

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: P299837

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-SL3-7050
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23930.2 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

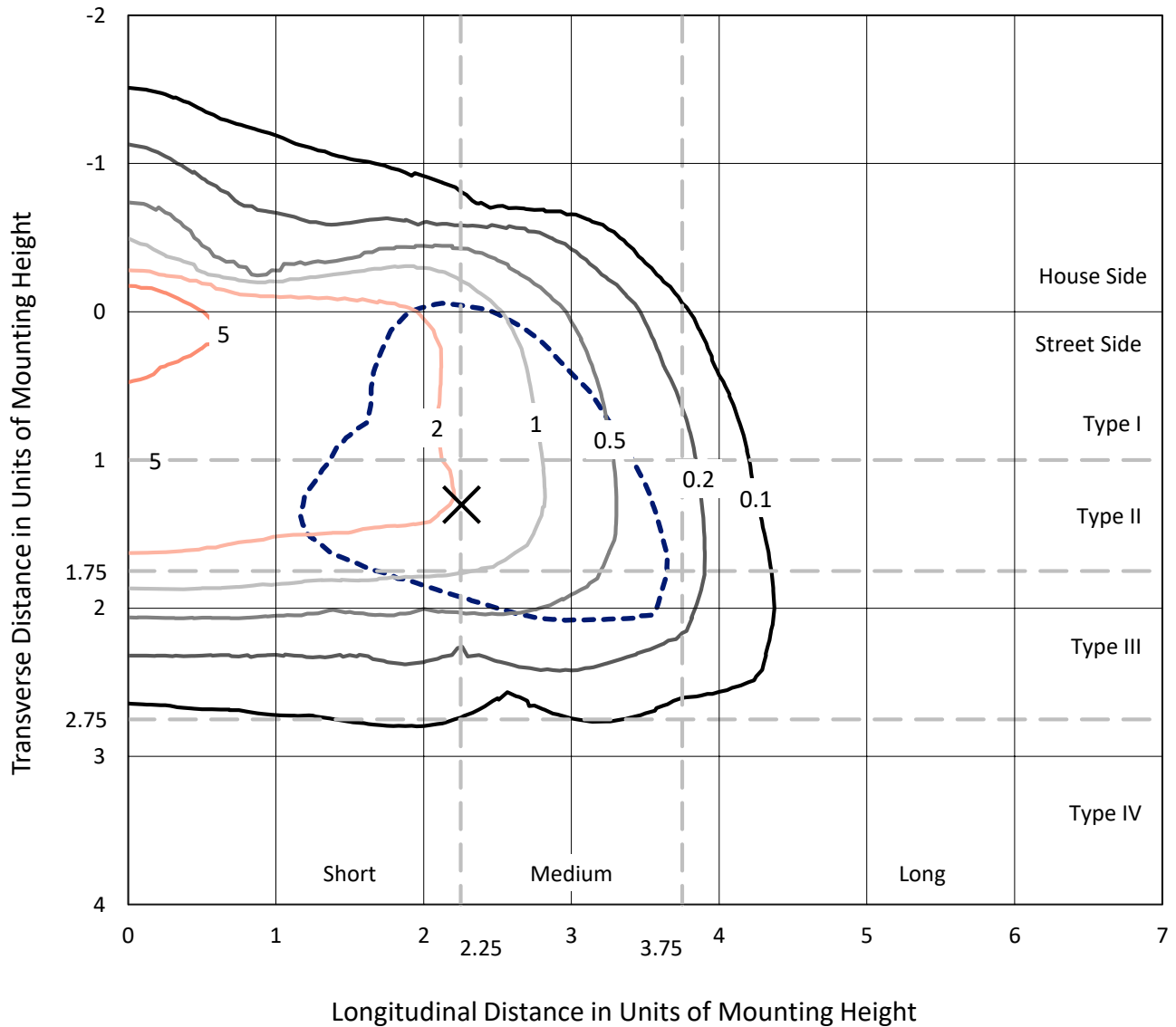
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

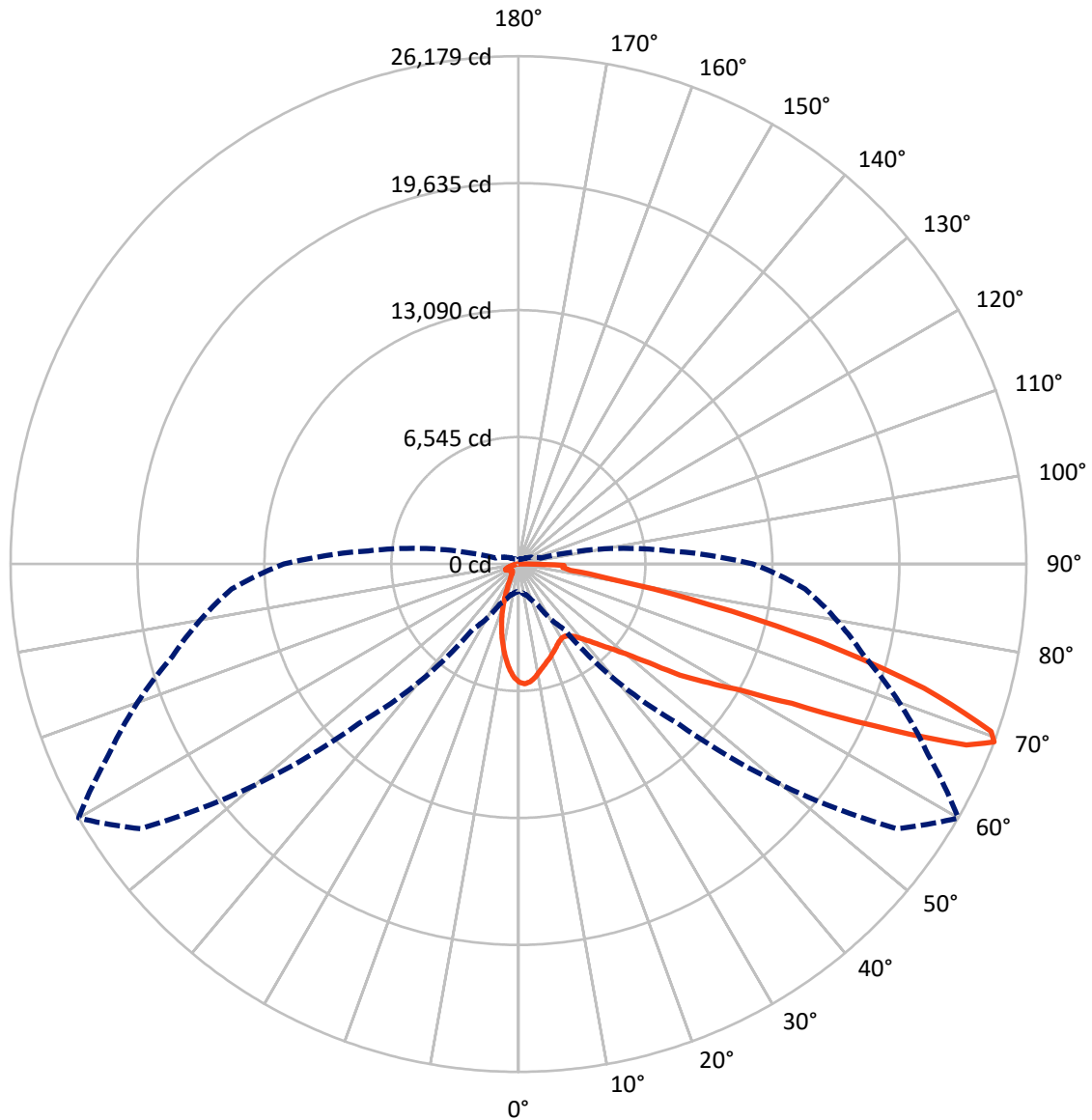
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3404.5 | 0.0 | 3404.5 |
| | % Fixture | 14.2 | 0.0 | 14.2 |
| Street Side | Lumens | 20525.7 | 0.0 | 20525.7 |
| | % Fixture | 85.8 | 0.0 | 85.8 |
| Total | Lumens | 23930.2 | 0.0 | 23930.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 515.6 | 2.2 |
| 10°-20° | 1098.5 | 4.6 |
| 20°-30° | 1399.7 | 5.8 |
| 30°-40° | 1924.2 | 8.0 |
| 40°-50° | 3122.2 | 13.0 |
| 50°-60° | 5007.2 | 20.9 |
| 60°-70° | 6664.2 | 27.8 |
| 70°-80° | 3598.2 | 15.0 |
| 80°-90° | 600.4 | 2.5 |
| 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° | 23930.2 | 100.0 |
| 0°-180° | 23930.2 | 100.0 |



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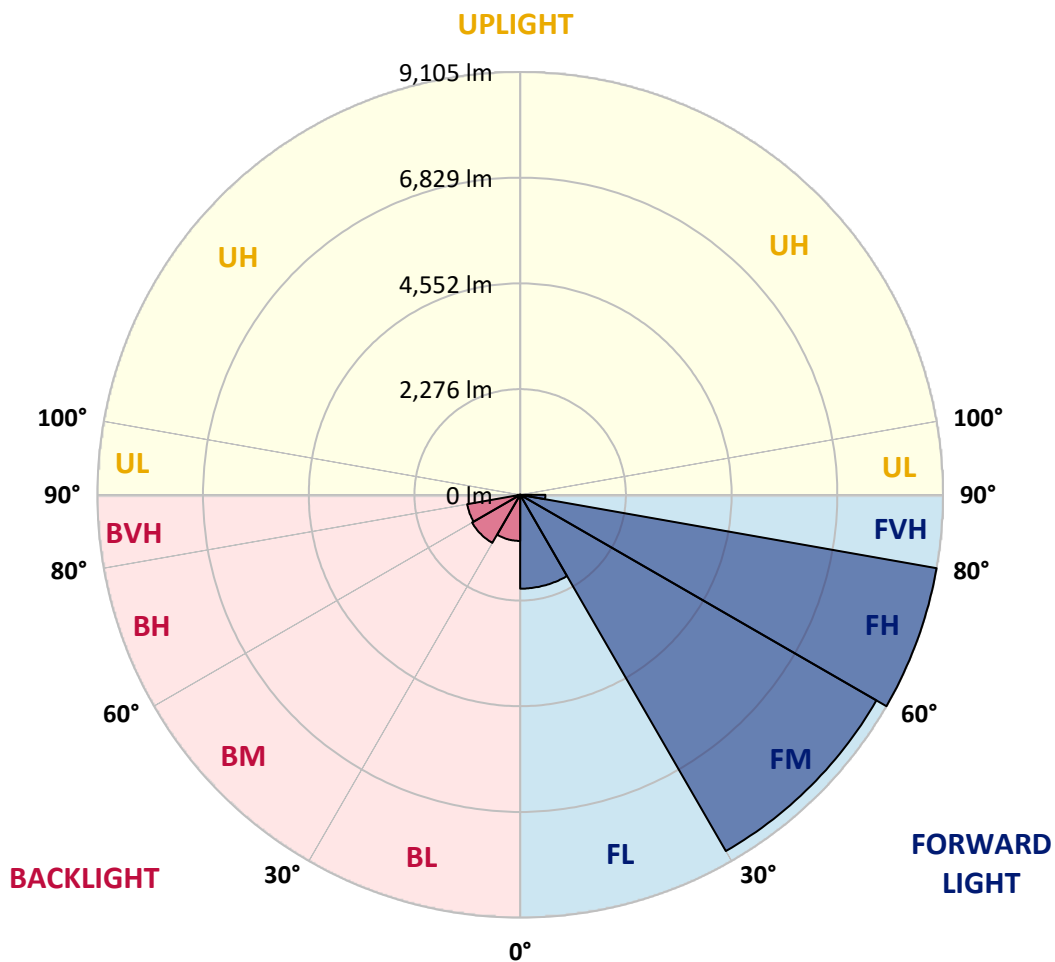
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2020.6 | 8.4 | | | |
| FM (30°-60°) | 8857.6 | 37.0 | | | |
| FH (60°-80°) | 9105.0 | 38.0 | | | G4/12000 |
| FVH (80°-90°) | 542.6 | 2.3 | | | G4/750 |
