

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: P299380

Luminaire Tested: **GLNA-AF-08-LED-E1-SLR**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194679)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-08-LED-E1-SLR
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Right OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 41785.9 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 445
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

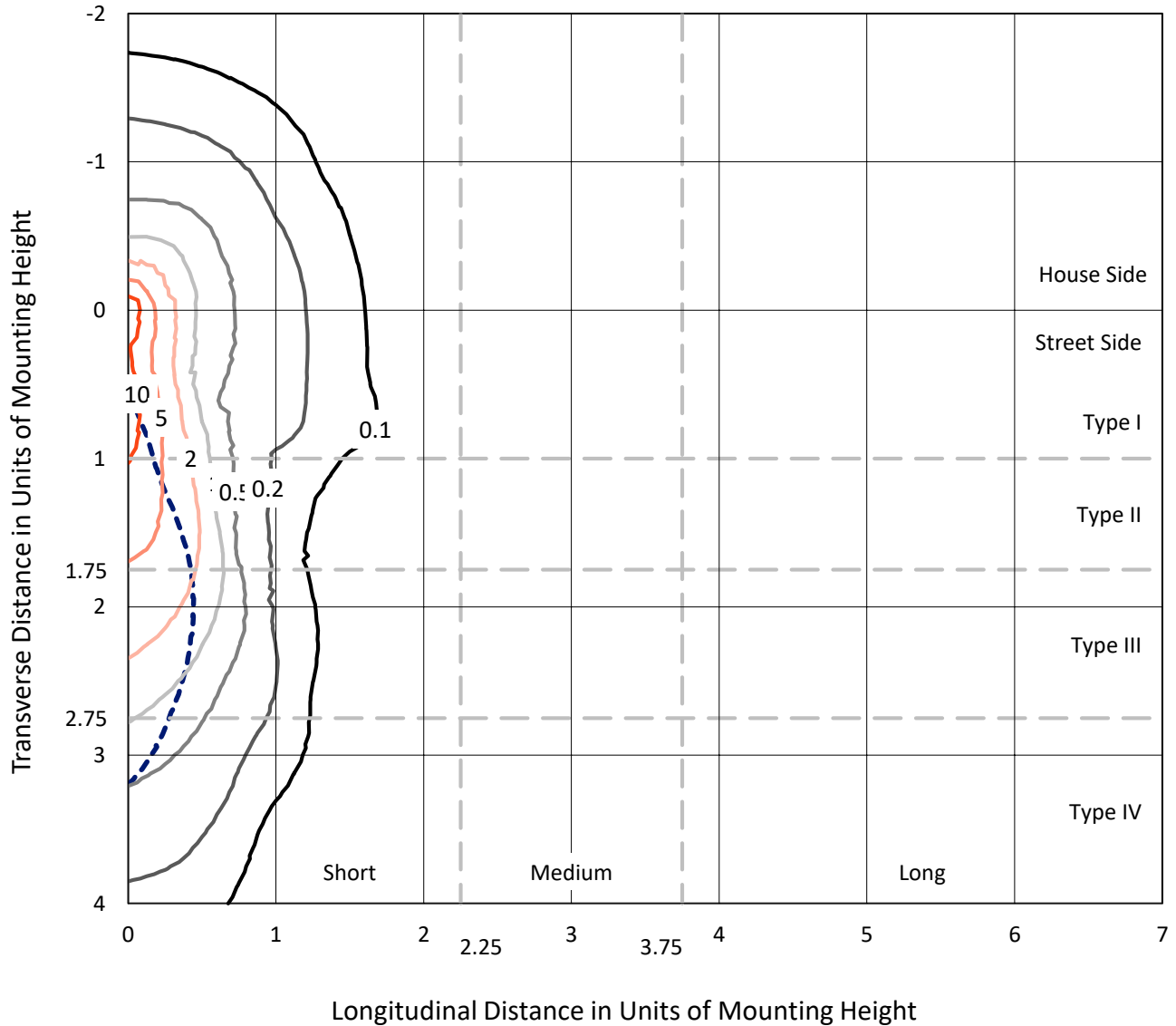


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

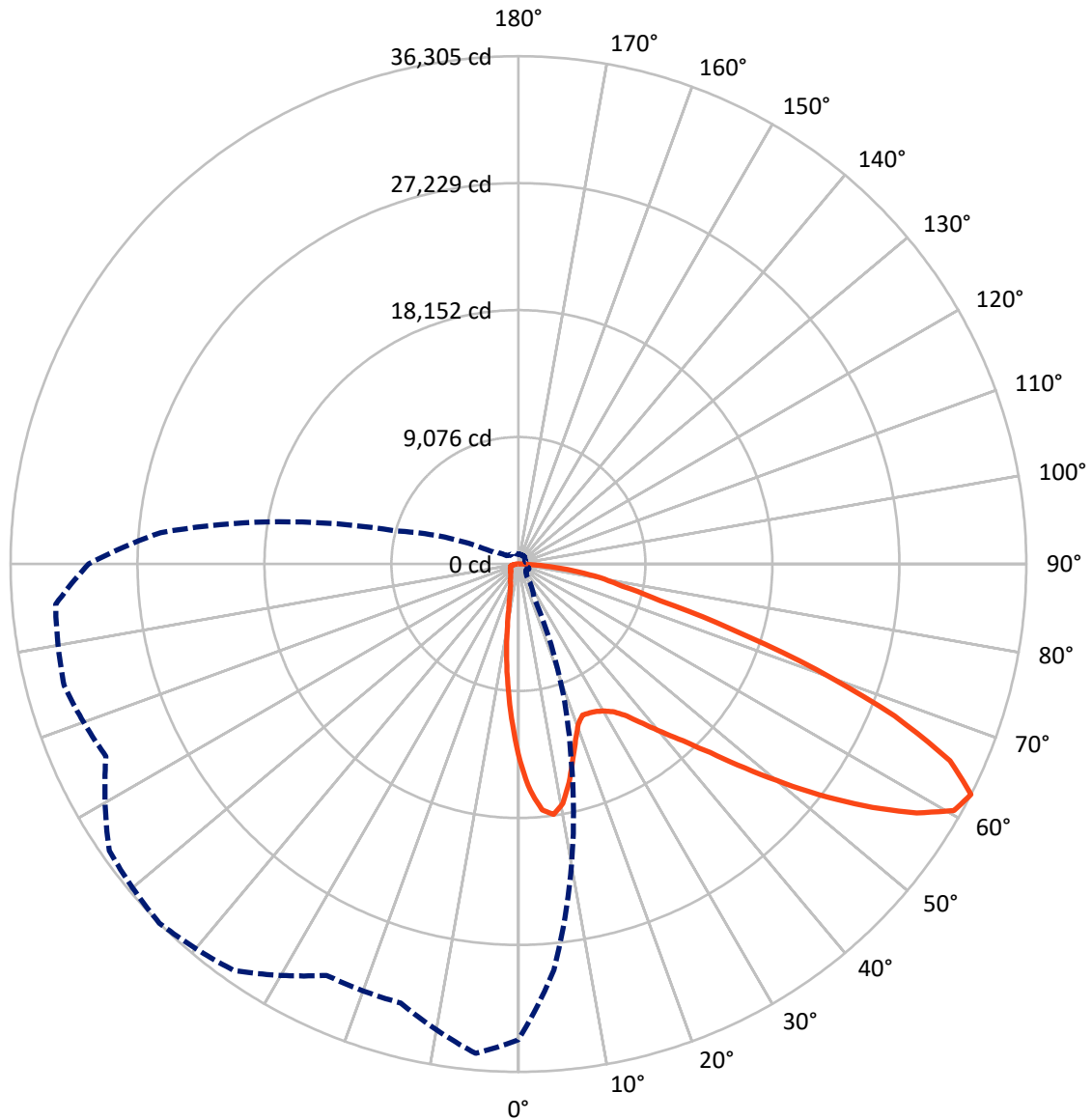


Based on 30 foot mounting height. Maximum calculated value = 15.7 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6915.0	0.0	6915.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	34870.8	0.0	34870.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	41785.9	0.0	41785.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1027.7	2.5
10°-20°	1884.5	4.5
20°-30°	2747.6	6.6
30°-40°	4231.7	10.1
40°-50°	6228.0	14.9
50°-60°	9135.1	21.9
60°-70°	10211.7	24.4
70°-80°	4999.6	12.0
80°-90°	1320.0	3.2
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°	41785.9	100.0
0°-180°	41785.9	100.0



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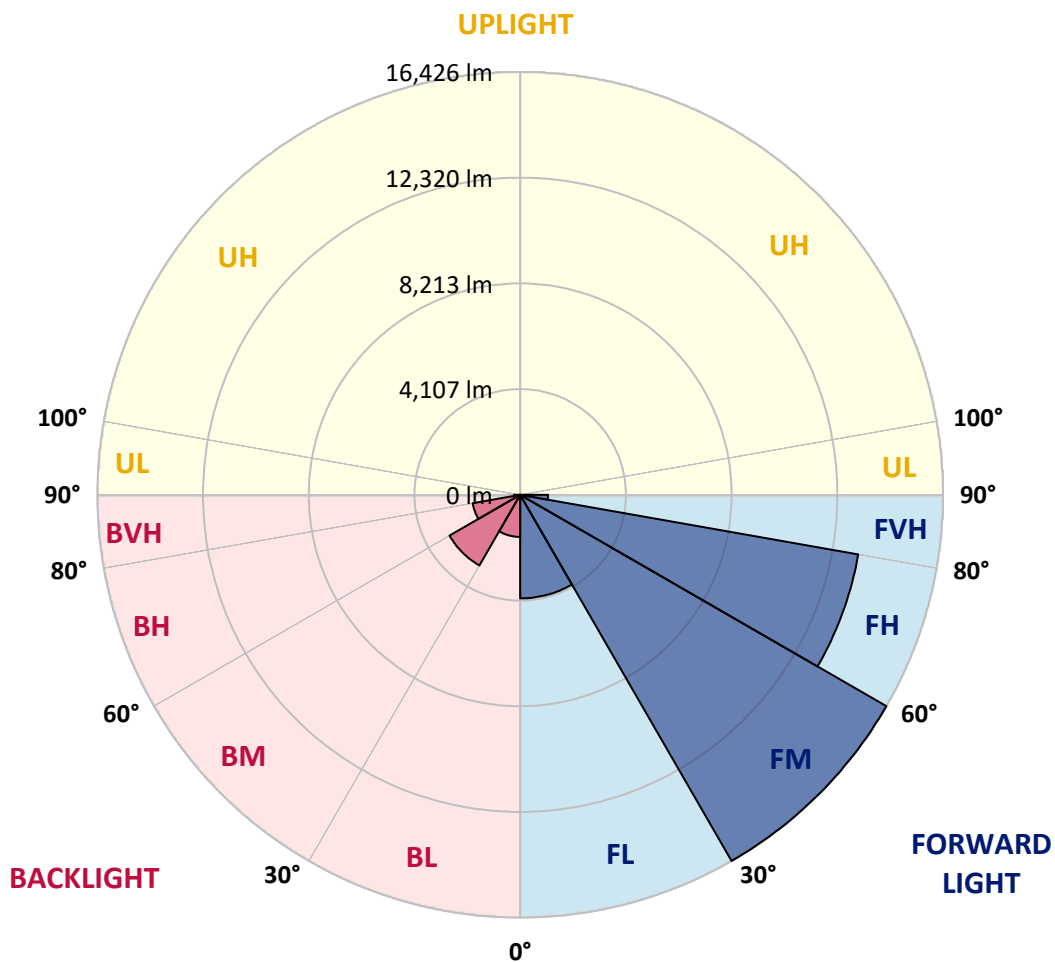
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4023.8	9.6			
FM	(30°-60°)	16426.4	39.3			
FH	(60°-80°)	13336.6	31.9			G5
FVH	(80°-90°)	1084.0	2.6			G5
BL	(0°-30°)	1636.0	3.9	B3/2500		
BM	(30°-60°)	3168.4	7.6	B3/5000		
BH	(60°-30°)	1874.7	4.5	B3/2500		G3/2500
BVH	(80°-90°)	236.0	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8
2.5°	14668.5	14370.2	13873.7	13357.0	13042.7	12674.8	12387.6	12135.2	11629.7	11530.9	11620.6
5°	13793.7	13194.3	12259.0	11317.4	10690.2	10017.1	9493.4	9073.4	8432.3	8319.6	8455.2
