

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: P298903

Luminaire Tested: **GLNA-AF-09-LED-E1-SLL-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298903
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-09-LED-E1-SLL-7027
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K 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: 40498.4 lumens
Efficiency: N/A
Efficacy: 80.8 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

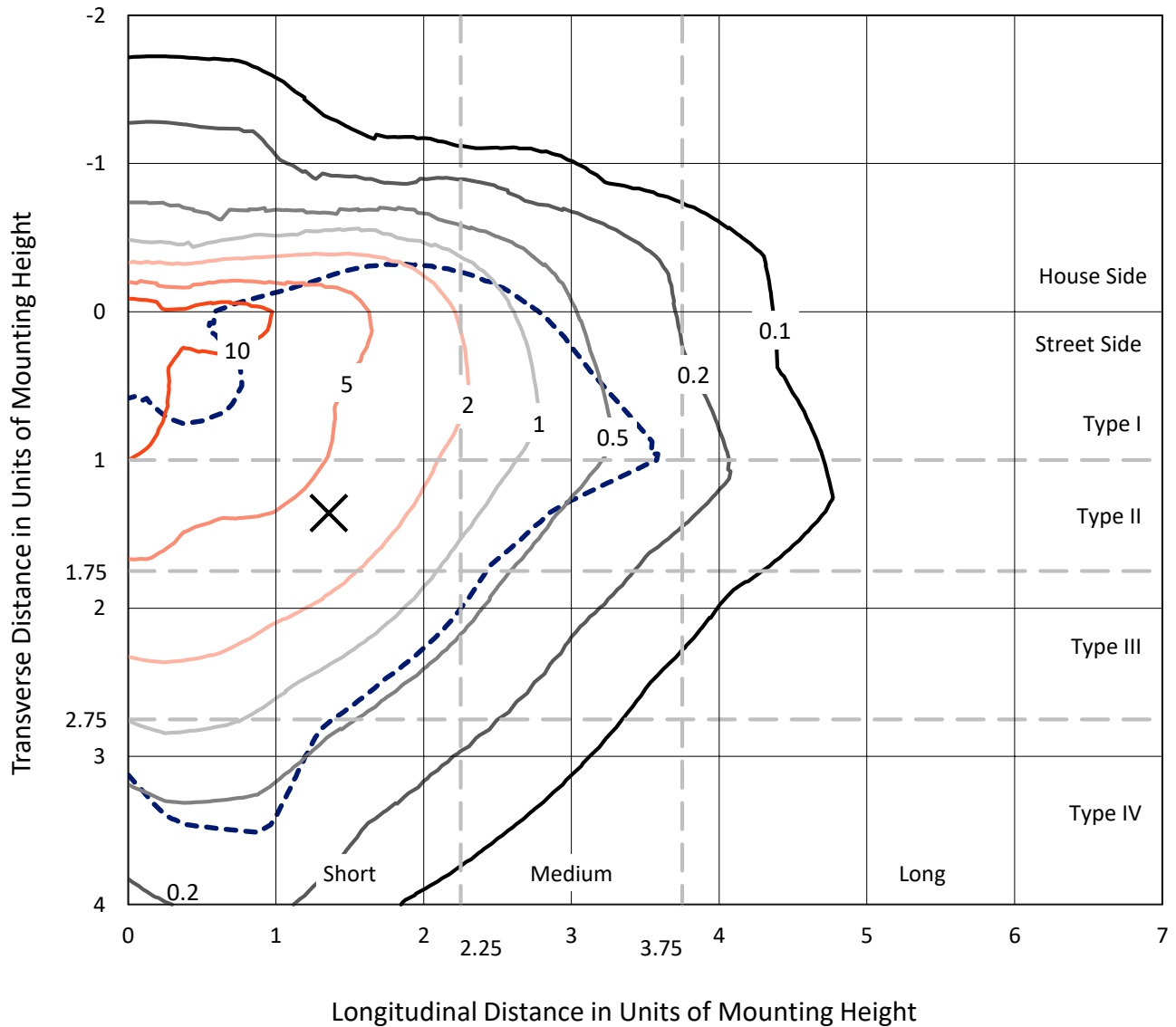
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

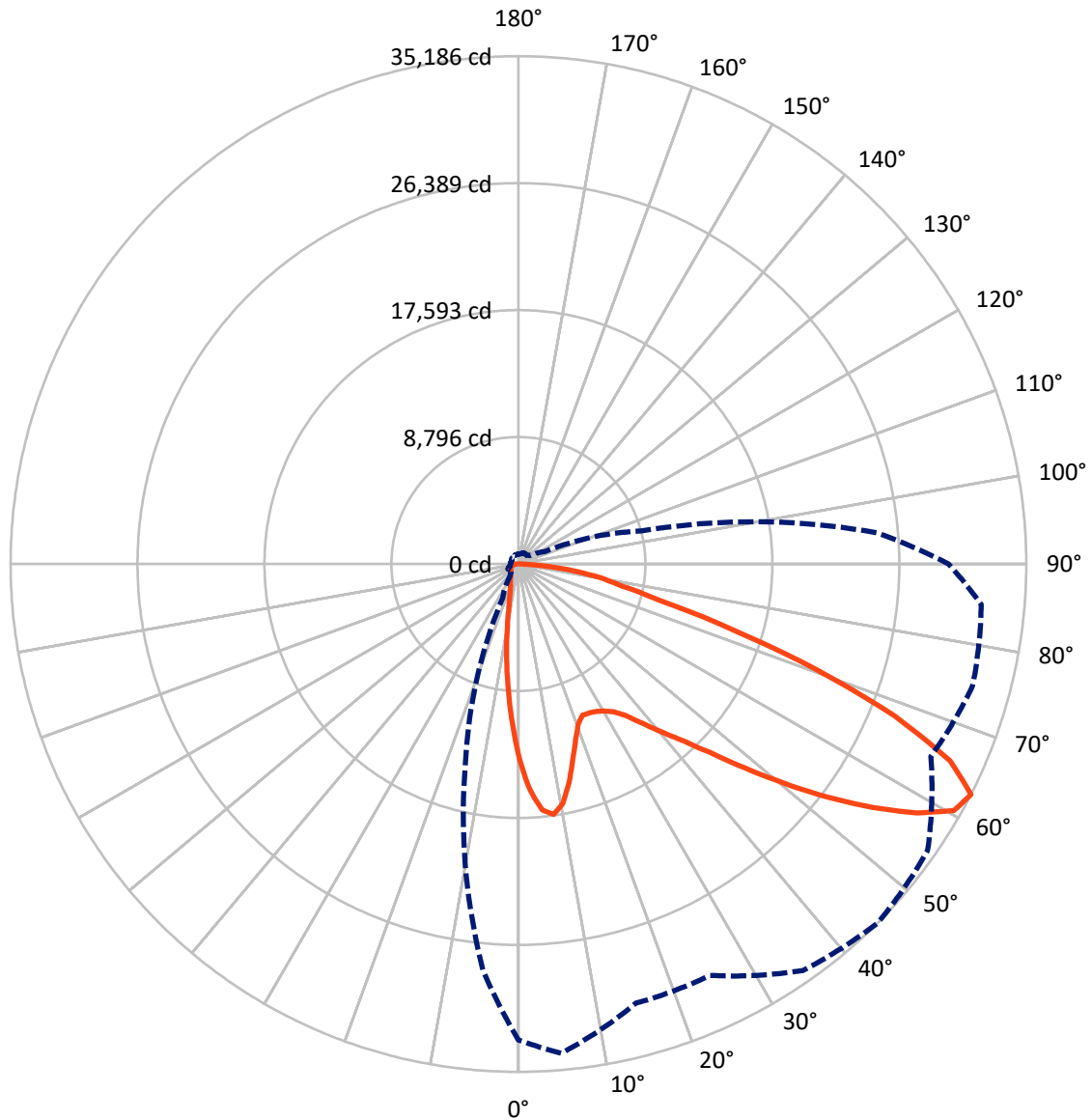
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 17.9 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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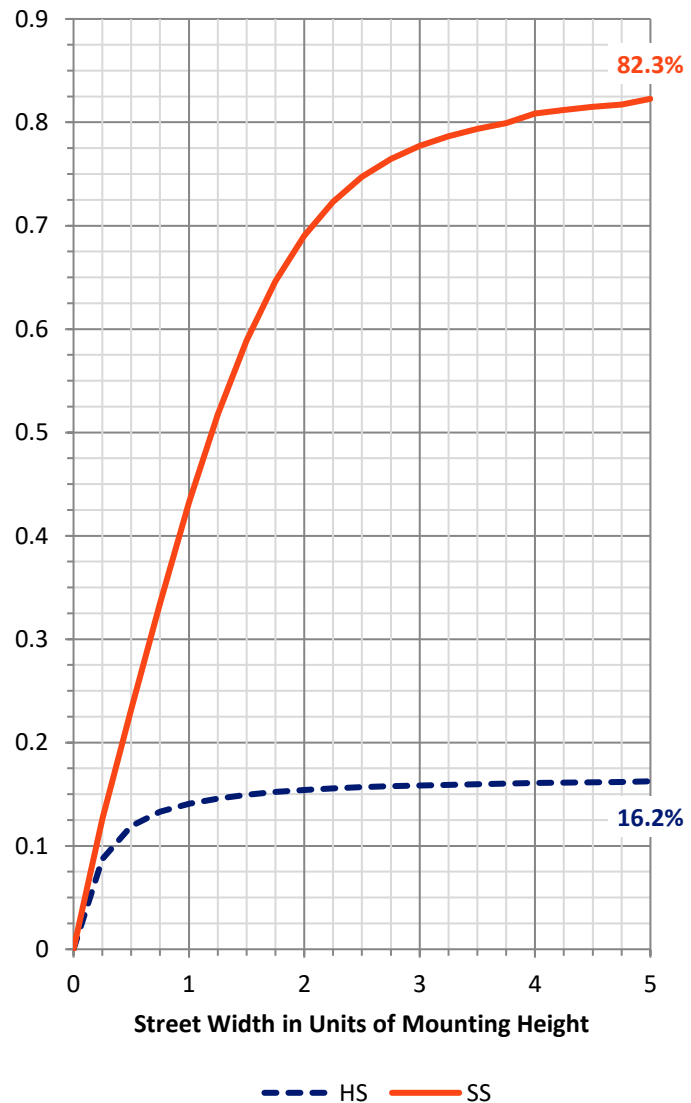
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6701.9	0.0	6701.9
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	33796.5	0.0	33796.5
	% Fixture	83.5	0.0	83.5
Total	Lumens	40498.4	0.0	40498.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	996.0	2.5
10°-20°	1826.4	4.5
20°-30°	2663.0	6.6
30°-40°	4101.4	10.1
40°-50°	6036.1	14.9
50°-60°	8853.7	21.9
60°-70°	9897.1	24.4
70°-80°	4845.4	12.0
80°-90°	1279.3	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°	40498.4	100.0
0°-180°	40498.4	100.0



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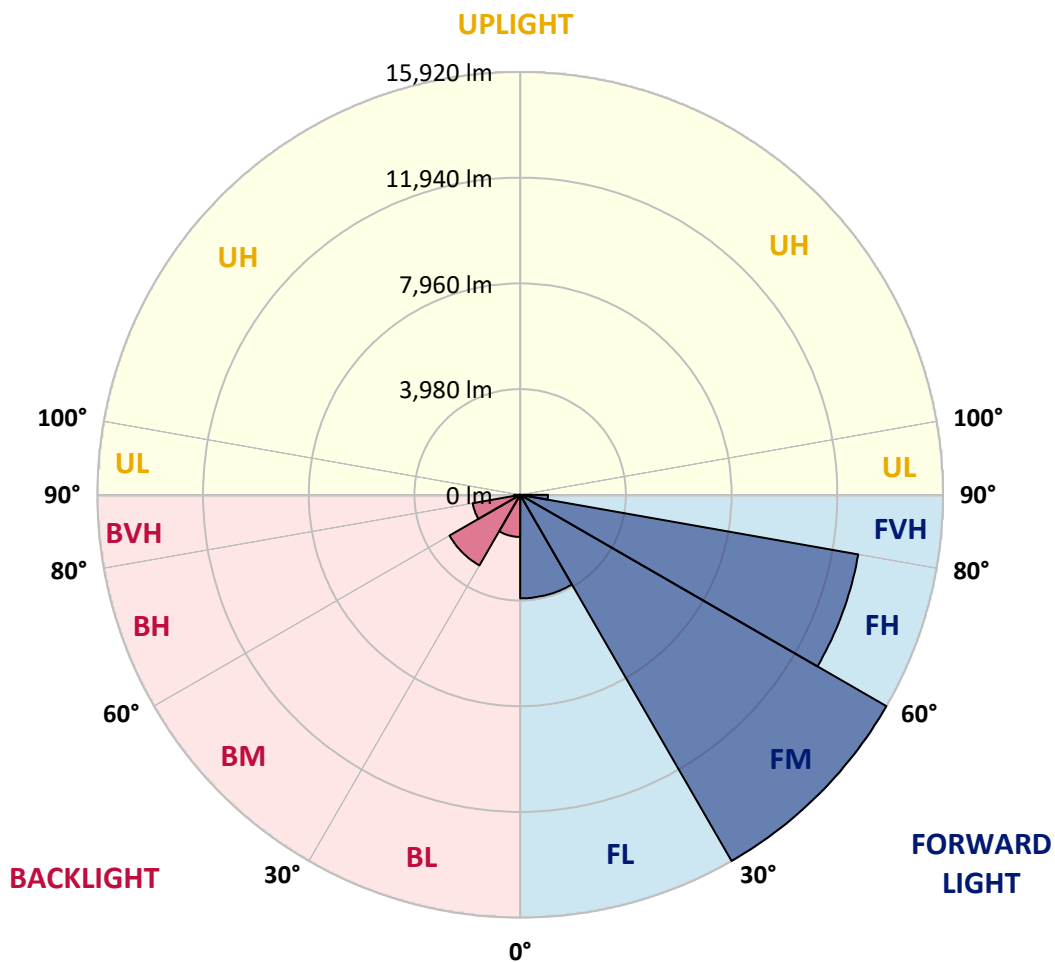
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3899.9	9.6			
FM	(30°-60°)	15920.3	39.3			
FH	(60°-80°)	12925.7	31.9			G5
FVH	(80°-90°)	1050.6	2.6			G5
BL	(0°-30°)	1585.6	3.9	B3/2500		
BM	(30°-60°)	3070.8	7.6	B3/5000		
