

REALIZE THE FUTURE

Integrating Smart Lighting
into the LAN

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INTRODUCTION

By now you’re probably familiar with the growing popularity of intelligent buildings. One important component of intelligent buildings is smart lighting, an emerging technology that leverages the energy efficiency of LED light bulbs with the cost-savings benefits of Power over Ethernet (PoE). Many suppliers make claims of extreme efficiencies and other benefits that smart lighting delivers, but they often lack details and present only a portion of the big picture. Chances are you’re interested in learning more, but aren’t really sure where to start. You are looking for someone to “stitch it all together,” so you can decide for yourself the best way to implement a smart lighting solution.

This document seeks to provide all the information you’re looking for. If further questions remain, representatives from both Berk-Tek and Cree are available to assist you:

Cree

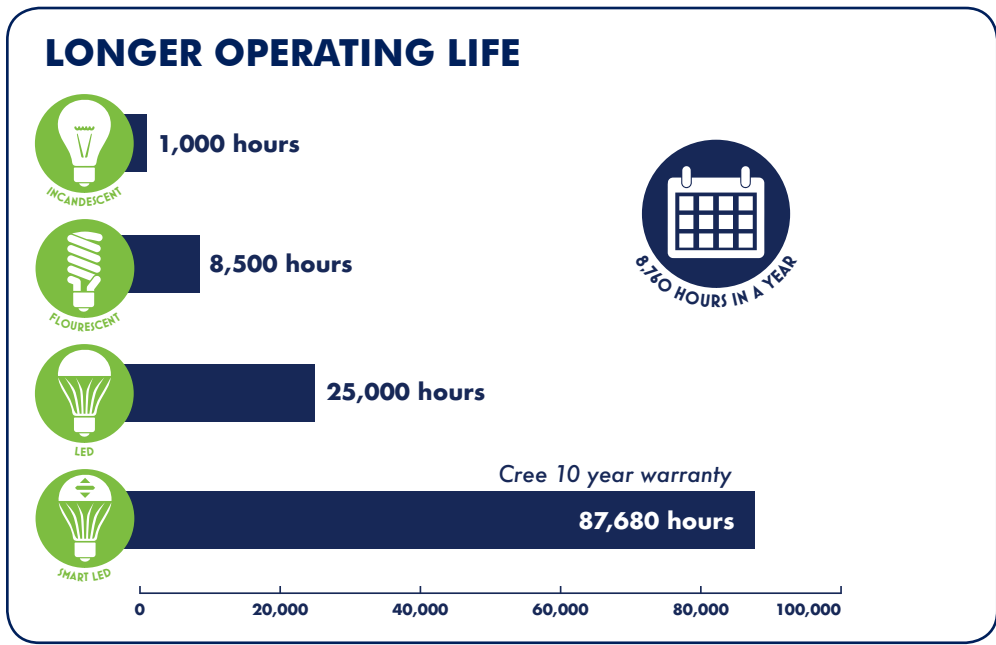
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BENEFITS OF LED LIGHTING

LED (Light Emitting Diodes) lighting has been a popular choice for quite some time now. They provide a number of benefits over incandescent and fluorescent bulbs, including longer operating life, energy efficiency and superior light quality.



LED bulbs last 2-5X longer than fluorescent bulbs, and almost 100X longer than incandescent bulbs. That means fewer bulb change-outs and reduced costs.

ENERGY EFFICIENCY

Energy used to generate equivalent brightness of 1,600 lumens.



INCANDESCENT



FLUORESCENT



LED



SMART LED

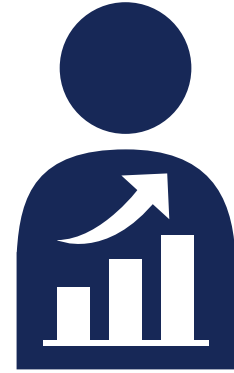
LED bulbs use less than 20% of the energy consumed by incandescent bulbs.²

Sources:

¹The Eco Guide "CFL vs LED: The energy saving light bulb debate is over 10/25/2017 (Jolene Hermanson and Rebecca Zisser).

²LEDs Magazine; "PoE technology for LED lighting delivers benefits beyond efficiency" 9/3/2015 (Alec Makdessian and Thong Hunyh)

SUPERIOR LIGHT QUALITY



The superior light quality and color of LED bulbs helps improve alertness and performance.

WHY INTEGRATE LED LIGHTING INTO THE NETWORK?

According to the 3-30-300sm Real Estate Principle - a solid rule of thumb for estimating business costs - a company pays an average of \$3/sq. ft. for energy costs, \$30/sq. ft. for real estate, and \$300/sq. ft. for salaries. Therefore, while energy savings are important, improvements to productivity are 100x more important. Our smart lighting solution can help you not only reduce energy costs and maximize space utilization, but we can also boost productivity.

How in the world can lights do all of this? It's because a smart lighting system is more than just lights. You are connecting and powering the start of a uLAN, or utility network, in your building.

Our smart lighting solution incorporates built-in sensors that continuously collect data on occupancy and ambient light conditions. Cree's SmartCast Intelligence Platform™ analyzes the data and provides recommendations (via an online dashboard) for space utilization and energy savings.

