



LRC LED Recessed Canopy

Recessed Canopy Luminaire

Innovation you can rely on™

 **COOPER** Lighting



Recessed Canopy Redefined

Performance and Visual Comfort

The LRC LED Recessed Canopy Luminaire is designed from the ground up to deliver exceptional performance and visual comfort. A choice of three specialized optics are combined with LED light sources to deliver superior optical control and uniformity. To enhance visual comfort, a glare-reducing optical system is utilized to maximize delivered lumens while minimizing glare. This approach results in unparalleled visual comfort and safety in the application.

Long Life with Low Cost of Ownership

With projected lumen maintenance of over 90% at 60,000 hours, the LRC LED Recessed Canopy Luminaire is virtually maintenance-free for over 15-years in the typical application. Compared to traditional HID sources, energy savings of over 70% can be achieved. Energy efficiency, combined with low maintenance costs provide a low total cost of ownership over the lifetime of the luminaire.

Engineered for Reliability

At Cooper Lighting we believe credibility is key. We are committed to providing LED solutions that meet the highest standards of reliability and performance. Cooper's deep-rooted understanding of outdoor product markets and application needs has been amassed through decades of supplying quality products, service and support.



The LRC LED Recessed Canopy Luminaire is specifically designed for recessed applications in single or double skin canopies. Three specialized optics are optimized for efficiency and uniformity, delivering high light levels on task. Typical applications include retail fuel stations, convenience stores, banks and pharmacy drive thru canopies.

LRC LED Recessed Canopy Design Excellence

Excellent Choice for New Construction or Retrofit

The LRC LED Recessed Canopy Luminaire is optimized for performance, functionality and versatility. Designed for ease of installation from underneath the canopy. Whether it's new construction or replacing traditional HID fixtures, the LRC LED Recessed Canopy Luminaire is an excellent choice in reducing operating costs.

Construction

- Designed for installation in open top or enclosed canopies.
- Heavy-duty die-cast aluminum housing with aluminum mounting frame.
- 3G vibration rated.
- IP66 rated housing and driver enclosure.
- Die-cast aluminum driver enclosure is elevated to prevent water ingress. 1/2" knockouts provided for wiring connections.

Electrical

- 120-277V 50/60Hz, 347V 60Hz, or 480V 60Hz operation.
- Operates in -40°C to 40°C ambient temperatures.
- Integral electronic LED driver incorporates surge protection. Optional with proprietary 10kV surge protection module.
- L90 60,000 hours at 40°C, compliant with IESNA TM-21.
- LED driver enclosed in thermally isolated wet location box.

