

JULY/AUG.
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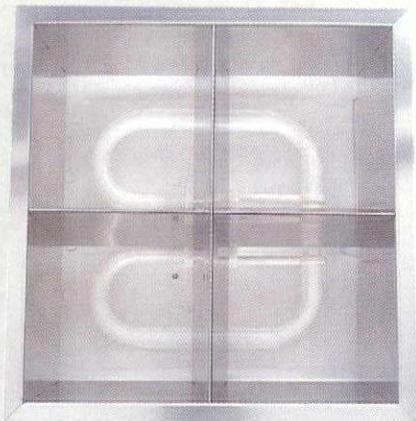
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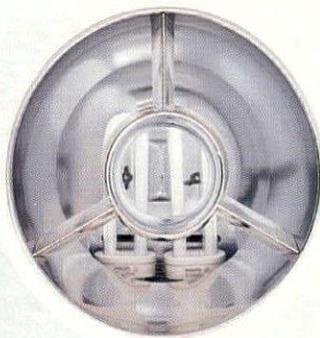
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NEW PRODUCT SHOWCASE

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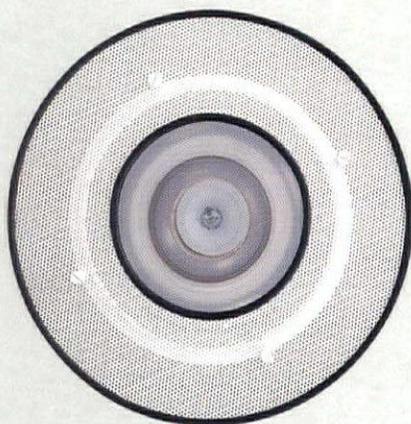


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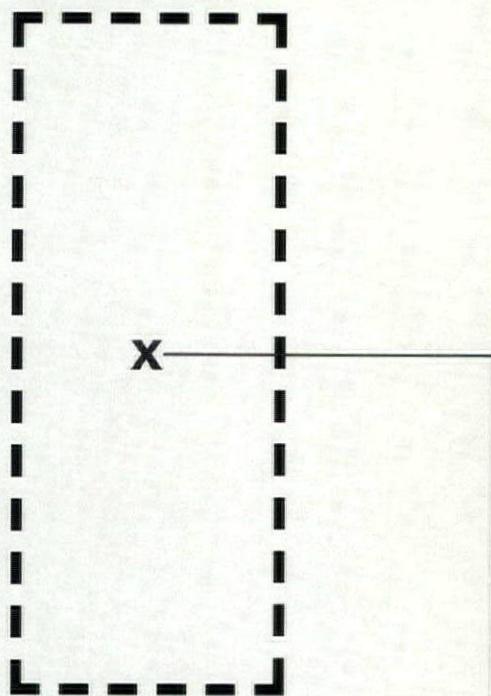


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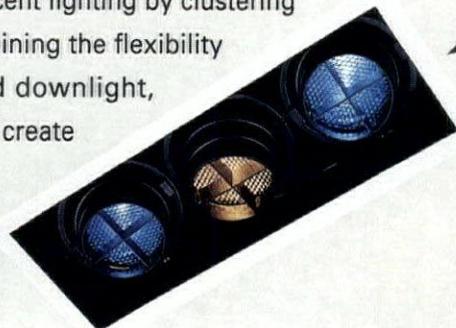


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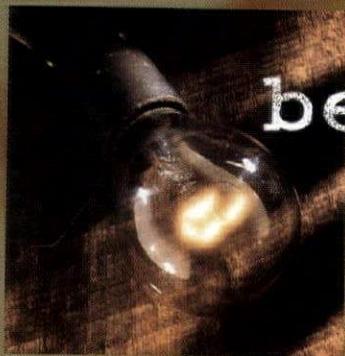


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good

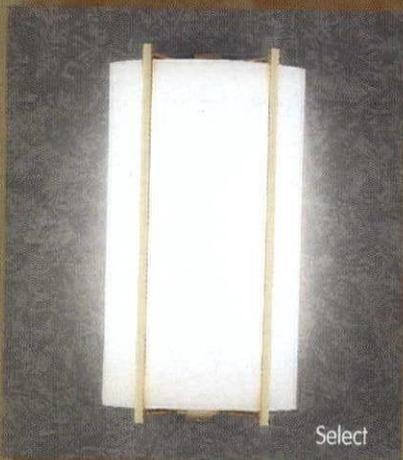
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better

works better than it looks

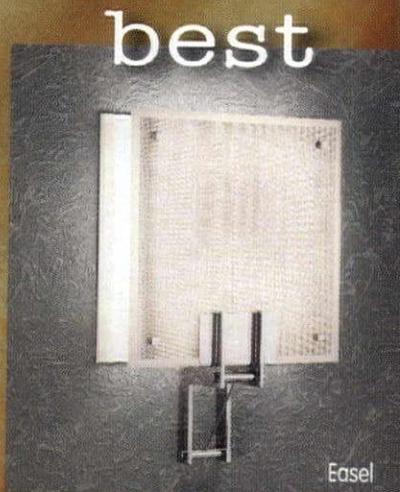
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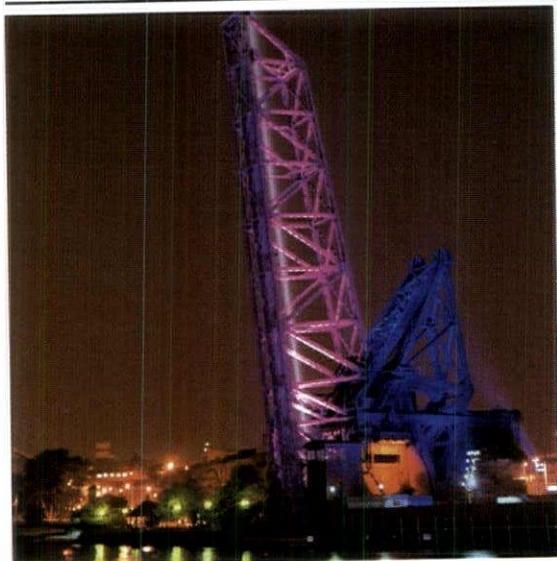


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CITY OF BRIDGES

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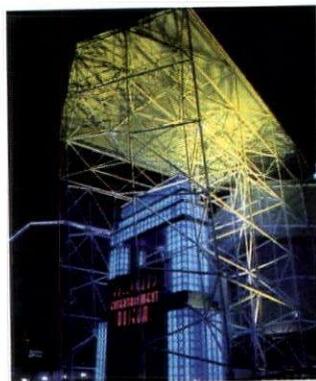


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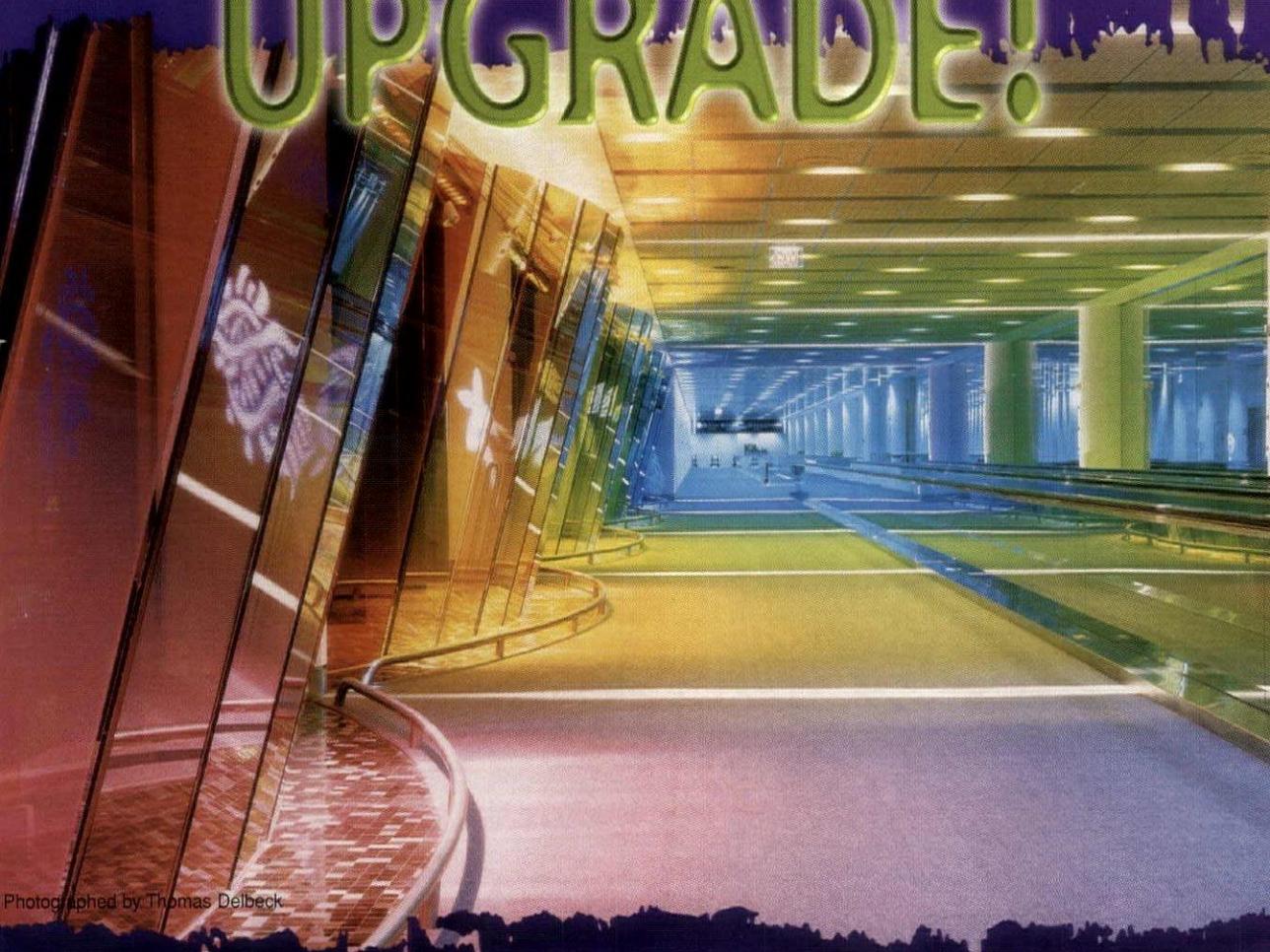
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Photographed by Thomas Delbeck

USHIO 10,000 Hour MR-16 Lamp

Travelers arriving at Miami International Airport will happen upon an oasis for the senses called the Harmonic Runway. This improvement of "interactive architecture" by PhenomenArts, Inc. is a spectacular mix of color, changing light and sound. As visitors stroll through a rainbow of color in the 180 foot-long corridor, it resonates with a harmonious blend of musical instruments mixed with the calls of the Florida Everglades' native wildlife.

Award recognized for excellence in the field of lighting, the Harmonic Runway was presented with the prestigious G.E. Edison Award in 1995.



How do you go beyond "excellence"? The Designer, Christopher Janney chose to relamp his creation with MR-16's from the Ushio Ultraline™ series of reflective halogen lamps.

At 10,000 hours average life — twice the life of any MR-16 on the market today — the Ushio Ultraline's™ special titanium reflector coating provides consistent color throughout the life of the lamp.

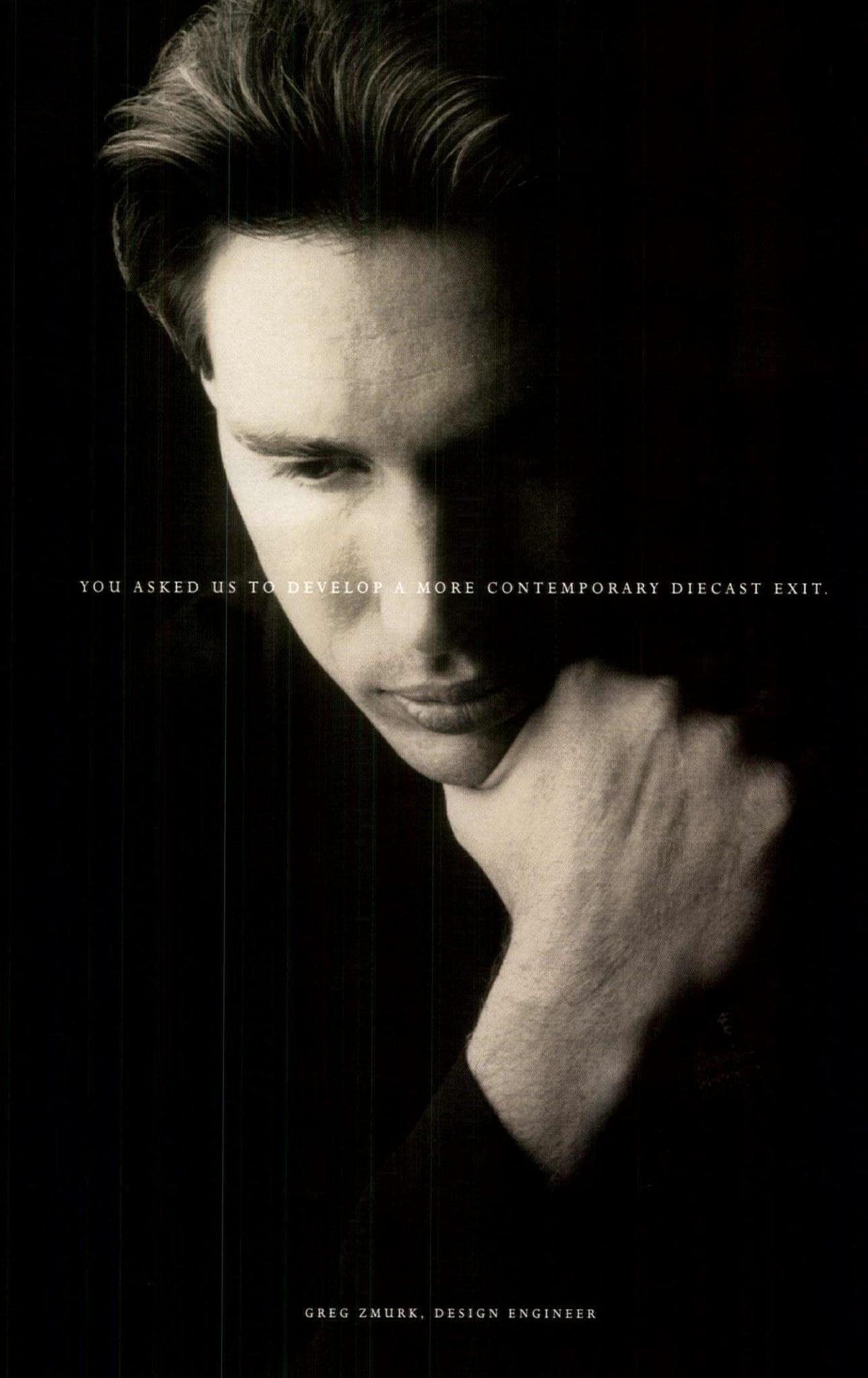
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GREG ZMURK, DESIGN ENGINEER



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PROGRESS MARCHES ON

This year's Lightfair in New York City was one of the most exciting the industry has attended in some time. From the diversity of the products unveiled at the New Product Showcase and the trade show to the quality of the projects recognized at the IALD and Edison Awards, it is evident that progress marches ever onward. Congratulations to all the award winners (see the IALD Award winners in this issue's Design Features section, and the New Product Showcase winners in this issue's Product Focus).

Taking a fast tour of the trade show, I was aware of three trends:

First was the attendance of a significant number of theatrical and entertainment lighting manufacturers. Since Irideon's AR5 fixture won the Best New Product of the Year at last year's New Product Showcase (see *Architectural Lighting*, July/August 1996), there appears to be an increased interest in the architectural market for these manufacturers, as well as the topic of theatrical/entertainment lighting in commercial applications. In this issue, Executive Editor Christina Trauthwein covers this topic along with products and projects in the Technique section.

Next was the advancement in quality and technology. RSA Lighting and Lightron demonstrated new electroluminescent and light distribution technologies (see *Architectural Lighting* April/May 1997), while 3M unveiled a new fixture for distributing light from the new sulfur lamp (see this issue's Technology section). Among many other accomplishments by the many manufacturers at the show, Lucifer Lighting showed us a way to get more versatility in a simple downlight; Cooper Lighting unveiled its high-end and comprehensive residential fixture line; and Prescolite focused on quality in downlighting with its new virtual source concept. With some of the new sophisticated approaches emerging, I believe we are starting to see the end of the "lighting is low-tech" days.

A third trend is the continued miniaturization of the light fixture and increasing aesthetics and choices. The Slite fixture from Alkco won the Best New Product of the Year at this year's New Product Showcase for its remote-ballasted shelf light sized for T2 lamps. The T5 lamp is showing up in more fixtures, and the major ballast manufacturers are keeping up with the demand for ballast designs.

Besides products and projects, the industry was buzzing with news about the NCQLP, whose LC certification, I think we can all agree, was worth the wait. Certification is an excellent means to demonstrate expertise and value to employers and clients alike. In this issue's Industry Focus, we reveal testing sites and date, the structure and content of the examination, and sample questions.

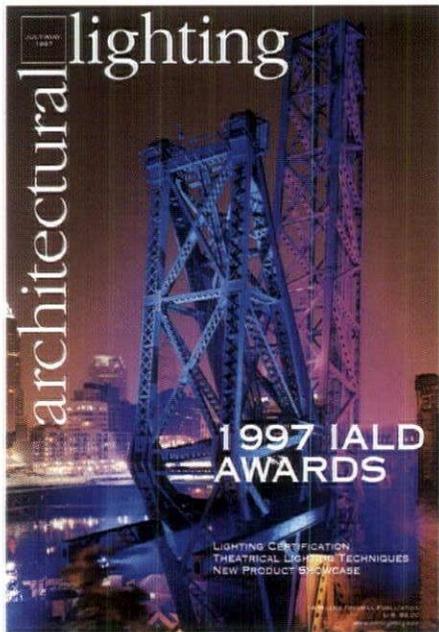
Another new development in the industry that was talked about was the Quality Lighting Campaign developed by *Architectural Lighting* and cosponsored by the Lighting Research Center, Lighting Design Lab, National Lighting Bureau, inter.Light, Ardee Lighting, Columbia Lighting, Garcy/SLP, GE Lighting, JJI Lighting Group, Litecontrol, Luxo Corporation,

Prescolite•Moldcast and SPI Lighting. The co-op ad with the headline, "Quality Lighting Makes a Difference ... for Aesthetics, Energy Efficiency and Productivity" is now running in *Facilities Design & Management*, which reaches 35,000 corporate and institutional end-users. We hope the result will be greater recognition of the value of quality lighting design and products.

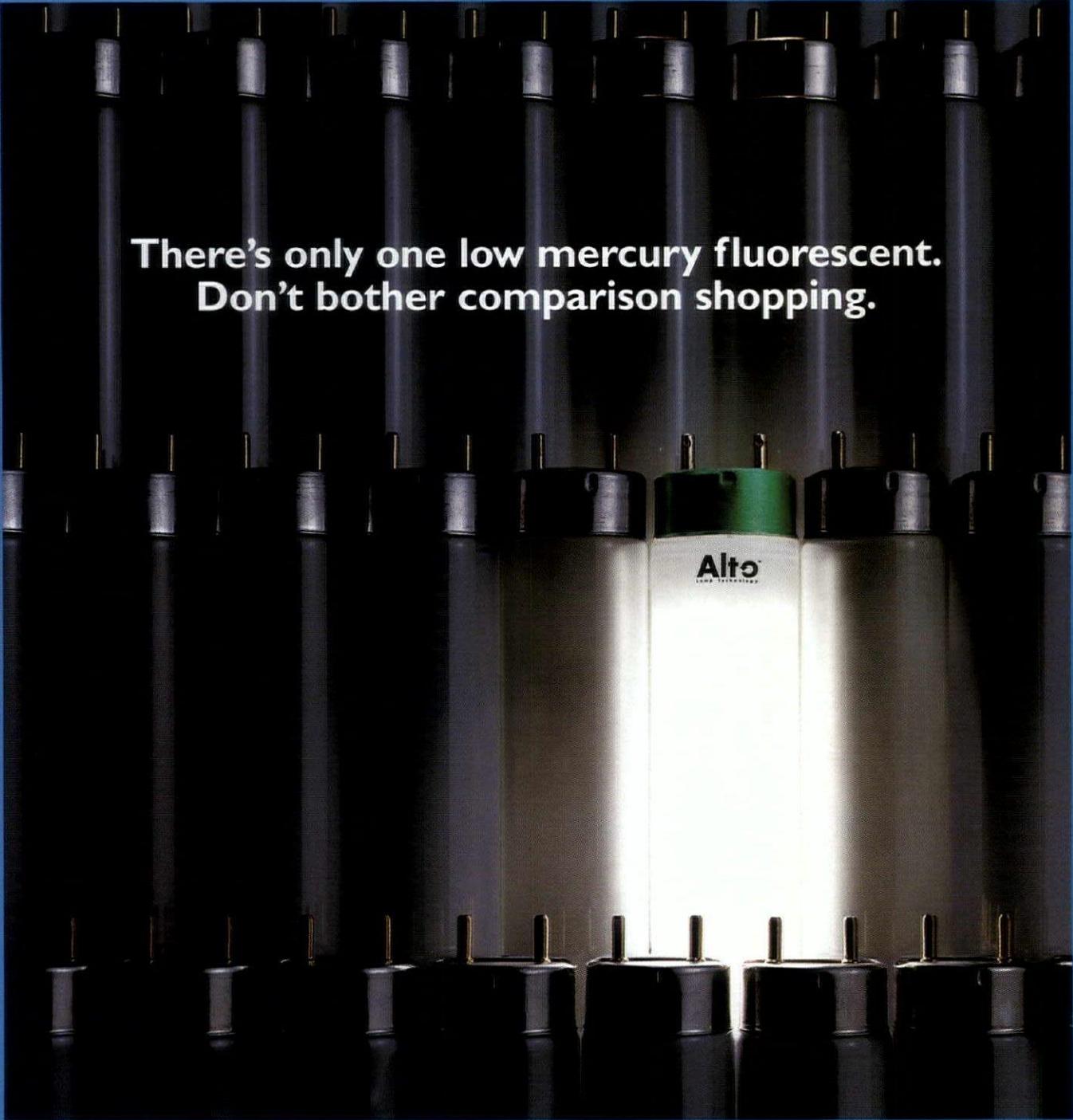
As part of the campaign, *Architectural Lighting* and inter.Light have joined to develop a new Web site at www.qualitylight.com, called the Lighting Design Forum. At this site, users can enjoy articles from the magazine as well as contributions from each of the Quality Lighting Campaign's sponsors. Users can then link to inter.Light at www.light-link.com to find manufacturers and products using inter.Light's sophisticated search engine.

We hope you'll come and visit this site, where we are also drawing end-users who see the *Facilities* ad, and we hope you enjoy this special issue of *Architectural Lighting*. ■

CRAIG DILOUIE,
EDITOR-IN-CHIEF/
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ASID AND MILLER FREEMAN ANNOUNCE AGREEMENT

The American Society of Interior Designers (ASID) and Miller Freeman, Inc. have agreed to join forces to create a new annual design event at the Jacob Javits Convention Center starting in October 1998. ASID's annual event, known as Design Power, will be co-located at the Javits Center with InterPlan, the commercial interior planning and design event co-sponsored by Designer's Saturday, Inc., and Batimat NA,

the commercial and residential building, design and construction exposition. Miller Freeman produces both InterPlan and Batimat NA. Combined attendance for the event is estimated by the ASID and Miller Freeman to be 20,000 and will include interior designers, architects, facilities executives, real estate professionals, building developers and construction specifiers. The ASID represents more than 30,000 members.

LUMIÈRE MOVES TO NEW LOCATION

Lumière Design & Manufacturing, Inc., a manufacturer of landscape lighting products, has moved its factory and offices to a larger facility at 2382 Townsgate Road, Westlake Village, CA 91361; phone (805) 496-2003; fax (805) 496-2303. The new phone number for purchasing, materials, accounting and operations is (805) 496-9803.

NUCKOLLS FUND RECEIVES NEW CONTRIBUTIONS, AWARDS GRANT

The Nuckolls Fund for Lighting Education received major financial support at Lightfair. At the annual luncheon sponsored by the Fund, Jeffrey Milham, the Fund's president, accepted checks totaling \$15,500 from two lighting industry associations and a manufacturer.

Maureen Farrell, president of the Designers Lighting Forum of New York, presented the Fund with a check for \$8,000, bringing that organization's support of the Nuckolls Fund to \$25,000. Randy Burkett, president of the International

Association of Lighting Designers, presented a check for \$2,500. Both organizations became Underwriters of the Fund, a category for contributions totaling more than \$20,000. The Philadelphia section of the Illuminating Engineering Society of North America (IESNA) made an additional donation of \$1,500 earlier in the spring, and in 1996 the New York section of the IESNA made a contribution for the 1996-1997 period that brought their total to over \$30,000. In addition, Lightolier announced a donation of \$5,000 to match the company's ear-

lier contributions and became a Benefactor of the Fund.

In further news, the Nuckolls Fund awarded its 1997 \$10,000 grant to the School of Architecture at the University of Illinois at Urbana-Champaign. The grant is intended as a catalyst in the development of a graduate lighting option and will be used to encourage the visibility of the program to foster student participation, and to assess and develop the curriculum. This is the tenth grant awarded by the Fund since its inception in 1988.

MAGNETEK ANNOUNCES 50TH ANNIVERSARY

MagneTek, a manufacturer of electronic and magnetic ballasts, began its 50th anniversary celebration at Lightfair. The company announced that it plans special events that will include customers, distributors and other members of the industry, including a Web-based 50th anniversary trivia contest with prizes (www.magnetek.com/ballast). In 1947, the first Universal electromagnetic ballasts were manufactured, and today MagneTek also develops, manufactures and markets Triad electronic ballasts along with compact fluorescent, HID and sign ballasts.

NEW LIGHTING SHOW TO DEBUT IN ASIA

The Singapore International Convention and Exhibition Centre (SICEC) announced Luminaire Asia, to be held February 19-21, 1998 at the Centre. It will be the only stand-alone lighting show in Southeast Asia.

SICEC anticipates 150 exhibitors and 3,000 trade and 5,000 public visitors. The show will encompass interior

lighting, exterior lighting, light sources and electrical components. A show highlight will be Reflexions, a central lighted display of the best products of the show, to be set up by lighting consultants.

For more information, contact SICEC at (65) 431-2293, fax (65) 431-2268 or visit its web site at www.sicec.com.

JJI ACQUIRES ARDEE

JJI Lighting Group, Inc. has announced that it has acquired Ardee Lighting/USA. With the acquisition, Ardee becomes JJI's fourteenth manufacturing and marketing subsidiary.

Ardee Lighting/USA, a manufacturer of low-voltage lighting, was established in 1990 and is best known for its compact Klikstrip linear light strip. In addition, Ardee markets a complete line of small-scale recessed downlights, low-voltage

landscape lighting and track lighting. A recent joint marketing and product development agreement with Ushio/Spax of Japan will yield a forthcoming line of proprietary recessed downlights, including the first compact wall-washer fixture to use the new 12V JA12 lamp.