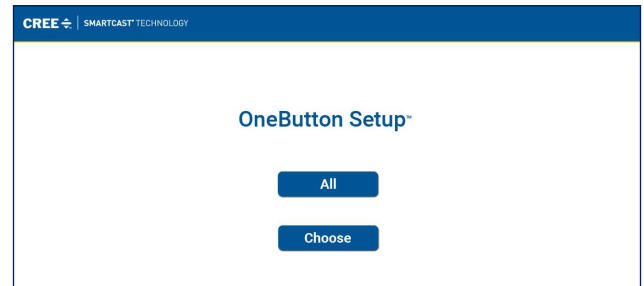


HOW DOES IT WORK?

Cree light fixtures connect to the network like any other device. Once connected, you engage Cree's unique SmartCast Manager™ software. The magic to Cree's SmartCast Manager™ software is its inherent simplicity. As an example, to commission your new PoE lighting system once it is connected, the SmartCast Manager™ software uses Cree's innovative OneButton™ Setup.

Initiate OneButton™ Setup, and your installed lighting system configures itself to the network in four steps:

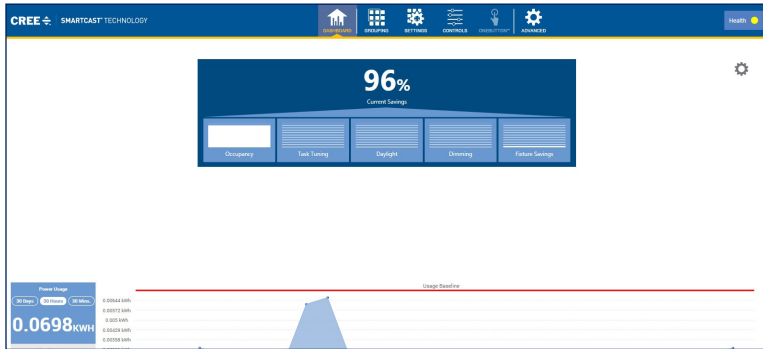
- 1) **Find:** As fixtures and wall dimmers are found, fixtures dim and dimmers blink
- 2) **Calibrate:** All fixtures discovered in Step 1 will turn on and off
- 3) **Learn:** Fixtures and dimmers will perform a series of specific sequences
- 4) **Group:** Devices are grouped intelligently (energy savings)



SmartCast Manager™: Simple and intuitive OneButton™ Setup

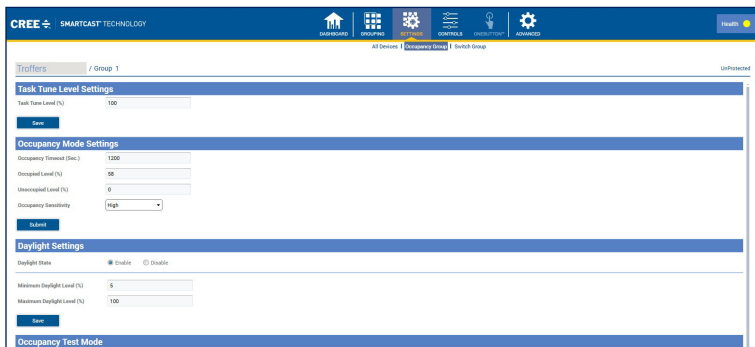
A maximum of 1,000 device (fixtures and dimmers) can be commissioned onto a VLAN (virtual LAN) but Cree recommends a maximum of 500 devices per VLAN.





Energy savings dashboard

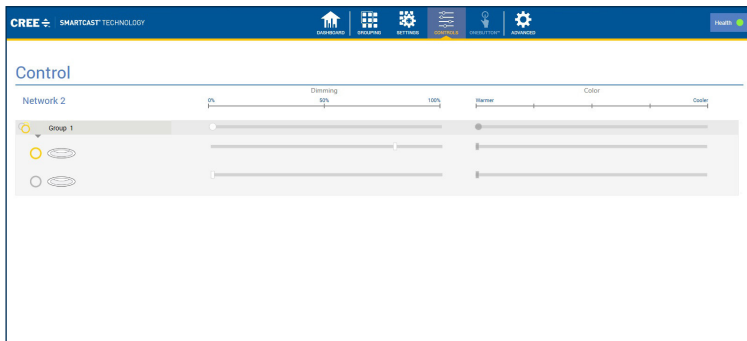
After initial set-up, An energy savings analytics dashboard allows users to visualize energy savings deployment-wide to uncover additional ways to save. And you can deliver greater energy savings with aggressive control settings for occupancy detection, daylight harvesting and other energy reduction strategies.



Advanced energy savings methodologies

You can custom configure your groupings, or settings of individual devices. The SmartCast Manager™ application has two primary groups:

- 1) Occupancy Group – group of fixtures that can coordinate their response to occupancy, task tuning, daylight harvesting (adjust to ambient light), etc.
- 2) Switch Group – group of fixtures that can be controlled and coordinated by wall dimmer(s)



Easy-to-use centralized lighting control

Individual fixtures can also be easily adjusted using slider bars.

WHY WOULD YOU INVEST?

