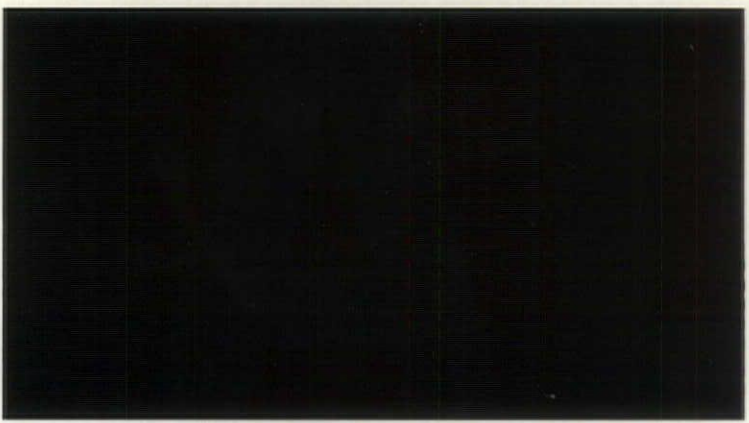


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**design awards 3**

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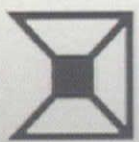
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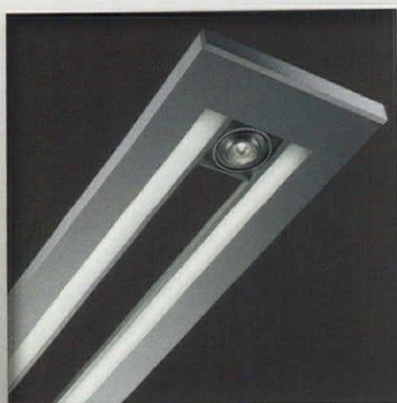
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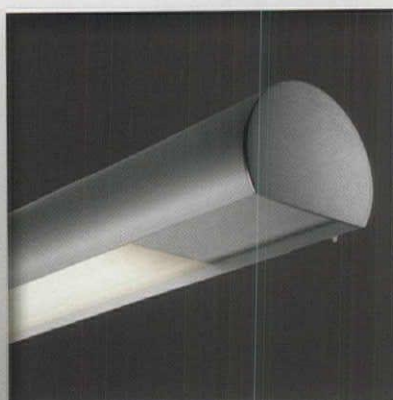
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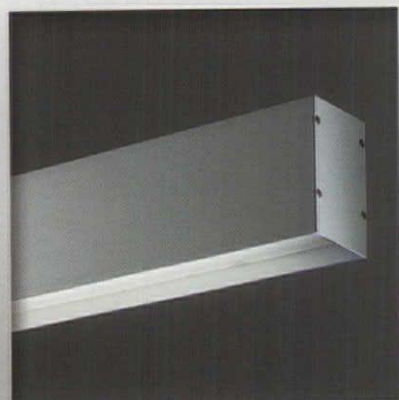
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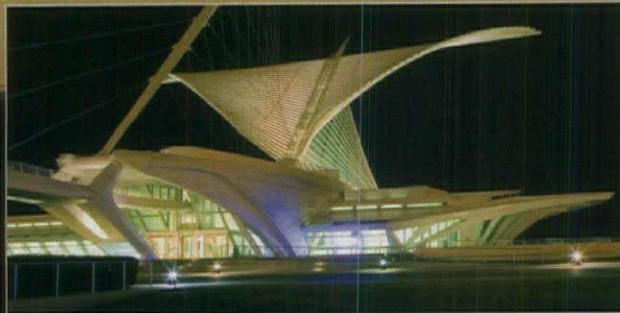
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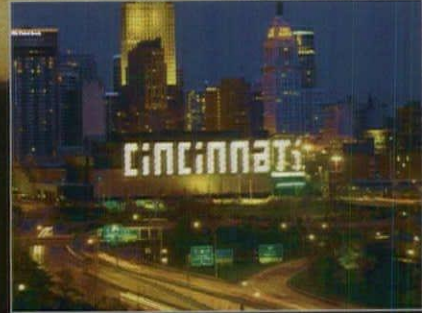
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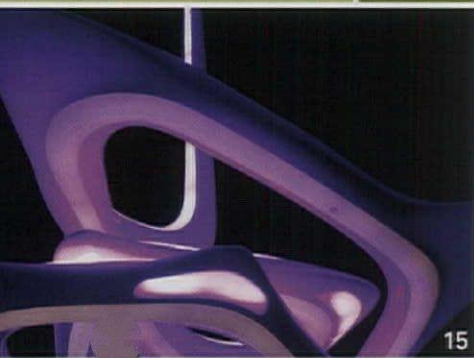
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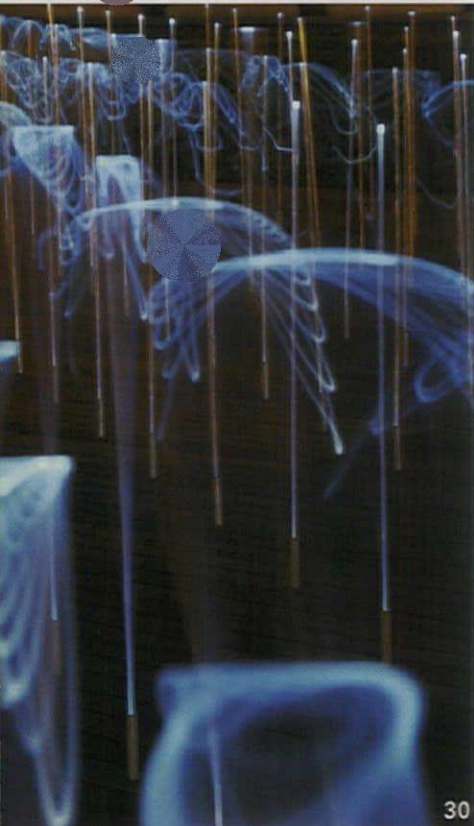
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**This page:** The Vortexx chandelier by Zaha Hadid and Patrick Schumacher; *White Noise | White Light*, installation on the M.I.T. campus, Cambridge, Massachusetts; Clayco Headquarters, St. Louis; Morimoto restaurant, New York







## The Full Story

**WELCOME TO THE THIRD ANNUAL A|L Light & Architecture Design Awards issue. The names on our version of a marquee—the**

cover—are our winning entrants. (If we could put them in lights we would.) At the heart of the issue, you'll find their eight awarded projects. We also encourage you to visit [archlighting.com](http://archlighting.com) for a slide show, additional jury comments, and complete specification information. That is, as "complete" as the current practice for selecting and installing lighting products seems to allow for, which, we have begun to worry, is "not very."

Every year, the course of soliciting entries, organizing the judging, witnessing the professional dialogue around the selection of winners, and finally, putting the magazine together is often illustrative—of important industry issues (the jurors, in their candid discussion, enlighten us, the editors), but also, of flaws in the awards and subsequent publishing process. Last year, the A|L editorial staff was challenged by, and ultimately updated, the program's category system. (We're still not entirely satisfied with it.) This year, we were troubled by inconsistencies in the supplied project detail information—namely, specified manufacturers. The concern is not solely relegated to the Design Awards issue, since it is data we prefer to supply in all project coverage. However, it seems that such fundamental details—manufacturers, costs, watts per square foot—should be particularly transparent in this context, where the selection process is also on display.

Two separate instances drew our attention, and the dedication of this page and our Sept/Oct Exchange question (following): A manufacturer and former advertiser complained that several recent projects, for which he knew his product had been specified, appeared in the magazine without recognition of his company in the Details Box, an element that accompanies each project story. In the second instance, a winning design firm supplied a specifications list that did not include a company the A|L editors knew to have been part of the project. After much back and forth, it was discovered to be an issue of miscommunication and of a complex project with many variously involved parties. In the end, all was well, but this kind of elaborate fact-checking is an anomaly and was only undertaken because the manufacturer happened to mention its involvement to us. To be certain, there are plenty of occasions when such serendipitous due diligence does not occur.

PHOTO BY BJORN WALLANDER

Anyone familiar with the lighting industry is also familiar with the problem of substitutions. On the long road from design to installation, original product specs are often lost when the electrical contractor and distributor join the caravan. At the end, when it comes time to publish a project, the designer may not know what manufacturers or products were finally used on a job. The list supplied to A|L may be incomplete or inaccurate, but for time, resource, and benefit-of-doubt reasons, the A|L editors must assume the designer's word is final.

There are many that stand to lose from substitutions: the client and occupants (who may live with compromised quality), the designer (whose original intent may be lost), and the manufacturer (who misses out on revenue). Published last year, the IALD's *Guidelines for Specification Integrity* is a fantastic step toward preventing subs in the first place. But, once a project is finished, the primary victim of missing or incorrect specification information is the manufacturer. A|L knows from research that readers are very interested in the sources used in the magazine's featured projects, hence the Details Box, and frankly, it's good for business to be recognized as part of those projects. Consequently, the manufacturer should ensure that design firms know to include it and its role on a job—particularly high-profile projects that are likely to find their way into publication. If the designers supply it, we will publish it. And that's an all-around win.

**EMILIE W. SOMMERHOFF**  
EDITOR-IN-CHIEF

### SEPT/OCT EXCHANGE QUESTION

Ensuring a lighting scheme sees its full implementation, along with the designer's intended product selection, is difficult. Designers: How often do you know which manufacturers were ultimately installed on your projects? Manufacturers: How do you track and then publicize the application of your products? What steps can be taken to guarantee the integrity and transparency of the lighting specification process?

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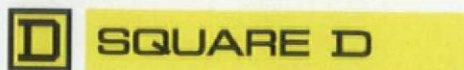


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## TIDAL-POWERED MOONTIME

**DESIGNED BY LONDON-BASED ARTIST LAURA WILLIAMS, ALUNA IS THE WORLD'S FIRST** tidal-powered moon clock. Heralded by scientists as a modern-day Stonehenge, the proposed five-story-high and approximately 131-foot-diameter structure will be constructed of three concentric steel rings clad in translucent curved glass. LEDs, located beneath the glass surface, will create the light that moves slowly around each ring, representing the cycles of the moon—the lunar phase, the lunar day, and the ebb and flow of the tide.

The project team is currently looking at tidal sites for Aluna in the United Kingdom—one being London's River Thames—as well as in Australia, which may lead to a dual-hemisphere project. Each structure, estimated to cost between £4 and £5 million (approximately \$7.4 and \$9.3 million), is being funded through a variety of international resources, including materials and technology sponsorships and donations.

Among its many supporters, the project has received endorsement from U.K.-based Proudman Oceanographic

Laboratory, which has provided the mathematical data and interface for the project. The team plans to use electricity generated through onsite turbines, located in the water to harness the energy of the tides, to power the LEDs. The sculpture will be illuminated 24 hours a day; however, during daylight hours, when only the sculpture's edges are lit with color, sensors will be used to regulate the color and surface area of illumination.



Jonathan Speirs of London- and Edinburgh-based lighting design firm Speirs & Major Associates is designing Williams's lighting scheme for Aluna, though details will not be available until a feasibility study has been completed. At that point, Aluna will take approximately two years to build. To publicize the project, the IALD is sponsoring a series of education forums in selected U.S. cities throughout September 2006 and in Germany in November. For more information, visit [www.iald.org](http://www.iald.org). For detailed information on the Aluna Project, visit [www.alunatime.org](http://www.alunatime.org). **A|L**

RENDERING BY MARK GLENN

# A|L LIGHT & ARCHITECTURE design awards 3

A|L congratulates the winners of the  
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**Hotel Puerta America**, Isometrix Lighting + Design

### commendable achievement

**White Noise | White Light**, MY Studio

**FLEXsystems**, Derek Porter Studio

**Higgins Hall Central Wing**, Arc Light Design

**Carlton Hotel Lobby**, Focus Lighting

**Morimoto NYC**, Isometrix Lighting + Design

**Briarcliff Residence**, Derek Porter Studio

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**WHEN:** October 24, 2006

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## FLUIDITY AND FRAGMENTATION

THIRTY YEARS OF PRITZKER PRIZE-WINNING ARCHITECT ZAHA HADID'S WORK IS NOW on display at the Guggenheim Museum in New York through October 25, 2006. Hadid's architecture explores the dichotomy between fluidity and fragmentation, and addresses space and form at an individual and urban scale.

Arranged chronologically, the exhibition includes a variety of project documentation tools—from drawings, paintings, computer-generated renderings, and architectural models—to Hadid's more recent forays into furniture design, including the Vortexx chandelier conceived in 2005 with colleague Patrick Schumacher, in collaboration with lighting manufacturer Zumtobel and furniture company Sawaya & Moroni.

It is only in the last 15 years that Hadid has seen her work realized in built form with any frequency, and the result is a series

of thought- and space-provoking structures. Hers is an architecture that explores the nature of floating planes and lines, folds and ribbons; consequently, light and shadow also find their place along the edges of volumes, in the spaces between forms, and embedded in planar surfaces. Recently completed projects, such as the Rosenthal Center for Contemporary Art in Cincinnati, the BMW Central Building in Leipzig, Germany, and the Phaeno Science Center in Wolfsburg, Germany, challenge the individual to rethink her interaction with architectural form when confronted with multiple perspectives, collapsing wall planes, and movement. Hadid's work is particularly well suited to this challenging exhibition venue, with its ramp, sloped floors, and curved walls, for the very essence of her architectural approach is made manifest in the exhibition viewing experience. **ELIZABETH DONOFF**

## FLUORESCENTS HAVE NO PLACE IN ZAHA'S FUTURISTIC KITCHEN

THE MARRIAGE BETWEEN ARCHITECT AND MANUFACTURER IS ALMOST ALWAYS MUTUALLY beneficial: The architect is allowed to push the design and material envelope, and the manufacturer can prove the merits of its product in a high-profile manner. In the case of Z.Island—a futuristic kitchen complete with a wet and dry island and cabinet system—the architect is Zaha Hadid, the company is DuPont, and the stage is global: first an unveiling at the 2006 Milan Furniture Fair, and then inclusion in a retrospective of Hadid's work at New York's Guggenheim Museum (see "Fluidity and Fragmentation," above).

The collaboration showcases Corian surfaces, in glacier white, molded to meet the demands of a 3D model created in Hadid's London studio and executed by Italian fabricator Ernesto Meda. The space-age form of the larger dry island—which features a cooktop, a cutting board, aromatherapy dispensers, a flat-screen TV, and an iPod dock—is complemented

by an embedded LED display that emphasizes the translucency of the non-porous surface. Controlled by an integrated touch pad, the linear array of red LEDs can be programmed to form four 7-diode-high rows of text, spelling out anything from a greeting to the ingredients of a recipe. A positionable "light spot" on the vertical arm of the island is comprised of several cool-temperature white LEDs integrated into one housing, which provides tasklighting.

But lest one think that the islands are to be installed in any old kitchen, Hadid has also designed undulating Corian wall panels that front cabinets and appliances

to form a quilt-like grid—some backlit by color-changing LED fixtures, creating a warm diffuse glow that plays nicely off the white, glossy surface. **KATIE GERFEN**

*Katie Gerfen is associate editor at Architecture magazine.*



Z.Island on display at the Guggenheim.



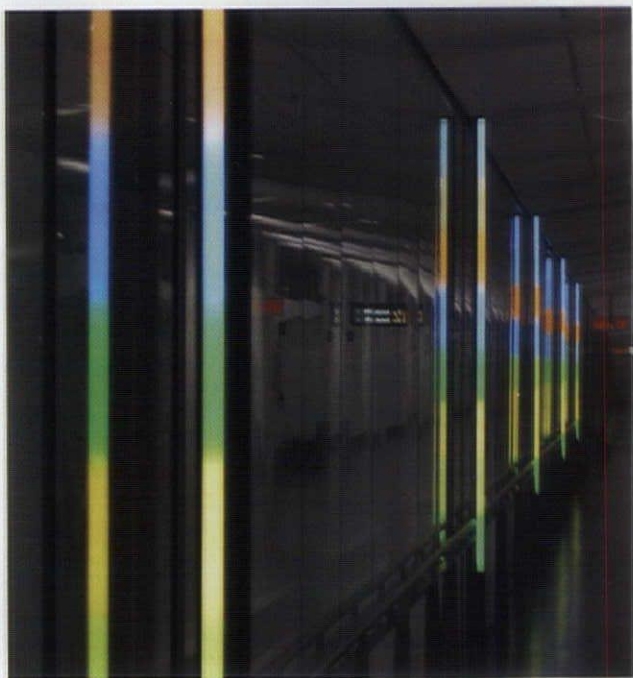
## ARE WE THERE YET?

**TRAVELERS ARRIVING AT THE MONTREAL-PIERRE ELLIOTT TRUDEAU INTERNATIONAL** Airport in Canada will now be guided down the arrival corridors by *You Are Almost There!*, a permanent lighting installation by Montreal-based conceptual artist and lighting designer Axel Morgenthaler. Designed to depict passengers in transit, the installation is part of local airport authority Aéroports de Montréal's identity program, created to infuse Montreal's character into its airports, and support the city's artistic and cultural development.

The installation is comprised of a series of 29 tube-shaped luminaires, measuring 8 feet tall and 2 inches in diameter, integrated into metal support beams along one side of two curved corridors. Morgenthaler, who has used video as a tool for lighting in past works, took individual video clip frames and broke them down to a very low resolution—8 pixels high by 6 pixels wide. The images were then translated to DMX and, via a linear array of RGB LEDs within each tube, used to create an ever-changing multicolored experience that Morgenthaler describes as a "color massage."

