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GENERATION SERIES

SustainabLED Design™

# Generation Series

## Decorative Post Top Luminaire

COOPER Lighting

# GENERATION SERIES

## DECORATIVE POST TOP LUMINAIRE

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**EVOLUTIONARY FORM**

Regardless of whether the application has a contemporary character or is decidedly traditional, the interchangeability of the Generation Series of post top luminaires provides the versatility of form necessary to complement the appearance of surrounding environments. A well-rounded collection of base, cage, top, lens and finial styles creates hundreds of design combinations and modularity that surpasses every product family in the decorative post top market.

CITYSCAPE | PATHWAY | NEIGHBORHOOD

**ENVIRONMENTAL STEWARDSHIP**
Reduce, Reuse and Recycle—three words that universally stand for responsible conservation of the earth's precious resources. Likewise, Light Emitting Diodes [LED] usher in the lighting industry's opportunity for meaningful reductions in worldwide energy and resource consumption. Further enhancing LED technology with control features, the Generation Series provides uniform task illumination while decreasing $CO_2$ emissions, eliminating mercury disposal, lengthening maintenance cycles and dramatically reducing energy consumption.

**WITHSTANDS THE TEST OF TIME**
The Generation Series LED luminaire retains maintenance-friendly toolless and quick disconnect features while incorporating breakthrough source and performance innovations. Backed by Cooper Lighting's rigorous qualification standards, the Generation Series LED proves that the newest technology can seamlessly integrate into familiar forms without compromise.

# DESIGN FLEXIBILITY

**APPEALING FORM**

Although traditional forms remain popular for the illumination of streetscapes, more contemporary shapes are beginning to gain favor. The Generation Series is designed to offer a multitude of both traditional and contemporary forms to meet varying market needs. Combining three [3] exquisite bases, five [5] unique cage assemblies, and a variety of tops and finials, over 100 different styles can be created to complement virtually any application.

## BASE TYPE

Architectural

Classical

Acorn

## CAGE TYPE

Classical

Modern

Architectural

Avenue [Avenue Only]

Lantern
[Cascade Only]

## GLOBE TYPE

Refractive Globe
Type III or V
Acrylic or Polycarbonate

Clear Acrylic Globe
Cutoff Type III or V
w/Decorative Chimney

## TOP TYPE

Victorian
[Glow Top]

Acorn
[Glow Top]

Modern
[Spun Top]

Classical
[Spun Top]

Nostalgic
[Spun Top / Top Access]

Architectural
[Spun Top / Top Access]

Avenue
[Spun Top / Top Access]

## FINIAL TYPE

Architectural

Modern

Victorian

Nostalgic

## BRIDGING THE GAP BETWEEN AESTHETICS + PERFORMANCE

Traditional character with updated styling and superior photometric performance sets a standard for decorative post top luminaires. A wide variety of styles allow the Generation Series to both blend into and enhance the architectural setting of historic districts, neighborhoods, downtown streetscapes, walkways and commercial applications. Built to withstand the tests of time, The Generation Series bridges the gap between aesthetic ambiance and modern lighting performance.

### CVL CUTOFF SERIES

For applications with strict light control ordinances, the Generation Series CVL cutoff luminaires are equipped with multifaceted, precision formed Type III Cutoff [3C] or Type V Cutoff [5C] optical systems. The vertical lamp position optimizes light output and distribution uniformity while minimizing direct glare. Cutoff series luminaires offered standard with a brushed aluminum chimney to house electrical components. Enhance decorative appeal with an optional matte black chimney [CC] or copper anodized access top and chimney [CA].

DARK SKY COMPLIANT CO Cutoff

**NOTE**: In cutoff distributions only.

### INTERNAL HOUSE SIDE SHIELD

Factory installed or field retrofitable, the internal house side shield reduces light concentration behind the pole while maintaining street side efficiency.

### DECORATIVE BRASS BANDING

To further enhance the aesthetics of the Acorn and Victorian glow top versions, a decorative brass band [B] is available.

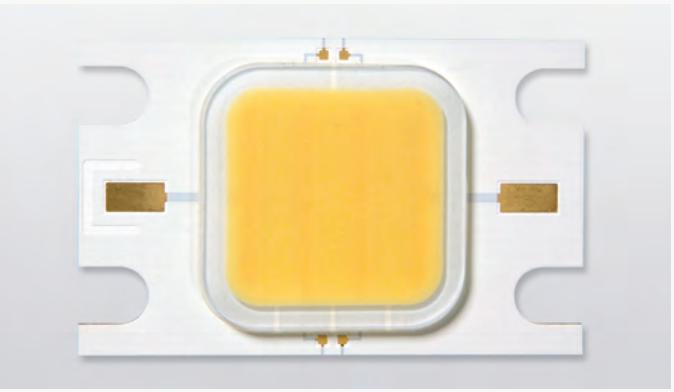
### CONCENTRATED DOWNLIGHT

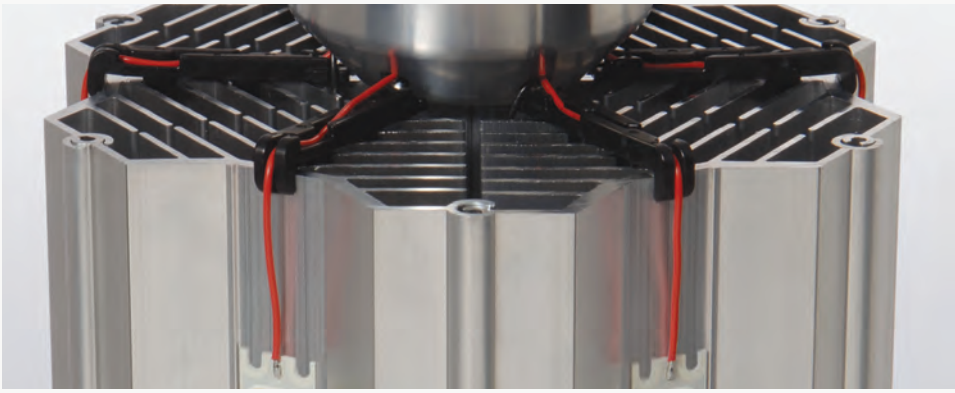
Increase downward efficiency, minimize uplight and retain the appealing soft glow of Victorian and Acorn glow top configurations with the optional downlight reflector [D].

