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architectural | lighting

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GLOWS IN BONN**

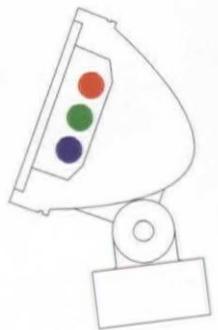
**FOUR PROJECTS TAKE
LIGHTING OUTSIDE**

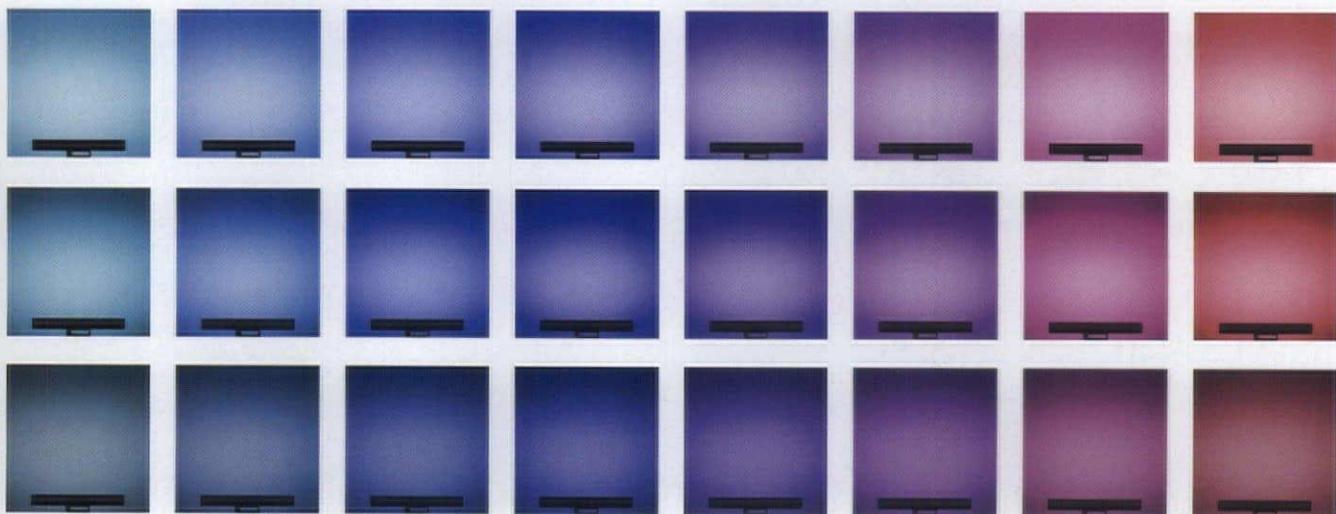
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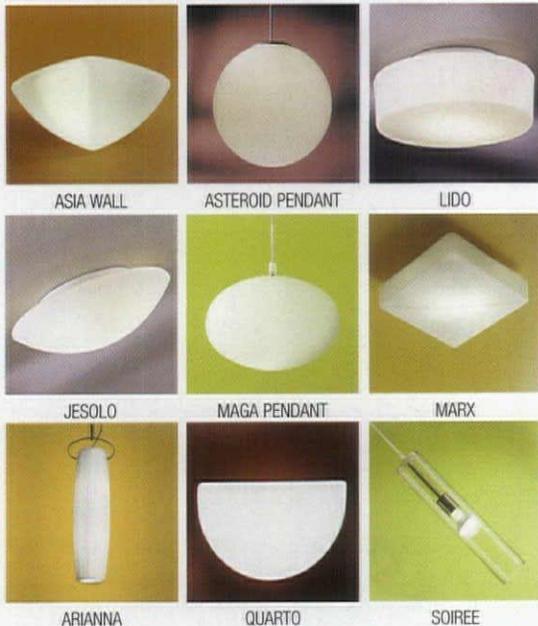
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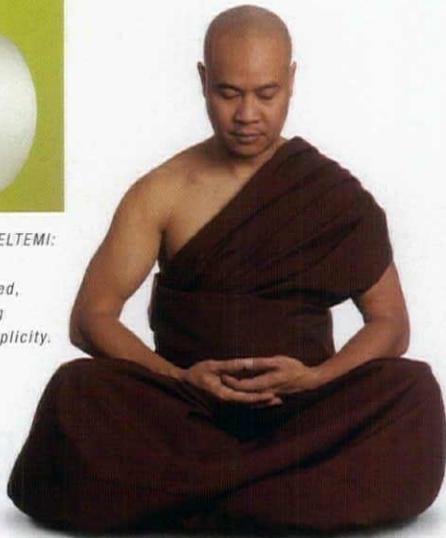
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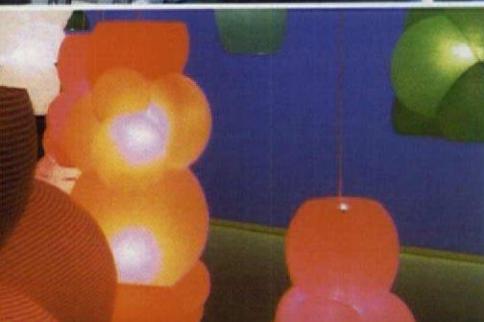
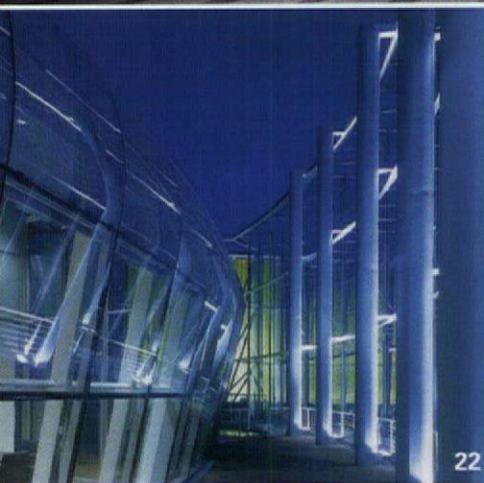
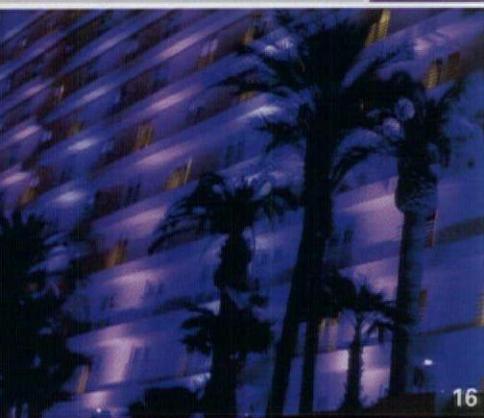
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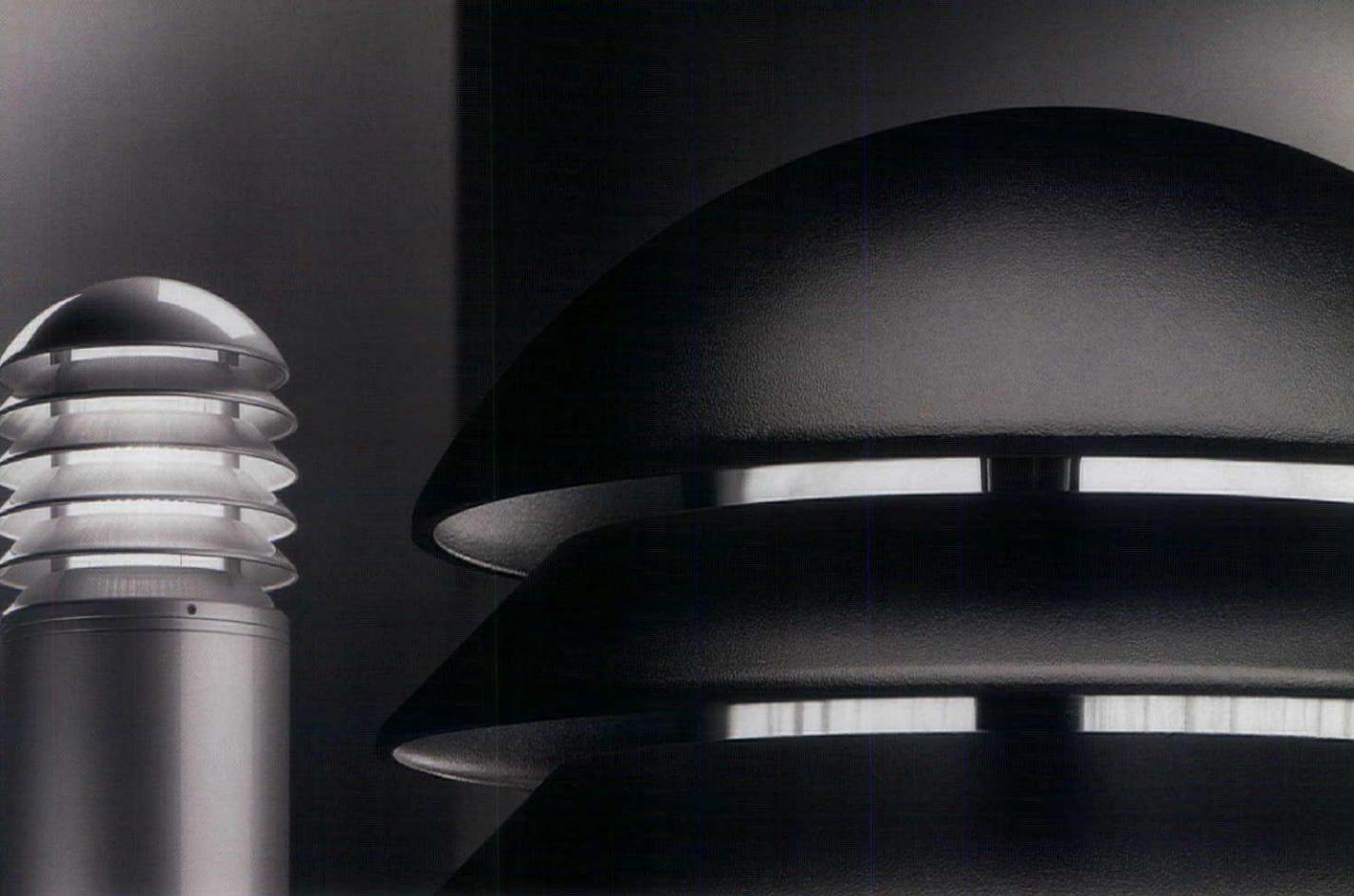
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Cover: The Post Tower graces the city of Bonn, Germany, with an ethereal night-time presence that glorifies the unification of light and architecture (page 22).

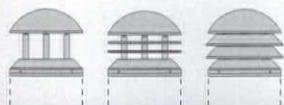
PHOTO: ALAN TOFT

This page: Hard Rock Hotel & Casino, Las Vegas; underpass, Jamaica, New York; Post Tower; *Brilliant* exhibit, London (photo courtesy Victoria and Albert Museum).

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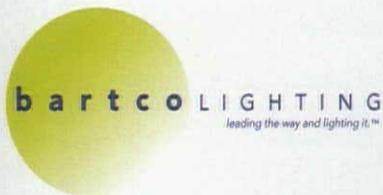


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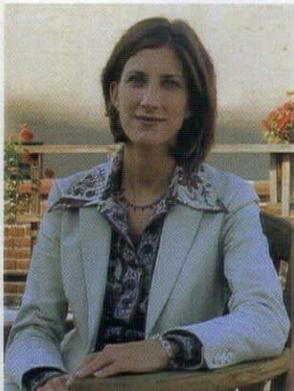
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Time Out

IT IS THE SEASON FOR TRADE SHOWS. LIGHTFAIR, LIGHT+BUILDING, Global Shop, K/BIS, Hospitality Design Expo, AIA, NeoCon, ICFF—and the list goes on. A|L's editorial staff will attend five of these eight. As many of you with a similarly sized office know, this is first and foremost a

time investment. Secondly, these shows are a significant financial commitment. We pay out more than half of our yearly travel budget during these four months. Lastly, the information and product introductions in terms of lighting are often redundant from one event to the next.

So why do it? Or at least, why do it every year. In almost eleven months on the job, the most commonly discussed *contentious* issue—I say contentious because there are other topics, but they do not seem to generate the same vigorously divided camps—is whether Lightfair, the industry's heart-and-soul show, should be biennial. Our Industry Exchange question this month, on page 72, asks readers which side of the fence they are sitting when it comes to Lightfair's frequency. And, contributing writer and editorial advisor James Benya has a few of his own points to make on page 62.

Since the magazine is as much an attendee and exhibitor at Lightfair as those who have submitted commentary, it is only fair that A|L also answer that question. We visit trade shows, and Lightfair in particular, because this is where most of our content ideas are spawned—and redundancy for journalists is not always inefficient: it can point to the next trend story. Also, like many of you, we meet our customers—advertisers and readers—at these events. They provide a see-and-be-seen, as well as a customer-service, opportunity. Lightfair also helps us generate revenue. However, the most important reason—and the reason that I believe Lightfair should be every year—is that this show is the center of our little universe. This is where you show support for and become part of the U.S. lighting community, not at the regional fairs, not in Frankfurt. It is a big country with many markets; a unified meeting of the minds every second year is not enough.

With this said, however, there have been valid points made about Lightfair's failings, and good ideas about how to address them. (Again, I urge you to turn to page 72, and to our website at archlighting.com for the full Exchange text.) I appreciate the comments made by Brian Stacy of Arup Lighting, who suggests that the major events better coordinate their content. Sam Gumins of Luxo argues for an annual Lightfair, but a biennial New Products Showcase. It's a hot topic, and one that needs involved commentary from the entire industry. What better place to discuss it than Lightfair 2005.

EMILIE W. SOMMERHOFF
EDITOR-IN-CHIEF

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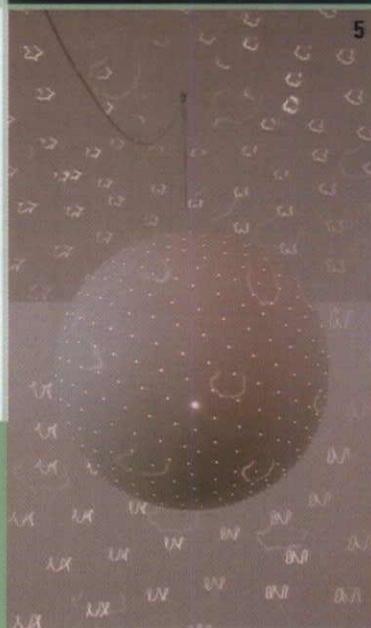
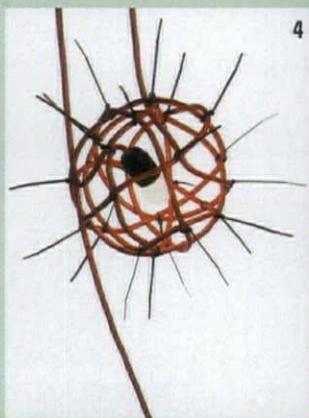
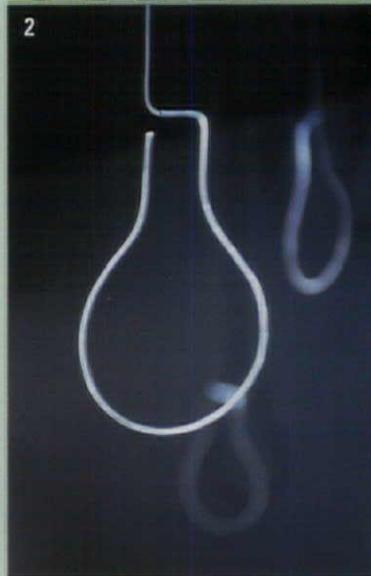
BRILLIANT EXHIBIT AT THE V&A

It seems appropriate that the recent contemporary lighting exhibit at London's Victoria and Albert Museum (the V&A) should be the same word as the British slang expression for "excellent." *Brilliant* was the V&A's first ever contemporary lighting exhibition. Although small (it only occupied two galleries), the exhibit showcased the potential of light, space and materials in the work of artists and designers such as Ingo Maurer, Ron Arad, Tom Dixon and Karim Rashid. The first gallery featured nine installations that revealed how light can be used to shape space. The second gallery focused on domestic lights and "light-objects" and was organized around themes in design today: form, archetype, domesticity, materials and manufacturing process.

Depending on one's knowledge of lighting, the exhibit varied in its degree of success. Nils von Leesen, a lighting designer with Speirs and Major Associates in London, made this observation: "As one who works with light and lighting on a daily basis, when first viewing this exhibit it seemed as if I had seen this before, and that there was really little new to celebrate. But, quickly it became obvious that those who do not work with lighting on a professional basis were clearly fascinated with these forms and objects. For these visitors, the exhibit was a new and exciting treatment of previously unseen technologies."

One of the highlights of the show was Ron Arad's *Inverted Pinhole Camera Obscura (IPCO)*. Constructed of fiberglass, polyester and an incandescent bulb, the *IPCO Sphere* projects a pattern of the bulb's filament onto the surrounding walls. Von Leesen comments, "This piece was the closest approach to what an architectural lighting designer might consider an installation in which the viewer is immersed in both the magical and the technically interesting."

The comprehensive companion catalog *Brilliant: Lights & Lighting*, by exhibit curator Jane Pavitt, is an excellent library addition for architect, lighting designer and general design enthusiast alike. *Brilliant* is a first step in showcasing good product design combined with lighting, and its greatest success is that lighting is now entered into the realm of public discussion. For additional information about the exhibit, visit the museum's website at www.vam.ac.uk. NILS VON LEESEN, AS REPORTED TO ELIZABETH DONOFF



(1) The V&A's garden illuminated during the exhibition with Bruce Munro's *Field of Light*, 2004; (2) Kazuhiro Yamanaka's *As Long As I Am Dreaming*, 2002; (3) Tord Boontje's *Midsummer Light*, 2003; (4) Arik Levy's *Umbilical Lamp*, 2002; (5) Ron Arad's *IPCO Sphere*, 2001; (6) Bertjan Pot's *Huuphuup Lamp*, 2001. All images courtesy of the Victoria and Albert Museum, London.

Industry Greats LESLEY WHEEL and EDWARD ZUBLER Pass Away

LESLEY WHEEL, 1929 – 2004

"It took me eight years in theater to find out where I belonged, but once I got started in architecture, I knew that I was in the right place," said Lesley Wheel in a March 2001 interview with A|L. The pioneer lighting designer passed away on April 1, 2004, at the age of 75. A graduate of Bryn Mawr College in 1949, she trained in theater lighting and production, and was the first woman to practice lighting design full time. Her work focused on hotel and hospitality design, and in 1957 she joined the staff of the Hilton Hotels Corporation as an in-house lighting consultant. In 1961 she co-founded the firm Wheel-Garon, and in 1977 the firm became Wheel-Gertsztoff. Some of her most notable projects include the Willard Hotel in Washington, DC, the Monte Carlo Hotel and Casino in Las Vegas, and Union Station in Los Angeles. Her numerous accomplishments and contributions include: founding member, fellow and past president of the IALD; recipient of the Designers Lighting Forum Honor Award in 1979, the Reader's Choice award from Architectural Lighting magazine in 1990, and the IALD Lifetime Achievement Award in 1999; former director of the Lighting Research Institute; and founder and board member of the Nuckolls Fund for Lighting Education. Memorial Services will be held in May in New York City and Los Angeles.

EDWARD ZUBLER, 1925 – 2004

Edward G. Zubler, research chemist and developer of the halogen lamp, died in March at the age of 79. Zubler joined GE's lighting research laboratory in 1953, developing the halogen lamp in 1959. Zubler's innovation was the addition of halogen gas to standard incandescent bulbs, which use a tungsten filament. The incorporation of halogen eliminated the chemical reactions with tungsten and prevented deposits from forming inside the lamp, making for a longer-lasting bulb.

Zubler was the recipient of many patents and awards for his work in advancing lighting technology. In 1973, he was honored by GE for his contributions to halogen lamp science and technology. The Smithsonian Institute includes his work in its online exhibit *Lighting a Revolution: 20th Century Invention*. **ED**

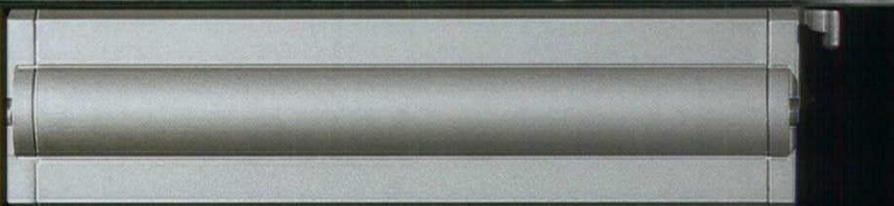
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NORMAN SCHEER Memorial Fund

Bega/US, in conjunction with the IALD, has established the Norman Scheer Memorial Scholarship Fund to honor the late Mr. Sheer for his contributions to the lighting industry and his commitment to young people interested in pursuing a career in lighting. Mr. Sheer was a product representative for several major lighting manufacturers including Bega.

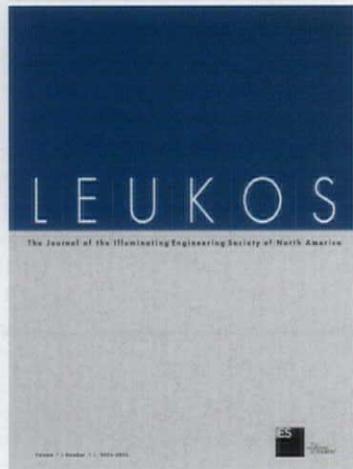
The \$3,000 scholarship encourages students to pursue educational opportunities otherwise unavailable to them, and will be given annually to lighting design students from New York State or at an accredited lighting program in New York State. Each year the judges will determine if a single award is to be given or multiple scholarships totaling the \$3,000. The 2004 recipient, Andrea M. Cleveland, will receive her Master of Arts in Lighting Design from New York City's Parsons this May. For more information about the scholarship, interested individuals should contact the IALD at www.iald.org. **ED**



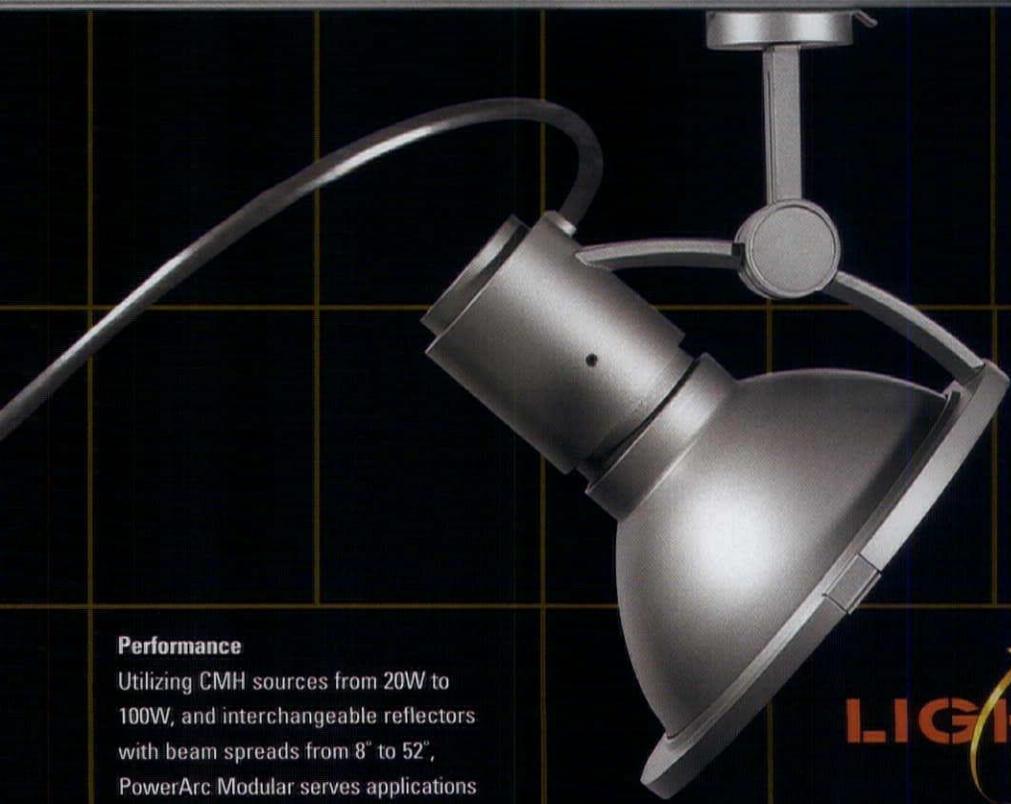
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NEW QUARTERLY JOURNAL FROM IESNA

Leukos, the IESNA's new online international quarterly journal, will focus on technical developments in illuminating engineering and lighting design, and include five types of articles: scientific research results; engineering developments; technical aspects of lighting applications; tutorial articles or critical reviews (summaries of technical topics for instructional purposes); and brief communications (shorter technical pieces). David DiLaura, who teaches at the University of Colorado, Boulder, will edit the journal. Four issues, in PDF format, will be produced per year and will be available via the Internet at www.iesna.org. All four will be available in a combined print format at the end of the year for a \$25 fee. The first issue will be launched online in July 2004. **ED**



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In an effort to advance recent technological developments and respond to the growing demand to include sustainable building resources in their projects, designers are joining forces with manufacturers.

