

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: P302918

Luminaire Tested: **GLNA-AF-07-LED-E1-T4W-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302918
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191569)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-07-LED-E1-T4W-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(7) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23848.5 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

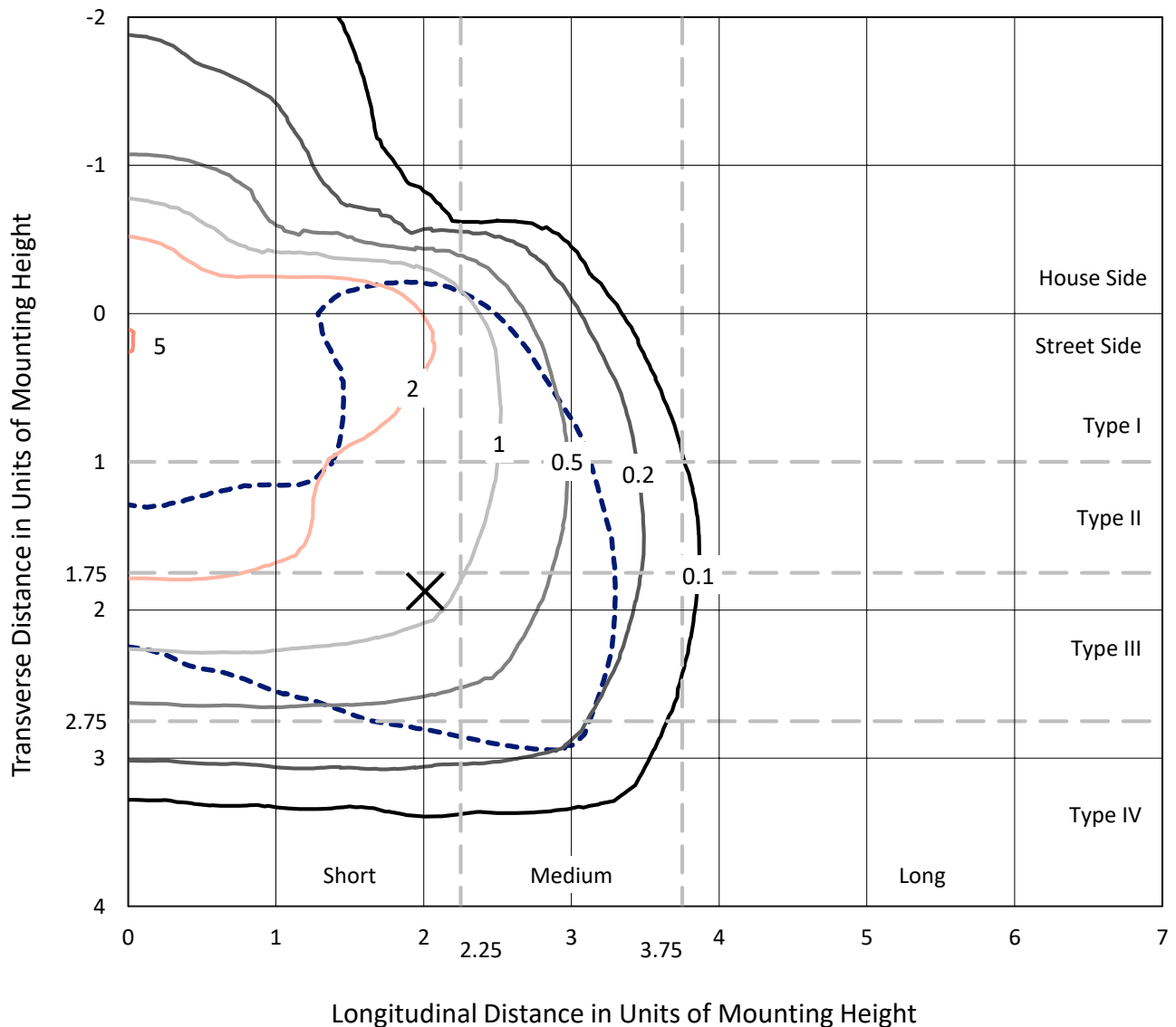
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

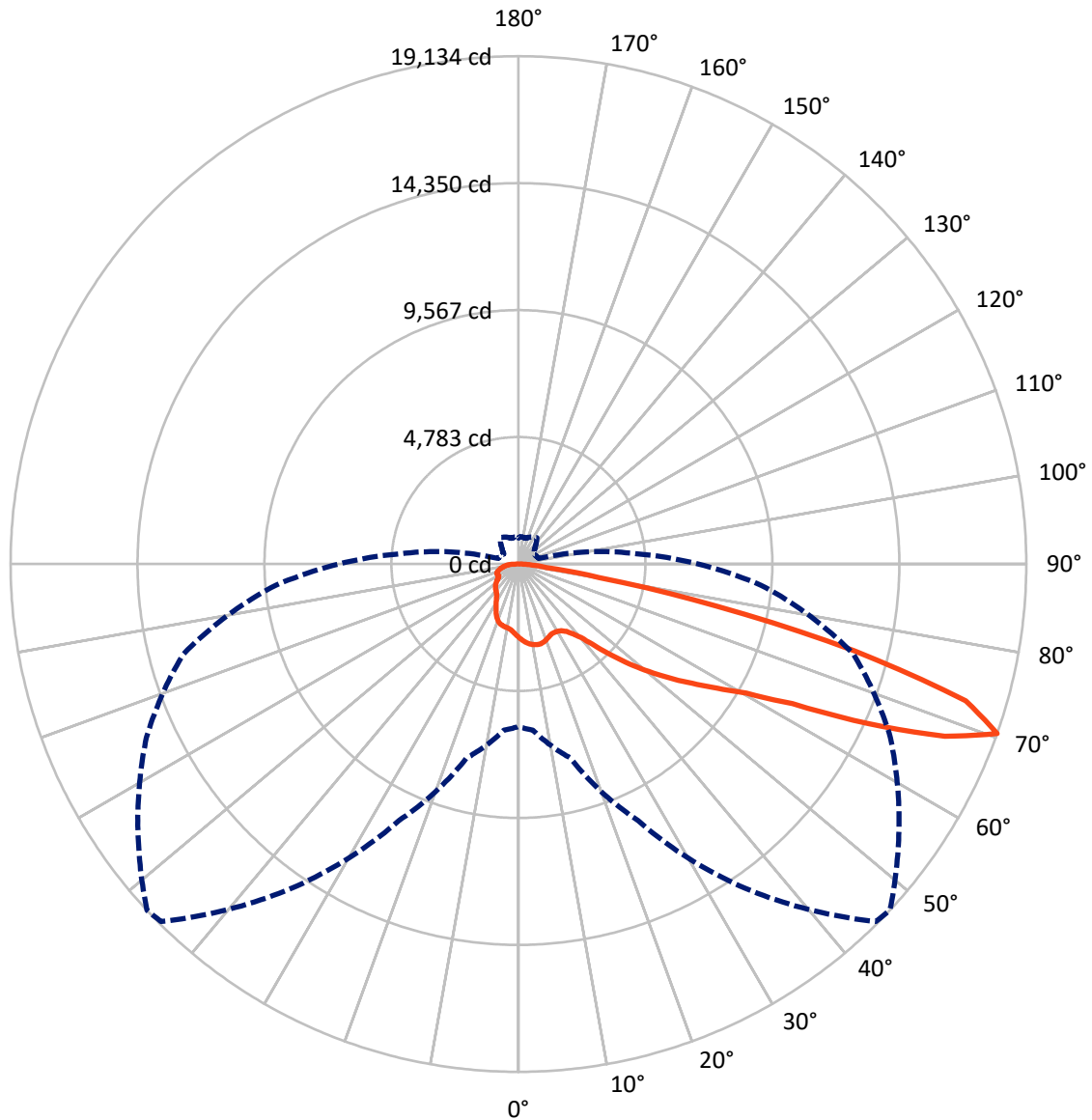
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4975.3 | 0.0 | 4975.3 |
| | % Fixture | 20.9 | 0.0 | 20.9 |
| Street Side | Lumens | 18873.2 | 0.0 | 18873.2 |
| | % Fixture | 79.1 | 0.0 | 79.1 |
| Total | Lumens | 23848.5 | 0.0 | 23848.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 265.1 | 1.1 |
| 10°-20° | 777.9 | 3.3 |
| 20°-30° | 1148.7 | 4.8 |
| 30°-40° | 1669.6 | 7.0 |
| 40°-50° | 3004.7 | 12.6 |
| 50°-60° | 5205.3 | 21.8 |
| 60°-70° | 7429.4 | 31.2 |
| 70°-80° | 3813.9 | 16.0 |
| 80°-90° | 533.9 | 2.2 |
| 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° | 23848.5 | 100.0 |
| 0°-180° | 23848.5 | 100.0 |



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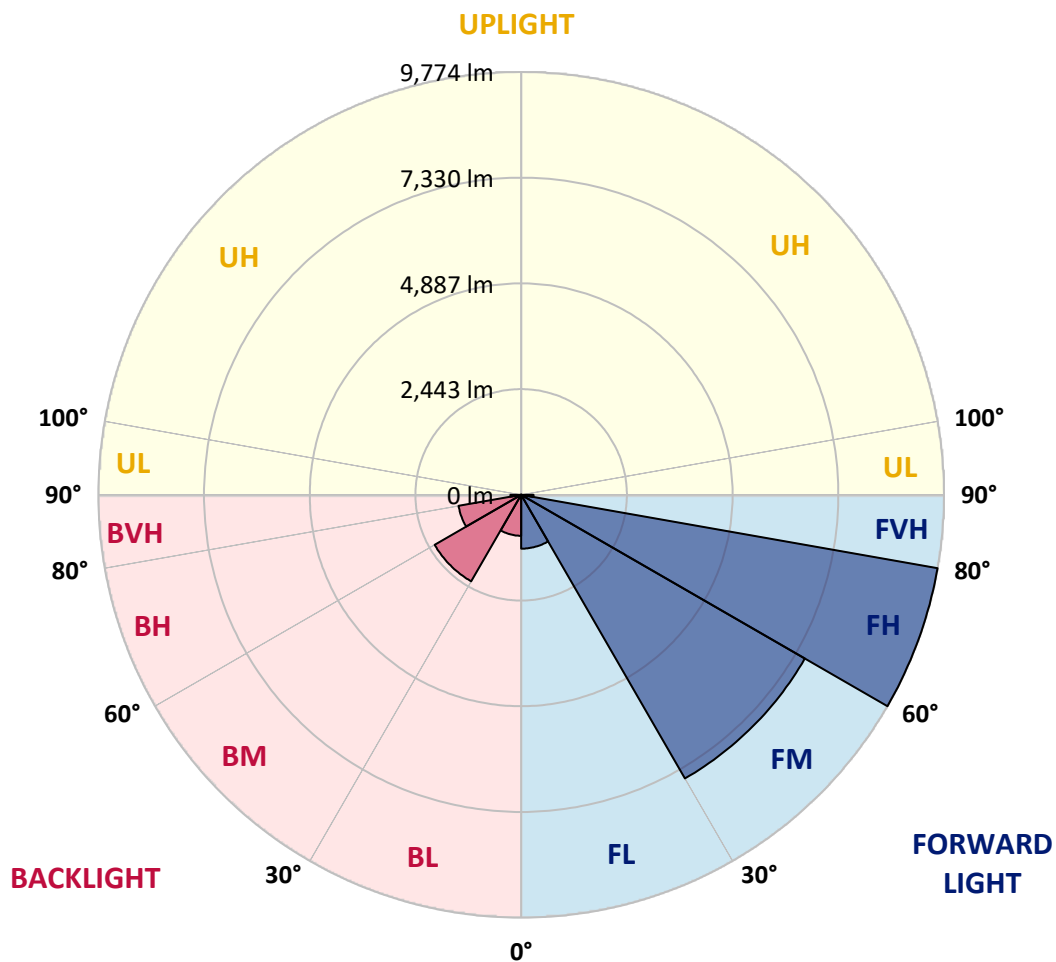