Gary Gulden, previously vice president of marketing for JJI Lighting Group, has been named vice president and general manager of Ardee.

INTERPLAN AND BATIMAT TO RUN CONCURRENTLY

Batimat North America and InterPlan will be held October 29-31 at the Javits Convention Center in New York City.

The InterPlan expo, now in its fourth year, is designed for the commercial interior design and facilities management industries and showcases products such as lighting, furniture, textiles and carpeting.

Adjoining InterPlan, Batimat North America will focus on the full spectrum of the commercial and residential construction markets, including the interior market (such as HVAC systems and lighting), building systems and components and exterior products.

For more information about the shows, call (800) 950-1314.

CITY OF BRIDGES WINS EDISON AWARD

Ross De Alessi, principal, and Brian Lockwood, designer, of Ross De Alessi Lighting Design were named winners of the 1996 GE Lighting Edison Award for excellence in lighting design for creating the City of Bridges for the Cleveland Bicentennial.

The team transformed eight industrial-era bridges into an exciting and colorful light sculpture. Each bridge features a different scene or "story." (See IALD Awards in this issue for more information on the project.)

CORRECTION

In the article "Integrated Solutions for Daylighting" by Philippe Dordai (*Architectural Lighting*, April/May), we neglected to credit Carpenter Norris Consulting, daylighting consultants on the Hoffman LaRoche administrative building. David Norris also provided the computer-generated analysis images. *Architectural Lighting* regrets the error.



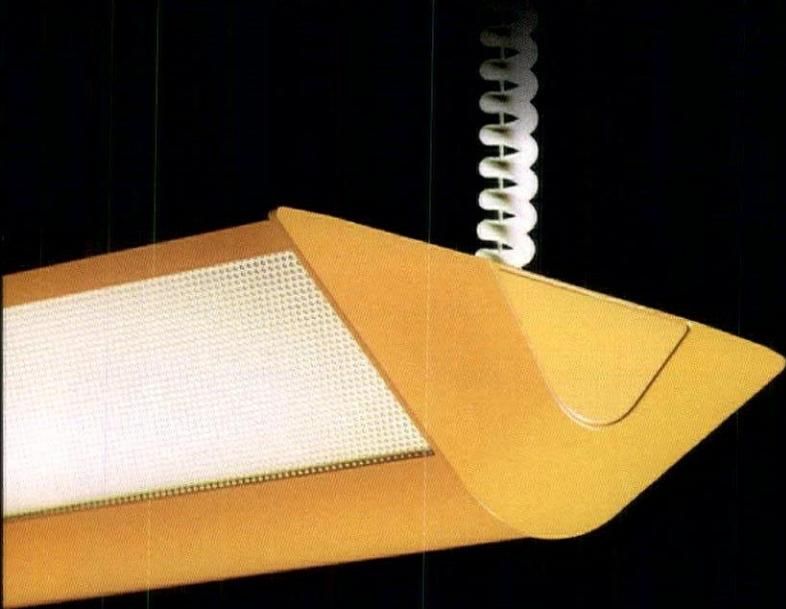
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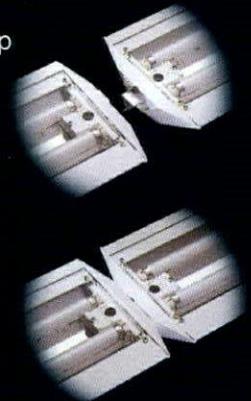
It combines a streamlined, handsome V-profile with unparalleled versatility and performance.

Illumination choices include four different lumen packages. And Columbia Architectural's innovative **ScreenArt** technology gives you a unique, easy maintenance alternative to conventional perforated metal shielding.

Avalon also features a revolutionary innovation. The fixture's **quick-locking,** post-and-clip connection system

lets installers easily snap fixtures together in straight, continuous rows. That means

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MOTOROLA & SYLVANIA ENTER EUROPEAN AGREEMENT

Motorola Lighting, Inc. and Sylvania Lighting International (SLI) have entered into an agreement to market Motorola energy-saving electronic ballasts throughout Europe.

Entering the European electronic ballast market for the first time, SLI is launching a family of KEMA-approved electronic bal-

lasts manufactured by Motorola.

These ballasts were designed specifically for the European market and incorporate many advanced features including a power factor of 99 percent, line voltage regulation from 198 to 270, low harmonic distortion and a lamp current crest factor of less than 1.5.

Targeted at the high-performance segment of the European market, these new ballasts will initially be offered in 18W (one- to four-lamp), 36W (one- and two-lamp) and 58W (one- and two-lamp) models. Additional models are expected to be introduced by the end of the year.

LUMENYTE WINS PATENT

Lumenyte International Corp., a manufacturer of fiber-optic lighting systems, announced that it has been awarded a European patent for a new jacketing process. Clear Coat jackets, manufactured through an extrusion process at the company's Costa Mesa, CA facility, are designed to provide coating options for the fiber optics that can inhibit UV effects and provide algacides, fungicides and fire retardants. Opaque compounds can be added to prevent any light from being viewed along the side of the fiber. In addition, according to the company, the jacketing can also provide a bondable agent which allows efficient coupling of large-core optical fiber with the use of adhesives.

LITHONIA UNVEILS NEW SOFTWARE

Lithonia Lighting has introduced LightWare, a set of electronic tools designed to assist in the selection, specification and application of Lithonia's products. It includes a Web site, CD-ROM product catalog, application

software, photometric data and an electronic bulletin board service. The Web site is located at www.lithonia.com. The Product Catalog (2.0) is an electronic version of the U.S. Lithonia Product Selection Guide, Edition 4, with

direct links to all product submittal sheets. For more information, specifiers can contact their local Lithonia representative or the company's marketing communications department at P.O. Box A, Conyers, GA 30207-0067.

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Each new member of Lumière's Coronado line of metal halide fixtures is a unique specification grade fixture designed to use the newest in high technology natural color rendering metal halide lamps.

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Available in versions to accept the PAR 20, 35 watt (Cat. #720), PAR 30, 35 or 70 watt (Cat. #730, pictured), and PAR 38, 70 or 100 watt (Cat. #740) metal halide lamps. Coronado fixtures can be mounted in the ground, on trees or walls, and can be remoted from their waterproof composite ballast compartment.

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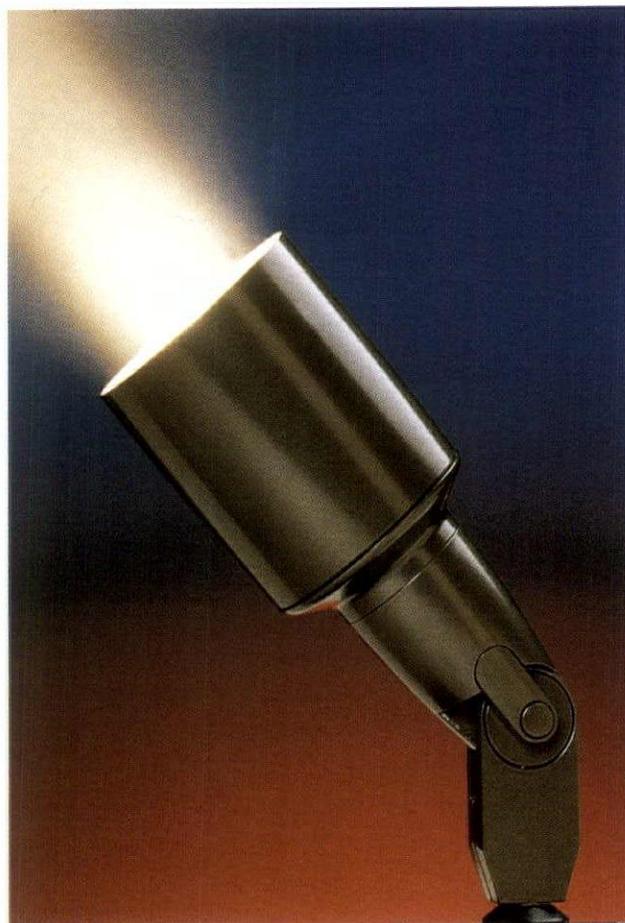


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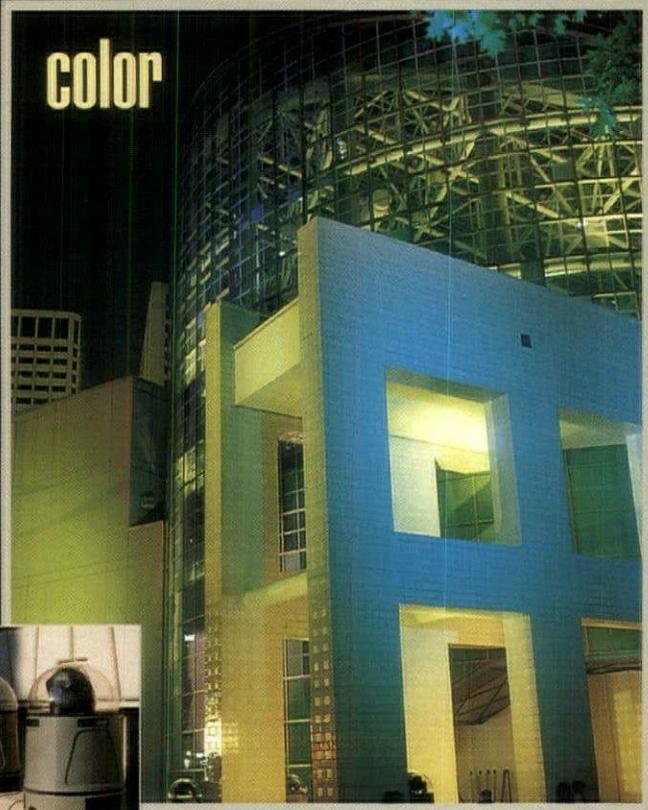
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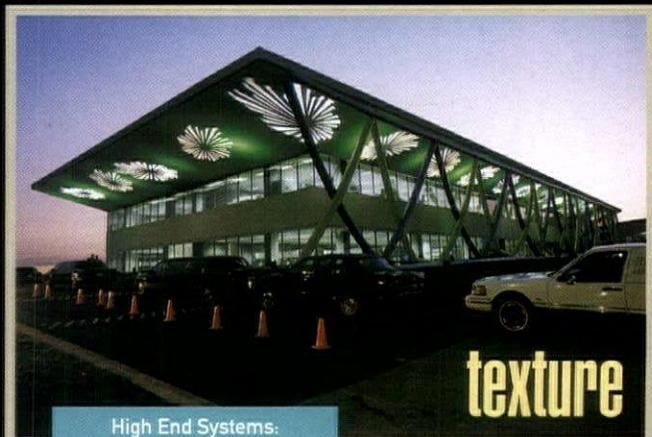
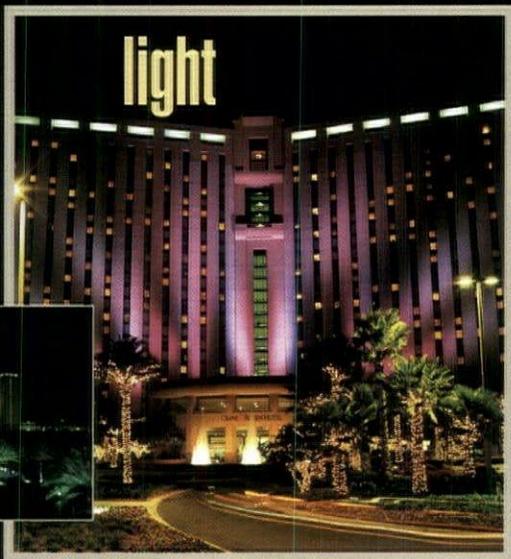
Ecodome: WINNER, "Architectural Lighting Product '96," Lighting Dimensions International 1996

Studio Color: WINNER, "Entertainment Lighting Product '96," Lighting Dimensions International 1996

Studio Color: WINNER, "New Lighting Product of the Year," LIVE! Magazine 1996 Awards

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LITECONTROL LAUNCHES DESIGN AND TECHNOLOGY CENTER

Litecontrol has launched the Litecenter, a 10,000 sq.ft. design and technology center located in Plympton, MA, nine miles from the company's main facilities near Plymouth. To date, it has hosted more than 30 groups.

At a typical day-and-a-half session, visitors learn about strategies for managing design projects, tour a 30-ft. x 40-ft. room showcasing Litecontrol's existing products and products under development, learn about new products and technologies, study lighting approaches in various vignettes, tour the company's Plympton manufacturing facilities, and participate in a workshop to share design ideas.

The products and technologies

focus on direct, indirect, direct/indirect and perimeter lighting systems. Visitors learn about these systems and can compare them in application rooms including classrooms, labs, corridors, conference rooms and small and open office spaces.

Attendance is limited to 24 to enable an interactive learning experience.

The Litecenter program is registered with the American Institute of Architects' Continuing Education System (AIA/CES); learning activities have been developed to meet AIA/CES criteria. Attending AIA members can therefore receive credits (learning units) toward their annual CES requirement.

NEW ARCHITECTURAL RESOURCE AVAILABLE

CMD, a national construction project news service, has unveiled the 1997 edition of *Profile: The Architects Sourcebook*, which contains more than 2,000 pages with data on 18,000 architectural firms.

The *Sourcebook*, designed to be a compendium of architectural practices in the U.S., is available in softcover for \$149 from R.S. Means (800) 334-3509, the Sales Resource Group (888) 251-1313, and select AIA bookstores.

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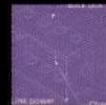
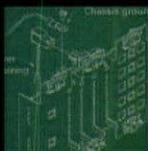
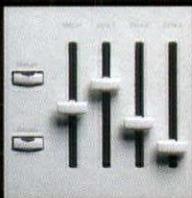
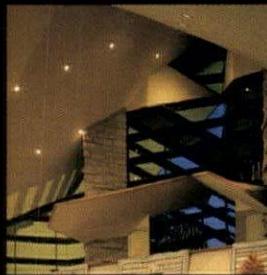
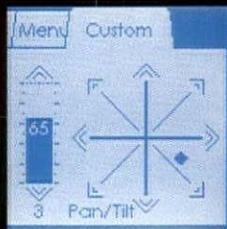
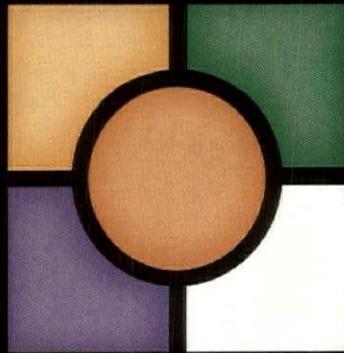
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Lou Goren, former president of Kim Lighting, has been appointed to GTY Industries' board of directors. GTY's Hydrel Division manufactures outdoor lighting products.

David M. Varon has been named vice president and managing director for the San Francisco office of Robert Young Associates.

Karen Goldstick has joined Baldinger Architectural Lighting as vice president. Previously, Ms. Goldstick was with Flack & Kurtz Consulting Engineers.

Sonny Sonnenfeld was inducted as a fellow of the United States Institute for Theatre Technology at the organization's

annual convention in Pittsburgh in March. In addition, Mr. Sonnenfeld received an award from the Designers Lighting Forum of New York.

Walter B. Coleman has been named president of Chicago-based North Star Lighting, which specializes in sports and area lighting.

George C. Bosson has been appointed vice president, general manager for Lam Lighting Systems, a subsidiary of JJI Lighting Group.

Terrance O'Toole has been named vice president, general manager of JJI Lighting Group's newly established hessamerica subsidiary based in Shelby, NC.

Bruce Jilk, AIA and **Kurt Rogness**, AIA have joined the Cunningham Group, an architecture and construction services firm with offices in Minneapolis, Phoenix, AZ and Los Angeles.

Scott Stuewe has joined Waldmann Lighting Company as office lighting sales manager.

Joe Freed has been promoted to vice president of the California branch of CEW Lighting. **John Werner** has joined the company as vice president of the Spartan Fixture Manufacturing Division.

John Nadon has been promoted to the position of director of marketing operations for Prescolite.

Pamela Stone Cartwright, IIDA has joined Liminality LLP of Washington, D.C. as a principal.

Robert D. Smith, AIA has been appointed director of architecture for ODI of Des Plaines, IL, an architectural and interior design firm. **Timothy C. Bennett** has joined as director of operations.

Jack McGrane, IIDA, Associate AIA has been appointed design director for Kling Lindquist's Interior Design Studio in Washington, D.C.

Dennis Belfiore, AIA has joined the New York office of Skidmore, Owings & Merrill LLP, and will take responsibility for the firm's interior design practice in New York.

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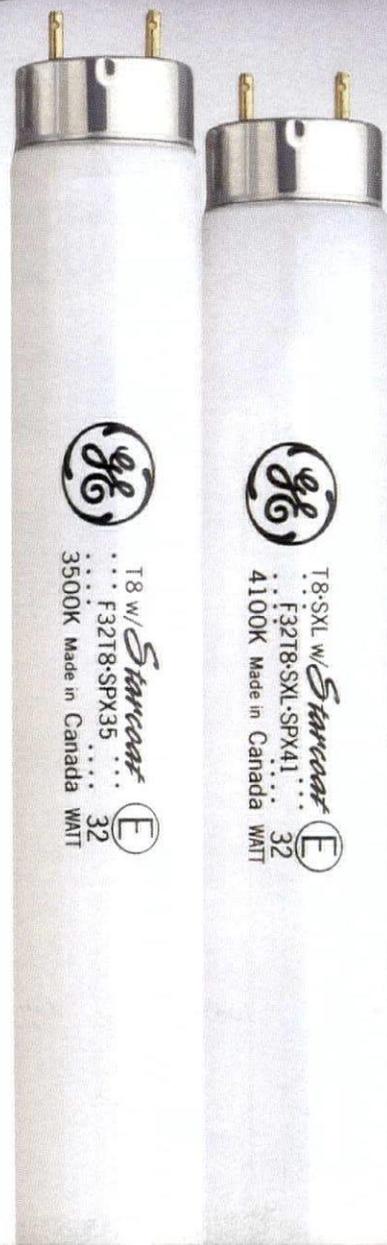
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The Energy Efficient Lighting Association (EELA) announced a new Web site at www.eela.com.

GE Lighting has launched a new Web site for business and commercial/industrial users, "The City of Light," at www.ge.com/lighting/business.

Hubbell Lighting, a fixture and components manufacturer can be accessed at www.hubbell-ltg.com.

Neo-Ray, a manufacturer of indirect lighting fixtures, has launched a Web site at www.neo-ray.com.

Clay Paky, a manufacturer of lighting instruments, has announced its new Web site at www.claypaky.it.

MagneTek Lighting Products Group, a manufacturer of ballasts, has expanded its Web site at www.magnetek.com/ballast.

Waldmann Lighting, a manufacturer of task lighting, has launched its new Web site at www.waldmannlighting.com.

UV/FX Scenic Productions, a UV visual effects company, has launched a Web site at www.earthlink.net/~uvfx.



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INTER.LIGHT ADDS SEARCH FEATURES

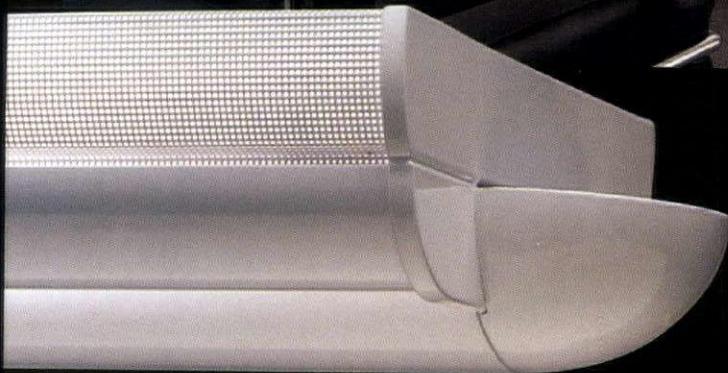
Inter.Light, a lighting directory and search tool on the Web, has announced new search capabilities and faster catalog ordering for specifiers. It can be found at www.light-link.com.

Users of inter.Light, cosponsored by *Architectural Lighting*, can now query for lighting manufacturers under various trade criteria. For example, it is possible to search for all ballast manufacturers who provide OEM sales. Other searchable categories include direct sales to commercial end-users, direct sales to contractors and export sales.

Another new feature allows frequent users to place catalog and spec sheet orders by using a short password. Previously, every catalog order required filling out a form with user information. Now users have the option of registering with inter.Light to obtain an ID that can be used to forward requests for literature.

The inter.Light searchable directories now include more than 2,500 lighting companies and thousands of products. All capabilities and features on inter.Light are free and accessible to any Web user.

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CHEDULED EVENTS

st 11-15 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

ember 8-9 Advanced Lighting Technologies, Inc. symposium on metal halide lamps

and lighting systems, Aurora, OH; (908) 438-1043.

September 9 CSI seminar: "Getting Specified: 201," Pittsburgh; (703) 706-4776.

September 15-18 "Lighting Design and Application Workshop," Philips Lighting,

Somerset, NJ; (908) 563-3000.

September 16 CSI seminar: "Getting Specified: 201," Milwaukee; (703) 706-4776.

September 18-19 CSI seminar: "Succeeding in Design-Build: Practical Approaches," Philadelphia; (703) 706-4776.

September 25-26 CSI seminar: "Succeeding in Design-Build: Practical Approaches," San Francisco; (703) 706-4776.

September 29-October 3 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

October 4-8 Landscape Lighting Institute. The Lighting Research Center at Rensselaer Polytechnic Institute, Troy, NY; (518) 276-8716.

October 6-8 "Energy Management," GE Lighting, Cleveland; (800) 255-1200.

October 8-9 CSI seminar: "Construction Contract Administration," Kansas City, MO; (703) 706-4776.

October 13-14 "Store Lighting," GE Lighting, Cleveland; (800) 255-1200.

October 15 CSI seminar: "Specifying for Historic Projects," Chicago; (703) 706-4776.

October 16-17 AEE seminar: "Fundamentals of Lighting Efficiency," Chicago; (770) 925-9633.

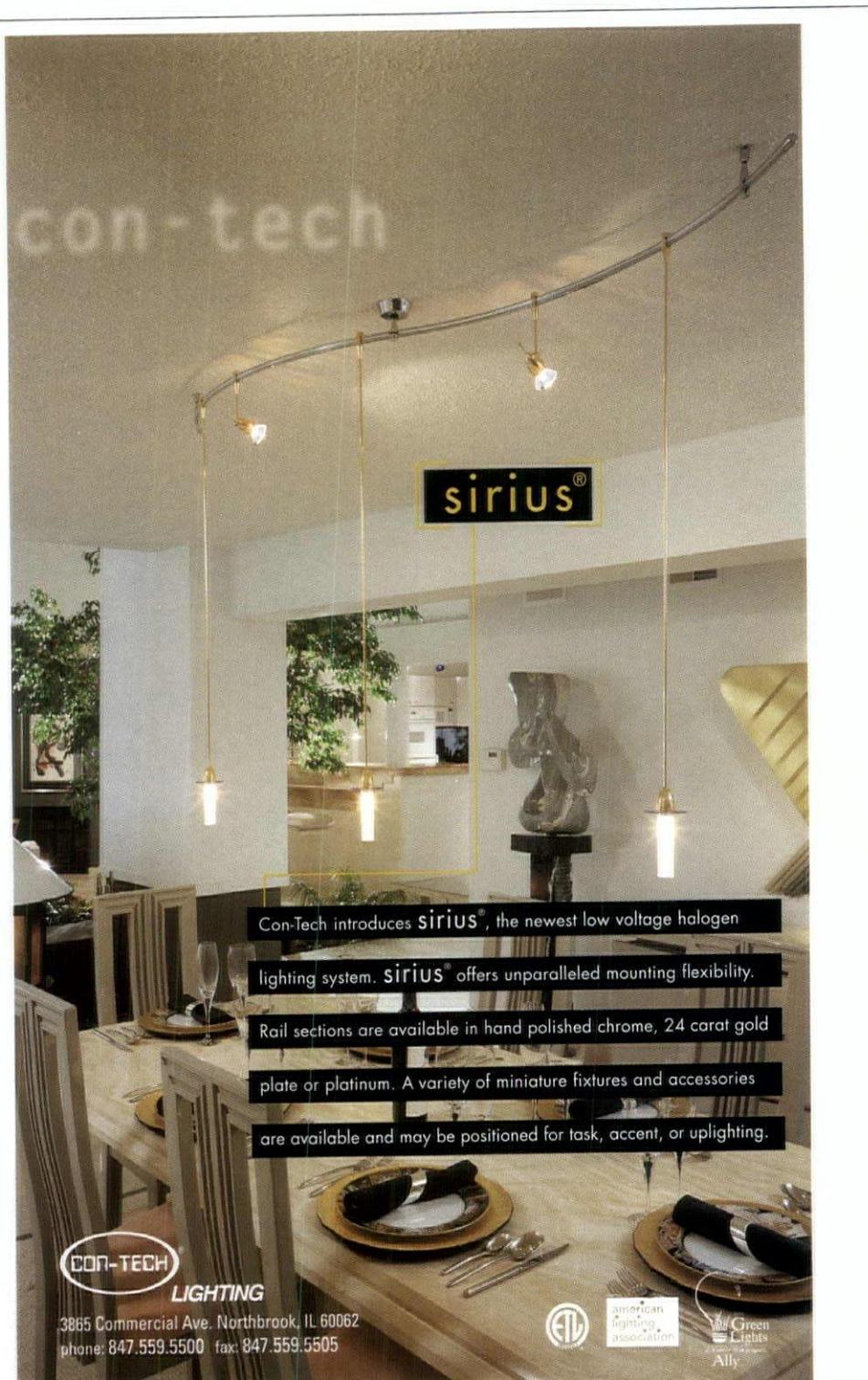
October 16-17 CSI seminar: "Succeeding in Design-Build: Practical Approaches," Chicago; (703) 706-4776.

October 17 CSI seminar: "Uniform Drawing System," Sacramento, CA; (703) 706-4776.

October 20-22 "Architects & Interior Designers," GE Lighting, Cleveland; (800) 255-1200.

October 22 CSI seminar: "Getting Specified: 101," Greensboro, NC; (703) 706-4776.

October 22 Conference: North American Construction Forecast, Washington, D.C.; (800) 283-4699.



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October 24-25 CSI seminar: "Design and Construction Communication for Facility Managers," St. Louis; (703) 706-4776.

October 24-26 LDI97, Sands Expo Center, Las Vegas, NV; (303) 220-0600.

October 28-29 CSI seminar: "Specifications: Principles and Practices," Detroit; (703) 706-4776.

October 29-30 LA Buildings & Real Estate Show, Los Angeles Convention Center, Los Angeles; (203) 840-5556.

October 29-31 International Lighting Exposition, Metro Toronto Convention Centre, Mississauga, Ontario, Canada; (905) 890-1846 for show, (416) 443-8202 for conference.

October 29-31 "Outdoor Lighting," GE Lighting, Cleveland; (800) 255-1200.

October 30-November 1 InterPlan '97 and Batimat, Jacob Javits Convention Center, New York City; (800) 950-1314, x2611.

