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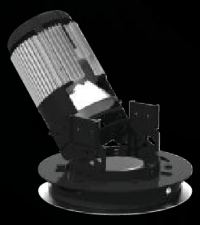

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• FRONT

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Clockwise: Wil Carson, 64North; Jakob Boserup/Courtesy Velux; Tang Yau Hoong

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"Whether you call this field 'architectural lighting design' or 'lighting design' is a game of semantics. At its core, lighting is about creating a sense of place and atmosphere using light as the main medium of expression."

GIVING DEFINITION

Some professions are easier to explain than others. Take medicine, law, or architecture. Most people have a sense about what these professions entail and what the people who practice them do. But architectural lighting design is another matter. Neither is it on the public's radar, nor is it clearly understood.

Complicating this further is the use of both the terms "architectural lighting design" and "lighting design." This publication uses the two interchangeably; as far as I can tell, having looked through our archive, we have always done so. I've always assumed that everyone in the profession understood its definition and also used both terms as a matter of course. But as new people enter the industry, from fields outside of lighting, there is a growing confusion about what the term "architectural lighting design" means.

Is there a distinction between architectural lighting design and lighting design? Does this distinction extend to whether practitioners call themselves an architectural lighting designer or a lighting designer? How critical is the qualification of "architectural"? And is there a need for differentiation?

I have always understood architectural lighting design as the act of crafting space—exterior and interior—with light. This is illumination done in concert with architecture. By extension, one could infer that architectural lighting is meant to last for a substantial period of time, unlike, for example, theatrical lighting, which is created for a specific performance and exists only for the duration of its run.

Crafting space with light requires knowledge, experience, and expertise. It's a knowledge base very different from, say, that of an artist or an industrial designer focused on designing decorative lamps. (By the way, it is incredibly frustrating to read general consumer "shelter" publications and see a designer who has created a decorative light be referred to as a lighting designer.)

The very fact that this publication is titled ARCHITECTURAL LIGHTING reinforces the fact that there is something about architectural lighting design that distinguishes it from other types of illumination, such as theatrical and entertainment lighting or sports lighting. Take a look at the projects that are part of this year's AL Light & Architecture Design Awards (starting on page 33) to understand what this field, with all its complexity and nuance, represents. It requires the ability to work at different scales, in both exterior and interior settings; an understanding of technical issues and the associated vocabulary; an understanding of how to manipulate light, both natural and electric; knowing how a luminaire works; and being able to distinguish what different types of light sources will do in concert with different color temperatures, lenses, and beam spreads.

Whether you call this field "architectural lighting design" or "lighting design" is a game of semantics. At its core, lighting is about creating a sense of place and atmosphere using light as the main medium of expression. It's about fulfilling the practical needs of a project, whatever the program might be. It means having one's work blend seamlessly with the architecture, often at the risk of not being seen. It's about giving definition to a space.

Elizabeth Donoff, Editor
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THE MATTER OF LIGHT

This summer, at museums in Los Angeles, Houston, and New York, three reloted exhibitions give audiences a first-hand look at—and experience of—the work of artist James Turrell.

text by Aaron Seward

Aten Reign (2013), Turrell's site-specific work at the Guggenheim Museum.

The story goes that, in the mid-1960s, a young California native named James Turrell, the son of devout Quaker parents, took an empty slide projector and positioned it so that it would shine into the corner of a room. After adjusting the angle, what appeared where the beam hit the intersecting walls was a cube of light.

Moving around the room, the perspective changed but the glowing apparition maintained its three-dimensional form, until, after getting close enough, it became clear that the box was an illusion. All that really existed in the spot were two intersecting flat planes of white light. But the phenomenon—both the material quality that the light seemed to take on when projected this way, and what that illusion implied about the nature of perception—launched Turrell as the foremost artist of what is referred to as the Light and Space movement, and has since taken him on an artistic journey that is now entering its fifth decade.

The cube of light, a piece titled *Afrum I (White)* (1967), is currently on display on the fifth floor of the Solomon R. Guggenheim Museum in New York City, as part of a major solo show of the artist's work titled simply "James Turrell," which runs through Sept. 25. Concurrent to the Guggenheim's exhibition is one called "James Turrell: The Light Inside" at the Museum of Fine Arts, Houston, which runs through Sept. 22, and another called "James Turrell: A Retrospective" at the Los Angeles County Museum of Art, which runs through April 6 of next year. Together, these three related exhibitions are giving American audiences an opportunity to immerse themselves in a diverse body of work that must be experienced first-hand to be fully understood. •

To continue reading this article about James Turrell's work and others from AL's archive go to http://bit.ly/12XXQjN.

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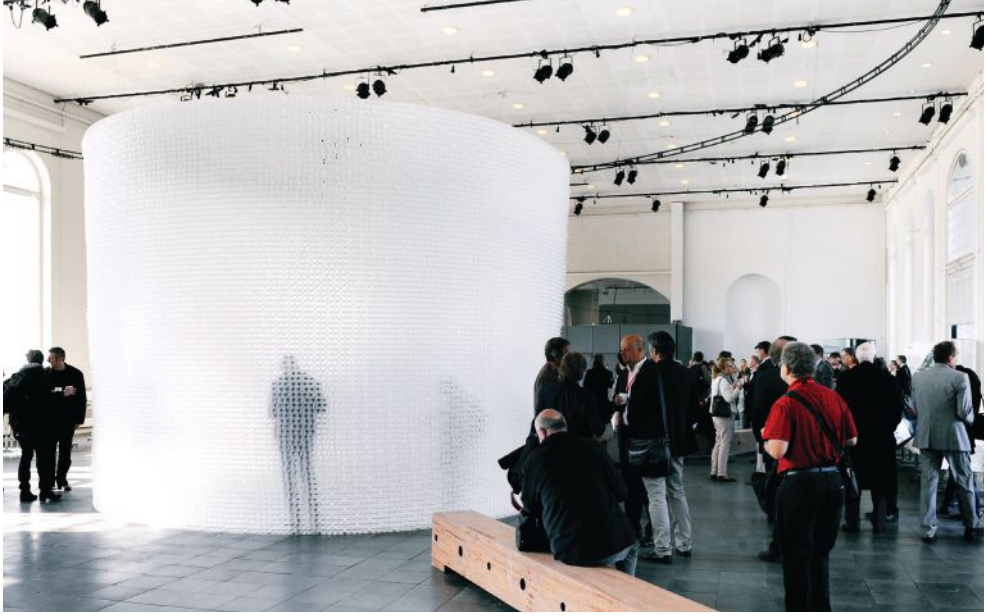
SPREADING THE LIGHT

By Wanda Lau



Natural light filled the Royal Danish Academy of Fine Arts' School of Architecture, which served as the venue for the 2013 Velux Daylight Symposium as well as for networking between sessions.

Jakob Boserup/Courtesy Velux

The benefits of natural light are gaining recognition, presenters said at the 2013 Velux Daylight Symposium, which was held on May 15 and 16 in Copenhagen.

The theme of this year's symposium, *New Eyes on Existing Buildings*, was chosen because the world's extant building stock will remain in use for decades, says Per Arnold Andersen, head of Velux's Knowledge Centre for Daylight, Energy, and Indoor Climate. This makes it "obsolete to look at the future building stock as something new," he says. "Instead, we should realize that tomorrow's buildings have already been built."

In his opening remarks, Andersen challenged attendees to find ways to disseminate the issues and research presented at the event to a "viable audience." Several presenters alluded to working with decision- and policy-makers who are unaware, skeptical, or indifferent to daylighting's effect on people's well-being. For example, presenter and Berlin University of Technology lecturer Martine Knoop said that she wants to counter the ideas of people who want to reduce building window sizes in favor of increasing the insulation value of walls, and who believe that LEDs will usurp the need for daylight.

The presentations and group panels covered topics beyond existing buildings. From detailed project studies to a review of research and technologies to impassioned pleas for more involvement from the design community, the speakers discussed the role daylight plays in health, education, productivity, and livelihood. A full program along with links to speaker presentations is available on Velux's recently relaunched site: thedaylightsite.com. •

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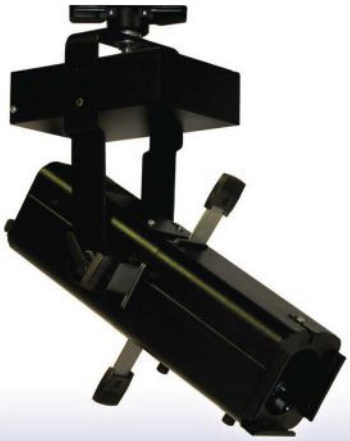

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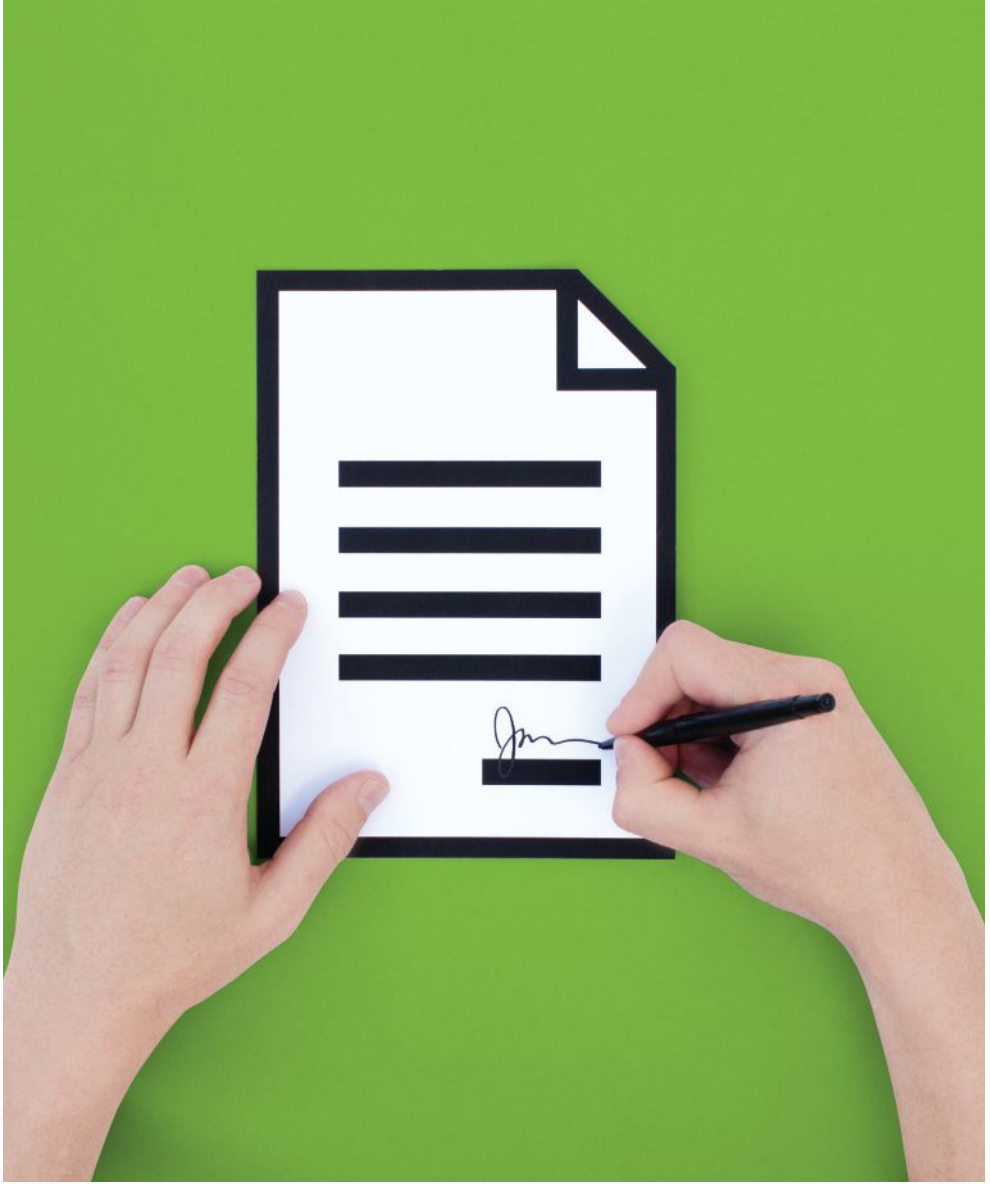

PROFESSIONAL PRACTICE

EMAIL, DIGITAL DOCUMENTS, AND SIGNATURES

What's legally binding in our digital age?

text by Peter J. Lamont
illustration by David Schwen

Peter J. Lamont is a business and commercial litigation attorney nationally recognized in a wide variety of highly specialized areas within the kitchen, bath, lighting, construction, and design industries. He routinely represents various national and international companies within the design sector, and has achieved the highest rating in both legal ability and ethical standards as awarded by AVVO (avvo.com).

There was a time when a contract was not legally binding unless all of the parties involved sat down, reviewed the agreement, then signed and dated it in front of witnesses. Today, such formal contract signings have become passé. Everyone—from major corporations to the solo lighting practitioner—now uses email as their primary means of communication. Consequently, people receive and review documents on their smartphones, tablets, and other mobile devices. Some even sign documents with a digital signature.

While most businesses enjoy the ease of digital communication and negotiation, many wonder if email communications or digital signatures are legally binding. What are the legal ramifications of using email and digital signatures to conduct business and to negotiate and sign business documents?

To gain a full understanding of the legality of electronic communications, we have to discuss two federal laws. The first is the *Uniform Electronic Transactions Act of 1999* (UETA). This act makes it legal for contracts to be negotiated and agreed to via email. The UETA specifically states that emailed and faxed contracts are legally binding. So any agreement made through electronic medium will, assuming all other required contractual conditions are met, hold up in court.

The second law is the *Electronic Records and Signatures in Commerce Act*. Signed by President Bill Clinton in June 2000, this law grants electronic signatures on contracts the same weight as those executed on paper. Even so, there are some exemptions, such as student loans, whose contracts must still be signed by hand.

