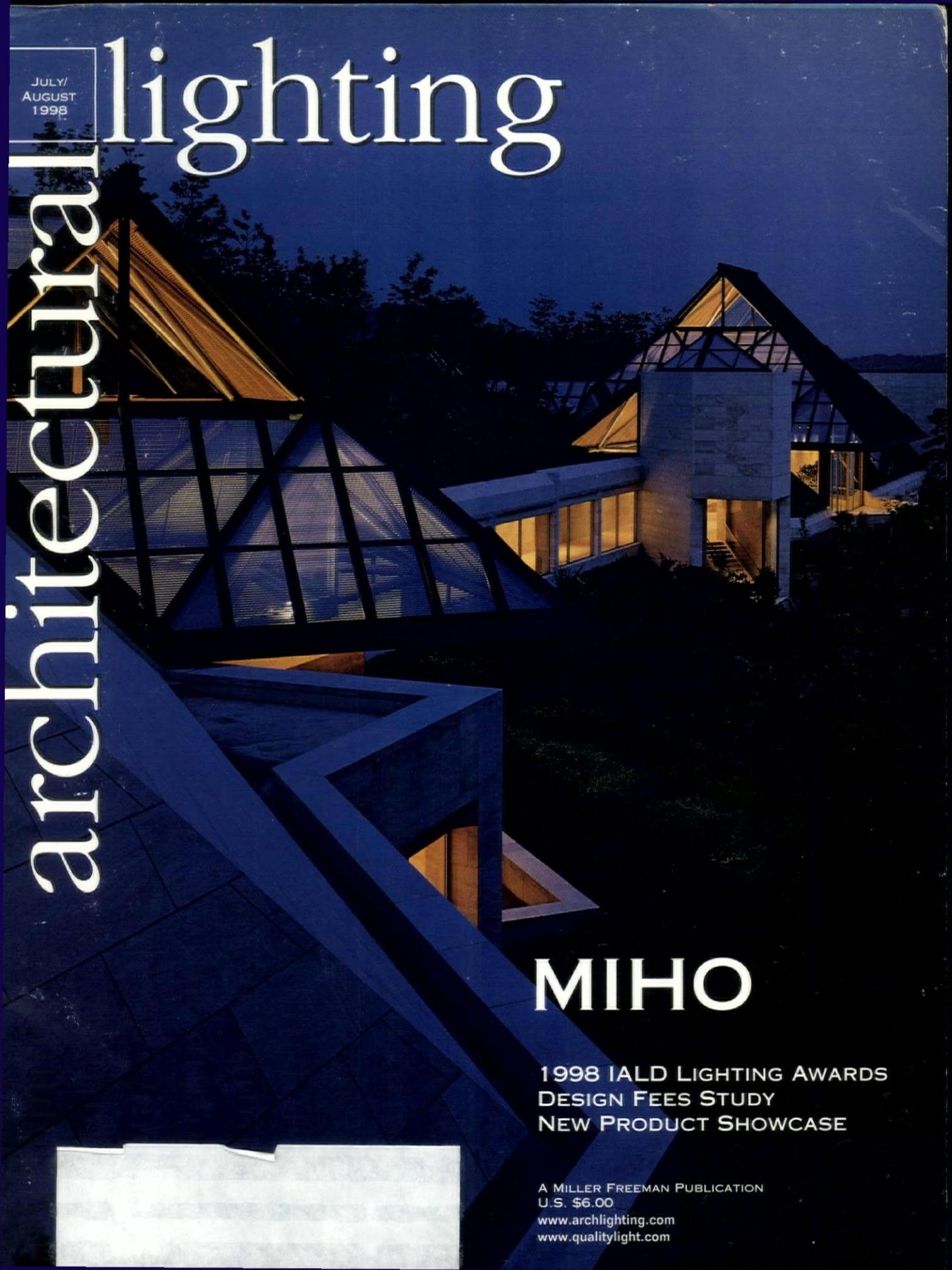


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# lighting

# architectural



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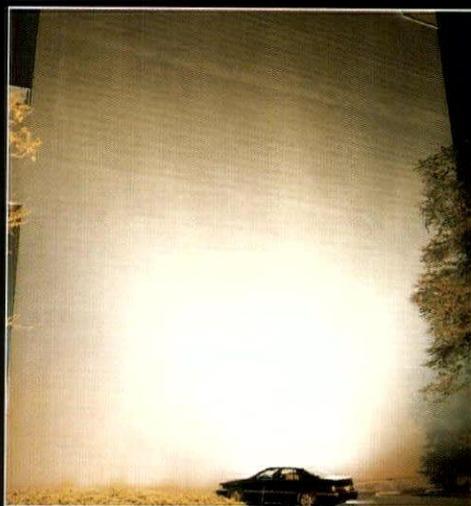
and

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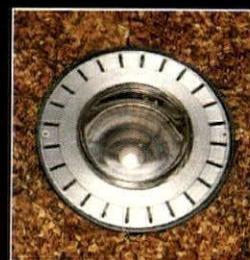


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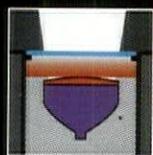


### The M9400

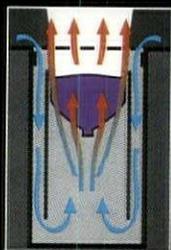
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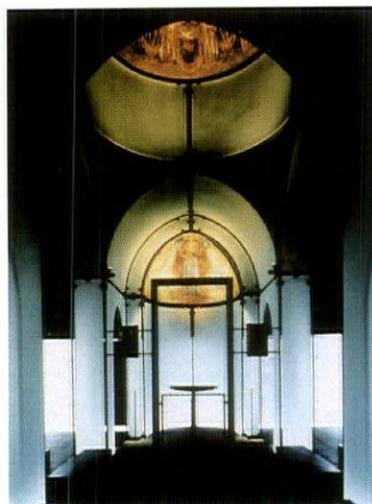


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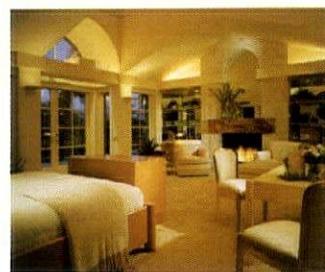
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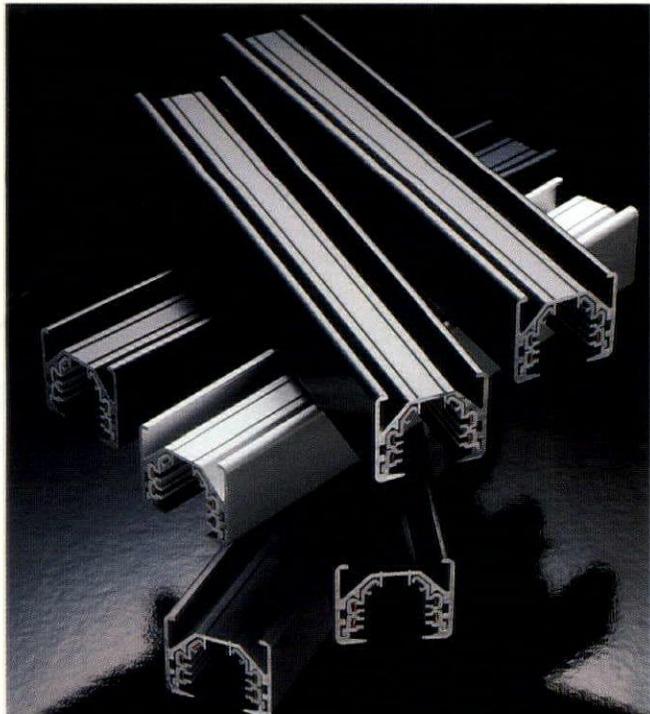
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# architectural lighting

Editor-in-Chief

CHRISTINA TRAUTHWEIN  
 (212) 615-2631  
[ctrauthwein@mfi.com](mailto:ctrauthwein@mfi.com)

Publisher

CRAIG DILLOUJE  
 (212) 615-2304  
[cdilouje@mfi.com](mailto:cdilouje@mfi.com)

Designer

JEANNE LAWLOR  
 (212) 615-2273

Assistant Editor

ALICE LIAO

#### CONTRIBUTING EDITORS

LOIS I. BURGNER, WANDA JANKOWSKI, JEAN GORMAN, DAVID HOUGHTON

#### EDITORIAL ADVISERS

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

Group Publisher PHILLIP A. RUSSO (212) 615-2368

Production VINCE HABICK (415) 905-2454  
 fax (415) 905-2236

List Rental (847) 619-9800  
 fax (847) 619-0149

Circulation WENDY SAAR (212) 615-2687  
 fax (212) 279-4460

CUSTOMER SERVICE (800) 255-2824  
 fax (847) 647-5972

Reprints VICKI BREWSTER (516) 365-2646  
 fax (516) 681-7315  
 62 Northwoods Rd.  
 Manhasset, NY 11030

Marketing Director KIM CARCONE (212) 615-3025  
 fax (212) 279-3955

Marketing Assistant LIZ MAVIS (212) 615-2392  
 fax (212) 279-3955

Classified Sales TIMOTHY LIAM DWYER (212) 615-2727  
 fax (212) 279-3955

#### ADVERTISING SALES

NATIONAL SALES DANIEL T. BURKE (212) 615-2608  
 DIRECTOR/INTERNATIONAL SALES fax (212) 279-3955

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## AND THE SURVEY SAYS...

Ask anyone. The importance of lighting design as a valued service is on the rise. And it's born out of healthy optimism—which made another strong showing at this year's Lightfair from both a product and project perspective. More than 100 new products were introduced at the *Architectural Lighting*-sponsored New Product Showcase. Our Technology column takes readers on a tour of some of the most progressive and anticipated technology that debuted in Vegas. Contributing Editor Dave Houghton opens his Lightfair "notebook" and shares with us both the products and trends to watch. In addition, *Architectural Lighting* once again features the New Product Showcase award winners, including those manufacturers that were given the distinction of "Category Innovators."

In this issue, we're also pleased to present the winners of the 15th Annual International Association of Lighting Designers (IALD) Awards, also cosponsored by *Architectural Lighting*. This year, judges awarded the Award of Excellence to the Miho Museum in Japan, which is featured on our cover. In addition to the Miho, four other projects received Awards of Merit, rounding out this year's event. Coverage, including a behind-the-scenes look at both the judging and post-ceremony festivities, begins on page 36. It's interesting to note that of the five projects, four are located outside the U.S. The globalization of the lighting industry that began several years ago is still in motion.



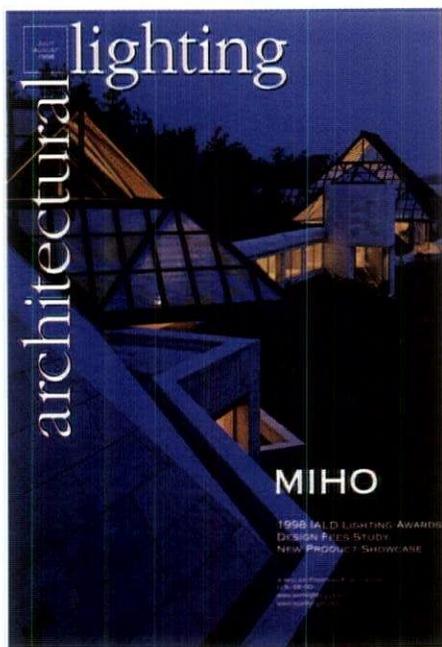
CHRISTINA  
TRAUTHWEIN,  
EDITOR-IN-CHIEF

And now, closer to home. Business is good, the industry is strong. Both technology and the economy are moving in the right direction. But are we where we want to be? In this issue, *Architectural Lighting* tackles the issue of design fees. How do *your* attitudes toward lighting design service fees compare with your peers? For the first time, *Architectural Lighting* presents the results of a Design Fees Study, an exclusive survey of our readers from each region of the U.S. in the fields of architecture, interior design and lighting design.

The report, cosponsored by Architectural Lighting Magazine and Prescolite-Moldcast, explores fee issues, and not only questions the current structure, but forecasts the future trend in design fees. Do designers cash in? Or, can design services be called "not-for-profit"? It seems our readers have indicated that design fees are not producing a financial windfall, as overhead costs chip away at income. In fact, practitioners suggest that 10+ percent would be the minimum percentage based fee needed to cover overhead and generate a profit. But, on a more positive note, many respondents predict fees will increase as our

economy hopefully continues its strong performance.

I urge you to turn to page 50 and review the responses to our survey, and I encourage feedback—both comments and suggestions—so that our future studies can accurately satisfy your need for information. ■



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HURSLEY

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## IN MEMORIAM...

It is with great sadness that we announce the untimely passing of Craig A. Roeder, LC, IALD, IES and president of Craig A. Roeder Associates, Inc. Roeder passed away on June 16 in Salt Lake City, UT at the age of 48.

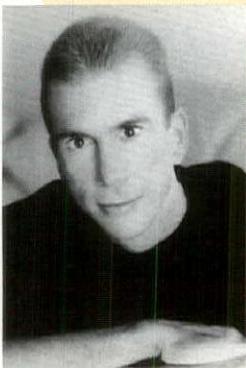
Craig began his career as a lighting designer after graduation from the Parsons School of Design in 1977. From 1975 to 1979, Craig worked as an associate to Jim Nuckolls and Jeffrey Milham at Design Decision (the lighting consulting division of Syska and Hennessey, Inc.). For the past 18 years, Craig operated his own firm in Dallas, TX, with offices in Seoul, Korea and Jakarta, Indonesia.

Craig Roeder had received top lighting design awards from both the Illuminating Engineering Society of North America (IESNA) and the International Association of Lighting Designers

(IALD), including the first Electric Power and Research Institute Award of Excellence for Energy Efficiency in 1992. In 1994, Craig received the prestigious IES Award of Distinction.

Roeder strived to put as much vibrancy and vitality, especially through color, into his projects as possible. In an interview with Roeder late last year, he explained to *Architectural Lighting*, "I do that in public spaces because people adore it, they smile. My philosophy is one of enlightenment. If I have the opportunity to energize people, lighten their loads, I'll do it."

Suggestions for a memorial in Craig's name include the Nuckolls Fund for Lighting Education, New York, NY; the Aids Resource Center, Dallas, TX; and the Open Door Mission, Omaha, NE. For more information, contact the offices of Craig A. Roeder Associates at (214) 528-2300.



Galleria Shopping Center, designed by Craig A. Roeder Associates and Roeder's Korean firm, Ener Ken, was just awarded a 1998 IIDA Paul Waterbury Award of Excellence at the IESNA Annual Conference held August 10-12.

## PHILIPS FORMS PARTNERSHIP WITH KENNEDY SPACE CENTER

Philips Lighting Company has signed on as an official partner of the Kennedy Space Center Visitor Complex in Orlando, FL. Under the five-year agreement, Philips will be the exclusive lighting partner of the Kennedy Space Center Visitor Complex and provide an array of lighting products used to light the facility and exhibits dedicated to the history of the U.S. space program. In addition, Philips will be recognized as a corporate partner with on-site signage and will design a permanent lighting display to educate visitors on developments in lighting technology and the science of lighting.

## OSRAM SYLVANIA RECOGNIZED BY SMITHSONIAN

Osram Sylvania has been inducted into the Smithsonian Institution's Permanent Research Collection for its work on an electronic product catalog for its General Lighting business. Recognition was given as part of the Computerworld Smithsonian Awards Program, a prestigious awards program in the information technology industry.

Nominations are made by chairmen of leading information technology companies and winners are accorded a place in history at the Smithsonian's Institution's National Museum of American History. Osram Sylvania was nominated by Bill Gates, chairman of Microsoft Corporation, for an award in the business and related services category. The catalog is available on Osram Sylvania's website at [www.sylvania.com](http://www.sylvania.com).

## LENNOX-MOYER AND HOOKER WIN GE AWARD

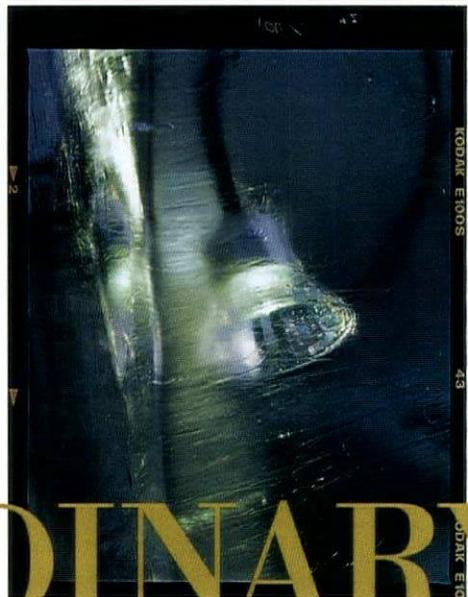
Janet Lennox-Moyer and Michael Stewart Hooker of MSH Visual Planners in Oakland, CA have received the 1997 GE Edison Award for excellence in lighting design for the Far Niente Winery in Oakville, CA. The award was presented to the winners at the annual Edison Award reception and dinner May 27 in Las Vegas during Lightfair '98.

To obtain entry forms or information on next year's contest, contact: The GE Edison Award, GE Lighting, 1975 Noble Road, 315C, Cleveland, OH 44112; phone (216) 266-3868 or fax (216) 266-2925.

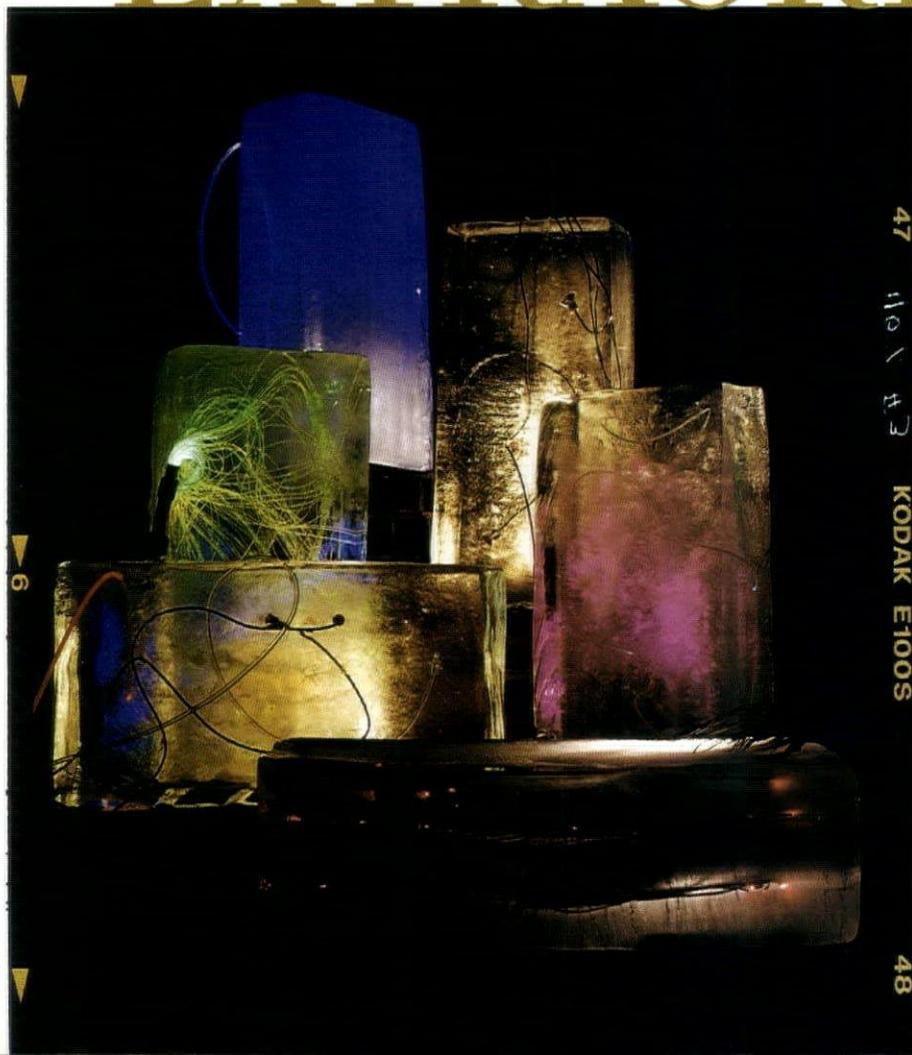
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The Nuckolls Fund for Lighting Education awarded two grants and announced the Edison Price Award at its annual luncheon, held this year in Las Vegas, during Lightfair. A \$20,000 award was made to the School of Interior Design at Ryerson Polytechnic University in Toronto for developing a comprehensive lighting design program to be offered in conjunction with the university's Center for Lighting Research and Design. The grant will enable the university to expand its course offering.

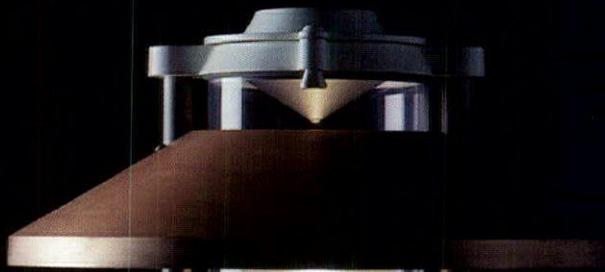
A special award of \$5,000 was presented to the Texas Christian University, a past grantee, to ensure the continuation of its Lighting Designers Residence series for the 1998-1999 academic year. The series is part of Lighting for Visual

Presentation, a course established in 1996 with Nuckolls Fund support.

Beginning in 1999, the Fund will present an annual Edison Price Award, initially in the amount of \$5,000, as a memorial to the late lighting pioneer, who died in October 1997. The award will enable lighting educators to further their own lighting education outside their academic institutions.

Designated by the Price family as the recipient organization of memorial contributions, the Nuckolls Fund has already received \$21,500 in contributions and pledges in memory of Edison Price. Emma Price, president of Edison Price Lighting, has also been appointed to the Fund's Board of Directors.

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## MAGNETEK TAKES EQUITY POSITION IN MYTECH

MagneTek, Inc. has announced a minority investment in MyTech Corporation, a closely held corporation based in Austin, TX. The two firms will jointly develop and market advanced lighting products primarily for commercial, industrial and institutional applications.

MagneTek manufactures integrated electrical products, and MyTech is a developer of occupancy sensors and adaptive lighting controls. The companies' first priority will be to satisfy demand for controls that dim HID lamps.

## EELA CALL FOR PAPERS

The Energy Efficient Lighting Association (EELA) has announced a call for papers to be presented at Enlightening America '99, the second annual conference and trade show, January 30-February 2, 1999 in Dallas. Enlightening America '99 will cover such topics as new lighting technologies, project financing, installation and maintenance, project networking and utility deregulation. Accepted papers will be presented and published in the conference proceedings.

The deadline for submitting abstracts is September 25, 1998. Send to: John Eaton, Energy Efficient Lighting Association, P.O. Box 727, Princeton Junction, NJ 08550. For more information, call (609) 799-4900; fax (609)799-7032 or e-mail [jeaton@eela.com](mailto:jeaton@eela.com).

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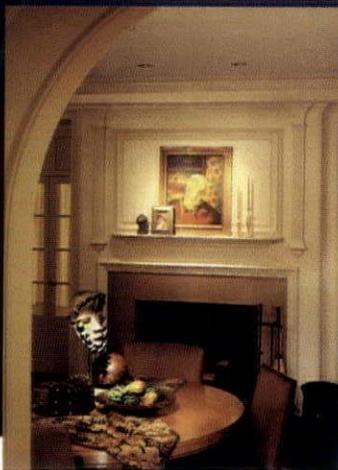
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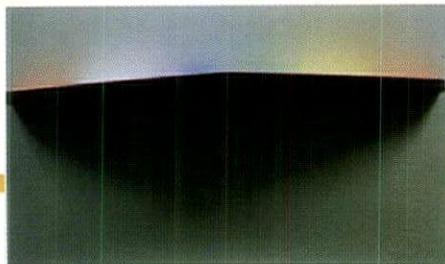
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## RICHARD KELLY GRANT AWARDS FOUR

The Richard Kelly Grant has been awarded to four winners. Two of the winners, Michele Brody and Alicia Wirt, will receive financial grants while Sandy Stannard and Heidi Kumao will receive Award of Merit certificates. This year, a total of 37 projects were submitted for consideration.

Both financial grant awardees plan to use the grant money to expand their personal inquiries into the nature of light. Continuing her Containment/Sustainment series on the nurturing and destructive power of light, Brody will build a tube-shaped glass and steel structure to contain a water, aeration and light source. Wirt will extend her exploration of reflected light from painted surfaces to include materials such as cast aluminum, steel and fiberglass (shown).

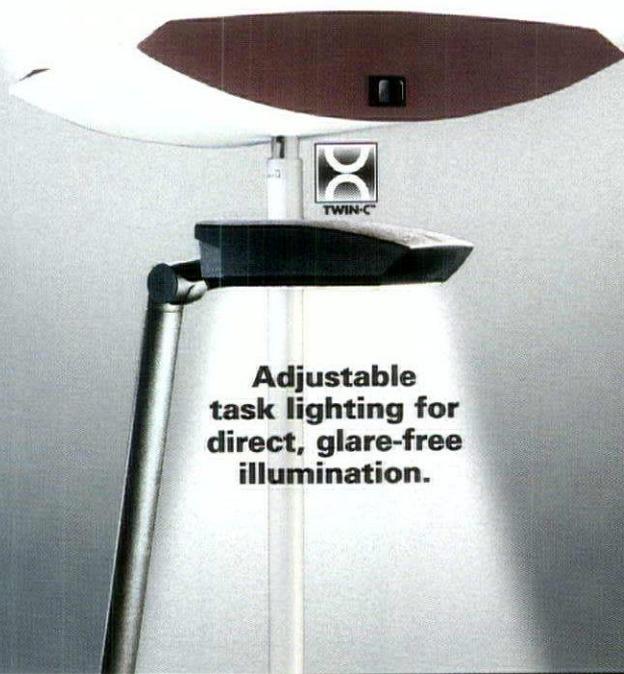
The judges were: Adam Anuszkiewicz, Stephen Bernstein, Indy Berry, Davidson Norris, Andrienne Schulman and Christina Trauthwein.



## LITHONIA BUILDS NEW FACILITIES

Lithonia Lighting has begun construction on three new facilities in Conyers, GA. The facilities, located on a 50-acre site, will include a 30,000-sq.-ft. finance and administration building and a 60,000-sq.-ft. products and market development building. The new facilities will be located near the original Conyers location where Lithonia has maintained operations since 1957. The company was originally established in 1946.

