INDUSTRIAL & WAREHOUSE LIGHTING
Application Guide

Better Light For a Safer, More Productive Work Environment.
Industrial Spaces
BETTER LIGHT FOR BETTER WORK

Few things affect your facility like lighting. From an operations viewpoint, lighting affects quality control, productivity and safety. For facility management, maintenance costs, productivity and downtime are key, while costs, consumption and emissions all impact energy management.

Cree® LED lighting for industrial and warehouse spaces meets the goals of facility management by providing maintenance and energy savings without compromising light quality or light levels, bringing new energy to facilities, productivity, quality and employee morale. With Cree LED lighting solutions, you’ll see the work you do, better.

BETTER LIGHT THAT:
• Improves the working environment
• Is intelligent by design, adapting to the user and the environment
• Is intuitively simple to design and implement
• Is ultra-efficient, offering significant lifetime energy and maintenance savings
PROPER LIGHTING FOR DEMANDING SPACES.

Cree LED lighting solutions are designed to withstand the demanding conditions of a manufacturing environment. In addition to dust and moisture resistance, Cree LED luminaires stand up to extreme ambient temperatures—without reducing efficacy or lifetime.

Delivering proper distribution of light in large, open, high-ceiling spaces can help increase the comfort, safety and productivity of people working in the space, bringing a direct impact to the bottom line.
LS Series Surface Ambient
- 90 or 80+ CRI
- Deliver up to 10,000 lumens
- CCT: 3500K, 4000K and 5000K
- Up to 150 LPW
- 0 to 10V dimming to 5%
- Occupancy sensor and thru-wiring available

HXB Series High-Bay
- 70 CRI, 80 CRI
- Deliver up to 70,000 lumens
- CCT: 3500K, 4000K, 5000K
- Up to 150 LPW
- 0-10V dimming to 10%
- Operating temperature: -40°C to +60°C

LXB Series High-Bay
- 80+ CRI
- Deliver up to 60,000 lumens
- Up to 162 LPW
- 0-10V dimming to 10% or multi-level occupancy sensor accessory
- Operating temperature range: from -30°C to 55°C
NO TIME FOR LIGHTING MAINTENANCE IN 24/7 OPERATIONS.

Critical operations cannot continue when lights go out, which means those processes shut down while bulbs and ballasts are replaced, resulting in a loss of time, a loss of productivity and a loss of money. With the Cree LED 10-year limited warranty, you can stop budgeting for line interruptions or unplanned down time to replace lighting.

Engineered for long life, your Cree® lighting system will last well beyond traditional two- and three-year maintenance cycles, reducing costs and freeing up valuable space—you’ll no longer need to stock lighting replacement inventory. Reclaim space, reduce costs, and increase time and energy savings with Cree LED lighting.

**KBL Series High-Bay**
- 70 or 80+ CRI
- Delivers up to 24,000 lumens
- CCT: 3000K, 35000K, 4000K and 5000K
- Up to 150 LPW
- 0-10V dimming to 10% or multi-level occupancy
- Operating temperature range: -40°C up to 50°C
- IP65 optical assembly
- Onboard emergency battery backup

**LXB Series High-Bay**
- 80+ CRI
- Deliver up to 60,000 lumens
- Up to 162 LPW
- 0-10V dimming to 10% or multi-level occupancy sensor accessory
- Operating temperature range: from -30°C to 55°C

**HXB Series High-Bay**
- 70 CRI, 80 CRI
- Deliver up to 70,000 lumens
- CCT: 3500K, 4000K, 5000K
- Up to 150 LPW
- 0-10V dimming to 10%
- Operating temperature: -40°C to +60°C
SEE YOUR WAY CLEARLY TO PRODUCTIVITY AND SAFETY GOALS.

Receiving and transferring inventory at an industrial site means moving equipment back and forth from inside to outside spaces and navigating equipment and inventory through doors, around corners, and between racks and pallets. High performance lighting that eliminates both hot spots and dark spots keeps inventory moving safely and efficiently.

With both indoor and outdoor products, Cree® LED lighting provides consistent lighting for smooth transitions between interior and exterior spaces. Superior vertical light optimizes visibility to keep loading bays and docks running smoothly.

