WLB72 Industrial LED Light Bar (AC Quick Disconnect) Instruction Manual

Original Instructions
p/n: 233591 Rev. A
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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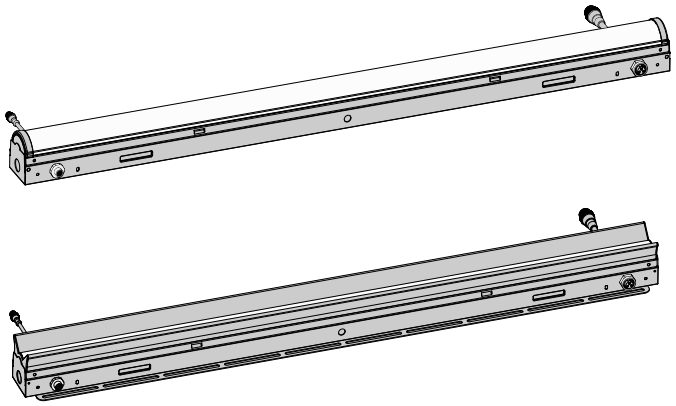
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WLB72 Models 4

Chapter 1 Features

Banner's WLB72 Industrial Strip Light is a bright LED luminaire that features an even light output for a no-glare glow. The WLB72 Inspection Light with Eye Shield is designed specifically for use in paint and surface inspection tunnels in motor vehicle, construction machinery, and aerospace manufacturing. The WLB72 Basic Light with round window is better suited for work stations, machine lighting, and low bay lighting. The WLB72 uses advanced LED lighting technology to provide a high-quality and maintenance-free industrial lighting solution.

- Long eye shield provides additional glare control and enhanced striping for defect detection
- Plug-and-play connections simplify installation
- Separate power and dimming wiring for superior electrical noise suppression
- Optional control box for advanced control and further simplified installation
- Slotted bracket for unhindered mounting options and easy adjustment
- Bright, high-quality, uniform LED light
- Durable light with a metal housing and shatter-resistant window



IMPORTANT: Read the following instructions before operating the light. Please download the complete WLB72 Industrial LED Light Bar 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 WLB72 Industrial LED Light Bar, 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 WLB72 Industrial LED Light Bar sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

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WLB72 Models

Model Key Table. Example Model: WLB72IZCWH1200E25RABKQPB1.

Family	Style	Voltage	Cascade	Color	CRI	Lighted Length (mm)	Window	Mounting	Control	Housing	Connection
WBL72	**I**	**Z**	**C**	**W**	**H**	**1200**	**E25**	**R**	**A**	**BK**	**QPB1**
	I = Inspection B = Basic	Z = AC	C = Cascadeable X = Non-cascadeable	W = Daylight White WW = Warm White	Blank = 80 CRI H = High CRI(1)	1200 = 1200 mm 2400 = 2400 mm	E25 = Eye Shield D = Basic Diffuse	Blank = No Mounting Rail R = Mounting Rail	A = 0-10 V Analog Dimming X = No Dimming Connection	Blank = White Housing BK = Black Housing	See list below

Connection Options

- **QPA0.5** = 0.5 m PVC cable with quick-disconnect connector, End
- **QPB0.5** = 0.5 m PVC cable with quick-disconnect connector, Side
- **QPC0.5** = 0.5 m PVC cable with quick-disconnect connector, Rear
- **QPA1** = 1 m PVC cable with quick-disconnect connector, End
- **QPB1** = 1 m PVC cable with quick-disconnect connector, Side
- **QPC1** = 1 m PVC cable with quick-disconnect connector, Rear

(1) High CRI in Daylight White only.

