

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: P299002

Luminaire Tested: **GLNA-AF-05-LED-E1-SLL-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299002  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191289)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-05-LED-E1-SLL-600  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill  
Light Eliminator Left OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

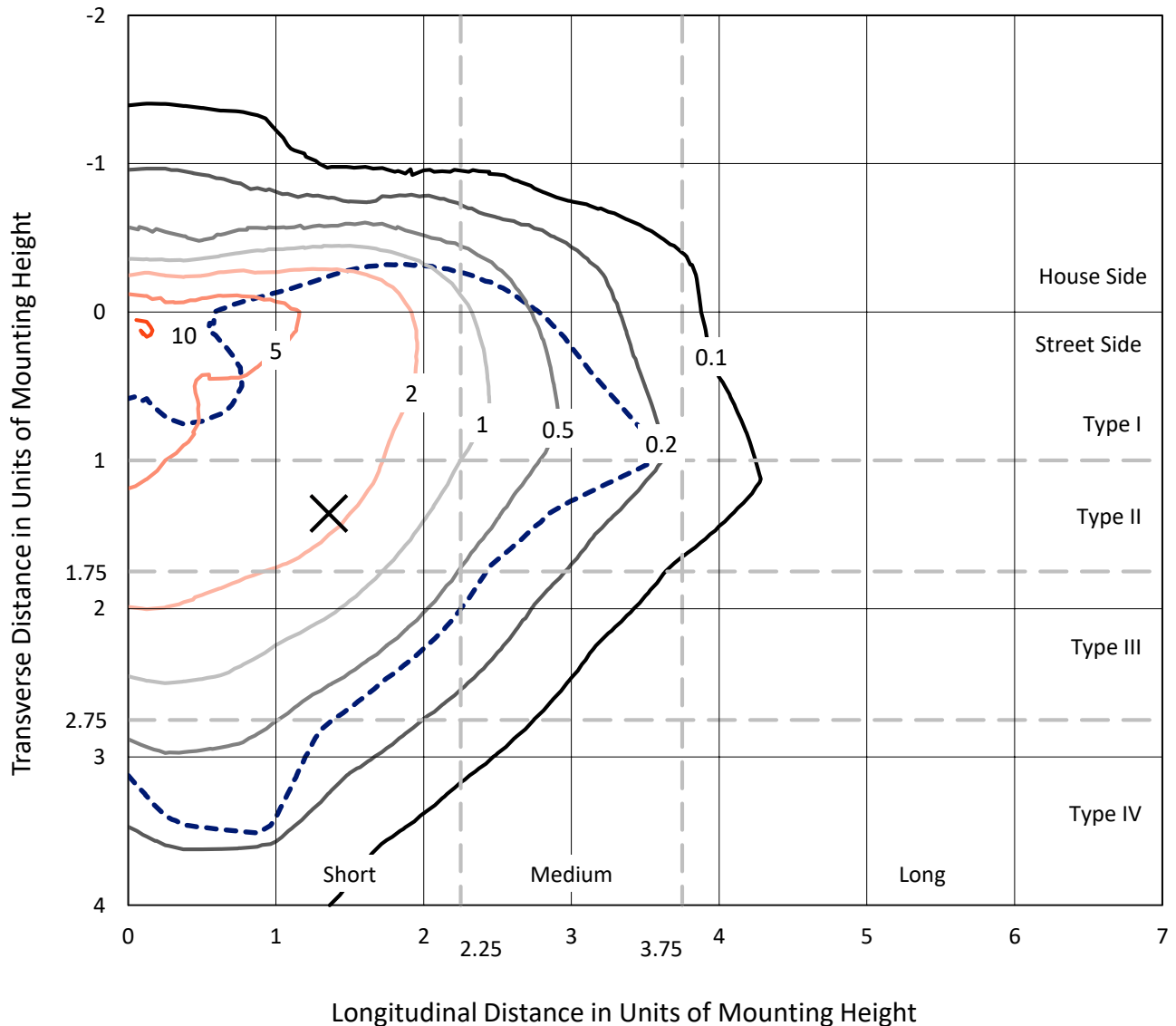
Lumens per Lamp: N/A  
Luminaire Lumens: 17166.9 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (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

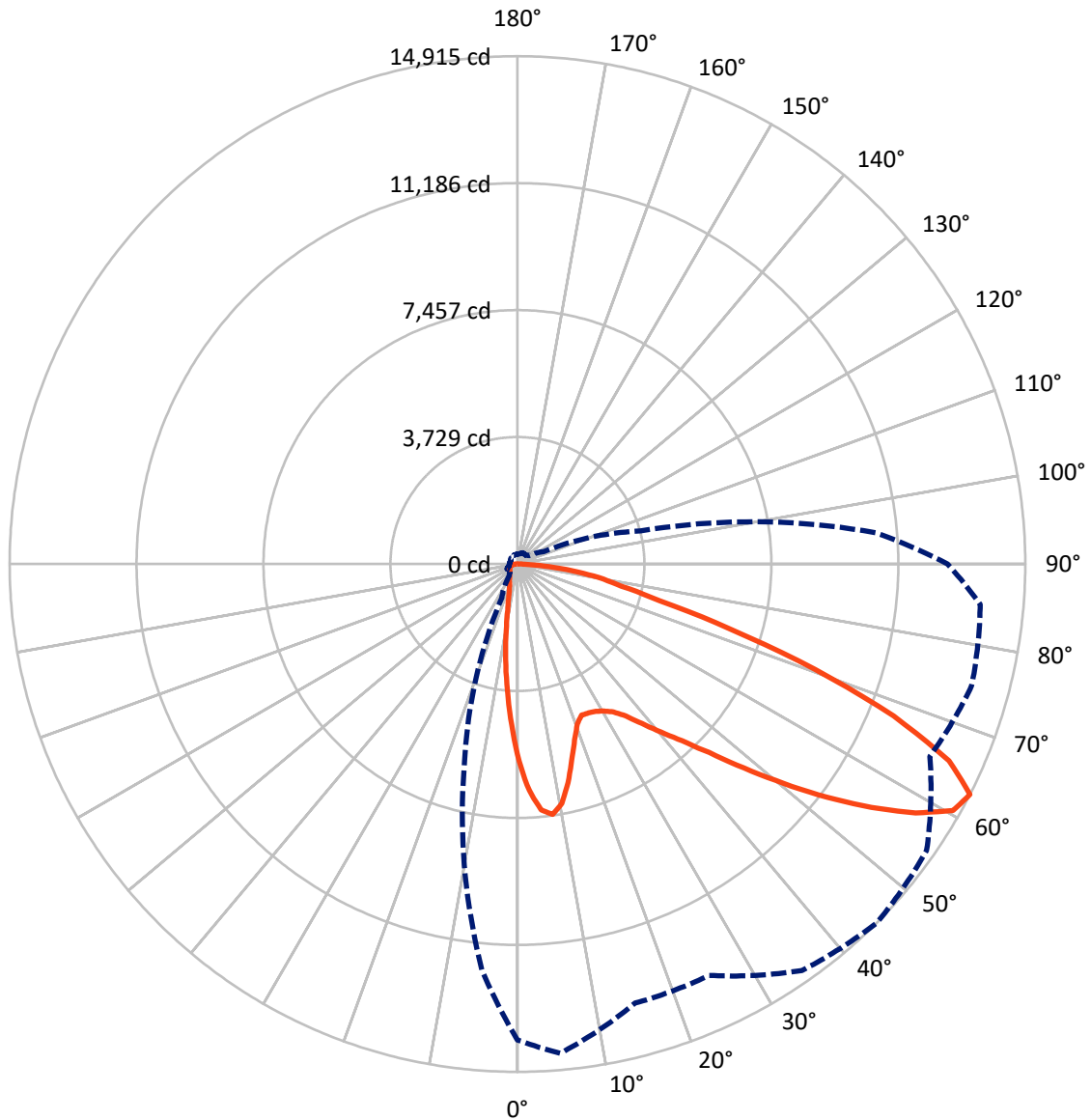
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.9 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2840.9	0.0	2840.9
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	14326.0	0.0	14326.0
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	17166.9	0.0	17166.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	422.2	2.5
10°-20°	774.2	4.5
20°-30°	1128.8	6.6
30°-40°	1738.5	10.1
40°-50°	2558.6	14.9
50°-60°	3753.0	21.9
60°-70°	4195.3	24.4
70°-80°	2053.9	12.0
80°-90°	542.3	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°	17166.9	100.0
0°-180°	17166.9	100.0

**Coefficient of Utilization**



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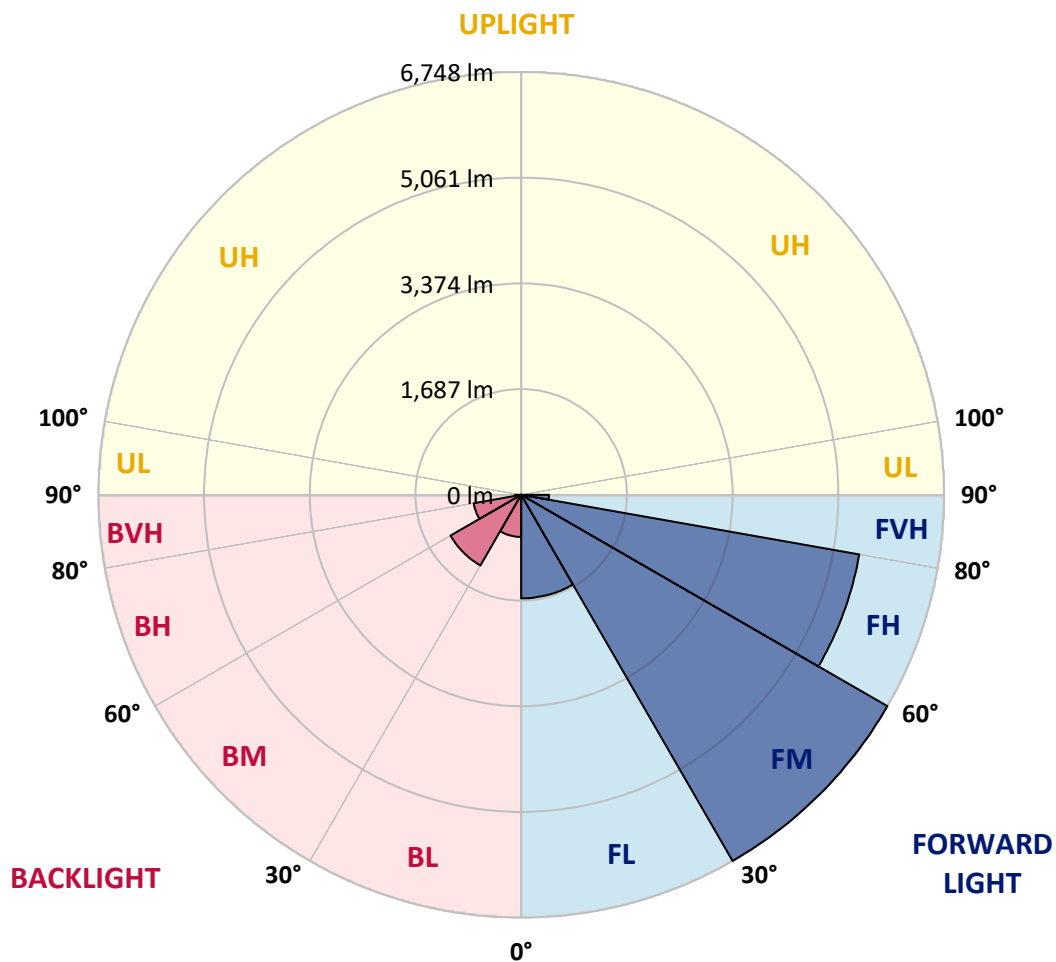
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1653.1	9.6			
FM (30°-60°)	6748.5	39.3			
FH (60°-80°)	5479.1	31.9			G3/7500
FVH (80°-90°)	445.3	2.6			G3/500
BL (0°-30°)	672.1	3.9	B2/1000		
BM (30°-60°)	1301.7	7.6	B2/2500		
BH (60°-80°)	770.1	4.5	B2/1000		G2/1000
BVH (80°-90°)	96.9	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1
