

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: P299506

Luminaire Tested: **GLNA-AF-09-LED-E1-SLR-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299506  
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-600  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill  
Light Eliminator Right OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30706.4 lumens  
Efficiency: N/A  
Efficacy: 105.9 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

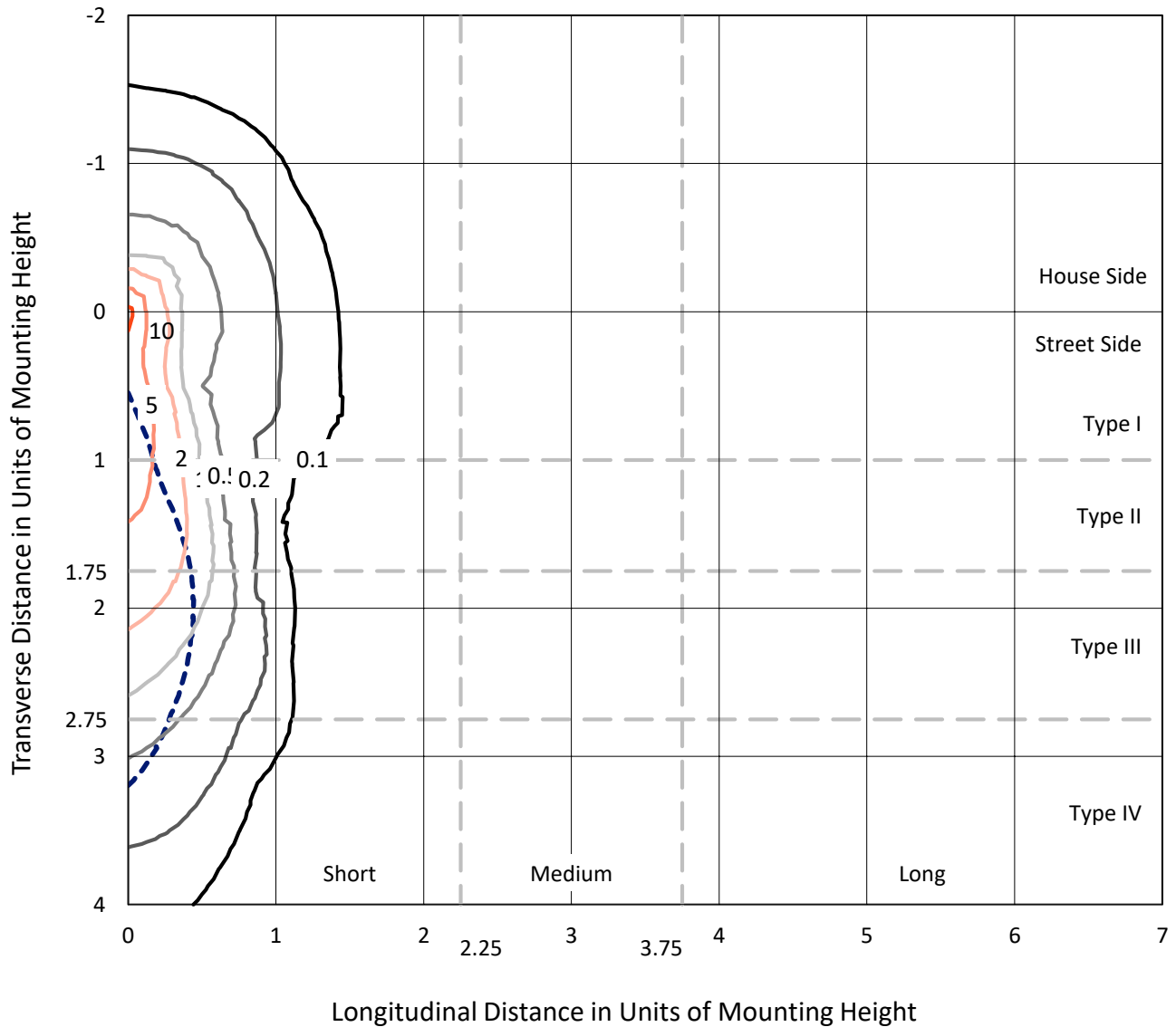
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

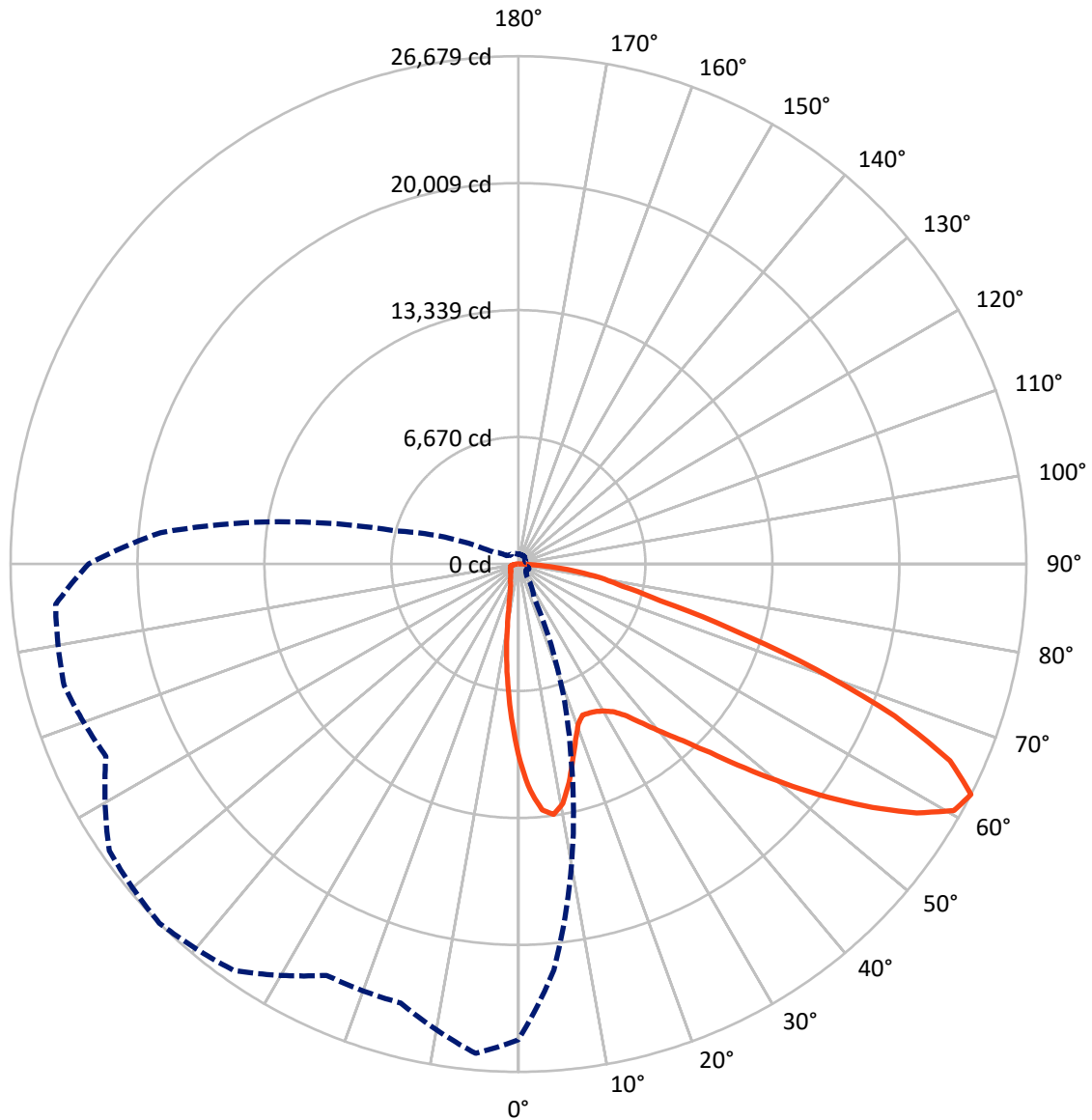
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.5 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	5081.5	0.0	5081.5
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	25624.9	0.0	25624.9
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	30706.4	0.0	30706.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	755.2	2.5
10°-20°	1384.8	4.5
20°-30°	2019.1	6.6
30°-40°	3109.7	10.1
40°-50°	4576.6	14.9
50°-60°	6712.9	21.9
60°-70°	7504.1	24.4
70°-80°	3673.9	12.0
80°-90°	970.0	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°	30706.4	100.0
0°-180°	30706.4	100.0



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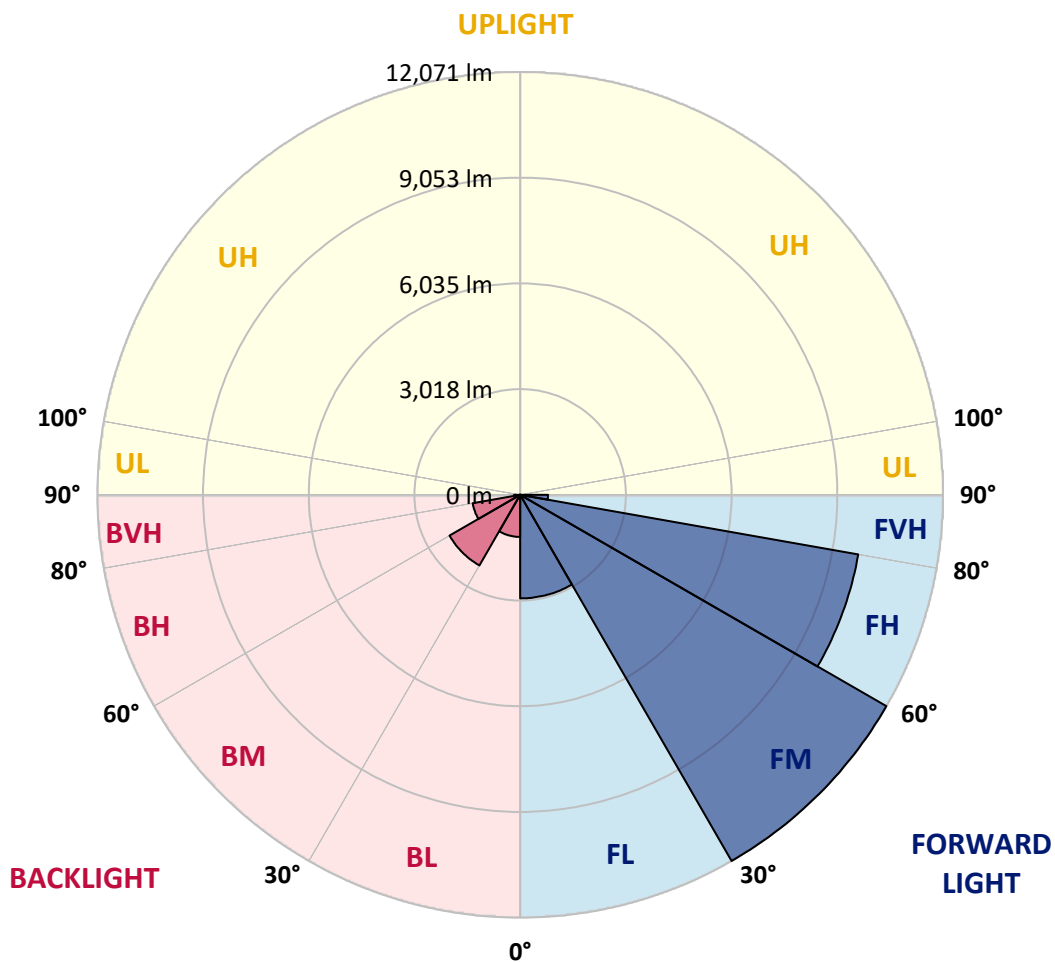
CATALOG NUMBER: GLNA-AF-09-LED-E1-SLR-600

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2956.9	9.6			
FM	(30°-60°)	12070.9	39.3			
FH	(60°-80°)	9800.4	31.9			G4/12000
FVH	(80°-90°)	796.6	2.6			G5
BL	(0°-30°)	1202.2	3.9	B3/2500		
BM	(30°-60°)	2328.3	7.6	B2/2500		
BH	(60°-80°)	1377.6	4.5	B3/2500		G3/2500
BVH	(80°-90°)	173.4	0.6			G2/225
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°	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4
2.5°	10779.2	10559.9	10195.1	9815.4	9584.4	9314.1	9103.1	8917.6	8546.1	8473.5	8539.4