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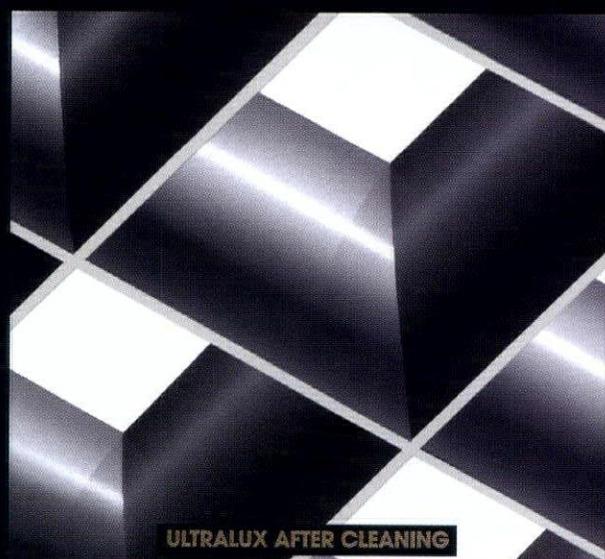
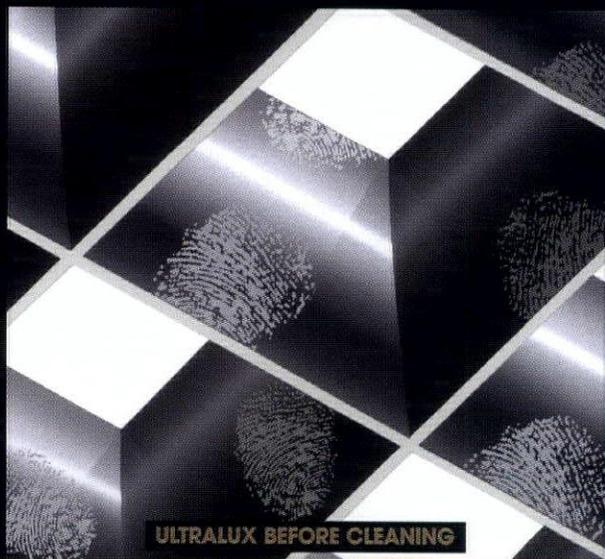


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How did we do it? Through our exclusive Absolute Vacuum Manufacturing process. This process integrates aluminum vapor with advanced polymer plasma, for a hard durable finish with the specular perfection you expect from American Louver Company... but at a price that compares to ordinary plastic louvers.

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Circle No. 12 on product service card

Lumen Award winner Ann Kale (center) pictured with (left to right) Matthew Tanteri, Patricia DiMaggio, Jon Boka and Carrie Knowlton.

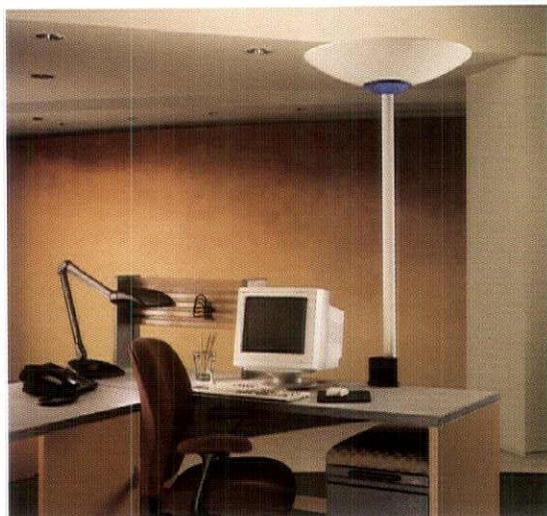


Over 370 members of the lighting community attended the NY-section Lumen '98 Awards gala event held at the historic Puck Building in New York City, June 24, 1998.

This year, Lumen awards were given to the Glowing Topiary Garden by James Conti (see *Architectural Lighting*, April/May 1998); Exhibit for I.D. Magazine by David Rockwell, Sam Trimble, Gaylin Bowie, Michael Mensch and Paul Molina, the Rockwell Group and Paul Gregory and Kimberley Donohue, Focus Lighting; and Byzantine Fresco Chapel by Paul Marantz and Barry Citrin, Fisher Marantz Renfro Stone. The Feltman-Lumen Award was given to I Natural by Ann Kale and Chi Ming Lin, Ann Kale Associates. EPRI Awards were presented to the New Terminal Washington National Airport by

Stephen Lees, Horton•Lees Lighting Design and Dana Farber by Mary Ann Hay, Syska & Hennessey. Richard Renfro and Daina Yurkus, Fisher Marantz Renfro Stone received the Lumen Citation for the New Amsterdam Theatre. Three Lumen Awards of Merit were awarded to Rite Aid by Ann Kale, Ann Kale Associates; Paper Moon Milano by David Singer, Arc Light Design; and Best Cellars by David Rockwell, Sam Trimble, Tim Archambault, Lorraine Knapp and Alice Yiu, the Rockwell Group and Paul Gregory and Alex Sebesalmi, Focus Lighting.

Members of the Lumen '98 jury were: Thomas Thompson, Thomas Thompson Lighting Design; Leni Schwendinger, Light Projects; Renee Cooley, Renee Cooley Lighting Design; Richard Dorfman, H.M. Brandston & Partners; Audrey Matlock, Audrey Matlock Architects; Dennis Wedlick, Dennis Wedlick Architects; Russell Ross, Meyer Strong & Jones; and Christina Trauthwein, *Architectural Lighting* magazine.



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

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

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## GENLYTE AND STINGRAY FORM MARKETING ALLIANCE

Genlyte and Stingray Lighting, Inc. have formed a strategic alliance to market high-bay fixtures containing the Stingray patented adjustable dual reflector system.

Initially, Genlyte will offer the Stingray adjustable dual reflector system for HID fixtures through the sales organizations of its Stonco, ExcelLine, and Genlyte Energy Products units. Stingray will continue to market the products through its existing sales organization.

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**Circle No. 14 on product service card**

AND THE WINNER IS...

**Luceplan** has won the 1998 International Contemporary Furniture Fair (ICFF) Editors Award for Lighting. Presentations were made at the ICFF Exhibitors Reception and Editors Awards Ceremony held on May 18 at New York City's Jacob K. Javits Convention Center. The 10th annual ICFF took place May 16-19 and featured 468 exhibitors from 14 countries. The fair was attended by more than 11,000 retailers, interior designers, architects and the general public.

Credenza, the table lamp dimmer from **Lutron Electronics Co., Inc.** has won the DIY New Product Competition Award at the Japan DIY Show '98 Osaka. Lutron took top prize over 97 international competitors in the overseas new products award category. The award for Credenza was presented to Hidetoshi Arakawa, representative director of Lutron Asuka Corporation.

**Garcey/SLP** was awarded the Best of NeoCon Silver in Lighting for its Newhouse portable task light (shown). NeoCon was held June 8-10 at the Merchandise Mart in Chicago. The award-winning Newhouse portable task light features a high-tech computer-designed optical system that provides asymmetric light distribution. The materials used in manufacturing and shipping the energy-efficient Newhouse light are 86 percent recyclable.



NOMINEES  
SOUGHT FOR  
THE 1998 NLB  
LIGHTING AWARDS

The National Lighting Bureau has announced its 19th annual National Lighting Awards Program. The program was established to recognize lighting applications that demonstrate the value of effective electric illumination.

The awards program is open to owners, managers, lighting designers, consulting engineers, electrical contractors and any other party who has influenced modification of an existing lighting system or development of a new one. Submissions should document how lighting changes improved productivity, increased retail sales or achieved any of the bottom-line goals of "high-benefit lighting."

Projects eligible for consideration in 1998 must have been completed on or before January 1, 1995. The deadline for entries is October 31, 1998. For more information, call (301) 587-9572.

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## SPECIFICATION INTEGRITY

Disparate factions of the lighting industry came together at Lightfair International to discuss the issue of specification integrity. The Lighting Industry Resource Council (LIRC), an affiliate of the International Association of Lighting Designers (IALD), held its first public forum at Lightfair in Las Vegas on May 28. LIRC member manufacturers and interested designers obtained information about the organization; the LIRC received input on its continuing efforts to develop a document that designers can use as a guide to specification

The majority of the discussion concerned the nature of the guidelines the LIRC is developing. Phil Cialdella, cochair of the LIRC Specification Integrity Committee, and Randy Burkett, chair of the IALD's Specification Integrity Committee, said that the guidelines will be utilized by the full spectrum of lighting specifiers: IALD members, architects, engineers, designers, and many others. The guidelines will comprise three parts: actions to be taken before writing the specification—e.g., establish a substitution review process with the client sample language to be used in the specification itself strategies for effective follow-through during construction. The LIRC's intention is that these guidelines, if widely adopted, will become accepted as standard practice.

The LIRC expects to have a working draft by the end of 1998. To participate in development of the specification integrity guidelines, contact Morag Fullilove at (312) 527-3677.

## NEW YORK DESIGN SHOW

Design.y.c., produced by Miller Freeman Design Group, is the new name for the event to be held October 27-30, 1998 at the Jacob Javits Convention Center in New York City. Co-located under the new design.y.c. banner are ASID's Design Power, InterPlan, the Design Show and Batimat Design-Build covering both commercial and residential interior planning and design, as well as construction. Design.y.c. will also include other events and showrooms throughout Manhattan. More than 20,000 industry professionals are expected to attend. For more information, visit [www.designyc.com](http://www.designyc.com). or call (800) 950-1314, ext. 2331.

design.y.c.

## ANGELO BROTHERS TO MANUFACTURE WESTINGHOUSE

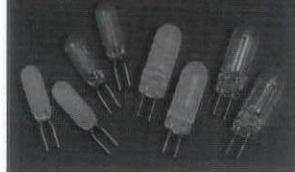
Angelo Brothers Company, a privately held manufacturer and distributor of lighting products, accessories and ceiling fans, has acquired an exclusive license to manufacture and distribute lamps bearing the Westinghouse brand name.

Initial lamps offered by Angelo Brothers under the Westinghouse brand include NurtureLite, MarineLite and ReaLite Full Spectrum Fluorescents. Founded in 1946 and headquartered in Philadelphia, Angelo Brothers also manufactures lamps under the ABCO brand name.

# Xelogen

The halogen solution

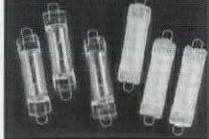
Xelogen JC G4 Bi-Pin



Xenon Festoon



Xenon Rigid Loop



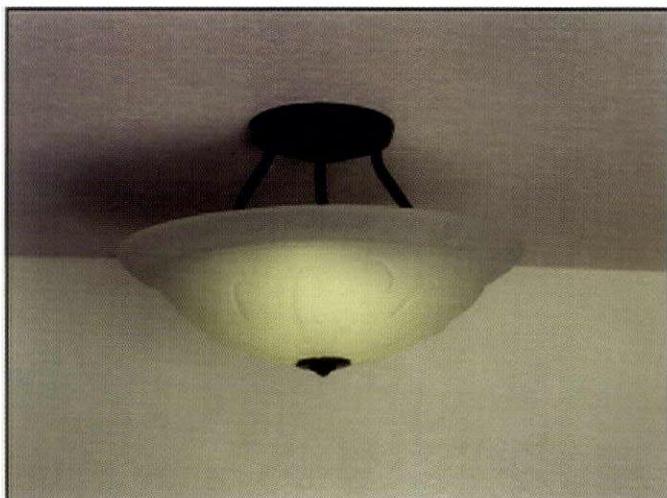
Xenon Wedge Base



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*Brownlee Lighting*

## NEW DECORATIVE COLLECTION

Featured in the New Decorative Collection catalog, which contains 21 fixtures especially for designers, architects and engineers, the 2143 is available in five finishes up to 3 x 13 lamps. The fixture features frosted etched glass, and is 9 1/2 in. high with a 14 1/2 in. diameter.

Brownlee, a long time leader in the energy-efficient commercial market, has a new design team directed toward the specification market. Phone: (800) 318-6768. **Circle No. 36**

Circle No. 36 on product service card

ARCHITECTURAL LIGHTING

# DELTA Snapshots

Issue 4 Office Lighting

Indirect lighting for open-plan offices is an effective approach to providing a comfortable, low-glare office environment. This application features a creative solution that is flexible and functional.

## Application Profile

Siegel & Gale is a corporate communications firm located at 10 Rockefeller Plaza in New York City. The design concept for the office focused on creating an environment that would build community and teamwork among employees. The design team faced several challenges in renovating this historic building for modern office use—preserving the appearance of tall ceilings in spite of exposed mechanical ducts and sprinkler pipes, and providing uniform illuminance throughout the open offices where ceiling heights varied from 9'-6" (2.9 m) to 13'-0" (4.0 m).

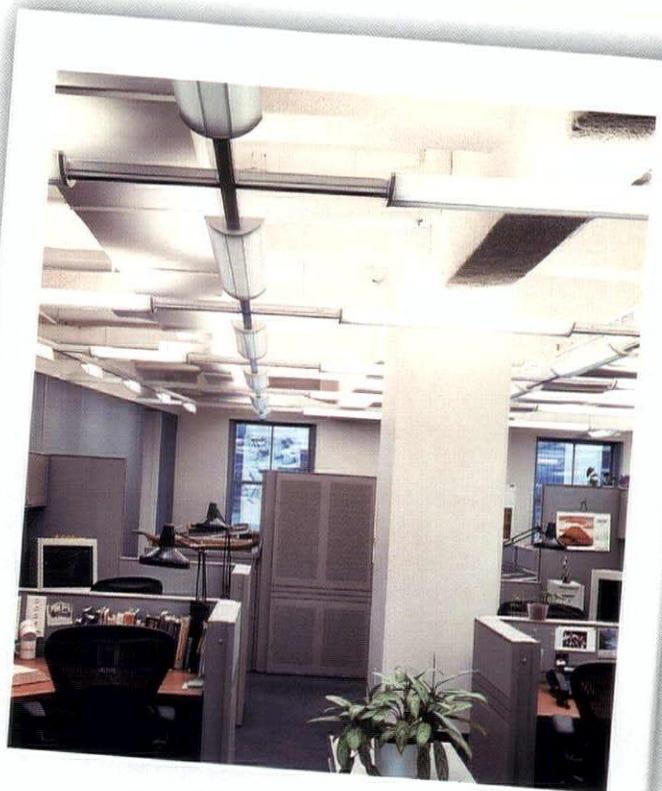
A 9' X 9' (2.7 m X 2.7 m) cable-mounted power grid was installed to create a consistent pattern and provide flexibility to attach luminaires as needed. The channel acts as an electrical raceway, avoiding additional ceiling clutter. A white acoustical coating was sprayed onto the ceiling (reflectance of 72%).

Task lighting at each workstation allows individual control of desktop lighting. Wall washers attached to the grid illuminate pin-up space and highlight artwork along perimeter walls.



Wall washers highlighting perimeter wall

© Edward Addeo



Siegel & Gale open plan office  
(Task lights off)

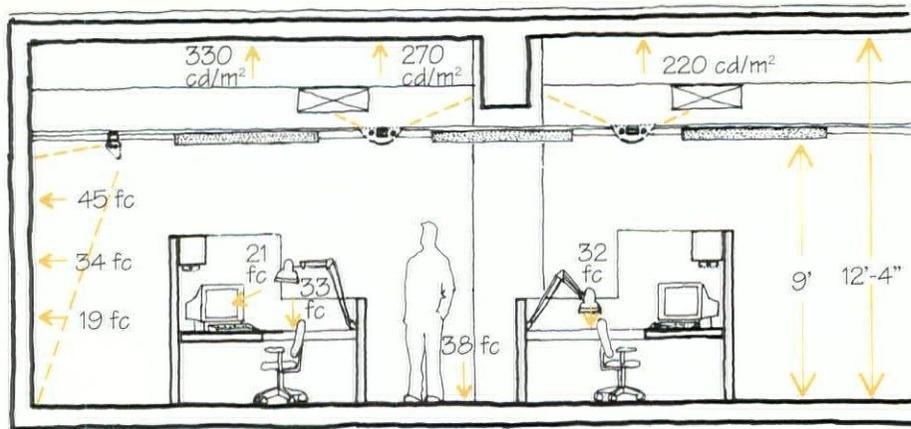
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## Lighting Objectives

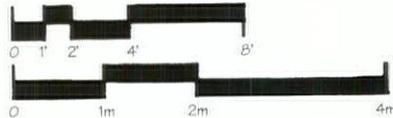
- Provide uniform illumination throughout the open office area.
- Provide good color quality for graphic layout work and long-life lamps (20,000 hours) for reduced maintenance.
- Provide a consistent visual design element that ties all the work areas together.

## Luminaires, Lamps, and Energy

The 9' X 9' power grid supports 5' (1.5 m) long indirect luminaires placed in a square pattern. Each luminaire contains (2) F40T8/RE735 lamps. Wall washers, 18" (450 mm) long, each lamped with (1) FT39T5/RE835 long twin-tube fluorescent lamp, draw energy from the same grid. All luminaires on the power grid have electronic ballasts for quiet, flicker-free operation. The lighting power density for the office is 1.3 W/ft<sup>2</sup> (14 W/m<sup>2</sup>), not including task lights.



Section through open office area



## Design Highlights

**Architecture/Lighting Integration:** The power grid, suspended from the ceiling, provides a place to mount indirect lighting and serves as an alternative to a suspended ceiling. The clutter of exposed ductwork, painted white, seems to disappear above the power grid.

**Uniformity and Flexibility:** Uniform illuminance throughout the open office area enables furniture arrangement to be flexible. Indirect lighting provides consistent light levels, irrespective of furniture or partition placement, as well as the nondirectional light that allows people in work groups to see each other's faces easily. Maintaining visual contact among different work groups was an important design consideration for the Siegel & Gale office.

**Visibility and Visual Comfort:** The indirect lighting system provides low-glare general lighting throughout the office with a good luminous quality for VDT and paper tasks. Undershelf fluorescent task lighting, built into each workstation, and incandescent swing-arm task lamps provide necessary additional desktop lighting and allow employees to customize their work environments to their individual lighting needs.

DELTA Snapshots • Issue 4 • November 1997

Siegel & Gale, New York

Sponsors: Consolidated Edison Company of New York, Inc.  
New York State Energy Research and Development Authority

**Architect:** JJ Lee Falk, The Phillips Janson Group

**Luminaires:** Zumtobel Staff Lighting, Inc.

**Photography:** Edward Addeo

**Graphic Design:** JSG Communications

**DELTA Program:**

**Director:** Naomi Miller

**Research Specialist:** Rita Koltai

**Publication:** Judith Block

**DELTA Members:**

Bonneville Power Administration

Consolidated Edison Company of  
New York, Inc.

New York Energy Research and  
Development Authority

Northeast Utilities System

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Circle No. 18 on product service card

## LUXO RECEIVES ISO 9001 QUALITY CERTIFICATION

Luxo Corporation and its office, medical and industrial lighting products, have successfully passed the ISO 9001 quality certification procedure created by the International Standards Organization (ISO) in Geneva, Switzerland and administered in the U.S. by the American National Standards Institute (ANSI).

The ISO 9000 series measures the uniformity of quality standards among manufacturers of products in different countries. Luxo Corporation is the U.S. marketing and manufacturing subsidiary of Luxo AS of Norway.

## ON THE MOVE...

**Supervision International** has relocated to 8210 Presidents Drive, Orlando, FL 32809. The phone number is (407) 857-9900; fax (407) 857-0050.

**The Lighting Practice, Inc.**, an architectural lighting design firm, has relocated to 128 Chestnut Street, fourth floor, Philadelphia, PA 19106. The company can be contacted by phone at (215) 238-1644 and fax at (215) 238-1674. The firm's e-mail address is [tlpphl@voicenet.com](mailto:tlpphl@voicenet.com).

**Light Source Design Group** has changed its trade name to LightSmiths Design Group and has moved to a new location at 2145 19th Avenue, Suite 204, San Francisco, CA 94116-1866. The mailing address is P.O. Box 320185, San Francisco, CA 94132-0185; phone (415) 682-0283; fax (415) 682-0285.

## CORRECTIONS

In the Spring Product Tabloid issue, the new SignMaster outdoor lighting product from the Metrolux division of JJI's Quality Lighting subsidiary was mistakenly identified as Starfire Lighting Company's Tru-Lux product in the article entitled "Great Things in Small Packages," on page 18.

In "Sports Marketing," the cover story of our April/May issue, *Architectural Lighting* omitted the name of Bob White, LC, senior lighting designer with Sigma Associates, Inc. and formerly with Illuminating Concepts from the project credits. White was instrumental as part of the design team, helping to develop concepts for NikeTown, as well as delaying with onsite conditions.

Christopher Dolan, LC was omitted from the list of newly certified lighting professionals in NCQLP updates, April/May.

*Architectural Lighting* regrets the errors.



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## MANNING LIGHTING

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Circle No. 19 on product service card

**Osram Sylvania** has revamped its web site at [www.sylvania.com](http://www.sylvania.com). The five reorganized sections contain information about lighting for the home, business and automobile, as well as details about precision materials and components and consumer electronics products. A Press Xpress section provides details about current product innovations, strategic alliances and lighting retrofits and automatically e-mails Osram Sylvania news releases to subscribers.

**Litetrionics** recently unveiled its new website, [www.litetrionics.com](http://www.litetrionics.com), at Lightfair International, May 27-29, 1998 in Las Vegas. Visitors to the website can search for a particular product, learn more about Litetrionics' history and view its catalog of "Lighting Products for the 21st Century."

Albany, NY-based **Einhorn Yaffee Prescott, Architecture and Engineering, P. C. (EYP)** has announced the launch of its website at

[www.eypae.com](http://www.eypae.com). The web site provides information on the company's clients and services as well as recent articles on awards. Users can also visit the firm's Washington, D.C. office computer room and lobby.

**Cooper Lighting's** new website at [www.cooperlighting.com](http://www.cooperlighting.com) offers customers information on the company's lighting brands and the full Cooper Lighting Buyers Guide. Users can also download photometric data and IES data files for products.

**Lighting Technologies Inc.'s** site at [www.lighting-technologies.com](http://www.lighting-technologies.com) to find out about new features and performance enhancements for Lumen Micro 7.5, the company's lighting design, analysis and specification program.

**Hessamerica**, a subsidiary of the JJI Lighting Group, Inc. has established a new site at [www.hessamerica.com](http://www.hessamerica.com) that features the company's product catalog and news releases.

**The Watt Stopper** has announced the completion of a new website at [www.wattstopper.com](http://www.wattstopper.com). The website is complete with product specifications, schematics, technical bulletins, applications and FAQs. A floorplan search also allows users to find the appropriate product for each application.

**Philips Lighting Company** has upgraded its site at [www.lighting.philips.com/nam](http://www.lighting.philips.com/nam). Philips offers site visitors access to new products, industry news and company announcements, and an upgraded open forum in which users can interact with each other in a "community-like" environment.

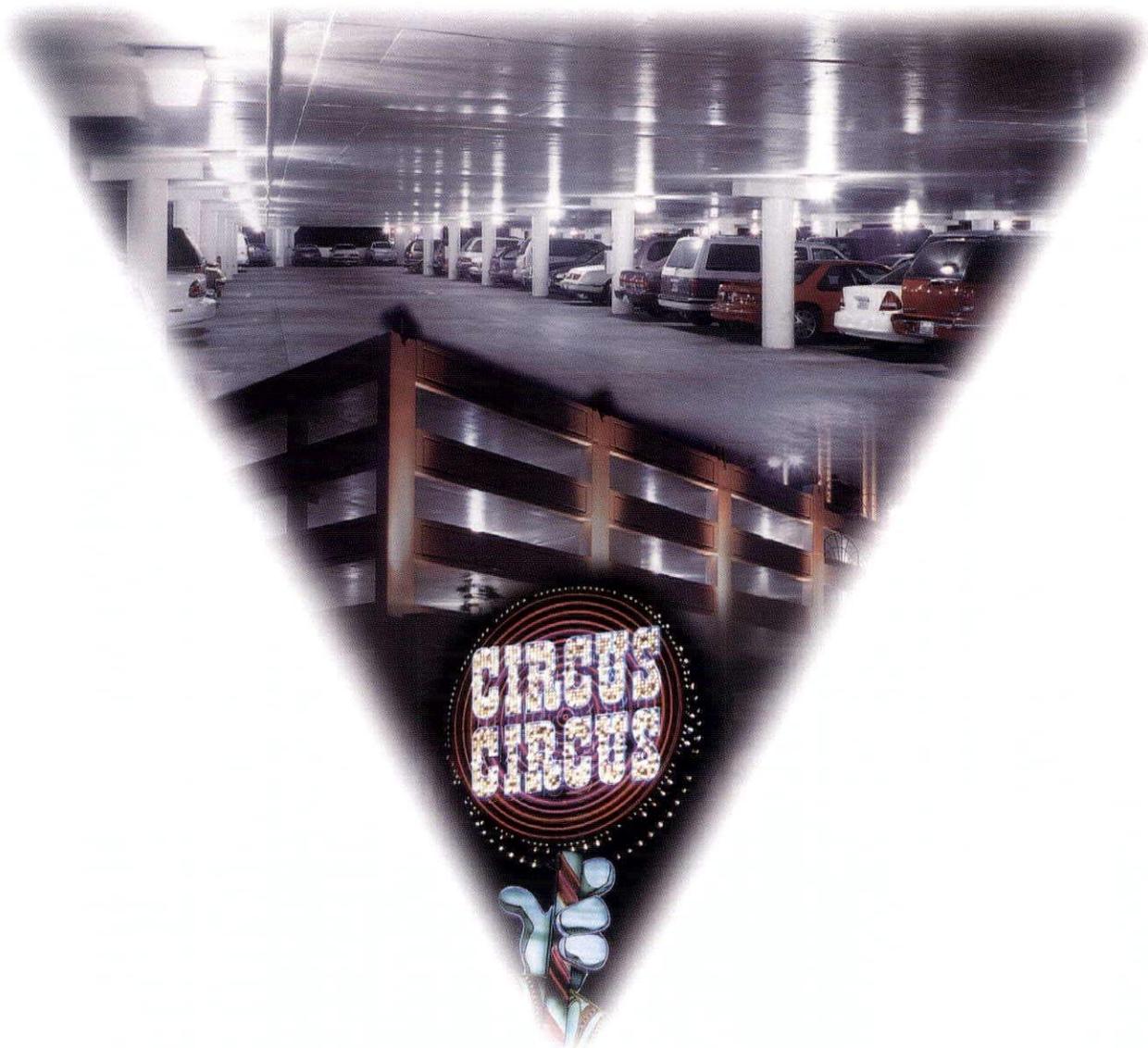
**Architectural Lighting Magazine** has launched a comprehensive industry forum at [www.qualitylight.com](http://www.qualitylight.com), called the Lighting Design Forum. Cosponsored by the IALD, the Lighting Research Center, Lightfair, inter.Light, the Lighting Design Lab and other organizations and manufacturers, the site allows users to access articles and other information contributed from these sources that span the lighting industry. Users can also link to inter.Light to find products and manufacturers, purchase books, access information about certification and link to other organizations.