Optical

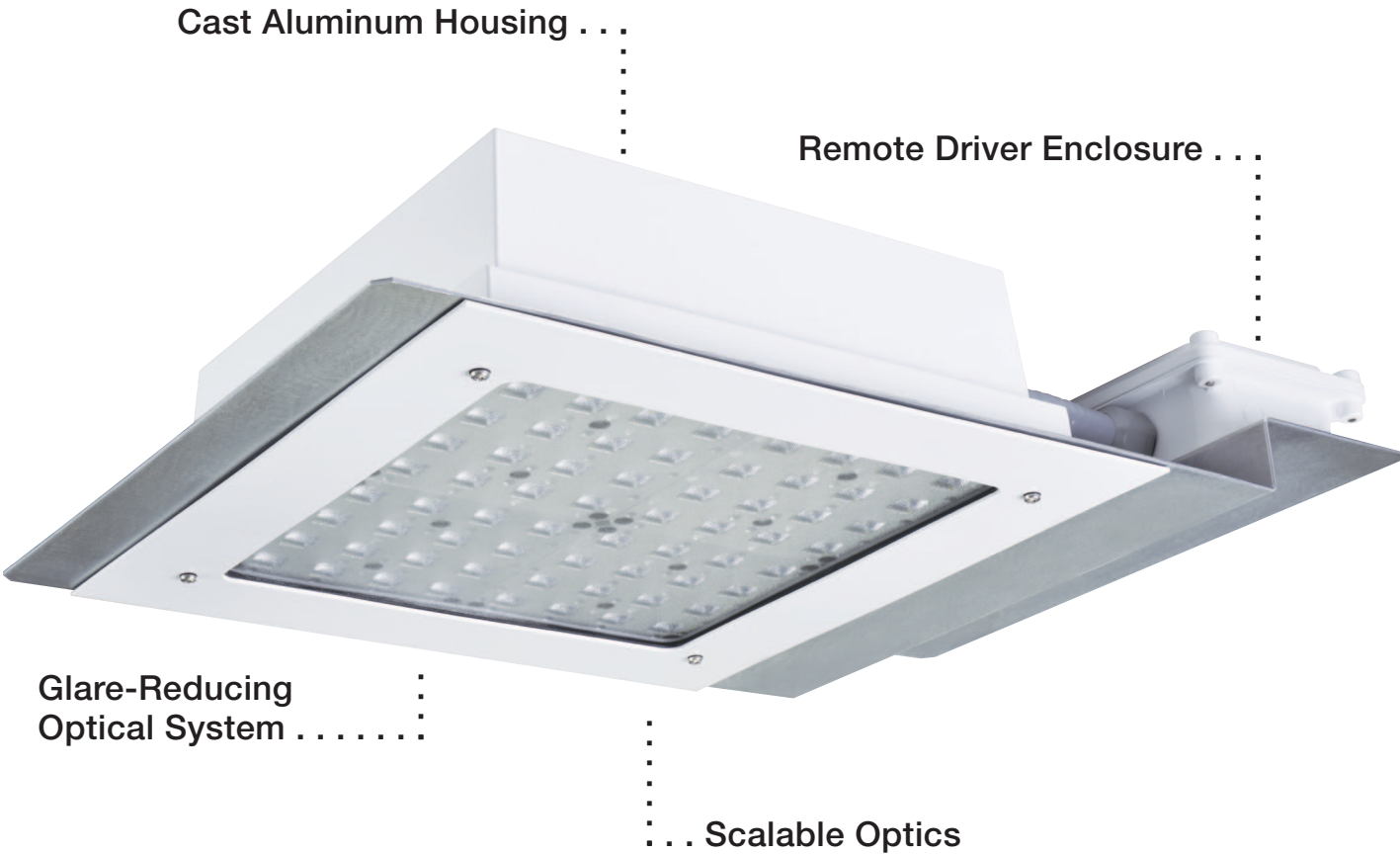
- A glare-reducing optical styem is utilized to provide superior uniformity while reducing glare and enhancing visual comfort.
- Precision molded reflectors are coated with a highly reflective vacuum metallized optical coating.
- Two symmetric and one asymmetric distribution designed for efficiency and uniformity.
- Offered standard in 4000K CCT and 70 CRI. Optional 6000K 70 CRI and 3000K 80 CRI.

Finish

- Five-stage Super TGIC paint resists extreme weather conditions while providing optimal color and gloss retention. Standard housing and lens frame trim finished in true white color. Optional lens frame trim colors include white, grey, black, bronze dark platinum, and graphite metallic. RAL and color matches available.

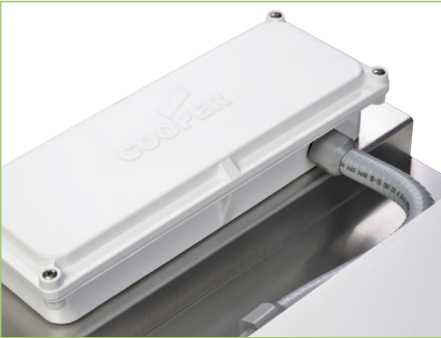
Warranty

- Five-year limited warranty.



Glare-Reducing Optical System

Softening glass minimizes glare and increases visual comfort.



Driver Enclosure

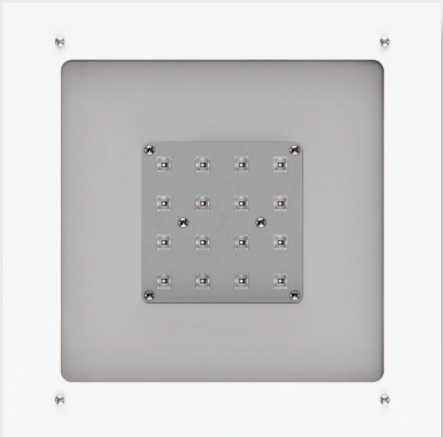
Wet location and IP66 rated driver enclosure is elevated to prevent water ingress.



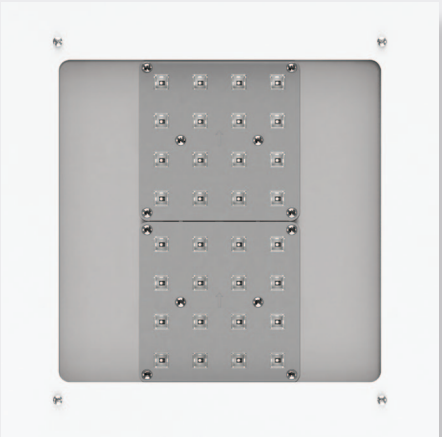
Optional Surge Protection

10kV common (line-to-ground) and differential (line-to-line) mode protection.

