



**BOLLARD SERIES
PATHWAY LUMINAIRES**

THE ARCHITECTURE OF FORM AND LIGHT

MCGRAW-EDISON'S PATHWAYS LUMINAIRES

The McGraw-Edison Bollard Series has been designed to do just one thing — *PERFORM*.

BRUTALLY TOUGH CONSTRUCTION

Construction features beyond common is where McGraw-Edison steps above the ordinary.

Whether mother nature or man made, low level pathway luminaires have to hold up in the worst of conditions. The Bollard Series endures and rises above the toughest environments.

A heavy-wall cast-aluminum base sets the anchor and assures the strength to endure. A 1/8" extrusion shields and protects a high power factor electrical assembly. Cool to the touch, heavy-wall cast tops and louvers veil and protect the state-of-the-art optical performance. Silicone and EPDM Gasketing seals and protects any entry of contaminants that risk impacting performance.

ILLUMINATING IN PERFORMANCE

Due to their low-level application, bollards need to be low glare else they risk disabling driver and pedestrian visibility. Often, low glare comes at a cost of reduced fixture efficiency. The McGraw-Edison Series of bollards challenge that assumption.

The Louvered Series optical module provides exceptional, glare free performance, while allowing maximum light projection for wide fixture spacings. Spacings up to 8 times mounting height are possible while still meeting IES recommended 4:1 uniformity ratios.

The Standard Series provides low glare, point of reference illumination to mark the path while providing uniform, wide patterns enabling the identification of borders, pedestrians and other objects.

CLASSIC IN AESTHETICS

The Bollard Series maintain the simple, yet classic forms that blend into the environments they illuminate. Their form provides a sense of proportion to both anchor architecture while promoting a transition to the pedestrian scale.

FOUR FORMS—ONE GOAL: PERFORM.

MCGRAW-EDISON®





LOUVERED SERIES—DESIGN FEATURES

TOP

Rugged, minimum 5/32" thick cast aluminum top cap secured via a concealed stainless steel allen screw with twist removal mechanism for lamp access. Flow through ventilation assures cool to the touch top.

LOUVERS

Cast Aluminum Louver blades provide sharp cutoff providing no direct light above 90°. Louvers are secured to the shaft via tamper resistant stainless steel rods and fasteners.

LAMP ENCLOSURE

Lamp enclosure is one-piece tempered glass with internal flutes for even disbursement of illumination. Decorative colored glass optional. Globe is fully gasketed via EPDM material. Socket is porcelain, medium-base for HID lamp sources.

LOWER HOUSING

Nominal 1/8" thick extruded aluminum housing. Bollard housing is secured to the base with flathead, counter-sunk screws for smooth, uncluttered appearance.

ELECTRICAL

High Power Factor ballast for -20°F starting. Product is factory mounted to the base. Quick disconnects provided between lamp and electrical assembly. Metal Halide and High Pressure Sodium lamp sources up to 100W Metal Halide or High Pressure Sodium coated lamps.

FINISH

Premium fade and abrasion resistant, TGIC Polyester Powder Coat Finish. Standard colors are Bronze, Architectural White, Grey and Black. Other architectural finish colors available including all RAL matches.

BASE

Rugged cast aluminum. Completely concealed.

MOUNTING

Base mounts onto foundation with three (3) 1/2" x 12" anchor bolts on a 5" Dia. bolt circle (a centrally located 2 7/8" x 3 1/2" wire entrance opening provided).



LOUVERED SERIES—DESIGN FEATURES



**BSL
SQUARE LOUVERED SERIES**



**BRL
ROUND DOME TOP
LOUVERED SERIES**

STANDARD SERIES—DESIGN FEATURES

TOP

Rugged, cast aluminum. Provides rapid heat dissipation. Encloses the upper reflector so it is hidden from view. Tamper-proof screws provide easy access to lamp compartment.

HOUSING

Consists of a heavy-duty, seamless extruded aluminum tube. Lifts off base for easy access to ballast.

