

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P299858

Luminaire Tested: **GLNA-AF-08-LED-E1-5WQ-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299858  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-08-LED-E1-5WQ-7030  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(8) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 48433.9 lumens  
Efficiency: N/A  
Efficacy: 108.8 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G5

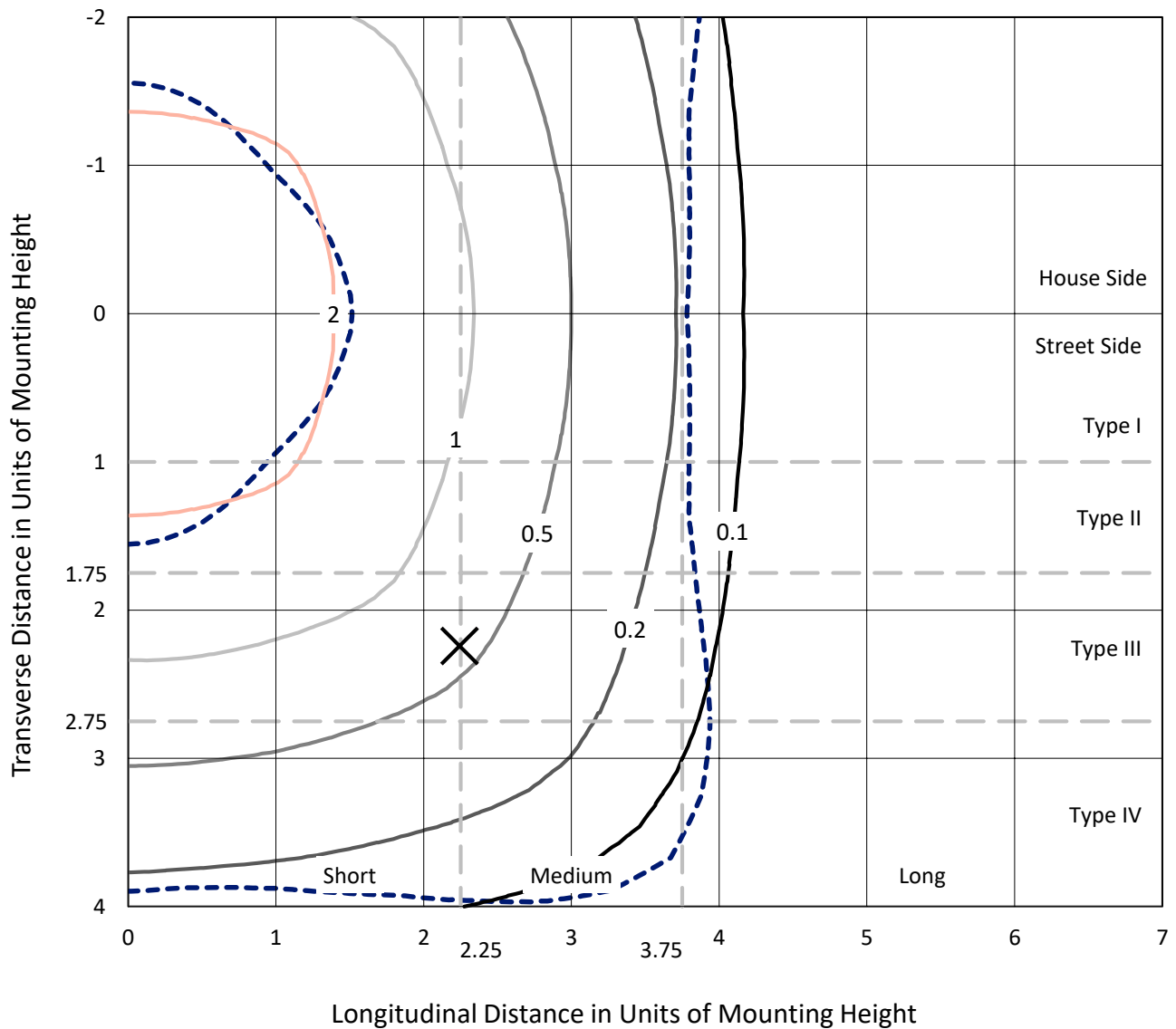
Input Watts (W): 445  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P299858  
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### Iso-Footcandle Lines of Horizontal Illumination

