

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: P299393

Luminaire Tested: **GLNA-AF-10-LED-E1-SLR-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299393
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-10-LED-E1-SLR-7050
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Right 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

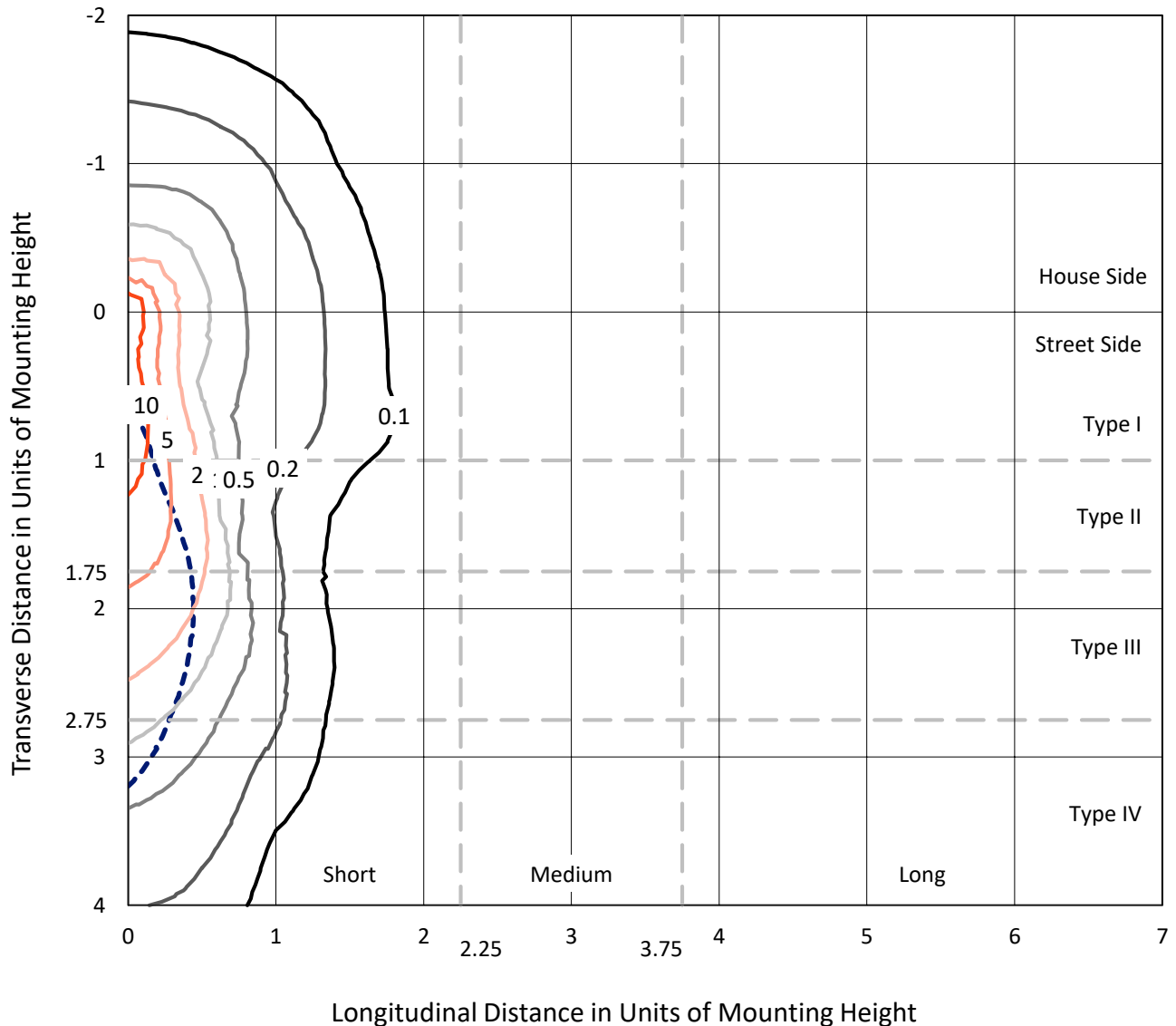
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

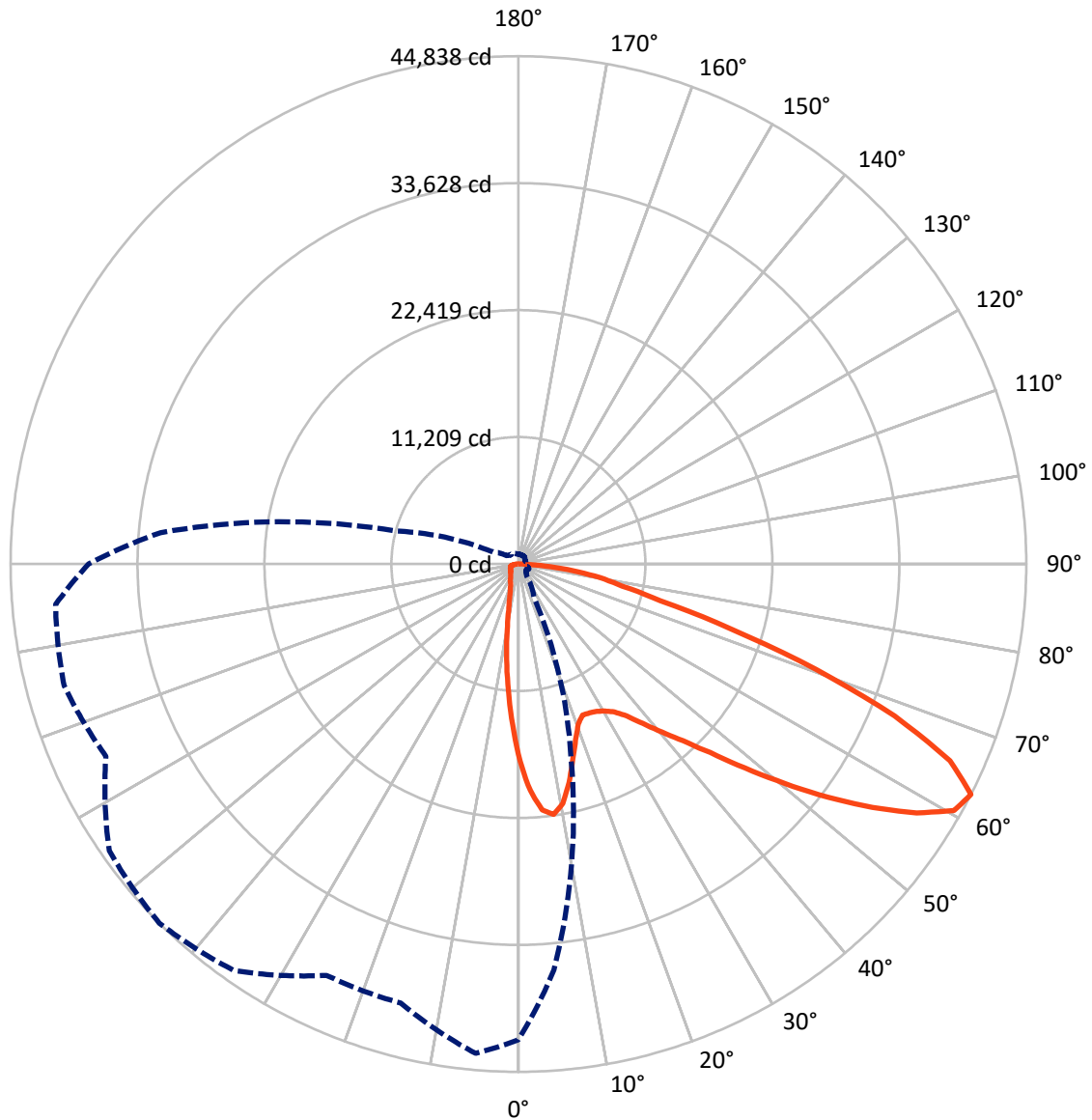
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 19.4 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
House Side	Lumens	8540.3	0.0	8540.3
	% 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

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°	6174.6	12.0
80°-90°	1630.3	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°	51607.1	100.0
0°-180°	51607.1	100.0

Coefficient of Utilization



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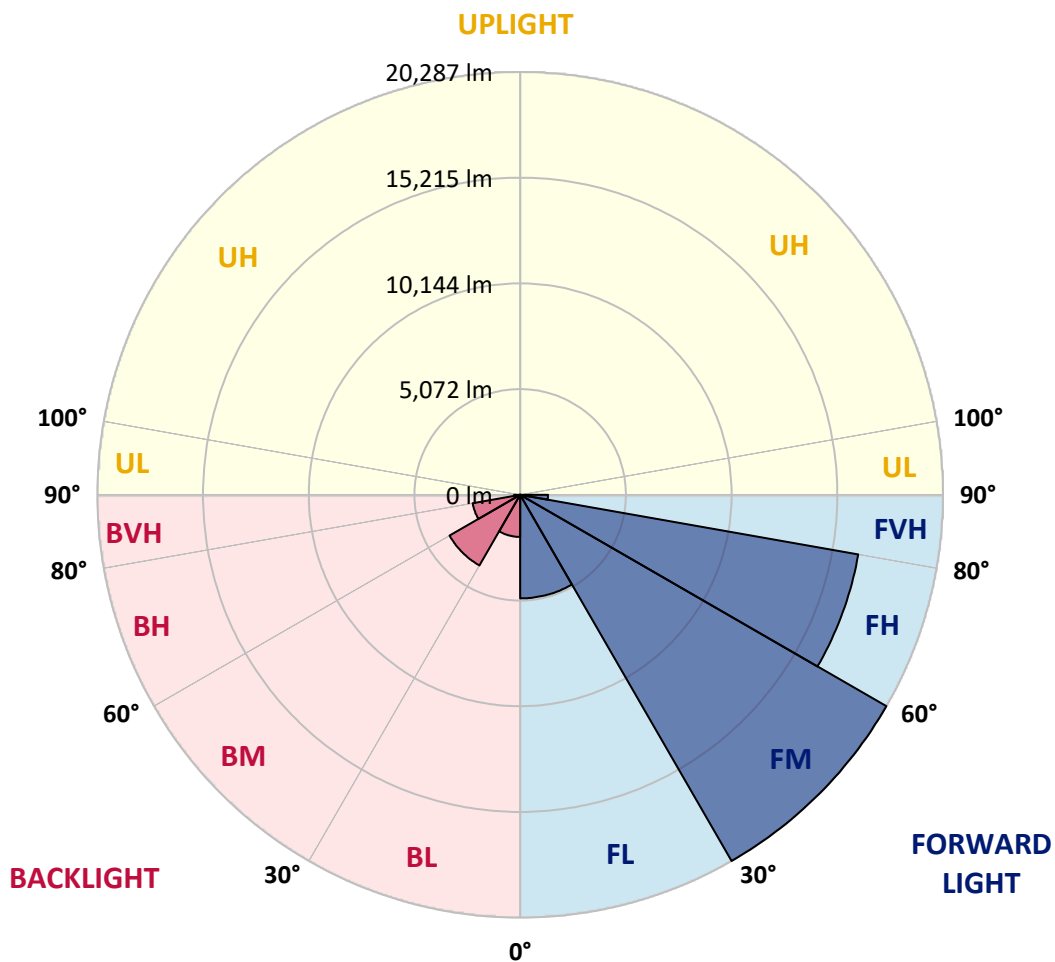
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	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°)	2315.3	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°	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9
2.5°	18116.1	17747.7	17134.5	16496.4	16108.2	15653.9	15299.2	14987.4	14363.1	14241.1	14351.9
5°	17035.7	16295.4	15140.3	13977.4	13202.8	12371.4	11724.7	11206.0	10414.2	10275.0	10442.5
7.5°	15302.6	14417.2	12891.0	11407.0	10312.0	9273.6	8576.3	8019.7	7401.4	7135.2	7151.5
10°	13807.4	12808.6	11004.2	9390.4	8493.8	7793.0	7205.6	6635.3	6008.4	5597.0	5483.6
12.5°	12970.0	11821.8	9741.7	8300.6	7469.2	6732.4	6099.4	5489.6	4819.7	4399.8	4281.3
15°	12825.8	11577.0	9268.5	7603.2	6561.5	5628.8	4882.4	4201.4	3511.8	3171.7	3100.4