# LED TECHNOLOGY

**EXPERTISE IN HARSH ENVIRONMENTS**
Through a rich history of innovation and technological advances in electrical product and component manufacturing, Cooper Lighting has amassed extensive knowledge and expertise in reliable luminaire design. Precise engineering is backed by rigorous qualification testing protocols that mimic the rigors of the exterior environment to ensure reliable performance over the product lifetime.

Exterior lighting specifications frequently designate a high level of surge immunity due to transient voltages. Traditional magnetic HID ballasts inherently provide between 7.5kV and 10kV of surge protection. However, due to the construction of electronic ballasts or LED drivers, the inherent surge resistance can be far less. To bridge this gap and provide the expected reliability for exterior roadway applications, the Generation Series LED is supplied standard with a replaceable circuit module designed to withstand 10kV of transient line surge.





**HIGH RELIABILITY + LOW MAINTENANCE**
Light emitting diodes are solid state devices that do not have filaments or glass components that can break causing the source to fail. Due to solid state construction, an LED light source is less susceptible to vibration, therefore reducing the risk of premature failure and improving component longevity. Over 70% of the initial light output is maintained after 50,000 hours of operation. In application, a LED fixture can last six [6] times longer than metal halide sources or nearly three [3] times longer than high pressure sodium sources.

**RIGOROUS INTERNAL PROCESS + TESTING**
The performance of LED luminaires relies heavily upon thermal management. Utilizing the most current techniques for optical design, thermal modeling, and qualification testing ensures that the most reliable product is delivered to the market. In addition, Cooper Lighting has invested significant effort to manage the thermal challenges associated with implementing LED technology in high ambient environments. All components have been fully evaluated to perform in ambient temperatures up to 40°C [104°F].

**DRAMATIC ADVANCES IN LED TECHNOLOGY**
Dramatic advances in LED technology have broadened the applicability of this type of illumination in outdoor applications. Compared to traditional metal halide and high pressure sodium technologies, LED light sources can deliver longer life, enhanced energy efficiency, greater eco-friendliness, lowered maintenance demands and equal or better quality of light. Today, bright-white LEDs have more than tripled their light output as compared with just a few years ago. That and other ongoing performance improvements are helping LEDs gain wider acceptance in outdoor, commercial and municipal applications.

**WHITE LIGHT + COLOR CONSISTENCY**
Producing 5,000 source lumens, the Generation Series LED luminaire provides comparable performance to a 100W metal halide luminaire with excellent color rendering and a brilliant white color temperature. The optical design yields effective distribution shaping and superior glare control.

**QUALITY OF LIGHT—UNIFORMITY OF ILLUMINATION**
When LEDs are implemented properly they can provide impressive improvements in uniformity [maximum to minimum footcandles] when compared to traditional metal halide or high pressure sodium sources. This improvement in uniformity allows the observer to focus on visual tasks, reduces eye strain and creates a more comfortable and inviting outdoor environment for pedestrians and drivers alike.

**EFFICIENCY + EFFICACY**
Both energy efficiency and light efficacy have improved with LEDs. It is well documented that the light output relative to the electrical energy consumed has increased rapidly in recent years. Continuous advancement in research and development of LEDs has improved the energy efficiency commonly measured in lumens per watt [LPW]. Advancement in optical control of the light produced by LEDs, which is fundamentally different than traditional sources, has also been improving over time. Enhancements in the way light is directed means that light can oftentimes be more effectively utilized versus other sources. The combination of the two drives down the cost of light in both initial cost and operating cost.

## PARTNERING TO ENCOURAGE ENVIRONMENTAL CONSERVATION

Cooper Lighting builds on a long history of reliability and innovation to ensure superior luminaire performance. Advancements in LED technology coupled with Cooper Lighting's expertise in design and manufacturing to create the Generation Series LED luminaire—an elegant lighting solution with conservative energy and resource consumption.


## LIVABLE CITIES AND NEIGHBORHOODS

Livable cities are designed with careful thought toward encouraging pedestrian traffic and providing support for bicycling and public transit as complementary modes of transportation. They work to integrate pedestrian improvements into neighborhood plans and street and corridor projects. Livable Cities advocate completion of pedestrian projects citywide, support revitalization of the city's plazas and public open spaces and assist the efforts of neighborhood groups geared toward improving the walkability of their community through technical support and advocacy. Urban lighting is a critical component of pedestrian movement and the environmental ambiance. It should be used to create illumination scenes offering more secure, inviting, attractive, appropriate and positive images for people who live and work in the surrounding community.

## SUSTAINABLE BY DESIGN

Fixtures with LED sources have an environmental advantage in that LEDs contain no mercury, have extended life, produce less waste and are made from fully recyclable materials.

### $CO_2$ OFFSET

The supply of fossil fuels impacts lighting and all energy consuming products. Lighting fixtures constitute a large percentage of electric utility bills—as much as 40% in some commercial facilities. Lighting will need to change to meet higher mandated efficiency levels. Changes in the lighting industry are being driven by energy legislation that has been established to meet concerns of excessive consumption. The future of lighting lies with high efficiency products that meet lower energy consumption levels.

### RoHS[1]

A significant portion of RoHS legislation is the ban on lead, which can directly affect lighting products. All LED products produced by Cooper Lighting are RoHS compliant, containing neither lead nor mercury unlike some traditional sources.

### CONSERVES RESOURCES

The sustainability of the Generation Series LED luminaire dramatically reduces maintenance and service costs over traditional sources. Fixtures which last longer will need to be replaced less frequently resulting in fewer service calls.

### ENERGY SAVINGS PLATFORM

Upgrading to a Generation Series LED decorative fixture can save hundreds of dollars over the life of the fixture via significantly reduced electric demand. Each Generation Series LED luminaire consumes up to 75% less energy than a comparable HID system when coupled with dimming and control features.

