

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: P299242

Luminaire Tested: **GLNA-AF-05-LED-E1-SL2-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24286)
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-SL2-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Narrow OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19133 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

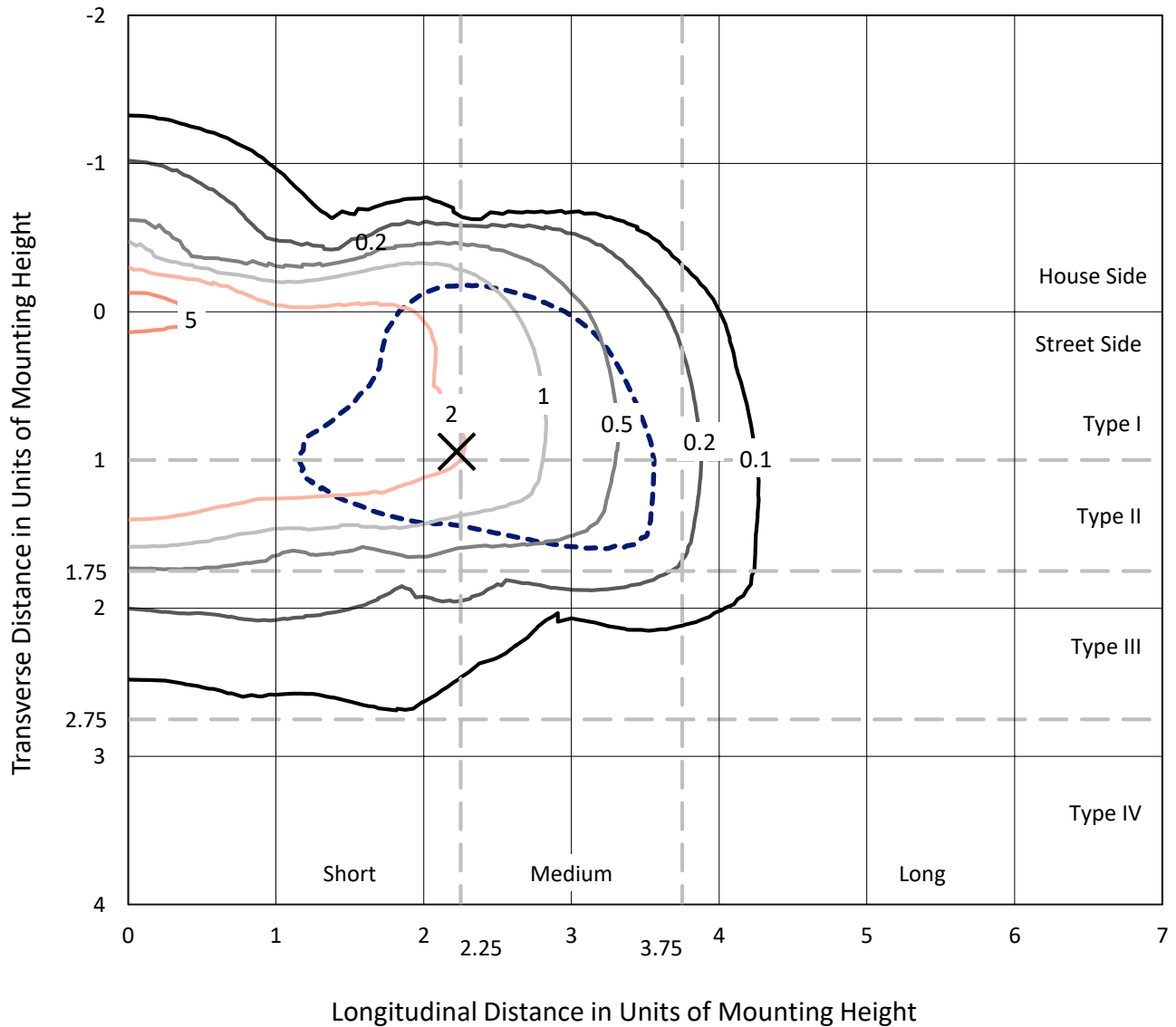
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

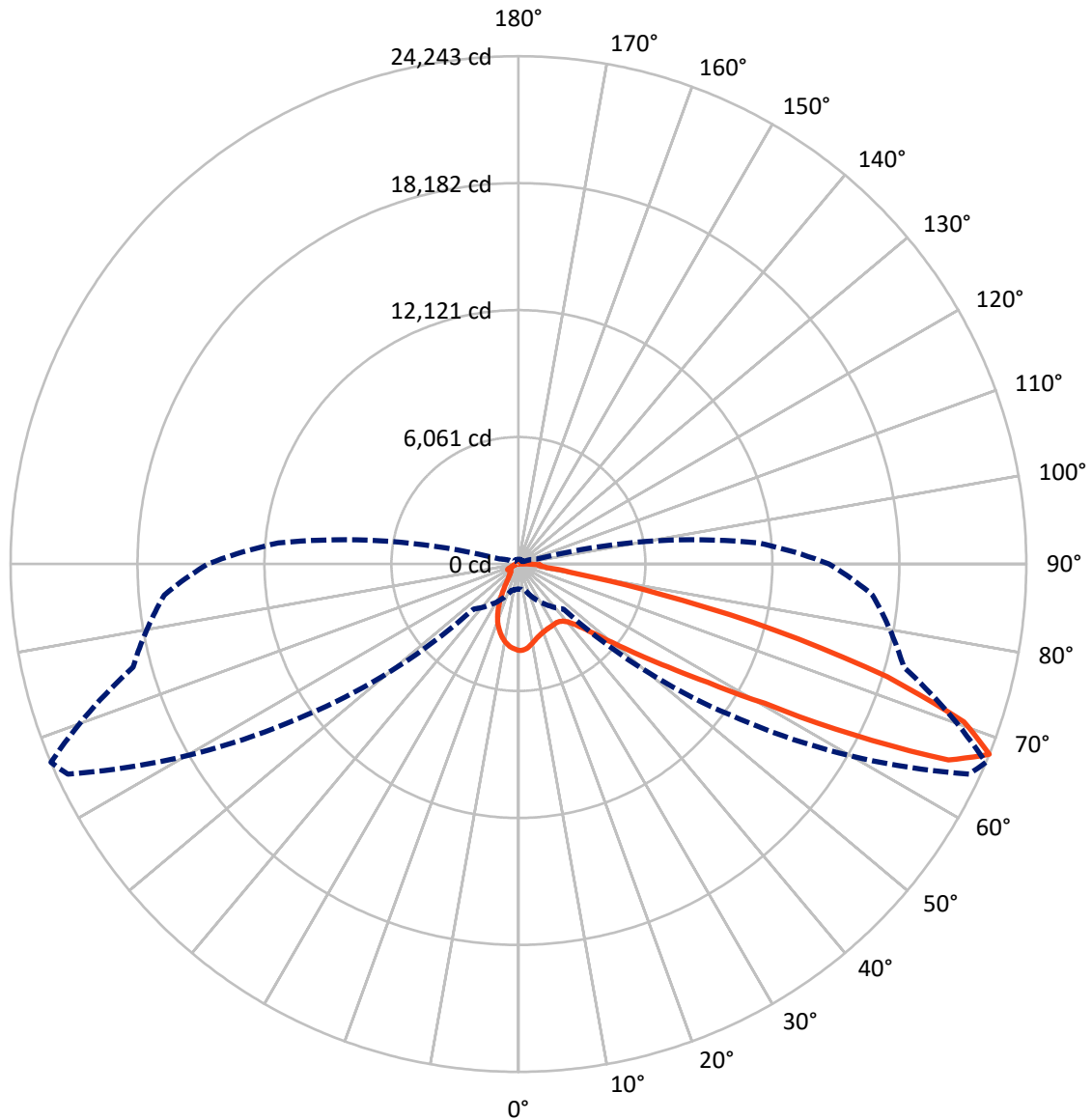
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3170.1 | 0.0 | 3170.1 |
| | % Fixture | 16.6 | 0.0 | 16.6 |
| Street Side | Lumens | 15962.9 | 0.0 | 15962.9 |
| | % Fixture | 83.4 | 0.0 | 83.4 |
| Total | Lumens | 19133.0 | 0.0 | 19133.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 352.1 | 1.8 |
| 10°-20° | 814.7 | 4.3 |
| 20°-30° | 1104.3 | 5.8 |
| 30°-40° | 1569.9 | 8.2 |
| 40°-50° | 2626.5 | 13.7 |
| 50°-60° | 4155.1 | 21.7 |
| 60°-70° | 5293.2 | 27.7 |
| 70°-80° | 2772.6 | 14.5 |
| 80°-90° | 444.7 | 2.3 |
| 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° | 19133.0 | 100.0 |
| 0°-180° | 19133.0 | 100.0 |



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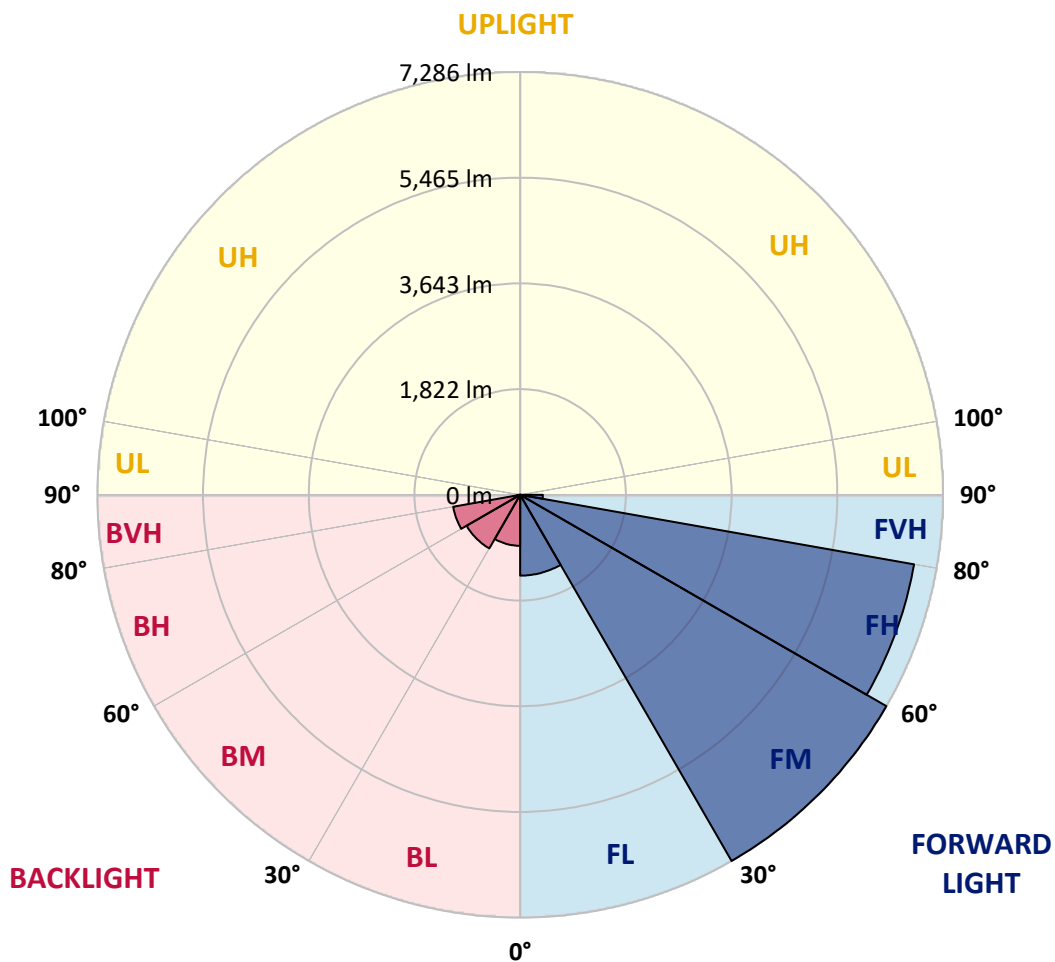
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1392.4 | 7.3 | | | |
| FM | (30°-60°) | 7286.2 | 38.1 | | | |
| FH | (60°-80°) | 6893.2 | 36.0 | | | G3/7500 |
| FVH | (80°-90°) | 391.0 | 2.0 | | | G3/500 |
| BL | (0°-30°) | 878.7 | 4.6 | B2/1000 | | |