5°	10136.3	9695.8	9008.5	8316.6	7855.7	7361.0	6976.3	6667.6	6196.5	6113.7	6213.3
7.5°	9105.1	8578.3	7670.2	6787.2	6135.7	5517.8	5102.9	4771.8	4403.9	4245.4	4255.1
10°	8215.4	7621.1	6547.5	5587.3	5053.9	4636.9	4287.3	3948.0	3575.0	3330.2	3262.8
12.5°	7717.2	7034.0	5796.3	4938.9	4444.2	4005.8	3629.2	3266.4	2867.8	2617.9	2547.4
15°	7631.4	6888.4	5514.8	4523.9	3904.1	3349.1	2905.1	2499.8	2089.5	1887.1	1844.7
17.5°	8004.4	7148.5	5423.3	4154.0	3396.1	2710.9	2165.6	1713.4	1379.2	1278.0	1269.3
20°	8719.8	7648.2	5411.6	3806.5	2894.9	2091.5	1509.0	1179.9	1033.3	1004.1	1006.2
22.5°	9724.4	8422.9	5556.7	3544.9	2433.9	1559.6	1134.4	987.3	930.0	902.9	902.9
25°	11023.9	9489.9	5890.9	3354.2	2033.8	1245.8	1001.1	913.2	859.0	840.6	844.2
27.5°	12283.6	10527.7	6279.2	3204.0	1772.2	1130.9	948.4	869.2	822.2	803.3	812.0
30°	13265.7	11449.6	6603.2	2999.6	1638.8	1098.7	967.3	886.1	818.6	790.0	791.5
32.5°	14079.2	12256.5	6875.1	2852.4	1520.8	941.8	834.0	798.2	790.0	756.3	739.4
35°	15119.1	13135.9	7057.5	2856.0	1465.1	840.6	742.5	680.1	634.7	595.8	595.8
37.5°	16337.9	14145.2	7251.7	2894.9	1445.1	781.3	710.8	648.0	606.1	568.7	562.1
40°	17542.8	15134.5	7429.0	2932.2	1432.9	746.1	685.3	628.0	589.2	551.9	541.7
42.5°	18567.9	15948.0	7587.4	2950.5	1392.5	742.5	666.9	614.2	577.4	536.6	526.8
45°	19325.7	16629.7	7758.1	2979.2	1352.1	756.3	666.9	612.7	567.2	528.4	518.2
47.5°	20002.3	17429.9	8043.2	2979.2	1303.1	730.7	688.8	614.2	565.7	524.8	516.6
50°	20908.8	18527.0	8583.4	2910.2	1234.1	703.7	725.6	607.6	550.4	518.2	507.9
52.5°	22157.7	19933.3	9440.8	2790.1	1127.8	651.5	720.5	604.5	535.0	501.3	489.5
55°	23635.1	21438.8	10376.0	2650.1	968.9	614.2	695.5	595.8	518.2	480.9	469.1
57.5°	24787.9	22475.1	11034.2	2433.9	830.4	594.3	616.3	587.7	497.7	458.9	449.2
60°	25246.8	22434.7	11215.1	2145.2	762.9	577.4	538.6	658.2	480.9	442.0	430.3
