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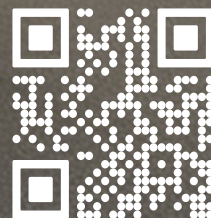


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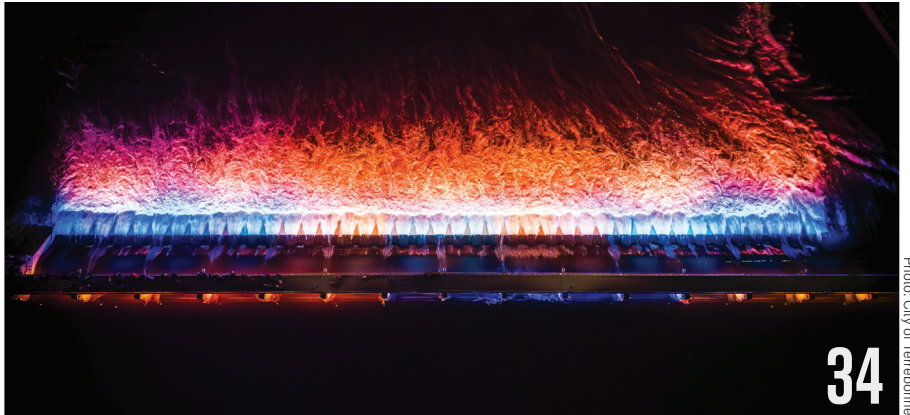


Photo: City of Terrebonne

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Pendants hang overhead in MCO's Boulevard. Photo: Michael Robinson Photography.



EDITOR'S NOTE

LightFair or Foul?

I'm writing this note after returning from my first LightFair experience, where for three days I walked the show floor, spoke to attendees and exhibitors, and joined education sessions. Most of the folks I met were happy to be there, raved about the education sessions and quality of show floor conversations, and conveyed the importance of supporting the IES and IALD. To be fair, I also heard some comments that expressed frustration with the blackout show floor as well as slower foot traffic.

With fewer than two years under my belt at LD+A, I do not possess a lived history with LightFair, but I am aware of the challenges it currently faces: primarily, a significant dip in attendees and exhibitors since its pre-COVID heyday. With Messe Frankfurt acquiring a stake in LightFair, the hope was that its expertise would provide an injection of energy to the show, but it did not materialize in the form of added traffic this year. LightFair will return in 2027 and 2029, so we will see if 2025 serves as a building block for future improvements or is a harbinger of what's to come.

What has been most alarming since my return are voices from various corners of the lighting community stating that LightFair needs to "bow out" and let LEDucation take the reins, as if any one show can address the all-encompassing

needs of an entire industry. Many of these "hot takes" are disrespectful to the esteemed industry professionals who supported IES, IALD, and all those who

attended LightFair. The show's value is evident, but it's just as apparent that it needs to evolve.



The lighting industry needs fewer prognosticators and more participants

Like the world in general, the lighting industry needs fewer prognosticators and more participants. Comments such as "LightFair should die," "Let's find other ways to fund IES and IALD," and "LEDucation is better," do not offer any real constructive

thoughts on how to navigate this still-new, post-COVID world of tradeshow or enhance the current offerings at LightFair.

Many prognosticators are clouded by ego bias, and often wave off accountability when their predictions fall flat. I'm not about to offer any predictions but rather ask that you provide your thoughts to the IES on how LightFair can better appeal to a wider audience.

There's some pretty big brains spread across the lighting industry. LightFair is not going to live or die by what you or I forecast; its future will be determined by the work of the show's partners along with the collective industry's active engagement going forward.

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PRESIDENT'S PERSPECTIVE

Wilson Dau

I write this as I'm heading back home after LightFair. By the time you read it, you'll have seen a number of social media posts for and against the show. While the event was smaller in terms of exhibitors and attendees, the conversations I had were profoundly positive.

First and foremost, the education program stood out with excellent seminars, engaging presenters, and highly involved audiences.

While the exhibit hall might have been slightly smaller compared to previous years, I spent a lot of time walking the floor and conversing with exhibitors asking about their experience—all of them, without exception, had a positive experience. Though many wished for larger audiences, they all agreed that they interacted with specifiers and decision makers on a more personal level. There's always room for improvement, but one thing remains clear: LightFair's success hinges on increased participation from exhibitors and attendees alike.

Such personal connections are invaluable in our industry, as they foster collaboration and innovation. Looking ahead, it's essential for us to encourage greater participation and commitment from the specification community to ensure the continued growth and success of LightFair.

Here is my ask of the specification community: every time a manufacturer comes to your office to showcase their products, ask the question, "Will you be at the next LightFair?" If it's one of the larger manufacturers, take one more step, and express your genuine disappointment if they did not attend the previous event.

We've all heard complaints about the cost of exhibiting, yet much smaller manufacturers attend with pride. No one is asking for huge booths; we simply want to see your latest products and interact with your wonderful staff. Both the IES and IALD benefit from LightFair—this is our industry, and we should collectively champion its success.

Looking ahead, I trust that the Messe Frankfurt team has gathered valuable insights from their first experience managing the show, which will make the 2027 show even more remarkable. Next month, IES25: The Lighting Conference takes place from August 23 to 25. I am looking forward to attending the event and seeing many of my friends and colleagues. If you haven't made plans to attend, the time

to do so is now.

IES25 promises unparalleled education content, offering an opportunity to keep up with new developments in the art and science of illumination, presented by the best and brightest (no pun intended) minds in our industry. This year's event includes 22 CEUs, featuring 64 speakers, and (at the time of this writing) around 500 attendees, including designers, engineers, manufacturers, agents, researchers, and special guests. Attendees can explore a tabletop exhibit area featuring 32 manufacturers, as well as a re-imagined Industry Progress Report that enhances value for submitters and fosters greater interaction with recognized products. Plus, the Anaheim location is ideal for a family trip, with eight nearby amusement parks and more than 60 museums within 100 miles.

Finally, I want to revisit the topic of mentoring, which I discussed in my January column. Mentoring is vital, yet many of us are unsure how to effectively share our expertise. We lack a set of "best practices" for mentoring that could be disseminated across our local sections. So, let's start the conversation. Are you a mentor or a mentee? What worked and what didn't? How did the experience benefit you? The speed mentoring program we have conducted at the annual conference and via the local sections is always successful. However, we might gain even more from longer-term mentoring programs. I want to hear from you. Please email me at president@ies.org and share your thoughts.

Together, we can shape a brighter future for our industry, and I look forward to the memories we will make at IES25.



Both the IES and IALD benefit from LightFair—this is our industry, and we should collectively champion its success

INSIGHTS

Lost City • Education • Museum Reopened



Photo: Pharos Architectural Controls

Found

A spa takes guests to new depths under the sea

Who knew that the lost city of Atlantis can be found inside the Hagymatikum Spa in Makó, Hungary? The vacation destination, once deemed the most beautiful bath in the country by Hungarian Prime Minister Viktor Orbán, not only features green spaces, 15 indoor and outdoor pools, a sauna, and dedicated thermal waters space but also Atlantis-themed sculptures by the late Hungarian architect Imre Makovecz—artworks that were posthumously discovered among his possessions. The installation comes to life through dynamic illumination, projection, and A/V controls by Pharos. Fixtures such as the Pharos Designer LPC 1 along with DMX and RDM signals distributed via a Pharos Designer EDN 20 allow guests to immerse themselves in Plato's mythical, watery world while they relax.



Fall 2025 LHRC Courses Announced

The Light and Health Research Center (LHRC), Icahn School of Medicine at Mount Sinai has announced two online courses for the fall. A 10-week course, Online

Professional Certificate Course in Lighting Design, will focus on providing attendees in lighting and related fields with the knowledge and skills to begin or improve their practice in architectural lighting. The course fee is \$1,400 or \$1,120 for LHRC partners.

The second, five-week-long, Online Certificate Course in Light and Human Health will focus on providing attendees with an understanding of the latest research on the interaction between light and human health as well as how lighting can improve well-being. The course is \$750 or \$600 for LHRC partners.

LHRC Education Program Director Dan Frering said, "We have designed these two online courses to provide information that will help professionals in lighting and related occupations to gain cutting-edge knowledge and advance in their careers."

To learn more, visit <https://icahn.mssm.edu/>.



Photo: Nicholas Venezia

New York City's The Frick Collection, known for its Old Master painting collection and European arts, reopened this spring with a lighting design scheme by L'Observatoire International. The updated lighting enhances the architectural materiality of the space, upholds the historic aesthetic, and supports the domestic scale of the building.

8

The number of years UNESCO's International Day of Light (May 16) has been celebrated around the globe.



Source: International Day of Light

MERGERS AND MORE

- **Acuity**, a market-leading industrial technology company, has acquired **M3 Innovation, LLC**, a sports lighting start-up.
- **DMF Lighting**, a leader in modular lighting, has expanded its partnership with business advisory and financial software solutions company **VITAL**; the expansion introduces a new suite of educational benefits to DMF dealers.
- **Fusion Optix**, a manufacturer of LED components, has acquired **LEDdynamics**, a technology company. The acquisition includes **Prolume** and **LEDsupply**, a fixture manufacturer and an e-commerce platform, respectively.
- Florida-based **SESCO Lighting** has acquired ERT Lighting, expanding SESCO's footprint into Central and South Texas.
- **Original BTC** has rebranded its identity; the makeover includes a refreshed website with new product imagery and a refined logo.

THEY SAID IT:
"The future of lighting is smarter but also more human"

Rachel Kim, "Ask an EP," p. 12



DW Windsor has delivered DarkSky Approved lighting solutions to the historic St. Paul's Cathedral Gardens in London. The scheme includes 20 Pharola DS bollards with 2700K LED modules that blend into the landscape and provide warm illumination.



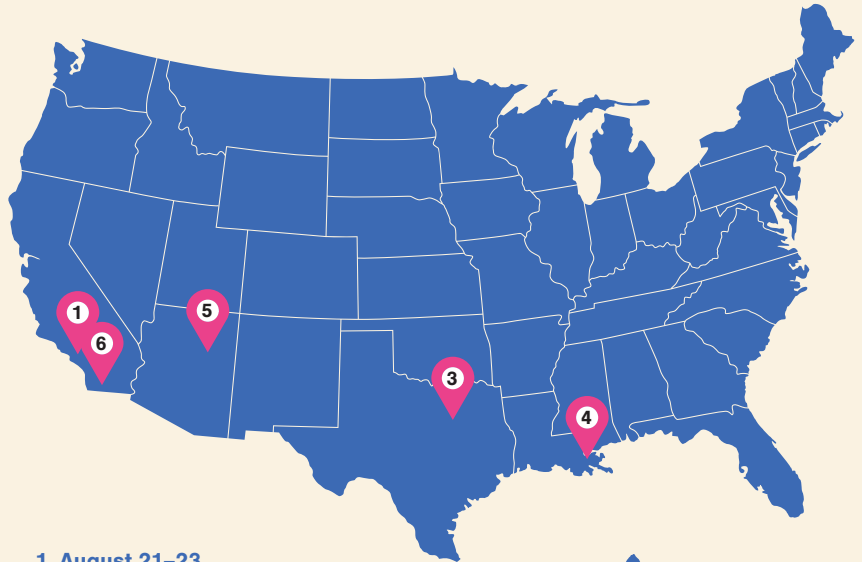
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Share Your Voice

If you are interested in publishing an article in *LD+A*, please reach out to Editor-in-Chief Craig Causer at

Craig.Causer@sagepub.com to discuss further.

