

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: P298870

Luminaire Tested: **GLNA-AF-03-LED-E1-SLL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P298870  
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-03-LED-E1-SLL  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill  
Light Eliminator Left OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15917.6 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 166  
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

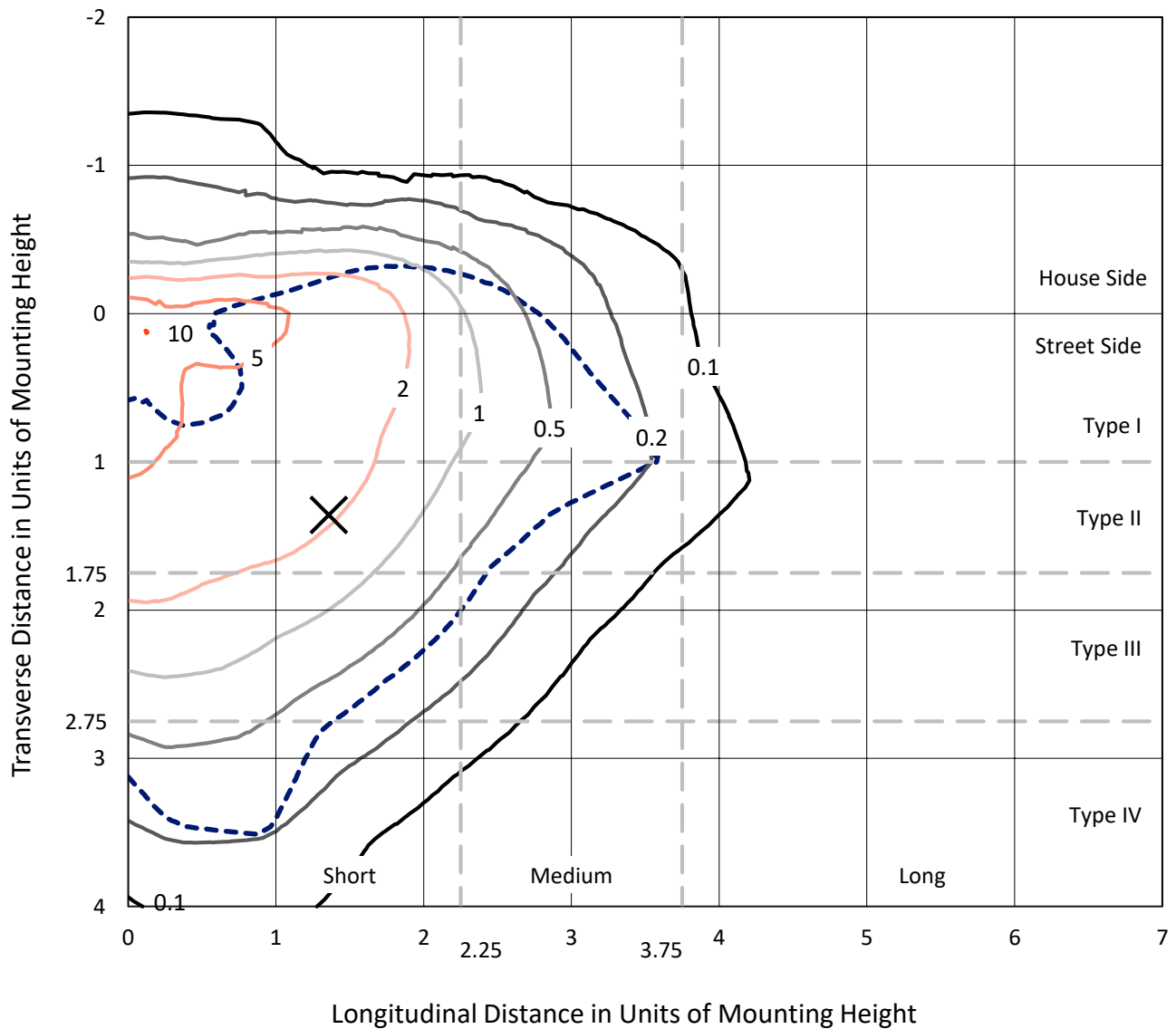


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

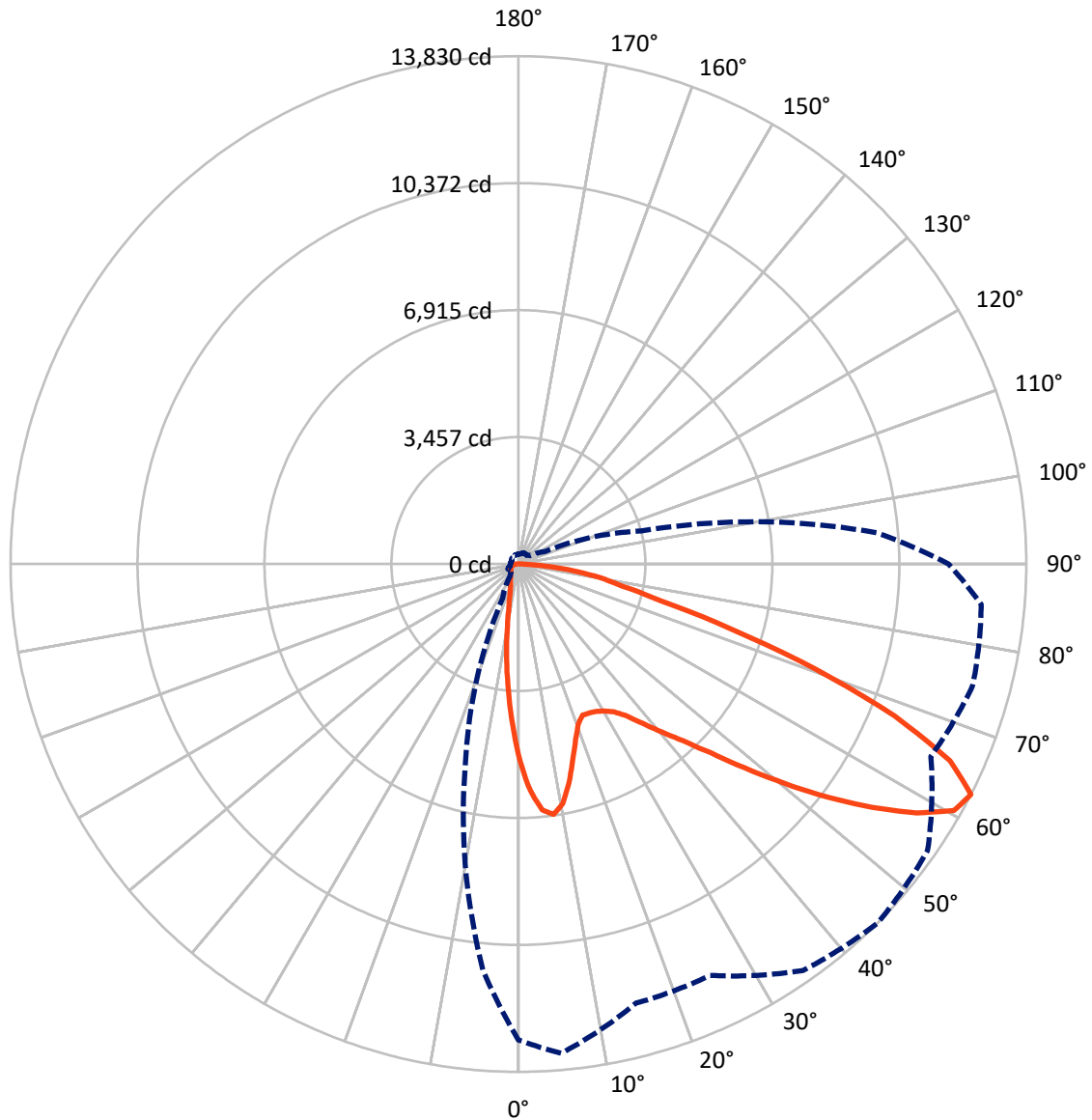


Based on 25 foot mounting height. Maximum calculated value = 10.1 fc  
 Type IV - Short - Non-Cutoff

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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	2634.1	0.0	2634.1
	% Fixture	16.5	0.0	16.5
<b>Street Side</b>	Lumens	13283.5	0.0	13283.5
	% Fixture	83.5	0.0	83.5
<b>Total</b>	Lumens	15917.6	0.0	15917.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	391.5	2.5
10°-20°	717.9	4.5
20°-30°	1046.7	6.6
30°-40°	1612.0	10.1
40°-50°	2372.4	14.9
50°-60°	3479.9	21.9
60°-70°	3890.0	24.4
70°-80°	1904.5	12.0
80°-90°	502.8	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°	15917.6	100.0
0°-180°	15917.6	100.0



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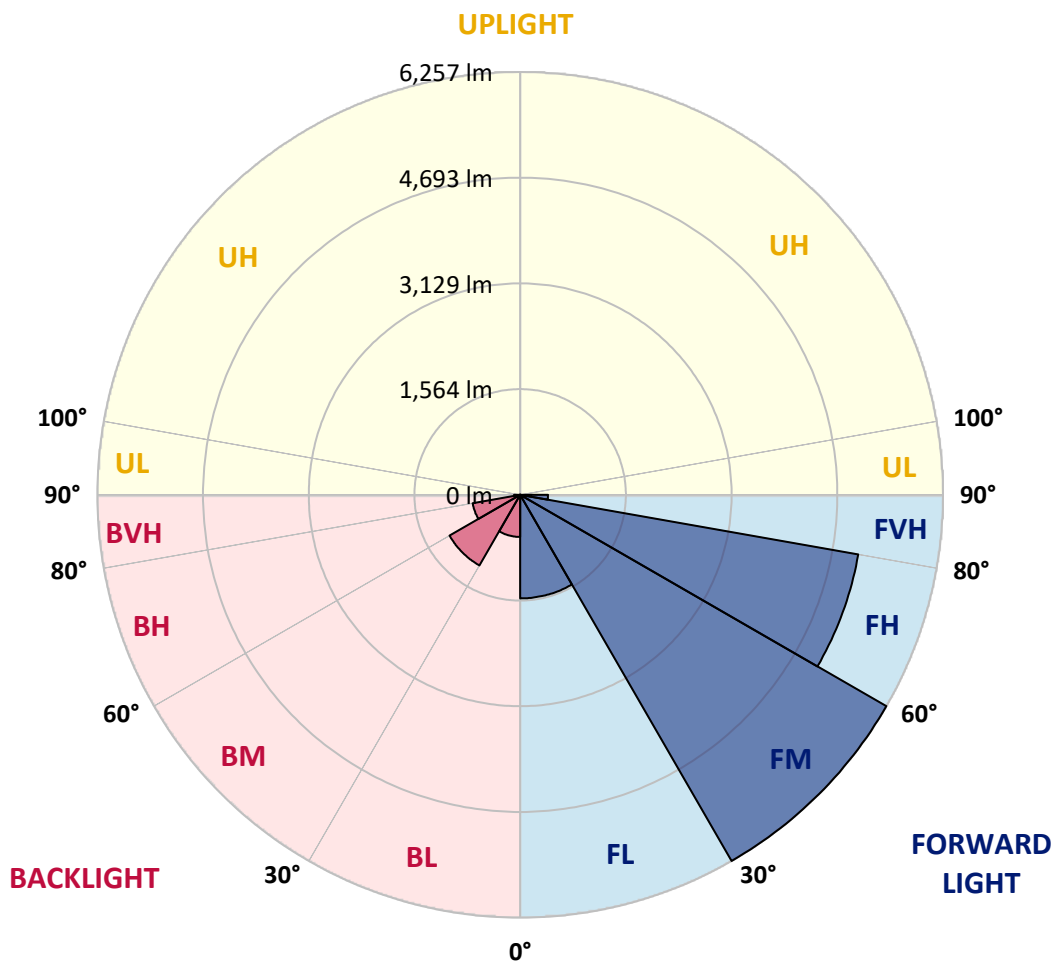
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1532.8	9.6			
FM	(30°-60°)	6257.4	39.3			
FH	(60°-80°)	5080.4	31.9			G3/7500
FVH	(80°-90°)	412.9	2.6			G3/500
BL	(0°-30°)	623.2	3.9	B2/1000		
BM	(30°-60°)	1207.0	7.6	B2/2500		
BH	(60°-80°)	714.1	4.5	B2/1000		G2/1000
BVH	(80°-90°)	89.9	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°	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0
