



Full Cutoff Bollard LED

Landscape and Pathway Lighting



An inspiring new solution to low level lighting

The Philips Gardco Full Cutoff Bollard LED integrates polished aesthetics, maximum energy savings and extraordinary light output into an innovative pedestrian-scale luminaire.

Its form is a slim, natural design that gracefully blends into any location, yet retains the rugged strength, all-weather sealing and vandal resistance that is essential for the punishing low level environment. The soft, stylish shape is a refreshing addition to both contemporary and traditional architecture and feels equally comfortable in hardscape pedestrian zones and pathways or in landscape and park settings.

By day the shape is uniformly elegant, seamless and sculptural, carefully scaled for the pedestrian environment. By night, these luminaires provide exceptional light levels that leave one feeling both comfortable and safe.



A sustainable contribution to the landscape

Don't let its smaller stature fool you. When specified with the high strength galvanized steel tenon, these luminaires are as rugged as they come, able to withstand the persistent vandal or careless landscaper.

The luminaire is also available in a "head only" configuration for attachment to concrete structures or other architectural elements (by others).

What truly sets the 840 Series apart, however, is its incredible energy-efficient LED Bollard technology. LEDs concealed below a die cast top provide down lighting for landscape and pathway applications, while shielding the source from direct view. To further enhance its flexibility, the 840 Series provides full cutoff performance, allowing it to meet stringent LEED requirements and dark sky ordinances.

The bollard distributes LED light in patterns of 180° or 360°, allowing for a reduction of backlight and enhancing placement flexibility. Dimming capability further enhances energy savings.



BR840 shown with Natural Aluminum paint (NP)



Designed to complement, built to last

While all outdoor luminaires must deal with the elements, those at the pedestrian level must also endure vandalism, impacts from landscaping equipment and more frequent interaction with dirt, water and corrosives.

The Philips Gardco Full Cutoff Bollard LED was designed with this in mind. Thoughtful engineering and construction ensure that the 840 series of bollards will make a long term contribution to the site. An 8" die cast aluminum top sits atop a high strength 4" extruded aluminum column and are secured with flush, tamper-resistant stainless steel fasteners. Seamless design and soft detailing discourage dirt and dust from collecting on the luminaires. Units are fully sealed and gasketed. The optical compartment carries an IP66 rating. Finally, these luminaires receive a TGIC textured polyester powdercoat finish, one of the most durable finishes known.



Die Cast Top

LEDs are concealed below a die cast top, shielding the source from direct view and enabling the luminaire to provide full cutoff performance designation.



High Strength Tenon

The 842 model features an extruded aluminum shaft covering a high-strength galvanized steel base tenon that runs the length of the luminaire, providing a solid anchorage for applications requiring additional support



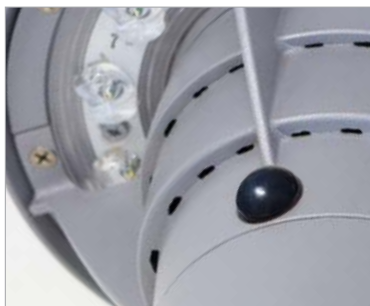
Heat Dispersion

While LEDs are recognized for their high efficiency and extended life, these benefits can be severely impacted by the heat they generate. The 840 Series incorporates integral openings and airways which facilitate proper airflow and heat dissipation, thus ensuring source longevity and performance.

Unparalleled Performance



The strength of the Philips Gardco Full Cutoff Bollard LED is its high-performance optical system. The system utilizes a series of long lasting, energy efficient LEDs oriented to achieve wide spacings with full cutoff performance, consistent uniformity without streaks and striations. Utilizing the 360-26 watt version, one can achieve light levels of 1/4 fc to 1/2 fc minimum maintained or more on a 5 mounting height on-center spacing distance. This allows for a high quality of light with fewer luminaires and less energy.



Motion Response Sensor

The motion responses sensor integrates naturally into the luminaire head, directly beneath the bottom louver.

Assisted by an integral thermal control system, the LED arrays carry L70 ratings of up to 230,000 hours, minimizing the hassle and expense of maintenance. Distributions are available in either a 360° or 180° pattern. The 180° distribution includes an integral shield, further limiting backlight.

