

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: P298912

Luminaire Tested: **GLNA-AF-10-LED-E1-SLL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298912
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-10-LED-E1-SLL
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 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: 51607.1 lumens
Efficiency: N/A
Efficacy: 92.5 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

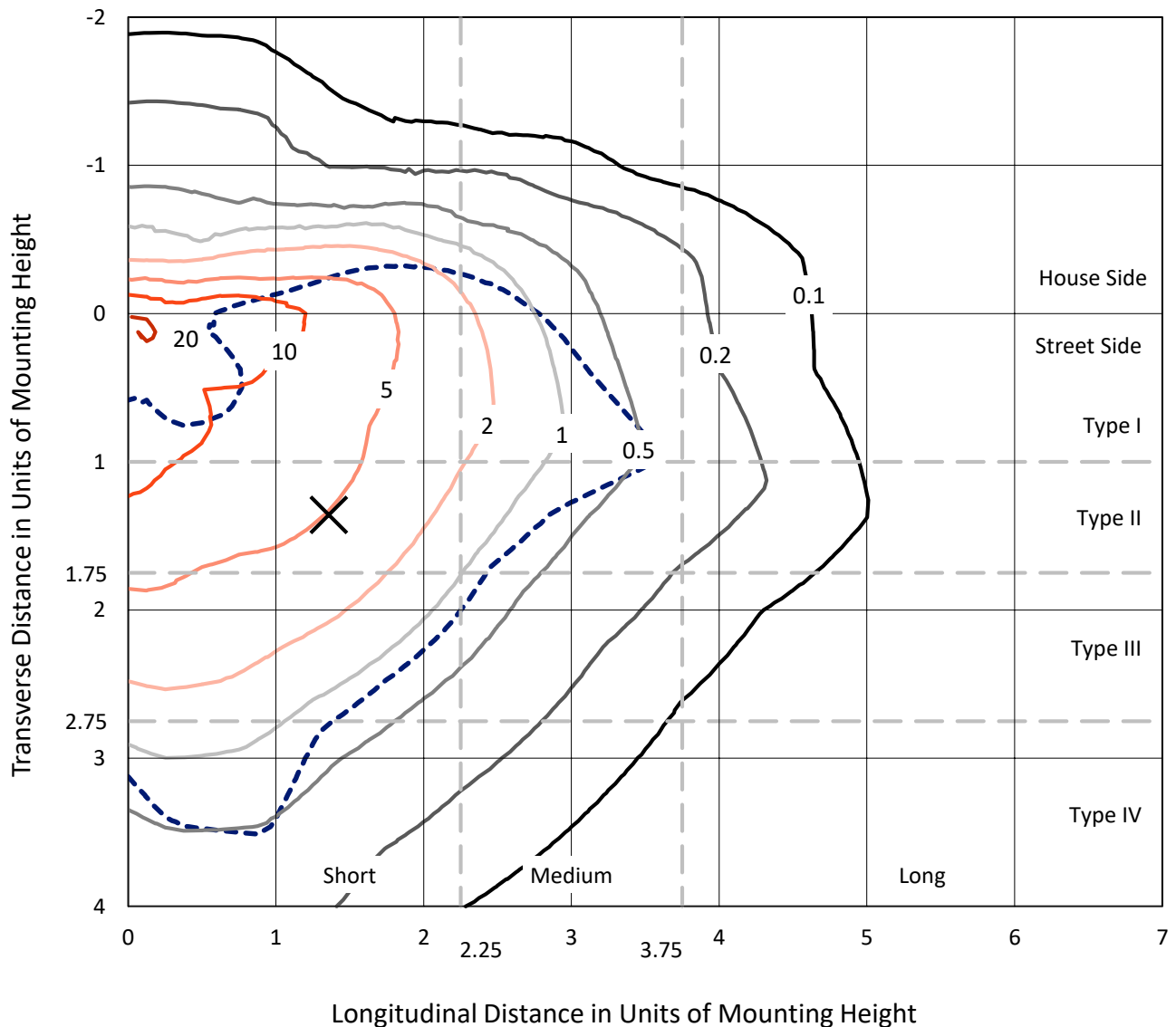
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

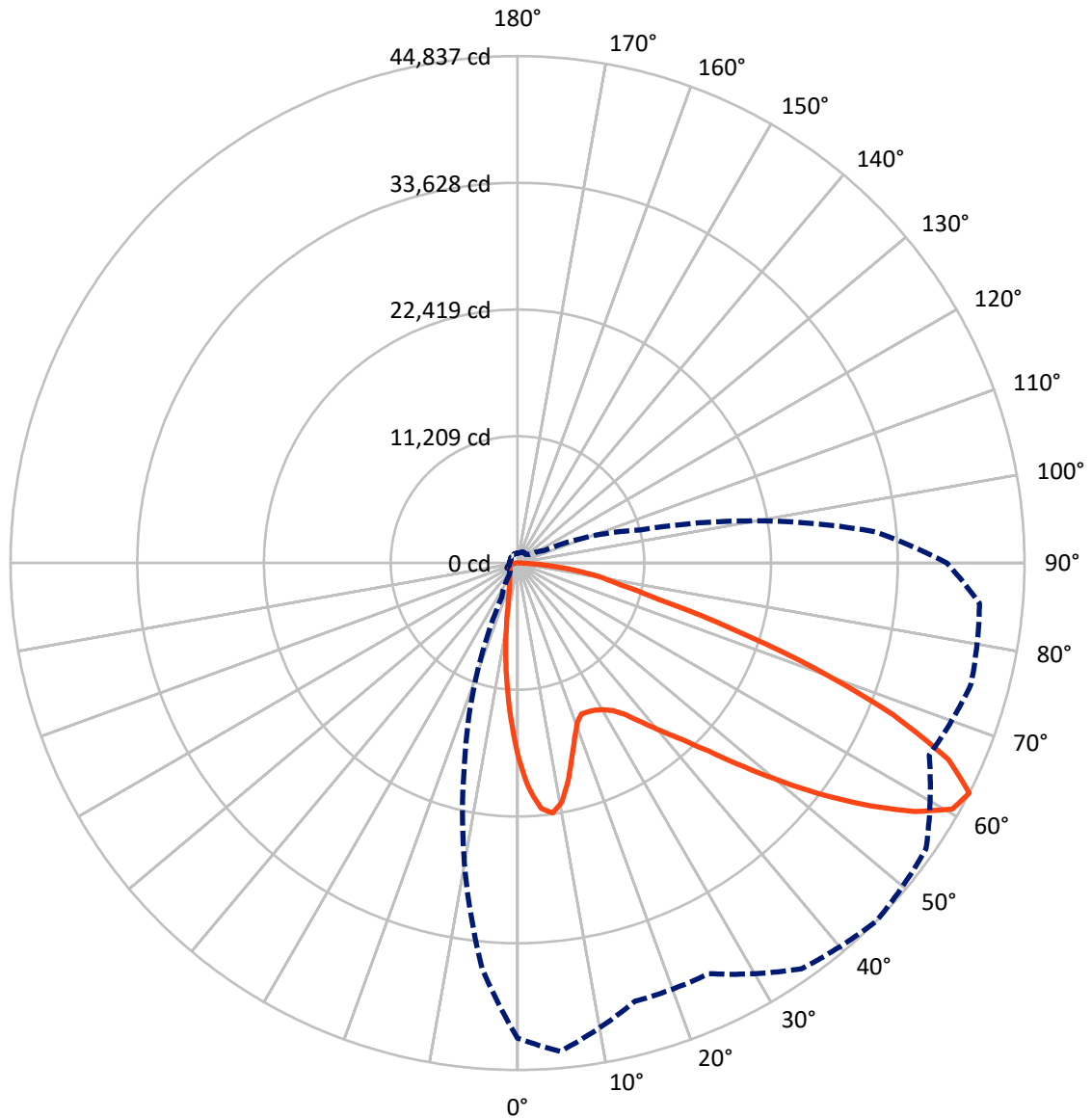


Based on 30 foot mounting height. Maximum calculated value = 22.8 fc
 Type IV - Short - Non-Cutoff

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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	8540.2	0.0	8540.2
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	43066.8	0.0	43066.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	51607.1	0.0	51607.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1269.2	2.5
10°-20°	2327.4	4.5
20°-30°	3393.4	6.6
30°-40°	5226.3	10.1
40°-50°	7691.8	14.9
50°-60°	11282.2	21.9
60°-70°	12611.8	24.4
70°-80°	6174.5	12.0
80°-90°	1630.2	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°	51607.1	100.0
0°-180°	51607.1	100.0



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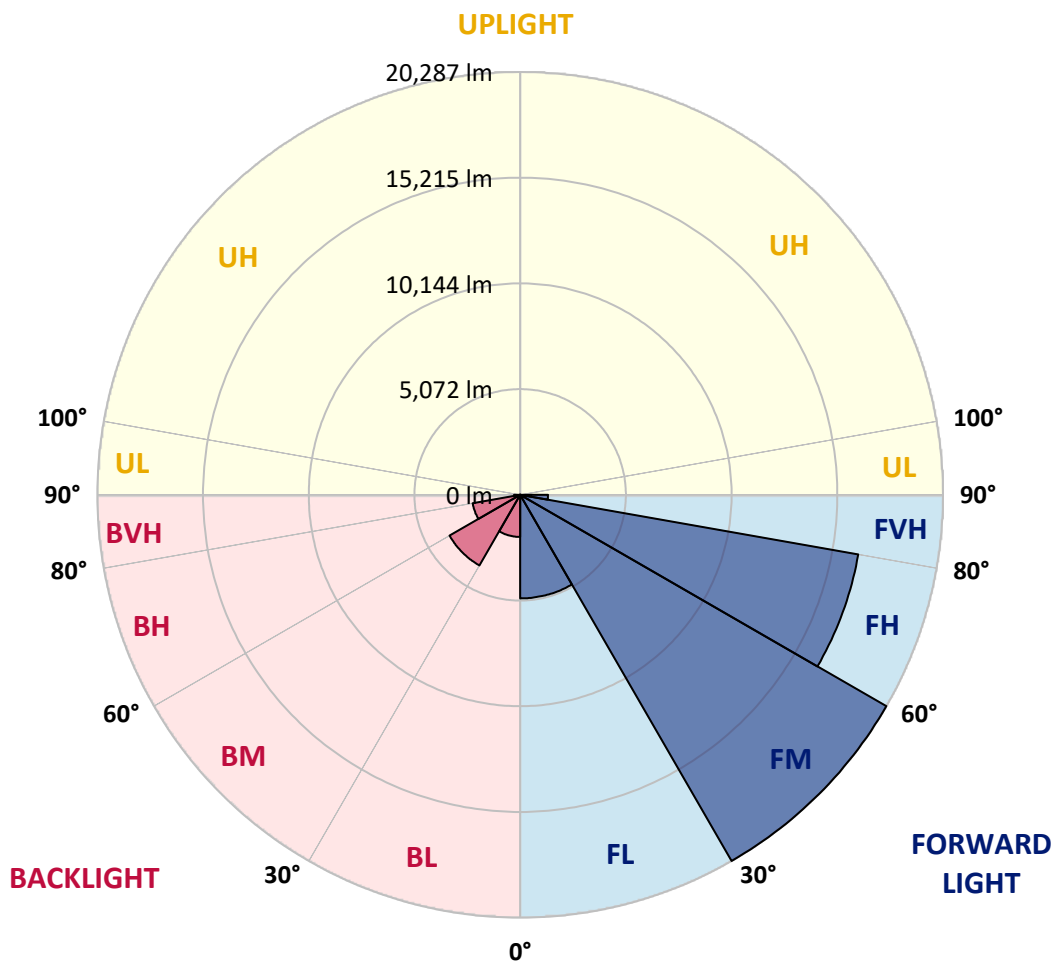
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4969.6	9.6			
FM	(30°-60°)	20287.2	39.3			
FH	(60°-80°)	16471.2	31.9			G5
FVH	(80°-90°)	1338.8	2.6			G5
BL	(0°-30°)	2020.5	3.9	B3/2500		
BM	(30°-60°)	3913.1	7.6	B3/5000		
BH	(60°-80°)	2315.2	4.5	B3/2500		G3/2500
