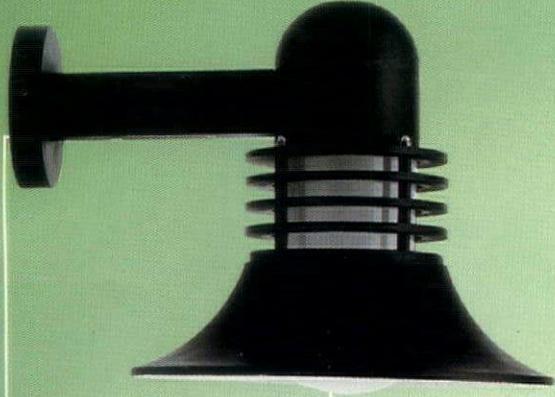
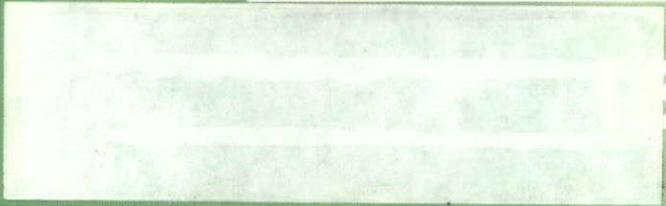
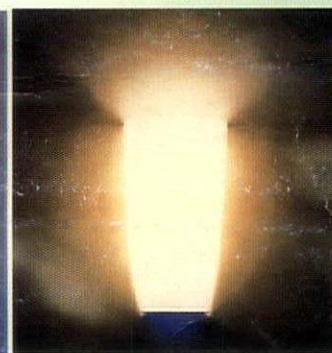
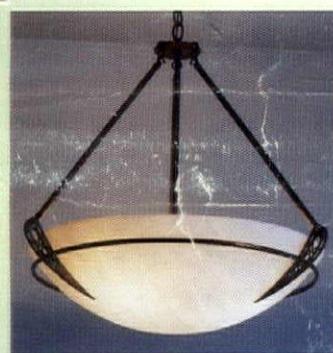


2000
MARKET
ISSUE

architectural lighting



**2000
MARKET
ISSUE**



30+ PRODUCTS

**WEB REVIEWS
SPECIFICATION GUIDELINES
"GREENER" LIGHTING**

A MILLER FREEMAN PUBLICATION
U.S. \$7.00
www.lightforum.com
Lightfair Booth #1526

THE PROMISE OF LIGHT

We promise a future inspired by product ingenuity
and a passion for service.

We promise to simplify your complex challenges by being the best
single-source supplier of lighting fixtures.

We promise to share our knowledge through educational programs
that affirm high technical standards and foster unlimited creativity.

We promise to imbue all of our work – from breakthrough technology
to no-breakdown communications – with a spirit of quality
that all admire and none equals.

We promise unwavering commitment
to your success.



COOPER Lighting
THE PROMISE OF LIGHT
www.cooperlighting.com

revolution happens

join the
COUP DE COLOR

JAMES MANSOUR, MANSOUR DESIGN

- ◆ CUTTING EDGE DESIGNER AND COLOR KINETICS COUP COMMANDER
- ◆ MAKES THE WORLD MORE COLORFUL WITH COLOR KINETICS PRODUCTS

DISCOVER REVOLUTIONARY FULL SPECTRUM DIGITAL LIGHTING.
16.7 MILLION COLORS AND COLOR-CHANGING EFFECTS VIA OUR PATENTED CHROMACORE™ LED TECHNOLOGY.
NO FILTERS, DIMMERS, OR MOVING PARTS. LOW MAINTENANCE. NEXT TO NIL HEAT. FOR 11 YEARS.
TAKE COMMAND. PLANT THE FLAG. WITH THIS COUP, YOU RULE.

psssst... cool lighting generated by
Color Kinetics (of course!)

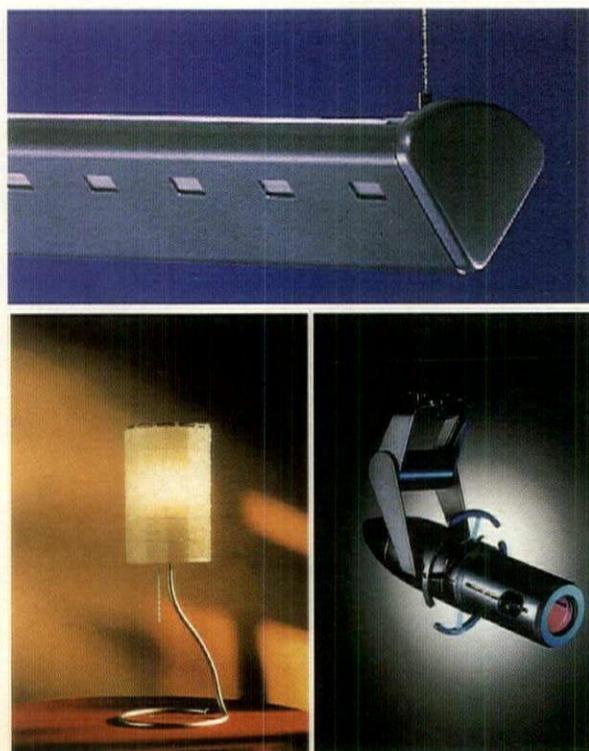
www.colorkinetics.com

FULL SPECTRUM DIGITAL LIGHTING

50 MILK STREET 17TH FLOOR • BOSTON, MA 02109 USA
TOLL FREE 888 FULL RGB • TEL 617 423 9999

©2000 Color Kinetics Incorporated. Color Kinetics is a trademark of Color Kinetics Incorporated.



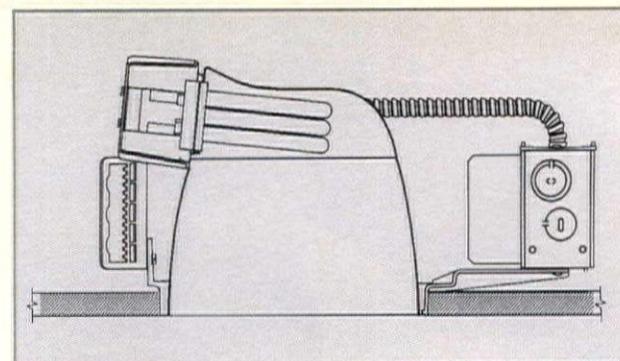


PRODUCTS

- 38 **Decorative Fixtures**
- 42 **Indirect Fixtures**
- 48 **Track Lighting**
- 52 **Task Lighting**
- 54 **Downlights**
- 58 **Wall/Sconce/Cove**
- 62 **Outdoor & Landscape Lighting**
- 65 **Fiber Optics**
- 66 **Lamps, Ballasts & Controls**
- 69 **Emergency Lighting**
- 70 **Theatrical Lighting**
- 71 **Software**
- 72 **Special Product Advertising Section**

FEATURES

- 14 **Web Picks—What's Hot**
- 20 **Environmental Initiatives—"Greener" Lighting**
- 28 **Defining the Language of Fixture Specifications**
- 34 **Guidelines for Specification Integrity**

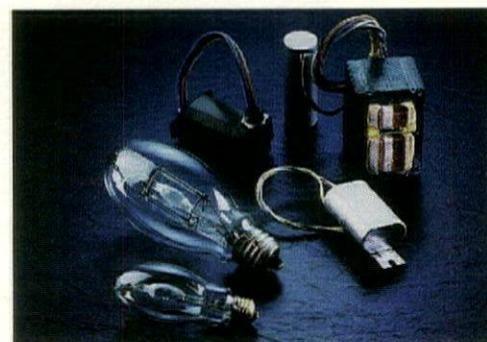


DEFINING THE SPEC

28

DEPARTMENTS

- 8 **Editorial**
- 10 **Calendar of Events**
- 76 **Perspectives**



LAMPS, BALLASTS & CONTROLS

66

Structural™



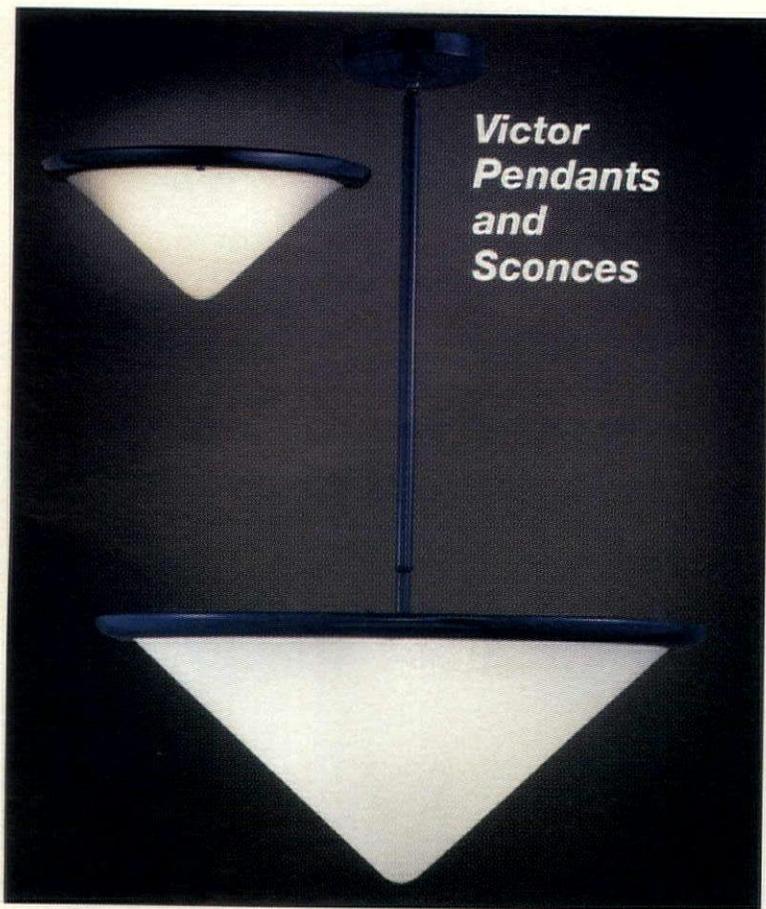
KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

Circle No. 3

www.kimlighting.com





**Victor
Pendants
and
Sconces**

**THE ORIGINAL CAST™
LIGHTING**



6120 DELMAR BLVD. • ST. LOUIS, MO 63112
314.863.1895 • FAX: 314.863.3278

www.theOCL.com

Circle No. 4

architectural lighting

Editor-in-Chief

CHRISTINA TRAUTHWEIN
(212) 615-2631
ctrauthwein@mfi.com

Publisher

CRAIG DILLOUJE
(212) 615-2304
cdilouje@mfi.com

Art Director

JOSEPH SCARPATI
(212) 615-2273
jscarpati@mfi.com

Assistant Editor

ALICE LIAO
(212) 615-3067
aliao@mfi.com

Lightforum.com Manager

RANDY HELLER
(212) 615-3067

CONTRIBUTING EDITORS

WANDA JANKOWSKI, JEAN GORMAN, DAVID HOUGHTON, PE

EDITORIAL ADVISERS

RENEE COOLEY, RENEE COOLEY LIGHTING DESIGN
HOWARD BRANDSTON, LC, FIALD, FIES, H.M. BRANDSTON & PARTNERS
GARY STEFFY, LC, FIALD, GARY STEFFY LIGHTING DESIGN
RAND ELLIOTT, FAIA, ELLIOTT + ASSOCIATES ARCHITECTS

Group Publisher	PHILLIP A. RUSSO	(212) 615-2368
Production	VINCE HABICK	(415) 905-2454 fax (415) 905-2236
List Rental		(847) 619-9800 fax (847) 619-0149
Circulation	WENDY SAAR	(212) 615-2687 fax (212) 279-4460
	CUSTOMER SERVICE	(800) 255-2824 fax (847) 647-5972
Reprints	VICKI BREWSTER	(516) 365-2646 fax (516) 681-7315 62 Northwoods Rd. Manhasset, NY 11030

ADVERTISING SALES

EAST/INTERNATIONAL	CLIFF SMITH	(212) 615-2649 fax (212) 279-3955
MIDWEST/CENTRAL	MARIE KOWALCHUK	(773) 792-1830 fax (773) 792-1831
WEST	JON HENG PATRICIA OLAIZ HENG	(626) 799-3610 fax (626) 799-5853
WEB SALES	DAVE BURTNER	(541) 344-1909 fax (541) 344-2646
CLASSIFIED SALES		(212) 615-2727 fax (212) 279-3955

MILLER FREEMAN, INC.

CEO/Miller Freeman Worldwide: Tony Tillin; Chairman/Miller Freeman Inc.: Marshall W. Freeman;
President/CEO: Don Pazour; EVP/CFO: Ed Pinedo; EVP: John Pearson; EVP: Darrell Denny;
VP/Circulation: Jerry Okabe; Senior VP/Human Resources: Macy Fecto; CIO: Howard Marsh; SVP
Production Services: Andy Mickus; Senior VP: Mark Klionsky



MILLER FREEMAN DESIGN GROUP

Architectural Lighting Contract Facilities Design & Management NeoCon East

Miller Freeman, Inc., division of United News & Media,
One Penn Plaza, New York, NY, 10119-1198
Telephone (212) 714-1300 Fax (212) 279-3955
www.lightforum.com

un Miller Freeman
A United News & Media publication

The 360HD™ Mounting System



360HD™

The 360HD™ Mounting System with "aim-and-lock" technology ensures the fixture stays aimed where you want it!

B-K LIGHTING... the number one choice in specification-grade, outdoor architectural lighting.

7595 N. Del Mar Avenue • Fresno, CA 93711 • (559) 438-5800 Fax: (559) 438-5900
email: info@bklighting.com • web: www.bklighting.com

See us at Lightfair 2000, booth 518

Circle No. 5

HYDREL

The Hydrel
9000 Series established
a new benchmark for
in-grade lighting

Today's M9000 Series
Raises the

BENCHMARK

New M9000 Series features:

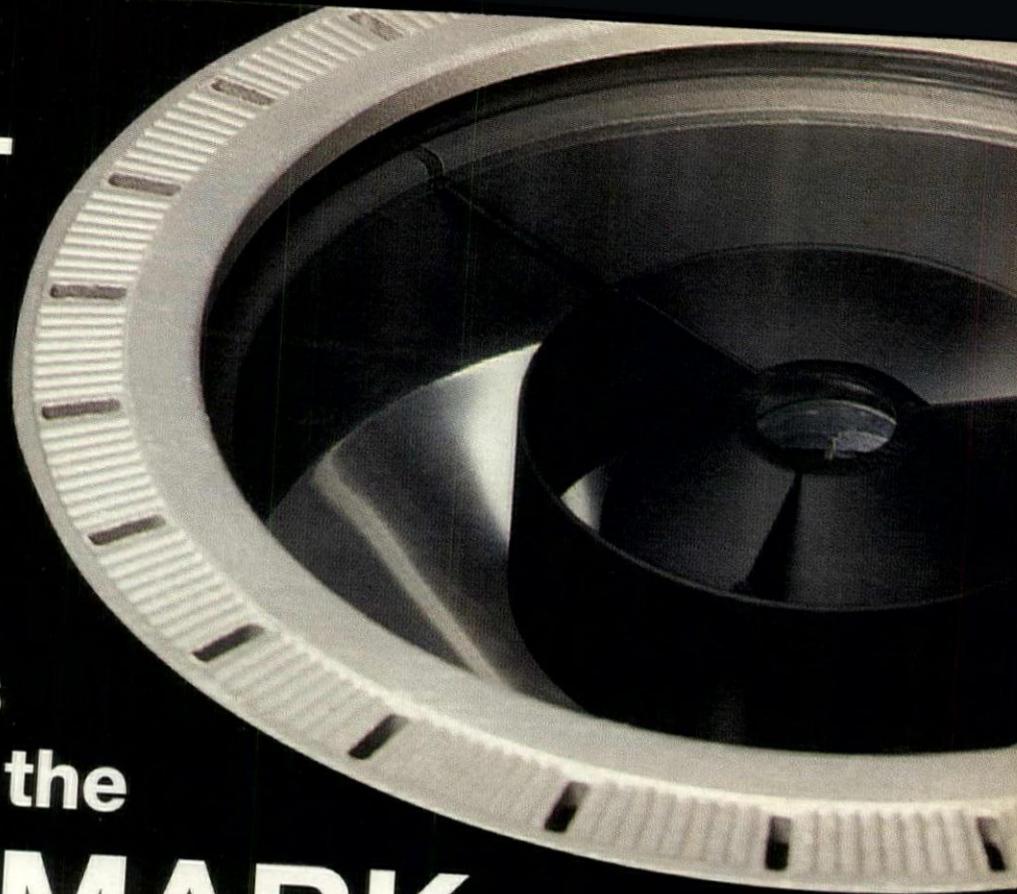
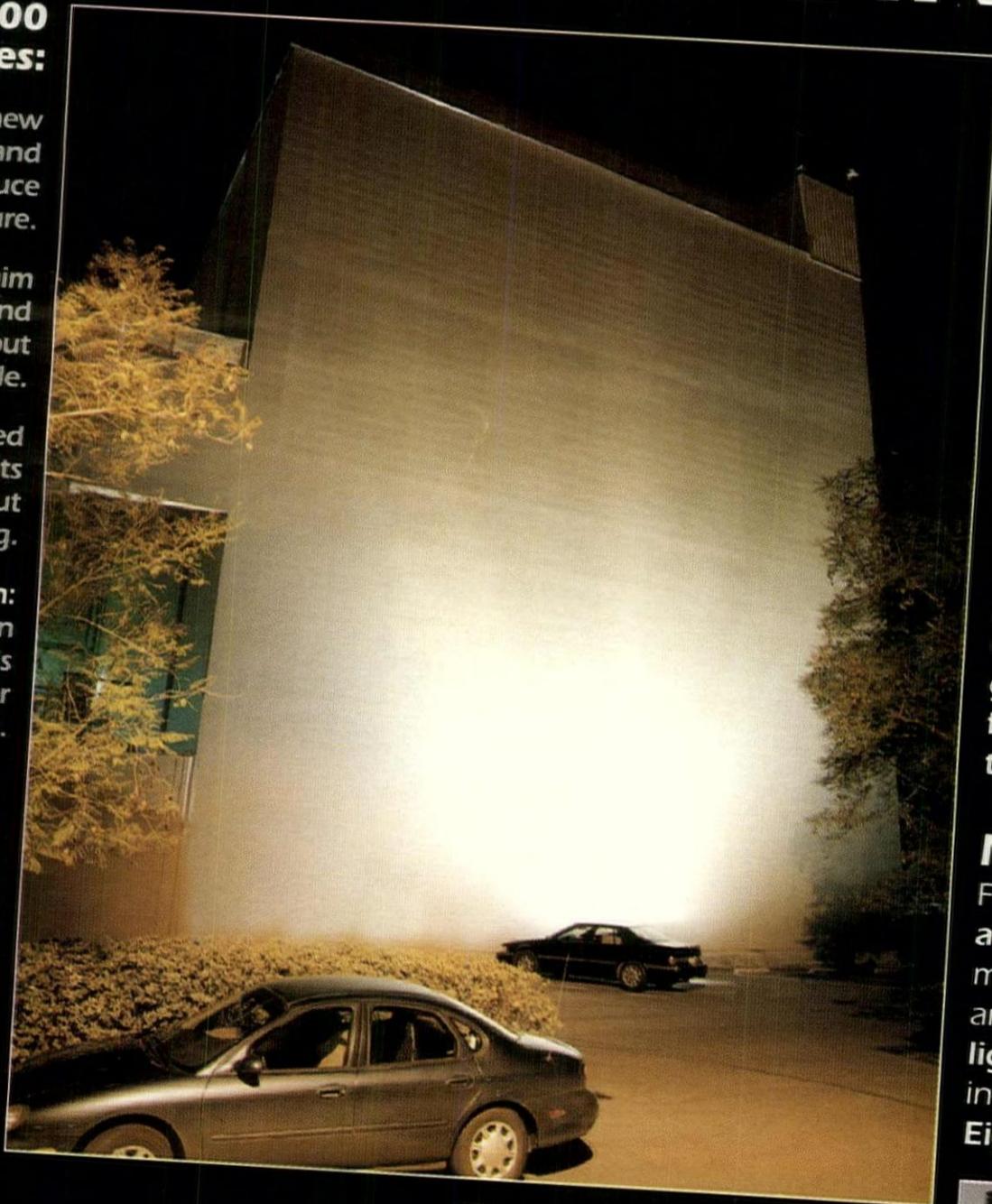
Cooler Operation: new convective design and double lenses reduce surface temperature.

External Aiming: aim mechanically and optically without entering lamp module.

Locked Settings: indexed and locking components allow relamping without reaiming.

Rugged Construction: computer aided design and tough materials surpass drive over requirements.

A single M9810, MH400 wall wash illuminates an eight story wall. The new M9000 Series achieves the widest range of ITL photometrics for in-grade lighting.



Now choose from a
Full range of
wattage and sizes:

M9400 to 70 Watts
accommodates the popular
new color corrected metal
halide lamps to 70 watts.
Unique housing with only a
nine inch footprint.

M9700 to 175 Watts
Standard workhorse
provides a variety of
distributions plus internal
glare control and filtering
for exciting effects in a
twelve inch footprint.

M9800 to 400 Watts
First in-grade fixture to
accommodate 400 watt
mogul base lamps. Provides
an alternative for flood
lighting structures with
in-grade concealment.
Eighteen inch footprint.



HYDREL
In-grade Lighting

HYDREL
12881 Bradley Avenue, Sylmar, California 91342
Phone 818-362-9465 Fax 818-362-6548
Website www.hydrel.com

HYDREL is a registered trademark of
Lithonia Lighting.

Circle No. 6

Presc•lite

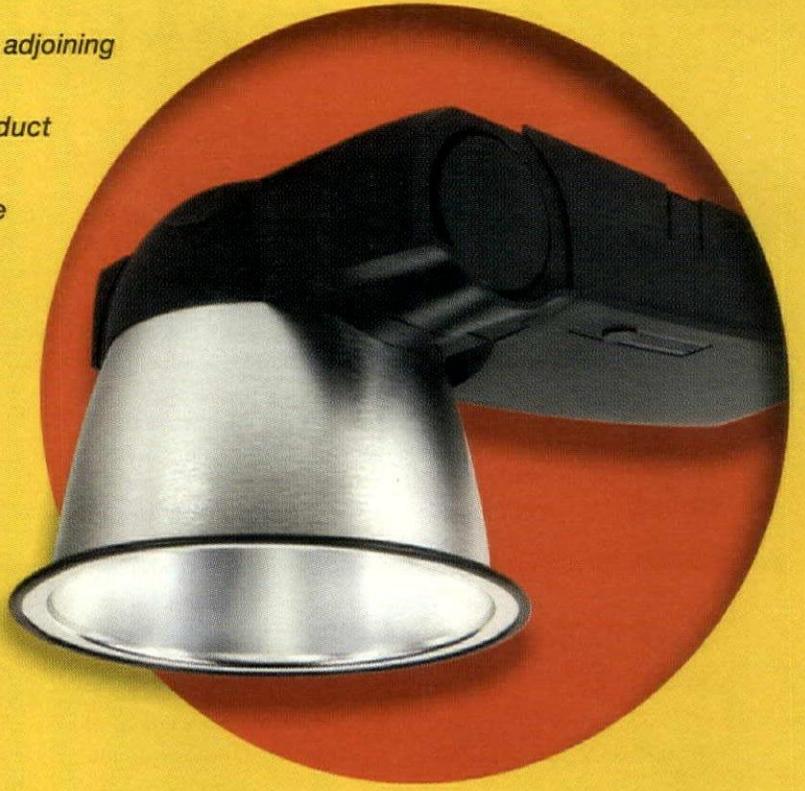
A NEW QUALITY OF LIGHT

OK. We heard you. We didn't laugh. You had a vision. We thought it was innovative. You wanted a recessed downlight that wasn't recessed. We built it. It won. **A lot.** Lightfair's Technical Innovation Award. Lightfair's Best New Product of the Year Award. The ADEX Grand Prize Trophy. Europe's Industry Forum Design Award. Thanks. For us, it's just another example of our listening skills paying off. For you, it's that rare example of being heard...and maybe that's the most important innovation of all. So, what do you want to **invent** now?



TRUSTING

From Prescolite's home page, click on the "What's New" button. Click on the "Phos" icon and view a complete press release. For product and technical information, click on the adjoining link or enter from the "Products" icon on the home page. Within the "Product Information" link, you can view a list of features and download complete specification sheets, or link to find your local Prescolite representative.



www.prescolite.com

Circle No. 7



Y O U R V I S I O N

MARKET WATCH ...

Welcome to the 2000 Market Issue, featuring stories about the supply side of our industry plus web reviews, an opinion editorial and more than 180 products in 12 categories.

Below, you'll notice a legend, designed to serve as a helpful and quick reference guide to the prominent acronyms that are common in our industry, from HO to VA. As usual, we are continuing our long-standing editorial policy of publishing products that are safety-certified, identified in the descriptions (usually the UL listing).

In addition to the many products featured, we've included some interesting, informative and useful topics in this year's Market Issue—tips on how both lighting specifiers and manufacturers

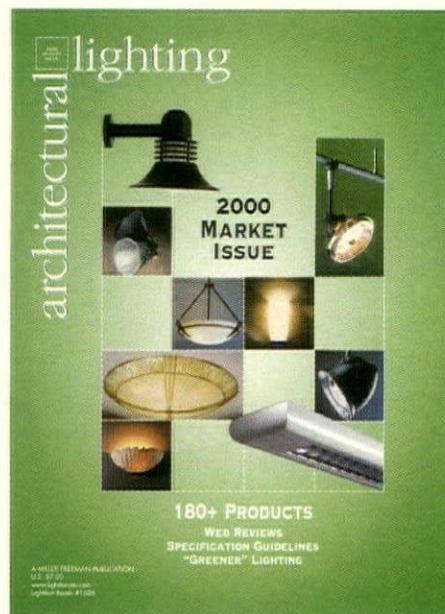


CHRISTINA TRAUTHWEIN
EDITOR-IN-CHIEF

can be environmentally conscious; definitions of commonly used terminology in fixture specifications; and the hot-off-the-press "Guidelines for Specification Integrity" document developed by the IALD in conjunction with the LIRC. And, of course, what would the Market Issue be without Dave Burtner's website reviews? Once again, he surfs the net to find hot

and helpful sites for our readers.

To learn more about manufacturers and products, see our December Lighting Source Directory and visit www.lightsearch.com. Now, turn the page to view just some of the innovative designs and technologies the industry has to offer...



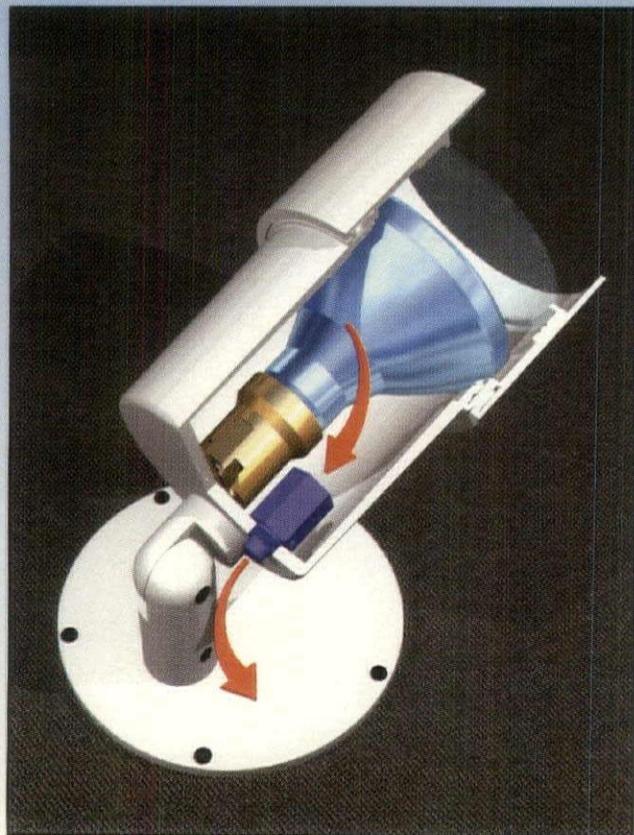
Key to using the product guide:

A = amp (current)
 ADA = Americans with Disabilities Act
 ANSI = American National Standards Institute
 C = Celsius
 cd = candela/candelas
 CRI = Color Rendering Index
 CSA = Canadian Standards Association
 CUL = Underwriters Laboratories/Canada
 CYM = cyan, yellow, magenta
 CWA = constant wattage autotransformer
 ETL = Electrical Testing Laboratories
 F = Fahrenheit
 fc = footcandle/footcandles
 ft = foot/feet
 HID = high intensity discharge
 HO = high output
 HPF = high power factor
 HPS = high pressure sodium

Hz = Hertz (frequency)
 IES = Illuminating Engineering Society (of North America)
 in. = inch/inches
 IR = infrared
 K = Kelvin
 LED = light-emitting diode
 LPS = low pressure sodium
 mcd = millicandela/millicandelas
 MH = metal halide
 NEMA = National Electrical Manufacturers Association
 PC = personal computer
 THD = total harmonic distortion
 UL = Underwriters Laboratories Inc.
 UV = ultraviolet
 VDT = video display terminal
 V = volt
 VA = volt-ampere
 W = watt

The ACV™ Valve System

(patent pending)



The ACV™ Valve System (Anti-Condensation Valve) utilized in B-K Lighting's PAR30/PAR38 fixtures expels moisture-laden air from the hermetically sealed optical compartment, creating an internal vacuum and eliminating the possibility of condensation. Leading industry organizations have awarded the ACV™ Valve System for its unique and significant advancement to the art and science of lighting. Contact us today for more information.



See us at Lightfair 2000, booth number 518.



B-K LIGHTING... the number one choice in specification-grade, outdoor architectural lighting.

7595 N. Del Mar Avenue • Fresno, CA 93711 • (559) 438-5800 Fax: (559) 438-5900 • email: info@bklighting.com • web: www.bklighting.com

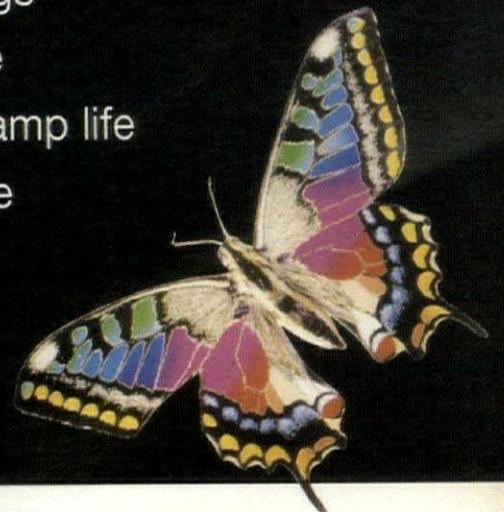
The best lighting designs...



demand the best ballasts.



- Enhanced color and CRI uniformity
- Significant energy savings
- Safety shutdown feature
- Extended photometric lamp life
- Small, compact package
- 5 year ballast warranty



San Francisco City Hall: *NAiS DCP™ Ballast, Horton Lees Lighting Design, Phoenix Lighting Fixtures, Philips MasterColor™ Lamps, Jay Graham Photo.*

NAiS DCP™ Metal Halide Electronic Ballasts

For more information, call 1-888-4AROMAT or visit www.aronat.com

Circle No. 9

Aromat
Subsidiary of Matsushita Electric Works

NAiS A Worldwide Brand

May 20-23 International Contemporary Furniture Fair and Decorex USA, Jacob Javits Convention Center, New York; (914) 421-3215, (800) 272-SHOW, www.glmshows.com.

May 24 Boston Society of Architects Lecture Series: "Real Cities: Density, Complexity and Serendipity," Rabb Lecture Hall, Boston; (617) 951-1433, fax (617) 951-0845.

May 25-June 1 Designers Lighting Forum of New York Trip to Paris; (212) 613-1599.

June 5-8 A/E/C Systems 2000, Washington D.C. Convention Center, Washington, D.C.; (800) 451-1196, fax (610) 458-1553.

June 12-14 NeoCon, The Merchandise Mart, Chicago; (800) 677-6278, (312) 527-7714.

June 14-17 The International Design Conference in Aspen: "The Spirit of Design," Aspen, CO; (970) 925-2227, www.idca.org.

June 18-20 BOMA International's 93rd Annual Convention & The Office Building Show, San Diego Convention Center, San Diego, CA; (888) 777-6956, email: mlynn@pgi.com.

June 21 IESNY Lumen Awards Banquet, New York; (800) 217-5445, www.nyies.org.

June 21-23 Ambiente Japan, Tokyo International Exhibition Centre, Big Sight, Ariake, Tokyo, Japan; (81) 3-5275-2851, fax (81) 3-5275-2867, www.ambiente.de.

June 22-25 44th Annual Construction Specifications Institute Convention and Exhibit, Georgia World Congress Center—East, Atlanta; (800) 689-2900, www.csinet.org.

June 23-27 Dallas International Lighting & Accessories Market, Dallas Market Center, Dallas; (800) DALMKTS.

July 31-August 2 IESNA National Conference, Washington, D.C.; (212) 248-5000, www.iesna.org.

September 7-9 Restoration & Renovation, Henry B. Gonzalez Convention Center, San Antonio, TX; (800) 982-6247, (978) 664-6455, ext. 14, fax (978) 664-5822, email: show@egiexhib.com, www.egiexhib.com.

September 8-12 Lumiere Paris, Paris-Nord Villepinte, France; (33) 1 44 29 02 47, fax (33) 1 44 29 02 43, email: info@lumiere-paris.com, www.lumiere-paris.com.

September 25-30 International Fair of Lighting Fixtures (FIAM), Valencia, Spain; (34) 96-386-11-00, fax (34) 96-363-61-11/96-364-40-64, email: ferivalencia@feravalencia.com, www.ferivalencia.com.

October 8-16 Athens to Rome: Architecture 2000 trip; (800) 975-7775, email: aia@travelmgmt.com, www.travelmgmt.com/aia.html.

November 1-3 Luminaire Asia 2000, Singapore International Convention & Exhibition Centre, Singapore, Singapore; (65) 220-76-33, fax (65) 220-97-33, www.hfasin.com

November 6-9 Computers for Construction 2000 & A/E/C Systems Fall, Anaheim Convention Center, Anaheim, CA; (800) 451-1196, (610) 458-5472, email: maten@penton.com. ■

HID IN-GROUND FIXTURES

CORONADO 750 SERIES

X₃TM aiming mechanism for pan, tilt, and lock without entering the fixture.

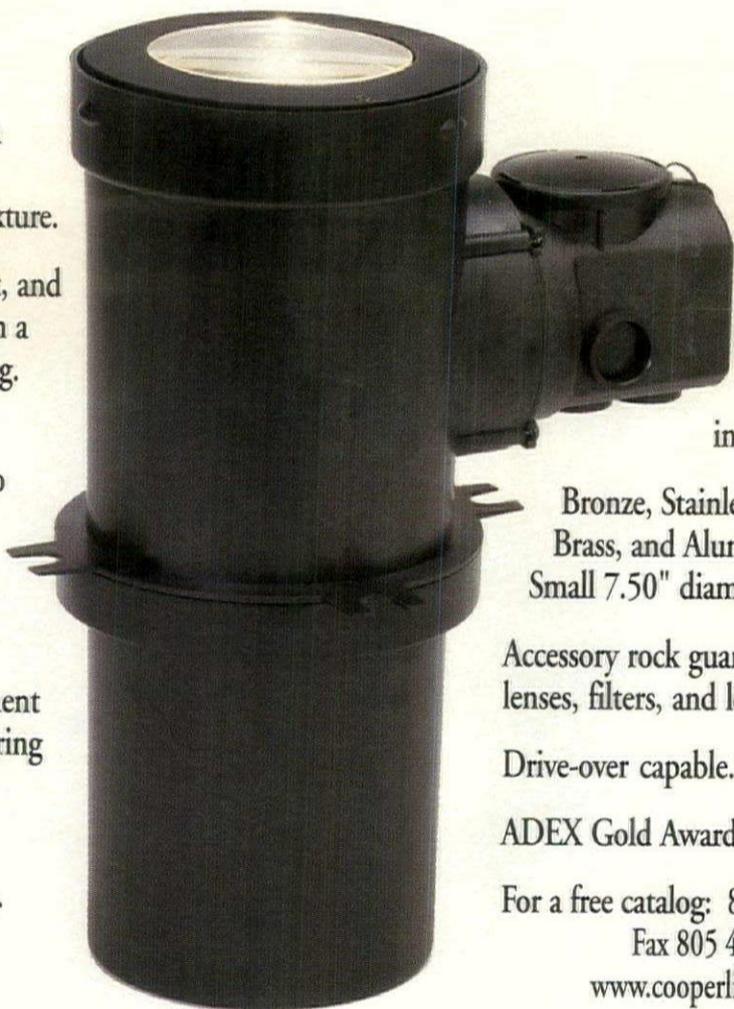
Resealable lamp, ballast, and wiring compartments in a watertight main housing.

Relamp in ground, or remove lamp housing to relamp offsite.

For MastercolorTM type Metal Halide lamps.

Exterior wire compartment for wiring without entering main housing.

Built in fittings for installation and leveling.



Composite construction.

For soil or concrete installation.

Bronze, Stainless Steel, Brass, and Aluminum trims. Small 7.50" diameter.

Accessory rock guard, glare shield, lenses, filters, and louvers.

Drive-over capable.

ADEX Gold Award Winner.

For a free catalog: 805 496 2003

Fax 805 496 2303

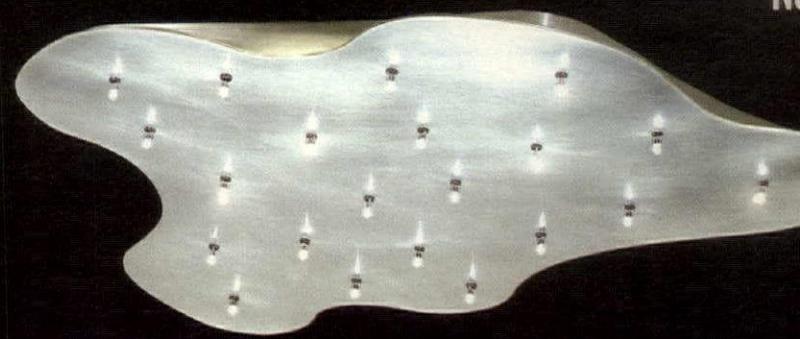
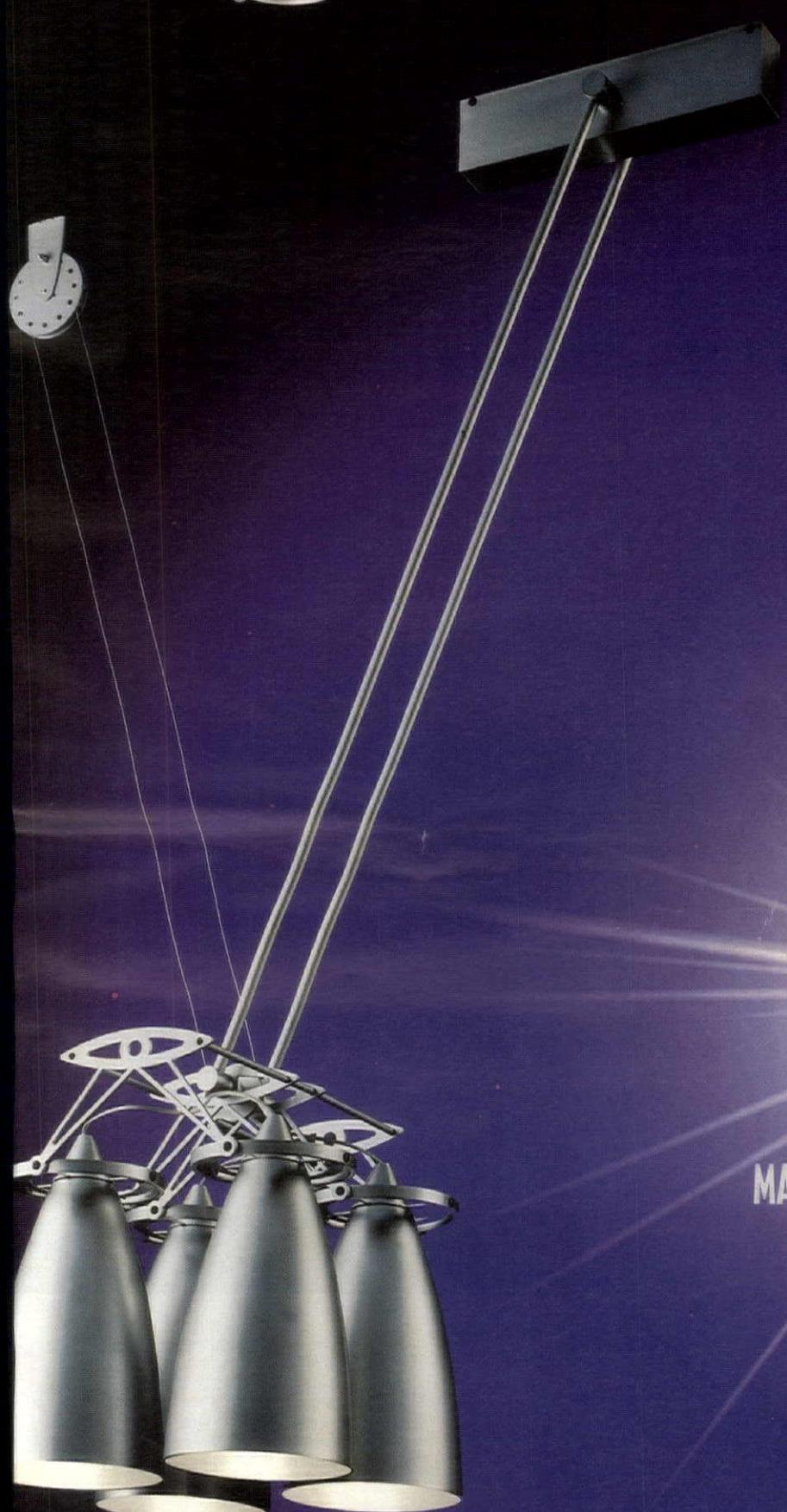
www.cooperlighting.com

 Lumière

Expanding opportunities
for artistry in light.

 COOPER Lighting

If you have or know of an event you'd like to see posted on our calendar page, let us know. Send the information to Architectural Lighting, One Penn Plaza, 10th floor, New York, NY 10119, fax 212-279-3955 or email aliao@mfi.com.



SPACEDOME

MANIA

WALLSCAN

FLAMBO

NOS

ALLISTER

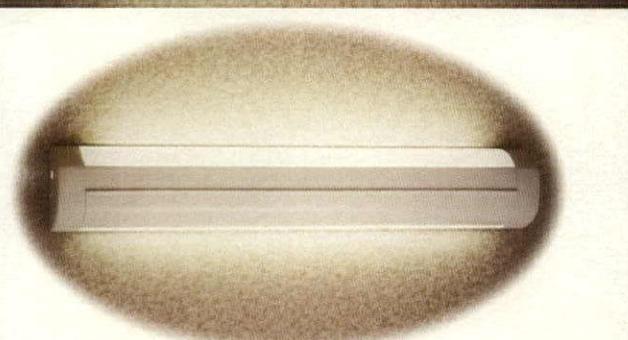
FAD LIGHTING

Circle No. 11

TEL: 1 (954) 566 7303 - FAX: 1 (954) 566 4240 - WEB: www.FADLIGHTING.com

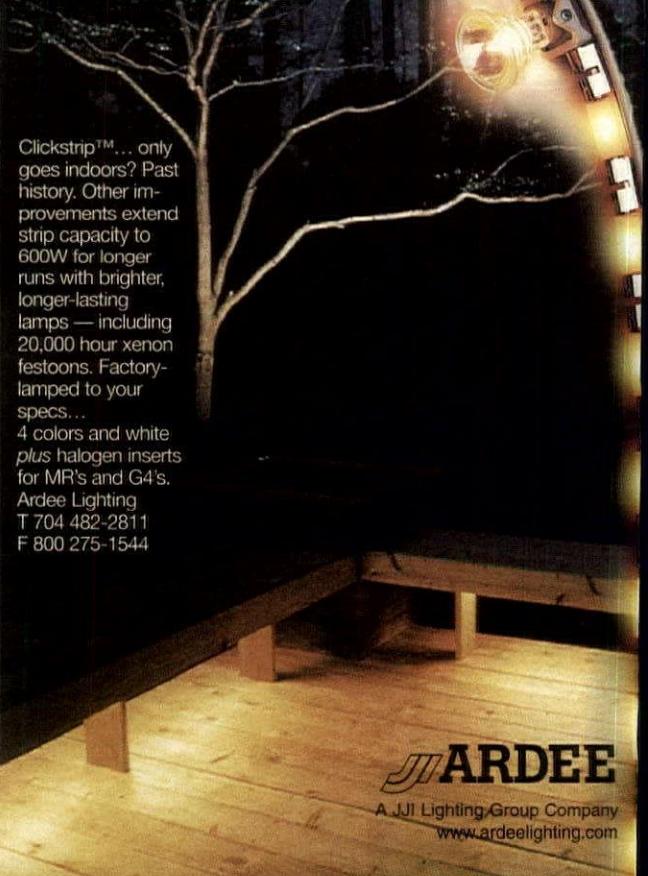
illumination
 arate-source.
 stable
 g... both
 d in its own
 s art form.
 erica
 71-2211
 71-2255

JJI hessamerica
 A JJI Lighting Group Company
 www.hessamerica.com



New Vistaform —
 4 in 1 patient room lighting:
 ambient uplighting, patient downlight,
 examination light and nightlight. Slender
 housing accomodates fixed downlight
 and hinged upper unit to direct
 illumination where needed.
 Vista Lighting
 T 800 576-2135
 F 800 576-2136

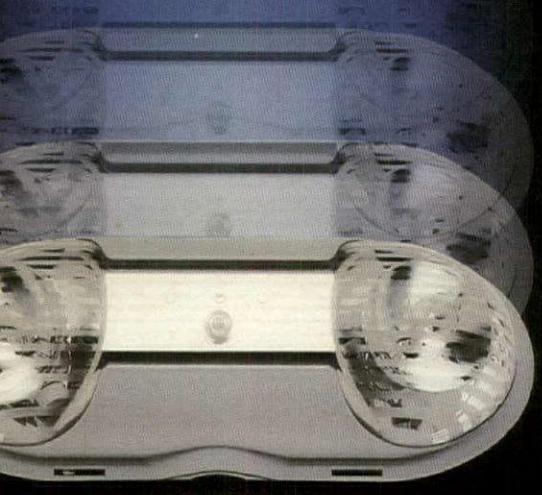
JJI VISTA
 A JJI Lighting Group Company
 www.vistalighting.com



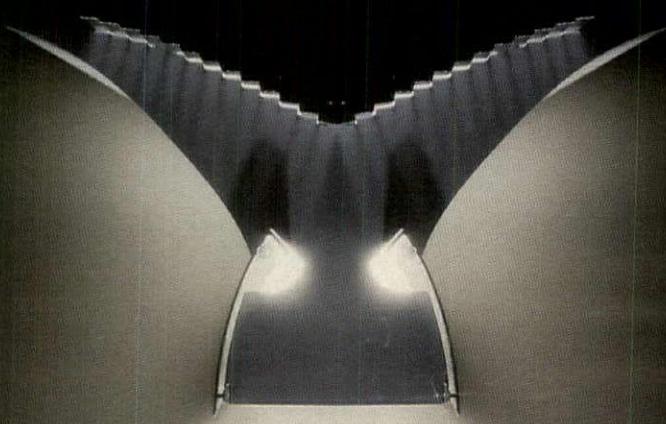
Clickstrip™... only
 goes indoors? Past
 history. Other im-
 provements extend
 strip capacity to
 600W for longer
 runs with brighter,
 longer-lasting
 lamps — including
 20,000 hour xenon
 festoons. Factory-
 lamped to your
 specs...
 4 colors and white
 plus halogen inserts
 for MR's and G4's.
 Ardee Lighting
 T 704 482-2811
 F 800 275-1544

JJI ARDEE
 A JJI Lighting Group Company
 www.ardeelighting.com

ake a beating... and keep on
 ! Weathergard 626 emergency
 resists vandalism and tampering.
 s 360° aimable, intense halogen
 ting. Automatic battery recharge
 -testing. Damp and wet ratings.
 gh-Lites
 76-2044
 74-3289



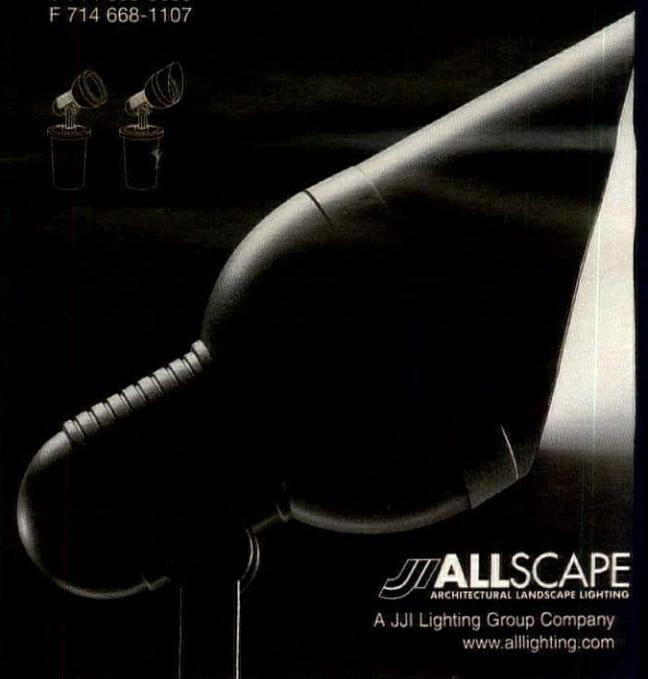
JJI HIGHLITES
 A JJI Lighting Group Company
 www.highliteslighting.com



Stadttor: indirect/direct ceiling luminaire
 with sculptural flair. Segmenting fins
 eliminate glare. Architectural appeal
 for today's open office environs.
 Hoffmeister Leuchten
 T 01149(0) 2351 159-0
 F 01149(0) 2351 159-328

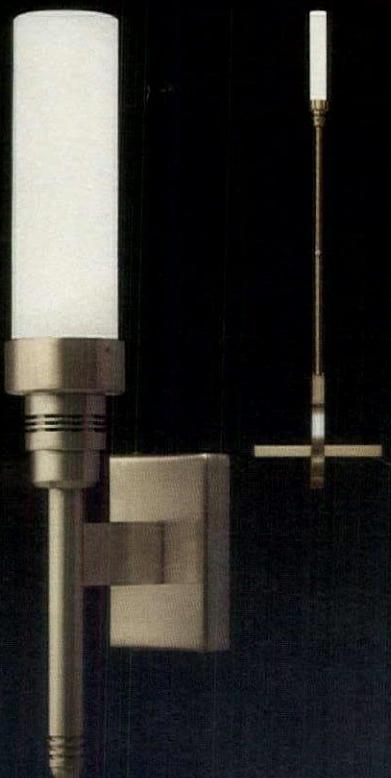
JJI Hoffmeister
 A JJI Lighting Group Company
 www.hoffmeister.de

Get lighter after dark —
 and lighter on the kilowatt
 hours. Make the most of up
 to 175 illuminating watts
 with ALLscape's SL-35
 Bullets. Discover your
 options, get the Catalog.
 Architectural Landscape
 Lighting
 T 714 668-3660
 F 714 668-1107



JJI ALLSCAPE
 ARCHITECTURAL LANDSCAPE LIGHTING
 A JJI Lighting Group Company
 www.alllighting.com

ar genre, as
 ed in Baton
 and Vela
 formats by
 n Noriega-
 s about get-
 t without
 ghteous.
 Lighting
 8-7799
 8-5577



JJI Nessen
 A JJI Lighting Group Company
 www.nessenlighting.com

Lovo/Lux™ surface and recessed mount fix-
 tures — shown life size — for display, cabinet
 and wall units. 10W and 20W halogens, short
 circuit and overload protected. Designed to
 focus, rather than attract, attention.
 Specialty Lighting
 T 704 482-3416
 F 704 484-0818



JJI SPECIALTY
 A JJI Lighting Group Company

Cure for the common cove:
 LAM's new HPD lamping units.
 Gone are the dark "divots"
 between hot fields, gained are
 more lumens, evenly dispersed.
 High performance, modest cost
 for coves as small as 2" x 4".
 LAM Lighting Systems
 T 800 732-5213
 F 714 662-4515



JJI LAM
 A JJI Lighting Group Company
 www.lamlighting.com

ban up the nighttime skies:
 nmaster illuminates signage
 h minimal light-polluting
 yglow" and trespass.
 ily adjustable,
 mputer-enhanced
 ector system aids
 mpliance with IESNA
 idelines.