| BM | (30°-60°) | 1065.3 | 5.6 | B2/2500 | | |
| BH | (60°-80°) | 1172.5 | 6.1 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 53.7 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0° | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 |
| 2.5° | 3957.1 | 3963.7 | 3984.5 | 3997.7 | 4057.1 | 4082.6 | 4100.5 | 4118.4 | 4121.3 | 4129.8 | 4121.3 |
| 5° | 3542.0 | 3556.1 | 3594.8 | 3638.2 | 3753.3 | 3843.9 | 3939.2 | 4038.2 | 4056.2 | 4120.3 | 4138.3 |
| 7.5° | 3220.2 | 3216.4 | 3248.5 | 3300.4 | 3418.4 | 3543.8 | 3710.8 | 3908.0 | 3946.7 | 4091.1 | 4160.9 |
| 10° | 2985.3 | 2982.5 | 3016.4 | 3070.2 | 3182.5 | 3301.4 | 3490.1 | 3759.9 | 3814.6 | 4044.9 | 4182.6 |
| 12.5° | 2811.7 | 2812.6 | 2846.6 | 2906.0 | 3020.2 | 3140.0 | 3331.6 | 3616.5 | 3686.3 | 3991.1 | 4205.2 |
| 15° | 2696.6 | 2704.1 | 2731.5 | 2794.7 | 2906.0 | 3025.9 | 3213.6 | 3508.9 | 3587.2 | 3948.6 | 4230.7 |
| 17.5° | 2657.9 | 2670.1 | 2679.6 | 2725.8 | 2821.1 | 2940.9 | 3124.9 | 3429.7 | 3512.7 | 3919.4 | 4253.4 |
| 20° | 2693.7 | 2707.9 | 2690.0 | 2706.0 | 2766.4 | 2872.1 | 3055.1 | 3367.4 | 3452.3 | 3886.3 | 4256.2 |
| 22.5° | 2847.5 | 2860.7 | 2807.9 | 2761.7 | 2757.9 | 2822.1 | 2997.5 | 3318.3 | 3406.1 | 3861.8 | 4257.1 |
| 25° | 3118.3 | 3126.8 | 3038.1 | 2930.6 | 2825.8 | 2804.1 | 2957.0 | 3284.4 | 3377.8 | 3840.1 | 4239.2 |
| 27.5° | 3450.4 | 3457.0 | 3355.1 | 3196.6 | 2986.2 | 2846.6 | 2942.8 | 3264.6 | 3361.7 | 3821.2 | 4209.0 |
| 30° | 3854.3 | 3885.4 | 3748.6 | 3548.6 | 3241.9 | 2972.1 | 2971.1 | 3254.2 | 3343.8 | 3789.2 | 4149.6 |
