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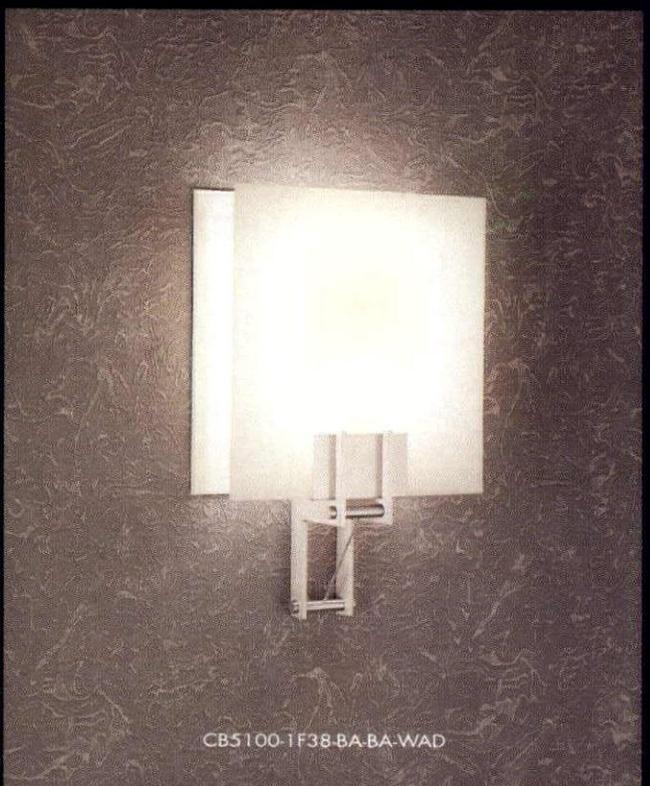
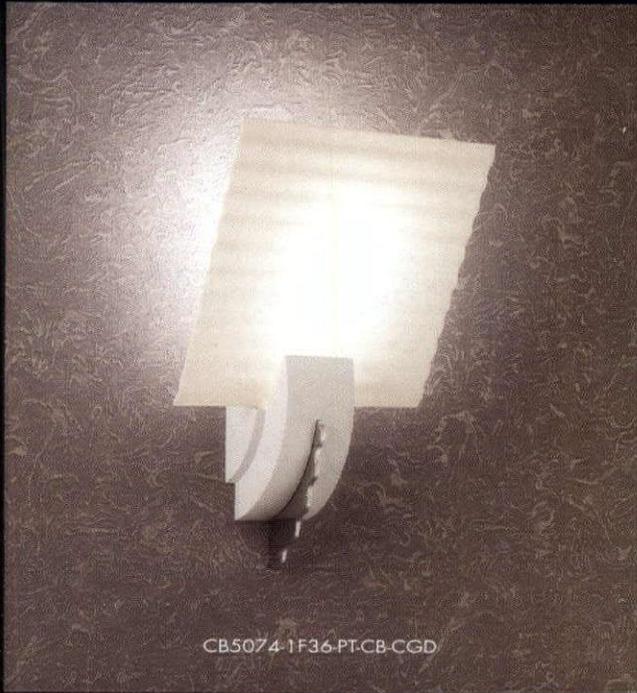
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UNIVERSITY OF KANSAS MEDICAL CENTER 26

DESIGN FEATURES

- 22 **East Meets West**
Architect David Rockwell and lighting designer Paul Gregory team up to create a culture-rich environment in New York City's Nobu restaurant
- 26 **Urban Studies**
Lighting designer Bruce Yarnell develops a Master Plan Approach to illuminate the University of Kansas Medical Center campus
- 30 **Winner's Circle**
The Grand Casino Coshatta lights up with excitement when Michael DiBlasi and CHQ Architects design an innovative circular truss system

INDUSTRY FOCUS

- 32 Lighting in Cyberspace

TECHNIQUE & TECHNOLOGY

- 36 **Technique** Remote Source Lighting
- 38 **Technology** Task Lighting Solutions
- 40 **Technology** Lightscape Visualization System

DEPARTMENTS

- 8 **Editorial** Celebrating 10 Years, Looking Ahead
- 10 **Updates** UV Light in Health & Entertainment
- 16 Applications
- 17 Technology
- 18 People
- 19 Calendar of Events
- 20 **Spotlight** A River Runs Through It
- 42 **Product Focus** ADA Wall Sconces
- 44 Products
- 51 Marketplace Classifieds
- 52 Ad Index



PLAZA RIO HONDO MALL 20



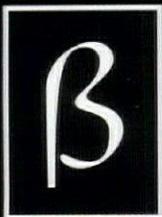
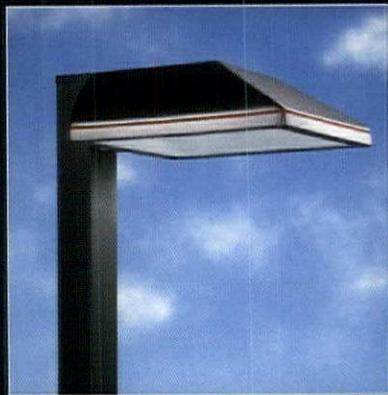
"VISUAL REALITY" 40

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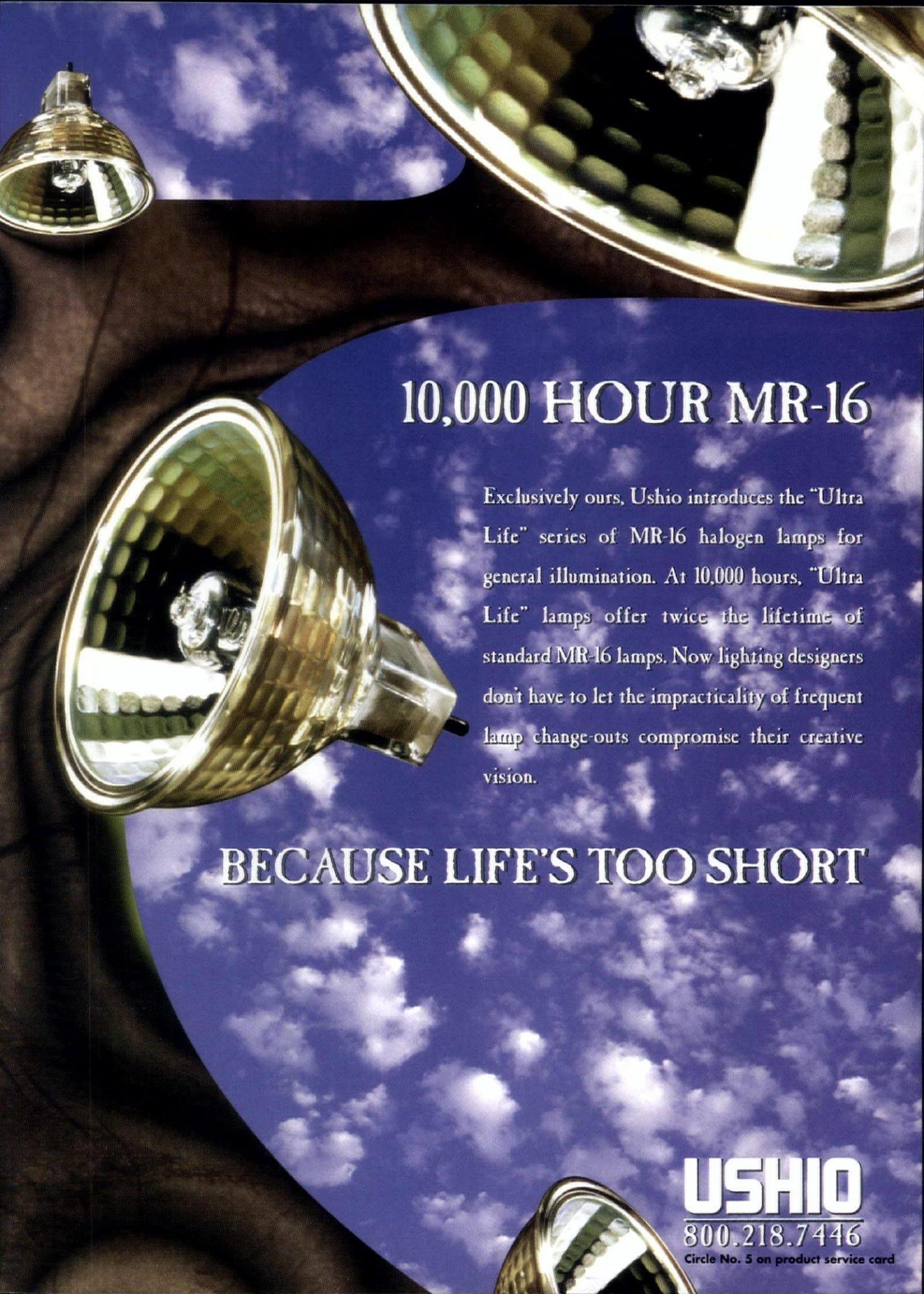
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WHILE CELEBRATING 10 YEARS, WE'RE LOOKING AHEAD

Welcome to the new *Architectural Lighting* as we celebrate 10 years of serving the lighting industry, and look ahead to an even brighter future.

Architectural Lighting was founded because lighting design had become a much more dynamic field, with a growing number of new considerations, equipment options and other complexities. Today, the world of lighting design is more challenging (and rewarding) than ever before, necessitating information you can count on to stay competitive.

That's where *Architectural Lighting* can make a real difference in adding value to your business.

Inside the pages of this issue, you'll find a new design, new sections, new editorial directions plus everything you liked from the old. Our editorial content is based on what we see as key trends combined with the results of a reader survey asking you to prioritize the topics you want to see covered. In each issue, we seek to strike an editorial balance that will please the artist and engineer in all of us—and help you be the very best in your field.

Architectural Lighting and its editors have also been busy behind the scenes sponsoring the IALD Awards while getting involved with other awards programs; sponsoring a television series on architecture; participating in the IESNA Educational Materials Committee; moderating a TV panel on lighting design; sponsoring the Lightfair New Product Showcase and InterPlan; sitting on the advisory committee of Neocon; and promoting professional lighting design with editorial in end-user publications. And we've got other surprises in store throughout 1996 that will give you even more value.

One new relationship we're proud to announce today is our sponsorship of inter.Light, an Internet lighting information resource produced by Inter.Light, Inc. Inter.Light, a site on the World Wide Web, offers product databases, new products and other information plus in-depth information about *Architectural Lighting*. Inter.Light and other new services, plus how to get "on line," are covered in this issue's Industry Focus.

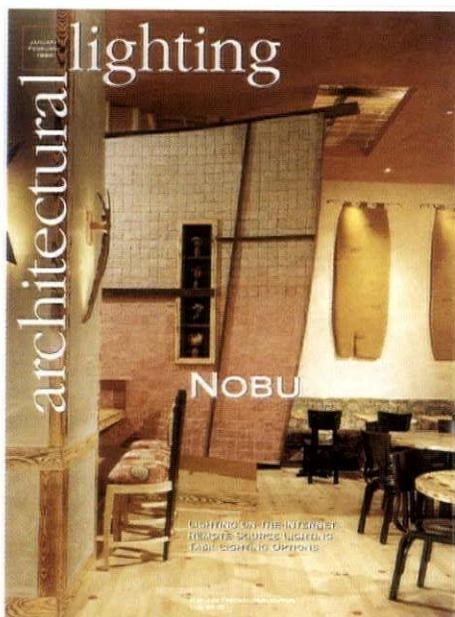
On a final note, I would also like to recognize Christina Trauthwein, a veteran editor with *Architectural Lighting* who has recently been promoted to Executive Editor, for her insights

and teamwork in helping to build the new magazine, and the rest of the staff here at the Commercial Design Network who help "make it happen."

We're excited about this issue and we hope you enjoy it. This is only the beginning. I'd love to hear your comments and insights on the magazine or the industry—give me a call at (212) 615-2304, fax me at (212) 279-3955, or e-mail me at cdilouie@mfi.com. ■



CRAIG DILOUIE,
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AND CHRISTINA
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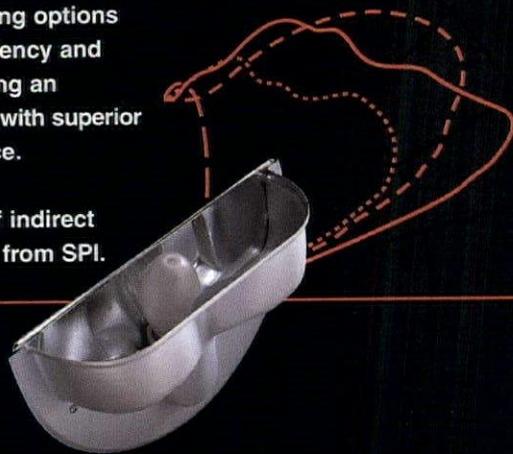
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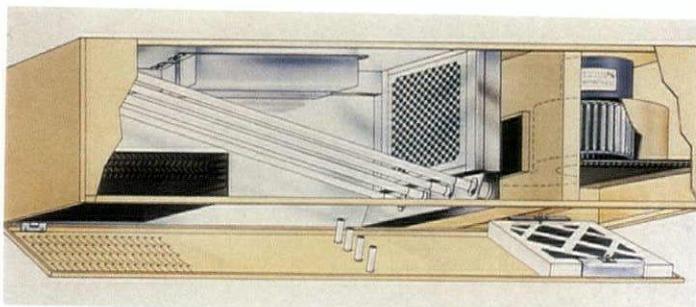
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UV LIGHT FINDS INNOVATIVE USES FOR ENTERTAINMENT AND HEALTH

For hospital, school, airline and other enclosed public-space applications, UV Technologies Inc. of Greenwich, CT, a subsidiary of the JJI Lighting Group, has developed the Viotec line of commercial air purifying units, which use UV light around-the-clock to kill airborne bacteria such as tuberculosis, Legionaire's

disease, infectious jaundice—even Ebola! Various models, tested at the University of Cincinnati, have been shown to be 96-99 percent effective at inactivating bacteria, reducing risk of infection. No UV radiation is released into the space due to Viotec's enclosed design. For more information, call (203) 869-9330.



VIOTEC UNITS FORCE ROOM AIR INTO ONE END OF THE DEVICE, DRAW IT THROUGH DUST FILTERS AND PAST A SERIES OF HIGH-INTENSITY UV LIGHT TUBES, THEN RELEASE IT BACK INTO THE SPACE OUT THE OTHER END—96-99 PERCENT BACTERIA-FREE.

LITETRONICS MERGES WITH DURO-TEST

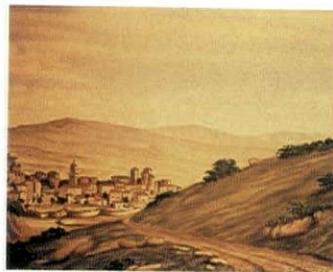
Litetronics International, Inc., the Alsip, IL-based manufacturer of halogen, metal halide, linear and compact fluorescent lamps, recently announced a merger with Duro-Test Corporation, the Fairfield, NJ-based manufacturer of incandescent and fluorescent lamps. The result is DuroLite International, Inc., with Robert Sorensen, previously president and CEO of Litetronics, heading up the new company as chairman and CEO. Dan Picini, former chairman and CEO of Duro-Test, will continue service as a consultant to the board of directors. DuroLite will be headquartered in NJ. Litetronics and Duro-Test will continue to operate as separate businesses. According to Sorensen, the merger brings together complementary manufacturing and marketing capabilities.

LEONARD PARKER ANNOUNCES NEW CHANGES

The Leonard Parker Associates, Architects Inc., an architectural firm based in Minneapolis, recently announced personnel and organizational changes. The promotions include Leonard Parker, FAIA, CEO/COB; Gary Mahaffey, FAIA, president; Stephan Huh, FAIA, executive VP; Francis Bulbulian, AIA, executive VP; Ray Greco, AIA, senior VP; and Carol Schu, secretary/treasurer. David Dimond, AIA and Ken Jandura, AIA have also joined the executive leadership as VPs.

Wildfire Inc., a UV visual effects company based in Los Angeles, has opened a full-service design/scenic studio located in its current 12,000-sq.-ft. facility in Culver City, CA. Wildfire's services include fluores-

cent visual effects painting techniques that completely change the look, content and design of large-scale images under UV light produced by long-throw projectors. For more information, call (310) 398-3831.



A MURAL, DEVELOPED BY WILDFIRE, UNDER WHITE LIGHT.



THE SAME MURAL, UNDER UV LIGHT.

EPRI/LRI FORM, ANNOUNCE RESEARCH OFFICE

The Electric Power Research Institute (EPRI), an R&D organization with some 700 utility members, and the Lighting Research Institute, Inc. (LRI) of New York City have joined forces to conduct national and international research and development in the lighting field.

The new Lighting Research Office, based at EPRI's Palo Alto, CA headquarters, will focus on lighting's relationship to human performance, health and safety, in addition to innov-

ative uses of light, such as using UV light as an indoor air quality tool. According to Karl Johnson, EPRI manager, Commercial Building Systems, the Office also will provide the lighting industry with an infrastructure for collaborative research. The LRI, holding a record of 100 lighting research projects, 85 reports and four international symposia since 1982, will phase out its existing projects and transfer them to the Lighting Research Office.

LIGHTING EDUCATION FUND RECEIVES BROAD SUPPORT

The Nuckolls Fund for Lighting Education received good news at last year's Lightfair. Ken Yarnell, then president for the International Association of Lighting Designers (IALD), presented a check for \$2,500, raising the IALD's support of the Fund to \$17,500. Stephen Lohm announced a contribution of \$2,000 on behalf of the Designers Lighting Forum of New York, increasing DLF's total support to \$12,000. Additionally, LiteControl contributed nearly \$6,700, which was the result of a Fun Run/Walk sponsored by the fixture manufacturer.