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**Charles M. Troxell**, distinguished lighting software critic, passed away June 1 at his home in Richmond, VA after losing a battle with cancer. Troxell greatly supported the practical and professional use of computers as a lighting design aid and fought for continued improvements in CAD technology. After working for Westinghouse and Dixie Electric, he founded his own consulting firm, Lighting Images Technology Inc., in 1993. As a lighting designer specializing in exterior lighting, he was

responsible for such installations as the Confederate Monuments in Monument Avenue, the Valentine Statue of Thomas Jefferson, the Arthur Ashe Memorial and the St. John Church Steeple.

**Jules Horton**, founder of Horton•Lees Lighting Design Inc., has retired after having served the firm for more than 30 years.

**Steven L. Klein**, formerly of Standard Electric, and **Lynn Howard**, formerly of Standard

Electric and most recently a sales representative for Lightolier in Chicago, have joined forces to form Klein Howard Lighting LLC.

Edison Price Lighting has announced the promotion of **Fulgencio Bengochea** to VP of research and development.

Auerbach + Associates has named **Paul Garrity principal** and **Michael McMackin**, ASTC, senior associate. **Josephine Marquez** has also joined as senior associate.

**John Davenport** has been named president of Unison Fiber Optic Lighting Systems.

**Andrew Chang** has been named VP of operations with Starfire Lighting.

Columbia Lighting has appointed **Allyn Fosse** VP, marketing.

**David G. Luchaco** has been named the first Lutron Fellow for Lutron Electronics Co., Inc.

Taliesin Architects has named **William E. Mims** CEO and managing principal; **Joe Lundeen** and **Donald Everett Larry** principals of Taliesin West; and **Peter Rott** principal of Taliesin's Madison office.

**Faith E. Baum**, **Kenneth Douglas** and **Linda G. Handrinos** have been named shareholders in David A. Mintz, Inc., Lighting Consultants. **Baum** has also been promoted to VP.

**Neal W. Kluger**, CEO and vice chairman of the Board of Directors, Eagle Electric Manufacturing Co., Inc., has been elected to the Board of Directors of the National Electrical Manufacturers Association (NEMA).

Tivoli Industries, Inc., has named **Charles Kimmel** president and COO. He will also assume the duties of CFO.

Electronic Lighting, Inc., has named **Rodger Lantz** VP, sales; **Andy Davis**, Southeast regional manager; **Scott Brandoniso**, Midwest regional manager.

Corbett Lighting, Inc. has announced the appointment of **Jack Kavanagh** as president.

Verilux, Inc. has appointed **Jennifer Oberbeck** director of U.S. marketing.

Fiberstars, Inc. has appointed **Bill Ragan** sales manager for its commercial lighting division.

**Anthony Lanzone** has been named VP of global staffing at Lutron Electronics Co., Inc.

con-tech

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**September 13-16** Street and Area Lighting Conference, Loew's Coronado Bay Hotel, San Diego; (202) 508-5900.

**September 22-23** AEE Seminar: "Effective Relighting Solutions," Navy Pier, Chicago; (312) 836-0100.

**September 24-25** International Energy and Environmental Congress, Navy Pier, Chicago; (770) 279-4386.

**September 28-October 3** Fiam '98—33rd International Fair of Lighting Fixtures, Valencia, Spain; 34-(9)6-386 11 65.

**October 1-2** AEE Seminar: "Fundamentals of Lighting Efficiency, a Preparatory Course for the CLEP Examination," Treasure Island, Las Vegas; (702) 894-7111.

**October 1-3** IIDEX/NeoCon Canada, Metro Toronto Convention Center, Toronto; (416) 944-3350.

**October 6-9** ELENEX Australia, Melbourne Exhibition Centre, Melbourne; (301) 656-3179.

**October 18-20** World Workplace '98, Chicago; (713) 623-4362.

**October 20-21** Philadelphia Lights 1998, Sheraton Valley Forge Hotel & Convention Center, King of Prussia; (610) 662-1700

**October 28-30** Interplan, the Commercial Interior Planning & Design Event, Javits Center, New York City; (800) 950-1314, ext. 2611.

**October 28-30** The Design Show, the Residential Interior Planning & Design Event, Javits Center, New York City; (800) 950-1314, ext. 3030.

**October 28-30** Batimat Design-Build, the International Building, Products & Design Exposition, Javits Center, New York City; (800) 950-1314, ext. 2807.

**October 28-30** ASID Design Power Conference, Javits Center, New York City; (800) 950-1314, ext. 3030.

**October 29-31** International Lighting Exposition and Energy Management Conference, Toronto; (905) 890-1846.

**November 4-6** 21st World Energy Engineering Congress, Georgia World Congress Center, Atlanta; (770) 447-5083 ext. 224.

**November 19-21** 4th European Conference on Energy-Efficient Lighting, Copenhagen, Denmark; (fax) 45-31 39 59 58.

**December 9-10** Business Energy Solutions Expo, Walt Disney World Dolphin, Orlando; (770) 279-4390.

**December 10-11** AEE Seminar: "Fundamentals of Lighting Efficiency, a Preparatory Course for the CLEP Examination," Walt Disney World Dolphin, Orlando; (800) 227-1500.

1999 SCHEDULED EVENTS

**January 30-February 2** Enlightening America '99, Dallas; (609) 799-4900.

**April 7-8** GlobalCon, Colorado Convention Center, Denver; (770) 279-4388.

**April 19-24** Hanover Fair '99, Hannover Fairgrounds, Hannover, Germany; (609) 987-1202.

**May 10-11** alt.office East Conference, New York Hilton & Towers, New York City; (800) 950-1314 ext. 2612.

**May 11-13** Lightfair International 1999, Moscone Center, San Francisco; (404) 220-2221.

# NCQLP

National Council on Qualifications  
for the Lighting Professions

Early Application Deadline: August 20, 1998  
Final Application Deadline: September 18, 1998  
Examination Date: November 7, 1998

Yes, please forward a copy of the 1998 LC Candidate Bulletin and add me to the NCQLP mailing list

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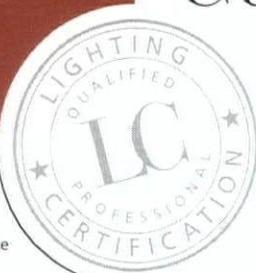
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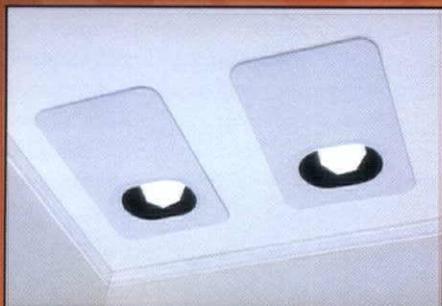
The NCQLP is a non-profit independent certifying body founded in 1991 by practitioners in the lighting industry. Its mission is to protect the well-being of the public through effective, efficient lighting practice. The NCQLP establishes the education, experience and examination requirements for lighting certification.

Comprised of 14 member organizations from lighting and related industries, the NCQLP is supported by member dues and industry contributions supplemented by major grants from the Environmental Protection Agency (EPA) and the department of Energy - Federal Energy Management Program (FEMP). Membership is open to organizations and associations in lighting and related industries.

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*In this issue of Architectural Lighting, Charles (Chip) Israel, IALD shares his background and thoughts. Chip Israel has been a practicing lighting designer since 1985 and is principal and founder of Lighting Design Alliance in Long Beach. Israel has also been an instructor at UCLA and the American College of Applied Arts in the field of interior lighting, and has been a guest lecturer at the University of Southern California, as well as many industry conferences and conventions. His design experience ranges from building facade lighting and custom fixture design to corporate office spaces and themed resorts. Some landmark projects that he has designed include Disney's Wilderness Lodge, All Star Resort and Disney Institute; The Citadel; and the UCLA site master plan. Israel is the recipient of numerous IES and GE Awards and is an active member of the IALD (board of directors), DLF (past president) and the IESNA (hospitality committee).*

—Christina Trauthwein

**AL:** Tell me about your firm, Lighting Design Alliance.

**Israel:** Upon graduating from Penn State University in the architecture and engineering program, I went to work for Lutron Electronics, then on to Grenald Associates in Philadelphia and eventually Los Angeles, where I became a principal. In 1992, I bought out the LA office of Grenald Associates and formed Lighting Design Alliance. We started with three people and now have 11 full-time employees. We moved our office to Long Beach a couple of years ago and things have grown from there.

The atmosphere of LDA is one in which we work hard and play hard—always in the spirit of teamwork. We're all fairly young and everybody gets along. Personalities are so important; that's half of what we look at when we hire. The ability to do AutoCAD and calculations is obviously necessary, but being a team player and working with the client's best interests in mind are equally important.

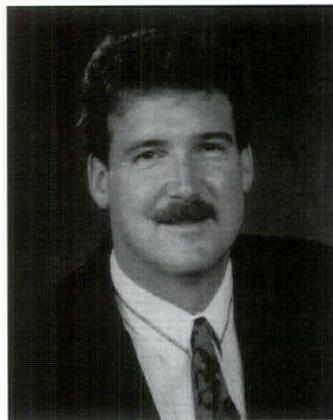
**AL:** What have been some of the major influences on your career?

**Israel:** As far as work ethic, I've had influences which were family-related. My grandfather built, lost and rebuilt a furniture company and I got to see the amount of hard work and dedication it took to do that. When it comes to influences in lighting, Ray Grenald had a large impact on my career as a mentor.

Prior to working with Ray, I remember things like Gary Steffy coming to talk to us in school, or at Lutron, Howard Brandston came in as a consultant to talk about lighting. The talks were extremely motivational. They showed me that lighting is more than illumination engineering and that a whole new world was out there. Craig Roeder also strongly influenced my career. The publication of his work on color proved that the lighting designs that we always had wanted to do actually could be done, though

at that time many architects were cautious. When I started, architecture was in the period where the lighting should be coordinated and not really seen. It was all integrated and concealed. Now, it's changed in that it's much more entertaining or even ornamental.

And, finally, Lesley Wheel also impacted my career. She encouraged me to start LDA and supported us along the way.



**AL:** With so many projects, how do you keep design approaches new and exciting?

**Israel:** It has to do with LDA's team approach and the younger designers. With all designers, once you've done three or four law offices, you kind of know what the design solution should be and you almost get lazy—don't go through all of the evaluations because you think you can just jump to the answer. What is inspiring is to work with some of our associates here and to literally give them bits and pieces, get them going in the design, allow them to do the research and then observe the process they use to come up with the solution.

We don't just create the drawings and let them draft them because the projects will be clones of each other. We'd rather teach them the thought process of design rather than the

"this is what I've done and always with this approach. Make them learn their own design rather than emulate somebody else's design. This method allows for the deeper questions, and it is rewarding when you actually see the employees develop and mature in their own way. Everybody grows from that. And the process becomes so much better because now you're getting input from a few different people instead of just relying on what you've done before, which is rehashed. Lighting, if you're not careful, can become very cookie-cutter-oriented.

**AL:** Do each of the designers in your firm specialize in certain areas?

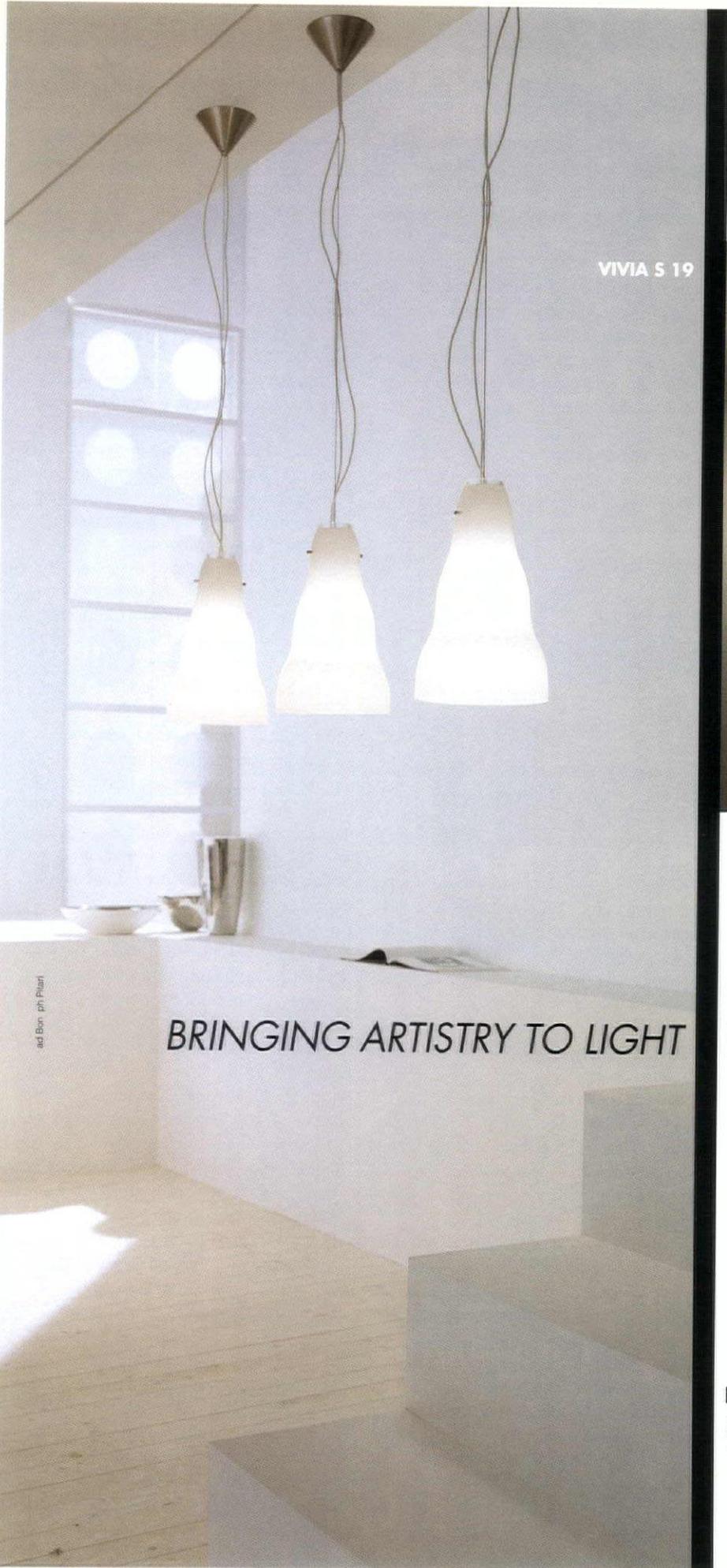
**Israel:** Everybody takes on different projects, but a couple of people have done more of certain types than others. Alex (Friend) is an example, has done a lot of commercial and Mark (Frank) often works on entertainment and casinos. In fact, you might say he is an entertainment specialist and from a marketing standpoint, it's easy to push him. But in reality is we don't want him to become a "specialist." He would burn out. So we try to keep it mixed up. Doing a library, for instance, means he has to shut everything about flashing lights and noise and work in a totally different realm. It keeps the employee and design fresh.

**AL:** Is there a governing philosophy for your firm?

**Israel:** Be honest. Explain designs. Be realistic about deadlines. Balance project design with customer relations because 95 percent of what we do is repeat business.

We really try to create positive energy. We do about 150 jobs per year and have strict deadlines. We have it set up in small teams, yet everyone helps each other out and get a lot of creative interaction. That's why we named the firm Alliance. We are this a mix of in-house, and then we try to create that with our clients, balancing their needs and expectations.

(continued on page 31)

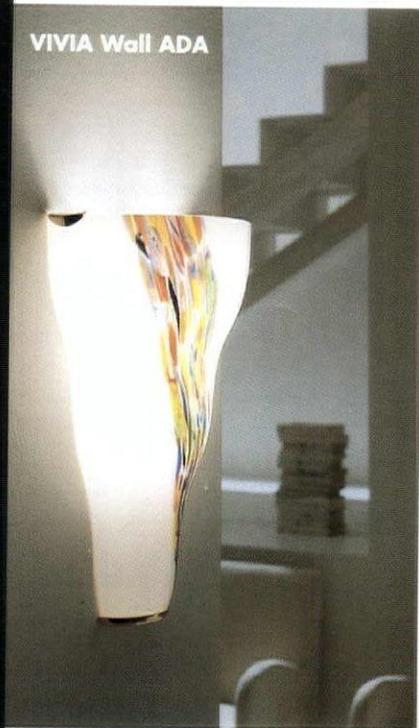


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VIVIA Wall ADA



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(continued from page 30)

**AL:** What is the greatest challenge for the lighting profession?

**Israel:** Incorporating the aesthetic designs and keeping the technical constraints under control, such as packaging. The way we approach all designs is a compromise—a melding of everybody's requirements. Listen to the client. Ask what the clients expectations are, then raise the bar a bit.

Deal with the packaging elements so that you develop a hybrid design and get what you really need to make the project special. Turn the client's vision into reality.

**AL:** What is the greatest opportunity for today's lighting designer?

**Israel:** Economy and entertainment. There's so much work out there right now and clients have become more sophisticated and educated on the benefits of lighting design, but we have a long way to go in that aspect. Originally, the entertainment lighting you saw existed only in high-end themed restaurants or malls; it's now in all market segments—office lobbies, streetlighting and exterior lighting, for instance. Lighting is much more theatrical and creates an environment for people. It's more stimulation-oriented than it used to be, maybe because the MTV generation is growing up. Mega-themed restaurants also seem to be dying out; maybe it's over-saturation. We've seen them and we're moving on.

There's a lot of work out there and as long as lighting designers align themselves with a firm where they can learn and grow, especially for young designers, the profession will remain successful.

**AL:** What do you consider to be detrimental to the lighting design field?

**Israel:** Technology. From two different aspects. To keep up with technological improvements of new products, whether control software or the latest lamp/ballast combinations, you really have to put in the time or you get burned on it and use it in the wrong applications, which is a disservice to the client.

But probably what is more of a problem with technology is the electronic media age. We have clients who modem drawings and

put them on bulletin boards rather than plotting them and sending them out to everybody. For a small job, it's not a problem, but for a casino, they might load up thousands of drawings and you don't know which ones you need. While technology has sped up design time, which is good because the clients save money, it takes away the face-to-face meeting and coordination. We've seen this as a glitch. We've invested in the technology, but I still think what's best is personal communication.

**AL:** Your greatest achievement?

**Israel:** Developing a multi-impact-level firm that is more horizontally organized than a dictatorship. It's a very nurturing internal

TAKE ADVANTAGE OF  
ELECTRONIC MEDIA,  
BUT DON'T LOSE  
SIGHT OF PERSONAL  
COMMUNICATION.

design. A great achievement is to have watched some of the designers who have started as draftspeople grow up to be senior designers with their own clientele and winning awards on projects that you've had minimal impact on.

**AL:** Where do you think the field of lighting design is headed?

**Israel:** I think we've gotten away from the environmental aspects of lighting. Everyone has become so caught up with the idea of pushing the envelope on technology that promoting the green aspects of where lighting can go has gotten lost.

We've been lucky to just get two new jobs. It's very refreshing to see that while our Title 24 says 1½ watts per sq. ft., the goal on these buildings is 0.9 watts per sq. ft. That requires a special integration of indirect and task lighting. But that's pretty substantial if we can start to think in those numbers and cut the connected load in half. It starts to add up and can be very powerful if we have enough owners and users that get on the bandwagon too. Everybody's in the flash stage right now, but the pendulum will start to swing back and "green design" will get picked up again.

Another trend? Our interior designers will still want more light through smaller holes so the technology of less glare and less obtrusive light sources will continue. And controls are a huge part—they keep coming down in cost and the flexibility is incredible.

**AL:** What is the future of lighting education?

**Israel:** It's up in the air from a lighting education standpoint. I'm the IALD director of education and my job has been to formalize what has always been out there in the past. The problem is that we don't have an international goal or structure to get education to the right people. Because young people in college really don't know how important lighting is, it becomes an adjunct course to their architecture or interior design program.

We're a big supporter of internships. Over the last four years, we've had about 10 interns. It's a great way to "give back" to the industry. It really helps the students who then return to school because they become so much more inspired in their vision. We really need to focus on the students, not when they're seniors talking to big manufacturers, because you've already lost them. You've got to get them excited early on so when they do their design studios, they think about integrating lighting at that early point. It's rewarding to see young minds light up. We get 50 resumes every summer because students have returned to school promoting the internships.

A whole other area of lighting education is that for practicing professionals. The IES and DLF have helped to create nighttime educational programs, but it needs to go to the next level. Last year, I did three educational talks. People are begging to learn about lighting and there's a big gap between where we are now and where we ought to be. People ask me, "But aren't you training your competition?" I say, we're really raising the level of competency which makes the whole field grow, which is significant to our industry. If people are doing lighting design, we want them to do it well because that means people who've hired them will always hire another lighting consultant whether it's them or someone else. Everybody benefits.

**AL:** And finally, good lighting design is...?

**Israel:** A project that meets the client needs and exceeds his expectations. Push it a little bit further. Sit down and really listen to the technical and aesthetic needs. Meet all of the basic requirements and then use your creativity to take it to the next level. And, if it's appropriate, add that little extra to make it unique. ■



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**PHILIPS**

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## MODERN MEDICINE

*In a Michigan hospital, an updated lighting design plays a vital role in the healing process*

BY JEAN GORMAN, CONTRIBUTING EDITOR

**CHALLENGE** When Detroit Receiving Hospital was completed in 1980, it carried the distinction of being the only one of the 126 academic medical centers in the country that was completely dedicated to emergency medicine, a status it still holds. In order to continue to meet state and federal agency regulations for medical facilities, it was recently renovated to keep pace with the changes in the way healthcare is delivered.

One of these changes has been a shift in the way materials are handled—they were moved through an exchange cart system, now they're handled via a case cart system. The area most impacted by this change was the 35,000-sq.-ft.-portion of the facility that makes up the Department of Surgery, which was the focal point of the renovation. The team from Gunn Levine Associates, the firm that served as architect, lighting and interior designer, concluded that lighting would be the pivotal ingredient in bringing the surgical suite up to date. "We decided that the connection between form and spatial experience was lighting," said Harvey Levine, principal of Gunn Levine Associates. "It influences attitude, encourages relaxation and plays an essential role in building a positive experience." In fact, so important is lighting in a healthcare facility, said Levine, that in this structure, lighting considerations actually drove the design.

**DESIGN AND TECHNICAL CONSIDERATIONS** The designers attempted to achieve two primary objectives through the lighting: to provide an atmosphere that would promote a sense of well being for the patients and to create conditions that would support the medical staff in assessing the health of the patients and in performing surgery and its attendant disciplines. Both of these demands required a series of location-specific lighting solutions.

In addition to meeting the requirements of the codes, the lighting has to serve the very different needs of both patients and medical staff. From the perspective of a patient, said Levine, what is most important is not so much the visual aesthetics, but rather the mood of the environment. From the point of view of the medical personnel, Levine explained that one of the most important functions that light can offer, aside from providing the proper level of illumination, is to accurately render natural skin tone. "We needed to provide light that could allow staff to perform what is known as visual triage, which is a way of enabling a physician to understand a patient's condition by looking at his or her skin tone."

**METHOD** Though different lighting approaches were employed to appropriately respond to the varied requirements of different areas, the core of the redesign revolves around one custom fixture in par-



AT THIS DETROIT HOSPITAL FOR TRAUMA AND SURGERY, THE LIGHTING SUPPORTS BOTH PATIENTS AND PERSONNEL. A CUSTOM FIXTURE IS BOTH THE HEART AND SPINE OF THE SPACE.

ticular, which serves as a sort of central spine in the renovation as a whole. The fixture consists of a pair of extruded aluminum tubes containing straight and radiused elements with fluorescent light sources. Suspended from arched ceiling vaults by 66 cable assemblies, the fixture consists of five sections that run a length of 456 ft. through circulation corridors, nursing and reception areas. (There are also two additional single straight segments, of 16 and 24 ft. over the nursing stations.) The linear sections of the tubes are fitted with two rows of 32W T8 fluorescent sources, and the radius sections contain 18W fluorescent BX/RS lamps. All of the lamps have a color temperature of 3500K and a CRI of 82. The tubular housings are fitted with a reflector finished with a baked white polyester powder coat and capped by an acrylic linear prismatic lens. The run of fixtures not only provides glare-free, indirect, even ambient illumination, but is also easily identifiable, serving as a way-finding device that "is integral to the flow of people, materials and information," said Levine.

Lighting in other areas includes exam lighting composed of two 2-ft. x 2-ft. units fitted together in a 2x4 configuration recessed in the ceiling of the pre-op spaces: one contains a fixture with four 55W fluorescent lamps with switches for two light levels; the other provides ambient lighting and contains a fixture fitted with two 39W fluorescent lamps with an electronic dimming ballast. ■

### DETAILS

**PROJECT**  
Surgical Suite  
Reconfiguration and  
Renovation Detroit  
Receiving Hospital and  
University Health Center

**LOCATION**  
Detroit, Michigan

**OWNER**  
Detroit Medical Center

**ARCHITECT /INTERIOR  
DESIGNER**  
Gunn Levine Associates—  
Harvey Levine, Jacqueline  
Royer, Sinh Dinh,  
Melissa Murcko

**LIGHTING DESIGNER**  
Gunn Levine Associates

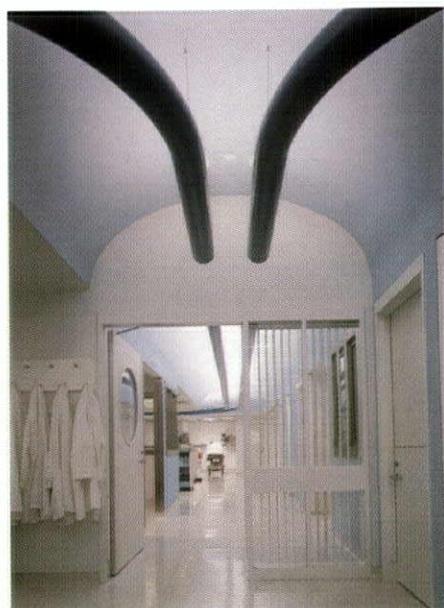
**ELECTRICAL/MECHANICAL  
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R. A. Prister and Associates

**STRUCTURAL ENGINEER**  
Seto-Tsang Associates

**GENERAL CONTRACTOR**  
George McIntosh, Inc.

**PHOTOGRAPHER**  
Norman McGrath

**LIGHTING  
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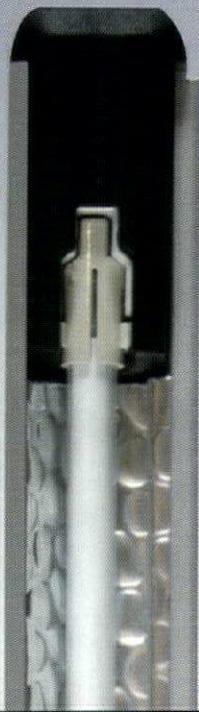
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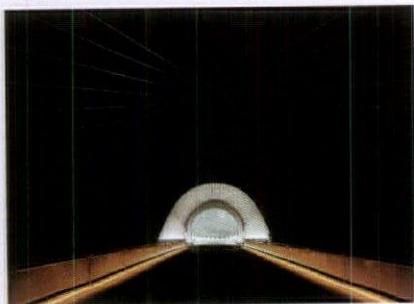
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# 15th Annual



Miho Museum, Japan

At the Awards presentation and dinner on May 28, 1998 at Caesar's Palace Hotel in Las Vegas, The International Association of Lighting Designers (IALD) recognized five lighting design firms for their outstanding lighting solutions and creative techniques. The IALD Lighting Design Awards, cosponsored by *Architectural Lighting*,

distinguishes 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 87 submissions from all over the world—including North America, Europe, Asia and South America—with a Japanese project receiving the top Award of Excellence. Lighting designers Paul Marantz, FIALD, Alicia Kapheim and Hank Forrest achieved this honor for creating spectacular exterior and interior lighting at the Miho Museum in Shigaraki, Japan.

