

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: P299600

Luminaire Tested: **GLNA-AF-05-LED-E1-SL2-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299600
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-SL2-7030-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21651.3 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G4

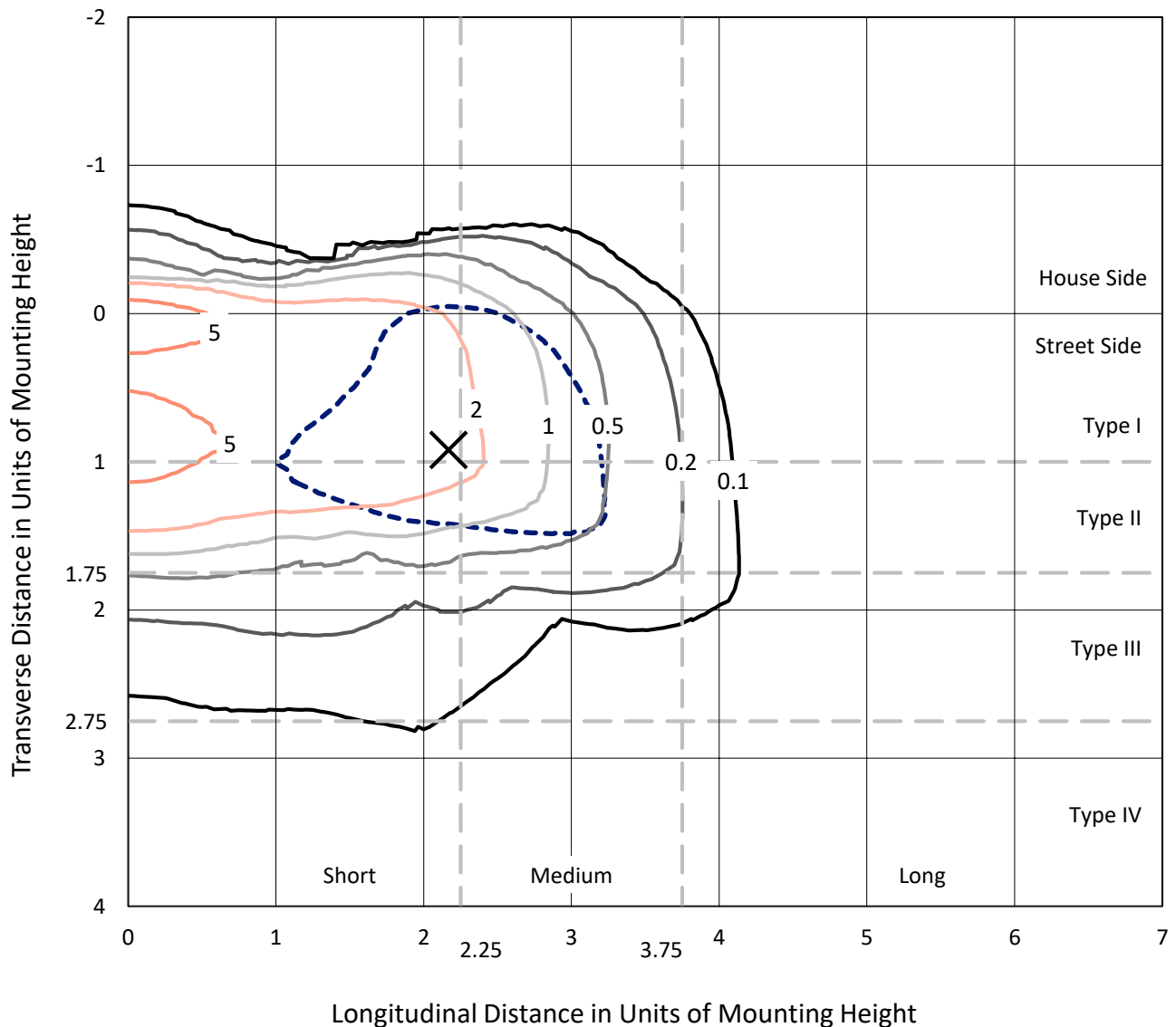
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

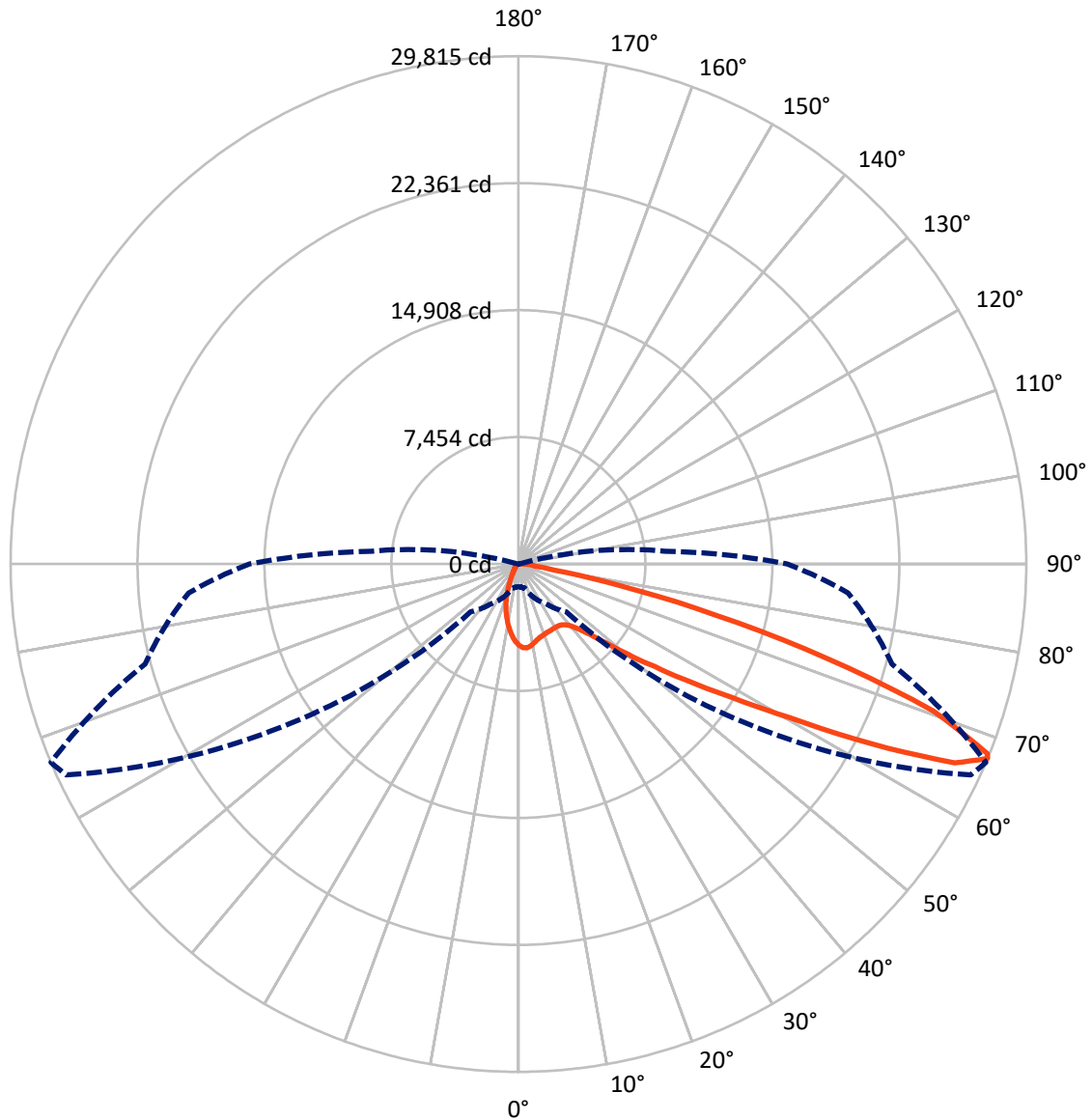
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2248.1 | 0.0 | 2248.1 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 19403.3 | 0.0 | 19403.3 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 21651.3 | 0.0 | 21651.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 388.5 | 1.8 |
| 10°-20° | 826.9 | 3.8 |
| 20°-30° | 1202.3 | 5.6 |
| 30°-40° | 1875.6 | 8.7 |
| 40°-50° | 3322.6 | 15.3 |
| 50°-60° | 5257.6 | 24.3 |
| 60°-70° | 6021.9 | 27.8 |
| 70°-80° | 2497.8 | 11.5 |
| 80°-90° | 258.0 | 1.2 |
| 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° | 21651.3 | 100.0 |
| 0°-180° | 21651.3 | 100.0 |



REPORT NUMBER: P299600

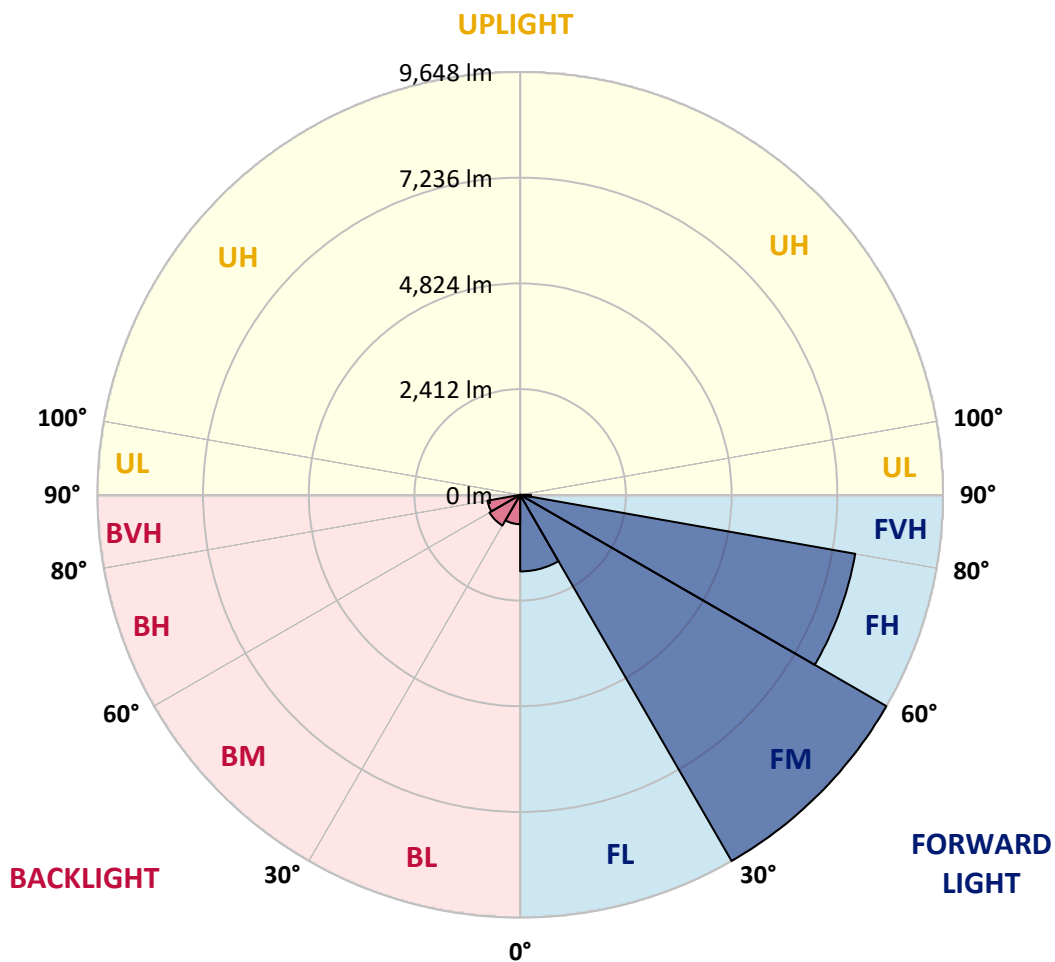
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1746.9 | 8.1 | | | |
| FM (30°-60°) | 9647.9 | 44.6 | | | |
| FH (60°-80°) | 7762.1 | 35.9 | | | G4/12000 |