2.5°	6026.2	6122.7	6310.5	6450.8	6622.0	6661.5	6716.4	6662.5	6567.2	6440.7	6399.3
5°	5666.8	5872.7	6328.2	6729.6	7086.1	7252.2	7298.7	7161.5	6885.2	6521.8	6300.1
7.5°	5090.3	5382.8	5999.8	6590.8	7116.2	7426.8	7419.1	7101.2	6592.6	6000.8	5645.1
10°	4592.8	4927.0	5635.0	6295.5	6853.0	7154.2	7037.7	6631.5	6024.3	5343.0	4957.3
12.5°	4314.6	4642.1	5360.2	6023.4	6489.7	6593.5	6504.7	6106.4	5534.5	4845.8	4507.9
15°	4266.2	4626.2	5250.8	5790.6	6051.9	5961.5	5855.5	5677.2	5273.2	4685.3	4333.3
17.5°	4475.1	4871.2	5376.4	5628.2	5583.8	5426.0	5396.0	5415.9	5318.8	4863.6	4458.0
20°	4875.2	5350.7	5675.4	5552.0	5228.1	5010.9	5018.6	5321.6	5609.2	5315.8	4852.3
22.5°	5436.5	5979.3	6106.4	5592.4	5078.0	4820.4	4882.9	5373.7	6072.7	5976.5	5384.7
25°	6163.1	6657.9	6566.3	5739.4	5093.0	4844.0	4893.9	5552.9	6619.9	6637.0	6043.6
27.5°	6867.1	7326.0	6952.0	5934.9	5155.5	4899.7	4965.9	5834.7	7142.8	7354.2	6796.6
30°	7416.4	7735.6	7104.8	6113.2	5278.1	5008.2	5090.3	6102.8	7380.9	7838.2	7375.9
32.5°	7871.3	8100.5	7348.4	6334.1	5503.5	5178.8	5323.4	6428.4	7723.3	8299.0	7943.0
35°	8452.5	8517.7	7651.4	6580.4	5851.9	5476.3	5655.5	6747.3	8049.9	8764.0	8501.8
37.5°	9134.1	9050.1	7937.2	6917.3	6302.2	5941.3	6089.6	7097.5	8318.6	9291.5	9072.5
40°	9807.7	9605.6	8296.2	7440.0	6959.0	6489.7	6665.2	7471.2	8569.8	9820.0	9630.4
42.5°	10380.6	10081.3	8649.7	8014.7	7570.2	7094.7	7304.3	7847.7	8809.4	10270.9	10114.4
45°	10804.3	10432.4	8986.7	8566.7	8412.9	7898.6	7997.8	8278.8	9068.8	10647.7	10512.6
47.5°	11182.6	10785.3	9367.8	9123.7	9150.0	8944.1	8784.5	8780.9	9374.9	10955.3	10889.2
50°	11689.3	11275.2	9777.4	9697.2	10255.9	10119.0	9767.0	9366.9	9761.5	11304.6	11296.9
52.5°	12387.8	12051.1	10277.7	10315.4	11288.6	11378.1	10941.8	10071.2	10367.1	11945.1	11900.1