2.5°	5587.6	5677.1	5851.2	5981.3	6140.1	6176.8	6227.6	6177.6	6089.3	5972.0	5933.6
5°	5254.4	5445.3	5867.7	6239.8	6570.5	6724.4	6767.6	6640.3	6384.1	6047.2	5841.6
7.5°	4719.8	4991.1	5563.2	6111.1	6598.3	6886.3	6879.2	6584.4	6112.9	5564.1	5234.3
10°	4258.5	4568.4	5224.9	5837.3	6354.3	6633.5	6525.6	6148.9	5585.9	4954.2	4596.6
12.5°	4000.6	4304.3	4970.1	5585.1	6017.4	6113.7	6031.3	5662.1	5131.7	4493.2	4179.9
15°	3955.7	4289.5	4868.7	5369.2	5611.5	5527.7	5429.4	5264.1	4889.4	4344.3	4018.0
17.5°	4149.5	4516.8	4985.2	5218.6	5177.5	5031.2	5003.3	5021.8	4931.8	4509.6	4133.6
20°	4520.4	4961.3	5262.4	5147.9	4847.7	4646.3	4653.4	4934.3	5201.0	4928.9	4499.1
22.5°	5040.8	5544.2	5662.1	5185.4	4708.5	4469.6	4527.5	4982.6	5630.8	5541.6	4992.8
25°	5714.6	6173.4	6088.4	5321.8	4722.4	4491.5	4537.8	5148.8	6138.1	6154.0	5603.8
27.5°	6367.4	6792.9	6446.0	5503.0	4780.4	4543.2	4604.5	5410.1	6623.0	6819.0	6302.0
30°	6876.7	7172.7	6587.8	5668.3	4894.0	4643.7	4719.8	5658.6	6843.7	7267.8	6839.2
32.5°	7298.5	7511.0	6813.6	5873.1	5103.0	4801.9	4936.0	5960.6	7161.3	7695.0	7365.0
35°	7837.3	7897.9	7094.5	6101.5	5426.0	5077.8	5243.9	6256.3	7464.1	8126.2	7883.1
37.5°	8469.4	8391.5	7359.6	6414.0	5843.6	5509.0	5646.4	6581.0	7713.2	8615.4	8412.3
40°	9094.0	8906.5	7692.5	6898.5	6452.6	6017.4	6180.2	6927.5	7946.1	9105.4	8929.5
42.5°	9625.2	9347.7	8020.3	7431.4	7019.3	6578.4	6772.7	7276.6	8168.3	9523.5	9378.3
45°	10018.0	9673.2	8332.7	7943.3	7800.7	7323.8	7415.8	7676.3	8408.9	9872.9	9747.6
47.5°	10368.8	10000.4	8686.1	8459.7	8484.1	8293.3	8145.3	8141.9	8692.6	10158.1	10096.7
50°	10838.7	10454.6	9065.9	8991.5	9509.6	9382.6	9056.2	8685.3	9051.1	10481.9	10474.8
52.5°	11486.3	11174.1	9529.7	9564.7	10467.1	10550.1	10145.6	9338.3	9612.7	11075.9	11034.1
