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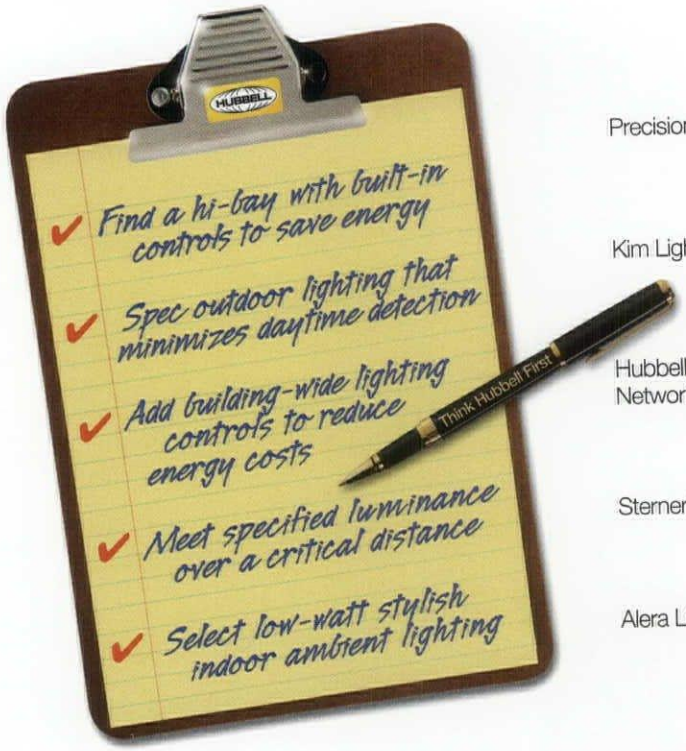

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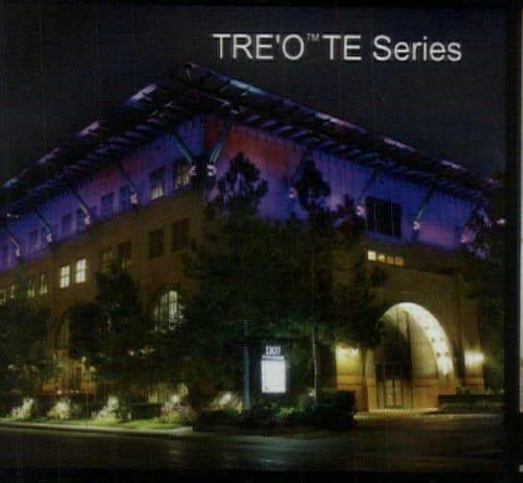

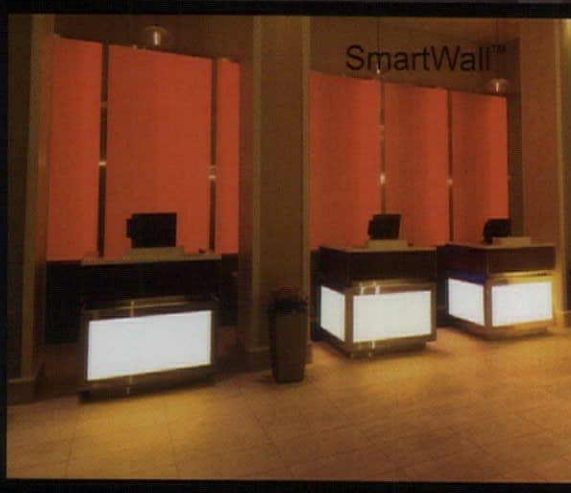

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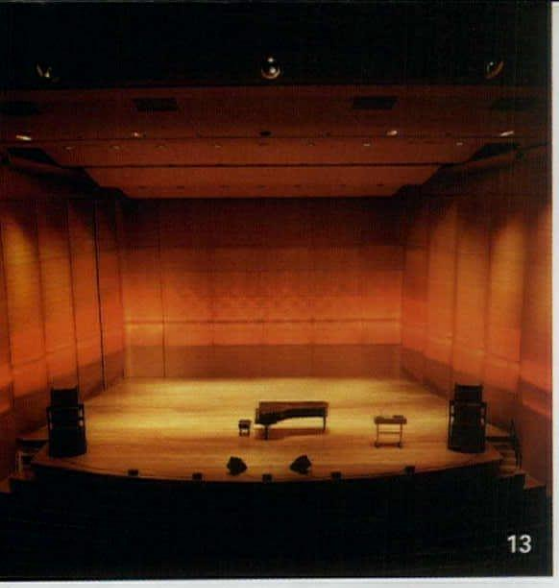

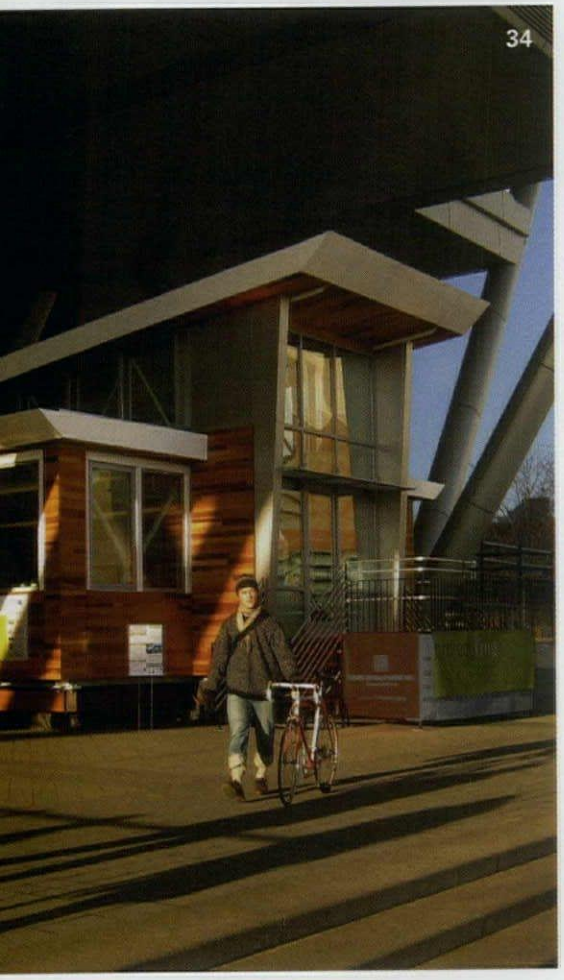

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Cover: Cosmic Ocean, from the new Cosmic Collection from Artemide, designed by Ross Lovegrove. Photograph Courtesy Artemide.

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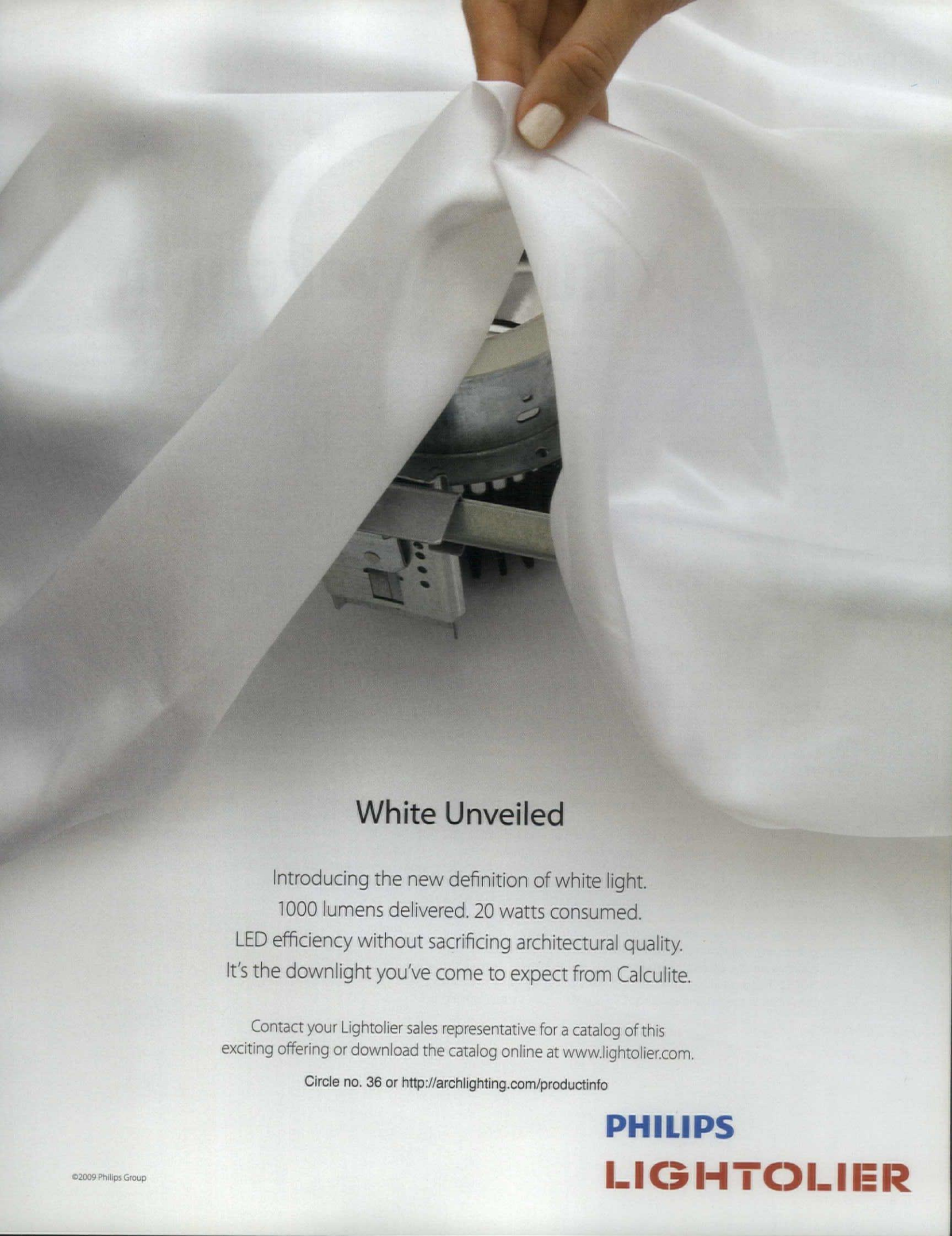

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A Rude Awakening

In what might be akin to the battle cry "Remember the Alamo!" the lighting design community now has its own call to arms—"Remember Texas House Bill 2649 (THB2649)!" Not quite as catchy, I know, but for lighting designers, the stakes are just as high.

For those who might not be aware of what I am referring to, let me explain. An urgent news release issued by the International Association of Lighting Designers (IALD) late in the evening of May 26 alerted its members that the Texas Legislature was scheduled to vote the next day on Texas House Bill 2649 (THB2649). The proposed legislation related to the regulation and practice of engineering and lighting design. Specifically, Sections 3, 5, and 6—an amendment not part of the original bill—restricted the practice of lighting design only to licensed engineers, architects, landscape architects, and interior designers. The bill made no recognition of the National Council on Qualifications for Lighting Professions (NCQLP) exam or individuals who have passed this exam and received the Lighting Certified (LC) designation.

Over the course of the next 48 hours, the lighting community pulled together in the most extraordinary way to resolve this issue before the Texas state legislative session closed. Hundreds of e-mails and phone calls were made to the Texas state senators and representatives who authored the bill, expressing grave concern and requesting that this amendment item be removed from the bill entirely. News updates were made via e-mail blasts, online news articles, blogs, LinkedIn Discussion Boards, and Twitter. In the end, this grassroots effort proved successful and the "lighting designer" language in THB2649 was withdrawn and replaced with language requesting a study by the Texas Department of Licensing & Regulation of the feasibility of licensing in the industry.

Although the immediacy of this situation has resolved itself, this incident urgently highlights three critical issues the lighting industry has long shrugged off—licensing and qualifications, open communication with allied design professions such as architecture and engineering, and the need for the lighting design community to have a full-time advocacy/lobbying voice. It would be a mistake to think that all of the work is complete with this one victory. Rather, the lighting community should use this experience to start a committed and open dialogue on the subject of credentialing, and acknowledge that the NCQLP has not fulfilled its promise of demonstrating value to either the public or the lighting industry. The NCQLP needs to step forward and act as the governing body it was meant to be. If the NCQLP exam and the Lighting Certified designation does not carry the weight to be meaningful to people inside the lighting community, then how can it be expected to hold up to people outside the lighting community who are not familiar with the practice of lighting design?

The issue is important enough to warrant the creation of a special task force with representatives from within and outside the lighting community to lead and monitor the discussion and prepare recommendations for establishing a credentialing system that recognizes the myriad ways one can enter the practice of lighting design, including (but not limited to) architecture, engineering, interiors, and theater. This system must validate the profession not only in the eyes of the lighting community, but associated disciplines and the public.

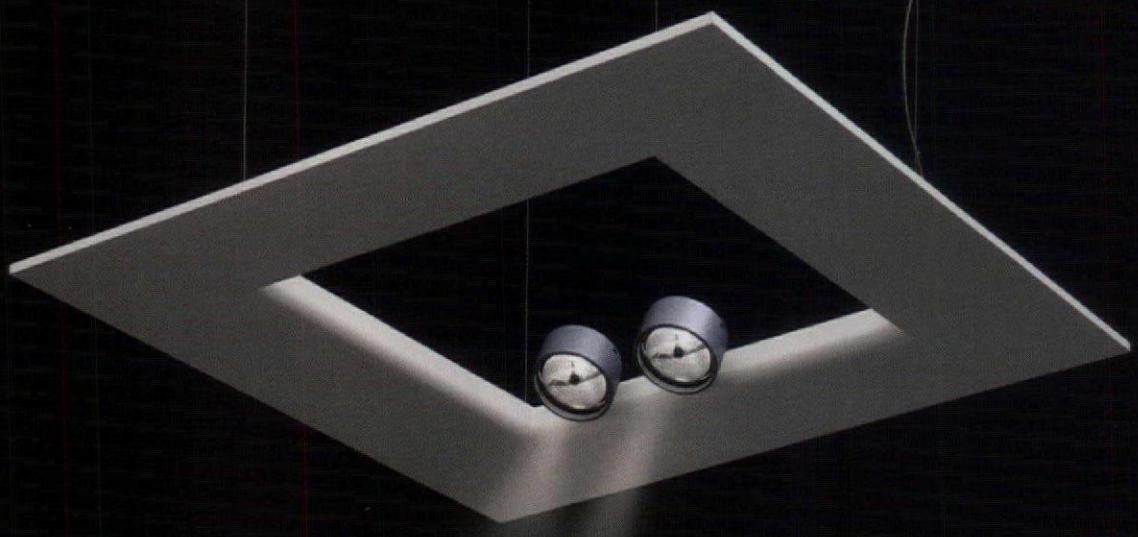
THB2649 also calls attention to a greater need for communication with colleagues in other design disciplines. In fact, it was the lobbyists for the Texas Society of Architects who alerted Austin, Texas–based architect and lighting designer Charles Thompson about THB2649. Thompson then alerted the IALD, and the rest, as they say, is history. Had our friends in the architectural community not extended a hand, we would be dealing with a very different outcome.

Finally, THB2649 necessitates the need for a full-time monitoring system of the legislative issues that impact the lighting design community. The IALD's creation of a public policy liaison is a great step forward, but the situation in Texas proves that this position needs to exist in a full-time capacity, not part time. I hope the IALD will make this modification. It also illustrates that lighting practitioners have the responsibility to act as advocates and keep a watchful eye on issues affecting them at a local level.

THB2649 shows how easy it is for those who are not familiar with lighting design—in this instance, politicians—to potentially dictate the fate of a profession. Until a clearly defined system of credentialing is established, we run the risk of similar legislative scenarios occurring. Let's address this once and for all before we find ourselves in for another rude awakening.

ELIZABETH DONOFF
EDITOR

SPENCER LUM



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EDITED BY ELIZABETH DONOFF

Lightfair 2009

With a record attendance of more than 23,000 individuals, Lightfair 2009 did not disappoint. A full lineup of seminars and workshops, along with a packed exhibit floor featuring 475 manufacturers, kept this 20th anniversary edition of the annual lighting trade show abuzz with new products and innovations.

Environmentalism was the focus of the first keynote speech on May 3, delivered by actor/green advocate Ed Begley Jr. The following day, artist James Turrell spoke about light as art and about how far lighting has come as an industry and profession since he started working in the field during the late 1960s.

With the event's theme of anniversary in mind, two highlights included special master classes—a 20-year historical look at lighting presented by David DiLaura, and a discussion about the independent lighting designer by elder statesmen Howard Brandston, Ray Grenald, David Mintz, Sonny Sonnenfeld, and Bill Warfel. The collective wisdom and lighting experience represented by this gathering of panelists did not go unnoticed by audience members.

On the product front, LEDs were prevalent throughout. Philips asserted its presence as a new North American conglomerate by exhibiting at a Light+Building–style booth in the main entrance to the exhibit floor, and the Lightfair Innovation Awards lived up to its name by honoring Lightolier/Philips' new Calculite Solid-State Downlights with the Most Innovative Product of the Year. Although the challenges of the current economic crisis remained on everyone's mind, based on attendance and energy one would have been hard pressed to know that we are in a recession. It's reassuring to know that even in these down times the lighting community supports its industry events.

Cooper SOURCE Awards

On May 4, in a luncheon ceremony, Cooper Lighting presented its 32nd Annual SOURCE Awards. Seven projects received awards at the professional level and five projects at the student level. The highest honors went to lighting design firms Sean O'Connor Lighting for its AT&T Experience Prototype Stores project and to Robert Singer & Associates for the Watson Divide Residence (shown). For more details about the SOURCE Awards, visit cooperlighting.com/content/source/awards.

