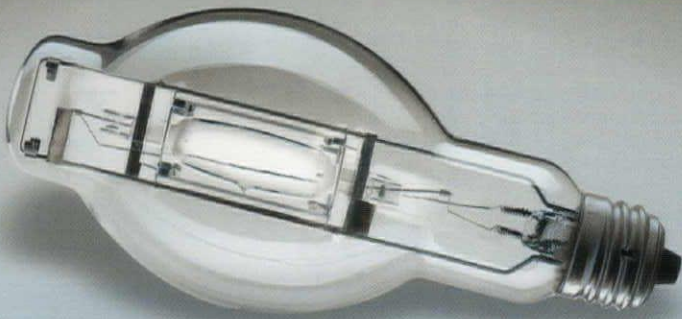


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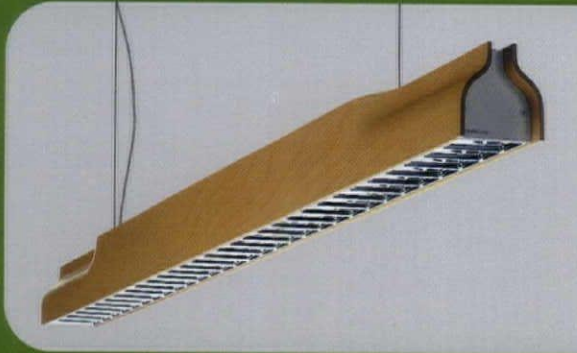
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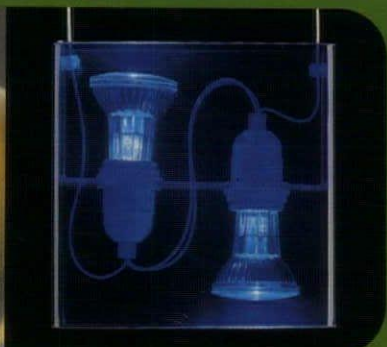


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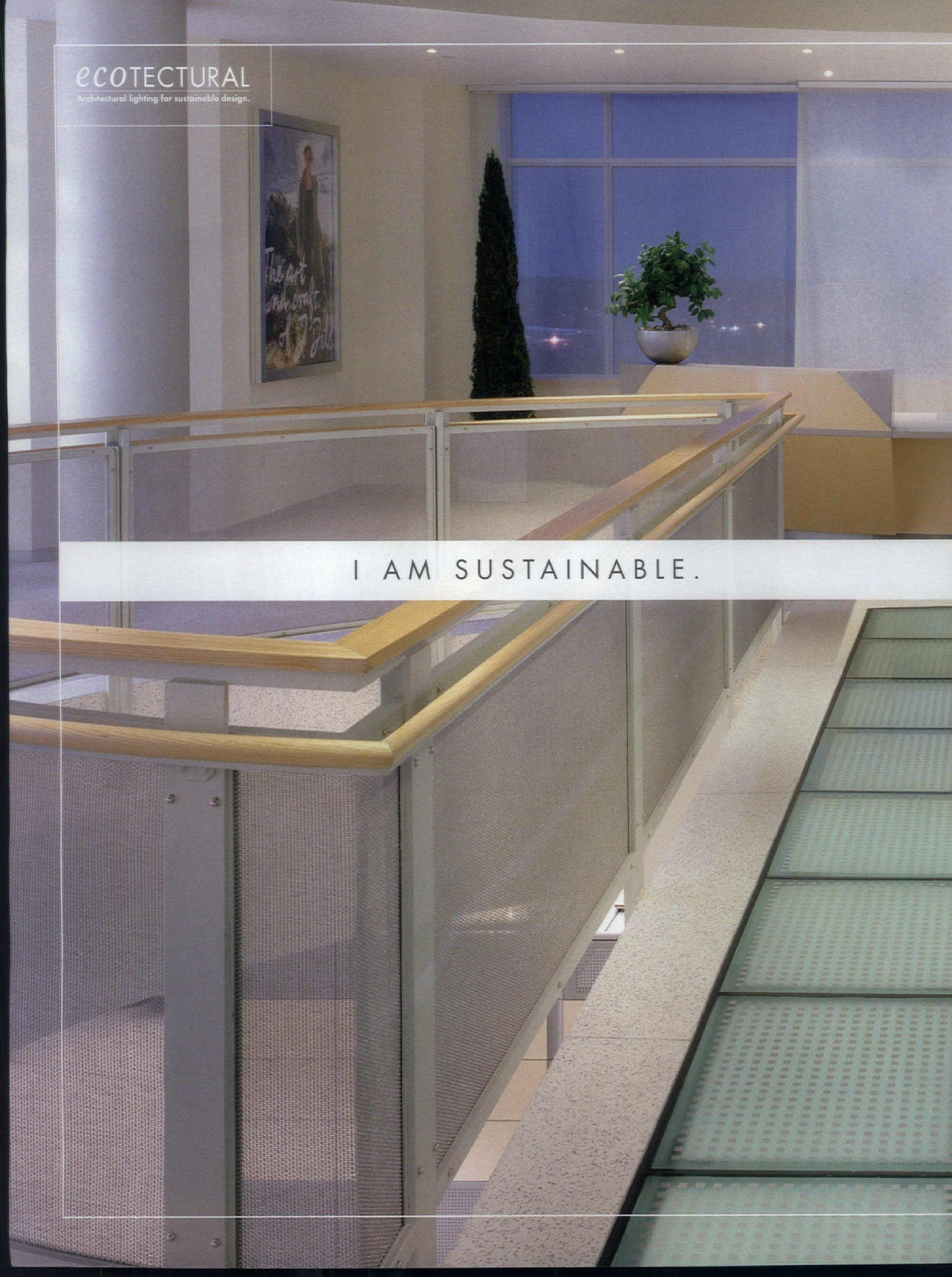
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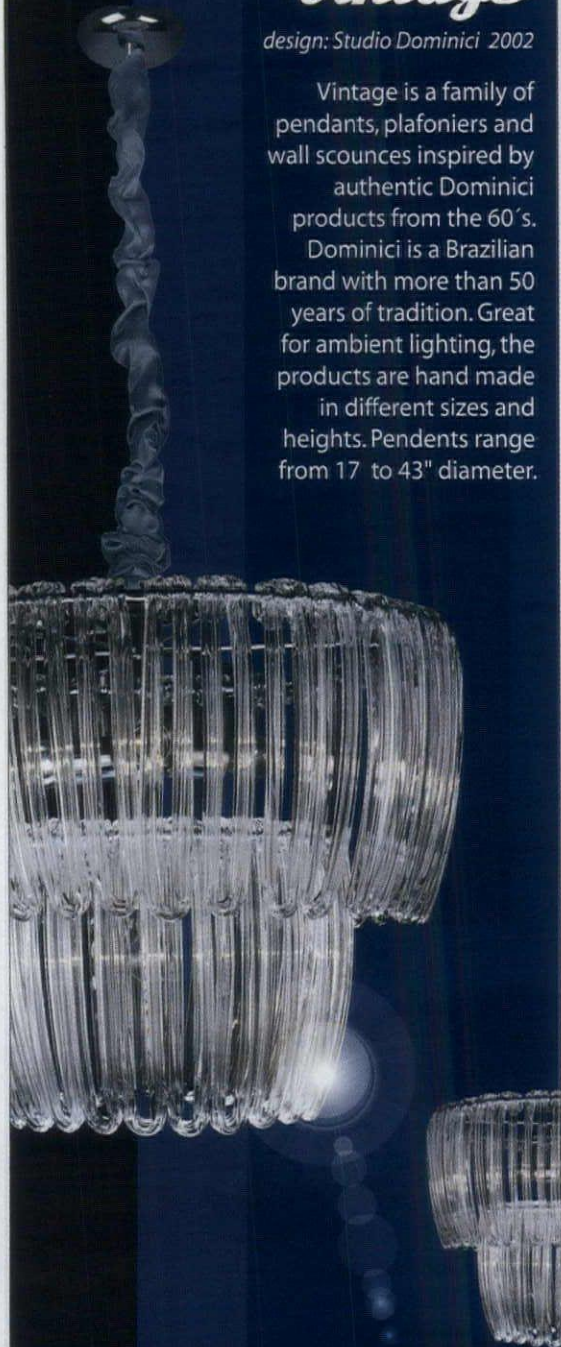
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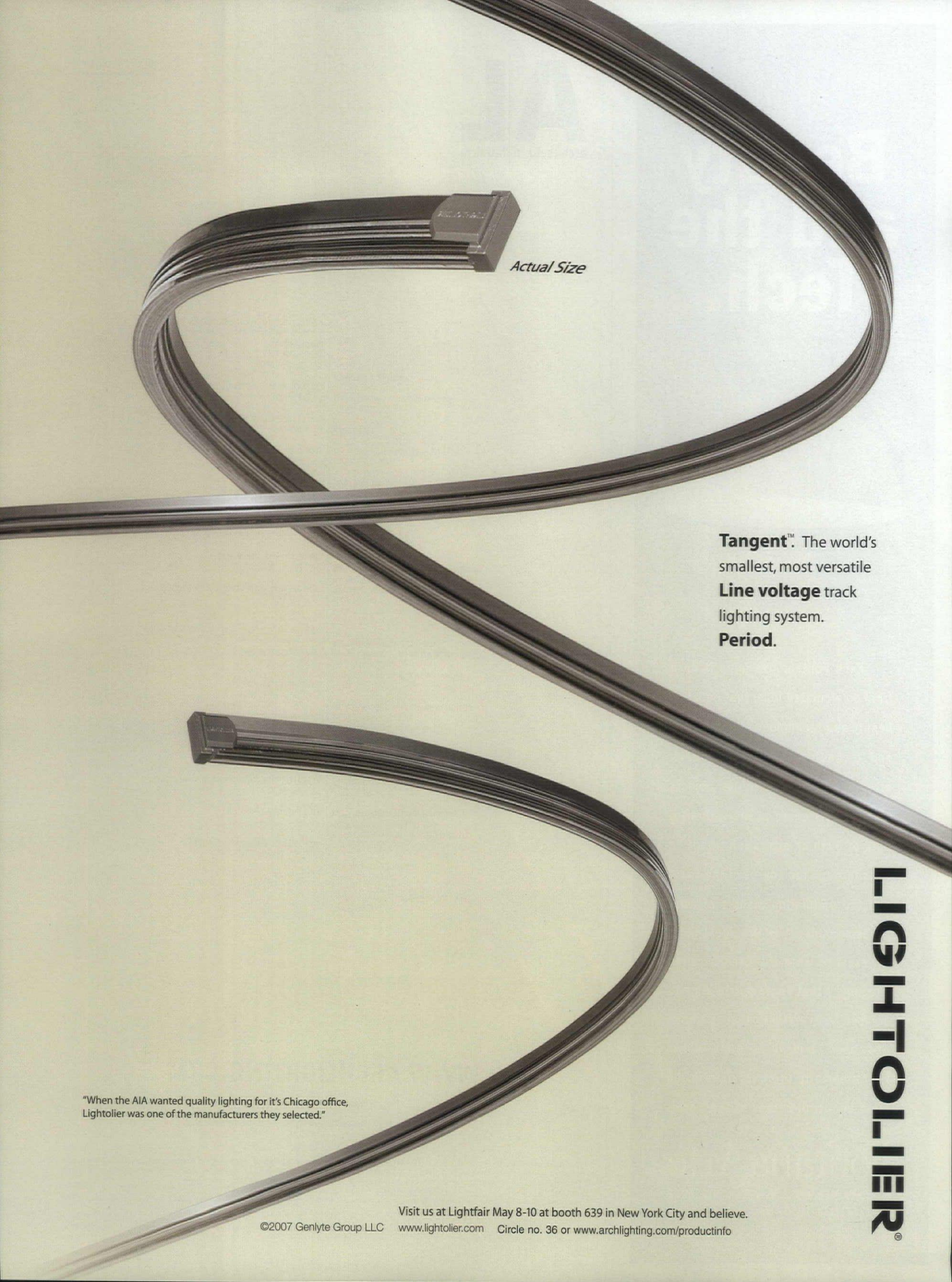
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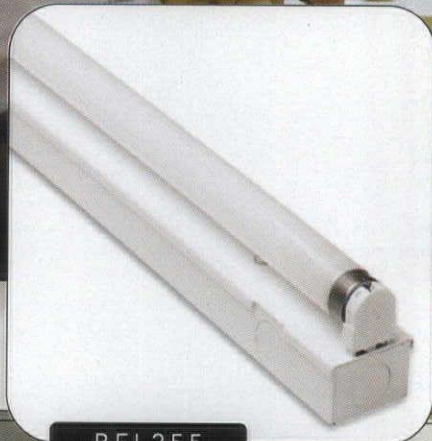
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**Cover:** A selection of products from Venture Lighting, Electro-Luminex Lighting, Selux, Prudential Lighting, W2 Architectural Lighting, Color Kinetics, AE Light, DuPont Corian, and Fontana Arte (left to right, top to bottom).

**This page:** The skylight feature and "green" roof at Lucifer Lighting's new headquarters; Dreamscape Lighting's step/accent luminaires; Diagram of the dual window strategy for sidelighting; *Splitting 10 & 11*, 1975, part of the Whitney Museum's Gordon Matta-Clark retrospective, © Estate of Gordon Matta-Clark, Photograph by Sheldon C. Collins.



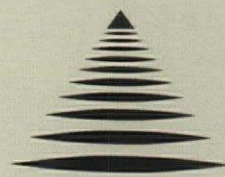
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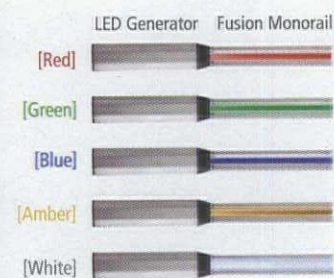
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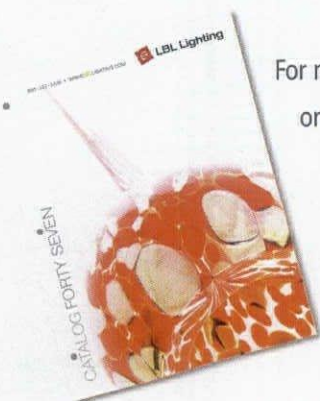
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## An Incandescent Truth?

I fear the incandescent light bulb has become the scapegoat du jour, as we address and tackle the growing magnitude of our ecological problems. Recent political announcements by Australian Environment Minister Malcolm Turnbull and California Governor Arnold Schwarzenegger, calling for a ban on incandescent light

bulbs by 2012, are actually counterproductive to working toward a viable sustainable future, because statements such as these do not present all the facts or aspects of the issue, and instead mislead the population into thinking there is a “quick fix” solution.

In particular, this call to arms against the incandescent light bulb has suggested that the compact fluorescent lamp (CFL) is the answer. But what is not mentioned is that CFLs contain mercury, and that by potentially solving some of the problems that incandescent sources present—high carbon emissions and electricity output—another equally as serious problem is introduced: An increased volume of mercury-containing lamps into the marketplace and environment that will need to be properly disposed of so that they do not sit in landfills.

Also absent from the political incandescent/CFL debate is the issue of *Quality of Light*. CFL technology is variable, and color temperature ranges limited. In fact, there is a condition known as Scotopic Sensitivity Syndrome, where fluorescent lighting can actually make people sick. Bottom line: The right source must be used for the appropriate application. To design strictly based on technical or economic criteria without an awareness of aesthetic issues would be to negate design itself.

Rather than treat the incandescent/CFL debate as an “either/or” proposition, what it should do is encourage us to focus energies on the research of more efficient lighting sources of all types, including incandescent. The fine print of Philips Lighting’s March 2007 announcement of its support of the newly created Lighting Efficiency Coalition’s proposed legislative action (See Briefs, p. 22), clearly advocates a switch to more energy-efficient lighting systems, and a structured phase-out of *inefficient* incandescent sources, not a complete or immediate ban. The National Electrical Manufacturers Association (NEMA) has weighed in as well, supporting energy-efficient lighting, but arguing that proposed legislation here in the U.S. and abroad, which suggests an all out ban, is misguided. In a prepared statement NEMA President Evan Gaddis points out that product bans “do not encourage technology innovation, and fail to take into account market and application needs of the consumer.” It will be interesting to see in the coming months the market place’s Darwinian effect on new products and technologies.

Certainly there are instances and applications in which changing an incandescent source to a CFL makes sense, and there is no doubt that of the approximately four billion screw-based light sockets in the United States, not all need to house incandescent sources, or of the potential energy savings—approximately \$18 billion in the U.S. alone. But if we are to create a more socially responsible and environmentally friendly world, it has to stem from more than just a change in equipment, it has to be a change in attitude, habit, and behavior. It won’t matter how many incandescent light bulbs are changed to CFLs if we continue to drive oversized fuel-dependent vehicles instead of favoring mass transit or walking. It won’t matter how many incandescent light bulbs are changed to CFLs if we continue to avoid researching and funding viable renewable energy resources. It won’t matter how many incandescent light bulbs are changed to CFLs if we don’t each personally come to a better understanding of our own consumption footprint. Changing a light bulb is only one piece of a far larger and more complicated environmental puzzle. To be sure, a first step, but not the only solution.

ELIZABETH DONOFF  
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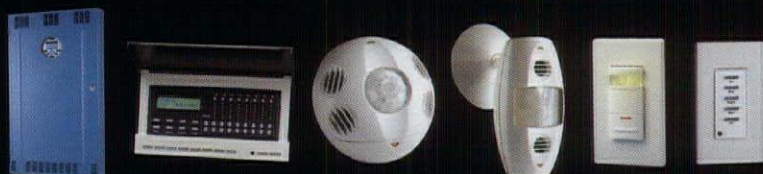
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## LIGHTING DESIGN COMMUNITY LOSES A GREAT

The lighting design community has lost one of its pioneers—Jules Horton, FIALD, FIES. A recognized leader in the profession, in 1969 he founded Jules G. Horton Lighting Design in New York; today, the firm is known as Horton Lees Brogden Lighting Design, with offices in New York, Los Angeles, and San Francisco. Mr. Horton passed away on February 23, 2007. He was 87. He will be honored posthumously at the IALD Awards Dinner in May during Lightfair, and at the Lumen Awards in June, both held in New York. **AJL**

The following piece originally appeared in Architectural Lighting's March 2003 issue, on the occasion of Mr. Horton's induction into AIL's Hall of Fame.

The word **pioneer**—*pi' o-nir` one who opens or prepares others for a new line of thought or activity*—is definitely synonymous with Jules Horton.

If one were to ask what Jules Horton contributed to the lighting design profession, it would have to be that he believed in lighting design and its future as a recognized profession. During his 35-year career, he mentored so many of us, not only as designers, but as leaders of the second and even third generation of lighting professionals. As many in lighting know, Jules used his worldly experiences, raw talent, determination, style, and charm often to create exceptional design solutions. He thrived on challenges and fought for what he believed in—sometimes too hard, and in the process lost the battle. Although he may have lost some battles, lessons were learned by all of those who learned from him. We understood his enormous passion for the search in excellence in lighting.

Jules retired from the profession starting in 1994 and, in 1998, was honored by the IALD in recognition for his many contributions. At the time, the firm now known as Horton Lees Brogden Lighting Design Inc. (HLBLD) prepared a list of all those who worked with Jules over the past 35 years and are still in the lighting profession—amazingly, 125 people have crossed paths with Jules Horton, and many have gone on to become leaders and principals of their own firms or principles in HLBLD.

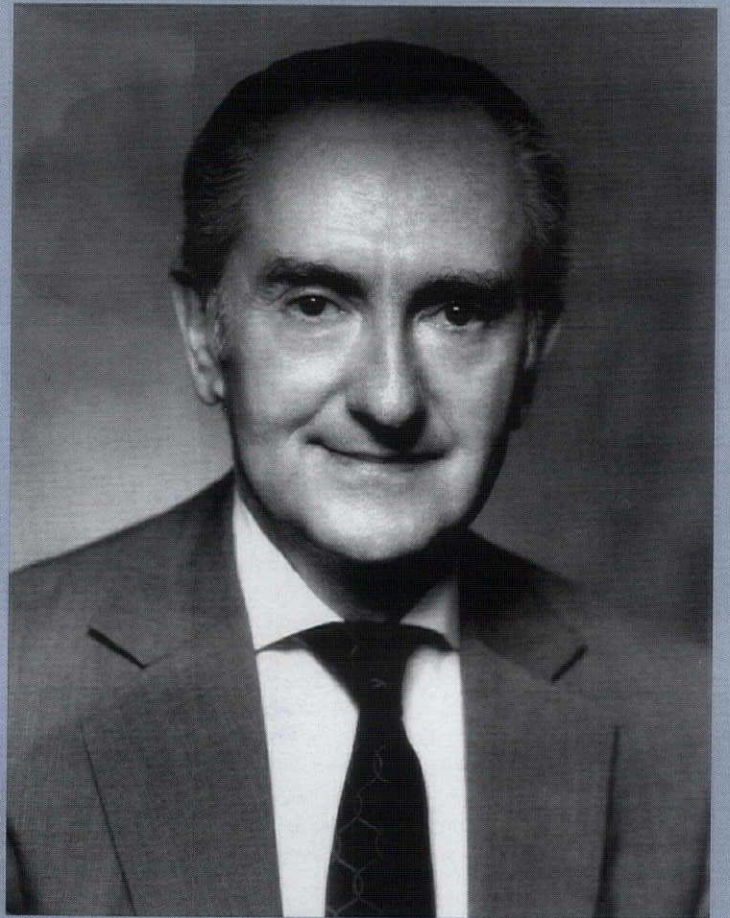
As many in the industry may know, Jules was trained as a structural engineer at the Polytechnic Institute in Warsaw, Poland, and in 1947 came to the U.S. to obtain his master's at Columbia University. He earned his Professional Engineer License and designed the radio tower located above the Empire State Building. His passion for art, music, language, and literature connected him to many interesting circles of friends. One of the most significant people he met was lighting designer Abe Feder, who introduced Jules to the world of architectural lighting. He apprenticed under Abe for several years and eventually left to start a lighting department with Syska & Hennessey. After several years of working on projects such as the new Madison Square Garden and the Triborough Bridge, he was asked to design the lighting of the Whitestone and Throgs' Neck Bridges for the 1964 World's Fair.

By the time Jules was ready to open his own firm, he had several large-scale, monumental lighting projects under his belt. The firm was launched in 1969 from his living room studio. He incorporated the firm in 1970 and opened a studio on Park Avenue South with the commission of one of his first large-scale projects, for the Dallas Fort Worth International Airport, with HOK. The project, like most airport projects, was several years in the making. Simultaneously, he developed a strong relationship with several prominent architectural firms across the country, which led to the design of several international projects including the King Abdulaziz International Airport in Jeddah, Saudi Arabia, the University of Petroleum and Minerals also in Saudi Arabia, and Tour de Cr dit Lyonnais in Lyon, France. His European background and fluency in English, Polish, German, Russian, French, and Italian served him well.

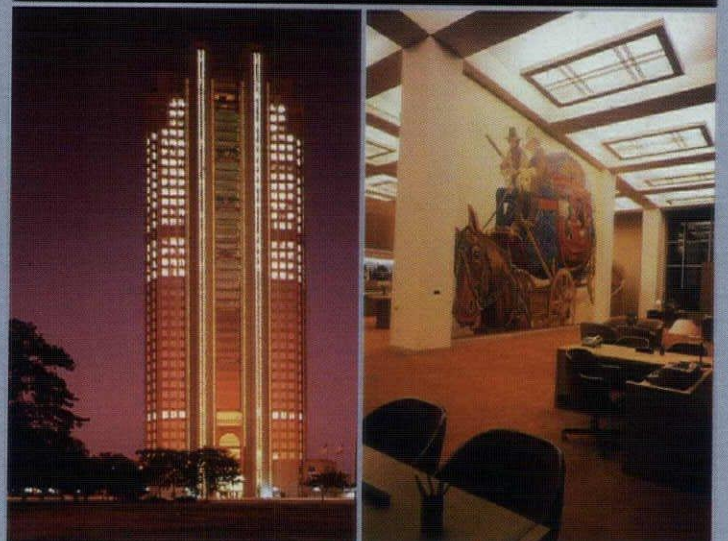
In a conversation with Jules some years ago, he revealed that he was the innovator of the 2x2 lensed fixture used widely in offices in the 1970s. Having learned that the sign industry had developed a U-shaped fluorescent lamp for compact signage, he saw an opportunity and went on to design a white metal box with a prismatic lens to shield the light source. The fixture was used in a large office project located in New York in the early 70s. It is amazing that his one simple move would dramatically influence the lighting industry as we know it today. And as anyone who knows Jules could attest, while he naturally boasts of his many accomplishments in life or often tells stories of his survival in a Russian labor camp in the Arkhangelsk Islands, Russia, in this case and in many others, when it came to truly discussing his innovations, he checked his enormous ego and became almost unaware of the impact that his idea had on today's office environment.

In 1976, he hired Stephen Lees, who went on to become a partner in the firm in 1984. In response to their West Coast clients, Jules and Stephen opened a San Francisco office in 1984 with Denise Bruya-Fong. In 1992, Barbara Horton stepped into his shoes as president after many years of being mentored. As Jules phased out of the business, the two partners expanded the firm once again with a Los Angeles office headed by Teal Brogden. The firm thrives with over 32 studio members in three offices—New York, Los Angeles, and San Francisco—and is owned and managed by four principals: Barbara Horton, Stephen Lees, Teal Brogden, and Angela McDonald.

Since retiring, Jules has stayed quietly at home exploring his passion for music, art, and literature. His travels have been curtailed because of arthritis, which stemmed from knee injuries during the war. For those of you who know Jules, this is a terrible thing for him because he so loved to travel abroad, explore art galleries, attend concerts and opera, and was never daunted by adversity. He recently began to venture out with the help of an attendant and his world, at almost 84, is reopening again. **BARBARA CIANCI HORTON**



Jules Horton (above). Horton's portfolio of projects includes: The King Abdulaziz International Airport, Jeddah, Saudi Arabia, 1980 (below); City Place, Dallas, 1980 (bottom left); and corporate offices for Wells Fargo, 1983 (bottom right).



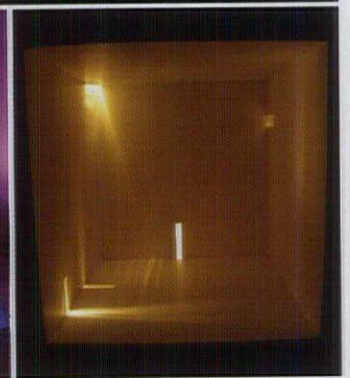
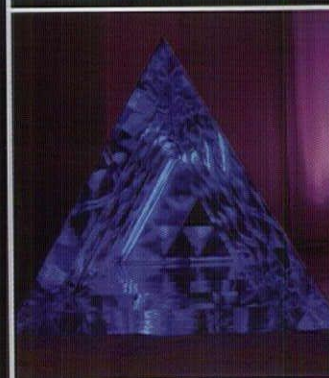
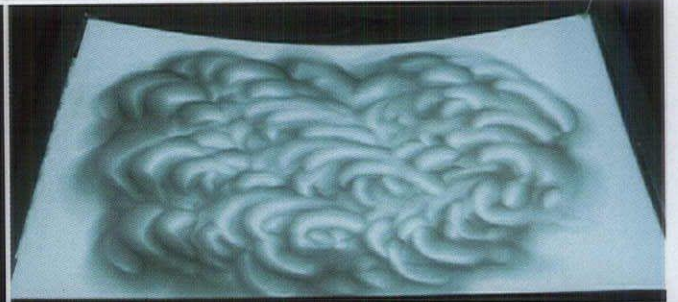
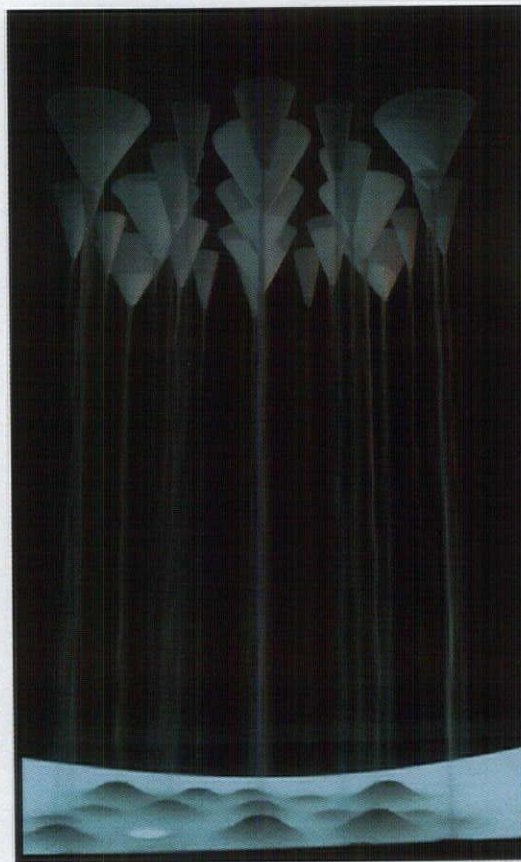
PHOTOS COURTESY OF HLB LIGHTING DESIGN

## IMMERSIVE LANDSCAPES

FOR THE SEVENTH CONSECUTIVE YEAR, NEW YORK AREA LIGHTING design, architecture, interior design, engineering, and art students were asked to explore light's potential as an artistic medium. The 2007 Annual Illuminating Engineering Society New York Section (IESNY) Student Competition garnered 47 entries, which were displayed for three days at Lotus Space, a gallery venue, in Manhattan's Chelsea neighborhood. The theme of this year's competition—Immersive Landscapes—asked students to envisage an "immersive sensory experience" through the creation of a three-dimensional space.

First place went to Chung-Jung Liao an MFA candidate in the lighting program at Parsons. His project, *Mandala in Light*, used salt distributed through funnels to create Mandala patterns—"a Tibetan Buddhist representation of the cosmos characterized by a concentric configuration of geometric shapes." Lit from below, depending of the density of distribution, the salt crystals emit different color values. Patterns can be redrawn without limit. Liao received a \$3,000 cash prize and all expense paid trip to the European Lighting Design Workshop and Conference in Alingsas, Sweden.

Sara Elizabeth Foley was awarded second prize for her entry, *The Light Prism*, a human-scale kaleidoscope. The bachelor of engineering student at Cooper Union used 15, 1W color-changing LEDs as the illumination source, along with different patterned screens to change the



Parson's Chung-Jung Liao's first-place winning entry *Mandala in Light* (left and top); Cooper Union's Sara Elizabeth Foley's second place project *The Light Prism* (above left); and Parson's Ross Guntert's third place entry *Refracted by Levers* (above right).

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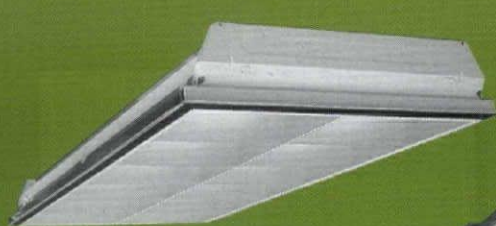


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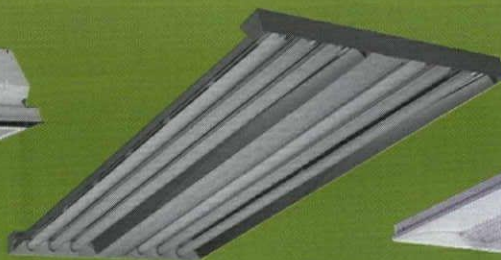
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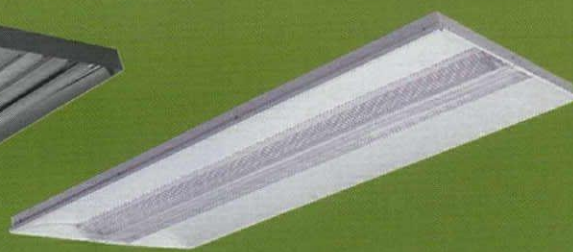
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"mood" within the linear tent-like structure. Foley received a \$1500 cash award.

Undergraduate architecture student Ross Guntert, received third prize for his project entitled, *Refracted by Levers*. Consisting of a black box with a series of levers and a light source, manipulating the levers altered the intensity of the refraction of light. Guntert received a \$500 prize for his efforts. Three honorable mentions were also awarded. The recipients were Wanlop Chantarakolkit, an MFA candidate at Parsons, Siriphot Manoch, also an MFA candidate at Parsons, and Ian Lotto a BFA candidate in the Architecture program at Parsons.

This year's jury included Frank Conti, president of Enterprise Lighting Sales and IESNY board member; Dennis McKee, director of special projects and corporate affairs at Bartco Lighting; Molly McKnight, associate lighting designer at the Brandston Partnership; Allison Ritter, educator and director of ELDA; Joachim Ritter, editor in chief of Professional Lighting Design magazine; and Coren Sharples, principal of New York-based ShoP Architects. Awards were presented on March 14, 2007, at an evening event that included presentations by artist Ben Rubin (See "Visual Communication," Jan/Feb 2007) and Joachim Ritter. For more information about the IESNY Student Competition visit [www.iesny.org](http://www.iesny.org). **AJL**



Honorable mention awards were also given to three student projects. From left to right the work of Siriphot Manoch, Ian Lotto, and Wanlop Chantarakolkit.

PHOTO COURTESY OF THE IESNY

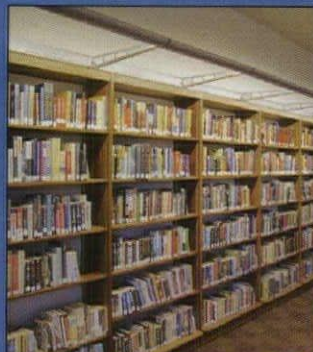
# library lighting



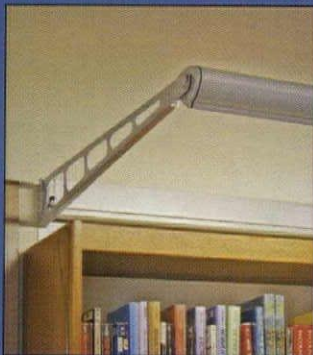
Style 3030



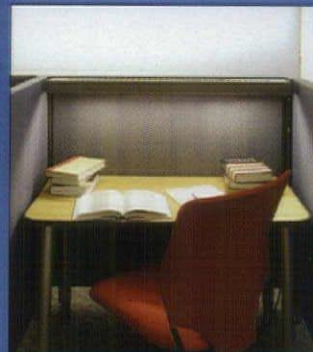
Evenly lights shelves top to bottom, on both sides of aisles 36"-48" wide.



Style 3502



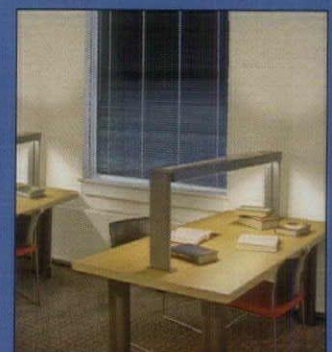
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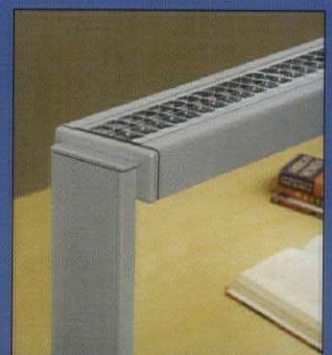
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## PHILIPS LEADS LIGHTING EFFICIENCY COALITION

PHILIPS ELECTRONICS HAS PARTNERED WITH SENATOR MARK PRYOR (D-ARK.), CONGRESSMAN DON MANZULLO (R-ILL.), and the Lighting Efficiency Coalition—comprised of the Alliance to Save Energy, American Council for an Energy Efficient Economy, Californians Against Waste, Natural Resources Defense Council, and Earth Day Network—to propose legislative measures toward “incorporating high-efficiency lighting technologies in home and office settings.” The goal of the Philips-led coalition is to encourage an industry-wide initiative to replace less efficient products that are in use, with more energy-efficient light fixtures and lamps. Philips supports the action as the “first lighting manufacturer in North America to seek a phase-out of inefficient incandescent light bulbs by 2016.”

The Coalition’s proposal calls for “incentives for consumers and business to purchase more energy-efficient products.” Explains Philips’ spokesperson Steve Goldmacher, “Its about creating performance standards, not bans.” Today in the United States there are approximately 4 billion screw-based light sockets that employ “inefficient, old-style general service incandescent lights.” If energy efficient sources were universally employed across the U.S. the result would represent almost \$18 billion annually on electricity bills, and “more than 158 million tons of carbon dioxide emissions and 5,700 pounds of air-born mercury emissions would be eliminated.”

The Coalition’s proposal is still in the formative stages as Senator Pryor’s office works to draft legislation in the next six months before heading to Senate Confirmations. When asked if the lighting design community at large was being consulted, no definitive answer was provided, rather it was suggested that the lighting design community would have to take a proactive stance and reach out to legislators. **AJL**

**CORRECTION:** The Editor extends apologies to the architectural firm SANAA. In the Jan/Feb 2006 issue and article “Light, Space and Architecture: SANAA’s Architectural Explorations with Light,” the firm name, was incorrectly spelled (SANNA).

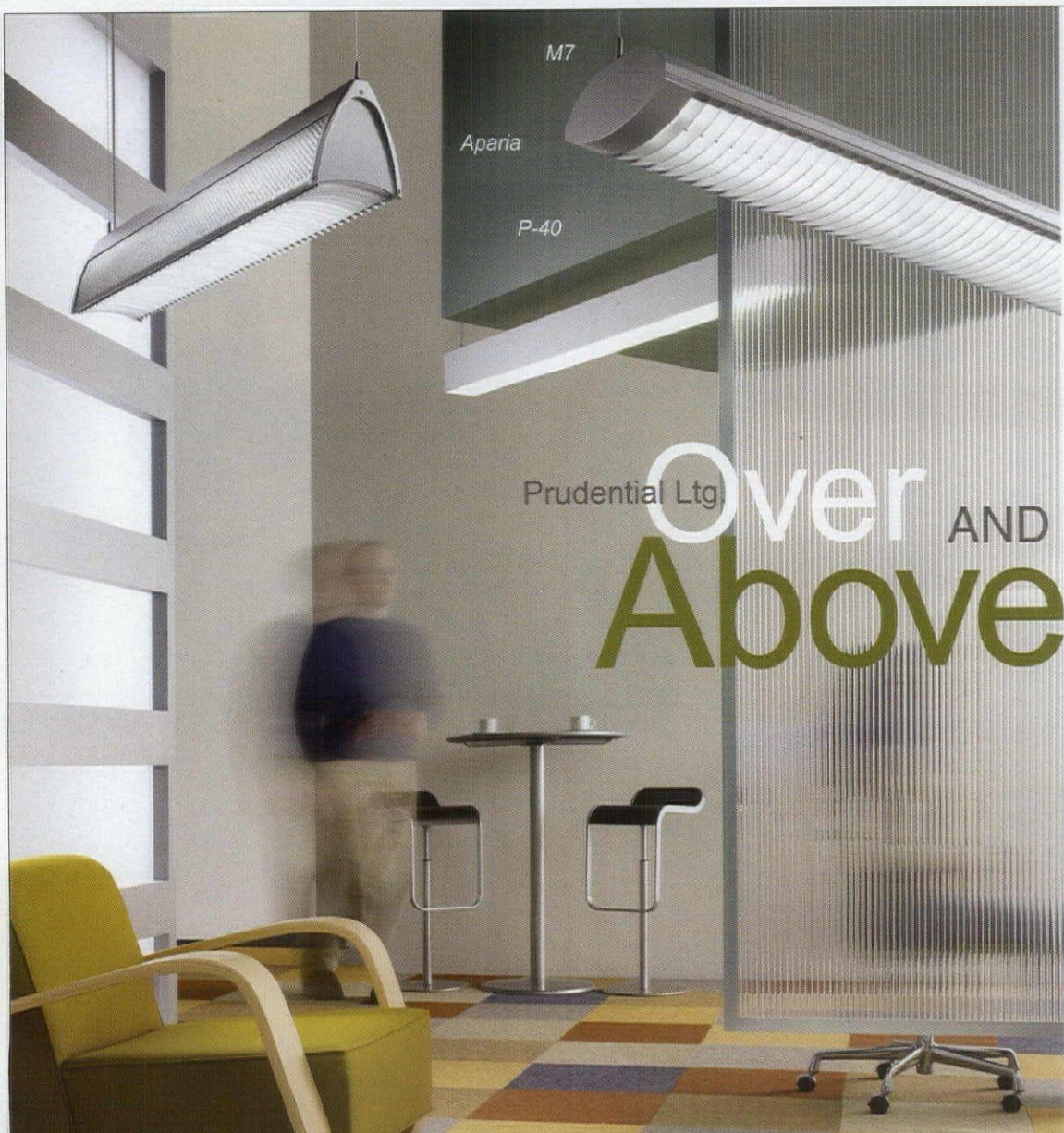
## LIGHTCONGRESS TURNS FIVE

CELEBRATING ITS FIFTH ANNIVERSARY, LIGHTCONGRESS, WHICH TOOK PLACE ON MARCH 13, 2007, ONCE again assembled an impressive line up of speakers. The day began with a keynote presentation by Laurie Kerr, Senior Policy Advisor in the New York City Mayor’s Office for Long Term Planning and Sustainability. Responding to global trends toward sustainability, and more specifically Mayor Bloomberg’s mandate for the city to reduce its carbon emissions by 30 percent by 2030, Kerr is responsible for developing various aspects of the City’s plan—PlaNYC-2030—to achieve these goals.

Overall, the conference was divided into three major topic areas: Energy Efficiency and Sustainability, Daylighting and Health, and Designing with Light, and included a diversity of speakers. The Daylighting sessions, moderated by Neall Digert of Solatube, were particularly strong. Jim Benya spoke about Natural Ambient Daylighting; Dr. Joan Roberts of Fordham University presented on the topic of daylight and human health and how light contributes to the treatment of various diseases; and Matthew Tanteri discussed daylighting techniques for K-12 schools.

The afternoon session was devoted to discussions of “Designing with Light,” moderated by lighting designer Leni Schwendinger. A particular stand out presentation was the work of architect Gustavo Aviles, whose firm—Ligteam—has been creating and implementing a master plan for Mexico City.

LightCongress originally served as a media-preview to Lightfair, the lighting industry’s main U.S. tradeshow. Over the past five years, LightCongress has evolved into a more content driven event, in order to introduce main stream media to the lighting industry and promote lighting issues. As in year’s past, the event was organized by Greystone Partners, along with the support of sponsors—Sylvania, Color Kinetics, Con Edison, the IESNY, Light Tape, and Lighting Science Group—and an advisory board to structure the presentations. Architectural Lighting once again supported the program as a media sponsor. For more information visit, [www.lightcongress.com](http://www.lightcongress.com). **AJL**



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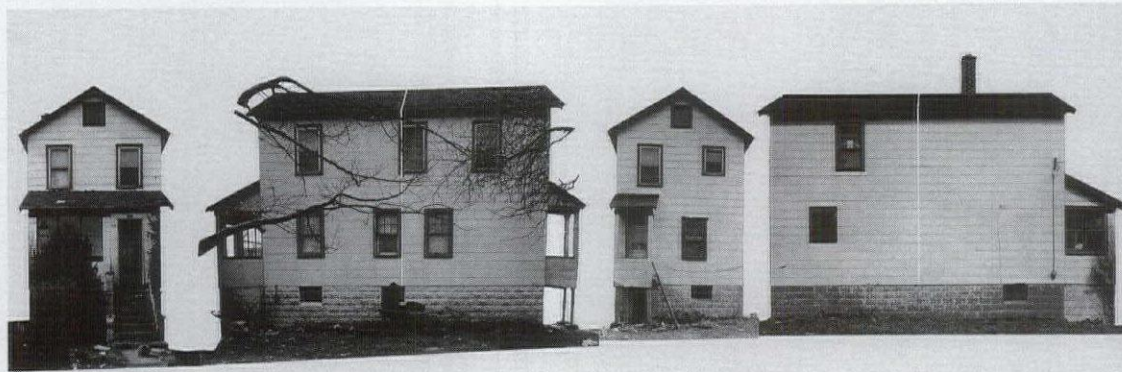
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## GORDON MATTA-CLARK AT THE WHITNEY

The mythological-like status associated with Gordon Matta-Clark (1943-1978) and his work, stems in part from his pre-mature death at the age of 35, but should not be doubted. That is proved in the current retrospective, *Gordon Matta-Clark: "You Are the Measure,"* at the Whitney Museum of American Art on view through June.

