

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: P301674

Luminaire Tested: **GLNA-AF-10-LED-E1-T2R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301674
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-10-LED-E1-T2R-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42930.1 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 419
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

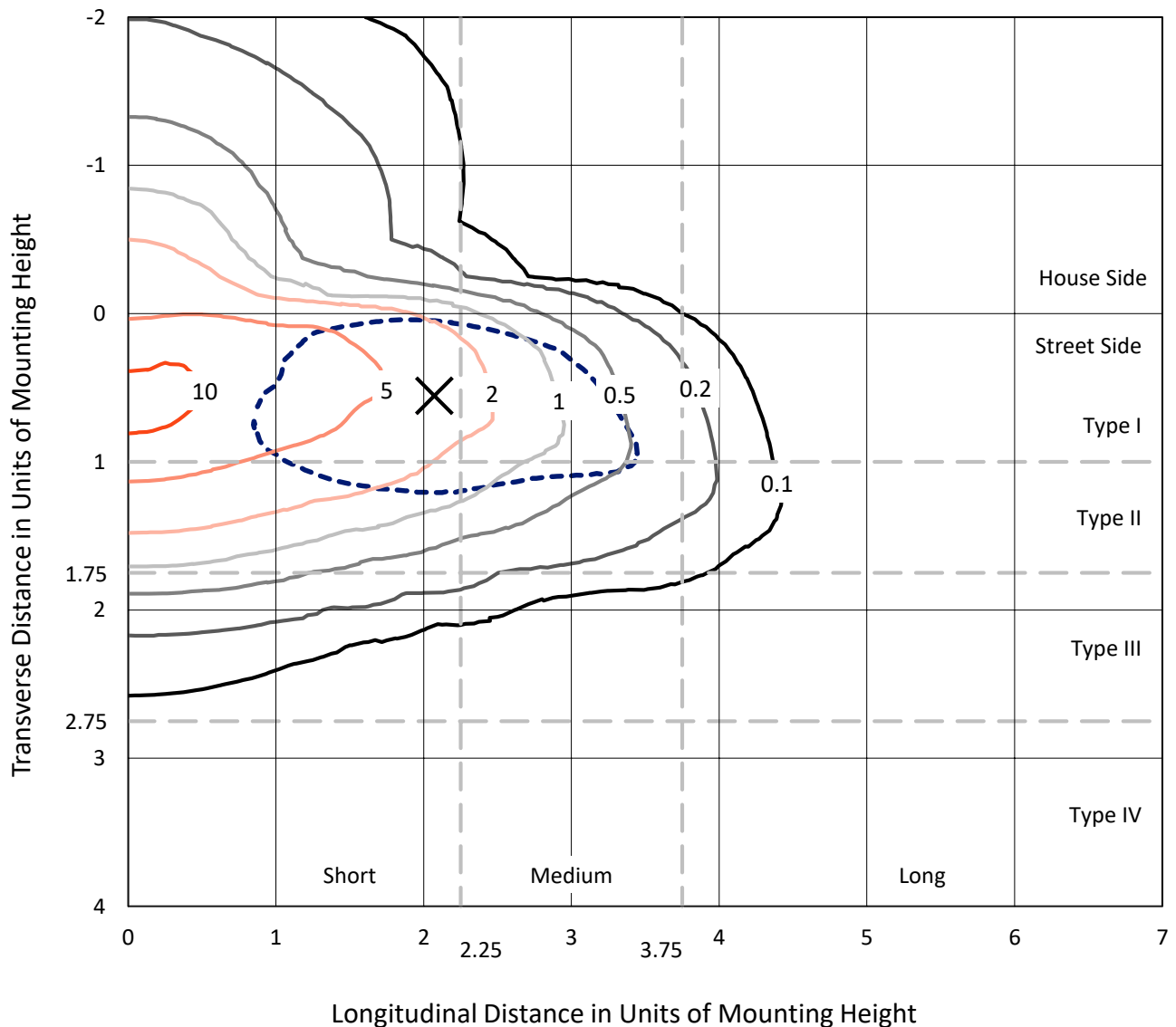


REPORT NUMBER: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

Iso-Footcandle Lines of Horizontal Illumination

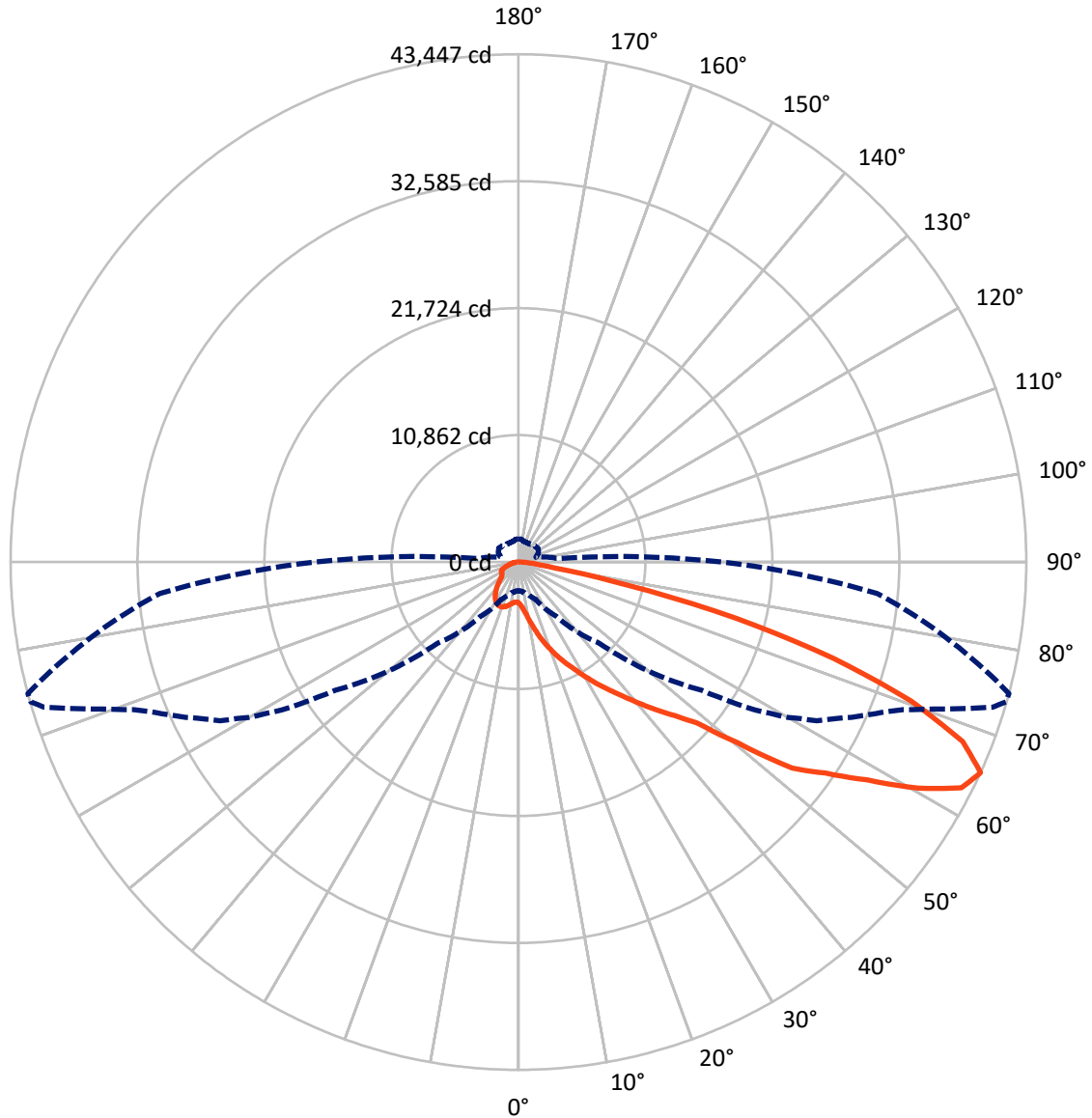
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P301674
CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6618.8	0.0	6618.8
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	36311.3	0.0	36311.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	42930.1	0.0	42930.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.2	1.0
10°-20°	1684.9	3.9
20°-30°	3457.0	8.1
30°-40°	5816.2	13.5
40°-50°	8036.3	18.7
50°-60°	10031.7	23.4
60°-70°	9027.5	21.0
70°-80°	3784.2	8.8
80°-90°	661.1	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°	42930.1	100.0
0°-180°	42930.1	100.0

Coefficient of Utilization



REPORT NUMBER: P301674

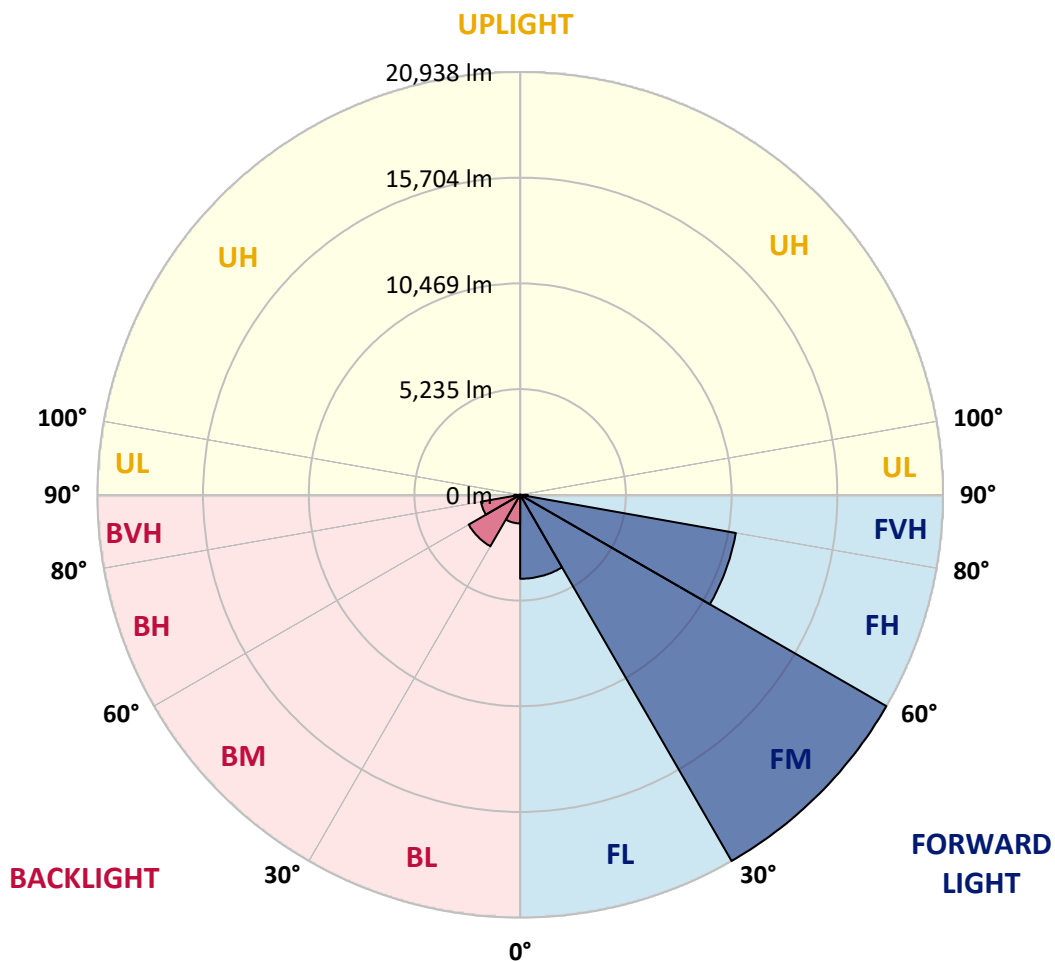
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4157.7	9.7			
FM (30°-60°)	20938.0	48.8			
FH (60°-80°)	10844.0	25.3			G4/12000
FVH (80°-90°)	371.6	0.9			G3/500
BL (0°-30°)	1415.5	3.3	B3/2500		
BM (30°-60°)	2946.1	6.9	B3/5000		
BH (60°-80°)	1967.7	4.6	B3/2500		G3/2500
BVH (80°-90°)	289.5	0.7			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short