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1244.4 | 5.2 | | | |
| FM | (30°-60°) | 7570.2 | 31.7 | | | |
| FH | (60°-80°) | 9773.7 | 41.0 | | | G4/12000 |
| FVH | (80°-90°) | 284.9 | 1.2 | | | G3/500 |
| BL | (0°-30°) | 947.3 | 4.0 | B2/1000 | | |
| BM | (30°-60°) | 2309.4 | 9.7 | B2/2500 | | |
| BH | (60°-80°) | 1469.6 | 6.2 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 249.0 | 1.0 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 47° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 |
| 2.5° | 2929.7 | 2923.9 | 2921.6 | 2917.0 | 2911.2 | 2881.9 | 2876.2 | 2855.3 | 2826.4 | 2796.0 | 2764.8 |
| 5° | 3122.4 | 3121.2 | 3108.1 | 3085.0 | 3048.0 | 2984.0 | 2969.0 | 2918.2 | 2849.6 | 2783.3 | 2717.4 |
| 7.5° | 3291.5 | 3281.1 | 3256.9 | 3210.2 | 3145.5 | 3058.4 | 3037.6 | 2966.7 | 2872.7 | 2782.1 | 2692.7 |
| 10° | 3415.6 | 3409.8 | 3356.7 | 3292.7 | 3207.9 | 3111.6 | 3087.3 | 3008.3 | 2905.1 | 2790.2 | 2678.9 |
| 12.5° | 3486.5 | 3475.0 | 3413.3 | 3337.0 | 3236.1 | 3142.0 | 3117.4 | 3037.6 | 2921.6 | 2790.2 | 2659.2 |
| 15° | 3481.9 | 3473.8 | 3412.2 | 3328.5 | 3226.8 | 3144.3 | 3122.4 | 3042.2 | 2918.2 | 2778.7 | 2633.8 |
| 17.5° | 3389.0 | 3392.5 | 3340.5 | 3258.0 | 3174.4 | 3111.6 | 3091.9 | 3018.0 | 2894.6 | 2755.5 | 2603.7 |
| 20° | 3226.8 | 3243.0 | 3207.9 | 3135.1 | 3088.5 | 3045.7 | 3033.0 | 2970.2 | 2858.8 | 2722.0 | 2571.0 |
