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1996 IALD AWARDS

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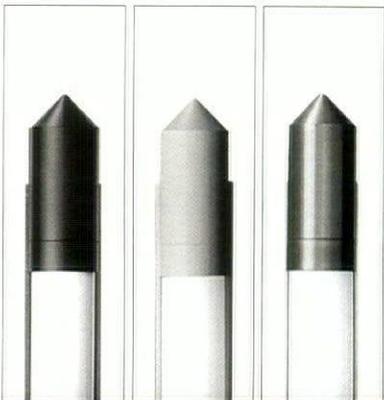
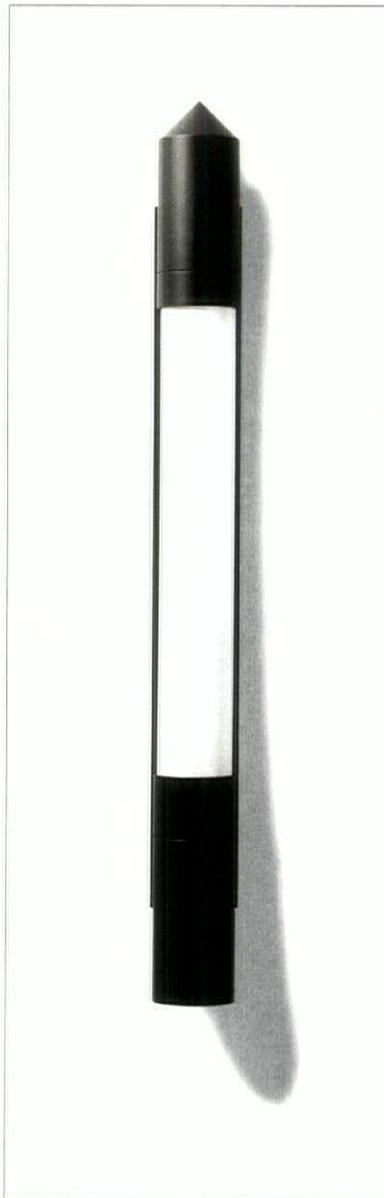
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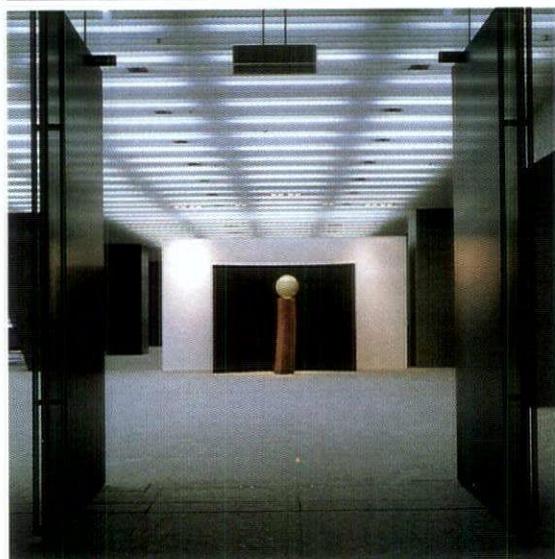
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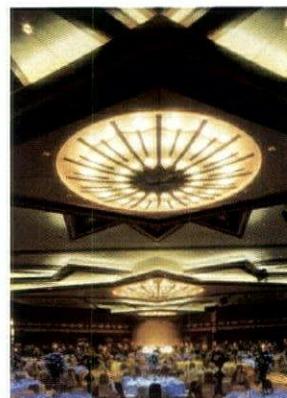
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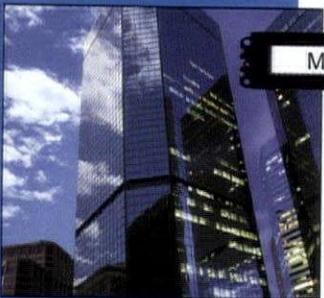
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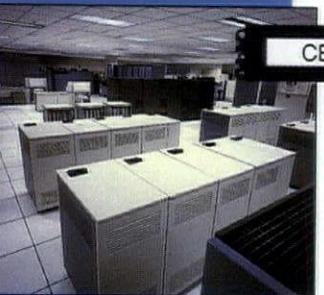
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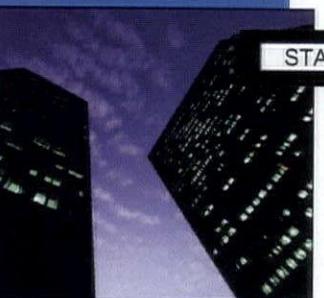
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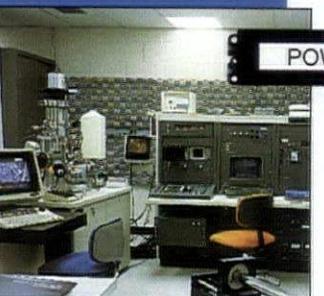
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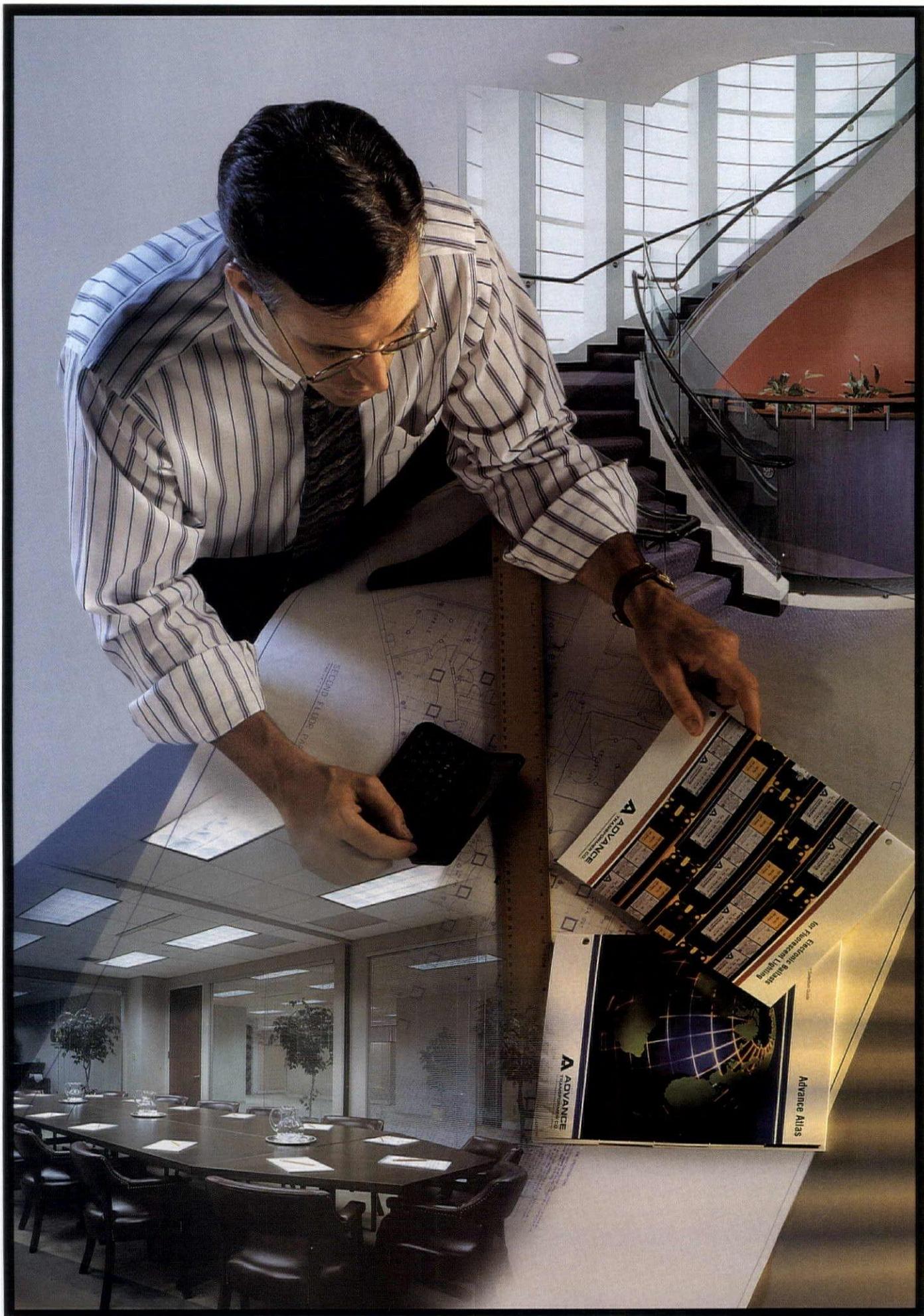
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FOUR BAROMETERS OF OUR INDUSTRY

Lightfair was certainly exciting this year for both specifiers and manufacturers. One reason why specifiers were more interested was the higher plane of innovation that was evident by the manufacturers. Most of the advancements appeared to be in the area of function and efficiency rather than bold new aesthetics. One fixture among several, however, really stood out for its aesthetic effects—Irideon's new AR5 fixture, which won applause and the Best New Product of the Year award at the New Product Showcase sponsored by *Architectural Lighting* and inter.Light.

We're especially pleased to present the AR5 fixture along with the winners of the New Product Showcase because we felt the diverse range of innovative new products truly deserved the mark of distinction. Other Showcase entries are shown in a special advertising section, and the complete Showcase can be viewed on the Web site of our Internet partner, inter.Light, at <http://light-link.com>.

On the design side, *Architectural Lighting* was proud to cosponsor the IALD Awards, sold out to an enthusiastic audience who attended the awards dinner and ceremony at the San Francisco Museum of Modern Art (*Architectural Lighting's* April/May cover story). Events like this provide the lighting professional with much-deserved recognition—and help the rest of us learn. The Awards program, developed by Christina Trauthwein and Emilie Sommerhoff, is presented in our Design Features section.

The level of problem-solving in the new products that come out each year and the depth of expertise evident by award-winning designers and projects are important barometers for our industry.

I want to also acknowledge two other important barometers that we almost never see publicly celebrated—standardization and research—although their impact can change the course of the future of lighting.

On the research side, this is an industry that has been rich in conventional wisdom but, in some areas, lacking the foundation of research that will build the expertise and product innovation of the future. One reason why, perhaps, is the fact that lighting has been moving at such a high speed since the '80s. We're pleased to focus on energy efficiency in this issue with an exciting study recently completed by the Lighting Research Center. Our Industry Focus highlights the results of the first study to focus on manual dimming, which tests its effectiveness versus automatic daylight dimming in an energy savings—and to an extent, occupant satisfaction—context.

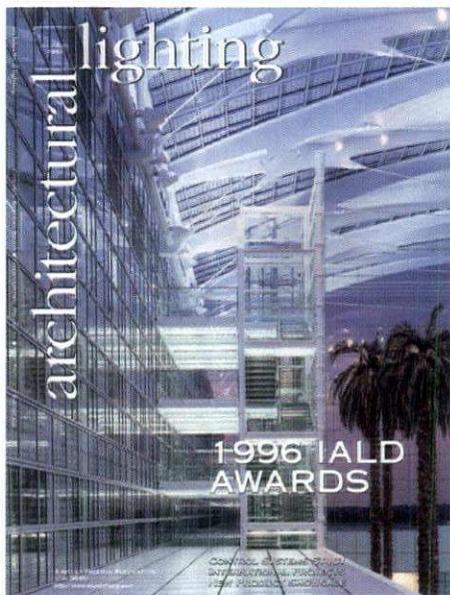
There are plenty of other features in this issue for you to enjoy at the beach this summer (or read when you get back!). Emilie

Sommerhoff covers four lighting projects in other countries and explores the cultural and design differences; Christina Trauthwein interviews Hayden McKay, AIA, FIES, FIALD in our new "Insights" column; Keith Yancey talks about integrating emergency and architectural lighting; our technology features focus on UV lighting and window technologies for daylighting; James Crowell reviews Euro luce; and Lee Waldron reviews Lightfair in our first "Perspectives" column at the end of the issue.

Lightfair was an affirming experience for our industry as well as for us here at *Architectural Lighting*. It was good for the soul to hear the many fine comments about the direction our magazine is taking. Keep your feedback coming—positive or constructive—by calling me at (212) 615-2304 or e-mailing me at cdilouie@mfi.com. ■



CRAIG DILOUIE,
EDITOR-IN-CHIEF



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should benefit from it too.



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Michiel van Dam, Group Product Manager
Philips Lighting, Somerset, NJ



I'm Michiel van Dam, from the Lighting division of Philips Electronics.

We've created a fluorescent tube with so little mercury, it meets the U.S. EPA test for nonhazardous waste.* In fact, it's the first fluorescent to meet this EPA standard.

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*The U.S. Environmental Protection Agency (EPA) test, Toxic Leaching Characteristic Procedure, 1990. Consult local laws and regulations, which may vary. © 1995 Philips Electronics North America Corporation

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HAPPY ANNIVERSARY, AL

Fiberstars, Inc., a manufacturer of fiber-optic lighting products, and FibreOptics International, a fiber-optic sign-maker based in Seattle, gave *Architectural Lighting* a 10th anniversary present that turned a lot of heads toward the *Architectural Lighting* booth at Lightfair.

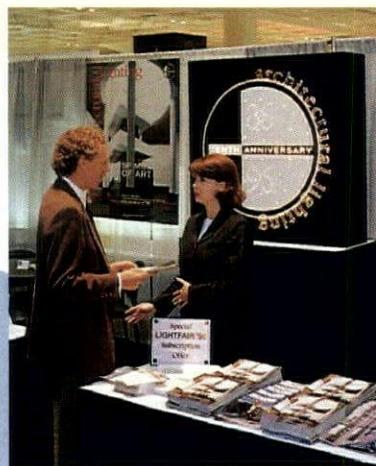
The fiber-optic sign is 4 ft. x 4

ft. and displays the magazine's 10th anniversary logo in brilliant animated colors via 5,000 precision holes, each of which is attached to fiber-optic strands—about 3.5 miles of fiber optic material to be exact.

The sign is constructed of a wood frame coated with a plastic laminate. Inside the sign, four

50W MR16 lamps in special light fixtures shine light through color wheels operated by separate synchronous motors. The result is a logo whose elements appear to shimmer and splash with color.

The sign was designed by Miae Russell, senior art director for FibreOptics International.



DAVE BURTNER OF INTER.LIGHT AND MICHELLE CARDELLO, AL MARKETING MANAGER, AT AL'S EYE-CATCHING LIGHTFAIR BOOTH.

GE LIGHTING'S 1995 EDISON AWARD WENT TO CHRISTOPHER JANNEY FOR HIS "HARMONIC RUNWAY" AT THE MIAMI INTERNATIONAL AIRPORT.



CHRISTOPHER JANNEY WINS EDISON AWARD

Christopher Janney, founder of Boston-area multimedia studio PhenomenArts, Inc., has earned the 1995 Edison Award from GE Lighting for creating an interactive corridor of light and sound in a walkway at the Miami International Airport.

Janney composed the "Harmonic Runway" to include a skilled orchestration of light, sound and color conducted by the strides of people walking along the above-ground concourse. Blending a tunnel of colored glass panels with a score based on South Florida's sounds of nature, the 180-

ft. walkway is lighted with more than 2,000 GE 75W MR16 lamps. As passersby stroll through zones of colored light, they trigger photoelectric cells that activate tones of musical instruments, which blend with sounds of distant crickets, frogs or a flock of loons.

With the help of designer Geoffrey Pingree and software expert George DeLaura, Janney integrated a series of photocells along the length of the corridor with a computer-controlled dimming board that adjusts the intensity of the lamps. Most of the MR16

OSRAM SYLVANIA INTRODUCES ECOLOGIC

At Lightfair, Osram Sylvania introduced Ecologic, a comprehensive environmental program that covers all stages of lamp life, from research and development to manufacturing to packaging to operation and, finally, to disposal. Osram Sylvania fluorescent, halogen and HID lamps bearing the ECO etch reduce heavy metals without reducing performance, according to the company.

Ecologic lamps feature a metal capsule or ferrous pill dosing system during manufacture that reduces mercury content; pass the Environmental Protection Agency's

TCLP test for lamp disposal, as it currently exists; are energy-efficient; feature welded bases or lead-free solders; and have reduced packaging and/or recycled packaging made with soy-based inks and cadmium-free paper stock.

During manufacture, production shrinkage is recycled to recover components and heavy metals.

Although the lamps pass the U.S. EPA's TCLP test for lamp disposal, local and state authorities should be consulted, as some localities and states have different statutes and disposal regulations regarding mercury-containing lamps.



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BROADWAY LIGHTING MASTER CLASSES

Broadway Lighting Master Classes will present its fourth-annual four-day seminar at John Jay College on October 10-13.

The planned faculty, presenting topics focused on theater lighting, includes Abe Feder, John Gleason, Gil Wechsler, Roger Morgan, Peggy Eisenhauer, Danny Franks, Wendall Harrington, Marc Weiss, Beverly

Emmons, Bran Ferren, Ted Mather and Steve Cochrane; Jules Fisher is serving as creative consultant. Manufacturers' technical representatives will also be on hand to show their newest products and to field questions. The cost is \$595.

For more information, call Kelly Sonnenfeld at (212) 787-0389 or fax (212) 721-0979.

PRE FINISH METALS RENAMES AND REFOCUSSES

Pre Finish Metals Inc., a manufacturer of reflector material and reflectorized fixtures, has restructured to form two subsidiaries operating under the umbrella entity of Material Sciences Corporation (MSC) Inc. (Elk Grove, IL).

MSC Laminates and Composites has been formed to produce laminate materials such as Specular+, while Pre Finish

Metals Inc. continues as the core coil coating arm of the business.

According to G. Robert Evans, MSC's chairman and CEO, the reorganization allows more cost-effective allocation of resources and greater flexibility to focus on product development and faster delivery to customers.

Pre Finish Metals Inc. was founded in 1971 and has seven U.S. manufacturing facilities.

NLB ANNOUNCES 17TH ANNUAL AWARDS

The National Lighting Bureau (NLB) of Washington, D.C. announced its 17th annual National Lighting Awards Program, established to recognize lighting applications that demonstrate the value of effective elec-

tric illumination. According to NLB Executive Director Kyle Pitsor, the program is not a design competition, but rather is intended to generate and publicize case histories illustrating "high-benefit" lighting, such as

increases in sales, security or productivity resulting from an effective design. If an entry is developed into a case history, the submitting designer will serve as the bylined author of a magazine article.

To be eligible, the project must have been completed on or after January 1, 1994. Entries must be received no later than October 13, 1996.

For more information, call the NLB at (301) 587-9572.

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LUCEPLAN MOVES

Luceplan USA, established 15 months ago to directly manage the marketing and distribution of the Luceplan collection of fixtures designed and manufactured in Milan, Italy, announced that it has relocated to a 9,500-sq.-ft. facility at 315 Hudson Street on the lower west side of New York City.

According to the company,

the renovated site has expanded office and showroom area as well as 6,500 sq.ft. of warehouse space for higher inventory levels to respond to the demands of the lighting market.

Luceplan USA's new address is 315 Hudson Street, New York, NY 10013, Tel. (212) 989-6265, Fax (212) 462-4349.

NUCKOLLS FUND AWARDS \$10,000 GRANT

The Nuckolls Fund for Lighting Education awarded its 1996 \$10,000 grant (its ninth since its inception) to Texas Christian University, Fort Worth, for the development of a course titled, "Lighting for Visual Presentation." With an interdis-

iplinary approach, the new course will address the interrelationship between merchandising and lighting, with specific concentration on theories of lighting merchandise, lighting in three-dimensional volumes and the use of color.

INTERIOR DESIGNER WINS AWARD FOR WALL SCONCE DESIGN

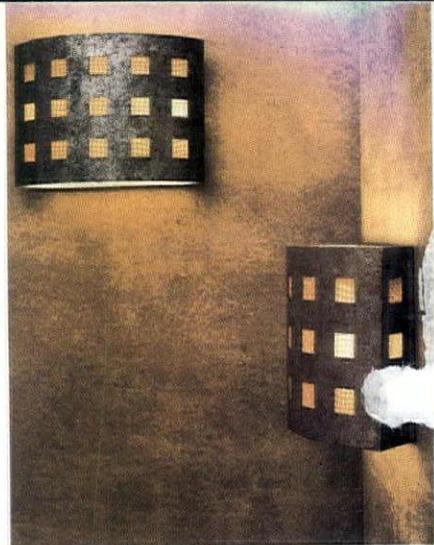
Ursula Kloetes, ASID recently received top honors from the American Society of Interior Designers (ASID) for her design of the "Facade" lamp. A California-certified interior designer, she received first place in the Product Category of the Interior Design Stars Competition.

The Facade lamp is available with a galvanized finish with black or red patina, and a choice of brass or copper mesh. The fix-

ture is UL-labeled, meets ADA requirements and can accommodate incandescent or compact fluorescent light sources.

