AUTOMOTIVE LIGHTING

Application Guide

Better Light to Enhance the Buyer Experience.
Automotive Spaces

SHOWCASE YOUR DEALERSHIP & ATTRACT POTENTIAL CUSTOMERS

Selling a vehicle is about more than just having the models, safety features and prices that your customers are looking for. It’s a visual and emotional experience. The reason you wash, vacuum and wax a car before putting it on the lot is the same reason why the luminaires lighting your business are so important.

Cree offers a complete line of LED luminaires that will deliver better light throughout your dealership — from the front-line row of cars to the showroom and service bays.

Better light that:
• Improves the sales and service environment
• Is intelligent by design, adapting to the environment and users
• Is intuitively simple to design and implement
• Is ultra-efficient, offering lifetime energy and maintenance savings
MAKE THE RIGHT FIRST IMPRESSION WITH YOUR CUSTOMERS.

Exterior lighting is a critical element in shaping the customer perception of your dealership and the vehicle inventory you’d like to sell after dark. Traditional metal halide lighting can lose 40 percent or more of its initial light output within the first year of operation and can suffer significant color shifts over time. Contrast this with Cree® LED exterior fixtures that lose less than 10 percent of their light over more than a decade on most products and have significantly better color stability. The result? Cree products simply showcase your business and vehicles in a better light.

OSQ Series High Output Area
- Cree TrueWhite® Technology
- 90 CRI at 5000K
- Deliver up to 68,691 lumens
- Efficacy of 125 lumens per watt
- Automotive FrontlineOptic™
- Replace multiple 1000W fixtures with one OSQ-HO luminaire

OSQ Series Area
- Minimum 70 CRI
- Deliver up to 27,103 lumens
- Efficacy of 139 lumens per watt
- Versatile mounting options
- Replace up to 1000W MH

XSP Series Wall Mount
- Minimum 70 CRI
- Deliver up to 4,109 lumens
- Efficacy up to 101 lumens per watt
- IP66 rated
- NanoOptic® Precision Delivery Grid™ Optic
- Photocell, dimming and multi-level options available
SHOWROOM LIGHTING THAT IMPROVES YOUR CUSTOMERS’ EXPERIENCE.

A properly illuminated showroom enhances the features and benefits of your vehicle inventory. The showroom, more than any other area, is where your visitors form a favorable impression of your dealership’s quality and professionalism. Beautiful lighting and excellent color rendering give your customers the confidence to imagine themselves behind the wheel of their new vehicle. Cree LED downlights and lamps put the focus on your latest models and help your customers focus on their buying decision.
KR Series Downlights
- Cree TrueWhite® Technology
- Cree WaveMax® Technology (8")
- Deliver up to 8,000 lumens
- Efficacy up to 77 lumens per watt
- Dimming: Triac to 5%, 0-10V to 10%, Cree Sunset Dimming
- 4" or 6" round and square, 8" round

Essentia® Series Downlights
- 90 CRI
- Deliver up to 6,315 lumens
- 4", 6" and 8" round apertures with wall wash and adjustable accent configurations
- Controls/Dimming: 0-10V continuous dimming to 1%, TRIAC dimming to 10%

MR16 Lamps
- Cree TrueWhite® Technology
- 15°, 25° and 40° beam angles
- "Perfect fit" design
- Dimmable to 5%
- Deliver up to 584 lumens
SERVICE YOUR CUSTOMERS, NOT YOUR LIGHTS.

Your service department requires good lighting to help maintain its productivity and help increase your revenues. That means the technicians working in your shops need high-performance lighting to reliably provide superior work that keeps your customers returning to the dealership for oil changes, parts replacements and other services.

Cree LED troffers and low-bay fixtures offer energy-efficient and near maintenance-free lighting for critical activity spaces that require high-efficiency, high-quality general purpose lighting.
PROFESSIONAL AND INVITING OFFICES.