| BL (0°-30°) | 993.2 | 4.2 | B2/1000 | | |
| BM (30°-60°) | 1196.1 | 5.0 | B2/2500 | | |
| BH (60°-80°) | 1157.4 | 4.8 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 57.8 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 65° | 75° | 85° |
|-------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 |
| 2.5° | 6222.6 | 6236.5 | 6230.7 | 6227.3 | 6237.7 | 6221.5 | 6187.9 | 6177.5 | 6161.4 | 6123.2 | 6058.5 |
| 5° | 5989.1 | 6030.7 | 6028.4 | 6059.6 | 6111.7 | 6125.5 | 6110.5 | 6112.8 | 6082.8 | 6035.4 | 5927.9 |
| 7.5° | 5585.7 | 5603.0 | 5612.3 | 5680.5 | 5775.3 | 5851.6 | 5916.3 | 5937.1 | 5923.2 | 5882.8 | 5744.1 |
| 10° | 5169.5 | 5183.4 | 5205.4 | 5285.1 | 5405.4 | 5510.5 | 5633.1 | 5703.6 | 5733.6 | 5726.7 | 5571.8 |
| 12.5° | 4812.3 | 4826.2 | 4855.1 | 4945.3 | 5088.6 | 5218.1 | 5396.1 | 5484.0 | 5555.6 | 5598.4 | 5431.9 |
| 15° | 4492.1 | 4522.2 | 4549.9 | 4654.0 | 4814.6 | 4984.6 | 5185.7 | 5296.7 | 5407.7 | 5503.6 | 5308.2 |
| 17.5° | 4242.4 | 4272.5 | 4288.7 | 4383.5 | 4554.6 | 4762.6 | 4998.4 | 5129.1 | 5267.8 | 5425.0 | 5185.7 |
| 20° | 4097.9 | 4111.8 | 4104.9 | 4158.1 | 4311.8 | 4532.6 | 4812.3 | 4963.8 | 5131.4 | 5351.0 | 5063.2 |
| 22.5° | 4057.5 | 4058.6 | 4033.2 | 4027.4 | 4126.8 | 4313.0 | 4613.5 | 4797.3 | 5003.1 | 5302.5 | 4958.0 |
| 25° | 4155.7 | 4152.3 | 4082.9 | 4026.3 | 4036.7 | 4145.3 | 4421.6 | 4635.5 | 4895.6 | 5292.1 | 4877.1 |