BVH	(80°-90°)	291.4	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°	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2
2.5°	18115.9	18406.0	18970.5	19392.3	19907.1	20025.9	20190.8	20028.7	19742.3	19361.9	19237.6
5°	17035.6	17654.5	19023.9	20230.4	21302.3	21801.5	21941.5	21528.9	20698.2	19606.0	18939.2
7.5°	15302.4	16181.9	18036.7	19813.2	21392.6	22326.4	22303.4	21347.5	19818.7	18039.4	16970.2
10°	13806.8	14811.5	16939.8	18925.4	20601.5	21506.8	21156.8	19935.7	18110.3	16062.2	14902.7
12.5°	12970.6	13955.1	16113.7	18107.6	19509.3	19821.5	19554.4	18357.2	16637.8	14567.5	13551.7
15°	12825.1	13907.2	15785.0	17407.7	18193.2	17921.6	17602.9	17066.9	15852.2	14084.9	13026.7
17.5°	13453.1	14643.9	16162.6	16919.6	16786.0	16311.7	16221.5	16281.4	15989.4	14620.9	13401.6
20°	14655.9	16085.2	17061.4	16690.3	15716.8	15063.9	15086.9	15997.7	16862.5	15980.2	14586.8
22.5°	16343.1	17975.0	18357.2	16811.8	15265.6	14491.0	14678.9	16154.3	18255.9	17966.7	16187.4
25°	18527.5	20014.9	19739.5	17253.9	15310.7	14562.0	14712.1	16693.0	19900.7	19952.2	18168.4
27.5°	20643.9	22023.4	20899.0	17841.4	15498.6	14729.6	14928.5	17540.3	21472.7	22108.2	20432.0
30°	22295.1	23254.7	21358.5	18377.4	15866.9	15055.6	15302.4	18346.1	22188.3	23563.3	22173.5
32.5°	23662.7	24351.6	22090.7	19041.4	16544.7	15568.5	16003.2	19325.1	23217.9	24948.3	23878.2
35°	25409.7	25605.9	23001.5	19781.9	17591.9	16462.8	17001.5	20283.8	24199.6	26346.3	25558.0
37.5°	27458.8	27206.5	23860.7	20794.9	18945.6	17860.8	18306.5	21336.4	25007.3	27932.2	27273.7
40°	29484.0	28876.2	24940.1	22366.0	20920.1	19509.3	20037.0	22460.0	25762.5	29520.8	28950.8