A prolific body of work that spanned a decade, Matta-Clark studied architecture at Cornell, but was frustrated by its pedagogical hierarchies. Instead, he used architecture as a base for artistic explorations of space. Working in New York during the 1970s, Matta-Clark was drawn to the abandoned and deteriorating neighborhoods of the city. Known for his building cuts, these "interventions" challenge traditional spatial understanding. "By opening up these spaces through removal," the exhibition text explains, "he created new views through space, unexpected perspectives, and new relationships between the standard conditions of architecture: walls, doors, and ceilings." The exhibit conveys Matta-Clark's working process through a combination of building cut artifacts, drawings, films, photographs, and photocollages, reaffirming Matta-Clark's dynamic engagement with the built environment. **ELIZABETH DONOFF**



*Splitting 10 & 11, 1975, Four gelatin silver prints, cut and collaged (left). Gordon Matta-Clark working on the house in Englewood, New Jersey, used for *Splitting*, 1974 (right).*

COURTESY: THE ESTATE OF GORDON MATTA-CLARK AND DAVID ZWIERNER, NEW YORK

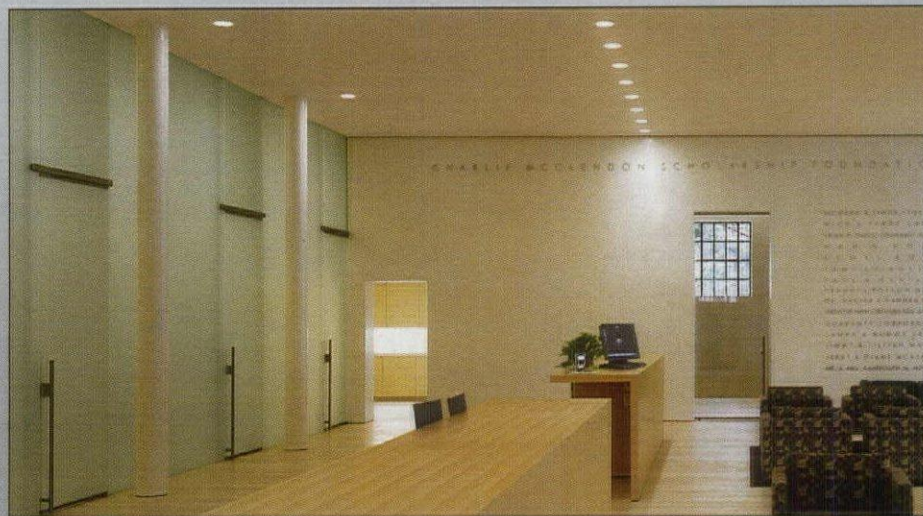
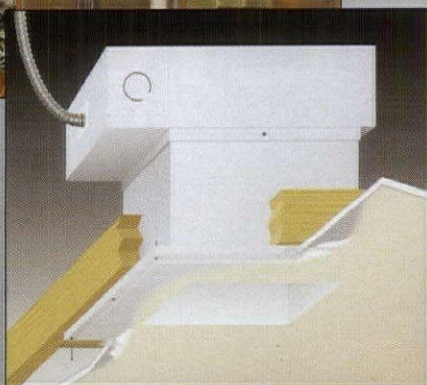
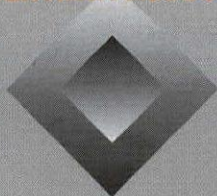
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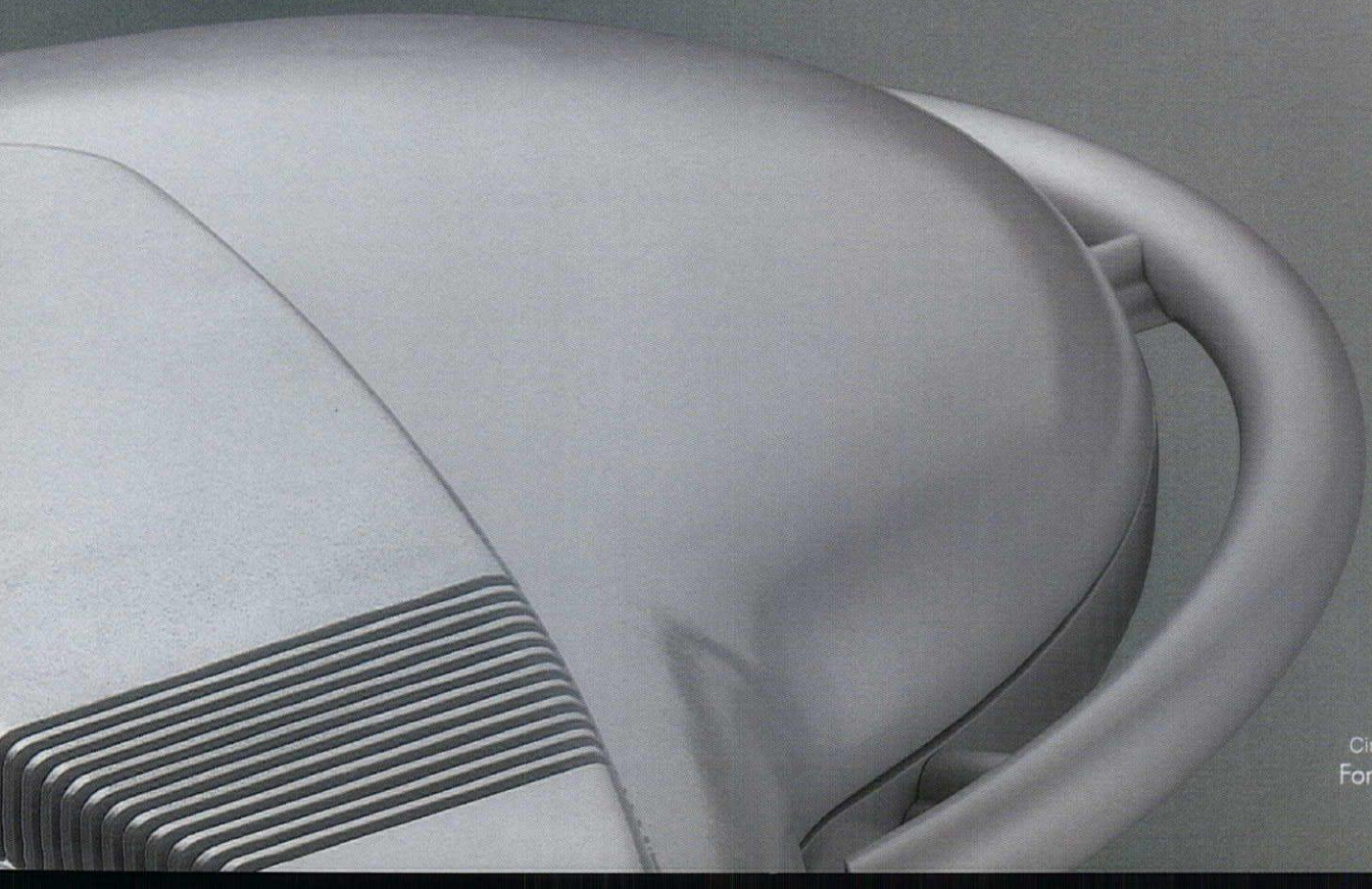


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## San Antonio Spirit CHRIS SCHULTZ

**DURING THE DAY, IT'S ONE OF A HANDFUL OF ROMANTIC PRE-DEPRESSION-ERA SKYSCRAPERS** gracing the downtown skyline. But at night, ask any San Antonian to name the most iconographic building of their hometown and chances are good the Tower Life building will top the list (OK, the Alamo and Tower of Americas are strong contenders as well). This octagonal, neo-gothic sliver of brick and terra cotta by the city's most prominent, and prolific, early twentieth-century architectural firm—the father-son team of Atlee and Robert Ayers—lights up the sky, it's upper two stages aglow. Visitors to San Antonio for the American Institute of Architects (AIA) 2007 National Convention and Design Expo will surely agree that as a marriage of lighting and architecture, Tower Life is hard to surpass.

Except perhaps by another, slightly more diminutive landmark—the Frank Murchison Tower at Trinity University. An elegantly simple essay in brick, concrete, and copper by San Antonio's most charismatic and influential mid-century architect, O'Neil Ford, the Murchison Tower is a dramatic presence for commuters from the northern suburbs. Ford's ethos of a Rational Regionalism—combining local materials and the region's rich traditions of handicraft with a modernist's honesty of expression—still underpins much of the current architectural exploration in the city.

Aside from Ford's own firm, Ford Powell & Carson, one of the most direct descendants is Lake|Flato, the city's best-known contemporary firm, and recipient of the AIA Firm of the Year in 2004. A panoply of projects around town—The Carver Academy, the Government Canyon Interpretive Center, numerous private homes, and an on-going adaptive use project at Pearl Brewery—highlight Lake|Flato's direct, ecologically sensitive and inventive approach to designing for the South Texas climate, and often incorporate creative custom lighting fixtures.


But numerous other firms are gaining acclaim as well. Overland Partners' expansions of the San Antonio Museum of Art display sophisticated elegance, particularly in their shoji-like cladding of the Asian Wing, while sustainable features are integral to their South Texas Blood and Tissue Center. Kell Muñoz's Methodist Healthcare Ministries Headquarters and Marmon Mok's Dreeben Family Pavilion at Temple Beth El display an iconographically modern sensibility. Alamo Architects enliven many of their inventive forms with an expressive lightness, as seen in their Humane Society Animal Shelter. Vbar in the Hotel Valencia, by Parsons 3D/I, integrates sleek color-changing LED lighting, as does the new Drury Plaza Hotel garage-recladding project by Sprinkle Robey. And though not technically architecture, the new "Light Channels" public art piece by Bill FitzGibbons, director of the Blue Star Contemporary Art Center, also employs color-changing LEDs and aluminum sculptural elements, which dramatically enhance the pedestrian experience under highway overpasses at Commerce and Houston Streets, immediately east of the Convention Center.

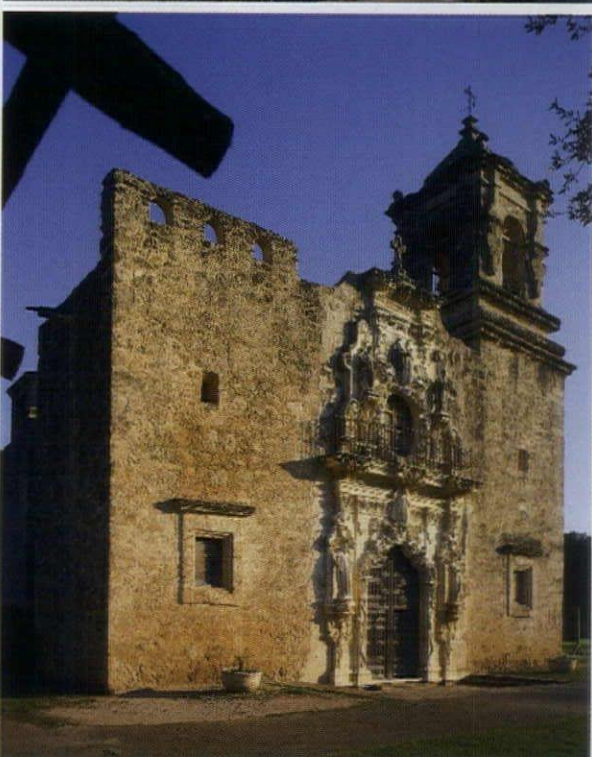
### AN HISTORIC PAST

San Antonio is equally proud of its wonderful collection of historic structures. San Fernando Cathedral, the oldest Roman Catholic cathedral in the United States, was recently renovated by Rafferty Rafferty Tollefson of St. Paul, Minnesota, with San Antonio-based Fisher Heck as associate architects. Dramatic exterior lighting highlights the 1873 French Gothic nave addition as well as the older Spanish Colonial dome and apse, while the interior is resplendent with golden *retablos* and the rich creaminess of the local limestone. The Majestic Theater, the queen of San Antonio's atmospheric theaters, designed by John Eberson of Chicago in 1929, and renovated by local architect Milton Babbitt in 1988-1989, is a *mélange* of Spanish and Moorish architectural confection, replete with twinkling pin lights and a cloud machine casting a moon-like luminance across the azure ceiling.

These projects and many more are highlighted in AIA San Antonio's new guidebook, *Traditions & Visions: San Antonio Architecture*, premiering at the Convention and available afterwards at [www.aiasa.org](http://www.aiasa.org). The guide contains over 350 of the city's finest designs along with insightful essays tracing the city's historical precedents and current directions in design. But as with all architecture, it is best viewed in person—when one can touch the stones of San Antonio's past alongside the concrete and steel of its present. AIA San Antonio invites everyone to do just that.

*Chris Schultz, AIA, is a San Antonio native and current AIA San Antonio President.*

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The Tower Life Building stands tall in San Antonio's downtown and River Walk area (top). The Alamo, site of the infamous 1836 battle of the Texan Revolution where 200 Texans stayed off 4,000-plus Mexican troops for 13 days before finally succumbing, is a San Antonio and Texas icon (above).

The city's architectural heritage provides a compelling backdrop for the 2007 AIA National Convention.


## Lucifer Lighting: A Native Son ELIZABETH DONOFF

A KEY FIXTURE IN THE LIGHTING AND SAN ANTONIO COMMUNITY FOR THE LAST 25 YEARS, Lucifer Lighting's new headquarters—a 13-acre site, formerly the Pace Picante production facility—blends thoughtful consideration of light and architecture, and provides forward thinking illumination to both interior and exterior spaces for office and factory alike. As chairman and CEO Gilbert Mathews explains, the company had outgrown its downtown location and was looking for the “ideal space” that would allow the company to unite its administrative offices with its factory and research and development studios, and “set them for a number of years.” The existing 60,000 square foot Pace factory has enabled Lucifer to double its existing footprint.

Owing to the company's trademark attention to detail and thoroughness in problem solving, it is no surprise that the renovation of the facility took almost three years from initial concept to actual completion. As a lighting manufacturer, coupled with his experience of working with leading architects and lighting practitioners, Mathews knew the particular people he wanted to work with, and called on a group of top professionals (Benya Lighting Design, Atelier Lumiere, Jackson & Ryan Architects, and Gensler) to design an architectural space integrated with light and with the stunning surrounding natural landscape. But the project does not stop at excellence in design; it also represents the company's commitment to sustainability and education. From the beginning, a significant amount of time has been spent researching the right “green design” features to incorporate into the renovated facility, such as the skylight and “green roof” system of the building's factory area.

To that end, two consulting firms—San Antonio-based 3DI International and Eugene, Oregon Solarc have been brought on board to lend expertise in both the LEED process and integration of sustainable design features. Although the project is seeking a silver LEED certification, for Mathews the certification will be an extra bonus, but not what has motivated his decision to proceed on this course. While the facility does provide a showcase for the company's own products, what the space really celebrates is light and lighting, and in turn the company's philosophy of a clean modern aesthetic, and a responsible corporate citizen engaged with its community.

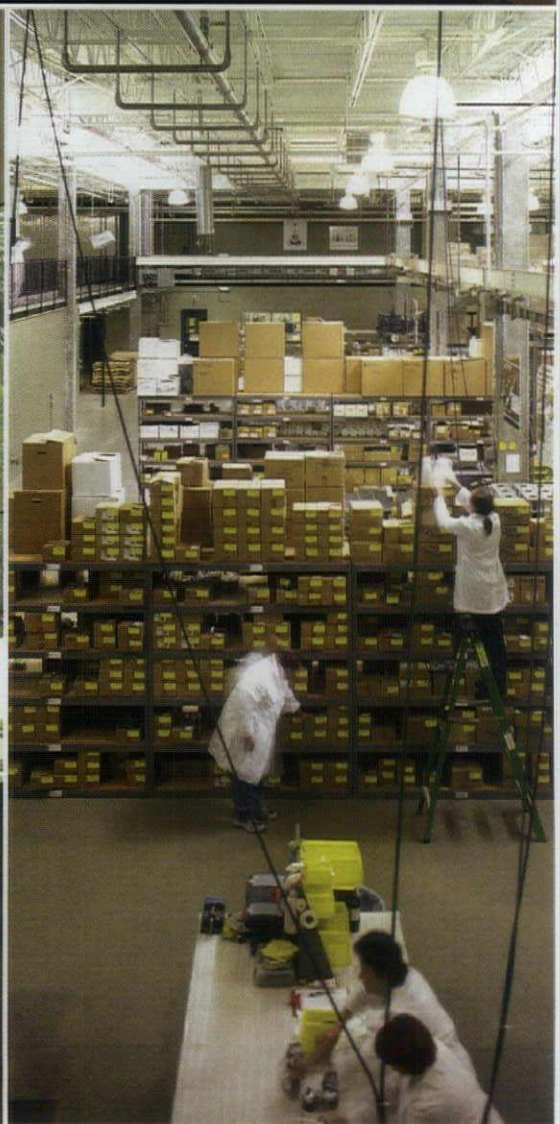
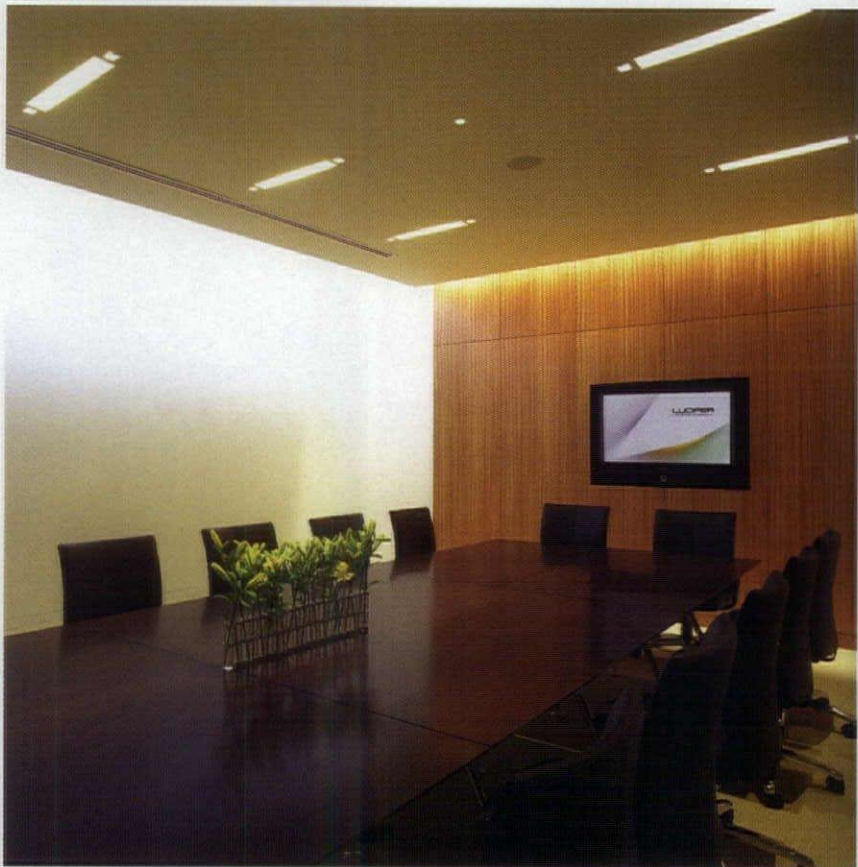
*Lucifer Lighting's new headquarters is one of the official AIA Convention Professional Tours. For more information, visit [www.aia-convention.org](http://www.aia-convention.org).*

 more information at [ARCHLIGHTING.COM](http://ARCHLIGHTING.COM)

**PROJECT:** Lucifer Lighting Company **LOCATION:** San Antonio, Texas **ARCHITECT:** Jackson & Ryan Architects, Houston **INTERIOR ARCHITECT/DESIGNER:** Gensler, Dallas **LIGHTING DESIGNERS:** Atelier Lumiere, New York and Benya Lighting Design, Portland, Oregon **ADDITIONAL CONSULTANTS:** 3DI International, San Antonio, Texas and Solarc, Eugene, Oregon **PHOTOGRAPHER:** Ross Muir, New York

Clean lines and an elegant, but neutral palette define the aesthetic of Lucifer Lighting's new headquarters. Natural light reaches all parts of the building including the reception area (top left) and the break room (facing page bottom left). An extensive art collection is showcased throughout the facility, and the ceiling treatment of the corridor adjacent to the main conference room recalls the architectural form of architect Louis I. Kahn's Kimball Art Museum (right). The main conference room (facing page top left and right) is equipped for numerous lighting scenarios. Skylights, coupled with high-bay fixtures provide an abundance of light in the factory (facing page bottom right).





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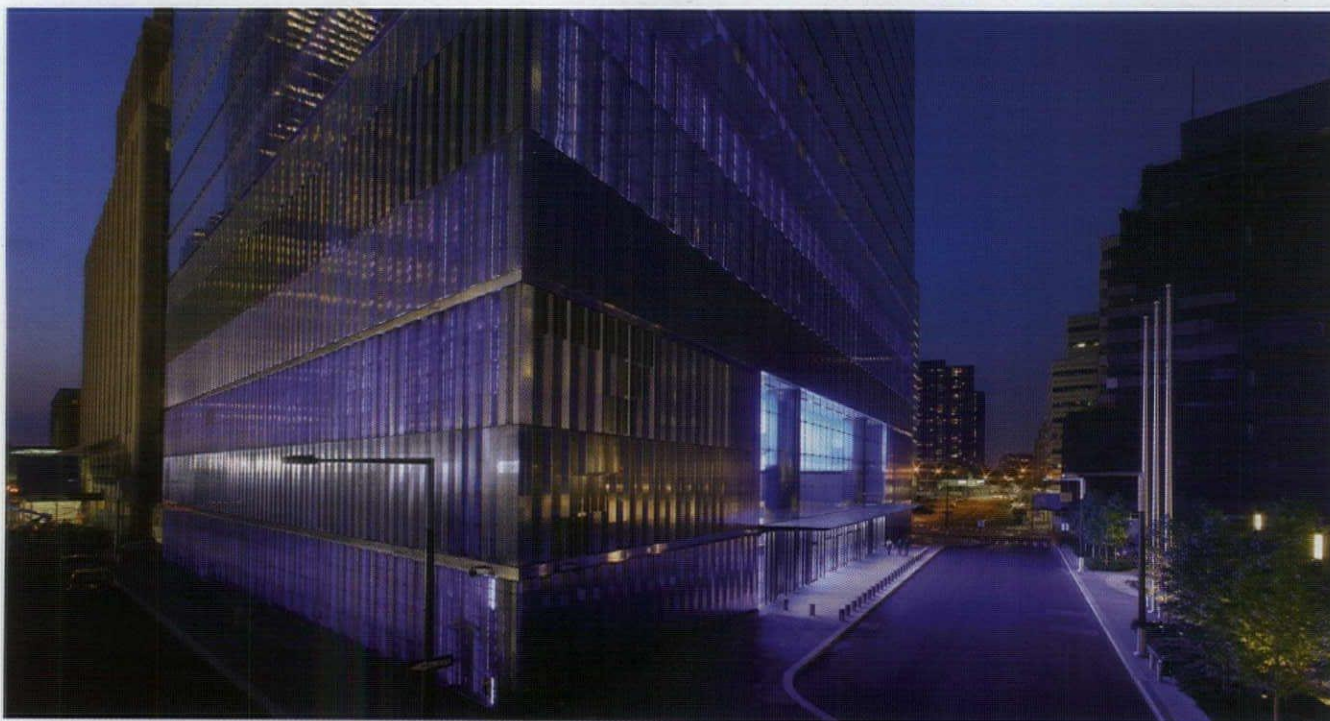


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## A New York State of Mind



At night, 7WTC comes alive with the lobby's luminous "light box" ceiling, while outside, an interactive LED light feature adds dimension to the double-layer metal scrim wall (above).

Two views of New York—where architecture and lighting come together unequivocally.

### LIGHT AND THE CITY RICK BELL

The utterly bearable lightness of being in New York this spring is evident in several new structures, and one classic now topping the charts. This is a great time to walk the sidewalks of Manhattan, from Columbus Circle to the Battery, from Harlem to City Hall Park.

#### SEVEN IS UP

Blue-purple LED lights in the metallic base of the new office building known as 7WTC (See "A Clockwork Blue," Sept/Oct 2006.) announce that something different has risen at the site of the World Trade Center. Designed by David Childs, of Skidmore Owings & Merrill, Childs called on New York-based Cline Bettridge Bernstein Lighting Design to turn the architectural concept into lighting reality. The ground level of the structure also benefits from collaboration with public artists James Carpenter, Jenny Holzer, and Jeff Koons. Carpenter's light touch helps dematerialize the otherwise solid streetwall, enclosing an electrical substation. The 9/11 destruction of the building's namesake predecessor symbolized one of the darkest points in New York's history. With an exciting new façade, and the lights on in newly occupied offices, including those of the National Academy of Sciences, this American Institute of Architects (AIA) award-winning building expresses resilience and elegance.

#### STATEN ISLAND TOO

The recently revamped Whitehall Ferry Terminal, also known as South Ferry, is an exciting new work of architecture by Frederic Schwartz of Schwartz Architects. With embodied photovoltaic panels facing south to the harbor, the building's shimmering façade greets ferry commuters from Staten Island, as well as visitors from around the world who have learned that this cheap ride (round trip for two bits) brings people close to the Statue of Liberty and our maritime history. The terminal beckons as a portal to the city, where waterborne transport has been resurgent. A multi-modal facility, the new terminal straddles the Number 1 Local subway, whose trains screech as they grudgingly make the slow turn to head back uptown.

#### AMERICA'S FAVORITE

In the 2007 Harris Poll of America's Favorite Architecture, commissioned for the 150th Anniversary of the AIA, the Empire State

Building topped the list. Designed by Shreve, Lamb & Harmon and completed in 1931, the building was for many years the tallest in the world. The Empire State endears itself nightly to New Yorkers and tourists by its nightcap of color. Holidays are predictable—red and green predominates in December. But for many baseball fans, the October blue-and-white lights signify the preeminence of the Yankees. The building won "fave" honors as a supporting player in the films *An Affair to Remember*, *King Kong*, and *Sleepless in Seattle*. It is also the fulcrum of New York's striving skyline and makes the empirical gesture—onward and upward.

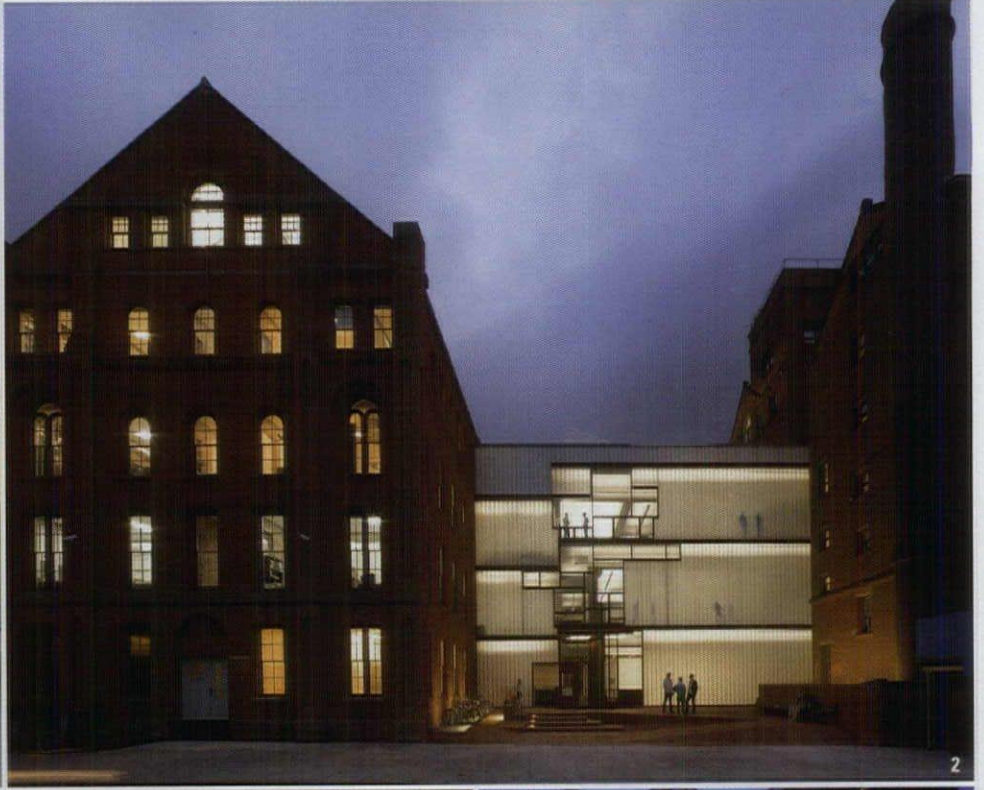
#### THE CENTER FOR ARCHITECTURE

The Center for Architecture, at 536 LaGuardia Place in Greenwich Village, benefits from daylighting on all three of its floors. This would not be so unusual, but for the fact that two of these levels are underground. Open since October 2003, the Center for Architecture, created by the AIA New York Chapter (AIANY) and the Center for Architecture Foundation, also houses the Illuminating Engineering Society of New York (IESNY) among its many professional organization partners. Multi-disciplinary discourse has engendered over 2,000 programs and 70 exhibitions to date. One recent exhibit sponsored by the IESNY, *Light | Energy | Impact* (May 17 - July 12, 2007), highlighted the work of architect and lighting designer Richard Kelly. And just this January, London-based LED light-artist Jason Bruges' installation *Visual Echo*, co-sponsored by the Royal Society for the Arts, was on view (See "Visual Echo Opens in New York," Jan/Feb 2007).

During Lightfair there will be new exhibitions on affordable housing, design excellence, and the history of New York's buildings and neighborhoods since 1857. Visit the Center for Architecture ([www.aiany.org](http://www.aiany.org)) to get oriented, hear what's happening, and to learn more about what is most enlightening on the New York architectural and lighting scene.

*Rick Bell serves as executive director of the New York Chapter of the AIA where he has worked to raise involvement of the architectural and design communities on public policy and development issues. He was elected a Fellow of the AIA in 2000 for his work in public facility design.*

## Award-winning Lighting Design by New York Designers



**ALESSI FLAGSHIP STORE, New York, NY**  
Lighting Designer: Tillotson Design Associates (1)

**CENTRAL WING SCHOOL OF ARCHITECTURE, Pratt University, Brooklyn, NY**  
Lighting Designer: Arc Light Design (2)  
A|L LIGHT & ARCHITECTURE DESIGN AWARD WINNER, JULY/AUG 2006

**SEVEN WORLD TRADE CENTER, New York, NY**  
Lighting Designer: Cline Bottridge Bernstein Lighting Design (SHOWN ON PAGE 31)

**CONEY ISLAND PARACHUTE JUMP, Brooklyn, NY**  
Lighting Designer: Leni Schwendinger Light Projects (3)

**THE IRISH HUNGER MEMORIAL NEW YORK, New York, NY**  
Lighting Designer: Johnson Schwinghammer (4)  
A|L LIGHT & ARCHITECTURE DESIGN AWARD WINNER, JULY/AUG 2004

**ATLANTIC TERMINAL, Brooklyn, NY**  
Lighting Designer: Cline Bettridge Bernstein Lighting Design (5)  
A|L LIGHT & ARCHITECTURE DESIGN AWARD WINNER, JULY/AUG 2005

**AUDREY LOUNGE AND CAFE, New York, NY**  
Lighting Designer: Focus Lighting (6)

**CARLOS MIELE, New York, NY**  
Lighting Designer: Focus Lighting (NOT SHOWN)  
A|L LIGHT & ARCHITECTURE DESIGN AWARD WINNER, JULY/AUG 2005

**THE PORTER HOUSE, New York, NY**  
Lighting Design: SHoP Architects (NOT SHOWN)

**55 WATER STREET PARK, New York, NY**  
Lighting Designer: Jim Conti Lighting Design (NOT SHOWN)

**MIXED GREEN GALLERY, New York, NY**  
Lighting Designer: Tillotson Design Associates (NOT SHOWN)

**POSTCARDS - THE STATEN ISLAND SEPTEMBER 11TH MEMORIAL, Staten Island, NY**  
Lighting Designer: Fisher Marantz Stone (NOT SHOWN)

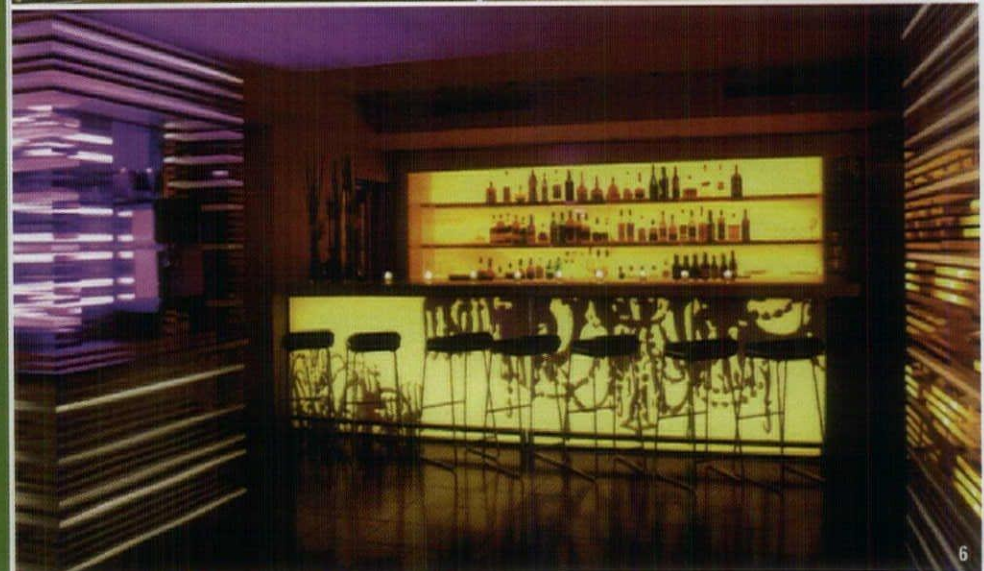
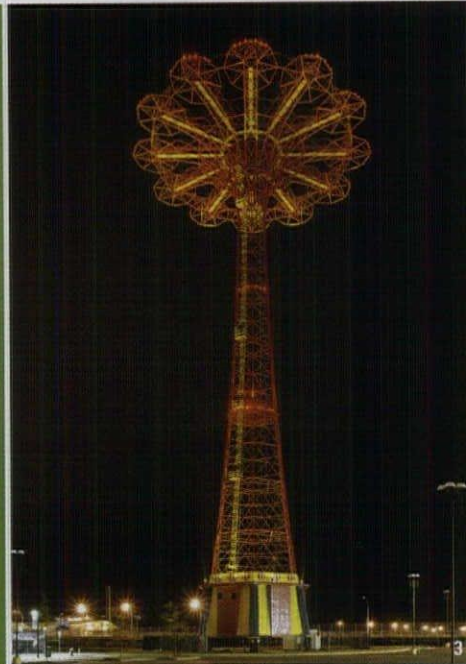


PHOTO CREDITS: (1) ELIZABETH FELICELLA; (2) DAVID SUNDBERG/ESTO; (3) COURTESY OF LENI SCHWENDINGER LIGHT PROJECTS; (4) PETER AARON/ESTO; (5) ELLIOTT KAUFMAN PHOTOGRAPHY; (6) COURTESY W HOTELS





Neo-Ray Straight & Narrow 23DR adds linear appeal to all three floors.

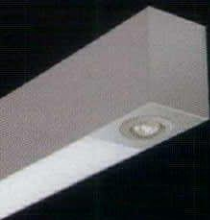
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**INVUE™ Slide Medium**

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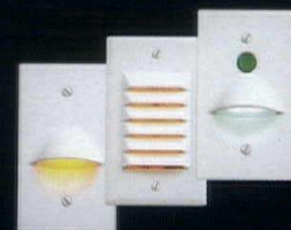
**Shaper™ 609**

The 609 Luminous Vanity Sconce with an MR-16 downlight offers indirect and direct illumination. Downlight can be switched separately.



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# Lighting the Way RANDY SABEDRA

OVER THE PAST TWO YEARS NEW YORK CITY LIGHTING DESIGNERS HAVE LOOKED BACK AT THEIR HISTORY, dealt with the present, and struggled to predict the future. New York City remains the center of the lighting industry, and its lighting designers continue to lead the way.

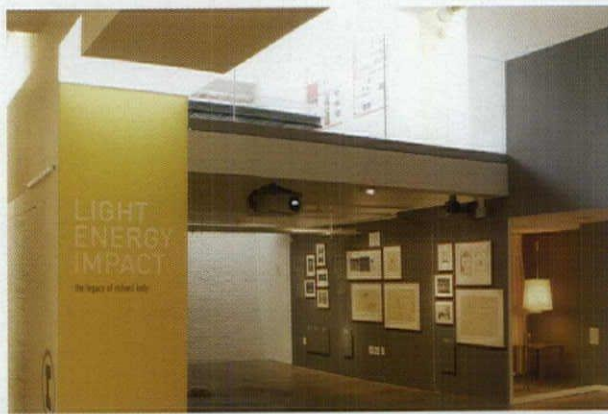
As LightFair 2005 packed its bags, the Museum of the City of New York, in conjunction with the Illuminating Engineering Society of North America's (IESNA) Centennial Celebration, showcased, with an extensive exhibition of lighting technology, design, and fads, an exploration of how illumination shaped the modern city. (See "IESNA Centennial Celebration Recap" and "The Radiant City," Jan/Feb 2006.) Utilizing timelines and artifacts, the displays documented lighting's past and present, and speculated on the future. In the spring of 2006, the IESNY's 1996 Richard Kelly exhibit, was expanded and re-introduced at the AIA's Center for Architecture. Enhanced with new materials to introduce lighting design to a broader public, the installation, entitled *Light | Energy | Impact*, showcased the work of this legendary designer, and how he shaped the use of light in the built environment. (The original Richard Kelly exhibit is now traveling throughout Europe.)

Living and working within such a large lighting community, designers benefit from the immediate access to innovative and improved lighting products. LEDs have had a major impact on the design choices and options of lighting equipment, but LED technology is a moving target. Lighting designers have a love/hate relationship with this constantly evolving technology. Designer's appreciate light emitting diodes' low wattage, long life, and continued improvements in color, size, and brightness. However, the technology (developed for the electronics industry) is a convoluted learning curve of circuiting boards, Tc-Points, heat sinking, chromaticity, and semi-

conductors. Gone are the simple days of lamps and sockets. The lighting designer's familiar set of tools with which to evaluate output, may no longer apply to LEDs. "Seeing is believing" and most lighting designers appraise LED performance with their eyes.

While New York lighting designers keep up-to-date with revisions to city and national electrical, energy, and building codes, no one issue has had as great an impact as sustainability. Designers are experiencing a new challenge: To improve the quality of lighting design, while balancing design concerns with the environment. Lighting designers and architects are now asking what it truly means to be "eco-friendly," pondering if today's practice of low-energy sources not only benefit the end user, but also how these products impact the entire eco-system from fabrication to shipping to operation to disposal of light sources and light fixtures—"cradle-to-grave."

Lighting design projects by New York lighting designers set new strides and definitions of what *is* lighting design. The integration of light into architecture is much stronger than ever before. The line defining where architecture ends and lighting begins is vanishing. Light now in New York City *is* the architecture; light *is* the material; and light *is* the environment.



Light | Energy | Impact exhibit at the Center for Architecture.

Randy Sabedra, principal of RS Lighting Design, is an award winning lighting designer and educator in New York City. He is a lighting instructor at Parsons The New School for Design, The Fashion Institute of Technology, and The Art Institute. Randy is currently serving as president of the New York Section of the IESNA.


 more information at [ARCHLIGHTING.COM](http://ARCHLIGHTING.COM)

PHOTO BY HERMANN FELDHAUS



brilliant



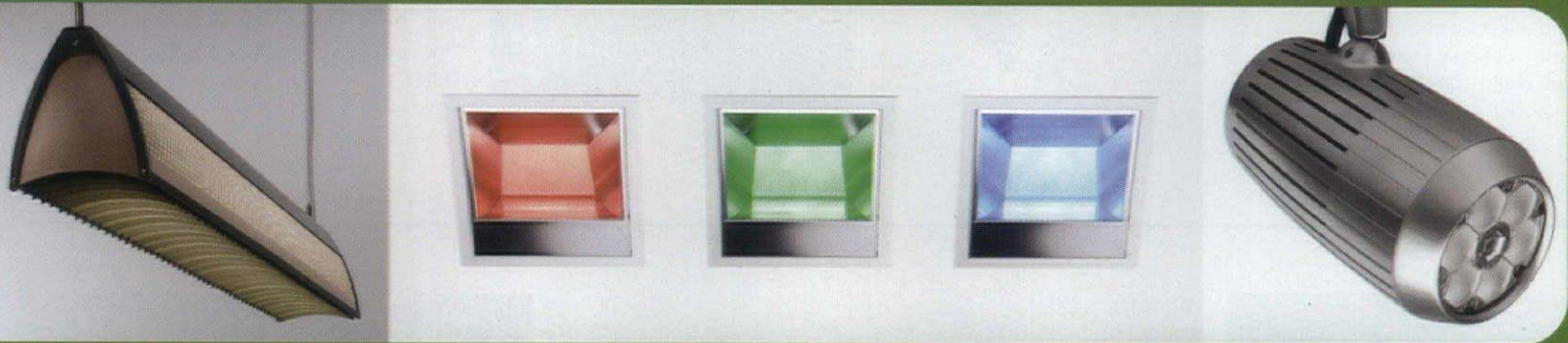
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# THE ANNUAL PRODUCT GUIDE



**THE TOOLS OF THE ARCHITECT AND LIGHTING DESIGNER ARE NUMEROUS. IN THIS ISSUE, ARCHITECTURAL LIGHTING'S ANNUAL PRODUCT GUIDE, THE LATEST MANUFACTURER** offerings are presented—over 150 products in 14 categories. Amazing, that there are so many lighting and lighting-related products a designer can choose from, which all provide technical and aesthetic solutions for a myriad of lighting conditions.

Each year as the editors of A|L sort through the product submissions for this particular issue certain trends emerge, and this year is no exception. One area of notable new offerings is luminaires designed for healthcare environments, specifically linear fixtures for patient bed areas that provide indirect and direct illumination for improved task lighting.

After several years of trying to find their place in architectural lighting applications beyond the usual color-changing effects, light emitting diodes (LEDs) seem to have come into their own. Manufacturers are now utilizing LEDs in luminaires where this type of light source makes sense—for example outdoor lighting—and issues of maintenance and accessibility come into play. Additionally, LED white light color temperature range capabilities continue to become more refined, as well as the tools to understand how to modulate this type of light source.

Another trend that should come as no surprise is energy efficiency, and manufacturers continue to call attention to this aspect of their product offerings, from lamps to controls to whole fixture assemblies. Concurrently, categories have emerged, such as Daylighting and Solar Control, which respond to the integration of sustainable design techniques, and these product offerings have become mainstream, not relegated to specialty items.