EVENTS



1. August 21–23

IES25: The Lighting Conference, IES' annual conference, will be held at the Anaheim Marriott in California. The event includes one day of hands-on workshops and two days of educational sessions, technical paper presentations, and manufacturers' exhibits as well as the Illumination Awards Gala.
www.ies.org

2. September 11

The ICEL Emergency Lighting Conference will be held at the Cavendish Conference Centre in London and is designed to bring together key stakeholders across the complete supply chain in emergency lighting from manufacturer to occupier.
www.thelia.org.uk

3. September 16–17

ArchLIGHT Summit, a commercial and architectural lighting event, will be held at the Dallas Market Center in Texas. It will showcase new products from leading commercial brands and include a full slate of accredited educational and hands-on experiential sessions facilitated by leading minds in design and lighting.
www.archlightsummit.com

4. September 21–25

The IES Street and Area Lighting Conference will be held in New Orleans and focus on improving outdoor lighting through training classes, seminars,



and networking sessions as well as an exhibit hall.
www.ies.org

5. October 9–11

IALD Enlighten Americas 2025 will be held at The Westin La Paloma in Tucson, AZ, and feature educational workshops, seminars, and presentations by nearly 40 industry leaders and researchers.
www.iald.org

6. February 5–6, 2026

Illuminate 2026, the Association of Outdoor Lighting Professionals' annual conference and expo, will be held in Carlsbad, CA (venue details to be announced). The event will include hands-on education sessions, new products and technologies, and the AOLP Lighting Awards.
<https://aolponline.org>



ASK AN EP

RACHEL KIM

This marketing specialist at **GigaTera Lighting** discusses finding a balance between engaging messaging and the technical aspects of illumination.

Why light?

My introduction to lighting came through frequency—gigahertz—which framed it in a technical context. What pulled me in even deeper was the realization that light touches everything: safety, comfort, accessibility, mood. We don't actually see light itself; we see what light allows us to see. That blend of science and influence is what makes lighting so compelling—light reveals the world around us and shapes how we experience spaces, often without us noticing.

What is your favorite lighting project?

National Park in Washington, D.C., stands out as a favorite. I had the opportunity to document the sports lighting system from on top of the stadium! Seeing the full scale of the lighting set-up was a powerful reminder of how light shapes memorable experiences for players and baseball fans.

The best part of your job?

I get to work with a wide range of people across the industry, from agents and specifiers to engineers and architects, coaches, and directors as well as designers and publishers. Each group brings their own unique lens to lighting, and those diverse perspectives make my work ever dynamic. One conversation is never like another, which keeps me curious and constantly learning.

What is the biggest obstacle you encountered in the marketing sector of the lighting industry?

Lighting is highly technical, and marketing in this industry requires a balance between complex specifications and engaging messaging. For every group I work with, from suppliers to engineers to end users, there

is a different way to communicate value. As a marketer, this takes ongoing collaboration and communication to tell stories that resonate, build brand awareness, and go beyond light to convey what truly matters.

What is an important consideration for the future of the lighting industry?

Lighting should be part of broader conversations around inclusion, accessibility, and sustainability. Beyond efficiency, useful light should create equitable environments where everyone can feel secure, safe, and supported to live, play, and thrive. One industry session that stayed with me explored how lighting affects neurodivergent individuals; a reminder that visibility does not equal comfort. The future of lighting is not only smarter but also more human. Bolstering young professionals and bringing new voices into these conversations is essential.

“The future of lighting is not only smarter but also more human”

Do you have a dream job/project?

I would love to work on a high-profile, global lighting project in collaboration with leading architecture and engineering firms, an initiative that challenges both creative thinking and strategic coordination across regions. I'm especially interested in contributing to the design storytelling that brings these projects to life and helps audiences understand the role of lighting in how spaces are experienced around the world.

The Emerging Professional column explores issues affecting younger lighting professionals and those new to the industry.



1 Curved linear lights and cove lights combine to illuminate the ceiling's unique structure, creating visual depth and providing higher light levels when necessary.

2 Flexible linear tape, in-grade fixtures, and spotlights highlight a column and planter structure.

3 A dual-cove system with RGB and 3000K white luminaires supports the bottom three ceiling tiers, while static-white light with the same color temperature illuminates the upper tiers.

HOW THEY DID IT

IES ILLUMINATION AWARD OF MERIT

"Children's Nebraska Solarium"

Color-fading preset scenes by **HDR** support an eye-catching ceiling inside an Omaha, NE, children's hospital. The solarium doubles as an area for daily respite and an event space.





HISTORY

Muhammad Annum Khan

Project Runway Photography and lighting in fashion

Lighting is a fundamental aspect of fashion photography and runway shows, yet its significance is often overlooked. In this column, I explore the historical progression, technological advancements, and contemporary applications of lighting in the fashion industry. Let's take a look at how lighting influences design presentation, sustainability practices, and audience engagement, while highlighting its integral role in fashion's past, present, and future.

Early Days: The Natural Light Era

In the early days of fashion photography, natural light was the primary source

of illumination. Pioneering photographer Eadweard Muybridge, who was known for his motion picture projections, worked with sequential images to capture movement and influenced how clothing was portrayed in motion. On the other hand, George Eastman relied on sunlight to capture images, creating soft, organic visuals that complemented the clothing of the time.

By 1888, Eastman revolutionized the field with the invention of the Kodak camera, making photography accessible to the masses. It was a box camera with a fixed-focus lens on the front, no view finder, and two V-shaped silhouettes at the top that aided in aiming in the direction of the



Fashion doesn't merely exist under light, it converses with it

subject. Prior to the Kodak camera, photography was a labor-intensive process, but Eastman's invention adhered to the slogan, "You press the button, we do the rest." This simplification democratized photography, allowing more people to experiment with capturing fashion.

Other photographers such as Edward Steichen began to explore how lighting could be manipulated to enhance fabric and form. His use of diffused light sources softened shadows and created a more ethereal, flattering effect on fabrics. Steichen frequently used elaborate sets or natural backgrounds, which complemented the clothing while also contributing to the overall mood of the photograph. This technique created a dream-like quality, setting a new standard for fashion photography.¹

The Birth of Studio Lighting

The 1920s to 1930s saw studio lighting revolutionize visual storytelling. While early photographers relied on uneven natural light, new artificial setups enabled precision and drama. Key innovators such as Irving Penn mastered soft, diffused lighting to accentuate textures and contours, while Richard Avedon and Steichen embraced high-contrast illumination to create dynamic shadows and movement.

Magazines like *Vogue* and *Harper's Bazaar* became testing



Photo courtesy of McQueen, photographed by Robert Fairer.

Dramatic lighting emphasized the historic moment when robotic arms spray-painted model Shalom Harlow during *No. 13* Finale in 1999.

grounds for these techniques. Steichen, in particular, demonstrated how controlled lighting could transform fashion into art—blending natural and artificial sources for striking emotional impact. This era established lighting as the foundation of fashion imagery, a principle that continues to evolve with technology today. The work of Penn, Avedon, and Steichen transformed fashion photography from simple documentation into an expressive medium, laying the groundwork for the current vibrant and diverse industry, where technology continues to expand creative possibilities.

The Early 20th Century

The integration of lighting into fashion can be traced back to the early 20th century. Mariano Fortuny, a multifaceted Spanish-Italian artist and designer, pioneered a lighting revolution through his groundbreaking indirect illumination system, which was a radical departure from harsh, direct lighting of his era. His patented “Fortuny Dome” and reflective silk diffusers crated ethereal, shadowless lighting that preserved delicate fabric textures and established mood through graduated tonal transitions.

These theatrical lighting principles migrated to fashion presentations as designers recognized light’s transformative power on textiles. Fortuny’s own pleated silk Delphos gowns—designed to shimmer under specific lighting conditions—demonstrated

how illumination could become an active design element rather than a form of passive visibility.

This legacy persists in contemporary runway lighting, where directional spots, color temperatures, and projection

mapping continue Fortuny’s quest for “emotional illumination,” proving that fashion doesn’t merely exist under light, but converses with it. His innovation was the precursor of modern lighting design in

Solutions as Dynamic as Your Design

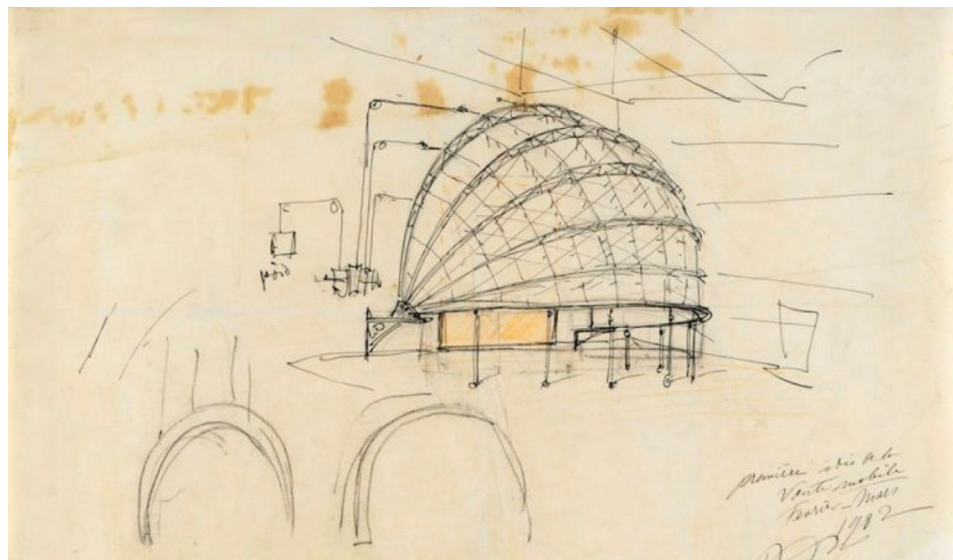


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The Fortuny Dome created homogeneously illuminated scenes where shades of color and light alternated.



Photo: ©The Estate of Edward Steichen/Artists Rights Society, NY

Steichen's 1929 photo *The Isadora Duncan Dancers of Moscow* uses diffused light to create texture and drama.



Photo: ©Helmut Newton Foundation

Helmut Newton manipulated light to sculpt his images.

light allowed him to sculpt his images, making them as much about the shadows as the light itself. This technical mastery allowed him to move beyond studio constraints while maintaining exacting lighting precision, even on location. His approach demonstrated how controlled illumination could become a narrative tool, influencing generations of photographers to treat light as a sculptural medium rather than mere illumination.³

Then, the 1960s witnessed the introduction of color photography, and experimentation with colored gels and filters became common. This decade also introduced fashion magazines where the interplay of color and volume of light was supported as a basic concept to shape trends.

The Digital Revolution: The Late 20th Century

The late 20th century was a transformative period for photography, particularly in the fashion industry. Digital cameras revolutionized the way photographers worked, offering unparalleled control over exposure and lighting. This technological leap meant that photographers could experiment more freely and achieve precise results that were previously difficult to attain.