Motion Response and Dimming

Greater energy savings are realized by capitalizing on the "instant-on" and dimming ability of LEDs. The Full Cutoff Bollard LED offers a Motion Response option that reduces power and light output by 80% when an area is unoccupied for more than five minutes. When motion is detected the luminaire returns to full wattage and full light output. The sensor is capable of detecting motion up to 39'/12m.

Additional dimming options can be based on time of day, ambient light, or any other control parameters desired (actual dimming system supplied by others).

Full Cutoff Bollard LED Specifications

GENERAL DESCRIPTION: The Philips Gardco LED Bollard family features the round full cutoff bollard, the BR840 series. This sleek series features LEDs concealed below cast louvers to provide down lighting for landscape and pathway applications. The BR840 series features 4" diameter extruded aluminum shafts. Available mountings include the standard shaft, with a welded cast base mounted firmly to anchor bolts. The BR840 series also is available with a galvanized steel base tenon reinforced shaft (BR842) for applications requiring additional support, such as schools. BR840 series bollards provide full cutoff performance.

UPPER HOUSING: Die cast aluminum upper housing featuring shielding louvers to provide down light.

LOWER HOUSING:

BR840: The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section incorporating a flush, weather-tight gasketed hand hole cover.

BR841: Louver head assembly is suitable for attachment to architectural elements (by others).

BR842: The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section, incorporating a flush, weather-tight gasketed hand hole cover, for placement over the galvanized steel tenon support structure. Tenon support structure is made from a .12" thick wall, 11 gauge steel, 2.25" square tube, welded to top and bottom round steel support plates. The steel tenon support structure includes an opening aligned with the aluminum shaft hand hole to permit wiring. The entire steel tenon support structure is hot dipped galvanized after fabrication.

LED PERFORMANCE:

PREDICTED LUMEN DEPRECIATION DATA		
Ambient Temperature °C	Driver mA	L70 Hours
25 °C	225 mA	230,000
	350 mA	220,000
	450 mA	165,000
	700 mA	150,000
40 °C	225 mA	212,000
	350 mA	188,000
	450 mA	150,000
	700 mA	137,000

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.

OPTICAL SYSTEMS: Philips Gardco LED Bollards feature advanced Philips Gardco LED technology, assuring maximized light output. LED arrays are replaceable.

ELECTRICAL: The LED power supply is located within the bollard head. Bollards accept from 120 Volts through 277 Volts, 50hz to 60 hz, input supply. The LED driver is located in the upper dome. LED drivers are replaceable. LEDs provided as specified. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

ANCHORAGE:

BR840: Base assembly consists of an internal welded cast ring section that provides for mounting to the foundation with four (4) 3/8" X 8" X 1 1/2" anchor bolts on a 2 3/4" bolt circle.

BR841: The luminaire head mounts to a concrete structure utilizing four (4) 3/8" #16 hex head bolts inserted into threaded concrete inserts (provided by others) on a 2 3/4" bolt circle.

BR842: A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured to the concrete footing with (4) 3/8" x 8" x 1 1/2" anchor bolts on a 2 3/4" bolt circle.

IP RATING: IP66 is the rating for the optical compartment.

FINISH: Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (W/P), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays or modules feature a 5 year limited warranty covering the LED arrays or modules. LED drivers carry a 5 year limited warranty. See Warranty Information on sitelighting.com for complete details and exclusions.

Prior to ordering, consult Submittal Data Sheet on sitelighting.com for the most current information, notes and exclusions.

Example	PREFIX	HEIGHT	LED CONTROL	LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE	PAINTED FINISH	OPTIONS
	BR840	36	CWL	NW	360-26	UNIV	NP	PCB
	BR840 Standard Shaft	42" 36" 30"	CWL Constant Wattage	CW Cool White	360° 360-10	UNIV 120V through 277V	BRP Bronze BLP Black	PCB Button Photocontrol
	BR841 Head Only	7.1"	DIM 0-10V Dimming	NW Neutral White	360-18 360-26		WP White NP Natural Aluminum	SPR Surge Protector
	BR842 Reinforced Shaft with Galvanized Steel Tenon	42" 36" 30"	MR Motion Response	WW Warm White	180° 180-10 180-18		OC Optional Color SC Special Color	
				<u>Solid Colors</u> LA Amber				