| FVH (80°-90°) | 246.4 | 1.1 | | | G3/500 |
| BL (0°-30°) | 670.8 | 3.1 | B2/1000 | | |
| BM (30°-60°) | 807.9 | 3.7 | B1/1000 | | |
| BH (60°-80°) | 757.7 | 3.5 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 11.6 | 0.1 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type II Short





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CATALOG NUMBER: GLNA-AF-05-LED-E1-SL2-7030-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 |
| 2.5° | 4936.6 | 4946.7 | 4945.4 | 4953.0 | 4970.7 | 4971.9 | 4954.2 | 4920.1 | 4912.6 | 4868.4 | 4791.3 |
| 5° | 4552.7 | 4581.7 | 4599.4 | 4671.4 | 4752.2 | 4849.4 | 4922.7 | 4949.2 | 4945.4 | 4913.8 | 4797.7 |
| 7.5° | 4114.4 | 4143.5 | 4163.7 | 4248.3 | 4355.6 | 4522.3 | 4713.0 | 4869.6 | 4883.5 | 4917.6 | 4792.6 |
| 10° | 3822.7 | 3827.8 | 3855.5 | 3936.4 | 4048.8 | 4219.3 | 4446.6 | 4720.6 | 4762.3 | 4887.3 | 4780.0 |
| 12.5° | 3582.8 | 3586.6 | 3623.2 | 3710.3 | 3830.3 | 4002.0 | 4240.7 | 4557.7 | 4622.1 | 4849.4 | 4777.4 |
| 15° | 3412.3 | 3426.2 | 3459.0 | 3549.9 | 3677.5 | 3848.0 | 4093.0 | 4437.7 | 4514.8 | 4835.5 | 4800.2 |
| 17.5° | 3355.5 | 3370.6 | 3380.7 | 3446.4 | 3562.6 | 3729.3 | 3980.6 | 4359.4 | 4446.6 | 4843.1 | 4844.4 |
| 20° | 3414.8 | 3426.2 | 3403.4 | 3419.9 | 3491.8 | 3640.9 | 3885.9 | 4292.5 | 4396.1 | 4852.0 | 4901.2 |