55°	13213.7	13017.0	10959.3	11026.1	12554.8	12619.1	12185.6	10951.3	11258.3	12873.1	12747.5
57.5°	13858.0	13816.6	11706.5	11879.3	13500.5	13789.4	13391.1	11970.9	12262.2	13654.3	13339.0
60°	14114.7	14315.7	12502.1	12739.8	14375.4	14694.9	14346.0	12866.0	13152.1	13978.1	13298.6
62.5°	13976.2	14425.0	13349.4	13329.5	14570.5	14914.9	14669.5	13364.4	13812.0	13643.8	12625.8
65°	13335.3	14031.7	13841.1	13177.6	13902.4	13930.6	13851.2	13141.7	13967.6	12587.9	11325.1
67.5°	11939.3	12941.7	13193.5	11875.6	12099.8	11916.0	11782.8	11922.5	13155.8	11005.3	9517.9
70°	9724.7	11232.9	11353.3	9498.3	9396.3	9272.6	9007.6	9774.7	11554.5	9019.8	7552.4
72.5°	7150.5	8735.8	9106.5	6966.4	6494.6	6519.7	6310.5	7366.1	9394.5	6700.1	5638.6
75°	4892.1	6325.5	7125.0	4860.8	4295.0	4305.1	4278.5	5219.6	7482.6	4660.8	4219.3
77.5°	3573.9	4519.3	5373.7	3267.8	3172.5	3114.0	3099.9	3652.0	5736.7	3384.2	3276.4
80°	2867.7	3338.9	3609.4	2264.8	2435.5	2430.9	2352.4	2511.1	3746.3	2475.3	2450.5
82.5°	1989.4	2566.0	2924.4	1775.0	1643.9	1616.3	1635.6	1870.3	2648.1	1692.0	1608.9
85°	1049.5	1704.2	2896.2	1573.1	975.7	778.4	968.4	1531.4	2294.2	896.7	784.9
87.5°	134.2	492.6	1917.4	627.7	385.1	207.4	459.8	862.4	1473.2	182.9	159.6
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°	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1
2.5°	6292.7	6167.1	6002.9	5850.6	5693.2	5536.3	5331.7	5203.3	5114.8	5097.6	5060.3
5°	6139.8	5722.6	5407.4	5134.7	4887.5	4537.9	4344.6	4184.1	4098.3	4090.1	4069.2
7.5°	5434.6	4859.0	4433.5	4047.5	3697.3	3415.2	3103.6	2958.7	2899.0	2913.1	2927.2
10°	4701.2	4057.9	3569.0	3174.4	2865.9	2628.2	2378.2	2209.4	2092.1	2068.5	2063.9
12.5°	4165.4	3459.6	2985.1	2706.3	2467.9	2244.0	1979.0	1779.6	1627.9	1575.9	1541.2
15°	3938.7	3167.0	2669.8	2369.6	2106.1	1822.2	1575.9	1367.2	1227.8	1182.5	1157.1