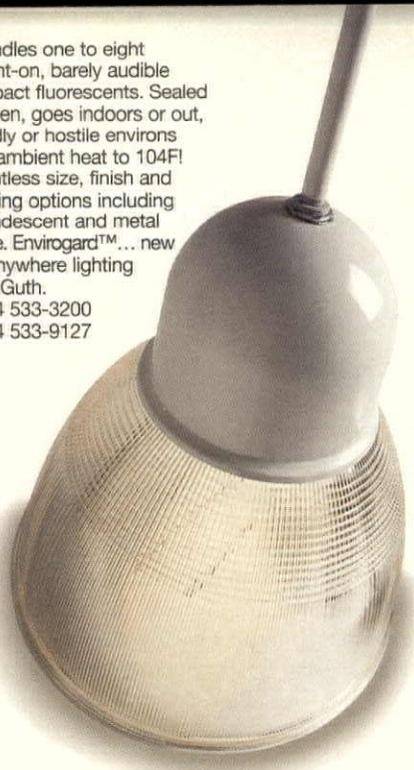
etrolux Lighting,
 847 451-3258
 847 451-7516



METROLUX

A JJI Lighting Group Company
 www.metrolux.com

It handles one to eight
 instant-on, barely audible
 compact fluorescents. Sealed
 or open, goes indoors or out,
 friendly or hostile environs
 with ambient heat to 104F!
 Countless size, finish and
 lamping options including
 incandescent and metal
 halide. Envirogard™... new
 go-anywhere lighting
 from Guth.
 T 314 533-3200
 F 314 533-9127



GUTH

A JJI Lighting Group Company
 www.guth.com

This is the incredible Alkco
 low voltage, wet location,
 2 1/2" mini-aperture down-
 light. Select a larger housing,
 choose an interchangeable
 trim ring, opt for a lens or
 louver and *voilà* – a full,
 commercial-scale fixture
 boasting the latest PL lamping
 technology. Hundreds of
 matching and contrasting
 adaptations plus the quality
 you expect from Alkco.
 T 847 451-0700
 F 847 451-7512



ALKCO

A JJI Lighting Group Company
 www.alkco.com

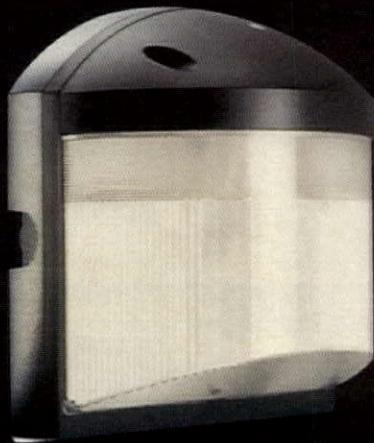


ey glide before your eyes,
 t you know they are motionless.
 if dancing on a breeze, they shimmer
 th super-saturated color and gossamer
 hite. Peter Wooding Design Associates
 nceived the "Handkerchief" ADA
 once for d'ac Lighting.
 314 698-5959
 314 698-6061

d'ac

A JJI Lighting Group Company
 www.daclighting.com

Conventional wisdom defied:
 new Morlite Defiant™ combines extreme
 vandal resistance, lo-glare hi-performance
 lighting in a handsome, architectural
 luminaire. 1000-hour salt spray finishes,
 IP65, damp and wet location ratings.
 T 800 865-5954
 F 800 667-99598

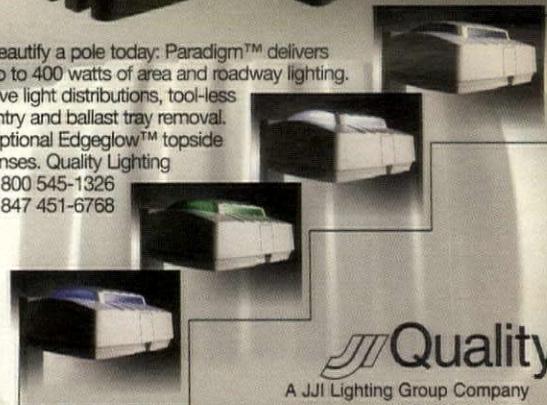


MORLITE

A JJI Lighting Group Company
 www.alkco.com

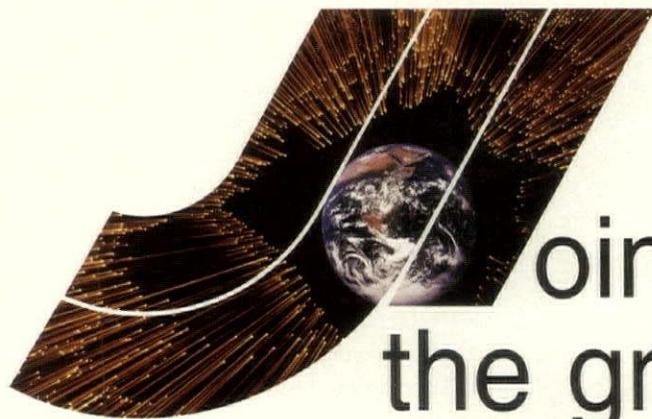


Beautifully a pole today: Paradigm™ delivers
 up to 400 watts of area and roadway lighting.
 Five light distributions, tool-less
 entry and ballast tray removal.
 Optional Edgeglow™ topside
 lenses. Quality Lighting
 T 800 545-1326
 F 847 451-6768



Quality

A JJI Lighting Group Company
 www.qualitylighting.com



oin
 the group
 ...and assert your
 independence

It's as true today as when we first published this message last
 century (April '98, to be precise).

Whether as specifier, contractor, owner – or manufacturer
 seeking joint ventureship – the credo applies. Your individuality
 brings unique skills, talent and assets to the table.

It makes sense, then to respect your judgement with goods
 and services that reflect your feel for the market. What we
 preach, we also practice with our own subsidiaries.

Marketplace management works so well, you will only find our
 brands under the names of Alkco, Guth, d'ac and colleagues.
None named JJI.

Three new companies and thousands of new customers have
 joined the Group these last two years.

All we've done is add the strength of numbers.
 To some very extraordinary individuals.

Let's talk at Lightfair, Exhibit 727.

JJI When it takes vision

JJI LIGHTING GROUP
 67 Holly Hill Lane, Greenwich, CT 06830.
 Tel: 203-869-9330 FAX: 203-869-9537

Circle No. 12

Web Picks—What's Hot

BY DAVE BURTNER

For most lighting specifiers, it's not the trendy dot.com market valuations that get them excited about the web. Nor is it the sudden appearance of lighting e-commerce sites—as yet more attuned to the casual needs of a consumer than the detailed requirements of an architectural lighting specification. Instead, what designers, architects, engineers and others who make their living finding solutions to the built environment are very likely to seek out when they click on their browser is an increasing array of lighting manufacturer websites that work.

For the most part, gone are the days of slow-loading promo pages, exploding splash screens and digitized sound bites from the CEO. Instead, real content has finally arrived. More manufacturers are giving specifiers most of what they need without them picking up the phone and waiting for FedEx or for the rep to drop by. It doesn't sound sexy, but it's the ballast wiring diagrams, the fixture CAD drawings, the downloadable photometric files, the installation instructions and the troubleshooting guides that are

turning these sites into impressive electronic tools.

Much of the improved access to content is because manufacturers have finally discovered the value of the Adobe PDF file format for delivering vast amounts of information in exactly the same format as in the printed version—and doing it a lot less expensively than recreating it as an HTML-based web page. These days, if you don't have the Adobe Reader on your hard drive (it's free from the Adobe website—www.adobe.com), you're missing out on one of the most valuable tools of the web. The integration of PDF files as a key feature of website information delivery is not the only trend for manufacturers thinking outside the HTML box. Web access to CD-ROMs, fax-back services and even old-fashioned 800 phone numbers with real people on the other end show that companies have learned that a primary factor for the specifier is not how the package is wrapped, it's how quickly and usefully it's delivered. Customer service counts—probably even more importantly on the web. While product information is king, even the most disciplined specifier can't help but love the occasional cool, if not particularly useful, flashy web feature—as long as it doesn't cause browser meltdown. With increasingly improved bandwidth and a plethora of free plug-ins, what today seems novel, tomorrow will be commonplace—a complete set of multimedia web-based information tools. Imagine one-click access to a step-by-step installation video for fiber-optic landscape lighting or a demonstration of how to connect a cable-mounting system.

What we're seeing at the beginning of the 21st century is the maturing of the web into what we always thought it could be and what the hype told us it was when it wasn't—an indispensable tool on the quest for efficient, high-quality lighting design and installation. To illustrate these points, the following web reviews focus on specific site features that should appeal to specifiers. These are not comprehensive reviews of entire sites. (Also omitted from this review is a discussion of the impressive progress manufacturers have made in web-based tools for channel partners.) With nearly 2,000 lighting manufacturer websites now available to the specifier, the few that are mentioned here are not meant to be a list of the best—some may even need improvement overall—but they each have at least one feature that merits attention as a step forward in the evolution of lighting on the web.

LITHONIA LIGHTING

www.lithonialighting.com

Lithonia's much-improved site (including an elegant, expandable/collapsible site index tree) gives users an online version of Lightware 3.0, its catalog on CD-ROM. With easy searches for all Lithonia products, PDF downloads of spec sheets, photometric IES file format downloads for each individual fixture and online viewing of the photometric report, Lithonia gives specifiers everything they need to quickly and accurately specify a product.

LUCIFER LIGHTING

www.luciferlighting.com

Lucifer doesn't stop at photometric files and specification sheets. Lucifer also gives the user some great technical guides. With products that include fiber-optic luminaires, downlights, tracklighting and light strips, it's nice to know installation and material details before you spec the product or get it out of the box. Users can access technical guides (both as web pages and PDF files) on installation, lamps, transformers, even fuses.

(Continued on page 16)



Downlighting gets Downsized

by CON-TECH

residential

retail

commercial

STAR-3™
Unsurpassed aiming flexibility: 359° rotational, 87° vertical.

IN THE WORLD OF LIGHTING TODAY THE BIG TREND IS GOING SMALLER



Series-3, featuring the Star-3™ trim, is a new line of mini-recessed downlights created specifically for use with energy efficient, low voltage MR16 halogen lamps. Select from 16 petite trim styles. Available in up to 6 modern finishes. Series-3 gives today's creative and value-conscious specifiers quality and range of selection for general, accent, or task lighting. Call **1-800-728-0312** today to request CON-TECH's Series-3 Mini-Recessed Lighting catalog. When you need lighting right now...ask about our *speed of light*™ shipping service.

CON-TECH LIGHTING

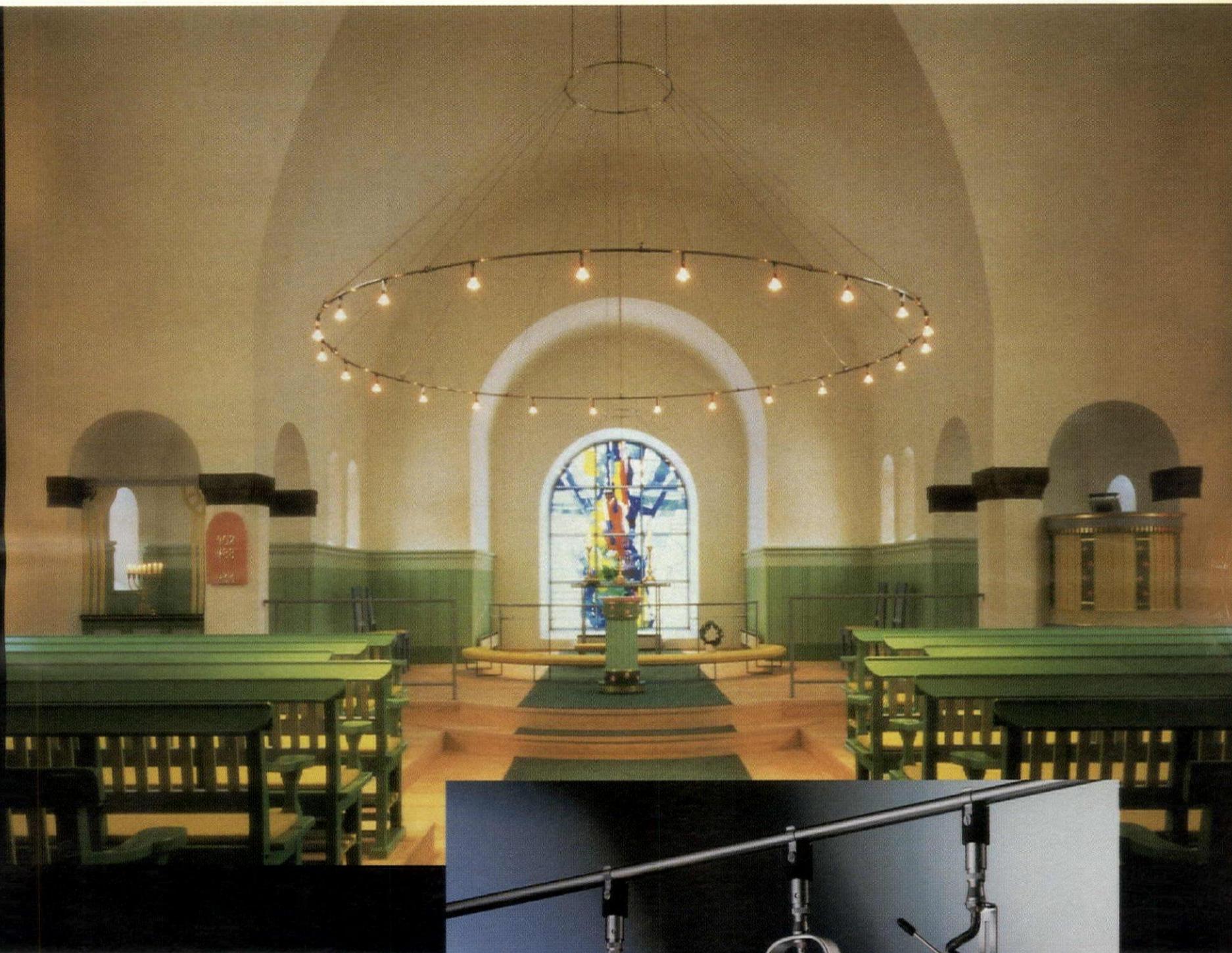
3865 Commercial Ave. Northbrook, IL 60062
phone: 847.559.5500 800.728.0312 fax: 847.559.5505
www.con-techlighting.com

© Copyright 1999 Conservation Technology, Ltd.



BRUCK

L I G H T I N G S Y S T E M S



Booth 101



VIA, one of seven systems from Bruck, is a low profile track system that can easily change directions and elevations. Available in straight or curved segments, in chrome, matte chrome, or gold finish.

BRUCK LIGHTING SYSTEMS

714 424-0500

Fax 714 424-0505

Costa Mesa, California

www.brucklighting.com

Circle No. 14

(Continued from page 14)

KIM LIGHTING

www.kimlighting.com

Kim Lighting also makes extensive use of PDF files to deliver detailed product specification information on its line of outdoor luminaires. In addition, Kim has provided something specifiers have long wanted—instant access to .dwg and .dxf drawing files. The self-extracting .exe files include both the drawings and a PDF document to guide the user to the desired drawing.

HUNT DIMMING

www.huntdimming.com

Another example of a manufacturer using the web to help the specifier with detailed product application informa-

tion, Hunt Dimming uses its site effectively as a tool for helping wade through the intricacies of choosing the right fluorescent dimming product. Hunt makes choosing the right dimmer easy—often a source of confusion—with a matrix of ballast type, lamp type, number of lamps and voltage options. This feature not only helps the specifier get it right the first time—it also saves customer service time at the sales end. You can also download the entire Hunt specification catalog as a PDF file.

HIGH END SYSTEMS

www.highend.com

Product support on the High End Systems site effectively combines online resources, downloads and links to customer service reps. For each product, users can select from High End's QuickLink Guide—a simple menu of product

support options—everything from photometrics to DMX protocol charts to training opportunities.

MAGNETEK

www.magnetek.com/ballast

MagneTek uses the web to leverage another information delivery system—its BallastFax-back system. Go to the MagneTek website, find the BallastFax menu, pick up the phone, enter the spec sheet code and almost immediately MagneTek information is coming out on your fax machine. Of course, MagneTek could have provided the same information—technical data and wiring diagrams—as a web page or as a PDF file, but for the user, there is effectively no difference in getting it as a fax. Given the format limitations and expense of HTML web page development, it's also a logical approach for MagneTek.

COOPER LIGHTING

www.cooperlighting.com

Cooper Lighting's fine site includes a great feature for specifiers—a spec sheet update tool. Users can download PDF spec sheets and IES format photometric files either by brand or by the date the files were uploaded to the site by Cooper.

GRIPLOCK SYSTEMS

www.griplocksystems.com

This manufacturer of cable suspension systems uses detailed visuals to effectively demonstrate how their product works. This site is worth visiting for its elegant design and easy navigation system.

VISA LIGHTING & WIDE-LITE

www.visalighting.com

www.wide-lite.com

Many manufacturer sites now make it easy to find reps. Both Visa Lighting and Wide-Lite have good examples of how not to waste a specifier's time with a slow loading locator map—instead, just enter your zip code and in a second or two you've got it.

ARTEMIDE

www.artemide.com

Artemide, who always delights in the unexpected (watch out for low flying bats), gives us just that by taking a single product line, wrapping it inside a web address all its own and leading users through an eye-popping, up-close look at a single product.

E.LIGHT

www.elight-usa.com

Check out this site. Not only is the site fun—you can click and see your e.light desk lamp color options match your iMac (just like trying on clothes)—you also get to know the designer and you can order an e.light online using a very simple shopping cart.

LUTRON

www.lutron.com

Most of what what makes Lutron's improved site valuable are the features mentioned above—product instruction sheets, wiring diagrams, easy product searches, online technical support—but how could a dimming company resist the temptation to give us a virtual dimming feature? You need Shockwave to enjoy it and you might wonder whether you really need to see what happens when you use your mouse to operate a slide dimmer, but clicking the buttons to view Lutron's preset scene control actually is both cool and informative.

COLOR KINETICS

www.colorkinetics.com

Like their product, full spectrum digital lighting, the Color Kinetics website comes at you with high-tech effects at every click. Even if you don't have a high speed DSL connection, it's worth the wait to try their interactive virtual reality tour of Harrods' Millennium White Perfumery room. ■

Dave Burtner, president of inter.Light, Inc., can be reached at www.lightsearch.com.

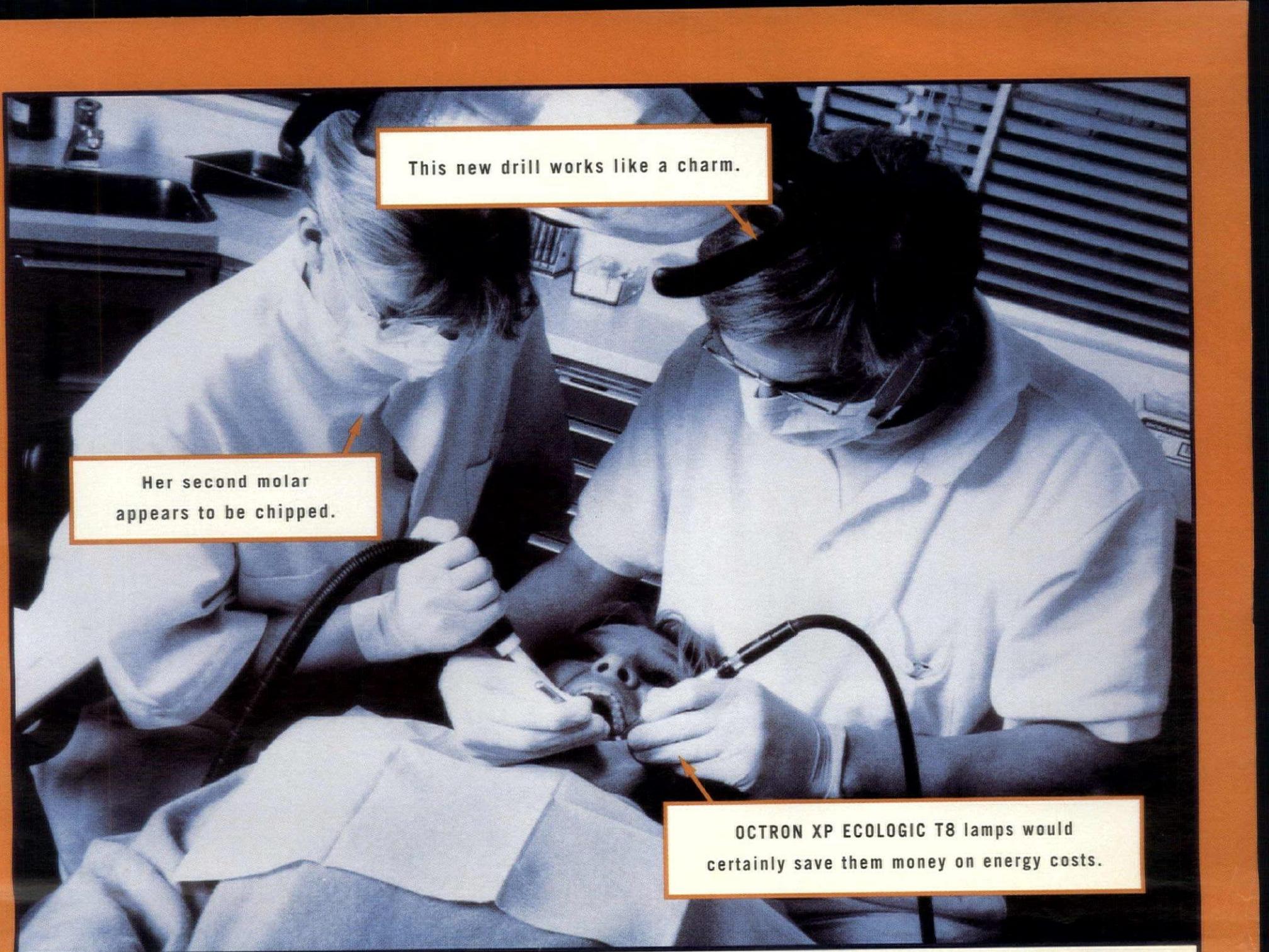


THE LINEAGE
COLLECTION
BY CLODAGH

Designed for contract spaces, these pendants and a series of matching sconces provide softly diffused light from the architecturally inspired frames. The ADA compliant sconces range in size from 6" x 18" to 24" x 24".

Exclusively from the makers of the American Aesthetic® Boyd Lighting ©1999 Tel: 115.776.4300 Email: info@boydlighting.com www.boydlighting.com Photography: John Sutton Patent Pending

B
O
Y
D
L
I
G
H
T
I
N
G



This new drill works like a charm.

Her second molar appears to be chipped.

OCTRON XP ECOLOGIC T8 lamps would certainly save them money on energy costs.

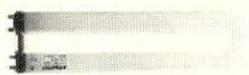
OBSESSIVELY FOCUSED ON LIGHTING.

When lighting is the only thing on your mind, you constantly think of energy efficient products that will help improve your surroundings. That ability to focus has helped us develop breakthrough products like the OCTRON T8, CAPSYLITE PAR, ICETRON, TRU-AIM IR, METALARC PRO-TECH, and PENTRON T5.

For the next millennium, we will continue our focus on R&D. Right now our designers are creating lamp and ballast

systems that will be more energy efficient and ecologically sound. Your link to those innovations will be SYLVANIA's commercial engineers. Their expertise will help you specify and install the right SYLVANIA product for the job.

To see how our obsessive nature can enhance your work, call your SYLVANIA Commercial Engineer or sales rep. For more information, dial 1-800-LIGHT-BULB (1-800-544-4828), or visit www.sylvania.com.



SYLVANIA

Our latest obsession, SYLVANIA OCTRON 800XP/ECO T8 lamps. Designed to pass TCLP, they have 20% longer life and 94% better lumen maintenance. You'll be able to use fewer fixtures, extend relamp cycles, and save a dollar per lamp in energy costs.

SYLVANIA is a registered trademark of OSRAM SYLVANIA, Inc.



Gullwing luminaires seamlessly and elegantly disappear into architecture and landscape. By night, illumination is precisely controlled, with no high angle brightness or glare into neighboring property. Gullwing blurs the lines between architecture, engineering and performance, and in so doing, advances the proposition that lighting at its best, is all but invisible.

Learn more about Gullwing scone and area luminaires at www.sitelighting.com/gwar

Gardco Lighting
San Leandro, CA
800.227.0758

Genlyte Thomas Group LLC

Circle No. 17

Environmental Initiatives—

BY MARK LOEFFLER, LC

While you wait for the Osram Sylvania web page about environmental issues to load, a message scrolls, "Efficient, energy-saving, environmentally safe products are smart choices for your business." Makes sense. Lighting professionals have long been on the forefront of energy efficiency issues. There is no debate that quality lighting is also effective and efficient in its energy use. However, the "environmentally safe" part of the message may not yet be a routine factor in "smart choices" for most of the profession.

The "built environment" has environmental consequences. Architects and their clients are increasingly concerned with the environmental health and safety performance of buildings. The design press now routinely covers green design issues. Major companies have environmental health and safety departments that require their facilities to demonstrate environmental responsibility. As sustainable design and construction practices become more prevalent, lighting professionals will have to take more than just energy use into account to serve clients' expectations. To do so, they will need more knowledge of sustainable design issues and ways that lighting choices can make a building "greener."

Sustainable design issues pertain directly to the "smart choices" lighting professionals can make to help manage that impact:

Quantity. Using fewer, more effective lighting fixtures to achieve design goals.

Durability. Using long-lasting, durable materials to prevent failure and require less frequent replacement.

Recyclability. Using recycled-content materials and packaging that can be safely recycled at end-of-life.

Safety. Using non-toxic materials, coatings and processes that ensure a healthy working environment and prevent pollution.

Embedded Energy. Obtaining materials and components from local sources and using energy-efficient manufacturing processes to reduce the amount of energy used to make and transport products.

Energy Effectiveness. Designing lighting systems that most effectively use the least amount of energy.

PACKAGING SYSTEMS

According to National Electrical Manufacturers Association (NEMA) statistics, lighting equipment sales in the U.S. have increased more than 40 percent over the last decade—from \$5.8 billion in 1991 to \$9.6 billion in 1999—and are still growing. That represents an almost unimaginable volume of lighting equipment with direct and indirect effects on the environment.

Many manufacturers have positioned themselves to serve the need for "greener" lighting. "We feel that it makes strong business sense to make improvements that help the environment and the bottom line," said Randy Solliday, national sales manager for Ontario-based



USING RECYCLED-CARDBOARD STRUCTURAL SUPPORTS INSPIRED BY THE FURNITURE INDUSTRY, METALUMEN IS ABLE TO SECURELY PALLETIZE AND TRANSPORT MORE LUMINAIRES WITH MINIMAL PACKAGING DEBRIS, WHILE ELIMINATING PRODUCT WASTE DUE TO DAMAGE DURING SHIPPING.

Metalumen. For example, Metalumen has invested in a packaging system that uses a minimal amount of recycled-content cardboard and plastic wrap to support more fixtures on a shipping pallet. It protects the bottom fixtures from being crushed and reduces the amount of cardboard destined for disposal.

Said Solliday, "The system evolved out of what we saw the furniture industry doing. It has virtually eliminated damage claims. We save 40 to 45 percent in our direct packaging costs. And at the job site, electricians aren't spending time breaking down boxes."

This kind of business-driven approach, increasingly common in other industries and among European manufacturers, is affecting U.S. lighting manufacturers' thinking.

ENERGY EFFICIENCY

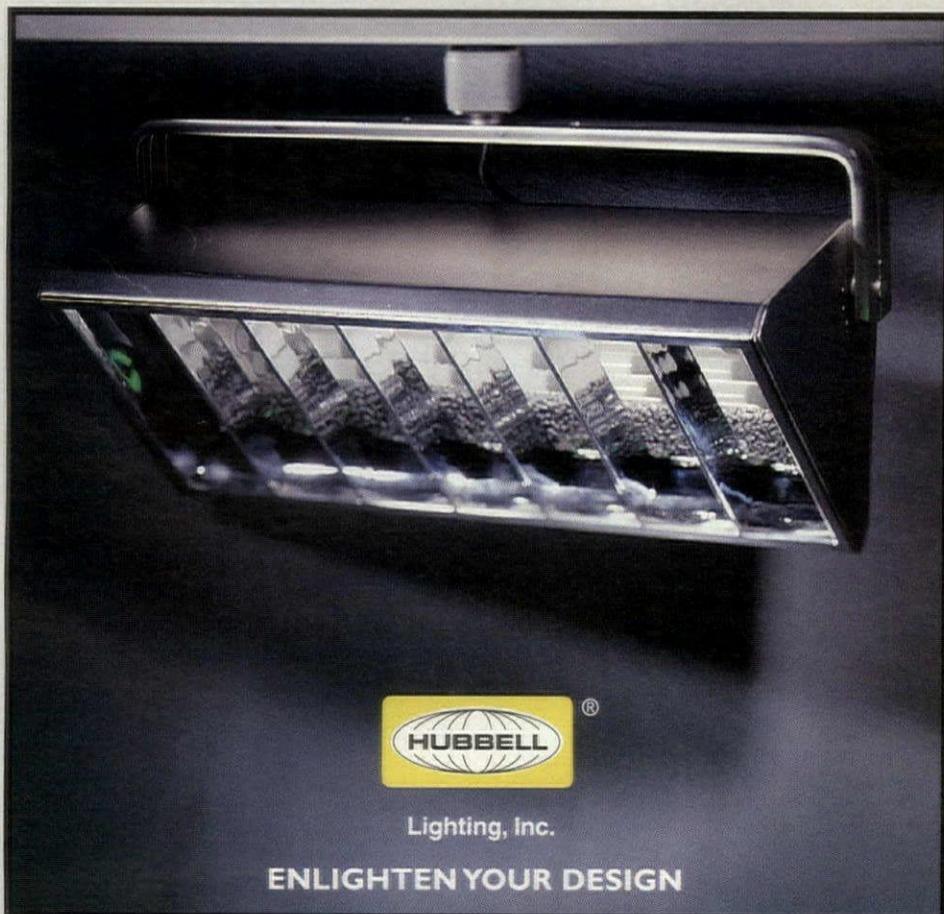
Lighting designers and manufacturers are accustomed to meeting energy efficiency and conservation goals. The Federal Ballast Energy Law of 1988 and the National Energy Policy Act of 1992 established phase-outs of inefficient ballasts and low-efficacy lamps. The IES/ASHRAE Standard 90.1 sets lighting energy use limits by space type and is under continual review and improvement. Along with utility demand-side management rebate programs and the Environmental Protection Agency's (EPA's) Green Lights program, these measures have helped transform the industry. Smaller, more-efficient technologies such as T8, T5 and compact fluorescent lamps, high-intensity discharge sources, electronic ballasts and programmable control systems became standard tools in the 1990s and today.

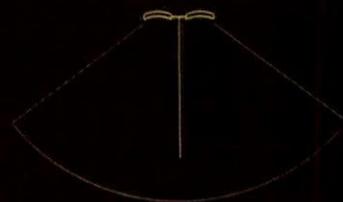
This emergence of energy-efficient lighting technology has had great environmental benefit. According to EPA Green Lights (now part of EPA Energy Star), since

Design with light.

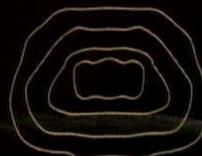
Hard. Yet soft. Tough. Yet expressive. A family of downlights with the look and feel of stainless that's flexible enough to let you light walls (in quartz or fluorescent), work areas, counter tops, displays, offices and homes. Talk with us.

Hubbell Lighting, Inc., 800-270-3737. Visit our web site at www.hubbell-ltg.com.





Sharp cutoff of lamp output eliminates trespass



Five highly efficient, uniform distributions



HID lamps to 1000 watts



18" & 13" discretely silhouetted forms

Gullwing by



INVISIBILITY

Towards "Greener" Lighting

its inception in 1991 through 1998, its partners saved energy through lighting upgrades that would have otherwise resulted in more than 5.1 billion tons of CO₂ emissions from power plants. Dozens of lighting manufacturers and service companies have joined Green Lights as Allies, an indication of the industry's support of green design and technology.

HAZARDOUS MATERIALS REDUCTION

The lighting industry has had to pay a great deal of attention to toxic materials used in ballasts and lamps. The Toxic Substances Control Act (TSCA) of 1976 outlawed the use of polychlorinated biphenyls (PCBs), which are carcinogenic. Ballasts manufactured before 1979 contained PCBs in the potting compound. TSCA requires that PCB ballasts be handled and disposed of as hazardous waste. This has been a particularly serious issue for utilities, energy service companies, specifiers and their customers working on lighting upgrade and retrofit projects during the past two decades.

Similar handling and disposal issues have arisen regarding fluorescent lamps which need a quantity of mercury for proper operation and longevity. Mercury is regulated by EPA under the Resource Conservation and Recovery Act (RCRA). Bulk disposal of used lamps is subject to the Toxicity Characteristic Leaching Procedure (TCLP) that determines how those particular lamps must be handled. This is a costly procedure with inconsistent results. EPA has recently expanded the Universal Waste Rule (UWR) to streamline the classification and handling of non-TCLP-compliant lamps, which encourages recycling.

The lamp industry responded by developing reduced-mercury fluorescent lamps, indicated by green end-caps, to meet TCLP requirements. Philips came first with its Alto series, closely followed by Osram Sylvania's Ecologic series and General Electric's Ecolux XL series. There has been some sharp debate among these manufacturers about which company's lamps are the most environmentally responsible and whether the UWR is effective. However, all fundamentally seem to agree that recycling is the best way to dispose of lamps.

Said Paul Ratliff, sales engineer for Osram Sylvania, "We make lamps that pass the TCLP test, but we take the position that lamps should always be recycled regardless of the mercury content."

Lamp manufacturers are among the biggest players in the electrical equipment industry. They are also suppliers to the automotive industry and the European market, where proven environmental management is a requirement. Therefore, major lamp manufacturers—including Philips, GE and Osram Sylvania—make a point of stating their environmental commitments on their websites and marketing materials.

In January 2000, NEMA released the fourth edition of its *Environmental Impact Analysis: Spent Mercury-Containing Lamps*. This study concluded, "Due to aggressive manufacturer and regulatory activity, disposal of mercury-containing lamps is an insignificant contributor of mercury to the environment." NEMA statistics indicate that of the 158 tons of mercury released in the United States in 1999 (only 3 percent of total global releases), only 1.1 tons from lamps. This is a 70-percent improvement since 1990, projected to be a 90-percent improvement by 2004.

PCBs and mercury are hot-button, public-health issues that the industry has seriously addressed. But Osram Sylvania's Ratliff echoes an observation that EPA and NEMA have also made, that "We believe that reduced-wattage, improved-output lamps that save energy have much greater environmental benefit than just reducing the mercury."

OTHER IMPROVEMENTS

Other technological improvements, driven by energy and environmental regulations, have had other, less publicized environmental benefits:

- Smaller, more precise lamps mean smaller fixture housings and less overall material use.
- Improved color rendering and optical control mean fewer fixtures to achieve better results.
- Cooler, quieter ballasts mean less air-conditioning load and ambient noise.
- More-reliable control devices save energy and enable better daylighting integration.
- New process and packaging techniques can substantially reduce material waste.

But these benefits can be difficult to quantify and are not yet key drivers of lighting design or specification decisions. "Part of our approach to quality manufacturing is to make it environmentally-friendly, too," said Amir Bagherlee, VP of U.S. Operations in Ft. Lauderdale for Copenhagen-based Louis Poulsen Lighting. "It started by meeting European requirements in our Denmark facility, but it goes beyond just complying with the codes." The facility has practically no pollution emissions. It uses a 100-percent recyclable powder painting process. It attempts to reclaim and recycle all of its manufacturing process metals and materials as well as filtering and reusing most of its process water.

Even though Louis Poulsen publicizes its environmental manufacturing approach, Bagherlee points out, "It is admired by specifiers, but it is not yet a criterion for specification."

MANUFACTURING GETS GREEN

Many manufacturers have found that good environmental management just makes good business sense in a variety of ways. "Our plant is in a nice Westchester County (Mamaroneck, NY) neighborhood, so we have always tried to be environmentally-minded for the good of our community," said Ira Minkoff, national sales manager for Nessen Lighting. "For example, although we still use wet paint to achieve the look we want for our fixtures, we contain all of our waste paint and have it picked up for recycling by a specialty contractor."

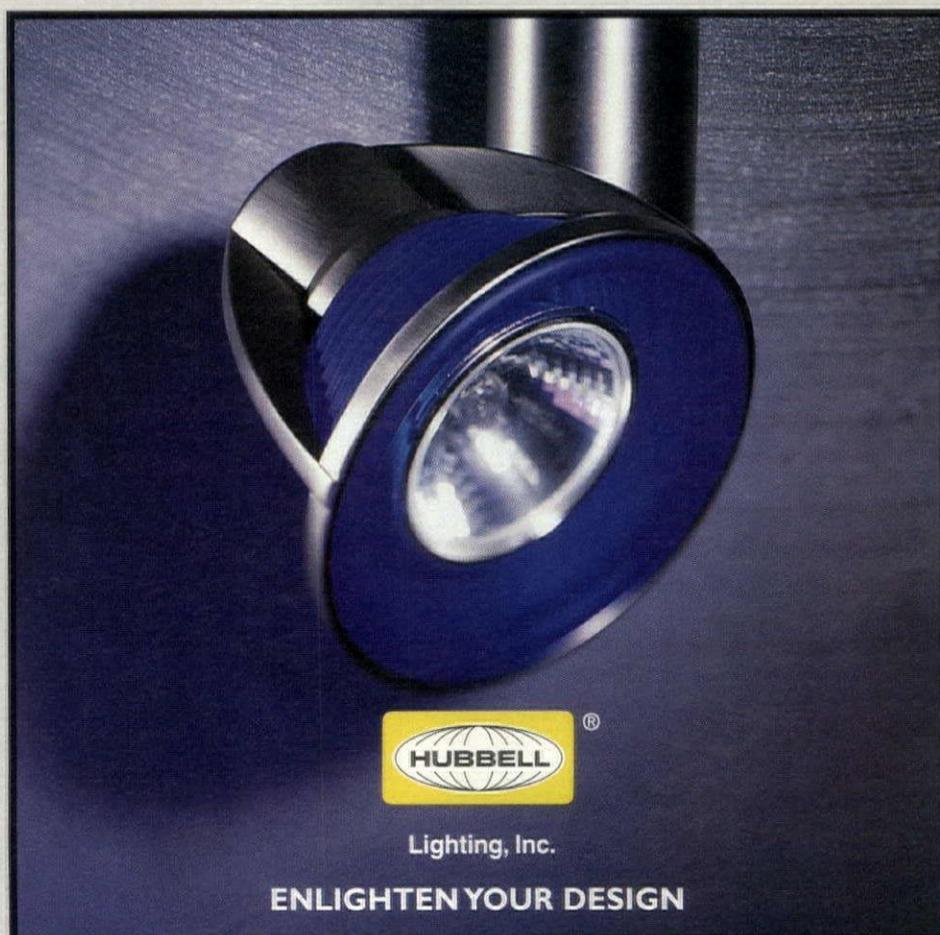
A key to minimizing waste is to use durable materials to prevent unnecessary replacement. "We try to make sure that our fixtures never make it to the landfill," said Teika Illumination president Jim Druffel, based in Templeton, CA. His philosophy is that sustainability and durability are synonymous, so his exterior luminaires are constructed of materials such as copper, brass and bronze for their longevity, value retention and ultimate recyclability.

Powder coating, a non-hazardous material that uses no solvent, has been enthusiastically implemented by many manufacturers. Metalumen changed over to an automated

Design with light.

Hard. Yet soft. Tough. Yet expressive. A family of downlights with the look and feel of stainless that's flexible enough to let you light work areas, walls, counter tops, displays, offices and homes, with etched or smooth glass shades, metal shades and barn doors. Talk with us. Hubbell Lighting, Inc., 800-270-3737.

Visit our web site at www.hubbell-ltg.com.



Lighting, Inc.

ENLIGHTEN YOUR DESIGN

powder paint coating system about four years ago. The company found it to be more durable with less waste, because they can reclaim and recycle all the unused powder.

Solliday noted, "The color change-overs take a little longer, but we are saving about 20 percent of our costs in otherwise wasted paint. We no longer have the cost of handling wasted wet paint as hazardous waste and the air quality in the factory has greatly improved."

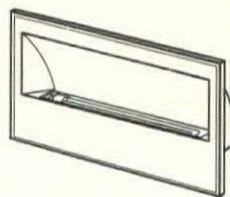
At Zumtobel Staff, based in Highland, NY, Allison Craig, marketing communications manager, reported, "We recently invested in a \$1.5-million state-of-the-art

powder-coating system. It has made us a practically zero emission facility." According to Craig, the company has found that the system improves quality assurance and eliminates the need for outside vendors to handle and dispose of waste paint. Ron Dixon of Zumtobel Staff's chief production office added, "When it comes to payback for powder coating, you have to look at it a little differently." He explained that powder coating provides a more durable, even finish, thereby drastically reducing damage and ensuring customer satisfaction.

For some companies, environmental performance is integrated into its entire process. "Osram Sylvania makes reduced-mercury and mercury-free lamps," said Ratliff. "We use lead-free soldering and welded base connection techniques to reduce or eliminate lead in the process. In the factory, we have comprehensive recycling programs to reclaim waste glass and metal. We use recycled content cardboard and soy-based inks for packaging." At Bega, environmental measures have been similarly integrated, from the powder paint system to the use of biodegradable, potato-starch "popcorn" used to cushion its luminaires in transit.

Our fixtures are so highly coveted,
that when customers buy them...

they promptly hide them.



Our 'Hole in the Wall' fixtures are plaster/fiberglass castings. They illuminate your space without calling attention to themselves. Call us for more information at 626.579.0943 or visit our website at www.elplighting.com.

**ENGINEERED
LIGHTING PRODUCTS**

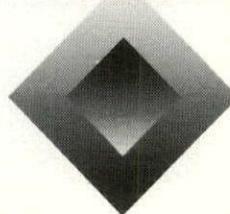


Photo by Mark Dell'Aquila

Circle No. 20

Lighting designers can influence change by:

√ Designing systems that integrate daylighting and use durable, energy-efficient fixtures, lamps, components and controls.

√ Specifying lighting equipment from manufacturers that have stated environmental management goals and use environmentally responsible methods and materials.

√ Specifying locally manufactured equipment, if possible, to reduce transport energy use and packaging requirements.

√ Designing well-controlled exterior lighting to prevent light pollution and light trespass.

Manufacturers can have an impact and position themselves as environmentally responsible by:

√ Publicizing their environmental goals and accomplishments.

√ Using durable, non-toxic, environmentally friendly materials.

√ Using energy-efficient, pollution-preventing manufacturing processes.

