WLC60 Heavy Duty LED Light

BANNER®
more sensors, more solutions

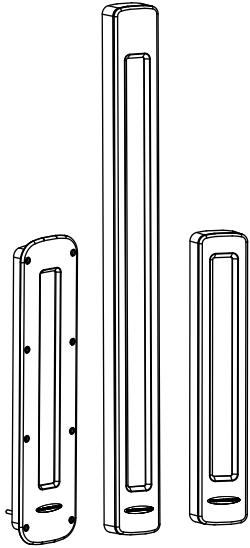## Datasheet

Banner's WLC60 Heavy Duty Lights are engineered to withstand harsh environments, making it the first choice for a machine lighting solution. A conservative mechanical design protects against liquid ingress and state-of-the-art LED technology delivers best of class brightness.
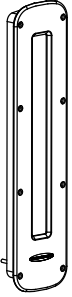
Choose between a durable polycarbonate window or a borosilicate glass (BSG) option featuring enhanced chemical and thermal resistance. This smart industrial lighting solution also features energy efficient eco-mode dimming states to tailor the lumen levels and power consumption to the application.

- Rugged and durable for harsh environments
- Oil, chemical, and water resistant with IP67, IP68g, and IP69K ratings
- High brightness paired with advanced glare-reducing optics
- Easy to install with a wide variety of mounting solutions
- Highly resistant to vibration and shock
- Input voltage of 12 to 30 V dc
- Integral 4-pin M12 Euro-style Quick Disconnect connector
- Models have four discrete intensity level settings

Base Mount Side Exit Connection Models				
	Models	Cascadable	Lighted Length (mm)	Window
	WLC60XW340AQ	No	340	Polycarbonate
	WLC60XW640AQ	No	640	Polycarbonate
	WLC60CW340AQ	Yes	340	Polycarbonate
	WLC60CW640AQ	Yes	640	Polycarbonate
	WLC60XW340GAQ	No	340	Borosilicate Glass
	WLC60XW640GAQ	No	640	Borosilicate Glass
	WLC60CW340GAQ	Yes	340	Borosilicate Glass
	WLC60CW640GAQ	Yes	640	Borosilicate Glass

Base Mount Rear Exit Connection Models				
	Models	Cascadable	Lighted Length (mm)	Window
	WLC60XW340ARQ	No	340	Polycarbonate
	WLC60XW640ARQ	No	640	Polycarbonate
	WLC60CW340ARQ	Yes	340	Polycarbonate
	WLC60CW640ARQ	Yes	640	Polycarbonate
	WLC60XW340GARQ	No	340	Borosilicate Glass
	WLC60XW640GARQ	No	640	Borosilicate Glass
	WLC60CW340GARQ	Yes	340	Borosilicate Glass
	WLC60CW640GARQ	Yes	640	Borosilicate Glass

Flush Mount Models				
	Models	Cascadable	Lighted Length (mm)	Window
	WLC60XW340FARQ	No	340	Polycarbonate
	WLC60CW340FARQ	Yes		
	WLC60XW340GFARQ	No		Borosilicate Glass
	WLC60CW340GFARQ	Yes		

The listed models have 4-pin integral QDs. To order the 2 m (6.5 ft) cable models, omit the suffix "Q" from the model number. For example, WLC60XW340FAR. Models with a quick disconnect (QD) connector require a mating cable.

Specifications

Supply Voltage
Operating Voltage: 12 to 30 V dc

Max. Current (340 mm Models)
1.4 A at 12 V dc
0.7 A at 24 V dc
0.56 A at 30 V dc
Max. Input Power: 16.8 Watts

Typical Current (340 mm Models)
1.3 A at 12 V dc
0.59 A at 24 V dc
0.47 A at 30 V dc

Max. Current (640 mm Models)
3.1 A at 12 V dc
1.53 A at 24 V dc
1.22 A at 30 V dc
Max. Input Power: 37.2 Watts

Typical Current (640 mm Models)
2.8 A at 12 V dc
1.17 A at 24 V dc
0.97 A at 30 V dc

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Construction
Nickel plated aluminum housing, polycarbonate or borosilicate glass window

Connections
Integral 4-pin M12 male quick disconnect (QD) (4-pin connecting cordset required); or 2 m (6.5 ft) integral cable

Vibration and Mechanical Shock
All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06", maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave.