| 22.5° | 3064.2 | 3079.2 | 3065.4 | 3003.7 | 2996.8 | 2971.3 | 2964.4 | 2919.3 | 2827.6 | 2701.2 | 2551.3 |
| 25° | 2944.7 | 2958.6 | 2956.3 | 2902.7 | 2923.9 | 2922.8 | 2917.0 | 2894.6 | 2820.7 | 2701.2 | 2554.8 |
| 27.5° | 2912.4 | 2917.0 | 2912.4 | 2863.4 | 2892.3 | 2915.8 | 2911.2 | 2907.4 | 2841.5 | 2734.7 | 2599.1 |
| 30° | 3023.7 | 3016.8 | 2980.6 | 2881.9 | 2908.9 | 2941.3 | 2936.6 | 2939.0 | 2903.9 | 2823.0 | 2697.7 |
| 32.5° | 3468.0 | 3436.4 | 3322.8 | 3045.7 | 2974.8 | 2992.1 | 2994.5 | 3033.0 | 3038.8 | 2958.6 | 2850.7 |
| 35° | 4132.7 | 4098.1 | 3950.5 | 3484.2 | 3180.2 | 3120.1 | 3120.1 | 3177.9 | 3212.6 | 3153.6 | 3088.5 |
| 37.5° | 4837.1 | 4798.6 | 4720.0 | 4092.3 | 3611.8 | 3341.6 | 3335.9 | 3376.3 | 3426.0 | 3440.3 | 3456.5 |
| 40° | 5637.5 | 5597.0 | 5619.0 | 4774.3 | 4214.0 | 3725.4 | 3643.0 | 3614.1 | 3748.6 | 3838.0 | 3968.2 |
| 42.5° | 6513.7 | 6494.8 | 6502.9 | 5534.2 | 4899.6 | 4300.0 | 4182.8 | 4032.9 | 4195.5 | 4354.3 | 4627.1 |
| 45° | 7324.5 | 7340.7 | 7332.6 | 6347.6 | 5663.3 | 5000.5 | 4876.4 | 4586.3 | 4745.4 | 5017.9 | 5462.5 |
| 47.5° | 8034.7 | 7967.2 | 8071.6 | 7236.2 | 6518.4 | 5785.1 | 5631.7 | 5243.3 | 5404.3 | 5740.7 | 6492.5 |
| 50° | 8896.6 | 8887.4 | 8734.4 | 8422.3 | 7551.8 | 6572.7 | 6371.9 | 5921.9 | 6172.3 | 6640.1 | 7791.1 |
| 52.5° | 9803.0 | 9634.6 | 9494.3 | 9344.4 | 8648.5 | 7380.4 | 7134.1 | 6598.1 | 7075.2 | 7663.2 | 9373.7 |
