



CREE SMARTCAST® PoE TECHNOLOGY

VALUE BEYOND LIGHT FOR A
MORE PROFITABLE BUSINESS.

CREE 

ETHERNET POWERED. INTERNET READY. BRILLIANTLY SIMPLE.

Cree is combining smart lighting with the Internet of Things and innovative applications to create the SmartCast Intelligence Platform™...to deliver smart building solutions that deliver value beyond light to make your business more profitable.

BETTER LIGHTING AND BIGGER SAVINGS.

SmartCast® Power over Ethernet (PoE) provides beautiful, comfortable and adaptive illumination with greatly simplified lighting control. You'll save money, improve aesthetics, lower TCO and make your entire enterprise more productive — all with the assurance of an industry-leading 10-year limited warranty.

SO SIMPLE IT JUST WORKS.

SmartCast® PoE cuts out the extra setup steps and devices found in ordinary LED lighting controls. That means less time and money spent designing, wiring, installing and commissioning your lighting project. And you can commission one fixture or hundreds in a single step.

READY FOR WHAT'S NEXT.

SmartCast® PoE is fully enabled to securely connect with building management systems, enterprise-wide networks and the Internet. Built on a future-ready open platform with a standards-based API, the sky's the limit for third-party cloud-based applications.



CREE SMARTCAST® PoE TECHNOLOGY: NOW THE ETHERNET CABLE IS THE EVERYTHING CABLE.

Cree SmartCast® PoE technology seamlessly integrates hardware, software and the user experience into an intuitively simple and powerful lighting intelligence platform that saves time, money and up to 70% on energy. A standard Ethernet cable links each light fixture into the lighting control network while also powering the fixture — no AC wiring required.

SCIENCE MADE MAGIC.

Traditional lighting control systems are costly and complex — and other PoE schemes are even more complex to commission than traditional controls. SmartCast® PoE eliminates all that. Your fixtures are shipped with sensors and intelligence already built in, and OneButton™ Setup intuitively configures and groups hundreds of intelligent luminaires at a time with a single keystroke.

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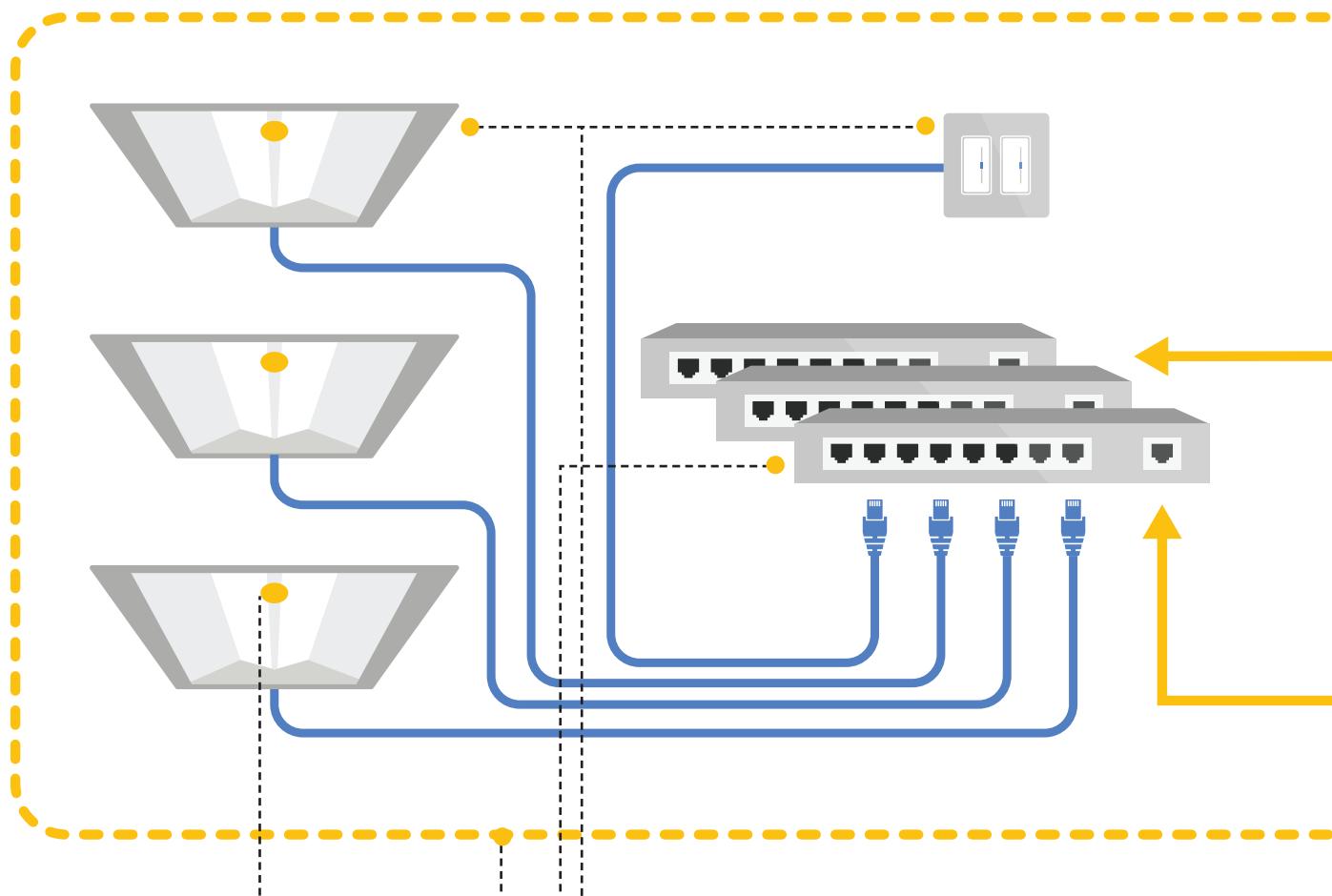
Overview

