

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: P301720

Luminaire Tested: **GLNA-AF-07-LED-E1-T2R-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-07-LED-E1-T2R-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(7) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28792.4 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

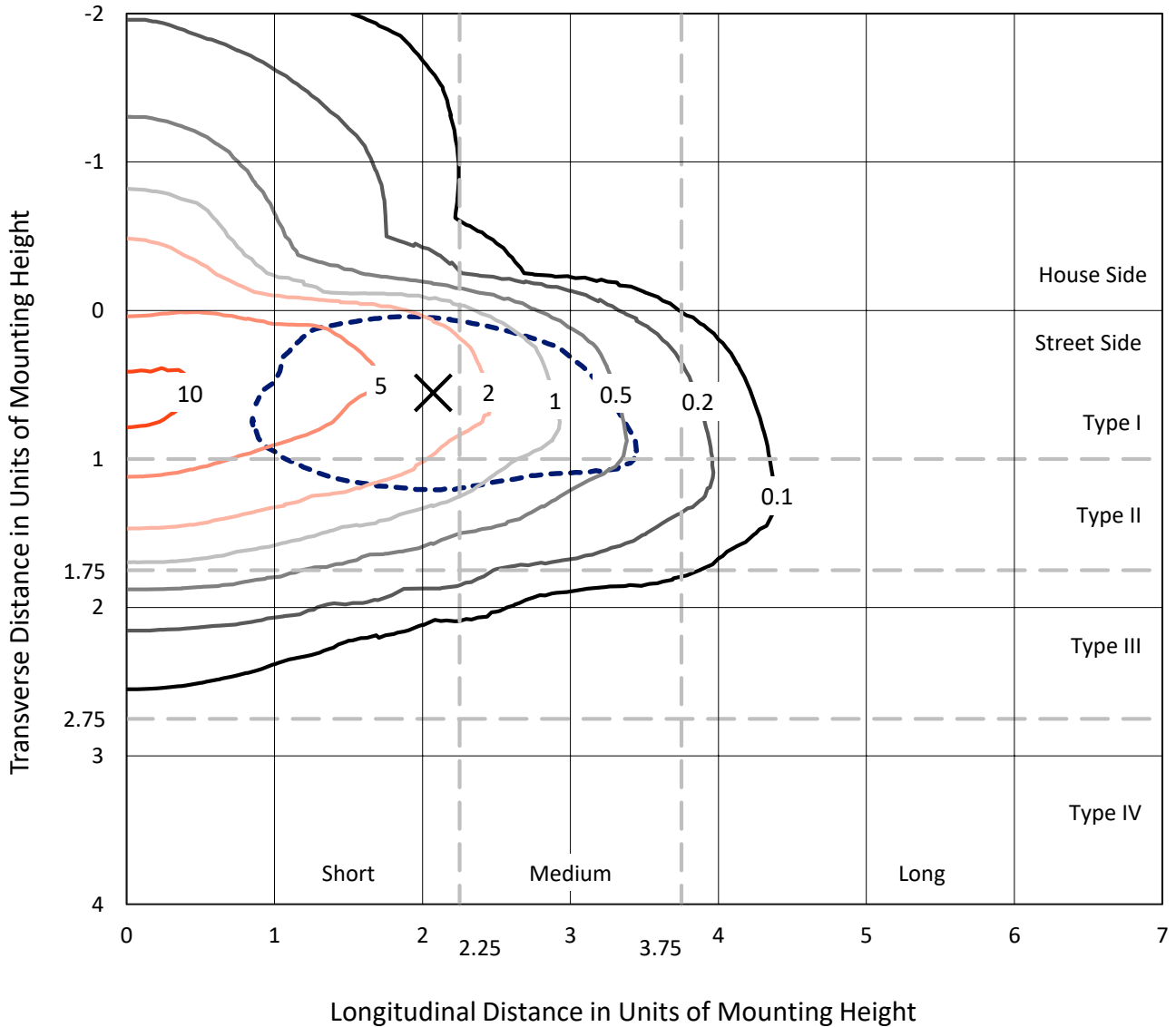
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P301720
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Iso-Footcandle Lines of Horizontal Illumination