42.5°	31206.2	30306.4	26002.8	24093.7	22757.4	21328.1	21958.0	23591.8	26482.6	30876.5	30405.9
45°	32479.8	31361.8	27015.9	25753.3	25290.9	23744.7	24043.1	24887.6	27262.7	32009.2	31603.1
47.5°	33617.2	32422.7	28161.5	27427.5	27506.7	26887.9	26408.0	26397.0	28182.7	32933.8	32734.9
50°	35140.4	33895.3	29392.8	29151.5	30831.3	30419.7	29361.5	28158.8	29344.9	33983.7	33960.7
52.5°	37240.2	36228.1	30896.7	31010.0	33935.8	34204.7	32893.3	30276.0	31165.6	35909.4	35774.0
55°	39723.0	39131.8	32945.8	33146.6	37742.1	37935.5	36632.4	32921.9	33844.7	38699.0	38321.4
57.5°	41659.8	41535.5	35192.0	35711.4	40585.0	41453.5	40256.3	35986.8	36862.6	41047.4	40099.7
60°	42431.5	43035.7	37583.7	38298.3	43215.3	44175.8	43126.8	38677.8	39537.9	42020.8	39978.1
62.5°	42015.3	43364.4	40131.0	40071.2	43801.9	44837.0	44099.4	40176.1	41521.6	41016.0	37955.7
65°	40088.7	42182.0	41609.1	39614.4	41793.3	41878.0	41639.5	39506.6	41989.5	37841.6	34045.4
67.5°	35891.9	38905.2	39662.3	35700.4	36374.5	35821.9	35421.3	35841.3	39549.0	33084.0	28612.8
70°	29234.4	33768.2	34130.2	28553.8	28247.2	27875.1	27078.5	29384.5	34735.2	27115.3	22704.0
72.5°	21495.7	26261.6	27376.0	20942.2	19524.0	19599.5	18970.5	22144.1	28241.6	20141.9	16950.9
75°	14706.5	19015.6	21419.3	14612.6	12911.6	12942.0	12861.9	15691.0	22494.0	14011.2	12684.1
77.5°	10743.7	13585.8	16154.3	9823.7	9537.3	9361.4	9319.0	10978.6	17245.6	10173.7	9849.5
80°	8620.9	10037.4	10850.6	6808.5	7321.5	7307.7	7071.9	7549.0	11262.2	7441.2	7366.6
82.5°	5980.6	7713.8	8791.3	5335.9	4941.8	4858.9	4916.9	5622.4	7960.6	5086.4	4836.8
85°	3155.2	5123.2	8706.6	4729.0	2933.2	2340.1	2911.1	4603.8	6896.9	2695.6	2359.5