| 32.5° | 4267.5 | 4280.7 | 4186.4 | 3983.5 | 3586.3 | 3192.9 | 3050.4 | 3261.7 | 3339.1 | 3750.5 | 4074.1 |
| 35° | 4686.4 | 4703.4 | 4642.1 | 4478.9 | 4057.1 | 3516.5 | 3205.1 | 3306.1 | 3368.4 | 3737.3 | 4021.3 |
| 37.5° | 5229.0 | 5251.6 | 5166.7 | 4978.0 | 4629.8 | 3955.2 | 3462.7 | 3417.4 | 3458.0 | 3775.0 | 4005.2 |
| 40° | 6086.6 | 6076.2 | 5828.1 | 5546.9 | 5256.3 | 4516.6 | 3830.7 | 3606.1 | 3629.7 | 3896.7 | 4054.3 |
| 42.5° | 7084.9 | 7059.4 | 6632.0 | 6190.4 | 5945.1 | 5195.9 | 4317.5 | 3933.5 | 3928.8 | 4136.4 | 4226.9 |
| 45° | 7881.2 | 7860.4 | 7475.5 | 6931.1 | 6734.8 | 5969.6 | 4946.9 | 4421.3 | 4386.4 | 4516.6 | 4545.9 |
| 47.5° | 8312.4 | 8313.3 | 8091.6 | 7647.2 | 7642.5 | 6952.8 | 5755.4 | 5127.1 | 5066.7 | 5128.0 | 5096.9 |
| 50° | 8161.4 | 8181.2 | 8157.6 | 8016.1 | 8470.9 | 8241.6 | 6811.2 | 6111.1 | 5989.4 | 6049.8 | 5930.0 |
| 52.5° | 7431.1 | 7456.6 | 7596.2 | 7813.3 | 8819.0 | 9799.4 | 8362.4 | 7333.9 | 7192.4 | 7170.7 | 7037.7 |
| 55° | 6136.6 | 6167.8 | 6452.7 | 7042.4 | 8529.4 | 10845.7 | 10809.9 | 8892.6 | 8667.1 | 8462.4 | 8405.8 |
| 57.5° | 4229.8 | 4281.7 | 4740.2 | 5615.8 | 7592.5 | 11161.8 | 13724.4 | 11114.6 | 10656.1 | 9940.9 | 9954.1 |
| 60° | 2384.3 | 2444.6 | 2985.3 | 3780.7 | 5701.7 | 10818.3 | 15941.6 | 14480.1 | 13512.1 | 11672.2 | 11770.4 |
| 62.5° | 1516.2 | 1581.3 | 1991.8 | 2626.7 | 3421.2 | 8969.1 | 16850.2 | 19159.0 | 17929.6 | 13806.5 | 13902.7 |
| 65° | 1227.5 | 1255.8 | 1449.2 | 2168.2 | 2484.3 | 5403.5 | 16160.5 | 23013.3 | 22554.7 | 16515.3 | 16066.2 |