The award-winning wall sconce is manufactured by Morrison Lighting.

For more information, call Kneeder Fauchere, Galleria Design Center in San Francisco, at (415) 861-1011.



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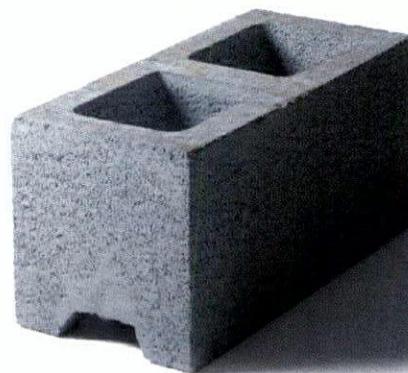


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INTELECTRON ACQUIRES AMERICAN LANTERN COMPANY

Intelectron, Inc., a manufacturer of security lighting, announced that it has purchased American Lantern Company of Newport, AK, a manufacturer of decorative lighting products currently marketed under both the American Lantern and Quality

Mark brands. According to Intelectron, the acquisition will expand the company's outdoor lighting line, will open up a second distribution center and will enable Intelectron's Electripak products to be manufactured in the U.S.

CD-ROM FROM HUBBELL

Hubbell Lighting's LightGear Buyer's Guide provides Hubbell customers easy access to up-to-date product information. Full text search and retrieval allows customers to search for corresponding information quickly, virtually eliminating the time spent manually researching products.

LightGear supports most printers and fax modems, so informa-

tion can be printed or faxed directly from the catalog. Photographs, dimensional drawings and ordering information are included.

LightGear requires a minimum of a 486 personal computer running DOS 5.0 or later, Windows 3.1 or later, 8 MB of RAM and 15 MB of free hard disk space. Call (540) 382-6111 for more information.

LUMENYTE FIBER PASSES UL, IEEE FLAMMABILITY TESTS

Lumenyte International Corporation, a manufacturer of fiber-optic lighting products, announced that the company's linear-emitting products have passed flammability testing in accordance with UL and IEEE Standard 383-1974 ("Standard for Type Testing of Class IE

Electrical Cables, Field Splices And Connections for Nuclear Power Stations"), para. 2.5 ("Flame Test").

Underwriters Laboratories Inc. conducted the UL testing, and SGS U.S. Testing Company Inc. of Los Angeles completed the IEEE evaluation.

SETTING THE RECORD STRAIGHT

In our April/May issue, our Industry Focus feature story, "Quality Metrics," noted that John Flynn started the lighting program at Penn State and focused on studying people's impressions of lighted spaces. A professor at Washington State University who had been with the program wrote

in to tell us that Melvin W. Isenberg actually started the program in the late '60s, although the lighting program was not fully established with facilities and courses until 1973. This was the year John Flynn joined Penn State, brought aboard by Robert B. Allen.

IALD SCHOLARSHIP & GRANT WINNERS

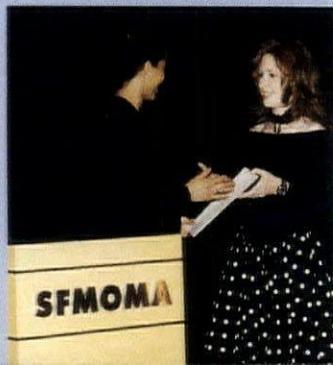
The International Association of Lighting Designers (IALD) announced its first Scholarship winner during Lightfair at the IALD Awards Dinner at the San Francisco Museum of Modern Art.

Emlyn Gurman Altman is the recipient of a \$1,500 scholarship for studies in lighting. Altman is currently working toward her Masters of Design Studies in Computer-Aided Design at Harvard University where she plans to explore methods of analyzing and simulating lighting conditions in architectural spaces. She is pictured here accepting the award from E. Sara McBarnette, Scholarship/Grant Committee Chair.

Robert Craik and Shelagh McCartney, students at Waterloo University in Ontario, Canada, are the winners of a \$500 grant to further an original project or research in lighting.

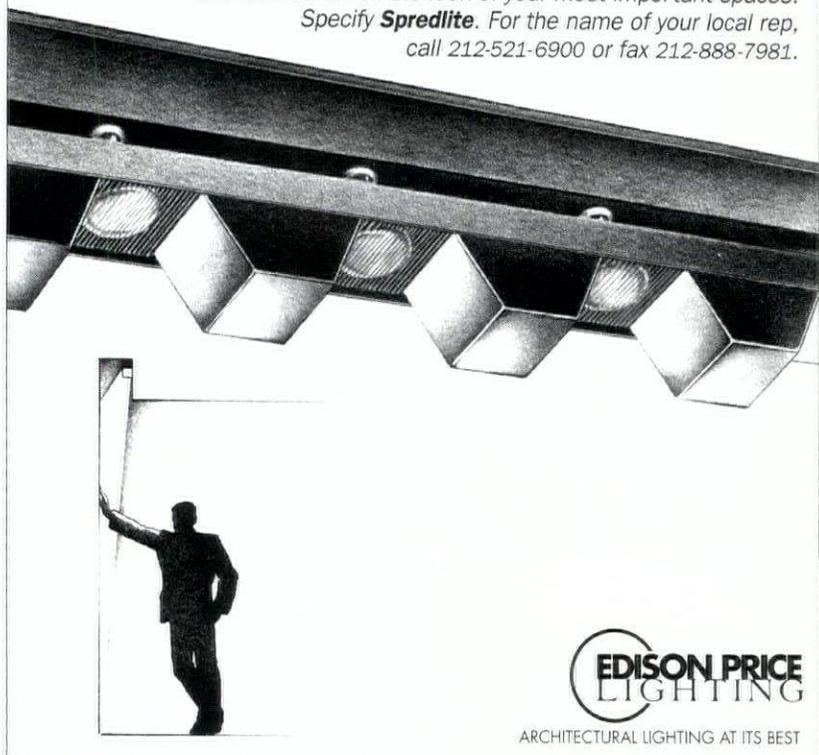
The Scholarship and Grant are being offered annually by the IALD to encourage the pursuit of education in lighting and to support excellence in lighting design.

For more information, call Maria Becerra, IALD executive administrator, at (212) 206-1281, or fax (212) 206-1327.



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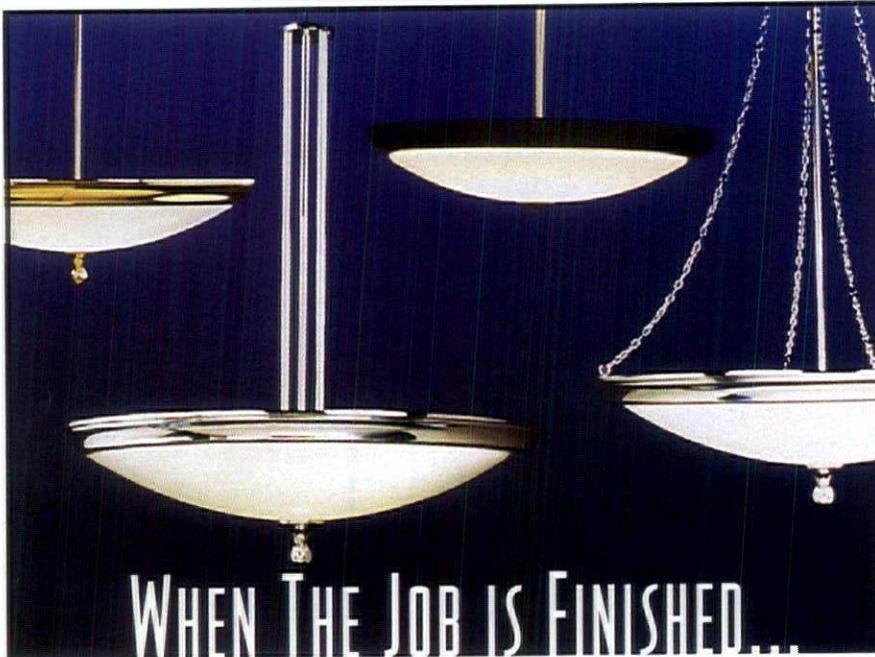
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Long Island golfers no longer have to dream about their favorite sport at night—they can play it. Heartland Golf Park in Deer Park

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The park consists of a nine-



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hole/par three golf course, miniature golf and computerized driving range. The golf park, constructed in less than a year, is equipped with lighting that permits play throughout the night and into the morning hours.

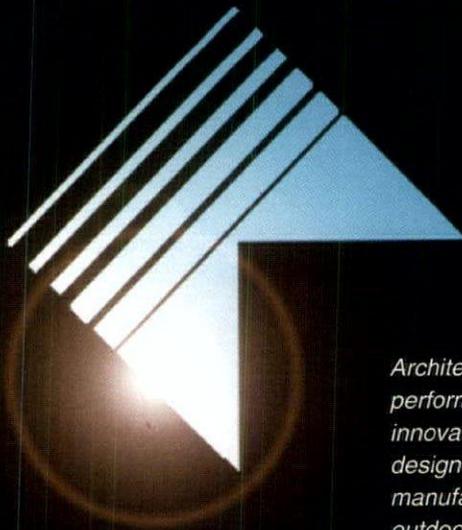
To light the park, contractor Jack Sanchez, owner of John Paul Electric, Inc., approached the lighting with many factors in mind: clear night visibility, strategic location of lamps, energy efficiency and spill light reduction.

Sanchez and Jerry Cullen of Russo Lighting Associates designed the lighting system with Hubbell Lighting's Sportsliters SLS Series to illuminate each area. Hubbell's Minilighters were used to illuminate the park's centrally located waterfall. According to Hubbell, Sportsliters have several beam patterns, can throw light a long distance and provide 30 to 40 percent more lamp life hours than higher-wattage fixtures.

Thirty-two 1000W fixtures were installed on the driving range—21 fixtures on the nine-hole course and 22 on the miniature golf course. The fixtures are designed to eliminate glare—players can watch the ball in flight without being blinded. "You can literally drive 250 yards, watch the ball fly and see where it's landing," said Cullen.

All fixtures are a maximum of 35 ft. off the ground, are arranged in six, four- and two-head configurations and feature Hubbell's Fast-Aim technology.

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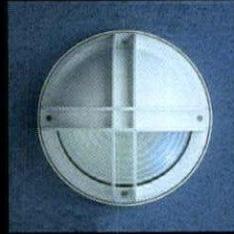
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INTER.LIGHT EXPANDS DATABASES

Inter.Light, the World Wide Web site designed for lighting specifiers, cosponsored by *Architectural Lighting*, recently launched improved on-line prod-

uct and company search capabilities. At the site, specifiers can access continuously updated databases to find the manufacturers and details on fixtures,

lamps, ballasts, controls and other lighting products at any time, day or night.

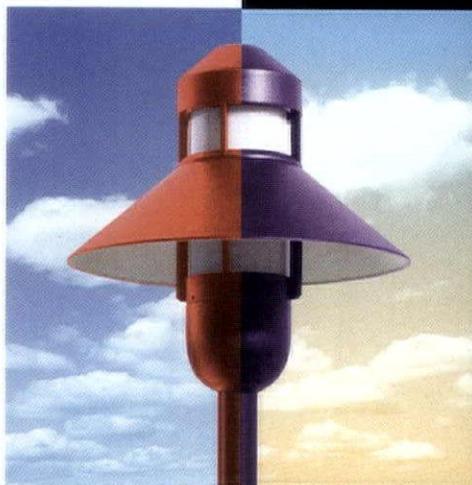
Fixture searches allow entry of more than 50 different types

plus the light source. For example, a specifier can search for ground-mounted floodlights with a metal halide light source. The search result displays a list of manufacturers offering that type of fixture. Ballasts can be searched by lamp designation, light source and voltage. Lamp searches include shape, base and wattage variables.

Currently, more than 600 companies are represented in the databases. Many company listings offer additional information such as product photos, photometrics, complete catalogs available for downloading and e-mail links for direct communication from the inter.Light Web site.

Access is free. Simply visit inter.Light on the World Wide Web at <http://light-link.com>.

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GE Lighting announced at Lightfair that the chemical compound amalgam is now added to several of its compact fluorescent products to improve lumen performance.

Amalgam regulates mercury vapor pressure at its optimal level to allow excellent lumen performance in fixtures, equal light output in base-up or base-down operating positions, and more even lumen output over a wide range of ambient temperatures.

Affected products include triple Biax plug-in lamps, Genura, Heliac, Performance Biac, triple Biac screw-in lamps, reflector lamps and accessory products, all in varying wattages.

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July 12-October 20 "Lighting Unplugged"; Museum of Art, Rhode Island School of Design. Call (401) 454-6348.

August 5-7 IESNA Annual

Conference; Renaissance Cleveland Hotel, Cleveland. Call (212) 248-5000 x117.

August 25-31 ACEEE 1996 Summer Study on Energy

Efficiency in Buildings; Asilomar Conference Center, Pacific Grove, CA. Call (510) 549-9914.

September 12 Talk of Trade Lecture: "Residential Lighting,"

given by Randall Whitehead; Seattle Design Center. Call (206) 762-2700.

September 25-26 IESNA North Central Regional Conference; State Fair Park, Milwaukee. Call (414) 427-9482.

October 10-12 NY Section IES Course: "Lighting Education Fundamentals." Call (800) 217-5445.

October 19-21 ASLA Annual Meeting and Expo; Los Angeles. Call (202) 686-8343.

October 24-26 NY Section IES Course: "Intermediate Level Lighting." Call (800) 217-5445.

November 6-9 Hong Kong International Lighting Fair; Hong Kong Convention and Exhibition Centre. Call (852) 2827-5121.

November 7-9 InterPlan 1996; New York Coliseum. Call (800) 950-1314.

December 11-12 West Coast Energy Management Congress/Edison Energy Show; Disneyland Hotel & Convention Center, Anaheim, CA. Call (770) 279-4386.

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EDUCATIONAL FACILITIES

GE Lighting Institute

- Conference on the fundamentals of commercial and industrial lighting: Aug. 12-16; Sept. 16-20; Oct. 14-18; Nov. 4-8
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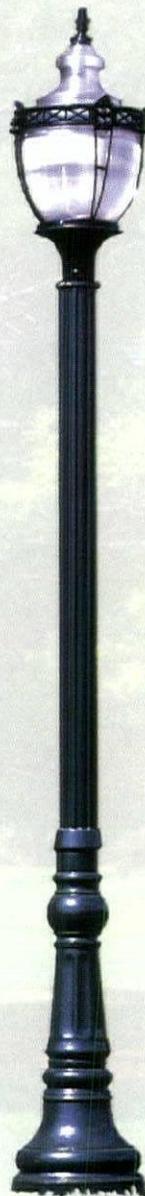
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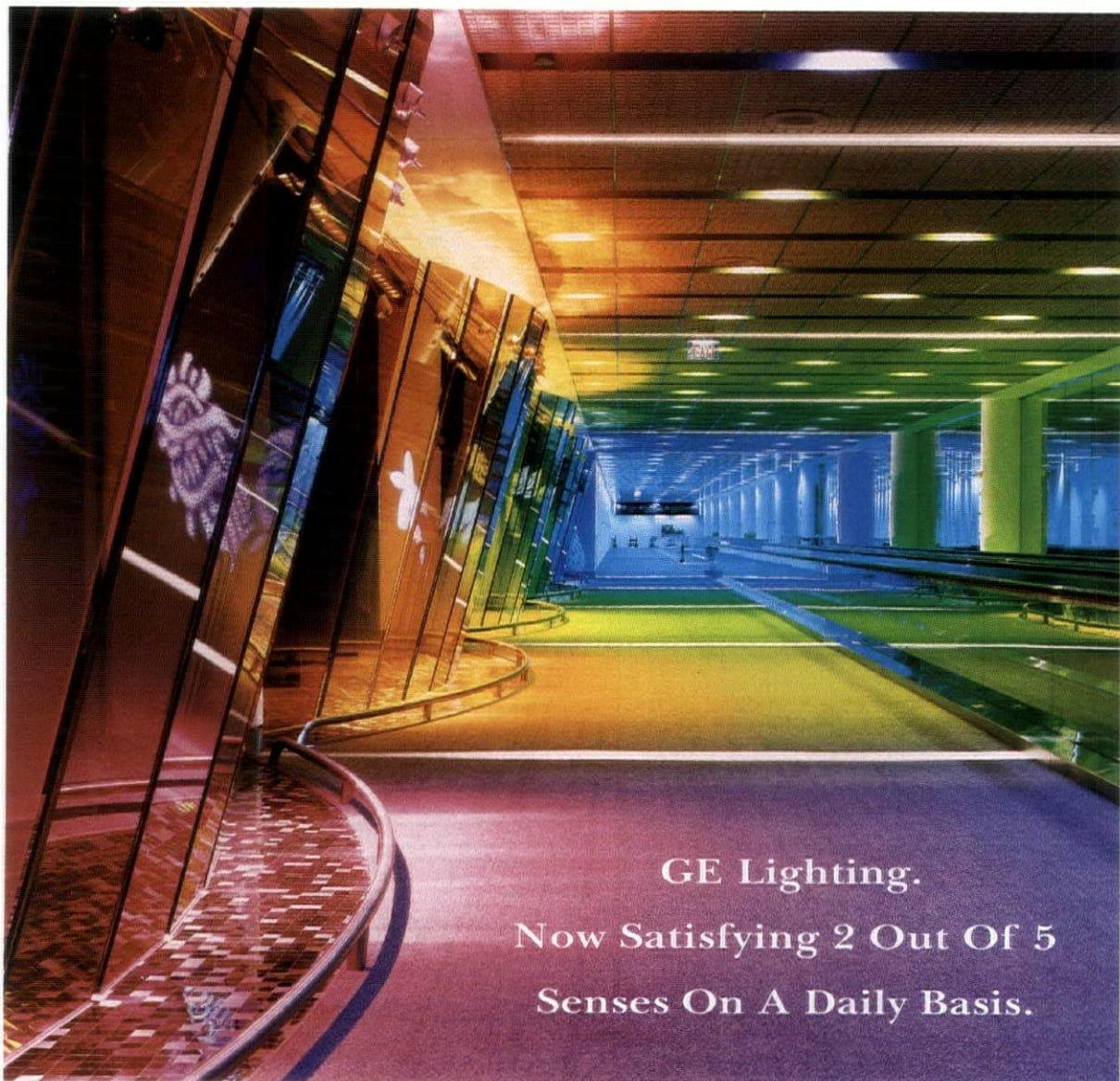
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INTERPLAN 1996

InterPlan '96, the new Designer's Saturday, will be held this year at the New York Coliseum on November 7-9. The event is cosponsored by Designer's Saturday, Inc. and Miller Freeman, Inc., publisher of *Architectural Lighting* and its two sister publications, *Facilities Design & Management* and *Contract Design*. InterPlan, which attracts designers and facilities professionals in the Northeast U.S. and Canada, drew close to 10,000 attendees last year and anticipates 12,000 this year.

InterPlan will hold 32 conference programs. Lighting sessions will cover the ergonomic considerations and energy sav-

ings of task lighting, how the new generation of lighting controls can help lower space costs and lighting retail environments. In addition, there will be seminars on interior planning and design, interior products, facilities development, facilities and space management and career/business development.

At press time, more than 150 exhibitors had committed to booths, including Luxo Corp., Waldmann Lighting Co. and Tech Lighting.

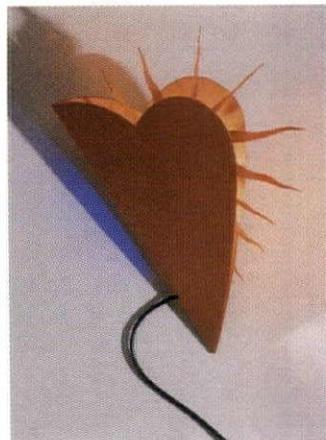
For more information about exhibiting or attending InterPlan, call (800) 950-1314, ext. 2611 or visit InterPlan's Web site at <http://www.interplanshow.com>.

EUROLUCE VISITED

On April 18-22, the Milan Fairgrounds came to life with the 14th biannual lighting show, EuroLuce, showcasing European designers from both the established, well-known firms and the new, smaller boutique designers and emerging manufacturers. EuroLuce shared the stage this year with the Salone Internazionale del Mobile, the annual European furniture and decorative arts show. Visitors to both shows totalled 153,746, with attendees coming from 129 countries.

EuroLuce offered the observer a broad range of light sources. Germany, France, Spain, Denmark and the UK were represented, but the show was dominated by the Italians. Far different from Lightfair International, the show resembled the Dallas market with products that have both residential and commercial applications. The show featured chandeliers, pendants, surface and recessed fixtures, table lamps, floor lamps, lighting systems and outdoor lighting.

