

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: P299032

Luminaire Tested: **GLNA-AF-10-LED-E1-SLL-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299032
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-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33996.9 lumens
Efficiency: N/A
Efficacy: 105.3 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

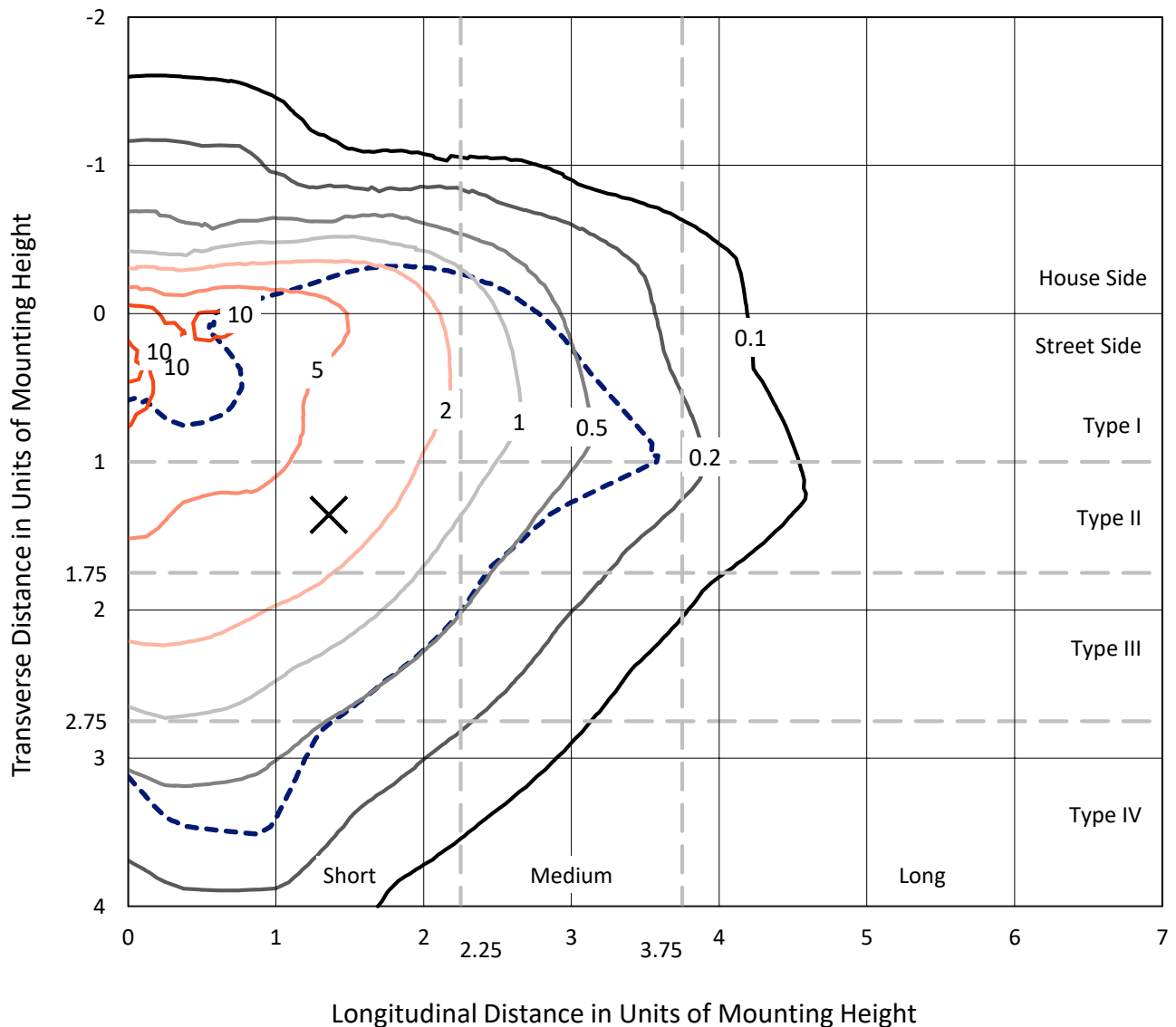
Input Watts (W): 323
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

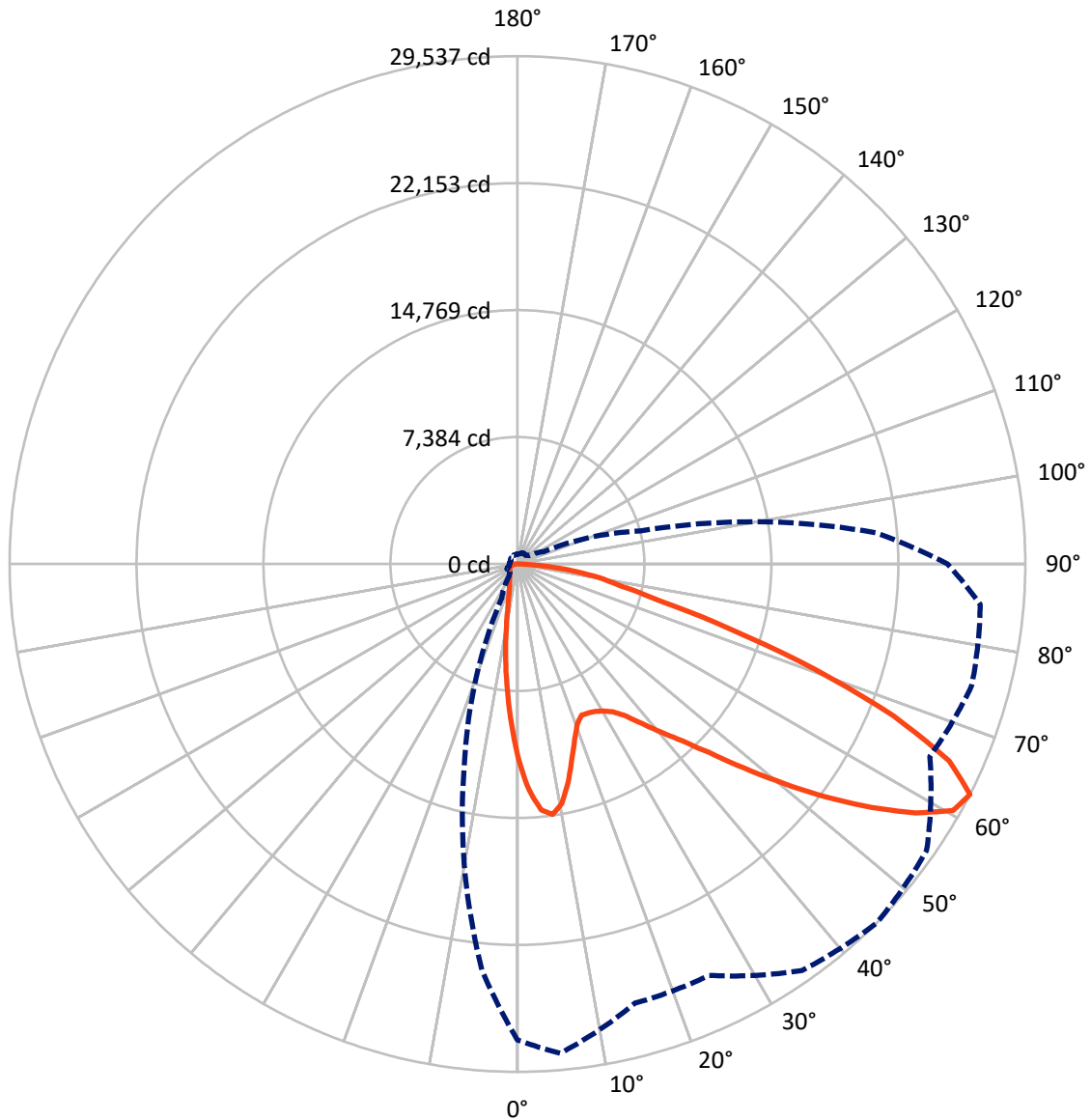
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15 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	5626.0	0.0	5626.0
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	28370.9	0.0	28370.9
	% Fixture	83.5	0.0	83.5
Total	Lumens	33996.9	0.0	33996.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	836.1	2.5
10°-20°	1533.2	4.5
20°-30°	2235.5	6.6
30°-40°	3442.9	10.1
40°-50°	5067.1	14.9
50°-60°	7432.3	21.9
60°-70°	8308.2	24.4
70°-80°	4067.6	12.0
80°-90°	1073.9	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°	33996.9	100.0
0°-180°	33996.9	100.0



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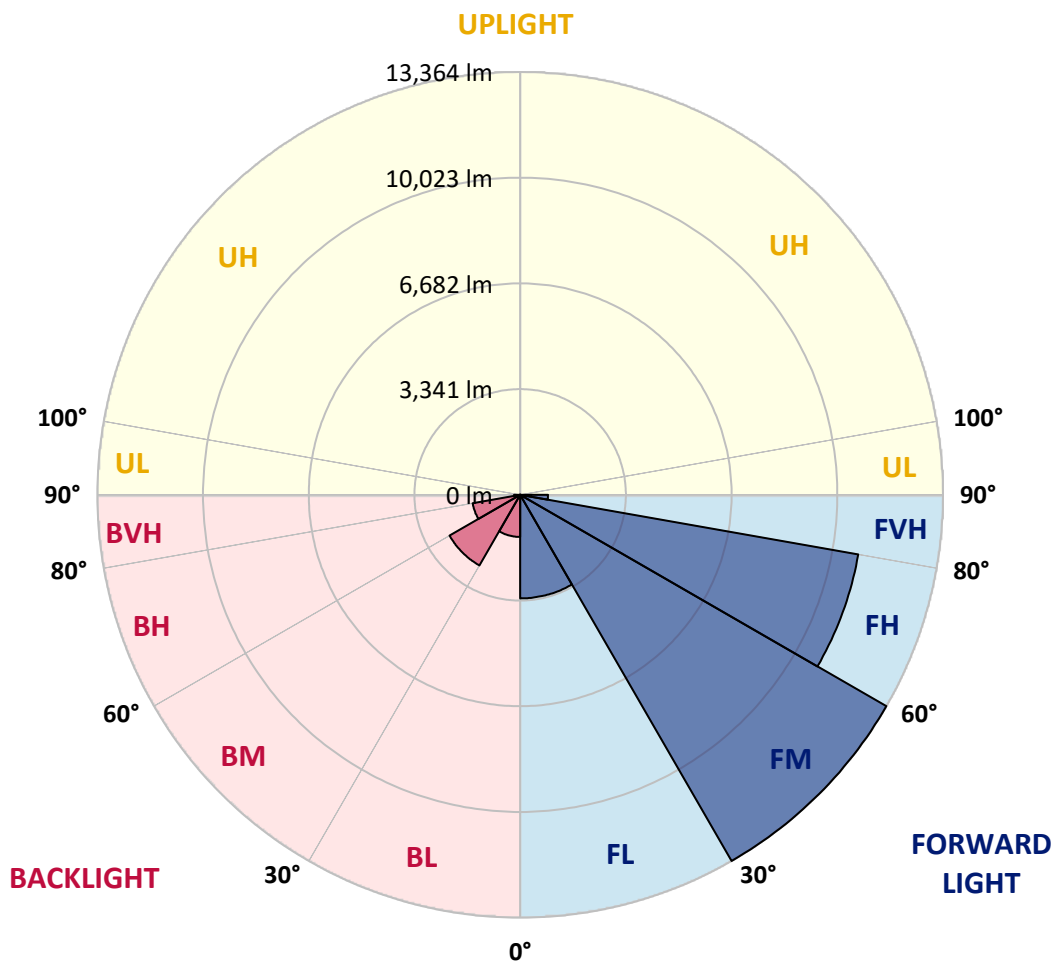
CATALOG NUMBER: GLNA-AF-10-LED-E1-SLL-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3273.8	9.6			
FM (30°-60°)	13364.5	39.3			
FH (60°-80°)	10850.6	31.9			G4/12000
FVH (80°-90°)	882.0	2.6			G5
BL (0°-30°)	1331.0	3.9	B3/2500		
BM (30°-60°)	2577.8	7.6	B3/5000		
BH (60°-80°)	1525.2	4.5	B3/2500		G3/2500
BVH (80°-90°)	192.0	0.6			G2/225
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°	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3
2.5°	11934.1	12125.2	12497.1	12774.9	13114.1	13192.3	13300.9	13194.2	13005.5	12754.9	12673.0
5°	11222.4	11630.1	12532.3	13327.0	14033.2	14362.0	14454.2	14182.5	13635.2	12915.7	12476.5
