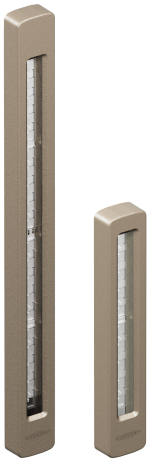
WLC60 Heavy Duty LED Light - PWM Dimmable

Features



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.

- Intensity can be controlled from 0 to 100% using Pulse Width Modulation (PWM) on an input control wire
- Rugged and durable for harsh environments
- Oil, chemical, and water resistant with IP67, JIS C IP68G, and IP69K per ISO 20653 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 V DC to 30 V DC
- Integral 4-pin M12 male quick-disconnect connector



For PWM dimming, use with the LC65 Dimmer Module. For more information, refer to the LC65 LED Dimmer Module datasheet, p/n 177086.

IMPORTANT: Read the following instructions before operating the light. Please download the complete WLC60 Heavy Duty LED Light - PWM Dimmable technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

IMPORTANT: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLC60 Heavy Duty LED Light - PWM Dimmable, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

IMPORTANT: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLC60 Heavy Duty LED Light - PWM Dimmable sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

Original Instructions
12-Mar-26

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179496
p/n: 179496 Rev. G

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Models

Base Mount Side Exit Connection Models



Models[1]	Cascadable	Lighted Length (mm)	Window
WLC60XW340APWMQ	No	340	Polycarbonate
WLC60XW640APWMQ		640	
WLC60CW340APWMQ	Yes	340	
WLC60CW640APWMQ		640	
WLC60XW340GAPWMQ	No	340	Borosilicate Glass
WLC60XW640GAPWMQ		640	
WLC60CW340GAPWMQ	Yes	340	
WLC60CW640GAPWMQ		640	

The following models are no longer available for order but are still covered by the information in this document: **WLC60XW340APWM**.

Base Mount Rear Exit Connection Models

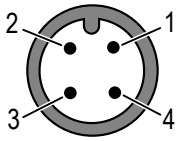


Models[1]	Cascadable	Lighted Length (mm)	Window
WLC60CW340ARPWMQ	Yes	340	Polycarbonate
WLC60XW340GARPWMQ	No	340	Borosilicate Glass
WLC60CW340GARPWMQ	Yes	340	

The following models are no longer available for order but are still covered by the information in this document: **WLC60XW340ARPWMQ**.

NOTE: Rear exit available in 340 mm models only.

Wiring

4-pin M12 Male Pinout	Pins	Color	Description
	1	Brown	12 V DC to 30 V DC
	2	White	Not used
	3	Blue	DC common
	4	Black	Pulse width modulation (PWM) input

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

Specifications

Supply Voltage

Operating Voltage: 12 V DC to 30 V DC
Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)
See electrical characteristics on product label

Pulse Width Modulation (PWM)

Frequency: Up to 30 kHz
Voltage: 12 V DC to 30 V DC
Current: 5 mA max.

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Construction

Nickel-plated aluminum housing
Polycarbonate or borosilicate glass window

Light Characteristics

Color temperature (CCT): 6200K (+500, -550K)
Color: Cool white

Lumen Output

1300 lumens for 340 mm models (typical at 25° C)
2600 lumens for 640 mm models (typical at 25° C)
Luminous efficacy: 87 lumens/watts typical at 24 V DC at 25° C
CRI: 80, minimum

Spacing Criterion

0.86

[1] Integral 4-pin M12 male quick-disconnect connector models are listed.
- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, WLC60CW340APWM or WLC60XW340ARPWM.
- Models with a quick-disconnect connector require a mating cordset.

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LED Lifetime

Lumen Maintenance - L_{70}

When operating within specifications, output will decrease less than 30% after 60,000 hours

Supply Current

Length (mm)	Max. Current Draw	Typical Current Draw
340	1.4 A at 12 V DC	1.3 A at 12 V DC
	0.7 A at 24 V DC	0.59 A at 24 V DC
	0.56 A at 30 V DC	0.47 A at 30 V DC
640	3.1 A at 12 V DC	2.80 A at 12 V DC
	1.53 A at 24 V DC	1.17 A at 24 V DC
	1.22 A at 30 V DC	0.97 A at 30 V DC

Connections

Integral 4-pin M12 male quick-disconnect connector or 2 m (6.5 ft) integral PVC-jacketed cable