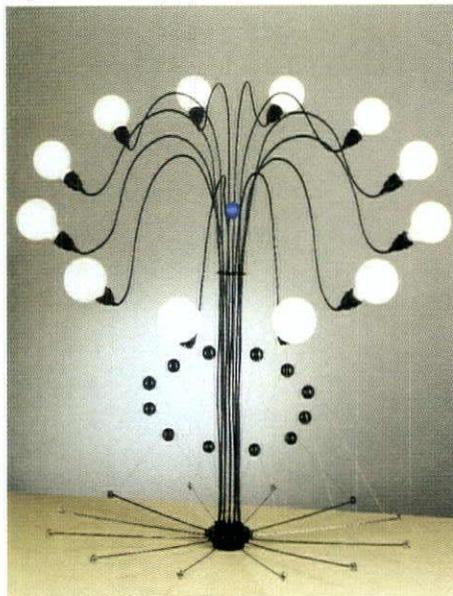
There were the pervasive Italian manufacturers of traditional chandeliers, sconces and lamps, celebrating the usual fruit and floral translation in colored glass, but the show was highlighted by modern technology in the form of halogen, cable and the integration of



Murano glass in just about any form, shape, color and size imaginable. Of note was the classically beautiful Vennini hand-blown crystal case, with the single crystal flower encasing a halogen source. The elegant clear-glass hand-blown cable pendant, *Popone in orbita*, by Album is a sphere encasing an MR16, reminding one of the classic "ship in a bottle." Arteluce, Artemide, Ingo Mauer and Foscarini, who continue to produce classic, well-known products with a sense of style, simplicity and elegance, were among the Italian firms to shine at EuroLuce.

On a more whimsical note, the German firm Rue D'Elle offered a truly American approach to cable lighting with a remote control in the form of a green apple that energizes a classic '60s pink Chevrolet. The car moves on the cable with its operable MR16, providing a moving light source. Further translations from the same firm show beautifully crafted parachutes and chrome zeppelins moving quietly over the cable system. On a solely California note, a cable suspension fixture of the Golden Gate bridge was a fun feature from the German firm, Geo Gestaltun GA Eisenhut.

—James L. Crowell,
IESNA, president of
LumenGroup in Radnor, PA.



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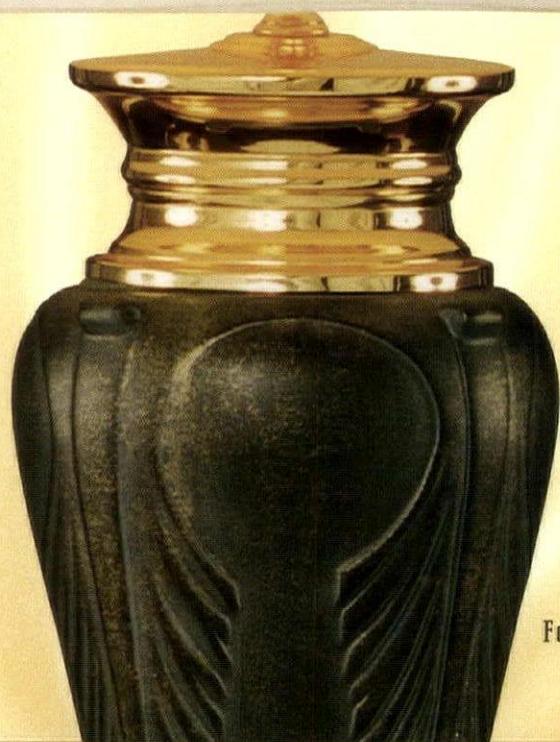
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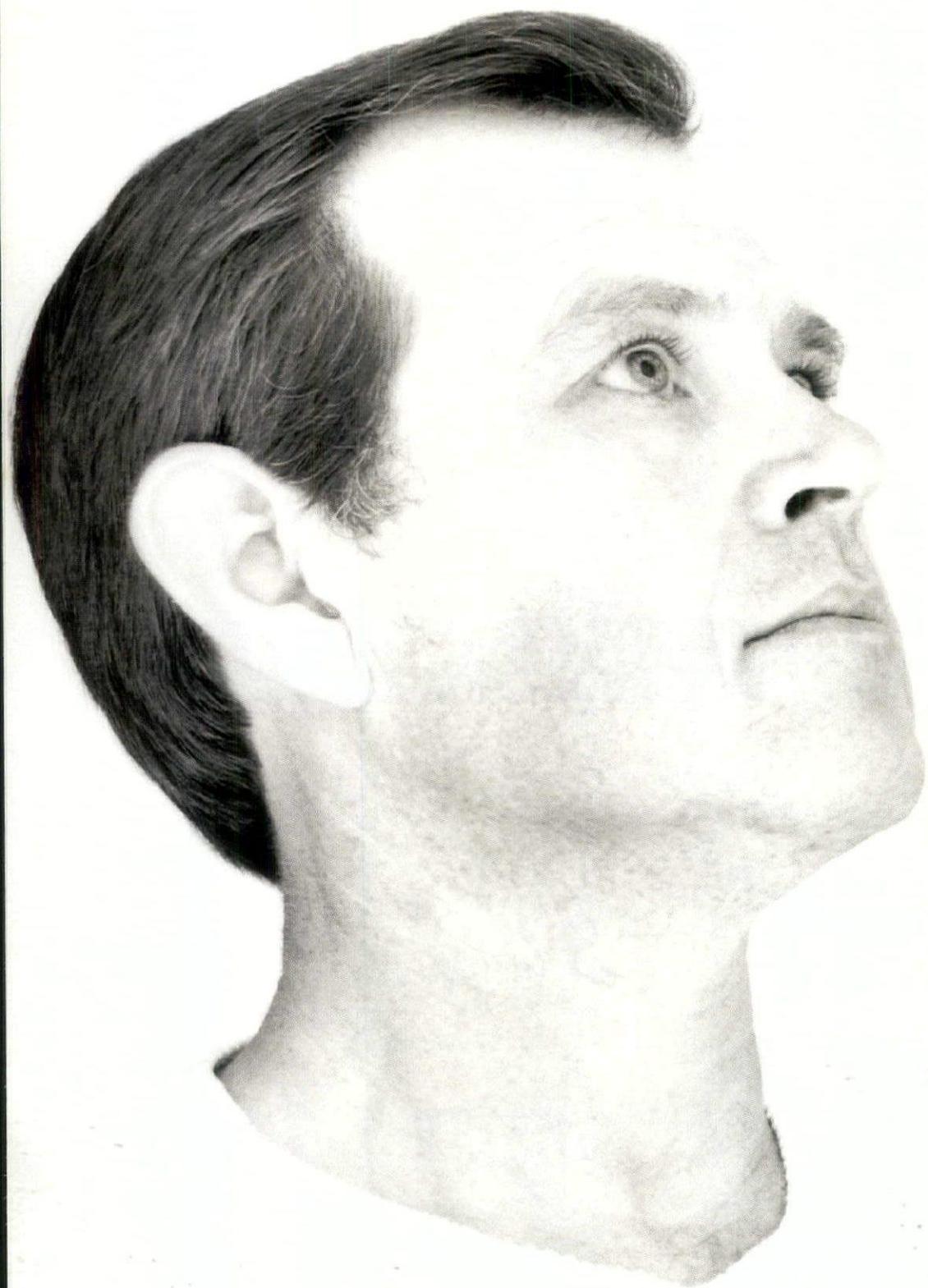


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Editor's Note: This is just the first in a series of "Insights" Architectural Lighting is planning for each issue. This new column delves into the ideas, techniques and approaches of a selected lighting designer and asks their opinions on various industry issues.

To begin the series, Hayden McKay, AIA, FIES, FIALD, principal of Hayden McKay Lighting Design, shares her thoughts on topics ranging from industry trends to professional challenges to growth opportunities. McKay is an architect with more than 20 years' experience specializing in lighting design, and was previously a partner with H.M. Brandston & Partners. She was executive director and member of the Board of the IALD, and currently chairs the IALD Metrics of Quality Committee.

—Christina Trauthwein

AL: *How has lighting design changed in the last few years?*

HM: There is a new respect for the basics. There were numerous dead-end trends in the 1980s, especially in

office lighting, when specifiers seemed to be searching for the one correct lighting solution. Now there is a realization that there is no *one* perfect answer, but rather, great design is an issue of balance. There has been a return to designing with multiple sources, multiple directions and a greater use of color. This approach is not new, but there is renewed interest in lighting comfort and quality, implemented now by new technologies.

On a different note, there has been an increase in projects that are "fast tracked," and this is having a negative impact on the design process. Architects are still designing when the project goes out to bid, so the desire to have a totally integrated design concept can get lost in the demand for piece-meal solutions. There's reduced coordination between lighting, architecture and engineering. Typically, this results in a process which is less efficient and compromises the original design. Unfortunately, fees haven't increased with the complexity and speed of jobs.

AL: *What do you see as the greatest opportunity for the lighting designer?*

HM: The use of daylight. Low-E glazing now provides thermal control with much less loss of visual transmission, so there's less solar heat gain problem with the new glasses. Unfortunately, the use of daylight is rarely taught to architects or lighting designers, yet there's a lot of opportunity for daylighting design.

The second greatest opportunity for the lighting designer is integration with architectural materials. Reflective, translucent, absorptive and textured surfaces can all become part of our palette of design tools and can be used to define space, form and surfaces.

AL: *What are the biggest challenges you currently face as a lighting designer?*

HM: Getting the job built as conceived.

Value-engineering makes this difficult. Substitutions continue to be a problem, as do field changes, which are happening more than ever. Lack of coordination due to fast tracking has increased our participation greatly during the construction phase. We used to simply check the shop drawings and make site visits, but now the amount of time spent during the construction phase is significant; all of the quality control and fine tuning comes during this phase.

The other big challenge is having the job maintained as built. The job should look as good in 10 years as the day it was installed. How can we help? By designing jobs with a reasonable number of lamps, providing a maintenance manual which explains the relamping schedule and order codes for each lamp type and specifying that fixtures come with labels identifying the specified lamp.

AL: *What is your approach to aesthetics?*

HM: What drew me to lighting was its power to enhance or destroy architecture. Lighting establishes the hierarchy of importance for the features of the space. The practice of lighting design is composing the luminous environment; the desire is to get the most effective perception of the architectural forms and features.

To do this, lighting must be closely integrated with the architecture, rather than applied to it. Fixtures may be part of this, but they're not the essence of it. There's a quote about architecture that "God is in the details," and for me, the "details" of lighting design are the perfect composition of brightnesses, and the manipulation of intensity and direction and color and distribution that meet the perceptual criteria.

AL: *How have these beliefs influenced your design objectives?*

HM: I believe you must design the lighting for the space first and then work back to the task. If you start from the task first, you're almost always doomed to failure. Designing on a holistic scale will ultimately create the best comfort, quality and energy savings. You're not relegating task as an afterthought, but in fact, you're creating an environment that is conducive to the task and then you're just supplementing the luminance and other task criteria.

Furthermore, I believe fixtures are tools for implementing concepts, but their selection should be at the end of the process: Equipment and technology should never drive the design.

Lighting is an avenue to affect people's lives in a positive way. I hope to bring light, comfort, information and excitement to peoples' environments.

AL: *How can other designers approach their work in new and productive ways?*

HM: My practice involves a number of building types and I find that very stimulating. Often, applications meant for the outdoors might actually be applicable to a hospital, or a technique used in a museum might be effective in a shopping mall. You can get a lot of this kind of cross pollination from magazines and observation as well.

Equally important, lighting designers must do their homework and keep on top of new technologies and research by attending trade shows and seminars. Professional commitments such as association or committee work also helps to keep you involved. Not only does this help the lighting designer, but the designer contributes to the knowledge base of the profession.

AL: *What part does energy efficiency play in your designs?*

HM: Energy conservation has always been a factor in my designs. I was practicing daylighting and sun control when the 1973 Energy Crisis hit and suddenly those skills were very much in demand. But unfortunately, environmental concerns are mostly supported by the government and are subject to political fluctuations. So during the Bush-Reagan years, I included daylighting and energy services virtually for free, because I was committed to it, not because there was a demand for it. Now the latest trend for green architecture has created a new demand, but it's still not a very heavy one.

I don't think, however, that energy conservation should drive the design. The criteria for quality design must be established first and then you implement it in an energy effective manner. Because if the design fails, then you've wasted all of the energy.



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BRIGHT LIGHTS, BIG TOWER

Miami Beach's Newest Night Light

BY EMILIE SOMMERHOFF, ASSISTANT EDITOR

CHALLENGE Miami Beach's new office building at 404 Washington wanted a bold lighting concept to complete the world's largest glass block tower. The building, combining an art deco and southwestern aesthetic in its architecture, was intended to serve as a focal point and beacon along the busy commercial street, using the tower to draw the attention of passersby.

The structure, however, was already intact, which left little room to influence the interior structural design to meet the lighting design needs. Since the tower had been built with only four inches of air space between the concrete columns and floors and the glass block skin, the primary challenge was developing a lighting system that would render a shadowless glow when viewed from the outside.

Lighting designer Randy Sabedra and senior partner Chou Lien of New York-based H.M. Brandston & Partners, Inc. developed an eye-catching and dramatic design, successfully overcoming the structural limitations and complementing the colorful architecture.

DESIGN/TECHNICAL CONSIDERATIONS The local climate created concerns about maintenance. The heat, humidity and salt air inside the non-climate-controlled environment of the tower threatened to rust any metal used in traditional interior fixtures, promising expensive maintenance costs.

In addition, the tower needed to be more than an overgrown streetlight; the animated nature of the surrounding community demanded an equally organic aura from such a visible landmark.

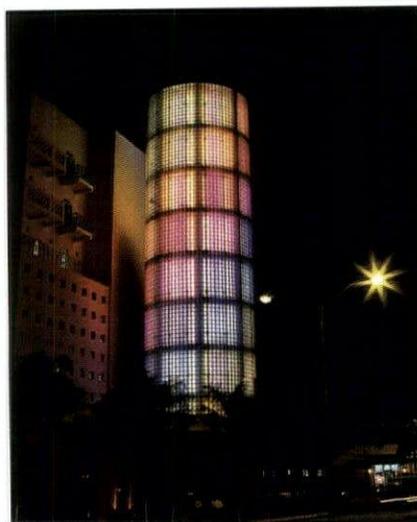
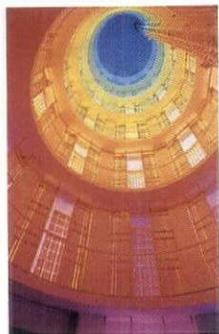
METHOD In considering how to light a structure from the inside out, the obvious answer, one might think, is to throw light at the glass surface using directional sources such as theatrical lights. "But direct lighting would have been a mistake," said Sabedra, "We chose fluorescent lamps for their soft, diffuse lighting quality, which ensured minimal shadowing and more uniform lighting of the tower."

The 1,164 fluorescent lamps, wrapped with blue, red, green or amber acetate filters, also fit nicely in the limited space between the columns and the building's eight floors. To address the climate considerations, the fixtures feature aluminum channels specially treated for damp locations.

The most exciting aspect of this project, however, is the animated effect the designers were able to achieve using a special computer program. The tower is divided into a grid of bays that can be selectively controlled from a computer screen—much like the screen's own pixels—to create geometric patterns and shapes as well as moving sequences. Colored and fully dimmable, the lamps have the potential to project eye-catching patterns. While white light is created when all the lamps are at full output, various combinations in percentage levels of the primary lamps—blue, red, green and amber—create a palette of appealing secondary colors, which can then be programmed to sweep the tower in a kinetic rainbow of light. Holiday and special event compositions—such as an animated pumpkin for Halloween—can be designed and prescheduled using a calendar program.

RESULT H.M. Brandston & Partners' design, through its use of color, ultimately ties the tower to its background; the variously hued shadows reflect off the adjacent building, adding yet another dimension to the lighting's activity.

"People in Miami stop and look," said Sabedra. "At the restaurant across the street, for example, they now ask to sit outside." Indeed, appreciation of the project extends beyond Miami's busy thoroughfare—a winner of the 1996 Lumen Awards, this project is bound to get noticed.



© SCOTT B. SMITH

DETAILS

PROJECT
404 Washington
Glass Block Tower

LOCATION
Miami Beach, FL

OWNER
Portofino Group

MANAGEMENT CO.
Taylor & Mathis

ARCHITECT
Bermello, Ajamil
& Partners Inc.

LIGHTING DESIGNER
H.M. Brandston
& Partners Inc.

ELECTRICAL CONTRACTOR
Angle Electric

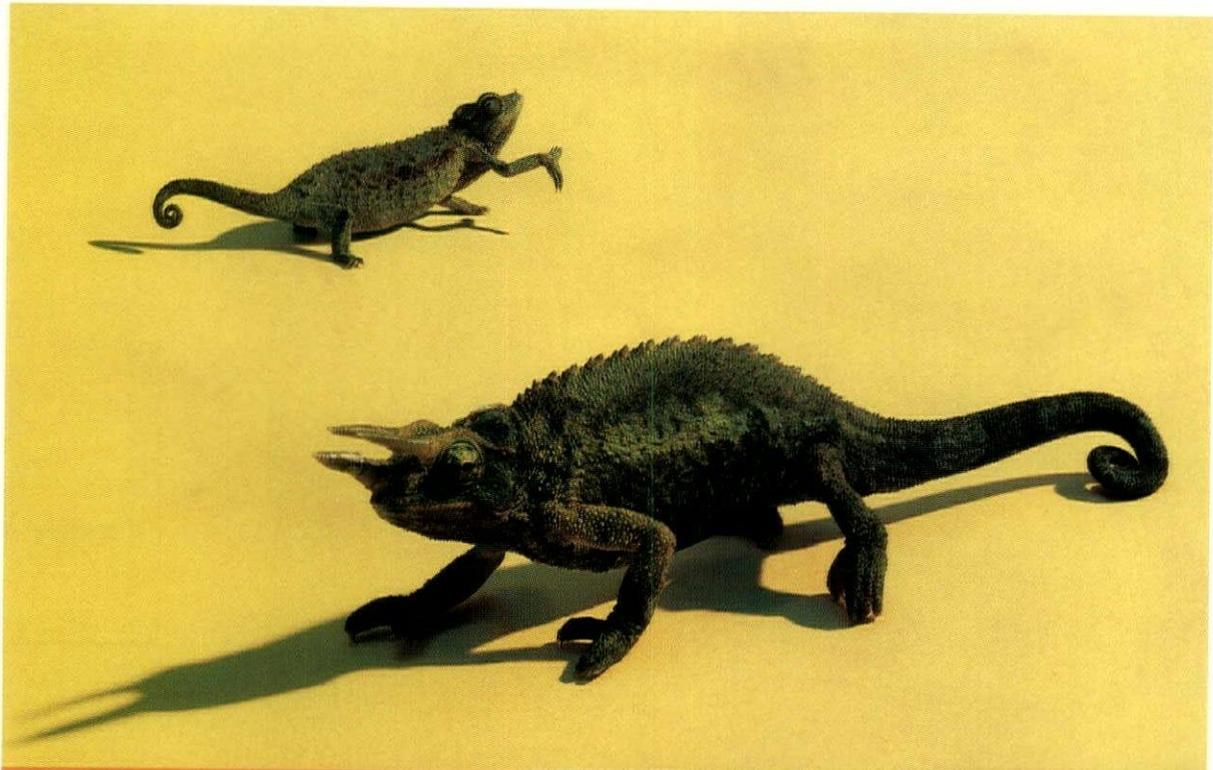
PHOTOGRAPHER
Scott B. Smith

LIGHTING MANUFACTURER
Lutron Electronics Co., Inc.

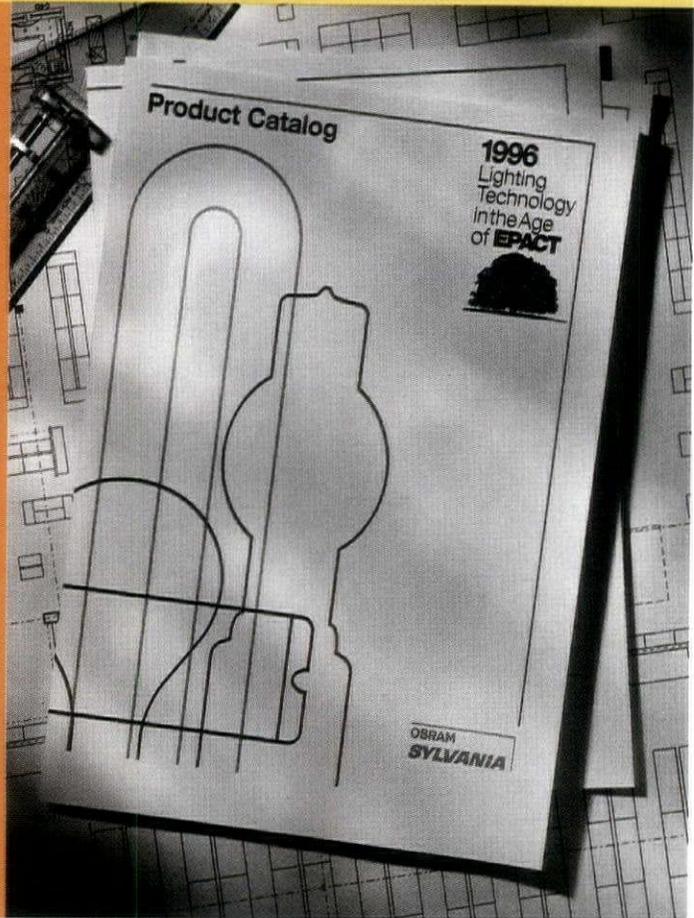
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COLORFUL BEACON AT
NIGHT (BOTTOM).
PRIMARY LAMPS ARE
PROGRAMMED TO CREATE
A WARM COLOR PALETTE
ON THE INTERIOR (LEFT).