55°	12252.1	12069.8	10161.8	10223.7	11641.1	11700.8	11298.8	10154.4	10439.0	11936.3	11819.8
57.5°	12849.5	12811.1	10854.6	11014.8	12518.0	12785.9	12416.6	11099.7	11369.8	12660.6	12368.3
60°	13087.5	13273.9	11592.3	11812.7	13329.3	13625.5	13302.0	11929.7	12195.0	12960.8	12330.8
62.5°	12959.1	13375.3	12378.0	12359.5	13510.2	13829.5	13601.9	12391.9	12806.9	12650.9	11707.0
65°	12364.9	13010.5	12833.9	12218.6	12890.7	12916.8	12843.2	12185.4	12951.2	11671.8	10500.9
67.5°	11070.5	11999.9	12233.4	11011.4	11219.3	11048.9	10925.3	11054.8	12198.4	10204.4	8825.3
70°	9017.0	10415.4	10527.1	8807.1	8712.5	8597.8	8352.1	9063.3	10713.7	8363.4	7002.8
72.5°	6630.1	8100.1	8443.8	6459.4	6022.0	6045.2	5851.2	6830.1	8710.8	6212.6	5228.3
75°	4536.1	5865.2	6606.5	4507.1	3982.4	3991.8	3967.1	4839.7	6938.0	4321.6	3912.3
77.5°	3313.8	4190.4	4982.6	3030.0	2941.7	2887.4	2874.3	3386.2	5319.2	3137.9	3038.0
80°	2659.0	3095.9	3346.7	2100.0	2258.2	2254.0	2181.3	2328.4	3473.7	2295.2	2272.2
82.5°	1844.6	2379.2	2711.6	1645.8	1524.2	1498.7	1516.6	1734.2	2455.4	1568.8	1491.9
85°	973.2	1580.2	2685.5	1458.6	904.7	721.8	897.9	1420.0	2127.3	831.4	727.7
87.5°	124.4	456.8	1777.9	582.0	357.1	192.3	426.4	799.6	1366.0	169.6	148.0
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°	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0
2.5°	5834.8	5718.3	5566.0	5424.9	5278.9	5133.4	4943.7	4824.7	4742.6	4726.7	4692.0
5°	5693.0	5306.1	5013.8	4761.0	4531.8	4207.7	4028.5	3879.6	3800.1	3792.4	3773.1
7.5°	5039.1	4505.4	4110.8	3752.9	3428.3	3166.6	2877.8	2743.4	2688.0	2701.1	2714.1
10°	4359.1	3762.6	3309.2	2943.4	2657.3	2436.9	2205.1	2048.6	1939.8	1917.9	1913.7
12.5°	3862.3	3207.8	2767.8	2509.3	2288.3	2080.7	1835.0	1650.1	1509.5	1461.2	1429.1