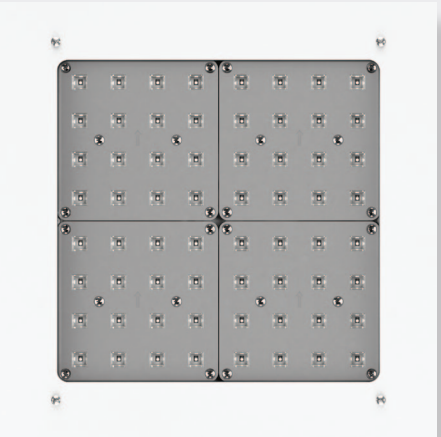
Scalable Illumination



16 LEDs (37 or 50W)



32 LEDs (35, 46 or 73W)



64 LEDs (69 or 88W)

Energy-Efficient Illumination

Energy Savings and Environmental Stewardship

The simplest and most effective way to reduce a lighting fixture's impact on the environment is to minimize its energy consumption. The LRC LED Recessed Canopy Luminaire provides energy savings from 30% to 70% compared to standard HID solutions.

Long Life

With a 60,000+ hour rated life (at 90% lumen maintenance), the LRC LED Recessed Canopy Luminaire operates without maintenance six times longer than traditional metal halide solutions.

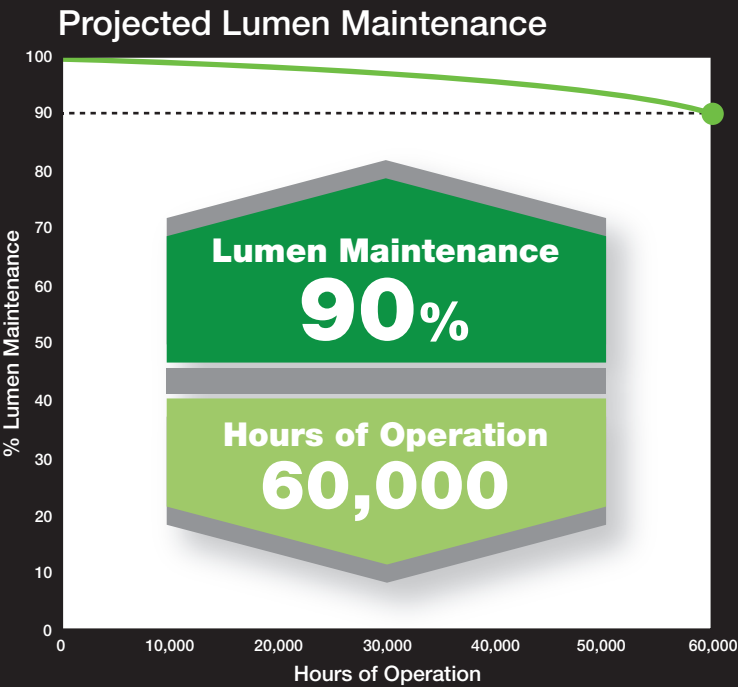
Low Maintenance

The LED tray is easily removed in the field for replacement or rotation of optics.



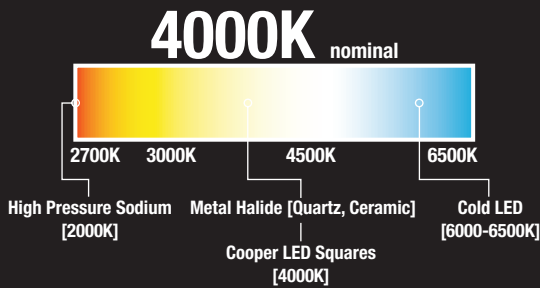
Superior Optical Control

The LRC LED Recessed Canopy Luminaire is available in three unique optical distributions designed to maximize light levels on task. Proprietary optical surfaces deliver an unobstructed view of the LED to the application target. Optimized surface profiles combined with highly reflective aluminum metallization ensure each distribution provides the highest level of optical control.



Warm White Color

Lighting designers, architects and specifying engineers have long preferred light sources that provide a balanced spectral power distribution and warm white light. Many LED solutions standardize on a cold blue 6000-6500K correlated color temperature (CCT) to maximize lumen output. The LRC LED Recessed Canopy Luminaire provides warm white light at a standard 4000K CCT with no sacrifice in lumen output.



Performance and Versatility

Optimal Configuration

The LRC LED Recessed Canopy Luminaire is designed around superior optical performance and scalability. With a choice of seven lumen packages and three optical distributions, the optimal configuration can be used to maximize light levels while minimizing operating costs.