| 67.5° | 1198.3 | 1207.7 | 1307.7 | 1820.0 | 2382.4 | 3037.2 | 12890.3 | 23734.1 | 24242.7 | 19044.9 | 16967.2 |
| 70° | 1184.1 | 1217.1 | 1473.8 | 1737.0 | 2281.4 | 2561.6 | 7746.3 | 21758.4 | 22561.3 | 19706.3 | 15768.0 |
| 72.5° | 574.6 | 572.7 | 741.6 | 1571.0 | 2570.1 | 2656.9 | 3979.7 | 17605.1 | 18410.8 | 17072.9 | 12957.3 |
| 75° | 463.3 | 423.6 | 404.8 | 575.5 | 2471.1 | 2743.7 | 2536.2 | 12113.8 | 12696.9 | 11446.7 | 7965.2 |
| 77.5° | 439.7 | 392.5 | 359.5 | 360.4 | 1044.5 | 2909.8 | 2148.4 | 6704.6 | 6874.5 | 5170.5 | 2182.4 |
| 80° | 364.2 | 320.8 | 297.2 | 334.9 | 505.7 | 2771.1 | 2322.9 | 3034.3 | 2784.3 | 1270.0 | 726.5 |
| 82.5° | 252.9 | 230.2 | 223.6 | 281.2 | 404.8 | 1974.8 | 2701.3 | 1630.4 | 1367.2 | 635.9 | 448.2 |
| 85° | 161.3 | 137.8 | 152.8 | 204.7 | 315.1 | 911.4 | 2782.4 | 1270.9 | 1010.5 | 403.8 | 252.9 |
| 87.5° | 74.5 | 60.4 | 75.5 | 113.2 | 205.7 | 314.2 | 2647.5 | 1427.5 | 1040.7 | 213.2 | 159.5 |
| 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-SL2-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 | 4126.9 |
| 2.5° | 4128.8 | 4110.9 | 4096.7 | 4070.3 | 4041.1 | 4012.8 | 3987.3 | 3955.2 | 3945.8 | 3937.3 | 3950.5 |
| 5° | 4142.0 | 4124.1 | 4072.2 | 3991.1 | 3901.4 | 3817.5 | 3733.5 | 3661.8 | 3617.4 | 3592.9 | 3607.1 |
| 7.5° | 4161.8 | 4136.4 | 4028.8 | 3879.7 | 3718.4 | 3571.2 | 3419.3 | 3297.6 | 3208.0 | 3165.5 | 3177.8 |
| 10° | 4179.8 | 4130.7 | 3955.2 | 3731.6 | 3495.7 | 3276.8 | 3037.2 | 2839.0 | 2691.8 | 2614.5 | 2633.4 |
| 12.5° | 4187.3 | 4109.0 | 3852.4 | 3546.7 | 3223.0 | 2902.3 | 2549.4 | 2253.1 | 2041.8 | 1964.4 | 1948.4 |