One such example is the recent launch of the EFO Fiber Optic Lighting System, a joint venture between Gensler Architecture, Design & Planning Worldwide, and lighting manufacturer Fiberstars. The EFO system is a continuously extruded large-core fiber, and combines patented innovations in lamp design, power sources, fiber and fixtures. With targeted applications for retail, commercial and museum settings, this fiber optic technology is intended to reduce energy consumption, and act as an alternative for recessed ceiling downlights, track and

display case lighting. "Fiberstars already had the science," explains Jeffrey H. Brite, director of Gensler's Product Development Division, "We worked with them on the design of the housing, the redesign of the mechanical box so that the product can work in a construction environment, and consulted on configurations of light fixtures." According to Fiberstars, the EFO system provides as much as an 80 percent energy savings compared to halogen or other incandescent sources in downlighting applications. One 68W EFO can replace eight 50W halogen lamps. Other benefits of EFO include no heat or UV transmission. For architects and lighting designers, this technology provides another viable design solution that meets "green" criteria. **ED**

Jeffrey Miller to New Firm

On April 1, 2004, Jeffrey I.L. Miller exchanged his role as director of lighting design at NBBJ for the same title at Affiliated Engineers. He will be based in the company's Seattle office. Miller brings over 25 years of architectural lighting design experience to Affiliated's Pivotal Lighting Design Studio. Miller explains that this new partnership is structured around an integrated approach, enabling lighting and building systems design to be developed in unison and thereby providing a more comprehensive package of information for architect and client.

Recent projects under his direction to receive acknowledgement for design excellence include the McCormick Tribune Student Center at the Illinois Institute of Technology for Rem Koolhaas/OMA/Holabird & Root, and the Grand Hyatt hotel in Hong Kong with Hirsch Bedner. Miller is an active member of the IALD, currently serving on its board of directors. **ED**

CORRECTION

If only we had been partaking of Scandinavian spirits when we were editing the "Absolut Vodka Office Design Focus" article that appeared in the January/February 2004 issue. The editors regret misspelling the company's name, and promise to drink during future copy editing.

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Designboom, an independent European e-zine launched in April 2000, has grown into one of the largest sites devoted to design content on the Internet. Based in Milan, it provides the international design community with articles on design history and contemporary issues, and interviews with leading artists and architects. In 2002 it created an online education component called design-aerobics, whose purpose is to offer "online courses that are relevant to the intellectual, cultural, artistic, and professional needs and interests of adult design-enthusiasts." Each year the courses focus on a single theme; this year, the five-course offering focuses on lighting. Although the first course (Writing Lamp) is already completed, the second course (Pendant Light) continues through June 4, and the dates for the remaining three courses are as follows: Light Objects, June 14 to August 23; Floor Lamp, September 6 to November 5; and Urban Lighting, November 8 to January 12, 2005.

The 35 lessons for each course, developed in collaboration with leading practitioners, are written and directed by Designboom's editor-in-chief Birgit Lohmann. All communication is done via e-mail and online assignment postings. Students receive one-on-one feedback from instructors, and the Designboom team; students can also participate in online group discussions. The final work of each participant is published on designboom.com. For complete details, visit www.designboom.com/aerobics. **ED**



2004 ENERGY STAR WINNERS

In March, the Environmental Protection Agency (EPA) and the Department of Energy (DOE) announced the 57 businesses and organizations they had recognized as winners of the 2004 ENERGY STAR Partner of the Year Awards. These companies have worked to reduce greenhouse gas emissions by producing energy-efficient products. The EPA and DOE sponsor these awards annually, and winners are selected from the over 8,000 companies now participating in the ENERGY STAR program.

The program was started by the EPA in 1992 as a voluntary, market-based partnership to reduce air pollution through increased energy efficiency. Four lighting manufacturers were recognized as Partners in the Excellence in Efficient Products Category: GE Consumer Products, Sylvania, Sea Gull Lighting and Good Earth Lighting. For a complete list of the winners and more information on the ENERGY STAR program, go to www.energystar.gov. **ED**



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ILLUMINATION

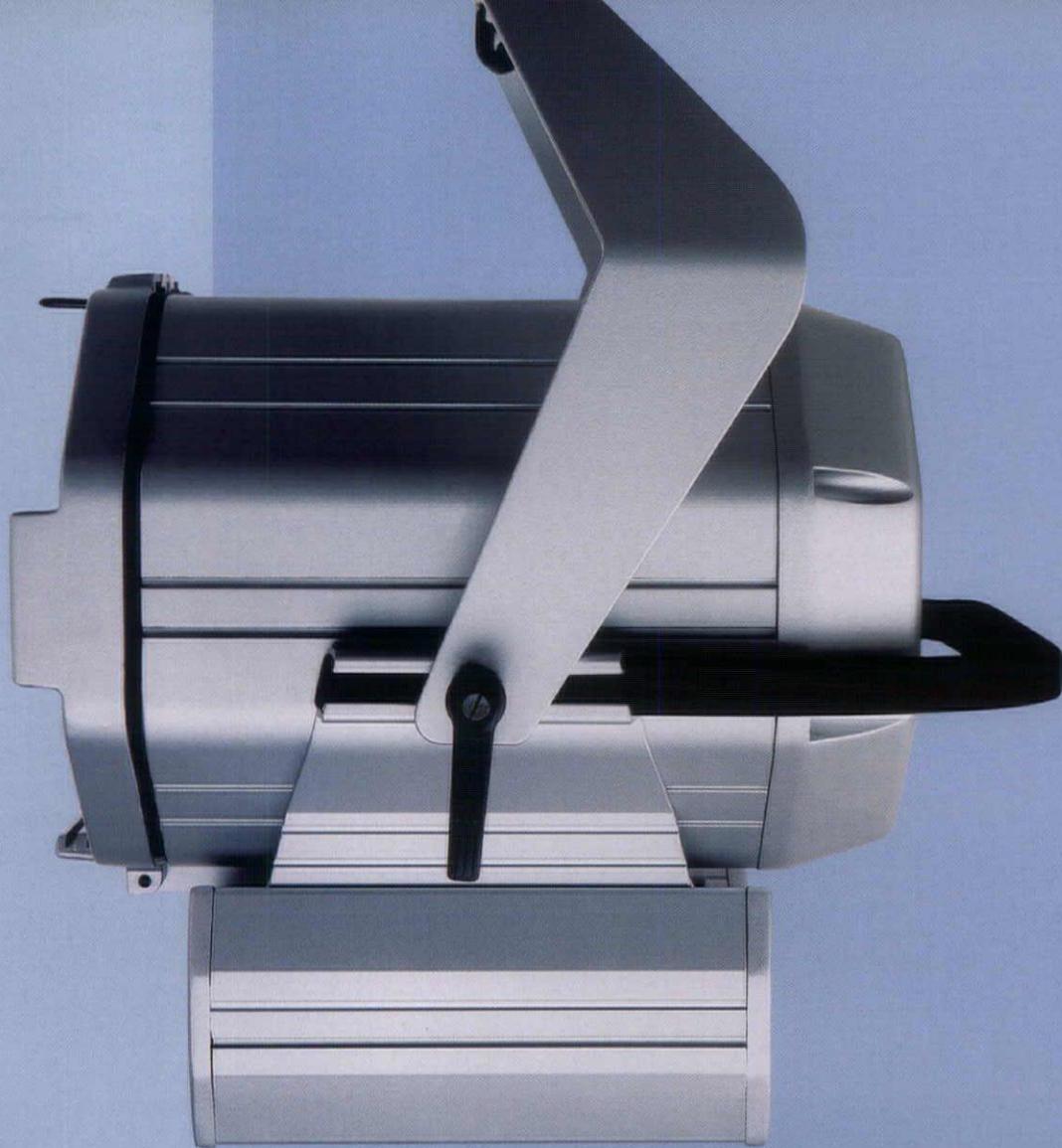


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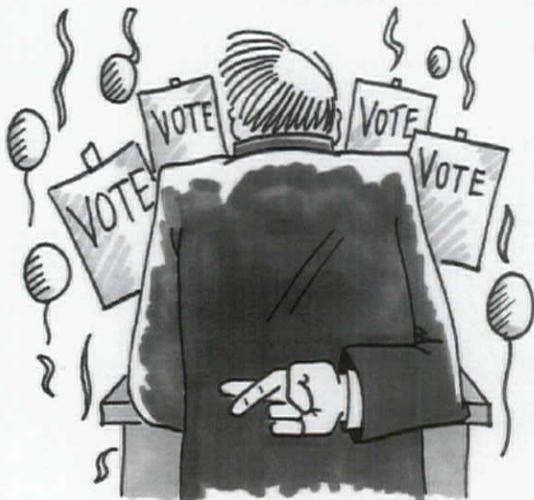
Lightfair 2004 proved one thing: the lighting industry has LEDs on the brain. Of the record 222 products entered in the annual New Product Showcase, more than 50 were LED specific. Perhaps more significantly, judges named LED-based products as winners in 9 of the 25 categories. In other words, more than a third of the potential areas for innovation (as designated by the showcase's advisory committee) are seeing successful developments using this technology. Responding to the Exchange question posed by A|L in the March 2004 issue ("What is the future of LEDs?"), designers and manufacturers alike stated that it is only a matter of time before the obstacles currently faced by LEDs—such as white light and price point—are overcome. Given the sheer number of new LED products at Lightfair, it seems this may be sooner rather than later.

More projects are providing evidence of the merits of LEDs. The site of this year's Lightfair, Las Vegas is also home to a case in point, the Hard Rock Hotel & Casino. The venue recently underwent a conversion from its existing exterior lighting system to one lamped with LEDs. The two previous lighting systems had been a trade off between lamp life and color, explains Hard Rock lighting designer Warwick Stone. It took five mock-ups, but the team was finally convinced that an LED solution could achieve the 100-foot throw on the façade with a CRI similar to the existing metal halide lamp system. The building's 120-foot façade is illuminated with 60 custom fixtures designed by specialty lighting company 4Wall using Color Kinetics



ColorBlast technology. The individual fixtures comprise a custom housing, two power supplies, and five ColorBlast 12 units, each with a bottom-frosted lens that casts a wide beam angle and a top clear lens to maximize the upward throw of light. The LED system offered a longer lamp life and new creative options to achieve the color changing effects. Even more compelling were the estimated cost savings. The LED-based units will draw about \$1,900 in electricity per year as compared to the approximately \$18,000 it cost to operate the metal halide lamps. In addition, the maintenance cost per each LED unit is estimated at only \$600 as opposed to the approximately \$25,000 spent to maintain the metal halide lamps. **ED**

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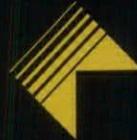
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LIGHTING ENERGY CODES SQUELCH CREATIVITY

After participating in the Architectural Lighting Master Classes, which was the best assembly of lighting specialists I've ever witnessed, I came to the conclusion that architectural lighting in the hands of designers like Howard Brandston, Paul Gregory, Ray Grenald, Ann Kale, Robert Prouse and Jonathan Speirs, who were also part of the program, is an art form. The restaurants, hotels and high-end retail projects that were presented should be considered entertainment destinations, not simply commercial establishments, and should be exempt from the lighting energy constrictions imposed by ASHRAE 90.1.

What a dull city New York would be without Times Square, and the dazzling lighting that is now required on Broadway by the regulations written by Paul Marantz almost a decade ago. The multi-award-winning lighting design of the Toys "R" Us store by Paul Gregory is part of the excitement we wish to create in Times Square, but it can't be done within the new lighting codes. How many people come to New York, Chicago, Beverly Hills and San Francisco to browse their elegant shops? And some hotels in these cities are visited by more people than our historic monuments and professional sports arenas, which are exempt from lighting power density limits. Moreover, most entertainment establishments do not reach their peak demand when the utilities do.

The energy code allowances for dimming and bi-level lighting in these spaces are much too stingy. I have visited schools participating in the California PIER (Public Interest Energy Research) project that are achieving illuminances of 50 footcandles with less than 1.0 watts per square foot using direct/indirect bi-level lighting. Consolidated Edison's lighting specialist Peter Jacobson is relighting its headquarters to 50 footcandles with recessed troffers and task lights at under 0.9 watts per square foot. Both jobs are done within the lighting power density limits by employing recent technological advancements. The Lighting Research Center recently published a report showing that high-rise office building and apartment house stairwells are occupied only 2 percent of the time—so connected load is meaningless when lights are dimmed down by sensors 98 percent of the time. Even California's Title 24, the nation's most restrictive energy code, gives credits for dimmed bi-level lighting in intermittently used spaces.

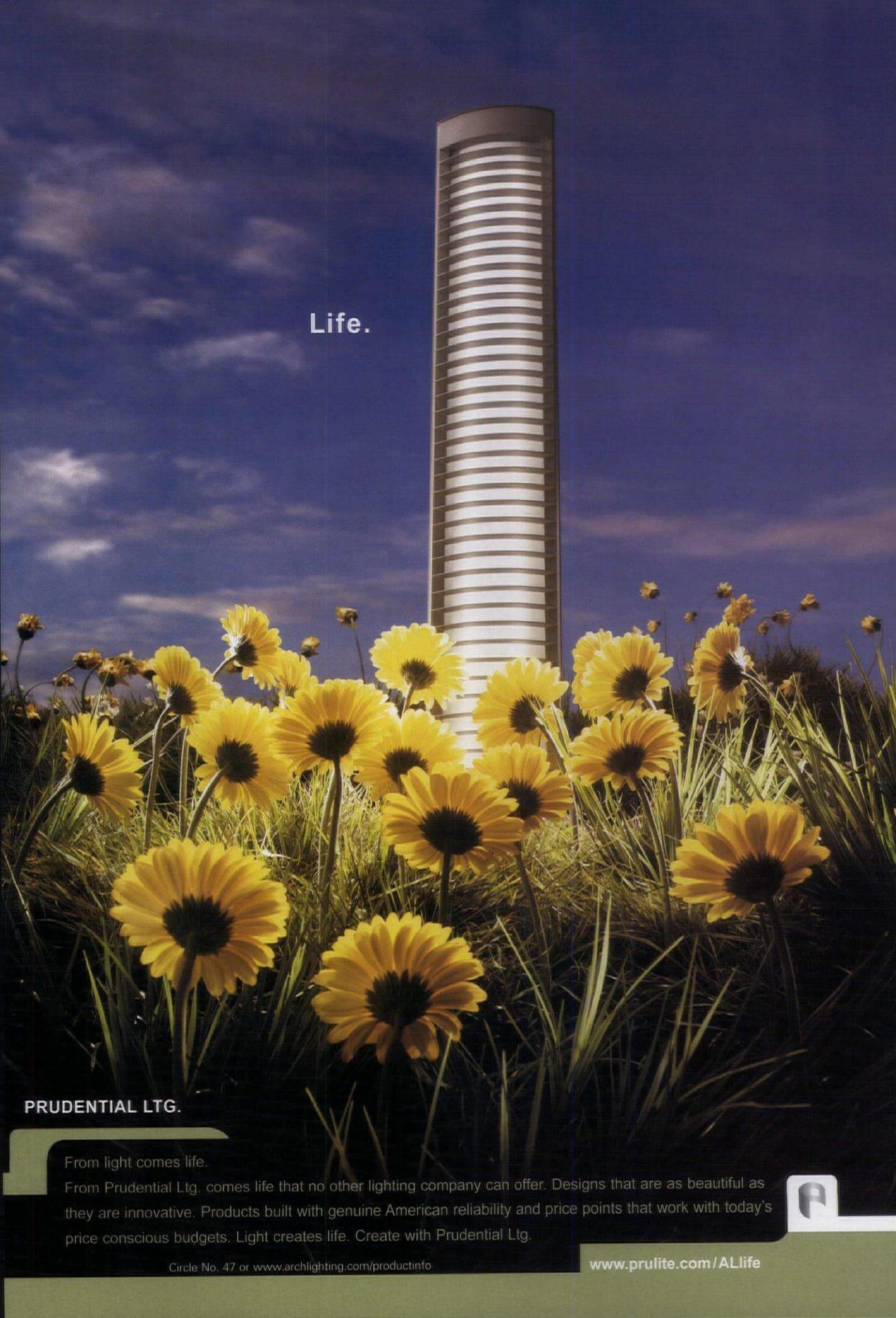
Retail, dining and hotel spaces cannot create excitement under the new lighting codes. What does an owner or designer do if he or she wishes to enliven a downtown area? Where is the provision for an occasional "gas-guzzler"? We need an allowance for a little indulgence to brighten up our leisure time.

Architectural lighting excites our senses. It generates lasting memories not only for our national historic monuments, but for all leisure experiences. It would be a great loss to impose limits on the creative efforts of our lighting designers. Would you have the government tell a painter to use less paint or a composer to shorten a symphony? Lighting designers are also artists, and limiting their imagination when designing these important destinations doesn't make sense.

Willard L. Warren

Willard L. Warren Associates, New York City
April 2004

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KUNSTHAUS GRAZ: ARCHITECTURAL LIGHTING OR DESIGN GIMMICK?

The Austrian city's new museum for contemporary art, conceived by London architects Peter Cook (of Archigram fame) and Colin Fournier for a competition in 2000 and opened last September, loudly challenges traditional architectural tastes. With descriptors like the "friendly alien" and "supine nursing animal" floating around the critical press, appreciation for the structure seems hardly a given. However, love it or hate it, the Kunsthaus raises conspicuous questions about light's responsibility to and role in architectural form.

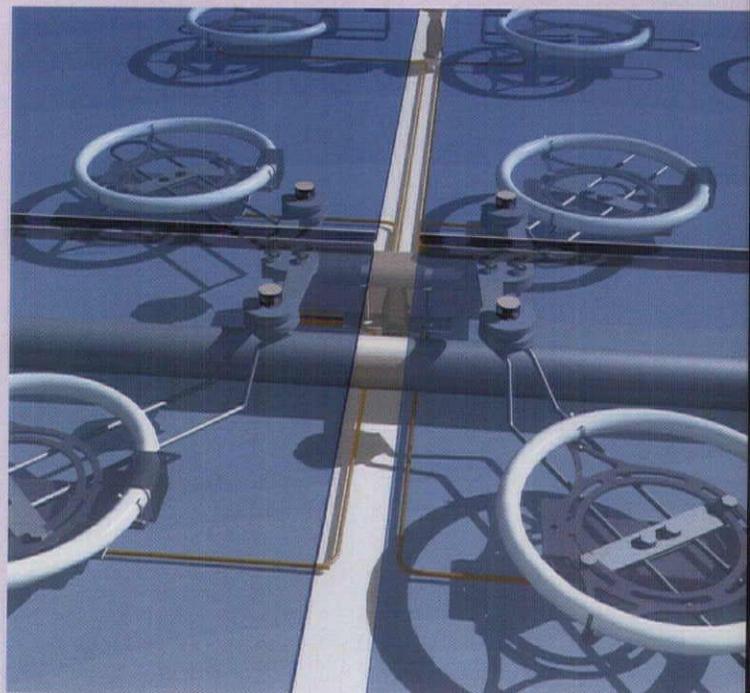
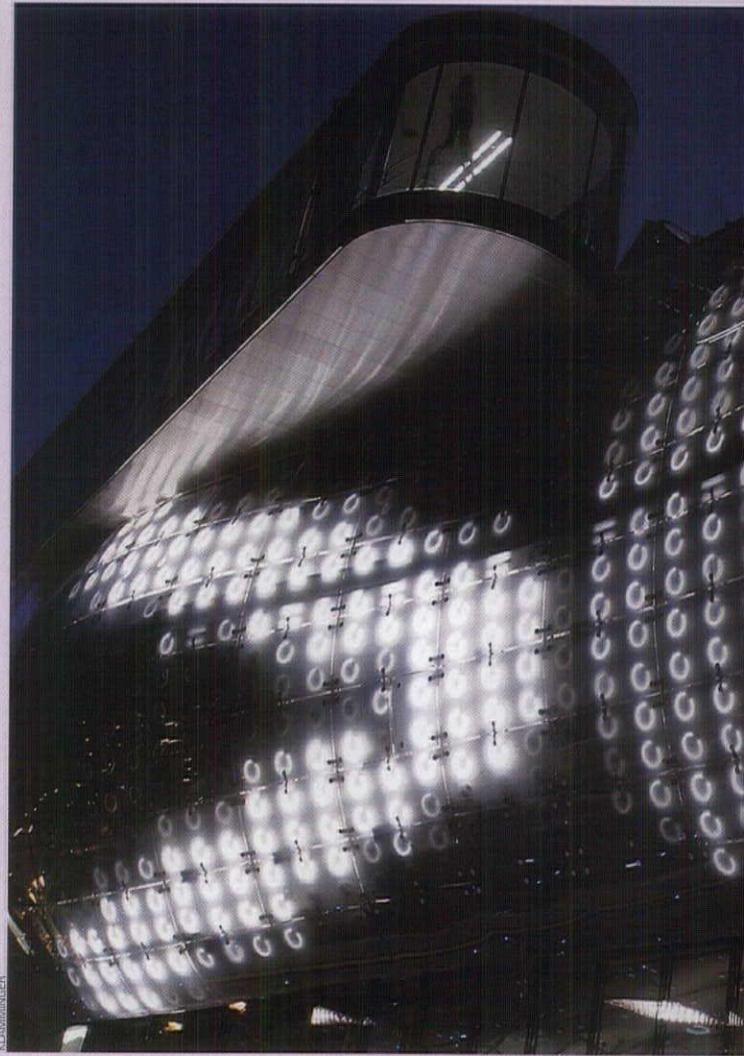
The illuminated shell, which seems to hover above the glass-walled ground floor, was developed by Berlin design firm Realities:United. Appropriately named BIX for "big pixels," the façade system acts as a kind of media screen, capable of being programmed to display rudimentary text and "low-res" images. A field of more than 900 simple circular 40W fluorescent tubes (the pixels) covers almost the entire area of the structure's eastern exposure, about 66 feet high by 148 feet wide. The luminaires are digitally controlled through a central computer, which can turn the lamps on and off, or rapidly dim the light intensity (up to 18 variations per second). An outer layer of acrylic glass panels shades and slightly diffuses the fluorescent sources, contributing to the building's "aura."