OPTICS

Lower dispersing reflector, in conjunction with a truncated, octagonal upper collecting reflector, provides low-glare, highly efficient illumination with optimum uniformity.

EXAMPLE: Using 70W HPS lamps with Bollard Series luminaires mounted on 20' centers produce a symmetric light pattern with a max. to min. uniformity ratio of less than 4:1.

LENS

1/4" wall, impact-resistant clear acrylic. Polycarbonate lens is optional.

PRISMATIC REFRACTOR

All Bollard Series luminaires are available with an optional prismatic borosilicate glass refractor to provide efficient, low-glare light distribution.

GASKETING

Bollards are designed to form a single, integral unit that is completely gasketed and sealed from outside contaminants.

ELECTRICAL

High Power Factor ballast for -20°F starting. Product is factory mounted to the base. Quick disconnects provided between lamp and electrical assembly. HPS and MH Lamp sources up to 100W MH or HPS and up to 57W Compact Fluorescent sources available with MOL length not exceeding 7".

FINISH

Premium fade and abrasion resistant, TGIC Polyester Powder Coat Finish. Standard colors are Bronze, Architectural White, Grey and Black. Other architectural finish colors available including all RAL matches.

BASE

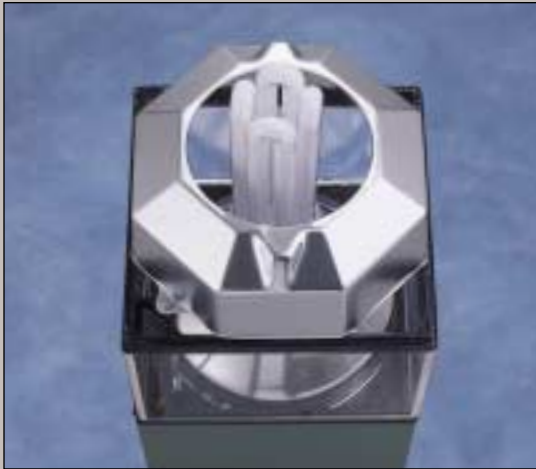
Rugged cast aluminum. Completely concealed.

MOUNTING

Base mounts onto foundation with three (3) 1/2" x 12" anchor bolts on a 5" Dia. bolt circle (a centrally located 2 7/8" x 3 1/2" wire entrance opening provided). Bollard housing is secured to the base with flathead, counter-sunk screws for smooth, uncluttered appearance.