Four Awards of Merit winners designed projects ranging from an English school chapel to the Hong Kong Convention Centre, the Yamaguchi Trade and Culture Center and a Byzantine Chapel created to house ancient frescoes.

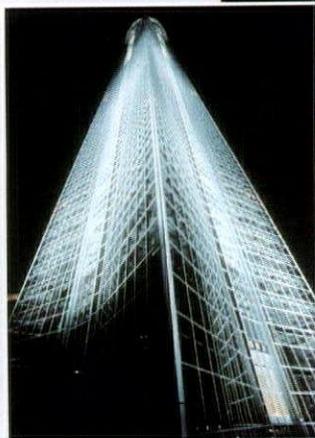
In addition to presenting awards to this year's winners, the evening included a retrospective honoring the award winners of the last 15 years, a remembrance of IALD members who have passed away this past year and the presentation of the 1998 IALD and *Architectural Lighting* student scholarships.

Established in 1969, the Chicago-based IALD is an international organization dedicated to the professional architectural lighting designer. Comprised of 550 members throughout the world, the IALD's role is to promote the lighting design profession and set the global standard for lighting design excellence.

For information about membership or about the 1999 IALD Lighting Design Awards, contact Morag Fullilove, IALD's Executive Director, at (312) 527-3677 or log onto the IALD website at [www.iald.org](http://www.iald.org).



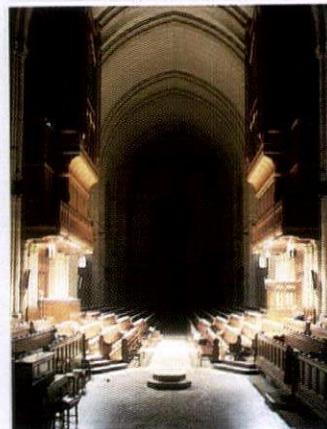
Hong Kong Convention and Exhibit Centre, China



Yamaguchi International Trade & Culture Center, Japan



Byzantine Fresco Chapel, Texas



Charterhouse Memorial Chapel, England

# IALD *Lighting Design Awards*

The judges for the 15th annual IALD Awards convened on March 6, 1998 at the Museum of Modern Art in New York City to review more than 85 lighting design projects. After three rounds of judging, five lighting design firms were selected based on criteria established by the IALD.

Two types of awards, the Award of Excellence and Award of Merit, recognize projects that exemplify a synthesis of architecture and light and integrate aesthetics and performance. In judging the entries, the jury considers how the lighting design of each submittal reinforces the atmosphere and function

of the architecture, as well as its cultural and geographic location. In addition, technical criteria, including viewing comfort, energy conservation, budget restrictions and successful execution of color and special effects, are considered. Only projects presenting permanent architectural lighting design solutions qualify for the awards; lighting equipment, products and lighting design for theatrical performances are not eligible. Projects are not grouped into categories and are reviewed on an individual basis.

The judges for the 15th Annual Awards were Renee Cooley, Renee Cooley Lighting Design, Inc.; Heather Faulding, Faulding & Fredman; William Lam, IALD, William Lam, Inc.; Kenneth Loach, IALD, H.H. Angus & Associates; John Richman, Starwood Urban Investments; Terry Riley, Museum of Modern Art; Lee Waldron, Grenald Waldron Associates and Pamela Hull Wilson, IALD, Lighting Consultant.

1998 Awards Committee members were E. Teal Brogden, Horton•Lees Lighting Design, Inc., chair; Laura Antonow, Oxford Lighting consultants; JoAnne Lindsley, IALD Lindsley Lighting Consultants; Pamela Hull Wilson, IALD, Lighting Consultant; and Christina Trauthwein, editor-in-chief, *Architectural Lighting*.



The judges (from left, standing): Lee Waldron, Renee Cooley, Terry Riley and Heather Faulding; (sitting) Kenneth Loach, William Lam, Pamela Hull Wilson and John Richman.



Heather Faulding (left) and John Richman (right).



Laura Antonow (left) and Teal Brogden (right).

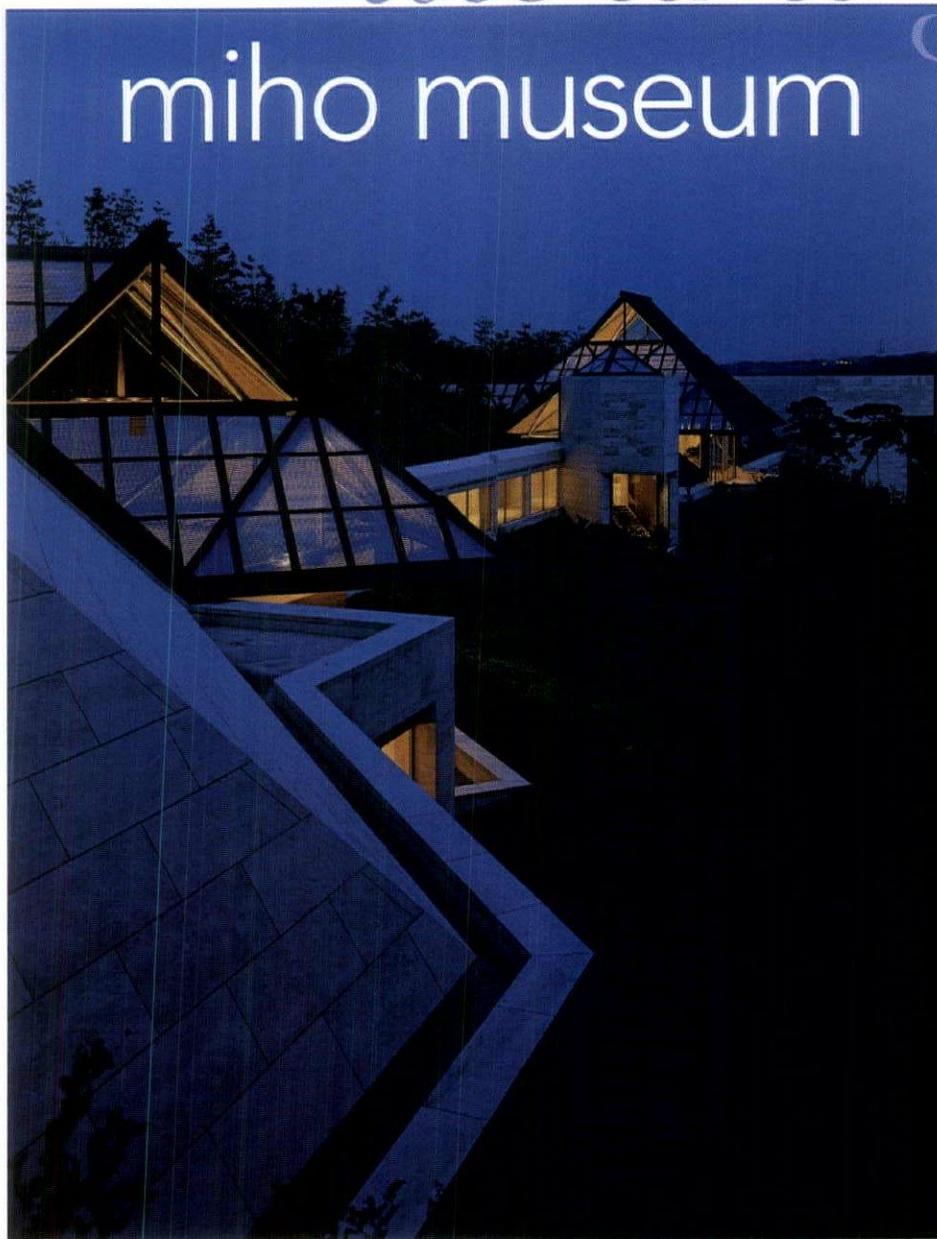


William Lam (left) and Pamela Hull Wilson (right).

IALD  
'98 awards

*award of*

# miho museum



japan

“Just excellent,” said IALD judges of the lighting design at the Miho Museum recently built in Shigaraki, Japan. The museum, integrated into a hill (80 percent of the complex is underground) in a mountainous region, is introduced by an 800-ft.-long tunnel, leading to a half-suspension, half-cantilever bridge over a ravine that brings the visitor to the entrance plaza. The architectural design by I.M. Pei Architects emphasizes a seamless blending with the natural environment, providing both a place to exhibit art and a peaceful setting for contemplation and worship.

The lighting design, produced by Paul Marantz, Alicia Kapheim and Hank Forrest of Fisher Marantz Renfro Stone, makes the museum a warm experience, said IALD judges, providing a “sense of peace and tranquility that is mindful of the environment.”

# excellence

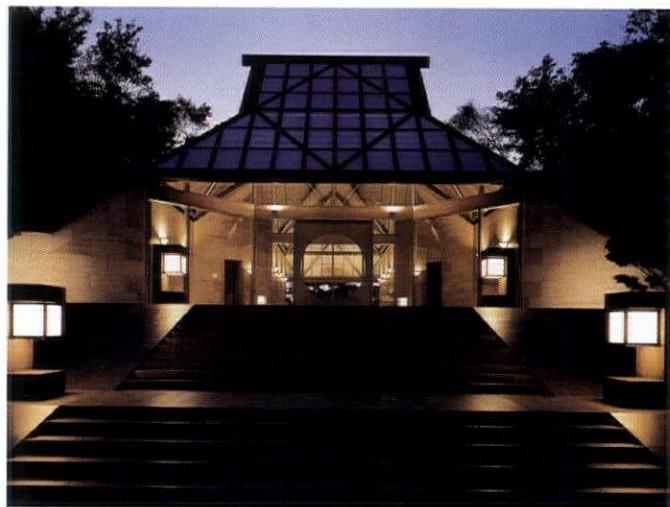
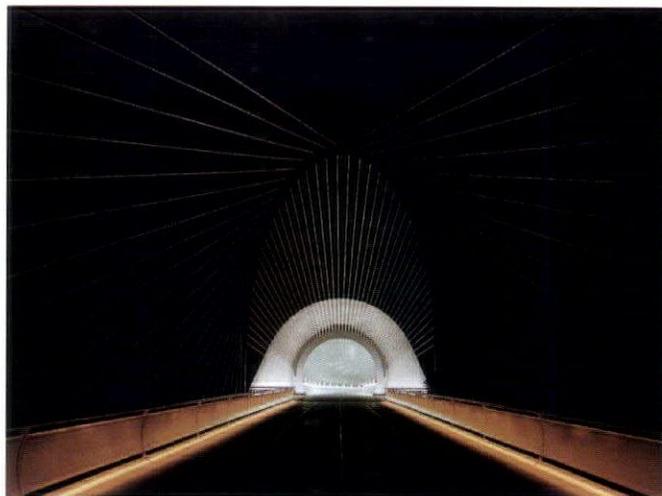
The design goal for the pedestrian tunnel was to provide a sense of drama and mystery, while allowing the visitor to feel safe and comfortable. Sconces and a linear light shelf, at pedestrian height, provide a visual cue to lead the visitor along, yet the lamps are concealed to prevent glare. During the day, the linear fixtures provide fill light in the center of the tunnel to balance the high exterior brightness. At night, these are turned off. A combination of warm-tone, high-color-rendering light sources is used.

As visitors are about to leave the mouth of the tunnel, they see the bridge. At night, this is lighted with warm-toned, high-CRI metal halide burial fixtures that uplight the scene, highlighting the suspension frames—one of the elements that caused IALD judges to praise a “wonderful sense of transition.”

At the museum, the modest entrance, modeled on a traditional Japanese shrine, is framed by landscaping that is accentuated by accent lights installed in the rear of stone lanterns on the steps. A series of uplights and downlights transforms the building into a lantern.

In the entrance hall, incandescent downlights, halogen uplights and track lighting are incorporated into the space-frame structure and operate on a dimming system to make the system flexible due to the presence of the skylight. The amount of sunlight entering the space is tempered by a system of aluminum bars painted to look like wood.

In the galleries, general lighting is provided by a recessed track system with interchangeable cover plates, allowing unused lampholders to be covered by blank plates and thereby eliminating the hole in the ceiling and simplifying the visual appearance of the ceiling. All wall-mounted cases are lighted by fiber optics.



## details

project Miho Museum

location Shigaraki, Japan

owner Shinji Shumei-kai

lighting designers Fisher Marantz  
Renfro Stone—Paul Marantz, FIALD;  
Alicia Kapheim, AIA; Hank Forrest

architect I.M. Pei

engineer Kandenko

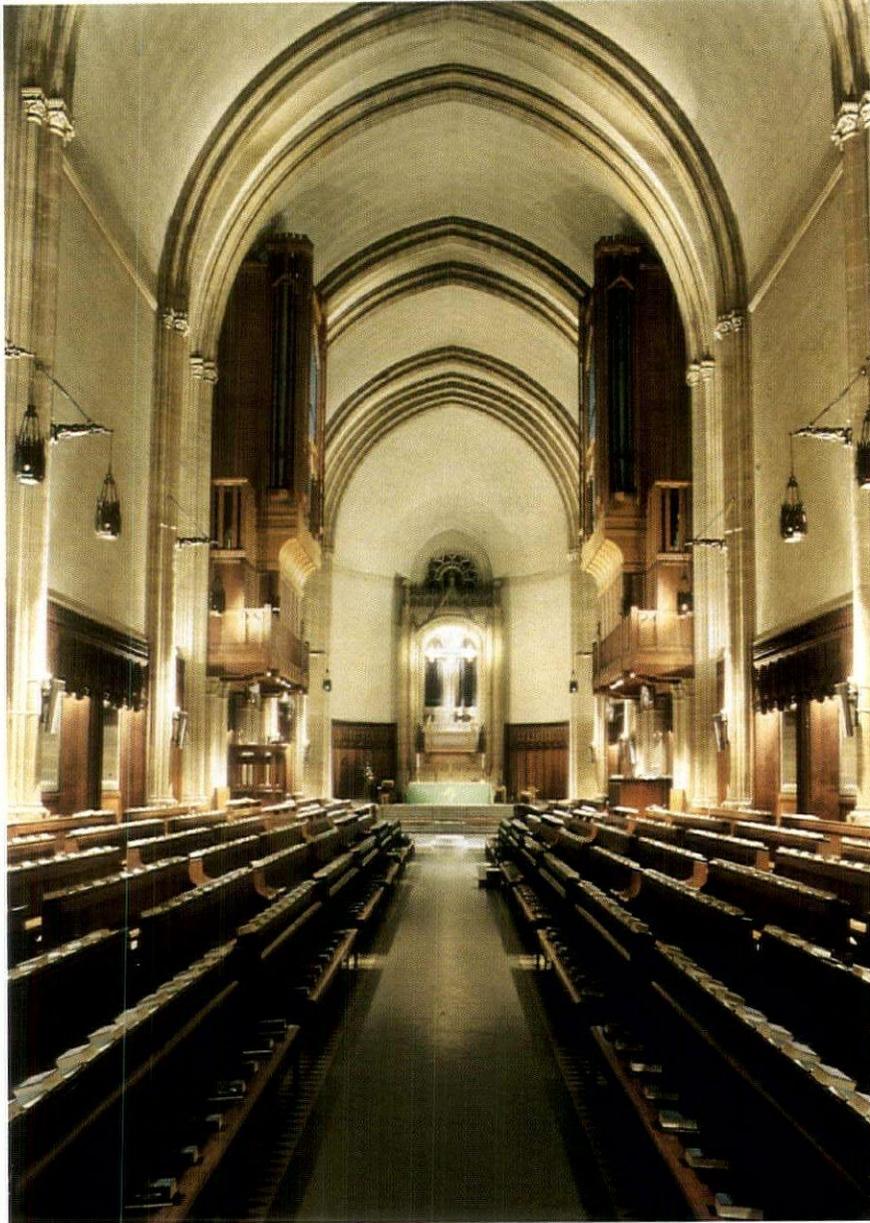
photographer Timothy Hursley

lighting manufacturers Erco Toto;  
EPK; Koizumi; NuLux; Glasbau Hahn;  
National Lighting Co.

IALD  
'98 awards

*award*

# charterhouse memorial chapel



england

The Memorial Chapel lighting project at the Charterhouse School in Surrey, England was conceived to increase light levels to the pews; provide a flexible system for multiple uses of the space, including worship and choral/orchestral performances; enhance the architecture, minimizing visual intrusion; and cause the least physical damage to the building fabric.

# of merit

Nick Hoggett and Richard Bolt of DPA Lighting Consultants, working with Alistair Kingston and Jerry Goolding of Charterhouse, produced a design that responded to these challenges, causing IALD judges to praise its respect for and strong dimensional rendering of the architecture.

The lighting design incorporates 10 lighting components operated on a preset dimming control system. All of the light sources are tungsten halogen. Energy was not a significant issue due to limited hours of use, but color, controllability, optical performance and size were.

Hoggett and Bolt's approach included refurbishing the original Gilbert Scott decorative pendant fixtures with 250W tungsten halogen E27 lamps to provide ambient light, while supplying all other effects from concealed sources. The fitting was raised 1,000 mm to ensure that the front pews receive sufficient illumination; a light level of 20 fc is produced where the hymn books are held, but the front of the seating is kept in relatively low brightness.

"We did not want the feeling of a floodlit environment," said Boggett. "Darkness was as important as the lighted elements."

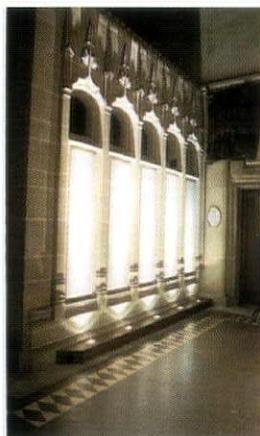
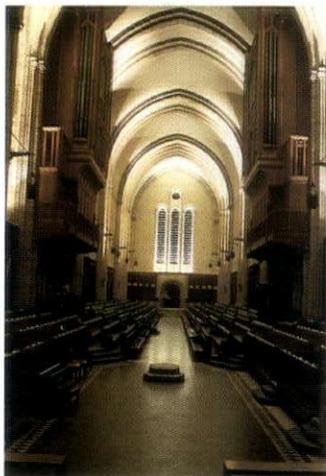
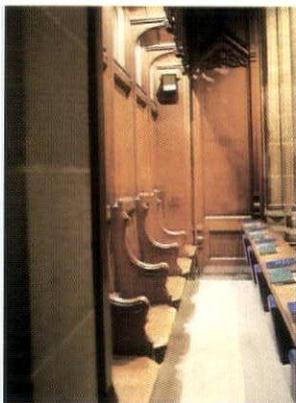
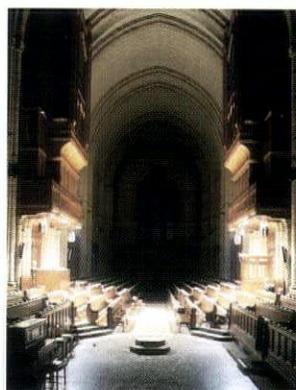
The choir stalls located under the organ originally received minimal light from the general lighting fixtures. Low-voltage spot fixtures were added to increase light levels. The organ case itself is illuminated from low-voltage spot fixtures concealed on the base of the window reveals.

To highlight architectural elements and walls, a series of uplights are concealed in the side windows, which have extremely deep reveals. The second uplighting element is a softer effect emanating from a fitting hidden behind the speakers on each column. Around the perimeter of the Chapel, a series of recesses containing seating have very small fittings. A 20W 12V lamp incorporated into the bays provides vertical illumination to the paneling as well as ambient light.

To create a dramatic effect for the memorial plaques without damaging the building fabric, a timber plinth was built that incorporates low-voltage uplights (bottom, left).

The altar area is the focal point during ecclesiastical services and also serves as a backdrop for choral and orchestral performances. A number of lighting elements create the desired lighting effects. Lighting of the area consists of a vertical three-circuit track mounted behind a rib. The first circuit provides general light; the second highlights the altar; the third highlights the cross. A linear xenon system floats the masonry surround.

To light the performance area where solo concerts, choral and other events are held, four vertical three-circuit tracks concealed in the window reveals provide a number of different lighting scenes. The control system consists of 16 lighting zones linked to a preset dimmer system that has manual access to eight scenes and off, and a master raise/lower facility.



## details

### project

Charterhouse Memorial Chapel

location Surrey, England

owner Charterhouse School

lighting designer

DPA Lighting Consultants—Nick Hoggett, IALD, Richard Bolt

architect Gilbert Scott (1927)

electrical contractor

R.J. Lintott Electrical Contractors

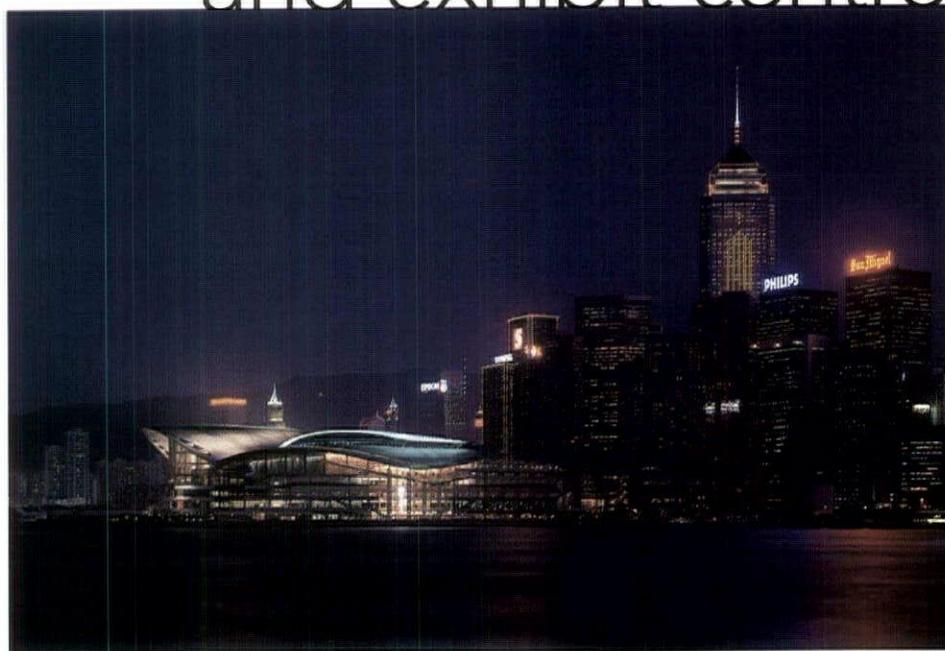
photographer

Nick Hoggett

lighting manufacturers

Erco Lighting; Concord; Light Project; Lucent Lighting

## hong kong convention and exhibit centre

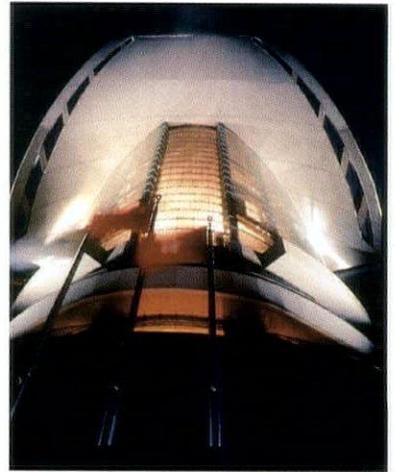
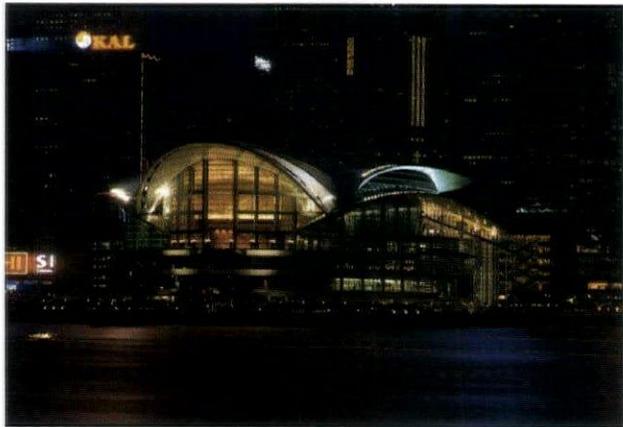


Situated on an island in Victoria Harbor in Hong Kong, the Hong Kong Convention and Exhibit Centre has become a new leading architectural landmark for the city, functioning both as an exhibit venue and a grand-scale civic monument. Paul Helms and Christopher Bowsher of PHA Lighting Design used exterior lighting to emphasize its shape and ensure its prominence in a bright urban skyline, and interior lighting to combine color, efficiency and texture to illuminate large spaces, making the building “glow from within,” according to the IALD judges.

The exterior lighting was designed to emphasize the building's height, shape and details such as the sculptural roof forms, while suggesting motion. Clear metal halide lamps are used to floodlight the underside of the roof's “wings.” The lamps were specified a cool 4000K to reinforce the silver/blue collaboration on the roof and create a dynamic separation from the plane below. The peaked roof segment is lighted with 1000W PAR 64 metal halide lamps with a 3000K color temperature to provide a cool/warm contrast, articulate it from the wings, and emphasize its height. PAR 64 metal halide floodlights spread grazing light over the north peak of the roof. Below, one can see ambient light emanating from the building's interior, creating a lantern-like glow and outlining the whole building form.