Despite what its crude messaging capabilities might suggest, the façade is hardly a Times Square wannabe; in fact, notes Realities:United in a press release about the installation, the "coarseness and monochromacity of the pictures are an 'advantageous limitation' which enables the Kunsthaus to take a strong and clear position in the current discourse about high-tech media facades." From this perspective, BIX is more of an artistic commentary on the subjugation and adulteration by digital screens of architectural form. Rather than a life and message of its own, the illuminated façade is both reined in and glorified by the architecture: "BIX is formed to meet the structure of the building and is therefore an additional architectural element that replenishes the Kunsthaus. ...BIX gives the impression that not a screen but the Kunsthaus itself renders images and pictures."

The system also speaks to the architects' belief that the façade should indicate the nature of the activities within. Programmable using custom software, the exterior skin becomes its own artistic canvas, thereby bringing the building's program outside.

So, while seemingly a digital media placard at first glance, the illuminated façade actually exists only within the context of the architectural form, at once a participant in the building's purpose *and* its advocate. In other words, architectural lighting in its purest sense. **EMILIE W. SOMMERHOFF**

The eastern façade of Kunsthaus Graz is illuminated with a system of digitally controlled circular fluorescent tubes encased behind blue-tinted acrylic panels (rendering right).





HARRY SCHIFFER

KUNSTHAUS GRAZ

LOCATION: Graz, Austria
ARCHITECT: Spacelab Cook-Fournier, London
FAÇADE DESIGN: Realities:United, Berlin
IMAGES: Realities:United, except where noted. All images courtesy of Realities:United.de at www.bix.at



HARRY SCHIFFER

A Façade for

The Post Tower illuminates Bonn for the next century, both inside and out.

A VIEW FROM THE "PENTHOUSE" OF THE DEUTSCHE POST TOWER IN BONN, Germany, emphasizes the building's distinctiveness. The 41-story structure is clearly the tallest building around, which at first makes it seem out of place, towering above an otherwise diminutive city. After experiencing the Post Tower, however, its stature seems appropriate, the privilege of a design that is uniquely beautiful, ecologically responsible and human-centric.

The building is also a shining example of collaborative effort. Design architect Helmut Jahn ensured that Parisian lighting artist Yann Kersalé and Berlin-based lighting design firm L-Plan were part of the Post Tower from its inception. This coordination produced a structure in which the lighting seems intrinsic to the architecture, be it the cafeteria, emergency stairwell, offices, elevator lobby or penthouse boardroom.

ARCHITECTURAL FUSION

The most obvious synthesis—since it can be seen for miles—happens within the building's transparent double-glazed curtain wall, which begins to emit a unified and comprehensive lighting effect at sundown. Conceived by Kersalé and translated into a lighting scheme by L-Plan, the slow-loop color change is intended to express "the life of the building." After dark, the façade gently transitions through a series of colors at about one minute per color—"as if

breathing," says L-Plan principal Michael Rohde. Sandwiched between the building's inner and outer glass layers, 1,000 custom fixtures fitted with red, yellow and blue neon tubes are horizontally oriented and recessed into the façade approximately every 5 feet. The lamps use "filter glass"—real red, yellow and blue glass—chosen because it imparts a purer color when illuminated; turned off, the lamps maintain their color rather than reverting to plain white tubes.

Though enclosed inside a glass skin, the building is actually two separate towers linked by nine-story atria. Every ninth floor, a "sky garden," or open circulation space, joins the north and south tower halves. (A bridge with an elevator bank connects the other floors.) At the four sky-garden levels, Martin Professional 150W and 575W spotlights capable of changing color and distribution angle uplight the façade. A DMX system from Martin controls both the neon fixtures, as well as the spots, to create the color-changing effect.

If the building is "alive," it draws sustenance from what Kersalé refers to as *racines de lumiere*, or light roots. Two thousand custom-designed in-ground LED luminaires simulate the pattern of tree roots stretching across the plaza from the base of the tower. Seven white LEDs set inside a stainless-steel housing behind an opaque diffuser create the source; these are integrated into 10-millimeter-thick stainless-steel parallelogram-shaped



the Future

plates. Six versions of the plates, each with a different number and placement of the LED luminaires, enabled the designers to create a random “scattering” of the point sources. The plates, arranged in strips with a channel for wiring underneath, alternate with stone surfacing to create a striped pattern.

Given the tower’s transparency, every building component had the opportunity to become an aesthetic element—even the emergency stairwell. According to the lighting artist’s vision, only every second flight of the fire stairs is illuminated, visually emphasizing the architectural repetition of the 41 flights of stairs and the height of the tower. To prove Kersalé’s idea would meet prescribed light levels of 100 lux, L-Plan prepared numerous calculations and a one-to-one mockup. (“We don’t usually do a mockup for emergency stairs,” jokes Rohde.) A simple bare T5 fluorescent lamp in a brushed-aluminum fixture met both brightness and aesthetic requirements.

The top floors of the building are occupied by Deutsche Post executives, and while the office lighting is calculatedly democratic using the same direct/indirect scheme as the junior level employee spaces, the penthouse boardroom is an exclusive luxury. An arched structure folds over the tower’s apex to form the walls and ceiling of the boardroom and several smaller meeting areas that share the floor. To accentuate the curvature, L-Plan integrated LED strips into the metal profiles, which for a change, the architect created to meet the lighting designer’s specifications. “It was one of the few times as a lighting designer that I have influenced the form of a metal profile,” comments Rohde, who required 40 millimeters in recessed depth and 60 millimeters in width to accommodate the LED technology available at that time. Like many of the luminaires on the project, the strips had to be custom fabricated. Lighting manufacturer Ansoerg crafted the 800 meters of LED strips, as well as the 2,000 “light roots.” Double-focus downlights with both halogen and metal halide lamps supply the primary lighting for the meeting rooms. The halogen enables more comprehensive dimming in the space, which is occasionally used for events that require a personal atmosphere.

An outdoor space encircles the boardroom, providing access to the building’s greatest amenity—a spectacular view. From the ground, the roof rendered in light becomes an important part of the architectural whole after dark: The 15 columns and horizontal elements that fortify the area around the deck are illuminated from their base with two narrow-beam uplights, creating a concluding glitter atop this stacked jewel. A high-performance projector accents the Deutsche Post logo.

THE HUMAN ELEMENT

Helmut Jahn’s design, in its transparency, cannot help but be about daylight, which easily penetrates the many diaphanous glazed layers—the vast atrium spaces, the skylit conference center, the glass elevator shafts, and the airy, high-ceilinged ground-floor lobby. It is the window-walled offices, however, that bring the building’s true character to the fore. Arranged around the perimeter of the building, all have floor-to-ceiling views of the Bonn landscape. And in addition to daylight and an inspirational scene, the 2,000 Post Tower occupants are granted unprecedented control over their environments. The shading



SERIES BY ALAN TOFT



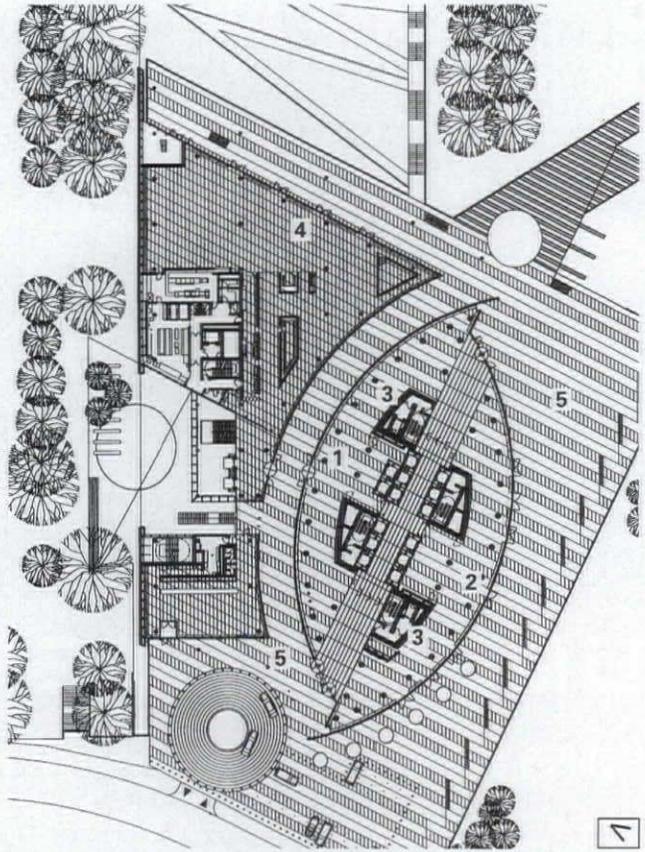
The Post Tower's penthouse boardroom (above right) is one of the building's most graceful spaces. Lighting design firm L-Plan specified LED strips to accentuate the bowed steel profiles that form the walls and ceiling of the 41st floor. An outdoor deck circles its perimeter, offering 360-degree views. Narrow-beam uplights illuminate the ring of columns that contain the area (above left). A feeling of transparency exists throughout the building, owing to the full-height glazing in many of the spaces. The lobby, which ranges from 32 to almost 50 feet in height, is particularly majestic. Daylight from the floor-to-ceiling window wall (below right) combines with illumination from light pipes arranged behind a suspended ceiling striped with clear and frosted glass, and underneath a fully frosted floor (below left). Spotlights also provide direct light for these spaces, and in the elevator banks on each floor.



system sandwiched between the two-layered curtain wall is user controlled, as are the operable windows. An indirect lighting system recessed into coves formed in the concrete ceiling (another example of the detailed integration of light and architecture) is completely adjustable by individual users; a task light at each desk provides still further control. This is architectural design that respects its end user.

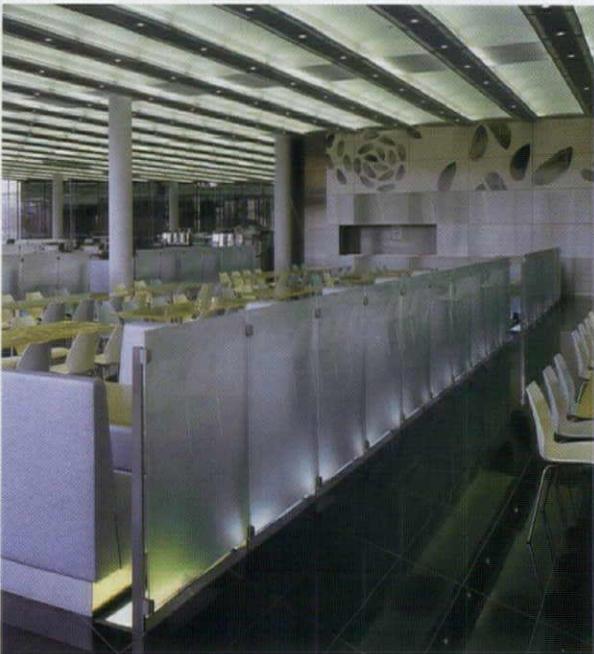
It is also a design that considers its environment. The double-glazed façade dexterously compensates for heat gain, providing ventilation to the interior throughout the seasons without a central mechanical system. The south face of the building is shingled to enable natural airflow; the north face is flat. The shades and operable windows also facilitate climate control. Daylight sensors automatically adjust office light levels to 300 lux, which also helps reduce energy costs. Rohde notes that certain areas like the lobby were more extravagant in terms of energy usage. "There is great awareness in Germany, since our energy costs are higher than in the United States, but in the lobby, we were allowed more freedom. The client wanted it to look nice," he says. "Where we did a lot of calculations was in the offices. We could not use more than 10 watts per square meter [about 11 square feet]."

Honored this year with an IALD Award of Merit, the Post Tower's stunning effects are catching the attention of more than just Bonn residents. Rohde credits the quality of the team, and he particularly appreciated Kersalé's uninhibited approach to lighting design. "It is interesting to collaborate with someone who is used to working on light very 'freely,' without having codes or security in mind. It's one of the reasons this project is so special in terms of the lighting." Another reason, he notes, was the quality of the client. Deutsche Post, formerly government-owned, wanted a headquarters that both demonstrated and facilitated the progressive mentality of this newly privatized organization. The environment it creates for employees and the statement it makes architecturally is indeed one for the future. **EMILIE W. SOMMERHOFF**



- 1 North Tower
- 2 South Tower
- 3 Emergency stairwell
- 4 Cafeteria and conference center
- 5 Plaza with "light roots"

Located in a semi-detached building on the tower's north side, the cafeteria features an indirect lighting system like that used in the offices. The custom solution involved recessing luminaires into the concrete ceiling for an "integrated" appearance. Also a custom detail, a color-changing RGB luminaire grazes the partitions with light.



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DETAILS

PROJECT Deutsche Post Tower, Bonn, Germany
ARCHITECT Murphy/Jahn, Chicago
LIGHTING DESIGN L-Plan, Berlin
LIGHTING ARTIST Yann Kersalé, Paris
PHOTOGRAPHER Atelier Altenkirch, except where noted

MANUFACTURERS

Ansorg
 Belux
 Erco
 Martin Professional
 Sill
 Siteco
 Spectral
 TIR Systems
 WE-EF

APPLICATION

LED strips in penthouse, "light roots," RGB cafeteria luminaire
 Office task light
 Penthouse double-focus downlights
 Exterior 200/600 Series spots, controls on façade
 Penthouse deck/Deutsche Post sign
 Custom indirect office/cafeeteria luminaire
 Emergency stair T5 fluorescent; spotlights in elevator lobby
 Light pipes in lobby
 Narrow/medium-beam lobby downlights



URBAN LIGHT

Lighting aids in the rebirth of two forgotten cityscapes.

AS CITIES DEVELOP AND EXPAND OVER TIME, UNIQUE SPATIAL CONFIGURATIONS emerge. Places that were once the city's edge become enveloped in its fabric, and others that once had a specific use become places of confusion. But in the case of the Triple Bridge and Jamaica streetscape projects (both to be completed by the end of 2004), architecture, light and landscape work in unison to reclaim these neglected urban spaces. While the projects each have

their own unique circumstances, their sites and the applied design approach are similar. Both projects address the spatial conditions of urban underpasses: Triple Bridge is part of the complex system of ramps that buses traveling between New York and New Jersey use to enter Manhattan's Port Authority Bus Terminal, and the Jamaica, New York, project is an active pedestrian underpass for the Long Island Railroad.

The Triple Bridge Gateway project creates a "visual" landmark on Manhattan's Ninth Avenue (bottom right). Fluorescent lamps behind the suspended reflector panels highlight the underside of the ramps (bottom left). The chain-link scaffolding system is attached to the underside of the bridge structure (above).



TRIPLE BRIDGE GATEWAY, NEW YORK CITY

Nine years in the making, Triple Bridge is a testament to collaboration and vision. The search for a solution to remedy this unfriendly and dark pedestrian space along Ninth Avenue had long been the focus of dialogue between the community and the Port Authority, the agency that oversees New York and New Jersey's major transportation hubs. The 50-year-old ramps were already scheduled to undergo painting and deck rehabilitation. Discussion with the community led the Port Authority to host an invited design competition to incorporate architectural improvements with the rehabilitation. The lighting enhancement is just one part of a larger plan that includes renovating a community center located directly under the ramps and refurbishing the Port Authority façade on Ninth Avenue.

The Triple Bridge project creates a landmark for the neighborhood, while addressing the juxtaposition of activities and modes of transportation that simultaneously occur at this location. The design team—New York City architects Pasanella + Klein Stolzman + Berg and lighting designer Leni Schwendinger Light Projects—wanted pedestrian, automobile driver and bus commuter to have a sense of arrival and departure as they transitioned through the space. The design took its cues from the bridge's beam structure. "I wanted to enhance and magnify the existing conditions, to reinterpret the existing structures through light and color," explains Schwendinger. The lighting works in conjunction with the architectural solution to wrap the sides and underside of each ramp in a total containment system—scaffolding that can be used as a scrim to reflect and diffuse light, as well as provide full-time maintenance access.

Without interfering with the ramp roadway lighting, multiple light sources illuminate the bridge structure and the area under the bridges. Metal halide sources graze the stainless-steel chain-link of the scaffolding system, and wallpacks are used to wash the bridge coffers. Another inspiration behind the lighting design was the "urban" quality of light. "The reflected light from glass clad buildings creates wonderful patterns," explains Schwendinger. Pendant-mounted reflector panels, approximately 3 feet by 3 feet, pierce the containment system. Metal halide sources on the east and west walls of the underpass shine onto the panels that, in turn, cast reflected light patterns onto the street. Fluorescent lamps behind the reflector panels illuminate the underside of the bridge structure. The positioning of the reflected light patterns ties together the existing lines and spaces of the bridges, and promotes the idea of movement and animation. Both day and night, this space becomes a place of light.

STREETSCAPE IN JAMAICA, NEW YORK

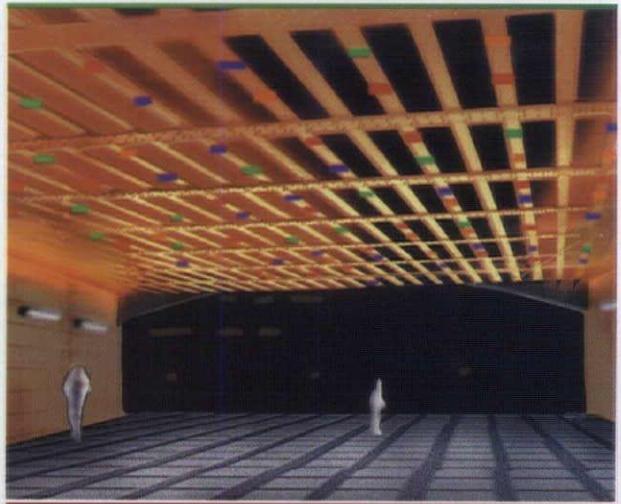
Lighting also serves as an elixir for a neglected pedestrian underpass that divides York College from downtown Jamaica. Like Triple Bridge, the design process includes a large team of designers, city agencies and private institutions. The underpass is part of a larger rehabilitation plan to redefine an entrance for York College, improve the surrounding streetscape and signage, and install new lighting at the nearby courthouse.

The original design solution was to refurbish the decayed interior of the underpass with tile, but this proved too expensive. "These are marginal spaces. The infrastructure is maintained, but the aesthetics are not. The question is how do you reclaim these spaces? Bringing light to this dark dingy place seemed logical," explains Brooklyn-based landscape architect Donna Walcavage, who proposed Leni Schwendinger be brought on board. Once embraced as a design solution, light was used to "tile" the underpass.

The site is the confluence of two grid systems—the street axis and the railroad structure—and the lighting scheme takes advantage of this intersection. Light reflectors painted in red, green, purple and white are attached to the underside of the underpass and accentuate the "ceiling" grid. These strips, approximately 1 inch by 4 inches, are evenly spaced to provide a balanced surface illumination. During the day they reflect the daylight funneled into the underpass, and at night they reflect the metal halide uplights, installed on the orange-painted side walls.

Light has helped create two physical and visual urban gateways. Schwendinger incorporates and manipulates light as a way of creating a civic stage. What were once forgotten spaces are now local landmarks actively reintegrated into the urban landscape. **ELIZABETH DONOFF**

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Evenly spaced light reflectors attached to the underside of the Jamaica streetscape underpass highlight the "ceiling" grid (above).

DETAILS

PROJECT Triple Bridge Gateway, New York City
OWNER The Port Authority of New York and New Jersey
ARCHITECT Pasanella + Klein Stolzman + Berg, New York City
LIGHTING DESIGN Leni Schwendinger Light Projects (LSLP), NYC

MANUFACTURERS	APPLICATION
Kim Lighting	Chain-link graze
Holophane	Bridge coffers
Northstar	Reflector panel lighting
Insight Lighting	Reflector bridge wash
HessAmerica	Sidewalk lighting

PROJECT Streetscape in Jamaica, New York
OWNER Greater Jamaica Development Corporation
LANDSCAPE ARCHITECT Donna Walcavage, Brooklyn, New York
LIGHTING DESIGNER LSLP

MANUFACTURER	APPLICATION
Elliptipar	Metal halide ceiling washer

IMAGES All images and renderings courtesy LSLP

GLOWING TRIBUTE

Soft illumination visually lightens this steel monument to create a place of remembrance.



THE IMPACT OF THE MICHIGAN VIETNAM MEMORIAL MONUMENT, situated between the State Capitol and State Supreme Court buildings in Lansing, is embodied in the stunning beauty of its steel structure. By night, the lighting system masterfully enhances the structure to further promote the appropriate atmosphere and mood for this environment devoted to tribute, remembrance and contemplation.

In the late 1980s, the veterans of Michigan lobbied for a monument to honor those who had given their lives in service to their country during the Vietnam War. The competition held to solicit designs for the Vietnam memorial had only two parameters: a budget of \$1.2 million and the requirement that the names of all Michiganites lost during the war be shown.

The Michigan Vietnam Memorial Monument Commission, a group selected by the governor to represent the veterans, chose as the winning design the curved steel structure by New York City-based architect Alan Gordon. The memorial took more than a decade to complete. Gordon won the design competition in 1993, but because of funding challenges, the monument was not formally dedicated until November 2001, with construction completed about six months later.

Gordon sought to make this monument different from others dedicated to the veterans of the Vietnam War. "This monument is a structure that is under the continuous self-applied dynamic forces of tension and compression," Gordon explains. "The sequence of visiting and finding the names makes the visitor an active participant."

SUSPENDED ARC

Lighting designer Paul Gregory of Focus Lighting in New York City had worked successfully with Gordon on other projects. Gregory was included early in the design development phase to create a lighting system that would produce a warm, welcoming aura and further the architectural goals. "The light sources we chose for the monument make it a warm and inviting place to be. It's a beautiful exterior project where visitors can gather at night, similar to gathering around a campfire, and spend time with others."

The monument's curved steel arc measures 120 feet long by 10 1/2 feet high and is raised 3 feet above the ground. "It is supported by a triangular-shaped concrete pier at its western end, and by a steel cable 10 1/2 feet above the ground at its eastern end," explains Gordon. "The north face of the steel arc displays letters and poems about the Vietnam War and the veterans. The south face of the arc supports 15 engraved steel plaques, which display the names arranged by county of those honored in this memorial."