15°	3652.1	2936.6	2475.5	2197.2	1952.9	1689.6	1461.2	1267.7	1138.5	1096.5	1072.9
17.5°	3697.0	2861.3	2274.1	1917.9	1605.8	1330.8	1043.0	877.4	799.6	779.7	779.7
20°	3931.6	2847.4	2107.7	1660.9	1271.1	952.7	716.7	622.1	596.8	594.2	601.1
22.5°	4260.5	2896.5	1983.8	1437.9	987.9	695.6	558.2	523.2	511.9	514.7	522.4
25°	4750.5	3061.8	1893.8	1239.0	775.2	569.5	497.7	476.9	471.5	478.6	488.3
27.5°	5331.4	3227.1	1837.5	1089.3	654.5	520.7	473.2	451.6	455.1	463.9	472.4
30°	5841.6	3362.9	1749.2	982.8	617.0	523.2	473.2	443.7	440.3	442.0	444.5
32.5°	6299.5	3454.7	1645.8	881.1	532.0	464.7	442.0	437.7	418.1	411.0	412.2
35°	6694.0	3454.7	1583.9	821.8	476.9	412.2	375.5	353.6	343.7	344.6	354.5
37.5°	7074.7	3385.4	1553.2	788.3	447.1	392.0	359.6	340.3	327.2	324.7	326.4
40°	7410.4	3284.8	1518.3	774.3	424.4	379.8	349.4	333.2	319.3	315.0	315.9
42.5°	7680.0	3203.3	1479.6	756.2	410.2	371.0	342.0	328.1	312.5	307.9	307.1
45°	7971.4	3176.3	1429.1	719.2	417.3	371.8	340.3	325.5	309.6	304.5	302.8
47.5°	8355.5	3261.2	1376.5	675.5	432.3	376.4	342.9	325.5	308.8	304.5	302.8
50°	8839.2	3460.6	1309.8	611.6	417.3	388.6	342.0	322.7	308.8	304.5	301.1
52.5°	9460.7	3730.2	1222.6	538.3	408.5	418.1	340.3	317.6	304.5	298.5	292.3
55°	10215.7	3950.6	1118.0	477.8	388.6	410.2	337.7	311.6	297.7	288.9	283.5
57.5°	10768.8	4030.2	984.5	438.6	360.5	397.1	334.0	303.7	288.9	281.8	275.0
60°	10659.4	3876.2	871.5	413.9	343.7	358.8	331.5	296.6	280.9	275.8	269.3
62.5°	9783.7	3473.7	798.8	402.5	333.2	327.2	334.0	289.7	274.1	268.4	266.7
65°	8470.2	2879.5	770.1	399.9	324.7	308.8	310.8	281.8	265.9	261.6	259.9
67.5°	6986.9	2324.1	744.8	408.5	313.3	295.7	287.2	271.3	257.9	253.7	250.3
70°	5509.8	1933.0	733.1	403.4	299.4	282.6	273.3	259.9	248.5	244.0	241.4
72.5°	4436.9	1632.7	726.9	398.0	280.9	265.0	256.2	244.9	232.6	230.9	228.4