WHAT IS PoE LIGHTING?

Power over Ethernet is just that — it uses standard Ethernet cable to deliver low voltage power to devices. The same cable transmits data like any other Ethernet cables to link those devices to a virtual network. PoE isn't new — it's been a proven technology since 2003 and is standard for wireless access points, security cameras and VoIP phones. What is new: Cree's SmartCast® PoE LED fixtures can now be powered by PoE, eliminating the need for costlier AC wiring and components. One cable does it all.



INTELLIGENT LIGHT MADE POSSIBLE WITH CREE SMARTCAST® PoE.



SENSORS

Cree SmartCast® luminaires are shipped from the factory with advanced lighting control sensors and embedded intelligence that provide the right amount of light based on changing occupancy and daylighting conditions. The lights sense when you're in the room and turn off when you're not. Lights automatically dim on sunny days and provide more light when you need it. All while providing up to 70% energy savings.

LIGHTING NETWORK

The lights and PoE switches are a part of the lighting network which, as part of the virtual local area network, delivers commands and messages across the platform. It can work independently or use SmartCast® Link for full integration into the enterprise network.

SMARTCAST® LUMINAIRES AND DIMMERS

Cree luminaires deliver better light — beautiful, consistent and pleasing illumination that enhances the appearance of your facilities, delights end users and supports productivity with exceptional color rendering and temperature tuned to specific tasks or personal preference.

PoE SWITCHES

A CAT5e or CAT6 Ethernet cable connects each Cree device to uPoE or PoE+ switches that provide both low-voltage power to the lights and allow two-way data communication across the lighting network and optionally, building management systems, the Internet and the cloud.

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SMARTCAST MANAGER™ PC APP

The SmartCast Manager™ initiates Cree's unique OneButton™ Setup and allows intuitively simple changes to the system and settings. It also enables real-time visibility into system status and advanced energy savings strategies including task tuning and energy savings visualization.



