#### Application

This LED wall luminaire has a partially shielded light source and is designed for the down lighting of interior and exterior locations with glare-free

#### Materials

Luminaire housing constructed of die-cast and spun marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy

Three-ply opal glass

High temperature silicone gasket

NRTL listed to North American Standards, suitable for wet locations

Protection class IP44

Weight: 4.0 lbs

Electrical

Operating voltage 120-277VAC -20° C Minimum start temperature 8.9W LED module wattage System wattage 12 W Controllability 0-10V dimmable

Color rendering index Ra > 90

Luminaire lumens 724 lumens (3000K) Lifetime at  $Ta = 15^{\circ} C$ 500,000 h (L70) Lifetime at Ta = 40° C 268,000 h (L70)

# LED color temperature

4000K - Product number + K4 3500K - Product number + K35 3000K - Product number + K3 2700K - Product number + K27

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

#### Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors Black (BLK) White (WHT) RAL:

Bronze (BRZ) Silver (SLV) CUS: Type:

**BEGA Product:** 

Project:

Modified:



| LED wall luminaire · partially shielded |       |        |        |       |       |  |
|---|-------|--------|--------|-------|-------|--|
|   | LED   | Α      | В      | С     | D     |  |
| 66 411                                  | 8.9 W | 12 1/8 | 14 1/2 | 131/2 | 4 3/8 |  |

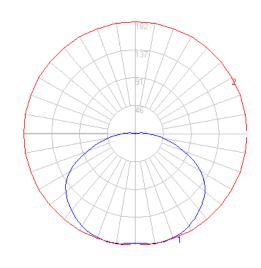


# **BEGA**

Photometric Filename: 66411.IES

TEST: BE\_66411
TEST LAB: BEGA
DATE: 9/12/2017
LUMINAIRE: 66 411
LAMP: 8.9W LED





## **Characteristics**

IES Classification Type V
Longitudinal Classification Very Short
Lumens Per Lamp N.A. (absolute)
Total Lamp Lumens N.A. (absolute)
Luminaire Lumens 724

Downward Total Efficiency N.A.
Total Luminaire Efficiency N.A.
Luminaire Efficacy Rating (LER) 60
Total Luminaire Watts 12
Ballast Factor 1.00
Upward Waste Light Ratio 0.02

 Max. Cd.
 182.007 (0H, 15V)

 Max. Cd. (<90 Vert.)</td>
 182.007 (0H, 15V)

 Max. Cd. (At 90 Deg. Vert.)
 21.828 (3.0%Lum)

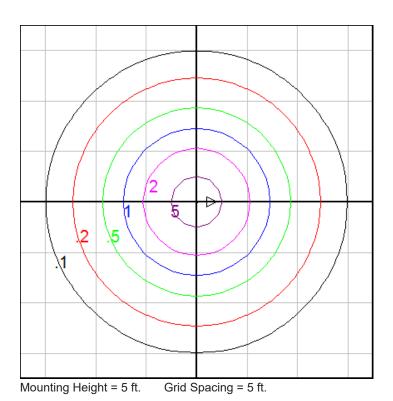
 Max. Cd. (80 to <90 Deg. Vert.)</td>
 47.401 (6.5%Lum)

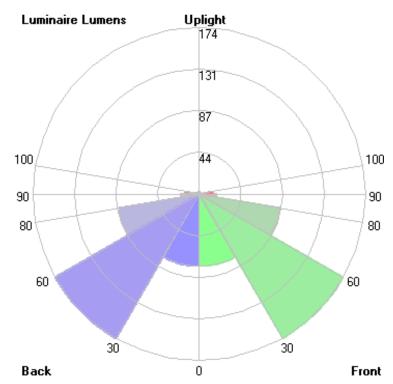
 Cutoff Classification (deprecated)
 N.A. (absolute)