75°	3754.9	1283.6	666.1	381.5	259.9	244.0	238.0	227.5	215.3	215.3	213.6
77.5°	2896.5	928.3	553.9	337.7	238.0	220.4	215.3	207.4	193.4	196.0	195.1
80°	2139.5	605.6	433.2	280.1	211.1	194.3	191.5	183.8	168.7	172.4	172.4
82.5°	1465.7	397.1	311.6	229.2	180.1	164.5	164.5	156.5	140.0	141.7	147.1
85°	736.0	273.3	232.6	177.5	140.0	132.1	132.1	126.1	109.4	110.2	117.3
87.5°	224.1	164.5	154.0	127.0	100.6	98.9	94.3	90.0	79.5	78.7	83.2
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0
2.5°	4638.3	4588.3	4528.4	4395.2	4350.6	4347.7	4388.4	4346.0	4426.7	4392.6	4430.1
5°	3740.4	3691.9	3624.3	3454.7	3351.3	3281.1	3248.2	3150.2	3220.9	3169.2	3212.4
7.5°	2751.1	2762.4	2717.8	2618.1	2393.2	2280.4	2213.9	2154.3	2206.0	2200.6	2282.9
10°	1933.8	1964.2	1933.0	1832.4	1650.1	1588.1	1600.4	1623.9	1691.5	1726.2	1853.2
12.5°	1392.2	1390.4	1370.3	1280.2	1160.4	1167.2	1217.2	1258.1	1320.3	1357.2	1486.5
15°	1039.4	1023.7	1014.9	941.4	873.2	888.2	912.7	916.9	956.4	978.3	1083.4
17.5°	785.7	793.6	803.0	750.8	699.1	689.4	670.4	646.5	658.2	662.4	714.7
20°	623.8	655.3	679.2	642.2	590.0	561.6	537.1	521.5	521.5	520.7	535.4
22.5°	545.1	567.8	593.4	567.8	520.7	496.0	482.0	469.8	468.1	468.1	482.0
25°	502.5	519.0	543.4	526.1	490.8	472.4	459.3	443.7	437.7	435.7	445.4
27.5°	481.2	488.3	500.5	484.6	455.1	446.2	442.8	428.9	420.7	416.4	426.4
30°	445.4	443.7	444.5	428.9	405.1	404.2	410.2	413.0	410.2	409.3	424.4
32.5°	412.2	408.5	407.6	393.7	371.8	366.7	371.8	377.2	383.2	392.0	409.3
35°	370.1	378.9	384.0	371.8	345.4	329.8	323.8	314.2	308.8	308.8	328.9
37.5°	336.9	357.1	365.0	353.6	324.7	302.8	292.3	290.6	291.4	294.8	314.2
40°	325.5	340.3	347.1	336.0	307.1	287.2	280.9	279.2	280.9	286.3	305.4
42.5°	318.4	328.9	328.1	314.2	290.6	276.7	273.3	271.3	273.3	278.4	299.4