7.5°	12390.4	11673.5	10437.8	9236.1	8349.5	7508.8	6944.1	6493.5	5992.9	5777.3	5790.5
10°	11179.7	10371.0	8910.0	7603.4	6877.4	6309.9	5834.3	5372.6	4864.9	4531.8	4440.0
12.5°	10501.7	9572.0	7887.8	6720.9	6047.8	5451.1	4938.6	4444.9	3902.5	3562.5	3466.5
15°	10384.9	9373.8	7504.6	6156.3	5312.8	4557.6	3953.3	3401.8	2843.4	2568.1	2510.3
17.5°	10892.6	9727.8	7380.1	5652.8	4621.5	3689.0	2947.1	2331.6	1876.9	1739.2	1727.3
20°	11866.1	10407.9	7364.2	5179.9	3939.4	2846.2	2053.5	1605.6	1406.1	1366.4	1369.2
22.5°	13233.2	11462.1	7561.6	4823.9	3312.1	2122.3	1543.8	1343.5	1265.6	1228.7	1228.7
25°	15001.6	12914.0	8016.4	4564.5	2767.6	1695.4	1362.3	1242.7	1168.9	1143.9	1148.8
27.5°	16715.7	14326.4	8544.9	4360.1	2411.6	1538.9	1290.6	1182.9	1118.9	1093.1	1105.0
30°	18052.3	15580.9	8985.8	4081.9	2230.1	1495.1	1316.4	1205.8	1114.0	1075.1	1077.2
32.5°	19159.3	16678.9	9355.7	3881.7	2069.5	1281.6	1134.9	1086.2	1075.1	1029.2	1006.2
35°	20574.4	17875.6	9604.0	3886.5	1993.7	1143.9	1010.4	925.6	863.7	810.8	810.8
37.5°	22232.9	19249.0	9868.2	3939.4	1966.6	1063.2	967.3	881.8	824.7	774.0	764.9
40°	23872.7	20595.3	10109.5	3990.1	1949.9	1015.3	932.5	854.6	801.8	751.0	737.1
42.5°	25267.6	21702.4	10325.1	4015.2	1894.9	1010.4	907.5	835.9	785.8	730.2	716.9
45°	26298.9	22630.0	10557.4	4054.1	1840.0	1029.2	907.5	833.8	771.9	719.0	705.1
47.5°	27219.6	23719.0	10945.4	4054.1	1773.2	994.4	937.4	835.9	769.8	714.2	703.0
50°	28453.2	25212.0	11680.4	3960.2	1679.4	957.5	987.5	826.8	748.9	705.1	691.2
52.5°	30152.7	27125.7	12847.3	3796.8	1534.7	886.6	980.5	822.6	728.1	682.2	666.2
55°	32163.1	29174.3	14119.8	3606.3	1318.5	835.9	946.4	810.8	705.1	654.4	638.4
57.5°	33731.9	30584.5	15015.5	3312.1	1130.0	808.7	838.6	799.7	677.3	624.5	611.2
60°	34356.3	30529.6	15261.7	2919.2	1038.2	785.8	732.9	895.7	654.4	601.5	585.5
62.5°	34019.1	29119.4	14572.5	2643.9	1017.4	755.9	687.0	828.9	636.3	585.5	562.6