REPORT NUMBER: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9
2.5°	4429.8	4381.0	4393.1	4311.7	4212.2	4082.0	3938.0	3936.2	3938.0	3923.5	3871.1
5°	6142.3	6083.9	6061.6	5878.3	5610.1	5228.5	4813.8	4769.2	4750.5	4704.1	4596.2
7.5°	7392.5	7360.0	7325.0	7187.0	6943.4	6516.7	5959.7	5864.5	5772.8	5750.5	5628.8
10°	8199.0	8190.6	8117.7	8080.9	7929.0	7558.9	7016.4	6924.7	6825.3	6790.9	6662.5
12.5°	8836.8	8835.0	8800.6	8810.9	8678.2	8410.6	7942.8	7859.7	7786.7	7680.6	7589.6
15°	9278.0	9279.8	9331.1	9387.7	9367.2	9186.4	8747.6	8710.8	8648.1	8575.2	8467.3
17.5°	9639.7	9649.9	9702.4	9806.0	9918.2	9903.7	9556.5	9525.8	9470.9	9371.4	9314.8
20°	10456.4	10495.0	10393.8	10393.8	10405.8	10460.7	10293.7	10269.6	10192.4	10139.4	10094.8
22.5°	11836.2	11880.8	11651.2	11417.9	11188.2	11021.3	10854.9	10885.0	10832.6	10795.8	10769.3
25°	13628.3	13663.2	13291.3	12897.1	12429.3	11819.9	11407.6	11388.9	11360.6	11338.3	11326.3
27.5°	15314.9	15329.3	14977.9	14400.4	13857.9	12982.1	11968.2	11945.9	11911.6	11868.8	11832.0
30°	16757.9	16753.7	16392.0	15841.1	15260.0	14290.7	12819.9	12750.6	12648.8	12533.0	12443.8
32.5°	18007.5	18001.5	17604.8	17034.0	16424.6	15587.3	13986.3	13844.1	13685.5	13459.5	13323.9
35°	18990.6	18987.0	18612.7	18017.7	17318.5	16808.6	15323.3	15148.5	14947.2	14644.6	14435.4
37.5°	19362.5	19362.5	19153.4	18747.1	18129.2	17779.6	16808.6	16597.0	16381.8	16038.2	15802.5
40°	19144.9	19149.2	19193.8	19119.0	18818.2	18550.0	18194.3	18068.4	17883.3	17574.7	17328.8
42.5°	18415.6	18437.9	18735.0	19098.5	19248.6	19206.4	19423.4	19366.8	19236.6	18999.1	18803.8
