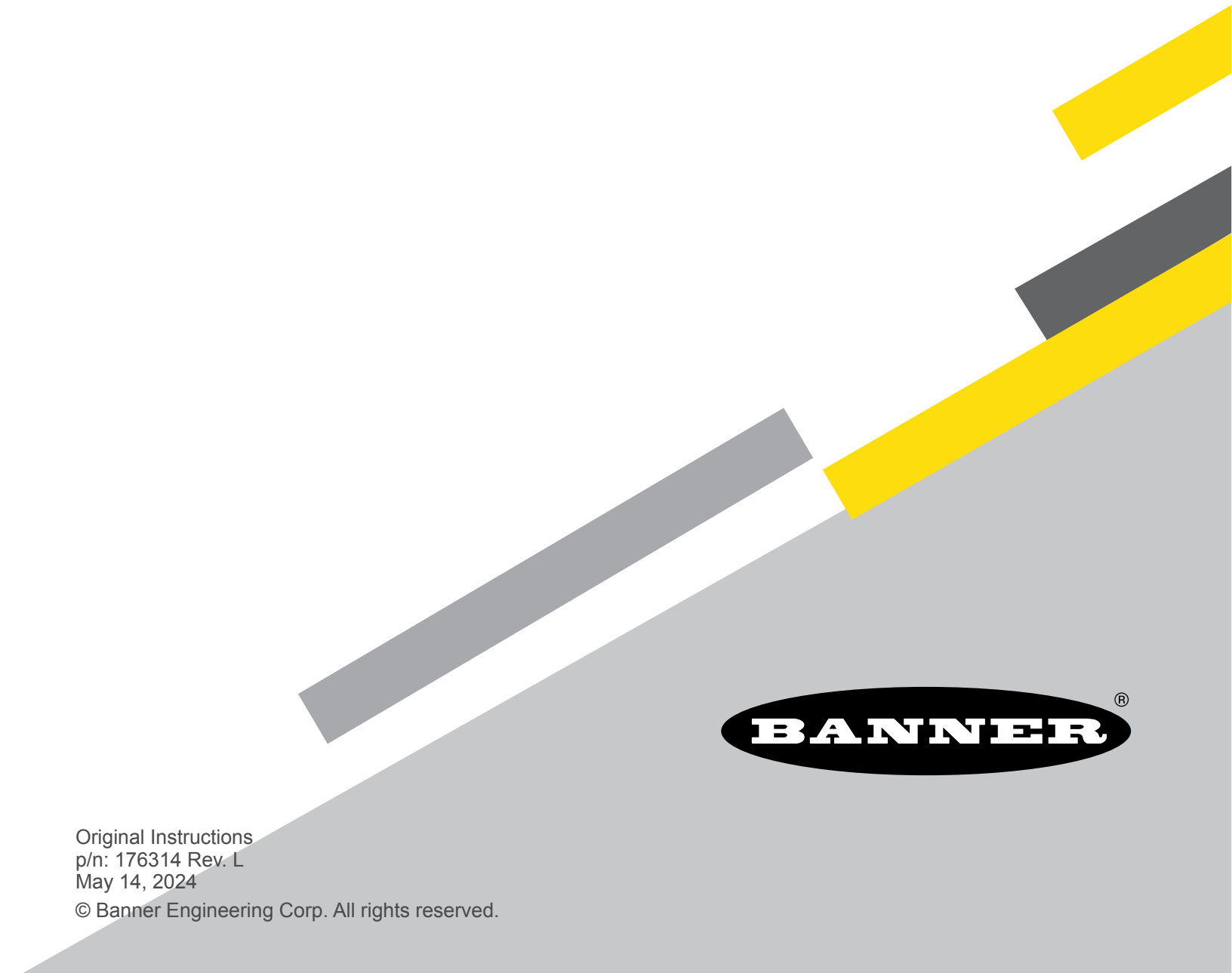
WLB32 Industrial LED Light Bar (AC) Instruction Manual



Original Instructions
p/n: 176314 Rev. L
May 14, 2024

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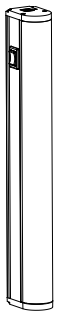
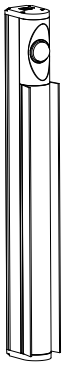
Chapter 1 Features and Models



Model without Motion Detector

Model with Motion Detector



Model with Eye Shield and Motion Detector

Banner's WLB32 is an ultra-bright LED fixture that features an even light output for a no-glare 'glow'. Suitable for a variety of environments and applications, including workstations, machine lighting, control cabinets, and manufacturing lines, the WLB32 uses advanced LED lighting technology to provide a high-quality and maintenance-free industrial lighting solution for years.

