

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: P299386

Luminaire Tested: **GLNA-AF-09-LED-E1-SLR**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299386  
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-09-LED-E1-SLR  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(9) 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: 46612.1 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

Input Watts (W): 501  
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

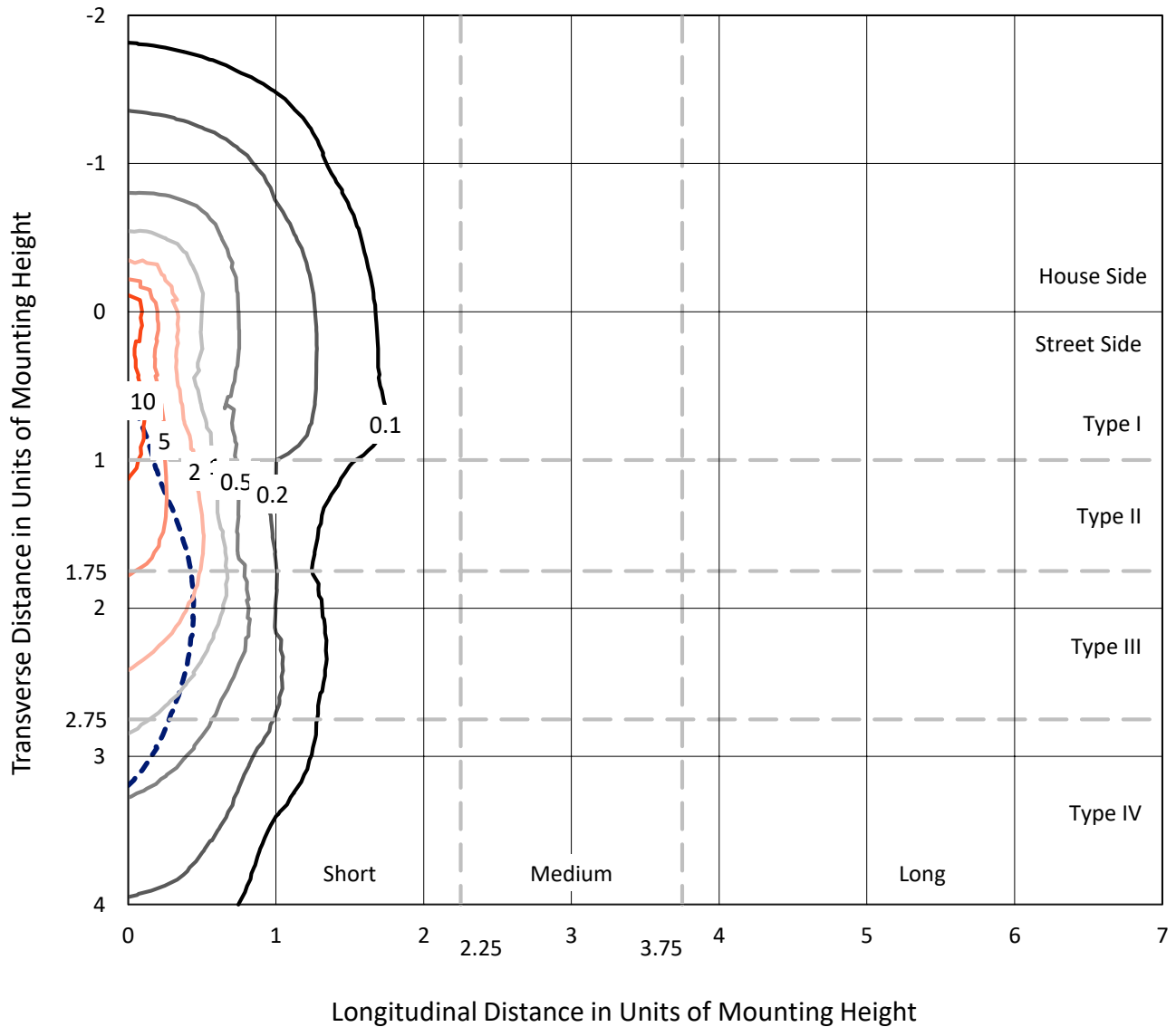


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

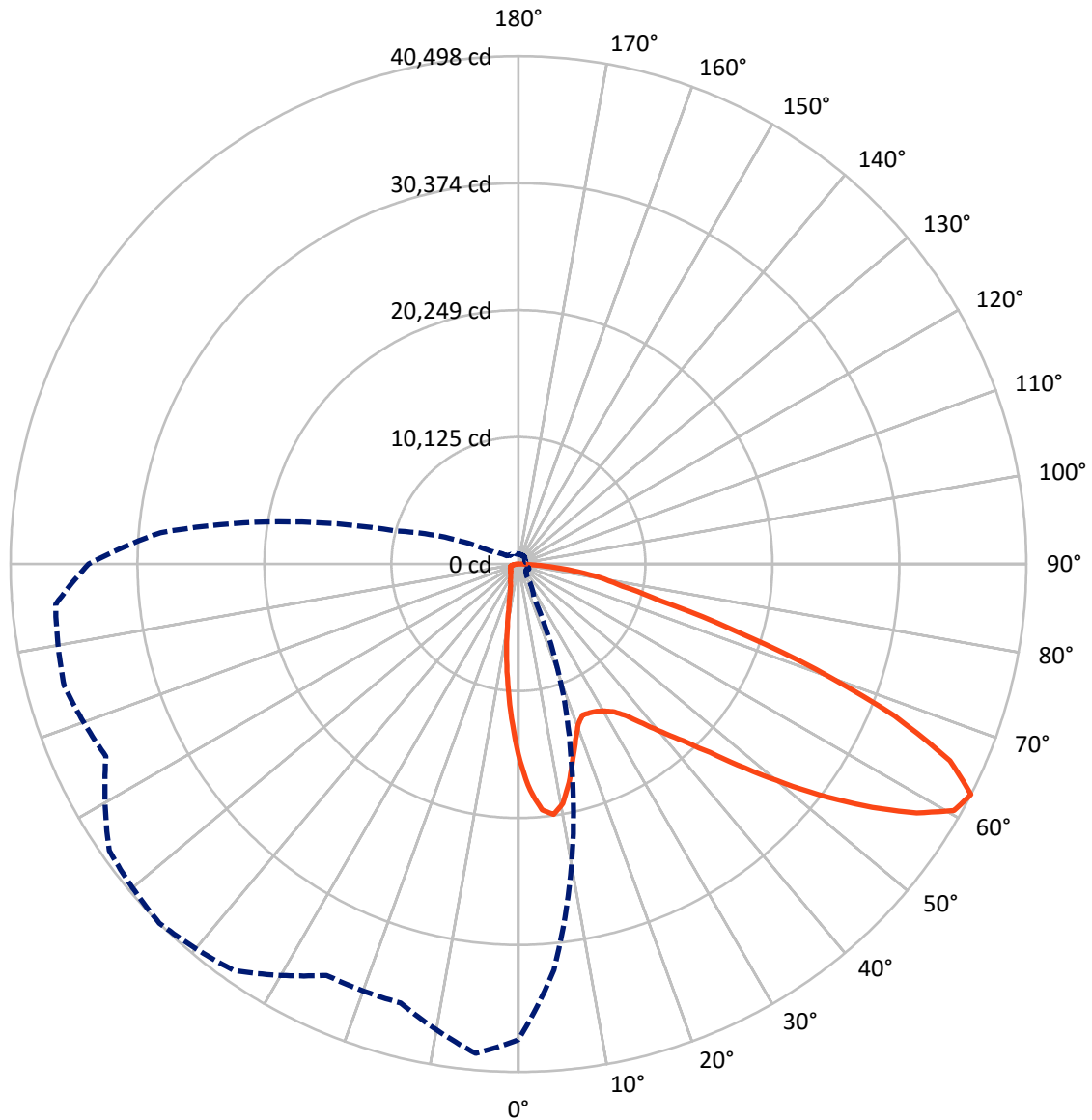


Based on 30 foot mounting height. Maximum calculated value = 17.5 fc  
 Type IV - Short - Non-Cutoff

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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
<b>House Side</b>	Lumens	7713.7	0.0	7713.7
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	38898.4	0.0	38898.4
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	46612.1	0.0	46612.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1146.4	2.5
10°-20°	2102.2	4.5
20°-30°	3065.0	6.6
30°-40°	4720.5	10.1
40°-50°	6947.3	14.9
50°-60°	10190.2	21.9
60°-70°	11391.2	24.4
70°-80°	5577.0	12.0
80°-90°	1472.5	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°	46612.1	100.0
0°-180°	46612.1	100.0



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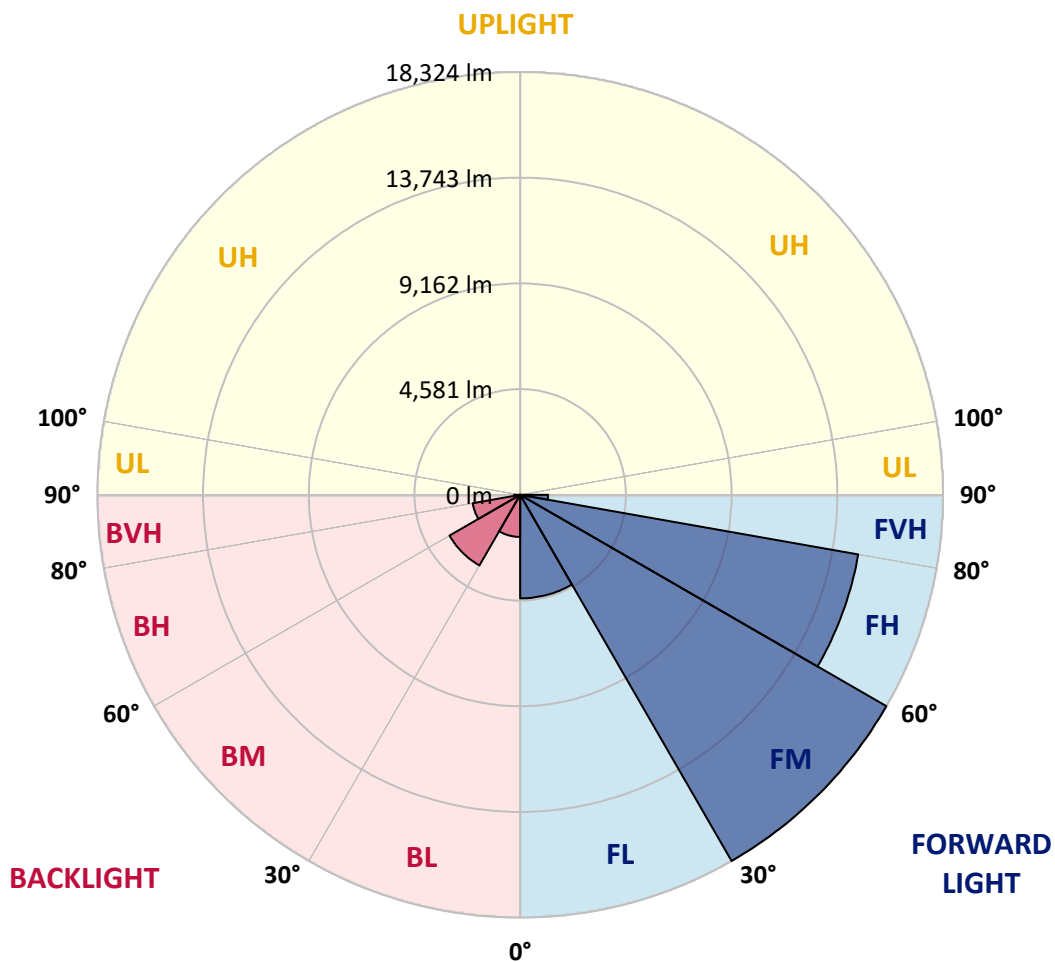
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4488.6	9.6			
FM	(30°-60°)	18323.6	39.3			
FH	(60°-80°)	14877.0	31.9			G5
FVH	(80°-90°)	1209.2	2.6			G5
BL	(0°-30°)	1824.9	3.9	B3/2500		
