

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: P298876

Luminaire Tested: **GLNA-AF-04-LED-E1-SLL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298876
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-04-LED-E1-SLL
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 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: 21032.2 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

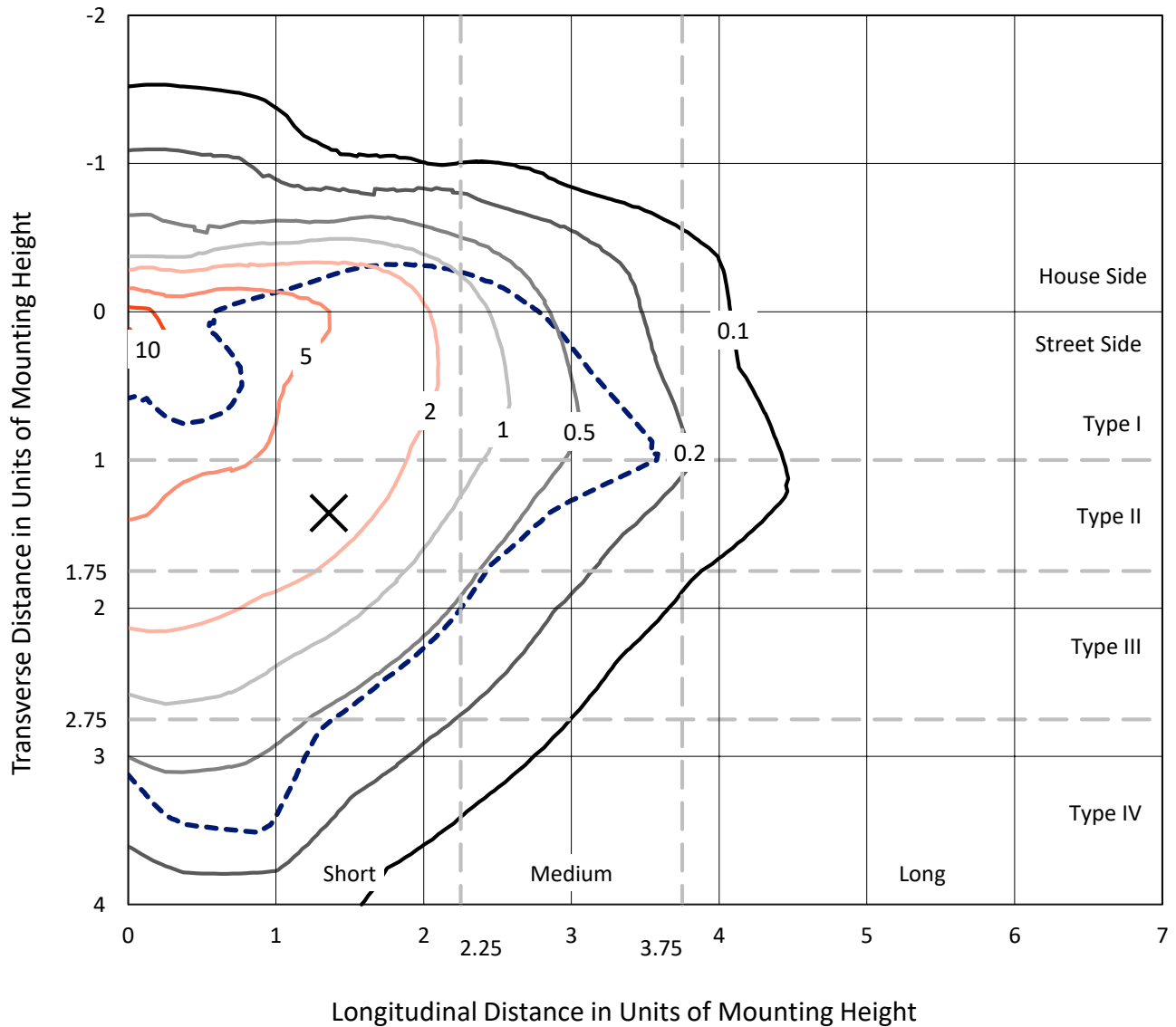
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P298876
 CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

