

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: P300987

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300987
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-05-LED-E1-SL4-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18557.7 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

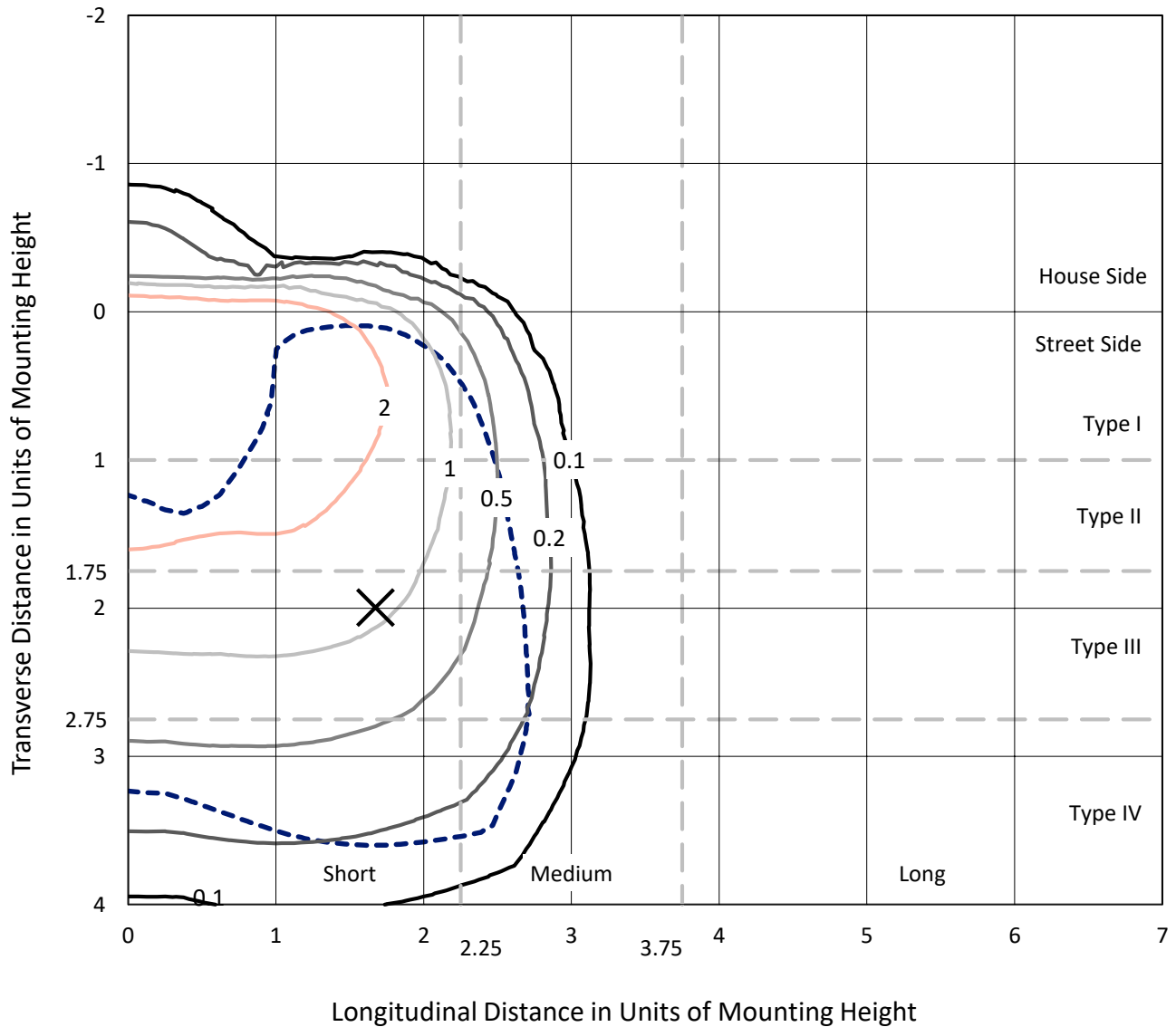
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

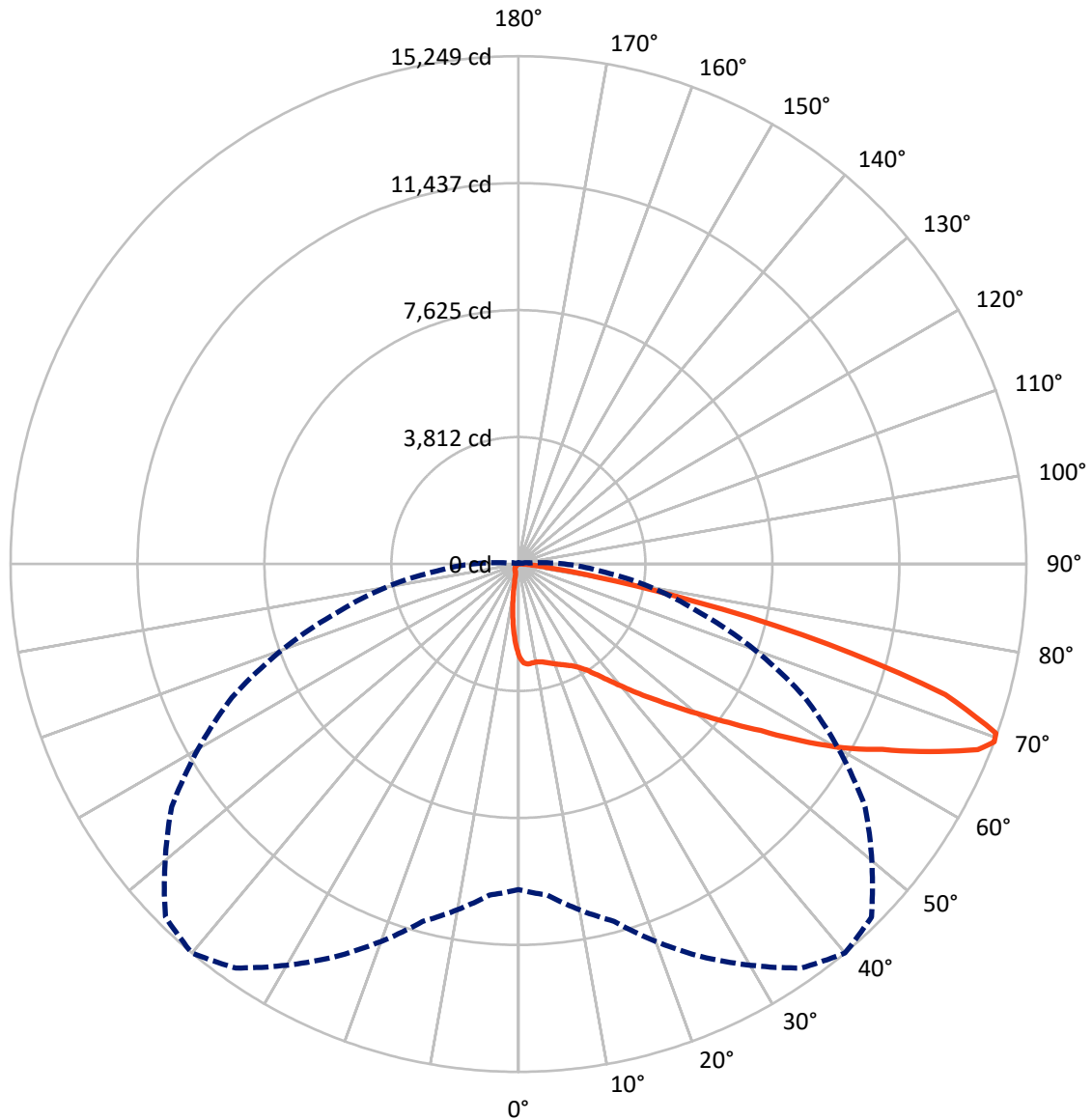
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 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 | 1085.7 | 0.0 | 1085.7 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 17471.9 | 0.0 | 17471.9 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 18557.7 | 0.0 | 18557.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 224.8 | 1.2 |
| 10°-20° | 552.8 | 3.0 |
| 20°-30° | 931.2 | 5.0 |
| 30°-40° | 1524.3 | 8.2 |
| 40°-50° | 2639.4 | 14.2 |
| 50°-60° | 4157.2 | 22.4 |
| 60°-70° | 5429.2 | 29.3 |
| 70°-80° | 2796.3 | 15.1 |
| 80°-90° | 302.5 | 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° | 18557.7 | 100.0 |
| 0°-180° | 18557.7 | 100.0 |

Coefficient of Utilization



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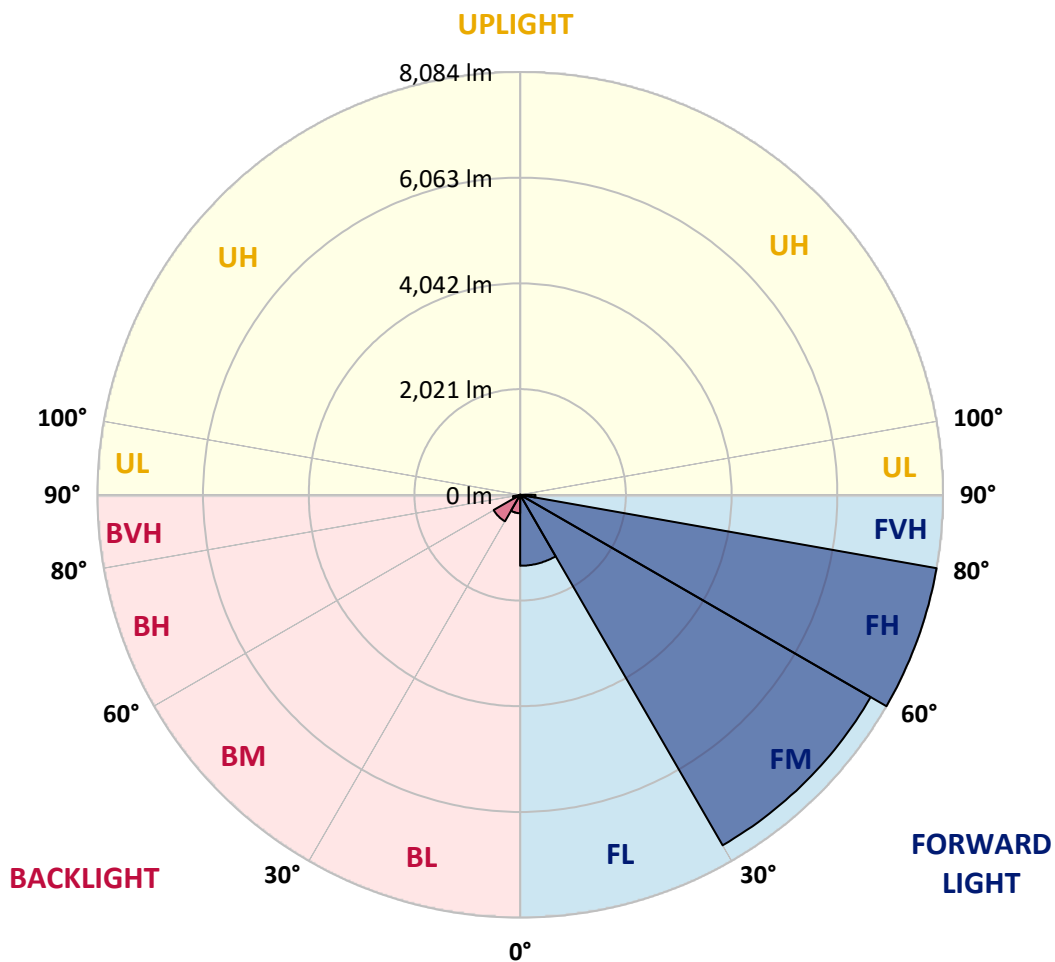
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1357.1 | 7.3 | | | |
| FM | (30°-60°) | 7737.4 | 41.7 | | | |
| FH | (60°-80°) | 8084.5 | 43.6 | | | G4/12000 |
| FVH | (80°-90°) | 293.0 | 1.6 | | | G3/500 |
