

LUMINOUS SPEC

SPRING 2017

“I think of **architecture and light** as a **yin and yang** in design...”

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FEATURED PROFILE

Jered Widmer

Connecting experiences

With a lifelong passion for architecture and a keen engineering aptitude, Jered Widmer blended both strengths at Penn State University. During college, he was mentored by lighting professor Dr. Craig Bernecker, who encouraged Jered to pursue a career in lighting design. Fresh out of school, Jered found the right chemistry and inclusive atmosphere at The Lighting Practice in Philadelphia, PA. He became a principal at the firm in 2014.

How do you tell a story or convey a message through light?

When I start a project, I like to talk with the architect about his or her vision for the space. I think of architecture and light as a yin and yang in design; they work hand-in-hand, so the light should have fluidity that works with the architecture rather than fighting it. Some projects include the opportunity for great dialogue with the design team, and time to really dig in to create the most dynamic solution. As a lighting designer, it's not only important to intelligently talk about the appropriate lighting technique, but also influence elements in the architecture to build a stronger storyline or reinforce specific emotional responses. And while storylines are great, with some projects it can be a struggle. In that scenario, I start by understanding the function of the space, imagining myself in that space, and then asking myself questions like: What do I want to experience? How might I feel in this room? Where is my attention drawn? There's a high-level, abstract thought process of outlining destinations, how to get there, and what to experience along the way. That helps me set the tone for the storyline, and subsequently the lighting application and which fixtures to use.



First Baptist Dallas – Dallas, TX
© Casey Dunn, SISTERBROTHER, MGMT.

Do you incorporate personalized lighting into your designs?

To me, personalized lighting is the ability to make lighting in the space fit the user's needs or desires. With LED technologies, it comes down to controllability and integrating local user controls to dim, set color, or set color temperature. When I bought my house, the first thing I did was put a dimmer in every room. I've even given dimmers to friends and family as Christmas gifts, and once installed, they're amazed by the improvement to their space and how much more functional and enjoyable it is. This past Christmas, I gave my mom some Philips Hue White Ambience lamps and the wall dimmer switch; she loves them and wants more for the rest of the house. Philips Hue does a great job of bringing personalization into the residential side, from adding color with some models, to just changing the color temperature with other models. It also helps to bring lighting into everyday conversations. This idea extends into the commercial side. When people have control of the lighting in their environment, they're apt to feel more comfortable and want to be in the space more often. Many people don't realize how important dimming is until they have it. Not that you couldn't personalize or dim with traditional light sources, but there were more cost-prohibitive and technical limitations, especially on the residential side. LED has shaken the snow globe, so to speak. People are taking advantage of personalization and asking what else is possible.

How do controls impact client needs or motivations?

Our clients don't always actively think about controls. Rather, their focus is often on creating a certain look or feel for the space and getting energy savings. And of course, the newest technology is a must-have; our clients are now demanding LED in most scenarios. Controls are part of the energy savings equation, but many clients think of controls as an element in a conference room, or in the neonatal intensive care unit, or a restaurant. In early discussions, it is often us or the mechanical, electrical and plumbing (MEP) consultant that broaches the topic of controls, often because codes are driving the need. But beyond codes and energy savings, controls enhance flexibility and functionality. One big challenge is that while most lighting control systems can do very similar things, they go about doing it slightly differently. I've been advocating in our office to simplify controls and remove the perception that they are so complex. I think that the industry is going in that direction with PoE and wireless protocols starting to take hold; and we're going to get there. I still find some compatibility issues in the field between luminaires and drivers and controls, particularly with LED. It's slowly improving, but far from resolved. With that said, I've learned to specify dimming controls for every fixture, even if I don't plan to dim it, because with LED advances, the products continue to increase in output, not just efficacy, and driving the need to tighten the reigns for visual comfort and other aspects.



Gateway Church Grand Prairie – Grand Prairie, TX
©2016, Steve Hinds, Inc.

What can LED lighting manufacturers offer to facilitate your projects?

