

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: P300861

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300861
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22736.1 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

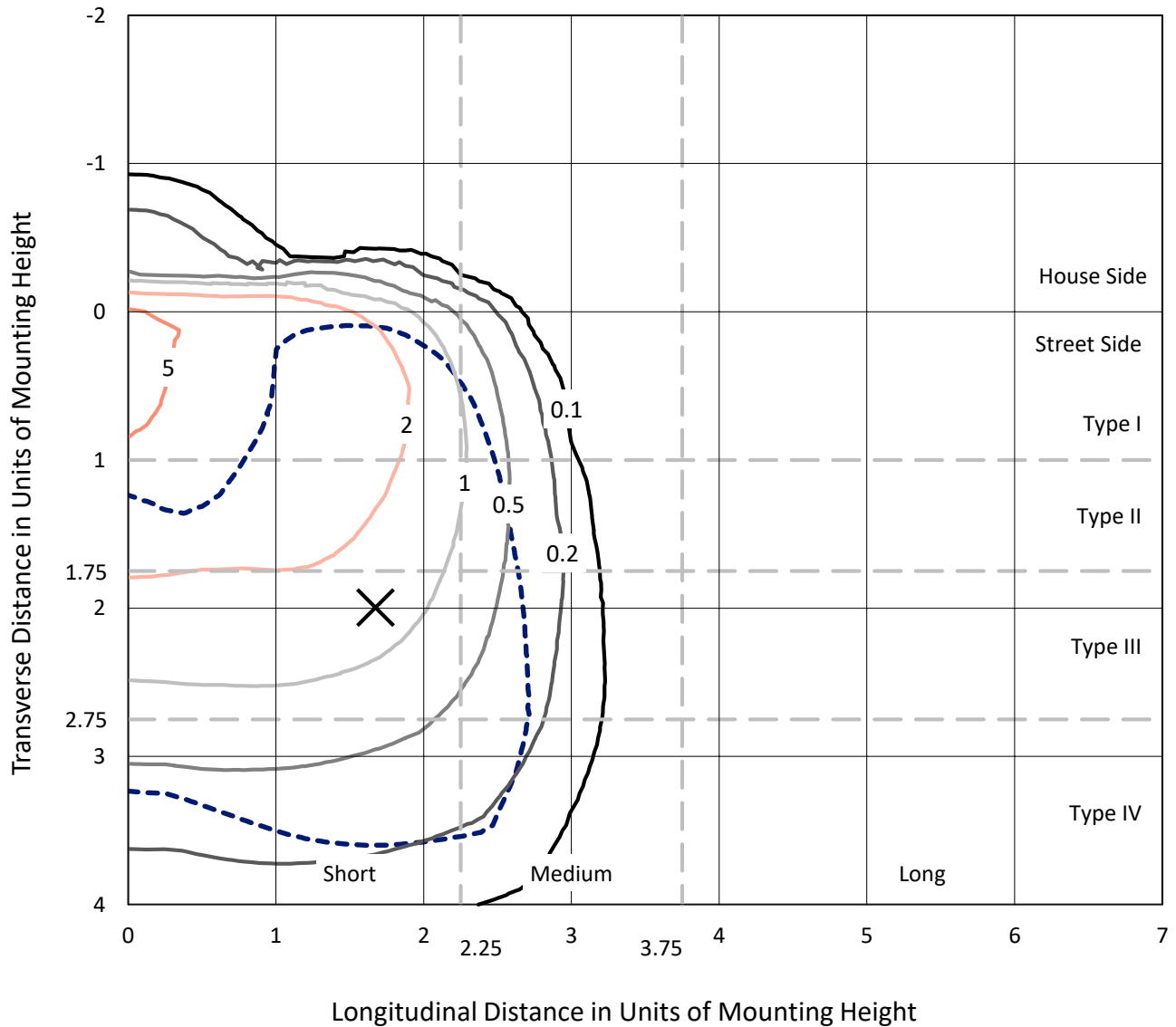
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

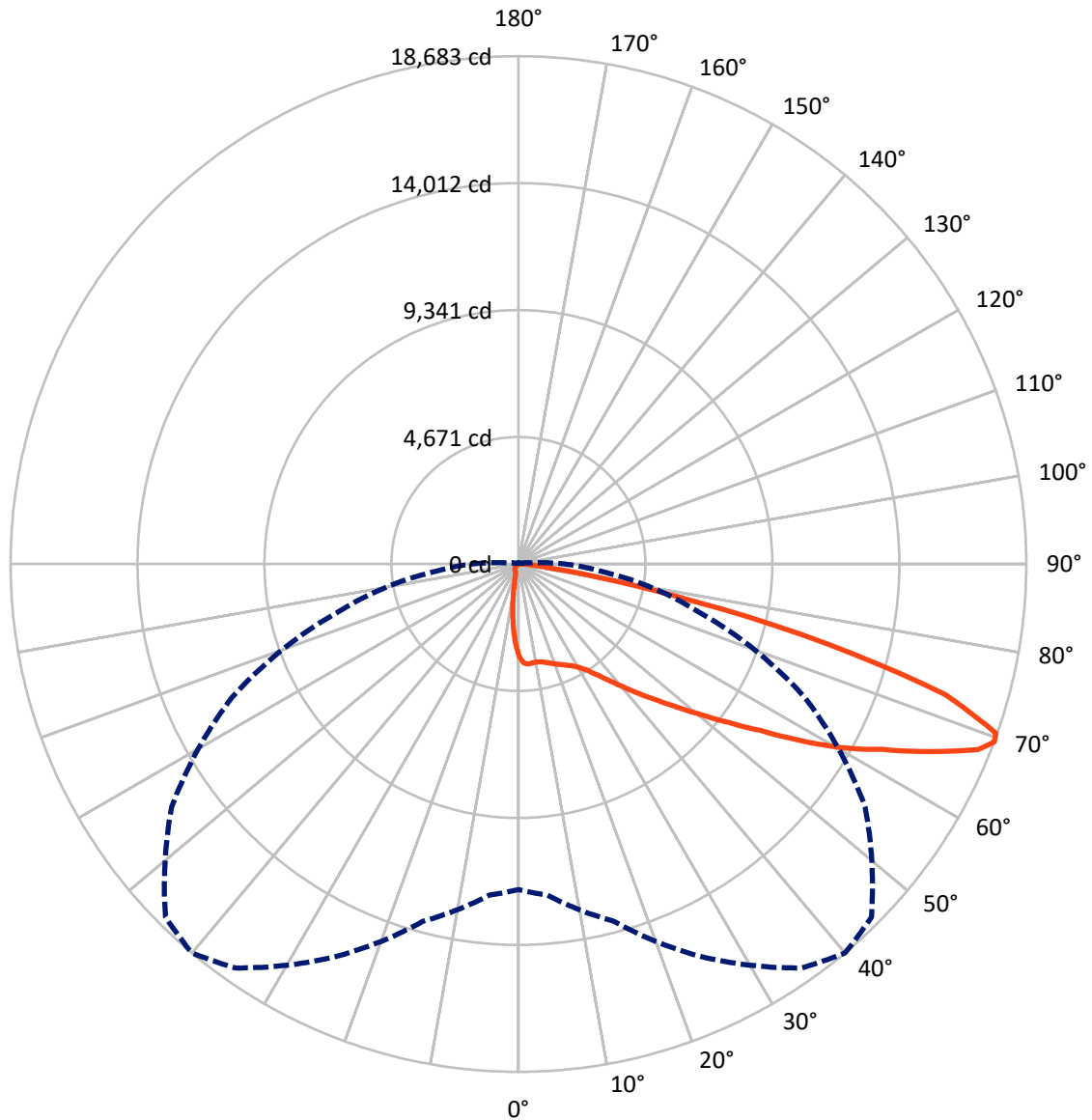


Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1330.2 | 0.0 | 1330.2 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 21405.9 | 0.0 | 21405.9 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 22736.1 | 0.0 | 22736.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 275.4 | 1.2 |
| 10°-20° | 677.3 | 3.0 |
| 20°-30° | 1140.8 | 5.0 |
| 30°-40° | 1867.6 | 8.2 |
| 40°-50° | 3233.6 | 14.2 |
| 50°-60° | 5093.3 | 22.4 |
| 60°-70° | 6651.6 | 29.3 |
| 70°-80° | 3425.9 | 15.1 |
| 80°-90° | 370.6 | 1.6 |
| 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° | 22736.1 | 100.0 |
| 0°-180° | 22736.1 | 100.0 |



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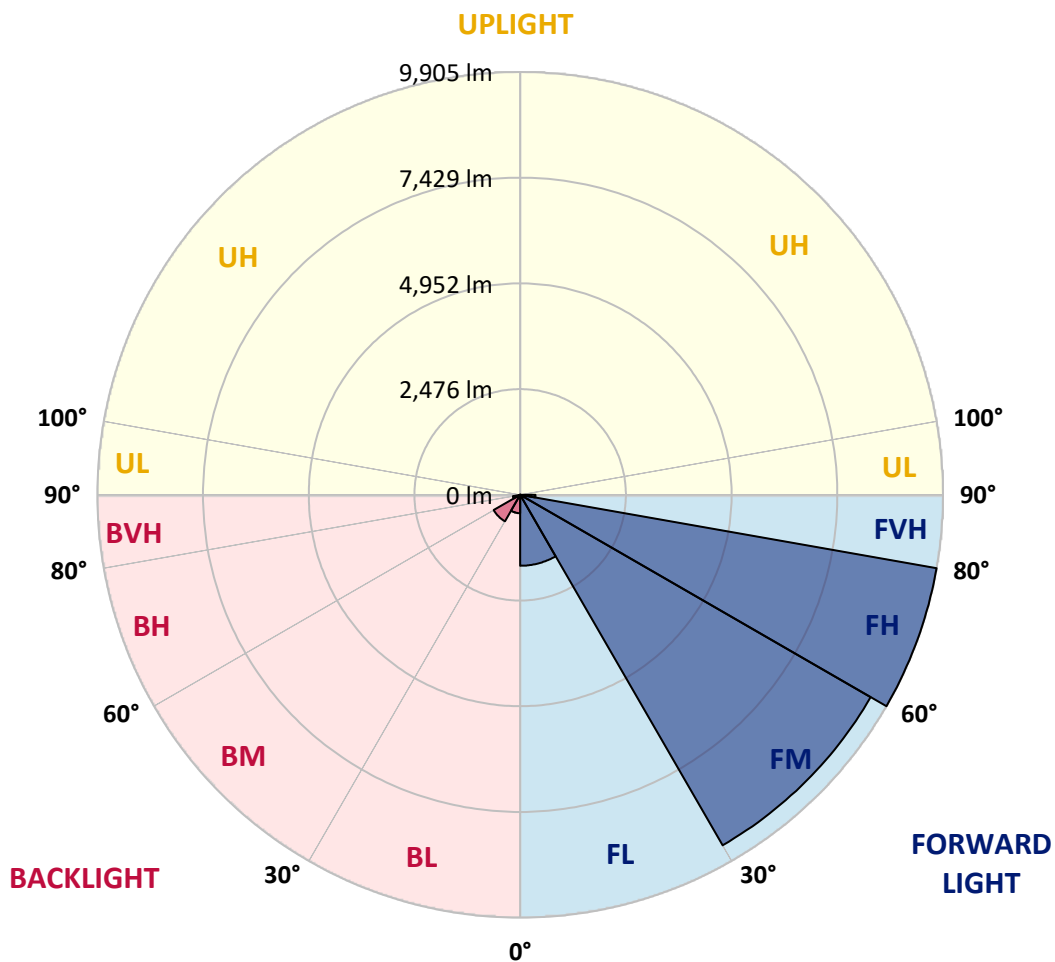
CATALOG NUMBER: GLNA-AF-04-LED-E1-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1662.7 | 7.3 | | | |
| FM (30°-60°) | 9479.5 | 41.7 | | | |
| FH (60°-80°) | 9904.8 | 43.6 | | | G4/12000 |