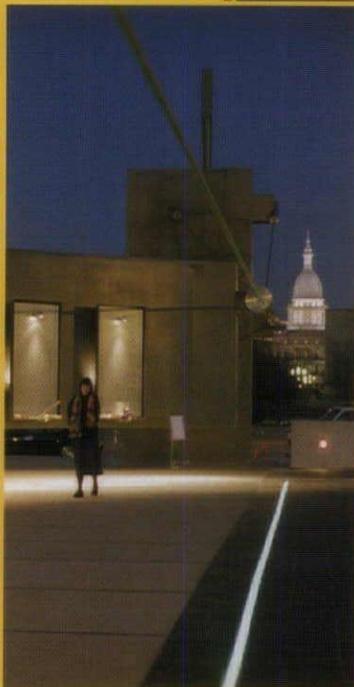
Cast bronze strips in the ground plane lead visitors from the county name to the corresponding steel plaque. Two miniature incandescent floodlights concealed behind each panel emphasize the curved shape of the arc backdrop. A single MR16 fixture positioned at the top of each panel grazes and highlights the raised lettering. Dual T8 vapor tight fluorescent lamps mounted within a pocket at the bottom of the arc cast light down and create the illusion that the plaques are floating in space.

Set along an axis line to the Capitol's dome is a strip of

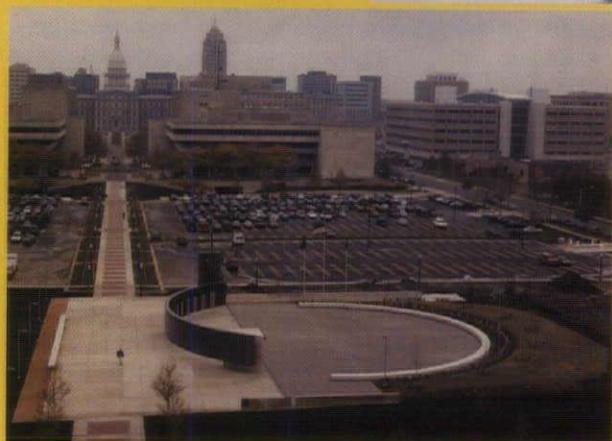
A moment of personal contemplation (left). The memorial site is located near the State Capitol (bottom). The monument features three key components: the steel arc that supports the commemorative plaques (center right); the illuminated strip (center left) that separates the arc from the semi-circular seating; and two seating elements that include the semi-circular bench opposite the arc (top) and a rectangular bench behind it.



MICHAEL COVATINS

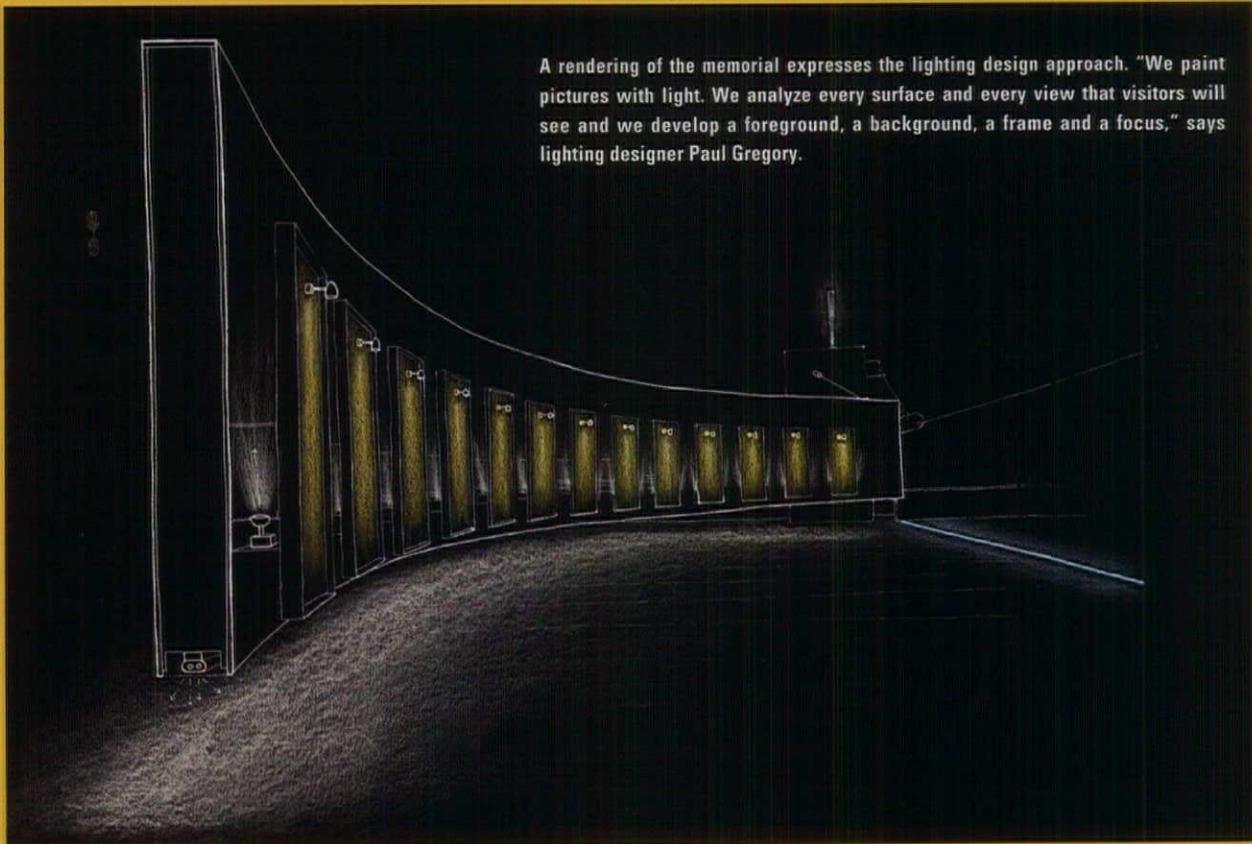


ALAN GORDON



ALAN GORDON

A rendering of the memorial expresses the lighting design approach. "We paint pictures with light. We analyze every surface and every view that visitors will see and we develop a foreground, a background, a frame and a focus," says lighting designer Paul Gregory.



RENDERING: COURTESY: FOCUS LIGHTING

ground-recessed frosted glass that divides the monument proper from the semi-circular seating area. The channel is backlit by two rows of high-output, side-emitting fiber optics, which are, in turn, lit by four 15W metal halide illuminators—one at each end of both rows—housed in burial compartments. The white channel backing optimizes reflectance, boosting light output.

The large semi-circular bench is lit by 55 recessed LEDs, to represent the number of U.S. states and territories. The long-life LEDs were selected to eliminate heat on the legs of those seated on the bench. The rectangular bench behind the monument is illuminated with concealed 100W halogen lamps positioned to emit a tight beam of light through small openings near the feet of those seated. "We were able to collaborate with the architect early on in the design process to introduce lighting elements into the critical parts of the design," says Gregory. "Sustainability and longevity of the lighting design were important considerations." Gregory installed dimmers in an underground vault to increase the lamp life of the incandescent sources. "The lighting system turns on about an hour before sunset and it maintains the same levels all through the night," says Gregory, whose firm also illuminated the trees and pathways leading to the site.

According to Gordon, there was only one change made to the original design when the monument was finally built. "The original site plan had the cable line on the true axis of the Capitol building in Lansing," he says. "The monument site was moved 30 feet to the south to facilitate access to a new State Supreme Court complex adjacent to the monument. The arc and cable components were skewed to enforce the axis line."

The memorial's structure mirrors the complexities of the Vietnam experience, providing an engaging place of

remembrance. The monument's architecture and lighting is as timeless as the heartfelt sense of tribute and gratitude that Americans feel for their veteran countrymen. **WANDA JANKOWSKI**

Wanda Jankowski is an editor/writer in the design field who has served as editor-in-chief of Architectural Lighting and LD+A. She has authored seven books, four on aspects of lighting design.

more information at
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DETAILS

PROJECT Michigan Vietnam Memorial Monument, Lansing
ARCHITECT Alan Gordon Architect, New York City
LIGHTING DESIGN Focus Lighting, New York City
PHOTOGRAPHERS Gary Bjorkquist, except as noted
WATTS PER SQ.FT. 3.5 watts/sq.ft.

MANUFACTURERS

B-K Lighting
 Exterieur Vert
 Metalux
 Bega
 Lumiere
 3M (Fiber Optics) and Cogent

APPLICATION

Lights behind plaques
 LEDs in the semi-circular benches
 T8 fluorescents under arc
 General pathway illumination
 Plaque front light
 Ground light channel

Leviton's new advanced lighting control system puts the competition in the Dark Ages.



Feature	Leviton D-3208	Brand "G"
Max. no. of scenes, zone-controller accessible	32	4
Max. no. of linkable zone controllers	31	8
Max no. of zones per system	248	48
Max no. of zones controlled from one zone controller	248	6
Max. no. of control points/system	100	24
Scheduled scene changes	64	0
Astronomical clock	Built in, no cost	Accessory-additional charge

With Leviton's new D-3208 Multizone Dimmer/Controller, architectural lighting control systems enter the Age of Enlightenment. It's that far ahead of the competition! With the power and capability once found only in "big box" cabinet systems, the D-3208 offers such progressive features as join/separate functions, astronomical clock for event scheduling, PC interface and unprecedented networking capability that can link up to 31 units together. And where other units kept you in the dark, the D-3208 keeps you informed, spelling out zone, channel and

programming information in plain English on its bright 2-line, 32-character display. What's more, on-screen wizards guide you step-by-step through set-up functions. Whether commercial or the most demanding residential application, the D-3208 brings lighting control to a new age of power, convenience and capability. ■ To learn more, visit www.Leviton.com/d3200.



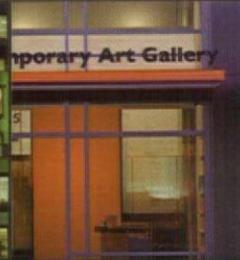
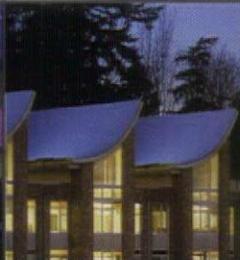
New Astronomical clock now available also on D-3206

LIGHTING CONTROL DIVISION



F O R M

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APPLICATIONS

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AT THE SOURCE: LAMP OPTIONS FOR RETAIL

WHETHER BOUTIQUE OR BIG BOX, RETAIL DESIGN MEASURES its success by sales figures. The lighting in such an environment can contribute helpful visual cues toward the ultimate goal of selling product, including attracting customers, showcasing merchandise, guiding visitors through the store, and indicating where to pay and exit. Recent trends in retail lighting design include themed environments, theatrical elements such as moving and colored lighting effects, and advanced controls systems. The most noteworthy developments for these spaces have been in the area of source technology. Advances in lamp life and color rendition have lowered maintenance costs and improved the appearance of merchandise. Popular options for retail environments include ceramic metal halide, high-output and high-wattage fluorescent lamps, daylighting and LEDs. A trip to almost any mall today will find these sources comfortably cohabitating with the fluorescent and halogen archetypes we know so well.

CERAMIC METAL HALIDE A growing favorite among lighting designers and retailers, ceramic metal halide provides a superior lumen package, a 10,000-hour lamp life, a color temperature of 3000K, and a color rendering index of 85. For retail applications, this source is most commonly employed, like its halogen cousin, as merchandise accent lighting in a track head. In an attempt to help the retailer minimize lamp stock, Cooper Lighting recently introduced the MiniLume track head for the ceramic metal halide T4 bi-pin envelope featuring adjustable optics for flood and spot beam configurations. The PAR lamp, though, continues to act as the workhorse of retail lighting. The drawbacks: like any HID source, ceramic metal halide cannot instantly switch on, nor can it be consistently or cost-effectively dimmed.

FLUORESCENT Like metal halide, fluorescent technology gets better every year. Ongoing improvements in color rendering index, lumens per watt, lamp life, dimming capabilities, and color temperature options make fluorescent an excellent source for retail illumination. The flat and even illumination quality produced by fluorescent lighting can create terrific uniformity but does little to promote visual diversity; whether or not this is a benefit depends on the retailer. The T5 and T5HO linear fluorescent lamps pack more lumens in a

smaller package, equaling fewer lamps, ballasts and fixtures to maintain. Higher wattage (57W and 70W) compact fluorescent lamps offer alternatives to HID sources for big-box retailers. Not only do these newer fluorescent lamps provide the same lamp life and lumen output as metal halide, with instant on and dimming capabilities they offer increased energy savings as well.

DAYLIGHT For full-spectrum illumination, no source performs like reflected natural light; moreover, daylighting reduces energy and maintenance costs and has been shown to contribute to increased sales. Direct sunlight on merchandise is not desirable since it can spoil perishables, cause fading, and create glare and dramatic contrast ratios; therefore, daylight should be incorporated in retail spaces using light shelves, skylights, light tubes or pipes, louvers, and screening. Ambient illumination and higher lighting levels for accent highlighting can be achieved with the proper application of these elements.

LIGHT EMITTING DIODES Like fiber optics 10 years ago, solid-state technology is creating a stir in the lighting community. LEDs boast a tremendous lamp life. Red LEDs, for example, are true performers with 100,000 hours of life until half brightness and 4 to 5 lumens per LED. An acceptable form of white light has yet to be developed, however. The white LED is actually a blue semi-conductor with a yellow phosphor; this combination produces a color temperature of around 5500K to 6500K, the color of daylight minus its rendering capabilities. LEDs are not yet a viable or cost-friendly solution for ambient and accent illumination of merchandise, but are a fantastic source for cove lighting, niches, casework displays and color accents.

With the demand from retailers to increase sales, decrease maintenance and energy costs, and create unique brand imaging, there is no doubt technology in these areas will continue to improve, offering designers more options for cost-effective creative design solutions. **MORGAN GABLER**

Morgan Gabler is a senior lighting designer with Atlanta-based Newcomb & Boyd's Lighting Design Group. Gabler has received several International Illumination Design Awards of Merit and is past president of the Georgia section of the IESNA.



COACH SHIBUYA, TOKYO

DETAILS

PROJECT | Coach Shibuya, Tokyo
DESIGN TEAM | Michael Neumann Architecture (architect); Work Techt, Tokyo (lighting designer)
PHOTOGRAPHER | Nacasa & Partners (Tokyo)
MANUFACTURERS | Erco, Modular, Nippo, Solx, Ushio, Yamagiwa

CHALLENGE How does an American luxury goods retailer maintain its brand identity while appealing to a young Japanese clientele? That was the challenge at Coach's newest flagship store in the busy Shibuya shopping district of Tokyo.

ARCHITECTURAL AND LIGHTING SOLUTION Continuing a six-year working relationship with Coach, New York City's Michael Neumann Architecture was already familiar with the company's design philosophy. Whereas the Coach store in Tokyo's Genza district, also designed by the architect and the lighting firm Work Techt, is more formal in its approach, perpetuating the image of an established quality brand, the Shibuya store caters to young fashion-oriented customers in their 20s. Critical to the appeal of a product in Japan is that it seems "fresh," and that the shopping environment be open and accessible. At Coach Shibuya, the lighting responds to create a bright and hip atmosphere.

The store is located at the intersection of a heavily trafficked vehicular roadway and a pedestrian street. The architectural concept was determined first, and the lighting scheme followed suit. The shop is a play between luminous open spaces and intimate rooms, with attention paid to the light and dark material palette. A main feature of the design, the "walnut box," floats between interior and exterior, as it breaks the store's façade. Inside, the box extends into the store's double-height space. At night, the store's long exterior wall, fabricated from etched glass and

conceived of as a three-dimensional billboard, transforms into a plane of white diffused light illuminated by Nippo's Slim Line fluorescent lamps. The store's front façade uses a combination of CDM 70W and AR111 lamps, which can be adjusted according to the merchandise on display. The back wall is lit with MR16s, so products will stand out.

Inside, rather than focus on the fixture aesthetics, the designers directed their attention to the quality of light and the lamp sources. The store's general lighting is provided by AR111 recessed downlights. Perimeter display shelves are illuminated with under-shelf fluorescent lights, and the walls are washed with MR16 spotlights. Another feature of the design, the duratran wall on the stair landing, consists of three panels, each 14 feet high by 15 wide and lit by fluorescent lamps. The landing can be used as a stage for in-store presentations.

The most significant difference at Coach Shibuya is that floor products are for display only: When a customer makes a purchase, a new item is retrieved from the stockroom and carefully gift wrapped, whether the purchase is a gift or not. In Japan, the act of the purchase signifies a gift relationship between the seller and the buyer. By responding to the specifics of this customer base, the neighborhood, and the Japanese enthusiasm for this American retailer, architecture and lighting design create a dynamic shopping experience.

ELIZABETH DONOFF



BARRIER MOTORS, BELLEVUE, WASHINGTON

CHALLENGE How does one create and maintain a lighting scheme that showcases luxury automobiles, while educating the client about the importance of quality lighting? This was both the challenge and inspiration for Seattle-based lighting firm Studio Lux in its design for Barrier Motors' Mercedes Benz dealership. "What we wanted to achieve was not just a great lighting design for this showroom," explains founder and firm principal Christopher Thompson. "We also wanted to raise the consciousness of the client and people within that organization about the importance of good lighting."

ARCHITECTURAL AND LIGHTING SOLUTION The existing 4,000-square-foot building required extensive renovation to convert it to its new use as a showroom. There was no room to recess the lighting elements in the ceiling, so everything had to be surface mounted. This design solution creates a floating ceiling layer below the wood beams, ducting and exterior building envelope. "We didn't look at it as an automobile dealership, but rather as a large room with sculptures in it," says Christopher Thompson. The lighting scheme employs three types of sources that act as different layers and can provide any number of lighting combinations. The system includes low perimeter fluorescent tubes along the exterior wall, exposed track lights with PAR30 heads, and an uplight with a built-in reflector. "We wanted there to be an ambient light layer, a point source to create sparkle on the automobiles, and a linear light source down low to really emphasize the lines of the automobile, which in the case of a Mercedes, has

a lot of energy in it," describes Thompson. When the linear and track sources are turned on and the ambient light is turned off, the temperature of the lighting in the room becomes warmer and the automobiles appear more dramatic.

Positioning of the automobiles was discussed with the showroom manager before spacing of the fixtures was finalized. Given the frequency with which the cars are moved in and out of the showroom, a highly flexible system was implemented so that the lighting remains uniform and eliminates angles that can lead to harsh glare. To assist the staff, Studio Lux provided a poster with text instructions that point out parts of the automobile that should be highlighted and the corresponding lights that need to be adjusted. This poster, in conjunction with staff training sessions, provided a comprehensive approach to assuring the consistency of the lighting solution.

The lighting scheme was also designed to meet the criteria of the Washington State Energy Code, one of the most stringent in the nation at 1.5 watts per square foot. "Our design effort is greatly challenged by that because we can't just use whatever source and quantity we want. It's always a balancing act," says Thompson. There were, however, a few exemptions: the designers used an integrated track with an indirect system within four feet of the display windows, and the low fluorescent lamps were categorized as "aesthetic" and, therefore, not considered part of the indirect system. The end result celebrates the beauty and motion of these luxury automobiles and the collaborative process between lighting designer and client in understanding quality lighting. **ELIZABETH DONOFF**

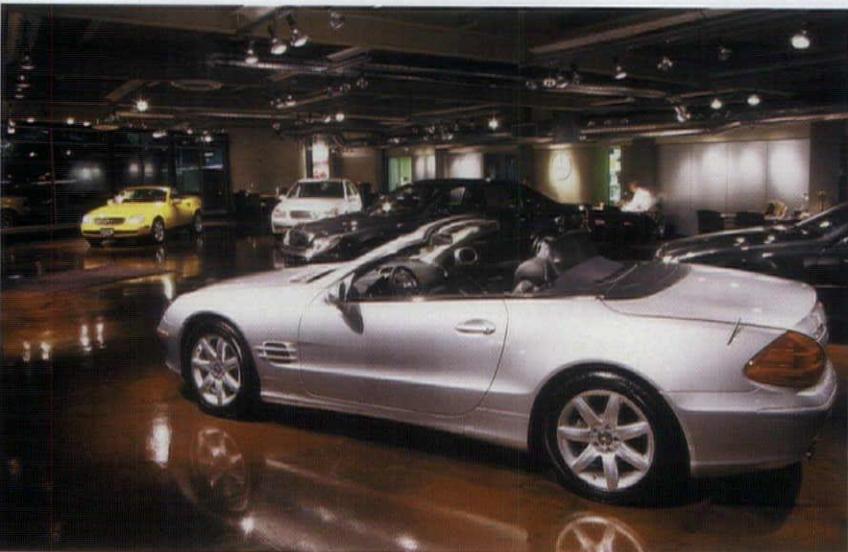
DETAILS

PROJECT | Barrier Motors, Bellevue, Washington

DESIGN TEAM | Studio Lux (lighting designer); Lance Mueller and Associates (architect)

PHOTOGRAPHER | Stephen McGehee

MANUFACTURERS | Bartco, Lightolier, Luna, Lytecaster



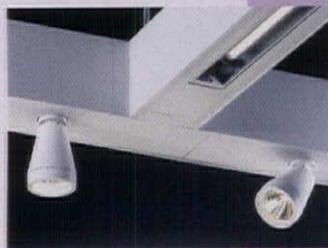
PRODUCT REVIEW: RETAIL


ZUMTOBEL STAFF | PRODUCT: SOLAR II | ZUMTOBELSTAFF.COM

Featuring an organic form and smooth lines, Solar II is fabricated from die-cast aluminum and comes in three sizes. Ensuring efficiency levels of between 75 and 80 percent, four newly developed reflectors with different radiation angles—5, 10, 25 and 40 degrees—are available for all sizes. Solar II comes with a universally dimensioned three-phase adapter to allow easy installation on all available tracks. The product is also available with DALI capabilities. **CIRCLE 121**


SERIEN LIGHTING | PRODUCT: PAN AM | SERIEN.COM

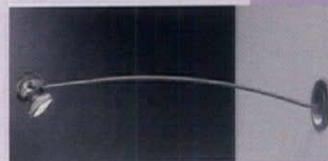
The Pan Am spotlight in brushed aluminum turns 360 degrees on its axis and rotates 270 degrees for flexible focusing. The hollow housing integrates the necessary equipment. The series is available with a variety of lamps and reflectors, and comes in track, ceiling and pendant versions, and with a cross base fitted with castors or a solid round base. **CIRCLE 122**


ANSORG | PRODUCT: VARIO | ANSORG.COM

Featuring a choice of sizes, suspension options and lamps sources, Vario provides architectural flexibility. The channel section that forms the base comes in two standard widths, and into this fit the chosen modular inserts—from spotlights to downlights to wallwashers. The sections are available in a variety of standard lengths that can be cut to fit on site, and a range of corner connectors is available to complement all versions. **CIRCLE 123**


ERCO | PRODUCT: SKIM | ERCO.COM

For flush-mounted ceiling installations, Skim features a clear-cut joint between the reflector's edge and the plaster-mounting ring. The joint can be a shadow gap, a diffusely shining light ring fed by the main light source, or a varychrome ring illuminated by LEDs using RGB technology. The latter enables dynamic color changing, which can be controlled electronically. Available with a variety of lamps and accessories. **CIRCLE 124**