BH	(60°-80°)	1816.9	4.5	B3/2500		G3/2500
BVH	(80°-90°)	228.7	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°	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0
2.5°	14216.3	14444.0	14887.0	15218.0	15622.0	15715.2	15844.6	15717.4	15492.6	15194.2	15096.6
5°	13368.6	13854.3	14928.9	15875.7	16716.9	17108.6	17218.5	16894.7	16242.8	15385.7	14862.4
7.5°	12008.5	12698.7	14154.2	15548.3	16787.7	17520.6	17502.5	16752.3	15552.6	14156.4	13317.3
10°	10834.8	11623.3	13293.5	14851.6	16166.9	16877.4	16602.7	15644.4	14212.0	12604.7	11694.8
12.5°	10178.6	10951.2	12645.2	14209.8	15309.8	15554.8	15345.2	14405.7	13056.4	11431.8	10634.6
15°	10064.4	10913.6	12387.2	13660.6	14277.1	14063.9	13813.8	13393.2	12439.9	11053.1	10222.7
17.5°	10557.3	11491.7	12683.5	13277.6	13172.8	12800.6	12729.7	12776.7	12547.6	11473.7	10516.8
20°	11501.1	12622.8	13388.9	13097.6	12333.7	11821.3	11839.4	12554.1	13232.7	12540.4	11446.9
22.5°	12825.1	14105.8	14405.7	13193.0	11979.6	11371.8	11519.2	12677.0	14326.2	14099.3	12703.0
25°	14539.4	15706.6	15490.5	13539.9	12015.0	11427.4	11545.2	13099.8	15617.0	15657.4	14257.5
27.5°	16200.2	17282.8	16400.4	14001.0	12162.4	11559.0	11715.1	13764.7	16850.6	17349.3	16034.0
30°	17496.0	18249.0	16761.0	14421.6	12451.5	11814.8	12008.5	14397.0	17412.2	18491.2	17400.6
32.5°	18569.2	19109.8	17335.5	14942.7	12983.4	12217.3	12558.5	15165.3	18220.1	19578.1	18738.3
35°	19940.2	20094.1	18050.3	15523.7	13805.1	12919.1	13341.9	15917.6	18990.5	20675.2	20056.5
37.5°	21548.2	21350.2	18724.6	16318.7	14867.5	14016.2	14365.9	16743.7	19624.4	21919.7	21402.9
