# WLS27 LED Strip Light Product Manual

Original Instructions
p/n: 185590 Rev. I
11-Sep-25
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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# Chapter 1 Features

Banner's WLS27 LED Strip Light has a sturdy aluminum housing and is encased in a shatterproof, UV-stabilized, copolyester shell, making it ideal for harsh indoor and outdoor applications.

- Low-profile, space-saving design
- Rugged, water-resistant IP69K option
- Available in eight lengths from 145 mm to 1130 mm
- Daisy chain power to multiple lights
- Optional snap clips for easy installation and repositioning
- Capability to dim lights using the wiring pinout (Hi/Lo/Off)
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect product lifetime

*Stand-Alone Light or End Light in a Cascade—QD*



*First or Middle of a Cascade—QD*



These Work Light Strips are available as either stand-alone models, or as cascade models that can be "daisy-chained" together for a continuous length of lighting, with a minimum of wiring.

Stand-alone models have a male quick disconnect (QD) at one end for power connection and no connections at opposite end. A stand-alone model may be used as the last in the cascade series.

Cascade models have a male quick disconnect (QD) at one end for power connection, and a female QD at the opposite end for connecting to other lights in the cascade. A double-ended accessory cordset must be used between each pair of lights in a cascade.

Use single-ended cordsets between the power source and the QD connection of a stand-alone light or the first light in a cascade. Use double-ended cordsets between lights in a cascade.

**IMPORTANT:** Read the following instructions before operating the light. Please download the complete WLS27 LED Strip Light 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 WLS27 LED Strip Light, 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 WLS27 LED Strip Light 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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# Models

| Family | Cascadable | LED Color | Lighted Length (mm) | Window | Construction | Connector[1] |
|---|---|---|---|---|---|---|
| WLS27 | C | W | 145 | D | S | Q |
| | C = Cascadable<br>X = Non-cascadable | W = Cool white<br>WW = Warm white<br>R = Red<br>G = Green<br>B = Blue<br>Y = Yellow | 145<br>285<br>430<br>570<br>710<br>850<br>990<br>1130 | D = Diffused plastic | S = Sealed | Q = Integral 4-pin M12 male quick-disconnect connector |

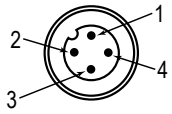
| Models | | Lighted Length | Power Connector |
|---|---|---|---|
| Stand-Alone | Cascade | | |
| WLS27XW145DSQ | WLS27CW145DSQ | 145 mm | Integral 4-pin M12 male quick-disconnect connector |
| WLS27XW285DSQ | WLS27CW285DSQ | 285 mm | |
| WLS27XW430DSQ | WLS27CW430DSQ | 430 mm | |
| WLS27XW570DSQ | WLS27CW570DSQ | 570 mm | |
| WLS27XW710DSQ | WLS27CW710DSQ | 710 mm | |
| WLS27XW850DSQ | WLS27CW850DSQ | 850 mm | |
| WLS27XW990DSQ | WLS27CW990DSQ | 990 mm | |
| WLS27XW1130DSQ | WLS27CW1130DSQ | 1130 mm | |

[1] Models with a quick-disconnect connector require a mating cordset.


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# Chapter 2 Wiring

| 4-pin M12 Male | Pin | Wire Color | Connection |
|---|---|---|---|
|  | 1 | Brown | 12 V DC to 30 V DC |
| | 2 | White | Not used |
| | 3 | Blue | DC common |
| | 4 | Black | Connect to 12 V DC to 30 V DC for 50% maximum intensity. For maximum intensity, leave the black wire floating or connected to common. |