√ Minimizing packaging and using recycled/recyclable materials to reduce shipping weight and waste.

√ Making catalogs available on electronic media to reduce printing, paper and shipping waste.

√ Providing proactive environmental performance information to lighting designers, engineers, architects, interior designers and other specifiers.

At Zumtobel Staff, Craig said, "Our concern for the environment is part of our corporate mission statement." Published on their website, it reads, "With light we want to create worlds of experience, to make work easier, to improve communication and safety in full awareness of our responsibility to the environment." Said Craig, "In addition to continually optimizing our manufacturing processes, we also design our products for long-life, energy efficiency, low maintenance and easy installation, thereby minimizing the use of energy and materials."

This kind of thinking extends beyond the manufacturing process. On a different front, Zumtobel Staff gained favorable local and national press coverage for its installation of a natural water treatment facility. Facility expansion was being constrained by an undersized private septic system. The company was at the point of considering relocating away from Highland, NY. But an environmentally-sound alternative was brought to their attention.

"The local sewer system is headed by a progressive director, John L. Jankiewicz, who researched a system in Ecuador," said Craig. "We ended up installing a natural attenuation marsh near the parking lot that more than handles all of our expected waste water treatment needs." The system is a constructed wetlands that naturally filters wastewater through vegetation, providing an ecologically-sound solution at a fraction of typical wastewater treatment costs.

Whether it is out of a feeling of community responsibility, a desire to gain recognition or to get bottom-line results, lighting manufacturers are investing in environmentally-responsible systems and technologies. It will be up to designers and consumers to reward this new attitude with their specifications and purchases. Maybe, after all, it is easy being green. ■

Mark Loeffler, LC, based in New Haven, CT, is the lighting and sustainable design practice leader for ThermoRetec Consulting Corporation, an environmental management consulting firm headquartered in Concord, MA.

Websites to check out ...

Illuminating Engineering Society
www.iesna.org/

National Electrical Manufacturers Association
www.nema.org/

EPA Energy Star Program
www.energystar.gov/

Energy Star/Green Lights Building Program
www.epa.gov/buildings/esbhome/

Legislation overview
www.lightsearch.com/resources/lightguides/legislation.html

Lamp and ballast disposal overview
www.lightsearch.com/resources/lightguides/wastedisposal.html

US Green Buildings Council
www.usgbc.org/

Environmental Building News
www.ebuild.com/

International Association for Energy-Efficient Lighting
www.iaeel.org/



ZOOMS

Imagine. . .

projecting any pattern,

any color,

any size,

from 15 to 40 degrees.

ZOUNDS !

For a BP75 information kit,

send your letterhead to:

Lighting Services Inc

2 Kay Fries Drive

Stony Point, NY 10980

(800) 999-9574



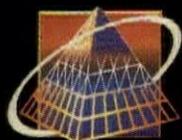
www.LightingServicesInc.com

From **Bricks** To **Clicks**

e-solutions for the **AEC Industry**

Click by click, all the best design and construction firms are building business on new virtual ground. Where do they get the blueprints? From the interactive exhibit and conference that showcases the most important technologies for the AEC industry.

See and test new software and hardware. Hear from the visionaries of your time. Get connected with your peers. All in the world capital of high technology. Register today on the Web at www.aecsystems.com



A/E/C SYSTEMS 2000

Conference: June 5-8 Exhibit: June 6-8
Washington Convention Center • Washington, D.C.
www.aecsystems.com
info@aecsystems.com • (800) 451-1196

Produced by A/E/C SYSTEMS International, a Division of  Penton

All Exhibitors Are Manufacturers

CELF 2000

CHINA EXPORT LIGHTING FAIR

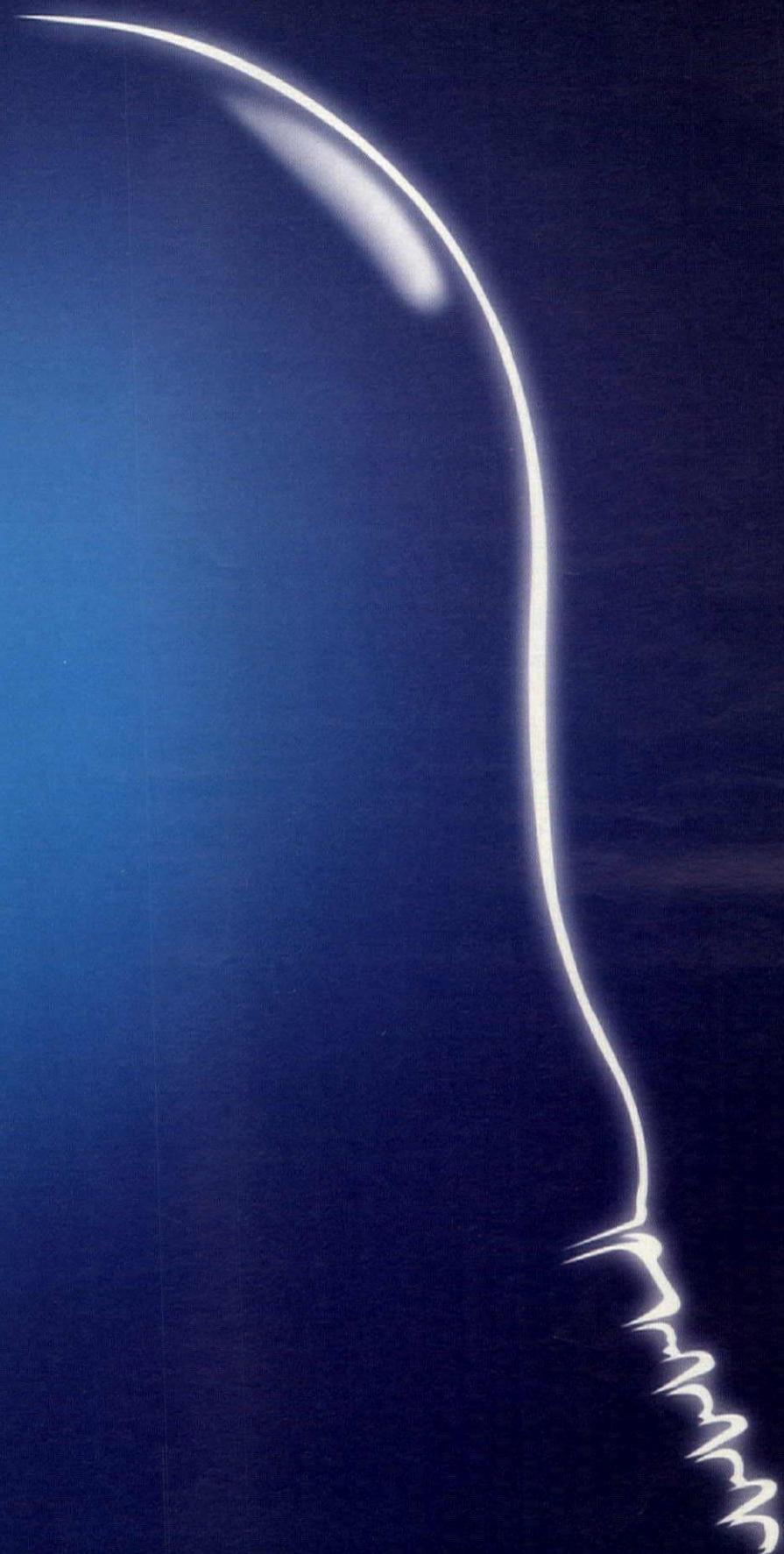
2000 中國出口燈飾展

OCTOBER 10-13, 2000

2000年10月10-13日

Hong Kong Exhibition Center

香港展覽中心



CHINA
MEDIA

龍媒展覽

M2M.com.cn

Name _____

Company Name _____

Address _____

_____ Zip _____

_____ Fax _____

_____ Website _____

I am interested in visiting CELF2000

I am interested in exhibiting at CELF2000

For further information, please complete and return this form to :

China Media
 Rm. 1615-1616, 16/F
 International Bank Tower
 191 Dongfeng Rd. W.
 Guangzhou 510180
 P.R. China
 Tel: +86-20-81351998
 Fax: +86-20-81351401
 E-mail: tygg@chinamedia.org
 www.M2M.com.cn

Lightsearch.com: Lighting Industry Directory an...

Address:

lightsearch.com™
inter.Light®

April 5, 2000 The Source for Lighting Specifiers & Buyers

Search by Keyword

Company Name
 Product Type

Search by Category

Manufacturers	Fixtures	Commercial
Distributors	Lamps (bulbs)	Industrial
Design Firms	Ballasts	Institutional
Services	Controls	Residential
Associations	Components	Entertainment
Schools	Instruments	Roadway
International	Software	Daylighting

Industry News

New Products	News & Editorial
Calendar	Jobs

Site Information

List a Company	Advertising
Update a Listing	Site Guide
User ID	About Us

Marketplace Resources

Buy Fixtures	Light Guides	Books
Buy Bulbs	Projects	Magazines
Buy Controls	Articles	Awards
	Interviews	Trade Shows
	Discussions	

lightsearch.com ©1996-2000 inter.Light is a registered service mark of inter.Li

**Find the lighting
you need . . .**

Fast

Why do more lighting specifiers use
Lightsearch.com?

Simple. There is no other web directory that can
give you instant access to over 6200 lighting
companies including 4200 manufacturers.

You can conduct detailed searches, view
products, order catalogs and link to company
web sites. All free. All fast.

Product Search: Outdoor Fixtures: Landscape/Path...

Address:

Outdoor Fixtures: Landscape/Pathway: Low Mount

Select Fixture: (see Fixture Glossary)

(Optional) Light Source:

- in-grade (recessed)
- in-grade (recessed, fiber optic)
- in-grade (semi-recessed)
- in-grade (drive-over)
- low mount (path light)
- low mount (path light, fiber optic)
- low mount (flood or spot)
- low mount (elongated flood, adjustable)
- bollard (standard)
- bollard (standard, fiber optic)
- bollard (mini)
- bollard (mini, fiber optic)

Resources

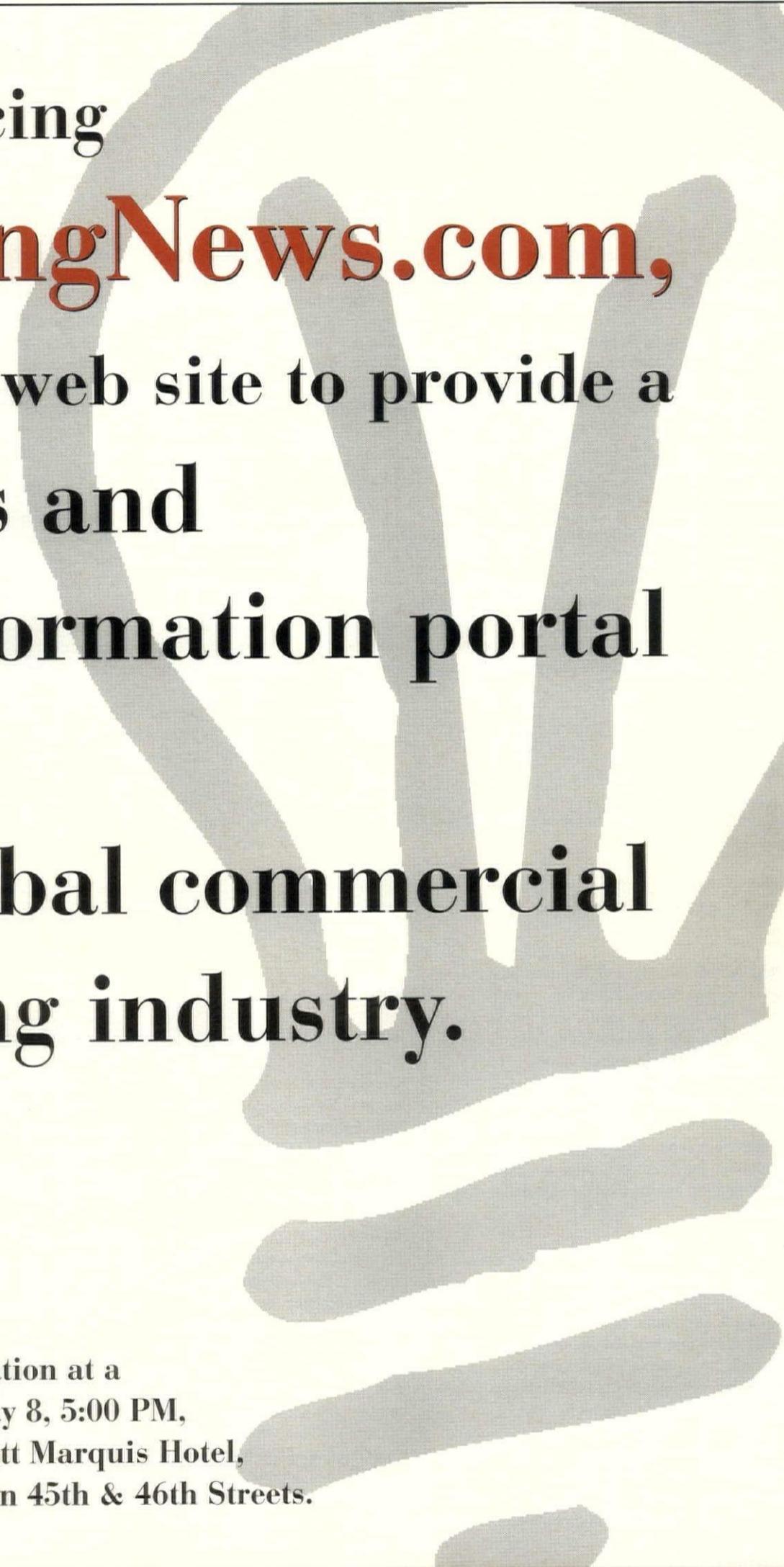
Standards

- [The Energy Star Light Fixture Program](#)
- [Special Lighting: Creating Dynamic Spaces](#)
- [Outdoor Lighting Pattern Book](#)
- [Landscape Lighting Book](#)
- [er.Lighting](#)
- [Document for Landscape Lighting](#)

Lumiere / Brand of Cooper Lighting:

- [order Catalog](#)
- [go to Web Site](#)
- [view More Products](#)
- [view Company Profile](#)

www.lightsearch.com



Introducing
LightingNews.com,
the first web site to provide a
news and
information portal
for the
global commercial
lighting industry.

Join us for a demonstration at a
press conference on May 8, 5:00 PM,
at the New York Marriott Marquis Hotel,
1535 Broadway, between 45th & 46th Streets.

LightingNews.com

The Global Newsplace
for the Commercial Lighting Industry

Press inquiries: Leslie Jay (212) 856-5110

Defining the Language

BY STEPHEN BLACKMAN

Every industry has its own special terminology that outsiders don't understand. But in the lighting field, the technical jargon is sometimes confusing if not incomprehensible even to lighting industry insiders.

In a never ending battle to promote the advantages and technical superiority of their products, manufacturers are increasingly turning their efforts to enhancing ad copy and pouring on the technical jargon in specification sheets. The idea is to impress specifiers with the image of quality and high technology. Some of this jargon is true and impressive, and some is just over-hyped copy.

There are also many time-honored catch phrases that are put in every lighting catalog and are never questioned but are nonetheless rarely understood by the very people who are specifying these fixtures.

This article offers a brief glossary of many of these terms with an explanation in plain English as to what they mean and specifically how these attributes should affect fixture specification. Check out the two "sample specifications" on the opposite page—the highlighted words correspond to the definitions below.

DESCRIPTION TERMINOLOGY

CRT Cathode Ray Tube, what is now called a computer monitor (see VDT).

Low Brightness This usually refers to a reflective surface that doesn't produce an intense glare (or brightness) when looking directly at it.

Photometric Optimization When fixture manufacturers engineer lamp positions, reflectors and/or louver profiles ensure that the maximum amount of light leaving the lamp(s) will end up in the task area, as opposed to being trapped inside the fixture or bouncing uselessly around the room.

Rainbowing An effect that happens with certain types of fluorescent lamps (especially high-color-rendering triphosphor lamps) are used with certain types of lower-end anodized aluminum reflectors and louvers. It causes a noticeable and unacceptable rainbow reflection on the anodized surfaces of the fixtures.

Troffer As the name implies, troffers are trough-shaped recessed ceiling fixtures (the term is derived from the terms "trough" and "coffer.") They usually contain fluorescent lamps and have an open surface flush with the ceiling. A parabolic troffer refers to a recessed fixture that has a louver with a parabolic cross section. The parabolic shape redirects light rays from the light source into parallel rays that shine in a controlled fashion into the room.

VCP Visual Comfort Probability. This is a fixture rating system that determines how many people would, when viewing this fixture, find it to have low glare and be comfortable to work near. The higher the number or percentage, the better.

VDT Video Display Terminal, what is now called a computer monitor (see CRT).

MATERIALS TERMINOLOGY

20Ga CRS 20-Gauge Cold Rolled Steel. This is the most common type of steel used in the lighting industry. Cold rolling indicates that the steel is not heat-treated or hardened, which allows for easy forming, piercing, stamping or shearing when manufacturing a lighting fixture. Twenty-gauge CRS is in the general range of 0.036 in. in thickness.

16Ga. Galvanized Steel A steel commonly used in internal or unseen functional parts of a fixture. This metal is used because it doesn't require finishing or painting. Steel is galvanized by applying a layer of zinc to the raw metal sheets. This process helps preserve the material and prevent it from rusting. Sixteen-gauge equals about 0.060 in. thickness.

Clear Specular Alzak Reflector Alzak is a registered trademark, originally of Alcoa. This is a proprietary anodizing process that allows maximum light reflection from the reflective surface with low brightness and glare.

Code Gauge This is a catch-all term used by many people to refer to the gauge of metal used in a fixture—acceptable to the certain prevailing national electrical or local code requirements for fixture construction.

Pre-Anodized Aluminum Anodizing is one of the most common finishing processes done to aluminum in the lighting industry. Anodizing is a controlled oxidation process that occurs when aluminum is exposed to an electrically charged chemical bath. The end result is a hardening of the surface to resist abrasion and corrosion with an added protective transparent layer to preserve the decorative natural aluminum finish. Anodizing can also produce colored or dyed finishes that are locked into the aluminum surface. Pre-anodizing is usually performed on the raw coil of aluminum before it is fabricated into a louver or reflector.

Semi-Specular This refers to the image one would see in a reflective surface. A true specular reflector would act similar to a mirror where one could clearly see the reflective image. A semi-specular image would produce a more diffuse, less clear and a less glaring image, which is a desirable type of reflector used in a lighting fixture.

FABRICATION PROCESSING TERMINOLOGY

Die-Formed Manufacturers use die-forming to ensure highly accurate mass-produced parts at low cost. Die-forming uses large, high-tonnage presses with precision-formed and hard-stamping dies to pierce and bend the metal material. These large automated presses rapidly and economically produce complicated sheet metal parts with a high quality of fit.

Hydro-Formed This forming process allows the precision production of non-round asymmetric difficult-to-form reflector shapes. It allows designers to optimize reflector performance for non-centered lamps or fixtures that produce specific directional photometric properties.

Die-Cast A process that usually involves the high-pressure injection of zinc or aluminum into a hardened mold to produce a highly accurate part with high strength and detail.

FIXTURE PARTS TERMINOLOGY

Louver A series of baffles arranged in a geometric pattern used both to shield a light source from an unwanted viewing angle and to redirect the remaining light to a more usable location.

Luminaire A complete lighting fixture.

Protective Dust Guard After fixture installation, this dust guard is a plastic film placed on the decorative faces of the reflectors and louvers (unfortunately, many end-users forget to take it off upon installation, impairing reflector performance).

Wireway Cover A cover of a fluorescent fixture that usually encloses access to the splice compartment and the ballast location.

FINISHING TERMINOLOGY

Baked White Enamel A common paint finish that is applied in a "wet" form and applied with a gun or automated sprayer. The paint is usually attracted to the metal part electrostatically to prevent excessive paint overspray. The paint is finally baked on for maximum adhesion. The final paint thickness is usually 0.7 to 1.1 mm when dry.

Five-Stage Iron Phosphate Pretreatment The standard process required to best prepare sheet steel for painting. The initial phase uses a high alkaline base bath to remove oil deposits and take out stains. The next stage is a water bath, then an iron phosphate acid bath to etch the metal to prepare it to accept and hold the paint well; then another water bath. The last stage is a sealer that does the final cleaning of the metal and makes the water droplets completely run off the surface to eliminate any moisture from remaining and combining with the final painted surface.

Powder-Coated Finish This process is used when a tougher, more durable paint coating is required. The final paint thickness is up to 2.25 to 2.5 mm when dry. The paint is a dry resin powder that is applied with a special spray applicator. The powder is electrostatically attracted to the charged metal surface being painted. This process has many similarities to the baked white enamel (see above), although it is a more expensive process. It is used on parts that see more handling or wear-and-tear and on parts that need better weather resistance.

ELECTRICAL & SAFETY TERMINOLOGY

#12AWG 90C Conductor This conductor (or wire) is a No. 12 size American Wire Gauge electrical wire. It is equal to 0.095 in. diameter with an insulation that can withstand up to a 90°C (194°F) temperature.

AWM/THHN Wire Appliance Wiring Material (AWM) is common internal fixture wiring. THHN wire is rated at 90°C and can carry up to 600 volts; it is a heavier nylon jacketed wire (for use in dry locations) that can be used in connections with building wiring.

Damp Location/Wet Location In general, damp location fixtures can be used in areas where a certain level of humidity is present but the fixture itself does not come into contact with water (such as an exterior building soffit). Wet location fixtures allow some contact of water with the exterior of the fixture. Vaportight fixtures allow the fixtures to operate in a very high humidity application like a shower stall.

Power Whips/Modular Wiring Power whips are simply armored wire cables that are factory-installed so an electrician can connect several nearby fixtures to one common junction box instead of bringing electrical service to every individual fixture in a large ceiling area. Modular wiring is a specially designed cabling system that allows electricians to easily connect a entire series of lighting fixtures using a modular connector plug that easily fits into a mating receptacle specially mounted in each fixture.

Tandem Wiring/Master Slave Wiring Tandem wiring is when two (or more) fixtures are attached together and wired into only one fixture but then internally wired to the other(s). Master Slave wiring is when the electrical power is brought into one fixture (master) and the ballast of that one fixture controls the lamps inside other nearby similar fixtures (slaves). A long run of strip lighting can benefit from such a configuration. This is especially true when the electrician would only have to replace one multilamp ballast instead of three when the fixture ballast requires maintenance.

of Fixture Specifications

ABC LIGHTING INCORPORATED

Parabolic Troffer Series
P2448 2x4
4-in. Deep Louver/ 2,3,4 lamps

Description A new family of high performance 2x4 recessed deep-cell parabolic troffers designed to maximize the output of T12/ T8 lamp and ballast combinations. This low-brightness troffer provides especially good lamp cut-off and is particularly applicable to areas with high VDT (CRT) usage. Computer photometric optimization has led to a more efficient parabolic luminaire with a high VCP, good glare control and optical performance. These fixtures come with optional heat removal dampers and air pattern control blades that allow enhanced airflow control. T-hinges are die formed for maximum strength. Latches are spring loaded, concealed in reveal.

Construction Each fixture housing is die-formed from heavy code gauge or optional 20-gauge CRS. Ends and housing parts are securely riveted into place. Reflecting surfaces of body and reflector/wireway covers match precise parabolic contours of louvers. Louvers are constructed of semi-specular low-iridescence pre-anodized aluminum. All parabolic louvers are accurately held into place with interlocking construction and louvers feature mitered corners. Fixtures come packaged with a protective film dust guard.

Finish Five-stage iron-phosphate pretreatment allows excellent paint adhesion and rust resistance. Finish paint coat is a high reflectance baked white enamel. Provides a reflectivity of 86% or higher.

Wiring And Electrical Fixture conforms to UL 1570 and is suitable for damp locations. AWM or THHN wire is used throughout and is rated for required temperatures. All electrical components are UL-approved. Standard wiring, tandem wiring and master-slave wiring are available. Factory-installed fixture power whips and modular wiring systems are available as specified.

Ballasts All supplied ballasts are Class P rated HPF (high power factor) non-PCB CBM-certified ballasts. They comply with the Federal Ballast Law (Public law 100-357,1998). Each is a thermally protected and resetting type. Energy-saving and electronic ballasts are sound rated A and have a THD of less than 20%. Ballasts are also CSA-certified and pass UL 935. Magnetic ballasts are also available. (Specify voltage 120V 60Hz AC or 277V 60Hz AC.)

Labels Luminaires bear appropriate UL and CUL recessed fixture labels. Optional CSA certification and NOM-labeled fixtures are available. IBEW-made and labeled.

Listings NYC Code—For products that meet NYC Code requirements. Chicago Plenum—For products that meet Chicago Plenum requirements.

XYZ LIGHTING CO. INC.

8-in. Horizontal Quad Open Reflector Downlight
6QCF 18/26W single- or double-quad lamp

Description A series of low-brightness downlights for use with 18W and 26W quad CFL. Provides wide beam distribution and highly efficient delivery of uniform illumination with excellent color rendition. The precisely formed non-imaging optical reflector ensures equal cutoff to lamp and lamp image, and offers unparalleled glare-free performance. This series offers visual comfort suitable for most general lighting.

Reflector Precision hydro-formed 0.050 aluminum, with clear specular Alzak low iridescent finish for eliminating "rainbowing" while maintaining full light output. Vented to cool lamp. Interchangeable with screw attachment.

Trim Self-flanged with matte white powder-coated finish. Covers ceiling opening without light leaks.

Mounting Frame Precision die-stamped plaster frame of 16-Gauge galvanized steel. Has universal mounting brackets with 3 1/2 in. of vertical adjustments. Ballasts and galvanized metal junction box are accessible from below. Friction springs and snap-on precision die cast socket cup ensure correct optical alignment without adjustments.

Sockets Two G24q2 horizontally mounted 4 pin plug-in type sockets ensure correct optical placement. Lamps are tilted for maximum heat dissipation and efficiency.

Electrical Junction box comes with 1/2-in.- and 3/4-in.-diameter pryouts, listed for 8 #12 AWG 90°C conductors.

Ballasts Full light output electronic 120V or 277V HPF thermally protected Class P internally fused; quiet flicker free operation. Soft non-pulsating starting down to 5°F. Power Factor >99%; THD <10%.

Labels UL-listed and CSA-Certified. Non-Type IC fixture. Feed through junction box. Approved for use in dry or damp locations and approved for branch circuit wiring. IBEW-made.

Listings NYC Code—For products that meet NYC Code requirements. Chicago Plenum—For products that meet Chicago Plenum requirements.

UL 1570 Indicates Underwriters Laboratories Inc. requirements for fluorescent fixtures.

UL 935 Indicates Underwriters Laboratories Inc. requirements for fluorescent ballasts.

LAMP & SOCKET TERMINOLOGY

G24q2 This is a designation for a socket for a compact fluorescent lamp. Since there are very many compact fluorescent lamp types and an equal number of socket types, a numbering system was developed to identify the different variations. "G" is the European designation for sockets that accept two or more lamp pins. "24" is the spacing in millimeters between the lamp pins in the base of the lamp. The "q" indicates that this socket accepts 4 (or quad) pins and the "2" indicates that this variation on this socket only accepts an 18W lamp (to prevent users from mislamping the socket, the lamp manufacturers put tabs on the bottom of the lamp base ensure that only the correct wattage lamps are used in that fixture).

T8 or T-8 This is the American lamp designation for a tubular (T) lamp. Linear fluorescent lamps commonly use this lamp designation. The "8" refers to the tube diameter as a number of 1/8 inches (8 "eighths") or one inch in diameter. The European description is T26 (26 mm in diameter). Similarly, a T12 is tubular and 1 1/2 in. or 1.5 in. in diameter. The European description is T38 (38 mm in diameter).

CFL Compact Fluorescent Lamp. These lamps still go by many names and specifications: PL (Philips), Biax (GE), Dulux (Osram Sylvania) and other trade names. A TC (tubular compact) followed by letter(s) is the European system of CFL lamp classification.

BALLAST TERMINOLOGY

120V 60Hz AC 120-Volt Alternating Current is the standard voltage used in many of the residential and light commercial buildings in the United States; most lighting fixtures and ballasts are designed to run on at this voltage level. Hertz (Hz), or cycles per second, is a unit of frequency of electric current. Sixty Hertz is the common U.S. rating.

277V 60Hz AC 277-Volt Alternating Current is a common voltage standard used in many commercial fixture applications in the United States. The higher voltage makes it easier to wire many fixtures together on fewer circuits, making installations easier and simpler. Specially designed ballasts are required for operation at this voltage.

Ballast Used in gaseous discharge systems (fluorescent and high-intensity discharge), the ballast starts the lamps and then regulates the flow of current during normal operation.

CBM Certified Certified Ballast Manufacturers Association certification identifies ballasts that are produced to conform to American National Standard Institute (ANSI) standards.

Class P-Rated Class P is a standard created by UL that indicates it has an internal thermal protection device to protect against overheating, excessive voltage supply, internal ballast short circuiting, inadequate lamp maintenance and improper fixture application. In the event the ballast overheats, the thermal protection device will shut off the ballast until it cools; once it cools sufficiently, the ballast is reconnected to the power supply and it reignites the lamps. If this process continually repeats itself due to a temperature problem, it is called "cycling."

Electronic Ballast These ballasts differ from magnetic ballasts in that they generally consist of a printed circuit board with semi-conductor technology that electronically regulates

the voltage to start and run the fluorescent lamps instead of physically changing the voltage as the magnetic ballast does. Due to the increased level of control, this ballast can operate at a higher current frequency range and send a more precise and efficient flow of voltage through the lamp. This creates a brighter, more efficient lamp operation. Some electronic ballasts include all electronic components, while some include a mix of electronic and magnetic components.

Federal Ballast Energy Law The Federal Ballast Energy Law (Public Law 100-357) was enacted in 1988 as part of the National Appliance Energy Conservation Amendments (NAECA '88). The law set minimum ballast efficacy standards for four major fluorescent lamp types. As of 1991, ballasts submitted for testing by the U.S. Department of Energy and complying with NAECA '88 provisions carry an E symbol on their labels. Ballasts exempt from NAECA included dimming ballasts and ballasts used in areas where ambient temperatures reached 0°F or lower.

Magnetic Ballast Also called an electromagnetic ballast. These are the most basic and oldest type of fluorescent ballasts. The basic construction consists of a core of stacked steel plates wrapped with a coil of copper or aluminum wire (a basic electron magnet) This is then potted in an insulating material such as asphalt to conduct the heat of the ballast outward. The entire assembly is then put into a metal housing to prevent breakdown and shock hazard. Usually a separate starter of various different designs is incorporated into this housing to provide the additional voltage needed when initially starting a fluorescent lamp. Some HID ballasts require an external ignitor.

Non-PCB Ballasts manufactured and distributed in the United States prior to 1979 contain polychlorinated biphenyls (PCBs), which is a hazardous material whose disposal is governed by environmental regulations. Since many magnetic ballasts can enjoy a service life of 25 years or longer, these ballasts are still in existence. If a ballast label is marked "NO PCBs," then it is not a PCB ballast; if there is no such marking, then the ballast is assumed to contain PCB fluid and must be treated according to all applicable regulations.

Power Factor Power factor is a measure of how well the ballast uses the input voltage and current that is provided to generate the power that is actually delivered to the lamps. It is not an indication of how efficiently it runs the lamps, but a measure of ballast operating efficiency. Low power factor ballasts require a "higher" operating current and tend to put more "load" on the circuits in a building; in larger buildings, even the feeder lines from the electrical utility can be "loaded down." Therefore, electric utilities encourage the use of high power factor ballasts and penalize building owners for heavily loaded circuits. Another reason why specifiers need to know about power factor is that the more inefficient the ballast is in using the current supplied to it, the "heavier" the wire that is necessary to supply this "current thirsty" ballast. A specifier can place more fixtures with high power factor ballasts on individual circuits than with normal (low) power factor ballasts. High power factor ballasts are those with a rating of greater than 90 percent (0.90).

Resetting Type Refers to the thermal protection circuitry inside the ballast. Most ballasts that are Class P-rated will have an automatically resetting type of thermal protection that will restore the ballast to normal operation once the event that caused the shut down has passed (see Class P Rated above).

Sound Rating This rating is more commonly associated with magnetic ballasts where vibration caused by the inherent magnetic action in the core and coil produces a hum. Sound rating "A" is the best and quietest and is used for most indoor installations.

THD Total Harmonic Distortion. This term describes distortion that sometimes occurs when the need for current is not in equilibrium with the supply of this current. On one side, a fluorescent lamp can draw short pulses of current instead of asking for a constant supply of current. On the other side, when turning on a ballast, a large in-rush of electric current can occur. The ballast between the lamp and the supply current is trying to balance the needs of the lamp with the amount of current it is receiving at that moment. Low THD ballasts can also be compared to surge protectors because they act to protect themselves and other electronic components by preventing power surges. This is not a major problem for most ballasts and in most applications. In larger buildings with many fluorescent fixtures, however, THD can present a significant problem and if not precalculated and controlled can possibly overload the normal flow of current in the system. The lower the THD rating of the ballast, therefore, the better (below 20 percent is preferred).

LABEL TERMINOLOGY

CSA Canadian Standards Association is the testing authority for ballasts and electrical products used in Canada, similar to UL.

CUL UL certification of testing to Canadian UL standards.

IBEW Union Made International Brotherhood of Electrical Workers. This label represents that the fixture it is attached to is union-made. It is useful on larger construction jobs where the use of union-made products is encouraged. Job sites in certain larger cities strongly encourage the use of fixtures made by specific local unions.

IC Fixture Insulated Ceiling Fixtures are allowed to be placed against and surrounded by building insulation material commonly found in areas such as residential attics.

NOM The Mexican standards testing agency similar to UL.

UL Underwriters Laboratories, an independent non-profit organization that tests products for public safety. Through use of study experimentation and testing, their mission is to prevent the loss of life and property from the hazards of fire, casualty and crime.

LISTINGS TERMINOLOGY

NYC Code A set of fixture requirements regulated by the government of New York City. It assigns a Calendar Number to every manufacturer's fixture submitted; this number is required before installation. The highlight of this code is that it requires fixture manufacturers to build their fixtures of 20-gauge steel material or better and attach these parts with approved mechanical fasteners to ensure better fixture strength and integrity.

Chicago Plenum A requirement for all lighting fixtures that will be installed in the City of Chicago. The main feature is that any fixture installed in a ceiling air plenum (the space between the finished or suspended ceiling and the main structure above) needs to have special gasketing to completely enclose the junction box, splice compartment or fixture wireway to avoid electrical sparking, fire or other hazardous situations that might encroach into the ceiling plenum or room below. ■

Stephen Blackman is principal of Blackman Design Associates Inc. in Florham Park, NJ.

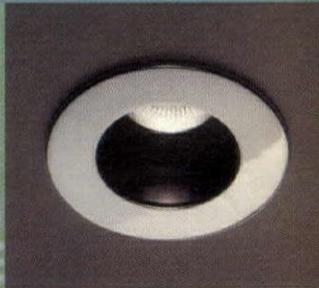
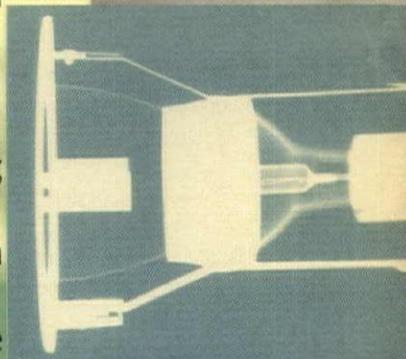
a new way to look @ lucifer

www.luciferlighting.com

A clearer vision. An in-depth view. Now Lucifer Lighting Company is online. Visit our website to see the entire product line, breathtaking application imagery and a wealth of comprehensive product specifications.

Inside and out, Lucifer Lighting Company's newest lighting solutions are as beautiful as ever. At right: **Calyx**, a petite glowing sconce, lit by fiber optics. Low-voltage **Basso**, a deeply recessed downlight, using Par or R lamp and multiple effects devices. At left: **Stria**, a compact low-voltage linear fixture that surface mounts or recesses flush to walls, ceilings and coves.

Calyx



Basso

Stria

www.luciferlighting.com

See us at Lightfair, Booth 1047

1-800-879-9797

Fax 1-210-227-4967

©2000 Lucifer Lighting Company. All rights reserved.

LUCIFER
LIGHTING COMPANY

Circle No. 24

Guidelines for Specification Integrity

The International Association of Lighting Designers (IALD), in conjunction with the Lighting Industry Resource Council (LIRC), has developed the following Guidelines for Specification Integrity, which suggest actions specifiers can take to build and preserve a specification of high integrity.

These guidelines provide specific information for specifiers on how to write specifications with clarity and precision. The guidelines also provide information about how to communicate with clients, manufacturers and manufacturer's agents concerning their standards of quality for lighting equipment to ensure that recommendations apply to every phase of a project's development—from the preliminary design phase through completion of construction.

I. Foundation Elements for Building a Quality Specification

A. Work to develop a lighting equipment specification database.

1. Establish categories for the key luminaires (lighting fixtures) you specify, classifying them according to location, source and function or application (e.g., recessed incandescent downlights, pendant fluorescent uplights, exterior metal halide floodlights, etc.).
2. Develop a standard luminaire typing system to organize your lighting equipment.
3. Develop a master luminaire schedule or database that identifies acceptable products by manufacturer and specification number.
4. Track project pricing information in this database, allowing you to develop a history of unit price information that will be beneficial in evaluating lighting budgets for future projects.
5. Update your databases on a regular basis.

B. Establish clear and defensible standards of quality for the lighting equipment you specify.

1. Determine your interpretation of differing specification project grades.
2. Foster dialogue with fellow design professionals to assist your development of quality standards for lighting equipment.
3. Develop and use a checklist of product performance evaluation criteria including:
 - Photometric performance
 - Aesthetics
 - Construction materials and integrity
 - Finishes
 - Energy consumption
 - Manufacturer's support
 - Delivery
 - Long-term availability and service
4. Brief your local manufacturers' agents on your preferences concerning products and lighting equipment standards.
5. Adopt and maintain a company policy regarding specification integrity. Write a policy statement on lighting specifications to be distributed to your design clients, key project decision-makers and other project team members.
6. Meet with key representatives of your local manufacturers' agencies to discuss your policy and how to work together to maintain the integrity of your lighting specifications.

C. Get to know the lighting products you specify.

1. Encourage manufacturers and their agents to visit your office with working sample products, not just catalogs. Use these visits to evaluate product performance.
2. When possible, visit manufacturers' facilities to see how the products are researched, developed, designed, manufactured, tested and shipped.
3. Cultivate professional relationships at regional or national levels with key factory-based contacts for manufacturers you specify. Rely on these contacts for assistance when special requirements arise on projects.
4. Attend seminars and trade shows that allow you to evaluate lighting equipment performance characteristics, compare products and remain current on technology.
5. Obtain product samples of similar luminaires from multiple manufacturers for comparative evaluation. Record your assessments of the products' qualities and add this information to your lighting product database.
6. Develop a reference of standard notes relating to lighting products that are to be used for quality assurance during the project design process.

D. Promote and protect the creation of unique designs.

1. Educate yourself, your professional colleagues and your clients' decision-makers as to the value of unique products and the necessity for protecting intellectual property.
2. Include language in your specification that addresses intellectual property and original designs. State your policy in upholding design copyrights and discouraging the consideration of "knock-offs."

II. Actions in the Project's Design Phase(s)

A. Assess the project's lighting budget and establish product quality level.

1. Identify the level of lighting system quality and cost desired by the owner and supported by the budget.
 - a. Make the owner aware of tangible differences between various product quality levels.
 - b. If necessary, provide the owner examples of different levels of product quality (samples, installation, etc.) to assist him in understanding both the benefits and limitations of various equipment designs.
2. Communicate directly with the owner and principal decision-maker whenever possible to minimize the chance for confusion or miscommunication.
3. Clarify the rationale for the project's budget and identify various influences. Understand your role and formal responsibilities in ensuring that the budget for lighting is met.
4. Learn to recognize potential lighting-related budget problems early in the design phase. Provide constructive suggestions to the decision-maker for addressing problems.

5. Continually update costs for the lighting products you are planning on specifying to minimize later budget problems.

6. Identify construction bidding format (Guaranteed Maximum Price, Competitive Bid, etc.) and its possible impact on your design process.

B. Identify protocol for securing approval(s) of selected products.

1. Identify which project members will influence the selection of lighting equipment.
 - a. Enlist the architect or engineer in assisting you in holding your specification.
 - b. Determine the owner's position on specification integrity and assess likelihood of his support of your efforts.
2. Determine if "value engineering" or similar project scope and cost reviews may be a factor on the project.
 - a. Establish when value engineering activities are likely to occur in the project schedule.
 - b. Ally yourself with the decision-makers to clarify in advance which products should not be substituted or compromised.
 - c. Position yourself with the decision-makers to be the only logical adviser on these matters, should they arise.
 - d. Clearly communicate, in writing, anticipated compromises in performance, operation or maintenance that may result from value engineering.

3. Become familiar with regional conditions on your projects outside of the local area.

- a. Find out who the local agencies are that represent the key products you specify and, if appropriate, make it known to them that you, as lighting specifier, are available to answer questions on the specifications.

- b. Make the local agents aware of your policy regarding specification integrity.

C. Develop and employ a methodology for selecting lighting products.

1. Obtain relevant project information to ensure the most accurate and complete luminaire specification.
 - a. Room dimensions, finishes, ceiling cavity conditions and similar physical characteristics.
 - b. Determine specific locations for remote equipment to determine maximum allowable distances.
 - c. Identify estimated operating temperatures where products are to be located (i.e., where will it be too hot or too cold).
2. When necessary, conduct mock-ups to assess or demonstrate lighting performance.
3. Understand and monitor the project design and construction schedule.

III. Actions in the Project's Construction Document Phase

A. Specification of the desired product(s).

(Continued on page 34)



Visionary thinking brought to light

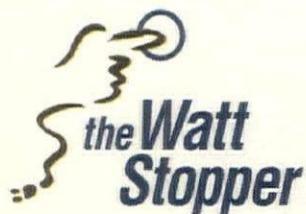
For nearly twenty years, The Watt Stopper has been providing innovative solutions so companies like yours can achieve the benefits of lighting control. We can help you realize your vision, whether it be saving energy, increasing productivity, or enhancing security and convenience.

Select from our range of control products that



includes occupancy sensors, lighting control panels, daylighting systems, bi-level HID control, and individual dimming systems. Call on our technical support resources at every stage of your project, from inspiration to implementation.

The Watt Stopper can help you find the pieces that fit—and finish—your lighting control vision.



Putting a Stop to Energy Waste®

800-879-8585 • www.wattstopper.com

(Continued from page 32)

1. Secure accurate manufacturers' pricing of the products you are specifying. Ideally, "distributor net" costs are most informative, but "approximate contractor net" is often easier to determine. Share these costs, on a confidential basis, with your client and the project's decision-maker.

2. Use a luminaire schedule (lighting fixture schedule) when the project bidding process is clearly understood and you have some control over the product approval process. *Note: Refer to Section VII of this article ("Specification Approaches") for detailed information on formulating a specification strategy.*

3. Use a written luminaire specification to give explicit luminaire descriptions when you are not sure you can depend upon the project team to assist in maintaining your specification.

4. Separate and identify special types from "commodity" items, especially when multiple-name specifications are required.

5. Distribute luminaire schedules to local manufacturer representatives to foster open communication on the project.

6. Notify both local agent and factory contact of project.

B. Include product notes on lighting drawings and luminaire schedule to fully articulate project requirements.

1. Note any accessories, special finishes, atypical mounting devices and other unusual requirements required for each luminaire type.

2. Make sure notes or specifications relating to a specific luminaire are shown in one location only to minimize errors if and when changes are made to the documents.

C. Provide product details when necessary to fully clarify unique project conditions or requirements.

1. Include complete details of architectural integration when mounting is not considered standard installation.

2. Properly note and cross-reference details to aid contractor in identification.

D. Lighting section of the project's electrical specification.

1. Make sure the specifications apply to all lighting products you specify on the job.

2. Delete or modify specification language that does not apply or may lead to misunderstanding.

3. Require that for all products where identical appearance across functions, lamps, etc. in a specific "family" of products such as downlights, exit signs, etc. is essential to the appearance of the job, that the whole family be supplied by the same manufacturer.

4. Require prequalification of contractor offered substitution 10 days prior to bid date.

5. Advise in the specifications that if any submissions from the low bidder are for products other than those specified, then—in the event that they are approved—the other bidders will be notified and offered the opportunity to resubmit their bids based on their supplying the same non-specified bill of materials as the low bidder.

6. Require the contractor to submit on the manufacturer product he intends to furnish within 14 days of the bid. State specifically that failure to submit within the deadline constitutes a guarantee that only the base specified product(s) will be supplied and that no other products, whether listed as alternates or not, will be considered.

7. Include a schedule impingement clause when allowed.

8. Decide that specification technique is most appropriate for each luminaire specified and include all documentation necessary to assure proper bidding. *Note: Refer to Section VII of this article ("Specification Approaches") for complete description of specification formats.*

IV. Actions in the Project's Bidding Phase

A. Whenever possible, participate in the project's pre-bid meeting to answer questions and reinforce to the bidders your expectation for their bid submittals.

B. Provide counsel to the decision-maker regarding lighting-related bid issues.

C. Should the resulting construction bids be such that the decision-maker requires a reduction in project scope and costs, be in a position to lead and advise on the lighting portion of this effort. Do not allow the contractor to influence design decisions through only a cost reduction focus.

V. Actions in the Project's Construction Phase

A. Review and Assessment of Contractor Submittals

1. Establish procedures, in advance, for the review and critical assessment of shop drawings, samples and other submittal materials required from the contractor by the specifications. *Note: It is important to inform the client of your procedures, so that you receive the necessary information in a timely manner.*

2. Assist in the appraisal of prototypes or full-scale mock-ups that are required by the specifications.

3. Inform the client and decision-maker of any contractor responses that are inconsistent with the specifications or may jeopardize the possible delivery time of the product.

B. Monitor construction progress.

1. Ensure that installation-related requirements of the lighting specification are being executed.

2. Respond to questions (Requests for Information or RFI) from the field in a timely manner so as not to jeopardize the project's schedule.

C. Intervene on the client's behalf, when requested, to resolve inconsistencies or problems.

1. Contact factories to verify shipment schedules and, if possible, obtain better delivery dates. *Note: It is important that the contractor know that it is with the client's permission that you are providing this service.*

2. Ask the construction manager/project manager to copy you on periodic construction reports to assist in foreseeing possible problems.

VI. Specification Approaches

Single-Name Specification

Purpose: When only one product is suitable for the application and/or no known equals exist.

- List the one and only product by manufacturer name and specific catalog number.
- Indicate in the specification that submission of other than the listed product(s) will not be considered.
- Make it clear in the specification that accurate pricing for all single name products has been secured prior to bidding and that the information has been shared with the owner/client.
- Require unit pricing for product that clearly indicates what the contractor is charging the owner for the equipment.
- Advise the owner and project team prior to the bid date that these particular products are set aside for this treatment because of their unique character.
- Prepare for the owner in advance a detailed list of all the technical, performance and design features that warrant this product's special consideration.

Multiple-Name Specification

Purpose: When several products are available that will meet the design, performance and budgetary requirements of the project/application.

- List two or more products by manufacturer name and specific catalog number.
- Avoid using "or equal" in the specification. Such language is too vague and what constitutes an equal is clearly difficult to identify.

Single-Name Specification with Deduct Alternates

Purpose: When a particular product is decidedly preferred for an application, but one or more less costly products could be utilized, with the understanding that certain compromises in quality or performance would occur.