Adobe Photoshop and other digital editing tools further expanded creative possibilities. Photographers could now enhance their images in post-production, adjusting everything from lighting to color balance and even removing imperfections. This level of control allowed for a new era of polished, high-quality fashion imagery.

Mario Testino emerged as a

fashion shows, emphasizing the importance of light quality and its impact on visual perception.²

Technological Advancements: The Mid-20th Century

The post-war era was a golden age of technological advancements in photography. Before this time, lighting options were limited. However, with the advent of electronic flash and portable lighting systems, photographers

found new ways to create striking images, regardless of the environment.

One notable figure during this period was Helmut Newton, whose use of lighting was nothing short of revolutionary. He favored harsh, direct light to create sharp contrasts, adding a dramatic flair to his photographs. This technique amplified the boldness of his subjects.

Newton's ability to manipulate

key figure during this time. His work is renowned for its glamorous style, often characterized by his masterful use of lighting. His ability to manipulate light and shadow allowed him to create images that not only captured the physical appearance of his subjects but also conveyed their essence and emotions. Testino's ability to create warmth and depth in his photographs helped redefine fashion photography, making his images iconic and highly influential.⁴

This period marked a significant shift in the industry, setting the stage for the digital age of photography we know today. The combination of advanced technology and creative vision led to some of the most memorable and impactful fashion images of the 20th century.

Runway Lighting: The Stage Is Set

As the fashion industry grew, the importance of lighting in live presentations became paramount. Runway shows transformed into theatrical productions where lighting played a crucial role in setting the mood and enhancing the overall experience. Fashion designers began working closely with lighting designers to create immersive environments that complemented their collections.

Lighting in fashion shows does more than just illuminate the runway; it highlights the intricate details of the garments, emphasizing textures, colors, and embellishments. Proper illumination can make a significant difference, turning a simple presentation into a captivating spectacle. For example, ellipsoidal lights are

often used to provide natural-looking illumination that brings out the best in the clothing.

The 1990s and early 2000s were a transformative period for fashion shows, with lighting design taking center stage. The advent of LED lighting marked a significant shift in fashion show production.⁵ LEDs offer energy efficiency, longevity, and versatility in color and intensity, making them ideal for dynamic runway environments. As a result, this era saw designers such as Alexander McQueen pushing the boundaries of runway shows. McQueen was known for his dramatic and theatrical presentations, where lighting played a crucial role in enhancing the themes and narratives of his collections. His shows were more than just fashion displays; they were immersive experiences. He used lighting to create moods and atmospheres that complemented his avant-garde designs. For example, his 1999 show *No. 13* featured a model standing on a rotating platform while robotic arms sprayed paint onto her dress, all under stark, dramatic lighting that highlighted the performance's intensity.⁶

Designers like McQueen pioneered the use of LED-embedded garments, merging technology with fashion to create interactive and visually striking pieces.

Contemporary Trends: The Age of Social Media

In the age of social media, the focus of lighting in fashion photography has undergone another significant transformation. Platforms such as Instagram have become visual powerhouses, pushing

photographers and brands to adopt new lighting techniques that make their images stand out. Natural light is still a favorite for lifestyle photography, as it creates relatable and authentic images. However, artificial lighting is often used to achieve polished, striking visuals that grab attention.⁷

Influencers and content creators have become central figures in this new landscape. They frequently use ring lights and portable lighting kits to produce professional-looking images, even from their homes. This accessibility to high-quality lighting equipment has further democratized photography, allowing more people to create stunning visuals without requiring a professional studio.

Contemporary fashion shows increasingly incorporate interactive lighting systems that respond to movement, sound, or audience engagement. For instance, some events have utilized mobile applications allowing attendees to influence lighting hues and intensities in real-time, fostering a participatory atmosphere.⁸

The Future of Lighting in Fashion

As technology evolves, so will lighting techniques in the fashion industry. Advancements in LED technology, augmented reality, and virtual reality are shaping how fashion is presented. Designers are experimenting with immersive environments where lighting plays a key role in storytelling.

Projection mapping has emerged as a tool for transforming garments into dynamic canvases, displaying intricate

patterns and animations that evolve throughout the show. Additionally, holographic technology has enabled the inclusion of virtual models alongside live models, expanding creative possibilities and audience reach.

As environmental concerns gain prominence, the fashion industry has adopted sustainable lighting solutions. LED lighting reduces energy consumption and heat emission, contributing to eco-friendly and lower carbon footprint. Moreover, high CRI LEDs ensure accurate color representation, essential for both live audiences and digital media.

The history of lighting in the fashion industry reflects the interplay of art, technology, and cultural shifts. From the

soft hues of natural light to the high-impact contrasts of studio setups, lighting has shaped how fashion is perceived. Illumination has transcended its traditional role in the fashion industry, becoming a multifaceted tool that influences design, sustainability, and audience experience. As we look to the future, and technology continues to evolve, lighting will remain at the forefront of innovation, shaping the future of fashion in both aesthetic and ethical dimensions.

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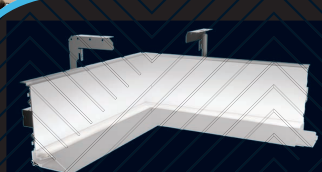


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CAREERS

Brooke Ziolo

Candidate Movement Are the tides turning?

The lighting industry experienced an unprecedented power shift in favor of candidates in the years following the COVID-19 shutdown. With a labor shortage, booming demand, and widespread remote work adoption, candidates were in the driver's seat. This dynamic led to higher salaries, increased flexibility, generous PTO packages, and rapid job changes driven by enticing offers. But the tides may be turning.

In 2025, we are seeing a marked shift in candidate motivations and employer strategies. While job movement remains high, it is no longer fueled by opportunism or inflated expectations. Instead, candidates are increasingly seeking stability, cultural alignment, and long-term career development. Flexibility and compensation remain important, but they're no longer the sole drivers. The result is a more measured, values-based job search environment, which is a reflection of broader changes in the industry.

Tariffs and Trade: A Growing Catalyst for Change

One of the most significant factors influencing candidate behavior in the lighting industry today is the uncertainty surrounding tariffs, particularly those involving Chinese imports. Many lighting manufacturers who rely heavily on overseas production are

experiencing rising costs, unpredictable logistics, and shrinking profit margins. This has led to real concern among employees about job stability and business sustainability.

As a result, we're seeing an uptick in candidates looking to move from import-heavy companies to U.S.-based manufacturers. These job seekers aren't just looking for a paycheck—they're seeking resilience.

The Cautionary Tale of Global Entrants

Global electronics giants such as Toshiba, Panasonic, and Samsung have long attempted to penetrate the U.S. lighting market. Despite vast financial resources, many have struggled, primarily due to a fundamental misunderstanding of the lighting market's complexity. These companies often enter with aggressive growth targets and unrealistic expectations, putting enormous pressure on leadership



One of the most significant factors influencing candidate behavior... is the uncertainty surrounding tariffs

to produce quick results. When those expectations aren't met, they frequently restructure, resulting in a revolving door of executive turnover. Experienced lighting professionals now view these employers with caution, aware of the instability that often follows.

Today's candidates are much more deliberate about their next move, prioritizing employers with realistic goals, market awareness, and long-term vision. They're asking, "Will this company still be here—and thriving—in five years?"

Culture Over Compensation: A Shift in Priorities

Another major theme we're seeing is flight from toxic work cultures. Candidates are growing weary of environments marked by volatile or disengaged leadership, unclear direction, and/or burnout. Increasingly, they're prioritizing mental wellness and professional growth over sheer compensation.

This is especially true in sectors like lighting design, where long hours and tight deadlines are the norm. Designers and project managers are seeking firms that offer collaborative environments, clear career progression, and work-life balance. Distributors and sales representatives are also expressing a desire for companies that invest in people and prioritize purpose alongside profit.



Illustration: iStockphoto/Prasong Maulae

This shift represents an opportunity for companies to differentiate themselves through culture. Organizations that foster inclusion, provide mentorship, support autonomy, and align their mission with their employees' values are emerging as top destinations for elite talent.

A Tighter Job Market with Select Opportunities

Despite increased candidate interest, the job market is tightening. Major players like Acuity Brands and Signify have implemented layoffs, and several lighting design firms report that business has slowed. Their workload, often closely tied to the AIA Billings Index, has tracked below 50 for most of the year, which is an indicator of reduced demand in architecture and design and, by extension, lighting services.

This slowdown means that while more candidates are looking, fewer positions are available. Many firms—whether manufacturers, rep agencies, or design studios—are choosing to delay hiring decisions, consolidate roles, or move cautiously amid economic headwinds and tariff speculation.

Still, in conversations with professionals, the tone is one of cautious optimism. Several manufacturers and rep agencies reported slow Q1 performance but noted improved business conditions in Q2. Their approach: stay lean, stock up on inventory while possible, and hold off on large strategic moves until more clarity emerges around tariffs and construction activity.

Strategic Advantage for Proactive Employers

In this evolving landscape, employers hold the advantage, but only if they act strategically. The companies that are decisive, transparent, and efficient in their hiring process are successfully securing top talent before the competition can react.

Moreover, candidates are no longer impressed by speed alone. They're looking for defined growth paths, supportive leadership, transparent expectations, values-aligned culture, and long-term stability. Companies that embrace this new paradigm are well-positioned to attract and retain the best and brightest in the lighting industry.

Final Thoughts

The candidate-driven market

of the post-pandemic boom is evolving. The lighting industry now finds itself at a critical crossroads, where economic pressures, shifting candidate values, and geopolitical uncertainty are reshaping how talent moves and how companies hire.

We're witnessing these changes firsthand—across manufacturers, design firms, and distributors. While the road ahead may be uneven, it's also full of opportunity for those who are willing to listen, adapt, and lead with intention.

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Selected Territories Open for Reps

A photograph of the Orlando International Airport terminal at dusk. The terminal features a large, curved, cantilevered roof structure that is illuminated from within, creating a warm glow. Below the roof, the terminal building has a glass facade that reflects the sky. In the foreground, a parking lot is filled with cars, and several people are standing near a car. The sky is a deep blue with some clouds.

LET'S GET ELEMENTAL

Orlando International Airport
celebrates Florida's natural beauty

By Michele Zimmerman

Photos: Michael Robinson Photography



When you think of the Orlando International Airport (MCO), you may think of large crowds dressed in their best Disney, *Star Wars*, or *Harry Potter*-themed attire, or perhaps, your mind goes to the airport's former moniker, McCoy Air Force Base. If you're from the Sunshine State, you may even know some "deep-cut" trivia about the travel hub such as the location of the permanently on-view, hyper-realistic sculpture *The Traveler*, by Duane Hanson, which depicts a sleeping tourist and his belongings, or that the airport was once a designated emergency landing spot for the now-retired Space Shuttle. What you probably don't know is that MCO's newly renovated Terminal C is designed to celebrate Florida's naturally beautiful elements: sea, sky, and light; the terminal hosts a lighting scheme fashioned to evoke all three as travelers find their way to their next great adventure.