# of merit

Inside the Centre, the Grand Lobby and Concourses are lighted with 100W metal halide downlights, with accent lighting and additional ambient lighting provided by 1000W PAR64 quartz adjustable fixtures and 100W metal halide PAR 38 fixtures in a matching housing. Low brightness, small-scale metal halide downlights were selected so that they would appear inconspicuous in the ceiling plane. Further inside, Helms confronted the challenge of defining various spaces and providing lighting for spaces that had more than one use.



Custom fluorescent uplighting at the core wall is used to frame the primary circulation routes which end at the Convention Hall, used for both exhibits and social events. An ambient system using 1000W quartz lamps is activated for social events, and a system using 400W metal halide lamps is provided for exhibits. In the Meeting Level, cold cathode gives detail to the ceiling, and in the Prefunction Space, quartz downlighting adds warmth and texture to the space. Automatic timers activate the sequence of preset scenes during the operating cycle.

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## details

project Hong Kong Convention and Exhibit Centre

location Hong Kong, People's Republic of China

owner Hong Kong Trade and Development Council

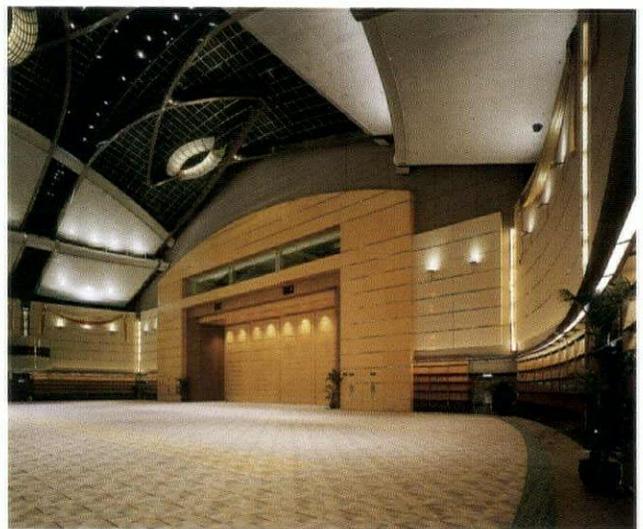
lighting designers PHA Lighting Design—Paul Helms, IALD; Christopher Bowsher

architect Skidmore, Owings & Merrill—Larry Oltmanns, principal

engineer Wong & Ouyang

photographer Chris Eden

lighting manufacturers Erco Lighting; Lighting Services Inc

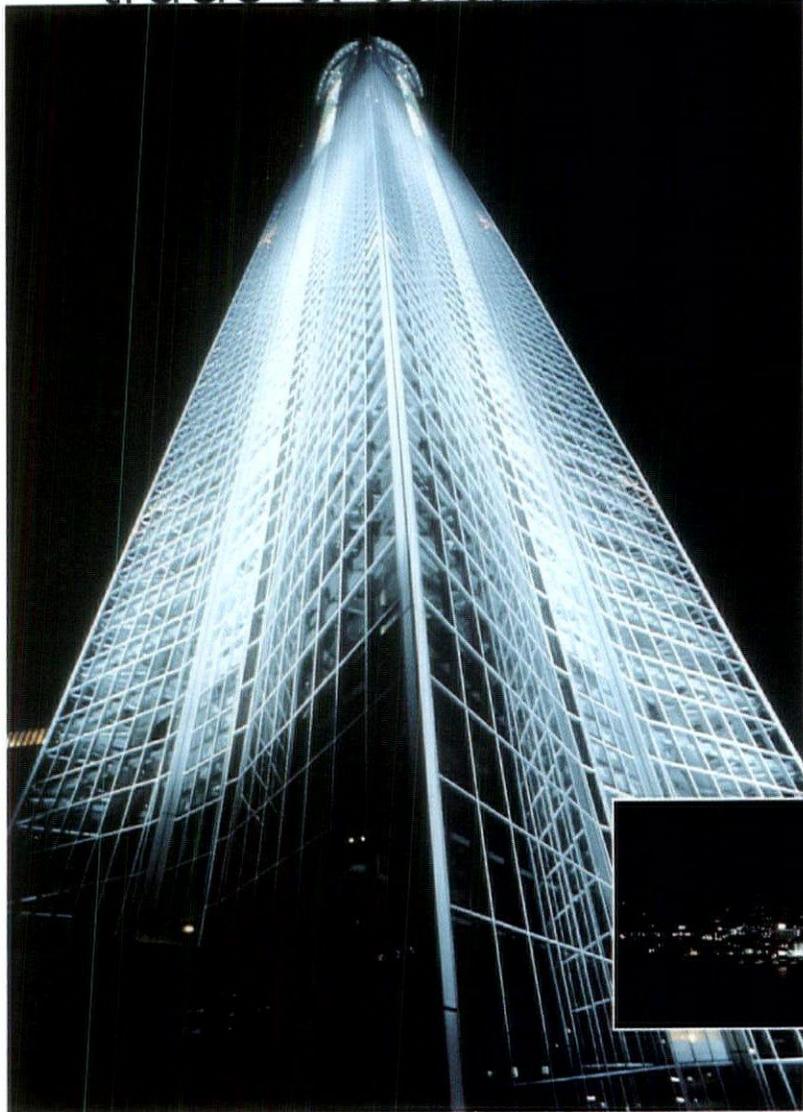


From outside to in, Paul Helms and Christopher Bowsher of PHA Lighting Design sought to emphasize detail, shape and use with dynamic contrast, integration and efficiency.

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## yamaguchi international & culture center



The 492-ft.-tall Yamaguchi International Trade & Culture Center, facing the Kanmon Straits in Yamaguchi, is a futuristic tower built by architects NTT Power and Building Facilities to symbolize the strength and cosmopolitan chic of this Japanese city.

From the tower's observation decks, visitors are offered a spectacular view of the Straits and the Inland Sea. From around the city and from the water, Yamaguchi's inhabitants are offered a modern landmark during the day and now at night, due to the innovative lighting design of Motoko Ishii. IALD judges called the design a "lighting engineering feat," "original" and "dimensional," adding that it is not only true to the architecture, but makes the architecture more than it is.

# of merit

The lighting design fulfilled three objectives: to light the sharp crystalline contours of the tower, plot points of white light on the surface of the sphere at the tower's summit, and project original colors from narrow slits in the middle of the tower to indicate time.

The tower's structural ribs are uplighted with floodlighting that can be seen through the glass walls of the tower with a silver color in spring/summer and a golden color in autumn/winter.



The sphere at the top of the tower brightens and dims as if it were breathing slowly every 15 minutes, and the points of white light (electrodeless lamps) are intended to give the impression of stars in the nighttime sky.

The slits in the side of the tower are used to provide time information with colors, indicating both day of the week and the hour. The colors (Monday/white, Tuesday/green, Wednesday/blue, Thursday/white, Friday/green and Saturday/blue-green) are changed for

three minutes on the hour to announce the color of the next day. On Fridays and Saturdays, a preset weekend program is activated, showing five colors for one minute each. The precise color changes are achieved by combining various filters; for bright light, halogen lamps and dichroic filters are used. Because color is shifted from the center to the circumference when dichroic filters are used, several floodlights are installed to create definite color.



"The opening event for Yamaguchi International Trade & Culture Center, Kaikyo Messe, was a great success," said Motoko Ishii, whose designs in Japan and overseas have won dozens of awards, "and the building has taken its important role as a new landmark. Lighting added charm, instilling a sense of a bright future to the people, as if the tower is sending its light to the world."

## details

project Yamaguchi International Trade & Culture Center

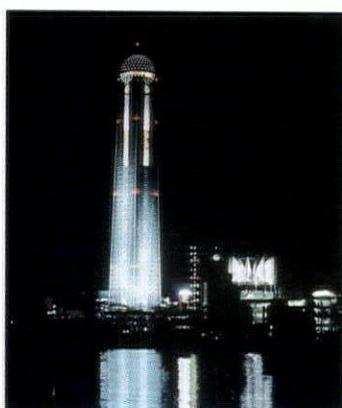
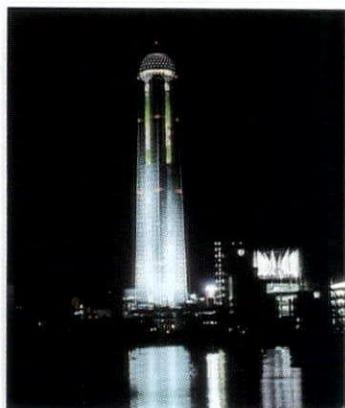
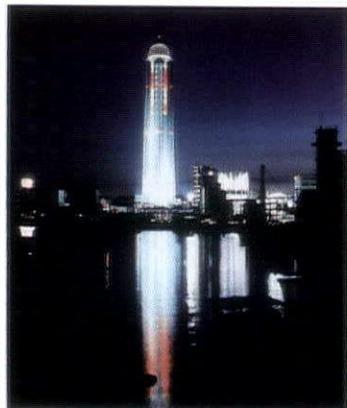
location Yamaguchi, Japan

owners Yamaguchi Prefecture

lighting designer Motoko Ishii, IALD, Motoko Ishii Lighting Design

architect NTT Power and Building Facilities Inc.

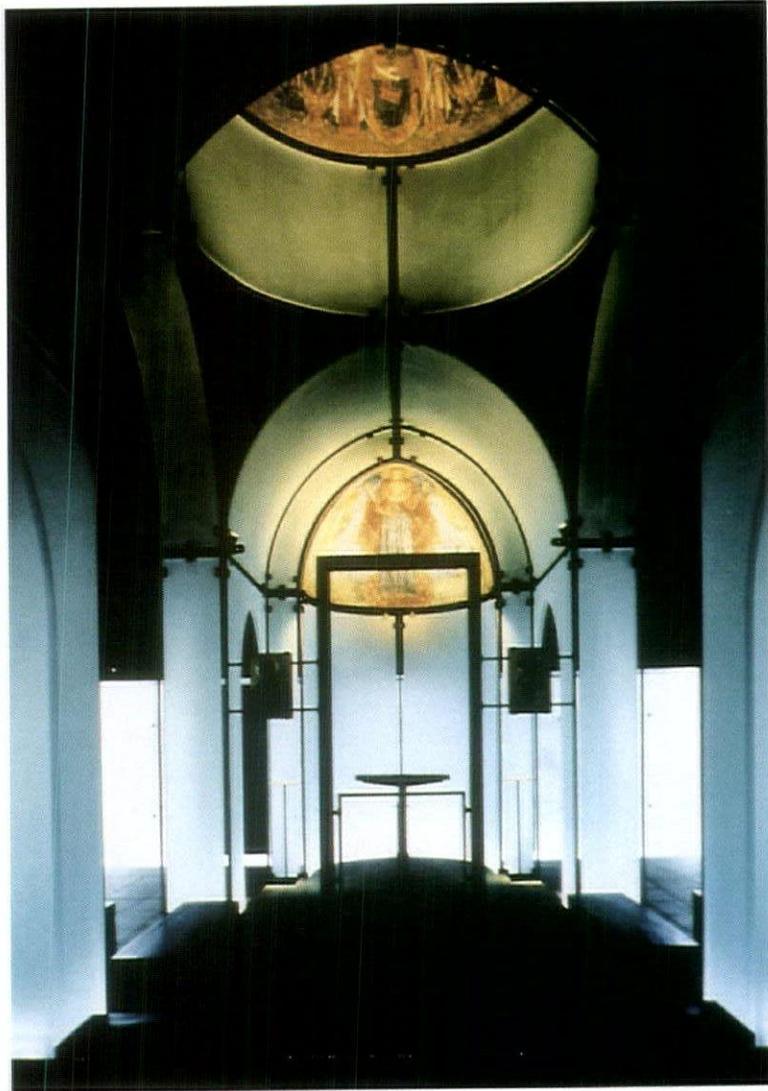
photographer Yoichi Yamazaki



The points of light at the sphere on top of the tower give the impression of stars, and the color slits are used to tell the hour of the day and day of the week: red for Sunday (left), green for Tuesday (middle) and blue for Wednesday (right).

*award*

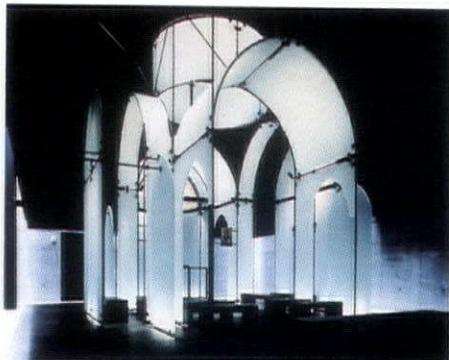
# byzantine fresco chapel



houston

The Byzantine Fresco Chapel serves as both a museum and chapel, housing two Byzantine frescoes evoking the original Cyprus chapel in luminous diffuse glass. Cyprus, an island state off the coast of modern-day Turkey, was once a leading center of early Christianity, which by the fourth century had become the official religion of the Byzantine Empire.

# of merit



The lighting design challenge was to evoke a spiritual, luminous quality for the chapel and frescoes while providing adequate lighting for various functions. Paul Marantz and Barry Citrin of Fisher Marantz Renfro Stone evoked

and reinforced this spiritual atmosphere through the play of light and shadow and the contrast of colors. The result led IALD judges to call the design "spectacular," "an exceptional experience," praising the contrast in color and the excellent integration of the light sources into the architecture.

The entrance lobby is wall washed to bring out the color and texture of the stone. Back-lighted suspended glass plates define the passage beyond.

In the nave of the chapel, adjustable MR16 fixtures with varying spread lenses are strategically concealed in the black walls and suspended from the ceiling to provide shadow-free luminous light for the upper glass panels. Floor-recessed shielded 3000K fluorescent striplights edge-light the lower glass panels. The glowing chapel contrasts with the black ceiling and floor. The cool fluorescent color washes the textured concrete perimeter enclosure to help define and separate it from the highlighted chapel.

The frescoes are uniformly uplighted with the warm color of MR16 lamps fitted in specially designed low-brightness miniature fixtures. All wiring is integrated and concealed within the thin tube structure.

Seating areas receive increased light levels for reading tasks through a preset dimming system.



## details

project Byzantine Fresco Chapel

location Houston, TX

owners de Menil Foundation

lighting designer Fisher Marantz Renfro Stone—Paul Marantz, FIALD; Barry Citrin

architect Francois de Menil

engineer Ove Arup & Partners

photographer Paul Warchol Photography

lighting manufacturers NuLux; Edison Price Lighting; Cole Lighting



# IALD *awards*



Diana Mesh, Zumtobel Staff (left); C.J. Mapletoft, International Lights (right).

Industry professionals celebrated another outstanding year in lighting design. Festivities honoring the award winners were held at Caesar's Palace Hotel in Las Vegas during Lightfair 1998. Pictured on these pages are just some of the 400+ people who turned out to share in the evening's events.



Carol Chaffee, IALD, Carol Chaffee Associates (left); Jim Oliver, Ledalite Architectural Products (right).



1998 IALD Award winner Nick Hoggett, IALD, DPA Lighting Consultants (left); Barry Hannaford, IALD, Lighting Design Partnership (right).



Chip Israel, IALD, Lighting Design Alliance (left); Lee Waldron, IALD, Grenald Waldron Associates (right).



Motoko Ishii, IALD, Motoko Ishii Lighting Design Inc., one of this year's IALD Award winners.



From left: Gary Gordon, IALD, Gary Gordon Architectural Lighting; Jeffrey Milham, IALD, Design Decisions, Inc.; and Frank Conti, Enterprise Lighting Sales.



Gary Steffy, IALD (left) and Gary Woodall, IALD (right), Gary Steffy Lighting Design.



Eddie Effron, Philips Lighting (left); Lesley Wheel, IALD, WGS Lighting Design, Inc. (right).

## congratulations...

The International Association of Lighting Designers has awarded three aspiring lighting designers a total of \$3,000 in scholarship and grant money to further support educational pursuits of lighting design. The winners were chosen by the IALD Grant and Scholarship Committee based on criteria including grades, extracurricular activities, a written statement and pictures of the applicants' lighting artwork.

Julie C. Reeves, a recent Texas Christian University graduate with a B. S. in interior design, received the top IALD Scholarship of \$1,500, which was presented to her at the 15th Annual IALD Awards Program. Reeves has completed a summer internship with a lighting firm and has taken a position with a lighting design firm in Long Beach, CA.

Kyllene A. Jones, an undergraduate in architectural engineering at the University of Kansas, received the combined scholarship underwritten by *Architectural Lighting* in the amount of \$1,000.

A third IALD grant of \$500 was awarded to Lindsay Stephans, a graduate student in the architectural lighting program at Parsons School of Design in New York City.



Left to right: Kyllene Jones, Editor-in-Chief Christina Trauthwein, Julie Reeves and Chip Israel, Lighting Design Alliance.

# Design Fees Study

**A**rchitectural Lighting recently polled 1,000 readers about their attitudes towards design fee structures. Responses were collected from each region of the U.S., with the strongest showings on the East and West coasts. The majority of respondents work for small firms of less than six employees (54 percent); half have been in business more than 20 years—25 percent, more than 10 years. Respondents include architects (41 percent), interior designers (22 percent) and lighting designers (10 percent).

**About fees.** What fee arrangement most accurately accounts for the services that lighting specifiers render to clients at this time? Respondents indicated that either an hourly rate would be most applicable (29 percent) or a negotiated lump sum (29 percent), followed by a percentage of total project budget (15 percent) and percentage of lighting budget (10 percent). *See Chart 1.*

What would be an ideal way for practitioners to work is, unfortunately, not the reality. Asked what is the minimum percentage based fee needed to cover overhead and generate a profit for design services, relatively few respondents (30 percent) believed that 6 percent or less would suffice. Rather, more than half of all respondents (54 percent) said 7 percent or more—including a considerable number of readers (32 percent) citing 10 percent or more. *See Chart 2.*

If hourly rates are a leading basis of fees, our readers report that current rates for design services by job title are spread across a considerable range.

- *Principal and partner services:* Slightly more than half (51 percent) check in at \$110+, and more than 25 percent at \$90-109. *See Chart 3.*

- *Marketing/business development:* By contrast, rates for this group are well below \$90, with a majority of the respondents reporting \$50-59.

- *Project managers, directors, job captains:* This group is billing less than \$100 (77 percent), though just slightly, as one-quarter of that amount is at \$90-99.

- *Senior designers:* This group is billing at rates of \$50-59 (11 percent), \$60-69 (17 percent), \$70-79 (29 percent) and \$80-89 (23 percent).

- *Junior designers/draftspeople/CAD operators:* Not surprisingly, hourly rates for this group are noticeably low with 61 percent of junior designers billing lower than \$69, 50 percent of CAD operators at \$50-59.

And on what method are hourly rates based? Just under half the readers said multiplier plus overhead factor, while competitive market rate is also a popular method (34 percent). *See Chart 4.*

While a dollars per sq. ft. fee arrangement might be appropriate for office design (35 percent) and possibly retail (21 percent), few thought it should apply to education, residential, healthcare and other market segments. Is negotiated lump sum a better way to charge clients? Readers suggested that this arrangement was most appropriate for traditional scope of services (56 percent) and consulting services only (38 percent).

Design fees are not generating tremendous profit for designers. When respon-

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dents compared design fees with overhead costs, the results were sobering. Those who say the fees cover overhead with substantial profits (13 percent) are offset by those who say fees do not cover overhead without significant reduction in scope of services or other cost savings (19 percent), while even greater numbers report that fees cover overhead costs with little or no profits (52 percent). *See Figure 5.*

When asked what is the ideal profit percentage for the company in which respondents work, about half (49 percent) said 8 percent or more, with a 10 percent profit percentage the popular response. *See Chart 6.*

And what percentage are lighting design fees of construction budget? More than 76 percent responded less than 1.6 percent.

**The future.** How might fees trend in the next year? For the most part, industry professionals are looking forward to better times as the strong economy moves toward another year of growth. Readers who predict fees will remain unchanged (44 percent) have a slight edge on those who expect to see rising fees (39 percent). Fortunately, very few respondents anticipate falling rates (7 percent). ■

Chart 1

### Fee Arrangement



- percentage of total project budget (15%)
- hourly rate depending on project team staffing (29%)
- dollars per square foot (3%)
- negotiated lump sum (29%)
- percentage of lighting budget (10%)
- percentage of principal designer's fee (6%)
- other (4%)
- n/a (4%)

What fee arrangement most accurately accounts for the services that lighting specifiers to clients at this time?

Chart 2

### Minimum percentage-based fee

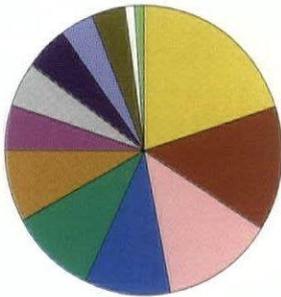


- under 5%, (8%)
- 5%, (8%)
- 6%, (14%)
- 7%, (11%)
- 8%, (11%)
- 9%, (0%)
- 10%, (21%)
- over 10%, (11%)
- n/a, (16%)

What percentage-based fee represents the minimum needed to cover overhead and generate a profit for lighting design service today?

Chart 3

### Hourly rates for principals or partners



- \$50-59, (1%)
- \$60-69, (4%)
- \$70-79, (10%)
- \$80-89, (13%)
- \$90-99, (10%)
- \$100-109, (20%)
- \$110-119, (8%)
- \$120-129, (14%)
- \$130-139, (4%)
- \$140-149, (5%)
- \$150-159, (5%)
- \$160+, (5%)
- n/a, (1%)

Chart 4

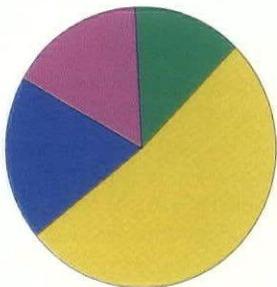
### On what method do you base hourly rates?



- multiplier based on salary, (18%)
- multiplier plus overhead factor, (45%)
- competitive market rate, (34%)
- n/a, (3%)

Chart 5

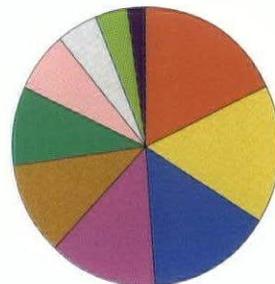
### How do design fees compare with overhead costs in today's market?



- fees do not cover costs (19%)
- little profit (52%)
- substantial profits (13%)
- n/a (16%)

Chart 6

### What is the ideal profit percentage for your company?



- 1, (2%)
- 2, (4%)
- 3, (5%)
- 4, (7%)
- 5, (9%)
- 6, (11%)
- 7, (13%)
- 8, (15%)
- 9, (16%)
- 10, (18%)

## HOUSE WARMING— CREATING AN INVITING, FUNCTIONAL HOME ENVIRONMENT

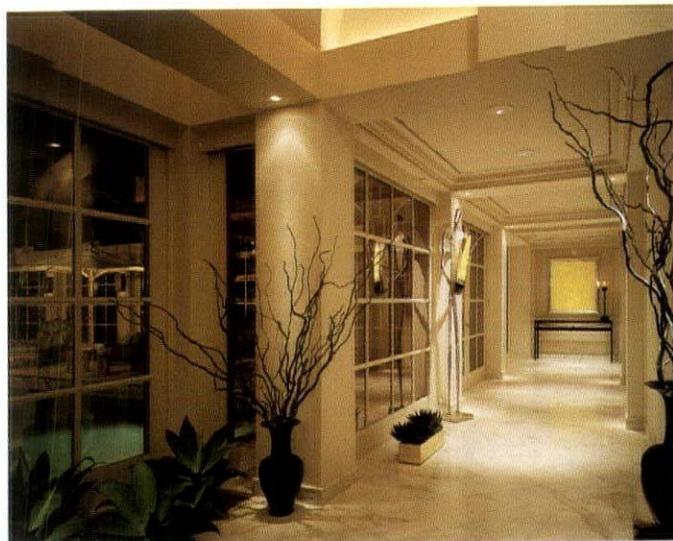
BY WANDA JANKOWSKI, CONTRIBUTING EDITOR

Though each residential client has individual requirements, there is a framework of tried-and-true techniques that can be drawn on to assure that the lighting system designed will reliably produce the results intended. Presented here is expert advice from Randall Whitehead, Randall Whitehead International, San Francisco, based on his many experiences in lighting residential spaces. Case studies on specific installations are included in the accompanying sidebars to demonstrate how basic techniques can be adapted to suit very different clients and design styles.

### LAYERING THE LIGHT

Acquaint clients with the “layers of light” concept. To help your clients determine what kind of system will best suit their needs, break lighting down for them into these general and understandable categories: task, ambient or general, accent and decorative. “Once they understand the concepts behind them,” Whitehead said, “you can use the categories to elicit from the client what kinds of effects they want in each room.” Whitehead, like many other designers, approaches a room in terms of creating layers of light that address these four categories.

Provide enough ambient light in the living or great room. “Often designers and architects will address the other kinds of light in a living room, but not ambient,” said Whitehead. “They will create dramatic spaces where every vase and piece of artwork is lighted and highlighted, but the seating area is left in darkness. A degree of



ambient light mixed in with other components humanizes the space and makes occupants look better.” Bouncing uplight off the ceiling, particularly in a high-volumed space, can make the room look larger and soften shadows created by direct beams from downlights that can make occupants look tired or older than they are.

Plan the illumination to suit the furniture layout. Particularly in new construction, the temptation is to install the lighting according to a routine grid—for example, three downlights on each side of the room. Whitehead recommends requesting a plan specifying the layout of the furniture from the client. If the owner plans to include a buffet in the dining room on the side wall, for example, the dining table may be placed closer to the opposite side of the room rather than in the center of the room. Knowing the layout allows the chandelier to be positioned over the table and not awkwardly in the center of the room. Find out, for example, if the client wants a sofa and end table to be in front of a fireplace in the living room, so an electrical outlet can be installed in the floor near the furnishings and cords for nearby floor or table lamps unobtrusively plugged in.

Specify a system with flexibility. In spite of the client’s initial layout intentions, tastes and furnishings can change with the passing of time. Whitehead recommends using adjustable recessed fixtures, so if occupants reposition the furniture, the beam angles can be readjusted. Or if artwork is changed, the fixtures can be relamped to match a different beamspread with a different-sized painting or sculpture. Including a dimming system enables the occupant to reprogram the lighting to relate to new tasks that will be performed in a room whose function is changed—for example, when a library is transformed into a home theater.



PHOTOGRAPHY BY DOUGLAS A. SALIN

(continued on page 54)

# WHAT'S COOKIN' IN THE KITCHEN...

Members of the Baby Boomer generation, in particular, are looking to live in spaces that reflect their personalities and interests. One approach to lighting the kitchen is to create schemes that depart from the standard task/ambient configurations and go beyond to incorporate the whimsical and dramatic, so that the space elicits an emotional reaction in addition to being functional. The following kitchens are both designed by Gary White, CID, CKD, CBD, Kitchen & Bath Design, Newport Beach, CA, who drew upon his many years as a lighting designer to spice up the ordinary.