"Not tonight honey. The cage isn't warmed to an exact 78° Fahrenheit."

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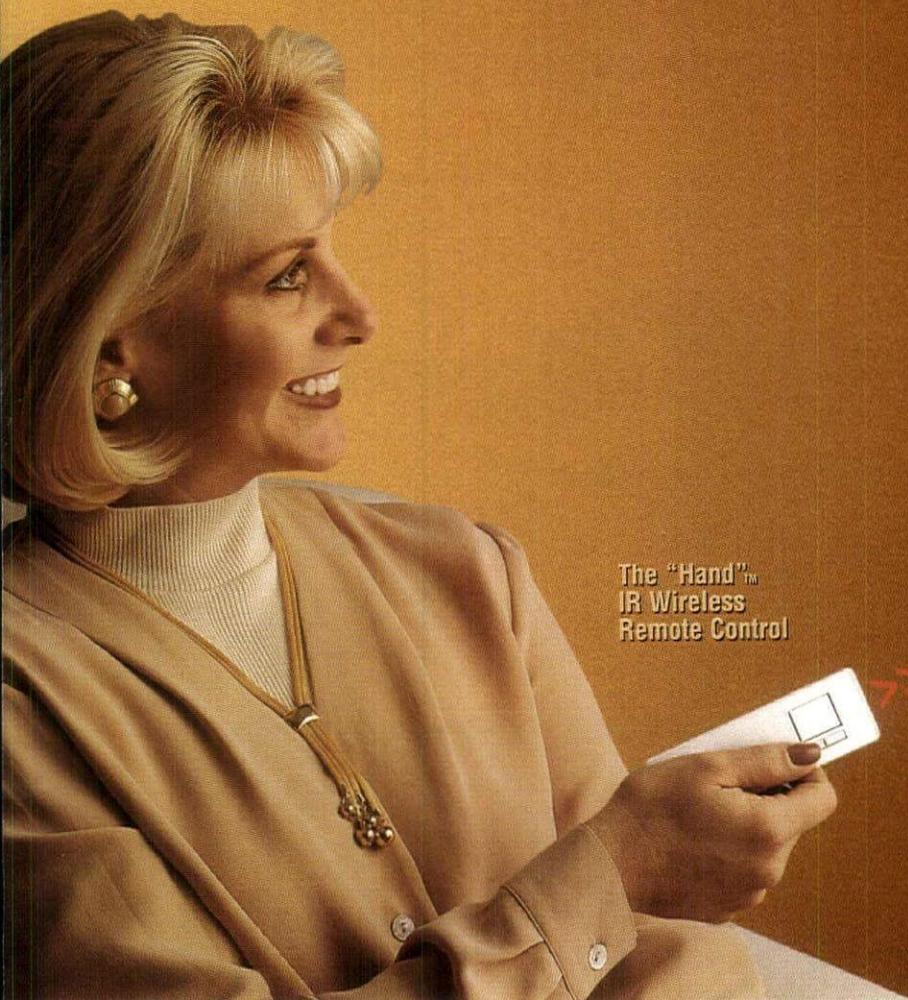


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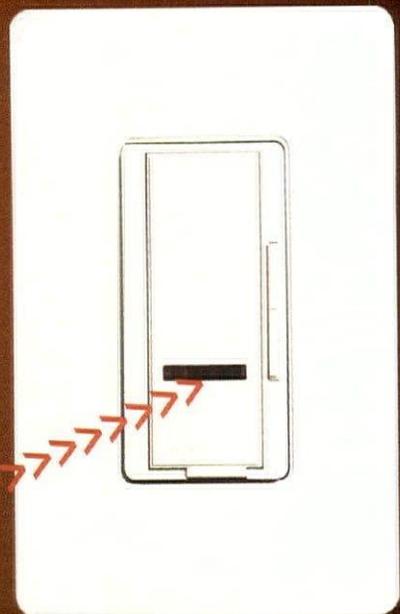
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13TH
ANNUAL
IALD
LIGHTING
AWARDS

The International Association of Lighting Designers (IALD) has awarded eight lighting designers for their outstanding lighting solutions and creative techniques. The IALD Lighting Awards, cosponsored by *Architectural Lighting*, recognizes lighting installations that display high aesthetic achievement backed by technical expertise and exemplify the integration of the architectural and lighting design process.

This year's program received 124 submissions from all over the world—including North America, Europe, Asia and Australia—with a Japanese project receiving the top Award of Excellence. Lighting designer Takeshi Konishi achieved this honor for work creating both exterior and interior lighting at facilities supporting a Buddhist temple in Tokyo.

Seven Citation Award winners include projects that range from a German hotel and British bridge to a convention center, two museums, a trading floor and an airport tunnel in the U.S.

Established in 1969, the New York City-based IALD is an international organization dedicated to the professional architectural lighting designer. Comprised of 450 members throughout North and South America, Europe, Asia and Australia, the IALD's role is to promote the lighting design profession and to advance lighting design excellence in the built environment.

For information about membership or about the 1997 IALD Lighting Awards program, call Maria Becerra, the IALD's Executive Administrator, at (212) 206-1281. You can also fax her at (212) 206-1327 or send e-mail to IALD@aecnet.com.

MYOCHI-KAI ANNEX BUILDING

YOYOGI, TOKYO, JAPAN

**ELECTRIC LIGHTING AND
DAYLIGHTING ARE
SUCCESSFULLY INTEGRATED IN
A BUDDHIST TEMPLE'S
SUPPORTING FACILITIES**

The Myochi-Kai Annex building, part of an adjoining Buddhist temple in the heart of Tokyo, houses supporting facilities for the main structure, which was built 15 years ago in a traditional temple style.

The Annex building consists of the headquarters offices, the Chairman's Room, a VIP conference

room, seminar rooms and a multi-purpose hall serving members as well as neighboring communities.

Myochi-kai, a 46-year-old religious organization with more than a million followers in Japan, requested the creation of a symbolic "Worshippers' Road" by cutting through the middle of the property, making the temple visible from the main road at the front. A three-story annex building and single-story service wing were built alongside the new road.

Lighting designer Takeshi Konishi's challenge was to light the Annex building, which is designed to communicate openness to the outer world, with interior spaces easily visible from the outside. The resulting system is a masterful composition that combines exterior and interior lighting in what IALD judges called "a fabulous synthesis of light and architecture with clarity of design."

Windows and skylights are carefully placed to allow sunlight to enter the space and intermingle with interior elements. Daylight and

© Koji Horiuchi

electric lighting subtly illuminate the spaces in a functional and artistic way.

Exterior lighting at the Annex, combined with the lighting of the temple, is used for special occasions and extends a welcoming

gesture to the main road. Low-voltage, adjustable custom fixtures are embedded in green granite at the base of the Annex building. The fixtures create dramatic





shadows and bring out the hammered texture of the stone wall.

At the main entrance of the Annex, the lobby, lounge and headquarters office are

indirectly illuminated by light reflected from a matte white ceiling. Fluorescent fixtures set over custom-designed V-shaped louvers of extruded aluminum provide the light. Low-voltage

adjustable spotlights (12V, 50W) mounted between the louvers accent art objects.

The walls of the second-floor lobby, which can be seen clearly from the outside, are gently illuminated by continuous strips of low-

LOW-VOLTAGE, ADJUSTABLE CUSTOM FIXTURES, EMBEDDED IN GREEN GRANITE AT THE BUILDING'S EXTERIOR BASE, EMPHASIZE THE TEXTURE OF THE HAMMERED STONE AND CREATE DRAMATIC SHADOWS ON THE WALL.

HIGH-FREQUENCY FLUORESCENT FIXTURES SET OVER V-SHAPED ALUMINUM LOUVERS REFLECT LIGHT FROM THE WHITE CEILING ABOVE, WHILE ADJUSTABLE SPOTLIGHTS SHINE DIRECTLY TO ILLUMINATE ARTWORK FEATURED IN THE MAIN ENTRANCE OF THE ANNEX.

© Koji Horiuchi



voltage lamps.

The VIP room, also on the second floor, is illuminated with natural light,

indirect fluorescent fixtures and adjustable low-voltage fixtures that light both the walls and table tops.

The third floor houses the Chairman's working room. The vestibule outside the room is designed as a transition space between the hallways, balancing strong daylight from a low casement window overlooking an interior Japanese garden. Konishi specified a continuous strip of line-voltage 60W reflector lamps, which softly wash the walls with light.

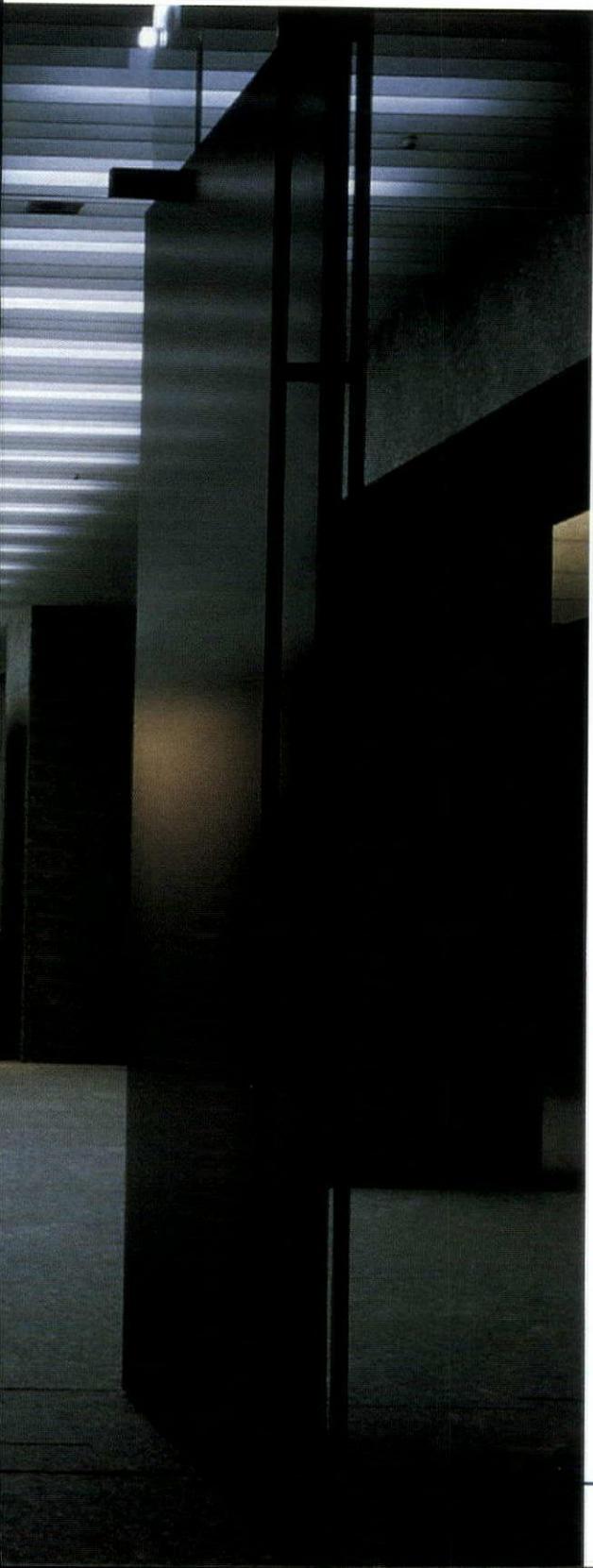
In the basement, a multipurpose room—the Gathering Hall—is designed for seminars and receptions. Lighting and mechanical systems in this space are concealed above a shallow suspended grid of translucent Teflon-coated membrane panels, approximately 5 ft. wide. Six 32W fluores-

cent lamps diffuse light through each panel and low-voltage 100W incandescent downlights are mounted at the intersections of double grids. These intersections conceal the mechanical and sprinkler systems as well as smoke detectors. The flexible system can be set at appropriate levels for seminars, receptions, religious ceremonies or theatrical performances such as a simple Broadway musical or Kabuki.

The elevator lobbies are also illuminated by the Teflon-coated glass cloth panels. These light-weight membrane surfaces are lighted from both sides by 32W compact fluorescent tubes with specular reflectors to distribute light evenly to the arched ceiling over the panels.

A final challenge for Konishi involved sculptures by British artist Danny Lane, which were introduced late in the design process. The lighting

designer and the artist spent several days together solving the problem of how to light the work. Wishing to avoid harsh silhouetting of granite columns in the hallways that connect the Annex and the main temple, which is where the sculptures are located, Konishi used a series of six low-voltage 50W narrow beam fixtures to light the column faces.



DETAILS

PROJECT Myochi-Kai Annex Building ■ **LOCATION** Yoyogi, Tokyo, Japan ■ **OWNER** Myochi-Kai ■ **ARCHITECT** Takenaka Corporation ■ **LIGHTING DESIGNER** Takeshi Konishi+EPK, Takenaka Corporation ■ **INTERIOR DESIGNER** Takenaka Corporation ■ **ENGINEER** Takenaka Corporation ■ **PHOTOGRAPHER** Koji Horiuchi, Shin-Shashin Koubou Inc. ■ **LIGHTING MANUFACTURERS** EPK Corporation; Ercototo Ltd.

SAN FRANCISCO MUSEUM OF MODERN ART

SAN FRANCISCO, CA



© Richard Barnes

INTEGRATION AND CUSTOM SOLUTIONS DISTINGUISH THE LIGHTING OF THIS NEW SAN FRANCISCO LANDMARK.

One glance at this newly built San Francisco landmark, and it is clear that successful integration was the key to the lighting design. Scott Hershman of Fisher Marantz Renfro Stone, Inc. worked closely with architects at Mario Botta Architects and Hellmuth, Obata & Kassabaum to integrate the lighting and the architecture, integrate electric lighting and daylighting and make the art stand out.

The main lighted spaces include the galleries, circulation areas and atrium.

In the galleries, electric lighting and daylighting work together harmoniously as a result of close coordination between the lighting designer and the architects. A clear, patterned glass skylight admits daylight, where it strikes a louver inexpensively constructed of standard stamped metal. The

louver diffuses the sunlight as it penetrates the skylight well. The light is further diffused and distributed to the gallery space via a white gull-wing diffuser. Within the gallery space, the light reflects from the ceiling vaults to softly illuminate the walls where art is shown.

The diffuser not only serves a key lighting function, but also houses light fixtures and other equipment such as smoke detectors, sprinklers and occupancy sensors. Should insufficient daylight be available, compact fluorescent lamps, mounted in the diffuser's vertex, uplight the metal louver, which redirects the light downward in a diffused pattern. The diffuser is also the mounting stage for small sections of track lighting.

For direct lighting of the art, continuous tracks are located on the underside of the ceiling vaults, camouflaged in the darkest part of the ceiling by adjacent slots for air diffusers and wall partitions.

In the circulation areas and

atrium, custom lighting solutions are employed. Custom wall-washers are located in the underside of the stair treads of a prominent staircase to illuminate a banded stone wall—ensuring safe use of the stairs while creating a visual element complementary to the overall design scheme.

Custom two-lamp fixtures suspended from a single point are located in the atrium and corridors, where the ceiling is constructed of an accessible wooden slat grid that did not lend itself readily to the placement of recessed light fixtures. Each lamp is adjustable, fitted with a spread lens and cross-baffle, and wired to a separate circuit to permit various levels of downlighting and accent lighting. The fixtures were designed so that they could be adjusted during installation to align with the axis of the building; once their aim was determined and fine-tuned, the fixtures were permanently fixed with set screws.

DETAILS

PROJECT San Francisco Museum of Modern Art ■ **LOCATION** San Francisco, CA
 ■ **OWNER** San Francisco Museum of Modern Art ■ **ARCHITECT** Mario Botta
 ■ **LIGHTING DESIGNER** Paul Marantz, FIALD, Scott J. Hershman—Fisher Marantz Renfro Stone, Inc. ■ **INTERIOR DESIGNER** Hellmuth, Obata & Kassabaum ■ **ENGINEER** Flack & Kurtz ■ **PHOTOGRAPHER** Richard Barnes ■ **LIGHTING MANUFACTURERS** Creative Light Source; C.W. Cole & Company; Kurt Versen Company; Lighting Services Inc

THE NEW CHARLOTTE CONVENTION CENTER

CHARLOTTE, NC

The southern sun was an obvious influence on the lighting strategy for Charlotte's new Convention Center. The structural plan, devised by a team of architects and New York-based Hayden McKay Lighting Design, incorporates an abundance of windows which work in harmonious accord with the Center's "very interesting use of fixtures," as described by IALD Awards judges.

During the day, small clerestory windows, running along the southeast and southwest lengths of the L-shaped building, send million-patterned shafts of sunlight into the interior concourses, while larger windows on the northern sides of each concourse visually connect gardens and plazas on the inside of the "L." During the day, these windows provide soft diffuse daylight on columns and the ceiling. The direction and design of these

windows create an interesting juxtaposition of cool, uniform light from the North and warm, angular patterns from the South.

The evening view into the concourses from the two street entrances was established as a priority from the beginning. While the nighttime lighting took cues from daytime effects, it did not attempt to simulate natural lighting. In an asymmetrical design, soft, diffuse uplighting bathes the northern interior walls of the "L." The lighting is provided by monumentally scaled metal halide fixtures that complement the structural rhythm of the concourses. Flood lights, located on the roof for easy maintenance, are fitted with nine different colored filters, creating a subtle progression of color from the entrances to the Grand Hall.

Budget constraints meant utilizing a modest but creative palette of building finishes. Patterned glass and

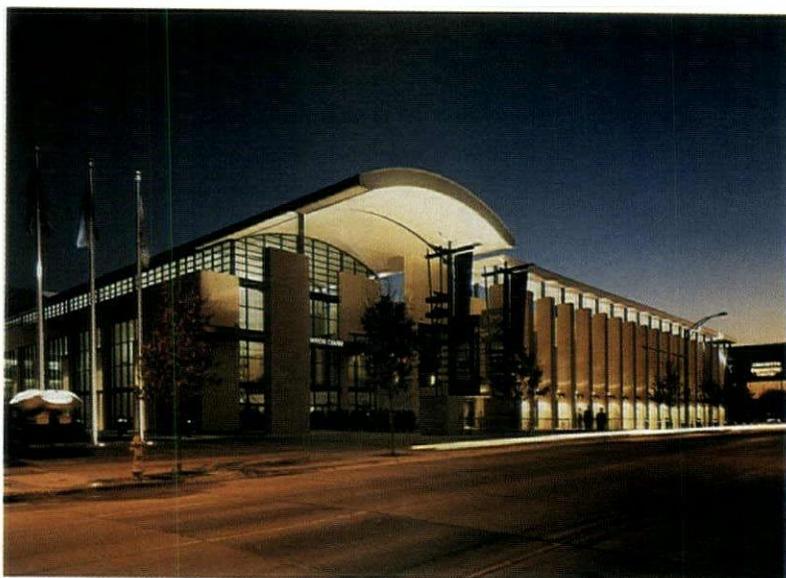
textured wall treatments are carefully integrated with grazing angles of light, while wood walls featuring wall-washers and standard sconces with ornamental "tails" create warm niches. To maintain a uniform appearance, ballasts are recessed into mounting plates and PAR accent lamps are

locked and glued into their specific aiming angles.

In other areas, McKay developed a family of seven fixture types, based on the concept of exposed PAR lamps on industrial cantilevered armatures. The fixtures were designed primarily for clusters of metal halide PAR38 lamps, but they also use single quartz PAR20 and PAR56

lamps to provide warm, low-level illumination. As energy efficiency was an important criterion, quartz PAR lamps are only used where metal halide would have provided unnecessarily bright light. Likewise, fluorescent coves and compact fluorescent baffled downlights are used in corridors, while metal halide sources illuminate exterior columns and canopies.

ALTHOUGH THERE WERE NO UTILITY INCENTIVES OR STRINGENT ENERGY CODES IN CHARLOTTE, EVERY EFFORT WAS MADE TO MAXIMIZE THE EFFECTIVE USE OF NATURAL RESOURCES. THE EXTERIOR LIGHTING OF COLUMNS AND CANOPIES IS ACHIEVED ENTIRELY BY METAL HALIDE SOURCES.