Light Characteristics
Color temperature (CCT): 6000–7100K
Color: Cool white
Lumen output at 25 °C (77 °F) typical for 340 mm models: 1300 lumens
Lumen output at 25 °C (77 °F) typical for 640 mm models: 2600 lumens
Luminous efficacy at 25 °C (77 °F) typical: 92 lumens per watt at 24 V dc

Spacing Criterion
0.86

Operating Temperature
−40 to 50 °C (−40 to 122 °F) at the max. intensity setting
−40 °C to +70 °C (−40 °F to +158 °F) at any of the dim settings

Environmental Rating
IEC IP67/IP68g / IP69K per DIN 40050

Storage Temperature
−40 °C to +70 °C (−40 °F to +158 °F)

Application Notes
When connecting cascadable lights in series, it is important not to exceed the maximum current limitation of 4 Amps.

Input Voltage	Max. Number of Units	
	340 mm Models	640 mm Models
12 V dc	3	1
24 V dc	6	3
30 V dc	8	4

Certifications

Spacing Criteria (SC)

The spacing criteria is the fixture-spacing-to-mounting-height ratio and aids in laying out a pattern of fixtures. Multiply the spacing criteria by the mounting height to get the maximum fixture spacing that still provides even illumination (no shadowing between fixtures).

Luminaire Spacing = SC × Height to Illuminated Plane

The mounting height is the distance from the fixture to the surface you are lighting.
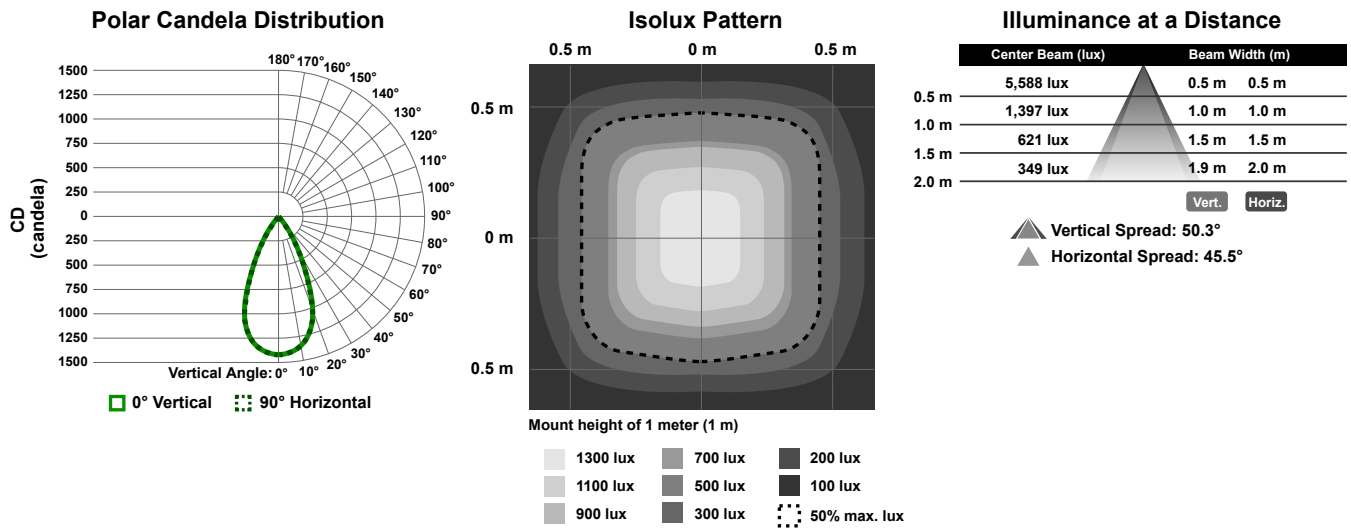
Hookups