87.5°	403.4	1480.9	5764.2	1887.0	1157.6	623.5	1382.3	2592.5	4428.8	549.8	479.8
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2
2.5°	18917.1	18539.5	18045.9	17588.2	17114.8	16643.3	16028.1	15642.2	15376.1	15324.5	15212.1
5°	18457.5	17203.2	16255.6	15435.9	14692.7	13641.9	13060.8	12578.2	12320.4	12295.5	12232.9
7.5°	16337.5	14607.1	13327.9	12167.5	11114.9	10266.7	9330.1	8894.5	8714.9	8757.2	8799.6
10°	14132.8	12198.8	10729.0	9542.8	8615.4	7900.8	7149.3	6641.8	6289.1	6218.2	6204.4
12.5°	12522.1	10400.2	8973.7	8135.6	7419.1	6745.9	5949.3	5349.8	4893.9	4737.3	4633.3
15°	11840.6	9520.7	8026.0	7123.5	6331.5	5477.8	4737.3	4110.2	3691.1	3554.8	3478.4
17.5°	11986.1	9276.7	7373.1	6218.2	5206.1	4314.6	3381.7	2844.8	2592.5	2528.0	2528.0
20°	12746.8	9231.5	6833.4	5384.8	4121.2	3088.8	2323.5	2016.9	1934.9	1926.6	1948.7
22.5°	13813.2	9390.9	6431.9	4661.8	3203.0	2255.4	1809.7	1696.4	1659.5	1668.7	1693.6
25°	15401.9	9926.8	6139.9	4017.2	2513.3	1846.5	1613.5	1546.3	1528.8	1551.8	1583.1
27.5°	17285.2	10462.8	5957.6	3531.8	2121.9	1688.1	1534.3	1464.3	1475.4	1503.9	1531.5
30°	18939.2	10903.0	5671.2	3186.5	2000.3	1696.4	1534.3	1438.5	1427.5	1433.0	1441.3
32.5°	20423.8	11200.5	5335.9	2856.8	1724.9	1506.7	1433.0	1419.2	1355.6	1332.6	1336.3
35°	21702.9	11200.5	5135.2	2664.3	1546.3	1336.3	1217.5	1146.6	1114.3	1117.1	1149.3
37.5°	22937.0	10975.8	5035.7	2555.6	1449.6	1270.9	1165.9	1103.3	1060.9	1052.6	1058.2
40°	24025.6	10649.8	4922.4	2510.5	1375.9	1231.3	1132.8	1080.3	1035.1	1021.3	1024.1
42.5°	24899.5	10385.5	4797.2	2451.6	1329.8	1202.8	1108.8	1063.7	1013.0	998.3	995.5
45°	25844.4	10298.0	4633.3	2331.8	1352.9	1205.5	1103.3	1055.4	1003.8	987.3	981.7