- Highly energy efficient for overall cost savings
- High/Low/Off switch
- Models with eye shield block side glare
- Connect power in sequence to multiple lights
- Motion detection models available
- Metal housing, shatterproof window
- Easy installation with snap clips, or a choice of magnetic or angle brackets

WLB32 Industrial LED Light Bars are available in models that can be connected in sequence together for a continuous length of lighting, with a minimum of wiring. Each light bar can be turned to high, low, or off independently of the other lights, upstream or downstream, in the chain of lights. A double-ended accessory cordset must be used between each pair of connecting lights.

90 V AC to 264 V AC Models			
Models	**Lighted Length (mm)**	**Connector**	**Lumens**
WLB32ZC285PBQMB	285	Custom integral quick-disconnect connector	750
WLB32ZC570PBQMB	570		1500
WLB32ZC850PBQMB	850		2250
WLB32ZC1130PBQMB	1130		3000

The listed models include a U.S. power cable.

- To order model with no power cable, omit the suffix "B" from the model number. For example, WLB32ZC285PBQM. For a list of other countries' wall plug cables, refer to the Accessories list.
- To order the light without the integral switch, omit the "PB" from the model number. For example, WLB32ZC285QMB.
- To order the light with the integral motion detector, replace the 'PB' from the model number with 'M'. For example, WLB32ZC285MQMB.
- To order the light with the eye shield, add an 'E' after the length. For example, WLB32ZC285EPBQMB.

IMPORTANT: Read the following instructions before operating the light. Please download the complete WLB32 Industrial LED Light Bar (AC) technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

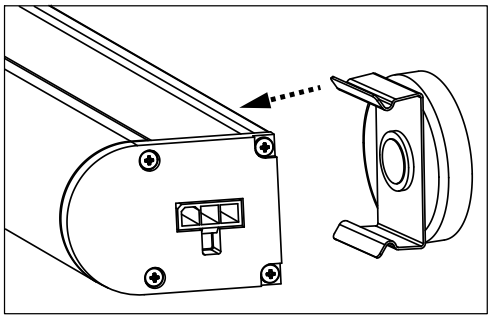
IMPORTANT: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLB32 Industrial LED Light Bar (AC), disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

IMPORTANT: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLB32 Industrial LED Light Bar (AC) sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

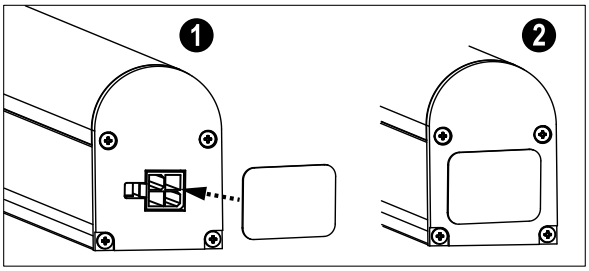
Chapter Contents

Chapter 2 Installing the WLB32 AC Series Lights

1. Attach the snap brackets to the light.



2. Select a suitable horizontal or vertical dry mounting location.
3. Place the light in the mounting location and mark the positions of the snap bracket mounting holes.
4. Drill the holes and use appropriate screws to secure the snap bracket to the mounting location.
5. Snap the light onto the brackets.
6. When connecting multiple lights in sequence, follow steps 1 through 5 to mount additional lights. See the application note in "Specifications" on page 6 for the maximum number of lights connected and the maximum allowed cable run when choosing mounting locations.
7. Connect the units together using a double-ended cordset (see "Accessories" on page 12).
8. Install the supplied cover over the output connector on the last light in the chain.



9. Plug the power cord from the first light into the wall outlet.

CAUTION: To reduce the risk of fire, electric shock, or injury to personnel:

- Use only insulated staples or plastic ties to secure cords;
- Route and secure cords so that they will not be pinched or damaged when the cabinet is pushed to the wall;
- Position the portable cabinet light with respect to the cabinet so the lamp replacement markings are able to be read during relamping;
- Do not recess into ceilings or soffits; and
- Do not conceal the cords. The National Electrical Code (NEC) does not permit cords to be concealed where damage to insulation may go unnoticed. To prevent fire danger, do not run cord behind walls, ceilings, soffits, or cabinets where it may be inaccessible for examination. Cords should be visually examined periodically and immediately replaced when any damage is noted.