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# Chapter 3 Specifications

## Supply 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

| Light Length | Typical Current | | | Max. Current | Lumens (Typical at 25 °C) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 12 V DC | 24 V DC | 30 V DC | A | Cool White | Warm White | Green | Red | Yellow | Blue |
| 145 mm | 0.33 A | 0.15 A | 0.12 A | 0.4 | 400 | 400 | 180 | 55 | 50 | 40 |
| 285 mm | 0.66 A | 0.30 A | 0.24 A | 0.8 | 800 | 800 | 360 | 110 | 100 | 80 |
| 430 mm | 1.01 A | 0.46 A | 0.36 A | 1.2 | 1200 | 1200 | 540 | 165 | 150 | 120 |
| 570 mm | 1.36 A | 0.61 A | 0.48 A | 1.6 | 1600 | 1600 | 720 | 220 | 200 | 160 |
| 710 mm | 1.75 A | 0.77 A | 0.60 A | 2.0 | 2000 | 2000 | 900 | 275 | 250 | 200 |
| 850 mm | 2.13 A | 0.92 A | 0.73 A | 2.4 | 2400 | 2400 | 1080 | 330 | 300 | 240 |
| 990 mm | 2.59 A | 1.08 A | 0.85 A | 2.8 | 2800 | 2800 | 1260 | 385 | 350 | 280 |
| 1130 mm | 3.04 A | 1.24 A | 0.97 A | 3.2 | 3200 | 3200 | 1440 | 440 | 400 | 320 |

## Supply Protection Circuitry

Protected against reverse polarity and transient voltages

## Light Characteristics

Cool white

Color Temperature (CCT): 6500K (+500K, -400K)
Lumen output: 800 (± 5%) per foot, typical at 25 °C (77 °F)
Luminous efficacy: 110 lumens/Watt typical at 24 V DC at 25 °C (77 °F)
CRI: 85, typical

Warm white: 3000K (+200K, -100K)

Green: 525 nm

Red: 618 nm

Yellow: 590 nm

Blue: 460 nm

## Application Note

When connecting cascadable lights in series at 100% intensity, it is important not to exceed maximum current limitations:

Maximum length of light at 12 V DC: 1.4 m (4.6 ft)
Maximum length of light at 24 V DC: 3.0 m (9.8 ft)
Maximum length of light at 30 V DC: 3.1 m (10.2 ft)

At 50% intensity, double the lengths.

**NOTE:** Do not spray cable with high-pressure sprayer, or cable damage will result.

## 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

## LED Lifetime

Lumen Maintenance - $L_{70}$

When operating within specifications, output will decrease less than 30% after 75,000 hours.

## Construction

Clear anodized aluminum housing; FDA-grade copolyester outer housing

## Mounting

Bracket LMBWLS27EC included (2 for lights up to 570 mm or 3 for lights 710 mm and longer)

## Connections

Integral 4-pin M12 male quick-disconnect connector (4-pin connecting cordset required)


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**Environmental Rating**

Rated IP66, IP67, and IP69K per ISO 20653

**Operating Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

Light output begins to decrease above 50 °C (122 °F) and will be approximately 65% of max intensity at 60 °C (140 °F) and 30% of max intensity at 70 °C (158 °F)

**Storage Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

**Vibration and Mechanical Shock**

Vibration 10-55 Hz 1.0 mm p-p amplitude per IEC 60068-2-6

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

# 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)

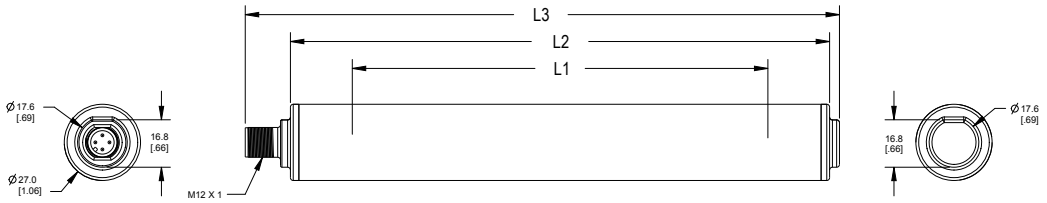
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

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.