47.5°	27089.5	10573.3	4462.9	2190.0	1401.7	1220.2	1111.6	1055.4	1001.1	987.3	981.7
50°	28657.9	11219.8	4246.5	1982.8	1352.9	1259.9	1108.8	1046.2	1001.1	987.3	976.2
52.5°	30672.9	12093.8	3963.7	1745.2	1324.3	1355.6	1103.3	1029.6	987.3	967.9	947.7
55°	33120.8	12808.5	3624.8	1549.0	1259.9	1329.8	1095.0	1010.3	965.1	936.6	919.1
57.5°	34913.9	13066.3	3192.0	1421.9	1168.7	1287.5	1083.0	984.5	936.6	913.6	891.5
60°	34559.3	12567.2	2825.5	1341.8	1114.3	1163.2	1074.7	961.5	910.8	894.2	873.1
62.5°	31720.0	11262.2	2589.7	1305.0	1080.3	1060.9	1083.0	939.4	888.7	870.3	864.8
65°	27461.6	9335.6	2496.7	1296.7	1052.6	1001.1	1007.5	913.6	862.0	848.2	842.7
67.5°	22652.4	7535.2	2414.7	1324.3	1015.8	958.7	931.1	879.5	836.2	822.4	811.4
70°	17863.5	6267.0	2377.0	1307.7	970.7	916.3	885.9	842.7	805.8	791.1	782.8
72.5°	14385.1	5293.6	2356.7	1290.2	910.8	859.2	830.7	793.9	754.3	748.7	740.4
75°	12173.9	4161.7	2159.6	1236.8	842.7	791.1	771.8	737.7	698.1	698.1	692.5
77.5°	9390.9	3009.6	1795.8	1095.0	771.8	714.7	698.1	672.3	627.2	635.5	632.7
80°	6936.5	1963.5	1404.4	908.0	684.3	629.9	620.7	595.9	547.0	559.0	559.0
82.5°	4752.1	1287.5	1010.3	743.2	583.9	533.2	533.2	507.4	454.0	459.6	477.0
85°	2386.2	885.9	754.3	575.6	454.0	428.2	428.2	408.9	354.6	357.3	380.3
87.5°	726.6	533.2	499.2	411.7	326.0	320.5	305.8	291.9	257.9	255.1	269.8
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°	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2
2.5°	15038.1	14876.0	14681.7	14249.8	14105.2	14096.0	14227.7	14090.4	14352.0	14241.5	14363.0
5°	12127.0	11969.5	11750.3	11200.5	10865.3	10637.8	10531.0	10213.3	10442.6	10275.0	10414.9