- List the preferred product by manufacturer name and specific catalog number. Clearly identify this product as the Base Bid.
- Identify as Deduct Alternates one or more products by manufacturer name and specific catalog number. Avoid listing manufacturer name only without first clearly identifying the performance criteria.
- Require unit pricing for both Base Bid and Deduct Alternates.
- Require that the Base Bid product be priced by the contractor, otherwise Deduct Alternate pricing is invalidated and his bid submittal will be considered incomplete.
- Make sure that the Deduct Alternates are properly listed or referenced on the Project's Contract Document bid form.
- Prohibit the submittal of voluntary Deduct Alternates by the Contractor unless expressly requested to permit such by the owner.

Performance Criteria Specification

Purpose: Special requirements for many government and some private sector projects dictate the use of a performance criteria specification without the listing of manufacturers or specific catalog numbers. The performance specification attempts to identify, as completely as possible, both the quantifiable and qualitative aspects of a luminaire's performance. Any product submitted for consideration must meet or exceed the performance characteristics set forth in this specification.

(Continued on page 36)

Always be seen in the best light



Marks & Spencer, London · Architect: Building Design Partnership

Silhouette 4 + 5

Good lighting design needs adequately designed luminaires and excellent lighting distribution.

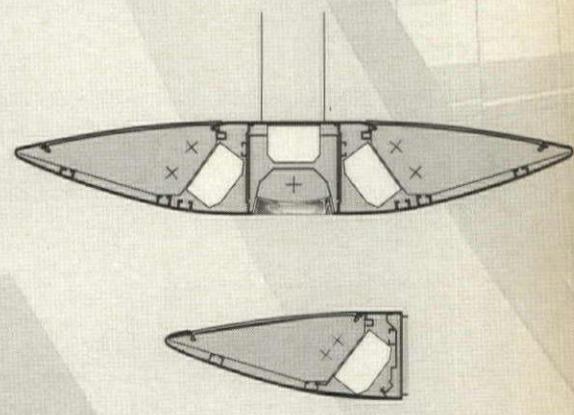
With the wall mounted Silhouette 4 and the suspended Silhouette 5, we are able to offer linear extrusions that keep in proportion with the architecture.

The mix of soft diffused indirect light and well controlled direct light gives an impression of simple elegance that enhances the space without detracting away from the interior design or the product.

If visitors to Marks & Spencer feel comfortable with the surroundings, then this may be due in part, to our Silhouette family of luminaires.

If you would like to know more about Light, Ideas and Systems, please contact us at:

Tel: (800)-735 8927
Fax: (914)-691 6749
email: seluxus@selux.com
www.selux.com/usa



se'lux®

Light. Ideas. Systems.

www.selux.com/usa

Australia · Austria · Benelux · France · Germany · Great Britain · Italy · Singapore · Sweden · U.S.A.
Circle No. 35

(Continued from page 34)

- Clearly identify all aspects of luminaire performance that are important to the situation that the product is applied. Whenever possible, provide quantifiable performance measures in the specification so that the potential for interpretive disagreements are minimized.
- If non-quantifiable, qualitative aspects of a luminaire performance are critical (style, craftsmanship, etc.), provide examples of similar products or applications that can be cited later for comparison.
- Insist that the "burden of proof" with regards to a submitted product's ability to meet a performance criteria specification be placed solely on the submitting entity. The guidelines for submission are especially critical in a performance criteria specification. *Note: It is not unusual to request extensive calculations as a requirement for product submittal under a performance specification. This will not only help assure compliance with the design intent, but will discourage submission of "less-than-serious" product contenders.*

Custom Fixture Specification

Purpose: When an original luminaire design is developed to fulfill a specific application on a project.

- Provide sufficient details within the Construction Documents to permit the contractor to reasonably assess requirements for assembly and installation.
- If several manufacturers are identified as capable of producing a custom design, they should be mentioned by name with a predetermined product reference number/code. Provide contact names and telephone numbers whenever possible.
- Accept absolutely no substitutions on custom designs. Decision-maker must understand the rationale for this prior to bidding.
- Construct a separate Deduct Alternate if budget may become an issue. This will keep the specifier more in control in case of "value engineering."

Allowance Specification

Purpose: When actual product has not yet been selected or specific design approved. Sometimes used in situations where the bidding climate is uncertain or unknown.

- Include enough information in the specification to allow the contractor to accurately price installation, electrical and special needs (weight, voltage, wattage, etc.).
- Allowance should be a "contractor net price."

VII. Specification Language

Lighting specifications should be clear, concise and comprehensive. The sign of a professional specification is one that communicates both general and specific requirements in an authoritative, non-ambiguous manner. Defensibility, and respect for a lighting design specification, is more likely if its writing reveals confidence and insight. The bidder needs to be made to realize that the author completely understands the design and construction process, and fully expects a professional and forthright response. Problems in getting what is specified are less likely when this climate is created.

As an aid to the lighting specifier, sample language for a variety of frequently occurring specification situations has been developed. These examples can be used as departure points for crafting material appropriate for specific project needs.

A. Establishing specifier control in the bidding phase.

1. "Distributor Net Pricing has been secured for all products specified and is used in the preparation of preliminary opinions of probable cost. A record of specific unit costs has been shared confidentially with the Owner to assist him in analysis of bid submittals."
2. "Contractor shall supply 'contractor net' unit pricing for each lighting product specified. Unit price shall be for equipment only and not include installation or miscellaneous electrical costs. The unit price supplied shall be guaranteed for the project and valid for additions and deletions of product throughout the duration of the project."
3. "In addition to the Base Bid product(s) listed, the Contractor is requested to supply pricing for the following Deduct Alternate products. This pricing is to be supplied in addition to the Base Bid, using the Contractor Bid Form supplied for this Project. The Base Bid must include the Base Bid products specified. Failure to do so will invalidate the lighting bid submittal and, at the discretion of the Owner, may eliminate the Contractor's bid from further consideration."

B. Maintaining timeliness and efficiency in the submittal process.

1. "Within (twenty-one) 21 days of contract award, successful Contractor shall submit a complete list of lighting products he intends on furnishing with manufacturer and catalog designations, along with currently quoted lead times for delivery of same. Should the Contractor anticipate that the delivery schedule of any specified product may adversely impact the construction schedule, he shall bring it to the attention of the Owner at this time."
2. "Within twenty-one (21) days of bid award, Contractor shall provide a complete list of all lamps that will be furnished on the project. This list shall be organized alphabetically by the luminaire type indicated on the luminaire schedule, and include the manufacturer and exact model number of each lamp. Up to three (3) samples of any listed lamp shall be supplied at no additional cost to the project, if so requested by the specifier."
3. "A submittal for this luminaire type shall include an operable 120-volt non-returnable sample, complete with lamp(s), 72-inch grounded cord and plug and specified finish."

4. "Alternate products other than those listed by name in the specification will not be considered without prior written consent from the Lighting Designer."

C. Managing substitutions.

1. "Substitutions for the specified lighting products are not acceptable and will not be considered. Failure to include one of the specified products as a part of the Base Bid may, at the discretion of the Owner, invalidate the entire lighting product bid and exclude the Contractor from further consideration."
2. "Should the Contractor wish to have considered products other than those specified they must submit those items fourteen (14) days in advance of the bid. Failure to submit within that deadline constitutes a guarantee that the specified products will be supplied. The Lighting Designer will invoice the Contractor at

Senior Designer hourly rates to review any product not listed in the specification. Submittal of a bid for this project shall include a written acknowledgment of these terms from the Contractor."

3. "Voluntary product substitutions from the Contractor will not be considered without prior approval to submit from the Lighting Designer."

D. Product design integrity/intellectual property.

1. "This luminaire is a unique design, available only from the specified manufacturer. No attempt should be made to solicit bids from other manufacturers to copy or 'knock-off' the luminaire design. Attempts to do so may, at the discretion of the Owner, invalidate the entire lighting bid and exclude the contractor from further consideration."

E. Focusing, aiming and adjustment.

1. "Contractor shall focus and adjust designated luminaire(s), after dark, at a time mutually agreeable to Contractor, Lighting Designer and Owner. Adjustments shall be made in accordance with the Lighting Designer's stated intent, under his/her observation."
2. "The aiming and adjustment of this luminaire must take place after the Project's amenities have been completely installed. These amenities shall include, but not necessarily limited to plantings, furniture, artwork, graphics and signage. Contractor shall include in his base bid, provisions for lifts, scaffolding, extension ladders and all other materials required to complete said adjustments."
3. "This luminaire shall not be installed to track until aiming and adjustment takes place, just prior to the Project's completion."
4. "Exact distribution of the lamp for this luminaire will not be known until final aiming and adjustment takes place. Contractor shall provide 150 percent of total lamp quantity required, with distributions broken down as follows: 75 percent flood; 75 percent spot; 150 percent total. A portion of the lamps remaining after final aiming and adjustment will be turned over to the Owner for stock, while the others shall be returned unopened to the Contractor's distributor for full credit."

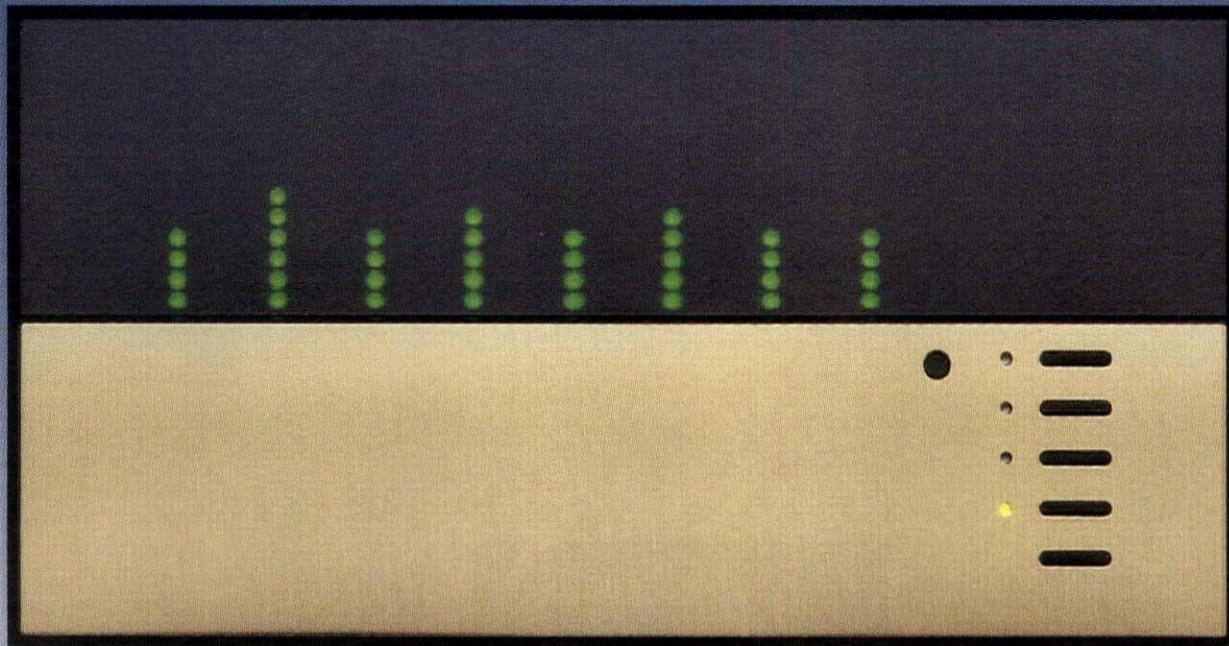
F. Anticipating frequently encountered on-site problems.

1. "This luminaire shall not be operated for work light at any time during construction, nor shall it be illuminated for any other reason. Failure to comply with this requirement will make necessary the relamping of this luminaire by the Contractor at no additional cost to the Owner."
2. "Whenever this luminaire is used for work light during construction, it shall be relamped with the Project specified lamp just prior to turnover of area to Owner." ■

Copyright 2000 by the International Association of Lighting Designers. All rights reserved. Materials may not be reproduced or translated without written permission.

GRAFIK Eye®

Preset Lighting Controls



Faceplate available in architectural metal finishes and a variety of colors. Shown in Satin Brass.

New Performance Innovation Solutions



new

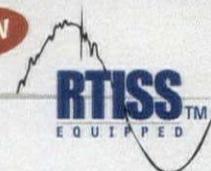
2Link™
READY™

DMX512 Theatrical Applications.
Controls lights from a GRAFIK Eye or theatrical console through the same Lutron power panel.

Ideal for hotel ballrooms, auditoriums, houses of worship and schools.



new



New smart electronics filter poor power quality conditions.

Ideal for open offices and meeting rooms.
Patent Pending



new

Softswitch™

Arcless switching for 20 times better reliability than relays.

Ideal for entire floors and buildings.
US Patents 5,309,068 and 5,633,540

Problem:

Some spaces require architectural dimming 90 percent of the time, but occasionally there is a need for theatrical lighting for a presentation or special event which requires two systems—one for day-to-day architectural lighting, another for theatrical effects.

2Link Solution:

Lutron's 2Link technology allows dimming panels to accept two data protocols simultaneously so that an architectural space can be operated by an architectural control system like GRAFIK Eye controls and a theatrical console. One system does both.

Features of GRAFIK Eye Preset Lighting Controls:

- ◇ Control any light source
- ◇ Save and recall multiple scenes
- ◇ Integrate with AV, shades, security, HVAC and other building and residential systems
- ◇ Specified and installed in over 90 countries
- ◇ Tested in real world conditions
- ◇ Applications engineers available 24 hours a day, 7 days a week

Circle No. 26


LUTRON
LIGHTING CONTROL SOLUTIONS®

See us at Lightfair, booth #939.

Free video, detailed product information: lutron.com/grafikeye-ad or 1-877-2LUTRON, ext. 211.

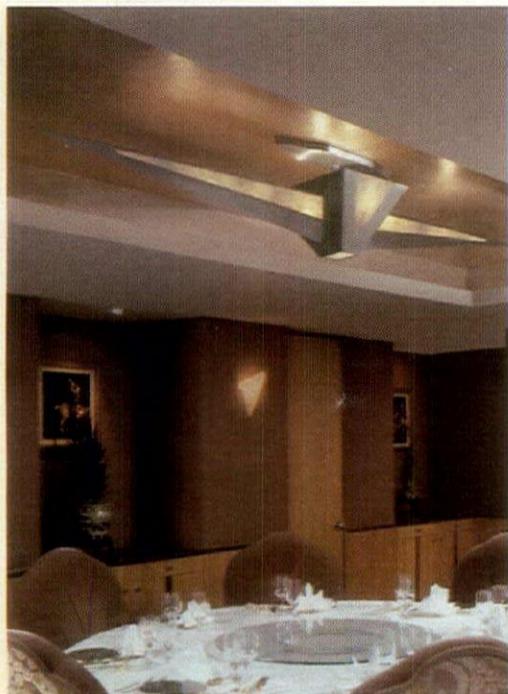
decorative



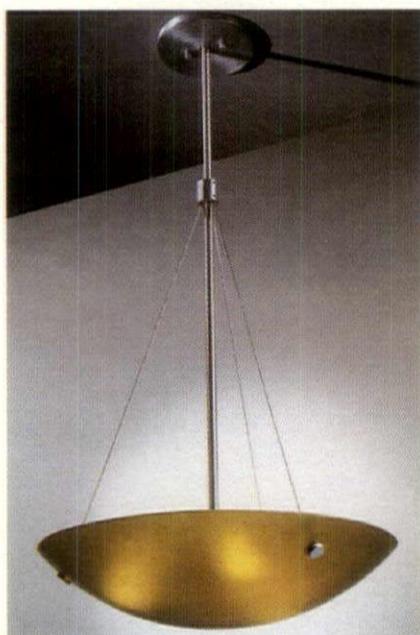
From **Norwell Mfg.**, the Tuileries series of chandeliers features hand-bent tubing and Italian glass to create the look of budding flowers as seen in France. Tuileries is offered in 3-, 6-, 9- and 15-lights. Available finishes are polished, pewter and flemish. UL-listed. **Circle No. 60**



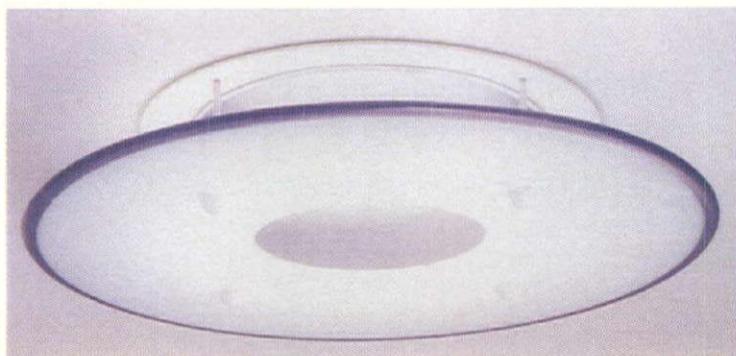
From **Rock Cottage Glassworks**, this "O" pendant commissioned for an ASID showhouse features hand-blown and cast glass. The fixture measures 10 in. in diameter. Rock Cottage Glassworks creates fixtures from molten glass that are often one-of-a-kind. **Circle No. 61**



Starfire Select Xenflex custom star-shaped pendants are available in a variety of sizes, finishes and light-source options. Suspended just 2 ft., the pendants fit close to the ceiling and provide illumination without intruding into the space. Core ingredients of the pendants are linear low-voltage strip lights with Xenon gas-filled lamps. Housings are satin stainless steel and faux alabaster, hand-finished by Starfire in-house artisans. UL-listed. **Circle No. 62**



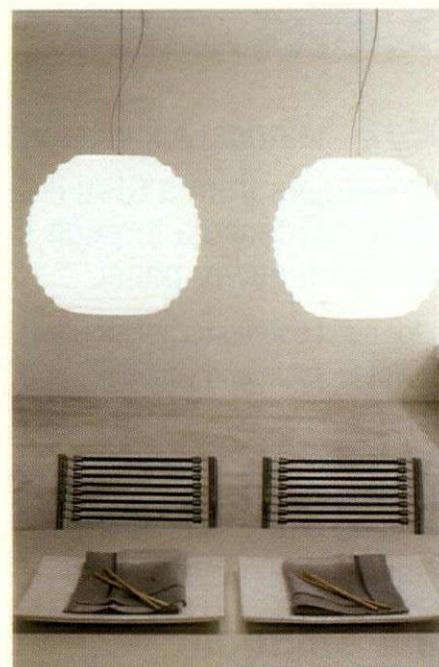
The Moderne pendant series from **Neidhardt Inc.** is offered in clear, amber and bronzed frosted slumped glass with complementing satin nickel or sanded aluminum metal finishes. Seeding—trapped air bubbles between the layers of glass—creates visual interest. The Moderne I and II are offered in 24-in.- and 29-in.-diameter bowl shades with 5-in. depth and customized suspension length. The pendants are suspended by three rigid stems or cable wires attached to a focal point on a single rigid stem. Lamping options include three 100W A-lamps or three 13W compact fluorescent lamps. UL-listed. **Circle No. 63**



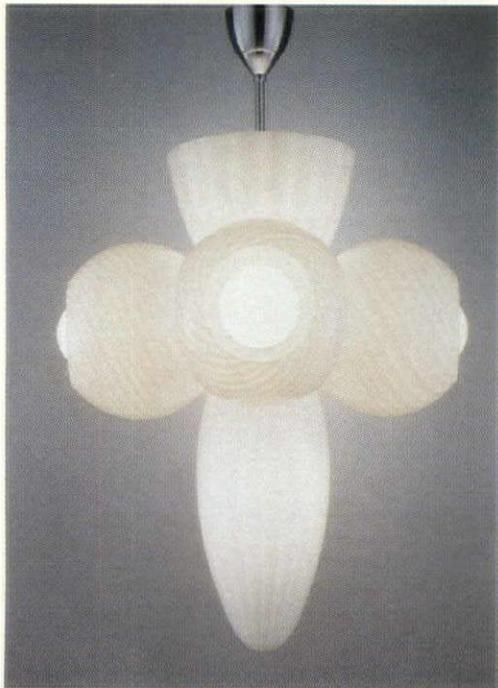
Created by the Claritis Studio in California, **Lightolier's** Clarite offers the Claritis line of below-the-ceiling glass downlight fixtures, available in standard aperture sizes of 6 in., 7 in. and 8 in. The fused glass discs are offered in round, elliptical and square shapes as well as a variety of bright colors. Designed for use with energy-efficient compact fluorescent lamps, Clarite Claritis can be used with standard reflectors and frame-in kits or load bearing frames when necessary. Metal halide and incandescent sources are also available. UL-listed. **Circle No. 64**



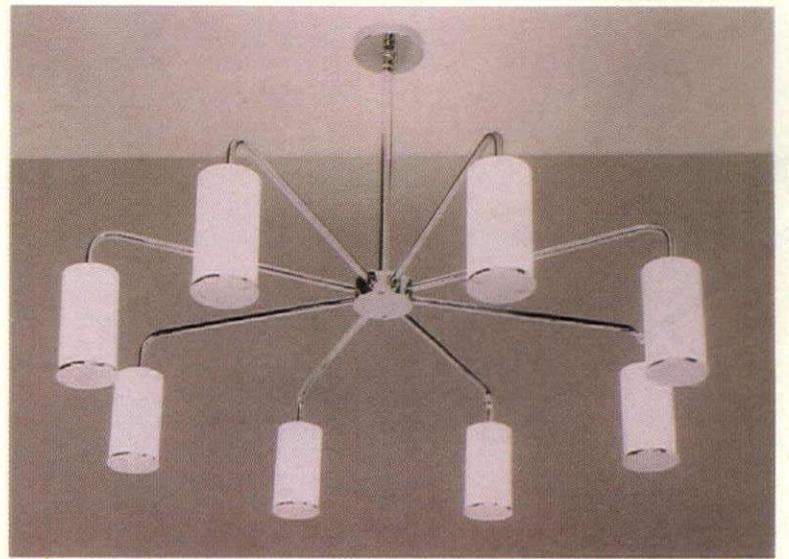
From **Ultralights Architectural Lighting**, the Compass Collection is comprised of six handcrafted ceiling pendant designs offered in a variety of finishes. All models feature incandescent lamplighting with fluorescent options and are available with 24-, 30-, 36- or 48-in.-diameter bowls constructed from decorative acrylic diffusers. Handmade art glass bowls are offered in 24-in. diameters. UL-listed. **Circle No. 65**



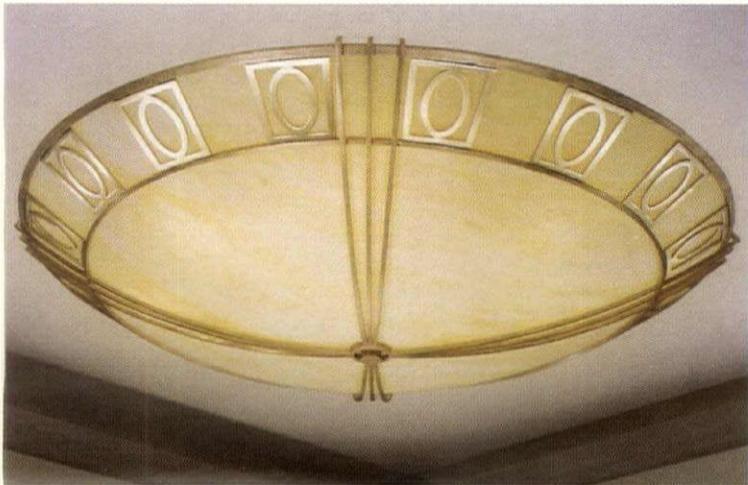
Conceived by Renato Toso and Noti Massari, the design for **Leucos' Modulo S/35** is based on the purity of materials and light. The shades are formed of lucid, handblown Murano glass wrapped around an opaque sheet of white glass with an undulating "ripple" effect. Modulo is offered with a number options including a cylindrical or conical shape. UL-listed. **Circle No. 66**



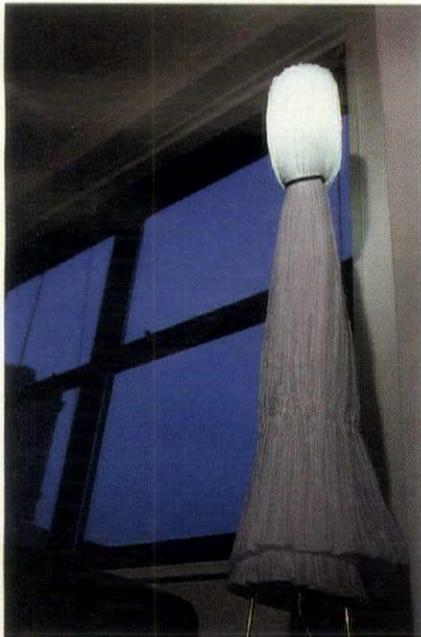
Designed by Emmanuel Babled as an interpretation of a shooting star, **Venini's Cometa** is made from hand-blown swirled and luminous Murano glass and features four globe-like projections that emit light from all angles. Hand-blown into a three-dimensional oval sphere, the "tail" of the shooting star is the main body of the pendant. Cometa is fabricated in the Rigadin style, which influences the varying color of the piece. Cometa 886.10 measures 39½ in. high and is suspended from a brushed chrome rosette. Cometa 886.11 measures 63 in. long. The series will include wall sconces and various ceiling mounts. UL-listed. **Circle No. 67**



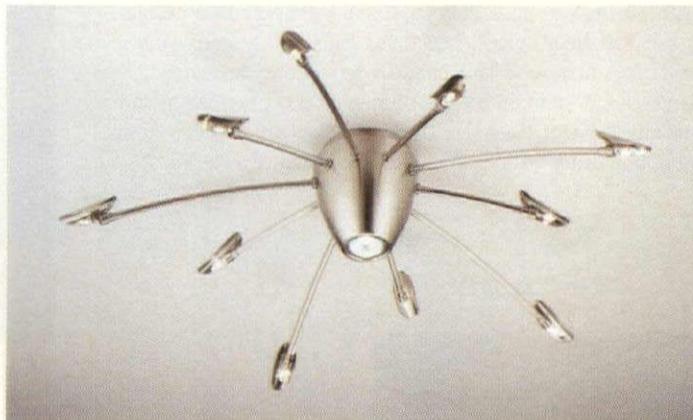
Available in overall fixture heights of 25 in., 29 in. or 33 in., **Nessen Lighting's Spider** features eight brass fixture arms with light sources that radiate from the "body" of the fixture and curve down at the tips to join closed-end translucent cylindrical glass shades. Spider provides a wide distribution pattern of ambient lighting. Measuring 42 in. in diameter, Spider is illuminated by 60W T10 incandescent lamps and can be specified with open-bottom shades for direct downlighting. Lenses are white sandblasted glass. Available finishes are brushed or polished brass, chrome or nickel and fade- and chip-resistant baked enamel. UL-listed. **Circle No. 68**



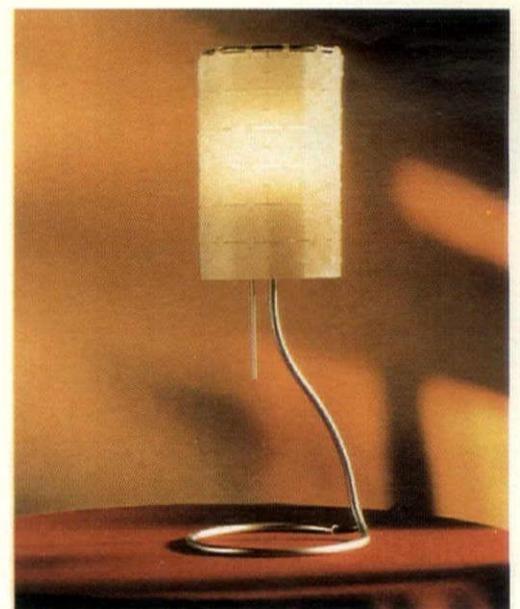
The Faux Alabaster Dome from **Starfire** is a ceiling-mounted ambient lighting fixture that can be customized to suit specific requirements. With its imposing transitional design, the Faux Alabaster features a satin-finished brass trim and a frosted dome. The three-dimensional "circle-in-square" metal motif trims the upper perimeter of the dome, while brass strips descend from the top of the dome to the lower center and meet in a knot. Measuring 60 in. in diameter, the fixture can use incandescent or compact fluorescent lamps. UL-listed. **Circle No. 69**



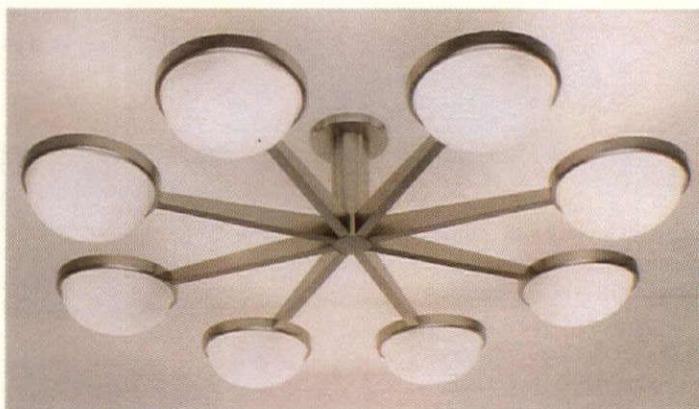
From **Mark Lee Lighting**, Lady is a lighted object of art measuring 9 in. long x 9 in. wide x 60 in. tall. A stainless steel frame draped with white fabric, Lady uses a 40W fluorescent and is equipped with a transparent cord. UL-listed. **Circle No. 71**



Estiluz's T9016 is a surface fixture that combines both direct and indirect light. Ten metal spokes contain 20W bi-pin low-voltage lamps. Reflective shields permit direct or indirect options. T9016 uses a 50W MR16 line-voltage center lamp and is offered in satin nickel and satin gold finishes. UL-listed. **Circle No. 70**

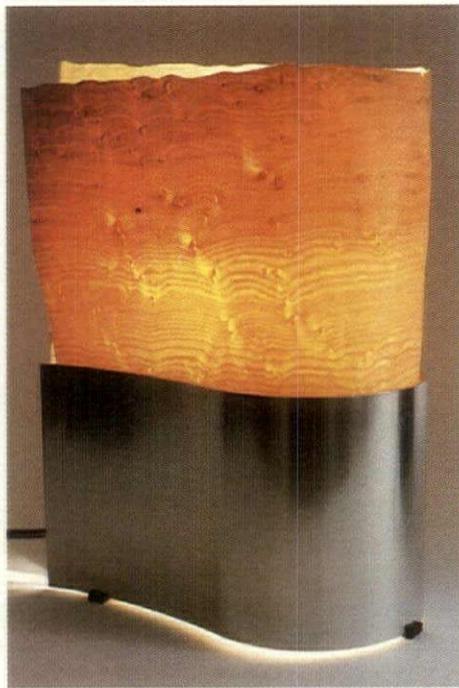


Designed by Rodolfo Dorini, **Flos USA's Bloc** represents an interpretation of a designer dress that incorporated small square pieces clipped together. The shade is constructed of polycarbonate squares held together by clips. Bloc is available in three applications, table lamp, suspension lamp and wall sconce. All are offered in white, blue, green and amber. All models take a 60W A19. UL-listed. **Circle No. 73**

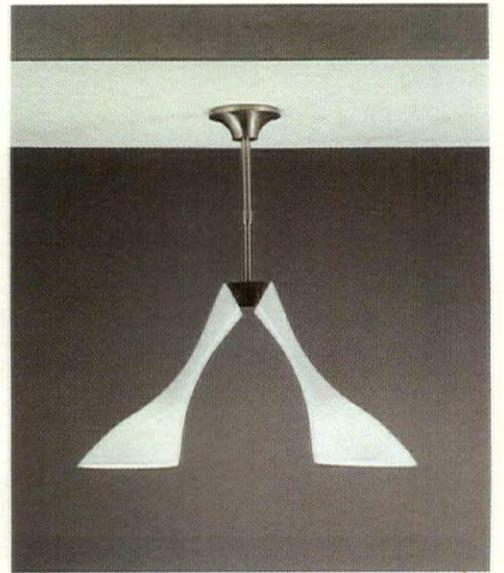


Nessen Lighting's Starfish is available in 25-, 29- or 33-in. overall fixture heights and has a diameter of 42 in. Starfish features a sandblasted, light-diffusing glass domed lens at the end of a broad, solid-brass fixture arm and uses 60W candelabra-base incandescent lamps. Spider can be specified with brushed or polished brass, chrome or nickel finishes as well as fade- and chip-resistant baked enamel finishes. UL-listed. **Circle No. 72**

decorative



From **Studio Q**, Teardrop features a shade made of sculpted wood veneer mounted on a brushed stainless steel band. The flame-retardant shade is made of non-endangered wood. The fixture is available in a variety of woods, including birdseye maple. Teardrop measures 4 in. x 8 in. x 10 in. All fixtures are original and vary slightly. The lamp base is UL-listed. **Circle No. 74**



Vistosi's Felicia Suspension series from **Hampstead Lighting** is available in various sizes ranging from 20 to 40 in. in length and 14.4 to 32.8 in. in height. The pendant is designed by Chiaramonte-Marin and is offered in different colors. Felicia uses two 100W lamps. **Circle No. 76**

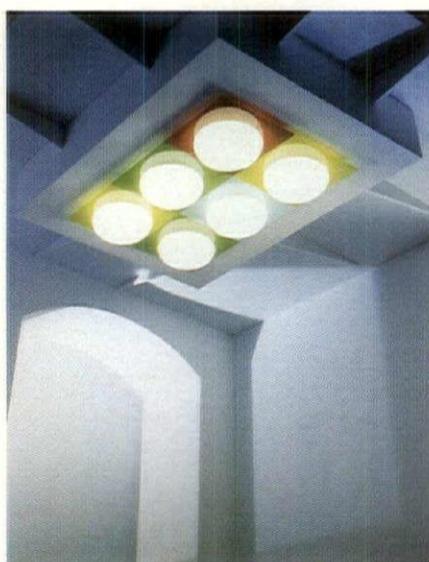


Meyda Tiffany's Model #D179-8 is a six-light decorative chandelier featuring purple and honey art glass with coordinating clear accents. The chandelier measures 22 in. high x 30 in. wide. UL-listed. **Circle No. 75**



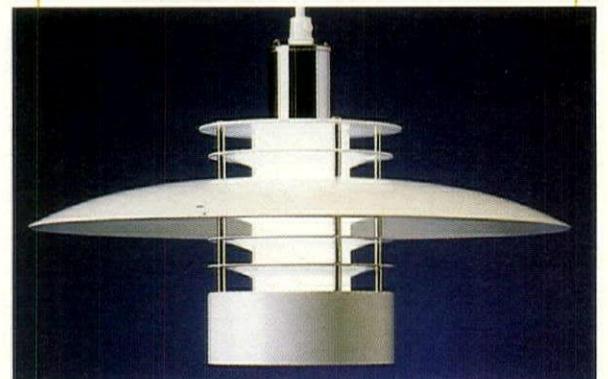
The Ambit pendant by **Ron Rezek** is a reinterpretation of a 50's sensibility. Stem hung, the pendant features double layers of blown glass and is offered in all white glass or a combination of white and cognac glass. Ambit is available in 6-in. and 8-in. diameters and 24-, 36- and 48-in. heights. Illumination is provided by one 100W A19 incandescent lamp. Fluorescent options are available with an electronic dimming ballast. UL-listed **Circle No. 78**

Progress Lighting's Eclipse Collection of pendants and wall sconces features brushed steel or polished brass finish with satin-white or white opal glass diffusers. This chain-hung pendant measures 27³/₈ in. in diameter and 24 in. in height. Illumination is provided by three 100W incandescent or three 3W 2-pin compact fluorescent lamps. Lamping options vary with each model. UL-listed. **Circle No. 77**

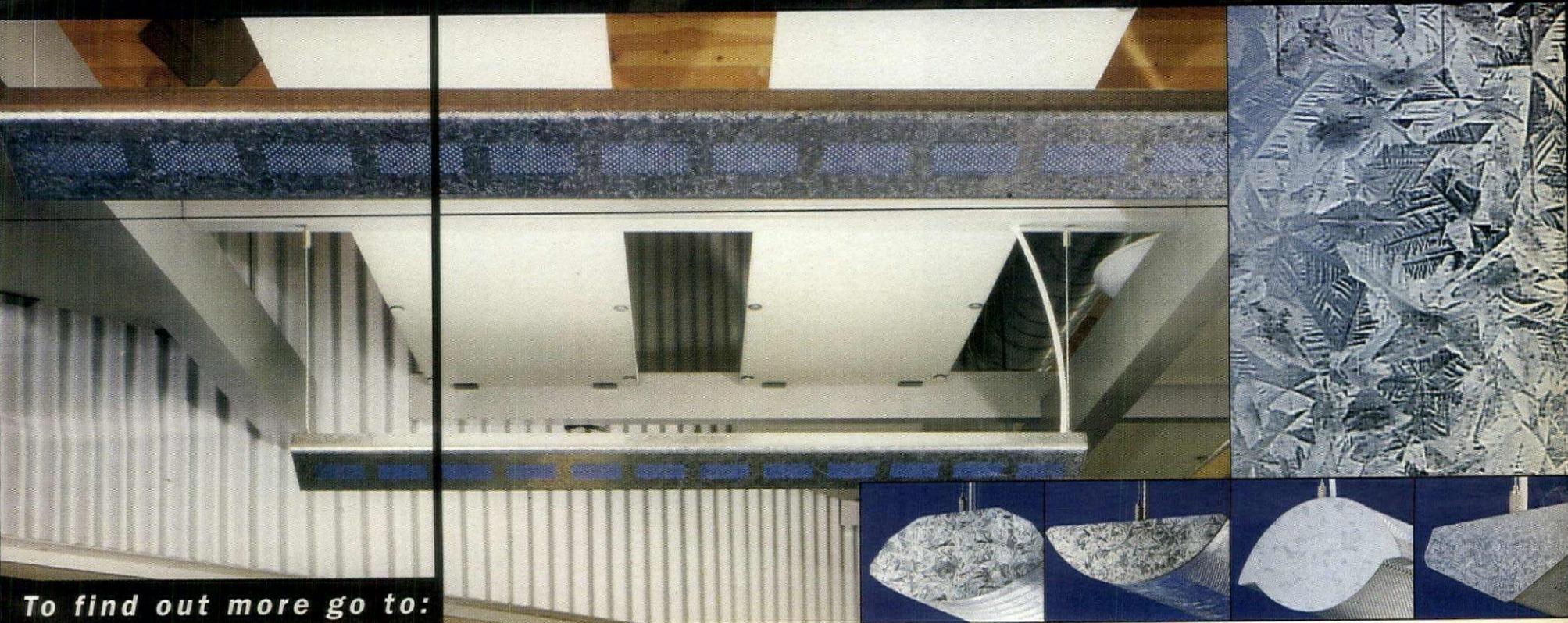


Murano Due's Gio wall and ceiling fixture features a white frosted blown glass diffuser against a square back plate. The back plate is offered in orange, white, satin crystal, lemon yellow, apple green, silk-screened cast glass "millerighe." The frame is made of matte white epoxy powder lacquered metal. Gio uses two 75W incandescent lamps or two 15W fluorescent lamps. **Circle No. 79**

Providing soft, diffused ambient lighting, **Luxo's** Lilla Aurora pendant features white polyester powder-coated metal construction with chrome details. The fixture is lamped with 13W or 26W compact fluorescent lamps; an A60 incandescent lamp model is also available. Fluorescent models are equipped with an etched glass lamp diffuser standard. Incandescent models feature a clear glass diffuser. Lilla Aurora suspends from the ceiling via a 7⁷/₈-in. cable. UL-listed. **Circle No. 80**



FINALLY **GALVANIZED** FIXTURES



To find out more go to:

WWW.PRULITE.COM

When your design is something special your lighting fixtures should be too. That's the driving force behind our newest offering of indirect and direct/indirect luminaires from Prudential Lighting.

Offering finishes like large pattern Galvanized steel and deep brushed stainless steel gives designers a new found freedom in lighting.

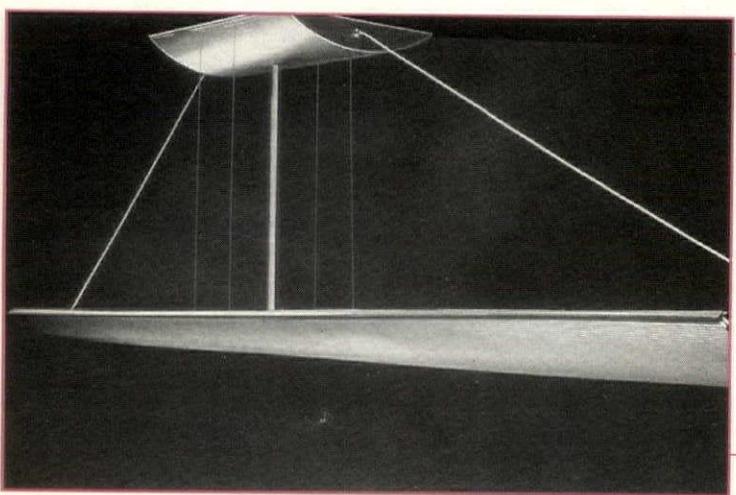
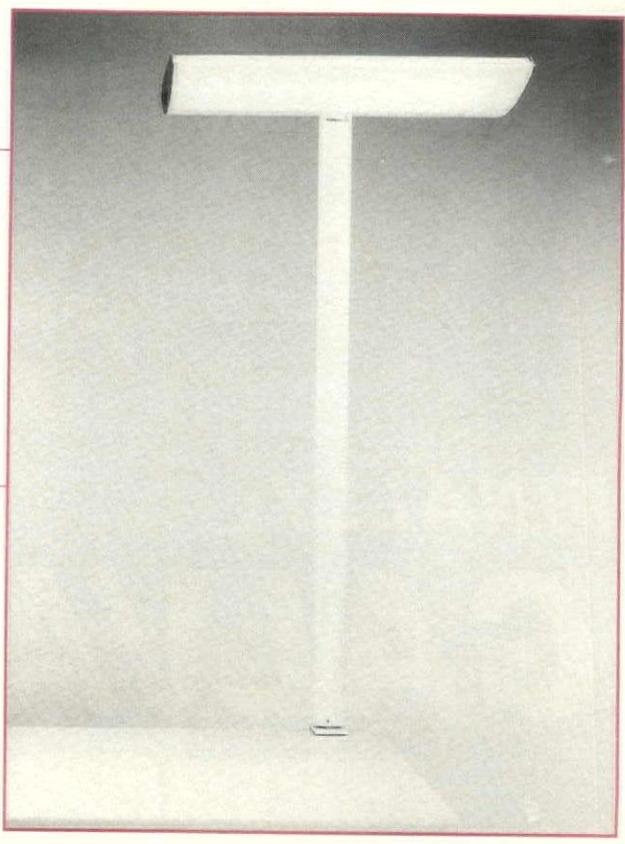


1737 East 22nd Street • Los Angeles, CA 90058-0408 • 213.746.0360 fax: 213.746.8838

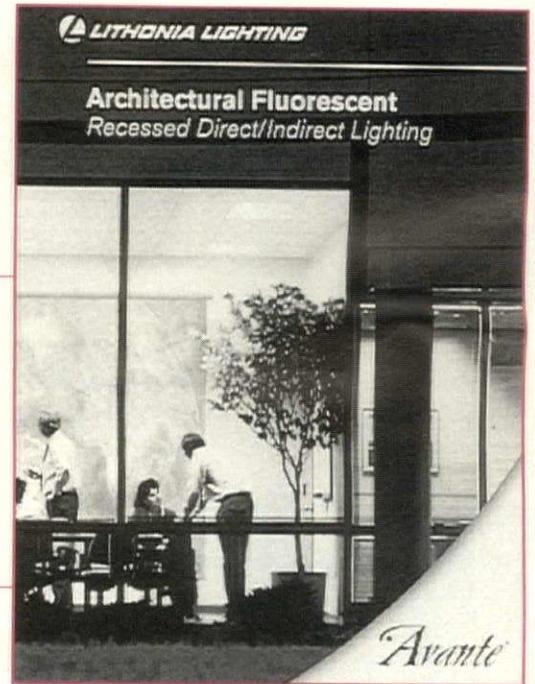
Circle No. 27

indirect lighting

Waldmann Lighting has unveiled the Chorus Uplighter that mounts directly onto furniture or onto desktops using special clamps and brackets. Each unit houses four 40WPL-L compact fluorescent lamps controlled by a three-way switch built into the head that lights two or all four lamps. Available in black or light gray finish with end caps in a variety of colors. UL-listed. **Circle No. 86**



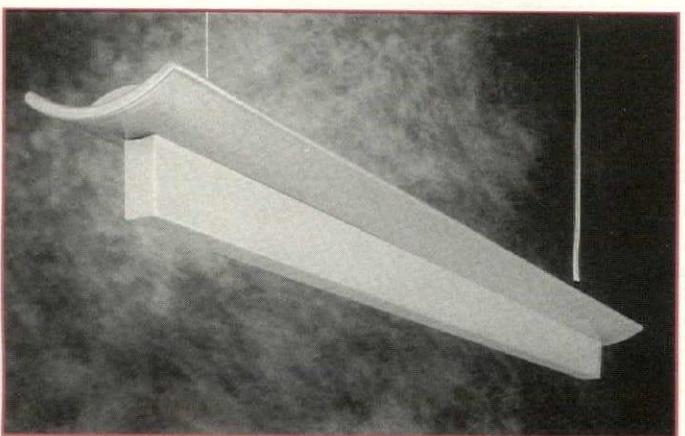
The Bridge from **Lam Lighting** provides semi-indirect lighting in a fixture that is 1.5 in. deep and utilizes single or dual T5 or T5/HO fluorescent lamps powered by an electronic ballast. Fixtures can be mounted within 12 in. of the ceiling and can be specified in up to 8-ft. lengths. Clear acrylic dust cover to shield the lamp(s) is optional. UL- and CUL-listed. **Circle No. 87**



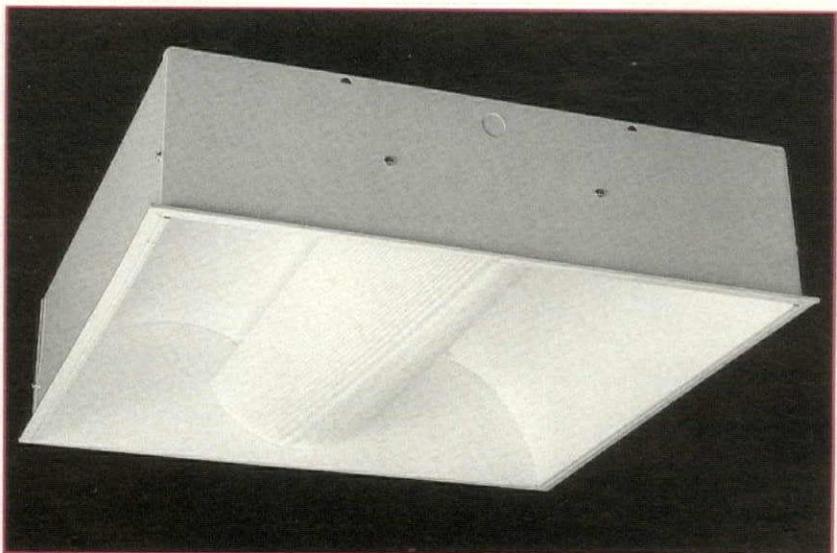
Lithonia has published a new 16-page brochure depicting the Avante series of recessed direct/indirect fluorescent lighting fixtures for small and large area applications. The brochure includes product details, common installations and other information necessary to select and order Avante products. **Circle No. 88**



Ledalite Architectural Products has introduced T5/HO versions of its Minuet and Crescendo fluorescent indirect, semi-indirect and direct/indirect fixtures. The semi-indirect fixture features a translector under the lamp that allows users to adjust the amount of light that reaches the filter on the bottom of the fixture, creating three levels of brightness. UL-listed. **Circle No. 89**

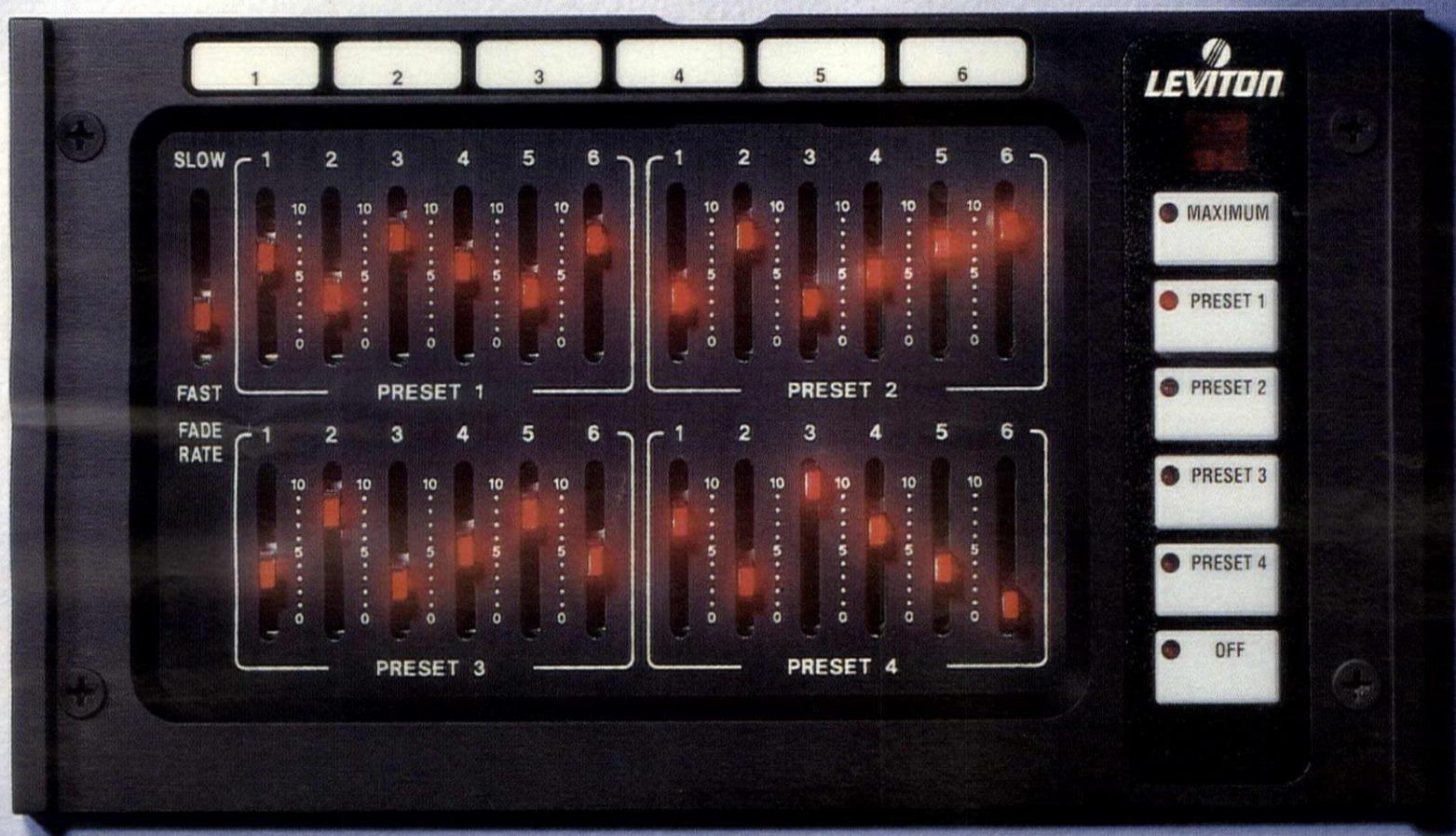


Silhouette from **Lightolier** is a series of linear indirect, indirect/direct and direct fluorescent lighting fixtures that use T5 lamps. Silhouette is based on a modular construction that allows units to be mounted individually or joined together to create a variety of configurations and patterns. UL-listed. **Circle No. 90**



Metalux Lighting, a brand of Cooper Lighting, has unveiled Ovation, a new family of recessed fluorescent direct/indirect fixtures. These fixtures are available in 2x2 and 2x4 sizes; in center- or side-mounted models for all light sources; in one-, two-, three- and four-lamp versions; and use T5, T5/HO, biaxial or T8 lamps. A matte white indirect reflector is mounted above the lamps to soften the light and balance brightness. UL-listed. **Circle No. 91**

Introducing an architectural control system that puts Leviton in a whole different light.