IALD Awards

On May 6, the IALD presented its 26th Annual Lighting Design Awards at an evening ceremony. Nineteen projects received a range of citation, merit, and excellence awards, with the grand prize—the Radiance Award—going to Speirs & Major Associates, of London, for the Entrance and Atrium, at 3 More London Riverside. For complete details about all the winning projects, visit iald.org/about/awards/award.asp?year=2009.

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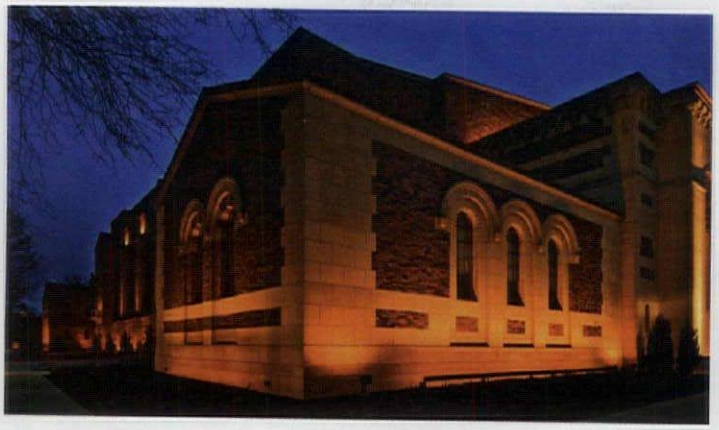
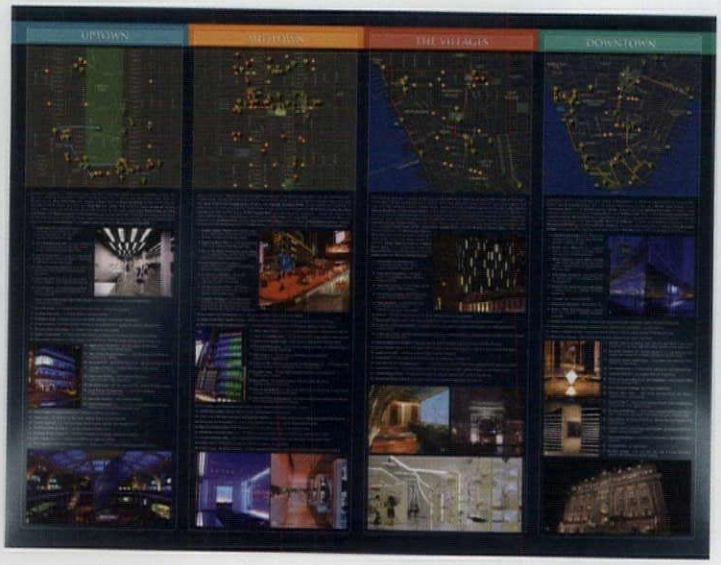


GE Edison Awards

On May 4, General Electric presented its 26th Annual Edison Awards. In a ceremony held during the evening, 15 projects received an array of special citation, merit, and excellence awards. The ultimate prize of the evening, the Edison Award, went to the Sacramento Memorial Auditorium. The lighting for this project had been designed by James R. Benya of Benya Lighting Design, Michael Neils and Juan Jose Villatoro of M. Neils Engineering, and James E. Christensen of the City of Sacramento. For full details about the awards and winners, visit geconsumerproducts.com/pressroom/press_releases/lighting/commercial_lighting/ge_08edisonaward.

NYC Nightseeing Map



Can't find your way in the dark? Then look no further than the IESNYC's fifth edition of its night walking guide. Four walking tours take you to recent award-winning architectural lighting design projects throughout Manhattan. Distributed at Lightfair, the map is available at selected venues throughout the city and can also be downloaded at the IESNYC's website—www.iesnyc.org/CityLights.

CLOCKWISE FROM TOP LEFT: COURTESY GE, COURTESY PLDA, COURTESY IESNYC

Dark Night

On May 5, an overflowing roomful of lighting designers, architects, lighting sales reps, interior designers, and students crossed over to the dark side. Held at Xenon Architectural Lighting's showroom in lower Manhattan, the event, titled Darknight, was hosted by Martin Lupton, president of the Professional Lighting Designers' Association (PLDA), and was a meditation on the absence of light—the lost twin of luminance. The evening was free of any black magic, but still conjured up darkness in all of its umbrageous glory. The moody atmosphere was set with a low-light installation made out of products from Xenon and designed by students at the Parsons Master of Fine Arts in Lighting Design program.

Glenn Shrum, PLDA's newly appointed coordinator in the United States, organized the program as an alternative to the evening celebrations traditionally held during Lightfair. He invited a dozen professionals to present in a Pecha Kucha–like format. Each presenter showed 10 slides, which automatically changed every 20 seconds. The diverse lineup included an international array of professionals: Lighting designers and architects participated, as well as an astronomer and an oceanographer. The mix was inspiring and surprising. Kay Bidle, a professor in the Department of Marine and Coastal Sciences at Rutgers University, dove into water depths during his 200 seconds, shedding light on the fantastical bioluminescent sea creatures that live in total darkness.

The standing-room-only crowd sipped their drinks and observed the program, while DesignCurve principal Clifton Taylor ventured into the profound, quoting Shakespeare's Macbeth: "The instruments of darkness tell us truths." As the slides quickly switched, the Darknight presentations formed a kind of rapid-fire poetry, neither on the technical nor the mundane, but evocative of the design process. **MIMI ZEIGER**

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A Slice of Urban Theater

ALICE TULLY HALL'S ELEGANT RENOVATION IS THE FIRST STEP IN THE REMAKING OF NEW YORK'S LINCOLN CENTER

The renovated Alice Tully Hall, best known for hosting performances of chamber music, is warm and welcoming. Lighting is used not only to set the mood and make the patrons feel comfortable, but also to give the audience members cues on when the performance is set to begin. LEDs behind sections of the wall veneer turn on, causing them to glow pink, and the lights are attached to dimmers so that the stage manager can adjust the illuminance as the show begins.

COURTESY OF EMILE H DUBUISSON

Twilight at New York City's Lincoln Center for the Performing Arts is a glittering, high modernist affair. Light spills onto the main plaza from behind the iconic arched façade of the Metropolitan Opera House and the portico of Philip Johnson's David H. Koch Theater just as ticket holders feed into the lobbies where chandeliers are aglow. Lincoln Center was developed at a time when urban renewal was painted in broad, block-clearing strokes. As such, the '60s-era complex, which is composed of some 12 cultural institutions, covers a swath of Manhattan's Upper West Side between Columbus and Amsterdam Avenues, from West 60th Street to West 66th Street. Architect Wallace Harrison's master plan for the main plaza envisioned the space as a theatrical interplay between architecture and performance, while satellite structures got short shrift. For 40 years, the Cinderella-like Alice Tully Hall, located at the corner of West 65th Street and Broadway, never got to go to the ball.

But all that changed in 2002 when Alice Tully Hall was granted a fairy godmother—New York architectural firm Diller Scofidio + Renfro (DS+R), who were engaged along with collaborators FXFowle to redevelop the entire Lincoln Center site. The hall, which opened in February, is the first step in this redevelopment, with the rest of the campus makeover—a series of discrete projects—set to be completed in early 2011.

Understanding DS+R's tactical approach to the site requires a bit of historical context. Lincoln Center broke ground in 1959, and while construction stretched across the 1960s, its architecture represents haute culture, not flower power. Alice Tully Hall opened in 1969 and the blocky building designed by architect Pietro Belluschi, which houses the Starr Theater concert hall and the Juilliard School, turned a cold shoulder to Broadway, and offered up a gloomy lobby off a gusty, sidewalk-level patio. Poised at the break between decades, generations, and ideologies, it more or less hunkered down, even as the programming inside grew more and more daring. (*Last Tango in Paris*, the controversial film, premiered there in 1970.)

DS+R has literally sliced open the hall to reveal what's inside. In a

Near concert time, ticket holders move through the lobby from the entrance toward the theater. L'Observatoire International used cove-mounted PAR30 fixtures to highlight the rich brown color of the wood used in the lobby's hallway (above). The lighting scheme also prevents glare on the lobby's glass curtain wall, and allows passersby on the street to see clearly into the space.

bold and dynamic move, the architects sheared off the existing building's corner, eliminating the clunky relationship the original structure had to the immediate surrounds and its urban context. In the evening, the tip of the wedge-shaped cut (the underside of the Juilliard School and the lobby ceiling) is brightly illuminated by a single high-powered metal halide floodlight. This new Alice Tully Hall is no shrinking violet.

DS+R architects Liz Diller and Ricardo Scofidio have a penchant for avant-garde theatricality. Their scheme not only retrofits the auditorium but also expands the lobby from 707 square feet to a whopping 6,161 square feet, adding a café and a small outdoor grandstand in the process. A three-story glass curtain wall greets visitors, and the transparency is welcoming. Although sunken, the amphitheater leading to the entrance seems a better concept than practice. (Then again, Juilliard students eager to perform might use it for spontaneous performances.) Still, by strengthening the connection between inside and outside, DS+R's design chips away at the formality associated with Lincoln Center. The café serves up espresso and snacks all day. At concert time, ticket holders mill about the grand foyer or casually linger at the bar. Lighting designer Hervé Descottes, founder and principal of New York–based lighting design firm L'Observatoire International, used a channel of cove-mounted PAR30 fixtures to wash the rich brown of the tongue-and-groove muira-piranga wood wall that wraps the exterior walls of the auditorium. As a result, there is no glare on the glass façade and the view from the street penetrates deep into the lobby. "We wanted to create a seamlessness between the outside and the inside of the lobby; by lighting the vertical surface, we emphasized the transparency," explains Descottes.

From street to seat, the spaces transform and, in doing so, they prepare the ticket holder for the start of the performance. Descottes followed the lead set by DS+R. "Their architecture was very clear, so we reinforced the scheme with our [lighting] language," he says. The grandness of the foyer gives way to the more compressed inner lobby outside the theater doors, which are tucked under the mezzanine-level patron salon. The lighting at this inner lobby is straightforward, but with careful details: A pattern of recessed downlights is tucked seamlessly into the ceiling and another hidden line of cove-mounted fixtures warm the wood panels.

Everything then changes as the visitor enters the stairwells leading to the theater. Clad in sound-dampening felt, with fixed-position halogen downlights, the spaces are, according to the architects, designed to be sensory deprivation chambers. The result goes beyond hush. The urban drama of the lobby and entry sequence simply drops away.

The need to dampen the senses comes from an inherent duality in the project. While the new

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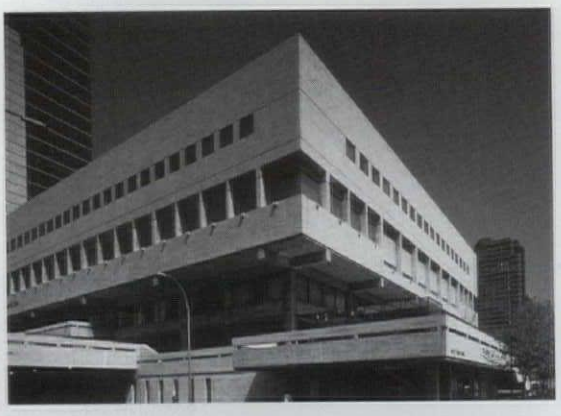
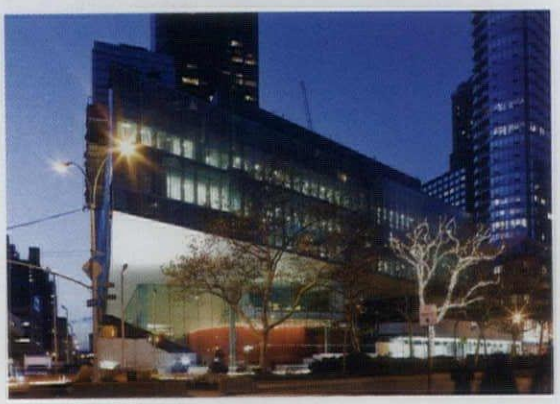
"We wanted to create a seamlessness between the outside and the inside of the lobby; by lighting the vertical surface, we emphasized the transparency."

—Hervé Descottes, L'Observatoire International





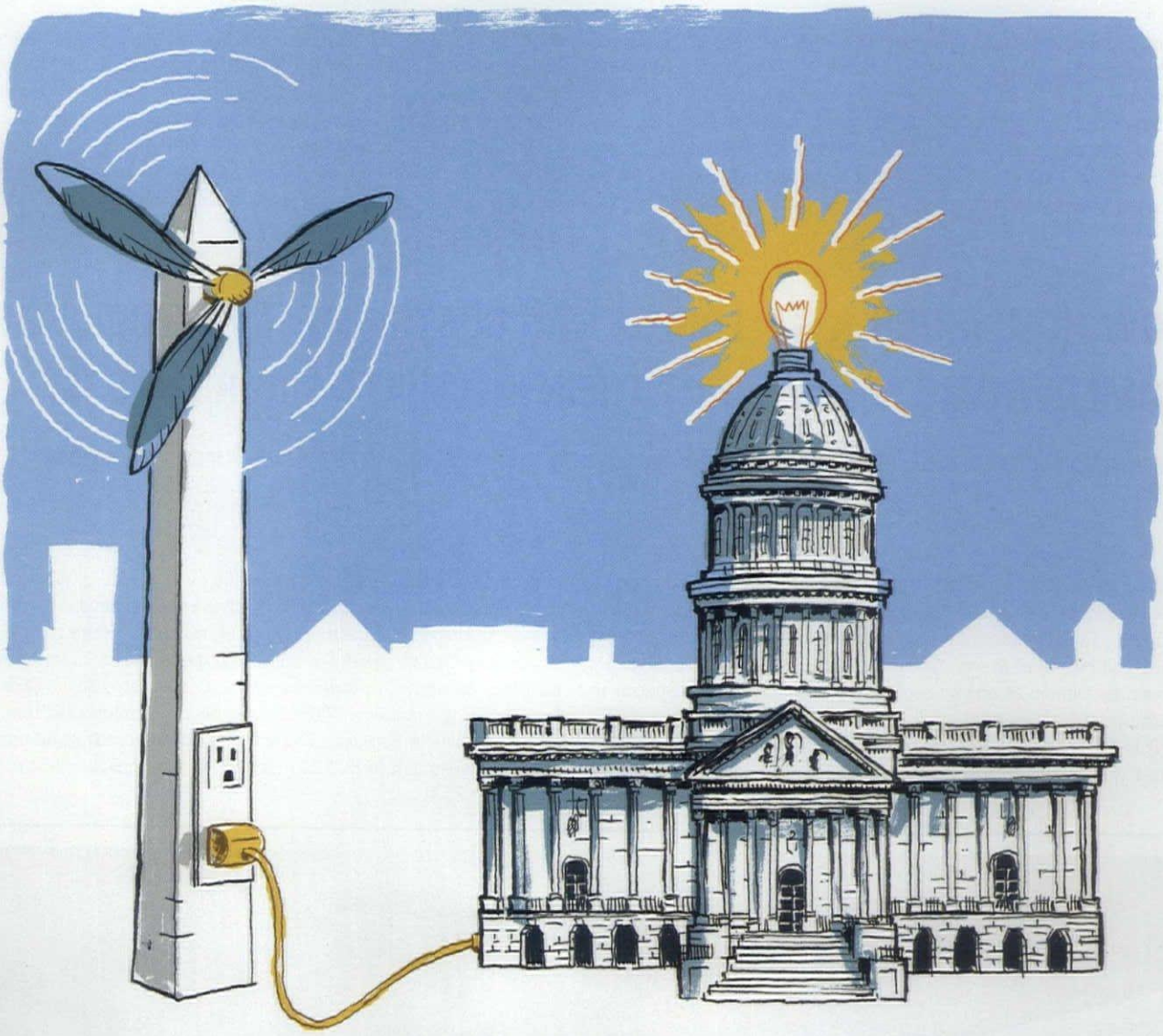
The original Alice Tully Hall (top) was a study in Brutalism, as was the original design for Lincoln Center. Diller Scofidio + Renfro's renovation (above) makes the building more visible by cutting off the corner of the building to make the lobby space more welcoming.

design is concerned with making the lobby a public event, Alice Tully Hall is best known for hosting chamber music, which requires an intimate setting. The renovated Starr Theater embraces its audience. Custom-molded moabi veneer and resin panels wrap the walls and ceiling. The wood is warm-toned, like a cello, and the effect is like sitting in a resonating string instrument.

Adding to the warm embrace is the rosy LED house lighting that L'Observatoire and DS+R installed between the auditorium's veneer walls and the existing structure. Prior to show time, the LEDs glow pink behind the translucent veneer. The diodes are linked to the dimmer boards, so the stage manager can increase or decrease the LED's blush as the performance begins. "The intent was to convey that this is not a static place. It is a theater, not a museum. It changes," Descottes notes.

Offering something akin to a sophisticated lava lamp appeal, the lighting scheme brings the theater not back to the summer of love, but into the contemporary era. Ultimately, the entire lighting scheme is as much cutting edge as it is familiar. "When you go to the Met, the chandeliers go up and the lights go on at the same time," Descottes says, drawing connections with Lincoln Center's grande dame. "It is the same with the LEDs at Alice Tully Hall. It is about setting the mood—you are in your seat and waiting for the show to start—you are part of the change of atmosphere." **MIMI ZEIGER**

TOP: SANDOR ABCS/COURTESY LINCOLN CENTER; ABOVE: IWAN BAAN/COURTESY LINCOLN CENTER



PAUL HOPPE

ILLUMINATING CHANGE

THE OBAMA AGENDA HOLDS BRIGHT PROMISE FOR LIGHTING

Spurred by international events, climate change, and economic crises, American presidents have been promising a new direction on national energy policy for nearly four decades. But despite the campaign promises and good intentions, America remains as dependent on fossil fuels to power our cars, homes, and businesses as we were when Richard Nixon was president. Now, with the reins of power firmly in Democratic hands for the first time since the 1990s, there's widespread agreement in Washington that last November's election represented a watershed moment for U.S. energy policy. "I'm very much of the opinion that this is an irreversible political and economic trend that once it picks up momentum, which it will over the next four years, cannot be derailed," said Rep. Ed Markey (D-Mass.), who has focused on energy and environmental policy throughout his more than 30-year congressional career and is the co-author of a major energy bill moving through the House, in an interview earlier this year.