45°	17490.9	17560.2	17885.1	18572.3	19368.6	19773.0	20453.6	20459.6	20435.5	20307.7	20157.0
47.5°	16221.4	16318.5	16747.7	17676.0	19088.3	20324.0	21500.0	21554.9	21606.1	21522.9	21453.6
50°	14534.9	14650.6	15292.6	16524.0	18517.4	20894.8	23477.1	23725.5	23956.9	23928.6	23975.0
52.5°	12728.3	12864.6	13650.6	15022.5	17536.1	21026.8	24741.2	25145.6	25550.1	25881.0	26232.4
55°	11098.4	11025.5	11812.1	13256.4	15922.5	20431.3	25877.4	26365.0	26815.9	27222.2	27641.1
57.5°	8889.8	9009.8	9798.2	11226.8	13786.8	18750.7	26659.2	27372.9	28020.9	28693.6	29286.7
60°	6498.0	6617.9	7473.3	8924.2	11468.5	16202.8	26061.8	27143.2	28181.2	29211.4	30016.1
62.5°	3923.5	4013.3	4766.8	6149.0	8843.4	13181.6	23400.0	24818.3	26346.4	27577.8	28811.1
65°	2442.5	2493.1	2771.6	3531.7	5679.4	9841.0	19119.0	20665.1	22310.7	23873.7	25155.9
67.5°	1999.4	2017.5	2068.7	2230.9	3118.8	6417.2	14229.9	15599.4	17084.6	18596.4	20023.2
70°	1798.1	1786.0	1786.0	1796.3	1999.4	3450.3	9316.6	10208.7	11446.2	12760.9	14065.3
72.5°	1623.3	1611.2	1588.9	1558.8	1631.7	2104.9	4815.6	5488.3	6380.4	7548.6	8798.2
75°	1458.7	1442.5	1416.5	1378.0	1428.6	1588.9	2312.3	2595.0	3029.6	3651.6	4348.5
77.5°	1288.1	1267.6	1243.5	1215.2	1280.3	1235.7	1355.1	1456.9	1623.3	1822.8	2085.0
80°	1095.3	1077.2	1068.7	1054.9	1132.0	940.9	957.2	1019.9	1117.6	1225.5	1347.2
82.5°	857.8	857.8	889.7	896.3	981.3	676.9	715.5	770.4	821.0	877.6	934.9
85°	564.8	569.0	678.7	721.5	774.0	455.1	536.5	554.6	595.5	628.1	652.2
87.5°	176.6	191.1	414.7	459.3	444.9	258.0	329.1	337.6	365.9	388.2	408.7
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: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9