| 22.5° | 3635.8 | 3640.9 | 3579.0 | 3507.0 | 3494.4 | 3576.5 | 3811.3 | 4239.5 | 4350.6 | 4875.9 | 4968.1 |
| 25° | 4014.7 | 4005.8 | 3904.8 | 3749.5 | 3603.0 | 3565.1 | 3767.1 | 4206.6 | 4327.9 | 4901.2 | 5037.6 |
| 27.5° | 4471.8 | 4484.5 | 4345.5 | 4119.5 | 3840.4 | 3640.9 | 3760.8 | 4192.7 | 4317.8 | 4918.9 | 5098.2 |
| 30° | 5027.5 | 5045.2 | 4886.1 | 4601.9 | 4201.6 | 3827.8 | 3818.9 | 4190.2 | 4311.4 | 4907.5 | 5103.3 |
| 32.5° | 5594.5 | 5616.0 | 5491.0 | 5198.0 | 4684.0 | 4141.0 | 3950.3 | 4218.0 | 4324.1 | 4868.4 | 5074.2 |
| 35° | 6188.1 | 6218.4 | 6135.0 | 5883.7 | 5338.2 | 4593.1 | 4181.4 | 4302.6 | 4383.4 | 4864.6 | 5045.2 |
| 37.5° | 7007.7 | 7035.5 | 6878.9 | 6612.4 | 6130.0 | 5199.2 | 4552.7 | 4461.7 | 4523.6 | 4925.2 | 5052.8 |
| 40° | 8231.4 | 8227.6 | 7823.5 | 7415.6 | 7000.1 | 5969.6 | 5074.2 | 4749.7 | 4781.2 | 5108.3 | 5146.2 |
| 42.5° | 9565.0 | 9558.7 | 8961.3 | 8341.3 | 7966.2 | 6918.0 | 5760.0 | 5247.2 | 5225.8 | 5445.5 | 5388.7 |
| 45° | 10593.0 | 10591.7 | 10104.2 | 9405.9 | 9129.3 | 8006.6 | 6646.5 | 5939.3 | 5906.5 | 5993.6 | 5835.7 |
| 47.5° | 11031.2 | 11038.8 | 10793.8 | 10302.5 | 10418.7 | 9479.1 | 7764.1 | 6942.0 | 6892.8 | 6857.4 | 6617.4 |
| 50° | 10690.2 | 10705.4 | 10725.6 | 10629.6 | 11364.6 | 11458.0 | 9263.2 | 8355.2 | 8331.2 | 8173.3 | 7798.2 |