| FVH (80°-90°) | 358.9 | 1.6 | | | G3/500 |
| BL (0°-30°) | 430.9 | 1.9 | B1/500 | | |
| BM (30°-60°) | 714.9 | 3.1 | B1/1000 | | |
| BH (60°-80°) | 172.7 | 0.8 | B1/500 | | G1/500 |
| 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: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 |
| 2.5° | 3729.8 | 3709.5 | 3697.3 | 3681.1 | 3660.8 | 3643.2 | 3636.4 | 3586.4 | 3539.0 | 3474.0 | 3399.6 |
| 5° | 3798.8 | 3792.1 | 3770.4 | 3748.8 | 3724.4 | 3697.3 | 3682.4 | 3622.9 | 3555.2 | 3460.5 | 3330.6 |
| 7.5° | 3805.6 | 3797.5 | 3770.4 | 3740.6 | 3706.8 | 3674.3 | 3648.6 | 3589.1 | 3526.8 | 3430.7 | 3272.4 |
| 10° | 3794.8 | 3785.3 | 3765.0 | 3732.5 | 3690.6 | 3659.4 | 3633.7 | 3576.9 | 3524.1 | 3437.5 | 3261.6 |
| 12.5° | 3782.6 | 3773.1 | 3763.6 | 3747.4 | 3710.9 | 3689.2 | 3667.6 | 3613.4 | 3566.1 | 3493.0 | 3300.8 |
| 15° | 3794.8 | 3789.4 | 3800.2 | 3793.4 | 3773.1 | 3754.2 | 3732.5 | 3683.8 | 3640.5 | 3579.6 | 3372.5 |
| 17.5° | 3846.2 | 3846.2 | 3880.0 | 3884.1 | 3865.1 | 3838.1 | 3807.0 | 3758.2 | 3721.7 | 3670.3 | 3457.8 |
| 20° | 3966.6 | 3962.6 | 4005.9 | 4014.0 | 3968.0 | 3926.0 | 3880.0 | 3820.5 | 3792.1 | 3759.6 | 3541.7 |
| 22.5° | 4173.7 | 4154.8 | 4180.5 | 4172.4 | 4081.7 | 4016.7 | 3959.9 | 3886.8 | 3871.9 | 3857.0 | 3635.1 |
| 25° | 4443.0 | 4432.2 | 4449.8 | 4369.9 | 4210.2 | 4122.3 | 4054.6 | 3972.1 | 3972.1 | 3986.9 | 3740.6 |