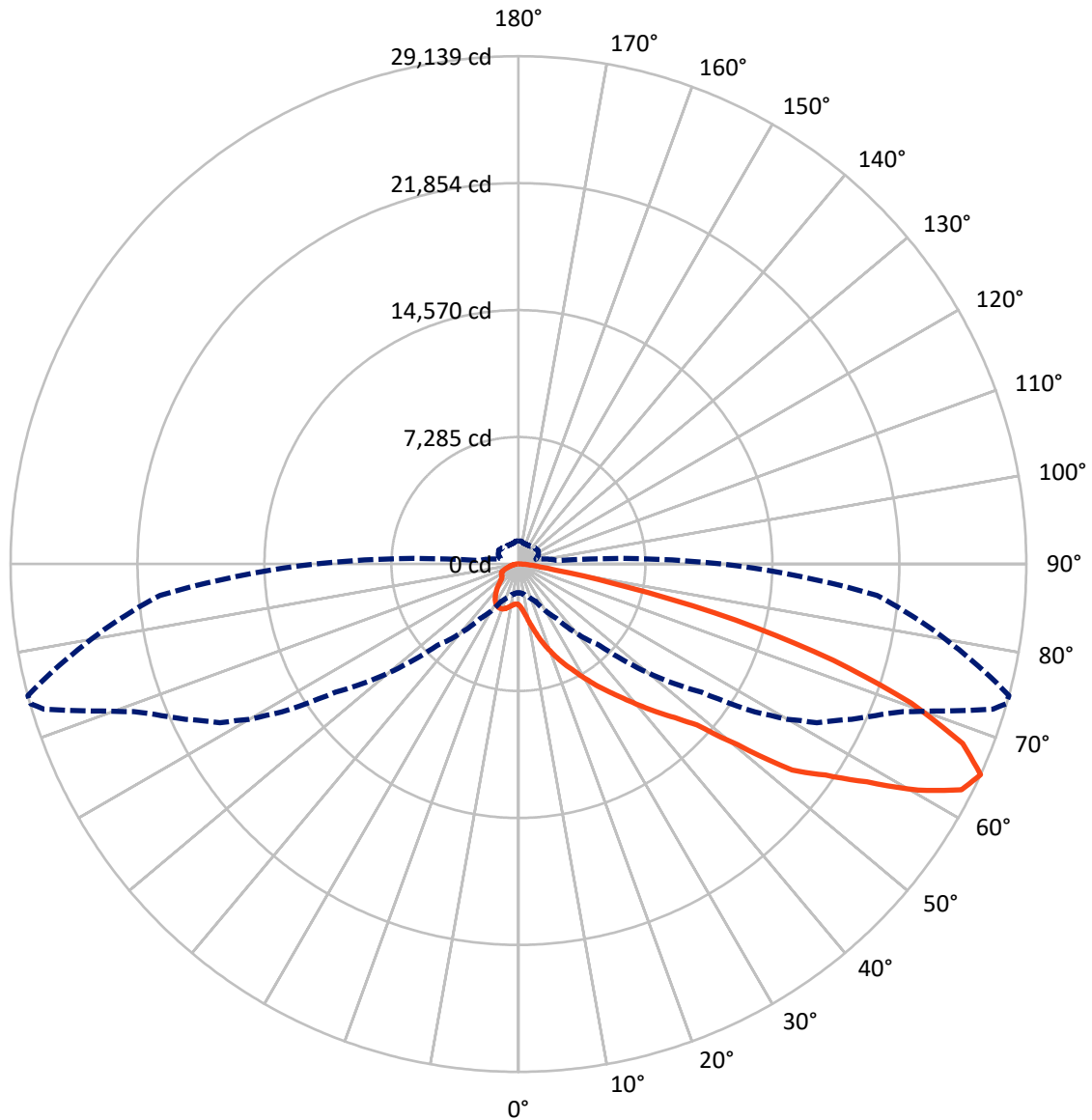
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.6 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P301720
CATALOG NUMBER: GLNA-AF-07-LED-E1-T2R-7050-600

Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P301720

CATALOG NUMBER: GLNA-AF-07-LED-E1-T2R-7050-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4439.1	0.0	4439.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	24353.3	0.0	24353.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	28792.4	0.0	28792.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.2	1.0
10°-20°	1130.1	3.9
20°-30°	2318.5	8.1
30°-40°	3900.8	13.5
40°-50°	5389.8	18.7
50°-60°	6728.1	23.4
60°-70°	6054.6	21.0
70°-80°	2538.0	8.8
80°-90°	443.4	1.5
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°	28792.4	100.0
0°-180°	28792.4	100.0



REPORT NUMBER: P301720

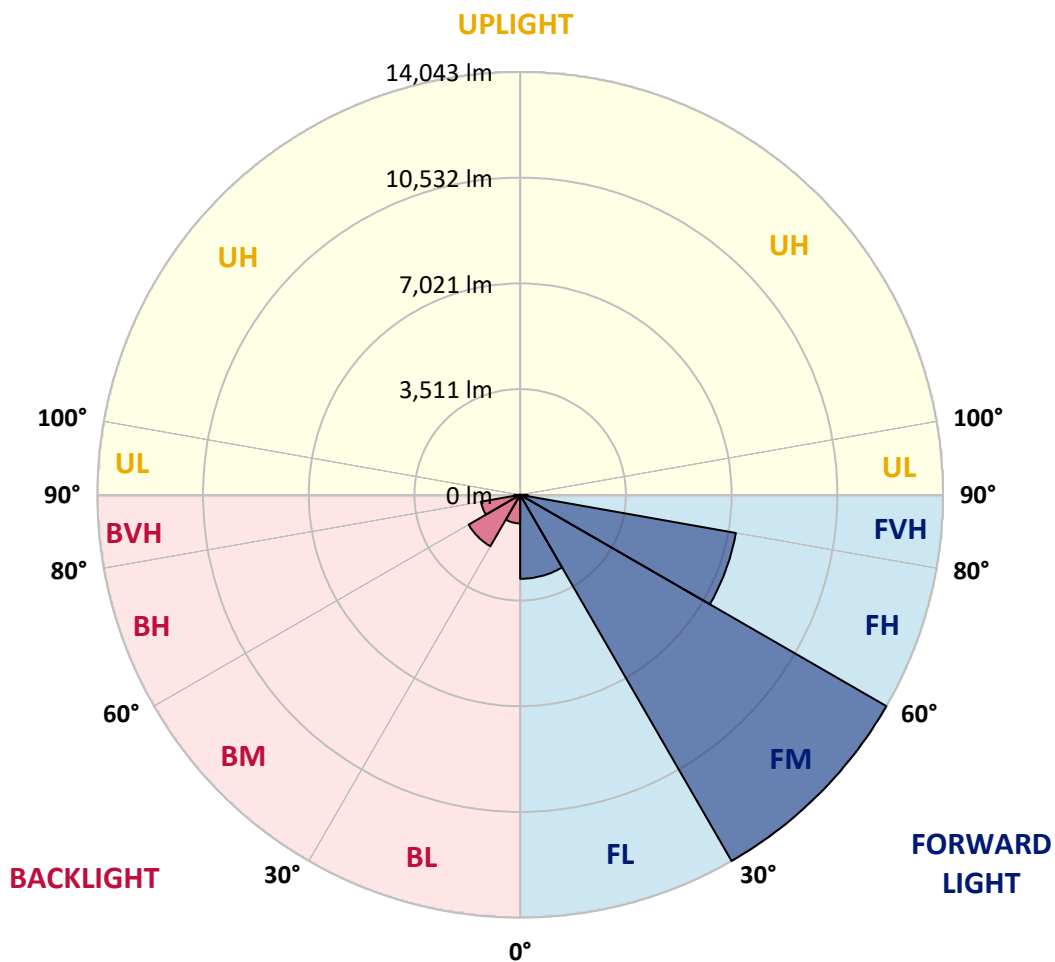
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2788.5	9.7			
FM (30°-60°)	14042.8	48.8			
FH (60°-80°)	7272.9	25.3			G3/7500
FVH (80°-90°)	249.2	0.9			G3/500
BL (0°-30°)	949.3	3.3	B2/1000		
BM (30°-60°)	1975.9	6.9	B2/2500		
BH (60°-80°)	1319.7	4.6	B3/2500		G3/2500
BVH (80°-90°)	194.2	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