There are sure to be many new luminaires and lighting related products discovered as conference and trade show season begins. A|L will be your eyes and ears at upcoming events including Euro luce, the American Institute of Architects National Convention, and Lightfair. As always, A|L will continue to bring its readers the latest in lighting products and technology. Turn the page; the lighting product class of 2007 requires your attention. **A|L**



**ELEEK | WWW.ELEEKINC.COM**

Product: **Calliope**

Available in both pendant and chandelier (shown) versions, Calliope is constructed of a hollow globe framed with welded steel. Recycled cast-aluminum clips are attached to the globe's struts and hold a total of 146 pieces of colorful, rectangular art glass, creating a multifaceted lens. The 33-inch-diameter luminaires can accept both fluorescent and incandescent lamps and are offered in specifiable colors with optional patinas or colored powder coats. **CIRCLE 100**



**CON-TECH LIGHTING | WWW.CON-TECHLIGHTING.COM**

Product: **Quadris**

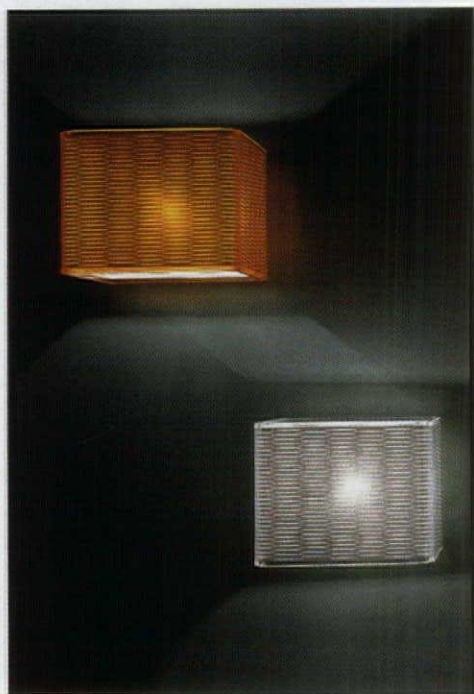
This series of decorative metal faceplate wall sconces is suitable for indoor and outdoor applications and is available with seven standard designs: horizontal, vertical, squares, oval, trio, mosaic (shown), and window. Offered in black, stainless-steel, and white finishes, as well as custom designs and colors, the fixtures measure 9 3/8 inches wide and 10 1/4 inches tall and accept one 13W, 18W, or 26W compact fluorescent lamp. **CIRCLE 101**



**FONTANA ARTE | WWW.FONTANAARTE.IT**

Product: **Lounge**

Part of the Candle Collection, the Lounge wall sconce measures just under 6 3/4 inches wide and just over 5 inches tall. Its diffuser is made from screen-printed methacrylate, offered in orange or transparent and affixed to the wall with an aluminum painted mounting. Sandblasted glass diffusers, located on the top and bottom of the luminaire, conceal an incandescent or fluorescent lamp. **CIRCLE 102**



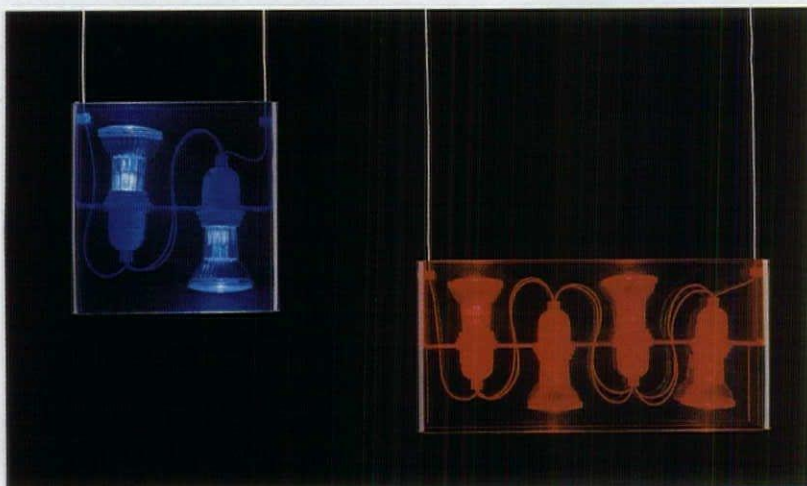
Product: **Slot**

Part of the Tecnica Collection, Slot is a series of recessed indirect wall and ceiling luminaires. Their metal structure (coated in matte white epoxy powder) houses one or more dimmable T5 fluorescent lamps, while magnets keep the diffuser in place, making for easy mounting and maintenance. The fixtures are offered in approximately 35 1/2-, 47 1/4-, 59-, and 97 1/4-inch lengths. **CIRCLE 104**



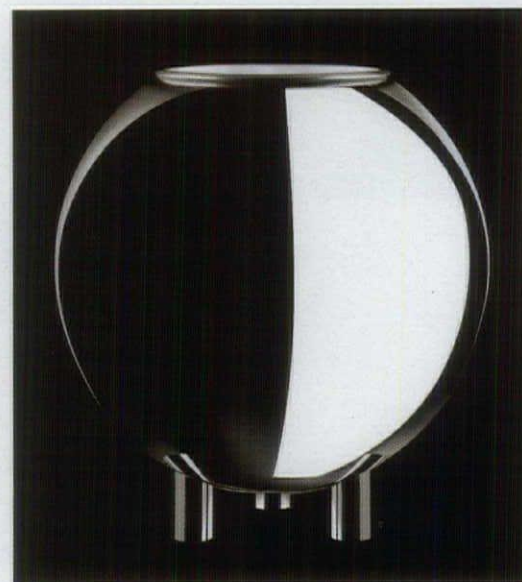
Product: **Duplex**

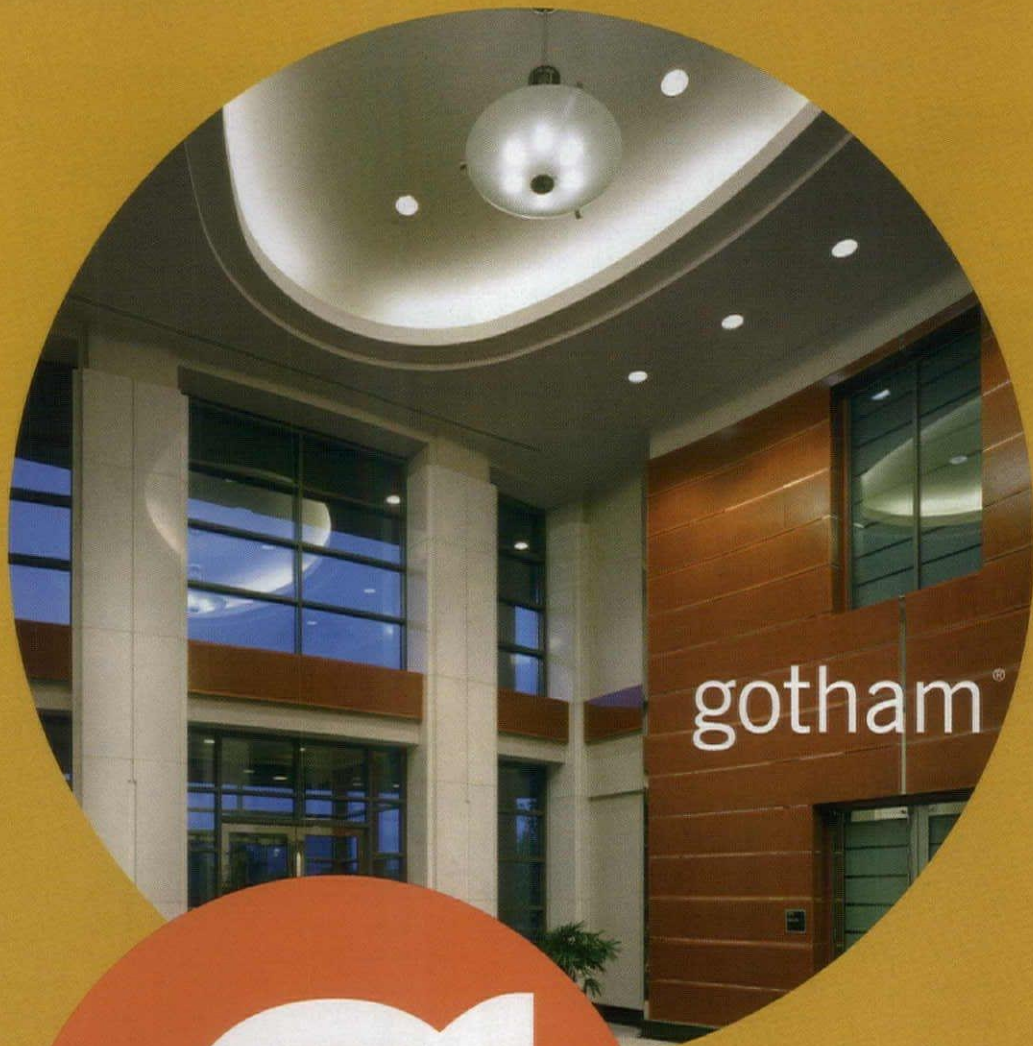
The Duplex pendant comprises a cast-methacrylate diffuser and polished steel raceway for a minimal industrial aesthetic. Offered in two sizes—the two-lamp fixture measures 7 3/4 inches wide, while the four-lamp version is 15 3/4 inches wide—the luminaires can be adjusted for either direct or indirect lighting. The diffuser is offered in red, blue, and satin, and houses 50W PAR20 lamps. **CIRCLE 103**



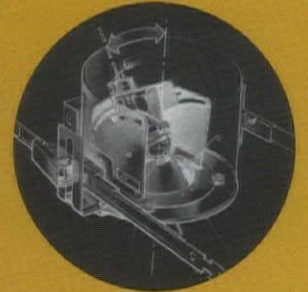
Product: **Globo di Luce**

Also part of the Candle Collection, Globo di Luce is a pendant luminaire with a metallic-brown glass globe. Offered in two sizes—approximately 11 3/4 and 17 3/4 inches in diameter—the fixture has an anodized aluminum internal reflector to maximize the light from one halogen lamp. Its transparent suspension cable is just under 98 1/2 inches long. **CIRCLE 105**

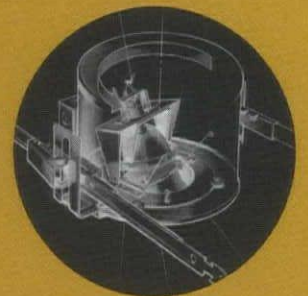




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**AXO LIGHT | WWW.AXOLIGHT.IT**

Product: **Blum**

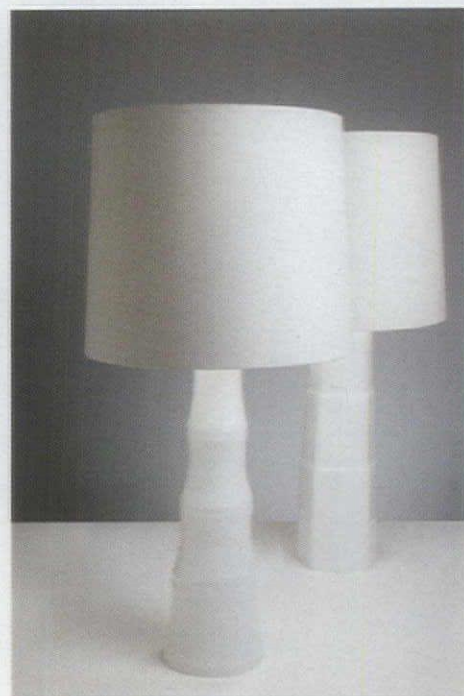
A collection of contemporary direct/indirect pendant luminaires, Blum is offered in three large-scale designs. Characterized by hand-blown Murano glass molded into two orbital shapes with cutouts and individual, vase-like diffusers, the fixtures are available in clear, chromed glass, and cream-white finishes and have interiors of high-reflectance white. Each can be lamped with a 25W or 60W incandescent. **CIRCLE 106**



**BOYD LIGHTING | WWW.BOYDLIGHTING.COM**

Product: **Chenla + Kambuja**

These white glass table lamps were inspired by stone structures found at temple ruins in Cambodia. Offered with cased white glass bases, opaque white linen shades, and a full range of finish options—including antiqued Boyd brass, polished brass, polished nickel, and satin nickel—they each measure 38 1/2 inches tall and 19 inches wide. Lamped with two incandescents, the luminaires include a frosted Pyrex glass top diffuser. **CIRCLE 109**



**WILMETTE LIGHTING COMPANY | WWW.WILMETTELIGHTING.COM**

Product: **Pullman Suspension**

A general area light designed to evenly illuminate ceilings, walls, and floors, the frost-colored Pullman Suspension luminaire has a classic-shaped Holophane prismatic glass shade that diffuses light to reduce glare and enhance visual comfort. It can take both incandescent and fluorescent lamps (the former comes with a standard incandescent dimmer) and is offered in three lengths: 24, 36, and 48 inches. Antique bronze and polished nickel finishes are available. **CIRCLE 107**



Product: **Piccolo Series**

Comprised of three diminutive sconces influenced by classic Greek architecture, the Piccolo Series measures 10 inches high and 4 3/4 inches wide. Featuring a white linen shade and three types of bobèche (white flash glass, solid brass, and Strass Swarovski crystal), each fixture takes one incandescent lamp, has an optional mirror-mount modification, and is offered in six finishes including blackened brass, polished nickel, and satin nickel. **CIRCLE 110**



**DELRAY LIGHTING | WWW.DELRAYLIGHTING.COM**

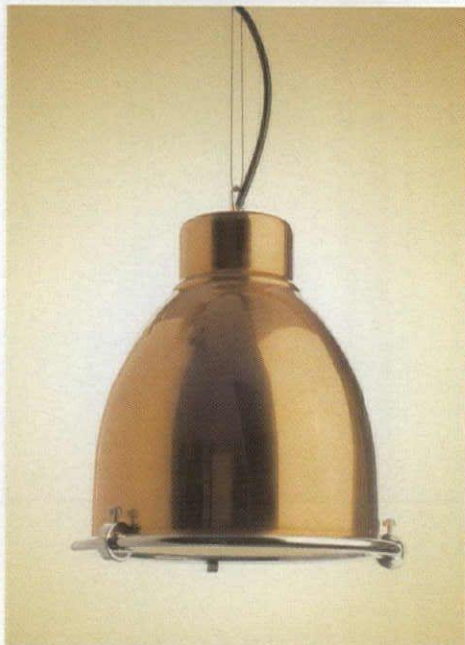
Product: **Cylindro**

Available in two 24-inch-diameter models—one that takes five 18W or 26W compact fluorescent lamps and another with RGB and color-sequencing LEDs—the Cylindro pendant has a matte aluminum exterior and an opal acrylic interior that provides direct/indirect lighting distribution while creating a play of light and dark. The LED models can also integrate an optional adjustable monopoint AR111 or MR16 lamp for task lighting. **CIRCLE 108**



Product: **Catacaos**

An updated example of the ancient South American handcrafted technique called filigrana, in which small metallic pieces are combined to create larger surfaces with spiral texture, the Catacaos luminaires come in ceiling, pendant, and sconce versions. Both the ceiling and pendant fixtures come in 24- and 30-inch diameters with textured bone white and espresso shades, while the sconce measures 10 inches wide and has a matte white decorative grill. Each contains a white acrylic diffuser. **CIRCLE 111**



**D'AC LIGHTING |**  
**WWW.DACLIGHTING.COM**

Product: **Mini-Davidio**  
Providing a soft industrial design aesthetic to interior spaces, the Mini-Davidio bell-shaped pendant features an opaque metal shade and measures just over 9 inches tall. The fixture can be suspended by height-adjustable cables or a 1/2-inch-diameter rigid stem, as well as specified with modifications that allow use on low-wattage tracklighting systems. It is available with a spun aluminum shade, the inside of which is finished with a highly reflective opal acrylic paint for maximum light distribution. **CIRCLE 112**

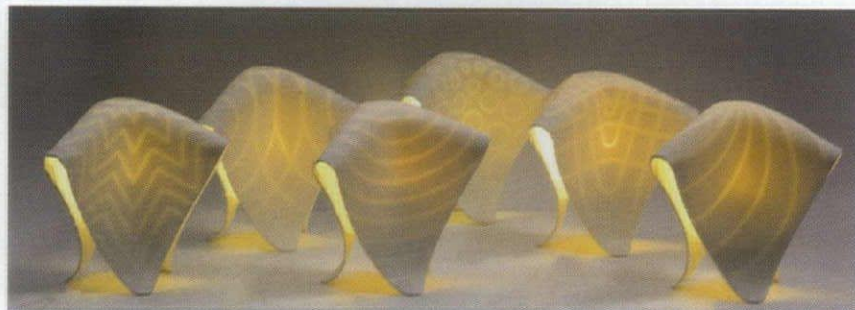
Product: **Fonari**

Fonari pendants cast a broad beam of direct downlighting into a space while providing a clean, contemporary design. Along with its shallow, disc-shaped spun-aluminum shade offered in a wide range of saturated and metallic colors, a 5-inch round ceiling canopy mimics the 21 1/2-inch aperture opening. Illumination is produced by a choice of metal halide, incandescent, compact fluorescent, and halogen sources, and a white opal acrylic lens diffuser distributes the light evenly and reduces glare. **CIRCLE 113**



Product: **Mini-Clareta**

Reminiscent of industrial luminaire designs of the 1940s, '50s, and '60s, the Mini-Clareta pendant provides a focused, cone-shaped beam of high-performance light from its classic bell-shaped shade. Suspended via height-adjustable cables or a 1/2-inch-diameter rigid stem, a domed ceiling canopy mimics the top of the shade, which can house a metal halide, incandescent, compact fluorescent, or halogen light source. Spun aluminum or solid copper shades are offered in a variety of finishes. **CIRCLE 114**



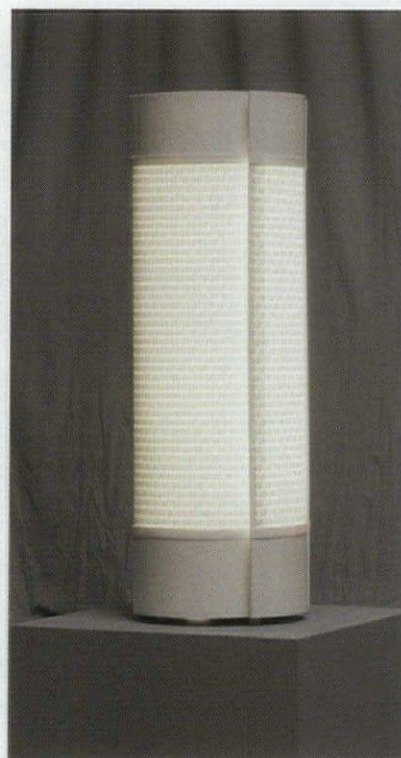
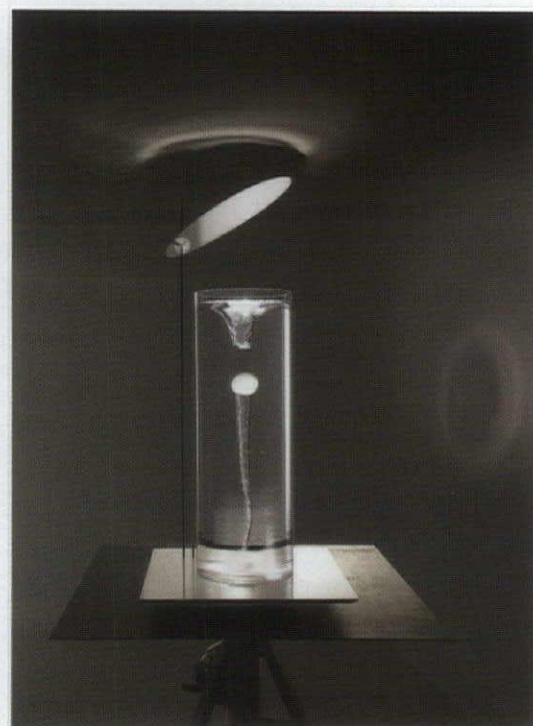
**DUPONT CORIAN |** **WWW.DUPONT.COM**

Product: **Medusa**

Designed by Barcelona-based design firm Exposed, the Medusa table lamp was inspired by the form of the jellyfish. With swooping curves made of Corian in shades of brown, the sculptural luminaire is sandblasted on the inside to create a variety of beautiful patterns when illuminated. **CIRCLE 115**

Product: **Delirium Yum**

Designer Ingo Maurer created this table lamp using unusual components—a conical glass vase filled with water is placed on a Corian tray, which lies atop a halogen spotlight and five control elements including a dimmer. A magnetically-powered pole activates the swirling water, while a mirror at the top of the lamp diffuses the light. **CIRCLE 116**



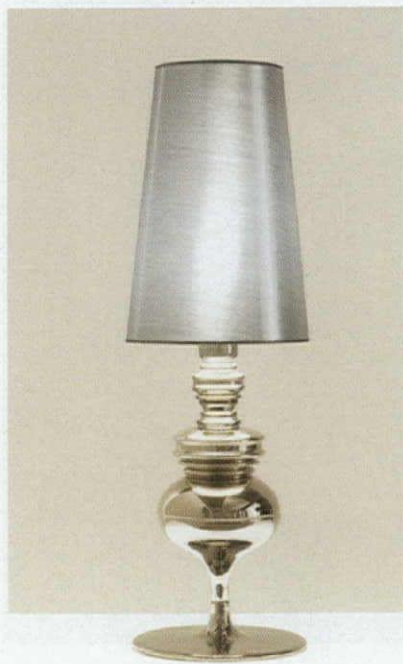
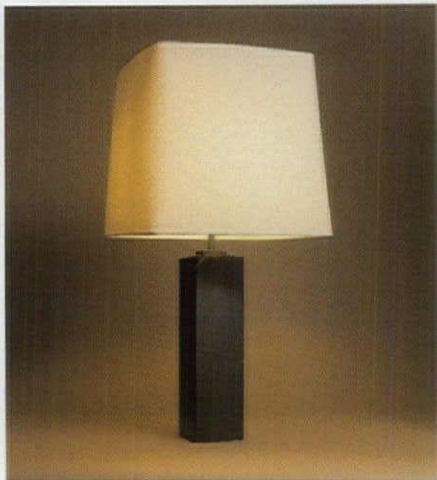
Product: **Woven-Light**

Comprised of numerous thin, weaved layers of Corian, architect Andreas Hild has created the cylindrical Woven-Light table lamp and highlighted the translucency of the textured material. Offered in cameo white, Corian pearl grey, and Corian ice white, the luminaire was part of the Visions of Corian creative workshop on innovative design held in 2006 in Rio de Janeiro. **CIRCLE 117**

**HINSON LIGHTING |**  
**212-475-4100**

Product: **Hinson Robsjohn-Gibbings**  
**Classic Square Marble Table Lamp**

Originally designed by T.H. Robsjohn-Gibbings in 1952, the Classic Square Marble Table Lamp is being re-launched by Hinson Lighting after 30 years off the market. Comprised of a sculptural square column in black or white marble and a round or square white linen or white translucent shade, the luminaire stands 27 1/2 inches tall. It has an on/off pull-chain socket and available finishes include bronze, matte nickel, polished brass, polished chrome, and hand-rubbed bronze (white marble only). **CIRCLE 118**



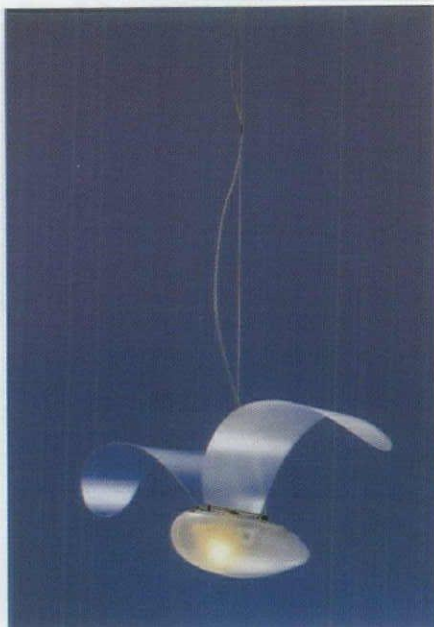
Product: **Josephine**

The Josephine collection depicts the transformation of traditional to contemporary with the application of platinum (shown), gold, black, and white finishes to its fixtures' ceramic bases. Available in table lamp and pendant versions, the collection is also offered in combinations of black and white, and platinum and black. The table lamp stands 30 inches tall, while pendants are offered in 30-inch and 70-inch diameters. Shades are available in white, black, silver, or gold. **CIRCLE 119**

**LUXO | WWW.LUXOUS.COM**

Product: **Vola**

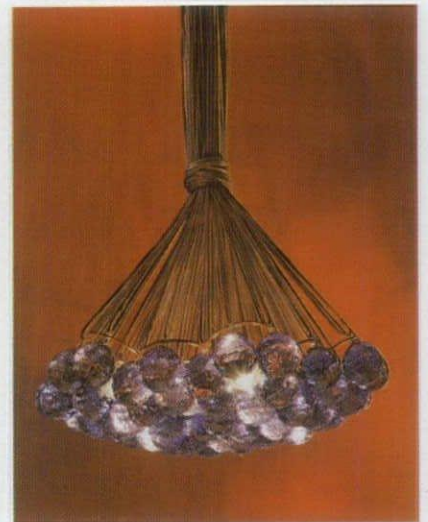
Providing high-performance, glare-free indirect lighting in a dramatic design, Vola is characterized by its bulbous-shaped housing and arching light-diffusing wings. Available in fixed and mobile styles, the latter features movable wings with Memory Metal springs that, when the fixture is on, expand and raise to a gliding position. Suspended via steel wire, the luminaire is comprised of a chromed metal structure, blown glass diffuser, and polycarbonate satin-finished wings. It accepts a 75W halogen lamp. **CIRCLE 120**



**LAMPISTER | WWW.LAMPISTER.COM**

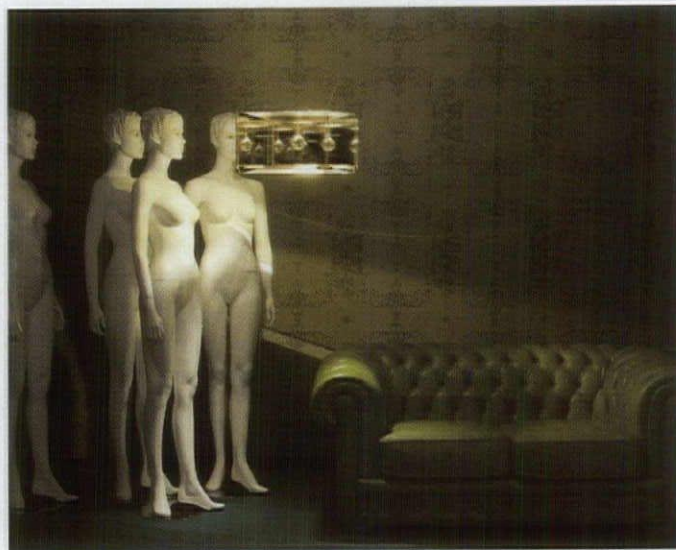
Product: **Damson**

Measuring approximately 14 inches by 14 inches by 3 1/4 feet, the Damson pendant illuminates with light, color, and sparkle. Comprised of 60 spheres of Strass Swarovski Crystal, the fixtures are available in violet, topaz, or transparent glass. Each is suspended by a leather cord in red, black, or white, respectively, and accepts 12 (maximum) 20W G4 lamps. **CIRCLE 121**



Product: **Voyeur**

Constructed from Strass Swarovski crystals, glass, and steel, this unique orthogonal pendant conjures an optical illusion with a play on light. When illuminated, the luminaire's exterior seems to disappear, highlighting the crystals suspended inside. The fixture measures approximately 17 inches by 17 inches by 10 1/2 inches and takes one (maximum) 300W R7S lamp. **CIRCLE 122**



Product: **Pearl**

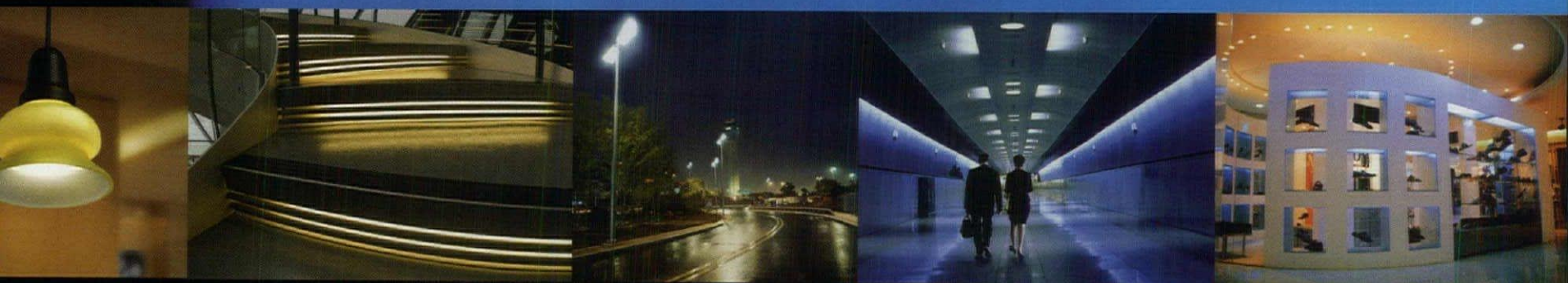
Inspired by classic, pearl jewelry, the Pearl wall sconce has three opaline glass shades joined together by strands of handcrafted porcelain beads. The fixture measures approximately 3 1/2 feet by 23 inches by just under 8 inches and houses three (maximum) 60W E27 lamps. **CIRCLE 123**





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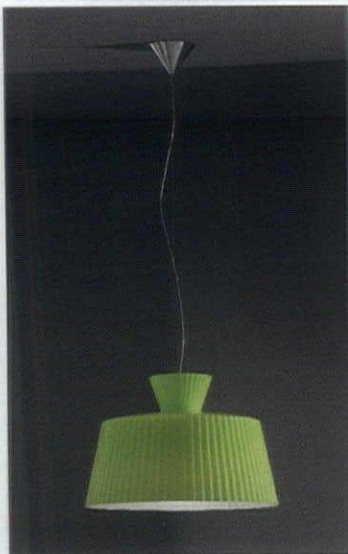
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LEUCOS | WWW.LEUCOSUSA.COM

Product: **Katerina**

Knife pleats of blown glass give texture to this collection of luminaires, all available in gloss white or gloss lime green. The small pendant and wall sconce each accept one 100W A19 incandescent lamp and measure 8 3/4 inches wide and 9 1/2 inches tall. The large pendant accepts one 150W G40 incandescent lamp and is 19 3/4 inches wide and 12 1/4 inches tall. Both pendants have a cord length of 78 3/4 inches and all fixtures offer white painted or brushed nickel finishes. CIRCLE 124



Product: **Bisquit**

Available in table, wall, floor, ceiling, and pendant versions, Bisquit is constructed of stacked cylinders of hand-blown glass diffusers in combinations of gloss white, crystal, and transparent wisteria. The unstacked ceiling model measures 13 3/4 inches in diameter and 5 1/4 inches tall, and houses three 40W incandescent lamps or two, 18W compact fluorescents. Hardware is offered in a brushed nickel finish. CIRCLE 125



MANNING LIGHTING | WWW.MANNINGLTG.COM

Product: **Elements**

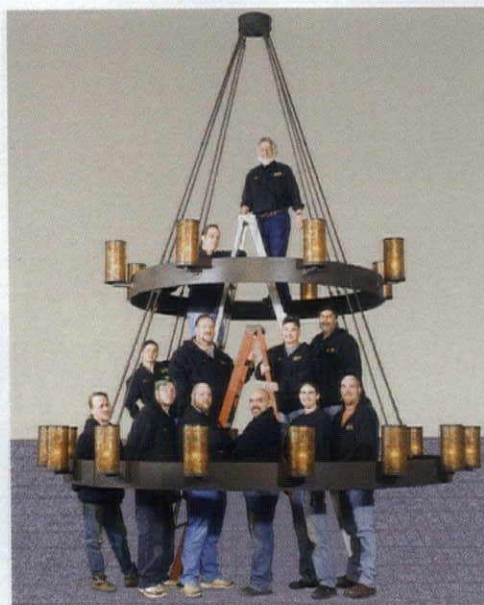
The Elements pendant, part of the Ambia Collection, features rich fabrics, perforated metal, and graphic elements. Made in two sizes—18- and 24-inch diameters—with compact fluorescent or incandescent sources, the fixture provides both uplight and downlight. Its heavy-gauge spun solid aluminum housing is offered in different colors and finishes and, while a white bottom diffuser is standard, a wide variety of dual paint finishes, translucent resins, and lens configurations are available. CIRCLE 126



MEYDA LIGHTING | WWW.MEYDA.COM

Product: **Wine Bottle Pendants**

Featured in the company's Metro line, the Wine Bottle Pendants incorporate authentic glass wine bottles as their shades. Offered in green, blue, etched, amber, and white, with hand-forged wrought iron accents wrapped around their necks, each luminaire measures 12 inches tall and 3 inches wide and can be adjusted from 16 to 84 inches from the ceiling. All accept one T6 40W lamp. CIRCLE 127



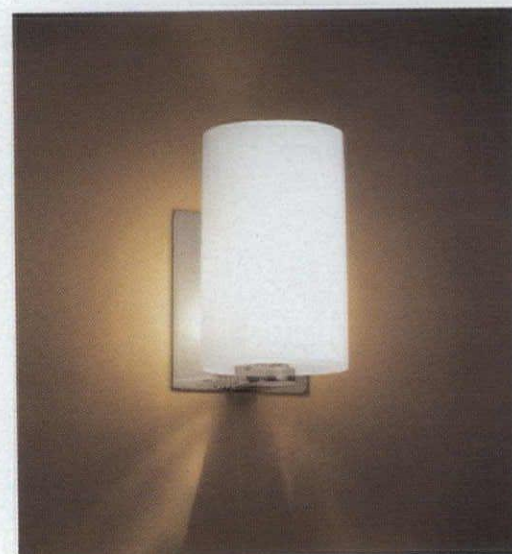
Product: **Prodigious Chandelier**

Standing over 15 feet tall and 13 feet wide, the Prodigious, two-tier 24-lamp chandelier (Model 100641) weighs a whopping 550 pounds. Custom crafted of steel and finished in a warm bronze, the luminaire features 24 cylindrical-shaped amber mica shades that are laced together with leather and bound on the edges. CIRCLE 128

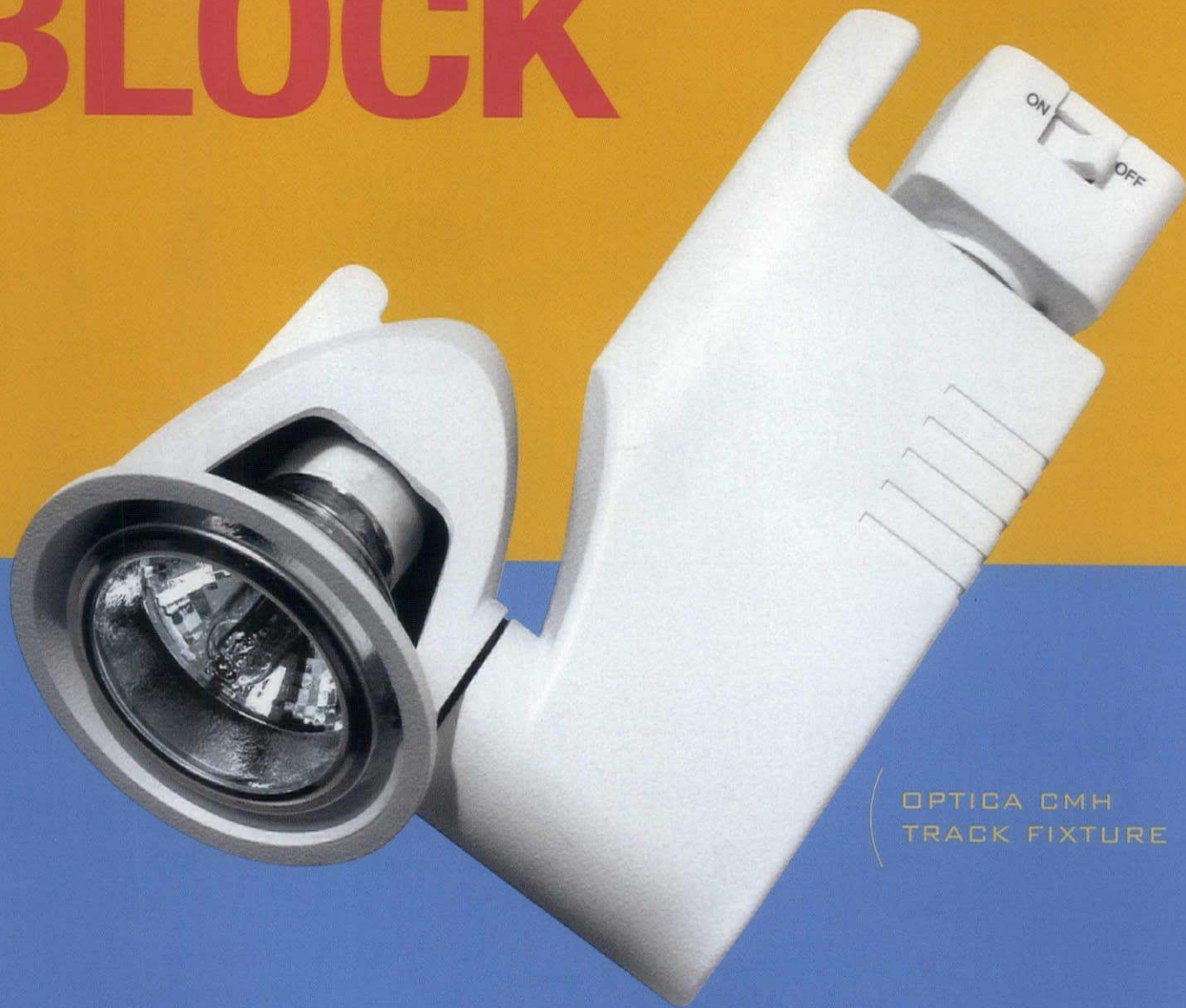
NESSEN LIGHTING | WWW.NESSENLIGHTING.COM

Product: **Taza**

This ADA-compliant direct/indirect wall sconce provides softly diffused ambient/accent lighting from its 3 1/2-inch-diameter cylindrical translucent shade. Measuring just over 6 inches tall and 4 inches deep, the lamp can accommodate a single 35W xenon lamp. It has a solid brass backplate and lamp arm construction, which are available in polished or brushed brass, polished or satin chrome, polished or satin nickel, and antique brass finishes. Optional baked enamel painted finishes are also offered. CIRCLE 129



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Product: **Nexus**  
This Energy Star-compliant luminaire can be installed semi-flush or as a pendant, and comes with a 12-foot-long wire. Measuring 25 inches in diameter by 24 inches in height, Nexus features a white-acrylic diffuser and brushed nickel hardware. It takes one 32W or 40W lamp. **CIRCLE 130**

Product: **Fireball**

Fireball is available as a mono-point pendant and a wall sconce. As a pendant it measures 7 inches in diameter and 11 inches in height. The glass shade houses one (maximum) 100W lamp and hardware is finished in antique nickel. The wall sconce is 6 inches wide and 8 inches tall and can accommodate one (maximum) 60W lamp. Its decorative cap nuts are offered in antique bronze, Eurotech, and antique nickel finishes. Also made of glass, the sconce meets ADA requirements. **CIRCLE 131**



**TECH LIGHTING | WWW.TECHLIGHTING.COM**

Product: **New Pendants**


Tech Lighting has added five new pendants to its decorative line of luminaires: Mini Larkspur has a cone-shaped glass shade rich in color and pattern; Mini Soda is a perfectly proportioned glass shade infused with bubbles; Pompeii is also a cone-shaped glass shade but with frosted old-world charm; Piper has a sleek tube-shaped metal shade that provides a crisp downlight; and Mini Noir is made of multi-layered glass with a gloss black outer layer and colored or white inner layer to supply a wash of tinted or white light. **CIRCLE 132**

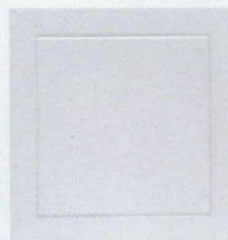


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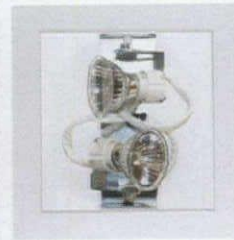


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JESCO LIGHTING | WWW.JESCOLIGHTING.COM

Product: **Java Series 501**

A coordinated collection of six contemporary cased opal glass pendants, wall sconces, floor, and table lights, the Java Series 501 provides a combination of direct and diffused illumination. Its fluted glass shades radiate a subtle, colored iridescence from one incandescent lamp. Pendants feature slender, inverted vase-like shapes, which project direct downlighting, while the shades emit broader patterns of ambient light. Each fixture has aluminum fittings with a satin nickel finish. CIRCLE 133



W2 ARCHITECTURAL LIGHTING | WWW.W2LIGHTING.COM

Product: **Architectural Elements**

A family of contemporary pendants crafted with clean lines, Architectural Elements have glossy, cased opal glass shades offered in four different styles, each spreading light evenly and minimizing glare. Glass trims are available in a variety of colors including blue with white frits, green with white frits, white with white frits, amber, blue, and clear. The canopy and socket set are finished in brushed nickel and the family can accommodate both compact fluorescent and incandescent lamps. CIRCLE 134



Product: **Norfolk Architectural Series**

Designed to illuminate today's contemporary commercial interiors, the Norfolk Architectural Series' gently diffusing bowl-shaped shades produce soft, even lighting while their open tops deliver indirect lighting. Offered in diameters from 24 to 48 inches, the pendants can be extended from the ceiling with stems. Styles are available with incandescent or compact fluorescent lamping options and the series also includes ADA sconces, ceiling mounts, and close-to-ceiling luminaires. CIRCLE 135

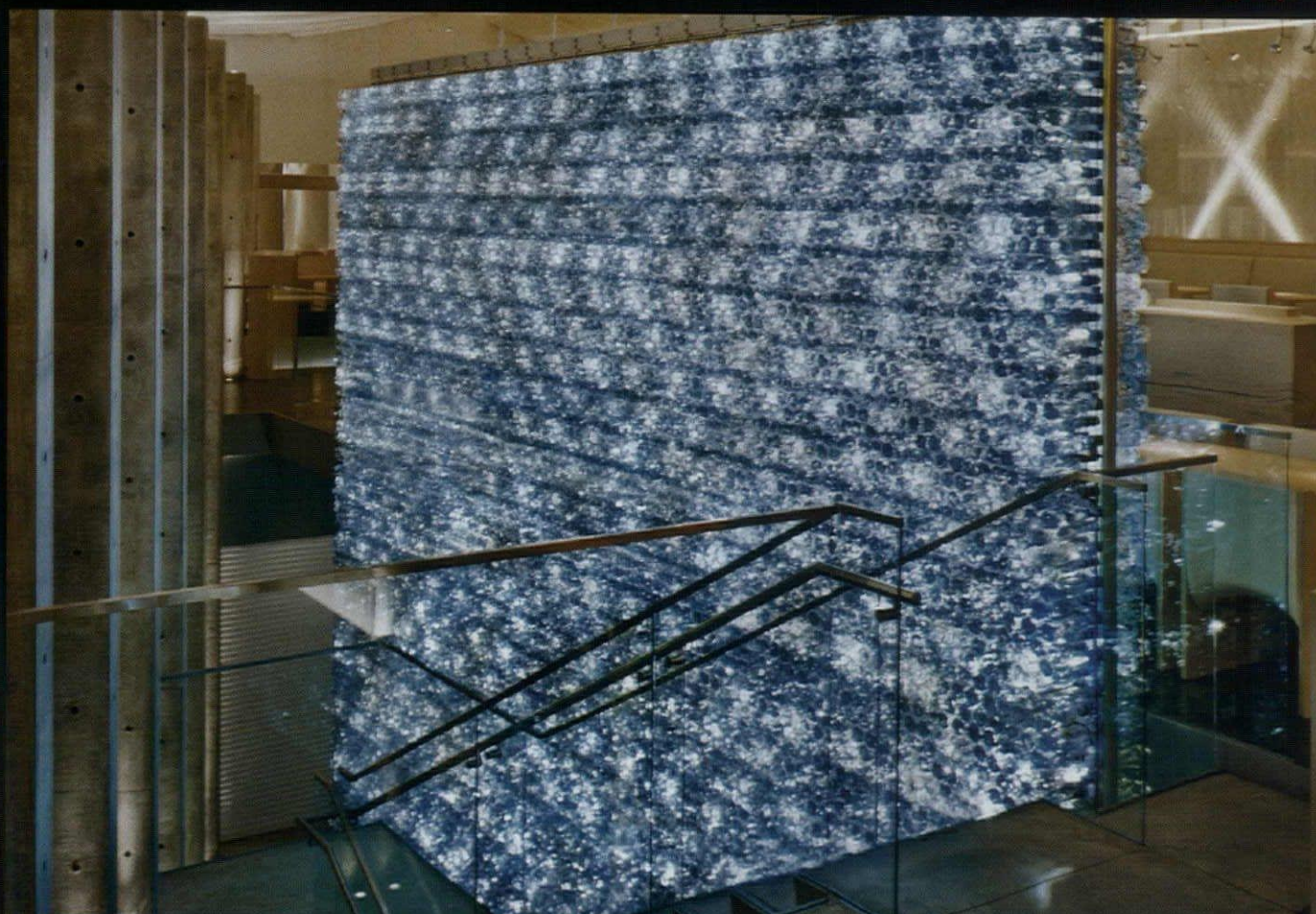


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**NEO-RAY | WWW.NEORAY-LIGHTING.COM**

Product: **Straight and Narrow**

The Straight and Narrow family of luminaires includes recessed, pendant, surface- and wall-mounted, and in-wall configurations. The recessed fixtures (Series 22 and 23, shown) have T5, T5HO, and T8 capability and can be specified with either a high-performance parabolic louver or a trimless white satin acrylic diffuser. The fixtures are available in modular lengths of 2 or 4 feet, which can be installed individually or as runs. Direct, indirect, and direct/indirect light distributions are offered. **CIRCLE 140**



**OXFORD INDUSTRIES | 215.591.2800**

Product: **Aislelux**

Incorporating seven adjustable, addressable, and lockable reflectors to maximize horizontal or vertical illumination, Aislelux's plug-and-play design offers tool-free maintenance and a "lite-trak," which provides simple, full-proof positioning of the lamp into the lampholder. Available for T5, T5HO, and T8 fluorescents, the fixture comes in recessed, pendant, and surface-mounted versions, and has, according to the manufacturer, an efficiency rate of over 95 percent. **CIRCLE 143**



**LIGHTOLIER | WWW.LIGHTOLIER.COM**

Product: **HP90**

Available in three sizes—2 feet by 4 feet, 2 feet square, and 1 foot by 4 feet—the HP90 line of high-performance recessed luminaires fits both standard and slot grid ceilings. A softly balanced light is created by the even illumination of each fixture's curved body and matching-profile prismatic acrylic lens. The luminaires take 28W fluorescent lamps. Ballasts are accessible through the fixtures' lamp compartments, and available options include step dimming, occupancy sensors, and day-light sensors. **CIRCLE 141**



**ENGINEERED LIGHTING PRODUCTS | WWW.ELPLIGHTING.COM**

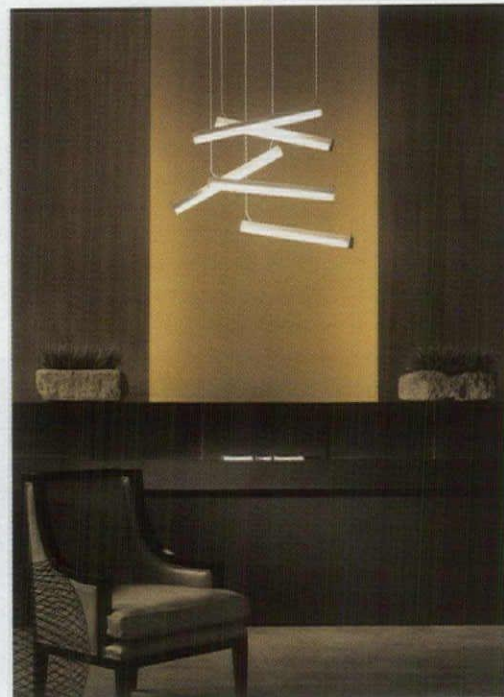
Product: **Modular Series**

The Modular Series offers adjustable accent, wall-wash, and downlight options that can be individually used or mixed and matched to fit any continuous or patterned lighting configuration. For accent lighting, modules are 6 inches, 1 foot, and 2 feet in length with adjustable lamp heads that allow for 358-degree rotation and a 45-degree tilt. Both the wall-wash and downlight options are available in 2, 3, and 4-foot lengths using linear or compact fluorescent lamps, along with various reflectors, lenses, and louvers. **CIRCLE 142**

**PRUDENTIAL LIGHTING | WWW.PRULITE.COM**

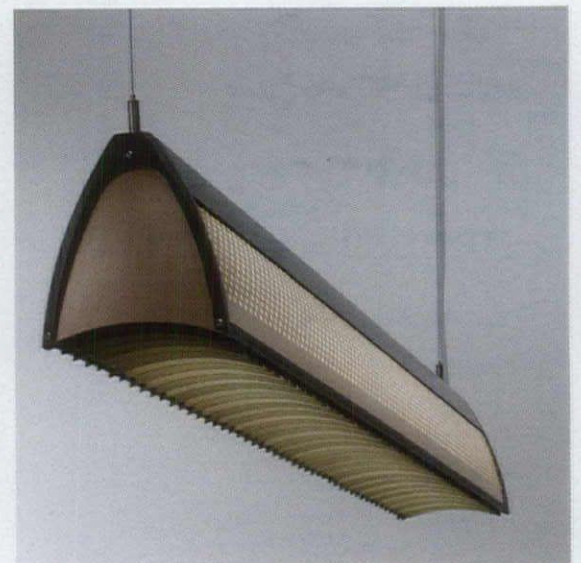
Product: **Snap**

Slender and simple, Snap is a low-profile striplight that can be surface mounted or suspended by adjustable cables. It offers a diffuse line of illumination via an impact-resistant, white acrylic lens held without clips or fasteners. Nominal lengths of 2, 3, 4, 6, and 8 feet are offered and the fixture can take T5, T5HO, and T8 fluorescents. At 2 1/4 inches wide, the die-formed 20-gauge steel housing has aluminum endplates and is available in gloss white, textured matte white, pewter, and galvanized finishes. Premium and custom colors are also offered. **CIRCLE 144**



Product: **Aparia**

This fluorescent lighting system is available in two versions: Glow and Throw. With Glow, light filters through translucent acrylic or punched steel, copper, or brushed aluminum, while Throw offers reflectors for three distribution patterns—wide, narrow, and stack. Hanging hardware can be fixed at any point along the extruded aluminum fixture, which comes in lengths of 4 and 8 feet. All luminaires are finished in polyester powder paint, with the option of metal finishes and paint colors. **CIRCLE 145**



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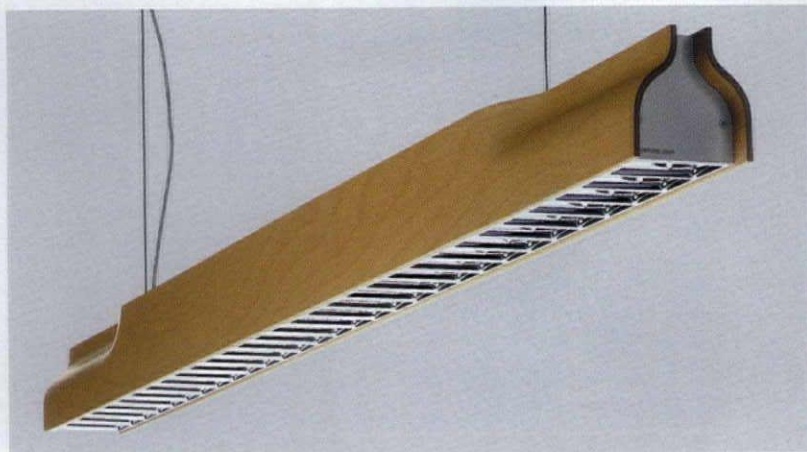
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**ZUMTOBEL LIGHTING | WWW.ZUMTOBEL.US**

Product: **Evio**

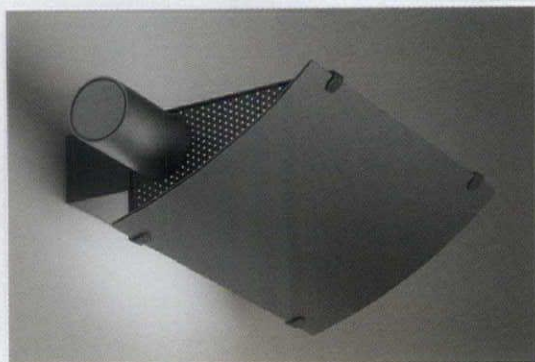
The Evio pendant, available in both direct and direct/indirect models, has innovative cell louver technology that allows for a smaller luminaire housing and creates uniform light distribution that eliminates glare. Offered in beechwood, walnut, and Eternit (a synthetic concrete fiber) finishes, lamping options for the 4-foot direct model are one 28W T5 or one 54W T5HO, while the 5-foot direct/indirect fixture can take one 35W T5 or one 80W T5HO. Both models have specular louver optics, and offer several voltage and mounting options. **CIRCLE 146**



**OMEGA LIGHTING | WWW.OMEGALIGHTING.COM**

Product: **Aspect5 T5HO**

A discrete yet powerful recessed wallwasher that uses a T5 high-output lamp, the Aspect5 T5HO yields smooth vertical illumination from ceiling to floor plane. According to the manufacturer, the fixture—which is offered in 2 1/2-foot and just under 4-foot lengths—has an efficiency of over 92 percent. At only 2 inches deep, the luminaire has a 22-gauge steel housing and includes a clear specular or clear semi-specular reflector. **CIRCLE 147**