| 27.5° | 4374.2 | 4384.6 | 4281.7 | 4175.4 | 4070.2 | 4066.7 | 4276.0 | 4501.4 | 4807.7 | 5339.5 | 4842.4 |
| 30° | 4680.6 | 4697.9 | 4588.1 | 4452.8 | 4255.2 | 4092.2 | 4219.3 | 4421.6 | 4753.4 | 5437.7 | 4836.6 |
| 32.5° | 5015.8 | 5034.3 | 4951.1 | 4808.9 | 4549.9 | 4249.4 | 4258.6 | 4428.5 | 4751.1 | 5575.3 | 4875.9 |
| 35° | 5373.0 | 5393.8 | 5351.0 | 5230.8 | 4943.0 | 4539.5 | 4408.9 | 4540.7 | 4826.2 | 5785.7 | 4981.1 |
| 37.5° | 5771.8 | 5804.2 | 5815.7 | 5701.3 | 5393.8 | 4922.2 | 4655.1 | 4753.4 | 4996.1 | 6078.1 | 5174.2 |
| 40° | 6346.3 | 6391.4 | 6387.9 | 6223.8 | 5910.5 | 5438.9 | 5035.4 | 5060.9 | 5260.9 | 6468.9 | 5482.8 |
| 42.5° | 7446.8 | 7456.1 | 7168.2 | 6811.0 | 6479.3 | 5982.2 | 5484.0 | 5463.1 | 5626.1 | 6963.6 | 5937.1 |
| 45° | 8846.7 | 8808.5 | 8168.1 | 7478.0 | 7073.4 | 6606.4 | 6067.7 | 5966.0 | 6089.7 | 7567.0 | 6505.8 |
| 47.5° | 10008.5 | 9920.6 | 9111.4 | 8158.9 | 7702.3 | 7285.0 | 6753.2 | 6575.2 | 6643.4 | 8251.4 | 7241.0 |
| 50° | 10411.9 | 10346.0 | 9675.5 | 8725.3 | 8297.6 | 8112.7 | 7597.1 | 7345.1 | 7363.6 | 9067.5 | 8102.2 |
| 52.5° | 10325.2 | 10315.9 | 9868.6 | 9098.7 | 8854.8 | 8981.9 | 8792.4 | 8451.4 | 8271.0 | 9973.8 | 9031.7 |
| 55° | 10120.6 | 10140.2 | 9978.4 | 9533.3 | 9491.7 | 9821.2 | 10354.1 | 10102.1 | 9541.4 | 10888.2 | 9992.3 |