THE ENFORCEABILITY OF EMAIL

The law has developed rapidly over the past 20 years since the UETA was passed. Clarifications of the original law and developing case law have made it reasonably clear that an email can be considered a legally binding contract. Therefore, it is important for designers and design firms to be mindful of what they write in emails as

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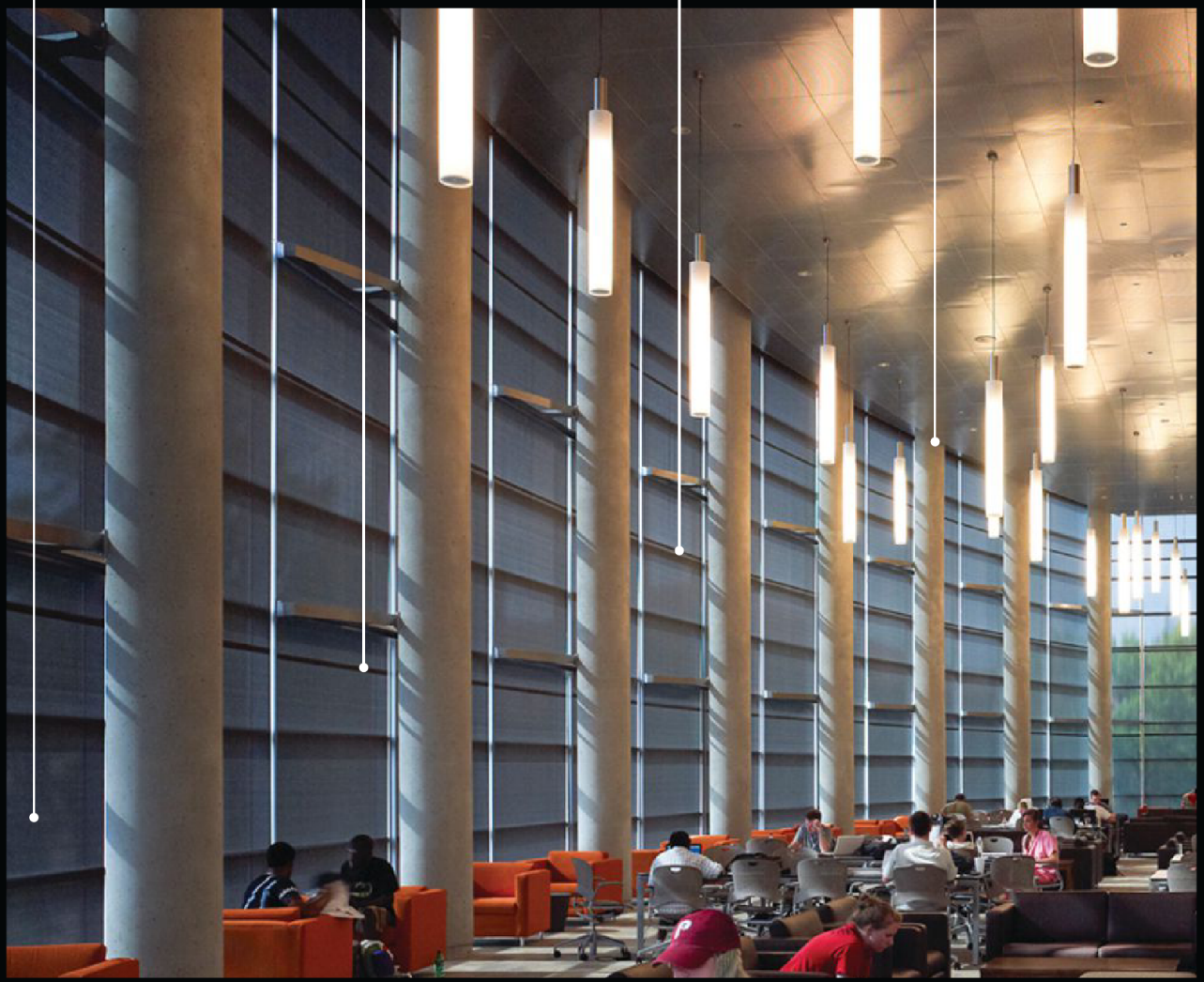

Unlike formal negotiations and signings, email communication can be very casual and oftentimes fail to reflect the level of thought or care that goes into the preparations of hard-copy contract documents.

to avoid inadvertently creating a contractual obligation. Unlike formal negotiations and signings, email communications can be very casual and oftentimes fail to reflect the level of thought or care that goes into the preparation of hard-copy contract documents.

Over the past few years there have been a number of federal and state cases involving the creation of contractual obligations through email, which the author later sought to get out of. For example, a lighting designer had been negotiating a contract with a client that had gone back and forth via email for several days. Tired of the process dragging on, the designer sent an email to the client indicating that "the current terms of the contract are acceptable." Five days after sending the email, the designer reviewed those terms and realized that he had agreed to it out of frustration, not because the terms were favorable. He immediately contacted the client and sought to revoke the agreement. The client refused, arguing that they had already turned down a number of other designers and that they wanted to use him.

The designer then filed a lawsuit seeking the court's permission to void the contract on the grounds that it was not formally entered into, but informally agreed to via email. The court determined that the email clearly showed his intent to enter into the contract with the client and refused to let him void the agreement, comparing the situation to the request of an individual who had signed a formal, hard copy contract and then later sought to avoid his obligations simply because he had not read the entirety of the document.

But courts do still require that all of the elements of a contract be met. A contract is an agreement that sets specific terms between two or more persons or entities with a promise to do something in return for a valuable benefit. The courts have been applying standard contract law requirements to emails and other electronic communications since the late 1990s. So lighting designers need to understand the potential power of an informal email and the steps to take to protect oneself against unintended contractual obligations. And the best way to limit the power of an electronic communication is to include a disclaimer.

For example, let's assume that you are negotiating a contract with a client. You have sent more than 10 emails back and forth trying to hammer out various clauses in the document, but you do not want any of these negotiations to be considered acceptance of a formal agreement. As such, you should include a disclaimer at the bottom of your emails that states that the message does not legally bind either party and serves only for the purpose of negotiating a final agreement. You can also

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state that the electronic correspondence may provide the basis for the preparation of a legally enforceable agreement but that email does not address all issues contemplated by the transaction, and as such will be the subject of further negotiations. You should also include a sentence that reads: "In the event that the parties are unable to agree upon and execute, for any reason whatsoever, a mutually acceptable formal agreement, the parties understand that each party reserves the right to cancel all negotiations and consider other offers thereafter."

Finally, you should include a sentence that states: "In the event an agreement is executed and delivered by both parties, the terms of that document shall supersede all prior discussions and negotiations, and such documents should constitute the entire agreement between the parties."

ELECTRONIC AND DIGITAL SIGNATURES

There are hundreds of websites that offer digital and electronic signature solutions. Furthermore, many sites make a distinction between the two.

Most people use the term "digital signature" to mean either a digital or an electronic signature, but it is becoming standard to reserve the term for cryptographic signature methods. (Cryptography is the science of securing information and is generally associated with signatures on encrypted documents.) The term "electronic signature," on the other hand, is used for other paperless signature methods.

There are a number of online and mobile applications that use cryptography to create a digital signature, such as SignNow (signnow.com) and DocuSign (docusign.com). In these applications, online documents (word or pdf) are encrypted to protect them from unauthorized signatures. A "key" is generated which allows only the proper parties to sign the documents.

On the other hand, while an electronic signature or "e-signature" can be a secure digital signature, it can also be a typed name or a digitized image of a handwritten signature. But with these "e-signatures," there is nothing to prevent someone from typing someone else's name. An "e-signature" may be legally enforceable in a number of circumstances, but it is generally considered to be less secure than an encrypted digital signature.

In general, digital signatures are fully enforceable. Both the *Electronic Signatures in Global and National Commerce Act* (ESIGN, 2000) and the *Uniform Electronic Transactions Act* (UETA, 1999) state that electronic records and signatures carry the same weight and legal effect as paper documents and handwritten signatures.

But there are a few documents that cannot be signed using a digital or electronic signature. These include wills, leases, deeds, adoption papers, divorce papers, court orders, notices of termination of leases, notice of repossessions, and notices of foreclosure.

It is important to note that when a lighting designer wants to use a digital signature on a client contract, federal law permits the client to opt out of an electronic agreement. Thus, prior to using an electronic contract and signature, the designer is required to provide the client with a notice concerning the use of electronic documents and signatures, and an explanation of the designer's digital security. The law does not have the same requirements for business-to-business agreements.

So while using digital means of conducting business can often be quicker and more cost effective than traditional methods of signing and negotiating contracts, it is still important for lighting designers to follow the developing areas of law relating to digital signatures and electronic documents so that they, and their clients, are best served when entering into working agreements. •

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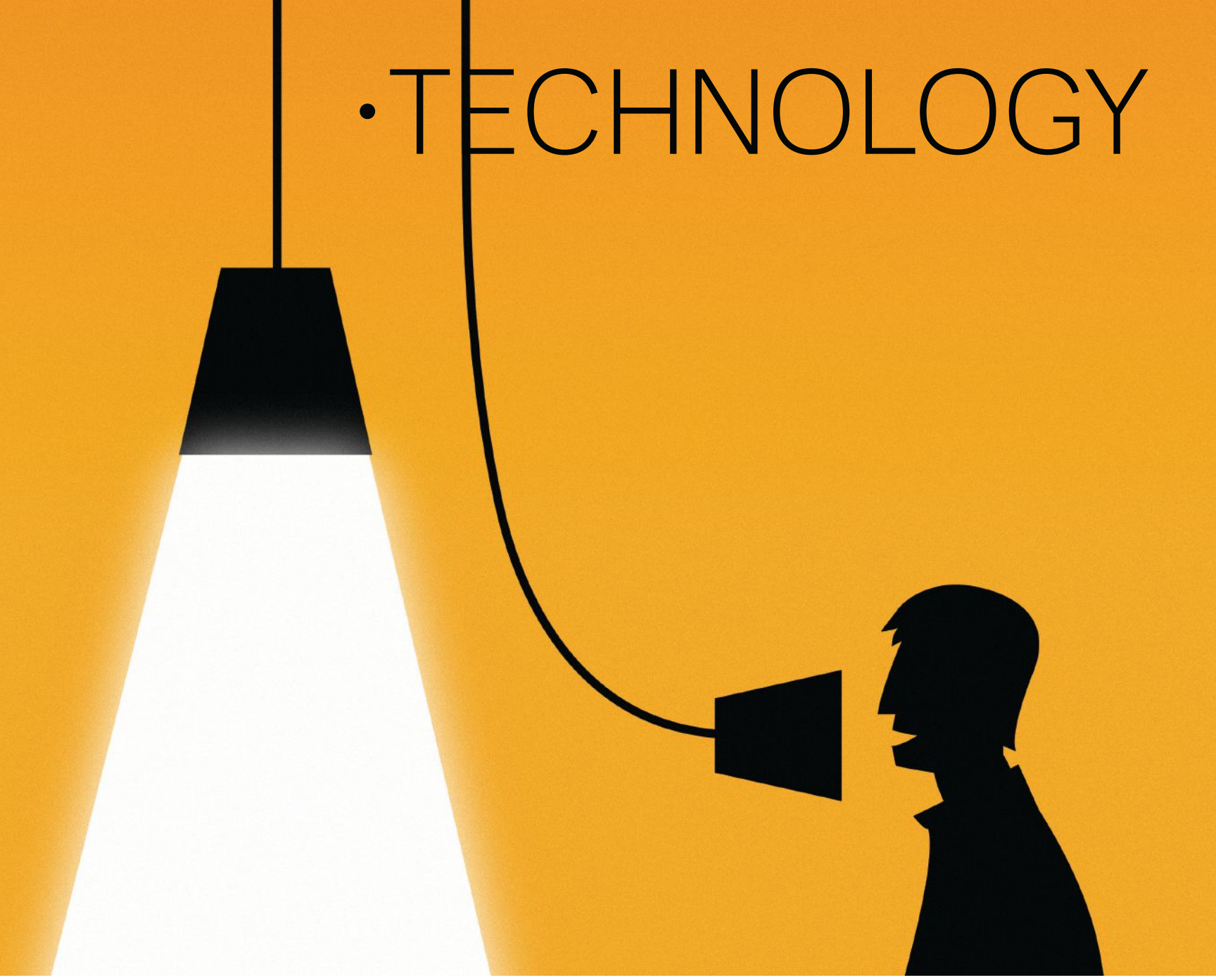

TECHNOLOGY

IN THE NETWORK

Lighting has advanced from standalone controls to integrated systems that speak with each other and with overall building operations.

text by Amanda Kolson Hurley
illustration by Tang Yau Hoong

Technology has made commercial lighting smart, starting with automated controls. Instead of flipping switches in a utility closet, facility managers can program lights to activate at designated times and days. They can be linked to occupancy and daylight sensors and controlled by zones on one or several floors. Though this type of system—in which a central control panel choreographs every action and receives feedback from sensors—remains popular, lighting is becoming even smarter.

With a distributed intelligence approach, lighting systems no longer have a single mission control station. Rather, they act more like ant colonies, where members work independently, but in concert with the overall goals of the community. Control zones are smaller and greater in number, and individual luminaires can make their own decisions when to switch "on" or "off," or dim, thanks to integrated sensors and controls.

One such strategy is to enable individual devices—sensors, dimmers, and luminaires—to behave autonomously, while belonging to a flexible and scalable system, says Dave Ranieri, vice president of Acuity Brands. "You can control [devices] individually, or you can group them together into small networks and control them by room or zone" with a simple CAT-5 cable, he says. "If you change the space, all

"[The impact of LEDs] is on a much bigger scale than just changing sources. There are so many emerging technologies they are enabling, in the way of optics, communications, and controls." —Dave Ranieri, Acuity Brands vice president

you have to do is unplug them and plug them in again."

For its 2012 office renovation in Newport Beach, Calif., DPR Construction chose a mix of controls and LED fixtures to conserve energy and to reach its target of LEED-CI Gold certification. Occupancy sensors were located every six to eight workstations, in hallways, and in common rooms, while daylighting sensors were positioned along the glazed perimeter of the open-plan office to automate dimming. Employees control their tasklighting on their computers or smartphones. The overall light level can be set at 30 percent of full power, thanks to ample daylight, and energy usage has been well below the requirements of California's Title 24.