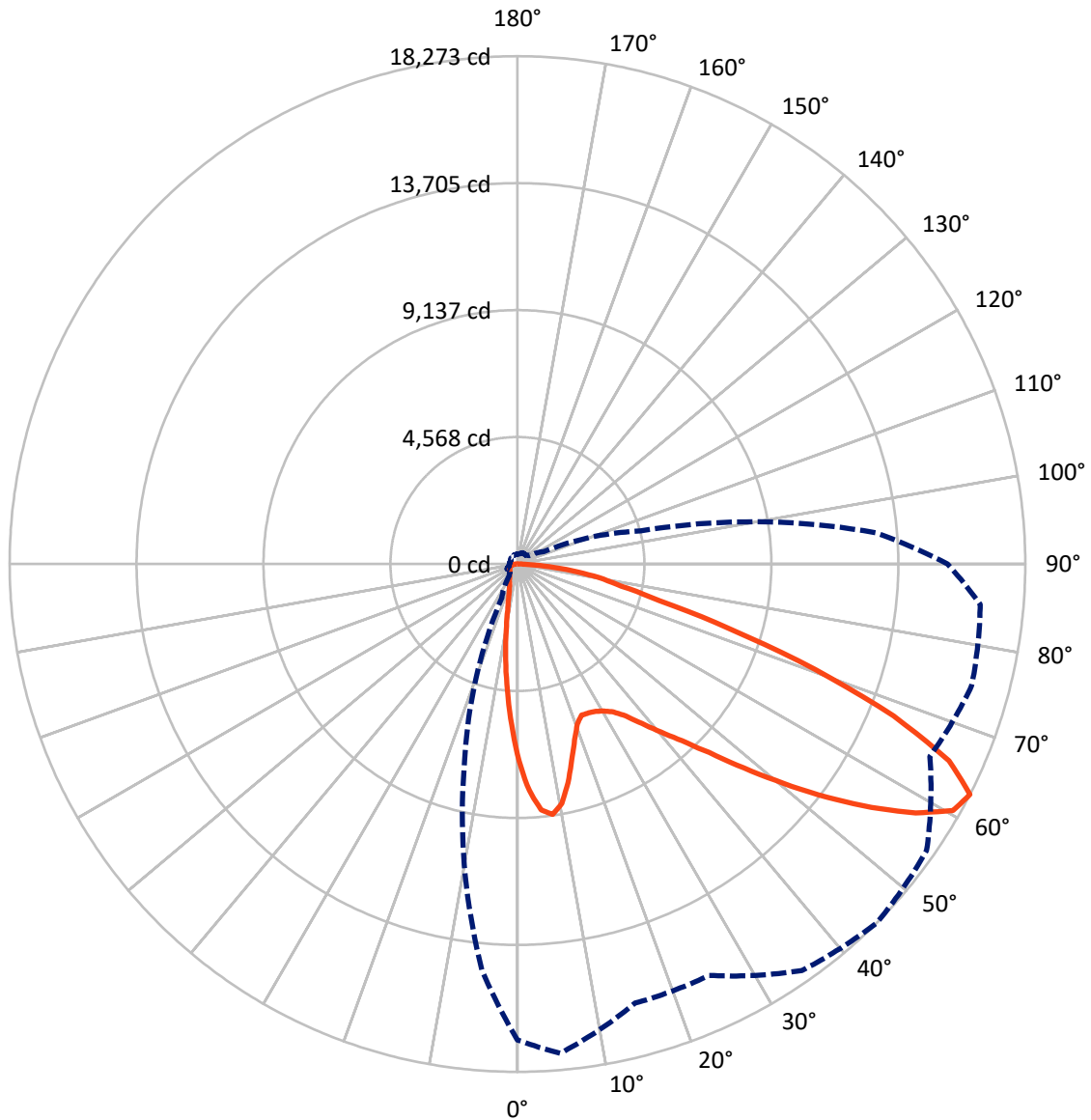


Based on 25 foot mounting height. Maximum calculated value = 13.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3480.5	0.0	3480.5
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	17551.6	0.0	17551.6
	% Fixture	83.5	0.0	83.5
Total	Lumens	21032.2	0.0	21032.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	517.3	2.5
10°-20°	948.5	4.5
20°-30°	1383.0	6.6
30°-40°	2130.0	10.1
40°-50°	3134.7	14.9
50°-60°	4598.0	21.9
60°-70°	5139.9	24.4
70°-80°	2516.4	12.0
80°-90°	664.4	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°	21032.2	100.0
0°-180°	21032.2	100.0