| 57.5° | 9409.7 | 9460.5 | 9816.6 | 10080.1 | 10517.1 | 11007.2 | 11611.8 | 11540.1 | 10909.0 | 11876.5 | 11134.4 |
| 60° | 7580.9 | 7698.8 | 8653.6 | 9973.8 | 11572.5 | 13105.3 | 13375.8 | 13209.4 | 12319.3 | 13103.0 | 12642.9 |
| 62.5° | 5311.7 | 5434.3 | 6569.4 | 8635.2 | 11399.1 | 15475.1 | 16529.3 | 15811.5 | 14344.5 | 14909.8 | 14595.4 |
| 65° | 2843.7 | 2902.7 | 3769.6 | 5991.4 | 9623.5 | 15964.0 | 21138.2 | 20045.8 | 17551.2 | 17137.4 | 16265.8 |
| 67.5° | 1568.7 | 1601.0 | 1932.8 | 3025.2 | 6163.7 | 14057.8 | 24074.4 | 24899.8 | 21559.0 | 18620.5 | 15961.7 |
| 69° | 1418.4 | 1448.4 | 1665.8 | 2291.1 | 4124.5 | 11623.4 | 23787.7 | 26179.4 | 23316.1 | 18473.7 | 14838.1 |
| 70° | 1387.2 | 1414.9 | 1610.3 | 2112.0 | 3338.5 | 9580.7 | 22827.1 | 25852.3 | 23734.5 | 17947.7 | 13857.9 |
| 72.5° | 1248.5 | 1278.5 | 1468.1 | 1897.0 | 2853.0 | 4776.5 | 18081.8 | 21858.4 | 21548.6 | 15561.8 | 10511.3 |
| 75° | 1164.1 | 1191.8 | 1513.2 | 1857.7 | 2731.6 | 3022.9 | 11920.4 | 16109.7 | 15840.4 | 10885.8 | 5667.8 |
| 77.5° | 498.2 | 495.9 | 701.7 | 1572.1 | 2772.0 | 2926.9 | 6405.3 | 10063.9 | 9181.9 | 4652.8 | 1627.6 |
| 80° | 332.9 | 327.1 | 332.9 | 462.4 | 2542.0 | 2943.1 | 3355.8 | 5108.3 | 3858.7 | 1186.0 | 802.2 |
| 82.5° | 286.7 | 282.1 | 292.5 | 282.1 | 893.6 | 3359.3 | 2853.0 | 2716.5 | 1834.5 | 673.9 | 397.7 |