SMARTCAST® LINK

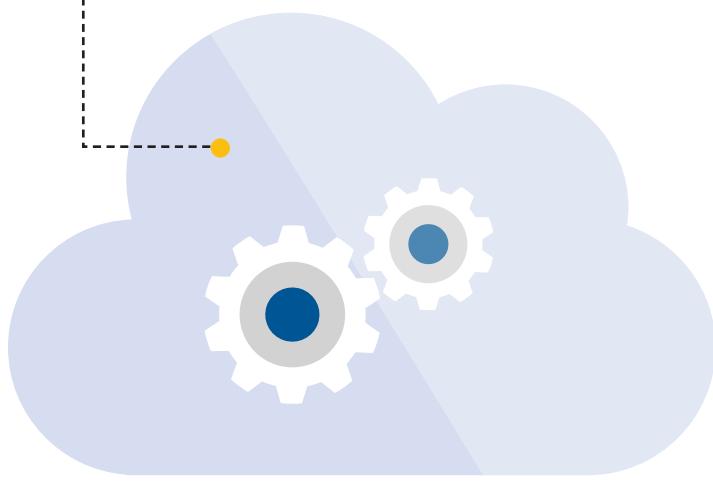
The optional SmartCast® Link provides the connection between the lighting network and third parties through the enterprise IP network while securely separating and protecting critical systems for added protection.

SMARTCAST ADVISOR™ (BETA)

Cree SmartCast Advisor™ offers real-time and historical visibility into energy use and space utilization, showing trends and opportunities to save energy and more effectively use space today and over time. Insights are delivered via highly intuitive screens, delivering all the value of big data, without the noise.

CLOUD

SmartCast® Link connects through the enterprise LAN to enable a nearly limitless number of integrations and applications.



ENTERPRISE IP LOCAL AREA NETWORK

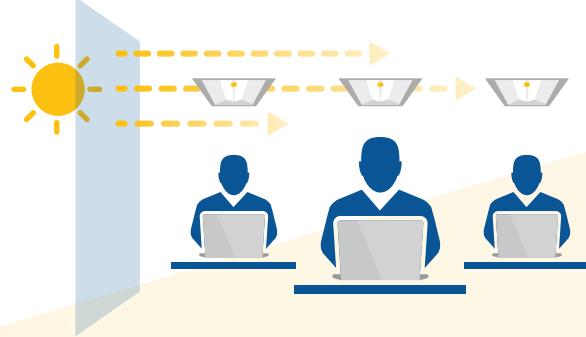
The SmartCast® PoE platform smoothly integrates with IP-based enterprise local area networks while requiring only simple configuration changes for a VLAN — no network redesign required. SmartCast® PoE works with what you have.

SMARTCAST® API

The SmartCast® API provides the ability for the lighting network to communicate with and be controlled by other applications via the SmartCast® Link. Its standards-based ReST protocol is future-ready and developer-friendly, making integration with building automation systems and IoT applications simple.

SCALABLE INTELLIGENCE FOR CUSTOMIZED CONTROL

The SmartCast Intelligence Platform™ was designed to offer scalable intelligence capabilities that can be tailored to the needs of each project. Foundational energy savings from adjusting lights based upon occupancy and daylight conditions more than justify its use. The platform works across all project sizes and effortlessly scales from small autonomous installations to highly integrated installations of tens of thousands of devices — today and in the future.



FOUNDATIONAL ENERGY SAVINGS

Start with the legendary efficiency of Cree® LED lighting solutions — consuming the least amount of energy required to produce exceptional lighting quality at whatever light level is desired.

Now add intelligence: fixtures share data with each other from their integrated occupancy and daylight sensors while utilizing their embedded intelligence and sophisticated algorithms to provide precisely the right amount of light at the right time based on changing conditions within the building. Meanwhile, you have to do — nothing. And occupants notice... nada. It all just happens.

- Occupancy/vacancy detection
- Daylight harvesting
- Low wattage per square foot



ADVANCED ENERGY SAVINGS

The SmartCast Manager™ Windows PC-based application delivers even more energy savings with aggressive control settings for occupancy detection, daylight harvesting and other energy-paring strategies. Task tuning can decrease maximum light levels available across all devices or in specific areas where lower light levels are desired.

For more insight, the SmartCast Advisor™ (Beta) application provides real-time and historical visibility into energy use, showing trends, and opportunities to amplify savings. Designed for ease, data is presented in simple terms - graphical metrics and numeric scores - that can be grasped and acted on from day one.