2.5°	3871.1	3846.3	3824.0	3822.2	3806.0	3783.7	3791.5	3757.1	3758.9	3740.9	3720.4
5°	4551.6	4535.3	4453.9	4431.6	4370.8	4332.2	4326.2	4244.8	4234.5	4188.1	4136.9
7.5°	5531.1	5478.1	5364.1	5309.3	5205.6	5128.5	5092.3	4984.4	4931.4	4809.6	4754.7
10°	6557.1	6490.1	6349.7	6272.5	6173.1	6048.9	5982.0	5825.9	5764.4	5652.9	5519.1
12.5°	7508.2	7441.3	7296.7	7237.6	7105.6	6973.6	6900.6	6724.0	6644.5	6465.4	6359.9
15°	8387.7	8320.8	8194.8	8133.9	8001.9	7894.0	7796.4	7622.2	7528.7	7361.8	7223.7
17.5°	9241.2	9170.1	9060.4	9005.6	8877.8	8768.1	8662.6	8497.4	8402.2	8235.8	8111.6
20°	10033.9	9980.9	9901.9	9828.3	9700.6	9601.1	9475.1	9332.9	9194.8	9072.5	8954.9
22.5°	10724.7	10704.2	10619.2	10586.6	10476.9	10391.3	10281.6	10141.8	10041.7	9887.4	9777.7
25°	11320.2	11314.2	11273.2	11263.0	11185.8	11104.4	11080.3	10964.6	10873.0	10736.7	10623.4
27.5°	11832.0	11838.0	11828.4	11856.7	11836.2	11799.4	11801.9	11763.3	11710.2	11596.3	11496.8
30°	12401.0	12368.5	12387.2	12427.5	12439.6	12443.8	12510.7	12533.0	12529.4	12454.1	12405.2
32.5°	13205.7	13128.6	13057.4	13051.4	13091.8	13108.1	13222.0	13281.1	13331.7	13349.8	13358.2
35°	14231.7	14077.4	13929.1	13850.1	13780.8	13798.9	13880.2	13976.1	14087.6	14164.8	14256.4
37.5°	15524.0	15335.4	15073.1	14886.3	14839.3	14738.0	14790.4	14865.8	14975.5	15095.4	15254.0
40°	17090.7	16804.3	16509.6	16261.8	16128.0	15940.5	15938.7	15924.3	15991.8	16103.3	16326.9
42.5°	18598.8	18344.4	18031.6	17771.8	17597.0	17346.8	17296.2	17164.2	17194.3	17292.0	17509.6
45°	20010.5	19801.4	19610.3	19310.1	19161.2	18891.2	18805.6	18649.4	18562.0	18606.6	18824.3
