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1997

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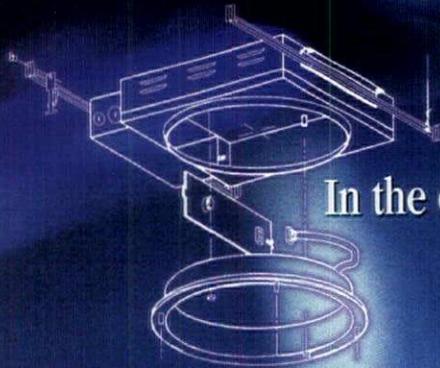
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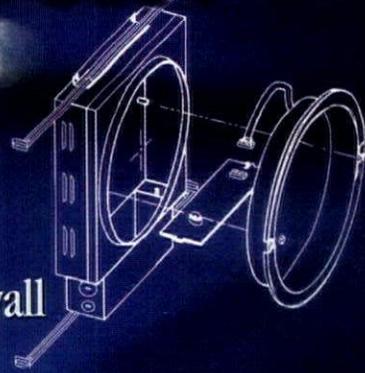
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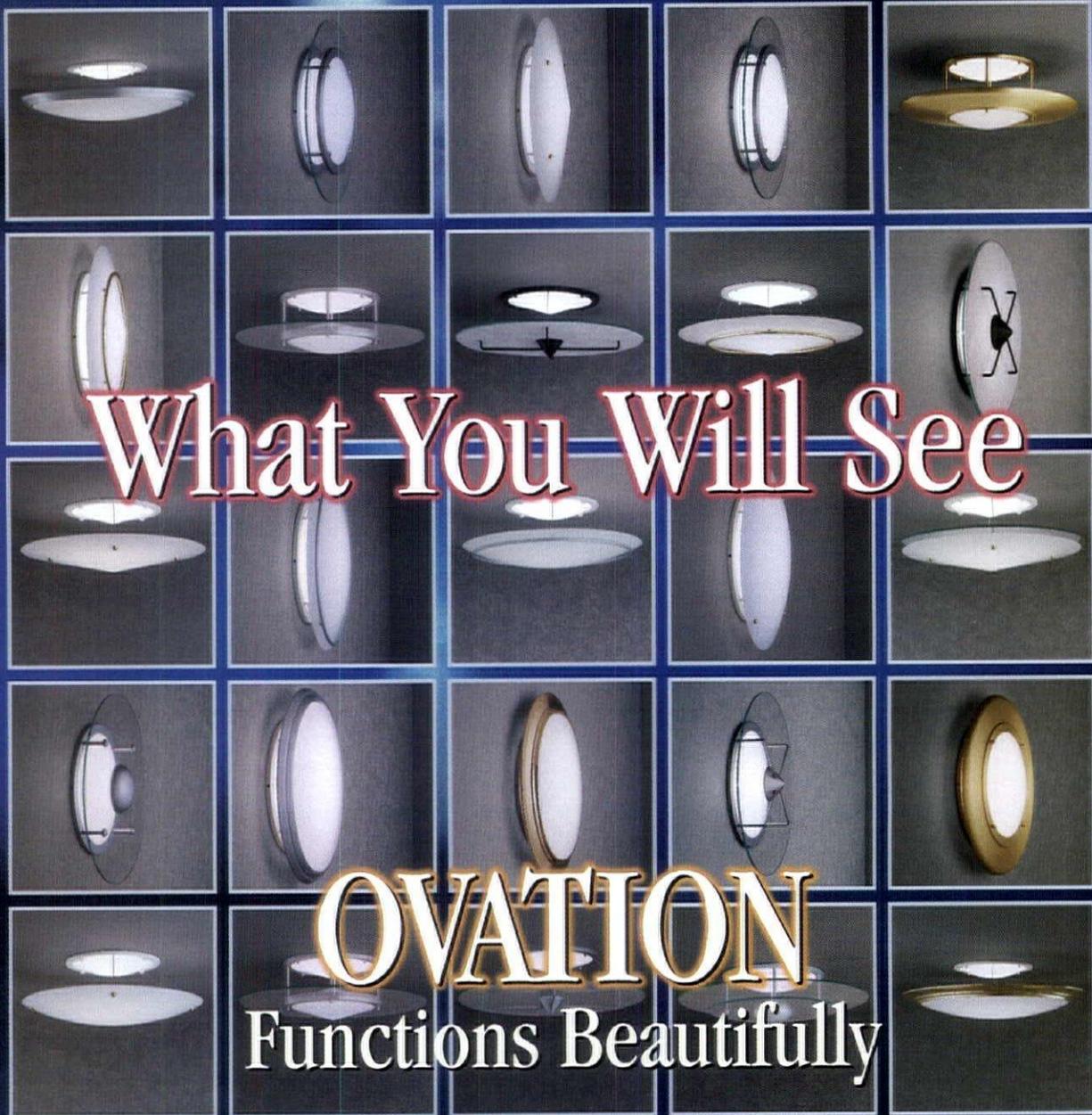
What You Won't See



In the ceiling



In the wall



What You Will See

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ACT THEATRE

48

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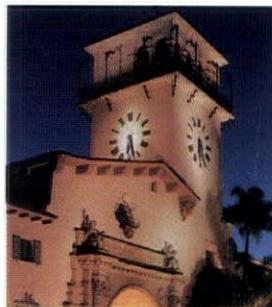
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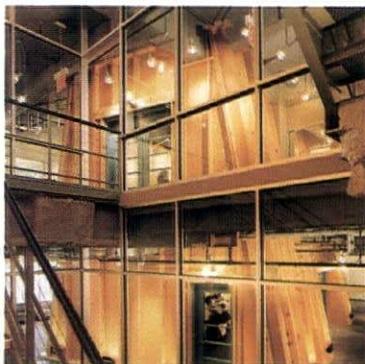
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Architect: Perez & Perez Architects Planners
Engineer: William A. Berry & Associates
Luminaire: 60° Forward Throw Indirect

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beta lighting was specified.



beta lighting

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A black and white photograph of a man, Scott Pahl, looking upwards and to the right. He is wearing glasses and a dark jacket over a light-colored collared shirt. He is holding a notebook and a pen in his hands. The lighting is dramatic, with strong highlights on his face and hands against a dark background.

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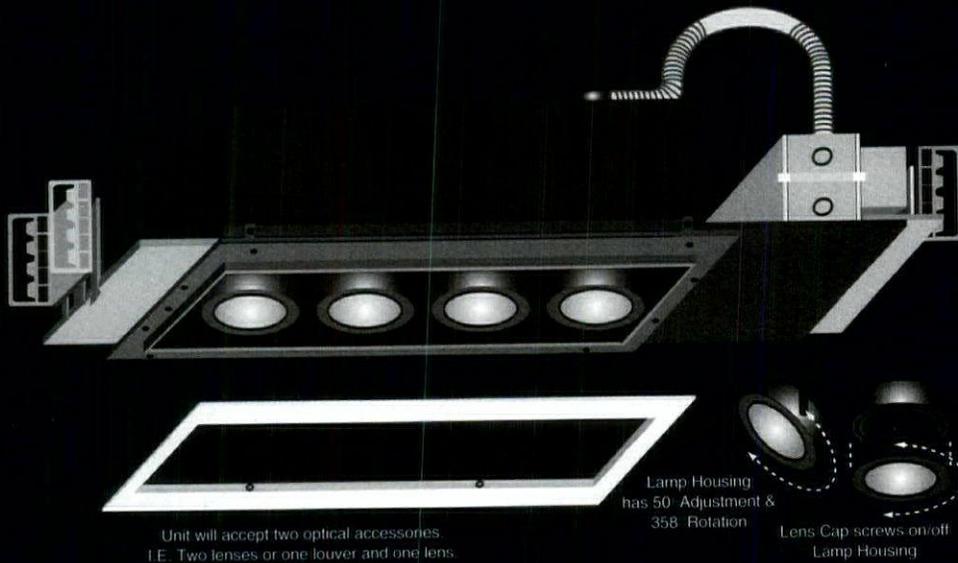
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COMMUNICATING VALUE

Rule #1 of marketing is to communicate value to the customer. Many corporations in many industries, however, have failed to properly communicate value because they focused on product features rather than the results—the final benefit to the end-user. As a result, there has been a quiet revolution in the marketing profession over the past 10 years to focus on “Here’s what’s in it for you,” instead of “I offer you this great product/service.”

It’s all about creating *demand* for that product or service.

Lighting professionals are typically aggressive marketers on a small budget, developing portfolios, networking and demonstrating to their clients that they can and will produce a value-added and effective lighting design.

I have no doubt that *Architectural Lighting* readers can make a convincing argument and can deliver on the promise. But does the client feel he really needs a value-added and effective lighting design? Many in the lighting community would argue no, pointing out that quality lighting services and products are only penetrating 10-20 percent of the available market. With that kind of statistic, it would seem that the lighting community “pushes” well, but doesn’t get “pulled.”

We are all firm believers that quality lighting services and products offer a strong value to corporations and building occupants, including aesthetics, energy efficiency and worker productivity. In other cases, this value may be retail sales, accuracy, reduced absenteeism or effectively stimulating a desired mood.

Unfortunately, however, we as an industry are not effectively communicating that message to the end-user so as to create a perception of the connection between quality lighting and these desirable benefits (see this issue’s Perspectives column by Robert Ingram on page 90). This is vital for the professional lighting community to create demand for quality lighting services and products, preserve design and specification integrity, and make available the benefits of quality lighting to the broadest population.

At *Architectural Lighting*, we listened to this need and created a new program—the Quality Lighting Campaign—that’s designed to influence decision-makers at Fortune 1000 companies and generate business for *Architectural Lighting*’s readers (see this issue’s Industry Focus on page 60). I think you’ll find it an exciting first step. Our goal is to change customer attitudes and create a greater demand for quality lighting for the benefit of everyone in our industry. Tell me what you think at Lightfair, or e-mail me at cdilouie@mfi.com.

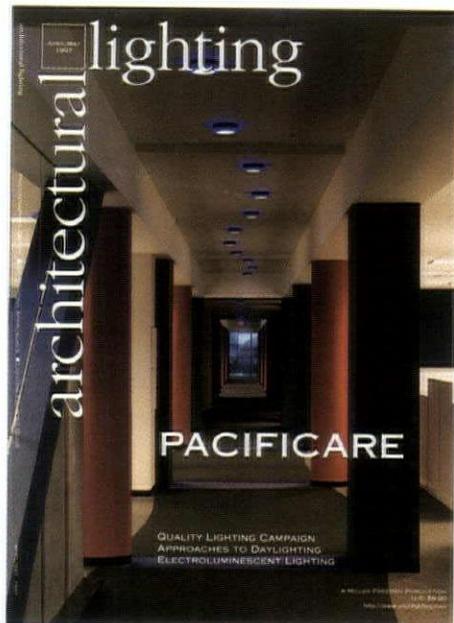
Welcome to the April/May “Lightfair” issue of *Architectural Lighting*, packed with design features, interviews, opinions and articles about technique and technology. Christina Trauthwein and Emilie Sommerhoff bring us inside several projects

including the PacificCare Customer Service Center; Mexico’s Santa Engracia Hospital; the Columbus Center, a marine research facility; Seattle’s ACT Theatre; and the Stratosphere Tower in Las Vegas. We also interview Jules Horton in this issue’s Insights, and cover daylighting techniques, capturing projects on film, and specifying fluorescent lighting in residential interiors. We’re also excited to present a new high-end residential fixture line, a product gallery and two innovative new technologies—a light conveyance system and electroluminescent lighting.

In coming weeks, look for a new fifth issue of *Architectural Lighting* in a tabloid size that will present a comprehensive product guide and articles about the supply side of our industry. A vast majority of our readers wanted more product information, and we think you’ll find the new Spring Product Issue extremely useful to keep up with what’s new.

As always, thank you for reading and we look forward to seeing you at Lightfair.

CRAIG DILLOUIE,
EDITOR-IN-CHIEF/
ASSOCIATE PUBLISHER



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GREG HURSLEY

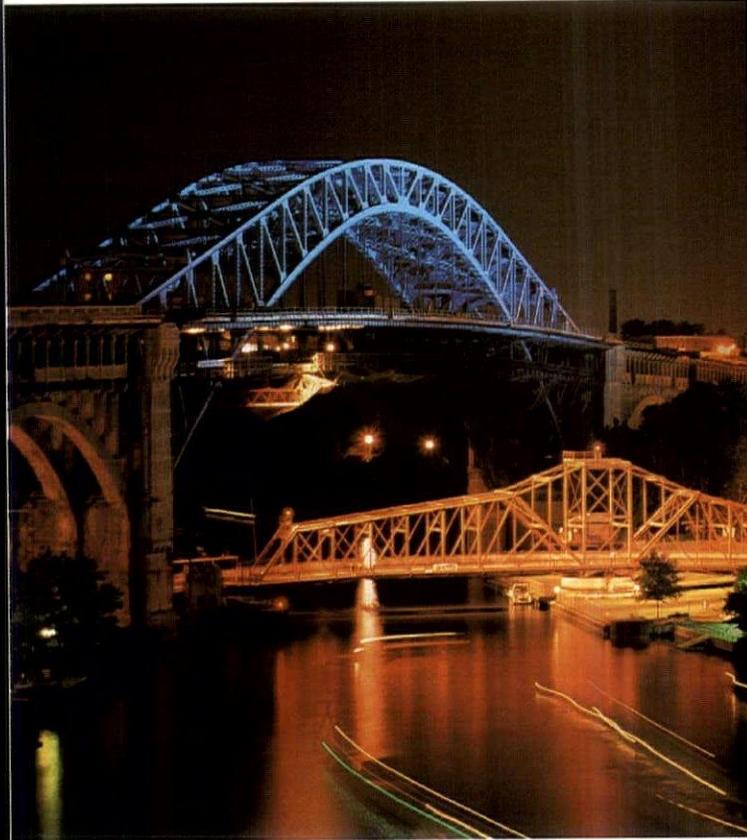
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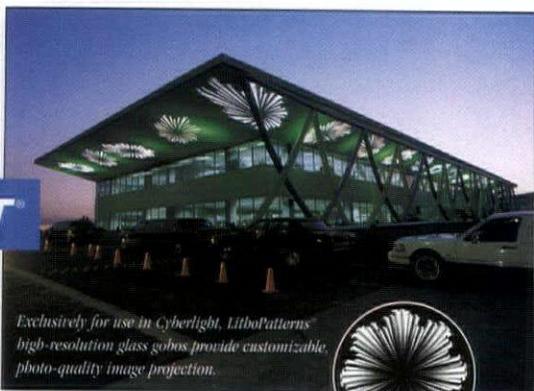


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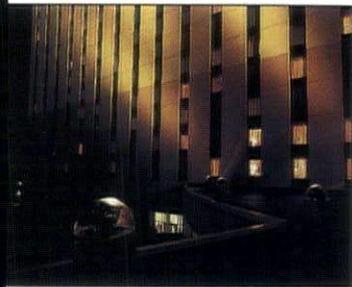


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NEW FELLOWSHIP IN LIGHTING ANNOUNCED AT LRC

The Lighting Research Center (LRC) at Rensselaer Polytechnic Institute, Troy, NY announced that Robert S. Roller, director of marketing development for Advanced Lighting Technologies, Inc. of Twinsburg, OH, has endowed a fellowship in lighting at the LRC. According to the LRC, this fellowship, named the Robert S. Roller Fellowship in Lighting, is the first endowed fellowship in lighting at a U.S. college or university.

The Fellowship will be awarded annually to the most appropriate candidate in the LRC's Graduate Education in Lighting program. Mr. Roller expressed interest in seeing the Fellowship used to support deserving graduate students at the LRC in their studies of fundamental issues in lighting and promising new lighting technologies, adding, "My career has been primarily in the lighting industry ... I wanted to do something to

support its growth and enhancement."

This Fellowship follows an endowed chair, the result of a \$1.5 million personal gift from Wayne Hellman, CEO of Advanced Lighting Technologies. The endowment supports the research and educational activities of the LRC; the Wayne R. Hellman Chair is designed to "support academic excellence in teaching and research" as well as "foster a broader appreciation of lighting by all people."

TIVOLI TO SERVE ALL OF LATIN AMERICA

Tivoli Industries, Inc. has formed its first direct international subsidiary, Tivoli de Mexico SA de CV, based in Mexico City. According to Terrence C. Walsh, president and CEO of Tivoli, the move positions the company to serve all of Latin America with specialty lighting and other lighting system products from Tivoli.

OSRAM SYLVANIA ACHIEVES ISO CERTIFICATION AT 22 SITES

Following the recent completion of the ISO certification efforts at its St. Mary's, PA and Juarez, Mexico manufacturing locations, Osram Sylvania has achieved ISO certification at its 22 manufacturing plants in North America.

ISO certification proves to customers that a facility meets the quality systems requirements set by the

International Organization for Standardization, based in Geneva, Switzerland.

The lighting and precision materials manufacturing factories, located throughout North America, were certified to either the ISO 9001 or 9002 series. In addition, the company's Automotive Lighting plants have been registered under both ISO and QS9000,

the quality system standard recognized by Ford, Chrysler and General Motors and by truck producers. Also certified under ISO standards are Osram Sylvania's National Customer Support Center; its Canadian headquarters, distribution center and sales offices; as well as several locations of Sylvania Lighting Services.

PHILIPS' OUTDOOR LIGHTING FIXTURES WIN DESIGN AWARD

The ID Annual Design Review has honored the Philips LightColumn range of outdoor lighting fixtures with their 1996 Design Distinction Award in Equipment. The product incorporates Remote Source Technology (RST), which

transports light using Optical Light Film to the top of the lamppost from a source located at its base. Light can also be emitted through slots or holes located on the side of the lamppost, providing for limitless lighting effects.

INTERPLAN '97 MOVES SHOW UP ONE DAY—TO OCTOBER 29-31

InterPlan '97 has been moved up one day and will now take place on Wednesday through

Friday, October 29-31, 1997 at the Jacob Javits Center in New York City. The decision to change the

show dates was based on the labor savings to exhibitors if the show closes on a Friday. The availability

of dates for the successful MET Gala, which kicked off the show last year, was also a factor.

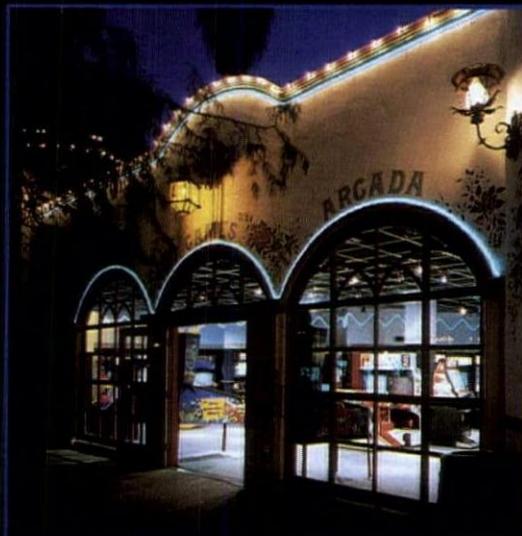
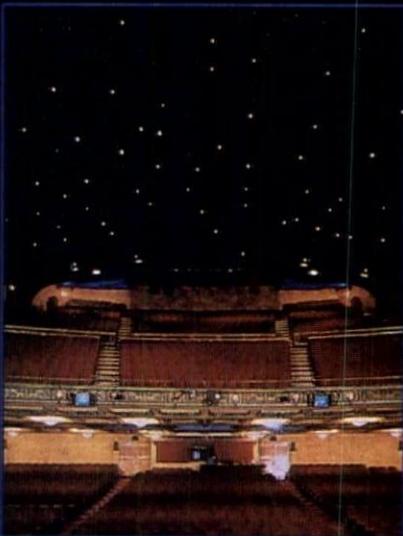
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PRESCOLITE EARNS DOE AND EPA DESIGNATION

Prescolite Emergency, a division of Prescolite, has earned the U.S. Department of Energy's (DOE's) and the U.S. Environmental Protection Agency's (EPA's) new Energy Star Partner designation for a range of products that meet stringent Federal guidelines for energy efficiency. The voluntary program, started in September 1996, covers exit signs, which are the first lighting products to join the labeling program that began in 1993. The program includes electrical appliances, and heating/cooling and office equipment. Products awarded the designation include the company's PEX thermoplastic LED exit, Lite Plate Diecast LED exit and Edge Lit LED exit.

MAGNETEK LAUNCHES INFOCENTER

MagneTek, a manufacturer of ballasts, has combined its corporate information center with its product information center.

This move was initiated to conveniently accommodate customers requesting company information. The new unified

MagneTek Corporate InfoCenter, located in Nashville, TN, will expedite the company's ability to fulfill requests.

MOTOROLA LIGHTING RECEIVES ISO 9001

Motorola Lighting Inc. (MLI), a wholly owned subsidiary of Motorola Inc., recently

achieved ISO 9001 certification. ISO 9001 certification recognizes MLI's quality system

that supports the design, production and servicing of its electronic ballasts.

BATIMAT NORTH AMERICA TO RUN CONCURRENTLY WITH INTERPLAN

The dates of the new Batimat North America have been rescheduled. The event will now be held October 29-31, 1997 in conjunction with InterPlan. Both shows will be held at New York

City's Javits Convention Center. Adjoining InterPlan, Batimat will focus on the full spectrum of the commercial and residential construction market.

"With InterPlan's established

reputation and Batimat's record of success in Europe, we expect the show to answer a strong need in our industry," said David Nussbaum, senior VP of Miller Freeman, which produces the show.

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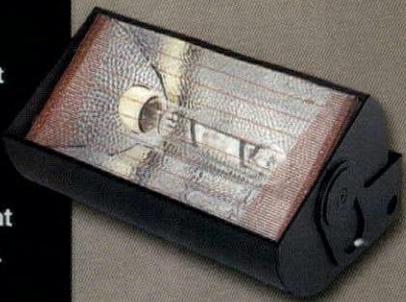
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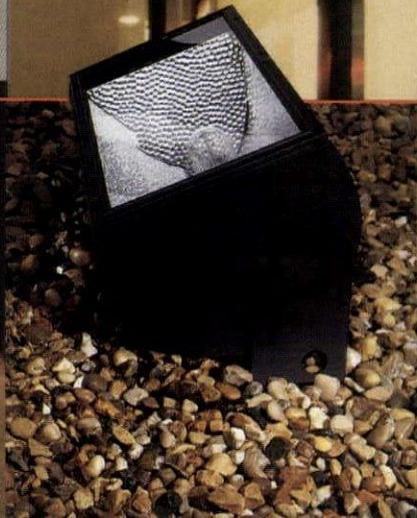
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10400 North Enterprise Drive
Mequon, WI 53092

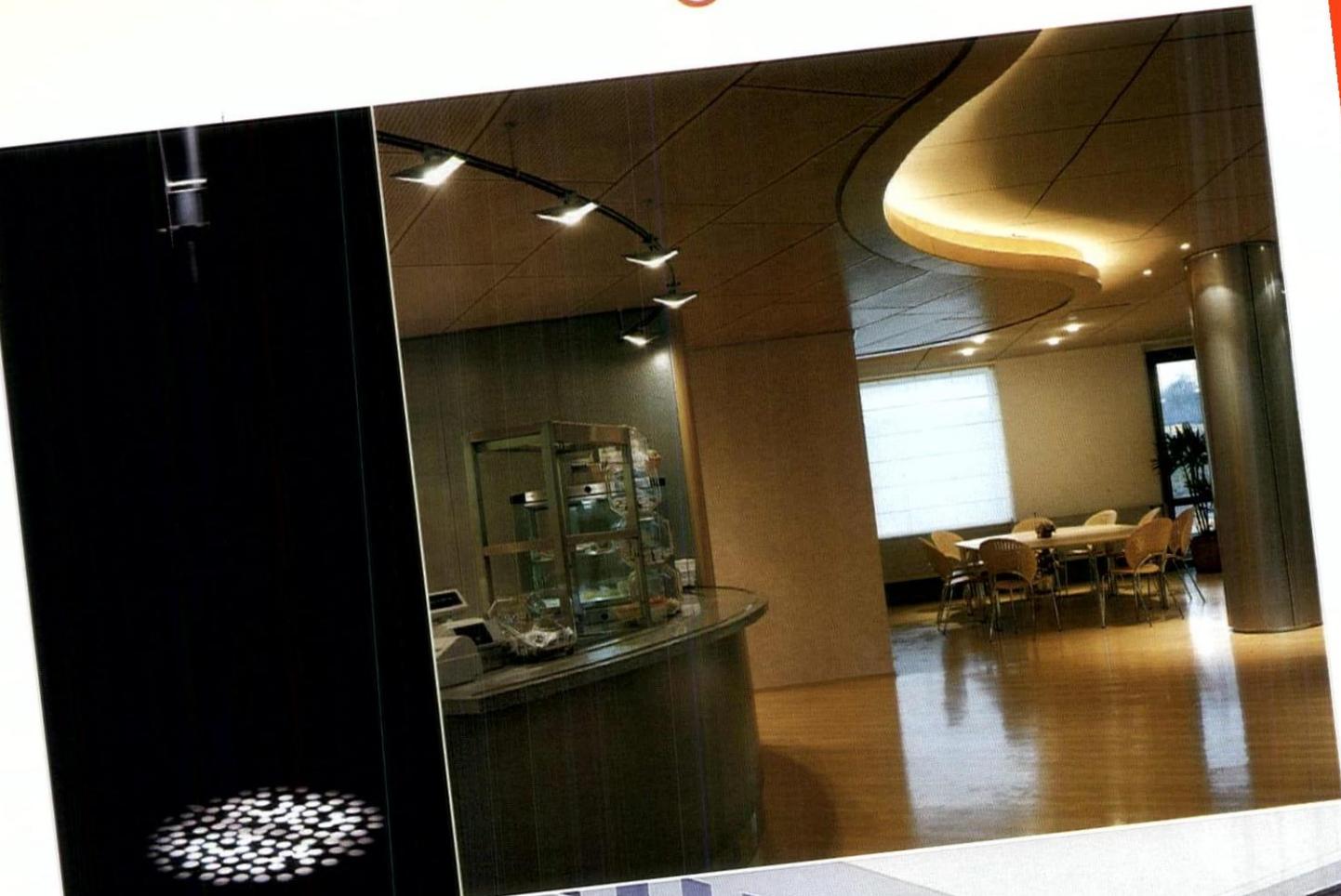
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414 242 6414 FAX
Call, write or fax for information

Circle No. 12 on product service card



SPI





Top left, right: The premium line of low voltage lighting—Clikstrip™, track and specialty downlighting. JJI now enables Ardee Lighting, its latest acquisition, to bring an even greater array of breakthrough products to market.

Lower left, right: Fresh, Euro-inspired design solutions. Unique, indirect outdoor area lighting. These and more from .hessamerica, JJI's new alliance with Hess Form + Licht—a leader in contemporary concepts introduced abroad.

+ ALKCO + ALL + d'ac + GÜTH + VISTA + *Nessen* + MORLITE
+ HIGH-LITES + LAM + *Quality* + SPECIALTY: JJI Lighting Group



Join
the Group
(and assert your individuality)

You work alone. Or alongside hundreds. Yet each of you is singular. Invariably, it is your design, your spec, your requirement that matters. And we notice it is seldom a desire to conform, but rather one to excel, which brings you our way.

Not so strange, then, that JJI thrives on individuality—vigorously defending and growing our companies' own identities.

In this spirit, we welcome new alliances with Hess Form + Licht and Ardee Lighting... and invite you to meet all of our Group members at Lightfair, Booths 201 and 343.

Here, you'll find provoking new concepts under the banners of Alkco, LAM, d'ac, Quality and colleagues. But not a one named JJI.

All we do is add the strength of numbers. To some very extraordinary individuals.

 *When it takes vision*

JJI LIGHTING GROUP, INC.
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Circle No. 13 on product service card

JJI SIGNS AGREEMENT WITH HESS FORM+LICHT

JJI Lighting Group, Inc. has announced a long-term agreement with Germany's Hess Form+Licht to manufacture and market the company's specification-grade lighting products throughout North America.

New products to be launched by JJI in North America as a result of the agreement include

outdoor, landscape and indoor fixtures as well as outdoor furniture and accessories.

The announcement was made by Robert N. Haidinger, president and CEO of JJI. As a result of the agreement, JJI has formed Hess-America as its 14th subsidiary. Operations are being set up in Shelby, NC.

HERON TASK LIGHT WINS AWARD

The Heron asymmetric task light introduced by Luxo Corporation at Lightfair 1996 has won the "Good Design" award from the Chicago Museum of Architecture and Design, known as the Chicago Athenaeum. Heron will enter the Museum's Permanent Design

Collection and will be featured in an exhibition. Winning entries were judged by an independent panel of architects and designers selected by the Museum. Heron, designed by Isao Hosoe, was inspired by the heron bird. It is characterized by a curved, slender shape.

FII FOCUS INDUSTRIES MOVES

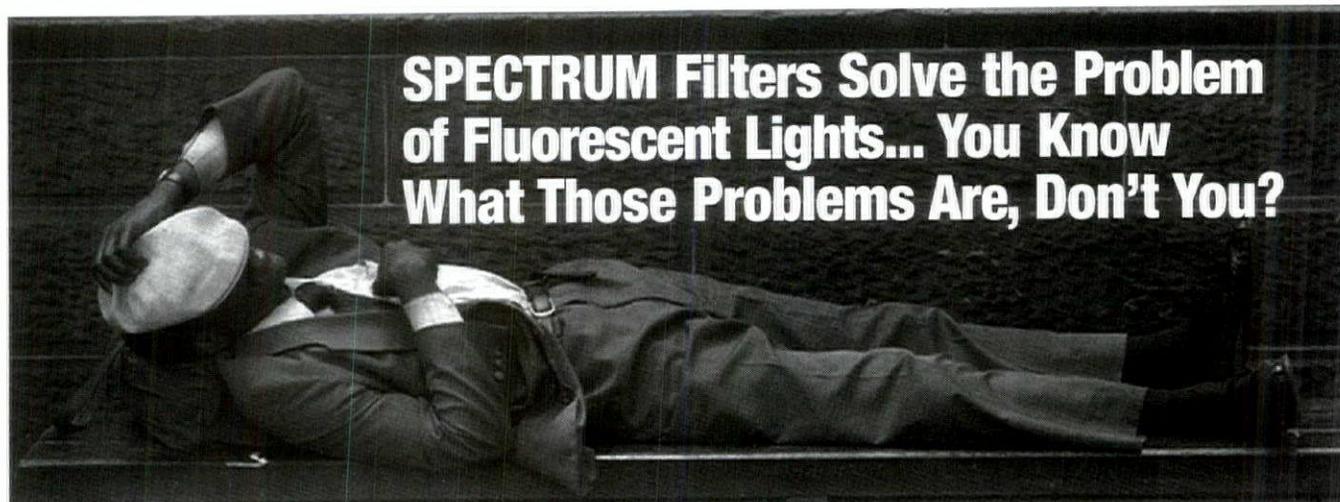
Fii Focus Industries, Inc., a manufacturer of landscape lighting, has moved to a new, larger facility in Lake Forest, CA. According to the company, the new facility will provide training capabilities for speci-

fiers and contractors, as well as offer a demonstration room. The exterior landscape of the facility will be used as an outdoor laboratory demonstrating products and techniques in a real setting.

AR5 WINS LIGHTING INNOVATION AWARD

Irideon's AR5 interior wash fixture has been awarded the 1997 Lighting Innovation Award by the German-based VIA-Light yearbook (Magazine for Innovation in Architecture). Supported by the European Lighting Designers' Association, the VIA publication presents the award for the most

innovative and creative lighting ideas. Criteria include technical quality, design appeal and the product's effectiveness as a tool for the professional lighting designer. The AR5 also received the Best of New Product Showcase Award at Lightfair 1996 (see July/August 1996 *Architectural Lighting*).



SPECTRUM Filters Solve the Problem of Fluorescent Lights... You Know What Those Problems Are, Don't You?

Yes, fluorescent lights are economical. But...

- Their economy comes from putting out light with unnatural color distribution, forcing our eyes to adjust to the light and to keep adjusting all day long.
- Their economy results in putting out light that is highly prone to glare, especially on the surfaces of computer displays.
- Their design results in the generation of ultraviolet. And who needs more UV?

The result is lowered productivity, reduced visual comfort in the workplace, and even increased absenteeism. These are the problems of fluorescent lighting.

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- They reduce indirect glare, making computer screens and reflective surfaces easier to work with.
- They absorb virtually all of the ultraviolet coming from fluorescents.

They install in minutes, and they're guaranteed for 10 years. And your investment is far less than other methods of providing full spectrum lighting.

The choice is clear. Fluorescent lights for economy. SPECTRUM Filters for human factors – so we can all live with them.



For more information: **1-800-WELL-LIT**

<http://www.spectranomics.com/spec>

Circle No. 14 on product service card

SCHOTT EXPANDS FIBER-OPTIC ACTIVITIES

The Schott Corporation of Yonkers, NY and Chicago Miniature Lamp, Inc. of Canton, MA have formed a joint venture company to expand their respective fiber-optic activities in North America. The new company is called Schott-CML Fiberoptics, Inc. and will be located in Marlborough, MA.