REPORT NUMBER: P301720

CATALOG NUMBER: GLNA-AF-07-LED-E1-T2R-7050-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9
2.5°	2971.0	2938.3	2946.4	2891.8	2825.1	2737.7	2641.1	2639.9	2641.1	2631.4	2596.2
5°	4119.6	4080.3	4065.4	3942.5	3762.6	3506.7	3228.5	3198.6	3186.1	3155.0	3082.6
7.5°	4958.0	4936.2	4912.7	4820.2	4656.8	4370.6	3997.1	3933.2	3871.7	3856.8	3775.1
10°	5498.9	5493.3	5444.4	5419.7	5317.8	5069.6	4705.8	4644.3	4577.6	4554.6	4468.4
12.5°	5926.7	5925.4	5902.4	5909.3	5820.3	5640.8	5327.1	5271.3	5222.4	5151.3	5090.2
15°	6222.6	6223.8	6258.2	6296.2	6282.4	6161.1	5866.8	5842.2	5800.1	5751.2	5678.8
17.5°	6465.2	6472.0	6507.2	6576.7	6651.9	6642.2	6409.4	6388.7	6352.0	6285.3	6247.3
20°	7012.9	7038.8	6970.9	6970.9	6979.0	7015.8	6903.8	6887.6	6835.9	6800.3	6770.4
22.5°	7938.3	7968.2	7814.2	7657.8	7503.7	7391.8	7280.2	7300.4	7265.2	7240.6	7222.8
25°	9140.2	9163.7	8914.2	8649.9	8336.1	7927.4	7650.9	7638.4	7619.4	7604.4	7596.3
27.5°	10271.4	10281.1	10045.4	9658.1	9294.3	8706.9	8026.9	8011.9	7988.9	7960.2	7935.5
30°	11239.2	11236.4	10993.8	10624.3	10234.6	9584.5	8598.1	8551.6	8483.3	8405.7	8345.8
32.5°	12077.3	12073.2	11807.2	11424.4	11015.7	10454.1	9380.4	9285.0	9178.6	9027.0	8936.1
35°	12736.7	12734.2	12483.2	12084.2	11615.2	11273.2	10277.1	10159.8	10024.8	9821.8	9681.6
37.5°	12986.1	12986.1	12845.8	12573.3	12159.0	11924.5	11273.2	11131.3	10987.0	10756.5	10598.5
40°	12840.2	12843.0	12872.9	12822.8	12621.0	12441.1	12202.6	12118.1	11994.0	11787.0	11622.1
42.5°	12351.0	12365.9	12565.2	12809.0	12909.7	12881.4	13026.9	12988.9	12901.6	12742.3	12611.3
45°	11730.8	11777.3	11995.2	12456.1	12990.1	13261.4	13717.8	13721.9	13705.7	13620.0	13518.9
47.5°	10879.4	10944.5	11232.4	11854.9	12802.2	13630.9	14419.7	14456.4	14490.8	14435.0	14388.5
50°	9748.3	9825.9	10256.4	11082.4	12419.3	14013.8	15745.7	15912.2	16067.5	16048.5	16079.6
52.5°	8536.7	8628.0	9155.2	10075.3	11761.1	14102.3	16593.4	16864.7	17136.0	17357.9	17593.6
55°	7443.5	7394.6	7922.2	8890.8	10678.9	13702.9	17355.5	17682.6	17984.9	18257.4	18538.4
57.5°	5962.2	6042.7	6571.5	7529.6	9246.6	12575.8	17879.8	18358.5	18793.1	19244.3	19642.1
60°	4358.1	4438.5	5012.2	5985.3	7691.7	10866.9	17479.2	18204.5	18900.6	19591.5	20131.2
62.5°	2631.4	2691.7	3197.0	4124.0	5931.1	8840.7	15693.9	16645.2	17670.0	18496.0	19323.1
65°	1638.1	1672.1	1858.9	2368.6	3809.1	6600.2	12822.8	13859.7	14963.4	16011.7	16871.6
67.5°	1341.0	1353.1	1387.5	1496.2	2091.7	4303.9	9543.7	10462.2	11458.3	12472.3	13429.2
70°	1206.0	1197.9	1197.9	1204.7	1341.0	2314.1	6248.5	6846.8	7676.8	8558.5	9433.3
72.5°	1088.7	1080.6	1065.7	1045.5	1094.4	1411.7	3229.7	3680.9	4279.2	5062.7	5900.8
75°	978.3	967.4	950.0	924.2	958.1	1065.7	1550.8	1740.4	2031.9	2449.1	2916.4
77.5°	863.9	850.2	834.0	815.0	858.7	828.8	908.8	977.1	1088.7	1222.5	1398.4
80°	734.6	722.4	716.8	707.5	759.2	631.1	642.0	684.0	749.5	821.9	903.6
82.5°	575.3	575.3	596.7	601.2	658.2	454.0	479.9	516.7	550.6	588.6	627.0
85°	378.8	381.6	455.2	483.9	519.1	305.2	359.8	371.9	399.4	421.3	437.4
87.5°	118.5	128.2	278.1	308.1	298.4	173.0	220.7	226.4	245.4	260.4	274.1
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: P301720