# **Lum. Classification System (LCS)**

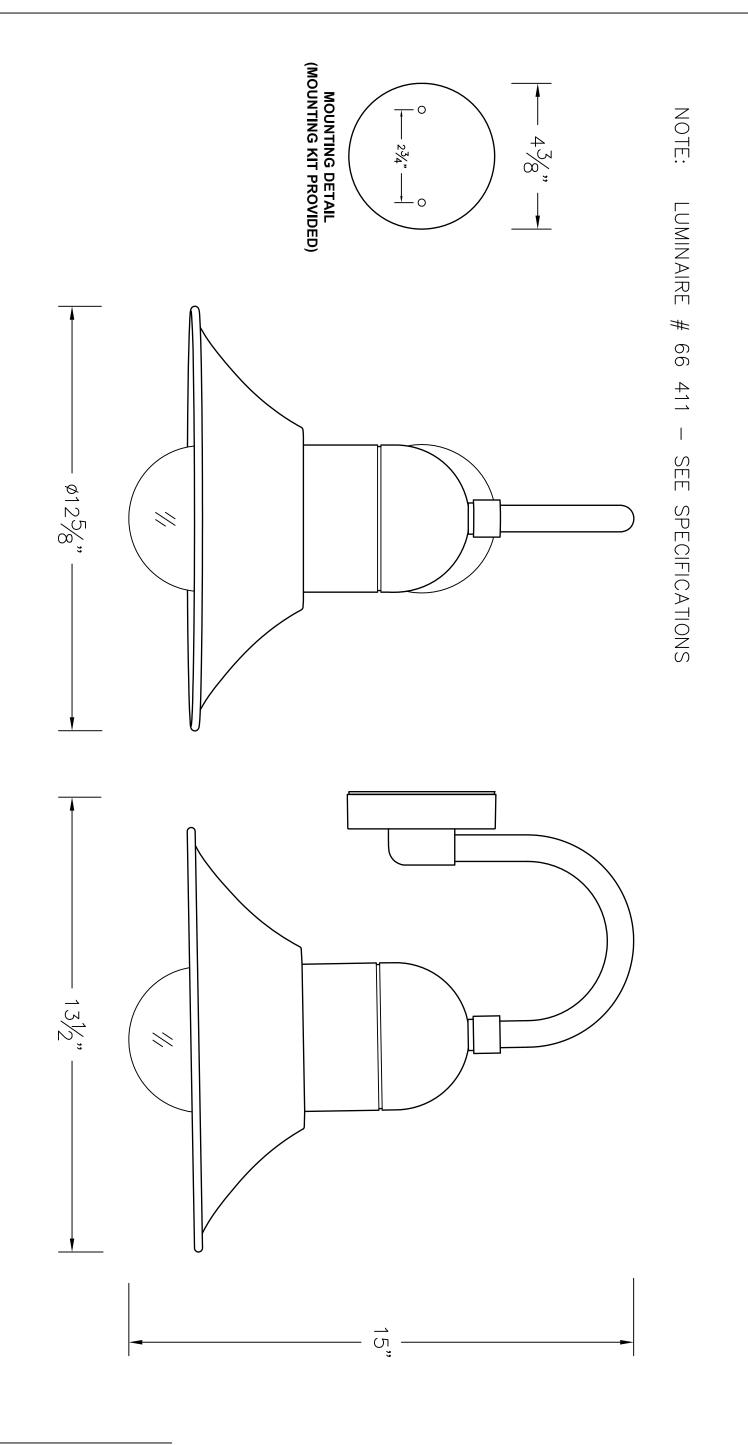
| LCS Zone     | Lumens | %Lamp | %Lum  |
|--------------|--------|-------|-------|
| FL (0-30)    | 75.5   | N.A.  | 10.4  |
| FM (30-60)   | 174.4  | N.A.  | 24.1  |
| FH (60-80)   | 85.8   | N.A.  | 11.8  |
| FVH (80-90)  | 18.4   | N.A.  | 2.5   |
| BL (0-30)    | 75.5   | N.A.  | 10.4  |
| BM (30-60)   | 174.4  | N.A.  | 24.1  |
| BH (60-80)   | 85.8   | N.A.  | 11.8  |
| BVH (80-90)  | 18.4   | N.A.  | 2.5   |
| UL (90-100)  | 14.5   | N.A.  | 2.0   |
| UH (100-180) | 1.9    | N.A.  | 0.3   |
| Total        | 724.6  | N.A.  | 100.0 |

BUG Rating B0-U2-G1





In the interest of product improvement, BEGA reserves the right to make technical changes without notice.



| SUBMITTAL APPROVAL | APPROVED BY: | SIGNED: | DATE: | DATE: | DRAWN: | RA | DATE: 9/12/2017 FILE NAME: | 66411.dxf | (805) 684-0533 | (805) 684-0533 |

TYPE:

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**Housing:** Two interlocking die-cast aluminum housings. Heavy gauge .080" spun aluminum shade with rolled edge, finished white inside. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

**Arm:** Fabricated from .125" wall aluminum extrusion formed into a continuous smooth radius, terminating and welded into a one piece die-cast aluminum fitter. Fitter slip fits a 3" O.D. pole top and is secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts.