Cree's SmartCast Intelligence Platform™ allows the customer to maximize efficiency and productivity for any commercial space. The platform allows the user to control brightness, light color and temperatures as well as configure lighting groups to save up to 70% in energy costs versus traditional incandescent lamps. Each PoE light fixture has built-in sensors and intelligence that allow it to take full advantage of daylight harvesting, as well as turn off lights completely when no movement is detected for a specified period of time. Additionally, the SmartCast Manager™ software tracks improvements via intelligent algorithms and can apply what it learns to continue driving down operational cost. A detailed example of CAPEX of PoE lighting versus traditional AC powered is shown below and on the next page:

ESTIMATED COSTS: CREE® PoE LIGHT FIXTURES	
Cree PoE LED 2x4 Troffer	
Price per fixture	\$300
Estimated number of fixtures ¹	X 250
Control cost per square foot ²	\$0
Cost for Fixtures	\$75,000
Cisco UPoE Switch to support Cree PoE LED 2x4 Troffer	
ASP per PoE port	\$110
Number of ports needed for 250 fixtures (24-port switch X 11)	X 264
Cost for Switches	\$29,040
Cabling cost to support Cree PoE lights	
Average distance	165 ft
Berk-Tek LANmark™-IP (22AWG, 1Gbps)	X \$0.50/ft
Cost per fixture	\$82.50
Estimated number of fixtures	250
Cost for Cabling	\$20,625
Fixture and Wiring Installation	
Total labor hours per fixture (0.3 pull cable + 0.1 connect power + 0.1 install)	0.50
Estimated hourly labor cost	X \$50
Estimated labor cost per fixture	\$25
Estimated number of fixtures	X 250
Cost for Fixture/Wiring Installation	\$6,250
Switching Installation	
Switch Installation (assume 10% of switching cost)	\$2,940
Cost for Switch Installation	\$2,940
Control System Installation	
Control wiring/installation/hardware (cost per sq ft)	\$.05
Number of square feet	X 20,000
Cost for Control System Installation	\$1,000
Commissioning	
OneButton™ Setup	\$0
Cost for Commissioning	\$0
TOTAL COST FOR 20,000 SQ FT SPACE	\$134,844

¹Assume each troffer covers 80 square feet

²PoE lighting controls are assumed to be integrated into the fixture

ESTIMATED COSTS: AC-POWERED LIGHT FIXTURES

AC-Powered LED 2x4 Troffer

Price per fixture	\$210
Estimated number of fixtures ¹	X 250
Cost for fixtures	\$52,500
Control cost (\$1.60 per sq ft x 20,000 sq ft)	\$32,000
Cost for Fixtures	\$84,500

Note: No switch costs associated with AC-powered light fixtures.

Cabling cost to support AC lights

Average distance to J-Box	165 ft
Conduit & wire to J-Box	X \$0.83/ft
Cost per fixture	\$136.95
Estimated number of fixtures	250
Cabling cost to J-Box	\$34,238
Average Distance: J-Box to fixture	12 ft
MC cable cost for J-Box to fixture	X \$0.83/ft
Cost per fixture	\$9.96
Estimated number of fixtures	250
Cabling cost: J-Box to fixture	\$2,490
Cost for Cabling	\$36,728

Fixture and Wiring Installation

Total labor hours per fixture (0.63 pull cable + 0.2 connect power + 0.2 install)	1.03
Estimated hourly labor cost	X \$85
Estimated Labor cost per fixture	\$88
Estimated number of fixtures	X 250
Cost for Fixture/Wiring Installation	\$22,000

Control System Installation

Control wiring/installation/hardware (cost per sq ft)	\$0.75
Number of square feet	X 20,000
Cost for Control System Installation	\$15,000

Commissioning

Number of hours per fixture	0.2
Cost per hour	X \$135
Commissioning cost per fixture	\$27
Estimated number of fixtures	X 250
Cost for Commissioning	\$6,750

TOTAL COST FOR 20,000 SQ FT SPACE \$164,978

CAPEX COMPARISON

Cree[®] LED PoE	—————>	\$134,844
Traditional LED AC	—————>	\$164,978

Beyond the CAPEX, you are also interested in the OPEX. Here is where you can really *Realize the Future* with Cree and Berk-Tek.

Cree SmartCast Manager™ Software

We introduced Cree's SmartCast Manager™ controlling software and some of what it can do earlier in this document. To reinforce and then build on what we mentioned earlier, SmartCast Manager™ performs several primary functions: Commission the Lights (OneButton™ Setup), Occupancy and Switch Group Modifications, and Individual Fixture and Group Level Controls. SmartCast Manager™ application allows you to quickly and easily set up your lighting network with the touch of a button.

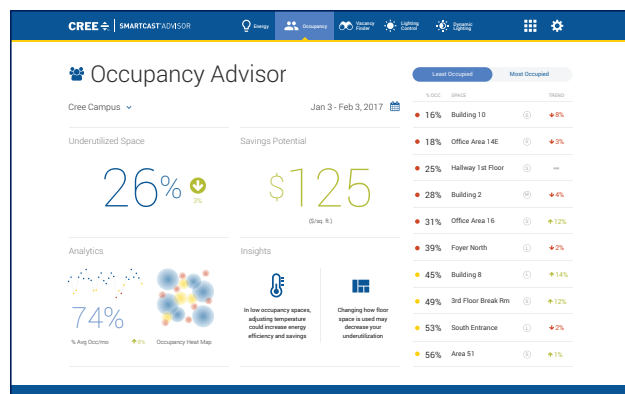
Cree SmartCast Advisor™ Software

The Cree SmartCast Advisor™ is a powerful suite of applications that offers immediate and actionable business insights. It intelligently monitors your building with the SmartCast® PoE lighting network and provides tips on making your business more profitable with recommendations for energy efficiency, putting your spaces to better use, and much more. Built on the simple and intuitive Cree SmartCast Intelligence Platform™, these insights are delivered via a highly engaging and easy to follow interface which delivers all the value of big data, without all the noise.