CATALOG NUMBER: GLNA-AF-07-LED-E1-T2R-7050-600

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9
2.5°	2596.2	2579.7	2564.7	2563.5	2552.6	2537.6	2542.9	2519.8	2521.1	2508.9	2495.2
5°	3052.7	3041.8	2987.2	2972.2	2931.4	2905.5	2901.5	2846.9	2840.0	2808.9	2774.5
7.5°	3709.6	3674.0	3597.6	3560.8	3491.3	3439.6	3415.3	3342.9	3307.4	3225.7	3188.9
10°	4397.7	4352.8	4258.6	4206.9	4140.2	4056.9	4012.0	3907.3	3866.1	3791.3	3701.5
12.5°	5035.6	4990.8	4893.7	4854.1	4765.6	4677.0	4628.1	4509.7	4456.3	4336.2	4265.5
15°	5625.5	5580.6	5496.1	5455.3	5366.7	5294.4	5228.9	5112.0	5049.4	4937.4	4844.8
17.5°	6197.9	6150.2	6076.6	6039.9	5954.2	5880.6	5809.8	5699.1	5635.2	5523.6	5440.3
20°	6729.5	6694.0	6641.0	6591.7	6506.0	6439.3	6354.8	6259.4	6166.8	6084.7	6005.9
22.5°	7192.8	7179.1	7122.1	7100.3	7026.7	6969.3	6895.7	6801.9	6734.8	6631.3	6557.7
25°	7592.3	7588.2	7560.7	7553.9	7502.1	7447.5	7431.4	7353.7	7292.3	7200.9	7124.9
27.5°	7935.5	7939.5	7933.1	7952.1	7938.3	7913.7	7915.3	7889.4	7853.8	7777.4	7710.7
30°	8317.1	8295.3	8307.8	8334.9	8343.0	8345.8	8390.7	8405.7	8403.2	8352.7	8320.0
32.5°	8856.8	8805.1	8757.4	8753.3	8780.4	8791.3	8867.8	8907.4	8941.3	8953.5	8959.1
35°	9544.9	9441.4	9342.0	9289.0	9242.5	9254.6	9309.2	9373.5	9448.3	9500.0	9561.5
37.5°	10411.7	10285.1	10109.3	9984.0	9952.4	9884.5	9919.7	9970.2	10043.8	10124.2	10230.6
40°	11462.4	11270.4	11072.7	10906.5	10816.8	10691.0	10689.8	10680.1	10725.4	10800.2	10950.2
42.5°	12473.9	12303.3	12093.5	11919.2	11802.0	11634.2	11600.2	11511.7	11531.9	11597.4	11743.4
45°	13420.7	13280.4	13152.3	12950.9	12851.1	12670.0	12612.5	12507.8	12449.2	12479.1	12625.1