| 15° | 4194.9 | 4084.5 | 3739.2 | 3336.3 | 2893.8 | 2439.9 | 1945.5 | 1590.8 | 1415.3 | 1376.6 | 1368.1 |
| 17.5° | 4196.8 | 4042.0 | 3610.8 | 3107.9 | 2507.9 | 1889.9 | 1330.4 | 1104.9 | 1105.8 | 1168.1 | 1175.6 |
| 20° | 4176.9 | 3978.8 | 3455.2 | 2823.9 | 2045.5 | 1306.8 | 913.3 | 874.6 | 1017.1 | 1172.8 | 1191.7 |
| 22.5° | 4131.7 | 3894.8 | 3278.7 | 2492.8 | 1516.2 | 860.5 | 706.7 | 749.2 | 933.1 | 1123.7 | 1145.4 |
| 25° | 4074.1 | 3792.9 | 3070.2 | 2108.8 | 1003.9 | 615.2 | 592.5 | 644.4 | 769.0 | 896.3 | 908.6 |
| 27.5° | 3995.8 | 3672.2 | 2836.2 | 1669.1 | 652.0 | 506.7 | 521.8 | 556.7 | 607.6 | 664.2 | 669.9 |
| 30° | 3894.8 | 3527.8 | 2586.2 | 1217.1 | 492.5 | 455.7 | 477.4 | 496.3 | 518.0 | 550.1 | 552.9 |
| 32.5° | 3778.8 | 3389.1 | 2329.5 | 840.7 | 436.8 | 429.3 | 446.3 | 455.7 | 472.7 | 492.5 | 494.4 |
| 35° | 3681.6 | 3257.0 | 2063.5 | 594.4 | 413.3 | 409.5 | 420.8 | 424.6 | 440.6 | 462.3 | 464.2 |
| 37.5° | 3625.9 | 3149.5 | 1788.9 | 479.3 | 397.2 | 391.6 | 398.2 | 398.2 | 420.8 | 452.9 | 457.6 |
| 40° | 3629.7 | 3090.0 | 1514.3 | 433.1 | 384.0 | 376.5 | 377.4 | 377.4 | 406.7 | 441.6 | 444.4 |
| 42.5° | 3732.5 | 3105.1 | 1270.9 | 415.1 | 373.6 | 365.1 | 360.4 | 363.3 | 387.8 | 410.4 | 412.3 |
| 45° | 3974.1 | 3211.7 | 1042.6 | 403.8 | 363.3 | 360.4 | 350.0 | 349.1 | 358.5 | 368.9 | 368.9 |
| 47.5° | 4370.4 | 3422.1 | 887.8 | 396.3 | 354.8 | 353.8 | 341.6 | 329.3 | 328.3 | 332.1 | 332.1 |
| 50° | 5014.8 | 3784.4 | 784.1 | 387.8 | 349.1 | 341.6 | 327.4 | 308.5 | 301.9 | 304.8 | 304.8 |