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Chapter 2 Mounting Instructions

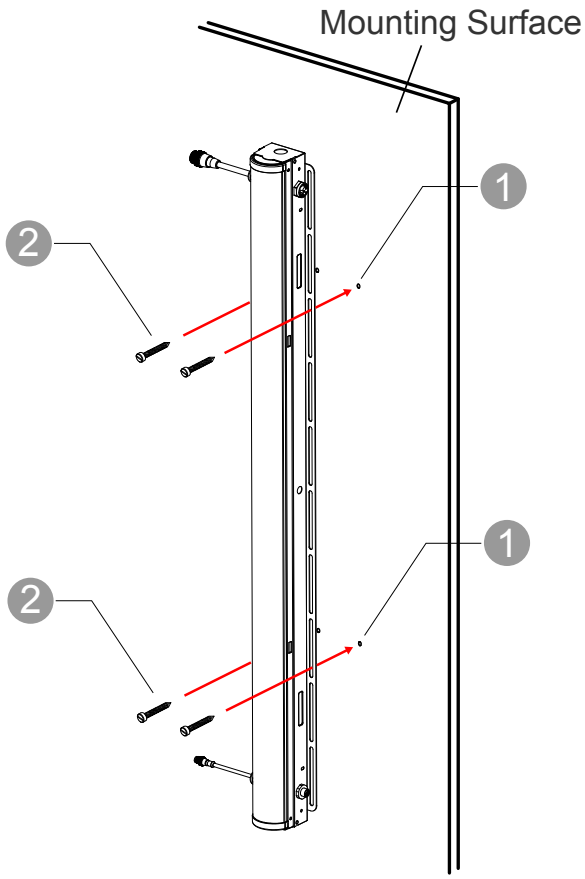
To mount the WLB72 Industrial LED Light Bar, follow these steps.

Remove the luminaire from the packaging and inspect for damage before installing. Determine the mounting method and location.

The WLB72 is rated for wall, ceiling, or under-cabinet mounting. Some models include pre-installed brackets. Optional mounting brackets are available, see "Accessories" on page 13.

1. Place the light in the mounting location and mark the positions of the light mounting holes.
2. Drill the holes and use the appropriate screws to secure the luminaire to the mounting location.

Bracket holes and positioning



When installing cascading lights, repeat steps one and two to mount additional lights. See the application note in "Specifications" on page 8 for the maximum number of cascaded lights.

> **NOTE:** With appropriate spacing, the attached quick-disconnect cordsets can be used to cascade lights without any additional cordsets.

3. Plug the incoming female cordset (not shown) into the 3-pin 7/8 in-16UNF cordset for power. See (B) in the figure below.

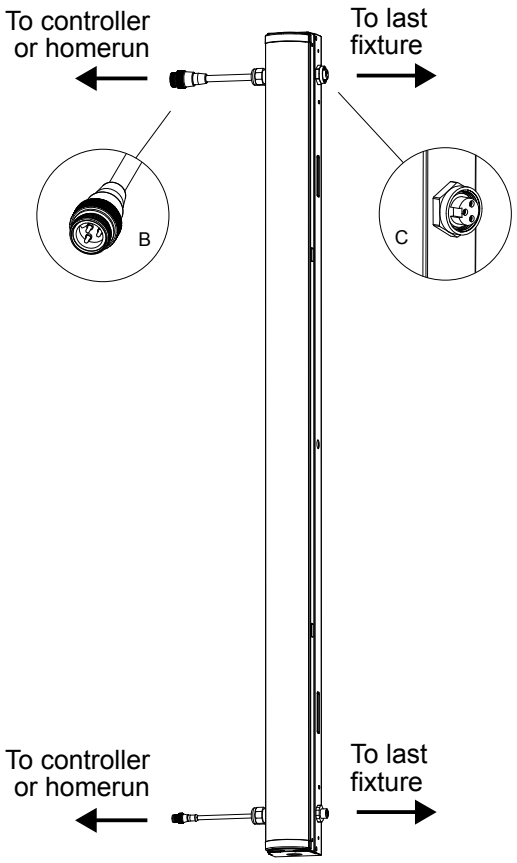
   Power flows through to the integral female quick-disconnect connector on the other side of the light. See (C) in the figure below.

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4. Position the lights so that the homerun to power attaches to the cordset side, not the integral quick-disconnect side.

> **NOTE:** The same logic applies to a 0 V to 10 V signal with models equipped with M12 quick-disconnect connectors.