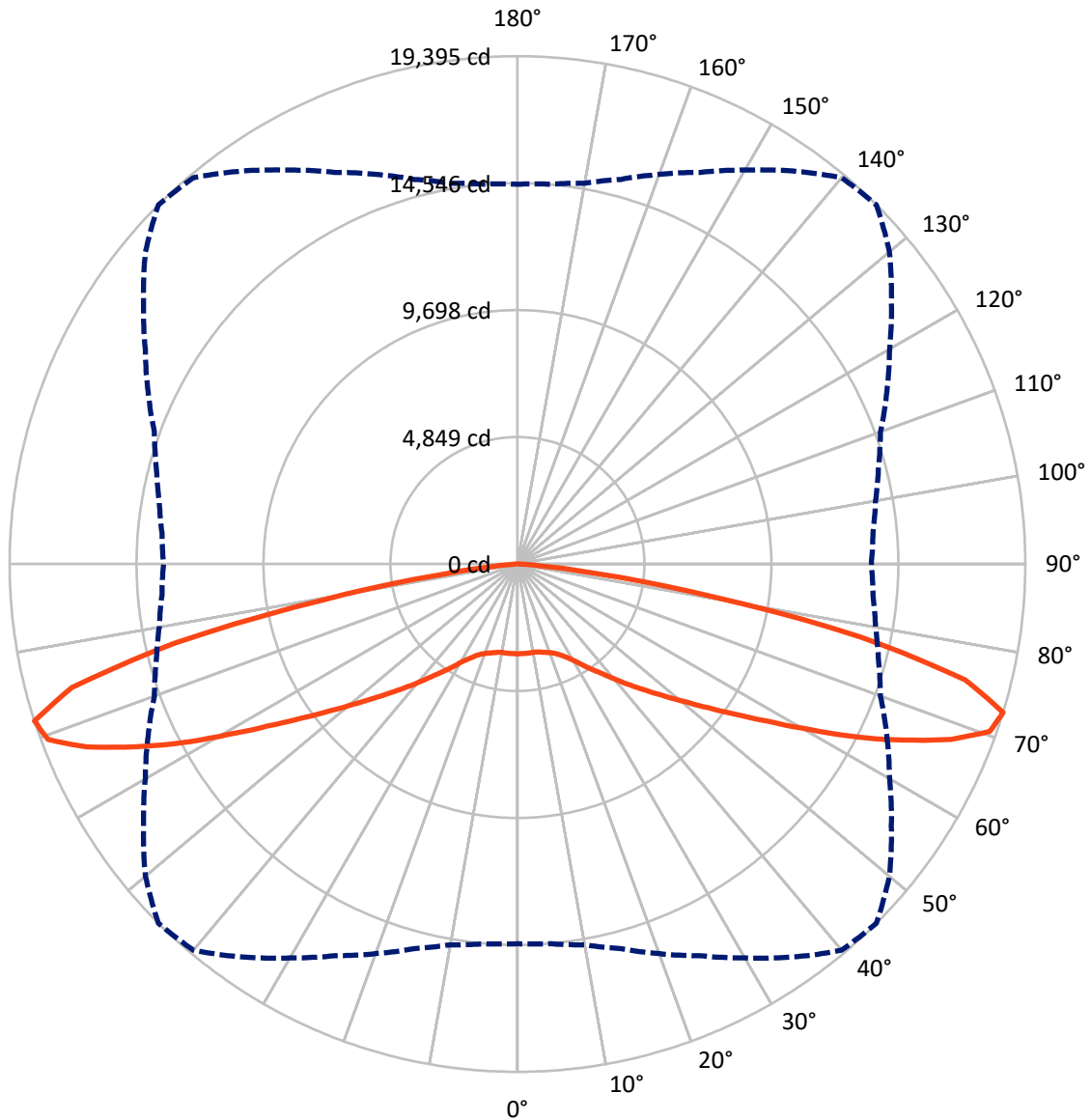
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.8 fc  
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P299858  
CATALOG NUMBER: GLNA-AF-08-LED-E1-5WQ-7030

