ULINE uses Cree Lighting luminaires integrated with Synapse® SimplySNAP controls to help achieve operational excellence and reliability.
Opportunity

ULINE, a rapidly growing shipping supply company, was looking for a lighting solution for its 800,000-square-foot warehouse facility in Lacey, Washington that would match the high quality and operational excellence engrained in the company. ULINE Director of Engineering, Mike McConnell was tasked with finding a system that would provide better light to ensure reliability and accuracy, enhance the employee experience and improve warehouse aesthetics, with excellent wireless controls capabilities that would help the facility comply with the Washington State Energy Code.

“Everything we do is based on operational excellence and reliability, so everything that we put into our buildings must speed toward our mission to get our customers their products as soon as we can,” said McConnell.

McConnell turned to long-term lighting partner Cree Lighting to meet the requirements. ULINE liked the KBL Series high-bay luminaire used in other manufacturing locations, but the team still needed to figure out the advanced controls capabilities. Cree Lighting collaborated with one of its lighting controls partners, Synapse®, to provide the wireless lighting control solution that would suit the needs of the customer.

Solution

Cree Lighting and Synapse® worked together to create a smart, efficient lighting system designed to produce maximum light output allowed by state codes.

A total of 3,014 KBL Series high-bay luminaires were installed throughout the facility. The KBL Series high-bay luminaire was chosen for this installation for several reasons. The KBL Series is a high-efficiency luminaire that produces more light while consuming less energy than traditional metal halide luminaires.

“The amount of light coming from the KBL Series sets it apart from other high-bay luminaires on the market. Even though it’s producing so much light, people working underneath the luminaires still experience visual comfort in a properly illuminated space that doesn’t cause headaches and is glare-free,” said Ryan Loggins, product manager, Cree Lighting.

The KBL Series high-bay luminaires have an instant start so they turn on when needed without delay, and have dimming capabilities straight out of the box. More levels of control – such as occupancy detection, daylight harvesting, scheduling and alerts – are available from the SimplySNAP wireless controls platform to customize the luminaire and tap into a higher performance level.

In addition to the normal features of a controls system, ULINE wanted to integrate the system in a way that would tie into the main building systems and detect motion so all the lights in an area would come on at the same time when needed. To accomplish this, Synapse®, Cree Lighting and ULINE decided to use SimplySNAP, a scalable platform that can scale up to 10,000 lights, manage multiple gateways from a single user interface and integrate with a building management system (BMS). The solution was also successfully deployed on a smaller scale in ULINE’s Pleasant Prairie, Wisconsin facility.

“The collaboration between the Cree Lighting and Synapse® teams has been outstanding. They worked together to fine-tune the way in which the SimplySNAP wireless controls are integrated into the lighting product,” said McConnell.”

Mike McConnell | Director of Engineering, ULINE
ULINE has experienced several tangible and intangible benefits since implementing the new luminaires and wireless controls system.

The extremely well-lit environment drastically improved visibility in the facility so all employees can see well. This was an important enhancement that supports reliability and accuracy in order picking and keeping error rates down.

In addition to the KBL Series’ low glare, uniform light providing better visibility to improve productivity, safety and quality control, it also showcases ULINE’s immaculate, organized facility.

“Our facilities appear brighter and cleaner than they’ve ever been before. The KBL Series has an 80 CRI, so all our products have a vibrant look and feel,” said McConnell.

Employees at the facility agree and have expressed how much they love the light quality because it makes it easier for them to do their jobs.

ULINE was also satisfied with the installation of the luminaires and the onboarding process for their team to learn how to use the system, as well as the ongoing support.

“The installation of the Synapse®-enabled Cree Lighting luminaires is extremely easy. The electrical contractor only had to worry about getting the power to the box, allowing us to save money on the installation,” said McConnell.

“The onboarding process was robust from both the Cree Lighting and Synapse® teams. Initially, I thought learning the system would be complicated and have a steep learning curve, but it was seamless and easy to understand,” said Emil Yanos, facility manager for the Washington location.

The integrated controls system goes to work for the facility by meeting the stringent Washington State Energy Code and providing all the necessary data at the customer’s fingertips. From an energy savings perspective, moving from the old metal halide luminaires to the KBL Series high-bay has saved the company 50% on their energy output. They’ve also experienced an additional 30% energy savings due to the occupancy control and another 5% from daylight harvesting. ULINE is now able to operate the facility at approximately 20% of the cost it used to. Compared to similar facilities with HID lighting, Cree Lighting with SimplySNAP wireless controls is saving ULINE $500,000 per year thanks to the lower energy consumption.

The KBL Series, paired with the advanced wireless controls system, helps the maintenance team quickly identify which lights need troubleshooting or to be fixed, creating efficiencies that result in reduced maintenance time and expenses.

The Lacey facility also utilized OSQ Series area/flood luminaires and XSPW™ wall mount luminaires for quality outdoor illumination and energy savings in their parking lots, receiving docks and building perimeter.

The success from this project led ULINE to install Cree Lighting luminaires integrated with Synapse® SimplySNAP in other facility locations, including Cree Lighting’s OSQ Series with SimplySNAP for area lighting applications at the ULINE Pleasant Prairie, WI location.

“We’re here today with a partnership that positions us well for the future,” concludes McConnell.
Cree Lighting Luminaires Used

- KBL Series High-Bay with Synapse® SimplySNAP Controls
- OSQ Series Area/Flood
- XSP Series Wall Mount

Synapse® Wireless Control Accessories

- SimplySNAP On-Site Controller (SSA50-002)
- Wireless Sensor WSN-DPM
- Building Management System (BMS) Gateway BMS-GW-002

Visit www.creelighting.com or contact a Cree Lighting representative to learn more.