7.5°	10080.7	10660.0	11881.9	13052.2	14092.7	14707.8	14692.7	14062.9	13055.8	11883.7	11179.4
10°	9095.4	9757.3	11159.3	12467.4	13571.5	14167.9	13937.4	13132.9	11930.4	10581.2	9817.4
12.5°	8544.5	9193.1	10615.2	11928.6	12852.0	13057.7	12881.7	12093.0	10960.4	9596.5	8927.4
15°	8448.7	9161.5	10398.6	11467.5	11985.0	11806.1	11596.2	11243.1	10442.9	9278.6	8581.5
17.5°	8862.4	9646.9	10647.3	11146.0	11058.0	10745.6	10686.1	10725.6	10533.2	9631.7	8828.5
20°	9654.8	10596.3	11239.4	10994.9	10353.7	9923.5	9938.7	10538.7	11108.4	10527.2	9609.3
22.5°	10766.2	11841.3	12093.0	11075.0	10056.4	9546.2	9669.9	10641.8	12026.3	11835.8	10663.7
25°	12205.3	13185.1	13003.7	11366.2	10086.1	9592.9	9691.8	10996.8	13109.8	13143.8	11968.7
27.5°	13599.4	14508.2	13767.5	11753.3	10209.9	9703.3	9834.3	11554.9	14145.4	14564.1	13459.9
30°	14687.2	15319.4	14070.2	12106.4	10452.6	9918.1	10080.7	12085.8	14616.8	15522.6	14607.1
32.5°	15588.1	16041.9	14552.5	12543.8	10899.1	10256.0	10542.3	12730.7	15295.1	16435.1	15730.1
35°	16739.0	16868.2	15152.5	13031.6	11588.9	10845.1	11200.0	13362.2	15941.8	17356.0	16836.7
37.5°	18088.9	17922.7	15718.6	13698.9	12480.7	11766.0	12059.7	14055.7	16473.9	18400.7	17966.9
40°	19423.0	19022.6	16429.6	14733.9	13781.4	12852.0	13199.6	14795.8	16971.4	19447.3	19071.7
42.5°	20557.5	19964.8	17129.7	15872.1	14991.8	14050.2	14465.2	15541.4	17445.8	20340.3	20030.3
45°	21396.5	20660.0	17797.1	16965.3	16660.8	15642.1	15838.7	16395.0	17959.7	21086.5	20819.0
47.5°	22145.8	21358.9	18551.8	18068.3	18120.4	17712.7	17396.7	17389.4	18565.7	21695.6	21564.6
50°	23149.2	22329.0	19362.9	19204.0	20310.6	20039.4	19342.3	18550.0	19331.4	22387.2	22372.1
52.5°	24532.5	23865.7	20353.6	20428.3	22355.7	22532.9	21668.9	19944.7	20530.8	23655.8	23566.6
55°	26168.1	25778.6	21703.5	21835.8	24863.1	24990.5	24132.1	21687.7	22295.6	25493.5	25244.7