62.5°	24998.9	21398.4	10708.6	1942.8	747.6	555.5	504.9	609.1	467.6	430.3	413.4
65°	23852.7	19561.8	9366.7	1888.7	791.5	533.5	482.9	477.8	449.2	413.4	396.5
67.5°	21356.0	16817.2	7499.5	1893.8	847.2	511.5	460.9	437.4	423.6	395.0	379.7
70°	17394.7	13296.4	5590.4	1907.6	875.9	486.0	437.4	411.9	396.5	367.9	357.7
72.5°	12790.0	10247.7	4061.5	1819.7	881.0	457.4	405.2	383.3	367.9	337.8	329.1
75°	8750.5	7838.8	2817.2	1507.5	768.0	417.0	369.5	349.5	339.3	302.0	296.9
77.5°	6392.2	5884.2	1802.8	1119.1	592.3	366.4	326.0	310.7	304.0	263.2	256.5
80°	5130.0	4655.3	1127.8	766.5	433.8	307.1	273.4	265.2	258.1	217.7	212.6
82.5°	3558.1	3117.6	724.1	497.7	326.0	238.1	216.2	212.6	202.4	165.6	160.5
85°	1876.9	1693.0	458.9	339.3	236.1	163.5	150.2	150.2	145.1	109.9	106.3
87.5°	239.7	389.9	233.0	177.3	129.8	72.6	72.6	71.0	76.1	62.3	54.2
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°	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4
2.5°	8384.1	8465.3	8387.7	8392.8	8478.6	8735.1	8851.6	8947.7	9050.9	9118.4	9148.5
5°	6076.9	6266.0	6329.8	6464.7	6664.0	6991.6	7121.4	7215.9	7278.8	7315.6	7330.9
7.5°	4156.0	4270.5	4398.7	4616.4	5050.3	5242.9	5328.8	5306.8	5236.3	5210.7	5185.7
10°	3133.0	3087.5	3063.5	3183.6	3534.6	3728.8	3789.6	3730.3	3691.5	3700.2	3742.1
12.5°	2427.3	2348.1	2252.0	2238.2	2469.7	2643.4	2682.3	2685.3	2756.4	2818.7	2911.7
15°	1769.1	1760.4	1713.4	1684.8	1816.1	1958.2	1975.0	2005.2	2069.6	2115.1	2195.8
17.5°	1247.4	1292.8	1330.1	1348.5	1448.2	1549.4	1531.0	1515.6	1503.9	1503.9	1542.7
20°	1006.2	1036.3	1083.8	1137.5	1239.2	1309.7	1264.2	1203.4	1159.5	1146.2	1151.3
22.5°	906.5	930.0	957.1	1004.1	1095.6	1144.7	1095.6	1051.7	1007.7	992.4	987.3
25°	855.9	886.1	911.6	946.9	1014.3	1048.1	1001.1	968.9	941.8	923.4	909.6
27.5°	827.3	853.9	861.0	877.9	935.1	965.3	941.8	928.5	911.6	894.8	877.9