BM	(30°-60°)	3534.4	7.6	B3/5000		
BH	(60°-80°)	2091.2	4.5	B3/2500		G3/2500
BVH	(80°-90°)	263.2	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°	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4
2.5°	16362.7	16029.9	15476.1	14899.7	14549.1	14138.8	13818.4	13536.8	12972.9	12862.7	12962.8
5°	15386.9	14718.2	13674.9	12624.6	11924.9	11174.0	10589.9	10121.4	9406.2	9280.5	9431.8
7.5°	13821.5	13021.8	11643.3	10302.9	9313.9	8376.1	7746.2	7243.5	6685.0	6444.6	6459.3
10°	12471.0	11568.9	9939.1	8481.6	7671.7	7038.7	6508.2	5993.1	5426.8	5055.3	4952.9
12.5°	11714.7	10677.6	8798.8	7497.2	6746.3	6080.7	5509.1	4958.3	4353.3	3973.9	3866.9
15°	11584.4	10456.5	8371.4	6867.3	5926.4	5084.0	4409.9	3794.7	3171.9	2864.7	2800.3
17.5°	12150.6	10851.3	8232.6	6305.7	5155.3	4115.1	3287.4	2600.9	2093.6	1940.0	1926.9
20°	13236.6	11610.0	8214.7	5778.2	4394.4	3175.0	2290.7	1791.1	1568.5	1524.3	1527.4
22.5°	14761.7	12785.9	8435.0	5381.1	3694.7	2367.5	1722.1	1498.7	1411.8	1370.7	1370.7
25°	16734.3	14405.6	8942.3	5091.7	3087.3	1891.2	1519.6	1386.2	1304.0	1276.0	1281.5
27.5°	18646.4	15981.1	9531.9	4863.7	2690.1	1716.6	1439.7	1319.5	1248.1	1219.4	1232.6
30°	20137.3	17380.4	10023.7	4553.4	2487.7	1667.8	1468.4	1345.1	1242.7	1199.2	1201.6
32.5°	21372.2	18605.3	10436.3	4330.0	2308.5	1429.6	1265.9	1211.7	1199.2	1148.0	1122.4
35°	22950.8	19940.3	10713.3	4335.4	2223.9	1276.0	1127.1	1032.5	963.4	904.5	904.5
37.5°	24800.8	21472.3	11008.0	4394.4	2193.7	1186.1	1079.0	983.6	920.0	863.4	853.3
40°	26629.9	22974.0	11277.2	4451.0	2175.1	1132.5	1040.2	953.3	894.4	837.8	822.2
42.5°	28186.0	24209.0	11517.7	4478.9	2113.8	1127.1	1012.3	932.4	876.5	814.5	799.8