40°	23137.4	22660.4	19571.6	17551.6	16417.0	15309.8	15723.9	17625.4	20217.0	23166.3	22719.0
42.5°	24488.9	23782.8	20405.6	18907.4	17858.8	16737.1	17231.5	18513.6	20782.1	24230.2	23860.9
45°	25488.4	24611.0	21200.6	20209.7	19847.0	18633.5	18867.7	19530.4	21394.3	25119.1	24800.4
47.5°	26380.9	25443.6	22099.6	21523.6	21585.8	21100.1	20723.6	20714.9	22116.2	25844.7	25688.6
50°	27576.3	26599.2	23065.9	22876.5	24194.7	23871.7	23041.3	22097.5	23028.3	26668.6	26650.5
52.5°	29224.1	28429.8	24246.1	24335.0	26631.0	26842.0	25812.9	23759.0	24457.1	28179.8	28073.5
55°	31172.5	30708.5	25854.1	26011.6	29617.9	29769.7	28747.1	25835.3	26559.4	30368.8	30072.5
57.5°	32692.3	32594.8	27616.8	28024.4	31848.9	32530.4	31590.9	28240.5	28927.8	32211.7	31468.1
60°	33298.0	33772.0	29493.6	30054.4	33913.0	34666.8	33843.6	30352.2	31027.2	32975.6	31372.7
62.5°	32971.3	34030.1	31492.6	31445.7	34373.3	35185.7	34606.8	31528.0	32583.9	32187.2	29785.6
65°	31459.4	33102.1	32652.6	31087.2	32797.1	32863.6	32676.4	31002.6	32951.1	29696.0	26717.0
67.5°	28166.0	30530.7	31124.8	28015.7	28544.7	28111.1	27796.7	28126.3	31035.9	25962.5	22453.8
70°	22941.6	26499.5	26783.5	22407.5	22166.8	21874.9	21249.7	23059.4	27258.3	21278.6	17816.9
72.5°	16868.7	20608.7	21483.2	16434.3	15321.4	15380.6	14887.0	17377.5	22162.5	15806.3	13302.1
75°	11540.9	14922.4	16808.7	11467.2	10132.3	10156.2	10093.3	12313.5	17652.1	10995.2	9953.8
77.5°	8431.1	10661.4	12677.0	7709.1	7484.3	7346.3	7313.1	8615.4	13533.4	7983.7	7729.3
80°	6765.3	7876.8	8514.9	5343.0	5745.5	5734.7	5549.7	5924.0	8838.0	5839.5	5780.9
82.5°	4693.3	6053.4	6899.0	4187.4	3878.0	3813.0	3858.5	4412.1	6247.1	3991.5	3795.7