47.5°	21378.2	21244.4	21044.9	20850.2	20736.3	20494.6	20384.9	20272.7	20161.2	20157.0	20384.9
50°	24044.3	23973.2	23737.5	23534.4	23589.2	23292.7	23310.8	23010.0	23146.2	23162.5	23639.9
52.5°	26549.5	26797.8	26972.6	27185.4	27324.1	27350.6	27441.6	27577.8	27742.4	28067.3	28510.3
55°	27984.1	28295.1	28476.0	28638.7	28907.0	28963.6	29116.1	29297.0	29441.0	29806.9	30183.1
57.5°	29689.4	30266.2	30546.5	30804.5	31166.2	31304.2	31558.6	31755.7	31942.6	32375.4	32830.5
60°	30739.4	31442.9	32013.7	32421.8	32875.1	33200.6	33584.6	33893.2	34332.0	34850.4	35529.1
62.5°	29904.6	30936.5	31694.8	32395.9	33011.3	33633.4	34183.7	34761.2	35427.3	36211.5	37264.5
65°	26578.4	27628.5	28926.9	29654.4	30469.4	31428.4	32265.7	33200.6	34108.4	35250.6	36807.0
67.5°	21396.9	22617.6	24076.9	24810.5	25747.2	26817.7	27756.9	28898.5	29959.4	31342.8	33267.5
70°	15422.8	17001.4	18228.7	18994.8	20088.3	21191.4	22098.0	23426.5	24304.1	25722.5	27712.3
72.5°	9765.7	11011.0	12514.9	13480.0	14451.1	15569.2	16495.7	17641.6	18460.2	19752.5	21554.9
75°	5250.8	6168.9	7489.6	8406.4	9446.8	10401.6	11486.6	12254.5	12860.3	13882.7	15345.6
77.5°	2460.6	3019.3	3687.8	4393.1	5098.3	5833.7	6549.2	7170.7	7431.1	8016.4	8879.6
80°	1493.7	1674.5	1869.2	2086.8	2381.6	2619.1	2934.3	3161.6	3177.9	3362.9	3626.9
82.5°	997.6	1064.5	1123.6	1178.4	1253.8	1312.9	1379.8	1458.7	1491.3	1534.1	1619.7
85°	680.5	713.1	725.1	760.1	751.7	772.2	798.7	825.2	839.1	837.3	875.8
87.5°	418.3	434.6	443.0	450.9	444.9	437.0	449.1	463.5	467.2	455.1	459.3
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: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9