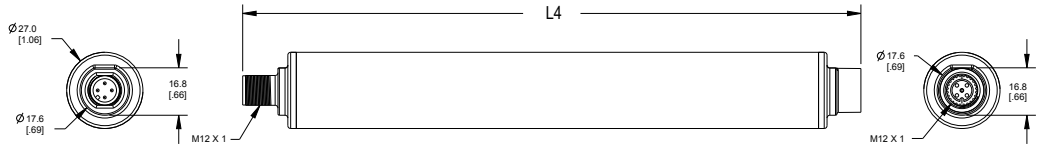
# Dimensions

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

*Quick Disconnect Models*




*Cascade Models*




| Models | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| WLS27..145.. | 145 mm (5.7 in) | 191 mm (7.5 in) | 210.5 mm (8.3 in) | 219 mm (8.6 in) |
| WLS27..285.. | 286 mm (11.3 in) | 332 mm (13.1 in) | 351.5 mm (13.8 in) | 360 mm (14.2 in) |
| WLS27..430.. | 427 mm (16.8 in) | 473 mm (18.6 in) | 492.5 mm (19.4 in) | 501 mm (19.7 in) |
| WLS27..570.. | 568 mm (22.4 in) | 614 mm (24.2 in) | 633.5 mm (24.9 in) | 642 mm (25.3 in) |
| WLS27..710.. | 709 mm (27.9 in) | 755 mm (29.7 in) | 774.5 mm (30.5 in) | 783 mm (30.8 in) |
| WLS27..850.. | 850 mm (33.5 in) | 896 mm (35.3 in) | 915.5 mm (36 in) | 924 mm (36.4 in) |

Continued on page 8


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Continued from page 7

| Models | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| WLS27..990.. | 991 mm (39 in) | 1037 mm (40.8 in) | 1056.5 mm (41.6 in) | 1065 mm (41.9 in) |
| WLS27..1130.. | 1132 mm (44.6 in) | 1178 mm (46.4 in) | 1197.5 mm (47.1 in) | 1206 mm (47.5 in) |

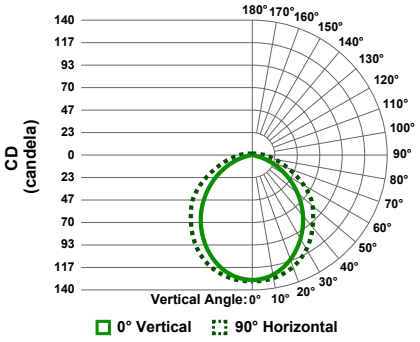
# Photometric Data

The optical data shown below is for cool white only. To get lux and candela values for other colors, multiply the values shown on the charts by the following factors:

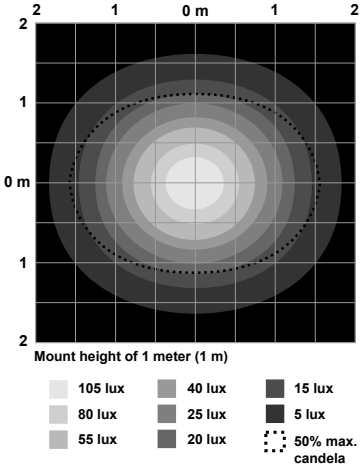
| | |
|---|---|
| **Warm White:** | 1 |
| **Green:** | 0.45 |
| **Red:** | 0.138 |
| **Yellow:** | 0.125 |
| **Blue:** | 0.1 |