| 55° | 9988.3 | 9913.2 | 10087.0 | 10339.0 | 9705.5 | 8219.2 | 7932.5 | 7446.2 | 8091.7 | 8833.1 | 11198.6 |
| 57.5° | 10385.2 | 10384.0 | 10744.0 | 11192.9 | 10793.7 | 9109.0 | 8820.0 | 8470.9 | 9234.2 | 10172.9 | 13136.1 |
| 60° | 10653.4 | 10728.5 | 11397.1 | 12268.3 | 11862.2 | 10137.0 | 9871.2 | 9653.1 | 10533.9 | 11670.7 | 14941.4 |
| 62.5° | 10793.7 | 10895.8 | 11807.9 | 12704.5 | 13372.7 | 11848.3 | 11582.8 | 11268.4 | 12253.3 | 13313.8 | 15997.2 |
| 65° | 10210.3 | 10410.6 | 11743.9 | 13081.8 | 14695.6 | 14622.4 | 14502.9 | 13950.7 | 14403.1 | 14612.0 | 15615.8 |
| 67.5° | 8594.9 | 8800.3 | 10352.8 | 12730.0 | 15640.0 | 17298.1 | 17323.6 | 16380.3 | 15726.0 | 14723.3 | 13129.2 |
| 70° | 6123.8 | 6284.8 | 7569.6 | 10673.1 | 14920.6 | 19046.4 | 19133.5 | 17499.7 | 15462.4 | 13057.1 | 9172.9 |
| 72.5° | 2907.4 | 3006.0 | 4222.1 | 6946.5 | 11840.2 | 17451.1 | 17619.5 | 16070.5 | 13147.7 | 9666.9 | 5004.0 |
| 75° | 1068.5 | 1098.6 | 1426.9 | 2955.1 | 6867.5 | 12869.5 | 13067.9 | 11520.0 | 8715.5 | 4812.9 | 1906.3 |
| 77.5° | 640.4 | 660.1 | 800.7 | 1247.3 | 2701.2 | 7356.1 | 7649.3 | 6265.2 | 3809.1 | 1791.4 | 937.5 |
| 80° | 447.8 | 461.6 | 574.2 | 776.1 | 1276.2 | 2803.3 | 3064.2 | 2557.1 | 1517.5 | 1133.7 | 682.0 |
| 82.5° | 302.9 | 309.8 | 403.8 | 524.4 | 848.1 | 1001.1 | 1080.1 | 1137.1 | 1023.5 | 843.5 | 432.7 |