October 31-November 2 1997 Green Building Conference, Austin, TX; (512) 264-0004.

November 3-5 "Lighting for Office Buildings," GE Lighting, Cleveland; (800) 255-1200.

November 5-6 CSI seminar: "Construction Contract Administration," Charlotte, NC; (703) 706-4776.

November 6-7 AEE seminar: "Fundamentals of Lighting Efficiency," Anaheim, CA; (770) 925-9633.

November 6-9 Conference: "Environmental and Economic Balance: The 21st Century Outlook," Miami; (202) 626-7482.

November 10-12 "Consulting Engineers & Lighting Designers," GE Lighting, Cleveland; (800) 255-1200.

November 10-13 "Lighting Design & Application Workshop," Philips Lighting, Somerset, NJ; (908) 563-3000.

November 17-21 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

November 18-19 CSI seminar: "Specifications: Principles and Practices," Memphis, TN; (703) 706-4776.

November 18-20 Conference & training program: "The Built Environment: Bringing the Past into the 21st Century—Policy, Materials & Systems," Boston; (617) 623-4488.

December 1-3 "Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

1998 EVENTS

January 16-19 International Builders' Show—54th Annual Convention & Exposition, Dallas Convention Center, Dallas; (202) 861-2105.

February 1-4 The EELA's Enlightening America trade show, The Grand Kempinski, Dallas; (609) 799-4900.

February 19-21 Luminaire Asia '98, Singapore International Convention and Exhibition Centre, Singapore; (65) 431-2293.

April 20-25 Hannover Fair, Hannover Fairgrounds, Germany; (609) 987-1202.

May 27-29 Lightfair International, Las Vegas Convention Center, Las Vegas, NV; (404) 220-2215.



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This month, Architectural Lighting interviews Jim Benya, PE, FIES, IALD, principal of Pacific Lightworks. The recipient of numerous lighting design awards, Jim has been involved in lighting education for many years. He is featured in the IESNA video series and is one of the first instructors for the IALD's Academy of Lighting Design. He is an ASID Professional Development instructor and a former adjunct professor of architecture at CCAC, the University of California and the University of Michigan. In addition, Benya serves on the California Energy Commission Lighting Efficiency Advisory Group and is the chairman of the test committee for the NCQLP.

—Christina Trauthwein

AL: When did you first realize you wanted to enter the lighting profession? What were your earliest influences?

Benya: In the formative years, I really loved lighting and was attracted to it. I did my first theatrical lighting in high school

and truly enjoyed the experience.

In college, however, I wasn't aware that there could be an opportunity in architectural lighting. At the time, I remember reading the *IES Handbook* and realizing there was something there, but didn't know how to get to it. The field of lighting was just evolving and the people in it were pioneers. I wanted to pursue a career in either music or lighting and where it interfaced with technology, which is why I got degrees in electrical engineering and computer science.

AL: What has been the single greatest impact on your career?

Benya: Meeting Steve Squillace, the vice president and director of electrical engineering for Smith Hinchman & Grylls (SH&G) in Detroit. He is one of the most visionary people I've ever known, and envisioned a future in which lighting design and lighting technology would emerge into a profession. Steve hired me to work in the firm's electrical engineering department, which became the most significant and powerful step to getting me started in the field.

When I was coming out of college, I was thinking of going to work in the computer industry. Steve said to me, "You can be a small frog in a big pond, or you can work with me in this industry and be a big frog in a big pond." The construction industry at that time wasn't glamorous, and lighting design—which is somewhat glamorous—wasn't a well-known profession yet. You see, Steve didn't hire me to become a lighting designer, but a lighting-aware electrical engineer.

AL: So Steve Squillace became a mentor?

Benya: To a large extent. Steve was the

first person to pursue the whole notion of lighting calculations done on computers. He was the bridge between the laboratory and reality and encouraged a whole generation. Today's modern lighting designers and experts, whether we worked directly for him or not, have all been impacted by him. He is one of the most important people in illumination in this century and has influenced many careers in lighting.

AL: You began as an electrical engineer. How did that translate to design?

Benya: It was 1973. The old-fashioned system was in place: Architects and engineers working together with reps. The only people doing lighting design as we think of it today were the New York-based pioneers. But there was a shift

"MANY OF US
DISCOVERED ON OUR
OWN THE ROLE OF
LIGHTING DESIGN AS A
TRUE PROFESSION."

afoot. As an electrical engineer, I was introduced to many concepts in architectural lighting, though they tended more toward a scientific basis—but the artistic side was welcomed.

My career has been a bit different than many of my colleagues. I worked primarily in the electrical engineering group, but also spent a few years as an architect's field rep, in architectural project management, in the marketing department, you name it.

AL: All of this training allowed for a broader base of knowledge.

Benya: Absolutely. It has been an advantage; it's taught me more about the industry as a whole.

We have an unfortunate tendency in our industry to hang labels on people by what backgrounds they're from. There are people who have succeeded in architectural

lighting that have come from electrical engineering, architecture, interior design, theater, landscape, photography. Lighting is one of those fields where success is not limited to those who went to a school of architecture. There isn't a university of lighting design yet.

AL: Let's talk about education. Are students sufficiently trained to enter the lighting profession?

Benya: For the most part, no. The key to training today's graduates is through internships—learning real life at the hands of experienced people. Knowledge is best passed on through on-the-job training. It's difficult to teach lighting because it's hard to explain what we do when we do it well. Many of us are great designers but lousy teachers, and vice versa. Some schools are known for technology, some academia, some pure arts. We haven't quite learned what to teach to properly prepare someone. The problem is we're still in infancy.

AL: You mentioned earlier that change was taking place—a shift in attitude about the importance of design. What was the mood of the industry during this time?

Benya: The idea of a lighting designer can be traced back to the pioneers. But in the Midwest, we didn't know who those people were and weren't aware of a lot of their work. Many of us discovered the notion of lighting design on our own, and the role of lighting design as a substantial profession started to become clear. I credit Gary Steffy with paving the road for those of us outside of the Big Apple to take a chance and make that commitment.

Others started following the lead. Jan [Moyer] went to San Francisco to work for Fran Kellogg Smith at Luminae, which I bought in 1984.

AL: Because there was more opportunity in that market?

Benya: Well, Smith showed how a lighting design firm could be successful in the design environment of California. So I left Detroit and shed some of my Midwestern skin, and it completely changed my life.

Where Steve's philosophies were rooted in science and mathematics, this

(Continued on page 28)

(Continued from page 26)

opportunity really pushed me in the direction of high-end residential and hotel work and understanding an entirely right-brained, artistic approach to lighting design. This closed the circle for me: To take what I learned in the theater—use light to manipulate focus and mood—and apply it to architecture. It culminated in the completion

of my journey from young graduate of engineering school to lighting designer.

AL: How has the industry changed since that "journey" began?

Benya: The single biggest change has been the renaissance and the interest in lighting and lighting fixtures as part of architecture. At one time, lighting was considered to be fluff—serious buildings didn't employ decorative lighting.

Second was the energy crisis and the understanding that lighting consumed energy and could be reduced. This is what phenomenally revolutionized the technology of our industry. Twenty years ago they were taking coffee cans, putting them in ceilings, putting bulbs in them and calling them downlights. Unbelievable!

Third is the advent of the lighting designer. The architect/engineer/agent/contractor method of doing lighting design does not work. Clients are becoming more educated and expecting better. In fact, I just received a request for a proposal in which the standard form within the request includes a line item for lighting designer. A decade ago, that didn't happen.

Also, our awareness has created a rather serious and heart-felt competition within the industry amongst lighting designers. I'm very competitive and believe that our firm can offer something better than the next guy, but we have to prove it.

AL: And the future of lighting design?

Benya: It's a profound and wonderful future but we have to be prepared to step up and say, we're going to be a profession.

AL: How so?

Benya: Well, I'm a huge believer in the NCQLP process and I believe it's a major

step in professional lighting design. The NCQLP is establishing a minimum standard. There are lots of folks who would like to call themselves lighting designers—I'm hoping this process will sober them up. Passing this exam will prove that you've been properly educated. Quite frankly, I'm a little sick of trying to compete against those with no training and qualifications.

The NCQLP is a significant step forward and upward because it is a high-quality certification that's of the same caliber and thoroughness as the interior design profession's NCIDQ examination. Interior design faced 20 years ago the problems we face today: A profession whose time had come and the public had no way of identifying a knowledgeable individual from a complete novice.

"WE, AS PROFESSIONALS,
MUST OFFER A VALUE
TO THE PUBLIC: QUALITY
OF CONSULTATION
AND EFFORT."

AL: What's the feedback?

Benya: Lukewarm. A lot of people are scared. Many lighting designers do purely artistic lighting and don't know a watt from a volt. Therefore, they're panicking at the thought of having to get enough technical knowledge to pass the exam. But it's a fair and broad-based exam, and if you know lighting as well as the committees who have been working on this think you should, then it's okay.

This is the bottom line: If we're going to be a profession, charge professional rates and get paid professional fees, we have to be prepared to do what professionals do. That is, offer a value to the public that they cannot get from a non-professional and offer a quality of consultation and effort.

AL: What motivates you, inspires creativity?

Benya: I am inspired primarily by designing projects that are a holistic combination of architecture, engineering, energy efficiency and beauty: A seamless integration of lighting and architecture that

fits the mood and the purpose of the building; the magnificence of architecture; the mood of people as they enter and utilize a space; the ability to develop a sustainable, efficient environment that I know 20 years from now will still be there and will not have cost an unreasonable amount of natural resources and funds to maintain.

AL: What advice would you like to give to future generations entering the field?

Benya: Get the best education possible in lighting or a related field. If you aren't comfortable sitting in front of the computer and working with photometric data, you'll have a tough time being a lighting designer because that's the direction in which we're headed. Hands-on experience with AutoCAD and today's modern computer programs is absolutely essential...

AL: What about creative instinct?

Benya: Personally I think it's easier to teach someone who has the acumen to become a better designer rather than someone with a strictly artistic education to become an engineer. Our profession continues to be a blending of art and science but the science is getting stronger. I believe that the success of the pioneers and the early generations of lighting designers was because of their innate ability, their genius, their gift for understanding light and being able to work with it. They felt it, lived it.

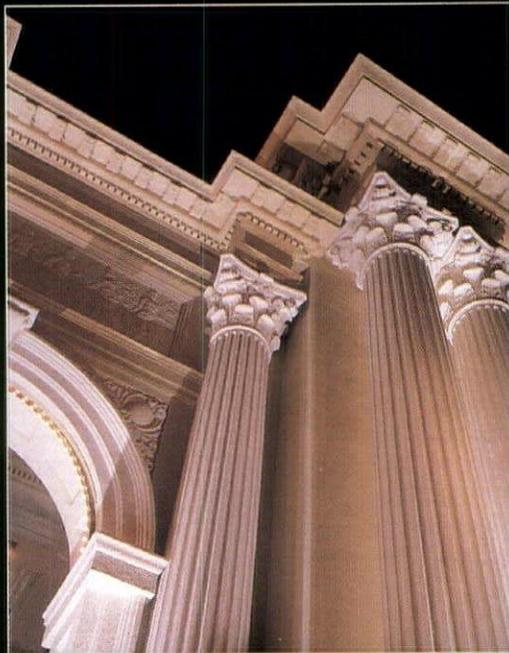
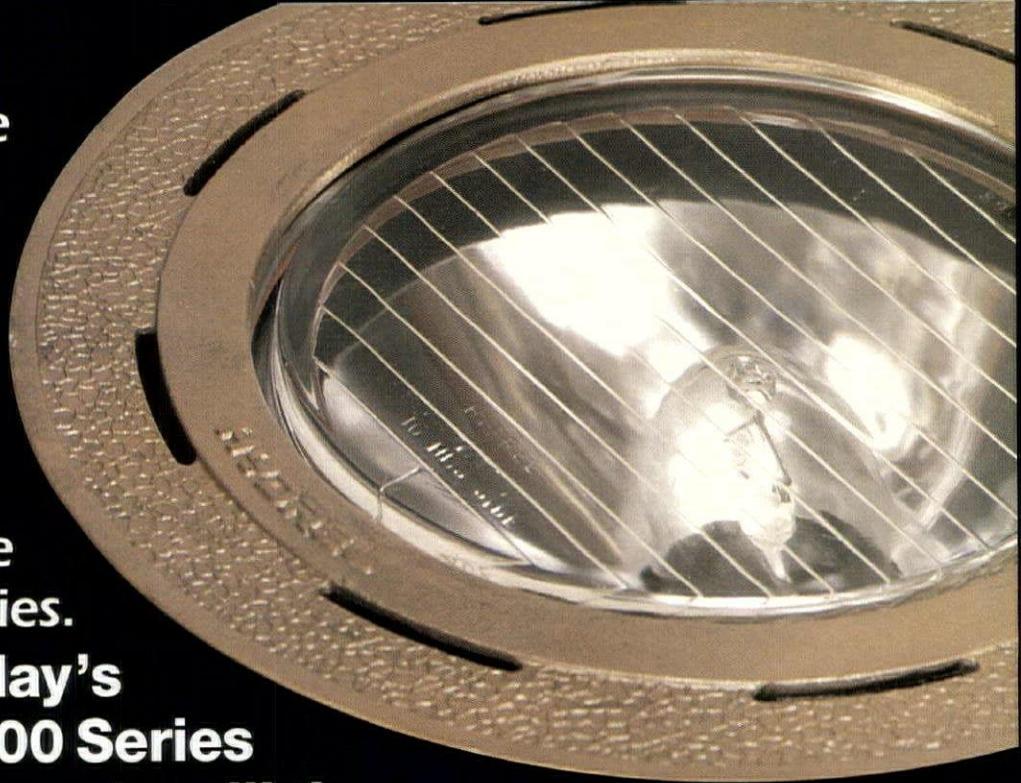
As we try to make lighting design a profession, we demystify it a bit. The pioneers mystified it because they couldn't explain it. As we learn to explain the whole process, we can train others who maybe don't have quite the genius of the "greats." That's OK. The person who walks through my door has to be able to draw, communicate, write and run that computer.

AL: If you could do it all over again, what, if anything, would you do differently?

Benya: Let's see, what would have given me more opportunity and expedited my career? I hate to say it, but I'd go to New York and work there for a while. It would've been a tremendous learning experience. I think working in Manhattan in an established firm might have helped me develop the right-brain side early in my career, rather than constantly seeking it throughout my career. But I can tell you, I wouldn't change my decision to become a lighting designer. Lighting design is like a disease, once you've got the bug, you never get rid of it. ■

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early nineties.

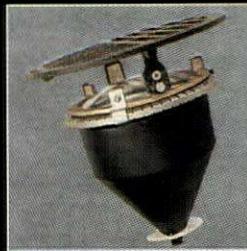
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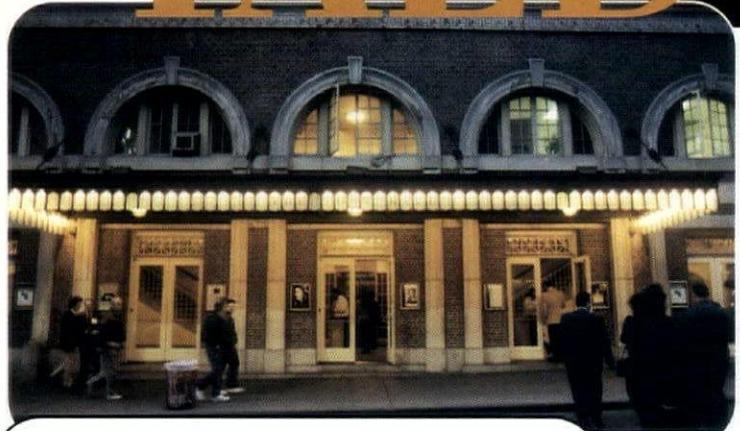
Pre-ceremony cocktails and hors d'oeuvres were held at Laura Belle, a charming 1928 movie theater now used for special events.



The "Academy Awards" of the lighting industry, the IALD Awards are one of the highlights of Lightfair, drawing a selection of rising and established star designers from around the world. Cosponsored by the International Association of Lighting Designers and *Architectural Lighting*, the event saw its fourteenth year—and what a year it was!

Judges received an impressive 100 entries from the U.S., Europe, Asia and Australia. The committee presented two projects with Awards of Excellence and six with Citation Awards. A collection of theatrical bridges in Cleveland and a futuristic forum in Japan took the top awards; a light sculpture and a chic clothing salon, both in Japan, a public park in Ontario and a colorful theater in the Netherlands all received citations.

IALD



Guests crossed the street for the awards ceremony, which was held at the historic Town Hall. Opening remarks and welcomes were delivered by Randy Burkett, president, IALD; E. Teal Brogden, Awards Committee chair; and Architectural Lighting's editor-in-chief Craig DiLouie.

WELL DONE

Hoping to support excellence in lighting design and encourage the pursuit of education in lighting, the IALD has allotted \$2,000 in fund money for the second year in a row. This year, the IALD scholarship of \$1,500 was awarded to Lesley Morgan of Midwest City, OK. A student of architecture at Oklahoma State University, Morgan recently decided to include lighting design in her final degree after completing an interesting project involving light.

Receiving \$500, Chung-Chih Huang of College Station, TX will use the funds to support the computer-aided design of exterior lighting for a greenway on the campus of Texas A&M University. Huang is pursuing a degree in Landscape Architecture.

The IALD awards provide an opportunity for professional peers to share the year's experiences.



From left, Jim Yorgey, Lutron; Karen Goldstick, Baldinger; and Helen Diemer and Alfred Borden, The Lighting Practice.



From Left, Jan Moyer, The Lighting Research Center; Reginald Wilson, Lighting Analysis & Design; and Nigel and Kate Fimmimore, Lightpoint Distributors.





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E. Teal Brogden (left) and Christina Trauthwein, executive editor, Architectural Lighting (center), presented the award-winning projects. Here, Trauthwein congratulates Hans Wolff, principal, Hans Wolff and Partners BV, designer for Theater De Harmonie (right).



After the awards presentation, party-goers crossed back to Laura Belle for a buffet dinner, celebratory drinks and discussion and later, dancing. Kaoru Mende (right), Lighting Planners Associates Inc., designer for the Tokyo International Forum, discusses the program with Rick Shaver, Edison Price (left).



AWARDS

A FOND FAREWELL

This year's IALD Awards also marked the final days of Maria Becerra as the organization's executive administrator. In a moving yet humorous tribute delivered by Randy Burkett, president, IALD, Lee Waldron, Grenal/ Waldron Associates, and Philip Gabriel, Gabriel/Design, the IALD honored Becerra for seven years of service. "Maria was vital to the Association's growth and success," commented Burkett. "She brought boundless energy to her work and a heartfelt conviction to the lighting design profession."

Becerra leaves the IALD to join her husband as a partner in their lighting and furniture showroom, Millennium Collection, located in the Chelsea Design Center. A distributor of Estiluz, Leucos, Remote Source Lighting and Tech Lighting, Millennium Collection will make good use of Becerra's experience in the lighting industry.

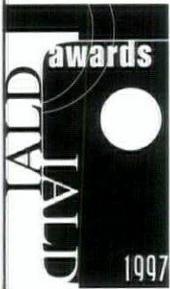
It was a good time for Hideo Yasui, Yasui Hideo Atelier Inc., designer for Advanced Cique (second from left). Accompanying the award winner are his wife Naoko Wamoto (left), his assistant Shiroh Ogata (second from right) and Philips Lighting's Ronald Dalderup (right).



Behind every successful event is a lot of hard work and months worth of planning. Emilie Sommerhoff, assistant editor (left) and Executive Editor Christina Trauthwein (center), Architectural Lighting, and Maria Becerra, former executive administrator, IALD (right), beam at a job well done.

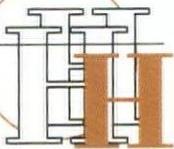
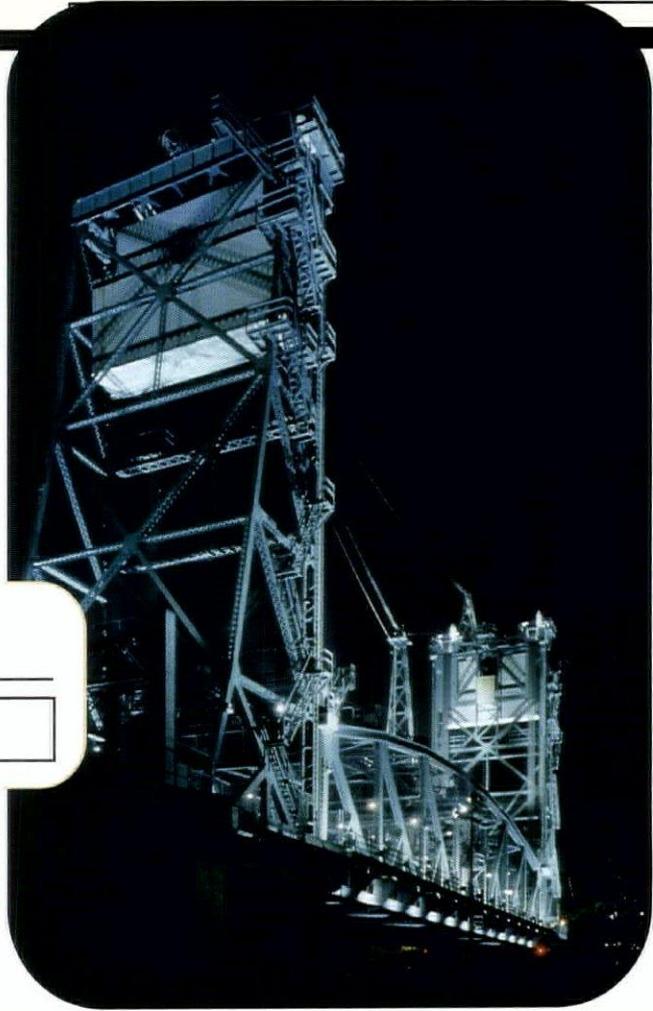


award of excellence



CITY of bridges

Cleveland, OH



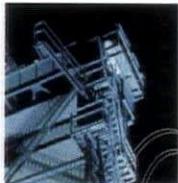
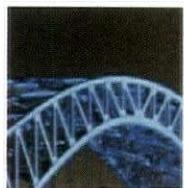
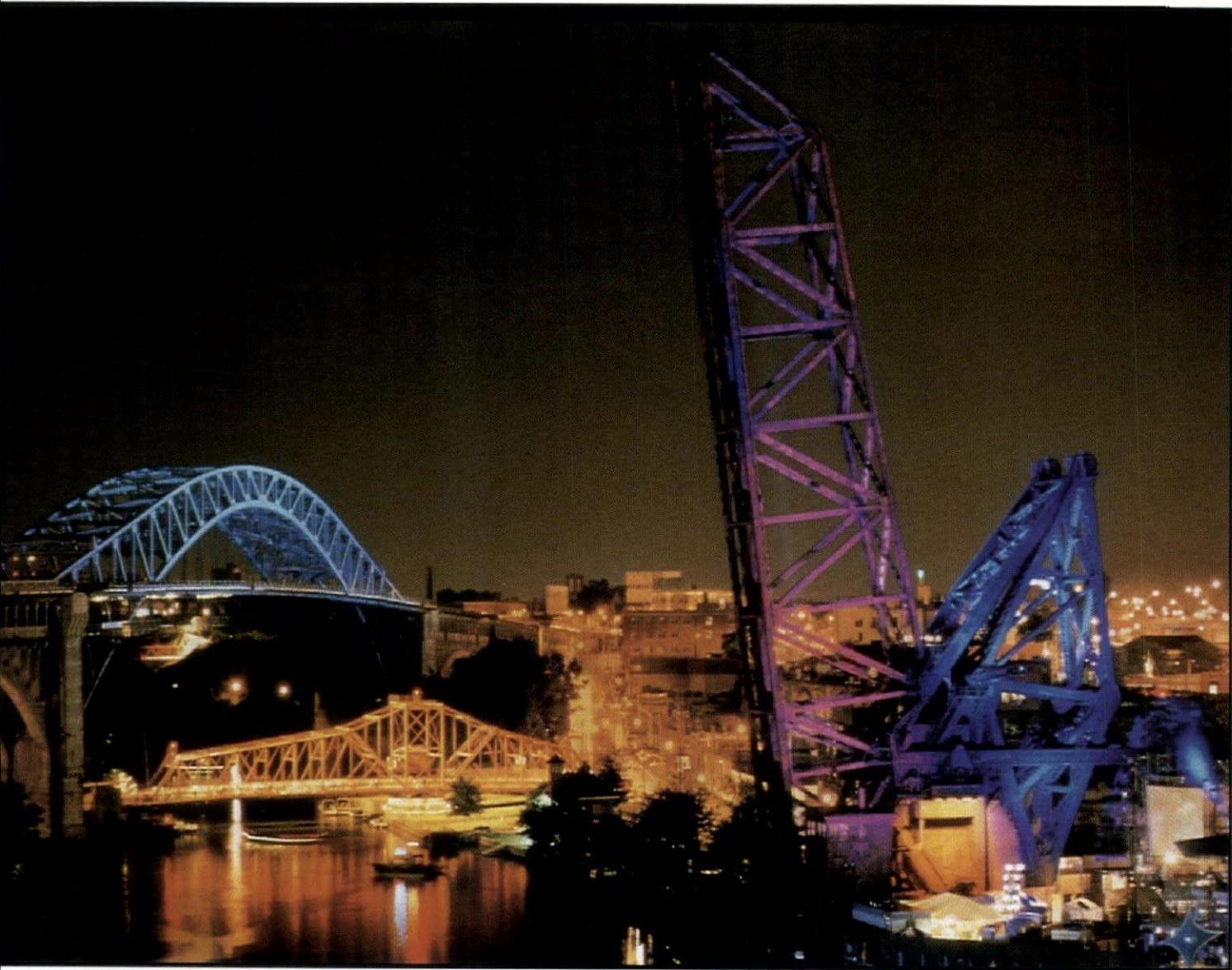
In honoring the city's industrial past and civil engineering achievement, the "City of Bridges," designed by Ross De Alessi, IALD, celebrates Cleveland's revitalization and ties together the east and west shores of the Cuyahoga River. The "City of Bridges," the master plan for the permanent lighting of 18 of Cleveland's Flats Area bridges, is not only a colorful tribute to Cleveland's industrial accomplishments, but "brings valuable historical structures to life through animation," said IALD judges. "The project is really wonderful in its simplicity."

The lighting project, the Bicentennial Legacy Gift to the people of Cleveland, anticipates the viewing of multiple bridges at once in scales ranging from distant to intimate. Of the 18, eight were chosen and full design packages were completed in six months. Six bridges were finished for the city's Bicentennial celebration last July; the two others are first undergoing structural renovation.

Up to seven bridges can be viewed from one area. "The success lies in the composition of the bridges," said judges. "Lighting was used as a creative tool to transform the city, and each bridge, when viewed together, becomes a living example of our industry, increasing people's awareness of lighting."