**PEERLESS | WWW.PEERLESS-LIGHTING.COM**

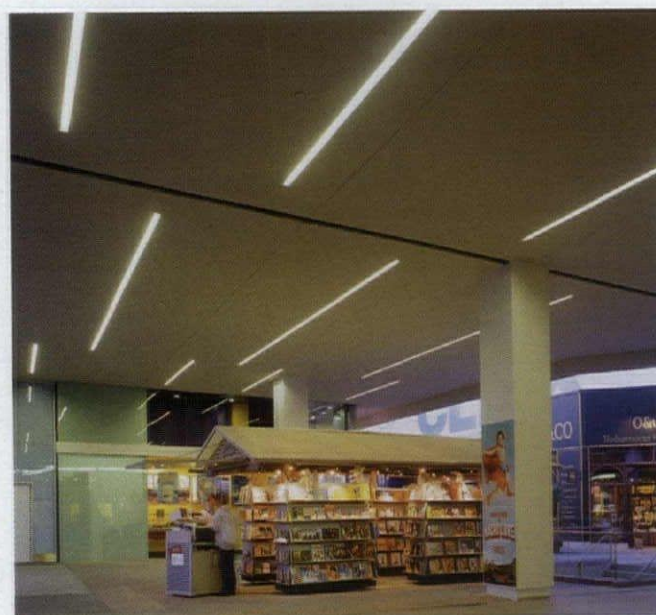
Product: **Lightfoil Sconce**

The latest offering from the Lightfoil family of fixtures, the Lightfoil Sconce contains a refined optical system for the production of a striation-free beam. Die-formed reflectors combine specular aluminum and white enamel for a nominal reflectance of 90 percent. The luminaire can be specified with or without a cylinder, accepts 42W and 57W compact fluorescents, and offers white, silver, or bronze finishes. **CIRCLE 148**

**FOCAL POINT | WWW.FOCALPOINTLIGHTS.COM**

Product: **Fusion**

A blend of highly tooled aluminum and precision die-cast components, this pendant contains a reflector with a frosted upright ring, which is an ideal solution for highlighting ceilings. Available in one-, two-, three-, and four-lamp compact fluorescent configurations, it measures just under 19 inches tall and has an anodized housing with a clear polished satin finish. The upright ring comes in white, blue, and green, while diffusion disks are offered in white and green. **CIRCLE 149**



Product: **Infinite 3**

The Infinite 3 is a 3-inch, continuous slot T5 fluorescent fixture that contains a one-piece acrylic lens diffuser with a satin frosted white finish. Staggered lamp configurations help to eliminate socket shadows and also create an uninterrupted slot of light. The luminaire and its reflectors are constructed from steel and shielding options include a lens with regress or flush trim configurations. **CIRCLE 150**



Product: **Equation 2x2**

Blending sleek aesthetics and uniform diffuse illumination, Equation 2x2 has a center divider that features MicroGlow prismatic lens technology, through which precision-molded conical prisms deliver 92 percent light transmission while controlling high angle brightness. A QuickLatch hinged diffuser system makes for easy re-lamping, and shielding options include natural anodized and high-performance white side rails. **CIRCLE 151**



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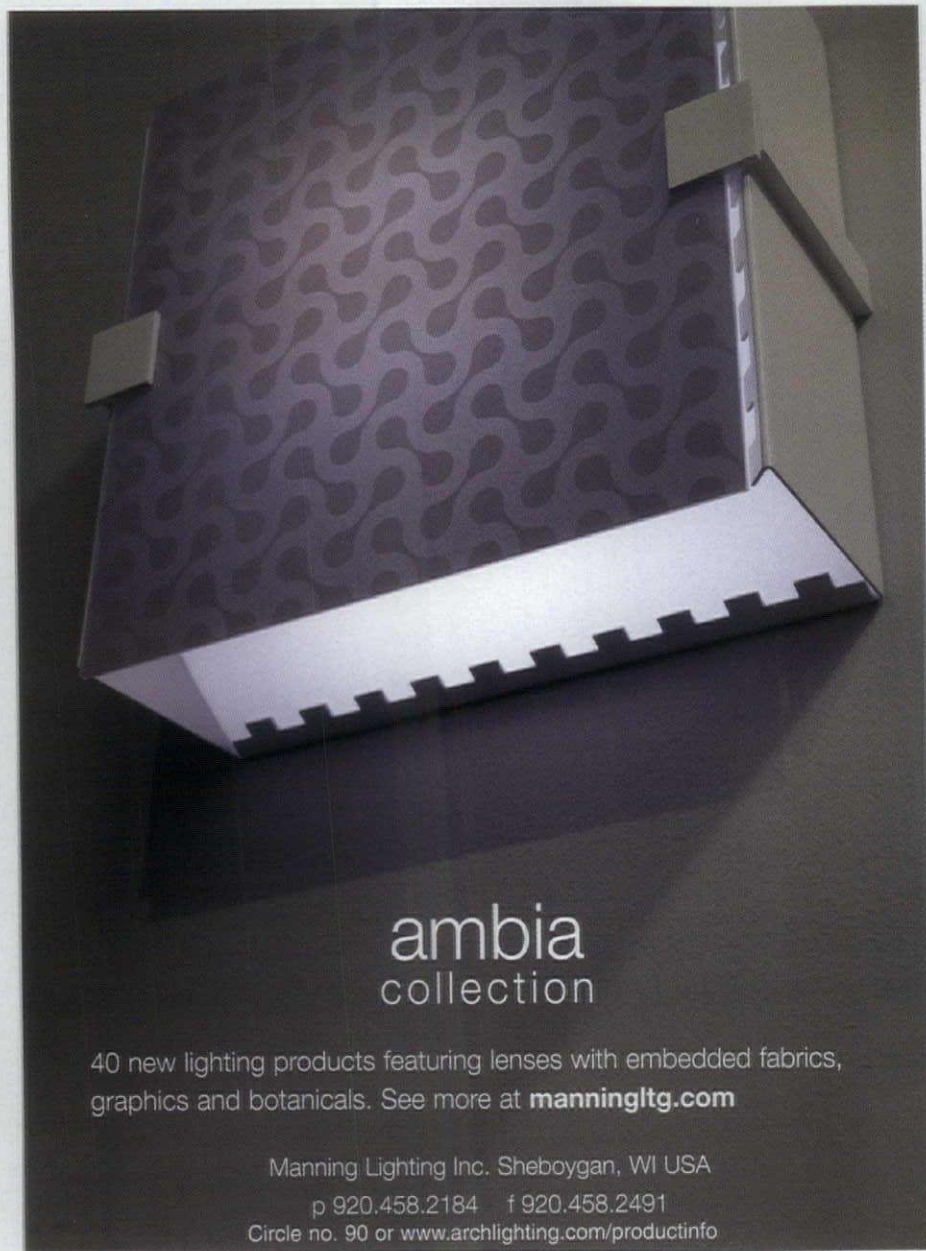
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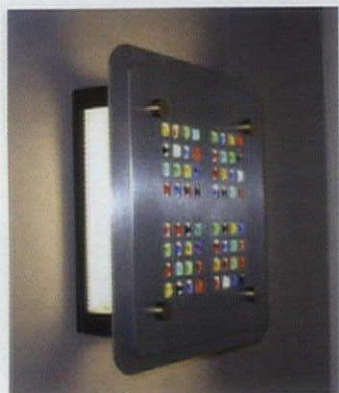
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VODE LIGHTING | [WWW.VODE.COM](http://WWW.VODE.COM)

Product: **BoxRail for MLR System**

One of five rail profiles available for the company's Modular Light Rail System—a flexible lighting system designed for T5 and T5HO fluorescent lamps—the BoxRail has an aluminum housing that measures under 1 1/4 inches square. It has an extruded aluminum reflector and is available in 2-, 3-, 4-, 5-, and 8-foot lengths. Wall or ceiling mounted with projection or suspension lengths up to 96 inches, the fixtures feature a unique hub design that allows for 370-degree rotation. CIRCLE 152

ARCALUX CORPORATION | [WWW.ARCALUX.COM](http://WWW.ARCALUX.COM)

Product: **SmartFixture**

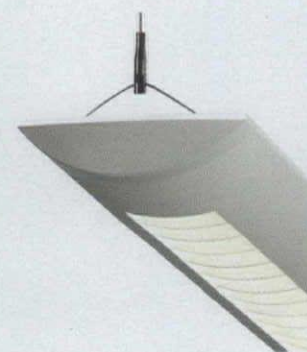
This modular luminaire can be fully installed, relocated, serviced, and modified in place without tools. Its plug-and-play technology allows lamp quality to be increased or decreased, lamps to be swapped from T5 to T8, ballasts to be replaced, and lensing to be changed. It can be modified from an acrylic lens to a parabolic louver or a recessed indirect luminaire and offers up to 12 different lamp configurations in the standard direct fixture and an additional nine in the direct/indirect fixture. CIRCLE 153



LITECONTROL | [WWW.LITECONTROL.COM](http://WWW.LITECONTROL.COM)

Product: **Arcos ID**

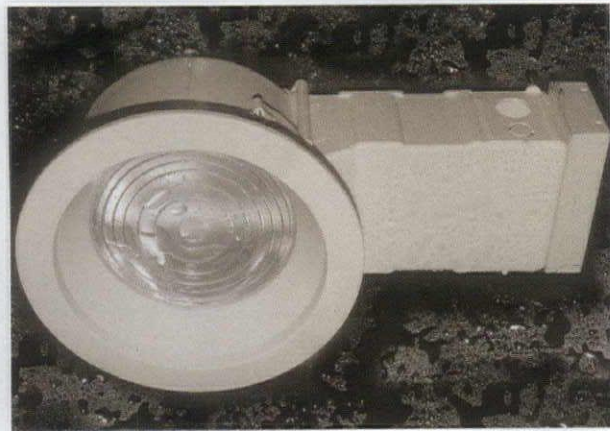
This high-performance direct/indirect luminaire has a compact arcuate-shaped design. Its optical system can accept one, two, or three T5, T5HO, or T8 lamps, and offers three diffuser options: semi-specular parabolic baffle, parabolic baffle finished matte white, and a white, frosted acrylic lens. Up/down distribution ratios range from 75 percent/25 percent to 63 percent/37 percent, depending on lamping and diffuser choices, and fixtures are available in 4- and 8-foot lengths. CIRCLE 154



Product: **Mod2 MR**

The newest addition to the company's Mod line, the Mod2 MR provides 100-percent directional downlight in a small fixture cross-section. The steel fixture is offered in pendant, recessed, and surface-mounted housing styles, which come in 2-, 3-, 4-, 6-, and 8-foot lengths and accommodate from one to eight MR16 lamps. The lamp trim can accept up to three lens accessories, including a softening lens, a prismatic lens, a linear spread lens, and a black honeycomb louver. CIRCLE 155

DOWNLIGHTS



**NUTECH LIGHTING | WWW.NUTECHLIGHTING.COM**

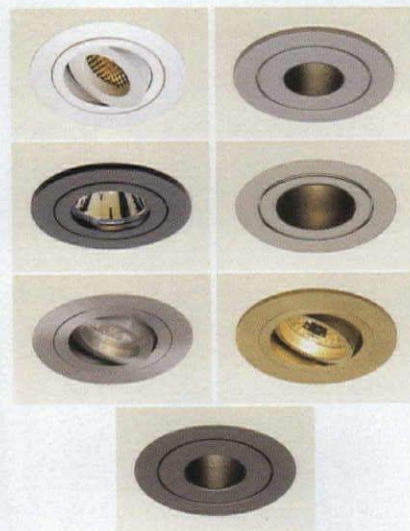
Product: **Composite Recessed CFL Downlights**

Constructed of 100-percent, high-impact, corrosion-resistant composite material, NuTech Lighting's Energy Star-compliant, California Title 24- and NYC Calendar Number-approved Composite Recessed CFL Downlights are lightweight and, at only 4 1/4 inches tall, ideal for restricted spaces or angled ceilings. They feature an ellipsoidal reflector system, twist-on/off flush-mounted trims in 6-inch apertures, and a quick-release lamp system. Appearing as an integral one-piece unit, the body houses one or two dual- or triple-tube compact fluorescent lamps in many wattages. **CIRCLE 160**

**ARDEE LIGHTING | WWW.ARDEELIGHTING.COM**

Product: **Focus and Varianti**

A collection of small-aperture recessed downlights, Focus and Varianti provide high-performance illumination with energy-efficient MR11 or MR16 halogen lamps. Focus provides fixed downlighting in a dual-trim ring design for direct spot lighting, while Varianti offers aimable downlights and a two-ring design, allowing for 360-degree rotation and 35-degree tilting for precise placement of light. Each can accommodate lenses and louvers for a range of custom effects, and trims are offered in machined aluminum or natural brass in multiple finishes. Custom combinations can be specified as well. **CIRCLE 161**



**IRIS LIGHTING | WWW.IRIS-LIGHTING.COM**

Product: **Square Downlight Series**

Featuring a modular design and a two-stage optical system, the Square Downlight Series accepts a broad range of lamps and optical elements for open downlight, adjustable/accent, wallwash, and lens/shower applications. Its steel collar can be rotated plus or minus 7 1/2 degrees through the 4-inch aperture, providing precise alignment. In addition, all trims can be flush mounted to the ceiling and 2-inch square aperture pinhole trims are also available. **CIRCLE 162**

**HALO LIGHTING | WWW.HALOLTG.COM**

Product: **H3 Square Trims**

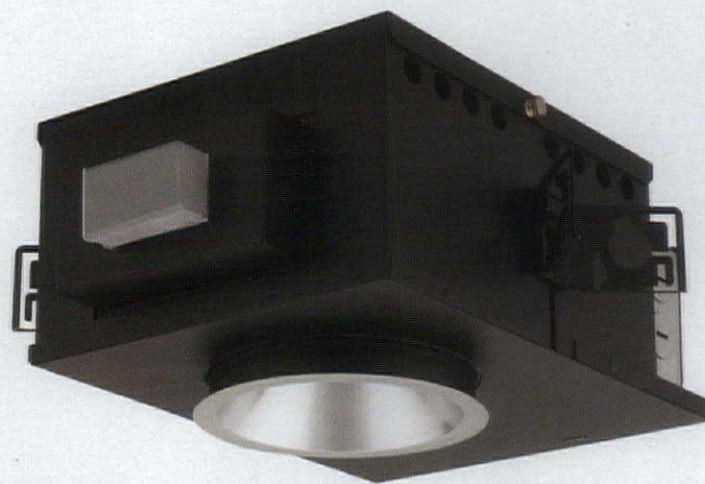
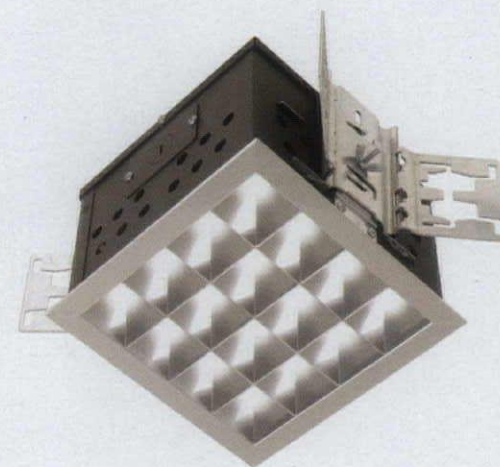
A new line of trims for Halo's H3 small-aperture recessed downlights, H3 Square Trims are dual-listed for use with low-voltage 50W MR16 and line-voltage 50W GU10 lamps. The family features three styles—adjustable, adjustable gimbal, and a regressed lens adjustable shower light—and is available in satin nickel, antique copper, and Tuscan bronze, as well as with baffle color options of white with black, white with white, and black with black. Trims can be installed into the company's H3 round aperture housings, which allow adjustments for perfect alignment. **CIRCLE 163**



**GALLIUM LIGHTING | WWW.GALLIUMLIGHTING.COM**

Product: **GS6 Series**

The GS6 Series of square, 6-inch, specification-grade LED downlights is available in standard and high lumen output levels in three color temperatures: 3500K, 4200K, and 5100K. Each fixture contains 16 LEDs with a CRI of 69 to 79, and a louvered aluminum reflector, offered in semi-specular or white, that provides a 45-degree shielding angle. Heat generated by the LEDs is dissipated by the company's proprietary Heat Ejector technology, which maintains proper operating temperatures. **CIRCLE 164**



**OMEGA LIGHTING | WWW.OMEGALIGHTING.COM**

Product: **OM4 Low Voltage**

Designed for commercial accent lighting, the OM4 Low Voltage family of 4-inch downlights has a depth of only 5 1/2 inches and takes MR16 lamps. Each fixture contains a die-cast lamp cartridge, nylon guides for horizontal rotation, and an integrated heat shield that includes a docking station for hot aiming. A wide array of trim options is available, including adjustable slot-cut cone, pinhole, lensed wallwash, open reflector, and open baffle. **CIRCLE 165**

www.motiv.us

Life forward



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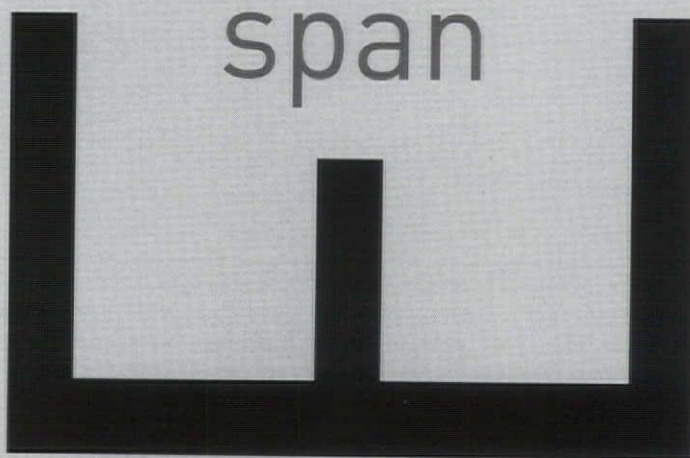


# XX

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ABOVE & BEYOND



AKTMHT670 Z

span  


Prescolite's Signos M metal halide track foundations provide the perfect starting point to create your own unique style. Contemporary and highly shielded, the final design is up to you. A wide array of models is available, each designed around the latest ceramic metal halide lamp and electronic ballast technology. Each features diecast aluminum construction for premium craftsmanship and is available in your choice of three finishes. Lamp aiming is easy, with tool-less 180° rotational and vertical adjustment. Non-directional sources are controlled with your choice of spot, medium, or flood reflectors and a series of optional aesthetic elements is available to further personalize your specification.

To learn more about Prescolite's new Signos M architectural track lighting, contact your local Hubbell Lighting representative, visit us at [www.prescolite.com](http://www.prescolite.com) or call 888-PRS-4TEC.

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# SS

DOWNLIGHTS

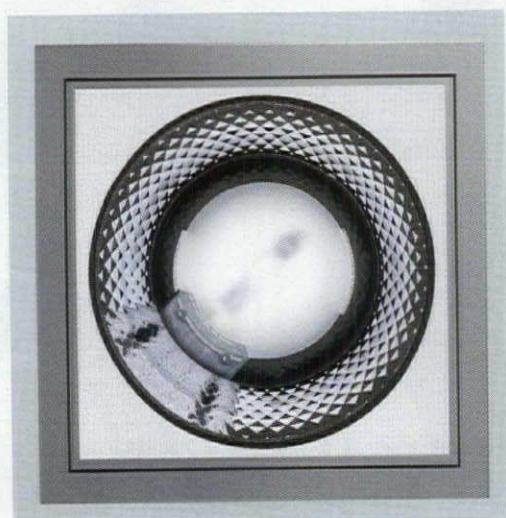


**TECH LIGHTING |**  
[WWW.TECHLIGHTING.COM](http://WWW.TECHLIGHTING.COM)

Product: **Element**  
Element is a recessed downlighting system that features full locking rotation, tilt, and lens orientation, a three-lens capacity, and a small aperture. Available in square and round; flanged and flangeless; and open, lensed, and shower fixtures with die-cast trim options in four standard finishes, the luminaires' housing-mounted optics reduce glare. A hot aiming system can adjust the tilt up to 40 degrees and the pan to 361 degrees. **CIRCLE 166**

**LUCIFER LIGHTING |**  
[WWW.LUCIFERLIGHTING.COM](http://WWW.LUCIFERLIGHTING.COM)

Product: **DL32DGZ and DL2DGZ**  
Using concealed internal gear trains for self-locking adjustment of trim rotation and lamp holder aim, these downlights distribute stress load to reduce the chance of ceiling cracks, allow self-leveling, have a low-profile and efficient installation, and eliminate sightlines for a smooth, clean finish. The fixtures can accept up to three accessories for the control of beam distribution, color, and glare. Square (Model DL32DGZ) and round (Model DL2DGZ) trims are offered. **CIRCLE 167**



**ZUMTOBEL LIGHTING |** [WWW.ZUMTOBEL.US](http://WWW.ZUMTOBEL.US)

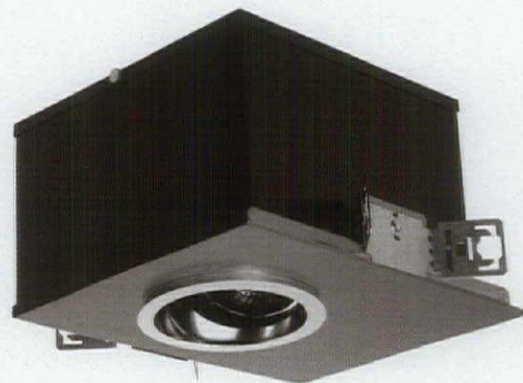
Product: **2Light**  
This luminaire creates a unique lighting effect by combining direct light with a diffuse lighting component. The result is a brilliant "corona" only visible from certain angles. The fixture also combines a square frame and round reflector for integration into modern architectural styles and additional accent lighting. It is dust-proof and can be opened without tools, thanks to a swing-down reflector unit and lamp holder, and can take both metal halide and compact fluorescent lamps. **CIRCLE 168**

**PRESCOLITE |** [WWW.PRESCOLITE.COM](http://WWW.PRESCOLITE.COM)

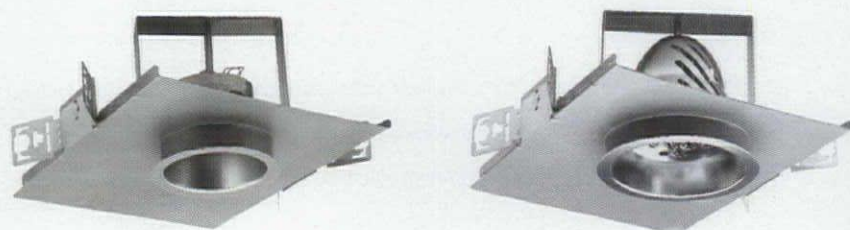
Product: **Architektur D4**  
A new collection of 4 1/2-inch-aperture, compact fluorescent, specification-grade downlights, the Architektur D4 series incorporates a twist-lock socket mechanism that properly positions lamps of various lengths and Virtual Source, the company's proprietary optical technology that produces equal cut-off to lamp and lamp image at a nominal 45-degree viewing angle. An assortment of trims is available, including clear, champagne gold, wheat, light wheat, pewter, and black. **CIRCLE 169**



Product: **A6**  
This 6-inch, specification-grade downlight features 35-degree vertical and 362-degree rotational aiming, both of which can be locked in place without tools. The fixture's 20-gauge powder-painted steel housing comes in matte black and can take PAR30, AR111, and PAR36 lamps. Hot aiming (with trim in place) is standard for all trims, and die-cast aluminum flanges are offered in brushed aluminum, black, Zet metallic silver, and white. A variety of trim and reflector finishes are also available. **CIRCLE 170**



Product: **D4LED and D6LED**  
An expansion to the Architektur line of downlights, the D4LED (containing four 3W LEDs) and D6LED (equipped with ten 3W LEDs) fixtures promise (according to the manufacturer) to provide high energy efficiency, excellent illumination, and lower operating costs. Both the 4- and 6-inch LED luminaires consist of two elements: a light engine/reflector assembly and a housing. Finishes include specular, semi-specular, haze, and American matte, while a selection of colors and flange options are also available. **CIRCLE 171**





How to corner like a Porsche.



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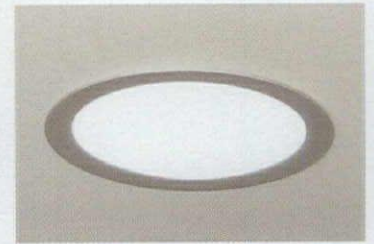
PRODUCTS

DOWNLIGHTS

RENAISSANCE LIGHTING | [WWW.RENAISSANCELIGHTING.COM](http://WWW.RENAISSANCELIGHTING.COM)

Product: **4-inch evo LED Downlight**

This downlight is available in color-changing and white versions. The color-changing fixture has RGB LEDs producing over 400 maintained lumens, while the high-brightness all-white version is available in 3000K or 4100K color temperatures. All LEDs within each luminaire are concealed, creating a smooth, uniform output of light, and a Frame-In-Kit is included in each fixture, making it easy to install in most applications. Diffuse or specular reflectors are offered. CIRCLE 172



BEGA/US | [WWW.BEGA-US.COM](http://WWW.BEGA-US.COM)

Product: **Limburg**

Characterized by its low profile and shallow recessed depth, Limburg is made of hand-blown 3-ply opal glass in convex or flat configurations. Its housing measures just 5 1/2 inches deep to accommodate shallow plenums and is offered in three sizes: 9-, 12 1/2-, and 16-inch diameters for the convex version, and 10-, 14-, and 17-inch diameters for the flat version. The fixture takes multiple fluorescent lamp options and two finishes are available for each glass style. CIRCLE 173

JUNO LIGHTING GROUP | [WWW.JUNOLIGHTINGGROUP.COM](http://WWW.JUNOLIGHTINGGROUP.COM)

Product: **Elate**

A line of specification-grade commercial recessed downlights, Elate offers customization capabilities, providing a wide range of options, such as open, lensed, and louvered fixtures, wallwashers, and pull-down adjustables in uniform aperture sizes. Reflectors come in a variety of standard colors in both specular and satin finishes, and fixtures can be easily installed with the company's Tru-Lock mounting system, which features T-Bar locking and locator notches for repeatable alignment. CIRCLE 174




AMERLUX LIGHTING SOLUTIONS | [WWW.AMERLUX.COM](http://WWW.AMERLUX.COM)

Product: **Evoke 2.9-Inch Downlight Series**

Part of Amerlux's new EcoTectural line—which includes downlights, recessed adjustable accents, pinhole adjustable accents, and lens wall-wash fixtures with round or square apertures of under 3 inches—the Evoke 2.9-inch Downlight Series accepts a variety of low-wattage metal halide lamps. It is available in a range of anodized and baked aperture finishes with accessories including louvers and lenses. Depending on the lamp used, a variety of beam spreads is offered. CIRCLE 175





The leading edge in recessed lighting.

## Remarkable.

Leave it to Mark Lighting to take the LEED in energy efficient recessed lighting. Our new LDS series is an energy efficient take on our classic side-basket and center-basket designs. We've replaced the perforated metal diffuser with pigmented high-efficacy acrylic optics to increase efficiency a nominal 70-80% over the original. Available in frosted linear ribbed and soft white, Mark Lighting's LDS series is a superb choice for the energy conscious design.

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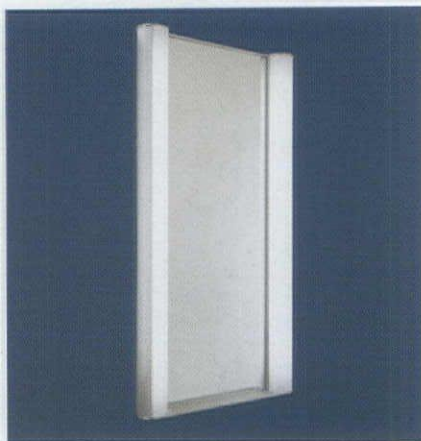


TASK

**LUXO | WWW.LUXOUS.COM**

Product: **Air LED**

An LED version of the company's Air task light, Air LED incorporates three 3W LEDs in its ergonomic design. Its light engine features Luxo's proprietary lens array, which converts the normally pinpoint light source into a wider, asymmetric beam spread, pushing light forward to eliminate glare. The luminaire has a multi-adjustable, spring-balanced arm that comes in 24- and 35-inch lengths. A weighted circular base or mounting clamp is offered, and matte black and gray aluminum finishes are standard. **CIRCLE 177**



**SHAPER LIGHTING | WWW.SHAPERLIGHTING.COM**

Product: **601 Mirror Luminaire Series**

Offering a choice of two integral vertical T8 lamp extrusions or one top horizontal lamp extrusion, the newly streamlined 601 Mirror Luminaire Series is available in three vertical orientations and one horizontal orientation. Its solid aluminum housing contains a matte white diffuser insert and prismatic acrylic lens and is available in 14 finishes or a custom color. Other options include a 4- or 6-inch shelf and a dimmable ballast. **CIRCLE 178**



**ALKCO LIGHTING | WWW.ALKCO.COM**

Product: **Little Inch2**

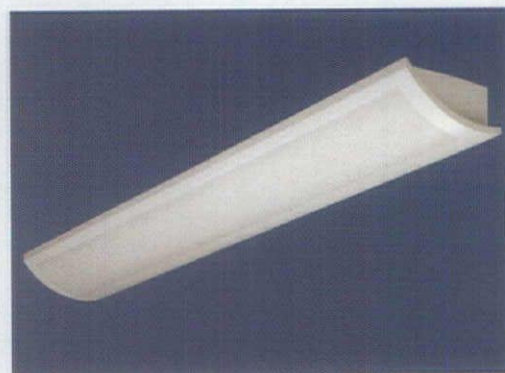
This undercabinet luminaire has a clean, architectural appearance with no visible hardware. Its full-face, recessed glass lens provides a continuous plane, while inside, a full-length specular aluminum reflector produces a uniform distribution of light. Available in 1-, 2-, 3-, or 4-lamp configurations, the fixture is composed of an extruded aluminum housing and die-cast endcaps. It takes both low-voltage halogen and xenon lamps and is offered in four powder-coat finishes—white, black, bronze, and aluminum. **CIRCLE 179**

HEALTHCARE APPLICATIONS

**COOPER LIGHTING | WWW.COOPERHEALTHCARESOLUTIONS.COM**

Product: **Meditrine Series**

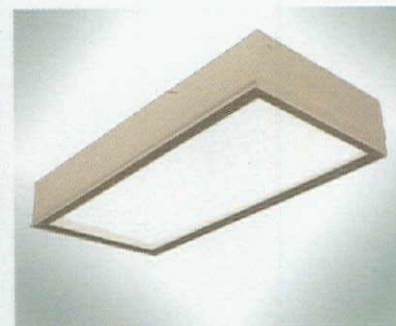
A line of low-profile, wall-mounted, hospital-room luminaires, the Meditrine Series provides reading and ambient light and is available in 36- or 48-inch lengths. It features a tool-free mounting system for easy installation and maintenance, and a multi-position switching option allows for convenient control. Three T5HO or two T8 lamps can be used, various end cap options are offered, and finishes include matte white, almond, and dark platinum, as well as custom colors. **CIRCLE 180**



**VISTA LIGHTING | WWW.VISTALIGHTING.COM**

Product: **AG3700 Series Surgical Troffers**

Designed to address infection-control issues, this low-profile ceiling troffer for surgical suites has spot-welded seams for smooth surfaces that resist particulate build-up and closed-cell interior gasketing to ensure an airtight seal against bacteria and viruses that can travel through ceiling ducts. A silver-based grid pattern on the fixture's acrylic lens provides asymmetric light distribution for glare-free ambient illumination; a clear prismatic lens is also offered. One-piece square and rectangular housings recess into all standard ceiling grids, while piano-hinged lamp access doors allow for easy maintenance. **CIRCLE 181**



**ARCHITECTURAL LIGHTING SYSTEMS | WWW.ALSLIGHTS.COM**

Product: **Harmony Dual**

An alternative to traditional headwall-mounted patient-room lighting, Harmony Dual consists of two opposing fixtures mounted on either side of the bed. With its linear prismatic lens and a unique arrangement of T5 lamps and reflectors, the luminaire offers three modes of operation—a soft wash of ambient illumination, crossing beams of shadow-free examination lighting over the entire bed, and the two prior modes used concurrently. **CIRCLE 182**



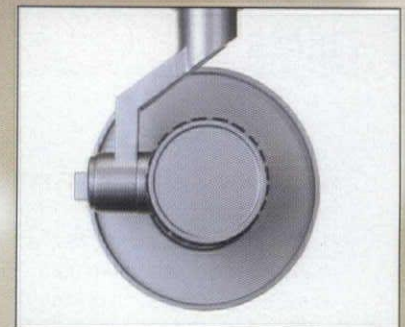
**LITECONTROL | WWW.LITECONTROL.COM**

Product: **Bedlite**

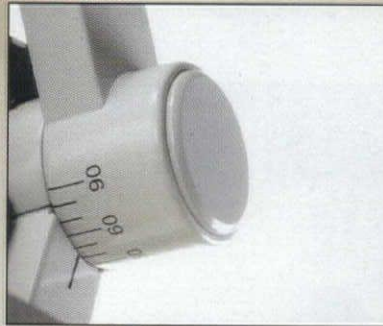
Offering flexibility to meet the visual needs of both patient and caregiver, Bedlite is available with two- or three-lamp T8, T5, or T5HO cross-sections in 3- and 4-foot lengths. Separate uplight and downlight chambers allow for varying lighting conditions, and an Engage-n-Lock fixture attachment provides quick installation and quick release of the fixture from the mounting bracket. 3Form ecoresin is used for the luminaire's fascia, resulting in a wide variety of colors, patterns, and textures. **CIRCLE 183**



Heavy duty die-cast aluminum construction.



Closed back eliminates light leaks.



Lockable, adjustable 350° horizontal and 90° vertical aiming.



Aesthetically concealed wiring.

## VAMP SPOTLIGHTS

The new W2 track spot series sports an aesthetic developed specifically for the performance architectural market: a tasteful fusion of smooth cylindrical forms and black silicone accents. Captive accessory holders accommodate two filter mediums. The ten lamp options include MR16, metal halide and incandescent PAR lamps.

See us at Lightfair, booth #521 and HD, booth #2443.



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# AL

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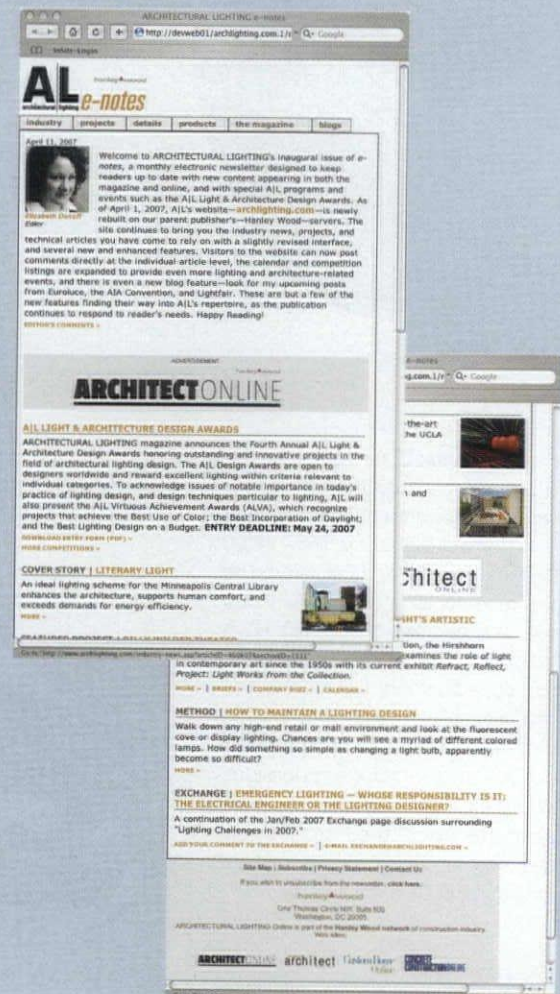
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# e-notes

*A monthly electronic newsletter designed to keep readers up to date with new content appearing in both print and online.*

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- ▶ EXPANDED CALENDAR AND COMPETITION LISTINGS PROVIDE EVEN MORE LIGHTING AND ARCHITECTURE-RELATED EVENTS
- ▶ EDITOR'S BLOG: UPCOMING POSTS FROM EUROLUCE, THE AIA CONVENTION, AND LIGHTFAIR



TRACK

**W2 ARCHITECTURAL LIGHTING | WWW.W2LIGHTING.COM**

Product: **Vamp**  
 Designed with cylindrical forms and black silicone accents, Vamp is crafted using heavy-duty, die-cast aluminum construction for durability and is offered in black, white, platinum, and black/platinum finishes. Its closed back eliminates light leaks, and accessory holders can accommodate up to two filter mediums, including hexagon louvers, cross-blade louvers, color lenses, or dichroic lenses. Each track head has a 350-degree horizontal rotation and a 90-degree vertical rotation and can accept 10 lamping options. **CIRCLE 184**



**LIGHTING SERVICES INC | WWW.LIGHTINGSERVICESINC.COM**

Product: **GR Series**  
 Minimally designed for a high level of style, the GR Series is constructed from die-cast aluminum and can take MR16, AR111, and PAR36 lamps. Each fixture contains a user-friendly snap-in socket for tool-free installation of lamps and features self-locking in all horizontal and vertical planes. A variety of beam spreads is offered. Available finishes include black, white, silver, graphite, and platinum. Luminaires can accommodate all of the company's AAA accessories. **CIRCLE 185**

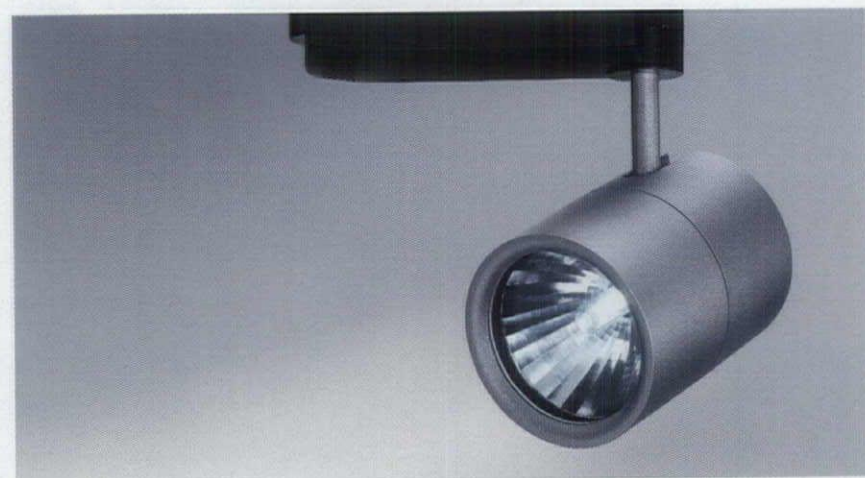


Product: **LumeLEX**  
 Utilizing Lexel technology—a universal platform for solid-state lighting—LumeLEX provides 1,000 lumens of light and, according to the manufacturer, has a light output comparable to a 75W PAR lamp. It has a 16-degree beam spread, adjustable through the use of accessory lenses, and can be dimmed down to 10 percent without any shift in color temperature. A range of seven white color temperatures are offered, from incandescent at 2700K to a daylight range of 6500K. **CIRCLE 186**



**LIGHTOLIER | WWW.LIGHTOLIER.COM**

Product: **Tangent**  
 A low-profile track system that combines extruded aluminum and clear polycarbonate, Tangent can be installed in three configurations—surface mounted or suspended in a solid I-Beam or perforated truss. Its “side-by-side” busbar design allows the track to be surface mounted flush to ceilings and walls in both straight-run arrangements or bent into architectural curves. A selection of fixtures is available, each accepting low-voltage MR16 and T4 bi-pin lamps, as well as line-voltage ES16 and G9 lamps. **CIRCLE 187**



**ZUMTOBEL LIGHTING | WWW.ZUMTOBEL.US**

Product: **Vivo**  
 Vivo allows for precise trackhead alignment with tool-free operation and maintenance due to its proprietary Squeeze, Move, and Retain (SMART) system. By pressing the integral clip to release the joint, spotlights can be rotated 360 degrees and pivoted up to 90 degrees. Available in three sizes—3 1/4-, 3 15/16-, and 5 1/8-inch diameters—each die-cast aluminum housing can accommodate several lamp types. Spot, flood, and wide-flood beam distributions are offered, as well as several reflector and filter options. **CIRCLE 188**

**CON-TECH LIGHTING | WWW.CON-TECHLIGHTING.COM**

Product: **Optica 22W Mini MasterColor**  
 Designed specifically for the 22W Philips Mini MasterColor ceramic metal halide lamp, this lightweight fixture features a compact vertical ballast design and provides 360-degree horizontal and 180-degree vertical rotations. Measuring 2 1/2 inches in diameter, the die-cast aluminum housing is offered in black, white, and silver finishes and contains a reflector with medium beam distribution (spot and flood are also available). **CIRCLE 189**



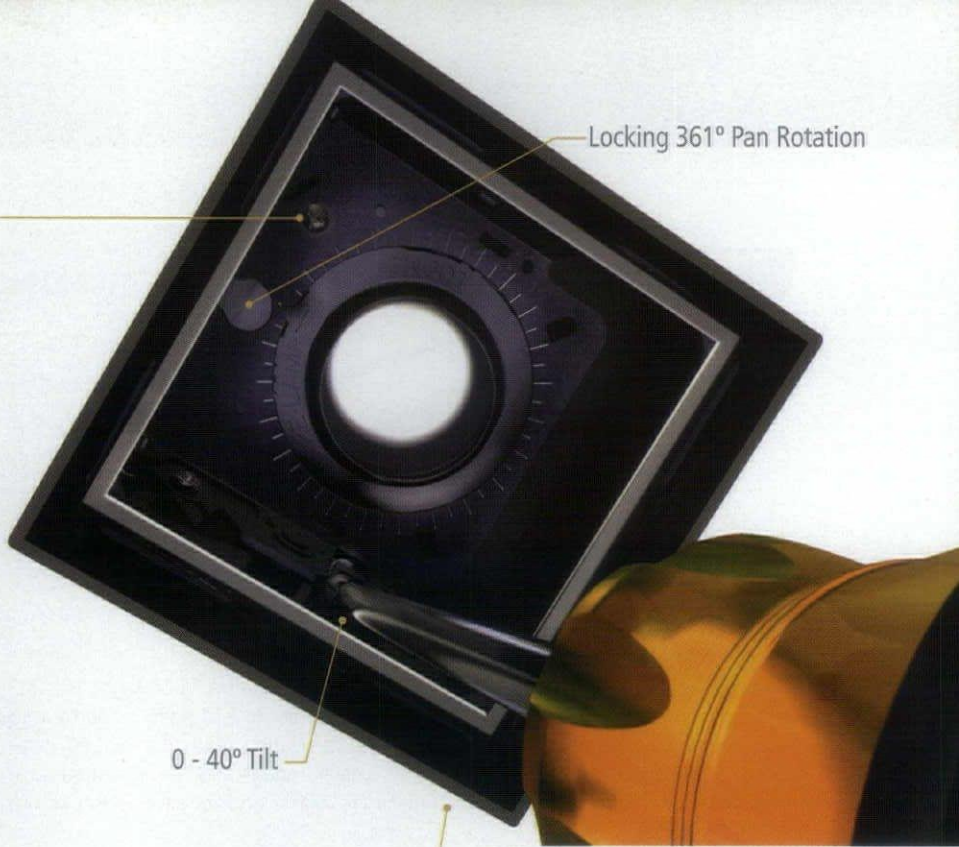


Patent-Pending Lens Rotation and Locking System



Captive Three Lens System

- Lamp Options:
- Halogen MR16
- CMH MR16



Locking 361° Pan Rotation

0 - 40° Tilt



- 3.5" Trim Detail
- Flanged and Flangeless
- Round and Square

Available Finishes

- Antique Bronze
- Black
- Satin Nickel
- White

designers aim the light  
 maintenance re-lamps the light  
**ELEMENT** remembers the light

the first downlight with a lens rotation locking system

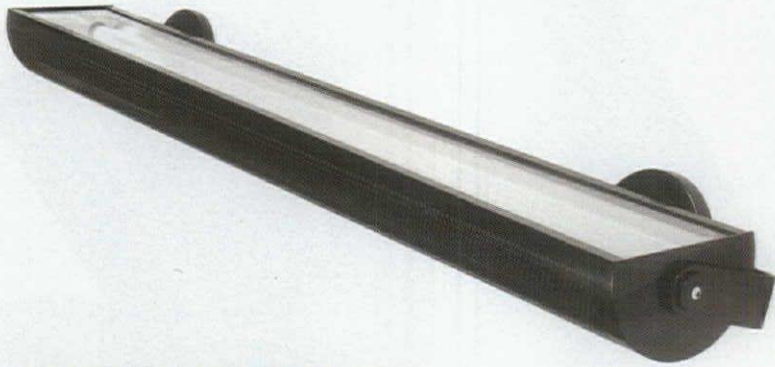


**ELEMENT**



for more information or a product demonstration visit us at booth #1621 at  
[www.element-lighting.com](http://www.element-lighting.com)

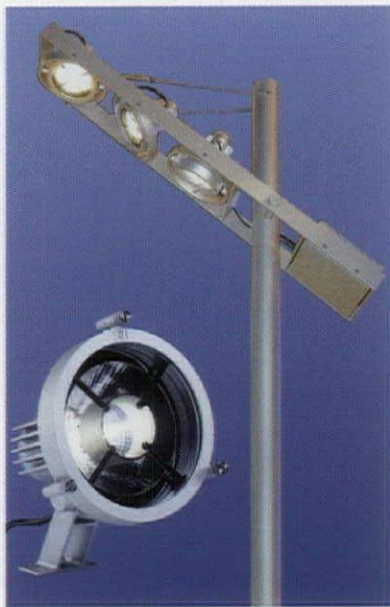




**LITE ENERGY | WWW.LITEENERGY.COM**

Product: **Alphalume Flood Light**

Available in small, medium, and large fixtures, the Alphalume Flood Light line features die-cast endplates, a choice of extruded aluminum and solid or perforated metal housing constructions, and hands-free installation (with the hinged plate option). Light can be directed in six ways via a clear impact- and heat-resistant tempered glass lens. Offered finishes include white, black, bronze, silver, and custom colors. **CIRCLE 191**