| BL | (0°-30°) | 351.7 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 583.6 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 141.0 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 9.5 | 0.1 | | | G0/10 |
| 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° | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 |
| 2.5° | 3044.4 | 3027.8 | 3017.8 | 3004.6 | 2988.0 | 2973.7 | 2968.1 | 2927.3 | 2888.6 | 2835.6 | 2774.8 |
| 5° | 3100.7 | 3095.2 | 3077.5 | 3059.8 | 3039.9 | 3017.8 | 3005.7 | 2957.1 | 2901.9 | 2824.5 | 2718.5 |
| 7.5° | 3106.2 | 3099.6 | 3077.5 | 3053.2 | 3025.6 | 2999.1 | 2978.1 | 2929.5 | 2878.7 | 2800.2 | 2671.0 |
| 10° | 3097.4 | 3089.6 | 3073.1 | 3046.6 | 3012.3 | 2986.9 | 2965.9 | 2919.5 | 2876.4 | 2805.8 | 2662.1 |
| 12.5° | 3087.4 | 3079.7 | 3072.0 | 3058.7 | 3028.9 | 3011.2 | 2993.5 | 2949.4 | 2910.7 | 2851.0 | 2694.2 |
| 15° | 3097.4 | 3093.0 | 3101.8 | 3096.3 | 3079.7 | 3064.2 | 3046.6 | 3006.8 | 2971.4 | 2921.7 | 2752.7 |
| 17.5° | 3139.3 | 3139.3 | 3167.0 | 3170.3 | 3154.8 | 3132.7 | 3107.3 | 3067.5 | 3037.7 | 2995.7 | 2822.3 |
| 20° | 3237.7 | 3234.3 | 3269.7 | 3276.3 | 3238.8 | 3204.5 | 3167.0 | 3118.4 | 3095.2 | 3068.7 | 2890.8 |
| 22.5° | 3406.7 | 3391.2 | 3412.2 | 3405.6 | 3331.6 | 3278.5 | 3232.1 | 3172.5 | 3160.3 | 3148.2 | 2967.0 |
| 25° | 3626.5 | 3617.7 | 3632.0 | 3566.8 | 3436.5 | 3364.7 | 3309.5 | 3242.1 | 3242.1 | 3254.2 | 3053.2 |
| 27.5° | 3945.7 | 3912.6 | 3864.0 | 3749.1 | 3553.6 | 3461.9 | 3402.2 | 3330.4 | 3349.2 | 3394.5 | 3167.0 |
| 30° | 4272.7 | 4236.2 | 4124.7 | 3947.9 | 3696.1 | 3600.0 | 3530.4 | 3455.3 | 3499.5 | 3582.3 | 3319.4 |