A mating cordset is required for quick-disconnect connector models

Test Data

LM-79, LM-80, TM-21

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	2	1
24 V DC	5	2
30 V DC	7	3

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Operating Temperature

–40 °C to +50 °C (–40 °F to +122 °F) at the maximum intensity setting

–40 °C to +70 °C (–40 °F to +158 °F), at PWM dim settings with a 1 to 70% duty cycle

Environmental Rating

IP67, JIS C IP68G, IP69K per ISO 20653

Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 1.0 mm peak-to-peak amplitude per IEC 60068-2-6

Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27

Certifications

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

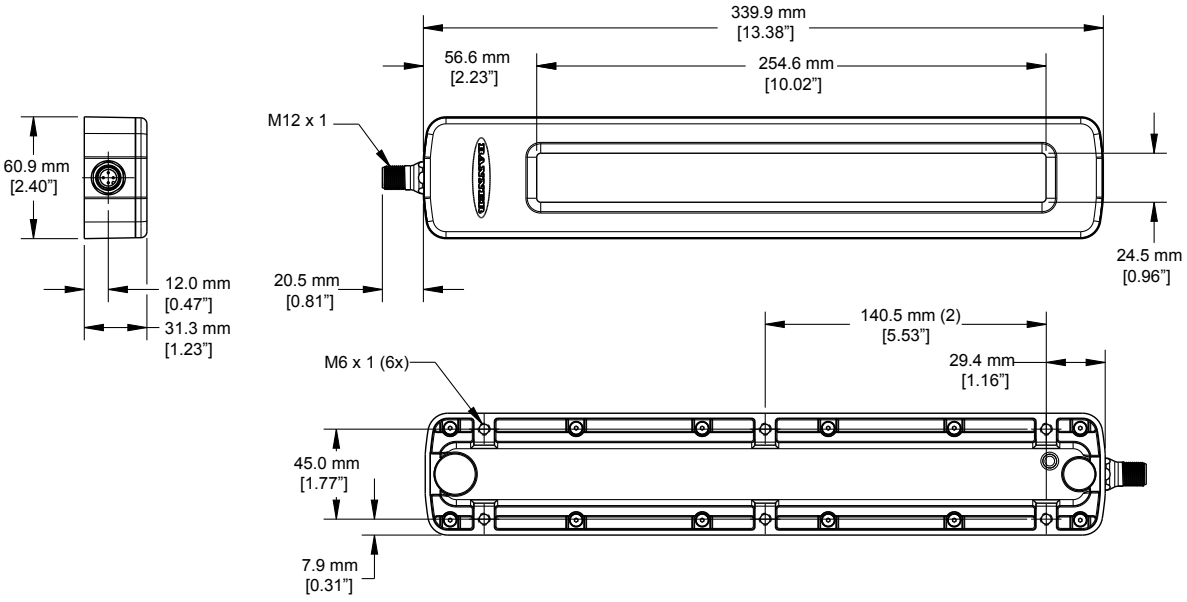
For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	2.0	30	0.5