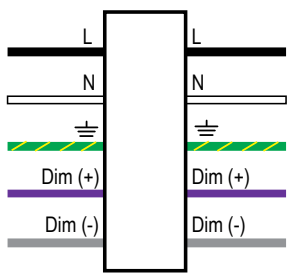
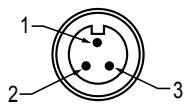
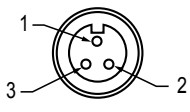
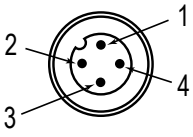
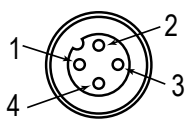
Correct orientation for the light



5. Install the supplied cover over the output connector on the last light in the cascaded chain.
6. Plug the power cord from the first light into an LCS10 controller or an appropriate outlet. Repeat for dimming cordsets, if applicable.

   Additional double-ended cordsets may be needed. See "Cordsets" on page 13.

Wiring Diagram

Diagram	Wire	Connection	Pinout (Male)	Pinout (Female)
	L - Black	Line/Hot		
	N - White	Neutral		
	⏚ - Green/ Yellow	Earth ground		
	Dim (+) - Purple	0–10 V DC analog dimming		
	Dim (-) - Gray	Return analog dimming		

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3-pin 7/8 in-16UNF Pinout Description		4-pin M12 Pinout Description	
1	Ground	1	Not connected
2	Neutral	2	Not connected
3	Line/Hot	3	Dim (-)
—	—	4	Dim (+)

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Chapter 3 Specifications

Supply Voltage

Nominal voltage: 120 V AC to 277 V AC, 60 Hz in North America

Nominal voltage: 120 V AC to 277 V AC, 50/60 Hz outside North America

Power factor: > 0.95 at 120 V AC and > 0.90 at 277 V AC

Total harmonic distortion (THD): < 20%

See electrical characteristics on product label

Supply Protection Circuitry

Protected against transient voltages

LED Lifetime

Lumen Maintenance - L_{70}

When operating within specifications, output will decrease less than 30% after 50,000 hours.

Connections

PVC cable with a 3-pin 7/8 in-16UNF quick-disconnect connector for power

PVC cable with a 4-pin M12 quick-disconnect connector for dimming

Weight

1200 model: 2.8 kg (6.2 lbs)

2400 model: 5.6 kg (12.3 lbs)

Environmental Rating

IP20

Dimming

Compatible with 0-10 V analog LED dimming, dimmable to 5% intensity

Construction

Galvanized steel with corrosion resistant polyester powder coat, polycarbonate window and end caps

Mounting

Pre-installed mounting rail bracket option. Housing includes six mounting holes for surface mounting. Several optional mounting brackets are available

Light Characteristics

Daylight White Efficacy (basic window): 130 lumens/watt typical at 120 V AC at 25 °C (77 °F)

CRI: 82, typical

High CRI: 90, minimum

Length	Color	Color Temperature (CCT)	Window	Lumens (Typical at 25 °C)
1200	Daylight White	5000 K (±300 K)	Eye Shield	3800
	Warm White	3000 K (±300 K)		
	Daylight White	5000 K (±300 K)	Basic	6800
	Warm White	3000 K (±300 K)		
2400	Daylight White	5000 K (±300 K)	Eye Shield	7600
	Warm White	3000 K (±300 K)		
	Daylight White	5000 K (±300 K)	Basic	13600
	Warm White	3000 K (±300 K)		

Operating Temperature

Surface Mount Installation:–20 °C to +45 °C (–4 °F to +113 °F)

85% at +50 °C maximum relative humidity (non-condensing)

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6 (5 minute sweep, 30 minute dwell)

Shock: 5G 11 ms duration, half sine wave per IEC 60068-2-27

Impact: IK07 (IEC 60068-2-75)

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Application Notes

When connecting continuous run/cascadable lights in series, it is important not to exceed maximum current limitations of 14 AWG, 75 °C wire, in accordance with the National Electrical Code (NEC) and any applicable local code requirements.