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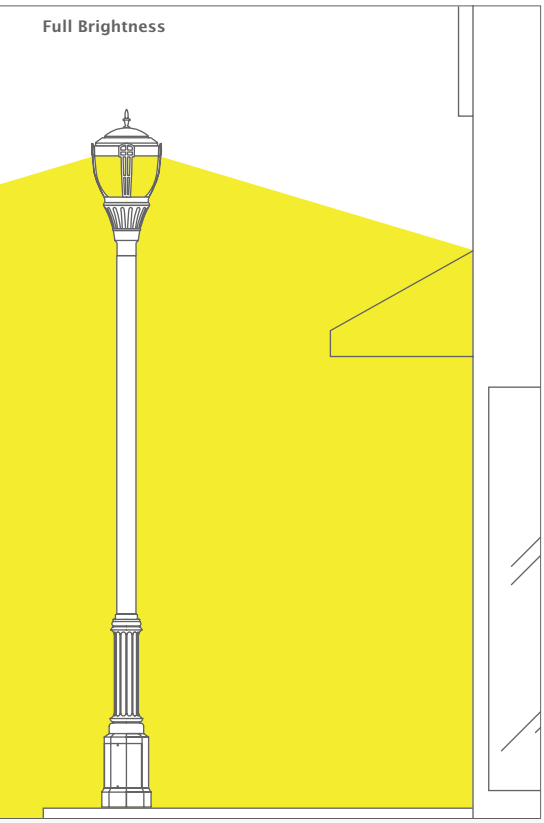
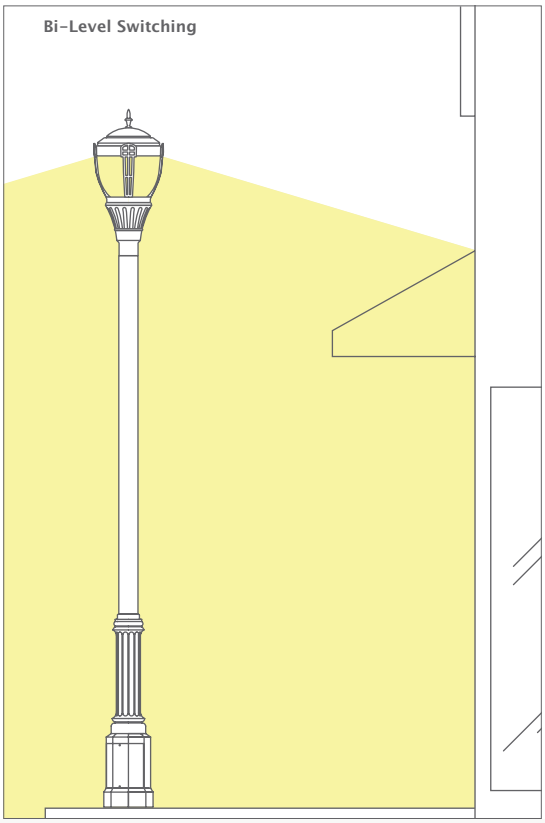
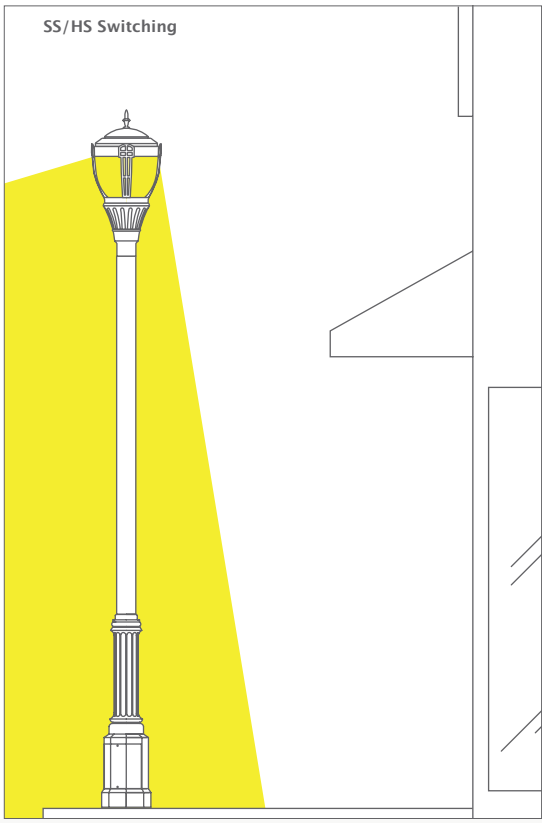
**NOTE: 1** Beginning July 1 2006, based on the legislation enacted by European Union [RoHS], the directive of the restriction of the use of certain hazardous substances in electrical and electronic equipment makes manufacturers responsible for eliminating the products that contain—Lead, Mercury, Cadmium, Hexavlent Chromium, Polybrominated Biphenyls [PBB] or Plybrominated Dipenyl Etheres [PBDE].

# ENERGY SAVINGS



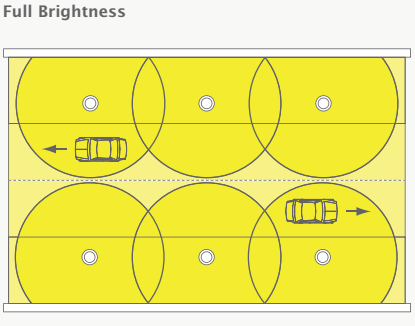



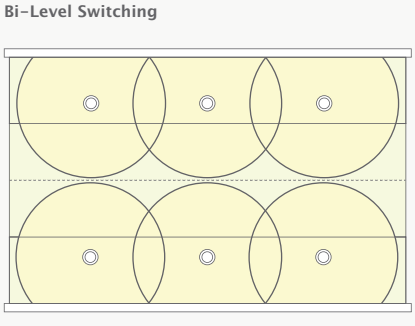



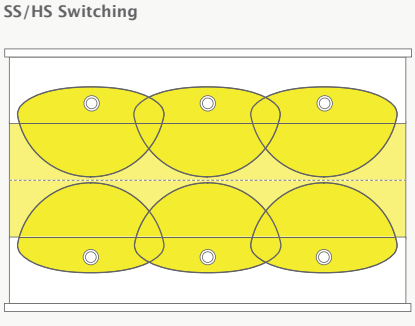

**TASK DRIVEN ILLUMINATION**
Offered in Type III and Type V refractive units or cutoff Type III and Type V clear globe units, the Generation Series luminaires focus light on the task at hand instead of producing wasteful and uncontrolled illumination.