Positioned to signify in segments the visitor's approach to the Customs area, *You Are Almost There!* challenges the notion of light. Morgenthaler's objective is for travelers to question the perception of each image. He explains, "Every screen is made of light, but where is the limit of the human brain to recognize an image on that screen—when does the image made of light become just light?" For more information, visit [www.axelmorgenthaler.com](http://www.axelmorgenthaler.com). **AJL**

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## ACQUISITIONS IN THE AIR

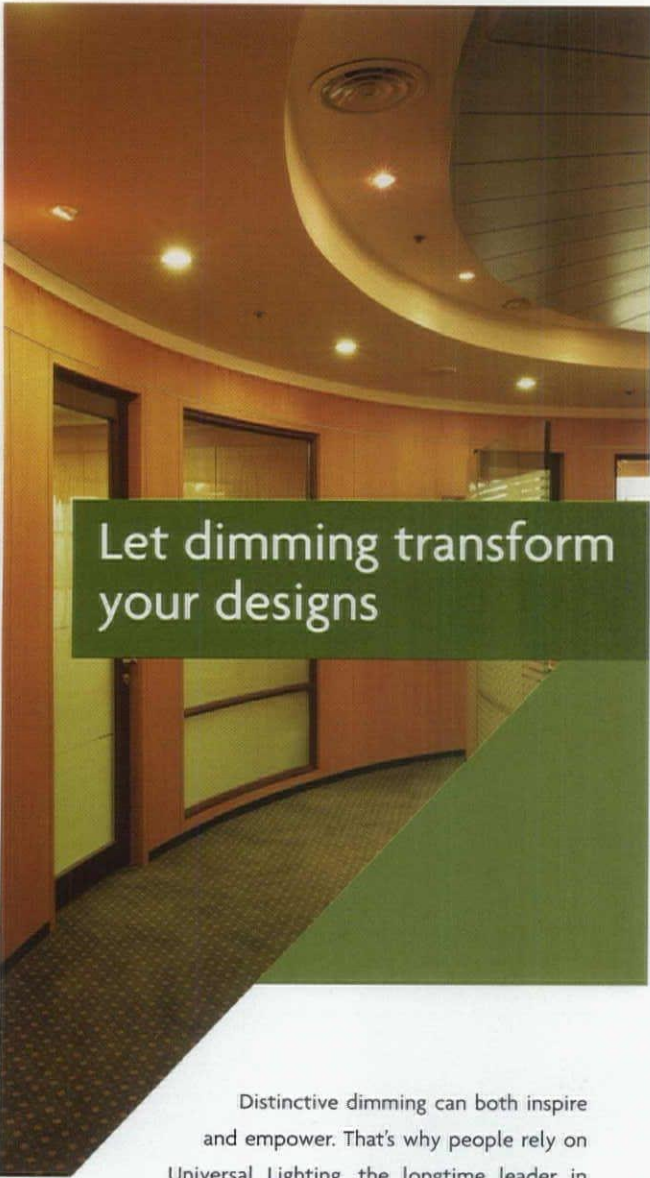
**THE LIGHTING INDUSTRY HAS WITNESSED SEVERAL IMPORTANT MERGERS OVER THE** last year, with a rush of activity this spring and summer, causing one to wonder if larger economic forces are afoot.

Square D, a subsidiary of Schneider Electric, an international corporation headquartered in France, started things off last summer, when it purchased U.S.-based Juno Lighting. At the time, Juno had reported revenues of \$242 million. The deal, according to Schneider, helped it expand its presence in the U.S. market. More recently, Philips acquired Bodine, a Tennessee-based manufacturer of emergency ballasts with revenues over \$30 million in 2005. The lamp and electronics manufacturer saw an opportunity, with its purchase of Bodine, to "enter strategic new market segments involving building networks," said a July 7, 2006, press release.

A merger between Quality Home Brands and Encompass Lighting Group, completed in June 2006, assembles the "broadest, deepest, and strongest offering of aesthetically superior lighting for residential and commercial applications," commented Tracy Bilbrough, president and CEO of the newly combined company Generation Brands, in a press release dated June 20, 2006. (Interestingly, Bilbrough was president and CEO of Juno when the company was acquired by Square D.) Quality Home Brands was, itself, founded only last fall, with the merger of Murray Feiss Lighting, Monte Carlo Fan Company, Sea Gull Lighting, Light Process Company, and Royce Lighting.

In recent months, Genlyte acquired both JJI Lighting Group (May 2006) and the U.S.- and Hong Kong-based operations of Strand Lighting (July 2006). The former, which has 15 branded business units, including two in Europe, is one of the largest privately held fixture manufacturers in the United States with 2005 sales of \$130 million. In addition to giving Genlyte certain operational synergies and access to several highly specific market niches, the JJI acquisition, notes Genlyte CFO Bill Ferko, has also provided the company with a factory in Germany, its first in Europe. Strand, which is being broken up as part of a restructure, recorded sales of \$31 million for the business units that are currently part of the deal. An international theatrical lighting business, Strand has "static light fixtures, which we did not have in our product portfolio, and a robust dimming business," says Ferko.

The lighting industry is not new to M&A activity. "There has been a consolidation going on for about 15 years," says Ferko. "If you go back to the early 1990s, the largest thirteen companies had about a 34 percent market share. Today, in North America, the largest four lighting manufacturers have a 62 percent market share." In Ferko's opinion, the confluence of a slowing residential construction market and a simultaneous pick-up in the commercial and industrial sectors has encouraged acquisition momentum. "The changing economic environment causes people to think about how to operate within that environment," he says. The pace of consolidation has slowed since its peak in the late 1990s, notes Craig DiLouie, principal of Zing Communications. "However, the scale of some recent acquisitions is notable, such as Square D's of Juno and Genlyte's of JJI. Looking forward, acquisitions are likely to continue to be very selective." **AJL**



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## ASID PUBLICATION ADDRESSES LIGHTING IN THE WORKPLACE



THE PURSUIT OF ENERGY EFFICIENCY AND LOWER COSTS TOO often overshadow the need for quality lighting in workplace environments, according to a paper recently issued by the American Society of Interior Designers (ASID) in conjunction with Orfield Laboratories, Haworth, Lutron Electronics, and Vista Window Film. *Better Lighting and Daylighting Solutions: Improving Visual Quality in Office Environments*—written primarily for interior designers—looks at the effects of both the physical attributes of light and also the perception of lighting quality on work performance. It argues that occupant productivity and satisfaction should supersede sustainability and budgetary concerns when designing a lighting or daylighting scheme for an office environment. The authors point out that over the lifetime of a building, total facilities costs only account for between 5 and 8 percent of a company's budget.

According to the report, "In the built environment, we have been laboring under the impression that if we employ the most highly rated, energy-efficient lighting and daylighting products, we have achieved a sufficient lighting solution. From an occupancy standpoint, however, energy is only a secondary issue."

The paper was developed to respond to ASID members' growing interest in lighting. "Interior designers are now more and more responsible for the entire layout of the interior partitions, as well as the finishes, fixtures, and equipment layouts," says Bruce Goff, ASID member and principal of Nevada-based Domus Design Group. "Finishes and furniture layouts are affected by lighting; and lighting is affected by finishes and furniture layouts."

The report is separated into six sections: The first three provide a general introduction to office lighting and daylighting. Part Four examines the technical aspects of workplace lighting. Part Five lists common lighting problems found in offices, and Part Six proposes future research inquiries. Complimentary digital copies of the report are available at [www.asid.org](http://www.asid.org) to ASID members; print copies are offered for \$15 to members and for \$22 to non-members. **AJL**

## NYC GREEN LIGHTING SALON

ON JUNE 8, 2006, ANTHONY AMARO, VICE PRESIDENT OF BUSINESS DEVELOPMENT at Earth Protection Services, and David Bergman, principal of David Bergman Architect and founder/designer of Fire & Water Lighting + Furniture, were the speakers for "Let There Be Light. But Let It Be Green." One in an annual series of 11 New York City Green Building Design Salons held every second Thursday of each month (except August) at the Center for Architecture in Greenwich Village, the program—geared toward building and engineering professionals—covered solutions for the recycling of old lighting and presented issues surrounding new energy-efficient lighting designs. Amaro offered information on environmental considerations in the removal and correct (CONTINUED ON PAGE 23)



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PRINT PORTFOLIO 2005

**MiT5** patent no. US 6,652,119 B1

architect: Levin Beitz Studio lighting design: Tolkison Design Associates photography: Michael Moran Photography, Inc.

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(NYC GREEN LIGHTING SALON; CONTINUED FROM PAGE 20)  
disposal of mercury-containing lamps; Bergman spoke to the development of sustainable lighting, noting technical, design, and demand issues.

Produced by the Center for Economic and Environmental Partnership (CEEP), the series is a statewide initiative held in six New York cities (Albany, Buffalo, Farmingdale, Manhattan, Mt. Kisco, and Syracuse) to provide the building design and development community with education and business-development programming. For more information on the series, visit [www.ceepinc.org](http://www.ceepinc.org). **AJL**

## LETTERS TO THE EDITOR

### RESPONSE TO THE MARCH 2006 ISSUE:

*Architectural Lighting* is always good, but the March issue was exceptional. With the new national EAct 2005, based on ASHRAE/IESNA Standard 90.1 (energy conservation for other than low-rise residential buildings), upgrading to energy-efficient illumination to comply with the mandates will be in great demand, if only to benefit from the financial incentives. If all the available lighting tools were employed where suitable, it would make it easier and more affordable for designers to create sophisticated effects within the mandates for both new and existing structures.

It is for this reason that I wonder why, in the fascinating projects related, no one chose glass fiber optics where it could do a better job than conventional products. This technology has been used abroad for decades, leaving the United States considered backward by its foreign colleagues.

**GERSIL N. KAY**, Conservation Lighting Int'l, Philadelphia

### RESPONSE TO "DRAWING UPON THE FUTURE," APRIL/MAY 2006:

We were confused and disappointed by the caption under our McCarter chandelier sketch on page 51.

"People don't talk with a pencil anymore, except we do." Those last three important words were missing. One hundred percent of our design workshop time with clients takes place with pen and pencil in hand. We have thousands of by-hand drawings and sketches in our flat file archives. While graphics software produces crisp, convincing, and indeed wonderful images, we find that hand drawings often express much more in their passion, whimsy, and freedom.

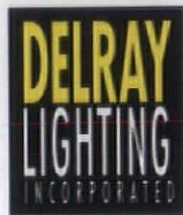
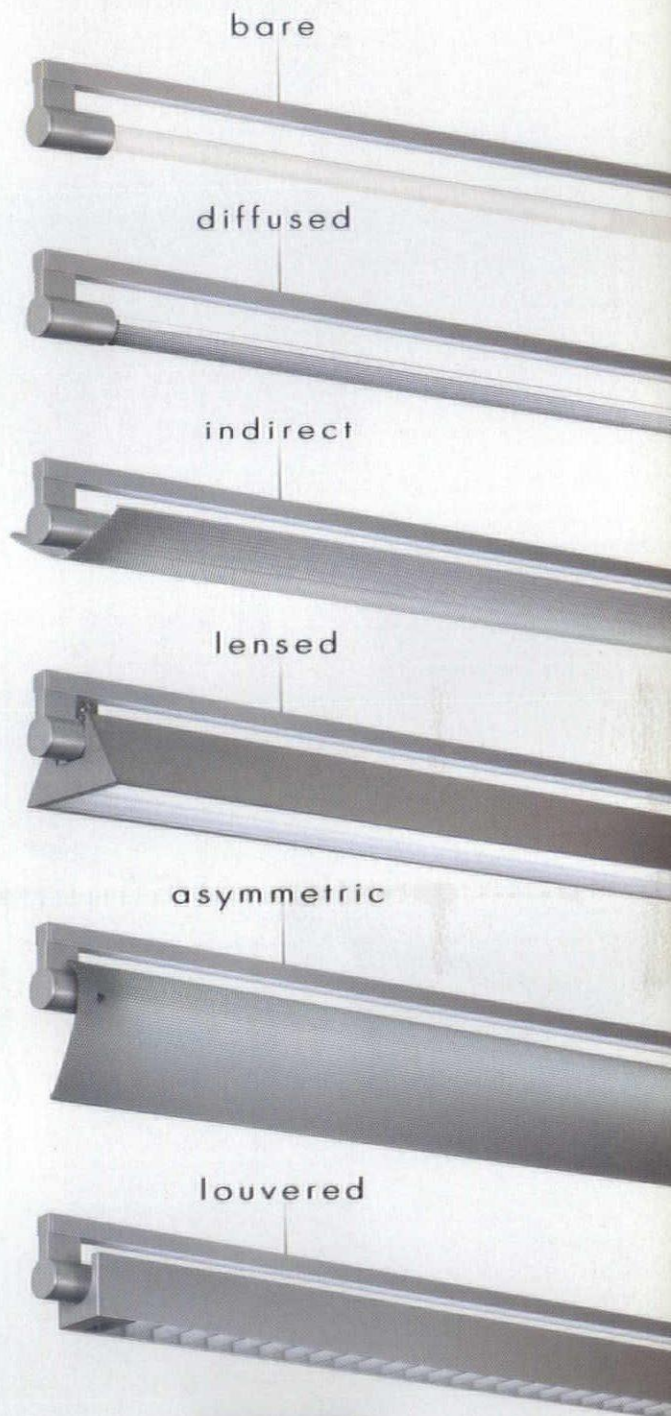
**FISHER MARANTZ STONE**, New York

### RESPONSE TO "TECHNOLOGY REVOLUTIONS IN LIGHT," JUNE 2006:

GE introduced fluorescent fixtures at the 1939 World's Fair in New York City. They must have used ballasts. (Your timeline indicated that the first fluorescent ballasts were introduced in 1945.) Also, GE and Westinghouse made saturable core reactor dimmers in the late 20s and 30s (the timeline suggests electric dimmers were first introduced in 1947). I believe Ward Leonard also made them. George Izenour designed and built thyatron tube dimmer systems in 1946 for theaters at Yale and Carnegie Mellon, and the Goodman Theater in Chicago.

**SONNY SONNENFELD**, Entertainment Lighting Reps, New York

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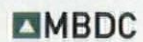


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# A|L LIGHT & ARCHITECTURE design awards 3

The eight projects presented on the following pages of the Third Annual A|L Light & Architecture Design Awards made an impression on this year's jury. The premiated schemes also made an impression on the editorial staff: three of the projects (*White Noise*|*White Light*, Higgins Hall, and Hotel Puerto America) have already graced the pages of previous issues of A|L.

While diverse in their typologies, budgets, and character, these projects clearly exhibit one common attribute: the work is expertly executed. The restraint and thoughtful placement and selection of sources for the Detroit Athletic Club's exterior set a new standard for future façade lighting applications. The lighting solutions for the Hotel Puerto America, the Carlton Hotel lobby, and Morimoto NYC respond to and successfully celebrate a rich and diverse material palette. The installation *White Noise*|*White Light* dares to think beyond convention as it marries art, technology, light, sound, and site to create a unique interactive experience. Its staying power is proved: transported and installed on M.I.T.'s campus after its initial construction in Athens, it still successfully communicates its intent. FLEXsystems (a self-storage facility) and the Briarcliff residence (a basement renovation) challenge assumptions about the importance of design no matter the project type. With an economy of means and luminaire selection, both projects demonstrate a lot can be accomplished with very little. Finally, Higgins Hall's central wing unites architecture and lighting in a manner that cohesively smooths the transition between existing and new, representing a thought process in which an understanding of light is integral to the architectural design concept.

Indeed, critical to the success of each of the winning projects is the way in which its lighting scheme integrates itself within the architectural whole. If the lighting elements were removed, the architecture would be fundamentally incomplete. In celebrating these examples, A|L hopes to reinforce the significant role lighting plays in an architectural discourse. **A|L**

## OUTSTANDING ACHIEVEMENT

- 26 detroit athletic club**  
smithgroup
- 28 hotel puerto america**  
isometrix lighting + design

## COMMENDABLE ACHIEVEMENT

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arc light design
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- 40 briarcliff residence**  
derek porter studio

## JURY

### C. BROOKE CARTER

SENIOR DESIGNER, Domingo Gonzalez Associates, New York

### STEPHEN RUSTOW

PRINCIPAL, SRA Consultancy, New York

### GLENN SHRUM

DESIGNER, Ziger/Snead Architects, Baltimore

### LENI SCHWENDINGER

PRINCIPAL, Leni Schwendinger Light Projects, New York

### KEITH YANCEY

PRINCIPAL, Lam Partners, Cambridge, MA

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# detroit athletic club

ENTRANT SMITHGROUP

With downtown Detroit experiencing a rebirth, owing to the construction of two new athletic facilities (Tigers Park for baseball and Ford Field for football) and the city's hosting of Major League Baseball's 2005 All-Star Game and the 2006 Super Bowl, the Detroit Athletic Club called on SmithGroup to highlight its Beaux Arts-style building's architectural and historical importance—literally. "They wanted to enhance the significance of the building as a landmark," says lighting designer Jeff Gerwing of SmithGroup, by making it more visible. Lacking an exterior lighting scheme, the structure was either swallowed by darkness, or overwhelmed by the stadium lights of its neighbors. The challenge for SmithGroup was to illuminate the detailed façade with "dignified restraint," allowing the building to shine, game night or not.

The tripartite organization of the building's classical façade (*left*) facilitated a similarly defined approach to the lighting solution. SmithGroup divided the lighting into sections corresponding to the architectural expression—base, middle, and top—so that each area could be easily discerned. Simultaneously, the lighting works to unify the exterior, for an effect that clearly establishes the building in its overall context.

Starting with the base—referring to both the bottom portion of the building and an initial layer of lighting—Gerwing and his team blanketed the façade with an ambient wash, provided by asymmetric metal halide fixtures mounted on the surrounding streetlamps. Responding to short setback constraints, the designers were able to reposition the streetlighting to provide appropriate mounting positions for a wallwash approach. They also realized the opportunity to replace the existing cobra heads with historically appropriate pole lights.

To frame the middle section of the façade and accent the fluted pilasters, SmithGroup added T6 metal halides painted to match the limestone at the pilaster bases. "We wanted to bring out the texture of the Corinthian columns," says Gerwing. The balustrades are backlit with 3000K LEDs, suggesting a glow from the interior. (To maintain the structure's "historic feel," the designers also specified or color-filtered the metal halides to a warm 3000K.)

The bracketed cornice at the top is the building's crowning detail (*facing page, bottom*). "We wanted to accent it, but not lose focus," says Gerwing. In order to have the building edge pop against the sky, but not disturb patrons on the upper floors, source selection was key. Neon did not provide the right quality of light or color temperature. Instead, 3000K LEDs with controlled beams (to minimize spill light) were chosen, and mounted on the continuous stone ledge located 12 feet below. LEDs provided "high-intensity light," explains Gerwing, and met maintenance criteria for this difficult-to-reach location.

The lighting scheme also needed to respect the building's delicate skin. To accommodate the cornice lighting, the designers devised a stainless-steel cable tray, to which they mounted the fixtures (*facing page, drawing*); the tray connects at the vertical mortar joints, to minimize stone damage. Most importantly, however, a painted faceplate attachment keeps the equipment hidden: "During the day, you cannot even tell there is a fixture," says Gerwing.

The success of this project, from the AJL Design Awards jury's perspective, is how fluid and effortless the solution seems, despite its technical complexity. **AJL**



## jury comments

The exterior lighting looks so natural, like it was part of the original architectural design. ∞ A subtle approach. ∞ It's about simplicity; I feel like I could learn something from this. ∞ Just beautiful.