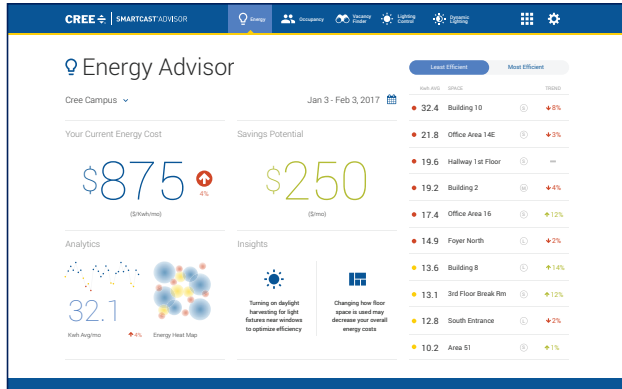
Included in the SmartCast™ Advisor suite are:

Occupancy Advisor - Add People, Not Real Estate



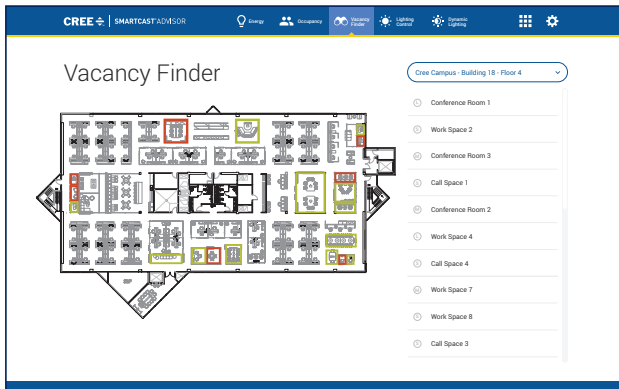
- Make spaces more productive by analyzing relative space utilization over time
- Quickly identify the most and least utilized spaces, which spaces can be reclaimed and which spaces can accommodate more people without adding more square footage

Energy Advisor - Go Beyond 70% Savings



- Analyze energy usage and occupancy patterns to focus efforts on the least efficient spaces
- Optimize system settings to reduce energy beyond the 70% that's possible with standard controls

Vacancy Finder - Stop Wasting Time on Meeting Rooms



- See real-time meeting room availability based on actual occupancy, not outdated schedulers
- Boost productivity by eliminating wasted time while searching or waiting for meeting rooms

SmartCast® API

An API (Application Programming Interface) is a standardized language or set of protocols that allow two software programs to communicate and interact with each other to accomplish a task, usually by retrieving, modifying and pushing data to each other. As consumers, we take advantage of APIs nearly everywhere: when our GPS map works with a retailer's website to deliver on-the-spot coupons; when we use our social media account to automatically log on to our pharmacy or bank accounts – just to name a few.

SmartCast® API is a way for developers to build software applications that work seamlessly with Cree SmartCast® luminaires, thereby extending their features and value to end users. With this, third-party developed apps are able to easily talk to the SmartCast® API over the Internet using a secure standards-based web service defined by the Constrained Application Protocol (CoAP is defined by IETF RFC 7252) to retrieve data and control SmartCast® luminaires. Unlike many other intelligent lighting platforms on the market, SmartCast® API utilizes CoAP to ensure easy integration. CoAP is a specialized software integration protocol similar to HTTP but designed specifically to simplify Internet of Things (IoT) connections by addressing the unique requirements of networked high-efficiency devices such as LED luminaires.

What can be done with SmartCast® API?

With the SmartCast® API, third-party apps can access data and set controls on SmartCast® luminaires in the following ways:

SMARTCAST INTELLIGENCE PLATFORM™ CAPABILITIES		EXAMPLE APPLICATIONS
LIGHT CONTROL	<ul style="list-style-type: none"> • Turn lights on and off. • Continuous dimming up and down. • Change color temperature for fixtures that support color adjustment. 	<ul style="list-style-type: none"> • Automated light control, scene and mood setting based on timing or conditions. • Control lights remotely from mobile phone. • Enable color temperature adjustment to align with circadian rhythm.
ENVIRONMENTAL AWARENESS	<ul style="list-style-type: none"> • Sense and record occupancy and patterns of motion such as timing. • Sense and record patterns of surrounding ambient light from both daylight and other artificial sources. 	<ul style="list-style-type: none"> • Real estate, space and conference room utilization. • Automated daylight harvesting and task tuning to save more energy while improving experience. • Real-time traffic heat maps. • Track employee or consumer habits over time and space to optimize workplace or retail experiences. • Physical and electronic security.
CONFIGURATION AND DIAGNOSTICS	<ul style="list-style-type: none"> • Detect and record power consumption, down to the individual luminaire. • Monitor real-time system health and detect performance levels, down to the individual luminaire. • Maintain software releases. 	<ul style="list-style-type: none"> • Advanced power usage, energy savings, and lighting performance visualizations and reporting. • Track power consumption over time and footprint to optimize power loads in real-time and participate in utility Demand Response programs. • Anticipate lifetimes for preventative maintenance. • Import and export configuration profiles.
PLATFORM INTEGRATION	<ul style="list-style-type: none"> • Share data with third-party apps and platforms such as Building Automation Systems (BAS). 	<ul style="list-style-type: none"> • Real-time conference room schedulers based on occupancy data. • Security system alerts based on unusual motion. • Activate related building systems based on occupancy: HVAC, security cameras, water features, elevators/escalators, automatic doors, electronic blinds, and more. • Email, message or post to social media on lighting or occupancy event.