65°	32459.3	26620.1	12746.5	2570.2	1077.2	726.0	657.1	650.2	611.2	562.6	539.6
67.5°	29061.6	22885.2	10205.5	2577.1	1153.0	696.1	627.2	595.3	576.5	537.5	516.7
70°	23671.0	18094.0	7607.5	2595.9	1191.9	661.3	595.3	560.5	539.6	500.7	486.8
72.5°	17404.9	13945.3	5526.9	2476.3	1198.8	622.4	551.4	521.5	500.7	459.7	447.8
75°	11907.8	10667.2	3833.7	2051.4	1045.2	567.4	502.8	475.6	461.7	411.0	404.0
77.5°	8698.6	8007.4	2453.3	1522.9	806.0	498.6	443.7	422.8	413.8	358.1	349.1
80°	6981.0	6335.0	1534.7	1043.1	590.4	417.9	372.0	360.9	351.2	296.2	289.3
82.5°	4842.0	4242.6	985.4	677.3	443.7	324.1	294.1	289.3	275.4	225.3	218.4
85°	2554.2	2303.8	624.5	461.7	321.3	222.5	204.4	204.4	197.5	149.5	144.6
87.5°	326.1	530.6	317.1	241.3	176.6	98.7	98.7	96.7	103.6	84.8	73.7
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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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8
2.5°	11409.2	11519.8	11414.1	11421.0	11537.9	11887.0	12045.5	12176.2	12316.7	12408.5	12449.5
5°	8269.5	8526.8	8613.8	8797.3	9068.5	9514.3	9690.9	9819.6	9905.1	9955.2	9976.0
7.5°	5655.6	5811.4	5985.9	6282.1	6872.5	7134.7	7251.5	7221.6	7125.6	7090.9	7056.8
10°	4263.4	4201.5	4168.8	4332.3	4810.0	5074.2	5157.0	5076.3	5023.5	5035.3	5092.3
12.5°	3303.1	3195.3	3064.6	3045.8	3360.8	3597.2	3650.1	3654.3	3750.9	3835.8	3962.3
15°	2407.4	2395.6	2331.6	2292.7	2471.4	2664.7	2687.7	2728.7	2816.3	2878.2	2988.1
17.5°	1697.4	1759.3	1810.1	1835.1	1970.7	2108.4	2083.4	2062.5	2046.5	2046.5	2099.4
20°	1369.2	1410.2	1474.9	1547.9	1686.3	1782.3	1720.4	1637.6	1577.8	1559.8	1566.7
22.5°	1233.6	1265.6	1302.5	1366.4	1490.9	1557.7	1490.9	1431.1	1371.3	1350.4	1343.5
25°	1164.8	1205.8	1240.6	1288.6	1380.3	1426.2	1362.3	1318.5	1281.6	1256.6	1237.8
27.5°	1125.8	1162.0	1171.7	1194.7	1272.6	1313.6	1281.6	1263.5	1240.6	1217.6	1194.7