Two or more lights installed in parallel must maintain a 150 mm (6 in) spacing to maintain a 50 °C operation temperature.

Operating Voltage	Maximum Unit Limit		
	1200 mm Lights	2400 mm Lights	Total Length of Combined Lights (m)
120	34	17	41.45
230	68	34	82.91
277	83	41	101.2

For example, if you use (34) 1200 mm lights at 120V, you cannot add any 2400 mm lights within the same continuous run.

Supply Current

Lighted Length (mm)	Typical Current Draw (A)		
	120 V AC	230 V AC	277 V AC
1200	0.45	0.22	0.21
2400	0.86	0.44	0.36

Certifications and Approvals

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

Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN

FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Industry Canada ICES-003(B)

This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

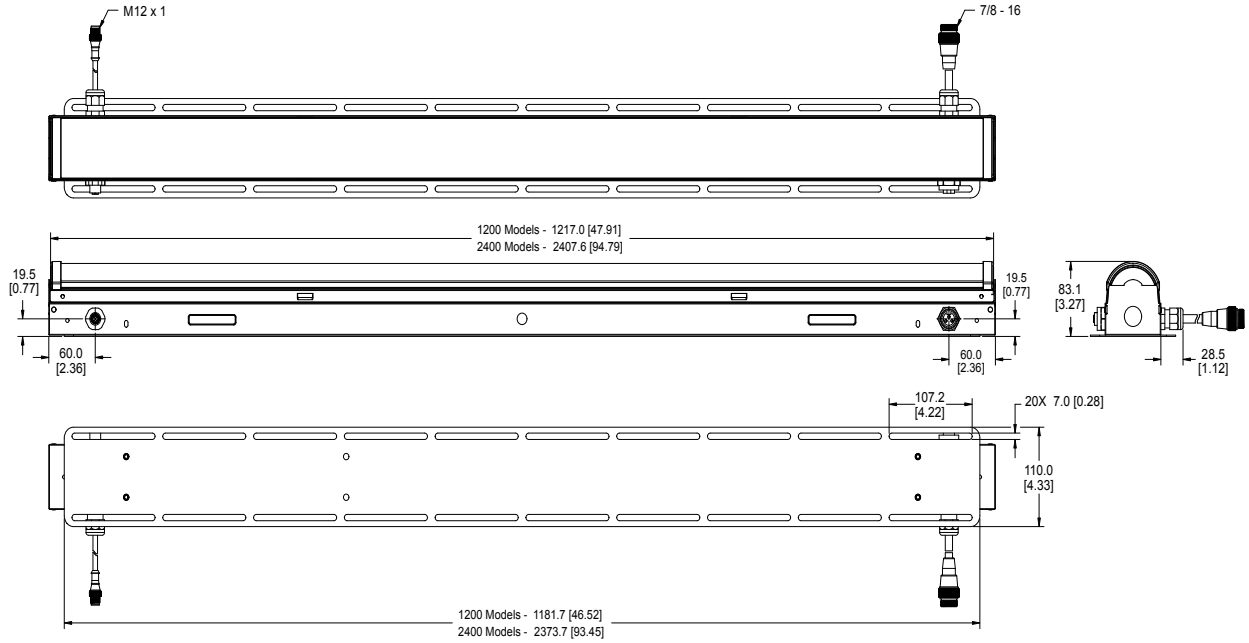
Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