85°	2476.0	4020.4	6832.5	3711.1	2301.8	1836.4	2284.5	3612.8	5412.3	2115.4	1851.6
87.5°	316.5	1162.1	4523.4	1480.8	908.4	489.3	1084.8	2034.4	3475.5	431.5	376.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0
2.5°	14845.1	14548.8	14161.4	13802.2	13430.8	13060.7	12578.0	12275.2	12066.3	12025.8	11937.7
5°	14484.5	13500.1	12756.5	12113.3	11530.1	10705.4	10249.4	9870.7	9668.4	9648.8	9599.7
7.5°	12820.8	11462.8	10459.0	9548.4	8722.3	8056.7	7321.7	6979.9	6839.0	6872.2	6905.5
10°	11090.6	9573.0	8419.5	7488.7	6760.9	6200.1	5610.4	5212.2	4935.4	4879.7	4868.9
12.5°	9826.6	8161.5	7042.0	6384.4	5822.1	5293.8	4668.7	4198.2	3840.5	3717.6	3635.9
15°	9291.8	7471.3	6298.4	5590.1	4968.6	4298.7	3717.6	3225.4	2896.6	2789.6	2729.7
17.5°	9406.0	7279.8	5786.0	4879.7	4085.5	3385.9	2653.8	2232.4	2034.4	1983.8	1983.8
20°	10003.0	7244.4	5362.5	4225.7	3234.1	2424.0	1823.4	1582.7	1518.4	1511.9	1529.2
22.5°	10839.9	7369.4	5047.4	3658.3	2513.6	1769.9	1420.1	1331.2	1302.3	1309.5	1329.1
25°	12086.5	7790.0	4818.3	3152.4	1972.3	1449.0	1266.2	1213.4	1199.7	1217.8	1242.3
27.5°	13564.5	8210.7	4675.2	2771.6	1665.1	1324.7	1204.0	1149.1	1157.8	1180.2	1201.9
30°	14862.4	8556.1	4450.4	2500.6	1569.7	1331.2	1204.0	1128.9	1120.2	1124.5	1131.0
32.5°	16027.4	8789.5	4187.4	2241.8	1353.6	1182.3	1124.5	1113.7	1063.8	1045.8	1048.6
35°	17031.3	8789.5	4029.8	2090.8	1213.4	1048.6	955.4	899.8	874.5	876.6	901.9
37.5°	17999.7	8613.2	3951.8	2005.5	1137.5	997.3	914.9	865.8	832.6	826.1	830.4
40°	18854.0	8357.4	3862.9	1970.1	1079.7	966.3	888.9	847.7	812.3	801.5	803.6
42.5°	19539.8	8150.0	3764.6	1923.8	1043.6	943.9	870.1	834.7	795.0	783.4	781.2