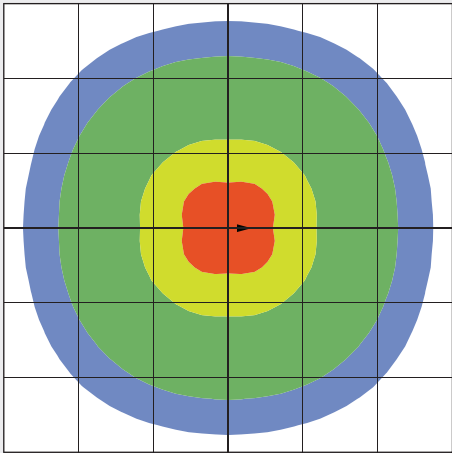
Power and Lumens by Number of LEDs

Number of LEDs	LED Drive Current	Input Wattage	Input Current (Amps)		Optics	MST	VAT	WST
			120V	277V				
16	700mA	37W	0.33	0.15	Lumens	3,099	2,987	3,026
					BUG Rating	2-0-0	2-0-0	1-0-0
	950mA	50W	0.41	0.19	Lumens	3,841	3,702	3,751
					BUG Rating	2-0-1	2-0-0	2-0-0
32	350mA	35W	0.30	0.14	Lumens	3,448	3,323	3,367
					BUG Rating	2-0-0	2-0-0	2-0-0
	450mA	46W	0.40	0.18	Lumens	4,285	4,130	4,184
					BUG Rating	2-0-1	2-0-0	2-0-0
	700mA	73W	0.62	0.23	Lumens	6,048	5,829	5,906
					BUG Rating	3-0-1	3-0-0	2-0-0
64	350mA	69W	0.59	0.28	Lumens	6,679	6,439	6,524
					BUG Rating	3-0-1	3-0-0	2-0-0
	450mA	88W	0.77	0.36	Lumens	8,212	8,019	8,125
					BUG Rating	3-0-1	3-0-0	3-0-0

NOTE: Lumen values tested at 4000K CCT.

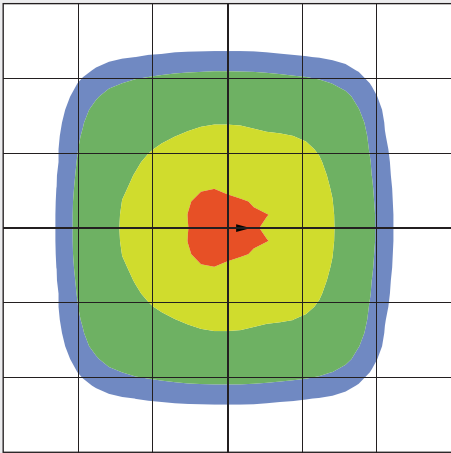
Optical Distributions

Choice of one asymmetric and two symmetric distributions.



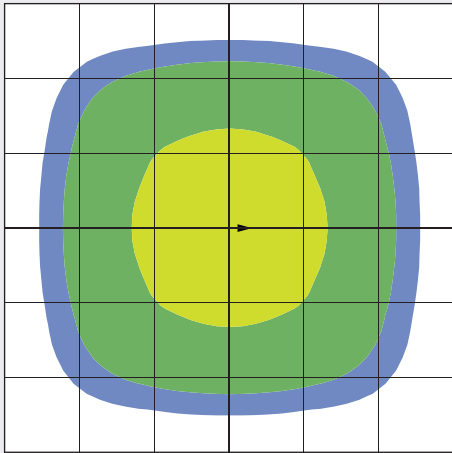
Medium Symmetric (MST)

For use at higher mounting heights, typically from 15'-20'.



Vertical Asymmetric (VAT)

Designed to increase light levels on a specific object, such as a fuel pump or signage.



Wide Symmetric (WST)

For use at lower mounting heights, typically from 10' to 15'.

Universal Functionality



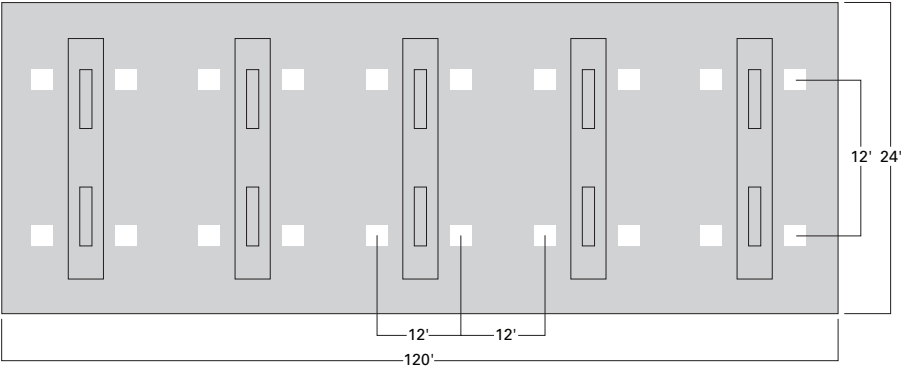
The LRC LED Recessed Canopy Luminaire can be used in a variety of commercial applications, including fuel stations, convenience stores, bank and pharmacy drive thru canopies. With a choice of seven lumen packages, the desired light levels can be tailored for the application to minimize operating costs. Optimized for mounting heights ranging from 10' to 20', three unique optical distributions are designed to maximize light levels on task.