17.5°	3987.1	3085.8	2452.6	2068.5	1731.8	1435.2	1124.9	946.3	862.4	840.9	840.9
20°	4240.2	3070.8	2273.1	1791.2	1370.9	1027.5	772.9	670.9	643.6	640.9	648.2
22.5°	4594.9	3123.8	2139.5	1550.7	1065.5	750.2	602.0	564.3	552.0	555.1	563.4
25°	5123.4	3302.1	2042.4	1336.3	836.0	614.2	536.7	514.4	508.5	516.2	526.6
27.5°	5749.9	3480.4	1981.8	1174.8	705.8	561.5	510.4	487.1	490.8	500.3	509.5
30°	6300.1	3626.9	1886.5	1060.0	665.4	564.3	510.4	478.5	474.8	476.7	479.4
32.5°	6793.9	3725.8	1775.0	950.3	573.8	501.2	476.7	472.1	450.9	443.3	444.5
35°	7219.4	3725.8	1708.2	886.3	514.4	444.5	405.0	381.4	370.7	371.6	382.3
37.5°	7629.9	3651.1	1675.1	850.1	482.2	422.8	387.8	367.0	352.9	350.2	352.0
40°	7992.0	3542.6	1637.4	835.1	457.7	409.6	376.8	359.3	344.3	339.7	340.7
42.5°	8282.7	3454.7	1595.8	815.5	442.4	400.1	368.8	353.8	337.0	332.1	331.2
45°	8597.1	3425.6	1541.2	775.7	450.0	401.0	367.0	351.1	333.9	328.4	326.6
47.5°	9011.2	3517.2	1484.6	728.5	466.3	405.9	369.8	351.1	333.0	328.4	326.6
50°	9532.9	3732.2	1412.6	659.6	450.0	419.1	368.8	348.0	333.0	328.4	324.7
52.5°	10203.2	4023.0	1318.5	580.5	440.5	450.9	367.0	342.5	328.4	322.0	315.2
55°	11017.5	4260.7	1205.8	515.3	419.1	442.4	364.2	336.1	321.1	311.6	305.7
57.5°	11614.0	4346.5	1061.8	473.0	388.8	428.3	360.3	327.5	311.6	303.9	296.5
60°	11496.0	4180.4	939.9	446.3	370.7	386.9	357.5	319.8	303.0	297.5	290.4
62.5°	10551.6	3746.3	861.5	434.1	359.3	352.9	360.3	312.5	295.6	289.5	287.7
65°	9135.0	3105.5	830.5	431.3	350.2	333.0	335.1	303.9	286.7	282.1	280.3
67.5°	7535.2	2506.5	803.2	440.5	337.9	318.9	309.7	292.6	278.2	273.6	269.9
70°	5942.2	2084.7	790.7	435.0	322.9	304.8	294.7	280.3	268.1	263.2	260.4
72.5°	4785.2	1760.9	783.9	429.2	303.0	285.8	276.3	264.1	250.9	249.1	246.3