Manufacturers need to recognize that for decades, we dealt with four standard color temperatures in traditional white light sources: 2700K, 3000K, 3500K and 4000K. Our clients recognize these as standardized building blocks, but some LED manufacturers are offering oddball temperatures like 3200K and 4500K, or only two of the four recognized color temperatures. I'm an advocate for offering an expanded color temperature range, but let's keep the standard four in place. Particularly on renovations or expansions, where we marry new technology with old technology, there must be continuity in color temperature. I'd also like to see more standardization in testing procedures and data publication, with data readily available online to support claims. We shouldn't have to reach out to reps and manufacturers to ask for LM-79, TM-30, or photometric data; and while it's not an issue across the board, this information is important. Aside from the data, the availability of resources will help to educate. We all have busy schedules, yet all specifiers need to continually improve and learn. An online resource library would be helpful to keep us informed at our convenience. With the proliferation of podcasts and other online resources, it would be great to have a library of digital content at our disposal. Whether it's a 60-minute video of an industry professional talking about DMX dimming controls, or a 15-minute refresher course on reading photometric data, this digital content would be

“ Just because it visually looks the same doesn't mean the guts are the same ”

great to take in during a train commute. There are so many ways to get information these days, and so much to talk about in the lighting world.

What's important for the project team to understand about LED technology? On the other hand, what's important for manufacturers to understand about lighting design?

Controls, understanding how things interconnect, and the differences between various dimming protocols are big on my list. LEDs aren't a complete departure from other lighting technologies, but there is a bit of a learning curve. Speaking of curves, understanding the dimming curve is also important for project teams to understand, as the dimming is a bit different in LED compared to traditional light sources. It used to be that one percent dimming with halogen was a nice low-level dim, but with LED technology, you need to go much lower to get that same effect, down to 0.1 percent. It's also important to educate your design

team and the owner that not all LED products are created the same. Just because it visually looks the same doesn't mean the guts are the same. It's like a computer, where the processor, motherboard and hard drive are factors in the computer's performance; a luminaire is only as good as its driver, LED light engine, optics and reflectors, and binning process. Part of the service we provide is helping the entire team understand why we select a fixture. We don't just pick one and say it's the best one out there. There's logic involved.

PROJECT SPOTLIGHT

ENHANCE ARENA EFFICIENCIES AND EXPERIENCES

Today's arenas and stadiums aren't simply event venues; they're lucrative, memorable destinations. LED lighting systems support this concept by combining functional and aesthetic lighting to dazzle spectators and encourage revenue generation, while simultaneously empowering operational efficiencies and savings. Below are three examples of how LED lighting systems are applied in sports venues.

Create drama

Ekinox Arena in Lyon, France, home of the JL Bourg basketball club, uses energy-saving LED lighting to create an immersive spectator experience. LED lights with instant-on brightness go from pitch black to full brightness for a dramatic pre-game player introduction, and dimming is used during other crowd-enticing activities. The system features individual or grouped fixture control along with real-time performance tracking, ensuring consistent light quality for every event.

Bring the party outside

Allianz Arena in Germany uses dynamic lighting effects to bring the inside excitement to the outside world. Dynamic color light displays on its façade indicate the action on the field when home soccer team FC Bayern Munich is playing, and evoke local team spirit through subtle red and white color-changing effects when the stadium is not in use. The color and intensity of the light choreography can be adjusted instantaneously while ensuring a smooth and flowing motion sequence.

Enhance viewing

Chelsea Football Club's Stamford Bridge stadium in the UK uses crisp, bright LED lighting that meets the stringent broadcast criteria of the English Premier League. An even distribution of light focuses attention on the playing field, and cameras capture all the flicker-free action, even during slow-motion replays, where details are crucial.

Visit bit.ly/ArenasStadiums to learn more.