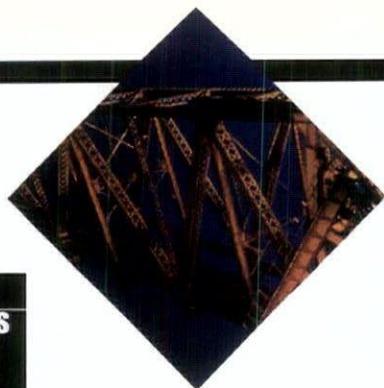
The gray-colored Willow Avenue Bridge is a celebration of civil engineering. Tower faces, the internal structure, counterweights, chain links and the top connection span are uplighted with shielded 175-250W metal halide linear and spot optic fixtures mounted on poles and the bridge's lift section. Fixtures incorporated in the railing and structure of the lift section travel with the bridge as it opens. Metal halide, sharp cut-off roadway lighting dims as the section lifts to avoid glare into the navigable waterway. A rainbow effect is projected onto the motor house, symbolizing unity.

Bascule #1 Bridge, built in 1907, is located immediately adjacent to the area's most popular restaurant. The inoperative and historically landmarked bridge honors the steel industry by recreating a forge effect in the old roadway at the bridge's base. A 15-minute event on the half hour transforms the bridge coloring from white to amber to red, growing from its base to tip.



awards of

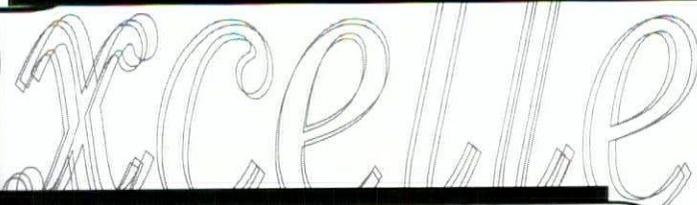
IALD
awards
IALD
1997



Mist from concealed nozzles pours into the "forge" areas, initiating the event. Improved sodium linear and flood optic fixtures form a base layer of warm color while a series of cues orchestrates the forge-like pulsations of filtered quartz uplights concealed in troughs inside. This activity (and perceived heating) creates the source of the rising bridge glow from the base to its 230-ft. tip.

The Main Avenue Bridge is the "strength in connection" bridge. It spans the river and valley in a series of uplighted cascades tying east to west. Linear and spot optic 400W metal halide fixtures are concealed on the pier tops only 4 ft. out from the structure.

Bascule #2 Bridge is also landmarked and inoperative. This bridge honors the steam locomotive by creating the passage of a ghost train. The bridge is footlighted with deeply colored dichroic filtered 1000W metal halide PAR lamps. Deep magenta and blue were chosen to give an otherworldly appearance and to make the focus on detail more difficult. This old bridge resurrects itself through an event that begins with what appears to be an approaching train from middle earth. White light "grows" from the inside of the amber-colored counterweight/base areas until the

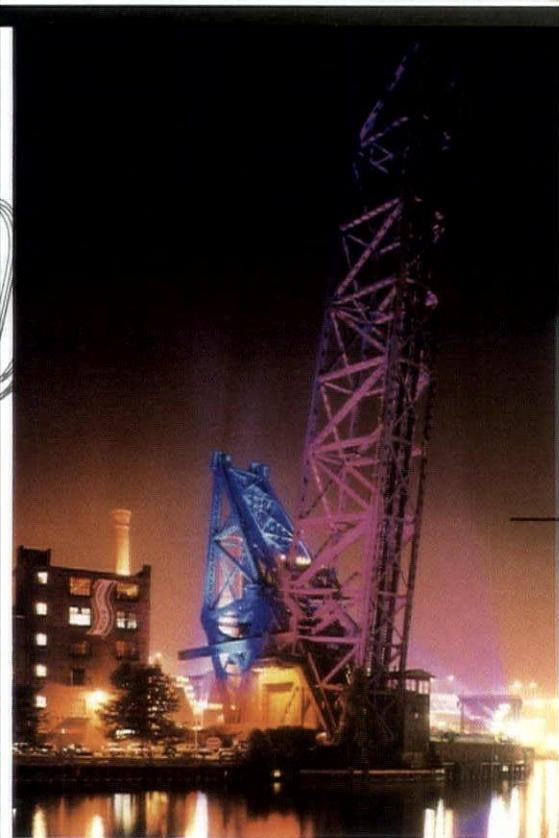


inside of the magenta-colored roadway glows white. When the ghost train hits the trestle, a 65M candlepower 1 KW xenon searchlight strikes the sky (the effect required and received FAA approval).

The Eagle Avenue Bridge is directly across from the city's new baseball field. Exposed sheaves atop the towers are highlighted for enjoyment either still or in motion. The lift section and undercarriage are also featured from balustrade-mounted uplights and downlights allowing for viewing in both the open and closed positions.

"The city of Cleveland should also be commended for commissioning the project, which required strong initiative and tenacity," said IALD judges. "The project required the cooperation of private business and more than a half-dozen government bodies, from a landmarks commission to the Coast Guard and Army Corps of Engineers."





Details

Project City of Bridges

Location Cleveland, OH

Owners City of Cleveland; County of Cuyahoga; Nautica Entertainment Co.

Lighting Designer Ross De Alessi, IALD, MIES, Brian Lockwood, MIES—Ross De Alessi Lighting Design

Renderings Bich-Lien Nguyen, Ross De Alessi Lighting Design

Research Jill Mulholland

Engineer HNTB

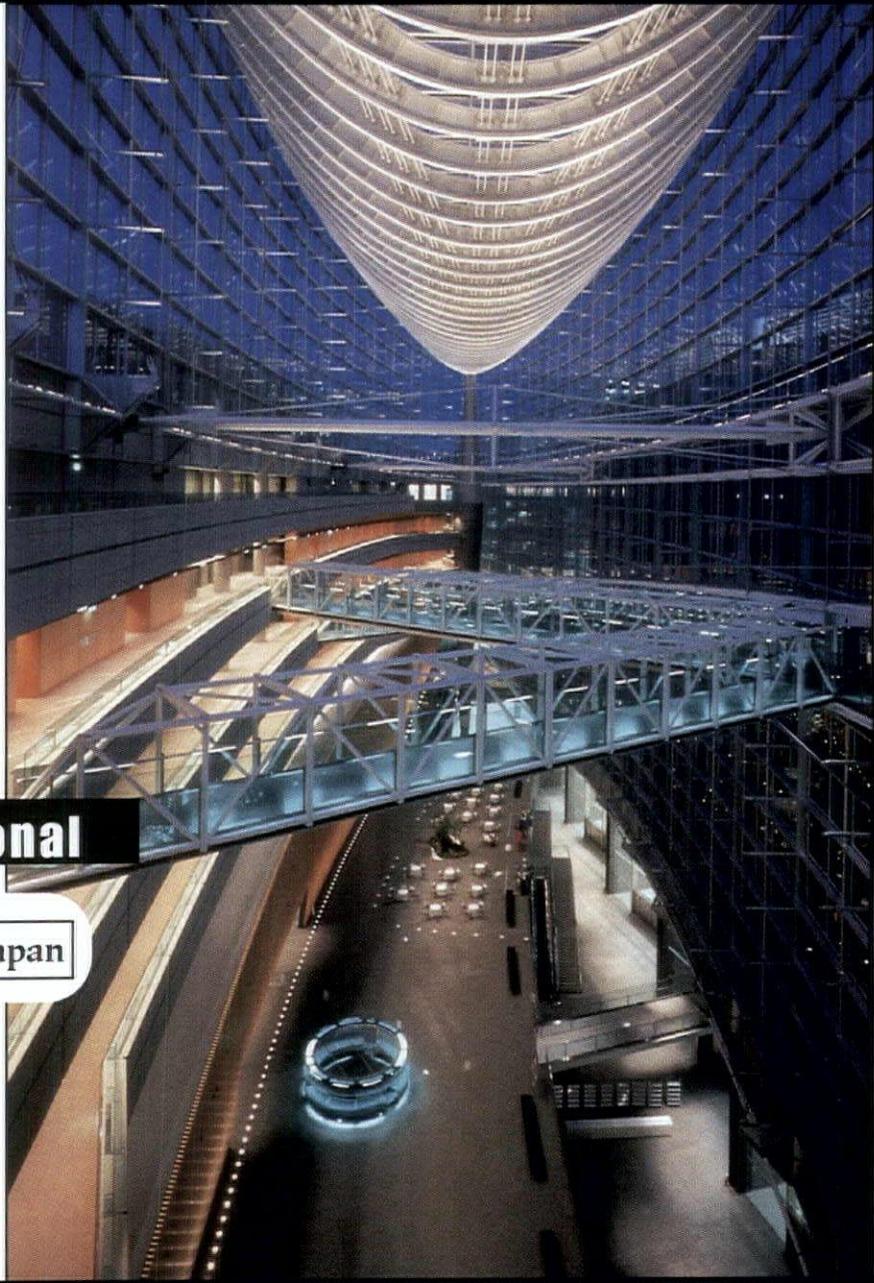
Photographer Ross De Alessi Lighting Design

Lighting Manufacturers Bega; Northstar; Hydrel



Tokyo international forum

Chiyoda - ku, Tokyo, Japan



Not to be outdone by the rising sun, the recently designed Tokyo International Forum shines like a "lantern against the night sky." In fact, the project was bright enough to be recognized for an IALD Award of Excellence halfway around the globe. "This project was beautifully executed," said IALD judges. "The architecture and lighting work together at so many levels of detail."

East met West when Tokyo-based lighting designers Kaoru Mende and Yutaka Inaba and Washington D. C.-based designers Claude R. Engle III and Danielle David Engle used lighting to emphasize the voluminous space of the Tokyo International Forum.

The immensity of the atrium extends even beyond its structural confines as light pours through the windows and out of the glass-encased hall. A variety of wall washers accents the vertical plane rather than the floor space, impressing those

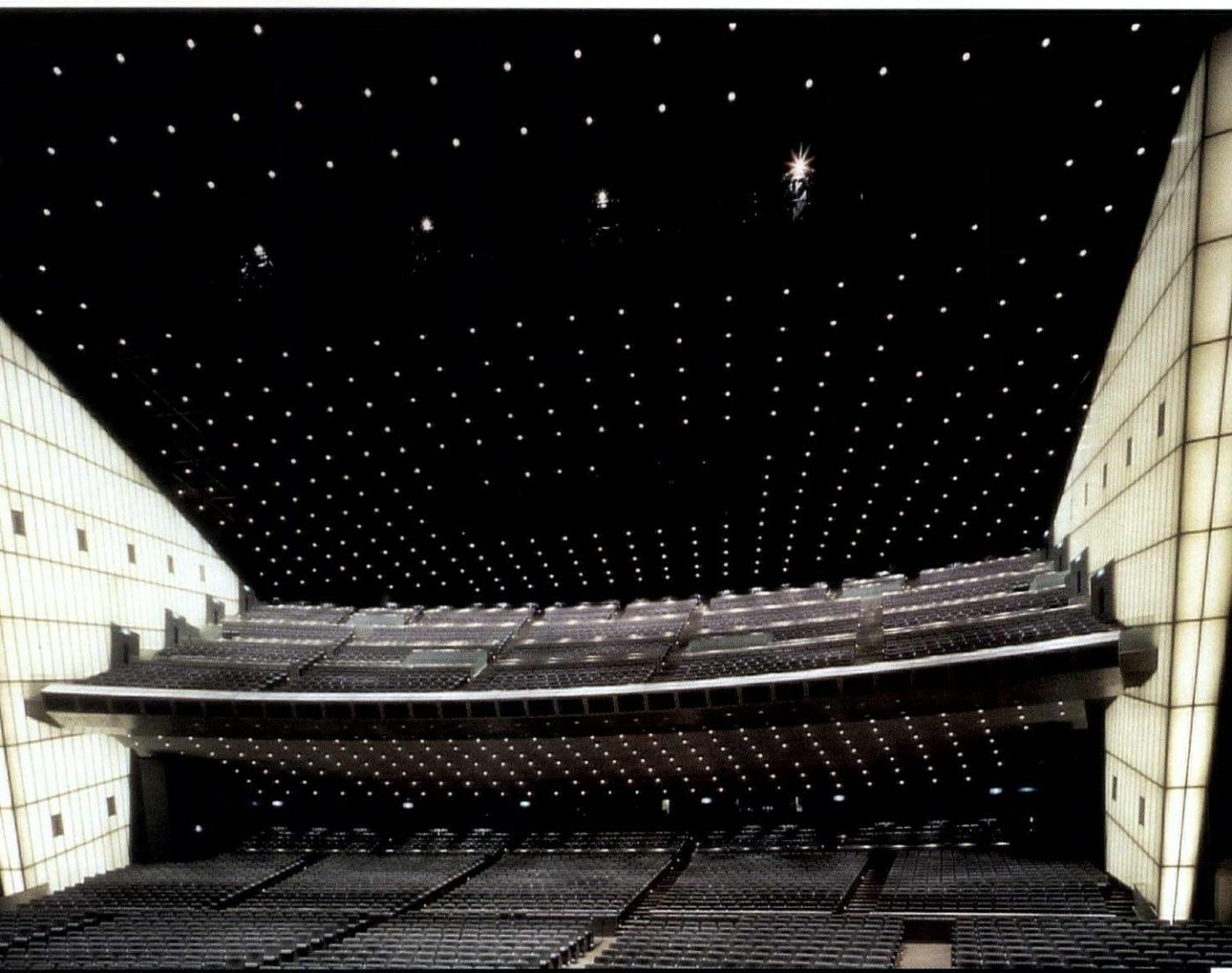
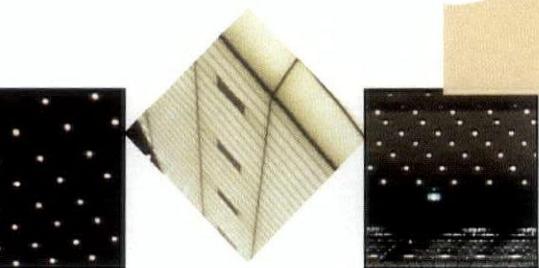
award of excellence

wards

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inside with the soaring height of the complex. Outside, the 60-meter-high roof stands out against the illumination of 600 75W halogen spotlights. Bridges, connecting floors within the building, provide a sense of the atrium's depth. Fluorescent lamps (40W) concealed in the handrails assure sufficient brightness along the passages, while protecting against glare to those below.

Hall A, a multi-purpose space with 5,000 seats, uses a versatile lighting system to accommodate its many functions. The seating is lighted with 250W halogen downlights. By tilting the fixtures up 10 degrees, efficient and well-distributed lighting is achieved for the entire space. The beauty and necessity of opposites—night and day, black and white, east and west—is inherent in the glow of the luminous walls against the darker ceiling. Suggestive of a Japanese shoji screen, the walls are illuminated with 2,700 25W mini-krypton lamps.





The lighting design for the subterranean exhibition hall (5,000 sq. meters) is also well equipped for diverse activities. Fluorescent lamps are attached at the top of the V-shaped columns, highlighting the structural design, while 150W metal halide downlights and incandescent track fixtures provide more lighting options within the open areas.

A horseshoe-shaped luminous floor encircles the perimeter of the plaza, bringing visual unity to the complex. Indirectly and uniformly lighted by a grid arrangement of 40W fluorescent lamps, the glass floor seems to flow elegantly forward leading visitors into and around the impressive space. The outdoor courtyard—sparsely lighted with a combination of uplights attached to the zelkova trees and downlights attached to the eaves—is kept dim to emphasize the effect of the lighting inside. **┐**

Details

Project Tokyo International Forum

Location Chiyoda-ku, Tokyo, Japan

Owner Tokyo Metropolitan Government

Architect Rafael Viñoly Architects PC.

Lighting Designers Claude R. Engle III and Danielle D.

Engle, Claude R. Engle Lighting Consultant; Kaoru Mende and Yutaka Inaba, Lighting Planners Associates Inc.

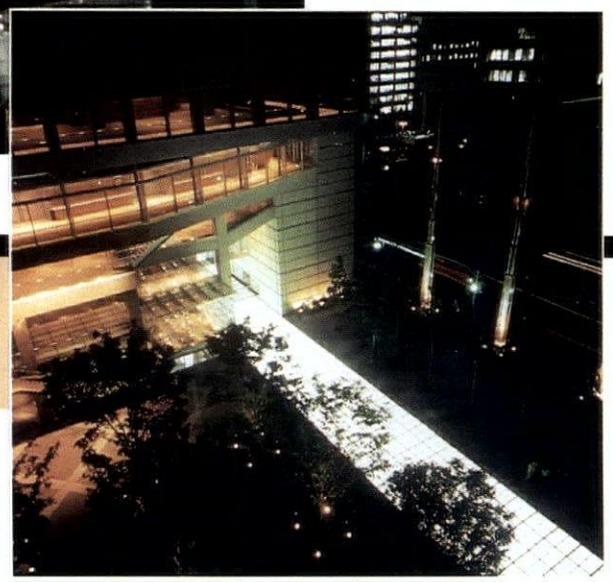
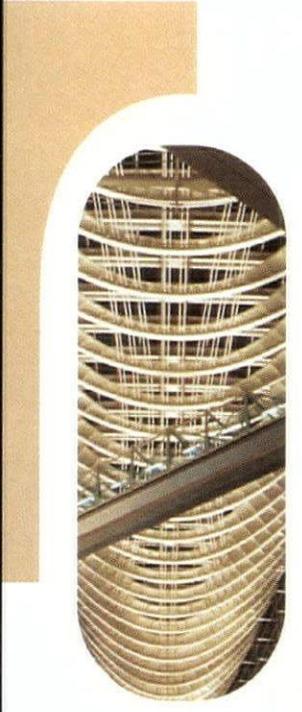
Engineer P. T. Morimura and Associates

Photographer Toshio Kaneko

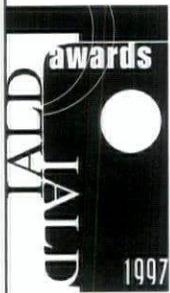
Lighting Manufacturers ERCO-TOTO; Yamagiwa Corporation; Yamada Shomei Lighting Company Ltd.



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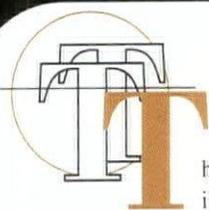


llence



FIBER wave

koto-ku,
Tokyo, Japan



The Japanese lighting project Fiber Wave is breaking on the shore of future design, creating a wave both at home and abroad. Members of the IALD judging panel, impressed by the image but unsure about how to define it, recently disputed whether this project fits the category of sculpture, architecture or landscaping.

"We rallied behind it because it works on so many levels," concluded the judges. "Powered by nature, Fiber Wave springs from the earth, transforming the things around it."

The surrounding environment has everything to do with the success of this project. Japanese lighting designer Makoto Sei Watanabe used 150 4-meter-high carbon-fiber rods, a flexible material that bends with

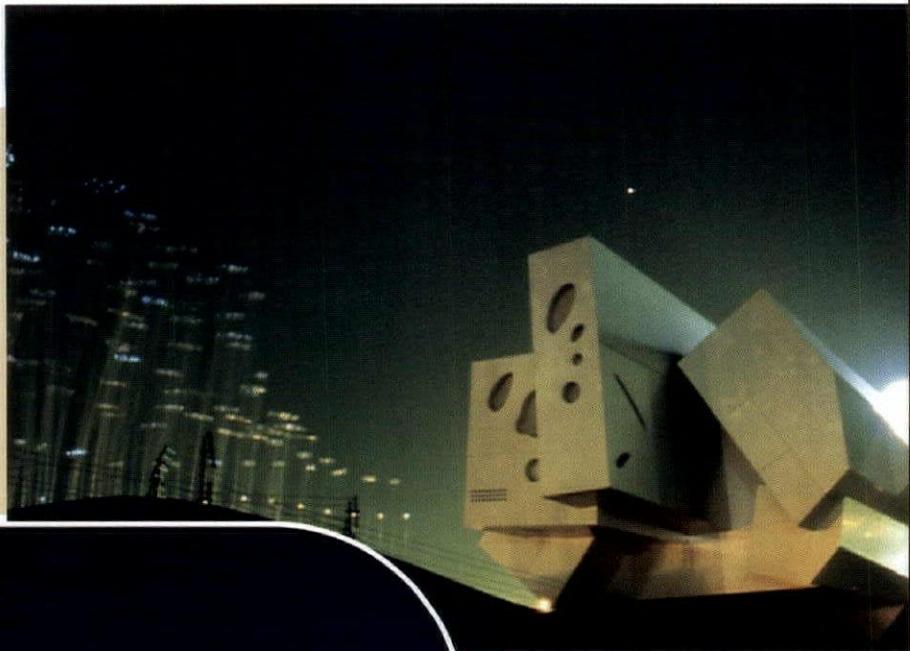
itation award

the movement of the air, giving the installation a fluid, organic quality. The wind rustles the thin, vertical "stalks" as easily as it would surrounding foliage.

Natural sunlight is also employed by Fiber Wave. The carbon-fiber rods are tipped with 150 light-emitting diodes that switch on automatically at night. During the day, however, the sun reflects off the multiple rods and LED pieces, creating a glimmering effect much like that of dew on a grassy field. The carbon-fiber rods also feature solar batteries that charge by day in order to power the LEDs by night.

Fiber Wave, located in the village of Sakauchi near the Tokyo waterfront, makes excellent use of urban industrial space, accenting with technology the intrigue and beauty apparent in nature. **r**

citat



Details

Project Fiber Wave

Location Koto-ku, Tokyo, Japan

Owner Tokyo Waterfront Development Inc.; The Bureau of Port and Harbor Tokyo Metropolitan Government; Makoto Sei Watanabe/Architects' Office

Architect Makoto Sei Watanabe/Architects' Office

Lighting Designer Makoto Sei Watanabe

Photographer Makoto Sei Watanabe

Lighting Manufacturer Ozeki Co. Ltd.

awards

IALD awards
1997

Festival plaza

ottawa, ontario, canada



Philip Gabriel's primary challenge in designing the lighting for Ottawa's Festival Plaza was to create a contained public gathering space, well-lit enough to feel safe and festive at night, but illuminated without glare. Located near the Regional Government Headquarters, the plaza accommodates many special events, while serving as a quiet circulation and relaxation place for local residents.

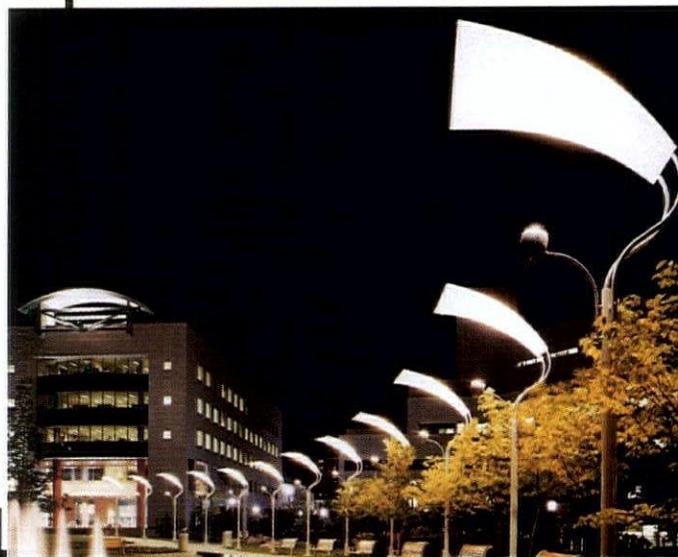
The architectural layout of the plaza helps to separate and isolate it from the busy surrounding streets. Two curved paths are outlined and reinforced by trees and custom light fixtures, while water elements draw visitors into the plaza and away from traffic.

It is the lighting, however, that completes the project, enclosing the park and creating a "safe haven" outlined by light. A perimeter row of lights is balanced by the illumination on the building facade—the front entrance is marked with a pair of double-sized fixtures with two lamps each. In turn, the 150W lamps lining the main path leading into the park are balanced on the opposite side of the plaza with fountain and pool lighting. Animated by the motion of the water, horizontally aimed underwater lights graze the surface and bounce light off the fountain wall.

The lighting design also accommodates Festival Plaza's many special events. Flagpoles topped with lights reinforce the outline of the park from a distance while simultaneously illuminating the nation's flags, which is particularly useful during national holiday celebrations.

The design of the fixtures minimizes unwanted glare. Gabriel employed a vertical fixture, custom made from an inexpensive

city



citation award

standard pipe section, a sheet of perforated aluminum and a utility PAR64 lampholder. The light from 3000K metal halide PAR sources reflects off the aluminum "sails" at the top of the pole, providing a warm, inviting glow without throwing light across the lawn. Spill light around the reflector and through the metal perforations enhances the fixture's aura and illuminates the background rows of young trees.

The convenience of the lighting design also benefited the tax-paying public. "The fixtures cost less than many standard pedestrian post tops and the amount of energy used for the total area is a small fraction of usual solutions," noted Gabriel. Likewise, the height and convenience of the base-located ballast make these fixtures easy to maintain.

As urban areas continue to grow, the nature of public space changes. IALD judges were struck by Festival Plaza, calling it playful, creative and relevant to the redefinition of public space. "The use of light makes the plaza feel warm and inviting at a time when people don't feel safe being out." ┐



Details

Project Festival Plaza
Location Ottawa, Ontario, Canada
Owner Regional Municipality of Ottawa-Carleton
Architect Griffiths Rankin Cook
Lighting Designer Philip Gabriel, IALD, Gabriel/Design
Engineer R. J. McKee Engineering Ltd.
Building Facade Lighting Moriyama & Teshima Architects/Crossey Engineering Ltd.
Photographer Adrian Searle, A. Searle Photography
Lighting Manufacturer Lumca Inc.

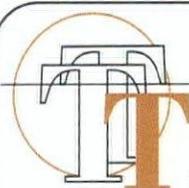


award

ALD awards
1997

Theater de harmonie

Leeuwarden, Friesland, the Netherlands



Theater De Harmonie may be located on another continent, but the challenge posed by this project is universal—how to bring about an exciting, creative atmosphere with lighting without breaking the bank, whatever the currency. Dutch lighting designer Hans Wolff orchestrated a fresh, daring design appropriate to the art world and within budget.

The lighting design at the Theater De Harmonie is, in many ways, an act of its own, designed to incite curiosity. The harbor-side wall of the building is accented with whole sections of glass. From outside, the shadows of visitors and actors are cast against a wall of sand-blasted glass. Other panels are clear, offering a view of the inside stairway and foyer.

Entering the foyer, visitors to the theater are immediately introduced to the presence of a lighting theme. Dramatic, gold-painted columns are highlighted with recessed spotlights, while an orange/red stucco wall 60 meters long and 12 meters high reflects light from HPS floodlights. This reflective warm light from the wall, the main source of illumination in the hall, is perpetuated by reflective materials in the high-gloss floor. The floor itself is an interesting lighting detail, with an illuminated glass strip cutting across the plane; lighted from below, the glass strip is an eye-catcher in the foyer and provides general lighting for the wardrobe rooms underneath.