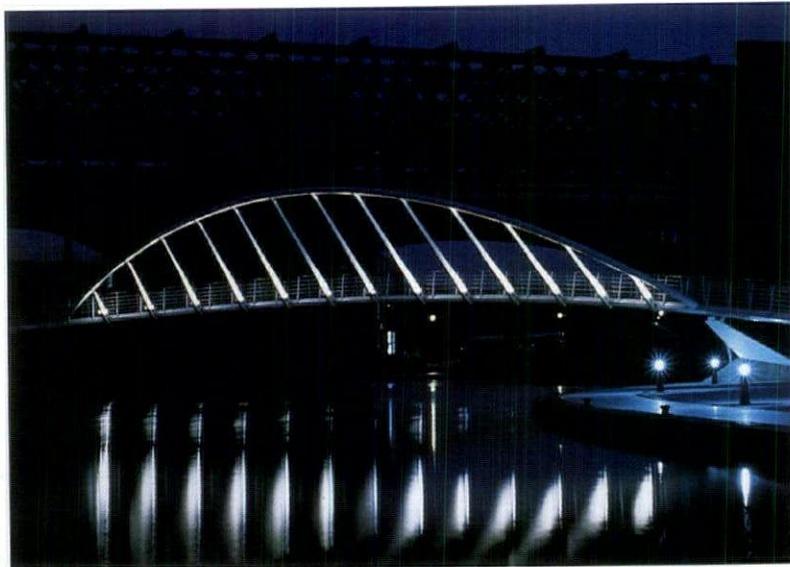
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DETAILS

- PROJECT the New Charlotte Convention Center ■ LOCATION Charlotte, NC
 ■ OWNER the New Charlotte Convention Center ■ DESIGN ARCHITECT Thompson, Ventulett, Stainback & Associates, Inc. in association with the FWA Group, architect of record
 ■ LIGHTING DESIGNER Hayden McKay, AIA, FIALD—Hayden McKay Lighting Design
 ■ INTERIOR DESIGNER Thompson, Ventulett, Stainback & Associates, Inc.
 ■ ELECTRICAL ENGINEER McCracken & Lopez, P.A. ■ SIGNAGE CONSULTANT Agnew Moyer Smith, Inc. ■ PHOTOGRAPHER Rick Alexander & Associates
 ■ LIGHTING MANUFACTURERS Sterner Lighting, Inc.; Edison Price Inc.; Rambusch Lighting; Baldinger Lighting; Artemide/Ron Rezek

MERCHANTS BRIDGE

CASTLEFIELD, MANCHESTER, UK



© Timothy Soar

The plans for construction of a new pedestrian bridge in Castlefield had started well enough, but then structural costs ran over budget. Tough choices were made. It was decided that the original plans for the lighting design would be scaled down, adding another tough

design challenge to a list that had already included energy efficiency, maintenance and vandalism. Gavin Fraser and Jonathan Speirs of Jonathan Speirs & Associates, Edinburgh, met the challenge with a show of technical mastery and aesthetic flair, according to the IALD Awards judges.

The original design specifications included a series of narrow-beam

low-voltage fixtures recessed within strong vandal-resistant steel outer casings, with integral louvers added to minimize offending glare to pedestrians on the bridge. They also included a series of floor-recessed deck lights. The equipment was selected to achieve efficient use of energy,

DESPIKE BUDGET CUTBACKS, THE LIGHTING DESIGNERS OF THIS NEW PEDESTRIAN BRIDGE MET THE CHALLENGE WITH "A SHOW OF TECHNICAL MASTERY AND AESTHETIC FLAIR," ACCORDING TO IALD AWARDS JUDGES.

resistance to vandalism, and ease of maintenance.

Fraser and Speirs removed the deck lights from the design. And while the low-voltage fixtures within the steel outer casings remained to perform the task of lighting each vertical rib of the bridge structure, another tough decision was made to reduce costs.

In the original plans, the outer casings were to be mounted via bolting to the bridge structure, a feature that provided a wide tolerance for later beam adjustments to ensure precision

lighting of the ribs. Instead, the casings were welded with a strict adjustment tolerance of +/- 5 millimeters. Thanks to skillful communication and construction, only one of the fixtures had to be slightly refocused.

Due to skillful technical compromise, Fraser and Speirs were able to continue their initial lighting concept, preserve key design features, and meet the client's goals and expectations on a reduced budget.

DETAILS

PROJECT Merchants Bridge ■ **LOCATION** Castlefield, Manchester, England
■ **OWNER** Central Manchester Development Corp. ■ **LIGHTING DESIGNER**
Jonathan Speirs, IALD, Kevin Fraser—Jonathan Speirs & Associates ■ **STRUCTURAL**
ENGINEER Whitby & Bird ■ **ENGINEER** F.C. Foreman & Partners
■ **PHOTOGRAPHER** Timothy Soar, Architectural Photographer ■ **LIGHTING**
MANUFACTURERS Light Projects

AMERICAN MUSEUM OF NATURAL HISTORY— FOURTH-FLOOR FOSSIL HALLS

NEW YORK, NY

New York City's American Museum of Natural History now brings to life not only images of our distant ancestors, but more recent aspects of our architectural history. As part of its 125th-anniversary celebration, the museum initiated a complete restoration and reinterpretation of the fourth-floor fossil exhibit, desiring a return to the institution's original 19th-century architectural grandeur.

Lighting designer H. M. Brandston & Partners and a team of architects and exhibit designers created a new and "appealing atmosphere that is fresh and alive," according to IALD Awards judges.

During a 1950s renovation, windows were bricked up, ceilings were

dropped and chandeliers and sconces were replaced with the institutional look of fluorescent fixtures. As part of the recent renovation, the design team was careful to ensure that every part of the new lighting system maintains a resemblance to its architectural predecessor.

The lighting design of the now re-opened exhibit halls reintroduces daylight through windows that had been sealed off for decades. The suspended ceiling was eliminated and the windows rebuilt to reduce the need for electric lighting and allow daylight into the halls once again. In addition, replicas of the original chandeliers and other lighting fixtures that recall an earlier era were installed in the space. The replica forms conceal light sources and control systems.

A new exhibit lighting system is unobtrusively integrated into the historic

surroundings. A plug-in lampholder was developed to mount alongside the structural beams in the museum ceiling. The plug-in system offers the flexibility of using a variety of line- and low-voltage lamps. Light levels within

the exhibit cases are kept intentionally bright to eliminate veiling reflections.

In a pilot project, the museum is testing a computer-controlled electronic

shading system and dimmable fixtures. Sensors read the ambient light levels in the exhibit halls and regulate brightness accordingly by adjusting the window shades and the light output of pendant fixtures.

RESTORATION OF THE INITIAL FENESTRATION AND REPLICAS OF THE ORIGINAL CHANDELIERS OFFER A SENSE OF THE BUILDING'S 19TH-CENTURY GRANDEUR, WHILE PLUG-IN ACCENT LIGHTS, MOUNTED TO THE STRUCTURAL BEAMS OF THE CEILING, SUGGEST A 20TH-CENTURY INFLUENCE.



© Scott Frances/Esto

DETAILS

PROJECT American Museum of Natural History—Fourth-Floor Fossil Halls

■ LOCATION New York, NY ■ OWNER American Museum of Natural History

■ ARCHITECT Kevin Roche John Dinkeloo Associates ■ LIGHTING DESIGNER Howard Brandston, FIALD, Chou Lien, IALD, Dennis Burckhardt—H. M. Brandston & Partners Inc.

■ EXHIBIT DESIGNER Ralph Appelbaum Associates ■ ELECTRICAL ENGINEER Altieri Sebor Wieber Consulting Engineers ■ PHOTOGRAPHER Scott Frances/Esto ■ LIGHTING

MANUFACTURERS Creative Light Source; Lutron Electronics Co. Inc.; Lighting Services Inc

HOTEL KEMPINSKI

MUNICH, GERMANY



© Engelhardt & Sellin Architekturfoto

A LARGE CROSSHAIR IN BLUE AND YELLOW INTERSECTS AT THE PROJECT'S CENTER. FORMED BY A LIGHTPIPE USING 250W METAL HALIDE LAMPS AND COLORED LENSES, THE CROSSHAIR IS EMBEDDED INTO THE PAVING BENEATH FROSTED GLASS.

In keeping with Germany's current cultural and economic expansion, the city of Munich recently completed the 400-room Kempinski Hotel, the first phase of a commercial service zone at the new airport. By blending a colorful, geometrical lighting plan with the hotel's generous gardens and spacious interior atriums, California-based lighting design firm Francis Krahe & Associates, Inc.

was able to create an "ephemeral, fantastical, unusual" environment for weary travelers, according to IALD Awards judges.

Each of the major indoor and outdoor spaces includes a vibrant arrangement of lighting elements, which helps visitors understand where they are as they navigate through the hotel.

In the pedestrian tunnel, which is modeled after the United O'Hare Terminal in

Chicago, metal halide and high pressure sodium lamps with tinted glass lenses project colored light onto the white walls, which are viewed through perforated metal screens. The contrasting media and varied colors diffuse the perceived limits of the tunnel and create a playful entrance for visitors traveling from the terminal at night.

The steel and glass roof of the entrance atrium, which adjoins the main drive, is uplighted to reinforce its

unique triangular pattern with white and soft blue filtered metal halide fixtures (400W floods, 1000W spots). The blue tints hint at an early evening sky color while the unfiltered white light allows for variable intensity and color hue at different times of the day and for special events. In addition, the uplights are lighted in controlled gradation, allowing for a stepped intensity of brightness. A series of 2m square glass "fountains," a key element to the landscape of the atrium, are each backlighted with fluorescent lamps, adding aquamarine highlights to the Kempinski ambiance.

The glass floors of the elevator and stairs are uplighted by pendant fluorescent fixtures, which fur-

ther contribute to a sense of mysterious transparency in the atrium. Palm trees stand out in the glow of floor-recessed halogen uplights, while other architectural features such as the shattered glass frames are accented by dimmer-controlled roof-mounted halogen fixtures.

The center of the project is marked by the intersection of two 750-ft.-long stripes of light. The lines of the crosshair—one blue, one yellow—are formed by lightpipes with 250W metal halide lamps and color lenses, which are embedded into the paving below frosted glass. The yellow line extends to form an edge to the parterre garden north of the ballroom, while the blue continues to designate the edge of the beer garden.

DETAILS

PROJECT Hotel Kempinski ■ **LOCATION** Munich, Germany ■ **OWNER** Flughafen Munchen GmbH ■ **ARCHITECT** MurphyJahn Architects, Inc. ■ **LIGHTING DESIGNER** Francis Krahe II, IALD, Elaine O'Neill, Keith Kosiba—Francis Krahe & Associates, Inc. ■ **INTERIOR DESIGNER** Studio Wichers ■ **ENGINEER** Schlaich, Bergemann and Partner ■ **PHOTOGRAPHER** Engelhardt & Sellin Architekturfoto

DEEP TIME/DEEP SPACE, A SUBTERRANEAN JOURNEY—DENVER INTERNATIONAL AIRPORT

DENVER, CO

No longer does being in transit have to mean, "Are we there yet?" At the Denver International Airport at least, the one-mile shuttle run connecting the three concourses and terminals now includes an artistically appealing view for traveling passengers. Light and sculpture, which highlight Colorado's industrial past and future, line the tunnel walls and make for a "very entertaining ride," according to IALD Awards judges.

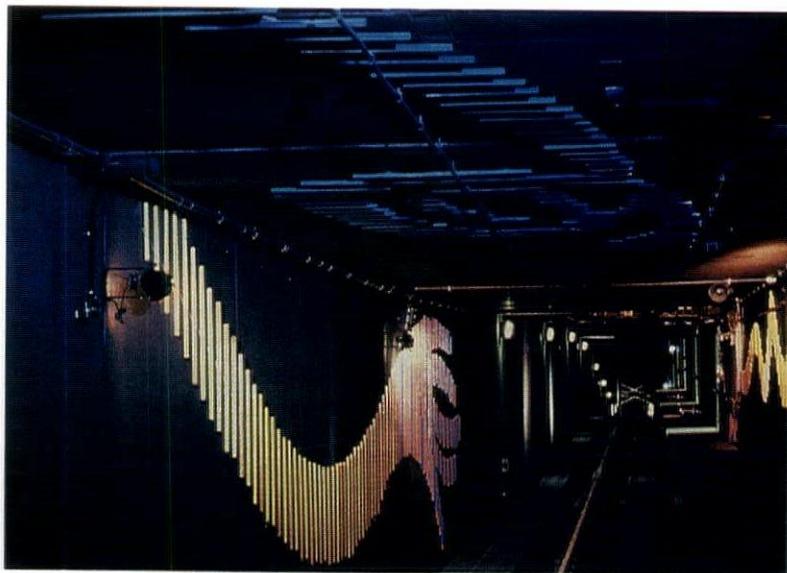
Like its audience, the "Deep Time/Deep Space" project is constantly in motion. Lighting designer Leni Schwendinger conceived of four zones which segue into one another in a domino-like lighting effect. The moving train activates photoelectronic sensors that trigger timed lighting sequences, thereby illuminating the sculptures.

In zone one, PAR56 (110V) fixtures are angled to create mysterious shadows

on the ominous steel sculpture (the Mine), which features craggy corners and a sequence of miner arms with pickaxes. In the second installation, which imitates a construction zone with safety signs and beacon strobes, reuse of general tunnel lighting saved on fixture costs. The ceiling in the third zone (the Night Sky) is patterned with retro-reflective images, while standard theatrical PAR64 fixtures using composite glass filters maximize color distribution over 200-ft. segments. As the train slows for its final stop, the Dream zone features a timed sequence of projected text and layered color washes, created by low-wattage theatrical pattern projectors with glass templates and PAR64 units with glass filters.

The nature of the project imposed unique demands on the lighting system. The artwork required unobtrusive fixtures and special lighting effects such as shadow casting and projections.

Several additional criteria played a key role in the development of the right lighting system. Limited



© Morgan Keiser

spatial parameters of 1½ to 22 in. deep encouraged full integration of the sculpture materials and lighting system. Glass beads capture light and direct it back to the source, resulting in brightness without glare, while retro-reflective sheetings—"the intriguing key to the project's success," said the IALD judges—proved cost effective as they reduced the number of fixtures needed.

RETRO-REFLECTIVE MATERIALS, SUCH AS THOSE USED IN THE COLORFUL HAND AND SPIRAL INSTALLATION JUST BEFORE THE FINAL TRAIN STOP, DRAMATICALLY REDUCE THE NUMBER OF FIXTURES NEEDED, KEEPING COSTS LOW AND SAVING ENERGY.

To simplify maintenance requirements, lamp life is prolonged by shutting down lighting during off-peak hours, as well as by incorporating the natural voltage drop that occurs over a dis-

tance of one mile and factoring in an intentional reduction of eight to 10 percent. In addition, fixtures were stabilized with a bonding agent and filters wired in to ensure focus during relamping.

DETAILS

PROJECT Deep Time/Deep Space, A Subterranean Journey—Denver International Airport
■ LOCATION Denver, CO ■ OWNER City of Denver Art Program ■ ARCHITECT Hoover Berg Desmond ■ LIGHTING DESIGNER Leni Schwendinger, David Lander—Leni Schwendinger Light Projects Ltd. ■ ENGINEER Roos/Sznsky Inc. ■ ELECTRONIC SPECIALIST Tessco ■ FABRICATOR B & C Steel ■ PHOTOGRAPHER Morgan Keiser
■ LIGHTING MANUFACTURERS Edwards; Lighting Services Inc.; Electronic Theatre Controls

INTERNATIONAL INVESTMENT FIRM

NEW YORK, NY

A great view of the surrounding scenery can certainly offer inspiration, an important element in any business. The investment banking firm that employed New York City-based Horton•Lees Lighting Design Inc. had exactly that—an expansive view of the skyline from a lofty level in one of Manhattan's most prominent skyscrapers.

The client's goal was to achieve a progressive, dynamic space emphasizing the company's sophisticated, international image. A dramatic tension structure of four giant white sails and suspended ceiling planes creates a visually stimulating, slightly spontaneous environment. Combined with two-story, floor-to-ceiling windows on three sides, these layered planes also accentuate the aerial nature of the space and its potential for natural light.

The result: A "finely detailed, beautifully refined" project, according to IALD Awards judges.

Lighting designers Stephen Lees, FIALD and Susan Brady, IALD created a system that, while enhancing and defining architectural forms, provides maximum visual comfort, minimizes brightness on the fabric sails and creates a balance of light along the window wall. For task illumination, an indirect system delivering 50-60 fc onto the work surface was deemed appropriate for the space.

Upon entering from the elevator lobby, the eye is drawn to the reception area. Here, a custom bracket-mounted dual-function fixture conceals fluorescent uplights that enhance the volume above, as well as recessed incandescent accent lights that wash the wall below. Additional incandescent lighting accents the warm wood of the reception desk while providing task illumination.

On the trading floor, a suspended indirect fluorescent lighting system was designed to "float" below the structure. Compact fluorescent biaxial lamps operated by electronic ballasts were selected for their energy efficiency, high lumen output, good color rendering and long lamp life. The pendant-mounted fixtures softly bounce light off the fabric sails, providing an agreeable balance of brightness during the day between the windows and sails and maximum visual comfort to the traders below. The shape of the pendant-mounted system complements the soft sweeping lines of the sails, appearing to weave delicately between the fabric and columns, while the bracket-mounted version acts as a unifying element, bringing the many forms together.



© Paul Warchol

CUSTOM PENDANT-MOUNTED INDIRECT FIXTURES SOFTLY BOUNCE LIGHT OFF THE FABRIC SAILS, PROVIDING MAXIMUM VISUAL COMFORT TO THE WORK SPACES BELOW. THE DELICATE PROFILE OF THE FIXTURES APPEARS TO WEAVE BETWEEN THE FABRIC SAILS AND THE COLUMNS.

DETAILS

PROJECT International Investment Firm ■ LOCATION New York, NY ■ LIGHTING DESIGNER Stephen Lees, FIALD, Susan Brady, IALD—Horton•Lees Lighting Design, Inc. ■ INTERIOR DESIGNER ISI New York ■ PHOTOGRAPHER Paul Warchol Photography Inc. ■ LIGHTING MANUFACTURERS Michael's Lighting; Reggiani USA Inc. Illumination

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'96

Personal vs.

Buildings are becoming more intelligent, and sensing and control systems are enabling this trend. Control of lighting systems, of course, entails on/off switching, step-dimming or continuous dimming. In an energy efficiency context, automatic switching is essential to reduce the operating hours of the lighting system. But when it comes to dimming in the office environment, who is best to judge whether to lower light levels—the photosensor or the occupant?

multiple ballasts, and some systems require an integrated controller wired between the photosensor and the ballast. In typical systems, low-voltage wiring connects the photosensors and ballasts—installed in the ceiling plenum and operating independently of the power circuits so that specific zones of fixtures can be established for dimming (such as a group closest to the windows). Some systems offer the option to transmit a pulse signal over the standard line, adding flexibility and eliminating the need for hard-wiring. Most dimming ballasts allow dimming down to 10-20 percent; minimum light levels can be manually adjusted at the photosensor by the user. Newer dimming ballasts can operate up to four lamps, which can be tandem-wired to pairs of two-lamp fixtures.

Daylight dimming controls are application-sensitive, requiring careful placement and calibration. Photocells are generally installed in the ceiling two-thirds of the way into the zone containing the dimmable fixtures. The photosensor should be mounted above a work area that is representative of the other areas in the space. The use of blinds can reduce energy savings by restricting the access of daylight to the space; the blinds should be adjusted so that reflected light impacts the ceiling, or window film can be applied to the windows. If the space includes partitions, where occupants do not receive much daylight, the fixtures over these spaces can be left out of the dimming zone. Or a single photosensor can be assigned to each fixture.

MANUAL DIMMING
Manual dimming controls allow occupants to choose their own light levels

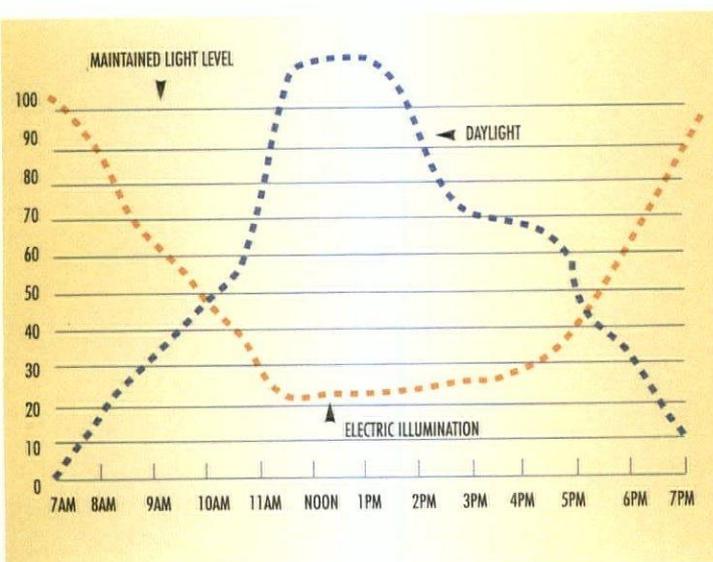
DAYLIGHT DIMMING

Current energy-saving automatic dimming strategies include daylight dimming, lumen maintenance control, scheduled dimming and occupancy-sensed dimming. Of these, daylight dimming is the most popular for energy management.