17.5°	13452.7	12014.2	9114.8	6981.4	5707.8	4556.1	3639.7	2879.7	2318.0	2147.9	2133.3
20°	14655.1	12854.1	9095.0	6397.4	4865.3	3515.2	2536.1	1983.0	1736.6	1687.6	1691.0
22.5°	16343.5	14156.1	9338.9	5957.7	4090.6	2621.1	1906.6	1659.3	1563.1	1517.6	1517.6
25°	18527.5	15949.3	9900.6	5637.4	3418.1	2093.8	1682.4	1534.7	1443.7	1412.8	1418.8
27.5°	20644.5	17693.6	10553.3	5384.9	2978.4	1900.6	1594.0	1460.9	1381.9	1350.1	1364.7
30°	22295.2	19242.9	11097.8	5041.3	2754.3	1846.5	1625.8	1489.2	1375.8	1327.7	1330.3
32.5°	23662.5	20599.0	11554.7	4794.0	2555.9	1582.8	1401.6	1341.5	1327.7	1271.1	1242.7
35°	25410.2	22077.1	11861.3	4800.0	2462.3	1412.8	1247.9	1143.1	1066.7	1001.4	1001.4
37.5°	27458.5	23773.2	12187.6	4865.3	2428.8	1313.1	1194.6	1089.0	1018.6	955.9	944.7
40°	29483.6	25435.9	12485.7	4928.0	2408.2	1253.9	1151.7	1055.5	990.2	927.5	910.4
42.5°	31206.4	26803.2	12751.9	4958.9	2340.3	1247.9	1120.8	1032.3	970.5	901.8	885.5
45°	32480.1	27948.9	13038.7	5007.0	2272.5	1271.1	1120.8	1029.7	953.3	888.0	870.9
47.5°	33617.1	29293.8	13518.0	5007.0	2190.0	1228.1	1157.7	1032.3	950.7	882.0	868.3
50°	35140.7	31137.7	14425.8	4891.0	2074.1	1182.6	1219.5	1021.1	925.0	870.9	853.7
52.5°	37239.7	33501.2	15866.9	4689.2	1895.4	1095.0	1210.9	1016.0	899.2	842.5	822.8
55°	39722.6	36031.3	17438.5	4453.9	1628.3	1032.3	1168.9	1001.4	870.9	808.2	788.4
57.5°	41660.1	37773.0	18544.7	4090.6	1395.6	998.8	1035.7	987.7	836.5	771.2	754.9
60°	42431.3	37705.2	18848.7	3605.4	1282.2	970.5	905.2	1106.2	808.2	742.9	723.1
62.5°	42014.8	35963.5	17997.6	3265.3	1256.5	933.5	848.5	1023.7	785.8	723.1	694.8
65°	40088.4	32876.8	15742.3	3174.2	1330.3	896.6	811.6	803.0	754.9	694.8	666.5
67.5°	35892.2	28264.1	12604.2	3182.8	1423.9	859.7	774.7	735.2	712.0	663.9	638.1
70°	29234.5	22346.7	9395.6	3206.0	1472.0	816.7	735.2	692.2	666.5	618.4	601.2