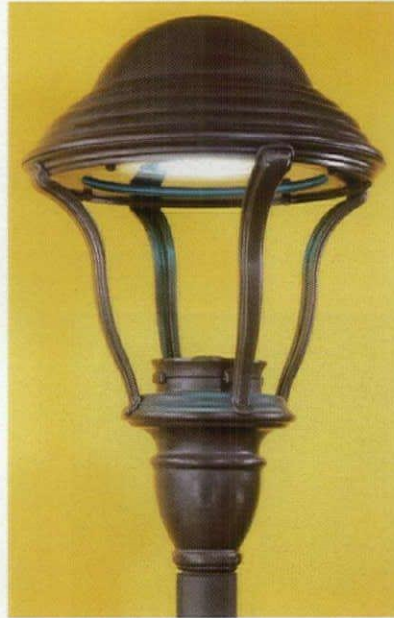
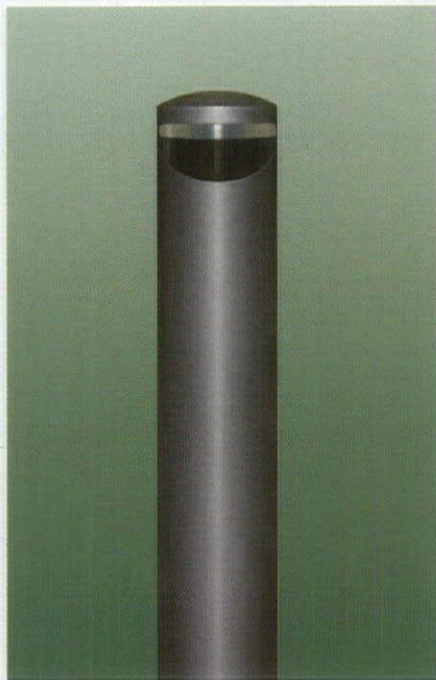
**SELUX | WWW.SELUX.COM**

Product: **Pro Series**

Pro Series precision floodlights are constructed of die-cast, high-purity aluminum and are available in three sizes with lampholder choices that range from 13W compact fluorescents to 1000W HID sources. A wide variety of mounting options, beam patterns, lenses, filters, and louvers are offered, as well as the company's Cardanic Systems gimbal mounting frames (shown) for suspended and pole-mount applications. **CIRCLE 192**

Product: **Notch Bollard**

This extruded aluminum bollard with a die-cast cap contains 12 high-output LEDs that can be started and re-started instantly at temperatures as low as minus 40 degrees Celsius. Measuring 7 7/8 inches in diameter, the bollards are offered in 2-, 3-, and 4-foot heights, as well as custom heights. A precision-formed aluminum reflector gives low-level light output with Type IV semi-cutoff distribution via a translucent, one-piece injection-molded and UV-stabilized polycarbonate lens. The fixture's low power consumption can be further reduced with an optional Hi-Low switching option. **CIRCLE 193**



**STERNBERG LIGHTING | WWW.STERNBERGLIGHTING.COM**

Product: **Euro**

With a bold new look of contemporary styling, the Euro luminaire has three distinctive optical styles including traditional, contemporary downlight, or indirect for glare-free illumination. Available with the manufacturer's proprietary Nightsky Star-Shield and Opti-Shield roof, louver, and indirect optics (depending on model), the fixture is offered in six different configurations and can be post- or wall-mounted to a number of decorative brackets. It conforms to Dark Sky ordinances. **CIRCLE 194**

Product: **Venice**

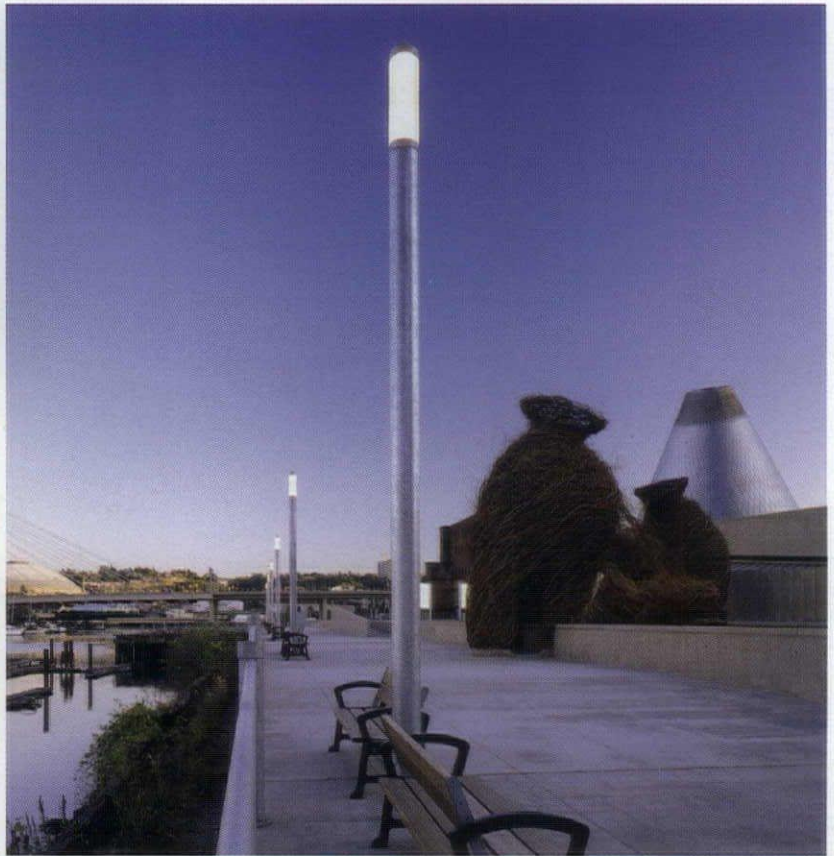
Influenced by Italian street lighting, the Venice luminaire comes in two models: V410, which measures 19 1/2 inches in diameter and 41 inches tall, and V310, which is 17 1/4 inches in diameter and 35 inches tall. It is comprised of the company's sculpted, cast-aluminum Naples base (model 1600 for both fixture sizes) and mounting arms. Single, double, or in-wall-mounted configurations are available and a variety of optics, lamps, and lenses are offered. **CIRCLE 195**



Product: **Greenfield Option**

An ideal way to enhance a streetscape, park, or walkway while providing safety and security, the Greenfield Option is a dual illumination assembly that increases pathway and area lighting while minimizing fixture glare. The design allows up to 70W lampholder in the lower section, providing extra light around the pole base, where decorative fluting creates a 90- to 360-degree light pattern. Ten different styles are available. **CIRCLE 196**





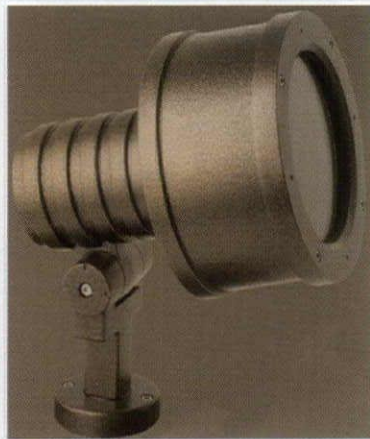
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**ALLSCAPE |**  
**WWW.ALLLIGHTING.COM**

Product: **Ciello Series**  
Characterized by a rugged design and constructed of die-cast aluminum for high corrosion resistance, the Ciello Series provides evenly distributed spot, flood, or accent lighting and is comprised of three models—SL50, which has a 3 1/2-inch diameter and takes a low-voltage halogen lamp, and the larger SL51 and SL52, which have an integral spot-to-flood beam adjustment mechanism and can accommodate compact fluorescent, metal halide, incandescent, and halogen lamps. All allow for vertical adjustments of 75 or 120 degrees. **CIRCLE 197**

**BEGA/US | WWW.BEGA-US.COM**

Product: **Linear Elements and Bollard Luminaires**

These rectangular architectural lighting elements are ideal for delineating interior and exterior spaces such as plazas and building entrances. The Linear Elements have an overall height of 11 1/2 feet, while the Bollards are offered in three heights: 36, 47, and 59 inches. All have a precision louver and linear spread lens to conceal the T5HO fluorescent source, while providing widespread, uniform illumination. They also offer both single- and double-sided distribution. **CIRCLE 198**



**DELTA LIGHT USA | WWW.DELTALIGHT.US**

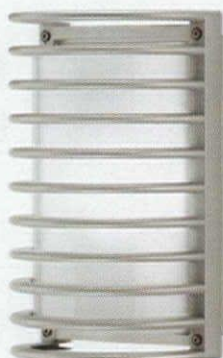
Product: **Minimal Bollards**

Answering the demand for more stylish and attractive bollards, Delta Light has introduced its line of Minimal Bollards, which come in a variety of basic shapes and scales. Offered in multiple finishes, including aluminum, stainless steel, and solid teak, the fixtures accept a wide range of light sources such as halogen, fluorescent, HID, and LEDs. **CIRCLE 199**

**PRISMA ARCHITECTURAL LIGHTING |**  
**WWW.PRISMALIGHTING.COM**

Product: **NIKKO+ Series**

Built to withstand the elements, this family of fixtures is constructed of die-cast aluminum and pressed glass with frosted internal surfaces. NIKKO+ is offered in three sizes with three faceplate options, and can take incandescent, compact fluorescent, and ceramic metal halide light sources. It can be mounted vertically or horizontally and is available as a double-sided mount with specially designed wall brackets and a post mount in single or double configurations. **CIRCLE 200**



**DREAMSCAPE LIGHTING | WWW.DREAMSCAPELIGHTING.COM**

Product: **Avanti 9100**

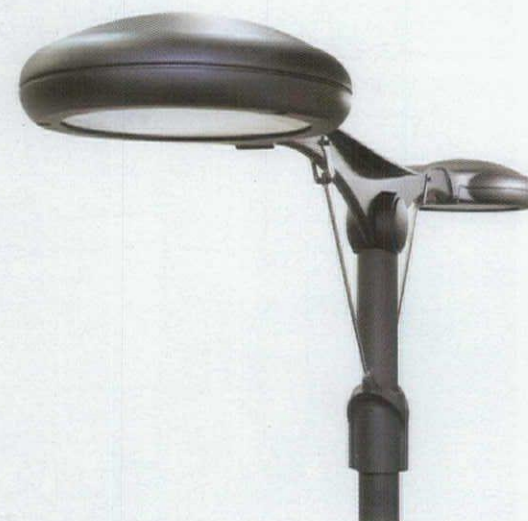
A series of miniature, flush-mounted, trimless step/accent fixtures, Avanti 9100 luminaires are suitable for wall- and ceiling-mounted applications. Able to accept both fluorescent lamps and LEDs, each has a U-shaped white acrylic diffuser and an extruded aluminum housing that measures 3 1/2 inches wide and 3 inches deep. Available fixture lengths include 7, 9, 13, 18, and 22 inches, and custom lenses and colors are offered. **CIRCLE 201**



**INVUE LIGHTING | WWW.INVUELIGHTING.COM**

Product: **Medium Slide**

Medium Slide is an architectural area luminaire offering solutions for full cutoff compliance, spill-light control, and path of egress illumination with a choice of five high-efficiency, precision-built optical systems. Combining a sleek optic housing with a dramatic cast-aluminum cantilever arm assembly, the fixture accepts metal halide, pulse start metal halide, high-pressure sodium, and compact fluorescent lamps. A twin head option is offered, as well as photo control for additional energy savings. **CIRCLE 202**



**KIM LIGHTING | WWW.KIMLIGHTING.COM**

Product: **MiniBounce**

This pole- and surface-mounted lantern-style direct/indirect landscape fixture maximizes downward light distribution to site and pedestrian zones with tightly controlled beam spreads for visual comfort. Constructed of rugged, die-cast aluminum with a high-performance, high-efficiency internal spectral metal reflector, the luminaire is available with an optional black ballast cover and full cutoff light distribution for StarView compliance. Five powder-coat finishes and custom colors are offered. **CIRCLE 203**





# There's no such thing as Too Thin

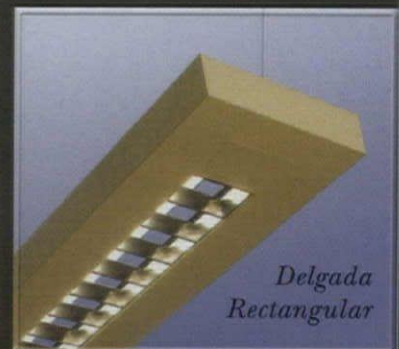


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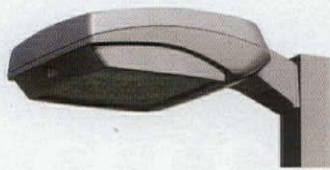
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**ACCULITE | WWW.ACCULITELTG.COM**

Product: **Alari and Alari Plus**

These high-performance area lighting luminaires have a sleek profile design and optics engineered to meet the Illuminating Engineering Society (IES) full cutoff standards. In addition to standard horizontal lamp models—which come in all wattages—the line is offered with vertical lamps up to 200W. While Alari features an 86-percent specular aluminum reflector with standard heat-resistant glass, the Alari Plus offers Miro IV specular aluminum reflectors and a 98 percent efficient high-transmission glass lens, as well as rotatable optics. **CIRCLE 204**



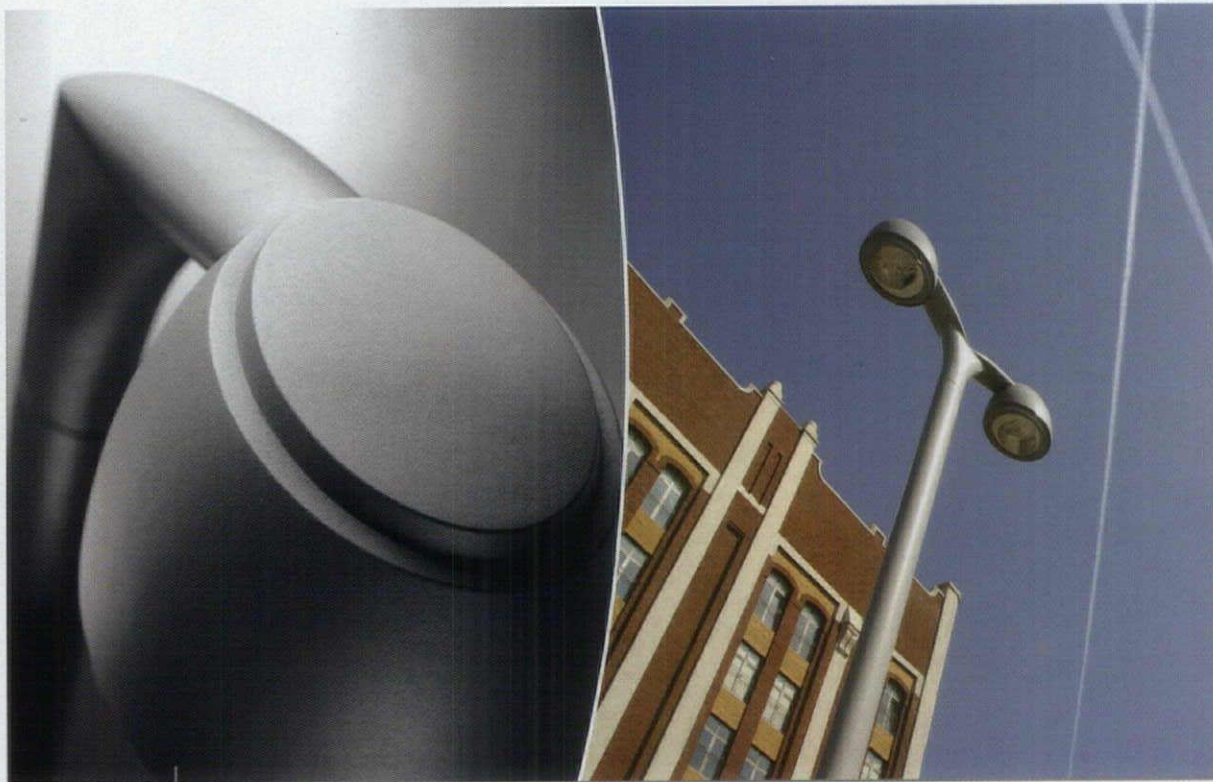
**U.S. ARCHITECTURAL LIGHTING | WWW.USALTG.COM**

Product: **Scilux**

An aerodynamically styled fixture, this sharp cutoff area luminaire is designed for pole mounting up to 40 feet and is offered in one-, two-, three-, or four-fixture configurations. Constructed from cast aluminum, the fixture features ribbed styling details on the hood that enhance the design and dissipate heat. Fixture components can be replaced easily with tool-free lamp and ballast access, and a variety of light distributions can be achieved with specular segmented reflectors working in concert with a clear tempered glass lens. **CIRCLE 205**



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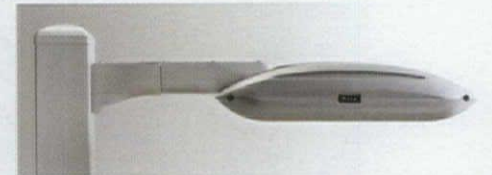
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**BETA LED | WWW.BETA-LIGHTING.COM**

Product: **The Edge**

One in a family of LED luminaires for general outdoor illumination, The Edge has a slim, low profile design that minimizes wind load requirements. It can house up to 10 light bar modules, which consist of 20 LEDs each—designed to be flexible as technology advances and fewer LEDs are required to create the same level of light. Using LEDs with a color temperature of 6500K and outputs of 70 lumens per watt, the fixture is designed with a modular thermal management system and an open housing with a mesh top. **CIRCLE 206**



**LUMIÈRE | WWW.LUMIERELIGHTING.COM**

Product: **Rio Architectural Steplights**

Available in 5- or 7-inch round or square profiles, the Rio series has several fascia designs including open, cross/guard, and eyelid with diffused lens and louvered with a clear lens. Its low-profile design features no visible fasteners and can accommodate low-voltage halogen, metal halide, compact fluorescent, and LED sources. The durable, corrosion-resistant die-cast aluminum alloy housing is available in painted or natural metal finishes. **CIRCLE 207**



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Inspired by light

# Daylighting to Destruction

For museums sometimes the brightest idea isn't the best solution!

Ruth Ellen Miller, DE Business Person of the Year 2000 and President of NoUVIR Research, has spent years in lighting design and manufacturing and holds dozens of U.S. patents. In 2006 NoUVIR was awarded a National Chamber of Commerce Blue Ribbon for excellence. NoUVIR has been featured on PBS television, in best sellers on management and marketing and in college-level entrepreneurial textbooks. - Matthew Scott

RE: Ruth Ellen, what in the world does daylight have to do with fiber optic museum lighting?

REM: NoUVIR's mission is preserving our art and heritage. That's my mission! I've spent fifteen years in museum lighting, making things last, making things beautiful and saving energy. I look at lighting from a very different perspective. But that perspective works! Our history and our customer list prove it. A lot of what I see being done in museums doesn't work. It wastes incredible resources. It damages our heritage. No one admits it or talks about the problems. No one explains what is wrong. No one shows how to do it right. I want to talk about these things, even if I risk offending those involved.

Most of the places where daylighting is used extensively are wasting their time trying to preserve artwork. The density and resulting glare are just too great. I had museum staff tell me that their collection's worst enemy was *their architect!* That's magic.

The fact is that fiber optics, daylighting and other things we have are tools. Good designers know their tools. They know what each tool can and can't do. If you design to truly meet your customer's needs, your lighting choices become obvious.

Museum lighting goals revolve around three things: presentation, preservation and conservation. Presentation is basically making things look good. Preservation is protection from damage, keeping art and artifacts safe. Conservation is doing this efficiently. Anything else is sophistry. Fiber optics actually accomplishes the things that daylighting is supposed to do but without daylight's serious drawbacks. A lot of design conflicts are artistic. I'm an artist. I understand light and shadow and space and feel. But, I focus on footcandles, spectral power distribution, color, glare, UV and IR. I can quantify those things. Science has optimal solutions.

RE: But architecture is art.

REM: I'm not advocating abandoning artistic expression. I told you, I am an artist. But you must address science. Poor design is not good art. Destroying a collection for a client is always ugly. Truly elegant designs always include practical matters like artifact preservation. RE: Then is daylighting a tool?

REM: In a museum that never is almost always, "no." But only because it doesn't fit the job requirements. There's nothing wrong with a hammer. You just don't want to use one on your laptop. RE: Explain that.

REM: Direct sunlight is roughly 10,000 footcandles. Even if you filter it 90% that's ten times surgical lighting levels. It's a thousand times museum conservation light levels. A thousand times! That's a hammer! I've seen a library where they actually build a tent inside the building to safely exhibit artifacts. Daylight's biggest problem is volume. You can have fantastic filtering and still be way over what is safe for artwork when you start with 10,000 footcandles. You can't control it. Now add glare. In a museum, if you can see a window, it becomes a source of pure glare. The way our eyes work,

daylighting can actually make exhibits harder to see. That's because you see everything in the 180° in front of you, top-to-bottom, side-to-side. Want to prove it? Look straight ahead. Without moving your eyes, spread your arms to your sides and wiggle your fingers. See them? Now stick your tongue out. See it? You see everything in this circle.

Put a bright source anywhere in that field of vision and your eyes respond to it. The greater the area, like a glass wall, the more your eyes adjust. This adjustment to light happens in a fraction of a second. The recovery, adjusting back to low light levels, takes people 10 to 15 minutes. During that time, they can't see. That glare source can be a window, a badly aimed track light or even an overly-bright video presentation. Poor visibility, particularly in museums, is more often the result of too much light or light in the wrong places than it is too little light. Uncontrolled light makes exhibits hard to see. It is also responsible for irreparable destruction.

MS: But... I see museums with glass walls all of the time.

REM: People in the twenties thought that putting radium in drinking water was a great idea. It gave you energy. They didn't understand the danger of that energy. We don't put radioactive drinking fountains in historical houses today. Good science trumps historical accuracy.

In the seventies Westinghouse was saying UV didn't cause any appreciable fading. In the eighties only red light was considered "safe". By the nineties the Park Service was publishing data showing that IR caused 40% of the fading of organic dyes. The Illuminating Engineering Society didn't recommend removing all non-visible light energy until 2000. NoUVIR had been teaching that for years. The point is that the science is here now to create good presentation without wrecking a collection. We should be using it.

MS: Can you identify some recent projects where daylighting is creating these kinds of problems?

REM: At Lightfair? In *Architectural Lighting Magazine*? Who's going to protect me from the tar and feathers? I'm going to make people mad just questioning glass walls in museums!

What I am getting at here is that clients hire designers to think through all of these issues. They are supposed to know all of the pros and cons. Nevertheless, I see a lot of very striking designs that don't meet a collection's needs very well. That's both in public museums and the private collections that are going to be tomorrow's museums.

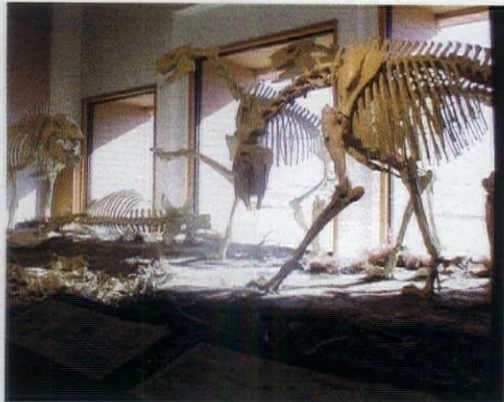
I'm not saying don't use daylight. Just do the math. Make sure your customer understands the choices. Beautiful buildings add to our life. Most of the time though, the collection inside that building is far more important and far more valuable. Protecting those artifacts should be the priority.

MS: How does fiber optics actually do what daylight is supposed to do?

REM: Isn't natural color daylight's big selling point? Properly designed fiber optic illumination has perfect color, the spectral power distribution of sunlight, but with no UV and no IR, absolutely zero. So artwork looks beautiful and it stays safe.

I need to limit that to NoUVIR systems. HID illuminators have the same problems with color quality and drift as other gas discharge sources. Add glass optical fiber and the light gets really green. And, not all systems are no UV and no IR.

Remember vision and glare? Fiber optics give you the beam control to eliminate glare. You light exactly what you want, the way you want, to the intensity you want. Avoiding glare sources gives you excellent visibility at greatly reduced light levels. Fiber optic lighting gives you the energy savings. Circle no. 39 or [www.archlighting.com/productinfo](http://www.archlighting.com/productinfo)



Sunlight makes conservation light levels impossible. Glare and shadows make graphics difficult to read.



Poorly planned daylighting can actually make things harder to see.



Q. What cracked this priceless painting?  
A. IR driven expansion and contraction.

that daylighting only promises.

A lot of Lightfair is about green. Lower light levels save energy. Powering 32 lights with a single illuminator saves even more. Every watt you take out of a space saves three or four more in air conditioning. The energy savings of fiber optics can be substantial.

We've had utilities document 70% energy savings in a gallery. I've seen one-year returns on investment. People talk about green, but how many can talk about paying for lighting hardware in a year or two?

The advantages of fiber optic lighting are awesome. You can conceal NoUVIR luminaires just about anywhere. With no UV or IR, they never get hot. You can put lights inside cases or shoot tight focus beams across a room with no spill or scatter. You can individually adjust each beam from 5° to 50°.

NoUVIR fiber optic lighting lets you do some amazing things. MS: This sounds like something designers ought to know about. REM: That's it exactly! NoUVIR is not the solution to every lighting job. It isn't designed to be. But it's a fantastic tool for lighting where control is needed or things are valuable.

What we do particularly well is what I'm doing here, providing people with the technical data to do good design. From the underlying science behind light and lighting to full product specifications, easy to understand photometry to a published price list, the information is on our web sight and it's in our catalog. Even better, it's free. Take advantage of it.

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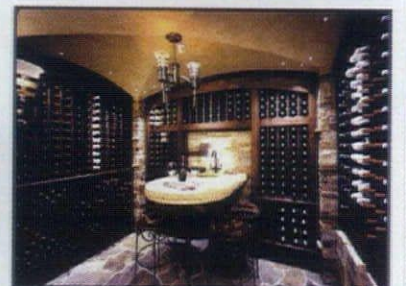
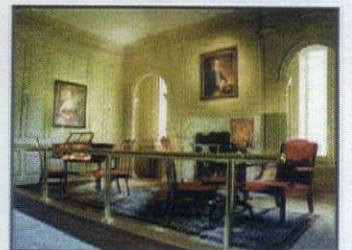
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EMERGENCY

**SURE-LITES | WWW.SURELITES-LIGHTING.COM**

Product: **StairLite2**

Designed for use in stairwells or other areas with low occupancy levels, StairLite2 features an integrally mounted ultrasonic motion detector, a system display panel, and an optional battery backup. Constructed of 20-gauge steel with high-impact acrylic lenses and a durable powder-coat finish, the surface-mounted fixture contains two 4-foot T8 fluorescents and has field-adjustable bi-level or dual lamp operation. **CIRCLE 186**



**CHLORIDE SYSTEMS | WWW.CHLORIDESYS.COM**

Product: **Caliber Series**

The Caliber Series of edge-lit exit signs offers universal mounting configurations—recessed ceiling, surface ceiling, surface end mount, and surface wall mount—and field-selectable chevrons. According to the manufacturer, high-brightness LEDs provide illumination levels that exceed 70 candela per square meter. Featuring dual-voltage input with surge protection and Intelli-Charge for self-diagnostics, the die-cast aluminum fixture has a high-impact, clear acrylic panel offered in red or green with optional white or mirrored inserts. The fixture housing is available in several finishes. **CIRCLE 187**



Product: **Solaray**

Solaray combines a wall-mounted outdoor luminaire with an integral emergency lamp for egress and non-egress lighting applications. One 100W high-pressure sodium (or metal halide) lamp and a polished specular aluminum reflector provide regular illumination, while a 35W instant-strike Xenarc lamp, powered through a remote emergency battery unit, provides emergency lighting. A pre-mountable wall box contains a low-voltage emergency power connector and an integral splice chamber for easy, hands-free wall positioning. Made from die-cast aluminum, the 17-inch-wide fixture is offered in a bronze powder-coat finish. **CIRCLE 188**

**EVENLITE | WWW.EVENLITE.COM**

Product: **Aperion**

Concealed, recessed, and folded into a compact housing, the Aperion emergency fixture has fully adjustable mounting hardware that is suitable for many applications. Constructed of die-cast zinc and finished in a white powder coat, the unit contains two adjustable 25W halogen lamps and a maintenance-free lead-calcium battery (a nickel-cadmium battery is also available). Its rotating door is just 4 inches square. **CIRCLE 189**



**LEDTRONICS | WWW.LEDTRONICS.COM**

Product: **EXL-W Series**

Offering an alternative to conventional 15T6 or 20T6 incandescent exit sign lamps, the EXL-W Series is a line of low-power-consumption, white LED lamps that are bright, safe, and maintenance free. Constructed of flame-resistant polycarbonate resin, the lamps are durable and visible even in bright light. They require no extra wiring to install, run on 120V, put out 12 lumens of unfiltered illumination, and are available in a variety of base options. **CIRCLE 190**

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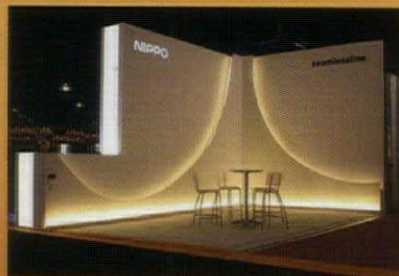


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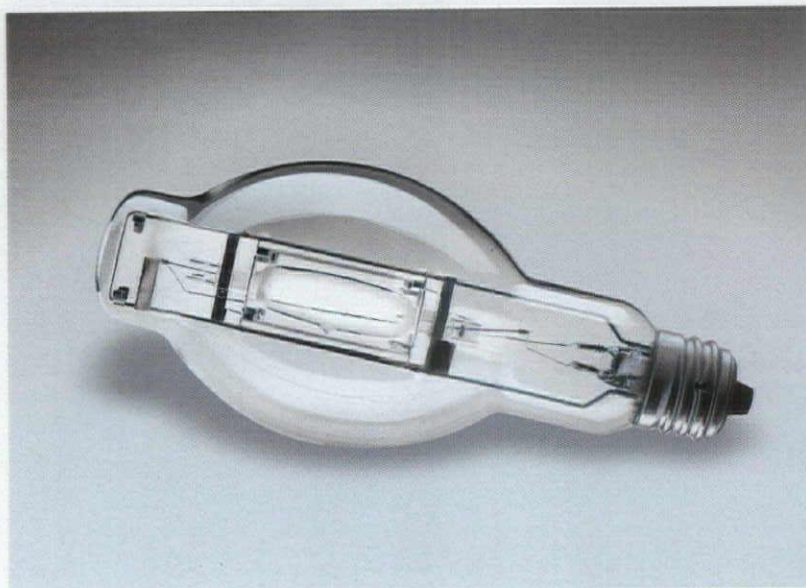
Product: **SuperT8**

A linear fluorescent for high-bay lighting, the high-lumen SuperT8 lamp starts at 3,100 lumens, providing (according to the manufacturer) 10 percent more light than standard T8 lamps. It has a color temperature of 5000K and a rated life of 24,000 hours at 12 hours per start. ArmRlux, a shatter-resistant coating that reduces lumen output by one percent, is offered as an added feature on select T8 lamps. **CIRCLE 210**



Product: **54W T5HO**

With a slim profile and shorter length to allow for a variety of uses, the 54WT5HO lamp has a CRI of 85. Offered in 3500K, 4100K, and 5000K color temperatures, the lamp provides 5,000 initial lumens—making it ideal for high ceiling applications—and a rated life of 30,000 hours. **CIRCLE 211**



VENTURE LIGHTING | [WWW.VENTURELIGHTING.COM](http://WWW.VENTURELIGHTING.COM)

Product: **Uni-Form MP 575**

This energy-saving, pulse-start metal halide lamp, part of the company's Super Site Lighting System, produces 60,000 initial lumens and embodies the manufacturer's proprietary tipless, formed-body arc tube technology for improved thermal characteristics, resulting in greater light output. Each lamp features weldless technology for reliable and consistent optical precision and has a rated life of 20,000-plus hours. **CIRCLE 212**

OSRAM SYLVANIA | [WWW.SYLVANIA.COM](http://WWW.SYLVANIA.COM)

Product: **Octron Skywhite XP Ecologic**

Ideal for applications where a feeling of daylight is desired, this linear fluorescent T8 lamp has a color temperature of 8000K, which provides a bluish-white light, and a CRI of 88. It produces 2,518 mean lumens and, at three hours per start on an instant-start ballast, has a 24,000-hour average rated life (30,000 hours on programmed rapid start). Ecologically sound, this lamp carries the company's Ecologic label and is Federal Toxicity Characteristic Leaching Procedure (TCLP) compliant. **CIRCLE 213**



BALLASTS



ADVANCE | [WWW.ADVANCETRANSFORMER.COM](http://WWW.ADVANCETRANSFORMER.COM)

Product: **e-Vision Mini 20W**

This 120V electronic HID ballast for ceramic metal halide lamps has a compact, versatile housing that measures approximately 4 1/4 inches by 1 1/4 inches by 1 1/4 inches. It delivers lamp wattage regulation to optimize lamp color quality and reduce lamp-to-lamp variations, and has a 90-degree-Celsius maximum case temperature rating to ensure long lamp life. Safety features include automatic lamp power control, lamp end-of-life detection, and lamp monitoring. **CIRCLE 214**



Product: **e-Vision Mini Square and TrakStick**

Two new compact and lightweight additions to the e-Vision line of HID electronic ballasts, Mini Square and TrakStick, for 39W and 70W ceramic metal halide lamps, offer superior performance, long life, and design flexibility. Both deliver lamp wattage regulation, feature IntelliVolt (Advance's proprietary multiple-voltage technology), and have all-metallic closures for superior heat transfer and universal code compliance, along with a 90-degree-Celsius maximum case temperature rating and multiple safety features. **CIRCLE 215**



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**ADVANCE |**  
**WWW.ADVANCETRANSFORMER.COM**

Product: **e-Vision Compact 150W**  
For the operation of 150W metal halide lamps, this low-profile electronic HID ballast is 20 percent smaller (at approximately 6 1/4 inches by 3 1/2 inches by 1 1/2 inches) and 3 percent more efficient than the company's previous 150W offering. It features IntelliVolt multiple-voltage technology to enhance ease of ordering and reduce stocking requirements, as well as provide lamp wattage regulation. The ballast offers a maximum case temperature rating of 85 degrees Celsius and has a cold-start capability of minus 20 degrees Fahrenheit. **CIRCLE 216**



Product: **e-Vision 2X39W**  
Designed to support the market for multi-lamp 39W metal halide fixtures, this electronic HID ballast operates two 39W metal halide lamps, which can result in the reduction of up-front product and installation costs. Measuring approximately 4 3/4 inches by 3 1/2 inches by 1 1/2 inches, it can easily blend into modern fixture designs and features IntelliVolt multiple-voltage technology as well as metallic closures for maximum performance and reliability. The ballast also incorporates lamp power control and lamp end-of-life detection. **CIRCLE 217**



**OSRAM SYLVANIA | WWW.SYLVANIA.COM**

Product: **Quicktronic QHE**  
Part of the high-efficiency Dulux L 28W Supersaver T5 Compact Fluorescent System, this instant-start, universal-voltage ballast will operate Dulux L 28W Supersaver Ecologic TT5 compact fluorescent lamps as well as FT40DL lamps. Proprietary Quicksense circuitry provides end-of-life protection and, according to the manufacturer, the ballast will produce energy savings of up to 6 percent over its standard electronic counterparts. It has a 0-degree-Fahrenheit starting temperature, is lightweight, and operates quietly. **CIRCLE 218**

**FOSTER TRANSFORMER |**  
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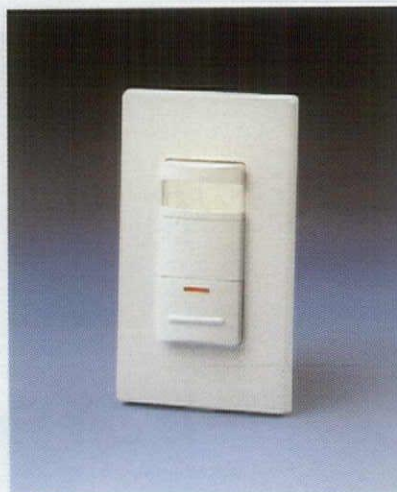
Product: **Dimmable LED Power Supply**  
The Dimmable LED Power Supply can be dimmed with a standard household dimmer and features a short circuit and overload protection. Encapsulated in epoxy and housed in a stainless-steel enclosure, the unit is virtually impervious to dirt, moisture, and corrosive elements, making it ideal for use with signage, lighting, and other industrial, commercial, and institutional applications. It can withstand a direct short in excess of 15 days, with no external fusing required, and accepts input voltages including 120V, 240V, and 277V. **CIRCLE 219**



CONTROLS

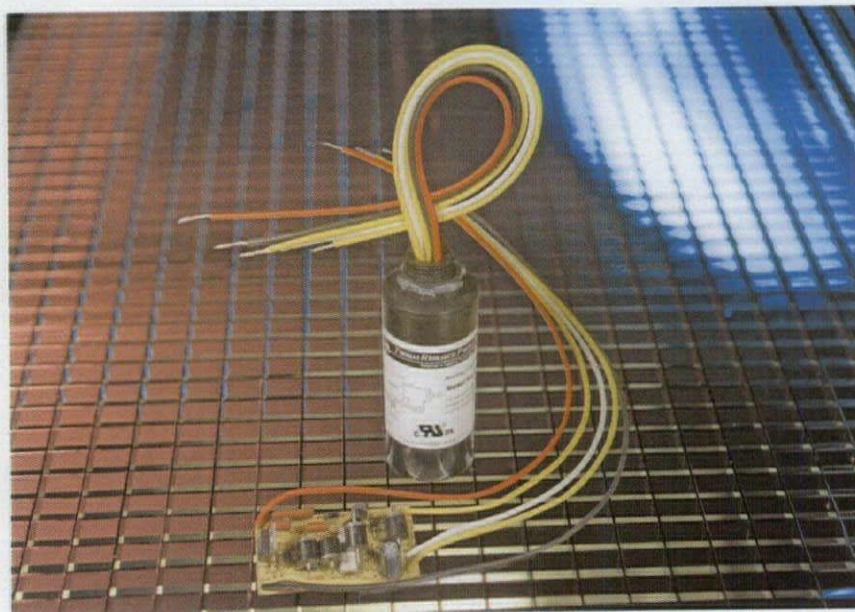
**LEVITON | WWW.LEVITON.COM**

Product: **Decora Wall Switch Sensors**  
Available in occupancy and vacancy sensing models, the Decora Wall Switch Sensors contain an LED night-light that uses a photocell to automatically illuminate a room based on its ambient light level. Both models use passive infrared detection technology and feature a 180-degree field of view with approximately 1,200 feet of coverage. They also provide small motion detection, capable of sensing even the slightest movement. The sensors measure just over 4 inches high and come in white, ivory, grey, almond, and light almond. **CIRCLE 220**



**THOMAS RESEARCH PRODUCTS | WWW.THOMASRESEARCHPRODUCTS.COM**

Product: **ESP-Auto Quartz Restrike System**  
A compact, current-sensing, cylindrical device that wires directly to HID lamp circuits or to an emergency power generator, the ESP-Auto Quartz Restrike System is an auxiliary instant-on lighting system for all HID lamps in the event of failure. It can be used with any HID lamp or ballast on circuits from 39W to 1000W, in both indoor and outdoor installations, and operates auxiliary halogen quartz lamps from 100W to 250W. **CIRCLE 221**

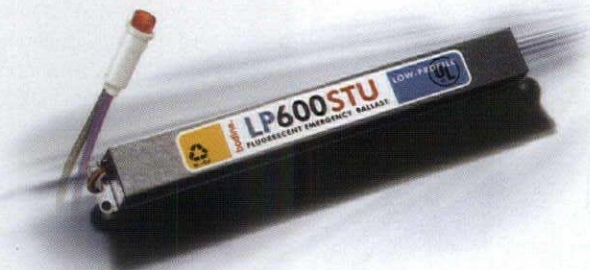




**BODINE | WWW.BODINE.COM**

Product: **REDiTEST LP600STU**

Offering a combination of features such as self-testing/self-diagnostic operation, low-profile design, universal input, high lumen output, and suitability for damp locations, the REDiTEST LP600STU can operate one 14W to 54W (2- to 4-foot) T5 or T5HO, one 15W to 55W (2- to 5-foot) T8 or T8HO, and one 36W to 55W W (4-pin) long compact for at least 90 minutes. It provides up to 1,325 initial lumens of emergency light output and includes the manufacturer's end-of-lamp-life circuitry protection. **CIRCLE 222**



**ACUITY BRANDS LIGHTING | WWW.ACUIYBRANDS.COM**

Product: **Simply5 Lighting Intelligence**

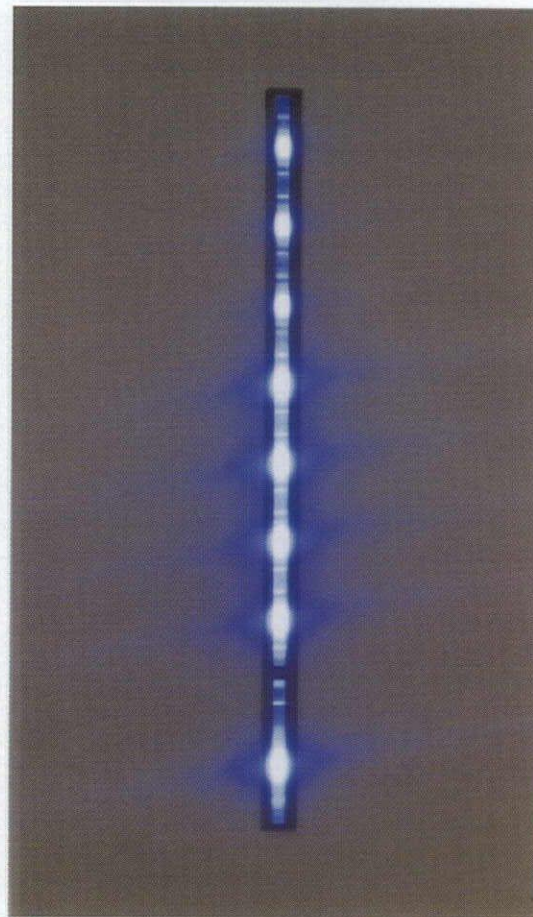
Built on the premise that lighting controls should be simple to design, specify, use, and maintain, Simply5 is an intelligent lighting control system that easily incorporates features such as daylight harvesting and local dimming, while offering a high degree of control over any environment. Integrated plug-and-play control elements allow for flexibility and reconfiguration, as components can be added or removed at any time, without any special communication cable or device. **CIRCLE 223**



**PHAROS ARCHITECTURAL CONTROLS | WWW.PHAROSCONTROLS.COM**

Product: **Audio Visual Controller**

Designed to complement the Lighting Playback Controller (LPC), the Audio Visual Controller is a compact, solid-state device that, when used with the LPC, can be used to program lighting, audio, and visual elements as part of the same timeline. Pharos Designer Software incorporates the simulation of both lighting and video so that the entire presentation can be mapped out, and the design proven at the specification stage. **CIRCLE 224**



**LUTRON | WWW.LUTRON.COM**

Product: **ZIP**

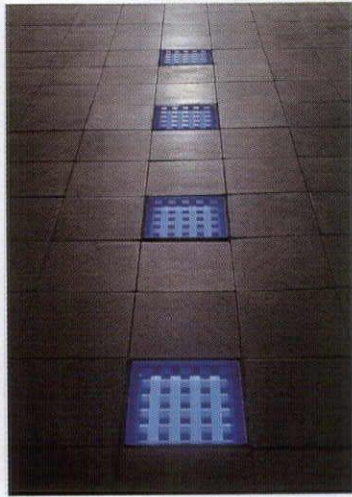
Suitable for both commercial and residential applications, ZIP is a multi-location, touch-control dimmer that provides an easy way to set light levels. The user need only touch the highest point of the panel for 100-percent bright light, or the lowest point for 1-percent light. LEDs, available in green, white, and blue, indicate the light level and a status indicator shows when the lights are on or off. In addition, the panel makes a soft click to confirm the selection made and doubles as a nightlight. **CIRCLE 225**

Product: **GRAFIK Eye GS**

As the next-generation GRAFIK Eye, the GS contains more options. It allows for the control of both lighting scenes and individual fixtures, can incorporate an optional column of buttons that control shades independently of lights, and provides power and communication for occupancy sensors. In addition, a new user-friendly display (with backlit buttons) makes it easier to read energy savings, light levels, and time clock information. It is offered in 30 colors and finishes. **CIRCLE 226**



LEDS



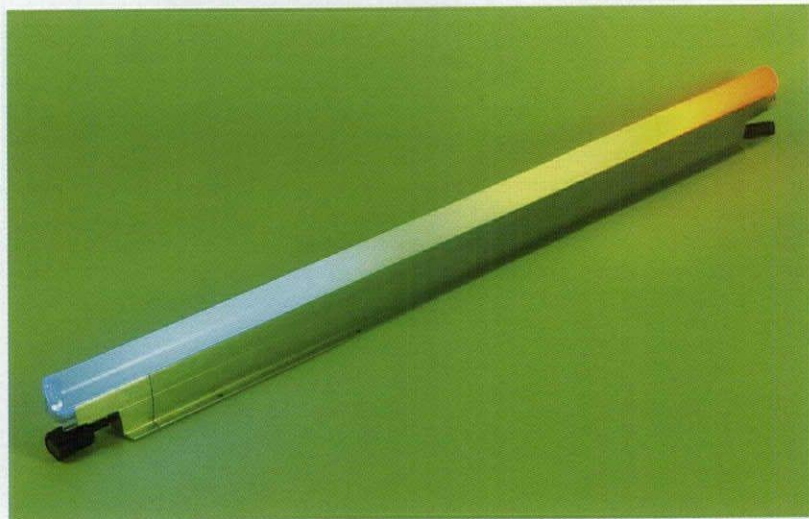
**HESSAMERICA |**  
[WWW.HESSAMERICA.COM](http://WWW.HESSAMERICA.COM)

Product: **Ledia**  
 Comprised of LED-illuminated, flush-mounted fixtures for indoor, outdoor, and underwater use, Ledia comes in two styles: Ledia LF, a tile-light system offered in four sizes that can be used in row or grid configurations, and Ledia LL, a series of striplights available in four lengths, from 9 1/2 inches to just under 40 inches. Each style features stainless-steel housings with tempered glass lenses bonded to the frame and the choice of red, blue, green, amber, white, or color-changing LEDs. **CIRCLE 230**

**COLOR KINETICS |** [WWW.COLORKINETICS.COM](http://WWW.COLORKINETICS.COM)

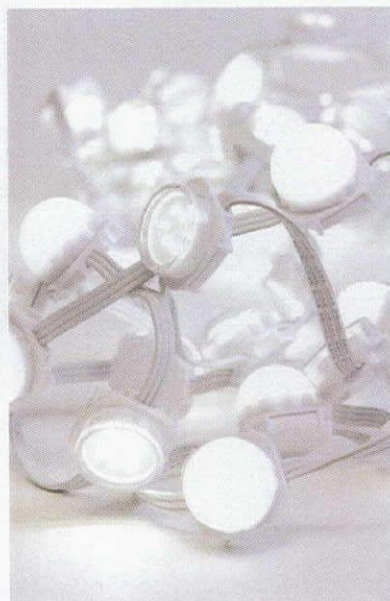
Product: **iColor Accent Powercore**

An evolution of the company's iColor Accent fixture, iColor Accent Powercore is an LED-based alternative to neon suited to create seamless columns of color and color-changing effects. Its control resolution has been brought down to under 1 1/4-inch increments, allowing the fixtures to run video, graphics, and intricately designed effects. Using Powercore technology to accept line voltage, eliminating the need for external power supplies, fixtures are available in 2-, 4-, and 8-foot lengths and can be easily connected for continuous runs. **CIRCLE 231**



Product: **eW Flex SLX**

A strand of 50 white LED nodes (each containing five 2700K or 4200K LEDs) that use Color Kinetics' Chromasic-based intelligence for individual control, the eW Flex SLX is durable and flexible, and can be installed across nearly any interior or exterior surface. Each node can generate fully dimmable light and is available in two models, clear flat or translucent dome. Nodes can be arrayed in 4- or 12-inch increments along the three-wire cable. **CIRCLE 232**



**COLORMOTION LED SOLUTIONS |** [WWW.COLORMOTION.US](http://WWW.COLORMOTION.US)

Product: **Par 196 LED Par Lights**

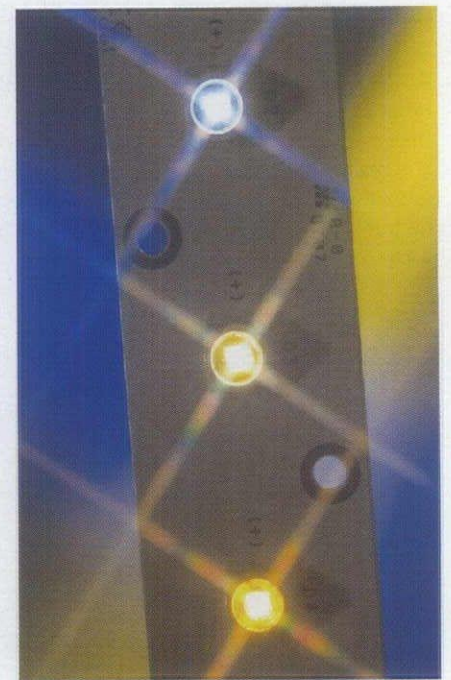
Compact and bullet-shaped, the PAR196 LED PAR Lights provide high-performance, RGB illumination via 196 LEDs in seven circles, and can be affixed to ceilings, walls, floors, suspended, or direct mounted. The LEDs are clustered in evenly spaced patterns for optimal light output, through which a wide range of simple or complex color mixes, fixed color projection, or color changes in timed, dimming, or quick-flash sequences can be achieved. Each fixture is individually addressable and is made with a non-corroding composite housing. **CIRCLE 233**



**CREE |** [WWW.CREE.COM](http://WWW.CREE.COM)

Product: **Warm White XLamp LEDs**

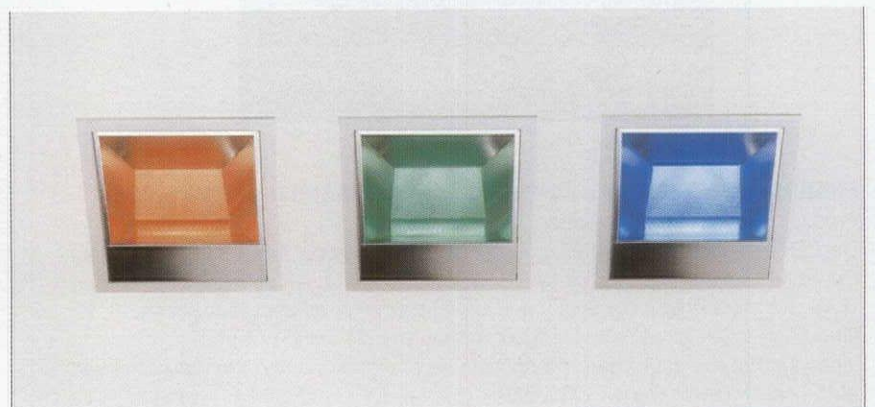
Providing an ideal color for a full range of home and office task and accent lighting, the Warm White XLamp LEDs are available in the XLamp XR-E and XR-C power LED families and come in a color temperature range from 2600K to 5000K. The lamps can achieve up to 124 lumens at a correlated color temperature of 3000K while maintaining a uniform white light output. **CIRCLE 234**



**ERCO |** [WWW.ERCO.COM](http://WWW.ERCO.COM)

Product: **Color Compensation**

A new technology for ERCO's LED varychrome luminaires, Color Compensation allows designers to produce exactly the same hue of light from all fixtures of the same type. To ensure precise and consistent color, the luminous flux and dominant wavelength of each color-compensated luminaire are measured and adjusted individually, then compared to prescribed specific values. Based on this comparison, compensation factors are calculated and permanently stored in each control gear unit and identified on each fixture label. **CIRCLE 235**



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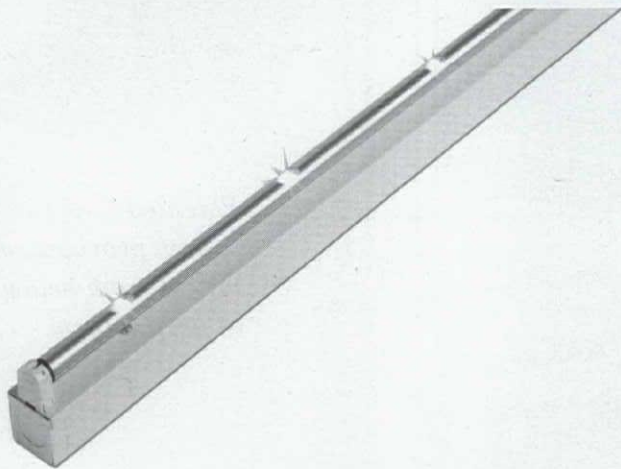
For detailed information visit our website or contact your local Kramer Lighting representative.