47.5°	14338.0	14248.2	14114.4	13983.8	13907.4	13745.3	13671.7	13596.6	13521.8	13518.9	13671.7
50°	16126.1	16078.4	15920.3	15784.1	15820.9	15622.0	15634.1	15432.4	15523.7	15534.6	15854.8
52.5°	17806.3	17972.8	18090.1	18232.8	18325.8	18343.5	18404.6	18496.0	18606.3	18824.2	19121.4
55°	18768.4	18977.0	19098.3	19207.5	19387.4	19425.4	19527.7	19648.9	19745.6	19991.0	20243.2
57.5°	19912.1	20299.0	20487.0	20660.0	20902.6	20995.2	21165.8	21298.0	21423.3	21713.6	22018.8
60°	20616.4	21088.2	21471.0	21744.7	22048.7	22267.0	22524.5	22731.5	23025.8	23373.5	23828.7
62.5°	20056.5	20748.6	21257.1	21727.3	22140.1	22557.3	22926.4	23313.7	23760.4	24286.4	24992.6
65°	17825.7	18529.9	19400.7	19888.7	20435.3	21078.5	21640.0	22267.0	22875.9	23642.0	24685.8
67.5°	14350.5	15169.2	16147.9	16639.9	17268.2	17986.2	18616.0	19381.7	20093.2	21021.0	22311.9
70°	10343.8	11402.6	12225.7	12739.5	13472.8	14212.7	14820.7	15711.7	16300.3	17251.6	18586.1
72.5°	6549.6	7384.9	8393.5	9040.8	9692.1	10442.0	11063.4	11831.9	12380.9	13247.7	14456.4
75°	3521.6	4137.3	5023.1	5638.0	6335.8	6976.2	7703.9	8218.9	8625.2	9310.8	10292.0
77.5°	1650.2	2025.0	2473.4	2946.4	3419.4	3912.6	4392.4	4809.2	4983.9	5376.4	5955.4
80°	1001.8	1123.1	1253.7	1399.6	1597.3	1756.6	1968.0	2120.4	2131.3	2255.4	2432.5
82.5°	669.1	713.9	753.6	790.4	840.9	880.5	925.4	978.3	1000.2	1028.9	1086.3
85°	456.4	478.3	486.3	509.8	504.1	517.9	535.7	553.5	562.7	561.5	587.4
87.5°	280.6	291.5	297.1	302.4	298.4	293.1	301.2	310.9	313.3	305.2	308.1
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: P301720