## details

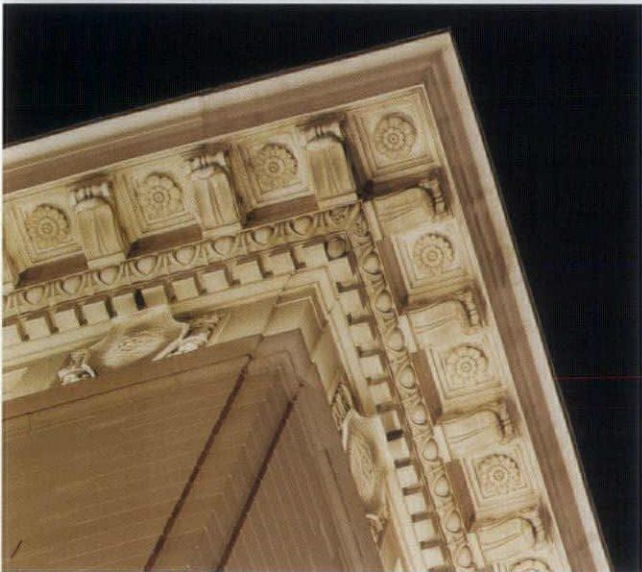
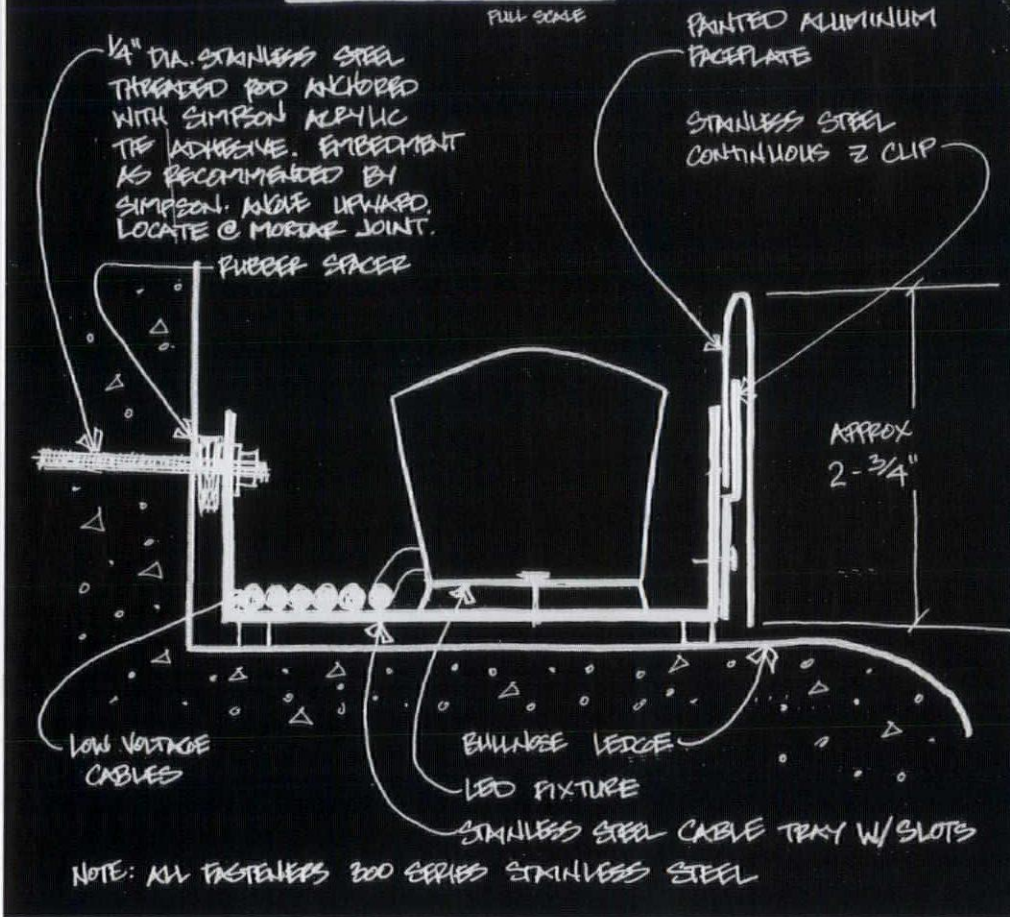
**Project Location:** Detroit **Architect:** Albert Kahn (original building, 1915) **Lighting Designer:** SmithGroup, Detroit **Photographer:** Justin Maconochie, Ferndale, MI **Project Size:** 56,000 square feet of illuminated façade **Watts per Square Foot:** 0.31 **Cost:** Withheld at client's request **Manufacturers:** Elliptipar, Invue, io Lighting, Lumière

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# LED MOUNTING DETAIL

FULL SCALE





## hotel puerta america

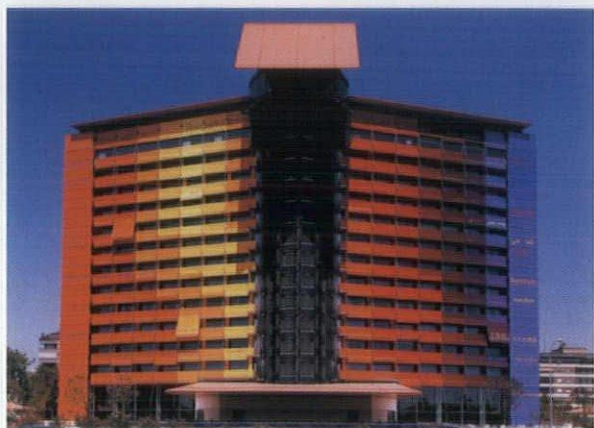
ENTRANT **ISOMETRIX LIGHTING + DESIGN**

Touted as one of the "it" projects of 2005, owing to its exorbitant price tag and cadre of 19 notable designers, the 342-room, 12-story Hotel Puerta America on the outskirts of Madrid simultaneously enralls and confuses. The project concept was "to create a hotel that was unique, merging different ways of seeing architecture, design, and art." And in that sense, Hotel Puerta is a success, creating an eclectic sensory experience both calming and disruptive as guests move between spaces and styles. The work of the architects, designers, and landscape architects involved in the project follows either a luxurious modern aesthetic or a hi-tech futuristic design typology. In contrast, the lighting for these diverse spaces was the charge of a single firm, London-based Isometrix Lighting + Design, which had the monumental task of coordinating the building's lighting scheme, while supporting the design concept of each architect and designer, a feat recognized and applauded by this year's Design Awards jury.

The lighting scheme responds individually to each space—from the restaurant's custom pendants to cold cathode in the fourth-floor corridor to the LED installations used by several of the architects—with an attention to detail and fluid incorporation within the architecture that display two of the few, if only, constants in the building. As explained in the entry submission, "The demand for cohesion from the lighting meant that the strictest observance to subtly integrated details, color temperature consistency, and practical operation had to be given to ensure that each space, each concept had a singular clarity, but one that formed part of an integrated whole." Isometrix's solutions concealed light sources wherever possible, and with few exceptions—the 12th-floor suites designed by architect Jean Nouvel, and the lobby bar by Marc Newson—refrained from colored lighting in order to bring the diverse material palette to the fore.

Throughout the project, Isometrix relied on two core lighting approaches: indirect coves and lighting within furniture elements. To provide a color rendering supportive of the warm ambience associated with hotel environments, the guestrooms and suites rely on either xenon, tungsten halogen, or a combination of both sources for their illumination. The rooms are also outfitted with a four-scene lighting control panel that allows guests to control the effects in their rooms. The integration of architectural form and light is apparent in the floors designed by Kathryn Findlay, Norman Foster, and Plasma Studio. It is also present in the spaces by Zaha Hadid and Ron Arad, who used a material produced by LG Electronics called Hi-Macs, a ductile Corian and fiberboard composite that allows fluid planar surfaces, creating illuminated furniture pieces that amorously emerge from the walls.

There is no doubt about the expert execution of these diverse spaces, and it is clear that the lighting design does more than simply illuminate. In what might otherwise be a dizzying array of elements, the lighting design for Hotel Puerta emerges as a sophisticated and unifying response. **A|L**



### jury comments

How one lighting designer could work with a diverse field of architects and capture the essence of each design is truly remarkable. — The range and versatility of the lighting is amazing.

### details

**Project Location:** Madrid **Architects/Designers:** Teresa Sapey, parking lot; BB UK, landscape and public realm; John Pawson, lobby, conference rooms, mezzanine (PHOTO 3); Christian Liaigre, restaurant and breakfast room; Marc Newson, lobby bar (PHOTO 5) and Floor 6 (PHOTO 7); Zaha Hadid, Floor 1; Foster and Partners, Floor 2 (PHOTO 6); David Chipperfield, Floor 3 (PHOTO 2); Plasma Studio, Floor 4; Victorio & Lucchino, Floor 5; Ron Arad, Floor 7; Kathryn Findlay and Jason Bruges, Floor 8 (PHOTO 1); Richard Gluckman, Floor 9; Arata Isozaki, Floor 10; Estudio Mariscal, Floor 11 (PHOTO 4); Jean Nouvel, Floor 12, penthouse, façade **Lighting Designer:** Isometrix Lighting + Design, London **Photographer:** Rafael Vargas, Barcelona **Project Size:** 340,000 square feet (approx.) **Watts per Square Foot:** N/A **Cost:** \$5 million (lighting, unconfirmed purchase price only); \$96 million (overall construction, approx.) **Manufacturers:** Agabekov, Ardee, Ardis, Artemide, Belfer, Clay Paky, Cube, Encapsulite International, Fontana Arte, iGuzzini, Light Graphix, Light Corporation, Louis Poulsen, Lucent, Lucifer, Modular, Oldham, Osram, Wever & Ducré, We-Ef

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## white noise | white light

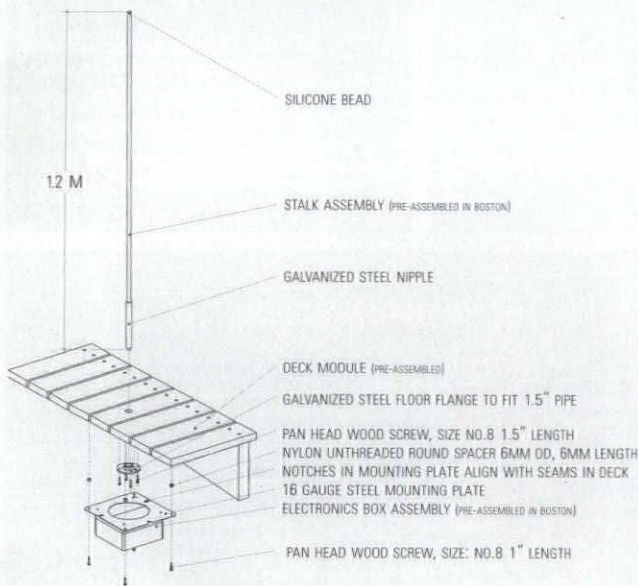
ENTRANT **MY STUDIO**

In preparing to host the 2004 Summer Games, Athens extended its imaging campaign beyond athletics to include culture and architecture with a program called "Catch the Light: Routes through Athens." Designed to introduce visitors to parts of the city other than just the Olympic venues, "Catch the Light" celebrated Athens, past and present. Nine international artists/design teams were invited to create temporary interactive art installations along five prescribed walking routes through the historic city center. *White Noise | White Light*, conceived by architect and Massachusetts Institute of Technology faculty member J. Meejin Yoon, with the help of a team of young design and engineering professionals, interpreted the spirit of the city through light and sound.

Located at the plaza entryway to the Ancient Theater of Dionysus, adjacent to the public walkway leading up to the Acropolis, the project—a field of 4-foot-tall fiber optic "light stalks" embedded in a 6-inch-high wooden platform—occupied only 50 square feet (*facing page, bottom*). The pliant fiber carried the light (supplied by three white LEDs) through the stalk to a silicone endcap (*left*). The stalks responded to pedestrian movement, swaying as visitors brushed by. "We wanted the installation to be a piece of artificial nature in the city, and we were interested in the relationship of the stalks to one's body," says Yoon. The stalks initially illuminated at 40 percent, and as people moved through the field and touched the fiber wands, they brightened to 100 percent output. Simultaneously, concealed speakers under a raised platform activated to emit electronic sound samples, collectively creating a field of "white noise." Through the experience, visitors interacted with the city—as both a generators and manipulators of light, sound, and space.

The entire installation was implemented as a design-build project. That meant extensive pre-planning, and pre-assembly of all the major components, from the circuit boards to the custom housings to the fiber optic "light stalks," so that everything could be shipped from Boston to Athens for on-site construction and installation (*facing page, top*).

Although temporary, the project made an impact. "We wanted to achieve something that was poetic, quiet, and powerful all at the same time," says Yoon. Visited by close to 10,000 people a day in Athens, the project was installed for a second time in May 2005 in Cambridge on the MIT's Kresge Oval (*below*). **AJL**



### jury comments

This is a seminal work that will influence future projects because it broadens the definition of lighting. ∞ Reinforces the need for and importance of artistic explorations. ∞ Uses limited resources creatively.

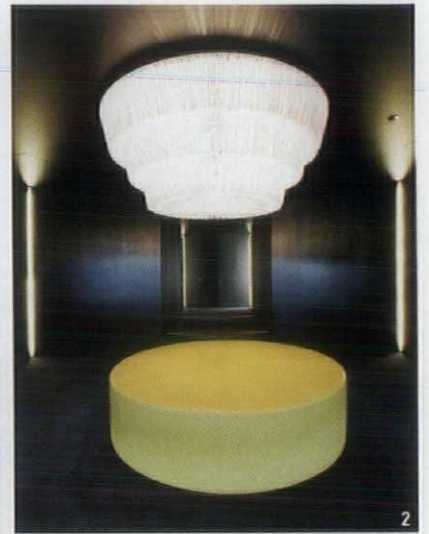
### details

**Project Locations:** Athens and Cambridge, MA **Architect:** MY Studio, Boston **Project Team:** J. Meejin Yoon, Eric Howeler, Matthew Reynolds (engineer), Marlene Kuhn, Kyle Steinfeld, Lisa Smith, Naomi Munro **Photographer:** J. Meejin Yoon **Project Size:** 1,625 square feet **Watts per Square Foot:** .066 (450 lighting units x .24W produced by 3 LEDs per unit) **Lighting Cost:** \$60,000 (lighting, sound, and interactive components fabricated and installed); \$34,000 (LEDs and fiber optics) **Manufacturers:** Liteon (LEDs); lighting modules custom designed and fabricated by the project team

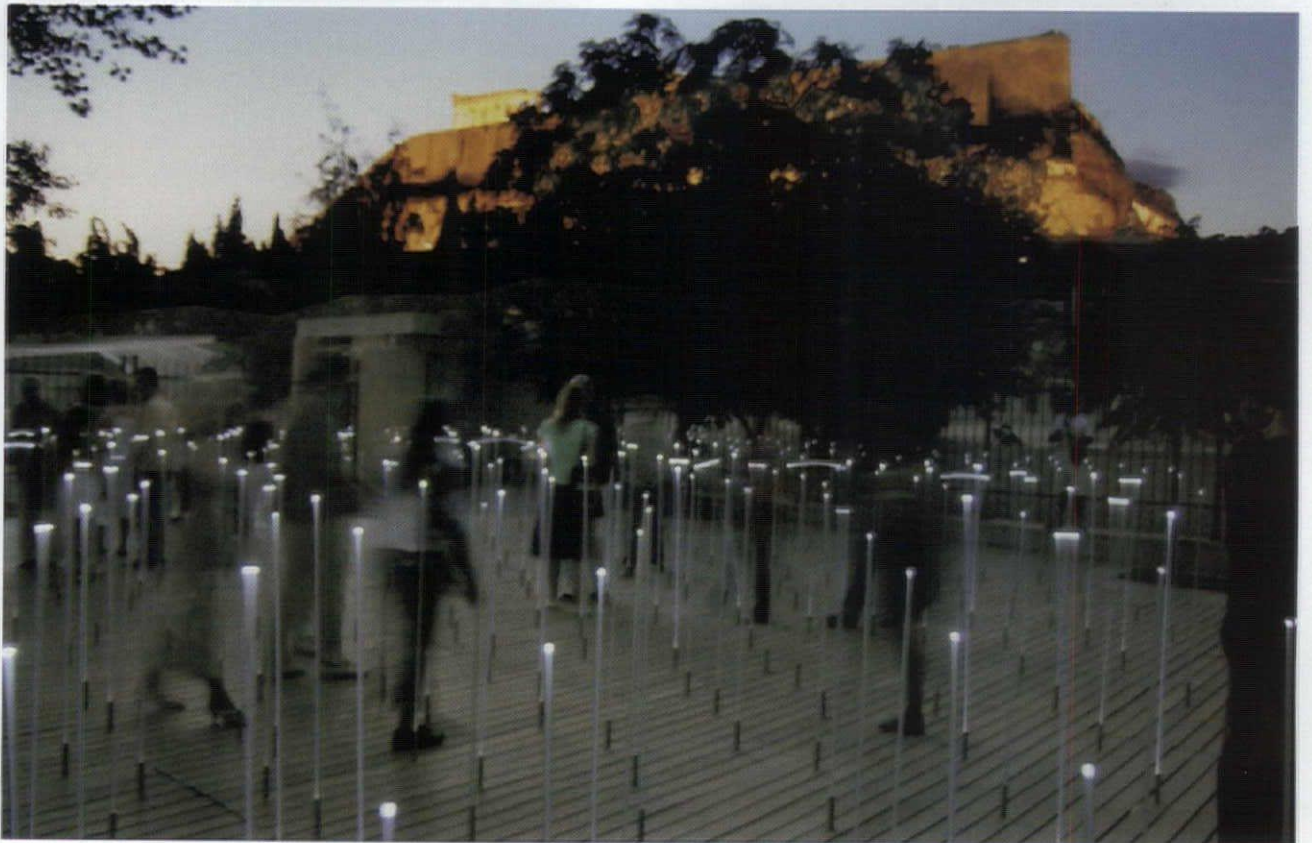
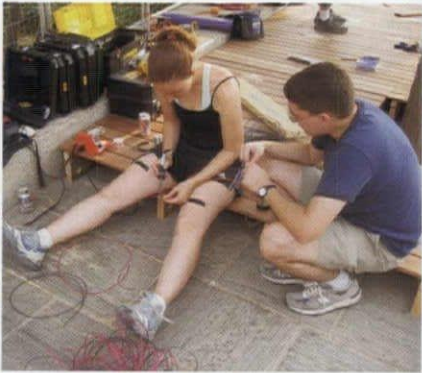
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## flexsystems

ENTRANT **DEREK PORTER STUDIO**

A creative-thinking developer and industrious design team have proven that the mundane can be beautiful with FLEXsystems, a self-storage facility in a blighted neighborhood of Topeka, Kansas. Recognized by the A|L Design Awards jury for the graceful and thorough way in which its unpretentious solutions came together, the structure exemplifies what can be achieved when architecture and light are considered integral pieces of a whole, no matter how simple the building type may seem.

The recommendation of a study conducted by the developer for the reclamation of an old strip mall, the project included not only an architect, but a lighting designer and a landscape consultant—unusual in the slap-it-up world of storage facilities. Equally unusual, was the developer's agenda that the building be a "symbol of renewal, as well as a catalyst for redevelopment and revitalization," notes the submission form.

The resulting building is simultaneously pragmatic and elegant. Most of the materials were catalog-ordered. On the north side, ribbed-metal overhead doors in four custom colors punctuate a band of corrugated Galvalume, which is crowned with an 11-foot-tall horizontal expanse of polycarbonate glazing (*facing page, top*). Tongue-and-groove cedar planks line the underside of the roof overhang and the entrance. These materials speak of simplicity, which also defines the lighting approach.

