

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: P301639

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301639
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-04-LED-E1-T2R-7030-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19478.2 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

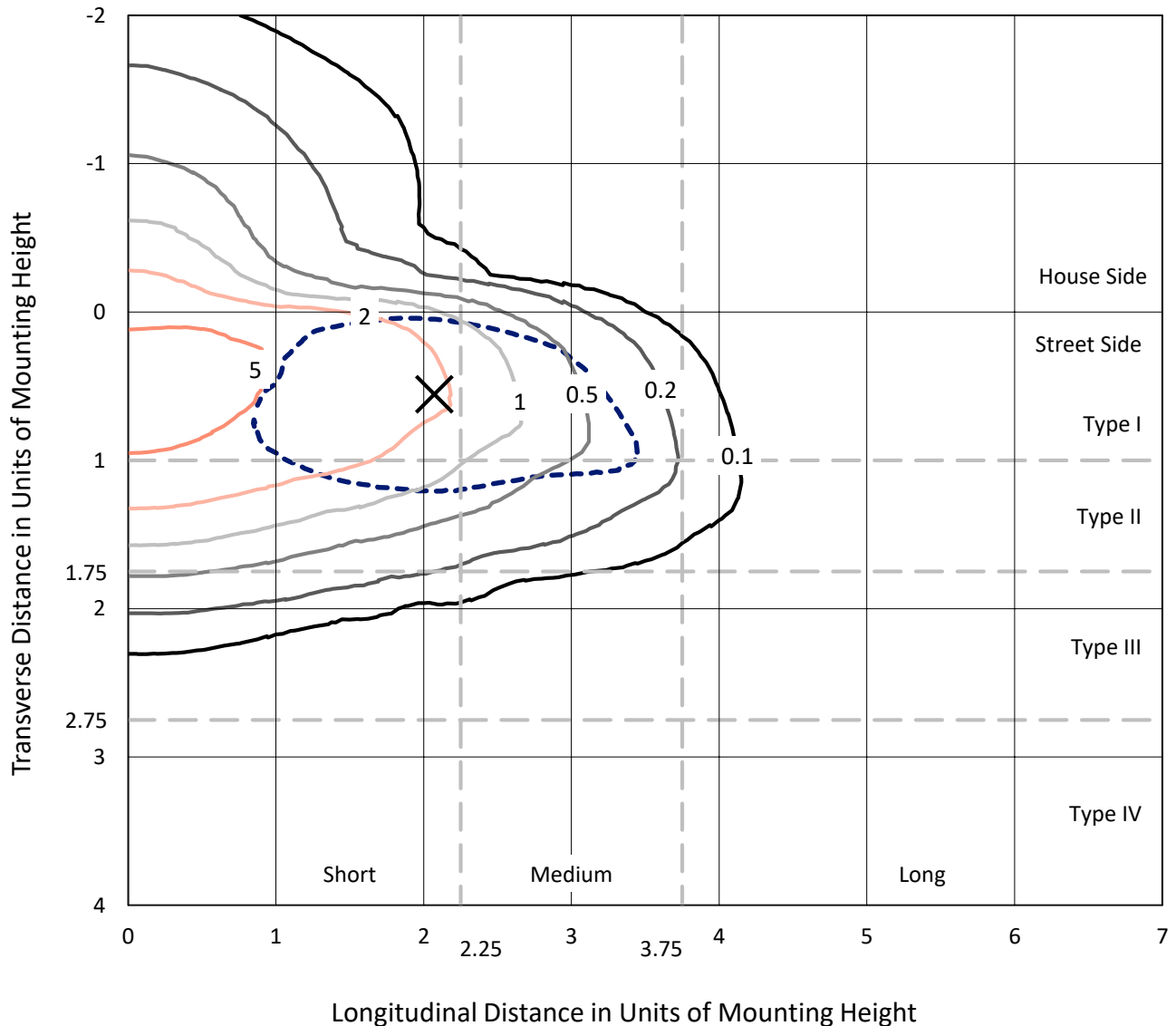
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P301639
 CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