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CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9
2.5°	2498.0	2485.9	2473.4	2465.3	2462.4	2390.5	2358.9	2338.7	2295.1	2259.5	2230.8
5°	2755.5	2729.7	2709.4	2684.8	2671.0	2488.3	2421.6	2375.5	2299.1	2254.2	2213.0
7.5°	3169.9	3097.5	3055.5	3007.8	2967.0	2637.1	2526.7	2454.3	2348.0	2288.2	2241.7
10°	3640.1	3565.3	3498.2	3424.6	3360.7	2834.8	2673.9	2561.9	2421.6	2344.0	2282.5
12.5°	4164.8	4091.3	4006.8	3912.6	3830.9	3085.4	2861.9	2702.6	2510.1	2406.6	2320.9
15°	4785.0	4655.2	4552.9	4444.2	4348.8	3385.4	3081.4	2860.6	2604.3	2464.1	2349.6
17.5°	5361.1	5224.8	5086.2	4990.8	4880.4	3721.7	3302.1	3021.1	2682.0	2500.8	2354.9
20°	5924.2	5775.5	5655.8	5527.6	5411.6	4070.6	3537.8	3163.0	2732.5	2502.1	2320.9
22.5°	6420.3	6327.3	6193.9	6054.8	5937.6	4419.5	3758.5	3283.1	2751.5	2470.9	2260.7
25°	6984.2	6886.4	6722.7	6605.4	6474.9	4775.3	3975.2	3375.7	2740.6	2412.3	2168.1
27.5°	7586.6	7477.9	7310.1	7187.6	7029.5	5144.4	4174.1	3442.4	2699.7	2316.9	2044.0
30°	8214.9	8115.4	7950.5	7826.7	7667.1	5535.7	4396.5	3487.3	2618.1	2184.7	1899.7
32.5°	8889.6	8806.3	8643.0	8513.6	8343.0	5959.4	4603.5	3501.0	2494.0	2027.8	1747.3
35°	9530.0	9473.0	9335.1	9213.8	9036.7	6360.0	4823.0	3494.1	2346.8	1856.0	1608.2
37.5°	10251.2	10216.8	10148.9	9994.9	9778.2	6903.8	5086.2	3465.4	2166.9	1685.8	1501.9
40°	11019.7	11022.5	10949.0	10843.8	10642.1	7563.6	5399.5	3409.6	1970.4	1535.8	1404.9
42.5°	11833.1	11875.6	11840.0	11765.2	11571.5	8228.6	5774.2	3341.7	1780.0	1389.9	1309.8
45°	12765.4	12817.1	12871.7	12761.3	12573.3	9106.3	6267.5	3253.2	1573.8	1268.6	1244.4
47.5°	13840.7	13922.4	13971.3	13972.9	13784.9	10193.8	7068.7	3199.8	1391.5	1186.9	1212.8
50°	16109.5	16135.8	16251.4	16453.2	16308.8	12710.8	8468.3	3167.1	1267.4	1136.4	1189.8
52.5°	19378.9	19663.9	19864.4	19850.7	19654.2	14309.3	9239.7	2998.1	1193.8	1117.4	1178.9
55°	20710.6	21066.3	21437.0	21534.9	21382.5	15673.7	9969.0	2829.1	1158.2	1131.2	1182.9
57.5°	22484.9	23084.5	23593.0	23806.9	23586.2	17419.4	10928.3	2740.6	1147.3	1167.9	1208.8
60°	24557.6	25299.1	25966.9	26351.0	26351.0	19425.4	11923.3	2703.8	1132.4	1222.5	1252.4
62.5°	25889.3	26978.0	27986.7	28549.4	28532.9	20822.1	12364.7	2578.5	1098.4	1260.5	1312.3
65°	25894.6	27189.5	28474.3	29106.9	29139.3	20650.7	11635.8	2277.3	1035.8	1266.2	1372.5
67.5°	23736.2	25116.3	26614.2	27321.7	27485.0	19009.8	10072.5	1872.6	933.5	1211.6	1394.3
70°	20046.7	21394.6	22923.6	23618.9	23909.2	16204.9	8112.6	1443.3	802.9	1091.5	1349.1
72.5°	15793.4	17115.4	18179.8	18688.0	18914.4	12386.6	5907.7	1090.3	658.2	919.7	1227.8
75°	11181.8	12173.9	12739.5	12852.7	12887.9	7466.9	3589.6	811.0	542.5	715.6	1037.0
77.5°	6311.1	6736.4	6689.9	6740.5	6320.8	2882.5	1563.3	580.5	447.1	543.7	804.1
80°	2464.1	2540.5	2386.4	2338.7	2145.1	1072.5	689.7	404.7	357.0	411.6	562.7
82.5°	1086.3	1121.5	1088.7	1097.2	1049.5	553.5	412.8	293.1	272.5	301.2	373.5
85°	598.3	609.2	606.4	624.2	598.3	220.7	196.1	179.9	190.8	204.6	239.7
87.5°	291.5	294.3	285.0	300.0	290.3	111.6	96.6	102.3	111.6	114.4	114.4
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: P301720