Derek Porter Studio employed three off-the-shelf solutions to illuminate the entire building. Integrated adeptly into the architecture, the fixtures provide functionality and personality for the structure at night. In particular, the luminaire arrangement at the north-side loading dock speaks to the project's incorporation of the practical with the aesthetic: A wet-location industrial fixture, with a cold-weather ballast and vandal-resistant polycarbonate lens, placed in a cove between the façade and the rolling door, simultaneously illuminates the loading dock and, when the door is up, the interior of each unit, while also washing the colorful doors with light for visual punch. Above, the glazing glows nocturnally with illumination from the same core source—4-foot T8 fluorescent strip-lights—mounted inside. (The glazing also allows ample daylight to enter the space.) The third solution appears in the office, an arrangement of the same T8 lamps customized to create a decorative pendant (*left*).

By day, FLEXsystems brings a viable business in an aesthetically refreshing form to a depressed area; by night, a well-conceived lighting strategy gives the building a similarly hopeful identity. **A|L**



### jury comments

It's wonderful because there is nothing extra. Considerate use of daylighting. It's so "other" in comparison to other entries. A beautifully simplistic design solution that is visually successful.

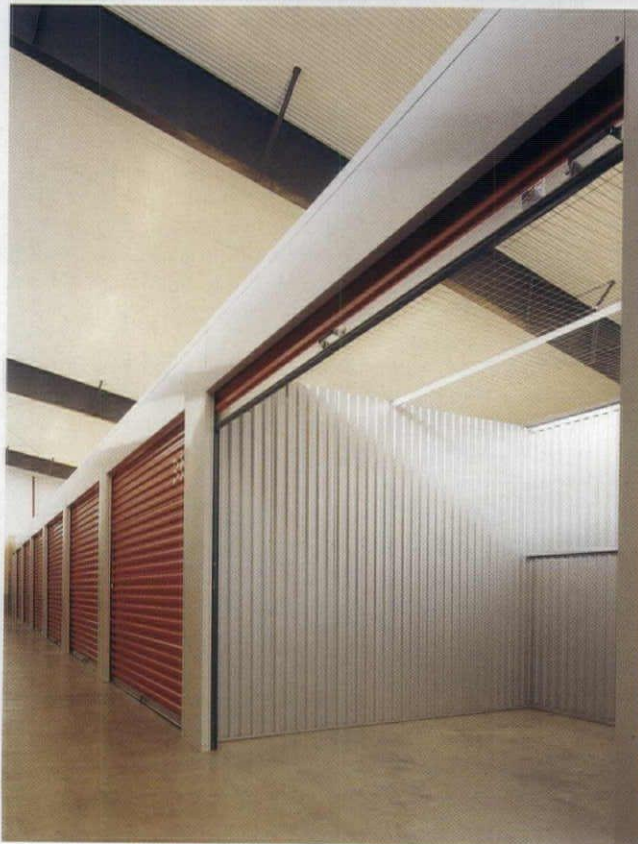
### details

**Project Location:** Topeka, Kansas **Architect:** El Dorado Architects, Kansas City, MO **Lighting Designer:** Derek Porter Studio, Kansas City, MO **Photographer:** Mike Sinclair, Kansas City, MO **Project Size:** 24,000 square feet **Watts per Square Foot:** not provided **Costs:** approx. \$60 per square foot (overall construction) **Manufacturers:** H.E. Williams, ACE Ballast

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# higgins hall central wing

ENTRANT **ARC LIGHT DESIGN**

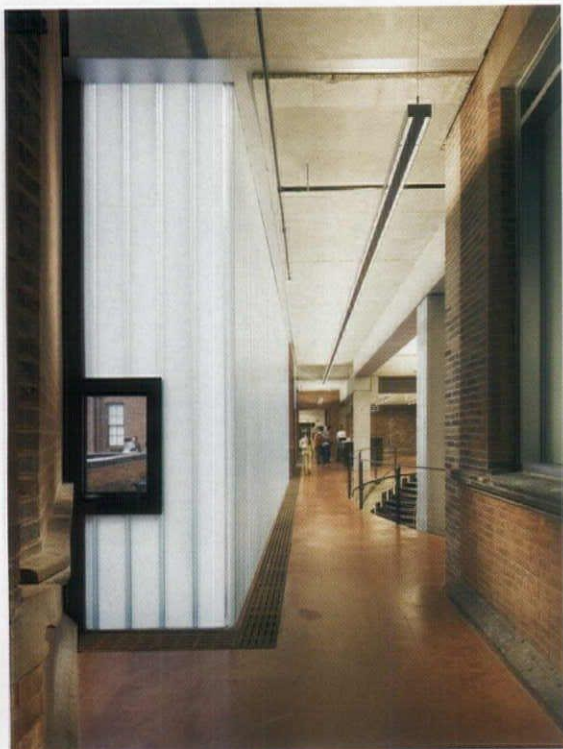
Designed by Steven Holl Architects to reunite the two wings of Pratt Institute's School of Architecture left standing after a devastating fire in 1996, Higgins Hall's new central addition infuses modern character into the school's historic aesthetic and landmark status. Praised by the A|L Design Awards jury for its use of light as a way to understand the connection between the new contemporary structure and its Victorian flanks, the project was also noted for its high level of daylight integration.

Semi-transparent interlocking U-shaped structural channel glass comprises the four-story façade, through which the weathered brick of the existing adjoining wings is visible (*facing page, top*). For an academic program that requires 24-hour accessibility, the glass became a solution for the students' safety: the interior illumination within creates a nighttime glow, while broadcasting signs of activity.

Despite the visual distinction between the old and new structures from the exterior, the interior design is fluid. The lighting scheme, realized by Arc Light Design, is minimal yet sophisticated. In keeping with the geometric patterns throughout the entire hall, the center section is illuminated by several variations of one custom linear pendant, manufactured by Day-O-Lite. Suspended below the expanse of exposed concrete, these indirect fixtures highlight the ceiling's texture, while generating ambient light in the space. "We wanted the lighting to be minimal, yet provide enough illumination for the students to be able to work," explains David Singer, president of Arc Light Design. Enhanced by daylight via the glass façade and a double-throated skylight, the design produces an even and flexible indirect illumination that—with luminaires allowing for four brightness levels and the option to bring in task lamps—leaves room for students to create their own environment in the studio (*facing page, bottom*).

Other spaces in the new building include a lobby (*left*); an exhibition gallery, its walls lit with T8 fluorescent billboard fixtures; two classrooms; and a lecture hall, accessed through a corridor in the basement where continuous single-lamp T8 industrial channels are set into cast-concrete coves. From the lobby, a staircase leads to the basement, where a two-story space is illuminated by integrated dimmable tracklighting (*below*).

Higgins Hall central wing's minimalist lighting design emphasizes the structure's architectural composition and embodies an integration of elements that, while seemingly simple, create a well-orchestrated scheme. **A|L**



## jury comments

Highly integrated and really covers all the bases. ∞∞∞ It is incredibly well organized and orchestrated. ∞∞∞ There is something about the simplicity in its means.

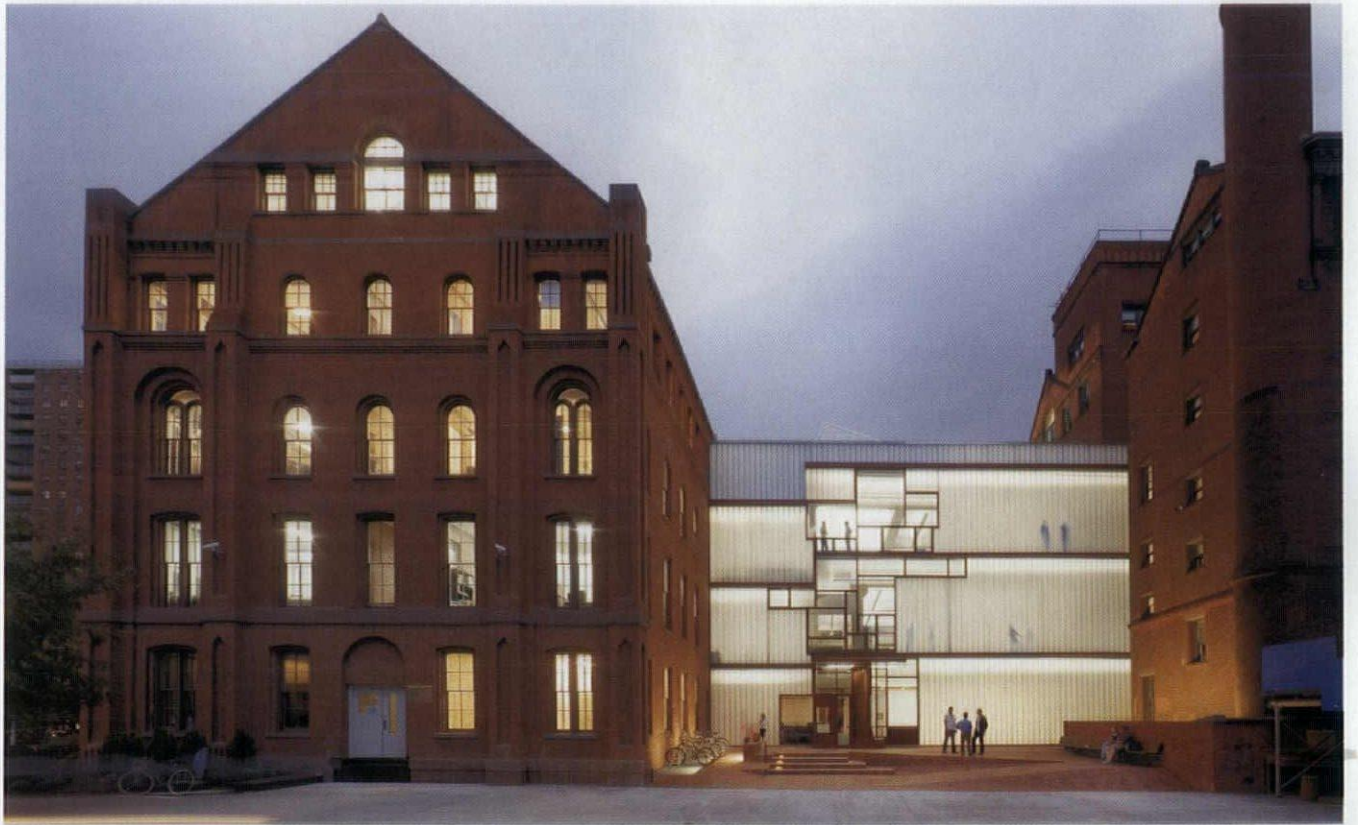
## details

**Project Location:** Brooklyn, NY **Architect:** Steven Holl Architects, New York (design architect); Rogers Marvel Architects, New York (architect of record) **Lighting Designer:** Arc Light Design, New York **Photographer:** David Sundberg/Esto **Project Size:** 22,550 square feet **Watts per Square Foot:** 1.4 (first floor excluding gallery), 1.55 (studio on second and third floors), 1.1 (basement excluding lecture hall), 2.2 (lecture hall) **Cost:** \$200,000 (interior and exterior lighting installed) **Manufacturers:** Columbia, Day-O-Lite, Elliptipar, Lightolier, Lutron

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## carlton hotel lobby

ENTRANT FOCUS LIGHTING

When New York's Carlton Hotel (originally built in 1904 as the Seville Hotel) underwent extensive renovations in 2001, a new identity was created, as well as a new look. Focus Lighting was charged with designing a lighting scheme for the lobby that would tie into the concept of "faded elegance," recalling the glamour of past eras. "We wanted to create a sense of drama," says project lighting designer Michael Cummings, "but still make the space comfortable and inviting."

To achieve this, Focus Lighting drew on theatrical techniques and multiple light layers. "We didn't want a cold, sterile scene," Cummings says. Nor did the designers want it to feel too glitzy or theme-park-like. The team accomplished this by juxtaposing modern materials against more classical elements. For example, crystal chandeliers hang from the ceiling above the main seating area, but are sheathed in a metal and sheer-fabric drum to make them softer and less imposing (*facing page*).

Several features serve as focal points in the lobby. The reception desk contains brightly illuminated frosted-glass panels, backlit with low-voltage socket strips. Lining the perimeter of the main seating area are quoin-patterned columns, covered in ultra-suede, with orange-glass panel centers that draw the eye vertically. Linear low-voltage socket strips, set behind the glass, glow softly.

To provide a balanced lighting solution for the double-height volume, theatrical fixtures are hidden in the ceiling coves, creating an upper layer of light. In the center of the ceiling is a "skylight" (*below*), which suggests a natural light source from above. In keeping with the theatrical nature of the space, it is outfitted with color-changing capabilities that can shift from pale amber to lavender, as well as different intensities. "It helps us create varying moods from day to night," Cummings explains. Because the lobby was new construction (the adjacent building lot was purchased in order to expand the footprint), a catwalk was added above the ceiling, allowing for easier fixture maintenance.

By far the most dramatic feature of the lobby is the water wall (*left*), a 24-foot glass sheet covering a fabric-printed archival photo of the building, backlit by four fiber optic panels. The image is alternately abstracted, the result of the fiber optics' shifting wave pattern, which responds to the water's movement.

Noted by the jury for an elegant lighting solution that successfully reinforces the design concept while establishing a sense of atmosphere, the Carlton Hotel lobby remains contemporary while referencing its ties to the past. **AJL**



### jury comments

Very successful in not simply recreating architectural history, but rather enhancing it with modern accents. ∞ The lighting complements the rich material palette and provides a cohesive feeling to this sophisticated space.

### details

**Project Location:** New York **Architect:** The Rockwell Group, New York **Lighting Designer:** Focus Lighting, New York **Photographer:** J.R. Krauza/Focus Lighting **Project Size:** 3,300 square feet **Watts per Square Foot:** 6.5 **Cost:** \$245,000 (lighting fixtures only, installation costs unknown) **Manufacturers:** Altman Lighting, Chris Freeman Designs, CSL, ETC, Hydrel, Lightolier, Litelab, Lucifer, RSA, TPR

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## morimoto nyc

ENTRANT ISOMETRIX LIGHTING + DESIGN

At Morimoto, the namesake restaurant of celebrity chef Masaharu Morimoto, the focus is culinary. So when Isometrix Lighting + Design was asked to illuminate the chef's new Manhattan venue, it unified disparate materials and embraced the asymmetrical layout to create a cohesive, comfortable atmosphere for this multi-level dining experience.

The restaurant was designed by Japanese architect Tadao Ando, an avowed minimalist, and the lighting respects his aesthetic. "It is about illuminating things in a hidden way," says lighting designer Gerardo Olvera. Materials range from concrete to gold leaf, and the lighting embraces this diverse palette of color and texture.

One of the restaurant's most compelling features is a resin-filled fabric ceiling, which signifies the first time Ando has worked outside his signature all-concrete material palette. Floating over the 160-seat dining room, the tent-like enclosure provides a unifying element for the different seating configurations. The undulating folds of the material are lit with high-intensity PAR56 projectors concealed above the ceiling and AR70 stemlights poking through, producing a play of light and shadow. Xenon striplights fill the gaps between the ceiling's main "seams" and cast a restrained glow over the entire dining area (*facing page, top*).

Another of the restaurant's focal elements is its clever play on a water feature. A double-height "water wall," which anchors the main stair leading to the downstairs bar and lounge areas, is comprised of over 17,000 horizontally suspended amorphous-shaped water bottles—designed by British industrial designer Ross Lovegrove for water company Tynant—forming a life-sized Lite-Brites board (*facing page, top*). LEDs embedded within the two-bottle-deep wall range in color from 3200K to 5000K and are inserted length-wise into every third row of bottles, creating a pattern of cool and warm white light. The water within the bottles diffuses the LEDs, and the overall effect is a sparkling vertical chandelier.

A second bottle wall acts as the backdrop for the downstairs bar, where the challenge was to create a sense of unity, since xenon-filled lamps, tungsten halogen, and LEDs were all at play (*below*). Isometrix married the industrial clear resin of the bar countertop and the red-painted clapboard lounge walls through the lighting (*facing page, bottom*). Purple LEDs are embedded in the custom counter, and the clapboard is illuminated with cold cathode.

Balancing the diversity of light sources and color temperatures was a major challenge for this design. The result is a solution that reinforces the architectural composition, celebrates the material palette, and creates a memorable fine-dining experience. **AIL**



### jury comments

The rich materials contribute to what is clearly an exciting dining experience. ∞ The illuminated ceiling is a beautiful element. ∞ An inventive and accomplished lighting solution.

### details

**Project Location:** New York **Architect:** Tadao Ando Architect & Associates, Tokyo **Lighting Designer:** Isometrix Lighting + Design, London **Additional Designers/Consultants:** Goto Design Group; Guggenheimer Architects; Thomas Polise Consulting **Photographer:** Gerardo Olvera/Isometrix **Project Size:** 8,645 square feet **Watts per Square Foot:** 7 (approx.) **Manufacturers:** A&L, Ardee, Atlite, Bartco, Belfer, B-Light, Electrix, Exterieur Vert, Halo, io Lighting, Lamar, Litelab, Lucifer, Times Square Lighting, W.A.C.

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## briarcliff residence

ENTRANT DEREK PORTER STUDIO

Basements are often poorly lit places—think single light bulb in a socket and a pull chain—and function as the repository for unwanted items, a kind of personal flea market within your own living space. However, this basement, a renovation for a young family into a secondary living area with guest rooms and a gym, is anything but dark and forgotten. Here, the architectural and lighting design takes basement living to a new level.

Interior architecture firm R.M. Lambson and lighting design practice Derek Porter Studio collaborated from the project's inception to craft a space that integrates their two disciplines, and allows the inhabitants "to become aware of the spatial envelope," says principal Derek Porter. The modern and contemporary treatment departs from traditional approaches to residential lighting, where illumination usually takes the form of individual objects. "In a traditional home," explains Porter, "light exists in pockets, not expanses." In the Briarcliff residence, horizontal and vertical planes create architectural reveals and provide a location for lighting elements (*below*). The space itself becomes the fixture, as light emerges from the walls and ceiling.

Because the entire space is below grade with minimal access to natural light, the design relies on electric light to play a dual role: to illuminate the space and to provide a quality of light reminiscent of daylight. Porter accomplished this by employing mainly fluorescent sources. "There is a misconception about fluorescent lighting," he says. "By default, people think it can't be used." But in fact, the color temperature (3500K) is fairly neutral and lends itself to the coolness required for such a contemporary space.