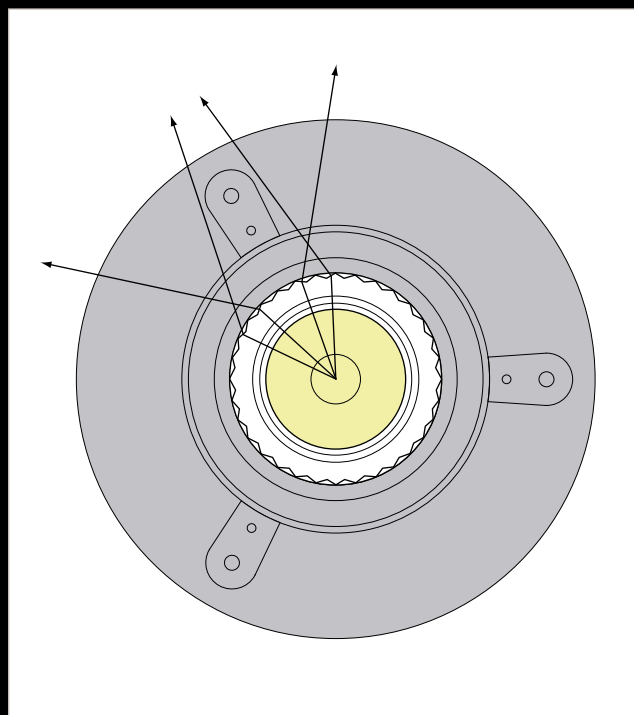
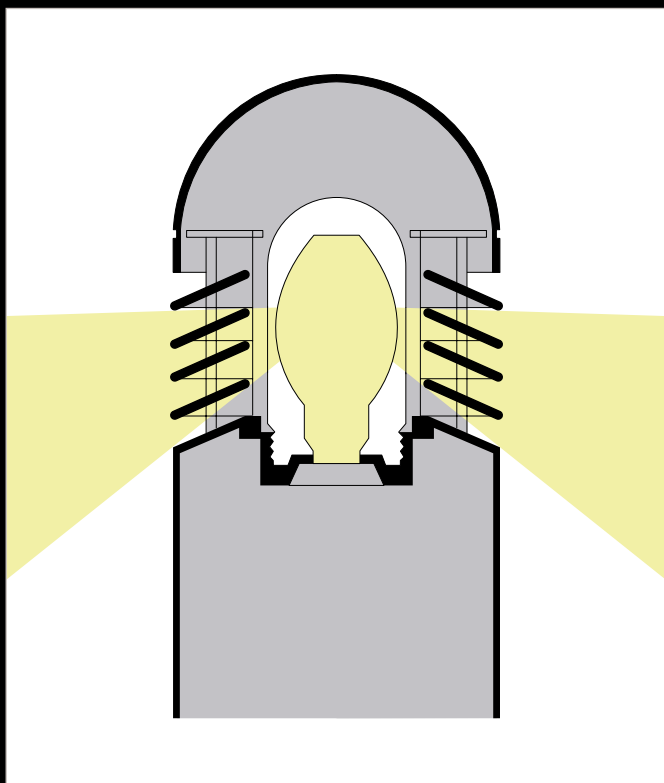
STANDARD SERIES—DESIGN FEATURES



OPTICAL EXCELLENCE

GLARE-FREE ILLUMINATION

The Louver Series bollard features carefully designed louvers that block direct view of the lamp while creating a channel for high angle light to escape and effectively illuminate the pathway below. These dual purpose louvers eliminate glare and provide comfortable fixture viewing without sacrificing performance.



UNIFORM ILLUMINATION

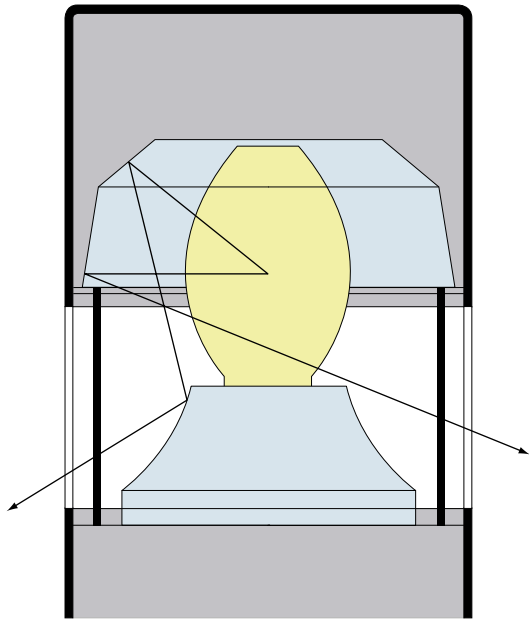
The Louvered Series bollard features fluted glass refractors to direct light rays around louver support elements, eliminating the potential for unsightly shadows and streaking in the distribution. Coated lamps, in conjunction with the refractive glass lens, allow the Louvered Series bollard to produce uniform illumination.



DESIGN FLEXIBILITY

Add some flair and personality to your application with the use of optional colored refractive glass lenses. The Louvered Series bollards allow the design flexibility with a selection of highly saturated colors. Producing a blanket of color on the walkway as well as a pronounced glow on louvered surfaces, they feature prismatic refractive technology, ensuring a uniform distribution of color and light.