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Introducing The Entablature™, the first outdoor luminaire that allows you to define its character within the architectural scheme. As a shy personality, The Entablature has a distinguished simplicity that can blend with its surroundings and become integral with the architecture. As an extrovert, the luminaire can be reconfigured with many different entablatures to emulate the distinctive features and accent colors that often become the unique signature of building exteriors. Whatever the choice, you can be sure that you have specified a luminaire of unprecedented quality and performance because it is Kim. The Entablature is available in two sizes, four light distributions, HID lamp modes from 70W to 400W, and a host of features such as die cast construction and no-tool maintenance. The shoebox has been redefined!



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WALDMANN EXPANDS

Waldmann Lighting Company, Inc., the Wheeling, IL-based task lighting manufacturer, has begun an 18,000 sq. ft. expansion to be completed later this year. According to Waldmann, the expansion was launched based on strong sales growth. Waldmann, a subsidiary of Herbert Waldmann GMBH and Company headquartered in Germany, has been operating in the U.S. for 15 years in the office, machine and magnification task lighting markets.

HEBERT
RECEIVES
IDEC AWARD

Paulette Hebert, assistant professor in interior design at Louisiana State University and principal in the firm Paulette Hebert Lighting Consultant, was recently recognized by the Interior Design Educators Council (IDEC) in its national design competition. The contest awards design projects and creative works by interior design educators.

Hebert was awarded for her lighting design for the Hahn Shoes Store in the Greenbriar Mall in Atlanta. The architect for the project was Sam L. Vincent, AIA, principal of Baton Rouge-based The Architecture Group. The project

was awarded based on the following criteria: contribution to interior design; exceptional solution in relation to programmatic requirements; intentions and results relative to content, operational, experimental and aesthetic achievement; and quality of execution, crafting and



appropriate materials. The project was also awarded the IESNA's Design Award of Merit (South Central Louisiana Section) and an Edwin Guth Award of Merit (South Central region).

FIBERSTARS AWARDED
FIFTH PATENT

Fiberstars, Inc. reported that it has been issued patent number 05345531 by the U.S. Patent Office for lateral emission of light from uniquely bundled and cabled fiber-optic tubing. Fiberstars' invention covers fiber-optic tubing that uses a proprietary technique to micro-blend clear-quality plastic optical fibers into specifically sized bundles which, in turn, are twisted and drawn through a clear outer Lexan tube in custom lengths. According to Fiberstars, the process enhances light output over ordinary fiber-optic tubing, and the resulting effect, called "BritePak" by Fiberstars, is 30 times brighter than the original system introduced by the company in 1988. Fiberstars holds a number of patents in fiber-optic technology.

In other news, John B. Stuppin has been elected chairman of the board at Fiberstars. He brings experience in helping start, finance and manage emerging technology companies such as Autodesk, Inc. and Neurobiological Technologies, Inc.

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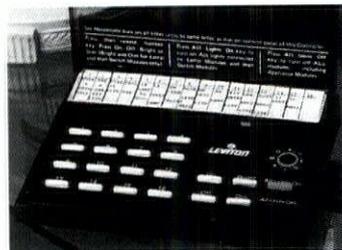
Leviton Mfg. Co. has installed an array of its Universal Design Series devices in Fairland Manor, a new real estate development in Silver Spring, MD that features a community of 10 townhouses designed to enhance independent

living for the elderly and people with disabilities.

Products include easy-to-use Decora designer switches; specialty switches and receptacle lighting control devices such as dimmers and motion-activated occupancy

sensors; night lights; and programmable lighting controls. In a variety of applications, these products can make life easier for all types of users—young children, older people and people with special needs—the whole concept behind universal design.

For more information, contact Joe Zaccaria at (718) 281-6384.



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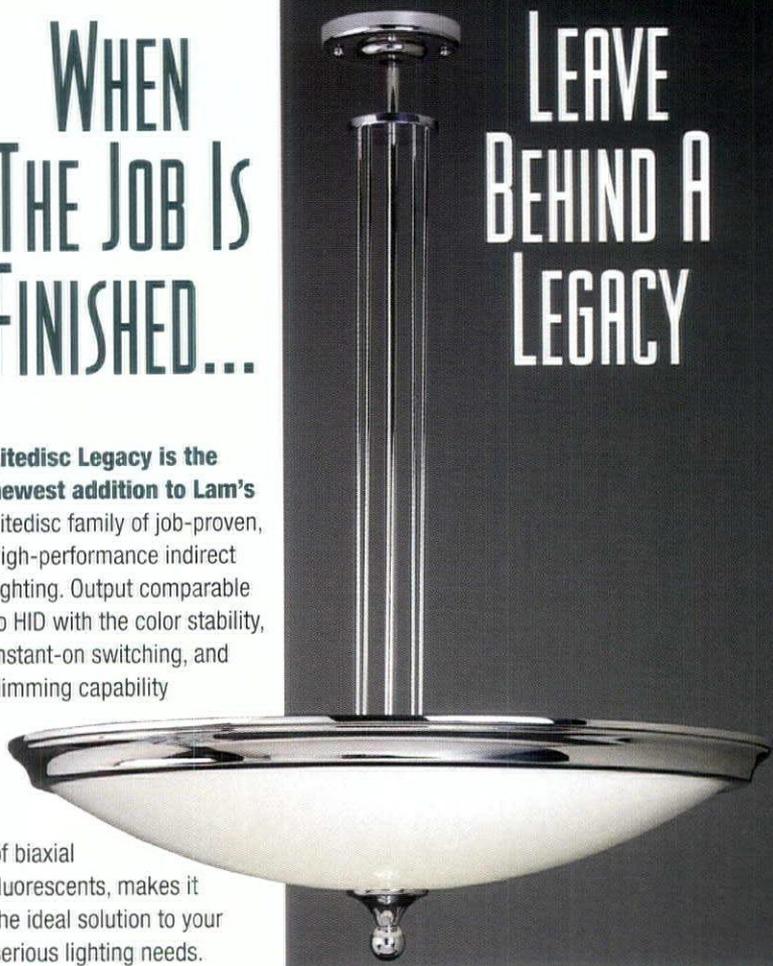
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VISA
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MEMORIES"

When Visa Lighting contacted Unicare Health Facilities, Inc. and Artreach Milwaukee, a nonprofit organization involved in arts for senior citizens, a donation of wall sconces was arranged that would brighten the day-to-day life of the Alzheimer's patients that live at Highland Transitional Care Home in Madison, WI.

Visa Lighting's wall sconces, donated initially to improve the main hallway's appearance, found a new innovative use—to help elderly Alzheimer's patients with recognition and memory. Alzheimer's disease causes a gradual, debilitating loss of short-term memory, causing patients to become confused about their surroundings.

Removable metal panels, primed with a white paint, were designed into the sconces. Patients glued assorted objects onto the panels to build decorative collages with special, personal meanings. The panels were then inserted into the sconces and the complete units installed outside the patients' rooms, aiding in recognition of the location of the rooms, improving the area aesthetically, and possibly improving memory because Alzheimer's patients respond best to color. Most importantly, the sconces also improved patients' morale.

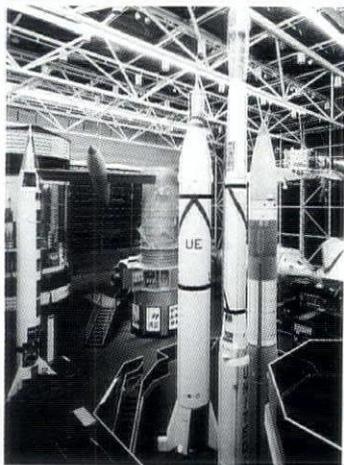
BRIGHTER LIGHT PANELS

A recent breakthrough accomplished by researchers at Yamagata University in Japan was covered by *Business Week* and *Science*.

Junji Kido, a materials scientist, and his team developed a combination of flat electroluminescent panels—one producing green light, one red, one blue—that form one paper-thin panel which produces 2,200 candelas per sq. m. of white light at 16V.

This is about 22 times brighter than the average computer monitor, and a little more than one-fourth the luminance of a fluorescent lamp.

Kido suggested that after some refinements, the panels could produce about 10,000 candelas per sq. m.—2,000 candelas more than the typical fluorescent lamp. The luminous ceilings of the '50s may end up making a comeback after all.



PROTOTYPES OF THE FUSION SOLAR 1000 LAMP, AN ELECTRODELESS NEW LIGHTING SYSTEM CONSISTING OF LAMPS, ILLUMINATORS AND LIGHT PIPE, WAS INSTALLED AT THE NATIONAL AIR AND SPACE MUSEUM AT THE SMITHSONIAN INSTITUTE. ACCORDING TO THE SMITHSONIAN, LIGHT OUTPUT DOUBLED WHILE ENERGY USE DROPPED 25 PERCENT. COMMERCIAL VERSIONS ARE CURRENTLY IN DEVELOPMENT.

The Fusion Solar 1000 lamp, in development by Fusion Lighting, Inc. of Rockville, MD, is currently being used in several test applications such as the National Air and Space Museum at the Smithsonian Institute in Washington, D.C.

Fusion, which received *Research & Development* magazine's award for one of the top 100 inventions of 1995 among other awards, has patented the technology and is working on models for commercial use.

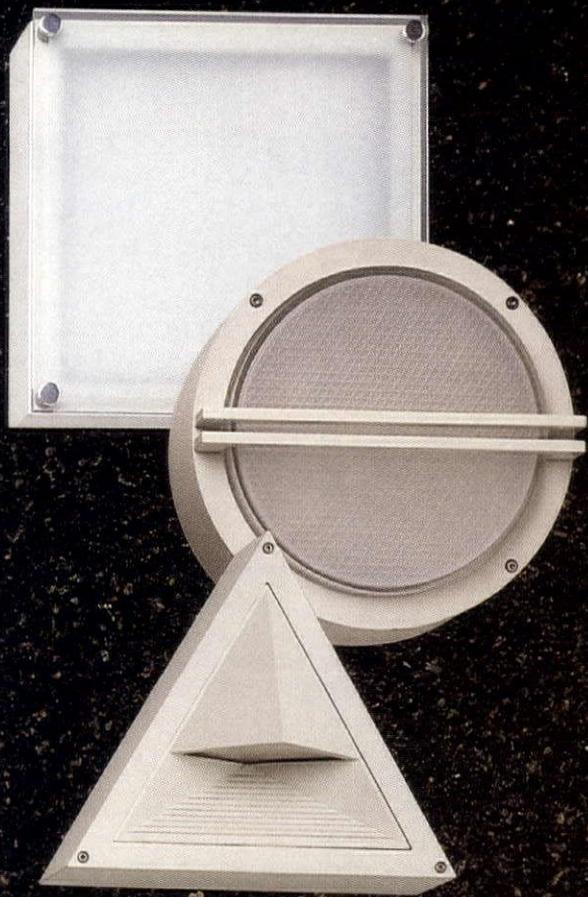
For more information, contact Fusion Lighting at (301) 251-0300.

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BURKETT NAMED PRESIDENT OF IALD

Randy Burkett, president and design principal of Randy Burkett Lighting Design, Inc. of St. Louis, has been named president of the International Association of Lighting Designers (IALD), headquartered in New York City. A veteran of lighting design for the past 26 years, 18 of them with his own professional practice (winning more than 10 IALD, Edwin F. Guth and Edison Awards), Burkett has also been active in a number of professional societies. Besides being president of IALD, he is a member of the board of directors of the CQLP as well as IESNA technical design committees, and has authored a wide variety of design and technical articles appearing in publications in more than 40 countries.

According to Burkett, in 1996 the IALD plans to continue support for certification; international membership growth; education (1996 will be the awarding of the first scholarship from IALD's new university scholarship program); the popular IALD Awards; and a working relationship with the LightNET Internet information resource.

GULDEN APPOINTED TO VP AT JJI

The JJI Lighting Group, Inc., comprised of 10 manufacturing divisions producing commercial and residential indoor and outdoor light fixtures, recently appointed Gary W. Gulden to the position of VP of mar-

keting and sales. Previously, he held positions at Stonco Lighting and Lightolier. Gulden is responsible for developing the marketing, sales, distribution and marketing communications for JJI lighting products.

LITHONIA PROMOTES DARNELL AND LEE

Lithonia Lighting, the Conyers, GA-headquartered manufacturer of light fixtures with sales topping \$850 million, has announced the promotion of Charles J. Darnell to the post of executive VP and Rod B. Lee to the position of senior VP, sales and marketing. Both have been with Lithonia for more than 30 years.

IN MEMORIAM

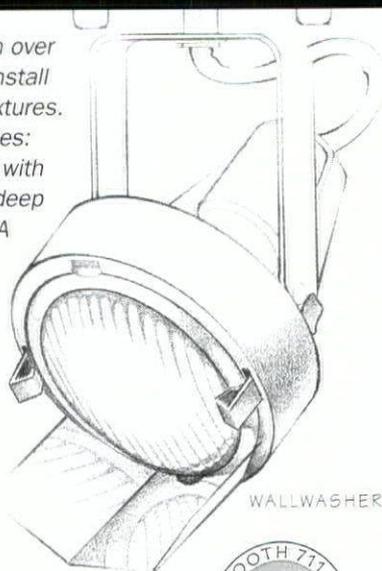
Barry Leib, executive VP of CSL Lighting Mfg., Inc., passed away on August 10, 1995 at the age of 61. As one of the founders of

CSL, Leib paved the way for the company's role in recessed low-voltage lighting. He is survived by his wife Toni, son Josh, daughter Cherise and granddaughter Ashley.

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SCHEDULED EVENTS IN 1996

February 24-28 Ambiente '96, International Frankfurt Fair; Germany. Call (49) 7575-6364.

March 6-8 Seminar: Museum Exhibit Lighting—Conservation, Lighting Design and Current Technology; Washington, D.C. Call (410) 578-0145.

March 18-20 Seminar: Reflector Design—Theory and Practice; Denver. Call (508) 745-6870.

March 19-21 The Second Interior Design Show; Hong Kong Convention & Exhibition Centre. Call (212) 838-8688.

March 25-27 CIE Expert Symposium '96 on Colour Standards for Image Technology; Vienna, Austria. Call (1) 7143-1870.

April 1-3 The DOE's FEMP University Sessions: Federal Relighting Initiative; Kansas. Call (800) 566-2877.

April 2-3 The Electrical Electronic Expo; St. Louis. Call (314) 968-1000.

April 22-27 World Light Show '96; Hannover, Germany. Call (609) 987-1202.

April 23-26 A/E/C Systems Mexico '96; Mexico City. Call (800) 451-1196.

May 4 IESNA Technical Knowledge Exam (TKE); various locations. Call (800) 525-8555.

May 14-16 Lightfair International; Moscone Center, San Francisco. Call (404) 220-2217.

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

EDUCATIONAL FACILITIES

Osram Sylvania's Lightpoint Facility

- Light Essentials: February 26-28; May 20-22; August 26-28; November 18-20
 - Lighting Design & Applications: April 1-3; October 7-9
 - The Energy Focus: March 11-13; September 23-25
- For more information, call (508) 750-2464.

Cooper Lighting's Source Facility

- Lighting Fundamentals: March 27-29; September 11-13; October 16-18; November 20-22
- Energy-Efficient Lighting: April 25-26; November 7-8
- Computer Software: March 14-15; June 6-7;

- September 5-6; December 12-13
- Incandescent Seminar: March 5; August 16
 - Fluorescent Seminar: March 7; August 15
 - H.I.D. Seminar: March 8; August 14
 - Emergency/Exit Lighting Seminar: March 5; August 13
 - Utilities Lighting Seminar: May 6-7
- For more information, call (708) 956-8400.