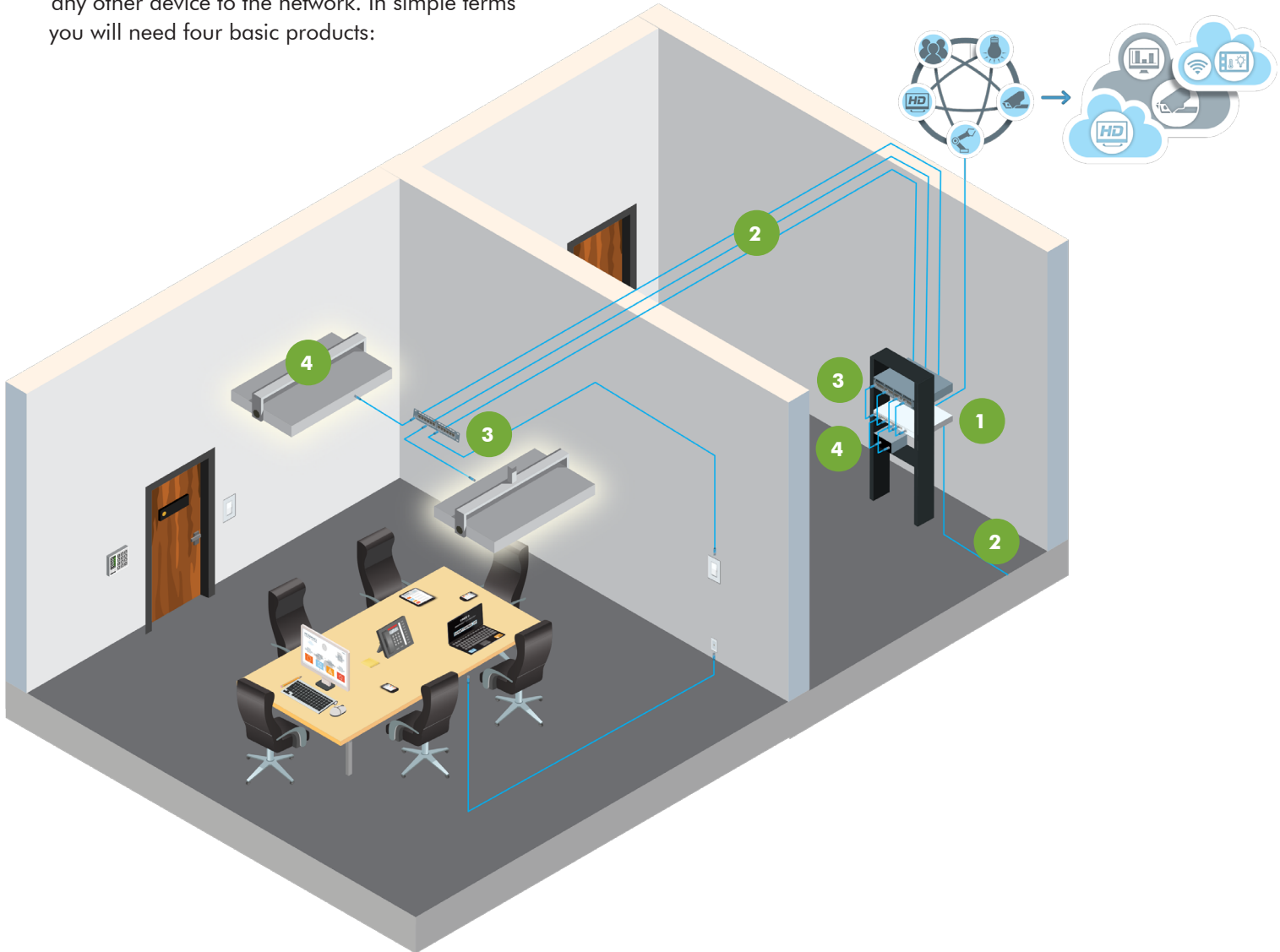
SmartCast® API Security

While the SmartCast® API was designed for open collaboration, that doesn't mean your business data isn't secure. On the contrary, we take security and privacy very seriously. We utilize encryption to ensure business and energy data flow securely and reliably across the SmartCast® network and your enterprise network. So you never have to worry about hackers tapping into your lights. In addition, all of our third-party API integrations utilize DTLS, which means communications between the SmartCast® API and network- or cloud-based third-party apps are always encrypted (private and secure).

Software providers and developers who want to integrate SmartCast® luminaires into their value-added platform or application can join our developer program. Every company we work with is required to follow guidelines that limit how it can use the data our end users have agreed to share. We take these rules seriously to ensure a reliable quality experience for end users. End users are also able to connect or disconnect any third-party integrations as they wish.

WHAT PRODUCTS WILL YOU NEED?