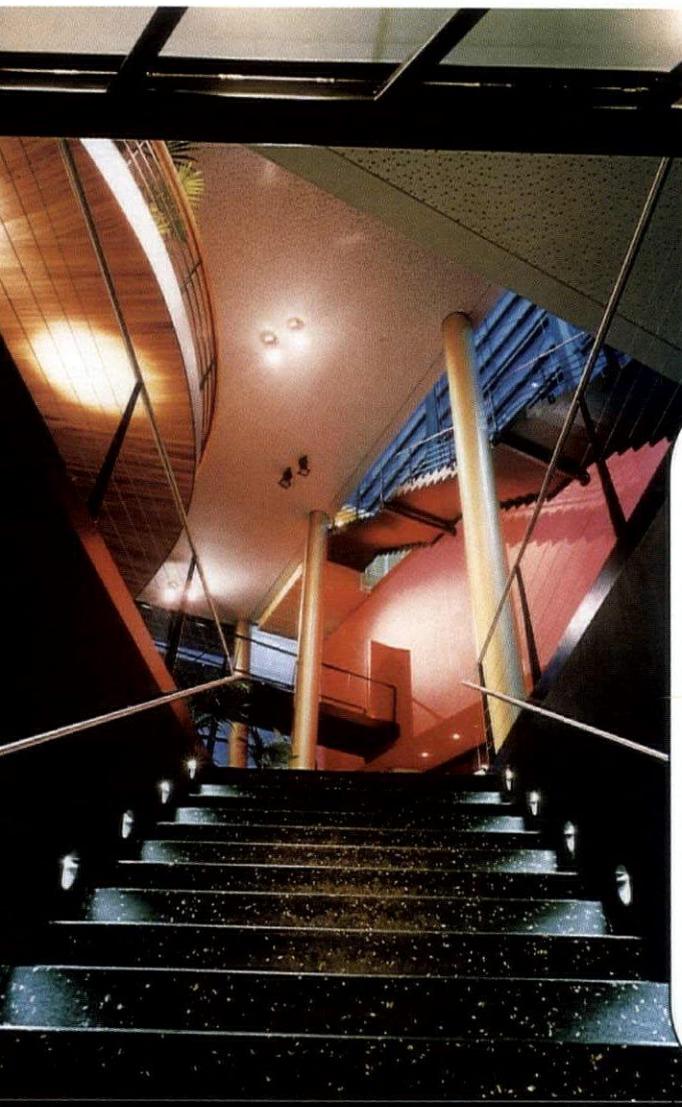
Each of the theater's three auditoriums are given a distinct lighting design, creating various environments appropriate to the ever-changing world of stage. The smallest auditorium has the benefit of a huge window overlooking the harbor. Using sailboat winches, the auditorium's ceiling panels can be manually operated to alter the effect of the lighting. At their highest position (8.5 meters) the lighting bridges can be used for theater performances, while the lower position (5 meters) offers an option of fluorescent or incandescent lighting depending on the demands of the function.

illumination



citation award

awards



The second auditorium serves a variety of performances, including rock concerts. Asymmetrical cyclorama lights with red, green and blue filters light the steel-plated walls and floor. Downlights illuminate the seating and audience.

The main auditorium heightens one's sense of the unreal: Glowing glass panels at the sides of the stage seem more like the discriminating eyes of some otherworldly critic. The acoustic panels, however, are actually sand-blasted car windshields, lighted from behind with dimmable incandescent lights. PAR56 spotlights provide the general illumination.

Wolff's lighting design draws attention to itself, asking viewers to concentrate on what they see (in much the same way that theater requires one to suspend disbelief in order to capture what's on stage). Sources with different color temperatures, highlights on painted walls and the use of shadows add complexity to the Theater De Harmonie without costly architectural or material details. Indeed, IALD judges found the lighting design true to its environment, praising its "sense of movement, anticipation, drama and audacity." **┌**

Details:

Project Theater De Harmonie

Location Leeuwarden, Friesland, the Netherlands

Owners The Town of Leeuwarden

Architect De Architecten Cie

Lighting Designer Hans Wolff, Hans Wolff & Partners BV

Interior Designer De Architecten Cie

Engineer Technical Management

Photographer Jeroen van Putten, Jeroen van Putten Architectuur Fotografie

Lighting Manufacturers Bega; Modular; Kreon; Strand Lighting; Thomas; BEO Brackman Electronics & Optics

ADVANCED

c i q u e

IALD
awards
IALD
1997

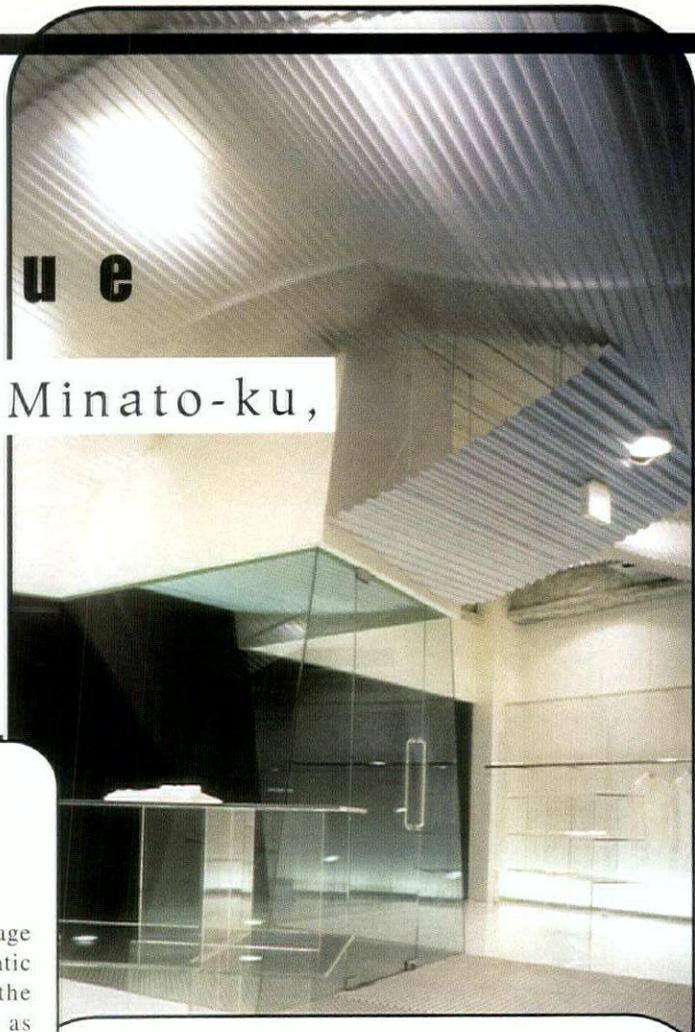
Minamiaoyama Minato-ku,

Tokyo, Japan



Merchandise traditionally takes center stage in retail design. And retail lighting usually puts a dramatic spotlight on those products. But at Advanced Cique, the lighting designer believes that customers are equally as important. The result? Advanced Cique is a store transformed

citation award



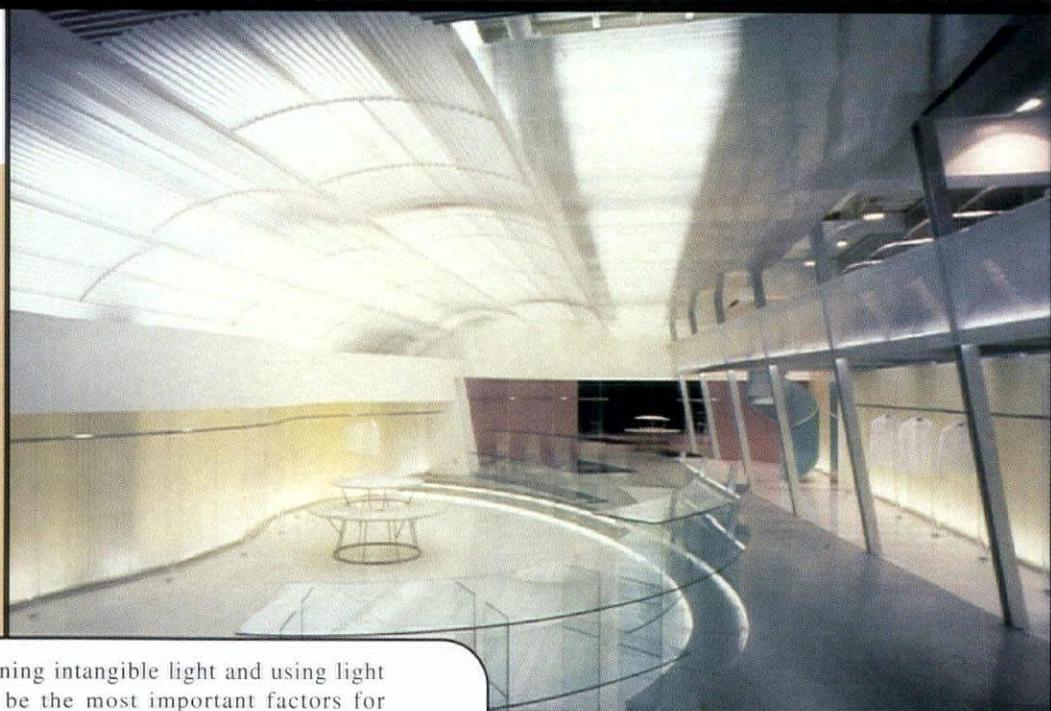
into an illuminated stage for both products and people.

IALD judges were impressed and intrigued by the lighting designer's unusual technique. "It is difficult to work with diffuse light and lighted planes," the judges commented, "but this project did it in a very successful way." The lighting designer transforms and reconstructs the commercial space through the use of light. Space components, such as the floors, walls and ceiling, are disassembled and reconstructed by light, making the space itself function as an illuminating article. "The designer creates volumes out of transparent elements, resulting in a floating, ethereal sculptural entity," according to the IALD jury.

Light appears to pour into the store from every direction. At the ceiling level, light passes through the material as "films"—i.e., polycarbonate waves—and permeates the entire space, gently embracing it. A sense of floating is created through the loss of ceiling height, as well as the weight reduction of the ceiling plane. Again, a polycarbonate material is used on the walls, this time to create a sense of illusion by diminishing the parameters of the space.

A "floating" concept is emphasized through the re-diffusion of scattering light from the ceiling through aluminum floor material. Borders between walls and the floor are made ambiguous by means of light with an eye to unifying the space.





"We consider designing intangible light and using light for a performance to be the most important factors for space design," states Hideo. "In our thinking, light is not regarded as a functional tool, but as a design factor on the same rank as forms and materials. In other words, it is considered a freely changeable design factor that can imbue the air in the space." 

Details

Project advanced cique

Location Minamiaoyama Minato-ku, Tokyo, Japan

Owner Orizzonti Co., Ltd.

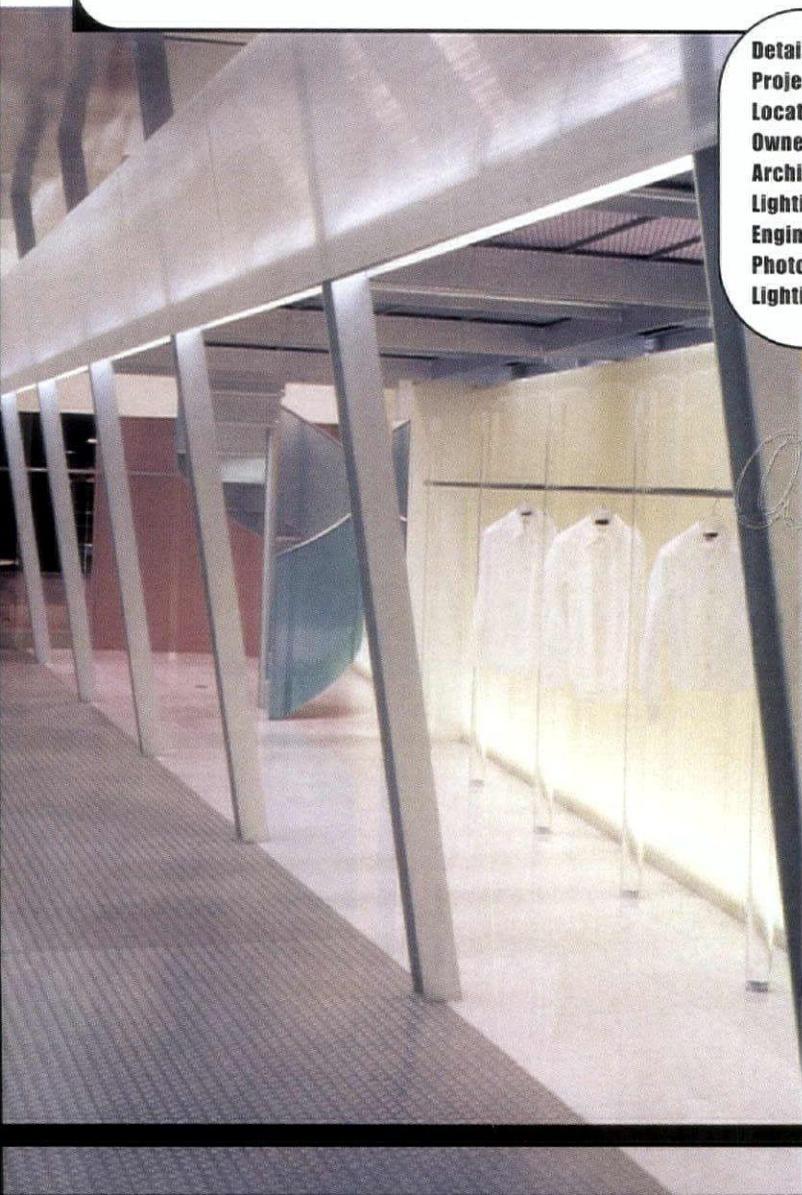
Architect/Interior Designer Yasui Hideo Atelier Inc.

Lighting Designer Yasui Hideo Atelier Inc.—Hideo Yasui

Engineer Ishimaru Co., Ltd.

Photographer Nacasa and Partners, Inc.

Lighting Manufacturer Sakae Co., Ltd.



awards



Here Comes

After five years of effort, the National Council on Qualifications for the Lighting Professions (NCQLP) is ready to unveil a new certification program for lighting professionals.

Lighting practitioners who demonstrate eligibility and successfully complete a written examination will be recognized by the NCQLP as Lighting Certified (LC). The LC designation can be used after the individual's name as an appellation.

To be eligible, the candidate must hold a bachelor's degree from an accredited college or university and have three years of lighting-related work experience, *or* have six years of lighting-related work experience.

The first examination will be administered on Saturday, November 1, 1997, from 1-5 pm, at 20 sites across the U.S.: Ann Arbor, Atlanta, Baltimore, Boston, Buffalo, Chicago, Dallas, Denver, Houston, Los Angeles, Memphis, Minneapolis, New Orleans, New York, Orlando, Phoenix, Pittsburgh, Portland, San Francisco and St. Louis. An independent testing agency, Applied Measurement Professionals (AMP) of Lenexa, KS, has been contracted to develop, administer and score the examination. It will be offered annually. According to the NCQLP, the registration deadline for the November testing date is September 5.

While CLMC and CLEP certifications will still be offered by the interNational Association of Lighting Management Companies (NALMCO) and the Association of Energy Engineers (AEE), respectively, the NCQLP represents the most broad-based effort by the lighting community and related organizations. The NCQLP includes the American Society of Interior Designers (ASID), California

Energy Commission (CEC), Electric Power Research Institute (EPRI), Illuminating Engineering Society of North America (IESNA), International Association of Lighting Designers (IALD), International Facility Management Association (IFMA), International Interior Design Association (IIDA), Lighting Research Center (LRC), National Electrical Manufacturers Association (NEMA), Nuckolls Fund for Lighting Education, the U.S. Department of Energy (DOE)/Federal Energy Management Program (FEMP), U.S. Environmental Protection Agency (EPA) and U.S. General Services Administration (GSA).

Once LC certification is achieved, it must be maintained through ongoing professional development. Organizations that offer courses are encouraged to register them with the NCQLP to ensure they meet recertification requirements.

A CLOSER LOOK AT THE EXAM

The four-hour exam includes 100 multiple choice questions (two hours) and four simulation problems (two hours) covering six major content areas: survey/audit of existing facilities (20%); lighting design (30%); financial analysis (10%); installation and commissioning (15%); operations and maintenance (15%); and regulatory compliance (10%). The numbers in parentheses are the percentage of questions related to each content area.

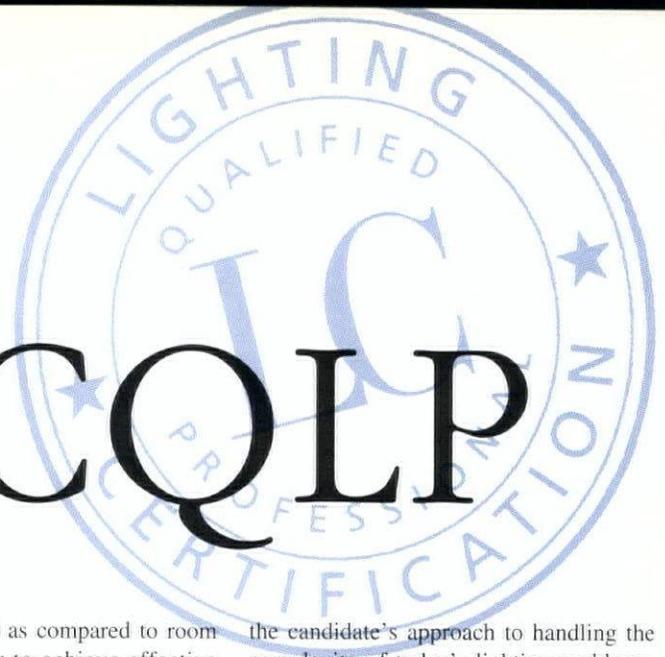
According to the NCQLP, the goal of the exam is to reflect the activities performed by lighting professionals, demonstrate the candidate's knowledge adequately, and be "candidate friendly." The NCQLP stated that hundreds of lighting practitioners, representing the various disciplines within the lighting

industry, volunteered over the past five years to help develop the exam in concert with AMP, the professional testing agency. AMP sent 1,000 NCQLP Lighting Practitioner Job Analysis Survey questionnaires to a target group representing a broad cross section of the lighting community. The NCQLP volunteers translated the results into the examination content outline, identified a body of knowledge (reference list) and wrote questions through a peer review process. The IESNA has also contributed the body of unused questions that comprised the Technical Knowledge Examination (TKE).

The complete exam content outline is published in the NCQLP Bulletin. To offer an inside look, here is the outline for section two, Lighting Design, which represents 30 percent of the questions:

II. LIGHTING DESIGN

- A. Establish design constraints
 - 1. Project
 - 2. Physical
- B. Develop assessment criteria
 - 1. Daylight
 - 2. Electric lighting
- C. Evaluate proposed conditions
 - 1. Spatial forms
 - 2. Furnishings/Plants
 - 3. Other light-sensitive subjects/objects
 - 4. Construction conditions, including plenum, wall/ceiling/floor materials, sprinklers, speakers, diffusers, etc.
 - 5. Colors
 - 6. Finish characteristics, including specularly
- D. Identify and evaluate human factors, both psychological and physiological
 - 1. User needs



The NCQLP

- 2. User expectations
- 3. User existing conditions inventory
- E. Preliminary design**
 - 1. Develop preliminary design concept
 - 2. Prepare preliminary cost projection
 - 3. Refine design concept
 - 4. Identify/Evaluate/Select lighting technologies
 - 5. Specify critical product criteria
 - 6. Perform preliminary calculations
 - 7. Assess compliance with criteria and constraints
 - 8. Iterate/Refine accordingly
 - 9. Conduct preliminary energy and code compliance analysis
 - 10. Prepare design basis report and presentation
- F. Design development**
 - 1. Lighting concepts vs. detailed technical analysis calculations
 - 2. Plans, sections and elevations, details and specifications
 - 3. Controls
 - 4. Final review and coordination
 - 5. Project team review
 - 6. Presentation for owner/client
- G. Develop construction documents**
 - 1. Lighting drawings and specifications
 - 2. Control drawings and specifications

The multiple choice questions were developed as part of a three-tiered system that identifies the level of thinking required—recall, application and analysis. Most of the multiple choice questions require thinking at the application level.

Below are three sample multiple choice questions published in the NCQLP Bulletin. The first tests powers of recall, the second application and the third analysis.

1. What is the commonly held ratio of the relationship of

window height (H) as compared to room depth (D) in order to achieve effective distribution of daylight in rooms with windows on only one side?

- A. $H = D$
- B. $H = 1.5 D$
- C. $D = 1.5 H$
- D. $H = 2 D$

2. The Inverse Square Law is typically used to calculate light at some specific point that is produced by a compact source. To construct the formula in order to solve for I (intensity), the resultant formula would be:

- A. $I = fc \times D^2 \div \text{COS}\Phi$
- B. $I = fc \times D^2 - \text{COS}\Phi$
- C. $I = fc \times D^2 \times \text{COS}\Phi$
- D. $I = fc \times D^2 + \text{COS}\Phi$

3. You have been asked to estimate the length of run given a 20 amp circuit and a maximum voltage drop of 14V. Given that the lamps constitute a 100W load, using the chart [see below], what is the maximum distance that your fixture can be mounted from the transformer?

- A. 60 feet
- B. 90 feet
- C. 120 feet
- D. 180 feet

The correct answers are (1) D, (2) A and (3) B.

The simulation problems (20 points each) are designed to create a realistic situation in which the candidate must perform both information gathering (10-point section) and decision-making (10-point section). According to the NCQLP, this allows for in-depth measurement of

the candidate's approach to handling the complexity of today's lighting problems. In the simulation problems, both positive and negative points are available, and both the information gathering section and the decision-making section must be passed.

PREPARING FOR THE EXAM

While there are no preparatory courses now available from NCQLP, the IESNA is developing a course for lighting practitioners that will be "of value" to those taking the exam (call 212-248-5000 for more information). In addition, a Body of Knowledge, which represents source information for all test questions, is available from NCQLP in the form of a reference list of basic texts in lighting and related disciplines. The primary reference list includes *Advanced Lighting Guidelines* by the California Energy Commission; the ASHRAE/IESNA 90.1 *User's Manual*; *The Lighting Management Handbook* by Craig DiLouie; *Bringing Interiors to Light: The Principles and Practices of Lighting Design* by Fran Kellogg Smith and Fred J. Bertolone; *Interior Lighting for Designers, Third Edition* by Gary Gordon and James L. Nuckolls; the *NFPA 70 National Electrical Code: 1996 Edition*; and the *Lighting Handbook, Eighth Edition* by the IESNA.

Contact the NCQLP at (301) 654-2121, fax (301) 654-4273 or www.ncqlp.org to receive a Bulletin, LC Candidate Handbook and more information about courses offered by NCQLP members.

To register, send an application (from the LC Candidate Handbook) with a check for \$475 (U.S.) postmarked by Sept. 5, 1997 to NCQLP, 4401 East-West Highway, Suite 305, Bethesda, MD 20814. ■

Chart (for use in problem #3)

Distance (Ft.) from Transformer to Lamps for 100 Watt Load		30	60	90	120	150	160	210	240	270	300
Wire Size (Gauge)	Less Than 30Ft										
14	12V	13V	14V	Use Larger Wire Size							
12	12V	13V	13V	14V	Use Larger Wire Size						
10	12V	13V	13V	14V	14V	Use Larger Wire Size					
8	12V	12V	12V	13V	13V	13V	14V	14V	14V	Use Larger Wire Size	

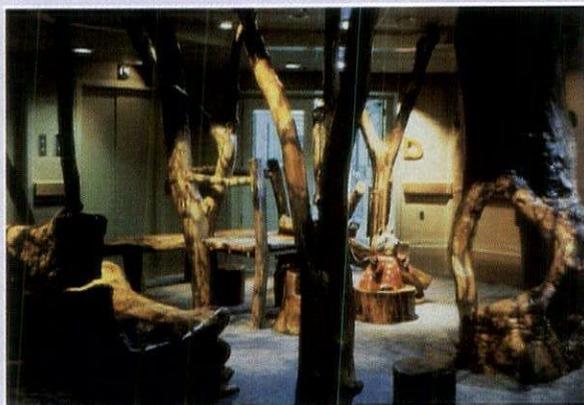
THEATRICAL LIGHTING TECHNIQUES IN NON-THEATER ENVIRONMENTS

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

In theatrical, entertainment and architectural environments, lighting plays the lead supporting role, setting the stage and creating artistic illusion. The lighting must control the focus of attention, emphasize rhythm and structure, and establish mood and realistic elements.

In theatrical environments, however, the lighting scene is kinetic; the focal point is

always changing, along with the design goals, from moment to moment, requiring a layered, flexible lighting system and design. In entertainment environments, the lighting often must create an even stronger experience, and may be the focal point itself with spectacular effects. Both types of lighting, often interrelated, can provide a dramatic identity for a commercial or residential building or space as well as a signature element.



UNIVERSITY OF BALTIMORE MEDICAL CENTER

The concept: To create an environmentally inspired lighting design for a play space in the pediatrics wing. It's fun and exciting yet comforting, simulating the magic and surprise of a protected forest grove with interactive play areas for children and places of respite for adults.

To achieve the effect of a sunny day in the forest, lighting designer Steven Rosen adapted theatrical design solutions for permanent installation. The illusion of a north sky is created by using non-fading blue glass filters in PAR30 adjustable floodlights. In contrast, MR16 framing projectors, fitted with tree branch patterns and amber glass filters, simulate streaming sunlight. Employed in opposite directions, these two distinct lighting "paint brushes" produce an array of secondary shadows and strong accents. To enhance the illusion, the framing projectors are located in the ceiling, concealed from view; the higher angles also limit glare in the participants' eyes. Recessed PL13 wall washers, illuminating the perimeter walls, enclose the space in a soft, warm light—a cozy alternative to typically stark hospital corridors.

Photo by Ed Howe; Interior Design by Anita Rui Olds & Ed Howe

THE "WOW" FACTOR

How do theatrical techniques benefit a commercial project? "A theatrical approach enables the lighting designer to sculpt a space and carve out the interesting architectural features by emphasizing texture and integration of design," said Pat Gallegos, principal, Gallegos Lighting Design. It can create strength with subtlety, drama with flexibility and sophistication with simplicity.

"The world tends to be going a lot faster," said Steven Rosen, principal designer and president of Available Light. "As technology edges forward, the public seems to want a constant barrage on their senses, whether with music, film, video, virtual reality or the Web." In order to get attention and maintain it, the lighting designer must consider what is the most cutting-edge way to create a compelling environment. "It's the 'Disneyfication' approach," noted Rosen.

Theatrical techniques and treatments and the use of drama and kineticism to attract people is on the upswing. Fountains, sculpture, artwork—usually some type of cultural enticement—exists within a public space; one of the things theatrical lighting can do, either unto itself by creating a lighting sculpture, or as a supporting element, is to create a dynamic identity. And not only as part of the interior design; as higher-tech lighting tools are becoming outdoor related, clients are requesting an immediate "punch" at the entrance of a building or property. (See "Fleet Center.")

KEEP THE DESIGN SIMPLE

While theatrical lighting can noticeably enhance a design, two issues must be considered



FLEET CENTER

In Boston, owners sought a unique lighting treatment for their Fleet Center logo, made of white steel letters mounted on the surface of a glass curtain wall facade. The sign is visible from the adjacent downtown expressway, across the harbor and beyond.