*145 mm models*

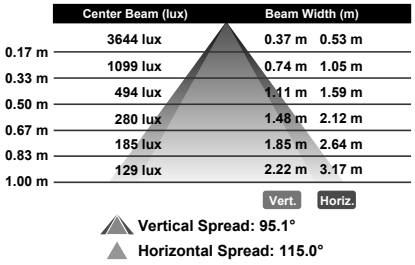
**Polar Candela Distribution**




**Isolux Pattern**

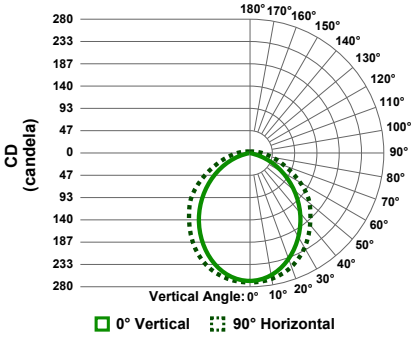



**Illuminance at a Distance**

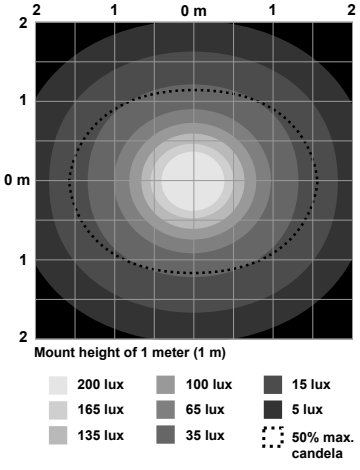



*285 mm models*

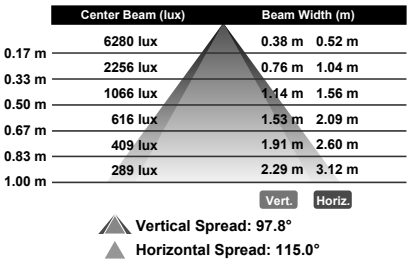
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**

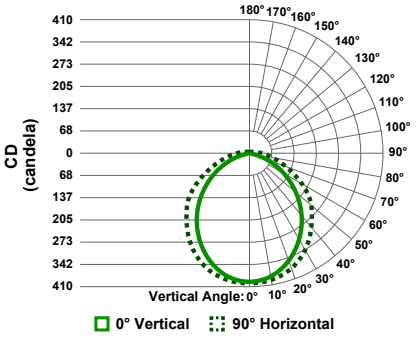




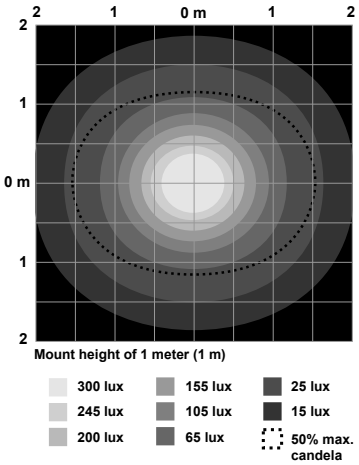
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*430 mm models*

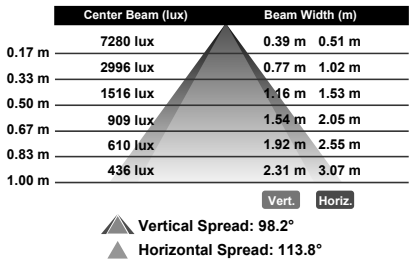
**Polar Candela Distribution**




**Isolux Pattern**

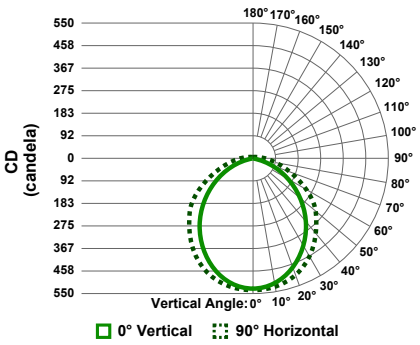



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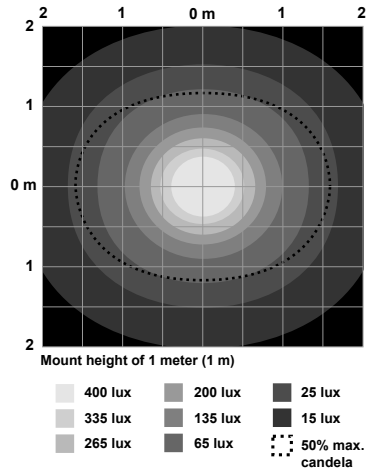