Iso-Footcandle Lines of Horizontal Illumination

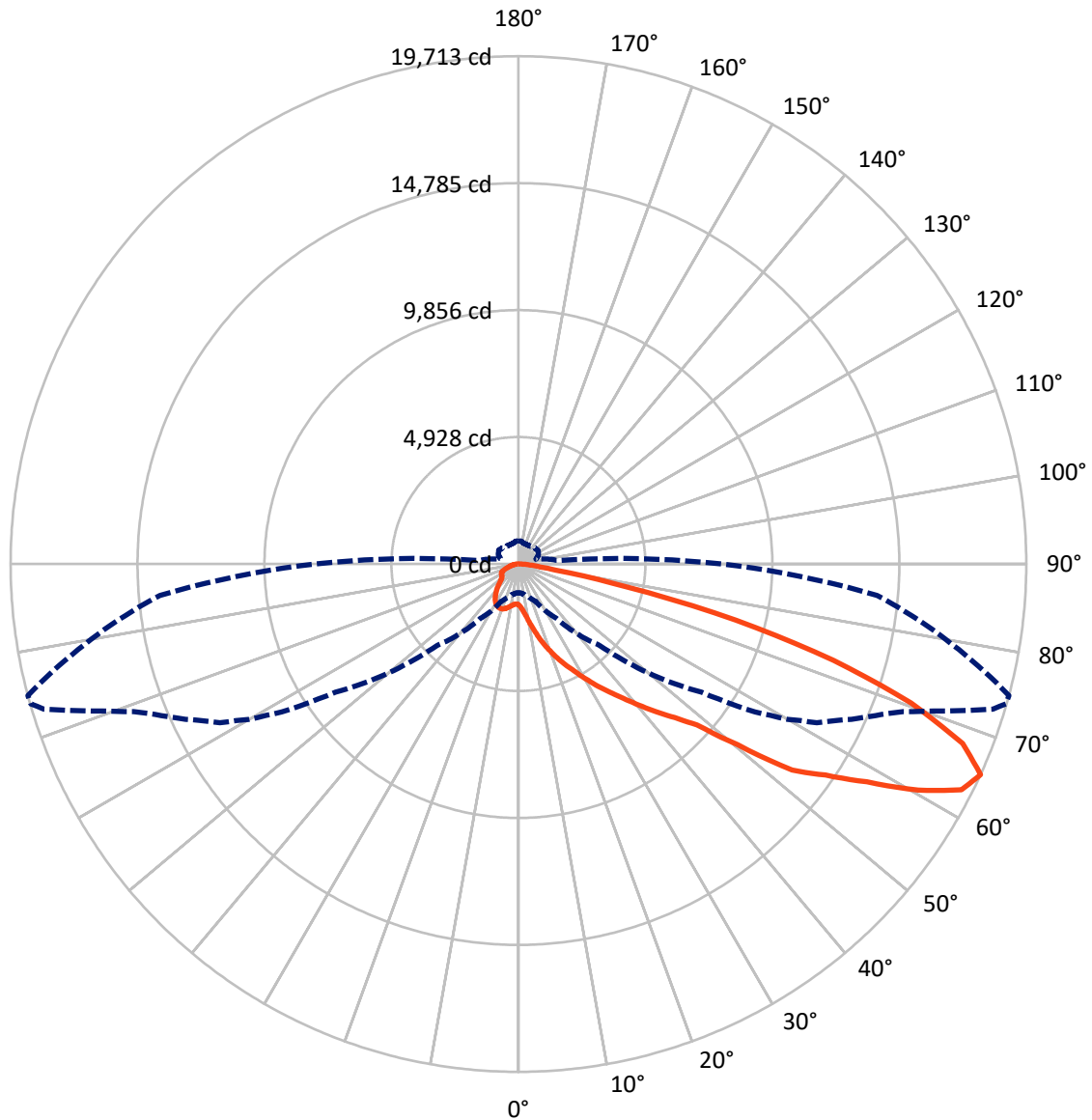
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.9 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P301639
CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P301639

CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3003.1	0.0	3003.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	16475.2	0.0	16475.2
	% Fixture	84.6	0.0	84.6
Total	Lumens	19478.2	0.0	19478.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.7	1.0
10°-20°	764.5	3.9
20°-30°	1568.5	8.1
30°-40°	2638.9	13.5
40°-50°	3646.2	18.7
50°-60°	4551.6	23.4
60°-70°	4095.9	21.0
70°-80°	1717.0	8.8
80°-90°	300.0	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°	19478.2	100.0
0°-180°	19478.2	100.0