Now the Obama administration and its congressional allies are crafting a complete overhaul of the way America produces and consumes energy. To ease global warming, Democrats are planning to place a cap on carbon dioxide and other greenhouse gases. A complementary plan aims to reduce U.S. dependence on foreign energy by investing

heavily in renewable energy production—and President Obama wants to double production in three years. The Markey legislation, co-sponsored by House Energy and Commerce Committee Chairman Henry Waxman (D-Calif.), moves toward both goals. As currently written, the bill's carbon cap would reduce emissions to more than 80 percent below 2005 levels by 2050, while requiring that 15 percent of U.S. electricity be generated from renewable sources, such as wind or solar, by 2020.

the National Electrical Manufacturers Association (NEMA), the trade association that represents major lighting manufacturers. Pitsor says NEMA's approximately 450 member companies are seeing a spike in interest for lighting technologies that improve energy efficiency in buildings. Energy usage in buildings is the cause for at least 40 percent of U.S. carbon dioxide emissions, according to the Alliance to Save Energy, a nonprofit coalition of business, environmental, government, and

"WE KNOW HOW MUCH A GALLON OF GAS COSTS, BUT I WONDER HOW MANY HOMEOWNERS KNOW WHAT THEIR KILOWATT-HOUR RATE IS."

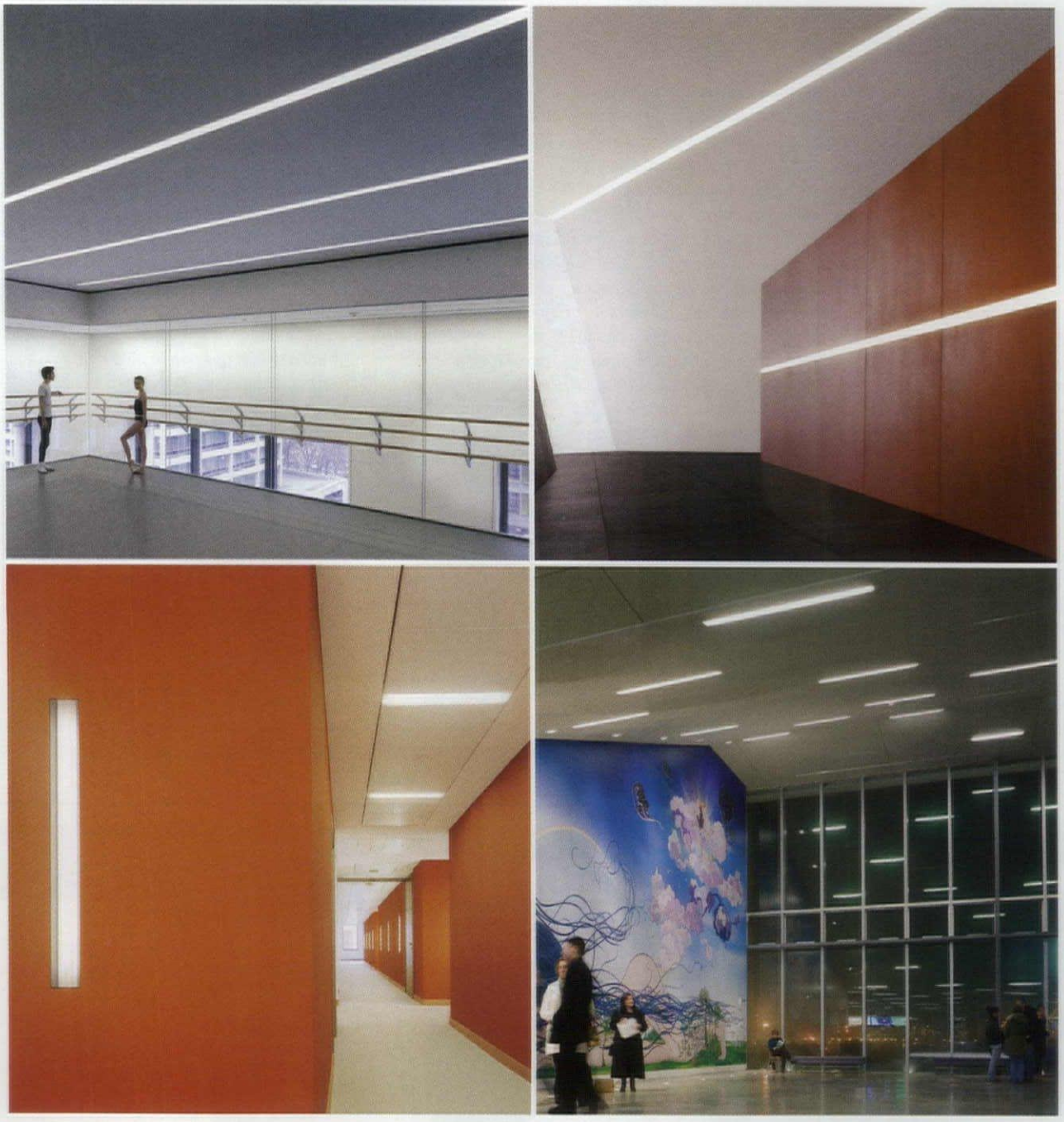
—KYLE PITSOR, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION VICE PRESIDENT FOR GOVERNMENT RELATIONS

Also underpinning nearly the entire Obama administration's energy agenda is an across-the-board emphasis on reducing demand and use. "Energy efficiency and conservation is where the greatest gains will be," said Steven Chu, the Nobel Prize–winning physicist chosen by Obama as energy secretary, to reporters after a speech in Washington, D.C., in April.

This focus on efficiency holds huge implications for the lighting industry, says Kyle Pitsor, vice president for government relations for consumer interests. "There's been a little bit of a pent-up demand and roadblocks that have been removed with the new administration and an interest in looking at what's commercially available," Pitsor says.

An early Obama priority is improving the efficiency of government buildings and private residences—an area that saw billions of dollars included in the massive $787 billion economic stimulus bill that was signed into law in February. The stimulus dollars represent an unprecedented investment in building retrofits, including $4.5 billion to help

School of American Ballet, NY and Institute of Contemporary Art, MA photos by Iwan Baan



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the General Services Administration retrofit federal buildings, $4 billion for public housing upgrades, and $5 billion in weatherization assistance for low-income residents to improve the efficiency of their homes. Pitsor says the stimulus funds represent a rare opportunity to upgrade the lighting systems in existing buildings. "A large percentage of the building stock has not been upgraded in decades," he says.

Lighting could also see a boost from more than $3 billion in grant money included in the stimulus for states to encourage energy-efficiency projects. Markey's proposed legislation would also create a separate pot of money for the states that could be used for education and outreach, an area Pitsor believes is essential in this rapidly changing marketplace. "What we find is that we have wonderful energy-efficient products available but they're not getting deployed," he says.

In addition, stimulus funds have tripled the operating budget for the Department of Energy's Commercial Building Initiative, a partnership between the government and the private sector that aims to make "net-zero" building technology commercially available by 2025. (A building that is "net-zero" would conserve and create as much energy as it takes from the electrical grid.) Drury Crawley, the DOE's team leader for the effort, says lighting will play a key role in meeting that goal. To that end, the target for lighting efficiency will be a 20 percent increase over the current target of 30 percent as outlined by ASHREA90.1-2004.

NEMA's Pitsor says early indications show that DOE research efforts into emerging lighting technologies, such as LEDs and OLEDs, are slated to receive major government funding increases in the coming fiscal year as well. "That technology will be quite revolutionary in terms of how we look at lighting going forward," he says.

The Obama administration is working hand-in-hand with Congress to implement other items of its energy agenda as well. The House and Senate are at work on sweeping energy bills that will contain first-time federal renewable energy mandates and a cap-and-trade system for controlling greenhouse gases—both items which will carry potential for lighting. The creation of a cap-and-trade system—under which the federal government determines a cumulative annual limit for all sources of greenhouse gases and issues tradable credits for emissions to companies, thereby creating a financial incentive to reduce pollution—will have electric utilities seeking out new measures to reduce use and save money. In addition, to accommodate the vast quantities of renewable electricity anticipated to come online in the next decade, lawmakers are expected to invest substantially in a new smart electrical grid that will rely heavily on computerized technology, including sensors, to determine power needs.

"One thing utilities can do is to look to buildings as a source for reducing their energy needs, and therefore their credit needs," says Ryan Colker, manager of government affairs for the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHREA), which helps develop efficiency standards. NEMA's Pitsor predicts that the end result will be a growing consumer awareness of energy use in the coming years. "We know how much a gallon of gas costs, but I wonder how many homeowners know what their kilowatt-hour rate is," he says. **GEOF KOSS**

Geof Koss writes about the intersection of politics and policy for CongressNow, *a Washington, D.C., news service. He has worked for newspapers in Colorado and Oregon, and is a regular contributor to* Planning *magazine and the political newspaper* Roll Call.

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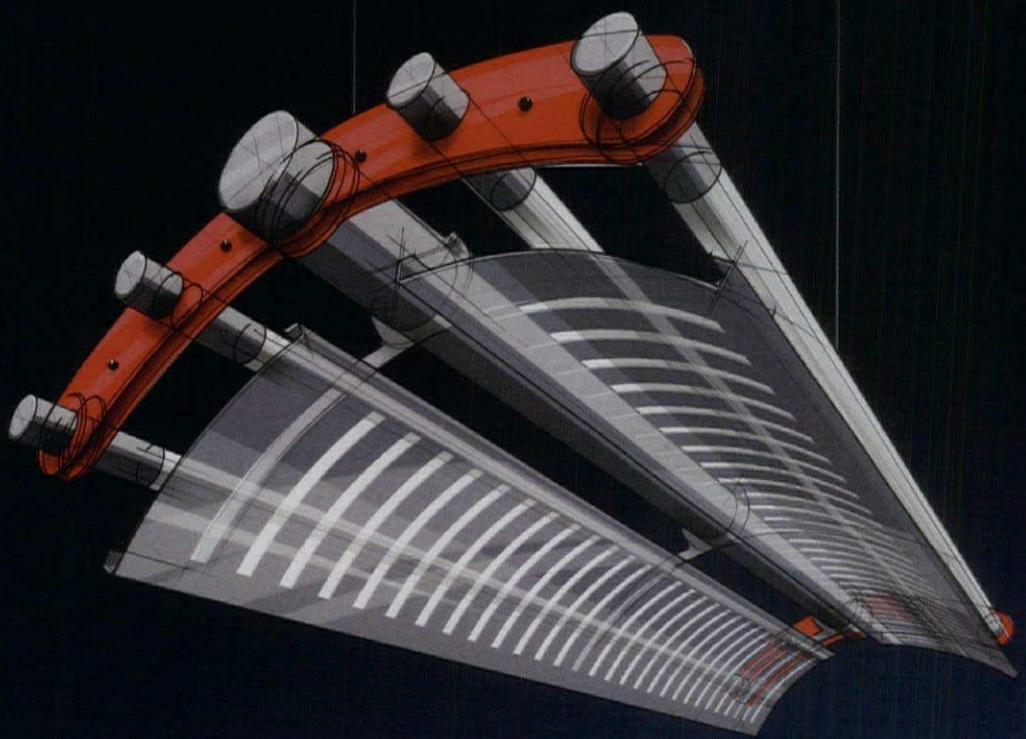

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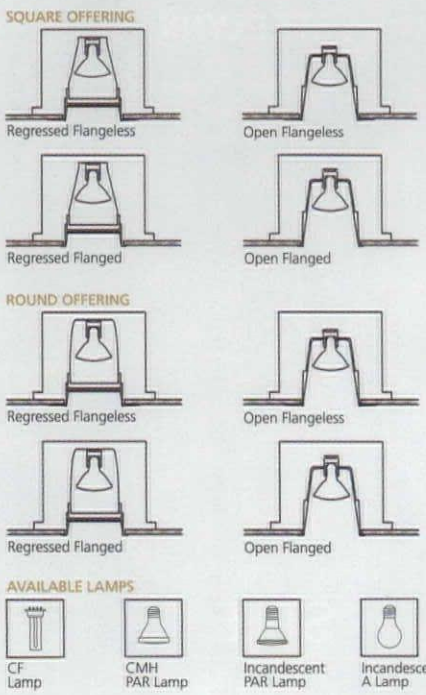

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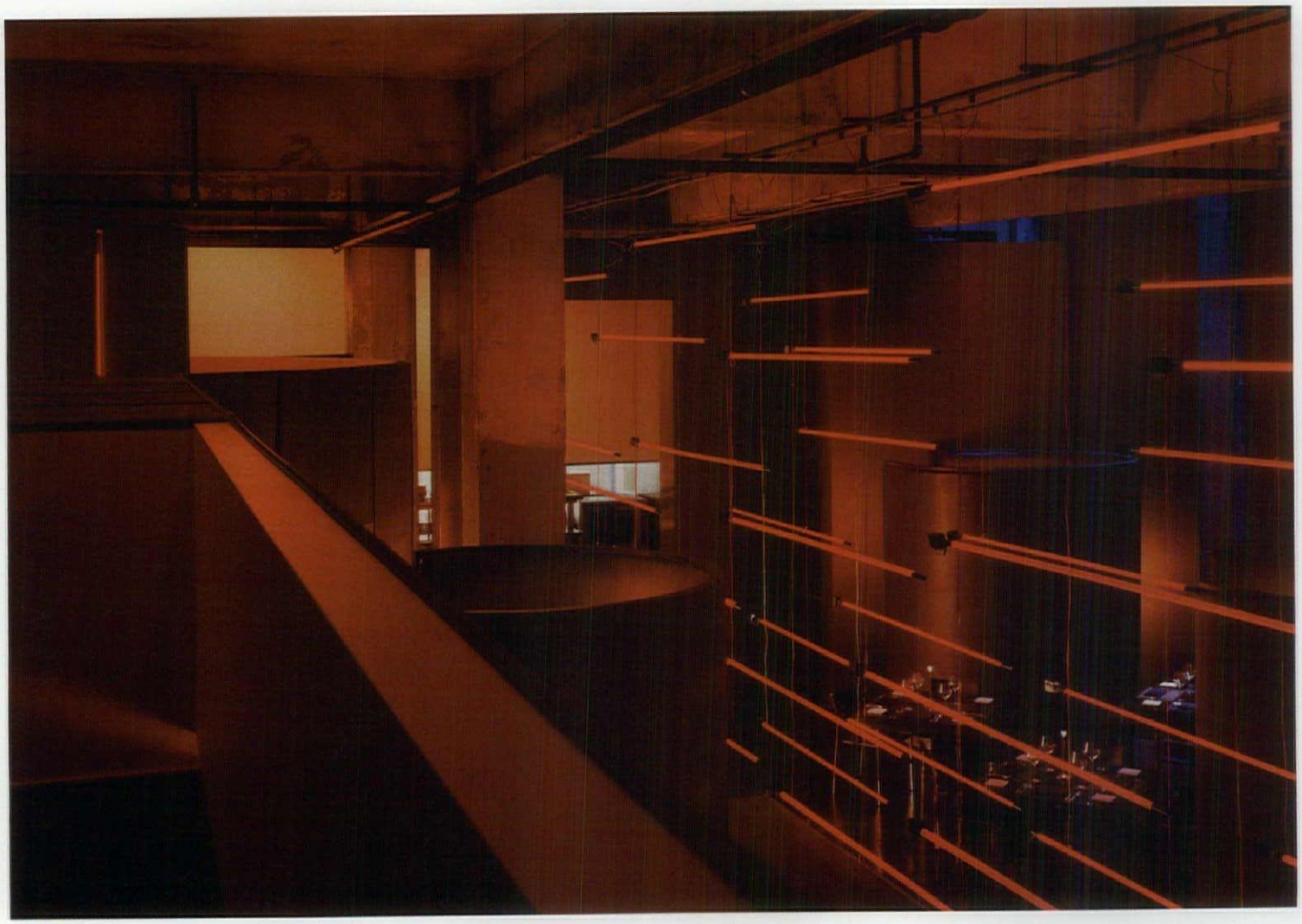
RED PRIME STEAK, OKLAHOMA CITY

CHALLENGE: REINVENTING THE IMAGE OF THE STEAKHOUSE WHILE HONORING A HISTORIC BUILDING THROUGH LIGHT AND DESIGN

Project Red Prime Steak, Oklahoma City **Design Team** Elliott + Associates Architects, Oklahoma City (architect and lighting designer); Kathy Reynolds and Womack Electric, Oklahoma City (custom neon) **Photographer** Scott McDonald/Hedrich Blessing, Chicago **Project Size** 20,174 square feet **Manufacturers** Lightech, Lithonia Lighting, Lumascape, Paramount, Starled, Swivelier, Tech Lighting, Winona Lighting

Red neon lighting, the signature feature of restaurant Red Prime Steak, strikes a bold note along the streetscape of downtown Oklahoma City. The red neon emits a soft glow and helps distinguish the wine wall—with a capacity to hold 7,150 bottles—that separates the main dining room from the bar area.