72.5°	21495.6	17223.0	6826.0	3058.3	1480.6	768.7	681.1	644.1	618.4	567.7	553.1
75°	14706.6	13174.4	4734.7	2533.5	1290.8	700.8	620.9	587.4	570.3	507.6	499.0
77.5°	10743.1	9889.4	3029.9	1880.8	995.4	615.8	547.9	522.2	511.0	442.3	431.1
80°	8621.8	7823.9	1895.4	1288.2	729.1	516.2	459.5	445.7	433.7	365.9	357.3
82.5°	5980.0	5239.7	1217.0	836.5	547.9	400.2	363.3	357.3	340.1	278.3	269.7
85°	3154.5	2845.3	771.2	570.3	396.8	274.8	252.5	252.5	243.9	184.6	178.6
87.5°	402.8	655.3	391.6	298.0	218.1	122.0	122.0	119.4	128.0	104.8	91.0
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°	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9
2.5°	14090.8	14227.4	14096.8	14105.4	14249.7	14680.8	14876.6	15038.1	15211.6	15324.9	15375.6
5°	10213.2	10531.0	10638.3	10865.0	11200.0	11750.5	11968.6	12127.5	12233.2	12295.0	12320.8
7.5°	6984.9	7177.2	7392.8	7758.7	8487.8	8811.6	8955.9	8918.9	8800.4	8757.5	8715.4
10°	5265.5	5189.0	5148.7	5350.5	5940.5	6266.9	6369.1	6269.5	6204.2	6218.8	6289.2
12.5°	4079.4	3946.3	3784.9	3761.7	4150.7	4442.7	4508.0	4513.1	4632.5	4737.3	4893.6
15°	2973.3	2958.7	2879.7	2831.6	3052.3	3291.0	3319.4	3370.0	3478.3	3554.7	3690.4
17.5°	2096.4	2172.8	2235.5	2266.4	2433.9	2604.0	2573.1	2547.3	2527.5	2527.5	2592.8
20°	1691.0	1741.7	1821.6	1911.8	2082.7	2201.2	2124.7	2022.5	1948.7	1926.4	1934.9
22.5°	1523.6	1563.1	1608.6	1687.6	1841.3	1923.8	1841.3	1767.5	1693.6	1667.8	1659.3
25°	1438.5	1489.2	1532.2	1591.4	1704.8	1761.5	1682.4	1628.3	1582.8	1551.9	1528.7
27.5°	1390.4	1435.1	1447.1	1475.5	1571.7	1622.3	1582.8	1560.5	1532.2	1503.8	1475.5
30°	1338.9	1330.3	1310.6	1313.1	1390.4	1441.1	1438.5	1443.7	1441.1	1432.5	1427.4
32.5°	1223.0	1205.8	1188.6	1205.8	1276.2	1321.7	1325.2	1336.3	1336.3	1333.8	1356.1
35°	1018.6	1049.5	1069.2	1120.8	1205.8	1245.3	1228.1	1199.8	1149.1	1117.3	1114.8