| 27.5° | 4834.1 | 4793.5 | 4734.0 | 4593.2 | 4353.7 | 4241.4 | 4168.3 | 4080.3 | 4103.3 | 4158.8 | 3880.0 |
| 30° | 5234.7 | 5190.1 | 5053.4 | 4836.8 | 4528.3 | 4410.5 | 4325.3 | 4233.3 | 4287.4 | 4388.9 | 4066.8 |
| 32.5° | 5629.9 | 5579.8 | 5386.3 | 5112.9 | 4778.7 | 4660.9 | 4578.4 | 4476.9 | 4567.5 | 4738.1 | 4340.2 |
| 35° | 6012.9 | 5968.2 | 5744.9 | 5422.8 | 5111.6 | 5014.1 | 4938.3 | 4850.4 | 4966.8 | 5205.0 | 4725.9 |
| 37.5° | 6443.3 | 6394.5 | 6122.5 | 5773.4 | 5516.2 | 5445.9 | 5390.4 | 5302.4 | 5505.4 | 5854.6 | 5263.1 |
| 40° | 6972.4 | 6889.9 | 6523.1 | 6175.3 | 5984.5 | 5950.6 | 5912.8 | 5900.6 | 6215.9 | 6699.0 | 5979.1 |
| 42.5° | 7578.7 | 7443.4 | 6942.6 | 6598.9 | 6498.8 | 6523.1 | 6513.6 | 6567.8 | 7105.0 | 7749.2 | 6850.6 |
| 45° | 8185.0 | 8010.4 | 7409.6 | 7050.9 | 7064.4 | 7149.7 | 7202.5 | 7419.0 | 8218.8 | 8953.7 | 7788.5 |
| 47.5° | 8699.3 | 8527.4 | 7857.5 | 7539.5 | 7701.9 | 7869.7 | 8013.1 | 8423.2 | 9363.8 | 10139.2 | 8517.9 |
| 50° | 9139.1 | 8976.7 | 8332.5 | 8076.7 | 8442.2 | 8712.8 | 8945.6 | 9553.2 | 10595.3 | 11041.9 | 9029.5 |
| 52.5° | 9499.1 | 9390.8 | 8825.1 | 8692.5 | 9288.0 | 9684.5 | 10025.6 | 10753.7 | 11686.1 | 11775.4 | 9427.4 |
| 55° | 9849.6 | 9772.5 | 9354.3 | 9424.7 | 10281.3 | 10821.3 | 11253.0 | 12027.2 | 12625.3 | 12387.1 | 9809.0 |