To light the interior and play off the culinary focus—red meat—Elliott + Associates Architects hired artist Kathy Reynolds to design the red neon lighting concept. Eight-foot-long suspended neon tubes run through the dining room and the bar, but the tables are equipped with 4000K LEDs so that the food does not appear red.

SOLUTION The name of the restaurant ties together two of Red Prime's most important elements: red meat and red neon. Architect Rand Elliott of Elliott + Associates Architects in Oklahoma City says his goal was to make dining at Red Prime a sensory experience. "We developed what we call 'the procession,'" Elliott says of the corridor that runs through the center of the restaurant. "In order to get to your table you go through the procession, which is lined with tubes of red neon." While LEDs were considered, Elliott says he selected neon for its warm color. Designed by artist Kathy Reynolds, the lighting concept, dubbed "Red Wind," uses 8-foot-long ruby red neon tubes suspended from a ceiling cable grid. It's the design element that draws one's eye upon entering the space.

The lighting design is integrated throughout the entire project. The soft red glow of the neon is visible from the street and permeates through the wine wall. The bar features a translucent top made of a resin that is uplit by T8 fluorescents covered with a red gel. Even in the restrooms, the neon lighting runs along the back wall of the toilets. But the red hue throughout isn't overpowering. "Once you get into it, you don't feel like it's thick," Elliott says. "It's a very warm space." However, to ensure that the lighting concept didn't appear to turn the food red, 4000K white LED fixtures are used at each table.

Red Prime is housed in Oklahoma City's historic Buick Building, built in 1911 as part of an area known as Automobile Alley. Elliott points out that he was keen on maintaining some of the building's original elements. One example is a series of small 25W incandescent lamps placed on the ceiling grid. These bare bulbs represent the original light fixture locations, and in addition to the LED table lamps, are only the second instance where white light is employed. "The rawness adds a certain informality and brings comfort to the space," Elliott notes.

The building's high ceilings also presented a challenge. "How do you take 18-foot-tall ceilings and make the space feel intimate?" he asks. The solution was to handle the dining room's scale, employing elements such as 8-foot-tall booths and washing the restaurant in red neon.

Starting with the idea of kitchen as stage and food as art, Elliott and his team worked to create a sensual, memorable atmosphere with all of the design and lighting elements contributing to the diners' experience. Preserving the historic components and mixing them with what Elliott refers to as "modern insertions" provides the restaurant with its desired atmospheric conditions. "We all know that the color red gives a person's complexion and outlook a certain romance," he explains. "It makes for an exciting, warm experience, and that was our intention from the beginning." **JENNIFER LASH**

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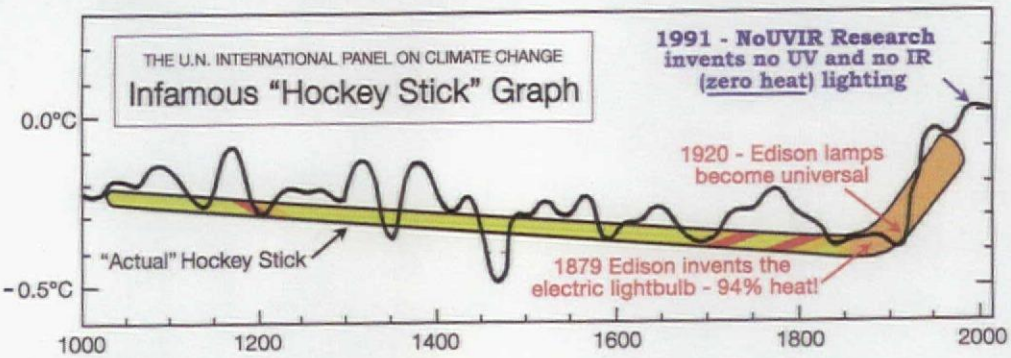
UN Global Temperature Data Shows Direct Link to Advances in Lighting!

New York - Recent U.N. global temperature data shows a remarkable correlation to historic events in the lighting industry. The U.N.'s infamous "Hockey Stick" Graph shows that despite a gradual overall decline in temperatures over the proceeding millennium, even when including the period of the Industrial Revolution, the adoption of incandescent and fluorescent lighting corresponds with a sudden rapid increase in world wide temperatures.

Some experts argue that the 94% infrared content of incandescent lamps and the 70% IR of fluorescent lights are responsible for much more than fading, photochemical and photomechanical damage. While there are a number of factors involved, the fact remains that the increase in global temperatures almost exactly matches the growth of conventional lighting. It is also true that increases in global temperatures stopped and then reversed at about the same time that NoUVIR Research began reducing energy use with hugely efficient, UV and IR free, fiber optic lighting.



"The president says, 'Never waste a crisis.' Perhaps climate change and financial crisis will finally make us look at the efficiency of our lighting. " said **(Cont. pg. A-8)**

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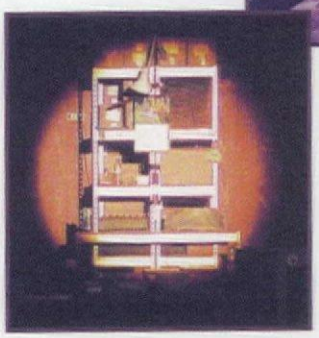

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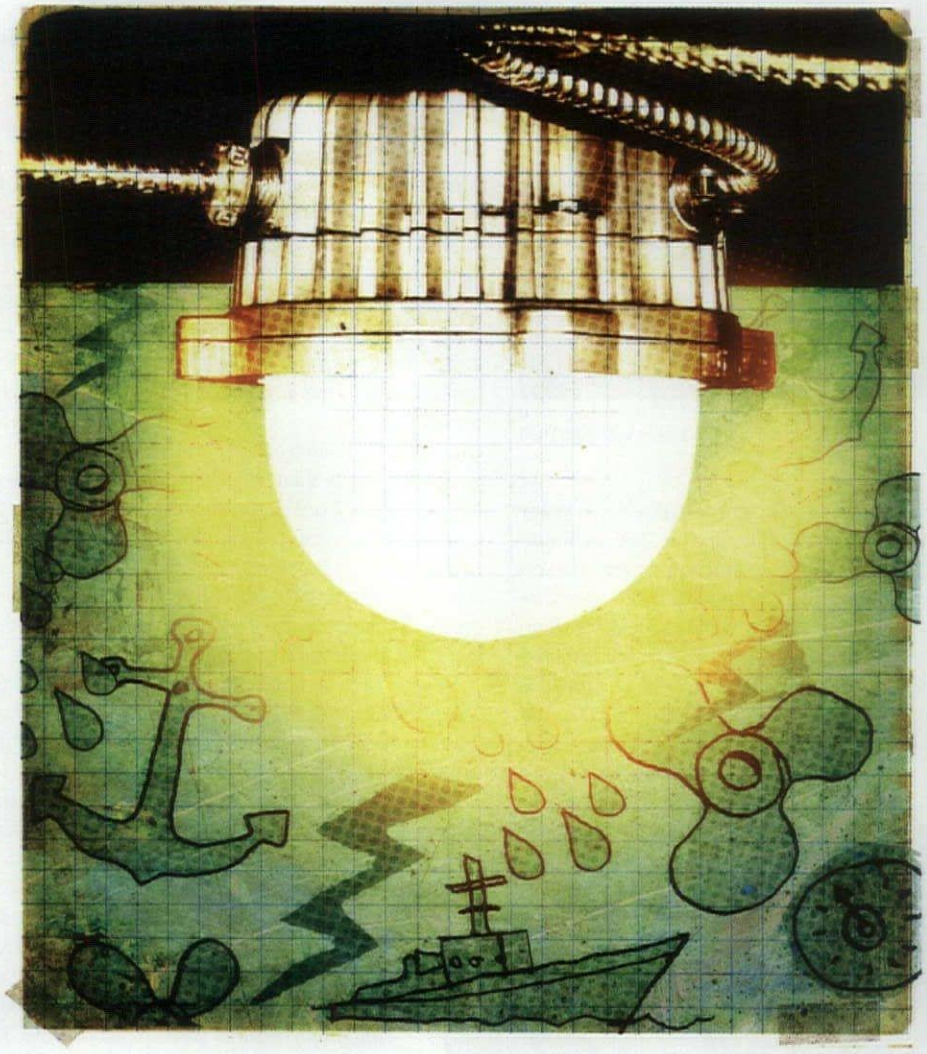


RICHARD BORGE

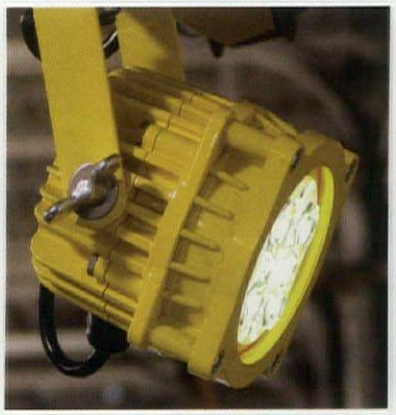
Adaptive Light

RESEARCH SETS THE STAGE FOR DEVELOPING FIXTURES ACROSS APPLICATIONS

In his more than 15 years in the commercial lighting industry, Roger Buelow had never heard of the "Spiderman test." It was 2004 and Buelow, vice president of Ohio-based Energy Focus, had just completed several months of rigorous testing for a new LED-based light fixture designed specifically for naval destroyer ships. Naval Sea Systems Command, the organization responsible for setting specifications for naval ships, had subjected the luminaire prototypes to a series of grueling assaults, and Buelow thought he'd seen it all—salt sprays to replicate rough seas; extreme temperature shifts to duplicate the heat of the equator and the cold of the North Pole and South Pole; impact with a 450-pound hammer to simulate missile fire; and intensive vibration to mimic other combat conditions. The fixtures were even tested to ensure low-electromagnetic interference, so as not to impede the Navy's weapons and radar systems.

The prototype—a hanging globe light that looks a bit like a jelly jar—was being installed on a destroyer for further feedback in November 2004, when it caught the attention of a Navy electrician. "This may not pass the Spiderman test," he mused. Buelow soon discovered what the electrician meant. During long trips at sea, sailors, bored and looking for entertainment, have been known to traverse corridors by swinging from one fixture to the next. "The lights needed to be robust enough to handle that," Buelow says.

Turns out the lights are plenty robust. The U.S. Navy's Program Executive Office for Ships (PEO Ships)—the organization responsible for building and outfitting naval vessels—installed the prototypes for full-scale evaluation onboard three destroyers in 2007 and 2008. The trials have been a great success and PEO Ships anticipates qualifying the LED fixtures for widespread use later this year. "We've been doing incandescent lighting in the Navy for [many] years," says Glen Sturtevant, director for science and technology for PEO Ships. "These [LED fixtures] are head and shoulders above the traditional lighting we've been installing."



Energy Focus brought their Navy-tested technology to the commercially available LED DockLight (left) and the LED LandScape outdoor fixtures (right).

Energy Focus wasn't always in the business of developing new technology for the military. Originally founded in 1985 as Fiberstars, the company built its reputation on fiber optic products and lighting for museums and retail applications. In 2000, the company began working with the Defense Advanced Research Projects Agency on an initiative to create high-efficiency distributed lighting that could better use optics to spread and focus light. The research resulted in a patented optic to reduce glare. By 2006, the company was collaborating with Sturtevant on the naval lights.

Sturtevant says partnering with commercial companies like Energy Focus helps foster new applications for both the military and civilian marketplace. "If a product survives a Navy ship environment, it can survive any application ashore," he says.

Energy Focus has since brought their advanced LED technology onto dry land. The design of the naval light has been reconfigured for commercial environments. The marine-grade electronic specifications were adjusted to make the units lighter and more affordable, and the Navy's specific color temperature requirements were altered, resulting in three new consumer products.

First there is the LED GlobeLight, which offers high-intensity lighting with, according to the manufacturer, 50,000 hours of lamp life and low power consumption. Corrosion resistant and vapor tight with a high-impact glass casing, these luminaires can survive in temperatures as low as minus 45 degrees Celsius, making them ideal for extreme settings such as walk-in freezers.

Energy Focus then added beam-forming optics to create two exterior lights. The LED DockLight model is an industrial fixture that can handle intense outdoor conditions, while the LED LandScape model—which was given a flat lens to deflect snow—provides an adjustable exterior uplight with 700- to 1,400-lumen output. The commercial versions use more common fasteners and mounting bolts, instead of the more expensive marine-grade stainless steel.

Energy Focus had help bringing these products to consumers. In 2007, Joseph Konrade of the Federal Energy Management Program of the U.S. Department of Energy (DOE) approached the company about collaborating on new applications. Konrade's job is to figure out ways that the DOE can test energy-saving and sustainable technologies in federal and civilian buildings in order to accelerate widespread adoption. "The one thing that we were hoping for was duplication of the [Energy Focus LED] technology in a number of other federal facilities," explains Konrade.

He suggested testing the GlobeLight fixtures in the oversized freezer storage rooms at the Fort George G. Meade commissary in Maryland. The existing 100W gel-coated incandescent lamps and fixtures were replaced with 15W white LEDs, and the results were striking. Energy consumption was reduced by 85 percent and the new fixtures will provide five years of continuous use—whereas the incandescent lamps needed to be changed an average of eight times a year.

Today, Energy Focus is seeing their commercial products utilized by top companies throughout the United States. There are some major grocery store chains, like Albertsons, who are using the GlobeLight fixture in freezers and display cases. The LandScape model is being used to light government buildings in Cuyahoga County, Ohio. And FedEx recently selected DockLight as their luminaire of choice for all of their loading docks. "This is a great example of finding new applications for new lighting technology," says the DOE's Konrade. "The lights perform very well."

Sturtevant believes this is a model example of how the military and the lighting industry can work together to achieve better results. "We work in both directions," he explains. "We not only foster research in the military, we look to see what's going on in industry that can be modified to our needs. We collaborate and create these strategic partnerships. We are interested in transferring products back into the commercial sector as much as we can." **ELIZABETH EVITTS DICKINSON**

Elizabeth Evitts Dickinson is a Baltimore-based writer who writes frequently for design publications and is a contributing editor for ARCHITECTURAL LIGHTING*'s sister publication,* ARCHITECT.

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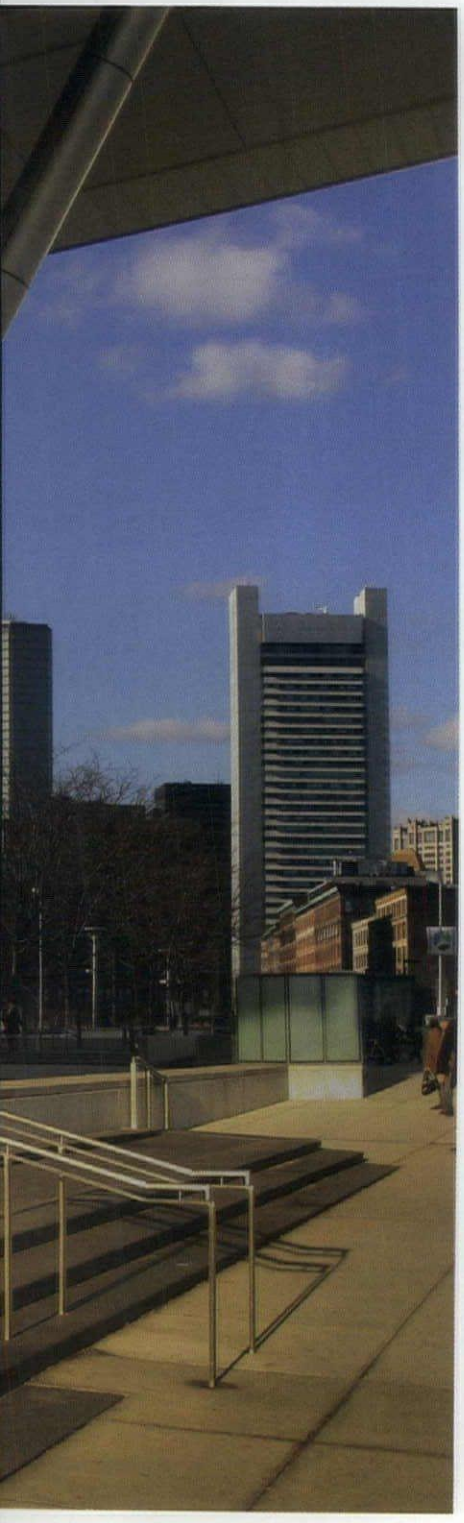
Innovation is most often associated with introducing something that is new, but it also represents the ability to effect change. And it is that daring to imagine something different that is at the root of ARCHITECTURAL LIGHTING's Sixth Annual Innovation Issue. No matter the person, the project, or the product, all the articles this month feature work that questions and reinvents.

Whether it is the ability to envision new forms, as in the case of Ross Lovegrove's new Cosmic Collection luminaire family for Artemide, or to re-imagine building types we think we know, as with Project FROG's and Studio Gang's projects, inspiration is all around. Sometimes it's about inserting yourself in an unfamiliar environment, as Chad Groshart did on his transformative trip to Nepal, which left him with a new understanding about the value of light.

And then there are those who have been innovating their entire careers. Trailblazers Cheryl English, Mary Beth Gotti, and Pam Horner entered the corporate lighting arena when it was still a man's world and, throughout their careers, they have been advocates for the industry—promoting professionalism, education, and communication.