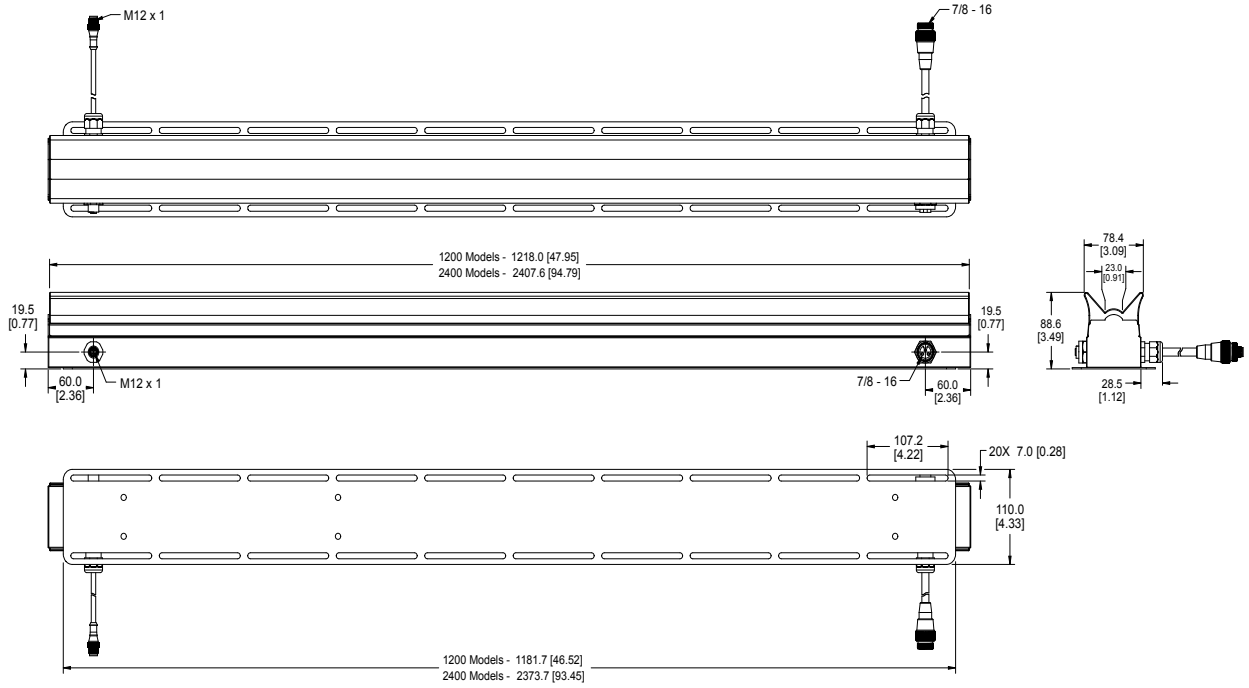
Two types of models are shown below: a model with a mounting bracket, and a model with a mounting bracket and eye shield. More information on all models can be found in "WLB72 Models" on page 4, or at www.bannerengineering.com.

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Standard Model with Mounting Bracket



Model with Mounting Bracket and Eye Shield

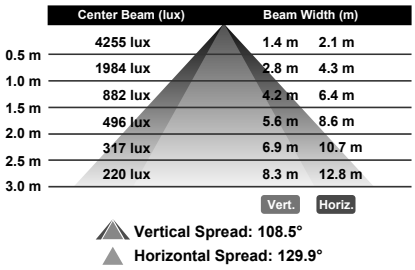


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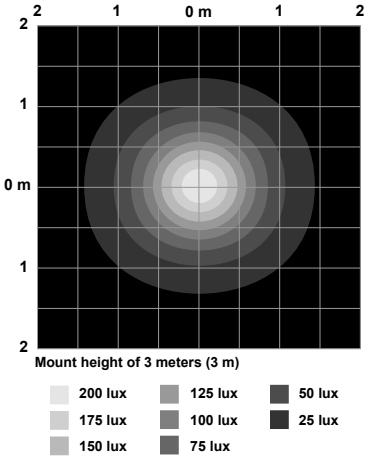
Photometric Data