LEDS

**NEXXUS LIGHTING |**  
**WWW.NEXXUSLIGHTING.COM**

Product: **Savi LED Lamps**

Savi LED lamps offer an alternative to traditional incandescent lamps and are designed to last up to five years, even when operated 24 hours a day. The lamps have durable polycarbonate lenses and a proprietary heat sink and thermal management system, and contain high-powered white LEDs. The line includes MR16, R16, R20, R30, and R38 reflector lamps for downlighting and tracklighting applications, G11 and G25 white globes, as well as bent tip and flame tip candelabra-based lamps for chandeliers and accent lighting. CIRCLE 236



**BARTCO LIGHTING | WWW.BARTCOLIGHTING.COM**

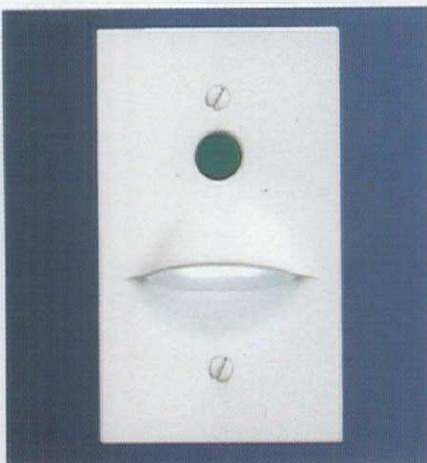
Product: **Re LED Component System**

Simplifying the use of LEDs in both new construction and retrofit applications, the Re LED Component System is comprised of eight, high-brightness LEDs packaged in standard fluorescent formats and coupled with low-profile drivers. Conforming to the dimensions of a G5-based linear T5 lamp, and fitting into virtually any existing 28W luminaire design, the Re-LT5-28 has an extruded aluminum body that provides an efficient heat sink for 5000K LEDs. CIRCLE 237

**FAIL-SAFE |**  
**WWW.COOPERHEALTHCARESOLUTIONS.COM**

Product: **Circadian Series**

The Circadian Series of LED nightlights and chart lights (shown with an illuminated push button for easy identification) feature aluminum faceplate designs that allow for a soft, low-level even distribution of light. Available with a louvered or scoop design, each fixture measures 5 inches tall and 3 inches wide and provides up to 4 watts of light. LEDs are offered in white, amber, and red, while faceplates come in a standard white finish. Custom colors are also available. CIRCLE 238



**OPTEK TECHNOLOGY AND IRC ADVANCED FILM DIVISION |**  
**WWW.OPTEKINC.COM AND WWW.IRCTT.COM**

Product: **LED Design Kit**

Providing the necessary resources to create products for solid-state lighting applications, these two companies have collaborated to develop an LED Design Kit. Combining IRC's Anotherm technology, a thermally conductive aluminum alloy substrate, and Optek's LEDs, the kit consists of lighting modules, assemblies, components, and accessories. The assemblies feature 1W LEDs available in yellow, blue, green, red, and white, and offer a full 120-degree viewing angle. CIRCLE 239



Product: **VLED Lab**

An in-house visible LED lab designed to assist customers in developing solutions for applications involving solid-state lighting, the VLED Lab offers the ability to compare traditional lighting solutions to solid-state designs, as well as compare LEDs and assemblies side by side. The lab equipment includes a thermal imaging camera, a scanning electron microscope, a luminous flux and wavelength tester, and a spectroradiometer system. CIRCLE 240





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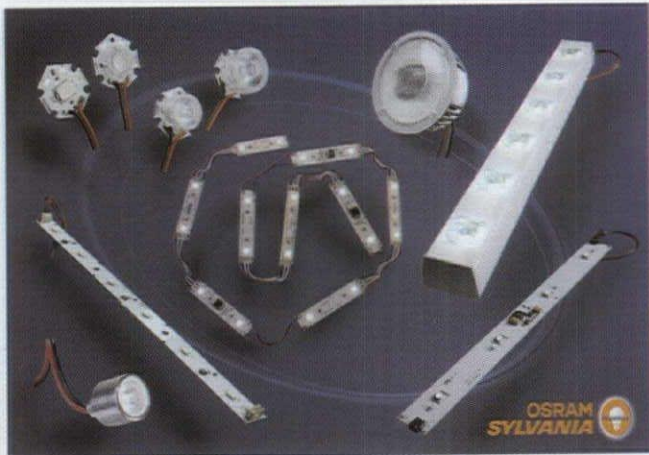
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LEDS

OSRAM SYLVANIA | WWW.SYLVANIA.COM

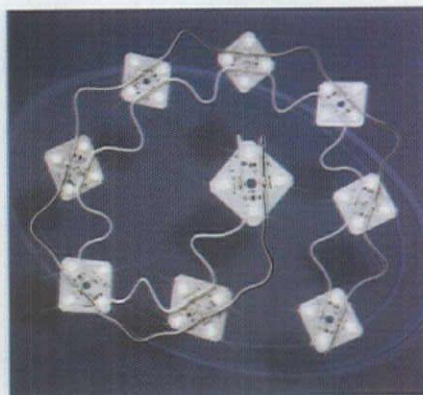
Product: **HF2 Family**

The HF2 Family of high-flux LED modules has an average rated life of 50,000 hours and is comprised of the following seven products: HF2 Chain, an alternative to neon in an extremely flat module; HF2 Stick, which contains six LEDs and can be used in place of fluorescent; HF2Stick XB, the high-brightness alternative to the HF2 Stick; HF2 Eye, a compact source for spotlighting applications; HF2 Linear, similar to the HF2 Stick; HF2X, which offers intense light for specialty illumination; and HF2 Narrow Flood, with a luminous intensity of up to 700 candelas for white light. CIRCLE 241



Product: **BACKlight 2G BL04**

An alternative to neon, the BACKlight 2G BL04 is suited to fit contours and curves with its narrow widths (less than 1/2 inch) and flexible wiring that can be bent up to 180 degrees. Each reel is made up of two 8-foot LED modules equipped with self-adhesive backing and mounting holes to allow for installation by screw, rivet, or snap-in spacers. LEDs are available in green, white, and blue, and provide a 120-degree viewing angle. CIRCLE 242



Product: **LINEARlight Power Flex**

Available in three color temperatures of white—4700K, 5400K, and 6500K—with a viewing angle of 120 degrees per LED, the LINEARlight Power Flex is offered on a nine-foot reel consisting of 120 LEDs. It can be cut in the field into strips of six LEDs and each flexible printed circuit board has a self-adhesive backing for easy installation. The width of the module is under 1/2 inch. CIRCLE 243



PHILIPS LIGHTING COMPANY | WWW.LIGHTING.PHILIPS.COM

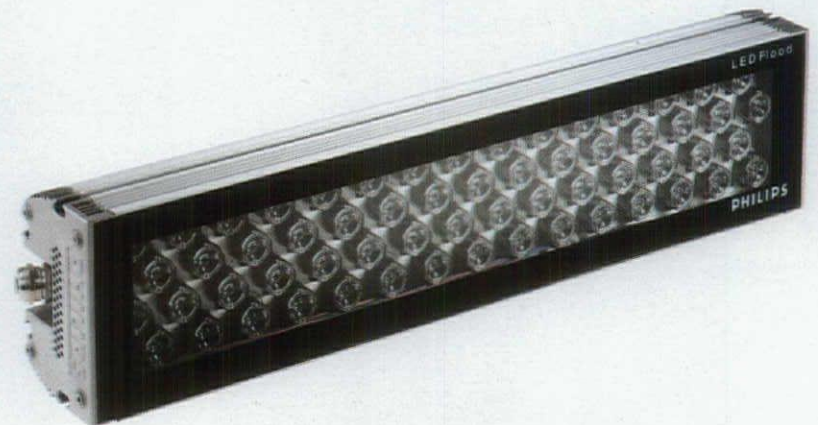
Product: **LED Low Bay**

The LED Low Bay is designed for use in warehouses, parking garages, and other applications that require reliable low-maintenance lighting. With its cool white light, high color rendering index, and instant on/off capabilities, the luminaire provides a clean design and optics that provide excellent visibility for improved safety. It can also be easily retrofitted to replace older, less efficient lighting systems. CIRCLE 244



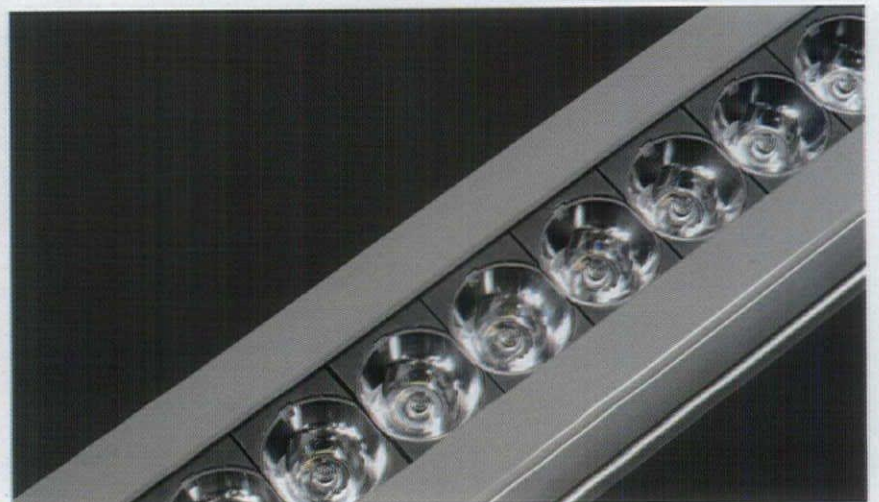
Product: **LED Floodlight**

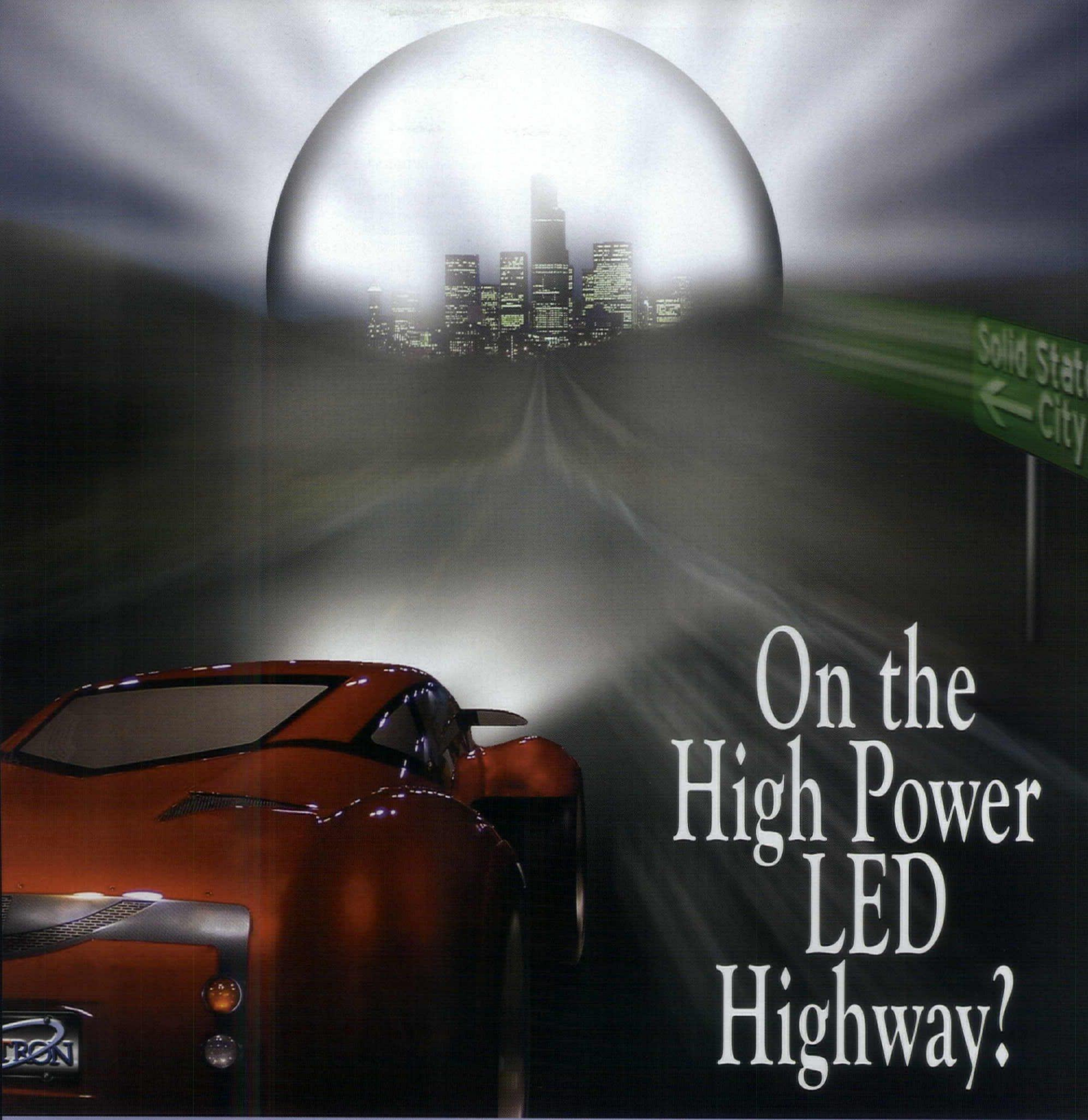
Integrating advanced technologies such as high-power LEDs and an internal thermal monitoring system, the LED Floodlight offers a range of exterior spot and flood lighting in two sizes—with 30 LEDs at 13 1/2 inches and with 60 LEDs at 21 inches—and two beam spreads, narrow at 10 degrees and wide at 25 degrees. LEDs are offered in RGB, warm white (3000K), neutral white (4000K), and other colors by request. CIRCLE 245



Product: **LED Linear**

The LED Linear is a sleek indoor/outdoor architectural luminaire ideal for grazing, back-lighting, cove-lighting, and wall-washing applications. Available in RGB, warm white (3000K), neutral white (4000K), and other colors by request, the fixture offers two beam spreads (narrow at 10 degrees and wide at 30 degrees) and nominal lengths of 1, 2, 3, and 4 feet. It's anodized aluminum housing is 3 inches wide. CIRCLE 246





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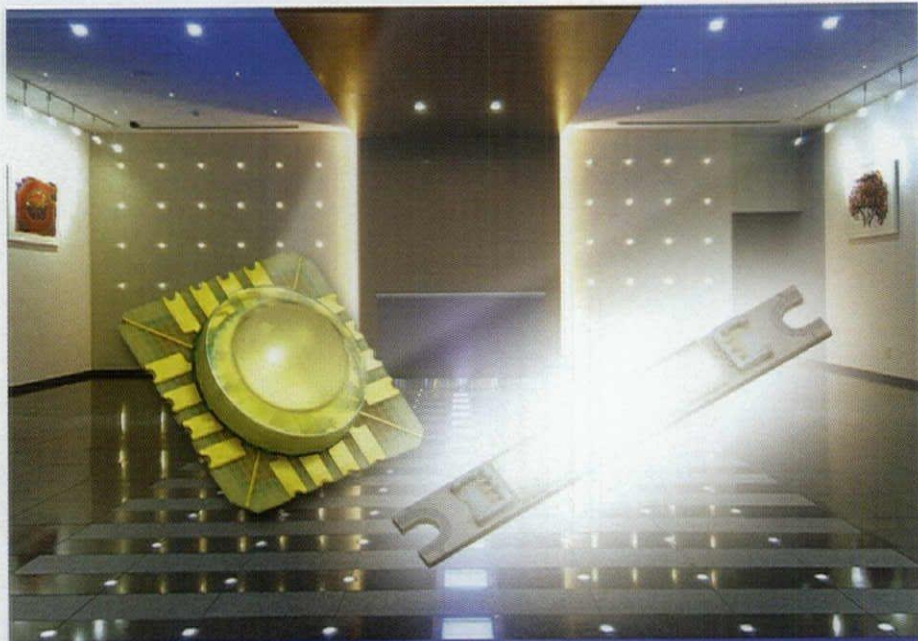
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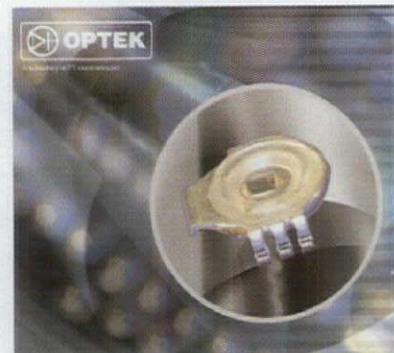
## PRODUCTS

### LEDS

OPTEK TECHNOLOGY | [WWW.OPTEKINC.COM](http://WWW.OPTEKINC.COM)

Product: **OVTL01LGAXS Series**

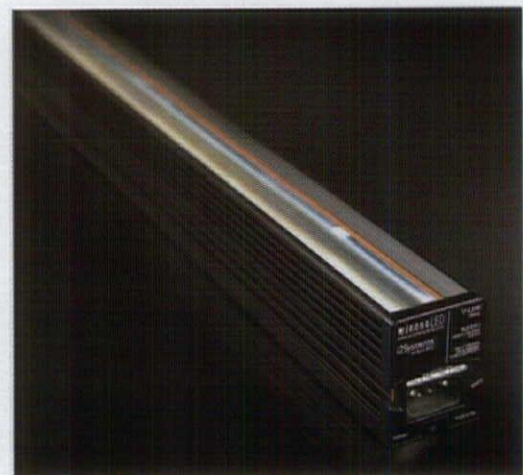
This 1W surface-mount LED device can be mounted flat on a printed circuit board and provides high luminance, low thermal resistance, a water-clear lens, and a long lifespan. In addition, the series offers a full 140-degree viewing angle and LEDs are available in amber, blue, green, red, cool white (7000K), and daylight white (5500K). CIRCLE 247



WINONA LIGHTING | [WWW.WINONALIGHTING.COM](http://WWW.WINONALIGHTING.COM)

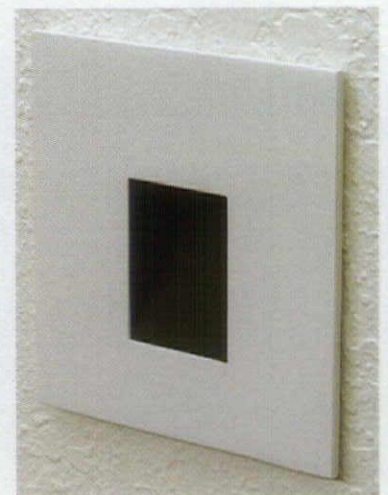
Product: **V-Line Gen2 and Gen3**

Two precision linear lighting systems, the V-Line Gen2 offers high output for wall grazing, wallwashing, and general illumination, while the Gen3 is ideal for highlighting architectural features. They offer beam spreads of 15, 30, 65, and 82 degrees and 30, 45, 65, and 82 degrees, respectively. Each is available with white (3000K and 6200K), amber, orange, red, green, cyan, and blue LEDs, and feature internal SmartDrivers with built-in dimming. CIRCLE 248



Product: **STEP01 Square**

One in a family of LED steplights, the surface-mount STEP01 Square measures just over 4 1/2 inches and has concealed optics. Eight LED colors are offered—warm white, cool white, amber, blue, cyan, green, red-orange, and red—and are available in both normal and high-output configurations. The fixture provides three light distribution patterns: short for narrow corridors, medium for wide corridors, and long for large area illumination. It's faceplates are constructed of solid aluminum, brass, or stainless steel. CIRCLE 249







**NOUVIR RESEARCH | WWW.NOUVIR.COM**

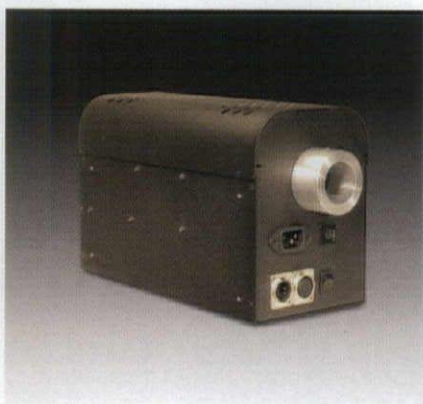
Product: **Fiber-Rail Banister**

This 2-inch-diameter, freestanding, 8-foot fiber optic Banister module requires only an electric outlet. The self-contained unit has a fiber optic projector concealed in its base and adjustable spotlights mounted within the Banister behind a polycarbonate lens. One projector can illuminate up to 32 individual spotlights, whose 100 CRI, 3200K soft-edged beams can be aimed from 15 degrees to 50 degrees with no spill light. The connectable modules are finished in bronze with a clear powder coat for durability; stanchions, joining hardware, and decorative end caps are also available. CIRCLE 137

**WYBRON | WWW.WYBRON.COM**

Product: **Transition**

This CMY fiber illuminator is ultra-bright and uses a dichroic color mixing technology that offers smooth color changes with nearly infinite color choices and silent operation. Its compact design measures less than 6 inches wide, and the unit weighs less than 8 pounds. Using a 150W compact UHI light source, the fixture accepts 17mm to 34mm common-end fiber bundles. CIRCLE 138



**FIBERSTARS | WWW.FIBERSTARS.COM**

Product: **EFO 3+3 Illuminator**

Fanless, noiseless, and UL listed for damp and wet locations, the EFO 3+3 Illuminator contains one 70W metal halide lamp and produces 61 lumens per watt. It has two ports, each capable of connecting up to three large-core fibers, for a total of six fixtures per illuminator. It weighs 14 pounds and is made of 99.5 percent recycled aluminum and injection-molded plastic. CIRCLE 139



Cylindro



CFL

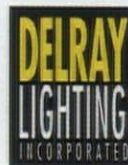
5 x 18w / 26w



LED

RGB color mixing

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# A|L LIGHT & ARCHITECTURE design awards 4

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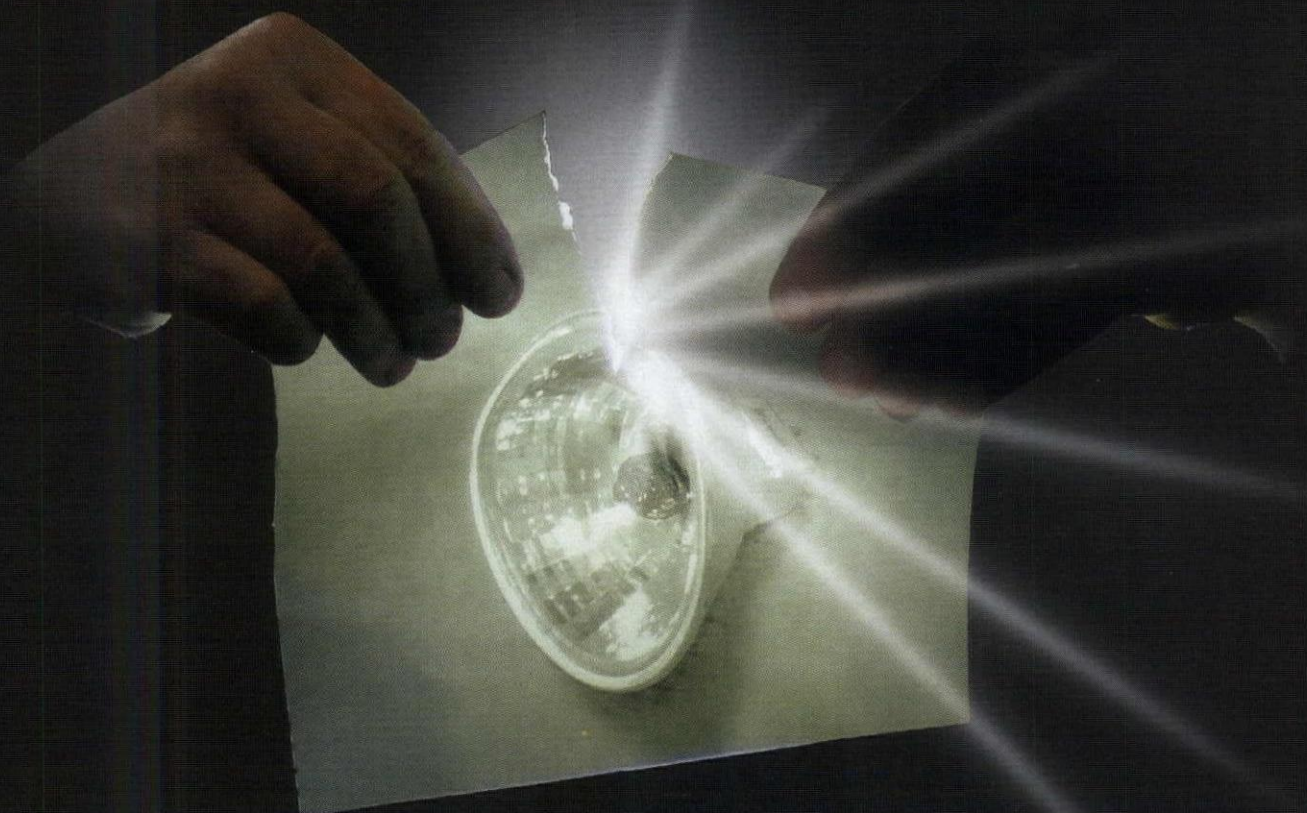
## Questions?

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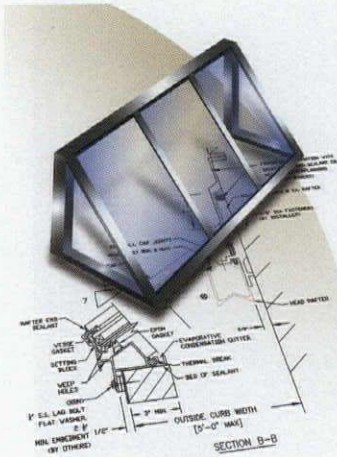
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Product: **Versalean-To-Glass Skylight (VL2G)**  
This preassembled, pre-glazed skylight is a lean-to product that can be installed from a vertical wall to a curb. It uses a split rafter to conceal the unit's expansion joints, and pre-glazed sections can be joined together in the field to accommodate any desired length. Standard glazing options include insulating glass units, multiwall polycarbonate panels, and translucent fiberglass panels. VL2G is offered in 20 standard colors, as well as custom colors, bronze, and clear anodized finishes. **CIRCLE 250**

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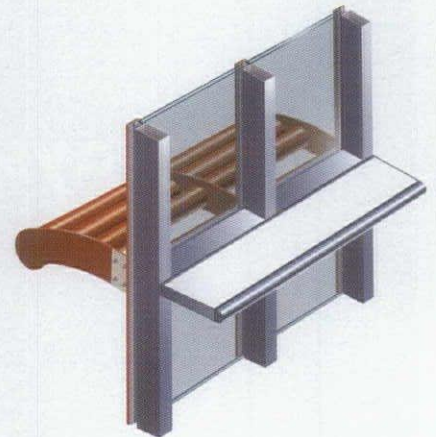
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Product: **Solar Shelf**  
This architectural light shelf (for use with the company's CW-250 and Reliance curtain wall systems) is field-installed onto the interior of a curtain wall to deflect daylight deeper into a building in order to reduce electric lighting. Comprised of extruded aluminum struts with panels set between a wall mount and continuous cover, the shelf comes in depths of up to 30 inches with three standard covers, or custom covers. All extrusions and panels are offered in factory anodized or painted finishes. **CIRCLE 253**



**WATT STOPPER/LEGRAND |**  
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Product: **LS-101**  
The LS-101 is a single zone, on/off daylighting controller that can be installed in open- or closed-loop applications to turn lights off automatically when sufficient natural light is present. It consists of an advanced digital multi-band photosensor positioned behind a 100-degree cone that cuts off unwanted light to prevent false triggering, an on-board microcontroller, and an LCD display for quick, easy, and accurate adjustments. The device measures 2 1/2 inches in diameter and is certified to meet California's Title 24 requirements. **CIRCLE 254**



**MECHOSHADE |**  
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Product: **Sivoia QED**

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Product: **Sivoia Manual Shades**

Ideal for both commercial and residential spaces, the Sivoia Manual Shades share hardware with the Sivoia QED Roller 64 provides easy conversion from manual to electronic control if desired. The manual shades have a universal, multi-position clutch and spring-loaded idler, so shades can be quickly repositioned on site for bottom, front, or back chain drop. Maximum shade size is 8 feet square and a full line of Lutron fabrics are offered, including SheerShade, Designer SheerShade, Privacy, and Blackout fabrics. **CIRCLE 257**

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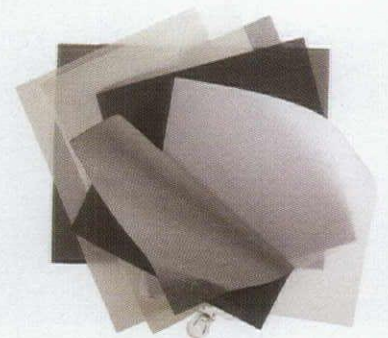


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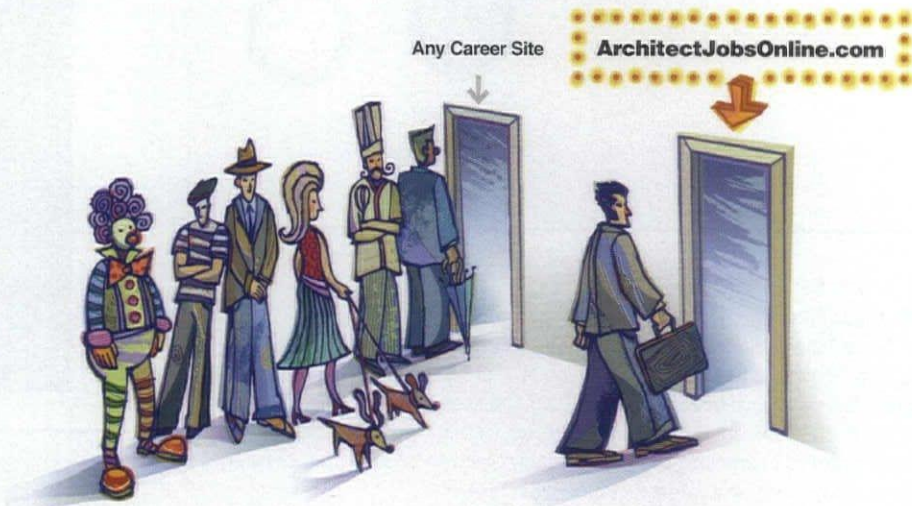
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An optimized version of the company's GreenScreen Eco line of solar shading fabrics, GreenScreen Platinum is metalized on one side to reduce solar heat gain, reduce glare, and increase visibility outward. The line is available in four colors—charcoal, bronze, pewter, and pearl—and, being PVC-free, is highly recyclable and reclaimable. **CIRCLE 258**



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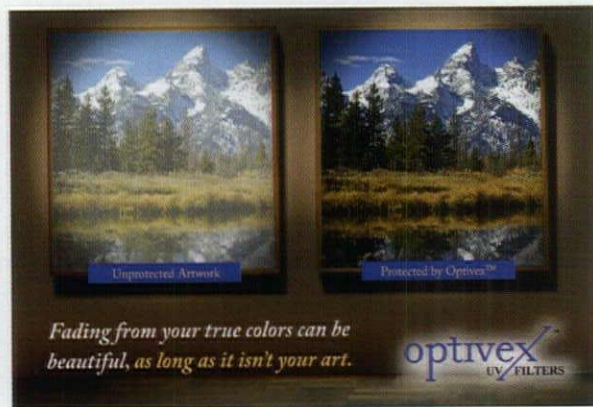
A colorful collection of filters that enhance HID Powerlight applications, the line includes the following: an IR filter calibrated to 850nm for covert operations; an amber filter to help penetrate smoke, fog, and dust; a red filter for traffic control and better night vision; a blue filter for forensics; a green filter for signaling, traffic control, and night vision; and a diffused lens to widen the fixture's beam by approximately 65 degrees. All are mounted in rubber holders for easy installation. **CIRCLE 260**



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**TRIPAR INC | WWW.TRIPAR-INC.COM**

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An accessory that converts any small recessed halogen fixture into a projector, the Light Projection System clips onto a wide variety of recessed lighting trims, from 4- to 5 1/2-inch round and 4- to 4 1/2-inch square. It includes three pattern motifs: the moon and stars, sun and palms, and musical notes. In addition, three color filters are included, allowing up to six different colored light projections. Wide or narrow beam-width models are available and finishes include white, black, polished chrome, and polished brass. **CIRCLE 262**

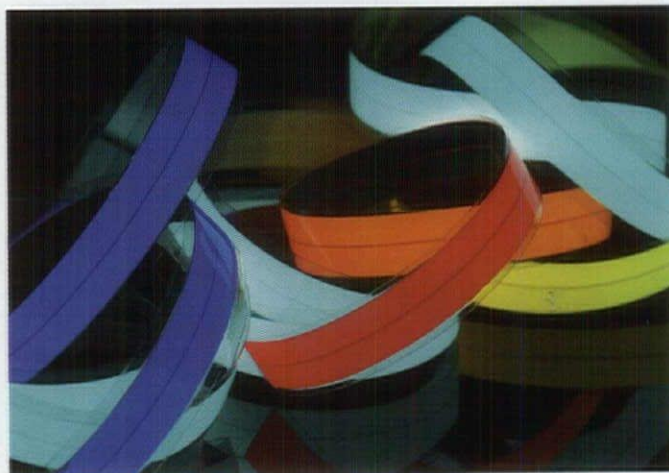


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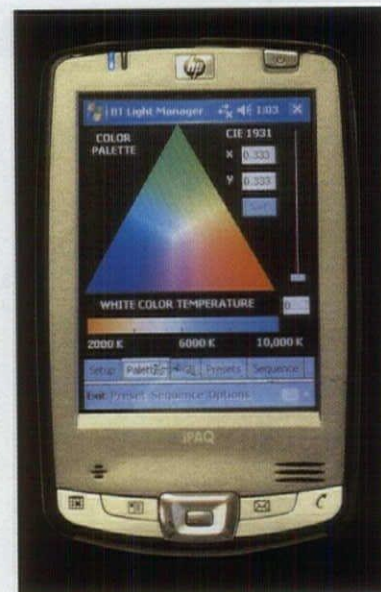


SOFTWARE

**RENAISSANCE LIGHTING | WWW.RENAISSANCELIGHTING.COM**

Product: **evo Color Manager**

A method for managing an evo light fixture through either a Bluetooth or an RS232 hardwired connection, the evo Color Manager is designed to operate on a Hewlett Packard iPAQ PDA (or equivalent). Offering the ability to control the color and intensity of one or more luminaires—the software enables setting the color to any one of 16 million hues and the color temperature from 2000K to 10,000K—the Manager provides six separate screens to perform various functions. **CIRCLE 264**



TRIMS

**FOCAL POINT ARCHITECTURAL PRODUCTS | WWW.FOCALPOINTAP.COM**

Product: **Focal Finish**

A new line of faux finish options for medallions, Focal Finish features 10 hand-applied, artistic finishes on more than 30 medallion styles, from 12 inches all the way up to 41 1/2 inches. Designed to complement popular lighting fixtures, the finishes are offered in brushed opulence, distressed silver, sierra, regal gold, sunset, imperial gold, weathered bronze, burnished bronze crackle, gilded mahogany, and oil-rubbed bronze. **CIRCLE 265**





FANS

MONTE CARLO | [WWW.MONTECARLOFANS.COM](http://WWW.MONTECARLOFANS.COM)

Product: **Sleek**

This modern fan suits sophisticated tastes and measures 52 inches wide. It has a 12-degree blade pitch for maximum air movement, precision-balanced motor and blades for smooth operation, and extra long 79-inch leadwires for high ceiling installation. Sleek comes with a 40W fluorescent light kit, a three-speed reversible motor, and includes a wall-mounted remote control. Three finishes are offered: a brushed steel housing and silver blades, and a Roman bronze and white housing and blades. CIRCLE 266



Product: **Stirling Castle**

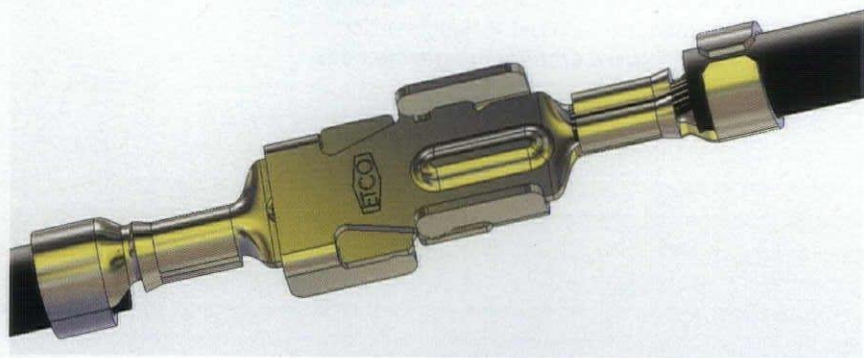
Stirling Castle measures 60 inches wide and is comprised of carved tung wood blades, champagne Scavo glass, and hardware with a British bronze finish. It contains a heavy-duty torque-induction motor with three speeds and is precision balanced for smooth operation. The fan includes three 60W downlights and four 25W candelabra uplights for a dramatic feature, and includes a wall-mounted remote control with reverse operation capability. CIRCLE 267

WIRING

ETCO INCORPORATED | [WWW.ETCO.COM](http://WWW.ETCO.COM)

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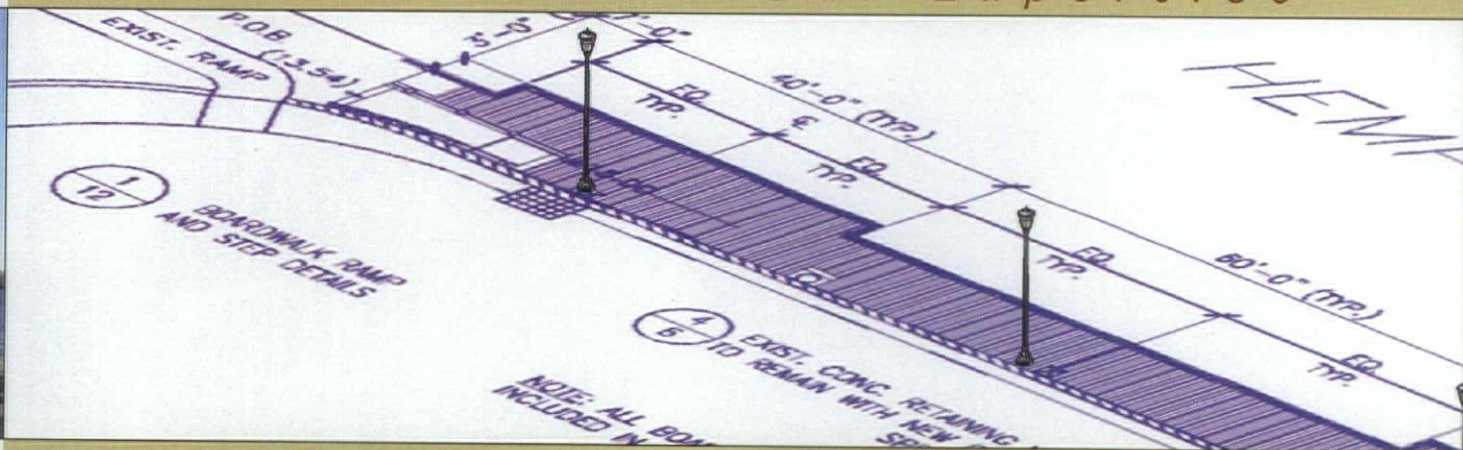
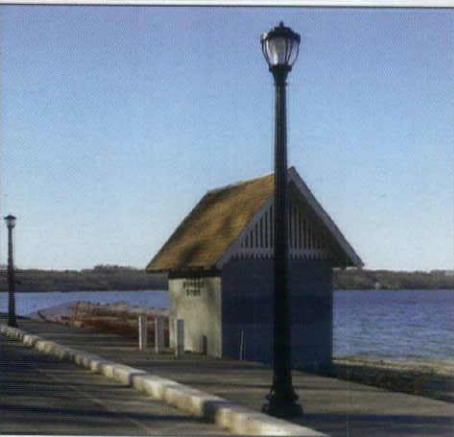
Changing out electronic components can often be time consuming with the cutting of wires and re-crimping, but the Flat-Snap electronic connection makes it possible to connect wires with one quick snap, making it easier for assemblers to overlay two unisex connectors and pull them securely into each other—they can also be easily disconnected by simply reversing the motion. The Flat-Snap can be customized and insulated. CIRCLE 268



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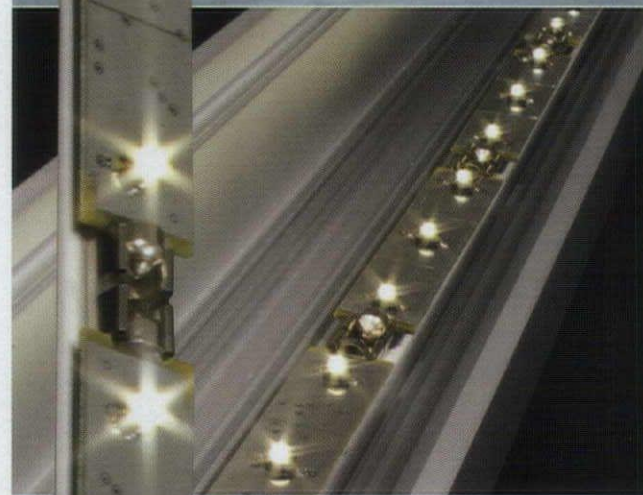
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	Lamps/Ballasts/Controls	72	Lutron Electronics	Daylighting	86
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Bega/US	Downlight	56	Nessen Lighting	Decorative	42
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Bodine	Lamps/Ballasts/Controls	73	NuTech Lighting	Downlight	52
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Con-Tech Lighting	Decorative	36	Optivex	Specialty - Filters	88
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Cree	LEDs	74		LEDs	78
d'ac Lighting	Decorative	38	Oxford Industries	Direct/Indirect	46
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Focal Point			Stellaris	Daylighting	84
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Foster Transformer	Lamps/Ballasts/Controls	72	TCP	Lamps/Ballasts/Controls	70
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Juno Lighting Group	Downlight	56	Vode Lighting	Direct/Indirect	50
Kim Lighting	Outdoor	64	W2 Architectural Lighting	Decorative	45
Lampister	Decorative	40		Track	60
LEDtronics	Emergency	68	Watt Stopper/Legrand	Daylighting	84
Leucos USA	Decorative	42	Wilmette Lighting Company	Decorative	38
Leviton	Lamps/Ballasts/Controls	72	Winona Lighting	LEDs	80
Lighting Services Inc	Track	60	Wybron	Fiber Optics	81
Lightolier	Direct/Indirect	46	Zumtobel Lighting	Direct/Indirect	48
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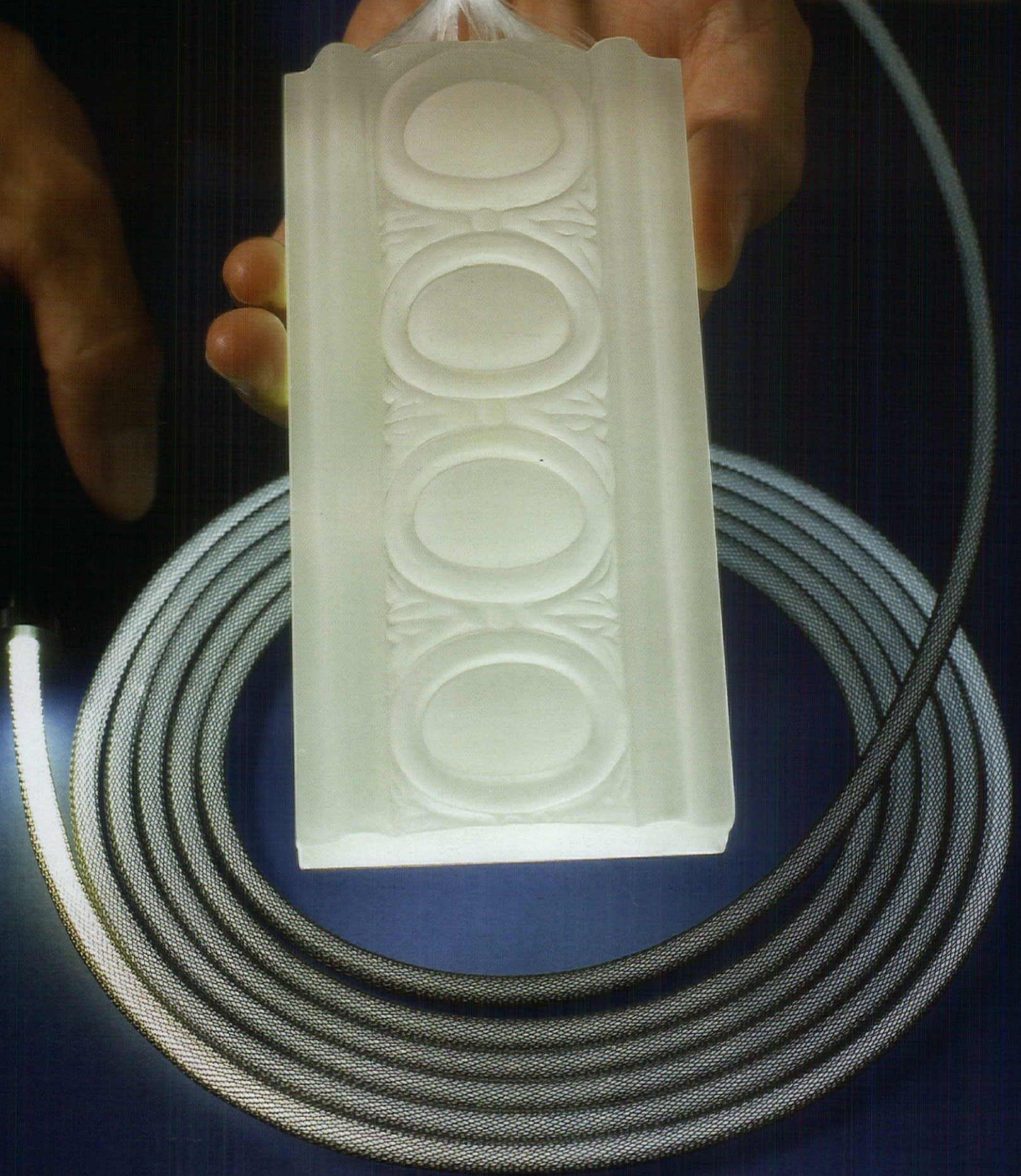
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# Mastering Sidelight

MATTHEW TANTERI | ILLUSTRATIONS BY VICKY PANG AND MATTHEW TANTERI

THE INTERRELATIONSHIP BETWEEN A DAYLIGHT SOURCE, WINDOWS, AND A ROOM.