With an unwillingness to accept things as they are—to imagine that there might be a more efficient, compelling, and unique approach to solving everyday problems—the ideas presented on these pages represent a breed of people who have committed themselves to their work and their profession. ARCHITECTURAL LIGHTING invites you to move out of your comfort zone and be inspired. **A|L**


project frog



Most Likely to Succeed

THE CLASSROOM OF THE FUTURE RAISES THE BAR WITH INNOVATIVE LIGHTING SOLUTIONS

Visitors arriving at the 2008 Greenbuild International Conference and Expo held at the Boston Convention Center last November were welcomed by what many are hoping will be the "classroom of the future." The 1,282-square-foot prefabricated pavilion, situated at the entry plaza to the convention center, used the best in class of sustainable materials and products. The single classroom prototype is the work of San Francisco–based Project FROG (Flexible Response to Ongoing Growth), a company that designs and manufactures smart building systems.

As with every highly designed detail in the FROG classrooms, the lighting serves the goals of a people-focused environment. Mark Miller, founder and CEO of Project FROG, explains, "Lighting is incredibly important to us because we are about creating high-performance facilities for users who are working on tasks that require their brains to be functioning at an optimal level." First and foremost, Project FROG advocates the efficient use of available daylight, which is then supplemented with intelligent electric lighting strategies for both the interior and exterior of the building.

The pavilion that debuted at Greenbuild 2008 was a configuration called FROG Zero, named as such because it achieves zero net energy. The classroom is part of FROG 2.0, the platform that the

On view at Greenbuild 2008 in Boston was the "classroom of the future" prototype, a 1,282-square-foot pavilion (left), designed by San Francisco–based Project FROG. It integrates sustainable materials, products, and building processes.

company has developed to manufacture its "quick-to-deploy" smart buildings. "The design has an opinion, a point of view," Miller says. "The [building's] orientation varies by having a high side and a low side, low wings and a high spine, as well as clerestories. These devices allow us to organize the building in a lot of different ways and get different results."

To achieve indirect daylighting with no heat gain, Project FROG has developed a series of eaves that clip on to the structure depending on the climate where the prefabricated structure is located. Direct sunlight bounces off the low roofs on either side of the pavilion, up off the eaves of the high roof and into the clerestory. Drawing from this kit of parts, Project FROG can optimize each classroom depending on the site and user needs, and with a consistent goal to create an equal throw of light across the horizontal and vertical surfaces of the workspace.

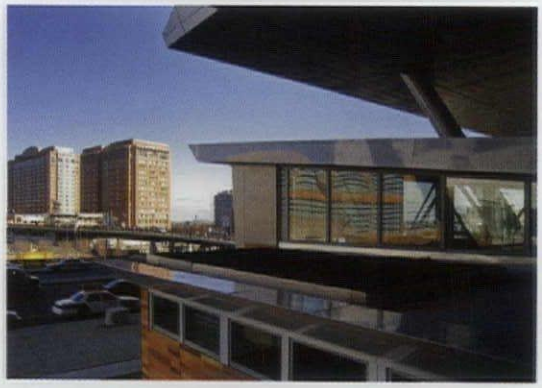
Through the use of energy efficient lamp sources and smart luminaire technologies, the FROG Zero classroom operates at 50 percent below the energy requirements for California's Title 24. In addition, all of Project FROG's structures are designed to achieve LEED Silver certification and have the capability to be configured to reach LEED Platinum and above based on a range of design considerations. The classrooms also exceed the Collaborative for High Performance Schools best practices.

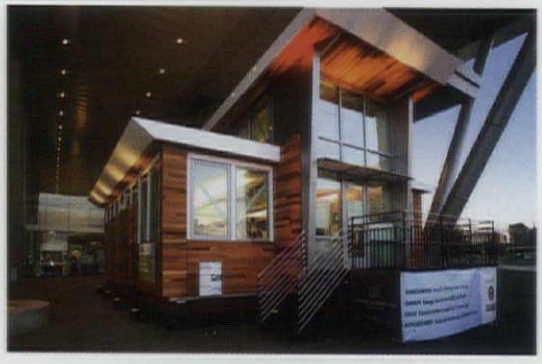
In order to achieve these energy-efficient and sustainability goals, Project FROG partnered with Acuity Brands Lighting to serve all of their electric lighting needs. "In terms of products and approach [Acuity] is a dynamic and forward-thinking company and that's why we were attracted to them," says Miller. The FROG Zero classroom shown at Greenbuild showcased an array of lighting products, including intelligent ballasts and controls, emergency and exit lighting, and exterior luminaires.

The combination of prefabricated construction techniques, intelligent design solutions, and easy to install sustainable products and materials, raises this project to the top of the class in terms of affordability, innovation, and environmental responsibility. It proves that it is possible, in the words of Miller "to be better, greener, faster, and cheaper"—all at the same time. **MEGAN CASEY**

Project Classroom of the Future Prototype **Location** Greenbuild 2008, Boston **Design Team** Project FROG, San Francisco **Photographer** Courtesy Project FROG **Project Size** 1,282 square feet **Manufacturers/Applications** Hydrel: In-grade exterior luminaires with 12W LED sources; Lithonia Lighting: Emergency and exit lighting; Peerless Lighting: SIMPLY5 Classroom Lighting Solutions (CLS), Indirect/direct T5 luminaires with integrated Synergy lighting control components and RELOC plug-and-play wiring

JOE RENCKLY



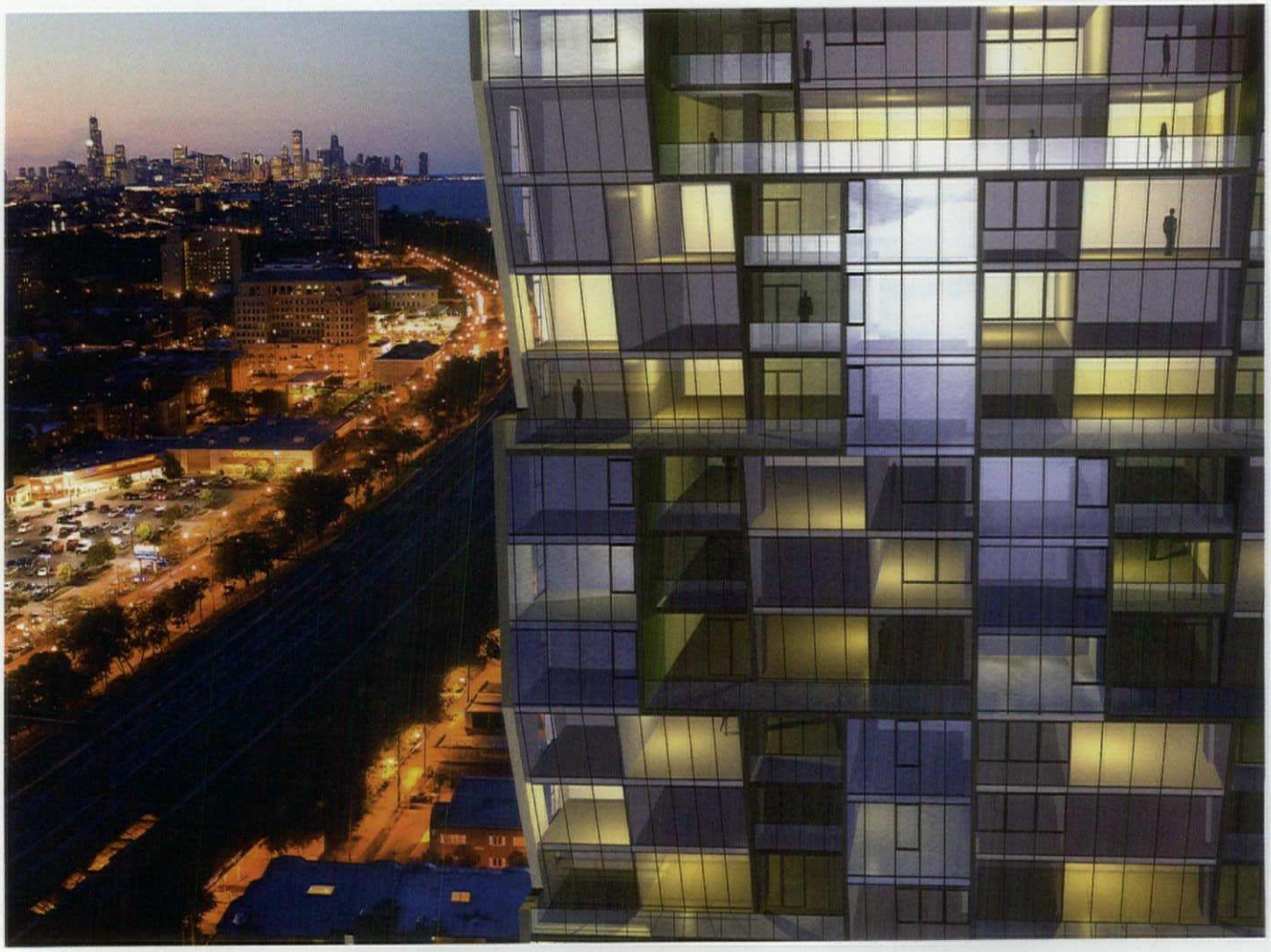


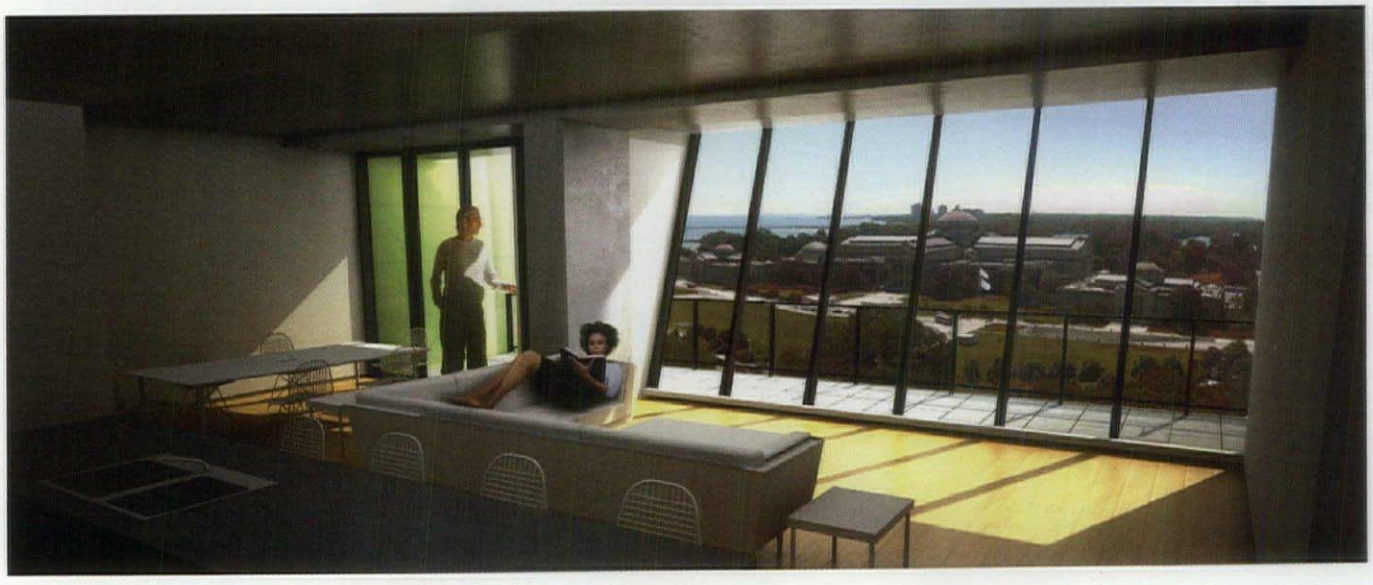
Supplementing the abundant daylight in the main classroom space are two rows of indirect/direct T5 linear fluorescent pendants running parallel to the side windows. Several layers of control are integrated including an occupancy sensor for automatic shutoff, a photosensor for daylight step-dimming control, and switches located at the main teaching board for manual control. These controls provide ideal lighting conditions for both general use and A/V presentations, and produce significant energy savings by providing light only when and where it is needed. This lighting strategy strives to reduce glare on task surfaces, improve vertical illumination on faces, and optimize visual comfort while minimizing energy use (left).

Various configurable window wall systems can be selected, including full-view windows with sunshades and high windows for indirect illumination. Several roof options are also available including a living roof to assist with temperature control and photovoltaic panels to harvest solar power (top).

In-grade luminaires using 12W LEDs uplight the structure providing a dramatic presence at night (above). Project FROG founder and CEO Mark Miller explains, "The exterior lighting at night is all about setting the building in the landscape and accentuating that. These are special projects that show schools care about their students by giving them good proper classrooms—and people want to light them and celebrate the identity of their school through their buildings."

Shaped By the Sun





STUDIO GANG'S DAYLIGHTING RESEARCH INFORMS THE DYNAMIC PROFILE OF A RESIDENTIAL HIGH-RISE IN CHICAGO

Jeanne Gang sees architecture differently. To the founder and principal of Chicago-based Studio Gang Architects, architecture is more than just a response to client and program, it is a set of material investigations and research initiatives meant to inform the dense urban conditions of our living environments. The result is a dynamic body of work that creates a new kind of building—interpretive and responsive.

One of the most intriguing examples of this methodology can be seen in Solstice on the Park, a 26-story residential tower for Chicago's Hyde Park neighborhood. The building's form is shaped by the sun. "The idea has legs," Gang says, when discussing how the building's south façade responds to the sun's path over the course of a year. "I'm interested in the concept of self-shading," she explains. "We wanted to create a pattern of angled bays, to create a façade that looks woven." By canting the structure's glass curtain wall to respond to Chicago's latitude of 71 degrees, sunlight can enter the apartments during the winter for passive solar warming and be kept out to reduce air-conditioning use during the summer.

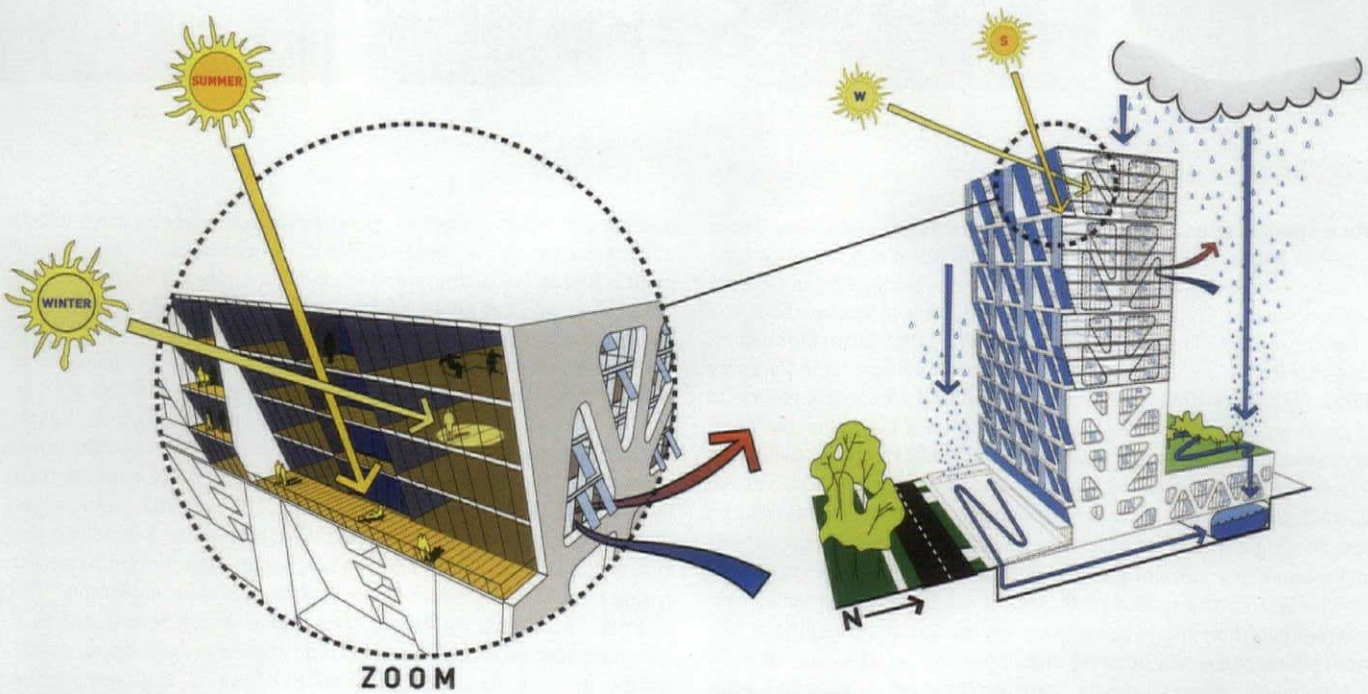
Aided by engineering firm Arup in modeling the building's energy use, Studio Gang wove the sun's path into the structural design. "We wanted the idea to be visible—figuratively and literally," Gang says. Similarly, a pattern of openings on the building's east and west sheer walls corresponds with the actual structural diagram, as material was eliminated where it was not needed because forces were low.

While daylighting strategies have been incorporated into commercial interiors, they have not been widely considered for residential work. And daylighting on the scale of a 550,000-square-foot, 145-unit project is particularly new. "The spatial quality of the interiors is set to harness daylight and shadow," Gang explains. "The uneven quality of the light—baffled light—connects the building and its inhabitants to real time."

Residents will be able to rely on natural light to illuminate their apartments for the majority of the day, no matter the season, but individual tenants will govern the specifics of the electric lighting solutions. A window treatment, designed to work with the angled façade, is being designed into the base building features.