45°	29336.4	25243.8	11776.7	4522.4	2052.5	1148.0	1012.3	930.1	861.0	802.1	786.6
47.5°	30363.4	26458.5	12209.6	4522.4	1978.0	1109.3	1045.6	932.4	858.7	796.6	784.2
50°	31739.5	28123.9	13029.5	4417.6	1873.3	1068.1	1101.5	922.3	835.4	786.6	771.1
52.5°	33635.3	30258.7	14331.1	4235.3	1712.0	989.0	1093.7	917.7	812.2	761.0	743.1
55°	35877.9	32543.9	15750.7	4022.8	1470.7	932.4	1055.7	904.5	786.6	729.9	712.1
57.5°	37627.9	34117.0	16749.8	3694.7	1260.5	902.1	935.5	892.1	755.5	696.6	681.8
60°	38324.5	34055.8	17024.4	3256.4	1158.1	876.5	817.6	999.1	729.9	671.0	653.1
62.5°	37948.2	32482.6	16255.7	2949.2	1134.9	843.2	766.4	924.6	709.8	653.1	627.5
65°	36208.3	29694.7	14218.7	2867.0	1201.6	809.8	733.0	725.3	681.8	627.5	601.9
67.5°	32418.2	25528.4	11384.2	2874.8	1286.1	776.5	699.7	664.0	643.1	599.6	576.3
70°	26405.0	20183.8	8486.2	2895.7	1329.6	737.7	664.0	625.2	601.9	558.5	543.0
72.5°	19415.1	15556.0	6165.3	2762.3	1337.3	694.3	615.1	581.8	558.5	512.7	499.6
75°	13283.2	11899.3	4276.5	2288.3	1165.9	633.0	560.8	530.6	515.1	458.4	450.7
77.5°	9703.3	8932.2	2736.7	1698.8	899.0	556.2	494.9	471.6	461.5	399.5	389.4
80°	7787.3	7066.7	1712.0	1163.6	658.6	466.2	415.0	402.6	391.7	330.5	322.7
82.5°	5401.2	4732.6	1099.2	755.5	494.9	361.5	328.1	322.7	307.2	251.3	243.6
85°	2849.2	2569.9	696.6	515.1	358.4	248.2	228.1	228.1	220.3	166.8	161.3
87.5°	363.8	591.9	353.7	269.2	197.0	110.2	110.2	107.8	115.6	94.6	82.2
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°	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4
2.5°	12727.0	12850.3	12732.4	12740.2	12870.5	13259.9	13436.8	13582.6	13739.3	13841.7	13887.4
5°	9224.7	9511.7	9608.7	9813.4	10116.0	10613.2	10810.2	10953.7	11049.1	11105.0	11128.3