Through long-term collaborative relationships with the project's architect of record (HNTB) and the design architect (Fentress), lighting design firm HLB was brought onto the scene of the nearly \$3 billion project in 2016. Though Terminal C was open for use in 2022, the full scope of the firm's work, including the design of electric lighting, daylighting, and the lighting control system, wasn't complete until 2023. However, HLB isn't finished with MCO just yet—it is currently working on a Phase 1 Expansion of the South Concourse that will provide one of the nation's top 10 busiest airports with additional gates.



Ocean's Hue

A split, 70-ft-high feature wall inside the terminal with dynamically illuminated acrylic “fins” captures the movement and essence of Florida’s various warm waters. HLB Associate Principal Darcie Chinnis explained how the team achieved the effect: “Throughout the design process, careful attention was paid to how light could be effectively delivered but also support the themes of sky and water...RGBW tape light with per-pixel control from Enttec was provided to edge light architectural fins. Fixtures were programmed to overlap multiple dynamic effects to create an experience of water dripping down a window, for example.” Each side of the wall spans 80 ft across and features 32 of the 8-ft-tall blue-hued fins.

Left: Acrylic fins and RGBW tape light create the visual of moving water.

Center: Pseudo-randomized pendants hang in higher concentration in busier areas of the atrium.



Look Up

As fitting for the mode of travel taken via MCO, the airport’s lighting scheme encourages visitors to look skyward. Throughout the Boulevard, a skylight atrium, a mixture of integrated daylighting and electric lighting guides travelers through the space—making the journey through ticketing, TSA screening, passenger boarding bridges, baggage claim, and other areas, one of ease. Large LED pendants by SPI hang over the Boulevard walkway and are seemingly scattered—but there is a method to the design madness. Fixtures in 1.5-, 6-, and 12-in. diameters in 2-, 4-, 8-, 12-ft, and additional custom lengths provide downlighting and appear to glow. “The randomized design of the Boulevard ceiling’s pendant lighting was carefully curated to provide higher concentrations of increasing scale



that drop farther down into areas of high activity,” explained Chinnis. “The design also tucks tighter to the skylight using smaller fixtures more sparsely arranged in areas of lower activity. All circulation linear lighting was oriented so that the fixtures are perpendicular to the path of travel to help support wayfinding goals.” Chinnis also noted that the Boulevard pendant lighting is unique to MCO and enhances the airport’s identity while supporting the aesthetic of the Everglade State.

In addition to the pendant lighting, uplights by Insight Lighting and Traxon add color-changing flair to the Boulevard. Visible from the landside of the terminal and the airside, Aviation Authority-approved “light shows” celebrate various holidays and offer “late-night, space-theme” scenes. At the North Concourse and through the center of the

Top Right:
Blue illumination marks checkpoints and increases wayfinding.

Bottom Right:
Terminal C connects visitors to Florida’s natural beauty.

West Concourse, additional color-changing fixtures also display holiday hues in addition to a static blue to match the Aviation Authority’s signature look.

Electric lighting components also support airside wayfinding. “RGBW lighting was employed specifically at gate locations to help create visual demarcations of decision points, in addition to elevated architectural lighting solutions that involved quiet slot-mounted cylinder downlights to create a more hospitality-like feeling,” Chinnis added.

Glazed Glass

The sky of the grand skylight atrium adds a memorable element to the terminal. “The project presented an amazing opportunity to effectively integrate daylight throughout the passenger experience and celebrate the architectural theme focused



on Central Florida's essence," said Chinnis. "The thoughtful and careful design of the pattern of glazing within the atrium was an expected challenge, but the result of the design is a stunning integration of daylight into the main space."

Daylighting specialists from HLB together with the architectural team created another pseudo-randomized pattern, but this time with insulated glass units (IGUs). IGUs with three different transmittances not only provide higher light levels in certain sunny spots but also increase light control in certain areas such as the customs checkpoint with "restrictive constraints on contrast," said Chinnis. The pattern creates the effect of sunrays through a tree canopy. As a result, passengers can enjoy an elevated travel experience: the feeling of sunlight spilling through palm leaves as they make their way toward amenities or wait to board their planes. ©

Varied IGUs create the effect of dappled sunlight in the Boulevard.

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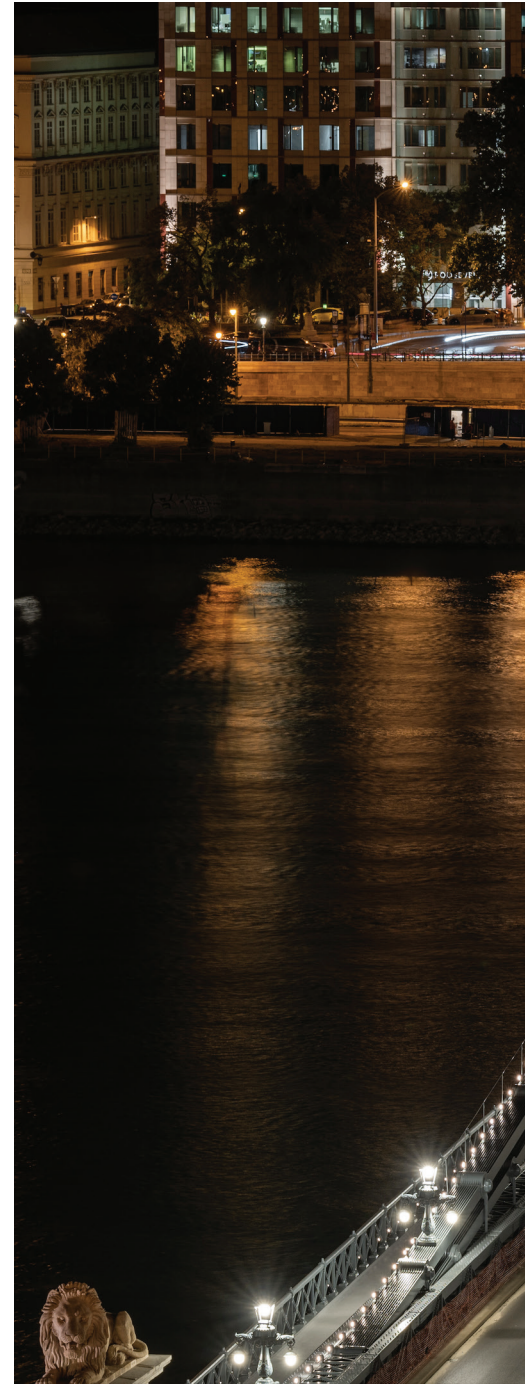
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Photos: A-Hid Zrt



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Renewing a bridge and
Hungarian pride

By Katianne Williams

Hungary's Chain Bridge, it is said, belongs to everyone. Stretching across the Danube, the suspension bridge first connected the cities of Buda and Pest in 1849, setting the stage for the formation of Budapest in 1873. Today, it is the center point of Budapest nightlife, a meeting place, and a rendezvous. It is also the center of the country, so much so that kilometer marker 0 sits by the base of the bridge in Clark Ádám Square, with every highway in Hungary measured from that point.



Both the Pest and the Buda sides of the bridge are protected heritage sites, and the history of the bridge is storied. The official name is Széchenyi Chain Bridge, after Count István Széchenyi, Minister of Infrastructure, who advocated for the building of the bridge, the story goes, after missing the funeral of his father because he could not cross the Danube. The bridge, spanning 375 meters (~1,230 ft), is anchored by two stone towers. Iron chains drape between them, giving the bridge its silhouette and name. At each end, stone lions stand guard.

Left: Hungary's Széchenyi Chain Bridge was the first permanent bridge in the capital.

Right: Lighting fixtures were calibrated in collaboration with city government officials.

When a 2011 inspection revealed that the iconic bridge suffered from major structural problems, plans were made for repairs. As part of the renovation, the city of Budapest opted to update the lighting as well. In 2016, LED lighting specialist Lysis-Project partnered with planning and design firm FŐMTERV Zrt. to develop the initial lighting concept and fixture layout. Gábor Nyéky, lighting designer and project manager at Lysis-Project, explained, "As all wash and streetlights were still fitted with metal halide lamps and the chains were



decorated with light dots sporting compact fluorescent bulbs, a complete LED overhaul was agreed upon.” This redesign focused on improving energy efficiency, introducing dynamic lighting capabilities, and streamlining maintenance and control, all while preserving the historical integrity of the 19th century structure.

The lighting project began in 2021 and took 18 months to complete under the leadership of A-Híd Zrt., with Árgus-Security Kft. serving as general electrical contractor. Lysis-Project operated as a subcontractor to Árgus-Security, providing the lighting equipment, control system installation, and programming. The Lysis-Project team consisted of László Deme, lead designer; László Kiss, project manager for luminaires; Gábor Kele, project manager for controls; and Nyéky, who was also in charge of control system design and programming.

Nyéky grew up in Budapest and understood the significant responsibility with which his team had been tasked. As a teenager, he used the bridge as a meeting place and has since stepped onto the terraces of Fisherman’s Bastion and climbed Buda Hill for a view of the bridge at night to view its soft white lights reflecting off the water. He described the structure as “very iconic and very sensitive”; for a bridge that belongs to everyone, any modification runs the chance of displeasing somebody.

Throughout history, the bridge’s lighting scheme has changed only a few times. At its inception, iron lamp posts mounted along the roadway provided vehicle and pedestrian visibility. For the Eucharistic World Congress in Budapest in 1937 and 1938,

The Széchenyi Chain Bridge’s soft light reflects off the Danube’s waters.

temporary light dots were strung along the chains in what was among Hungary’s earliest experiments in decorative lighting, creating a dramatic outline of the bridge’s profile for the first time. When the structure was destroyed by German bombs less than a decade later, it was rebuilt in its original form but fitted with a new lighting aesthetic spotlighting the prominent neoclassical stone towers.

Adding a Modern Twist

“While the bridge had different lighting schemes in the past for various reasons, chief architects working on the project decided to keep its latest design, established in the 1970s,” said Nyéky. The original 2016 plan proposed fitting modern WE-EF streetlight heads into the historical candelabras. However, in 2020, a historical building specialist commissioned by FŐMTERV revised the approach, opting for a post-World War I candelabra design that was significantly smaller than the existing fixtures, rendering the original solution incompatible. In response, Lysis-Project engaged Kandeláber Manufaktúra, a well-known Hungarian lighting manufacturer specializing in historical lamp posts and candelabras, to develop a custom LED fitting suitable for the revised design.

As part of the restoration effort, 24 existing candelabras were restored, four of which were originals from the Széchenyi era, and 32 columns were reconstructed as three-pronged candelabras. Each fixture was equipped with modern LED engines designed to provide sufficient illumination to the road surfaces and pavement. Today, road



surfaces meet the M2 class of 1.5 candelas per sq meter of luminance with uniformity of 0.4. Pedestrian sidewalks meet the P1 class with 20 lumens per sq meter and uniformity of 0.3.

For the decorative lighting, Nyéky turned to Griven Italy, a brand he said, “proved reliability multiple times in the past when it comes to quality outdoor solutions with RGBW LED engines and DMX/RDM capabilities.” The chain illumination alone consists of over 1,000 fixtures. All told, the decorative lighting is made up of 1,500 fittings, and the solution comprises 56 Griven Capital 100 RGBWs, 64 Griven Capital 200 RGBWs, 128 Griven Parade L4 RGBWs, four Griven Ruby RGBWs, and 1,180 Griven Graph-i-Cell RGBWs.