**Enclosure:** Lamp enclosure/optical system comprises an assembly of two pure anodized aluminum asymmetrical main beam reflectors with clear impact resistant acrylic lens with optical texture fixed to a heavy gauge .080" spun aluminum shade with rolled edge, finished white inside and rigidly fastened to the luminaire housing. Fasteners are stainless steel.

**Electrical:** 15.8 W LED luminaire, 19 total system watts, -20°C start temperature. Integral 120 V - 277 V electronic LED driver, dimming not available. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.

**Note:** Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**UL** listed for US and Canadian Standards, suitable for wet locations. Protection class: IP65.

Weight: 23.1lbs.

EPA (Effective projection area): 1.7 sq. ft.

Luminaire Lumens: 2250



| Single pole-top luminaires |           |      |     |        |        |  |  |
|----------------------------|-----------|------|-----|--------|--------|--|--|
|                            | Lamp      | LEED | А   | В      | С      |  |  |
| 77910                      | 15.8W LED | LZ-2 | 19¾ | 40 1/8 | 32 1/8 |  |  |

Recommended for use with 14' to 18' poles.

Type: BEGA Product: Project: Voltage: Color:

Options: Modified:

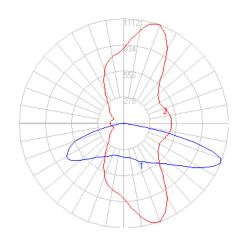


# **BEGA**

Photometric Filename: 77910.ies

TEST: BE77910 TEST LAB: **BEGA** DATE: 11/29/2016 LUMINAIRE: 77 910 LAMP: 15.8W LED





## **Characteristics**

**IES Classification** Type III Longitudinal Classification Medium Lumens Per Lamp N.A. (absolute) **Total Lamp Lumens** N.A. (absolute) Luminaire Lumens 2250 Downward Total Efficiency N.A. Total Luminaire Efficiency N.A. Luminaire Efficacy Rating (LER) 118 **Total Luminaire Watts** 19 **Ballast Factor** 1.00 Upward Waste Light Ratio 0.00

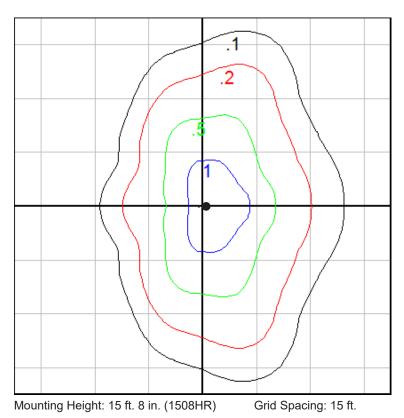
Max. Cd. 1111.8 (290H, 67.5V) Max. Cd. (<90 Vert.) 1111.8 (290H, 67.5V) Max. Cd. (At 90 Deg. Vert.) 4 (0.2%Lum) 221 (9.8%Lum)

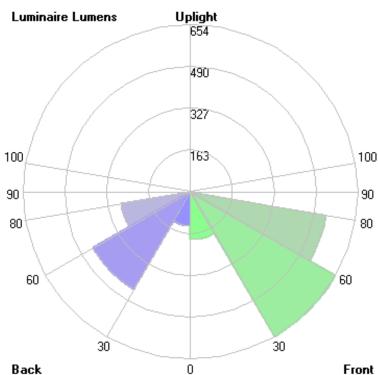
Max. Cd. (80 to <90 Deg. Vert.) Cutoff Classification (deprecated) N.A. (absolute)

# **Lum. Classification System (LCS)**

| LCS Zone     | Lumens | %Lamp | %Lum  |
|--------------|--------|-------|-------|
| FL (0-30)    | 186.9  | N.A.  | 8.3   |
| FM (30-60)   | 653.8  | N.A.  | 29.1  |
| FH (60-80)   | 537.8  | N.A.  | 23.9  |
| FVH (80-90)  | 13.8   | N.A.  | 0.6   |
| BL (0-30)    | 132.5  | N.A.  | 5.9   |
| BM (30-60)   | 439.5  | N.A.  | 19.5  |
| BH (60-80)   | 274.2  | N.A.  | 12.2  |
| BVH (80-90)  | 10.3   | N.A.  | 0.5   |
| UL (90-100)  | 1.3    | N.A.  | 0.1   |
| UH (100-180) | 0.1    | N.A.  | 0.0   |
| Total        | 2250.2 | N.A.  | 100.0 |