REPORT NUMBER: P298876

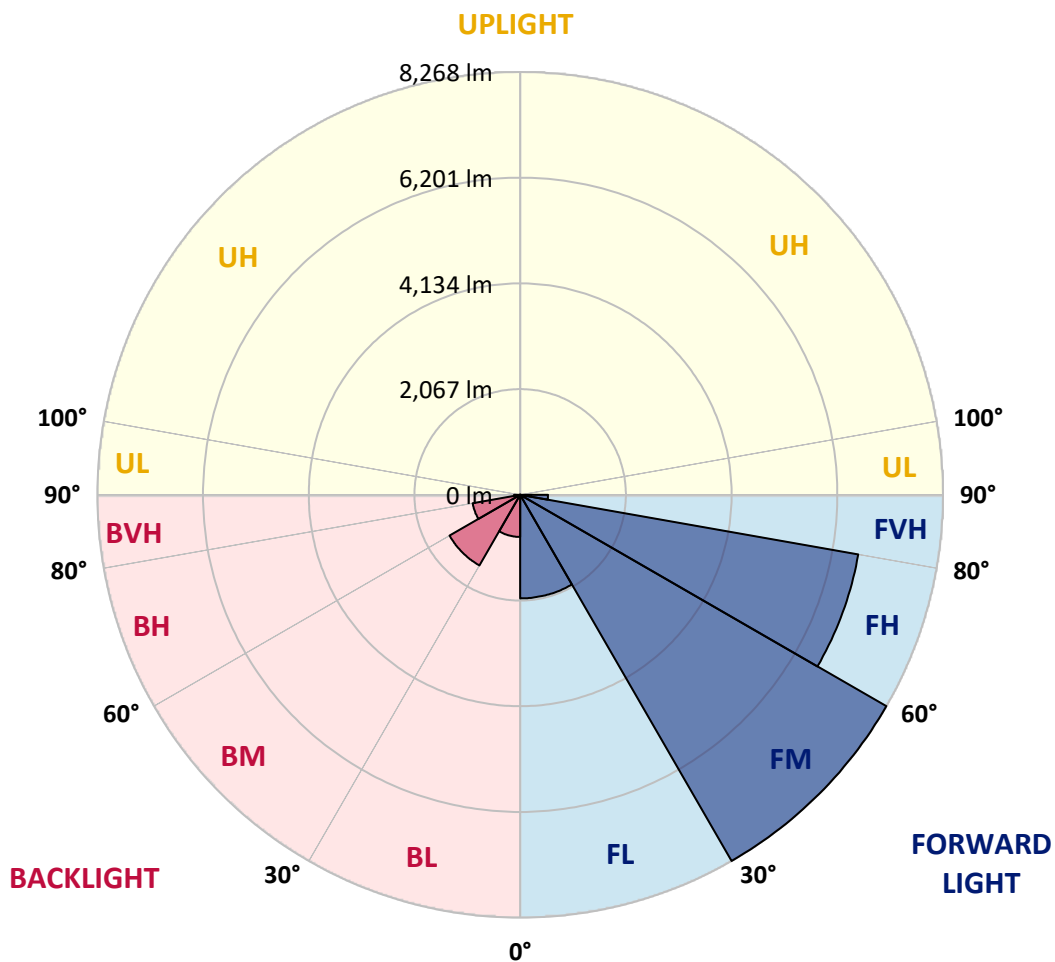
CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2025.3	9.6			
FM	(30°-60°)	8267.9	39.3			
FH	(60°-80°)	6712.7	31.9			G3/7500
FVH	(80°-90°)	545.6	2.6			G4/750
BL	(0°-30°)	823.4	3.9	B2/1000		
BM	(30°-60°)	1594.8	7.6	B2/2500		
BH	(60°-80°)	943.6	4.5	B2/1000		G2/1000
BVH	(80°-90°)	118.8	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