37.5°	942.1	947.3	981.6	1052.1	1146.5	1182.6	1157.7	1092.4	1058.1	1052.1	1060.7
40°	905.2	910.4	930.1	995.4	1089.0	1125.9	1103.6	1055.5	1023.7	1021.1	1035.7
42.5°	879.4	885.5	896.6	942.1	1018.6	1064.1	1066.7	1032.3	995.4	998.8	1012.6
45°	864.8	868.3	864.8	888.0	958.5	1012.6	1035.7	1012.6	981.6	987.7	1004.0
47.5°	862.3	853.7	842.5	848.5	922.4	975.6	1004.0	995.4	981.6	987.7	1001.4
50°	851.1	831.3	816.7	814.2	888.0	944.7	970.5	970.5	975.6	987.7	1001.4
52.5°	816.7	794.4	794.4	785.8	864.8	918.9	936.1	938.7	947.3	967.0	987.7
55°	774.7	766.1	774.7	760.1	848.5	899.2	907.8	913.8	918.9	936.1	964.5
57.5°	737.7	726.6	746.3	740.3	833.9	879.4	879.4	890.6	890.6	913.8	936.1
60°	718.0	694.8	703.4	709.4	814.2	862.3	857.1	868.3	873.4	894.0	910.4
62.5°	692.2	672.5	672.5	686.2	791.8	836.5	833.9	842.5	864.8	870.9	888.0
65°	661.3	652.7	644.1	661.3	768.7	808.2	811.6	822.8	842.5	848.5	862.3
67.5°	629.5	633.0	615.8	633.0	748.9	779.8	779.8	803.0	811.6	822.8	836.5
70°	596.0	598.6	584.0	604.6	735.2	748.9	746.3	777.2	783.3	791.8	805.6
72.5°	553.1	553.1	547.9	576.3	712.0	718.0	712.0	737.7	740.3	748.9	754.9
75°	507.6	507.6	502.4	541.9	698.2	683.6	666.5	686.2	692.2	698.2	698.2
77.5°	448.3	454.3	454.3	502.4	649.3	669.9	612.3	624.4	633.0	635.5	626.9
80°	374.4	389.0	394.2	456.9	544.5	618.4	547.9	555.7	559.1	559.1	547.9
82.5°	286.8	311.8	326.4	394.2	417.4	518.7	476.7	485.2	476.7	459.5	454.3
85°	198.4	232.7	249.9	300.6	315.2	400.2	396.8	396.8	380.5	357.3	354.7
87.5°	108.2	128.0	139.1	178.6	215.6	269.7	292.0	283.4	269.7	255.1	258.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9
2.5°	15642.7	16028.3	16644.1	17114.7	17588.8	18045.7	18539.5	18916.6	19236.9	19362.3	19741.9
5°	12579.3	13061.1	13642.5	14692.0	15435.7	16255.1	17203.2	18457.1	18938.9	19606.2	20697.8
