

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: P301689

Luminaire Tested: **GLNA-AF-02-LED-E1-T2R-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-02-LED-E1-T2R-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8328.3 lumens  
Efficiency: N/A  
Efficacy: 126.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

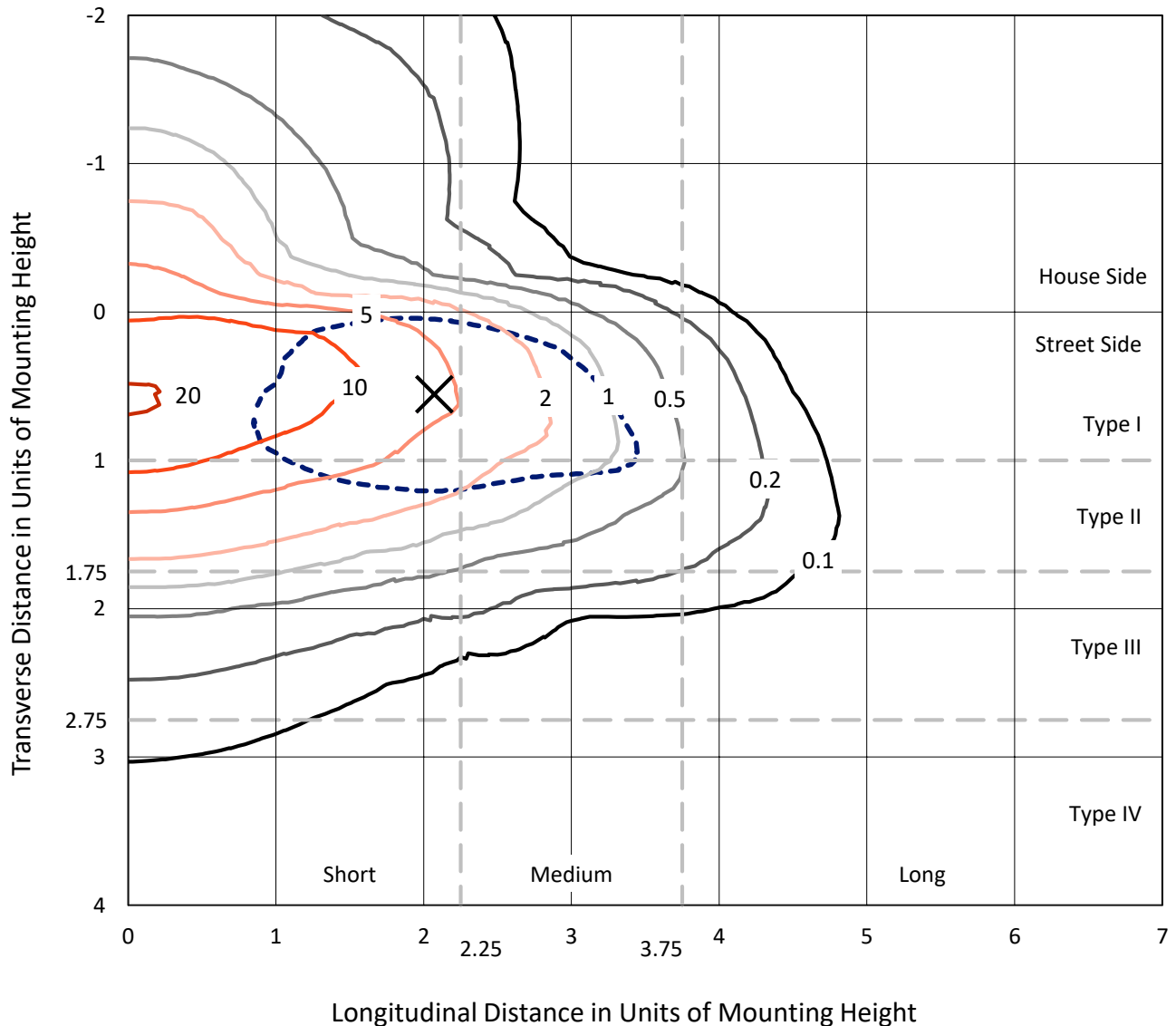
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P301689  
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### Iso-Footcandle Lines of Horizontal Illumination