45°	20281.3	8081.3	3635.9	1829.9	1061.7	946.0	865.8	828.2	787.7	774.7	770.4
47.5°	21258.4	8297.4	3502.2	1718.6	1100.0	957.6	872.3	828.2	785.6	774.7	770.4
50°	22489.2	8804.7	3332.4	1556.0	1061.7	988.7	870.1	821.0	785.6	774.7	766.1
52.5°	24070.4	9490.6	3110.5	1369.5	1039.3	1063.8	865.8	808.0	774.7	759.6	743.7
55°	25991.4	10051.4	2844.6	1215.6	988.7	1043.6	859.3	792.8	757.4	735.0	721.3
57.5°	27398.5	10253.8	2504.9	1115.9	917.1	1010.3	849.9	772.6	735.0	716.9	699.6
60°	27120.3	9862.0	2217.3	1053.0	874.5	912.8	843.4	754.5	714.8	701.7	685.1
62.5°	24892.2	8838.0	2032.2	1024.1	847.7	832.6	849.9	737.2	697.4	683.0	678.6
65°	21550.4	7326.1	1959.3	1017.6	826.1	785.6	790.6	716.9	676.5	665.6	661.3
67.5°	17776.4	5913.2	1894.9	1039.3	797.1	752.3	730.7	690.2	656.2	645.4	636.7
70°	14018.3	4918.0	1865.3	1026.2	761.7	719.1	695.2	661.3	632.4	620.8	614.3
72.5°	11288.7	4154.1	1849.4	1012.5	714.8	674.3	651.9	623.0	591.9	587.6	581.1
75°	9553.4	3265.9	1694.7	970.6	661.3	620.8	605.6	578.9	547.8	547.8	543.5
77.5°	7369.4	2361.8	1409.3	859.3	605.6	560.8	547.8	527.6	492.2	498.7	496.5
80°	5443.4	1540.8	1102.1	712.6	537.0	494.3	487.1	467.6	429.3	438.7	438.7
82.5°	3729.2	1010.3	792.8	583.2	458.2	418.4	418.4	398.2	356.3	360.6	374.4
85°	1872.5	695.2	591.9	451.7	356.3	336.1	336.1	320.9	278.2	280.4	298.5
87.5°	570.2	418.4	391.7	323.0	255.8	251.5	239.9	229.1	202.4	200.2	211.8
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°	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0
2.5°	11801.1	11673.9	11521.4	11182.4	11069.0	11061.7	11165.1	11057.4	11262.6	11175.9	11271.3
5°	9516.6	9393.0	9221.0	8789.5	8526.5	8348.0	8264.1	8014.8	8194.8	8063.2	8173.1