Throughout the project, dimmable T5HO fluorescent strips in architectural coves define the edges of the horizontal and vertical surfaces, while casting an ambient glow. T8 lamps provide tasklighting at the kitchen work surfaces (*facing page, top*). The galley kitchen is also accented with an illuminated column. Fiber optic cable is wrapped around a pole and permanently encased in translucent glass, which acts as a light diffusion device (*left*). In the dining and living room areas, ceiling-recessed low-voltage trimless fixtures complement the cove-lighting, and are the only time incandescent sources are used. A fireplace located at the far end of the dining area offers another form of ambient luminescence in the basement (*facing page, bottom*). The solution for this unique space reconsiders techniques for residential lighting, and the jury commended the work for its innovative approach to a project type that often does not receive such focused attention. **AJL**



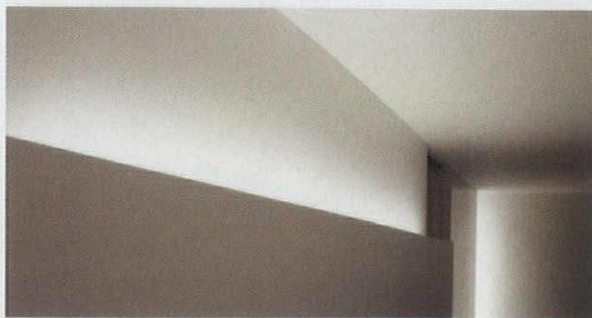
### jury comments

A clear and direct approach. ∞∞∞ The project creates frames of light and explores the boundaries of surfaces. ∞∞∞ A sophisticated lighting solution for an often neglected type of space.

### details

**Project Location:** Kansas City, MO **Interior Architect:** R.M. Lambson, Kansas City, MO **Lighting Designer:** Derek Porter Studio, Kansas City, MO **Photographer:** Michael Spillers, Kansas City, MO **Project Size:** 1,850 square feet **Watts per Square Foot:** 1.10 **Cost:** N/A **Manufacturers:** Alkco, Fiberstars, H.E. Williams, RSA

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## postscript

While it is important to commend outstanding projects, the discussion that leads to those selections also deserves mention, for without this debate, one of the more distinctive aspects of the design process—dialogue—would be missing. Every year, a number of projects, though ultimately dismissed, capture the attention of the jury. They may not receive a citation, but these projects provide an important contribution to the discussion and the overall review process.

This year, six projects found themselves at the center of extended debate. The reasons were many, including design and technical qualities within the projects themselves, and broader issues pertaining to the awards process, such as categories and the quality of entry materials, particularly photography. Simultaneously engaging and perplexing, these projects raised as many questions as they answered.

One such submission dividing the group was the Copenhagen Opera House. A few were impressed with the diverse array of lighting solutions in a project of this scale. However, others questioned if all the elements acted cohesively to form a united lighting scheme. The “Ashes and Snow” exhibit at the Nomadic Museum (Santa Monica, California, installation) also split the jury. While some thought it was successful precisely because of its integration with the architecture, other members debated whether work that was so reliant on another part of the design could actually be evaluated on its own.

In a first, there were no winning projects submitted in the Architectural Lighting Virtuosity Achievement (ALVA) categories (Best Lighting Design on a Budget, Best Use of Color, and Best Incorporation of Daylighting). The jury found several entries that illustrated aspects of the ALVA honors, but without the proper supporting materials (submissions for ALVA require additional documentation), the jury and the editorial staff did not feel a full and fair evaluation could be made. Nevertheless, the discussion around these projects was compelling.

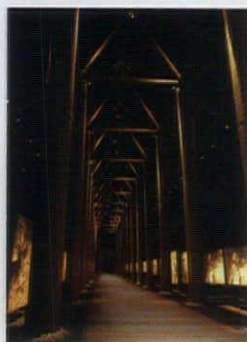
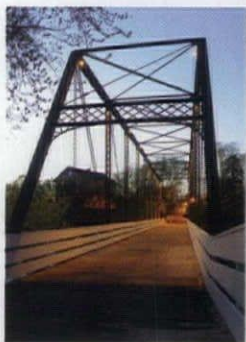
In the case of Hanover Bridge, the jury appreciated the design sensitivity to a historic structure, but questioned the selection of an incandescent system for an exterior application. Its greatest success was the \$26,000 installation cost.

On the subject of color, the jury was very specific in its criteria: color should have a purpose or tell a story and that story should be clear. Two projects—ImageNet Dallas, a production facility, and the Rayko Photo Center—contributed interesting points to this discussion, although from opposite perspectives. At ImageNet Dallas, the use of the color blue had meaning, tying into the corporate branding of

the company, and delineating between public and private areas. The Rayko Photo Center intrigued the jury because of its absence of color.

The Williams College theater and dance facility exhibited an interesting “modulation of daylighting as a transition strategy” from exterior to interior, but the jurors’ reservations in evaluating the project were twofold: not enough information specific to this ALVA category, and concern that their opinion was being swayed by beautiful project photography.

Discussion around these six projects helped the jury clarify its thoughts about the projects to which it did award citations. While this is perhaps little consolation to the entrants of the non-selected projects, all should be assured that without this important contribution to the design review dialogue, the awards process would not be as rich. **AJL**



From top, left to right: Copenhagen Opera House (entrant: Spiers & Major); Hanover Bridge (entrant: Meyer, Scherer & Rockcastle); “Ashes and Snow” at the Nomadic Museum in Santa Monica, California (entrant: Visual Terrain); RayKo Photo Center (entrant: H.E. Banks + Associates); ImageNet Dallas (entrant: Elliott + Associates); Williams College ‘62 Theater for Dance (entrant: Horton Lees Brogden Lighting Design).



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## MOODY'S KMV OFFICES, SAN FRANCISCO

**CHALLENGE** When Moody's, a Manhattan-based investment firm, acquired KMV, a San Francisco-based credit-risk-management technology company, it needed a headquarters capable of integrating the two corporate cultures and an increased number of employees. The building—at 405 Howard Street in Foundry Square, San Francisco's dot-com neighborhood—boasts one of the city's largest floor plates, and easily houses the merged staff. While this arrangement eliminated the difficulty of circulating employees throughout stacked levels, it posed the problem of dividing the expansive office in a clear, meaningful way. "We had to organize the program elements so they were conducive to workflow, as well as to public interaction," says Sascha Wagner, a project architect with Huntsman, the design firm on the job.

**ARCHITECTURAL AND LIGHTING SOLUTION** To add coherence to this single third-floor level, a series of urban planning concepts was employed. A large central atrium that pierces the third through tenth floors of the ten-story building became the "Town Square," around which the mailroom, copy rooms, visitors' lounge, and public areas are arranged. Intersecting the Square is "Main Street," a large hallway off of which are conference rooms, a cafeteria, and a break room. Main Street also leads to the "Neighborhoods," open workstations situated against the building's exterior walls.

Lighting played an important role in making this arrangement work. "We used a combination of lighting and materials to establish wayfinding," says Wagner, "illuminating important areas with intensity and the rest of the spaces diffusely."

The entry sequence is the first example of this approach. Lit with recessed cove fixtures and AR111 lamps, the elevator lobby is a simple white box, with one exception: the company signage—a blue glowing frosted-glass panel, backlit with 28W T5 fluorescent strips. The real lure, however, is the decorative 48-inch-diameter cherry-wood chandelier hanging in the adjacent reception area, outfitted with 150W incandescent lamps. This draws visitors into the Town Square, illuminated with natural light by day, and by square recessed downlights lamped with compact fluorescents by night.

From the reception area, visitors are led to Main Street by other eye-catching elements: Walnut flooring gives way to random-striped carpeting in the thoroughfare, and two walls, one with green tiles and another with a painting, brilliantly lit with 75W PAR30 wallwashers, function as the primary wayfinding devices.

Combining elements of architectural interest with greater light intensities was a technique put to work throughout the headquarters. The designers opened up the ceilings to optimize the airy feeling of the space. Unassuming 28W T5HO linear indirect pendants set on dimmers provide illumination in the office areas. A custom polycarbonate box along the ceiling, holding 28W T5 fluorescent strips, washes the glass panels enclosing the adjacent private offices.

Moody's success showcases a rich design accomplished with simple means. By highlighting important areas with an architectural gesture and light, Huntsman both aided circulation across an expansive floor plate, and imbued an otherwise confusing space with intuitive logic. **AARON SEWARD**

### DETAILS


**PROJECT** | Moody's KMV Offices, San Francisco

**DESIGN TEAM** | Huntsman Architectural Group, San Francisco (architecture and lighting)

**PHOTOGRAPHER** | David Wakely, San Francisco

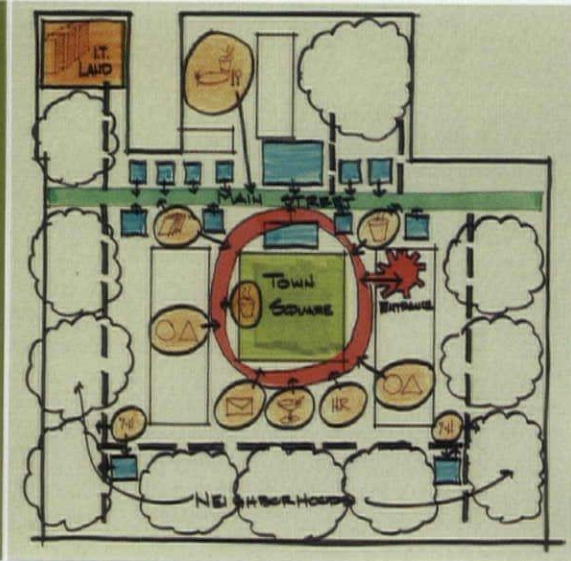
**PROJECT SIZE** | 58,300 square feet

**MANUFACTURERS** | Erco, Indy Lighting, Lampa, Lithonia, Peerlite, Prescolite

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Below, from left: Huntsman Architectural Group's initial concept sketch; reception area. Above: office area.





## CLAYCO HEADQUARTERS, ST. LOUIS

## DETAILS

**PROJECT** | Clayco Headquarters, St. Louis

**DESIGN TEAM** | Forum Studio, St. Louis (architecture and lighting)

**PHOTOGRAPHER** | Sam Fentress, St. Louis (this page and facing page, top); additional images courtesy of Hunter Douglas Contract

**PROJECT SIZE** | 62,000 square feet

**WATTS** | 1 per square foot

**MANUFACTURERS** | Corelite, Delray Lighting, Halo, Hunter Douglas Contract, Lam Lighting, Lightolier, Lithonia, Lutrex, Metalux, RSA, Ushio, Vista Lighting, Watt Stopper

**CHALLENGE** When real estate and design-build firm Clayco rebranded in 2005, the company asked its architecture, interior design, and planning collaborative, Forum Studio, to update its St. Louis corporate headquarters, and moved both companies—previously separated by a parking lot—under the same roof. As Mike Benz, principal and senior designer at Forum, says, “What we were missing was the opportunity to take advantage of spontaneous collaboration.”

**ARCHITECTURAL AND LIGHTING SOLUTION** To accommodate the increased number of employees, Forum transformed the existing offices and attached warehouse into the type of space that Clayco desired: an open forum where clients can observe the working process, and a place where project team members are interspersed to foster a truly collaborative environment. By using a wide range of products and materials, and exposing the building’s structural and mechanical systems, Forum added another dimension to the design, a working showroom. “Clients can walk through and point to something that they might want to incorporate into their projects,” Benz explains.

Forum adapted half of the warehouse—approximately 18,000 square feet—for its studio, and renovated 80 percent of the existing offices to aesthetically and functionally connect the two distinct areas. In order for the office space to reflect the new studio design, Forum carved out large sections, transforming what was formerly a maze of corridors and private offices into an open, loft-like environment, replacing the lay-in ceiling and direct parabolic fluorescent 2x4 fixtures with a softer indirect lighting scheme for an airy, voluminous work environment throughout.

In the 24-foot-high entry lobby, which connects the warehouse and conference rooms, a floating central staircase leads to second-floor offices. Previously illuminated with skylights and canlights, the dark two-story volume was full of hard surfaces. As Benz explains, “We took it from a space of dark wood and brick, ancient coffee-can tracklights, and bad acoustics to one of lighter-colored materials, and indirect, diffused

natural light with specific accents on particular materials.” An existing linear skylight along the northern edge of the ceiling supplies ambient daylight, while in-ground metal halide uplights provide spiked accents on the concrete wall.

In the studio, the goal was natural light. Because the former warehouse had no access to daylight, Forum punched three 8-foot-wide-by-14-foot-tall windows into the existing concrete panels along the northern wall; four 5-foot-wide-by-10-foot-long triple-insulated frosted-glass skylights were installed down the center of the ceiling. To supplement the natural light, indirect 400W metal halide HID pendants—manipulated by daylight sensors located in the skylight wells—illuminate the exposed structural elements and ductwork on the ceiling. In addition to skylights in the existing office space, linear indirect T8 pendant luminaires on 14-foot centers uplight the ceiling, and existing parabolic fixtures were reused in private offices. “This gives us a variety of lighting strategies we can show to clients,” says Benz.

Throughout the headquarters, materials, such

as concrete, galvanized steel, and wood, remain consistent, as does the use of Techstyle by Hunter Douglas, a translucent ceiling system of “hanging clouds.” With both acoustic and luminescent properties, the 4-foot-square sheer polyester panels, backlit with both natural light and metal halide track-lighting, dampen sound in the voluminous space of the studio, while providing a softly illuminated cover to the entire building. The system, notes Benz, “combines the assets of a typical acoustical dropped ceiling—accessibility,

acoustics, and modularity. But what I really love is that for an ‘off-the-shelf’ product, it has a lot of sculptural, space-shaping capabilities.”

Having started in 1999 as a 9-person firm, Forum is now 68 in number, and is already renovating the remaining 18,000 square feet of warehouse for additional studio space. The environment, where work is put on display via open meeting rooms, communal areas, and a light-filled space, “seems to provide a delightfully serendipitous experience to all our visitors,” says Benz. **SALLIE MOFFAT**







The studio is enhanced with natural light from large skylights and windows for an airy, loft-like work environment (above). Throughout the headquarters, a translucent ceiling system dampens sound and provides a softly glowing sculptural dimension, seen in the lobby (below left) and in one of many open meeting spaces (below right). T5 pendants highlight orange ceiling panels in the "Think Tank" conference room (facing page).





## OFFICE SPACE


**SQUARE D CLIPSALE | DLT NEO KEYPAD |  
SQUAREDLIGHTINGCONTROL.COM**

Part of a line that includes touch screens and sensors, the DLT Neo Keypad controls up to eight lighting functions. Its proprietary labeling technology allows commercial building occupants to electronically label each button with text, symbols, or graphics according to preference. Keypad styles include Neo (gray and faux metal) and Saturn (glass and silver)—both of which offer remote controls, blue and orange LED switch indicators, and dimming, timer, and custom functions. **CIRCLE 125**


**METALUX | ACCORD |  
COOPERLIGHTING.COM**

According to the manufacturer, this luminaire exceeds ASHRAE 90.1-2001 standards by approximately 40 percent. It is available in 1-foot-by-4-foot, 2-foot-square, and 2-foot-by-4-foot versions—all with a depth of 3 1/4 inches. The fixture's recessed matte white powder-enamel housing takes T5 or T8 fluorescent lamps. **CIRCLE 126**


**PRECISION ARCHITECTURAL LIGHTING | LUMINATA II | PAL-LIGHTING.COM**

This 12-foot-long linear fluorescent fixture is available in wall-mounted and pendant versions with two-, three-, or four-lamp profiles. It can be lamped with T5HO or T8 fluorescents, and is offered in a variety of colors. Perforated or solid housings are available, and an optional isolation reflector can be used to produce 43 percent downlight. **CIRCLE 127**


**LIGHTOLIER | F7000 LIGHTING SYSTEM | LIGHTOLIER.COM**

This portable ambient tasklighting system includes six families of fluorescent luminaires offered in 3-foot lengths and lamped with two 39W T5HO fluorescents. Constructed of extruded or die-cast aluminum, the fixtures are available in table, floor (shown), panel, and binder-bin-mounted versions with a variety of diffusers, including perforated, striped, and solid shieldings and louvers, for different light distribution configurations. **CIRCLE 128**


**MINDSPRING | SOLO |  
MINDSPRING-LIGHTING.COM**

This sleek LED tasklight has a thin profile and measures 9 1/2 inches tall by 7 inches deep by 2 3/4 inches wide. Available in white or black, it is made of aluminum with a matte chrome finish and features a proprietary cooling system that uses a three-stage process to dissipate the heat produced by the luminaire's 49 LEDs. **CIRCLE 129**


**TAMBIENT | STYLE L201 | TAMBIENT.COM**

One in a family of workstation fixtures, Style L201 is designed to be mounted above seated eye level and below standing eye height to provide low-glare illumination for horizontal work surfaces. Available in lengths from 36 inches to 96 inches, the luminaire's aluminum housing measures 2 1/2 inches high by 6 inches deep and takes a T5 fluorescent lamp. Seven standard powder-coat finishes, as well as custom colors, are available. **CIRCLE 130**



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## Designing for a Sustainable Future...

AAL's Indirect product line added a sibling, the 'Straight Fixed Head'. The Dark-Sky Friendly luminaire produces soft, glare-free illumination making it a perfect match for applications where mood is just as important as illumination. The 'Straight Fixed Head' model is available for post and wall mount configurations and can be styled with a round or square upper reflector to compliment architectural themes. The Indirect product family utilizes energy efficient lamp sources up to 150 watts and Egress (emergency) options are available to enhance public safety.