7.5°	6308.8	6482.6	6677.3	7007.7	7666.3	7958.7	8089.0	8055.7	7948.6	7909.9	7871.9
10°	4755.8	4686.8	4650.3	4832.6	5365.5	5660.3	5752.6	5662.6	5603.7	5616.9	5680.5
12.5°	3684.6	3564.4	3418.5	3397.6	3749.0	4012.7	4071.7	4076.3	4184.2	4278.8	4420.0
15°	2685.5	2672.3	2600.9	2557.5	2756.9	2972.5	2998.1	3043.9	3141.6	3210.6	3333.2
17.5°	1893.5	1962.5	2019.2	2047.1	2198.3	2351.9	2324.0	2300.7	2282.9	2282.9	2341.9
20°	1527.4	1573.1	1645.3	1726.7	1881.1	1988.1	1919.1	1826.8	1760.1	1739.9	1747.7
22.5°	1376.1	1411.8	1452.9	1524.3	1663.1	1737.6	1663.1	1596.4	1529.7	1506.4	1498.7
25°	1299.3	1345.1	1383.9	1437.4	1539.8	1591.0	1519.6	1470.7	1429.6	1401.7	1380.8
27.5°	1255.9	1296.2	1307.1	1332.7	1419.5	1465.3	1429.6	1409.5	1383.9	1358.3	1332.7
30°	1209.3	1201.6	1183.7	1186.1	1255.9	1301.6	1299.3	1304.0	1301.6	1293.9	1289.2
32.5°	1104.6	1089.1	1073.6	1089.1	1152.7	1193.8	1196.9	1207.0	1207.0	1204.7	1224.8
35°	920.0	947.9	965.8	1012.3	1089.1	1124.8	1109.3	1083.7	1037.9	1009.2	1006.9
37.5°	850.9	855.6	886.6	950.2	1035.6	1068.1	1045.6	986.7	955.7	950.2	958.0
40°	817.6	822.2	840.1	899.0	983.6	1016.9	996.8	953.3	924.6	922.3	935.5
42.5°	794.3	799.8	809.8	850.9	920.0	961.1	963.4	932.4	899.0	902.1	914.6
45°	781.1	784.2	781.1	802.1	865.7	914.6	935.5	914.6	886.6	892.1	906.8
47.5°	778.8	771.1	761.0	766.4	833.1	881.2	906.8	899.0	886.6	892.1	904.5
50°	768.7	750.9	737.7	735.4	802.1	853.3	876.5	876.5	881.2	892.1	904.5
52.5°	737.7	717.5	717.5	709.8	781.1	830.0	845.5	847.8	855.6	873.4	892.1
55°	699.7	691.9	699.7	686.5	766.4	812.2	819.9	825.3	830.0	845.5	871.1
57.5°	666.3	656.2	674.1	668.7	753.2	794.3	794.3	804.4	804.4	825.3	845.5