30°	796.7	791.5	779.8	781.3	827.3	857.5	855.9	859.0	857.5	852.4	849.3
32.5°	727.7	717.5	707.2	717.5	759.4	786.4	788.5	795.1	795.1	793.6	806.9
35°	606.1	624.4	636.2	666.9	717.5	741.0	730.7	713.9	683.7	664.8	663.3
37.5°	560.6	563.6	584.1	626.0	682.2	703.7	688.8	650.0	629.6	626.0	631.1
40°	538.6	541.7	553.4	592.3	648.0	669.9	656.6	628.0	609.1	607.6	616.3
42.5°	523.3	526.8	533.5	560.6	606.1	633.1	634.7	614.2	592.3	594.3	602.5
45°	514.6	516.6	514.6	528.4	570.3	602.5	616.3	602.5	584.1	587.7	597.4
47.5°	513.1	507.9	501.3	504.9	548.8	580.5	597.4	592.3	584.1	587.7	595.8
50°	506.4	494.7	486.0	484.4	528.4	562.1	577.4	577.4	580.5	587.7	595.8
52.5°	486.0	472.7	472.7	467.6	514.6	546.8	557.0	558.5	563.6	575.4	587.7
55°	460.9	455.8	460.9	452.2	504.9	535.0	540.1	543.7	546.8	557.0	573.9
57.5°	439.0	432.3	444.1	440.5	496.2	523.3	523.3	529.9	529.9	543.7	557.0
60°	427.2	413.4	418.5	422.1	484.4	513.1	510.0	516.6	519.7	532.0	541.7
62.5°	411.9	400.1	400.1	408.3	471.1	497.7	496.2	501.3	514.6	518.2	528.4
65°	393.5	388.4	383.3	393.5	457.4	480.9	482.9	489.5	501.3	504.9	513.1
67.5°	374.6	376.6	366.4	376.6	445.6	464.0	464.0	477.8	482.9	489.5	497.7
70°	354.6	356.2	347.5	359.7	437.4	445.6	444.1	462.5	466.0	471.1	479.3
72.5°	329.1	329.1	326.0	342.9	423.6	427.2	423.6	439.0	440.5	445.6	449.2
75°	302.0	302.0	298.9	322.4	415.4	406.8	396.5	408.3	411.9	415.4	415.4
77.5°	266.7	270.3	270.3	298.9	386.3	398.6	364.3	371.5	376.6	378.1	373.0
80°	222.8	231.5	234.6	271.9	324.0	367.9	326.0	330.6	332.7	332.7	326.0
82.5°	170.7	185.5	194.2	234.6	248.3	308.6	283.6	288.7	283.6	273.4	270.3
85°	118.0	138.5	148.7	178.9	187.5	238.1	236.1	236.1	226.4	212.6	211.0
87.5°	64.4	76.1	82.8	106.3	128.3	160.5	173.7	168.6	160.5	151.8	153.8
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°	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4