For product information, log onto: [www.aal.net/indirect\\_sfh.html](http://www.aal.net/indirect_sfh.html)

Circle No. 34 or [www.archlighting.com/productinfo](http://www.archlighting.com/productinfo)

# Architectural Area Lighting

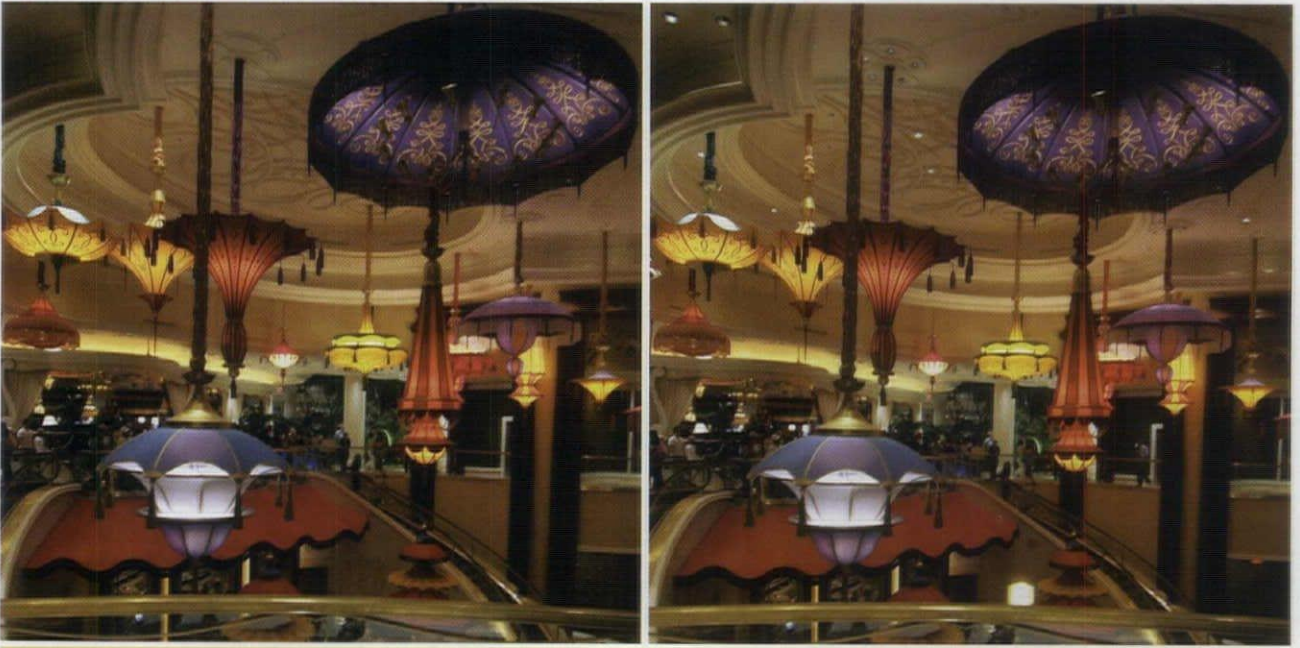




# A Primer for Digital Photography

BY JAMES BENYA

## STEPS TO TAKE WHEN RECORDING A PROJECT WITH DIGITAL IMAGERY



Edits to this photograph of the Wynn hotel and casino in Las Vegas are subtle but effective. The original image (right) was tweaked to remove the downlights that dot the ceiling and the light blob just below and right of center. A person was also deleted from the balcony right of center.

FROM MARKETING MATERIALS TO PRESENTATIONS, REPORTS, AND WEBSITES, DIGITAL images are an increasingly essential part of doing business, and the lighting industry is no exception. Yet, because of its rapid development and technical complexity, many pass up the opportunity to take full advantage of the technology. Whether photographing a prospective job site or recently completed work, a designer needs to be able to use a digital camera competently under a wide range of light conditions. And then, whether using a photo for marketing purposes, or to illustrate a proposed lighting scheme, that designer should also learn to manage and edit images. Here are a few basics for those developing these skills.

### MEET THE MEGAPIXEL

Digital images and cameras are rated in megapixels. A pixel is a dot, and in the printing world, picture quality is determined by the number of dots per inch (dpi): simply, the more pixels, the better. Magazine-quality printing requires a resolution of at least 300 dpi in both horizontal and vertical directions. So, for example, a standard 3x5 (3 inches by 5 inches) printed image requires (3x300) x (5x300) dots, or 1,350,000 pixels (1.35 megapixels). An 8x10 print demands 7.2 megapixels. If the original image has fewer pixels than needed, photo-editing software can attempt to fill in the missing dots, but the resulting picture will lack sharpness and detail.

However, most other uses of digital images require fewer pixels than typical digital photos record. For example, a full-page image on the average 1024x768-resolution computer screen or portable video projector only requires 0.8 megapixels. Even the most stunning professional-grade video monitors and projectors

require little over 4 megapixels. This suggests that for most practical uses, images over 4 megapixels are only necessary when 5x8 prints or larger are needed. And for many everyday uses, images of 1.6 megapixels or less are fine.

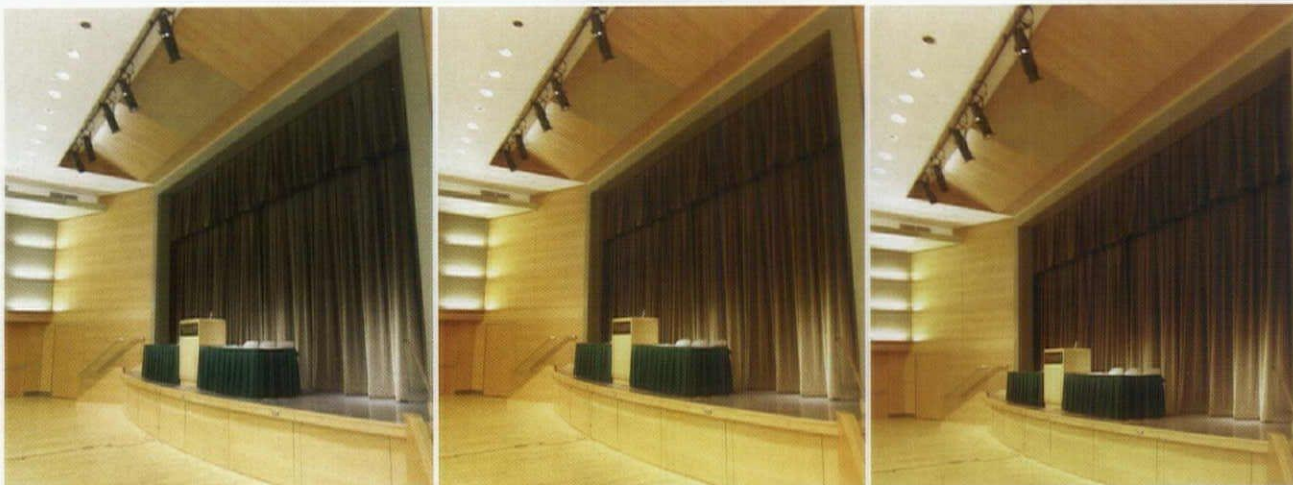
### IMAGE FILES

Each pixel has specific color and brightness qualities. Data for an individual pixel is contained in approximately 4 bytes of memory; so, for every megapixel, it takes about 4 megabytes of storage to retain the original image information. This "raw" data can be stored in one of several original file formats, the most common called "tagged image file format" or TIFF (.tif). Raw image files are often large, requiring a lot of storage space and transmission time when downloading from websites or e-mailing.

The solution is either to reduce the picture's total number of pixels, or to make the data set smaller by compression. Compression keeps the number of pixels the same, but carefully throws away unnecessary or redundant data. The most common compression method, called "joint photographic experts group" or JPEG (.jpg), creates files with varying levels of compression, from level 12 (minimum compression) to level 0 (maximum compression). Remember, compression permanently removes data in a careful and hard-to-notice way, but the greater the compression, the lower the final image quality. And once gone, you can't put it back.

Formatting a photo for the web usually requires both making the picture smaller and using compression. For instance, imagine designing a web page with text, pictures, and other graphics. You have an original 4-megapixel photograph in TIFF format. But you





Correcting color temperature and parallax are two of the most common photo-editing processes. Here, the original photograph (left) was adjusted for both. Red and yellow were added to warm the image (middle), and the frame around the stage opening was straightened (right).

only plan to fill a quarter of a 1024x768-resolution computer screen. In this case, the picture will be (1024x768)/4, or about 196,000 pixels. Even at this size, a TIFF file will require about 800KB of data—much too large for ordinary web use. So that websites download efficiently, it's best to use photo files that are no larger than about 50KB. JPEG compression level 3 will reduce this 0.2 megapixel file to about 49KB of memory.

**GET THE PICTURE**

Digital cameras continue to become more powerful and less expensive. The most unique requirement for interior lighting-related photography, however, is not a common amenity: an extra-wide-angle lens. As a simple rule, the camera should have the equivalent of a 24mm (or less) wide-angle lens (based on a 35mm camera). Not many cameras have this ability without a lens attachment or, in the case of a digital SLR, a special wide-angle lens that attaches to the camera body. A camera for less than \$500 will meet most needs; but it is often said that the lens makes the picture, so to publish or compete with photos, a better camera is a requisite investment. Expect to spend at least \$1,000 on a digital SLR with a truly great lens, keeping in mind that a top professional camera and lens system can easily cost over \$30,000.

Generally avoid the flash in favor of long exposures, which means using a tripod. There are several easily portable pocket

tripods and camera clamps. The flash can be used for casual photos and job-site records, but its color temperature—usually 5000K to 7500K—will normally be different than the interior lighting, and combined with the tendency to overlight foreground images, flash photos are not good at illustrating architectural lighting.

Digital cameras shoot light well because they are relatively insensitive to differing sources. The photographer can mix halogen and 3000K fluorescents in the same photo without worrying about the camera recording subtle differences in color temperature. In addition, the camera can automatically adjust to match the color of the lamps in the space. However, if two significantly different Kelvin sources are present, the digital camera must be set for a single color temperature (an advanced feature most cameras offer) and sources of other temperatures will stand out. Designers shooting two sources together, such as electric light and daylight, must either accept the result, or shoot multiple exposures and stitch the pictures together later with the proper color temperature for each.

The key to a great image is composition. Emphasize perspective by taking pictures from the corner of a room rather than the middle. Also be careful with the foreground: make sure there is something there! Often a photograph shows a big empty—and boring—floor. And take camera height (point of view) into account, as a lower camera position can make a room look taller and vice versa.

Digital photos are easily cropped and, if necessary, rotated. For

**FILL LIGHT: FRIEND OR FOE?**

As long as lighting designers have competed for awards, fill light has been a hot topic. In the hands of a master photographer, fill light makes every part of the interior visible. Not only is this preferred by design magazines, it often makes the lighting look better.

However, from a lighting designer's perspective, fill light is cheating. It adds

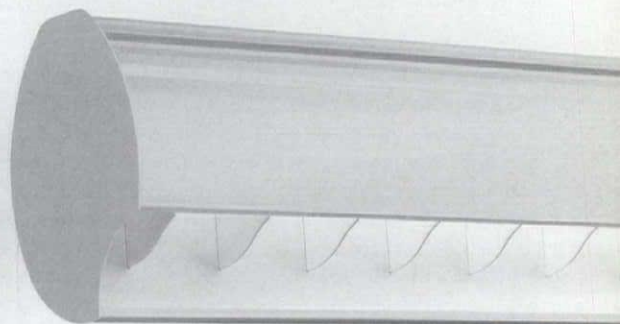
sources not specified by the designer, often to compensate for shortcomings in the lighting scheme. Fill light is as dishonest as, well, digital-image "surgery."

Should you add fill light? That depends on your needs and skill. I suggest a small amount of light, such as a table lamp beneath the tripod or an umbrella lamp near the camera, to elim-

inate foreground darkness. Having been a lighting awards judge, I believe this is minor and should not be held against the photographer or designer. But big-time fill light, such as massive uplighting of historic buildings, is another issue. It's not honest to show glorious architectural details that were only visible during the photo shoot.



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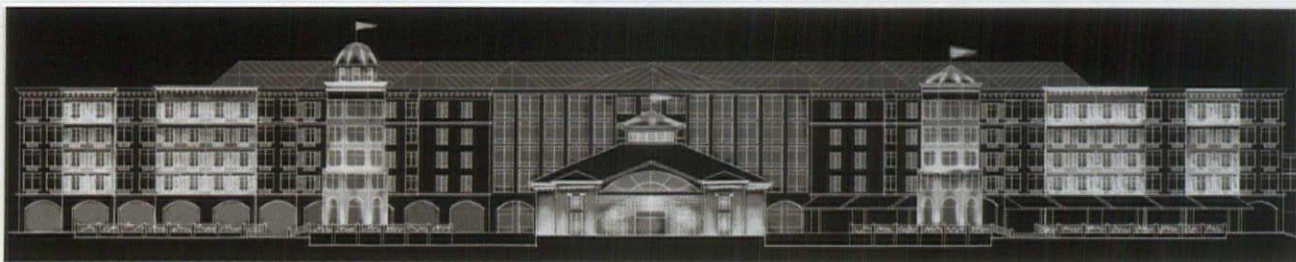
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The lighting concept for the Majestic Springs Resort (above) was developed in Photoshop using architecture firm Hnedak Bobo Group's elevation.

example, adjustments to the perspective (parallax) are often made after the fact. Unless taken with a very expensive camera and lens, any photograph of a structure—especially through a wide-angle lens—will exhibit bending or arcing lines.

**MANAGE THE PICTURE**

Most cameras and scanners are bundled with an image-editing program that will suit the casual user. The best-known, Adobe Photoshop, is relatively expensive, but those willing to buy and take the time to learn it will have developed an important professional skill. Even professional photog-

raphers are making the switch from film, as pixel count can now be high enough for crisp photos in all but the largest formats. No longer are sophisticated lenses with bellows and tilt-and-shift capabilities needed, either. Every common problem—including cropping, straightening the view, correcting for parallax, correcting for color temperature and saturation, and adjusting the brightness and contrast—can be fixed by software. In the hands of a skilled photo editor, major surgery can be performed.

**IMAGING EDITING AS PRACTICE**

Digital image editing and management are

critical new skills for the lighting designer. Using photo-editing programs, a designer can create simple illustrations of complex visual scenes, especially photos of existing buildings, without actual rendering software. Also, using photo-editing techniques, one can take a line drawing or rendering and artistically add lighting effects to illustrate a concept for a fraction of the cost of creating a computer-generated lighting rendering.

In one example, illustrated above, the architect developed drawings of the proposed building for community planning and architectural review groups. The community also required that the exterior lighting be described, well before actual schematic design had started. Using image-editing software, and working from the architect's line drawings, we created a "rendering" of the façade lighting. At relatively low cost, a compelling image was generated, and the project, including the proposed lighting concept, was granted approval to proceed.

Using these programs, a designer can also add "new" lighting to existing photos. It is often not practical to digitize a space with complex detailing, especially when developing quick concepts to gain schematic approval. Once again, a skilled editor can create realistic images that suit the need of the project for a modest cost in professional time. It is for situations like these that, when reviewing resumes, I now look for photo-imaging skills in employee candidates.

*James Benya is a professional lighting designer and principal of Benya Lighting Design in West Linn, Oregon. He is editor-at-large for A|L. This article was adapted from a program presented by the author at the January 2005 IALD Annual Meeting.*

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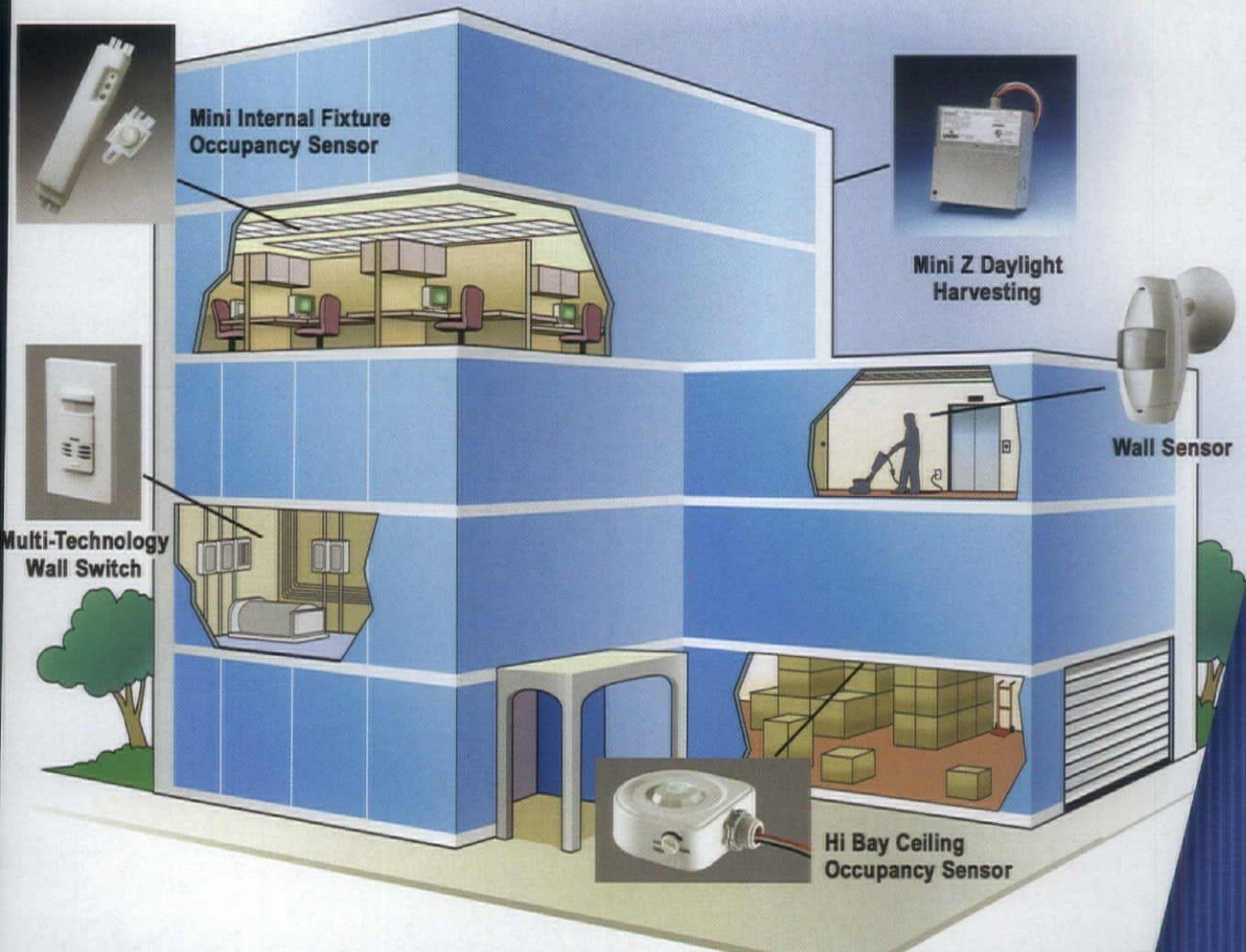
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## A Report from Lightfair 2006

BY JAMES R BENYA

**THE 17TH ANNUAL LIGHTFAIR, HELD IN LAS VEGAS FROM** May 28 through June 1, exceeded expectations with over 16,500 attendees and a record number of exhibitors. Despite the Memorial Day weekend, everyone showed up, and this Lightfair was fresh and enjoyable, with plenty to see. Here are a few product highlights.

**LEDS** This year, many good white color and high-efficacy products were exhibited. A category winner in the New Product Showcase (NPS) competition—the kickoff event to the tradeshow, during which submitted products are recognized with awards—the Luxeon K2 by Lumileds is a 1.5-amp, 130-plus-lumen white source. Also noteworthy is Osram Opto Semiconductor's White Golden Dragon thin-film LED, and its 400-lumen OSTAR cluster device. Want a bigger lumen package? Try Lamina Ceramics' powerful 1-inch-square LED arrays, including the Titan 562-lumen RGB light engine. Want less? Try Lumileds' tiny portable Luxeon PWT1 LED.

A number of LED assemblies and string lights were also introduced. GE's GELcore added the new Tetra Mini, and Hongli Opto showed a submersible and flexible LED ribbon light. I especially liked Osram Sylvania's Dragonstick, a complete linear unit suitable for general and display lighting systems, and Permlight Products' Enbryten ENBF LED replacement for low-voltage strips. Even Color Kinetics has a flexible string called iColor Flex SLX.