Dimensions for WLC60 (Dimmable) 340 mm Models

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

WLC60 (340 mm) Base Mount Side Exit Models



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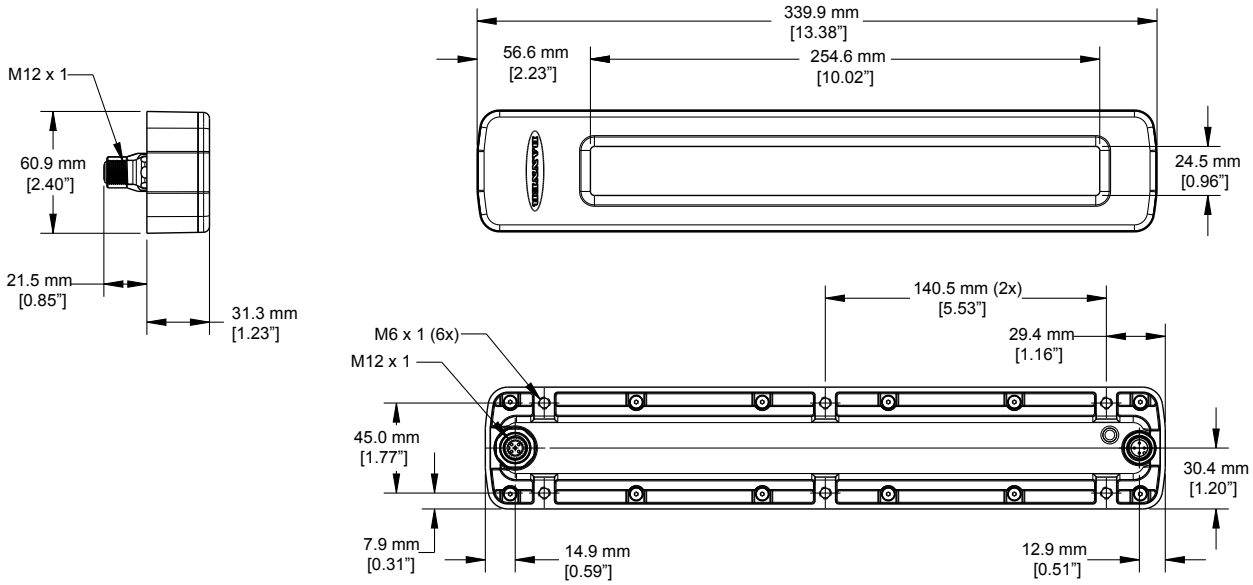
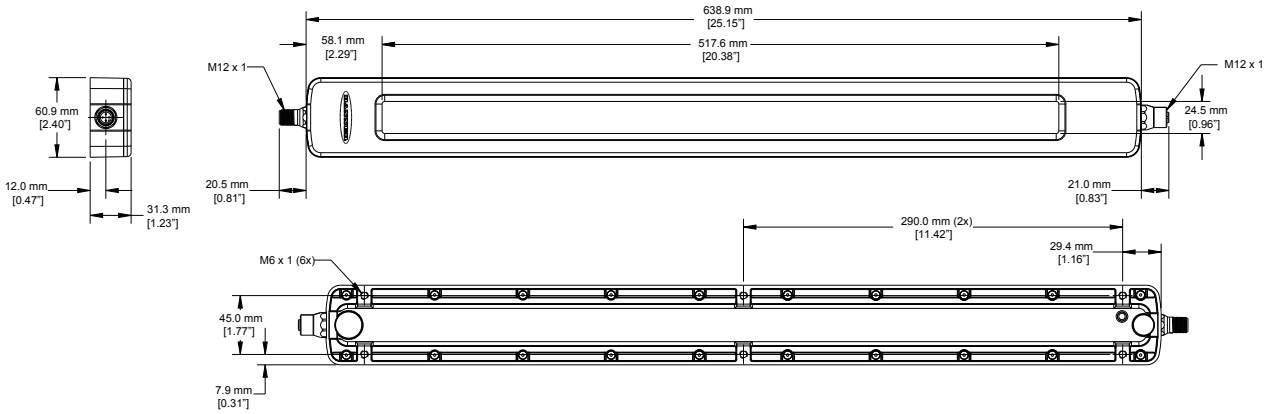
WLC60 (340 mm) Base Mount Rear Exit Models



Dimensions for WLC60 640 mm Models

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

WLC60 (640 mm) Base Mount Side Exit Models Dimensions



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.

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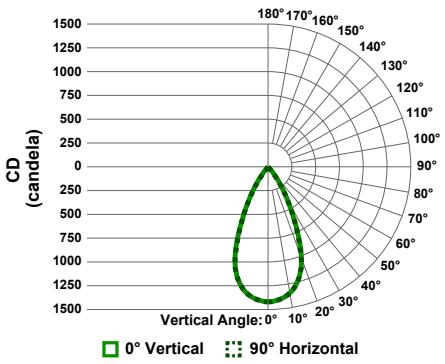
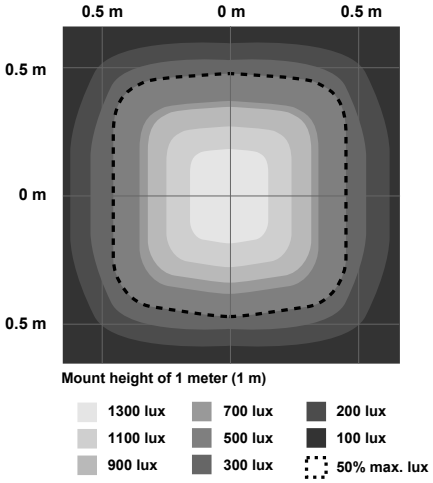
Optical Data