Coefficient of Utilization



REPORT NUMBER: P301639

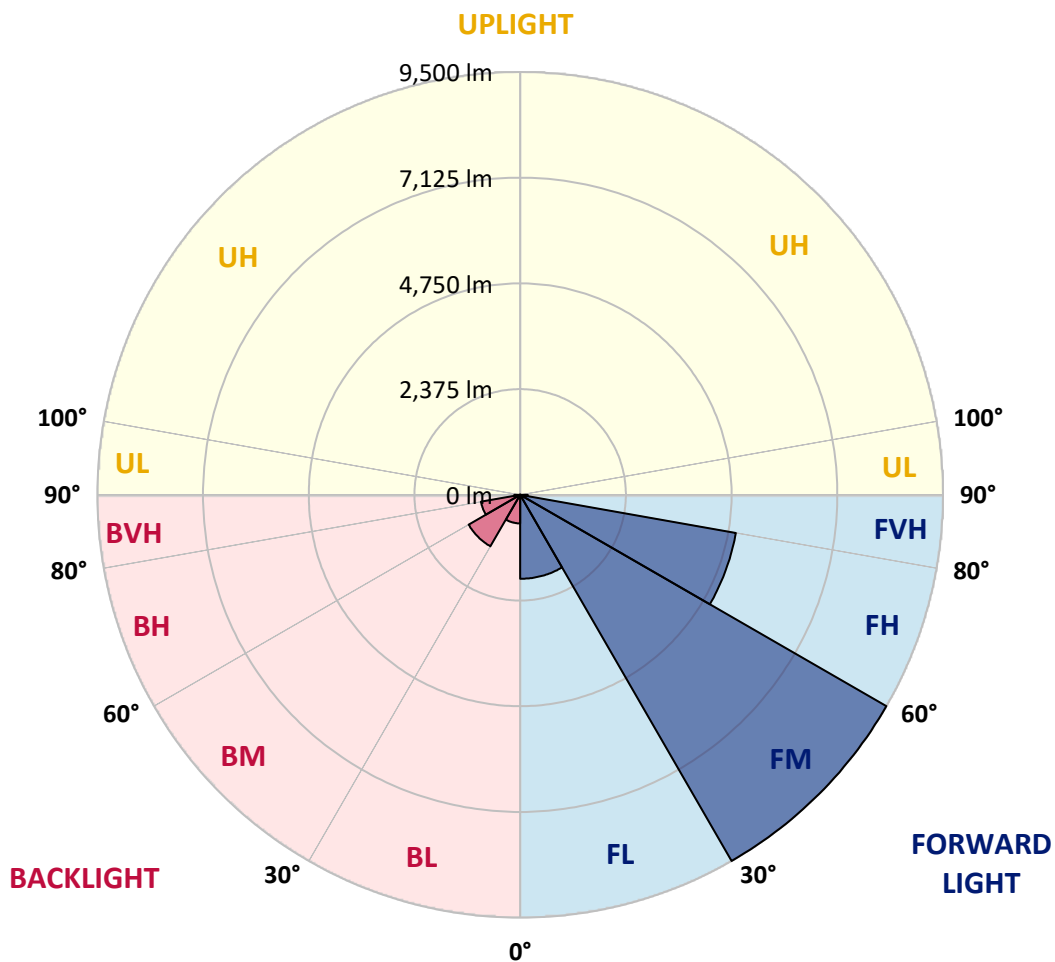
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1886.4	9.7			
FM (30°-60°)	9500.0	48.8			
FH (60°-80°)	4920.1	25.3			G2/5000
FVH (80°-90°)	168.6	0.9			G2/225
BL (0°-30°)	642.2	3.3	B2/1000		
BM (30°-60°)	1336.7	6.9	B2/2500		
BH (60°-80°)	892.8	4.6	B2/1000		G2/1000
BVH (80°-90°)	131.4	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