The joint venture will combine the present North American cus-

tomers bases, engineering and manufacturing resources and the talents of Schott Fiberoptic Division, Wiesbaden, Germany; Schott Fibre Optics (UK) Ltd., Doncaster, UK; and CML Fiberoptics, Inc., Marlborough, MA.

Schott-CML Fiberoptics will manufacture non-telecom fibers and products to service a range of markets, including architectural lighting.



LUMIERE WINS AWARD FROM DESIGN JOURNAL

Among the winners of Design Journal's 1996 ADEX Award (Award for Design Excellence), in the lighting category, is Lumiere Design & Manufacturing's Coronado 720, a landscape light fixture that combines the most recent advances in metal halide technology with design.

The Coronado 720 features a patent-pending mounting stem with a unique mechanism that ensures secure fixture aiming capabilities. The locking mechanism also makes vertical adjustment easy and has a simple-to-use setting swivel that assures fast horizontal adjustment and fastening of the fixture.

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LIGHTOLIER®

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IALD AWARDS PRESENTATION

In addition to exhibits and seminars at Lightfair, a special event of note is the 14th annual IALD Lighting Awards presentation dinner, cosponsored by the International Association of Lighting Designers (IALD) and *Architectural Lighting* magazine. This year's winners, among 100 entries, will be awarded on April 30 at New York City's historic Town Hall; a cocktail reception and dinner party will be held at Laura Belle, a New York City supper club. Tickets are \$95 and can be purchased through Lightfair registration by calling (800) 856-0327, or by faxing (214) 248-8700.

Judging for the IALD awards was held on February 7 at the offices of *Architectural Lighting*. Respected professionals from the architecture and lighting design communities judged the entries on their aesthetic and technical merits. Complete coverage of the winning submissions will be covered in the July/August issue.



1997 LIGHTFAIR PROGRAM ANNOUNCED

The annual Lightfair International trade show and conference will be held April 29-May 1 at the Jacob Javits Convention Center in New York City.

Exhibit hours for the show are 10:00 am-6:00 pm, Tuesday, April 29

and Wednesday, April 30, and 9:00 am-3:00 pm, Thursday, May 1.

Following is a conference program of seminars and workshops, as well as some of the special events to be held before and during the exhibition.

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MONDAY, APRIL 28
Pre-Show Workshops

9:00 am-3:30 pm

- "Inside/Outside—Landscape Lighting for Exterior & Interior Applications"; speaker: Janet Moyer, IALD, IES
- "Lighting Evaluation and Audits"; speaker: John Fetters, IES, AEE
- "Lighting Techniques for Residential and Commercial Spaces"; speaker: Randall Whitehead, IALD
- "Compressed Lighting"; speaker: Gary Steffy, FIALD, IES

5:00-8:00 pm

- New York At Dusk: An Architectural Lighting Boat Tour, hosted by Barbara Horton, IALD and Stephen Lees, FIALD, IES

TUESDAY, APRIL 29

8:30-10:00 am

- New Product Showcase, sponsored by *Architectural Lighting & inter.Light*; presenters: Gary Dulanski, IES and Craig Roeder, IALD, IES

10:30 am-12:00 noon

- "Daylighting in Architecture: A Look at the Future of Greener Environments"; speaker: Lori Garcia, IES
- "Rooms With a View: Lighting Kitchens and Baths"; speakers: Drew Atherton, ASID, DLF; Peter Coxe, AIA; Michael Eberle; Susan Frenette, IES; Jeffrey Sladen, AIA
- "The Can Can!"; moderator: Janet Groeber, IES; speakers: Jeffrey Bucar, IES; Daniel Gelman, IES; Gilbert Lang Matthews

12:15-1:45 pm

- Richard Kelly Luncheon, presented by IES, NY Section

2:00-3:30 pm

- "How Utility De-Regulation is Affecting the Lighting Industry"; speakers: Lindsay Audin, IES, AEE, APEM; James Benya, P.E., CLEP, IALD, FIES; Peter

- Jacobson, IES, EPRI; Willard Warren, P.E., IEEE, T.B.P., IES
- "Theatrical Lighting Techniques for Non-Theater Environments"; speakers: Kevan Shaw, IALD, ELDA; Theo Kondos, IES, DLF, ASID; Stefan Graf, IALD, IES
- "The Source, of Course!"; moderator: Janet Groeber, IES; speakers: Robert Horner, IES; Rochelle Kimball, IES; Roy Sierlaja, IES
- "Lamp & Lighting Systems Update"; speakers: Lance Bennet, IES; William Lee; Sally Sledge, IES

3:45-5:15 pm

- "Lighting For Healthcare/Institutional Facilities/Assisted Living"; speakers: Eunice Noell, IES; Robert Dupuy, IES, IALD
- "Hooked on Photonics!"; moderator: Mark Kruger; speakers: Jack Calmes; Richard Green, IES; Hyla Lipson; Tama Star

6:00 pm-

- Designers Lighting Forum (DLF) of New York Benefit Cocktail Reception

WEDNESDAY, APRIL 30

8:30-10:00 am

- "The New Era of Controls"; moderator: Gary Dulanski, IES; speakers: Don Munroe; Mike Ostaffe, IES
- "Lighting Revitalization for Main Street"; speaker: Robert Prouse, IES, IALD
- "The Designer's Forum"; moderator: Janet Groeber, IES; speakers: David Apfel, IALD, IES; Chip Israel, IALD, IES; Mark Kruger

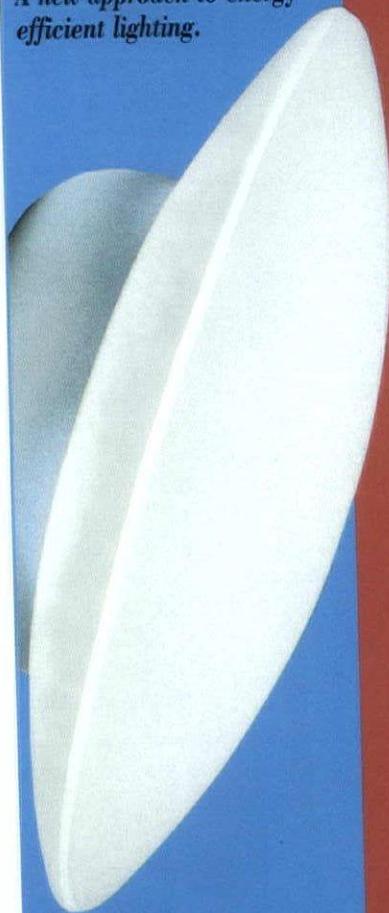
10:30 am-12:00 noon

- "Lighting Legislation and its Effects on Design"; speakers: Joanne Lindsley, IALD; Jim Yorgey, IES, IEEE
- "Theatrical Lighting Techniques for Themed Environments"; speakers: Michael Finney, IES; Patrick Gallegos, IALD, IES, DLF; Robert J. Laughlin, IALD, IES, AIA

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• "Understanding Your Client's Needs"; speaker: Brad Bouch, AIA, IIDA

12:15-1:45 pm

• The Nuckolls Fund for Lighting Education Luncheon and NCQLP seminar
 • U.S. EPA Green Lights & Energy Star Buildings Presentation: "Energy-Efficient Lighting: Part of a Smart Buildings Solution"; speaker: Maria Tikoff

2:00-3:30 pm

• "HID Sources & Their Characteristics That Affect the Designer"; speaker: Edward Effron, DLF, IES
 • "Video Communications"; speaker: Renee Cooley, IES
 • "Specifying Internationally"; speakers: Clara Powell, IES; Cynthia Turner, IES

3:45-5:15 pm

• "Realistic Interpretation & Application of Photometrics"; speakers: Peter Franck, IES; Maarten Mulder

• "International Lighting Cultures"; speakers: Tony J. Adams, IES; Motoko Ishii, IALD, IES, CIE; Jonathan Speirs, IALD, IES
 • "Painting With Light"; speaker: Leni Schwendinger

6:30 pm-

• IALD Awards Presentation and Dinner, cosponsored by *Architectural Lighting* magazine

THURSDAY, MAY 1

8:30-10:00 am

• "Color Rendering Effects on Productivity & Visibility"; speakers: Nancy Clanton, PE, IES, IALD; David Nelson, AIA
 • "Indirect vs. Direct Lighting Quality"; speaker: Stephen Margulies, IALD, IES

• "Details: How They Did It!"; speaker: James Benya, P.E., CLEP, IALD, FIES

10:30 am-12:00 noon

• "Alternative Light Sources"; speakers: Terry McGowan, IES; Ric Barton
 • "Pros & Cons of Reflector Inserts in Retrofit Applications"; speaker: Paolo Minissi
 • "Integrating Lighting & Architecture"; speakers: Charles Thompson, IALD, IES, AIA; Sarah Gibson, IES, TAID

2:00-3:30 pm

• "Non-Visual Effects of Lighting: Physiological & Psychological"; speakers: Dr. Craig Bernecker, USNC-CIE; Dr. George C. Brainard, IES, USNC-CIE
 • "Using Lighting Controls Creatively"; speaker: Rogier Van Der Heide, ALD, VP, NSVV

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SCHEDULED EVENTS IN 1997

April 16-17 Buildings/New York, New York Coliseum, New York City; (203) 840-5608.

April 16-18 "Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

April 21-25 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

April 23-25 "Lighting Fundamentals II: Design Basics & Applications," Cooper Lighting; (847) 956-8400.

April 28-May 1 Lightfair International, Jacob K. Javits Convention Center, New York City; pre-show conference, April 28; trade show conference, April 29-May 1; (800) 856-0327; international subscribers call (972) 620-3036.

April 30 IALD Awards Dinner, Laura Belle, New York City; (212) 206-1281.

May 5-6 "Museum Lighting," GE Lighting, Cleveland; (800) 255-1200.

May 7-9 "Lighting Fundamentals I: Lighting Basics," Cooper Lighting; (847) 956-8400.

May 7-11 Environmental Design Research Association conference, "Space Design and Management for Place Making," Montreal; (514) 330-4863.

May 12-14 "Lighting for Office Buildings," GE Lighting, Cleveland; (800) 255-1200.

May 20-July 8 Live via WisView teleconferencing, "Intermediate Lighting Design: A Practical Course for Non-Electrical Engineers," College of Engineering, University of

Wisconsin, Madison, WI; (800) 462-0876.

May 19-21 "Lighting Essentials," Osram Sylvania, Danvers, MA, (508) 750-7464.

May 28-30 Conference for consulting engineers, lighting designers, sponsored by GE Lighting, Cleveland; (800) 255-1200.

June 2-3 "Retail Lighting Seminar," Philips Lighting, Somerset, NJ; (908) 563-3000.

June 2-6 "Fundamentals of Commercial & Industrial Lighting," GE Lighting, Cleveland; (800) 255-1200.

June 9-11 Neocon, The Buildings Show, The Merchandise Mart, Chicago; (312) 527-4141.

June 11-13 "Lamps, Ballasts & Controls: A Systems Approach," Cooper Lighting; (847) 956-8400.

June 12-13 "Healthcare Lighting," GE Lighting, Cleveland; (800) 255-1200.

June 16-19 "Lighting Design & Application Workshop," Philips Lighting, Somerset, NJ; (908) 563-3000.

June 25-27 Conference for teachers of lighting at the college and university levels, sponsored by GE Lighting, Cleveland; (800) 255-1200.

July 13-16 "Industrial Products and Application," Cooper Lighting; (847) 956-8400.

July 17-18 "Specification Products and Application," Cooper Lighting; (847) 956-8400.

July 23-25 "Fundamentals I: Lighting Basics," Cooper Lighting; (847) 956-8400.

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SULFUR LAMP Q&A

Architectural Lighting published a story about the new sulfur lamp from Fusion Lighting and a new fixture from Cooper Lighting specially designed to complement it (Jan/Feb issue,

Technology Section, "Private-Public Partnership Turns Sulfur Lamp Into Sulfur System," pages 46-47).

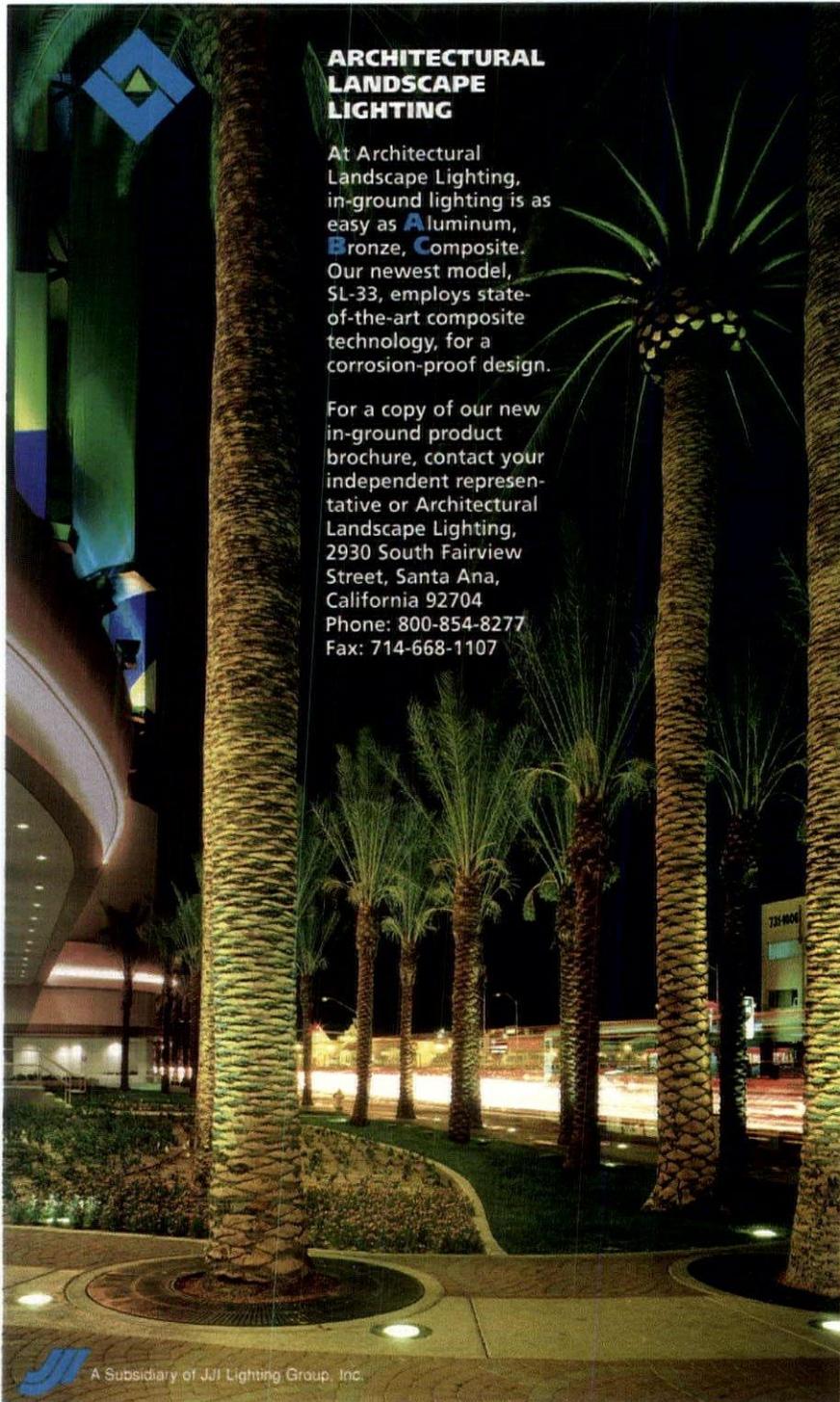
One of our readers wrote in to ask about potential microwave

leakage and radio frequency interference. We put these questions to Fusion.

According to Fusion, there is no microwave leakage. The lamp is housed inside a screen that is

opaque to microwaves but transmissive to visible light.

Steve Mule, sales and marketing director for Fusion Lighting, put the answer to the second question this way: "The sulfur lamp does not produce radio frequency interference in nearby receivers because the RFI standards that Fusion Lighting has set for its lamps is more than twice as strict as those standards set by the microwave oven industry for its products. In other words, the lamps generate less than half of the RFI generated by a microwave oven. The lamps do not kick back electrical noise into the power circuit."



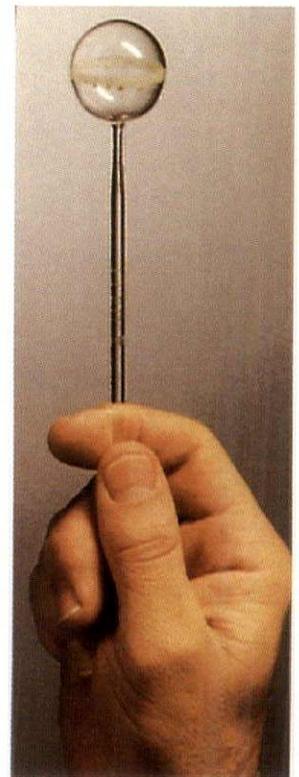
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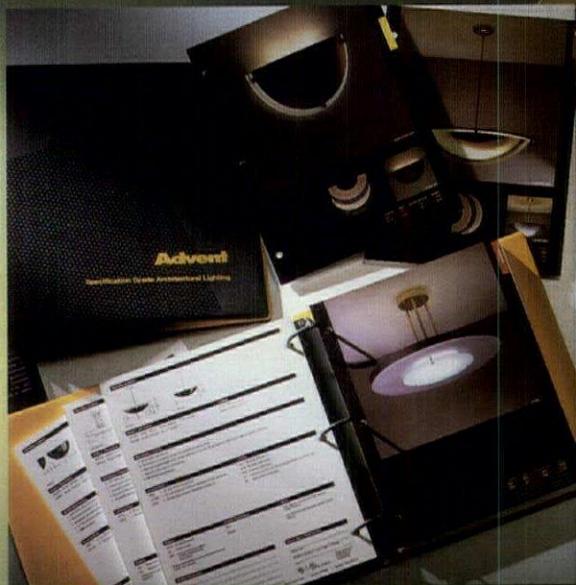


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GOVERNMENT BUILDING SAVES ENERGY

When considering a government building project, many people may think of large, dark, drab buildings with little character. While conventional and function-

al, they're not particularly appealing to the eye.

The new Foley Square Federal Courthouse in New York City, the largest federal court-

house in the U.S., redefines "government building" by focusing on aesthetics, in addition to energy efficiency. According to the judges who use the new Foley

Square building, the design of the courthouse "rivals the finest courthouses in Europe."

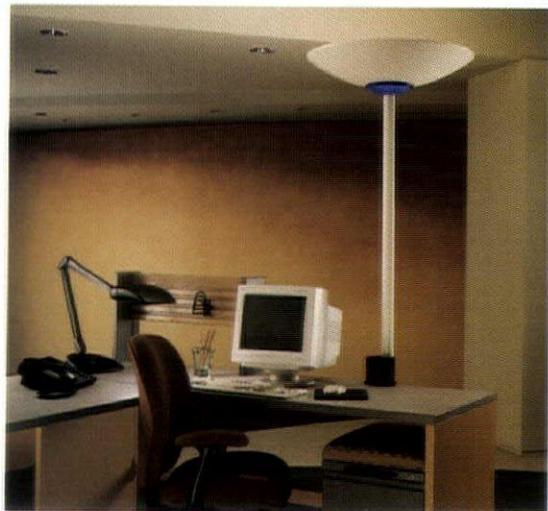
With a high emphasis on its architectural quality, Foley Square Courthouse was designed to be a significant public structure, while incorporating all the elements necessary for the operational needs of today's courts.

The courthouse was built to accommodate the needs of the Federal Judiciary, which had overgrown the facilities of the nearby existing Foley Square Courthouse, opened in 1936. The new courthouse is a 918,000-sq.-ft., 27-story tower and includes 44 courtrooms, a ceremonial courtroom, 42 chambers and associated support space for the District Court, Circuit Court, the U.S. Marshals Service and other court-related agencies.

In constructing the new Foley Square Courthouse, General Services Administration (GSA) sought to utilize energy-efficient technologies available to end users. These technologies incorporate the latest energy-efficient systems and products that would qualify for rebates from Con Edison, the servicing utility company. Originally, the building developer's design submissions did not consider the latest energy-efficient systems.

The plan submitted by GSA included the use of 11,794 T8 lamps and 4,358 dimmable ballasts instead of the originally recommended T12 lamps. The T8 lamps and ballasts consume 50 percent less energy.

The building designer originally proposed incandescent downlight fixtures throughout the judges' chambers and main lobby. GSA recommended compact fluorescents (11,567 total). The designer proposed fluorescent exit signs. GSA specified the use of LED exit signs throughout the courthouse. GSA also advised group relamping as the lights burn



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Installed in monotonous rows, most indirect lighting proves inflexible and unappealing. It fails to cut glare where most needed – on VDT screens and worksurfaces.

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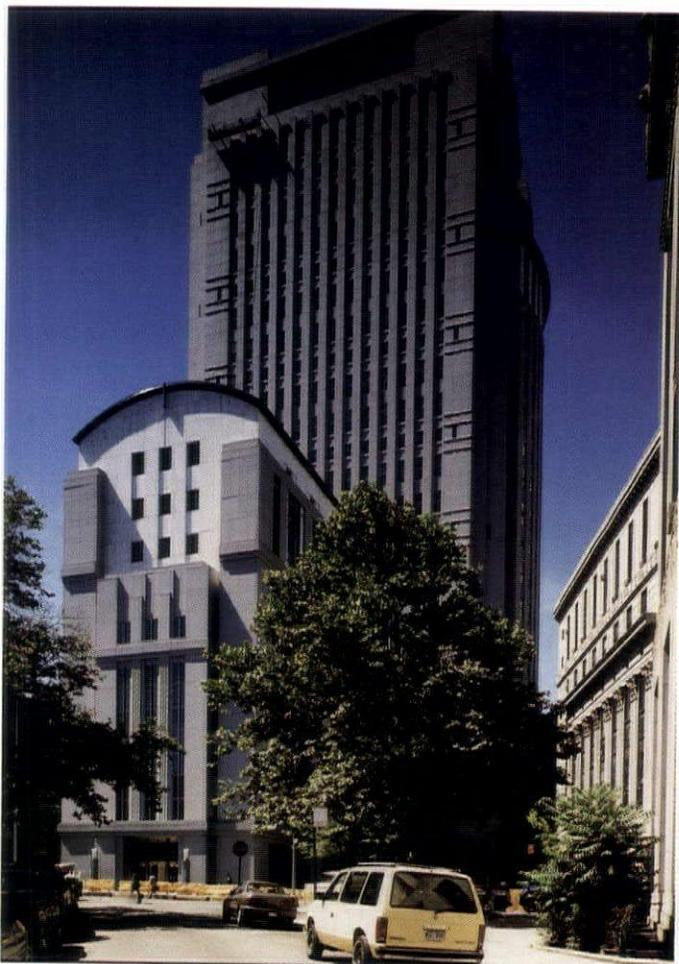
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Circle No. 22 on product service card



out, instead of spot relamping.

The new system employs 4,160 fixtures comprised of two-, three- and four-lamp fixtures with 79W-143W per fixture. Sensory lighting was also installed as a conservation feature. The annual savings from these alterations is \$321,000.

The new Foley Square Courthouse has many benefits besides its energy efficiency. Poorly lighted rooms and glare caused visual fatigue. The reduction in glare and improvement in overhead lighting enhances the visual environment for workers, alleviating visual fatigue and thus absenteeism. In addition, workers are able to accomplish more work in a more effective and accurate manner. This improves productivity and decreases the amount of recycling, which reduces the waste of source

materials and energy.

The courthouse received the Department of Energy's 1995 Federal Energy Efficiency Award; Consolidated Edison Company of New York named it an "Energy Efficient Building" under its Enlightened Energy Program and also issued a \$642,000 rebate check to GSA.

Moreover, the Foley Square received an award from the National Lighting Bureau for improving the bottom line through "high benefit" lighting; and a TOBY Award from the New York Chapter of the Building Owners and Manufacturers Association (BOMA) among other awards.

—Louis Lozito, GSA Chief,
Facility Support Branch and
Brian K. Magden, Regional
Energy Coordinator



LIGHT NOTES

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LIGHTING COURSE OFFERED

Iowa State University is offering a new course in energy-efficient lighting. Designed around the EPA's Green Lights Program, it prepares students to take the Green Lights Surveyor Ally Program.

Green Lights is the EPA's voluntary, non-regulatory program that encourages U.S. corporations to upgrade 90 percent of their facilities to energy-efficient lighting wherever profitable and wherever lighting quality is

maintained or improved.

The course is conducted through correspondence (mail, fax or e-mail) and includes a textbook, software and nine installments of course materials. At completion, each participant receives a certificate from Iowa State University along with six continuing education units (CEUs). There are no prerequisites. The registration fee is \$375; contact Connie Middleton at (515) 294-6229.

NEW CONSTRUCTION WEB SITE

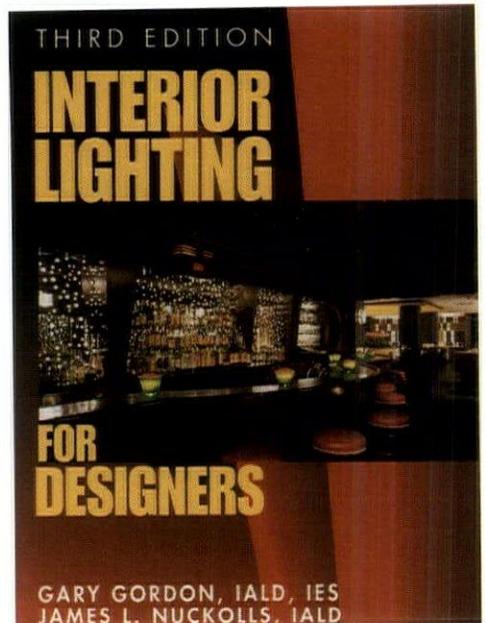
The Construction Innovation Forum (CIF), an international nonprofit organization, has launched a Web site at www.cif.org. The site will help

promote CIF and its NOVA Award, which is presented annually in recognition of innovation and quality in the construction industry.

BOOK NOTES

Interior Lighting for Designers, Third Edition (Wiley: 1995; Cloth: \$59.95), written by Gary Gordon, IALD, IES and the late James Nuckolls, IALD, addresses both why and how a particular lighting design should be used.

Completely revised and reorganized, this new edition of the classic text delivers a simplified and straightforward approach to help both the professional lighting designer and the student better understand the elements of interior lighting design.



To order a copy of the book, call (800) 225-5945 and ask for book number 0-471-50970-1.

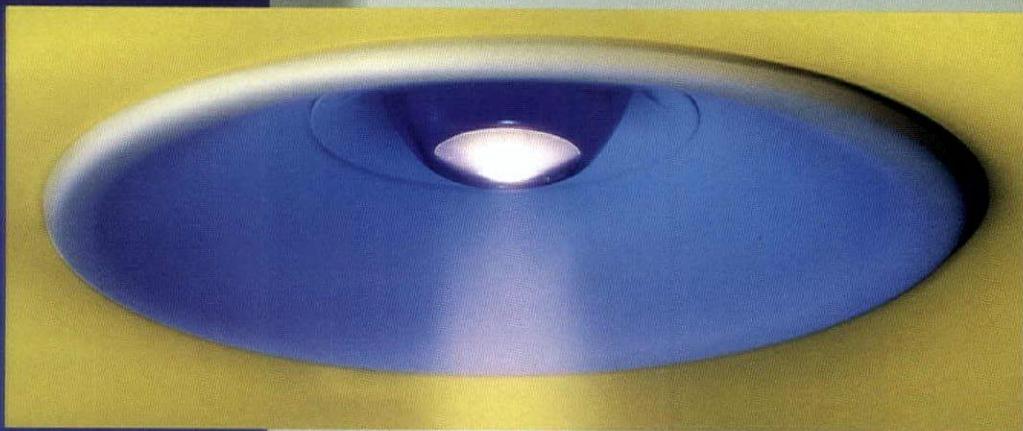
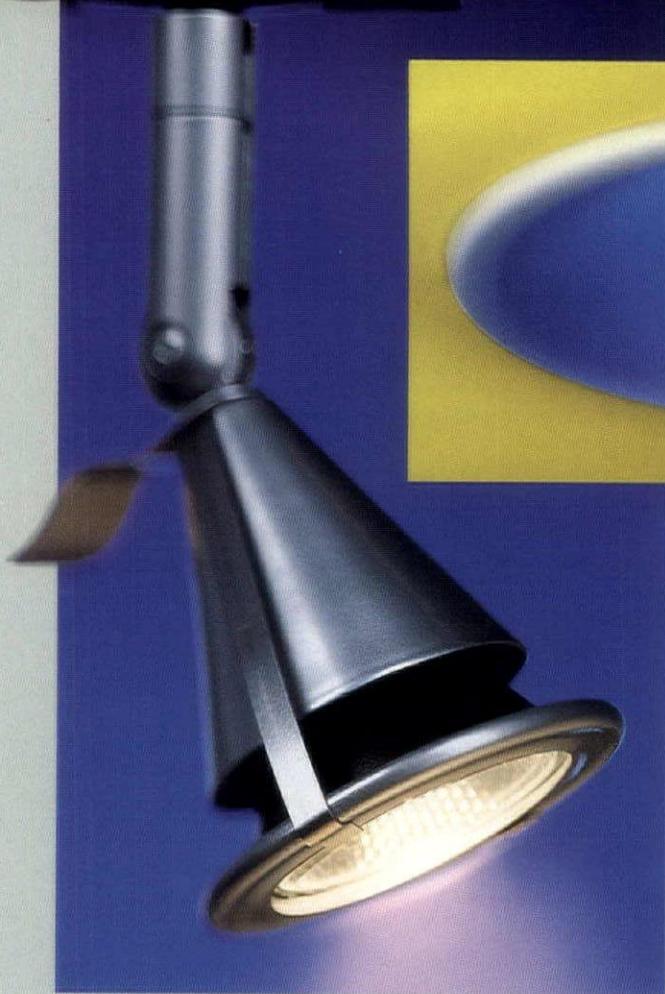
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ETL American Lighting Association Green Lights Ally

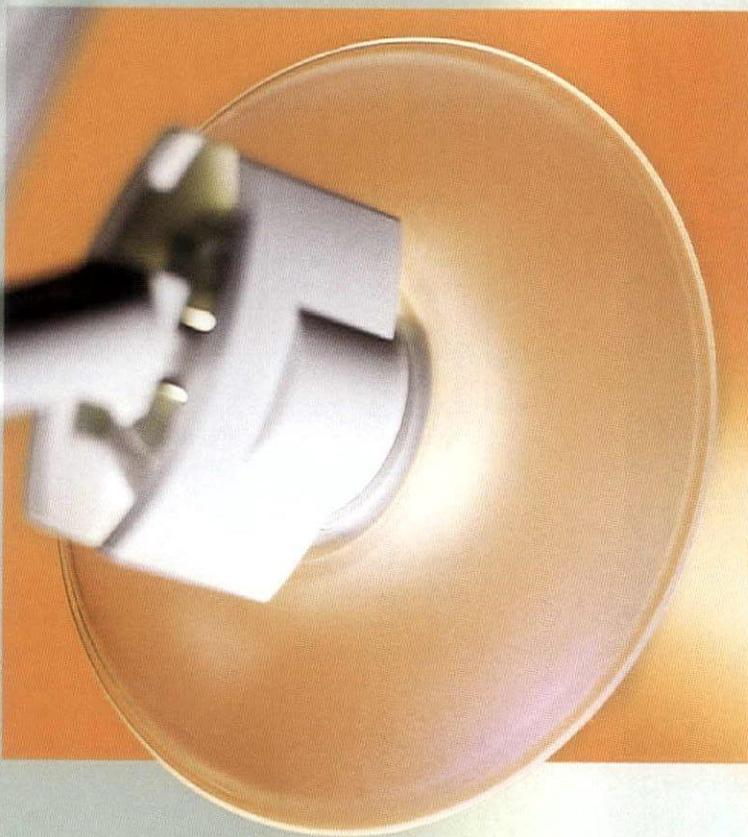
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CURRENT ELEMENTS



Clockwise from upper left: The *Ringer* spotlight, a smaller interpretation of Altima's *Cornetto*, features a lens ring clamped by two spring clips. The *Gem*, a downlight of pristine matte white, is infused

with brilliant color by frosted-glass insets. *Camba*, a sculpted

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Catherine E. Sheehan, AIA has joined Washington-based Liminality, an interior design firm, as principal.

Sheila Cahnman, AIA and **Elizabeth Rack, AIA** have been promoted to the position of associate principal of HLM, a national architecture and engineering firm.

Robert P. Domingo has been promoted to the position of associate at AM Partners, Inc., a Honolulu-based architecture and design firm.

Warren Ashworth, who has been an associate at the office of L. Bogdanow & Associates Architects for 15 years, has joined with **Larry Bogdanow** to form Bogdanow Partners Architects PC.

Timothy G. Cahill, AIA has been appointed VP of HNTB, an international consulting firm.

Jim Hooley has joined Prescolite Emergency as group manager.

J. Arthur Hatley, previously general manager of the commercial lighting division of Fiberstars, has been promoted to VP, general manager of that division.