1200 mm Model

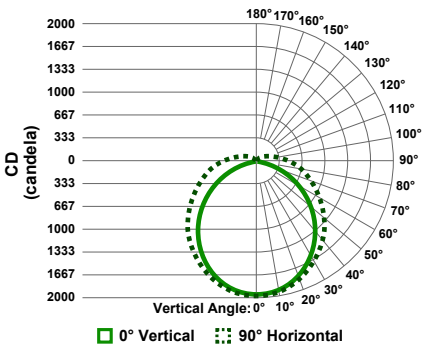
Illuminance at a Distance



Isolux Pattern

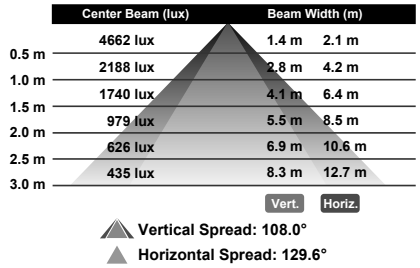


Polar Candela Distribution



2400 mm Model

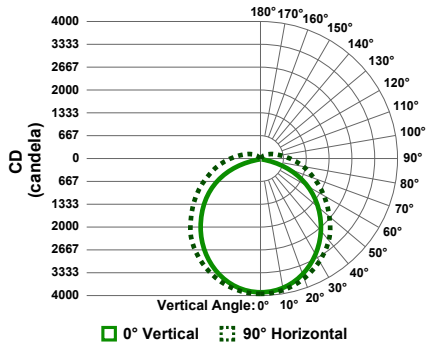
Illuminance at a Distance



Isolux Pattern

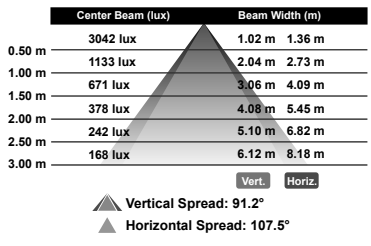


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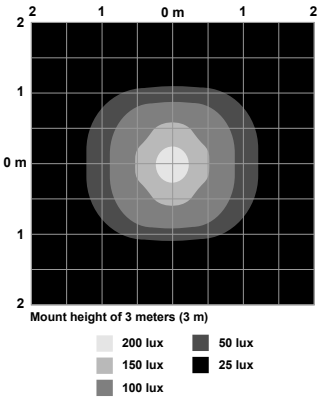


1200 mm model with eye shield

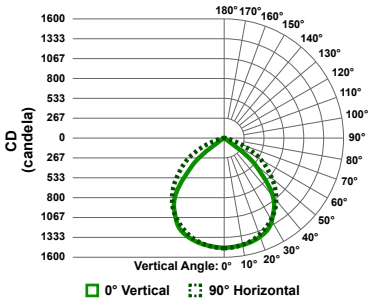
Illuminance at a Distance



Isolux Pattern



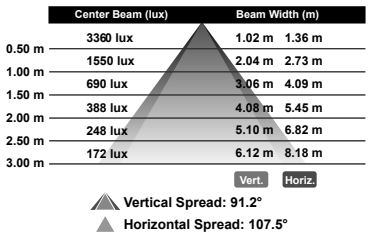
Polar Candela Distribution



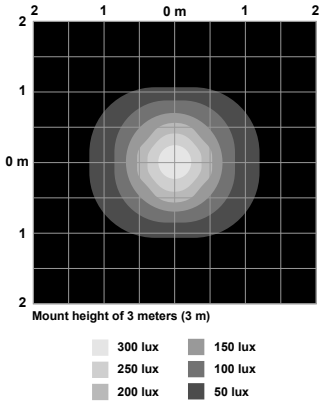
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2400 mm model with eye shield