60°	648.5	627.5	635.3	640.7	735.4	778.8	774.2	784.2	788.9	807.5	822.2
62.5°	625.2	607.4	607.4	619.8	715.2	755.5	753.2	761.0	781.1	786.6	802.1
65°	597.3	589.5	581.8	597.3	694.3	729.9	733.0	743.1	761.0	766.4	778.8
67.5°	568.6	571.7	556.2	571.7	676.4	704.3	704.3	725.3	733.0	743.1	755.5
70°	538.3	540.7	527.5	546.1	664.0	676.4	674.1	702.0	707.4	715.2	727.6
72.5°	499.6	499.6	494.9	520.5	643.1	648.5	643.1	666.3	668.7	676.4	681.8
75°	458.4	458.4	453.8	489.5	630.6	617.5	601.9	619.8	625.2	630.6	630.6
77.5°	404.9	410.3	410.3	453.8	586.4	605.0	553.1	563.9	571.7	574.0	566.3
80°	338.2	351.4	356.0	412.7	491.8	558.5	494.9	501.9	505.0	505.0	494.9
82.5°	259.1	281.6	294.8	356.0	377.0	468.5	430.5	438.3	430.5	415.0	410.3
85°	179.2	210.2	225.7	271.5	284.7	361.5	358.4	358.4	343.6	322.7	320.4
87.5°	97.7	115.6	125.7	161.3	194.7	243.6	263.7	256.0	243.6	230.4	233.5
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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**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4
2.5°	14128.7	14477.0	15033.2	15458.2	15886.4	16299.1	16745.1	17085.7	17375.0	17488.3	17831.1
5°	11361.7	11796.9	12322.1	13270.0	13941.7	14681.8	15538.1	16670.7	17105.8	17708.6	18694.5
7.5°	8033.2	8427.3	9272.8	10039.2	10990.2	12038.2	13193.2	14756.2	15327.9	16293.7	17900.2
10°	5998.5	6457.0	7135.7	7781.9	8619.6	9690.9	11018.1	12765.8	13460.0	14508.0	16358.1
12.5°	4832.6	5373.3	6093.2	6700.5	7349.0	8104.6	9393.8	11309.8	12240.6	13157.5	15027.7
15°	3712.5	4278.8	4948.2	5719.3	6433.7	7249.0	8599.5	10695.4	11765.9	12722.3	14318.0
17.5°	2569.9	3053.9	3897.1	4701.5	5616.9	6659.4	8379.2	10825.7	12104.1	13206.4	14441.3