*570 mm models*

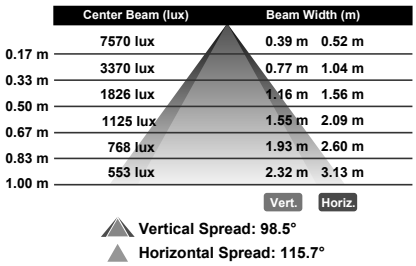
**Polar Candela Distribution**




**Isolux Pattern**

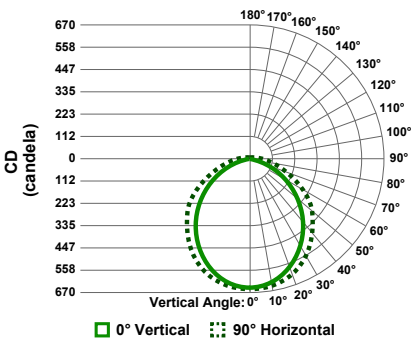



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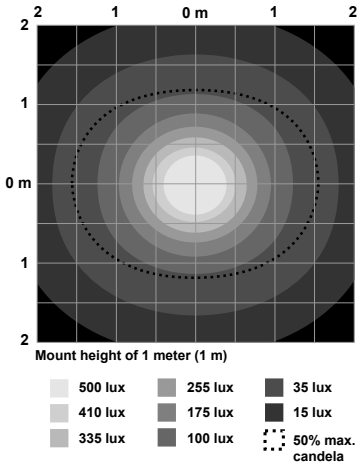



*710 mm models*

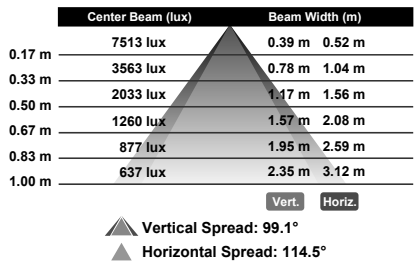
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**

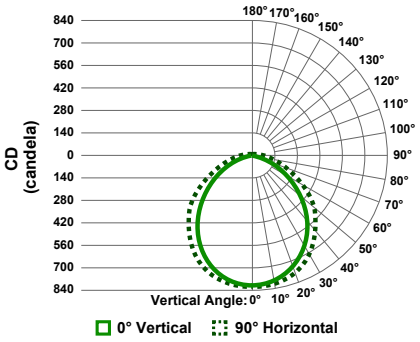




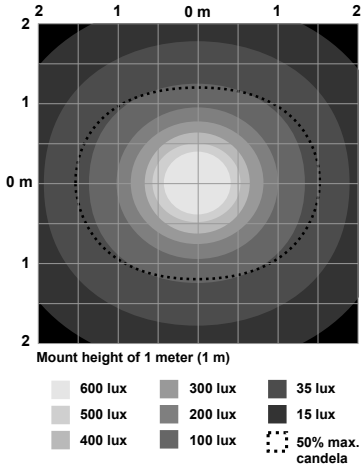
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*850 mm models*

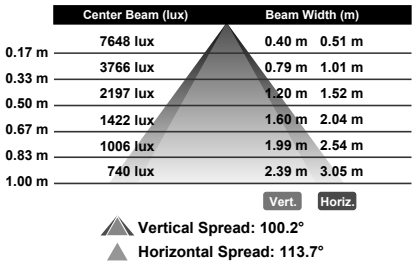
**Polar Candela Distribution**




**Isolux Pattern**

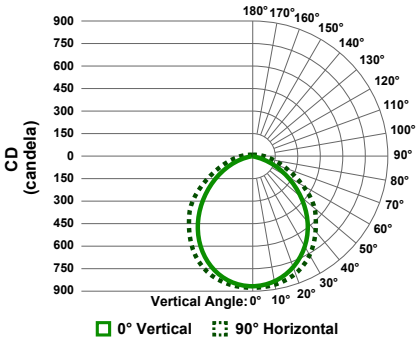



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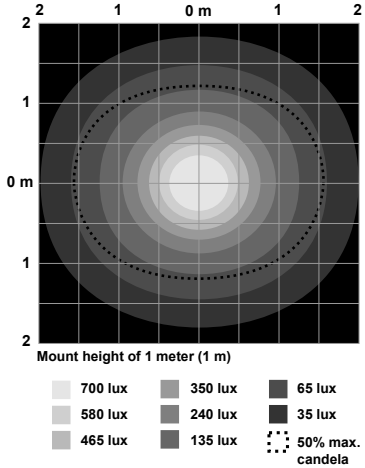