2.5°	9307.5	9536.9	9903.3	10183.3	10465.4	10737.3	11031.1	11255.4	11446.0	11520.6	11746.5
5°	7484.7	7771.4	8117.3	8741.8	9184.3	9671.8	10236.0	10982.0	11268.7	11665.8	12315.2
7.5°	5292.0	5551.6	6108.6	6613.4	7239.9	7930.3	8691.2	9720.9	10097.5	10733.7	11792.0
10°	3951.6	4253.6	4700.7	5126.4	5678.3	6384.0	7258.3	8409.6	8867.0	9557.3	10776.1
12.5°	3183.6	3539.7	4014.0	4414.1	4841.3	5339.0	6188.3	7450.5	8063.7	8667.7	9899.7
15°	2445.7	2818.7	3259.7	3767.6	4238.3	4775.4	5665.0	7045.8	7750.9	8381.0	9432.2
17.5°	1693.0	2011.8	2567.3	3097.2	3700.2	4387.0	5519.9	7131.6	7973.7	8699.9	9513.4
20°	1200.4	1382.3	1838.1	2452.8	3204.0	4066.1	5492.8	7583.8	8679.4	9508.3	10033.1
22.5°	1009.2	1076.7	1341.9	1905.5	2773.2	3826.4	5587.3	8218.5	9631.4	10689.7	10861.9
25°	919.8	960.7	1098.7	1495.7	2390.0	3652.7	5906.2	9163.9	10809.8	11871.7	11841.0
27.5°	870.8	913.2	1004.1	1262.7	2101.8	3544.9	6225.1	10285.0	12156.8	13154.3	12776.2
30°	855.9	913.2	1009.2	1190.1	1895.8	3374.2	6486.7	11268.7	13193.2	14020.5	13201.8
32.5°	844.2	852.4	896.3	1026.1	1699.6	3174.9	6664.0	12151.7	14207.5	14844.2	13814.5
35°	682.2	724.1	795.1	919.8	1585.1	3055.3	6664.0	12913.1	15207.0	15676.1	14398.6
37.5°	656.6	693.9	756.3	862.6	1520.8	2996.0	6530.7	13647.4	16228.0	16620.0	14879.5
40°	643.4	673.5	732.8	818.6	1493.7	2928.6	6336.5	14295.4	17225.5	17564.8	15328.7
42.5°	633.1	660.2	715.9	791.5	1458.4	2854.5	6179.6	14815.1	18091.7	18371.7	15757.4
45°	628.0	656.6	717.5	805.3	1387.4	2756.4	6127.5	15377.2	18804.0	19045.2	16221.4
47.5°	628.0	661.8	725.6	834.0	1303.1	2655.2	6291.0	16118.7	19477.5	19595.6	16768.2
50°	622.9	660.2	749.6	805.3	1179.9	2526.9	6675.8	17051.8	20206.7	20220.0	17460.6
52.5°	612.7	656.6	806.9	788.5	1037.9	2358.3	7196.0	18250.6	21285.5	21366.2	18543.9