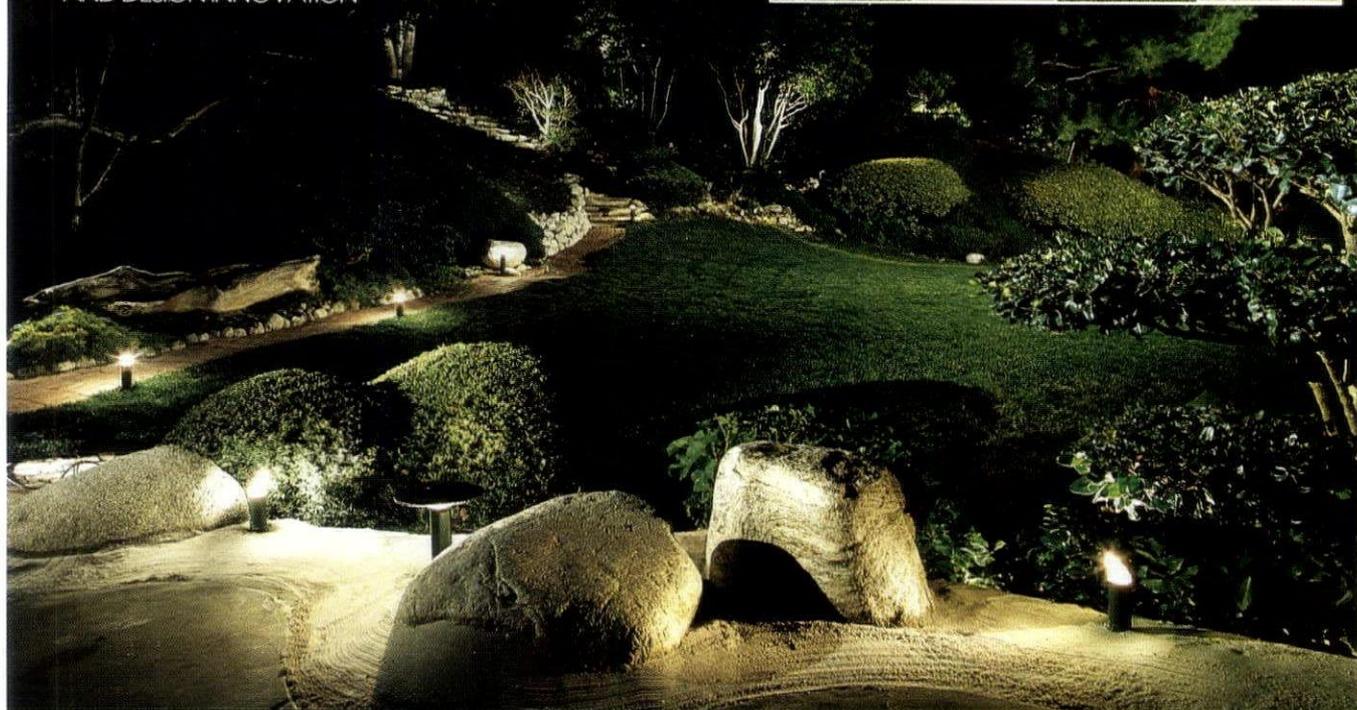
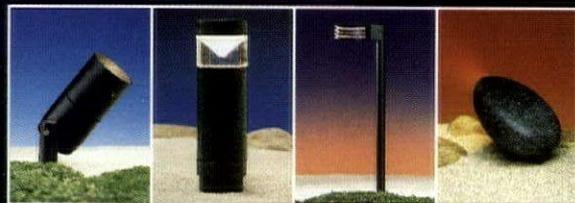
Philips Lighting Center

- Lighting Residential Spaces: February 26-27
 - Lighting Design & Application Workshop: April 15-18; September 9-12; November 11-14
 - Lighting Technology Update: June 3
 - Retail Lighting: June 10-11
 - Commercial Lighting Seminar: October 21-23
- For more information, call (908) 563-3600.



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A RIVER RUNS THROUGH IT

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

CHALLENGE Consumers expect to leave a store with a box or two. They certainly don't want to shop in one. But the 15-year-old Plaza Rio Hondo shopping mall in Puerto Rico, with its rectangular shape, dark interior and static atmosphere conveyed such an image. The mall required updating—more specifically, a sense of movement, a stimulating atmosphere and the illusion of a more complex geometry—according to architect Patricia Cornelison, AIA and lighting designer Addison Kelly.

Prior to the redesign, the shopping center was rather dim: The entire mall was essentially lighted with lensed fluorescent troffers mounted in the ceiling in 20 ft. x 20 ft. aluminum bays. The design team set about lifting the ceiling, which was low and oppressive, and creating an asymmetrical ceiling pattern to lure shoppers from one end of the mall to the other. They eliminated the squareness of the architecture by building upon a river theme, consistent with the name of the mall.

DESIGN/TECHNICAL CONSIDERATIONS "Skylights are often used in the main arcade of a mall to provide daylight and a sense of space," said Cornelison. "In Puerto Rico, however, where the sun is relentless, the use of skylights is limited. So electric lighting became very important to the new design since the existing light level was fairly low."

"The arcades were virtually dark," agreed Kelly. The only daylight occurs at a few small court areas where there are clusters of small pyramidal skylights, and at the ends of the mall where there are glass doors, which are blindingly bright—literally like lights at the end of the tunnel. "The contrast ratio between the daylight space and the arcade space was tremendous," said Kelly. "To create balance and shorten the tunnel effect, we had to address the intense tropical sunlight in two ways: by drastically increasing the perceived light level inside the mall and by baffling down the daylight in the court areas to shield the glare."

Since the mall was to remain in operation during construction, according to Cornelison, there was little opportunity for intervention below the ceiling plane without forcing all of the tenants to renovate their storefronts. Other than the ceiling, the only parts of the mall available for redesign were the neutral piers between the stores and the four freestanding columns in the center court.

METHOD The design team removed the existing flat metal slat ceiling panels edged with fluorescent and created, as infill, a series of visible overlapping planes in curvilinear forms. In the center, a winding "river" of parallel vertical metal baffles literally creates a sense of flow. Moreover, the baffles conceal mechanical equipment such as the building's HVAC system.

"The curvaceous asymmetric forms provide spatial depth to the ceiling plane and evoke the fluid shapes of water," Cornelison pointed out. Surface-mounted neon delineates the curved forms and is reflected across the polished chrome edge of the baffles, providing accent colors in festive hues: blue, pink and yellow. A simple fluorescent strip hidden above the opposite edge washes the face of the blades. Furthermore, two rows of recessed metal halide downlights keep the "river" clear of hot spots.

In the open-court areas, there are larger, "pond-like" areas of baffles. "The ceiling above the baffles is lighted by a fluorescent cove to balance the sunlight by day and provide ambient light at night," said Kelly. In addition, narrow-beam metal halide fixtures hidden above the baffles splash down between the skylights to create pools of light on the floor. Outside the baffled areas, in a freeform drywall soffit, recessed metal halides shine through purple and green glass trims.

RESULTS The design team created a new, dynamic space without altering the physical parameters of the existing structure. "The light level was almost doubled to achieve current standards without increasing the existing energy loads," said Kelly. "We used energy-efficient sources—metal halide, neon, fluorescent—bright colors and translucent and polished materials, with a resulting average of 1.3 watts per square foot. In addition, we selected only long-life sources and kept lamp types to a minimum for ease of maintenance."



ROBERT S. HOLT, AIA



ROBERT E. MIKRUT

DETAILS

- PROJECT**
Plaza Rio Hondo
- LOCATION**
Bayamon, Puerto Rico
- OWNER**
Manley-Berensen
- ARCHITECT**
Arrowstreet Inc.,
Pat Cornelison, AIA,
project designer
- LIGHTING DESIGNER**
Addison Kelly,
US Lighting Consultant
- ELECTRICAL ENGINEER**
Raphael Mullet,
Eagle Engineering
- PHOTOGRAPHERS**
Robert S. Holt, AIA/
Robert E. Mikrut
- LIGHTING MANUFACTURERS**
Prescolite; Kramer;
Poulsen; Reggiani;
Norbert Belfer

CUSTOM "PALM TREE" FIXTURES FEATURE CAPITOL-STYLE METAL "WAVES" INTERSPERSED WITH CLEAR BLUE ACRYLIC. COMPACT FLUORESCENT SOURCES UPLIGHT THE CEILING AND HEIGHTEN VISUAL IMPACT. AT THE MAIN ENTRANCE (CENTER), THE MALL'S NEW IDENTITY IS ANNOUNCED WITH ART DECO-STYLE GRAPHICS REINFORCED BY BACKLIT CHANNEL LETTERS AND MULTI-COLORED NEON OUTLINES. THE "RIVER" IN THE CENTER OF THE MALL (RIGHT) IS CREATED WITH METAL BAFFLES, BRIGHT NEON AND A FLUORESCENT STRIP.

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DAVID ROCKWELL AND
PAUL GREGORY ADD
SOME AUTHENTIC
FLAVOR AND
“LIGHT” FARE TO A
JAPANESE EATERY

East Meets

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

What do a top L.A. chef, innovative restaurateur and first-rate actor all have in common? Well, the answer is far from a joke. When they're Nobu Matsuhisa, Drew Nieporent and Robert DeNiro, it's Nobu, a TriBeCa-district hot spot. Now add to that the cutting-edge team of architect David Rockwell and lighting designer Paul Gregory—of Planet Hollywood fame—and what you have is an artful experience that reflects the spirit of Nobu Matsuhisa's unconventional and sophisticated Japanese cuisine.

"In Nobu, we're introducing patrons to a new view of Japanese food and design," said Rockwell, president of the Rockwell Group. "Neither the menu nor the design is standard." The design team's primary goal was to create a sensory-rich environment in a space that doesn't rely on one's automatic perceptions of Japanese restaurants.

"In other words," said Rockwell, "there are no shoji screens, tatami mats or abundance of light wood, which are all traditional elements of the Japanese domestic culture."

Rather, the 2,800-sq.-ft. interior of the high-ceilinged restaurant, which previously housed a bank and two different restaurants, borrows its cues from the Japanese countryside, where Matsuhisa was born. Given the restaurant's trendy location—the corners of Franklin and Hudson Streets in Manhattan—Nobu was designed to integrate informal, yet unusual, materials.

Rockwell carefully designed the interior to celebrate rural life by incorporating bits of nature and raw materials indigenous to Japan into the urban eatery. The lighting successfully supports the motif by creating a glowing jewel box in which



to showcase the natural elements, according to Rockwell.

SET DESIGN

Rockwell, who co-designed Nobu's lighting with Gregory, began his career assisting a Broadway lighting designer. Inspired by his background in stage and theater design, Rockwell designs what he terms *architecture as theater*: The vital roles lighting, decoration and special effects play in creating every "set."

In this particular case, he envisioned the set or restaurant as a Kabuki theater where the patron is provided not just with an experience in Japanese cuisine, but also Japanese culture. To do this, Rockwell incorporates the strong contrast between simple horizontal and vertical planes against a simple background to

conjure up an environment distant from everyday life.

Rockwell and Gregory achieve a successful balance between lighting and architecture in Nobu by using lighting elements to:

- create interesting "pictures or views"
- highlight key architectural and design features
- add drama to the visual experience

"Looking at the space from many different perspectives is important," said Gregory, president, Focus Lighting Inc. "There's the view from the front door, where the space is essentially a large stage set filled with scenery; the views as the patron enters the room and moves through it; and the view from the table where the person sits.

"As the lighting designer, my mission was to paint these pictures with the lighting to create an artistic product," he added.

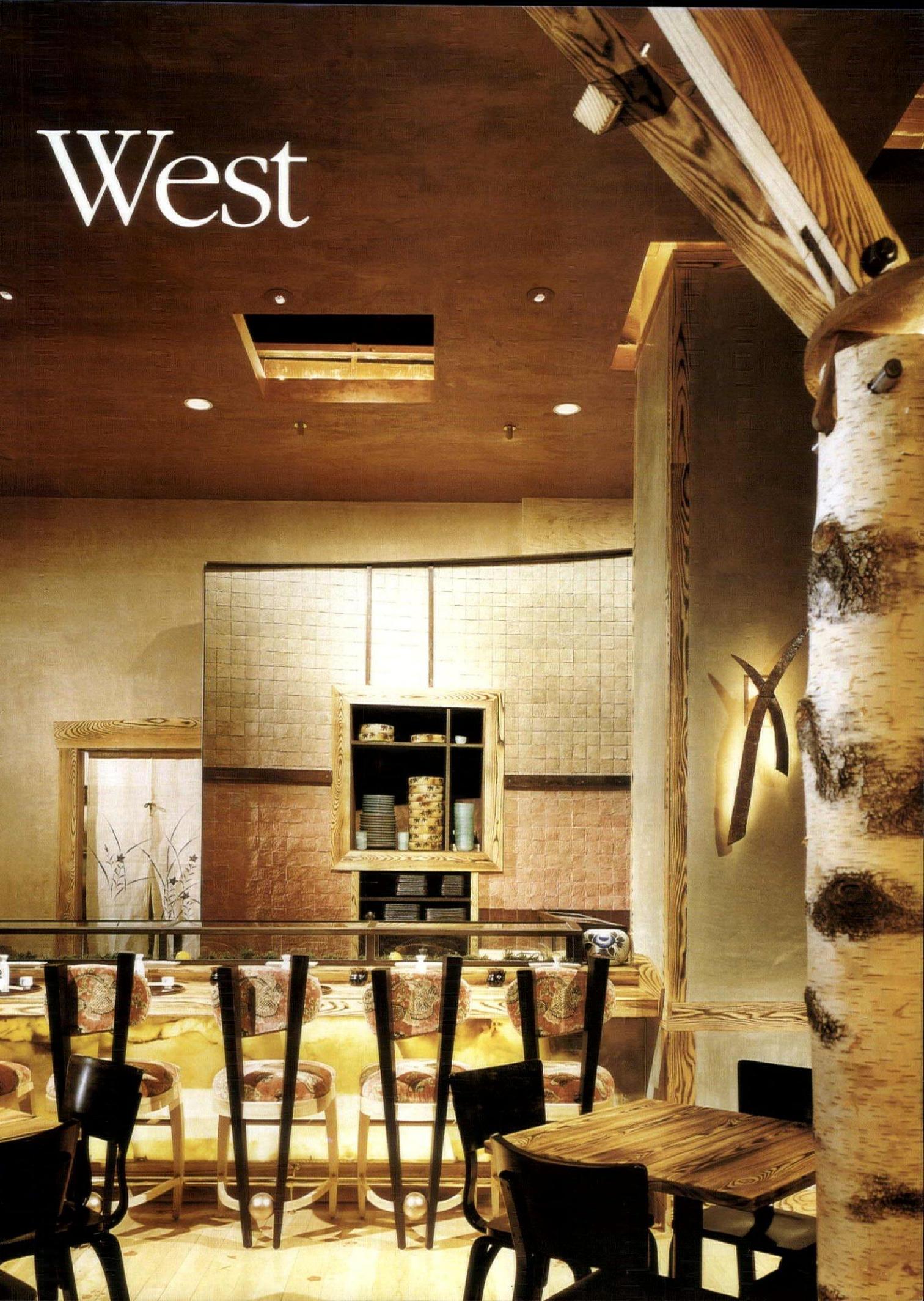
CENTER STAGE

If dining at Nobu is theater, then the sushi bar, set against a wall of small handmade glazed ceramic tiles lighted by MR16s, is definitely center stage.

The polished bar, which is the heart of the restaurant, is composed of a green onyx front and a scorched wood surface with details in bronze and polished brass.

THE SUHSI BAR IN NOBU (OPPOSITE) RESEMBLES THE TRANSLUCENT, IRIDESCENT QUALITY OF SUSHI, THE RESTAURANT'S SPECIALTY. THIS IS CREATED BY BACKLIGHTING THE ONYX FRONT WITH FLUORESCENT SOURCES. THE BAR IS POSITIONED IN A CENTRAL LOCATION, SURROUNDED BY RUSTIC ELEMENTS, LIKE THE STAGE IN A KABUKI THEATER (ABOVE). AT NOBU PATRONS COME TO GET A TASTE OF JAPANESE FOOD AND CULTURE.

West



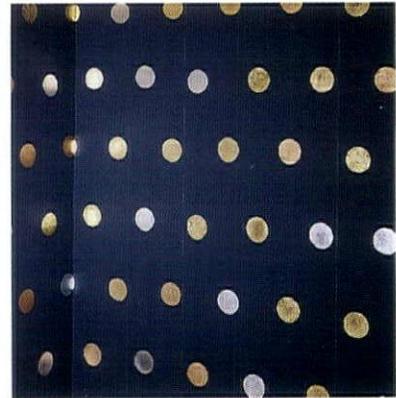
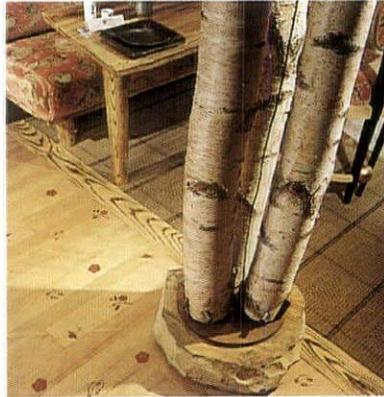
Fluorescent lights backlight the onyx to create a soft translucent look, a visual metaphor for the variety of raw fish being served there.

"This is the first time I've used fluorescent lighting in a restaurant," said Rockwell. "We decided to apply it here because we wanted a lot of diffused soft light to illuminate the richly hued material."

The fluorescents are sleeved to achieve the proper intensity and to color-correct them to incandescent. Custom-designed bar stools, set against the green glow of the backlit onyx, feature fish-patterned upholstery and upright supports that resemble huge black-lacquered chopsticks.

Custom hammered bronze sconces in the shape of dueling samurai swords are backlit with low-voltage (24V) 5W xenon lamps. The sconces are mounted on structural columns which frame the prominent sushi bar.

Adjacent to the sushi bar, concealing the waiter station, is a large curved wall composed of dark Japanese riverbed stones. The glistening divider is lighted with four floor-mounted adjustable MR16 well



lights that graze the surface to accentuate the texture of the pebbles and produce a water-wall effect.

INTO THE WOODS

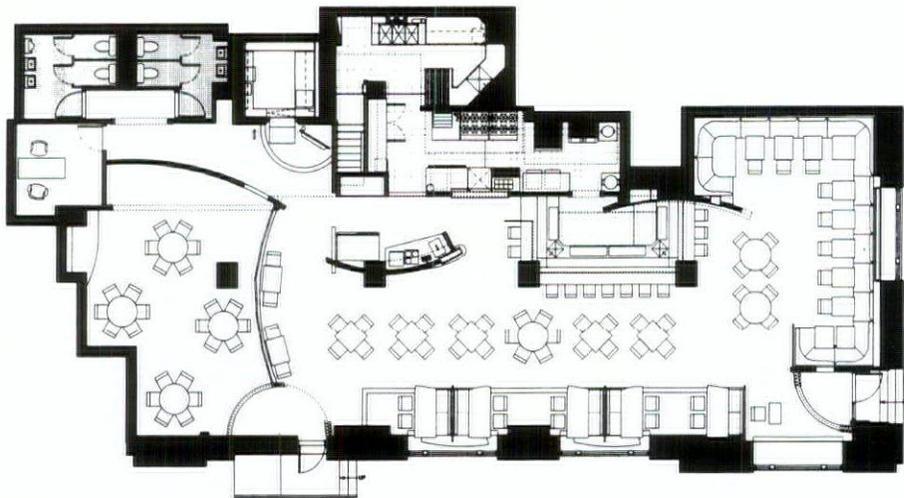
In an attempt to recreate the countryside, the team studied books on Japanese landscape (in addition to their research on the culture and food). This is most notably expressed in the dining room, which is

characterized by three stylized floor-to-ceiling tree-like columns whose branches spread out toward the ceiling. These fantastic custom woodland sculptures transport patrons to another place in time—a request of the clients and a philosophy born into each of Rockwell's designs.