BRUCK | PRODUCT: LEDRA | BRUCKLIGHTING.COM

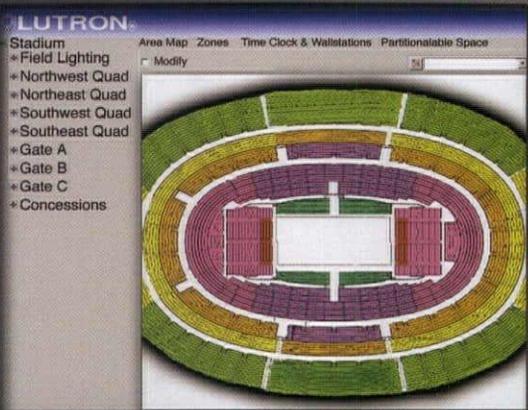
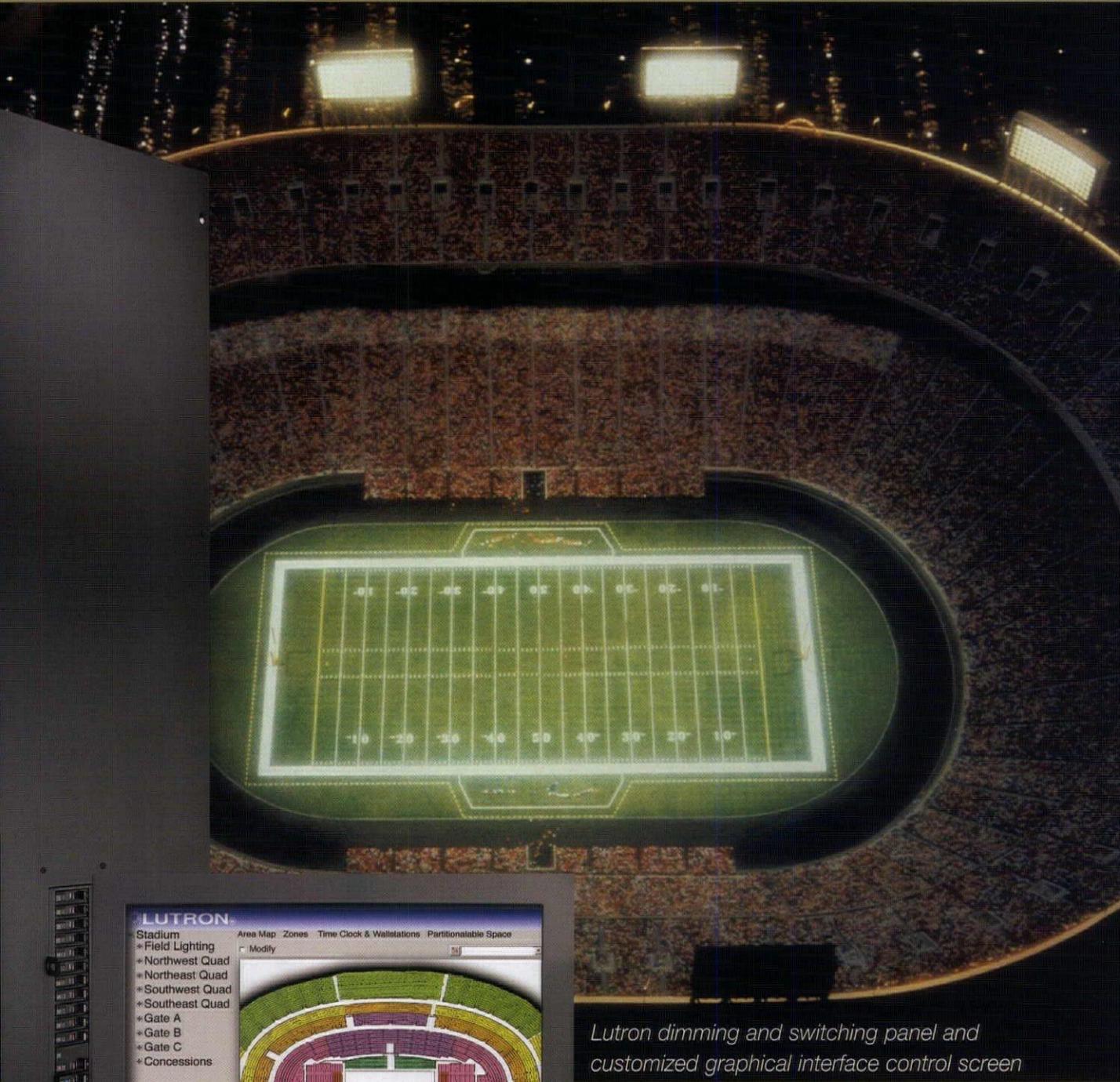
Utilizing 3W high-brightness LEDs, which maintain 70 percent light output after 50,000 hours, Ledra is fully adjustable with 360-degree rotation and narrow, medium, and wide beam spreads. Bruck offers four models with features including integral dimming and tool-free installation. Ledra is available with white, warm white, blue, and green LEDs. **CIRCLE 125**


PHILIPS LIGHTING | PRODUCT: MASTERCOLOR CDM-R 111 (SHOWN) + MINI | LIGHTING.PHILIPS.COM

In conjunction with Advance Transformer, Philips has added the smallest ceramic metal halide system to its MasterColor line. The 20W Mini MasterColor is 50 percent smaller than competitive products, according to the company. Also added to the line is the MasterColor CDM-R 111 (shown), which combines the design attributes of the ALR-111 halogen lamp with the color, life and efficiency of the MasterColor CDM. The lamp also features a special shield that minimizes glare. **CIRCLE 126**

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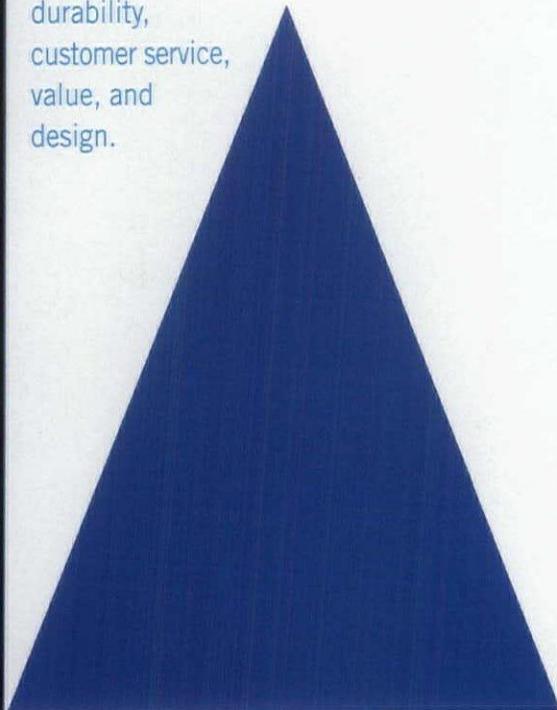
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- 69 Focal Point
- 70 Foscarini
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3	27	51	75	99	123	147	171	195	219
4	28	52	76	100	124	148	172	196	220
5	29	53	77	101	125	149	173	197	221
6	30	54	78	102	126	150	174	198	222
7	31	55	79	103	127	151	175	199	223
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12	36	60	84	108	132	156	180	204	228
13	37	61	85	109	133	157	181	205	229
14	38	62	86	110	134	158	182	206	230
15	39	63	87	111	135	159	183	207	231
16	40	64	88	112	136	160	184	208	232
17	41	65	89	113	137	161	185	209	233
18	42	66	90	114	138	162	186	210	234
19	43	67	91	115	139	163	187	211	235
20	44	68	92	116	140	164	188	212	236
21	45	69	93	117	141	165	189	213	237
22	46	70	94	118	142	166	190	214	238
23	47	71	95	119	143	167	191	215	239
24	48	72	96	120	144	168	192	216	

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breeze

Ceramic Metal Halide	CMH TALS	CMH PAR30 Long
Incandescent	PAR30 Short	PAR30 Long



gamma

Ceramic Metal Halide	CMH TALS
Incandescent	T3



omega

Ceramic Metal Halide	CMH TALS	CMH PAR30	CMH PAR30 Long
Incandescent	PAR30	PAR30 Short	PAR30 Long



sportster

Ceramic Metal Halide	CMH PAR30	CMH PAR30 Long		
Incandescent	PAR30 GU10	PAR30 Short	PAR30 Long	PAR30



spot

Ceramic Metal Halide	CMH PAR30	
Incandescent	PAR30	PAR30 Short

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Dynamic Signage in a Limited Space

EMILIE W. SOMMERHOFF

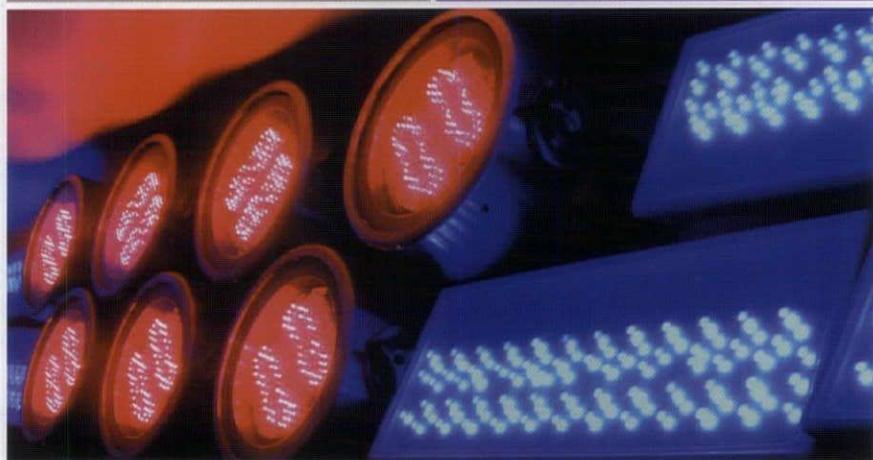
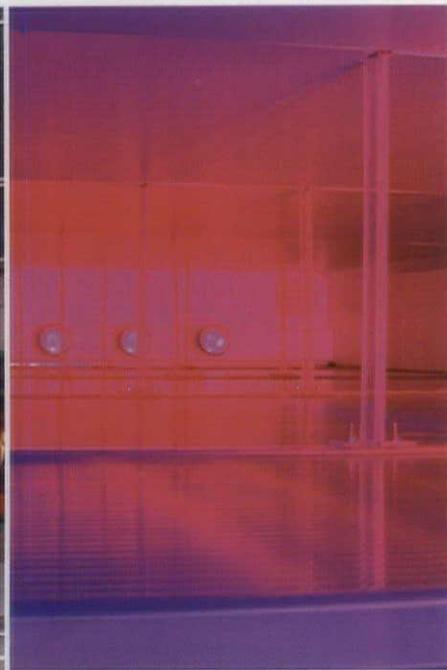
A STRING OF SUCCESSES HAD MADE HBO'S headquarters building on 42nd Street in New York City a tourist destination. But its signage—a plain black-painted glass panel with stand-alone silver lettering—barely announced the company during the day, never mind at night. The network that produces *Sex and the City* and the *Sopranos* needed a sign worthy of its award-winning programs and robust enough to counter the city's visual noise.

Lighting design firm Cooley Monato Studio of New York City was working with HBO on another project; during a related meeting, principal Emily Monato happened to see the concept drawings for a new sign. "They were about solid metal forms, and I suggested that it be more dynamic and abstract, using light," she says.

A GOOD IDEA HITS A WALL—LITERALLY

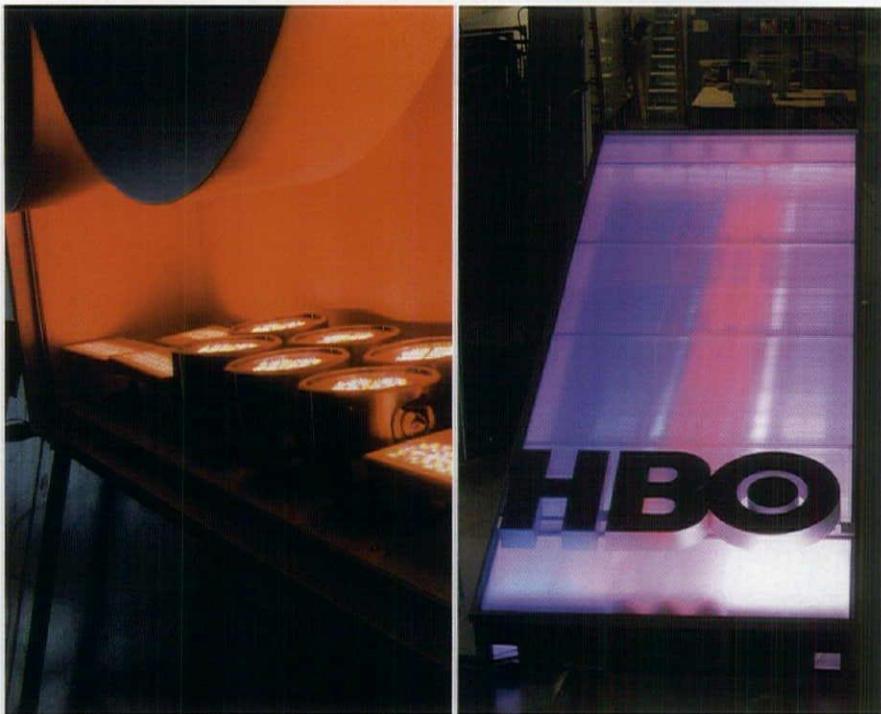
Several initial ideas involving light, including stacked video monitors, proved logistically impossible. Monato, however, had something else in mind. Her firm had just developed a 5-inch-by-15-inch ADA-compliant sconce for a design competition: Plexiglas rods stacked side by side (an idea literally inspired by Bic pen casings) created a dramatic refraction of the passing light. Much the way a streak of sun or moonlight on water seems to move as the viewer moves, filtering light from a point source through the Plexiglas rods gave the sconce a similarly interactive quality. Monato imagined this design concept applied on a larger scale. HBO gave Cooley Monato and architecture firm Gensler, which had also become involved with the project, the go-ahead to flesh out the idea further.

To adapt the sconce to the space proportionally—which was necessary to preserve the unique way the light and material interacted—the team needed about 4 feet of depth to the 19-foot height. After breaking through the wall, however, the designers discovered the narrow shaft behind the original sign was a vapor barrier, and thus invasive construction was not an option. Instead of 4 feet, they had only 11 clear inches. Though it seemed the idea would not work, "there was huge enthusiasm from Gensler and HBO," says Monato. "Before we gave it up, we decided to do a mockup." Gensler began sourcing materials.



Television network HBO wanted to replace its understated black-painted glass panel signage (top left) with something more dynamic. Despite a very narrow space, lighting design firm Cooley Monato Studio created a vibrant sign using LED spots and wallwashers in waterproof housings (above and center), which light from the bottom up and provide color-changing capabilities. Four incandescent sources on a dimmer illuminate from the top down (top right).

ALL IMAGES COURTESY COOLEY MONATO STUDIO



To achieve the necessary brightness, the designers incorporated as many fixtures as could be accommodated in the limited space. Principal Emily Monaco notes that LEDs have come a long way since the sign was completed two years ago; today's LED sources would make the sign two to three times brighter. The polycarbonate glazing is paneled, allowing access to the fixtures for maintenance.

ADAPTING TO A NEW PLAN

The project required a clear, lightweight acrylic (glass would be too heavy for a 19-foot vertical span), and the lack of depth necessitated something flatter than rods. From previous experience, Monaco knew that horizontal ribbing would produce a look similar to the rods. The light needed to strike a defined hard edge to create the refracted quality the design required. "Fortunately or unfortunately, there weren't a lot of materials to try," recalls Monaco. "Having studied this on a small scale, I knew what optical properties it needed. It was simple, but specific."

Gensler sourced Lexam thermoclear plastic from GE, a single-sheet polycarbonate glazing. The product met virtually all design requirements except one. It was only available in fixed-width sheets, which meant the sign would be paneled rather than have the continuous, seamless look the designers had hoped for. In the end, however, paneling proved better from a maintenance perspective: the top and bottom sections are removable for easy access to the fixtures.

The light sources include three wallwashers on either side, and seven spotlights in the middle, all using waterproof housings and all fitted with LEDs for the longevity, efficiency and "infinite color combinations." (HBO uses different color scenes to announce holidays and premiers.) Four PAR38 60W halogen sources on a dimmer illuminate from the top down. The major adaptation from the original concept was the density of sources needed to compensate for lack of depth. "The layout is literally all we could fit in there," says Monaco.

A FULL-SCALE MOCKUP SEALS THE DEAL

After developing an initial version in Gensler's office, it became clear that the concept might work after all. Cooley Monaco sold the client by building a full-scale mockup in a large auditorium at HBO's building, complete with silver-paper letters and a portion of the stone wall that would flank the sign.

The completion time for this small project start to finish was a lengthy two years, a product of corporate culture and the thorough materials investigation and mockup necessitated by the spatial obstacles. But the design was extremely cost effective. "It is a box with plastic in front of it. The most expensive part is the electronics," says Monaco. And now, when fans seek out HBO, it is easier to find. ■

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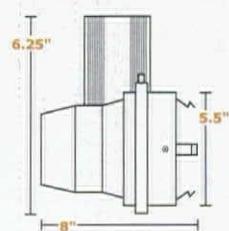
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[Post Top Series]

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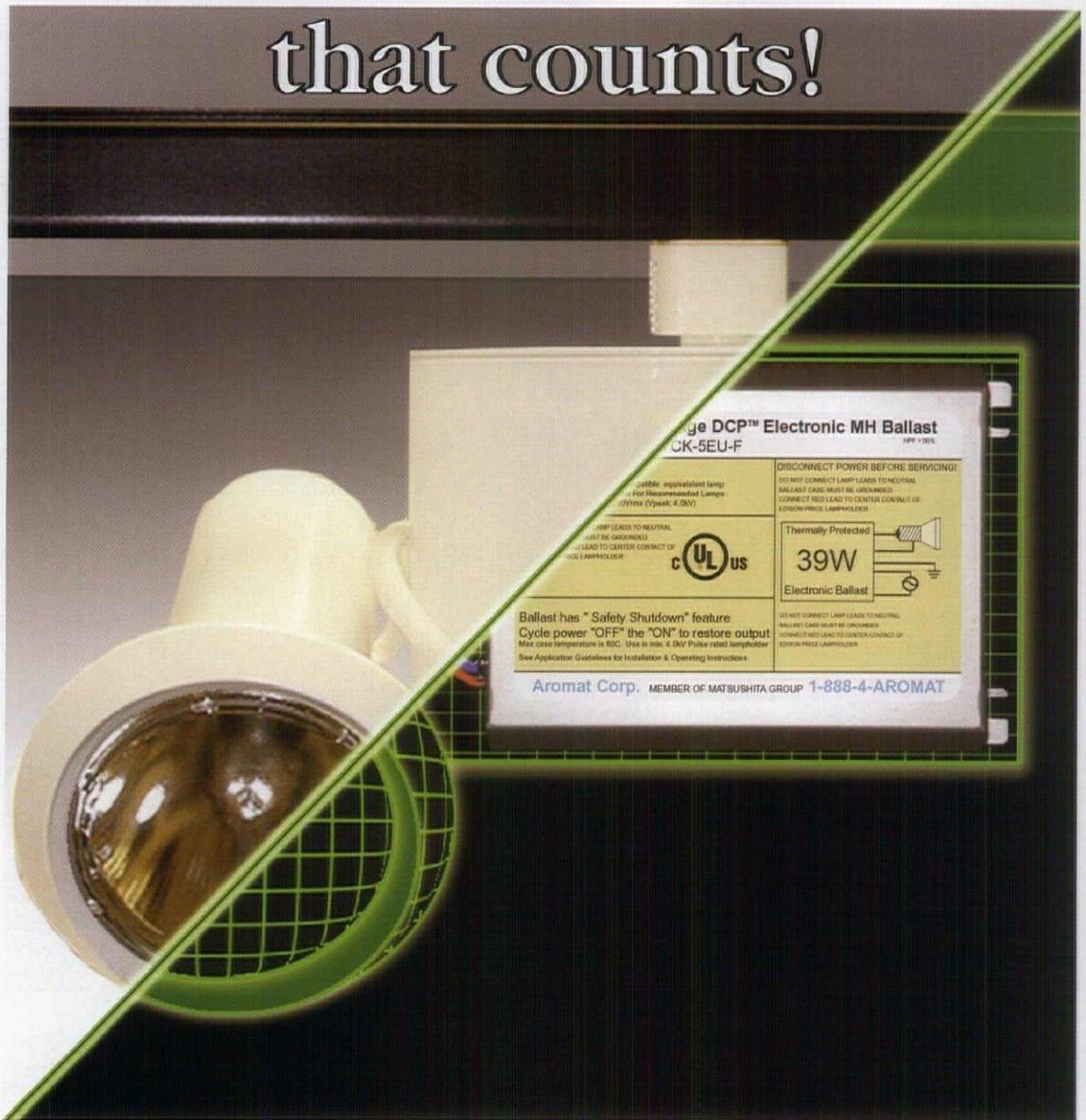


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Lighting for Whole Hospital Health

DENISE B. FONG

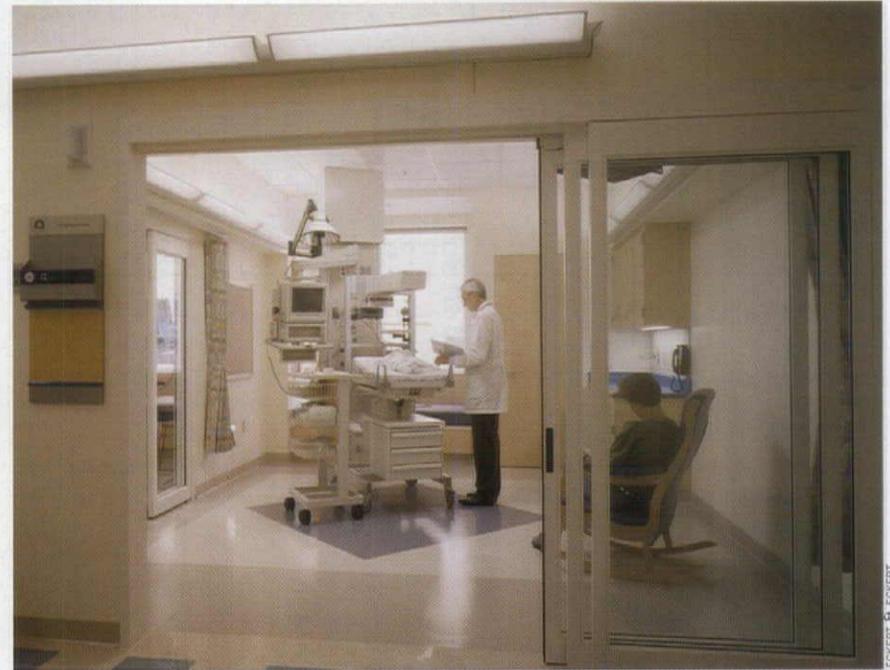
OFTEN, WHEN THE DESIGN OF HEALTHCARE FACILITIES is discussed in publications, only photographs of peaceful and welcoming lobbies are shown. Indeed, lobbies should announce the healing environments of the spaces within, and set the tone for the rest of the building, but what generally happens when visitors move beyond the lobby to the patient care areas? Too frequently, lighting reverts back to the same-old recessed lensed troffers. This strategy provides adequate horizontal footcandles, but leaves something to be desired in terms of creating a "healing environment."