20°	1822.1	2098.3	2790.2	3723.4	4863.7	6172.3	8338.0	11512.2	13175.3	14433.5	15230.2
22.5°	1532.0	1634.4	2037.0	2892.6	4209.7	5808.5	8481.6	12475.7	14620.5	16227.0	16488.4
25°	1396.3	1458.3	1667.8	2270.5	3628.0	5544.7	8965.6	13910.7	16409.3	18021.2	17974.6
27.5°	1321.8	1386.2	1524.3	1916.8	3190.5	5381.1	9449.6	15612.6	18454.0	19968.2	19394.2
30°	1299.3	1386.2	1532.0	1806.6	2877.9	5122.0	9846.8	17105.8	20027.1	21283.0	20040.3
32.5°	1281.5	1293.9	1360.6	1557.6	2580.0	4819.5	10116.0	18446.3	21566.9	22533.4	20970.4
35°	1035.6	1099.2	1207.0	1396.3	2406.2	4637.9	10116.0	19602.1	23084.2	23796.3	21857.0
37.5°	996.8	1053.4	1148.0	1309.4	2308.5	4548.0	9913.5	20716.7	24634.1	25229.0	22587.0
40°	976.6	1022.4	1112.4	1242.7	2267.4	4445.6	9618.7	21700.3	26148.2	26663.3	23268.8
42.5°	961.1	1002.2	1086.8	1201.6	2213.9	4333.1	9380.6	22489.2	27463.0	27888.1	23919.6
45°	953.3	996.8	1089.1	1222.5	2106.0	4184.2	9301.5	23342.5	28544.4	28910.5	24624.0
47.5°	953.3	1004.5	1101.5	1265.9	1978.0	4030.6	9549.7	24468.1	29566.8	29745.9	25454.0
50°	945.6	1002.2	1138.0	1222.5	1791.1	3835.9	10133.8	25884.5	30673.7	30693.9	26505.1
52.5°	930.1	996.8	1224.8	1196.9	1575.5	3579.9	10923.5	27704.3	32311.2	32433.8	28149.5
55°	912.2	989.0	1201.6	1138.0	1399.4	3275.0	11568.9	29915.0	34611.9	34952.5	30569.0
57.5°	889.0	978.9	1163.6	1055.7	1283.8	2882.5	11802.3	31534.7	36218.4	37074.0	33294.8
60°	868.8	971.2	1050.3	1006.9	1211.7	2552.1	11350.9	31214.4	36108.3	37952.9	35711.1
62.5°	847.8	978.9	958.0	976.6	1178.3	2339.5	10172.6	28649.1	34281.5	37046.1	37502.2
65°	825.3	909.9	904.5	950.2	1171.3	2255.0	8432.7	24803.2	30750.5	34179.1	37925.0