The trees, designed to add rhythm to the long, narrow space, are not only thematic decorations, but intriguing light fixtures whose light shines through the sprawling branches and adds dimension and drama to the ceiling. The trunk of each sculpture is constructed of three slender 6-ft.-tall birch logs bound together. This assembly is mounted to a stone base and topped by solid ashwood branches, burnished to emphasize the natural grain. A single 100W clear quartz halogen T lamp, connected to a dimming circuit, is positioned in a tubular bronze reflector housed in a lampholder.

BRANCHING OUT

The tree fixtures distribute crisp focused light that illuminates the angled branches and projects sharply detailed patterns on the ceiling. The effect is created by a theatrical patterned template positioned over the lamp, though the shadows



specs

(55) 50W MR16 recessed adjustable accent lights with dichroic filters and louvers accent the tables

(62) MR16 track accent lights with dichroic filters and louvers wash the walls

(8) T8 fluorescent channel strips with Rosco color filters backlight the onyx sushi bar

(4) 100W clear quartz halogen T12s in custom uplights in tree sculptures

(75) 60W A-19 lamps in 2 x 2 (6 in. on center) uplights housed in ceiling cutouts

(4) 5W xenon lamps backlight custom sword sconces

(8) shovel-cut wall-wash fixtures illuminate perimeter walls



seem to be cast entirely by the branches.

The ceiling, punctuated by large abstract cutouts, appears to float over the space, supported by the branches. Incandescent strip lights are recessed into the openings to light the copper-leaf vaults above and to create an inviting glow.

The lighting for the tables, which consists of perimeter banquettes and loose tables of four that seat nearly 100 people, is designed to bring out the warm tones of the material surfaces, creating soft, flattering light and intimacy.

"We used slot aperture adjustable MR16 medium floods and clustered them together, rather than placing them the standard 3 ft. on center," said Gregory. This creates soft pools of light on the tables without producing any glare.

Decorative gold-colored Italian chenille panels, which hang on the walls in the main dining area, are highlighted by MR16 spots in track fixtures housed in the perimeter soffit. This light, which bounces off the panels, creates an amber glow that adds to the warmth of the space.

Toward the back of the restaurant is a

THREE BIRCH LOGS JOIN TOGETHER TO FORM THE BASE OF CUSTOM-DESIGNED TREE-LIKE LIGHTING FIXTURES (OPPOSITE, LEFT). RED DOTS PAINTED ON THE FLOOR REPRESENT WHERE BLOSSOMS HAVE FALLEN. METALLIC COPPER- AND GOLD-LEAF POLKA DOTS FLOAT ON AN INDIGO BACKGROUND ON THE PRIVATE DINING ROOM WALLS (OPPOSITE, CENTER) TO ADD SOME SPARKLE TO THE SPACE. THE GLOSSY, TEXTURED SURFACE OF A RIVER STONE WALL (INSET) IS HIGHLIGHTED BY FLOOR-MOUNTED MR16S. EACH OF THESE ELEMENTS COMBINE TO RECREATE THE JAPANESE COUNTRYSIDE, CHEF NOBU MATSUHISA'S HOMETOWN.

special dining area for private parties. Tall, delicate screens of woven birch branches quietly separate the two dining rooms with rustic elegance. Just beyond the branch screens are heavy indigo-colored drapes, which serve to ensure privacy. When

drawn, the velvet panels and branches are grazed by sharply angled halogen lights to highlight the whiteness of the birch bark and to add a theatrical effect—like stage curtains waiting to be opened to reveal the scenery behind them.

DETAILS

PROJECT Nobu ■ **LOCATION** New York City ■ **OWNERS** Drew Nieporent, Nobu Matsuhisa, Robert DeNiro ■ **ARCHITECT/INTERIOR DESIGNER** Rockwell Group—David Rockwell, Chris Smith and Andrew Fuston, project team ■ **LIGHTING DESIGN TEAM** David Rockwell and Paul Gregory, Focus Lighting Inc. ■ **PHOTOGRAPHER** Paul Warchol ■ **LIGHTING MANUFACTURERS** Halo; C.J. Lighting; Litelab; CSL; John Saviteri; Lucifer Lighting

Urban



Studies

BY CHRISTINA TRAUTHWEIN, EXECUTIVE EDITOR

At the University of Kansas Medical Center in Kansas City, Bruce Yarnell just might be the "Big Man on Campus." After all, he, in conjunction with W.L. Cassell & Associates, Inc., is responsible for bringing nighttime identity, visual cohesiveness and increased security to the sprawling 80-acre urban site. Prior to the extensive relighting, the campus lacked any unified design or visual boundaries and seemed rather ominous and foreboding—neither safe nor welcome to attending students. "The campus needed a comprehensive lighting plan that could assist vehicular and pedestrian movement, orientation and interaction while improving the overall feeling of security," said Yarnell.

"Designing a lighting plan for an urban campus is one of the most challenging project types I've encountered because it's extraordinarily complex," he said.

Both old and new buildings—as well as structural additions, pedestrian walkways and roadway changes covering years of growth—have accumulated to form a montage of fixture and lamp types specified by architects and engineers to satisfy immediate projects and conditions.

"What happened here is lighting by piecework," said Yarnell, "which rendered chaos to the campus night image, making it visually noisy." The lighting solution required cohesion: Fewer fixture and lamp types (with longer-life sources) would enable campus architects to easily incorporate them into future expansion projects, as well as provide ease of maintenance.

Furthermore, the campus is dense with many buildings occupying limited space. There are no expansive green lawns and meandering walkways to break up the landscape or let it "breathe."

"Rather," said Yarnell, "limited landscaped areas and expanses of concrete squeeze between buildings, and pedestri-

an bridges 'fly' across streets in an attempt to connect a segmented campus." At night, this translated to individual buildings blending into an unfriendly mass. A more attractive and inviting environment, within the context of a limited budget, was needed.

"Crime rate is perceived as being greater in the inner city," said Yarnell. "Poor lighting amidst tightly packed structures just compounds this notion." Dark alleyways signal danger: students and faculty don't feel safe unless they use direct pathways. Better lighting would improve the perception and reality of greater safety.

ALL IN THE FAMILY

To accomplish the varied criteria—unity, vitality, security—and to satisfy the conceptual goals, Yarnell developed a lighting plan that included:

- specifying similar poles and light fixtures to be used as a campus standard
- removing fixtures that were glare sources
- moving quality fixtures that had been poorly utilized
- identifying campus/building entrances with inviting light
- accenting positive architectural features and lighting the limited landscape features

"Fixtures were chosen with the thought of a neutral aesthetic," said Yarnell. "Too many lighting fixture statements already existed, which increased the visual noise.

LIGHTING
DESIGNER
BRUCE YARNELL
AND PROJECT
ENGINEER
W.L. CASSELL
& ASSOCIATES
TEAM UP
AND GO BACK TO
SCHOOL TO CHART
A COURSE IN
CAMPUS LIGHTING



THE UNIVERSITY OF KANSAS MEDICAL CENTER (OPPOSITE) HAS GROWN FROM AN INITIAL SINGLE HOSPITAL TO A MAJOR URBAN UNIVERSITY CAMPUS. GROWTH HAS INCLUDED MANY NEW BUILDINGS, GARAGES, PARKING LOTS, DRIVES AND SIDEWALKS ALL IN A COMPACT SETTING SURROUNDED BY RESIDENTIAL AND BUSINESS AREAS. THE UNIVERSITY DESPERATELY NEEDED A MASTER LIGHTING PLAN THAT WOULD BOTH UNIFY AND IDENTIFY THE CAMPUS, AND SIMULTANEOUSLY PROVIDE SAFETY AND SECURITY. PATHWAYS, SUCH AS THE ONE ABOVE, ARE NOW LIGHTED BY A FAMILY OF OPTICALLY CONTROLLED HPS FIXTURES.



GROUND-MOUNTED FLOODLIGHTS AND RECESSED LAMPS NOT ONLY ILLUMINATE THE SIDEWALK BUT ALSO LIGHT THE COLUMNS AND SOFFITS OF THIS CAMPUS BUILDING (ABOVE). ILLUMINATING VERTICAL SURFACES CREATES NIGHTTIME DRAMA AND INCREASES SAFETY.

"We actually picked fixtures that were similar in appearance and formulated a family of poles," said Yarnell. Basic cobra-head type street lighting fixtures were replaced with cutoff flood fixtures, which became the campus standard; pole heights and lamp wattages were varied to respond to the application.

"All wall- and roof-mounted floodlights were removed in one recommended action to 'quiet' the glare," said Yarnell. Thirty-ft.-tall cutoff flood fixtures on garage top decks were removed and relocated to remote parking lots; shorter pole cutoff flood fixtures which allowed less direct lamp glare, are now installed on the top decks.

"Wall packs "and "jelly jar" fixtures along the paths were removed and replaced with optically controlled fixtures. All pathways are now illuminated by 12-ft.-high pedestrian-scale poles, spaced about 40 to 50 ft. apart, with cutoff flood optics.

The increased light levels required at critical circulation junctions, such as crosswalks and entrances, are achieved by a tighter graphic rhythm of these fixtures. The same family of fixtures is also used in the parking lots, which are illuminated by 20 ft. poles to minimize visible glare from higher mast options and also to graphically delineate driving lanes.

High-pressure sodium (HPS) was chosen as the light source for the major driveways and walkways. "This was based on continuing the major light source in existing 'acceptable' fixtures," said Yarnell. Building accent and landscape lighting is specified with metal halide and mercury lamps to achieve color contrast from the general lighting.

sidelights

How does one begin the production and implementation of such a complex project? When dealing with the relighting of a major urban campus, Yarnell suggests a Master Plan Approach. "Repeated observation is a good start," he said. "Go to the campus, experience it. Get the feel, feel the darkness, be blinded by the glare, be offended by the visual confusion—and look for opportunities." Yarnell offers some guidelines to rendering a campus with a fresh, cohesive, attractive and safe appearance, using light as the media:

RECORD Survey the lighting—each

fixture and lamp that currently exists on the campus and its location. Few universities will be able to purchase all new equipment; select the better, newer equipment to remain, relocate or modify and build on that.

Aerial photography might be required simply to have a single document that is accurate and inclusive of the project. Drawings can be created from aerial photos for presentation and documentation purposes.

Note offending fixtures which must be removed because of inappropriate use or excessive glare.

Take light readings in all public

walkways, streets, cross walks, parking lots, garages and building entrances. Record the existing light levels on a Master Site Plan. (Accurate low-level light readings are especially informative so the designer can realize what 0.5 fc, 1 fc, 2 fc and so on actually looks and feels like.)

DEFINE Make a schedule of the types of fixtures required on the campus.

Photos and sketches can assist in this effort. Can all needs be met with a limited "family" of fixture types?

RESEARCH Review existing IESNA and other code requirements for each of the functions existing on the campus.

MIDNIGHT BLUE

"After resolving the functional lighting requirements, our attention shifted to enhancing the campus image and creating a more attractive nighttime identity through visual articulation," said Yarnell.

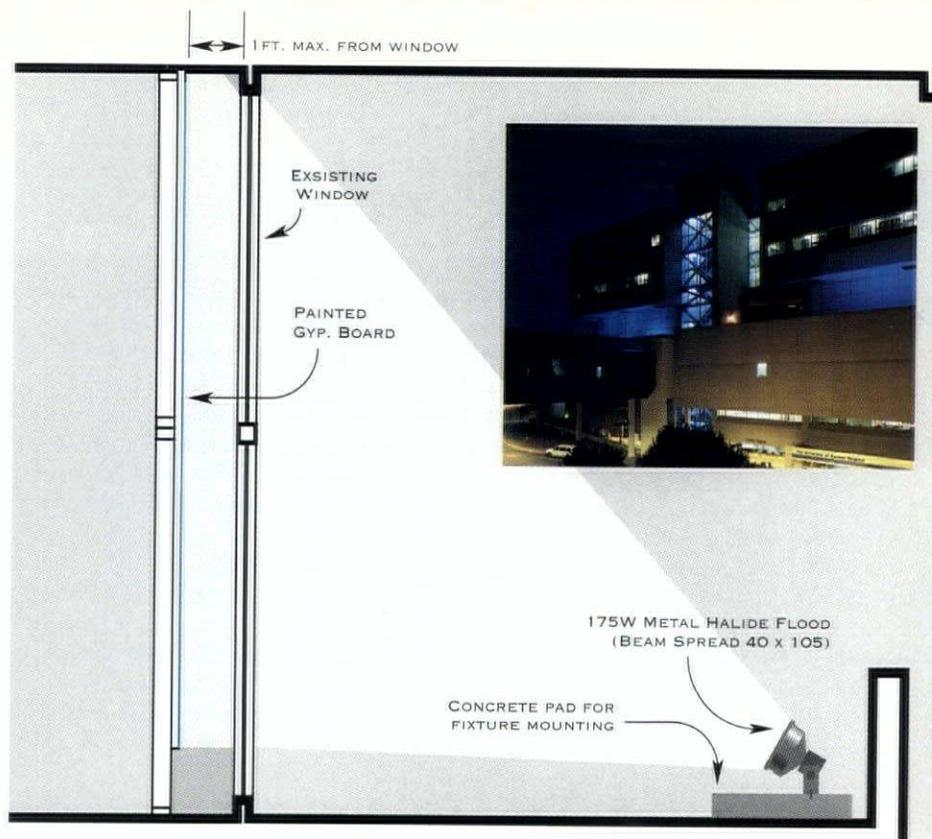
"We wanted to draw more attention to the main hospital building, which is a very large structure in the center of the campus," according to Yarnell. The third floor of the structure is set back and its vertical surface was clear glass, designed in an era when it was trendy to showcase a facility's mechanical rooms. Yarnell recommended painting the glass opaque, hiding all of the ducts from view and washed it with blue light (the school's color), providing a smooth singular image. Metal halide lamps, equipped with color gels, uplight the facade and fourth-floor soffit from concealed locations. The fixtures, mounted about 20 ft. on center, deliver a striking blue light that evenly washes the building and creates a spectacular nighttime view.

Dramatic university identity was realized not only in the Medical Center's facade, but also in the numerous pedestrian bridges that span the city streets and in the glass-enclosed staircases typical to the campus buildings. Elevated walkways tie the campus together. To increase recognition of these connecting areas, the bridges are lighted internally with fluorescents installed in existing fixtures. To echo the color theme, color gels were added to the sleeves of the lamps to produce a blue glow. This treatment successfully unifies the campus over several city blocks and "lightens" the mass of the nighttime scene. "An added benefit is easy identification, which

Discerning the "correct" criteria for a function may have legal ramifications and is especially important. Few light levels are dictated in a single number simplicity. Interpretation of recommendations gives designers the ability to "layer" brightness in desirable contrast ratios when assimilating criteria tailored to a specific campus. Designers, at this point in time, have the freedom to design.

DESIGN Design criteria, in conjunction with a Statement of Concept, have to be developed, represented and approved.

Specific design solutions will vary greatly as the outlined procedural format is applied to different projects.



THIRD-FLOOR LIGHTING MOCKUP: A SERIES OF 175W METAL HALIDE FLOODLIGHTS (40 X 105 BEAMSPREAD) MOUNTED BEHIND THE PARAPET EVENLY WASHES THE THIRD-FLOOR FACADE AND FOURTH-FLOOR SOFFIT OF THE MEDICAL CENTER. THE LAMPS ARE EQUIPPED WITH COLOR GELS TO HEIGHTEN THE BLUE COLOR OF THE PAINTED WALL BEHIND THE GLASS WINDOW AND TO CREATE AN ATTRACTIVE CAMPUS IMAGE (INSET).

encourages the use of these major pedestrian routes," said Yarnell.

Vertical stairwells, on the center's interior, are also treated identically. "Any time we have a pedestrian walkway—either horizontal or vertical—and a glass enclosure, we light it in a soft blue," said Yarnell. "Students are only traversing between buildings so they don't need color-corrected or white light," he added.

Campus and building entrances are generally lighted to increased levels for easy recognition, and to produce a "welcome mat" of light. Metal halide ground mounted floodlights are installed to wash specific interior campus building walls. This makes the most of limited open space by making the spaces appear brighter.