The lighting concept, developed by Steven Rosen, was to dispense with traditional nighttime sign illumination and develop a theatrical sequence of lighting cues that is exciting and unique. Four computer-automated fixtures (Irideon's AR500), which incorporate a variable percentage dichroic color changing system, are built into an exterior architectural package; the source is metal halide.

The lighting show is comprised of a preprogrammed sequenced cue loop that continually and variably mixes the proportions of both the secondary colors and an adjustable diffusion element producing a colorful, lively and dynamic lighting presentation across the logo and the large glass wall. The resultant play of light off both the sign and adjacent glass produces an ever-changing rippling watercolor effect.

Photo by Barbara Hakim; Installation by BN Productions

up-front, and according to Gallegos, certainly require the commitment of the client: maintenance and additional cost. "Maintenance can be a big deal," said Rosen. "First of all, theatrical lighting fixtures generally do not have the lamp life of, say, a 20,000-hour metal halide source. So the people paying for them are not only obligated to come up with the capital dollars to purchase the equipment, but to maintain it."

He added, "There's initial euphoria about doing this kind of work but then when it comes down to taking care of it, the excitement often falls off." Often, it's a matter of technical know-how. One solution is to encourage clients to form a relationship with a local theatrical rental and/or sales shop and develop a service contract. Another is to hire trained technicians who also have the ability to troubleshoot a problem.

In terms of cost, be up-front. Convince the client that the payback is often worth the

extra money and that "investing in a theatrical-type fixture to achieve a certain effect can be more cost-effective than using a few traditionally architectural fixtures," according to Gallegos.

But be conservative in your design. "Often, the client becomes excited by the prospect of entertainment lighting and wants to include it in every square inch of the plan," said Rosen. Reining in the enthusiasm will not only help contain costs but will lead to a simple and clear design statement. "Overkill only dilutes the message." Theatrical techniques, for example, just in the lobby, or at the fountain, make a much bolder statement when set against a backdrop of purely architectural lighting. (See "University of Baltimore Medical Center.")

The biggest enemy of theatrical lighting is ambient light and that's something designers must consider very seriously. Drama is created best by starting with a black space—the absence of light—the way

it's done in the theater. When dealing with theatrical lighting in architecture, finding ways to use spaces that either have fewer windows, or some sort of automated lighting control, is best. "Or, consider the space as having two 'faces,'" said Gallegos. "One for day, one for night."

TECHNOLOGY & FIXTURES

"Theatrical fixtures offer more flexibility in terms of aim, focus, direction and shape," said Gallegos, "and tend to produce a more evenly distributed and easily controllable beam that can be soft- or hard-edged, colored and patterned." These fixtures can also maintain the integrity of the beam for a longer throw—a feature especially useful in atriums and lobbies. In addition to control, theatrical fixtures allow manipulation and variety.

Developments in technology are allowing fixtures, control systems and lighting techniques used predominantly in the theater to be integrated into architectural lighting schemes to produce more varied

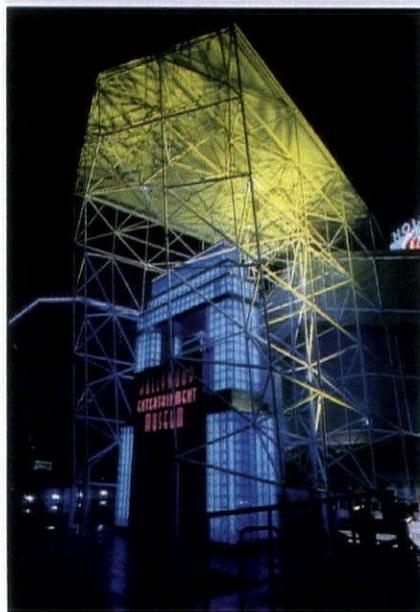
HOLLYWOOD ENTERTAINMENT MUSEUM

After a decade-long effort, Hollywood found a permanent home to display the stars of the motion picture and television industries within blocks of the Chinese Theater and the restored *El Capitan* Theater, continuing the revitalization of the district. Designed by Karl Haas, project designer at Gallegos Lighting Design, the lighting carries the theme of the excitement of the art while showcasing an elegant display.

On regular intervals, a multimedia show of video projection, slides, audio and lighting pays tribute to the Hollywood arts. Lighting consists of a combination of washes mounted to the overhead trusses, intelligent moving lights for the dramatic sweeps of color and pattern and static projected images, all timed to synch with the multiple source video projections.

Moving lights and patterns sweep through the space in synch to the program, with color changing spotlights defining the overhead space frames and the Hollywood sign.

Photos by Karl Haas



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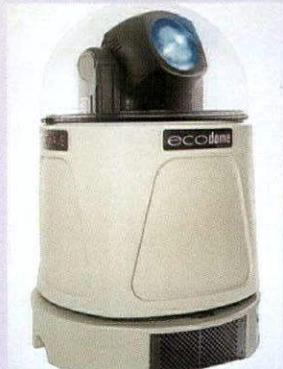
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Circle No. 24 on product service card



High End Systems' Ecodome architectural housing (left) is a weather-resistant modular indoor/outdoor housing system for High End's Studio Color and Cyberlight automated lighting fixtures. The dome is high-impact, UV-resistant polycarbonate and allows full use of Studio Color's 370 degrees of movement. Filtered forced air ventilation keeps respective fixtures cool.

Circle No. 53

Irideon's AR5 Interior Wash Luminaire (right) features a patented computer-controlled dichroic color changing mechanism which produces smooth color crossfades through the entire color spectrum. Robotic 360-degree pan and 270-degree tilt capabilities combined with a diffuser or douser option provide full beam control. **Circle No. 54**

effects. Often, equipment is no longer strictly defined as theatrical or architectural—it comes down to a matter of function. A rich palette of lighting resources has evolved in response to the growing trend and requests from clients, and many designers have expanded their toolbox with the following theatrical equipment and techniques to bring the energy of the theater into the public arena. (See "Hollywood Entertainment Museum.")

Framing Projector/ Ellipsoidal Spotlight: Has the ability to manipulate the beam of light by cutting it with shutters, enabling the designer to frame an object. Sharp or soft edges of light can be achieved with a focusing element, color with dichroic glass filters. Framing projectors can be as simple as an accessory that clips on to the front of a track head to a small body spotlight driven by an MR16 lamp, and from a high-powered 575-1000W halogen source to a metal halide long-life spotlight.

Gobo & Gobo Rotator: A template used in a framing projector. Static gobos can create concrete or abstract images. A gobo rotator can continuously spin a single gobo or it can spin two gobos in counter directions

for strong kinetic effects.

Animation Disc: Used with a framing projector to create more abstract effects. Unlike a gobo, which is placed at the optical focal point (or gate) of a framing projector, an animation disc (a spinning wheel with a variety of cut patterns) is placed on the front of the fixture. Combining gobo rotators and animation discs can create a combination of color and motion.

Color Scroller: Used with a computer, allows the color of a fixture to be changed from a remote location.

PAR Can: For general washes and floods of light. Directional beam (typically oval in shape) with extremely flexible focus capability. Will not image a gobo but will accept a color scroller or animation disc.

Fresnel: Soft-edged spotlight with a stepped Fresnel lens. Spot or flood adjustment is possible.

Striplight or Border Light: A multi-source/multi-circuit fixture with individual compartments designed to produce linear washes of light in multiple colors.

Large Scale Image Projectors: Designed to project slide images on building facades or other large surfaces.

Intelligent or Robotic Lighting Fixtures: Computer-controlled fixtures used to produce a multitude of repeatable dynamic lighting effects: X/Y axis movement, color changing/mixing, gobo changing rotation, zoom optics, image focus, strobing, dimming, etc. Typically these fixtures employ a short arc metal halide source.

Fluorescent Sleeves: A less obvious approach that can add to the drama of the composition. Sleeve tubes and place in a cove or niche to modify color in the space. Available for both T8 and T12 lamps.

Fiber Optics: Side- or end-emitting fiber-optic cable used with color changing devices and sparkle wheels can add visual interest and architectural outline.

While theatrical equipment can achieve plenty of "magical" effects, the lighting designer must remember that it is he who orchestrates the display. "Designers work in a sensitive artistic medium," said Rosen, "and must understand light and how to use it as a communication device. Have a

vision and then use the technology to help you realize your concept, but don't rely on it to create it."

INSTALLATION IDEAS

More and more organizations are looking for new and stimulating ways to attract a sophisticated clientele to their event or venue; this competitive atmosphere continues to dissolve the line between theatrical spectacle and corporate marketing. A museum, property developer or major nonprofit organization can benefit from presenting itself in a compelling visual environment, according to Rosen. Architectural environments conducive to theatrical lighting techniques include:

- *Athletic arenas:* Capitalize on the sense of excitement theatrical lighting can provide.
- *Casinos & hotels:* Entertainment is the name of the game. Create compelling environments with the use of theater magic.
- *Conference centers/auditoriums:* Take advantage of the sculpting techniques of

theatrical lighting to make lecturers appear more dynamic.

- *Hospitals/healthcare facilities:* Emphasize color and movement; this dynamic can help relax patients in an otherwise high-stress environment.
- *Museums/cultural institutions:* Science, technology and history museums and visitors centers most benefit from the enhancements of theatrical lighting.
- *Public spaces:* Lobbies, parks, fountains, movie theaters—create an identity.
- *Public works projects:* Bridges, tunnels, subway systems, etc. all present potential. Sculptural structures can be enhanced.
- *Residential:* Some ideal spaces for theatrical lighting include game/recreation rooms, landscaping, galleries.
- *Shopping Malls:* Theatrical lighting can be used to distinguish one public gathering over another.
- *Retail:* From greeting card stores to automobile dealerships, the sky's the limit. What better way to one-up the competition? ■

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STAGING A SUCCESSFUL MOCK-UP

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

The mock-up, a necessary step in the lighting design process, is absolutely essential to achieve satisfactory results. Whether a full-blown event, in which equipment and staff travel to the job site, or a simple procedure, in which a specific technique is demonstrated in your office, conducting a mock-up will demonstrate to both the design team and the project owner the effects a specific lighting scheme will produce in a space or on a building.

Mock-ups should not be equated with a detailed sketch of the lighting layout: A mock-up requires some degree of *hands-on* involvement. Physical demonstration is critical. Words or drawings alone cannot describe how architecture will appear when illuminated; mock-ups communicate the design in visual terms. Both lighting designer and owner benefit: The designer realizes his conceptual ideas and the owner becomes involved in the decision-making. Moreover, the mock-up demonstration reduces any unexpected surprises for the client and therefore reduces liability of the design team.

Depending on the complexity of the project, multiple mock-ups may be necessary. "Many times we'll do a working mock-up, return to the office, review what we've done and come up with a second level to demonstrate other options," said Charles Thompson, AIA, IALD, IESNA, president of Archillum Lighting Design, Inc.

Following are some tips from Thompson—a 12-step process to successfully guide you through the mock-up stage:

1. *Establish written goals for the mock-up*

Have a plan of action and send a memo to the other design team members detailing the plan, including what's needed, the design elements pertinent to the mock-up, etc. This eliminates miscommunication and avoids wasting time.

2. *Private vs. public mock-up*

Determine whether you'll do the mock-up within the design team (private) or with the owner and user present (public). It's often better to stage the latter; the owner is made aware of your plans, and preferences are identified and addressed.

3. *Determine location*

Will the mock-up take place in your office or at the job site? It's easy to do a demonstration on-site in the case of a remodel; in new construction, it's not. Find a similar location to stage it.

4. *Determine products to be used*

Establishing goals will lead to product

selection. Don't bring just one type of fixture to a mock-up, it may be the wrong one. Order a few distinct groupings of fixtures as a basis for comparison. Use the mock-up to disqualify certain options—show what works, prove what doesn't.

5. *Stage all hardware in office*

Gather what you think you'll need and lay it out on your floor. Take visual inventory. Is everything there? This step helps things go smoothly in the field.

6. *Determine access and power requirements*

Is there power in the building? Do you need a generator? Find out *before* you get there. Also consider distance. How far away is the power? Where are the electrical outlets? Ascertain accessibility. Do you need a lift or extension ladder to install fixtures? Plan in advance.

7. *Use adequate staff to prevent delays*

Prepare to bring your employees and colleagues. This way the mock-up is constructed and deconstructed in a timely manner. You want to demonstrate the concept with the least amount of impact to the site.

8. *Expect failure, be flexible!*

Murphy's Law states that something's not going to work—maybe your lamp will burn out. Take extra lamps, etc. to keep the system running.

9. *Debrief and follow-up*

After the mock-up, get together and discuss what goals were to be achieved, and if they were. Is there agreement among all parties involved? This ensures everybody, as a group, hears the resolution and leaves with an understanding of the status of the project.

10. *Prepare a post mock-up shopping list*

Inevitably, when on-site, you'll think, "I wish I had..." Write it down, go buy it and add it to your "kit" so you have it when you encounter the same situation.

11. *Know when to say when*

"There are certain mock-ups that lighting designers and architects have no business doing such as those involving exceptional heights, extraordinarily high wattage and precarious mounting situations," said Thompson. Call in an experienced contractor.

12. *Know your personal limits*

This is especially true for electrical issues: If you don't have a sufficient technical background, don't open a "hot" electrical box to check the voltage, for example.

WHAT YOU NEED

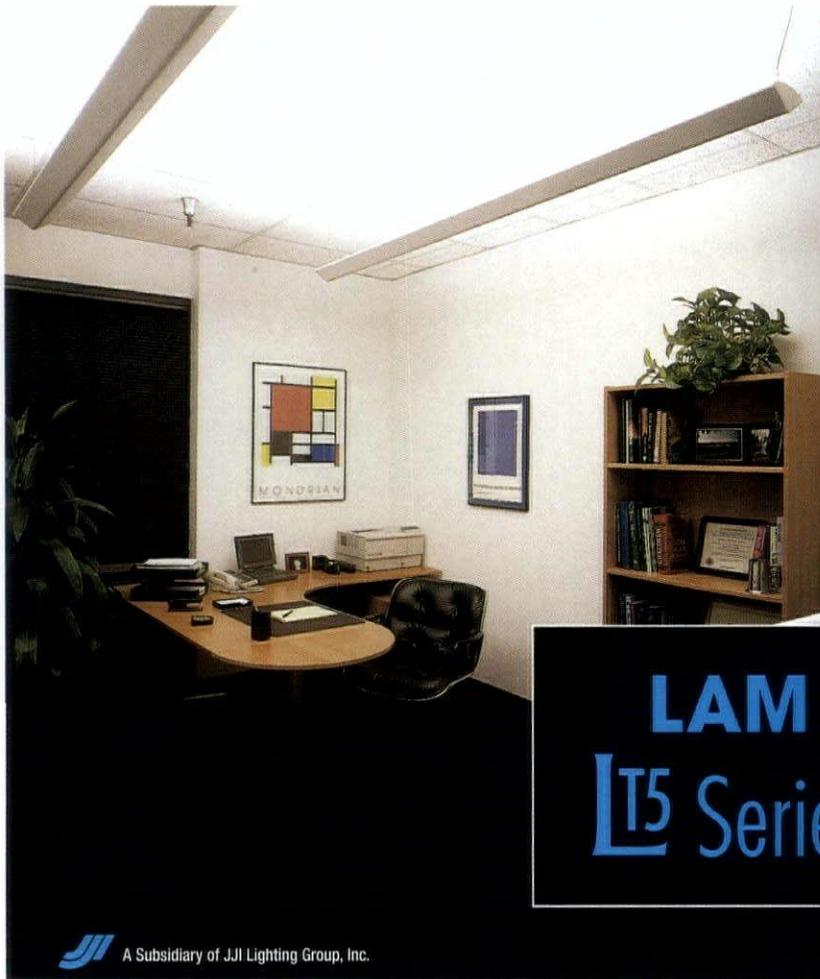
Thompson suggested creating a "mock-up kit" to keep on hand. You can use storage crates, bags, a designated space in your office or whatever you like to easily contain the supplies and tools necessary for a mock-up. Not only is this organized approach functional and convenient, it helps ensure that a core list of essentials are in one spot and ready to travel. Be sure to include:

SUPPLIES

- √ Extension cords with multiple receptacles
- √ Multiple extension cords (all grounded): 12-, 25-, 100-ft. lengths
- √ Cords and plug assemblies
- √ Grounded plug adapters (three prong to two prong)
- √ Multiple receptacle power strips
- √ Plastic lampholders with stakes
- √ Selection of transformers
- √ Plastic or ceramic lampholders with screw-down bases
- √ As many lamps as possible (all wattages, all shapes, all beam spreads)
- √ Trackhead lampholders with mono-point base with a standard plug
- √ Specific lighting products for actual mock-up design
- √ Assorted size wire nuts
- √ Aluminum foil for cut-off snoots

TOOLS

- √ Duct tape or gaffers tape (the most important tool of all!)
- √ Multiple battery screwdrivers (with extra batteries)
- √ Tool kit of screw driver bits for above (all varieties)
- √ Basic hand tools (adjustable pliers, needle nose pliers, wire cutters)
- √ Multi-tool pocket knives
- √ Light meter
- √ Pocket camera with film
- √ Note pads, writing implements
- √ Stackable carrying crates for all of above
- √ Wire strippers
- √ Volt meter
- √ Amp meter
- √ 25-ft. measuring tape
- √ Allen wrenches



Fixtures designed to the unique properties of the T5 Lamp:

- 12" suspension – for low ceilings
- Average 46fc (typical office)
- Uniform distribution
- 1 watt per sq. ft. – 85% efficient
- Minimal profile (as slim as 5" x 2 1/4")



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Santa Ana, CA 92704-6598

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LAM
T5 Series



A Subsidiary of JJI Lighting Group, Inc.

Circle No. 28 on product service card

NEW EGRESS LIGHTING INTEGRATES WITH ARCHITECTURE—COMPLETELY

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Many is the specifier who has lamented the often unattractive emergency egress lighting that is attached to the design scheme, and many have tried to integrate it successfully with the design and the architecture. Now Concealite has introduced a new series of emergency lighting products that are completely integrated with the architecture—in fact, they are designed to be invisible until they are needed.

Concealite manufactures two distinct product lines, but each is similar in that the unit is not visible during normal conditions. If the power is cut during an emergency, the unit's door or panel swings open, bringing the lamps promptly into position to light the egress path. The door or panel is operated by a continuous duty 2,000-hour 12V DC motor. All units are UL- and CUL-listed, meet UL 924 and meet or exceed all national and state codes for emergency lighting. No special wiring is required.

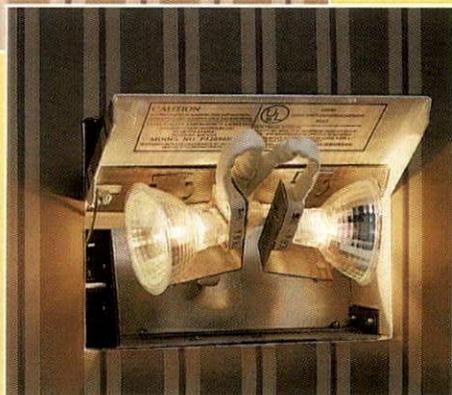
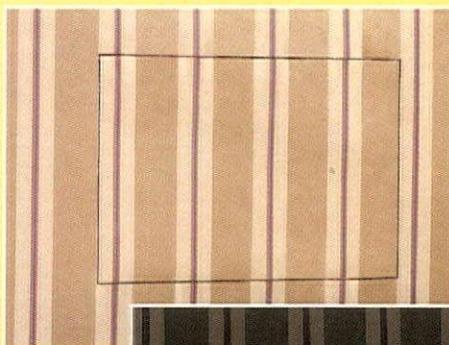
The 1000 series units are integrated into standard 2x2 and 2x4 suspended T-bar grid lay-in ceiling systems. Each contains maintenance-free lead-acid batteries, a fully automatic solid-state charger and a universal transformer for 120V or 277V operation on an AC power supply (optional 347V is available). The unit is available with 2-6 fully adjustable 12W, 20W or 35W 3,000-hour MR16 quartz halogen lamps; 50W and 75W lamps are also available. The unit can be specified to provide 90 minutes, two hours or four hours of lighting.

The 5000 series are enclosures mounted flush in the wall or ceiling material, including gypsum board, plaster, concrete, brick or acoustical tile. Each unit contains two 12W, 20W or 35W quartz halogen MR16 lamps; remote lighting units can be specified with 12W, 20W, 35W, 50W or 75W quartz halogen or special-wattage halogen lamps at 12V, 24V, 48V or 110V (AC). The unit can be specified to provide 90 minutes, two hours or four hours of operation. Various testing options, battery types, voltages and other features are available. In addition, various trims and finishes are available; units can also be customized to ensure that the flush unit matches the area wall material, color or wallpaper. In addition, the 5000 series offers a surface-mounted ETL/CETL-listed and UL 924-conforming model for wet locations called the Hydro-Lite.

Each unit produces up to three to four times more light output than a standard egress unit, and costs two to three times more. ■



THE 1000 SERIES FOR LAY-IN GRID CEILINGS.
CONCEALITE, CIRCLE NO. 50



THE 5000 SERIES FLUSH WALL MODEL.
(NOT SHOWN TO SCALE COMPARED TO THE
10000 SERIES.)

BEGA

Introducing another member
of a new family of Pole Top luminaries
with direct/indirect light distribution
for the illumination of outdoor spaces

A clear acrylic cylinder encloses a
white louver stack which shields the light source
and directs the light downward.

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Circle No. 25 on product service card

3M LIGHTING INTRODUCES NEW FIXTURE FOR SULFUR LAMP

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

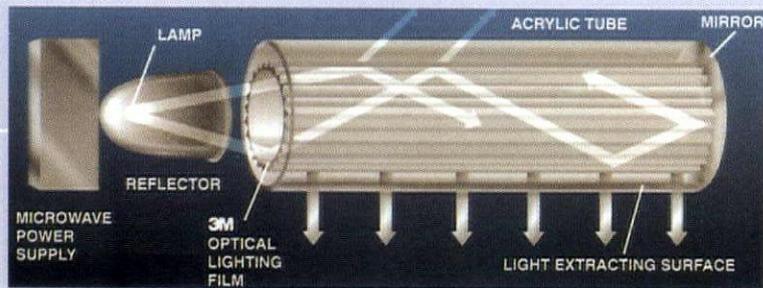
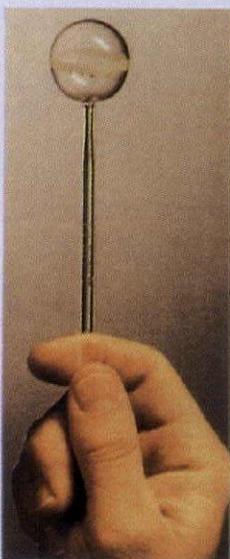
The Solar 1000 sulfur lamp from Fusion Lighting, which has generated a lot of attention in the past year, has found a new fixture. 3M Corporation's new division, 3M Lighting, has developed a product designed to distribute light from the powerful lamp from the Rockland, MD-based Fusion.

The Solar 1000 is a golfball-sized quartz bulb containing non-toxic sulfur and inert argon gas at the end of a thin glass stick. A fan-cooled motor turns the lamp at 3400 rpm while it is bombarded with focused microwave energy from the magnetron housed in a lamp module. The microwaves excite the gas which in turn heats the sulfur, forming a brightly glowing plasma with a full brightness of 19 candela/mm² and a full output of 135,000 lumens, according to Fusion. Full light output and brightness is achieved in about 15-20 seconds. The complete unit draws 1,425 watts. No microwave leakage or radio frequency interference are produced. Correlated color temperature is rated at 6000K and color rendering is rated at 79 CRI with no observable color shift.

After the lamp was introduced, the lighting industry faced a challenge to distribute so much light from such a small package. Last November, Cooper Lighting teamed up with Fusion to develop an indirect fixture in the form of a freestanding kiosk. At that time, both Moldcast and Fiberstars also reported developing fixtures and fiber-optic cable for use with the sulfur lamp.

Now, 3M Lighting has made the Light Pipe commercially available after 10 years of development. According to 3M, recent advances in precision micromachining and polymer processing of its optical lighting film resulted in the final breakthrough.

The Light Pipe is a hollow acrylic or polycarbonate tube surrounding a layer of optical lighting film that has a reflectance efficiency of nearly 99 percent. Used with a sulfur or HID lamp at one or both ends, it distributes light through 90-degree microscopic prisms on the surface of the film. Both side- and end-emitting versions are available, and it comes in a range of lengths and diameters. Light is distributed



THE SULFUR LAMP PRODUCES EXTREMELY HIGH LIGHT OUTPUT THAT IN TURN IS DISTRIBUTED EVENLY BY 3M'S LIGHT PIPE, CREATING A GLOWING LINE OF LIGHT.

FUSION LIGHTING, CIRCLE NO. 51
3M LIGHTING, CIRCLE NO. 52





IN THE INTERIOR OF THIS OFFICE BUILDING, THE LIGHT PIPE WAS USED VERTICALLY TO CREATE A DRAMATIC ARCHITECTURAL STATEMENT AS WELL AS PROVIDE A DEGREE OF FUNCTIONAL LIGHTING FOR PUBLIC SPACES.



IN A RETROFIT OF A LARGE EXHIBITION GALLERY AT THE NATIONAL AIR AND SPACE MUSEUM IN WASHINGTON, D.C., THREE 90-FT.-LONG LIGHT PIPES, EACH CONNECTED TO A SULFUR LAMP, REPLACED 94 MERCURY VAPOR LAMPS, REDUCING ENERGY COSTS BY 25 PERCENT WHILE INCREASING LIGHT LEVELS BY THREE TIMES.

uniformly through the end of the length of pipe. The quantity, color and direction of light transmitted from the pipe can be determined by the specifier.

According to 3M, Fusion Lighting and 3M engineers have successfully tested the Light Pipe in exterior and interior high-bay

applications. Potential applications for this system, among dozens, include aircraft hangars, architectural accent lighting, clean rooms, construction sites, exhibit halls, security lighting, museums, parking facilities, tunnel lighting and workstation task lighting. ■

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LIGHTFAIR NEW PRODUCT SHOWCASE

Architectural Lighting is proud to have sponsored once again the well-attended New Product Showcase at Lightfair International in New York City. More than 80 products were presented with style and humor by Product Showcase veterans Craig A. Roeder, IALD, IESNA and Gary Dulanski, IESNA.

Out of all the products submitted, five were chosen for providing exemplary benefits to lighting professionals. Each received an

Award of Distinction, and are shown here.

Slite, a new shelf lighting system from Alkco, was especially honored as the Best New Product of the Year.