<table>
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<tr>
<th>WS Series Wet Location Linear</th>
<th>CPY Series Canopy</th>
<th>XSP Series Wall Pack</th>
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<tbody>
<tr>
<td>• Minimum 80 CRI</td>
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<tr>
<td>• Deliver up to 6,100 lumens</td>
<td>• Deliver up to 20,080 lumens</td>
<td>• Deliver up to 8,475 lumens</td>
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<td>• CCT: 3500K, 4000K, 5000K</td>
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<td>• Up to 142 LPW</td>
<td>• Flat or drop lens optic</td>
<td>• Up to 139 LPW</td>
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<td>• IP65 and IP66 rated</td>
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<tr>
<td>• NSF Splash Zone II certified</td>
<td>• Class 1, Division 2 Hazardous Location models</td>
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ULTRA-EFFICIENT LIGHTING BACKED BY AN INDUSTRY-LEADING LIMITED WARRANTY.

Cree® LED luminaires are designed for long life, much longer than conventional lighting, which equates to fewer replacements over time. Designed with ease of installation in mind, Cree LED lights can work as direct replacements for your facility’s incumbent lighting to transform your space from poorly-lit to a uniformly and brilliantly-lit space that is virtually maintenance free.
60% ANNUAL ENERGY SAVINGS

$220K LIFETIME MAINTENANCE SAVINGS

1.8 Yr. PAYBACK

Payback and energy savings are based on the national average electricity rate, recommended maintenance schedule, and typical maintenance costs over a 50,000 hour (11.4 year) assessment period (application life).

Featured Products

1. HKB Series High-Bay Linaire
2. KBL Series High-Bay/ Low-Bay Luminaire
3. ZR Series Troffer
4. LS Series Linear
5. CPY Series Canopy
6. OSQ Series Area
7. XSP Series Wall Pack
SMART LIGHT FOR EVEN SMARTER ENERGY SAVINGS.

Facility scheduling, planning and general operations management usually happen away from the production floor. But that doesn’t mean office lighting should be overlooked as part of facility lighting improvements.

Cree® luminaires with SmartCast® Technology save you money by doing smart things like automatically dimming when daylight is streaming in and turning off when offices and conference rooms are vacant. Illuminate your office spaces, enhance productivity and reduce energy consumption. Brilliant!
CR Series Troffers
- 90 CRI or 80+ CRI
- Deliver up to 5,000 lumens
- CCT: 3000K, 3500K, 4000K, 5000K or adjustable CCT with Cree SmartCast® Technology
- Dimming: 0-10V to 5%
- Efficacy up to 130 lumens per watt

FLEX Series Troffers
- 83 CRI
- Deliver up to 6000 lumens
- CCT: 3000K, 3500K, 4000K, 5000K
- Up to 145 LPW
- 0-10V dimming to 1% or SmartCast® Technology
- DLC Premium

ZR Series Troffers
- 90 CRI or 80+ CRI
- Deliver up to 5,000 lumens
- CCT: 3000K, 3500K, 4000K, 5000K
- Up to 130 LPW
- Dimming: 0-10V to 5%
- Matte finish for reduced glare
- Retrofit Kit option available
SEE THE LIGHT. OUTSIDE.

Outside your facility, better light and clear lines of sight are important for helping ensure workforce safety, especially around crosswalks and building access points. Cree LED lighting solutions provide even illumination around your building façade and throughout parking areas to enhance visibility and create a sense of safety. In addition, brighter light helps security staff monitor vehicle traffic, read license plates and aid in identification.

Cree® LED exterior lighting delivers superior performance to keep the outside of your industrial site running as efficiently as the inside.

**OSQ Series Flood**
- Minimum 70 CRI
- Deliver up to 27,103 lumens
- CCT: 3000K, 4000K, 5700K
- Up to 139 LPW
- cULus listed
- Versatile mounting
- IP66 rated

**XSP Series Area**
- 70 or 80 CRI
- Deliver up to 14,408 lumens
- CCT: 3000K, 4000K, 5700K
- Up to 103 LPW
- 0-10V dimming
- UL wet listed

**XSP Series Wall Pack**
- Minimum 70 CRI
- Deliver up to 8,475 lumens
- CCT: 3000K, 4000K, 5000K and 5700K
- Up to 139 LPW
- IP66 rated
What if you could easily transform your existing facilities into energy-efficient spaces with automated intelligence that optimizes light levels and improves the effectiveness and productivity of your spaces — all in a way that’s so intuitive and simple, it just works. With SmartCast® Technology, Cree is providing value beyond illumination, enabling smart buildings that are more efficient, deliver improved energy savings and lower maintenance costs.