Chapter Contents

Chapter 3 Specifications

Operating Voltage

90 V AC to 264 V AC (50 Hz or 60 Hz)

Power factor > 0.95 on high setting at 120 V AC

See electrical characteristics on product label

Supply Current

Light Length (mm)	Max Current Draw (A) at 90 V AC	Typical Current Draw (A)	
		120 V AC	230 V AC
285	0.08	0.06	0.036
570	0.15	0.111	0.063
850	0.265	0.175	0.095
1130	0.3	0.225	0.126

Supply Protection Circuitry

Protected against transient voltages

Light Characteristics

Color: Daylight white

Color temperature (CCT): 5000K (±300K)

Lumen output: 750 (±5%) per foot, typical at 25 °C (77 °F)

CRI: 82 typical

Eye shield reduces lumens by approximately 25%

LED Lifetime

Lumen Maintenance - L_{70}

When operating within specifications, output will decrease less than 30% after 70,000 hours.

Push Button

II = 100% light intensity

I = 50% light intensity

O = Standby

Models with Motion Detection

Light turns off after approximately 60 seconds without detecting motion.

Range: 12 m; ±45° field of view

Standby current: 170 µA

Construction

Anodized aluminum housing; polycarbonate window and end caps; stainless steel mounting brackets

Spacing Criterion

Vertical: 1.22

Horizontal: 1.32

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	1.0	30	0.5

Certifications

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

UL Listed only for 120 V AC, 60 Hz

E476617

UL Recognized for easy installation in control cabinets

Mounting

Snap clips; optional magnetic mount or swivel bracket accessories available

Connections

Custom integral quick-disconnect connector (connecting cordset required)

Environmental Rating

IP50

Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)

Operating Temperature

–25 °C to +45 °C (–13 °F to 113 °F)

Models with Motion Detection: –20 °C to +45 °C (–4 °F to +113 °F)

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Test Data

LM-79, LM-80, TM-21

Application Note

When connecting lights in series, do not exceed the maximum unit limit of 16, regardless of light size, and do not exceed a maximum wiring distance of 100 m (328 ft)

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.

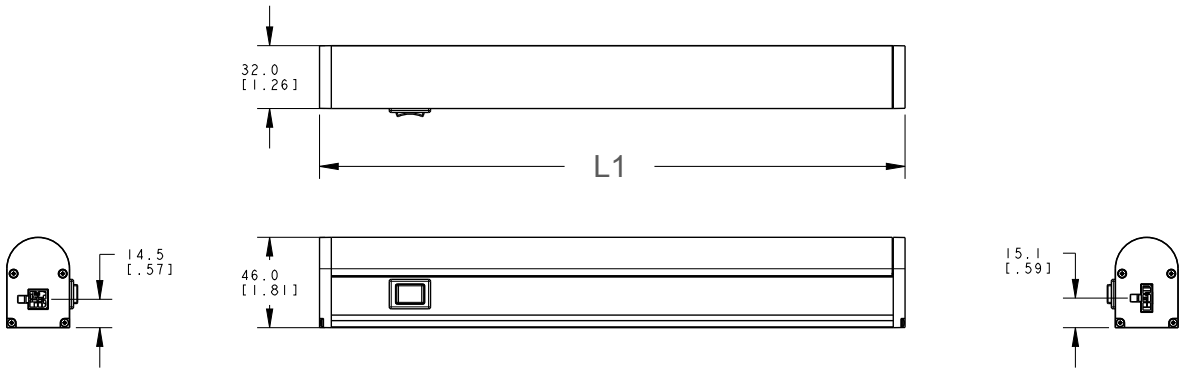
(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.