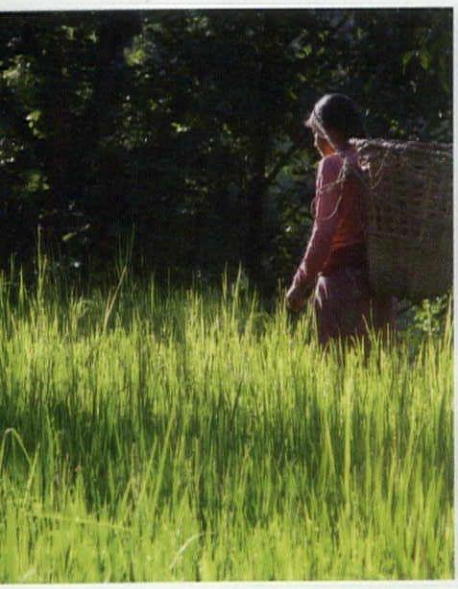
Designed to target LEED Silver certification, the project returns to a set of first principles about building siting. "The key to the Solstice Tower is getting the light into the building via the floor-to-ceiling glass curtain wall, but without the heat gain," Gang says. "But more than that, it's about seeing how the building will perform—an area of architecture that in underregarded." Exploring how light interacts with materials, Studio Gang challenges our perception and understanding of building. Solstice on the Park provides us with a new outlook on how we and our living spaces interact with light. **ELIZABETH DONOFF**

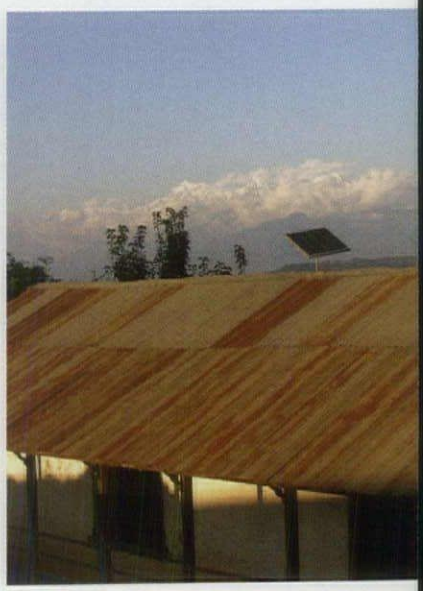
Project Solstice on the Park **Location** Chicago **Design Team** Studio Gang Architects, Chicago **Renderings** Courtesy Studio Gang **Project Size** 550,000 square feet



Chicago's Studio Gang Architects designed the Solstice on the Park residential tower to use the path of the sun specific to Chicago's latitude to encourage daylight and passive solar heat during the winter and increase shade and lower air-conditioning costs during the summer.

The Meaning of Light





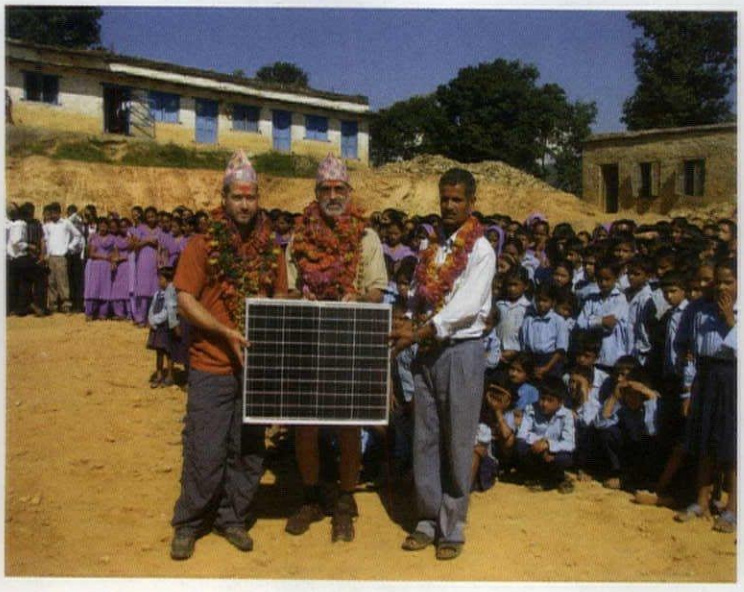
As a specialist in sustainable lighting design at the New Haven office of Atelier Ten, Chad Groshart thinks about the future of light sources and fixtures all the time. Until a trip to rural Nepal in October 2008, however, he hadn't spent a lot of time thinking about the absence of light. "I heard about the work of the Himalayan Light Foundation (HLF) at the IALD's Enlighten Europe conference in February 2008, and was struck by the idea of a lighting designer traveling to a place with no light," Groshart says. Motivated both personally and professionally to make the journey to Nepal, Groshart and his father, Mickey, who accompanied him on the two-week expedition, raised $10,000 to cover their travel expenses and purchase six solar lighting kits that they would install at three mountain village schools outside of Kathmandu under the auspices of HLF's Solar Sisters program.

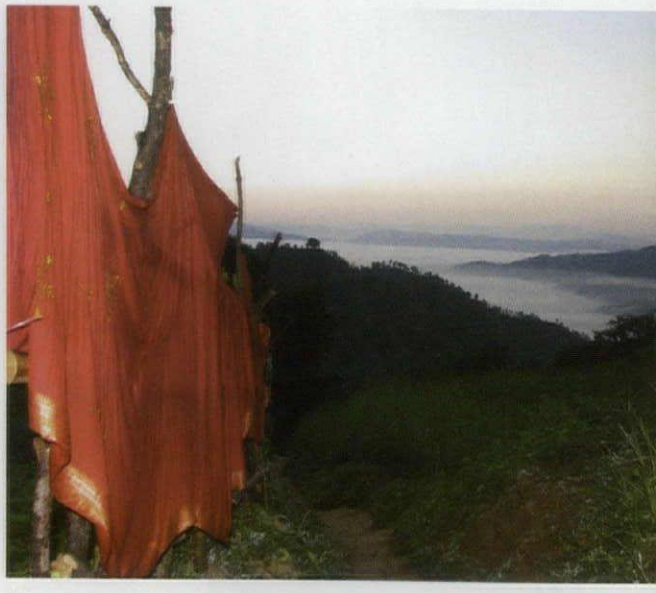
The HLF is the not-for-profit arm of a company that sells solar-powered lighting kits to homeowners in areas without regular or reliable power grids. "Kathmandu makes use of load shedding, or what we would call rolling blackouts," explains Groshart. And that is merely in the city itself. The rugged and steep topography of most Nepalese villages makes the installation of regular power lines infeasible; the few that can afford it install photovoltaics. The HLF's Solar Sisters initiative matches volunteers, who have raised funds for the lighting units, with villages in need of off-grid electric light for one of their main community buildings—which in most cases is a school.

Groshart and his father's first evening in the village of Ghampasel underscored the profound changes that electric light could bring. After sharing a meal of *dhal bat* (lentil soup over rice, the staple food of the region) with the family hosting them, the duo was left to their own devices—and they were thrown for a loop. "By 8 o'clock, the village had gone to bed, and we didn't know what to do," says Groshart. "There was no controllable light except for a few candles, so we read by headlamp for a while and then turned in." The next day, they awoke to the cock's crow before dawn, and were soon at work installing the kits, which include a 40W photovoltaic panel, a deep-cycle battery, a wiring kit with switches, and four 10W linear fluorescent lamps.

From Ghampasel, Groshart and his father—accompanied by a HLF liasion who served as their translator, and another person as their guide/electrician—traveled 3 kilometers by foot with all their gear to the village of Masel. It was an easy trek compared to the route to the third village, Darbung, which is accessible only via a narrow suspension bridge. The way they were greeted by the people of Masel was typical

LIGHTING DESIGNER CHAD GROSHART BRINGS LIGHT AND POWER TO REMOTE VILLAGES IN NEPAL





Intrigued by the idea of a lighting designer traveling to a region with no electric lighting, Atelier Ten's Chad Groshart teamed up with the Himalayan Light Foundation to make a trip to Nepal and see how he could help. With his traveling partner—his father, Mickey—he raised $10,000 to cover expenses and the cost of six solar lighting kits which they would install at three rural villages in the Nepalese mountains.

Above, left to right: A Nepalese woman goes about her daily work; Chad, with Mickey in the background, traverses the old, narrow suspension bridge to reach the village of Darbung; one of the solar lighting kits that the Grosharts installed on their journey; Chad and his father present a photovoltaic panel to a village, with local schoolchildren looking on; and a majestic view of the Nepalese landscape.

CHAD GROSHART

of the experience they had at each village: Even though it was a Sunday, a non-school day, hundreds turned out to welcome them, including schoolchildren.

The ability to provide illumination for these school buildings has significance well beyond just lighting a space. Groshart would soon learn that the school day is actually divided into two shifts, one starting before dawn, and the other ending a half-hour after dusk, in order to accommodate all of the children in the village. The lighting kits would mean that they no longer had to study in the dark, and even more children potentially could be accommodated. When the light was ready to test the next morning, the teacher waited in the pre-dawn darkness until all of the students were present before switching it on; the flick of the switch was met with great applause.

For Groshart, to say the experience was transformative would be an understatement. And he is already planning for his next trip. "There is an awareness and value of light that these villagers have because they are so often without light," Groshart says. "We, on the other hand, have so much light at our disposal. It's hard to imagine going about our daily routines with less light—but that is exactly what I find myself doing now, really thinking about light and if I need to turn the switch on." **ANNE GUINEY**

Anne Guiney is a writer and editor based in New York.

The Three Graces

CHERYL ENGLISH, MARY BETH GOTTI, AND PAM HORNER CONNECT SOME OF THE INDUSTRY'S LARGEST MANUFACTURERS TO THE DESIGN COMMUNITY AND BEYOND

With more than 75 years of experience between them, Cheryl English, vice president of market and industry development at Acuity Brands Lighting; Mary Beth Gotti, manager of the Lighting and Electrical Institute at GE's Nela Park; and Pam Horner, director of government, regulatory, and industry relations at Osram Sylvania, have been tireless advocates of the lighting industry. Through education, advocacy, and outreach, they keep the general public and key stakeholders in government and business informed on crucial matters of lighting design and technology. ELIZABETH DONOFF

What have been the milestones in your lighting careers?

English: When I became the first woman VP at Acuity. It's exciting to see how women have progressed in the company, although there is still a greater need for diversity throughout the industry. Recognition by my peers with the IES Distinguished Service Award meant a lot.

Gotti: I started as a research scientist. It was incredibly exciting to work with Howard Brandston on the relighting of the Statue of Liberty and see the creation of a completely new lamp. It was that experience that got me interested in education and teaching people at Nela Park.

Horner: Being the first woman president of the IES Houston chapter. Going back to school and receiving my master's in lighting in my 40s. Working at the international level has been particularly extraordinary, especially in preparing for the IES centennial in 2006. The mix of generations at that event was magical and gave me a lot of confidence in the future of the profession.

What milestones have you observed for the industry?

Horner: Technologically, there are so many: In the 1980s the development of the twin-tube compact fluorescent; the marriage of electronics with light sources and how they work to drive light; LEDs; the demise of the incandescent light; and so on.

English: The lighting profession has evolved to focus on the quality of the visual environment and human response. Additionally, the nature of manufacturing has changed. Previously, it was an industrial process; now it's an electronics industry. And that is completely different.

Gotti: Globalization has accelerated international technical resources.

How has technology changed your role in lighting since you first started in the industry?

Gotti: In 1976 we were hand-plotting data, we didn't have computers, everything required handwritten documentation. One thing that has been a bit disappointing is that lighting at the university level is still very small; you'd think it would have progressed further by now.

Horner: Lighting education has always depended on a single individual to lead a program. Well-done lighting education has to cover a lot of ground—human factors, dark sky, toxic material content, energy efficiency. A lighting designer has to be an expert in a lot of things.

English: The Internet has helped to change things dramatically, with webcasts and on-demand learning, but at the same time you loose the experience and diversity of thought—quality education is part of a collaborative process. Over 25 years, we've gone from keypunch to computer-aided design. That is a very short amount of time.

Where do you see lighting heading in the future?

Gotti: More effective tools to attune lighting.

English: Greater responsiveness of lighting to controls; light and health issues; more efficiency in relation to energy use in buildings; and alternative energy.

Horner: Energy costs are increasing, and we have to ask ourselves what the lighting future looks like, given the marriage between electric and natural light. Daylighting will continue to be at the forefront as people look to the amount of energy used in buildings.

Lighting advocates Mary Beth Gotti, Pam Horner, and Cheryl English (left to right) took a break from this year's Lightfair for a photo session at Acuity Brands Lighting's midtown offices.

Products! Products! Products!

A VARIETY OF NEW OFFERINGS WERE ON DISPLAY AT THE AIA NATIONAL CONVENTION AND LIGHTFAIR

With the AIA National Convention and Lightfair literally back-to-back this year, there were plenty of lighting products on display from April 30 to May 7. Here's a sampling of what was on view and some products that made an impression on the architects and lighting designers in attendance. **A|L**

AIA National Convention, San Francisco

ELLIPTIPAR OVALINEAR STYLE 159
Style 159 is a new addition to the Ovalinear family of luminaires and expands the line's offerings into outdoor lighting applications, including the illumination of entry canopies or signs. The compact fixture utilizes metal halide lamps to assure excellent color rendering. Featuring an integral ballast, the luminaire is also wet-listed compliant and can be either surface or cantilever mounted. • *elliptipar.com* • CIRCLE 125

TAMBIENT TASK/AMBIENT STYLE L231
This first single-component task/ambient system incorporates energy-efficient T5 lamps in an extruded aluminium housing, and "Glowline" optics that convert underutilized lamp energy into a decorative illuminated accent on the fixture's front face. L231 can mount to any furniture system while delivering a unique combination of efficiency and visual comfort through advanced lens and louver optics. The luminaires are compatible with an array of push-button, personal dimming, and wireless control options. • *tambient.com* • CIRCLE 126

"Energy efficiency combined with perfect lighting levels seemed to merge perfectly."

—Claudio Ramos, principal of San Francisco–based H.E. Banks + Associates Lighting Design

INTENSE LIGHTING V-RAIL MODULAR LED RAIL SYSTEM

V-Rail is the first modular solid-state rail system for both indoor and outdoor applications. The system provides flexible options for lighting stairs or ramps and may also be used as a guardrail. Easy to install, light distribution patterns are controlled by a unique field-adjustable reflector system. High-brightness LEDs project more than 10 footcandles along the path of egress and meet ANSI code for stair illumination. Mounting options include wall mount, post mount, or embedded. Stainless steel or aluminum construction is available. V-Rail will be commercially available by October 2009. • *intenselighting.com* • CIRCLE 127

INSIGHT LIGHTING SMART PANEL

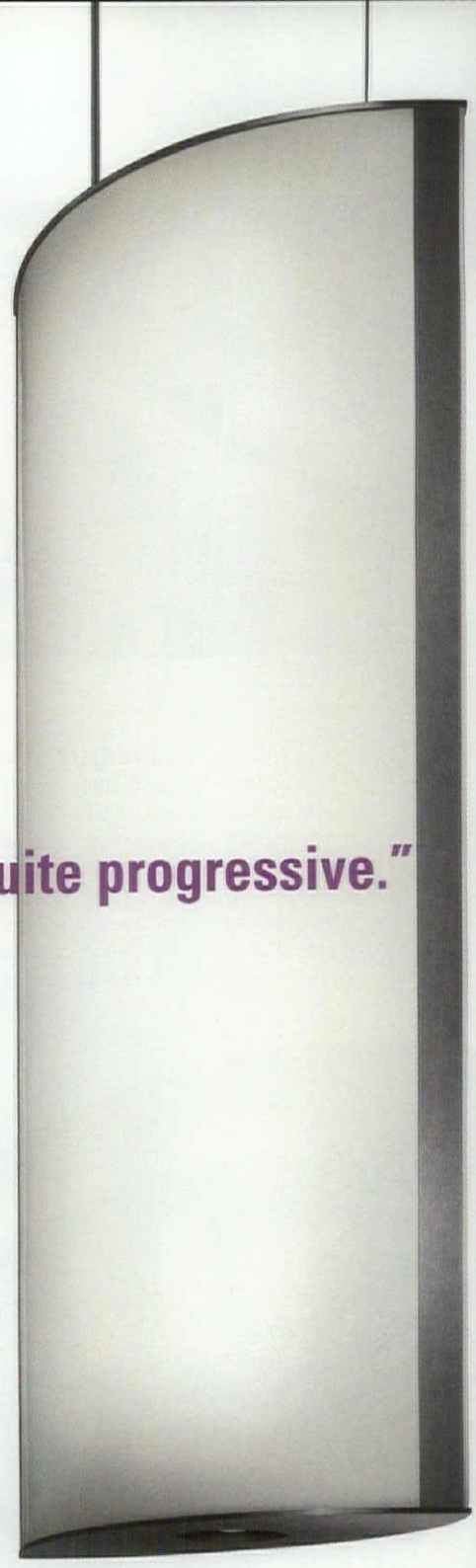
Appropriate for wayfinding, corporate signage, or advertising promotional graphics, this LED edge-lit product combines LED high-performance platforms with custom-etched acrylic panels that provide a one-to-one uniformity. Available in Designer sizes up to 32 square feet and Architectural sizes up to 24 feet, the slim-profile, extruded aluminium flip frame, enables toolless installation and removal of graphics. Panels are available with either an integral or remote 24V power supply. • *insightlighting.com* • CIRCLE 128

"It's one of the few fixtures that is actually designed around the LED module."