From an installation standpoint, connecting light fixtures to the network is exactly like connecting any other device to the network. In simple terms you will need four basic products:



1 Cisco Catalyst[®] 3850 series of UPoE (Universal Power over Ethernet) switches (Cree recommends specifically the **C3850-24U switch with IOS version 3.7.0EX.**)

- Switch can be installed in a rack in the Telecom Room (TR) (Preferred) or
- Switch can be installed in plenum rated ceiling racks near the Cree light fixtures

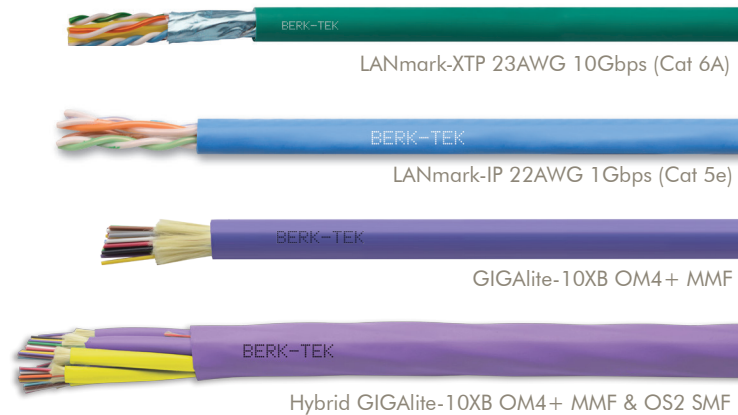


Cisco Catalyst C3850-24U

2

Berk-Tek CMP Cable.¹ Berk-Tek recommends either LANmark™-IP 22AWG, 1Gbps cable or LANmark™-XTP 23AWG, 10Gbps cable for PoE Lighting. Both offer superior PoE performance. LANmark-XTP offers 10X the bandwidth than LANmark-IP. To support additional bandwidth from more connected devices, in the fiber backbone we recommend either GIGAlite™-10XB OM4+ or a Hybrid cable containing OM4+ and OS2 single-mode fiber.

- 11098078 LANmark-IP 22AWG, CMP, Blue, Category 5e, Reel in Box
- 11082057 LANmark-XTP 23AWG, CMP, Blue, Category 6A, Reel
- Contact Berk-Tek for fiber part numbers



3

Leviton Connectivity. Select the appropriate connectivity products to match cabling products. Please note that Cat 6A products are backward compatible to Cat 5e but not vice-versa.

- Atlas-X1™ is the only unshielded connector to feature a solid metal body, which dissipates heat 53% more efficiently than plastic alternatives in PoE applications
- Patented Retention Force Technology® (RFT) delivers an additional layer of protection against PoE arcing damage. PoE-optimized tine geometry prevents damage from arcing at contact mating zone between plug and connector

Leviton¹ Patch Panel

- 5G596-U24 5e, flat, 110 style 24 port, 1RU
- 6A586-U24 6A, flat 110 style 24 port, 1RU

Leviton¹ Connector

- 5EUJK-Rx5 (x = (W) white, (T), Lt Almond, etc) Atlas-X1 Quickport Connector
- 6AUJK-Rx6 (x = same as above) Atlas-X1 Quickport Connector

Leviton¹ Patch Cord

- 5D560-xx (length 3,5,7,10,15,20 feet) if Berk-Tek LANmark IP 22AWG selected
- 6AS10-xx (length same as above) if Berk-Tek LANmark XTP 23AWG selected

Leviton¹ Face Plate

- See Leviton website for ordering information



Patch Panel



Atlas X1 Connector



Face Plate



Patch Cord

¹More cabling and connector options from Berk-Tek and Leviton are available at www.berkteklevitontechnologies.com

4

Cree® Light Fixtures and SmartCast Manager™ Software. Cree offers a variety of PoE lighting fixtures and accessories:

KR Series Downlights with SmartCast® PoE Technology

- KR6-20L-35K-PoE 6" housing, 200-2000 Lumens, 3500k CCT, PoE
- KR6T-SSGC-FF Reflector for 6" housing

CR Series Troffer with SmartCast® PoE Technology

- CR22-32L-ACK-PoE 2'x2' Troffer, 160-3200 Lumens, 3000k-5000k CCT, PoE
- DGA22-WHT Drywall grid adapter
- A variety of mounting options and hardware available at www.cree.com

SmartCast® Dimmer for SmartCast® PoE Technology

- CWD-PoE-WH Wall Dimmer Switch, PoE
- CFP-1-WH Matching Cree faceplate, 1 gang, white

SmartCast Manager™ (Software)

- PC application for set-up, dashboard and energy analytics
- License for single installation, 12 months of software maintenance and upgrades included



KR Series with SmartCast® PoE Technology



PoE Dimmer



CR Series PoE with KR Series with SmartCast® PoE Technology

Some more about the products:

Warranty:

Cree offers an industry best 10-year warranty on its products. This is double the five (5) years that is typical in the industry.

Berk-Tek offers a limited lifetime warranty when used with Leviton connectivity solutions. Again, this is an industry-leading warranty.

Unique Features and Benefits:

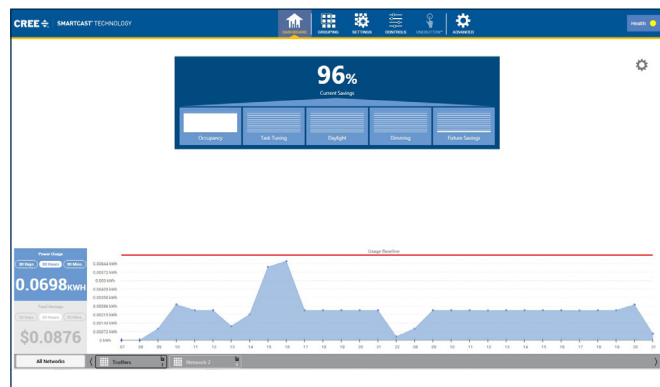
Cree's SmartCast Intelligence Platform™ is so much more than a controller. It allows you to:

- Perform the OneButton™ Setup once installed
- Make easy moves, adds, and changes (MAC work)
- Control the lighting network
- Group components together for improved efficiency and energy savings
- View the online dashboard and visualize future cost savings
- Securely integrate other network solutions via the API
- Secure your lighting network

Cree's SmartCast® PoE lights are also much more than just super-efficient lights. They have built-in intelligence and sensors that allow them to collect data throughout the building. They can communicate with each other via built-in wireless technology and share data with each other. This allows them to adjust to optimize efficiencies, like with task dimming or daylight harvesting. Additionally, the data collected by the building's lighting network is analyzed by SmartCast® to create dashboards and make recommendations for further space and energy efficiency.