7.5°	8919.3	8956.2	8811.6	8488.3	7758.9	7393.3	7177.8	6984.4	7152.0	7134.5	7401.6
10°	6269.8	6368.3	6267.0	5941.0	5349.8	5149.0	5188.6	5265.0	5484.2	5596.6	6008.2
12.5°	4513.5	4508.0	4442.6	4150.7	3762.1	3784.2	3946.2	4078.9	4280.5	4400.3	4819.3
15°	3369.7	3319.1	3290.5	3052.0	2831.0	2879.8	2959.0	2972.8	3100.8	3171.7	3512.5
17.5°	2547.3	2573.1	2603.5	2434.1	2266.4	2235.1	2173.4	2096.1	2133.8	2147.6	2317.1
20°	2022.4	2124.6	2202.0	2082.3	1912.8	1820.7	1741.5	1690.9	1690.9	1688.1	1736.0
22.5°	1767.3	1841.0	1923.9	1841.0	1688.1	1608.0	1562.8	1523.2	1517.7	1517.7	1562.8
25°	1629.1	1682.6	1761.8	1705.6	1591.4	1531.5	1489.2	1438.5	1419.2	1412.7	1444.0
27.5°	1560.1	1583.1	1622.7	1571.1	1475.4	1446.8	1435.8	1390.6	1363.9	1350.1	1382.3
30°	1444.0	1438.5	1441.3	1390.6	1313.3	1310.5	1329.8	1339.1	1329.8	1327.1	1375.9
32.5°	1336.3	1324.3	1321.6	1276.4	1205.5	1188.9	1205.5	1223.0	1242.4	1270.9	1327.1
35°	1200.0	1228.5	1245.1	1205.5	1119.9	1069.2	1049.9	1018.6	1001.1	1001.1	1066.5
37.5°	1092.2	1157.6	1183.4	1146.6	1052.6	981.7	947.7	942.1	944.9	955.9	1018.6
40°	1055.4	1103.3	1125.4	1089.5	995.5	931.1	910.8	905.3	910.8	928.3	990.0
42.5°	1032.4	1066.5	1063.7	1018.6	942.1	897.0	885.9	879.5	885.9	902.5	970.7
45°	1013.0	1035.1	1013.0	958.7	888.7	864.8	867.5	864.8	870.3	888.7	953.2
47.5°	995.5	1003.8	976.2	921.9	848.2	842.7	853.7	862.0	867.5	883.2	950.4
50°	970.7	970.7	944.9	888.7	814.1	816.9	830.7	851.0	853.7	870.3	925.5
52.5°	939.4	936.6	919.1	864.8	785.6	793.9	793.9	816.9	822.4	842.7	899.8
55°	913.6	908.0	899.8	848.2	760.7	774.5	766.2	774.5	788.3	808.6	870.3
57.5°	891.5	879.5	879.5	833.5	740.4	746.0	726.6	737.7	754.3	771.8	836.2