Replacing the in-ground metal halides with LEDs presented a technical challenge. “We are always struggling with in-ground fixtures,” said Nyéky. “In-ground metal halides are up to 250 watts and produce enormous amounts of light. It is impossible to this day to reach the same illumination levels with LEDs for in-ground fixtures.” Ultimately, German lighting company WE-EF provided 16 WE-EF ETC140 RGBWs. “Only they could provide quality RGBW fixtures with sufficient luminous output,” added Nyéky.

For the decorative lighting control system, Nyéky looked to Pharos Controls, his “personal go-to when it comes to high-end reliability and flexibility on any scale.” BDK, the municipal department responsible for public lighting, maintains all lighting fittings in Budapest and could not be hindered by a system that required extensive programming or



Top Right:
Three-pronged candelabras are equipped with modern LED engines.

Bottom Right:
LEDs replaced the compact fluorescent bulbs that comprised the light dots on the bridge.

special knowledge of the digital control signals. The installed system consists of one Pharos Controls LPC20, two Pharos Controls EDN20, and one Pharos Controls BPS UK. All basic lighting systems and scenes are automatically started by the city’s central control system, while special lighting scenes are recalled by an eight-button wall panel in a secure room on the Buda side of the bridge.

Voltus Holding Kft. tackled the challenging installation, where, Nyéky explained, “almost all lighting fixtures were to be installed either in great heights or great heights above water.” Industrial alpinists traversed below the bridge with ropes and used heavily ballasted carts so that installers could reach the sides of the bridge.



Timeless Authenticity

Another key challenge, according to Nyéky, was “to keep the look as close and authentic to the desired design with totally different form factor and color spectrum lighting fixtures.” Additionally, there was the subjective artistic interpretation as the team stepped back to look at the bridge. “It is the center point of Budapest nightlife,” noted Nyéky. “You can see in one frame the castle in Buda and the palace, the Matthias Church. They don’t have the same illumination levels, the same color, so it was always a debate, which to incorporate.” To this end, fixtures were precisely calibrated in collaboration with city government officials. Color temperature was modified a percentage point at a time, adding a percentage here, taking one away there, adding a bit more red, a bit less yellow, and so on, until the desired result was achieved.

The bridge was closed for a year before road traffic was allowed in December 2022, once the streetlights were fully functional. Pedestrians were permitted to cross after August 2023 when the decorative lighting was in full operation. Still today, per a city initiative to reduce car traffic through the center, the roadway is only open for buses, taxis, and cycling.

The redesign, Nyéky said, “is popular and publicly acclaimed,” with the Chain Bridge’s night illumination attracting the eye in what many describe as a magical view. The linear lights coming from the pylons are striking, and beside the bridge, string lights glisten from the river cruise boats that dock along the banks, while the gold-toned lights of the Hungarian Parliament Building shine upriver

A preset color scheme displays the pride of the Hungarian people.

from the bridge. Budapest at night remains romantic, classic, and timeless.

The year 2023 marked the 150th birthday of Budapest, and as part of the celebration, the city offered bus tours highlighting the local architecture and decorative lighting. For this event, the bridge’s lighting scheme was programmed to closely resemble photographs of the original design. After a tour stop at the structure to learn about the history of its illumination, tourists witnessed the bridge transform, lit with the tricolor red, white, and green of the Hungarian flag.

For most of the year, the bridge is illuminated in a soft, white light, honoring its traditional appearance. At the same time, the advanced lighting system also allows for the bridge to be bathed in color on special memorial days, offering a modern touch for commemorative moments. In this way, the Széchenyi Chain Bridge embraces both heritage and innovation through a flexible lighting design that can be appreciated by locals and tourists alike. ©

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Photo: City of Terrebonne

A RIPPLE EFFECT

Terrebonne Dam injects life into an off-island Montreal suburb

By Craig Causer

Approximately four years ago, Québec firm CS Design (which merged in March 2025 with HLB Lighting Design under the HLB brand) was tasked with a park project involving an island connected to Terrebonne, a suburb of Montreal. The ambitious goal consisted of an overhaul of the park, a new theater, and a building for a skating rink. CS Design completed a master plan for the entire park, and it identified key opportunities for illumination including a dam, which also served as a pedestrian bridge that led from the island to a satellite neighborhood. Then COVID-19 hit.

In the post-COVID world, the civic government changed and axed the larger project, but the



administration was still excited about one aspect of it—the dam. Illumination of the dam and pedestrian bridge was anything but straightforward since the dam falls under the purview of various government agencies.

“Originally out of scope, we prepared an esquisse [sketch] for the dam to convince the officials of the high potential of the structure,” explained Conor Sampson, lighting designer and principal of the Canadian office of HLB. “Following the municipal election and the arrival of a new mayor, we succeeded in convincing the administration to move forward, and in 2023, the project was finally in design development. Construction was achieved eight

The flowing chute of water was one of five key elements that required illumination.

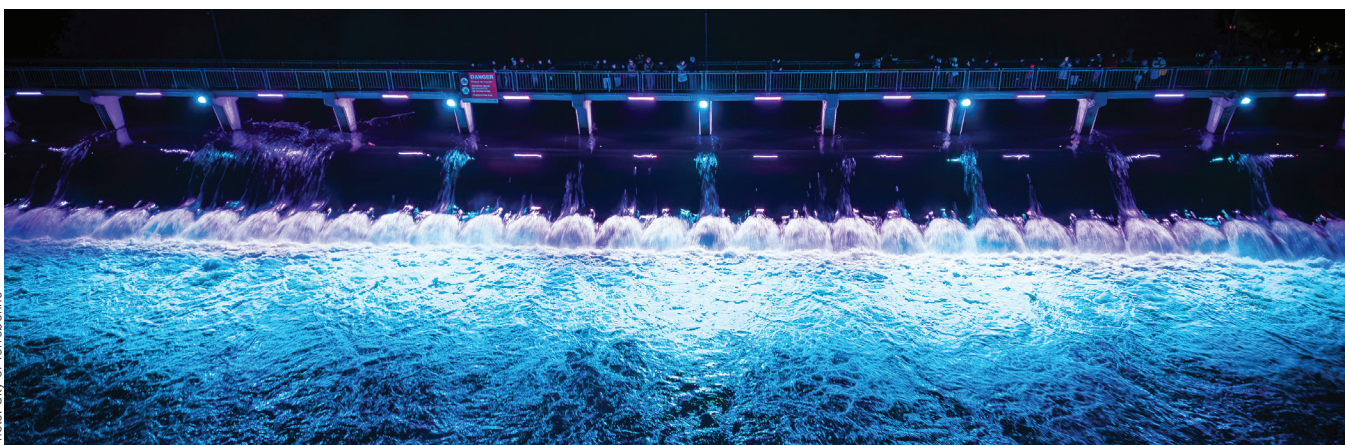
months later, a pretty quick timeline for this kind of infrastructure project. During that time, the plans had to be reviewed and approved by three layers of governmental institutions, as the dam belongs to the environmental protection office [and] the island to the Culture and Heritage Ministry, but the project was financed and orchestrated by the city.”

Five key illumination elements were employed in the project including a flowing chute, with smooth water arching over concrete spillways; a boil of rushing whitewater; transitioning to the tranquil waters beyond; a series of concrete piles; and a horizontal deck that was functionally lit from lamp posts. The lighting approach was broken down into three zones: the highlighting of the structural piers, illumination of the white water rapids, and the tapered washing of the fast-moving and smooth dark water farther out in the river.

“Water is a unique medium for lighting: it is either transparent or acting as a mirror, and therefore almost impossible to light when immobile,” Sampson said. “But as water moves and falls, swirls and bubbles create constantly renewing textures that catch light. It was an amazing opportunity, as we had the chance to have these different layers of water texture complementing each other. The main light focus is on the water waves, but the texture of the backwash beyond reveals exceptional and lively patterns as well. We forced ourselves to use a very colorful light palette instead of our favorite white tints, as the river is not clear and is a dominantly brown hue.”

CS Design called upon a various range of small to larger fixtures, both projector and linear luminaires, to create the different layers of lights, with vibrant colors and contrasting intensities. A series of linear, Lumenpulse Lumenfacade RGBA luminaires with a narrow spread were used to highlight the white water closest to the dam, with Lumenpulse Lumenbeam RGBA projectors employed to reach further out into the river. All fixtures used DMX protocol and connected into a Pharos controller.

“One of the main challenges was to have fixtures below the deck,” noted Florent Couedou, a lighting designer and project manager who completed the project while working for HLB. “We looked at different ways of installing the fixtures, like a bucket and a crane but the issue was that the rating of the bridge was not made known to us.” As a result, the designers turned to “spidermen” who rappelled off the side of the bridge to install the fixtures among difficult conditions including freezing waters and slippery decks and handrails.



Bridge Mix

In addition to the lighting of the water, the chute, and the structural pillars, CS Design was also involved with the replacement of the functional fixtures aimed at the deck. The original bridge possessed a series of lamp posts that were too tall, spewed light, and were blindingly bright, so the designers took the mountings, installed shorter poles, and used optics that were tailored to the deck of the dam. Lumenpulse Lumenquad fixtures replaced the existing post-top fixtures, with photometry targeting at 10 lux with 1:4 uniformity at 3000K CCT.

"We had to add power and use the bases of the existing lamp posts to install new lamp posts that were shielded and directional," Sampson noted.

Top: The completed installation, viewed from the mainland to the island.

Bottom: Colors can change with the seasons including this winter color palette.

"This included adding a lot of electrical infrastructure on the bridge. In addition to poor visual comfort, previous lamp posts were spreading light in the river, resulting in light pollution that affected wildlife and plants. From a light pollution perspective, the light is now concentrated on the area that we want illuminated. We have a section lighting the piers on both sides, one set of lights illuminating the whitewater, and one that aimed at the spillway."

Precise narrow optics (Type II) with back shield accessories were employed to frame the deck on the bridge and improve the contrast of colors on the water. The system is controlled by an advanced DMX/RDM interface with custom schedules and behavior for each layer of light:



Photo: CS Design



Photo: HLB Lighting Design

Top Right: A “before” view of the installation with light spill from the original lamp posts.

Left: Pont Guillot electrical contractors rappelled from the bridge deck to complete light focus.

the dynamic illumination shuts down at midnight, while the functional fixtures remain on for security purposes, but a temporization allows the light to dim to 50% when no presence is detected.

The most innovative part of the project, according to Sampson, is the interactive component provided by four occupancy sensors linked into a DMX control system. There is a resting state that is disrupted by anyone walking across the bridge; as pedestrians cross from one side to another, it triggers sensors that allow the program to detect their direction of travel, launching various ripple effects that follow pedestrians along their path, before bouncing on shore. The scenography evolves throughout the year, with special events featuring

various effects and colors. One example was a Halloween scene that appeared when multiple pedestrians activated the sensors in sequence, triggering a scary strobing effect across the dam, as if the bridge was a haunted house.

The pedestrian bridge serves as an essential link for the neighborhood, as it is the only way for people to reach the center of the town. Once the project was complete, local politicians and residents turned out to celebrate the structure’s transformation.