Maracanã Stadium,
Rio de Janeiro, Brazil

Photographer
Luiz Dianese

Lighting designer
Antonio Mingrone,
Mingrone Iluminação

AROUND THE WORLD

LIGHT AND SHADOWS INTERMINGLE AT A MYSTICAL MOSQUE

Tasked with emphasizing a spiritual and iconic identity at the newly-constructed Kirikkale Merkez Nur Mosque in Kirkkale, Turkey, Ayrim Yasser Talu at ZEVE Engineering and Lighting in Istanbul took advantage of the building's complex Ottoman-style architecture and materials in his stunning lighting design. Talu mixed color temperatures to accentuate three-dimensionality across the mosque. Cool white highlighted the slopes of the main dome and patterned, rectangular tower windows; while warm white played upon the eight carrier columns and patterned windows surrounding the main dome, as well as the inner surfaces of the entrance domes. Super-warm white light bathed the main dome's brass crescent, the towers, four three-balcony minarets and the main door. Light beams and distances were varied among the many fixtures to maximize dramatic effect at night. The result was not only awe-inspiring for Kirkkale citizens, it was award winning. Ultimately, Talu received an "Award of Merit" at the 33rd annual IALD International Lighting Design Awards, and second place in the darc awards category, Architectural Structures, Best Exterior Lighting Scheme – High Budget.

Visit bit.ly/KirikkaleMerkezNur to learn more.



Kirikkale Merkez Nur mosque
Kirikkale, Turkey

Photographer
Idris Ekinci

Architect
Necip Dinç

Lighting designer
Ayrim Yasser Talu, ZEVE
Engineering and Lighting

TECHNICALLY SPEAKING

PoE in relation to the National Electrical Code® (NEC®)

So-called “smart” buildings are on the rise, and along with this trend is the digitalization and control of lighting systems. Power over Ethernet (PoE) is one way to integrate lighting into a smart building, but there’s still a lot to learn about this technology. For example, during a recent Philips Lighting webinar, an attendee asked, “Has any coordination with the requirements by the National Electrical Code [NEC] been looked at as far as power requirements for PoE lighting, and specifically NEC Section 220.12? And what about NEC requirements on installation and design for limited power?”

While PoE passes power and data over Ethernet cables, it does not change the power distribution in the space. Rather, it provides DC power from a PoE switch located in an electrical closet, so special circuits and junction points in the ceiling for the general lighting load are not necessary, and NEC Article 220 may not be applicable. Even so, dedicated lighting circuits have power per PoE port ranges of 25–45W, so depending on luminaire spacing within the overall space, power requirements may still fall within the NEC 220 requirements. According to new language in the 2017 code, chapter 8 (Communications Systems) covering Ethernet cabling, new rule 840.160 may apply which means that PoE systems operating over 60W of power could be considered as Class 2 wiring and subject to Article 725 rules, including Section and Table 725.44. Since Philips PoE solutions transmit less than 60W, it shouldn’t be a factor of concern.



To learn more about PoE in smart buildings, visit:

philips.com/connectedofficelighting

To view our webinar, Connected Lighting with PoE, hosted by Leds Magazine, visit: bit.ly/PoELedsMagazine (available for on-demand viewing until April 30, 2017)

To view our webinar, How to Improve Total Building Efficiency and Personal Productivity with Lighting, hosted by Electrical Construction & Maintenance (EC&M) Magazine, visit: bit.ly/2kMbqGB



Calling All BIM Practitioners!

The IES has a renewed focus on developing building information model (BIM) recommendations, and your input is needed! By unifying BIM lighting content, communication is facilitated across the entire lighting community, including manufacturers, specifiers, and software manufacturers. Additionally, your project workflows can be streamlined to keep everyone on-task, on schedule, and working towards the project goal. The BIM subcommittee is gearing up now. Existing members have already contributed critical information as a foundation for these recommendations, and additional volunteers are needed to share insights and help to proactively shape the future of lighting innovations.

Experienced BIM practitioners from lighting design, architecture, regulatory and academia, or other areas – especially those familiar with various BIM software platforms – are invited to get in on the ground floor of this opportunity. Your experience and opinions are invaluable to the subcommittee’s efforts.