60°	867.5	856.5	862.0	814.1	709.1	703.6	695.3	717.4	723.9	743.2	808.6
62.5°	842.7	833.5	836.2	791.1	687.0	672.3	672.3	692.5	695.3	723.9	785.6
65°	822.4	811.4	808.6	769.0	661.2	644.7	652.9	661.2	666.8	695.3	754.3
67.5°	803.1	780.0	780.0	748.7	632.7	615.2	632.7	629.9	639.1	664.0	711.9
70°	777.3	746.0	748.7	734.9	604.1	583.9	598.6	595.9	601.4	618.0	666.8
72.5°	737.7	711.9	717.4	711.9	575.6	547.0	552.6	552.6	552.6	567.3	618.0
75°	687.0	666.8	684.3	698.1	541.5	501.9	507.4	507.4	499.2	507.4	570.1
77.5°	623.5	612.4	669.5	650.2	501.9	454.0	454.0	448.5	431.9	443.0	510.2
80°	556.2	547.0	618.0	544.3	456.8	395.1	388.6	373.9	357.3	365.6	434.7
82.5°	485.3	477.0	519.4	417.2	395.1	326.0	312.2	286.4	269.8	278.1	339.8
85°	397.8	397.8	400.6	315.0	300.2	249.6	233.0	198.9	178.7	184.2	244.0
87.5°	283.7	291.9	269.8	215.5	178.7	139.1	128.0	107.8	90.3	105.0	128.0
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: P298912

CATALOG NUMBER: GLNA-AF-10-LED-E1-SLL

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2	17436.2
2.5°	14987.4	15299.6	15654.2	16107.3	16496.9	17134.1	17747.5	18115.9
5°	11206.0	11725.4	12371.0	13203.6	13978.1	15140.3	16295.2	17035.6
7.5°	8019.6	8575.8	9273.9	10311.8	11407.7	12890.4	14417.4	15302.4
10°	6636.3	7206.4	7793.0	8493.9	9390.9	11004.3	12808.5	13806.8
12.5°	5489.7	6099.4	6732.1	7469.8	8300.5	9741.7	11821.2	12970.6
15°	4201.3	4881.9	5627.9	6561.7	7602.4	9268.4	11577.2	12825.1
17.5°	2879.8	3640.5	4555.9	5708.0	6981.7	9114.6	12014.6	13453.1
20°	1982.8	2536.3	3515.2	4865.3	6397.8	9095.2	12853.6	14655.9
22.5°	1659.5	1906.4	2621.0	4090.8	5957.6	9339.3	14156.7	16343.1