Erich "Rick" Shuett has been appointed to the position of VP, new business development at Lutron Electronics Co., Inc.

Angie K. Marchant has been appointed to the position of national sales manager for Mytech Corporation.

Christina Mazzawi has been appointed national architectural sales manager for Illuminating Experiences.

Jac Jacobsen, founder of Luxo Corporation, passed away in his native Norway last December at the age of 95. In 1934, he launched Jac Jacobsen AS to manufacture an adjustable task light; later in the 1950s, he

developed an illuminated magnifier; in the 1980s, he developed asymmetric task lights that reduced glare. In the 1990s, the company began manufacturing indirect lighting, wall sconces and portable lights, changing its name to Luxo AS. Although unofficially "retired," he remained active in the company until the day he passed away.

Kristina Ruotolo has been named group art director for the Commercial Design Network, a division of Miller Freeman, Inc., publisher of *Architectural Lighting*, *Facilities Design & Management* and *Contract Design*.

Kimberly R. Williams, IDC, principal, director of interior design, has been named shareholder by Kling Lindquist, an architectural/engineering/interior design firm.

Steven Mesh has joined Edison Price Lighting in New York as director of lighting applications.

Lee Hedberg has been named senior applications specialist by Tivoli Industries, Inc. He will supervise all Tivoli and Targetti lighting products distributed throughout the U.S.

John Forbes, VP of marketing for the Holophane Corporation, announces his retirement after 35 years in the lighting industry. **Robert St. Germain** will replace Forbes as VP.

Donald K. Wiggins has been appointed VP of sales and marketing at the Spring City Electrical Manufacturing Company.

Joe Murphy has been named VP of marketing at Cooper Lighting.

Rod B. Lee, senior VP of sales and marketing at Lithonia Lighting, retired at the end of 1996. **John K. Morgon** will fill Lee's position.

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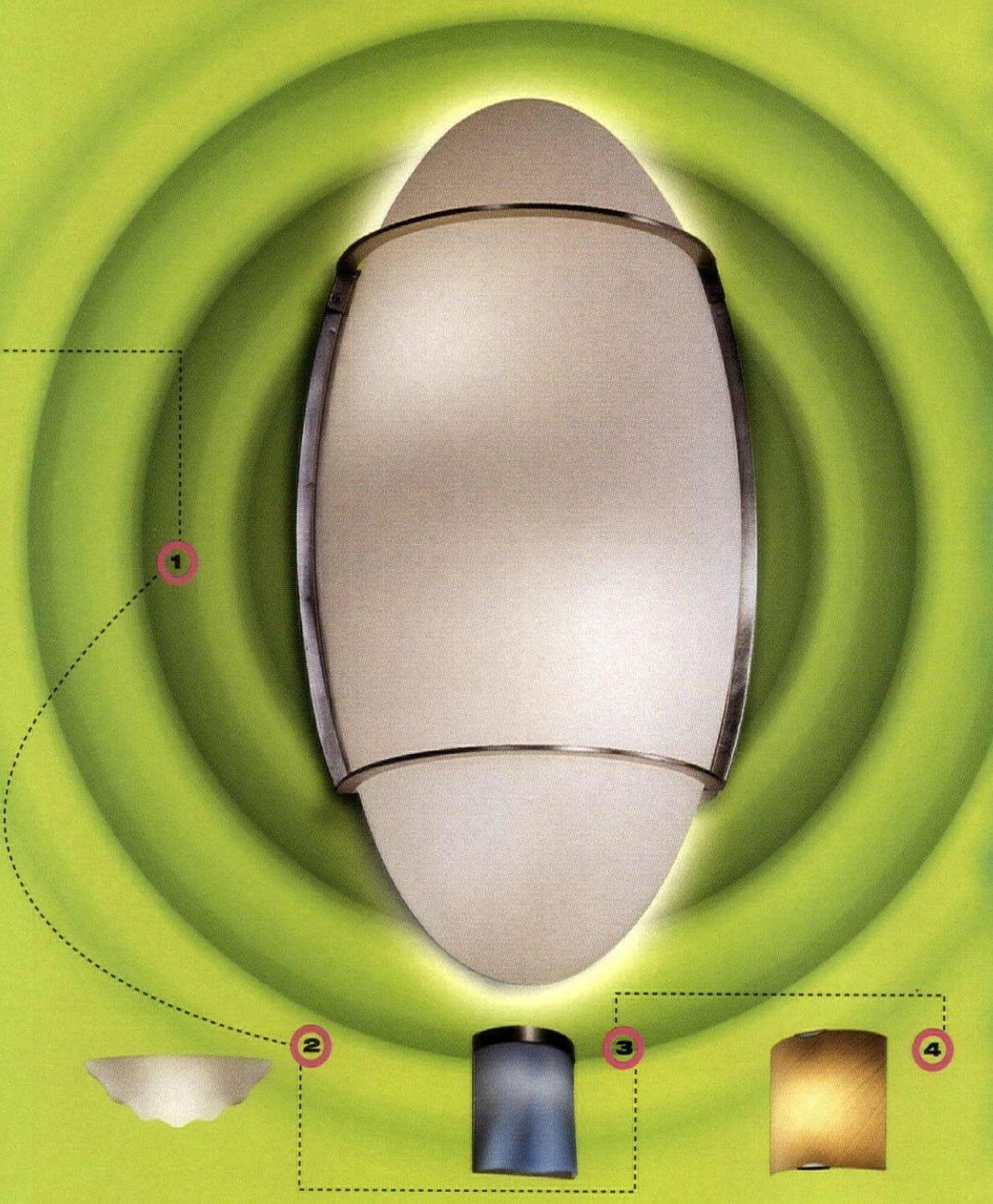
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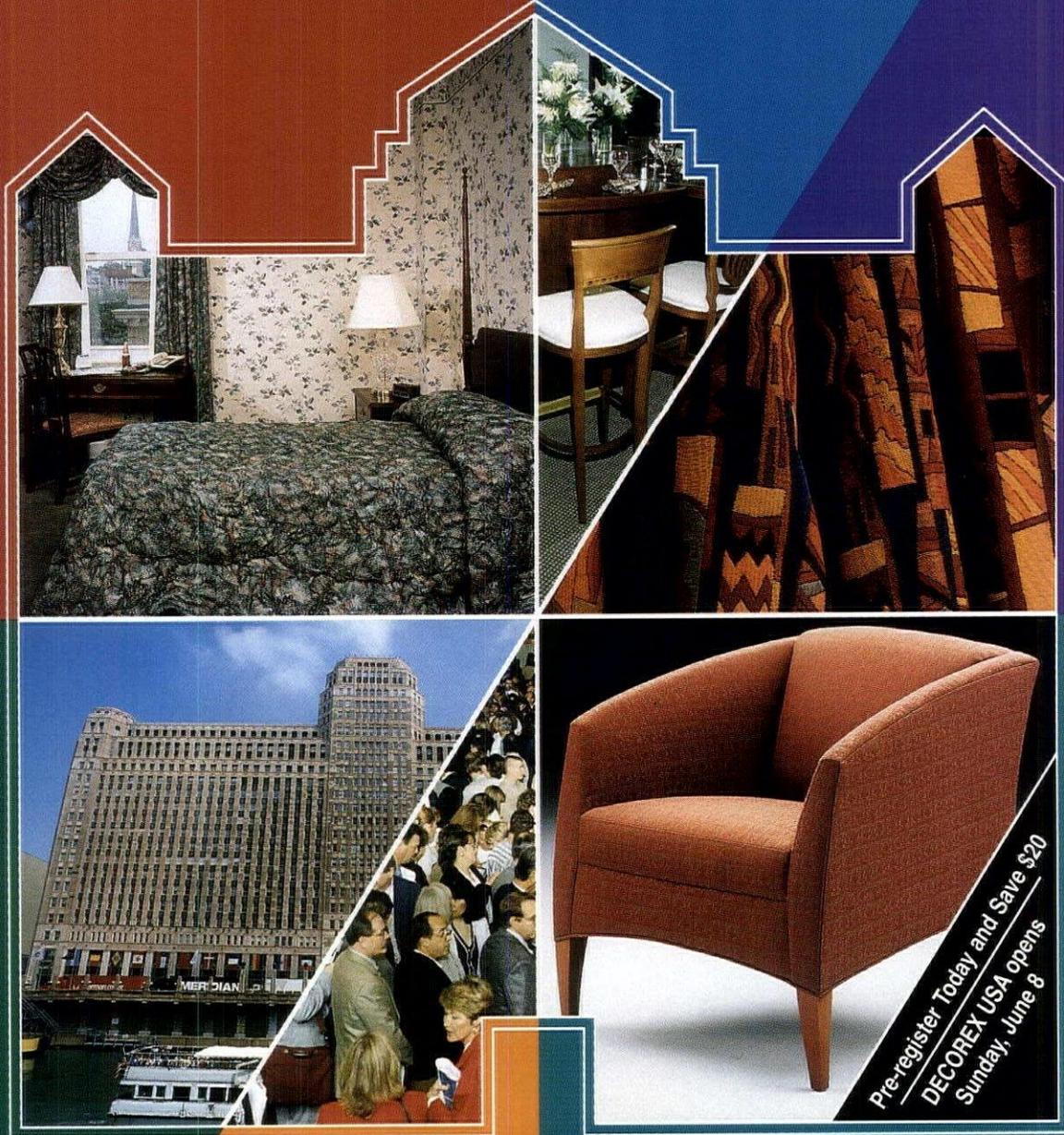
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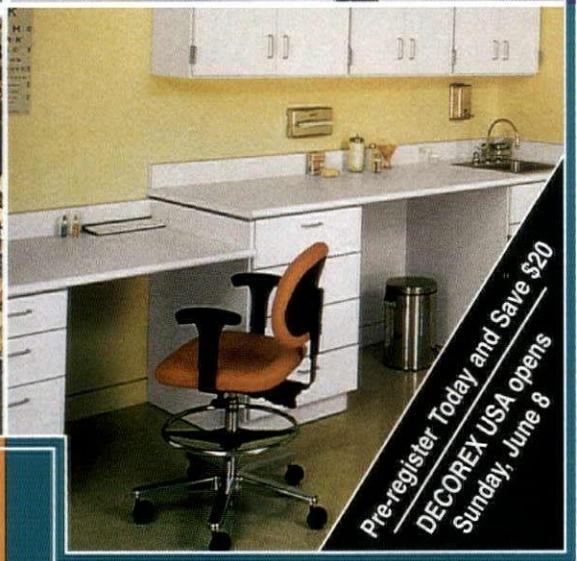
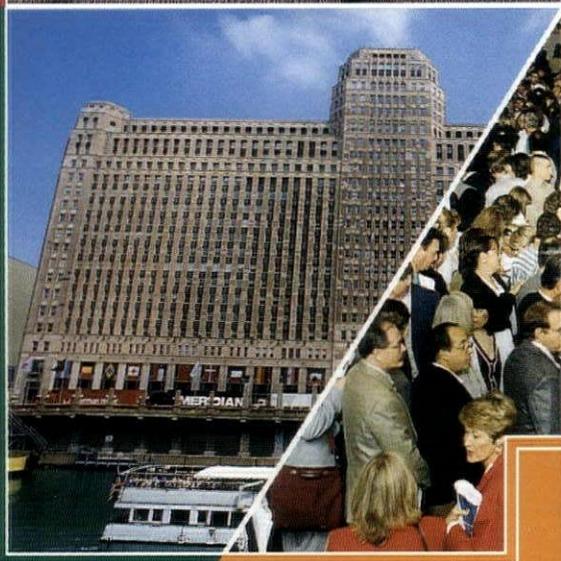
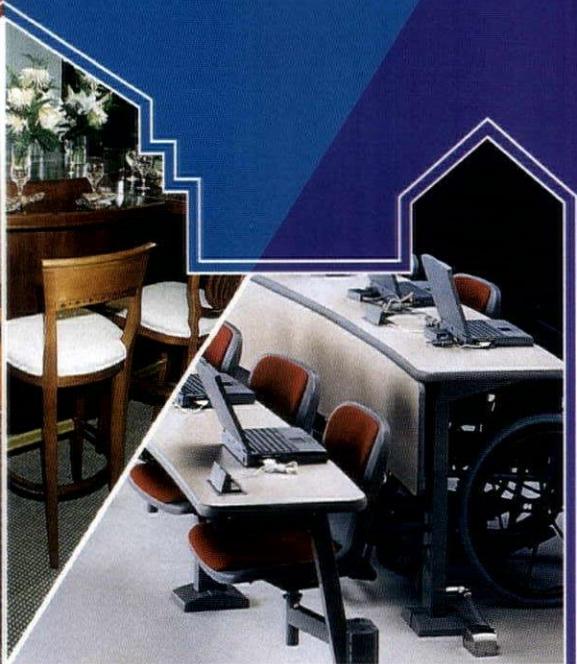
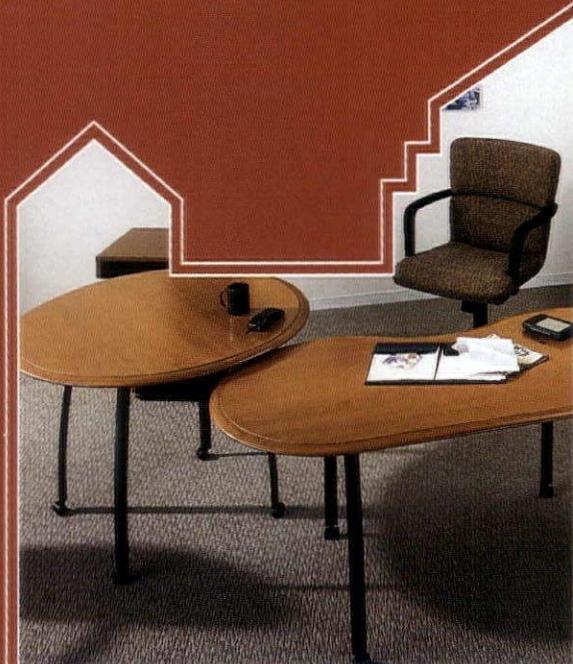
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This month, Architectural Lighting interviews Jules Horton, FIALD, FIES and inquires about his beginnings, ideas and even dreams as they pertain to the lighting industry.

After relocating to the U.S. from Poland, Mr. Horton began his career as a structural engineer, went on to study under Abe Feder for three years, worked for one of the top engineering firms and eventually started his own lighting design business in 1967. Mr. Horton is a consultant with Horton•Lees Lighting Design Inc., which has offices in New York City, San Francisco and Los Angeles, and is credited with many prestigious projects both here and abroad.

—Christina Trauthwein

AL: You began your profession as a structural engineer. What changed your focus?

Horton: I was always attracted to art and theater and everything that had to do with light. As a structural

engineer, I became frustrated by the separation of design and construction. I was interested in seeing how things were put together and worked together, so I went to work for a contractor. And that was a fantastic education—it has been serving me in my lighting design activities ever since. I know the market, the people, the clean and the dirt...

AL: Did Abe Feder have an impact on your decision?

Horton: I met Abe socially shortly after I came to the country. He came from the theater, then decided to enter architectural lighting. For a number of reasons—which I'm too modest to detail—he decided that I would be the right guy to run his firm. The problem was I knew nothing about lighting! So when he offered me a job as his chief engineer, I thought, if he's crazy enough to offer me the job, I'll be crazy enough to take it.

I worked with Abe for three years, then felt I had learned enough to be marketable. I started on my own and did a couple of nice projects.

AL: Was it always a dream to run your own business?

Horton: No. I was never really interested in having my own firm. In fact, after I went out on my own, the recognition of lighting design started accelerating and some of the engineering firms were hiring in-house lighting designers. One of the top ones offered me a job with the privilege of private practice. I spent five years with them. It was a rather harmonious collaboration.

AL: What made you decide to leave what you've termed a harmonious

relationship to once again start out on your own?

Horton: The way everything was developing. You see, the lighting designer could never become a major player within the organization. Because I represented a very important segment of work, the one that is seen, I wanted some input in company policy. And that didn't seem to be the way they wanted to go. So I parted in a friendly fashion and returned to my own practice and have been at it ever since.

AL: That was the late '60s. How has the industry changed since then?

Horton: Enormously. I'll tell you, when I started, there were very few independent

organization in the country. Very useful, but it didn't represent design. IES proposed to create a design division. We balked and were supported by the architect.

AL: How so?

Horton: You see, lighting designers should do all the lighting, and in order for them to do it, they have to have an identity, recognition. Engineers are great at their jobs, so they should stay great engineers. Pure design belongs in the hands of the lighting designer. Engineering and design work together but are not the same. Lighting design is a separate question.

AL: And this seems to be where the lighting design profession is heading.

Horton: Yes. This is the greening of America, the education of people. Let me share this with you: People are beginning to recognize that lighting plays an essential part in our lives and therefore, you need those who really know what it is. You can't just go and take your medicine by the size and color of the pills.

But right now, getting reasonably qualified young lighting designers is very difficult; everyone is employed. So now the IALD, for example, is resuscitating its intern program. It was dormant because business was slow. But we must do it and find work for at least one intern in each major firm because so many top designers came from this program. It's important to try to continue to educate people about the profession, what it is to be a lighting designer.

AL: What does that mean to you—to be a lighting designer?

Horton: That's a good question. A lighting designer is a person who first has a perception, has an innate perception of lighting. It is someone who reacts to light, who notices light. You see we all like sunny days, it makes us feel energetic and we are transformed by light. But the lighting designer is someone who harnesses these perceptions and can respond to them.

A lighting designer is someone who has to have the knowledge and understanding

(Continued on page 40)

"A LIGHTING DESIGNER
IS SOMEONE WHO
REACTS TO LIGHT, WHO
NOTICES LIGHT."

—JULES HORTON

lighting designers. As a matter of fact, when another lighting firm opened up, presenting competition, Abe [Feder] thought it was great. He said, "In order to be taken as a real profession, there have to be many more of us." He was right.

AL: And you certainly became many more.

Horton: Yes, especially with the formation of the IALD. I was always very active, and after talking with several other young lighting designers at that time, we realized that not only did we not know each other, which is bad, but obviously we were not really known outside of our group. That was the origin of the IALD.

But before that happened, I, two other lighting designers and a prominent architect had been invited to a board meeting of the IESNA.

At the time, it was the only lighting



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(Continued from page 38)

of a great many disciplines that go way beyond lighting technology. Psychology, maybe even a little medicine, engineering, construction. You don't have to be an expert in each of these, just have awareness to broaden your bases. In fact, at Horton•Lees, our motto is we are not really lighting designers, we are visual environment designers.

AL: What is your greatest achievement?

Horton: I think the ability to attract and to hold good, enthusiastic people. There's never room in the firm for prima donnas. True success is teamwork and training people so that they work together as one.

AL: Your favorite project?

Horton: The one nearest and dearest to my heart is my first one, which doesn't exist anymore. It was Yardley Salon in Rockefeller Center. First of all, it gave me the opportunity to prove to myself that I could be a lighting designer. What I saw in my mind's eye came out in a finished product. You can have something done by fluke or by accident, but this was having my vision realized. It was a landmark in my life—I proved that my dream was a sound dream.

I also like projects that need doctoring. There are times when people come to me with problem projects that just don't click, which require me to bring not only knowledge to the table, but also questions: Why did it happen? What was overlooked? What was doable and what was not? Like in medicine, it becomes your responsibility to take an ailing project and bring it back to health.

AL: How about your dream project?

Horton: The Prado in Madrid. When I first went to visit it, it was terrible. You were blinded by the windows and the reflection from them and couldn't see anything. It was an excruciating effort to really view these priceless paintings.

When I returned from Spain, I thought here is a project I really want to do because the painters and public will be served better. It was really a crime screaming for revenge. Unfortunately, I didn't follow up on it.

AL: What is your philosophy about lighting design and how do you bring it to each of your projects?

Horton: I always try to see what's unique in each project, but keep in mind that it's important for people to come first. There are really two kinds of projects. Projects where people are outside looking in and those where people are part of the visual environment. Lighting is for people, for reaction or interaction.

"WE ARE NOT
REALLY LIGHTING
DESIGNERS, WE ARE
VISUAL ENVIRONMENT
DESIGNERS."

—JULES HORTON

AL: You mentioned to me that you've been called "Mr. Maintenance."

Horton: Yes, and this remains the highest honor bestowed upon me. As a lighting designer, you are putting things on paper but some living being has to install the fixtures. Select fixtures that are not a contractor's nightmare. If they are well-designed fixtures, they won't be. No lamp lasts forever so think of the maintenance. If the fixture is difficult to reach, the space will stay dark for as long as the maintenance people can avoid fixing it.

Another thing to remember is that not everybody knows what we in the lighting profession know about lamps. Make sure that somehow you get to know the maintenance people and the building personnel. Tell them and teach them why lamps which you specified should be there always.

Let me tell you an anecdote. My second project was the expansion of Bergdorf Goodman. I was sitting in the office of the executive vice president of the store who had just signed my contract. I asked him an innocent leading question, which I very often do. "Tell me about your maintenance program," I said. He replied, "Lousy." And I said, "Okay, we'll design the lighting accordingly." What I made him hear was that we'd design lousy lighting and indeed he said, "You mean lousy lighting?" as the ink on his signature was still drying. I said, "No, not lousy lighting but a lighting system with which your lousy maintenance program will be able to cope." By that time we were friends.

AL: Do you find this to be a common occurrence, poor maintenance?

Horton: It especially happens in the retail industry, and I told him this as well. You give yourself good salaries, you pay the maintenance director a good salary and then you hire inexperienced workers. Many of them don't even speak the language, let alone know lamps. We need to educate maintenance personnel so they are loyal employees. If you think the lowest paid worker will shine your shoes as eagerly as the one who learns different polishes, then you're wrong.

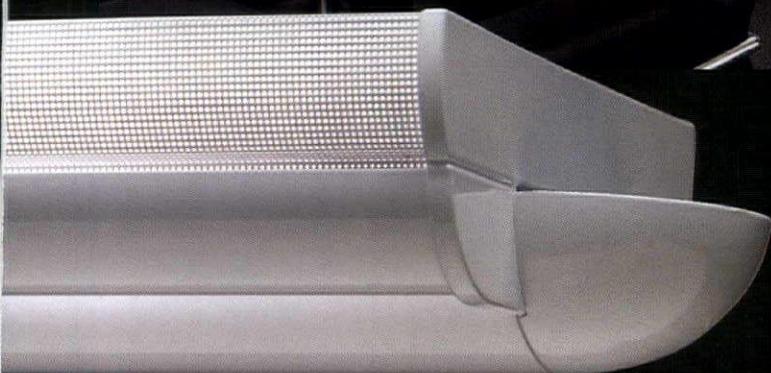
AL: For those looking to enter the field, what advice can you give them?

Horton: Lighting design does not end with the documents going out. Learn the whole politics of construction, which involves lighting. That's where the real battle begins because there are many sharks out there—many people in it for a profit who want to undermine your specifications. Understand how to defend them and who your allies are. Know all the players and know how to align yourself with those who can help you.

Also, don't necessarily go for the highest salary. Go to the firm, check around, find the reputation and look for one that will teach you, help you grow and where there is no glass ceiling. Look for a place where you can be a member of a team.

And then the last thing, always observe. The visual environment, every tree, every window is an education. Ask questions. It's free. Life is continued education. Use it.

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URBAN PLAYGROUND

Industrial Theme Inspires Children's TV Network

BY EMILIE SOMMERHOFF, ASSISTANT EDITOR

CHALLENGE Located in Times Square, the virtual heart of western urban culture, the offices of the popular television network Nickelodeon are themselves a tribute to city living.

The architectural design attempts to foster an environment of communication and connection by emphasizing public areas, while the layout of conference rooms and work zones suggests a neighborhood block. "We also wanted to capture the creative spirit of a loft space," said architect David Kau of California's Fernau & Hartman. "Fresh but rugged."

Accommodating the complex architectural theme became the primary challenge for New York-based lighting designer Karen Goldstick of Flack + Kurtz Consulting Engineers. "The lighting had to respond to the architectural vocabulary," said Goldstick. "The fixtures were another expression of the raw industrial aesthetic."

DESIGN/TECHNICAL CONSIDERATIONS Evoking the Manhattan skyline, the office complex features a series of "monuments"—three floors of stacked conference rooms that form "buildings within a building." Goldstick's task was to accentuate this concept so that one could distinguish not only each room as part of a larger structure, but its position within the structure as well.



METHOD In a traditional office, public and private areas are clearly defined, but the creative layout of the Nickelodeon headquarters required more than a sign on a door. Goldstick was able to designate the nature of the space by using incandescent lighting sparingly to feature "monuments," while fluorescent lighting serves for general illumination. The use of fluorescent, as well as a fairly low 30-35 fc in the open areas with task lighting to boost light levels at work stations, helps to keep energy use and costs down.

To emphasize the "monument" theme on each floor, the lighting designers placed fixtures relative to the top or bottom of the structure. Steplights on the first floor suggest the bottom of a building, while the upper floor uses ceiling-mounted PAR floodlights appropriate to the top of a building.

The loft-like space also required a certain aesthetic from its light fixtures. "This project took 'industrial' to a greater plateau," said Goldstick. "The fixtures had to make a statement."

Bare fluorescent striplights tucked inside I-beams heighten the architectural rawness of exposed ceilings. Vertically mounted compact fluorescent floodlights illuminate the stairwell, while high-bay warehouse fixtures retrofitted with the same source hang above work stations. Fluorescent signlighters, cast aluminum jelly jars and custom downlights using industrial strainers and drainers as decorative trim are employed throughout the space. The main conference room features a "chandelier" assembly comprised of bright yellow docklights using a PAR38 incandescent source and fluorescent striplights.

RESULT Nickelodeon wanted a non-corporate office atmosphere reminiscent of the network's early days as a 20-employee company. For an office accommodating a staff of more than 300, breaking the traditional formula was a difficult challenge. By saturating the space with common materials reinvented for the corporate work space, the design team produced an unusual atmosphere, guaranteed to foster creativity and positive energy.

DETAILS

PROJECT
Nickelodeon

LOCATION
New York City

OWNER
Viacom International/MTV
Network

ARCHITECT
Fernau & Hartman

ASSOCIATE ARCHITECT
KPF Interior Architects

LIGHTING DESIGNER
Flack + Kurtz Lighting Design
Group

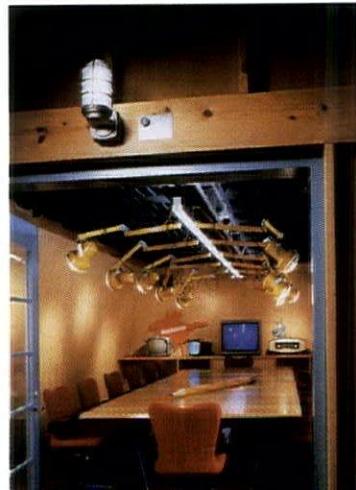
ELECTRICAL ENGINEER
Flack + Kurtz Consulting
Engineers

PHOTOGRAPHER
Esto/Scott Frances

LIGHTING MANUFACTURERS
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Radco; Kim Lighting; Legion
Lighting; Lightolier; Linear
Lighting; Neoray; Phoenix;
Stonco



THE "CRATE" (LEFT)—A TWO-FLOOR "MONUMENT"—APPEARS AS IF IT IS STILL UNDER CONSTRUCTION. THE DELIBERACY OF THE LIGHTING, HOWEVER, INCLUDING THE CUSTOM CHANDELIER IN THE MAIN CONFERENCE ROOM (RIGHT), SUPPORTS AND COMPLETES THE ARCHITECTURE. A COMBINATION OF INDUSTRIAL FIXTURES, BOXY FORMS AND OPEN SPACES (ABOVE) CALLS TO MIND A WAREHOUSE TURNED LOFT SPACE, NOT AN OFFICE ENVIRONMENT.

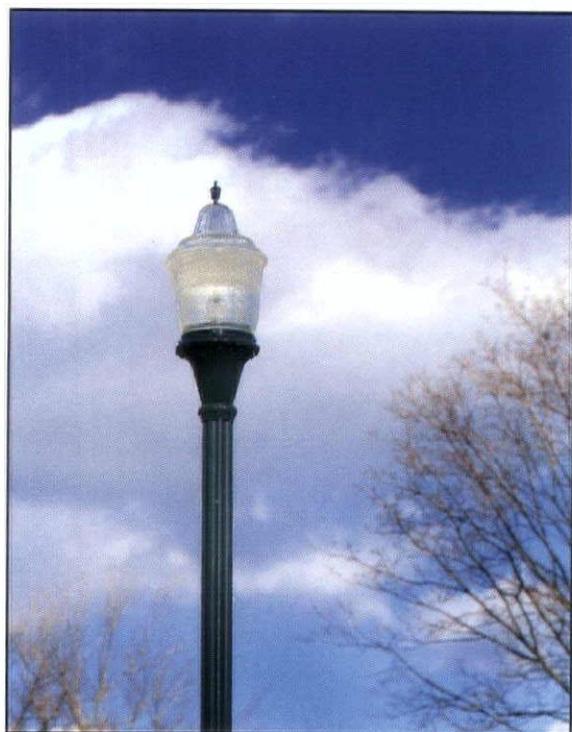
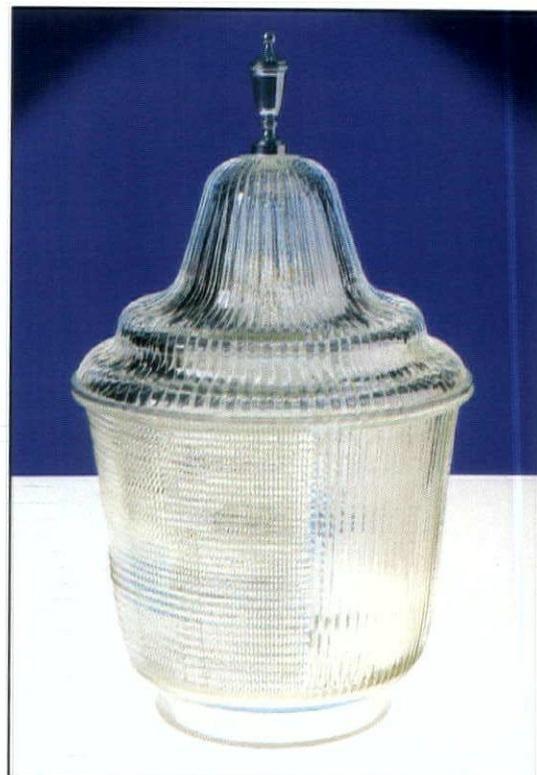


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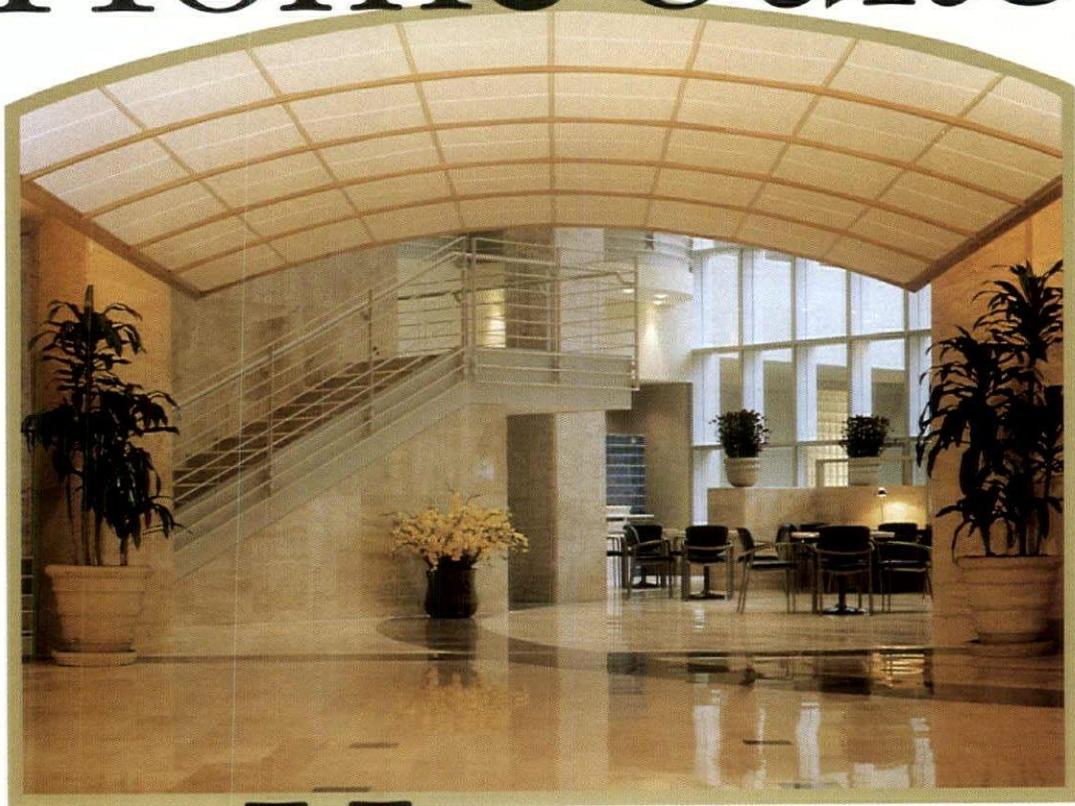
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THIS HOSPITAL HAS ALL THE TECHNOLOGY OF A MODERN MEDICAL FACILITY AND ALL THE COMFORTS OF HOME

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

In Monterrey, Mexico, the patient suites seem more suited to a hospitality than hospital environment. Just what the doctors ordered—and just what Henningson, Durham & Richardson (HDR) designed. Patients and visitors to the \$20 million Centro Medico Integral Hospital Santa Engracia are welcomed and warmed by a serene residential atmosphere, much like you'd find at a resort hotel.