57.5°	27444.0	27362.1	23183.2	23525.4	26736.0	27308.1	26519.4	23706.8	24283.7	27040.5	26416.2
60°	27952.4	28350.3	24758.8	25229.6	28468.7	29101.4	28410.4	25479.5	26046.2	27681.8	26336.2
62.5°	27678.1	28566.9	26436.9	26397.4	28855.1	29537.0	29051.1	26466.6	27353.0	27019.9	25003.9
65°	26409.0	27788.0	27410.6	26096.5	27531.9	27587.7	27430.6	26025.5	27661.2	24928.6	22427.9
67.5°	23644.3	25629.4	26128.1	23518.1	23962.2	23598.2	23334.3	23610.9	26053.4	21794.5	18849.1
70°	19258.6	22245.3	22483.7	18810.2	18608.2	18363.1	17838.3	19357.5	22882.3	17862.6	14956.6
72.5°	14160.6	17300.2	18034.3	13796.0	12861.7	12911.5	12497.1	14587.7	18604.6	13268.8	11166.6
75°	9688.1	12526.8	14110.3	9626.3	8505.7	8525.7	8472.9	10336.7	14818.3	9230.1	8355.9
77.5°	7077.6	8949.8	10641.8	6471.5	6282.8	6166.9	6139.0	7232.3	11360.8	6702.0	6488.5
80°	5679.2	6612.2	7148.0	4485.2	4823.1	4814.0	4658.7	4973.0	7419.1	4902.0	4852.9
82.5°	3939.8	5081.6	5791.4	3515.1	3255.5	3200.9	3239.1	3703.8	5244.2	3350.7	3186.3
85°	2078.5	3375.0	5735.6	3115.3	1932.3	1541.6	1917.7	3032.8	4543.5	1775.8	1554.3
87.5°	265.7	975.5	3797.2	1243.1	762.6	410.7	910.6	1707.8	2917.5	362.2	316.1
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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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3
2.5°	12461.9	12213.2	11888.0	11586.5	11274.6	10964.0	10558.7	10304.5	10129.2	10095.2	10021.2
5°	12159.2	11332.9	10708.6	10168.6	9679.0	8986.8	8604.0	8286.1	8116.2	8099.8	8058.6
7.5°	10762.6	9622.6	8779.9	8015.5	7322.1	6763.3	6146.3	5859.4	5741.1	5769.0	5796.9
10°	9310.2	8036.1	7067.9	6286.5	5675.5	5204.7	4709.7	4375.4	4143.0	4096.3	4087.2
12.5°	8249.1	6851.3	5911.5	5359.4	4887.4	4444.0	3919.2	3524.2	3223.9	3120.8	3052.2
15°	7800.1	6271.9	5287.3	4692.7	4171.0	3608.6	3120.8	2707.6	2431.6	2341.8	2291.4