| 85° | 198.4 | 205.4 | 274.0 | 345.6 | 539.5 | 517.5 | 529.1 | 669.3 | 747.2 | 573.0 | 240.1 |
| 87.5° | 113.7 | 118.3 | 164.9 | 184.6 | 264.7 | 219.3 | 221.6 | 352.6 | 478.2 | 386.5 | 146.0 |
| 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-07-LED-E1-T4W-7027-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 | 2767.1 |
| 2.5° | 2756.7 | 2741.7 | 2708.1 | 2687.0 | 2667.3 | 2662.7 | 2654.6 | 2653.4 | 2652.3 | 2652.3 | 2648.8 |
| 5° | 2695.0 | 2669.6 | 2617.6 | 2588.3 | 2564.0 | 2561.7 | 2560.6 | 2566.3 | 2568.7 | 2571.0 | 2567.5 |
| 7.5° | 2655.7 | 2621.1 | 2555.9 | 2514.3 | 2485.4 | 2478.1 | 2490.0 | 2516.6 | 2534.0 | 2540.9 | 2537.4 |
| 10° | 2631.5 | 2588.3 | 2513.2 | 2467.7 | 2443.4 | 2440.0 | 2455.0 | 2486.6 | 2522.4 | 2536.3 | 2535.1 |
| 12.5° | 2603.7 | 2554.8 | 2474.6 | 2427.2 | 2413.4 | 2420.3 | 2440.0 | 2468.9 | 2506.2 | 2528.2 | 2529.3 |
| 15° | 2575.6 | 2518.9 | 2436.5 | 2394.9 | 2389.1 | 2398.3 | 2416.8 | 2438.8 | 2467.7 | 2490.0 | 2492.4 |
| 17.5° | 2542.1 | 2482.7 | 2400.6 | 2357.5 | 2352.9 | 2357.5 | 2358.6 | 2370.2 | 2389.1 | 2409.9 | 2415.7 |
| 20° | 2506.2 | 2445.7 | 2359.8 | 2317.0 | 2296.2 | 2277.7 | 2256.5 | 2258.8 | 2264.6 | 2285.8 | 2290.4 |
| 22.5° | 2480.4 | 2420.3 | 2328.6 | 2269.2 | 2213.8 | 2157.9 | 2116.3 | 2110.5 | 2112.8 | 2130.1 | 2135.9 |