Industry Canada ICES-003(B)

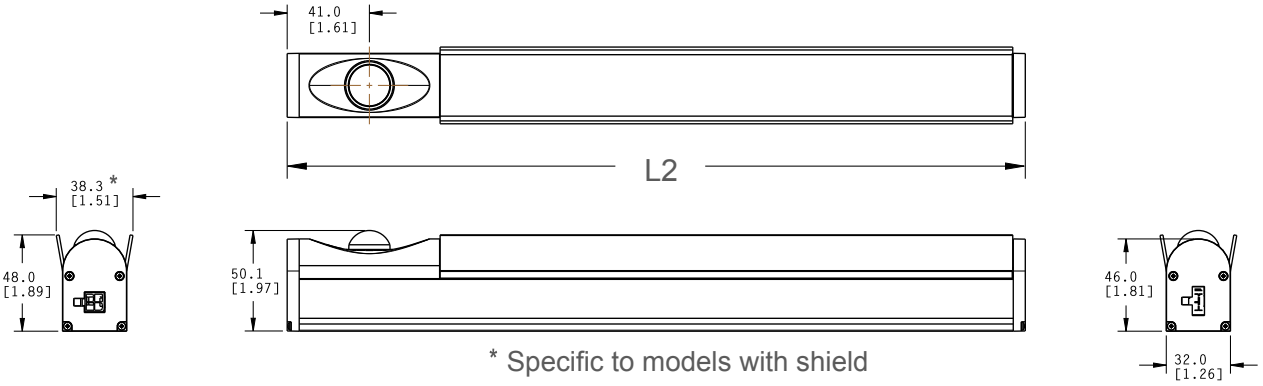
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

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.

WLB32 Dimensions



Motion Detector and/or Eye Shield Models



* Specific to models with shield

Model	Models without Motion Detector	Models with Motion Detector and/or Eye Shield
	L1	L2
WLB32ZC285..QM	298 mm (11.7 in)	368 mm (14.5 in)
WLB32ZC570..QM	580 mm (22.8 in)	650 mm (25.6 in)
WLB32ZC850..QM	862 mm (33.9 in)	932 mm (36.7 in)
WLB32ZC1130..QM	1144 mm (45.0 in)	1214 mm (47.8 in)

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).

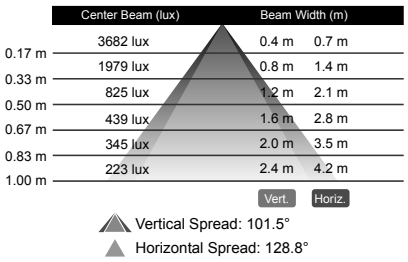
Luminaire Spacing = SC × Height to Illuminated Plane

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

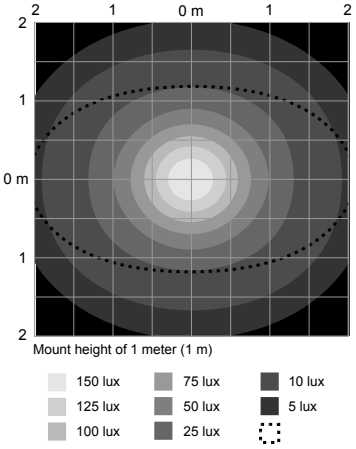
WLB Light Characteristics

285 mm Models

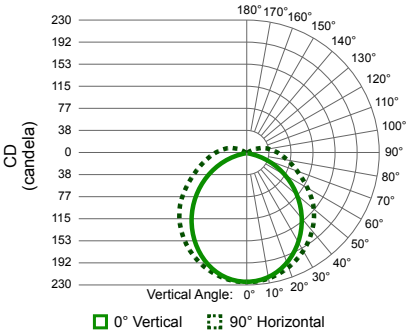
Illuminance at a Distance



Isolux Pattern

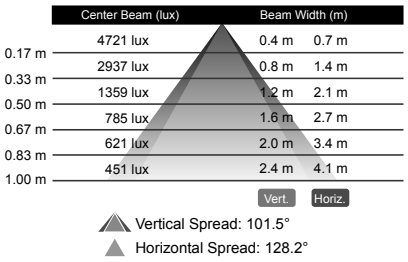


Polar Candela Distribution



570 mm Models

Illuminance at a Distance



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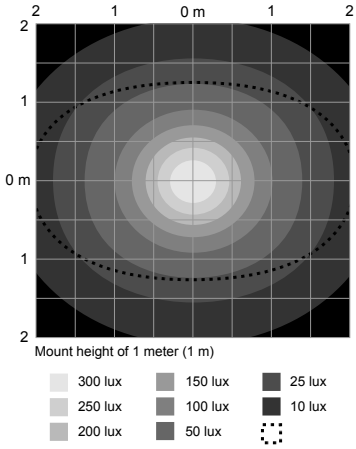