| 52.5° | 9576.4 | 9653.4 | 9890.8 | 10195.2 | 11692.9 | 13357.4 | 11613.4 | 10110.6 | 9981.7 | 9813.8 | 9400.8 |
| 55° | 7699.7 | 7784.3 | 8235.2 | 8974.0 | 11204.2 | 14605.1 | 14906.9 | 12373.6 | 12158.9 | 11657.6 | 11061.5 |
| 57.5° | 5095.7 | 5227.0 | 5881.2 | 6820.8 | 9784.7 | 14805.9 | 18192.9 | 15514.4 | 14766.8 | 13394.0 | 12722.2 |
| 60° | 2807.4 | 2933.7 | 3643.4 | 4494.6 | 7067.0 | 13813.3 | 20403.0 | 19603.6 | 18282.6 | 15335.1 | 14739.0 |
| 62.5° | 1728.9 | 1797.1 | 2321.2 | 3113.0 | 4238.2 | 10902.4 | 20860.1 | 24742.2 | 23212.8 | 17834.3 | 17175.1 |
| 65° | 1376.5 | 1405.6 | 1661.9 | 2544.7 | 3038.5 | 6484.8 | 19383.8 | 28659.6 | 28149.4 | 20860.1 | 19356.0 |
| 67° | 1336.1 | 1347.5 | 1468.7 | 2184.8 | 2864.2 | 3975.5 | 16239.3 | 29297.4 | 29815.1 | 22691.3 | 19424.2 |
| 67.5° | 1345.0 | 1357.6 | 1472.5 | 2085.0 | 2859.1 | 3653.5 | 15155.7 | 29046.1 | 29700.2 | 22836.5 | 19122.4 |
| 70° | 1297.0 | 1336.1 | 1685.9 | 2083.7 | 2719.0 | 3035.9 | 9076.3 | 25166.5 | 25847.2 | 21218.8 | 16225.4 |
| 72.5° | 459.7 | 462.2 | 728.7 | 1685.9 | 2956.4 | 3068.8 | 4557.7 | 18449.3 | 18953.2 | 16231.7 | 11698.0 |
| 75° | 272.8 | 232.4 | 242.5 | 479.9 | 2825.0 | 2980.4 | 2629.3 | 11788.9 | 11977.1 | 9301.1 | 5924.1 |
| 77.5° | 188.2 | 164.2 | 169.2 | 212.2 | 1076.0 | 2938.7 | 2088.8 | 6147.7 | 5946.9 | 3262.0 | 1261.6 |