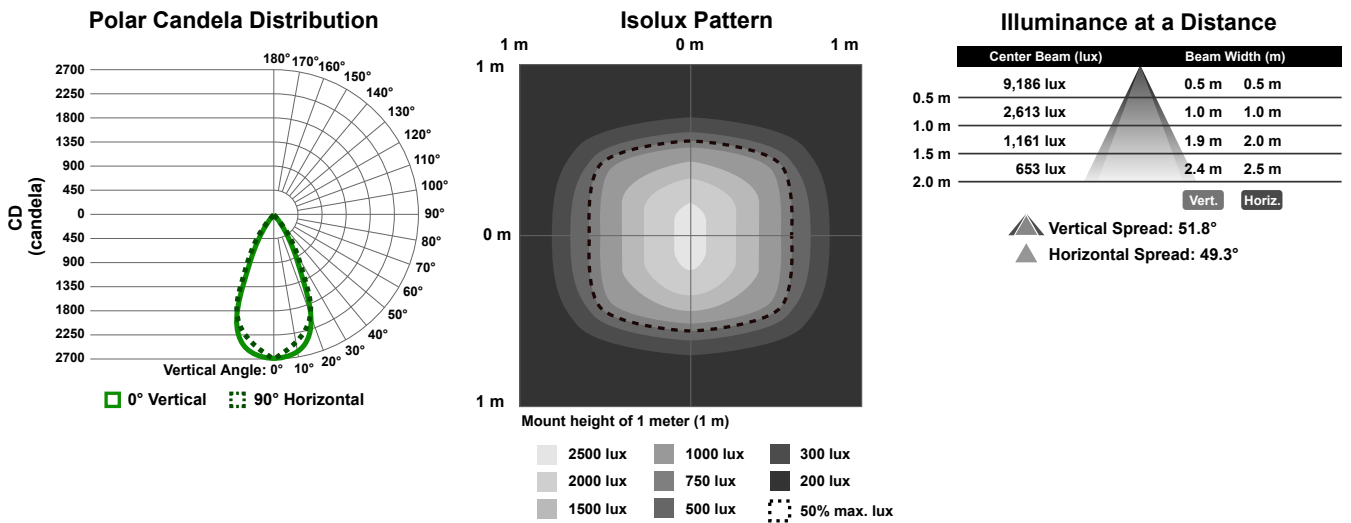| Pins	Color	Color/Connection
1	brown	12–30V dc
3	blue	dc common
4	black	Connect to 12–30V dc for 66% max. intensity
2	white	Connect to 12–30V dc for 33% max intensity
4 and 2	black/white	Connect to 12–30V dc for 50% intensity

For maximum intensity, leave the white and black wires floating or connected to common.
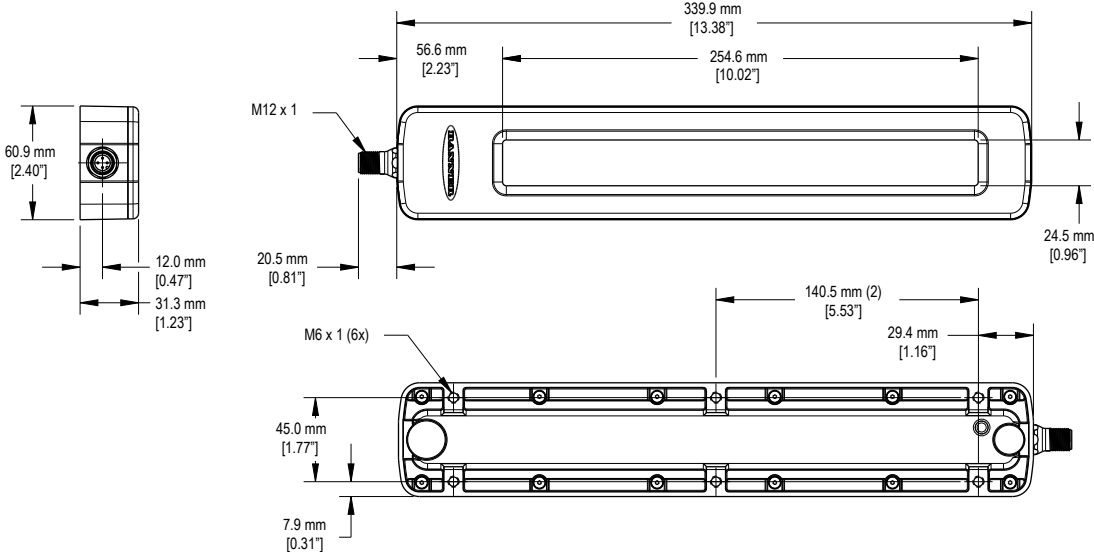
Light Characteristics