45°	312.5	319.3	312.5	295.7	274.1	266.7	267.6	266.7	268.4	274.1	294.0
47.5°	307.1	309.6	301.1	284.3	261.6	259.9	263.3	265.9	267.6	272.4	293.1
50°	299.4	299.4	291.4	274.1	251.1	252.0	256.2	262.5	263.3	268.4	285.5
52.5°	289.7	288.9	283.5	266.7	242.3	244.9	244.9	252.0	253.7	259.9	277.5
55°	281.8	280.1	277.5	261.6	234.6	238.9	236.3	238.9	243.2	249.4	268.4
57.5°	275.0	271.3	271.3	257.1	228.4	230.1	224.1	227.5	232.6	238.0	257.9
60°	267.6	264.2	265.9	251.1	218.7	217.0	214.5	221.3	223.3	229.2	249.4
62.5°	259.9	257.1	257.9	244.0	211.9	207.4	207.4	213.6	214.5	223.3	242.3
65°	253.7	250.3	249.4	237.2	204.0	198.8	201.4	204.0	205.7	214.5	232.6
67.5°	247.7	240.6	240.6	230.9	195.1	189.7	195.1	194.3	197.1	204.8	219.6
70°	239.7	230.1	230.9	226.7	186.3	180.1	184.6	183.8	185.5	190.6	205.7
72.5°	227.5	219.6	221.3	219.6	177.5	168.7	170.4	170.4	170.4	175.0	190.6
75°	211.9	205.7	211.1	215.3	167.0	154.8	156.5	156.5	154.0	156.5	175.8
77.5°	192.3	188.9	206.5	200.5	154.8	140.0	140.0	138.3	133.2	136.6	157.4
80°	171.6	168.7	190.6	167.9	140.9	121.9	119.9	115.3	110.2	112.8	134.1
82.5°	149.7	147.1	160.2	128.7	121.9	100.6	96.3	88.3	83.2	85.8	104.8
85°	122.7	122.7	123.6	97.1	92.6	77.0	71.9	61.4	55.1	56.8	75.3
87.5°	87.5	90.0	83.2	66.5	55.1	42.9	39.5	33.2	27.8	32.4	39.5
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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CATALOG NUMBER: GLNA-AF-03-LED-E1-SLL

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0	5378.0
2.5°	4622.7	4719.0	4828.4	4968.1	5088.3	5284.8	5474.0	5587.6
5°	3456.4	3616.6	3815.7	4072.5	4311.4	4669.9	5026.1	5254.4
7.5°	2473.5	2645.1	2860.4	3180.6	3518.6	3975.9	4446.9	4719.8
10°	2046.9	2222.7	2403.7	2619.8	2896.5	3394.2	3950.6	4258.5
12.5°	1693.2	1881.3	2076.4	2304.0	2560.2	3004.7	3646.1	4000.6