Introducing an architectural lighting control system that will change the way you think about Leviton.

For added reliability, we build our systems with the heavy duty power handling capability of SCR's. To give you the exact system for your application, we offer the flexibility of

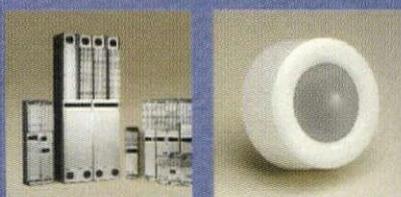
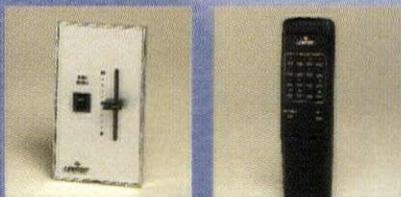
multiple control choices. And to aid in ease of adjustment, our control systems include slider control. Our new lighting control systems are going to change the way people see a lot of things, including us.

Call 1-800-996-2276, ext. 245 or fax us at 512-927-8023 and a

Leviton Regional Lighting Manager will

contact you. See our website at

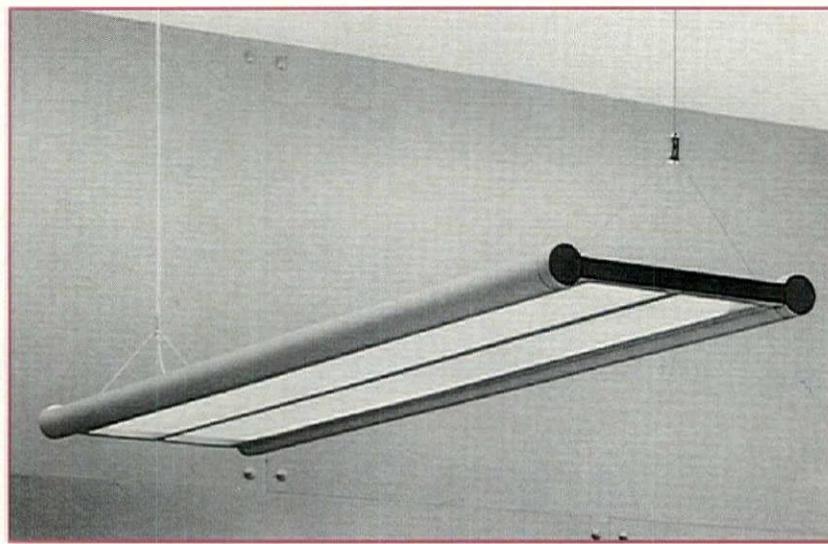
www.leviton.com



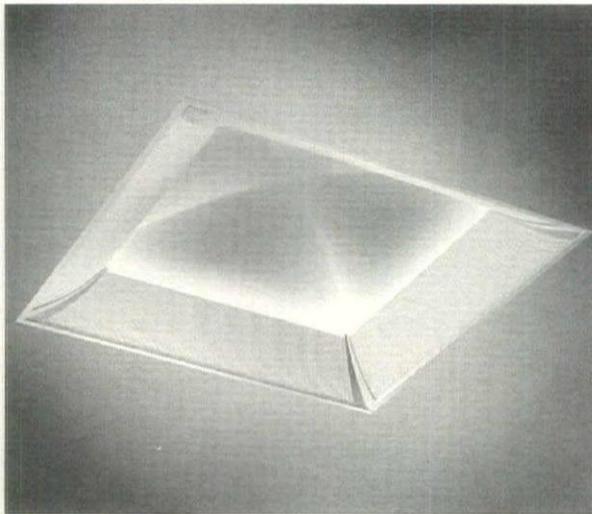
An ISO 9000 Company

LEVITON
LIGHTING CONTROL DIVISION
Building A Connected World

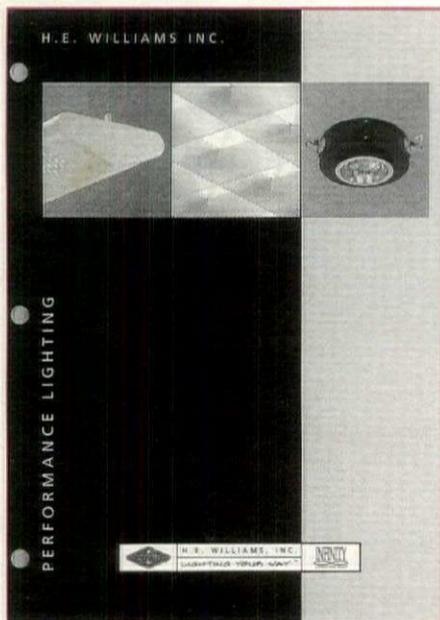
indirect lighting



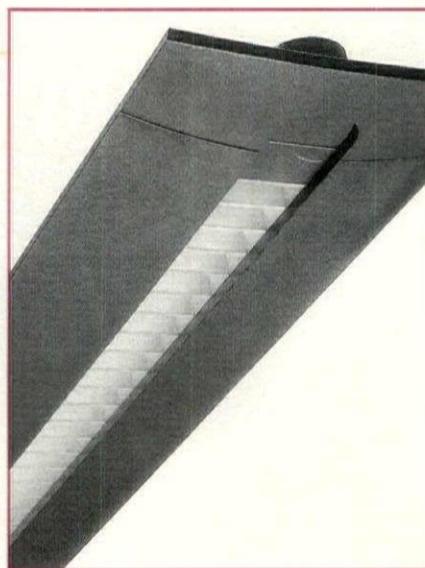
Zumtobel Staff Lighting Inc. has introduced Aria, a new indirect/direct fluorescent lighting fixture designed by Sottsass Associati. Housing 54W T5/HO lamps, Aria does not use conventional reflectors or louvers; instead, it uses a patented microprism structure that directs light downward in a batwing pattern to reduce glare. Measuring 2 in. deep, it can be configured with either a single panel or double panels, and with square or rounded edges. UL-listed. **Circle No. 92**



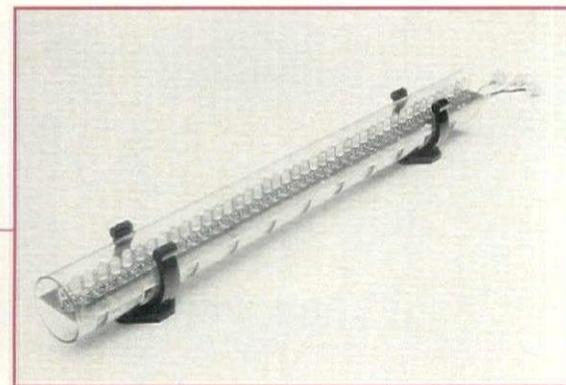
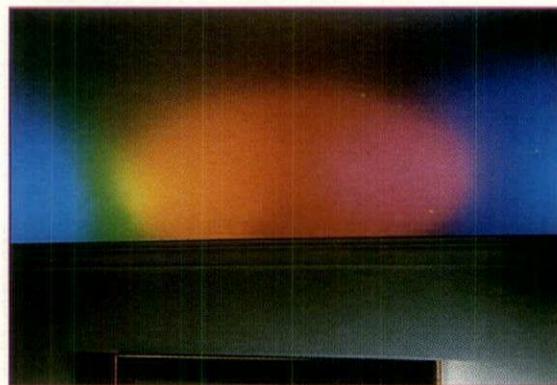
Focal Point's Sky is a symmetric recessed indirect fixture. This 2 ft. x 2 ft., four-lamp fluorescent fixture houses either the linear 14W T5, 24W T5/HO or 55W TT5. The quadripartite vault form, often seen in Romanesque and Gothic architecture, inspired Sky's contoured reflector design. UL-listed. **Circle No. 93**



H.E. Williams Inc.'s "Performance Lighting" catalog features, among many other products, the Series A12 fixture. Series A12 features high efficiency with a wide distribution curve; perforated downlight apertures with white acrylic overlay; quick-connect polarized single-circuit wiring standard; self-aligning joining method to ensure straight rows; diecast aluminum end caps; non-glare polyester powdercoated textured exterior finish; and high-gloss 92-percent reflectance white powdercoating on all non-exterior steel components. Available in 4- and 8-ft. nominal lengths with two, three, four or six T8 lamps. **Circle No. 95**



Ciros from Litecontrol balances direct and indirect lighting components, as well as function and aesthetics. The fixture is offered in two-, three- and four-lamp versions and a choice of seven diffusers—from a die-formed steel windows pattern to baffles and lenses. Available as an option, the Distribution Separator Reflector (DSR) allows three- and four-lamp tandem-wired fixtures to deliver separate direct and indirect components. A hub connector allows adjustable fixture corners from 85 to 275 degrees. UL-listed. **Circle No. 94**



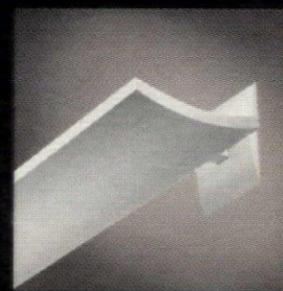
iColor Cove from Color Kinetics Incorporated provides digital color-changing light and lighting effects to alcoves and accent areas (chasing rainbow effect shown). iColor Cove uses the company's patent-pending Chromacore technology, which generates more than 16.7 million colors using a microprocessor and RGB color mixing of LEDs, to produce color cross fades, color washes, random color changes or constant colors. It can also be externally controlled by standard DMX512 controllers, PCs or other controllers. Segments come in 6- and 12-in. lengths; are housed in low-profile narrow-footprint design; and project a soft-edge strip of light at a 100-degree beam angle. UL-listed. **Circle No. 96**

Got Verve?

Verve I

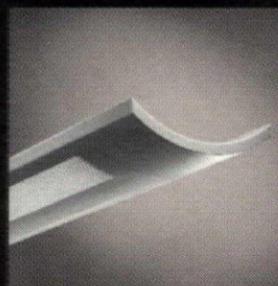


suspended



wall mount

Verve II



suspended



wall mount

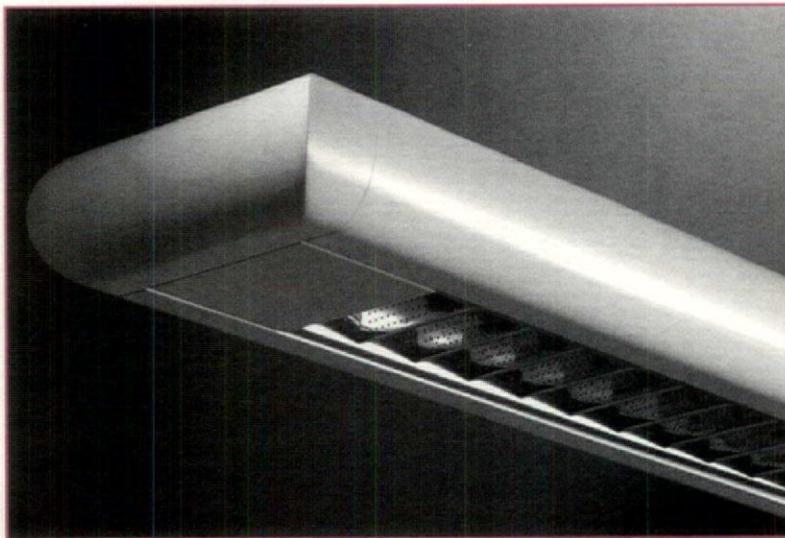
[VERVE (VURV)N: AN ENERGETIC STYLE [SYN: VITALITY]



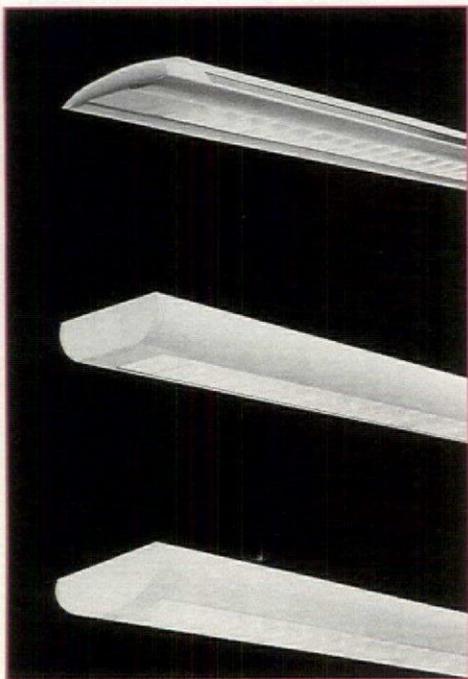
FOCAL POINT[®]
Powered By Innovation[™]

www.focalpointlights.com

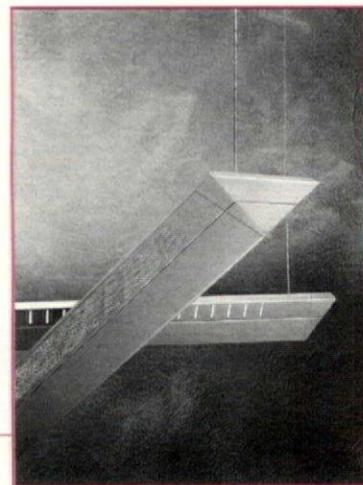
indirect lighting



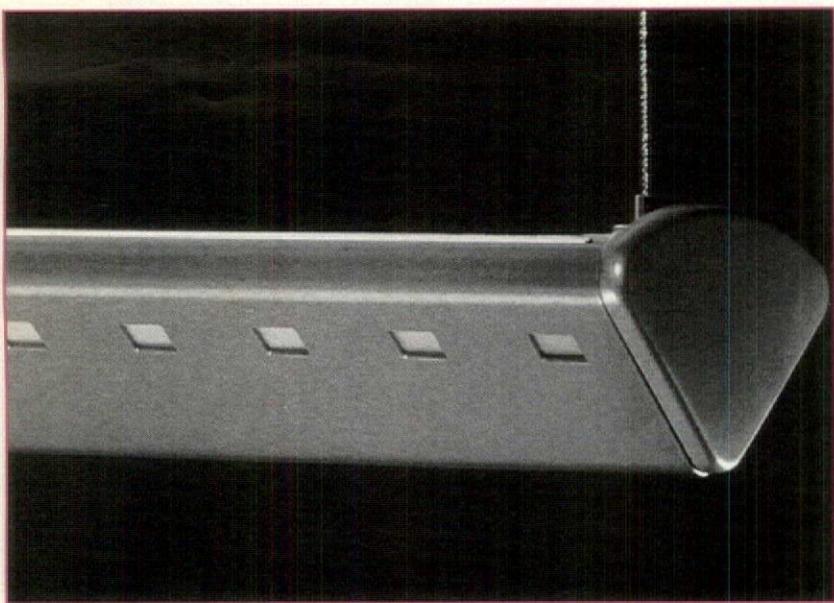
Mirage from **Peerless Lighting** is a linear fluorescent indirect/direct fixture that is available with T5/HO or T8 lamping options and comes standard with a satin matte baffle. Available in 4-ft., 8-ft. and 12-ft. fixture modules with end plates, feed and suspension kits and power connections. UL-listed. **Circle No. 97**



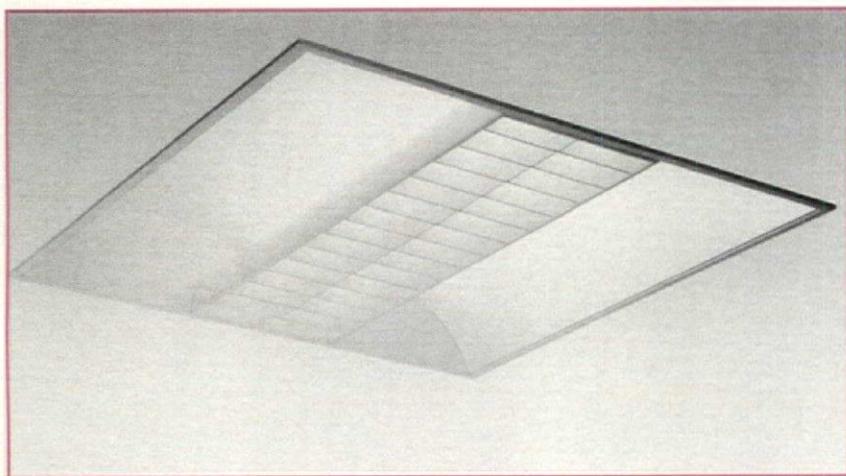
Peerless Lighting's line of indirect/direct lighting fixtures includes the Modular Envision I/D, a fixture with an extruded aluminum design similar to other fixtures in the company's Envision family. Comes with T5/HO or T8 lamping options and a standard baffle finish. Available in 4-ft., 8-ft. and 12-ft. fixture modules with end plates, feed and suspension kits and power connections. UL-listed. **Circle No. 98**



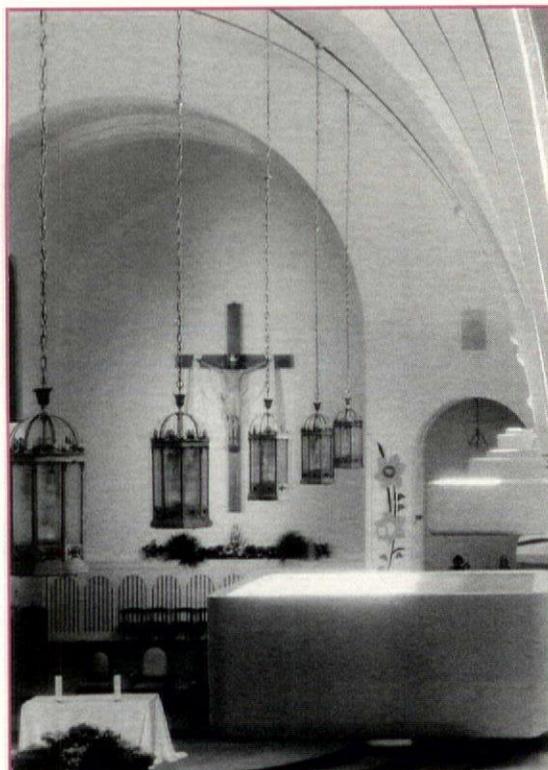
Aviva from **Litecontrol** comes in three housing styles and offers a variety of appearances to complement various interiors. Series 75S has slotted steel sides affixed to the aluminum extrusion lower housing while series 75P features perforated panels. Series 75N has no pattern on the side panels. Aviva utilizes T5 lamp technology—a $\frac{5}{8}$ -in. diameter lamp and a low profile ballast. The high-output version of the T5 with 5,000 lumens, can match the output of two T8 lamps. UL-listed. **Circle No. 99**



Windows from **Lam Lighting** is a semi-indirect linear fluorescent lighting fixture with cubic perforations. Thin aluminum cables suspend the fixture 24-30 inches from the ceiling surface. Houses one or two T5 or T5/HO lamps; lamps can be shielded with an optional acrylic dust cover. UL- and CUL-listed. **Circle No. 100**



Zumtobel Staff Lighting has unveiled the Synto family of recessed fixtures that combine indirect lighting with a direct component that provides controlled brightness. Synto is offered in a 2x2 configuration with two 40W or 50W twin-tube compact fluorescent lamps. Available with matte, specular or white louvers and with white, stepped vane or perforated reflectors. UL-listed. **Circle No. 101**



Ruud Lighting offers wall-mounted indirect lighting in a number of aluminum housing styles, including soft-cornered 12-, 16- and 22-in. square; and 9.25-in. x 16-in. rectangular; and wedge-shaped models. Available with a variety of metal halide and high pressure sodium lamps and with white, silver, black, bronze and verde finishes. UL-listed. **Circle No. 102**

Search

for us at Lightfair

Find us at booth #3421 and ask about
our Hanover Fair airfare giveaway.



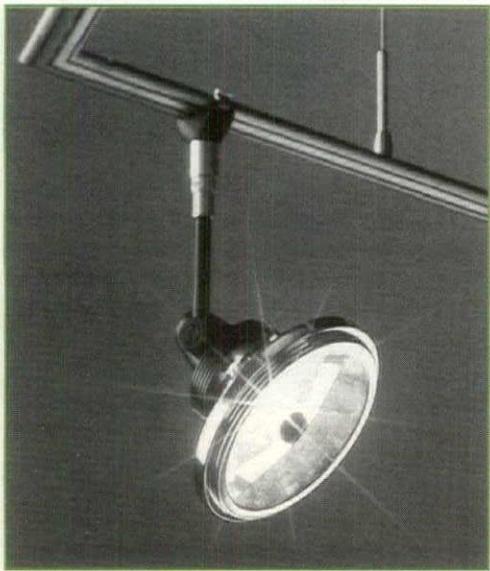
W W W . C - Z . C O M

Circle No. 30



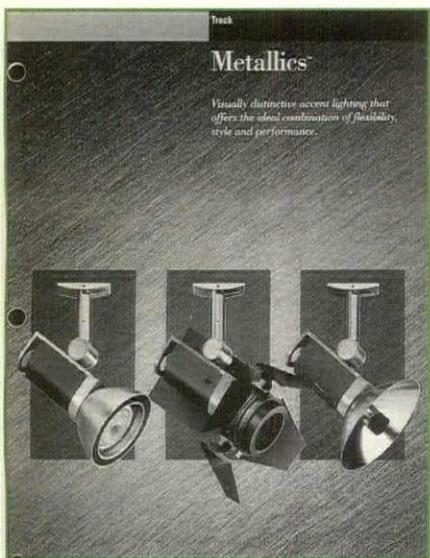
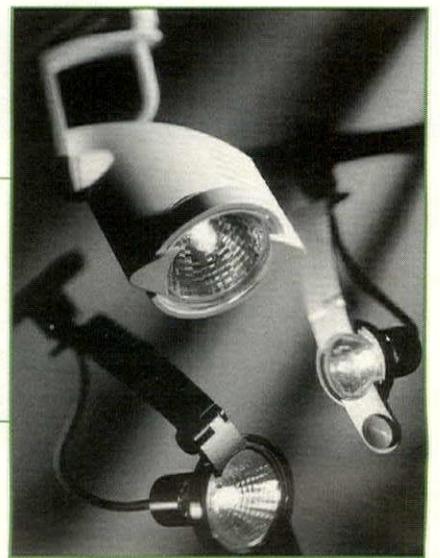
track lighting

Alkco Lighting, a division of JJI Lighting, has introduced Recessed Trak, a ceiling-recessed miniaturized track lighting system. Each unit holds one 50W MR16 halogen lamp; an internal mechanism allows 330-degree rotation for adjustable aiming. UL-listed. **Circle No. 112**



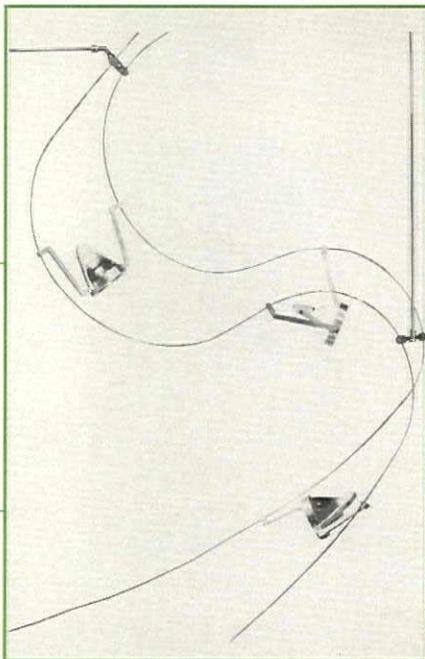
Boa from **Bruck Lighting** is a low-voltage, two-circuit track system with dual switching ability. The system can be suspended or flush-mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck systems. UL-listed. **Circle No. 113**

The Halo Lighting brand of **Cooper Lighting** has introduced a 24V track lighting system called Linea. The miniature lampholders are offered in either 35W MR11 or 50W MR16 lamps. Available in white, matte black or silver, Linea fixtures feature 338-degree rotation and 0- to 90-degree elevation for precise aiming. Lampholders can be combined with optical lenses and color filters. UL-listed. **Circle No. 114**

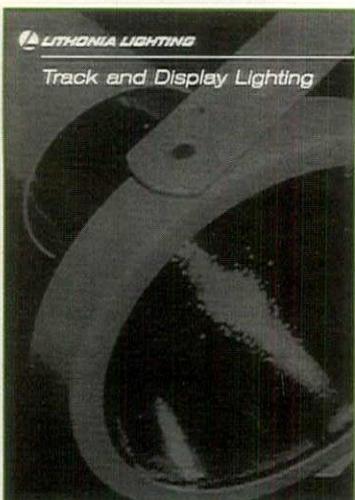


Lightolier has published a 15-page color brochure detailing its Metallics line of track lighting fixtures; the brochure presents a complete view of products, styles and performance options. **Circle No. 115**

Tech Lighting's low-voltage RadiusWire system features slim conductors that can be easily hand-bent on site into loops or curves for a sculptural effect. Shown: RadiusWire with Bye-Byes accessorized with Round Glass Shields in cobalt, amber and red. UL-listed. **Circle No. 116**



Bruck Lighting's Track-Line is a single-phase, 1-in.-wide, laterally rounded track with an aluminum profile. Tracks may be connected without the use of tools. Available in matte aluminum or black. All Uni-plug fixtures can be used with all Bruck systems. UL-listed. **Circle No. 117**

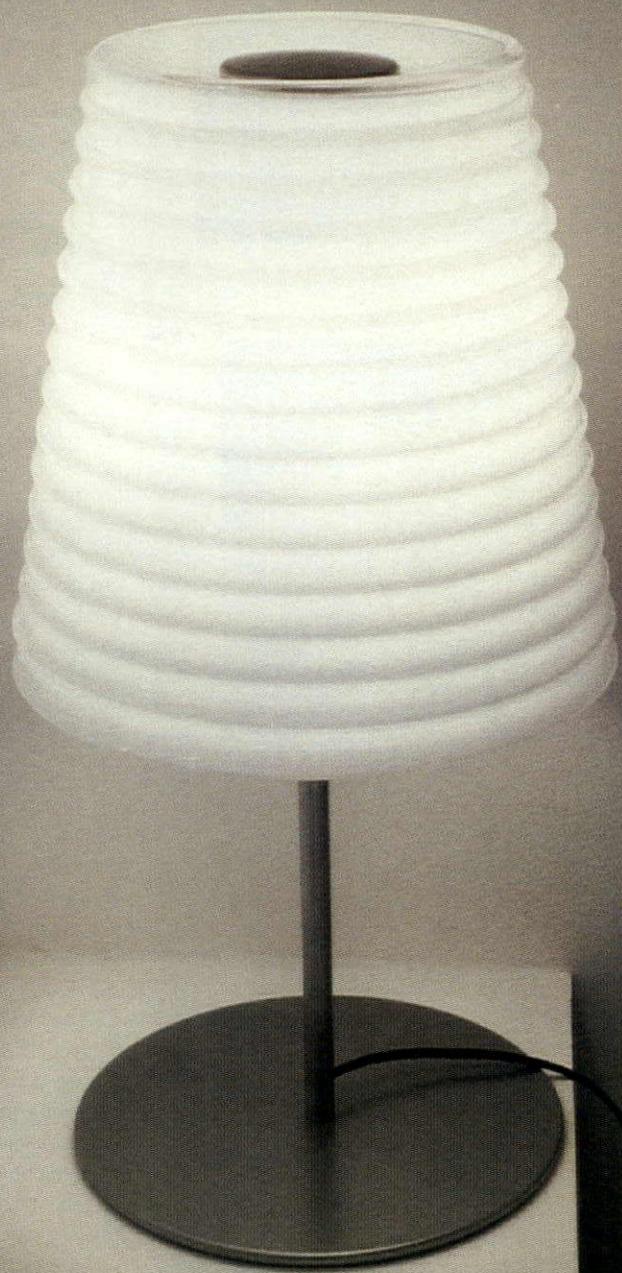


Lithonia Lighting has published a new 28-page brochure featuring its line of track lighting, including numerous track head styles with dimensional drawings and product photographs to assist with ordering. Featured styles include roundback, flatback, gimbal ring, wire form, step cylinder, geosphere, bellspot and others; accessories, louvers and filters, track layouts and lamp data are also presented. **Circle No. 118**

The Lightrail system from **Neoz**, delivers halogen light from a selection of fixtures in a full spectrum of intensities and effects ranging from gentle, ambient backlighting to crisp, focused spots. The Lightrail system consists of two parallel aluminum rods set 4 in. apart and live at 12V. It is easily formed to many geometric shapes and most interior contours—around corners, above counters, from wall to ceiling. Lightrail is supported at a maximum span of 3 ft. and can be surface- or suspension-mounted. Many lamphead styles are available, including Beetles, as either a disc-shaped downlight or up/downlight. CUL- and UL-listed. **Circle No. 119**

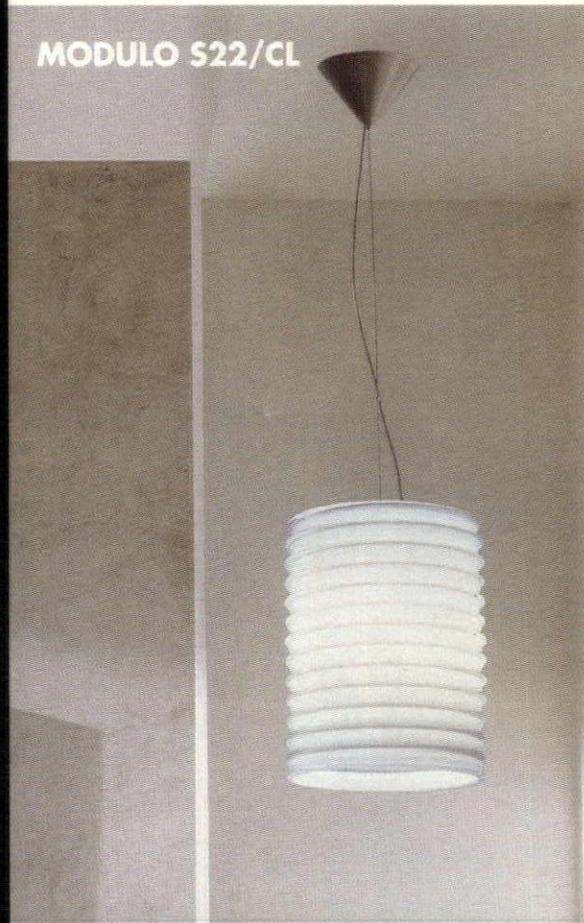
BRINGING ARTISTRY TO LIGHT

MODULO T31

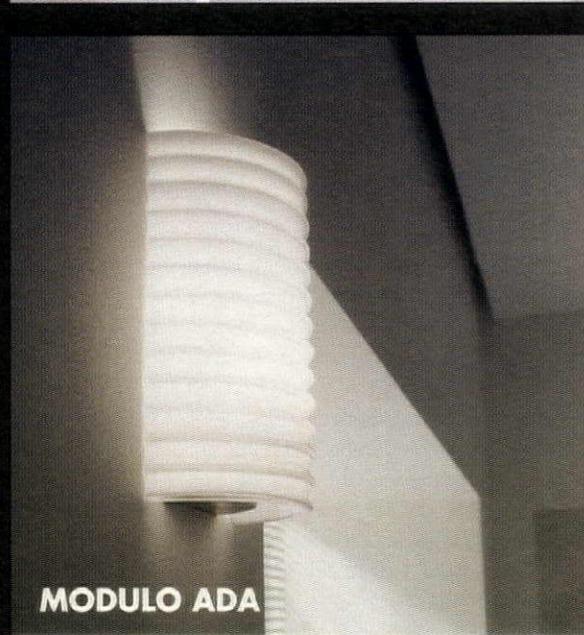


LEUCOS LIGHTING

MODULO S22/CL



MODULO ADA



MODULO

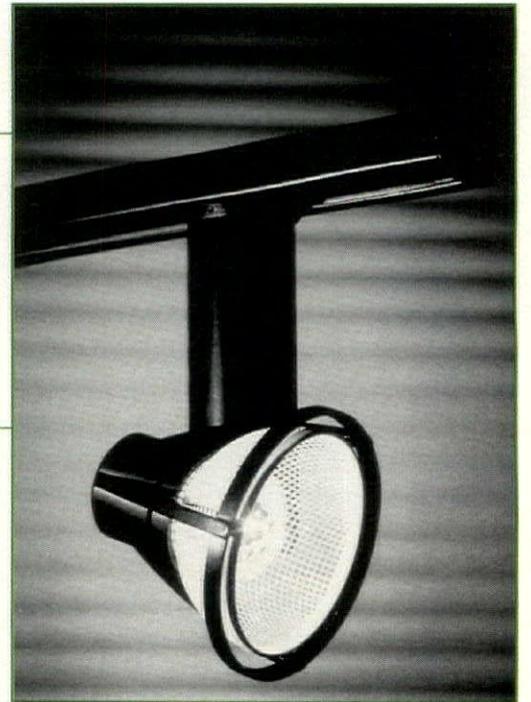
design by R. Toso, N. Massari and Associates

LEUCOS USA INC.

11 MAYFIELD AVENUE EDISON N.J. 08837
TEL (732) 225-0010 FAX (732) 225-0250
Circle No. 31

track lighting

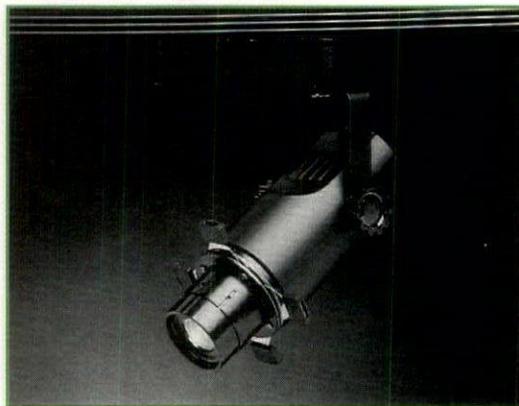
Hubbell Lighting has introduced a new two-circuit, four-wire track system. It provides two 20A-rated circuits and can be connected without modification for either one- or two-circuit wiring, allowing for individual switching and dimming of each circuit. Track is available in 2-, 4-, 6-, 8- and 12-ft. lengths in black and white satin baked enamel finish. Mounting accessories include stem kits, monopoint adapters, pendant fixture track adapters, fixture wands and canopy covers. A wide range of track heads is available UL-listed. **Circle No. 120**



Amerlux Lighting Systems has extended its line of Stylist track fixtures for retail applications with the Stylist III, which uses a high-color-rendering 100W clear ED17 lamp. The fixture's reflector provides a tight beam of light that can light merchandise from up to 50 ft. away; from a distance of 20 ft. it provides a 7.5-ft. beam diameter with approximately 100 fc. Stylist III is made of aluminum with a clear flat glass lens and black painted metal baffle trim ring. Can be track- or canopy-mounted; can be rotated for aiming. UL-listed. **Circle No. 121**



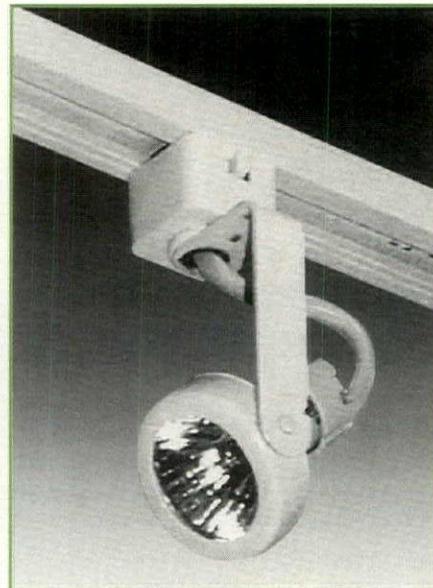
W.A.C. Lighting has introduced its new Framing Projector Track Head. Like a camera lens, the projector can be adjusted to match the width and length of four-sided flat objects on display, such as paintings and other wall art. Uses MR16 lamps. Works with incandescent dimmers. UL-listed. **Circle No. 122**



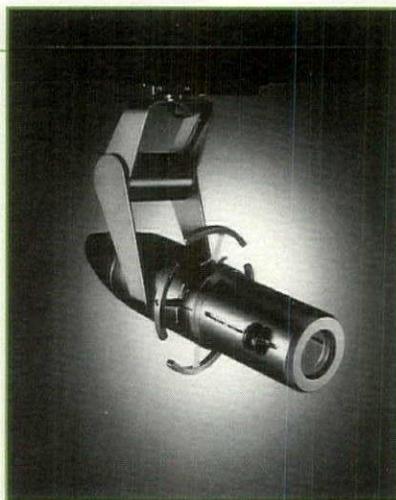
Juno Lighting has published a 12-page color brochure describing the company's Trac12 low-voltage lighting system, which includes 12V and 24V Linear Strip Lighting, 12V and 24V Trac Display Lighting and Decorative Pendants. Provides technical data, product photos and ordering information on the complete system. **Circle No. 123**



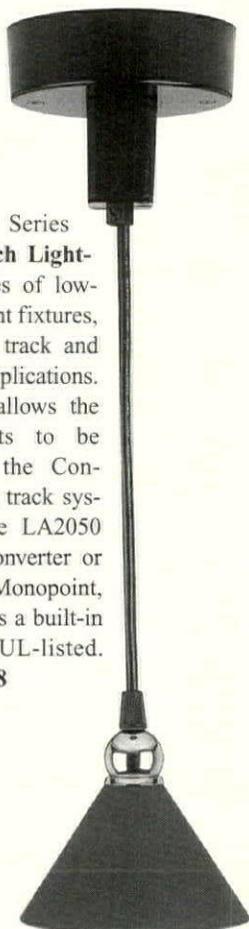
Prescolite has unveiled its Lite Trac line of track heads for use with Prescolite's line of low-voltage and one- and two-circuit line-voltage MR16 track fixtures. Styles include miniature classic bell, traditional flat-back cylinder, round back cylinder and open gimbal designs. UL-listed. **Circle No. 124**



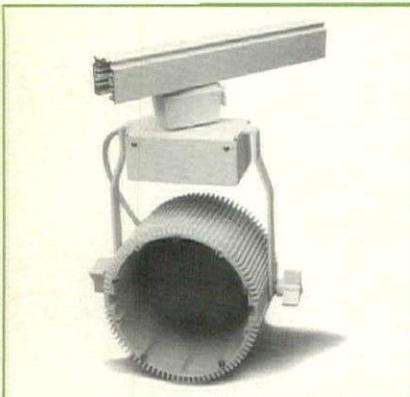
The BP75 Image Projector Series from **Lighting Services Inc** offers projection lighting. Designed for display and architectural environments, it offers the ability to simultaneously project, focus and align (up to 90 degrees) any combination of two gobos (patterns) that can be either glass or metal. A narrow angle zoom from 15-25 degrees and a wide angle zoom from 25-40 degrees are available; houses a 12V 71W MR16 lamp. Available in black, white, silver, graphite and platinum finishes with a range of fittings and accessories. UL- and CUL-listed. **Circle No. 125**



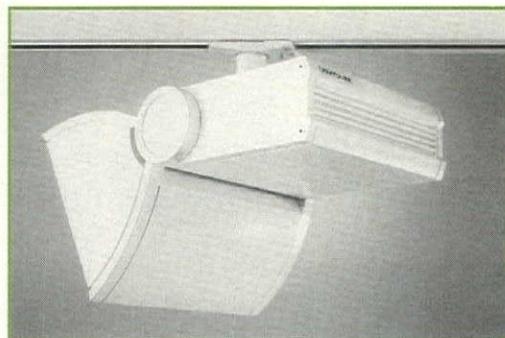
The RLM16 Series from **Con-Tech Lighting** is a series of low-voltage pendant fixtures, adaptable for track and monopoint applications. The adapter allows the 12V pendants to be mounted to the Con-Tech Lighting track system using the LA2050 Solid State converter or the LA1816 Monopoint, which includes a built-in transformer. UL-listed. **Circle No. 128**

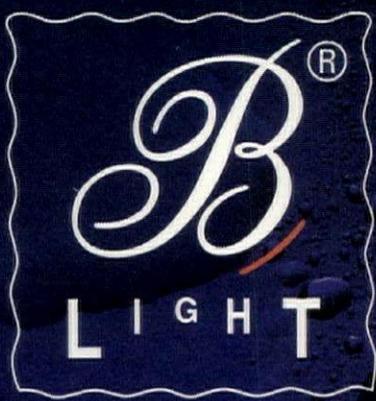


Color Kinetics has introduced the Track C-Series of color-changing track lighting. The Track-C Series consists of a C-200T light fixture, a three-circuit track and the company's patented Data Masseuse, which enables lighting control and unrestricted track topology/configuration. The C-200T is powered by the company's patent-pending Chromacore technology that generates more than 16.7 million colors using a microprocessor and RGB color mixing of LEDs. UL-listed. **Circle No. 126**

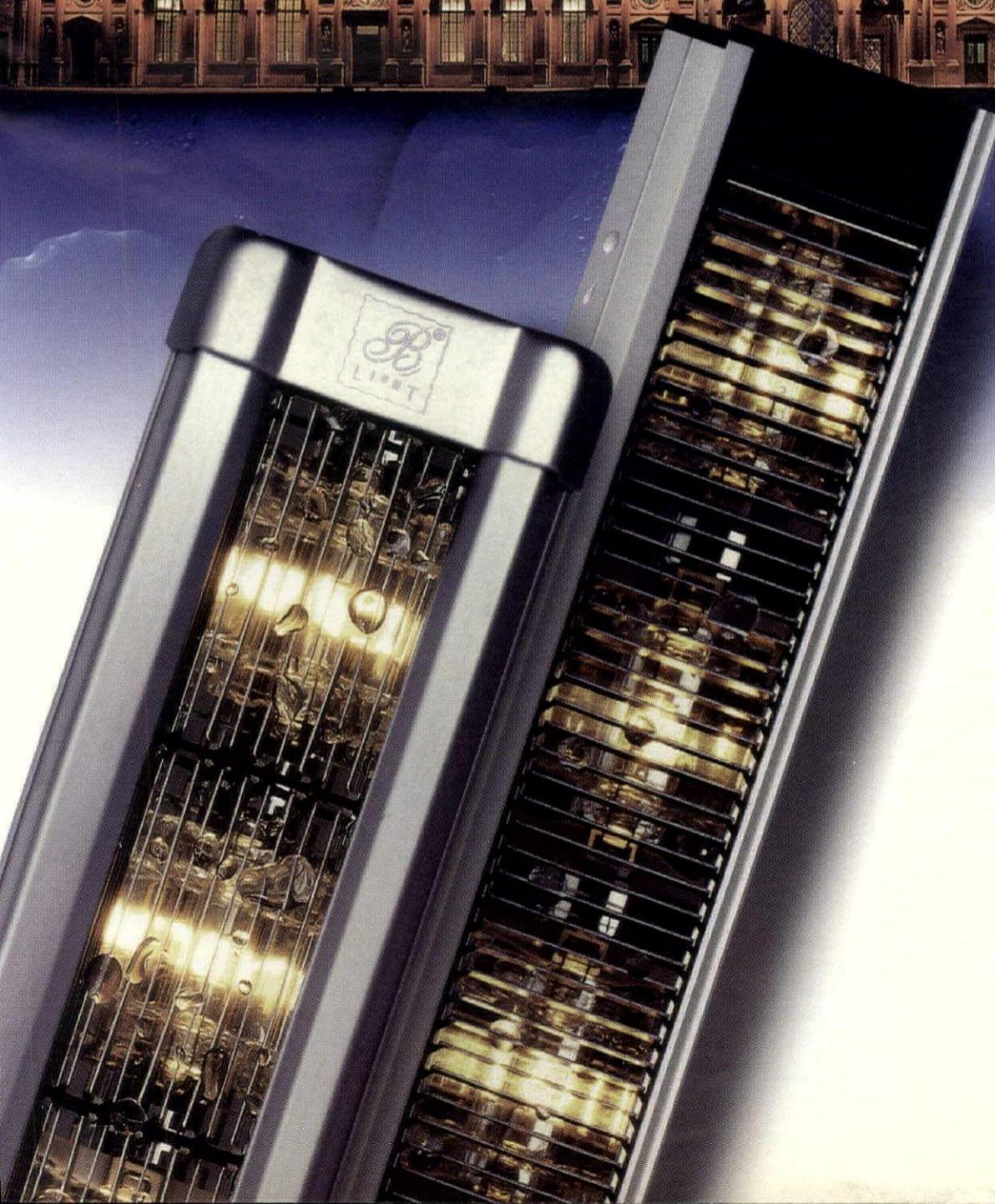


PowerArc from **Lightolier** is a metal halide track lighting fixture for retail applications, available in two versions: as an asymmetrical wall washer and a 30-degree vertical flood for horizontal distribution. Both versions employ an electronic-ballasted 70W CDM or CMH double-ended metal halide lamp and provide 0- to 90-degree vertical aiming capability. Available in matte white, black and metallic aluminum. Accessories available. UL-listed. **Circle No. 127**



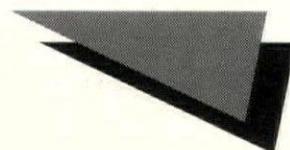


THIS IS THE LIGHT THAT LIT THE LOUVRE
What architectural masterpiece do you need to light?