2.5°	3724.6	3706.5	3687.8	3675.8	3671.5	3564.2	3517.2	3487.1	3422.0	3368.9	3326.1
5°	4108.6	4070.0	4039.8	4003.1	3982.6	3710.1	3610.7	3541.9	3428.0	3361.1	3299.6
7.5°	4726.4	4618.5	4555.8	4484.7	4423.8	3931.9	3767.4	3659.5	3501.0	3411.7	3342.4
10°	5427.4	5315.9	5215.9	5106.2	5010.9	4226.7	3986.8	3819.8	3610.7	3494.9	3403.3
12.5°	6209.9	6100.1	5974.2	5833.7	5712.0	4600.4	4267.1	4029.6	3742.7	3588.4	3460.6
15°	7134.5	6941.0	6788.5	6626.4	6484.1	5047.7	4594.4	4265.3	3883.1	3674.0	3503.4
17.5°	7993.5	7790.3	7583.6	7441.3	7276.8	5549.2	4923.5	4504.6	3998.9	3728.8	3511.2
20°	8833.2	8611.3	8432.9	8241.8	8068.8	6069.4	5274.9	4716.2	4074.2	3730.6	3460.6
22.5°	9572.8	9434.1	9235.2	9027.9	8853.0	6589.6	5604.1	4895.2	4102.5	3684.2	3370.8
25°	10413.6	10267.8	10023.6	9848.8	9654.1	7120.1	5927.1	5033.2	4086.3	3596.8	3232.7
27.5°	11311.8	11149.6	10899.5	10716.8	10481.2	7670.4	6223.7	5132.7	4025.4	3454.5	3047.7
30°	12248.5	12100.2	11854.3	11669.8	11431.7	8253.9	6555.2	5199.6	3903.6	3257.4	2832.5
32.5°	13254.6	13130.4	12886.9	12694.0	12439.6	8885.6	6863.9	5220.1	3718.6	3023.6	2605.2
35°	14209.4	14124.4	13918.8	13738.0	13474.0	9483.0	7191.2	5209.8	3499.1	2767.4	2397.9
37.5°	15284.7	15233.5	15132.2	14902.6	14579.5	10293.7	7583.6	5167.0	3230.9	2513.6	2239.3
40°	16430.6	16434.8	16325.1	16168.4	15867.6	11277.4	8050.7	5083.9	2938.0	2290.0	2094.7
42.5°	17643.4	17706.7	17653.7	17542.1	17253.4	12269.0	8609.5	4982.6	2654.0	2072.4	1953.0
45°	19033.4	19110.6	19191.9	19027.4	18747.1	13577.6	9344.9	4850.6	2346.6	1891.5	1855.4
47.5°	20636.8	20758.6	20831.5	20833.9	20553.6	15199.1	10539.6	4771.0	2074.8	1769.8	1808.3