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P299858

CATALOG NUMBER: GLNA-AF-08-LED-E1-5WQ-7030

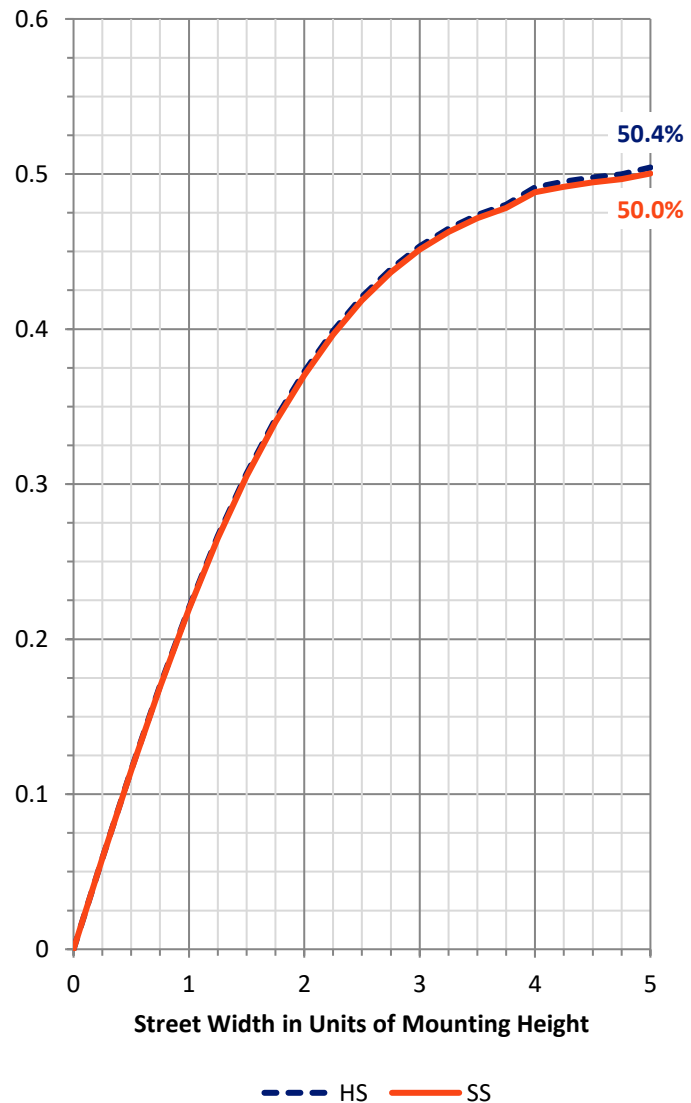
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 24217.0  | 0.0    | 24217.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 24217.0  | 0.0    | 24217.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 48433.9  | 0.0    | 48433.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 327.5   | 0.7       |
| 10°-20°   | 994.7   | 2.1       |
| 20°-30°   | 1817.7  | 3.8       |
| 30°-40°   | 3134.1  | 6.5       |
| 40°-50°   | 5357.6  | 11.1      |
| 50°-60°   | 8684.0  | 17.9      |
| 60°-70°   | 14406.5 | 29.7      |
| 70°-80°   | 12688.7 | 26.2      |
| 80°-90°   | 1023.1  | 2.1       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 48433.9 | 100.0     |
| 0°-180°   | 48433.9 | 100.0     |