Sensors built into Cree's PoE lights



SmartCast® Dashboard

Similarly, Berk-Tek's cabling isn't only cable. It is the nerve network connecting everything to the SmartCast Intelligence Platform™. It is essential that it not only has the bandwidth, but that it protects the data as it moves from point-to-point. It also must support the power (PoE) required for the lights without causing any errors in the data transmission. Power is inherently noisy and power transmission through copper conductors causes heat rise. Heat and noise are no friend to sensitive data transmission. This is where Berk-Tek's expertise comes in. Berk-Tek recommends the following two copper cables and two fiber cables.

LANmark™-XTP

10Gbps bandwidth | 23AWG conductors | Bundles of 720 cables, each with 100W PoE



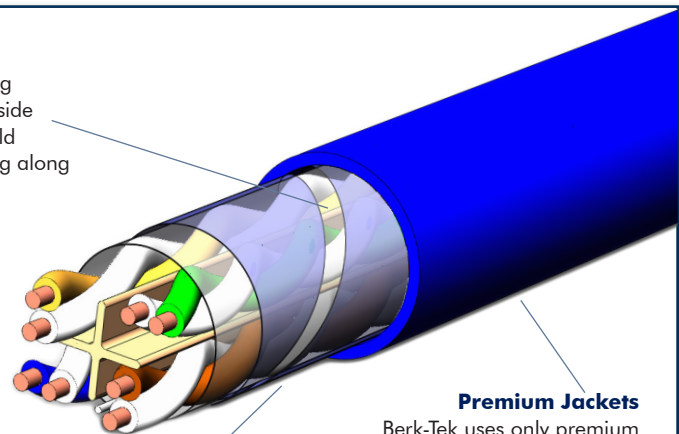
Specially designed for high-bandwidth and high-power applications, this product can support up to 10Gbps bandwidth. Lighting doesn't currently require high bandwidth (which is deemed as >1.0Gbps), but future generations of lighting modules will begin to incorporate LiFi technology, wireless access points (WAPs), 4K cameras and other bandwidth-demanding devices. LANmark-XTP prepares you for the future. LANmark-XTP also incorporates an intermittent shield that provides excellent signal isolation, but also provides PoE support of 60W, 100W and beyond. Because LANmark-XTP's intermittent shield needs no grounding, it is considered a UTP cable and uses less expensive UTP connectivity.

Cross Talk Prevention

Built-in Cross Talk Prevention (XTP) shielding technology protects your IP traffic from outside interference. Intermittent spaces in the shield absorb any electrical energy (noise) running along the shield, so no grounding is required.

Superior Heat Dissipation

XTP shielding technology is also designed to efficiently "Get the Heat Out!" In the TEK Center's testing, the LANmark-XTP experienced 30% less heat rise under the same PoE load as a standard Category 6A UTP product with no shielding.



Premium Jackets

Berk-Tek uses only premium jacketing compounds to ensure your IP traffic is protected from the stress and strain of installation in the real world.

LANmark™-IP

1Gbps bandwidth | 22AWG conductors | Bundles of 720 cables, each with 100W PoE



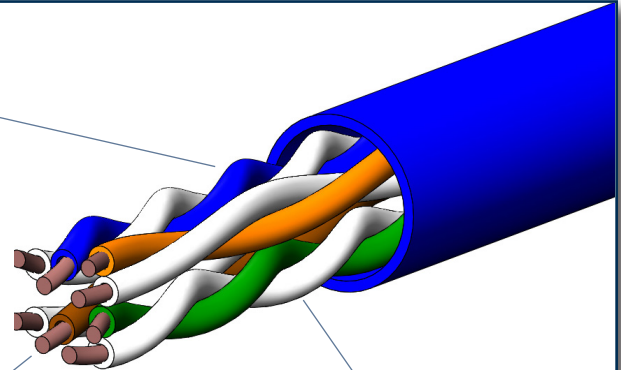
Specially designed for low-bandwidth, high-power applications, this product can support up to 1.0Gbps of bandwidth. It was designed for high-power applications by using a 22AWG conductor with long twist lays that have less resistance and therefore less heat rise when using high-power PoE (>60W). And because LANmark-IP can still comfortably support Cat 5e performance, it is ideal for today's PoE lighting network needs.

Specially designed for High Power PoE

Easily supports 100 watts of Power over Ethernet and bandwidth requirements up to 1 Gigabit Ethernet, making it ideal for PoE lighting.

Superior Heat Dissipation

Specially designed with 22AWG conductors to minimize heat rise. In the TEK Center's testing, LANmark-IP stayed 40% cooler than traditional Cat 5e cables.