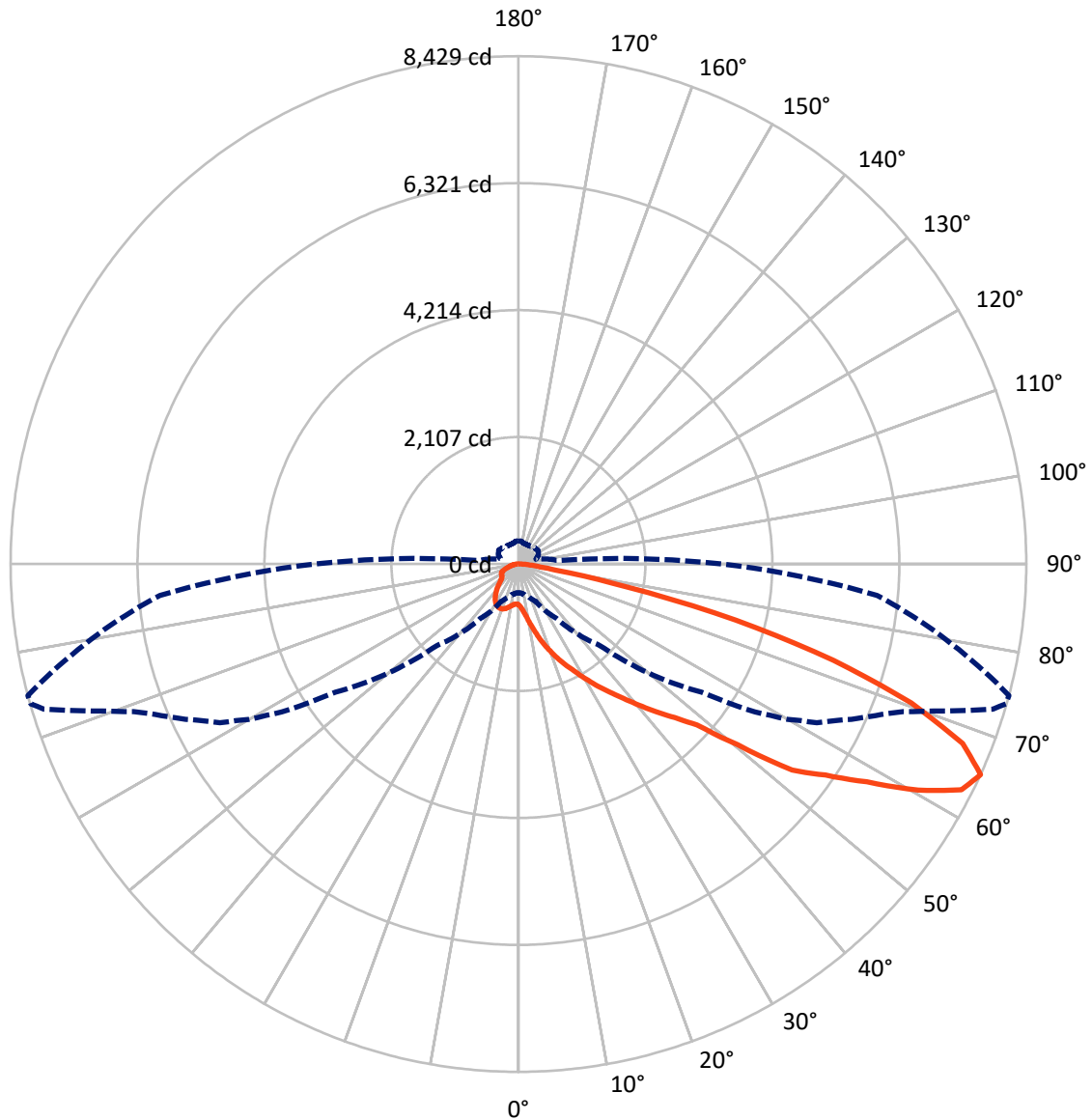
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 21 fc  
 Type II - Short - Full Cutoff

REPORT NUMBER: P301689  
CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P301689

CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1284.0	0.0	1284.0
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	7044.2	0.0	7044.2
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	8328.3	0.0	8328.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.7	1.0
10°-20°	326.9	3.9
20°-30°	670.6	8.1
30°-40°	1128.3	13.5
40°-50°	1559.0	18.7
50°-60°	1946.1	23.4
60°-70°	1751.3	21.0
70°-80°	734.1	8.8
80°-90°	128.3	1.5
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°	8328.3	100.0
0°-180°	8328.3	100.0