After a customer finds the right vehicle, you want to bring them to an office with a professional and comfortable setting that provides the right environment to help close the deal. Cree interior lights fit into any architectural plan and offer a variety of color temperatures and lumen packages.

Cree LED downlights and troffers provide higher efficacy and longer life, with better light quality than you can expect from traditional fluorescent and incandescent lighting.
**CR Series Troffers**
- Cree TrueWhite® Technology
- Deliver up to 5,000 lumens
- Efficacy up to 130 lumens per watt
- Dimming: 0-10V to 5%
- Field adjustable CCT

**KR Series Downlights**
- Cree TrueWhite® Technology
- Cree WaveMax® Technology (8”)
- Deliver up to 8,000 lumens
- Efficacy up to 77 lumens per watt
- Dimming: Triac to 5%, 0-10V to 10%, Cree Sunset Dimming
- 4” or 6” round and square, 8” round

**ZR Series Troffers**
- 90 CRI or 80+ CRI
- Deliver up to 5,000 lumens
- Efficacy up to 130 lumens per watt
- Matte finish for reduced glare
- Dimming: 0-10V to 5%
- Retrofit Kit option available
SAVE MORE WHILE SECURING YOUR EXTERIOR.

Site and area lighting often create the greatest consumption of energy for an automotive dealership. With the Cree family of LED luminaires, you can drastically reduce the wattage required to illuminate your location.

Inside, outside and on the showroom floor, Cree lighting pays for itself — all while helping your site and vehicles look crisp, colorful and appealing for your guests. Our LED luminaires help you create an inviting appearance that will provide your customers with a sense of safety and security through properly directed light.

OSQ Series Area
- Minimum 70 CRI
- Deliver up to 27,103 lumens
- Efficacy of 139 lumens per watt
- Versatile mounting options
- Replace up to 1000W MH

CPY Series Canopy/Soffit
- Minimum 70 CRI
- Deliver up to 20,080 lumens
- Efficacy up to 151 lumens per watt
- IP66 rated
- Direct, pendant or Hook & Cord mounts available

XSP Series Wall Mount
- Minimum 70 CRI
- Deliver up to 4,109 lumens
- Efficacy up to 101 lumens per watt
- IP66 rated
- NanoOptic® Precision Delivery Grid™ Optic
- Photocell, dimming and multi-level options available
TURN YOUR LIGHTING POLES INTO MONEY TREES.

Gone are the Reasons to Compromise Superior Color Quality

The cars on display in your dealership need to be properly illuminated to showcase the exciting paint and interior options that you are promoting. Don’t let insufficient color rendering from poor lighting diminish your customer’s car shopping experience. Powered by Cree TrueWhite® Technology, only Cree LED fixtures can deliver exceptional color quality (90+ CRI) and industry-leading efficacy. Colors show truer, spaces are brighter and significant energy savings are real. The OSQ™ High Output luminaire featuring TrueWhite® delivers true-to-life color rendering with 5000K 90 CRI and maintains more than 90 percent of the light output for longer than a decade. Contrast this with metal halide lighting that can lose 40 percent or more of its initial light output within the first year and can suffer significant color shifts.

OSQ™ High Output LED Luminaire versus Traditional Metal Halide

Like Metal Halide, Only Better

The Spectral Power Distribution (SPD) curves shown here provide a great way to compare the color characteristics between the OSQ™ High Output luminaires featuring TrueWhite® Technology and traditional metal halide fixtures. At each point across the visible color spectrum, the height of the SPD curve correlates with how accurately that color is rendered by the light source.

The fuller, more continuous curve renders a much larger color set than metal halide while using only a fraction of the energy.
Good Enough is No Longer Good Enough: Cree Automotive FrontlineOptic™ Technology

Designed specifically for the front lines of automotive dealerships, the Automotive FrontlineOptic™ precisely puts light on the front row of your vehicle inventory — the most high profile area on your property. The unique thermal management system utilizes a flow-through design to maximize performance and longevity, eliminating costly and inconvenient re-lamping cycles for more than a decade, significantly reducing maintenance costs and disruptions to operations.