340 mm Models

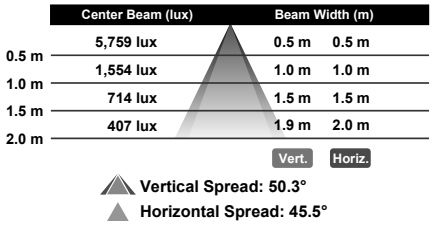
Polar Candela Distribution



Isolux Pattern



Illuminance at a Distance

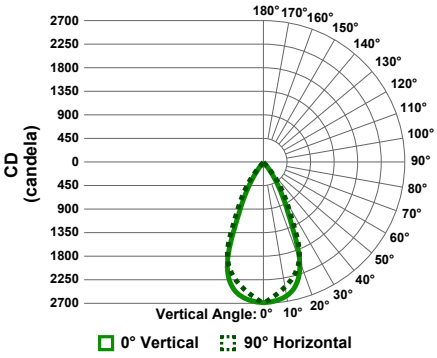


Vertical Spread: 50.3°

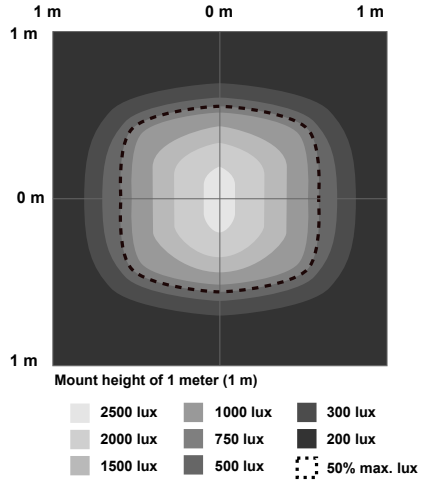
Horizontal Spread: 45.5°

640 mm Models

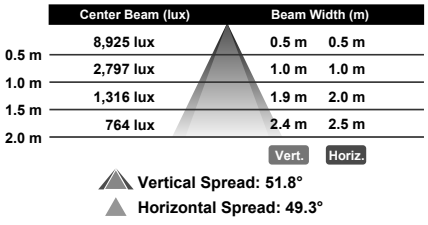
Polar Candela Distribution



Isolux Pattern



Illuminance at a Distance

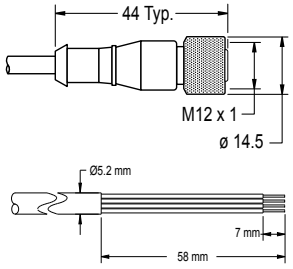
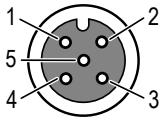


Vertical Spread: 51.8°

Horizontal Spread: 49.3°

Accessories

Cordsets

4-Pin Single-Ended M12 Female Cordsets					
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**	
MQDC-406	2 m (6.56 ft)	Straight			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Not used
MQDC-415	5 m (16.4 ft)				
MQDC-430	9 m (29.5 ft)				
MQDC-450	15 m (49.2 ft)				

Continued on page 6

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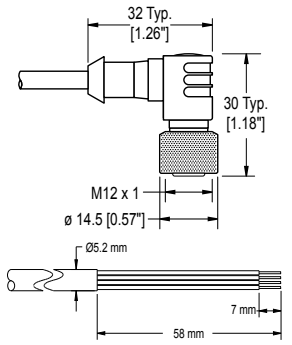
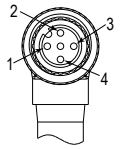
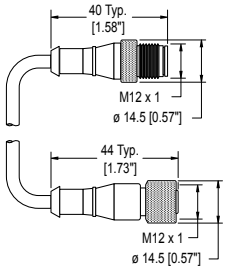
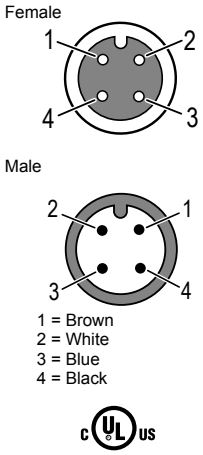
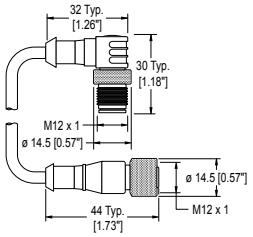
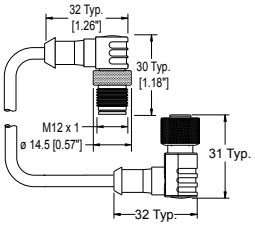
Continued from page 5