| 52.5° | 5980.9 | 4430.7 | 744.4 | 376.5 | 336.8 | 324.6 | 308.5 | 289.7 | 284.0 | 284.9 | 284.9 |
| 55° | 7248.1 | 5423.3 | 738.8 | 363.3 | 323.6 | 303.8 | 290.6 | 276.5 | 269.8 | 271.7 | 271.7 |
| 57.5° | 8796.4 | 6796.1 | 839.7 | 342.5 | 305.7 | 283.1 | 275.5 | 266.1 | 261.4 | 264.2 | 263.2 |
| 60° | 10678.7 | 8592.6 | 1245.4 | 320.8 | 287.8 | 264.2 | 264.2 | 256.6 | 252.9 | 255.7 | 254.7 |
| 62.5° | 12846.9 | 10656.1 | 1751.2 | 304.8 | 268.9 | 249.1 | 252.9 | 249.1 | 245.3 | 247.2 | 246.3 |
| 65° | 14769.8 | 12000.6 | 1639.8 | 292.5 | 250.0 | 234.9 | 241.5 | 239.7 | 236.8 | 238.7 | 237.8 |
| 67.5° | 14825.5 | 11502.4 | 920.9 | 279.3 | 232.1 | 220.8 | 230.2 | 229.3 | 227.4 | 229.3 | 228.3 |
| 70° | 13230.9 | 9712.5 | 518.9 | 254.7 | 213.2 | 203.8 | 217.0 | 216.1 | 214.2 | 218.0 | 217.0 |
| 72.5° | 10600.4 | 7048.1 | 379.3 | 224.6 | 194.4 | 185.9 | 201.0 | 200.0 | 200.0 | 205.7 | 202.9 |
| 75° | 6099.8 | 3626.9 | 302.9 | 192.5 | 174.6 | 167.9 | 181.2 | 182.1 | 184.0 | 191.5 | 185.9 |
| 77.5° | 1738.9 | 1130.3 | 247.2 | 163.2 | 150.0 | 147.2 | 160.4 | 162.3 | 163.2 | 171.7 | 164.2 |
| 80° | 646.3 | 520.8 | 203.8 | 136.8 | 122.7 | 123.6 | 135.9 | 138.7 | 139.6 | 148.1 | 138.7 |
| 82.5° | 412.3 | 343.4 | 165.1 | 105.7 | 96.2 | 95.3 | 110.4 | 114.2 | 114.2 | 115.1 | 109.4 |
| 85° | 240.6 | 205.7 | 124.5 | 76.4 | 67.9 | 65.1 | 82.1 | 88.7 | 85.9 | 84.0 | 80.2 |
| 87.5° | 161.3 | 141.5 | 76.4 | 42.5 | 36.8 | 34.9 | 48.1 | 52.8 | 50.9 | 48.1 | 45.3 |
| 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)