75°	4049.6	1384.4	718.4	411.4	280.3	263.2	256.7	245.4	232.2	232.2	230.4
77.5°	3123.8	1001.1	597.4	364.2	256.7	237.7	232.2	223.6	208.6	211.4	210.5
80°	2307.4	653.1	467.2	302.1	227.6	209.5	206.5	198.2	182.0	186.0	186.0
82.5°	1580.8	428.3	336.1	247.2	194.2	177.4	177.4	168.8	151.0	152.9	158.7
85°	793.7	294.7	250.9	191.5	151.0	142.5	142.5	136.0	117.9	118.9	126.5
87.5°	241.7	177.4	166.0	136.9	108.4	106.6	101.7	97.1	85.8	84.9	89.8
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°	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1
2.5°	5002.4	4948.4	4883.8	4740.1	4692.0	4689.0	4732.8	4687.1	4774.1	4737.4	4777.8
5°	4034.0	3981.6	3908.7	3725.8	3614.3	3538.6	3503.1	3397.4	3473.7	3417.9	3464.5
7.5°	2967.0	2979.2	2931.1	2823.6	2581.0	2459.4	2387.7	2323.3	2379.1	2373.3	2462.1
10°	2085.6	2118.4	2084.7	1976.3	1779.6	1712.8	1726.0	1751.4	1824.3	1861.7	1998.6
12.5°	1501.4	1499.6	1477.8	1380.7	1251.4	1258.8	1312.7	1356.8	1423.9	1463.7	1603.1
15°	1120.9	1104.1	1094.6	1015.2	941.7	958.0	984.3	988.9	1031.5	1055.1	1168.4
17.5°	847.4	855.9	866.0	809.7	753.9	743.5	723.0	697.2	709.8	714.4	770.8
20°	672.7	706.7	732.5	692.7	636.3	605.7	579.3	562.5	562.5	561.5	577.5
22.5°	587.9	612.4	640.0	612.4	561.5	534.9	519.9	506.7	504.9	504.9	519.9
25°	541.9	559.7	586.0	567.4	529.4	509.5	495.4	478.5	472.1	469.9	480.4
27.5°	519.0	526.6	539.8	522.6	490.8	481.3	477.6	462.6	453.7	449.1	459.8
30°	480.4	478.5	479.4	462.6	436.9	435.9	442.4	445.4	442.4	441.4	457.7
32.5°	444.5	440.5	439.6	424.6	401.0	395.5	401.0	406.8	413.3	422.8	441.4
35°	399.2	408.7	414.2	401.0	372.5	355.7	349.2	338.8	333.0	333.0	354.8
37.5°	363.3	385.1	393.7	381.4	350.2	326.6	315.2	313.4	314.3	318.0	338.8
40°	351.1	367.0	374.4	362.4	331.2	309.7	303.0	301.1	303.0	308.8	329.3
42.5°	343.4	354.8	353.8	338.8	313.4	298.4	294.7	292.6	294.7	300.2	322.9