7.5°	6999.4	7028.3	6914.9	6661.2	6088.8	5801.9	5632.8	5481.0	5612.5	5598.8	5808.4
10°	4920.2	4997.5	4918.0	4662.2	4198.2	4040.6	4071.7	4131.7	4303.7	4391.9	4714.9
12.5°	3542.0	3537.6	3486.3	3257.2	2952.3	2969.6	3096.8	3200.9	3359.1	3453.1	3781.9
15°	2644.4	2604.6	2582.2	2395.0	2221.6	2259.9	2322.1	2332.9	2433.4	2489.0	2756.4
17.5°	1999.0	2019.2	2043.1	1910.1	1778.6	1754.0	1705.6	1644.9	1674.5	1685.4	1818.3
20°	1587.1	1667.3	1728.0	1634.0	1501.1	1428.8	1366.6	1326.9	1326.9	1324.7	1362.3
22.5°	1386.9	1444.7	1509.7	1444.7	1324.7	1261.8	1226.4	1195.4	1191.0	1191.0	1226.4
25°	1278.5	1320.4	1382.5	1338.5	1248.8	1201.9	1168.6	1128.9	1113.7	1108.6	1133.2
27.5°	1224.3	1242.3	1273.4	1232.9	1157.8	1135.4	1126.7	1091.3	1070.3	1059.5	1084.8
30°	1133.2	1128.9	1131.0	1091.3	1030.6	1028.4	1043.6	1050.8	1043.6	1041.4	1079.7
32.5°	1048.6	1039.3	1037.1	1001.7	946.0	933.0	946.0	959.8	974.9	997.3	1041.4
35°	941.7	964.1	977.1	946.0	878.8	839.1	823.9	799.3	785.6	785.6	836.9
37.5°	857.1	908.4	928.7	899.8	826.1	770.4	743.7	739.3	741.5	750.2	799.3
40°	828.2	865.8	883.1	855.0	781.2	730.7	714.8	710.4	714.8	728.5	776.9
42.5°	810.2	836.9	834.7	799.3	739.3	703.9	695.2	690.2	695.2	708.3	761.7
45°	795.0	812.3	795.0	752.3	697.4	678.6	680.8	678.6	683.0	697.4	748.0
47.5°	781.2	787.7	766.1	723.4	665.6	661.3	669.9	676.5	680.8	693.1	745.8
50°	761.7	761.7	741.5	697.4	638.9	641.0	651.9	667.8	669.9	683.0	726.3
52.5°	737.2	735.0	721.3	678.6	616.5	623.0	623.0	641.0	645.4	661.3	706.1
55°	716.9	712.6	706.1	665.6	597.0	607.8	601.3	607.8	618.6	634.5	683.0
57.5°	699.6	690.2	690.2	654.0	581.1	585.4	570.2	578.9	591.9	605.6	656.2