The hospital, completed in the summer of 1996, is a 50-bed facility that serves the medical needs of women and

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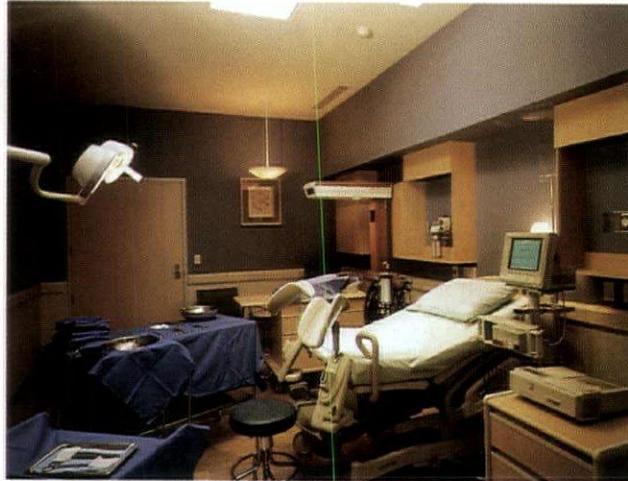
THE LABOR/DELIVERY/RECOVERY ROOMS (LEFT) FEATURE A SOOTHING SETTING FOR WOMEN EXPERIENCING CHILDBIRTH. "THE CLIENT WAS KEEN ON PRODUCING A RESTFUL ENVIRONMENT," SAID HDR'S RIOS. THESE INTERIOR ROOMS HAVE NO WINDOWS, SO THE LIGHTING DESIGN RELIES SOLELY ON ELECTRIC ILLUMINATION TO PRODUCE THE DESIRED EFFECT. SUSPENDED FIXTURES WITH TRANSLUCENT SHADES PROVIDE

children by offering obstetrics, gynecology, plastic surgery and other related care. "Santa Engracia is truly outstanding in its community," said Bernie Bortnick, AIA, design principal. "There hasn't been a new hospital built in Monterrey in many years."

The standards at Mexican healthcare facilities are far below those in the U.S., said Bortnick. "As a result, the more affluent Mexicans have been coming to the States to have their babies and receive medical treatment," he explained. This project was initially an attempt on the part of some of the local physicians to capture that market. The goals were specific: to create a facility visually receptive to both patients and staff and to deliver healthcare to a target-income clientele for a reasonable price, competitive with U.S. healthcare standards. "We started with those two things in mind," Bortnick said.

Hospital Santa Engracia is a harmonious blend of Mexican culture, site and design. Illustrating this best are the patient rooms—all private suites—designed in a variety of sizes with private baths and seating areas. Each suite also features extra space to accommodate patients' families celebrating the birth of a baby, as is Mexican tradition. Forming a quarter circle, the patient suites are configured into clusters of four to six rooms facing spectacular views of the mountain ranges southwest of the four-acre sloped site.

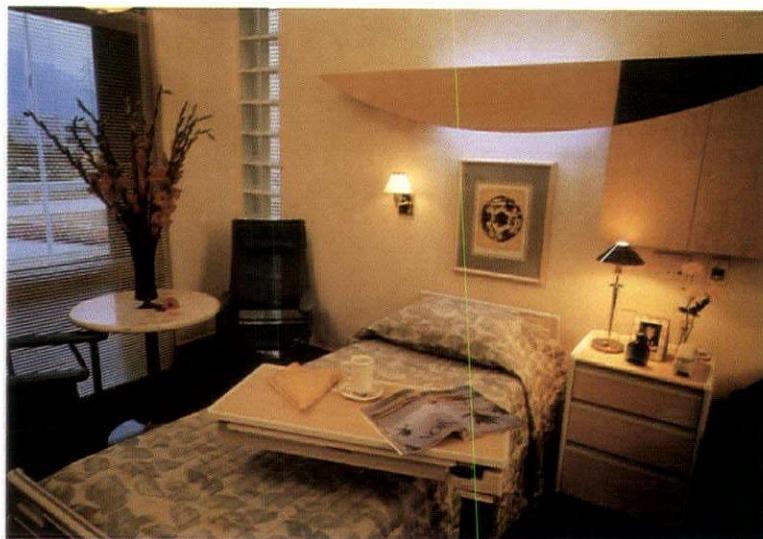
Each of the patient rooms features a subtle lighting scheme. "One of the sins of healthcare lighting is that very often



GENTLE UPLIGHTING, AND DECORATIVE TABLE LAMPS ENHANCE THE HOME-LIKE DECOR. WHEN THE ROOM IS TRANSFORMED INTO A DELIVERY MODE (LEFT, BOTTOM), PORTABLE SURGICAL LIGHTS ARE BROUGHT TO

THE SCENE FOR THE TASK AT HAND. IN ADDITION, MEDICAL PARAPHERNALIA, ENCASED BEHIND WOODWORK, EMERGES, TURNING THE "BEDROOM" INTO A FULLY EQUIPPED HOSPITAL ROOM. "WE HAVE A BIT MORE LATITUDE CREATING THIS TYPE OF ATMOSPHERE IN A MEXICAN HOSPITAL BECAUSE THE CODES ARE NOT AS STRINGENT," SAID BORTNICK. "WE EMPLOYED AMERICAN CODES AS A BASELINE FOR DESIGN, BUT USED PROFESSIONAL JUDGMENT RATHER THAN BUREAUCRATIC

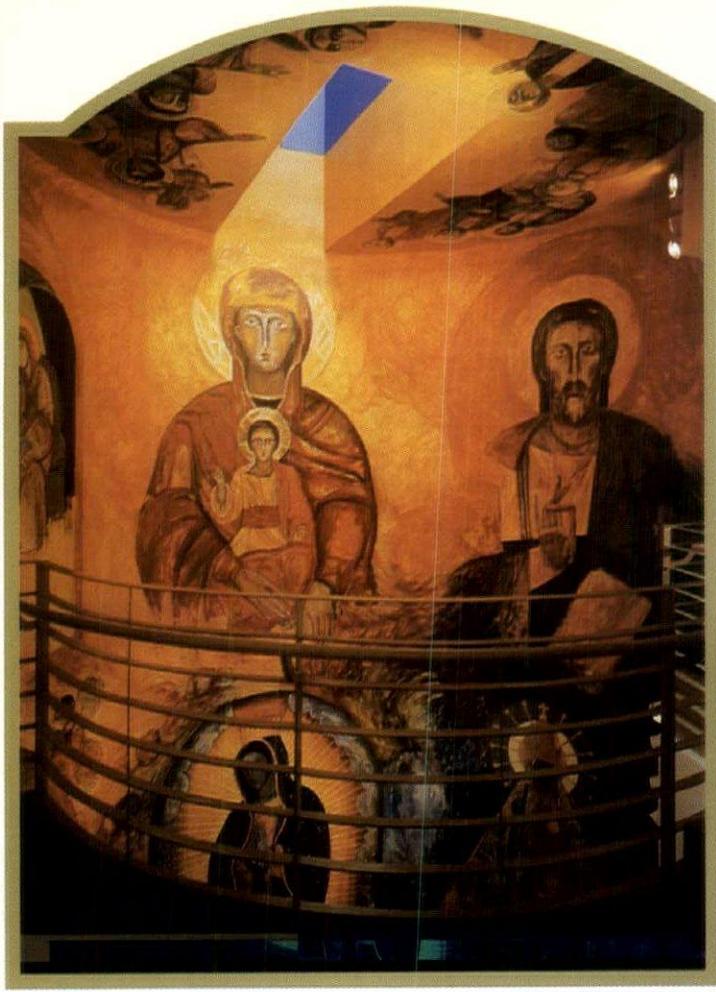
DEMAND TO DETERMINE THE FINAL DESIGN."



IN A TYPICAL PATIENT ROOM AT SANTA ENGRACIA (LEFT), THERE IS A CUSTOM-DESIGNED FIXTURE OVER THE BED.

"THIS WAS

CREATED IN RESPONSE TO OUR DISTASTE FOR THE INDUSTRIALIZED, HIGH-TECH LOOK OF TYPICAL HOSPITAL PATIENT BED FIXTURES," SAID BORTNICK. THE LIGHT FIXTURE IS COMBINED WITH A CABINET THAT CONTAINS THE NECESSARY MEDICAL GASES AND ELECTRICAL OUTLETS. "THE MELON SHAPE PROVIDES US WITH AN ELEMENT THAT IS ABSTRACT, GIVING A DIFFERENT AMBIANCE AND MOOD TO THE SPACE," SAID BORTNICK. A FLUORESCENT SOURCE PROVIDES A SOFT GLOW.

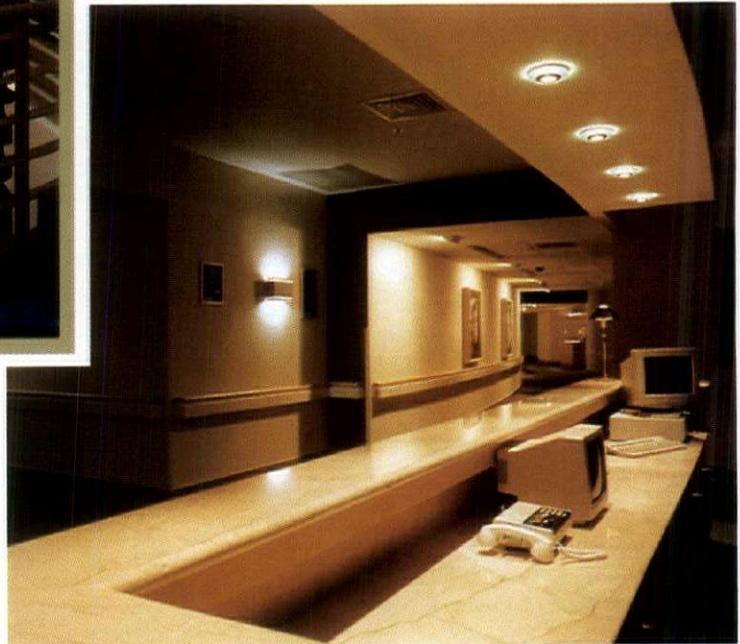


"WHERE WE CAN, WE HAVE MODULATED NATURAL LIGHT, BRINGING IT IN AND ENHANCING A SPACE," SAID BORTNICK. THE HOSPITAL CHAPEL IS A PERFECT EXAMPLE OF THIS TECHNIQUE. THE CURVED CHAPEL WALL HAS A THREE-STORY-HIGH MURAL, TOPPED WITH A RECTANGULAR-SHAPED, SLOPING GLASS SKYLIGHT (LEFT). THE RESULT? THE RELIGIOUS DEPICTION IS LITERALLY CROWNED WITH LIGHT.

RECESSED FLUORESCENT LIGHTING, SPACED AT INTERVALS, CREATES A SLIGHTLY DIMMER ATMOSPHERE FOR CONTINUED TRANQUILITY IN THE COMMON AREAS.

THE COUNTER AT THE NURSES' STATION (RIGHT) IS LIGHTED AT A BRIGHTER LEVEL TO ACCOMMODATE THE TASKS PERFORMED AT SURFACE LEVEL; OTHERWISE,

BRIGHT LIGHT IS NOT REQUIRED. "CONTRAST IS STRONG," SAID BORTNICK, "THE DARK IS AS IMPORTANT AS THE LIGHT IN ARTICULATING THE SPACE." THE CORRIDORS ARE WALL-WASHED WITH HALOGEN TO ELIMINATE GLARE, AS ARE THE ORIGINAL PIECES OF ARTWORK, PAINTED BY ONE OF MEXICO'S FOREMOST ARTISTS. SCONCES ON THE WALLS CONTINUE THE RESIDENTIAL LOOK AND ADD HUMAN SCALE.



the spaces are overlighted," Bortnick said. "This is especially true in non-treatment areas that don't require the same levels of illumination—it's just not a functional necessity." Of course, the required examination lights are positioned over the beds, "but they do not interfere with the other decisions we made about lighting," said Bortnick. To enhance the residential feel of the hospital and avoid hot spots and harsh illumination often typical of healthcare design, the team used a lot of indirect lighting and wall washing, specifically in public areas.

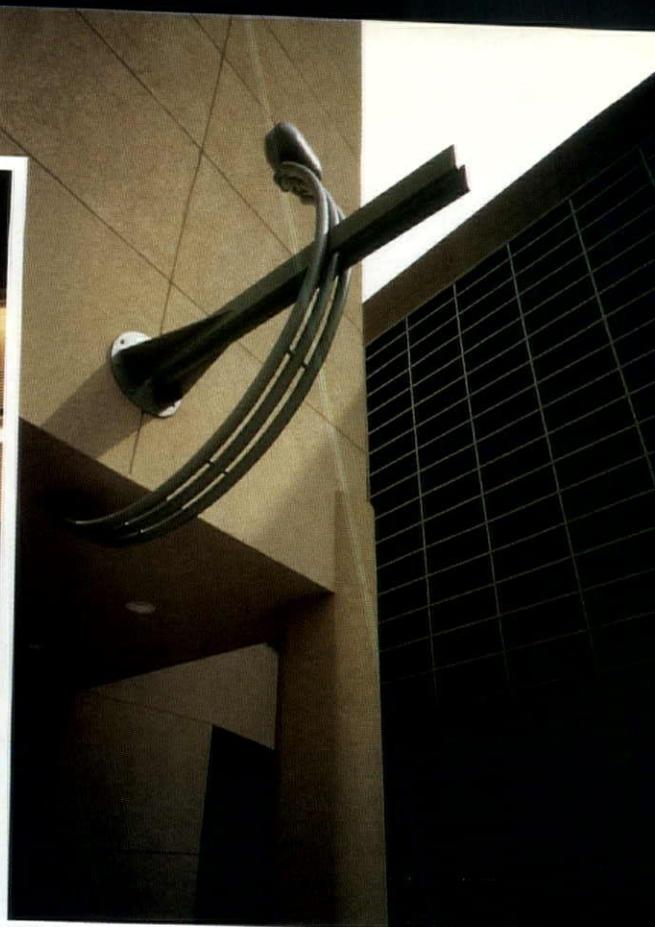
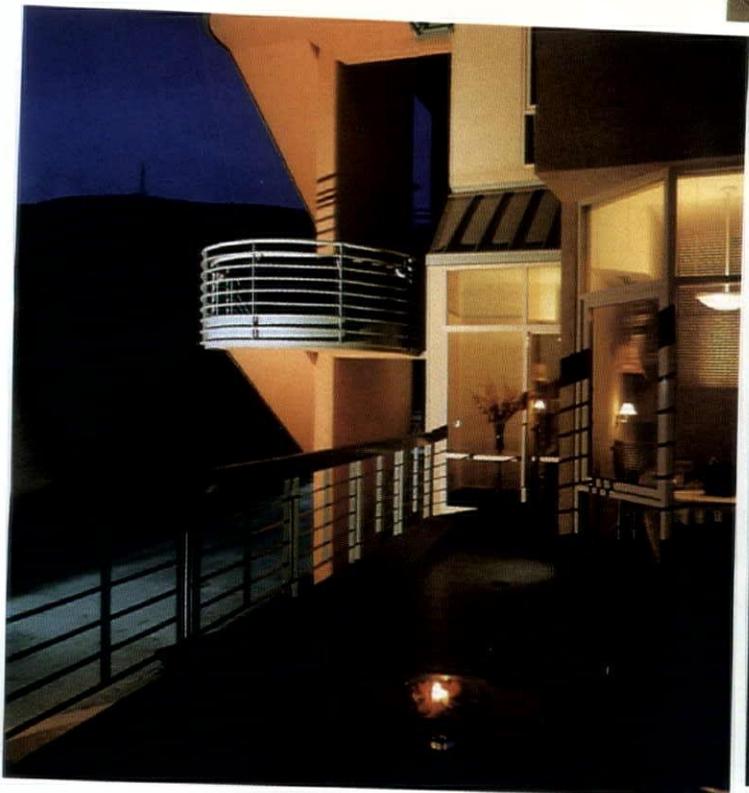
"Despite the volumetric density of

the building, we managed to provide open spaces," said Bortnick.

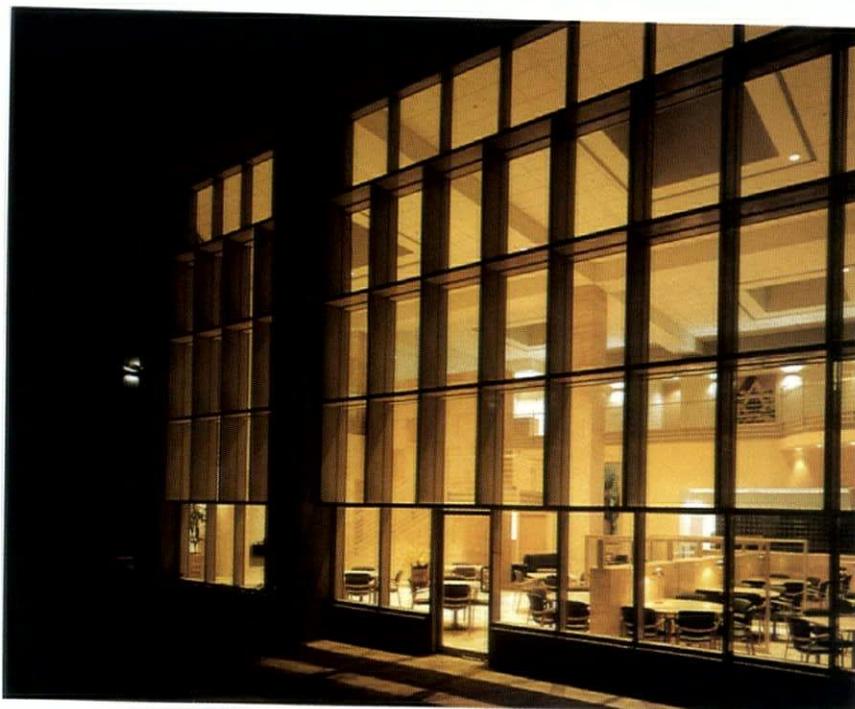
On the first level of the hospital, a two-story skylighted dining area merges with the main lobby entrance and serves as the principle orientation space for the hospital. Its hotel-like ambiance offers views into a quiet, protected garden dining terrace. The garden promotes tranquility, soothing patients' anxieties. This whole dining space is illuminated with a two-story glass wall on two sides. "Louver extensions offer some reflected light and modulate the light coming in," said Bortnick. In addition, four skylights

bring in a tremendous amount of light.

The resort-like feeling also translates to the exterior, where visitors and patients enter from a landscaped drop-off zone to the medical office building. This connects with the hospital floors and creates a pronounced landmark element as seen from the approaching roads, providing high visibility and unique identity to the entry complex. The plaza with garden amenities, fountains, trellises and entrances not unlike what one might find at a fine hotel, imparts a residential architectural scale to this otherwise large institutional building. ■



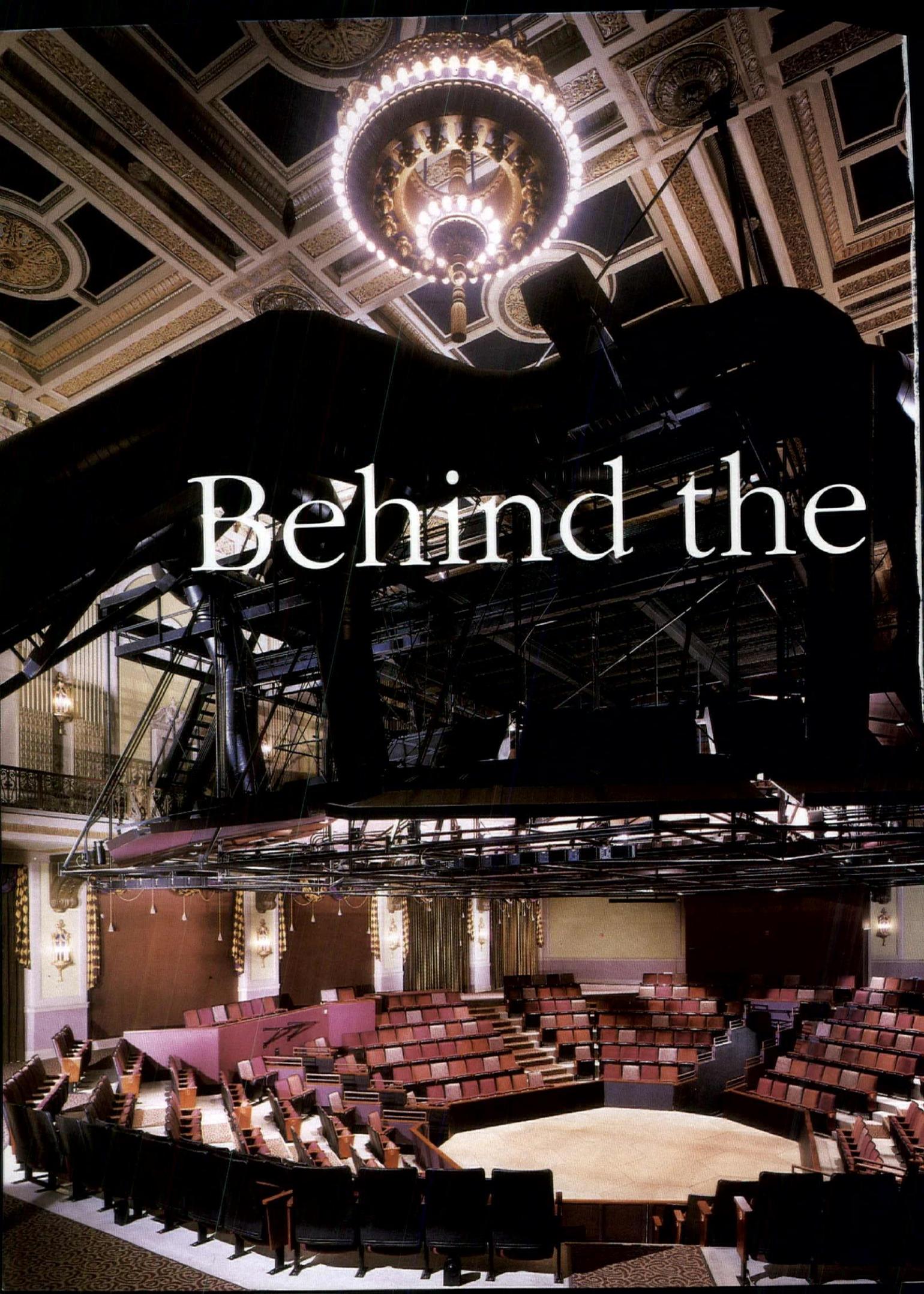
THE NIGHTTIME IDENTITY OF THE HOSPITAL IS NOT ONLY STRIKING, BUT CLEARLY DEFINED BY LIGHT. THE DINING AREA (BELOW), ADJACENT TO THE MAIN ENTRY, CONVEYS A SENSE OF WARMTH AND INVITATION.



RECESSED 250W HALOGEN DOWNLIGHTS, 30 FT. ABOVE THE FLOOR, GENTLY GRAZE THE TABLES, PROVIDING A LOW, BUT SUFFICIENT LEVEL OF ILLUMINATION AT THAT HEIGHT. FIXTURES MOUNTED ON A $\frac{3}{4}$ CIRCLE CANTILEVERED PROJECTING TORCHIERE ARE PRECISELY AIMED TO LIGHT THE SIDES OF THE STRUCTURE (ABOVE). ON THE SECOND LEVEL OF THE HOSPITAL, TERRACES ADJOIN PATIENT ROOMS (ABOVE LEFT).

DETAILS

PROJECT Centro Medico Integral, Hospital Santa Engracia ABA/Salud S.A. de C.V. Monterrey, Nuevo Leon, Mexico ■ **CLIENT** ABA/Salud S.A. de C.V., Monterrey, Mexico ■ **ARCHITECT** Henningson, Durham and Richardson, Inc.—Bernie Bortnick, design principal; Mike Tangney, designer; Phil Wendling, project manager; Melissa Keaton/Kamran Elahi, project architects ■ **ELECTRICAL ENGINEER / LIGHTING HDR**—Leo Rios, Bill Lavrinovich ■ **MECHANICAL ENGINEER HDR** ■ **LANDSCAPE ARCHITECT HDR**—Vince Ellwood ■ **CONTRACTOR** Planecion Technica Ingenieros, Garza Garcia, Mexico ■ **INTERIOR DESIGNER HDR**—Carol Myers, Nancy Whiteman ■ **PHOTOGRAPHER** Mark Trew ■ **LIGHTING MANUFACTURERS** Lithonia; Hydrel; Lightolier; Nessen; Kim Lighting; Winona; Elliptipar



Behind the



Scenes

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

A COMBINATION OF
HISTORICAL FIXTURES
AND NEW LIGHTING
SETS THE STAGE FOR A
WASHINGTON THEATER

THE ACT THEATRE IN SEATTLE IS PART
RESTORATION, PART NEW CONSTRUCTION.

LIGHTING FIXTURES, SUCH AS THE
CHANDELIERS AND SCONCES IN THE
THEATER-IN-THE-ROUND (OPPOSITE)
WERE REFURBISHED, WHILE HALOGEN
UPLIGHTS AND PAR38 DOWNLIGHTS
OVER THE STAGE PROVIDE ACCENT AND
HOUSE LIGHTING. A COMBINATION OF
DAYLIGHT AND ELECTRIC LIGHT PROVIDE
ILLUMINATION IN THE LOBBY OF THE
ARENA (ABOVE).

Seattle boasts the best new revival in town. But it's not just a play or musical—it's an entire theater. With its restoration, this historical building has drawn crowds, bringing new vitality to the heart of downtown. In fact, it's fair to say that in Seattle, everybody wants to get into the ACT.

After a \$30 million renovation, an effort pioneered by A Contemporary Theatre (ACT) and the City of Seattle, the Eagles Building has become the new home of the ACT Theatre. The structure, designed by a prominent local architect and opened in 1925, was the national headquarters of the fraternal order of Eagles. For the next 60 years, the landmark building was used for political meetings, proms, tea dances, rock concerts and other musical events. Now listed in the *National Registry of Historic Buildings*, the structure accommodates two independent and acoustically isolated 390-seat theaters with separate lobbies and public spaces; eventually, 44 restored apartments will occupy space above the theater facility.

DESIGN PROGRAMS

The program requirements were complex. Restoring the ambiance of a historic building that had been abandoned for more than 10 years, while updating the technology, created many lighting design challenges. The resulting design is a combination of the artful restoration of original historical fixtures and new lighting that speaks directly to the imaginative, constantly changing nature of the theater. "The lighting grew out of architectural needs of the space and was integrated into the architectural vocabulary being established for the facility," said lighting designer Denise Fong, IALD. The design team created an aesthetic environment that preserved the architecture and successfully stayed within a very tight budget, dictated by ACT's nonprofit status.

"The lighting was a close collaboration between the lighting designer, architect and the owner," said Fong. "Normally, a lighting designer meets with the architect to discuss the owner's lighting needs. In this project, both the architect and owner attended all of our meetings, which saved a lot of time

THE FALLS THEATRE UPPER LOBBY (BELOW) FEATURES FROSTED GLASS MEDALLIONS, BLUE NEON, AND WHIMSICAL CHANDELIERS. THIS EYE-CATCHING CORRIDOR LEADS THEATER PATRONS DOWNSTAIRS TO THE STAGE.

and money because all of the decision-makers were in the same room."

CENTER STAGE

The elegance and beauty of the historic Eagles Auditorium, rediscovered after years of neglect, is now home to ACT's new arena stage, or theater-in-the-round. This new theater has landed in the old auditorium with little disturbance to the historic setting. In fact, the new design leaves intact the original stage at the north end of the room where Dr. Martin Luther King Jr. delivered a historic speech. It now has a painted curtain illuminated with new footlights located on the stage.

The high-tech trappings of a modern theater-in-the-round are massed into an imposing but discrete presence in the 47-ft.-high room, once the Grand Lodge. This architectural feat was accomplished by recessing the seating tiers and stage floor and hanging the new theater superstructure from four points on the ceiling. Colorful tented fabric forms a canopy, which helps to conceal the mechanical elements and enhance the space visually.

"We uplighted each of the fabric panels to create a glowing ceiling plane above the audience," said Fong. Between the segmented panels are simple PAR38 can downlights with eggcrate louvers which provide house lighting. These are painted black and disappear between the panels. Lamp sizes are adjusted to accommodate the varying mounting heights.

Four of the original six chandeliers in this space were refurbished including new wiring and gilding. Each are approximately 5 ft. in diameter and hang about 15 ft. from the ceiling. A total of eight Q250PAR38 lamps per chandelier illuminate the ornate coffered ceiling. A-lamps around the perimeter of each fixture, part of the original design, illuminate its detailed sculptural form. Perimeter sconces are original but required extensive renovation to remove several layers of paint and repair the original horsehair reinforced plaster. All have been dimmed to about 60 percent of their original output to reduce glare and increase lamp life.



DETAILS

PROJECT ACT Theatre ■ LOCATION Seattle ■ OWNER A Contemporary Theatre
■ ARCHITECT Callison Architecture, Inc. ■ LIGHTING DESIGNER Candela—Denise Fong, IALD, principal ■ INTERIOR DESIGNER Shelley Schermer ■ GENERAL CONTRACTOR Sellen Construction Co. ■ ELECTRICAL ENGINEER Travis Fitzmaurice
■ PHOTOGRAPHER Steve Keating ■ LIGHTING MANUFACTURERS Halo; Lucifer; Lutron; Shaper; Light Solutions East; Campbell Enterprises; LightLab; Lighting Techniques; B-K Lighting



PEAK PERFORMANCE

The Falls Theatre, a state-of-the-art theater below the arena, required more aggressive restructuring. To accommodate the new theater and lobby, most of the basement mezzanine, first floor and first floor mezzanine had to be cut away.

In the upper lobby, which is visible to the street, the design criteria was twofold, in addition to maintaining a historic theme: to attract passersby and direct them to the lower-level theater. Frosted glass medallions with star patterns form the base for an Italian chandelier. The medallions are reminiscent of the large plaster medallions that were demolished during construction. They are backlit with blue neon to provide a luminous glow and some sense of excitement in the otherwise narrow space.

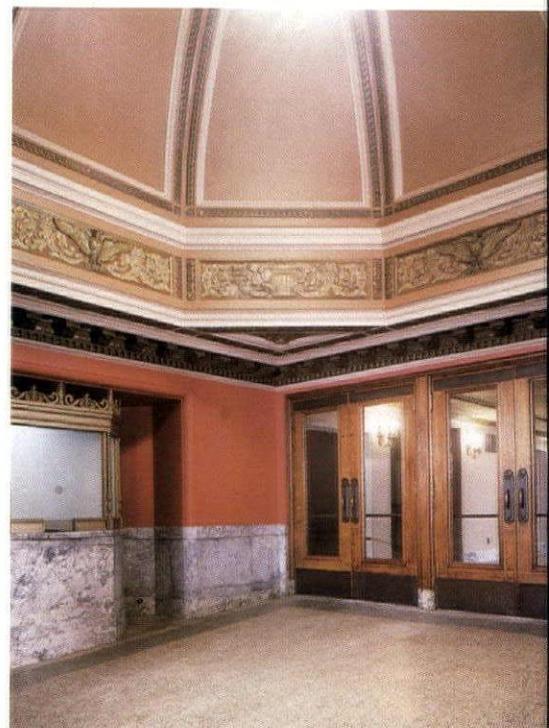
The architectural lighting in the lobby consists of theatrical fresnel fixtures that light the fabric wall leading down to the theater entry.

"We chose to brightly light this wall to encourage people to head forward into the theater," said Fong. Halogen accent lights illuminate the remaining walls. Both the theatrical and accent fixtures are mounted to a pipe grid

IRIDESCENT, METALLIC COLUMN CAPITALS GLOW WITH HALOGEN STRIPLIGHTS TO PROVIDE SPARKLE IN THE INTERIOR OF THE FALLS THEATRE (ABOVE). ALTHOUGH IT'S NO LONGER USED, THE ORIGINAL BOX OFFICE IN THE MAIN ENTRY (BELOW) IS A WELCOMING GESTURE FOR VISITORS TO ACT THEATRE. A LANTERN EFFECT IS CREATED WITH SANDBLASTED GLASS ILLUMINATED FROM BEHIND.

above the glass medallions and are concealed from view.