| 25° | 2482.7 | 2419.1 | 2320.5 | 2218.4 | 2096.6 | 2007.2 | 1951.3 | 1942.1 | 1940.9 | 1953.7 | 1962.1 |
| 27.5° | 2528.2 | 2464.2 | 2350.6 | 2166.0 | 1969.1 | 1836.5 | 1777.6 | 1770.6 | 1761.4 | 1764.8 | 1774.1 |
| 30° | 2629.2 | 2569.8 | 2423.8 | 2112.8 | 1830.7 | 1669.7 | 1608.0 | 1601.1 | 1588.4 | 1582.6 | 1589.5 |
| 32.5° | 2793.7 | 2745.1 | 2530.5 | 2061.6 | 1692.8 | 1526.7 | 1464.3 | 1449.3 | 1441.2 | 1434.2 | 1440.0 |
| 35° | 3067.7 | 3046.9 | 2673.1 | 2006.1 | 1571.0 | 1416.5 | 1359.9 | 1336.7 | 1325.2 | 1337.9 | 1347.1 |
| 37.5° | 3496.9 | 3508.5 | 2860.0 | 1919.0 | 1477.0 | 1343.7 | 1295.9 | 1269.3 | 1252.0 | 1262.4 | 1272.8 |
| 40° | 4105.0 | 4113.1 | 3066.5 | 1796.1 | 1395.7 | 1300.5 | 1249.6 | 1225.4 | 1200.7 | 1182.2 | 1181.1 |
| 42.5° | 4903.0 | 4820.9 | 3269.6 | 1662.7 | 1301.7 | 1273.9 | 1217.3 | 1186.8 | 1149.8 | 1098.6 | 1088.2 |
| 45° | 5849.8 | 5561.2 | 3423.7 | 1509.4 | 1196.1 | 1241.6 | 1181.1 | 1139.4 | 1081.3 | 1025.8 | 1020.0 |
| 47.5° | 6940.7 | 6355.7 | 3499.2 | 1350.6 | 1097.4 | 1193.8 | 1137.1 | 1070.9 | 997.6 | 969.9 | 966.4 |
| 50° | 8272.4 | 7299.0 | 3535.1 | 1196.1 | 1011.9 | 1131.3 | 1073.2 | 995.3 | 934.1 | 928.3 | 924.8 |
| 52.5° | 9789.1 | 8433.9 | 3547.0 | 1069.7 | 941.0 | 1050.0 | 1021.1 | 945.6 | 896.7 | 901.7 | 901.7 |
| 55° | 11376.3 | 9605.7 | 3389.0 | 978.0 | 875.9 | 966.4 | 986.1 | 926.0 | 885.1 | 904.0 | 910.9 |