“We think that the project provides a lot of enthusiasm among residents, and kids’ reaction to the interactive effects are always joyful,” Sampson said. “Once they understand they can trigger the light effects, it often arouses their curiosity and becomes a game.” ©

THE DESIGNERS | Conor Sampson, Member IES, is a lighting designer and the principal of the Canadian office of HLB Lighting Design.

Florent Couedou, Member IES, is a lighting designer and project manager. He completed the project while working for HLB Lighting Design.

Marc Laliberté is an engineer and project director at Tetra Tech.

Emmanuel Scott is an engineer at Tetra Tech



BETWEEN LAND AND SEA

The Seattle Ferry Terminal balances safety and sustainability

By David Shiller

The Seattle Ferry Terminal at Colman Dock, a crucial hub in Washington's ferry system, serves approximately 10 million travelers each year. New-construction buildings have transformed this vital transportation gateway, with lighting playing a pivotal role in enhancing both its functionality and aesthetic appeal. The lighting design seamlessly integrates with the architecture, reinforcing the terminal's dual identity as a civic landmark and a high-throughput transportation facility. This blend of form and function creates a welcoming and efficient environment for commuters and tourists alike.

The lighting design is carefully woven into the architectural fabric of the terminal, supporting its purpose by marking transitions between land and



Left: The Entry Building features vertical columns of light, an open layout, and pedestrian connections with the urban surroundings.

Top: Illumination integrated into the folded façade provides architectural depth and navigational clarity.

sea, vehicle and pedestrian zones, and day and night. The project encompasses approximately 212,000 sq ft of interior and exterior pedestrian circulation space. Key metrics include 0.64 watts per sq ft and illuminance levels of 30 footcandles for ticketing and waiting areas as well as 1 fc minimum and 3:1 (average: minimum) for exterior circulation areas. These light levels created some challenges around balancing relatively high light levels and uniformity in the pedestrian zones with the goal of creating an inviting environment.

Key design elements include embedding lighting within façades and guiding pedestrian flow with linear elements and illuminated wayfinding panels. Bright yellow illuminated panels at stairs, elevators, and building entries provide a consistent

navigational cue across the terminal, enhancing orientation and creating visual continuity. These panels, made with Heilux flexible film for yellow panel backlighting, are strategically placed at key transition points to become an integral part of the architectural language, offering intuitive, color-coded wayfinding at critical navigation points. This approach ensures that even first-time visitors can easily navigate the complex terminal layout.

Linear light strips, meticulously integrated into the façade's folding panels, accentuate architectural dimension and geometry. This subtle technique adds depth and visual interest to the building's exterior, while also providing ambient lighting for pedestrian areas. In addition to the panels, Luminii accent lights adorn the façade. Illuminated handrails guide pedestrians toward the Terminal Building on an elevated pedestrian bridge over the vehicle holding area, enhancing safety and convenience.

Layer by Layer

The design team worked diligently to create a high-quality visual environment while meeting stringent technical requirements for light levels mandated by Homeland Security, according to Jill Cody, principal at Dark Light Design. To achieve this, multiple layers of lighting were used throughout



the project, allowing the team to meet precise illumination and uniformity standards without compromising visual comfort or aesthetic goals.

“On the elevated pedestrian plaza, a variety of light sources at different scales—ranging from discreet architectural elements to larger-scale pole lights—work together to deliver the necessary lighting levels while maintaining a sense of warmth and welcome,” Cody explained. “This layered approach supports both safety and placemaking, ensuring that even in highly regulated zones, the terminal remains a comfortable, intuitive, and human-centered space.” McGraw-Edison luminaires illuminate the auto holding area, and Bega pedestrian pole mounts provide lighting in the plaza.

The layered lighting strategy not only enhances safety and security but also contributes to the overall ambiance of the terminal. By carefully selecting and positioning light fixtures, the design team created a space that feels both secure and inviting. This is particularly important in a transportation hub, where travelers may be feeling stressed or disoriented.

One solution to easing stress is ensuring a connection to nature. The Terminal Building’s wood ceiling extends to the outdoors, facilitating pedestrian navigation through natural design cues. This design element creates a seamless transition between the interior and exterior, making the terminal feel more open and welcoming. The Lighting

Left: Yellow illuminated panels identify key navigation points to provide legible wayfinding.

Right: Illuminated handrails on an elevated walking bridge direct pedestrians toward the Terminal Building.



Quotient and Insight luminaires were utilized for effective uplighting of the wood ceiling, and Litecontrol luminaires deliver cove uplighting. Low-level lighting integrated into the handrails, manufactured by Klik USA, defines the plaza edge and maintains clear views to the water and mountains beyond.

No Trespassing

While the safety and security of millions of annual users drove a large part of the lighting strategy, preventing light trespass into the adjacent marine habitat was also essential and required careful luminaire selection and shielding. Other deliverables included employing a high-performing lighting system to meet the expectations of Washington State Ferries (WSF), as well as the discreet integration of lighting into the architecture to support intuitive wayfinding and preserve views to the waterfront, all while operating within the constraints of a public sector budget.

The design team successfully addressed these challenges by applying a combination of innovative solutions. For example, the design uses fewer than 20 fixture types, chosen for versatility and durability in a demanding maritime environment. Control zoning by fixture type allowed for the granular tuning of light output, which improves energy performance while ensuring different user needs are met—whether it’s uniform light levels for exterior circulation or higher illumination at boarding areas.



This simplified system not only eases long-term maintenance but also supports adaptability as operational needs evolve. The key was to provide a fixture palette that was easily maintainable by WSF.

Sustainability was also a key consideration throughout the design process. The project achieved energy code compliance 16% below the Seattle Energy Code baseline and earned LEED Silver certification. Special attention was paid to prevent light trespass into adjacent marine habitats, minimizing the impact on the surrounding ecosystem.

“Mounting and fixture integration were especially challenging given the exposed waterfront environment and the complex, multiple pedestrian circulation routes throughout the facility,” Cody explained. “We needed to provide visual clarity to support navigation. Fixtures had to be coordinated closely with architectural elements such as façade panels, canopies, and guardrails. Corrosion resistance, vandal resistance, and weatherproofing were critical. Additionally, two of the three ferry slips were required to be operational at all times during the construction period, which required close coordination around construction phasing.”

The success of the Seattle Ferry Terminal lighting design was the result of collaboration by a team of professionals including WSF; architects at NBBJ; Dark Light Design; structural engineers at KPFF Consulting Engineers; electrical engineers



The project met stringent standards for light levels and uniformity.

from Wood Harbinger; and the contractor, Hoffman Pacific.

“For our client, WSF, lighting at Colman Dock is a triple win: enhanced safety and comfort for users, reduced maintenance complexity, and significant energy savings,” added Cody. “The environment feels calm, navigable, and distinctly civic; making it a gateway that reflects the identity of Seattle and the legacy of its ferry system. The lighting not only meets technical metrics but also contributes meaningfully to placemaking, sustainability, and long-term operational resilience.” ©

THE DESIGNERS | Jill Cody, Member IES, is a principal at Dark Light Design.

Shannon Kowski was previously a senior lighting designer at Dark Light Design.

Amber Thimmesch was previously a lighting designer at Dark Light Design.

THE AUTHOR | David Shiller is a leading business development and marketing consultant, as well as an executive recruiter for the lighting industry. He is also the editor of *LightNOW*, an online lighting industry trade publication. He is a 20-plus-year veteran of the lighting industry, and co-chair of the American Lighting Association Engineering Committee.

By now, nearly everyone is familiar with LEDs and likely have them throughout their homes. But while LED illumination is the dominant choice in residential and commercial applications, there are still some industrial plants that continue to use fluorescent and metal halide lighting.

The U.S. Department of Energy describes LEDs as a highly energy-efficient technology that uses at least 75% less energy and lasts up to 25 times longer than incandescent lighting. The energy savings is a direct result of traditional lighting losing a majority of energy as heat. LEDs, in contrast, only discharge about 5% of their energy as heat and convert 95% into light. The result is higher-quality, brighter lighting, and greater efficiency, which is good for company bottom lines and the environment.

For large industrial settings, however, there are even greater benefits in the form of enhanced worker safety. Upgrading facilities to modern LED lighting can actually lower the risk of accidents, injuries and fatalities. How? Consider these six benefits:

- 1. Improving visibility:** Poor visibility is the leading cause of slips, trips, and falls. When overall illumination is increased, accident rates decrease significantly. Traditional high-pressure sodium fixtures often provide poor illumination, making it difficult for workers to spot hazards. However, LED fixtures produce brighter quality light that enables workers to avoid accidents.
- 2. Differentiating colors:** The inability to distinguish colors is a tremendous safety risk. The poor color accuracy



Photos: Matt Turner/COMPOA

ENHANCING SAFETY IN INDUSTRIAL PLANTS

Six benefits of LED upgrades

By Bill Liberto



generated by high-intensity discharge (HID) lights, for example, can make it difficult to distinguish colors, which puts workers at risk of misinterpreting color cues on various warning placards or wiring, which is color-coded for safety reasons. LED lighting, in contrast, typically delivers a higher CRI, which makes it easier to distinguish colors.

3. Reducing risky maintenance work: The allegedly simple task of replacing light bulbs becomes riskier in

LEDs inside Independence Power Plant create a safer work environment.

industrial plants where crews must often work at high elevations, sometimes directly above dangerous production equipment. Since LEDs typically last at least three times longer than HID, less maintenance is required in these potentially dangerous situations. In addition, HID lighting emits high levels of unsafe UV radiation and contains mercury, which can be released as the result of accidental breakage. LEDs contain no hazardous materials. Plus, since they

burn more efficiently, less energy is converted to heat, which makes LEDs cooler and safer to handle.

4. Encouraging alertness and reducing fatigue: The crisp white light of LEDs has been shown to improve alertness, which is especially important in applications involving shift work that is common in many industrial plants that run 24/7. By operating in conjunction with workers' circadian rhythms and suppressing melatonin levels, the brighter LED lighting can help reduce fatigue, eye strain, headaches, and accidents that are common in environments with insufficient light.

Among other benefits, LEDs can emit light in a range of colors in a specific direction, reducing the need for reflectors and diffusers that can trap light. This feature makes LEDs more efficient for many uses such as task lighting, which requires light focused in a specific direction.

Today's LED systems often work in conjunction with advanced sensors and controls that, among other things, can sense occupancy levels and adjust light levels accordingly or set light levels by time of day. This results in major energy savings and also ensures adequate lighting in areas where employees are working in real time. Many of these controllers can be operated remotely via an app for added convenience.

Creating Safer Working Conditions in Oswego

Luminant, a subsidiary of Vistra, is one of the largest energy producers in the U.S. Its Independence Power Plant in Oswego, NY, turned to the latest



LED technology when replacing fixtures within 83,700 sq ft of the general plant area, as well as in specialty locations around the facility's water box, condenser, and oil purification skids.

The goal of the LED retrofit was twofold—to save energy and provide a safer, more conducive working environment. The previous fixtures were highly inefficient, with many being 400-W metal halide and nearly 30 years old. As a result of their advanced age, the fixtures required more maintenance

Upgraded illumination inside the Motor Control Center and Digital Control Systems panel areas.

than just re-lamping, including the replacement of ballasts and capacitors.