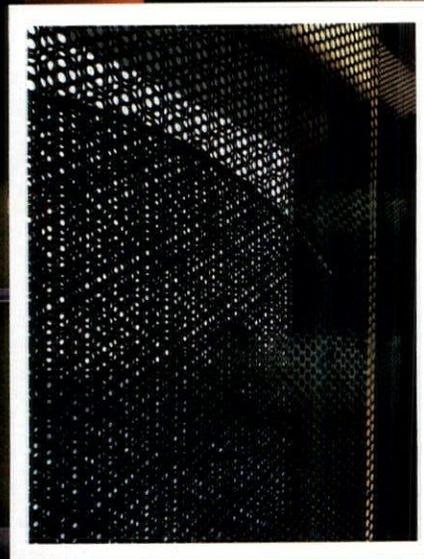
There are three primary lighting elements in the interior of the Falls Theatre, which address three distinct functions: comfort, orientation and sparkle. To provide house lighting, accent lights are mounted to the back sides of catwalks—part of the stage lighting truss system—and to perimeter pipe grids. Lamps vary from 60W to 100W PAR38 HIR lamps, depending on the mounting height. The back wall is illuminated with recessed incandescent wall washers to help people orient themselves around the theater. To create sparkle, columns are "crowned" with capitals made of iridescent ceramic tiles and a perforated, folded copper screen. Low-voltage halogen striplights located between the layers wrap around the columns and create a shimmering effect that complements the rich jewel tones of the interior. ■





WHEN IT CAME TO DESIGNING NEW OFFICES FOR A
NATIONAL HMO, RK DESIGN GROUP HAD ITS EYE ON

The Long Hall



BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

RK Design Group's first project took them down a winding path. That's the way they designed it. With serpentine patterns and fixtures slightly askew, the new office space for a California-based HMO has been transformed into a place that is visually fun and colorful.

Developing an interior design and lighting plan for the PacifiCare Regional Customer Service Center in San Antonio, TX, a 52,000-sq.-ft. interior renovation, was challenging in many regards. The goal was to create a stimulating workplace in an exceptionally long space in only five months, from design through construction. Add to that a limited budget (under \$20/sq. ft.), and the result was one in which the design elements dictated powerful but simple solutions.

"Lighting became one of the major ways to inexpensively divide the space yet make it really vibrant and exciting," said Lynn Kuckelman, RK Design Group. "Light, or the quantity of contrast originating from light, is what forms your perception of the space. The more you can incorporate it as an element into your overall design concept, the stronger the project will be."

The plan was organized to maximize natural light in the open office areas. PacifiCare's program dictated large open office areas with only seven built offices in a facility capable of accommodating 367 employees. A "main street" corridor was developed to spatially divide the open office spaces. Three basic core areas—a training and conference area in the center, and reception areas, a break room, small conference rooms and private offices on each end—rounds out the space. Full-height windows along the entire perimeter of the lease space allow plenty of daylight to enter the open office areas, which is occupied by the majority of the employees.

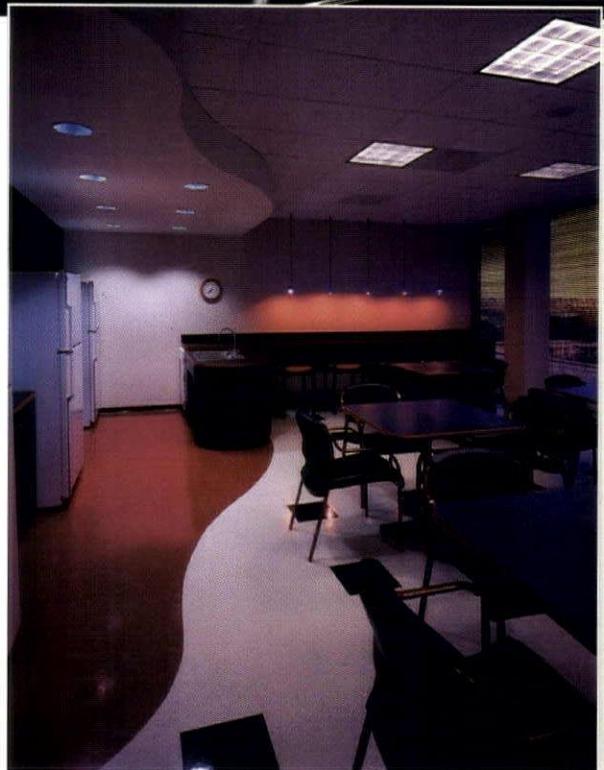
The design team developed a simple serpentine path in the "main street"

corridor that runs through the 525-ft.-long space. The dividing hallway projects a much more dramatic image than the surrounding offices. The serpentine carpet pattern translates to the curvature of the corridor walls and ceiling planes, which were kept clean of mechanical elements such as speakers and strobes to allow the design features to stand out. Existing and false columns were used to create an arcade, alternating red circular columns with teal trapezoid columns.

"We specified cobalt blue fixtures with compact fluorescent sources to accentuate and light the main street in an energy-efficient manner," said Kuckelman. "They are simple in design but create a gentle luminance and add whimsy to the space, not to mention a powerful architectural statement within the project budget." A thick tapered ring of blue glass floats elegantly off the ceiling plane, each fixture placed at different points off center so that they, as a collection, serpentine throughout the long space.

The main street terminates at each end with three layered, perforated stainless steel panels marking the endpoints. The panels, with views to the outside, become playful sculptures, as well as intriguing light fixtures. "As natural light changes in the space, it reflects off the steel and creates different patterns on the walls, ceiling and floor," Kuckelman added.

"The clients are just thrilled," said Kuckelman. "They really had a tough job simultaneously consolidating operations and having the facility built. But the finish out is great." ■



A SERPENTINE PATTERN WINDS ITS WAY DOWN THE EXTRAORDINARILY LONG CORRIDOR OF PACIFICARE'S NEW OFFICES (OPPOSITE). STAINLESS STEEL PANELS AT EACH END (INSET) PLAY WITH INCOMING SUNLIGHT TO CREATE INTRIGUING FORMS ON THE WALLS. BLUE HALOGEN PENDANT FIXTURES OVER THE COUNTER IN THE BREAK ROOM (ABOVE) COMPLEMENT THE CORRIDOR LIGHTING AND PINPOINT LIGHTING ACCENTS ARTWORK IN RECEPTION AREAS (TOP).

DETAILS

PROJECT PacifiCare Regional Customer Service Center ■ LOCATION San Antonio, TX

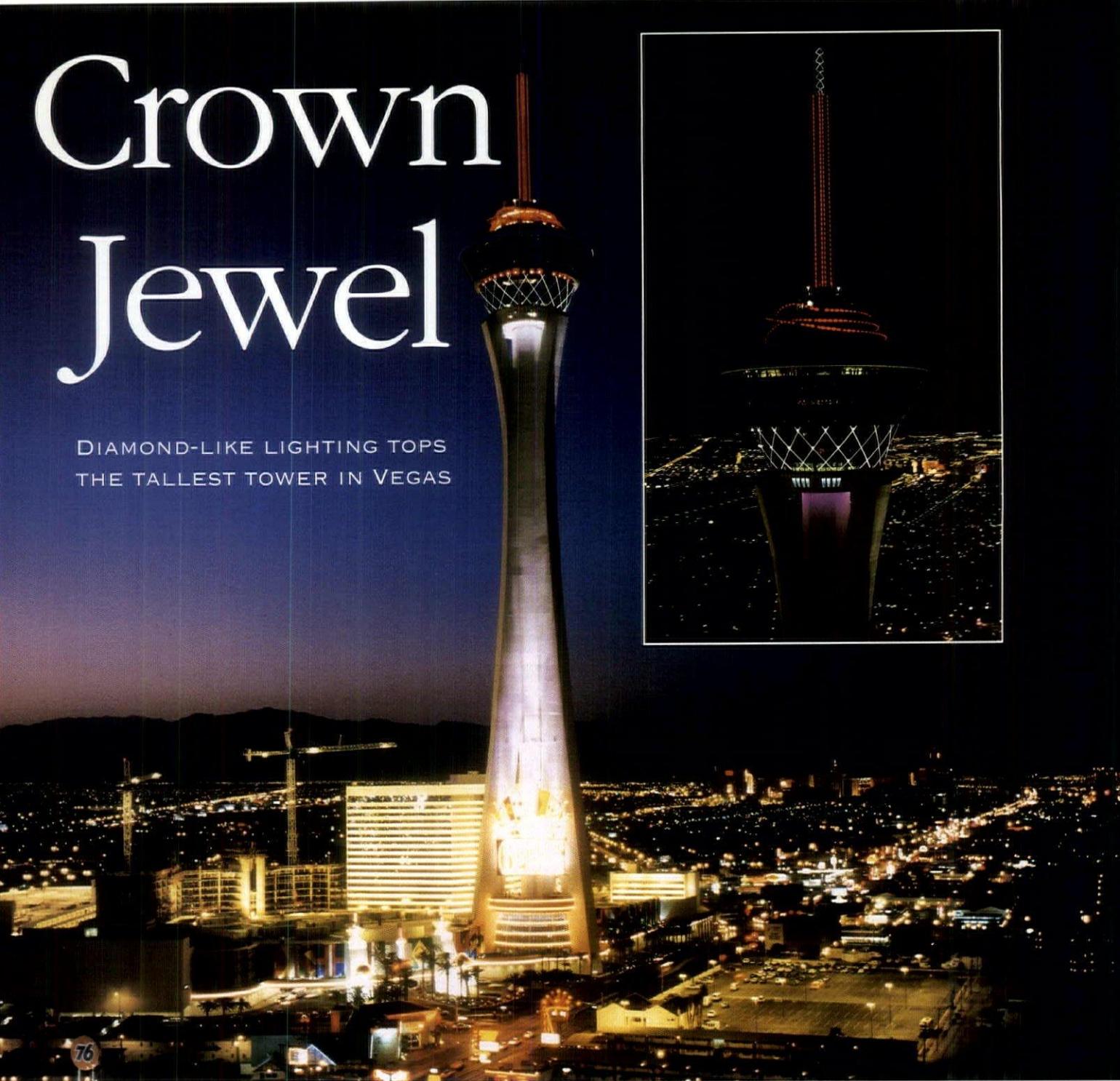
■ OWNER PacifiCare ■ LIGHTING DESIGNER/INTERIOR DESIGNER RK Design Group Inc. ■ ENGINEER Goetting & Associates

■ GENERAL CONTRACTOR Metropolitan Contracting Company ■ PHOTOGRAPHER Greg Hursley

■ LIGHTING MANUFACTURERS Lightolier; Metalux; USI Columbia

Crown Jewel

DIAMOND-LIKE LIGHTING TOPS
THE TALLEST TOWER IN VEGAS



BY EMILIE SOMMERHOFF, ASSISTANT EDITOR

Las Vegas' recently completed Stratosphere Tower is a show stopper. The tallest thing west of the Mississippi at 1,149 ft., the Tower is an interesting attraction by day even without lighting details. With them, however, the flamboyant structure sits center stage on the Vegas nighttime

skyline, a distinct monument to what this city is all about.

The Stratosphere Tower includes a hotel and casino at ground level, but it was the 12-story pod set at the tower's pinnacle that required the creative attention of lighting designer John Levy of Los Angeles-based John Levy Lighting

Productions. Contracted only months before the new resort was expected to open, Levy's design had to comply with an already completed structure. "The theme and corresponding shape of the pod were representational of the facets of a diamond," noted Levy. "In fact, 'Diamond in the Desert' was our working title."

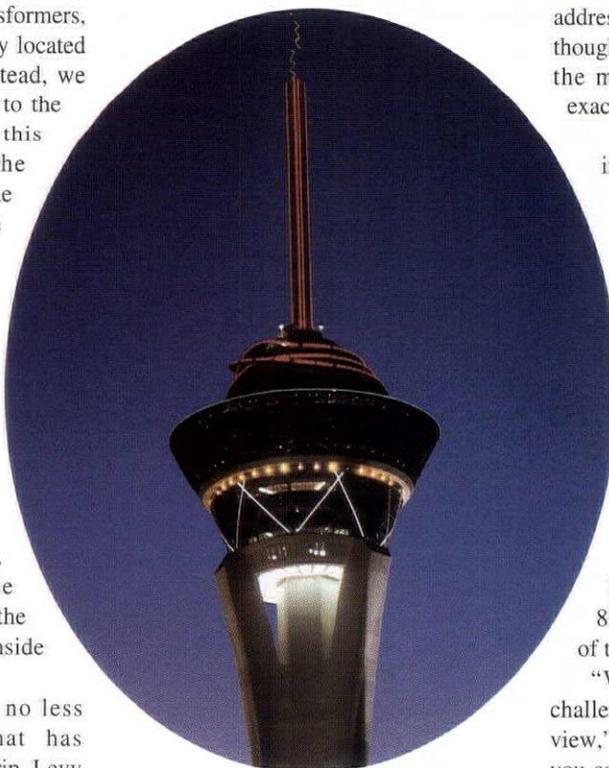
Levy's first obstacle in formulating a lighting design concept for the highly visible tower was what types of sources to use. Said to interfere with air traffic, lasers are restricted in outdoor Vegas shows. Likewise, the nature of the project made neon an expensive and impractical option. The client wanted the light to change colors, and although neon is available in different colors, these cannot be modified. Moreover, the height of the pod and the 60-80 mph desert winds characteristic of Las Vegas discouraged high maintenance outside the pod. A neon source would have required transformers, which could not have been easily located within the structure itself. "Instead, we would have had to attach them to the outside," explained Levy. In this situation, the weight of the transformers would have made the apparatus not only inaccessible but slightly dangerous. "Since the pod flares out toward the top," noted Levy, "the transformer would have been pulled on by its own weight as well as gravity."

Fiber-optic lighting seemed to be most suited to the project criteria because of its flexibility, durability and color changing capacity. Meanwhile, because of their independence from the rest of the apparatus, the illuminators could be located inside the tower for easy access.

Fiber optics proved to be no less exciting than the neon that has traditionally lighted the Vegas strip. Levy designed a series of light shows that "dance" around the crown for 15 minutes every hour on the hour after dark. (Original music written specifically for Levy's show can be heard from the entry level, at the front of the hotel.) The majority of the 5,200 ft. of fiber-optic tubing circles the lower section of the pod

in a crisscross pattern, evoking the cut edges of a diamond. Ninety-six 400W metal halide illuminators, fitted with eight possible color changes, work together under a DMX control system to create a "chasing," pulsating effect that makes the pod appear to rotate. A separate band of fiber optics also circles the perimeter of the structure, while a final 50 ft. of tubing climbs the crosswork lattice at the tower's zenith. (This was constructed on the ground and installed using a helicopter.)

The pod may be a gem but the Tower



as a whole calls to mind a celestial body, reflecting beams of light from every angle. The legs are uplighted with fifteen 7K xenon searchlights which, fitted with a color changer and douser and hooked up to the same DMX show control system, contribute boldly to the show above. A

metal halide lamp with a custom-colored glass lens washes the architectural detailing located just below the crisscross pattern. The underside of the pod employs a unique combination of lighting products, a union inspired by Levy.

"There were these precast concrete soffits, which we fit with an acrylic pipe," said Levy. "The problem was I wanted to have a color changing capability with enough control over it to include the light pipe in the show. The other product, a computer-controlled color changing assembly, can be programmed and addressed off the DMX control system. I thought it would be a good marriage for the manufacturers and indeed that is exactly what it turned out to be."

The Stratosphere Tower includes, in addition to four wedding chapels and a revolving restaurant, two outdoor thrill rides: the Big Shot, which propels its prey 160 ft. into the air for a free fall back to the launching pad (already 921 ft. above solid ground), and the High Roller roller coaster (the highest in the world). Levy's design had to incorporate both. LED lamps outline the tracks of the coaster and the vertical raceways that go to the top of Big Shot; powered by conventional chase circuits, the 88,000 lights emphasize the motion of the rides.

"What really presented a design challenge here were the many points of view," said Levy. There is nowhere that you can stand and see the whole show so we really had to design this with at least three points of view in mind—the Las Vegas strip, the hotel entrance and the freeway. The Tower comes into view about 20 miles outside of town." Indeed, no matter how you look at it, the Stratosphere Tower is a star in more ways than one. ■

THE STRATOSPHERE TOWER—NOT ONLY THE TALLEST BUT THE MOST CREATIVELY ILLUMINATED STRUCTURE FOR MILES AROUND—DOMINATES THE LAS VEGAS SPREAD (OPPOSITE). THE POD (ABOVE) CALLS TO THRILL-SEEKING TOURISTS: A MULTICOLOR, MOVING FIBER-OPTIC LIGHT SHOW HARDLY DISGUISES THE LED-LIGHTED HIGH ROLLER ROLLER COASTER AND BIG SHOT TRACKS.

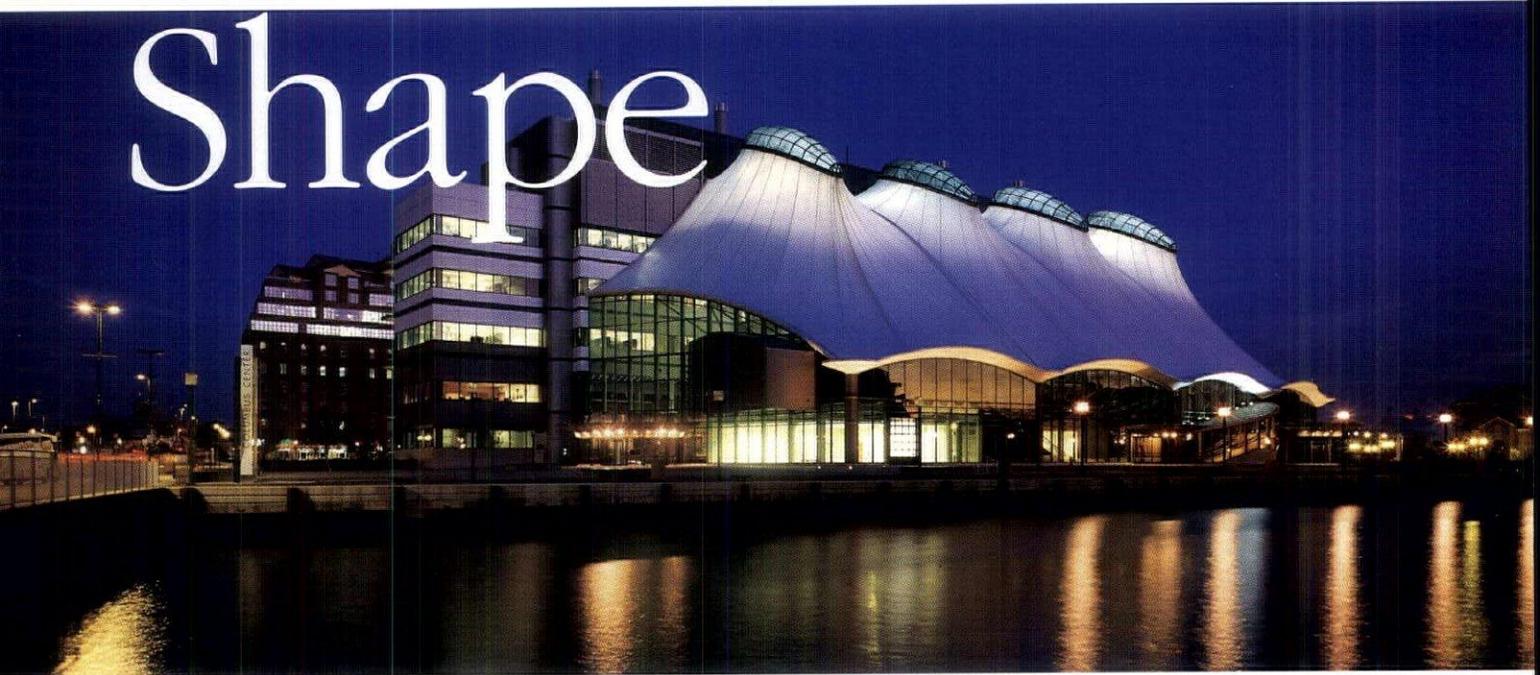
DETAILS

PROJECT Stratosphere Tower ■ LOCATION Las Vegas ■ OWNER Stratosphere Corporation ■ ARCHITECT Gary Nelson Architect Inc. ■ LIGHTING DESIGNER John Levy, John Levy Lighting Productions; Cindy Breakfield, assistant lighting designer ■ ELECTRICAL ENGINEER Line Systems Services Inc. ■ PHOTOGRAPHER Allen Photograph Las Vegas ■ LIGHTING MANUFACTURERS Fiberstars; Xenotech; High End Systems; Creative Light Source; Strand; TIR Systems; Irideon Inc.; Altman

Ship

IN BALTIMORE, ARCHITECTURE AND LIGHTING
CREATE A KEY NIGHTTIME ICON
ON THE WATERFRONT

Shape



BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

In the spirit of its namesake, Maryland's Columbus Center looms on the horizon, setting its glowing sail against the Baltimore skyline. The luminous canopied facade commands a presence on the city's waterfront and is an exciting visual advertisement for a facility dedicated to marine research. It lures visitors and nightly harbor traffic, while providing a distinct design contrast and vital link to the adjacent aquarium.

HARBOR VIEW

While the scope of this project deals with a multitude of spaces, including exhibition areas, offices, laboratories and auditoriums, the real focus of the Columbus Center is the exterior and how lighting it provides an animated glow to the urban site.

"The building takes on a strong nighttime identity that is friendly to the residential cityscape on one side and creates a spectacular presence on the water," said lighting designer George Sexton. "The lighting design supports and

enhances the architectural ideas and is an integral part of the architecture. We wanted the lighting to be as transparent as possible to let the building shine through."

On the harbor side, uplight diffused against the fabric of a tent structure creates a luminous glow and visual statement. The lighting solution is truly key in amplifying the architectural imagery and expressive nature of a ship's sail.

"Uplighting the translucent tent creates background illumination and helps the public perceive the entire space by drawing attention to the structure," said Sexton. In fact, the entire building—and concept behind the lighting design—is about making the public aware of marine study. "It's really a flagship type of experience," said Sexton, "because this is only one of a few buildings that strips the covers off research and makes it accessible to the public. The building and its function seem less institutional, less intimidating and therefore less mysterious."

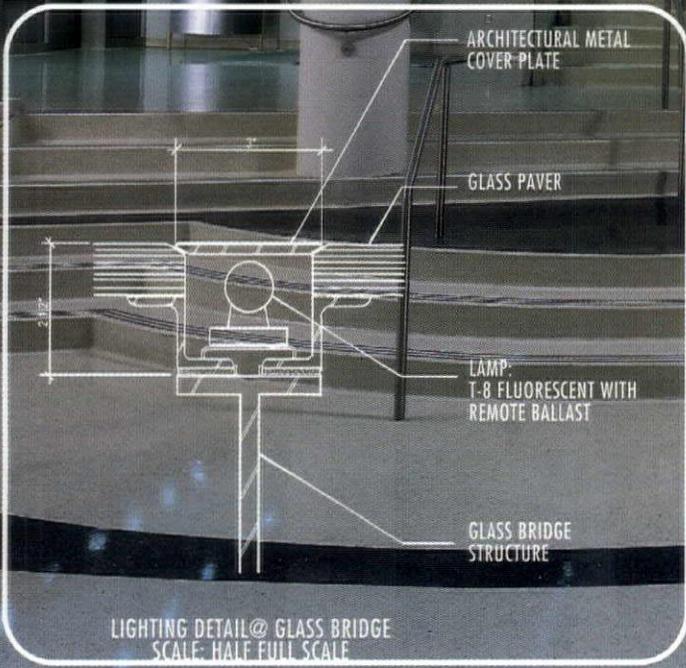
Atop the fabric tent are skylights, which allow daylight to enter the space

TENTED CANOPIES ARE UPLIGHTED TO CREATE A NIGHTTIME GLOW AND VISUAL IDENTITY (ABOVE). AN ILLUMINATED GLASS FLOOR NOT ONLY PROVIDES A TRANSLUCENT ELEMENT IN THE INTERIOR OF THIS RESEARCH CENTER BUT ALSO "LIGHTENS" THE MASSIVE APPEARANCE OF THE BRIDGE (OPPOSITE). FLUORESCENT CHANNELS EDGELIGHT THE FLOOR (INSET AND DETAIL).

and provide some connection to the building's natural surroundings. At night, a series of incandescent lamps softly illuminate the skylights.

UNDER THE BIG TOP

Underneath the tent is exhibition space, which creates an interface between the public and the research being conducted in the building. Architectural drama peaks at this boundary between the solid building and the tent structure; the sheer rising wall of the solid building intersects with the stretched fabric, creating a direct but graceful contrast between rigid and flowing forms.





RIB-SHAPED INTERNAL SERVICE CHUTES ARE LIGHTED WITH FLUORESCENT SOURCES TO ADD DRAMA TO THE REAR OF THE BUILDING. AS A RESULT, AN OTHERWISE FUNCTIONAL ELEMENT TURNS INTO A SCULPTURAL FORM.

The challenge of lighting the tent and what lies beneath it was critical to the success of the project. Extensive computer studies, calculations and modeling of the space were essential to planning and fixture placement decisions. Architectural landings that look like ship-deck lookout points create easily accessible hiding places for 400W and 1000W metal halide floodlights to uplift the tent, concealing the fixtures and thereby producing a magical lighting effect. The long-life metal halide sources minimize maintenance while providing a crisp, white light. In addition, the fixture positions and their focusing arrangement are critical for the elimination of glare and the creation of an even glow on the tent surface.

The tent becomes a light fixture in itself, as reflected light illuminates areas below the fabric canopy. However, exhibition spaces are constantly changing and have additional dramatic lighting

requirements. Custom-designed slots were developed to allow flexibility of a track system, while minimizing its appearance in the ceiling. The system uses a family of line-voltage PAR38 and low-voltage PAR36 lamps recessed within a slot above the ceiling. To conceal the system from view, a series of modular panels was developed. The panels are laid out in a linear fashion and are flush with the drywall ceiling. In areas that lighting is required, panels with apertures are used with a lighting module. In areas that do not require lighting, solid panels are used.

FLOATING DEVICE

Transition elements such as glowing glass bridges—located within the building and visible on the outside—add a sense of excitement to the exhibition space. A series of 4-ft. fluorescent channels, detailed into the architectural

modulation of the structure, create focal points in the vast space. Edgelit glass walkways hover above the main area, as if suspended. The lighting solution for the walkway gives the structure a sense of lift, reducing the apparent mass of the structural components of nearby and related building systems.

The back side of the solid building is grasped by “luminous fingers”—internally lighted service chutes—which rise up the back wall of the building and arch toward the stretched membrane of the tent structure. These glowing exhaust ducts draw the eye and highlight the function of equipment. “We wanted to give that side of the building its own identity without creating an unwanted distraction to the nearby residences,” said Sexton. “The result is that we were able to turn something strictly utilitarian and otherwise unattractive into smooth, rhythmic forms.”

The areas within these shafts required a great deal of detailing to accept mechanical and lighting equipment, and to minimize shadows of adjacent equipment. In addition, standard fluorescent channels were integrated with a pulley system for ease of relamping since the area is non-accessible.

“The versatility of the lighting solutions in this project allowed us to achieve the architectural goals while maintaining energy efficiency throughout the entire facility,” said Sexton. “The use of efficient, long-life sources such as fluorescent and metal halide allowed the use of incandescent light to provide some drama, while adhering to power budget guidelines.” ■

DETAILS

PROJECT The Columbus Center

■ **LOCATION** Baltimore, MD ■ **OWNER** The Columbus Center Development, Inc.

■ **ARCHITECT/INTERIOR DESIGNER** Zeidler Roberts Partnership ■ **LIGHTING DESIGNER** George Sexton Associates

■ **ENGINEER** HC Yu and Associates

■ **PHOTOGRAPHER** Hoachlander Photography Associates—Judy Davis, Eric Kieley ■ **LIGHTING MANUFACTURERS**

Lighting Services Inc.; Elliptipar; Edison Price Inc.; Louis Poulsen; C.J. Lighting; Nulux Inc.; Belux; Prudential Lighting; Hydrel; Kim Lighting; Bega; Litecontrol; Lumark; Baldinger Lighting, Inc.; Bega; C.W. Cole & Co., Inc.; Hydrel; Fiberstars

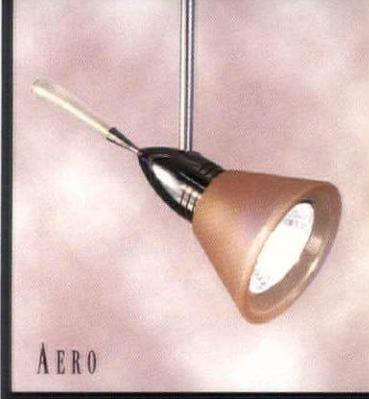


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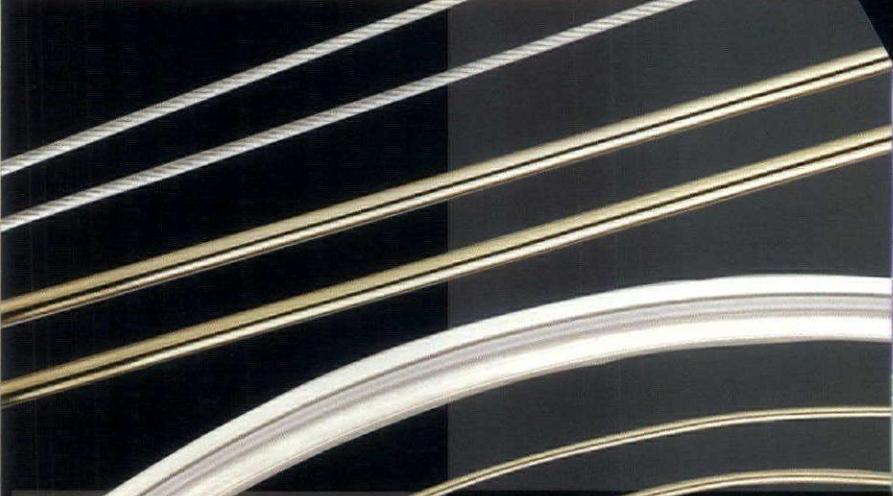


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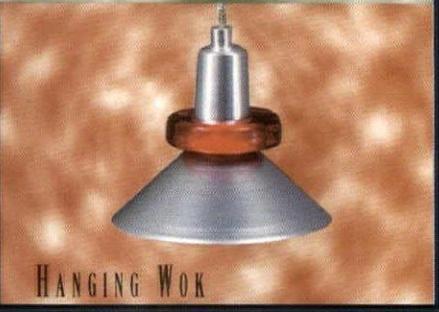
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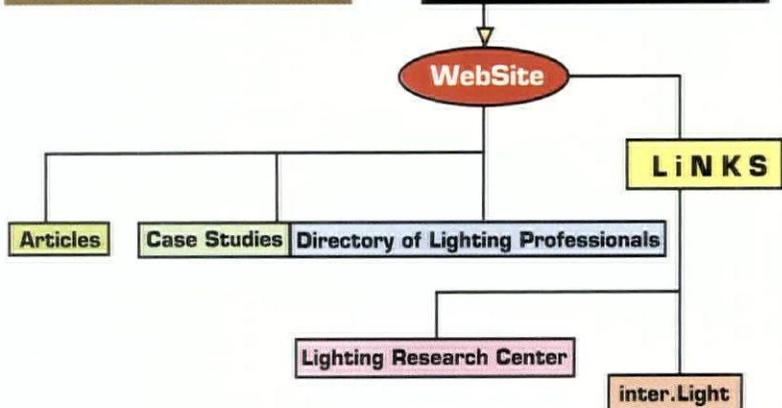
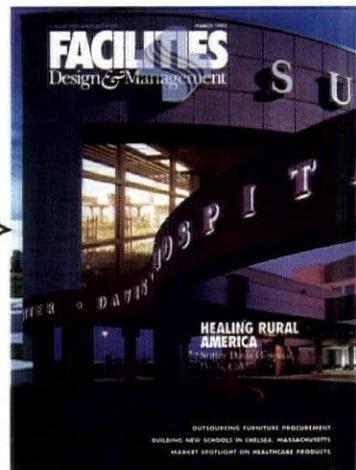
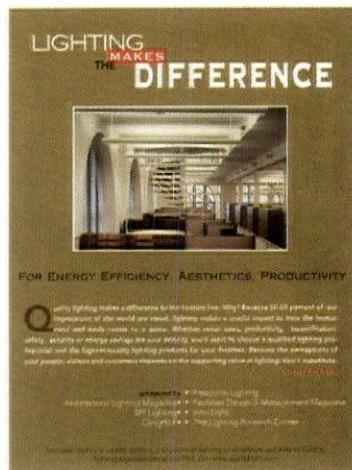
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Quality Campaign

AS CONSTRUCTION TRENDS LOOK POSITIVE AND FACILITY MANAGERS PLAN LIGHTING PROJECTS, ARCHITECTURAL LIGHTING MAGAZINE LAUNCHES A CUSTOMER OUTREACH PROGRAM

An often-heard complaint within the lighting industry is that we “preach to the choir”—that is, we fail to effectively communicate in a broad manner the value of quality lighting to the end-user, the individual who is the final decision-maker and holds the purse. Other industries have dealt with this problem proactively to stimulate demand for their product, usually in the form of cooperative marketing campaigns. This issue is discussed in more detail in the Perspectives column by Robert Ingram (see Page 90).