| 32.5° | 4595.2 | 4554.4 | 4396.4 | 4173.3 | 3900.4 | 3804.3 | 3737.0 | 3654.1 | 3728.1 | 3867.3 | 3542.5 |
| 35° | 4907.9 | 4871.4 | 4689.1 | 4426.2 | 4172.2 | 4092.6 | 4030.8 | 3959.0 | 4054.0 | 4248.4 | 3857.4 |
| 37.5° | 5259.1 | 5219.4 | 4997.3 | 4712.3 | 4502.5 | 4445.0 | 4399.7 | 4327.9 | 4493.6 | 4778.6 | 4295.9 |
| 40° | 5691.0 | 5623.7 | 5324.3 | 5040.4 | 4884.7 | 4857.0 | 4826.1 | 4816.2 | 5073.5 | 5467.9 | 4880.2 |
| 42.5° | 6185.9 | 6075.4 | 5666.7 | 5386.2 | 5304.4 | 5324.3 | 5316.6 | 5360.8 | 5799.3 | 6325.1 | 5591.6 |
| 45° | 6680.8 | 6538.3 | 6047.8 | 5755.1 | 5766.1 | 5835.7 | 5878.8 | 6055.6 | 6708.4 | 7308.2 | 6357.1 |
| 47.5° | 7100.5 | 6960.3 | 6413.5 | 6153.9 | 6286.4 | 6423.4 | 6540.5 | 6875.2 | 7642.9 | 8275.9 | 6952.5 |
| 50° | 7459.5 | 7327.0 | 6801.2 | 6592.4 | 6890.7 | 7111.6 | 7301.6 | 7797.6 | 8648.1 | 9012.6 | 7370.1 |
| 52.5° | 7753.4 | 7665.0 | 7203.3 | 7095.0 | 7581.1 | 7904.7 | 8183.1 | 8777.4 | 9538.4 | 9611.4 | 7694.8 |
| 55° | 8039.5 | 7976.5 | 7635.2 | 7692.6 | 8391.8 | 8832.6 | 9185.0 | 9816.8 | 10305.1 | 10110.6 | 8006.3 |
| 57.5° | 8368.6 | 8311.2 | 8127.8 | 8450.4 | 9457.8 | 10012.3 | 10396.7 | 10738.1 | 10980.0 | 10621.0 | 8300.2 |
| 60° | 8704.5 | 8671.3 | 8675.7 | 9292.1 | 10681.7 | 11214.2 | 11426.3 | 11514.6 | 11642.8 | 11101.5 | 8316.7 |
| 62.5° | 9024.8 | 9087.8 | 9302.1 | 10228.8 | 11853.7 | 12262.5 | 12369.6 | 12456.9 | 12306.6 | 11177.7 | 7683.8 |
| 65° | 9567.2 | 9669.9 | 10181.3 | 11482.6 | 13142.8 | 13580.3 | 13690.7 | 13391.4 | 12411.6 | 10192.4 | 6250.0 |