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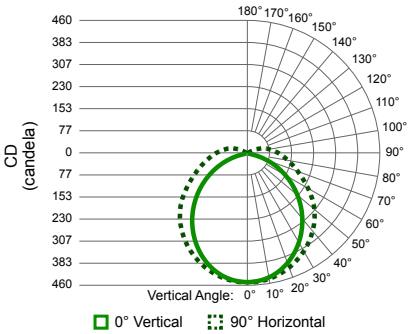
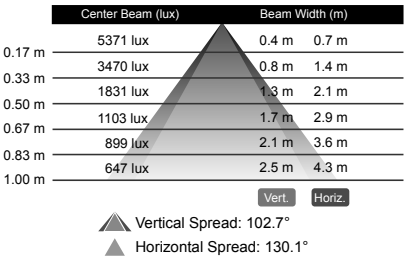


850 mm Models

Illuminance at a Distance



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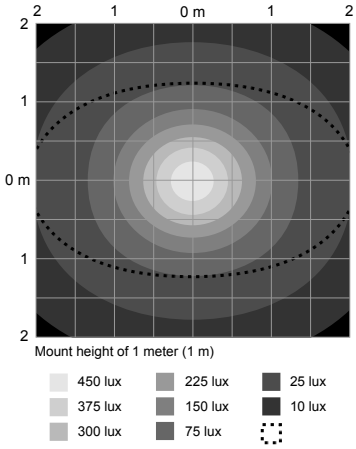

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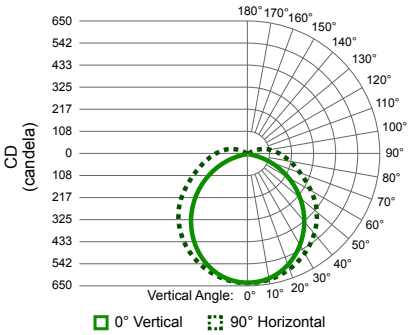
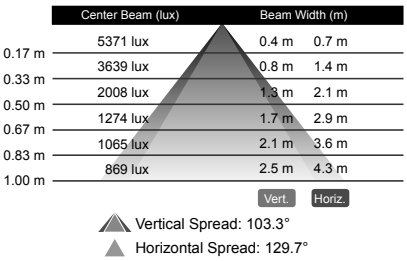


Illuminance at a Distance

1130 mm Models

Illuminance at a Distance



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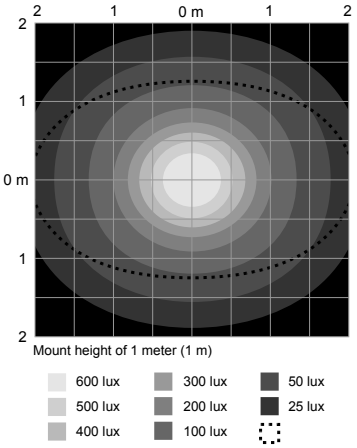

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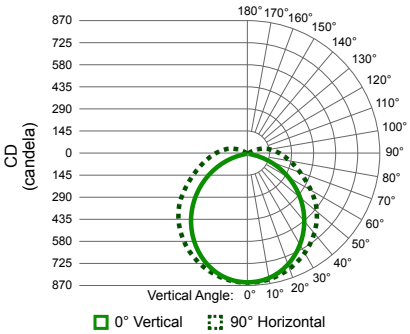
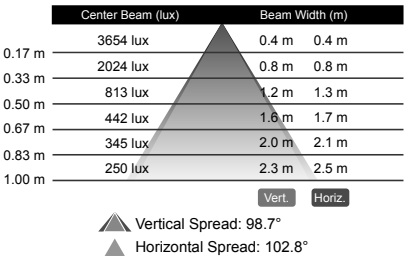


285 mm Models with Eye Shields

Illuminance at a Distance



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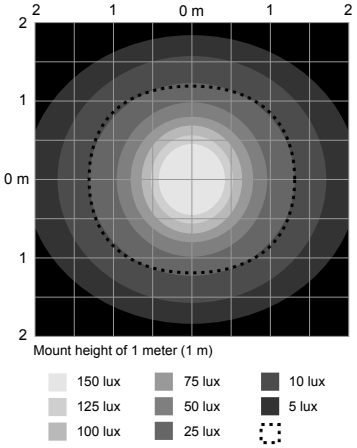