55°	600.9	651.5	791.5	749.6	921.9	2157.5	7621.1	19707.0	22801.1	23025.4	20137.7
57.5°	585.6	644.9	766.5	695.5	845.7	1898.9	7775.0	20773.9	23859.4	24423.0	21933.4
60°	572.3	639.8	691.9	663.3	798.2	1681.2	7477.6	20562.9	23786.8	25002.0	23525.2
62.5°	558.5	644.9	631.1	643.4	776.2	1541.2	6701.3	18873.0	22583.4	24404.6	24705.1
65°	543.7	599.4	595.8	626.0	771.6	1485.5	5555.1	16339.4	20257.3	22516.0	24983.6
67.5°	523.3	553.4	570.3	604.5	788.5	1436.4	4483.1	13478.3	17024.7	19685.0	23531.8
70°	501.3	526.8	545.2	577.4	778.3	1414.5	3728.8	10628.9	13509.0	16133.5	20667.6
72.5°	472.7	494.7	511.5	541.7	768.0	1402.7	3149.8	8559.9	10085.7	11984.6	16803.9
75°	439.0	458.9	471.1	501.3	735.8	1284.7	2476.3	7243.0	7547.1	8337.1	13383.8
77.5°	400.1	415.4	425.2	458.9	651.5	1068.5	1791.1	5587.3	5860.7	6052.9	10261.0
80°	354.6	369.5	374.6	406.8	540.1	835.5	1168.2	4126.9	4383.4	4427.4	6701.3
82.5°	302.0	317.3	317.3	347.5	442.0	600.9	766.5	2827.4	2878.0	3026.7	4736.5
85°	243.2	255.0	255.0	270.3	342.9	449.2	526.8	1419.6	1404.2	1603.5	4103.4
87.5°	173.7	182.4	190.6	194.2	244.8	296.9	317.3	432.3	285.1	327.6	2634.7
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: P299506

CATALOG NUMBER: GLNA-AF-09-LED-E1-SLR-600

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4	10374.4
2.5°	11917.2	12013.2	11915.1	11844.6	11539.0	11287.6	10951.4	10779.2
5°	12809.9	13054.7	12971.9	12675.0	12036.8	11319.3	10504.2	10136.3
7.5°	12702.1	13270.8	13284.1	12729.2	11788.9	10732.2	9628.4	9105.1
10°	11861.5	12588.6	12796.6	12258.0	11260.5	10079.1	8812.8	8215.4
12.5°	10922.8	11635.1	11794.0	11608.0	10774.6	9587.5	8303.3	7717.2
15°	10154.7	10474.1	10662.7	10825.2	10357.6	9391.8	8274.2	7631.4
17.5°	9687.1	9651.9	9706.1	9987.6	10066.8	9616.1	8713.2	8004.4
20°	9518.5	8976.8	8963.0	9351.4	9930.4	10151.6	9570.6	8719.8
22.5°	9611.5	8733.6	8622.2	9083.1	10002.9	10922.8	10694.8	9724.4