30°	1084.1	1077.2	1061.2	1063.2	1125.8	1166.9	1164.8	1168.9	1166.9	1159.9	1155.7
32.5°	990.2	976.3	962.4	976.3	1033.3	1070.2	1073.0	1082.0	1082.0	1079.9	1098.0
35°	824.7	849.8	865.8	907.5	976.3	1008.3	994.4	971.5	930.4	904.7	902.6
37.5°	762.8	767.0	794.8	851.8	928.3	957.5	937.4	884.5	856.7	851.8	858.8
40°	732.9	737.1	753.1	806.0	881.8	911.7	893.6	854.6	828.9	826.8	838.6
42.5°	712.1	716.9	726.0	762.8	824.7	861.6	863.7	835.9	806.0	808.7	819.9
45°	700.3	703.0	700.3	719.0	776.1	819.9	838.6	819.9	794.8	799.7	812.9
47.5°	698.2	691.2	682.2	687.0	746.8	790.0	812.9	806.0	794.8	799.7	810.8
50°	689.1	673.1	661.3	659.2	719.0	764.9	785.8	785.8	790.0	799.7	810.8
52.5°	661.3	643.2	643.2	636.3	700.3	744.1	758.0	760.1	767.0	783.0	799.7
55°	627.2	620.3	627.2	615.4	687.0	728.1	735.0	739.9	744.1	758.0	780.9
57.5°	597.3	588.3	604.3	599.4	675.2	712.1	712.1	721.1	721.1	739.9	758.0
60°	581.3	562.6	569.5	574.4	659.2	698.2	694.0	703.0	707.2	723.9	737.1
62.5°	560.5	544.5	544.5	555.6	641.1	677.3	675.2	682.2	700.3	705.1	719.0
65°	535.4	528.5	521.5	535.4	622.4	654.4	657.1	666.2	682.2	687.0	698.2
67.5°	509.7	512.5	498.6	512.5	606.4	631.4	631.4	650.2	657.1	666.2	677.3
70°	482.6	484.7	472.9	489.6	595.3	606.4	604.3	629.3	634.2	641.1	652.3
72.5°	447.8	447.8	443.7	466.6	576.5	581.3	576.5	597.3	599.4	606.4	611.2
75°	411.0	411.0	406.8	438.8	565.4	553.5	539.6	555.6	560.5	565.4	565.4
77.5°	363.0	367.9	367.9	406.8	525.7	542.4	495.8	505.5	512.5	514.6	507.6
80°	303.2	315.0	319.2	369.9	440.9	500.7	443.7	449.9	452.7	452.7	443.7
82.5°	232.3	252.4	264.2	319.2	338.0	420.0	385.9	392.9	385.9	372.0	367.9
85°	160.6	188.5	202.4	243.4	255.2	324.1	321.3	321.3	308.1	289.3	287.2
87.5°	87.6	103.6	112.7	144.6	174.5	218.4	236.4	229.5	218.4	206.5	209.3
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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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8