Healthcare projects are a wonderful challenge for lighting designers. Many facilities are built out to make patient rooms look as non-institutional as possible. Creating a residential atmosphere is advantageous to patient health, and a subdued, unobtrusive lighting system can achieve that goal. However, medical staff must perform complex and meticulous visual activities in the same space. Maintenance and cleaning needs must also be considered. The following examples are representative of these kinds of challenges, with solutions that effectively balanced the visual needs of all users.

BEYOND TROFFERS

At Evergreen Hospital Radiation Oncology Center, an outpatient care facility in Kirkland, Washington, designed by Seattle-based Mahlum Architects, several treatment rooms feature radiation equipment that requires patients to be immobilized for up to 30 minutes. A key objective of the lighting solution was to create an atmosphere in which patients can rest quietly while receiving treatments. At the same time, it was necessary to provide adequate light levels for both the set-up procedure and cleaning.

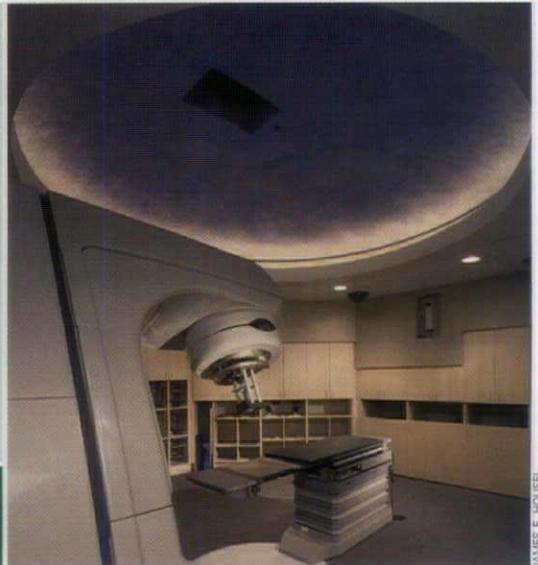
The lighting in these rooms consists of a cold cathode cove at the base of a central ceiling dome. Cold cathode 3000K tri-phosphor lamps were chosen because they could be custom fit to match the curvature of the cove, in addition to offering the same color and light output as the fluorescent lamps used throughout the project. Recessed Fresnel lens downlights are installed outside the perimeter of the dome



ECKERT & ECKERT

Indirect fixtures have separate controls to provide flexible light levels in the intensive care suites at Doernbecher Children's Hospital (above).

The ceilings of the treatment rooms at Evergreen Hospital Radiation Oncology Center (right) are hand-painted to resemble the color of a sunset. End-lit fiber optics with a pattern wheel create a twinkling effect when the cold cathode perimeter cove is turned down.



JAMES F. HOUSEL

where the ceiling plane is slightly higher, and are used only when the room is being cleaned. The hand-painted dome ceiling is reminiscent of a sunset, with blue, purple and pink tones. When patients enter the room, the cold cathode lamp is turned on to illuminate the dome. Following procedure set-up, care providers dim the cove to "off," allowing the patient to see twinkling stars in the ceiling. The imaginary night sky was created using end-lit fiber optic strands with metal halide lamps that terminate in the

surface of the dome. Three fiber strand sizes used in a random pattern suggest stars at various distances. A dousing wheel rotating in the illuminator box randomly blocks and admits light through various fibers, creating the twinkling effect.

Although the design team considered modeling a particular galaxy, it decided against this idea; hospital staff worried that patients who should be immobile might move their heads to locate Orion or the Big Dipper.



Incorporating daylighting where possible, shown here at Doernbecher Children's Hospital, is energy efficient, cost effective, and creates a more human environment.

HEALING WITHIN

Exam rooms often have one or more recessed fixtures centered in the ceiling, with a lens or louver shielding device. This creates glare and uneven illumination. To promote a more patient-friendly environment at Doernbecher Children's Hospital in Portland, Oregon, designed by Seattle-based Zimmer Gunsul Frasca Partnership, we utilized wall-mounted indirect uplights with T8 lamps and abundant daylighting in the exam rooms. As a result, electric light is often unnecessary. When it is required, there

is a generous amount of soft, reflected light with good color quality—3500K with a color rendering index above 80.

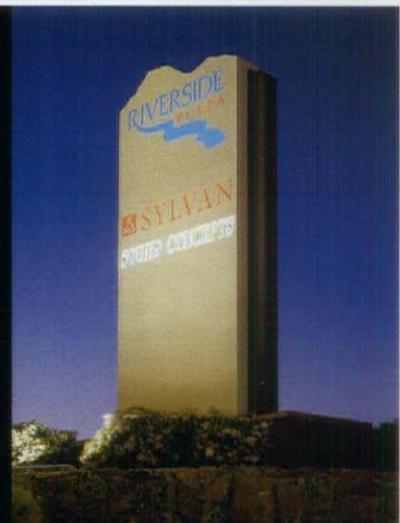
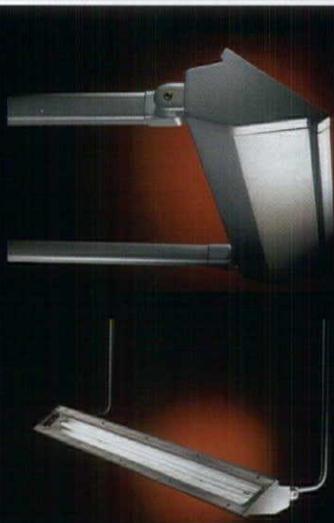
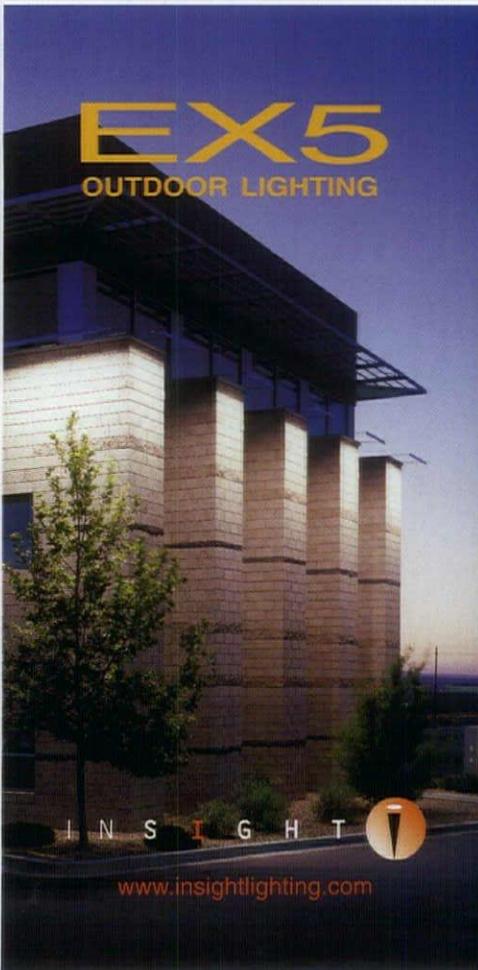
The intensive care unit is a very stressful place for patients and their families, and perhaps even more so in a children's hospital. Children often have long stays, and parents are with them most of the time. Medical staff must make critical care decisions in these rooms quickly and without distraction.

At Doernbecher, we recommended that the intensive care suites use the same

indirect fixtures as those in the exam rooms and be located on two walls instead of only one to provide a more balanced amount of light. The two-lamp fixtures have separate controls to provide flexible light levels. The ambient light is sufficient for all normal activities; for procedures, a task light is built into the bed equipment. The indirect light is beneficial to the staff as it has less glare, is more diffuse, and creates fewer shadows than a direct lighting system. A separately controlled wall sconce in the niche provides reading light for window seats where parents can nap or read.

Whether a waiting area, treatment room or surgery suite, indirect lighting is less institutional, while diffuse light reduces shadows and glare. Balancing comfortable patient environments with a hospital's technical requirements is a challenge, but brings lasting value to a project. ■

Denise B. Fong is principal of Seattle-based Candela Architectural Lighting Consultants, which offers design services for commercial, educational, and medical campuses, as well as restaurants, civic centers, hotels and entertainment environments.



The EX5 possesses the features and benefits of significantly larger outdoor fluorescent offerings. Diminutive and styled, EX5 accommodates a myriad of lamp choices, finishes and options that make it the most versatile outdoor fluorescent available. Attention to detail in both design and installation requirements set EX5 apart from the others. Whether illuminating monuments, facades or statues, the EX5 represents the designer's choice when performance and size matters.....Exterior lighting in 3" X 5".

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Ceramic Metal Halide Goes Outside

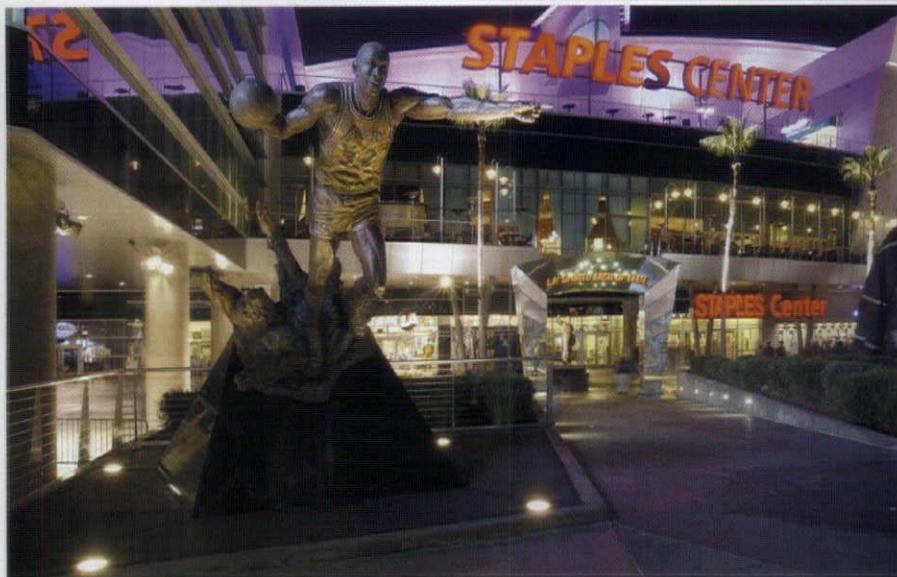
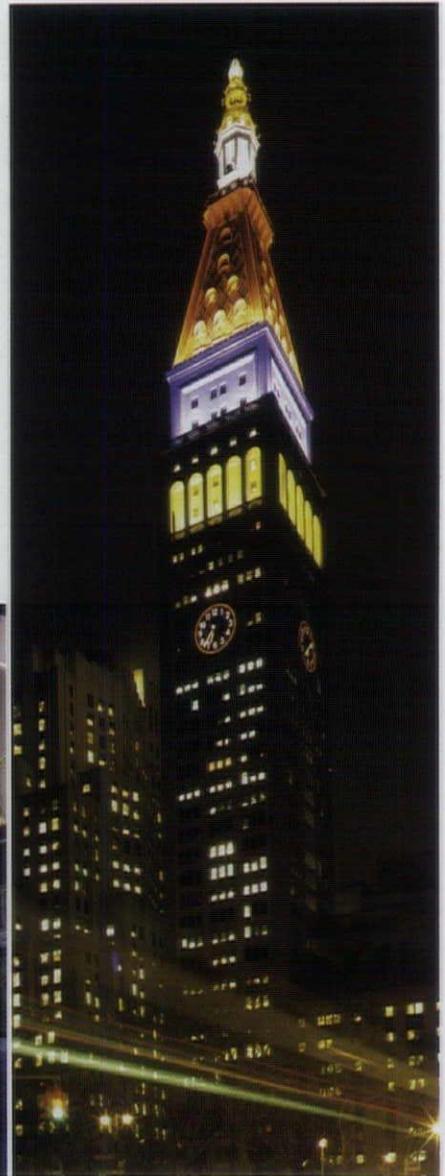
CRAIG DILOUIE

Superior color quality creates demand for these lamps in a range of outdoor applications.

CERAMIC METAL HALIDE (CMH) LAMPS WERE FIRST introduced in 1994 after Philips engineers essentially borrowed a ceramic arc tube from a sodium lamp and put it in a metal halide lamp to create something entirely new. The final product delivered a crisp, white light and better color appearance and color control than standard metal halide lamps. These qualities make CMH lamps ideal for color critical areas in commercial applications, where a high-efficiency, long-life alternative to incandescent and halogen lamps is desired: for example, accent and recessed lighting in retail spaces. While still primarily used for indoor lighting applications, ceramic metal halide is also becoming popular for high-end outdoor installations.

Ceramic metal halide receives the strongest praise for its excellent color qualities. "These lamps offer good color stability, color consistency from lamp to lamp and wattage to wattage, color rendering with 80-plus CRI and an excellent red component, along with improved lumen maintenance," says Bob Nigrello, HID product group marketing manager for Osram Sylvania. The company provides CMH products like Powerball to fixture manufacturers Lithonia, Cooper, B-K Lighting, Greenlee and Custom Lights.

What is more, points out Adolphus Bailey Jr., marketing manager for Philips Lighting, ceramic metal halide provides consistent white light with the efficiency of HID lamps. Philips' MasterColor line of



Ceramic metal halide technology receives the strongest praise for its excellent color stability and rendering. Philips' new 400W MasterColor lamp, rated at 36,000 initial lumens, illuminates the top of the 95-year-old MetLife Tower in New York City (right). The building's lighting was redesigned by Stephen Lees of Horton Lees Brogden Lighting Design. He took advantage of the color qualities of ceramic metal halide to render the warm tones of the marble tower. Photo by Elliot Kaufman.

Artwork is also an appropriate situation for ceramic metal halide. Four ALLSCAPE SL33 in-ground fixtures, using 35W T6 ceramic metal halide lamps, light an outdoor sculpture at the Staples Center (left).

Table 1. Attributes for ceramic metal halide lamps offered by major lamp manufacturers.

	MANUFACTURER		
	Philips Lighting	Osram Sylvania	GE Lighting
WATTAGE	20-400	39-250	35-320
EFFICACY (LUMENS/WATT)	60-97	80-85	67-97
CRI	85-93	80-90	80-90+
COLOR TEMPERATURE	3000K, 4000K	3000K, 4200K	3000K, 4200K
RATED LIFE (HOURS)	9,000-20,000	9,000-15,000	9,000-15,000

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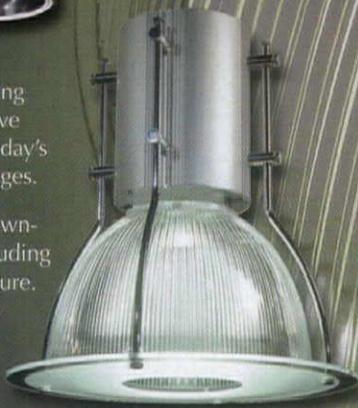
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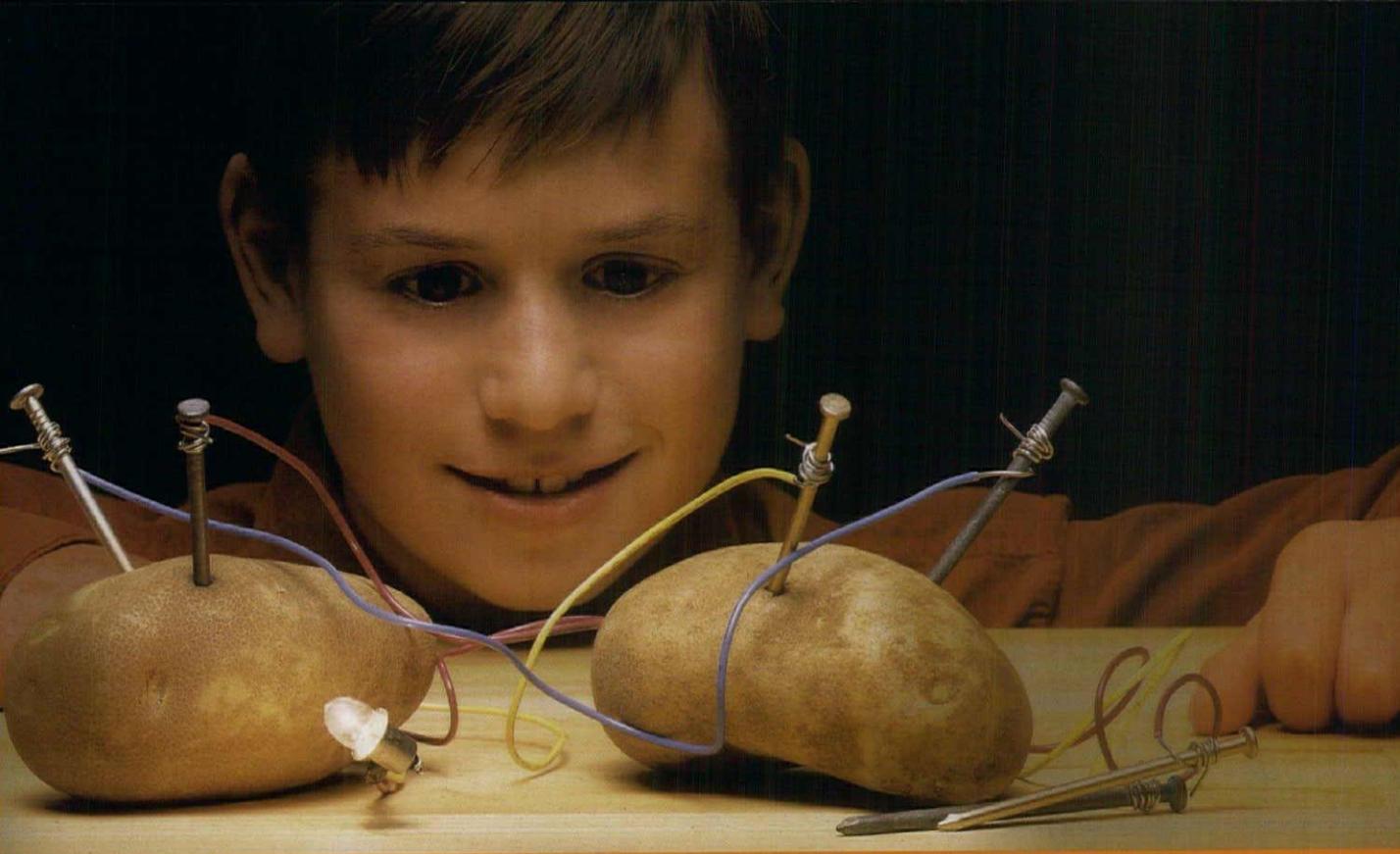
CMH lamps have been used for landmark projects like the Chicago Water Tower, San Francisco's City Hall and the top of the Chrysler Building in New York City. "Crisp, white light creates a pleasing environment, both indoors and out. In addition, the high CRI afforded by ceramic metal halide lamps delivers a feeling of safety and comfort," says Bailey.

Manufacturers of outdoor fixtures are also excited about this light source. "Where else can you find something with so much energy, crisp white light, great CRI, and re-strike times that are under five minutes, in such a small and robust package?" says Michael Stevens, senior marketing specialist, SOURCE Cooper Lighting Center. The company's recently introduced INvue Lighting, and its established Lumiere and McGraw Edison brands, include both fixtures designed for CMH lamps and fixtures that can house a CMH lamp as an option.

OUTDOOR APPLICATIONS

CMH lamps are generally selected for outdoor applications where color quality and stability are critical. The lamps are available in a number of configurations, including ED17, PAR, T4 and T6 envelopes. The lamps offer long service life, good lumen maintenance and improved re-strike and warm-up times. While they are optimized for use with electronic ballasts, models that accept magnetic ballasts are available for retrofit of high pressure sodium lamps. Manufacturers are also introducing higher wattages, expanding the market for CMH lamps into applications where more light is needed.

"Ceramic metal halide lamps are ideal for lighting graphics and façade materials where true color rendition is important, along with indirect outdoor lighting, such as canopies, where good or warm color is flattering to people," says Zach Zaharewicz.



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with Elliptipar. Zaharewicz estimates that about 25 percent of Elliptipar fixtures now include a CMH option.

"In landscape lighting, the traditional metal halide color is far too cool for most spaces," says Ronald S. Naus, vice president of sales and marketing for B-K Lighting, which chose ceramic metal halide as the exclusive light source for its HID floodlighting line. "People want to see warm color tones in the landscape, which

makes ceramic metal halide an ideal choice. Consider the lighting of palm trees, for example. There is a brown trunk and green fronds. A traditional metal halide would accent the green leaf but wash out the brown trunk. Ceramic metal halide brings out both elements."

A BRIGHT FUTURE

The percentage of CMH outdoor fixtures is small but growing. Naus and Ibbitson

estimate that 5 to 10 percent of all outdoor fixtures in the United States use a CMH source. Naus believes, however, that ceramic metal halide has captured perhaps 40 percent of the decorative outdoor and landscape lighting segment.

"As more companies showcase their facilities and as more cities re-energize or reinvent themselves through the use of lighting, ceramic metal halide lamps lead the way as a viable option," says Bailey.

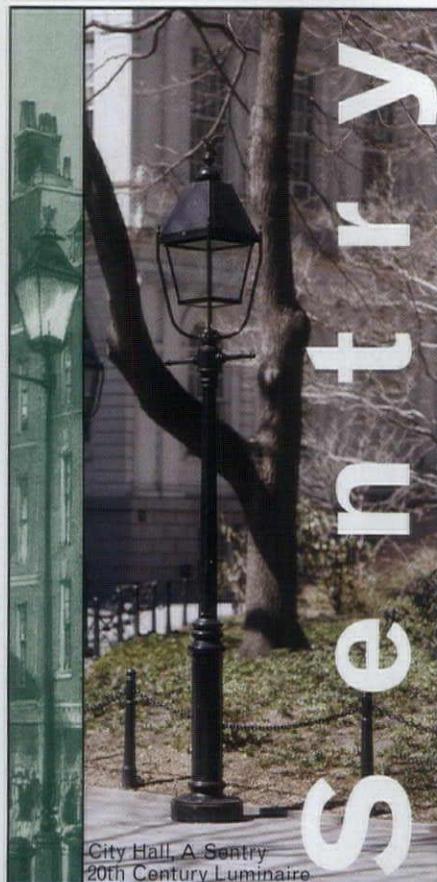
"This technology is gaining lots of attention very quickly," says Stevens. "With the ED envelope and the PAR envelope, this lamp can be used in older-style fixtures provided they feature pulse-start technology. With the higher wattages becoming more readily available, the market for ceramic metal halide lamps is growing very quickly."

B-K Lighting's Naus would like to see specifiers choose outdoor fixtures that are designed specifically for ceramic metal halide. "A user should look for a product optimized for use with ceramic lamps," he says. "Frequently, manufacturers will use one type of reflector for several lamps. Good ceramic reflector systems are designed specifically for that lamp type. Using a quality brand will ensure that the optical system does its job for a long time. As a contractor once told me, 'It costs just as much to install a cheap fixture as a good one.'"

As with other premium sources, CMH lamps have tradeoffs. The primary catch is initial cost. "Although this lamp type has come down considerably in cost, it is still higher in price than standard metal halide lamps that you would find at the commodity level," says Cooper Lighting's Stevens. "However, you definitely get what you pay for." ■

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Craig DiLouie is principal of ZING Communications, a marketing communications and consulting firm specializing in the lighting and electrical industries. A former publisher of Architectural Lighting, he is the author of many books and articles on lighting and electrical engineering.