**CURFEW COMPLIANCE**
Legislation from forward leaning communities incorporates energy saving measures beyond maximum source wattage. Curfew regulations call for lighting power reduction. When alternating luminaires are turned off to accomplish the power reduction, uniformity is greatly reduced, impeding visibility and the feeling of security.
For LED equipped luminaires, the Bi-Level Switching [2L] option provides a uniform 50% power reduction. Dual drivers wired to alternating banks produce energy saving power reductions while closely maintaining critical-to-safety lighting uniformity levels.

**SELECTIVE SWITCHING SOLUTIONS**
For main roadway thoroughfares or other areas with constant light level requirements, energy saving power reductions may be obtained through Street Side/House Side Switching [SH]. Available only on LED equipped luminaires, specifying this switching option allows independent operation of the house side and the street side of the distribution through separate circuiting. During late night or post business hours a single driver can be powered down to save 50% of energy consumption while closely maintaining opposing light levels.



## MEETING ENERGY REDUCTION GOALS

Project payback analysis and product performance requirements vary greatly from application to application. The Generation Series LED luminaire offers alternate source options and customizable features focused on tailoring the light distribution and energy consumption to meet the specified application requirements.

## ENERGY SAVING STRATEGIES

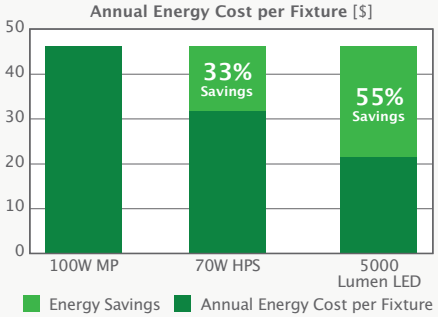
Thoughtful design and application knowledge allows the Generation Series to reduce energy consumption by as much as 75% when teamed with available control options. High efficacy sources, new source technologies and switching solutions allow numerous energy saving scenarios to meet a multitude of application and legislative requirements.

## SOURCE SELECTION

Light source selection can dramatically impact the operating and maintenance costs of a lighting system and should be the first consideration when addressing concerns over energy consumption and total cost of ownership. Sources with higher lumen maintenance values reduce the number of fixtures needed to achieve consistent lighting levels over the fixture's installed life. Initial savings are compounded by decreased energy consumption and less frequent maintenance intervals.

| Lamp Source | Delivered Lumens [1] | Input Watts | Total Annual Cost [2] | Annual Savings [3] | % Savings |
|---|---|---|---|---|---|
| 100W Pulse Start Metal Halide [MP] | 3,950 | 129 | $2,354 | -- | -- |
| 70W High Pressure Sodium [HPS] | 2,950 | 86 | $1,570 | **$785** | **33%** |
| 5000 Lumen Light Emitting Diodes [LED] | 2,850 | 58 | $1,059 | **$1,296** | **55%** |

**NOTES: 1** Delivered lumens is the number of lumens that reach the surface after optical losses and light loss factors are considered. **2** Total annual cost is the cost of operating 50 fixtures 10 hours per day with a national average energy cost of $0.10 per kWh. Annual Cost = (Input watts) * (# of fixtures) * (operating hours) * (days/year) * (kWh/1000). **3** Annual savings is the money saved by operating 50 fixtures for 10 hours per day with the listed source over the standard 100W MP lamp. Annual Savings = (Total Annual 100W MP cost) - (Total Annual Cost).




## CONTROL OPTIONS

Beyond efficient light source selection, switching options offer the next level of energy saving opportunities. On average, lighting installations operate for approximately 10 hours each evening. During this time, only 4-6 hours are during actual business hours and peak activity periods. The Generation Series offers LED switching options that achieve a 50% power reduction while closely maintaining lighting uniformity levels that ensure safety and security.

| Lamp Source | Input Watts | Operating Hours | Total Annual Cost [1] | Annual Savings [2] | % Savings |
|---|---|---|---|---|---|
| 5000 Lumen LED [Full Power] | 58 | 5 | $529 | -- | -- |
| [Optional Switching] | 29 | 5 | $265 | **$265** | **50%** |

**NOTES: 1** Total annual cost is the cost of operating 50 fixtures 5 hours per day with a national average energy cost of $0.10 per kWh. Annual Cost = (Input watts) * (# of fixtures) * (operating hours) * (days/year) * (kWh/1000). **2** Annual savings is the money saved by operating 50 fixtures at the low level for 5 hours per day. Annual Savings = (Total Annual [Full Power] Cost) - (Total Annual [Optional Switching] Cost).

## RETROFIT INSTALLATION

The Generation Series LED light engine is backwards compatible, requiring no modification to existing refractive globe Generation Series HID luminaires installed in the field. The light output is tuned to match the properties of HID sources, optimizing photometric performance and visual appearance while enabling retrofit opportunities.

Commensurate with the standard maintenance features offered in the Generation Series, installation of an LED replacement module is quick and easy. The electrical quick disconnect of the LED replacement module matches existing HID connections. Access to the electrical quick disconnect is through the housing door via a quarter turn fastener. Inside the lamp compartment the HID lamp and ballast module is mounted on a cast aluminum tray that can be removed by loosening two [2] toolless thumb screws. Remove the HID module and reconnect the LED replacement module using the same electrical connection and thumbscrew arrangement. Once the refractive globe is put back into place and the housing door is closed enjoy the energy savings.

# SPECIFICATION FEATURES






**CONSTRUCTION**
**Housing**: Heavy-duty cast aluminum housing and removable door are 3.5G vibration tested to ensure strength of construction and longevity in application. A single quarter turn fastener on the removable door provides toolless access to the electrical compartment, terminal block and the optional internally mounted photocontrol receptacle for ease of installation and maintenance.
**Cage Assemblies**: Cage assembly uprights and medallions are manufactured of heavy-duty cast aluminum and mounted to the exterior of the base housing via four [4] stainless steel fasteners. Cage rings constructed of extruded aluminum and finished to match housing.
**Tops and Finials**: Choose from seven [7] spun aluminum or acrylic tops and four [4] cast aluminum finials for customized fixture style. All hard mount tops are heavy-duty spun aluminum or for Cascade, cast aluminum. Select spun tops offer top access for toolless entrance into the lamp compartment during relamping or maintenance.
**Twistlock Globe**: An optional twistlock globe assembly [available on the Acorn and Classical bases only] offers ease of maintenance through toolless access to the lamp compartment by twisting the top refractor assembly and lifting it from the mating lock plate.