Within each SmartCast®-enabled luminaire, integrated sensors, cutting-edge electronics and software all work together using the language of light and intelligent algorithms to automatically learn and interact with each other and with your space.

The result is a seamless application of scalable intelligent light strategies that can save you up to 70% in energy costs while delivering more comfortable, personalized lighting experiences, with the assurance of an industry-leading 10-year limited warranty. The best part — all of this is employed with OneButton™ Setup, enabling an entire building to be commissioned and connected at one time.

And with Cree SmartCast® Technology, you can now expand beyond making lighting more efficient to making buildings more efficient and businesses more profitable. Cree combines smart lighting products with the Internet of Things and innovative applications to create the SmartCast Intelligence Platform™, where smart lighting enables smart building solutions that amplify savings and further optimize environments, delivering even more value.

So Easy, the Building of the Future Can Be the One You’re Already In.

Environmental Awareness and Control
Embedded sensors continually detect and share data on room occupancy, ambient light and energy consumption to fine-tune your environment and energy-saving strategies in real time.

Simple Set-Up and Commissioning
OneButton™ Setup commissions hundreds of luminaires in a single step, providing smart lighting that meets existing and emerging buildings codes, wirelessly and over Power over Ethernet (PoE) — operational in minutes, not weeks.

A Platform for Intelligent Lighting
SmartCast® Technology orchestrates the optimal environment for energy efficiency and productivity by setting parameters for brightness and color, adjusting color temperatures to tasks and personal preferences, and tracking improvements.

Innovative Connectivity
SmartCast® PoE embraces imagination and collaboration with the open, standards-based SmartCast® API that invites endless third-party app development and ensures seamless integration.

CREE SMARTCAST INTELLIGENCE PLATFORM™
CREE SMARTCAST TECHNOLOGY
Outdoor installation contrasting Cree LED lighting vs. high pressure sodium
PROVEN PERFORMANCE AND SUPERIOR VALUE.

Your industrial spaces need to be properly illuminated to provide better, safer working environments. Don’t let insufficient color or poor lighting get in the way of productivity.

A well-lit, aesthetically pleasing environment promotes better work habits, lowers fatigue and fosters more positive attitudes. Powered by our breakthrough technology innovations, Cree® LED fixtures provide better light for better work.

Cree WaveMax® Technology

Cree WaveMax® Technology is a breakthrough in the execution of waveguide technology that challenges industry-standard assumptions of how light is delivered. Featuring up to 90% optical efficiency and precise optical control, Cree WaveMax® Technology enables customers to obtain unmatched visual comfort and improved color quality without sacrificing performance. This transformative technology redefines the limits of fixture design to optimize performance and provides more aesthetic options at an unmatched customer value.

Cree TrueWhite® Technology

Cree TrueWhite® Technology

Your industrial and warehouse spaces need to be properly illuminated to provide better, safer working environments. Don’t let insufficient color rendering from poor lighting get in the way of safety or productivity. A well-lit, aesthetically pleasing environment promotes better work habits, lowers fatigue and fosters more positive attitudes. Powered by Cree TrueWhite® Technology, only Cree® LED fixtures can deliver our exclusive combination of industry-leading efficacy, 90+ CRI with high R9, and consistent warm or cool color temperatures.

DeltaGuard® Finish

Exclusive to Cree LED outdoor fixtures, the DeltaGuard® finish protects our LED outdoor fixtures without compromise. Immersive conditioning across 18 stages delivers an e-coat epoxy primer with an ultra-durable powder topcoat, providing unmatched protection against corrosion, UV light, fading and weathering complete with a 10-year limited warranty.

Cree 10-Year Limited Warranty

Light your education facility with confidence. Cree offers a 10-year limited warranty that covers the broadest product range in the industry. To learn more, please visit lighting.cree.com/warranty.

NanoOptic® Technology

Traditional technologies offer limited choices when it comes to optical selections. Cree has changed this with our patented and highly-efficient NanoOptic® refractor technology. Our wide range of NanoOptic options provides new possibilities for highly-optimized target illumination performance and the flexibility needed for application-specific requirements.

Tradational High Pressure Sodium solution versus Cree LED lighting solution
BETTER LIGHT FOR BETTER WORK

Learn more at: lighting.cree.com/industrial
or contact a Cree lighting representative to learn more.

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