Ready to jump onboard? To apply for the IES BIM Subcommittee, please visit: www.ies.org/committees

Need more information first? Visit the IES at: www.ies.org or send questions to: design.resources@philips.com

EVENT NEWS



Discover Philips Lighting at AIA Convention 2017 in Orlando

Approximately 20,000 convention attendees, representing decision makers from across the building industry are expected to attend this year’s Convention. This provides a unique opportunity to showcase members, allied members and local partners, and interact with nearly 800 exhibitors. At the Convention, Philips Lighting will showcase their latest lighting products.

For more information, visit: <http://convention.aia.org/event/homepage.aspx>



IALD Education Trust Benefit Dinner - May 10th 2017

The IALD Education Trust Benefit Dinner + 34th Annual IALD International Lighting Design Awards will be held in conjunction with LIGHTFAIR International on May 10, 2017 at the elegant Crystal Tea Room in Philadelphia. The evening is a dedication to the development of the international architectural lighting design industry and supports an annual fundraising event for the IALD Education Trust. The IALD Education Trust is a not-for-profit charitable educational organization that provides direct support to students, educators and academic programs for the purpose of promoting the study of architectural lighting design. Philips Lighting will participate as a sponsor this year in Philadelphia.

For more information, visit: www.iald.org

EDUCATION

Lighting Application Center



Whether you're new to the industry, or want to learn additional skills, the Philips Lighting Application Center offers a variety of courses in the United States and Canada for all levels.

Visit education.lighting.philips.com to find additional information about the Lighting Application Center's programs or write to us at lightingapplicationcenter@philips.com to arrange a customized visit.

Specifier seminar

Lighting Trends & Technology Update

SYNOPSIS: These one and two and a half day seminars will be held at the Philips Lighting Application Center in Somerset, NJ and focus on lighting trends, as well as the latest technologies for both outdoor and indoor applications. With a variety of topics, attendees are able to earn over 5 hours of Continuing Educational Units (CEU) and AIA Learning Units. Programs in March and December include a private viewing of the Times Square Ball in New York City where Philips has been a sponsor for over 18 years.

LOCATION: Somerset, New Jersey

DATES: March 29 - 31, 2017
September 12 - 13, 2017 (one and a half day program)
December 5 - 7, 2017

**NOTE: Invitation only. Participants must register by contacting your sales representative or inquiring at bit.ly/PhilipsUniversity*

Workshops

LED Application Lighting

SYNOPSIS: This workshop is designed to give the participant all the tools to make an intelligent decision in choosing the correct LED for the respective application. While there is much talk about LEDs, there is a lack of knowledge with regards to this ever-popular light source. We will explore the history of the LED, physical characteristics of a light emitting diode, effects that will limit an LED's effectiveness, LEDs in comparison to other available sources, as well provide a look into the future.

LOCATION: Markham, Ontario, Canada

DATES: March 20, 2017

Controls Fundamentals

SYNOPSIS: The knowledge gained from this one day Controls workshop will not only allow you to feel more comfortable with Controls in general, but will also give you the information needed to supply your customers with the best energy management and architectural controls solutions available.

LOCATION: Markham, Ontario, Canada

DATES: May 4, 2017

Lighting Application for Healthcare

SYNOPSIS: This two day workshop addresses the principles and practicalities of integrated lighting solutions for specific situations. We take an interactive, experience-based, and participant-centered approach, using full-scale and hands-on demonstrations. Participants observe lighting in action, measure and evaluate lighting alternatives, and practice applying the content. Lighting systems are considered as an integrated solution, including sources, luminaires, and controls.

LOCATION: Markham, Ontario, Canada

DATES: May 15 - 16, 2017

Lighting Fundamentals

SYNOPSIS: The three and a half day workshop offers a practical understanding of the principles of lighting and an introduction to today's lighting technologies, including sources, luminaires, and controls. We take an interactive, experience-based and participant-centered approach, using full-scale, hands-on demonstrations, and lots of practice. Participants see lighting in action, explore how lighting systems work, and measure and evaluate lighting alternatives.