- Task tuning
- Savings visualization
- Measurement and verification
- Actionable energy saving insights

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BUILDING AUTOMATION SYSTEM INTEGRATION

Integration with third-party building automation systems is possible through the SmartCast® API. Based on the straightforward and future-ready ReST protocol, the SmartCast® API enables the BAS system to utilize data from the SmartCast Intelligence Platform™ for deep building integration and further energy savings. For instance, the BAS can utilize data from the lights to adjust HVAC system output by occupancy level and daylight — only one of many possibilities.

- BMS-focused API
- Demand response
- Timeclock
- Deep integration



IoT ENABLEMENT

The SmartCast® API also opens up the platform for third-party developers to create a connected, sensor-rich ecosystem of virtually limitless integrations and applications. Applications can extend well beyond intelligent lighting to connect to virtually any system — HVAC, plumbing, security, safety and more — for vastly greater efficiency, control and user interaction. This open, secure and IoT-enabled lighting and building intelligence platform can help you automate business processes, inform strategic decisions, improve the bottom line and sharpen your competitive edge.

SmartCast Advisor™ (Beta) provides real-time and historical visibility into the space utilization, providing powerful insights like how to add people without adding square footage.

SMARTCAST® PoE DEVICES AND APPLICATIONS

LUMINAIRES & DIMMERS

UNIVERSAL ARCHITECTURAL TROFFERS

- Integral occupancy and daylight sensors
- Embedded intelligence
- SmartCast® firmware and platform algorithms
- Adjustable lumen output up to 4000 lumens
- Adjustable color temperature 3000K to 5000K in 500K increments (increments of 100K optional)
- 100 lumens per watt
- Designed to last 100,000 hours at 25°C
- Dimmable to 5%
- Available products:
 - CR22-32L-ACK-POE – 2'x2' up to 3000 lumens
 - CR24-40L-ACK-POE – 2'x4' up to 4000 lumens
 - CR14-40L-ACK-POE – 1'x4' up to 4000 lumens
 - CR-LE-32L-ACK-POE – 1'x2' up to 3200 lumens
 - CR-LE-40L-ACK-POE – 1'x4' up to 4000 lumens



RECESSED DOWNLIGHTS

- Adjacent occupancy and daylight sensors
- Embedded intelligence
- SmartCast® firmware and platform algorithms
- Adjustable lumen output up to 2000 lumens
- 100,000 hours at 25°C
- Dimmable to 10%
- Available products:
 - KR6-20L-35K-POE – 6" recessed, 35K, up to 2000 lumens
 - KR6-20L-40K-POE – 6" recessed 40K, up to 2000 lumens
 - Available with all KR6T downlight and wall wash trim



WALL DIMMERS

- On/off control
- Dim level control
- Embedded intelligence
- SmartCast® firmware and platform algorithms
- Integral light sensor
- CWD-POE-WH



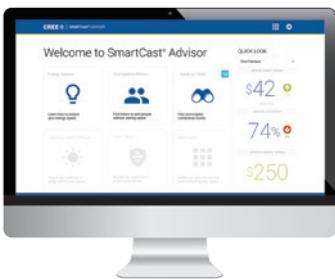
Single Dimmer

SOFTWARE



SMARTCAST MANAGER™

- Windows PC-based application
- Simple commissioning with OneButton™ Setup – up to hundreds of devices at one time
- Configuration and settings changes
- Switch and occupancy group creation and changes
- Task tuning control
- Energy savings visualization
- Measurement and verification as required
- CSC-MGR



SMARTCAST ADVISOR™ (BETA)

- A full suite of applications that deliver actionable business insights
- Real-time and historical visibility into energy usage and space utilization
- Immediate actionable insights with easy to understand user-optimized dashboards
- Contact smartcastdev@cree.com for information on the Beta Program

