

Luminaire Level Lighting Controls: The Future of Intelligent Lighting



ASK THE EXPERTS

Q&A with Damon Bosetti, Technical Manager at DesignLights Consortium

As the commercial lighting industry continues its steady move towards more advanced controls and lighting solutions, for many experts, all signs point to networked lighting controls. And when it comes to truly intelligent, flexible lighting with non-energy benefits, the future could be Luminaire Level Lighting Controls (LLLCs).

Can you give us a short summary of your experience in the lighting industry?

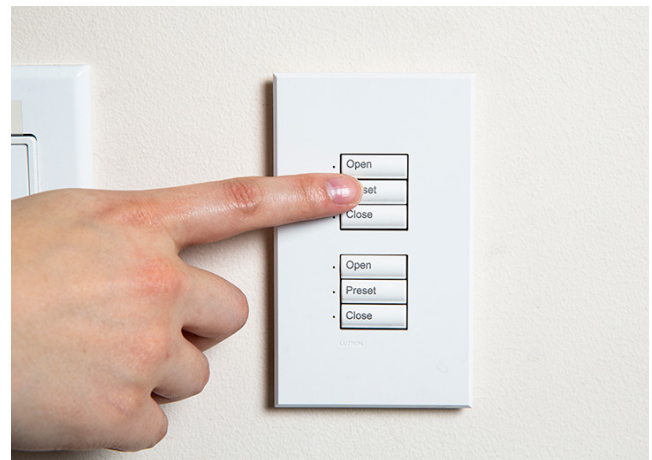
I'm a technical manager at the DLC, a non-profit whose mission is to drive efficient lighting through thought leadership, technology and collaboration. I focus on horticultural and networked lighting and spend my days working to get the lighting industry to accelerate its transition to the newest solid state lighting and control technology.

Where do you see the lighting industry headed?

The energy-related benefits of increasing efficiency will continue to guide the industry. And while we're improving slowly now, we'll eventually see fixture efficacy in the range of 200 lumens per watt. And LLLCs and other networked controls help cut the energy consumption of already highly-efficient sources by an additional 50% or more.

Also, until now physical wiring has defined the behavior of lights in a facility. If you wanted to change what the switch did, then you needed to pull more wire—at great cost. I've begun thinking of the future as one of software-defined lighting, in which the physical fixture's installation does not drive

considerations of control and sensing. Just like a computer can change what it does with new software, a building's lighting will be as flexible and responsive as its firmware and software allow.



What should people know about Luminaire Level Lighting Controls?

LLLCs make lighting controls easier for both designers and installers. You no longer need to figure out where to place sensors – they're already built into every fixture. You also don't need to install separate sensors and deal with associated wiring and mechanical challenges – again, they're pre-installed.



LLCs are a great way to future-proof your lighting design against unknown changes in your facility. Building in sensing and control points at each luminaire maximizes a system's flexibility, which allows for all kinds of behaviors that can save energy while improving the way people experience the space.

The same aspects that make LLCs relevant in the energy space are going to give them great dual-use capabilities for non-energy benefits, or NEBs. The sky's the limit with ubiquitous sensing and data collection: the data that these systems will collect will help us find answers to questions we don't even know to ask yet.

What are your favorite use cases for LLCs right now?

LLCs are already delivering value to early adopters in specific vertical markets. Sensors in every luminaire allow LLCs to deliver precise data about location, for example. In hospitals, that can mean that medical staff, patients, and portable equipment get to the right place at the right time. In warehouses and retail, the same technology can map occupancy patterns and help place products based on their popularity. In schools and office conference rooms LLCs improve efficiency and support a suite of new lighting experiences. LLCs are also a great "thin end of the wedge" for slowly diving into the concept of improved

building automation. By letting a few extra sensors piggyback on the lighting control and communication network, users can experiment with a "Building Management System-lite" experience at a very reasonable cost.

What advice would you give to people who are still hesitant about considering an LLC system in their next project?

Try before you buy, and start small, Find two or three system manufacturers on the DLC Networked Lighting Control's [Qualified Products List](#) (be sure to filter for interior and Luminaire Level Lighting Controls), and ask them to arrange a demonstration with real hardware and software. Don't just read the brochure: get a feel for what it's actually like to work with a system. You'll find that manufacturers have put a lot of work into developing products, and that those products have improved dramatically from even just a few years ago.

Visit betterbricks.com/lighting/llc for more information about Luminaire Level Lighting Controls