**OPTICAL**
**Refractive Globe**: High efficiency refractive optical systems constructed of lighting grade acrylic, or optional polycarbonate[1]. Precisely designed utilizing a combination of refractive and reflective prisms to create Type III or Type V distributions while maintaining a consistent exterior form. CVL cutoff and Cascade series luminaires offered standard with a clear injection molded lighting grade acrylic globe. Lighting grade acrylic ensures long lasting optical clarity and resistance to the gradual discoloration that results from exposure to sunlight or UV radiating sources.
**Reflector + Chimney** [cutoff versions only]: Generation Series CVL cutoff luminaires equipped with multifaceted, precision formed Type III Cutoff [3C] or Type V Cutoff [5C] optical systems. Chimney housing electrical components supplied standard with a brushed aluminum finish or with an optional matte black [CC] or copper anodized [CA] finish.

**ELECTRICAL**
HID ballast or LED driver assembly mounted to a toolless removable tray with quick disconnects for ease of installation and maintenance. Wide toolless access door provides ample hand and tool room for terminal block and plug-in starter access [HID only]. Available with 58W LED and HID sources up to 400W metal halide or 250W high pressure sodium.
**LED Light Engine**: Solid State LED engine provides even and uniform illumination without the pixilation common to LED applications. Thermal management incorporates both conduction and natural convection to transfer heat rapidly away from the LED source and retain optimal efficiency and light output. The LED replacement module is backwards compatible with existing Generation Series luminaire installations enabling retrofit opportunities. For low temperature operation the Generation Series luminaires are suitable to -30°C.

**MOUNTING**
Base casting slipfits over a standard 3" O.D. tenon and secured via four [4] stainless steel allen head fasteners. 3.5G vibration tested [2G Cascade].

**NOTE: 1** Polycarbonate not recommended for Metal Halide applications.

## EASE OF MAINTENANCE

Ease of maintenance was a leading design consideration for Generation Series decorative post top luminaires. Without considering routine maintenance, by treating it secondary to the form, a fixture can become a liability instead of an asset. Consideration must be given to the access to electrical components, types of ballasts and drivers that can be used and ease of relamping when selecting a decorative product.

## FINISH

Cast and spun components finished in a 5 stage premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult the McGraw-Edison Architectural Colors brochure for a complete selection of standard colors include black, bronze, grey, white, dark platinum, graphite metallic, and hartford green. RAL and custom color matches available.

**BK**
Black

**AP**
Grey

**BZ**
Bronze

**WH**
White

**DP**
Dark Platinum

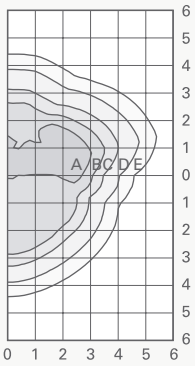
**GM**
Graphite Metallic

**GN**
Hartford Green

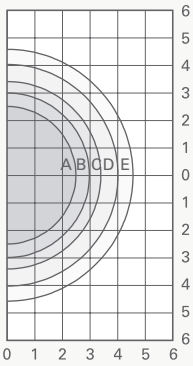
Patents Pending

# PHOTOMETRICS

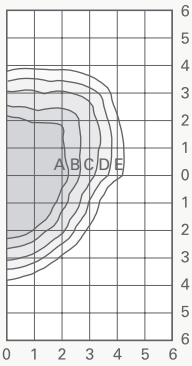
[complete IES files available at www.cooperlighting.com]



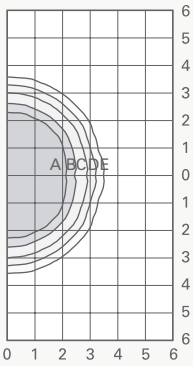

**GXX-150-MP-X-3-AX-D**
150-Watt MP
14,000-Lumen Lamp
Type III w/Glow Top + Downlight Reflector




**GXX-150-MP-X-5-AX-D**
150-Watt MP
14,000-Lumen Lamp
Type V w/Glow Top + Downlight Reflector




**GXX-100-HPS-X-3C**
100-Watt HPS
9,500-Lumen Lamp
Type III Cutoff

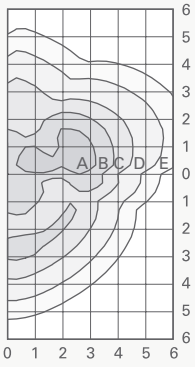



**GXX-100-HPS-X-5C-XC**
100-Watt HPS
9,500-Lumen Lamp
Type V Cutoff w/Cage

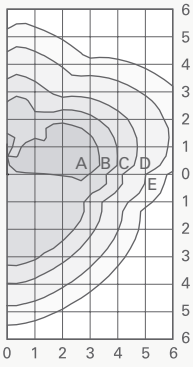
**FOOTCANDLE TABLE**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

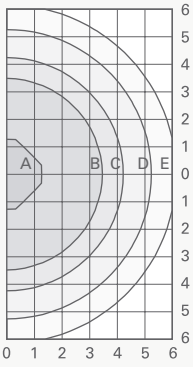
| Mounting Height | Footcandle Values for Isofootcandle Lines | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| **150W** [3-AX-D/5-AX-D] | | | | | |
| **10'** | **1.00** | **0.50** | **0.20** | **0.10** | **0.05** |
| 12' | 0.69 | 0.35 | 0.14 | 0.07 | 0.04 |
| 15' | 0.44 | 0.22 | 0.09 | 0.05 | 0.02 |
| **100W** [3C/5C-XC] | | | | | |
| 10' | 2.88 | 1.44 | 0.72 | 0.29 | 0.15 |
| **12'** | **2.00** | **1.00** | **0.50** | **0.20** | **0.10** |
| 15' | 1.28 | 0.64 | 0.32 | 0.13 | 0.06 |