15°	1295.9	1505.8	1735.9	2023.9	2344.9	2858.7	3570.8	3955.7
17.5°	888.2	1122.9	1405.2	1760.6	2153.4	2811.3	3705.8	4149.5
20°	611.6	782.3	1084.2	1500.7	1973.3	2805.3	3964.5	4520.4
22.5°	511.9	588.0	808.4	1261.8	1837.5	2880.6	4366.5	5040.8
25°	473.2	519.0	645.7	1054.4	1738.7	3053.9	4919.5	5714.6
27.5°	450.8	491.7	586.3	918.9	1660.9	3255.0	5457.5	6367.4
30°	459.3	501.4	569.5	849.6	1554.9	3422.9	5935.3	6876.7
32.5°	413.9	432.3	488.3	788.3	1478.8	3563.7	6353.4	7298.5
35°	352.8	384.9	435.7	759.6	1480.5	3658.3	6809.4	7837.3
37.5°	336.0	368.4	405.1	749.1	1500.7	3759.2	7332.6	8469.4
40°	325.5	355.4	386.9	743.1	1520.0	3850.9	7845.6	9094.0
42.5°	318.4	345.4	384.9	721.8	1529.6	3933.3	8267.1	9625.2
45°	317.6	345.4	392.0	700.8	1544.4	4021.6	8620.8	10018.0
47.5°	318.4	357.1	378.9	675.5	1544.4	4169.4	9035.5	10368.8
50°	315.0	376.4	365.0	639.7	1508.6	4449.4	9604.2	10838.7
52.5°	313.3	373.8	337.7	584.6	1446.4	4894.0	10333.1	11486.3
55°	308.8	360.5	318.4	502.5	1374.0	5378.9	11113.6	12252.1
57.5°	304.5	319.3	307.9	430.6	1261.8	5720.0	11650.8	12849.5
60°	341.1	279.2	299.4	395.4	1112.1	5813.5	11630.0	13087.5
62.5°	315.9	261.6	288.0	387.7	1007.3	5551.0	11092.6	12959.1
65°	247.7	250.3	276.7	410.2	979.1	4855.6	10140.5	12364.9
67.5°	226.7	238.9	265.0	439.4	982.0	3887.6	8717.9	11070.5
70°	213.6	226.7	252.0	454.2	988.8	2898.2	6892.3	9017.0
72.5°	198.8	210.2	237.2	456.8	943.1	2105.1	5312.4	6630.1
75°	180.9	191.5	216.2	398.0	781.4	1460.3	4063.7	4536.1
77.5°	161.1	168.7	189.7	307.1	580.3	934.5	3050.2	3313.8
80°	137.5	141.7	159.4	225.0	397.1	584.6	2413.3	2659.0
82.5°	110.2	111.9	123.6	168.7	257.9	375.5	1616.3	1844.6
85°	77.8	77.8	84.9	122.7	175.8	238.0	877.4	973.2
87.5°	36.6	37.5	37.5	67.3	91.7	121.0	202.2	124.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)