## ELEMENTS OF SURPRISE

A traditional, Country-influenced, American ranch-style home with arched doors and thatch-like roof is what first greeted White when he paid his new clients a visit. But once the front door opened, he said, "Everything I saw of note in their interior seemed to have been acquired for its power to surprise." The boldness and color of this 40-something California couple's furnishings led White to believe that perhaps they and their teenage children would welcome the avant-garde Memphis style into their renovated kitchen.

The Memphis style involves juxtaposing contrasting elements—mixing colors and textures to push the design envelope and enliven the space and the senses. "The lighting design," said White, "consists of 15 separate elements orchestrated by scenic controls into four preset schemes."

White also incorporated the following into his design:

**Cove and above-cabinet lighting.** California's energy code mandates that fluorescent lamps be a primary source of illumination in the kitchen. White has custom designed a color-balanced, dimmable two-layer fluorescent system concealed in the coves of the coffered ceilings and above the wall cabinets to cast ambient illumination upward.

**Cable lights.** Four Metal Men fixtures, each fitted with a low-voltage halogen lamp, are suspended on wire cables to illuminate the back wall of the breakfast nook.

**Glass-trimmed downlights.** Multi-shaped and multi-colored Murano translucent glass trims glow from light cast by ceiling-recessed halogen fixtures clustered over the breakfast table and the sink area.

**Pendant fixtures.** Two pendant fixtures with Murano glass bowls—one blue, one white—are suspended from within the ceiling coffer in the cooking/preparation area.

**Undercabinet illumination.** Low-voltage miniature halogen strip lights concealed under all the wall cabinets provide task lighting.

**Interior cabinet lights.** Miniature round, thin-profile halogen fixtures illuminate the interiors of the glass-doored cabinets.

**Bar lights.** Steel twin-rail, "chopstick" mounted MR16s illuminate the bar area beyond the sink.

Photo by Larry Falke

Lighting Manufacturers: Itre Lighting; Osram Sylvania; Lutron; Translite; SeaGull Lighting



## HEAVY METAL

White's "empty nester" clients wanted a kitchen that was theatrical and magical. The husband happened to be a sheet metal fabricator and White used that talent in two ways to shape the lighting for the project. The Italian-made cabinets have a 3/4-in. overhang on the front doors, which is wide enough to conceal the 3/8-in. wide 10W 24V xenon lamps mounted 4-in. on center on a light rail beneath the cabinets. However, the lamps' presence would have been revealed when they were turned on. "Usually you can almost read the UL labels of under-cabinet lights in the reflection of dark granite countertops when they are turned on," White explained. To avoid the problem, the owner fabricated a valance for the light rail out of black, powder-coated steel.

The owner's second contribution was fabricating the large metal triangular-shaped fixture suspended above the peninsula, custom designed by White. Casting light downward onto the countertop are miniature housings fitted with MR11s recessed into the metal framework and concealed behind decorative glass diffusers. The top of the triangle is covered with perforated steel that allows heat to escape and on which are mounted T8 linear fluorescents for uplighting.

Dimmable T8 linear fluorescents installed as above-cabinet lighting also add ambient illumination to the room. A dash of color comes from multi-colored glass pendants fitted with G4 halogen capsules and suspended over a built-in table for two. The pendants dapple the wall and ceiling with small pools of light. Additional ambient and task illumination is also provided by angle-correcting MR16 recessed ceiling downlights.

Photo by Larry Falke

Lighting Manufacturers: SeaGull Lighting; Translite; Lutron; GE; Osram Sylvania, Horizon LightWorks



(continued from page 52)

Use good color-rendering fluorescent lamps. California's Title 24 mandates that the general illumination in the kitchen and bath be fluorescent. But though color temperature and dimming capabilities have improved and electronic ballasts enable quieter operation, many homeowners still have doubts about the quality of light they will receive from fluorescents. To overcome their fears, Whitehead recommends using fluorescents in a "non-fluorescent way." In a kitchen over an island, for example, suspend three faux-alabaster pendants fitted with 2700K compact fluorescents.

In media rooms, keep fixtures out of the line of sight. In

addition to blackout shades, many homeowners opt to have sound absorption material installed on the walls, eliminating the possibility of using wall sconces, which would pierce it. Whitehead has used a pair of torchieres to illuminate the media room. Another option is building a shallow dome into the ceiling so that a chandelier or

small pendant can be positioned in the center and still be out of the line of sight. Lining the perimeter of the dome with dimmable low-voltage striplights will create enough of a gentle glow to allow occupants to exit and enter the room safely during a movie.

Include ambient light in the bedroom. Master bedrooms today can be quite large and include a sitting room, fireplace and dressing area. In addition to reading lights and downlights, sufficient ambient illumination should be included to allow tasks to be performed such as laying out clothing on the bed while packing for a trip. Increasingly, Whitehead is seeing a trend toward including a console with a pop-up television at the foot of the bed. To allow for comfortable viewing, use opaque or translucent shades if swing-arm reading lights are wall-mounted on either side of the bed to avoid hotspots on the screen. And do not light artwork that may be displayed on the wall above the bed.

Fluorescents work well in closets and laundry rooms. Full spectrum or daylight-quality fluorescents are fine for walk-in

closets and laundry rooms given the long life and energy-saving capabilities. Your clients' complexions may not look their best, but they will be able to select clothing by color.

Light the outdoors to be enjoyed from the inside. Those who dwell in climates that are warm year-round welcome exterior lighting of their gardens and pools. However, most homeowners in the U.S. experience cold weather conditions that necessitate more time spent at home indoors. Exterior lighting should be designed for clients in these climates to be enjoyed looking from the inside out, as well as from the exterior. When lighting the garden or backyard plantings, strive for a layered, multi-dimensional look with nighttime lighting effects.

Decoratives are the fixtures of the '90s. Decorative fixtures in the home—in an entryway, over the dining table, near the exterior entrance—are more popular today than they were a decade ago, according to Whitehead. In the 1980s, recessed halogen and indirect fixtures were very popular, but in the 1990s, the romance of decorative fixtures is back. In high-end projects, custom decorative fixtures, viewed as light sculptures by the clients, are gaining in popularity. ■



PHOTO BY DOUGLAS A. SALIN

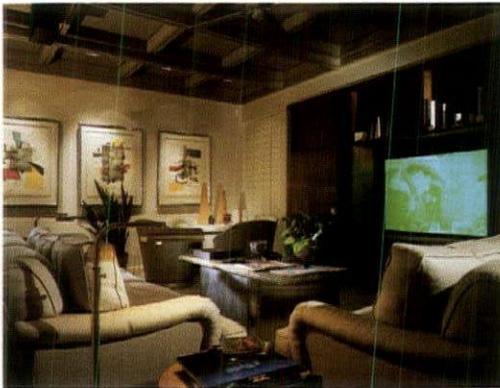


PHOTO BY DENNIS ANDERSON

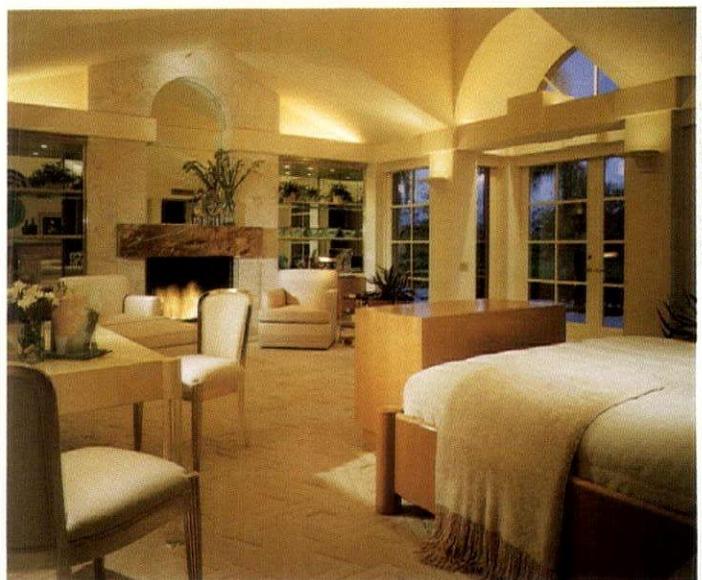


PHOTO BY DOUGLAS A. SALIN

## THE BATH: PEACEFUL COEXISTENCE

"I design light by responding to architecture. This leads to creative solutions," said Melinda Morrison, Auerbach + Glasow, San Francisco, CA, who designed the lighting for the Greene residence, a single family home that had been built in 1870 and originally functioned as a winery. Extensive work was done to the structure by a team that included Kuth Ranieri



Architects, San Francisco, CA with Doug Thornley as project manager. A dynamic tension is created by the coexistence of the new and old architecture. All new construction "floats" in the envelope created by the old stone and the new hip roof and perimeter skylights.

Since the hip roof provided junction box recess only and no walls extend up to the "old" ceiling, downlights were not an option.

A "column of light" created by mounting dimmable fluorescent fixtures behind a vertical, etched glass panel is used to illuminate the hallway that leads to the master bedroom and bath.

In the bath, the column of light concept is repeated. In this case, the illuminated vertical slot located next to the bathroom sink includes horizontal shelves for display. A prismatic diffuser acts as a refractive background for the vertical medicine cabinet creating an artful display.

Additional light is produced by opening the other half of the cabinet. The door, mirrored on the inside, contributes additional reflective properties.

Since the client prefers to read while soaking in the tub, reading light is provided via dimmable fluorescent fixtures mounted high enough in the horizontal niche adjacent to the tub to avoid unwanted sight lines. Both the vertical column and the niche are relamped via access from room on the other sides of the walls.

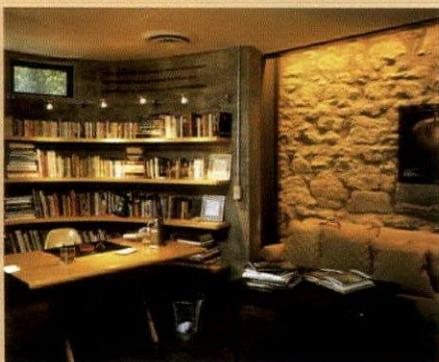
Photos by Sharon Risedorph (above); Dennis Anderson, (right)



tip

One of the best ways to illuminate the vanity area is simply to place soft, glare-free fixtures on either side of the mirror. A pendant suspended in the center of the room or well-placed wall sconces can provide sufficient ambient illumination. All fixtures close to water should be installed with an instant circuit shutoff or ground fault interrupter and be damp location listed by UL or another approved testing laboratory.

## HOME OFFICE: MORE HOME THAN OFFICE



More homes are built today with open layouts in which rooms flow into each other without distinct walls or doors separating them. Often, the home office is visible from adjacent areas in the home, such as the living room, kitchen or family room. Consequently, homeowners prefer an office lighted with incandescents to blend in with these other areas.

Simplicity enhanced by texture is the concept behind the home office. The books on the curved shelves of this residence are illuminated with surface-mounted, adjustable, low-voltage MR16s cantilevered off the back wall. Task lighting on the desk is provided by a portable table lamp. The rough textures of the stone wall are grazed with light from incandescents concealed in a ceiling slot.

The dimming system provides individual channel and remote control for all lighting.

If the home office includes a computer, try indirect illumination in the room—it won't cause the imaging or hotspots on the screen that track lights or downlights can create. Many people also prefer to work at a computer with only the glow of the screen and some daylight filtering in through a window. Whitehead suggests placing an upright behind the monitor. This will brighten the walls and ceiling and may help alleviate the eye strain that can come from the harsh contrast of viewing a glowing screen surrounded by darkness. Finally, keep the terminal screen away from the window. Strong daylight hitting the screen is hard on the eyes.

Photos by Sharon Risedorph (above); Dennis Anderson, (right)



## BEYOND THE BARRIERS— A UNIVERSAL APPROACH

BY LOIS I. BURGNER, CONTRIBUTING EDITOR

The American with Disabilities Act (ADA) may have brought accessible design to the fore, but the concept of universal design remains foreign to many. Basically, universal design, an idea credited to the late Ronald L. Mace, founder

of the Center for Universal Design, is design for everyone: all ages, all abilities. There are over 30 million people in the U.S. with functional limitations (12 to 20 percent of the population), and as baby boomers age, these numbers will increase. Design that excludes or hinders the elderly, children and the challenged ignores important potential markets.

There are now many companies, architects and designers who advocate and practice universal design. But beyond a slew of ADA-compliant sconces, few lighting manufacturers or lighting designers have paid attention to this growing design trend. One exception is Leviton, which has gathered a number of automated controls, remote controls and control systems into a Universal Design Series. These products are not marketed with a prominent wheelchair symbol. Instead, Leviton emphasizes the versatility, attractiveness and desirability of these products and their suitability for all populations.

"Universal Design," according to Peter Wooding, Peter Wooding Design Associates, Providence, RI, "is design that tries to accommodate the largest number of people with a single design—which is often very hard to do." Perhaps the most prominent group of "challenged" people is the elderly. Current research estimates that by the year 2020, the elderly population will double, many of whom desire to "age in place." That is, they wish to remain in their current residences and live unassisted for their entire life span. In residential design, issues of comfort rival safety and function. Other homeowners are housing their parents and children simultaneously. This is an immense population that shares many common limitations, particularly low vision abilities.

Due to changes in the eye, seniors require higher levels of light than people with average vision. "Elderly people also have a sensitivity to glare, and it gets worse over time," said Linda Sanford, a lighting consultant based in the San Francisco Bay area. "So at the same time you want to provide more light, you have to make sure that you're minimizing glare." Well-shielded task and accent lighting is often the solution. Beyond task lighting equipment, Sanford added, most lighting fixtures currently available fail to meet this audience's needs.

### ACCESSIBLE & ADAPTABLE

The ADA is similar in intent to the principles of universal design, but applies primarily to public buildings. Barrier-free design, also called accessible design, is based on the premise that persons of all abilities should have equal access. The blind and those with low vision perhaps benefit most

## *u•ni•ver•sal de•sign*

The design of products and environments to be useable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

from the ADA projection rule that applies to corridors and other circulation areas: from 27 to 80 in. above the finished floor nothing can project more than 4 in. from the wall.

Universal design is also a matter of safety. "Extra lighting becomes critical for accident prevention," said Cynthia Leibrock, principal/founder of Easy Access, Fort Collins, CO. "At the tops of stairways, a room that has electrical controls, and entryways that could become slick if people track water in. These would be excellent places to increase light levels." Automated security lighting can be highly desirable. Occupancy sensors that turn lights on as one enters a room are a boon to people of all abilities.

Costs are often a barrier to meeting accessible and adaptable criteria. "The question is not so much what does it cost, but what do you get back?" said Jim Mueller, president of J.L. Mueller Incorporated, Chantilly, VA. Mueller specializes in adapting work spaces to accommodate challenged employees. "If you can start out with something that meets everybody's needs, then that's great," said Mueller, "If you can't do that, the next best thing is to make it adaptable."

Universal design is about enabling people and creating independence with design. A major characteristic of universal design is often just good lighting design practice. The tolerances are narrower, so that an "average" person enjoys the space overall; it's universally more useable. Likewise, a person with a limitation will notice the extra care and attention, because without it he or she might be disabled by design.

Some designers argue that trying to design all things for all people can result in boring, "vanilla" spaces. "The point is that you come up with a design that retains its integrity, that basically accommodates as many people as possible," Wooding countered. And, most often, universal design can be integrated seamlessly into a structure. A good example is the Cooper-Hewitt National Design Museum in New York City which recently completed a major refit to accommodate all types of visitors. The upcoming exhibit "Unlimited By Design" (November 1998 through March 1999) will demonstrate the institution's commitment to improving the quality of life through design. Galleries are being transformed into highly accommodating and flexible prototype living spaces.

The National Endowment for the Arts and the National Building Museum sponsor the Images of Universal Design Excellence Project to educate practitioners, faculty, and students. For more information on this juried contest, contact Universal Designers & Consultants. ■

### RESOURCES

The Center for  
Universal Design  
(800) 647-6777

The Lighthouse Inc.  
(212) 821-9559

Universal Designers &  
Consultants, Inc.  
(301) 270-2470

Adaptive Environments  
Center, Inc.  
(800) 949-4232

## UNIVERSAL LIGHTING DESIGN TIPS

- DIMMERS ADJUST LIGHTING LEVELS TO USERS' PREFERENCES. SENIORS AND OTHERS WITH LOW VISION CAN REQUIRE UP TO FIVE TIMES THE AMOUNT OF LIGHT FOR CERTAIN TASKS AS THOSE WITH "AVERAGE" VISION. OTHER EYE DISEASES MAY CAUSE PEOPLE TO REQUIRE LOWER LEVELS.
- MANY OLDER PEOPLE ARE PARTICULARLY SENSITIVE TO GLARE, SO WELL-SHIELDED FIXTURES AND INDIRECT SOURCES, INCLUDING COVES AND VALANCES, ARE PREFERRED.
- WHERE CHILDREN OR ADULTS OF SHORTER STATURE PERFORM READING TASKS, LAMPSHADES SHOULD BE ADJUSTABLE TO REDUCE GLARE.
- ADJUSTABLE LIGHT SOURCES SHOULD BE CAREFULLY GUARDED TO PREVENT BURNS WHILE ADJUSTING.
- FOR PEOPLE IN WHEELCHAIRS, CHILDREN AND SHORTER ADULTS, FIXTURE CUTOFFS (LAMP AND LAMP IMAGE) ARE OPTIMAL AT 30 TO 40 DEGREES.
- ABRUPT ADAPTATION FROM BRIGHT TO DARK AND VICE VERSA CAN BE PROBLEMATIC FOR EVERYONE, EVEN MORE SO FOR THE ELDERLY AND PEOPLE WITH RETINITIS PIGMENTOSA. CAREFULLY LIGHTED TRANSITION SPACES GIVE THE EYE SOME TIME TO ADJUST.
- BALANCE BRIGHTNESSES AND CONTRASTS THROUGHOUT THE SPACE. IMPORTANT AND DIFFICULT TASKS OR FEATURES SHOULD BE EMPHASIZED (E.G., WORK SURFACES OR A LOBBY DIRECTORY) AND SUBORDINATE FEATURES DOWNPLAYED.
- LIGHT SOURCES AND AIMING ANGLES SHOULD BE COORDINATED WITH INTERIOR FINISHES TO PREVENT DISABLING REFLECTED GLARE.
- WINDOW SHADES SHOULD BE ADJUSTABLE TO CUT OUT GLARE OR, ALTERNATIVELY, PROVIDE HIGH AMBIENT LIGHT LEVELS.
- FLICKERING OR FLASHING LIGHTS, EVEN FLUORESCENTS WITH MAGNETIC BALLASTS, CAN SOMETIMES INDUCE SEIZURES IN PERSONS WITH EPILEPSY.
- DIFFERENTIATION AMONG BLUE, VIOLET AND GREEN IS DIFFICULT FOR MANY SENIORS, BECAUSE OFTEN THE EYE'S LENS YELLOWES OVER THE YEARS. A HIGH-CRI SOURCE WILL AID IN DISCRIMINATION; PERHAPS THESE COLORS SHOULD BE AVOIDED IN MONOCHROMATIC COLOR SCHEMES OR GRAPHIC DISPLAYS RELATING INFORMATION.
- AN AREA OF LIGHTNESS ON THE FLOOR, SUCH AS A POOL OF LIGHT CAST BY A DOWNLIGHT, CAN BE INTERPRETED AS A STEP. A PERSON WITH AMBULATORY LIMITATIONS, PERHAPS WALKING WITH A WALKER OR CANE, MAY MISINTERPRET THE VISUAL CUE AND STUMBLE OR FALL.
- DANGER AREAS INCLUDE STAIRS, BATHROOMS, ENTRYWAYS, COUNTERS AND STOVETOPS. STAIRS SHOULD BE CAREFULLY LIGHTED TO DEFINE RISERS, PARTICULARLY ON CARPETED STAIRS.
- CONTROLS SHOULD NOT INVOLVE TIGHT GRASPING, PINCHING, OR TWISTING (ADA REQUIREMENT). THIS ACCOMMODATES PEOPLE WITH ARTHRITIS OR OTHERS WITH LIMITATIONS OF MANUAL DEXTERITY.
- SWITCHES SHOULD BE LOCATED 3 FT. ABOVE THE FINISHED FLOOR.
- CRUCIAL CEILING FIXTURES MAY BE RIGGED TO PULL DOWN FOR RELAMPING. OVERHEAD MECHANISMS CAN MOST OFTEN BE REACHED WITH A GRABBER. LONG LIFE LAMPS, OR DIMMING TO PROLONG LIFE, CAN ALSO REDUCE MAINTENANCE HASSLES.
- CONTROLS SYSTEMS THAT ARE OVERLY COMPLICATED CAN BE A HINDRANCE RATHER THAN A HELP. IN ADDITION, HIGH-TECH SYSTEMS CAN FAIL, PERHAPS CREATING A DISABLING SITUATION. OFTEN THE LOW-TECH SOLUTION IS BETTER.
- GLARE ON A SHINY FLOOR CAN BE PERCEIVED AS WATER, AND THESE AREAS WILL BE AVOIDED BECAUSE THEY'RE PERCEIVED AS SLIPPERY.
- LONG LINES OF LIGHTING THAT APPEAR TO CONVERGE IN THE DISTANCE CAN BE VISUALLY CONFUSING. IN INSTITUTIONAL CORRIDORS, THIS SCHEME SHOULD BE CAREFULLY AVOIDED AS IT CAN MAKE CORRIDORS SEEM EVEN LONGER.
- MONOTONOUS LIGHTING SCHEMES ARE BORING AND UNSTIMULATING WHEN VIEWED OVER LONG PERIODS. VARIED SYSTEMS OR LAYOUTS, AS LONG AS THEY FORM PATTERNS, CAN HELP WITH ORIENTATION (DETERMINING WHERE YOU CURRENTLY ARE) AND WAYFINDING (VISUAL CUES THAT HELP YOU GET WHERE YOU'RE GOING).
- TIMERS, OCCUPANCY SENSORS, CENTRALIZED CONTROL PANELS, REMOTE CONTROLS, EVEN SOUND-ACTIVATED CONTROLS CAN ASSIST EVERYONE. (NOTE: THE TV REMOTE WAS ORIGINALLY DEVELOPED FOR THE PHYSICALLY CHALLENGED.)
- SELF-ILLUMINATED ROCKER SWITCHES ASSIST GUESTS IN A HOME OR FACILITY. A SWITCHPLATE TRIM OF A CONTRASTING COLOR AIDS IN DAYTIME AND LIGHTS-ON LOCATION OF SWITCHES.
- GROUND FAULT CIRCUIT INTERRUPTERS CAN SAVE CHILDREN'S LIVES. THEY ARE ALSO IMPORTANT FOR PEOPLE WITH MENTAL OR COORDINATION LIMITATIONS.
- ADEQUATE LIGHTING IS ESPECIALLY IMPORTANT FOR PEOPLE WITH HEARING DIFFERENCES, IN ORDER TO READ FACIAL EXPRESSIONS, BODY MOVEMENTS, AND GESTURES.
- EXTRA LIGHTING IS HELPFUL WHEN TAKING A SHOWER.

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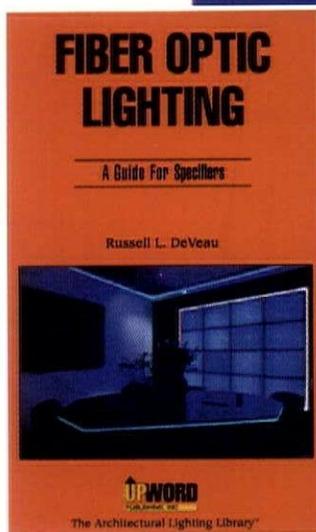
# New Books from Architectural Lighting Magazine

## **Fiber-Optic Lighting: A Guide for Specifiers**

Russell L. DeVeu

This new text provides technical and practical fundamentals regarding the technology and specification of fiber-optic lighting—covering components, systems, principles of operation and more. One of the first clear and comprehensive books on the subject, it is sure to be a valuable reference on this dynamic emerging technology.

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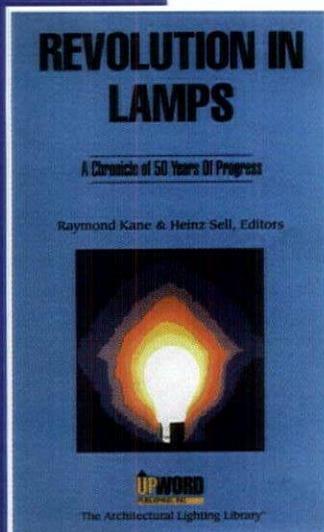


## **Revolution in Lamps: A Chronicle of 50 Years of Progress**

Raymond Kane & Heinz Sell, editors

This new book offers a historical overview of the development of the light source from World War II to the present. Written by some of the engineers who worked for leading lamp companies during this time, it provides a fascinating and informative look inside the lamp industry and offers insight into the future of lighting.

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## NEW & NOTEWORTHY— PRODUCT DEBUTS AT LIGHTFAIR '98

BY DAVID HOUGHTON, PE CONTRIBUTING EDITOR

This year's Lightfair International was another exciting look at what manufacturers have been developing for our industry. In this review, we'll look at significant trends in remote lighting, metal halide and fluorescent systems revealed at the show, as well as a few snapshots and notes on another season of evolutionary progress in lighting technologies.

### REMOTE-SOURCE LIGHTING

Remote lighting technology—light pipes, fiber optics and the lamps that drive them—made a strong showing this year. The sulfur lamp continues its progress with the

Vancouver-based company TIR, which makes a light pipe using 3M's film. Light pipes are still quite expensive—on the order of \$100 per linear ft.—so hopefully specifiers will see lower costs as the volume of light pipe production ramps up. Within a year's time, lighting designers should be able to select between multiple manufacturers and light pipe diameters and have access to design software that helps predict light levels from installations of this new technology.

The number of light pipe installations continues to grow, with hundreds of units around the world serving spaces such as rail stations, airports, high-bay retail stores and industrial assembly and painting facilities. In natatoriums, light pipes offer a major maintenance advantage by positioning the light source away from the swimming pool (with some conventional HID systems, changing a lamp requires draining the pool!). Removing lighting equipment—and the heat it generates—from the illuminated space also solves problems in clean rooms, refrigerated storage facilities and harsh industrial environments.