| 57.5° | 10252.9 | 10182.5 | 9957.9 | 10353.1 | 11587.3 | 12266.7 | 12737.7 | 13155.8 | 13452.2 | 13012.4 | 10169.0 |
| 60° | 10664.3 | 10623.7 | 10629.2 | 11384.3 | 13086.8 | 13739.1 | 13999.0 | 14107.2 | 14264.2 | 13601.1 | 10189.3 |
| 62.5° | 11056.8 | 11133.9 | 11396.5 | 12532.0 | 14522.7 | 15023.5 | 15154.7 | 15261.6 | 15077.6 | 13694.5 | 9413.9 |
| 65° | 11721.3 | 11847.2 | 12473.8 | 14068.0 | 16102.1 | 16638.0 | 16773.3 | 16406.6 | 15206.2 | 12487.3 | 7657.2 |
| 67.5° | 12046.1 | 12276.2 | 13394.0 | 15499.8 | 17634.1 | 18229.5 | 18179.4 | 16481.0 | 13645.8 | 9522.1 | 4914.0 |
| 69° | 11978.4 | 12223.4 | 13606.5 | 15938.3 | 18142.9 | 18682.9 | 18364.9 | 15570.2 | 11625.2 | 6898.0 | 3016.6 |
| 70° | 11710.5 | 11958.1 | 13496.9 | 15922.1 | 18207.9 | 18635.5 | 18021.1 | 14445.6 | 9829.3 | 5043.9 | 1886.6 |
| 72.5° | 9779.3 | 9993.1 | 11982.5 | 14391.4 | 16773.3 | 16425.5 | 15076.2 | 10008.0 | 4789.5 | 1373.6 | 424.9 |
| 75° | 6019.7 | 6138.8 | 8597.8 | 10841.6 | 12668.6 | 11775.4 | 10044.5 | 4978.9 | 1427.8 | 388.4 | 235.5 |
| 77.5° | 3180.4 | 3234.5 | 4706.9 | 6390.5 | 8030.7 | 6644.9 | 5148.1 | 1942.0 | 657.7 | 243.6 | 170.5 |
| 80° | 1879.8 | 1920.4 | 2534.8 | 2921.9 | 3475.4 | 2902.9 | 2058.4 | 1192.3 | 471.0 | 152.9 | 151.6 |