25°	1534.3	1682.6	2093.3	3418.5	5637.1	9901.1	15949.8	18527.5
27.5°	1461.5	1594.2	1900.8	2979.3	5384.8	10553.1	17694.1	20643.9
30°	1489.2	1625.5	1846.5	2754.5	5041.2	11097.4	19243.1	22295.1
32.5°	1341.8	1401.7	1583.1	2555.6	4794.4	11554.2	20598.7	23662.7
35°	1143.8	1247.9	1412.7	2462.6	4800.0	11860.8	22076.8	25409.7
37.5°	1089.5	1194.5	1313.3	2428.5	4865.3	12187.8	23773.2	27458.8
40°	1055.4	1152.1	1254.3	2409.2	4928.0	12485.2	25436.4	29484.0
42.5°	1032.4	1119.9	1247.9	2340.1	4959.3	12752.3	26803.1	31206.2
45°	1029.6	1119.9	1270.9	2272.0	5007.2	13038.7	27949.7	32479.8
47.5°	1032.4	1157.6	1228.5	2190.0	5007.2	13517.6	29294.3	33617.2
50°	1021.3	1220.2	1183.4	2074.0	4891.1	14425.7	31138.0	35140.4
52.5°	1015.8	1212.0	1095.0	1895.3	4689.4	15866.9	33501.1	37240.2
55°	1001.1	1168.7	1032.4	1629.1	4454.6	17439.0	36031.9	39723.0
57.5°	987.3	1035.1	998.3	1396.1	4090.8	18545.0	37773.4	41659.8
60°	1106.1	905.3	970.7	1282.0	3605.5	18848.0	37706.2	42431.5
62.5°	1024.1	848.2	933.8	1257.1	3265.7	17997.1	35963.7	42015.3
65°	803.1	811.4	897.0	1329.8	3174.5	15742.6	32876.7	40088.7
67.5°	734.9	774.5	859.2	1424.7	3183.7	12604.0	28264.7	35891.9
70°	692.5	734.9	816.9	1472.6	3205.8	9396.4	22345.8	29234.4
72.5°	644.7	681.5	769.0	1480.9	3057.5	6825.1	17223.5	21495.7
75°	586.6	620.7	700.8	1290.2	2533.5	4734.6	13175.0	14706.5
77.5°	522.2	547.0	615.2	995.5	1881.5	3029.9	9889.1	10743.7
80°	445.7	459.6	516.6	729.4	1287.5	1895.3	7824.3	8620.9
82.5°	357.3	362.9	400.6	547.0	836.2	1217.5	5240.2	5980.6
85°	252.3	252.3	275.4	397.8	570.1	771.8	2844.8	3155.2
87.5°	118.8	121.6	121.6	218.3	297.5	392.3	655.7	403.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)