Lighting the vertical surfaces along a pathway, not just the sidewalk itself, also increases the feeling of safety and security. Consequently, the tightly spaced building walls are lighted to assist in creating a safe feeling for enclosed areas. Classical entrance columns and the underside of pedestrian walkways are washed by precise PAR56 ground mounted floodlights, and HPS lamps in fixtures recessed into the soffit of the building downlight the pathways next to it. In addition, mercury vapor uplights, focused on select trees, soften the night scene. ■

DETAILS

PROJECT University of Kansas Medical Center ■ **LOCATION** Kansas City, KS ■ **FUNDING** Kansas Board of Regents, Warren Corman ■ **LIGHTING DESIGNER** Bruce Yarnell, IALD, IES, Yarnell Associates ■ **PROJECT ENGINEER** W.L. Cassell & Associates, Inc. ■ **PROJECT CONCEPTION** Dr. Roger Lambson, Vice Chancellor, University of Kansas Medical Center ■ **MECHANICAL ENGINEER** George Steele, State of Kansas, Division of Architectural Services ■ **CONTRACTOR** Vince Venier, Pro Electric ■ **FACILITIES PLANNER** Tom Allen ■ **PHOTOGRAPHER** Michael Spillers ■ **LIGHTING MANUFACTURERS** Sterner Lighting Systems Inc.; Hydrel; Gardco; Omega; Infinity

As many gamblers know, seven is the lucky number. But at the \$45 million Grand Casino Coshatta, eight is the number of choice. The octagonally shaped facility, located in Kinder, LA, opened in January 1995 to a capacity crowd. And it's no wonder. With 41,000 sq. ft. of gaming space and a festive atmosphere all under one big vaulted roof, architect Tom Hoskens and lighting designer Michael DiBlasi certainly hit the jackpot with their distinctive design.

Grand Casino Coshatta is owned by Native Americans and managed by Grand Casinos, America's number one fastest growing company (414 percent annual

The 67-ft.-high ceiling in the one-story casino, while impressive, created quite a challenge for DiBlasi and Hoskens. Both ambient and accent—as well as “fun”—lighting had to be incorporated into the cavernous space, which is accentuated by exposed articulated steel trusses. The soaring interior necessitated a lighting system that could bring intimacy and human scale to the casino yet still enhance the spacious architectural plan.

The solution: Theatrical-like circular trusses, which incorporate a sophisticated lighting system, as well as other equipment such as speakers and security cameras.

“The truss system created the basis for an

uplights, which articulate the ceiling with a wash of light. “When the lighting is 20 to 30 ft. off the floor, height becomes a real issue,” said DiBlasi. “By using PAR38 lamps, we get the ease of maintenance that's needed and the light we want.

“We specified quartz PAR38 downlights because we needed a fairly tight beam and a bright light source that could directly hit the gaming tables,” he added. Enough light also was needed for the security cameras to accurately monitor the tables.

The PAR38 lamps on the lower truss are 150W, the ones on the upper truss are 250W in order to deliver enough light to the space

THE DESIGN TEAM OF CHQ
ARCHITECTS AND SCHULER
& SHOOK INTEGRATES
CIRCULAR LIGHTING
TRUSSES WITHIN A SOARING
OCTAGONAL SPACE TO
CREATE AN ACE OF A CASINO

Winner's

growth rate), as reported by *Fortune* magazine in April 1995.

“Grand Casinos was looking to attract not only the local market, but also the regional market,” said Hoskens, a principal at Cunningham Hamilton Quiter (CHQ), P.A. Architects. “In conceptualizing the interior, we envisioned a dramatic and festive space—one that would make people say, ‘Wow, you just *have* to see the Grand Casino Coshatta.’” said Hoskens.

effective lighting plan, added another plane to the overwhelming space and provided an economical way to deal with installation, wiring and fixture costs without sacrificing light distribution,” said DiBlasi, principal with the firm Schuler & Shook, Inc. The system also maintains organization: All of the wiring from the uplights, downlights, speakers, neon, transformers and security cameras is managed within the truss system assembly.

TIERED DROP

The trusses are suspended from the roof deck in a two-tier fashion; The larger ring is 20 ft. from the floor, the smaller, 32 ft. In the space between the two rings is an additional element: HVAC ducts, which surprisingly enhance the space by echoing the octagon motif used throughout the casino.

Both of the circular trusses (94 ft. and 44 ft. in diameter) are equipped with adjustable track fixtures, which provide both ambient and accent lighting for the space, and

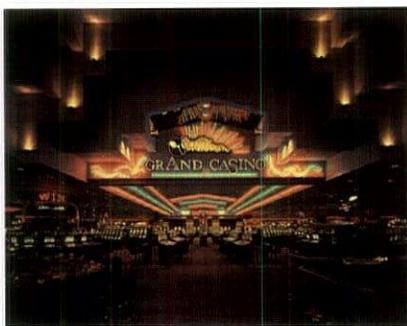
below. Some are spots, grouped together to focus light on the gaming tables, while others are floods used for general downlighting.

Quartz PAR56 uplights, positioned around the top of each ring, evenly illuminate the ceiling. “Since there's no daylighting in the space, the uplights were designed to accommodate dichroic glass color filters to create a colorful, yet subtle effect on the ceiling,” said DiBlasi. “Every other light will fade in and out so that the truss work can be faded from daytime to sunrise to evening to evoke a variety of lighting effects,” said Hoskens.

The circumference of each circle is outlined with neon—teal on the lower, lavender on the upper—to underscore the fact that this is a recreational destination.

CHANGE OF SCENE

The fiber optics—located on the eight steel truss “legs” that emanate from the octagonal rotunda—are equipped with color wheels allowing the glowing fibers to slowly and evenly cross fade from subtle blues to purples to give the space some movement and add visual appeal. Fiber optics was chosen not only for its ability to produce the desired effects, but

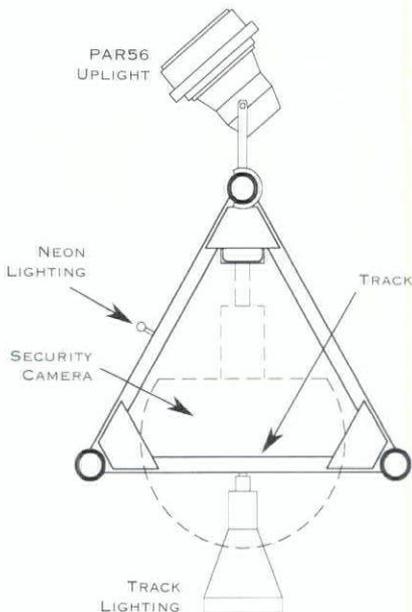


VIBRANT NEON ADDS SPLASHES OF COLOR TO THE GRAND CASINO COUSHATTA, CREATING A FUN AND ENTERTAINING ENVIRONMENT FOR GAMBLERS. DECORATIVE WALL SCONCES HIGHLIGHT THE ARCHITECTURE OF THE STEPPED SOFFITS (ABOVE).

Circle

also because the system is easy to maintain—once again, a significant consideration. The illuminators, which house 400W metal halide lamps, are located remotely in an easy-to-access upper level ceiling.

The cross bracing around the perimeter of the space is illuminated to create added depth and dimension. A compact fluorescent lamp,



TWO CIRCULAR TRUSSES, EQUIPPED WITH ADJUSTABLE TRACK FIXTURES, PROVIDE BOTH AMBIENT AND ACCENT LIGHTING FOR THE MAIN GAMING FLOOR (ABOVE). A CROSS SECTION OF THE ALUMINUM LIGHT TRUSS (LEFT) DETAILS ITS ASSEMBLY.

mounted at the intersection of the two steel beams, washes and brightens the wall surface behind the girders and consequently darkens the cross bracing. This creates another level of lighting and draws attention upward to the architecture, said Hoskens.

Special features created by the design team include neon stripes and custom star-shaped sconces mounted on columns to add some flair to areas around the periphery where the ceiling is only 12 to 14 ft. high. "The neon reflects in the polished metal of the slot machines and animates the space more," said DiBlasi. But the neon is not only fun, it's functional. Exposed neon and indirect neon coves define

the architecture and add depth to the space. Neon is also used on the ceiling as a directional element to guide visitors through the space.

To further reinforce the architecture, decorative wall-mounted sconces accent the various entrance corridors, which radiate from the gaming floor. Here, the walls step up and back and the fixtures, equipped with quartz lamps, bounce light off of the different ceiling planes.

The design team collaborated to evoke a "must see" response—and they certainly played their cards right. More than 20,000 people passed through the doors on opening day, setting an attendance record for Grand Casinos, according to *Casino Executive*. ■

DETAILS

PROJECT Grand Casino Coshatta ■ **LOCATION** Kinder, LA ■ **OWNER** Coshatta Tribe of Louisiana ■ **OPERATOR** Grand Casinos, Inc. ■ **ARCHITECT** Tom Hoskens, principal-in-charge, Cunningham Hamilton Quiter, P.A. Architects ■ **LIGHTING DESIGNER** Michael DiBlasi, principal designer, Lauri Tredinnick, Schuler & Shook, Inc. ■ **ELECTRICAL ENGINEER** Michaud Cooley Erickson ■ **PHOTOGRAPHER** Christian Korab ■ **LIGHTING MANUFACTURERS** Litelab; Lithonia; Eon-Lite; Artup; Fiberstars; Lee Colortran

THE LIGHTING INDUSTRY
ENTERS THE AGE
OF ELECTRONIC
INFORMATION

Lighting In

Anytime you have a lot of media exposure for a new technology that exceeds demand for it, you have hype. But you also have a lot of potential.

As signs of the electronic information age show up more and more in culture, business and the household, services targeting the lighting professional are becoming increasingly available. In this survey, we will examine the many facets of the Internet, review new information sites and explore their potential to help today's lighting professional become even more successful.

After all, as computers become more and more powerful, shouldn't we?

WHAT IS THE INTERNET?

The Internet (the "Net") is a vast global network of thousands of smaller networks of computers around the world. Linked computers have access to vast sums of information. Users can "go on-line" to communicate electronically (e-mail), access and share information related to a specific topic (Usenet, World Wide Web) and market products and services.

To access the Internet, one needs a computer (check with a local computer dealer for optimum models); a modem that plugs into a phone line (the faster-speed the better, so the user can get information "downloaded" into his computer without a long wait); an account with an Internet access provider such as Netcom, America On-Line or local provider; and Internet software. The Internet access provider will charge a monthly fee.

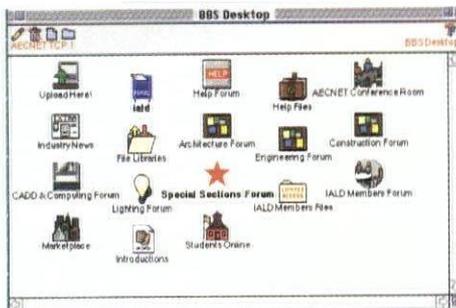
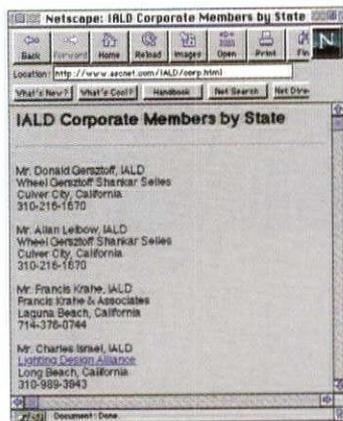
Computer users can explore two powerful information resources via the Internet—Usenet and World Wide Web (the "Web").

Usenet. Usenet is a network of electronic bulletin boards called "newsgroups" or "user's groups." Once the user finds a group

of interest, he can subscribe—he can read new messages, mark old ones as "read," send messages to one individual or post a message to the entire group. Etiquette is important on the Usenet; the novice may want to access posted information about etiquette before jumping into a group.

The World Wide Web. The Web is a network of sites where users can access information using a simple point-and-click navigation system. The Web is more sophisticated than Usenet in that it can handle pictures and graphics. It also features "links," which are words or graphics that when selected, will send the user to other sites or pages that carry more information. Some Web sites are simply bibliography-style menus from which the user can find more specific information across the Web from a single source.

Interface software programs such as Netscape and Mosaic permit the most intelligible access to the Web. Called



LIGHTNET PAGES ON THE
WORLD WIDE WEB.

USENET GROUPS OF INTEREST

[sci.engr.lighting](#)

Engineering-oriented discussion of lighting topics. Lighting professionals at design/engineering firms, academia and industry share information at this site. Recent topics include resilvering reflectors, PAR lamps and electronic ballasts.

[alt.fan.lightbulbs](#)

Forum for light-bulb jokes and other lighting humor, no kidding.

[alt.architecture](#)

Forum for discussion of architecture.

Cyberspace

browsers, these programs have sophisticated capabilities to handle graphics and organize information for review.

Specific sites of interest on the Web can be found via a search engine, a program that acts as a map of the Web. Search engines are actually Internet sites, such as Lycos, Yahoo and Web Crawler, and are available free through the Internet access provider.

To review Web sites, the user types a keyword into the search engine and all of the home pages containing that word will come up in a list. The user can then browse the list. Usually, the user also can download information (retrieve it from the home page to his own computer), where he can store and print it. Because information containing graphics and photos are sizable documents, a faster modem permits faster downloading.

THE INTERNET LIGHTS UP

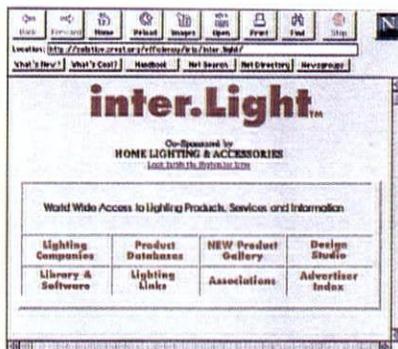
David Burtner, VP of marketing for Inter.Light, Inc. of Eugene, OR, describes

inter.Light as a natural outgrowth of the company's experience producing print directories of energy-saving products. As the Internet developed, Burtner saw an opportunity to create a "shopping mall" for the lighting industry.

"The huge advantage of Internet is timeliness," said Burtner. "You can store vast sums of easily accessible information, update it daily and distribute it instantly.

"Inter.Light's ultimate goal is to educate the lighting buyer with timely, accurate information, then help the buyer find the right seller and provide a vehicle for them to transact business," he said. "Our service will also offer technical information to support the lighting specifier, such as photometric files and current spec sheets that can be downloaded, and will be interactive, with forums on design, engineering and product application.

"We're not there just yet, but we've got most of the basic elements and we're



A TYPICAL INTER.LIGHT

PAGE ON THE WORLD

WIDE WEB.

alt.architecture.int-design

Forum for discussion of interior design.

sci.energy

Discussion of the protection and use of energy, with some messages devoted to energy-efficient lighting technologies.

WORLD WIDE WEB SITES OF INTEREST

inter.Light

Sponsor: Inter.Light, Inc.

Cosponsor: Architectural Lighting

Address: <http://irisinc.com/inter.light/>

Features: Hundreds of lighting company

listings, searchable product databases, catalog and photometric file downloads, lighting software demos, lighting design case studies, e-mail literature request system and more.

Mission: "inter.Light's primary mission is to provide lighting professionals with instant desktop access to the most up-to-date lighting product and design information available."

Contact: Dave Burtner, dkb@interlightinc.com; (541) 344-1909, fax (541) 344-2646

LightNET

Sponsor: AECNET

Cosponsors: IALD, Lighting Research Center (LRC)

Address: <http://www.aecnet.com/lightnet/>

Features: Technical libraries, lighting products, news and features, directories of lighting professionals and more.

Mission: "LightNET uses the Web and Internet BBS technology to provide lighting professionals with an electronic 'home' on the information superhighway."

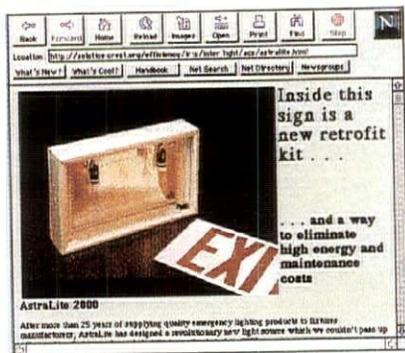
Contact: info@aecnet.com;
(800) 9AECNET

LRC Home Page

Sponsor: Lighting Research Center

Address: <http://www.rpi.edu/dept/lrc/LRC/html>

Features: Access to descriptions and literature discussing LRC faculty, research, staff, publications and programs, in addition to links to other lighting Web sites.



AN INTER.LIGHT PAGE SHOWCASING AN AD FROM ASTRALITE, A MANUFACTURER OF LED RETROFIT KITS AND EXIT SIGNS.

working on closing the loop," he said.

Like many Web sites, inter.Light is constantly changing, expanding and evolving as new products, software demos, catalogs, case studies and other features enter the site. Inter.Light is sponsored by *Architectural Lighting*. Burtner will lead a seminar on the Internet at the IES Annual Conference (August 5-7) in Cleveland.

Across the "dial" is LightNET, an extension of AECNET, an electronic service serving the architectural, engineering and construction industry. LightNET utilizes a Web site, Internet access packages and electronic bulletin boards. According to Drew Linsalata, president and CEO, LightNET started as an idea that became reality when the IESNA showed interest. Today, LightNET is sponsored by IALD and the Lighting Research Center.

"LightNET aims to provide easy accessibility to reams of information, up-to-date distribution of that information, and a forum of communication between peers," said Linsalata. "The Internet will make the world a smaller place for the lighting professional."

Linsalata said that the ultimate goal of LightNET, which like inter.Light is young and evolving, is to assemble and store all available information about lighting, put it in a common language and make it available and searchable electronically. The next step, said Linsalata, will be to supplement the service with new processing technologies.

Linsalata recently addressed the IALD

regarding LightNET, which provides free Internet access to all IALD members.

TAKING THE PLUNGE

Many manufacturers are taking advantage of new electronic technologies to get information into the hands of the designer. CD-ROM product catalogs, Web home pages, on-line services and fax-on-demand systems are proliferating. GE Lighting, for example, uses a Web site at www.ge.com to provide a visual tour of the GE Lighting Institute's architecture and lighting education facilities located at Nela Park in Cleveland. Other manufacturers are advertising products on Web sites such as inter.Light and LightNET.