45°	337.0	344.3	337.0	318.9	295.6	287.7	288.6	287.7	289.5	295.6	317.1
47.5°	331.2	333.9	324.7	306.7	282.1	280.3	284.0	286.7	288.6	293.8	316.2
50°	322.9	322.9	314.3	295.6	270.8	271.7	276.3	283.1	284.0	289.5	307.9
52.5°	312.5	311.6	305.7	287.7	261.3	264.1	264.1	271.7	273.6	280.3	299.3
55°	303.9	302.1	299.3	282.1	253.0	257.6	254.9	257.6	262.2	269.0	289.5
57.5°	296.5	292.6	292.6	277.2	246.3	248.1	241.7	245.4	250.9	256.7	278.2
60°	288.6	284.9	286.7	270.8	235.9	234.1	231.3	238.6	240.8	247.2	269.0
62.5°	280.3	277.2	278.2	263.2	228.5	223.6	223.6	230.4	231.3	240.8	261.3
65°	273.6	269.9	269.0	255.8	220.0	214.4	217.2	220.0	221.8	231.3	250.9
67.5°	267.1	259.5	259.5	249.1	210.5	204.6	210.5	209.5	212.6	220.9	236.8
70°	258.6	248.1	249.1	244.5	201.0	194.2	199.1	198.2	200.0	205.6	221.8
72.5°	245.4	236.8	238.6	236.8	191.5	182.0	183.8	183.8	183.8	188.7	205.6
75°	228.5	221.8	227.6	232.2	180.1	167.0	168.8	168.8	166.0	168.8	189.6
77.5°	207.4	203.7	222.7	216.3	167.0	151.0	151.0	149.2	143.7	147.4	169.7
80°	185.0	182.0	205.6	181.1	151.9	131.4	129.3	124.4	118.9	121.6	144.6
82.5°	161.4	158.7	172.8	138.8	131.4	108.4	103.9	95.3	89.8	92.5	113.0
85°	132.3	132.3	133.3	104.8	99.9	83.0	77.5	66.2	59.4	61.3	81.2
87.5°	94.4	97.1	89.8	71.7	59.4	46.3	42.6	35.8	30.0	34.9	42.6
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: P299002

CATALOG NUMBER: GLNA-AF-05-LED-E1-SLL-600

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1	5800.1
2.5°	4985.5	5089.4	5207.3	5358.0	5487.6	5699.6	5903.6	6026.2
5°	3727.6	3900.4	4115.2	4392.1	4649.8	5036.4	5420.5	5666.8
7.5°	2667.7	2852.7	3084.9	3430.2	3794.7	4288.0	4795.9	5090.3
10°	2207.5	2397.2	2592.3	2825.5	3123.8	3660.6	4260.7	4592.8
12.5°	1826.1	2028.9	2239.4	2484.8	2761.1	3240.6	3932.3	4314.6