BUG Rating B1-U1-G1

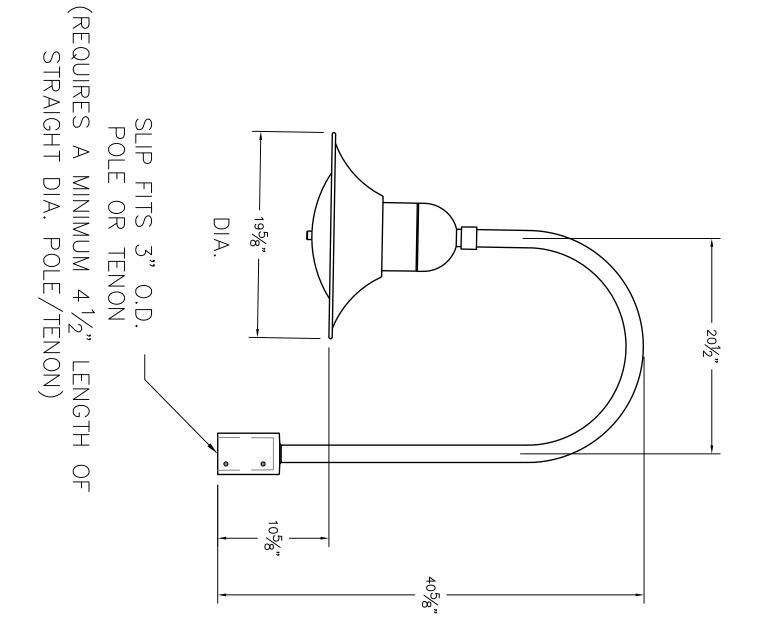




In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

NOTES:

1. LUMINAIRE # 77 910 - SEE SPECIFICATIONS.



SHOWN ON 1508HR

TYPE:

|      | SUBM        | IITTAL APPROVAL | CAT NO.: _ | 77 910 | )                                    | DEA                                   |
|------|-------------|-----------------|------------|--------|--------------------------------------|---------------------------------------|
| _ A  | PPROVED BY: |                 | PROJECT:   |        |                                      | BEGA                                  |
| SIG  | SNED:       | DATE:           | LOCATION:  |        |                                      | 1000 Bega Way                         |
| REV. | DATE        | DESCRIPTION     | DRAWN:     | RA     | DATE: 7/24/2017 FILE NAME: 77910.dxf | Carpinteria, Ca. 93013 (805) 684-0533 |
|      | 1           |                 |            |        |                                      |                                       |

# BEGA LED system bollard - luminaire head with shielded light - 360°

**Enclosure:** Housing constructed of die-cast aluminum. Die-castings are marine grade, copper free ( $\leq 0.3\%$  copper content) A360.0 aluminum alloy. Glass diffuser, inside white. Fully gasketed for weather tight operation using molded silicone gasket.

**Installation:** BEGA LED system bollards are designed for easy attachment to system bollard tubes using an interlocking stainless steel mechanism and stainless steel set screw threaded into stainless steel insert. An accompanying bollard tube must be selected for proper installation, see below chart for compatible tube options.

**Electrical:** 16.5W LED luminaire, 19.8 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (>80 CRI); add suffix K4 to order.

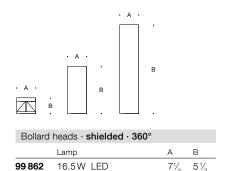
**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**CSA** certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 8.4 lbs

Luminaire Lumens: 1286



| Bollard | tubes                          |      |      |       |            |
|---------|--------------------------------|------|------|-------|------------|
|         | Integrated components          | Door | Α    | В     | Anch. unit |
| 99 622  | _                              | ~    | 71/2 | 32    | 79818      |
| 99 644  | 1 LED floodlight 19.3 W        | ~    | 71/2 | 32    | 79818      |
| 99 626  | GFCI outlet                    | ~    | 71/2 | 32    | 79818      |
| 99 658  | Passive infrared motion sensor | ~    | 71/2 | 32    | 79818      |
| 99 635  | Emergency lighting battery 10W | ~    | 71/2 | 32    | 79818      |
| 99 615  | _                              |      | 71/2 | 141/2 | 79817      |