7.5°	8894.0	9330.3	10266.4	11115.0	12167.9	13328.2	14607.0	16337.5	16970.5	18039.7	19818.3
10°	6641.3	7148.9	7900.4	8615.8	9543.3	10729.4	12198.8	14133.8	14902.4	16062.7	18111.0
12.5°	5350.5	5949.1	6746.1	7418.6	8136.5	8973.0	10400.4	12521.7	13552.3	14567.5	16638.1
15°	4110.4	4737.3	5478.5	6332.1	7123.1	8025.8	9521.0	11841.5	13026.7	14085.7	15852.3
17.5°	2845.3	3381.2	4314.8	5205.4	6218.8	7373.0	9277.1	11985.8	13401.2	14621.6	15988.8
20°	2017.4	2323.1	3089.2	4122.4	5384.9	6833.7	9231.6	12745.9	14587.2	15980.2	16862.3
22.5°	1696.2	1809.6	2255.3	3202.6	4660.9	6430.9	9390.4	13812.5	16187.2	17965.8	18255.3
25°	1545.9	1614.6	1846.5	2513.8	4016.7	6138.9	9926.3	15401.4	18167.7	19952.3	19900.8
27.5°	1463.4	1534.7	1687.6	2122.2	3532.4	5957.7	10462.3	17285.7	20431.5	22108.0	21472.4
30°	1438.5	1534.7	1696.2	2000.2	3186.3	5670.8	10902.0	18938.9	22173.2	23563.7	22187.8
32.5°	1418.8	1432.5	1506.4	1724.5	2856.5	5335.9	11200.0	20423.0	23878.0	24948.1	23217.6
35°	1146.5	1217.0	1336.3	1545.9	2664.1	5134.9	11200.0	21702.6	25557.9	26346.3	24199.2
37.5°	1103.6	1166.3	1271.1	1449.7	2555.9	5035.3	10975.8	22936.7	27273.8	27932.6	25007.4
40°	1081.3	1131.9	1231.6	1375.8	2510.4	4921.9	10649.5	24025.7	28950.3	29520.5	25762.3
42.5°	1064.1	1109.6	1203.2	1330.3	2451.1	4797.4	10385.8	24899.2	30406.0	30876.6	26482.9
45°	1055.5	1103.6	1205.8	1353.5	2331.7	4632.5	10298.2	25843.9	31603.2	32008.6	27262.7
47.5°	1055.5	1112.2	1219.5	1401.6	2190.0	4462.5	10573.0	27090.0	32735.1	32933.5	28181.6
50°	1046.9	1109.6	1259.9	1353.5	1983.0	4246.9	11219.7	28658.3	33960.7	33983.0	29345.3
52.5°	1029.7	1103.6	1356.1	1325.2	1744.3	3963.5	12094.0	30673.1	35773.7	35909.4	31166.0
55°	1010.0	1095.0	1330.3	1259.9	1549.3	3626.0	12808.6	33120.7	38321.0	38698.0	33844.7
57.5°	984.2	1083.8	1288.2	1168.9	1421.4	3191.4	13067.1	34914.0	40099.6	41046.9	36862.7