340 mm Models

Polar Candela Distribution

CD (candela)

Vertical Angle: 0°

□ 0° Vertical   ⠿ 90° Horizontal

Isolux Pattern

0.5 m   0 m   0.5 m

Mount height of 1 meter (1 m)

1300 lux	700 lux	200 lux	
1100 lux	500 lux	100 lux	
900 lux	300 lux	50% max. lux	

Illuminance at a Distance

Center Beam (lux)		Beam Width (m)	
0.5 m	5,588 lux	0.5 m	0.5 m
1.0 m	1,397 lux	1.0 m	1.0 m
1.5 m	621 lux	1.5 m	1.5 m
2.0 m	349 lux	1.9 m	2.0 m

Vert.   Horiz.

Vertical Spread: 50.3°
Horizontal Spread: 45.5°

640 mm Models

Polar Candela Distribution

CD (candela)

Vertical Angle: 0°

□ 0° Vertical   ⠿ 90° Horizontal

Isolux Pattern

1 m   0 m   1 m

Mount height of 1 meter (1 m)

2500 lux	1000 lux	300 lux	
2000 lux	750 lux	200 lux	
1500 lux	500 lux	50% max. lux	

Illuminance at a Distance

Center Beam (lux)		Beam Width (m)	
0.5 m	9,186 lux	0.5 m	0.5 m
1.0 m	2,613 lux	1.0 m	1.0 m
1.5 m	1,161 lux	1.9 m	2.0 m
2.0 m	653 lux	2.4 m	2.5 m

Vert.   Horiz.
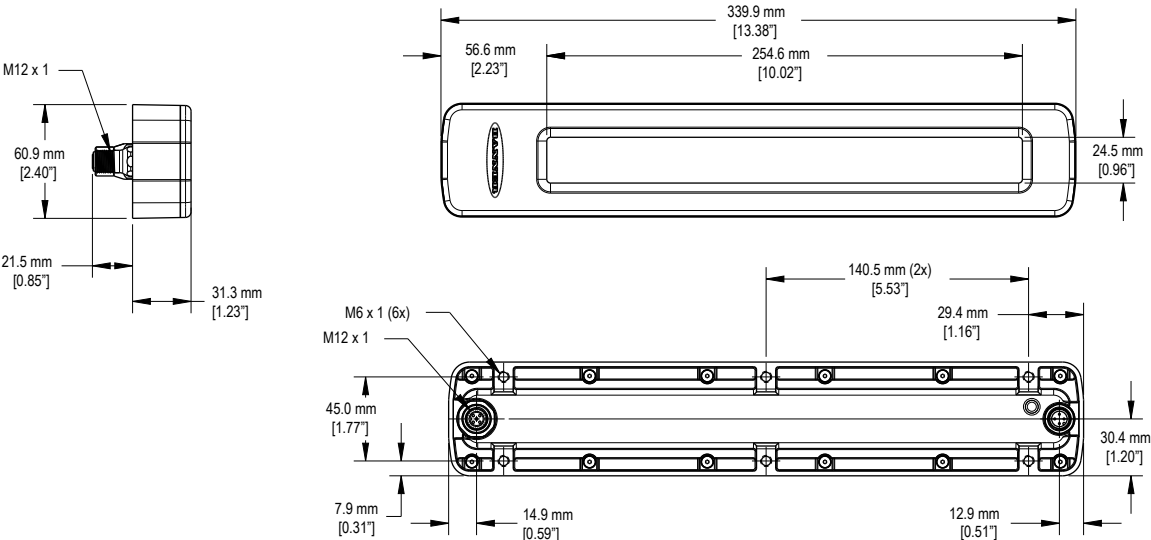
Vertical Spread: 51.8°
Horizontal Spread: 49.3°

Dimensions for WLC60 340 mm Models

WLC60 (340 mm) Base Mount Side Exit Models
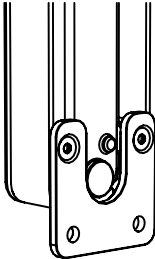
WLC60 (340 mm) Base Mount Rear Exit Models