CATALOG NUMBER: GLNA-AF-07-LED-E1-T2R-7050-600

CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
0°	2339.9	2339.9	2339.9	2339.9	2339.9	2339.9
2.5°	2210.6	2199.7	2200.9	2198.0	2192.8	2192.8
5°	2191.6	2180.7	2180.7	2177.8	2171.0	2172.2
7.5°	2210.6	2192.8	2185.9	2176.2	2166.9	2166.9
10°	2232.4	2200.9	2181.9	2165.7	2153.2	2153.2
12.5°	2248.6	2199.7	2168.1	2146.3	2134.2	2134.2
15°	2254.2	2190.0	2146.3	2120.4	2109.5	2108.3
17.5°	2236.4	2153.2	2100.2	2070.3	2056.5	2052.5
20°	2181.9	2086.5	2022.6	1988.2	1969.2	1962.3
22.5°	2100.2	1991.1	1916.3	1880.7	1856.0	1852.0
25°	1985.8	1868.6	1795.0	1760.6	1747.3	1742.8
27.5°	1852.0	1742.8	1680.2	1658.3	1646.2	1645.0
30°	1725.4	1632.5	1586.4	1569.8	1554.8	1552.4
32.5°	1606.6	1548.0	1530.6	1507.1	1472.0	1467.9
35°	1522.1	1516.8	1504.7	1452.6	1409.3	1396.8
37.5°	1470.3	1520.9	1458.2	1355.9	1324.8	1322.0
40°	1440.4	1478.8	1370.9	1335.7	1338.1	1335.7
42.5°	1372.5	1411.7	1373.7	1357.6	1368.1	1370.9
45°	1304.2	1347.9	1394.3	1383.4	1409.3	1409.3
47.5°	1266.2	1331.3	1392.7	1392.7	1431.1	1444.5
50°	1222.5	1317.9	1370.9	1389.9	1420.2	1409.3
52.5°	1219.7	1294.5	1339.8	1373.7	1387.5	1374.9
55°	1223.7	1275.5	1308.2	1346.6	1362.8	1364.0
57.5°	1229.4	1264.6	1286.4	1304.2	1353.1	1353.1
60°	1242.7	1255.3	1267.4	1277.1	1341.0	1342.2
62.5°	1264.6	1245.6	1242.7	1252.4	1334.1	1328.8
65°	1298.9	1231.8	1211.6	1220.9	1327.2	1311.1
67.5°	1345.0	1211.6	1172.0	1178.9	1322.0	1286.4
70°	1387.5	1178.9	1123.1	1116.2	1270.2	1207.6
72.5°	1391.5	1140.9	1054.8	1034.5	1104.1	1043.8
75°	1323.2	1114.6	980.0	919.7	911.6	903.6
77.5°	1192.6	1099.6	892.6	798.4	782.3	787.5
80°	997.7	1043.8	787.5	675.9	764.5	755.2
82.5°	745.5	921.3	669.1	598.3	596.7	527.6
85°	414.4	718.4	545.0	448.3	312.1	302.4
87.5°	116.0	399.4	381.6	253.5	173.0	179.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)