With solid-state lighting, systems with a sensor and controller at the individual LED fixture are becoming more common. Enlighted Inc., a Silicon Valley clean-tech startup, offers one such system. Occupancy, ambient light, and temperature data are collected from each fixture through a wireless relay and sent to a central data collector and dashboard, which then sets the control for each fixture. In 2012, a lighting retrofit of the LEED-certified San Jose City Hall outfitted with Enlighted's system achieved an energy savings of 53 percent.

Implementing control networks can be easier on renovation projects than in new construction, if plenum access is available. Networks with low-voltage plug-and-play or wireless components can be installed during the retrofit. For new construction projects, lighting control networks may be more sophisticated and require upstream planning and coordination in the design-bid-construction process, Ranieri says. Coordinated space planning during the design stage can help ensure that controls are tailored to specific conditions such as daylighting, occupancy patterns, and other factors that affect lighting needs.

The main factor driving these technologies is LEDs, which are well suited for digital control. They turn on instantly and, unlike fluorescents, consume less energy when dimmed. Their long life encourages owners to employ an advanced control strategy from the outset—if the fixtures will last up to 20 years, they may as well optimize their systems with state-of-the-art controls. Ranieri believes LEDs' greatest benefit is the way that they are driving advancements in control technology. "It's on a much bigger scale than just changing sources," he says. "There are so many emerging technologies they are enabling, in the way of optics, communications, and controls," that are making LEDs more efficient, precise, and responsive.

Meanwhile, regulations are also contributing to the momentum. "The next big driver is the energy codes, which are requiring more and more controls," says Len Sciarra, a sustainable design leader at Gensler. "Two [code] editions ago ... there was very limited control required." The 2012 International Energy Conservation Code requires occupancy sensors in various space types, including classrooms, restrooms, and private offices. Sensors must turn lights off within 30 minutes of vacancy, and lighting in daylight zones must be controlled separately.

Gensler devised a comprehensive lighting control strategy for the LEED Platinum–certified headquarters of Johnson Controls, in

Glendale, Wis. Not only does the networked lighting scheme allow for individual control of workspaces, but it also operates on the company's Metasys building management platform, which monitors and coordinates building systems across its campus—the next step in controls and integration with HVAC and other building systems. "In the old days," Sciarra says, "the mechanical system didn't care if a room was full or empty—only if it was 72 degrees. What you're able to do now is take information from the occupancy sensor, developed for the light fixture, to inform the chiller and air handler [operations] and ventilation. That's where you're getting the integration—it's all on one computer."

Ranieri agrees that systems integration is a trend that "the more intelligent buildings" are following, though standardized communication protocols would accelerate it. In addition to interfacing with HVAC, intelligent lighting can also communicate with the electric grid. California's Title 24 requires retail buildings with sales floors exceeding 50,000 square feet to reduce lighting loads automatically when utilities issue a demand-response signal at times of peak demand; this requirement will soon apply to all commercial buildings exceeding 10,000 square feet.

A 2010 California Energy Commission study investigated the performance of three commercially available lighting control systems (Lutron, Universal Lighting Technologies, and Convia/A Herman Miller Company) during utility demand-response tests. "Relative to normal levels of operation," the study notes, "demand savings of up to approximately 35 percent were achieved during testing."

The grid itself is changing to better reap the savings from smart lighting systems. Currently, electricity from the grid is delivered in alternating current (AC) form, while lighting devices use direct current (DC) power. The conversion wastes energy, adds complexity, and creates potential failure points. The EMerge Alliance, an open industry association based in San Ramon, Calif., promotes open standards that would effectively create DC microgrids throughout commercial buildings, eliminating the conversions. EMerge estimates that LEDs integrated with a DC microgrid can gain a 10 to 15 percent increase in efficiency. Wider adoption of DC distribution could spur wider LED adoption, and vice versa.

Ranieri foresees digital lighting systems not just receiving signals from the grid but sending them upstream. "When you take this intelligence and bring it down to a lighting or device level, you can send signals back to the grid that say, 'If you've got to do load shedding, this is a critical system.' Or 'This can go down to 50 percent but not below.' ... It's feasible."

Installing wired lighting networks can be costly and challenging, particularly in existing buildings. Wireless systems show promise for both retrofits and new construction. EnOcean, a German company, manufactures wireless switches and sensors that harvest small amounts of solar energy to function, eliminating the need for batteries. It spearheads the EnOcean Alliance, a consortium of manufacturers that has developed equipment profiles to operate at compatible radio frequencies, known as the EnOcean standard. The Squaire, a 1.57-million-square-foot hotel, office, and transit complex that opened in 2011 adjacent to Frankfurt Airport, uses 12,000 EnOcean-standard switches and sensors to manage lighting, heating, and room shading systems.

If these systems sound like a brave new world, they are, but they won't be adopted overnight. While the technology is developing rapidly, new construction has been sluggish, which has limited market penetration. Ambitious control systems remain most attractive for facilities with intensive lighting demand, such as hotels, or even projects that anticipate having longer payback periods, including schools, government buildings, and large offices. As construction picks up, however, the shift will accelerate. In a few years, hyper-intelligent lighting could seem just average. •


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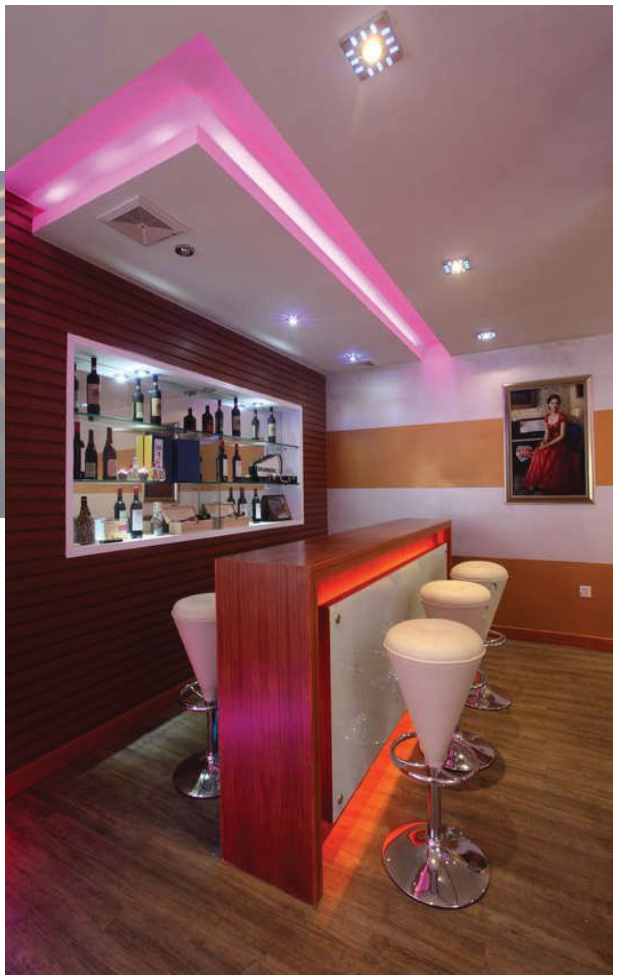

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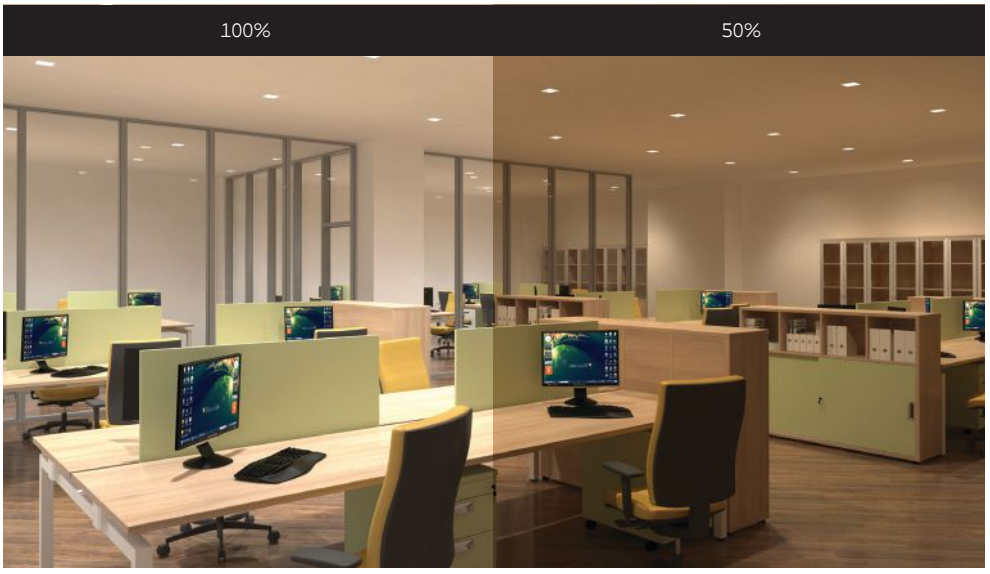
2013 LIGHTFAIR PRODUCT PICKS

As noted by our editorial team, technology advancements were the star when it came to luminaire development at this year's Lightfair in Philadelphia.

text by Jennifer Bickford

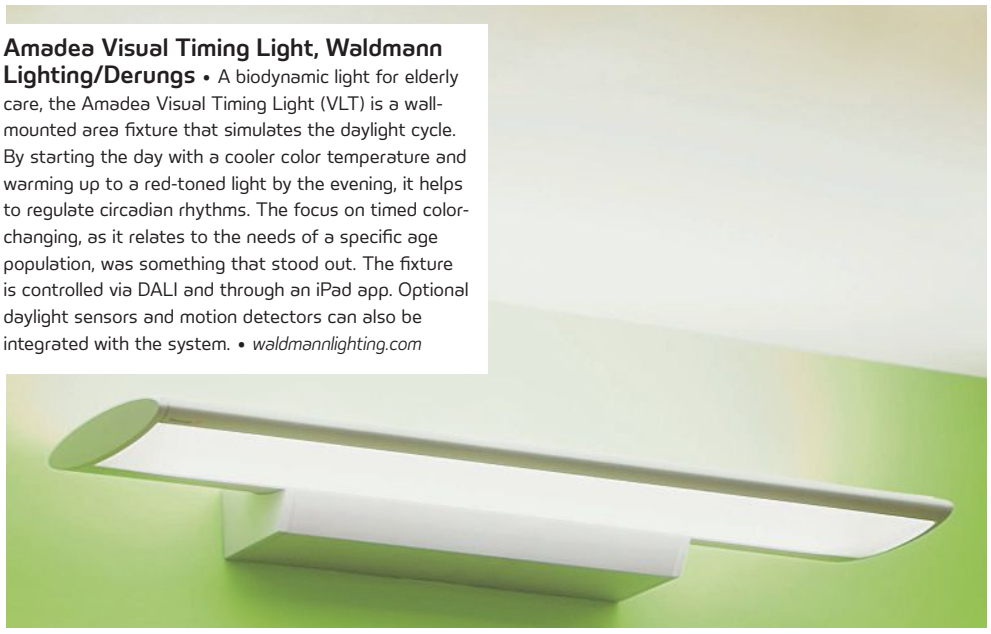
Snap System, Soraa • This integrated lamp and accessory arrangement uses self-centering magnets to attach different lenses to a single 10-degree 10W MR16 LED lamp. The magnet attachment stood out for both its ease of application and its clever placement, obscuring the source's hot spot. Available in 2700K or 3000K and either 80 or 95 CRI, the lamp can hold up to two accessories at a time. Options include three color filters, four beam distributions, two linear spread lenses, and a hex-cell louver. The Snap System can be used indoors or outdoors in sealed, non-ventilated fixtures and applications with glass lenses. • *soraa.com*



Color Select, USAI Lighting • Providing independent control of both color intensity and color temperature, USAI's Color Select technology aligns interior electric lighting color temperatures with shifts in daylight color throughout the day. The controllability and accuracy of the color temperature is what brought our attention to this product. A proprietary algorithm optimizes color temperature from 2700K to 6000K using zero-to-10V control. Fixtures can be dimmed down to 1% using zero-to-10V, Reverse Phase, 3 WIRE, DALI, or DMX. Color Select will be incorporated into BeveLED 2.0 series downlights, and adjustable or wallwash fixtures in 30-, 50-, and 80-degree beam spreads starting in fall 2013. • *usailighting.com*

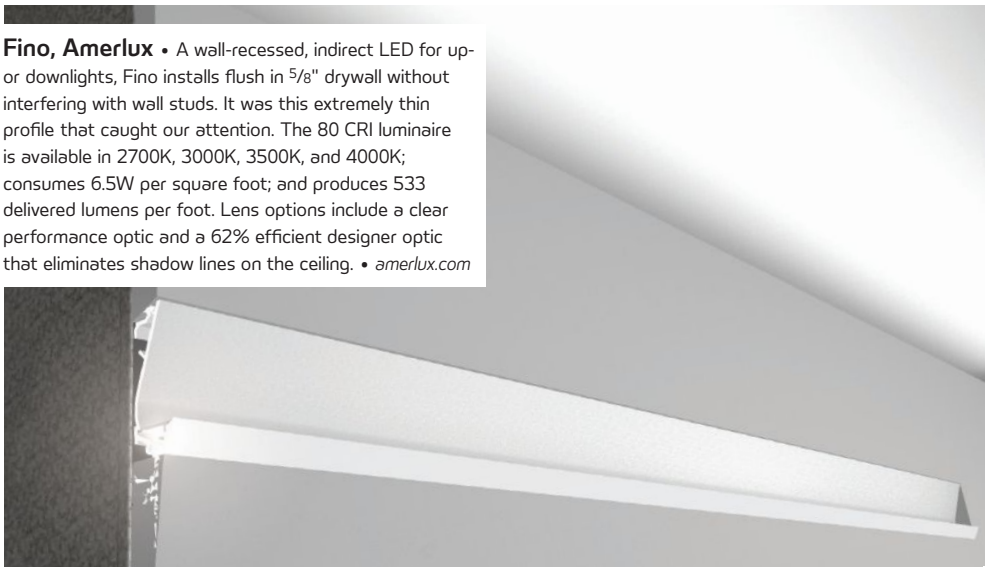
Canoe, Acuity Brands/Winona Lighting • Canoe is a newly launched 4'-long suspended indirect LED pendant. We were impressed with the luminaire's sophisticated design and ability to deliver steady illumination in such a thin profile. Canoe is available in two light outputs—2,100 or 4,100 lumens—and in three color temperatures—3000K, 3500K, or 4000K. Several ceiling mounting options and overall suspension lengths are available. The housing is composed of aluminum; the finish options are copper, gloss red, polished aluminum, or a custom color. Both the 277V and 120V versions use a remote driver to power the light engine, and a damp location label is optional. • *winonalighting.com*