| 67.5° | 9832.3 | 10020.1 | 10932.5 | 12651.3 | 14393.3 | 14879.3 | 14838.4 | 13452.1 | 11137.9 | 7772.2 | 4010.9 |
| 69° | 9777.0 | 9977.0 | 11105.9 | 13009.2 | 14808.6 | 15249.4 | 14989.8 | 12708.7 | 9488.7 | 5630.3 | 2462.2 |
| 70° | 9558.3 | 9760.5 | 11016.4 | 12995.9 | 14861.6 | 15210.7 | 14709.2 | 11790.8 | 8022.9 | 4116.9 | 1539.8 |
| 72.5° | 7982.0 | 8156.6 | 9780.4 | 11746.6 | 13690.7 | 13406.9 | 12305.5 | 8168.7 | 3909.3 | 1121.2 | 346.9 |
| 75° | 4913.4 | 5010.6 | 7017.7 | 8849.2 | 10340.4 | 9611.4 | 8198.5 | 4063.9 | 1165.4 | 317.0 | 192.2 |
| 77.5° | 2595.9 | 2640.1 | 3841.9 | 5216.0 | 6554.9 | 5423.7 | 4202.0 | 1585.1 | 536.8 | 198.8 | 139.2 |
| 80° | 1534.3 | 1567.5 | 2069.0 | 2384.9 | 2836.7 | 2369.4 | 1680.1 | 973.2 | 384.4 | 124.8 | 123.7 |
| 82.5° | 878.2 | 899.2 | 1500.1 | 1325.6 | 1117.9 | 954.4 | 836.2 | 922.4 | 230.9 | 84.0 | 128.1 |
| 85° | 322.6 | 327.0 | 843.9 | 1008.5 | 665.0 | 395.5 | 415.3 | 764.4 | 61.9 | 53.0 | 100.5 |
| 87.5° | 150.2 | 146.9 | 434.1 | 617.5 | 388.8 | 250.8 | 323.7 | 167.9 | 24.3 | 34.2 | 27.6 |
| 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-05-LED-E1-SL4-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 | 2772.6 |
| 2.5° | 2739.5 | 2698.6 | 2624.6 | 2548.4 | 2471.0 | 2411.4 | 2352.9 | 2306.5 | 2291.0 | 2262.3 | 2264.5 |
| 5° | 2655.5 | 2580.4 | 2425.8 | 2268.9 | 2105.4 | 1970.7 | 1843.6 | 1740.9 | 1691.2 | 1640.4 | 1640.4 |
| 7.5° | 2582.6 | 2473.3 | 2231.3 | 1976.2 | 1712.2 | 1490.1 | 1290.2 | 1140.0 | 1057.1 | 990.8 | 989.7 |
| 10° | 2555.0 | 2407.0 | 2069.0 | 1703.3 | 1335.5 | 1032.8 | 795.3 | 642.9 | 564.5 | 513.7 | 511.4 |