Figure 1: Clear sky

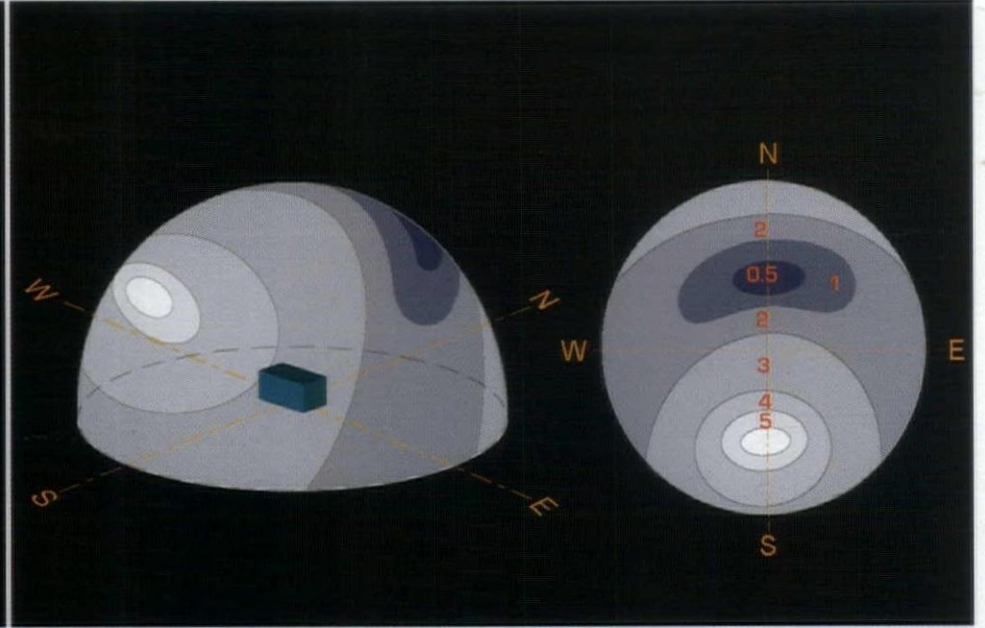


Figure 2: Sky brightness distribution on a clear day



Figure 3: Cloudy sky

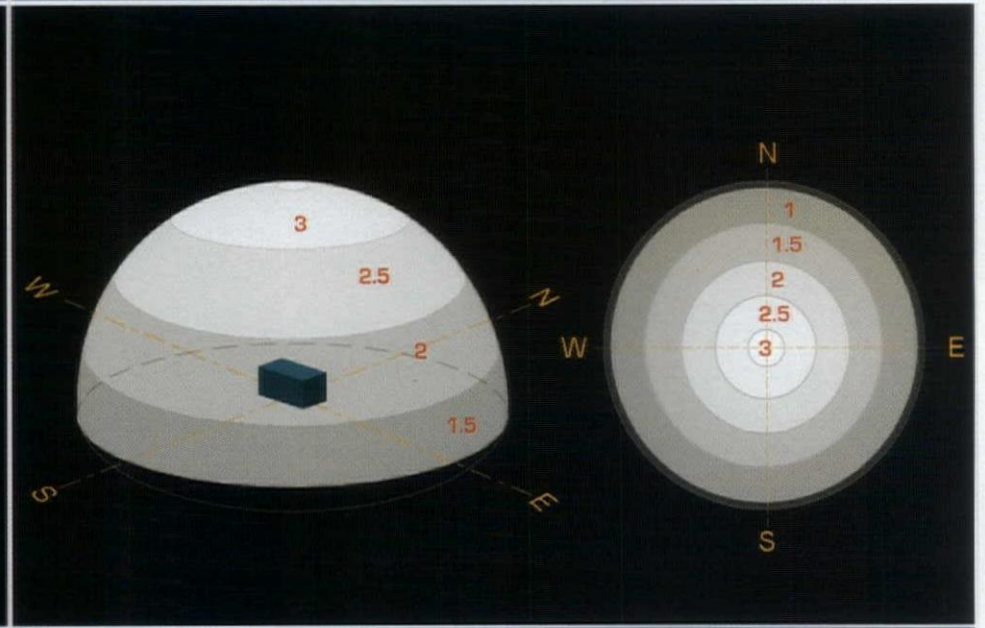


Figure 4: Sky brightness distribution on an overcast day

TODAY A WORKING KNOWLEDGE OF DAYLIGHTING NEEDS TO BE PART OF every lighting designer's skill set. But in fact, Daylighting is a broad term that encompasses many methods and techniques. This article explains some of the fundamental principles of daylighting with windows and clerestories, aptly termed Sidelighting, along with a set of important strategies. The concepts presented are applicable to a wide range of project types where daylight enters the building from the perimeter—from the open plan office in a multi-story office tower to the single room classroom.

The first step toward mastering Sidelighting is to realize that it is literally "light from the side." It is basically a two-part process. The first task is to admit the proper amount of light into the interior by adjusting the size and transmission of the window aperture relative to the room area. The second task is to apply an optimal combination of room-related design decisions to guide and maximize the primarily lateral flow of light away from the window wall, deep into the interior.

Although it sounds simple and straightforward, creating a visually comfortable luminous environment by directing light from one side of a room to the other is an artful challenge. For example, imagine if a lighting designer tried to construct the electric lighting equivalent of a typical window using some type of lensed fluorescent troffer recessed into a wall at eye level. Now consider the apparently conflicting requirements: Occupants viewing computer displays seated anywhere from 2 to 20 feet away from the lighting set-up, who in turn must receive glare-free, adequate illumination, yet also maintain an eye level view of the light fixture. Do not fear, this article will provide at least one or two creative ideas on how to make this lighting condition a more favorable situation.

## THE BASICS

Sidelighting is about controlling the interrelationship of a daylight source, window(s), and a room. Here is a detailed look at each of these elements.

## THE SOURCE

Sun, sky, and reflected light are all components of daylight. But there is another element that is part of all three—heat. For a standard window, skylight is typically the preferred source due to its high light-to-heat content, all day availability, and absence of direct sun—the ultimate source of both heat and glare. Another ideal source that can minimize the amount of heat entering the building envelope is sunlight reflected from an exterior surface, for example, from an adjacent building. However, since the sun is moving, its availability may be of shorter duration and needs to be carefully planned.

Daylighting strategies vary with the light source. Each site has a predominant sky type and set of site conditions that a designer needs to define as they conceptualize and facilitate their design. Two important sky characteristics to consider are brightness distribution and variability.

All skies are not created equal. There are an infinite variety of skies that must fit into three standardized

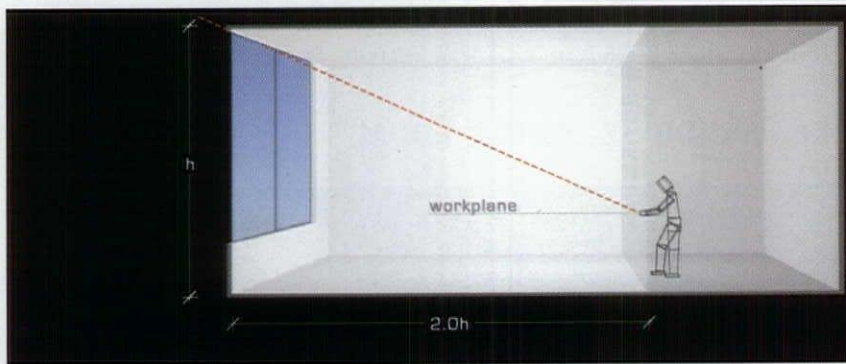


Figure 5: Depth of daylight penetration equals twice the window head height

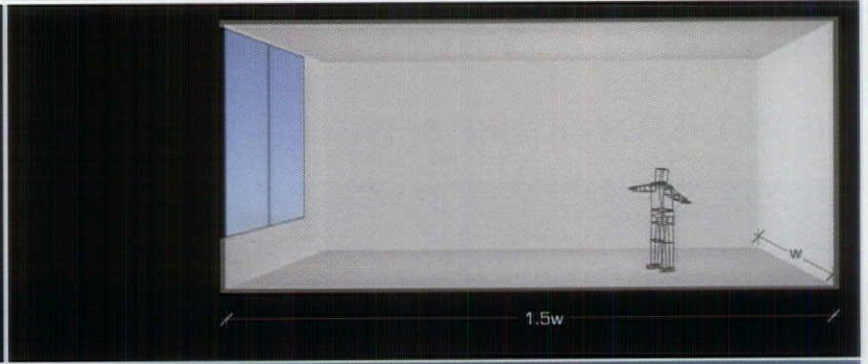


Figure 6: Room depth should not be much greater than width

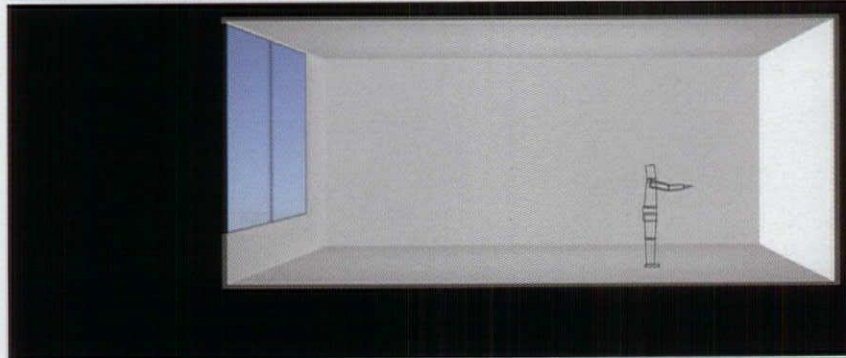


Figure 7: Wall opposite window should have at least 50% reflectance

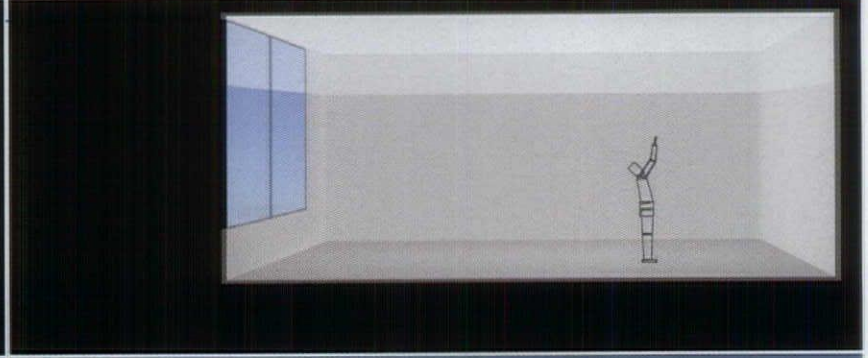
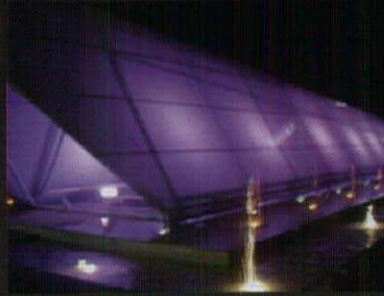


Figure 8: Ceiling should have at least 80% reflectance

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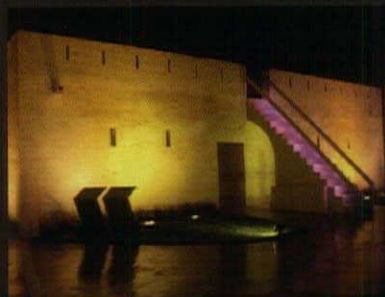
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conditions: clear, overcast, and partly cloudy. A good illustration of this is the inverse brightness relationship of a clear versus an overcast sky. See Figures 2 and 4. For a clear sky, the area near the horizon is about three times brighter than the sky overhead. For an overcast sky the inverse is true. For Sidelighting, the resultant effect is that clear skies tend to provide more illumination per window area than overcast skies since the window's vertical aperture faces a region of sky of higher luminance. Each sky type also has some unique and subtle brightness variations. The brightness gradient of an overcast sky is radially symmetric, while the brightness distribution of the other two sky types distribution are asymmetric. For a clear sky the darkest part of the sky dome is the area 90 degrees opposite the sun. For a partly cloudy sky, the same area is usually the brightest part, not including the sun, due to sunlight reflected off clouds. Since the sun is moving, these areas of light and dark may move with it and may be right in front of your window.

Obstructions outside the window are another modifying factor. If they rise more than 25 degrees above the center of the window it is highly probable that daylighting with skylight alone will not be feasible since a significant portion of available daylight is lost. This obstruction limit is based on a general rule: The minimal amount of overcast sky that a window needs to be exposed to, to admit sufficient daylight is 65 degrees. See Figure 14. However, if there is a clear or partly

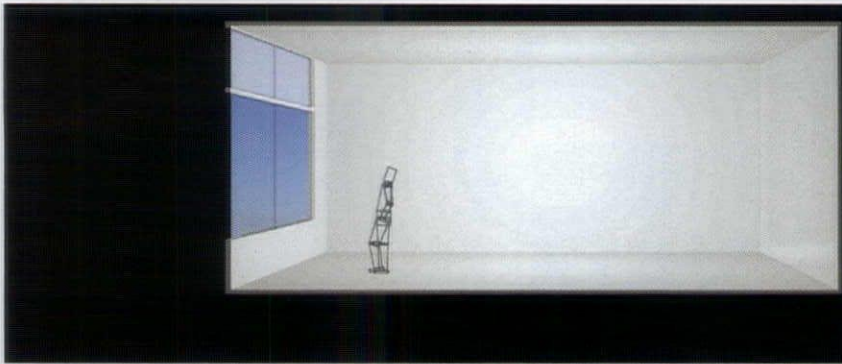


Figure 9: Dual Window Strategy = Daylight Window (top) + View Window (bottom)

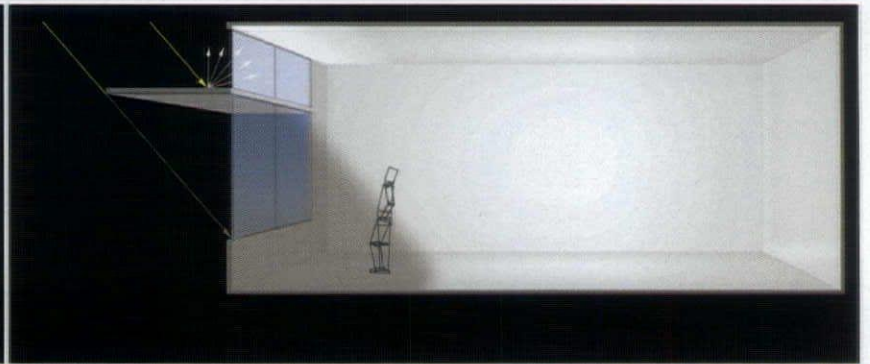


Figure 10: Dual Window + Exterior Light Shelf

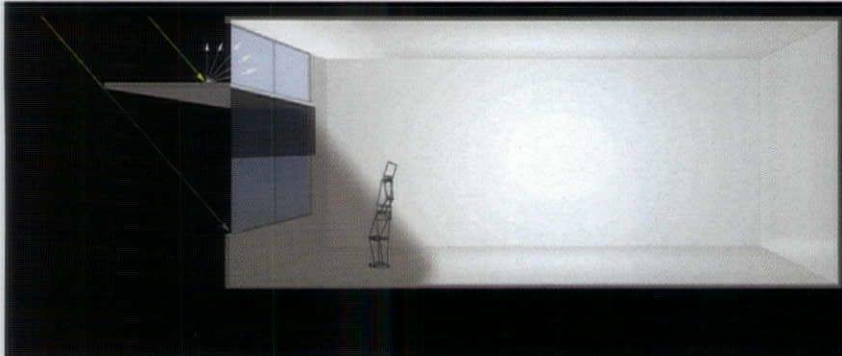


Figure 11: Dual Window + Exterior Light Shelf + Internal Shade

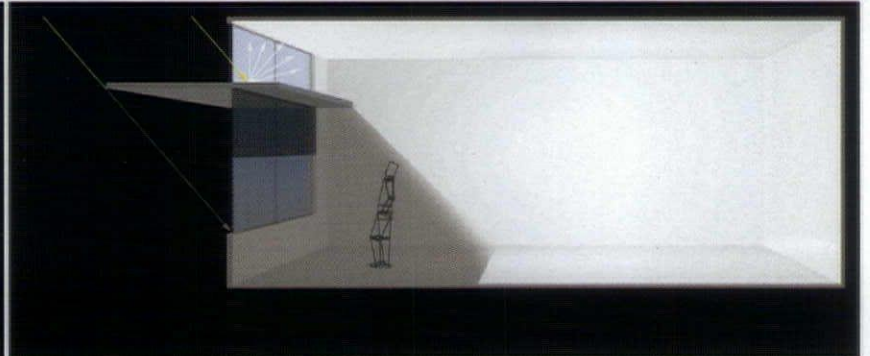


Figure 12: Dual Window + Exterior Light Shelf + Internal Shade + Interior Light Shelf

cloudy sky and the building has a high reflectance exterior surface, the building may become brighter than the sky and provide an ample supply of reflected light.

Variability is another major concern. Overcast skies, as well as regions of clear skies that do not contain sun, are fairly constant, but partly cloudy skies are highly variable, they cause constant patterns of change in interior brightness many times over the day, hour, and minute as clouds of varying density pass in front of the sun. These changes may seem more pronounced near the boundary of the daylight zone, since illumination is far from its source and it can be compared with the constant output of electric light. Here a continuous dimming system is an ideal solution, where photocells, dimming ballasts, and control systems work together to modulate electric light to maintain a prescribed light level in response to available daylight.

**THE WINDOW**

Until the day designers are able to control sky and sun, the window will remain a first line of control. Every element of its design, from its size and location, to the type of glazing selected and the detailing of the aperture itself has some effect on the distribution, quantity, and color of daylight admitted.

Let's start with distribution the most oft-repeated Sidelighting rule of thumb: *Daylight illuminates an interior to a depth approximately twice the height of the window.* See Figures 5 and 6. Looking at the window wall in section, the rule makes

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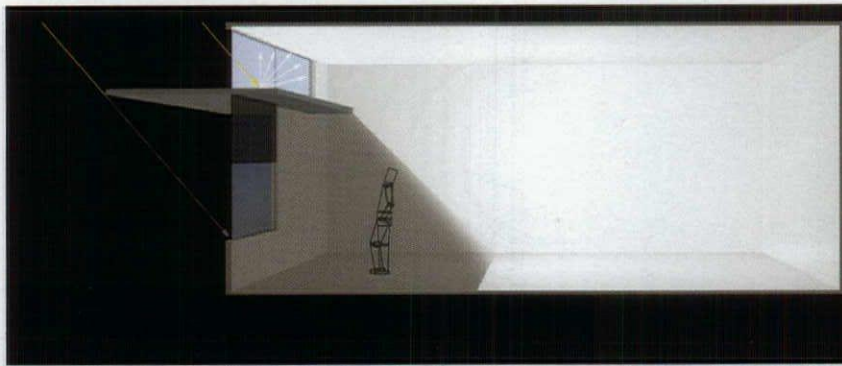


Figure 13: More Daylight Window - Less View Window

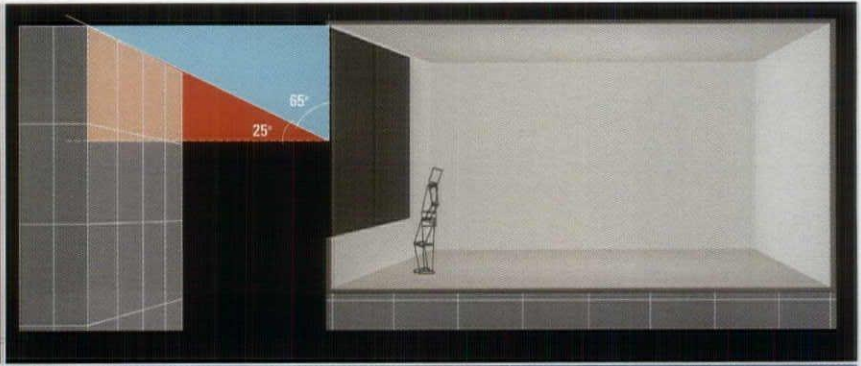


Figure 14: Obstruction angle

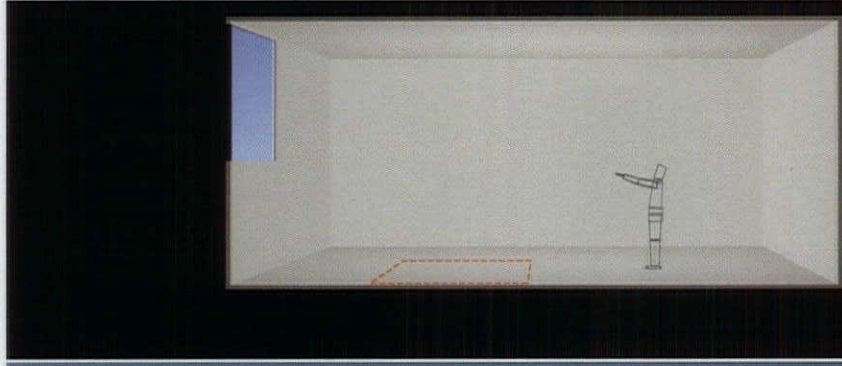


Figure 15: Window Area = 25% Floor Area

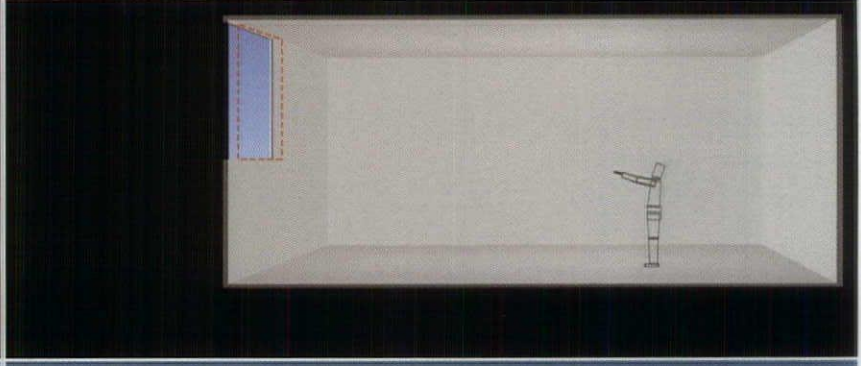


Figure 16: Window Area  $\leq$  35% Wall Area

perfect visual sense. Light from the sky enters the window at a downward angle, so the higher the window is above the floor, the further daylight extends into the interior. By locating windows on opposite sides of the room you effectively double the daylighted room depth. Following this principle, if a vertical aperture is designated to provide daylight only, locate it as high on the wall as practical in order to maximize daylight penetration.

*Right-sizing* is an essential to all fenestration design. It is the principle of adjusting window area and the glazing transmittance to control the amount of light flowing into a space. For example, a large area window with low transmittance glazing may provide an equal quantity of light as a small window with high transmittance glazing. A general rule for a well-positioned window with clear glazing is: *The amount of glass area needed to daylight a room is approximately 25 percent of the room's floor area.* If low transmittance glazing such as grey-tinted glass is used, the fenestration area can increase proportionally, however it is wise, and often code required, to limit the window-to-wall area to around 35 percent to prevent excessive heat transfer through the building envelope. See Figures 15 and 16.

Aperture orientation and exterior surface characteristics are also important elements to consider in relation to the "color" of daylight. Each cardinal sun direction has a particular overall color due to the amount of atmosphere that sunlight passing through absorbs, or more accurately, scatters, blue light. North exposures have cool-toned light lasting all solar day (duration of daylight from sunrise to sunset). South exposures have warm-toned light lasting most of the solar day. East and west exposures have even warmer-toned light, but it only lasts half the solar day. Since a window aperture sees both direct and reflected light, the colors and surfaces that make up the exterior, from green grass to freshly fallen snow, will influence how daylight renders interior surfaces and objects, even including the complexion of skin.

**THE ROOM**

The room element is all encompassing since it includes everything else besides the window: room geometry, interior surfaces and finishes, partitions, furniture and

even the occupants.

The ideal sidelighted room is proportioned so that its depth is not much greater than its width. Even though daylight can penetrate a substantial room depth, a designer does not want to create a tunnel-like effect. Room surface finishes are next for consideration. By selecting a higher than 50 percent reflectance color for the wall opposite the window, we can help guarantee that an occupant will perceive the room as bright, rather than gloomy. See Figures 7 and 8. A ceiling with a high reflectance value, greater than 80 percent, also improves the apparent brightness of the interior, but it really helps with evening the distribution of illumination through the depth of the room. As a general rule, use high reflectance finishes throughout the interior since they increase the number of times light rays interreflect before being absorbed by the room itself.

Size and placement of furniture in the room also need to be well considered so as not to inhibit the lateral flow of light. For example, if the room is a library with book stacks, orient them perpendicular to the window wall so light passes through them. The same is true for rows of shelving in retail and warehouse scenarios. If the room is an open plan office, try to use low partitions so light can flow over them, and deeper into the space. If it is a band of perimeter offices with full height walls running parallel to the window wall, designate the upper part of the partition a clerestory to allow adjacent spaces, such as corridors, to borrow light.

Developing a select set of daylight-friendly details is a good way to bring room elements together. For example, canting the ceiling to meet the top of a window eliminates the dark corner between window wall and ceiling. It also maximizes daylight penetration since it effectively raises the height of the window. Splaying the opening around the window reduces contrast between window glazing and the interior surface of the window wall, making the view out more comfortable.

**A PARTING STRATEGY**

The *Dual Window* concept is key to all Sidelighting strategies. It enables a window to provide two primary functions: daylight and view. Since each requires a different set of glazing characteristics, the aperture is divid-

ed into two so that each part may be optimized to serve the intended function. The upper half of the window, located high on the window wall, is designated the daylight window and outfitted with high transmittance clear or translucent glazing. The lower half of the window, located somewhere around eye level, is designated the view window. See Figure 9. Its glazing is given a lower visible transmittance that balances the brightness of the exterior with that of the interior wall surfaces surrounding the aperture to enable the view. Since the area of both apertures combined are limited by the room's wall area as we mentioned earlier, the most judicious approach is to dedicate more fenestration area to daylight function than view function. Separating daylight and view windows into two distinct sets of fenestration is a creative variation. For example, daylight fenestration may be a band of 18-inch-tall clerestory windows that run along the window wall right below the ceiling with an exterior overhang to provide solar control. For view function, individual, smaller area windows may be strategically placed in the lower part of the wall exactly where they are needed.

**ESSENTIAL ELEMENTS**

**SHADING DEVICES**

All windows incorporate some type of solar shading into their design. Shading may be accomplished by the position of the window itself, for example by locating it high up, or in a northern corner of a room. However in most windows, shading is addressed separately from the aperture itself using a shading device. Horizontal elements such as overhangs and light shelves work well for orientations within 45 degrees of south since the sun is high in the sky. Vertical elements work well for elevations within 45 degrees of east or west since the sun is low in the sky. Shading devices serve a dual purpose: To reduce heat and to prevent glare. The most efficient way to manage the solar heat gain absorbed by the shading device is to keep it outside of the building envelope. To control glare, consider the brightness of the room side view of the shading device in comparison to the surrounding room interior, and use surface finish and geometry to keep within an acceptable brightness ratio.



**LIGHT SHELVES**

Light shelves are functional for façades oriented within 90 degrees of south. The exterior portion of the shelf shades the lower window from direct sun to reduce the transfer of heat into the building envelope when it is not needed. Extend the shelf into the interior to prevent glare in near-window task areas by redirecting sunlight up on to the ceiling plane. See Figure 13. It is important to note that a standard light shelf does not increase overall daylight in the room; rather it decreases illumination near the window wall where it would otherwise be the highest. By doing so, it fulfills its primary function to even out the illumination gradient from the window to the rear of the room.

**DESIGN FOR CLIMATE ZONE**

The action of the shading device, the ability of the glazing to reject solar heat gain and resist the transfer of heat through the building envelope, are all performance characteristics that can be optimized to suit a particular climate zone. In an area where cooling is a major building expense, shading window apertures throughout the cooling period and using sun-protecting glazing will

make a building less dependent on its mechanical systems and save energy. In regions where heating is a major cost, allowing sunlight into the interior building envelope to heat a large mass that in turn releases heat long after the sun has set, is a well established passive solar heating strategy. Using a window system with a high resistance to the transfer of heat, measured by U-

value, will work to keep this passive collection of energy inside the building envelope.

**INTEGRATE ELECTRIC LIGHT**

In order to maximize your daylighted floor area, daylight first, then supplement with electric light. After this, explore using light for general illumination during the day, which at night can be lowered or completely removed, as a person's eyes adapt to lower light levels in preparation for sleep periods. Whatever your strategy, make sure to implement a daylighting control system, whether it is a combined daylight and occupancy responsive dimming system, or a person whose sole responsibility is to switch light fixtures and operate shades.

Remember, if the building's electrical demand for light and heat is not being reduced, it is not daylighting. Keep these basics in mind and you too will master the age-old art of this renewable energy source.

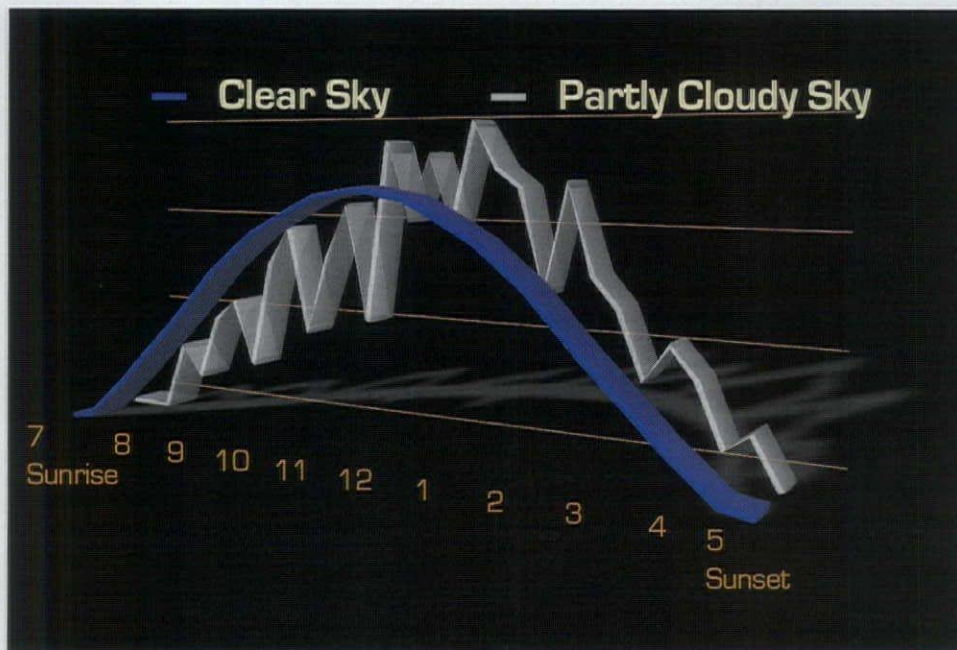


Figure 17: Length of Solar Day

Matthew Tanteri and Chris Meek will present "Advanced Sidelighting," a 3-hour workshop covering lighting and shading, energy performance, and HVAC integration on Monday, May 7, 2007, from 9a.m. to noon as part of the Lightfair Daylighting Institute. For more information visit [www.lightfair.com](http://www.lightfair.com).

66137  
Wine Bottle  
Pendant



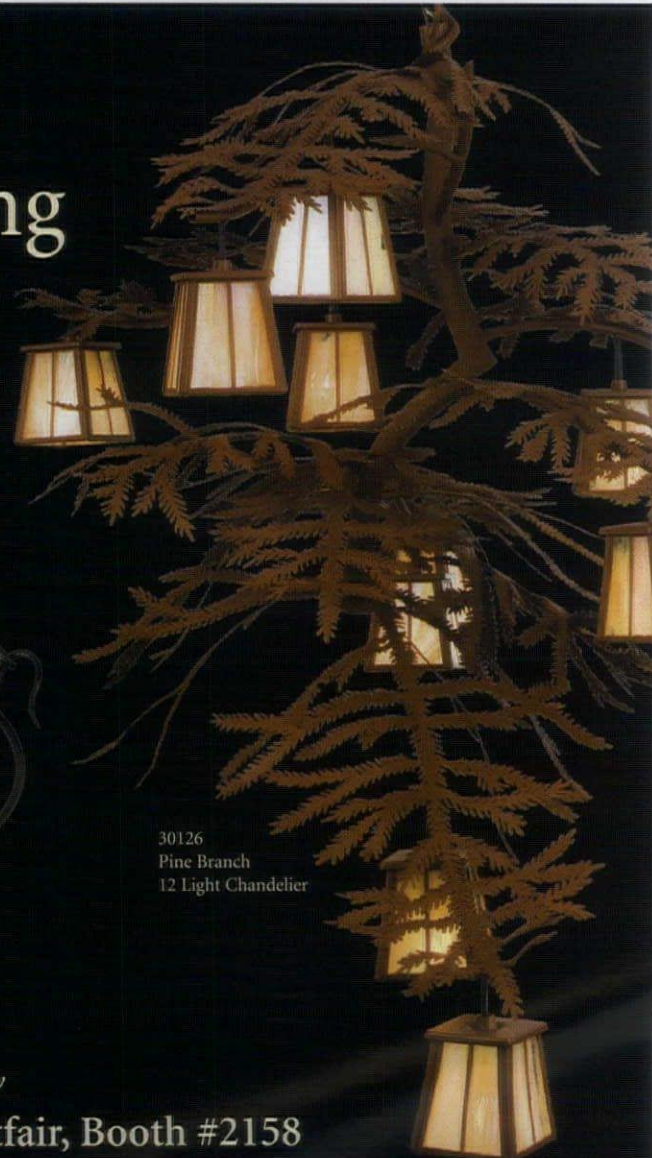
65453  
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30126  
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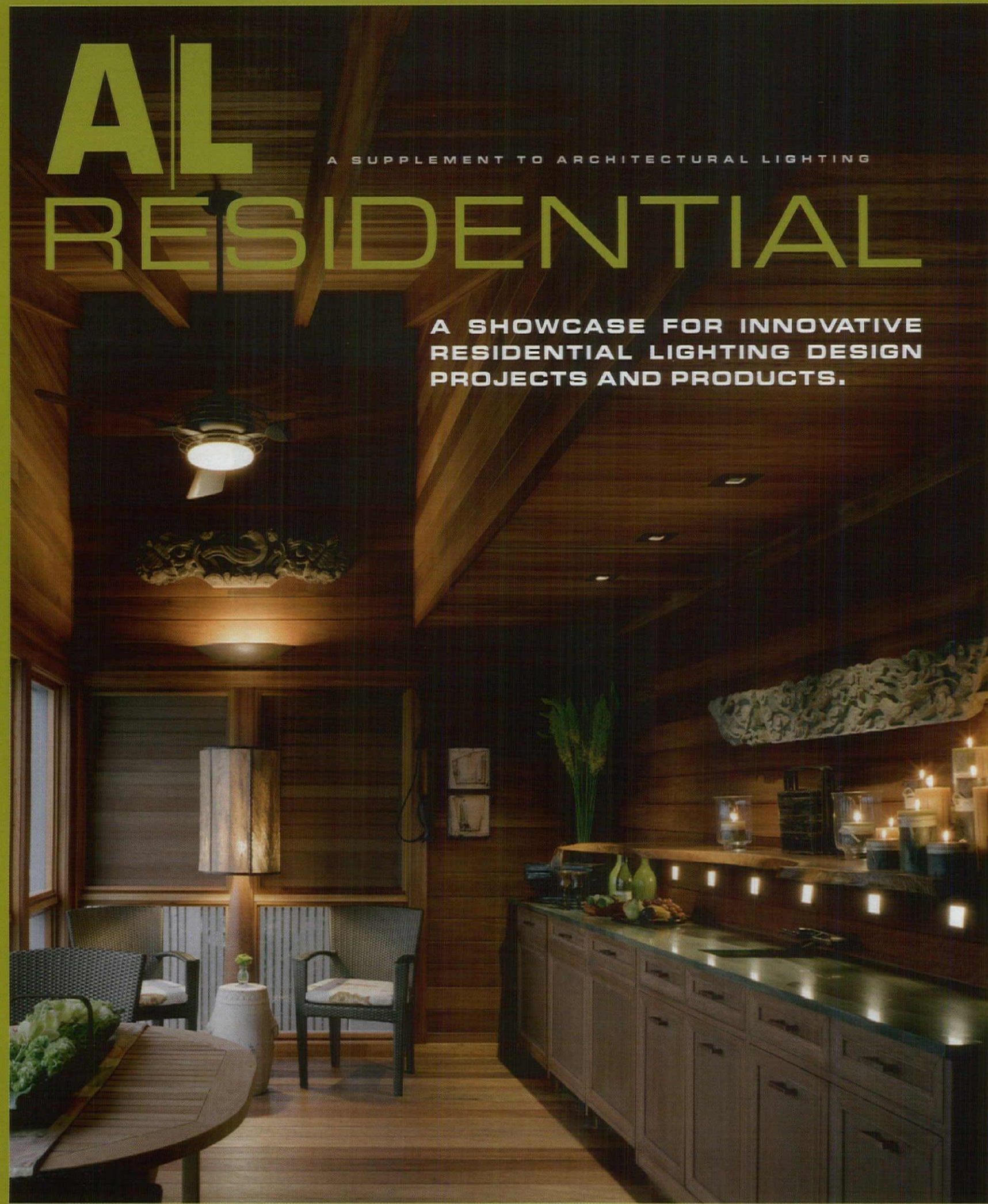
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# Material Considerations

JAMES R. BENYA

THESE DAYS, THERE IS AN INCREASING EMPHASIS ON MAKING EVERYTHING we do sustainable. Competition in the marketplace has taken us well beyond LEED, and in order to be "greener" than one's rivals, it helps to be able to embrace as many life cycle and environmental issues as one can. Architect William McDonough and chemist Michael Braungart's "cradle-to-cradle" philosophy, which advocates a "reduce, reuse, recycle" approach to the environment and our consumption of materials, is a starting point for how involved in this we, as both designers and citizens of the planet, have to be.

When it comes to lighting, it's important to remember that first and foremost, the greatest impact to the environment is energy consumption. Unless the energy source is totally sustainable, such as wind or solar, the greenhouse gases and air pollution resulting from electrical energy generation are by far the most significant impact caused by electric lighting. Moreover, even with sustainable sources of power, using light needlessly or inefficiently is depriving the nation's electrical grid of valuable watts that could be used for more-pressing demands. Conservation through the use of daylighting, lighting controls, and efficient sources still remains lighting's principal sustainability consideration.

The next largest consideration is mercury. High efficacy light sources including fluorescent and metal halide rely upon it. And while significant reductions in mercury have occurred in mainstream T8 and T5 lighting systems, the mercury content in compact fluorescent lamps and metal halide remains a lot higher. Recycling of spent lamps is essential. However, until there is a more efficacious choice, remember that the mercury emissions of coal burning power plants, which place mercury throughout the environment, are a bigger threat, so don't start a "Ban the Bulb" campaign just yet. Instead, emphasize low-mercury T5 and T8 lamps in as much of your design as possible. And, of course, make sure mercury is not part of any control system or component.

Once these issues are resolved, it's time to focus on the details of the lighting system. There are a number of things you can do to make your design even greener, as follows.

## MATERIAL CONSIDERATIONS

When evaluating the sustainability of a luminaire, it helps to address every material, with specific attention to the following key issues:

- Is the material renewable or depletable?
- How much energy is expended acquiring and processing the raw material?
- How much environmental damage is done obtaining the material?
- How far does the material need to be transported?
- When the material is mined, processed, or finished, does it require the use of heavy metals or volatile chemicals? If so, are they thoroughly and environmentally contained?
- When the life of the luminaire ends, what happens to the material?

To assess these issues well, it will take a lot of homework. As an example, gold is used to make critical connectors for, among other things, lighting and control systems. When mined, gold is often amalgamated with mercury to form solid nuggets. For every gram of gold obtained using this technique, 1 to 3 grams of mercury are washed into the watershed, in turn becoming the neurotoxin methyl mercury and accumulating in the flesh of car-

nivorous fish. As with many resources, this illegal process remains widely practiced because it is more profitable than more environmentally responsible methods.

## THE ANATOMY OF A LUMINAIRE

Almost every luminaire uses a metal housing. The most common material is steel, and because lighting is seldom structural, using thin gauge and/or recycled material is a good start. The side effects of iron mining and processing are substantial. Aluminum is another popular choice, but in addition to the impacts of mining, aluminum has an extremely high-embedded electrical energy use. Recycled aluminum is available and represents a

### ARE LEDs SUSTAINABLE?

*Among the potential benefits of LEDs is the elimination of mercury. But LED lamps pose other environmental issues. Here are several issues associated with LEDs that could tarnish their green halo.*

→ At present, LEDs are not overly energy efficient, and with the exception of a few outstanding uses (like exit signs and color effects), LEDs probably won't save energy compared to fluorescent alternatives. At least, not yet.

→ LED fabrication is a form of electronics manufacturing. The process involves environmental hazards including the use of plastics, volatile chemicals, and heavy metals. A lot of LED processing occurs in Asia, in part to avoid the high costs of environmentally regulated semiconductor manufacturing.

→ There is considerable energy use expended in making LEDs, with some products literally traveling once around the world before ending up on a jobsite.

→ LED lamp life is probably far shorter than the 100,000 hours we've always been told. Practical systems could last as little as 10,000 hours. And generally, you don't change the "lamp"—more than likely, you'll replace all of the electronics, the housing, and maybe even the wiring. How green is that?

→ Finally, when LED lighting systems end up in the trash, so do the electronics, including copper, solder, and plastic.

*The LED industry has a chance to solve all of this before the problems get out of hand. Let's hope it does.*

moderately responsible choice. But for all forms of metal processing, about 12 percent of the cost is for oil-based solvents and chemicals. You might consider wood luminaires, but be sure to employ rapidly renewable wood and non-volatile organic compound (VOC) finishes. Perhaps the best advice is to use smaller, lighter weight fixtures—the less material, the better.

The luminaire's reflective surfaces are often metal-backed as well. Today's highly reflective (95%+) polished and finished aluminum and extremely white paints are essential in making efficient luminaires. Anodizing aluminum uses considerable electrical power, while powder-coat painting, an otherwise environmentally friendly process, uses petroleum byproducts and electrical energy. Water based paints probably won't hold up well enough for this application, but traditional high-VOC paints and finishes should be avoided unless environmentally contained and rendered benign.