Amadea Visual Timing Light, Waldmann Lighting/Derungs • A biodynamic light for elderly care, the Amadea Visual Timing Light (VLT) is a wall-mounted area fixture that simulates the daylight cycle. By starting the day with a cooler color temperature and warming up to a red-toned light by the evening, it helps to regulate circadian rhythms. The focus on timed color-changing, as it relates to the needs of a specific age population, was something that stood out. The fixture is controlled via DALI and through an iPad app. Optional daylight sensors and motion detectors can also be integrated with the system. • *waldmannlighting.com*



Unilume LED Micro Channel, Tech Lighting • Designed for continuous-run lighting applications, the Unilume LED Micro Channel is a small 0.85" by 1.02" half-round linear LED fixture. We took note of its extremely slim profile and its modularity, which allows for easier connection with individual arrays. It is available in three lengths—12", 24", and 48"—and two outputs of 300 or 600 lumens per foot. It has four standard color temperatures—2400K, 3000K, 3500K, and 4000K—all with a CRI of 80. Powered by either a remote or plug-in 24V DC power supply, the fixtures use an ELV dimmer to dim down to approximately 10%. • *techlighting.com*

Fino, Amerlux • A wall-recessed, indirect LED for up- or downlights, Fino installs flush in 5/8" drywall without interfering with wall studs. It was this extremely thin profile that caught our attention. The 80 CRI luminaire is available in 2700K, 3000K, 3500K, and 4000K; consumes 6.5W per square foot; and produces 533 delivered lumens per foot. Lens options include a clear performance optic and a 62% efficient designer optic that eliminates shadow lines on the ceiling. • *amerlux.com*



Coastal Light, Lighting Science Group • Designed for coastline and beachfront applications, the Coastal Light uses amber-colored LEDs that provide ambient outdoor lighting that will not alter the natural cycle of sea turtles and other coastal wildlife. We took note of this family of lamps and luminaires both for their intended design use and amber LEDs. With a CCT of approximately 1500K, three lamp versions are available: the 13W 40-degree PAR30 Shortneck LED retrofit lamp that delivers 125 lumens (shown), the 55W Roadmaster in Type III and Type V optics with 648 delivered lumens, and the 100W Prolific LSR3 in Type III and Type V optics that provides 1,750 delivered lumens. • *lsgc.com*

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~~TENTH~~ ANNUAL AL LIGHT AND ARCHITECTURE DESIGN ~~AWARDS~~

text by Elizabeth Donoff

Once again, the projects submitted to the AL Light & Architecture Design Awards did not disappoint. Diversity in project location, design thinking, and technical problem solving characterized the pool of more than 80 international entries. The jury, a group of leading architects and lighting designers (read more about them on page 50), deliberated for two-and-a-half days. The projects on the pages that follow are the results of their intense project reviews and discussions.

The best of the best, these projects represent architectural lighting design at the top of its game. Successful aesthetic responses are merely one part of the winning design equation; technical prowess is another. Still, it's not just the use of the latest luminaires or leading-edge technologies that set these projects apart, it's the willingness of the design teams to research and explore the options. Often that means designing a custom luminaire, or using a lighting methodology in a way that it was not originally intended.

At its heart, design is about being curious, and it's that sense of inquisitiveness that has led to these design solutions that transform our spaces and our experiences.

For additional coverage, including companion videos and slideshows of the winning projects, go to orchlighting.com.

2013
DESIGN AWARDS
OUTSTANDING ACHIEVEMENT

EXTERIOR LIGHTING

IN LUMINE TUO

Speirs + Major

text by Elizabeth Donoff

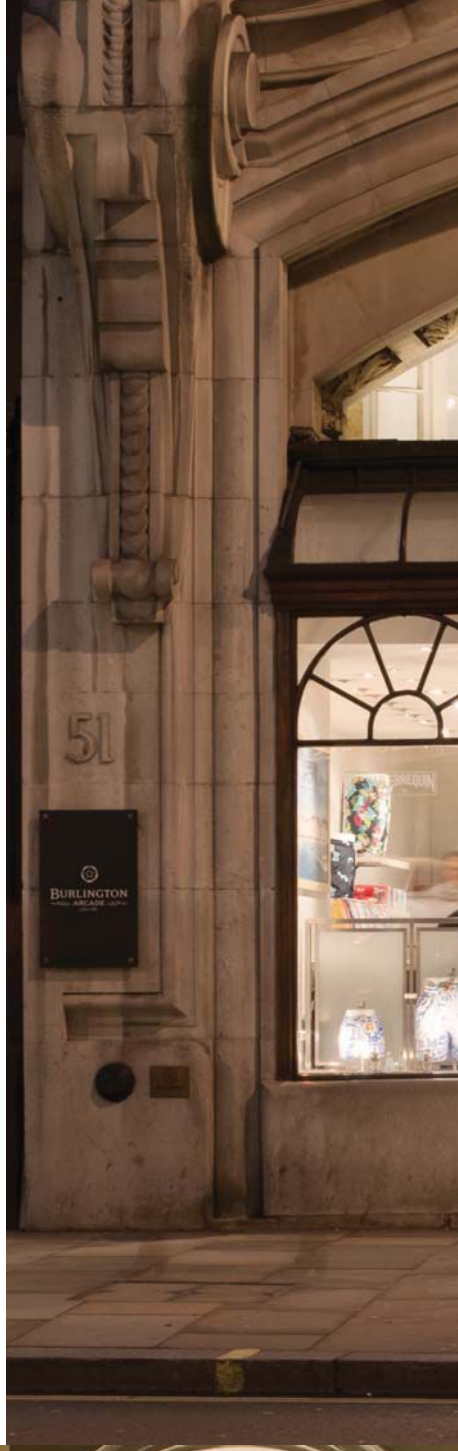
Created as part of the tri-centenary celebrations of the signing of the Treaty of Utrecht, "In Lumine Tuo" is a lighting installation that commemorates this Dutch city and its landmarks: the Dom Tower, church, and square. The project brief asked for a design that would transform these symbols into "living" entities, while recalling their place in Utrecht's history.

The team at Speirs + Major created a design in which "light comes from within." As such, lighting becomes the common element used to highlight the architectural details of the Gothic-style tower and church. All the lighting equipment—spotlights, projectors, strobes, and controls—were carefully positioned using compression clamping so as not to compromise any part of the landmarked structures.

The Dom Tower is the focal point of "In Lumine Tuo." Visible from different vantage points in the city, the light sequence is timed to take place just before the striking of the hour. The show begins as the spotlights in the tower's arches fade in and out at different intensities. Once the structure is fully illuminated, chimes begin to ring, and a series of lighting effects—bursts of speckled white light—move up the tower. As the bells get louder, the movement of light accelerates, and the installation culminates in a flickering burst of light from the tower's belfry. The clock strikes, the tower goes dark, and then it illuminates again. It's as if the tower is breathing and city residents—past and present—are connected across time. •

JURY COMMENTS: An interesting modern interpretation of a clock tower. • Tells a strong story. • Subtle and dramatic. • The intricate programming and controls that create the spectacle are impressive.

Details **Project:** In Lumine Tuo, Utrecht, the Netherlands • **Owner/Client:** Gemeente Utrecht, Utrecht, the Netherlands • **Lighting Designer:** Speirs + Major, London **Team Members:** Mark Major, Keith Bradshaw, Benz Roos, Ray Bill, and Iain Ruxton • **Art Consultant:** Marijke Jansen • **Project Manager:** Kees Van De Lagemaat • **City Engineer:** Arthur Klink • **Programmer:** Daniel Harvey • **Contractor:** Heijmans N.V., Rosmalen, the Netherlands • **Photographer:** James Newton Photographs, London • **Project Size:** 48,800 square feet • **Project Cost:** Withheld • **Lighting Cost:** Withheld • **Watts per Square Foot:** 0.3W excluding strobes; 1W including all strobes • **Code Compliance:** Not Applicable • **Manufacturers:** ACDC; Diversitronics; Hungaroflash; Martin Professional; Meyer; Pharos; Proliad; Sill



WHOLE BUILDING

BURLINGTON ARCADE

Speirs + Major

text by Elizabeth Donoff

The Burlington Arcade, built in 1819, is located in London's Mayfair district, an area known for its luxury shopping destinations and hotels. Speirs + Major was asked to devise a lighting strategy that would help restore the arcade's appearance and incorporate event lighting. The new lighting also had to be achieved within the total delivered load of the previous lighting scheme, a scheme that had used all metal halide sources. LED fixtures were the obvious choice even though they presented their own challenges. One of these was that matching the color temperatures of fixtures from different manufacturers required intense coordination.

The lighting design calls out the architectural details on both of the arcades' entry façades, one along Piccadilly Road and the other along Vigo Street facing Burlington Gardens. Inside, attention was paid to creating a uniform treatment for shop windows. Downlights provide a brighter zone of illumination around the shop entrances. (Design guidelines were written for shop owners to follow, as more stores are refurbished.) Custom LED fixtures are integrated into the skylights and fitted with louvers to minimize their effect. One of the main architectural features of the interior is the archways, which are illuminated by custom-designed miniature LED spotlights outfitted with elliptical lenses for a tight beam spread.

Adding to the palette of interior luminaires are new uplights: miniature linear LED fixtures with barn doors to ensure easy control of light distribution. These fixtures also incorporate variable color temperature to respond to different lighting conditions. During the summer, they are tuned to 4000K; in winter, to 3500K; and at night, to 2700K to recall the glow of gaslight, the arcade's original method of illumination. •

JURY COMMENTS: Integrated, elegant, and sophisticated. • Well thought out. • The design balances all the light levels and thinks about all the surfaces where light will be seen.

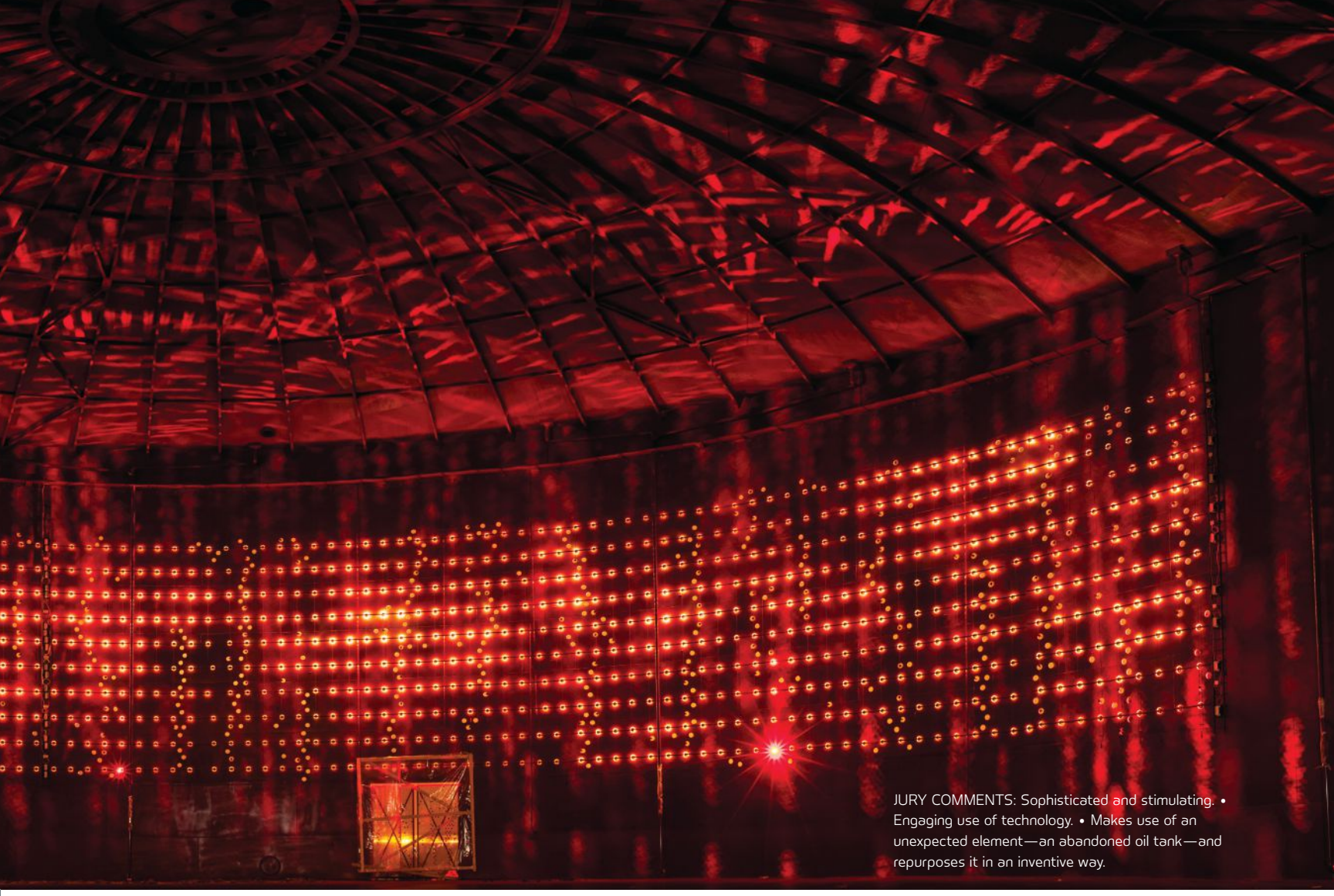
Details **Project:** Burlington Arcade, London • **Entrant:** Speirs + Major, London • **Owner/Client:** Meyer Bergman, London • **Architect:** Blair Associates Architecture, London • **Lighting Designer:** Speirs + Major, London **Team Members:** Andrew Howis, Clementine Rodgers, Benz Roos, and Ewan Parsons • **Building Services Engineer:** Polyteck, London • **Photographer:** James Newton Photographs, London • **Project Size:** 920 square meters (9,903 square feet) • **Project Cost:** Withheld • **Lighting Cost:** Withheld • **Watts per Square Meter:** 14W • **Code Compliance:** Part L of the Building Regulations • **Manufacturers:** ACDC; Cree; KKDC; Meyer; Mike Stoane Lighting; Osram; Philips; Selux UK

2013
DESIGN AWARDS
OUTSTANDING ACHIEVEMENT

EXHIBITION LIGHTING AND TEMPORARY INSTALLATIONS

SILO 468

Lighting Design Collective



JURY COMMENTS: Sophisticated and stimulating. • Engaging use of technology. • Makes use of an unexpected element—an abandoned oil tank—and repurposes it in an inventive way.

text by Deane Madsen

In Helsinki, winter nights can last upwards of 18 hours, and it takes a resilient population to endure the entire season when the sun barely crests the horizon. To celebrate this highly valued commodity of light and allow the public to reclaim an industrial space for civic and artistic celebration, architecture firm Pöyry Finland Oy and lighting studio Lighting Design Collective designed Silo 468, a permanent installation originally created for Helsinki's stint as the 2012 World Design Capital.