REPORT NUMBER: P299858

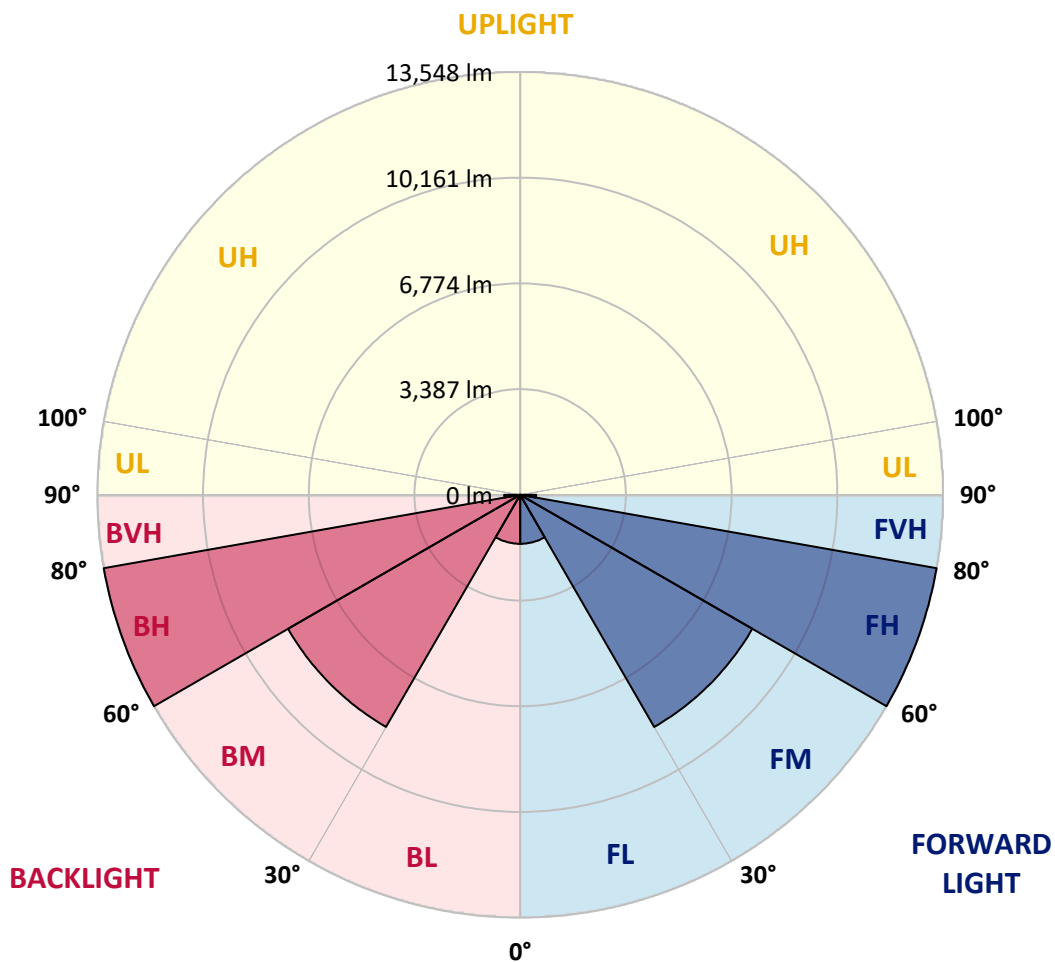
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|---------|-----------|-------------------------|------|--------|
|      |             |         |           | B                       | U    | G      |
| FL   | (0°-30°)    | 1570.0  | 3.2       |                         |      |        |
| FM   | (30°-60°)   | 8587.9  | 17.7      |                         |      |        |
| FH   | (60°-80°)   | 13547.6 | 28.0      |                         |      | G5     |
| FVH  | (80°-90°)   | 511.5   | 1.1       |                         |      | G4/750 |
| BL   | (0°-30°)    | 1570.0  | 3.2       | B3/2500                 |      |        |
| BM   | (30°-60°)   | 8587.9  | 17.7      | B5                      |      |        |
| BH   | (60°-80°)   | 13547.6 | 28.0      | B5                      |      | G5     |
| BVH  | (80°-90°)   | 511.5   | 1.1       |                         |      | G4/750 |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |        |