Now this revolutionary fixture is available in the US. Utilizing a Xenon 20,000 hour lamp, this tiny fixture virtually disappears from sight when mounted to the face of a building. No more hot spots, no more blinding flood lights. At last, you can highlight the true architectural detail of a building with the perfect amount of light.

Distributed in the USA by
LIGHT-PROJECT INTL INC[®]

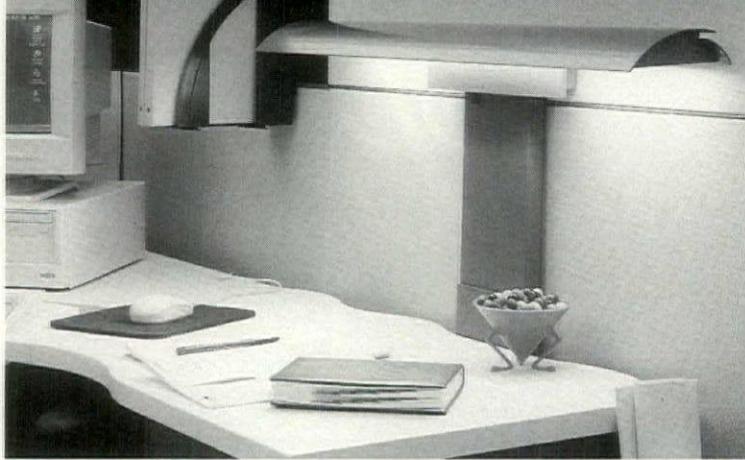


105 Executive Drive #210
Sterling, VA 20166-9558
Phone (703) 471-6411
Fax (703) 471-0312

Circle No. 32

Visit our web page at <http://www.lightproject.com>

task lighting



The Canopy Light from **Steelcase**, utilizing T5 lamps, mounts on most popular office furniture systems; mounts independent of overhead storage on panels of any height. A dimmer allows workers to control light levels. The optical system delivers light in a 988-sq.-in. pattern. UL-listed. **Circle No. 129**



Vista, a division of JJI lighting, has introduced the Sunnex Series HT200, TS708 and HS710 portable, adjustable medical examination fixtures. The HT200 is a tabletop design with a continuously adjustable gooseneck lamp and a clamp-on base; the TS710 is a tabletop design with a dual articulating arm and clamp-on base. The HS708 is a mobile floor lamp with a caster base and gooseneck lamp arm. Light source is a 20W halogen. UL- and CUL-listed. **Circle No. 130**



The Geneva task light from **Waldmann Lighting** provides low-glare illumination for critical applications such as communications centers to help with contrasts in darkened rooms. The unit's fully articulated arms are available in a 16-in. single arm, 32-in. twin vertical arms and a 24-in. twin horizontal style for under overhead storage cabinets. Mounting options permit adaptability for most consoles and workstation configurations. The 2x9 model offers 9W or 18W of light from CFLs; the 2x13 offers 13W or 26W. A special built-in parabolic louver focuses the light; a soft light black louver is available to soften light contrasts in darkened rooms. UL-listed. **Circle No. 131**

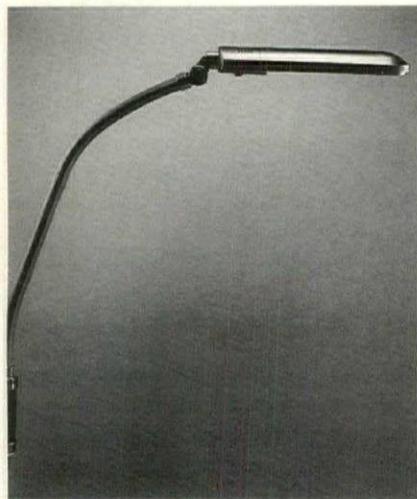
Duro-Lite Lighting's Omni-Lite adjustable undercabinet halogen lighting system features swivel head tilts for focused illumination, a built-in high-low dimmer switch and 25W halogen lamps. Individual Omni-Lite undercabinet units can be "linked" together by a bridge cord. UL-listed. **Circle No. 132**



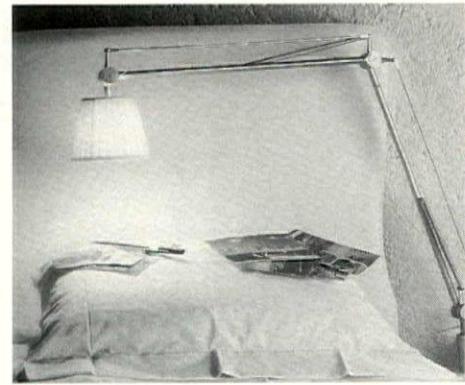
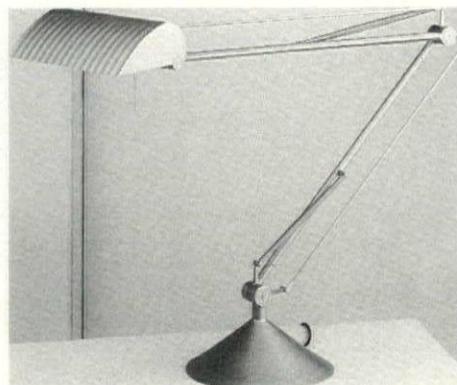
Luceplan USA Inc. has unveiled Fortebraccio, a collection of adjustable desk, floor and wall-mounted fixtures. Fortebraccio offers a choice of two articulating lamp arms connected by a central joint that allows 175-degree rotation across both vertical and horizontal planes, resulting in the ability to guide the light into unusual positions. Available with 60W soft-white incandescent, 100W A-19 incandescent or miniature 100W T10 halogen lamps. Dimmable. Available in a variety of finishes. UL-listed. **Circle No. 134**



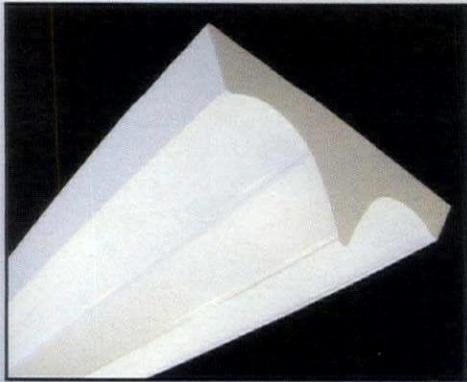
Luxo Corporation has introduced the Luxo 20/20 Asymmetric Task Light Series of multidirectional, adjustable and asymmetric task light fixtures that mount under cabinets, under shelves or on office system panels or walls. A swivel mechanism allows 325-degree rotation of the unit, left or right, directing the light across work surfaces at right angles. The light source is an 18W U-shaped CFL with a choice of magnetic or electronic ballast. UL-listed. **Circle No. 133**



The Wink from **Jolt Lighting** is an adjustable task light housing a 13W compact fluorescent lamp. Mountable via a desk clamp, table base or panel bracket designed to fit the slotted standards of all major office furniture systems, Wink features a two-axis head joint, black finish and 24-in. gooseneck arm. UL-listed. **Circle No. 135**



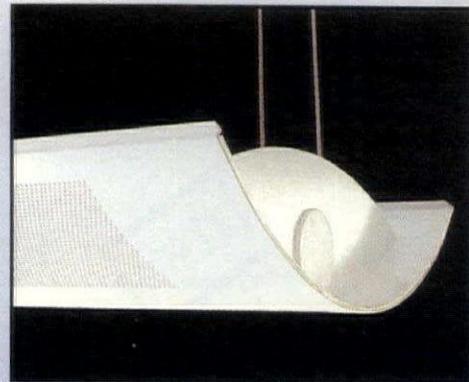
Archimoon by **Flos USA**, designed by Philippe Stark, is a collection of task fixtures with a choice of four shades: Soft (Plisse cloth surrounding an egg-shaped internal glass diffuser); Tech (choice of three heat-reducing polycarbonate shades in either translucent clear, yellow or opaque black; the lamp is sandwiched between an aluminum reflector below and a parabolic reflector above); Eco (symmetrical light distribution); and Classic (symmetrical distribution from an incandescent lamp; a dual reflector system acts as a heat-dissipating chimney, reducing surface heat on the outer shade). UL-listed. **Circle No. 136**



Victory

LIGHTRON

OF CORNWALL, INC.

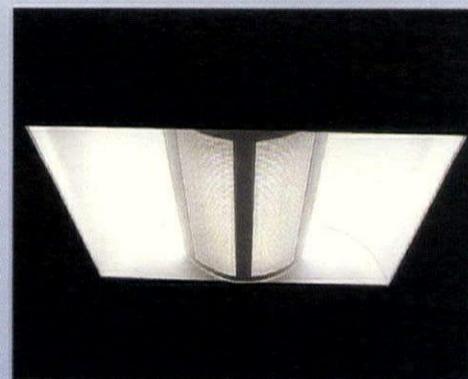


Authentica

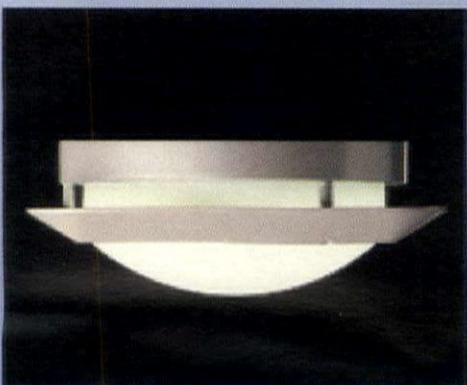


Condor

*Victory, Condor, Enviro-Tuff,
Authentica,
Recessed Authentica and
Retailer...
part of our new Lightron
product line.*

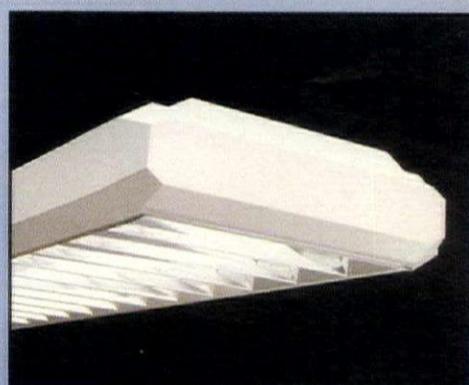


Recessed Authentica



Enviro-Tuff

**See Us at
Lightfair
Booth #121**



Retailer

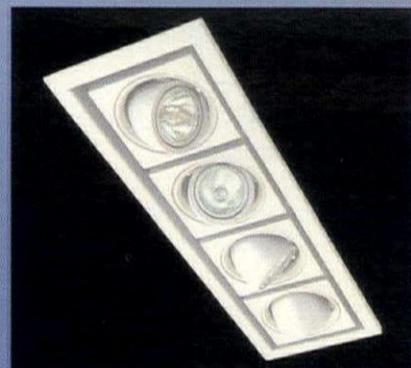
1126 River Road . New Windsor, New York . 12553
Tel: 914.562.5500 . Fax: 914.562.3082

E-mail: lightron2@aol.com
Visit us at our website: www.lightronofcornwall.com



Window

U.S.A. ILLUMINATION Premieres New Reggiani Designs



Mosaico - four light

Mosaico - Multiple channel spots
Low Voltage - compact fluorescent
Line Voltage & HID light sources



Mosaico - one light

Lingotta - Pendant mounted direct / indirect
Luminaire - Compact Fluorescent
& Low voltage sources



Lingotta

Window - Rectangular recessed adjustable
fixtures for compact fluorescent
& HID sources



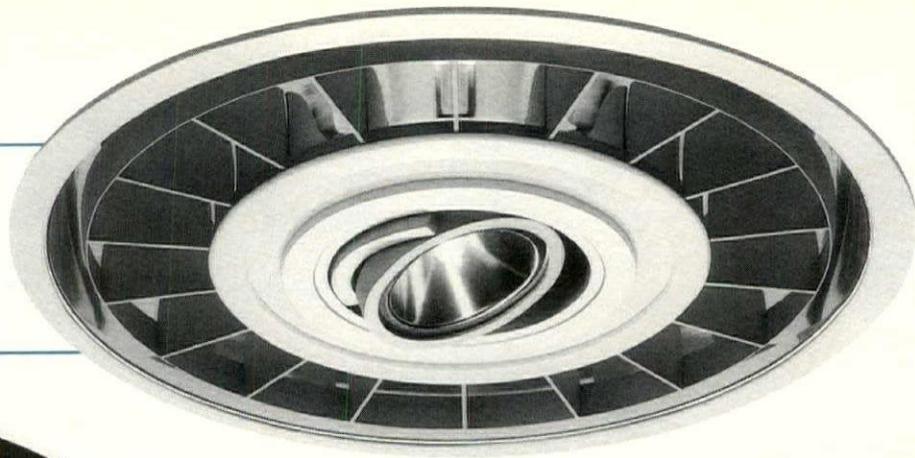
Mosaico - AR111

See these and other innovative luminaires at
Lightfair 2000 Booth #121

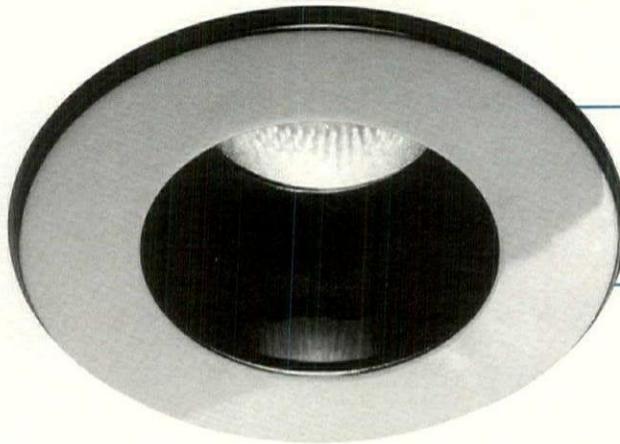
U.S.A. Illumination . 108 South Water Street . Newburgh, New York . 12550
Tel: 914.565.8500 . FAX: 914.561.1130

downlights

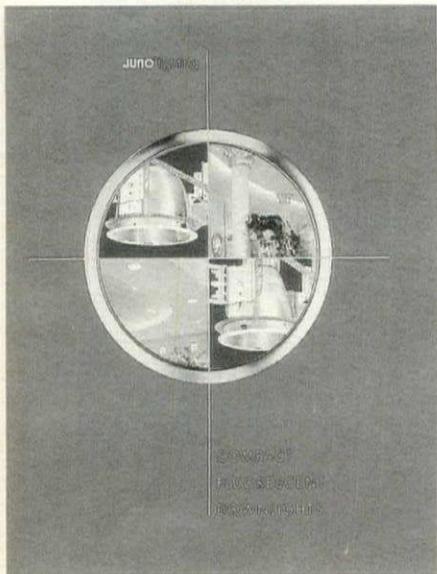
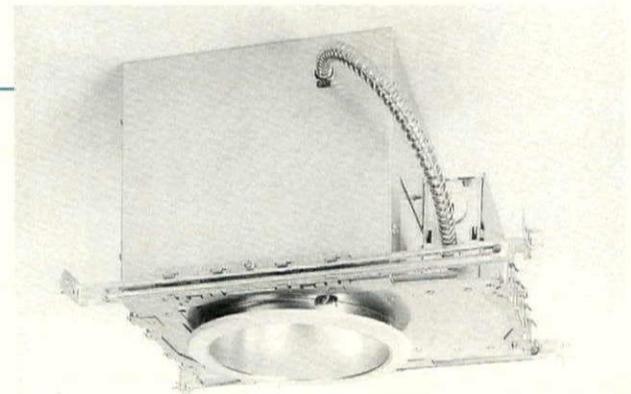
Wila Lighting introduces CircLet, a multifunctional downlight utilizing the circular T5 lamp. CircLet's modular construction allows integration of speakers, videocameras, accent lights, smoke detectors and fire sprinklers in the center "free space" of the fixture. UL-listed. **Circle No. 137**



Basso is **Lucifer Lighting's** first line-voltage downlight in the identical profile of the company's low-voltage fixtures. With an aperture slightly over 3 in., Basso accepts PAR and R lamps and can be accessorized with up to two effects devices. UL-listed. **Circle No. 138**

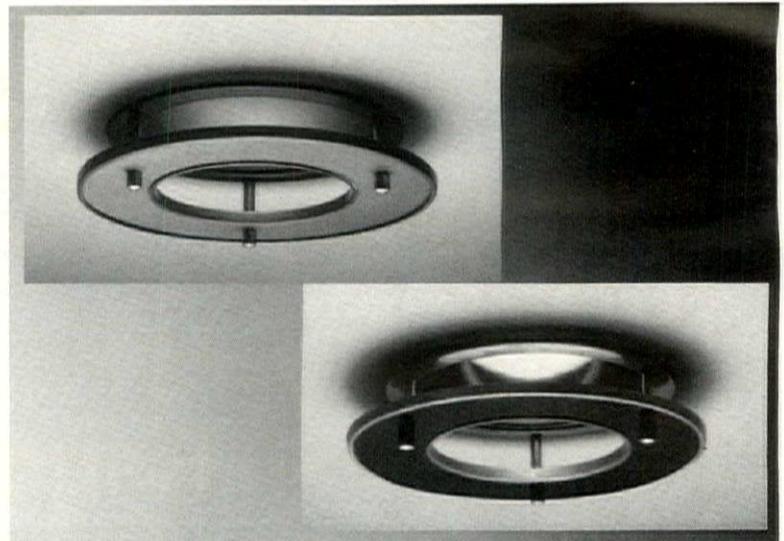
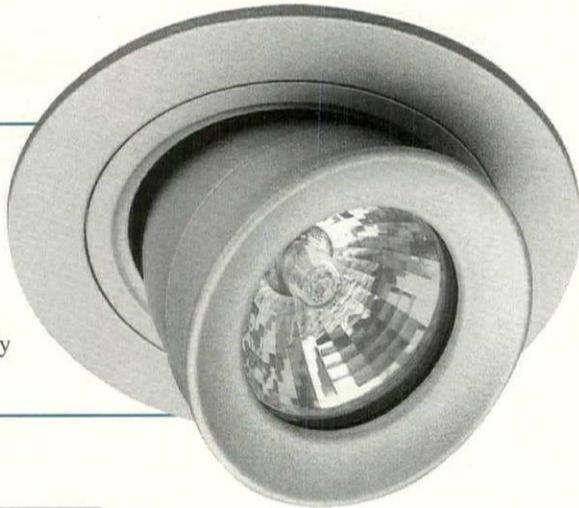


Ruud Lighting offers the Insulated Ceiling Air Tight (ICAT) Series of recessed downlight fixtures, which minimize air exchanges above and below the ceiling to reduce heating and cooling losses. Line-voltage (120V) incandescent models are available in 4-in. and 6-in. housings; a commercial-grade 18W fluorescent with an electronic 120/277V universal ballast is also offered in the 6-in. housing. Popular trims and a variety of lamps are available. UL-listed for direct contact with insulation, damp locations and through-branch wiring. **Circle No. 139**



Juno Lighting has published a 36-page catalog detailing its line of compact fluorescent downlight fixtures. Product photos, technical data and ordering information are provided in addition to a description of CFL technology and the company's options and accessories. **Circle No. 140**

Con-Tech has unveiled the CTR 306, a surface-adjustable downlight. The circular adjustable trim offers a 40-degree maximum vertical swing, 359-degree rotational. The regressed black baffle reduces surface brightness. Flat, stainless steel mounting springs hold the trim firmly to the ceiling. UL-listed. **Circle No. 141**



The Lite Deco series of Light Box recessed downlights with decorative trims are now available from **Prescolite Lighting**. Seven decorative styles of trims with 21 customization options are available, permanently mounted to the units' Alzak-coated reflectors. Standard Prescolite recessed housings with 8-in. apertures can be specified for HID, CFL and incandescent lamps. UL- and CUL-listed. **Circle No. 142**

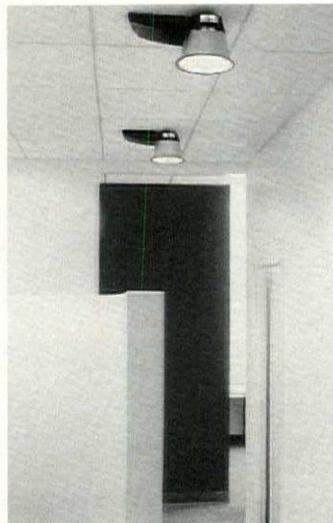
Portfolio, a brand of **Cooper Lighting**, has added a 4-in. aperture T6 metal halide fixture to its family of architectural downlighting. Available in 35W, 70W and 150W, these fixtures offer optical control with a 45-degree cut-off to lamp and lamp image. The downlight also accepts a lensed wall wash; both wall wash and downlight reflector assemblies are interchangeable. UL-listed. **Circle No. 143**



New options for the Mondial series of orbital recessed ceiling projector lights from **Targett-Tivoli, Inc.** New choices include low-voltage and line-voltage, and halogen and metal halide lamps. UL- and CUL-listed. **Circle No. 145**



Prescolite Lighting's Phos/VSL series of downlights mount on the surfaces of ceiling rather than recess into them, similar to a canopy-mount track fixture without the track; the fixture provides recessed downlight optics. A proprietary lamp socket allows both triple- and quad-tube CFLs to be accommodated in single- and two-lamp combinations spanning 26W, 32W and 42W. Two lamp configurations are for 13W, 18W and 26W quads, single lamps for 70W and 100W metal halide. UL-listed. **Circle No. 144**



technology

A Tradition of Innovation Continues...

people...products...technology

T5HO

Lighting systems for architecture.

With an unmatched record of innovation, it's no surprise that Litecontrol now offers the most extensive line of products featuring the latest T5 lamp technology. By

including the benefits of high performance optical systems into sleek, new fixture designs, Litecontrol offers you an extraordinary range of new lighting systems. Smaller fixtures. More output. Fewer lamps. Better distribution. Higher

design. Greater efficiency. Litecontrol now offers T5-based linear indirect lighting in pendant, wall and cove systems. All applications where T5 technology has a real advantage.

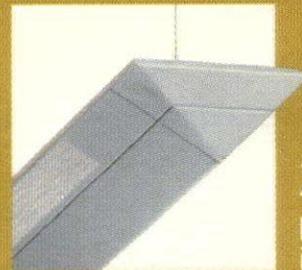
Visit us at www.litecontrol.com or ask your Litecontrol Representative for more details.



New!

V3

adjustable distribution
ADA wall valance.
Innovative ...again.



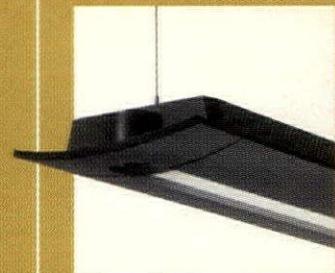
Aviva
pendant mounted
indirect



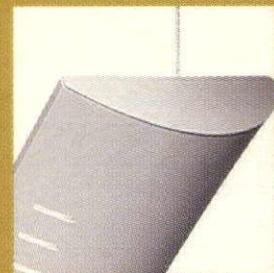
MOD-22
pendant mounted
indirect



Cove-25
concealed cove
indirect



Ciros
pendant mounted
indirect/direct



**ARCOS &
ARCOS slots**
pendant mounted
indirect

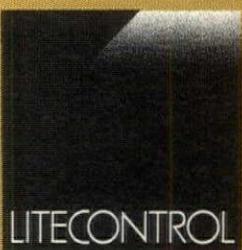


Wall X^a-56
wall mounted
asymmetric
indirect

LITECONTROL

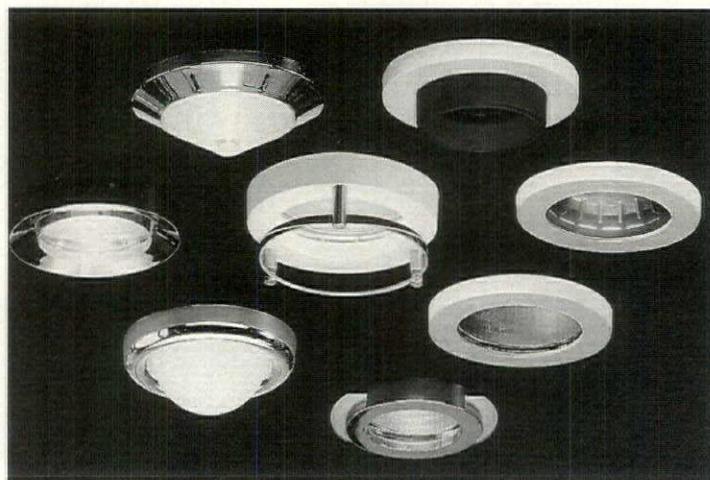
100 HAWKS AVENUE, HANSON MA, 02341 781 294 0100 FAX 781 293 2849
info@litecontrol.com www.litecontrol.com

an employee owned company

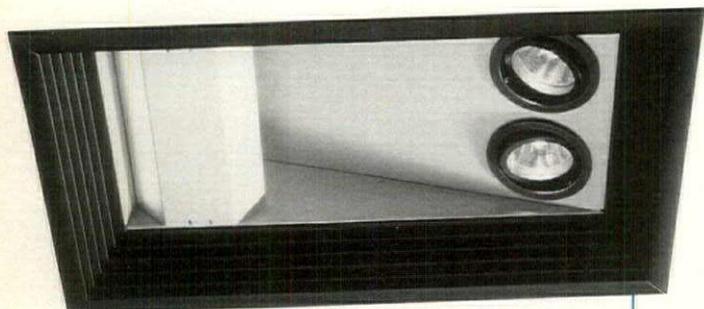


LITECONTROL

downlights

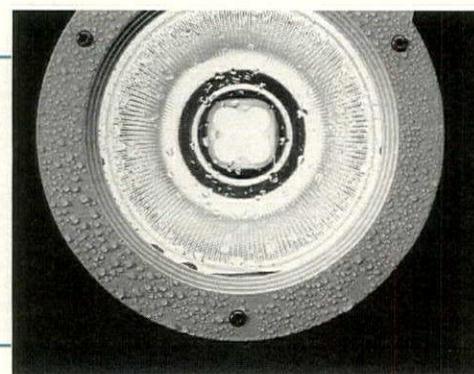


Alkco, a subsidiary of JJI Lighting, has introduced Alkco Downlighting, a collection of decorative recessed downlights that is comprised of three model lines: DL100, DL200 and DL400, each offering a different aperture diameter and other features, options and capabilities. All models also offer a variety of lens and louver options. UL- and CUL-listed for damp locations. **Circle No. 146**

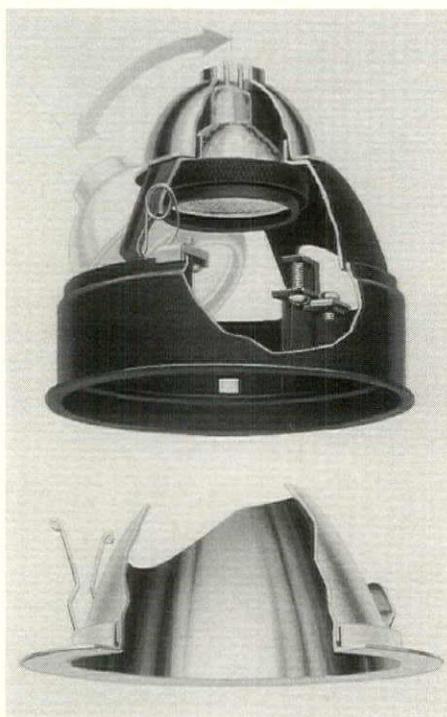


MatreX from **Ardee Lighting**, a subsidiary of JJI Lighting, is a collection of single- and multiple-lamp low-voltage recessed fixture housings that provide display and accent lighting. MatreX offers a choice of linear, square or rectangular lamp configurations. One to four halogen lamps fit into elements that rotate 358 degrees and tilt 30 degrees. MatreX also offers a combination of indirect ambient halogen light with an adjustable downlight (shown). Models AMX06, AMX07 and AMX12 feature a housing that angles back into the ceiling to hide a 100W quartz lamp that provides indirect ambient lighting. UL-listed. **Circle No. 148**

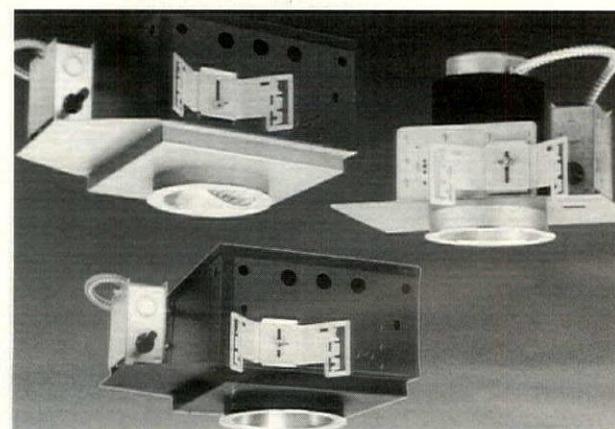
Architectural Landscape Lighting, a subsidiary of JJI Lighting, offers Model 150 outdoor downlights that feature a cylindrical canister-style housing with subtle architectural ring details in each of four models. The downlights can be specified for surface, wall or pendant mounting. All housings measure 7.13 in. in diameter. Wall-mounted units are available in a combination uplight/downlight model. UL-listed. **Circle No. 147**



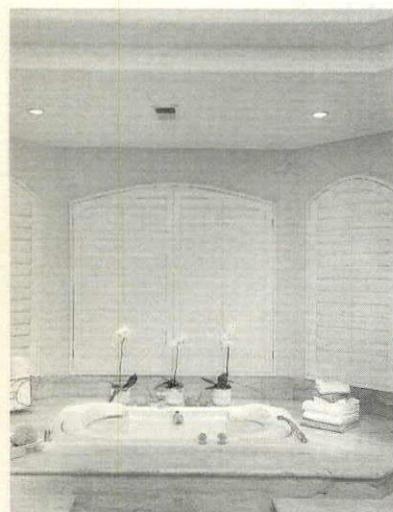
Holophane's Twin Industrial Series of fixtures includes two prismatic glass reflectors and is available with or without an aluminum cover for uplight or minimal uplight. The Twin Industrial Series was designed as an alternative to 1000W fixtures for increased light levels. UL-listed. **Circle No. 149**



Lightolier has introduced the Calculite Evolution line of recessed incandescent downlighting fixtures. Both IC and non-IC frames are available with 4-in. and 6-in. apertures and feature a 50-degree cutoff to lamp and lamp image. A selection of downlighting, wall wash, adjustable accent and wet-location reflector trims that incorporate a wide variety of incandescent and low-voltage lamp choices. UL-listed. **Circle No. 150**

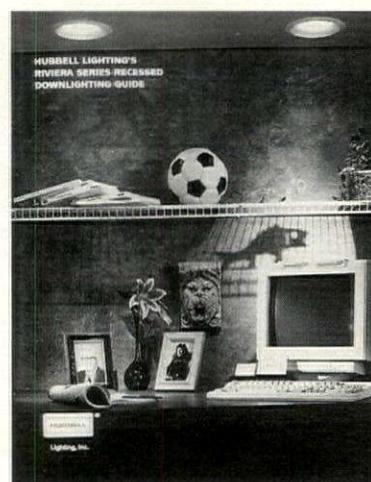


Darklites from **Edison Price Lighting** is a new line of downlights, accent lights and wall washers for use with quartz halogen PAR20 and PAR30 short-neck lamps. These shallow fixtures can be installed in installations with low to medium ceiling heights. Darklites are available in 4-in., 5-in. and 6-in. apertures and use 35W, 50W, 60W and 75W PAR lamps. Accessories for the accent lights include color filters, spread lenses, UV filters and light reduction screens. UL-listed. **Circle No. 151**

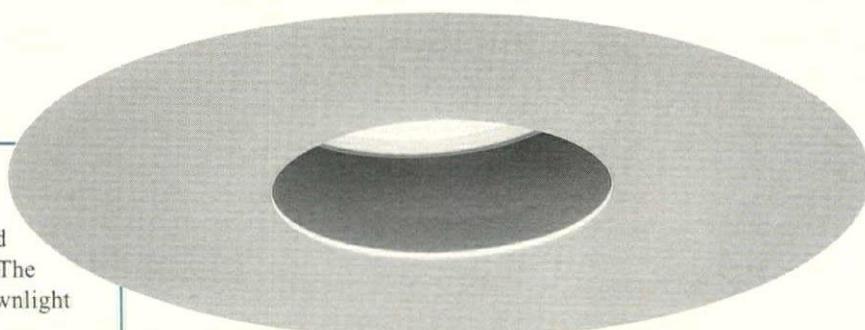


W.A.C. Lighting Company has unveiled new miniature low- and line-voltage recessed housings and trim styles for use in lighting undercabinet, overcabinet, in-cabinet and a variety of other task lighting functions. UL-listed. **Circle No. 153**

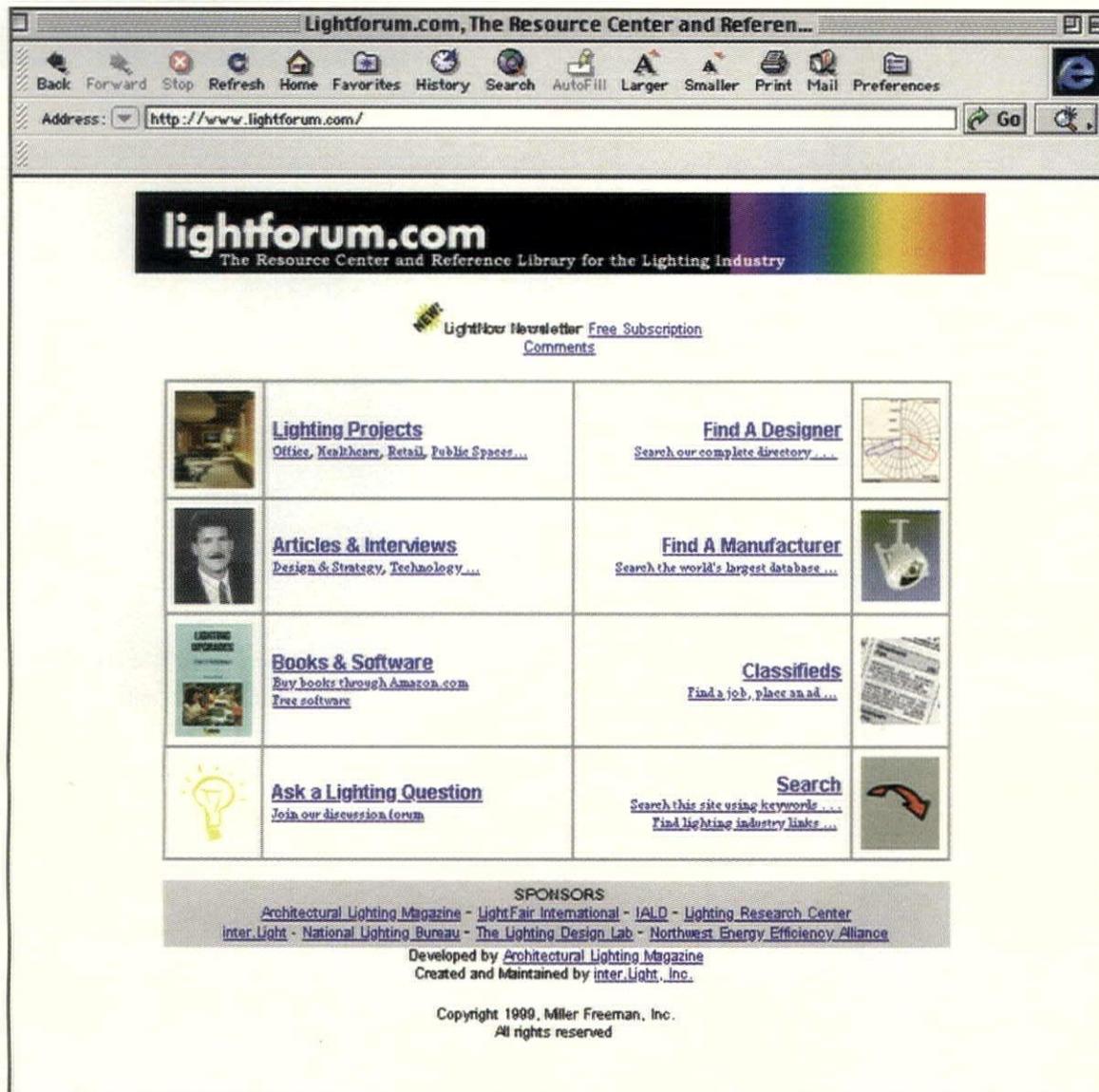
Dreamscape Lighting Mfg., Inc. has introduced the flush trim adapter, an accessory that can create the illusion that the recessed trim is flush with the ceiling, not below it. The flush trim collar works with all Illusion Downlight trims. ETL-listed. **Circle No. 154**



From **Hubbell Lighting**, the Riviera Series Recessed Downlighting Guide provides information on ordering, accessories, options and available trims for the company's architectural, commercial and residential downlights. **Circle No. 152**



Introducing Lightforum.com, your on-line resource library



- Learn from a comprehensive library of projects, articles and interviews
- Buy books
- Download free software
- Share ideas at our discussion forum
- Link to dozens of web sites
- Discover new suppliers
- Find opportunities in our classifieds
- Research easily with our keysearch engine

All fast. All free.

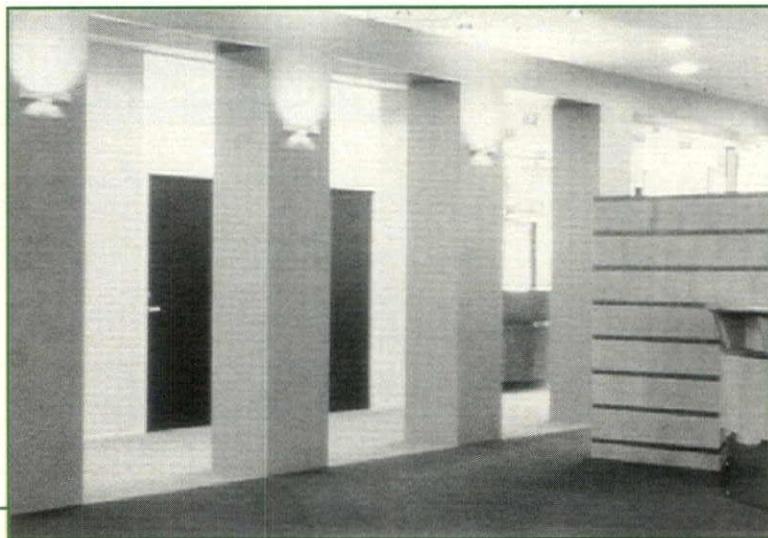
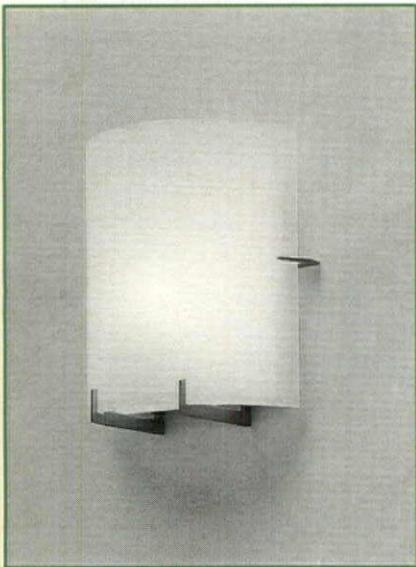
Sponsored by Architectural Lighting Magazine, Lightfair, IALD, Lighting Research Center, inter.Light, Lighting Design Lab, Northwest Energy Efficiency Alliance and National Lighting Bureau.

wall/sconce/cove

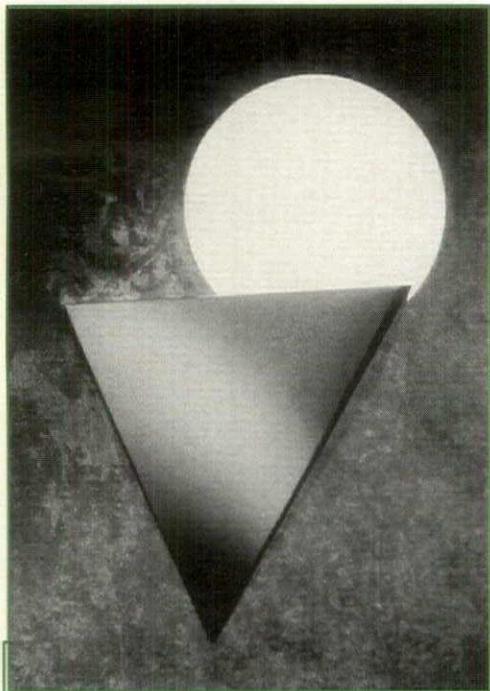
Justice Design Group has introduced the Limoges Leaves sconce, one of three new sconces made of translucent porcelain in Limoges, France. Offered in either a gloss white enamel glaze or in porcelain bisque (shown). UL-listed. **Circle No. 155**



Halo Lighting, a brand of Cooper Lighting, offers a new line of sconces called Etchings. Featuring etched grid glass and matte chrome brackets, Etchings includes six sizes and can be specified with incandescent, quartz halogen or compact fluorescent lamps. Meets ADA requirements with no more than 4 in. of extension from the wall. UL-listed. **Circle No. 156**

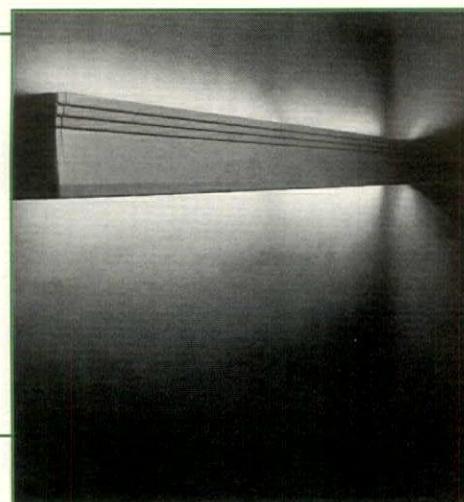


Targetti-Tivoli, Inc. has introduced the Spectra Wall Sconce made of die-cast lacquered aluminum. The reflector produces a wall washing effect above the unit, while a glass diffuser on the underside, incorporating a multilayer dichroic lens in green or magenta, casts a downward splash of color. The light source is a dimmable 150W linear halogen lamp. UL- and CUL-listed. ADA-compliant. **Circle No. 157**

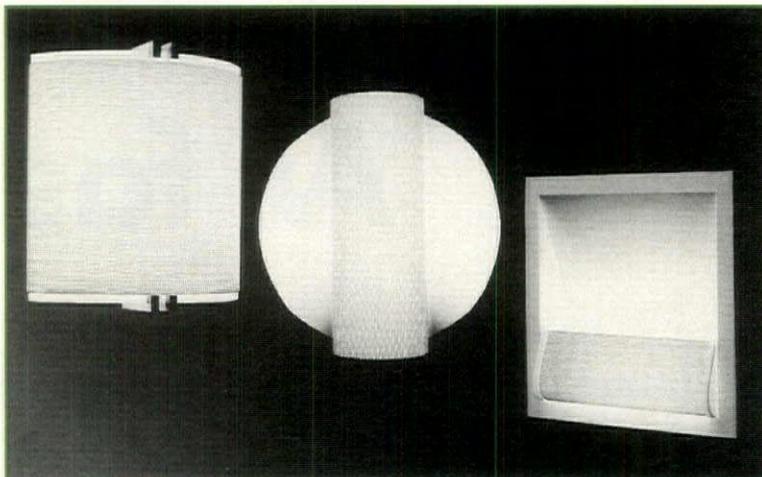


The Fantasia Wall Sconce from **Nessen Lighting**, a subsidiary of JJI Lighting, measures 10 1/2 in. long, 7 3/4 in. at its widest point and 5 1/4 in. from the wall. The translucent glass globe is 5 in. in diameter. The light source is a 60W minican incandescent lamp. UL- and CUL-listed. **Circle No. 158**

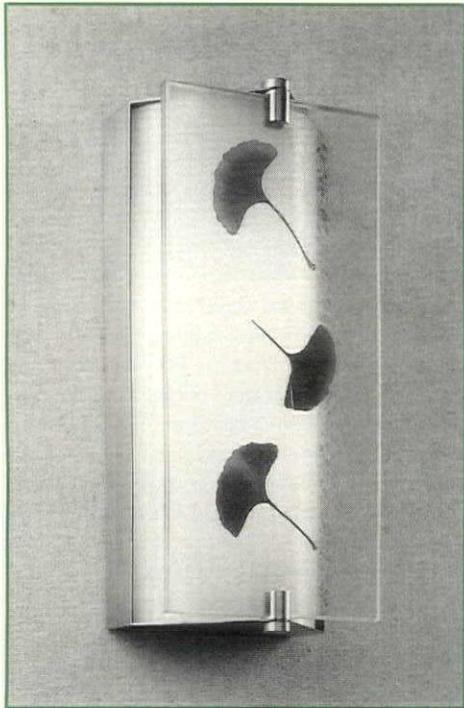
Lam Lighting's Profile ADA is an ADA-compliant indirect/direct wall lighting system, producing ceiling and wall-wash lighting from a choice of T8 or T5 lamps. Fixtures protrude 4 in. from the wall and are available in 4-, 8-, 12- and 16-ft. housing lengths. End caps are available for creating continuous rows. Available in a variety of finishes and with custom and other options. UL-listed. **Circle No. 159**



Elliptipar's Style F305 fixture features a low profile (2 5/8 in. high) and the T5 light source for uplighting from perimeter coves. It can be mounted individually or in a continuous row, and it's adjustable, allowing orientation to light from a slot, valance or niche. UL- and CSA-certified. **Circle No. 160**

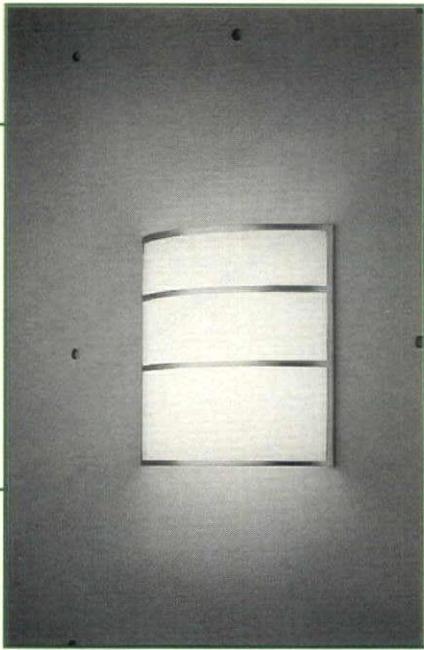


The Avante family of direct/indirect fixtures from **Lithonia Lighting** has been expanded to include ADA-compliant CFL sconces. Available in three types: AVSP, AVSC and AVSR. UL-listed. **Circle No. 161**



From **Baldinger's** Rockwell Group Collection, the Ricky wall sconce measures 5 1/4 in. wide x 11 9/16 in. long with a 3 3/4-in. projection and features laminated ginkgo leaves mounted between glass. Ricky uses one 18W fluorescent and is ADA-compliant. UL-listed. **Circle No. 162**

Boyd Lighting's "Lineage" sconces feature gently curved frames available in soft finishes of gossamer steel, satin steel, antique bronze and antique black. Diffusers are offered in silver mica or white pearl. Various models and pendants are available. UL-listed. **Circle No. 163**



From **Murano Due**, the Chimera 2 Piccola wall sconce features a diffuser of layered, frosted blown Murano glass. Diffusers are available in amber yellow, white or blue. Frames are offered in chromed metal, golden metal 24k or brushed nickel. Chimera uses one 150W tubular halogen. **Circle No. 164**



Derek Marshall's Kyoto wall sconce features a highly textured finish and measures 11 in. wide x 13 1/2 in. high with a 4-in. projection from the wall. Illumination is provided by a 100W incandescent. Various finishes available. UL-listed. **Circle No. 165**

WHITESTAR
4200K
MR-16

Retail
 Jewelry
 Crystal/Glassware
 Museums

USHIO
 800.838.7446
 www.ushio.com

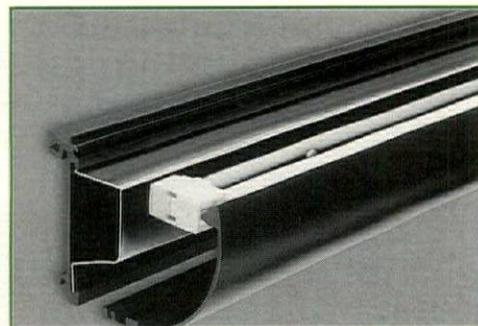
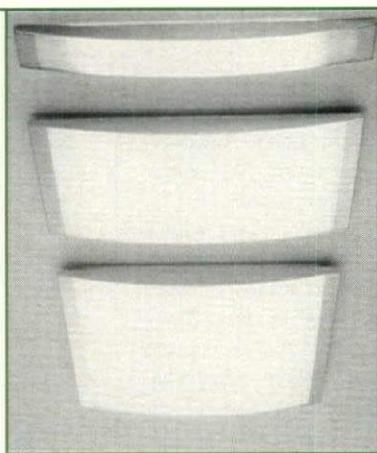
SPECTRAL DISTRIBUTION

Wavelength (nm)	3000K Relative Intensity	4200K Whitestar Relative Intensity
400	0.05	0.05
450	0.10	0.10
500	0.15	0.15
550	0.20	0.20
600	0.25	0.25
650	0.30	0.30
700	0.35	0.35
750	0.40	0.40
800	0.45	0.45
850	0.50	0.50
900	0.55	0.55
950	0.60	0.60
1000	0.65	0.65

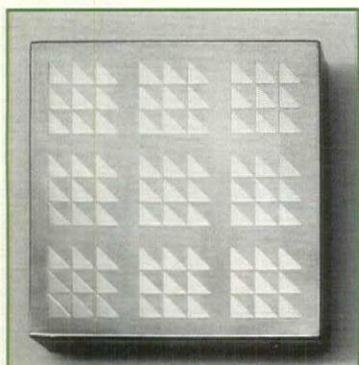
Circle No. 22

wall/sconce/cove

Luceplan USA Inc. has introduced the Strip Collection, which can mount on ceilings or walls to provide ambient lighting. Fixtures protrude 3 in. from the surface and are available in 7-, 15- and 26-in. widths, all with 29-in. lengths. An optional suspension kit is available for the two largest models. Can be specified with two, four or five T8 fluorescent lamps. UL-listed. **Circle No. 166**

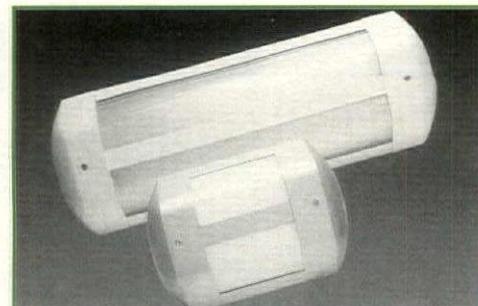
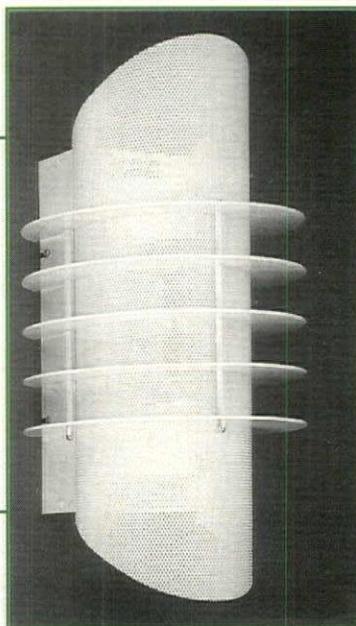


Starfire Lighting has introduced Tru-Lux, a series of T2 and T5 cove lighting and wall-mounted fixtures. Tru-Lux TB, the basic model, is 1.5 in. deep and 2.25 in. high. Tru-Lux LM, designed in a compact mini-square design, is 1.58 in. deep and less than 1 in. high. Tru-Lux TS is a wall sconce version that meets ADA requirements and Tru-Lux TC is an ADA-compliant version for cove lighting installations. UL-listed. **Circle No. 167**



D'ac Lighting, a subsidiary of JJI Lighting, has unveiled Aegis, a line of ADA-compliant geometric-system decorative wall sconces. Available in a variety of styles. All fixtures measure 10 1/2 in. by 10 1/2 in. and protrude from the wall 2 3/4 in. Aegis mounts to standard wall junction boxes for remote on/off switching. Can be specified with a single 24W 4-pin CFL or two 60W T10 incandescent lamps. UL- and CUL-listed for dry, damp and wet locations. **Circle No. 168**

The Safir Wall Sconce from the **Luxo Corporation**, is an original-design wall sconce featuring a cylindrical diffuser with beveled ends. Five-ring louvers cut across the center of the fixture, directing light outward. Safir measures 15 in. long and 7 7/8 in. in diameter. Can be specified with two 35W or 50W incandescent lamps. UL- and CUL-listed. **Circle No. 169**



The LPL Sconce Series from **Morlite**, a subsidiary of JJI Lighting, is a line of vandal-resistant, ADA-compliant pendant wall fixtures. LPL can be specified with a choice of two 26W quad tube CFLs or two 40W single-ended bi-x fluorescent lamps. When combined with an available battery pack, it can be turned into emergency lighting. UL- and CUL-listed. **Circle No. 170**

LUMIRAM CHROMALUX®

WHITE BEAM™ MR 16

For outmost color rendition and perfect natural daylight simulation!