17.5°	7896.0	6111.1	4857.1	4096.3	3429.6	2842.3	2227.7	1874.0	1707.8	1665.3	1665.3
20°	8397.1	6081.4	4501.6	3547.3	2714.9	2034.8	1530.7	1328.6	1274.6	1269.2	1283.7
22.5°	9099.7	6186.4	4237.1	3071.0	2110.0	1485.8	1192.1	1117.5	1093.2	1099.3	1115.7
25°	10146.2	6539.4	4044.8	2646.4	1655.6	1216.4	1062.9	1018.6	1007.1	1022.3	1042.9
27.5°	11386.9	6892.5	3924.6	2326.6	1397.8	1112.1	1010.7	964.6	971.9	990.7	1008.9
30°	12476.5	7182.5	3736.0	2099.1	1317.7	1117.5	1010.7	947.6	940.4	944.0	949.5
32.5°	13454.4	7378.5	3515.1	1881.9	1136.3	992.5	944.0	934.9	893.0	877.9	880.3
35°	14297.1	7378.5	3382.9	1755.1	1018.6	880.3	802.0	755.3	734.1	735.9	757.1
37.5°	15110.1	7230.5	3317.3	1683.5	954.9	837.2	768.1	726.8	698.9	693.4	697.1
40°	15827.2	7015.7	3242.7	1653.8	906.4	811.1	746.2	711.6	681.9	672.8	674.6
42.5°	16402.9	6841.6	3160.2	1615.0	876.1	792.3	730.4	700.7	667.4	657.6	655.8
45°	17025.4	6783.9	3052.2	1536.1	891.2	794.1	726.8	695.3	661.3	650.4	646.7
47.5°	17845.6	6965.3	2940.0	1442.7	923.4	803.9	732.3	695.3	659.5	650.4	646.7
50°	18878.8	7391.2	2797.4	1306.2	891.2	829.9	730.4	689.2	659.5	650.4	643.1
52.5°	20206.2	7967.0	2611.2	1149.7	872.4	893.0	726.8	678.3	650.4	637.6	624.3
55°	21818.8	8437.8	2387.9	1020.4	829.9	876.1	721.3	665.5	635.8	617.0	605.5
57.5°	23000.0	8607.6	2102.8	936.7	769.9	848.1	713.5	648.5	617.0	601.8	587.3
60°	22766.4	8278.8	1861.3	883.9	734.1	766.2	708.0	633.4	600.0	589.1	575.1
62.5°	20896.0	7419.1	1706.0	859.7	711.6	698.9	713.5	618.8	585.5	573.3	569.7
65°	18090.7	6150.0	1644.7	854.2	693.4	659.5	663.7	601.8	567.9	558.8	555.1
67.5°	14922.6	4963.9	1590.7	872.4	669.2	631.6	613.4	579.4	550.9	541.8	534.5
70°	11767.9	4128.5	1565.9	861.5	639.4	603.7	583.6	555.1	530.8	521.1	515.7
72.5°	9476.4	3487.2	1552.5	850.0	600.0	566.0	547.2	523.0	496.9	493.2	487.8