"The Web is a new frontier that changes as fast as computer technology changes," said Richard Stellar, marketing communications manager for Kim Lighting of City of Industry, CA. "This will be a totally new way of doing business. It won't be the Macy's versus Gimbel's mentality, as we will all be supporting each other in the vastness of cyberspace through links to supporting sites that anyone can access."

According to Stellar, Kim is planning to become a force on the Web with a site that takes advantage of new technologies to provide virtual catalogs, product information and simulated specifier arenas as well as links to other Web sites that can support design decisions, such as Green Lights.

"For Kim, the medium is education as well as product information," he said.

Lightolier, the Fall River, MA-based fixture manufacturer, recently launched TechExpress, which provides around-the-clock access to technical information, while marketing its residential line on the Internet. TechExpress includes fax-on-demand, an electronic bulletin board, a CD-ROM product catalog and the GENESYS lighting design workstation. Further developments are planned throughout 1996.

"When specifiers want technical information, they want it up to date, and they want it right away," said Joan Triano, director of electronic marketing for Lightolier. "We put together TechExpress to satisfy this need—those who need answers can have them in as little as two minutes.

"That's what the electronic information revolution is really all about," said Triano. "Saving time, being more productive, having reliable information at your fingertips." ■

The Lighting Resource

Sponsors: John Rowe and Mike Litman
Address: <http://www.webcom.com/lightsrc/>

Features: News, links to lighting companies, features, job market, classifieds, calendar of events, press releases and letters.

Mission: "The Lighting Resource is an Internet magazine of the lighting industry for both the professional and the end-user. Our goal is to be the source and resource for lighting on the Internet."

Contact: lightsrc@ix.netcom.com;
(612) 939-1717, fax (612) 933-6443

FMLink

Sponsor: FMLink Ltd.

Address: <http://www.fmlink.com>

Features: Directories (product and service), project listings, job market, newsgroups, calendar of events, government regulations and more.

Mission: "FMLink is an information resource for facilities managers and those marketing to them. What makes it particularly useful is its powerful ExpressSearch (for topics or vendors)."

Contact: info@fmlink.com;
(301) 907-9661

Cost: \$95 per year for a subscription
(30-day free trial)



9000 NIGHTWASH

Wide, even light finds new shapes in the night time landscape

Hydrel's 9000 Series in-grade up lights illuminate the walls at the new Citadel retail and office complex in Los Angeles. These new hi-tech in-grade fixtures were chosen especially for their high performance and low installation cost.

Chip Israel of Grenald talks about the project:

"The lighting on the front had to unify the whole project, as well as provide a soft inviting feeling."

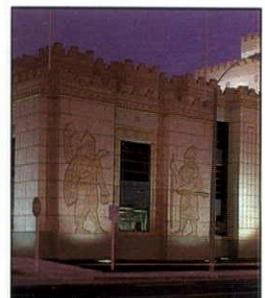
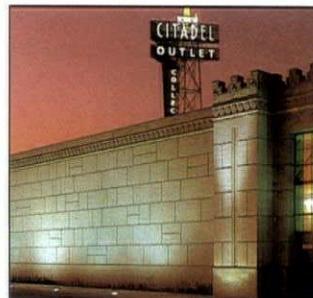
"The solution included 175 watt metal halide 9000 Series from Hydrel, set back six feet from 30 to 40 foot walls as a wash."

"We ended up further back and with a softer approach... we wanted the building to have a friendly feel, not to eerie."

"The lighting was also aimed up and outward from the entrance along the walls to accentuate architectural detail and shadows and to prevent the lighting from becoming too flat."

"These lights have the benefits of being concealed in-grade fixtures which reduce both aesthetic objections and installation costs, as well as new high performance E-17 lamps."

"We were fortunate to be able to work very well with some manufacturers such as Hydrel and Western Lighting Industries... They were able to supply us with some great and efficient lighting at a price that enabled the job to get done in the way we wanted."



Hydrel's 9000 Series in grade fixtures provide wide uniform performance for wall wash and sign lighting applications.



HYDREL 12881 BRADLEY AVENUE • SYLMAR • CALIFORNIA 91342 • TEL 818/362-9465

Circle No. 17 on product service card

REMOTE SOURCE LIGHTING — UP CLOSE

BY KENNETH E. YARNELL, IALD, IES, CONTRIBUTING EDITOR

In the decade since fiber-optic lighting was first introduced here in the United States, we have seen the dramatic development of remote source lighting systems employing a variety of fibers and light guides. New technologies, some only recently announced, include new lamp designs, advanced optical control, more fixture options and greater economy, while breakthroughs in color addressability, switching and dimming control are yet to be made public. This provides today's lighting designer with options and opportunities not available until now. Remote source lighting systems are ready to take their place alongside downlights, troffers and bollards in the designer's tool belt.

While technology continues to expand, standardization efforts have been consolidating a common vocabulary, calculation procedures, testing methods and specifications. With these tools, the lighting designer will be able to use remote source lighting in many new applications, from the replacement of traditional lighting systems to applications where lighting was previously not even possible.

As any developing technology creates new opportunities, it also creates new challenges—in making educated choices about products, materials and applications.

LEARNING THE LINGO

The first successful effort at standardization has been in establishing a common vocabulary. Below is a partial list of key terms essential to understanding and talking about remote source lighting (source: IALD Lighting Industry Resource Council, Remote Source Lighting Committee):

Light Guide: The material used to transmit light from the light source, typically bundles of plastic fibers, with glass fibers less common in the United States. Light guides may be side-emitting, like neon, or end-emitting, supplying light to fixtures such as downlights.

Illuminator: The "black box" that houses the

light source and injects the light into the input end of the light guide. Other components include any necessary transformers or ballasts; reflectors, refractors or lenses to control the light beam; cooling devices; color filters and controls; and mechanical connectors to attach or align the light guides. The efficiency at which the illuminator injects light into the fibers is called optical control. The aperture(s) through which light is released are called ports.

Connectors, Couplers and Ferrules: Devices used to join parts of a system physically or optically. Connectors hold a fiber or guide to a port, fixture or other guide. Couplers align the guides to each other or the illuminator. Ferrules are termination devices typical to glass fiber bundles, and are used to keep fibers properly positioned relative to each other. Main ferrules are larger ferrules used to harness groups of fiber for insertion into a port.

Fixtures (Fittings): Outlet devices applied at the end of a guide used to distribute light for end-emitting light guides.

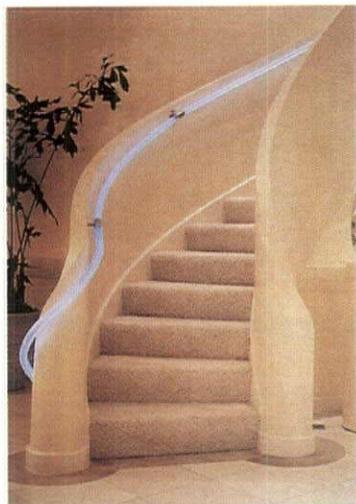
GUIDING LIGHT

The first specification decision will be choice of the right light guide. Small plastic fiber (SPF) and large plastic fiber (LPF) are most common, although glass fiber bundles (GFB) are common in other countries.

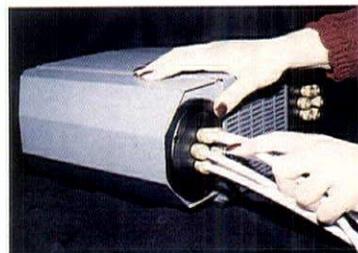
For brevity, we will focus on plastic fiber. The design need will dictate the most appropriate material and size.

SPF is often manufactured as a raw product distributed to original equipment manufacturers (OEMs), who in turn add value in bundling, harnessing, sheathing and scoring. The result is a unique product available to the designer that is typically patented. SPF bundles can be used as twinkle lights, pathway markers, bud lights and other tools. End-emitting light guides can be used to supply fixtures such as downlights, landscape lights and roadway pavers.

LPF is distributed similarly as SPF, with some products being cast and others extruded. Core materials vary and will be suitable for different applications. Side-emitting products vary considerably in output and allowable run lengths.



A DESIGNER MAY SPECIFY A COOL, NON-ELECTRIFIED INSTALLATION WITHOUT SPECIAL LISTING OF THE FIXTURE, SUCH AS THIS CUSTOM-ILLUMINATED HANDRAIL USING PRODUCTS FROM FIBERSTARS, INC. CIRCLE No. 42



REMOTE SOURCE LIGHTING INTERNATIONAL'S 150W METAL HALIDE 12-PORT ILLUMINATOR WITH PLUG AND LIGHT TECHNOLOGY OFFERS OPTICAL CONTROL AND DMX ADDRESSABLE COLOR CHANGING. CIRCLE No. 44



RETROFIT OF AN
EXISTING CANDE-
LABRA SCENCE BY
CONSERVATION
LIGHTING INTER-
NATIONAL DEMON-
STRATES CANDLE
FLAME FITTINGS
MADE FROM GLASS
FIBER BUNDLES.
CIRCLE No. 43

and end-emitting products experience various color shifts and attenuation rates over their lengths which may affect an installation. LPF can be configured to perform almost any of the same applications as SPF.

Efficiency and installation are important selection factors. While considering the efficiency of the light guide, the designer should also assess 1) the beam spread and focus of the lamp, 2) the angle of acceptance of the fiber, 3) the position of the fiber in relationship to the source, 4) the fiber connection or building process, including polishing, aligning and the percent of unused face area and 5) efficiencies of splices and fixtures.

Regarding installation, consider cost, size, packaging and simplicity. Splitting, splicing and joining technologies now under development will allow reduced fiber runs and decrease installation costs. Field installation techniques are becoming simplified with the introduction of more complex acrylic fiber materials with fewer environmental limitations. In addition, the larger size of LPF fiber often negates the need for factory bundling.

SOURCE SELECTION

Halogen and high-intensity discharge (HID) metal halide lamps are common in remote source lighting. Selection will be based on light output, color, size, service life and other factors. In systems now under development, backup or supplemental light sources will be easier, less costly and more effective.

Halogen lamps from Europe offer long life and precise beam control from tiny filament sizes, providing continuous spectrum lighting. An Australian manufacturer has produced a small halogen illuminator with hose-down capabilities and fanless convection with no breakdown of the plastic fibers even in areas with high ambient temperatures, ideal for outdoor applications.

HID lamps have also seen their advancements. Compact sizes permit greater optical control. One manufacturer offers compact 60W xenon metal halide lamps with instant start capability and a tiny arc gap. The integral reflector provides precise beam control for use in harnessed fiber applications. Other 150W small arc gap metal halide lamps are also common. One manufacturer adds a dichroic reflector to the most common lamp, positioning the arc tube within each reflector to provide optimum performance and beam angle for the specified type of fiber bundle.

COLORFUL EFFECTS

Fiber-optic lighting is ideal for special effects because it can change colors. Now, addressable color is available. DMX 512 is a common con-

trol protocol in the theatrical market, with DMX controllers now finding their way into some illuminators. Controls that allow selection, timing and accurate changing from one color to another—with options for mixing dichroic colors as well as dowsing certain filters—make sequencing of special effects easy, while allowing even more complicated visual effects.

ILLUMINATORS, FIXTURES

Illuminators are increasing in optical control with improved designs. Illuminators with the greatest efficiency in optical control are most desirable. One manufacturer provides individual fiber connections with focused beams of light into each fiber, allowing easy field installation and consistent light output. As for fixtures used with end-emitting guides, a continually growing number of standard designs are available. Designers have the ability to design their own fixtures—there are no electrical components to worry about, recessing depth problems or UL hassles.

WRITING THE SPEC

The designer may write a performance or manufacturer's spec. Performance specs may provide the most competitive situation for the client, but they are not always most practical. Manufacturers do not all provide the same information, for example, so comparative analysis in the construction administration phase may not be easy. While standardization procedures are in development, it may be up to a year before they are implemented.

When writing a performance spec, the designer should consider 1) various light sources and their color rendering, 2) color temperature, 3) color consistency from guide to guide, 4) color shift over the guide's length and 5) the illuminator's optical control, which affects color and light output consistency. When special effects are desired, note that color control varies from one manufacturer to the next when choosing illuminators. Remember that systems are continually developed; knowing what is coming to market can affect how a spec is written.

OTHER PICKS: Pinpoint Fiber Optics' adjustable track-mounted fixtures for retail and museum displays. **Circle No. 46**

Cast-in-place steplights by Fibre Light Systems for vandal-resistant applications. **Circle No. 47**



REMOTE SOURCE
LIGHT FIXTURES
CAN PROVIDE ECO-
NOMICAL LIGHT-
ING OF AN OBJECT
FROM MANY DIF-
FERENT ANGLES.
LIGHTING SER-
VICES, INC.
CIRCLE No. 45

Ken Yarnell, IALD, IES, is president of Keylight Design of Downingtown, PA.

TASK LIGHTING SOLUTIONS START WITH INTEGRATION

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Task lighting (also called localized lighting) refers to fixtures used to light a specific work area, including under-cabinet fixtures, desk-top fixtures, furniture-integrated fixtures and ceiling-mounted fixtures that drop light onto a task or particular area.

The mission of task lighting is to enhance the immediate visual environment. Commonly found in open-plan office environments where personal computers are in use, a well-designed task-ambient lighting system typically reduces glare on computer screens, reduces shadows and puts light where it is needed at greater efficiency.

Care must be taken, however, to properly integrate task lighting with the ambient lighting and to select the right fixture, as it is arguable that the task lighting in an open-plan office space has the most impact on performance of the primary visual task. The first step, said Peter Ngai, PE, FIES, VP of engineering for Peerless Lighting Corporation, is for the designer to stake a claim in task lighting specification.

"Task lighting plays such a critical role in the overall environment that an ineffective task lighting system can undermine even the best ambient lighting solutions," said Ngai. "Unfortunately, most task lighting decisions have historically been made without the participation of the lighting professional. Task lights, particularly of the under-cabinet variety, are often part of the furniture purchase, and rarely are required to meet any real lighting criteria.

"The greater the participation of the lighting professional in the selection of task lights, the lower the risk of improper task lighting negatively affecting the comfort and productivity of the occupants," he said.

By incorporating task lighting decisions into the overall lighting plan, today's lighting professional can provide the right lighting quality, take advantage of energy conservation opportunities and ensure that the finished space meets the original design vision.

UNDER-CABINET FIXTURES

"Instead of eliminating shadows and supplementing ambient light levels on an as-needed basis," said Ngai, "many under-cabinet fixtures simply blast excessive amounts of light into the primary work area. It is common to find workplaces designed to ambient light levels of 30, 40 or 50 fc—but with 125, 150 or even 200 fc on the work plane. This is wasteful, and can create visual discomfort."

Ngai suggests a simple quality test to choose the right under-cabinet fixture for the application. To perform a pure evaluation, it should be conducted once with the ambient lighting system activated and once with it deactivated. To test for veiling reflections, place a glossy document or other typical task on the workspace under the task light and observe. Rotate the task and view it at an angle, then tilt it about 20 degrees up from horizontal. If the reflection reduces contrast to the point where the task is washed out (obscured), then the task light is producing a veiling reflection. Additionally, if reflected light from peripheral areas of vision cause discomfort, there is reflected glare. The designer also can look at the fixture directly (head-on and at an angle) to see if direct glare causes discomfort. A final check is to



ABOVE:
TSAO+CLS'S
PORTABLE
TASKMASTER
CLASSIC DOME
SERIES OF DESK-
TOP FIXTURES ADD
A DECORATIVE
TOUCH TO THE
ENVIRONMENT
WITH A BLACK
ENAMEL DOME
DIFFUSER AND
ARM AND BASE
AVAILABLE IN
BLACK, POLISHED
CHROME OR POL-
ISHED BRASS.
CIRCLE No. 51

BELOW: THIS SAMPLE INSTALLATION AT PEERLESS LIGHTING CORPORATION'S 3,500-SQ.-FT. "VIGNETTE" AREA IN ITS HEADQUARTERS IN BERKELEY, CA SHOWS AMBIENT (IN THIS CASE, INDIRECT) AND TASK LIGHTING WORKING HAND IN HAND TO PRODUCE A VISUALLY COMFORTABLE ENVIRONMENT.
CIRCLE No. 50



ensure that the vertical surface behind the horizontal work area is lighted uniformly.

In addition to a quality check, fixture selection should be based on desired light levels. These light levels can be determined using the same guidelines as for an ambient lighting system, including age of the worker, desired speed and accuracy, the size of the task, the physical characteristics of the space, the ambient lighting system and other factors.

Light source selection will be based on desired light output, efficiency and a color appropriate to match the ambient lighting. A high power factor ballast is desirable.

The result of this process will be a fixture that produces the desired light distribution and light output. In addition, step-dimming or light output tuning may be desired. By performing the same criteria for an under-cabinet fixture that one would for an overhead system, the resulting lighting design can foster a more productive environment.

DESK-TOP FIXTURES

Desk-top fixtures are desirable in several situa-

tions: spaces where visible decorative fixtures fit the aesthetic vision, critical tasks that demand high light levels, tasks that require the fixture be portable or adjustable, and spaces where installation of under-cabinet lighting is not possible.

The choice of fixture depends upon what the designer wants from the task light. A decorative desk lamp may be appropriate to match the decor of a private office or overall space, as in a library—there are many choices of colors, materials and styles.

In open-plan office spaces with workstations, an adjustable desk-top fixture may be desirable. A swivel arm permits the worker to adjust the fixture's aiming angle

and distance from the task to his preference and need. These fixtures can be positioned to light the task from the side with a bare lamp—asymmetric distribution—to reduce veiling reflections, or a parabolic louver can be included on the fixture head to diffuse the light leaving the fixture.