Exterior Canopy Lighting

Canopy lighting in exterior applications require high levels of both horizontal and vertical footcandle levels while also maintaining outstanding uniformity levels. Exterior canopy lighting needs to not only address the security concerns of the area, but also needs to draw a potential customer to the site. The Illuminating and Engineering Society of North America (IESNA) recommends a range from 10 - 30 footcandle average horizontal light levels. Vertical light levels range from 5 - 20 footcandles required at the task plane.

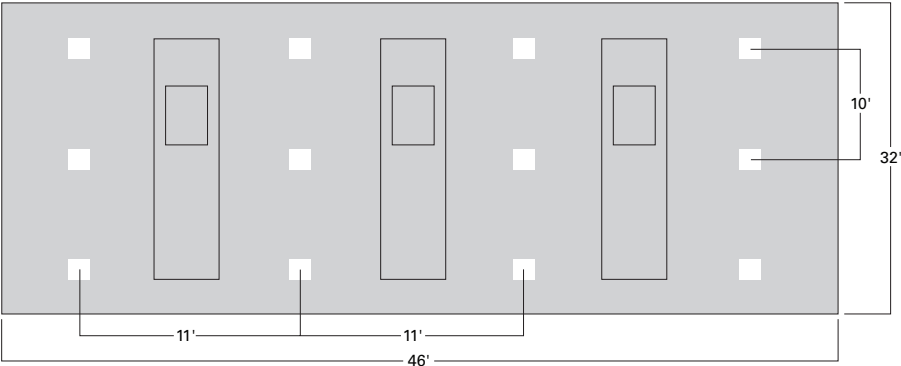
Typical Fuel Station Canopy

Fixture Spacing = 12' x 12' on center; mounted at 14' above grade.

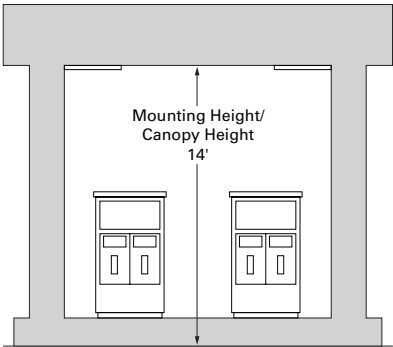


Typical Bank Drive Thru Canopy

Fixture Spacing = 11' x 10' on center; mounted at 10' above grade.



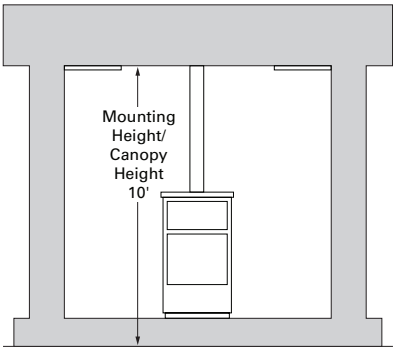
Typical Fuel Station Layout
Canopy floor to ceiling height = 14'.
Fixtures mounted flush with bottom of canopy at 14' above grade.
Reflectances = 50% canopy ceiling / open at sides / 7% canopy floor.



Fuel Station Light Levels for Typical Layout

Illuminance	Average Horizontal Footcandles
Horizontal at Floor Level	30
Vertical at Task Plane (0-7' High)	20

Typical Bank Drive Thru Layout
Canopy floor to ceiling height = 10'.
Fixtures mounted flush with bottom of canopy at 10' above grade.
Reflectances = 50% canopy ceiling / open at sides / 7% canopy floor.

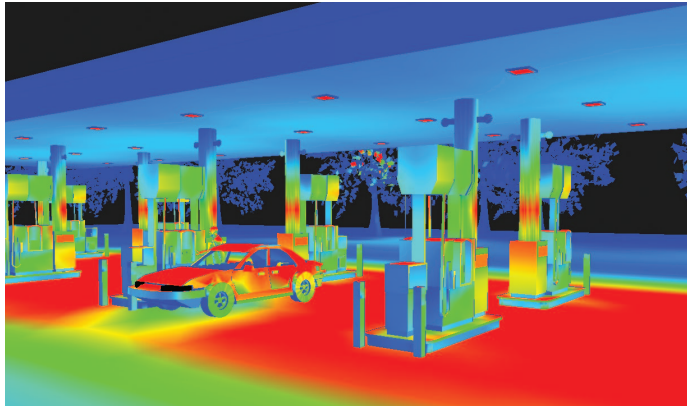


Bank Drive Thru Light Levels for Typical Layout

Illuminance	Average Horizontal Footcandles
Horizontal at 3' Above Floor Level	20
Vertical at Task Plane (0-5' High)	10