**BUG Rating: B5-U0-G5**

Type V Short





REPORT NUMBER: P299858  
 CATALOG NUMBER: GLNA-AF-08-LED-E1-5WQ-7030

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 10°     | 15°     | 20°     | 25°     | 30°     | 35°     | 40°     | 45°     | 50°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  |
| 2.5°  | 3429.9  | 3432.1  | 3434.3  | 3432.1  | 3432.1  | 3429.9  | 3427.7  | 3429.9  | 3427.7  | 3423.2  | 3425.4  |
| 5°    | 3441.0  | 3445.4  | 3445.4  | 3441.0  | 3443.2  | 3441.0  | 3436.5  | 3438.8  | 3434.3  | 3427.7  | 3427.7  |
| 7.5°  | 3454.3  | 3456.5  | 3456.5  | 3452.1  | 3454.3  | 3449.9  | 3445.4  | 3443.2  | 3438.8  | 3429.9  | 3423.2  |
| 10°   | 3474.3  | 3476.5  | 3474.3  | 3469.9  | 3469.9  | 3463.2  | 3452.1  | 3447.6  | 3438.8  | 3425.4  | 3418.8  |
| 12.5° | 3496.5  | 3498.7  | 3496.5  | 3492.1  | 3489.9  | 3478.7  | 3469.9  | 3463.2  | 3456.5  | 3445.4  | 3434.3  |
| 15°   | 3527.6  | 3532.1  | 3527.6  | 3518.7  | 3512.1  | 3503.2  | 3498.7  | 3501.0  | 3503.2  | 3494.3  | 3483.2  |
| 17.5° | 3585.4  | 3587.6  | 3580.9  | 3560.9  | 3552.1  | 3543.2  | 3543.2  | 3547.6  | 3554.3  | 3549.8  | 3538.7  |
| 20°   | 3692.0  | 3685.3  | 3669.8  | 3645.4  | 3634.2  | 3618.7  | 3616.5  | 3618.7  | 3618.7  | 3616.5  | 3607.6  |
| 22.5° | 3825.3  | 3820.8  | 3800.9  | 3769.8  | 3754.2  | 3745.3  | 3732.0  | 3720.9  | 3718.7  | 3712.0  | 3703.1  |
| 25°   | 3985.2  | 3983.0  | 3958.6  | 3931.9  | 3920.8  | 3909.7  | 3898.6  | 3883.0  | 3869.7  | 3854.2  | 3845.3  |
| 27.5° | 4189.6  | 4180.7  | 4145.2  | 4131.8  | 4116.3  | 4109.6  | 4094.1  | 4076.3  | 4065.2  | 4045.2  | 4034.1  |
| 30°   | 4414.0  | 4414.0  | 4385.1  | 4380.6  | 4380.6  | 4365.1  | 4347.3  | 4316.2  | 4296.2  | 4276.2  | 4269.6  |
| 32.5° | 4638.3  | 4640.5  | 4611.7  | 4620.6  | 4627.2  | 4638.3  | 4642.8  | 4631.7  | 4618.3  | 4616.1  | 4602.8  |
| 35°   | 4962.7  | 4953.8  | 4924.9  | 4931.6  | 4929.3  | 4927.1  | 4927.1  | 4951.5  | 4956.0  | 4960.4  | 4933.8  |
| 37.5° | 5364.7  | 5364.7  | 5335.9  | 5335.9  | 5322.5  | 5309.2  | 5291.4  | 5307.0  | 5331.4  | 5338.1  | 5320.3  |
| 40°   | 5824.6  | 5840.1  | 5804.6  | 5802.4  | 5806.8  | 5764.6  | 5744.6  | 5769.0  | 5784.6  | 5811.2  | 5791.2  |