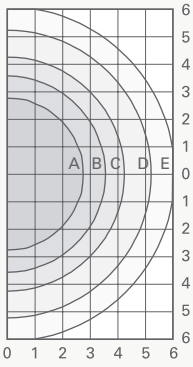

**GXX-150-MP-X-3-CX**
150-Watt MP
14,000-Lumen Lamp
Type III




**GXX-150-MP-X-3-CX-D**
150-Watt MP
14,000-Lumen Lamp
Type III w/Downlight Reflector




**GXX-150-HPS-X-5-CX**
150-Watt HPS
16,000-Lumen Lamp
Type V

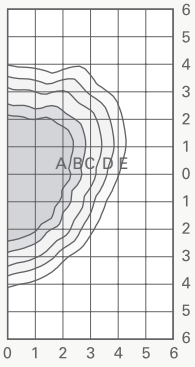



**GXX-150-HPS-X-5-CX-D**
150-Watt HPS
16,000-Lumen Lamp
Type V w/Downlight Reflector

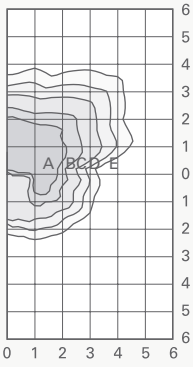
**FOOTCANDLE TABLE**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

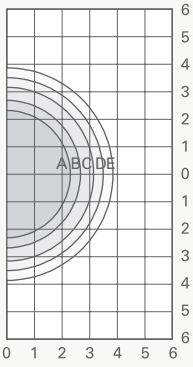
| Mounting Height | Footcandle Values for Isofootcandle Lines | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| **150W** [3-CX/3-CX-D/5-CX/5-CX-D] | | | | | |
| **10'** | **2.00** | **1.00** | **0.50** | **0.20** | **0.10** |
| 12' | 1.38 | 0.69 | 0.35 | 0.14 | 0.04 |
| 15' | 0.88 | 0.44 | 0.22 | 0.09 | 0.02 |



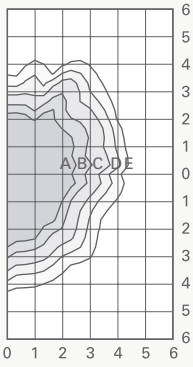

**GXX-150-HPS-X-3C**
150-Watt HPS
16,000-Lumen Lamp
Type III Cutoff




**GXX-150-HPS-X-3C-HS**
150-Watt HPS
16,000-Lumen Lamp
Type III Cutoff w/ House Side Shield




**GXX-150-HPS-X-5C**
150-Watt HPS
16,000-Lumen Lamp
Type V Cutoff

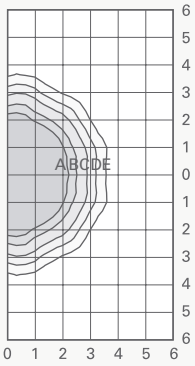



**CAX-150-MP-X-3C**
150-Watt MP
14,000-Lumen Lamp
Cascade Type III Cutoff

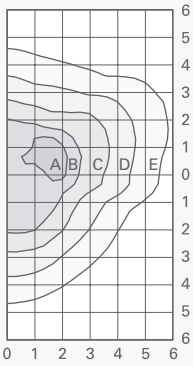
**FOOTCANDLE TABLE**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

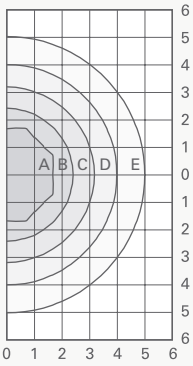
| Mounting Height | Footcandle Values for Isofootcandle Lines | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| **150W** [3C/3C-HS/5C] | | | | | |
| 10' | 2.25 | 1.13 | 0.45 | 0.23 | 0.11 |
| 12' | 1.56 | 0.78 | 0.31 | 0.16 | 0.08 |
| **15'** | **1.00** | **0.50** | **0.20** | **0.10** | **0.05** |
| **150W** [3C-Cascade] | | | | | |
| **10'** | **1.00** | **0.50** | **0.20** | **0.10** | **0.05** |
| 12' | 0.69 | 0.35 | 0.14 | 0.07 | 0.04 |
| 15' | 0.44 | 0.22 | 0.09 | 0.05 | 0.02 |



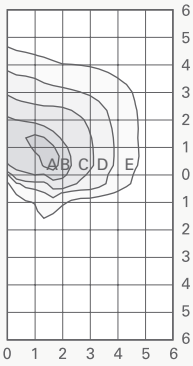

**CAX-100-HPS-X-5C**
100-Watt HPS
9,500-Lumen Lamp
Cascade Type V Cutoff




**GXX-50-LED-E1-3**
58-Watt LED
4,880-Source Lumens
Type III




**GXX-50-LED-E1-5**
58-Watt LED
4,880-Source Lumens
Type V




**GXX-50-LED-E1-3-SH**
58-Watt LED[1]
4,880-Source Lumens[1]
Type III w/House Side Switching

**FOOTCANDLE TABLE**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

| Mounting Height | Footcandle Values for Isofootcandle Lines | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| **100W** [5C-Cascade] **58W** [LED] | | | | | |
| **10'** | **1.00** | **0.50** | **0.20** | **0.10** | **0.05** |
| 12' | 0.69 | 0.35 | 0.14 | 0.07 | 0.04 |
| 15' | 0.44 | 0.22 | 0.09 | 0.05 | 0.02 |

**NOTE: 1** 29W/2,440 source lumens after switching.

# GENERATION SERIES—HID Ⓔ

## ORDERING INFORMATION

**SAMPLE NUMBER:** GAR-150-MP-120-3-ACV-BZ

**PRODUCT FAMILY**
**GAR**=Acorn Base
**CAA**=Cascade w/ Acorn Base [1, 2]
**GAT**=Architectural Base
**CAR**=Cascade w/ Architectural Base [1, 2]
**GLC**=Classical Base
**CAC**=Cascade w/ Classical Base [1, 2]

**LAMP WATTAGE** [3]
**MP**
**50**=50W
**70**=70W
**100**=100W
**150**=150W
**175**=175W
**250**=250W
**320**=320W
**HPS**
**50**=50W
**70**=70W
**100**=100W
**150**=150W
**250**=250W
**MH** [4]
**175**=175W
**250**=250W
**400**=400W [5]