50°	24019.6	24058.8	24231.2	24532.0	24316.8	18952.0	12626.5	4722.2	1889.7	1694.4	1774.0
52.5°	28894.3	29319.3	29618.3	29597.8	29304.8	21335.4	13776.6	4470.2	1780.0	1666.1	1757.7
55°	30879.9	31410.3	31963.1	32108.9	31881.7	23369.8	14864.0	4218.3	1727.0	1686.6	1763.7
57.5°	33525.5	34419.4	35177.7	35496.6	35167.5	25972.6	16294.4	4086.3	1710.7	1741.4	1802.3
60°	36615.9	37721.4	38717.2	39289.9	39289.9	28963.6	17777.8	4031.4	1688.4	1822.8	1867.4
62.5°	38601.5	40224.8	41728.7	42567.8	42543.1	31046.2	18436.1	3844.5	1637.8	1879.5	1956.6
65°	38609.3	40540.0	42455.7	43399.0	43447.3	30790.7	17349.2	3395.5	1544.3	1887.9	2046.4
67.5°	35391.1	37449.0	39682.3	40737.2	40980.7	28344.0	15018.3	2792.1	1391.8	1806.5	2079.0
70°	29890.1	31899.8	34179.5	35216.3	35649.1	24161.9	12096.0	2151.9	1197.1	1627.5	2011.5
72.5°	23548.2	25519.3	27106.5	27864.2	28201.7	18468.6	8808.4	1625.7	981.3	1371.3	1830.6
75°	16672.3	18151.5	18994.8	19163.6	19216.1	11133.4	5352.1	1209.2	808.9	1066.9	1546.1
77.5°	9410.0	10044.1	9974.8	10050.2	9424.5	4297.8	2331.0	865.6	666.7	810.7	1198.9
80°	3674.0	3787.9	3558.2	3487.1	3198.4	1599.2	1028.3	603.4	532.3	613.6	839.1
82.5°	1619.7	1672.1	1623.3	1635.9	1564.8	825.2	615.4	437.0	406.3	449.1	557.0
85°	892.1	908.4	904.2	930.7	892.1	329.1	292.3	268.2	284.5	305.0	357.4
87.5°	434.6	438.8	425.0	447.3	432.8	166.4	144.1	152.5	166.4	170.6	170.6
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: P301674

CATALOG NUMBER: GLNA-AF-10-LED-E1-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
0°	3488.9	3488.9	3488.9	3488.9	3488.9	3488.9
2.5°	3296.0	3279.7	3281.5	3277.3	3269.5	3269.5