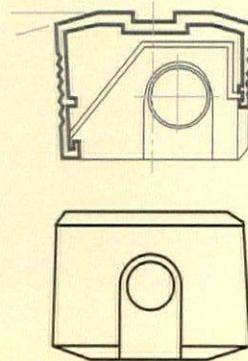
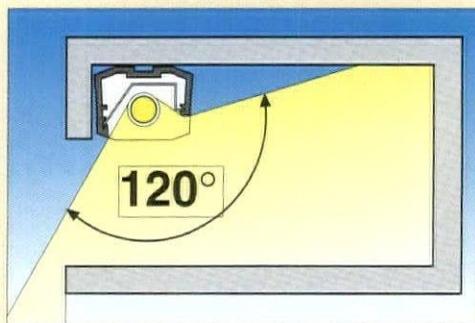
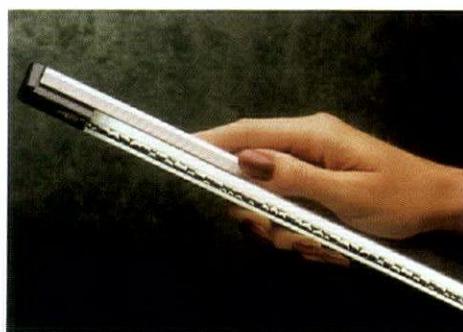
The Lightfair New Product Showcase Advisor Committee included Renée Cooley, Renée Cooley Lighting Design; Boyd Corbett, Remote Source Lighting International; Gary Dulanski, Stan Deutsch Associates; Art Hatley, Fiberstars, Inc.; and Craig Roeder, Craig A. Roeder Associates.

BEST NEW PRODUCT OF THE YEAR AWARD

ALKCO SLITE

The Slite shelf lighting system incorporates a 1/8-in.-diameter T2 fluorescent lamp into an ultra-miniature 3/4-in. x 1-in. remotely ballasted fixture. Slite's dimensions allow it to be fully recessed into shelves as thin as 22mm, completely concealing the fixture. A peened specular aluminum reflector, with controlled shut-off, produces even, shadow-free, 120-degree forward-throw light distribution to fill an entire display cavity with light and deliver a desirable visual impact. Each Slite fixture is available with a choice of a 300mm or 1500mm power cable and matching ballast. Electronic operation results in flicker-free, energy-efficient performance. Slite fixtures may be specified with either left- or right-hand cable entry to meet individual application requirements.

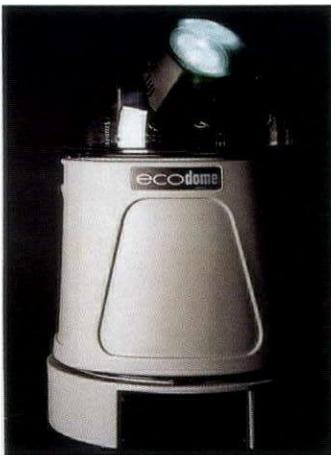
Circle No. 55



A W A R D S O F D I S T I N C T I O N

ENERGY SAVINGS, INC. LINEAR FLUORESCENT BALLAST

The ES-1-T5-28-120-X from Energy Savings, Inc. (ESI) is a compact electronic ballast (0.73 in. in height) for the new T5 linear fluorescent lamp. It features the company's Super LampGuard circuit, which guards the lamp when it is approaching the end of its life by deactivating the ballast. The ballast can be specified to feature low peak in-rush current. **Circle No. 56**

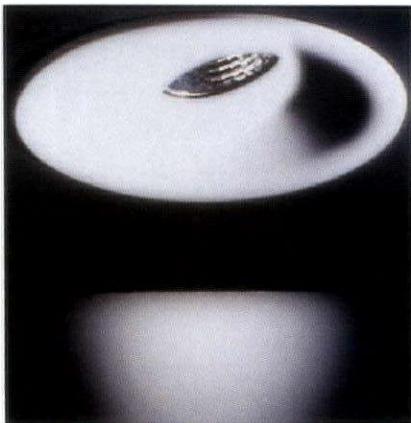
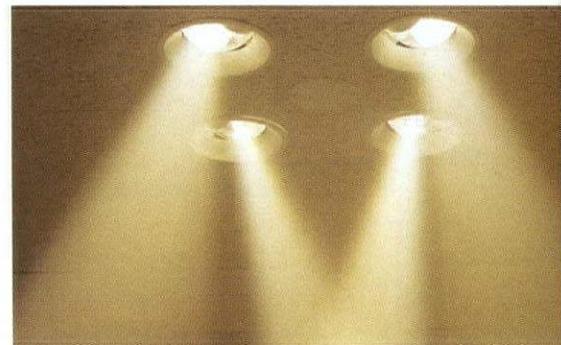


HIGH END SYSTEMS ECODOME

The EcoDome is a weather-resistant modular indoor/outdoor housing system designed to work with the company's award-winning Cyberlight and Studio Color products, creating effects such as rotating gobo patterns, beam shaping, moving beams, textures, color mixing and fast strobing. EcoDome is available in custom colors, and is designed for easy access for installation and maintenance. Filtered forced air ventilation enables EcoDome to work in most climates. **Circle No. 57**

LIGHTRON OF CORNWALL MULTI-BEAM 2000

The Multi-Beam 2000 is a light conveyance system that can transport multiple images from a single point source simultaneously (photo stylized to illustrate beams). Mounted up to 10 ft. away, each aperture can be adjusted independently 0-45 degrees vertical and 0-360 degrees horizontal. The system is designed to reduce energy, installation and maintenance costs compared to the use of halogen and incandescent general and accent lights. **Circle No. 58**



LUCIFER LIGHTING GUM

The Gum is a recessed downlight with a trim face that is elastic. After installation, Gum can be tilted from below to be oriented in any direction. Ideal for flexible downlighting and accent lighting, it is designed for use with 50W MR16 lamps. **Circle No. 59**

B-K LIGHTING
EVEREST & SIERRA

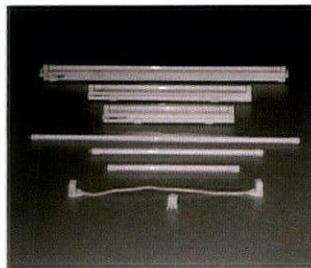
The Everest and Sierra series of floodlights are designed for use with 35W PAR20 and 35W and 70W PAR30 MasterColor metal halide lamps. These aluminum fixtures are available in three shielding types, eight polyester powder-coated colors and four different ballast housing options, including a remote ballast option. The fixtures also feature the company's Posilock and 360SL mounting knuckle system.



CIRCLE NO. 60

BOAM USA
DECO LAMP

Designed as an energy-efficient, compact, lightweight (8 oz. or less), self-ballasted modular system, Deco Lamp provides soft, natural light for kitchen/bath cabinetry, furniture, under-shelf installation and more. The Deco Lamp can be installed as single or multiple units ganged in line. The self-contained electronic ballast offers quiet, flicker-free operation. It houses a high color rendering (85 CRI) T4 lamp.



CIRCLE NO. 61

COOPER LIGHTING
IRIS P-5

The Iris P-5 is a recessed fixture for custom homes. It meets UL listing for direct contact with insulation, airtight and Title 24 requirements. A complete palette of optics provides 50-degree cutoff to lamp and lamp image, minimizing glare. Its modular design allows extreme flexibility. After installation, you can change to a variety of sources and distributions—for example, from a low-voltage AR111 adjustable accent to a 32W triple-tube wall washer.



CIRCLE NO. 62

EDISON PRICE
SPREAD LENSES

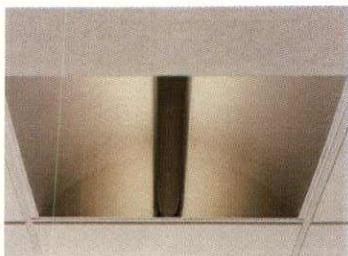
Three new spread lenses—a 30-degree linear lens, a 70-degree linear lens and a 4- x 70-degree wall-washing lens—are designed to enhance the output from PAR38, PAR36 and AR111 lamps, helping to create sophisticated and aesthetically sensitive lighting schemes.



CIRCLE NO. 63

ENGINEERED
LIGHTING PRODUCTS
ID SERIES

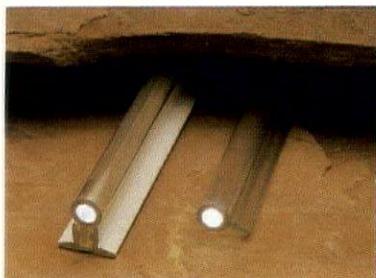
This series of indirect fixtures is specifically designed for lighting computer environments with 8-ft. ceilings, where low reflector brightness is essential. The fixture produces comfortable indirect lighting with nothing hanging below the ceiling plane. Glare control is provided by the formed reflector. The concise 0.10-ft. steps have a sharp return angle that represents a clean light cut-off at each step, minimizing angle glare. These 2x2 and 2x4 fixtures utilize efficient, long-life 40W, 50W or 55W biax fluorescent lamps.



CIRCLE NO. 64

LUMENYTE
INTERNATIONAL CORP.
INTERLOCK OPTICAL FIBER
& TRACK SYSTEM

This system is designed to high-light building perimeters. The optic can glide through the tracking, and also eliminates the need for messy adhesives during installation. Additionally, the linear fiber optic can be viewed from more oblique angles.



CIRCLE NO. 65

LUXO CORPORATION HALOGEN 3

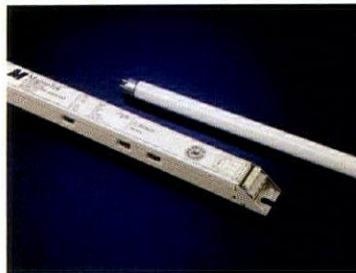
This new family of task lighting is based on the same design principle as Classic Luxo. At its core is the latest version of Luxo's patented fully articulating, counter-balanced concealed-spring arm. This arm—available in two lengths—allows precise vertical and forward placement of the light to suit each individual user and the tasks to be performed. Combined with Luxo's fully rotatable lighthead, light direction adjusts instantaneously, staying where it is aimed without causing harmful glare to the user's eyes. Each Halogen 3 contains a long-life tungsten halogen light source controlled by a two-position light switch.



CIRCLE NO. 66

MAGNETEK LIGHTING PRODUCTS GROUP T5 LINEAR ELECTRONIC BALLAST

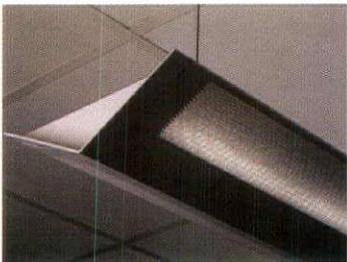
This high-efficiency ballast is for use with T5 linear fluorescent lamps. The ballasts are designed for one- and two-lamp designs with 14W, 21W and 28W lamps. T5 applications include task and undercabinet lighting.



CIRCLE NO. 67

NEO-RAY LIGHTING PRODUCTS, INC. TRIAD

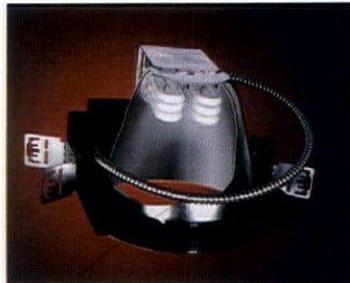
Neo-Ray's pendant-mounted indirect/direct fluorescent fixture features a partially perforated metal housing backed with an acrylic overlay to facilitate a uniform glow. The Neo-Ray Triad has a fixture profile of 10¹/₄ in. wide x 2⁵/₈ in. high with an integral ballast and lamps. This design articulates a graceful geometric form.



CIRCLE NO. 68

PRESCOLITE TWO-LAMP TRIPLE TUBE DOWNLIGHT

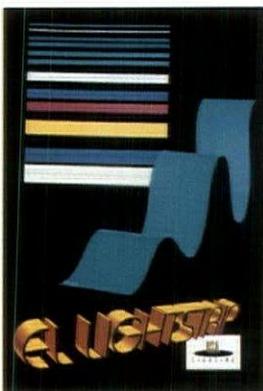
Prescolite's recessed ceiling downlights and wall washers represent a major advance by combining exceptional lumen output, high energy efficiency, economical spacing ratios and evenly distributed, glare-free light control.



CIRCLE NO. 69

RSA LIGHTING EL LIGHTSTRIP

The electroluminescent linear EL Lightstrip operates by dielectrically stimulating a combination of phosphors and fluoro-halocarbons ruminated to a thickness of 0.020 in. The product is available in widths from 3¹/₁₅ in. to 22¹/₂ in. for interior and exterior usage. One power transverter can power up to 1500 ft. of product in a variety of colors with no heat generation. The EL Lightstrip is dimmable and is available from 8 to 50 footlamberts.



CIRCLE NO. 70

ZUMTOBEL STAFF LIGHTING ARCADE

Arcade has a fresh, flexible profile featuring the new T5 lamp. Arcade's 180-degree rotation flexibility allows it to function as a wall washer when in the horizontal lamp position, a spotlight when in the vertical position, and when the reflector faces upwards, as an uplight. Arcade's slim, sleek profile and adjustability make it well-suited for the retail environment.



CIRCLE NO. 71

FIBER-OPTIC LIGHTING

The Fiberscent FE-9000 Series from **Fiberstars, Inc.** represents small-scale point-source fiber-optic light fixtures designed for commercial and residential decorative ceiling accent lighting applications. Up to 300 points of light can be illuminated by a single fiber-optic illuminator. Models FE-9003 and FE-9004 (shown) match the intensity of fiber-optic light with the diffusion characteristics of fine crystal. Custom designs, corporate logos or decorative patterns can be created with points of light from these and other FE-9000 fixtures. **Circle No. 100**



FIBER-OPTIC LIGHTING

Rohm and Haas has introduced the OptiFlex light pipe for remote source lighting for retail display, visual merchandising, entertainment, signage and related applications. OptiFlex is a large-diameter, solid-core fiber-optic cable, available in both side- and end-emitting versions. The cable distributes light evenly from 8-50 ft.; it is available in diameters of 3.2mm, 5.1mm, 7.1mm and 12.7mm; it comes in 100-ft. and 500-ft. reels. A range of compatible components and accessories such as illuminators and fixtures are available. **Circle No. 101**

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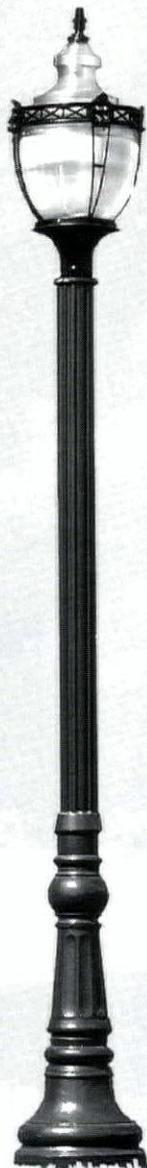
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Circle No. 29 on product service card

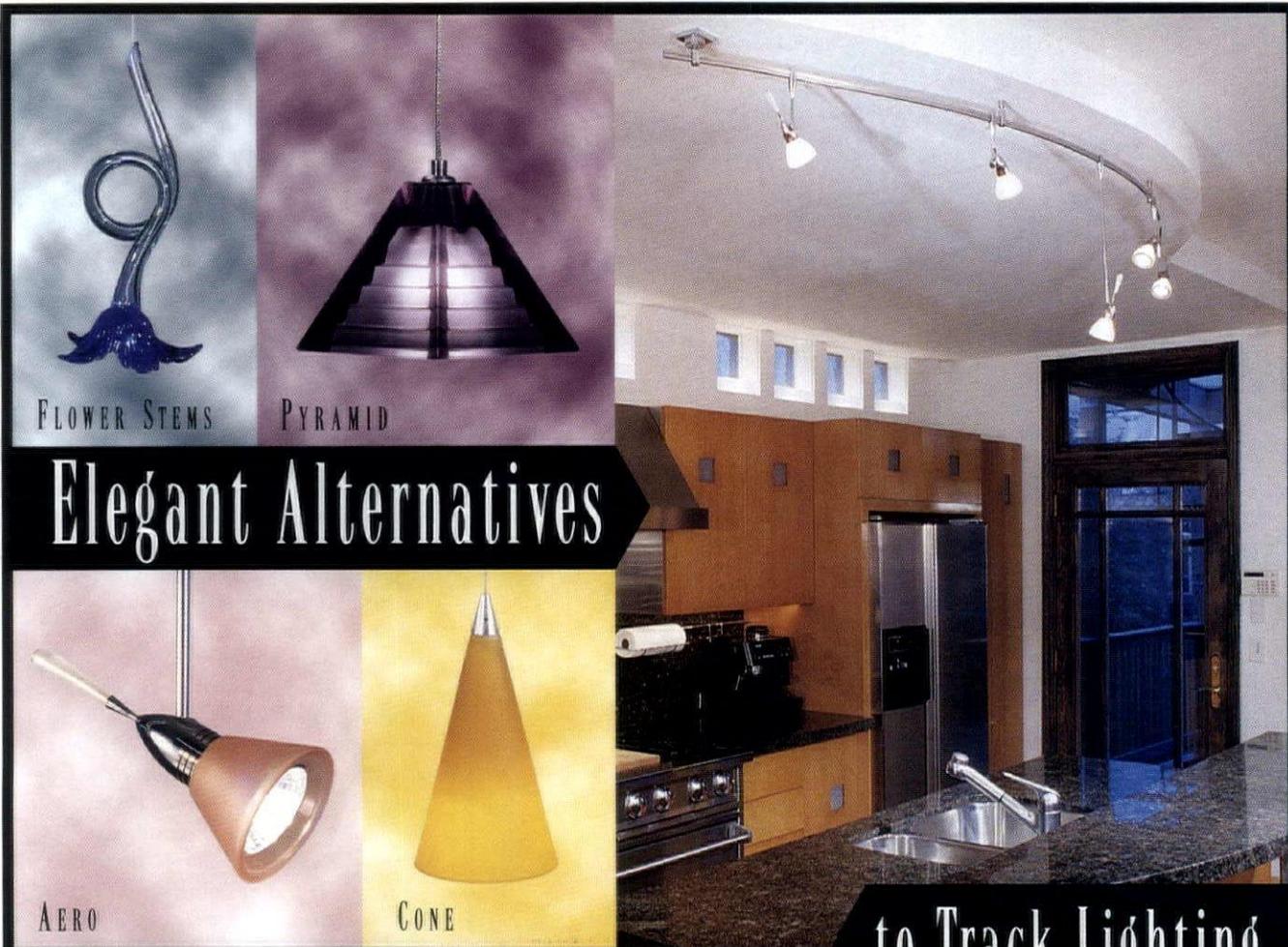
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AMBIENT-TASK SYSTEM

The Two-Component Lighting Series from **Luxo Corporation** features indirect and task lighting products that are compatible. The four lines of indirect fixtures are Futura, Isy, Lightwing and Ronda. They are available in a range of mounting options that include ceiling pendant, wall-bracket, portable floor mount and furniture clamp units. The eight models of portable, adjustable task lights are FL-12, FL-18, Jac, Halogen 3, Halogen 4, Heron, Vision and Sonnet. All have multiple pivot options on arms and light heads, and use compact fluorescent or low-voltage halogen source. UL- and CUL-listed. **Circle No. 102**



FLOWER STEMS

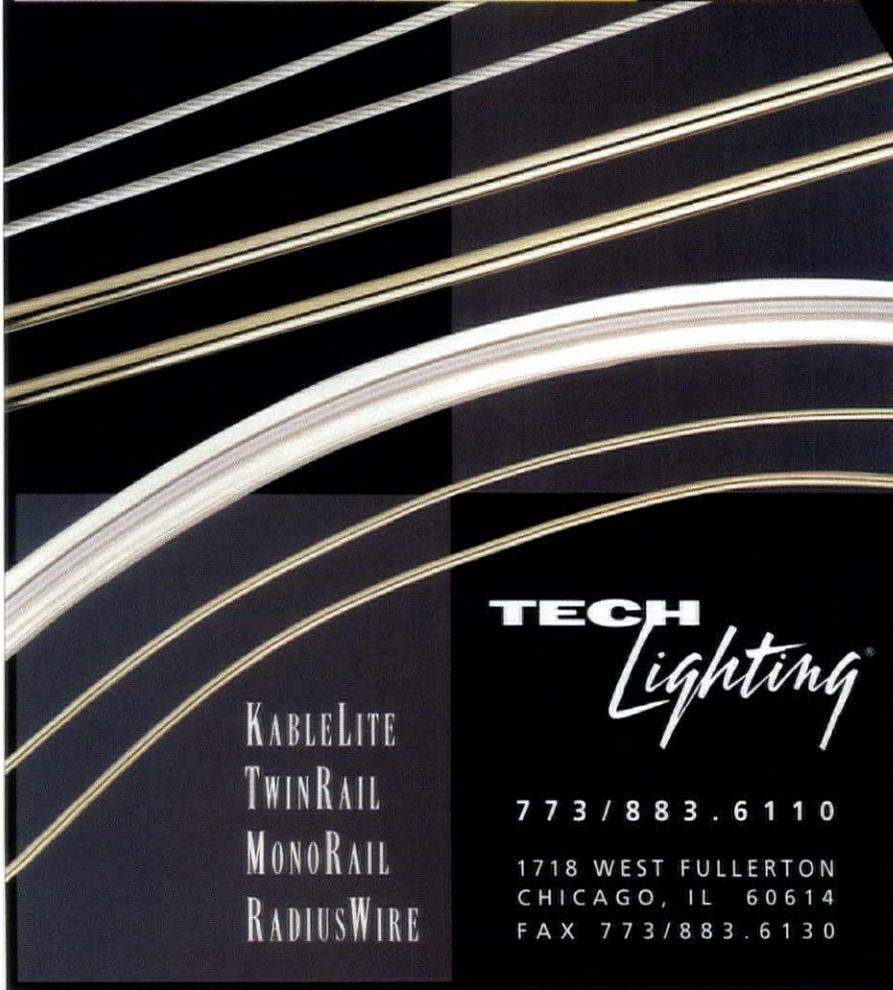
PYRAMID

Elegant Alternatives

AERO

CONE

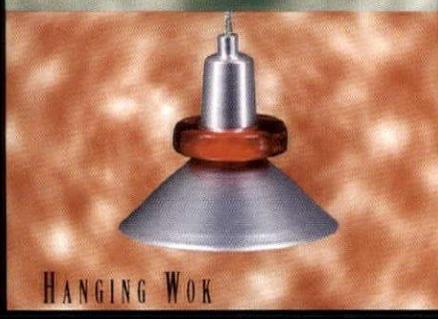
to Track Lighting



ICARUS



BYE BYE



HANGING WOK

TECH
Lighting

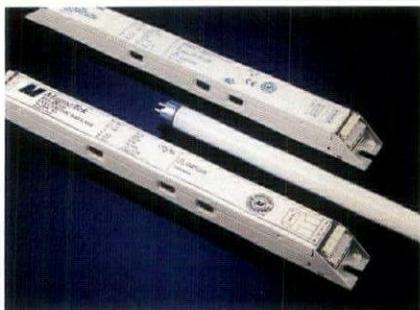
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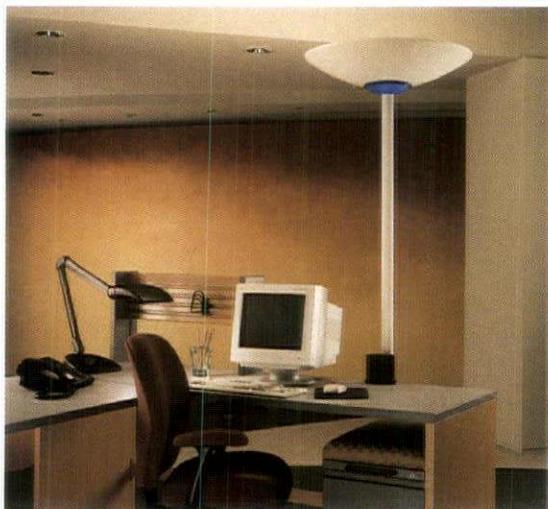
BALLASTS

MagneTek's new T5 electronic ballast line is designed to operate T5 linear fluorescent lamps used for task and undercabinet lighting. One- and two-lamp models are available for use with 14W, 21W and 28W lamps. The ballasts have a high power factor; feature less than 20 percent THD; feature a shutdown circuit to turn off the ballast at the end of lamp life; preheat the cathodes; protect against overvoltage; feature poke-in wire trap connections; and come in a small size (3/4 in. height). UL pending. **Circle No. 103**



WIRELESS CONTROL

The Radio RA from **Lutron Electronics Co., Inc.** is a radio frequency lighting control system for existing and new residential installations. With the touch of a button, Radio RA provides the homeowner with wireless, whole-house control. Up to 12 master controls can communicate with up to 32 dimmers or switches at a time. Uses include entertainment, security, ease of control for people with limited mobility, and easy checking of what lights are on and off in the house. It is designed for ease of integration with other systems; the house lights, for example, can be turned on when the garage door opener is activated. UL-listed. **Circle No. 104**



When corporate clients need to eliminate glare, reflections and shadows from VDT screens and work-surfaces, lighting professionals often recommend indirect lighting: a one-component solution.