The Chromalux Full Spectrum MR 16 Display Lamp by Lumiram truly mimics natural light! It's pure white light provides strong color contrasts with unsurpassed color discrimination. It's reflector is titanium coated for longer lumen performance and it's long life averages 5000 hours.

Available in 20° and 38° beam spreads.

Colour Temperature: 4200°K

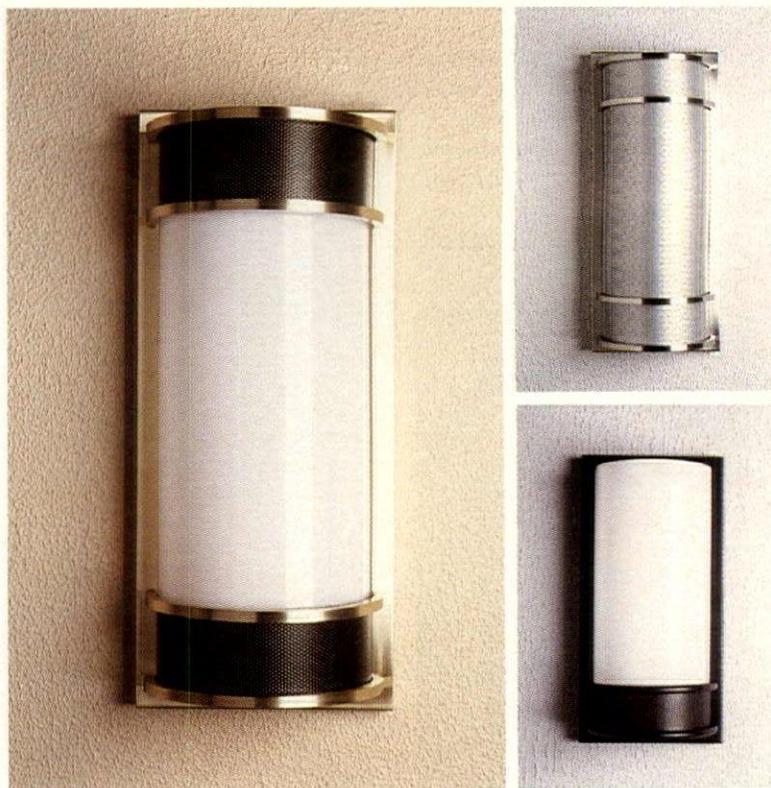
Lumiram Proprietary Technology

LUMIRAM ELECTRIC CORPORATION
Mamaroneck, NY 10543

For More Information On The New Chromalux White Beam MR 16 Call Lumiram at **1-800-354-5596**



P · E · R · F · E · X



New perforated metal diffuser for brightness control, glare-free security lighting & high-tech look. Available now for the Galileo series architectural luminaires. Over a dozen styles and sizes from 9" to 41" tall. Compact fluorescent, and HID. Matching or two tone finishes in white, black, grey, silver, nickel chrome, bronze, polished brass and custom colors. Interchangeable cages, vandal-resistant design.

ECLIPSE LIGHTING™ INC.

3123 N. Pulaski Rd., Chicago, IL 60641
Ph. 773.481.9161 Fax 773.481.0729 www.eclipselightinginc.com

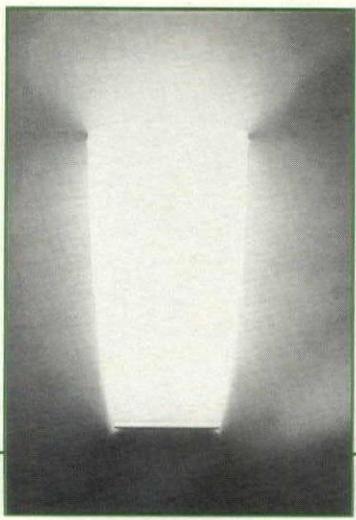
Visit Booth 275

Visit us at Lightfair, Booth #3213

Circle No. 36

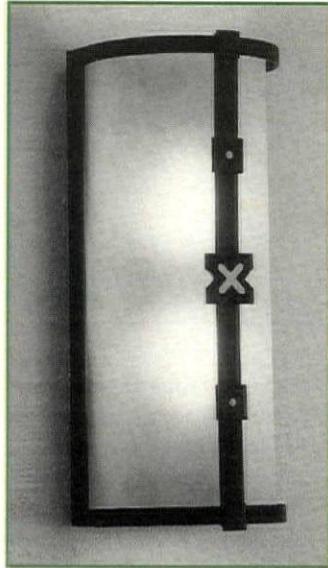
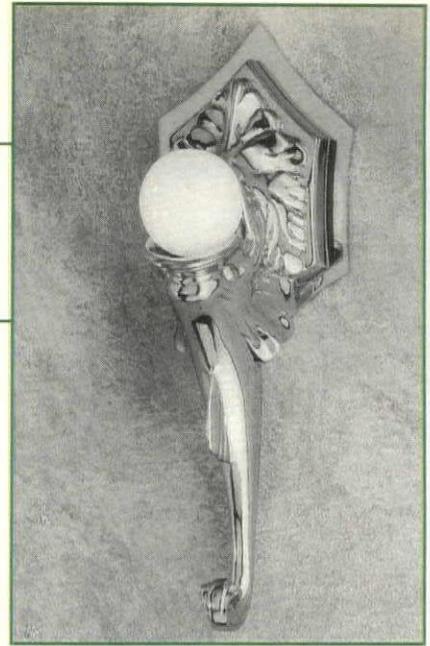
Circle No. 37

★ ARCHITECTURAL LIGHTING ★

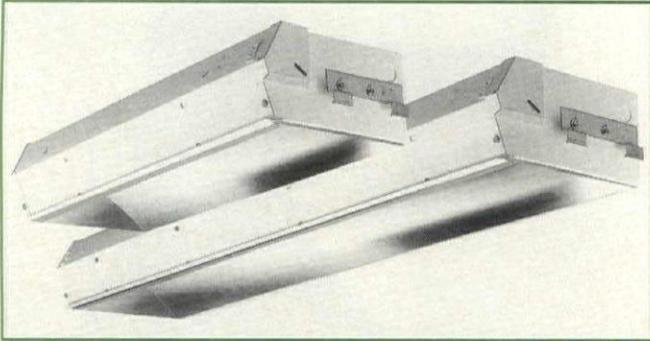


Flos USA's Ouest, designed by Rodolpho Dordoni, is a wall sconce that provides diffused and indirect lighting. Ouest is available in white or amber glass; accent filters in either blue or amber are available. A modular backplate accepts incandescent or fluorescent lamps. UL-listed. **Circle No. 172**

New Metal Crafts has introduced a decorative dolphin wall sconce wired for up to 60W caldelabra (lamp not included). Height is 11 1/4 in.; width is 4 in. Available in polished brass, polished brass with gold lacquer, satin brass and polished chrome. UL-listed. **Circle No. 171**

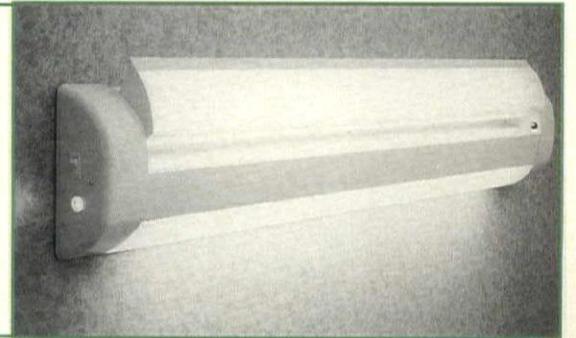


The Northwest Coast sconce from **New West** measures 14 in. high and is 4 1/2 in. in diameter. It is a wrought steel and mica fixture with a decorative vertical cross element that takes two 75W lamps. It is offered in a flat black finish with copper details on ceiling plate. UL-listed. **Circle No. 173**



Metalux Lighting, a brand of Cooper Lighting, has introduced the Horizon Recessed Wall Wash Series. Available in 2 ft. and 4 ft. housing lengths, the fixture line includes 1- and 2-lamp T5 and T5/HO lamp types. UL-listed. **Circle No. 174**

Vista, a subsidiary of JJI Lighting, has introduced Vistaform, a T5 fluorescent family of patient overbed/medical examination lights. Each Vistaform fixture functions as an ambient uplight, patient downlight, medical examination light and nightlight. Switching is accomplished via a pre-wired four-position pull chain or a low-voltage controller wired to a nurse call system. UL- and CUL-listed. **Circle No. 175**



BJB

Lampholders

Quality sockets for
the OEM Lighting
Industry

**Linear Fluorescent
Compact Fluorescent
Low Voltage Halogen
Metal Halide
Incandescent**

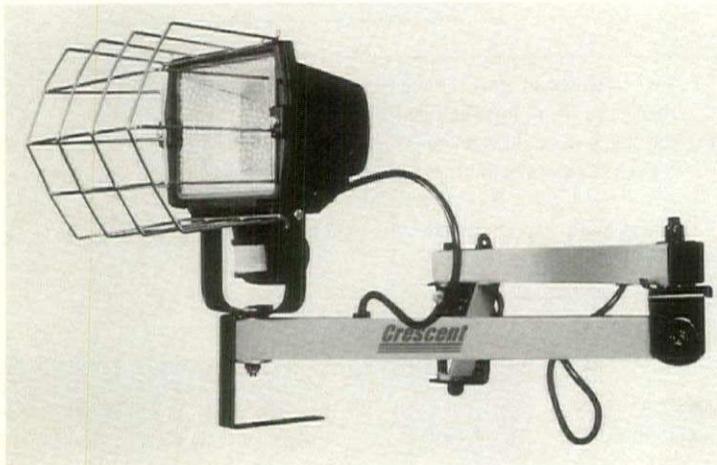
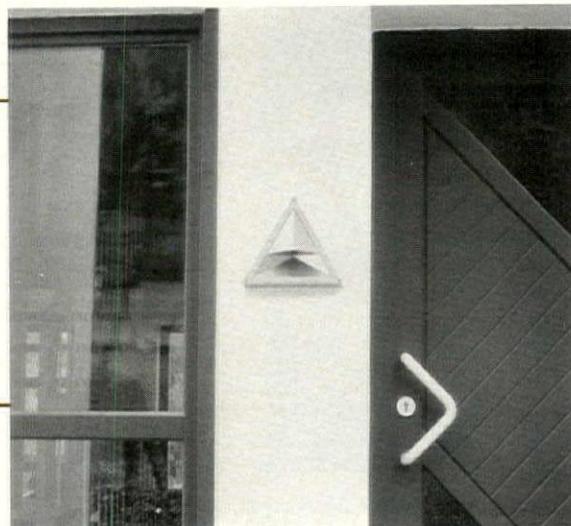


BJB Electric L.P.
6375 Alabama Highway • P.O. Box 968 • Ringgold, GA 30736
Tel: 706-965-2526 • Fax: 706-965-2528

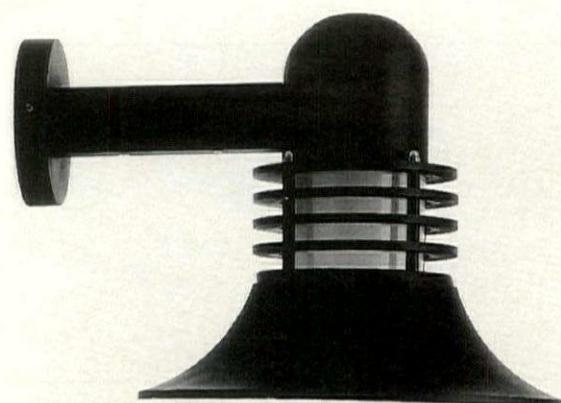
Circle No. 38

outdoor/landscape

Architectural Landscape Lighting, a subsidiary of JJI Lighting, has introduced Metric Outdoor, a collection of contemporary-design surface-mounted, recessed and bollard fixtures. The fixtures are available in round, square or triangular housings; each housing protrudes from the surface 4.73 in. (4.13 in. for the square housing). Illumination provided by a 13W CFL. UL- and CUL-listed for wet locations; IP65-rated. **Circle No. 180**



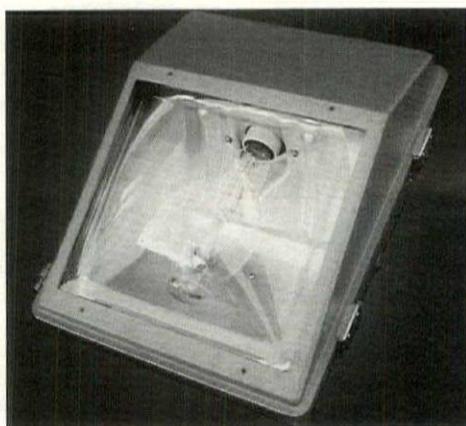
Crescent Lighting/Stonco has expanded its DockLytes Series to include loading dock fixtures with HID lamps and a motion-sensor quartz halogen series. These produce more than double the light output of incandescent DockLytes while reducing wattage by over 50 percent. UL-listed for wet locations. **Circle No. 181**



The Metro Series from **Phoenix Products Company, Inc.** is an expansion of the company's Intrigue Series. It features an open light area with solid rings and a modern European design for enhanced glare control and higher ambient light. Available in two sizes for pole, wall and pendant mounting. Corresponding bollards are also available. Can include up to 175W HID, 150W incandescent, 42W CFL and the 55W and 85W induction lamp system. UL-listed. **Circle No. 183**



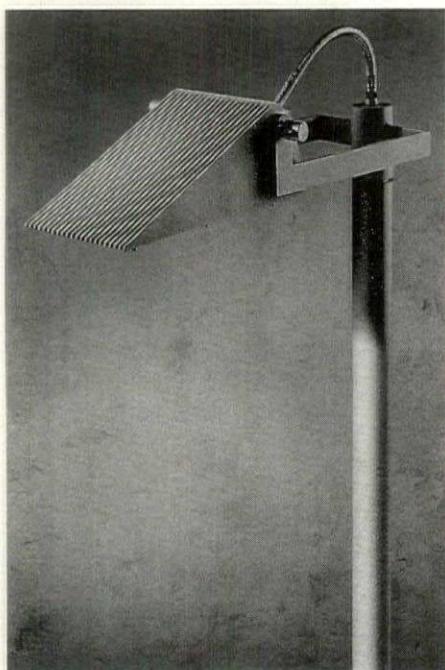
Holophane Corporation's Utility Washington Postlite Luminaire is designed for ease of maintenance with a plug-in electrical module common to all of the fixtures in Holophane's Utility Luminaire Series. The fixture is acorn-shaped, reminiscent of 1920's styling. UL-listed. **Circle No. 182**



The PanelMaster Series from **Metrolux**, a division of Quality Lighting (JJI Lighting), provides lighting for outdoor posters, bulletins and roadway signs, designed to meet or exceed IESNA recommended guidelines. The reflector includes a semi-specular Alzak finish. The reflector system functions in conjunction with a clear rather than prismatic glass lens. PanelMaster accommodates a broad range of standard HID light sources, including new pulse-start metal halide lamps. UL-listed. **Circle No. 184**



Quality Lighting has unveiled the Model 550 Adjust-A-Beam, an aiming floodlight that can produce various effects and a widely adjustable (17- to 80-degree) beamspread (adjustments are made without opening the fixture). Can be specified with HPS, metal halide or HQI lamps with a wattage range of 35-175. Can be ground or wall mounted. UL-listed. **Circle No. 186**



Hessamerica has expanded its Novara family of original-design pole and wall-mounted outdoor landscape lighting fixtures with the NV450 ML, an intermediate-sized fixture that can be used for either direct or indirect lighting. Pole or wall mounted. Can be specified with a range of metal halide, CFL or halogen lamps. UL-listed for wet locations. **Circle No. 185**



The Prairie Wall Fixture from **Sternberg Vintage Lighting** features incandescent downlighting for entryways and lighting walls, with a stylized tree feeling on the three sides. Cast in heavy wall aluminum with 1/4-in.-thick white acrylic lens. The overall size is 16³/₁₆ in. high x 9¹/₂ in. wide. **Circle No. 187**

The Perflex diffuser option from **Eclipse Lighting** is now available for the company's Galilea Series of architectural outdoor fixtures. Features a perforated diffuser for brightness control. Available in silver, white, gray, black and custom color finishes; available in a wide range of styles and sizes for fluorescent, incandescent and HID lamps. UL-listed, suitable for damp locations. **Circle No. 188**

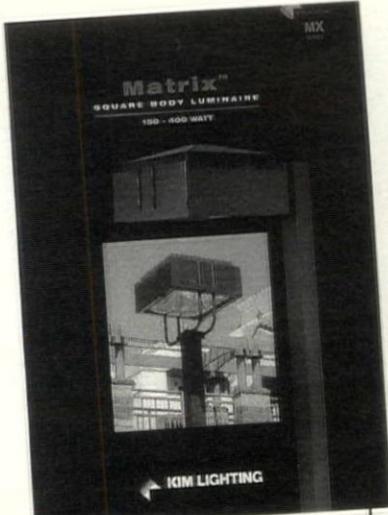


Lithonia Lighting's Gateway Series for architectural rough-service applications features round and oval fixtures constructed of die-cast aluminum and injection-molded polycarbonate. UL-listed for wet locations; meets ADA for ceiling- and wall-mount applications and is listed and labeled to comply with Canadian Standards. **Circle No. 189**



The Sealed Well Light from **Ruud Lighting** is a water-tight fixture for commercial or residential night-scapes. All fixtures are covered by the company's DeltaGuard seven-year finish warranty against excessive fading, peeling or corrosion. Can be specified with halogen (MR and PAR) or a range of HID lamps. Accessories include glare shields, linear grates, louvers and color filters. UL-listed. **Circle No. 190**

BECOME THE HELIX LIGHTS IN THE MINDS OF OTHERS



Kim Lighting has published a 24-page brochure describing its Matrix Series of symmetric, square-body outdoor fixtures, including application, specification and ordering information. **Circle No. 191**

We gratefully acknowledge these friends and colleagues for their generous support of the IALD Education Trust Fund Dinner.

- CORPORATE SPONSOR LEVEL I (\$10,000)**
- GE Lighting
 - Lucifer Lighting Company
 - Philips Lighting Company
- CORPORATE SPONSOR LEVEL II (\$5,000)**
- Architectural Lighting Magazine
 - Cooper Lighting
 - ERCO Lighting USA
 - ETC
 - Focal Point
 - Lightolier
 - Lithonia Lighting Group
 - Lucifer Lighting Company
 - LUTRON (3 tables)
 - Targetti Group
- CORPORATE SPONSOR LEVEL III (\$3,000)**
- Alisco Inc./DSA
 - Architectural Record
 - Baldinger
 - Belfer Lighting
 - Cooper Lighting
 - Creative Light Source
 - Eclipse Lighting
 - Edison Price Lighting
 - Enterprise Lighting Sales
 - International Lights
 - Kurt Versen Company
 - Ledalite Architectural Products
 - Lighting Dimensions
 - Lighting Services Inc
 - Litecontrol Corporation
 - LumiLeds Lighting
 - Luminis
 - National Cathode Corp.
 - Osram Sylvania
 - Philips Lighting Company
 - Poulsen Lighting
 - Prisma Architectural Lighting
 - Rambusch Decorating Company
 - SPI Lighting Group
 - Sterner Lighting Systems
 - Visa Lighting
 - Zumtobel Staff Lighting

The International Association of Lighting Designers Education Trust Fund promotes education in lighting design and provides scholarships to promising students. The IALD Trust Fund's goal is to make the study of lighting relevant and progressive in schools and universities worldwide.

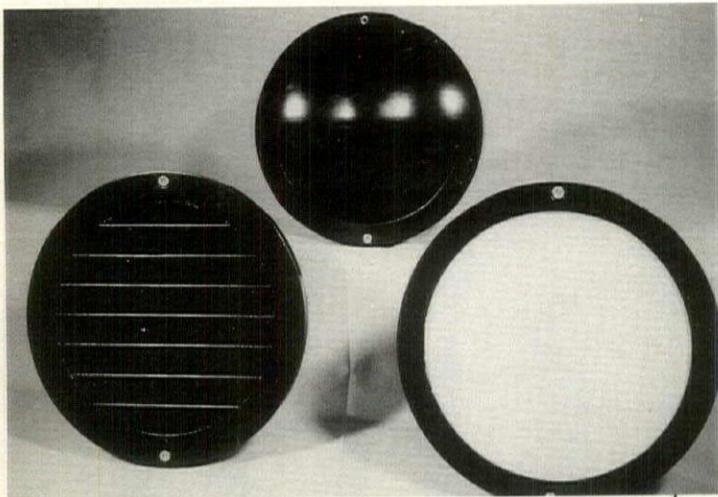
IALD
Education Trust Fund
www.iald.com
312.527.3677

Join us at the IALD Education Trust Fund Dinner on May 10 at the beautiful Puck Building in NY.

▶ **EVENT SOLD OUT**

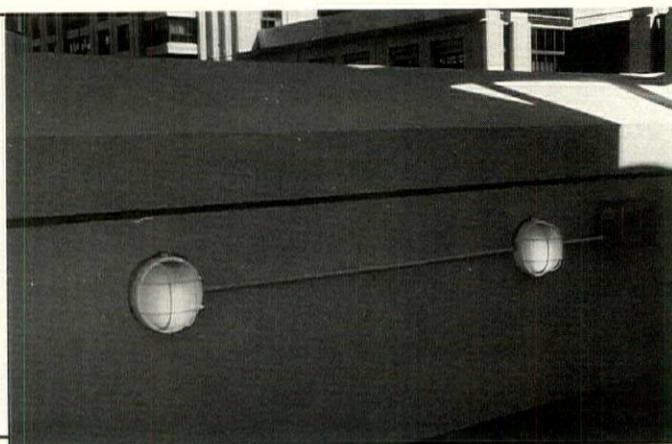
outdoor/landscape

McGraw-Edison, a brand of Cooper Lighting, has introduced the VXM site fixture, the first Vision Series fixture designed by the company. It is designed for parking lot, walkway and roadway applications. Available in a range of colors, the VXM's contours and sharp rear reveals allow it to change character from different viewing angles. Available in 100W to 400W metal halide and HPS. UL-listed. **Circle No. 192**



FC Lighting Manufacturers has added three round-shaped fixtures to its Architectural Outdoor Series. Designed for exterior or interior stairways, walkways and corridors of commercial buildings, the new round recessed step lights are offered with an eyelid, open-face-frosted/tempered glass or louvered faceplate. Options available. Can be specified with a range of lamps that include CFL, incandescent and T4 halogen. UL-listed for interior, exterior and wet locations. **Circle No. 194**

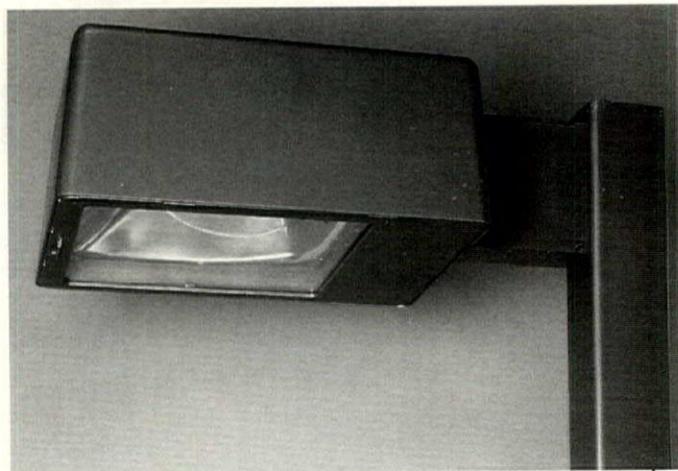
Hubbell Lighting's Euroluxe Series I can be specified both indoors and out. Series I is constructed with cast aluminum housings, rings, guards and shields and can be specified with incandescent, fluorescent and HPS lamps. Round and oval shapes are available in bronze and white (standard) and also gray, black, beige and green. Certified for wet locations. **Circle No. 193**



Polestar fixtures from Holophane Corporation are offered in two sizes with wattages ranging from 250W to 1000W and three patterns: square, asymmetric and forward throw. Three fixture shapes are available as well as three mounting styles. UL-listed. **Circle No. 195**

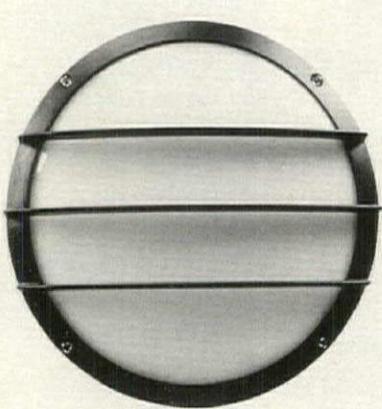


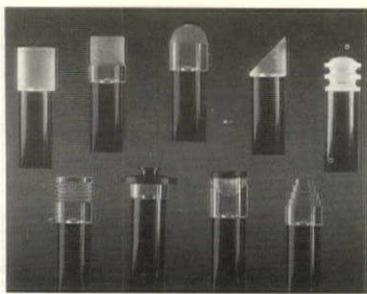
Ruud Lighting's Cutoff Floodlight (CF Series) feature die-cast aluminum housings in compact 12-, 16- and 22-in. square sizes with a bronze finish and is protected by Ruud's seven-year warranty. Can be specified with 35W to 1000W HID lamps. Factory-installed options—available, including fusing, two-level operation, photocontrol and quartz standby. UL-listed for wet locations. **Circle No. 196**



Stonco Lighting has introduced the MCL Series cut-off fixture to minimize house-side throw and maximize street-side throw. The aluminum housing is finished in Duraplex II bronze polyester. A variety of mounting configurations is available as well as options. Can be specified with HPS and metal halide lamps up to 400W. UL-listed. **Circle No. 198**

The Solitaire Series Surface Mount Wall Pack from **Phoenix Products Company, Inc.** is a new fixture from the company's Intrigue Series. It offers six decorative face frame styles. Bronze, white, silver, gray and verde green available. Can be specified with incandescent, CFL or HID lamps. Wall or ceiling mount. UL-listed for wet locations in the U.S. and Canada. ADA-compliant for the Open Face style. **Circle No. 197**



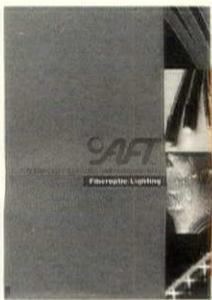


Optiance from **Supervision**, a brand of Cooper Lighting, introduces a family of nine fiber-optic bollard style fixtures for decorative pathway lighting. Each fixture head is made of solid, non-yellowing acrylic, while bodies are constructed of durable PVC plastic. Fixed head choices include a cylinder, stepped cylinder, slanted, tiered and lantern shapes, as well as grooved or inverted cylinders. **Circle No. 205**

Starfire Lighting has published a new catalog detailing the SwaroLite Crystal Architecture fiber lighting system. The 36-page catalog describes the system, which integrates fiber optic technology with Strass crystals that diffuse or concentrate the light. It contains a broad range of application and component photographs, photometry, technical data and ordering information. **Circle No. 206**

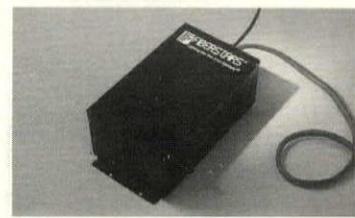
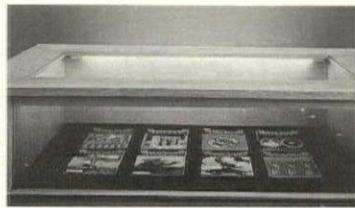


Fiberstars, Inc. has announced the release of its 2000 Product Book, a comprehensive guide to fiber-optic lighting for swimming pools and spas. The Product Book dispels some common misconceptions about fiber-optic lighting installations and includes fiber-optic sizing and placement guides, frequently asked questions about fiber optics, specification sheets, detailed parts diagrams and Fiberstars products listing. **Circle No. 208**

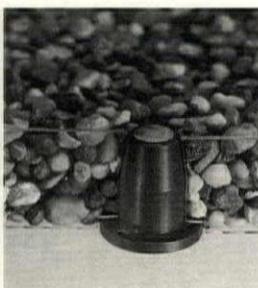


Advanced Fiberoptic Technologies, Inc. has published an eight-page color brochure describing fiber-optic lighting technology and its benefits. Includes a product selector guide. **Circle No. 209**

Fiberstars' LinearEssence is a linear side-emitting acrylic fiber-optic lighting system designed for use in display cases, cabinet and shelf systems. It consists of a rigid acrylic wand that emits aimable fiber-optic light from one side; a connector that holds the fiber-optic cable to the wand; and a yoke that holds the completely assembly in place against a flat cabinet or display-case surface.



LinearEssence converts end-emitting fiber-optic light from the cable to side-emitting linear light from the rod, producing a wide 150-degree wash of area illumination into a cabinet or display case. Rods are available in 12-, 24- and 48-in. lengths. **Circle No. 207**



Lucifer Lighting has unveiled Lightstones, a collection of recessed fiber-optic lighting fixtures for in-wall and in-ground illumination of walkways and pathways. The light source can be fitted with a color filter or wheel, thereby allowing multiple fixtures to be

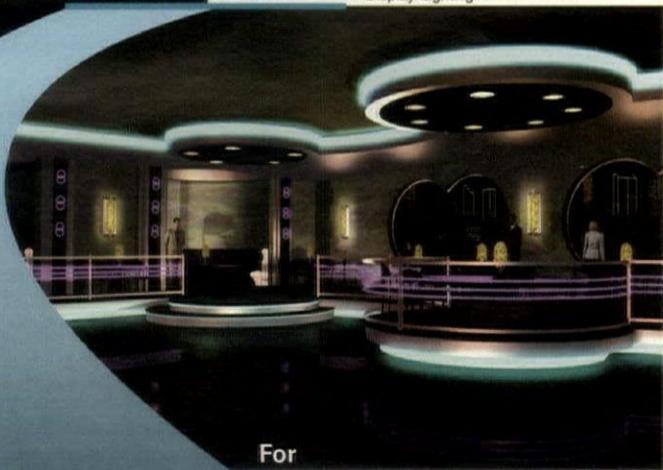
lighted with "Color on Command." The fixtures are round with machined aluminum casing and a frosted acrylic lens that is 1.5 in. in diameter. **Circle No. 210**

Lucifer Lighting Company has unveiled Naiad, a low-voltage or fiber-optic recessed downlight fixture for use in wet locations such as showrooms and steam rooms. The fixture, slightly under 5 in. in diameter, is offered with a frosted lens affixed to the fixture body with gasketing to eliminate moisture entry into the housing. If provided with remote fiber-optic lighting cable, no housing is required. The fixture's rear bracketry permits adjustment of lamp orientation to 45 degrees. Finish options are matte white and black, polished chrome and brass. **Circle No. 211**

fiber optics

FLATLITE[®] System for Architectural and Display Lighting

The world's widest, thinnest, longest lightbulb



For
Accents
Outlines
Coves
Pathways
Decorative Effects

Anything imaginable with a light that can be hundreds of feet long, thin and flexible as this page, visible for miles.



Electronic Energy Products of
an E-LITE[®] Technologies, Inc. product
© E-LITE Technologies, Inc. 1999

E-LITE
TECHNOLOGIES INC.
877-502-3951

Visit
www.e-lite.com
for design tools
and specification details.

Circle No. 39

W.A.C. LIGHTING



DESIGN EXCELLENCE IN LIGHTING

NEW BRUSHED NICKEL FINISH BLENDS NATURALLY WITH THE HIGH-TECH LOOK IN LINEAR SYSTEMS, TRACK, RECESSED AND MINIATURE FIXTURES

CORPORATE OFFICES
615 SOUTH ST
GARDEN CITY, NY 11530
TEL: (800) 526-2588
FAX: (800) 526-2585
Email: sales@wacighting.com
Website: www.wacighting.com

WESTERN U.S. FACILITY
17930 EAST ROWLAND ST
CITY OF INDUSTRY, CA 91748

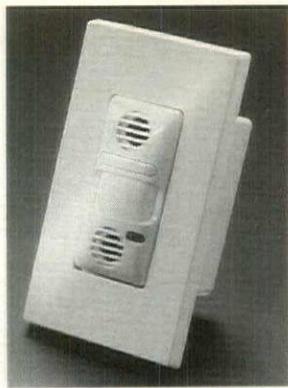
DALLAS SHOWROOM
DALLAS TRADE MART #3321
2100 STEMMONS FRWY
DALLAS, TX 75207

ASK FOR OUR CAPABILITIES CD-ROM.



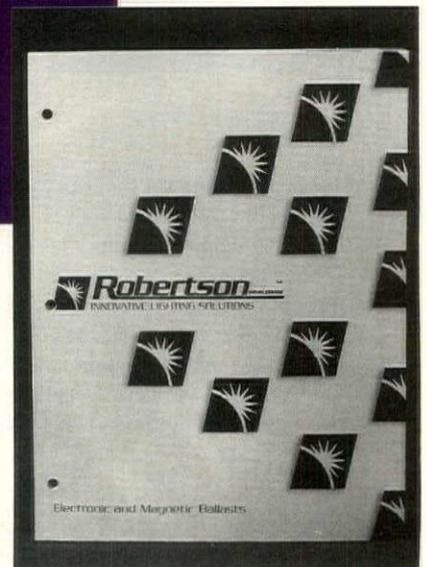
Circle No. 40

lamps, ballasts
& controls

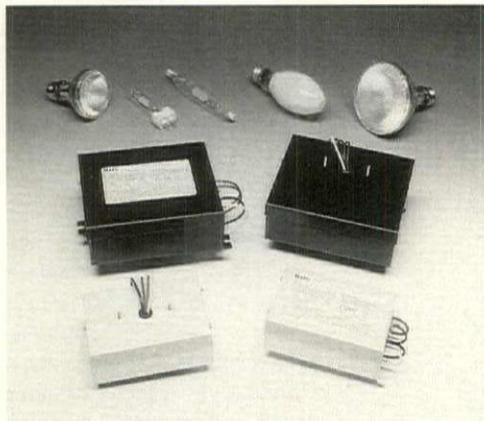


Mytech offers the LightHAWK-MT wall-mounted occupancy sensor, which utilizes both ultrasonic and infrared sensing technologies for occupancy detection in addition to microprocessor intelligence that enables it to adjust its performance to the given operating environment. A built-in photocell enables daylight harvesting. Meets UL, CSA and CE standards. **Circle No. 216**

Robertson Worldwide's product catalog includes more than 200 pages of the company's lines of fluorescent, linear, HID and specialty ballasts, along with voltage transformers. Wiring diagrams, case sizes, electrical and mechanical specifications are provided in addition to a system for finding an appropriate ballast based on the lamp type and configuration. **Circle No. 215**



Siemens Energy & Automation, Inc. has unveiled new plug-in lighting control capability for the company's Instabus product line. Instabus enables addressable lighting control at the fixture level; reassigning lighting "scenes," once created, is a matter of a mouse click. The plug-in feature means that now lighting fixtures and the Instabus apparatus arrive at the job site ready to install, delivering immediately distributed lighting control capability. **Circle No. 217**

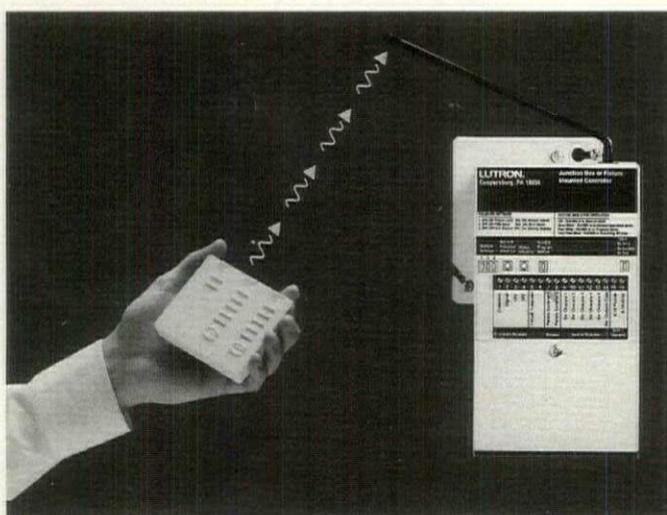


NAiS Metal Halide Electronic Ballasts from **Aromat** are designed to replace the core/coil, capacitor and ignitor of magnetic ballast systems in a single package. Electronic ballasts enable exacting control over the output wattage, resulting in consistent lamp to lamp color and lumen output, according to the company. Available for 35W, 39W, 70W, 100W and 150W lamps. UL and CUL-listed. VDE listing pending. **Circle No. 218**

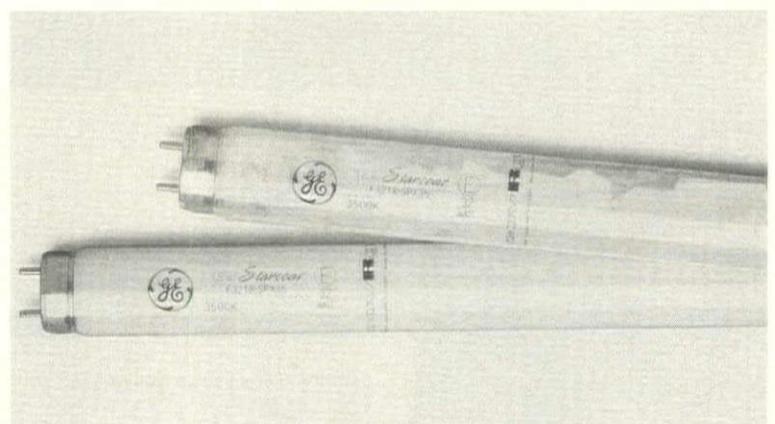
Philips Lighting Company has unveiled a dimmable flood compact fluorescent lamp as part of its Earth Light line of compact fluorescent lamps. The new dimmable flood is available in 15W and 20W models and features a snap-on R30 or R40 reflector. **Circle No. 219**



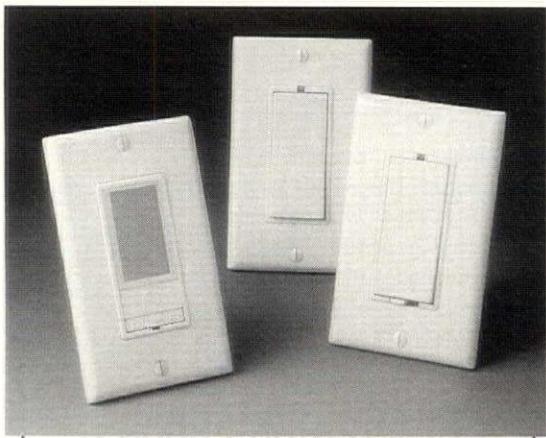
National Cathode Corp. has published a new catalog and brochure describing the company's line of cold cathode lighting products. According to the company, cold cathode is brighter than neon, more malleable than fluorescent tubing and energy-efficient. National Cathode's cold cathode lamps offer custom colors and are dimmable from 100 percent down to 10 percent. **Circle No. 220**



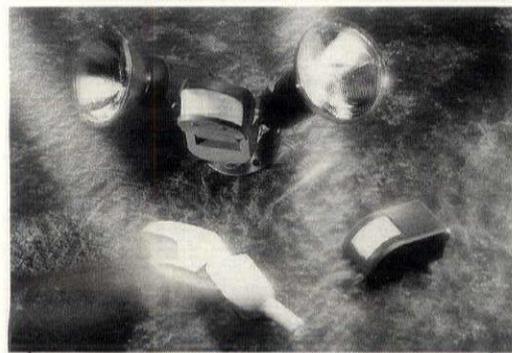
RadioTouch from **Lutron Electronics Co., Inc.**, designed to enhance lighting control in classrooms, training rooms and multi-purpose meeting rooms, offers wireless remote control of lighting, AV equipment and motorized window shades from anywhere in the room. RadioTouch consists of a wireless tabletop transmitter (mounted anywhere in the room, such as on a wall or podium), wallbox transmitter (which replaces a conventional wall switch) and a controller (one per lighting zone). **Circle No. 221**



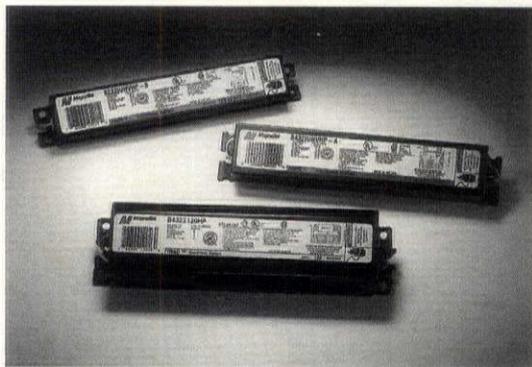
GE Lighting has introduced its new line of shatter-resistant fluorescent lamps, the Cov-R-Guard line, which arrive ready to install and do not change the overall length of the lamp. Lamps are wrapped in a full 15mm-thick shield of polycarbonate plastic. **Circle No. 222**



Leviton Manufacturing Co. has expanded its line of Decora designer-styled electronic timer switches to include four styles of timers. Designed to provide timed control for indoor and outdoor lighting, heat lamps, spas, hot tubs and attic and exhaust fans, this line of controls automatically switches controlled loads off when they're not needed. Products include the Variable Countdown Timer Switch, Programmable Light Switch, LCD Programmable Timer and Preset Timer Switches. **Circle No. 224**



The Watt Stopper, Inc. offers a line of passive infrared occupancy sensors that are rain-tight (UL rating of 773A) and weatherproof, making them ideal for outdoor use. The sensors, designed and built to resist corrosion, water and dust contamination, detect either a full 270 or 180 degrees; a customizable lens mask is included to mask coverage in unwanted areas. A built-in user-adjustable light level feature helps ensure lights stay off during daylight hours. **Circle No. 226**



MagneTek Lighting Products has released its new generation of low-profile Triad electronic linear fluorescent ballasts for T8 lamps in a smaller can size. Can size has been reduced by 45 percent, providing design flexibility. Reduced Harmonic (THD<20%) and High Performance (THD<10%) operations available. Ballasts operate one to four lamps in a parallel configuration; ballasts feature universal input voltages (108-305V). **Circle No. 227**

Deco-Lite fluorescent lamps from **LCD Lighting, Inc.** allow messages to be laser cut into the lamps for point-of-purchase displays, custom decorative designs, graphic art, corporate logos and signs. Available in T2, T5, T8 and T12 diameters in all standard lengths. **Circle No. 223**



Advance Transformer Co. has unveiled new Mark III magnetic and Centium electronic fluorescent ballasts for operation of T8/HO fluorescent lamps. The ballasts are designed to start the lamps at temperatures as low as -20°F, permitting their use in a wide range of environments, including outdoor and refrigerated applications. **Circle No. 225**



Selection • Business Tools • Value

Selection

• Over 7000 lighting products to choose from with 5000 additional options.
 • Categories include Commercial, Residential, Decorative, Theatrical, Landscape, Photographic, Bulbs, Parts and Accessories.