60°	961.9	1075.3	1162.9	1114.8	1341.5	2825.5	12567.2	34559.3	39977.6	42019.9	39537.9
62.5°	938.7	1083.8	1060.7	1081.3	1304.6	2590.2	11262.7	31719.1	37955.1	41016.0	41521.0
65°	913.8	1007.4	1001.4	1052.1	1296.8	2496.6	9336.3	27461.1	34045.7	37841.7	41989.0
67.5°	879.4	930.1	958.5	1016.0	1325.2	2414.2	7534.5	22652.5	28612.8	33083.8	39549.1
70°	842.5	885.5	916.4	970.5	1308.0	2377.2	6266.9	17863.6	22704.0	27115.0	34735.3
72.5°	794.4	831.3	859.7	910.4	1290.8	2357.5	5293.8	14386.2	16950.7	20142.1	28241.7
75°	737.7	771.2	791.8	842.5	1236.7	2159.1	4161.9	12173.0	12684.0	14011.8	22493.6
77.5°	672.5	698.2	714.5	771.2	1095.0	1795.8	3010.2	9390.4	9849.9	10172.8	17245.3
80°	596.0	620.9	629.5	683.6	907.8	1404.2	1963.3	6935.9	7367.0	7440.9	11262.7
82.5°	507.6	533.3	533.3	584.0	742.9	1010.0	1288.2	4751.9	4836.9	5086.8	7960.5
85°	408.8	428.6	428.6	454.3	576.3	754.9	885.5	2385.8	2360.1	2695.0	6896.4
87.5°	292.0	306.6	320.3	326.4	411.4	499.0	533.3	726.6	479.2	550.5	4428.1
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-10-LED-E1-SLR-7050

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9	17435.9
2.5°	20028.8	20190.2	20025.3	19906.8	19393.2	18970.7	18405.6	18116.1
5°	21529.1	21940.5	21801.4	21302.4	20229.7	19023.9	17654.1	17035.7
7.5°	21347.9	22303.8	22326.1	21393.4	19813.2	18037.1	16182.1	15302.6
10°	19935.1	21157.3	21506.8	20601.6	18925.2	16939.5	14811.4	13807.4
12.5°	18357.5	19554.7	19821.8	19509.2	18108.4	16113.4	13955.1	12970.0
15°	17066.7	17603.4	17920.3	18193.4	17407.6	15784.4	13906.2	12825.8
17.5°	16280.8	16221.6	16312.6	16785.8	16918.9	16161.4	14643.9	13452.7
20°	15997.4	15087.1	15063.9	15716.6	16689.6	17061.5	16085.0	14655.1
22.5°	16153.7	14678.2	14491.0	15265.7	16811.6	18357.5	17974.4	16343.5