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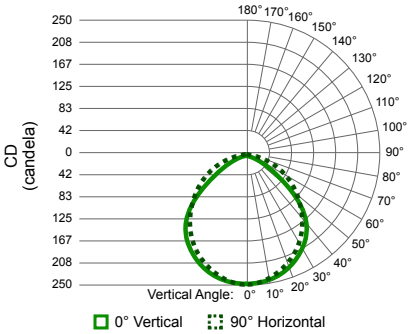
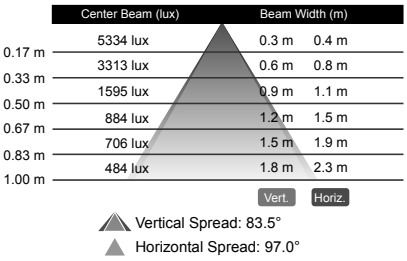


570 mm Models with Eye Shields

Illuminance at a Distance



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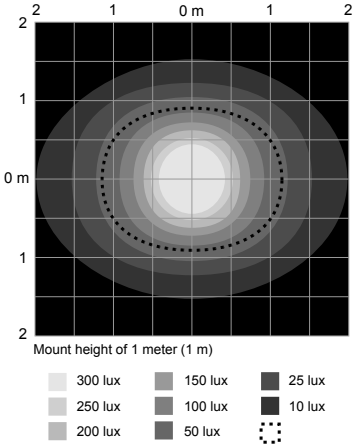

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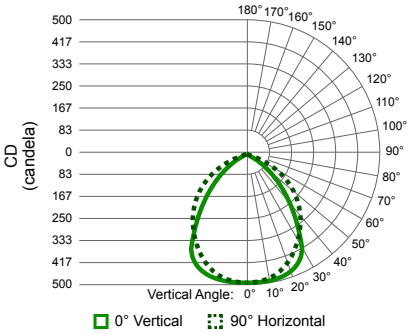
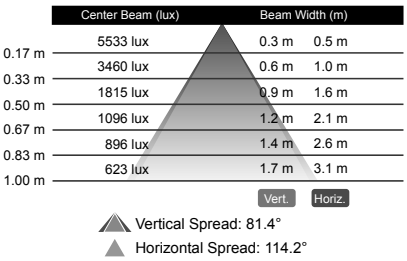


850 mm Models with Eye Shields

Illuminance at a Distance



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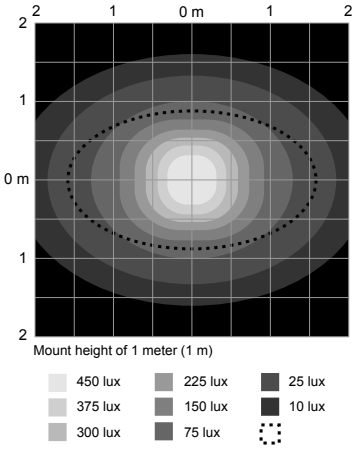

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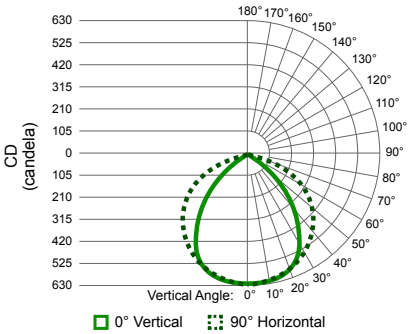
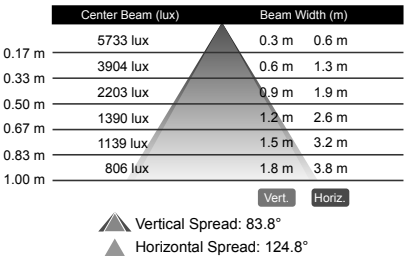


1130 mm Models with Eye Shields

Illuminance at a Distance



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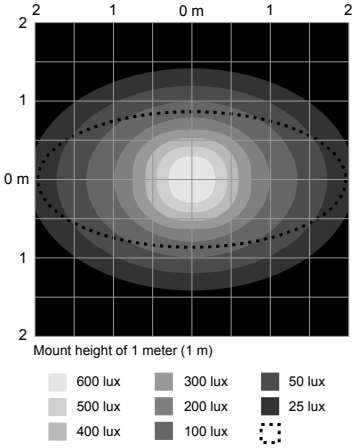