REPORT NUMBER: P301639

CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0
2.5°	2009.9	1987.8	1993.2	1956.3	1911.2	1852.1	1786.7	1785.9	1786.7	1780.2	1756.4
5°	2786.9	2760.4	2750.3	2667.1	2545.4	2372.3	2184.1	2163.9	2155.4	2134.3	2085.4
7.5°	3354.1	3339.4	3323.5	3260.9	3150.4	2956.7	2704.0	2660.8	2619.2	2609.1	2553.9
10°	3720.1	3716.2	3683.1	3666.5	3597.5	3429.6	3183.5	3141.9	3096.8	3081.2	3022.9
12.5°	4009.4	4008.6	3993.0	3997.7	3937.5	3816.1	3603.8	3566.1	3533.0	3484.9	3443.6
15°	4209.6	4210.4	4233.7	4259.4	4250.1	4168.0	3968.9	3952.3	3923.8	3890.7	3841.8
17.5°	4373.7	4378.4	4402.2	4449.2	4500.1	4493.5	4336.0	4322.0	4297.1	4252.0	4226.3
20°	4744.3	4761.8	4715.9	4715.9	4721.3	4746.2	4670.5	4659.5	4624.5	4600.4	4580.2
22.5°	5370.3	5390.6	5286.4	5180.5	5076.3	5000.6	4925.1	4938.8	4915.0	4898.3	4886.2
25°	6183.4	6199.3	6030.5	5851.7	5639.4	5362.9	5175.9	5167.4	5154.5	5144.4	5138.9
27.5°	6948.7	6955.2	6795.8	6533.8	6287.6	5890.2	5430.2	5420.1	5404.5	5385.1	5368.4
30°	7603.4	7601.5	7437.4	7187.4	6923.8	6484.0	5816.7	5785.2	5739.0	5686.5	5646.0
32.5°	8170.4	8167.6	7987.7	7728.7	7452.2	7072.3	6345.9	6281.3	6209.4	6106.8	6045.3
35°	8616.4	8614.8	8444.9	8175.0	7857.7	7626.4	6952.5	6873.2	6781.8	6644.5	6549.6
37.5°	8785.2	8785.2	8690.3	8505.9	8225.6	8067.0	7626.4	7530.4	7432.7	7276.8	7169.9
40°	8686.4	8688.3	8708.6	8674.7	8538.2	8416.5	8255.1	8198.0	8114.0	7974.0	7862.4
42.5°	8355.5	8365.6	8500.5	8665.4	8733.5	8714.3	8812.8	8787.1	8728.0	8620.2	8531.6
45°	7936.0	7967.4	8114.8	8426.6	8787.9	8971.4	9280.2	9282.9	9272.0	9214.0	9145.6
47.5°	7360.0	7404.0	7598.8	8019.9	8660.7	9221.4	9755.0	9779.9	9803.1	9765.4	9733.9
50°	6594.8	6647.3	6938.5	7497.3	8401.7	9480.4	10652.0	10764.7	10869.7	10856.9	10877.9
52.5°	5775.1	5836.9	6193.5	6816.0	7956.5	9540.3	11225.6	11409.1	11592.6	11742.7	11902.2
55°	5035.6	5002.5	5359.4	6014.7	7224.3	9270.1	11741.1	11962.3	12166.9	12351.3	12541.3
57.5°	4033.5	4087.9	4445.6	5093.8	6255.3	8507.6	12095.8	12419.6	12713.6	13018.8	13288.0
60°	2948.3	3002.7	3390.8	4049.1	5203.5	7351.5	11824.8	12315.4	12786.4	13253.8	13618.9
62.5°	1780.2	1820.9	2162.8	2789.9	4012.4	5980.8	10617.0	11260.6	11953.9	12512.6	13072.2
65°	1108.2	1131.2	1257.5	1602.4	2576.9	4465.1	8674.7	9376.2	10122.8	10832.0	11413.7
67.5°	907.2	915.4	938.6	1012.2	1415.1	2911.6	6456.4	7077.7	7751.6	8437.6	9084.9
70°	815.8	810.4	810.4	815.0	907.2	1565.5	4227.1	4631.9	5193.4	5789.9	6381.7
72.5°	736.5	731.0	720.9	707.3	740.3	955.0	2184.9	2490.2	2894.9	3425.0	3991.9
75°	661.9	654.5	642.7	625.2	648.2	720.9	1049.1	1177.4	1374.6	1656.8	1973.0
77.5°	584.5	575.2	564.2	551.4	580.9	560.7	614.8	661.0	736.5	827.0	946.0
80°	496.9	488.7	484.9	478.6	513.6	426.9	434.3	462.8	507.1	556.0	611.3
82.5°	389.2	389.2	403.7	406.7	445.2	307.1	324.6	349.5	372.5	398.2	424.2
85°	256.3	258.2	308.0	327.4	351.2	206.5	243.4	251.6	270.2	285.0	295.9
87.5°	80.1	86.7	188.2	208.4	201.8	117.1	149.3	153.2	166.0	176.1	185.4
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: P301639

CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0
2.5°	1756.4	1745.2	1735.0	1734.2	1726.8	1716.7	1720.3	1704.7	1705.5	1697.3	1688.0
5°	2065.2	2057.8	2020.8	2010.7	1983.1	1965.6	1962.9	1925.9	1921.3	1900.2	1877.0
7.5°	2509.6	2485.5	2433.8	2408.9	2361.9	2326.9	2310.5	2261.5	2237.5	2182.2	2157.3
10°	2975.1	2944.7	2881.0	2846.0	2800.8	2744.5	2714.2	2643.3	2615.4	2564.8	2504.1
12.5°	3406.6	3376.3	3310.6	3283.8	3223.9	3164.0	3131.0	3050.8	3014.7	2933.5	2885.6
15°	3805.7	3775.3	3718.1	3690.5	3630.6	3581.7	3537.4	3458.3	3415.9	3340.2	3277.5
17.5°	4192.9	4160.7	4110.9	4086.0	4028.0	3978.2	3930.4	3855.4	3812.2	3736.7	3680.4
20°	4552.6	4528.5	4492.7	4459.3	4401.3	4356.2	4299.0	4234.5	4171.9	4116.4	4063.0
22.5°	4866.0	4856.7	4818.1	4803.4	4753.6	4714.8	4665.0	4601.5	4556.1	4486.1	4436.3
25°	5136.2	5133.5	5114.9	5110.2	5075.2	5038.3	5027.4	4974.9	4933.3	4871.5	4820.1
27.5°	5368.4	5371.1	5366.8	5379.6	5370.3	5353.6	5354.7	5337.2	5313.2	5261.5	5216.3
30°	5626.6	5611.8	5620.3	5638.6	5644.1	5646.0	5676.4	5686.5	5684.8	5650.7	5628.5
32.5°	5991.7	5956.7	5924.4	5921.7	5940.0	5947.4	5999.1	6025.9	6048.9	6057.1	6060.9
35°	6457.2	6387.2	6319.9	6284.1	6252.6	6260.8	6297.7	6341.2	6391.8	6426.8	6468.4
37.5°	7043.6	6958.0	6839.0	6754.2	6732.9	6686.9	6710.7	6744.9	6794.7	6849.1	6921.0
40°	7754.4	7624.5	7490.7	7378.3	7317.6	7232.5	7231.7	7225.2	7255.8	7306.4	7407.9
42.5°	8438.6	8323.2	8181.3	8063.4	7984.1	7870.6	7847.6	7787.7	7801.4	7845.7	7944.4
45°	9079.2	8984.3	8897.6	8761.4	8693.8	8571.3	8532.5	8461.6	8422.0	8442.2	8540.9
47.5°	9699.7	9639.0	9548.5	9460.1	9408.5	9298.8	9249.0	9198.1	9147.5	9145.6	9249.0
50°	10909.4	10877.1	10770.2	10678.0	10702.9	10568.3	10576.6	10440.1	10501.9	10509.3	10725.9
52.5°	12046.0	12158.7	12238.0	12334.6	12397.5	12409.5	12450.8	12512.6	12587.3	12734.7	12935.7
55°	12696.9	12838.1	12920.1	12994.0	13115.7	13141.4	13210.6	13292.6	13358.0	13524.0	13694.7
57.5°	13470.7	13732.4	13859.6	13976.6	14140.7	14203.4	14318.8	14408.2	14493.0	14689.3	14895.8
60°	13947.1	14266.3	14525.3	14710.4	14916.1	15063.8	15238.0	15378.0	15577.1	15812.3	16120.3
62.5°	13568.3	14036.5	14380.6	14698.6	14977.9	15260.1	15509.8	15771.8	16074.0	16429.9	16907.7
65°	12059.2	12535.6	13124.7	13454.8	13824.6	14259.7	14639.6	15063.8	15475.6	15993.9	16700.1
67.5°	9708.2	10262.0	10924.2	11257.0	11682.0	12167.7	12593.8	13111.8	13593.2	14220.9	15094.1
70°	6997.6	7713.9	8270.7	8618.3	9114.5	9614.9	10026.3	10629.1	11027.3	11670.8	12573.6
72.5°	4430.9	4995.9	5678.3	6116.1	6556.7	7064.1	7484.4	8004.3	8375.7	8962.1	9779.9
75°	2382.4	2798.9	3398.2	3814.1	4286.2	4719.4	5211.7	5560.1	5835.0	6298.8	6962.6
77.5°	1116.4	1369.9	1673.2	1993.2	2313.2	2646.9	2971.5	3253.5	3371.6	3637.2	4028.8
80°	677.7	759.8	848.1	946.8	1080.6	1188.3	1331.4	1434.5	1441.9	1525.8	1645.6
82.5°	452.6	483.0	509.8	534.7	568.9	595.7	626.0	661.9	676.6	696.0	734.9
85°	308.8	323.5	329.0	344.9	341.0	350.3	362.4	374.4	380.7	379.9	397.4
87.5°	189.8	197.2	201.0	204.6	201.8	198.3	203.8	210.3	212.0	206.5	208.4
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: P301639

CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0
2.5°	1689.9	1681.7	1673.2	1667.8	1665.9	1617.2	1595.8	1582.2	1552.6	1528.6	1509.1
5°	1864.1	1846.6	1833.0	1816.3	1807.0	1683.4	1638.2	1607.0	1555.4	1525.0	1497.1
7.5°	2144.5	2095.5	2067.1	2034.8	2007.2	1784.0	1709.3	1660.4	1588.5	1548.0	1516.5
10°	2462.5	2411.9	2366.5	2316.8	2273.6	1917.7	1808.9	1733.1	1638.2	1585.7	1544.1
12.5°	2817.5	2767.8	2710.6	2646.9	2591.6	2087.3	1936.1	1828.3	1698.1	1628.1	1570.1
15°	3237.1	3149.3	3080.1	3006.5	2942.0	2290.2	2084.6	1935.2	1761.8	1666.9	1589.5
17.5°	3626.8	3534.6	3440.8	3376.3	3301.6	2517.8	2233.9	2043.8	1814.4	1691.8	1593.1
20°	4007.8	3907.1	3826.2	3739.5	3661.0	2753.8	2393.3	2139.8	1848.5	1692.7	1570.1
22.5°	4343.4	4280.5	4190.2	4096.1	4016.8	2989.8	2542.7	2221.0	1861.4	1671.6	1529.4
25°	4724.9	4658.7	4547.9	4468.6	4380.3	3230.5	2689.3	2283.7	1854.0	1631.9	1466.7
27.5°	5132.4	5058.8	4945.3	4862.4	4755.5	3480.2	2823.8	2328.8	1826.4	1567.4	1382.8
30°	5557.4	5490.1	5378.5	5294.8	5186.8	3744.9	2974.2	2359.2	1771.1	1478.0	1285.1
32.5°	6013.9	5957.5	5847.0	5759.5	5644.1	4031.6	3114.3	2368.5	1687.2	1371.8	1182.0
35°	6447.1	6408.5	6315.2	6233.2	6113.4	4302.6	3262.8	2363.8	1587.6	1255.6	1088.0
37.5°	6935.0	6911.7	6865.8	6761.6	6615.0	4670.5	3440.8	2344.4	1465.9	1140.5	1016.0
40°	7454.9	7456.8	7407.0	7335.9	7199.4	5116.8	3652.8	2306.6	1333.0	1039.0	950.4
42.5°	8005.2	8033.9	8009.8	7959.2	7828.2	5566.7	3906.3	2260.7	1204.2	940.3	886.1
45°	8635.8	8670.8	8707.8	8633.1	8505.9	6160.4	4240.0	2200.8	1064.7	858.2	841.8
47.5°	9363.3	9418.6	9451.7	9452.8	9325.6	6896.1	4782.0	2164.7	941.4	803.0	820.5
50°	10898.2	10916.0	10994.2	11130.6	11033.0	8598.9	5728.9	2142.5	857.4	768.8	804.9
52.5°	13109.9	13302.7	13438.4	13429.1	13296.2	9680.3	6250.7	2028.2	807.6	755.9	797.5
55°	14010.8	14251.5	14502.3	14568.5	14465.4	10603.4	6744.1	1913.9	783.6	765.2	800.2
57.5°	15211.2	15616.8	15960.8	16105.5	15956.2	11784.3	7393.1	1854.0	776.2	790.1	817.7
60°	16613.4	17115.0	17566.8	17826.6	17826.6	13141.4	8066.2	1829.1	766.1	827.0	847.3
62.5°	17514.3	18250.8	18933.2	19313.9	19302.6	14086.3	8364.8	1744.3	743.1	852.8	887.8
65°	17517.8	18393.8	19263.0	19691.0	19712.9	13970.3	7871.7	1540.6	700.7	856.6	928.5
67.5°	16057.6	16991.3	18004.6	18483.3	18593.7	12860.2	6814.1	1266.8	631.5	819.7	943.3
70°	13561.7	14473.6	15507.9	15978.3	16174.7	10962.7	5488.2	976.4	543.2	738.4	912.6
72.5°	10684.3	11578.6	12298.7	12642.5	12795.7	8379.6	3996.6	737.6	445.2	622.2	830.6
75°	7564.6	8235.7	8618.3	8694.9	8718.7	5051.4	2428.4	548.6	367.0	484.1	701.5
77.5°	4269.5	4557.2	4525.8	4560.0	4276.1	1950.0	1057.6	392.7	302.5	367.8	544.0
80°	1666.9	1718.6	1614.4	1582.2	1451.2	725.6	466.6	273.8	241.5	278.4	380.7
82.5°	734.9	758.7	736.5	742.3	710.0	374.4	279.2	198.3	184.3	203.8	252.7
85°	404.8	412.2	410.2	422.3	404.8	149.3	132.6	121.7	129.1	138.4	162.2
87.5°	197.2	199.1	192.8	202.9	196.4	75.5	65.4	69.2	75.5	77.4	77.4
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: P301639

CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7030-800

CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
0°	1583.0	1583.0	1583.0	1583.0	1583.0	1583.0
2.5°	1495.5	1488.1	1488.9	1487.0	1483.4	1483.4
5°	1482.6	1475.2	1475.2	1473.3	1468.7	1469.5
7.5°	1495.5	1483.4	1478.8	1472.2	1465.9	1465.9
10°	1510.2	1488.9	1476.0	1465.1	1456.6	1456.6
12.5°	1521.2	1488.1	1466.7	1452.0	1443.8	1443.8
15°	1525.0	1481.5	1452.0	1434.5	1427.1	1426.3
17.5°	1513.0	1456.6	1420.8	1400.6	1391.3	1388.5
20°	1476.0	1411.5	1368.3	1345.0	1332.2	1327.5
22.5°	1420.8	1347.0	1296.4	1272.3	1255.6	1252.9
25°	1343.4	1264.1	1214.3	1191.1	1182.0	1179.0
27.5°	1252.9	1179.0	1136.6	1121.9	1113.7	1112.8
30°	1167.3	1104.4	1073.2	1062.0	1051.9	1050.2
32.5°	1086.9	1047.2	1035.4	1019.6	995.8	993.1
35°	1029.7	1026.1	1017.9	982.7	953.4	944.9
37.5°	994.7	1028.9	986.5	917.3	896.2	894.3
40°	974.5	1000.4	927.4	903.6	905.3	903.6
42.5°	928.5	955.0	929.3	918.4	925.5	927.4
45°	882.3	911.8	943.3	935.9	953.4	953.4
47.5°	856.6	900.6	942.2	942.2	968.2	977.2
50°	827.0	891.6	927.4	940.3	960.8	953.4
52.5°	825.1	875.7	906.4	929.3	938.6	930.2
55°	827.9	862.9	885.0	911.0	921.9	922.8
57.5°	831.7	855.5	870.3	882.3	915.4	915.4
60°	840.7	849.2	857.4	864.0	907.2	908.0
62.5°	855.5	842.6	840.7	847.3	902.5	899.0
65°	878.7	833.3	819.7	826.0	897.9	886.9
67.5°	909.9	819.7	792.9	797.5	894.3	870.3
70°	938.6	797.5	759.8	755.1	859.3	816.9
72.5°	941.4	771.8	713.5	699.9	746.9	706.2
75°	895.1	754.0	662.9	622.2	616.7	611.3
77.5°	806.8	743.9	603.9	540.2	529.2	532.8
80°	675.0	706.2	532.8	457.3	517.2	510.9
82.5°	504.3	623.3	452.6	404.8	403.7	356.9
85°	280.3	486.0	368.7	303.3	211.1	204.6
87.5°	78.5	270.2	258.2	171.5	117.1	121.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)