*990 mm models*

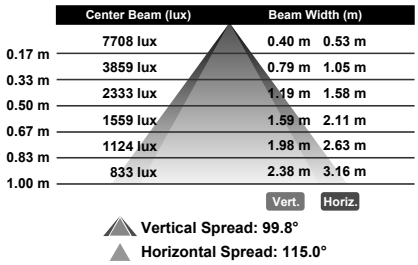
**Polar Candela Distribution**




**Isolux Pattern**

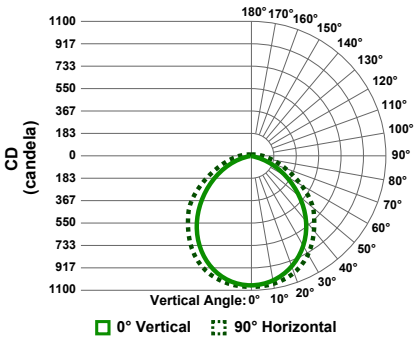



**Illuminance at a Distance**

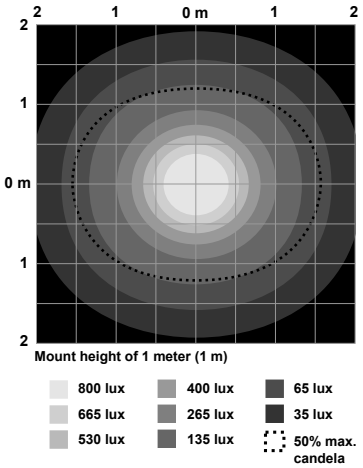



*1130 mm models*

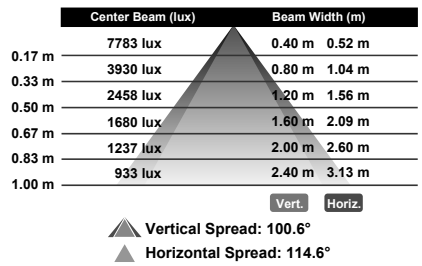
**Polar Candela Distribution**




**Isolux Pattern**




**Illuminance at a Distance**





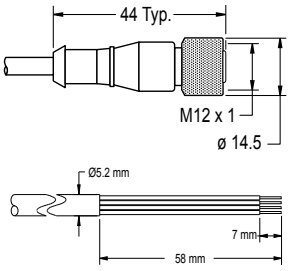
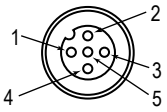
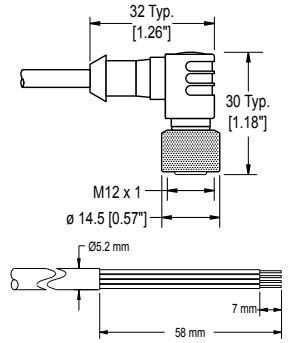
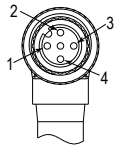
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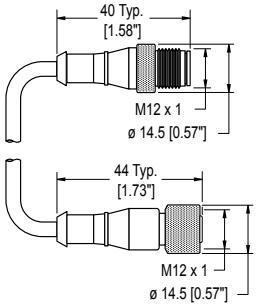
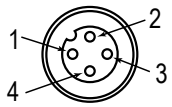
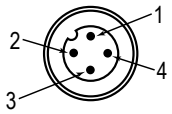
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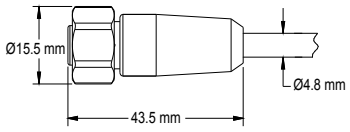
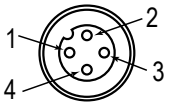
# Chapter 4 Accessories

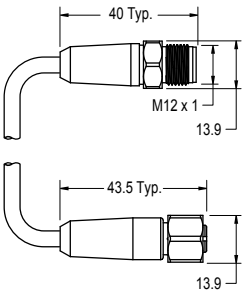
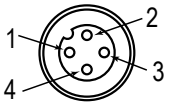
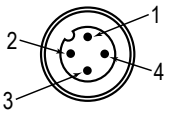
## Cordsets