"Desk-top fixtures with articulated arms for adjustability are growing in use because facility managers are increasingly concerned with ergonomics," said Gary Cardoza, VP of sales and marketing for Waldmann Lighting.

"Some hurdles to overcome during specification include the perception barrier to use of compact fluorescents, and whether to intrude on the work surface, where space is at a premium," said Cardoza.

BELOW: WALDMANN LIGHTING'S BARCELONA "E" DESK-TOP FIXTURE FEATURES AN ELECTRONIC BALLAST IN THE HEAD, A PARABOLIC LOUVER AND SEVERAL ARM STYLES FOR DESK-TOP OR INTEGRATION INTO THE WORKSTATION'S SLOTTED STANDARDS. CIRCLE NO. 52



TABLE 1. ENERGY COMPARISON

	Ambient Lighting	Ambient & Task Lighting
Ambient Fixture	(28) 2x4 parabolic	(28) 2x4 parabolic
Lamps/Fixture	(4) F32T8	(4) F32T8
Ballasts/Fixture	(1) electronic	(0.5) electronic (tandem-wired)
Task Lighting	n/a	(2) 13W CFL/cubicle
Power Draw	3,052 watts	2,206 watts
Light Level	55 fc	25 fc ambient, 55 fc task

An already efficient lighting installation can be enhanced with an energy reduction of nearly 28% via integration of task lighting with the ambient lighting system. Source: U.S. EPA Green Lights Program, October 1994.

"Product demonstrations usually cure a poor perception of compact fluorescents, and desk-top fixtures can be mounted into the slotted standards of open-office furniture, in either horizontal- or vertical-arm versions."

Light source selection depends upon the type of fixture used, the size of the fixture desired and the quality of light needed. Halogen lamps are more compact but as a point source can produce sharply defined, dark shadows. Fluorescent light can be specified with a high CRI rating and choice of color temperature; fluorescents also produce less heat, and diffuse shadows as a linear source. Compact fluorescent lamps can be specified with an electronic ballast.



ABOVE: GARCY/SLP'S PANEL MOUNT TASK LIGHT, HOUSING AN ELECTRONIC BALLAST-T8 LAMP SYSTEM, PROVIDES TASK LIGHTING FOR APPLICATIONS WHERE NO OVER-HEAD STORAGE COMPARTMENT IS AVAILABLE. CIRCLE NO. 53

ENERGY SAVINGS

Task lighting can contribute to a "green" design in two ways. Both under-cabinet fixtures and desk-top fixtures are available with energy-efficient fluorescent lamps and ballasts. Under-cabinet fixtures equipped with dimming controls and occupancy sensors are available.

Additionally, by concentrating light where it is needed and focusing the ambient lighting system on serving the task of orientation (in a typical open-plan office space), the designer can reap energy savings from this efficiency (see Table 1).

The key to quality and energy savings with task lighting is careful planning and integration between the task and ambient lighting systems to produce an overall lighting environment that is on target—productive, comfortable and efficient. ■

WELCOME TO "VISUAL REALITY"

BY CRAIG DILOUIE, EDITOR-IN-CHIEF

Lighting professionals who want to put an extra 100 percent into their dream projects now have access to a computer tool that allows them to produce and demonstrate multiple lighting plans in realistic and interactive simulated environments.

The Lightscape Visualization System (LVS) from Lightscape Technologies, Inc. of San Jose, CA offers an intuitive lighting interface for existing commercial CAD and animation packages created by Autodesk, Alias, ElectroGIG, Softimage, Wavefront and others. LVS utilizes ray tracing techniques and radiosity—a method for calculating the distribution of light energy between all the surfaces of a 3-D model—to combine lighting and environmental realism on a PC.

Designers can specify lighting by simply placing fixtures on-screen as they would in a real environment. Spot, diffuse and general distributions with a range of luminous intensities can be specified. Multiple light sources,

rooms that can be customized and equipped with colors/materials and objects such as desks, chairs, etc. Different colors/materials can be inserted for various room surfaces to produce any number of effects until the desired ambiance is achieved. Diffuse and specular reflections, shadows and "color bleeding" between brightly colored surfaces are simulated based on the unique characteristics of the lighted environment. The result is a 3-D lighting plan that can even be demonstrated to clients in an interactive "animated



AN LVS IMAGE
CREATED BY ISAO
NAGAOKA AND JOE
HENKE, DIGITAL
ARCHITECTURE,
NYC.

including point and linear sources with various colors and other characteristics, can be specified as well. Data describing the fixtures can be obtained directly from lighting manufacturers using IES and other industry standard formats. Skylights and daylight can be plugged into the environment by specifying location, date, time and degree of cloud cover.

The lighting is placed in 3-D models of



AN LVS IMAGE
CREATED WITH
AUTOCAD BY
DESIGN VISION.

walk-through" where lighting and room objects can be viewed at any angle. All accompanying technical backup can be stored and printed, including point and average illuminance and luminance for both surfaces and work planes.

To use LVS on a PC, a computer at least as powerful as a PC Pentium 90 is recommended, with 32-64 megabytes of RAM. LVS supports Open-GL-compliant 3-D accelerator boards. Operating in the Windows format, the software imports Autodesk 3-D studio 3DS files as well as DXF files. It is available through resellers of computer products in the architectural market at a suggested retail price of \$2,995 for Windows NT. A more expensive version of LVS is available for SGI computers. ■

For more information, contact Lightscape Technologies, Inc. at 1054 Saratoga-Sunnyvale Road, Suite 200, San Jose, CA 95129; phone: (800) 343-0073/(408) 342-1900; fax: (408) 342-1910; e-mail: info@lightscape.com; WWW: <http://www.lightscape.com>.

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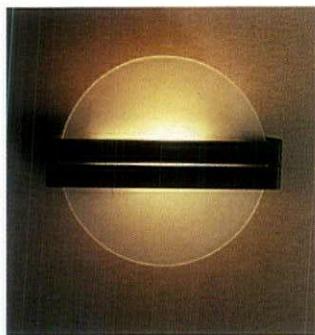
Euroluce

COMMON SENSE IN COMMON AREAS

While lighting and light fixtures are not specifically addressed in the American with Disabilities Act (ADA), they are covered under Section 4.4.1 pertaining to protruding objects in public spaces. The ADA sets a 4-in. maximum projection—between 27 in. and 80 in. above the floor—for any object, such as a sconce light fixture, approached from the side in a typical corridor setting. “The rule for wall lights is just common sense,” said Jamie Schwartzman, Justice Design Group, Inc., which manufactures

ceramic sconces that comply with the national standard. “The typical distance from side-of-head to edge-of-shoulder is 4 in., hence the maximum projection. Essentially, ADA-compliant sconces reduce the risk of injury for sight-impaired individuals.”

Check out some of the following products—these are just a few of the companies that produce ADA-compliant sconces. As you’ll notice, meeting federal requirements doesn’t mean you have to sacrifice on style.



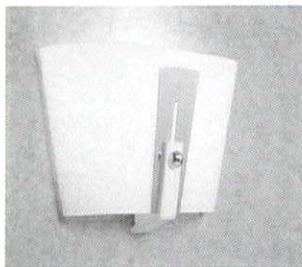
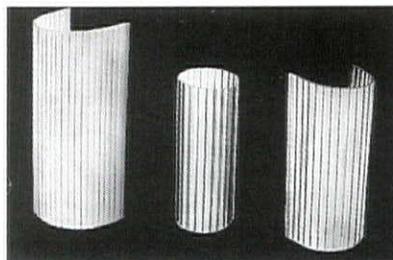
TSAO + CLS

The G-6 Collection of geometrically designed wall sconces features sand-etched translucent white glass diffusers, each in a different shape: circular, square, diamond, a parallelogram and a vertical formed-glass rectangle. A satin black or custom-color perforated metal baffle permits direct accent lighting while adding a contrasting architectural element. The sconces provide diffused and wall grazing lighting effects, and are suited for walls, corridors and public spaces. The G-6 Collection can be specified with either two 40W T10 incandescent lamps or two 13W PL compact fluorescents. Each design is UL-listed and ADA compliant. **Circle No. 30**

PSI WEST

PSI’s decorative fluted lenses are made from clear or special-formulated white acrylic to produce softly diffused light. Flat lenses with bold fluted designs are available, as are various sizes of fluted configurations.

The lenses are designed for architectural indoor and outdoor lighting, ceiling fixtures, decorative wall sconces that meet ADA requirements, as well as perimeter and vanity lighting. **Circle No. 31**



SPI LIGHTING INC.

Phaces, a series of low-profile ADA-compliant wall sconces, includes fixtures in many shapes. Metal, acrylic and alabaster housings can be accented with brass, chrome, aluminum, stainless steel, acrylic or a combination of trim elements. Phaces features a dual-chambered reflector system designed to project light in a wide, indirect lateral pattern to illuminate corridors and narrow commercial spaces. The sconces use halogen, metal halide or fluorescent sources. UL-listed. **Circle No. 32**

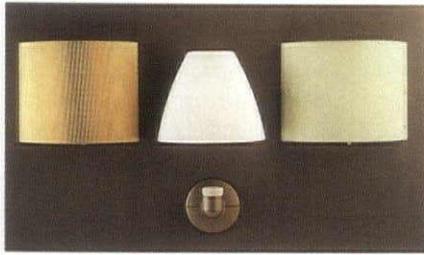
BOYD LIGHTING CO.

Claremont wall sconces are available in two styles and two sizes (10 3/4 in. high, 6 1/4 in. wide or 13 in. high, 7 1/2 in. wide) and are ADA compliant at any mounting height. The sconces, which use 60W incandescent lamps, feature polished brass or polished nickel finishes, opal acrylic baffles and sand-etched white glass in two distinct patterns: single X or diamond repeat. UL-listed. **Circle No. 33**



ECLIPSE LIGHTING

Six new models have been added to the Mariner and Classic lines of decorative indoor, outdoor and high-abuse sconces. The fixtures are ADA compliant, energy efficient and eliminate glare. The models in each line range up to 40 in. high and are offered in painted or polished finishes. These sconces can be used in lobbies, corridors and stairwells in applications such as dormitories, hotels/motels, shopping centers, and military and residential installations. UL-listed. **Circle No. 34**



FLOS INC.

Flos' trio of wall sconces is comprised of Charlie, Piperita and Sally, all designed by Marcello Ziliani. These UL-listed fixtures feature sleek designs, textured materials and can be used with incandescent or fluorescent sources. ADA-compliant Charlie features a vertically ridged, slightly curved shade; ADA-compliant Piperita employs a rectangular acid-etched glass diffuser with a silk-screened coating as its shade; and Sally, a companion sconce, features a cone-shaped cast glass diffuser. UL-listed. **Circle No. 35**

BASIC SOURCE

The ADAptable Series of natural alabaster wall sconces complies with ADA regulations. Shown is model 51-359-191-CF in white alabaster with satin brass hardware, housing one 13W compact fluorescent. The sconces are offered in a variety of hardware finish options. **Circle No. 36**

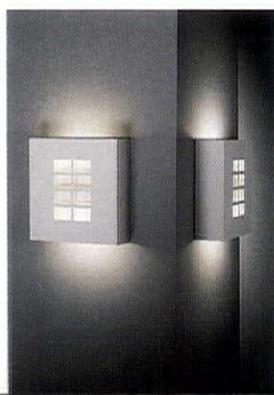


BALDINGER LIGHTING INC.

Marmont, designed by Regh Crackel Regh, is 18 1/2 in. high with a 4-in. projection, making it ADA compliant. The sconce is finished in antique brass, polished brass, polished chrome, white or black and features a Nomex paper, Japanese rice paper or beige linen diffuser. The fixture accepts a PL13 lamp. UL-listed. **Circle No. 37**

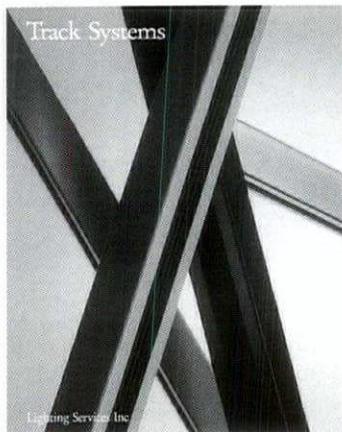
DEREK MARSHALL LIGHTING

The collection of ADA-compliant wall sconces includes three models: Prometheus (13 x 13 x 4 in.); Ginko (17 x 12 x 4 in.); and York. (13 x 12 x 4 in.), shown. Available finishes include 23K gold leaf, weathered cooper, verdigris, rusty iron, flake gold and many combinations of metal leaf, lacquers and enamels, as well as custom finishes. The sconces accept incandescent, compact fluorescent and halogen lamps, and are UL-listed. **Circle No. 38**



VISA LIGHTING

With a profile of less than 4 in., this ADA-complaint art sconce (CB3104) and the rest of its family features energy-efficient lamps and functional indirect/direct light distribution for public spaces. The collection enables designers to color code corridor wings to create visual continuity. UL-listed. **Circle No. 39**



Track Systems

Lighting Services Inc.

TRACK SYSTEM

Track Systems, a new brochure from **Lighting Services Inc.** features more than 40 pages of easy-to-read illustrations, diagrams and charts. The four-color brochure provides details on specifications, configurations, components, installations, key features and applications of all of the company's UL-listed track offerings.

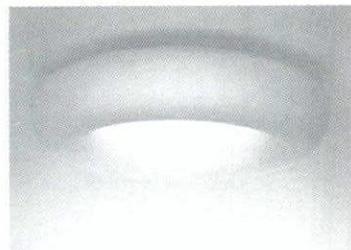
Circle No. 56



CERAMIC METAL HALIDE

A new family of Ceramic Metal Halide lamps from **GE Lighting** replaces the traditional quartz arc tube with a ceramic arc tube. The new lamps offer improved color performance (CRI>80) and a higher lumen output of 10 to 20 percent compared to standard quartz metal halide. The five available configurations are 35W, 70W and 150W G12 single-ended; 70W and 150W double-ended; 70W and 100W PAR38; 70W PAR30; and 70W and 100W elliptical.

Circle No. 57

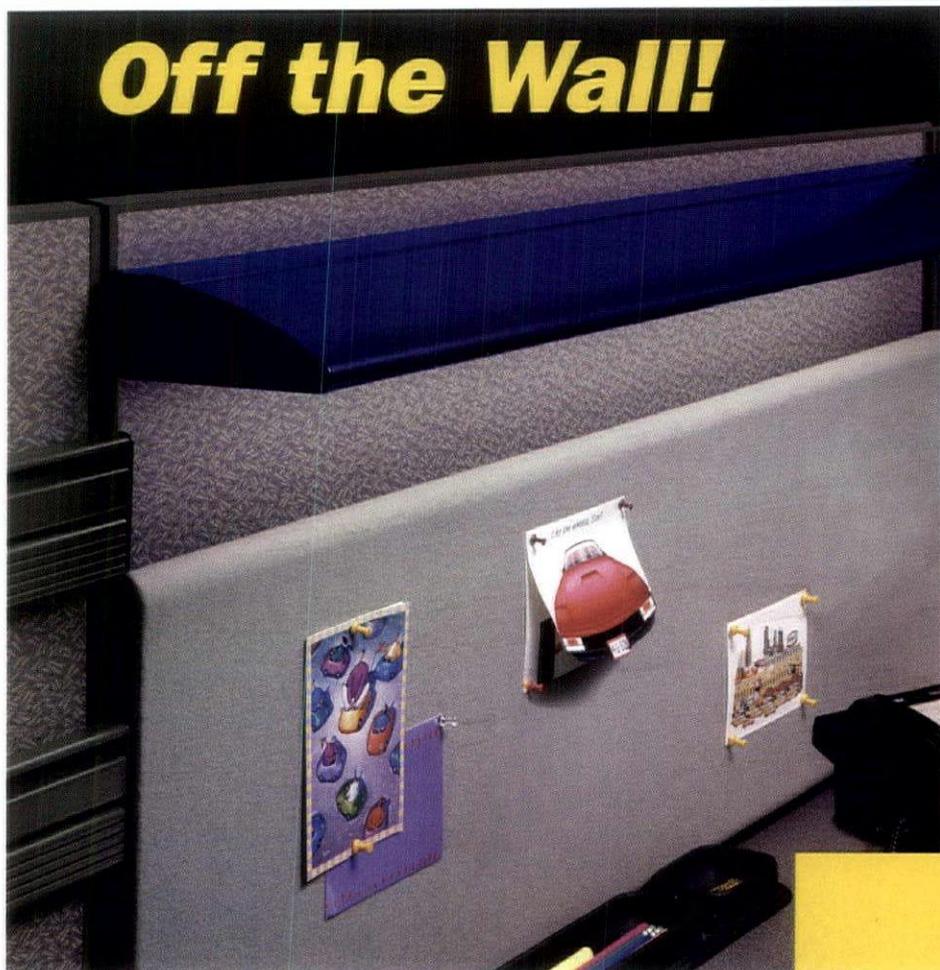


GLASS ACCESSORIES

New glass accessories for **Zumtobel's** Optos Downlight series, designed by Sottsass Associati, include Auriga (shown), Tauri and Mizar. The accessories are designed to be suspended from the Optos fixture by tabs attached to the accessory ring and are available in both 6-in. and 8-in. apertures. The Saturn glass accessory is now available completely sandblasted; outside sandblasted, clear center; completely clear; and square, completely sandblasted. UL-listed.

Circle No. 58

Off the Wall!



