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BetterBricks Industry Voices:

Sam Tumminello

A Q&A with Sam Tumminello, Lighting Consultant at Pacific Lamp Wholesale, on how Luminaire Level Lighting Controls (LLLC) is transforming school lighting in the Northwest



What is your experience in the lighting industry?

Several years ago I transitioned from public works to the lighting industry as a manufacturer's representative. I learned about the industry and began developing my skills in sales across multiple lighting brands. In 2022, I became a lighting consultant at Pacific Lamp Wholesale, a full-service lighting distributor and energy efficiency service provider.

I wear many hats, but my main responsibilities include distributor-level sales, meeting with customers, and developing customized lighting and control design packages. My favorite part of the job is problem-solving for customers. I identify the right solution for each customer, work within their budget, and help them navigate utility incentives.

What are the LLLC benefits you've seen in the field?

Initially, there weren't a lot of manufacturers using LLLC in the field, but recently I've seen it really take off in the industry. For many customers, the biggest benefits are the ability to dim lights, easily rezone spaces as their needs change, and save energy through features like occupancy sensing, high end trim adjustment, and daylight harvesting.

Some contractors can be initially hesitant to install LLLC since they don't have experience with the technology yet. But once they see these benefits, they come around. Contractors also value the labor savings, flexibility, and wireless capabilities.

Do you have recent examples showcasing these benefits?

A project for a rural Oregon community comes to mind. Before West Orient Middle School's LLLC system was installed, teachers were covering the lights because they were too bright. We used two-by-four retrofit kits with integrated controls, making it very simple to replace the existing fixtures.

Using conventional controls to add dimming capabilities would have been costly and time consuming. Wired control systems would have required new control wire to be pulled to each switch, but with LLLC enabled fixtures this is all done wirelessly.

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High-end trim allowed us to set every fixture to 80% output. This change isn't noticeable to the end-user and it delivered instant energy savings.

With the new lighting system, teachers can adjust light levels for different activities. Whether it's presenting, reading, or using a projector, LLLCs make the classroom environment much more comfortable and functional for the faculty and students.

Overall, we achieved a huge reduction in West Orient Middle School's energy usage compared to the older system. Thanks to state funding and the utility incentive, the entire lighting retrofit project was free for the school. Not only did the school not have to pay anything out of pocket, they also gained cost savings per year!





Another great project is the Sauvie Island School in Portland, Oregon. The scope included retrofitting the bathrooms library, classrooms, gym, hallways, and more. Our contractors installed the fixtures, and I programmed the lighting controls based on the space usage and energy savings goals.

A good example of the flexibility these controls provide is with the school's restrooms. Something that did not occur to me as was that Kindergarteners were not quite as comfortable as older students walking into a completely dark bathroom before the lights kicked on via motion sensing. Once I received this feedback, I was able to easily go in and adjust the settings to have the lights dim to 10% as opposed to entirely off to still capture energy savings while providing a comfortable and safe environment for younger children.

In the library and classrooms, we took advantage of ample natural light by implementing daylight harvesting and installed occupancy sensors. The gym was programmed with high-end trim set to 50%, so the light levels could change depending on activity or event, which was super cost-effective and flexible. For this project, funding covered almost the full cost and the energy savings are high, which is pretty significant for a small school.

Why is LLLC an ideal fit for schools?

The incentives and multiple features available make it a good fit. In Oregon there are utility incentives, as well as funding from Senate Bill 1149. These really add up, making an LLLC system more achievable for schools with a limited budget.

From a controls standpoint, many schools only have basic on and off light switches, but now teachers have the ability to dim and adapt their lighting based on the needs of their classrooms. On the energy side, schools are seeing significant decreases in their energy usage and utility bills, and those cost savings can be reinvested into other needed renovations.

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With both the West Orient Middle School and the Sauvie Island School, it's rewarding to see how the lighting upgrades are making an impact – they're enhancing comfort, safety, and usability for teachers, students, and staff, while also delivering significant energy savings and keeping costs relatively low.

What advice would you give to school districts and facility managers who are looking to upgrade their lighting?

Be sure to work with a trusted partner who understands the full range of available systems. A common pitfall is assuming all lighting systems can be compared apples to apples. A lower upfront cost may seem appealing, but if the systems aren't truly comparable, you could end up facing higher back end and service costs down the line.

For example, one of the biggest advantages of LLLC is the reduced labor costs due to wireless installation and user-friendly commissioning. There's no need to bring in a third-party contractor because users can follow the manual and use the app to set up the system themselves. It's really opening things up in the market by getting those controls into users' hands and making a difference in energy savings.

Lastly, make sure you aren't choosing a brand just because it's perceived as premium and well-known. Instead, fully understand what you're getting by ensuring your lighting and control package is tailored to your specific performance specification needs.





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