LOCATION: Markham, Ontario, Canada

DATES: May 15 - 16, 2017

Lighting Academy

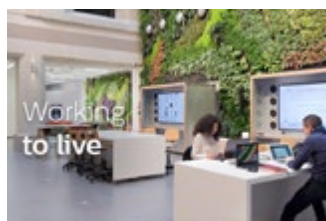


Lighting Academy offers a comprehensive range of educational resources for people who want to expand their lighting knowledge.

Register for the webinar below or see what other training options are available at philips.com/lightingacademy

Webinars

Working to live



DATE:
LIVE March 30, 10 am EDT, 2017

REGISTER:
philips.com/lightingwebinars

Attend this webinar to learn about light's importance to our health, covering topics like circadian rhythm, e-smog and flicker.

Discover whether HCL is an industry buzzword or scientifically merited, the kind of light sources we should use, and how we can holistically design the best modern, human workplace.

INDUSTRY NEWS

Autodesk® Seek operations transferred to BIMObject®

In January 2017, an agreement was reached whereby Autodesk immediately transferred all operational responsibility of their Autodesk Seek cloud-based building product content delivery system to BIMObject. In a formal announcement on the company's site, BIMObject's CEO and founder stated, "It is an honour for us to take over the Seek business from Autodesk. We are committed to the BIM content business and will do our best in giving both manufacturers and Autodesk users the best possible customer experience and business value. Our commitment to Autodesk technology and solutions is stronger than ever with our future solutions based on Autodesk Forge and Fusion 360."

No details were given on changes, if any, to the Seek or BIMObject software platforms. Stay tuned to future Luminous Spec issues for updates, notifications and other helpful tips, and contact design.resources@philips.com with any BIM-related questions.

PRODUCT NEWS



Versatility from the inside out

Whether you are looking to beautify or add a sense of well-being and security to your outdoor space, the highly configurable Philips Hadco LED refractive post tops paired with the latest LumiLock light engine **GX4** will definitely help you achieve your goals. A multitude of style choices will help you create your own

timeless historical charm and the very configurable LED light engine GX4 provides significant energy savings with additional distributions, light level choices, and control options.

Visit bit.ly/GX4LumiLock to learn more.



Deliver more than expected

In any outdoor site and area project, the next generation of Philips Gardco **EcoForm** LED area luminaires are more than sources of illumination; they offer the best of all worlds: saving energy, saving time, and saving money for significant and enduring value. It's not just about meeting technical requirements. It's about looking out for the best interests of your customers, and going the extra mile to uncover new savings and conveniences.

Visit philips.com/ecoform to learn more.



Flexible, compact, yet powerful

Philips Color Kinetics **iW Flex Compact** nodes are flexible strands of high-intensity diodes with high-impact tunable white light. Now, more than ever, you can create powerful and impressive lighting effects on projects that

include architectural accenting, signage, flexible backlighting and even building covering video displays.

Visit bit.ly/iW-flex to learn more.



Create with a new aesthetic

Philips Color Kinetics **eW Blast Powercore** gen4, Forward Throw Asymmetric high-performance LED luminaires provide uniform lighting across large surfaces. You can now direct more light and gain precise control of light and more illumination with higher uniformity. All of this for greater on-site impact.

Visit bit.ly/eWBlastPowercoreG4 to learn more.



Genuine convenience consistently supports your success

The rugged and reliable Philips Day-Brite / Philips CFI **FluxStream** luminaire family now includes strip, industrial and wraparound luminaires.

Before, during and after installation, you can trust the FluxStream luminaire family to help you quickly complete projects without hassles or troubleshooting, while delivering consistent comfort and long-term energy savings throughout the space.

Visit philips.com/fluxstream to learn more.



Experience the StoreWise difference

Philips **StoreWise**, an integrated lighting system that can deliver up to 35 percent greater energy savings versus LED lighting without controls and gives designers the power to create more engaging customer experiences and improve operational efficiency.

Visit philips.com/storewise to learn more.