—Chip Israel, principal of Long Beach, Calif.–based Lighting Design Alliance

KIM LIGHTING WARP9 LED

This introduction of an LED option for the WARP9 family of luminaires uses a patented optical system that shapes, points, and tightly controls the light beam for low-glare, high-performance outdoor area lighting. The LEDs are encased in individual modules integrated with reflectors so they can be precisely aimed for uniform illumination and replaced as solid-state lighting technology evolves. The LEDs are offered in two standard white light choices: 3500K and 5100K. The luminaire is also able to provide wide-throw ground plane illumination to maintain fixture spacing without producing excess glare. • *kimlighting.com* • CIRCLE 129



Lightfair, New York

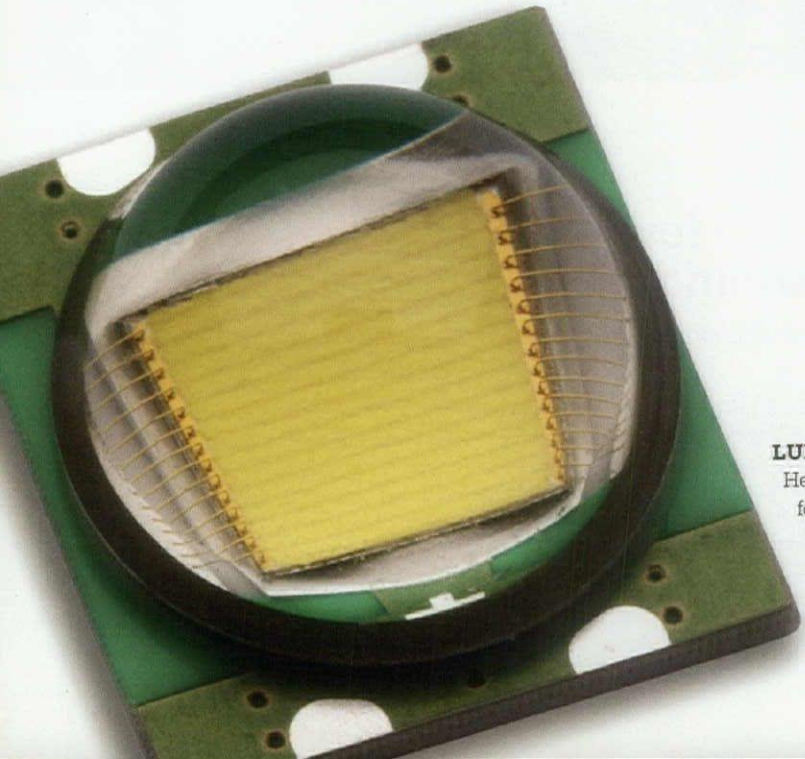
LEDs were definitely at the forefront of the new product offerings, achieving technical milestones and enabling the development of new fixture lines. Quality LED lighting products are pulling away from the glut of general LED offerings. Helping to distinguish and define this onslaught of new products, it was reassuring to see that the Judges Citation at the Lightfair Innovation Awards went to the Illuminating Engineering Society's guide *LM-80-08 Approved Method for Measuring Lumen Maintenance of LED Light Sources.* **A|L**

"Visa's new line of decorative lighting was quite progressive."

—Chip Israel, Long Beach, Calif.–based Lighting Design Alliance

VISA LIGHTING AIRFOIL

Winner in its category of "Chandeliers, Pendants, Sconces, Tasklights & Decorative Luminiares" at the 2009 Lightfair Innovation Awards, this 4-foot-tall pendant is one of several new fixtures from Visa Lighting that offers contemporary decorative lighting solutions for a variety of applications from commercial office interiors to retail and hospitality venues. The fixture body is made of an acrylic housing with an aluminum frame. Multiple source options include: T5 and T8 lamps, LEDs, and optional PAR or AR111 downlights. Airfoil is available in 16-, 24-, and 36-inch widths, and an acrylic connecting element enables the luminaire to be grouped in multiples for a chandelier effect. • *visalighting.com* • CIRCLE 130



LUMINUS DEVICES SST-90-W

Heralded as the co-winner (along with Philips Lumileds Lighting Luxeon Rebel ES) for the Technical Innovation Award in the "Specialty Lamps" category at the 2009 Lightfair Innovation Awards, this large-chip white LED in a new surface mounted package of only 9 square millimeters combines high power and efficiency. The 6500K white, 10W LED offers 100 lumens per watt—a technical milestone for solid-state lighting. • *luminus.com* • CIRCLE 131

CREE LRP-38
Designed specifically for display and retail installations, this LED replacement lamp offers an alternative to 50W to 90W halogen PAR38 lamps. The LRP-38 lamp has an input power of only 12W, a narrow-beam spotlight of 20 degrees, and, with Cree's proprietary TrueWhite technology, generates a color rendering index of 92 at a color temperature of 2700K. The unique optical design with an indirect reflector maximizes the amount of light within the beam without direct source view. According to the manufacturer, the lamp is designed to last 50,000 hours in open-track fixtures or 35,000 hours in commercial-grade downlights. • *cree.com* • CIRCLE 132

"While there were a million LED products at the show, the Cree LED PAR38 lamp really stood out for the thought that went into its development."

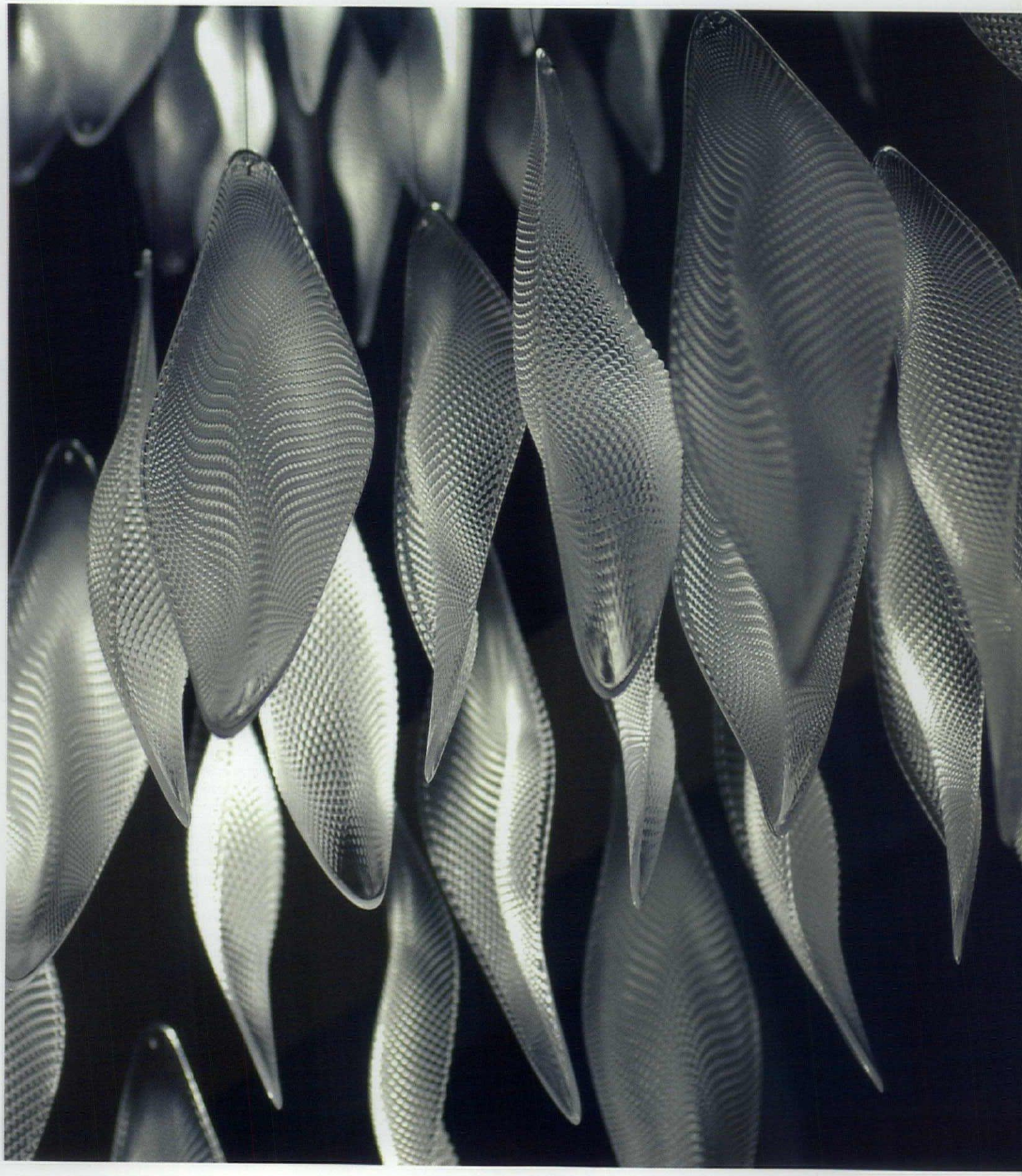
—Faith Baum, principal of Bloomfield, N.J.–based Illumination Arts

PHILIPS LUMILEDS LIGHTING
LUXEON REBEL ES
Celebrated as the co-winner (along with Luminus Devices' SST-90-W) for the Technical Innovation Award in the "Specialty Lamps" category at the 2009 Lightfair Innovation Awards, this LED offers the technical achievement of 100 lumens per watt in both a neutral white 4100K and a cool white 5650K. It also has a tighter binning process. • *philipslumileds.com* • CIRCLE 133

PEERLESS KITE
Taking home the Design Excellence Award at the 2009 Lightfair Innovation Awards, this 48W or 96W indirect/direct suspended luminaire features an edge-light optic that blends multiple LED point sources for a uniform and glare-free delivery of light. Applicable for office and classroom installations, the fixture design prevents a direct line of sight to the source while providing 3500 lumens and a color rendering index of 85. • *peerless-lighting.com* • CIRCLE 134

Cosmic Lights

ROSS LOVEGROVE COMBINES IMPRESSIONISM WITH ADVANCED COMPUTER MODELING TO CREATE HIS LATEST COLLECTION FOR ARTEMIDE



COURTESY ARTEMIDE

Ross Lovegrove considers himself more of an evolutionary biologist than a designer, and what he means by this is made clearer by the new family of light fixtures—Cosmic Collection—he has created for Artemide. The fourth series he has designed for the company, the protozoan forms of Cosmic Collection's three luminaires appear as if molded from specimens of primitive life forms. First, there is Cosmic Leaf, a pendant whose expanding figure could have been a rather sleek paramecium. Cosmic Angel is a wall-mounted fixture whose undulating waffled surface resembles a manta ray in motion. And then there is Cosmic Ocean, a chandelier whose multitudinous suspended elements glow like microorganisms seen through a microscope, or perhaps like plankton caught in a ray of light.

But genetic engineering might be a better way to describe the design process Lovegrove has used to create the Cosmic Collection. As was the case with his previous series for Artemide—Mercury, introduced at Euroluce 2007—Lovegrove took impressions from nature and employed 3D software, which is his design tool of choice, to experiment and develop highly complex tessellated surfaces and shapes. The data from these computer models was then transposed directly into milled surfaces. Similar to the Mercury family, the Cosmic fixtures do not function like your typical luminaire. "Cosmic itself relates to entities which capture light in the darkness of space," Lovegrove says. "My designs do not emit light, they capture projected light like a sun onto a distant planet."

While Lovegrove looked to extraterrestrial as well as oceanic and botanical structures to find formal inspiration for his designs, hands-on testing was required to make sure they would function as intended. To do this, he used a 3D printer at his London-based studio to create prototypes directly from the computer models. Once he had a physical model in hand, he could try out different surface treatments to achieve the desired planetary glow, think about an ideal material, and see how a given shape responded to projected light from different sources including LEDs and halogen lamps.

Working with his in-house team, as well as with the dedicated engineers from Artemide, Lovegrove settled on a liquid finish, slightly matte to hold light, over thermoformed plastic. That material's lightness, flexibility, and economy won out over metal. Lovegrove and his team experimented with a variety of forms and scales until they found shapes and sizes that were satisfying. Prototypes were made from the digital models using a 3D printer in Lovegrove's London studio.

Cosmic Angel has a silver surface for capturing light and a white surface for reflecting and distributing it. Cosmic Leaf comes in a transparent frosted version for an ethereal effect. The injection-molded acrylic "leaves" that make up the Cosmic Ocean chandelier capture the light of LEDs projected through their edges.

Lovegrove began developing the Cosmic series two years ago as part of his ongoing interest in 3D digital surfaces. With an already established working relationship, he pitched the idea to Artemide, who loved it and immediately began the process of prototyping and development.

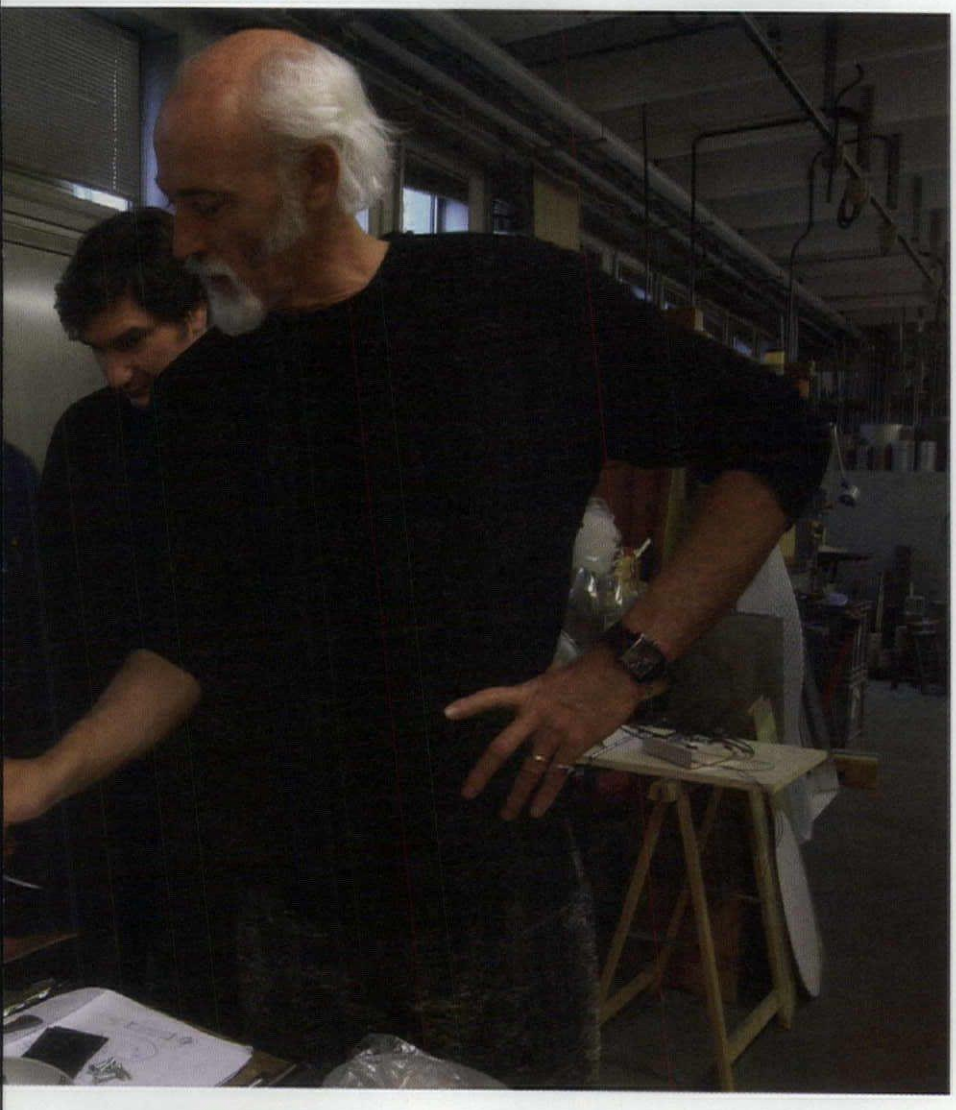
Lovegrove visits the company's facilities in Italy about once a month for design reviews. Once the forms are completed, the final computer models are plugged straight into Artemide's computer milling machines. "There is no ambiguity in this process," says Lovegrove. "The generated data is as valuable as the final pieces. It cultivates a type of self-referencing art form, a self-stimulating sequence of discovery within the team." **AARON SEWARD**

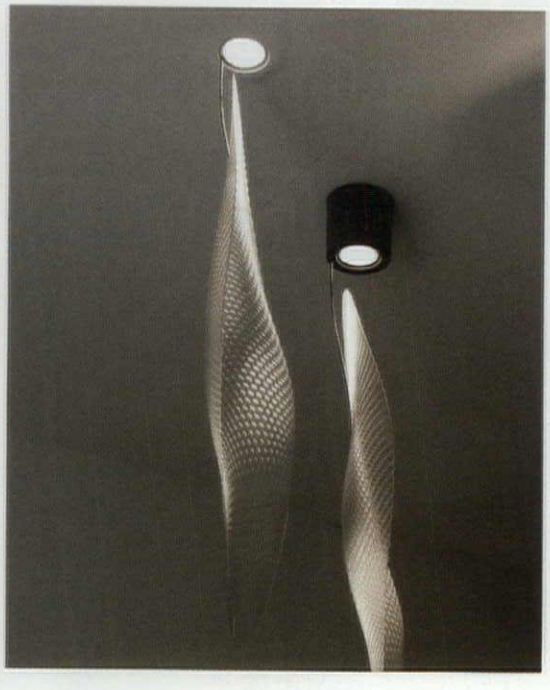
Project Cosmic Collection **Designer** Ross Lovegrove **Manufacturer** Artemide

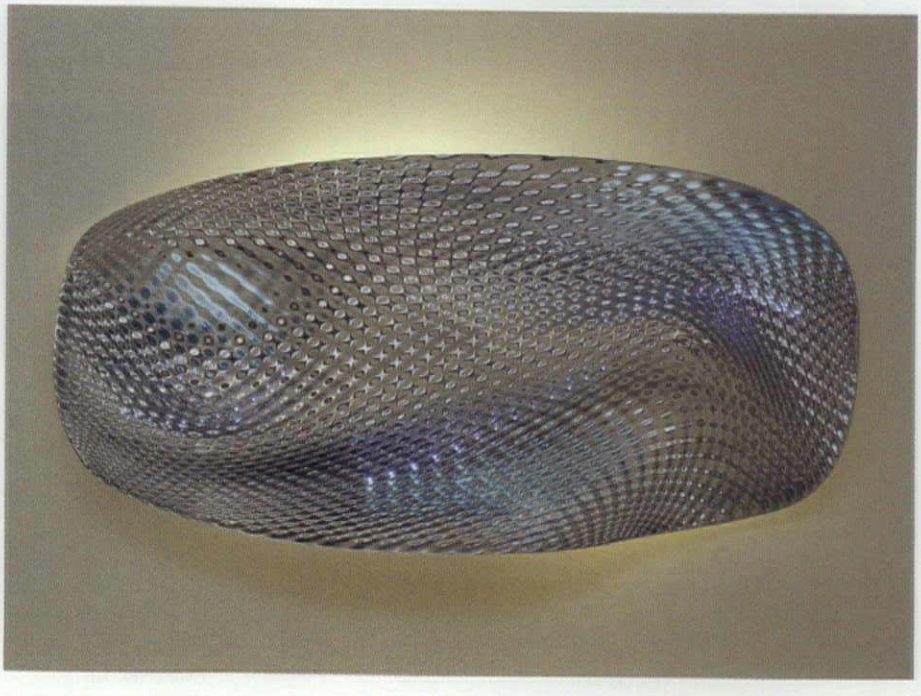
Shedding the title of designer in favor of evolutionary biologist, Ross Lovegrove (above) considers the Cosmic Collection as a series of alien species of botanical surfaces and interactive skins. He originally intended the Cosmic Collection to be pressed out of aluminum or stainless steel. But after extensive research and consultation with the engineers at Artemide, he decided on using thermoformed plastic.