5°	3267.7	3251.4	3251.4	3247.2	3236.9	3238.7
7.5°	3296.0	3269.5	3259.2	3244.8	3230.9	3230.9
10°	3328.6	3281.5	3253.2	3229.1	3210.4	3210.4
12.5°	3352.7	3279.7	3232.7	3200.2	3182.1	3182.1
15°	3361.1	3265.3	3200.2	3161.6	3145.3	3143.5
17.5°	3334.6	3210.4	3131.4	3086.8	3066.3	3060.3
20°	3253.2	3111.0	3015.7	2964.5	2936.1	2925.9
22.5°	3131.4	2968.7	2857.2	2804.1	2767.4	2761.3
25°	2960.9	2786.1	2676.3	2625.1	2605.2	2598.6
27.5°	2761.3	2598.6	2505.2	2472.6	2454.5	2452.7
30°	2572.7	2434.0	2365.3	2340.6	2318.3	2314.7
32.5°	2395.5	2308.0	2282.1	2247.2	2194.7	2188.7
35°	2269.5	2261.6	2243.6	2165.8	2101.3	2082.6
37.5°	2192.3	2267.7	2174.2	2021.7	1975.3	1971.1
40°	2147.7	2205.0	2044.0	1991.6	1995.2	1991.6
42.5°	2046.4	2104.9	2048.3	2024.1	2039.8	2044.0
45°	1944.6	2009.7	2079.0	2062.7	2101.3	2101.3
47.5°	1887.9	1985.0	2076.6	2076.6	2133.8	2153.7
50°	1822.8	1965.1	2044.0	2072.4	2117.6	2101.3
52.5°	1818.6	1930.1	1997.6	2048.3	2068.7	2050.1
55°	1824.6	1901.8	1950.6	2007.9	2032.0	2033.8
57.5°	1833.1	1885.5	1918.0	1944.6	2017.5	2017.5
60°	1852.9	1871.6	1889.7	1904.2	1999.4	2001.2
62.5°	1885.5	1857.2	1852.9	1867.4	1989.2	1981.3
65°	1936.7	1836.7	1806.5	1820.4	1978.9	1954.8
67.5°	2005.5	1806.5	1747.5	1757.7	1971.1	1918.0
70°	2068.7	1757.7	1674.5	1664.3	1893.9	1800.5
72.5°	2074.8	1701.0	1572.7	1542.5	1646.2	1556.4
75°	1972.9	1661.9	1461.1	1371.3	1359.3	1347.2
77.5°	1778.2	1639.6	1330.9	1190.5	1166.4	1174.2
80°	1487.7	1556.4	1174.2	1007.9	1139.9	1126.0
82.5°	1111.5	1373.7	997.6	892.1	889.7	786.6
85°	617.9	1071.1	812.5	668.5	465.3	450.9
87.5°	173.0	595.5	569.0	377.9	258.0	268.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)