75°	8019.8	2741.6	1422.7	814.8	555.1	521.1	508.4	486.0	459.9	459.9	456.2
77.5°	6186.4	1982.6	1183.0	721.3	508.4	470.8	459.9	442.9	413.2	418.6	416.8
80°	4569.5	1293.5	925.2	598.2	450.8	415.0	408.9	392.5	360.4	368.3	368.3
82.5°	3130.5	848.1	665.5	489.6	384.6	351.3	351.3	334.3	299.1	302.7	314.3
85°	1571.9	583.6	496.9	379.2	299.1	282.1	282.1	269.4	233.6	235.4	250.6
87.5°	478.7	351.3	328.8	271.2	214.8	211.1	201.4	192.3	169.9	168.1	177.8
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°	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3
2.5°	9906.5	9799.8	9671.8	9387.2	9292.0	9285.9	9372.7	9282.3	9454.6	9381.8	9461.8
5°	7988.8	7885.1	7740.7	7378.5	7157.7	7007.8	6937.4	6728.1	6879.2	6768.8	6861.0
7.5°	5875.7	5900.0	5804.8	5591.8	5111.3	4870.5	4728.5	4601.1	4711.5	4700.0	4875.9
10°	4130.3	4195.2	4128.5	3913.7	3524.2	3392.0	3418.1	3468.4	3612.8	3686.8	3958.0
12.5°	2973.4	2969.7	2926.6	2734.3	2478.3	2492.9	2599.6	2687.0	2819.9	2898.7	3174.8
15°	2219.9	2186.5	2167.7	2010.6	1864.9	1897.1	1949.3	1958.4	2042.7	2089.4	2313.9
17.5°	1678.1	1695.1	1715.1	1603.5	1493.0	1472.4	1431.8	1380.8	1405.7	1414.8	1526.4
20°	1332.3	1399.6	1450.6	1371.7	1260.1	1199.4	1147.2	1113.9	1113.9	1112.1	1143.6
22.5°	1164.2	1212.8	1267.4	1212.8	1112.1	1059.3	1029.5	1003.5	999.8	999.8	1029.5
25°	1073.2	1108.4	1160.6	1123.6	1048.4	1008.9	981.0	947.6	934.9	930.7	951.3
27.5°	1027.7	1042.9	1069.0	1035.0	971.9	953.1	945.8	916.1	898.5	889.4	910.6
30°	951.3	947.6	949.5	916.1	865.1	863.3	876.1	882.1	876.1	874.2	906.4
32.5°	880.3	872.4	870.6	840.9	794.1	783.2	794.1	805.7	818.4	837.2	874.2
35°	790.5	809.3	820.2	794.1	737.7	704.4	691.6	671.0	659.5	659.5	702.5
37.5°	719.5	762.6	779.6	755.3	693.4	646.7	624.3	620.6	622.5	629.7	671.0
40°	695.3	726.8	741.4	717.7	655.8	613.4	600.0	596.4	600.0	611.5	652.2