Business tools

• **Catalog Wizard** will design a customized catalog to e-mail to your clients to make their selections. The original can also be saved for future use for other projects.
 • **Project Builder** lets you create a bill of materials to e-mail to clients and print professional spec sheets.
 • **Resources** allow access to a calendar of events, industry books, and other trade specific information.

Value

• Open a **Trade Account** and save up to 50% off the manufacturer's suggested retail price.
 • **Trade professionals** save time and money by shopping at LightingUniverse.com.

LightingUniverse.com
 "The Professional's Lighting Store"

888.404.2744 • www.LightingUniverse.com • Rep Territories Available

lamps, ballasts
& controls



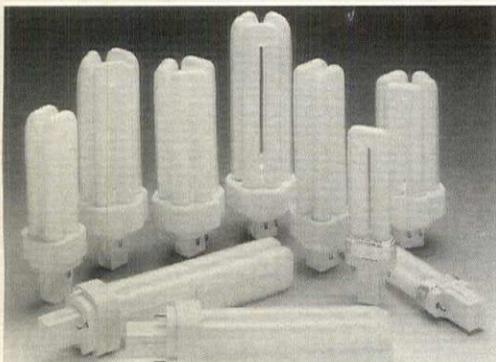
INnova has introduced a family of dimmable electronic ballasts for 35-150W metal halide lamps. Features 0.99 power factor, <10% THD, dimming capability and good light output regulation with only a +2% change in light output for a +10% change in line voltage. **Circle No. 228**



Litetronics International, Inc., subsidiary of Duro-Lite International, Inc., has unveiled the new Display-PAR line of 35W halogen lamps designed specially as a low-wattage option vs. 50W incandescent reflector lamps for lighting museum, gallery and retail displays. The Display-PAR line includes PAR20, PAR30 and PAR30 designs; lamps are rated at 3,000 hours. All lamps are available with a flood beam spread. **Circle No. 229**



The ED17 200W Uni-Form pulse-start metal halide system from **Venture Lighting** provides higher initial and maintained lumens along with a 20-percent longer life compared to standard metal halide pinched-body 175W and 250W universal lamps, according to the company. The ED17 200W lamp, in an enclosed, clear, base-up (medium base) version, produces 21,000 lumens with a performance life of 12,000 hours, color temperature of 4000K and a CRI rating of 65. The lamp is available with a mogul base that is rated at 15,000 hours. **Circle No. 231**



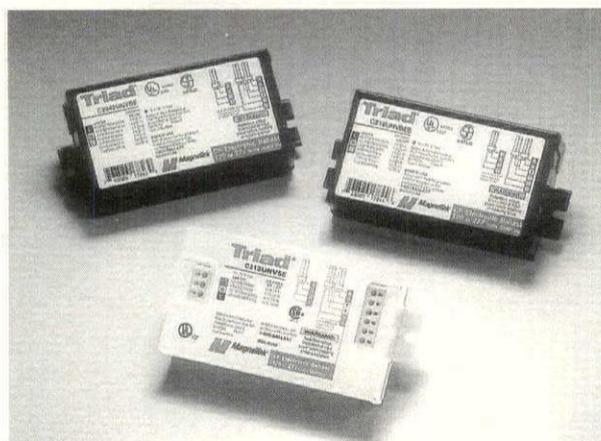
Osram Sylvania's Dulux EOL technology, first introduced in Dulux D/E lamps, has now been incorporated into Dulux T/E lamps. This technology for four-pin Dulux lamps offers integral end-of-life (EOL) shutdown protection in the lamp. In addition, most of the Dulux pin-base products are now Ecologic and can be disposed as non-hazardous waste in most states. **Circle No. 230**

Lutron Electronic Co. Inc. has unveiled its Real Time Illumination Stability System (RTISS), a patented design enhancement being incorporated into the company's Grafik Eye commercial grade dimming panels and Grafik Eye 3000 Series control units and accessories. It will soon be incorporated into Lutron's HomeWorks Interactive Remote Power Modules as well. RTISS filters out most line noise to the dimmer, ensuring consistent performance despite variable power quality conditions. **Circle No. 232**

The new portable, hand-held SP-1 system programmer from **The Watt Stopper, Inc.** is designed to streamline operation of its networked lighting control panels. Operating without need for a computer or software, it enables configuration, operation and maintenance of ACP-Net and ARP-Net Systems; for configuration and set-up, the programmer is used to assign device addresses and link network components. It can be used for administration of small- to medium-sized control systems or work with The Watt Stopper's software for use with larger, more complex systems. **Circle No. 233**



Advance Transformer Co. has expanded its Centium line of electronic fluorescent ballasts with new "small can" designs for one, two, three and four-lamp operation of F17T8, F25T8 and F32T8 rapid start lamps on both 120V and 277V systems. The ballasts' new reduced size dimensions are 1.7 in. wide, 1.18 in. high and 9.5 in. long, resulting in a reduction of about 5/8 in. in width and 1/3 in. in height compared to standard-sized ballasts. **Circle No. 234**

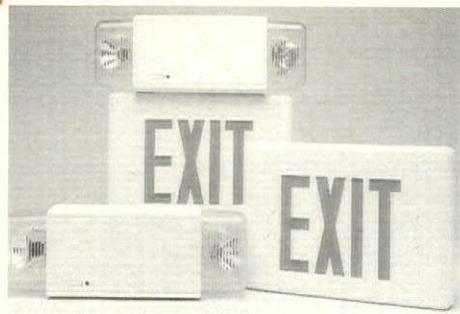


MagneTek Lighting Products has expanded its offering of ballasts for compact fluorescent lamps with a new universal voltage model designed to operate one 42W, 32W, 26W and/or two 26W compact fluorescent lamps, as well as 24W TT5 and 28W 2D lamps. Two other models can operate one or two 13W lamps and one or two 18W lamps. **Circle No. 235**



GE Lighting now offers the XL Ultra Life version of its HIR PAR lamp, which offers a life of 6,000 hours, three times longer than a standard halogen PAR lamp. The HIR XL Ultra Life PAR lamp is available in 45W, 55W and 90W as well as 12- and 40-degree beam-spreads. **Circle No. 236**

Bodine's B30RCT emergency ballast produces 3,000 lumens of initial emergency light output with one or two T8 lamps or 3,500 lumens with two 36W/39W 4-pin compact fluorescent lamps. The ballast is designed for remote control testing, which simplifies code-required testing of emergency ballast operation. UL-listed for factory or field installation. **Circle No. 241**



The Symmetry Series from **Chloride Systems** is a family of emergency lighting and exit sign products including LED exit signs, combination emergency LED exits and 12-25W

decorative emergency lighting units. Batteries are already connected. Available in black or white. Exit signs are illuminated with LEDs. UL-listed. **Circle No. 242**



Hubbell Lighting's Pathfinder P2000 Series Thermoplastic Exit Sign features 100-ft. visibility, universal mount design, snap-together design and reverse polarity protected. Available in three designs. Illuminated with LEDs. Numerous options available. **Circle No. 243**

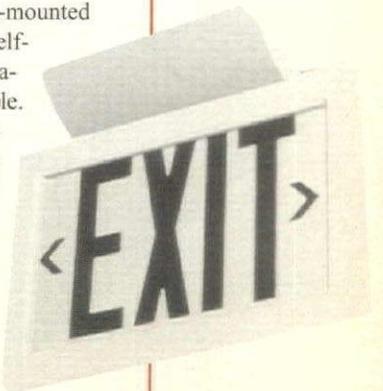


Ruud Lighting's new EMXP Series Thermoplastic LED Exit/Emergency Sign features LED exit illumination in green or red and includes two 5.4W tungsten halogen lamps for emergency illumination. A frosted diffuser controls glare. Available in black and white. Nickel cadmium batteries and higher-wattage halogen lamps are optional. **Circle No. 244**



Sure-Lites, a brand of Cooper Lighting, has introduced the CX series of LED exit signs, which can be end-, wall- or ceiling-mounted (also can be mounted directly to a junction box). Available with red or green LEDs. Die-cast aluminum housing with a brushed aluminum face and black trim is standard; optional finishes are black and white. Can be ordered as a self-powered (with short circuit protection and brown-out circuitry) or AC-only unit. UL-listed. **Circle No. 245**

High-Lites announces High-Glow, a series of low-profile exit signage that uses LEDs or cold cathode as the light source. Can be specified in wall-, side- and ceiling-mounted models. AC-only and self-powered/emergency operation models are available. Audible and visual intermittent alarms and fire alarm control panel interface are optional. Custom sign wording can also be specified. UL-listed. **Circle No. 246**



Pure-white, stone-cold fiber optic light

No UV, No IR... NoUVIR®

PRONOUNCED NEW-VEER

No UltraViolet. No InfraRed.

Unmatched performance.

Superior technology. Uses 16 U.S. Patents.

Zoom floods, spots, pinstots, "headless" hidden-light fiber optic tracks, fiber optic bannisters, 1"x1" wall washer track, fiber optic candles, gaslights, kerosenes, etc.

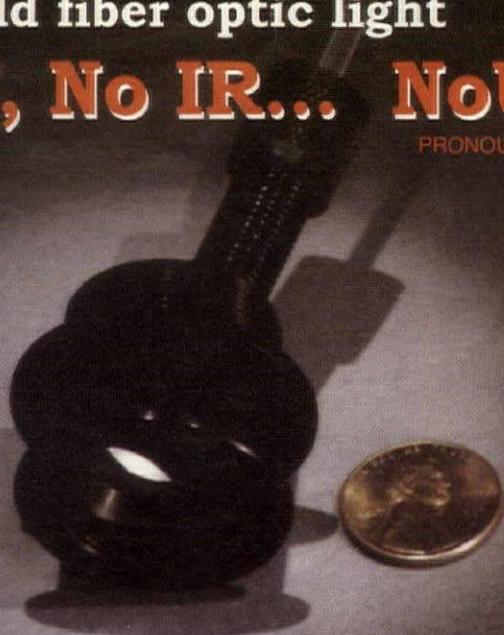
Turn on and off single luminaires with fiber optic relays.

WHEN YOU NEED LIGHTING QUALITY

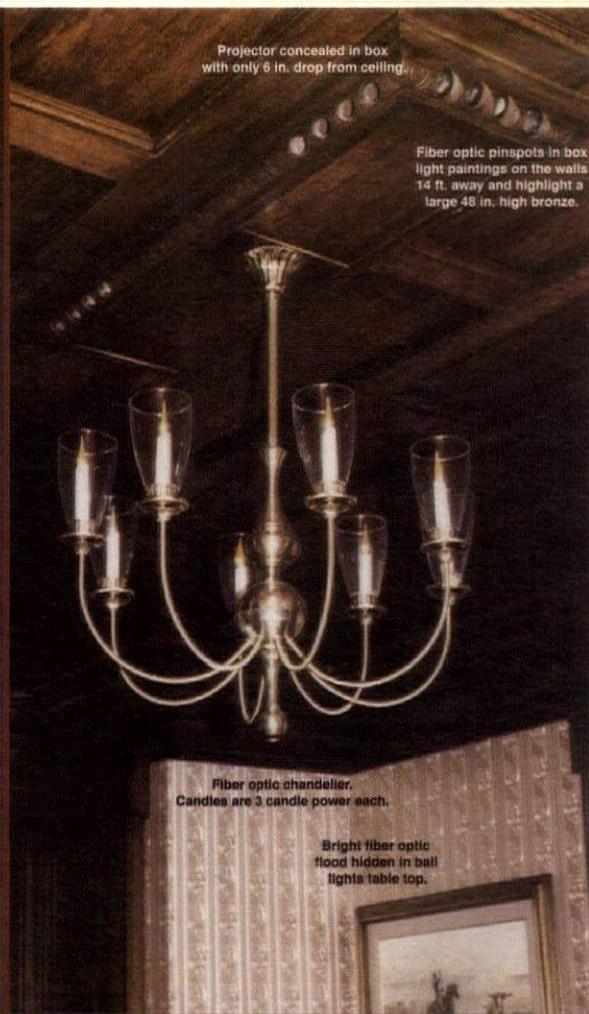
PRESENTATION: 100% CRI, SUNLIGHT COLOR BALANCE

PRESERVATION: STOP DAMAGE USING ONLY VISIBLE LIGHT

CONSERVATION: SAVE POWER, LABOR, AIR COND., RELAMPING



NoUVIR's fiber optic miniature eyeball zooms smoothly from 15° to 50° aims & locks

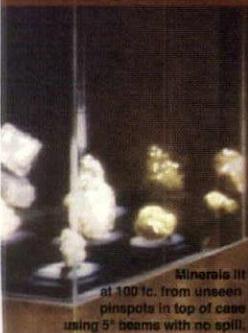


Projector concealed in box with only 8 in. drop from ceiling.

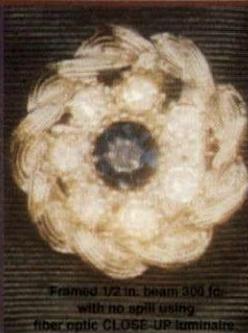
Fiber optic pinstots in box light paintings on the walls 14 ft. away and highlight a large 48 in. high bronze.

Fiber optic chandelier. Candles are 3 candle power each.

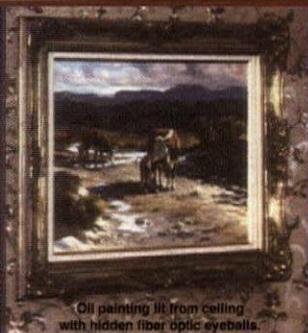
Bright fiber optic flood hidden in ball lights table top.



Minerals lit at 100 ft. from unseen pinstots in top of case using 5° beams with no spill.



Framed 1/2 in. beam 300 ft. with no spill using fiber optic CLOSE-UP luminaires.



Oil painting lit from ceiling with hidden fiber optic eyeballs.



Antique crystal chandelier retrofitted with fiber optic candles.



Roon-falzed case, 5 costumes, no hot shoulders, 5 ft. to front. Fiber optic projector 40 feet away.

Call for our 120-page catalog
NoUVIR RESEARCH

PH (302) 628-9933

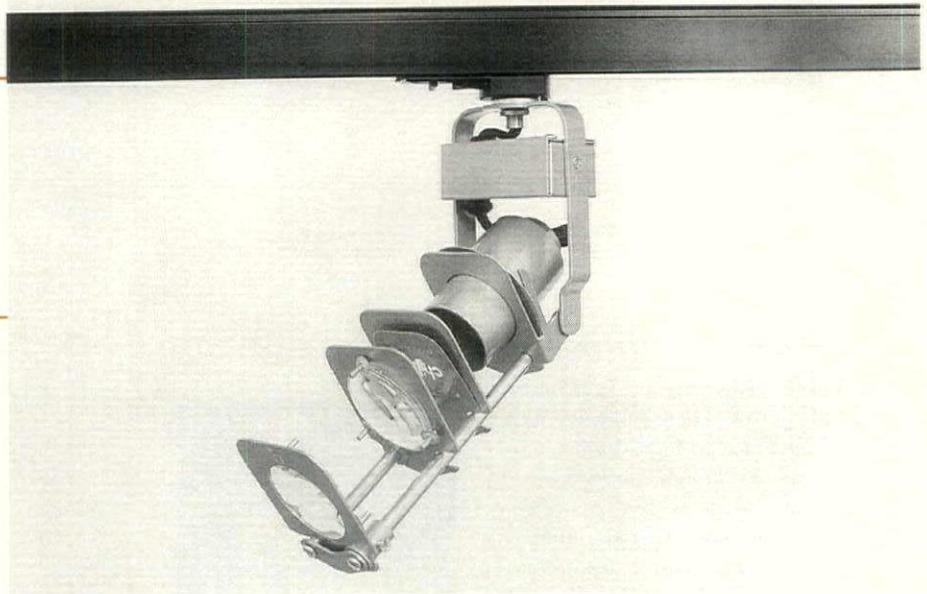
FAX (302) 628-9932

HWY 13/RR4 BOX 748

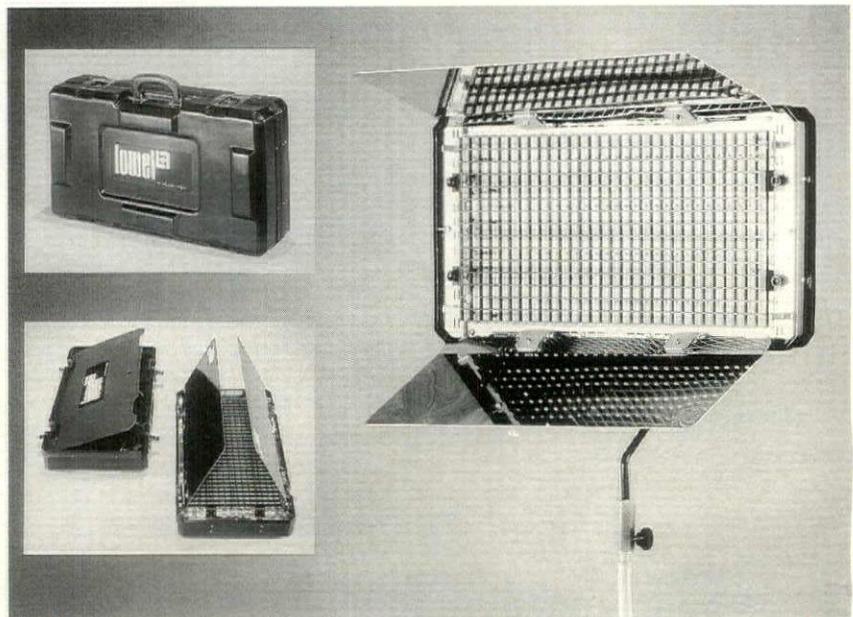
SEAFORD, DE 19973

We manufacture complete systems. Over 50 fiber optic lights, 5 tracks. With no UV and no IR. 10-yr warranty. Excellent for museum projects.

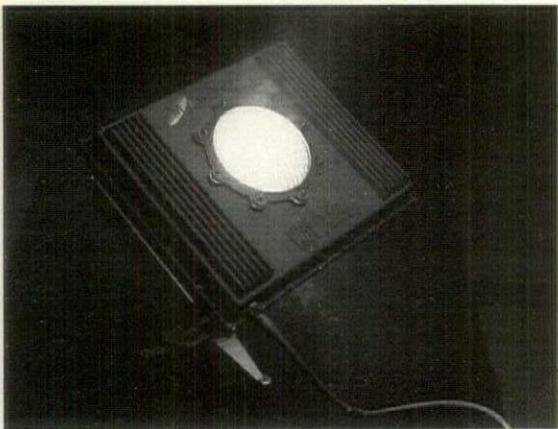
Times Square Lighting's SK75Z pattern projector features an electronic transformer that powers a 75W MR16 lamp. Mounting options include track, clamp and canopy mounts. Silver finish is standard. Custom colors are available. UL-listed. **Circle No. 247**



Phoenix's Snoot Kit Accessory mounts on the front of fixtures to hold a variety of special effect accessories. The snoot door opens with the release of two stainless steel latches, allowing for installation of accessories. Accessory rings are riveted in place to secure accessories in mounting position. The snoot measures 8 in. in diameter x 8 in. long from fixture doorframe. Housing and rings are copper-free formed aluminum. UL-listed. **Circle No. 248**

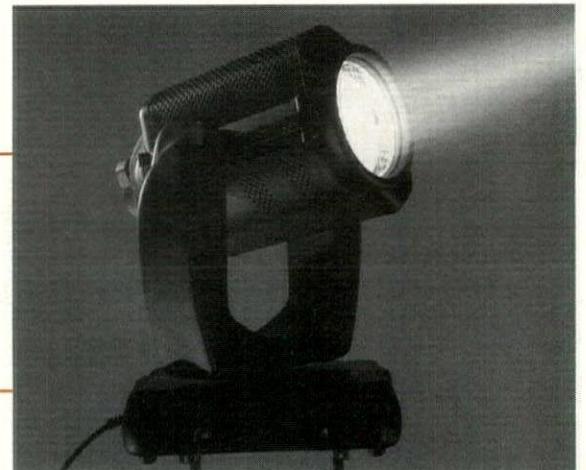


Lightweight and rugged, Caselite compact, self-contained location fluorescent kits from **Lowel-Light** feature an internal ballast, separate lamp switching, snap-on egg crate and dual-purpose barndoor/intensifiers. Caselite is available in two models: two or four 55W fluorescent tube fixtures. Universal tiltbracket allows for easy stand mounting and lamp positioning. UL-listed. **Circle No. 249**



From **Morpheus**, the WetFader is a CYM color mixing fader that is both weather-resistant and submersible. Housing is sealed cast bronze or aluminum and output lens is tempered glass available in very narrow to flood. The WetFader is powered by either the WPS-6 or the WPS-12 (6 or 12 units) power supply. The control input is USITT DMX 512 connected to the WPS via an optically isolated terminal strip with a maximum cable length of 330 ft. The output distribution allows the WPS-12 to control as many as 12 WetFaders with different addresses. ETL- and UL-listed. **Circle No. 250**

Vari*Lite's VL2201 spot luminaire is based on the VL6B. An upper enclosure houses the control electronics as well as a power factor corrected arc power supply for the Philips MSR400SA arc lamp. The lightweight VL2201 also features a zoom optics system and supports a variety of colors and gobos. Two wheels for interchangeable dichroic color and gobo selections make the luminaire user-configurable. Custom gobos are available. The VL2201 can be controlled from any Vari*Lite console as well as various DMX-512 consoles. **Circle No. 251**





Autodesk has unveiled Lightscape R3.2, a new release of the photorealistic lighting simulation software for design visualization and digital content creation. Lightscape R3.2 features numerous changes designed to improve ease of use and streamline the software's ability to interactively share data with AutoCAD 2000, 3D studio VIZ and 3D Studio MAX software. The new version includes more than 100 customer-requested user interface enhancements and expanded documentation and tutorials. **Circle No. 260**

Progress Lighting offers a new Interactive Dimensional Lighting CD-ROM, which allows users to try special lighting applications on-screen in a variety of areas of the home. Includes technical information on Progress Lighting's decorative products as well as product photographs. **Circle No. 261**

Osram Sylvania has introduced the Retail Lighting CD-ROM, an educational product for retail professionals that offers advice on how lighting can help direct customers, decrease returns, increase sales, enhance image and even increase staff productivity. Includes a Lighting Techniques section and interactive examples of retailers creatively using lighting styles, techniques and merchandising systems to get the most out of their environment. Also available from Osram Sylvania is the Introduction to Lighting CD-ROM. **Circle No. 262**

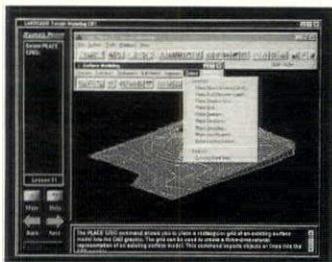


Visual 2.0 lighting design software from **Lithonia Lighting** is available in a Basic Edition (free), which aids with simple interior lighting design and analysis for rectangular spaces using industry standard photometric data. It is also available in a Professional Edition (must be purchased), which expands on the Basic Edition to provide numerous modeling and documentation features. Experienced CAD users will find the Visual 2.0 Professional interface familiar, according to the company. **Circle No. 263**

Lighting Analysts, Inc. has introduced the AGI32 lighting design and rendering software, a high-speed 3D lighting analysis program that produces full-color renderings and predictive lighting system calculations for designers, architects and engineers utilizing any type of electric lighting in interior and exterior design projects. Complex environments are created including domes, vaults and curved surfaces. Allows the import/export of CAD-compatible DXF files. **Circle No. 264**



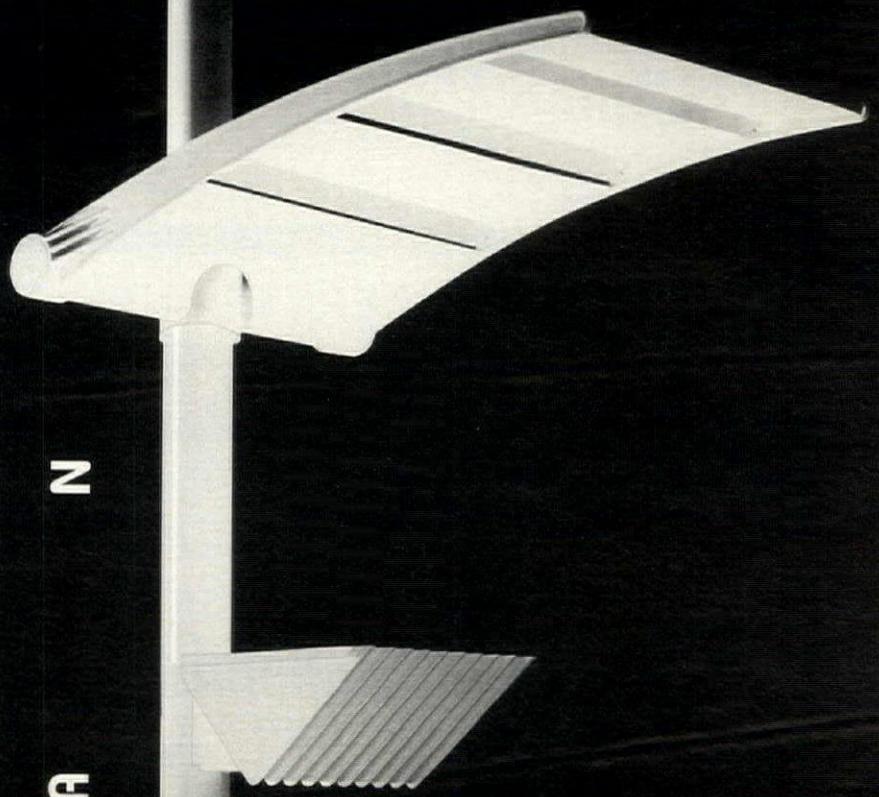
Jissai Graphics offers Luminaire Global Illumination Tools, Version 1, a rendering engine that plugs into the 3D Studio Max and 3D Studio VIZ applications from Kinetix. It uses radiosity and ray-tracing calculations to replicate the actual behavior light in the real world and produce visualizations of lighting concepts. **Circle No. 265**



Eagle Point Software has released the LANDCADD Terrain Modeling Computer-Based CD-ROM. This program demonstrates the creation of actual terrain models for use in conceptual design. Includes these modules: Base Plan, Site Planning, Surface Modeling, Landscape Design, Plant Database, Irrigation Design, Site Design, Drafting, Survey Adjustment, COGO and Site Analysis. **Circle No. 266**

Lighting Technologies, Inc. has unveiled Simply Lighting, a new collection of lighting design and analysis programs: Simply Indoor, Simply Outdoor, Simply Roadway, Simply Economics and Simply Photometrics. Performs point-by-point light level calculations as well as estimations of the interreflected component from indirect lighting. Simply Outdoor can import and export DXF/DWG files and model virtually any exterior applications. Simply Roadway calculates roadway brightness and veiling brightness according to IES RP-8 and CIE standards for a wide variety of roadway types and designations. In addition to customizable reports, each of these three can produce iso-contour maps and gray-scale renderings. Simply Economics is an economic analysis utility, and Simply Photometrics is a photometric data manager and viewer that provides iso-templates and export functionality. **Circle No. 267**

CONDAZ
Architectural Lighting



N

A

C

I

L

E

P

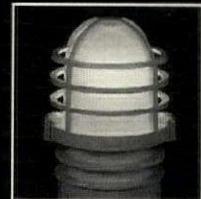
C Y C L O P E



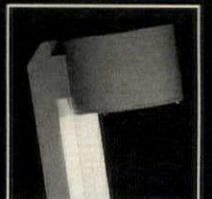
A R G O N



M I S T R A L



S O L I S



Defining quality
and simplicity

Con.Daz Lighting Inc.

87C Brunswick
D.D.O. (Quebec)
Canada H9B 2J5
Tel.: 514-684-7444 • Fax: 514-683-8872

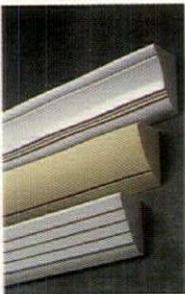
Visit us at:
www.condaz.com

Circle No. 23

Architectural Lighting Systems

Phone: (508) 823-8277

Architectural Lighting Systems, Inc. introduces a new line of extruded aluminum cove lighting. Available in two sizes, as well as the low-profile, ADA-compliant series pictured, they can be custom fit to any application. A complete line of matched fixtures is also available, including pendants, sconces, valances and patient bedlights. **Circle No. 270**

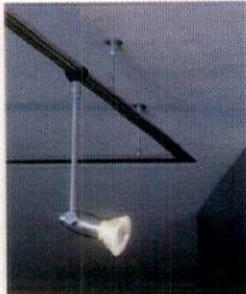


Lightfair Booth #539

Bruck Lighting

Phone: (714) 424-0500

Bruck Lighting, a manufacturer of innovative low-voltage cable and track systems, introduces Boa, a low-voltage two-circuit track system with dual switching ability. This system may be suspended or flush mounted, installed vertically or horizontally and is available in chrome or matte chrome. All Uni-lights fixtures can be utilized with Boa as well as all seven other Bruck systems. Boa will be on display at Lightfair in booth #101. Visit us at www.brucklighting.com. **Circle No. 276**



Lightfair Booth #101

Ardee Lighting

Phone: (704) 482-2811

MatreX provides high-performance display and accent lighting from a versatile series of low-voltage, recessed fixture housings for commercial and residential applications. An alternative to track, units hold one to four tiltable, rotatable MR series halogen lamps or a 100W quartz in linear, square or rectangular housings. Integral or remote transformers. Dimmable. UL-listed. Visit us at www.Ardeelighting.com. **Circle No. 271**



Con.Daz Lighting Inc.

Phone: (514) 684-7444

Innovation and creativity in design: These are the motives leading behind the concept of Argon. The Argon family can be wall or pole mounted. This design comes with a standard white glow ring of light to soften the vision of the cone shape. Argon is available in various sources (HID or CF) and numerous polyester powder-coating colors. For more information please visit us at www.condaz.com. **Circle No. 277**



Aromat

Phone: (908) 464-3550

Aromat's NAI5 metal halide electronic ballasts replace the core/coil, capacitor ignitor of magnetic ballast systems in a single small package with silent operation. Unlike magnetic ballasts, NAI5 electronic ballasts provide exacting control over the output wattage resulting in consistent lamp-to-lamp color and lumen output. Aromat ballasts come with a five-year warranty and are available for 35W, 39W, 70W, 100W and 150W lamps. C/UL-listed. **Circle No. 272**

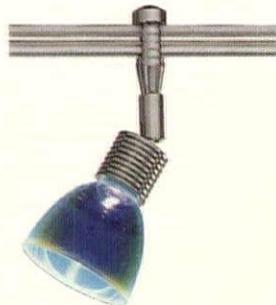


Lightfair Booth #609

Con-Tech Lighting

Phone: (847) 559-5500

The Optic, exclusively from Sirius and obtainable only from Con-Tech Lighting in North America, is a totally new, innovative concept in high-efficiency glass reflectors. Eighteen optical coatings on a crystal reflector give the Optic superior illumination capabilities. An 86-percent reflectance casts a crisply defined beam with sharp edges and no lamp striations. **Circle No. 278**



Lightfair Booth #1039

BJB

Phone: (706) 965-2526

BJB introduces the broadest line of T5 sockets in the lighting industry. BJB sockets are designed for all wattages of T5 lamps, including high output. The T5 series is available in a range of mounting styles, including push-through or snap-in tombstone, end-mount and others. All sockets feature BJB's rotor-lock and Top-Test for optimum performance and value. Sockets for T5 circular lamps are also offered. **Circle No. 273**

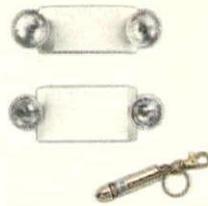


Lightfair Booth #647

Cooper Lighting

Phone: (912) 924-8000

The Fail-Safe Harmony series combines aesthetics with rugged reliability. Construction features include a precision cast aluminum housing, a five-stage paint finish and a shock-resistant, .225-in.-thick, tempered borosilicate glass lens. Mechanical features combine with electrical and optical components to produce a broad, low-glare light distribution. The series is available in several decorative grids and numerous lamp and mounting configurations. CUL wet-listed for wall and ceiling mount. **Circle No. 279**



Lightfair Booth #715

B-K Lighting

(559) 438-5800

Our new product catalog for 2000 features B-K Lighting's Yosemite and Sequoia Series fixtures utilizing the popular 35W T6 metal halide lamp. Both fixture styles are available with spot, flood or path lighting beam patterns and also feature B-K's innovative "chassis" design for easy change out reflector patterns and the award winning ACV Valve System and 360 HD Mounting System, exclusively from B-K Lighting. **Circle No. 274**



Lightfair Booth #518

E-Lite Technologies

Phone: (877) 502-3951

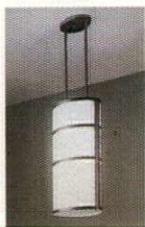


"The World's Widest, Thinnest, Longest Lightbulb!" Wouldn't it be nice to have a light source that was 1/4 in. to 24 in. wide, 0.025 in. thick, 1,200 ft. long, produced no heat, could be formed around corners, cut to any length, was available in a rainbow of colors, and had no glass or filament to break or gas to escape? The FLATLITE Electroluminescent System from e-Lite Technologies Inc. fits the description. Find out more about the FLATLITE System and how it can help create architectural impact at www.e-lite.com. **Circle No. 280**

Boyd Lighting

(415) 778-4300

Boyd Lighting's "Lineage" Collection provides timeless sconces and pendants for a multitude of settings. As they become progressively grander in scale, the fixtures retain their slim profile; even the 24-in. x 24-in. wall sconce is ADA-compliant. The inspired combination of steel and diffusing materials creates a striking juxtaposition between the warmly diffused light and the solid frame from which it emanates. These designs are offered in gossamer steel, satin steel, antique black or antique bronze finishes with white pearl or silver mica diffusers. Pendants and wall sconces are available in either incandescent or fluorescent versions. **Circle No. 275**



Lightfair Booth #167

Eclipse Lighting

Phone: (773) 481-9161



The Astro Series luminaires provide glare-free security lighting and restrict light trespass in commercial, public and high-abuse areas. Compact, retro-style triangular housing is rugged aluminum with vandal-resistant polycarbonate lens and tamperproof fasteners. Available in 10-in.- and 13-in.-tall models for wall or ceiling mount, outdoors or indoors. Choice of twin-lens and single-lens uplight/downlight models with or without integral glass-block design louvers. Energy-efficient compact fluorescent and HID. Available in raw aluminum and textured polyester powder-coat finishes. Visit us at www.eclipselightinginc.com. **Circle No. 281**

Lightfair Booth #275

ADVERTISER	PAGE	CIRCLE NO.		
Architectural Lighting Systems	72	270	Light-Project International	51 32
Ardee Lighting	72	271	LightingNews.com	27 45
Aromat	9, 72	9, 272	Lighting Services Inc	23, 73 21, 288
BJB Electric LP	61, 72	38, 273	LightingUniverse.com	67, 73 41, 289
B-K Lighting	4, 8, 72	5, 8, 274	Lightolier Inc.	73 290
Boyd Lighting	16, 72	15, 275	Lightron of Cornwall	53, 73 33, 291
Bruck Lighting	15, 72	14, 276	Litecontrol	55, 73 34, 292
Color Kinetics	1	2	Lithonia/Hydrel	5, 73 6, 293
Con.Daz Lighting	71, 72	23, 277	Lithonia Lighting	Cov. 4, 74 44, 294
Con-Tech Lighting	14, 72	13, 278	Lucifer Lighting	31 24
Construction-Zone	47	30	Lumiere	10 10
Cooper Lighting	Cov. 2, 72	1, 279	Lumiram	60, 74 36, 295
Davis-Muller	Cov. 3	43	Lutron Electronics Co., Inc.	37 26
E-Lite Technologies	65, 72	39, 280	Martin Professional	74 296
Eclipse Lighting	60, 72	37, 281	Michaels' Lighting	74 297
Engineered Lighting Products	22, 73	20, 282	MultiNeon Ltd./Lowel-Light	74 298
Excelite	73	283	NoUVIR Research	69, 74 42, 299
F.A.D. Lighting	11, 73	11, 284	The Original Cast Lighting	4, 74 4, 300
Focal Point, LLC	45	29	Osram Sylvania, Inc.	17 16
Gardco	18-19	17	Prescolite Lighting	6-7 7
Hatch Transformers, Inc.	73	285	Prudential Lighting	41, 74 27, 301
Hubbell Lighting	20, 21	18, 19	Se'lux Corp.	35, 74 35, 302
JJI Lighting Group, Inc.	12-13	12	Ushio America, Inc.	59, 74 22, 303
Kim Lighting	3, 73	3, 286	W.A.C. Lighting	65, 74 40, 304
Leucos USA Inc.	49	31	The Watt Stopper	33, 74 25, 305
Leviton Mfg. Co.	43, 73	28, 287		

Publisher is not liable for errors or omissions.

CLASSIFIEDS

TRACK & RECESS

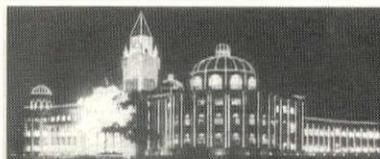
LIGHTOLIER

See what "Designing with Light" is all about with our full line of Lightolier track, recessed, fluorescent & controls.

SHOWROOM LIGHTING BY GREGORY

Ph: 212-226-1276 or 800-796-1965

lbg158@aol.com • www.lightingbygregory.com



flexible neon
fiber optic
chasing effects
tree lighting
UL listed

belt lights
tape lights
colors
in/outdoor
strip lights

bendalite.com 1-800-Flex-Neon

SPECIALTY LIGHTING

Architectural Lighting Designer

Excellent opportunity for a bright articulate individual with outstanding hand-drafting and language skills, and a knowledge of AutoCad, Lumen Micro, and AGL. This job entails lighting layouts, detailing, specifications, custom fixture drawings, mock-ups, photometric calculations, client and manufacturers' contact, etc.

Cline Bettridge Bernstein is an award winning architectural lighting design firm located in New York City working with prestigious architects on a wide range of national and international projects.

We are looking for two employees, one beginner and another with 3-5 years experience.

Please fax your resume to: 212-741-3112
or call Mr. Stephen Bernstein at 212-741-3280

LET CLASSIFIEDS WORK FOR YOU!

ARCHITECTURAL LIGHTING:

ONE PENN PLAZA - 10th FLOOR

NEW YORK, NY 10119 OR CALL

800-950-1314 EXT. 2727

Use our Convenient Fax
Number to Send

Use Your Ad Copy:

212-279-3955

THE PACKAGE ERA WILL END WITH THE INTERNET

BY WARREN MELTZER

Three years ago in this column I asked, "Is the 'Gourmet' Lighting Rep a Dinosaur?". I defined a gourmet rep as one who thoroughly knew the products of the 10 or so innovative independent manufacturers he or she represented. A lighting professional who consistently demonstrated new products to specifiers and kept their catalogs up-to-date. One who was well trained and kept the specification community current with technological developments.

I said that the conglomerate-driven "mega-rep" had replaced the electrical distributor as the one who put the entire lighting package quotation together. I bemoaned the fact that many lighting mega-reps now "represent" 60 or more companies, and it was impossible for them to adequately promote (or even remember) them all. Because of conglomerate pressure and the number of lines they have (many of which conflict), innovative products get lost in the rep's storage area, never finding their way to a specifier's office.

Mega-reps concentrate on quoting entire packages, substituting their lines for specified products wherever necessary. In some cases, this substitution is done with prior approval of the specifier, who may have buckled under the weight of the package. In other cases, the rep adopts a "worry about it later" posture regarding approval. Because of the package system the rep takes control of pricing. The factory gives the rep (and only the rep) the price and loses control at that point. If the rep tells the factory he needs a better price, it has little or nothing to do with that product's price—in relation to—its competition or its value to the job—again, it's the package that rules. In nearly all cases, the package system compromises design intent.

Once an order is written for the lighting package, the successful mega-rep negotiates with each factory involved and determines who gets how much for their product. The rep's primary concern at this stage is, understandably, to maximize commission. Some mega-reps have set up dummy distributorships. When factories bill these dummy companies (who in turn bill the electrical distributor) the factory has no idea what the customer actually paid for their product. Ironically, the same small companies that suffer price erosion from this practice are the ones that support it.

Conglomerates are leaning hard on their reps, reducing their independence. Three years ago, I said that many conglomerate rep principals were earning less personal (and far less psychological) income than they did before the package era began. I believe this is even more true today. I thought the pressured principals were prime candidates to become the gourmet reps of the future. This hasn't happened. The continuing acquisition trend has left fewer independent specialty companies available, and the specifier support that would be necessary for success is not evident. The risk of leaving the known—less desirable each year—is apparently not worth the potential reward.

If the remaining gourmet reps get their product specified, they cannot get their price to the buying influences because the packaging system does not allow it. Gourmet reps are indeed a dying breed. Packaging has squeezed most of them out, and I fear that attrition will eliminate those who remain.

Conglomerates continue to acquire innovative independent manufacturers. The acquired company's products are then buried in the conglomerate rep's package. Pressure on the acquired company for short-term results stifles creativity. Management focus shifts from the future to the current and following quarter. They lose their entrepreneurial culture, which further retards new product development. Profits from acquired companies are used to support the less successful conglomerate components instead of supporting new product development.

Many of the independent companies that remain coattail one of the conglomerates, eliminating the need to choose reps and manage sales. They get enough volume distributed from the mega-rep's package to survive. Because they have lost control of their pricing, they are forced to reduce staff. The fact that their products are often neither presented nor considered for ideal applications annoys them—but not enough to trigger taking action. Many hope that they, too, will soon be acquired. The public spaces within a building suffer most from the package system. Whether the "Type A" fixture comes from one conglomerate or another makes little difference on the finished job. But products with cutting-edge design or other unique qualities are often one-of-a-kind. Innovation does not occur in triplicate. To list "equals," when in fact there are none, compromises design integrity. The ambiance of the public space creates the perception one has of a building. A building with well-detailed lobby and corridor spaces can command higher lease rates than one that is mundane.

While building owners recognize this and sometimes travel abroad to select marble for the lobby, the package system does not allow them to make price/value judgments on lighting during project design. Instead, they are often faced with making "value engineering" (a mis-

THE PACKAGE ERA WILL
END WHEN INDEPENDENT
COMPANIES REBEL AGAINST
THE STATUS QUO AND
SPECIFIERS DEMONSTRATE
A WILLINGNESS TO
SUPPORT THEM.

nomer if there ever was one) decisions after bid time. In most cases, this process produces nothing positive for the owner or designer and merely lines the pockets of the reps and contractors who drive it.

It should be possible for the lighting designer and the owner to select the fixtures they want for the public spaces and determine their affordability during the design phase. This is true whether the fixture is a cataloged item or a custom design. A few custom fixtures in the public space do not have to run up a building's price tag. Lighting designers should be able to work with a custom manufacturer up front with confidence that a fair price can be determined early in the design phase and maintained throughout the project. With a competent manufacturer involved from the start, a signature custom fixture can be developed within the budget. A custom manufacturer who earns this confidence is entitled to a one-name specification.

As more lighting fixtures penetrate the architectural space (as opposed to recessed troffers), architects have become more interested in the selection process. They are also more aware of the advantage of using a competent lighting designer, and lighting design as a profession continues to mature. Many lighting designers intensely dislike the current package system.

There should be a better way—and it is here. The Internet offers a venue for the small innovative manufacturer to bypass the package system and all its pitfalls.

They can attractively display unique products and provide necessary technical details and pricing. For example, LightForm+, a newly formed Forms+Surfaces company, includes net fixture pricing on its website. Other companies are doing the same, and more will soon follow. With the actual price (not a fictitious "list price") on the Internet, affordability can be determined up front, and a one-name specification can be confidently written without fear of being blindsided at bid time.

Until such time when the package system dies, any or all of the packaging reps can access the Internet for these prices. The lighting rep can bid his package with these included or bid without them and the electrical contractor can fill in. The knowledge that anyone in the chain who is creditworthy can buy at the Internet price will keep unwarranted markups from occurring. Ruud Lighting is living proof that the electrical wholesaler is no longer needed on the project side of the business. Ruud's success proved that the industry can adapt to change, and the Internet is proving it again.

A panacea—not quite yet. An Internet presentation requires the backup of knowledgeable real live people, but not an army of them. Inexpensive communications allow factories to strongly support their website offerings from one location. But designers will still want to see product samples. Manufacturers will still need qualified people to work with specifiers on custom projects. Is today's lighting mega-rep the right person for this job? I think not.

Are there alternatives? Again as an example, LightForm+ goes to market through the Forms+Surfaces sales force whose expertise has been selling other architectural products. Bega, Louis Poulsen, Boyd, Nessen, and many other design-driven lighting companies have some non-lighting architectural reps among their sales force. There is a variety of independent non-lighting reps calling on the design community that can be utilized (combined with Internet pricing) by other innovative lighting companies. The companies can then retake control of their businesses. Start-up companies will now emerge—it is the American way.

Selling lighting through non-lighting reps has been tried before—with limited success. Specifications were generated, but the vehicle to get the price into the right hands at bid time was lacking. The Internet fills that void. With photographs, technical details, photometrics, and pricing immediately available, lighting design becomes less time consuming. Design professionals can form relationships with companies that are willing to do something about ending the package era. The architectural reps who will provide the personal contact with the design community can be brought up to speed on lighting through email, PowerPoint presentations, video conferencing, and one-on-one training. How much training is needed to get them to the level of the average lighting mega-rep "spec person"? Not very much.

One should always remember that the purpose of competitive bidding is for the owner to get what he wants at a fair price that he can afford. Eliminating unwarranted price markups (with no value added) is a far more effective way to achieve this than compromising the specification on public space elements.

The package era will end when independent companies rebel against the status quo and specifiers demonstrate a willingness to support them. Thanks to the Internet, this day is finally dawning. ■

During Meltzer's 45 years in lighting he has been a "packaging rep," sales manager and CEO of three lighting manufacturers. Since retiring, his company, Lake Creek Associates, has done consulting for several major lighting companies.