| 57.5° | 12833.2 | 10644.2 | 2892.3 | 907.5 | 814.6 | 902.8 | 973.4 | 944.5 | 916.7 | 991.9 | 996.5 |
| 60° | 13951.9 | 11257.6 | 2160.2 | 843.5 | 769.1 | 880.5 | 1007.3 | 1015.4 | 1022.3 | 1201.9 | 1226.5 |
| 62.5° | 14186.2 | 11053.8 | 1485.1 | 793.8 | 748.3 | 899.4 | 1068.5 | 1069.7 | 1061.6 | 1186.8 | 1201.9 |
| 65° | 13110.7 | 9762.1 | 1080.1 | 765.7 | 731.0 | 932.9 | 1120.9 | 1096.3 | 1043.1 | 1138.3 | 1110.2 |
| 67.5° | 10411.8 | 7354.9 | 899.4 | 744.9 | 705.6 | 930.6 | 1176.4 | 1120.9 | 1032.7 | 1115.2 | 1069.7 |
| 70° | 6758.4 | 4447.2 | 800.7 | 727.5 | 675.1 | 886.3 | 1208.8 | 1118.6 | 1002.3 | 1037.3 | 983.8 |
| 72.5° | 3297.3 | 1988.7 | 734.5 | 702.1 | 643.9 | 825.0 | 1207.6 | 1097.4 | 971.0 | 968.7 | 939.8 |
| 75° | 1290.1 | 910.9 | 674.0 | 663.5 | 590.7 | 755.3 | 1175.3 | 1067.4 | 934.1 | 896.7 | 886.3 |
| 77.5° | 755.3 | 649.7 | 597.7 | 606.9 | 526.8 | 685.5 | 1127.9 | 1015.4 | 882.8 | 838.9 | 827.3 |
| 80° | 549.9 | 486.3 | 509.4 | 524.4 | 450.1 | 616.2 | 1063.9 | 951.4 | 826.2 | 848.1 | 831.9 |
| 82.5° | 352.6 | 313.3 | 413.1 | 428.1 | 374.9 | 545.3 | 994.2 | 884.0 | 746.0 | 677.4 | 661.2 |
| 85° | 180.0 | 198.4 | 307.5 | 326.0 | 289.0 | 447.8 | 909.8 | 794.9 | 655.5 | 563.7 | 573.0 |
| 87.5° | 101.0 | 135.6 | 196.1 | 219.3 | 204.2 | 344.5 | 737.9 | 655.5 | 534.8 | 435.0 | 383.0 |
| 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)