| 12.5° | 2567.2 | 2383.8 | 1944.1 | 1451.5 | 989.7 | 663.9 | 460.6 | 362.3 | 329.2 | 313.7 | 313.7 |
| 15° | 2602.5 | 2377.2 | 1819.3 | 1205.1 | 699.2 | 415.3 | 306.0 | 279.5 | 277.3 | 277.3 | 277.3 |
| 17.5° | 2645.6 | 2379.4 | 1691.2 | 965.4 | 476.1 | 297.1 | 264.0 | 260.7 | 262.9 | 262.9 | 262.9 |
| 20° | 2689.8 | 2380.5 | 1553.1 | 743.4 | 335.8 | 258.5 | 248.5 | 247.4 | 249.6 | 249.6 | 250.8 |
| 22.5° | 2743.9 | 2386.0 | 1415.0 | 555.6 | 277.3 | 244.1 | 236.4 | 236.4 | 237.5 | 237.5 | 236.4 |
| 25° | 2805.8 | 2397.0 | 1271.4 | 412.0 | 253.0 | 234.2 | 227.6 | 226.4 | 227.6 | 226.4 | 225.3 |
| 27.5° | 2883.1 | 2412.5 | 1111.3 | 322.6 | 241.9 | 224.2 | 218.7 | 218.7 | 217.6 | 216.5 | 215.4 |
| 30° | 2980.3 | 2430.2 | 931.2 | 273.9 | 230.9 | 215.4 | 209.9 | 208.8 | 207.7 | 205.5 | 205.5 |
| 32.5° | 3128.3 | 2468.8 | 753.4 | 248.5 | 218.7 | 203.3 | 198.8 | 198.8 | 196.6 | 194.4 | 193.3 |
| 35° | 3355.9 | 2545.1 | 594.3 | 233.1 | 205.5 | 190.0 | 184.5 | 184.5 | 182.3 | 181.2 | 180.1 |
| 37.5° | 3670.7 | 2661.0 | 461.7 | 218.7 | 192.2 | 175.6 | 170.1 | 169.0 | 166.8 | 164.6 | 163.5 |
| 40° | 4089.3 | 2804.6 | 363.4 | 205.5 | 178.9 | 161.3 | 156.9 | 154.6 | 150.2 | 146.9 | 146.9 |
| 42.5° | 4615.1 | 2968.1 | 294.9 | 191.1 | 163.5 | 148.0 | 144.7 | 141.4 | 133.7 | 130.3 | 129.2 |
| 45° | 5165.2 | 3115.0 | 249.6 | 174.5 | 148.0 | 134.8 | 132.6 | 127.0 | 117.1 | 113.8 | 113.8 |
| 47.5° | 5561.8 | 3149.3 | 219.8 | 159.1 | 133.7 | 120.4 | 119.3 | 109.4 | 100.5 | 98.3 | 97.2 |