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

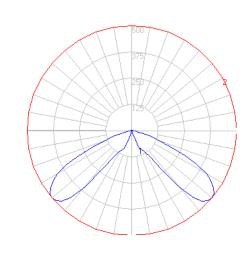


# **BEGA**

Photometric Filename: 99862.ies

TEST: BE 99862 TEST LAB: **BEGA** 5/11/2017 DATE: LUMINAIRE: 99 862 LAMP: 16.5W LED





# **Characteristics**

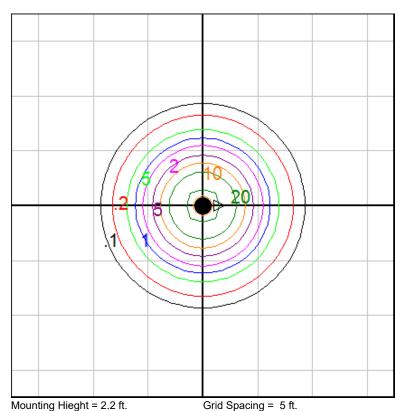
**IES Classification** Type V Longitudinal Classification Short N.A. (absolute) Lumens Per Lamp **Total Lamp Lumens** N.A. (absolute) Luminaire Lumens 1280 **Downward Total Efficiency** N.A. **Total Luminaire Efficiency** N.A. Luminaire Efficacy Rating (LER) 65 **Total Luminaire Watts** 19.8 **Ballast Factor** 1.00 Upward Waste Light Ratio 0.00 Max. Cd. 500 (0H, 50V) Max. Cd. (<90 Vert.) 500 (0H, 50V) Max. Cd. (At 90 Deg. Vert.) 0 (0.0%Lum) Max. Cd. (80 to <90 Deg. Vert.) 14.3 (1.1%Lum)

Cutoff Classification (deprecated)

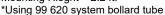
# **Lum. Classification System (LCS)**

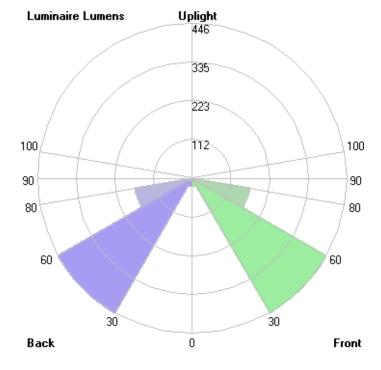
| LCS Zone     | Lumens | %Lamp | %Lum  |
|--------------|--------|-------|-------|
| FL (0-30)    | 23.0   | N.A.  | 1.8   |
| FM (30-60)   | 446.4  | N.A.  | 34.9  |
| FH (60-80)   | 167.8  | N.A.  | 13.1  |
| FVH(80-90)   | 2.9    | N.A.  | 0.2   |
| BL (0-30)    | 23.0   | N.A.  | 1.8   |
| BM (30-60)   | 446.4  | N.A.  | 34.9  |
| BH (60-80)   | 167.8  | N.A.  | 13.1  |
| BVH(80-90)   | 2.9    | N.A.  | 0.2   |
| UL (90-100)  | 0.0    | N.A.  | 0.0   |
| UH (100-180) | 0.0    | N.A.  | 0.0   |
| Total        | 1280.2 | N.A.  | 100.0 |

BUG Rating B1-U0-G0



N.A. (absolute)



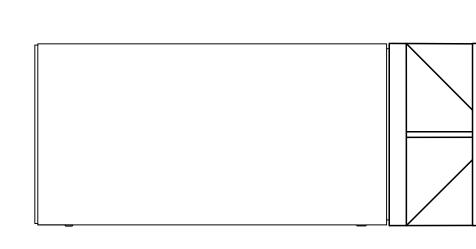


In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

NOTES: SYSTEM BOLLARD HEAD # 99 862-SEE SPECIFICATIONS

53%"

99 862 Shown Bollard Tube 99 (SCALE 1:2)



**TYPE:** 

6<u>1</u>5

| SUBMITTAL APPROVAL |             | CAT NO.:    | 99 862    |        |                            |           |                        |
|--------------------|-------------|-------------|-----------|--------|----------------------------|-----------|------------------------|
| Α                  | PPROVED BY: |             | PROJECT:  | -      |                            |           | <b>BEGA</b>            |
| SIG                | NED:        | DATE:       | LOCATION: | -      |                            |           | 1000 Bega Way          |
|                    |             |             | DRAWN:    | <br>RA | DATE: 8/26/2016 File Name: | 99862.DXF | Carpinteria, Ca. 93013 |
| REV.               | DATE        | DESCRIPTION |           |        |                            |           | (805) 684-0533         |

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