**Coefficient of Utilization**



REPORT NUMBER: P301689

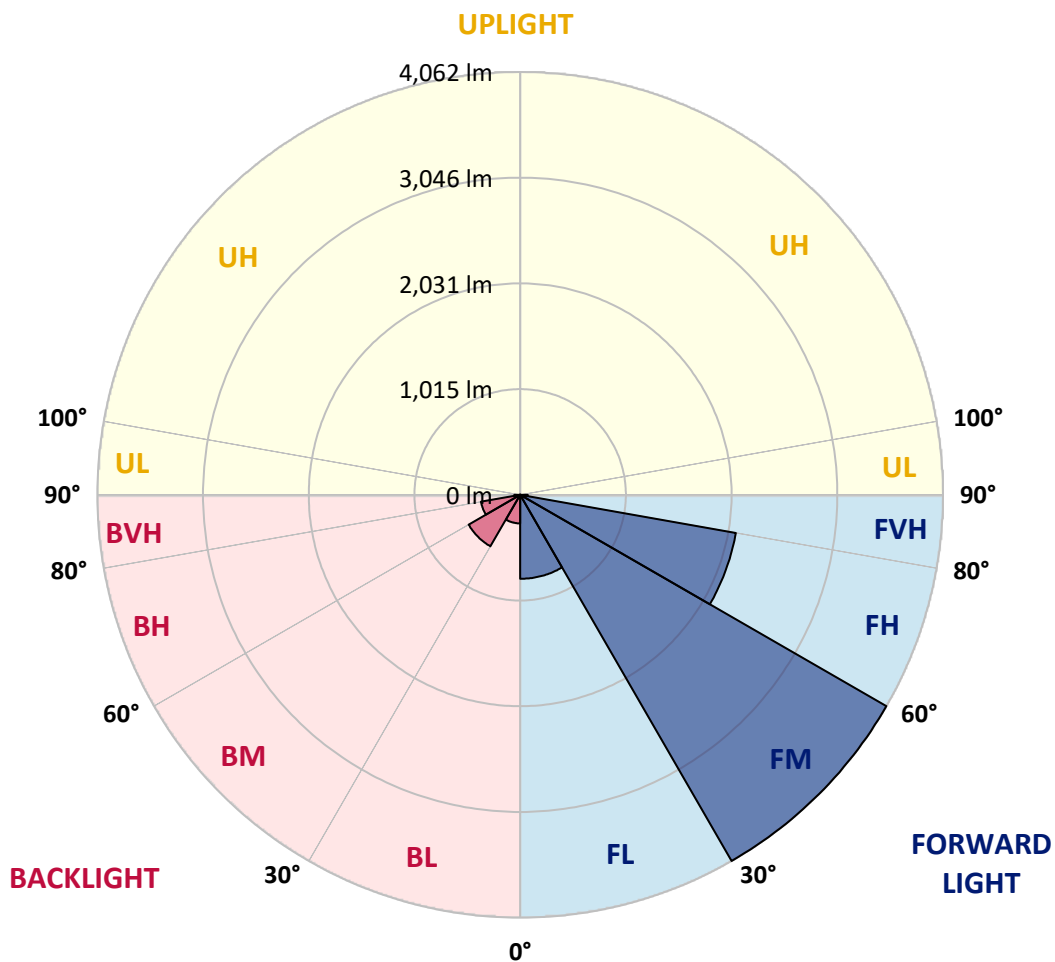
CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	806.6	9.7			
FM (30°-60°)	4061.9	48.8			
FH (60°-80°)	2103.7	25.3			G2/5000
FVH (80°-90°)	72.1	0.9			G1/100
BL (0°-30°)	274.6	3.3	B1/500		
BM (30°-60°)	571.5	6.9	B1/1000		
BH (60°-80°)	381.7	4.6	B1/500		G1/500
BVH (80°-90°)	56.2	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