| 80° | 107.3 | 94.7 | 101.0 | 185.6 | 391.5 | 2741.7 | 1970.1 | 2492.9 | 2125.4 | 553.1 | 348.6 |
| 82.5° | 56.8 | 48.0 | 58.1 | 152.8 | 272.8 | 1708.7 | 1973.9 | 1204.8 | 954.7 | 186.9 | 237.4 |
| 85° | 20.2 | 16.4 | 27.8 | 104.8 | 181.9 | 524.1 | 1829.9 | 1012.8 | 795.6 | 90.9 | 180.6 |
| 87.5° | 3.8 | 3.8 | 11.4 | 42.9 | 73.2 | 160.4 | 1082.3 | 601.1 | 402.9 | 54.3 | 123.8 |
| 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: P299600

CATALOG NUMBER: GLNA-AF-05-LED-E1-SL2-7030-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 | 4774.9 |
| 2.5° | 4759.8 | 4705.5 | 4632.2 | 4542.6 | 4436.5 | 4343.0 | 4273.6 | 4201.6 | 4186.4 | 4161.2 | 4157.4 |
| 5° | 4728.2 | 4634.7 | 4452.9 | 4244.5 | 4022.2 | 3821.5 | 3658.5 | 3513.3 | 3448.9 | 3393.3 | 3387.0 |
| 7.5° | 4681.5 | 4541.3 | 4231.9 | 3896.0 | 3548.7 | 3233.0 | 2965.2 | 2775.8 | 2601.5 | 2518.2 | 2505.5 |
| 10° | 4627.2 | 4426.4 | 3983.1 | 3517.1 | 3037.2 | 2591.4 | 2193.6 | 1860.2 | 1658.2 | 1538.2 | 1523.0 |
| 12.5° | 4576.6 | 4314.0 | 3729.3 | 3124.3 | 2486.6 | 1890.5 | 1379.1 | 1060.8 | 848.6 | 762.8 | 752.7 |
| 15° | 4552.7 | 4223.0 | 3491.8 | 2722.8 | 1910.7 | 1203.5 | 753.9 | 583.4 | 514.0 | 493.8 | 492.5 |
| 17.5° | 4550.1 | 4146.0 | 3259.5 | 2307.3 | 1338.6 | 699.6 | 491.3 | 448.3 | 434.4 | 429.4 | 429.4 |
| 20° | 4548.9 | 4072.8 | 3027.1 | 1876.6 | 849.9 | 466.0 | 409.2 | 399.1 | 389.0 | 382.7 | 382.7 |