| 85° | 193.0 | 185.0 | 252.0 | 253.2 | 421.9 | 2984.7 | 3213.6 | 2294.6 | 1484.3 | 400.0 | 196.5 |
| 87.5° | 92.5 | 90.2 | 146.8 | 179.2 | 247.4 | 1212.6 | 3605.5 | 2351.3 | 1497.0 | 204.6 | 93.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: GLNA-AF-04-LED-E1-SL3-7050

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 | 6097.8 |
| 2.5° | 6038.8 | 5991.4 | 5945.2 | 5889.7 | 5831.9 | 5767.2 | 5734.8 | 5702.4 | 5694.3 | 5685.1 | 5652.7 |
| 5° | 5872.4 | 5805.3 | 5689.7 | 5562.6 | 5428.5 | 5297.8 | 5198.4 | 5136.0 | 5088.6 | 5064.3 | 5021.6 |
| 7.5° | 5657.4 | 5559.1 | 5356.8 | 5137.2 | 4911.7 | 4706.0 | 4528.0 | 4415.8 | 4309.5 | 4259.8 | 4203.1 |
| 10° | 5452.7 | 5305.9 | 4991.5 | 4667.8 | 4344.2 | 4033.2 | 3740.7 | 3533.8 | 3350.0 | 3247.1 | 3174.3 |
| 12.5° | 5277.0 | 5075.9 | 4640.1 | 4202.0 | 3758.1 | 3315.3 | 2877.2 | 2532.7 | 2244.9 | 2093.5 | 2016.0 |
| 15° | 5106.0 | 4863.2 | 4306.0 | 3750.0 | 3180.1 | 2577.8 | 2002.2 | 1611.4 | 1373.3 | 1278.5 | 1246.1 |
| 17.5° | 4951.1 | 4640.1 | 3970.8 | 3294.5 | 2583.6 | 1855.3 | 1345.6 | 1130.5 | 1039.2 | 1008.0 | 997.6 |
| 20° | 4783.4 | 4414.7 | 3622.8 | 2818.3 | 1961.7 | 1297.0 | 1050.8 | 956.0 | 919.0 | 909.8 | 905.1 |
| 22.5° | 4621.6 | 4192.7 | 3289.9 | 2308.5 | 1409.1 | 1001.1 | 902.8 | 863.5 | 857.7 | 865.8 | 865.8 |