2.5°	12665.8	12978.0	13476.6	13857.7	14241.5	14611.5	15011.3	15316.6	15576.0	15677.5	15984.9
5°	10185.3	10575.5	11046.2	11896.0	12498.2	13161.6	13929.3	14944.6	15334.7	15875.0	16758.8
7.5°	7201.4	7554.7	8312.7	8999.7	9852.3	10791.7	11827.2	13228.4	13740.9	14606.6	16046.8
10°	5377.4	5788.4	6396.9	6976.1	7727.1	8687.5	9877.3	11444.0	12066.4	13005.8	14664.3
12.5°	4332.3	4816.9	5462.3	6006.8	6588.1	7265.4	8421.1	10138.8	10973.2	11795.2	13471.7
15°	3328.1	3835.8	4435.9	5127.1	5767.5	6498.4	7709.1	9588.0	10547.6	11405.1	12835.5
17.5°	2303.8	2737.7	3493.6	4214.7	5035.3	5969.9	7511.6	9704.8	10850.8	11839.0	12946.0
20°	1633.5	1881.0	2501.3	3337.9	4360.1	5533.2	7474.7	10320.2	11811.2	12939.1	13653.2
22.5°	1373.4	1465.2	1826.1	2593.1	3773.9	5207.1	7603.4	11183.9	13106.7	14546.8	14781.2
25°	1251.7	1307.3	1495.1	2035.4	3252.3	4970.6	8037.3	12470.4	14710.2	16155.2	16113.5
27.5°	1184.9	1242.7	1366.4	1718.3	2860.1	4823.9	8471.2	13996.1	16543.3	17900.7	17386.1
30°	1164.8	1242.7	1373.4	1619.6	2579.9	4591.6	8827.3	15334.7	17953.5	19079.3	17965.3
32.5°	1148.8	1159.9	1219.7	1396.3	2312.9	4320.4	9068.5	16536.3	19333.9	20200.3	18799.1
35°	928.3	985.4	1082.0	1251.7	2157.1	4157.7	9068.5	17572.4	20694.0	21332.4	19593.9
37.5°	893.6	944.3	1029.2	1173.8	2069.5	4077.1	8887.1	18571.7	22083.4	22616.8	20248.3
40°	875.5	916.5	997.2	1114.0	2032.6	3985.3	8622.8	19453.5	23440.8	23902.6	20859.5
42.5°	861.6	898.4	974.2	1077.2	1984.6	3884.4	8409.3	20160.7	24619.5	25000.6	21443.0
45°	854.6	893.6	976.3	1095.9	1888.0	3750.9	8338.4	20925.6	25588.9	25917.1	22074.4
47.5°	854.6	900.5	987.5	1134.9	1773.2	3613.2	8560.9	21934.6	26505.4	26666.0	22818.4
50°	847.7	898.4	1020.1	1095.9	1605.6	3438.7	9084.5	23204.4	27497.7	27515.8	23760.7
52.5°	833.8	893.6	1098.0	1073.0	1412.3	3209.2	9792.4	24835.8	28965.7	29075.5	25234.9