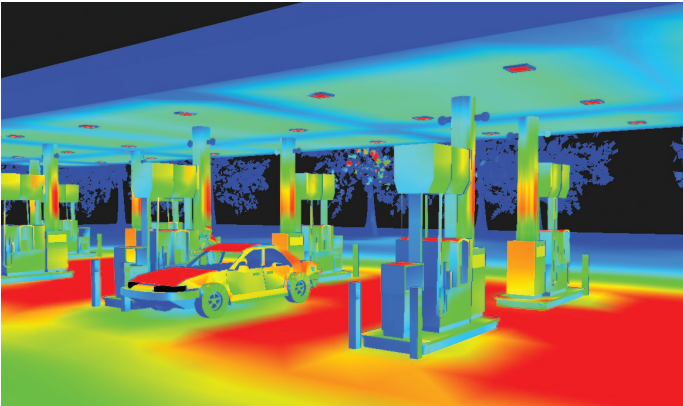
Performance and Savings

The LRC LED Recessed Canopy Luminaire utilizes highly reflective optics to meet the performance criteria and light levels typically required in canopy applications. Specialized optics deliver superior uniformity while significantly reducing the total cost of ownership. The LRC LED Recessed Canopy Luminaire's performance comes with years of low-cost, low-hassle ownership. With lumen maintenance and life expectancy far beyond traditional HID light sources, regular and time-consuming service visits are a thing of the past.



LRC Fixture; 64 LEDs, 450mA with VAT Optics – 1,760 Total Watts

(20 LRC luminaires with 12' x 12' spacing, 88W per fixture)



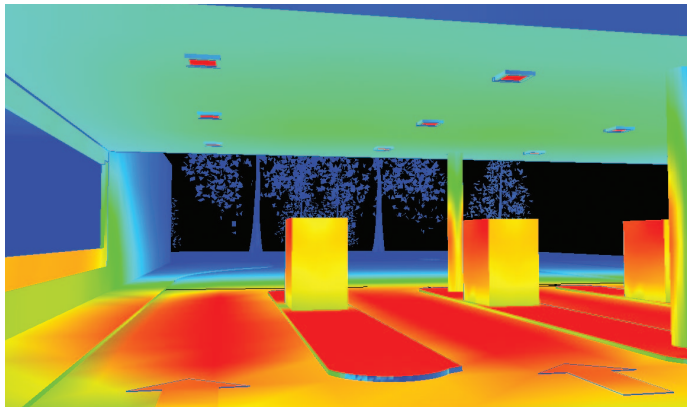
250W Pulse Start Metal Halide – 5,820 Total Watts

(20 Recess Mounted Canopy luminaires with 12' x 12' spacing, 291W per fixture)

Typical Fuel Station Canopy

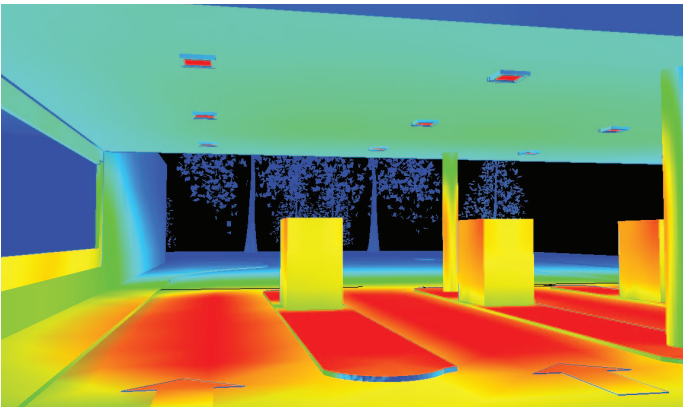
Luminaire / Technology	Wattage	Horizontal Illuminance		Vertical Illuminance		Annual Energy Cost ¹
		Average Footcandles	Maximum / Minimum	Average Footcandles	Maximum / Minimum	
LRC-B64-4-LED-E1-VAT	88	33.7	2.5	20.6	3.4	\$848
250W PSMH	291	34.7	2.1	25.1	4.0	\$2,804

NOTE: ¹ Assumes 20 fixtures operating 12 hours per day at \$0.11/kWh.