60°	680.8	672.1	676.5	638.9	556.5	552.1	545.6	563.0	568.0	583.2	634.5
62.5°	661.3	654.0	656.2	620.8	539.1	527.6	527.6	543.5	545.6	568.0	616.5
65°	645.4	636.7	634.5	603.5	518.9	505.9	512.4	518.9	523.2	545.6	591.9
67.5°	630.2	612.1	612.1	587.6	496.5	482.8	496.5	494.3	501.6	521.1	558.7
70°	610.0	585.4	587.6	576.7	474.1	458.2	469.8	467.6	471.9	484.9	523.2
72.5°	578.9	558.7	563.0	558.7	451.7	429.3	433.6	433.6	433.6	445.2	484.9
75°	539.1	523.2	537.0	547.8	425.0	393.9	398.2	398.2	391.7	398.2	447.4
77.5°	489.3	480.6	525.4	510.2	393.9	356.3	356.3	352.0	338.9	347.6	400.4
80°	436.5	429.3	484.9	427.1	358.5	310.0	305.0	293.4	280.4	286.9	341.1
82.5°	380.9	374.4	407.6	327.4	310.0	255.8	245.0	224.8	211.8	218.3	266.7
85°	312.2	312.2	314.4	247.2	235.6	195.9	182.8	156.1	140.2	144.5	191.5
87.5°	222.6	229.1	211.8	169.1	140.2	109.1	100.5	84.6	70.8	82.4	100.5
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: P298903

CATALOG NUMBER: GLNA-AF-09-LED-E1-SLL-7027

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0	13683.0
2.5°	11761.3	12006.3	12284.6	12640.1	12945.8	13445.9	13927.3	14216.3
5°	8793.9	9201.5	9708.1	10361.4	10969.2	11881.3	12787.6	13368.6
7.5°	6293.3	6729.8	7277.6	8092.1	8952.2	10115.7	11314.0	12008.5
10°	5207.8	5655.2	6115.5	6665.5	7369.4	8635.6	10051.4	10834.8
12.5°	4308.1	4786.5	5283.0	5861.9	6513.7	7644.8	9276.7	10178.6
15°	3297.0	3831.1	4416.5	5149.3	5965.9	7273.3	9085.1	10064.4
17.5°	2259.9	2856.9	3575.2	4479.3	5478.8	7152.6	9428.4	10557.3
20°	1556.0	1990.3	2758.6	3818.1	5020.6	7137.4	10086.8	11501.1
22.5°	1302.3	1496.0	2056.8	3210.3	4675.2	7329.0	11109.4	12825.1