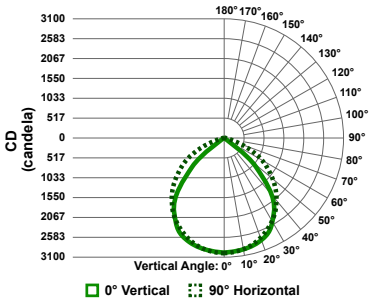
Illuminance at a Distance



Isolux Pattern



Polar Candela Distribution



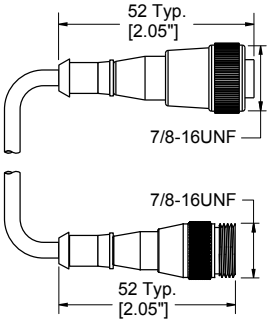
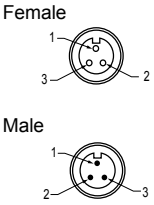
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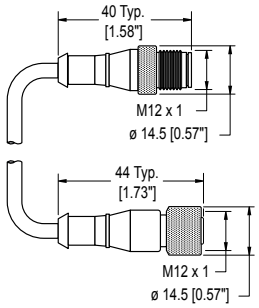
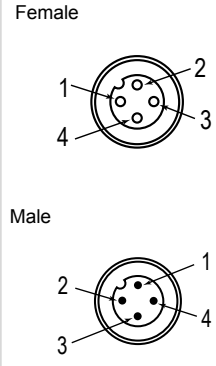
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Chapter 4 Accessories

Cordsets

3-pin 7/8 in-16UNF Cordsets - Female to Male Double-Ended, Straight				
Model	**Length**	**Dimensions**	**Pinout**	
BCP-MAF3-MAM3-14-0.5M	0.5 m (1.64 ft)			1 = Yellow/Green 2 = Black 3 = White
BCP-MAF3-MAM3-14-1M	1 m (3.28 ft)			
BCP-MAF3-MAM3-14-2M	2 m (6.56 ft)			
BCP-MAF3-MAM3-14-5M	5 m (16.4 ft)			
BCP-MAF3-MAM3-14-8M	8 m (26.24 ft)			
BCP-MAF3-MAM3-14-10M	10 m (32.81 ft)			
BCP-MAF3-MAM3-14-15M	15 m (49.2 ft)			
BCP-MAF3-MAM3-14-20M	20 m (65.62 ft)			
BCP-MAF3-MAM3-14-30M	30 m (98.42 ft)			

4-Pin Threaded M12 Cordsets—Double Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout**
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		
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)			

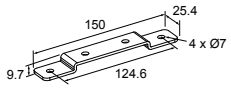
Brackets

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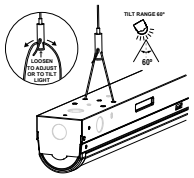
NOTE: Brackets cannot be used with models with pre-installed rail bracket.

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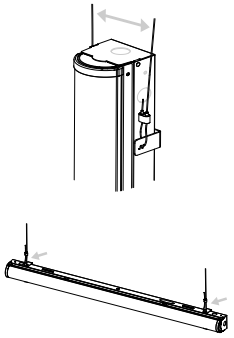
LMBWLB72F
- Stainless steel
- Includes two surface mount brackets and four screws for mounting onto the housing



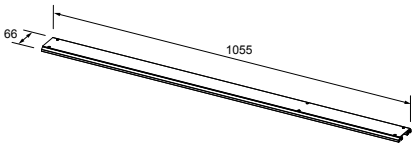
LMBWLB72HK
- Hanging bracket kit allows for suspended installation
- Includes two hanging bracket assemblies
- Cables allow for 60 degrees of angle adjustment



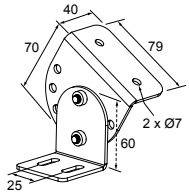
LMBWLB72HKHV
- Adjustable-length hanging bracket kit allows for vertical or horizontal mounting
- Includes two hanging bracket assemblies
- 1.52 m (5 ft) cable with looped end



LMBWLB72R1200
- Rail bracket for extrusion mounting for 1200 mm WLB72 models
- Anodized aluminum
- Hardware included



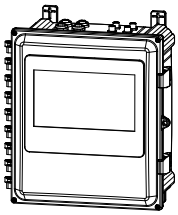
LMBWLB72RAS
- Swivel brackets allow for 180° of movement in seven fixed positions
- Stainless steel
- Includes two swivel bracket assemblies and eight screws



NOTE: The 2400 mm model requires four brackets for mounting. Order two of the above bracket model numbers.

Dimmers

LCS10 Lighting Controller System
- 14 in × 12 in polycarbonate enclosure
- Four-zone, 0 V to 10 V dimming control
- 10 in pre-programmed HMI color touchscreen



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Chapter 5 Banner Engineering Corp Limited Warranty

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