In a daylight dimming strategy, a photosensor reads the ambient light levels in a space where daylight is available from windows or skylights. If light levels exceed or fall below the desired maintained level, the photocell signals a dimming ballast to ramp up or dim fluorescent light output. Energy savings are realized by recognizing the variable contribution of daylight to the space.

The ballast can either step-dim or continuously dim light output. Photocells can control a single compatible ballast on up to

FIGURE 1. THE PRINCIPLE BEHIND DAYLIGHT DIMMING SYSTEMS IS THAT AS DAYLIGHT ENTERS THE SPACE THROUGH WINDOWS OR SKYLIGHTS, ELECTRIC LIGHTING IS DIMMED TO MAINTAIN A CONSTANT LIGHT LEVEL VIA PHOTOSENSORS AND DIMMING BALLASTS, SAVING ENERGY. COURTESY: NATIONAL LIGHTING BUREAU.



Automatic

via wall dimmers, desk dimmers, task lighting dimmers or hand-held remote controllers to dim the light output from individual fixtures or groups of fixtures. Step-level dimming or continuous tuning is available. A common configuration includes low-voltage wiring between the dimmer and the ballast to relay the dimming signal. Some manufacturers offer dimmable ballasts operating T8 lamps that do not require additional wiring.

PUTTING CONTROLS TO THE TEST

The Lighting Research Center at the Rensselaer Polytechnic Institute in Troy, NY recently completed a pilot study on controls at the National Center for Atmospheric Research (NCAR) in Boulder, CO.

The study was sponsored by the New York State Energy Research and Development Authority, GE Lighting, Motorola Lighting, Columbia-Prescolite-Moldcast, Watt Stopper and Horton Controls. Wayne Morrow was the facility manager at NCAR and the report was authored by Mark Rea, PhD, director of the Lighting Research Center, and Dorene Maniccia, manager of lighting applications research.

The site included 96 private offices, consisting of 64 perimeter and 32 interior offices. Twenty-eight were used for the pilot study with an equal number of perimeter offices on each of the four faces of the building (see Figure 2). About 50 percent of occupant activity involved computer use. In each office, an occupancy sensor, photosensor, manual on/off switch and two manual dimmers (one at the desk and one near the door which included an on/off switch) were installed (see Figure 3). A building automation system, which

served in part as a time clock, previously had been installed for the entire building.

The photosensors were mounted according to the manufacturer's specifications about 9 ft. from the window. The photosensor consisted of a photocell connected to a glass rod by an optical fiber. The glass rod, protruding into the space, was angled so that it received the light reflected from the floor directly away from the window. The photosensor was wired to a ballast (continuous-dimming to tune the light output of the lamps precisely) in a local control configuration whereby the sensor controlled one ballast. The photosensors were set to start dimming when ambient light levels exceeded the maximum electric lighting at night. The response of the sensors was set so that for every unit of incoming daylight, one unit of electric light was removed, and vice versa.

The wall-mounted control was an on/off switch and a dimmer. The portable dimmer was a device set on the desks near the personal computer, attached to a 12 ft. cord to communicate signals. Both wall-mounted and portable dimming controls had on/off switching capability, and were responsible for turning the lights in the office on. Both dimmers could dim from 100-10 percent.

The passive infrared occupancy sensors—mounted on the ceiling in the corner of each office—were responsible only for turning the lights off.

In half of the offices, the desk dimmer was removed. In half of the perimeter

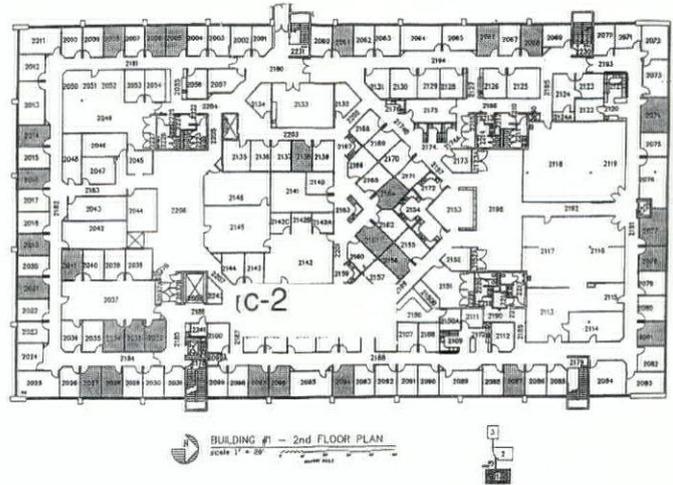


FIGURE 2. IN THE NCAR STUDY, THE ROOMS SELECTED (SHADED) WERE BALANCED AROUND THE FOUR SIDES OF THE BUILDING, AND INCLUDED INTERIOR AS WELL AS PERIMETER OFFICES.

offices, the photosensor was disabled without telling the occupants. This established the basis of comparison between the technologies.

RESULTS OF ROUND ONE

Through a formal experimental design, the study revealed that manual dimming controls yielded dramatic energy savings that surprised the researchers in their magnitude.

Two main results included:

1. On average, 40 percent less energy was used in perimeter offices than in the interior offices, indicating that windows are important to energy savings.

2. In perimeter offices that featured an operating occupancy sensor and a dimmer at the desk, about 75 percent less energy was used than would have been used during core hours (7 a.m. to 7 p.m.). On average, occupancy sensors cut lighting energy use in half during core hours. This

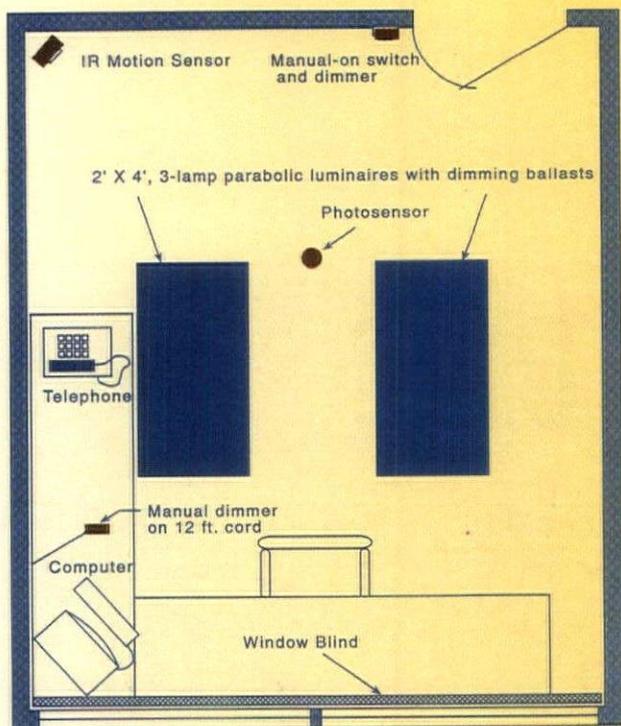


FIGURE 3. LOCATION OF CONTROLS IN A TYPICAL PERIMETER OFFICE IN THE NCAR STUDY.

indicated that a combination of automatic off and manual dimming near the occupant was the most effective strategy for gaining maximum energy savings.

ANALYSIS OF THE RESULTS

According to Dr. Rea, daylight dimming did not fare as well in performance because of the lack of occupant acceptance, which resulted in NCAR adjusting the photosensors until they became much less effective than the manual dimming. After complaints that the photosensor dimmed the lights too quickly, in-house engineering personnel returned to each office to increase the set-point of the minimum desired light level, reducing the sensor's effectiveness. They also increased the ratio of response of the sensor, so that one unit of electric light was removed only after a geometrically increasing number of units of daylight was sensed. This satisfied

the occupants to a large extent but reduced the effectiveness of the photosensor at saving energy. Recalibrations took a half-hour for each sensor.

As for the manual dimmers, the post-study results showed that one-third of the occupants wanted dimmers and about a quarter did not care whether they had them or not. It is interesting to note that the one-third who wanted dimmers were mixed between perimeter and interior offices, suggesting that some people may simply like control over their lighting.

"The fact that one-third of the occupants wanted dimmers can be used to argue for or against dimmers," said Dr. Rea. "But what is most significant is that dimming is flexible—it can satisfy current occupant needs, but with the high churn rate in today's offices, can also meet the needs of future occupants of the space."

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installation, providing occupants control via manual dimmers may be an effective means of generating acceptance of changes to the lighting system. But occupants should also be trained about the importance of maintaining minimum recommended light levels. And in open-plan office spaces, aesthetic problems can result if varying degrees of brightness are observable from overhead fixtures. The study did not address the latter issue because each space was a private office.

The final report will be publicly available upon request at year's end. Call the Lighting Research Center at (518) 276-8716.

FUTURE RESEARCH

According to Dr. Rea, the research team will attempt to validate the results with an additional study. Other questions will be asked in future studies, including whether photosensors can be designed to produce greater energy savings than manual dimming, whether manual dimmers can be designed to increase energy savings, and for what types of tasks do occupants choose high versus low light levels.

"The lighting industry is, unfortunately, data poor and folklore rich," said Dr. Rea. "This report, and the ones that will follow, will help controls reach a new plateau. The current state of the art is not as effective as it could be. Specifiers will have information to make better decisions, and manufacturers will have information they can use to develop new products. Data is only one piece of the puzzle, but it's important. The results may not work in every application, but we're excited about the possibilities."

He added, "We're at

the threshold of studying how people really use their lighting systems."

While follow-up studies are planned for NCAR in Boulder, researchers cut the ribbon on another dramatic controls study around Lightfair. (Researchers in both studies will be coordinating their efforts generally.) The site is the Philip Burton Federal Building at 450 Golden Gate Avenue, the second largest building in San Francisco. The 20-story, 1.45 million-sq.-ft. building houses Federal Courts, the FBI, DEA, Marshal's Service, IRS, GSA, HUD and other public agencies.

Sponsored by the Lawrence Berkeley National Laboratory/U.S. Department of Energy as well as the U.S. General Services Administration and Pacific Gas & Electric Co., the study aims to 1) demonstrate the energy- and cost-effectiveness of automatic controls, 2) demonstrate cost savings of new technologies and 3) provide a basis for design and specification of advanced control systems.

The installed lighting controls include 1,259 dimmable electronic ballasts, 40 smart control panels, 75 photosensors, 90 occupancy sensors, 13 remote-control dimming units, 11 manual dimmers and 186 energy/demand meters. Thomas Lighting, Motorola Lighting, Advance Transformer, Lutron, Novitas, Unenco, Watt-Stopper and PLC Multipoint provided the equipment. The entire building will be set up as a laboratory to observe the effectiveness of various control strategies.

For more information about this current study, call Francis Rubinstein at the Lawrence Berkeley National Laboratory at (510) 486-4096. ■



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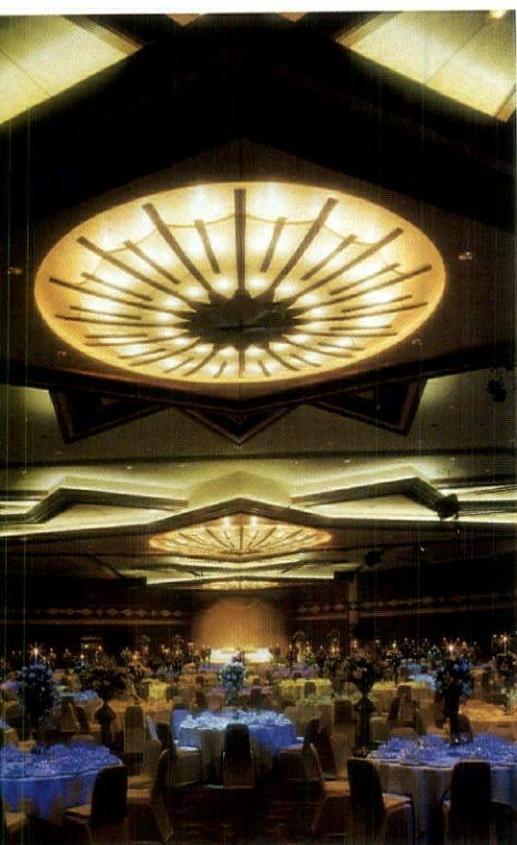
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FOUR PERSPECTIVES
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Americans



THIS 24,000-SQ.-FT. BALLROOM, ONCE THE LARGEST MEETING VENUE IN SINGAPORE, FOUND ITSELF COMPETING WITH A NEW CONVENTION CENTER NEARBY. CONCEPTS 4, INC. MET THE CHALLENGE BY INCORPORATING MODERN ASIAN CULTURE TO CREATE A CONTEMPORARY SPACE. THREE LARGE "STARBURSTS" PROVIDE A COMPLEMENTARY BACKGROUND FOR THE SANDCAST VENETIAN GLASS CHANDELIERS. MORE THAN 190 RECESSED FIXTURES CAN BE COMPUTER-CONTROLLED TO PINPOINT EACH TABLE WITH 14 IMAGES AND EIGHT COLORS.

In recent years, when the United States found itself in a construction slump, other parts of the world such as the Pacific Rim enjoyed a building boom. The United States, meanwhile, discovered it possessed an export very much in demand—design expertise. And lighting design is no exception. As the global economic arena warms up, boundaries are falling and American designers are playing the international field.

From country to country, projects differ vastly in aesthetics, codes and procedures, but they maintain one constant—an appreciation for the experience and expertise of American lighting designers. "Lighting design is a uniquely American invention," says Barry Arnold, principal of Barry Arnold Associates, "which is why some of the best lighting designers in the world are American."

In this article, we will offer the perspectives of several lighting designers who have worked internationally, providing through their experiences a sense of what to expect as an American lighting designer working abroad.

SINGAPORE

The city of Singapore has been a popular area for recent construction, and thus features a great deal of modern architecture with a surprisingly international aesthetic. Indeed, project designer Linda Snyder of California-based Concepts 4, Inc. was particularly

surprised by the design criteria during renovation of the Raffles Ballroom in the I.M. Pei-conceived Westin, Stamford & Westin Plaza. "My feeling is that a project should always reflect a sense of the surrounding culture, so my approach was to give an interpretation of what might look Asian," said Snyder. "But what they're really looking for in Asia right now is western aesthetics."

Though the desired design effect may not seem exotic, Singapore's codes are definitely foreign. Due to extremely high fire ratings and strict life-safety codes, the design team found it necessary to work with a local architect to make the proper submittal. Likewise, energy use requirements are restrictive at a total load allowance of only 25 watts per square meter: "We struggled to get the quality of light needed to guarantee the drama of the design and simultaneously meet the energy restrictions," said Snyder.

At the same time, the difference in line voltage—Asia is on 220V, while the U.S. operates on 120V/277V—also proved to be a problem. "We had some illuminated signs manufactured here in the U.S. and shipped to the site," said Snyder. "There was no way we could test the light boxes prior to sending them over because they had to wire them for the current in Singapore. As it turned out, on site they were too bright and required adjustment."

Conversely, other cultural obstacles

DETAILS

PROJECT Westin, Stamford & Westin Plaza; Raffles City Convention Centre
 ■ LOCATION Singapore ■ OWNER Raffles City Private Ltd. ■ DESIGN ARCHITECT Concepts 4, Inc. ■ LIGHTING & INTERIOR DESIGNER Concepts 4, Inc. ■ ELECTRICAL ENGINEER William Yang & Associates ■ PHOTOGRAPHER Albert Lin ■ LIGHTING MANUFACTURERS Crystal Palace; Kramer Lighting, Inc.; Martin; Macro

Abroad

were not a problem in Singapore. The time difference with the U.S. presented an obstacle, but basic communication is amazingly easy; originally a British colony, Singapore's official language is still English. And though Snyder noted that American-manufactured lighting technology and fixtures are more advanced, importing is relatively easy as Singapore is a major world port with extensive dock facilities.

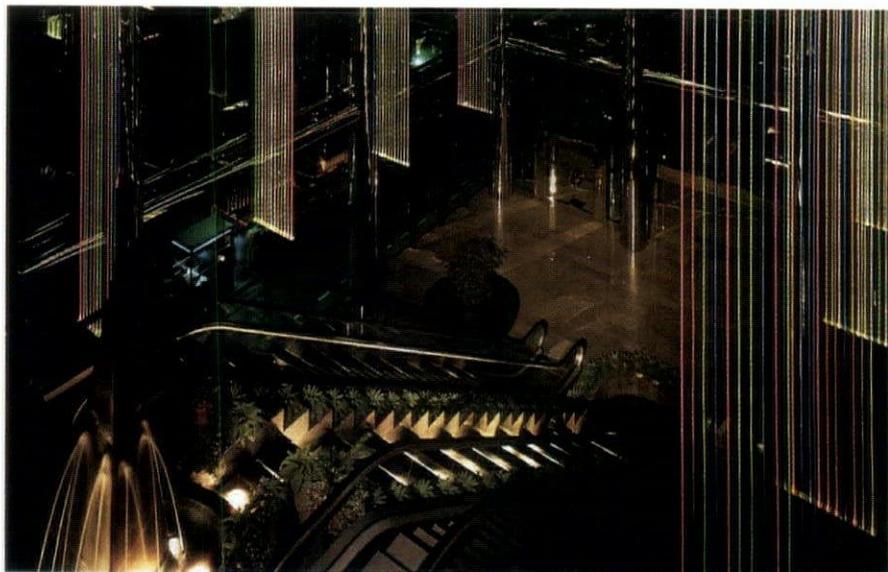
The Singapore market certainly has a future, and many companies, such as Concepts 4, Inc., are finding it profitable to open offices there. However, Snyder does advise designers to plan on a lengthy negotiation process. Like most business conducted in Asia, she noted, "it takes a great deal of perseverance and patience to be awarded a signed contract. They're tough negotiators."

BANGKOK, THAILAND

Lighting design has become equally popular in Thailand. "Thais love quality lighting," noted Barry Arnold, lighting designer for Bangkok's Siripinyo Building. "They tend to do more dramatic things with lighting there, particularly with color."

While demand for lighting design has increased, the discipline is still young; as a result, architects and contractors in Thailand are not as used to working with lighting designers. Thai projects, therefore, require more on-site supervision: "You often can't depend on general contractors to follow the drawings exactly," said Arnold, "so it's really important to stay on top of them."

Accurate drawings are also important in bridging the language barrier. Although most of the owners and project managers speak English, the contractor and the rest of the staff usually do not. Said Arnold, "You



LIGHTING DESIGNER BARRY ARNOLD WANTED TO CREATE AN IDENTITY FOR THE SIRIPINYO BUILDING IN BANGKOK. WHILE THE GLASS EXTERIOR MADE FLOODLIGHTING DIFFICULT, THE LOBBY—VISIBLE TO THE STREET OUTSIDE—PROVIDED AN OPPORTUNITY FOR DRAMATIC DESIGN. TOGETHER WITH LUMENYTE INTERNATIONAL, ARNOLD DEVELOPED 40-FT.-LONG FIBER-OPTIC BANNERS THAT UTILIZE A COLOR WHEEL TO CREATE MANY DIFFERENT FESTIVE SCENES WITHIN THE LOBBY.

have to rely on good detail in the drawings rather than the written word."

The availability of fixtures is another consideration when working in Thailand. Thailand imposes import duties, which may cause budget problems. "They have lighting manufacturers, but their products tend to be generic and mostly downlights," said Arnold. "When you do get something special—such as the banners for the Siripinyo lobby—you put aside part of your budget." Arnold encourages designers to create a library of what's available

internationally, and he adds that local manufacturers are always willing to try to make a lighting product.

Codes, on the other hand, are not as much of an issue in Thailand. Energy is expensive and there is the Asian (220V) and American (120V/277V) line voltage discrepancy, but otherwise Thailand is true to its name (Thailand translates "freeland"). "We do, however, try to keep the same kinds of standards we have here," said Arnold. "For example, we recommend methods for installations that are safe."