ARCHITECTURAL LIGHTING MAGAZINE IS DEVELOPING A “QUALITY LIGHTING CAMPAIGN” THAT WILL PLACE ADVERTISEMENTS IN FACILITIES DESIGN & MANAGEMENT MAGAZINE, ENCOURAGING END-USERS TO PLACE A HIGHER VALUE ON QUALITY LIGHTING AND ENCOURAGING THEM TO VISIT A WEB SITE THAT WILL FEATURE A DIRECTORY OF LIGHTING PROFESSIONALS AND OTHER HELPFUL ARTICLES ABOUT QUALITY LIGHTING.



Think globally.

In June, *Architectural Lighting* magazine will launch the "Quality Lighting Campaign," a marketing and outreach program targeting corporate facility managers to educate them about the value of quality lighting and help them get in touch with a lighting professional.

Current estimates by industry experts place the penetration of quality lighting products and design to be at 10-20 percent. The magazine's goal is to provide a common platform through which our industry can increase this penetration for the benefit of the industry.

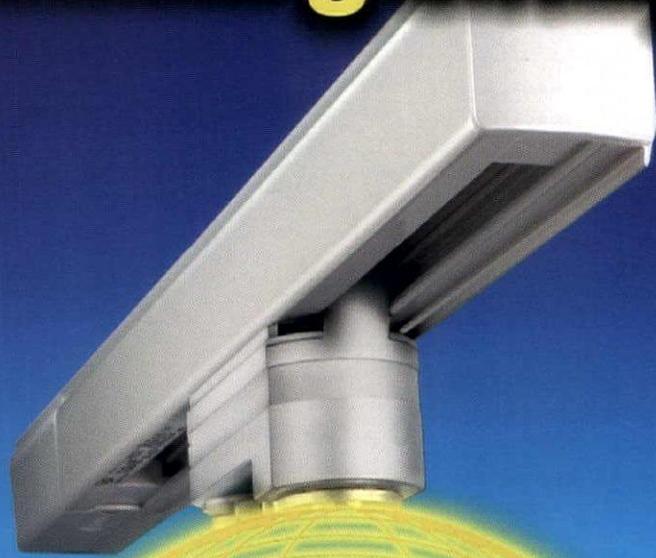
HOW THE CAMPAIGN WORKS

In June, *Architectural Lighting* magazine will launch an advertising campaign targeting the readership of *Facilities Design & Management*, a premier monthly magazine reaching 35,000 facility managers at Fortune 1000 and other companies.

Supported by charter sponsors Columbia Lighting, GarcylSLP, inter.Light, SPI Lighting, The Lighting Research Center and Prescolite, each full-color full-page ad will feature an innovative project from the pages of *Architectural Lighting*. This will communicate the message that quality lighting can make a bottom-line difference for energy efficiency, aesthetics and productivity.

The primary purpose of the new advertising campaign will be to help change customer attitudes about quality lighting, reaching the broadest audience possible.

Most industries have similar advertising campaigns, whether it's the Florida orange growers telling us orange juice is good for us, the dairy association saying "drink milk" or leading furniture manufacturers uniting for a "Stop the Knockoffs" campaign.



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LAUNCHING THE WEB SITE

The second purpose is more active and makes this program distinctive: To draw facility managers currently planning a lighting project to a new Web site. It will feature projects; a directory of lighting professionals; and links to organizations such as the Lighting Research Center and inter.Light.

Other articles about quality lighting and news about industry events will be posted. Participants in the directory are charged a nominal annual fee (\$50); those who pass the NCQLP examination and receive certification this fall will be listed free and highlighted.

Architectural Lighting recently conducted a survey of 450 *Facilities* readers across the U.S. concentrated in the commercial and industrial industries, with 8 percent responding. Sixty-nine percent of respondents indicated that their company was planning a lighting design project within the next two years.

With help from the Quality Lighting Campaign, *Architectural Lighting's* goal is to motivate these facility managers to value quality lighting and connect with an *Architectural Lighting* reader to perform the work. ■

“The Lighting Research Center is delighted to see *Architectural Lighting* kick off the Quality Lighting Campaign. Not only will this campaign raise awareness of the value of lighting to our customers, it will focus our efforts on delivering tangible benefits to them.

“In the past, lighting quality was what we could not measure. In the future, lighting quality will be what the customer wants to measure, such as lower operating costs, increased sales and reduced absenteeism.”

—Mark Rea, PhD, Director, The Lighting Research Center

“The value of quality lighting is often not readily apparent to the end-user, since it is difficult to quantify tangible benefits. An outreach program such as the one being proposed by *Architectural Lighting* can focus on educating the user to recognize those qualitative lighting issues that are indeed important to the success of their environments.”

—Randy Burkett, Principal, Randy Burkett Lighting Design

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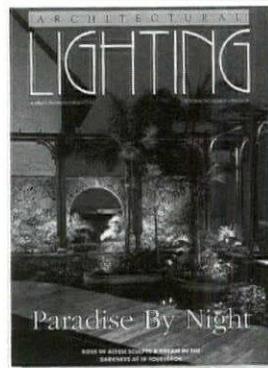
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Quality Lighting Campaign

In June, *Architectural Lighting* will begin a monthly advertising campaign in *Facilities Design & Management*, a magazine reaching 35,000 facility managers.

Besides communicating the message that quality lighting can make a crucial difference in energy efficiency, aesthetics and productivity, our goal is to get the readers of *Facilities* who are now planning a lighting project in touch with you.

Facilities readers will be invited to a Web site that will feature case studies in quality lighting and other articles. We will also post a directory of lighting professionals.

For just \$50 (good through May 1, 1997), we will post your name and information about your company in the directory, which can result in contacts among potential new customers who visit the site and learn more about the benefits of quality lighting.

To register, complete the information below and send it and your check for \$50 to Quality Lighting Campaign c/o *Architectural Lighting*, One Penn Plaza, 10th Floor, New York, NY 10119. Please TYPE all information.

Company Name _____

Contact _____

Address _____

City, State ZIP _____

Phone _____ *Fax* _____

Web Site _____ *e-mail* _____

Geographic Area(s) Served _____

Certifications/Professional Affiliations _____

Type of Firm (Lighting Design, Interior Design, Architectural, etc.): _____

Describe your firm and its lighting experience in 250 words or less:

INTEGRATED SOLUTIONS FOR DAYLIGHTING

BY PHILIPPE C. DORDAI, NCARB

Daylighting has become increasingly important in buildings, in part because it is recognized as relating to the improved morale and productivity of building occupants. More and more planning specialists are now incorporating surveys into their research to attempt to quantify productivity gains.

The problem of how to bring daylight into buildings is not new. In Europe, where many countries have building codes that require access to sunlight by all office workers, daylight control devices have always been a part of exterior wall systems. These devices involve relatively expensive and high-maintenance solutions such as manually adjustable or motorized blinds. European architects have also designed longer, thinner buildings to enhance penetration. Such buildings, however, are more costly to build because their shape requires more exterior wall square footage to enclose the same volume of space than in a more conventional rectangular or square building.

In the United States, architects have traditionally had a fairly narrow range of choices, such as light shelves, skylights, louvers and clerestory glass. Daylighting relies on reflective window coatings to control the entrance of

sunlight. Early coating methods were fairly crude, allowing less daylight to penetrate.

Subsequent combinations of tinted glass and special coatings have resulted in more sophisticated glass that rejects the infrared (heat) band of the spectrum and permits visible light to pass through the glass. While rejecting heat in the summer, these types of low-E glass coatings are also designed to admit heat into the building during the winter.

We have therefore seen significant technological improvements that make daylighting more attractive. Here, we will focus on recent developments in daylighting techniques, which can be categorized as "passive" or "active."

PASSIVE & ACTIVE TECHNIQUES

In a daylighting scenario, we have a static object (the building) with a dynamic object (the sun) that is always moving. Passive daylighting techniques focus on the static element, while active daylighting techniques account for the changing position of the sun to more fully harness the maximum amount of available daylight.

Passive daylighting techniques, the more traditionally employed, received a boost with

FIGURE 1

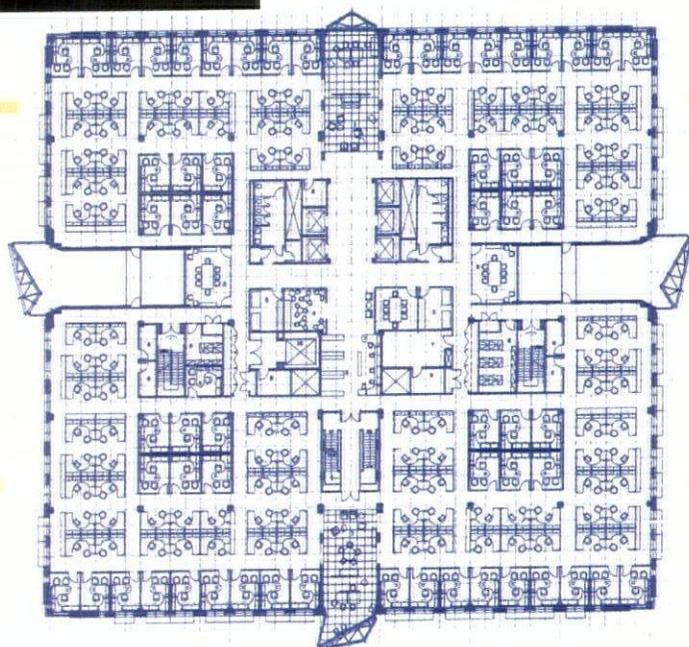


FIGURE 2A

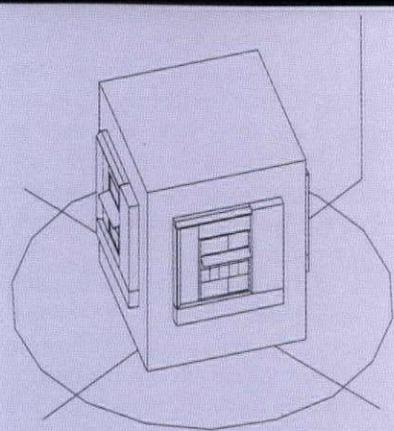
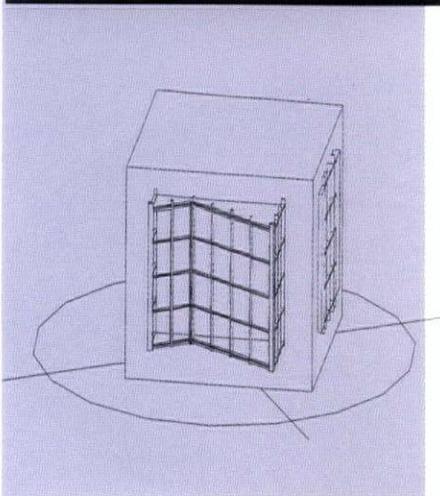


FIGURE 2B



technological advances in window coatings and the use of insulated glass, which consists of two pieces of glass with an airspace between them. Almost all new commercial glazing makes use of insulated glass. Using this approach, louvers, prisms and light-transmitting fibers are placed inside the airspace with the goal of taking sunlight and diffusing it or directing it up to the ceiling surface, where it is in turn reflected into the workspace. The angle of reflection can be adjusted to account for building geographic location and orientation of the particular side of the building. Passive solutions therefore offer the advantage of flexibility, effectiveness, energy savings and virtually no maintenance for the owner.

Active solutions rely on devices that allow for constant adjustment to follow the position of the sun as it changes through the day and the seasons. The most elaborate of these devices, called heliostats, track the sun continuously using a computer program. Although extremely precise and efficient, these devices are often expensive

and, thanks to motors and other moving parts, require a relatively high degree of maintenance. Their payback in terms of energy savings is usually fairly long. However, new technologies, such as photosensitive coatings (similar to what is used in sunglasses) and microlaminated coatings on glass, promise modified and more cost-effective active systems.

NEW BUILDING ONE

In building design, the challenge is to provide the owner with a relatively easy-to-maintain and low-cost solution that 1) evaluates both passive and active principles to maximize the use of daylight, and 2) blends the daylighting design with the electrical lighting system. Both require intensive collaboration between the client; the architect; the daylighting, lighting and electrical engineering consultants; and the manufacturer.

At Hoffmann LaRoche's New Building One, an integrated approach was successfully realized. The initial challenge was to maximize the use of daylight, given a building with an area of 185 ft. x 185 ft.

The first step was to plan the building with a central core and maximize the available perimeter for daylighting. The core was offset within the square plan to reduce the building depth at the north side where

daylight penetrates the least and to accommodate the design of a skylit atrium stair to the south of the core at the location where the plannable space is furthest from the exterior wall (see Figure 1).

The next step was to undertake studies using a computer modeling program to provide a visual image of where the sun would be at various times of the day and year. These "snapshots" of the building's components were taken from the point of view of the sun and were referenced constantly throughout the design of the daylighting system (see Figures 2a and 2b). The modeling program also took into account the shading and reflective impact of adjacent buildings.

The initial design concept proposed two basic approaches. The first utilized exterior and interior light shelves (see Figure 3) to redirect sunlight onto the ceiling; the second used large, two-story "work studios" (see Figure 4) that, because of their tall glass openings, would admit daylight deep into the center of the building (see Figure 5). These interior spaces were conceived to function like a traditional lightwell, but more economically using interior walls as the boundary rather than the exterior walls. The ultimate design evolved into a multi-component system in which each part plays a significant role:

FIGURE 3

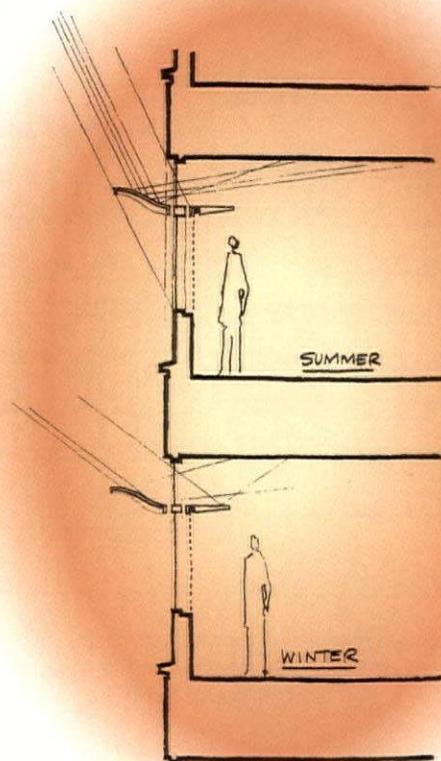
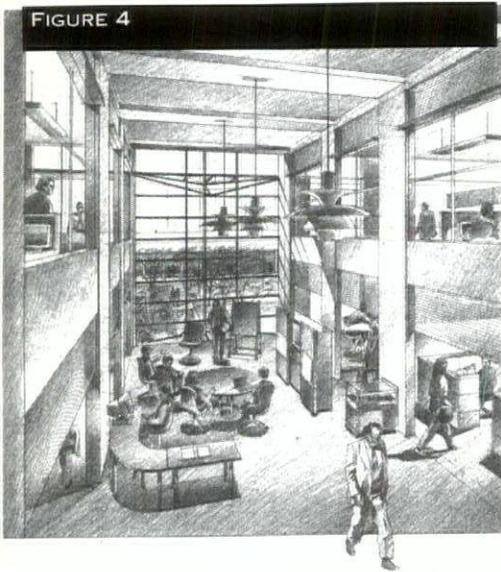


FIGURE 4



- A 9 ft. 6 in. interior ceiling height within a 13 ft. floor-to-floor height to permit the design of an indirect lighting system and maximize the depth of daylight penetration.
- A ceiling surface and adjacent wall finishes designed to optimize brightness and reduce glare and contrast.
- A series of 12 two-story-high work studios designed as team work rooms and as overall sources of daylight for the adjacent office areas. These rooms are equipped with interior light reflectors and computer-controlled roller shades to again redirect sunlight and skydome light onto

the ceiling of these two-story spaces.

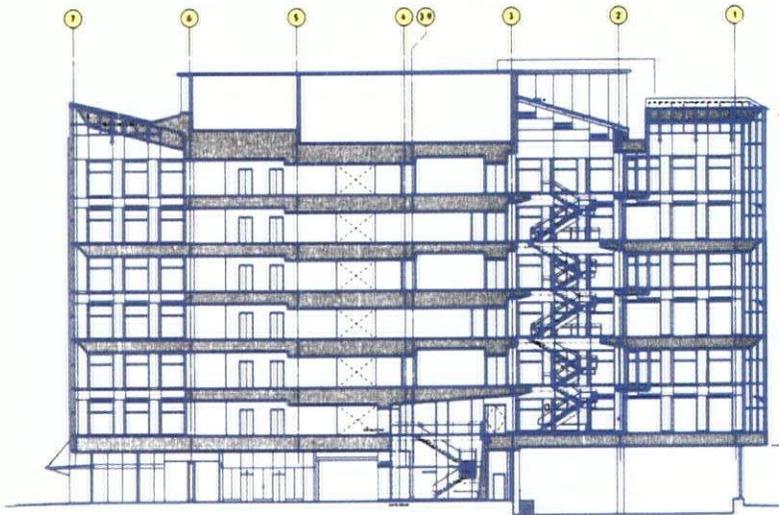
- A largely open interior plan with no perimeter offices to maximize the penetration of daylight into the building.
- A well-designed electric uplighting system that can be dimmed and can handle input from a daylight sensor.
- An exterior wall system that takes advantage of setbacks and projections to shade the vision glass wherever possible.
- A light reflector/sunshade that acts to redirect more daylight into the transom glass and hence up onto the ceiling.
- A sophisticated transom glass which uses acrylic prisms precisely angled to redirect sunlight and sky-

dome light up onto the ceiling of the space. As each component was developed and fine-tuned, computer analysis played an essential role in providing the engineering backup to what were originally schematic concepts. These tools were also used to keep the owner informed about the daylighting solutions and gave the design ideas a quantifiable foundation upon which they could be evaluated.

None of the components alone could have done the job. Together, they provide an integrated system in which each piece provides a part of the daylighting design, one which permits the occupants to save energy and enjoy higher-quality lighting. The final design, therefore, offered an integrated solution of passive and active



FIGURE 5



lighting techniques as well as successful integration of electric light and daylight.

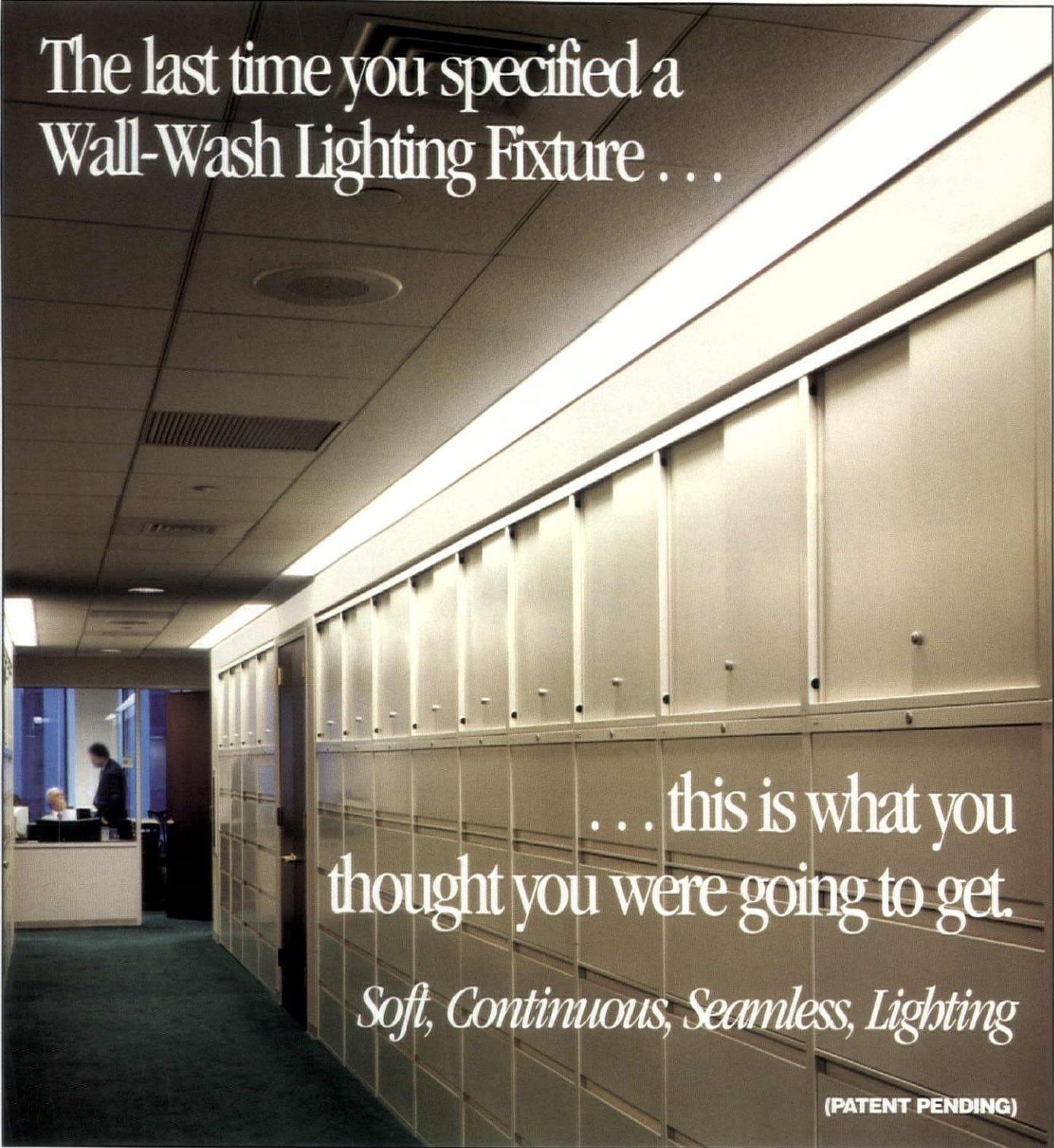
Daylighting is becoming recognized as an integral part of building design. As its effect on both cost savings and employee morale begins to be quantitatively measured and demand for daylighting increases, we can expect the techniques which provide such solutions to become increasingly sophisticated and precise.

Philippe Dordai is a studio principal with The Hillier Group, a seven-office, multidisciplinary architecture and planning firm.

PROJECT Hoffmann-La Roche ■ LOCATION Nutley, NJ ■ ARCHITECT The Hillier Group ■ INTERIOR DESIGNER Gensler & Associates, Architects
 ■ MECHANICAL/ELECTRICAL ENGINEER R.G. Vanderweil Engineers, Inc.
 ■ MANUFACTURERS (relevant to daylighting): Figla USA (glass panels); Hilman DiBernardo (lighting)

DETAILS

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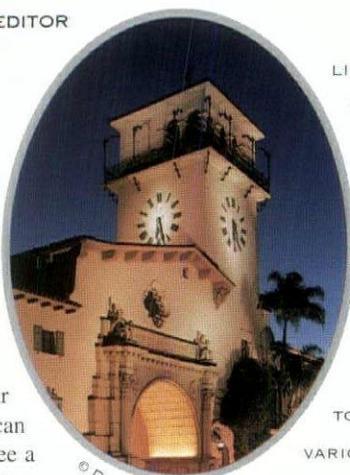
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IMAGE IS EVERYTHING: PROFESSIONAL PHOTOGRAPHY OR DO IT YOURSELF

BY LOIS I. BURGNER, CONTRIBUTING EDITOR

An excellent way of selling professional design services is to show the prospective client firsthand the possibilities offered by quality lighting—a personal tour of your top projects. The next best thing is to capture your work on film.

Representing architectural spaces on film accurately, particularly the lighting, requires skill and patience. Many amateur photographers, through study and practice, can produce images of quality and beauty. “I see a lot of people doing their own documentary photos for their portfolios,” said Steve Hall, a photographer with Hedrich Blessing, Chicago. But if the photo works for the portfolio, is it strong enough to submit for publication or for an awards competition? In some cases, it pays to



LIGHTING AT THE SANTA BARBARA COUNTY COURTHOUSE INCLUDES MERCURY, HPS, FLUORESCENT AND INCANDESCENT. SALIN USED FUJI NEGATIVE FILM TO HARMONIZE THE VARIOUS SPECTRA, JUST

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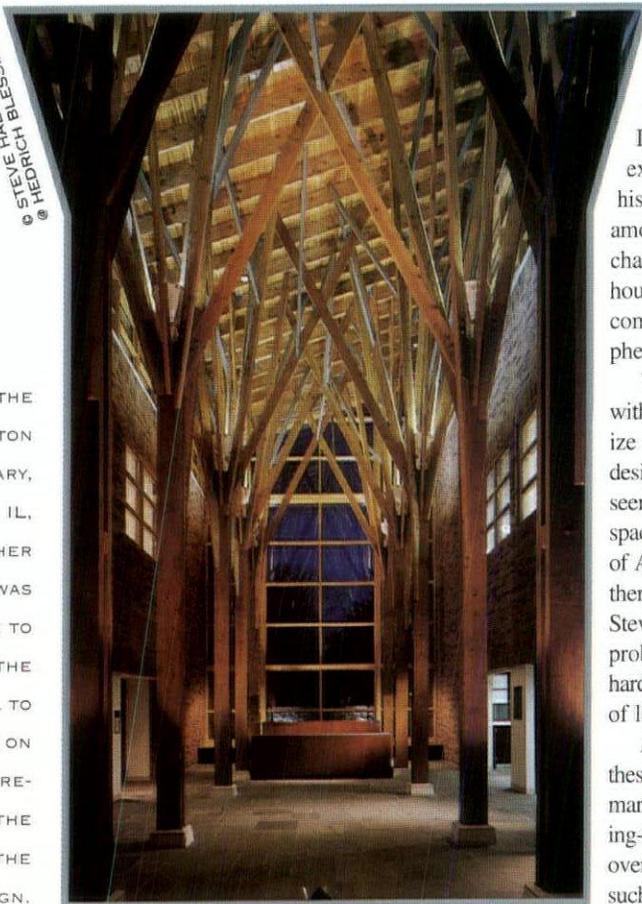
PROFESSIONAL PHOTOGRAPHERS

Capturing a lighting design on film is particularly tricky. Veteran lighting designer Jules Horton, now a consultant with Horton•Lees Lighting Design Inc. of New York City, bemoans an experience he had with *Time* early in his career: “We did an enormous amount of work to create a residential character in this tremendous penthouse.” But the photos printed were completely awash with the photographer’s floodlights, he added.

Though all photographers work with light, there are some who specialize in architectural lighting and its designed effects. “Some photographers seem to create their own lighting in the space,” said photographer Greg Hursley of Austin, TX. “I try to capture what’s there—the lighting and the mood.” Steve Hall said this about the “fill light” problem: “Dark restaurants are the hardest... We try to pick up the level of light without ruining the mood.”

A good photographer will recognize these problems and can become a strong marketing ally over time. Such “lighting-sensitive” photographers can also overcome common stumbling blocks such as sources of different types and

© STEVE HALL BLESSING
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AT THE BARRINGTON PUBLIC LIBRARY, BARRINGTON, IL, PHOTOGRAPHER STEVE HALL WAS ABLE TO INCREASE THE LIGHT LEVEL TO MAKE IT READ ON FILM WHILE PRESERVING THE EFFECT OF THE LIGHTING DESIGN.

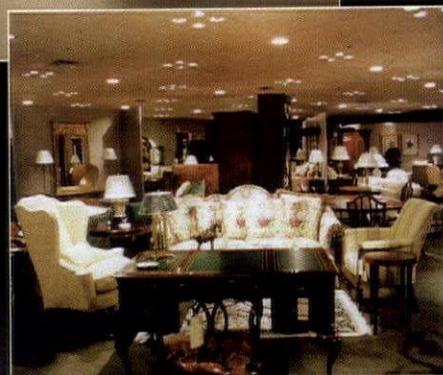
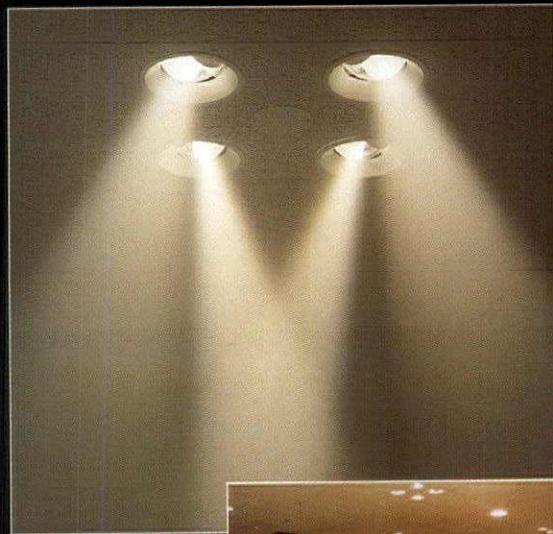
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DOING IT YOURSELF

With careful planning and some practice, you can shoot a project yourself and do it well. Your greatest asset is, of course, that you know lighting. And if you're paying a photographer for his services, you should be able to learn from him as well. Two of today's leading lighting designers, Ross De Alessi of Ross De Alessi Lighting Design, Seattle, WA and James Benya of Pacific Lightworks, Portland, OR are also talented photographers. They both credit San Francisco-based professional photographer Doug Salin as one of their mentors. Salin offers these tips:

- Generally, transparency (positive) film is better than negatives. Select a large format—e.g., 2-1/4 or 4x5—for large prints or magazine covers.
- Does the lighting look better at dawn, midday, dusk or night? When shooting at dawn or dusk, the space can be fully illuminated while the sky is colored deep blue. Wait until the sky is as bright as the lighting, and use the tungsten film to saturate the sky color.
- Daylight film should be used for sources close to 5000K and tungsten film for sources near 3200K. Lamps more than 200–300K off may require corrective gels.
- If you have a number of different source types—fluorescent, HID, incandescent, daylight—Fuji NPS or Reala negative film will marry the source colors without filtering, like the eye does. It is difficult, however, to create positive transparencies (slides) from these negatives.
- Several charts are available matching film types to light sources and gels. The best is contained in the *American Cinematographer Manual*.
- For transparency shoots, use a color meter, which evaluates spectral distribution relative to the film being used, to calculate the color temperature of each source type. Meter each individually at close range.
- Different light sources may require different exposure times, so access to circuit or switch control may be needed.
- To lighten the worst shadows, take sources pointed elsewhere and redirect them into the shoot.
- Shoot several sheets of 4x5 film at the same exposure, and have it processed at a custom professional lab. Pull processing (decreased development) 1/4, 1/2 or 3/8 stop will allow you to expose for shadows and develop for highlights. This will cause some color shift; a 10CC Red lens filter will typically correct.
- An NBRA lens filter (neutral blended ratio attenuator) is denser at the top and fades to clear at the bottom. It can show fixture highlight detail at the ceiling and retain shadow detail at the floor.

colors in a single space, or a range of brightnesses wider than the latitude of the camera.

To find a photographer with this sensibility, the best place to start is the lighting magazines, where the photographer is given credit. When reviewing his portfolio, note the assignments similar to yours. Ask specific questions: How much fill light was used

here? How many exposures are in this shot?

Should you find the right photographer, walk him through the installation on-site to select the shots you need and refine their composition. "I like to work with the architect or designer because we can figure out the photography together," said Peter Paige of Peter Paige Photography in Harrington Park,

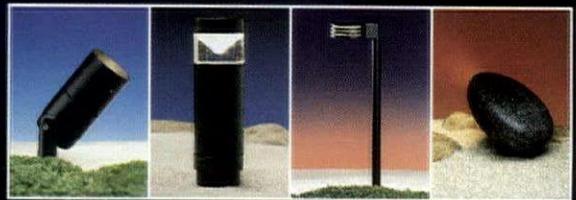
NJ. "I'm only there for a short time, so his input could be invaluable." If you can't be there during the shoot or conduct a pre-shoot tour, a Polaroid pre-shoot is good insurance that you will get what you want.

Most importantly, make sure ahead of time that the lighting installation is perfect. Failed lamps and color shifts often cannot be



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retouched. Also be sure that the photographer has access to enter, work in and exit the building at the scheduled times, as well as access to electrical panels, control systems and switches. "This can be a problem, particularly at 2 am," said Paige.

RIGHTS AND FEE ISSUES

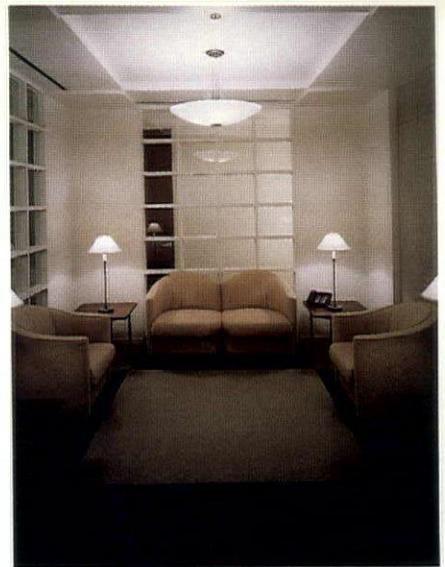
Some photographers actively solicit various members of the design team to pool their money and coordinate a shoot as a group, which can save money. A manufacturer may even pay for the shoot, all or in part, to use the project in advertising or public relations. "Most of the jobs I shoot are paid for by three parties or more," said Steve Hall. "You can't have everybody on the shoot, but our photos generally work for all the parties." A multiparty or manufacturer-funded shoot generally costs more than one paid for by a design firm.