Fiber-optic light distribution systems were prominent at this year's Lightfair. Notable equipment included Lucifer Lighting's fiber-fed strip-light fixtures and the Perpetual Light Pump 1000 from Remote Source Lighting International—a hemisphere with a sulfur lamp on the inside and dozens of fiber-optic ports on the outside. Look to *Architectural Lighting's* October/November issue for a complete round-up of new fiber-optic systems.

*(continued on page 62)*



LIGHT PIPE INSTALLATIONS SUCH AS THIS ONE, A MANUFACTURING FACILITY, RESULTED IN INCREASED LIGHT LEVELS. HERE, LIGHT PIPE REPLACED METAL HALIDE DOWNLIGHTS.

3M, CIRCLE NO. 44

introduction of a third-generation model, the Light Drive 1000. This remarkable light source turns 1,425 watts of electricity into 135,000 lumens over 60,000 hours—enough to illuminate

1,000 sq. ft. or more of high-bay industrial or commercial space. Because of its high intensity, however, the Light Drive depends on light pipes—reflective plastic tubes that distribute light as it bounces along the tube—to provide even distribution across a large area.

Minnesota-based 3M manufactures the reflective film that makes light pipes work, and at this year's Lightfair they announced that they will soon build their own light pipes. Up until now, the only commercially available product was from the



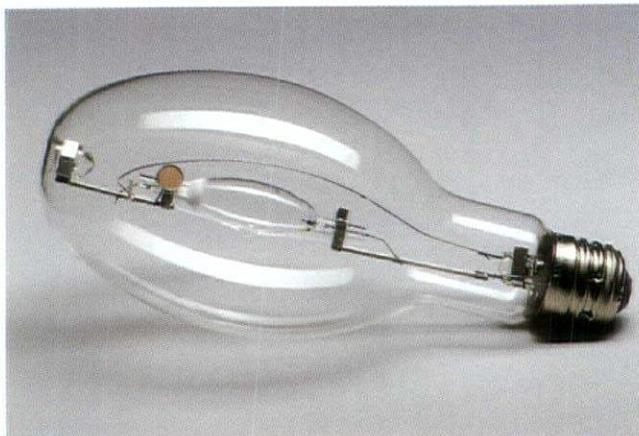
OSRAM/SYLVANIA'S ICETRON ELECTRODELESS FLUORESCENT LAMP SYSTEM COMBINES LONG LIFE (UP TO 100,000 HOURS) AND HIGH EFFICIENCY.

CIRCLE NO. 45

# Reporter's Notebook

- Holophane Centaglo—Asymmetric HID reflector/refractor for lighting aisles in high-bay warehouse & retail spaces.
- Lighttron/Cornwall metal halide wall washer using the company's "light train" concept. It's good to see more MH lamps suitable for retail use that can displace high-wattage incandescent sources.
- Emess/LBL compact fluorescent torchiere. Halogen torchieres are considered by some to be bad news for energy use and user safety. Alternative products are coming out.
- Lucifer's fiber-optic strip light—nice linear source for case or accent lighting.
- Philips Exhibitpar. Line voltage, tight-beam halogen PAR lamps. Angelo Brothers also introduced a line-voltage MR16.
- Electronic Lighting Inc. has a new load-shedding controller that connects to their "plug and play" dimming fluorescent ballasts for building-wide dimming during peak hours.
- Nice low-voltage transformer designs by Unique Lighting, Tortran and Always Bright, a Taiwanese import. Manufacturers are addressing efficiency, reliability and voltage drop with their new designs.
- Intrepid's innovative pendant downlight for high-bay applications uses 255W of fluorescent lighting to replace a typical 400W HID fixture.
- It seems that nobody likes looking at "frog eye" emergency lighting fixtures. Mirrorlite engineers have come up with an option that hides MR16 lamps behind mirrors that swing out from the wall or ceiling when the main power fails.
- Q-tran's low-voltage transformer uses a high-efficiency toroidal design, is cool and thin enough to fit into a 2x4 stud cavity and offers multiple voltage taps to correct for voltage drop.

(continued from page 60)



PULSE-START TECHNOLOGY, WHICH IMPROVES LAMP PERFORMANCE IN SEVERAL WAYS, IS EXPANDING TO HIGH-WATTAGE METAL HALIDE. VENTURE LIGHTING, **CIRCLE No. 46**

#### TAKING THE PULSE OF METAL HALIDE

Metal halide (MH) sources continue to grow in popularity—they provide clean white light, have high efficiency and are available in sizes from 35W to 1000W. Several developments at this year's Lightfair addressed improvements to halide technology.

Lamp manufacturers are bringing pulse-start technology—already used in metal halide lamps 150W and smaller—to their entire product lines. Pulse-start lamps don't need the conventional starting electrode, which simplifies their construction and allows the use of "formed-body" arc tubes that are structurally, chemically and thermodynamically superior to the "pinched-tube" design that is most common today. Together with high-efficiency pulse-start ballasts, these new systems can cut power requirements by nearly 25 percent: a 400W lamp and 60W ballast can be replaced by a 320W lamp and 30W ballast. Pulse-starting also improves lumen maintenance, color stability, restrike time and lamp life. Pulse-start lamps are incompatible with conventional MH ballasts and vice-versa, but they both use screw-in mogul bases; the industry has designated a new pink pulse-start socket design to avoid confusion.

Other metal halide developments:

- Manufacturers have also expanded the availability of internally shrouded lamps that can be used in open fixtures. The glass shroud contains a UV-blocking compound and provides protection in the event of an arc-tube failure.

- New high-performance electronic ballasts are available from Aromat, Hubbell and Magnetek, and Advance Transformer introduced an instant-restrike unit.

- Magnetek is now offering a two-level MH dimming ballast for warehouse applications that is packaged with a Mytech occupancy sensor. When a warehouse area is unoccupied, the

light level drops for significant energy savings.

- Ushio showed a new 100W metal halide reflector lamp for fiber-optic or light pipe applications.
- Manufacturers showed new retail-oriented fixtures for the 35W and 70W metal halide lamps, including Lightron/Cornwall's wall washer and Prescolite's track head.

#### FLUORESCENT DEVELOPMENTS

Lamp and ballast manufacturers are extending lamp life by digging into the physics of lamp ignition. (Most fluorescent lamps fail from on-off cycling rather than burn hours. Run continuously, a 20,000-hour lamp can operate for 36,000 hours—over four years.) The major application consideration here is occupancy sensor operation, which may turn lamps on and off several times per day.

To address this issue, GE Lighting and ballast manufacturer Magnetek have introduced their "Accustart" collaboration. Accustart is a variation of rapid-start technology: the idea is to hit the lamp with a one-two punch. First, the ballast warms the cathode with a low-voltage trickle, then it hits the lamp with arc voltage at exactly the right instant. The trick is figuring out the perfect timing. (This is in contrast to instant-start operation, which skips the setup punch and comes in with a massive right hook. The violence of this start method reduces lamp life by 25 percent at three hours per start.) Other manufacturers have also addressed starting conditions for better lamp life, including the



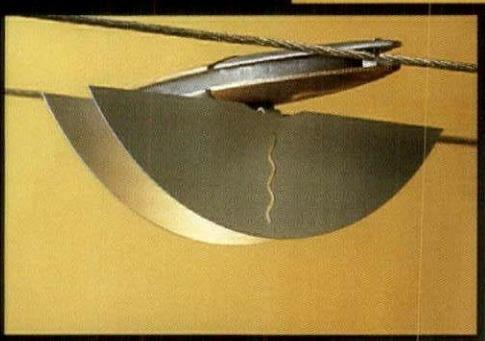
THIS COMPACT FLUORESCENT TORCHIERE FROM LAWRENCE BERKELEY NATIONAL LABS PRODUCES 25 PERCENT MORE LUMENS THAN STANDARD 300W HALOGEN TORCHIERES WHILE USING ONE-FIFTH THE ENERGY AND OPERATING 500 DEGREES COOLER.

**CIRCLE No. 50**

# BRUCK

L I G H T I N G   S Y S T E M S

## SHOU



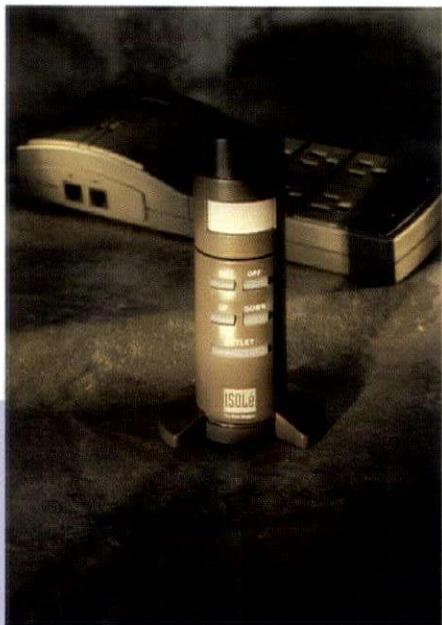
**BRUCK**, the leader in the field of low-voltage track and cable technology, introduces **SHOU**.

The unity of handcrafted wood and aluminum creates a softer approach to the classic cable system.

SHOU is one of seven different systems manufactured by **BRUCK LIGHTING SYSTEMS**.

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Circle No. 29 on product service card



ADAPTIVE OCCUPANCY SENSORS "LEARN" THE OCCUPANCY PATTERNS OF THE SPACE TO DELIVER BETTER PERFORMANCE. PRODUCTS NOW AVAILABLE FROM WATT STOPPER, MYTECH, AND LEVITON. SHOWN: THE REMOTE CONTROL TOWER FROM WATT STOPPER. **CIRCLE No. 47**



FIXTURE ENGINEERS KEEP FINDING NEW WAYS TO USE COMPACT METAL HALIDE SOURCES, INCLUDING THIS NEW TRACK HEAD FROM PRESCOLITE•MOLDCAST. **CIRCLE No. 49**

new ballast manufacturer Energy Savings Inc.

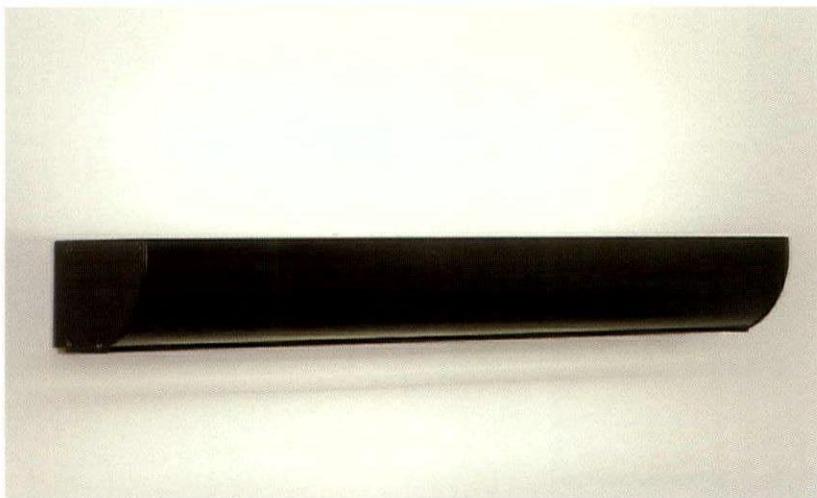
What all this means is that facility managers may soon have less frequent fluorescent lamp replacements (or be able to extend scheduled group relamping). Users may also adopt more aggressive occupancy control strategies, such as turning off office lights a few minutes after the occupants have left, compared to the 15-20 minute delay settings now commonly used. This could add up to significant energy savings.

In addition, manufacturers showed:

- Ballasts that automatically sense when lamps have failed and send no power to the socket (Advance Transformer, Osram Sylvania, Robertson and others). This is only a concern for narrow lamps (T5 or smaller).

- T8 ballasts in slim, narrow plastic cases modeled after the European look (Energy Savings Inc.). This in turn enables slimmer fixtures.

- More ballasts and fixtures for full-sized linear T5 lamps fixtures. Although many manufacturers showed T5 products, most estimate that it will still be a few years before this new lamp size achieves wide use in the U.S. (It already has become the new standard in Europe, however.) ■



TRU-LUX IS A FAMILY OF LOW-PROFILE T2 AND T5 SUBMINIATURE FIXTURES FOR COVE, VALANCE, UNDERCABINET AND AMBIENT LIGHTING SOLUTIONS. STARFIRE LIGHTING. **CIRCLE No. 48**

S T A - F L E X

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Circle No. 30 on product service card

## LIGHTFAIR NEW PRODUCT SHOWCASE

*Architectural Lighting* was proud to once again sponsor the well-attended New Product Showcase at this year's Lightfair International in Las Vegas. A total of 102 products spanning 11 product categories was presented by James Sultan, IESNA, James Benya, PE, CLEP, IALD, FIESNA and Andre Tammes, IALD.

Of all the products submitted, nine were chosen for providing exemplary benefits to lighting professionals. Each received a Category Innovators Award and is shown here. Of the nine, four top finalists were selected to receive Awards of Distinction—Energy Award, Technical Innovation Award, Design Excellence Award and the coveted Best New Product of the Year Award. This year, the Chameleon Series from Color Kinetics was honored as the Best New Product of the Year.

The Lightfair New Product Showcase Advisor Committee included Gary Dulanski, Stan Deutsch Associates; Boyd Corbett, Remote Source Lighting International; Art Hatley, Fiberstars; Renee Gable and Angela Ausband, AMC, Inc.; James Sultan, Lighting Distinctions; James Benya, Pacific Lightworks; and Andre Tammes, Lighting Design Partnership.



### BEST NEW PRODUCT OF THE YEAR AWARD

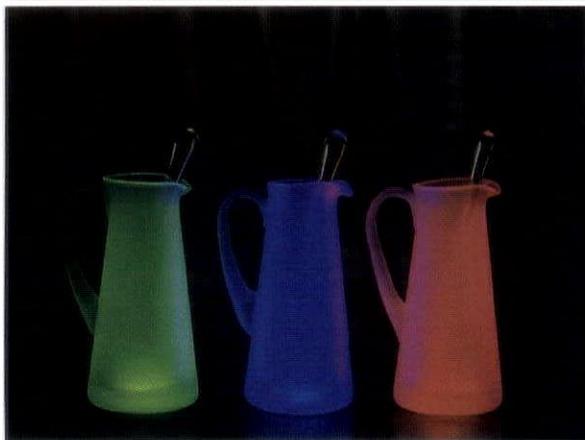
#### COLOR KINETICS, INC. Chameleon Series

Recently renamed the C-Series, the Chameleon Series is powered by a patent-pending technology called Chromacore. The technology employs a microprocessor to control variable intensity, super bright LEDs to generate colors and color lighting effects through additive RGB color mixing. Chameleon Series, or C-Series

products project a soft-edged beam of light and are available in three sizes to fit many applications. The current line includes the C-200, C-75 and C-30 fixtures. Each unit has 12 dip switches, which can be set in different positions to control speed, mode and color intensity in stand-alone mode. The units can also be externally controlled via data interface ports which accommodate PC or DMX-512 direction. The interface is compatible with DOS, Windows 3.1/95 and most DMX-512 stage lighting controllers. Fixtures are made from extruded aluminum in black anodized finish and are equipped with a 15-degree diffuser lens and hanging yoke.

Circle No. 55

1998  
NEW PRODUCT  
SHOWCASE



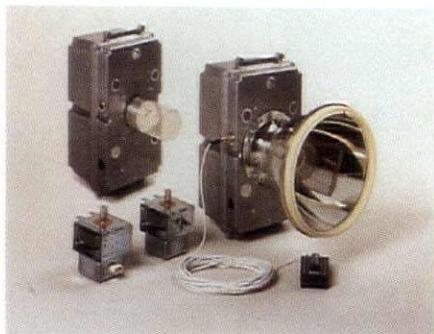
## AWARDS OF DISTINCTION

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### ENERGY AWARD

#### LEVITON MANUFACTURING Decora Wall-Mounted Occupancy Sensor

The Decora Wall-Mounted Occupancy Sensor provides an adaptive technology that allows the unit to tailor its operation based on actual occupancy patterns in the space monitored. A "walk-through" feature prevents lights from staying on for extended periods following momentary occupancy, and the unit's designer styling complements a variety of interiors. Decora is suitable for controlling incandescent or fluorescent lighting at 120 or 277V. **Circle No. 56**



### TECHNICAL INNOVATION AWARD

#### FUSION LIGHTING Light Drive 1000

Light Drive 100 is a highly efficient, full-spectrum light source with a spectral distribution similar to noon sunlight. It features good lumen maintenance, is low in UV and IR and contains no mercury. With its integral electronic power supply, the Light Drive 1000 is a lightweight lamp system that is capable of being dimmed down to 20 percent with very little color change. **Circle No. 57**

### DESIGN EXCELLENCE AWARD

#### LUMIERE DESIGN & MANUFACTURING Hollywood #1701

The Hollywood #1701 features compact-size imaging projectors and is designed for use in full view as an "architainment" fixture. Aiming, focusing and pattern placement are easy. The fixture body rotates, making critical placement on installation unnecessary. High-quality optics create ultra-sharp images. A variety of lens choices provides multiple beam spread options. Patent pending features reflect advancements in the state of the art. **Circle No. 58**





**COMMERCIAL INTERIOR**  
**LAM LIGHTING SYSTEMS, INC.**  
**Mobile**

Mobile is a three-circuit lighting track lighting system that can be ceiling-integrated, suspended or span-mounted. The track accommodates combinations of T5 and T8 direct/indirect fluorescent lighting with halogen accent lighting. Options can be applied in combination or separately. The track and fluorescent fixtures are constructed of extruded aluminum with aluminum parabolic louver. Exposed extruded ends of the fluorescent housings are illuminated through colored thermoplastic inserts. **Circle No. 59**

**DECORATIVE INTERIOR**  
**d'ac LIGHTING**  
**Corcovado Pendant**

A direct/indirect pendant lighting fixture, Corcovado emits indirect light through a center opening and projects direct light through a clear glass bottom lens. Users have a choice of illumination from a 150W incandescent, 42W triple-tube fluorescent or 70W metal halide lamp. Fixtures are available with 5½-, 7½- or 10-in.-diameter bottom openings. Red and blue filters may be specified for the center opening. Standard housing finish is brushed aluminum. **Circle No. 60**



**SPECIALTY**  
**REMOTE SOURCE LIGHTING INTERNATIONAL**  
**Perpetual Light Pump 1000**

The Perpetual Light Pump 1000 fiber-optic illuminator was designed for maximum efficiency of pumping light into Solid Core Plastic or Glass Fiber Bundles. The PLP000 utilizes patented light collection techniques combined with 60,000-hour Fusion sulfur lamp technology to provide up to 64 12mm ports with combined output of over 70,000 lumens into fiber. The patented shuttering system allows the user to turn ports on and off. **Circle No. 61**

**THEATRICAL/ENTERTAINMENT**  
**IRIDEON, INC.**

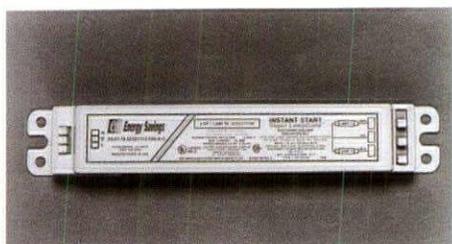
**AR6 Recessed Spot Luminaire, AR7 Recessed Wash Luminaire Family**

The AR6 Recessed Spot Luminaire and the AR7 Recessed Wash Luminaire were designed with versatility in mind. A variety of color patterns, motion control and beam options is offered, as well as a selection of bright, long-life lamp sources. All are packaged in an unobtrusive, recessed enclosure. **Circle No. 62**



**BALLASTS**  
**ENERGY SAVINGS INC.**  
**Electronic Ballasts for Instant Start T8 Lamps**

This high-performance ballast is microprocessor-controlled with Intelligent Software Super LampGard, a feature protecting the lamp at end of life. The ballast also eliminates arcing and operates two- and one-lamp 32W, 25W, 17W and 15W T8 lamps, with Universal Voltage of 120 through 277V. High power factor (0.99) and low harmonic distortion (10 percent) come in a Super Slim package. **Circle No. 63**



# www.light-link.com

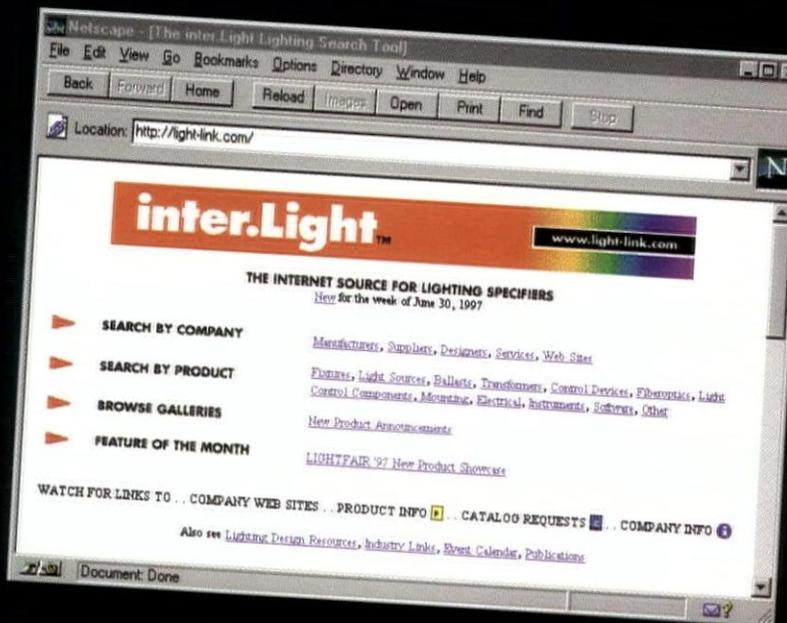
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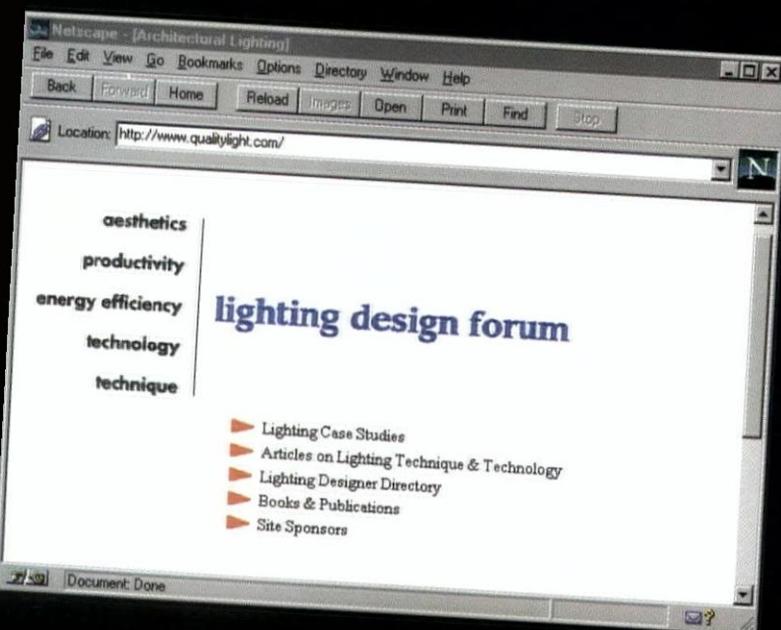
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The Lighting Design Forum features articles, case studies, and research on the benefits of quality lighting.

## Advance Transformer Company

### SMALL CAN ELECTRONIC BALLAST

Advance Transformer's new small can family of electronic ballasts for T8 lamps offers equal performance to the standard sized ballasts they replace, but in a package size 40 percent smaller in volume. One- and two-lamp models in both 120V and 277V are now available. Three- and four-lamp models are being introduced later in 1998.



CIRCLE NO. 85

## Hydrel

### M-9000 SERIES

The M9000 Series Modular Ingrade lights are multi-purpose units designed for flush mounting in a variety of substrates and materials. The M9000's are used to uplight architectural and landscape features. Two configurations are available: a single-lensed version with optical aiming, and a double-lensed version with lamp module aiming. Both units feature Aimlock (to allow maintenance and relamping without re-aiming). The double-lensed version offers cooler surface temperatures. The M9400 has a 9-in. footprint rated at 70W and the M9800 has an 18-in. footprint rated at 400W.

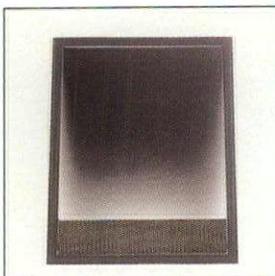


CIRCLE NO. 88

## Belfer Lighting

### REFLEX

Belfer's compact fluorescent Reflex is designed for ceiling or wall mount providing indirect lighting as well as wall-washing capability. Engineered to be lamp compatible with specification-grade compact fluorescent downlights; available in a variety of architectural finishes with multiple trim and reflector options. ADA-compliant compact fluorescent lamp options include 26W, 32W, 42W. UL/CUL-listed for damp locations.



CIRCLE NO. 86

## Ledalite Architectural Products Inc.

### IN-COVE

Ledalite's new In-Cove provides illumination in a wide range of cove lighting and wall-washer applications. Three mounting planes enable In-Cove to be installed at three different angles in both horizontal and vertical orientations. This allows the asymmetric beam pattern to be precisely coordinated with the architecture. Exceptional forward-throw distribution allows close mounting to the target surface with excellent uniformity. Pre-wired, interlocking In-cove modules require a single screw at each intersection for installation.



CIRCLE NO. 89

## B-K Lighting, Inc.

### LITESTICK

B-K's Litestick features a sleek, compact design that complements its surroundings during daylight and provides ample pathway illumination after dark. Only 1 in. in diameter, it is available in eight machined-aluminum finishes or three machined-brass finishes in adjustable or fixed heights from 3 in. to 18 in. The Litestick accepts lamps from 5W to 20W and operates on a 12V system.



CIRCLE NO. 87

## Lightly Expressed Ltd.

### FOCI

The new Foci fixture from Lightly Expressed Ltd. is a compact linear-wash and spotlighting design. Multiple fiber-optic spotlighting heads in a linear array are adjusted and held in place by means of a simple (patent pending) locking mechanism. Lightly Expressed also offers a range of optional spot modifying fittings to further extend its case lighting technology.



CIRCLE NO. 90

## Prescolite•Moldcast

### M3 TRACK SYSTEM

Prescolite's new M3 PAR lamp track system combines flexibility with the excellent color rendering capabilities of halogen and new metal halide lamp technology. An all-plastic housing is available in neutral colors with a choice of five bezel styles and six accent colors to match any decor, including red, blue, teal, purple, limestone and slate gray. A push-button locking mechanism retains the prefocused lighting position after installation.