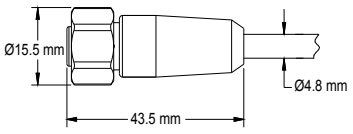
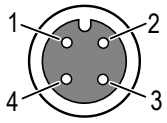
4-Pin Single-Ended M12 Female Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406RA	2 m (6.56 ft)	Right-Angle		
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			

4-Pin Double-Ended M12 Female to M12 Male Cordsets

Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight / Female Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			
MQDEC-403RS	0.91 m (2.99 ft)	Male Right-Angle / Female Straight		
MQDEC-406RS	1.83 m (6 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30.2 ft)			
MQDEC-450RS	15.2 m (49.9 ft)			
MQDEC-403RR	0.9 m (2.9 ft)	Male Right-Angle / Female Right-Angle		
MQDEC-406RR	1.8 m (5.9 ft)			
MQDEC-412RR	3.6 m (11.8 ft)			
MQDEC-420RR	6.1 m (20 ft)			

4-Pin Single-Ended M12 Female Washdown, Stainless Steel Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-WDSS-0406	2 m (6.56 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-WDSS-0415	5 m (16.4 ft)			
MQDC-WDSS-0430	9 m (29.5 ft)			

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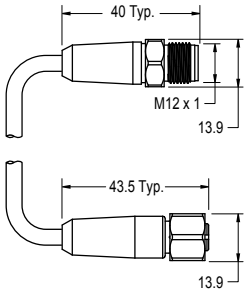
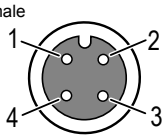
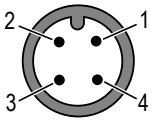
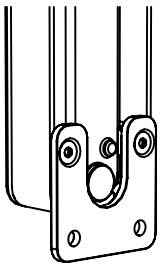
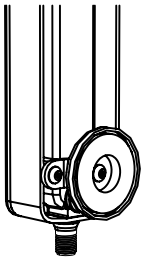
4-Pin Double-Ended M12 Female to M12 Male Washdown Stainless Steel Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-WDSS-401SS	0.31 m (1 ft)	Male Straight/Female Straight		Female  Male  1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-WDSS-403SS	0.91 m (2.99 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			
MQDEC-WDSS-412SS	3.66 m (12 ft)			

Brackets

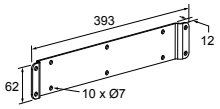
LMBWLC60F
- Set of two flat brackets
- 300 series stainless steel
- Includes M6 flathead screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware
- CAD Files: DXF, PDF, IGS, STP



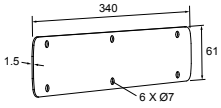
LMBWLC60MAG
- Magnetic mounting kit (set of two)
- Two-inch magnets
- Mounting hardware included
- CAD Files: DXF, PDF, IGS, STP



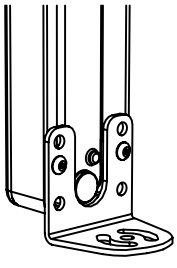
LMBWLC60B340
- Plate for sealing the cavity on the back of the 340 mm models
- 300 series stainless steel
- Includes hardware for mounting to the light
- CAD Files: DXF, PDF, IGS, STP



ACC-WLC60-340-GSK-N-1
- Black nitrile gasket
- Thickness: 1.5 mm
- CAD Files: DXF, PDF, IGS, STP



LMBWLC60RA
- Set of two right-angle brackets
- 300 series stainless steel
- Includes M6 button head screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware
- CAD Files: DXF, PDF, IGS, STP



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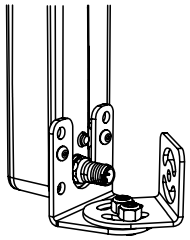
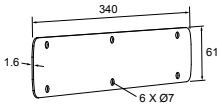
LMBWLC60RAS

- Pair of two swivel mount, right-angle brackets
- 300 series stainless steel
- Includes hardware for mounting to light
- CAD Files: DXF, PDF, IGS, STP



ACC-WLC60-340-GSK-FDA-1

- Blue FDA-approved silicone gasket
- Thickness: 1.6 mm
- CAD Files: DXF, PDF, IGS, STP



Banner Engineering Corp Limited Warranty

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