DETAILS

■ PROJECT Siripinyo Building ■ LOCATION Bangkok, Thailand ■ OWNER Siripinyo Co., Ltd ■ ARCHITECT Design Professionals, Ltd.—Krid Panyarachun ■ LIGHTING DESIGNER Barry Arnold Associates, Ltd.—Barry Arnold ■ INTERIOR DESIGNER Design Professionals, Ltd.—Krid Panyarachun ■ ELECTRICAL ENGINEER W and Associates Consultants, Ltd. ■ PHOTOGRAPHER John McDermott ■ LIGHTING MANUFACTURERS Lumenyte International; Yamagiwa; Kit Paisarn



EUROPEANS HAVE LEARNED TO MAKE THE MOST OF LIMITED SPACE, AND ROOF-TOP PARKING IS ONE SUCH STRATEGY. THIS MEANS, HOWEVER, THAT THE ROOF MUST HAVE AS MUCH AESTHETIC APPEAL AS THE REST OF THE PROJECT. SKYLIGHTS, FEATURING FLUORESCENT COVES, CREATE A VISUALLY APPEALING SCENE FROM THE PARKING AREAS—"ALMOST LIKE A SCULPTURE GARDEN," SAID LIGHTING DESIGNER STEVEN BLISS. MEANWHILE, THE SHOPPERS BELOW HAVE THE BENEFIT OF PLENTY OF NATURAL LIGHT.

Working in Thailand may require patience and careful planning, but it's worth it, said Arnold. "Coordinating the project is a frustration at times, but there are many benefits to being with the people," he said. "It's called the land of smiles."

VILA NOVA DE GAIA, PORTUGAL

Lighting design in Europe may not seem as new or at least as foreign, but it's thriving. While there are, by now, almost as many lighting designers there as in the U.S., Europeans have an appreciation for American expertise, particularly when it comes to retail lighting. "They have a

different way of approaching retail than we do," said lead designer for the Gaia project, Mark Lauterbach of RTKL in Dallas. "A lot of retail spaces over there are dark, use the wrong light source, or just have a closed-in feeling."

As far as the aesthetics of design are concerned, Lauterbach finds his European clients "much more open to things that break paradigms; everything is fair game." The lighting designer for Gaia, Steven Bliss of New York-based Theo Kondos Associates, added that "overall notions for lighting design in Europe are not necessarily cultural, but just good design practice."

Interestingly, the Europeans' heightened sense of aesthetics seems to influence the types of lighting products available. The quality of manufacturing in the European Community is high, the products are cheaper since they

avoid the handling agent in between, and the process is easier as the differences in European line voltage are already compensated for. Nevertheless, Bliss finds it difficult to locate clean, minimalist fixtures that look good. "They tend to tool these things to death," he said. "It's hard to get something that doesn't scream 'I'm a light fixture, look at me.'"

Electricity is expensive, which encourages restraint in the design, but otherwise European codes are extremely relaxed by American standards. In fact, America's UL qualifications are a little too finicky from a European perspective. "They can't understand why we design our fixtures the way we do," said Bliss. "The inherent difference, of course, is they build fire-proof buildings and we fire-proof our wooden buildings."

Europe is a good place to start for designers who wish to expand their reach. Communication with European clients is relatively easy: English is the second language in most countries, and

the time difference and the travel distances are manageable. The best way to access this market, according to Bliss, is through American architects. "Their projects look a certain way because they use certain consultants," he said. "They sell us as a package."

MEXICO CITY, MEXICO

Building activity in Mexico has been up and down, with business seemingly back on the rise again. While the North American Free Trade Agreement (NAFTA) appeared initially to inspire development, the sharp decline of the peso at the close of 1994 brought construction to an abrupt halt, a trend that is gradually changing, said Enrique García Carrera, New York-based lighting designer for Mexico City's Bar Academia.

Until recently, the Mexican lighting aesthetic did not seem to require a lighting designer. "They have a very long history of using natural light which has to do with the hot climate," said García Carrera. "The constructions are massive and planar, with big walls and big windows, which creates a marvelously dramatic contrast between light and shadow."

This use of natural light, however, did not translate into an appreciation for electric lighting. "Often they just embraced the latest technology without really knowing how to apply it," said García Carrera. Similarly, the lighting fixture manufacturers and sales representatives were generally an accepted substitute for designers. Lighting designers, however, are becoming an increasingly essential part of higher-end projects today. "Our Mexican clients see the difference between projects with a lighting consultant and those without," said García Carrera. "Consequently, we are getting repeat business from them."

In many ways, Mexico is a likely candidate for American designers. Mexico uses the same voltage and frequency as the U.S., which eliminates issues of technological compatibility. Mexico's proximity to the U.S. also

DETAILS

- PROJECT Gaia Shopping ■ LOCATION Vila Nova de Gaia, Portugal ■ OWNER Teleporto Empreendimentos Imobiliarios SS/SONAE ■ ARCHITECT OF RECORD Jose Quintela de Fonseca
- PRODUCTION ARCHITECT Promontório Arquitectos Associados, LDA. ■ DESIGN ARCHITECT RTKL International, Ltd. ■ LIGHTING DESIGNER Theo Kondos Associates
- INTERIOR DESIGNER RTKL International, Ltd. ■ PHOTOGRAPHER John Barlow
- LIGHTING MANUFACTURERS RZB; Ercol; Philips

THE LOCATION OF THIS 16TH-CENTURY MEXICO CITY HOT SPOT HAD BEEN DESIGNATED A HISTORIC LANDMARK. LIGHTING DESIGNER ENRIQUE GARCÍA CARRERA INCORPORATED THE HISTORIC ELEMENT INTO A NIGHTCLUB ATMOSPHERE BY USING RICHLY SATURATED COLORS, A MEXICAN TRADITION. TUNGSTEN HALOGEN FIXTURES USING PAR38 LAMPS AND COLORED FILTERS INTERACT WITH THE PAINTED WALLS WHILE LOW-VOLTAGE STRIP LIGHTS ELECTRIFY THE BAR STEPS.

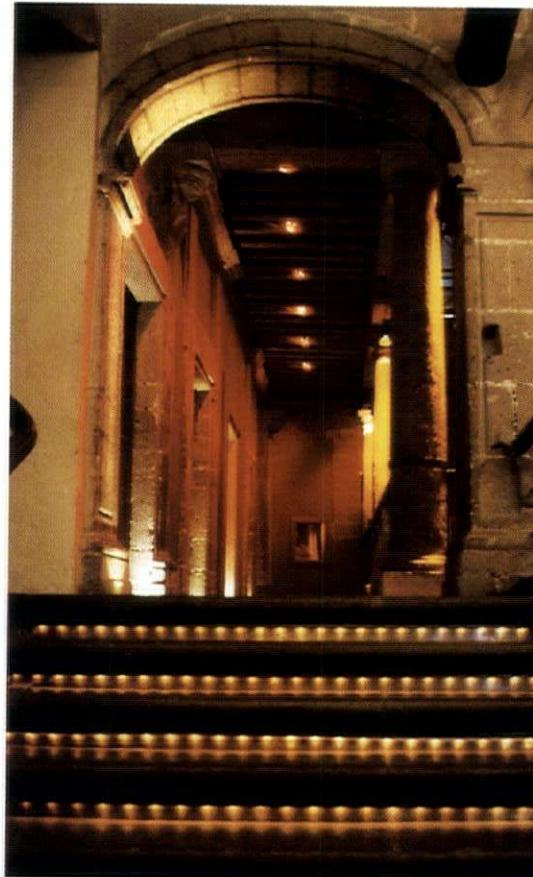
facilitates the availability of American fixtures. (During the decline of the peso, however, American fixtures were expensive for Mexican budgets. Imports also have a tendency to sit in Mexican customs for prolonged periods of time.) Likewise, Mexican codes are still few and far between. They are becoming stricter, according to García Carrera, but ironically "a lot of the energy savings movement has been started by industry itself in an effort to save money rather

than by government regulations."

While economic and cultural factors make the Mexican market a little harder to access at this time, this is expected to change. García Carrera's advice: Target the Mexican architects. "There is a difference between the pattern of construction in Mexico versus Asia," said García Carrera. "In Asia, during the building boom, a lot of the architects were American or European, whereas in Mexico, most of the architects are Mexican."

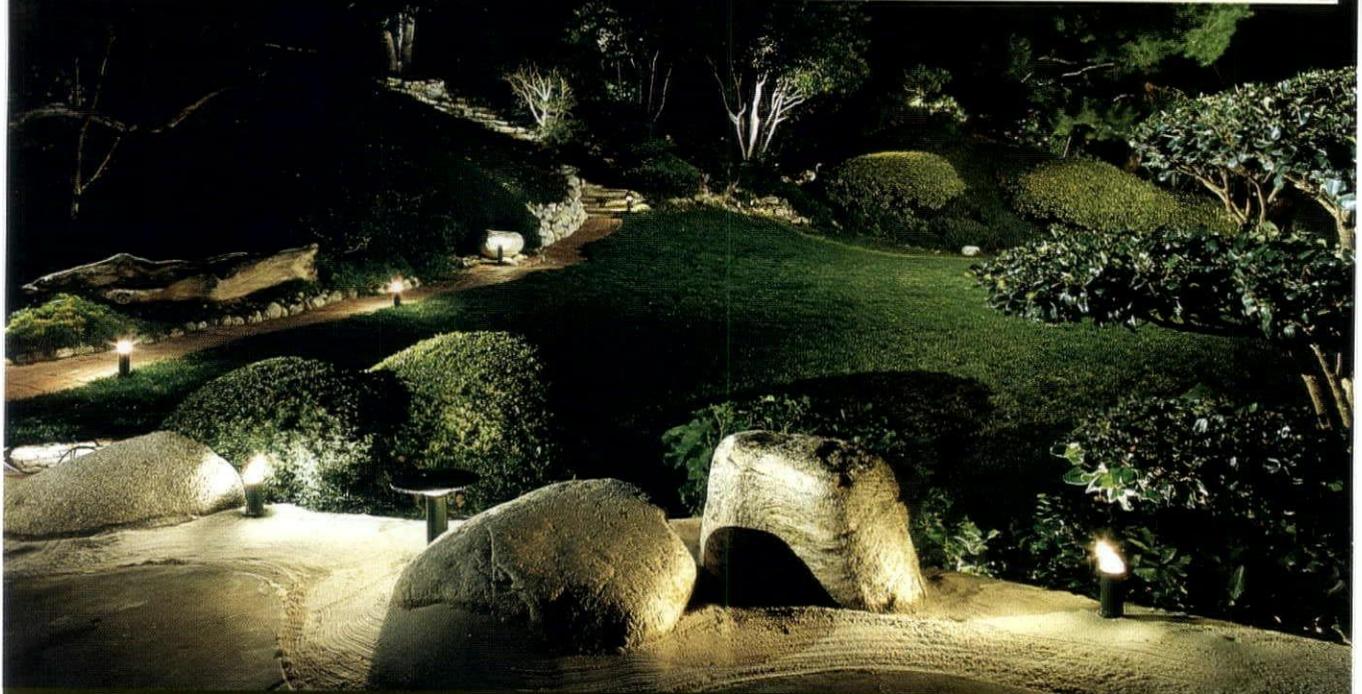
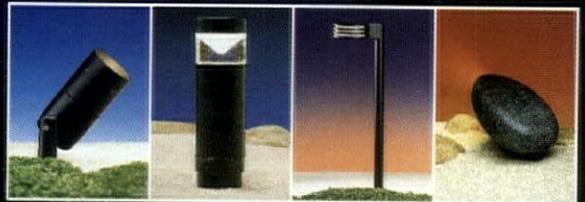
DETAILS

■ **PROJECT** Bar La Academia ■ **LOCATION** Mexico City, Mexico ■ **OWNER** Grupo El Experimento, S.A. de C.V. ■ **ARCHITECT** Schnaas/Valle ■ **LIGHTING DESIGNER** Enrique García Carrera ■ **INTERIOR DESIGNER** Schnaas/Valle ■ **ELECTRICAL ENGINEER** Emilio Rios Ramos ■ **PHOTOGRAPHER** Enrique García Carrera ■ **LIGHTING MANUFACTURERS** Halo, Hydrel; Lumiere; Iltec; Lumenyte; Martin; Elliptipar; Stonco; Pantalla, S.A.; Tokistar; Lucifer; Leviton; CSL; Starco; Lutron; Custom Fixtures designed by Enrique García Carrera & Ramon Pous



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INTEGRATING EMERGENCY LIGHTING INTO ARCHITECTURE

BY KEITH YANCEY, PE, AIA, CONTRIBUTING EDITOR

Emergency lighting is present in virtually every building, but is sometimes designed as an afterthought. Engineers may locate visible hardware indiscriminately with or without the design team's knowledge, and its existence goes unquestioned since such code-required systems are often considered non-negotiable. Frank Lloyd Wright once said, "Awareness is the key." If the architect, lighting designer and engineer are aware of the emergency lighting required and its role in the design early in the process, the end result will often be an aesthetically pleasing space and a visually efficient system during an emergency.

The first step toward integrating the proper emergency lighting equipment is to determine whether an emergency generator is being used on the project.

PROJECTS WITH A GENERATOR

Emergency generators are typically used to provide 60 Hz line-voltage power for emergency lighting and other critical loads. The method of circuiting to an emergency generator may allow for either integral or separate emergency lighting hardware.

Using integral hardware, selected standard light fixtures serve as emergency light fixtures when left unswitched and connected to the generator via a transfer switch. With these fixtures always on, they can also serve as security lighting after hours. A fixture that contains more than one lamp may be used for emergency lighting by providing two separate circuits—one normal, one emergency. This allows an area to be darkened under normal operation, as may be needed in spaces such as auditoriums, etc. Many manufacturers provide hardware with auxiliary sockets for this purpose. A variation of this is being used at Pennsylvania's historic State Capitol Building where emergency lighting is integrated unobtrusively into the public spaces by using an old "night lighting" circuit system (see Figure 1).

PROJECTS WITHOUT A GENERATOR

Emergency lighting equipment that is not dependent on generator power includes battery-operated units and inverter systems.

Battery units may be incremental (placed throughout a building) or centralized. Either

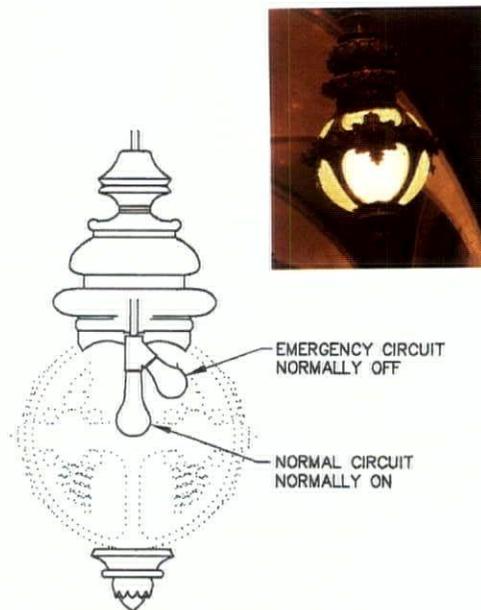


FIGURE 1

A "PUMPKIN-BALL" FIXTURE USED IN PENNSYLVANIA'S HISTORIC STATE CAPITOL BUILDING. THE ADDITIONAL EMERGENCY SOCKET IS COMPLETELY OBSCURED BY DECORATIVE CUT GLASS.

arrangement provides DC power to integral or remote incandescent heads. Although a lower first cost is a benefit of incremental units, maintenance and testing are not always performed on a regular basis since the equipment is usually spread throughout a building.

Inverter systems used with fluorescent and HID light sources may also be incremental (with ballasts in each fixture) or centralized (with circuits to those fixtures). A major benefit of the inverter system is that the same fixture can operate in both normal and emergency modes, eliminating the need for additional—and often unattractive—emergency lighting fixtures (see Figure 2).

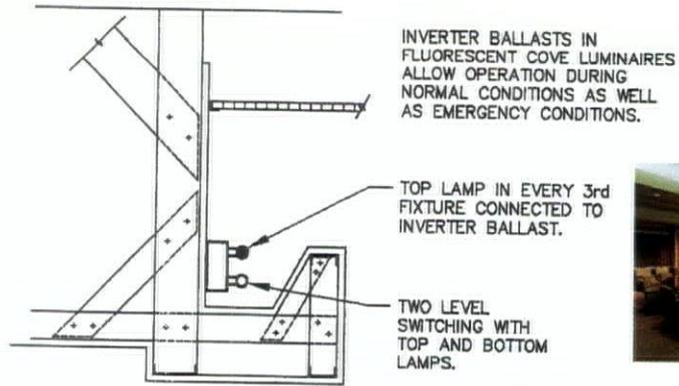
AND OTHER PROJECTS

Floor path marking systems do not fit conveniently into either category because they may or may not operate off an emergency generator. This system works similarly to roadway reflector but-

tons or airport runway lights by providing visual guidance along a path when the path itself is needed to be seen. Although used effectively in airplanes, a floor path marking system by itself does not satisfy most building codes and must be used in combination with a specified level of emergency lighting.

A FINAL NOTE

As building systems become more complex, so does the practice of architecture and lighting design. Architects and designers must have at least a general understanding of these many systems to carefully weave them into a building's architectural fabric. Emergency lighting is no exception. The first step is to understand the codes, and on a larger scale, to configure the general building layout with clear organization so that occupants will subconsciously recognize that it was designed with safety in mind. Architects, designers and engineers should also work together as a team to ensure successful integration, and they may find it desirable to include the building inspector or other "authority having jurisdiction" early in the



ALL INVERTER BALLASTS ARE CONNECTED TO ONE COMMON TEST BUTTON FOR EASE OF REGULARLY SCHEDULED TESTING.

FIGURE 2

design process because various emergency lighting codes may contradict each other. ■

Keith Yancey is a registered professional engineer and chief lighting designer for Brinjac, Kambic & Associates, Inc. Consulting Engineers of Harrisburg, PA.



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WINDOW TECHNOLOGIES FOR DAYLIGHTING SAVINGS

BY EVAN MILLS, CONTRIBUTING EDITOR

Recent advances in technology have helped make the window a powerful ally in lighting energy management. New window technologies can help minimize unwanted solar gains in summer as well as heat losses in winter, without squandering valuable daylight. Today's lighting designer cannot ignore the energy implications of window choices.

THE NEW TECHNOLOGIES

It is useful to think of a window as a fixture. Windows are sources of light and have distinct optical characteristics and important impacts on visual comfort. Although the practice of daylighting is as old as architecture itself, recent advances in window technology, aided by research conducted by the U.S. Department of Energy's (DOE) Office of Building Technologies, have opened up new vistas.

New technologies help to resolve the age-old dilemma posed by the trade-off between windows that reflect unwanted solar gains and those that admit a maximum amount of useful light. Today's window technologies can replace more primitive strategies, such as tinted windows and curtains, that shield a room from unwanted sunlight. Tinted or shaded windows impede building occupants' view of the outside environment and require higher electric lighting energy use to compensate for daylight loss. Tinted windows have the disadvantage of absorbing solar radiation and can become uncomfortably warm (up to 50° C).

For hot climates, high-tech "spectrally selective" glazings or retrofit films have recently entered the market. Spectrally selective glazings admit visible light wavelengths while reflecting unwanted infrared wavelengths. The larger the ratio of a window's visible transmittance to its shading coefficient (a measure of opaqueness to solar transmission), the greater its spectral selectivity. This ratio (the "coolness factor") ranges from 0.25 to 1.6 for windows sold today.

In cold climates, "low-emissivity" coatings

Evan Mills, PhD heads the Center for Building Science at the U.S. Department of Energy's Lawrence Berkeley National Laboratory. The Center conducts research on a spectrum of energy-efficiency technologies, policies and programs.

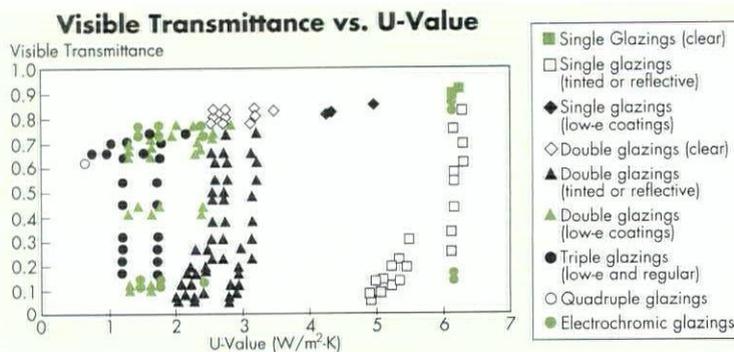


FIGURE 1. DESIGN OPTIONS FOR HOT CLIMATES: OVER A RANGE OF THERMAL EFFICIENCIES (U-VALUE), WINDOWS VARY CONSIDERABLY IN THEIR SPECTRAL SELECTIVITY. WITH THE EXCEPTION OF ELECTROCHROMICS, THE FIGURE REPRESENTS PRODUCTS AVAILABLE ON THE U.S. MARKET IN 1992. (FROM THE WINDOW LIBRARY IN THE DOE-2 BUILDING ENERGY SIMULATION PROGRAM.)

are of interest. The coatings save energy by reflecting heat back into the building. For even better performance, gaps between the layers of multi-glazed windows can be filled with gases—such as argon, krypton or xenon—that have better insulating properties than air, with no perceptible loss in light transmission. Advanced thermally efficient windows allow for higher window-to-wall area ratios where building codes dictate maximum overall heat loss rates. One class of low-emissivity glazings also incorporate spectral selectivity, thus allowing for more daylight transmission than tinted insulating windows.