| 50° | 5809.2 | 3081.9 | 195.5 | 143.6 | 120.4 | 107.1 | 103.8 | 91.7 | 86.2 | 84.0 | 82.8 |
| 52.5° | 5976.0 | 2961.5 | 175.6 | 130.3 | 108.3 | 95.0 | 87.3 | 78.4 | 74.0 | 71.8 | 71.8 |
| 55° | 6109.7 | 2791.4 | 155.8 | 118.2 | 98.3 | 85.1 | 74.0 | 67.4 | 63.0 | 60.8 | 60.8 |
| 57.5° | 6147.2 | 2560.5 | 135.9 | 108.3 | 88.4 | 75.1 | 63.0 | 58.5 | 53.0 | 51.9 | 51.9 |
| 60° | 5874.4 | 2144.1 | 120.4 | 96.1 | 79.5 | 65.2 | 55.2 | 49.7 | 44.2 | 43.1 | 42.0 |
| 62.5° | 5155.3 | 1659.1 | 106.0 | 85.1 | 69.6 | 56.3 | 47.5 | 40.9 | 36.5 | 36.5 | 36.5 |
| 65° | 3932.5 | 1112.4 | 92.8 | 74.0 | 60.8 | 47.5 | 40.9 | 33.1 | 30.9 | 30.9 | 32.0 |
| 67.5° | 2354.0 | 605.3 | 79.5 | 63.0 | 51.9 | 39.8 | 34.2 | 28.7 | 27.6 | 28.7 | 28.7 |
| 69° | 1379.7 | 355.7 | 71.8 | 56.3 | 45.3 | 35.3 | 29.8 | 25.4 | 27.6 | 28.7 | 28.7 |
| 70° | 851.7 | 239.7 | 66.3 | 50.8 | 40.9 | 32.0 | 27.6 | 24.3 | 26.5 | 27.6 | 27.6 |
| 72.5° | 237.5 | 123.7 | 53.0 | 39.8 | 33.1 | 26.5 | 22.1 | 22.1 | 25.4 | 26.5 | 26.5 |
| 75° | 154.6 | 91.7 | 40.9 | 29.8 | 25.4 | 21.0 | 18.8 | 21.0 | 24.3 | 25.4 | 25.4 |
| 77.5° | 128.1 | 75.1 | 33.1 | 24.3 | 21.0 | 19.9 | 17.7 | 18.8 | 22.1 | 23.2 | 23.2 |
| 80° | 117.1 | 53.0 | 26.5 | 22.1 | 18.8 | 17.7 | 16.6 | 15.5 | 19.9 | 21.0 | 21.0 |
| 82.5° | 111.6 | 42.0 | 23.2 | 19.9 | 17.7 | 15.5 | 14.4 | 15.5 | 17.7 | 18.8 | 19.9 |
| 85° | 69.6 | 27.6 | 21.0 | 18.8 | 15.5 | 14.4 | 14.4 | 14.4 | 16.6 | 17.7 | 17.7 |
| 87.5° | 25.4 | 22.1 | 18.8 | 15.5 | 13.3 | 13.3 | 13.3 | 13.3 | 14.4 | 16.6 | 16.6 |
| 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)