LED substitutions for regular lamps require a critical eye and sometimes a sense of humor. Among practical products were the American Bright Optoelectronics NovaBrite, a PAR-like screw-in lamp; CML Innovative Technologies' 6S6 candelabra-based mini lamps; GBL LED Lighting's PAR-like 3.2W cluster projector; and LEDtronics MR16 replacement. I particularly liked Westinghouse Lighting's Nanolux 1W S14 sign lamp, a perfect proxy for marquee lighting.

**CONVENTIONAL LAMPS** Probably the best new conventional lamp was GE's 20W ceramic metal halide MR16, which won its category award. A great product, but what took so long? I was intrigued by Osram Sylvania's Capsyrite E-PRO, which allows a one-third reduction in display-lighting power when replacing 50W PAR

lamps. Ushio showed a 20W 10,000-hour MR16, and EYE Lighting, a 10,000-hour UV-cut MR16. Other developments among tungsten-style lamps seemed to be one-trick-pony products for special uses. The biggest disappointments were in fluorescent and HID lamps with virtually no "new" additions. The NPS award for new ballasts (and technical innovation) went to Philips's ZigBee-compatible Equos, a ballast designed to provide wireless full-building lighting control through mesh network systems. Metrolight's dimmable HID ballasts suggest that high-wattage HID electronic ballasts will probably include dimming as a built-in feature.

### ARCHITECTURAL "TECHNICAL" LIGHTING

Hat's off to Gotham Lighting for its quartz ellipsoidal downlights and high-quality ceramic metal halide accents and wall-washers. Lightolier introduced a 2 7/8-inch version to its Evolution line of recessed downlights for premium residential applications. Phantom Lighting introduced an

**"This year, many good white color and high-efficacy LED products were exhibited....To be honest, new LED fixtures showed the most innovation."**

MR16-based optical projector, handy for gobo projections.

"Plaster-in" downlights are a trend in recessed lighting. RSA Lighting's Quiet Ceiling system now includes both an AR70 and a mini version. Pure Lighting offered ceiling and wall-mounted fixtures, including a square wallwasher. RSA also showed a linear wall-grazing system, an excellent package solution to the complex problem of grazing, not washing, a wall.

New track and rail systems included Luxo's amazing Arca Twin System. For a tailored twenty-first-century look, Architectural Lighting Works' Lightplane is a welcome alternative. Bruck and Tech Lighting offered line expansions, most notably Tech's new Two-Circuit T-trak and Bruck's super-mini Blade Star Spot, using the Osram Sylvania's Ministar lamp.

But to be honest, new LED fixtures showed the most innovation. Lighting Services Inc's LumeLEX is a cool RGB track

and monopoint display and effects luminaire. Color Kinetics' iW Blast 12 Powercore and iW Cove Powercore LED systems show that they finally understand lighting designers sometimes want white light sometimes. I liked NuaLight's Jewel-LED, a display system specifically for jewelry, and iLight Technologies' Plexineon RGB color-changing system. Cool stuff, though I wish it were a little brighter.

Perhaps the most perplexing product was Permlight Products' new Enbryten ENBC recessed 15W downlight, which looks like a standard 6-inch low-voltage can-light. It targets the residential market and, in particular, California's Title 24 requirements, which mandate 40-lumen-per-watt sources. But it left a lot of unanswered questions: Where is the heat sink? Is it really 40 lumens per watt? A reminder that with LEDs, there are few standards.

Troffers and strips are no longer news, but there are still a few things to look at. Cooper has entered into the T5 troffer business with its Metalux Accord and Neo-Ray Straight and Narrow product lines. But in the realm of fluorescent lighting, it's now all about suspended lighting, and Peerless won the NPS Best of Show award for its stunning Parallels pendant.

### ARCHITECTURAL DECORATIVE LIGHTING

Among others, Shaper, Lightolier, Winona, Tech, and Translite Sonoma showed beautiful designs among the largely technical displays. Shaper's new Farallon collection may be some of the best spanning the decorative and architectural worlds. Good products were also presented by Lightolier, including its Vetro series, and Tech Lighting's 2thousand degrees line, with the Siesta lamp and Madison pendant. I happen to love Winona's Pops! pendants.

Some "decorative" architectural lighting is actually technical lighting, but well designed enough to be used in key locations: Holophane's Illumibay products, and sister company Gotham's Elevations series of pendant and surface-mounted downlights. 3G Lighting's Mira pendant demonstrated that LEDs give new options for decorative lighting designers.

**EXTERIOR LIGHTING** Exterior product offerings have not yet totally succumbed to LEDs, but the threat is near. Amazingly, manufacturers are attempting to replace



the almost bullet-proof HID technology with largely untested LEDs. The best LED products included nice-looking outdoor floodlights from Philips, Super Vision International, Renaissance Lighting, Illumivision, and Lumascope USA. I was pleased to see CW Cole's Lightrail, an LED solution to an old problem of handrail lighting, something I'll use a lot. I also like neon-replacement LED tubing products, especially iLight Technologies' Plexineon White 2X and GELcore's Tetra Contour. There were even a few exterior polelights, including one from LeoTek Electronics that claims its 160W LED array provides as much "light" as a 250W high-pressure sodium. Right.

Among landscape and low-level lighting products, manufacturers went crazy with LEDs. Dreamscape's Nalu, the NPS category (and design excellence) winner, is a sleek pathlighting luminaire using LED or halogen lamps. Fiberstars showed an LED underwater light called Light Streams, and so did Light10 Labs with Beluga. Lightology's new steplight, Lumascope's Vita recessed light, MP

Lighting's LED01 paverlight, and Winona's Winscape demonstrate that landscape lighting is one area where LEDs have practically taken over.

From a more conventional perspective, Phoenix demonstrated progress in sustainable design with its fully shielded

**"Skylights, solar tubes, blinds, and specialized controls are now part of our world whether we're ready or not."**

Eurotech pole and sea-turtle-friendly low-pressure sodium Eurotech bollard. Sternberg Lighting continued to evolve its products in the dark sky direction with a full-cutoff Prairie series area luminaire.

**SPECIALTY LIGHTING TYPES** Some lights just don't fit into conventional categories, especially the most creative LED ideas. The NPS category winner was LightWild Ultimate Architectural Floor Tiles, a truly exciting LED color-changing tile. Similar products were offered by Traxon USA,

challenging Color Kinetics for the most spectacular and amazing effects. It's nice to see Fiberstars gallantly fighting off LEDs with its continuing improvements in fiber illuminators and systems, including the EFO 3+3 plus and EFO-Ice.

**DIMMING AND CONTROLS** Controls are still exciting, thanks to changing needs and electronic advances. Most noteworthy was Encelium Technologies, which has developed a daylight harvesting control system comprised of strategically located sensors and algorithms that "map" sensor readings to light outputs. This might be one of the first companies to bring together the promise of networked lighting controls with effective software.

"Mesh" RF controls technology—a web of cell-phone-like links that permit a number of control devices to work together without data wiring—will be a dream come true for those wanting to retrofit buildings with modern controls. GE and Cooper both showed systems, which means the big boys think this is the next big thing.

**OVERALL** Of course, in addition to hardware, Lightfair is a place to see software, publications, and other related products and materials. Among these, David DiLaura's book, *A History of Light and Lighting: In Celebration of the Centenary of the Illuminating Engineering Society of North America*, stood out. Lighting software is at the mid-development point, with nothing new in the past year or two to crow about.

Because Lightfair is historically about electric lighting, the emphasis is on fixtures, bulbs, dimmers, and other parts and pieces we love to use. The Daylighting Pavilion, however, was about things we aren't as familiar with. Skylights, solar tubes, blinds, and specialized controls are now part of our world whether we're ready or not. I spend as much time as possible getting up to speed on the topic, and there were several good booths, including those of leading companies like Solatube and MechoShade. It has been said that the years Lightfair is in Las Vegas are not as good as those when it is in New York, but 2006 was a pleasant surprise. It was a great show, with a good vibe and plenty of action. Compared to New York in 2005, on the last day of the show, there was still a lot going on.

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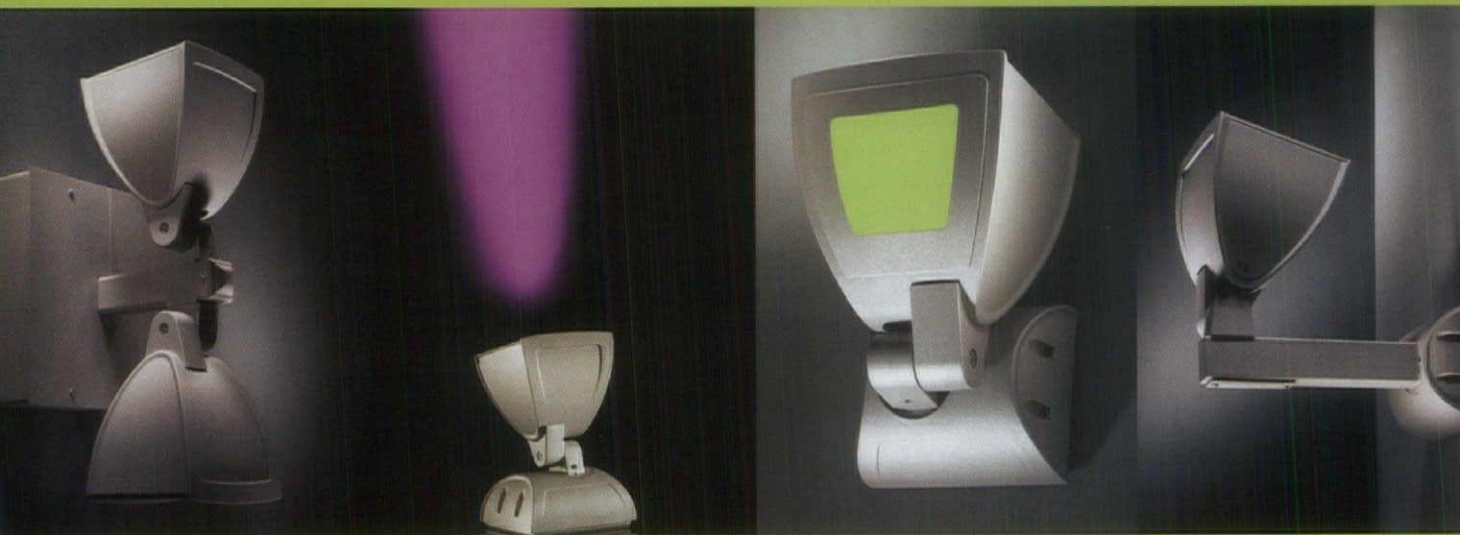
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# A Report from Light+Building 2006

BY DANIELA RATZEL

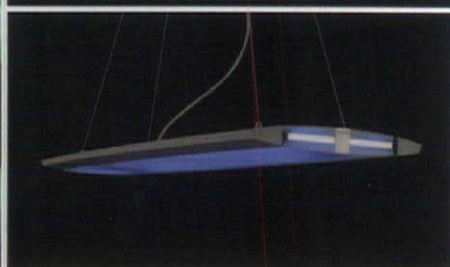
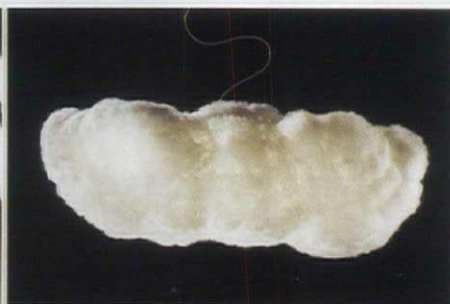
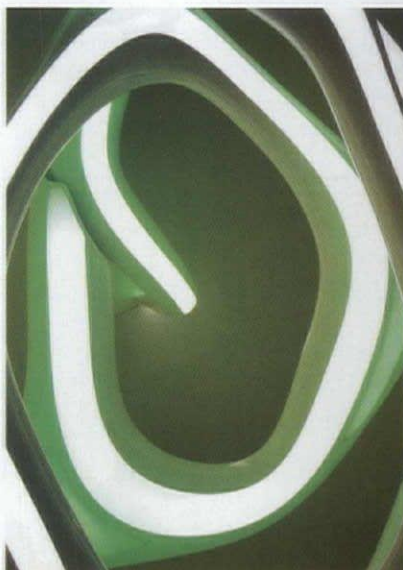
EVERY OTHER YEAR, ONE EVENT IN PARTICULAR enlightens and illuminates Frankfurt, Germany. This year, Light+Building was held from April 23 to 27. Its content not only lit the halls, but with enormous visitor numbers (over 134,000, according to Messe Frankfurt), also brought a smile to the fair organizers' faces. Indeed, attendees from all over the world got their money's worth: after a full day of trade show activities, visitors were treated to lighting-related events in the city through the Luminale program and numerous after-fair parties.

Light+Building is the yardstick for developments in the international architectural lighting arena: products presented there often indicate trends in the making, both aesthetic and technological. The former is a function of "fashion"; the latter tends to be a logical evolution of existing technologies.

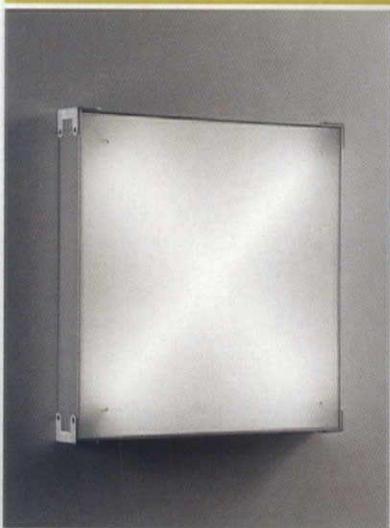
"Anything and everything that pleases" was the apparent motto for decorative luminaires on display at the show, and as there is no accounting for taste, there were no boundaries when it came to form and material. Especially apparent was the return of the chandelier; once reviled as old-fashioned, the fixture type has been updated, almost to the level of pop art. Many, such as Artemide's Nemo and the LED-illuminated color-changing Vortexx pendant designed by Zaha Hadid for Zumtobel, challenged traditional notions of the "stuffy" chandelier.

Experimentation with materials and a decreasing dependency on the incandescent lamp have allowed heat-sensitive components like wood, paper, and fabric to find their way into luminaire production. Anthologie Quartett exhibited *Illustri*, illuminated balls artfully draped with wood shavings. Ingo Maurer's *Luxury Pure* fixture features a lacquered paper shade. Material novelty alone did not satisfy Studio Italia Design: its *Nuvola* fixture's fabric-covered motorized metal frame moves to capture the essence of a cloud.

In other decorative products, the lamp itself became the focus: manufacturers, such as Delta Light with its *Climax* fixture, deemphasized the luminaire housing and instead celebrated the source. A similar trend was apparent among offerings for office environments, though in these, the lamp remained concealed in order to control glare. Instead, luminaires like Siteco's



Many trends characterized Light+Building 2006: Chandeliers, like *Vortexx* from Zumtobel (above left, CIRCLE 150) and *Nemo* from Artemide (below right, CIRCLE 151), embraced pop culture. Shades found expression in unusual materials, including washable fabric (as on Studio Italia Design's *Nuvola* luminaire, top, CIRCLE 152). LEDs made early strides into a luminaire intended for office environments, Siteco's *Sky.Lab 1.0* pendant (above right, CIRCLE 153). Meanwhile, lamps suggested themselves in fixtures like *Climax* from Delta Light (below left, CIRCLE 154).



*Novaluna* were imagined as a suspended transparent body of diffuse light with a minimal housing. Innovations in lamp technology (namely miniaturization) have also dictated form, since if the light source is smaller, the luminaire is less confined by the dimensional requirements of the bulb. Case in point: *Dot Spot* from Zweibrüder.

The lighting industry's technological focus remains fixed on LEDs, and the

dynamic light control and color capabilities that go hand-in-hand with that source. Many exhibitors at Light+Building were experimenting with color, which is finding its way into all areas of lighting, interior and exterior. LEDs are also beginning to assume the tasks of traditional sources like fluorescents, which in turn is encouraging the development of LED-based fixtures for applications formerly not associated with



this source. Siteco, for example, combined high-performance LEDs with proprietary lens technology to create, claims the company, "the first ever" suspended LED-lamped luminaire for office environments—its Sky.Lab 1.0. Fixtures presented for such applications are still in an embryonic stage, however, with generally low illuminance lev-

els and cool color temperatures.

Additionally, there is ongoing experimentation with white light. Osram introduced a new lamp, the Lumilux Skywhite T5HO, which generates an extremely cool light (8000K); it is unclear, however, what the purpose of such a product might be. Asked about appropriate uses, the manu-

facturer says it sees potential for the lamp in light therapy or night-shift applications; though, these claims seem to necessitate additional research.

Developments like the 8000K lamp make one wonder what practical benefits some technical "innovations" offer. Many products answer questions that were never asked; that is, they lack a concrete purpose. As is the case in various industries, manufacturers tend to be influenced by each other, copying or interpreting the ideas of their competitors—a natural process. However, regarding colored light, many manufacturers seem to perpetuate the idea without a definitive objective. Here, sense and nonsense must be divided. Beautiful and decorative, colored light is also thought to be connected to human health. The fact that it might do harm if used carelessly is too often neglected.

Time will tell how these trends are ultimately applied. We look forward to an update with Light+Building 2008.