The plant established strict goals for the project, including brighter illumination, less maintenance time, and more kilowatt-hour savings. In addition, the team wanted to create a safer work environment, which involved addressing hard-to-reach fixtures that previously put people involved with re-lamping in an unsafe situation.

Hal Duell from Power-Flo Technologies in Syracuse, NY,

was brought in to lead the lighting project, and he provided the plant with several different types of high bay fixtures to test, including LED UFO high bay fixtures. After thoroughly investigating several options, our team specified Wattage and Color CCT Selectable UFO High Bay fixtures from EarthTronics. The wattage-adjustable and color-selectable LED high bay fixture delivers energy savings by replacing up to 1,000-watt HID fixtures. It can be set at 150 or 240 W, producing up to 20,250 and 32,400 lumens,



respectively. It also features color selection options of 3500K, 4000K, or 5000K with a high 80+ CRI providing enhanced visual acuity and a significant increase in footcandles on the facility floor. Following the installation of the new lighting, four different work areas around the plant were measured, and illuminance levels increased from 6 to 42 fc, 0 to 24 fc, 2 to 48 fc, and 2 to 86 fc.

To achieve energy savings, advanced network control sensors that can be managed remotely through an app were

added to the UFO high bays. The sensors are set for 100% sensitivity, and full illumination is maintained for 30 minutes after the signal is triggered. After 30 minutes of no activity, the light output is reduced to 35% for an infinite amount of time until the sensor is triggered again.

By employing LED UFOs and sensors, the plant is saving more energy when the lights are running at a lower output until the high light levels are needed and triggered. For instance, the lights will be on six hours at 240

A view of Independence Power Plant's upper mezzanine deck.

watts and 18 hours at 84 watts for areas that do not receive much traffic. This reduction in energy use translates into annual savings of over \$14,000—and that doesn't include the additional maintenance savings of no longer re-lamping. The projected savings over the 10-year warranted life of the product is approximately \$145,000.

It's Not Just About the Money

Worker injuries are not only financially costly, but they can also negatively impact employee morale. Total cost starts with the direct payments to cover medical and occupational rehabilitation expenses, but often more costly is the lost productivity resulting from injured workers being away from the jobsite. Such cost is exacerbated by the current labor shortage because when an employee misses work, there is either no one to serve as a replacement (and work doesn't get completed) or other workers have to fill in by working longer shifts, which often leads to worker fatigue and a greater risk for workplace injuries.

The U.S. Bureau of Labor Statistics already lists manufacturing as one of the top three industries plagued by labor shortages. As a result, keeping employees working and free of injuries is certainly worth the investment of upgrading plant lighting, not to mention the additional energy savings the facility will realize. ©

THE AUTHOR | Bill Liberto is vice president of Sales for Commercial Accounts for EarthTronics. He is a member of AEIC/Electrical League of Ohio, NECA, NEMRA, and NAESCO.

PROJECT IN PICTURES

A Change of Pace

The \$32 million, 3-acre **Frankie Pace Park** includes walkways, bike paths, raised garden beds, permeable lawn areas and rain gardens for storm water management, an amphitheater and education area, and other public amenities. **Modular International's** challenge was to manufacture six, 16-ft-tall upright Totems with incorporated lighting elements while meeting requirements for three different fixture styles, two of which featured rotating tables for ADA accessibility. These Totems serve as a decorative lighting focal point for the new park, which is located across the street from PPG Paints Arena in Pittsburgh, PA.

"Modular International's involvement, creativity, and recommendations in taking our custom details to reality was a great experience," said Dan McDowell, senior associate at landscape architecture firm LaQuatra Bonci Associates. "The suggestions brought to the table enhanced the original design and allowed the Totems to become iconic park features."



»»
The staging area housed parts and components. **All raw materials were domestically sourced** during the fabrication of the Totem fixtures.

Photo: Modular International, Inc.



Illuminating each fixture is a 4-W, round **IP67-rated upright producing 386 lumens at 3000K** with a 1-ft diameter and 316 marine-grade stainless steel top cap.

Photo: Modular International Inc.

Photo: Modular International Inc.



Three different configurations of Totems were produced, each featuring a tapered 9-ft, 11.5-in. section of perforated stainless steel with a **laser-cut, custom heat-burnished braided pattern**. Fully assembled, each fixture weighs over a ton.



An **original rendering** of the project.



Rendering: LaQuatra Bonci Associates

IES INSIDER



Photo: LightFair

LightFair 2025 Takes Center Stage in Las Vegas

LightFair marched to a new beat as it kicked off its 2025 edition in Las Vegas in May with an energetic drumline opening the Exhibit Hall. Lighting professionals and innovators explored global manufacturers' offerings, artistic visuals, and interactive displays.

The educational sessions were very well received across the five-day event. Among the highlights, IES Industry Relations

Consultant Mark Lien and Hartranft Lighting Studios Principal Paula Ziegenbein continued the tradition of presenting the longest-running LightFair session, "Keeping Up with Change," which covered how new technologies such as AI and quantum computing will require the lighting industry to adapt and evolve.

While the number of attendees and exhibitors fell well short of pre-COVID levels, many people described their LightFair conversations as "valuable," "meaningful," and "intimate." The reception of the new blackout show floor, where 95% of the lighting was turned off to provide an environment conducive to better product discovery, received mixed reviews, with some exhibitors reporting that booth illumination was inadequate.

Following the conference, IES CEO and Executive Director Colleen Harper commented on this year's event and the future of LightFair. "While attendance figures haven't yet returned to pre-pandemic levels, the energy and engagement we witnessed at this year's LightFair were remarkably encouraging. The quality of the educational sessions and the meaningful interactions among attendees and exhibitors demonstrated that our community remains deeply committed to advancing lighting technology and design excellence."

Harper added that both the IES and the LightFair partnership recognize that the challenge ahead includes rebuilding momentum, which requires patience and adaptation. As a result, the LightFair partners are actively reviewing feedback from exhibitors and attendees to evolve LightFair's format and offerings to better serve today's lighting professionals.

"Looking forward, the IES remains confident in LightFair's fundamental value as our industry's premier gathering," Harper said. "Together with our partners, we're exploring new approaches to ensure LightFair not only rebounds but emerges stronger and more relevant for the future of lighting."



Photo: Craig Causier



Photo: LightFair



Photo: Lightfair



Photo: Lightfair



Photo: Lightfair



Photo: Craig Causer



Photo: Craig Causer



Photo: Lightfair

MEMBER MENTIONS



Samantha Barwin has joined the specification sales team of Engineered Representation Inc.



Keith Gelman has been promoted to director of business development with Lighting Services.



James Highgate has joined Red Sky Lighting as national business development manager.



Ken Lager has joined the Specification Sales—Specialty Lighting team of REPCO II.



John Majca has joined GVA Lighting as regional sales manager, Central, U.S.

Bold = Individual or Sustaining Member



DALI Alliance and IES Collaborate to Advance Lighting Industry Standardization and Education

The DALI Alliance and the IES have announced a strategic collaboration to advance the development, adoption, and harmonization of educational initiatives around global lighting standards. The DALI Alliance and the IES will coordinate on activities such as education and training programs as well as outreach to designers, engineers, and specifiers with the goal of creating greater alignment across lighting technologies and accelerate the deployment of intelligent and sustainable lighting solutions worldwide. As part of this collaboration, the organizations will explore opportunities for joint initiatives including marketing committees, publications, and knowledge-sharing efforts that benefit manufacturers, lighting professionals, and end users.

“This partnership reinforces our shared commitment to open standards, cross-industry collaboration, and delivering real value to the global lighting community,”

said Paul Drosihn, general manager of the DALI Alliance. “By working closely with IES, we’re better positioned to support the evolution of lighting systems that are smart, interoperable, and standardized.”

“We’re excited to work more closely with the DALI Alliance to further IES’s mission of improving the lighted environment through science and education,” said Colleen Harper, IES CEO and executive director. “Together, we can better serve the needs of lighting professionals and support a more integrated, forward-thinking approach to lighting design and technology.”



In Memoriam Willard Warren, Member IES

Willard Lee (Bill) Warren passed away in April 2025 at the age of 96. A graduate of Cooper Union with a degree in electrical engineering, Warren was a Professional Engineer and worked on some of the most prestigious landmarks in New York and abroad. He continued to consult on lighting and energy conservation into his 90s. Warren was an IES Member for 71 years; served as a Member of the IES Education, Library, and Office Lighting Committees; and authored the “Energy Concerns” column for *LD+A*.

“As a columnist, Bill Warren was an editor’s dream; his columns were never late, and they were so thorough and well written that very little work was required on my end,” said former *LD+A* Editor Mark A. Newman. “Before he started the column, he insisted that he take me to lunch, the goal being to ‘sell’ me on a column authored by him focusing on energy in the lighting industry. We went to lunch at the now closed St. Maggie’s on the first floor of 120 Wall Street, the glorious Art Deco building where the IES headquarters was located for decades. Bill was not only friendly, funny, and affable, but he was so knowledgeable and passionate about his subject matter. Honestly, I was sold on the idea of a Bill Warren column every month way before our lunch on Wall Street. Aside from his passion and love for the lighting industry, the one thing that everyone says about Bill when his name pops up is, ‘He was such a nice man!’ That’s a legacy we should all shoot for.”



LD+A

LIGHTING DESIGN and APPLICATION

Share Your Voice

The flagship publication of the Illuminating Engineering Society, *LD+A* is an award-winning magazine for professionals involved in the art, science, study, manufacture, teaching and implementation of lighting. In an effort to continue to provide diverse voices in *LD+A*, we are looking for **industry professionals** who are interested in telling their stories, including work on unique lighting projects, their experiences in the profession, and opinions on current hot topics in the world of illumination.



EVERY ISSUE of *LD+A* includes feature articles on design projects, technical articles on the science of illumination, new product developments, industry trends, news of the Illuminating Engineering Society, and vital information about the illuminating profession.



EACH MONTHLY issue features a unique theme such as sustainable design, retail lighting, roadway lighting, industrial lighting, hospitality lighting, or office and commercial lighting.



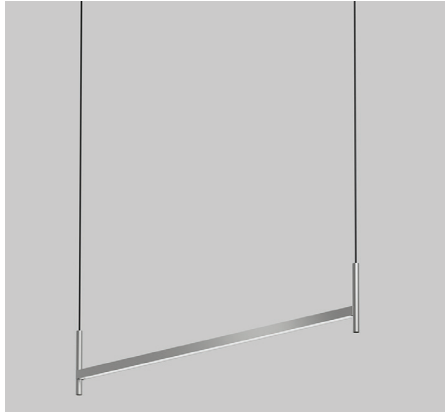
ROTATING COLUMNS cover topics including energy, green design, career issues, technology, regulations and legislation, research, and education—written by a veritable who's who of industry experts.

If you are interested in publishing an article in *LD+A*, please reach out to Editor-in-Chief Craig Causer at craig.causer@sagepub.com to discuss further.



PRODUCTS

1.



3.



2.



4.