Now, even on the darkest of days, Silo 468 serves as an urban beacon of light, visible from miles away. To illuminate the interior, the team perforated the exterior surface of the 56-foot-tall tank, which was previously used for oil storage. Through these holes—when natural light is seasonally available—the red-painted interior is infused with dappled sunlight. Conversely, the silo's steel exterior is lit from within. The interior is ringed with 1,280 2700K white LEDs, mounted in alignment with the 2,012 surface cutouts (the number commemorates the installation year). Programmable dimmers allow the LEDs to interact with software that refreshes its algorithmic data every five minutes, to respond to changes in wind velocity, temperature, and precipitation. This results in a series of kinetic light displays, which never repeat.

Every evening at midnight, the white LEDs switch to red for one hour and give the silo's interior a warm, red glow. The color is a nod to the tank's former use as an airtight container of energy. Now, with a new development and an illumination-themed residential neighborhood springing up around it, Silo 468 is a purpose-driven focal point of light, and Helsinki is all the brighter for it. •

Details **Project:** Silo 468, Helsinki • **Entrant:** Lighting Design Collective, Madrid • **Owner/Client:** City of Helsinki Planning Department • **Architect:** Pöyry Finland Oy, Jyväskylä, Finland • **Lighting Designer:** Lighting Design Collective, Madrid **Team Members:** Tapio Rosenius, Oscar Martin, Rodolfo Lozano, Victor Soria, Gorka Cortazar, Reinaldo Alcala, and Rodrigo Arcaya • **Lighting Programmer:** Lighting Design Collective, Madrid, and Sun Effects, Helsinki • **General Contractor:** VRJ, Helsinki • **System Integrator:** Sun Effects, Helsinki • **Photographer:** Hannu Iso-Oja, Helsinki • **Project Size:** 1,017 square meters (10,946.9 square feet) • **Project Cost:** $2.6 million • **Lighting Cost:** $160,000 • **Watts per Square Meter:** 2W • **Code Compliance:** CE Certification • **Manufacturers:** E:cue; Traxon Technologies

EXTERIOR LIGHTING

EAST RIVER WATERFRONT

Tillotson Design Associates

text by Deane Madsen

While New York City has long boasted a famous skyline, of late there has been renewed focus at ground level, specifically along the city's riverbanks. The East River Waterfront Pier 15 and Esplanade, designed by SHoP Architects, is a recent part of this renewal. The 2½-mile-long stretch—large portions of which lie underneath FDR Drive—is undergoing a transformation geared to revitalize activity at the water's edge.

To make the esplanade safer and more accessible in the evenings, Tillotson Design Associates employed a variety of lighting interventions. First, to deal with FDR Drive's hulking bridgework, the firm used concealed T5 fluorescent sources to wash the painted, east-facing girders in an ambient lavender glow that softens the otherwise obtrusive steel skeleton. Next, to guide visitors along the esplanade path, LED light slots were installed in the benches located at intervals along the new hard- and soft-scaped areas. And finally, to give the renovated stretch of promenade an identity, LED strips were added to the river-facing vertical handrail supports, making their soft purple light and that of the bridge girders appear as two ribbons visible from the opposite shore.

A new pavilion at Pier 15 is both a resting point for pedestrians and cyclists and a community gathering space. Linear fluorescents illuminate the pavilion's soffit and roof deck, allowing light to cast a soft glow through the decking material. And all of these improvements are promising first steps, to draw eyes from the sky to the water. •

JURY COMMENTS: Nicely composed. • Each lighting move is deliberate and purposeful. • The bench lighting detail is done particularly well.

Details **Project:** East River Waterfront Pier 15 and Esplanade, New York • **Entrant:** Tillotson Design Associates, New York • **Owner/Clients:** The City of New York; The New York City Economic Development Corporation; The New York City Department of Planning • **Architect:** SHoP Architects, New York • **Lighting Designer:** Tillotson Design Associates, New York **Team Members:** Suzan Tillotson, Erin DeVries, and Megan Pfeffer • **Landscape Architect:** Ken Smith Landscape Architect, New York • **Photographer:** Mugg Photo, New York • **Project Size:** 14 million square feet • **Project Cost:** Withheld • **Lighting Cost:** Withheld • **Watts per Square Foot:** 0.2W (open esplanade walkways); 1.25W (under FDR structure) • **Code Compliance:** ASHRAE 90.1-2007 • **Manufacturers:** Charlotte International Partners; Electrix; Hess; Philips; Targetti Poulson; We-ef

JURY COMMENTS: Interesting interface that creates a moment between the old and the new architecture. • The lighting details are carefully integrated so that they become part of the architecture.

WHOLE BUILDING

UNIVERSITY OF THE ARTS

Speirs + Major

text by Elizabeth Donoff

Light is the singular element that unites the buildings on the University of the Arts campus, in London, as it marries the historic architecture and the contemporary structures. The school's main entrance is through the landmarked Granary Building, a 19th century masonry structure. Narrow-beam, inground, high-intensity discharge fixtures accent the façade's brick piers, and inground linear fluorescents call attention to the cornice and lintel details.

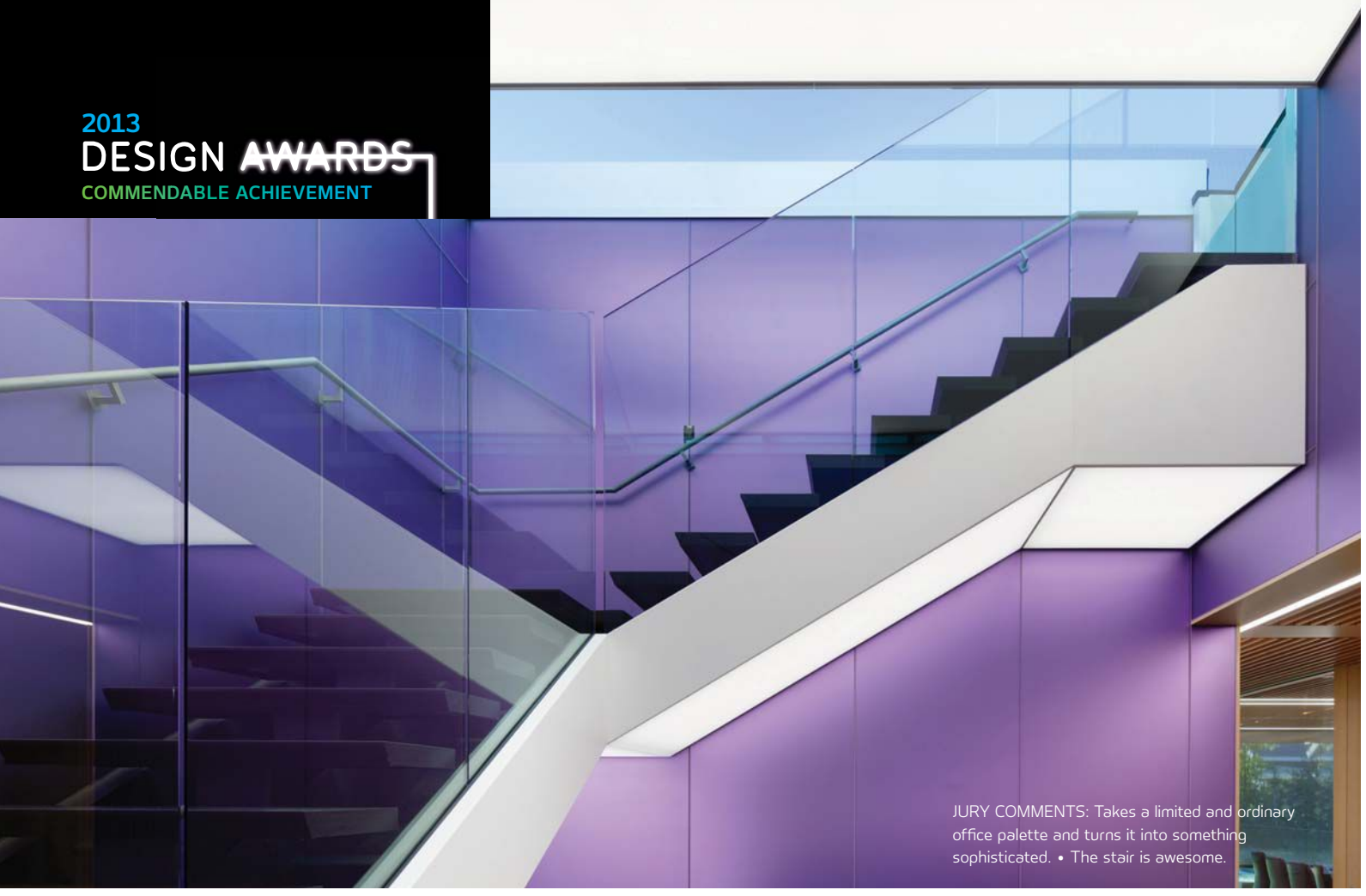
Once students and faculty pass through the entrance, they are greeted by what's referred to as the East–West link, a vast atrium space that provides a transition through the centuries. The space is partially covered by a glazed, cantilevered roof that allows natural light to supplement the electric lighting. A new integrated rail detail on the Granary façade recalls the building's sliding-door track, which is fitted with mounting points for theatrical lighting equipment needed for special events and exhibitions. In the ceiling plenum, custom-designed drum-style luminaires house fixture clusters that provide a layer of downlighting.

The school's new building is also organized around a large, covered, atriumlike space. Referred to as the Covered Street, it is topped by an ETFE roof. A lighting rail that carries the power infrastructure runs along the roof's perimeter and secures spotlights, which can be fitted with gobos and filters. Concrete and steel walkways are lit with 4000K neutral white light, which differentiates them from the other circulation and gathering spaces on campus that are lit with 3000K.

Old and new complement one another, thanks to the carefully considered lighting design, as articulated by the designers at Speirs + Major. •

Details **Project:** University of the Arts, Kings Cross, London • **Entrant:** Speirs + Major, London • **Owner/Client:** Argent, London • **Architect:** Stanton Williams, London • **Lighting Designer:** Speirs + Major, London **Team Members:** Mark Major, Andrew Howis, Philip Rose, and Rose Richardson • **Building Services Engineer:** Atelier Ten, London • **Electrical Contractor:** Grattes Brothers, London • **Photographer:** Nick Hufton, Hufton + Crow, London • **Project Size:** 6,800 square meters (73,195 square feet) • **Project Cost:** $221.5 million • **Lighting Cost:** Withheld • **Watts per Square Meter:** 12.9W (The installed loads for both schemes are considerably higher than the average consumption due to the use of control systems throughout.) • **Code Compliance:** BREEAM Excellent • **Manufacturers:** ACDC; Encapsulite; Enliten; Erco; Fagerhult; Meyer; Oldham Lighting; Philips; PJR Engineering; Siteco; Sill; Targetti Louis Poulsen; Wila

2013
DESIGN AWARDS
COMMENDABLE ACHIEVEMENT



JURY COMMENTS: Takes a limited and ordinary office palette and turns it into something sophisticated. • The stair is awesome.