LIGHTED COVERAGE / LED WATTAGE

360° Lighted Louvers - 14 LEDs

360-10 10 watts @ 225mA

360-18 18 watts @ 350mA

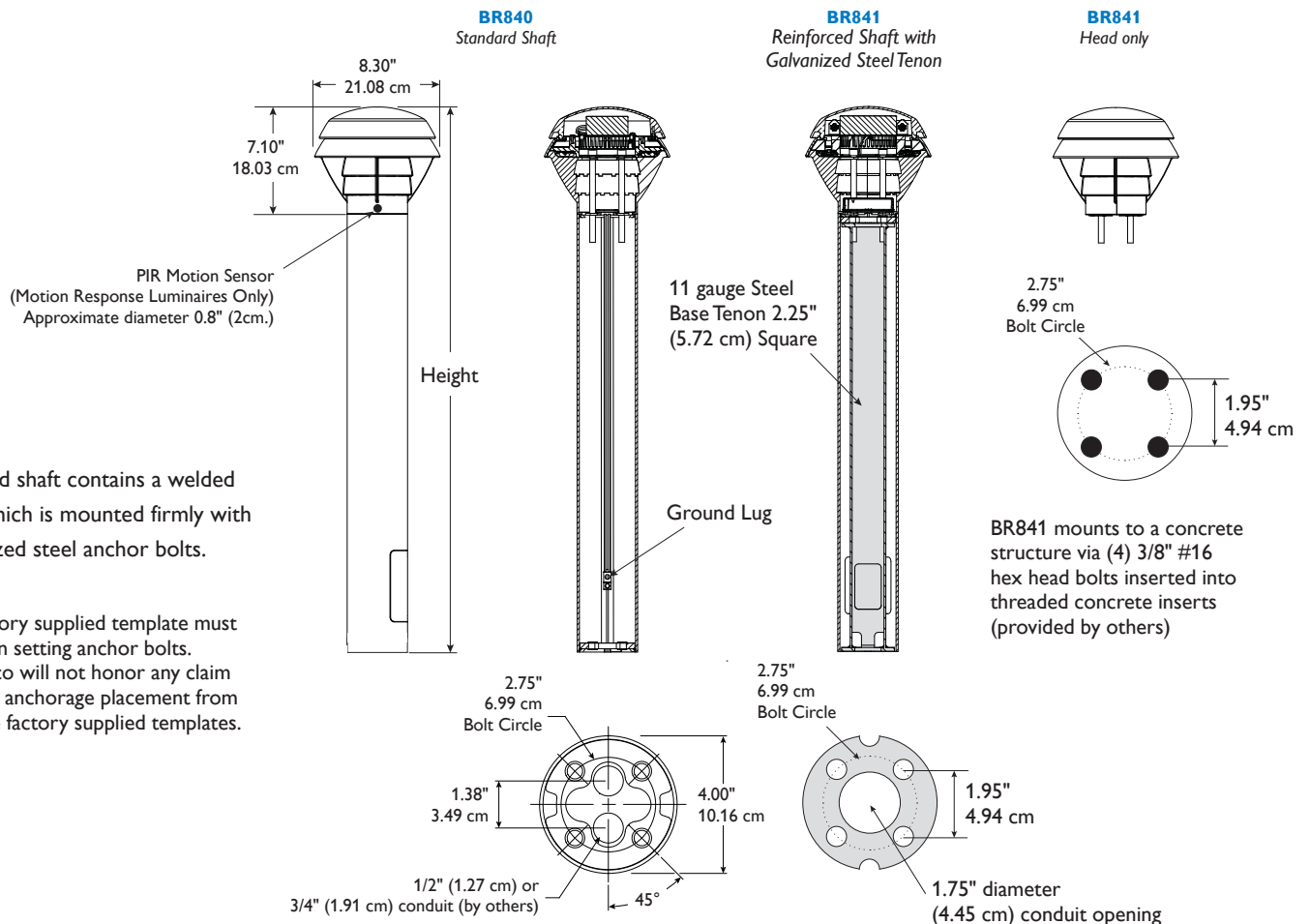
360-26 26 watts @ 450mA

180° Lighted Louvers - 7 LEDs (provides reduced backside light)

180-10 10 watts @ 450mA

180-18 18 watts @ 700mA

DIMENSIONS



Mounting

The standard shaft contains a welded cast base which is mounted firmly with four galvanized steel anchor bolts.

NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

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Philips Gardco reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.



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Philips Lighting Company
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008