67.5°	794.3	840.1	865.7	917.7	1196.9	2180.5	6805.3	20460.0	25843.4	29881.7	35721.2
70°	761.0	799.8	827.7	876.5	1181.4	2147.2	5660.3	16134.7	20506.5	24490.5	31373.4
72.5°	717.5	750.9	776.5	822.2	1165.9	2129.3	4781.4	12993.8	15310.1	18192.6	25508.3
75°	666.3	696.6	715.2	761.0	1117.0	1950.1	3759.1	10994.8	11456.4	12655.6	20316.5
77.5°	607.4	630.6	645.4	696.6	989.0	1622.0	2718.8	8481.6	8896.6	9188.2	15576.1
80°	538.3	560.8	568.6	617.5	819.9	1268.3	1773.3	6264.6	6654.0	6720.7	10172.6
82.5°	458.4	481.7	481.7	527.5	671.0	912.2	1163.6	4292.0	4368.8	4594.5	7190.0
85°	369.2	387.1	387.1	410.3	520.5	681.8	799.8	2154.9	2131.6	2434.2	6228.9
87.5°	263.7	276.9	289.3	294.8	371.6	450.7	481.7	656.2	432.8	497.2	3999.5
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: P299386

CATALOG NUMBER: GLNA-AF-09-LED-E1-SLR

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4	15748.4
2.5°	18090.2	18236.0	18087.1	17980.1	17516.2	17134.5	16624.1	16362.7
5°	19445.4	19816.9	19691.3	19240.6	18271.7	17182.6	15945.4	15386.9
7.5°	19281.7	20145.0	20165.2	19322.8	17895.5	16291.3	14615.8	13821.5
10°	18005.7	19109.5	19425.2	18607.6	17093.4	15300.0	13377.8	12471.0
12.5°	16580.7	17662.0	17903.3	17620.9	16355.7	14553.8	12604.4	11714.7
15°	15414.8	15899.6	16185.9	16432.5	15722.8	14256.7	12560.2	11584.4
17.5°	14705.0	14651.5	14733.7	15161.1	15281.4	14597.2	13226.5	12150.6
20°	14449.1	13626.8	13605.9	14195.4	15074.3	15410.1	14528.2	13236.6
22.5°	14590.2	13257.6	13088.5	13788.1	15184.4	16580.7	16234.7	14761.7
25°	15076.6	13288.6	13152.1	13829.3	15583.9	17828.8	18077.0	16734.3
27.5°	15843.0	13483.3	13303.3	13998.4	16114.5	18876.8	19891.4	18646.4