| 22.5° | 4562.8 | 4007.1 | 2784.6 | 1437.1 | 535.5 | 377.6 | 359.9 | 349.8 | 337.2 | 328.3 | 327.1 |
| 25° | 4576.6 | 3956.6 | 2537.1 | 1022.9 | 387.7 | 328.3 | 310.7 | 296.8 | 279.1 | 267.7 | 266.5 |
| 27.5° | 4579.2 | 3893.4 | 2271.9 | 684.5 | 324.6 | 286.7 | 263.9 | 242.5 | 222.3 | 210.9 | 209.6 |
| 30° | 4541.3 | 3787.4 | 1977.7 | 462.2 | 286.7 | 248.8 | 218.5 | 195.7 | 176.8 | 168.0 | 168.0 |
| 32.5° | 4466.8 | 3656.0 | 1654.4 | 348.6 | 255.1 | 213.4 | 180.6 | 159.1 | 146.5 | 142.7 | 141.4 |
| 35° | 4399.8 | 3514.6 | 1322.2 | 295.5 | 228.6 | 180.6 | 147.8 | 133.9 | 126.3 | 125.0 | 123.8 |
| 37.5° | 4360.7 | 3400.9 | 1010.3 | 267.7 | 203.3 | 151.5 | 125.0 | 114.9 | 111.1 | 108.6 | 109.9 |
| 40° | 4391.0 | 3306.2 | 746.4 | 245.0 | 178.1 | 126.3 | 106.1 | 101.0 | 97.2 | 96.0 | 96.0 |
| 42.5° | 4523.6 | 3289.8 | 554.4 | 224.8 | 154.1 | 104.8 | 92.2 | 88.4 | 85.9 | 84.6 | 85.9 |
| 45° | 4872.2 | 3390.8 | 430.6 | 205.8 | 130.1 | 88.4 | 78.3 | 77.0 | 75.8 | 75.8 | 75.8 |
| 47.5° | 5396.3 | 3599.2 | 358.7 | 184.4 | 108.6 | 75.8 | 68.2 | 66.9 | 65.7 | 66.9 | 66.9 |
| 50° | 6284.1 | 3980.6 | 320.8 | 162.9 | 89.7 | 64.4 | 58.1 | 58.1 | 58.1 | 58.1 | 59.4 |
| 52.5° | 7634.1 | 4730.7 | 295.5 | 141.4 | 73.2 | 54.3 | 49.3 | 49.3 | 50.5 | 50.5 | 51.8 |
| 55° | 9138.1 | 5725.9 | 272.8 | 120.0 | 61.9 | 45.5 | 40.4 | 41.7 | 42.9 | 44.2 | 44.2 |
