

Luminaire Level Lighting Controls: The Future of Intelligent Lighting



ASK THE EXPERTS

Q&A with Steve Mesh, Principal at Lighting Education & Design

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 have had a 39-year career in the lighting industry, most of which I've spent as a lighting designer or consultant. I've worked to design lighting and improve sales at some pretty amazing companies, and I've also taught for 35 of those years. I gained a lot of knowledge working on many different sides of the industry.

Where do you see the lighting industry headed?

That's a tough question. It's confusing right now because the industry is in flux. I like to tell my students that a few years ago I thought I'd be able to coast for decades on my knowledge of incandescent lightbulbs – but that knowledge is worthless now. You constantly have to learn new things.

There are also major changes in who is buying the technology and what they're doing it with it. One example is Lighting as a Service, which is a whole new model for how innovative lighting can be financed. Due to initial cost, people might avoid buying networked lighting control systems. The idea behind Lighting as a Service is that the end user leases a lighting system, rather than owning it. It's kind of like computer software: you pay an annual fee to use it instead of buying up-front, and then upgrade when a new model comes out.



When it comes to the biggest reasons LLLC systems are installed, we hear a lot about non-energy benefits and the growing cost savings potential with utility incentives. What do you see as the top reasons for specifying and installing these systems?

Flexibility, flexibility, and flexibility. As a designer, I want maximum flexibility at any time, with anything, on any project. LLLCs give you the most flexibility for a networked lighting control system: if you don't have LLLCs then you're always restricted in some way. For example, you may be restricted because groups of fixtures are wired to one control device and there's no way to split them apart later. If a designer wants the most flexibility, they should choose LLLCs.

Also, with LLLCs you achieve a greater level of granularity. For both installation and commissioning,



you don't have to make complicated decisions about which components of the system talk to each other because it's on a per fixture basis – and any decision you do make you can easily undo.

We know that office buildings, schools, hospitals and warehouses represent some of the best use cases for LLLCs because of additional non-energy benefits with many systems (like building system integration). What are your favorite use cases right now for LLLCs?

To me, saying that LLLCs work better in one building type over another seems like an artificial distinction. I could easily make a strong case for using these anywhere. I teach a class on behalf of the DesignLights Consortium, or DLC, and in that class we actually look at a couple of different project types for spaces like offices and warehouses. Inevitably, we conclude that it's easy to make the case for LLLCs in any space, because the underlying benefits that make LLLCs so valuable are applicable anywhere.

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

I think we should start by talking about the reasons why people are hesitant about LLLCs so we can figure out how to overcome them. Cost, for

example. Many utilities offer incentives on LLLC systems that can offset the increased per-fixture cost. And, easier installation can also offset higher equipment charges by reducing labor costs.

Beyond that, some people may be hesitant due to the perceived complexity of specifying, installing or operating an LLLC system. LLLCs, however, actually streamline installation. Wiring an LLLC fixture is about the same as wiring any other fixture a contractor might have worked with before. In terms of operation, it's also similar. Once you install it, the per-fixture granularity is even simpler than other new control systems.

In my view, the benefits of installing an LLLC system far outweigh any possible difficulties. And anybody can learn how to do this! I originally went to art school, and I'm now an expert in networked lighting controls with a 39-year career in the industry.

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