**LAMP TYPE**
**MP**=Pulse Start Metal Halide
**HPS**=High Pressure Sodium
**MH**=Metal Halide [4]

**VOLTAGE** [6]
**120**=120V
**208**=208V
**240**=240V
**277**=277V
**480**=480V
**347**=347V
**MT**=Multi-Tap [7]
**TT**=Triple-Tap [7]

**REFRACTOR TYPE**
**3**=Type III
**3C**=Cutoff Type III
**5**=Type V
**5C**=Cutoff Type V

**TOP TYPE**
**A**=Acorn [8]
**C**=Classical
**L**=Lantern [Top Access] [1]
**M**=Modern [8]
**N**=Nostalgic [Top Access]
**R**=Architectural [Top Access]
**U**=Avenue [Top Access] [9]
**V**=Victorian [8]

**CAGE TYPE**
**A**=Architectural
**C**=Classical
**M**=Modern
**U**=Avenue [9]
**L**=Lantern [1]
**X**=None

**FINIAL TYPE**
**A**=Architectural
**M**=Modern
**N**=Nostalgic
**V**=Victorian
**X**=None

**COLORS** [10] [add as suffix]
**AP**=Grey
**BZ**=Bronze
**BK**=Black
**DP**=Dark Platinum
**GM**=Graphite Metallic
**GN**=Hartford Green
**WH**=White

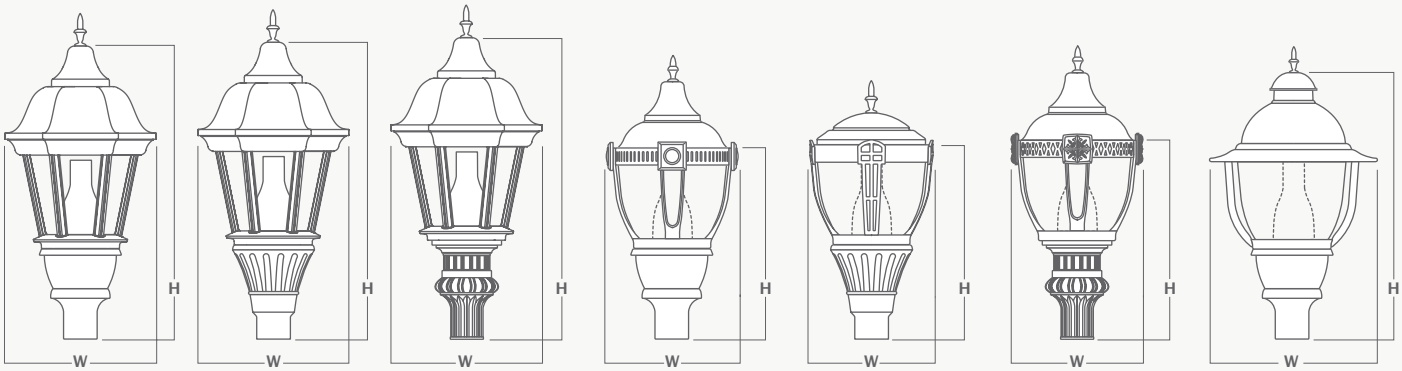
**OPTIONS + ACCESSORIES** [see below]

## OPTIONS + ACCESSORIES [Must be listed in the order shown and separated by a dash]

**OPTIONS** [add as suffix]
**F**=Single Fuse [120, 277 or 347V] [11]
**FF**=Double Fuse [208, 240 or 480V] [11]
**L**=Lamp Included
**A**=Twistlock Refractor [8]
**B**=Decorative Brass Banding [12]
**P**=Polycarbonate Refractor [8, 13]
**R**=Internal NEMA Photocontrol Receptacle
**G**=Gold Cage and Finial
**D**=Downlight Reflector [8]
**CA**=Copper Anodized Accents [2, 14]
**CC**=Matte Black Electrical Cover [2]
**HS**=House Side Shield [2]

**ACCESSORIES** [order separately]
**OA/RA1016**=NEMA Twistlock Photocontrol—Multi-Tap
**OA/RA1027**=NEMA Twistlock Photocontrol—480V
**OA/RA1201**=NEMA Twistlock Photocontrol—347V
**AA2000**=House Side Shield—Mogul-Base Socket [8]
**AA2001**=House Side Shield—Medium-Base Socket [8]
**MA1220**=House Side Shield—Cutoff [2]

## DIMENSIONS




**CAR**
W=20-3/8" [516mm]
H=40-1/2" [1022mm]

**CAC**
W=20-3/8" [516mm]
H=40-7/8" [1038mm]

**CAA**
W=20-3/8" [516mm]
H=41-1/4" [1048mm]

**GAT**
W=18-4/5" [478mm]
H=24" [610mm]

**GLC**
W=17-3/5" [447mm]
H=24-3/4" [610mm]

**GAR**
W=18-3/4" [476mm]
H=25-1/3" [643mm]

**GAT Avenue**
W=25-3/8" [645mm]
H=37-3/8" [949mm]

## CERTIFICATIONS

| | |
|---|---|
| 25°C Ambient Temperature | CSA Listed |
| 3.5G Vibration Tested [2G Cascade] | ISO 9001 |
| U.L. Listed | CO [Cutoff] * |

**NOTE** * In select configurations only.

## WATTAGE TABLE

| Lamp Type | Wattage |
|---|---|
| Pulse Start Metal Halide | 50, 70, 100, 150, 175, 250, 320W |
| High Pressure Sodium | 50, 70, 100, 150, 250W |
| Metal Halide | 175, 250, 400W |

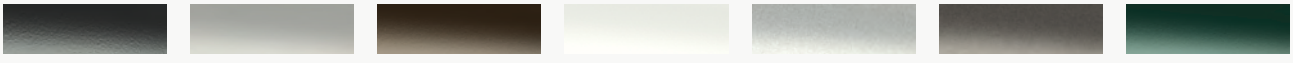
## EPA

| Effected Projected Area |
|---|
| GAT/GLC/GAR 2.1 |
| CAR/CAC/CAA 2.4 |

## SHIPPING DATA

| Approximate Net Weight |
|---|
| GAT/GLC/GAR 50 [23 kgs.] |
| CAR/CAC/CAA 50 [23 kgs.] |