30°	16570.6	13821.5	13598.1	14331.1	16598.5	19291.8	21003.8	20137.3
32.5°	17454.9	14454.5	14062.0	14943.2	17198.1	19952.7	21995.1	21372.2
35°	18320.6	15355.8	14869.5	15888.8	17866.8	20775.7	23127.6	22950.8
37.5°	19271.6	16534.9	16132.3	17111.3	18782.1	21551.4	24572.8	24800.8
40°	20286.2	18098.0	17620.9	18894.6	20201.7	22525.7	26082.3	26629.9
42.5°	21308.6	19832.4	19263.8	20554.6	21761.6	23486.0	27373.1	28186.0
45°	22479.1	21715.9	21446.7	22842.9	23261.1	24401.3	28326.4	29336.4
47.5°	23842.8	23852.9	24285.8	24844.3	24772.9	25436.1	29285.2	30363.4
50°	25433.8	26519.8	27476.2	27847.0	26330.5	26548.5	30614.7	31739.5
52.5°	27345.1	29710.3	30894.0	30650.4	28009.1	27906.0	32720.8	33635.3
55°	29735.9	33087.7	34263.6	34089.1	29938.3	29756.0	35345.0	35877.9
57.5°	32502.8	36359.6	37440.9	36656.7	32254.6	31786.0	37515.4	37627.9
60°	34934.6	38952.8	39900.7	39031.9	34591.8	33945.6	38870.6	38324.5
62.5°	36287.5	39831.7	40498.0	39562.5	36192.8	36246.4	39167.7	37948.2
65°	35683.2	37610.0	37824.9	37748.1	35780.2	37581.3	38099.5	36208.3
67.5°	32372.5	31993.2	32354.6	32854.2	32244.5	35823.6	35139.4	32418.2
70°	26540.7	24457.2	25177.8	25512.9	25789.9	30827.3	30499.2	26405.0
72.5°	20001.5	17134.5	17703.1	17634.1	18914.8	24726.4	23719.5	19415.1
75°	14172.1	11617.7	11689.1	11661.2	13198.6	19345.3	17175.7	13283.2
77.5°	9915.8	8417.2	8456.0	8614.2	8873.3	14590.2	12270.9	9703.3
80°	6818.4	6387.9	6600.5	6613.7	6149.8	9801.0	9065.7	7787.3
82.5°	5078.5	4440.1	4388.9	4463.4	4819.5	7940.9	6966.6	5401.2
85°	4158.6	2628.9	2113.8	2649.8	4271.0	7864.1	4627.9	2849.2
87.5°	2341.9	1248.1	563.9	1045.6	1704.2	5206.5	1337.3	363.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)