WLC60 (340 mm) Flush Mount Models

Dimensions for WLC60 640 mm Models
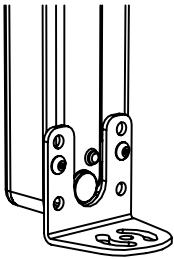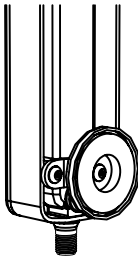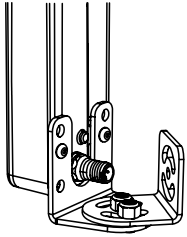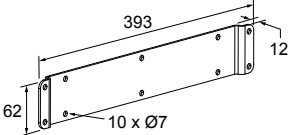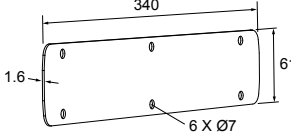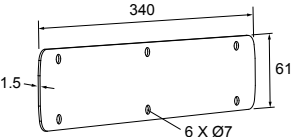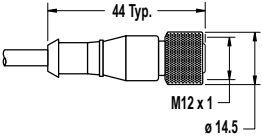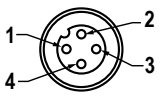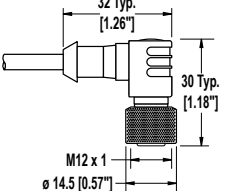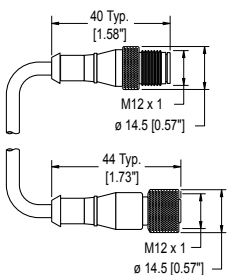
WLC60 (640 mm) Base Mount Side Exit Models Dimensions

WLC60 (640 mm) Base Mount Rear Exit Models Dimensions
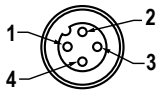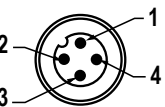
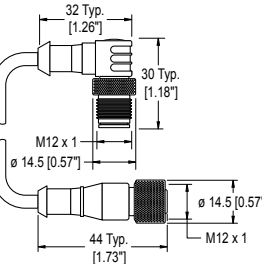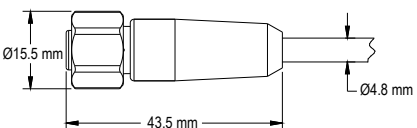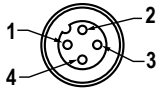# Accessories

Brackets

LMBWLC60F

- Set of two flat brackets
- 300 series stainless steel
- Includes M6 flathead screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware

LMBWLC60RA

- Set of two right-angle brackets
- 300 series stainless steel
- Includes M6 buttonhead screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware

LMBWLC60MAG

- Magnetic mounting kit (set of two)
- Two inch magnets
- Mounting hardware included

LMBWLC60RAS

- Pair of two swivel mount, right-angle brackets
- 300 series stainless steel
- Includes hardware for mounting to light

LMBWLC60B340

- Plate for sealing the cavity on the back of the 340 mm models
- 300 series stainless steel
- Includes hardware for mounting to the light

393
12
62
10 x Ø7

ACC-WLC60-340-GSK-FDA-1

- Blue FDA-approved silicone gasket
- Thickness: 1.6 mm

340
61
1.6
6 X Ø7

ACC-WLC60-340-GSK-N-1

- Black nitrile gasket
- Thickness: 1.5 mm

340
61
1.5
6 X Ø7

Cordsets

4-Pin Threaded M12/Euro-Style Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC-406	1.83 m (6 ft)	Straight		
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)			
MQDC-450	15.2 m (50 ft)			
MQDC-406RA	1.83 m (6 ft)	Right-Angle		1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-415RA	4.57 m (15 ft)			
MQDC-430RA	9.14 m (30 ft)			
MQDC-450RA	15.2 m (50 ft)			

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30 ft)			
MQDEC-450SS	15.2 m (50 ft)			
MQDEC-403RS	0.91 m (1 ft)	Male Right-Angle/ Female Straight		Male 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-406RS	1.83 m (3 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30 ft)			
MQDEC-450RS	15.2 m (50 ft)			

4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC-WDSS-0406	1.83 m (6 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-WDSS-0415	4.57 m (15 ft)			
MQDC-WDSS-0430	9.14 m (30 ft)			

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.3 m (1 ft)	Male Straight/ Female Straight		Female 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			
MQDEC-WDSS-412SS	3.66 m (12 ft)			

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