HARDWARE

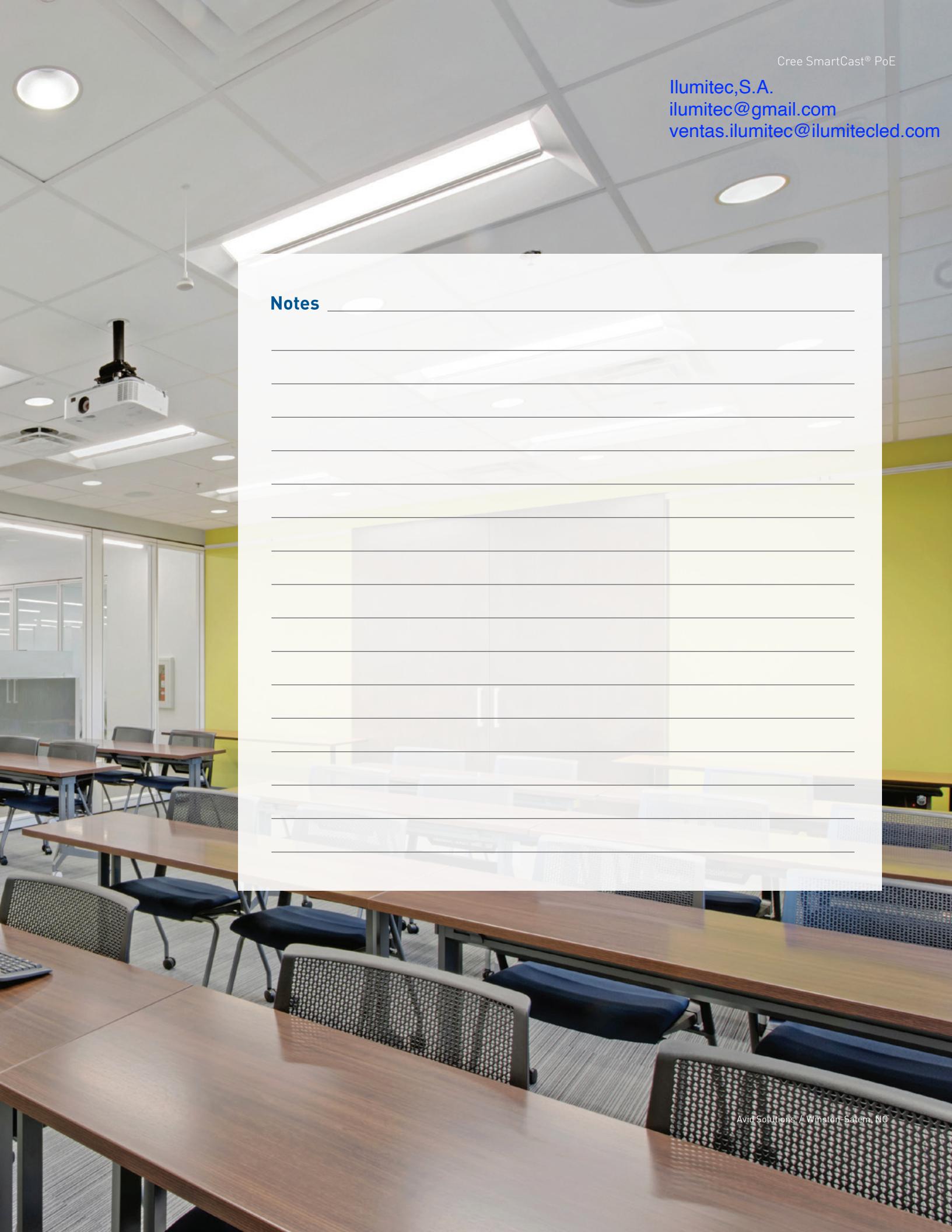


POWER OVER ETHERNET INFRASTRUCTURE - BY OTHERS

- SmartCast® PoE supports PoE, PoE+ and UPoE
 - CR Series troffers 4000 lumens max on UPoE or 3000 lumens on PoE+
 - KR Series downlights 2000 lumens max on UPoE or PoE+ (30W)
 - Recommended network switches are Cisco Catalyst 4506-E, WS-C3850-24U-S and WS-C3850-48U-S. Reference Cree.com/smartcast for future additions to the compatibility list



Notes



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Visit lighting.cree.com/smartcast or contact a Cree lighting representative to learn more.

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