REPORT NUMBER: P301689

CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8
2.5°	859.4	849.9	852.2	836.4	817.2	791.9	763.9	763.6	763.9	761.1	751.0
5°	1191.6	1180.2	1175.9	1140.4	1088.3	1014.3	933.9	925.2	921.6	912.6	891.6
7.5°	1434.1	1427.8	1421.0	1394.2	1347.0	1264.2	1156.2	1137.7	1119.9	1115.6	1092.0
10°	1590.6	1588.9	1574.8	1567.7	1538.2	1466.4	1361.1	1343.4	1324.1	1317.4	1292.5
12.5°	1714.3	1713.9	1707.3	1709.3	1683.5	1631.6	1540.9	1524.7	1510.6	1490.0	1472.4
15°	1799.9	1800.2	1810.2	1821.2	1817.2	1782.1	1697.0	1689.9	1677.7	1663.5	1642.6
17.5°	1870.1	1872.0	1882.2	1902.3	1924.1	1921.3	1853.9	1848.0	1837.3	1818.0	1807.0
20°	2028.5	2036.0	2016.3	2016.3	2018.7	2029.3	1996.9	1992.3	1977.3	1967.0	1958.3
22.5°	2296.2	2304.8	2260.3	2215.0	2170.5	2138.1	2105.8	2111.6	2101.5	2094.3	2089.2
25°	2643.8	2650.6	2578.5	2502.0	2411.2	2293.0	2213.0	2209.4	2203.9	2199.6	2197.2
27.5°	2971.0	2973.8	2905.6	2793.6	2688.4	2518.5	2321.8	2317.5	2310.8	2302.5	2295.4
30°	3251.0	3250.1	3180.0	3073.1	2960.4	2772.3	2487.0	2473.6	2453.8	2431.4	2414.0
32.5°	3493.4	3492.2	3415.3	3304.5	3186.3	3023.9	2713.3	2685.7	2654.9	2611.1	2584.8
35°	3684.1	3683.4	3610.8	3495.4	3359.7	3260.8	2972.7	2938.7	2899.7	2841.0	2800.4
37.5°	3756.2	3756.2	3715.7	3636.9	3517.0	3449.2	3260.8	3219.7	3178.0	3111.3	3065.6
40°	3714.0	3714.9	3723.5	3709.0	3650.7	3598.6	3529.6	3505.2	3469.3	3409.4	3361.7
42.5°	3572.5	3576.9	3634.5	3705.0	3734.1	3726.0	3768.1	3757.1	3731.8	3685.7	3647.8
45°	3393.2	3406.6	3469.6	3602.9	3757.4	3835.9	3967.9	3969.1	3964.4	3939.6	3910.4
47.5°	3146.9	3165.7	3249.0	3429.1	3703.0	3942.8	4170.9	4181.5	4191.5	4175.3	4161.9
50°	2819.7	2842.2	2966.7	3205.6	3592.3	4053.5	4554.5	4602.6	4647.5	4642.0	4651.0
52.5°	2469.2	2495.7	2648.2	2914.3	3401.9	4079.1	4799.7	4878.1	4956.6	5020.8	5089.0
55°	2153.0	2138.9	2291.5	2571.7	3088.9	3963.6	5020.1	5114.7	5202.2	5281.0	5362.3
57.5°	1724.6	1747.9	1900.8	2177.9	2674.6	3637.6	5171.8	5310.2	5435.9	5566.4	5681.5
60°	1260.6	1283.9	1449.8	1731.3	2224.8	3143.3	5055.9	5265.7	5467.0	5666.9	5823.0
62.5°	761.1	778.6	924.7	1192.9	1715.6	2557.2	4539.5	4814.6	5111.1	5350.0	5589.2
65°	473.8	483.7	537.7	685.1	1101.8	1909.1	3709.0	4008.9	4328.2	4631.4	4880.1
67.5°	387.9	391.4	401.3	432.8	605.0	1244.9	2760.5	3026.2	3314.3	3607.6	3884.4
70°	348.8	346.5	346.5	348.5	387.9	669.3	1807.4	1980.4	2220.5	2475.6	2728.6
72.5°	314.9	312.6	308.2	302.4	316.5	408.3	934.2	1064.7	1237.8	1464.4	1706.8
75°	283.0	279.8	274.8	267.3	277.1	308.2	448.6	503.4	587.7	708.4	843.6
77.5°	249.9	245.9	241.2	235.7	248.4	239.7	262.9	282.6	314.9	353.6	404.5
80°	212.5	209.0	207.3	204.6	219.6	182.5	185.7	197.9	216.8	237.7	261.4
82.5°	166.4	166.4	172.6	173.9	190.4	131.3	138.8	149.4	159.3	170.3	181.4
85°	109.6	110.4	131.7	140.0	150.1	88.3	104.1	107.6	115.5	121.8	126.5
87.5°	34.3	37.1	80.5	89.1	86.3	50.0	63.8	65.5	71.0	75.3	79.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P301689

CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

**CANDELA DISTRIBUTION (continued):**

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8
2.5°	751.0	746.2	741.8	741.5	738.3	734.0	735.5	728.9	729.2	725.7	721.7
5°	883.0	879.8	864.0	859.7	847.9	840.4	839.3	823.5	821.5	812.5	802.5
7.5°	1073.0	1062.7	1040.6	1030.0	1009.9	994.9	987.9	967.0	956.7	933.0	922.4
10°	1272.0	1259.1	1231.8	1216.8	1197.6	1173.5	1160.5	1130.2	1118.3	1096.6	1070.7
12.5°	1456.6	1443.6	1415.5	1404.1	1378.5	1352.8	1338.7	1304.4	1289.0	1254.3	1233.8
15°	1627.2	1614.2	1589.8	1577.9	1552.3	1531.4	1512.5	1478.7	1460.5	1428.2	1401.4
17.5°	1792.8	1779.0	1757.7	1747.0	1722.2	1701.0	1680.5	1648.5	1630.0	1597.7	1573.6
20°	1946.5	1936.2	1920.9	1906.7	1881.9	1862.6	1838.1	1810.5	1783.8	1760.0	1737.2
22.5°	2080.5	2076.6	2060.1	2053.8	2032.5	2015.9	1994.6	1967.5	1948.1	1918.1	1896.8
25°	2196.1	2194.9	2187.0	2185.0	2170.0	2154.2	2149.5	2127.1	2109.3	2082.9	2060.9
27.5°	2295.4	2296.5	2294.7	2300.1	2296.2	2289.0	2289.5	2282.0	2271.7	2249.6	2230.3
30°	2405.7	2399.4	2403.1	2410.9	2413.2	2414.0	2427.0	2431.4	2430.7	2416.0	2406.6
32.5°	2561.9	2546.9	2533.1	2531.9	2539.8	2542.9	2565.0	2576.5	2586.3	2589.8	2591.4
35°	2760.9	2730.9	2702.2	2686.9	2673.4	2676.9	2692.7	2711.3	2732.9	2747.9	2765.7
37.5°	3011.6	2975.0	2924.1	2887.9	2878.8	2859.1	2869.3	2883.9	2905.2	2928.5	2959.2
40°	3315.5	3260.0	3202.8	3154.7	3128.8	3092.4	3092.0	3089.2	3102.3	3124.0	3167.4
42.5°	3608.1	3558.7	3498.1	3447.7	3413.7	3365.2	3355.4	3329.8	3335.6	3354.6	3396.8
45°	3882.0	3841.4	3804.3	3746.1	3717.2	3664.8	3648.2	3617.9	3601.0	3609.6	3651.8
47.5°	4147.3	4121.3	4082.6	4044.8	4022.7	3975.9	3954.6	3932.8	3911.2	3910.4	3954.6
50°	4664.5	4650.7	4605.0	4565.6	4576.2	4518.7	4522.2	4463.8	4490.3	4493.4	4586.0
52.5°	5150.5	5198.7	5232.6	5273.9	5300.7	5305.9	5323.6	5350.0	5381.9	5444.9	5530.9
55°	5428.8	5489.1	5524.2	5555.8	5607.8	5618.8	5648.4	5683.5	5711.4	5782.4	5855.4
57.5°	5759.6	5871.5	5925.9	5975.9	6046.1	6072.9	6122.2	6160.5	6196.7	6280.7	6369.0
60°	5963.3	6099.8	6210.5	6289.7	6377.6	6440.8	6515.3	6575.1	6660.3	6760.8	6892.5
62.5°	5801.4	6001.6	6148.7	6284.7	6404.0	6524.7	6631.5	6743.5	6872.7	7024.9	7229.2
65°	5156.1	5359.8	5611.7	5752.8	5910.9	6097.0	6259.4	6440.8	6616.9	6838.5	7140.4
67.5°	4150.9	4387.7	4670.8	4813.1	4994.8	5202.5	5384.7	5606.2	5812.0	6080.4	6453.7
70°	2991.9	3298.2	3536.3	3684.9	3897.0	4111.0	4286.9	4544.6	4714.9	4990.0	5376.1
72.5°	1894.5	2136.1	2427.8	2615.1	2803.4	3020.4	3200.1	3422.4	3581.2	3831.9	4181.5
75°	1018.6	1196.7	1452.9	1630.8	1832.6	2017.9	2228.3	2377.3	2494.8	2693.2	2977.0
77.5°	477.3	585.7	715.4	852.2	989.1	1131.7	1270.5	1391.1	1441.6	1555.1	1722.6
80°	289.8	324.9	362.6	404.8	462.0	508.1	569.2	613.3	616.5	652.4	703.6
82.5°	193.5	206.5	218.0	228.6	243.2	254.7	267.7	283.0	289.3	297.6	314.2
85°	132.0	138.3	140.7	147.5	145.8	149.8	154.9	160.1	162.8	162.4	169.9
87.5°	81.2	84.3	85.9	87.5	86.3	84.8	87.1	89.9	90.6	88.3	89.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