42.5°	680.1	702.5	700.7	671.0	620.6	590.9	583.6	579.4	583.6	594.6	639.4
45°	667.4	681.9	667.4	631.6	585.5	569.7	571.5	569.7	573.3	585.5	627.9
47.5°	655.8	661.3	643.1	607.3	558.8	555.1	562.4	567.9	571.5	581.8	626.1
50°	639.4	639.4	622.5	585.5	536.3	538.1	547.2	560.6	562.4	573.3	609.7
52.5°	618.8	617.0	605.5	569.7	517.5	523.0	523.0	538.1	541.8	555.1	592.7
55°	601.8	598.2	592.7	558.8	501.1	510.2	504.8	510.2	519.3	532.7	573.3
57.5°	587.3	579.4	579.4	549.0	487.8	491.4	478.7	486.0	496.9	508.4	550.9
60°	571.5	564.2	567.9	536.3	467.1	463.5	458.0	472.6	476.9	489.6	532.7
62.5°	555.1	549.0	550.9	521.1	452.6	442.9	442.9	456.2	458.0	476.9	517.5
65°	541.8	534.5	532.7	506.6	435.6	424.7	430.1	435.6	439.2	458.0	496.9
67.5°	529.0	513.9	513.9	493.2	416.8	405.3	416.8	415.0	421.0	437.4	469.0
70°	512.0	491.4	493.2	484.1	398.0	384.6	394.3	392.5	396.2	407.1	439.2
72.5°	486.0	469.0	472.6	469.0	379.2	360.4	364.0	364.0	364.0	373.7	407.1
75°	452.6	439.2	450.8	459.9	356.7	330.6	334.3	334.3	328.8	334.3	375.5
77.5°	410.7	403.4	441.1	428.3	330.6	299.1	299.1	295.5	284.5	291.8	336.1
80°	366.4	360.4	407.1	358.6	300.9	260.3	256.0	246.3	235.4	240.9	286.4
82.5°	319.7	314.3	342.2	274.8	260.3	214.8	205.7	188.7	177.8	183.2	223.9
85°	262.1	262.1	263.9	207.5	197.8	164.4	153.5	131.0	117.7	121.3	160.8
87.5°	186.9	192.3	177.8	142.0	117.7	91.6	84.3	71.0	59.5	69.2	84.3
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: P299032

CATALOG NUMBER: GLNA-AF-10-LED-E1-SLL-600

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3	11486.3
2.5°	9873.2	10078.8	10312.4	10610.9	10867.5	11287.4	11691.4	11934.1
5°	7382.1	7724.3	8149.6	8698.0	9208.3	9973.9	10734.7	11222.4
7.5°	5283.0	5649.4	6109.3	6793.0	7515.0	8491.8	9497.6	10080.7
10°	4371.8	4747.3	5133.8	5595.4	6186.4	7249.3	8437.8	9095.4
12.5°	3616.4	4018.1	4434.9	4920.8	5468.0	6417.5	7787.4	8544.5
