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 Lighting 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
Outdoor Sales Area
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 Lighting luminaires 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 Lighting products simply showcase your business and vehicles in a better light.

### OSQ Series High Output Area
- Minimum 70 CRI (3000K, 4000K, 5700K); 90 CRI (5000K)
- Deliver up to 68,691 lumens
- Efficacy of 125 lumens per watt
- Automotive FrontlineOptic™
- Replace multiple 1000W fixtures with one OSQ-HO luminaire

### THE EDGE® High Output Area
- Minimum 70 CRI (4000K & 5700K); 90 CRI (5000K)
- Deliver up to 85,638 lumens
- Efficacy of 114 lumens per watt
- Automotive FrontlineOptic™
- Replace multiple 1000W MH fixtures

### XSP Series Wall Mount
- Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K)
- Deliver up to 8,475 lumens
- Efficacy up to 138 lumens per watt
- IP66 rated
- NanoOptic® Precision Delivery Grid™ Optic
- Photocell, dimming and multi-level options available
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.
LRX Downlights

- 90+ CRI
- Deliver up to 3,000 lumens
- Efficacy up to 88 lumens per watt
- Fits in existing 4” and 6” housings
- Dimmable to 5%
- A variety of reflector options available

Pro Series Lamps

- A19, A21, BR, B11, MR and PAR lamps
- 90+ CRI
- Suitable for damp locations
- Suitable wet locations (PAR lamps)
- Dimmable
- 5-year warranty

CADIANT™ Dynamic Skylight

- Recreates the sensation of being under a natural sky
- 90+ CRI, R9: >65
- Adjustable Lumen Levels: 200-3,200
- Efficacy up to 67 lumens per watt
- Smartcast Technology dimmable to 5%
- with East to West Sun Feature
SERVICE VEHICLES, 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 Lighting 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.

### KBL Series High-Bay
- 70 or 80+ CRI
- Delivers 9,000 to 30,000 lumens
- Efficacy up to 156 lumens per watt
- CCT: 3000K, 3500K, 4000K, 5000K
- IP65 optical assembly
- Optional SimplySNAP wireless lighting controls

### LSQ Series Surface Ambient
- 80+, 90 CRI
- Delivers up to 10,000 lumens
- Efficacy up to 130 lumens per watt
- CCT: 3500K, 4000K, 5000K
- 0-10V dimming to 5%
- Individual mount or continuous row
- Mounts: surface, suspended, pendant or cove

### ZR Series Troffers
- 90 CRI or 80+ CRI
- Deliver up to 5,000 lumens
- Efficacy up to 130 lumens per watt
- Available in gloss or matte finish
- 0-10V dimming to 5% standard; SmartCast® Technology optional
- Retrofit Kit option available
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 Lighting interior lights fit into any architectural plan and offer a variety of color temperatures and lumen packages.
FLEX Series Troffers
- 83+ CRI
- Deliver up to 6,000 lumens
- Efficacy up to 145 lumens per watt
- CCT: 3000K, 3500K, 4000K, 5000K
- 0-10V dimming to 1% standard; SmartCast® Technology optional
- Five inner optic choices create distinctive environments

Stylus™ Linear Series
- High, medium or low lumen options
- Efficacy up to 85 lumens per watt
- CCT: 3000K, 3500K, 4000K
- High color fidelity and gamut to bring out the truest colors 90+ CRI, R9>65
- Individual mount or continuous row (2’ to 72’ (120V) or 144’ (277V)) for recess, surface, suspended and wall mount

KR Series Downlights
- Cree TrueWhite® Technology; WaveMax® Technology (8”)
- 2700K, 3000K, 3500K, 4000K, 5000K
- Deliver up to 8,000 lumens
- Efficacy up to 77 lumens per watt
- Triac to 5%, 0-10V to 10% and Sunset Dimming
- 4” or 6” round and square, 8” round

SMARTCAST® TECHNOLOGY
**SAVE MORE WHILE SECURING YOUR EXTERIOR.**

Site and area lighting often creates the greatest consumption of energy for an automotive dealership. With the Cree Lighting 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.

<table>
<thead>
<tr>
<th>Noctura Series Area, Wall &amp; Flood</th>
<th>CPY Series Canopy/Soffit</th>
<th>THE EDGE® Series Wall Mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Minimum 70 CRI (3000K, 4000K, 5000K)</td>
<td>• Minimum 70 CRI</td>
<td>• Minimum 70 CRI</td>
</tr>
<tr>
<td>• Cohesive style and finish for pleasing daytime appearance</td>
<td>• CCT: 3000K, 4000K, 5700K</td>
<td>• CCT: 4000K, 5700K</td>
</tr>
<tr>
<td>• Versatile mounting</td>
<td>• Deliver up to 20,080 lumens</td>
<td>• Up to 15,094 lumens</td>
</tr>
<tr>
<td>• Suitable for wet locations</td>
<td>• Efficacy up to 151 lumens per watt</td>
<td>• Efficacy up to 123 lumens per watt</td>
</tr>
<tr>
<td>• IP65 rated</td>
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<td>• IP66 rated</td>
</tr>
<tr>
<td>• 5-year limited warranty</td>
<td>• Direct, pendant or Hook &amp; Cord mounts available</td>
<td>• Photocell, dimming and programmable multi-level options available</td>
</tr>
</tbody>
</table>
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 Lighting solutions 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 Lighting 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 Lighting 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.
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 Lighting 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 SmartCast® Technology, you can now expand beyond making lighting more efficient to making buildings more efficient and businesses more profitable. Cree Lighting 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.

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.

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.
Interior and exterior LED luminaires by Cree Lighting 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 Lighting 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 OSQ Series High Output luminaires.

### Utility LED Program Incentive Offering: $0.08/kWh Saved Annually

**Annual Luminaire Operating Hours:** 4,380

<table>
<thead>
<tr>
<th>Cree Lighting</th>
<th>Qty</th>
<th>Watts</th>
<th>Total Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSQ Series High Output</td>
<td>31</td>
<td>550</td>
<td>17,050</td>
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<table>
<thead>
<tr>
<th>Incumbent Lighting</th>
<th>Qty</th>
<th>Watts</th>
<th>Total Watts</th>
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</thead>
<tbody>
<tr>
<td>1000w Metal Halide</td>
<td>62</td>
<td>1080</td>
<td>66,960</td>
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<tr>
<td>400w Metal Halide</td>
<td>34</td>
<td>460</td>
<td>15,640</td>
</tr>
</tbody>
</table>

Total: 82,600

**Incentive:** $22,969

*Wattage with ballast factor.

### 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 Lighting 10-Year Limited Warranty
Light your dealership with confidence. With more than 30 years of experience, Cree Lighting is a market-leading innovator of LED lighting fixtures, lamps and commercial lighting solutions for interior, exterior, and intelligent lighting applications. Cree Lighting offers a 10-year limited warranty that covers the broadest product range in the industry including globally-available, commercial-grade indoor and outdoor fixtures.

To learn more, please visit [creelighting.com/warranty](http://creelighting.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.
AUTOMOTIVE LED LIGHTING SOLUTIONS

Indoor Products

1. KR Series Downlight
2. CR Series Troffer
3. KBL 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

4. XSP Series Wall Pack
5. OSQ Series High Output Area with FrontlineOptic™
6. OSQ Series Flood
7. THE EDGE® Series Flood
8. 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
- Reliable Buick GMC - Roseville, CA
- Szott Ford - Holly, MI

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