The OSQ™ High Output luminaires with FrontlineOptic™ Technology’s offer optical precision that puts light on target with little or no waste, reducing light pollution while resulting in potential energy savings of more than 50 percent over traditional technologies. The combined impact of the 90 CRI and NanoOptic® Technology will dramatically enhance the curb appeal of any dealership — making the OSQ™ High Output luminaire with Automotive FrontlineOptic™ a perfect solution for your dealership.

Colorfast 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 SMARTCAST INTELLIGENCE PLATFORM™

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.

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.

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.

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.
Interior and exterior LED luminaires by Cree are eligible for retrofit and new construction incentives (or “rebates”) under utility programs throughout the United States. Utility LED lighting incentives are able to help lower the upfront costs associated with installing new, energy-efficient lighting. As you begin planning your lighting project, Cree can provide assistance in working with your electric utility provider to identify and manage LED lighting incentive programs.

The example below shows an actual incentive an automotive dealership customer received through their local utility by switching to Cree® OSQ Series High Output luminaires.

### Utility LED Program Incentive Offering: $0.08/kWh Saved Annually
### Annual Luminaire Operating Hours: 4,380

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<th>Qty</th>
<th>Watts</th>
<th>Total Watts</th>
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<th>Qty</th>
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<tr>
<td><strong>Total</strong></td>
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*Wattage with ballast factor.

Total Incentive: **$22,969**

### Helpful Incentive Information

**What products qualify?**

Every utility program provides their own set of requirements and product criteria. In general, utilities usually require LED products to be listed under the qualification bodies of either ENERGY STAR® or DesignLights Consortium (DLC). In order to qualify under one of these organizations, the product must meet high efficiency, quality and lifetime criteria standards.

**What could potentially disqualify a project?**

The customer generally needs to be granted pre-approval for an incentive amount before starting a project. The project may become ineligible if products are installed before receiving a pre-approval from the utility program.

### Cree 10-Year Limited Warranty

Light your dealership with confidence. Cree offers a 10-year limited warranty that covers the broadest product range in the industry. As a leading innovator of LED chips, components and lighting, Cree has over 20 years of experience in commercial LED development, bringing an unprecedented level of expertise to all facets of the LED lighting design and development process. Cree’s 10-year limited warranty covers nearly all globally-available, commercial-grade indoor and outdoor fixtures. To learn more, please visit [lighting.cree.com/warranty](http://lighting.cree.com/warranty).

Disclaimer: Utility rebate programs are governed fully by the utilities and are subject to change without notice. Contact individual utilities for updates and/or changes to their programs.
CREE AUTOMOTIVE LED LIGHTING SOLUTIONS

Indoor Products

1. KR Series Downlight
2. CR Series Troffer
3. CXB Series High-Bay/ Low-Bay Luminaire
69% ENERGY SAVINGS

$504 K LIFETIME ENERGY & MAINTENANCE SAVINGS

1.4 Yr. PAYBACK

* Payback and energy savings are based on the national average electricity rate, recommended maintenance schedule, and typical maintenance costs over common assessment periods (application life).

Outdoor Products

1. XSP Series Wall Pack
2. OSQ Series Area Outdoor Products
3. Cree Edge™ Series Flood
4. OSQ Series Flood
5. OSQ Series High Output Area with FrontlineOptic™
6. OSQ Series Area
REV UP YOUR AUTO SALES

Facilities featured in this brochure include:

- BMW of Cape Cod - Hyannis, MA
- Digital Chassis - Durham, NC
- Duvall Automotive - Clayton, GA
- Michael Jordan Nissan - Durham, NC
- Palmen Dodge Chrysler Jeep - Racine, WI
- Reed Lallier Chevrolet - Fayetteville, NC
- Reliable Buick GMC - Roseville, CA
- Szott Ford - Holly, MI

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