15°	2767.7	3216.0	3707.4	4322.6	5008.2	6105.7	7626.6	8448.7
17.5°	1897.1	2398.2	3001.3	3760.2	4599.3	6004.4	7914.8	8862.4
20°	1306.2	1670.8	2315.7	3205.1	4214.6	5991.6	8467.5	9654.8
22.5°	1093.2	1255.8	1726.6	2694.9	3924.6	6152.4	9325.9	10766.2
25°	1010.7	1108.4	1379.0	2252.0	3713.5	6522.5	10507.2	12205.3
27.5°	962.8	1050.2	1252.2	1962.6	3547.3	6952.0	11656.2	13599.4
30°	981.0	1070.8	1216.4	1814.6	3321.0	7310.5	12676.7	14687.2
32.5°	883.9	923.4	1042.9	1683.5	3158.4	7611.5	13569.7	15588.1
35°	753.5	822.1	930.7	1622.3	3162.0	7813.5	14543.4	16739.0
37.5°	717.7	786.9	865.1	1599.8	3205.1	8028.9	15660.9	18088.9
40°	695.3	759.0	826.3	1587.1	3246.4	8224.8	16756.6	19423.0
42.5°	680.1	737.7	822.1	1541.6	3267.0	8400.8	17656.9	20557.5
45°	678.3	737.7	837.2	1496.7	3298.5	8589.4	18412.3	21396.5
47.5°	680.1	762.6	809.3	1442.7	3298.5	8904.9	19298.0	22145.8
50°	672.8	803.9	779.6	1366.3	3222.1	9503.1	20512.6	23149.2
52.5°	669.2	798.4	721.3	1248.6	3089.2	10452.6	22069.3	24532.5
55°	659.5	769.9	680.1	1073.2	2934.5	11488.2	23736.5	26168.1
57.5°	650.4	681.9	657.6	919.7	2694.9	12216.8	24883.8	27444.0
60°	728.6	596.4	639.4	844.5	2375.2	12416.4	24839.5	27952.4
62.5°	674.6	558.8	615.2	828.1	2151.3	11855.8	23691.6	27678.1
65°	529.0	534.5	590.9	876.1	2091.2	10370.7	21658.0	26409.0
67.5°	484.1	510.2	566.0	938.5	2097.3	8303.1	18619.7	23644.3
70°	456.2	484.1	538.1	970.1	2111.9	6190.0	14720.6	19258.6
72.5°	424.7	448.9	506.6	975.5	2014.2	4496.1	11346.2	14160.6
75°	386.5	408.9	461.7	850.0	1669.0	3119.0	8679.2	9688.1
77.5°	344.0	360.4	405.3	655.8	1239.5	1996.0	6514.6	7077.6
80°	293.6	302.7	340.3	480.5	848.1	1248.6	5154.4	5679.2
82.5°	235.4	239.0	263.9	360.4	550.9	802.0	3452.0	3939.8
85°	166.2	166.2	181.4	262.1	375.5	508.4	1874.0	2078.5
87.5°	78.3	80.1	80.1	143.8	196.0	258.4	432.0	265.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)