REPORT NUMBER: P301689

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**CANDELA DISTRIBUTION (continued):**

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8	676.8
2.5°	722.6	719.0	715.4	713.1	712.3	691.4	682.3	676.5	663.9	653.6	645.3
5°	797.0	789.6	783.7	776.6	772.6	719.7	700.5	687.1	665.0	652.0	640.1
7.5°	916.9	896.0	883.8	870.0	858.2	762.8	730.9	709.9	679.2	661.9	648.4
10°	1052.9	1031.3	1011.9	990.6	972.1	820.0	773.4	741.0	700.5	678.0	660.2
12.5°	1204.7	1183.4	1159.0	1131.7	1108.1	892.5	827.8	781.7	726.1	696.1	671.3
15°	1384.1	1346.5	1316.9	1285.5	1257.9	979.2	891.3	827.4	753.3	712.7	679.6
17.5°	1550.7	1511.3	1471.2	1443.6	1411.7	1076.5	955.1	873.9	775.8	723.4	681.2
20°	1713.6	1670.6	1635.9	1598.9	1565.3	1177.4	1023.3	914.9	790.4	723.7	671.3
22.5°	1857.1	1830.2	1791.6	1751.4	1717.5	1278.4	1087.2	949.6	795.9	714.7	653.9
25°	2020.2	1991.9	1944.5	1910.6	1872.9	1381.3	1149.8	976.4	792.7	697.8	627.1
27.5°	2194.4	2163.0	2114.5	2079.0	2033.3	1488.0	1207.4	995.7	780.9	670.2	591.2
30°	2376.2	2347.4	2299.7	2263.9	2217.7	1601.2	1271.7	1008.7	757.3	631.9	549.5
32.5°	2571.3	2547.2	2500.0	2462.6	2413.2	1723.8	1331.6	1012.7	721.4	586.6	505.4
35°	2756.6	2740.1	2700.2	2665.1	2613.9	1839.7	1395.1	1010.7	678.8	536.9	465.2
37.5°	2965.2	2955.2	2935.6	2891.0	2828.4	1996.9	1471.2	1002.4	626.8	487.6	434.4
40°	3187.5	3188.3	3167.0	3136.6	3078.2	2187.8	1561.8	986.2	570.0	444.2	406.4
42.5°	3422.7	3435.0	3424.7	3403.1	3347.1	2380.1	1670.2	966.6	514.9	402.0	378.9
45°	3692.4	3707.4	3723.2	3691.2	3636.9	2634.0	1812.9	941.0	455.2	366.9	359.9
47.5°	4003.5	4027.1	4041.2	4041.7	3987.3	2948.6	2044.6	925.6	402.5	343.3	350.8
50°	4659.7	4667.3	4700.7	4759.1	4717.4	3676.6	2449.5	916.1	366.6	328.7	344.1
52.5°	5605.4	5687.8	5745.8	5741.8	5685.0	4139.0	2672.6	867.2	345.3	323.2	341.0
55°	5990.6	6093.5	6200.7	6229.0	6184.9	4533.6	2883.5	818.3	335.0	327.2	342.2
57.5°	6503.8	6677.2	6824.3	6886.2	6822.3	5038.6	3161.0	792.7	331.9	337.8	349.6
60°	7103.3	7317.8	7511.0	7622.1	7622.1	5618.8	3448.8	782.1	327.5	353.6	362.3
62.5°	7488.5	7803.4	8095.2	8258.0	8253.2	6022.8	3576.5	745.8	317.7	364.6	379.6
65°	7490.0	7864.6	8236.2	8419.2	8428.6	5973.3	3365.7	658.7	299.6	366.2	397.0
67.5°	6865.7	7264.9	7698.2	7902.8	7950.1	5498.6	2913.5	541.7	270.0	350.5	403.3
70°	5798.6	6188.4	6630.7	6831.8	6915.8	4687.3	2346.6	417.5	232.2	315.7	390.2
72.5°	4568.3	4950.6	5258.5	5405.5	5471.0	3582.8	1708.8	315.4	190.4	266.0	355.1
75°	3234.4	3521.3	3684.9	3717.7	3727.8	2159.8	1038.3	234.6	156.9	207.0	299.9
77.5°	1825.5	1948.5	1935.1	1949.7	1828.3	833.8	452.2	167.9	129.3	157.3	232.6
80°	712.7	734.8	690.3	676.5	620.5	310.2	199.5	117.1	103.3	119.0	162.8
82.5°	314.2	324.4	314.9	317.4	303.6	160.1	119.4	84.8	78.8	87.1	108.0
85°	173.1	176.2	175.4	180.6	173.1	63.8	56.7	52.0	55.2	59.2	69.3
87.5°	84.3	85.1	82.4	86.8	84.0	32.3	27.9	29.6	32.3	33.1	33.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P301689