25°	9931.9	8754.0	8664.1	9110.2	10266.1	11745.0	11908.5	11023.9
27.5°	10436.8	8882.3	8763.8	9221.6	10615.6	12435.3	13103.7	12283.6
30°	10916.1	9105.1	8957.9	9440.8	10934.5	12708.7	13836.5	13265.7
32.5°	11498.7	9522.1	9263.5	9844.0	11329.5	13144.1	14489.6	14079.2
35°	12068.9	10115.9	9795.5	10466.9	11770.0	13686.3	15235.6	15119.1
37.5°	12695.4	10892.6	10627.4	11272.3	12373.0	14197.3	16187.7	16337.9
40°	13363.8	11922.3	11608.0	12447.1	13308.1	14839.1	17182.1	17542.8
42.5°	14037.3	13064.9	12690.3	13540.6	14335.8	15471.7	18032.4	18567.9
45°	14808.4	14305.6	14128.3	15048.1	15323.5	16074.7	18660.4	19325.7
47.5°	15706.8	15713.4	15998.6	16366.5	16319.5	16756.4	19292.0	20002.3
50°	16754.9	17470.3	18100.4	18344.6	17345.6	17489.2	20167.9	20908.8
52.5°	18014.0	19572.0	20351.8	20191.4	18451.4	18383.4	21555.3	22157.7
55°	19588.9	21797.0	22571.7	22456.7	19722.3	19602.2	23284.0	23635.1
57.5°	21411.7	23952.4	24664.7	24148.1	21248.1	20939.5	24713.8	24787.9
60°	23013.7	25660.7	26285.1	25712.8	22787.8	22362.1	25606.5	25246.8
62.5°	23904.9	26239.7	26678.6	26062.3	23842.5	23877.8	25802.2	24998.9
65°	23506.8	24776.1	24917.7	24867.1	23570.7	24757.2	25098.6	23852.7
67.5°	21325.8	21075.9	21314.1	21643.2	21241.5	23599.3	23148.6	21356.0
70°	17484.1	16111.5	16586.2	16807.0	16989.4	20307.9	20091.7	17394.7
72.5°	13176.3	11287.6	11662.2	11616.7	12460.4	16288.8	15625.5	12790.0
75°	9336.1	7653.3	7700.4	7682.0	8694.8	12744.0	11314.7	8750.5
77.5°	6532.2	5544.9	5570.5	5674.7	5845.4	9611.5	8083.6	6392.2
80°	4491.7	4208.1	4348.2	4356.8	4051.3	6456.6	5972.1	5130.0
82.5°	3345.6	2925.0	2891.3	2940.3	3174.9	5231.2	4589.3	3558.1
85°	2739.5	1731.8	1392.5	1745.6	2813.6	5180.6	3048.7	1876.9
87.5°	1542.7	822.2	371.5	688.8	1122.7	3429.9	881.0	239.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)