| 82.5° | 1075.9 | 1101.6 | 1837.8 | 1624.0 | 1369.6 | 1169.3 | 1024.5 | 1130.0 | 282.8 | 102.9 | 157.0 |
| 85° | 395.2 | 400.6 | 1034.0 | 1235.6 | 814.7 | 484.5 | 508.9 | 936.5 | 75.8 | 65.0 | 123.2 |
| 87.5° | 184.1 | 180.0 | 531.9 | 756.5 | 476.4 | 307.2 | 396.5 | 205.7 | 29.8 | 42.0 | 33.8 |
| 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-SL4

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 | 3396.9 |
| 2.5° | 3356.3 | 3306.2 | 3215.5 | 3122.2 | 3027.4 | 2954.3 | 2882.6 | 2825.8 | 2806.8 | 2771.6 | 2774.4 |
| 5° | 3253.4 | 3161.4 | 2971.9 | 2779.8 | 2579.5 | 2414.4 | 2258.7 | 2132.9 | 2072.0 | 2009.7 | 2009.7 |
| 7.5° | 3164.1 | 3030.1 | 2733.8 | 2421.1 | 2097.7 | 1825.7 | 1580.7 | 1396.6 | 1295.1 | 1213.9 | 1212.6 |
| 10° | 3130.3 | 2948.9 | 2534.8 | 2086.9 | 1636.2 | 1265.4 | 974.4 | 787.6 | 691.6 | 629.3 | 626.6 |
| 12.5° | 3145.2 | 2920.5 | 2381.9 | 1778.3 | 1212.6 | 813.4 | 564.3 | 443.9 | 403.3 | 384.3 | 384.3 |
| 15° | 3188.5 | 2912.4 | 2229.0 | 1476.5 | 856.7 | 508.9 | 374.9 | 342.4 | 339.7 | 339.7 | 339.7 |
| 17.5° | 3241.3 | 2915.1 | 2072.0 | 1182.8 | 583.3 | 364.0 | 323.4 | 319.4 | 322.1 | 322.1 | 322.1 |
| 20° | 3295.4 | 2916.5 | 1902.8 | 910.8 | 411.4 | 316.7 | 304.5 | 303.1 | 305.9 | 305.9 | 307.2 |
| 22.5° | 3361.7 | 2923.2 | 1733.6 | 680.7 | 339.7 | 299.1 | 289.6 | 289.6 | 291.0 | 291.0 | 289.6 |