Lovegrove and his team experimented with several surface treatments for the Cosmic Collection. For Cosmic Ocean (previous spread) and Cosmic Leaf (table version, top right; pendant version, bottom left), they settled on a fluid coating that is slightly matte in order to hold projected light. Cosmic Angel (bottom right) had two sides—a silver side to capture light, and a white side to reflect and distribute light.

Once the final prototypes had been decided upon, Lovegrove delivered digital models to Artemide. The company plugged them into its 3D milling machines and began generating the final product. This process leaves no ambiguity between the concept and the physical object. For once, there is no difference between the idea of the fixture and the fixture itself.







PIERRE JUSSELME (TOP LEFT); COURTESY ARTEMIDE

Bartco Lighting

Bartco Lighting introduces the BDS550 diagonal stagger fixture for linear T5 fluorescent lamps. The diagonal, 6" overlapping lamp arrangement of this specification grade luminaire provides exceptionally consistent runs of illumination in minimally scaled coves and other demanding indirect lighting applications. The BDS550 is fitted with program rapid start universal voltage ballasts and includes battery backup and dimming ballast options.

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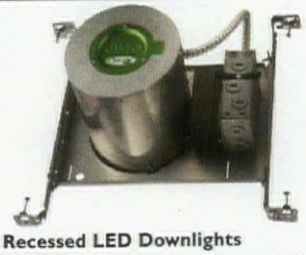

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Linear System by Sistemalux. The Linear System is offered in three (3) different configurations: the Linear Wall, Linear Pendant and Linear Pendant with track to be combined with the wide range of Sistemalux projectors for multiple applications such as public spaces, museums and office lighting. All configurations are available in both T5 fluorescent sources and high efficient LED systems in both 3000K and 4000K color temperature options. The LED option makes the Linear System the most energy efficient functional office lighting solution in the market.

www.sistemalux.com

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LUMENCOVE™, The LUMENCOVE™ is a highly efficient and sustainable cove lighting system. Offered in sections from 1 to 8', the LUMENCOVE™ requires only one (1) power feed for every 150' run. Using only 4.3 watts per foot, its performance matches a T5 fluorescent source. The fixture is made of two layered aluminum extrusions. The top part houses a linear LED module and the driver is enclosed in the bottom half. Two color temperatures available: 3000K and 4000K. The LUMENCOVE™ is a line voltage luminaire with the input ranging from 120V to 277V AC. It is supplied with a swivelling bracket that allows for a 0-90° tilt angle.

www.lumenpulse.com

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SolarTrac®, MechoShade Systems' ground-breaking WindowManagement® daylighting program, integrates digitally addressable motorized shades with automated, solar-control software. The system tracks the sun and sensors detect cloudy conditions or excessive glare; lowering the shades incrementally to provide occupant comfort. SolarTrac® offers brightness, shadow and manual overrides that further enhance its overall effectiveness.

MechoShadeSystems.com

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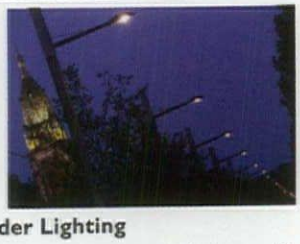

Schréder Lighting

Integrating a compact design with high photometric performance and style in street lighting, Schréder Lighting USA introduces Hestia luminaires with the world-famous Sealsafe® Optical System, in the US at Lightfair 2009. Crafted of aluminum and glass, the Hestia was designed around a new concept of lighting; the Sealsafe micro-reflector. Less space for the optical compartment signifies more space for the creative freedom granted to the designer, including vast opportunities for new forms and new lighting solutions.

www.schreder.com

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W2 Architectural Lighting

Presents Framing Projector Luminaire

W2 Architectural Lighting's "Framing Projector" luminaire provides a "self-illuminating effect" for photographs and other wall art and features an adjustable focus to match the width and length of the object. Its D size Gobo allows customizable images to be projected in a crisp and colorful fashion. Uses 39-watt HID lamping.

www.w2lighting.com T. 1.866.788.2100

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deadlines

June 29, 2009
Regular Submission

July 10, 2009
Late Submission*

* requires an additional fee

Winners in each category will be published in the November issue.

Projects must have been completed after June 30, 2008, and must have been built in the United States or designed by a U.S. firm.

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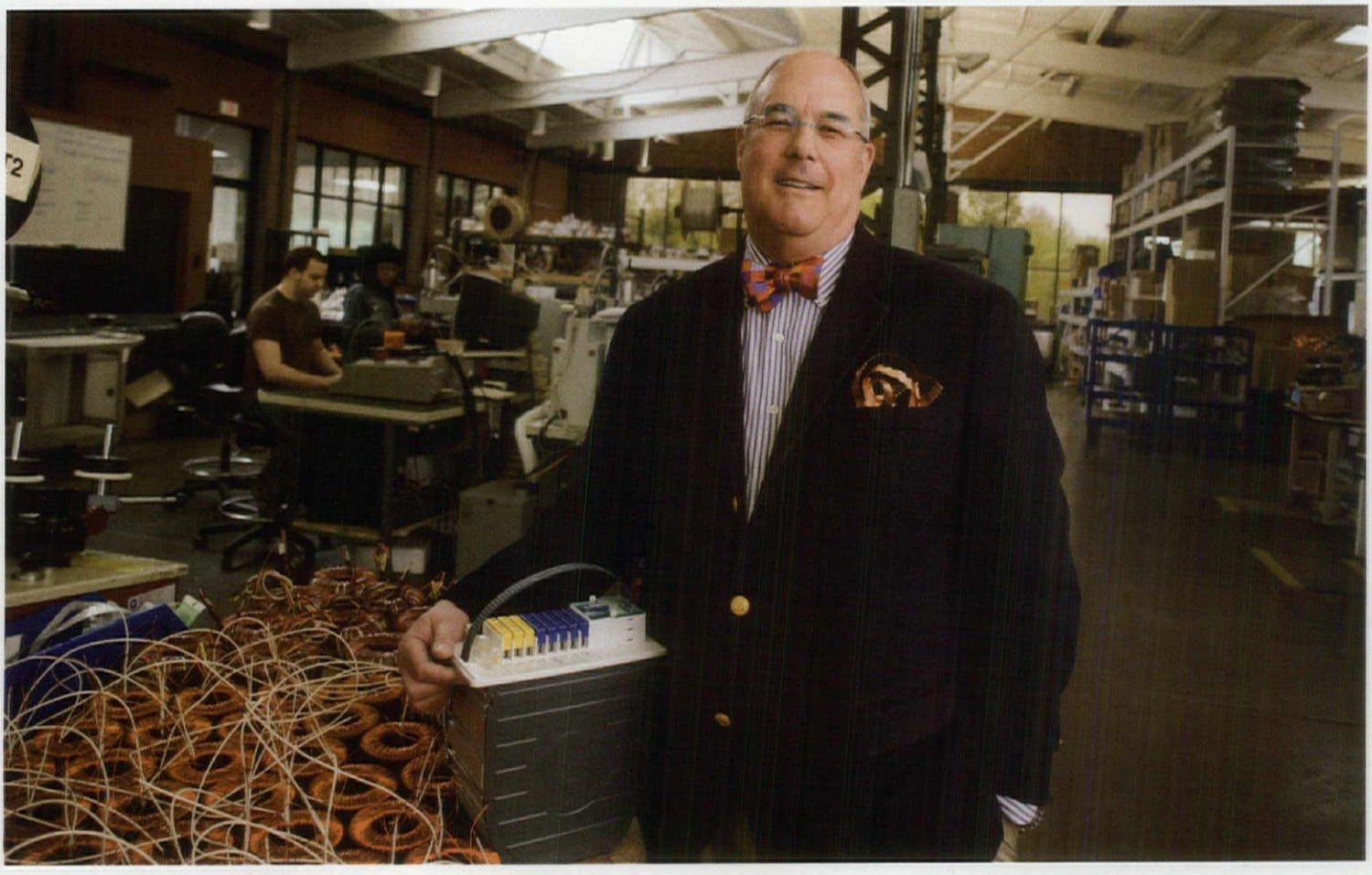


John Tremaine

A LIGHTING FAMILY LEGACY

With a family history in lighting that stretches across five generations, John Tremaine is both a steward of the past and a navigator of the future. An entrepreneurial spirit has always been the hallmark of this American lighting dynasty, which dates back to 1889 when Tremaine's great-grandfather, recognizing the difficulty in transporting the newly invented—and fragile—incandescent lamp, saw the potential in forming a consortium of lamp manufacturers in every city. The result was his creation of the National Electric Lamp Association (NELA) in Cleveland, which would later become GE's lamp division and home to its corporate campus, Nela Park, that is still in use today.

Like his great-grandfather, grandfather, and father before him, curiosity and desire to solve lighting problems is in Tremaine's DNA. Working as a lighting designer in the late 1980s, he could not find a sufficient transformer to work with low-voltage lighting, so he created his own power supply. The result was not only a new transformer, but a new company—Q-Tran. And the company has continued to innovate with the 2008 release of its Q-Scape exterior direct burial transformers. Not one to rest on his laurels, Tremaine is always in search of the next lighting puzzle—and inventive solution. ELIZABETH DONOFF

What criteria do you consider when designing a product?
To provide all the features a designer would want to see, but also to think about the installer and the client. When you can combine features and pare them down to their essentials, that's when the elegance of a design emerges.

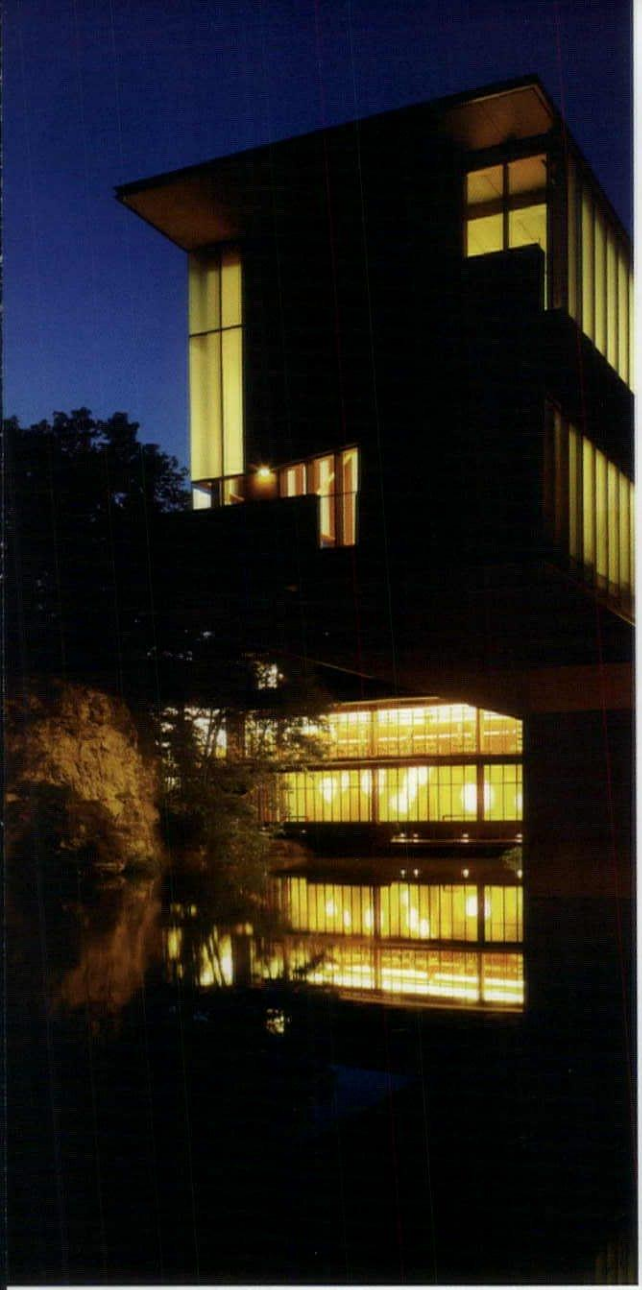
What motivates you to think at this level of detail?
As much as I enjoy lighting design, product design is really my great love. It requires a certain amount of obsession and passion where you can't let go of it until you know its perfect.

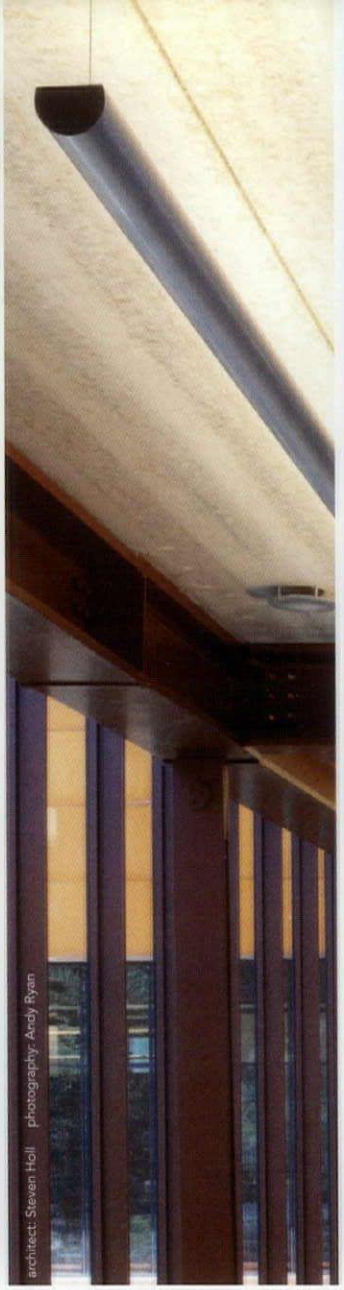
What is the "signature" of a good product?
A product should be honest in its approach and communicate what it is supposed to do. It should "talk" to the user, whoever that may be.

What challenges does product design face in this economy?
The pressure to get things to market. As a private company we have the ability to set our own timeline. This enables us to see things through in a way that reflects our company culture and approach to design. We'd rather get it right, than rush something to market.

What still excites you about lighting?
The way it evolves with technology. There are so many different segments in the industry that push and pull lighting to new levels.

MATT GREENSLADE





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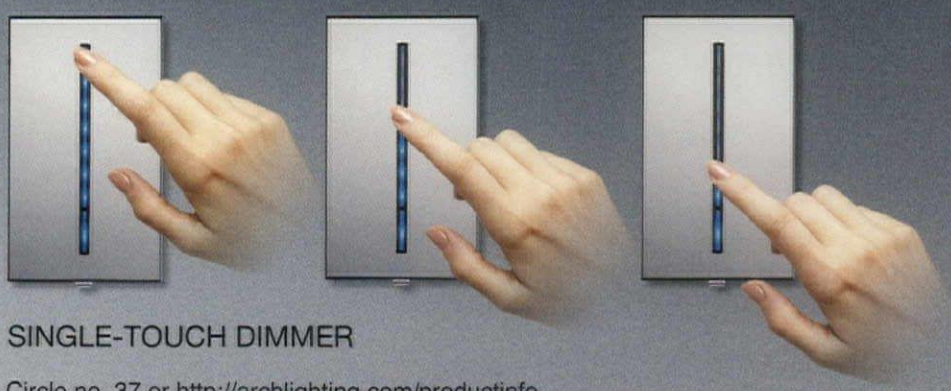

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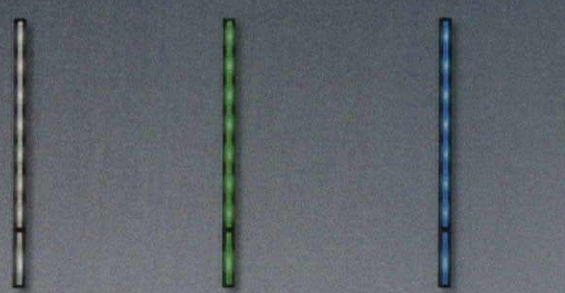

white LED green LED blue LED

architectural wallplate:
10 colors, 11 metal finishes