15°	1397.6	1624.0	1872.1	2182.7	2528.9	3083.1	3851.1	4266.2
17.5°	958.0	1211.0	1515.5	1898.7	2322.4	3031.9	3996.6	4475.1
20°	659.6	843.7	1169.3	1618.4	2128.2	3025.5	4275.7	4875.2
22.5°	552.0	634.1	871.9	1360.8	1981.8	3106.7	4709.2	5436.5
25°	510.4	559.7	696.3	1137.2	1875.2	3293.6	5305.6	6163.1
27.5°	486.2	530.3	632.3	991.0	1791.2	3510.4	5885.9	6867.1
30°	495.4	540.7	614.2	916.3	1677.0	3691.5	6401.1	7416.4
32.5°	446.3	466.3	526.6	850.1	1594.8	3843.4	6852.1	7871.3
35°	380.5	415.1	469.9	819.2	1596.7	3945.5	7343.8	8452.5
37.5°	362.4	397.3	436.9	807.8	1618.4	4054.2	7908.1	9134.1
40°	351.1	383.2	417.2	801.4	1639.3	4153.2	8461.3	9807.7
42.5°	343.4	372.5	415.1	778.4	1649.7	4242.0	8916.0	10380.6
45°	342.5	372.5	422.8	755.8	1665.6	4337.3	9297.4	10804.3
47.5°	343.4	385.1	408.7	728.5	1665.6	4496.6	9744.6	11182.6
50°	339.7	405.9	393.7	689.9	1627.0	4798.6	10357.9	11689.3
52.5°	337.9	403.2	364.2	630.5	1559.9	5278.1	11144.0	12387.8
55°	333.0	388.8	343.4	541.9	1481.8	5801.0	11985.9	13213.7
57.5°	328.4	344.3	332.1	464.4	1360.8	6168.9	12565.2	13858.0
60°	367.9	301.1	322.9	426.4	1199.4	6269.7	12542.8	14114.7
62.5°	340.7	282.1	310.6	418.2	1086.3	5986.7	11963.2	13976.2
65°	267.1	269.9	298.4	442.4	1056.0	5236.7	10936.3	13335.3
67.5°	244.5	257.6	285.8	473.9	1059.0	4192.7	9402.1	11939.3
70°	230.4	244.5	271.7	489.9	1066.4	3125.7	7433.2	9724.7
72.5°	214.4	226.7	255.8	492.6	1017.1	2270.3	5729.3	7150.5
75°	195.1	206.5	233.1	429.2	842.8	1574.9	4382.6	4892.1
77.5°	173.7	182.0	204.6	331.2	625.9	1007.9	3289.6	3573.9
80°	148.3	152.9	171.9	242.6	428.3	630.5	2602.7	2867.7
82.5°	118.9	120.7	133.3	182.0	278.2	405.0	1743.1	1989.4
85°	83.9	83.9	91.6	132.3	189.6	256.7	946.3	1049.5
87.5°	39.5	40.4	40.4	72.6	99.0	130.5	218.1	134.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)