55°	817.8	886.6	1077.2	1020.1	1254.5	2935.9	10371.0	26817.6	31028.2	31333.5	27403.8
57.5°	796.9	877.6	1043.1	946.4	1150.9	2584.1	10580.3	28269.6	32468.3	33235.4	29847.4
60°	778.8	870.6	941.6	902.6	1086.2	2287.8	10175.6	27982.4	32369.6	34023.2	32013.6
62.5°	760.1	877.6	858.8	875.5	1056.3	2097.3	9119.3	25682.8	30732.0	33210.3	33619.2
65°	739.9	815.7	810.8	851.8	1050.0	2021.5	7559.6	22235.0	27566.6	30640.2	33998.2
67.5°	712.1	753.1	776.1	822.6	1073.0	1954.7	6100.6	18341.5	23167.5	26787.7	32022.6
70°	682.2	716.9	742.0	785.8	1059.1	1924.8	5074.2	14464.1	18383.3	21954.8	28125.0
72.5°	643.2	673.1	696.1	737.1	1045.2	1908.8	4286.4	11648.4	13724.9	16308.9	22867.1
75°	597.3	624.5	641.1	682.2	1001.4	1748.2	3369.8	9856.4	10270.2	11345.2	18212.9
77.5°	544.5	565.4	578.6	624.5	886.6	1454.1	2437.3	7603.4	7975.4	8236.9	13963.4
80°	482.6	502.8	509.7	553.5	735.0	1137.0	1589.7	5616.0	5965.0	6024.8	9119.3
82.5°	411.0	431.8	431.8	472.9	601.5	817.8	1043.1	3847.6	3916.4	4118.8	6445.5
85°	331.0	347.0	347.0	367.9	466.6	611.2	716.9	1931.8	1910.9	2182.1	5584.0
87.5°	236.4	248.3	259.4	264.2	333.1	404.0	431.8	588.3	388.0	445.7	3585.4
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-08-LED-E1-SLR

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8	14117.8
2.5°	16217.1	16347.9	16214.4	16118.4	15702.5	15360.4	14902.9	14668.5
5°	17432.0	17765.1	17652.4	17248.4	16379.9	15403.5	14294.4	13793.7
7.5°	17285.2	18059.2	18077.3	17322.1	16042.6	14604.5	13102.5	12390.4
10°	16141.3	17130.9	17413.9	16681.0	15323.6	13715.8	11992.7	11179.7
12.5°	14863.9	15833.3	16049.5	15796.4	14662.2	13046.9	11299.4	10501.7
15°	13818.7	14253.4	14510.0	14731.1	14094.8	12780.5	11259.7	10384.9
17.5°	13182.5	13134.5	13208.2	13591.4	13699.1	13085.8	11857.1	10892.6
20°	12953.0	12215.9	12197.1	12725.6	13513.5	13814.6	13023.9	11866.1
22.5°	13079.5	11884.9	11733.3	12360.5	13612.2	14863.9	14553.8	13233.2