INTERIOR LIGHTING

VENTURE CAPITAL OFFICE BUILDING

Sean O'Connor Lighting

text by Elizabeth Donoff

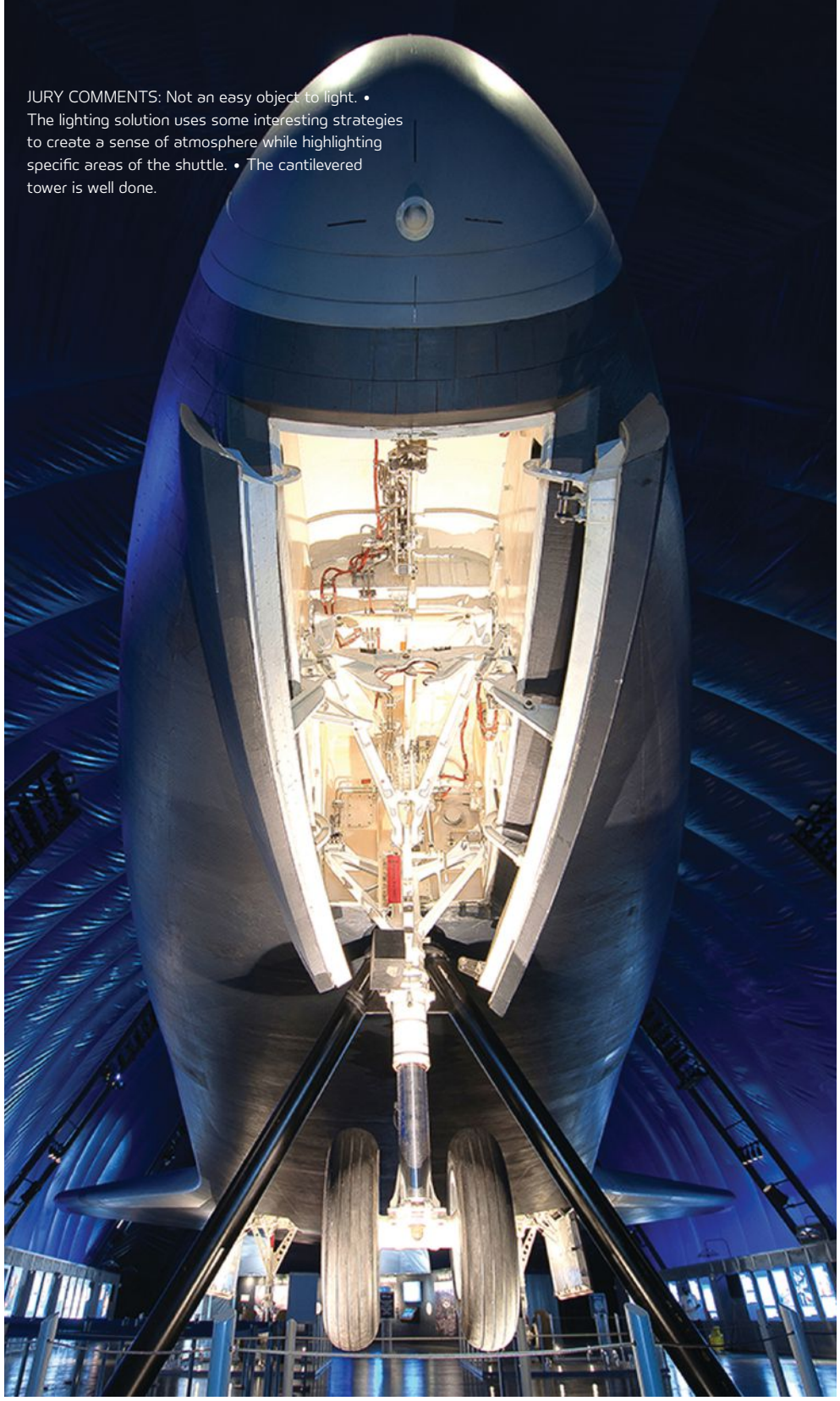
For this Silicon Valley–based venture capital firm, who requested to remain anonymous, Sean O'Connor Lighting was tasked with designing a lighting scheme that would be both environmentally responsible and technologically sophisticated. Furthering the complexity of the job was the client's request that only LED sources be used. To that end, O'Connor and his team came up with a design that employs just three luminaire types: linear light slots, downlights, and backlit panels.

The office's neutral material palette of wood and glass meant that the lighting had to maintain a uniform brightness. In the offices and corridors, 3500K LED light slots have custom-designed asymmetrical downward and outward light distribution. The dual optics provide both soft grazing for the wood and glass surfaces as well as tasklighting, while still keeping the ceiling plane free of fixtures.

In areas that require directional light, such as the conference rooms, custom miniature downlights fit in between the slats of the wooden ceiling system. The modularity and flexibility of the lighting is also present in its control system. Luminaires are individually addressed so that they can be zoned in groups, or separately using Wi-Fi-enabled devices.

The lighting transforms the stair area of this two-story building into a sculptural configuration. A backlit stretched ceiling—controlled by a daylight-responsive dimming system—and purple-etched laminated glass walls glow without a trace of any fixture silhouette. The stair stringer details were coordinated with the architect so that the stairs "float" against the luminous backdrop. Cutting-edge technology combined with an elegant palette of earth-tone finishes make this office a comfortable and easy-going environment. •

Details **Project:** Venture Capital Office Building, Menlo Park, Calif. • **Entrant:** Sean O'Connor Lighting, Beverly Hills, Calif. • **Owner/Clients:** Withheld at owner's request • **Architect:** Paul Murdoch Architects, Beverly Hills, Calif. • **Lighting Designer:** Sean O'Connor Lighting, Beverly Hills, Calif. **Team Members:** Sean O'Connor, Becky Yam, Martha Lopacki, and Jenny Sung • **Photographer:** Eric Staudenmaier Photography, Los Angeles • **Project Size:** 29,600 square feet • **Project Cost:** Withheld • **Lighting Cost:** Withheld • **Watts per Square Foot:** 0.62W • **Code Compliance:** Title 24 • **Manufacturers:** Architectural Lighting Works; Birchwood Lighting; HK Lighting; Philips; Zumtobel



JURY COMMENTS: Not an easy object to light. • The lighting solution uses some interesting strategies to create a sense of atmosphere while highlighting specific areas of the shuttle. • The cantilevered tower is well done.

EXHIBIT LIGHTING AND TEMPORARY INSTALLATIONS

SPACE SHUTTLE PAVILION

Focus Lighting

text by Elizabeth Donoff

How do you light a space shuttle that is being exhibited in a 100-foot-long by 60-foot-wide air-supported structure on the flight deck of an aircraft carrier? This is certainly not your average lighting scenario. But the team at Focus Lighting was not deterred by this technically driven project that was conceptualized, designed, built, and opened in just eight months.

The New York City pavilion that houses the temporary display of the Space Shuttle *Enterprise* was originally supposed to be a white tent. But once the Focus team began thinking about design strategies, they realized that the white background would not contrast enough with the white shuttle. Inspired by an image of the spacecraft against a fading blue sky, the team convinced the client that this "twilight" backdrop would create a more atmospheric setting. The lighting detail that accomplishes this wash of light uses 1,140 feet of 3500K 32W T8 fluorescent lamps with blue color sleeves mounted to the rear of the perimeter exhibit walls.

Visitors can walk underneath the shuttle, adding to the thrill of the exhibit. The landing gear wheel wells are highlighted with 3500K 20W ceramic metal halide lamps, which reveal the shuttle's mechanical inner workings. Because there are no surfaces in the tent from which to support luminaires, Focus Lighting designed eight custom light towers for the fixtures that were used to illuminate the *Enterprise*'s exterior. Cantilevering 29 feet above the exhibit floor and outfitted with multiple 70W PAR30 metal halide accent lights fitted with 30-degree snoots, the light is thrown 20 feet to dramatic effect, bringing the shuttle to life. •

Details **Project:** Space Shuttle Pavilion at the Intrepid Sea, Air, and Space Museum, New York • **Entrant:** Focus Lighting, New York • **Owner/Clients:** Intrepid Sea, Air, and Space Museum, New York • **Architect:** H3 Hardy Collaboration Architecture, New York • **Lighting Designer:** Focus Lighting, New York **Team Members:** Brett Andersen, Stephanie Daigle, Samuel Kitchel, and Kenneth Schutz • **Tent Architect:** A.Form Architecture, New York • **Photographer:** Juan Pablo Lira, Focus Lighting, New York • **Project Size:** 17,865 square feet • **Project Cost:** Not Available • **Lighting Cost:** Not Available • **Watts per Square Foot:** 0.9W • **Code Compliance:** IECC/ASHRAE • **Manufacturers:** Barnlight; BK-Lighting; Cree, Ruud Lighting; Cooper Lighting, Lumiere; ETC; Lamar Lighting; Philips Crescent Stonco; Tech Lighting; TSQ; Vode Lighting

BUDGET

SWEET CRUSH ICE BAR

Sean O'Connor Lighting

text by Deane Madsen

Los Angeles has seen its fair share of food trends, from cleanses to cupcakes, from food trucks to fro-yo, but the latest craze—shaved ice—brings with it a refreshing taste and a bright space. Working with just 1,000 square feet and having only 10 percent of the overall $160,000 design budget, Sean O'Connor Lighting created an identity for the Taiwanese company by incorporating the lighting into the architecture, such that the entire space reinforces the frozen treat purveyor's branding.

Custom-milled architectural panels with ice crystal–shaped cutouts, which are removable for maintenance, allow for illumination from RGB color-changing linear LED fixtures. These panels also conceal the store's structural supports, HVAC, and wiring for additional systems. Above the serving counter and the seating areas, custom linear-recessed white LED luminaires add a layer of practical ambient light. The store's high-gloss finishes and their reflective properties amplify all of the lighting effects.

By day, the shop caters to families, but at night it comes alive, thanks to a DMX-programmed system that activates the color-changing linear LEDs and produces a dynamic setting for an adults-only ice bar. It's a safe bet that Sweet Crush's shaved ice is one culinary trend that won't flicker out. •

JURY COMMENTS: Fun. • Impressive what they accomplished on such a small budget. • Nice integration of lighting, texture, color, and material to create a visually compelling space.

Details **Project:** Sweet Crush, Los Angeles • **Entrant:** Sean O'Connor Lighting, Beverly Hills, Calif. • **Owner/Clients:** Sweet Crush, Los Angeles • **Architect:** 64North, Los Angeles • **Lighting Designer:** Sean O'Connor Lighting, Beverly Hills, Calif. **Team Member:** Sean O'Connor • **Photographer:** Wil Carson, 64North, Los Angeles • **Project Size:** 1,000 square feet • **Project Cost:** $160,000 • **Lighting Cost:** $16,000 • **Watts per Square Foot:** 0.6W • **Code Compliance:** Title 24 • **Manufacturer:** Acolyte

2013
DESIGN AWARDS
BEST USE OF COLOR

JURY COMMENTS: Thoughtfully done. • Color plays a real role in creating a calming atmosphere.

COLOR

DUKE UNIVERSITY MEDICAL CENTER CANCER CENTER QUIET ROOM

Cline Bettridge Bernstein Lighting Design

text by Deane Madsen

The Duke University Medical Center Cancer Center is a serious place for those dealing with this illness. How each patient, family member, or loved one confronts the wide range of emotions associated with treatment can be as varied as the diagnoses. Tasked with the challenge of providing a multipurpose, contemplative space for a wide range of moods and emotions, Cline Bettridge Bernstein Lighting Design (CBBLD) organized the Cancer Center's Quiet Room with the tranquility of nature in mind.

The focal point of the space is an illuminated glass sculpture surrounded by seating banquettes accented with wood trellises. To re-create the soothing effect of a body of water, CBBLD lit the sculpture internally. Two strings of color-changing, linear LED fixtures, programmed with individual nodes, simulate the rippling of water on the surface of the glass, which is textured to add to the overall effect. CBBLD also outfitted the room's ceiling coves and walls with linear RGB LEDs. This allows the color of the entire space to subtly shift from red to blue to green to yellow, either independently or in concert with the sculpture. The entire room can be DMX controlled. While the hospital pulses with activity, the Quiet Room provides a place of calm, and CBBLD hopes it will provide those who enter it with a renewed sense of hope. •

Details **Project:** Duke University Medical Center Cancer Center Quiet Room, Durham, N.C. • **Entrant:** Cline Bettridge Bernstein Lighting Design, New York • **Owner/Clients:** Duke University Medical Center, Durham, N.C. • **Architect:** Duda/Paine Architects, Durham, N.C. • **Lighting Designer:** Cline Bettridge Bernstein Lighting Design, New York **Team Members:** Francesca Bettridge, Michael Hennes, Mitul Parekh, and Jeff Hoenig • **M/E/P Engineer:** United Engineering Group, Raleigh, N.C. • **Photographer:** Les Todd, Duke University Photography, Durham, N.C. • **Project Size:** 600 square feet • **Project Cost:** Withheld • **Lighting Cost:** Withheld • **Watts per Square Foot:** Complies with ASHRAE 90.1 • **Code Compliance:** Complies with local code • **Manufacturers:** Acuity Brands Lighting/Winona Lighting; B-K Lighting; Philips Color Kinetics

2013
DESIGN AWARDS
BEST USE OF DAYLIGHTING

JURY COMMENTS: A compelling and sophisticated use of a daylighting strategy to control glare. • A sensitive use of materials, particularly the scrimlike metal screens, to transform the atmosphere within the space from day to night.

DAYLIGHTING

ST. KATHARINE DREXEL CHAPEL

Cline Bettridge Bernstein Lighting Design

text by Deane Madsen

The St. Katharine Drexel Chapel at Xavier University—named after the school's founder—breaks away from traditional churches both in style and in lighting approach. The ramped entrance to the Pelli Clarke Pelli Architects–designed building has a narrow skylight that introduces daylight into the interior, and natural light is prevalent in the octagonal sanctuary.

In the main gathering and worship space, Cline Bettridge Bernstein Lighting Design (CBBLD) focused on creating an environment that would shift subtly from daylighting to electric lighting in the early evening hours. The chapel's double wall (solid on the exterior and punched with a repeating pattern of holes on the interior) is capped with a halo-shaped skylight between the two surfaces, which provides general, filtered illumination through the scrimlike perforated metal screens during the day. CBBLD's extensive daylight modeling influenced the size and placement of the panel perforations as well as the angle of the screens. At night, 3000K ceramic metal halide PAR30 wallwashers, mounted in the void of the double wall, and recessed CFL fixtures affixed to the skylight replicate the feel of daylighting by backlighting the screens. For a more intimate mood, the wallwashers can be turned off in favor of a ring of T6 accent lights in the ceiling that reflect off the interior surfaces of the screens.

A side chapel for meditation has a skylight, and recessed fixtures re-create this lighting at night. Stained-glass window niches provide additional perimeter lighting in this and the main sanctuary, and triple-headed LED fixtures light these small cutouts at night. In addition to the aesthetic value of having minimal visible luminaires, the chapel benefits from high energy savings and low maintenance needs, making the chapel's lighting practical and reverential. •

Details **Project:** St. Katharine Drexel Chapel, Xavier University of Louisiana, New Orleans • **Entrant:** Cline Bettridge Bernstein Lighting Design, New York • **Owner/Clients:** Xavier University of Louisiana, New Orleans • **Architect:** Pelli Clarke Pelli Architects, New Haven, Conn. • **Lighting Designer:** Cline Bettridge Bernstein Lighting Design, New York **Team Members:** Francesca Bettridge, Michael Hennes, Sang Lee, Nehal Youssef, and Jeff Hoenig • **M/E/P Engineer:** Altieri Sebor Wieber, Norwalk, Conn. • **Photographer:** Jeff Goldberg/Esto • **Project Size:** 12,000 square feet • **Project Cost:** $10 million • **Lighting Cost:** Not provided • **Watts per Square Foot:** Complies with ASHRAE 90.1 • **Code Compliance:** Complies with local code • **Manufacturers:** Acuity Brands Lighting/Mark Lighting; Amerlux; Bega Lighting; Cooper Lighting, Lumiere; Edison Price Lighting; MP Lighting; Philips Color Kinetics

JURY COMMENTS: A complex use of daylight to respond to the rich architectural material palette. • A nuanced daylighting approach that provides balanced illumination so that visitors are able to concentrate on the artwork without distraction.