Next up is refracting media. Plastics are widely employed in lighting, but the fossil fuel base, shipping issues, embedded energy, and environmental shortcomings are significant. Consider glass: It has high embedded energy, but it is generally environmentally

benign (even with high lead content), and when the product life ends, glass can be recycled and used to make other products. The trade-off is that plastics, while posing an environmental issue from "cradle-to-grave," offer superior resistance to breaking and shattering. Plastics used in lighting seldom end up recycled.

Then there are the electrical components. Because UL and other regulations are so specific, it will be difficult to choose internal components from a sustainable standpoint. Still, where you have choices, make them carefully. For instance, use the "efficient" ballasts for T8 lamps—they save at least 10 percent of the energy of the T8 system.

## SUSTAINABLE PRACTICES

Perhaps the best way to ensure the most sustainable lighting is to ensure that the manufacturer's practices are sustainable. Domestic and European lighting manufacturers are required to meet comparatively rigid environmental restrictions. Many have taken additional steps to follow ISO 14000/14001—a series of international environmental management systems—and other standards including environmental auditing, environmental performance evaluation, environmental labeling, and life-cycle assessment. As a minimum, these mean the use of environmentally favorable materials, design and manufacturing processes, packaging and transportation methods, installation and maintenance procedures, and disposal and recycling programs. Products from Asian manufacturers, including major components and subassemblies, should be carefully checked to determine whether the factories and business practices meet these and other U.S. or European Union standards.

Finally, evaluate how far the products are shipped. In LEED 2.1, rewards were given to the use of indigenous and locally manufactured products. Given the global market of lighting, with lamps coming from Eastern Europe and ballasts from Korea, it's hard to say where a lighting product is made. As a suggestion, try specifying products where the final point of assembly is in the U.S. or North America, or if you're really aggressive—within a short distance to the project. When shipped, ensure that the packaging materials are recyclable and require the contractor to follow through. And finally, require the contractor to meet or exceed all LEED-standard jobsite practices.

## MAINTAINING A GREEN PERSPECTIVE

The recent political climate change is likely to create a new group of novice greenies, as well as ardent politicians, who will seize apparent "sustainable" opportunities to make a point. For example, there is a growing worldwide sentiment to ban the incandescent lamp. (At least one state considering such a ban—Connecticut—had previously worked toward banning mercury-containing lamps). Therefore, it's possible that future laws will dramatically change our choices, and even on a modern project, some popular "sustainable" generalizations will force a variety of lousy design choices.

To prevent the lighting designer's work from "green" misdirection, it is necessary to develop and maintain a current and thorough green perspective. For the foreseeable future, energy and mercury should dominate decisions about lighting. Once these issues are under control, then foray into the wide world of products and all that goes into them. As a guiding light, start with "less is more"—that will be a hard adjustment for our industry, but it's a truly green ethic we need to learn.

 more information at [ARCHLIGHTING.COM](http://ARCHLIGHTING.COM)

## Material Witness

BRAULIO AGNESE

THROUGH HIS RESEARCH, HIS WRITING, AND HIS DESIGN, ARCHITECT BLAINE BROWNELL IS CHANGING THE PROFESSION'S AWARENESS OF BUILDING PRODUCTS AND MATERIALS.



*This article originally appeared in the Nov/Dec 2006 issue of Architect Magazine.*

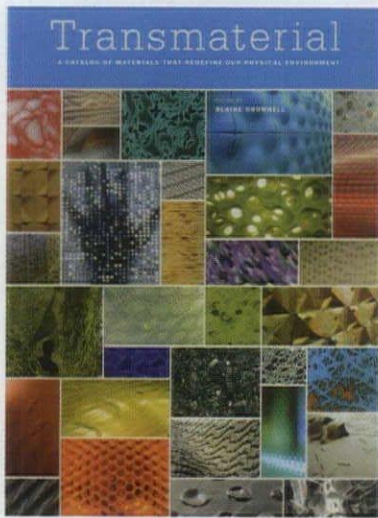
**PRODUCTS ARE THE STUFF OF ARCHITECTURE, IN A VERY LITERAL SENSE, AND YET IT'S FAIR TO SAY THAT THE** building products industry and the profession of architecture maintain an awkward alliance. As a rule, architectural education prioritizes abstract principles over real-world applications, and in practice, the process of design generally takes precedence over the selection of products. On the other side, manufacturers are creating innovative products all the time—the kinds of things architects should be enthusiastic about—but they have difficulty getting the attention of designers and specifiers.

Enter Blaine Brownell, an associate at NBBJ's Seattle office who keeps busy in his off-hours transforming the profession's perception of building products. Given that the disconnect is partly a matter of marketing, of architects and manufacturers speaking different languages, Brownell's accomplishment begins with a shift of word choice: mate-

rials, not products. He uses a mix of media—e-mails, blogs, and more recently a book, *Transmaterial: A Catalog of Materials that Redefine Our Physical Environment*—to convey a new message about materials: That they can be exciting, surprising, and, perhaps most important, of benefit, not just to buildings, but to people and to the environment.

These days, Brownell is on a leave of absence from NBBJ. Having received a Fulbright fellowship to research sustainable design and material innovations in Japan—which he first experienced as the son of a Fulbright grantee and where he worked as an architect in 1991 and 1997—he's moved his family to Tokyo until next July.

"The thing that drives me," says Brownell, "is not the subject matter so much as the potential. New materials can be fun to study, but they get really exciting when we use them. And if we can harness the creative energy stored in these new products to create a technologically advanced, intelligently crafted, and ecologically proactive world, wouldn't that be a marvelous thing?" Indeed.



**A. NAME** Entry's trademarked name

**B. NUMBER** Entry's nine-digit identification number

**C. DESCRIPTION** A brief explanation of the entry

**D. CATEGORY** Refers to the basic materiality of the entry described; the primary means of organization in *Transmaterial*

**E. SUMMARY** A basic description of the entry

**F. TREND** Each entry is assigned one of seven trends: ultraperforming, multidimensional, repurposed, recombinant, intelligent, transformational, or interfacial

**G. TYPE** Defines each entry as a material, product, or process

**H. ADDITIONAL DATA** Additional information to more fully describe each entry

Despite its bright cover (above left), high-quality paper, and four-color printing, *Transmaterial* is not your typical architectural book. Sized and styled more like a travel guide, it places maximum importance on informing readers without a lot of distractions, as can be seen in a typical spread (below). Reinforcing the idea that this is a book to be carried around, thumbed through, marked up, and otherwise used instead of admired, Brownell provides a key (above right), to help readers decipher each entry's numerous elements.



**OF BOOKS AND BLOGS**

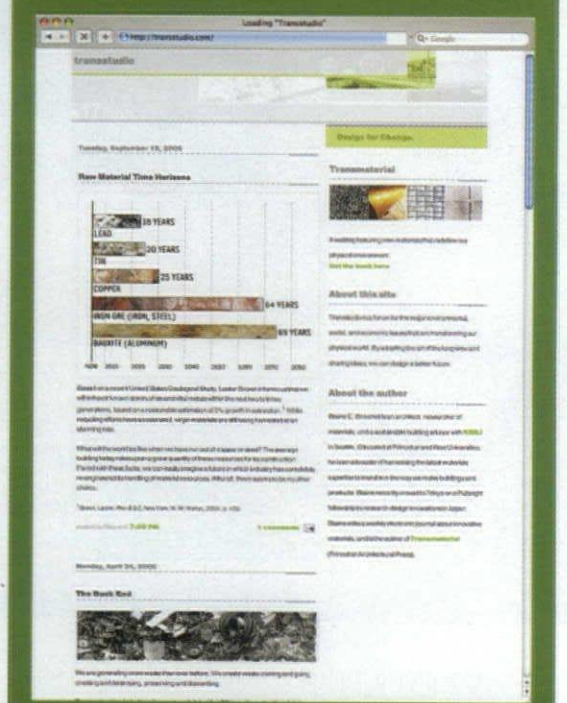
From the first, *Transmaterial* was intended to be a wallet- and satchel-friendly addition to the libraries of architects, students, and even nondesigners. "My colleagues, publisher, and I agreed that ... to have a significant positive influence, [the book] would have to be accessible, portable, and affordable," says Brownell. And if the book's pages appear similar to the entries on his *Transmaterial* blog (transstudio.com/tm)—small images, to-the-point descriptions—well, that was by design too.

The entire project started about six years ago as an occasional e-mail, called "Product of the Week," that resulted from Brownell's work as a materials researcher. (In November 2005, he started posting his e-mails as blog entries.) Ultimately, the digital medium inspired its paper counterpart. "After all," Brownell says, "*Transmaterial* is [meant to be] a gateway to resources. The sooner people

can understand ... innovative materials, the sooner we can spread innovation within our physical environment."

He seems to have struck just the right note. The Product of the Week e-mail has 4,000 subscribers, and *Transmaterial* is already into its second print run after the initial 10,000 copies sold out. "It's one of our best-selling titles," says Katharine Smalley Myers, publicity director at Princeton Architectural Press. A second volume is in the planning stages.

Brownell's other blog, *Transstudio* ("a forum for the major environmental, social, and economic issues that are transforming our physical world"), is for the moment on the back burner as he focuses on his research in Japan and maintaining his product e-mails. But he has every intention of rejuvenating it. "It's actually part of a long-term plan to write a book on the subject," Brownell says.

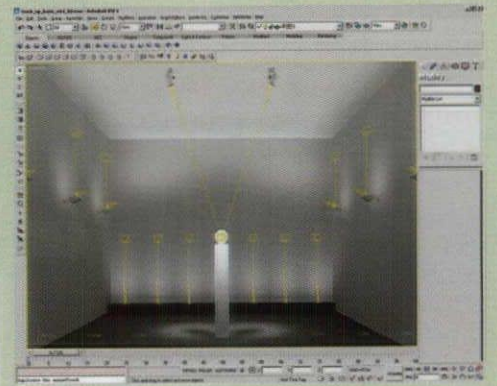


Brownell is a blogger, twice over. *Transmaterial* (top) is his continually updated journal of innovative products (none of which appear in the book). *Transstudio* (bottom) is a more philosophical effort aimed at engaging people in conversation about diminishing natural resources, the man-made world, and how we can effect positive change. As he notes in his first entry, "Design will play a fundamental role in this new epoch, and creativity will be the ultimate criterion for success. Since new problems will require new solutions, we can only preserve the future by letting go of present conventions."

**KEEP IT SUSTAINABLE**

As awareness about humanity's impact on the health of the planet continues to grow, green design and sustainability have become hot topics for the architectural community as well as for those who work, live, and play in and around its structures.

Buildings utilize almost half of all resources, notes Brownell. If architecture is ever going to maintain an ecological footprint more in balance with the requirements of its context, he says, then change needs to begin with the people who create the built environment. "[We] must place as much emphasis on research and teaching as [we] do on practice," he says. "In addition to function and form, I believe that architecture must have foresight." As he defines it, foresight considers the "entire ecology" of the material and energy resources that go into a building.



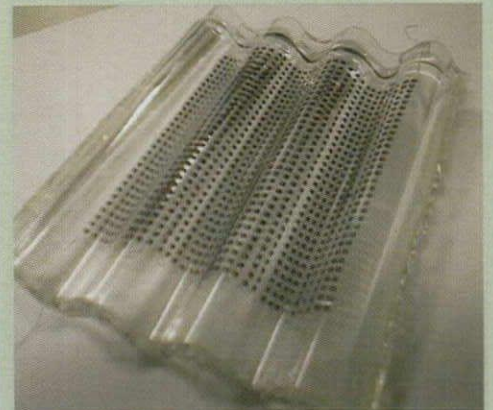
**PRODUCT:** ERCO Virtual Luminaires

**WHAT IT IS:** Models for digital lighting simulation

**ENVIRONMENTAL ASPECT:** Simulation studies may prevent wasted energy from poor lighting solutions

## Energy-Efficient Lighting Controls stop energy waste

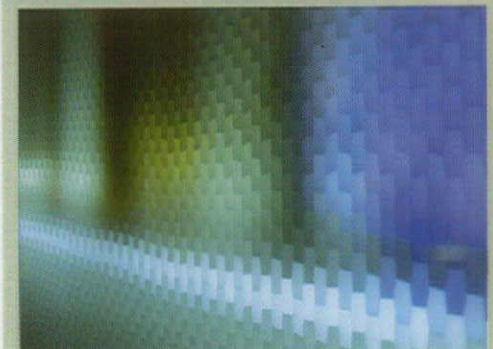
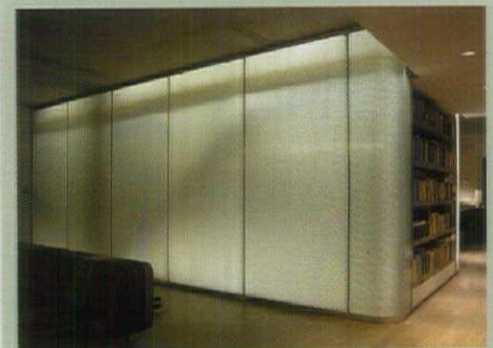
I specify daylighting controls from Watt Stopper/Legrand because they are easy to commission, enable code compliance and save energy to help improve building energy performance.



**PRODUCT:** Sphelar

**WHAT IT IS:** Spherical micro solar cells

**ENVIRONMENTAL ASPECTS:** Renewable energy source; less embodied energy; fewer materials than conventional photovoltaics



**PRODUCT:** Panelite

**WHAT IT IS:** Insulated glass unit with tubular polycarbonate core

**ENVIRONMENTAL ASPECTS:** Recyclable components; natural daylighting; efficient use of materials

Our daylighting control system, based on advanced technology photosensors, can improve a building's energy performance well above prerequisite standards and will reduce its environmental impact regarding energy usage.

- Single or multi-zone control
- Stand alone or networked control
- Low-profile design that blends into building decor
- More choice from the brand professionals trust

Get information on our new LS-101 simplified ON/OFF daylighting controller and a complete product selection guide.

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■ PUTTING A STOP TO ENERGY WASTE®





**PRODUCT:** Geometrix  
**WHAT IT IS:** Lightweight recycled metal ceramic tiles  
**ENVIRONMENTAL ASPECT:** 90 percent recycled content



**PRODUCT:** UltraTouch  
**WHAT IT IS:** Natural cotton-fiber  
**ENVIRONMENTAL ASPECTS:** Recycled content; no volatile organic compounds or harmful chemicals



**PRODUCT:** Solarwall  
**WHAT IT IS:** Solar air panels  
**ENVIRONMENTAL ASPECTS:** Lowers energy load; reduces fossil-fuel dependency and carbon emissions

To that end, throughout his book Brownell makes a point of noting, when applicable, the environmentally friendly aspects of a product or material—whether it's how it is manufactured; the benefits it confers to buildings, their users, and the surrounding environment; or how it can be put back into the production stream. Shown on these two pages is a small sample of what he's discovered.

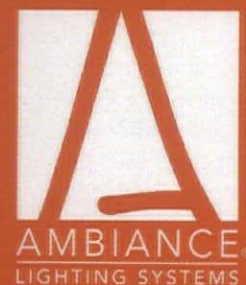
Green and sustainable products come in many forms and exist for every part of a building: inside, outside, and within the ceilings, floors, and walls. Some, like ERCO Virtual Luminaires (facing page top) can be used before the first shovel breaks ground. Others, like Panelite (facing page bottom), are among the last things to be put in place.



The best views aren't always outside the window.



Shape, color and installation ease come together in lighting systems so perfectly suited to setting the style, you won't want to look at anything else.



Sea Gull Lighting Products, LLC  
 A Generation Brands Company

SeaGullLighting.com

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THE PAST.**



**WHILE FLIRTING  
WITH THE FUTURE.**

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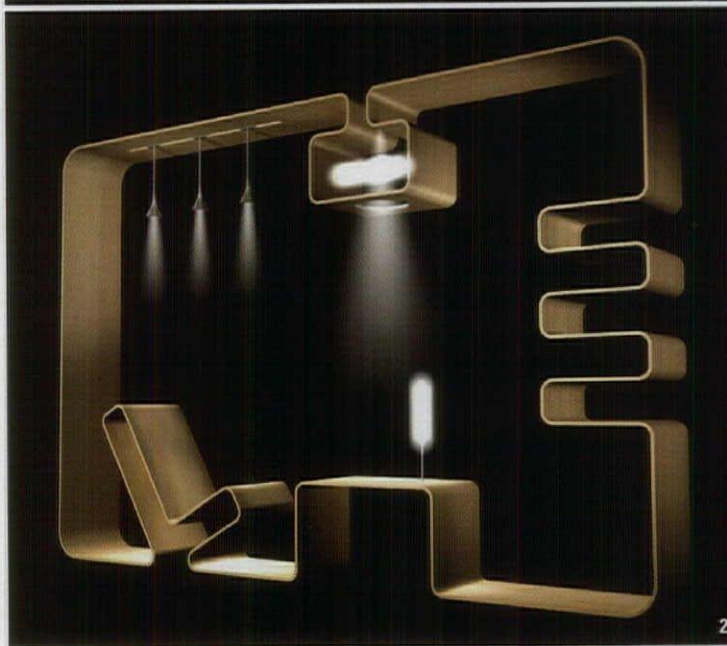
**FUTUREWORLD**

Not everything in the *Transmaterial* universe has an obvious use. Throughout Brownell's book and blog are entries on products and materials with names like Body Index, Aegis Hyposurface, Dimension Elevator, Super Cilia Skin, Lumalive, and Cubix. Reading the descriptions and looking at the images, you might think these high-tech, odd, or flat-out mysterious items came from the pages of a science-fiction novel or an episode of *Battlestar Galactica*. But they are very real.

Yet Brownell, although enthusiastic about advances in manufacturing and application, prefers not to see technology as an end in itself. "I think we must maintain a critical distance," he says. "Technology can bring us amazing things, but we should always be vigilant about where it is taking us. Marshall McLuhan said that the artist is essential to society because he/she can foresee the changes technological development will bring about."

And by informing other architects and lighting designers about the progress that researchers, manufacturers, and designers are making—whether it's a bleeding-edge use of computer-aided design or a new application of an existing material or product—Brownell hopes they will begin to think this way too.

 more information at [ARCHLIGHTING.COM](http://ARCHLIGHTING.COM)



**1**  
MATERIAL: Aegis Hyposurface  
WHAT IT IS: Environmentally responsive architectural surface  
APPLICATIONS: Interactive art, feature wall

**2**  
MATERIAL: Wood.e  
WHAT IT IS: Electrified preformed wood  
APPLICATION: Furniture

**3**  
MATERIAL: Protrude, Flow  
WHAT IT IS: Magnetic fluid art  
APPLICATIONS: Exhibits, interactive art

**4**  
MATERIAL: Interactable  
WHAT IT IS: Interactive table  
APPLICATIONS: Conference rooms, showrooms, exhibitions







ARCHITECTURAL LIGHTING'S 6th Annual  
**ACE Awards Ballot**

ARCHITECTURAL LIGHTING'S  
Readers' Choice for Excellence

Awarded by ARCHITECTURAL LIGHTING

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ACE.al Awards have become  
the mark of distinction and  
dependability.



# Vote For The Top 10 Companies!

Go to [www.ALaceawards.com](http://www.ALaceawards.com) or fax your ballot pages to 202.736.3470

## How The Program Works

1. Take a few minutes to review the list of manufacturers.
2. Circle the 10 manufacturers that meet or exceed the standards indicated in the voting criteria.
3. Of the companies you've selected, indicate your choices for Most Innovative, Most Respected, and Most Specified.
4. Go to [www.ALaceawards.com](http://www.ALaceawards.com) or fax your ballot pages to 202.736.3470.

## Voting Criteria

Select the manufacturers who have provided you and your projects with:

- Exceptional Durability
- Exceptional Customer Service
- Superior Product Value
- Advanced Designs

## Methodology

The ACE ballot manufacturers' list appears in the April/May and June issues of ARCHITECTURAL LIGHTING, each reaching the 25,000 nationwide circulation. In addition, e-mail campaigns are conducted to ensure the broadest base of response. Ballots are provided at the AIA, Lightfair and other industry conferences. A|L also conducts random sampling, consults with industry experts, and the list of nominated manufacturers is subject to review by an in-house publishing team.

## Results Will Be Announced In The November/December 2007 Issue.

**Your votes must be received by July 6, 2007.**

**>> Deadline: July 6, 2007**

- |                                       |                           |                                 |                                      |                                                    |
|---------------------------------------|---------------------------|---------------------------------|--------------------------------------|----------------------------------------------------|
| 3G Lighting                           | Bega Lighting             | D'ac                            | Fabbian USA                          | Hubbell                                            |
| 3M Light Fiber                        | Beta-Calco                | Daslight                        | FAD lighting                         | Hubbell Building Autom.                            |
| Aamsco Lighting                       | Beta Lighting             | Davis/Muller Lighting           | FC Lighting                          | HUNT Dimming                                       |
| Acrix                                 | Birchwood Lighting        | Day-Brite Lighting              | Fiberstars                           | Hunter Douglas Contract,<br>Solar Control by Nysan |
| Advance                               | B-K Lighting              | Delray Lighting                 | Fine Art Lamps                       | Hydrel                                             |
| Alanod Aluminum                       | Blauet                    | Delta Light USA                 | Finelite                             | Icon International                                 |
| Alera Lighting                        | Boca Flasher              | Derek Marshall Lighting         | FLOS                                 | IEPC Corp.                                         |
| Alkco Lighting                        | Bodine                    | Dernier & Hamlyn                | Focal Point                          | IL America Inc.                                    |
| A.L.P. Lighting                       | Boyd Lighting             | Designplan Lighting, Inc.       | Forecast                             | ILEX                                               |
| ALS-Architectural Lighting<br>Systems | Brass Light Gallery       | Dialite                         | Forms & Surfaces                     | iLight Technologies                                |
| Altman Lighting                       | Bruck Lighting Systems    | Domenici                        | Foscarini                            | Illuminating Experiences                           |
| Ambiance Lighting Systems             | C.W. Cole & Co.           | Donovan Lighting                | Gamma 3 Luce                         | Illumination Lighting                              |
| American Fluorescent                  | Capri Omega Lighting      | Dreamscape Lighting             | Gardco Lighting                      | Induction Lighting                                 |
| American Glass Light                  | CECOL                     | e:cur                           | GE Consumer & Industrial<br>Lighting | Industry + Design Light                            |
| Amerlux                               | Charleston Gas Light      | Eclipse Lighting Inc.           | Ginger                               | Indy Lighting                                      |
| Anafol International                  | Chloride Systems          | Edison Price                    | GKP                                  | Insight Lighting                                   |
| ANP Lighting                          | Cole Lighting             | Eiko Ltd.                       | Gotham Architectural<br>Downlights   | Intense Lighting                                   |
| Architectural Area Lighting           | Color Kinetics            | Electrix                        | Guth Lighting                        | IO Lighting                                        |
| Architectural Landscape<br>Lighting   | Columbia Lighting         | Elec. Theatre Controls (ETC)    | H.E. Williams                        | IP44                                               |
| Ardee                                 | Conant Custom Brass, Inc. | Eleek                           | HADCO                                | IRIS                                               |
| Arroyo Craftsman                      | Con.Daz Lighting          | Elite Bohemia/Bar Del Int'l.    | Halo                                 | Ivalo Lighting                                     |
| Aurora Lighting                       | Con-Tech Lighting         | Elliptipar                      | Hampstead Lighting                   | Jesco Lighting Group                               |
| Artemide                              | Contrast Lighting         | Encelium Technologies           | Hatch Transformers                   | JJI Lighting Group                                 |
| AVR USA                               | Cooper Lighting           | Engineered Lighting<br>Products | Heatron                              | Juno Lighting                                      |
| Axo Lighting                          | Corelite                  | ERCO Lighting USA, Inc.         | Hemera, Inc.                         | Kenall                                             |
| B-Light                               | COTCO                     | ESTILUZ, Inc.                   | Hessamerica                          | Kichler                                            |
| Baldinger                             | Cree                      | Eureka                          | High End                             | KIM Lighting                                       |
| Bartco Lighting                       | Crestron                  | Eurofase, Inc.                  | Highlights                           | Kingbright                                         |
| Beacon Products, Inc.                 | Custom Lighting Concepts  | Exceline                        | Holophane                            | Kramer Lighting                                    |
|                                       | Cyclone Lighting, Inc.    |                                 |                                      |                                                    |

# Vote For The Top 10 Companies!

Go to [www.ALaceawards.com](http://www.ALaceawards.com) or fax your ballot pages to 202.736.3470



- |                             |                                  |                                  |                               |                                |
|-----------------------------|----------------------------------|----------------------------------|-------------------------------|--------------------------------|
| Kurt Versen                 | Lutrex                           | Phillips Advance Transf.         | Serralunga                    | Traxon USA                     |
| Lam Lighting                | Lutron                           | Phoenix Products Co.             | Sharper Lighting              | Trend Lighting Co., Inc.       |
| Lamina Ceramics             | Luxo Corporation                 | Phoster Lighting                 | Sill                          | Tridonic, Inc.                 |
| LBL                         | Luxo Italiana                    | Planlicht                        | Sirius Lighting               | Trilux Lighting Limited        |
| Ledalite                    | Lyric Lighting (Seagull)         | Precision Architectural Lighting | Sistemalux                    | Troy-CSL Lighting              |
| LEDtronics Inc.             | Manning Lighting                 | Prescolite                       | Sirmos                        | Unilight Ltd.                  |
| Legion Lighting             | Mark Architectural Lighting      | Primelite                        | Solara Lighting               | Universal Lighting Tech.       |
| Leola                       | Martin Architectural             | Prisma Architectural Lighting    | Solatube International, Inc.  | Ushio America                  |
| Leucos USA                  | McGraw Edison                    | Progress Lighting                | Space Lighting                | Valmont Industries, Inc.       |
| Leviton                     | MechoShade Systems, Inc.         | Prudential lighting              | Spark Lighting                | Vantage                        |
| LexaLite International      | Mercury                          | Pure Lighting                    | Special FX Lighting, Inc.     | Varon Lighting                 |
| Light Craft Manufacturing   | Metalumen                        | Q-Tran Inc.                      | Specialty Lighting Ind.       | Venture Lighting               |
| Lightech                    | Metalux                          | Quality Lighting                 | Spero Lighting                | Viabizzuno                     |
| Lighting by Bushfeld        | Meyda Lighting                   | Reggiani Lighting USA            | SPI Lighting                  | Visa Lighting                  |
| Lighting Services Inc.      | Mills Architectural Lighting     | Renaissance Lighting             | Spring City Elec. Manuf. Co.  | Visio Lighting                 |
| LightLight                  | Morlite Systems                  | Renova Lighting Systems, Inc.    | Square D Clipsal              | Vistawall                      |
| Lightolier                  | Mule Lighting                    | Rockscapes                       | Starfield                     | Vossloh Schwabe                |
| Lightolier Controls         | Neoray                           | Rosco Laboratories, Inc.         | Starfire Lighting             | W.A.C Lighting                 |
| Light-Project International | Nessen                           | Rotaliani                        | Steng Light                   | W2                             |
| Linear Lighting             | New Metal Crafts                 | RSA                              | Sternberg                     | Wagner                         |
| Litecontrol                 | Nicolaudie                       | Schmitz                          | Stingray Lighting             | Waldmann                       |
| Itemakers                   | Nora Lighting                    | Schneider Electric               | Studio Due s.r.l              | The Watt Stopper               |
| Lithonia Lighting           | NouVIR Research                  | Schonbek Worldwide Light         | Studio Italia Design USA      | Weaver & Ducre                 |
| Lithonia Controls           | Nutech Lighting                  | Schnott-Fostec LLC               | Supervision (NEXXUS Lighting) | WE-EF Lighting USA             |
| Liton                       | Oggetti Luce                     | Schott North America             | Sure-lites                    | Wilshire Manufacturing Company |
| Louis Poulsen Lighting      | O Luce                           | Schreder                         | Tambient                      | Winona                         |
| Luceplan USA, Inc.          | Orbit North America              | Se'lux U.S.                      | Targetti North America, inc.  | Xilver BV                      |
| Lucien Gau                  | OCL - The Original Cast Lighting | Sea Gull Lighting                | Tech Lighting, LLC            | Zaneen Lighting                |
| Lucifer Lighting            | Osram Sylvania                   | Selecon                          | Teka Illumination, Inc.       | Zoltan                         |
| Lumca                       | Pathway Lighting                 | Semper Fi Power Supply           | Terzani                       | Zumbotel                       |
| Lumec                       | PCI                              | Sentry Electric Corporation      | THHC Lighting                 |                                |
| Lumiere                     | Peerless                         | Serien                           | Times Square Lighting         |                                |
| Luminis                     | Pennsylvania Globe               |                                  | Tivoli, LLC                   |                                |
| Luraline Products Co.       | Philips Lighting                 |                                  | Translite Sonoma              |                                |

Of the companies you have selected, which in your opinion is the:

Most INNOVATIVE

Most RESPECTED

Most SPECIFIED

I would also like to nominate these manufacturers (not listed) for the ACE.

Your Name

Title

Company

City/State

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A Generation Brands Company **CIRCLE 300**



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### Ardee Lighting

Focus and Varianti decorative recessed downlights provide crisp-white, high-performance illumination in a contemporary, precision-machined aesthetic. The collection is suited for use galleries and museums, upscale hospitality venues, kitchen, dining and living areas, professional and executive offices, reception areas, specialty retail and the like. Ardee Lighting, telephone: 704 482-2811 [www.ardeelighting.com](http://www.ardeelighting.com) **CIRCLE 301**



### Edison Price Lighting

Q-Tran has created the transformer for MR-16 fixtures: silent, even when dimmed, and brighter, without the light loss inherent with conventional transformers. Edison Price Lighting is impressed enough to use them, exclusively, as the magnetic option for our MR-16 Darklite downlight, wallwasher and Anglux accent light. Visit [www.epl.com](http://www.epl.com) <<http://www.epl.com/>> , keyword Q-Tran, for spec sheets. **CIRCLE 307**



### Cecol (Citizen Electronics)

#### New low-profile high brightness LEDs

Users say this low-profile LED is a "best-kept secret." The super luminance flux CL-L100 has 245lm with high efficiency (70lm/watt at 3.5 watts). Space-saving package releases flat, well dispersed illumination. One-third power consumption of incandescent lamps; smaller and safer than fluorescents. 50x7mm. Visit [www.cecol.com](http://www.cecol.com) or call 847-619-6700. **CIRCLE 302**



### Electrix, Inc.

Electrix, Inc. builds a wide range of linear indirect cove lighting for architectural and commercial applications. In addition to flexible and field curveable cove lighting, we manufacture specification-grade custom, indirect, LED and wall mount light fixtures using energy-efficient fluorescent, metal halide, halogen and incandescent lamps and LED's. For more information, please contact: [www.electrix.com](http://www.electrix.com) Phone: (203) 776-5577 **CIRCLE 308**



### Cooper Lighting

#### Halo Stasis Ceramic Metal Halide Track Lampholders

Halo has added ceramic metal halide track lampholders to its popular Stasis line. Providing significant energy savings compared to halogen sources, the new 505 Series is available in Accent and Wall Wash models and accepts 20W MR16, 39W and 70W PAR30 or T6 CMH lamps. [www.halolgt.com](http://www.halolgt.com) P: 770-486-4800 F: 770-486-4801 **CIRCLE 303**



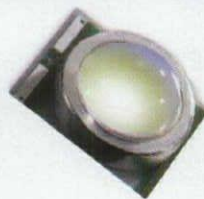
### Erco

Characterized by its patented reflector design, the Grasshopper family features the innovative Spherolit technology, which allows the option of spot, flood or wide-flood, utilizing new miniature 20 watt / 39 watt metal halide lamps. Suitable for outdoor use (IP65) the die cast Grasshopper offers unique mounting versatility for Lighting Professionals. **CIRCLE 309**



### Cree XLamp® LED

Cree is leading the lighting revolution. Cree's award-winning XLamp LEDs are 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 discover the future of LED lighting for yourself, visit [www.cree.com/xlamp](http://www.cree.com/xlamp), or call 800.533.2583. **CIRCLE 304**



### Eutrac

EUTRAC®|DALI "the intelligent track" offers specification grade 1 and 2 circuit track systems that include DALI enabled low voltage data bus. EUTRAC adapters can accommodate virtually any OEM track light fixture. The Light Composer® is available for complete control of individual light fixtures for custom dimming, scenes and interactivity. EUTRAC Corporation (845) 691-9030 [www.eutrac.com/usa](http://www.eutrac.com/usa) LIGHTFAIR booth #2768 **CIRCLE 310**



### D6LED/D4LED

Prescolite's new Architektur 6 inch and 4 inch LED downlights, D6LED and D4LED are designed from the ground up around cutting edge Luxeon K2 LEDs from Lumileds. Architektur LED downlights provide the benefits of LED technology to today's general lighting applications. 32 input watts (6 inch), 15 input watts (4 inch). 50,000 hours at 70% maintained lumen output. Visit [www.prescolite.com](http://www.prescolite.com) **CIRCLE 305**



### Heatron: Accelerating the High Power LED Revolution

Heatron offers a wide range of design, development, and manufacturing services, technology competencies including optics, thermal management, power sources and drivers, cost effective production and assembly capabilities, and in-depth industry and technology expertise. Heatron's new LED Design Center offers industry-leading design facilities to accommodate the most complex projects. **CIRCLE 311**



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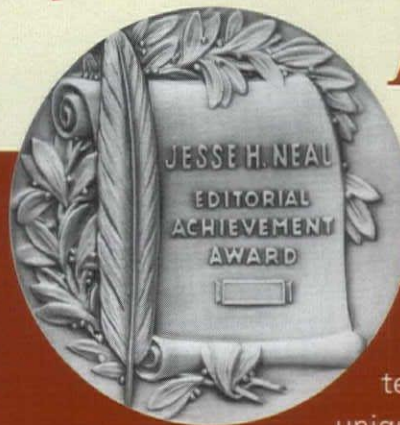


**Luraline**

Vanguard vapor-tight lighting fixtures are ideal for industrial styled interiors and exterior settings requiring extra protection. Suitable for use in wet locations, all fixtures are fully gasketed to withstand moisture and the elements. Offered in pendant, surface and wall-mount configurations with incandescent, compact fluorescent or H.I.D. lamping. Also available is the new Vanguard-E specification-grade, compact-fluorescent pendant with integrated electronic ballast. Phone: 800-940-6588 or www.luraline.com/vanguard. **CIRCLE 313**



Hanley Wood Salutes the Winners of the  
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Hanley Wood's leading magazines are based on our commitment to publish quality content that serves the unique information needs of construction industry professionals. We congratulate our award-winning editors and all the winners of the prestigious Jesse H. Neal Awards.

**Lutron**

Lutron's EcoSystem solution provides daylighting, automated energy management and personal control in a cost-effective system that makes fluorescent lighting control easy to design, install, and maintain for any size project. Its devices employ revolutionary technology allowing each device to listen, think, decide and remember. EcoSystem sensors and controls are free from interfaces and power packs, providing a convenient and simple energy-saving solution. **CIRCLE 314**



**Nexus Lighting**

Savi LED™ lamps with TRUE WHITE TECHNOLOGY™ ensure reliable operation for up to 50,000 hours, offer the equivalent lumen (light) output of incandescent bulbs but reduce energy costs by 75%, and last 15 to 25 times longer than traditional incandescent bulbs. The complete line of bulbs can be viewed on the Company's website at www.NexusLighting.com  
**CIRCLE 315**



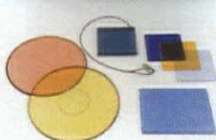
**Sentry Electric**

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. 516-379-4660 www.sentrylighting.com **CIRCLE 316**



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- BUILDER**  
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*Finalist*, Best Subject-Related Series of Articles, 2004  
*Finalist*, Best Single Issue of a Magazine, 2004  
*Finalist*, Best Staff-Written Editorials, 2004  
*Finalist*, Best Subject-Related Series of Articles, 2003  
*Finalist*, Best Single Issue of a Magazine, 2003  
*Finalist*, Best How-To Article, 2003  
*Winner*, Best Subject-Related Series of Articles, 2001  
*Finalist*, Best Single Issue of a Magazine, 2001  
*Finalist*, Best Single Issue of a Magazine, 2001  
*Finalist*, Best Staff-Written Editorials, 2000  
*Finalist*, Best Single Issue of a Magazine, 2000
- REMODELING**  
*Finalist*, Best Department or Column, 2004  
*Winner*, Best Department or Column, 2000  
*Winner*, Best Department or Column, 1999  
*Finalist*, Best Feature Article, 1999
- CUSTOM HOME**  
*Finalist*, Best Department or Column, 2006  
*Winner*, Best Department or Column, 1999
- residential architect**  
*Finalist*, Best Single-Theme Issue, 2006  
*Finalist*, Best Staff-Written Editorials, 2005  
*Finalist*, Best Single-Theme Issue, 2004  
*Winner*, Best Staff-Written Editorials, 2003
- MULTIFAMILY EXECUTIVE**  
*Finalist*, Best Feature Series, 2006  
*Finalist*, Best Single-Theme Issue, 2005  
*Finalist*, Best News Coverage, 2005
- TOOLS OF THE TRADE**  
*Finalist*, Best How-To Article, 2005  
*Winner*, Best Department or Column, 2003  
*Finalist*, Best Staff-Written Editorials, 2001
- AQUATICS INTERNATIONAL**  
*Finalist*, Best News Coverage, 2003
- BIG BUILDER**  
*Finalist*, Best Single Issue of a Magazine, 2005  
*Finalist*, Best Single-Theme Issue, 2005
- BUILDER ONLINE**  
*Finalist*, Best Web Site, 2004  
*Winner*, Best Web Site, 1999

hanley wood

# THE FIRST ANNUAL **R+D AWARDS**

## CALL FOR ENTRIES

### ELIGIBILITY

The awards are equally open to architects, designers of all disciplines, engineers, manufacturers, researchers, and students.

### JURY CHAIR

#### **Eric Owen Moss**

Principal, Eric Owen Moss Architects, Culver City, Calif.; director, Southern California Institute of Architecture (SCI-Arc), Los Angeles

### PUBLICATION

The winning entries will appear in the September 2007 issue of *ARCHITECT*, both in print and online.

### EVENT

Winners will present their ideas at the first annual **R+D Summit**, which will occur at **SCI-Arc in Los Angeles on October 4–5, 2007**. For more information about the event, visit [www.architectmagazine.com](http://www.architectmagazine.com) or email [r+dsummit@hanleywood.com](mailto:r+dsummit@hanleywood.com)

### DEADLINE

**Friday, May 18, 2007**  
regular submission deadline (postmark)

**Tuesday, May 22, 2007**  
late submission deadline (postmark, additional fee is required)

### FEE

**Subscribers:** \$100 first entry  
**Non-subscribers:** \$140 first entry (includes a one-year subscription to *ARCHITECT*)  
**Additional entries:** \$75 each  
**Late entries:** \$50 additional fee per entry by May 22, 2007

### PAPERWORK

Application forms and submission requirements are available for download in PDF format at [www.architectmagazine.com](http://www.architectmagazine.com)

### CATEGORIES

The awards will be judged in three categories, reflecting different stages of the research and development process:

- **Prototype**—Products, materials, and systems that are in the prototyping and testing phase
- **Production**—Products, materials, and systems that are available for use
- **Application**—Products, materials, and systems as used in a single architectural project or group of related architectural projects

The jury will consider new materials, products, and systems as well as unconventional uses of existing materials, products, and systems. Entries will be judged for their potential or documented innovation in fabrication, assembly, installation, and performance. All entries will be judged according to their potential to advance the aesthetic, environmental, social, and technological value of architecture.

NEW TECHNOLOGIES ARE REVOLUTIONIZING THE PROCESS AND PRODUCT OF ARCHITECTURE. TO CELEBRATE ADVANCES IN BUILDING TECHNOLOGY, ARCHITECT AND HANLEY WOOD PROUDLY ANNOUNCE THE R+D AWARDS. THE AWARDS HONOR INNOVATIVE MATERIALS AND SYSTEMS AT EVERY SCALE—FROM HVAC AND STRUCTURAL SYSTEMS TO CURTAIN-WALL AND CEILING-PANEL ASSEMBLIES TO DISCRETE BUILDING MATERIALS SUCH AS WOOD COMPOSITES AND TEXTILES.

FOR MORE INFORMATION EMAIL:  
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## What will be the fate of the incandescent lamp?

With so many recent proclamations to "Ban the Bulb," politicians and manufacturers seem to have made a cut and dry case against incandescent sources. But is there a legitimate complaint? Are compact fluorescent lamps the solution, as this "Ban" would advocate? Or is it a far more complex issue with numerous factors that go well beyond the simple incandescent lamp itself, which has served us for the last 125-plus years? Jeff Miller, President-elect of the International Association of Lighting Designers, starts the conversation this month.

*Architectural Lighting* invites responses from all members of the architecture and lighting design communities. To be considered for inclusion in the June print issue of A|L, responses must be received by May 18, 2007. All responses appear online at [archlighting.com](http://archlighting.com). Reply to [exchange@archlighting.com](mailto:exchange@archlighting.com) or [edonoff@hanleywood.com](mailto:edonoff@hanleywood.com).

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### JEFF MILLER, PRESIDENT-ELECT IALD, DIRECTOR | PIVOTAL LIGHTING

Edison cried. No not really, but I am sure that The Wizard has been twisting in his grave with news of the current surge of global pronouncements declaring the impending death of the incandescent light bulb. Suddenly it seems the filament lamp has become the low hanging fruit of energy efficiency, where politicians, needing to earn their 'green' chops, have made commitments to replacing the light bulb with 'newer technology.' It's been said, by the likes of Australian Environment Minister Malcolm Turnbull that banning incandescent bulbs could cut Australia's greenhouse gas emissions by 4 million tons by 2012. California Governor Arnold Schwarzenegger is exploring similar proposals, and in early March 2007, Philips announced support of a "phase-out of inefficient incandescent light bulbs by 2016." Unsaid is that the proposed bulb ban, is a distraction from the real environmental damage caused by automobiles and dirty coal-fired plants worldwide.

What has also not been said is that people hate fluorescent lighting, that LEDs represent an immature technology which may never yield great energy savings, or become a general illumination light source, and that no one will be using metal halide in their boudoir. Attacking the incandescent light bulb is easy, but misguided, as it is an inextricable part of modern living.

The incandescent light bulb, yes, the plain old warm, dimmable A-19 lamp is a cultural touchstone. The cool compact fluorescent lamp will never be the intimate friend that is Edison's (and Swan's) lamp. Maybe this is nostalgia, after all commercial and institutional buildings have been lit primarily as fluorescent for more than sixty years. Who needs the bulb? Maybe only eccentric romantics.

It can also be argued that the incandescent bulb is quite environmentally friendly. Unlike higher technology lamps, the simple filament bulb does not require rare earth gases and phosphors, leaches no mercury, and requires no proprietary manufacturing patents. The incandescent light bulb is produced worldwide, and is often a local product, which requires less packaging and less fuel for transport from low-wage factories to high-profit markets. Take a look at your next compact fluorescent package and see if it wasn't made in Hungary, China, or Vietnam. If total embodied energy were included in the calculation, would the compact fluorescent lamp still be the great white hope?

But let's be grateful for this debate, as it has awakened many professionals, and hopefully members of the general public to a certain sustainable myopia that has grasped the microphone, a monologue focused mostly on ecological sustainability and less on the necessary balance of economic and social sustainability goals.

The Three-Dimension Concept as outlined in the United Nation's 1992 "Declaration of Rio on Environment and Development," recognized that sustainable development was a balance of three dimensions: environmental protection, economic growth, and social development.

Indeed, in their *Declaration of Interdependence for a Sustainable Future*, the Union of International Architects (UIA)/American Institute of Architects (AIA) World Congress stated in 1993, "...Buildings and the built environment play a major role in the human impact on the natural environment and on the quality of life; sustainable design integrates consideration of resource and energy efficiency, healthy buildings and materials, ecologically and socially sensitive land-use, and an aesthetic sensitivity that inspires, affirms, and ennobles; sustainable design can significantly reduce adverse human impacts on the natural environment while simultaneously improving quality of life and economic well being."

In our world of lighting design, this means that *Quality of Light* must receive greater attention, as a balance to those committed to regulating light as a quantity. This is a critical time for our profession to broadcast its most knowledgeable and passionate voices, as we are in a full swing round of new energy code revisions that threaten to be a serious assault on the visual environment. Does "banning the bulb" and reducing lighting power densities really "...improve quality of life and economic well being?"

With a narrow stringency and utility, government rule makers are in an expedited flurry to further lower lighting power densities (LPDs) across many building types with little regard for the quality of lighting environments these regulations will produce, giving little acknowledgement to the cost of these actions to businesses and the citizenry. Many of the proposals represent significant cuts—20 percent reductions for California Title 24 rules for retail lighting, and 30 percent across-the-board cuts for ASHRAE 90.1, effective 2010.

I fear that buildings designed under these code conditions will be compliant spaces that may 'hit the numbers,' functional but without celebration, embracing an ethos of gray scarcity rather than a future filled with color and vitality. It is possible to create lighting designs that are energy efficient without degrading the quality of the places where we live, work, and associate? Fortunately there are many people in our lighting community who are advocating wisely for the broader use of daylighting strategies, incentives for the wider use of lighting controls, and abandonment of LPDs, which address only connected loads, in favor of methods that focus on actual electrical usage. These professionals know that light is more than the electricity that produces it, and sustainability is about more than carbon footprints.





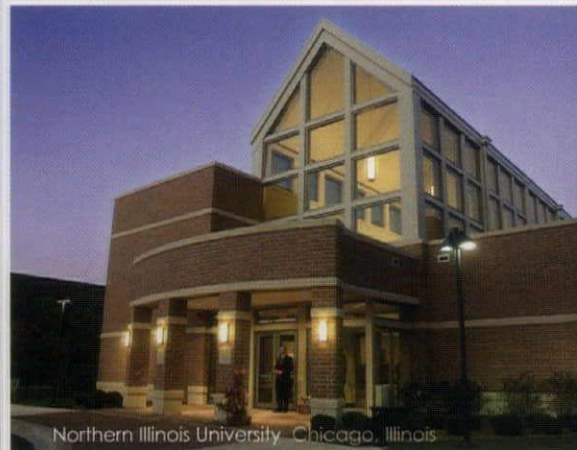
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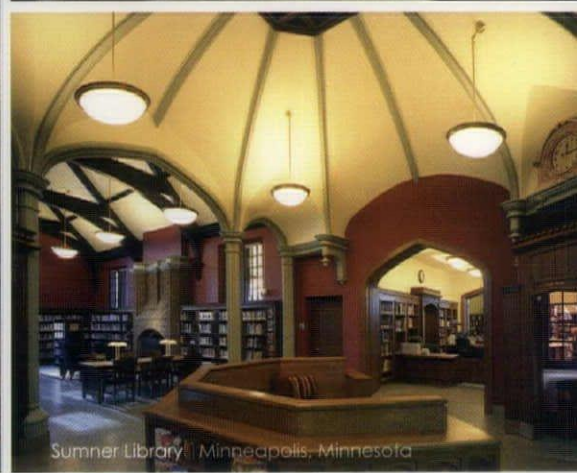
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