LRC Fixture; 16 LEDs, 700mA with VAT Optics – 444 Total Watts

(12 LRC luminaires with 11' x 10' spacing, 37W per fixture)



150W Pulse Start Metal Halide – 2,220 Total Watts

(12 Recess Mounted Canopy luminaires with 11' x 10' spacing, 185W per fixture)

Typical Bank Drive Thru Canopy

Luminaire / Technology	Wattage	Horizontal Illuminance		Vertical Illuminance		Annual Energy Cost ¹
		Average Footcandles	Maximum / Minimum	Average Footcandles	Maximum / Minimum	
LRC-B16-7-LED-E1-VAT	37	20.3	2.9	12.4	2.0	\$214
150W PSMH	185	21.1	5.2	11.4	1.8	\$1,070

NOTE: ¹ Assumes 12 fixtures operating 12 hours per day at \$0.11/kWh.

Energy Savings and Rebates

Reduced Cost of Ownership

In addition to energy savings, there are other advantages of utilizing LED technology over traditional light sources. The long life and superior lumen maintenance of LEDs significantly reduces maintenance costs and provides a significant reduction in the total cost of ownership. In many markets throughout the United States and Canada, there are utilities as well as energy efficiency organizations that provide rebates to help offset the initial cost in purchasing qualified LED products. When energy savings, reduced maintenance costs as well as rebates are combined, there is a compelling financial justification to choose LED over traditional technologies.

New Installation Application Comparisons

	LRC-B16-7-LED-E1-XXX	150W PSMH
System Cost	\$7,500	\$3,900
Rebate	\$1,800	--
Annual Energy Cost	\$214	\$1,070
Annual Maintenance Cost	--	\$338
Payback	1.5	--

	LRC-B64-4-LED-E1-XXX	250W PSMH
System Cost	\$16,500	\$6,500
Rebate	\$3,000	--
Annual Energy Cost	\$848	\$2,804
Annual Maintenance Cost	--	\$563
Payback	2.8	--

Return on Investment (ROI) Reference Information

The information below is used to calculate payback scenarios.

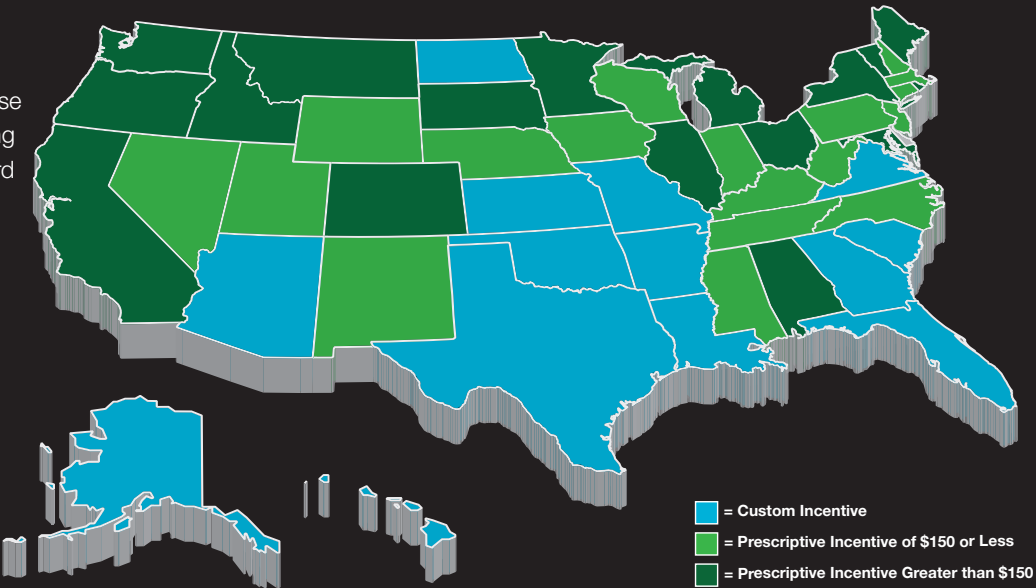
Fixture	Fixture Cost	Input Watts	Lamp Life (Hours)
LRC-B16-7-LED-E1-XXX	\$500	37W	> 60,000 hrs
LRC-B64-4-LED-E1-XXX	\$700	88W	> 60,000 hrs
150W PSMH	\$200	185W	15,000 hrs
250W PSMH	\$200	291W	15,000 hrs

Table 2 (Assumptions)	
Labor for Installation	\$125
Number of Fixtures (250W)	20
Number of Fixtures (150W)	12
Cost/kWh	\$0.11
Hours of use in a Year (12 Hours a Day)	4380
Lamp Cost	\$35
Labor for Lamp Replacement	\$40

NOTES:
1. Lamp life for HID sources is defined as 50% failures. 2. Cost = (Watts x 12 hours per day x 365 days per year) /1000 = Daily kilowatt hour (kWh). kWh x \$0.11 cents/kWh = Cost/Year at \$0.11 kWh.