25°	13515.6	11912.7	11790.3	12397.4	13970.3	15982.8	16205.3	15001.6
27.5°	14202.6	12087.2	11925.9	12549.0	14446.0	16922.3	17831.8	16715.7
30°	14854.9	12390.4	12190.1	12847.3	14879.9	17294.3	18829.0	18052.3
32.5°	15647.6	12957.9	12606.0	13395.9	15417.4	17886.8	19717.7	19159.3
35°	16423.7	13765.9	13329.9	14243.6	16016.9	18624.6	20733.0	20574.4
37.5°	17276.2	14822.9	14462.0	15339.6	16837.4	19320.0	22028.5	22232.9
40°	18185.8	16224.1	15796.4	16938.3	18110.0	20193.4	23381.7	23872.7
42.5°	19102.3	17779.0	17269.3	18426.4	19508.4	21054.3	24538.8	25267.6
45°	20151.6	19467.4	19226.1	20477.8	20852.6	21874.8	25393.5	26298.9
47.5°	21374.1	21383.2	21771.2	22271.9	22207.9	22802.5	26253.0	27219.6
50°	22800.4	23773.9	24631.3	24963.7	23604.2	23799.6	27444.9	28453.2
52.5°	24513.8	26634.0	27695.2	27476.9	25109.1	25016.6	29332.8	30152.7
55°	26657.0	29661.8	30716.0	30559.5	26838.5	26675.1	31685.3	32163.1
57.5°	29137.4	32594.9	33564.3	32861.2	28914.9	28494.9	33631.0	33731.9
60°	31317.5	34919.6	35769.3	34990.5	31010.1	30430.9	34845.9	34356.3
62.5°	32530.2	35707.5	36304.8	35466.2	32445.4	32493.4	35112.2	34019.1
65°	31988.5	33715.9	33908.5	33839.6	32075.4	33690.1	34154.7	32459.3
67.5°	29020.6	28680.6	29004.6	29452.4	28905.9	32114.4	31501.1	29061.6
70°	23792.7	21924.9	22570.9	22871.3	23119.6	27635.4	27341.3	23671.0
72.5°	17930.6	15360.4	15870.1	15808.2	16956.3	22166.2	21263.6	17404.9
75°	12704.7	10414.8	10478.8	10453.8	11832.0	17342.3	15397.3	11907.8
77.5°	8889.1	7545.7	7580.4	7722.3	7954.5	13079.5	11000.3	8698.6
80°	6112.5	5726.5	5917.1	5928.9	5513.0	8786.2	8127.0	6981.0
82.5°	4552.7	3980.4	3934.5	4001.3	4320.4	7118.7	6245.3	4842.0
85°	3728.0	2356.7	1894.9	2375.4	3828.8	7049.8	4148.7	2554.2
87.5°	2099.4	1118.9	505.5	937.4	1527.8	4667.4	1198.8	326.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)