| 42.5° | 6366.6  | 6355.5  | 6319.9  | 6315.5  | 6291.1  | 6277.7  | 6260.0  | 6280.0  | 6304.4  | 6322.2  | 6328.8  |
| 45°   | 6886.4  | 6877.5  | 6837.5  | 6837.5  | 6813.1  | 6802.0  | 6810.9  | 6844.2  | 6855.3  | 6879.7  | 6904.2  |
| 47.5° | 7399.6  | 7388.4  | 7361.8  | 7372.9  | 7375.1  | 7395.1  | 7424.0  | 7455.1  | 7486.2  | 7519.5  | 7530.6  |
| 50°   | 7923.8  | 7926.0  | 7897.2  | 7923.8  | 7957.1  | 8012.7  | 8090.4  | 8141.5  | 8205.9  | 8248.1  | 8261.5  |
| 52.5° | 8401.4  | 8410.3  | 8441.4  | 8503.6  | 8570.2  | 8679.1  | 8812.4  | 8936.8  | 9043.4  | 9114.5  | 9110.0  |
| 55°   | 8974.5  | 8987.9  | 9063.4  | 9170.0  | 9278.9  | 9443.3  | 9641.0  | 9860.9  | 10038.6 | 10140.8 | 10076.4 |
| 57.5° | 9707.6  | 9736.5  | 9820.9  | 9965.3  | 10127.5 | 10340.7 | 10611.7 | 10942.7 | 11218.2 | 11355.9 | 11251.5 |
| 60°   | 10713.9 | 10731.7 | 10833.9 | 10993.8 | 11189.3 | 11453.6 | 11815.7 | 12260.0 | 12648.8 | 12830.9 | 12711.0 |
| 62.5° | 12040.1 | 12073.4 | 12155.6 | 12317.8 | 12517.7 | 12817.6 | 13259.7 | 13815.0 | 14299.3 | 14552.5 | 14281.5 |
| 65°   | 13624.0 | 13730.6 | 13799.5 | 13963.9 | 14150.5 | 14468.1 | 14930.2 | 15525.5 | 16045.3 | 16211.9 | 15898.7 |
| 67.5° | 15192.3 | 15285.6 | 15405.6 | 15594.4 | 15783.2 | 16140.8 | 16569.6 | 17147.2 | 17718.1 | 17869.1 | 17382.6 |
| 70°   | 15878.7 | 15932.0 | 16118.6 | 16376.3 | 16738.4 | 17160.5 | 17655.9 | 18304.5 | 19010.9 | 19135.3 | 18517.8 |
| 72.5° | 14503.7 | 14557.0 | 14765.8 | 15203.4 | 15834.3 | 16505.2 | 17369.3 | 18322.3 | 19255.3 | 19395.2 | 18544.4 |
| 75°   | 10969.4 | 10882.7 | 11191.5 | 11771.3 | 12622.1 | 13557.3 | 14765.8 | 16132.0 | 17480.4 | 17655.9 | 16640.7 |
| 77.5° | 5669.1  | 5658.0  | 5891.2  | 6610.9  | 7626.1  | 8690.2  | 10020.8 | 11564.7 | 12884.2 | 13417.4 | 12591.0 |
| 80°   | 1597.2  | 1615.0  | 1726.0  | 2083.7  | 2676.8  | 3445.4  | 4485.0  | 5931.2  | 7010.8  | 7561.7  | 7099.7  |
| 82.5° | 626.4   | 675.3   | 717.5   | 784.2   | 861.9   | 975.2   | 1301.8  | 1937.1  | 2599.1  | 3105.5  | 2543.5  |
| 85°   | 224.4   | 239.9   | 339.9   | 402.1   | 408.7   | 431.0   | 490.9   | 573.1   | 690.9   | 824.1   | 677.5   |
| 87.5° | 84.4    | 93.3    | 108.8   | 179.9   | 177.7   | 162.2   | 197.7   | 206.6   | 155.5   | 142.2   | 175.5   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