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Luxo Corporation

36 Midland Avenue • PO Box 951 • Port Chester, NY 10573

Circle No. 31 on product service card



LAMPS

Starcoat from **GE Lighting** is a coating technology that provides GE F32T8 lamps with enhanced color rendering and lumen maintenance. GE T8 lamps with Starcoat now feature 95 percent lumen maintenance; color options are SP color (78 CRI) or SPX color (86 CRI). **Circle No. 105**

architectural lighting *thanks*

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LIGHTING

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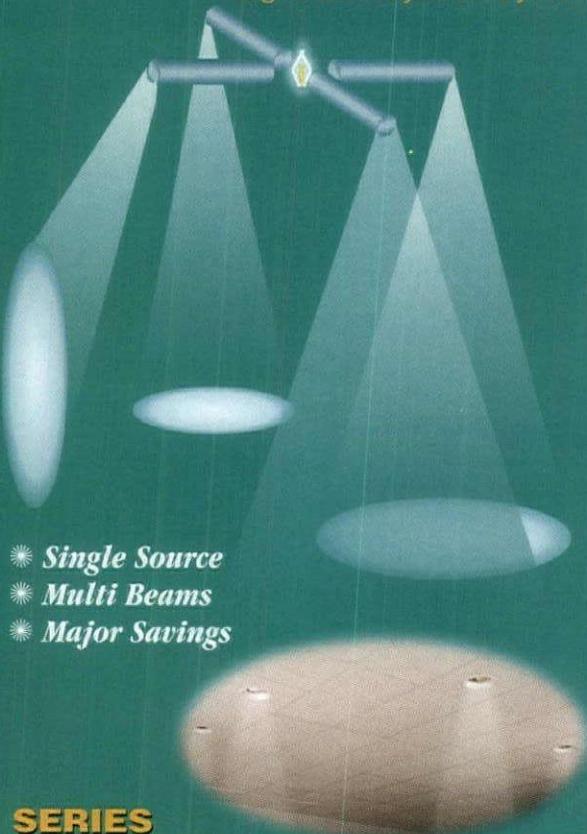
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Circle No. 32 on product service card

products

LAM BIAx Fluorescent Semi-Indirect LDL

LITEDISC LEGACY



specifications and ordering information. **Circle No. 106**

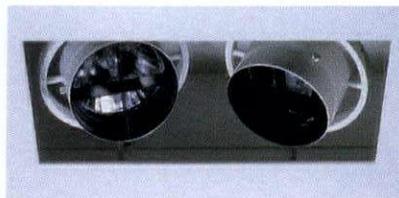
SEMI-INDIRECT

Lam Lighting Systems, Inc. now offers a brochure detailing the company's Litedisc Legacy series of semi-indirect light fixtures employing Biax fluorescent lamps. The brochure features new models added this year, along with photographs, trim and finish options, and speci-



POWER PRODUCTS

Powr/Comm from Specialty Lighting is a compact, modular, mountable, portable power and communications wire-management harness for office electronics. Powr/Comm mounts onto vertical panels, partitions and cabinets and recesses into or can be placed underneath horizontal worksurfaces. It can handle all desktop computer/printer cabling with auxiliary receptacles provided for task lighting and other electrical accessories. Coverplates are textured black matte enamel. UL-listed. **Circle No. 107**



DOWNLIGHTS

Recessed Multi-Slot from Zumtobel Staff Lighting is designed to meet the specification criteria of retail store design. The fixture features a white aperture and two or three adjustable heads which accept numerous sources, including metal halide PAR, halogen PAR30 and MR16 lamps. UL-listed for damp locations. **Circle No. 108**



TRACK LIGHTING

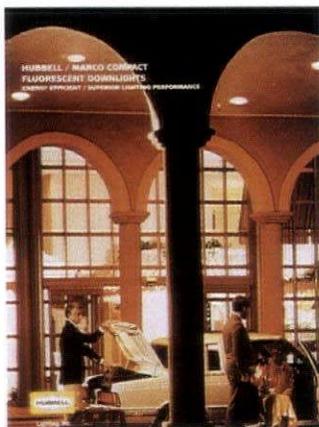
Con-Tech Lighting's new Gyro track light, designed for the lighting of retail store space and other commercial applications, provides 360-degree aiming adjustment to place light where desired. It uses 120V PAR16, PAR20 and PAR30 halogen lamps. "Sure-Set" pivot points hold the aiming angle. Featuring a fixture-

mounted on-off switch, the Gyro can be mounted on track or to an individual outlet box with an accessory monopoint adapter. White, black and gray finishes. Extensions are available to achieve lower mounting heights. UL-listed. **Circle No. 109**



DIRECT/INDIRECT

The Stratus STR series from **Columbia Lighting** is a direct/indirect light fixture designed for new construction or one-on-one replacement of standard 2x4 or 2x2 fluorescent fixtures in healthcare facilities, offices, hallways and any other commercial or public space with lay-in grid ceilings. The fixture recesses fully into the ceiling. T8 linear fluorescent and T5 compact fluorescent lamps are available. UL- and CUL-listed. **Circle No. 110**



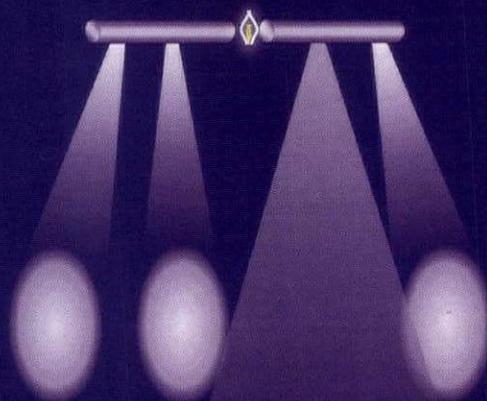
DOWNLIGHTS

Hubbell Lighting's *Compact Fluorescent Downlights* brochure features 32 pages of the company's newly engineered compact fluorescent downlights. Both vertically and horizontally lamped downlights are featured, including Hubbell's newest D4 8-in. series. **Circle No. 111**

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*Compared to 60W PAR 38 Halogen lamp



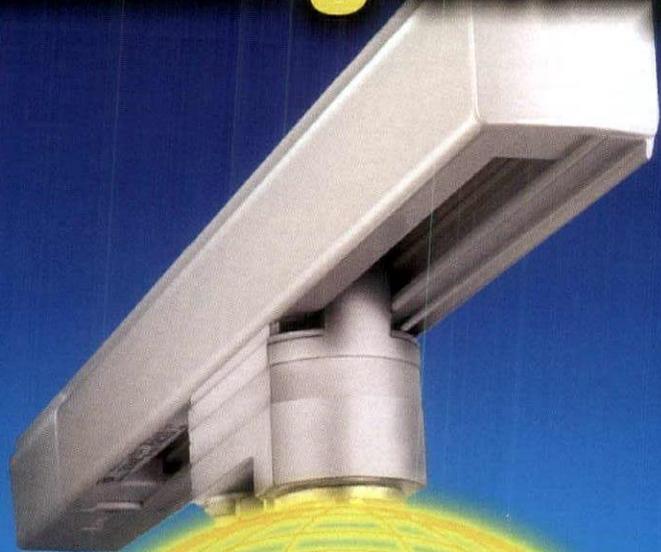
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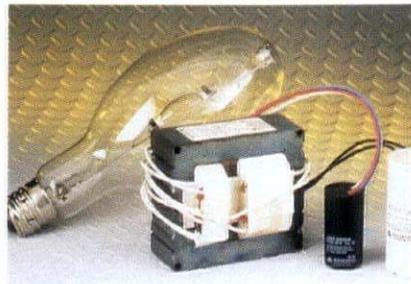
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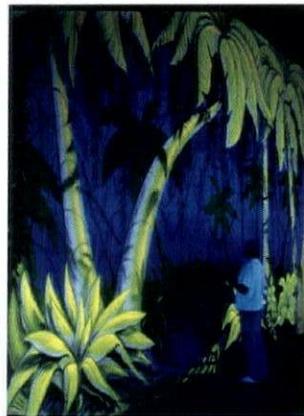
Circle No. 34 on product service card

products



HID BALLASTS

Advance Transformer's Super CWA series of HID core- and coil-lamp ballasts are designed to operate pulse-start metal halide lamps. In addition, the ballasts provide a low crest factor (1.6) which helps extend lamp life and provides cooler operation, longer ballast life, higher ambient temperature ratings on fixtures and assurance of thermal fit in retrofit situations. UL-listed. Circle No. 112



SPECIALTY

UV/FX Scenic Productions offers UV/FX 3D Scenery, a product that creates a completely immersive set, stage or background by enabling designers to make stock or custom scenery glow under UV illumination (black light). With the introduction of 3-D glasses, the effect is heightened with depth and color perception. Ideal for glowing panels, wallpapers, murals, drops, ceilings, exhibit pieces and other items in film, stage and themed environments. The technique can be designed to be visible, partially visible or completely invisible under ambient lights. Shown is jungle environment painted for a cruise ship's theatrical production. Circle No. 113

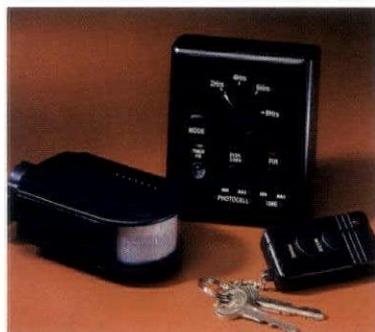
ARCHITECTURAL LIGHTING

products



TRACK LIGHTING

Con-Tech's Peak Efficiency HID track lights are designed for MasterColor metal halide lamps, which provide a high color rendering (over 80 CRI), color stability and long lamp life. The fixtures are available in two models. The universal model uses 35W, 70W or 100W metal halide lamps in PAR20, PAR30L and PAR38 sizes. It features a telescopic lamp collar to adjust for each size lamp. The round-back model (shown) is designed for 70W or 100W PAR38 metal halide lamps and includes a black baffle to conceal the light source for enhanced visual comfort. Available in a white or black finish. UL-listed. **Circle No. 114**



SECURITY LIGHTING

The Lyte Command exterior security lighting system from Hadco includes a command module, two motion sensors and two hand-held remotes. The motion sensor utilizes a flat infrared light beam, rather than a spread beam, to sense motion and radio frequency to signal the command module—lights come on instantly from 18 seconds to 20 minutes. The remote allows override of the command module. UL- and CUL-listed. **Circle No. 115**

JULY/AUGUST 1997



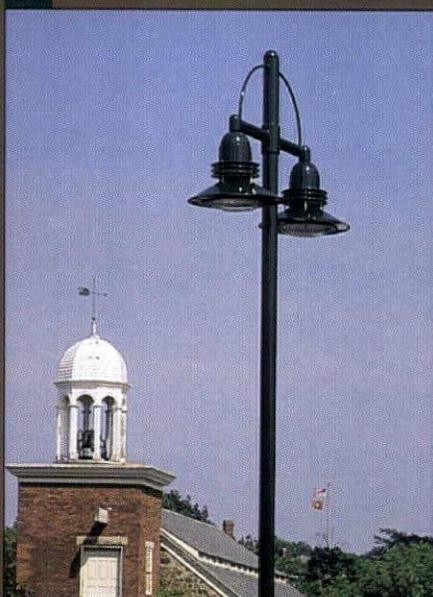
WALL SCONCES

The Sonic wall sconce from Boyd Lighting Co. is ADA-compliant at any mounting height. Low-voltage (12V) with integral transformer is standard. The fixture is engineered for switch-box or mud-ring mounting. Sonic features solid metal construction and is finished in polished brass or chrome, satin chrome or a combination of the two. UL-listed. **Circle No. 116**

THE UNIVERSE COLLECTION

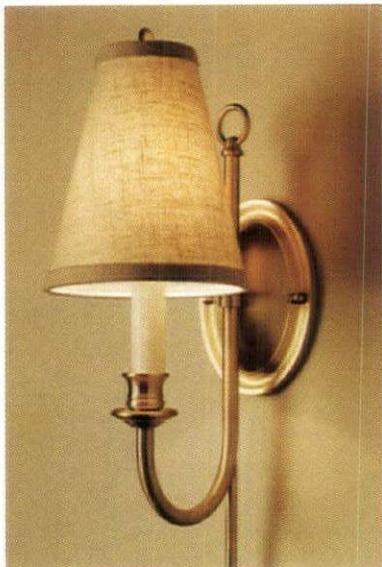


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DECORATIVE

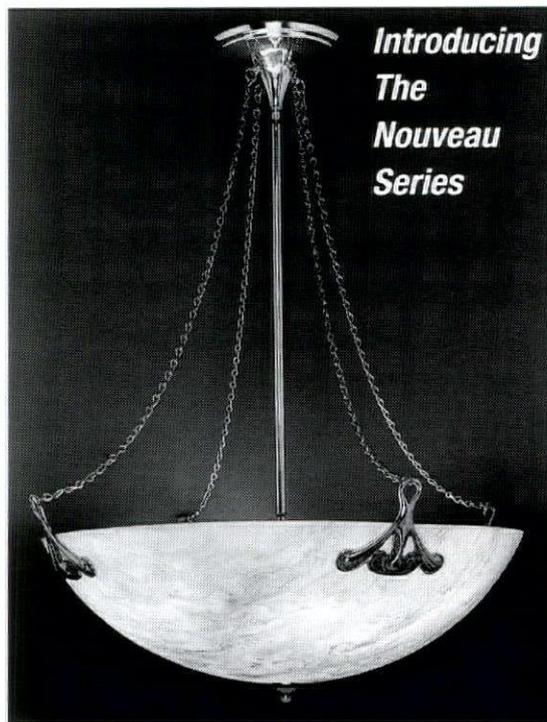
The Kristine series of decorative fixtures from **Architectural Details, Inc.** is available in four models: two sconces and two table lamps. Shown is the Kristine 2230, a sconce that measures 21 in. high x 5½ in. wide with an 8-in. projection. It is shown in satin brass with an off-white linen shade, and is available in various finishes and an optional brown parchment shade. Standard lamping is a single 60W incandescent lamp. A two-arm version is available. UL-listed. **Circle No. 117**



WALL SCONCE

This sconce from **New Metal Crafts** features a caricature of a monkey sitting at the base of a palm tree. The fixture has a pickled pine finish with antique gold-leaf glazed accents and features two candle lights. The fixture measures 27 in. high, 13 in. wide and extends 6½ in. UL-listed. **Circle No. 118**

Sometimes
Beauty...



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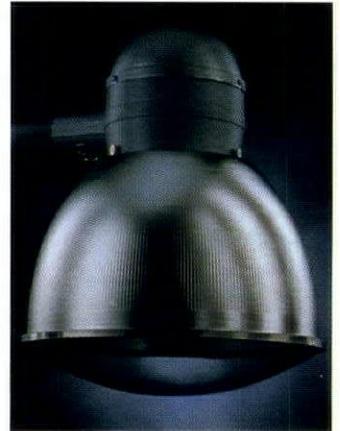


COLOR FILTERS

Edison Price Lighting's line of color filters is comprised of four standard, deeply saturated colors—red, amber, green and blue—and two new "delicate" colors: Surprise Pink, which flatters skin tones, and Daylight Blue, which is particularly compatible with ambient daylight. All six filters are available in four sizes and designed for use with recessed accent lights and track fixtures. In addition, the filters feature a stipple effect in the lens surface that smoothes and distributes light, and heat treatment for safe use with high-wattage quartz halogen PAR lamps. **Circle No. 119**

AREA & ROADWAY

VisionAire from Quality Lighting is an area and roadway lighting fixture for medium to high mounting heights. The fixture combines a vertically mounted metal halide or HPS lamp (400W-1000W) with a computer-designed, spun-aluminum reflector system to provide highly efficient lighting. Four distribution patterns are available: round symmetrical (Type V), square symmetrical (Type VS), asymmetrical (Type VR) and forward throw, employing a forward-tilted lamp (Type VF). UL-listed for wet locations. **Circle No. 120**



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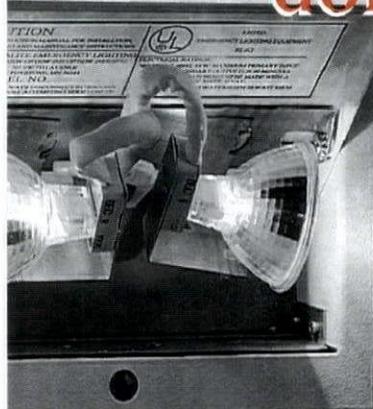
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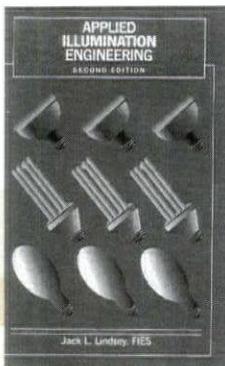
Lighting LIBRARY

Applied Illumination

Engineering, Second Edition
Jack L. Lindsey, FIES
The Fairmont Press, Inc.

This reference provides a fully illustrated guide to lighting design, specification and application for indoor and outdoor applications. The second edition features information on daylighting. ISBN: 0-88173-212-5; 6 x 9 (hardcover); 514 pp., illus.

Code #DS001 \$74.00

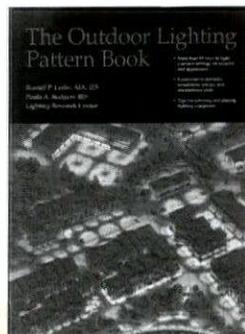


The Outdoor Lighting Pattern Book

Russell P. Leslie, AIA, IES and
Paula A. Rodgers, IES
The Lighting Research Center
Distributed by McGraw-Hill

This book provides the practical information and expert guidance needed to design outdoor lighting for residential and commercial spaces; ready-to-use lighting patterns featured. ISBN: 0-07-037188-1; 8.5 x 11 (hardcover); 208 pp., illus.

Code #DS007 \$59.95

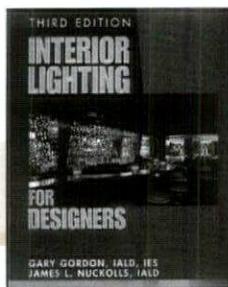


Interior Lighting for Designers, Third Edition

Gary Gordon, IALD, IES and James
L. Nuckolls, IALD
John Wiley & Sons, Inc.

This book addresses both why and how a particular lighting design should be used. Completely revised and reorganized, the material has been arranged in the sequence that a lighting firm would follow, covering creative aspects and equipment. ISBN: 0-471-50970-1; 8.5 x 9.5 (hardcover); 300 pp., illus.

Code #DS003 \$64.95

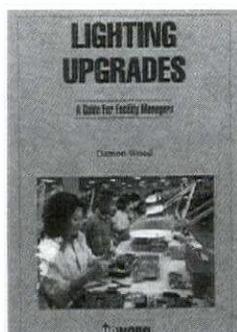


Lighting Upgrades

Damon Wood
UpWord Publishing, Inc.

Green Lights specialist Damon Wood takes you step by step through upgrading an existing lighting system for energy cost savings and productivity. Contents include lighting quality, upgrade strategies, applications, technologies, economics, maintenance and project implementation. ISBN: 1-57730-425-X; 6 x 9 (hardcover); 422 pp.; illus.

Code #DS008 \$75.00

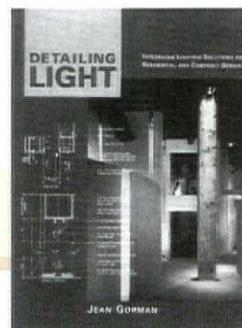


Detailing Light: Integrated Lighting Solutions for Residential and Contract Design

Jean Gorman Whitney Library of
Design/Watson-Guptill

One hundred examples of lighting installations designed by internationally renowned architects and designers offer innovative solutions to practical problems. Each case study includes descriptive text, technical data, costs, manufacturing information, large-scale construction details of fixtures, and color photographs. ISBN: 0-8230-1341-3; 8.25 x 11 (hardcover); 208 pp., illus.

Code #DS009 \$55.00

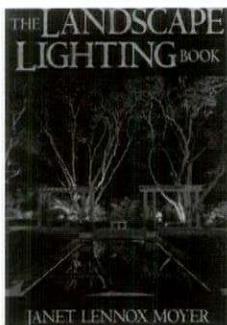


The Landscape Lighting Book

Janet Lennox Moyer, IES, ASID
John Wiley & Sons, Inc.

This book offers a comprehensive guide to the art and science of designing, erecting and maintaining an outdoor lighting system. ISBN: 0-471-62726-2; 8.5 x 11.5 (hardcover); 304 pp.; illus.

Code #DS004 \$79.95

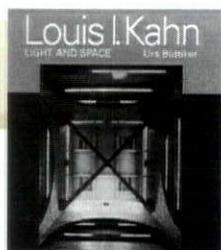


**Louis I. Kahn:
Light and Space**

Urs Büttiker Whitney Library of
Design/Watson-Guptill

Louis Kahn (1901-1974) is one of the preeminent figures in the history of American architecture, and today his body of work is receiving renewed attention. In this book, Buttiker analyzes Kahn's lighting solutions. ISBN: 0-8230-2772-4; 9.25 x 8.625 (paper with flaps); 184 pp.; illus.

Code #DS010 \$50.00

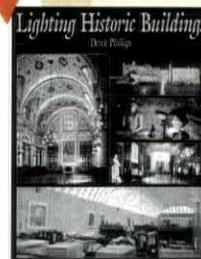


**Lighting Historical
Buildings**

Derek Phillips McGraw-Hill

Using examples going back to ancient times, the author traces the evolution of architecture and light to create an intriguing and essential look at how historic buildings can be preserved, illuminated and used in modern times. ISBN: 0-07-049864-4; 8.5 x 11 (hardcover); 206 pp.; illus.

Code: #DS024 \$79.95



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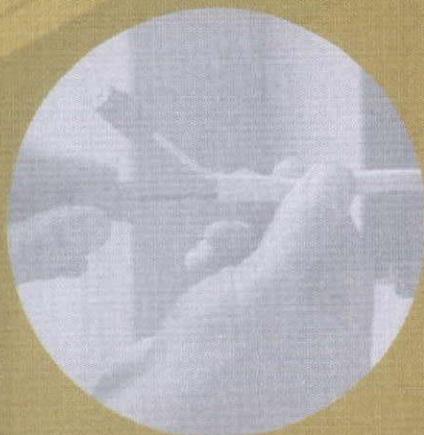
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LET'S MAKE FIBER-OPTIC LIGHTING "LEGITIMATE"

BY J. ARTHUR HATLEY

A market research study conducted by an independent organization last year showed that most professional lighting specifiers surveyed did not understand or trust the information given to them by fiber-optic lighting manufacturers as a whole. This is embarrassing to our industry.

Instead of independent laboratory testing reports, there is an incredible amount of rhetoric about what constitutes good fiber-optic lighting. Terms such as "claddings," "cabling," "integrating rods," "port lumens," "columnating lenses," "interfaces," "numerical apertures," "packing fractions" and "fresnel effects" keep getting bantered about. While all of these are important to those who make fiber-optic lighting, they can be quite confusing to a specifier.

I propose that we make fiber-optic lighting "legitimate." Lighting professionals should use the same uniform standards to understand and specify fiber-optic lighting systems as they use with any other lighting systems and point-source fixtures. The photometric test results from an independent laboratory are the best gauge of value and performance. Anything else is just words.

I am not pointing the finger at any one manufacturer. Having spoken with several competitors on a number of occasions, I know they feel the same way about the problem. Unfortunately, with an emerging unique technology, this type of marketing approach often evolves. But fiber-optic lighting has matured to the point where specifiers can demand easier, more uniform specification and manufacturers can provide it. If we don't, the growing specification of fiber-optic lighting may slow out of pure frustration.

I propose three solutions to this problem:

First, manufacturers need to provide the lighting specifier with information that is truly needed. Specifiers make their decisions based on performance, quality, cost and reliability. The information provided should focus on that, letting all of the details about what goes into the manufacture of cables and illuminators take a back seat. After 26 years in the lighting industry, I have yet to meet a specifier who is unduly concerned, for example, about what is going on inside a ballast; he is much more concerned with practical information about what the

ballast does—that is, if it meets the project requirements.

Regarding fiber-optic lighting, I believe the specifier is most concerned with how much usable light is being produced, how long the system will last and how much it costs to purchase and maintain. If a product fulfills the needs of a lighting designer in these areas, the product considered is acceptable. How its performance and cost is achieved is much less important than the actual results.

Second, specifiers need to measure the performance of fiber-optic lighting systems as they would "standard" systems, and manufacturers need to provide information tailored to that need. There are two basic types of fiber-optic systems: side-emitting, in which light is allowed through the side of the fiber cable, and end-

emitting, in which light is guided out the end of the fiber. The former is used in applications much like neon or cold cathode lighting; therefore, its performance standards should be judged by the same criteria. Light output should be measured in lumens per foot and in footlamberts (cd/m^2). End-emitting systems are primarily for accent lighting. They should be measured in the same way as the industry's other accent lighting sources—candela distribution curves.

Lastly, manufacturers must provide technical performance information that is produced by an independent source. Published photometric performance data

from an acceptable independent laboratory is the standard comparison criteria for all other fixtures and systems; it should be the standard of comparison for fiber-optic lighting products as well.

There is an added benefit to the industry from publishing independent testing laboratory reports. The data they yield shows the manufacturer exactly how well its products perform in relation to others. This will provide a natural impetus to improve performance to beat the competition—continually raising the standard of excellence.

Fiber-optic lighting offers a strong value in many applications; it is time it became more "legitimate" for the benefit of both specifiers and manufacturers. ■

J. Arthur Hatley is vice president, general manager of the commercial lighting division of Fiberstars, Inc.

"LIGHTING PROFESSIONALS SHOULD USE THE SAME UNIFORM STANDARDS TO UNDERSTAND AND SPECIFY FIBER-OPTIC LIGHTING SYSTEMS AS THEY USE WITH ANY OTHER LIGHTING SYSTEMS AND POINT-SOURCE FIXTURES."

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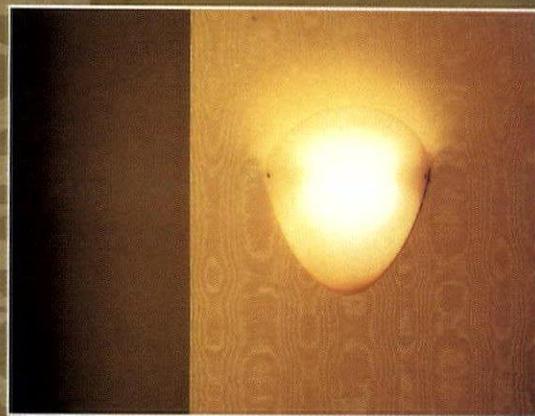
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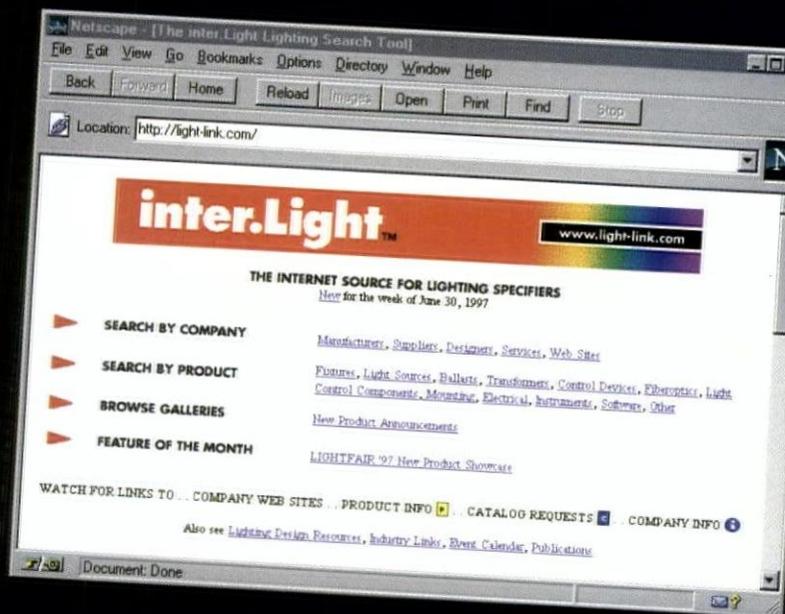
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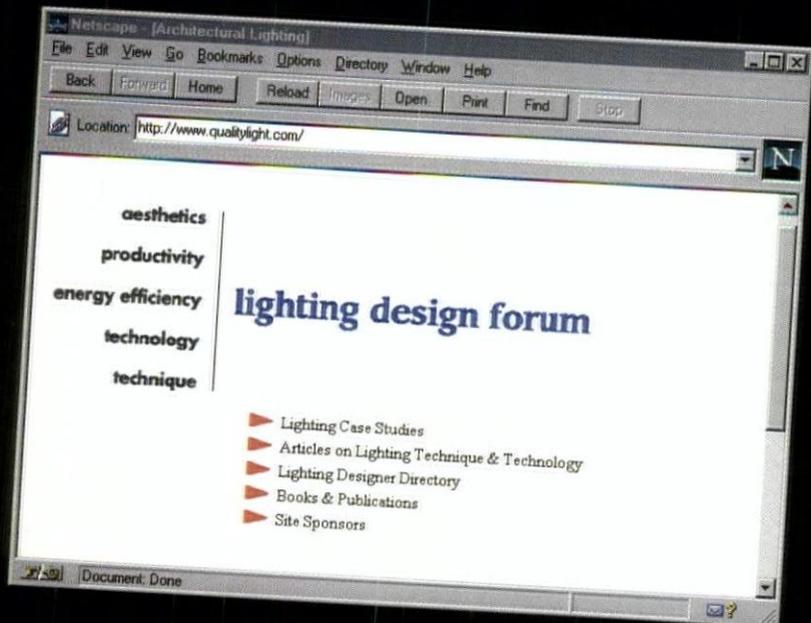
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