Introducing the PMT Task Light

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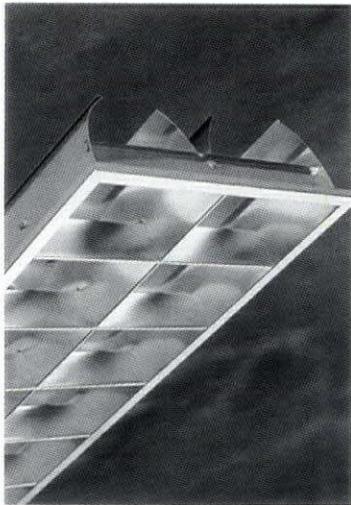
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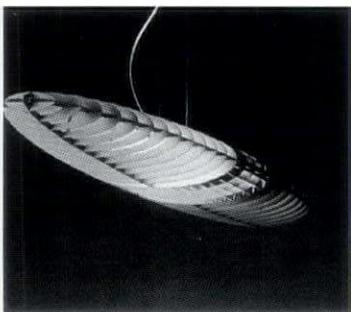
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MULTI-DEPTH LOUVER

Hightsider, A.L.P. Lighting & Ceiling Products' multiple depth parabolic louver, features high sides and center blade combined with shallower cross blades, which enables the fixture to provide specific light distribution. Additionally, it allows maximum light emission through the increased efficiency of the design. Hightsider will fit most applications and in many cases, eliminates the need for other light enhancers, according to the company.

Circle No. 59



FIXTURE SERIES

Luceplan's Titania series, starting with the UL-listed suspension fixture designed by Alberto Meda and Paolo Rizzatto (shown), has been reconfigured to become portable and expanded to include floor lamp and desktop fixture versions. The ellipsoidal reflector structure houses a 150W or 250W double-envelope halogen lamp for uplight and downlight.

Circle No. 70

METAL HALIDE LAMPS

Osram Sylvania has expanded its line of metal halide lamps to include a 175W lamp for open fixtures and a 400W lamp with improved color stability and increased lumen maintenance over life. The 175W Metalarc Pro-Tech lamp comes either clear or coated

with initial lumens of 14,500 and 14,200, respectively. It has an average rated life of 10,000 hours. The 400W Super Metalarc Pulse-Start lamp features an external ignitor in conjunction with the ballast to "pulse start" the lamp, as well as higher arc tube pressure.

Circle No. 60

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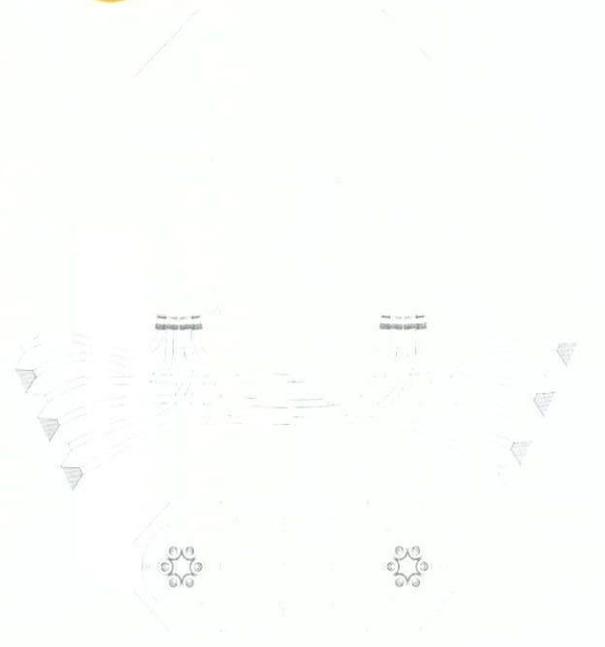
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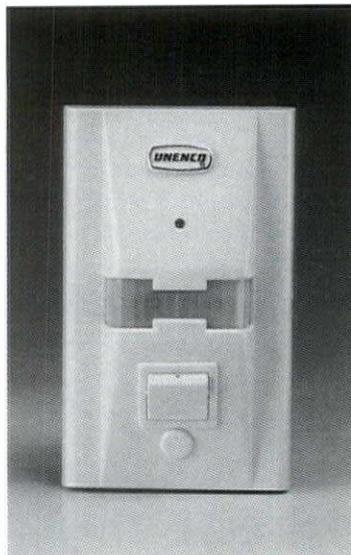
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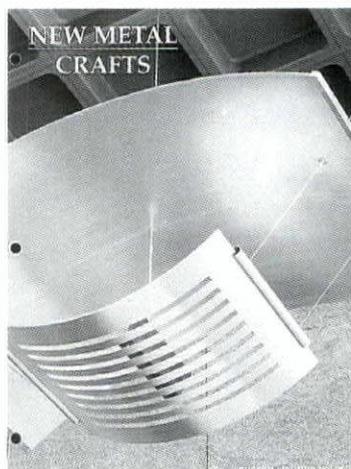
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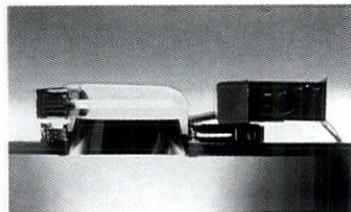
OCCUPANCY SENSOR

Unenco's SOM-1000-A-DP sensor expands the family of Switchomat wall switch replacement products. The unit features an advanced passive infrared technology that detects occupancy and automatically turns lights on. The SOM 1000-A-DP is a two-pole unit and is capable of switching 240VAC lighting. The additional contact also can be utilized as a separate signaling circuit for use with HVAC controls and EMS systems. UL-listed. **Circle No. 61**



CUSTOM FIXTURES

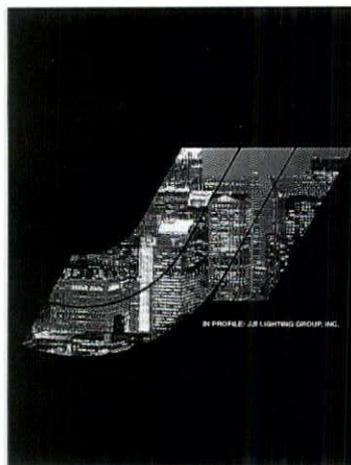
New Metal Crafts, Inc.'s Custom Lighting Folio features 48 four-color pages of custom fixture design. Both interior and exterior fixtures—sconces and chandeliers alike—are featured in a variety of styles in both photographs and sketches. **Circle No. 62**



LOW-PROFILE DOWNLIGHTS

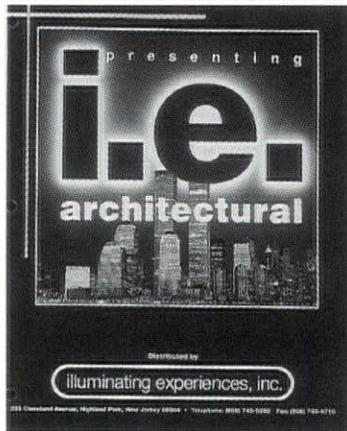
Lightolier has expanded its 1102T Low Profile line of compact fluorescent downlights with the addition of two higher-wattage (18W and 26W quad tube compact fluorescents) low-profile housings. The Lytecaster 1102T Low Profile fixture provides the same light output as a 100W incandescent fixture but saves almost 70 percent on energy consumption, according to the manufacturer. The lamps also last up to 13 times longer compared to typical incandescents. The Lytecaster line is comprised of more than 50 energy-smart fixtures for downlighting solutions. UL-listed.

Circle No. 63



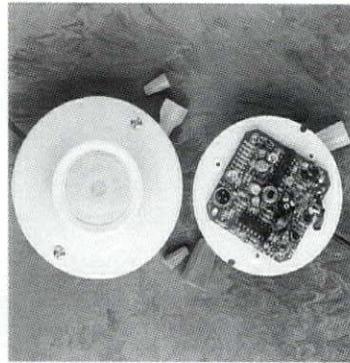
CORPORATE PROFILE

JJI Lighting Group's corporate brochure describes each of the parent company's 12 individual lighting fixture manufacturers in detail: Lam (includes Coast lighting); Architectural Landscape Lighting; Guth; Quality; Alkeo; Specialty; Morlite; Vista; High-Lites; UV Technologies; Nessen; and d'ac. Color pictures display many of the products and installations, which include indoor and outdoor, contract and residential. **Circle No. 64**



DECORATIVE DESIGNS

The I.E. Architectural brochure from **Illuminating Experiences, Inc.** includes a collection of specification-quality decorative lighting. Included in the four-color brochure are photos, drawings, descriptions and ordering codes for many styles of ceiling, suspension, wall, floor and table fixtures. **Circle No. 65**



SENSOR BREAKTHROUGH

A Microphonic/PIR Dual Technology (PDT) occupancy sensor from **Sensor Switch, Inc.** literally sees and hears the occupant to detect occupancy and control the lights. This technological advancement allows for 100 percent coverage in restrooms, open office cubicle areas, store rooms and any other spaces with obstructions, according to the manufacturer. UL-listed. **Circle No. 67**



ADJUSTABLE LAMP

The 22-in.-high Adjustalamp from **Electrix** angles, twists and turns, enabling the user to control the direction of light. Both the support tube and the hand-spun heavy gauge aluminum 8-in. diameter shade will adjust to any desired angle. UL-listed. **Circle No. 66**

Ergonomic task lighting solutions for the 21st century.



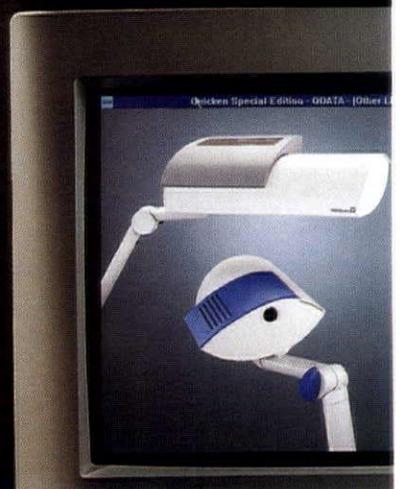
Introducing Roma: Its innovative design and superior technology set new standards for the VDT office. The Roma features a sleek fully articulating arm and new swivel joint connected to the base of the head which permits maximum rotation and positioning. The aluminized parabolic louver directs light evenly over work surfaces and virtually eliminates VDT glare and reflection.

When you specify task lighting,
make the ergonomic choice:

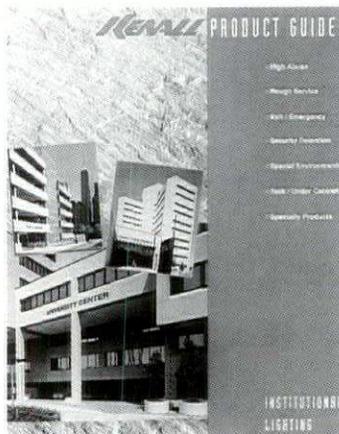
Roma by Waldmann.

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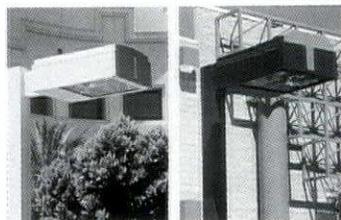
Waldmann Lighting 
Ergonomics that work.



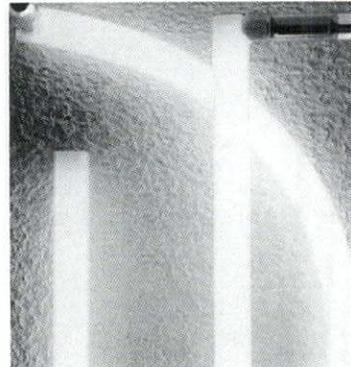
Circle No. 22 on product service card



INSTITUTIONAL LIGHTING
Kenall's complete line of institutional lighting fixtures (correctional, educational, parking, multi-housing and sealed environments) are available in the company's 44-page Product Guide. The guide includes graphic drawings, illustrations, product specifications, applications, features and ordering information.
Circle No. 68



OUTDOOR FIXTURES
 The Entablature from **Kim Lighting** complements any rectilinear architectural design. The fixture is available in two sizes: the larger uses a 175-400W metal halide source or 150-400W HPS. The smaller is available in 70-175W metal halide, 70-150W HPS. Four light distributions are available. The addition of an optional entablature trim, offered in 10 standard or custom designs, have been developed to mirror distinctive roof lines, provide continuity with facade geometry or just add accent color. UL-listed.
Circle No. 69

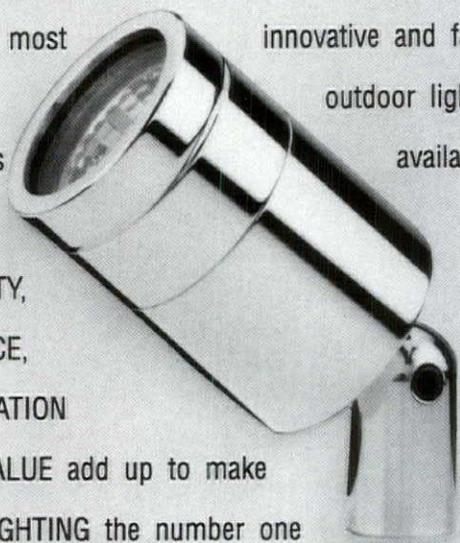


COLD CATHODE
Neon & Cathode Systems Inc.'s new line of custom cold cathode fluorescent lighting systems, available in 19 colors, is designed to provide seamless, shadow-free lighting void of hot spots. These cold cathode lamps can be curved or bent to conform to architectural details, can be dimmed without special dimming ballasts, and have a minimum 35,000-hour lamp life. UL-listed.
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 (Signed) Craig DiLouie, Editor-in-Chief, 10/5/95.

1996 IALD International Lighting Awards

IALD

International Association of
Lighting Designers

co-sponsor:

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Registration Form

Please include this form with your entry.

You may copy this form for additional entries.

Entry Fee: \$25.00 per entry.

Your name _____

Address _____

City _____

State _____

Zip Code _____

Phone Number _____

Fax _____

Type of project _____

Location _____

Date of completion _____

Lighting designer _____

Architect _____

Interior Designer _____

Engineer _____

Owner _____

PROGRAM DESCRIPTION

The Lighting Awards program was established in 1983 to increase awareness of quality lighting design by recognizing lighting installations which display high aesthetic achievement backed by technical expertise and exemplify a synthesis of the architectural and lighting design process. As a collection of work, the awarded projects illustrate the diversity of techniques used to create outstanding lighting design.

ELIGIBILITY

Anyone may enter a project for an award. The project must be a permanent architectural lighting design solution, interior or exterior, which construction was completed after 1 June 1993. Lighting production equipment and lighting design for theatrical performances are eligible.

JUDGING

Projects will be judged individually based on aesthetic achievement and technical merit in accordance with the designer's concepts and goals. This is not a competition, there is no minimum or maximum number of awards granted.

AWARDS

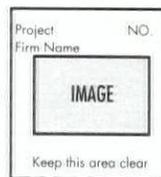
There are two types of awards, Awards of Excellence and Citations. Award-winning projects will be recognized at the IALD Awards Dinner and Presentation on May 15, 1996 in conjunction with LIGHTFA International in San Francisco. Winning projects will be published in leading architectural and design publications and included in the IALD slide library.

SUBMISSION REQUIREMENTS

All submissions must be in an 8 1/2 x 11 format and include all of the following:

Written Statement: A one page technical and conceptual summary of 800 words or less. Include a description of the architectural and lighting design concept, design criteria, special energy constraints and the design solution. The summary should incorporate the visual presentation and must be keyed to each slide. **No mention or identifiable illustration of a specific lighting product name, design firm, or designer may appear as any part of the presentation.**

Slides: A maximum of ten (10) 35mm slides of the project. Originals or high quality duplicates are required. The quality of the photography is important in the judging process. Professional photography is advisable. If plans and drawings are required to describe the lighting solution, we recommend photographing essential information and including them as slides. All slides must be labeled with project and firm name. With slides positioned right-reading, number each slide in the upper right corner. Photographs, drawings and/or magazine articles will not be considered.



Slide	Written Statement
	No Letterhead
Slide 1	_____

Slide 2	_____

Entries must be submitted in requested format or they will not be considered.

A self-addressed stamped envelope. For the return mailing of your submission. Foreign submissions should include a self-addressed express mail form. If you do not wish your submission to be returned, please indicate so in writing and include with submission.

Completed registration form.

Entry Fee. \$25 payment is by check or money order only. Checks must be payable in United States currency and drawn on a U.S. bank. Mail payable to IALD. A single check may be written for multiple entries. Please do not send cash.

Address entries to:

IALD Awards Program
International Association of Lighting Designers
1133 Broadway Suite 520
New York NY 10010 7903 USA
Telephone 212 206 1281
Facsimile 212 206 1327

DEADLINE

Submission must be received no later than
Friday, 1 March 1996.

Call for Entries courtesy of *Architectural Lighting* magazine.

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ad index

ADVERTISER	READER SERVICE NO.	PAGE
Architectural Landscape Lighting	25	16A-16D
B-K Lighting	23	48
Beta Lighting	3	3
Cosmit-Euroluce '96	18	41
Edison Price Lighting	15	18
Fiberstars	1	COV. 2
GE Lighting	8	15
Garco/SLP	12	44
Hydrel	17	35
Kim Lighting	11	11
Lam Lighting	19	16
Lightfair Int'l.	20	45
Lighting Corp. of America	9	12-13
Lighting Services Inc.	13	14
Lumiere	14	19
Lutron Electronics Co., Inc.	27	COV. 4
Peerless Lighting Corp.	16	21
R.A. Manning	4	4
Remote Source Lighting Int'l.	21	46
SPI Lighting Inc.	7	9
Sensor Switch	26	COV. 3
Sterner Lighting Systems Inc.	10	17
Ushio America	5	5
USI Lighting	6	6-7
Visa Lighting	2	1
Waldmann Lighting Co.	22	47

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