25°	16692.2	14712.6	14561.4	15311.2	17253.9	19739.3	20014.2	18527.5
27.5°	17540.7	14928.2	14728.9	15498.4	17841.3	20899.6	22023.0	20644.5
30°	18346.3	15302.6	15055.3	15866.9	18377.2	21359.1	23254.5	22295.2
32.5°	19325.4	16003.4	15568.9	16544.5	19041.1	22090.8	24352.1	23662.5
35°	20283.8	17001.4	16462.9	17591.4	19781.4	23002.0	25606.0	25410.2
37.5°	21336.8	18306.8	17861.1	18944.9	20794.8	23860.8	27206.0	27458.5
40°	22460.1	20037.3	19509.2	20919.4	22366.5	24939.5	28877.3	29483.6
42.5°	23592.0	21957.7	21328.2	22757.3	24093.6	26002.8	30306.4	31206.4
45°	24888.0	24042.9	23744.9	25290.8	25753.7	27016.2	31361.9	32480.1
47.5°	26397.8	26409.0	26888.2	27506.6	27427.6	28161.9	32423.4	33617.1
50°	28159.3	29361.6	30420.6	30831.1	29152.1	29393.4	33895.4	35140.7
52.5°	30275.4	32894.0	34204.6	33934.9	31010.6	30896.4	36227.1	37239.7
55°	32922.4	36633.4	37935.3	37742.1	33146.5	32944.7	39132.5	39722.6
57.5°	35985.8	40255.9	41453.1	40584.8	35711.0	35192.2	41535.6	41660.1
60°	38678.2	43127.0	44176.5	43214.6	38298.6	37583.2	43035.9	42431.3
62.5°	40176.0	44100.0	44837.7	43802.0	40071.2	40130.5	43364.9	42014.8
65°	39507.0	41640.3	41878.2	41793.2	39614.4	41608.6	42182.3	40088.4
67.5°	35841.5	35421.5	35821.8	36374.8	35699.8	39662.4	38905.0	35892.2
70°	29384.8	27078.0	27875.9	28246.9	28553.5	34130.7	33767.4	29234.5
72.5°	22144.9	18970.7	19600.2	19523.8	20941.7	27376.0	26261.3	21495.6
75°	15690.8	12862.7	12941.7	12910.8	14613.0	21418.3	19016.2	14706.6
77.5°	10978.4	9319.2	9362.1	9537.3	9824.1	16153.7	13585.8	10743.1
80°	7549.1	7072.5	7307.8	7322.4	6808.8	10851.3	10037.1	8621.8
82.5°	5622.8	4915.9	4859.3	4941.7	5335.9	8791.8	7713.1	5980.0
85°	4604.2	2910.6	2340.3	2933.8	4728.7	8706.8	5123.8	3154.5
87.5°	2592.8	1381.9	624.4	1157.7	1886.8	5764.5	1480.6	402.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)