Fees are based on image requirements (number and difficulty) and usage. Remember that the photographer owns all rights to the photos and will grant the client only specific rights of usage—i.e., copying,

reproduction, display and distribution. Even though a photographer may provide a set of slides, it is a violation of Federal copyright law to reproduce the images without permission. Most photographers often grant *carte blanche* rights for in-house use, including marketing materials. Be careful, however, when handing over the slides to a third party. Winning an awards competition may require that the images be reproduced in magazines, which could lead to additional fees.

Typically, the more extensive the usage rights, the higher the fee, so it pays to consider carefully how the images will be used in the future. It's generally cheaper to pay for rights up front, but of course they should be rights that will be used. A good fallback is to negotiate a fee schedule for future usage. The agreement should be in writing.

To keep costs as low as possible, don't compromise on quality. Keep the number of shots to a minimum. Ask to be on-site to act as an assistant/troubleshooter, eliminating the photographer's need for a paid assistant. Choose a photographer based near the project site. ■



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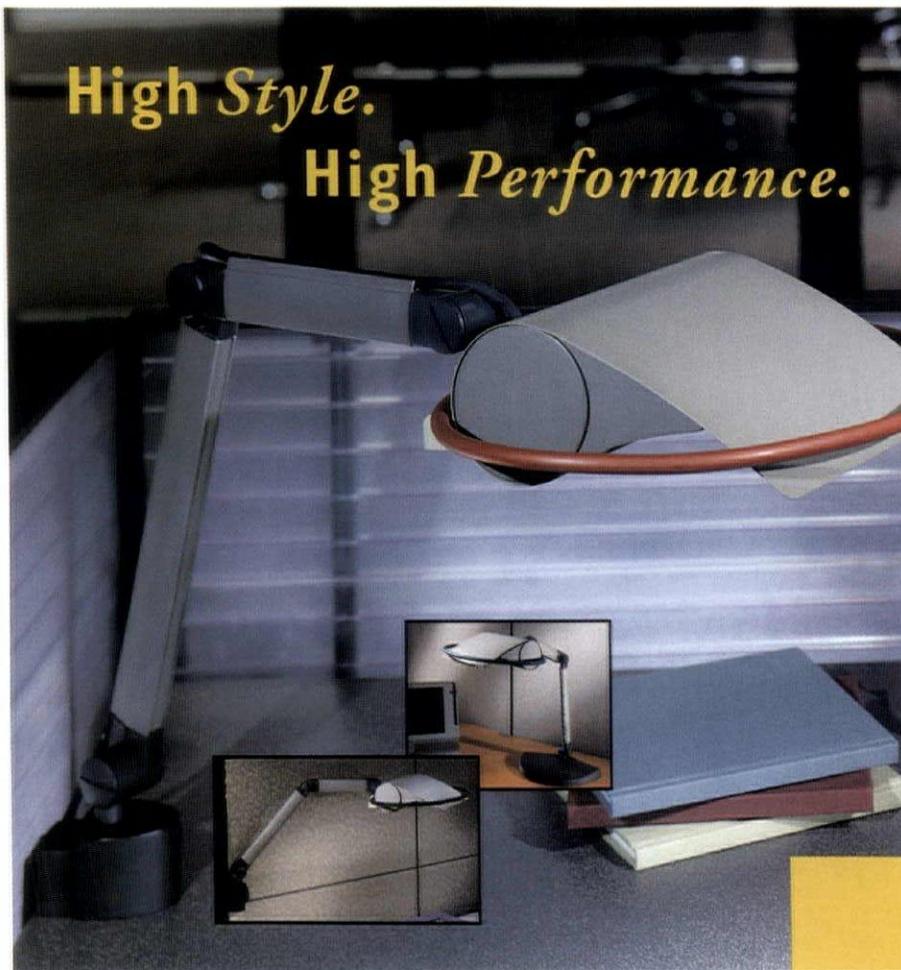
PHOTOGRAPHERS

Steve Hall **Circle No. 62**

Greg Hursley **Circle No. 63**

Peter Paige **Circle No. 64**

Doug Salin **Circle No. 65**



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FLUORESCENT LIGHTING IN RESIDENTIAL INTERIORS

BY CRAIG DILLOUË, EDITOR-IN-CHIEF

While the office has traditionally been an environment lighted with cool fluorescent sources designed to stimulate alertness and promote activity, the office workers always went home to relax under the warm glow of incandescent sources.

Today, with the development and advancement of new fluorescent technology and a few changes in traditional thinking, fluorescent lighting can be as good—or even better—than incandescent in a range of residential spaces, says Jeff Brown, IALD, principal of Colorlume Architectural Lighting Design, Ann Arbor, MI.

NEW TECHNOLOGY, NEW CHOICES

Traditionally, large fixture sizes, low CRI ratings, cool color temperature, potentially audible ballast hum and a lack of affordable, reliable

and easily installed dimming controls limited the use of fluorescent lighting in the home.

New fluorescent lighting tools include smaller T8 and T5 fixture designs and compact fluorescent fixtures, electronic-ballasted for instant start, quiet operation. Some electronic ballasts can also be connected to a manual dimmer or a more sophisticated control system. Compact fluorescent lamps have a rated service life of 10,000 hours, often dramatically reducing the number of trips to the fixture to replace the lamp. Fluorescent lighting offers distribution characteristics desirable for general lighting. And new fluorescent sources offer similar color temperature (2700K and 3000K) and CRI ratings (up to 80-90 versus 100 for the incandescent) that make them a competitive choice for many residential spaces.

DINING ROOM. A SPLASH OF COLOR WAS NEEDED IN THIS REVERSE COVE SUSPENDED OVER THE DINING ROOM TABLE AT THIS MIDWESTERN RESIDENCE. SIDE-MOUNT T8 FLUORESCENT STRIPS USE 4100K LAMPS AND ARE FITTED WITH LEE FILTERS' "JUST BLUE" THEATRICAL GELS INSERTED INTO CLEAR SLEEVES.



ROBERT J. ECVALDI

FLUORESCENT APPLICATIONS

"There really is no space where fluorescent sources could not be effectively used for general lighting," said Brown. "This is especially true if the lighting scheme is layered, meaning there are two or more types of fixtures in a space performing different functions."

He pointed to applications in the home where fluorescent lighting is particularly effective:

Kitchen. This is where fluorescent lighting works best, providing a relatively high light level with good distribution; since the kitchen is usually the most occupied space in the home, energy savings are also recognized.

Bathroom. If the home is occupied by a professional female, consider using both incandescent and fluorescent light sources in the vanity/make-up area on a separate circuit. This allows the application of make-up under the same type of lighting under which it will be viewed—fluorescent for the office, and incandescent for restaurants, nightclubs, etc.

Work Spaces. Fluorescent lighting, for sheer light output and wide distribution, can be more desirable in garage or basement work spaces versus the routine porcelain socket method. It is also suitable for home office areas.

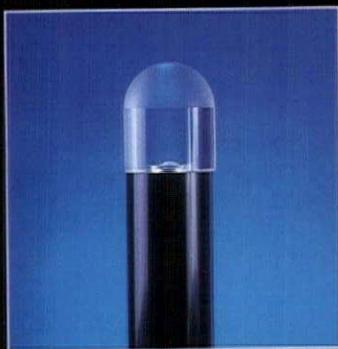
Laundry Areas and Walk-In Closets. In areas where color coordination and matching is important, consider fluorescent sources with a high CRI rating, as opposed to incandescent which does not render blues as well, said Brown.



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cent sources—that's how good the technology is at emulating the incandescent lamp.

MIDWESTERN RESIDENCE

At this midwestern architect-designed contemporary home (see photos), lighting is a main feature. Light pours in through windows and skylights during the day. Also during the day and especially at night, a comprehensive plan designed by Jeff Brown of Colorlume provides the architectural lighting.

"It is important to remember that humans see three-dimensionally and that almost all of our visual stimuli in the home occurs within our normal field of view rather than on horizontal surfaces," said Brown. "As such, this residence uses incandescent accent and fluorescent indirect lighting to emphasize the vertical and ceiling surfaces as well as unique architectural features, providing a comfortable, inviting, energy-efficient home."

In each room, including the bedrooms, at least two layers of lighting perform separate functions; even the laundry room features over-cabinet indirect lighting that is switched separately from the undercabinet task component.

The primary source of illumination in "gathering" spaces, such as the kitchen and family room, is fluorescent lighting featuring 3000K T8 lamps.

Where drama and mood are important, recessed PAR30 halogen accents are used to light larger artwork, while recessed low-voltage MR16 accents highlight small artwork, sculpture, table settings and architecture.

Color was added to the lighting in the kitchen, family room, dining room and open staircase. The latter space uses a low-voltage wire system with twisting lamp-holders (connecting the positive and negative 12V wires) that are fitted with red, green, blue and yellow acrylic shades. The dining room cove was fitted with a blue theatrical gel to match the owner's china pattern and other accessories.

Indirect coves are integrated into the architecture in the basement, family room, dining room, master bedroom and children's bedroom to visually expand the ceiling plane, creating a sense of volume. This is especially true in the walk-out basement, where the 7 ft. 9 in. ceiling height is not perceived as "low" due to the lighted ceiling surface. The cove in the master bedroom highlights the 11 ft. vaulted ceiling and open skylight wells, emphasizing the architecture. A home office, located in the basement, is lighted with a perimeter fluorescent cove surrounding 4 ft. suspended indirect fluorescent linear pendants, giving the space a professional office feel. ❖

IN THE KITCHEN, UNDERCABINET TASK LIGHTING COMBINED WITH DIRECT AND INDIRECT OVERHEAD LIGHTING PROVIDE A BALANCED, WELL-LIGHTED WORKSPACE. THE DOWN-LIGHTS ARE COMPACT FLUORESCENT WITH DECORATIVE COBALT BLUE GLASS TRIMS TO MATCH THE COLOR SCHEME. SIDE-MOUNTED T8 FLUORESCENT STRIPS ARE MOUNTED ON TOP OF THE WALL CABINETS, WITH A 2 IN. LIP PROVIDED TO CONCEAL THE FIXTURE.



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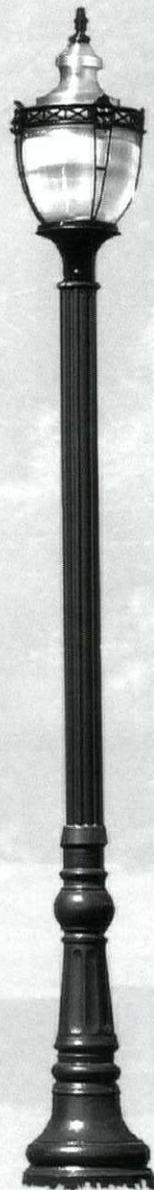
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ELECTROLUMINESCENT LIGHTING MAKES A BOLD NEW STEP

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Electroluminescent lighting refers to a material through which electric current is passed, exciting the material which causes it to glow.

Today, RSA Lighting of Northridge, CA has begun marketing a practical and commercially available electroluminescent lighting product called EL Lightstrip that is designed as an alternative to neon, fiber-optic and traditional cove, aisle and sign lighting.

The EL Lightstrip is a linear strip comprised of a layer of phosphorous materials and split electrodes on top of a flat aluminum conductor, all housed within a protective laminate. As electric current passes through the conductor and the electrodes, the phosphorous materials become excited and produce light along the entire length of the strip. There is no lamp, as the strip itself is the light source. The operating voltage is supplied by an RSA "power transverter" that accepts a line voltage of 120V, 240V, 12V or 24V and converts it to the required voltage to light the strip to the desired brightness.

The EL Lightstrip produces

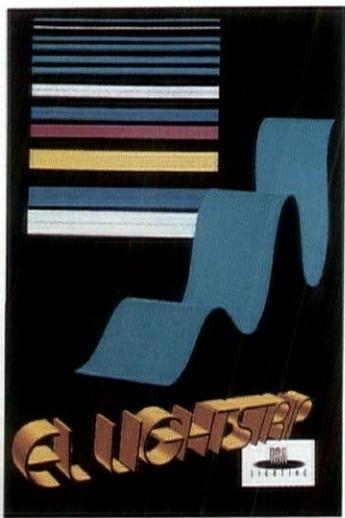
consistent brightness along the length of the strip over distances up to 1,500 ft. The level of brightness can be specified at various intensities, from 8 to 50 footlamberts (brighter than a computer monitor). A range of colors is available.

The strip is available in various widths, from $\frac{5}{16}$ in. to 22.5 in. For interior applications, the strip is laminated to a thickness of 0.020 in.; for exterior applications, the strip is jacketed to a thickness of 0.090 in. to render the product water- and moisture-proof. The strip can be cut to the desired length. In addition, the strip can be die-cut to create desired shapes for special applications.

According to RSA Lighting, the EL Lightstrip produces no heat and requires no maintenance. A 250 ft. length of 0.5 in. strip uses only 2 amps of power. The product is UL-listed for wet locations; it is pre-tested by RSA Lighting at the factory and arrives pre-assembled at the installation site.

Indoors, the product can be used for signage, hotel cove lighting, hospital pathway lighting, parking garage pathmarking and a number of other applications. RSA Lighting also offers aluminum and vinyl extrusions for aisle and step lighting in theaters.

Outdoors, the EL Lightstrip can be used to horizontally or vertically outline and attract attention to high-rise buildings. According to RSA Lighting, such designs are visible from up to five miles away. The product can also be specified for casinos, bridge spans, hotels, backlight signage and other applications.



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THE EL LIGHTSTRIP FROM RSA LIGHTING IS A PRACTICAL ELECTROLUMINESCENT STRIP DESIGNED AS AN ALTERNATIVE TO NEON, FIBER-OPTIC AND TRADITIONAL COVE, AISLE AND SIGN LIGHTING. CIRCLE NO. 58

HERE WE SEE THE EL LIGHTSTRIP AT A NATIONAL VIDEO AND MUSIC STORE. THE COMPANY IS BUILDING 400 STORES OVER THE NEXT TWO YEARS (SHOWN IS THE PROTOTYPE). THE LETTERS ARE 8 FT. TALL AND ARE OUTLINED BY LENGTHS OF EL LIGHTSTRIP.

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THE "LIGHT TRAIN"—A NEW CONCEPT IN DISTRIBUTING LIGHT AND SAVING ENERGY

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Lightron of Cornwall, Inc. has developed an innovative energy-efficient light conveyance system—Multi-Beam 2000—that offers an alternative to lighting spaces traditionally reserved for incandescent and halogen accent lights and downlights.

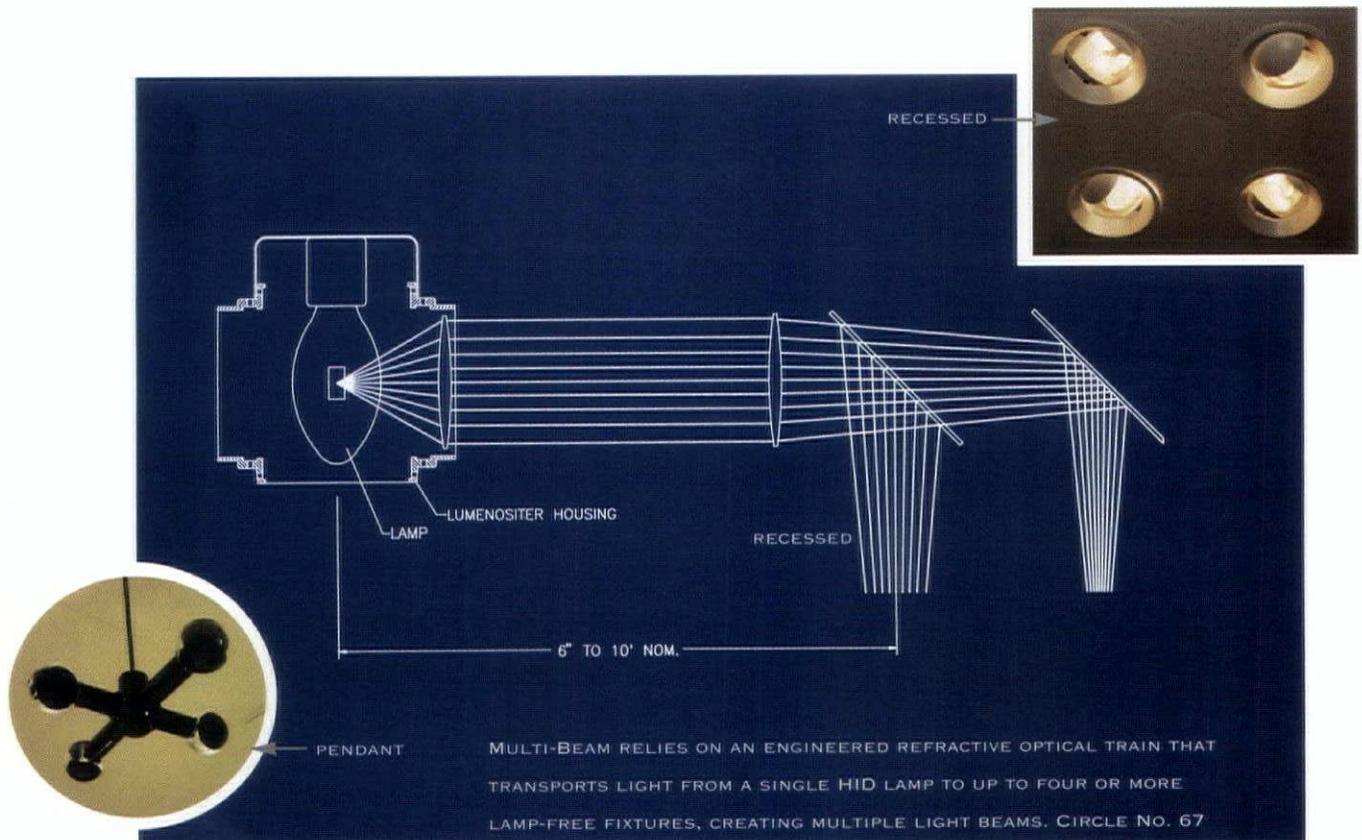
A LIGHT CONVEYANCE SYSTEM

Lightron's Multi-Beam is a patented (U.S. #5,130,908 with other domestic and international patents pending) light conveyance system that reproduces multiple lamp images from a single HID light source. Currently, it is designed as a competitor for incandescent and halogen fixtures for recessed and surface-mounted general downlighting and accent lighting applications, although the company is developing concepts for wall-wash, pendant-mounted and outdoor lighting fixtures.

The system was developed by inventor

Jerome Simon of Artech and subsequently Gene Littman, president of Lightron, acquired the exclusive license. Lightron then engineered the system to be commercially viable with a team led by Director of Engineering Steve Proner. The New York State Energy Research and Development Authority funded part of the research and engineering costs.

At the "hub" of the system is a lumenositer that contains a clear HID lamp, typically a Philips MasterColor 100W metal halide lamp that produces 10,000 lumens with an 85 CRI rating. Around the lamp are four refractive lenses that each focus 60 percent of the light leaving the arc tube into a beam which is then transported through air to up to four or more fixtures, where angled mirrored components distribute the light downward into the space at over 90 percent efficiency (see Figure below). Each of the



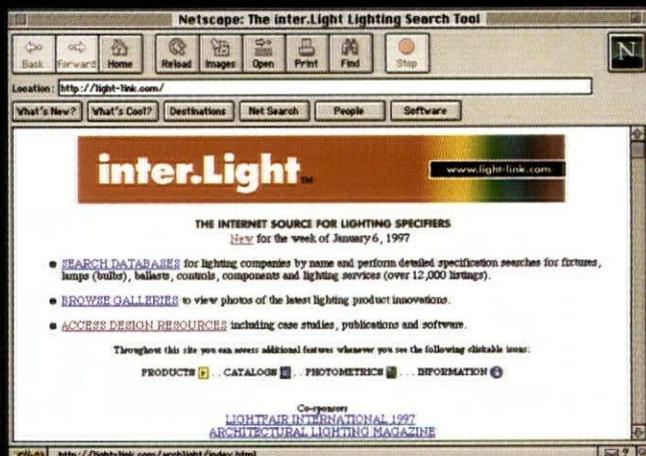
www.light-link.com

Try searching a standard web search engine for recess mounted low voltage halogen track fixtures.

Perhaps you're looking for electronic ballasts with a ballast factor of 0.95 that drive F32T8's.

Or maybe you want to know who manufactures a 50W, MR-16 with a beam spread greater than 50 degrees.

Good luck!



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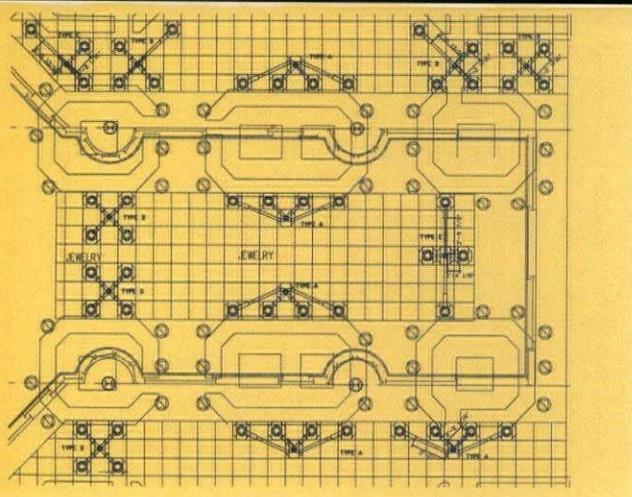


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AT JCPENNEY, THE MULTI-BEAM SYSTEM REPLACED RECESSED AND TRACK-MOUNTED HALOGEN PAR ACCENT LIGHTING FIXTURES ON A ONE-TO-ONE BASIS. (CIRCLES REPRESENT FIXTURES; THE CONNECTING LINES LEAD TO THE LUMENOSITER, WHICH HOUSES THE LAMP.)

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four beams subsequently represents 25 watts of power plus five watts for ballast losses. This results in 50 percent energy savings and increases lumen output by about 150 percent when replacing four 60W PAR38 halogen lamps, according to Lightron.

In addition, each beam transmitted to the space can be specified from 11 degrees to 25 degrees to provide high-level accent lighting through wide-area flood coverage. The beam pattern's edge can be a diffused soft edge or a crisp hard edge depending on desired effect.

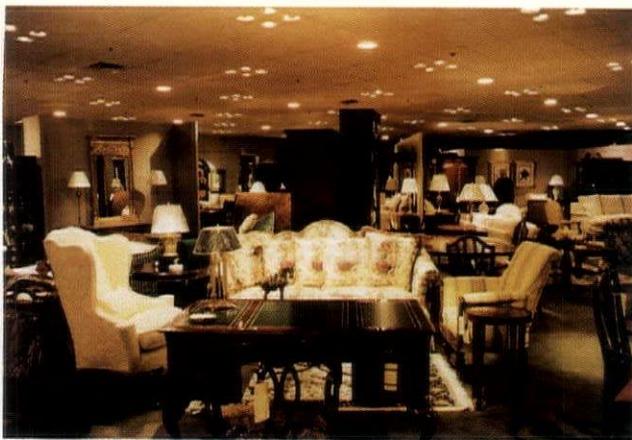
The beam also can be manipulated to either project graphic images through the beam or to shape the beam. A retail store, for example, could use this concept for department and brand identification, and to create visually exciting environments.

Each system (with four or more beams) requires a single electrical connection to supply the lamp with either 120V or 277V line voltage, reducing installation costs and eliminating the need for separate 120V circuits often required by the use of halogen PAR38 and other incandescent lamps. In addition, the metal halide lamp has a rated service life of 10,000 hours; upon replacement, the fixtures do not need to be re-aimed.

According to Lightron, Multi-Beam 2000 is currently priced to be competitive with conventional accent lighting and down-lighting systems.

"We view the Multi-Beam 2000 to be a major technological breakthrough," said Barry White, executive vice president of sales and marketing for Lightron. "We believe it will have vast lighting implications in installations such as correctional facilities, hospitals, retail, lobbies and particularly museums, where heat is a concern."

White added that other concepts that are in development include ambient lighting for office, school and other applications, as well as investigating potential reduction in UV light transmitted to the space.



AT BOGRADS FURNITURE, THE MULTI-BEAM SYSTEM WAS CHOSEN OVER A DESIGN THAT WOULD HAVE INVOLVED 608 HALOGEN ACCENT LIGHTING FIXTURES, RESULTING IN A LOAD SAVINGS OF 18,240 WATTS.

JCPENNEY COMPANY

JCPenney has installed the Multi-Beam 2000 system as a one-to-one replacement for its halogen recessed and track-mounted PAR accent lighting fixtures in two locations: Tysons Corner, VA and Valley View, TX. The major retailer realized 50 percent energy savings over existing fixtures, improved light levels by 150 percent and maintenance cost savings.

Currently, there are six other stores now under construction that incorporate Multi-Beam technology. According to White, more than 1 million sq. ft. of retail space will be lighted by the Multi-Beam 2000 system by the end of 1997.

"We estimate that if the Multi-Beam lighting conveyance system is implemented on a store-wide basis for all new stores scheduled for 1998 opening, the amount of energy required for accent lighting would be reduced by 52 percent," said Richard O'Leary, vice president and director of construction services for JCPenney. "It will save us a total of 3 million kWh, or approximately \$400,000 per year in operating costs. Additionally, it is expected that this new system could reduce construction costs by nearly \$1 million per year."

BOGRADS FURNITURE

When Bograds Furniture moved to a new 25,000 sq. ft. facility in Riverdale, NJ, the Multi-Beam system was evaluated versus a design that provided for track-mounted 60W and 90W halogen PAR fixtures.

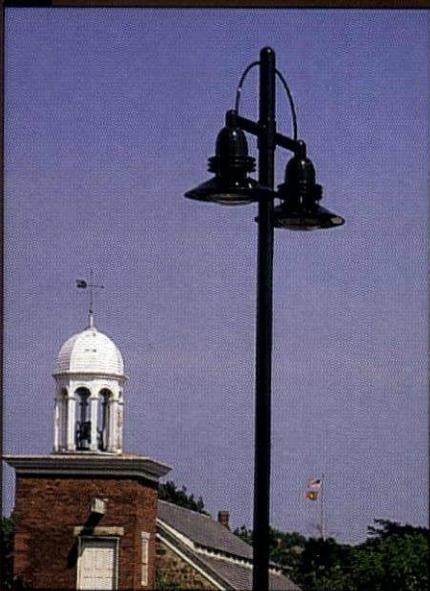
After Bograds chose the Multi-Beam system, 152 units were installed with a total connected load of 18,240 watts. The previous design would have involved installation of 608 fixtures housing 60W halogen lamps, or a doubling of the total load.

With the Multi-Beam system now installed, average light levels approach 90 fc with much design variation; wider beams produce 120 fc and many of the narrow 14-degree beams produce 250+fc. ■

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COOPER LAUNCHES NEW BRAND FOR HIGH-END RESIDENTIAL MARKET

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Cooper Lighting has launched a new brand of architectural grade/IC fixtures for the high-end residential market—Iris Lighting Systems—after two years of product development and market research that included site visits and interviews with architects, lighting consultants, interior designers, residential builders, showroom lighting specialists and builders. The new product family includes downlights; adjustable accent, wall-wash and shower/lensed fixtures; and accessories such as theatrical color filters, optical lenses, natural die-cast flanges, residential mounting bars that interlock, and field-replaceable MR16 sockets.

The result is a highly engineered line of fixtures whose features focus on aesthetics, visual comfort, optical control, modular construction (flexibility), consistent appearance, ease of installation, and preservation of the original design after relamp-

ings. Cooper's goal was to provide specifiers with a high-end residential product line to help them convince the home owner that lighting is as important as other interior design and architectural components, and crucial to mood and enjoyment of a quality home.

Besides the "tuning" of the fixture's construction and optics to meet prevailing building codes and visual comfort goals, what is particularly interesting is the modular nature of the system. Most fixtures can be broken down into interchangeable platforms for mounting, optical elements for beam control and lamp modules that accommodate a variety of incandescent, low-voltage halogen and compact fluorescent lamps. This strategy enabled Cooper to provide a broader range of choices to the lighting designer, and allows for a more consistent appearance of equipment in the space.

THE PLATFORM is air-tight and IC-rated, UL-listed and CSA-certified for direct contact with insulation. The interior of the platform is painted matte black to make the element non-obtrusive.



ADJUSTABLE ACCENT FIXTURES permit 361° rotation for all optical elements to eliminate common dead spots when aiming lamps, and up to 45° vertical aiming for flexibility. Translating center beam optics provide maximum light output through the aperture over the entire range of lamp tilt. Tool-free locking of the adjustable brackets allows for easy and secure aiming. All MR16 units come with backlight shrouds to prevent light escaping to the platform interior.

IRIS LIGHTING SYSTEMS. CIRCLE NO. 57

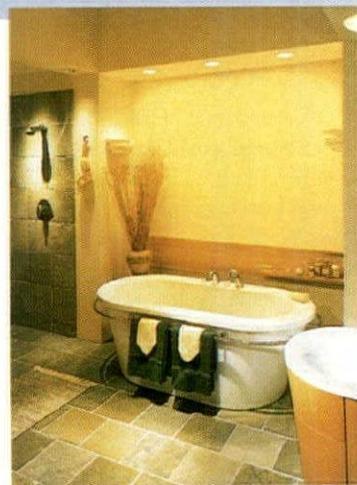
THE OPTICAL ELEMENT features 50° maximum cut-off to lamp and lamp image for low-glare lighting. Full cone optics enhance light output and prevent a view into the platform. Lamp attachments are fixed in place to secure optimal position for light output as well as for consistent performance. The optical elements are available in self-flange, die-cast matte white or natural die-cast. Mechanical light traps are designed to eliminate light leaks and reflections off the flange lip.

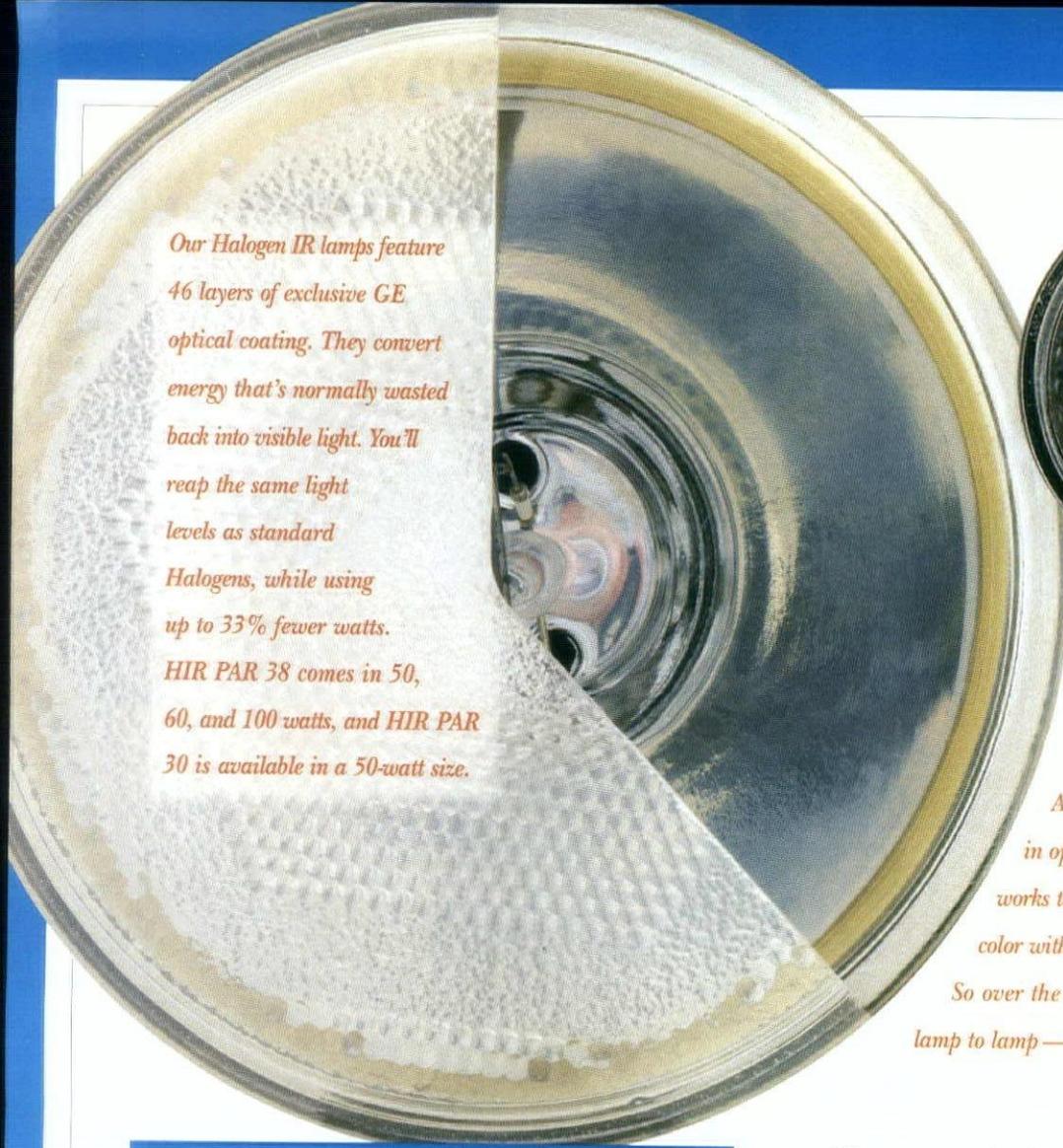
THE LAMP MODULES come with a lamp socket and quick connect plug that allows for changing the type of light source even after installation. Iris magnetic low-voltage transformers feature four-bolt construction and are acoustically isolated. Electronic FCC Class B compact fluorescent ballasts provide full light output and flicker-free and noise-free operation.