## STANDARD COLORS



**BK** Black
**AP** Grey
**BZ** Bronze
**WH** White
**DP** Dark Platinum
**GM** Graphite Metallic
**GN** Hartford Green

**NOTE: 1** Cascade bases must be ordered with lantern top and lantern cage. **2** Only available with cutoff distributions. **3** Standard with medium-base socket for 150W and below metal halide. **4** 175, 250 and 400W MH available for non-US markets only. **5** Requires reduced envelope lamp. **6** Products also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information. **7** Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V. **8** Not available with cutoff distributions. **9** Avenue cage must be ordered with avenue top. **10** Custom and RAL color matching available upon request. Consult your Cooper Lighting Representative. **11** Must specify voltage. **12** When brass banding is chosen, finial finished in gold. Not available with Lantern or Avenue top. **13** Polycarbonate parts used with Metal Halide lamps will eventually yellow. **14** Chimney and access top finished in copper. **15** Specifications and dimensions subject to change without notice.

# GENERATION SERIES—LED

## ORDERING INFORMATION

**SAMPLE NUMBER:** GAR-50-LED-E1-3-MMM-BK

**PRODUCT FAMILY**
**GAR**=Acorn Base
**GAT**=Architectural Base
**GLC**=Classical Base

**LUMEN PACKAGE**
**50**=5000 Lumens [1]

**SOURCE TYPE**
**LED**=Solid State Light Emitting Diodes

**VOLTAGE**
**E1**=Electronic [120-277V]

**REFRACTOR TYPE**
**3**=Type III
**5**=Type V

**TOP TYPE**
**A**=Acorn
**C**=Classical
**M**=Modern
**N**=Nostalgic [Top Access]
**R**=Architectural [Top Access]
**U**=Avenue [Top Access]
**V**=Victorian

**CAGE TYPE**
**A**=Architectural
**C**=Classical
**M**=Modern
**U**=Avenue
**X**=None

**FINIAL TYPE**
**A**=Architectural
**M**=Modern
**N**=Nostalgic
**V**=Victorian
**X**=None

**COLORS** [2] [add as suffix]
**AP**=Grey
**BZ**=Bronze
**BK**=Black
**DP**=Dark Platinum
**GM**=Graphite Metallic
**GN**=Hartford Green
**WH**=White

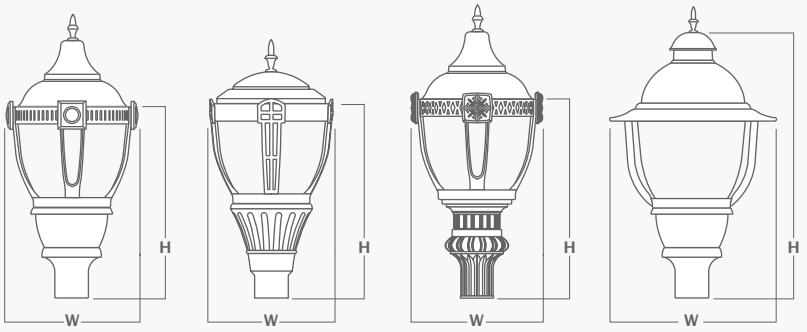
**OPTIONS + ACCESSORIES** [see below]

## OPTIONS + ACCESSORIES [Must be listed in the order shown and separated by a dash]

**OPTIONS** [add as suffix]
**A**=Twistlock Refractor
**B**=Decorative Brass Banding [3]
**P**=Polycarbonate Refractor
**R**=Internal NEMA Photocontrol Receptacle
**G**=Gold Cage and Finial
**D**=Downlight Reflector
**2L**=Bi-Level Switching Capable
**SH**=Street Side/House Side Switching Capable
**8030**=80 CRI/3000K CCT [4]

**ACCESSORIES** [order separately]
**MA1252**=10kV Circuit Module Replacement
**GLR-50-E1**=5000 Lumen LED Replacement Module with 120-277V Universal Driver
**GLR-50-E1-2L**=5000 Lumen LED Replacement Module with 120-277V Universal Driver and Bi-Level Switching Capable
**GLR-50-E1-SH**=5000 Lumen LED Replacement Module with 120-277V Universal Driver and Street Side/House Side Switching Capable

## DIMENSIONS




**GAT**
**W**=18-4/5" [478mm]
**H**=24" [610mm]

**GLC**
**W**=17-3/5" [447mm]
**H**=24-3/4" [610mm]

**GAR**
**W**=18-3/4" [476mm]
**H**=25-1/3" [643mm]

**GAT Avenue**
**W**=25-3/8" [645mm]
**H**=37-3/8" [949mm]

## CERTIFICATIONS

| | |
|---|---|
| 40°C Ambient Temperature | CSA Listed |
| 3.5G Vibration Tested | ISO 9001 |
| U.L. Listed | CO [Cutoff] * |

**NOTE** * In select distributions only.

## WATTAGE TABLE

| Source Type | Wattage |
|---|---|
| LED | 58W |

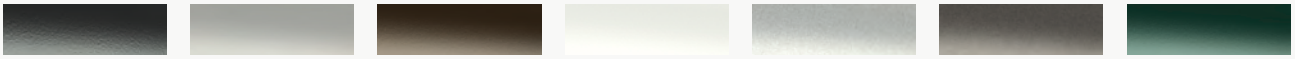
## EPA

**Effected Projected Area**
**GAT/GLC/GAR** 2.1

## SHIPPING DATA

**Approximate Net Weight**
**GAT/GLC/GAR** 50 [23 kgs.]

## STANDARD COLORS



**BK**
Black

**AP**
Grey

**BZ**
Bronze

**WH**
White

**DP**
Dark Platinum

**GM**
Graphite Metallic

**GN**
Hartford Green

**NOTE:** **1** LED module nominal source lumens prior to optical and configuration losses based on 65 CRI/5000K package at 25°C ambient. Refer to IES files for delivered lumens by configuration. **2** Custom and RAL color matching available upon request. Consult your Cooper Lighting Representative. **3** When brass banding is chosen, finial finished in gold. **4** Apply a 0.77 lumen multiplier. **5** Specifications and dimensions subject to change without notice.

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