DAYLIGHTING

CLYFFORD STILL MUSEUM

Arup

text by Deane Madsen

Denver recently ranked sixth on a *Current Results* list of the major cities that receive the most sunshine. With all of that light, it's no wonder that Allied Works Architecture chose to capitalize on the abundant resource in its design of the Clyfford Still Museum. Working with Arup, the team created an appropriate daylighting strategy.

The museum, which houses a collection of approximately 2,400 artworks by American abstract expressionist painter Clyfford Still, sits just west of the Denver Art Museum's Daniel Libeskind–designed addition. In contrast to its neighbor's bold, steel-plated façade, the Clyfford Still Museum is a diminutive, two-story concrete structure whose surrounds are landscaped with sycamores that will block out street views as they grow.

When Still died in 1980, his will stipulated that his oeuvre would go to the city, who should build a facility to store and display the works, so long as his were the only ones present.

Although the bulk of this collection resides in storage, the pieces that rotate through the second-floor galleries receive ample, diffuse light from a custom-formed, cast-in-place, perforated concrete ceiling with skylights and integrated electric lighting. Arup conducted several lighting studies with scale models and mock-ups to see that energy and conservation goals could be met with its daylighting strategy. Ambient light levels vary subtly and seasonally, which encourages repeat visits, a priority for the museum. The regularity of the ceiling's perforation patterns offers a texture complementary to the museum's variable-width-board-formed concrete walls, with the result being a lively space that manages to defer to Still's complex pieces. •

Details **Project:** The Clyfford Still Museum, Denver • **Entrant:** Arup, New York • **Client:** Clyfford Still Museum, Denver • **Owner's Representative:** Romani Group, Denver • **Architect:** Allied Works Architecture, Portland, Ore. • **Lighting Designer:** Arup, New York **Team Members:** Brian Stacy, Chris Rush, and Rohit Manudhane • **Landscape Architect:** Reed Hilderbrand, Watertown, Mass. • **Photographer:** Jeremy Bittermann, Portland, Ore. • **Project Size:** 26,500 square feet • **Project Cost:** $15.5 million • **Lighting Cost:** Not provided • **Watts per Square Foot:** 0.67W with exclusions • **Code Compliance:** 30% below ASHRAE 90.1-2004 • **Manufacturers:** Axis Lighting; B-K Lighting; iGuzzini; Kirlin Lighting; Litelab; We-ef

2013
DESIGN AWARDS
SPECIAL CITATION

JURY COMMENTS: An engaging backdrop of light, color, and sound for festival participants. • The installation and accompanying public programs, including a lantern-making workshop, provides the public with an introduction to light and lighting, an area of design they might not have been previously familiar with.

COMMUNITY ENGAGEMENT WITH LIGHTING

LANTERN FIELD

Virginia Tech Institute for Creativity, Arts, and Technology

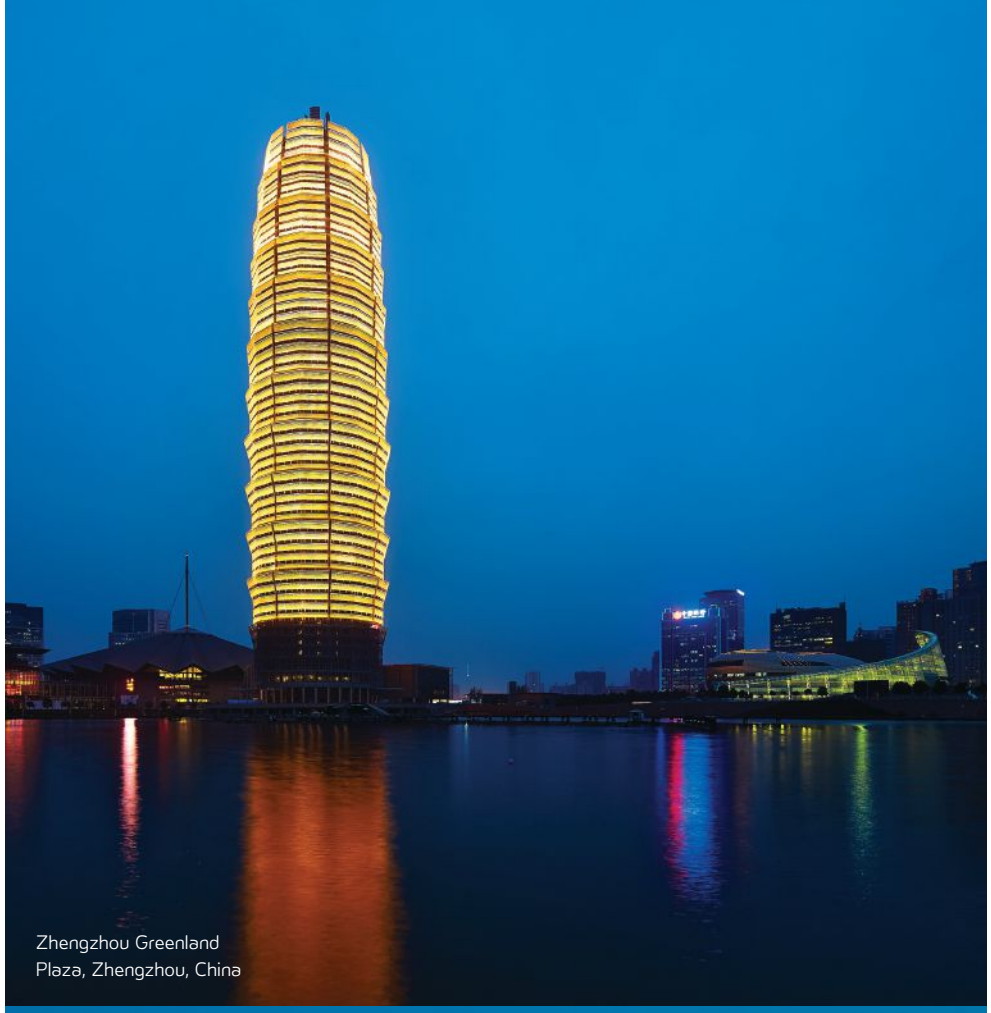
text by Deane Madsen

Washington, D.C.'s National Cherry Blossom Festival, an annual tradition, marks the true arrival of spring in the city. Tourists and residents alike flock to the Tidal Basin to observe the 3,000 sakura trees gifted to the United States in 1912 by the mayor of Tokyo. This year, the Freer and Sackler Galleries, part of the Smithsonian, commissioned an interactive installation—"Lantern Field," designed and run by students and faculty from the Virginia Tech Institute for Creativity, Arts, and Technology—which ran over the course of three days.

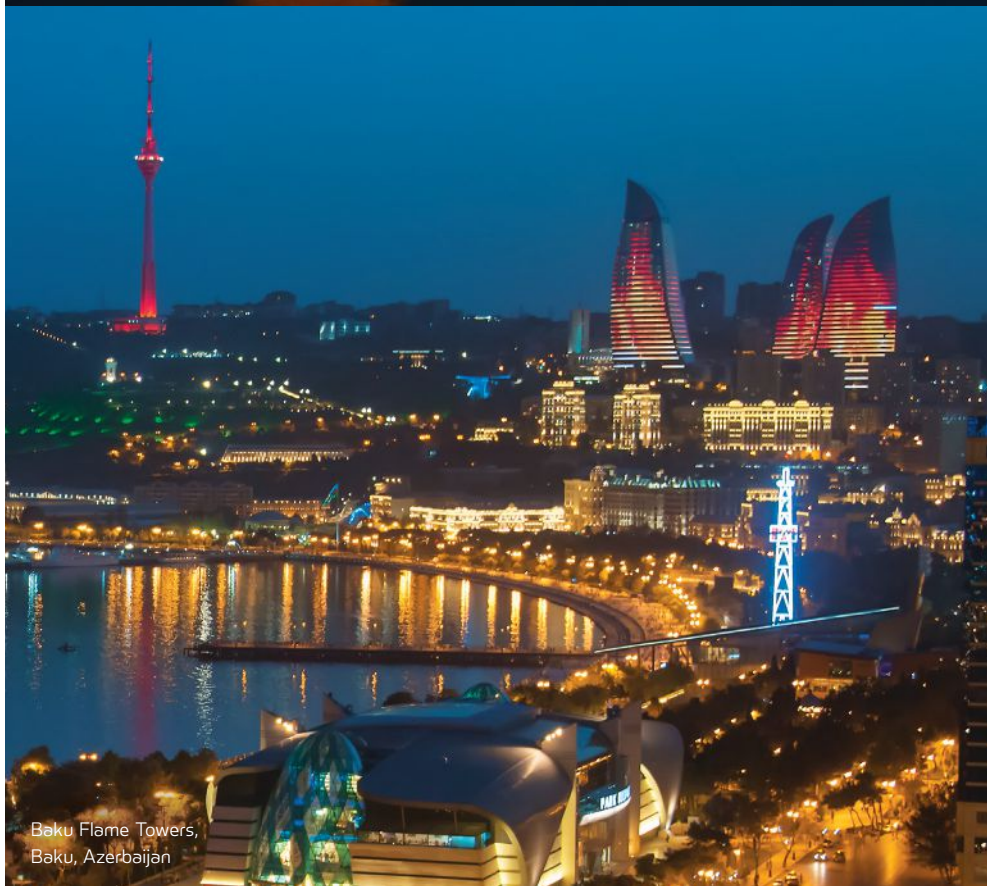
The public participated in a day-long workshop where they created lanterns by folding mulberry paper, which is commonly used in Japanese shoji screens. The paper lanterns were then hung from bamboo poles (so as not to interfere with the structural integrity of the museum's historic building status) in the 12-foot-wide by 70-foot-long loggia facing the museum's courtyard.

The Virginia Tech team wanted to create a highly interactive and multisensory experience. To that end, they positioned a combination of linear, color-changing LED fixtures and ultrasonic sensors along the loggia's east wall, and a series of white LED spotlights at the base of the loggia arches. As the sensors detected visitors in the space, the luminaires and speakers would activate, projecting reflected light onto the paper lanterns above. The more people who were present, the deeper and richer the color, hue, and tone that they experienced. Once the installation was complete, it pulsed with a spectrum of sound and color—from cool white to deep magenta, encouraging guests to explore the space and activate the light and sound around them. •

Details **Project:** Lantern Field, Washington, D.C. • **Entrant:** Virginia Tech Institute for Creativity, Arts, and Technology, Blacksburg, Va. • **Owner/Clients:** National Cherry Blossom Festival and Smithsonian: Freer|Sackler, The Smithsonian's Museums of Asian Art, Washington D.C. • **Architect:** Aki Ishida Architect with Virginia Tech, Blacksburg, Va. • **Lighting Designer:** Virginia Tech Institute for Creativity, Arts, and Technology, Blacksburg, Va. **Team Members:** Aki Ishida and Brennon Bortz • **Photographer:** Jeff Goldberg/ESTO • **Project Size:** 820 square feet • **Project Cost:** Withheld • **Lighting Cost:** $30,600 • **Watts per Square Foot:** 0.68W • **Code Compliance:** Not Applicable • **Manufacturer:** Philips Color Kinetics



Zhengzhou Greenland Plaza, Zhengzhou, China



Baku Flame Towers, Baku, Azerbaijan

Top: Si-ye Zhang for SOM; Bottom: Florian Licht, Licht & Soehne

POSTSCRIPT

AL LIGHT & ARCHITECTURE DESIGN AWARDS

text by Elizabeth Donoff

One of the most important aspects of the Design Awards review process is the jury discussion. It gives the assembled design colleagues an opportunity to explore ideas and to debate issues raised by the projects at hand. It is as important as the award selection itself.

Each year, different projects invariably play the important role of being the catalysts for discussion: reviewed, scrutinized, and debated until the end of deliberations. Ultimately, for a variety of reasons, this work is not recognized with an award. It may not provide much solace for the designers involved, perhaps, that their project was so hotly debated, but this work nevertheless makes an important contribution to the larger discourse. This year, two projects played this role: the Zhengzhou Greenland Plaza Tower in Zhengzhou, China, and the Baku Flame Towers in Baku, Azerbaijan.

Massive multi-use towers in Asia with elaborate façade lighting strategies, these projects were completed over the course of several years. As such, they had to deal with the challenges presented by changing economic scenarios, evolutions in lighting technology, differing attitudes toward power consumption, and even changes in aesthetic preferences.

Most importantly, these projects sparked a serious debate about how we illuminate our cities. Designers in different parts of the world face different cultural and contextual issues when it comes to façade lighting. While brightly colored and animated façades are the norm in some parts of the world, elsewhere this approach is not considered fashionable. How then do you create something that will stand the test of time? And what is the designer's responsibility in shaping the built environment? These questions—and answers—are greater than any one award.•

Michael A. Rantilla, AIA, LEED AP
Associate Principal, The Freelon Group, Research Triangle Park, N.C.
A native of São Paulo, Brazil, Rantilla received his Bachelor of Architecture degree from Cornell University. With more than 20 years of experience in the fields of architecture and design, he has worked both in the U.S. and in Europe. His approach to projects bridges design excellence, sustainability, technical rigor, and client satisfaction. At Freelon, he has been a key contributor to many of the firm's award-winning projects, including the Smithsonian Institution's National Museum of African American History and Culture, the District of Columbia Public Library's Tenley and Anacostia branches, Morgan State University's CBEIS Building, and North Carolina A&T State University's Proctor School of Education. Rantilla is also a frequent lecturer, panelist, and visiting critic at various architecture schools and design conferences.