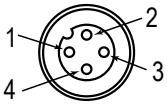
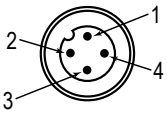
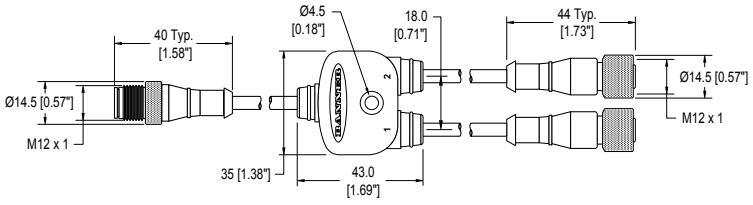
| 4-Pin Single-Ended M12 Female Cordsets | | | | | |
|---|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** | |
| **MQDC-406** | 2 m (6.56 ft) | Straight |  |  | 1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>5 = Not used<br>c UL us |
| **MQDC-415**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


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| 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<br>2 = White<br>3 = Blue<br>4 = Black |
| **MQDC-WDSS-0415** | 5 m (16.4 ft) | | | |
| **MQDC-WDSS-0430** | 9 m (29.5 ft) | | | |

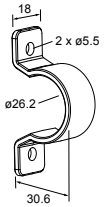
| 4-Pin Double-Ended M12 Female to M12 Male Washdown Stainless Steel Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout** |
| **MQDEC-WDSS-401SS** | 0.31 m (1 ft) | Male Straight/Female Straight |  | Female<br><br>Male<br><br>1 = Brown<br>2 = White<br>3 = Blue<br>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) | | | |

| 4-Pin Flat Junction M12 Female Branch to M12 MaleTrunk Splitter Cordsets | | | |
|---|---|---|---|
| **Model** | **Branches (Female)** | **Trunk (Male)** | **Pinout** |
| **CSB-M1240M1240** | No branch | No trunk | Female<br><br>Male<br><br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black |
| **CSB-M1240M1241** | 2 × 0.3 m (1 ft) | No trunk | |
| **CSB-M1241M1241** | | 0.31 m (1 ft) | |
| **CSB-M1248M1241** | | 2.44 m (8 ft) | |
| **CSB-M12415M1241** | | 4.57 m (15 ft) | |
| **CSB-M12425M1241** | | 7.60 m (25 ft) | |
| **CSB-UNT425M1241** | | 7.60 m (25 ft) Unterminated | |
| **CSB-M1243M1243** | 2 × 1 m (3.28 ft) | 1 m (3.28 ft) | |
|  | | | |

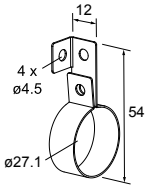

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# Brackets

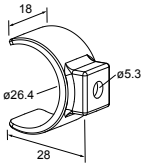
**LMBWLS27EC**
- Clear copolyester
- Clearance for M5 or #10 hardware



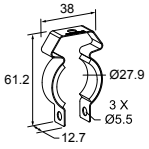

**LMBWLS27H**
- 300 series stainless steel mounting brackets
- M4 stainless steel hardware included



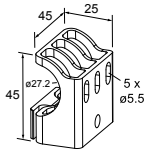

**LMBWLS27SP**
- Clear copolyester
- Clearance for M5 or #10 hardware
- Snap bracket for light-duty applications




**LMBWLS27T**
- Stainless steel mounting brackets with rubber grips
- M5 stainless steel hardware included
- Clearance for M5 or #10 hardware




**LMBWLS27U**
- Clear copolyester
- Clearance for M5 or #10 hardware
- Clamps securely around the light body





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# Chapter 5 Product Support and Maintenance

## Clean with Mild Detergent and Warm Water

Wipe down the device with a soft cloth dampened with a mild detergent and warm water solution. Do not use any other chemicals for cleaning.

## Repairs

Contact Banner Engineering for troubleshooting of this device. **Do not attempt any repairs to this Banner device; it contains no field-replaceable parts or components.** If the device, device part, or device component is determined to be defective by a Banner Applications Engineer, they will advise you of Banner's RMA (Return Merchandise Authorization) procedure.

> **IMPORTANT:** If instructed to return the device, pack it with care. Damage that occurs in return shipping is not covered by warranty.

## Contact Us

Banner Engineering Corp. | 9714 Tenth Avenue North | Plymouth, MN 55441, USA | Phone: + 1 888 373 6767

For worldwide locations and local representatives, visit www.bannerengineering.com.

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