*A recent graduate with a degree in architecture from the University of Karlsruhe in Germany, Daniela Ratzel works as a designer for Berlin-based L-Plan Lighting Design.*

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Experimentation with materials takes decorative fixtures in a new direction: Illustration from Anthologie Quartett. **CIRCLE 155**




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## Amerlux

Amerlux introduces Cylindrix, a family of luminaires designed around the newest miniature, low-wattage metal halide and electronic ballast technologies. Track, recessed and semi-recessed luminaires crafted with clean, architectural styling, compact scale, die-cast housing vented for optimal thermal management, and new performance optics. Small, energy-efficient lamp sources reduce operating and maintenance costs and meet energy codes. For more information, visit [www.amerlux.com](http://www.amerlux.com), or call 973.882.5010. **CIRCLE 131**



## Delta Light

Delta Light's "Profiles" is the answer to every architectural designer's dreams. This completely customizable linear system allows designers to create their own fixture configurations from 12 base profile shapes. Designers control fixture length, geometry, light sources, and distribution patterns. For additional information, contact a Delta Light agent, or visit [www.deltalight.com](http://www.deltalight.com). **CIRCLE 134**



## Bartco Lighting

The XLS290 LED display luminaire is based around 11 1/2-inch-length modules and incorporates either six or eight high-output LEDs. Each module integrates a dedicated 9W driver that produces 35 lm/W, while minimizing heat generation and prolonging lamp life (50,000-hour expectancy). Up to 12 LED modules join together electrically via quick-connects and mount inside a 1 3/8-inch-diameter aluminum extrusion. The housing is available in a variety of anodized- and powder-coat finishes. A clear acrylic lens redirects light from the LEDs, maximizing distribution for display-case applications. Visit [www.bartcolighting.com](http://www.bartcolighting.com). **CIRCLE 132**



## Edison Price Lighting

A beautiful wall, draped with light from a cove—no effect enriches a space more. Spredlite wall grazing systems make that magic a reality. For both quartz halogen and metal halide; for walls from 8 feet to 30 feet high. E-mail [info@epl.com](mailto:info@epl.com) for a brochure, or visit [www.epl.com](http://www.epl.com), keyword Spredlite, for spec sheets. **CIRCLE 135**



## Cree

Cree XLamp 7090 LEDs deliver the industry's highest-performance power LEDs in a rugged, reflow-solderable surface-mount package optimized for design flexibility, ease of use, and thermal efficiency. To register to be considered for Cree XLamp LED samples, visit [www.cree.com/xlamp](http://www.cree.com/xlamp), or call 800.533.2583. **CIRCLE 133**



## Elliptipar

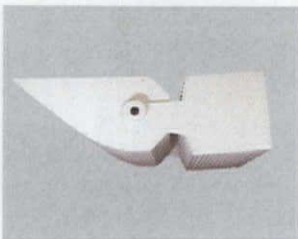
Elliptipar Style F144—thrifty lighting for retail graphics. Now available with snap-in lens for lighting overhead graphics, perimeter signage, food service menu boards, and more. Only 2 1/2 inches high. Surface or cable mount. Uniformly light an 8-foot menu board with two T5HO lamps using only 124W. F144 ... fewer lamps ... longer life ... lower energy ... better light. **CIRCLE 136**





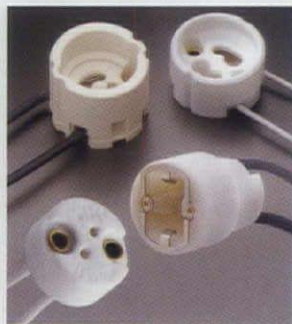
## Engineered Lighting Products

ELP's New AILERON A15 Series—large lighting for large spaces! These extruded A15 fixtures are 7 1/4 inches by 25 5/8 inches by 28 inches. They tilt for precise aiming of the asymmetric beam and can be secured in place. Interior and exterior wet-location styles are available in one- or two-lamp configurations for metal halide, HPS, or fluorescent models. Contact ELP at 626.579.0943. **CIRCLE 137**



## Leviton

Leviton OEM has introduced four new lampholders designed for today's most energy-efficient light sources. The new lampholders offer manufacturers cost-efficient solutions for incorporating the latest metal halide and quartz halogen lamps into indoor accent and display lighting, and gallery, museum, showroom, and other specialty lighting applications. For more information, e-mail [info@leviton.com](mailto:info@leviton.com), or visit [www.leviton.com](http://www.leviton.com). **CIRCLE 140**



## Eurofase

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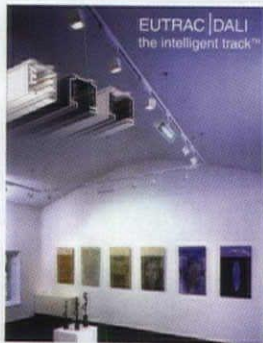
## Luraline

Luraline's Helos collection features a versatile, modern design enhanced by extraordinary durability and energy efficiency, making it ideal for interior and exterior commercial and residential spaces. Offered in pendant, ceiling, wall, and post-mount configurations, with a choice of incandescent or energy-efficient compact fluorescent or HID lamping. A full palette of painted and metallic finishes is available. Custom colors on request. For more information, call 800.940.6588, or visit [www.luraline.com](http://www.luraline.com). **CIRCLE 141**



## EUTRAC

The EUTRAC|DALI Intelligent Tracklighting System offers adapters that can accommodate virtually any manufacturers' tracklighting fixtures. The specification-grade 2-circuit/2-neutral track system includes digital bus option for integration with DALI and other digital protocols. EUTRAC LightComposer software/hardware interface enables control of individual light fixtures for custom dimming and automations. For more information, visit [www.eutracs.com/usa](http://www.eutracs.com/usa), or call 845.691.9030. **CIRCLE 139**



## Lutron

Lutron's new designer Roman shades expand the existing window treatments line with luxurious soft fabrics, stylish woven woods, grasses, and bamboos. Coupled with Lutron's award-winning Sivoia QED (Quiet Electronic Drive) technology, the new Roman shade line moves with quiet precision and features sophisticated backlit keypads and the ability to interface with lighting control systems. For more information, visit [www.lutron.com](http://www.lutron.com), or call 877.258.8766. **CIRCLE 142**





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The ultimate in motorized drapery systems—WhisperTrak. Whisper-quiet operation and clean monochromatic design. Available in either straight or curved lengths up to 58 feet.



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## Tech Lighting

Tech Lighting's Two-Circuit T-trak system offers the smallest profile of any line-voltage two-circuit system. A true two-circuit system with dedicated neutrals for two separately switchable 20-amp circuits, the system hand-bends to a radius as small as 36 inches, and may be cut in the field. Satin nickel and white finishes. For more information, visit [www.techlighting.com](http://www.techlighting.com), or call 800.522.5315. **CIRCLE 146**



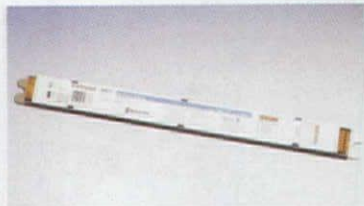
## Sentry Electric

Sentry offers a comprehensive line of luminaires from classic designs to contemporary and modern. Sentry offers a wide selection of matching poles in a full range of heights. Matching bollards are available as unlit or lighted models. Sentry offers a wide selection of wall brackets, cross arms, and accessories. For more information, visit [www.sentrylighting.com](http://www.sentrylighting.com). **CIRCLE 144**



## Universal Lighting

Universal Lighting introduces the Ballastar T5 high-efficiency light-level switching ballast. Nearly 8 percent more efficient than standard T5 ballasts, Ballastar offers two different ballast factor options—.95 and 1.15—for F28T5 lamps. Switching from full output to 50 percent via wall switch or lighting relay, Ballastar is ideal for offices, classrooms, conference rooms, and more. For more information, visit [www.universalballast.com](http://www.universalballast.com). **CIRCLE 147**



## Sternberg Lighting

This new PA130 luminaire offers NIGHTSKY full-cut-off optics up to 250W or with optional backlit side panels up to 175W. Features include tool-less entry, rotatable and scaled optics with IES Types II, III, IV, or V distribution. The PA130 conforms to dark sky ordinances and carries out the Prairie theme to any walkway, park, site area, or parking lot. For more information, visit [www.sternberglighting.com](http://www.sternberglighting.com), or call 847.588.3400. **CIRCLE 145**



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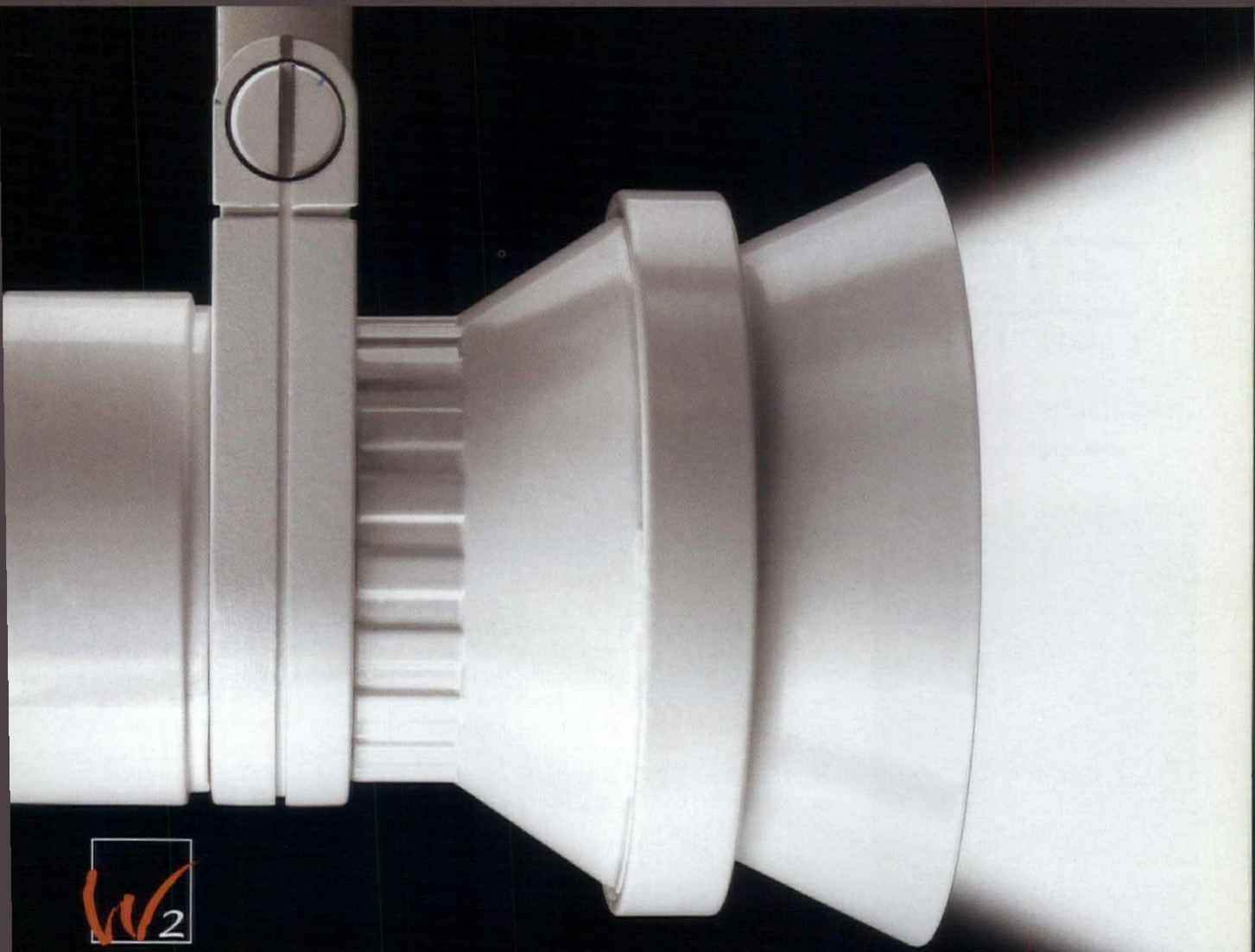
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# Lightfair's

# 2006

## New Product Showcase

Sponsored by *Architectural Lighting* and *eLumit.com*, Lightfair's New Product Showcase highlights the best in innovative lighting design and technologies. The manufacturers on the following pages were just some of the entrants for the competition. Their products were judged by a team of distinguished lighting professionals for honors in categories that included the Best New Product of the Year, the Technical Innovation Award, Energy Award, the Design Excellence Award, Best of Category Awards, and at their discretion, the Judges Citation Award and the Roeder Award.

Read on to learn about some of the innovative lighting products that make New Product Showcase an important part of Lightfair and the future of the industry.

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2006 NEW PRODUCT SHOWCASE

# 3G LIGHTING

manufacturing+design  
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## 3G Lighting Inc.

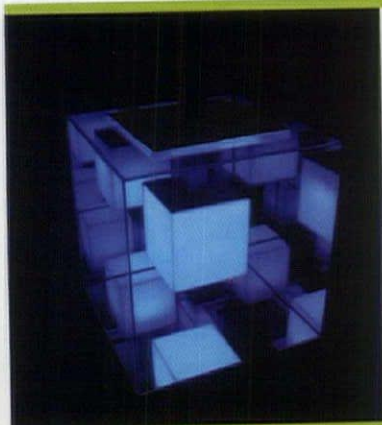
3G Lighting Inc. has been producing innovative lighting fixtures since 1991, combining creativity, design, and precision manufacturing to satisfy both high-end commercial designers and select residential customers. The 3G product line includes a range of recessed, pendant, wall, and ceiling mounted fixtures. 3G has supplied fixtures to award-winning projects such as Le Meridien, MGM Grand, and W Hotels, and is a choice manufacturer for upscale retailers. 3G products can also be found in famous restaurants, international airports, condominiums, and office buildings.

CATEGORY  
WINNER

### PRODUCT: Mira Pendant

**CATEGORY:** chandeliers, pendants, sconces, task lights, and decorative luminaries

The new Mira pendant is a decorative light source that incorporates color changing LEDs and mirrored acrylic to create a unique and spectacular lighting effect. The inner diffuser shines softly through the mirror while simultaneously creating numerous reflections in the sides of the mirrored box. When the light is turned off, the fixture looks like a simple mirrored cube. The LED source consumes less than 4W of power and can generate 64 billion colors. The LEDs can be driven either by a stand-alone controller or can be fully integrated into any DMX controlled system. The impressive Mira is the perfect choice to give restaurants, hotels, bars, and lounges a distinctive look. A matching Mira wall sconce is also available.



### CONTACT INFORMATION

**WEB SITE** | [www.3glighting.com](http://www.3glighting.com)

**E-MAIL** | [info@3glighting.com](mailto:info@3glighting.com)

**PHONE** | 905.850.2305

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## Fiberstars®, Inc.

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## Product: EFO ICE™

**CATEGORY:** Theatrical & Specialty

### EFO ICE™: ILLUMINATING COLD ENVIRONMENTS

The new EFO ICE effectively illuminates frozen and refrigerated products while saving owners both time and money.

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### FULL INTENSITY

EFO ICE shines at full brightness even in the coldest temperatures, an added benefit over fluorescent lights, which lose up to half of their intensity when chilled.

### EASY MAINTENANCE

EFO ICE lamps are easy to change and clean. Changes, which don't require any tools other than a pair of hands, are done on top of the case, and there is only one ballast for every three doors. The fixtures also have no electricity, eliminating lamp socket destruction during case cleaning, and no glass, meaning the lamp will never shatter inside the case.

### INCREASED SAVINGS

By reducing electrical consumption and easing maintenance, EFO ICE saves an average of \$139 per door annually. Savings come quickly, and EFO ICE essentially pays for itself in less than 24 months. Utility company rebates and incentives increase savings and accelerate payback.

## CONTACT INFORMATION

**ADDRESS** | 32000 Aurora Road, Solon, OH 44139

**WEB SITE** | [www.fiberstars.com](http://www.fiberstars.com) **E-MAIL** | [efoinfo@fiberstars.com](mailto:efoinfo@fiberstars.com)

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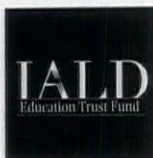
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## Preserving Our Night Skies

The dark sky movement has gained momentum in recent years. How do you feel it is impacting the practice of lighting design and manufacturing?



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### MANUFACTURER RESPONSIBILITY

#### HANSI MUELLER | SELUX

The dark sky movement has grown tremendously in recent years in strength, capabilities, and popularity. It has been our experience that "dark sky" is now a lighting phrase that is an integral part of almost every exterior project. Not just lighting designers, but more and more architects and engineers have not only heard of the dark sky movement, but are very involved in implementing and advancing the dark sky cause.

As a manufacturer of quality lighting fixtures and as a responsible and socially aware business organization, Selux Corporation recognizes and understands the importance of dark sky, both the International Dark-Sky Association and its goals. We consider it our responsibility to design, develop, and manufacture lighting fixtures that have optics with excellent control. Selux has no less than 10 fixtures in its portfolio that are dark sky certified by the Association.

#### JERRY LEHRFELD, MARKETING MANAGER | STERNBERG LIGHTING

Today, outdoor lighting design is vitally concerned with dark skies and affecting light pollution issues. Many of the new luminaires are designed and manufactured with full-cut-off optical systems. While these new lighting regulations started in the southwest—Arizona, New Mexico, and Southern California—the movement continues to expand eastward.

Industry standards on luminaire efficiency once were measured by the amount of light luminaires can throw down and the distance by which they can be spread apart. Today, the requirement has become much more sophisticated. Now we address the performance of light as light pollution, cut-off and veiling luminance, and glare.

The main purpose of the dark sky movement is to preserve and protect the nighttime environment through quality outdoor lighting. By eliminating light pollution we are able to find another solution to protect and enhance our environment.

### IMPLEMENTING TECHNOLOGY

#### TED CHAPPELL, PRESIDENT | ERCO LIGHTING

Dark sky technology is the driving force behind all of our outdoor product development. The dark sky philosophy of directing light only where it is needed forces manufacturers to carefully consider the following:

- maximum reflector efficiencies
- lower-wattage lamp alternatives, such as the new 20W metal halide lamp
- the removal of all unwanted glare and wasteful spill light above the horizon

Dark sky-compliant luminaires are beneficial to the environment and automatically elevate the overall quality of outdoor products in the market.

### IMPACT ON DESIGN PRACTICES

#### GLENN HEINMILLER, SENIOR ASSOCIATE | LAM PARTNERS

In general, high-quality outdoor lighting is also low-polluting outdoor lighting, so the impact of design practices on some lighting designers is minimal. With that said, I think it has made most designers more thoughtful about the potential negative consequences of their actions. ("Do we really need 400W floodlights on that façade?") All lighting designers have a responsibility to minimize the negative impact of our designs on environmental quality. For manufacturers, I think there is a great opportunity to develop and market new products, but I am suspicious of the proliferation of "dark sky friendly" labels popping up in advertising. I sense that some manufacturers just see dark sky as a burden to hype their way out of, rather than a great opportunity to develop innovative products. (The equivalent in the automotive world would be: "Instead of complaining about gas mileage standards and trying to convince us you are doing something, develop a hybrid car!")

### COMMUNITY AWARENESS

#### SCOTT DAVIS, COO | INTERNATIONAL DARK-SKY ASSOCIATION

Today there are fewer consumers, designers, engineers, and electrical contractors who just "stick up" any old light. Increasingly, more conscientious lighting design considers and incorporates sustainability in its criteria. Local governments are beginning to recognize the need for good holistic design, and more focus is being placed on lighting that enhances the urban night environment.

Individually, people are becoming more aware that the dark skies of their youth are disappearing for their children. As concern grows, so does the understanding of what prevents a clear view of night skies—glare, light trespass, and sky glow—and why. Citizens are requesting that their local and state governments develop dark sky legislation, which encourages good lighting practice. As a result, manufacturers are designing a wider range of fully shielded fixtures, while designers are responding to codes and lowering wattage requirements, lighting only when and where necessary. Our years of interaction with the public has indicated that even in areas lacking dark sky legislation, a growing number of consumers are demanding fixtures that will effectively and efficiently light their property while remaining ecologically responsible and cost effective.

The International Dark-Sky Association's mission of preserving and protecting the nighttime environment is emerging as a valued priority in all aspects of our society—from the homeowner to the business owner to the manufacturer to the government official. And when we share common goals, there is hope for substantive change.



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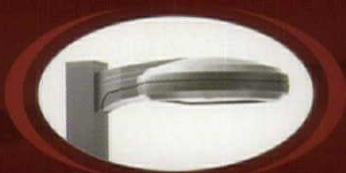
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