Utility Incentive Programs*

Utility companies are leading the way in responding to climate change and the power sector's role in reducing greenhouse gases while meeting the country's growing energy needs. Monetary incentives toward the purchase of high-efficient canopy luminaires support clean energy resources and technologies that are critical to our transition to a sustainable, low carbon society.



* As of August 1, 2012.

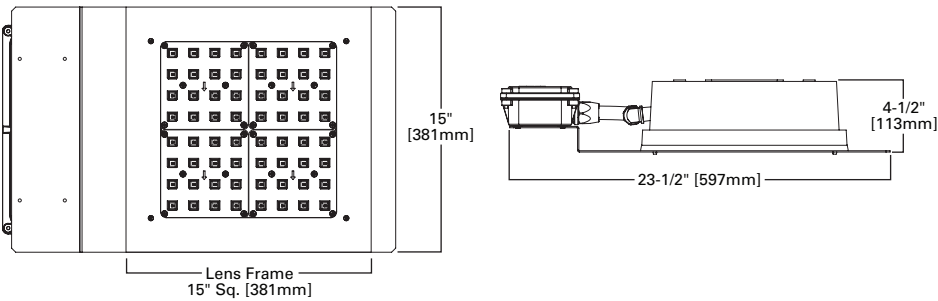
Ordering Information

Sample Number: LRC-B64-4-LED-E1-VAT

Product Family	Generation	Number of LEDs	Drive Current ²	Lamp Type	Voltage	Distribution	Trim Color
LRC=LED Recessed Canopy ¹	B	16 32 64	1=950mA 3=350mA 4=450mA 7=700mA	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V 480=480V	MST=Medium Symmetric VAT=Vertical Wide Asymmetric WST=Wide Symmetric	Blank=True White (Standard) AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately)			
7060=70 CRI 6000K 8030=80 CRI 3000K 10K=10kV Surge Module 2L=Two Circuits ³ L90=LED Optical Panels Rotated 90° Left ⁴ R90=LED Optical Panels Rotated 90° Right ⁴				MA1253=10kV Circuit Module Replacement			

NOTES: 1. DesignLights™ Consortium Qualified on select models. Consult www.designlights.org for the latest qualified products. 2. 950mA available only in 16 LEDs. 700mA available in 16 or 32 LEDs. 450mA available only in 32 or 64 LEDs. 350mA only available in 16 or 32 LEDs. 3. Not available in 347V or 480V. Not available with 16 LEDs. Not available with 32 LEDs in 350mA or 450mA. 4. Only applies with VAT distribution. MST and WST distributions are symmetrical.

Dimensions



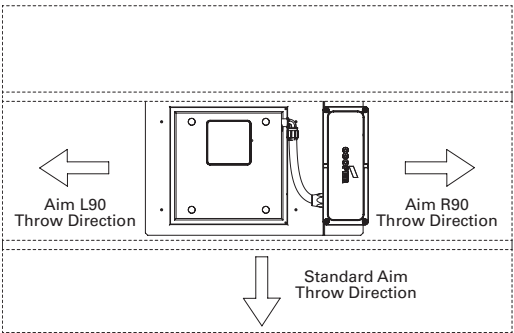
Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.04
15°C	1.03
25°C	1.00
40°C	0.96

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000

VAT Optic Orientation



Additional Information

Compliances	Technical Data (Electronic Driver)	Shipping Data (Approximate Net Weight)
UL and cUL Listed LM79/LM80 Compliant ARRA Compliant DesignLights™ Consortium Qualified* ISO 9001	+40°C (104°F) Maximum Ambient Temperature -40°C (-40°F) Ambient Temperature Rating 0.9 Power Factor <20% Total Harmonic Distortion 120-277V/50 and 60 Hz 347V/60 Hz, 480V/60 Hz	20-29 lbs. (9.07-13.15 kgs.)



IP66
Rated



* www.designlights.org

NOTE: Specification and dimensions subject to change without notice.

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The Cooper Lighting Family

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Halo Commercial
Portfolio
IRiS
RSA
Metalux
Corelite
Neo-Ray
Fail-Safe
MWS
Ametrix
Shaper
io
Lumark
McGraw-Edison
Invue
Lumière
Streetworks
AtLite
Sure-Lites

Domestic Distribution Facilities

Cranbury, New Jersey
Elk Grove Village, Illinois
Irving, Texas
Bloomington, California
Peachtree City, Georgia

Canadian Distribution Facilities

Calgary, Alberta T2E 7V9
Mississauga, Ontario L5R 1B8

The Cooper Controls Family

Greengate
iLumin
Zero 88
Fifth Light Technology
iLight (International Only)



25% PCRF

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