| 57.5° | 10769.8 | 6828.3 | 253.8 | 98.5 | 53.0 | 36.6 | 34.1 | 35.4 | 36.6 | 39.1 | 39.1 |
| 60° | 12738.6 | 8021.8 | 226.1 | 77.0 | 44.2 | 29.0 | 26.5 | 29.0 | 32.8 | 35.4 | 36.6 |
| 62.5° | 14900.6 | 9176.0 | 190.7 | 60.6 | 36.6 | 22.7 | 21.5 | 26.5 | 31.6 | 34.1 | 35.4 |
| 65° | 16378.2 | 9538.5 | 146.5 | 49.3 | 27.8 | 16.4 | 17.7 | 24.0 | 30.3 | 34.1 | 34.1 |
| 67° | 15779.6 | 8648.1 | 120.0 | 41.7 | 22.7 | 12.6 | 16.4 | 24.0 | 30.3 | 32.8 | 34.1 |
| 67.5° | 15364.1 | 8299.6 | 114.9 | 40.4 | 21.5 | 12.6 | 16.4 | 24.0 | 30.3 | 34.1 | 34.1 |
| 70° | 12501.2 | 6234.8 | 96.0 | 30.3 | 17.7 | 11.4 | 13.9 | 22.7 | 29.0 | 32.8 | 32.8 |
| 72.5° | 8686.0 | 3844.2 | 85.9 | 21.5 | 15.2 | 10.1 | 12.6 | 21.5 | 27.8 | 31.6 | 32.8 |
| 75° | 4129.6 | 1391.7 | 73.2 | 16.4 | 13.9 | 8.8 | 11.4 | 21.5 | 27.8 | 31.6 | 31.6 |
| 77.5° | 842.3 | 323.3 | 59.4 | 13.9 | 11.4 | 8.8 | 10.1 | 20.2 | 26.5 | 30.3 | 30.3 |
| 80° | 276.6 | 125.0 | 44.2 | 12.6 | 11.4 | 8.8 | 10.1 | 18.9 | 26.5 | 29.0 | 30.3 |
| 82.5° | 199.5 | 63.1 | 29.0 | 12.6 | 11.4 | 8.8 | 8.8 | 18.9 | 25.3 | 29.0 | 29.0 |
| 85° | 152.8 | 44.2 | 18.9 | 12.6 | 11.4 | 8.8 | 8.8 | 17.7 | 24.0 | 27.8 | 27.8 |
| 87.5° | 101.0 | 17.7 | 15.2 | 12.6 | 11.4 | 8.8 | 8.8 | 17.7 | 22.7 | 26.5 | 27.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)