| 25° | 3437.5 | 2936.8 | 1557.7 | 504.8 | 309.9 | 286.9 | 278.8 | 277.4 | 278.8 | 277.4 | 276.1 |
| 27.5° | 3532.2 | 2955.7 | 1361.5 | 395.2 | 296.4 | 274.7 | 268.0 | 268.0 | 266.6 | 265.3 | 263.9 |
| 30° | 3651.3 | 2977.4 | 1140.9 | 335.6 | 282.8 | 263.9 | 257.1 | 255.8 | 254.4 | 251.7 | 251.7 |
| 32.5° | 3832.7 | 3024.7 | 923.0 | 304.5 | 268.0 | 249.0 | 243.6 | 243.6 | 240.9 | 238.2 | 236.8 |
| 35° | 4111.5 | 3118.1 | 728.1 | 285.6 | 251.7 | 232.8 | 226.0 | 226.0 | 223.3 | 221.9 | 220.6 |
| 37.5° | 4497.2 | 3260.2 | 565.7 | 268.0 | 235.5 | 215.2 | 208.4 | 207.1 | 204.4 | 201.6 | 200.3 |
| 40° | 5010.1 | 3436.1 | 445.2 | 251.7 | 219.2 | 197.6 | 192.2 | 189.5 | 184.1 | 180.0 | 180.0 |
| 42.5° | 5654.3 | 3636.4 | 361.3 | 234.1 | 200.3 | 181.3 | 177.3 | 173.2 | 163.8 | 159.7 | 158.3 |
| 45° | 6328.2 | 3816.4 | 305.9 | 213.8 | 181.3 | 165.1 | 162.4 | 155.6 | 143.5 | 139.4 | 139.4 |
| 47.5° | 6814.1 | 3858.4 | 269.3 | 194.9 | 163.8 | 147.5 | 146.2 | 134.0 | 123.2 | 120.4 | 119.1 |
| 50° | 7117.2 | 3775.8 | 239.5 | 175.9 | 147.5 | 131.3 | 127.2 | 112.3 | 105.6 | 102.9 | 101.5 |
| 52.5° | 7321.6 | 3628.3 | 215.2 | 159.7 | 132.6 | 116.4 | 106.9 | 96.1 | 90.7 | 88.0 | 88.0 |
| 55° | 7485.3 | 3419.9 | 190.8 | 144.8 | 120.4 | 104.2 | 90.7 | 82.6 | 77.1 | 74.4 | 74.4 |