25°	1204.0	1320.4	1642.7	2682.7	4423.7	7769.8	12516.5	14539.4
27.5°	1146.9	1251.0	1491.7	2338.0	4225.7	8281.5	13885.3	16200.2
30°	1168.6	1275.6	1449.0	2161.6	3956.1	8708.6	15100.9	17496.0
32.5°	1053.0	1100.0	1242.3	2005.5	3762.4	9067.1	16164.8	18569.2
35°	897.6	979.3	1108.6	1932.5	3766.7	9307.7	17324.7	19940.2
37.5°	855.0	937.3	1030.6	1905.8	3818.1	9564.3	18655.9	21548.2
40°	828.2	904.1	984.3	1890.6	3867.2	9797.7	19961.1	23137.4
42.5°	810.2	878.8	979.3	1836.4	3891.8	10007.3	21033.6	24488.9
45°	808.0	878.8	997.3	1782.9	3929.4	10232.1	21933.4	25488.4
47.5°	810.2	908.4	964.1	1718.6	3929.4	10607.9	22988.6	26380.9
50°	801.5	957.6	928.7	1627.5	3838.3	11320.5	24435.4	27576.3
52.5°	797.1	951.1	859.3	1487.3	3680.0	12451.5	26289.9	29224.1
55°	785.6	917.1	810.2	1278.5	3495.7	13685.2	28275.9	31172.5
57.5°	774.7	812.3	783.4	1095.6	3210.3	14553.1	29642.5	32692.3
60°	868.0	710.4	761.7	1006.0	2829.4	14790.9	29589.7	33298.0
62.5°	803.6	665.6	732.8	986.5	2562.7	14123.1	28222.4	32971.3
65°	630.2	636.7	703.9	1043.6	2491.2	12353.9	25799.9	31459.4
67.5°	576.7	607.8	674.3	1118.0	2498.4	9891.0	22180.6	28166.0
70°	543.5	576.7	641.0	1155.6	2515.7	7373.8	17535.7	22941.6
72.5°	505.9	534.8	603.5	1162.1	2399.4	5356.0	13516.0	16868.7
75°	460.4	487.1	550.0	1012.5	1988.2	3715.4	10339.0	11540.9
77.5°	409.8	429.3	482.8	781.2	1476.5	2377.7	7760.4	8431.1
80°	349.8	360.6	405.4	572.4	1010.3	1487.3	6140.1	6765.3
82.5°	280.4	284.7	314.4	429.3	656.2	955.4	4112.2	4693.3
85°	198.0	198.0	216.1	312.2	447.4	605.6	2232.4	2476.0
87.5°	93.2	95.4	95.4	171.3	233.4	307.9	514.6	316.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)