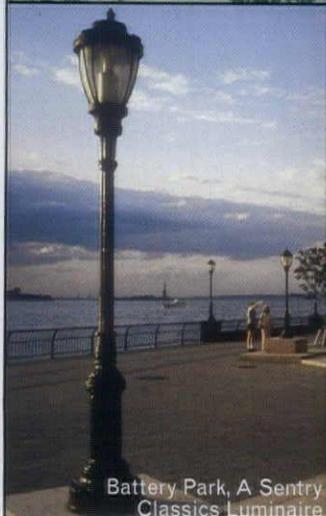
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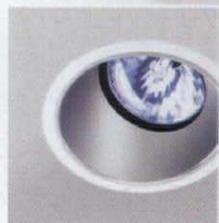
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EPY 7431

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Lightfair 2004: A Product Review

JAMES BENYA

THIS YEAR, LIGHTFAIR WAS HELD IN LAS VEGAS ON

March 31 through April 2, with the Lightfair Lighting Institute and the new Daylighting Institute on March 29 to 30 and the Annual Workshops on March 30. More than 15,000 people attended and a record number of exhibitors showed their wares. Among the show's greatest successes, however, were the institutes, workshops and conferences. The lineup continued the growth in quality and quantity of Lightfair education programs.

After the New Product Showcase on Wednesday, I hit the floor with walking shoes on. With so many booths, it was a daunting task, but here are a few products of note:

LAMPS

My love of "light bulbs" usually draws me to the lamp manufacturers first. Only GE had a major presence at the show this year, so I ended up visiting more of the second-tier lamp companies. Frankly, there was not much in the way of incandescent and halogen lamps. The Ushio Eurostar Reflekt MR11 is a definite hit, providing improved quality in a lamp increasingly common to landscape and residential lighting. I also noted clever neodymium halogen PAR lamps from Litetronics, for areas requiring excellent display and skin color rendering, such as in jewelry retail. Candela showed Dichro-Tec, a 4000K high-power MR16 lamp. And as always, the THHC Xelogen lamps caught my eye for its life and application benefits.

Fluorescent and compact fluorescent (CFL) lamps were more interesting, with variations, mostly of Asian origin, intended to replace every incandescent lamp in existence. For example, Aero-Tech had an A19 profile lamp. GE showed a dimmable R lamp. Ushio and Satco, conventional spirals. I was surprised by Dais Electric's mini MR16 12V CFL. That's creative. But the real winners were a cold cathode system from Litetronics and Nippo's Seamlessline, a clean linear fluorescent with right-angle connectors that produce almost perfectly illuminated joints. At last, a linear lamp that you can "line up."

In HID, GE's 20W PAR30 won the category, but I was more taken by its new PAR64 150W ceramic metal halide. At Venture, a horizontal burn 320W lamp makes pulse start possible in outdoor poles. PEC showed a 60W DC system using an MR16-sized package. Otherwise, slim pickings.

Then there was the ongoing LED

LEDs Drive the Show

We might as well say it: LED products drove a major portion of the lighting systems innovation in 2004. The most interesting included:

- **Designer's Edge** wall-mounted nightlights, a low-energy security lighting solution.
- **TIR's** Destiny series of exterior color-changing and accenting architectural lighting systems.
- **GELcore's** low-energy, effective street identification lighting system and its border light system for exterior and interior applications
- **Color Kinetics'** iColor FX tile system, capable of making interesting and dynamic color patterns in tile shapes, and iColor Flex SL, an LED strand light.
- **Element Labs'** VersaTile makes tiles glow and change color, allowing large dynamic wall panels.
- **Line by io Lighting**, a linear product that produces an unbelievably tight beam.
- LED step lights from **Semper Fi**, **Lucifer** and **B-K**.
- **Moon Cell's** Econo-Lum 55W roadway light. A product desperately in need of industrial design, it is the first of many LED roadway lights we will see in the next years.
- **Dialight's** recessed 6W LED spot for replacement of low-wattage incandescent lamps, and an interior/exterior LED strip light.
- **Traxon's** Mood Light Objects, a system of illuminated glass art and useful objects that change color, and Mood Light Reflector, a glass-faced tile system for color-changing.
- **Orgatech's** Rusty LED, an outdoor path or step light for maintenance-free, and linear wet-location color-changing wash lights.
- **Altman's** 36W LED theatrical floodlights.
- **Tokistar's** Trillium LED strip light modules with color changing.
- **K-tronic's** LED emergency lighting system for residential use.
- From **OutdoorlightSCAPES**, LED underwater lights.
- **Metamorphosis** high-density IP65 LED wash lights from **Space Cannon**.
- **Light Projects London's** underwater lights.
- **Ledra** monopoints – beautifully designed using LED sources from **Bruck**.
- **Lighting and Electronic Design's** Show Glass features LEDs that float in a glass panel to make shapes or words.

This is just a sampling. What is impressive about the market is the wide range of products and the profound creativity of the product developers. However, designers should proceed carefully. Not all LED systems are created equal, and LED technology still suffers from low-efficacy, lumen depreciation, heat dissipation concerns, and limited power.



invasion. LEDs are lamps, assemblies, luminaires and systems, and they were everywhere from everyone. The trend is toward warm white lamps with decent color rendering. Just considering lamp-related offerings, there were new LED lamps from LumiLEDs, Osram, and Toyoda; LED arrays from NSI/LEDWorks, Teledyne and OptiLED; and linear LED systems for color changing from GELcore and eSTAR. Complete lamp assemblies included the Enlux 22W BR30 flood, which was a winner in the lamp category. This is a very useable R30 LED lamp with 500 initial lumens (about the same as a 50W R20). Another cool alternative was Illumination Management System's ReflexAire, a 3W LED replacement lamp for aircraft reading lights. (See sidebar, page 57, for additional LED product releases.)

ARCHITECTURAL "TECHNICAL" LIGHTING

Among downlights and wallwashers, there were a few new ideas and a lot of important updates. Lucifer introduced a polymer-based recessed wet-location light. Light Projects London showed a CMR111 (AR111 metal

halide) track system; and Bartco, Portfolio, Indy, RSA, Juno and ELP showed new and updated products, including trimless and multiple-head recessed lighting, and more fixtures for low-wattage ceramic metal halide. It is important to monitor these companies, since they seem to expand their lines and capabilities constantly. I especially liked Mark's Slot 6, a combined fluorescent slot with MR16 accents, capable of continuous rows. A rein-carnation of products from my past, Nora's semi-recessed low-voltage projector enables low-cost gobos and framing for residential.

Interesting track, rail and monopoints included Con-Tech's Axo, a surface MR111 accent light; Juno's framed Duo; and Nora's line-voltage track. These are appealing problem-solvers. Cooper's Minilume is one of the best metal halide track lights I have seen, combining a small housing with a variable beam for the T4 lamp and low cost through the use of plastics. Altman introduced a 3-circuit DMX track. And RSA, newly part of Cooper, showed a 60-amp busway product. It's good to have options in that market.

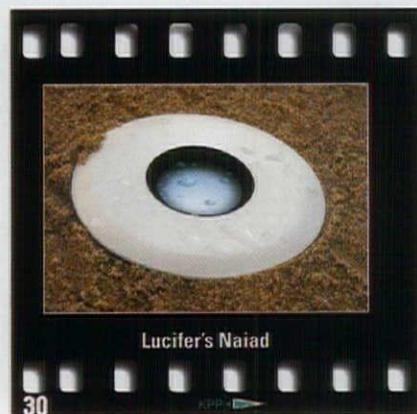


Nippo's Seamlessline

In the linear lighting market, Smedmarks showed its excellence in small-scale, well-detailed lighting with the Corall and Clic Gemini luminaires, both based on T5 technology. FAD Lighting showed its Light Be Cool pendants, and I must admit to coveting these babies for my own office. I also loved—especially with the new MR16 addition—the Spina pendants at Delray. Cooper's Corelite introduced a cove light with adjustable optics. And Martin Professional showed a fluorescent color-changing system using RGB T5HO lamps. Unfortunately, this area was missing important companies, as was true for HID and compact fluorescent pendants, though Delray introduced Big Lights, the first pendant to use the very high-wattage CFLs. Zaneen, as usual, brought us some of the finest of Italian and European lighting, including the exotic Ray series.

ARCHITECTURAL DECORATIVE LIGHTING

It has taken me 31 years to learn to distinguish between "architectural decorative" and "residential decorative" lighting. Architectural decorative products are sufficiently robust and scaled for commercial projects, though they are also applicable to residential. Residential decorative is generally traditional or transitional, and not big or strong enough for commercial uses. Architectural decorative is part of Lightfair,



Lucifer's Naiad

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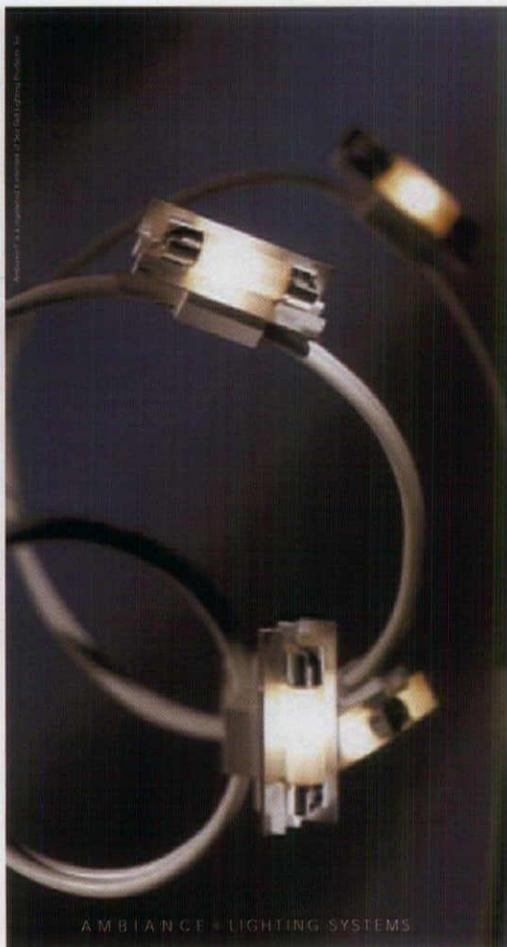
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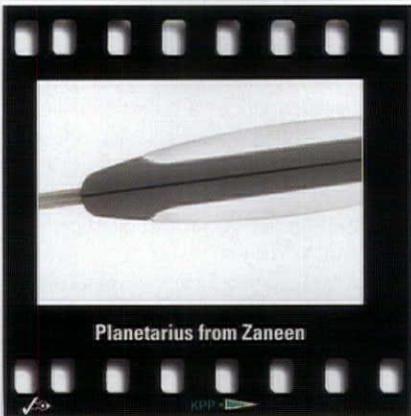
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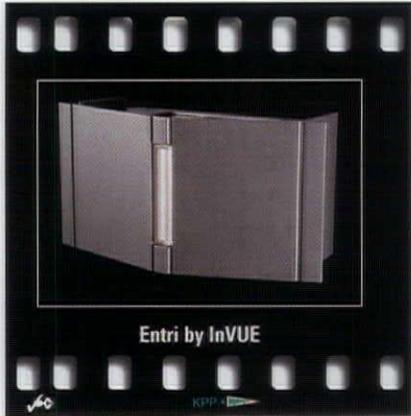
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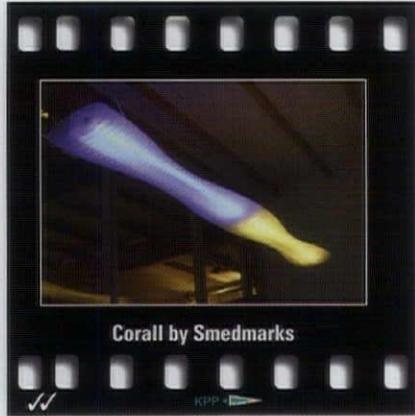
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but really, residential decorative is not.

The Decorative Lighting Pavilion made it easier to see these luminaires at once. I liked in particular the new Tech Lighting pendants in Murano glass, the Studio Italia Lace, and the Juno Alfa onyx cylinder sconces. Luxo showed a dynamite new task light called the Arketto, and Manning presented Craftsman-style lanterns. Industrial design and the art of luminaires is something American projects need more of.

EXTERIOR LIGHTING

Architectural exterior lighting is the use of appealing fixtures that are attractive by day, effective by night. Cooper made the biggest news with InVUE, a new brand under its banner devoted to high-quality American-style architectural outdoor lighting. Delta Lighting/FAD topped the program with a fabulous new bollard collection. BK, Cole and Hevi Lite showed high-quality step lights. Hydrel came up with its fabulous G2 designs, a unique geometric style of wall-mounted fixtures destined to be popular. Winona brought us its Exteriors 2.0 family. Lumca showed a very interesting product called OVO. Overall, a good showing in this group.

In landscape lighting, Auroralight led the way with a line of heavy-duty, corrosion-resistant, dark-sky-friendly step lights for residential and commercial use. Focus Industries, long known for quality at low prices, showed solid brass landscape lighting equipment, also incorporating corrosion resistance. I was especially impressed with Waldmann's exterior fluorescent wash lights. Lumiere showed new in-ground equipment and a small 70W metal halide above-ground floodlight. Vision3 added a family of cast bronze metal halide floodlights. Though there were a lot of products for this market, growth has seemed to slow over the last few years.

Among the more unusual products, Altman gave us the ODEC outdoor ellipsoidal.

Using the 150W metal halide, this projects color, frames and gobo patterns. Cooper's Sure-Lites unveiled a wet-label dual-head emergency light with a wide range of uses. From Celestial comes an outdoor 2-inch-square indirect light; I can't tell you how often I've needed something like this.

OTHER LIGHTING TYPES

LED has not killed fiber optics yet. Fiberstars introduced a remote source, multiple-head

system with improved performance making it competitive with halogen, and Super Vision demonstrated a high-efficiency illuminator. Visual Lighting Technology's fiber framing projector is an option for interior framing at low light levels. Among the few important theatrical products, Rosco presented an 200W metal halide effects projector; if you need rippling water, this could do it. Check out Wybron's Nexera wash luminaire and Apollo Design's Smart Gobo rotator.

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DIMMING AND CONTROLS

A trend is the integration of LED controls into larger systems. The importance of standard protocols was apparent, as many systems are designed for DMX-512, something theatrical lighting control does better than architectural. However, it seems DALI has staying power, with the possibility of LED integration. B+L, Tridonic and WattStopper unveiled new DALI products, and the B+L DALI Star dimming device for 12V was a Showcase winner.

"STUFF"

If God is in the details, then lighting stuff is the shrine of the show. There were a half a billion ballasts, sockets, devices, and controls. Bodine won the best of category award twice for its innovative emergency power solutions, including an LED backup system and a backup systems network allowing management of emergency sources. Aromat introduced HID electronic mini ballasts; Venture, a new HID igniter; Lutron, a T5

dimming ballast; and B+L and Lighttech, low-voltage transformers. ALP and Lexalite showed fabulous new optical materials, and Rockscapes introduced a power regulator for landscape lighting systems. Gavin Industries, Griplock, Access Mount, ERICO and Gripple introduced clever lighting hardware to improve installation speed and quality.

In the software category, Lighting Technologies Lumen Designer and Lighting Analysts's AGI32 are comprehensive programs, ready to actually sell this year (they both debuted previously). In a surprising choice, however, GE's ValueLight 3.0 won the lighting software competition.

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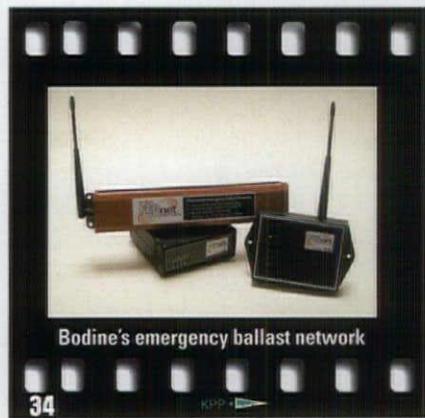
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DAYLIGHTING INTEGRATION

I saved the best for last. Lightfair added the Daylighting Pavilion, with over 50 booths. Some of the top products included MechoShade's 6000 Series EuroTwill, a reversible shade fabric that preserves view; Lutron's Sivoia shade control and motor for quiet operation of large shades; So-Luminares's ADS-600 advanced daylight tracking; Architectural Energy Corporation's LightLouver for improved sidelighting control; and DuoGard's Series 3000 Double Glaze daylighting system. There were also a lot of not-new products that were new to Lightfair. Natural Lighting Corp had probably the best integrated skylight/electric lighting product in its Day-Lite Hybrid system. Others were scattered outside of the pavilion. Lighting Control and Design won for its lumen maintenance photocell, and WattStopper showed a dimming photosensor with remote, handheld control. Axis Technology showed its Axis electronic dimming ballast with a photoelectric sensor wand and easy-to-apply automatic daylight dimming. ■

(SEE PAGE 62, FOR MORE LIGHTFAIR COMMENTARY.)

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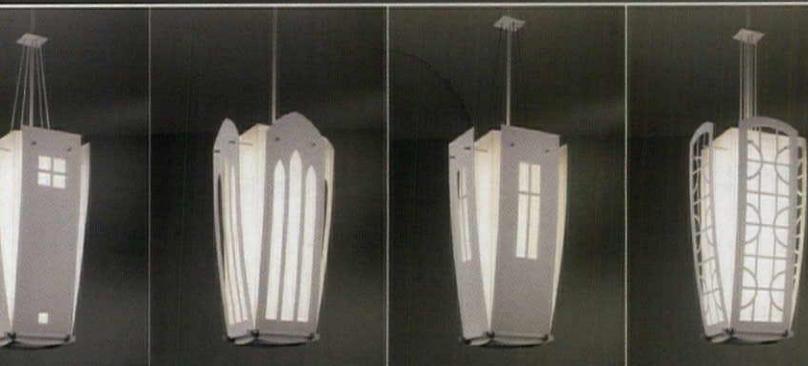
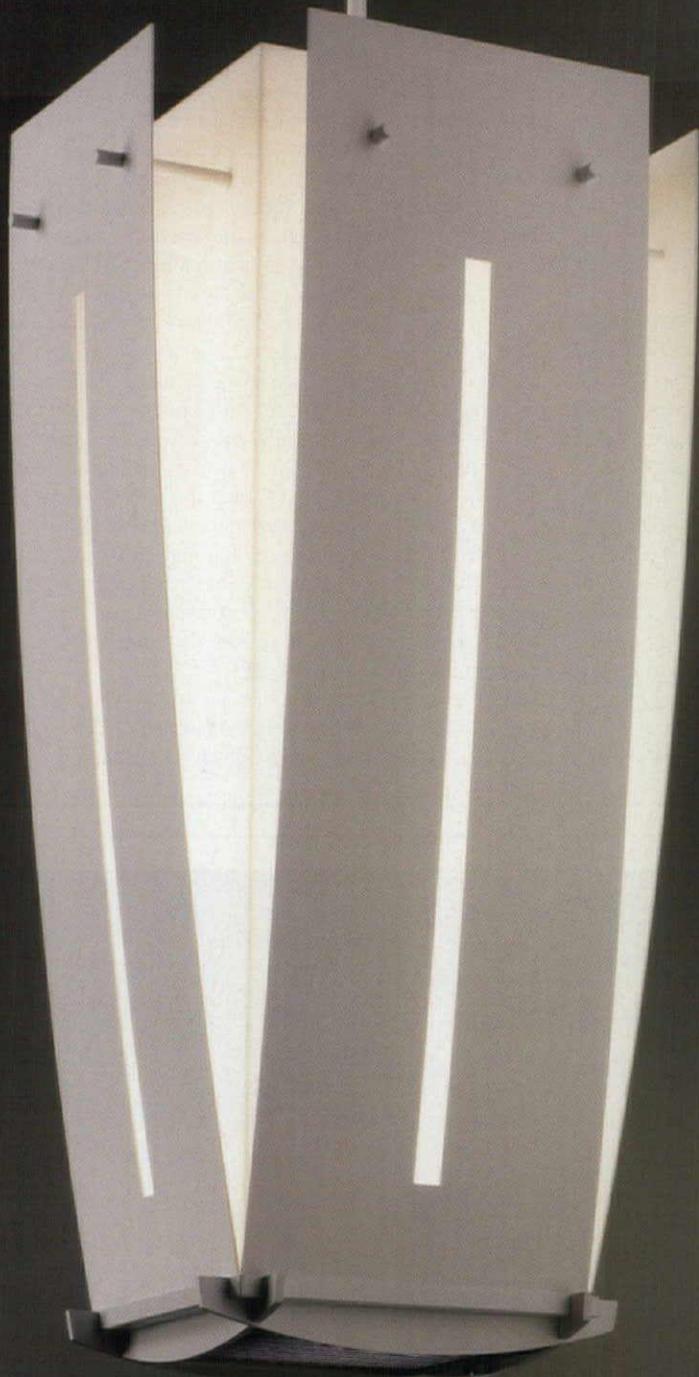
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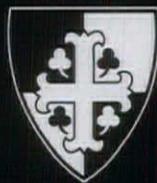
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A WORD ABOUT LIGHTFAIR

JAMES BENYA

Like many attendees, I was a little disappointed in the showing. Several categories were lacking, and there were too many "off site" product launches. There is a definite buzz about Lightfair becoming a biennial event. But before we all jump off the cliff, the industry should examine what Lightfair means. Lightfair was created to replace Lighting World, a trade show that had grown into an annual event out of demand. And throughout the booming 1990s, no one seemed bothered by Lightfair's annual cycle.

So what is really happening here? It seems logical that because of the economy, manufacturers have slowed their R&D and product innovations. But in my view, the threat of Chinese industry capturing the North American and European lighting market is real. Innovation is our strongest defense, and so we should not wait two years to reveal exciting new products.

Perhaps it is cost. In Oregon, the economy is still floundering; other lighting designers across the States are also finding it

slow. Manufacturers are below targets. Trade show presence is expensive, especially for larger companies. And for attendees, Lightfair means non-profitable days, on top of airfare, hotel and conference fees.

But I'll tell you what it really is: Our industry is struggling. Construction is down. Steel prices are going through the roof, and corporations are holding back. Outsourcing is just one example of the economic forces working on us. In other ways, industry has shown its reluctance to build, encouraging telecommuting and "hoteling." Internet purchasing has reduced the demand on "bricks and mortar" stores.

Lightfair has always placed lighting design at the heart of its existence, offering the best seminars from the world's best designers, teachers and scientists. Lighting design is the engine of innovation and change, and yet, even lighting designers seem to be dragging. Lightfair is the symbol of our fast times and phenomenal past, and maybe we just don't have the

energy and passion for it anymore.

It is likely that Lightfair will change and quickly. Everyone should remember, though, that the show's past success has provided profits that support much of the IESNA's and IALD's annual incomes. In other words, Lightfair is the financial engine of two of the lighting industry's most important organizations. The industry forces that want a biennial show have not taken this into account. Canceling Lightfair in the even years would ensure the end of the IALD and severely reduce the services and capabilities of the IESNA. So before we carelessly discard what in many ways is the heart and soul of the North American lighting industry, we should consider the consequences. Without a market for innovation and domestic quality, how do the companies pushing these changes think they are going to survive in the long run? ■

(See Industry Exchange, page 72, for additional opinions about Lightfair's frequency.)