| 57.5° | 7531.4 | 3137.0 | 166.5 | 132.6 | 108.3 | 92.0 | 77.1 | 71.7 | 65.0 | 63.6 | 63.6 |
| 60° | 7197.1 | 2626.8 | 147.5 | 117.7 | 97.4 | 79.8 | 67.7 | 60.9 | 54.1 | 52.8 | 51.4 |
| 62.5° | 6316.0 | 2032.7 | 129.9 | 104.2 | 85.3 | 69.0 | 58.2 | 50.1 | 44.7 | 44.7 | 44.7 |
| 65° | 4817.9 | 1362.8 | 113.7 | 90.7 | 74.4 | 58.2 | 50.1 | 40.6 | 37.9 | 37.9 | 39.2 |
| 67.5° | 2884.0 | 741.6 | 97.4 | 77.1 | 63.6 | 48.7 | 42.0 | 35.2 | 33.8 | 35.2 | 35.2 |
| 69° | 1690.3 | 435.8 | 88.0 | 69.0 | 55.5 | 43.3 | 36.5 | 31.1 | 33.8 | 35.2 | 35.2 |
| 70° | 1043.4 | 293.7 | 81.2 | 62.3 | 50.1 | 39.2 | 33.8 | 29.8 | 32.5 | 33.8 | 33.8 |
| 72.5° | 291.0 | 151.6 | 65.0 | 48.7 | 40.6 | 32.5 | 27.1 | 27.1 | 31.1 | 32.5 | 32.5 |
| 75° | 189.5 | 112.3 | 50.1 | 36.5 | 31.1 | 25.7 | 23.0 | 25.7 | 29.8 | 31.1 | 31.1 |
| 77.5° | 157.0 | 92.0 | 40.6 | 29.8 | 25.7 | 24.4 | 21.7 | 23.0 | 27.1 | 28.4 | 28.4 |
| 80° | 143.5 | 65.0 | 32.5 | 27.1 | 23.0 | 21.7 | 20.3 | 18.9 | 24.4 | 25.7 | 25.7 |
| 82.5° | 136.7 | 51.4 | 28.4 | 24.4 | 21.7 | 18.9 | 17.6 | 18.9 | 21.7 | 23.0 | 24.4 |
| 85° | 85.3 | 33.8 | 25.7 | 23.0 | 18.9 | 17.6 | 17.6 | 17.6 | 20.3 | 21.7 | 21.7 |
| 87.5° | 31.1 | 27.1 | 23.0 | 18.9 | 16.2 | 16.2 | 16.2 | 16.2 | 17.6 | 20.3 | 20.3 |
| 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)