1. Eureka launches Segment, a minimalist linear luminaire designed for use in boardrooms, lobbies, and hospitality applications. Available in 4-, 6-, and 8-ft lengths, fixtures are offered in regular or high outputs with the option for either a downlight or up/downlight. Dependent on the length of the fixture, a range of 1,157 to 4,615 lumens are delivered. Segment is available in 16 colors and multiple finishes.
www.eurekalighting.com

2. Nightingale introduces Embrace Overbed Lighting for reduced glare in patient rooms as well as NICU, senior living, and long-term care facilities. The multifunction, large-form, and

surface-mount fixtures push light outside the direct view of the patient, while meeting IES RP-29 suggested light levels for patient quarters. Fixtures offer ambient, exam, and night observation illumination modes, with an optional reading light, and are compatible with grid and hard ceilings.
www.nightingalelighting.com

3. Altman Lighting announces the ATF and APF series of fresnels. The ATF fixture provides white light in 3200K and 5600K and has linear vents that offer efficient cooling and an even field of illumination; fixtures can be switched between line voltage dimming and DMX. The APF fixtures

offer 6-channel color-changing with tunable-white and features motorized zoom and focus capabilities.
www.altmanlighting.com

4. Alloy LED introduces Mudr ArcCove, luminaires designed to wrap around corners without the need for soldering or corner connectors. Available in 3- and 4-in. options, fixtures include a paintable surface for seamless integration and provide soft indirect light. Both models are compatible with $\frac{5}{8}$ -in. drywall, while the 3-in. model is also compatible with $\frac{1}{2}$ -in. drywall.
<https://alloyled.com>



5.



6.

5. Relic debuts a 10-edition run of the Relic Table Lamp, the second collaboration by Ross Gardam and Peter Kovacsy. A brutalist sculptural piece, the handcrafted table lamp comprises cast crystal glass, a raw aluminum base, and a conical dimmer and is designed to emphasize the duality of the glass material. The voltage for each piece is customized to clients' specifications, and each piece is individually marked with an edition number.

www.rossgardam.com.au

6. Synapse Wireless launches the Combo Sensor Controller (CSEN1) for outdoor and indoor lighting applications. With a Zhaga-Book-18-base for standard mounting and an optional adapter for fixture knockout installations, devices integrate wireless communication with a range of up to 1,000 ft, motion and light sensors, and advanced fixture control for industrial projects into one package. Controllers support 0-10-V and D4i driver connectivity.

www.synapsewireless.com

SPOTLIGHT Ted Bradley



Ted Bradley debuts the Dome Collection, a reimagining of the classic dome form. Available in 60 designs ranging from a singular pendant to a 10-piece mobile sculpture in 21 propriety finishes and sizes up to 12 ft, the handcrafted porcelain series also includes sconces and flush-mount fixtures.

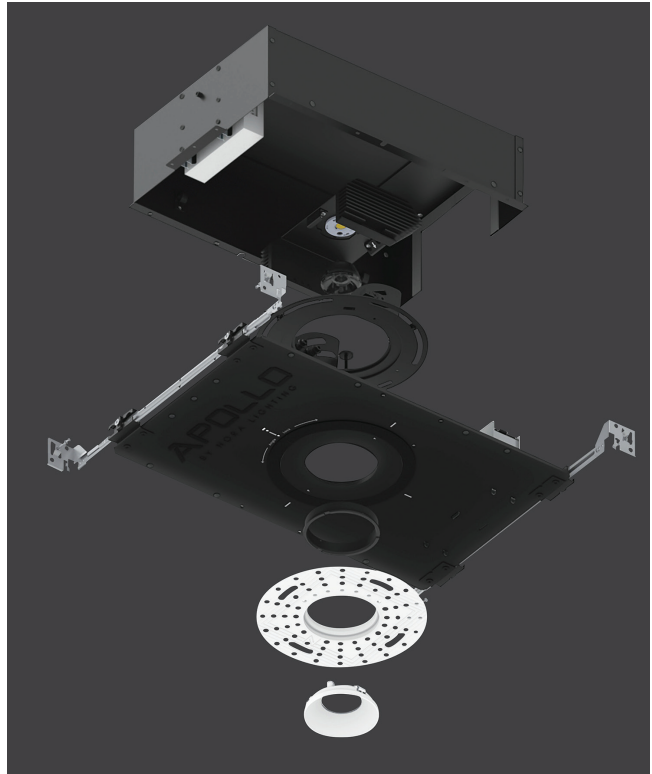
www.tedbradleystudio.com

PRODUCTS

7. Nora Lighting introduces the Apollo Series. A recessed lighting solution with a 3-in. aperture and state-of-the-art LED technology, the luminaires are ideal for residential and commercial spaces. With flanged and flangeless options, fixtures with glare control, a 361-deg rotation, and a 45-deg tilt are compatible with multiple ceiling types and deliver up to 2,000 lumens. www.noralighting.com

8. Lodes debuts MAP in partnership with Berlin-based studio Geckeler Michels. A modular ceiling and wall lighting system, MAP evokes the theme of freely arranged, customizable constellations via decorative, fabric bands of tape and connected modules that serve as fixed anchor points in spaces with single power sources. LED modules contain tunable-white technology while the tape, measuring up to 26 ft in length and available in multiple colorways, conceals the power source within the module. www.lodes.com

9. Landscape Forms presents Louis, a catenary luminaire created by Spain-based Urbidermis. Inspired by the work of architect Louis Khan, aluminum-housed luminaires are modernist geometric shapes designed to softly illuminate “slow-velocity” public spaces such as pathways, plazas, and parks. www.landscapeforms.com



7.



8.



9.



10.

10. Cooledge Lighting introduces Skyline, a fully integrated ceiling illumination system compatible with low-voltage and line-voltage track luminaires. The planar system integrates lighting such as downlights, color elements, and other recessed luminaires, as well as non-lit components such as security cameras, sprinklers, speakers, sensors, and more devices under customizable cover plates.
www.cooledgelighting.com



11.

11. American Lighting debuts Minuet, a flexible encased tape light for bars, cabinetry, and rails. Providing a neon-like appearance, the IP65-rated tape light offers both side and top bend as well as a maximum run of 16.4 ft. Tape lights deliver up to 182 lumens per ft while consuming 2.43 watts per ft.
www.americanlighting.com



12.

12. SPI Lighting introduces Novato Globes - Surface. The classic Novato Globe is now available in ceiling, wall, and Shepherd's Hook surface-mount options; fixtures are offered in nine globe sizes up to 27 in. and feature an IK10 PolySatin diffuser.
www.spilighting.com

IES® SUSTAINING MEMBERS

The following companies have elected to support the Society as Sustaining Members, which allows the IES to fund programs that benefit all segments of membership and pursue new endeavors, including education projects, lighting research, and recommended practices.*

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THE IES WELCOMES THESE NEW SUSTAINING AND UNIVERSITY MEMBERS

- ALUZ
- Sazan Group

Whether you are a manufacturer, utility company, distributor, sales agency, engineering firm, architectural firm, or any other professional or technical business that engages with lighting, each organization can pick and choose levels of benefits and discounts for their company employees directly—and in certain cases, non-employees' partners, as well—furthering the reach to a larger group of professionals. The complete new Sustaining Membership structure (including the tax deduction levels) is listed at: www.ies.org/membership/ies-sustaining-membership.

Education institutions that have dedicated lighting programs as well as those higher learning institutions that focus on “lighting” in their curriculums qualify for the University Membership. For more information on program benefits go to: www.ies.org/membership/ies-university-membership.

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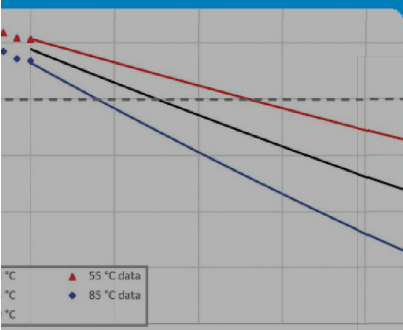
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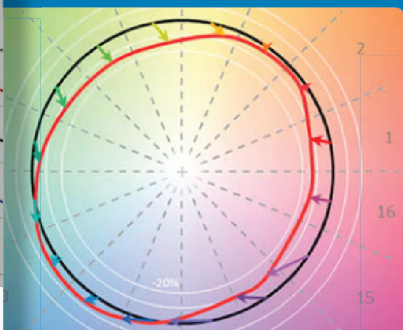
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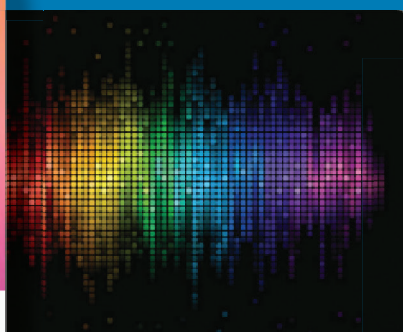
TM-21 Calculator

The official IES TM-21 calculator projects luminous flux maintenance based on the 2021 American National Standard, approved and maintained by the IES Testing Procedures Committee.



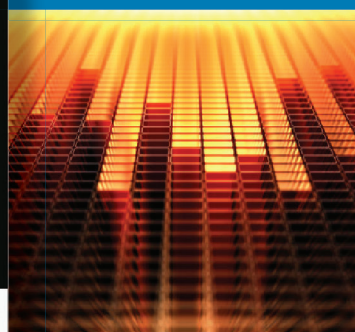
TM-30 Spectral Calculator

The official IES TM-30 calculator provides values and creates vector graphics based on the 2021 American National Standard, approved and maintained by the IES Color Committee.



The Illuminance Selector

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In the last quarter of 2024, the Netherlands' Queen Máxima turned on the new lighting scheme for Dom Tower in Utrecht. Speirs Major Light Architecture evolved its own lighting system originally designed 2013, turning the Gothic-style historic site into an after-dark beacon. Illumination grows progressively lighter and more transparent as it reaches the top of the tower.



Photo: Speirs Major Light Architecture and Jelle Verhoeks

LAST LOOK

Reverse-ombre Effect

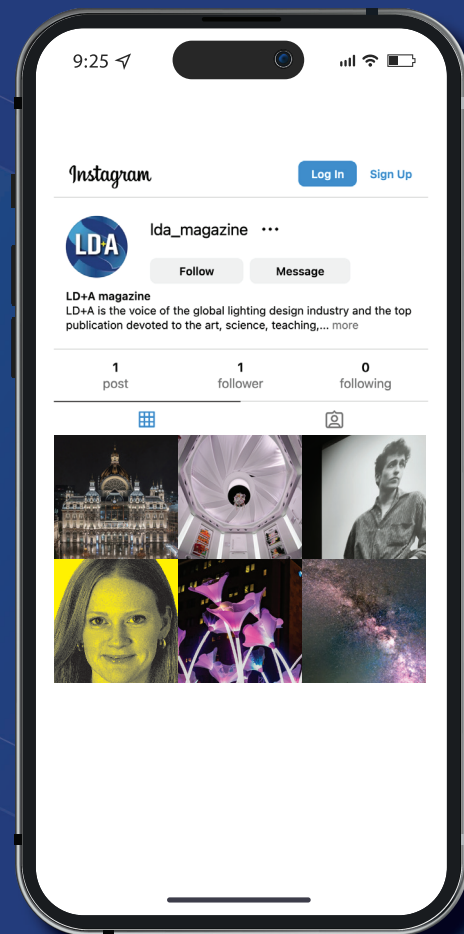
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