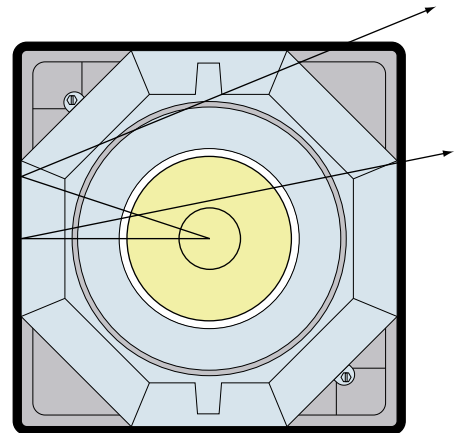




SIDE VIEW

EFFICIENT ILLUMINATION

The McGraw-Edison Standard Series bollard locates the lamp in the housing top cap preventing direct viewing of the lamp at pedestrian and motorist level. The multi-piece reflector system works in unison to maximize efficiency by redirecting otherwise unuseable light onto the lower reflector which focuses light onto the pathway.

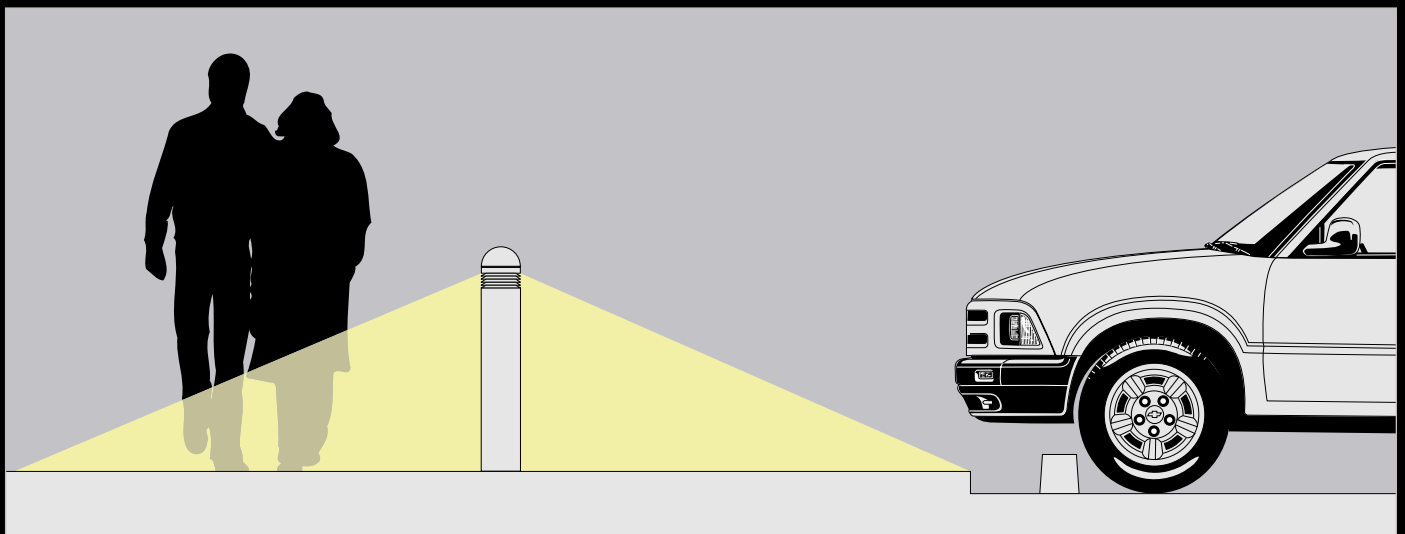


TOP VIEW

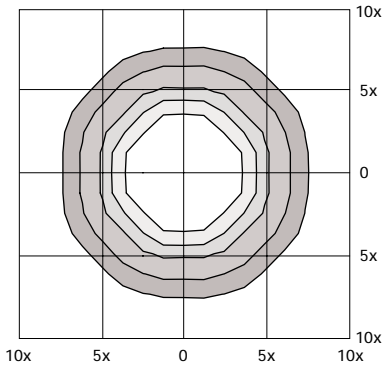


OPTICAL CONTROL

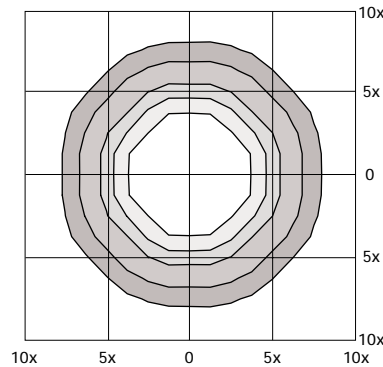
McGraw-Edison bollards are designed to efficiently direct light downward onto the walkway while concealing the lamp from direct view, eliminating discomfort glare and ensuring safety and visibility for pedestrians and motorists. The McGraw-Edison Bollard Series present a responsible pathway lighting solution for the environmentally conscience.