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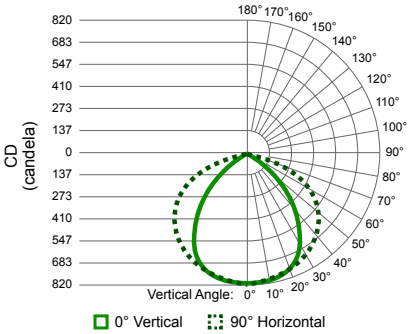
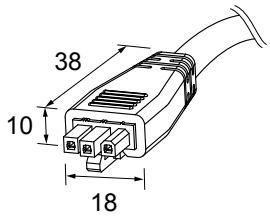
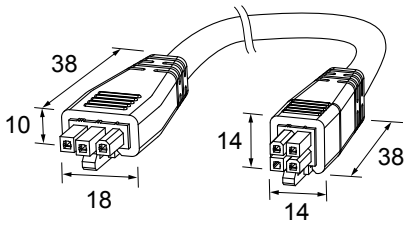


Chapter Contents

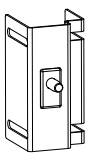
Chapter 4 Accessories

Cordsets

Wall Plug Cordsets					
Model	**Plug Type**	**Countries**	**Wire Gauge**	**Length**	**Dimensions**
LQMAC-306	Flying Leads		18 AWG	1.83 m (6 ft)	
LQMAC-306B	NEMA 5-15 grounded (IEC Type B)	United States, Canada, Japan, Puerto Rico, Taiwan			
LQMAC-306D	BS 546 (IEC Type D)	India			
LQMAC-306EF	CEE 7/7 (IEC Type E or F)	Germany, France, South Korea, The Netherlands, Poland, Spain, Turkey			
LQMAC-306G	BS 1363 (IEC Type G)	United Kingdom, Ireland, Singapore, Vietnam			
LQMAC-306I	AS/NZS 3112 (IEC Type I)	China, Australia, New Zealand			
LQMAC-306N	NBR 14136 (IEC Type N)	Brazil			
LQMAC-310B	NEMA 5-15 grounded (IEC Type B)	United States, Canada, Japan, Puerto Rico, Taiwan		3.05 m (10 ft)	

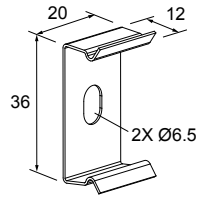
Continuous Run/Cascade Cordsets				
Model	**Length**	**Style**	**Wire Gauge**	**Dimensions**
LQMAEC-3005SS	0.15 m (0.49 ft)	Male straight/Male straight	18 AWG	
LQMAEC-301SS	0.305 m (1.00 ft)			
LQMAEC-303SS	0.91 m (2.99 ft)			
LQMAEC-306SS	1.83 m (6.00 ft)			
LQMAEC-312SS	3.66 m (12.01 ft)			
LQMAEC-320SS	6.10 m (20.01 ft)			
LQMAEC-330SS	9.20 m (30.18 ft)			

Enclosure Accessories

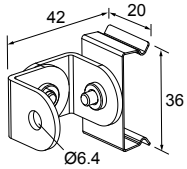
LMBEDS Switch • Bracket with plunger switch to power lights when the enclosure is opened • Refer to datasheet 160672 for more information	

Brackets

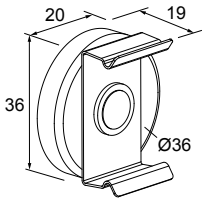
LMBWLB32
- Replaces the bracket that ships with the WLB32 light
- Stainless steel
- Includes 4 snap clips, 4 screws, and 2 insulator caps



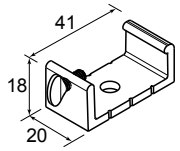
LMBWLB32-180S
- Swivel bracket kit allows 180° of movement



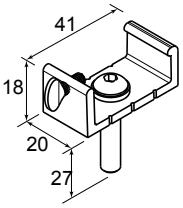
LMBWLB32MAG
- Magnetic mounting bracket for easy attachment to steel and iron surfaces



LMBWLB32U
- Die-cast bracket for rugged applications
- Secured to light with included thumb screw
- Clearance hole for 6 mm (1/4 in) button head screw



LMBWLB32UT
- Die-cast bracket for rugged applications
- Secured to light with included thumb screw
- Integral 1/4-20 stud for mounting



Chapter Contents

Chapter 5 Product Support and Maintenance

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