CIRCLE NO. 91

## TIR Systems Ltd.

### SERIES 4000 LUMINAIRE & LIGHT GUIDE

The TIR Systems Series 4000 luminaire, available in anodized or painted colors, uses 100W and 150W metal halide lamps for indoor and outdoor applications. The simple two-piece track mounting system is suitable for decorative applications, providing up to 32 ft. of continuous light when used with TLP4 light guides. The fixture features a specially designed reflector maximizing the amount of light entering the 4-in. diameter light guide.



CIRCLE NO. 94

## Targetti USA LLC

### MONDIAL F-1

Targetti's Mondial F-1 features aimable, fully orbital halogen projector lights in a modular steel space frame, which joins to the architectural planes of the interior space being illuminated. The frame allows multiple projection lights to be grouped into a compact architectural element that can be mounted, suspended or mobile. Mondial projection lights may be specified in different lens diameters and wattages with a full complement of light filters and beam shapes.

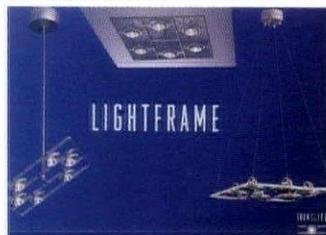


CIRCLE NO. 92

## Translite Systems

### LIGHTFRAME

Translite's Lightframe provides a versatile alternative to track lighting. The Lightframe is suspended in three different forms, cable or rod suspension and recessed. For the first two, there is a canopy that contains the transformer, mounted to a standard junction box. The frame is available with up to six fixtures per frame, either MR16 or AR111 lamps. It has a maximum light output of 300W. Each fixture head articulates within the frame.



CIRCLE NO. 95

## Tivoli Industries, Inc.

### READI COVE

Readi Cove enables designers to create a lighted cove of any length, with right or left angles, without construction. A range of compact fluorescent or incandescent lamps snap into low-profile cast aluminum housings. Lamps are concealed behind a choice of decorative polyurethane fascias available in different styles and finished to coordinate with any design or color palette. Fascia can hinge down for relamping or cleaning.



CIRCLE NO. 93

## Ushio America, Inc.

### MHR-100D

Ushio's MHR-100D is a 100W metal halide reflector lamp for fiber-optic and light pipe applications. The MHR-100D lamp features an ellipsoidal, cold mirror reflector designed for use with 8-mm to 13-mm bundle diameters. Specifications include a total luminous efficacy of 85 lumens per watt, a color temperature of 5200K and lamp life of 6,000 hours. This lamp operates on standard M91 ballasts or electronic equivalents and is also available in hot restrike versions.



CIRCLE NO. 96

new product showcase 1998

## EUROLUCE 1998—REPORT FROM MILAN

BY JAMES L. CROWELL, IESNA

EuroLuce, a lighting trade fair held on a bi-annual basis in Milan, Italy, took place this year from April 16-20, 1998, its 19th year. The show, sponsored by assoLuce and organized by Cosmit, features 30,000 sq. m. of exhibit space and, though primarily an Italian event, was supported by more than 300 exhibitors from around the world. The city of Milan, the design capital of Italy for fashion, industrial design and architecture, came alive during the EuroLuce Show, which shared the stage with the Salone Internazionale del Mobile, the highly attended furniture show and decorative arts exhibition.

Italian manufacturing has undergone profound changes since World War II. What was once a fragmented network of craft-based businesses, Italian manufacturing has evolved into an advanced manufacturing system whose business skills and technological innovation have made Italian products successful all over the world. In part, this is due to the high level of design—the world's most famous designers, such as Achille Castiglioni, Michele De Lucchi, Nora De Cicco, Jorge Pensi and Philippe Starck, are still producing for Italian firms. Italy manufactures 21 percent of all lighting in Europe—second to Germany's 29 percent—and more than 30 percent of all Italian lighting products are exported. Sixty-five percent of Italy's lighting production is decorative, 35 percent is commercial.

The show was segmented into two markets: domestic design and commercial applications. The domestic market is dominated with traditional glass and crystal chandeliers, wall sconces and table lamps. Dozens of manufacturers are still making quality crystal, and the design of new Murano glass allows the designers to experiment with shape and color. The tradition of glass in Italian lighting manufacturing is still dynamic.

Specialization in particular materials has been the focus of other Italian companies. Fontana Arte was established to make products from sheet glass. Flos made fixtures in a new sprayable plastic, a technique used by the Castiglioni in original production. Other firms such as Kartel and Guzzini have been set up to diversify the use of plastic on the domestic front. Materials and technologies have been borrowed from other technological industries, such as the automotive and aeronautical industries, where fixtures are made from a reticulated foam, heat resistant and washable with soap and water.

The smaller craft-oriented firms still dominate the creative marketplace. For the few large-scale manufacturers, the ability to outsource the production of prototypes, as well as the manufacture and assembly of electrical parts allows the manufacturer tremendous financial flexibility in new product development.

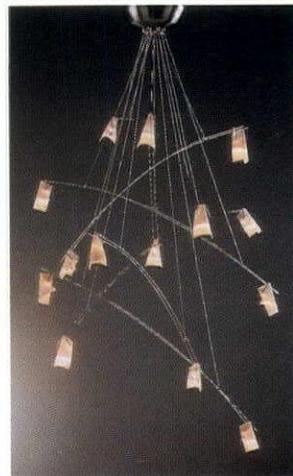
No new lamp technologies have emerged, but the refinement in manufacturing capabilities and the dominance of good design enabled a few firms to shine out above the rest. The German firm Serien developed a new fixture called Take Five, that allows the user to swivel and telescope the fixture horizontally for optimal performance. Zumtobel Staff premiered a modular fluorescent and MR16 adjustable fixture that is elegant in its perfectly machined parts and modules. Album continued to refine its low-voltage cable systems with exquisite clear and colored blown glass elements. Cini & Nils offered a precision cluster of four universal swivel MR16 lamps beautifully engineered for its cable system. Equilibrium Lighting Products presented a truly unique and wildly original collection of lighting fixtures, some made of textiles, wood and Plexiglas—a real show stopper. Luceplan developed seven new families of lighting products for the next 20 years: Glassglass is a family of elegant and classic blown glass diffusers in a variety of shapes held by a die-cast metal stirrup-handle, enabling the user to change the fixture appearance.

Trends to watch are the use of polycarbonate plastics, precise and beautifully detailed fixtures in metal and wood and the continued use and refinement of Italian Murano glass. Some of the truly innovative designs are shown here.

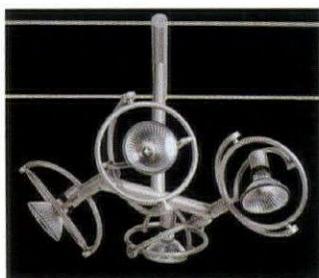
*Note: Most of the products shown are designed for European electrical frequencies and are not UL-listed.* ■

*James L. Crowell, IESNA is president of Crowell Design, Inc., a design and lighting consultant firm in Radnor, PA. (This article was prepared with assistance from Luca Salmoiraghi and Elisabetta Kluzer in Milan, Italy.)*

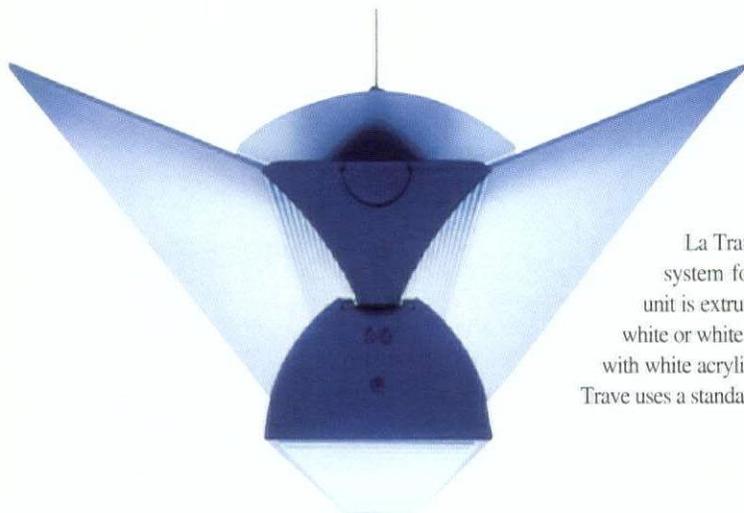
Bach from **Solzi Luce** is a chandelier made of low-tension wire. The fixture features dichroic halogen lamps in polycarbonate diffusers, and is offered in nine models that vary in size and the number of lighting points. Bach is available in chrome or gray-embossed aluminum finish, and diffusers are either natural or honey. **Circle No. 70**



Tenso Fari Quattro from **Cini & Nils** provides accent lighting with versatility. The fixture can simultaneously illuminate four objects situated at different heights and in different corners of a room. **Circle No. 71**

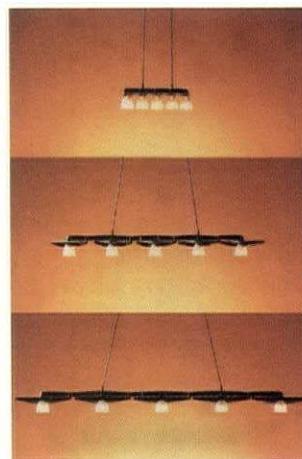


The ceiling-mounted **Lumiere Grande** from **Album** features a canopy energized to 12V, which allows the attachment of various cable and glass elements. **Lumiere Grande** is available in various dimensions. Lamp sources also vary. **Circle No. 72**

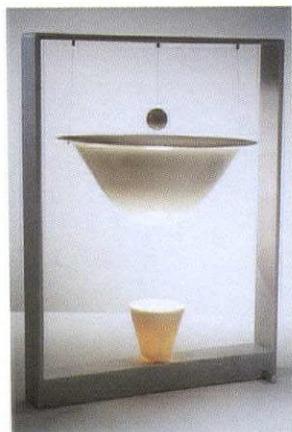


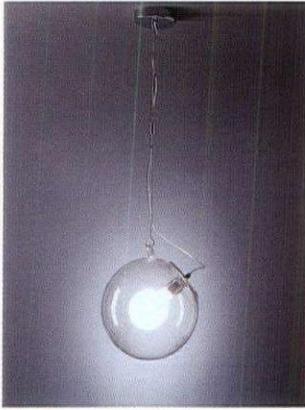
**La Trave** from **Zumtobel Staff Lighting** is a fluorescent direct/indirect system for ceiling mount or suspended applications. The basic indirect unit is extruded aluminum with reflector fins available in aluminum, painted white or white transparent plastic. The attached direct fluorescent unit is offered with white acrylic lens or aluminum baffles. **La Trave** uses a standard fluorescent. **Circle No. 73**

**Serien** introduces **Take Five**, which features a concertina-barrier construction that can be pulled out from 36 cm. to 152 cm. The fixture is available with striplight lamps for atmospheric illumination or with five 20W low-voltage halogen spots. Available in blue, green, orange, white opaque or black polycarbonate. **Circle No. 74**



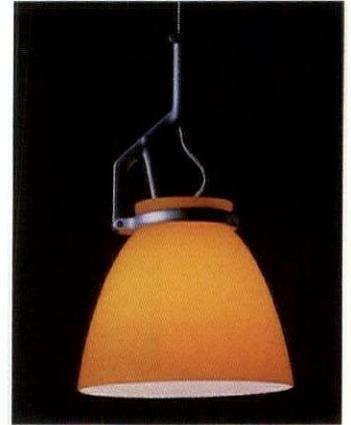
Created for **Design Gallery Milano**, **Passagi** by **Andrea Branzi** is made of porcelain and designed to be placed under arches in glass, marble or wood. Branzi conceived of the lamps as small illuminated architectural spaces. **Circle No. 75**



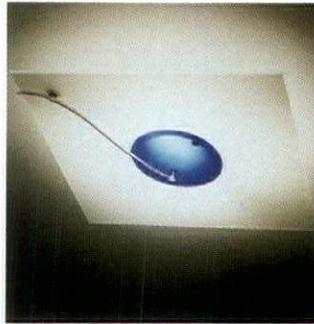


Miconos, designed by Ernest Gismondi for **Artemide**, provides diffused light and uses a 150W incandescent lamp source. Made of polished chrome metal and transparent blown glass, the fixture is suspended by a rod that can be adjusted according to ceiling height. **Circle No. 76**

Glassglass from **Luceplan** offers blown glass diffusers in a variety of shapes. A diecast metal stirrup-handle is housed in a support ring fastened to the circular opening of the various diffuser units. The stirrup is secured to the metal unit to which the electric wire is cabled. Wrapped in a steel mesh sheath, the cable itself provides vertical support. Glassglass can be attached to either a ceiling or wall. **Circle No. 77**

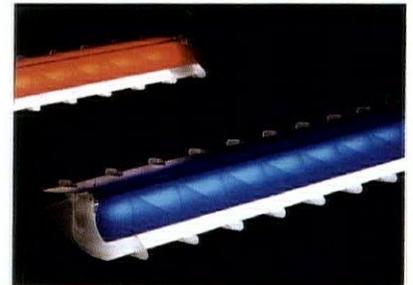


The Auriga ceiling lamp from **Nemo** provides widespread downlight filtered through glass, creating soft illumination. The fixtures uses a 3 1/8-in., 150W-RSC linear halogen source with protection glass. The lamp has a life span of approximately 2,000 hours. Auriga features a steel body, aluminum reflector, glass diffuser and lens in St. Just glass. The diffuser is available sandblasted or painted white; the lens comes in opal white or blue. **Circle No. 78**

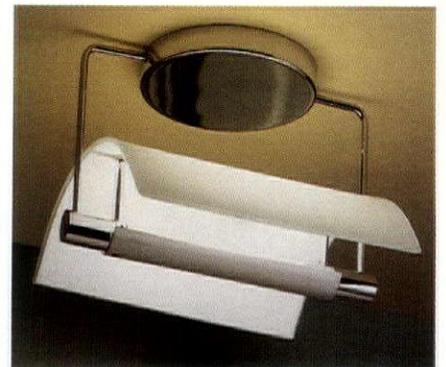


From **Artemide**, the RA System designed by Norman Foster is a modular suspended lighting system that can be used individually or in continuous rows. Direct and indirect systems combine fluorescent and incandescent. Various dimensions are available. **Circle No. 80**

Bandoneon from **Belux** is a fluorescent tube offered as a modular unit. The light source is a fluorescent T5 16 mm. lamp with an electronic component. Bandoneon was named and designed after the hand organ. The casing is made of polycarbonate and offered in a variety of colors. **Circle No. 79**



Turner AP & PL, designed by Andrea Tosetto for **Studio Italia Design**, is a wall or ceiling fixture featuring a canopy and frame made of chrome-plated metal. The curved form diffuser is of translucent white glass. The fixture is 26 cm. wide x 28 cm. long x 28 cm. deep. Turner uses a 200W halogen. **Circle No. 81**



# architècti prize

## Belém Cultural Centre 98

architècti magazine and the **Belém Cultural Centre** invite entries for their **international architecture and interior design competition 1998**.

Since 1993 **architècti** magazine has been awarding an annual prize for architecture and interior design and publishing the best entries. The winning architects are invited to present their work in a conference and exhibition at Lisbon's **Belém Cultural Centre**, hence ensuring prominent coverage of their work.

**The 1998 winners will be given even more prominent coverage !**

The winning projects for 1998 will feature on the cover of the issue of **architècti** devoted to the prize. They will also be given extensive coverage in the magazine and will be placed on the magazine's website for consultation.

## Deadline entry :

## November 6, 1998

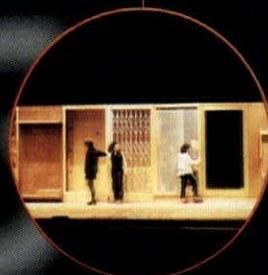
### Further details:

EDITORIA TRIFÓRIO, LDA.  
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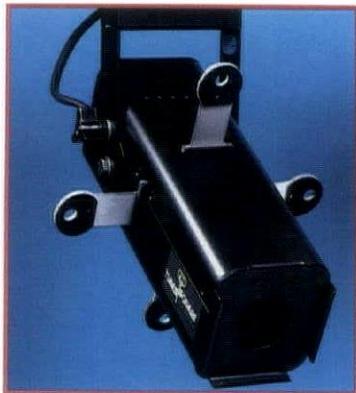
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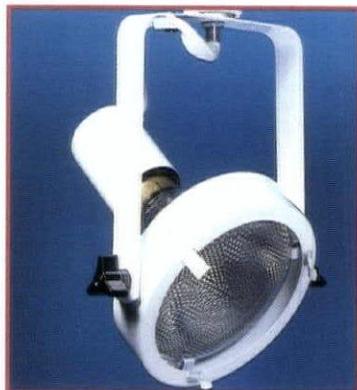
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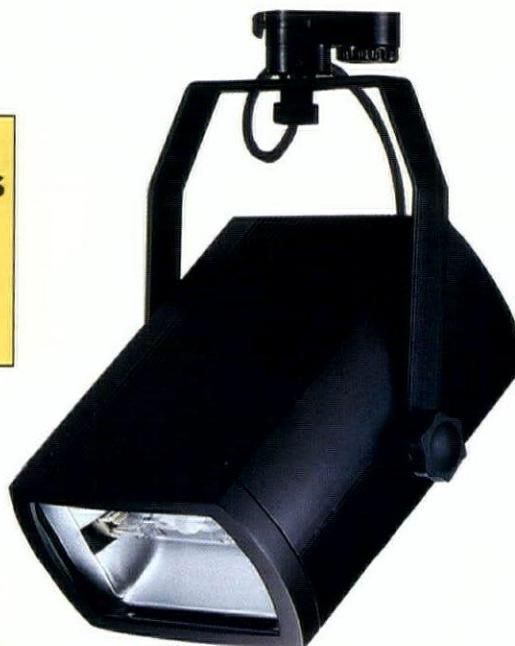
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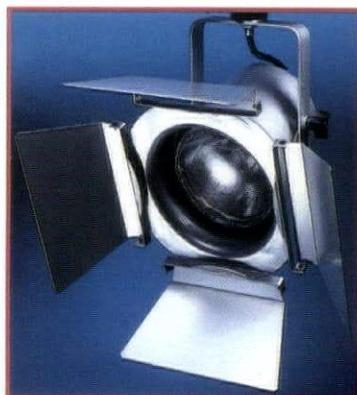


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## DEMANDING THE MOST FROM FIXTURE MANUFACTURERS' PRODUCT WARRANTIES

BY HENRY GLOVER

**B**efore making a major lighting specification or purchase, there is an important promise you should read. It's called the warranty—the manufacturer's or seller's promise to stand behind a product. Warranties vary significantly in the amount of coverage they provide. So, just as you compare the style, price and other characteristics of products before you specify or buy, you also should compare their warranties.

When describing the physical characteristics of outdoor lighting fixtures, we tend to use adjectives such as "tough," "rugged" and, most importantly, "durable." Why then, do most HID outdoor lighting manufacturers offer such weak warranties by comparison?

Put a fluorescent troffer or a recessed downlight outdoors, where we typically think of HID fixtures as being used, and you can measure its life in days. We take for granted that outdoor lighting fixtures are designed and manufactured to those more "durable" standards.

These standards are typified by heavy-walled housings of die-cast aluminum protected by corrosion-resistant paint and meeting Underwriters Laboratories (UL) wet location requirements. Some fixtures are made of composites designed to endure weather and caustic soils. The list of characteristics goes on and on.

However, these characteristics alone do not guarantee a long and useful life. As a matter of fact, the methods of manufacturing and the manufacturer's quality control programs are more significant determinants in the longevity of lighting fixtures, just as they are in most other products. Reviewing each manufacturer's process is impractical, so how do you ensure yourself that quality is a true priority of the manufacturer? The aforementioned warranty is an excellent test of a manufacturer's confidence in quality, and ISO registration is a good test—certification by an outside agency that a manufacturer has a universally accepted quality system in place.

Let's get back to HID lighting and outdoor fixtures. Outdoor lighting fixtures are required to withstand the elements in a manner similar to automobiles, yet customers and specifiers settle for relatively short warranties by comparison. The typical outdoor fixture manufacturer offers a one-year warranty on electrical components only. Some offer two years—again, on electrical components only.

If you ask the specifier, or more importantly the end user or owner, what they expect in terms of fixture life, the typical answer is, the same as the average life of the other building components before renovation or replacement is necessary—usually 10 to 15 years. Some will respond 20 years or more.

A one- or two-year warranty by the manufacturer versus a 10- to 20-year life expectancy by the customer? Why the disparity, and

more importantly, why is it accepted? Probably because, "This is the way it's always been"—a reason that is not good enough and should not be accepted.

Lighting products applied to harsher environments should offer, as standard, a warranty more in keeping with customer expectations. After all, isn't part of the specification a responsibility to ensure products are in keeping with the customer's expectations?

The protections offered by written warranties vary greatly, so it is important to read carefully and to compare warranties before making a selection. Here are some questions to keep in mind when comparing warranties:

- *How long does the warranty last?* Is it in keeping with expectations?

- *What parts and problems are covered by the warranty?* Sometimes, certain types of repairs are excluded from coverage.

- *Are any expenses excluded from coverage?* Some warranties require the customer to pay for labor charges.

- *Who do you contact to obtain warranty service?* Third parties can be a problem.

- *What will you have to do to get repairs?* Look for conditions that could prove expensive, such as a requirement that you ship a heavy object to a factory for service.

- *What will the company do if the product fails?* Find out if the company will repair it, replace it or refund the money.

Language on warranties is occasionally written into specifications, but not often enough. And when it is included, it sometimes allows "warranty by exception." That is, the manufacturer is allowed to write a letter of

guarantee for a specific project only. Will the owner look for the warranty extension letter three or four years from now when there's a problem? Will they even know it exists?

Let's go back to the auto example. Would you buy a new car if the standard warranty was one year but the sales representative offered you a letter extending it? You would question why the weak guarantee in the first place.

Each of us who manufacturers, sells or specifies lighting has a responsibility to the end user to provide products that have a reasonable life based on typical expectations. That responsibility is signified by a "standard" guarantee covering the entire fixture.

Perhaps we can't expect warranties in the 10- to 20-year range, but we certainly can demand a reasonable range of five to seven years. Only the specifier can force necessary change by writing in the specification and sticking to his guns during the approval process. ■

*Henry Glover is general manager of Wide-Lite, a division of Genlyte.*

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# parting shots

On a lighter note...

Staff and friends of Architectural Lighting Magazine gathered on Friday, May 30, to celebrate another successful Lighfair. Lighting designers, manufacturers and industry association members dined at Ruth's Chris Steakhouse, then hit the town for late-night festivities.

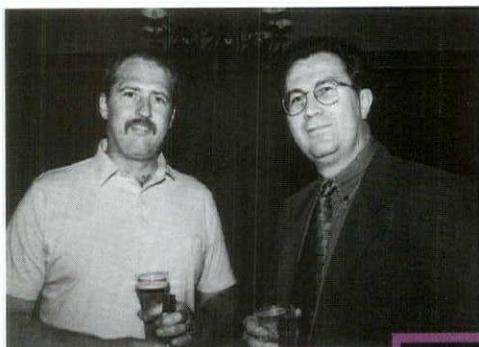
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EDITOR-IN-CHIEF CHRISTINA TRAUTHWEIN (LEFT) WITH DON KINDERDICK & JILL ST. ONGE, STERNER LIGHTING



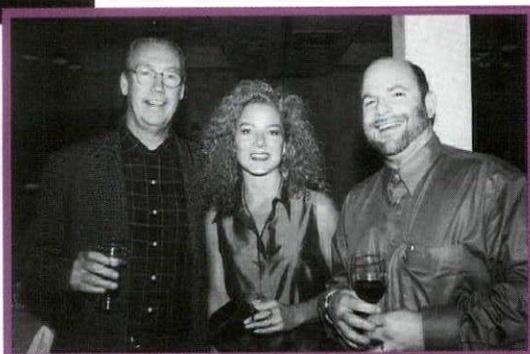
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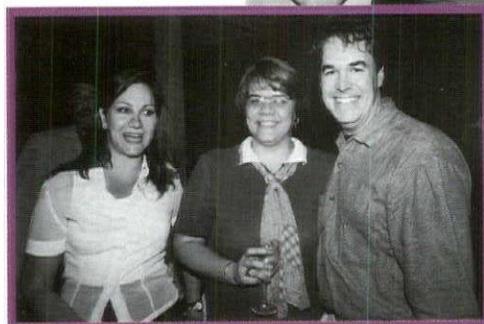
KEVIN HESLIN, LIGHTING RESEARCH CENTER (LEFT) & LEE WALDRON, GRENALD WALDRON ASSOCIATES



KEN WILLFONG, WIDE-LITE (LEFT) AND PUBLISHER CRAIG DILOUÉ

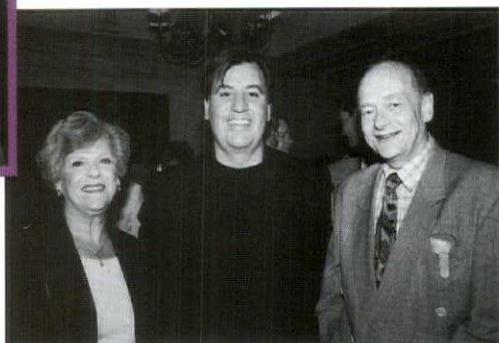


LEFT TO RIGHT: PHIL GABRIEL, IALD PRESIDENT, ANN REO, FOCAL POINT & STEVEN ROSEN, AVAILABLE LIGHT

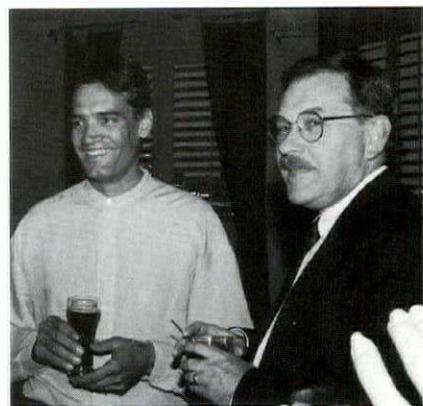


LEFT TO RIGHT: PATRICIA DIMAGGIO, OSRAM/SYLVANIA, PAULA VEGA, SUPERVISION AND LIGHTING DESIGNER BRAD HUTCHINSON

LEFT TO RIGHT: ANDREW POWELL, LIGHTING DESIGN ALLIANCE, JEANNE LAWLOR & CHRISTINA TRAUTHWEIN, ARCHITECTURAL LIGHTING MAGAZINE



DAN BURKE, ARCHITECTURAL LIGHTING MAGAZINE (CENTER) WITH SANDRA AND AL GROSSMAN, CON-TECH LIGHTING



DAVID HOUGHTON, CONTRIBUTING EDITOR, ARCHITECTURAL LIGHTING MAGAZINE (LEFT), AND JACK DRINAN, WIKO