PHOTOMETRICS



BSC-XX-100-MH
100-Watt MH
7,900-Lumen Lamp (Clear ED-17)

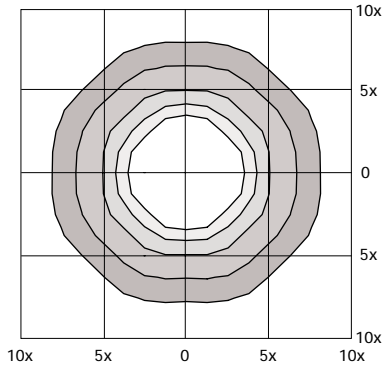


BSC-XX-100-HPS
100-Watt HPS
8,800-Lumen Clear Lamp (Clear ED-17)

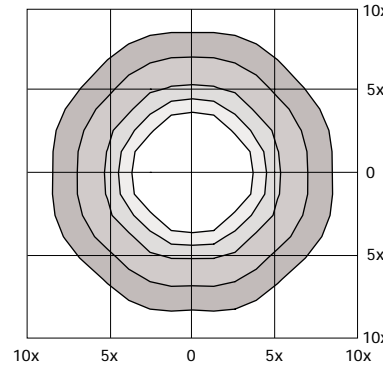
Footcandle Table

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				
	10x	5x	0	5x	10x
42"	1.20	0.60	0.30	0.12	0.06
36"	2.00	1.00	0.50	0.20	0.10
32"	2.40	1.20	0.60	0.24	0.12
28"	3.20	1.60	0.80	0.32	0.16
24"	4.40	2.20	1.10	0.44	0.22



BSL-XX-100-MH
100-Watt MH
7,900-Lumen Lamp (Coated ED-17)

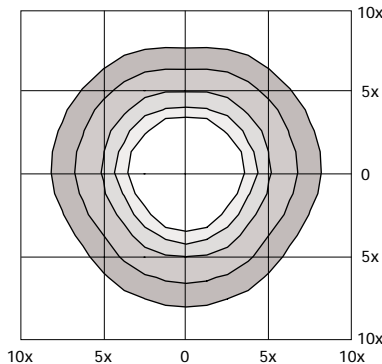


BSL-XX-100-HPS
100-Watt HPS
8,800-Lumen Lamp (Coated ED-17)

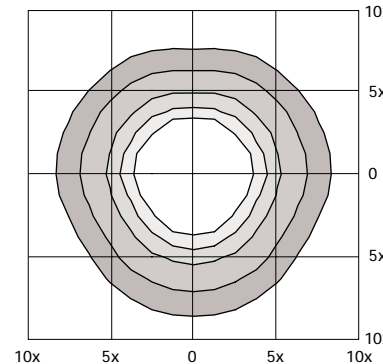
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28"	3.20	1.60	0.80	0.32	0.16
24"	4.40	2.20	1.10	0.44	0.22



BRL-XX-100-MH
100-Watt MH
7,900-Lumen Lamp (Coated ED-17)