| 25° | 4484.0 | 3993.9 | 2930.4 | 1775.6 | 1034.6 | 842.7 | 808.0 | 798.8 | 820.7 | 850.8 | 856.6 |
| 27.5° | 4381.2 | 3830.9 | 2547.8 | 1310.9 | 824.2 | 732.9 | 731.7 | 746.8 | 801.1 | 858.9 | 870.5 |
| 30° | 4310.6 | 3676.0 | 2138.6 | 945.6 | 691.3 | 645.0 | 663.5 | 695.9 | 775.7 | 857.7 | 879.7 |
| 32.5° | 4274.8 | 3561.6 | 1712.0 | 731.7 | 591.9 | 566.4 | 597.6 | 636.9 | 715.6 | 791.8 | 820.7 |
| 35° | 4302.5 | 3477.2 | 1309.7 | 610.4 | 522.5 | 502.9 | 535.2 | 573.4 | 619.6 | 652.0 | 673.9 |
| 37.5° | 4406.6 | 3443.7 | 988.4 | 546.8 | 475.1 | 456.6 | 482.0 | 504.0 | 522.5 | 531.7 | 542.2 |
| 40° | 4630.8 | 3479.5 | 791.8 | 514.4 | 448.5 | 425.4 | 435.8 | 443.9 | 455.5 | 464.7 | 469.3 |
| 42.5° | 4961.5 | 3587.0 | 709.8 | 501.7 | 434.6 | 401.1 | 398.8 | 402.3 | 417.3 | 434.6 | 438.1 |
| 45° | 5423.8 | 3776.6 | 704.0 | 509.8 | 427.7 | 381.5 | 371.1 | 375.7 | 398.8 | 425.4 | 430.0 |
| 47.5° | 6014.6 | 4065.6 | 750.2 | 534.1 | 433.5 | 371.1 | 353.7 | 359.5 | 388.4 | 424.2 | 430.0 |
| 50° | 6730.1 | 4469.0 | 827.7 | 569.9 | 458.9 | 373.4 | 347.9 | 351.4 | 381.5 | 420.8 | 426.6 |
| 52.5° | 7575.1 | 5041.2 | 912.1 | 604.6 | 485.5 | 388.4 | 352.6 | 344.5 | 372.2 | 406.9 | 413.8 |
| 55° | 8514.9 | 5775.3 | 998.8 | 635.8 | 499.4 | 406.9 | 361.8 | 335.2 | 354.9 | 383.8 | 389.6 |
| 57.5° | 9668.6 | 6801.8 | 1149.0 | 665.8 | 508.6 | 419.6 | 371.1 | 326.0 | 332.9 | 353.7 | 358.4 |