CATALOG NUMBER: GLNA-AF-02-LED-E1-T2R-600

**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
0°	676.8	676.8	676.8	676.8	676.8	676.8
2.5°	639.4	636.3	636.6	635.8	634.3	634.3
5°	633.9	630.8	630.8	629.9	628.0	628.3
7.5°	639.4	634.3	632.3	629.5	626.8	626.8
10°	645.7	636.6	631.1	626.4	622.8	622.8
12.5°	650.4	636.3	627.1	620.8	617.3	617.3
15°	652.0	633.4	620.8	613.3	610.2	609.8
17.5°	646.9	622.8	607.5	598.8	594.9	593.7
20°	631.1	603.5	585.0	575.1	569.6	567.6
22.5°	607.5	575.9	554.3	544.0	536.9	535.7
25°	574.4	540.5	519.2	509.3	505.4	504.1
27.5°	535.7	504.1	486.0	479.7	476.2	475.8
30°	499.1	472.2	458.9	454.1	449.7	449.0
32.5°	464.7	447.8	442.7	435.9	425.8	424.6
35°	440.3	438.7	435.2	420.2	407.6	404.0
37.5°	425.3	439.9	421.8	392.2	383.2	382.4
40°	416.6	427.8	396.5	386.4	387.1	386.4
42.5°	397.0	408.3	397.4	392.7	395.7	396.5
45°	377.2	389.9	403.3	400.2	407.6	407.6
47.5°	366.2	385.1	402.8	402.8	414.0	417.8
50°	353.6	381.2	396.5	402.0	410.8	407.6
52.5°	352.8	374.4	387.5	397.4	401.3	397.7
55°	354.0	368.9	378.4	389.5	394.2	394.5
57.5°	355.6	365.8	372.1	377.2	391.4	391.4
60°	359.5	363.1	366.6	369.4	387.9	388.2
62.5°	365.8	360.3	359.5	362.3	385.9	384.4
65°	375.7	356.3	350.5	353.1	383.9	379.2
67.5°	389.0	350.5	339.0	341.0	382.4	372.1
70°	401.3	341.0	324.9	322.9	367.4	349.3
72.5°	402.5	330.0	305.1	299.2	319.4	301.9
75°	382.7	322.4	283.5	266.0	263.7	261.4
77.5°	345.0	318.1	258.2	231.0	226.3	227.8
80°	288.6	301.9	227.8	195.5	221.1	218.4
82.5°	215.6	266.5	193.5	173.1	172.6	152.6
85°	119.9	207.8	157.6	129.7	90.3	87.5
87.5°	33.6	115.5	110.4	73.3	50.0	52.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)