Figures 1 and 2 display the energy and visual performance characteristics of 200 commercially available glazing products, including single-, double-, triple-, and quadruple-pane glazings with different tints, coatings, gas fills and gap widths.

Figure 1 plots the coolness factor as a function of the U-value (the higher the U-value, the greater the rate of heat loss), showing that, for example, in the U-value range of 2 to 3, the coolness factor ranges from 0.2 (low visible transmittance in relation to solar gain) to 1.4 (very well-managed solar heat gain and good visible transmittance). Remarkably, as shown in Figure 2, visible transmittances vary from

roughly 0.2 to 0.8 over the entire range of insulating values.

This proliferation of new window types can be overwhelming for the specifier. To help, DOE has developed the WINDOW 4.0 software and has worked with the National Fenestration Rating Council to help the window industry set uniform guidelines for rating and labeling window performance.

ECONOMIC CONSIDERATIONS

The prices of advanced window technologies vary widely. In markets where the technologies aren't well known, prices can be extremely high (if the product is available at all). By contrast, in markets with considerable demand or where utility rebates or building codes call for such windows, prices can be quite reasonable in relation to the energy savings garnered.

For new construction or major renovation, the higher first costs of high-performance windows can often be partially—or

even completely—offset by cost savings made possible by downsizing. In this case, there is immediate cash flow, and the energy savings are pure profit.

THE FUTURE: "SMART" WINDOWS

Since in the real world both thermal and luminous conditions are constantly changing, the ideal window should have optical properties that can be dynamically controlled.

Once a fantasy, such "switchable" glazings are moving from the lab bench toward the marketplace. With one of the most promising types of switchable glazings—electrochromics—optical density can be automatically controlled as a function of parameters such as direct or total solar radiation, outside temperature, the

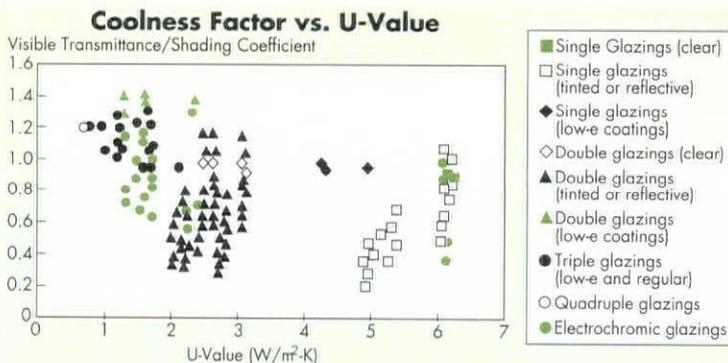
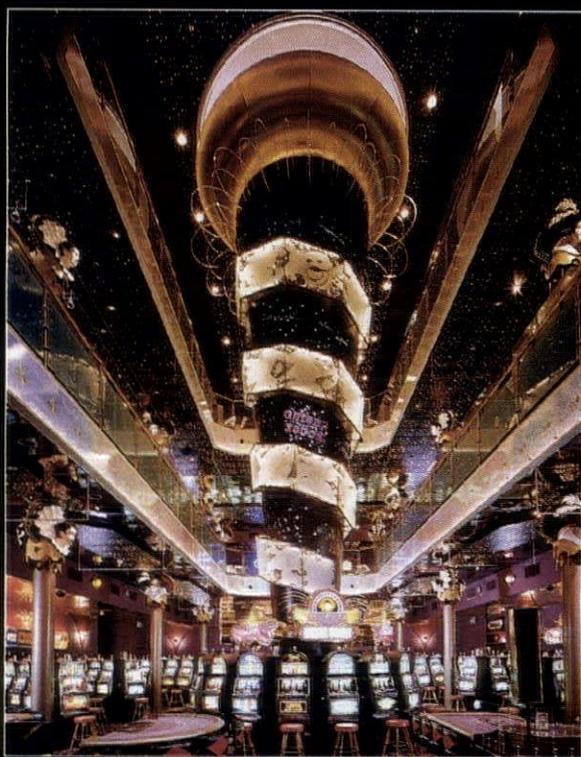


FIGURE 2. DESIGN OPTIONS FOR COLD CLIMATES: OVER A RANGE OF U-VALUES, WINDOWS VARY CONSIDERABLY IN THEIR VISIBLE TRANSMITTANCE.

previous-hour space-conditioning load or the indoor daylight level. If used in conjunction with dimmable lighting, electrochromic windows can help attain considerable energy savings relative to static window shading systems. Electrochromics also help manage daylight-related glare.

Smart windows will liberate designers from the historical rule-of-thumb that energy use eventually increases as a function of ratio of window-to-wall areas. ■

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THE NEW BLACKLIGHT TECHNOLOGY

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Ultraviolet lighting, also called "blacklight," is a technology that has been used for years to create visual effects in entertainment-based environments such as nightclubs and dark theme park rides. Recent advances in technology now make blacklight a viable option for a broader range of architectural and entertainment applications.

Ultraviolet light is outside the visible light spectrum, emitted at shorter wavelengths invisible to the naked eye. Short- and medium-wave UV light from the sun is what gives us a tan in summer and fades colors outdoors. These wavelengths of UV have been put to use in medical and industrial applications, although use is carefully controlled because large doses can be harmful to humans.

Long-wave UV light is the portion of the spectrum that is used for visual effects, and is considered harmless to humans. When this light impacts a fluorescent material, the material glows brightly with the specified color (see illustration, right). Traditionally, the UV light was emitted by a projector with an effective range of 3 to 8 feet.

Several advances have made blacklight accessible to a broader range of applications in architectural, retail, themed, entertainment, casino, park, theater and film-set environments.

Longer Range. Long-throw projectors can emit blacklight at effective ranges of more than 100 feet.

Ability to Work in Visible Light Environments. With long-throw projectors, fluorescent materials will excite and glow in the presence of visible light, freeing blacklight from its restricted use in dark-only environments. This application is limited by the amount of blacklight impacting the fluorescent material, the proximity of the UV source and the intensity of visible light in the area.

Advanced Fluorescent Materials. The fluorescent materials, which excite in the presence of UV light and emit a brilliant glow, include paints, plastics, make-up, hair products, dyes and water dyes. These materials can be introduced into nearly any

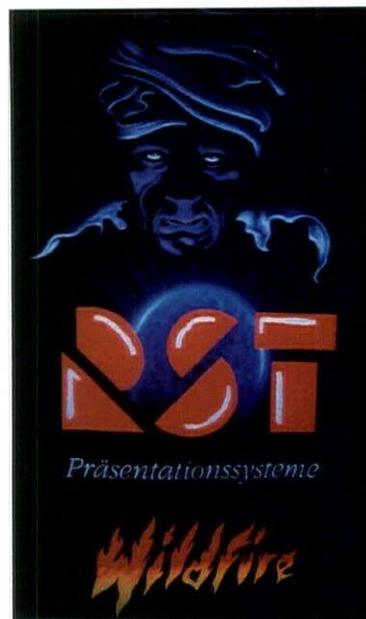
vehicle, transforming it into a brilliantly colored object.

More materials are available for use today than in the past, and more significantly, materials are available that are invisible under visible light but come to life under blacklight (see illustrations at bottom of page).

No Spill Light. Traditionally, blacklight was associated with a blue and purple haze, which represented UV light spilling into the visible light range. With today's available technology, virtually no light spills into the visible light spectrum.

"With improved blacklight technology, the designer now has the ability to design with a magical combination of color and light," said Richard Green, founder and president of Culver City, CA-based Wildfire, Inc., a UV lighting and fluorescent creative materials manufacturer with seven unique models of long-throw projectors. Wildfire products and designs have been used in a wide range of applications including Disneyland, Disneyworld, Caesar's Palace in Las Vegas, the Silver Legacy casino in Reno, and films such as *Star Trek VI* and *Batman Forever*.

"The architect, lighting designer and artist can work as a collaborative team," he added, "with an entire new array of tools to create glowing waterfalls, ceilings that change from day to night, and many other special effects limited only by the imagination." ■



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UV LIGHTING
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IN A BROADER
RANGE OF
APPLICATIONS.
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LIGHTFAIR NEW PRODUCT SHOWCASE

Architectural Lighting is proud to once again sponsor the well-attended New Product Showcase at Lightfair International in San Francisco. A total of 104 products spanning 11 product categories were presented with style and humor by Product Showcase veterans Craig A. Roeder, IALD, IESNA and Gary Dulanski, IESNA.

Out of all the products submitted, 12 were chosen for providing exemplary benefits to lighting professionals. Each received an Award of Distinction and is

shown here. The AR5 Interior Wash Luminaire from Irideon was especially honored as the Best New Product of the Year.

The Lightfair New Product Showcase Advisor Committee included Janet Nolan, Horton•Lees Lighting Design, Inc.; Hyman Kaplan, Belden Incorporated; Gary Dulanski, Stan Deutsch Associates; Michael Hooker, Jan Moyer Design; Boyd Corbett, Litetronics International; Art Hatley, Fiberstars, Inc.; and Craig Roeder, Craig A. Roeder Associates.

BEST NEW PRODUCT OF THE YEAR AWARD

IRIDEON

AR5 Interior Wash Luminaire

The AR5 Interior Wash Luminaire from Irideon offers unique color-changing ability. The fixture features a patented, computer-controlled dichroic color-changing mechanism that produces smooth color cross-fades through the entire color spectrum. The colors can change instantly or gradually over time.

The standard unit is equipped with a 35W miniature arc lamp. Light distribution can be varied by means of an optional motorized diffuser and a variety of front lenses. A dimming mechanism can be used in place of the diffuser. Irideon also offers a version of the fixture without color change.

Motorized pan and tilt capabilities, combined with a diffuser or douser option, provide full beam control. The fixture can pan 360 degrees and tilt 270 degrees.

The AR5 fixture is controlled by the Irideon Composer control system, which allows configuration and programming from an IBM-compatible PC with Windows 95 software. For more complex setups, a remote master control processor can be used for greater flexibility, including optional on-line clock-calendar control, remote station input and external sequencing input.

The fixture also can be controlled with an Irideon DMX Interpreter, which allows programming and operation via a DMX512 console. All control options offer smooth programmable position and motion control. **Circle No. 54**



product focus





**B+L TECHNOLOGIES LTD.
Nuance Electronic Dimming Ballast**

This ballast dims fluorescent lamps from 100 to 0 percent via an incandescent dimmer, eliminating the process of opening ceilings and/or walls to run control wires to the dimmer. Nuance offers low radio frequency interference (RFI), which minimizes interference with power line carriers and AM radio. The maximum load is a function of the dimmer, so a standard 600W incandescent dimmer dims up to seven T8 or T12 two-lamp fixtures. **Circle No. 55**

**ESTILUZ
T-1266 Surface Mount Light Fixture**

The T-1266 Surface Mount Light Fixture is a new product from Estiluz that uses a 300W halogen T3 lamp for maximum light output. It measures 15 7/8 inches in diameter and has a depth of 3 3/4 inches. A satinized glass diffuser is surrounded by a decorative metal band available in gold, chrome, black and white finishes. **Circle No. 56**

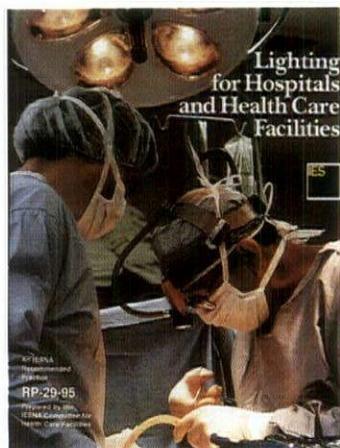
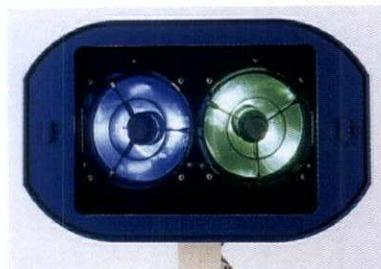


**FIBERSTARS, INC.
Fiberscape Paver Lighting**

Fiberscape Paver Lighting consists of point-source fiber-optic lighting fixtures that are functional, decorative and energy efficient. They mount flush into walkway and patio paving blocks. No electric current is necessary to or at the fixture head. Multiple fixtures can be illuminated from a single remote light source. The fixtures are UL-listed and highly weather- and vandal-resistant. **Circle No. 57**

**HYDREL
Model 7200 HTR Twin Reflector Floodlight**

This new floodlight is used for effects and unique light requirements. It features two independent reflector systems adjustable to +/- 15 degrees for lamps up to 175W for internal glare control. These are sealed in a die-cast aluminum fixture with a heavy-duty, fully adjustable knuckle. Coupled with standard E-17 or the new Venture Designer Color lamps, the fixture creates unique patterns of light to accent walls, corners and building elements. **Circle No. 58**



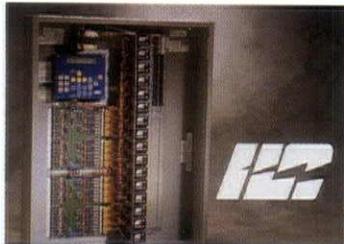
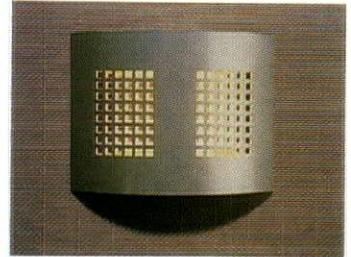
**ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
Lighting for Health Care Facilities**

This publication includes current recommended light levels, photographs of numerous applications, and an extended glossary of hospital/medical terminology. The topics consider specific tasks such as X-rays, surgery, lighting energy management, lighting criteria, design procedures and systems considerations. Detailed appendices include methodology, veiling reflections, economics, maintenance, instruments, fiber optics and other topics. **Circle No. 59**

INDUSTRIE UND DESIGN LIGHT

Alulite Filter Glass Holders

Alulite is a special form of aluminum and isolator that unites current control and static, and ensures excellent transmission of the current with extreme safety. The Alulite mirror filter glass holder can be installed in the ceiling or wall. Dichroic color effects can be generated using the integrated square filter glasses. Various beam angles and filter glass positions generate stippled color fields or colored surfaces. **Circle No. 60**



INTELLIGENT LIGHTING CONTROLS

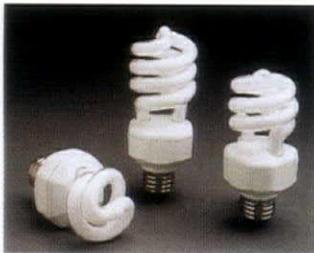
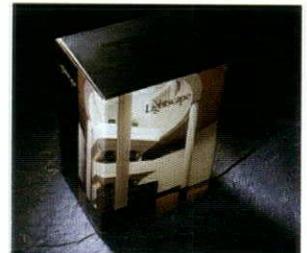
ILC Quanta 1000 DMX Lighting Controller

Intelligent Lighting Controls' new product combines control of dimmable and non-dimmable loads in architectural, television and theatrical lighting applications. The Quanta 1000 DMX provides easy setup of DMX addresses for relay switched lighting loads from a DMX console or any USITT standard DMX source. The controller also responds to local switches, telephones or scheduled time-of-day events. **Circle No. 61**

LIGHTSCAPE TECHNOLOGIES

Lightscape Visualization System for Windows

This software package is a Windows NT-based application that combines progressive-refinement radiosity technology with a physically based lighting interface. This combination permits both visual and quantitative analysis of a lighting design in complex 3-D models. Compatible with existing CAD applications and incorporating an intuitive user interface, the application opens new possibilities for design, analysis and presentation. **Circle No. 62**



LITETRONICS INTERNATIONAL

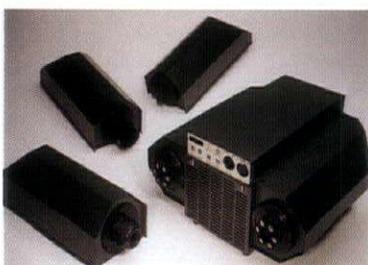
Spiral-Lite Lamps

Litetronics' Spiral-Lite Lamp is an ultra-compact fluorescent lamp whose open-coiled shape allows for maximum axial and radial light distribution as well as less trapping and less light absorption. Spiral-Lite offers a high CRI rating of 85, a 10,000-hour average service life and up to 80 percent energy savings when replacing incandescent lamps of comparable light output. The electronic ballast is integrated with the lamp. Available in 9, 11, 15, 20 and 23 watts. **Circle No. 63**

PHILIPS LIGHTING COMPANY

Alto Lamp Technology

Philips' Alto lamps are the first fluorescent lamps to meet current EPA non-hazardous waste characterization standards without sacrificing life, lumens or color. Alto lamp technology reduces mercury content to a level that will pass the EPA test, which ultimately means less mercury in the natural environment. Alto lamps are now available in F40T12/CW Econ-o-Watt lamps and F40T12 Spec and Ultralume Econ-o-Watt products. **Circle No. 64**

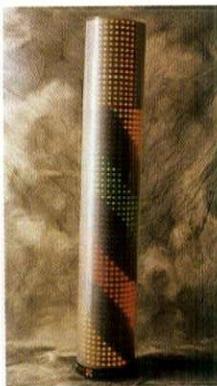


REMOTE SOURCE LIGHTING INTERNATIONAL INC.

The Light Pump

The Light Pump fiber-optic illuminator provides controlled light into each fiber, which allows accurate calculations and increases efficiency by more than 100 percent. "Plug and Light" installation means plastic fibers and glass tails up to 19mm can be installed into discrete ports in seconds. DMX-controlled changers provide multiple colors and 40-step dimming per slide for programmable effects. The modular illuminator comes in more than 75 variations. **Circle No. 65**

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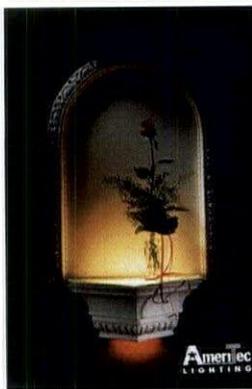


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The Classic Shelf Light is part of the new Classic Sconces line. The Shelf Light is a functional light source and a unique way to present special pieces. It is available in five styles as well as 28 different stock finishes, or in a custom finish. The Shelf Light is UL-listed and pre-drilled for any mounting surface. (Niche not included as shown.)

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A LIGHT AFFAIR TO REMEMBER

BY LEE WALDRON, IALD AND STACEE SILVER, CONTRIBUTING EDITORS

Hot on the heels of the Hanover Fair, Lightfair '96 springs eternal, this time in San Francisco. Unlike the annual pilgrimage to the German mecca, Lightfair is a bedouin affair pitching its tent and wandering between New York, Chicago and "The City by the Bay."

The lighting show draws over 10,000 followers of various beliefs, among them manufacturers, their agents, contractors, facility managers, and assorted design professionals. The key question asked of specifier attendees by both the ministers of sales and the unattached is "was it truly a religious experience?"

While God may be in the details, he certainly wasn't handing out Good Humor bars at the show. It's tough to come out with new products year-after-year, but let's show more innovation! While vaudevillian in manner, Philips' dawning parade of uniformed guards muscling its top-secret lamp through the waiting crowd showed this company had some theatrical flair. Mild-mannered, this Lightfair lacked the revival fervor found at many trade shows.

It can't be that lighting is boring. Perhaps it was that most of the innovation was from energy-saving fixture components like lamps and ballasts—details which, while of prime importance, lose something in their presentation. Has our fashion for energy flagged our passion for a new age of elegance? Or, perhaps, it's the American Way of "more is a bore"—quantity as a trade-off for quality.

Not to say that Lightfair didn't have some interesting highlights. Among the duplicative machinations of perforated metal parts and low-voltage parallel wire systems, a few eccentricities sparkled. And our digital nation has certainly added increased intelligence to control systems and devices.

Overall, while the show is the premier venue for the lighting industry, it is a sad commentary on the quality of workmanship tolerated by the lighting specification community and the end-user when compared to European affairs. Conspicuously absent from Lightfair were a number of conglomerate manufacturers who may set the taste of trends of the masses, but lack the conviction to raise the standards of conspicuous consumption. While overheard at a hotel breakfast one morning during the show, one of them dared to belittle the "unimportant" specifier for another "name" who works on big projects. This shallow crassness serves only to deepen the rift between quality and everything else.

Truly, the soul of the show seems lost among the well-heeled. While walking the floor, one heard the devout search for a renewed sense of design. Much of this may be lost amid the uncaring or uniformed. Part of it is brought about by a lack of communication between the specifier and manufacturer. But as we approach the new millennium, the seeds of a renewed drive for better workmanship are being crafted by both the IALD and the IES in their joint committee on a Metric for Quality. This, and the effort of the IALD to develop a dialogue between its members and manufacturers, should add to the contribution Lightfair brings to the lighting industry. ■

Lee Waldron, IALD is president of Grenald Waldron Associates in Narberth, PA.