| 60° | 11230.3 | 8253.7 | 1413.8 | 715.6 | 529.4 | 424.2 | 369.9 | 317.9 | 311.0 | 322.5 | 324.8 |
| 62.5° | 13101.8 | 9830.4 | 1634.6 | 778.0 | 564.1 | 427.7 | 363.0 | 312.1 | 292.5 | 292.5 | 294.8 |
| 65° | 14212.7 | 10252.4 | 1512.0 | 830.0 | 593.0 | 424.2 | 354.9 | 306.3 | 278.6 | 265.9 | 267.0 |
| 67.5° | 13270.6 | 9016.6 | 1295.9 | 840.4 | 591.9 | 408.1 | 342.2 | 295.9 | 264.7 | 245.1 | 243.9 |
| 69° | 12090.4 | 7779.7 | 1198.7 | 812.7 | 564.1 | 387.3 | 326.0 | 284.4 | 254.3 | 233.5 | 232.4 |
| 70° | 11139.0 | 7024.9 | 1135.2 | 782.6 | 534.1 | 372.2 | 313.3 | 274.0 | 246.2 | 226.6 | 224.3 |
| 72.5° | 8098.8 | 4603.1 | 969.9 | 672.8 | 440.4 | 312.1 | 270.5 | 240.4 | 219.6 | 208.1 | 205.8 |
| 75° | 4047.1 | 2195.2 | 787.2 | 545.6 | 337.5 | 249.7 | 221.9 | 201.1 | 190.7 | 188.4 | 187.3 |
| 77.5° | 1329.4 | 1005.7 | 563.0 | 406.9 | 250.8 | 195.4 | 179.2 | 164.1 | 161.8 | 168.8 | 166.5 |
| 80° | 730.6 | 584.9 | 357.2 | 269.3 | 171.1 | 143.3 | 141.0 | 132.9 | 136.4 | 148.0 | 145.7 |
| 82.5° | 372.2 | 304.0 | 220.8 | 161.8 | 115.6 | 102.9 | 112.1 | 107.5 | 112.1 | 122.5 | 121.4 |
| 85° | 183.8 | 166.5 | 139.9 | 98.3 | 76.3 | 65.9 | 79.8 | 83.2 | 85.5 | 93.6 | 93.6 |
| 87.5° | 106.3 | 98.3 | 74.0 | 46.2 | 38.1 | 34.7 | 46.2 | 45.1 | 53.2 | 57.8 | 56.6 |
| 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)