Premium Insulation Materials

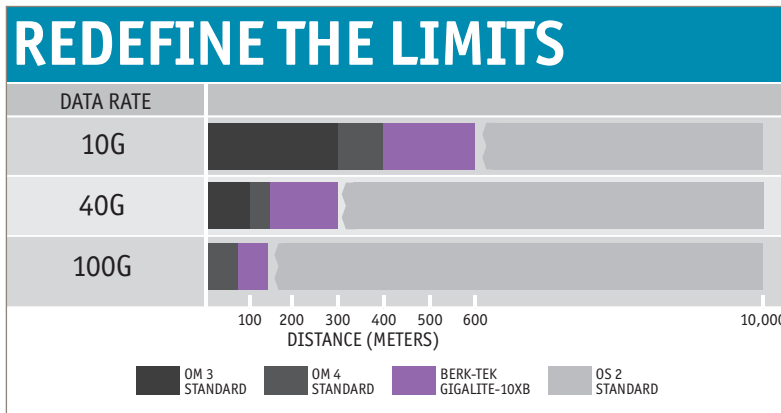
All-FPE construction on the primary insulation provides superior heat resistance, allowing for a 90° temperature rating. LANmark-IP keeps its cool even in the hottest plenum spaces.

GIGALITE™-10XB OM4+

40Gbps @ 300m | 2X the TIA standard | Cost-effective



The backbone is the often forgotten about link in the chain, and your network is only as strong as its weakest link. Berk-Tek's GIGALite-10XB fiber provides 300 meters of reach at 40Gbps bandwidth (2X the TIA standard), guaranteed. Connecting hundreds, or even thousands of additional nodes to your network, don't forget about your fiber backbone!

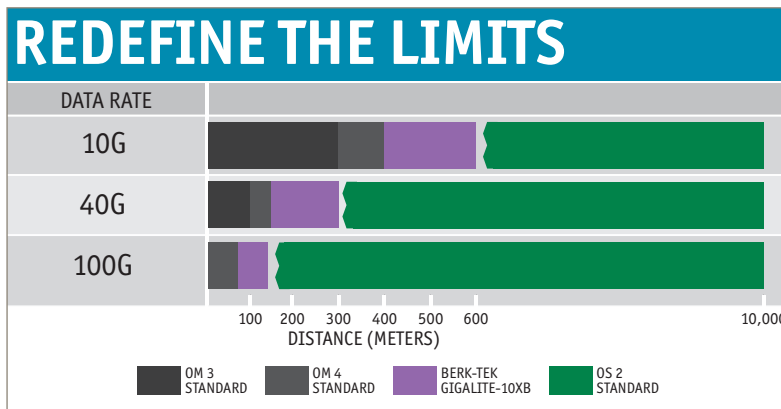


HYBRID GIGALITE™-10XB OM4+ WITH SINGLE-MODE FIBER

Cost-effective now | Future-proof for later



Single-mode fiber is the ultimate choice with virtually unlimited bandwidth and reach. Berk-Tek can support you with single-mode fiber; however, a single-mode solution may still be cost-prohibitive, as single-mode transceivers can be much more expensive than those for multimode fiber. Still, if you want to take advantage of lower-cost multimode transceivers today, and not have to rip out your fiber infrastructure later, why not install a hybrid with both?



WHO CAN INSTALL IT?

From an installation standpoint, connecting Cree SmartCast[®] light fixtures and dimmers is the same as connecting any other device to the network. Berk-Tek has carefully selected low voltage LAN contractor partners from around the country to be part of our OASIS Certified Contractor Program. These select contractors have completed training and have earned the right to become OASIS certified. They have the knowledge, training, and experience you can depend on for all your LAN copper and fiber needs. Contact Berk-Tek for a list of OASIS Certified Contractors near you.



WHEN CAN YOU GET STARTED?

You can get started today. Contact either Cree or Berk-Tek and we can answer any questions you have. If you are interested in an on-site demo, we would be happy to do that too. Both Cree and Berk-Tek's products are available for purchase through distributors.

Cree

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ABOUT CREE, INC. AND BERK-TEK, LLC



Cree, Inc, was founded in 1987 and is headquartered in Research Triangle Park (RTP), NC. Cree manufactures and markets LEDs, lighting products, as well as power and RF solutions. Most of Cree's products employ silicone carbide (SiC). SiC is a naturally occurring material which enables superior performance over standard silicone in devices that operate at high temperatures, high voltages, or both. Today, Cree is a leading LED lighting manufacturer that developed the revolutionary SmartCast Intelligence Platform[™] that seamlessly integrates luminaires into the network. Cree has a demo area in their RTP facility where customers can experience first-hand the difference a Cree powered PoE lighting solution can really make. Cree is traded on the NASDAQ as CREE.



Berk-Tek, LLC was established in 1962 in Reading, PA. Today, Berk-Tek has two locations, one in New Holland, PA and another in Fuquay-Varina, NC, about 30 minutes from Research Triangle Park. Berk-Tek is a leading manufacturer and marketer of LAN copper and fiber cabling products. Berk-Tek also has its TEK Center, a world class R&D facility that also includes a first class customer demo area in the New Holland, PA locations Here, customers experience first-hand the applications and solutions they are considering and talk to engineers instead of making decisions based solely on data sheets. Berk-Tek is owned by Nexans, Inc, one of the world's largest cabling manufacturers and headquartered in Paris, France. Nexans is traded on the Euronext, Paris as NEX.