Patricia Glasow, IALD, LC, MIES
Principal, Auerbach Glasow French, San Francisco
Trained as a theatrical lighting designer, Glasow has been involved in the design and management of hundreds of lighting projects over the course of her career. Her portfolio includes a range of projects including commercial offices, theaters, exhibit and retail spaces, schools, showrooms, churches, public spaces, hotels, residences, and exteriors across North America, Asia, and Europe. She joined the firm of S. Leonard Auerbach & Associates in 1984. In 1994, the lighting division of the firm became Auerbach Glasow, and later Auerbach Glasow French, where she is principal and serves as corporate vice president. She has received numerous lighting design awards from industry organizations, including the International Association of Lighting Designers, the Illuminating Engineering Society, and G.E. Lighting's Edison Awards.

Giulio Pedota, IALD, LC, LEED AP
Principal, Schuler Shook, Chicago
Pedota began his lighting design career at the National Theatre of Caracas in Venezuela before he branched out to architecture and electrical engineering. His design approach focuses on collaborative, creative, and intuitive design strategies that integrate aesthetics, sustainability, and modern technologies to satisfy the functional and visual aspects of a building. Pedota has served as the president of the Illuminating Engineering Society's (IES) Chicago Section and has presented at industry events such as the American Institute of Architects' Chicago chapter and the IES Annual Conference. He has lectured at Columbia College in New York and the Art Institute of Chicago, and has taught in the College of Architecture at the Illinois Institute of Technology where he is an adjunct associate professor.

David Ghatan, IALD, MIES, LC
President, C.M. Kling & Associates, Alexandria, Va.
Ghatan is a graduate of George Washington University with an interdisciplinary degree in design with emphasis in fine art, art history, and theater design. He joined C.M. Kling & Associates in 1999 where he has worked on a wide range of projects, including the Eau Spa at the Ritz Carlton Palm Beach, the American Red Cross National Headquarters, and the Starlight Ballroom at the Waldorf-Astoria in New York. His work for the Liberty Hotel in Boston and the BBG-BBGM offices in New York both received the Guth Award for Interior Lighting from the Illuminating Engineering Society (IES). Ghatan currently serves on the International Association of Lighting Designers' Board of Directors as treasurer and is the association's co-regional coordinator for the Washington, D.C., area. He is also a member of the IES Hospitality Committee.

Eli Meir Kaplan

BUILT FOR PERFORMANCE

When it came to site and area lighting for the Vince J. Whibbs Sr. **Community Maritime Park**, the City of Pensacola wanted an exterior LED luminaire that could deliver on performance and be cost effective. MayaLED was chosen because of its ability to fully deliver the potential of LEDs.

Due to its outstanding optical performance, MayaLED post top luminaires could be installed further apart necessitating fewer luminaires, resulting in overall energy savings and lower acquisition costs.

Project: Community Maritime Park - Pensacola, FL
Photo: Paul Brown

MayaLED

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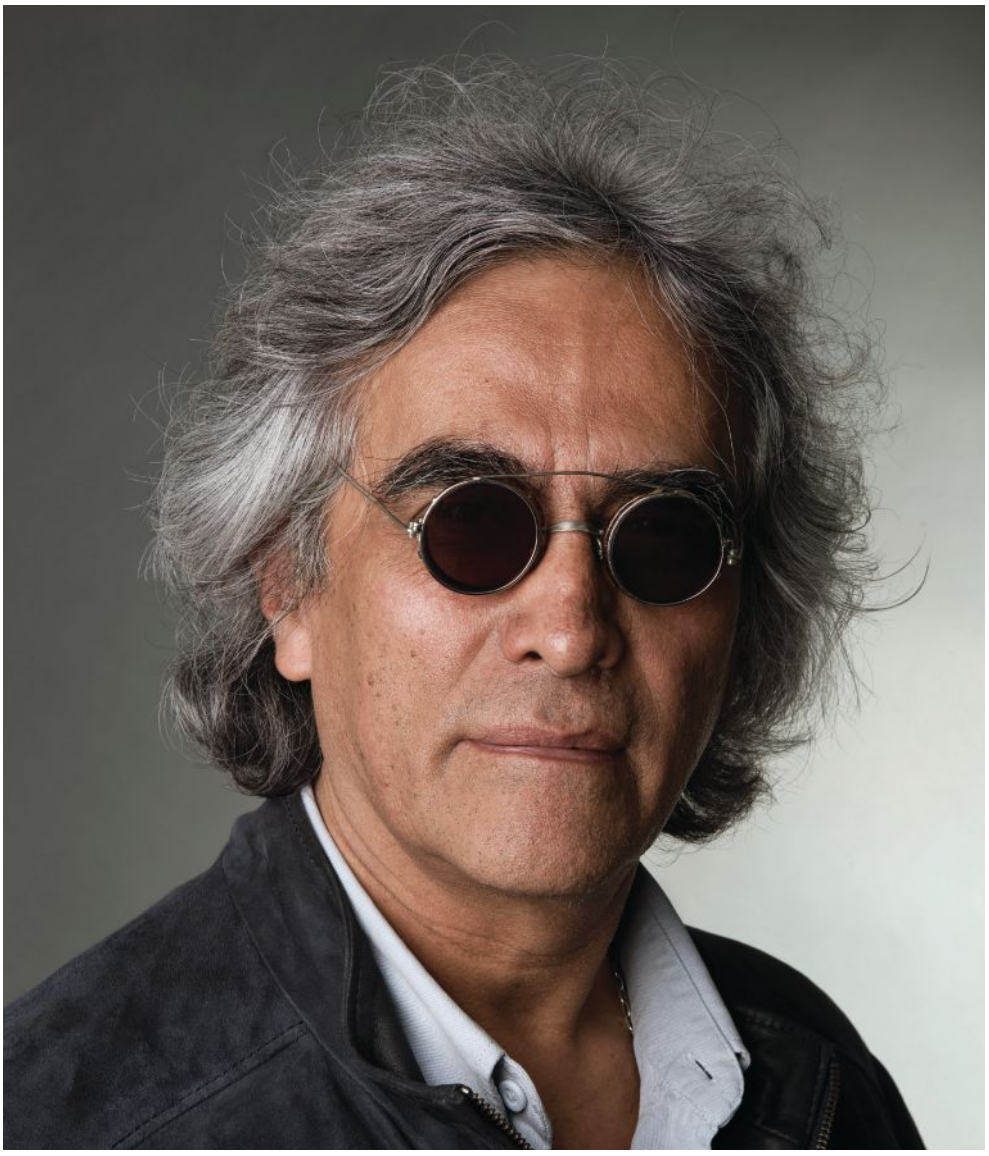
AD INDEX



GUSTAVO AVILÉS

interview by Elizabeth Donoff
photo by Carlos Alvarez Montero

"It's important to have our work relate to human experience. Lighting by itself is nothing; it has no meaning. It's just an invisible element, a fluid, until it [light] turns into something, then it has meaning."

Growing up, Gustavo Avilés only wanted to be one thing: an architect. Inspired to pursue the profession because of his older brother, Pablo, also an architect, Avilés earned his degree from the Universidad Iberoamericana in Mexico City. Lighting design came later when a client asked him to illuminate an art collection. After several unsuccessful attempts, he sought advice from John Case, a San Diego–based designer who specialized in lighting art. That tutorial introduced the idea of how one can compose with light. Since then, Avilés has developed his own unique poetic design expression and has mentored subsequent generations of designers while maintaining his youthful and energetic approach to life—and light.

How does architecture inform your approach to lighting design?
Light embraces all disciplines. It's not the main actor, but it is the link that makes it possible for other things to happen.

Is there a need for more critical discussion specific to architectural lighting design?
If you speak to a businessman, light is money. If you speak to a priest, light is faith. There are many kinds of light, and they are all real. This creates the possibility of deeper dialogue.

Do you have a design or a lighting philosophy?
Instead of designing with light, we have to compose with it. It's like music: Musicians take the elements that nature has already created, and they make a composition. In lighting, we have the same possibility.

How do you "teach" lighting?
You have to open your eyes—you have to train the muscles of your eyes to see.

What changes have you observed in the profession since you started working?
It used to be that you just had to know something about light, but now it's a complex trans-disciplinary experience.

What role does technology play in your work?
Technology has become so sensual, so beautiful, so sexy. But, you have to remember yourself and use technology with your own hands, your own criteria, your own sense and feeling. Otherwise, you are just an extension of the machine.

What advice would you give to a young lighting designer just starting out?
Open your eyes. Travel. Smoke. Drink. Make love. Understand how light affects everything. Be able to risk yourself to make some kind of a mistake. You cannot be a good lighting designer if you are not able to dare.

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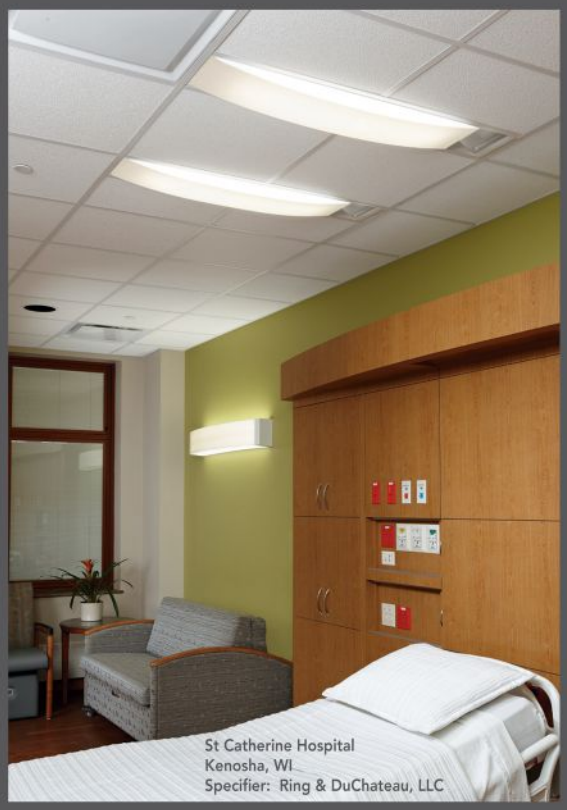

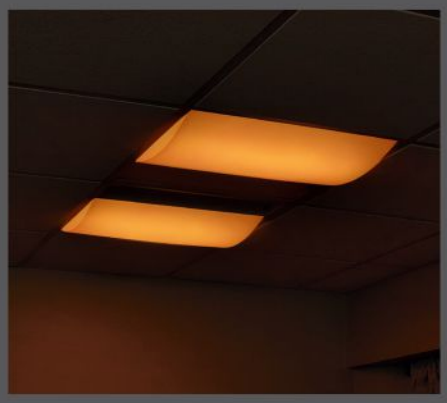

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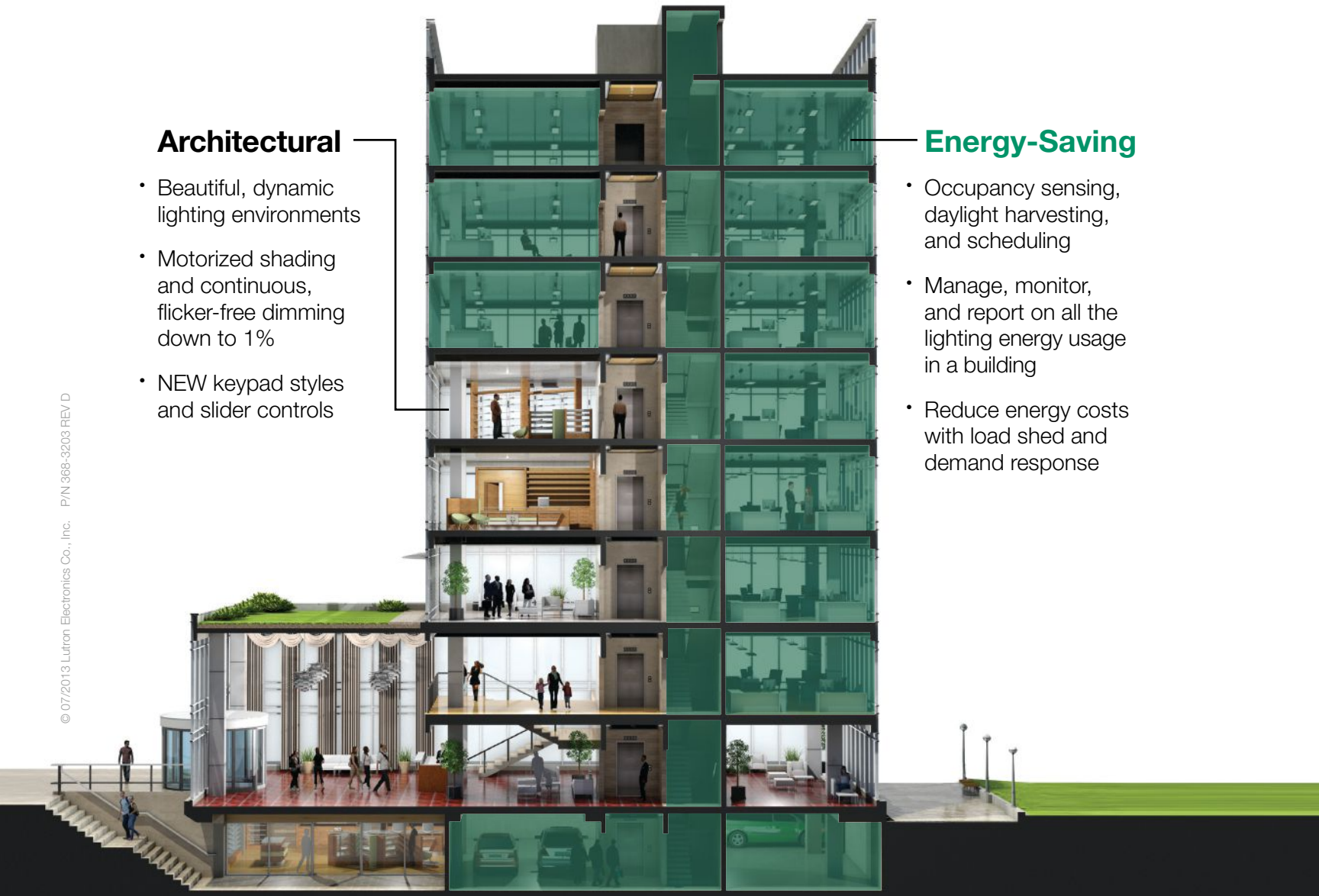

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