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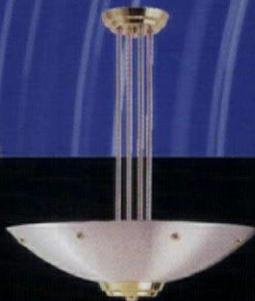
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An American in Frankfurt

JAMES BENYA

What does Light+Building have that Lightfair doesn't? What does it have that Lightfair doesn't want?

AMONG A SMALL LEGION OF AMERICAN LIGHTING designers, I attended Light+Building 2004 in Frankfurt, Germany, from April 18 to 22. While some attend every other year (it is a biennial event), I admit to rarely attending shows outside the United States. Maybe it is the time commitment or the multiple time zones, or maybe I'm just not as comfortable in the international arena. After this last experience, however, I think I will attend more often.

Light+Building is held at Frankfurt Messe, a 10-building exhibition complex thoughtfully integrated into Frankfurt's sophisticated urban fabric. Commuter trains and electric trolleys stop inside or immediately adjacent to the complex, and there are several quality hotels within walking distance. Facilities are fastidiously clean, and everything seems to work with expected German precision. Extensive signage and numerous information kiosks make wayfinding easy. Even the ticket takers seem to speak both German and English. Indeed, it is relatively simple for an American to attend this event.

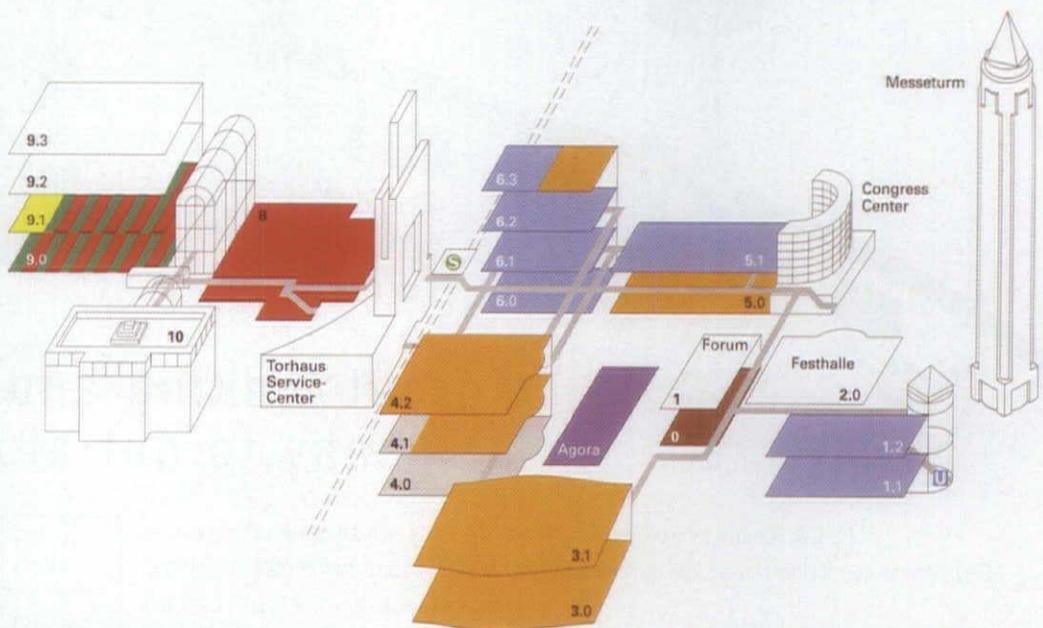
This is a huge show: Each building typically includes two floors or halls. Three floors, or a total area about the size of one of America's larger convention centers, are devoted to "technical" lighting. Another floor is just outdoor lighting. Yet another floor showcases lighting components and systems. Then there are two floors full of contemporary "contract decorative" lighting, and about five floors of residential and hospitality lighting, not to mention a whole floor of Chinese manufacturers. There is also an entire building devoted to electrical engineering and another to building automation and communication system technology. In other words, Light+Building is a fair that involves lighting and several related topics. It is a lot like combining Lightfair, the Dallas decorative lighting show, ASHRAE, and the Electric show into one event.

A major point of note, in addition to the square footage, is the number of attendees. Apparently well over 100,000 people visit. (The ticketing system, however, is different

than U.S. trade shows, and I used three separate day tickets, making me, at least, count for three attendees.) The popular booths—Zumtobel and Erco, for example—seemed packed with 100 or more visitors every time I walked by. There must have been over 200 people visiting each of the huge lamp companies.

The booths themselves are another noteworthy aspect. At Light+Building, the "booths" are actually huge sales platforms larger than most homes, complete with ceilings, upper stories, perimeter walls and high superstructures. Each booth is a design feat and an entertainment space, with lighting displays on par with those in high-end homes or galleries. Many offer food, with a bar serving coffee and nibbles by day, and beer and more nibbles by night.

Americans and Europeans have various cultural differences that influence their trade shows, rendering an accurate comparison of Lightfair and Light+Building difficult; nevertheless, there is a tendency to measure one against the other. In 2004,



What does Light+Building have that Lightfair doesn't? An abundance of square footage in an accessible, organized space, and the exhibitors and attendees to go with it. Ten buildings, each with two or more floors, make up the Frankfurt Messe complex.

the two shows, which usually do not occur in the same month, were a mere three weeks apart. This offers a unique opportunity to set the record straight:

■ **A LARGER PERCENTAGE OF PRACTICING ARCHITECTS** and engineers attends Light+Building than Lightfair. I think this has a lot to do with the differentiation in U.S. trade shows: we have many shows, segregating the profession and making each event smaller. For instance, this year I will speak at Lightfair (15,000 attendees), InfoComm (25,000), AIA (10,000), and Electric (10,000). Shows I have missed include specialized events for retail, hotel, and office furnishings. If we combined our U.S. shows, we would have something similar to Light+Building.

■ **THE EUROPEAN COMMITMENT TO PROVIDING AN** accessible and important trade show and venue is vastly superior to that of the United States. Frankfurt Messe is more than just an exhibition hall; it is a complex of buildings with architectural appeal, and more importantly, easy access to light rail, taxi and bus, as well as cars. No comparison to Las Vegas or to New York City's Javits, two of North America's worst convention centers.

And of course, Frankfurt is picturesque and clean—unlike the west side of Manhattan.

■ **LIGHT+BUILDING IS NOT MUCH OF A CONFERENCE.** The program does not even compare with the first Lightfair held in 1990. ELDA+, the European lighting design organization, uses other venues as its professional development and educational medium, having quasi-academic symposia throughout the region.

■ **PEOPLE WHO JOKE ABOUT THE MANY SMALL** Chinese booths at Lightfair should see Hall Six at Light+Building. Same thing only much larger. And it is not a joking matter. We should look carefully at the genesis of the world's dominant lighting industry.

■ **AFTER A WHILE, MOST OF THE BOOTHS LOOKED THE** same. Lighting design innovation in Europe is different, and the artful combination of industrial design and lighting technology is the best in the world, but many manufacturers showed great industrial designs that looked just like Zumtobel or Erco products from two years ago. And clearly, there is a design and cultural difference with respect to glare. (So many bare lamps.) Moreover, lighting efficiency is not as well addressed, and lighting controls

are lagging well behind American systems.

Should we aspire to producing Light+Building-quality shows in North America? Of course, but it likely will not happen, owing to cultural differences. Europeans design, build and treasure their buildings better than we do. Out of necessity this will change, and maybe we can change with it. In the meantime, it is more relevant for the average U.S.-based designer to attend Lightfair and occasionally make a trip to Germany. But be prepared for one awful thing about Frankfurt: there is enough indoor smoking to make anyone appreciate the dramatic air quality improvements we have made in the United States. I had to leave the hall periodically to get some fresh air. But at Light+Building, even that is easy to do. ■

James Benya is a professional lighting designer and principal of Benya Lighting Design, West Linn, Oregon. He serves on the editorial advisory board of A/JL.

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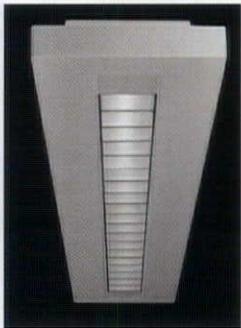
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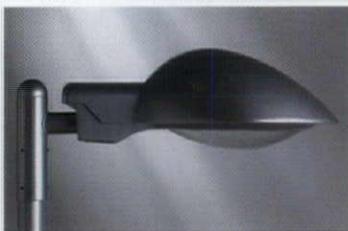
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Corelite

The simple rectilinear form of Corelite's newest introduction, Vertechs, combines the company's patent-pending Slide-N-Lock™ optics, allowing numerous combinations of uplight and downlight percentages to accommodate every lighting scenario. The modular direct-indirect fluorescent luminaire offers eight field-adjustable uplight/downlight settings, three media louver options, lamp isolators, and a wall-mount companion. For more information, visit www.cooperlighting.com. **CIRCLE 130**



Holophane



Holophane, the innovative leader in premium-grade indoor and outdoor lighting products, announces the much anticipated release of the Pechina.

Designed with strong mechanical attributes, the distinctive, sleek, and contemporary lines of the Pechina is a natural fit for roadway and area applications. For more information, call 740-345-9631. **CIRCLE 133**

Dreamscape

Dreamscape introduces Avanti, a 4-inch-wide T5 fluorescent commercial architectural wall sconce. Its trimless design fits flush with the wall or ceiling and is ideal for installation in lobbies and corridors. It is available with a selection of decorative acrylic diffusers and custom signage kits. For more information on Avanti, go to www.dreamscapelighting.com. **CIRCLE 131**



Invue

The versatile Phocus flood luminaire can be used for ground, wall, ceiling, burial and remote mounting configurations with its concealable size. Phocus offers optical versatility with seven uniquely shaped distributions, plus an array of HID and quartz halogen PAR lamps. Light control accessories provide custom cutoff solutions to meet specific distribution requirements. For more information on Phocus, visit www.invuelighting.com. **CIRCLE 134**



Halo

Halo, which introduced the first adjustable-beam ceramic metal halide low-wattage track fixtures utilizing a 20W or 39W T4.5 lamp, has now added a 70W fixture. The MiniLUME™ lamp holder is extremely compact in size and has amazing continuous adjustable optics from spot to flood, and rotates +300 degrees and tilts ±90 degrees. For more information, visit www.cooperlighting.com. **CIRCLE 132**

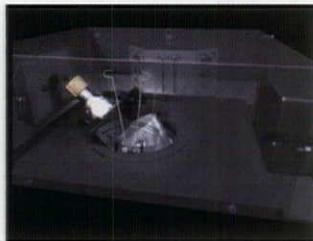


Lumière

The Monaco 6000 family of small-scale HID inground floodlights (39W-175W) for architectural and commercial applications utilizes the Venterra™ heat and water management system, providing reduced lens temperatures and protection from the outdoor elements. Lumière's exclusive Beam-Driver™ external aiming system provides adjustment of the lamp beam from outside the fixture, allowing precision aiming without opening the fixture. For more information, visit www.cooperlighting.com. **CIRCLE 135**



Portfolio



The petite Portfolio MA339ES adjustable downlight, with 365-degree rotation and 45-degree tilt, utilizes the new 39W BriteSpot ES50 lamp, the most compact metal halide reflector lamp available (comparable to an MR16 lamp). The architectural housing locks in any desired position, even during lamp replacement, and features Portfolio's translating center beam optics. For more information, visit www.cooperlighting.com. **CIRCLE 136**

TIR Systems



Destiny CV provides an even surface glow and paint-with-color function, offering an asymmetric throw from a concealed linear source. It provides a farther throw of light than today's conventional cove luminaires, and a continuous sheet of light. Destiny CV controls over-brightness at the mounting point, inches away from the target surface. For more information, visit www.tirsys.com. **CIRCLE 139**

Sure-Lites

Constructed of durable die-cast aluminum combined with the strength of a clear, polycarbonate shield, the award-winning Sure-Lites UEL NEMA 4X emergency light is designed for the most severe environments. Standard features include a nickel cadmium battery, self-diagnostics, photocell LASER test and MR16 lamps that provide long life, low maintenance, and dependability. For more information, visit www.cooperlighting.com. **CIRCLE 137**



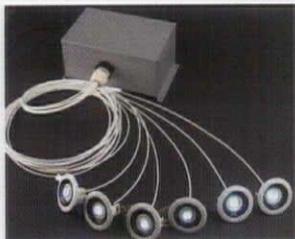
Traxon USA

An unprecedented combination of light, color and reflection, the Mood Light Reflector—a stunningly beautiful mirror-finished LED panel—is an expansion of Traxon USA's Mood Light line. Available in remote-controlled or DMX-compatible models, the Reflector panel measures 19.5 inches x 19.5 inches x 2.75 inches, and incorporates ultra-bright LEDs with millions of RGB colors of variable intensity. Visit www.traxon-usa.com. **CIRCLE 140**



Super Vision

Super Vision's high lumen output fiber optic illuminator, Es-150, produces the cleanest whitest light output due to its revolutionary dual parabolic reflector and quartz light pipe design. Even light output is especially noticeable when used with our light bars or adjustable lens systems (shown). Website: svision.com; e-mail: lighting@svision.com; or telephone 407.857.9900. **CIRCLE 138**

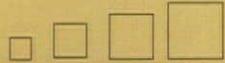


A|L
architectural lighting

We've redesigned
more than just
our magazine.

Look for our new internet icon  and visit the A|L website each month for new products, news briefs, calendar events, competitions, and industry Q&A.

www.archlighting.com

A|L LIGHT & ARCHITECTURE DESIGN AWARDS

Architectural Lighting magazine presents the A|L LIGHT & ARCHITECTURE DESIGN AWARDS honoring previously unpublished projects in the field of architectural lighting. Unlike other programs, the A|L DESIGN AWARDS first recognize and reward excellent designs within the unique criteria of a specific category. Then, for exceptional accomplishments, A|L will award the A|L VIRTUOUS ACHIEVEMENT (ALVA) AWARDS to acknowledge

projects that achieve the best lighting design on a budget; the best design in a LEED-rated building; the best incorporation of daylight; and the best use of color. A|L believes these final four categories are increasingly important considerations for its readers, and therefore hopes to identify and showcase successful examples. All winning projects will be published in the July/August 2004 issue of A|L.

Deadline: Monday, May 31, 2004

Entrant

Contact Name

Address

City, State, Zip

Phone Number

E-mail

Project Location

Client

Fee \$110 (first entry) \$

\$80 (subsequent entries) \$

Total \$

(Make checks payable to Architectural Lighting.)

I certify that the parties credited executed the submitted project and that it meets all eligibility requirements. I understand that Architectural Lighting magazine may disqualify any entry that fails to meet submission requirements. I grant Architectural Lighting magazine sole first publication rights to the project. (Signer must be authorized to represent those credited.)

Signature

Name Date

Categories for the A|L LIGHT & ARCHITECTURE DESIGN AWARDS

(must check one):

- | | |
|--|---|
| <input type="checkbox"/> Corporate/Institutional | <input type="checkbox"/> Healthcare |
| <input type="checkbox"/> Entertainment/Cultural | <input type="checkbox"/> Hospitality |
| <input type="checkbox"/> Outdoor | <input type="checkbox"/> Residential |
| <input type="checkbox"/> Retail | <input type="checkbox"/> Transportation |

Projects may also be submitted for the A|L VIRTUOUS ACHIEVEMENT AWARDS

(check all for which you would like this project considered):

- Best Lighting Design on a Budget
- Best Lighting Design in a LEED-Rated Building
- Best Incorporation of Daylight
- Best Use of Color

Questions? Call 646-654-5775

Send entries to:

A|L LIGHT & ARCHITECTURE DESIGN AWARDS
770 Broadway, 4th Floor, New York City, NY 10003

ELIGIBILITY

1. Design professionals practicing in the United States, Canada or Mexico may enter one or more submissions. Projects need not be located in those countries, however.
2. Any project that has previously appeared in a national design publication is NOT eligible and will be disqualified if submitted.
3. Projects must have been completed after July 2002.

SUBMISSION REQUIREMENTS

4. All entry materials must be contained in one large envelope per project, with the submitting firm and project name printed on the outside of the envelope. Include in the envelope one photocopied set of all entry materials, as well as printouts of the digital images. (Photocopies and printouts may be black and white.)
5. Each submission must be accompanied by a **signed entry form and a check** covering the entry fee (\$110 for the first entry; \$80 for subsequent entries). The form may be photocopied. Both the form and check should be included in the project envelope.
6. A **project fact sheet** must also be contained in each envelope. It should include (a) the project name, location and date of completion; (b) the project category, and whether the submission should be considered for any number of the four ALVA Awards (see Categories below); (c) project size in square feet; (d) watts per square foot; and (e) lighting installation cost.

Include a second page with a **brief written description** (no more than 600 words) of the client's goals, the challenges posed by the project and the design solutions applied. Submissions being considered for any of the four ALVA Awards should include an explanation (no more than 350 words) per ALVA category of why it excels in this/these category(ies). The digital images should be numbered and keyed to the 600-word and/or 350-word description(s) to clarify what is depicted.

7. Images must be in digital format. Additional image submission requirements: (a) one CD per project; (b) either TIF or PSD file format; (c) 300 dots-per-inch resolution; (d) dimensions of 1200x1200 pixels (either the height or width should be a minimum of 1200 pixels). Please include no fewer than 7 and no more than 12 images. Label the images using a consistent titling protocol, including the project name and numbers that correspond to the descriptions.

8. Please avoid the use of fill light when photographing the project; if its use is unavoidable, identify which shots include fill light.
9. To maintain anonymity during the judging process, no names of entrants or collaborating parties may appear on any part of the submission except on the signed entry form and on the project envelope.

CATEGORIES

10. Identify each submission on its entry form and on the project fact sheet as one of the following eight categories. (A|L reserves the right to change the category of a submission.)

- **Corporate/Institutional**
- **Hospitality**
- **Retail**
- **Outdoor**
- **Healthcare**
- **Entertainment/Cultural**
- **Residential**
- **Transportation**

(Projects will not be judged against each other, but rather as superior examples of a lighting design solution within their category. Therefore, each category may have more than one winner or no winner at all; likewise, the number of entrants within the category will not impact whether there is a winner or how many.)

11. Appropriate submissions may also be considered for any of the

four A|L Virtuous Achievement (ALVA) Awards. Entrants must indicate that a project should be considered for these awards on the entry form and on the project fact sheet. These awards require the following additional information:

Best Lighting Design on a Budget

Entrants must include an explanation (no more than 350 words) clarifying why theirs is a budget project; in addition, they must include project construction costs, lighting materials costs, and lighting and electrical subcontractor costs (preferably on a per-square-foot basis). Judges understand costs are relative to project type; however, they reserve the right to determine whether it is truly a budget project.

Best Lighting Design in a LEED-Rated Building

Entrants must demonstrate that the lighting design contributed two or more points to a building's LEED rating.

Best Incorporation of Daylight

Entrants must include an explanation (no more than 350 words) clarifying how the project integrates daylighting with electric lighting. In addition, entrants must include ASHRAE 90.1 or LEED documentation indicating that daylighting provides persistent on-peak energy savings.

Best Use of Color

"Use of Color" may be interpreted liberally; however, judges will be asked to consider the complexity of the design.

JUDGING

12. An independent panel of judges will award prizes to projects at their sole discretion, based on the complexity of the program and the lighting solutions applied.

13. Judging will take place in June 2004. Winning entrants will be notified in late June 2004, and their projects will appear in the July/August 2004 issue of A|L.

PUBLICATION

14. Winners of the A|L Design Awards grant A|L first publication rights for their winning projects for the magazine's July/August 2004 issue. If the submission wins, the entrant agrees to provide further information and publication-worthy graphic materials as needed by A|L.

15. Winners of the A|L Design Awards agree to have their projects and names published in A|L and in any other media and must secure permission for publication from clients prior to entry.

16. All winners will be required to complete, sign and return within a specified time a Publicity Release. In addition, each winner will be required to sign a document stating that the entry is the original work of the winner and does not infringe on any proprietary right, including but not limited to copyright, trademark, and the rights of publicity and privacy of any party, and grants A|L the right to use the entry in print and electronic medium.

ENTRY FEES

17. Each submission must be accompanied by a check covering the entry fee (\$110 for the first entry; \$80 for subsequent entries). Make check payable to *Architectural Lighting*. (Canadian and Mexican entrants, send drafts in U.S. dollars.)

DEADLINE

18. Entries must be received by May 31, 2004.

RETURN OF ENTRIES

19. A|L will ONLY return entries including a self-addressed stamped envelope. A|L shall not have liability for damaged or misplaced entries.

Illuminaire®

The New Shape of Light™

Holophane Prismatic Glass

now available in...
type

90, 50 & 30

Designed for retail stores, schools, universities, churches, government buildings and other similar applications, Illuminaire optics are available in two sizes – large and compact - to accommodate various ceiling heights. Available in incandescent, compact fluorescent and up to 400W metal halide.

Shown at right is the Quad optic with a remote mounted ballast and notched cap in the smoked chrome metallic finish.



wing span 2.5"
scale = 1:8.8



Egg

Crest

Tri-Egg

Tri-Crest

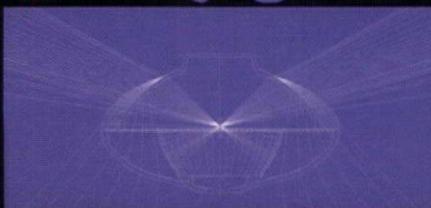
Quad

For more information, contact your local Holophane factory sales representative, call (740) 345-9631 or write to Holophane, 214 Oakwood Ave, Newark, Ohio 43055.

www.holophane.com

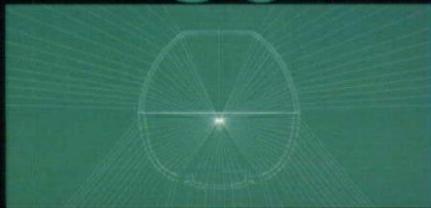
Circle No. 43 or www.archlighting.com/productinfo

type **90**



80-100% uplight

type **50**



40-60% uplight

type **30**



20-40% uplight

Your parents have always recognized your talents. Now it's Philips' turn.



Note to designers and retailers: Sure, retail is all about "image, branding and product." But it's also about lighting design – and Philips Lighting thinks it's high time you were recognized for yours. Submit your slickest retail lighting design to the 2004 Philips Lighting Company Innovation Awards. Naturally, you've specified Philips lamps. And naturally, winners will be feted at a ritzy affair and tendered a tasteful award. Give your lighting ideas an industry-

Three Distinct Categories Acknowledge Retail Lighting Excellence.

Experience Of Light demonstrates how lighting can enhance and stimulate the shopping experience while supporting the retailer's brand image.

Environmental Solutions demonstrate how sustainable lighting can be effective while environmentally responsible.

Energy Solutions demonstrate how energy efficient lighting can be effective and deliver immediate cost savings.



wide stage. Log onto our site for the official Entry Form and program details.

www.lighting.philips.com/nam/innovationaward

(Should you choose one parent to join you at the awards ceremony, the other one will be very, very hurt...Philips refuses to get in the middle of it.)

PHILIPS LIGHTING COMPANY
INNOVATION
AWARD™
for Retail Lighting Excellence

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