FIVE-IN. AR111 HALOGEN NARROW BEAM ADJUSTABLE ACCENTS ARE FOCUSED ON THE TABLE CENTERPIECE. FOR COOL AMBIENT LIGHTING, HIGH-CRI 32W TRIPLE TUBE CFLS ARE MOUNTED IN 5-IN. APERTURE PLATFORMS. THREE-IN. MR16 WALL WASHERS LIGHT THE TEXTURED WALLS AND CABINETRY. USING DIFFERENT OPTICAL ELEMENTS, THE SAME PLATFORM PROVIDES TASK LIGHTING AT THE SINK.



USING THE SAME 5-IN. PLATFORM, ADJUSTABLE ACCENTS PROVIDE LIGHT FROM A 100W INCANDESCENT FROM A SLOPED CEILING TO WALL WASH THE BATHTUB AREA. THE ITALIAN GLASS LUNA, ALSO ON A 5-IN. PLATFORM, PROVIDES DIFFUSE LIGHTING OVER THE SINK. THE 3-IN. NICHE PLATFORM AND MR16 LAMP ARE USED HERE TO BRING OUT THE SPARKLE OF THE SHOWER AND DRAMA OF THE TEXTURED WALLS.





Our Halogen IR lamps feature 46 layers of exclusive GE optical coating. They convert energy that's normally wasted back into visible light. You'll reap the same light levels as standard Halogens, while using up to 33% fewer watts. HIR PAR 38 comes in 50, 60, and 100 watts, and HIR PAR 30 is available in a 50-watt size.



Layered with 26 coats of super-thin optical film, our ConstantColor MR 16 lamps live up to their name. Available in 35- to 71-watt sizes in open and covered glass, the film works to provide a consistent beam of color with minimal lumen depreciation. So over the life of the lamp — and from lamp to lamp — you'll be consistently satisfied.

**The More We Cover Up
Our Lamps,
The Better They Work.**

It's a unique film twenty-five times thinner than the page you're holding. And when applied to our Halogen IR™ and ConstantColor® Precise™ MR 16 lamps, it dramatically improves their performance over standard Halogen lighting.

The reason is simple. Layer upon layer of this super-thin film results in greatly enhanced energy savings and light quality.

And this optical breakthrough is a GE exclusive. So if you want consistent quality from a consistent technology leader, we've got you covered. For more information about what these remarkable products can do for you, call 1-800-GE-LAMPS.

**GE—YOUR BEST CHOICE FOR INNOVATIVE,
ENERGY-SAVING LIGHTING.**



C-985 Circle No. 48 on product service card



GE Lighting

A D V E N T
L I G H T I N G

**N987 Craftsmen Dr.
Greenville, WI 54942
Phone: (414) 757-1088
Fax: (414) 757-1099**

The Advent Standard Product Pendant features a spun 30-in.-diameter solid brass and spun brass canopy, both with a mirror-polish finish. The pendant also includes a laser-cut 1/4-in.-thick green-tint acrylic disk with one side frosted. Four machined aluminum grip blocks with a brush finish support the green disk, while gripping the spun dome. A single aluminum center stem, also with a brush finish, completes the product. The light source is a 6-26W quad compact fluorescent using electronic integrally mounted ballasts.



CIRCLE NO. 75

A R C H I T E C T U R A L
A R E A L I G H T I N G

**14249 Artesia Blvd.
P.O. Box 1869
La Mirada, CA 90638
Phone: (714) 994-2700
Fax: (714) 994-0522**

The Promenade Series is a marriage of high-performance lighting and a period-style fixture. The PRMS shown is one of the six fixture designs available. Full cut-off reflectors are available in six distributions with lamp wattages from 70-400W HID.



CIRCLE NO. 76

A R C H I T E C T U R A L
L A N D S C A P E L I G H T I N G

**2930 South Fairview St.
Santa Ana, CA 92704
Phone: (714) 668-3660
Fax: (714) 668-1107**

The SL-34 is a new specification-grade landscape lighting fixture with three mounting heights that allow the fixture to be raised to or above the level of flower beds, hedges and other landscape features. A specular Alzak spun aluminum reflector provides even, wide lighting distribution. Fixture housing is constructed of compression-molded RhinoLite composite material for a long, damage- and corrosion-free operating life. SL-34's compact scale enables a landscape to be illuminated without noticeably invading its space.

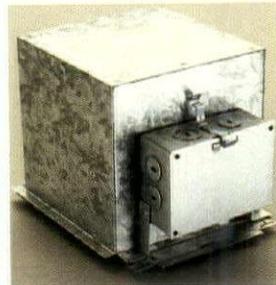


CIRCLE NO. 77

A R K
L I G H T I N G

**2327 Federal Ave.
Los Angeles, CA 90064-1405
Phone: (310) 473-4736
Fax: (310) 473-7955**

The ARLV7000/T IC housing measures only 6x5x5 in. The innovative design and engineering reduces the overall size of the fixture to allow installation into tight spaces. ETL-listed for 50W MR16 halogen lamps, with a variety of trims, Ark Lighting brings a space-saving solution to the market.



CIRCLE NO. 78

B E G A

**1005 Mark Ave.
Carpinteria, CA 93103
Phone: (805) 684-0533
Fax: (805) 684-6682**

Recessed Stainless Steel Luminaires are heavy-duty recessed wall fixtures with a 9 in. x 9 7/8 in. laminated steel and "eight window" faceplate backed by a precision tempered glass spread lens. Available in 70W metal halide, 50W HPS and 18W compact fluorescent, with a 30-degree cutoff "micro-louver" film. Suitable for wet locations and installation within 3 ft. of ground.



CIRCLE NO. 79

B E T A
L I G H T I N G

**1200 92nd St.
Sturtevant, WI 53177
Phone: (414) 886-2800
Fax: (414) 886-2779**

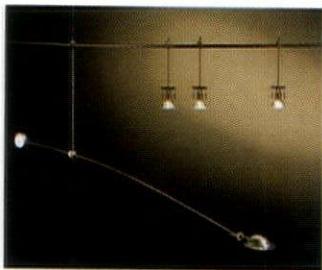
The new line of Low Profile Rectangular Luminaires offers the same great flood and area light performance as the existing 12-in. square Beta Lighting fixtures, but with a more compact, less obtrusive design. This departure from traditional shoe box styles has been designed primarily for ground-mounted applications, but also serves wall- and pole-mounted installations. The Rectangular Luminaire measures just 5.1 in. high x 16 in. wide x 9.25 in. deep. Six different optical systems are available with lamps ranging from 50-175W metal halide and 35-175W high pressure sodium.



CIRCLE NO. 80

**BRUCK
LIGHTING USA**

1431 Warner Ave.
Ste. E
Tustin, CA 92680
Phone: (714) 259-1000
Fax: (714) 259-1505



Bruck, a manufacturer of low-voltage cable and track lighting technology, offers five systems to satisfy a variety of applications. Mono-Line, a single, flat copper strip, replaces the regular double-cable system. This makes it possible to create forms and arrangements in a totally new way.

CIRCLE NO. 81

**CON-TECH
LIGHTING**

3865 Commercial Ave.
Northbrook, IL 60062
Phone: (847) 559-5500
Fax: (847) 559-5505

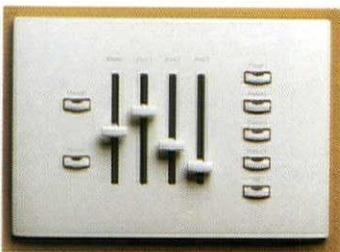


Con-Tech Lighting introduces the Ultimate Universal track light featuring modular component flexibility; a refined, low-profile design; and halogen lamp performance. The side-swivel lampholder is molded of durable, light-weight, high-temperature Lexan, and accepts interchangeable metal collars and shades. Suitable for residential, commercial and retail settings, the Ultimate Universal provides superb color and efficiency from 120V PAR16, PAR20, PAR30 and PAR38 lamps. Lampholder is available in black or white finish, with accessory shades in black, white, chrome and polished brass.

CIRCLE NO. 82

**ELECTRONIC THEATRE
CONTROLS**

3030 Laura Lane
Middleton, WI 53562
Phone: (608) 831-4116
Fax: (608) 836-1736
www.etcconnect.com

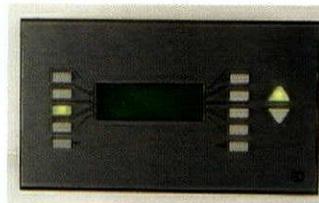


The Unison Lighting Control System from ETC incorporates sophisticated engineering with elegant styling to provide a unique, full-range lighting control product. Unison dimmers and controls are designed for architectural applications including hotels, convention centers, restaurants, churches, museums and theme parks. Control features include astronomical timeclock, programmable control stations, "Macros" and on-line computer programming and operation.

CIRCLE NO. 83

**ELECTRONICS
DIVERSIFIED, INC.**

1675 Northwest Cornelius Pass Rd.
Hillsboro, OR 97124
Phone: (503) 645-5533
Fax: (503) 629-9877
www.edionline.com

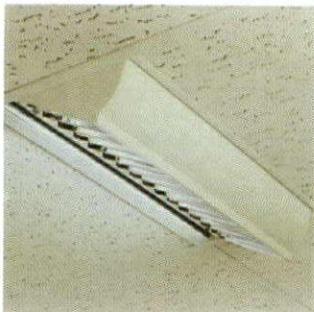


Twilite System Controls offer an affordable digital processor designed for integrated architectural lighting applications. The system can address up to 1,024 channels controlling 2,048 dimmers, and support up to 768 system-wide presets via the 4-line, liquid crystal display station. Capabilities include up to 1,000 channel address, controlling 512 dimmers, 48 stations, 16 rooms, 24 presets per room. Shown: TSC display station.

CIRCLE NO. 84

ELLIPTIPAR

114 Orange Ave.
West Haven, CT 06516
Phone: (203) 931-4455
Fax: (203) 931-4464



Elliptipar's 4X line provides more light using less energy. The F209 semi-recessed luminaire for lay-in grid ceilings is the first fluorescent with punch and control. Two 55W twin-tube compact fluorescent lamps in a 2-ft.-long recessed fixture provide the punch of a 500W tungsten halogen. The adjustable, semi-recessed design conceals the reflector aperture from normal view and evenly illuminates the entire wall.

CIRCLE NO. 85

**ENGINEERED LIGHTING
PRODUCTS**

10768 Lower Azusa Rd.
El Monte, CA 91731
Phone: (818) 579-0943
Fax: (818) 579-6803



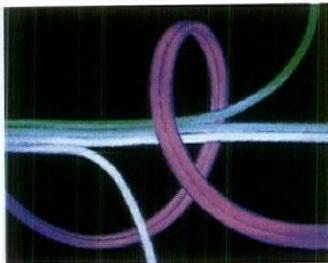
The new "ID Series" is specifically designed for lighting computer environments with 8- to 9- ft. ceilings where low reflector brightness is essential. Enjoy the comfort of indirect lighting with nothing below the ceiling plane. The precisely stepped and formed reflectors in our "ID Series" provide glare control. The 2-ft. x 2-ft. and 2-ft. x 4-ft. fixtures utilize efficient, long-life 40W, 50W or 55W biax fluorescent lamps.

CIRCLE NO. 86

FIBERSTARS, INC.

2883 Bayview Dr.
Fremont, CA 94538
Phone: (800) 327-7877
Fax: (510) 490-3247

BritePak II fiber-optic tubing is a highly luminescent tubing. Custom-manufactured cabling equipment, exclusive to Fiberstars and designed specifically for fiber-optic cables, incorporates a patented twisting process before drawing the bundles through the outer jacket, producing dense, more luminous fiber-optic tubing. A more clear and pliable PVC outer jacket is the result of a new chemical composition that facilitates optimum luminescence and lasting flexibility. This cost-effective product is 40 percent brighter than Fiberstar's original BritePak.

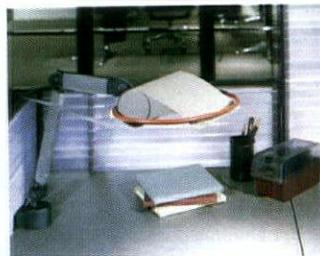


CIRCLE NO. 87

GARCYS LP

209 Kirby Rd,
Portland, TN 37148
Phone: (800) 221-7913
Fax: (615) 325-7727

The Pavo portable task light features an advanced optical system that provides superior asymmetric light distribution. It illuminates the work surface without producing glare. The integral grab ring makes it easy to position the light precisely where it's needed. The Pavo includes a choice of three ring colors: black, slate blue or burgundy, and three mountings: clamp, panel or freestanding.



CIRCLE NO. 88

HYDREL

12881 Bradley Ave.
Sylmar, CA 91342
Phone: (818) 362-9465
Fax: (818) 362-6548
www.hydre.com

The Hydrel 9000 Series In-Grade Lights offer state-of-the-art performance and Hydrel's water-tight modular design that eliminates water penetration problems. All critical components—lamp, ballast and connectors—are installed as presealed water-tight modules in a container designed to drain, thereby eliminating condensation. The unique Hydrel design also simplifies installation and maintenance.

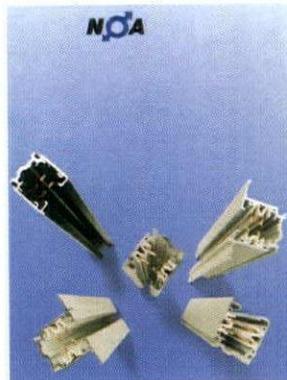


CIRCLE NO. 89

KALTEK, INC.

2310 Peachford Rd.
Atlanta, GA 30338
Phone: (800) 457-8795
Fax: (770) 454-9415

The North American stocking distributor of Nordic Aluminum (formerly Nokia) "Open Architecture" lighting track introduces the new Global Trac products. Fixtures for the specification-grade one-, two- and three-circuit Global Trac systems are currently available from a wide number of high-quality manufacturers, providing design, flexibility and retrofit ease. Global Trac products are UL-listed and sold in over 70 countries worldwide.



CIRCLE NO. 90

LAM LIGHTING SYSTEMS, INC.

2930 South Fairview St.
Santa Ana, CA 92704
Phone: (714) 549-9765
Fax: (714) 662-4515

Litedisc CR indirect pendant lighting fixture is specifically designed for economical classroom, training room and other commercial/architectural applications. Litedisc CR melds the benefits of highly energy-efficient compact fluorescent lamps with a simple, non-linear, high-output indirect reflector system. Fixtures are available in 30- and 36-in. diameters and in an array of heat- and fade-resistant matte enameled finishes. UL- and CUL-listed and IBEW-manufactured.



CIRCLE NO. 91

LIGHTING SERVICES INC

2 Kay Fries Drive
Stony Point, NY 10980-1996
Phone: (800) 999-9574
Fax: (914) 942-2177
www.LightingServicesInc.com

Lighting Services Inc, a manufacturer of track, accent, display and fiber-optic lighting systems, has introduced the new Light Notes family of fixtures. Composed of line and low-voltage units, the Light Notes family can accommodate lamp types ranging from 20W MR16 to 250W PAR38.



CIRCLE NO. 92

LIGHTING TECHNOLOGIES, INC.

5171 Eldorado Springs Dr.
Boulder, CO 80303
Phone: (303) 499-1822
Fax: (303) 499-1832
www.lighting-technologies.com

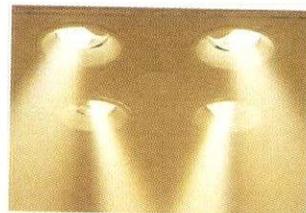


Lumen Micro 7 is the only manufacturer-independent, Microsoft Windows-based lighting design, analysis and specification software. LM7 provides comprehensive indoor/outdoor lighting design and analysis, and includes an extensive library of nearly 14,000 IES format photometric files from more than 50 manufacturers. LM7 also offers DXF import/export, a library of interior and exterior objects, and light-accurate renderings.

CIRCLE NO. 93

LIGHTRON

P.O. Box 4270
65 River Rd.
New Windsor, NY 12553
Phone: (914) 562-5500
Fax: (914) 562-3082

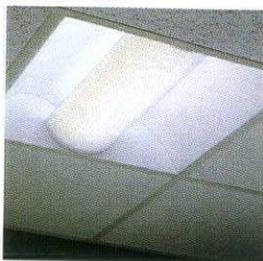


The MultiBeam 2000 is a "light conveyance system" that can transport multiple images from a single point source simultaneously. Mounted up to 10 ft. away, each aperture can be adjusted independently between 0-45 degrees vertical and 0-360 degrees horizontal. The following results are achieved: up to 70 percent reduction in energy; elimination of lamps from individual luminaires; simplification of electrical distribution; reduction in installation labor; reduction in air conditioning loads due to A-Thermal beam content; and the ability to project images, graphics and various beam sizes and shapes.

CIRCLE NO. 94

LITHONIA LIGHTING

P.O. Box A
Conyers, GA 30207
Phone: (770) 922-9000 x2647
Fax: (770) 922-1370

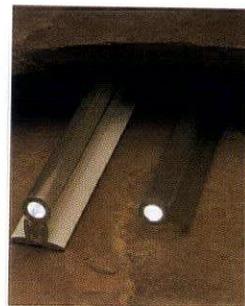


Lithonia Lighting has introduced Avante, a new recessed direct/indirect lighting system. Avante is recommended for small office applications and other spaces where low-angle shielding and the elimination of "cave effect" are important. The direct and indirect light distribution combine to provide superior brightness control at low angles and balanced illumination between task and proximate walls. Avante utilizes efficient T5 compact fluorescent and is available in a 2-ft. x 2-ft. size.

CIRCLE NO. 95

LUMENYTE INTERNATIONAL CORPORATION

350 Lear Ave.
Costa Mesa, CA 92626
Phone: (714) 556-6655
Fax: (714) 556-9329



Developed for the New York, New York Hotel and Casino skyline in Las Vegas, Interlock Optical Fiber and Track represent a revolutionary design in fiber-optic lighting. This system incorporates the beauty of Lumenyte large core optical fiber with a profile that provides for easier installations (no adhesives required), allows for extreme temperature changes, and offers a wider and brighter viewing angle than ever before. A "barbed" surface on one side simply "locks" into the tracking. Ideal for building perimeter accents.

CIRCLE NO. 96

LUXO CORPORATION

36 Midland Ave.
P.O. Box 951
Port Chester, NY 10573
Phone: (914) 937-4433
Fax: (914) 937-7016



Halogen 3 is based on the same design principles of all Luxo adjustable task lights. A patented, fully articulating, counter-balanced conceal-spring arm is available in two lengths. Each allows precise vertical and forward placement of the light to suit specific needs. A semi-elliptical translucent or opaque shade is available, as is Luxo's popular "stepped" shade design. Mounting options comprise table base, floor base and desk-edge clamp.

CIRCLE NO. 97

NEO-RAY LIGHTING PRODUCTS, INC.

537 Johnson Ave.
Brooklyn, NY 11237
Phone: (718) 456-7400
Fax: (718) 456-5492



The Triad is a pendant-mounted indirect/direct fluorescent fixture that embodies the highest attention to architectural design and detail as well as lighting performance. The Triad features precision-formed components, dual hangers and a partially perforated metal housing backed with an acrylic overlay to facilitate a uniform "glow." It has a profile of only 10 1/4 in. wide x 2 3/4 in. high with an integral ballast and lamps. Ideal for open plan offices, private offices, conference rooms, VDT workspaces and others.

CIRCLE NO. 98

OSRAM
SYLVANIA INC.

100 Endicott St.
Danvers, MA 01923
Phone: (508) 777-1900
Fax: (508) 750-2982

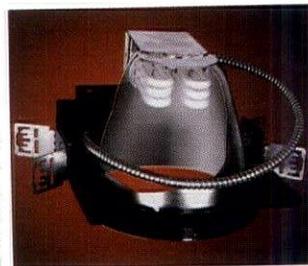


Osram Sylvania's new technology for electrodeless induction lamps uses a magnetic field to generate electron flow (unlike the electrodes used in conventional fluorescent lamps), resulting in an average rated lamp life of 60,000 hours. The new lamp will be available in two system wattages (100W and 150W) and three system lumen packages (7,500, 10,000 and 12,000).

CIRCLE NO. 99

PRESCOLITE®
MOLDCAST

1251 Doolittle Dr.
San Leandro, CA 94577
Phone: (510) 562-3500
Fax: (510) 577-5010

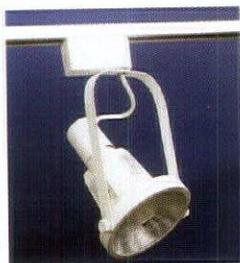


Two-Lamp Triple Tube recessed ceiling downlights and wall washers combine exceptional lumen output, high-energy efficiency, economical spacing ratios and evenly distributed, glare-free light. Three lumen packages are available; 3,600, 4,800 and 6,400. Six proprietary Alzak downlight reflector designs are offered. Two-Lamp Triple Tube features Prescolite's Intellect integral compact electronic ballast with optional full-range dimming.

CIRCLE NO. 100

PROLIGHT

581 Ottawa Ave.
Holland, MI 49423
Phone: (800) 968-2556
Fax: (616) 396-0686
E-Mail: kyoungquist@prolight.com



ProLight's new 26W and 32W gimbal track head luminaire features ProLight's patented multiparabolic reflector system. The reflector system delivers maximum candle power from triple twin-tube 26W and 32W design lamps to accomplish display lighting. Choice of several lamp color temperatures allow lighting designers flexibility in design for several lighting applications. The ProLight track heads replace up to 150W floodlamps, saving nearly 80 percent in energy costs and reducing HVAC loads. Electronically ballasted.

CIRCLE NO. 101

SPECTRACOM TECHNOLOGIES
CORPORATION

Gainey Ranch Financial Center
7377 East Doubletree Rd., Ste. 270
Scottsdale, AZ 85258
Phone: (800) WELL-LIT
Fax: (602) 443-4703
www.spectranomics.com/spec



Spectrum Environmental Lighting Filter. Eyestrain is the fastest-growing single cause of workplace injury and stress. Solve the problems of fluorescent lighting with the Spectrum Lighting Filter. Provide daylight-balanced light from cool white sources, reduce glare and eliminate UV and enhance workplace productivity for less outlay than a single relamping with tri-phosphor lamps. Guaranteed for life.

CIRCLE NO. 102

SPI LIGHTING

10400 N. Enterprise Dr.
Mequon, WI 53092
Phone: (414) 242-1420
Fax: (414) 242-6414

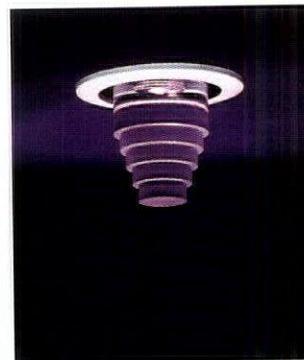


Echo expands flexibility—four sizes in solid or perforated steel. New extruded aluminum housings carry the design outside. Opticals up to 85 percent efficient, accommodate linear fluorescent, metal halide and halogen in single- and multiple-lamp configurations. Integral and remote ballast options simplify form. Mounting variations include ceiling, wall, pier or pendant. Add Decorative Shapes to compliment any space.

CIRCLE NO. 103

SUPER VISION
INTERNATIONAL INC.

2442 Viscount Row
Orlando, FL 32809
Phone: (407) 857-9900
Fax: (407) 857-0050



The D104-Bolero, a decorative fiber-optic downlight fixture, is one of seven styles available. Fiber optics provide energy efficiency, color change if desired and minimum installation clearances without heat, electricity or UV at the lens. Acrylic lens installs into a recessed fixture available in three colors. One light source can illuminate up to 40 fixtures.

CIRCLE NO. 104

T E C H
L I G H T I N G

1718 West Fullerton
Chicago, IL 60614
Phone: (773) 883-6110
Fax: (773) 883-6130
www.techlighting.com

Tech Lighting presents new low-voltage halogen lighting systems. A new catalog offers four elegant, versatile systems: airy, linear Kable Lite; shapely, hand-bendable Radius Wire; structural TwinRail; and sleek, hand-bendable MonoRail. All are UL- or ETL- and CSA-listed.



CIRCLE No. 105

T H H C L I G H T I N G

1300 John Reed Ct., Unit D
City of Industry, CA 91745
Phone: (818) 330-8368
Fax: (818) 330-3616

THHC Lighting has announced the introduction of its miniature xenon G4 bi-pin lamps that can easily replace existing G4 bi-pin halogen lamps with these advantages: versatile (12V and 24V 3-20W); 3,000-20,000 useful life hours; similar light output to a halogen, with less heat build-up; G4 bi-pin base; tipless construction for an even distribution of light output; low pressure/no additional shield needed; eliminates UV hazard. THHC is a manufacturer and distributor of miniature xenon lamps of all types, and an authorized distributor of Toshiba-brand lamps.

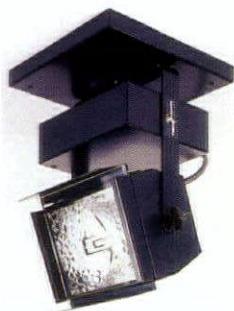


CIRCLE No. 106

T I M E S S Q U A R E
L I G H T I N G

Stony Point Industrial Park,
Rte. 9W
Stony Point, NY 10980
Phone: (914) 947-3034
Fax: (914) 947-3047

Times Square introduces the MC420, a compact linear metal halide floodlight ideal for accent, decorative and display lighting. The MC420 features a 70W MasterColor lamp that provides a warm 3000K color temperature, excellent color rendering (82-85 CRI) and an average life of 6,000 hours. A wide beam pattern is controlled by easy-fitting barndoors, louvers and filters. The MC420 is equipped with tempered safety glass and offers numerous mounting options.



CIRCLE No. 107

V E N T U R E
L I G H T I N G

32000 Aurora Rd.
Solon, OH 44139
Phone: (800) 451-2606
www.adlt.com/venture

An Advanced Lighting Technologies, Inc. company, Venture offers more than 250 specialty and 40 commodity metal halide lamps, ranging from 32W to 2,000W for industrial, commercial and residential applications. Advanced Lighting Technologies, Inc. is a designer and manufacturer of metal halide lamps, components and turnkey manufacturing equipment systems used in the production of metal halide lamps.



CIRCLE No. 108

V I S A
L I G H T I N G

8600 West Bradley Road
Milwaukee, WI 53224
Phone: (800) 788-VISA
Fax: (414) 354-7436
www.VisaLight.com

Visa Lighting announces its latest product line, Ovation. Available in both ceiling- and wall-mount versions, the Ovation line satisfies the need for attractive low-profile illumination. Ovation gives the look of a pendant in a ceiling-mounted product. It can be used in ceilings as low as 8 ft. and is available in both fluorescent and HID. The full line of companion wall units are ADA compliant. With 25 trim variations to choose from, the Ovation line can complement a variety of existing Visa products, making it an excellent companion where conventional pendants are too large or too tall to fit.

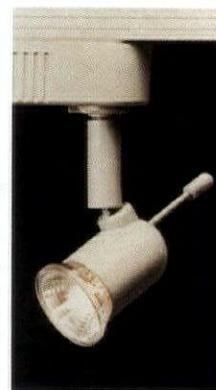


CIRCLE No. 109

W.A.C.
L I G H T I N G

P.O. Box 560128
113-25 14th Ave.
College Point, New York 11356
Phone: (800) 526-2588
Fax: (800) 526-2585
wacigt@popd.ix.netcom.com

W.A.C. Lighting's extensive line includes new die-cast track heads, miniaturized track/recessed fixtures, halogen button lights adaptable for recessed and flush-mount installations and under-cabinet halogen lightbars. Also offered are track extensions, suspension kits and accessories. Suitable for residential and commercial applications.



CIRCLE No. 110

QUALITY OFFICE LIGHTING: HOW SUCCESSFUL HAS THE INDUSTRY BEEN?

BY ROBERT H. INGRAM, CONTRIBUTING EDITOR

When discussing lighting, there is at least one aspect that all of us can agree is important—vital, in fact, to our respective business futures. That aspect is the quality of the lighting systems and installations we produce. Even more challenging is the open-ended question, “How successful have we been?”

Unfortunately, the truth is, we don’t always succeed in communicating to others the degree of quality we are capable of producing and that we know our customers should have. We need to ask ourselves why.

Let’s look at the office furniture industry. Like us, they had to address the changing office environment of increasing computerization, need for increased productivity, ergonomic health and value. They proactively approached the challenge and developed ergonomic workstations and chairs. They sold the value—and value-added—of the higher-quality office furniture. Today, roughly 70 percent of the sales of one leading office chair manufacturer falls into the higher-quality “ergonomic” category, with much of the rest of that industry not far behind.

They have achieved 70 percent implementation. We think we’ve achieved less than 10 percent—not a very complimentary picture of our industry. How did this happen when our industry has the product technology, the education and the expertise to do much better?

One of the main problems is that lighting is still initial-cost driven rather than life-cycle-cost driven. Contractors have capitalized on this situation, and have broken out of a congested sales channel of influencers (manufacturer, sales rep, distributor, specifier, contractor, end-user). They have taken the initial cost story directly to the end-user—the ultimate decision-maker. It’s in terms the end-user can easily understand—money.

Another problem is that there is a lack of a perception of value. Decision-makers understand the message of a dollar saved, but don’t understand the true value of a quality lighting system. Lighting can be much harder for a company president to understand than, say, a beautiful feature-laden executive desk, or even flooring. To illustrate this, a frustrated lighting designer related his experience of going to a meeting with a building owner and his architect. The contractor had proposed the lighting package go to lensed troffers to save money. The owner had agreed to the change, then had to cut the meeting short to catch a flight to Italy to pick out marble flooring. The decision-maker did not understand the value of the specified lighting system. He did, however,

perceive a value in a marble floor. We pay for what we value.

Here lies the crux of the problem. If the individual who holds the purse doesn’t understand the value of quality lighting, all the R&D for new product development and all the seminars and lighting courses become exercises in futility.

Lighting industry executives often spend more time trying to influence each other than trying to effectively reach out and speak to the end-user, to help him understand the value of quality lighting. We are often guilty of “preaching to the choir.”

We are in this together. We all add value to lighting products at every step of the process; we all pay the price for the lack of perceived value. As the understood value of quality lighting goes up, so does the need for an expert in the science of lighting. If we are successful in solving this problem, we will solve it as an industry. If successful, we will reap the benefits—as an industry.

First, we must understand why quality lighting is a good and viable goal that delivers genuine value to customers.

Second, we must quantify that value in monetary terms. If it doesn’t make economic sense, the story will have limited influence. Some current productivity studies and case studies are a move in the right direction. Let’s get the right target in our sights and show the end-user how to increase bottom-line profits not only through energy savings but through quality lighting with improvements in productivity as well.

The lighting industry needs a broad overall approach to boost the industry as a whole and the quality lighting we offer. Advertisements, articles—any avenue that conveys the quality issues of lighting. They should be placed where decision-makers will see them.

It is time for the pendulum to swing back and for us to reclaim the position of primary influencer of lighting. It is the manufacturers who have made the investment in factories, equipment and tooling. It is the specifiers and sales reps who have made the investment in education and technology. For us, lighting is not and should never become just a paycheck. It’s our passion, our life. To those who truly aspire to make a difference, let us accept the challenge and, as an industry, become over-achievers in marketing the message of “quality of light.”

Robert Ingram is president of Columbia Lighting, a manufacturer of energy-saving parabolic and indirect fluorescent fixtures.

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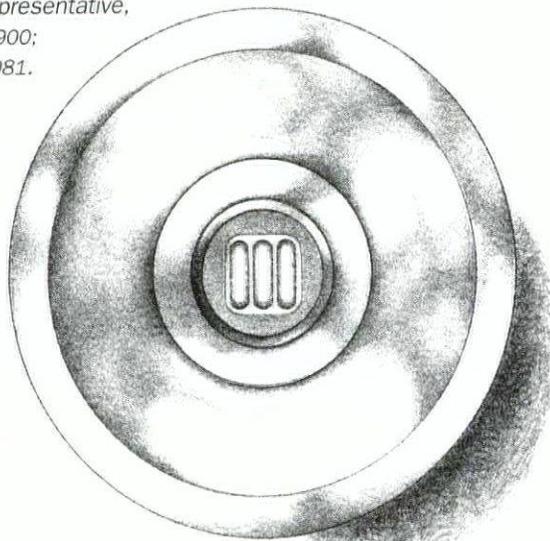
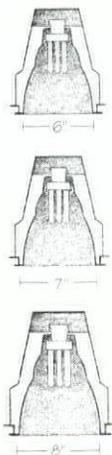
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