REPORT NUMBER: P299858

CATALOG NUMBER: GLNA-AF-08-LED-E1-5WQ-7030

**CANDELA DISTRIBUTION (continued):**

|       | 55°     | 60°     | 65°     | 70°     | 75°     | 80°     | 85°     | 90°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  | 3429.9  |
| 2.5°  | 3421.0  | 3423.2  | 3423.2  | 3425.4  | 3427.7  | 3427.7  | 3432.1  | 3432.1  |
| 5°    | 3423.2  | 3423.2  | 3418.8  | 3421.0  | 3418.8  | 3418.8  | 3421.0  | 3421.0  |
| 7.5°  | 3418.8  | 3416.5  | 3412.1  | 3409.9  | 3405.4  | 3405.4  | 3405.4  | 3405.4  |
| 10°   | 3412.1  | 3409.9  | 3405.4  | 3403.2  | 3401.0  | 3401.0  | 3401.0  | 3401.0  |
| 12.5° | 3429.9  | 3423.2  | 3418.8  | 3416.5  | 3416.5  | 3416.5  | 3416.5  | 3416.5  |
| 15°   | 3476.5  | 3461.0  | 3449.9  | 3449.9  | 3452.1  | 3456.5  | 3456.5  | 3461.0  |
| 17.5° | 3534.3  | 3516.5  | 3505.4  | 3496.5  | 3501.0  | 3507.6  | 3512.1  | 3516.5  |
| 20°   | 3603.1  | 3594.3  | 3578.7  | 3569.8  | 3569.8  | 3578.7  | 3583.2  | 3585.4  |
| 22.5° | 3698.7  | 3692.0  | 3685.3  | 3674.2  | 3674.2  | 3678.7  | 3687.6  | 3687.6  |
| 25°   | 3840.8  | 3836.4  | 3832.0  | 3823.1  | 3820.8  | 3820.8  | 3825.3  | 3829.7  |
| 27.5° | 4018.6  | 4020.8  | 4016.3  | 4014.1  | 4007.4  | 4005.2  | 4011.9  | 4009.7  |
| 30°   | 4256.2  | 4267.4  | 4278.5  | 4269.6  | 4258.5  | 4251.8  | 4245.1  | 4236.3  |
| 32.5° | 4578.3  | 4565.0  | 4556.1  | 4540.6  | 4520.6  | 4502.8  | 4489.5  | 4473.9  |
| 35°   | 4882.7  | 4860.5  | 4851.6  | 4864.9  | 4862.7  | 4851.6  | 4836.0  | 4822.7  |
| 37.5° | 5255.9  | 5251.4  | 5255.9  | 5280.3  | 5275.9  | 5287.0  | 5255.9  | 5253.7  |
| 40°   | 5726.8  | 5731.3  | 5762.4  | 5791.2  | 5806.8  | 5822.3  | 5804.6  | 5786.8  |
| 42.5° | 6273.3  | 6271.1  | 6282.2  | 6322.2  | 6348.8  | 6366.6  | 6328.8  | 6324.4  |
| 45°   | 6850.9  | 6835.3  | 6844.2  | 6877.5  | 6904.2  | 6924.2  | 6882.0  | 6882.0  |
| 47.5° | 7486.2  | 7459.5  | 7430.7  | 7468.4  | 7484.0  | 7497.3  | 7464.0  | 7452.9  |
| 50°   | 8194.8  | 8139.3  | 8077.1  | 8092.6  | 8092.6  | 8088.2  | 8046.0  | 8043.8  |
| 52.5° | 9007.9  | 8905.7  | 8792.4  | 8750.2  | 8725.7  | 8699.1  | 8625.8  | 8590.2  |
| 55°   | 9943.1  | 9789.8  | 9612.1  | 9503.2  | 9445.5  | 9372.2  | 9250.0  | 9216.7  |
| 57.5° | 11036.0 | 10796.1 | 10489.6 | 10356.3 | 10227.4 | 10107.5 | 9972.0  | 9934.2  |
| 60°   | 12331.1 | 11977.9 | 11571.4 | 11324.8 | 11184.9 | 11069.3 | 10929.4 | 10922.7 |
| 62.5° | 13775.0 | 13217.5 | 12757.6 | 12535.5 | 12433.3 | 12331.1 | 12197.8 | 12215.6 |
| 65°   | 15243.4 | 14661.4 | 14230.4 | 14050.5 | 13955.0 | 13870.6 | 13737.3 | 13757.3 |
| 67.5° | 16691.8 | 16156.4 | 15683.2 | 15498.9 | 15392.2 | 15285.6 | 15165.6 | 15185.6 |
| 70°   | 17731.4 | 17067.2 | 16534.0 | 16125.3 | 15869.8 | 15581.0 | 15394.4 | 15347.8 |
| 72.5° | 17433.7 | 16409.6 | 15563.3 | 14752.5 | 14277.1 | 13890.5 | 13628.4 | 13515.1 |
| 75°   | 15087.9 | 13688.4 | 12599.9 | 11604.7 | 11044.9 | 10589.5 | 10258.5 | 10051.9 |
| 77.5° | 11204.8 | 9632.1  | 8345.9  | 7199.6  | 6293.3  | 5684.6  | 5255.9  | 4978.2  |
| 80°   | 6133.3  | 4665.0  | 3409.9  | 2396.9  | 1761.6  | 1463.9  | 1292.9  | 1210.7  |
| 82.5° | 1910.4  | 1232.9  | 908.6   | 784.2   | 728.6   | 697.5   | 646.4   | 564.2   |
| 85°   | 608.7   | 533.1   | 495.4   | 473.2   | 450.9   | 393.2   | 271.0   | 246.6   |
| 87.5° | 235.5   | 242.1   | 239.9   | 226.6   | 231.0   | 166.6   | 133.3   | 117.7   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)