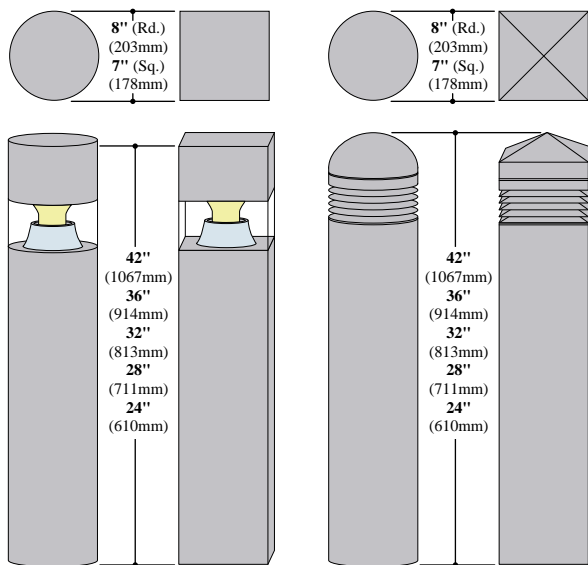
BRL-XX-100-HPS
100-Watt HPS
8,800-Lumen Lamp (Coated ED-17)

Footcandle Table

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28"	3.20	1.60	0.80	0.32	0.16
24"	4.40	2.20	1.10	0.44	0.22

DIMENSIONS



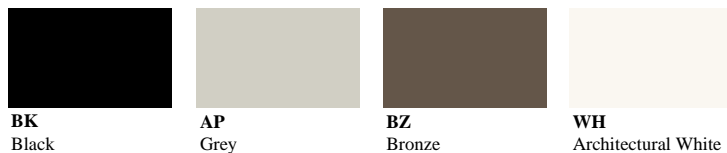
ORDERING INFORMATION

SAMPLE NUMBER: BSL-36-100-MH-MT-BK

Product Family BSC=Square Bollard with Clear Lens, & Square Top BSL=Square Bollard with Stacked Louvers, & Pyramidal Top BRC=Round Bollard with Clear Lens, & Cylindrical Top BRL=Round Bollard with Stacked Louvers, & Dome Top	Fixture Height 24=24" 28=28" 32=32" 36=36" 42=42"	Lamp Wattage¹ 26=26W ² 32=32W ² 35=35W ³ 42=42W ² 50=50W 57=57W ² 70=70W 100=100W	Lamp Type MH=Metal Halide HPS=High Pressure Sodium CF=Compact Fluorescent ⁴ IC=Incandescent	Voltage⁵ 120=120V 208=208V 240=240V 277=277V MT=Multi-Tap wired 277V ⁶ TT=Triple-Tap wired 347V ⁶	Color (add as suffix/must specify) ⁷ BK=Black AP=Grey BZ=Bronze WH=Architectural White	Options (add as suffix) F=Single Fuse (120, 277, or 347V) FF=Double Fused (208 or 240V) PC=Button Photocontrol PL=Polycarbonate Lens ⁸ L=Lamp Included ⁹ RB=Royal Blue Glass Jar ¹⁰ AB=Aqua Marine Blue Glass Jar ¹⁰ HG=Hunter Green Glass Jar ¹⁰ RE=Red Glass Jar ¹⁰ OR=Orange Glass Jar ¹⁰ R1=Provisional cut for GFI Receptacle ¹¹ R2=Installed GFI Receptacle ¹¹

- NOTES: ⁽¹⁾ All HID lamps are medium-base.
⁽²⁾ Compact fluorescent only.
⁽³⁾ 35W HPS available in 120V only.
⁽⁴⁾ BSC/BRC only. MOL length of lamp cannot exceed 7".
⁽⁵⁾ Product also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information.
⁽⁶⁾ Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V.
⁽⁷⁾ Other finish colors available. Consult Architectural Colors brochure.
⁽⁸⁾ Polycarbonate lens available on BSC and BRC only.
⁽⁹⁾ Coated lamp standard. Must specify clear lamp if desired.
⁽¹⁰⁾ Available on BSL and BRL only.
⁽¹¹⁾ Location of R1 and R2 option on housing subject to height of luminaire.

STANDARD COLORS





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