REPORT NUMBER: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0
2.5°	7383.0	7501.3	7731.3	7903.2	8113.0	8161.4	8228.6	8162.6	8045.8	7890.8	7840.2
5°	6942.8	7195.0	7753.1	8244.8	8681.6	8885.1	8942.1	8774.0	8435.4	7990.3	7718.6
7.5°	6236.4	6594.8	7350.7	8074.7	8718.4	9099.0	9089.6	8700.0	8077.0	7351.9	6916.1
10°	5626.9	6036.4	6903.7	7712.9	8396.0	8765.0	8622.3	8124.7	7380.8	6546.0	6073.5
12.5°	5286.1	5687.3	6567.1	7379.6	7950.9	8078.1	7969.3	7481.4	6780.6	5936.9	5522.9
15°	5226.8	5667.8	6433.1	7094.4	7414.6	7303.8	7174.0	6955.5	6460.5	5740.2	5309.0
17.5°	5482.8	5968.0	6587.0	6895.5	6841.1	6647.8	6611.0	6635.4	6516.4	5958.7	5461.7
20°	5972.9	6555.4	6953.3	6802.0	6405.3	6139.2	6148.6	6519.8	6872.2	6512.6	5944.8
22.5°	6660.5	7325.6	7481.4	6851.6	6221.4	5905.7	5982.3	6583.6	7440.1	7322.2	6597.1
25°	7550.8	8156.9	8044.7	7031.7	6239.8	5934.6	5995.8	6803.1	8110.4	8131.4	7404.4
27.5°	8413.3	8975.5	8517.3	7271.2	6316.3	6003.0	6084.0	7148.4	8751.1	9010.1	8327.0
30°	9086.3	9477.3	8704.5	7489.6	6466.5	6135.8	6236.4	7476.9	9042.7	9603.1	9036.7
32.5°	9643.6	9924.4	9002.9	7760.2	6742.7	6344.9	6522.0	7875.8	9462.3	10167.6	9731.4
35°	10355.6	10435.5	9374.1	8062.0	7169.5	6709.3	6928.9	8266.5	9862.4	10737.3	10416.0
37.5°	11190.7	11087.9	9724.3	8474.8	7721.2	7279.1	7460.7	8695.5	10191.6	11383.6	11115.3
40°	12016.0	11768.3	10164.2	9115.2	8525.9	7950.9	8166.0	9153.4	10499.3	12031.1	11798.7
42.5°	12717.9	12351.2	10597.3	9819.3	9274.7	8692.2	8948.9	9614.7	10792.9	12583.5	12391.7
45°	13237.0	12781.3	11010.2	10495.6	10307.2	9677.0	9798.6	10142.8	11110.8	13045.2	12879.7
47.5°	13700.5	13213.7	11477.1	11177.9	11210.2	10958.0	10762.5	10757.9	11485.7	13422.0	13340.9
50°	14321.3	13813.8	11978.9	11880.5	12565.1	12397.4	11966.1	11475.9	11959.4	13849.9	13840.5
52.5°	15177.0	14764.5	12591.8	12638.0	13830.4	13940.0	13405.5	12338.8	12701.4	14634.7	14579.5
55°	16188.9	15947.9	13426.9	13508.7	15381.6	15460.4	14929.3	13417.1	13793.2	15771.5	15617.7
57.5°	16978.2	16927.5	14342.3	14554.0	16540.2	16894.1	16406.2	14666.2	15023.1	16728.6	16342.4
60°	17292.7	17539.0	15317.0	15608.3	17612.1	18003.6	17576.1	15762.9	16113.5	17125.3	16292.9
62.5°	17123.1	17672.9	16355.2	16330.8	17851.2	18273.1	17972.5	16373.6	16921.9	16715.9	15468.7
65°	16337.9	17191.0	16957.6	16144.6	17032.6	17067.2	16970.0	16100.7	17112.6	15422.1	13875.0
67.5°	14627.6	15855.6	16164.1	14549.5	14824.2	14599.0	14435.8	14606.9	16118.0	13483.2	11661.0
70°	11914.3	13762.1	13909.6	11637.0	11512.0	11360.3	11035.7	11975.5	14156.1	11050.7	9252.9
72.5°	8760.5	10702.8	11156.9	8534.9	7956.9	7987.7	7731.3	9024.7	11509.7	8208.7	6908.2
75°	5993.6	7749.7	8729.3	5955.3	5262.1	5274.4	5241.8	6394.8	9167.3	5710.2	5169.4
77.5°	4378.5	5536.8	6583.6	4003.6	3886.9	3815.2	3797.9	4474.3	7028.3	4146.2	4014.1
80°	3513.4	4090.7	4422.1	2774.8	2983.8	2978.2	2882.1	3076.5	4589.9	3032.6	3002.2
82.5°	2437.4	3143.7	3582.9	2174.6	2014.0	1980.2	2003.9	2291.4	3244.3	2072.9	1971.2
85°	1285.9	2087.9	3548.3	1927.3	1195.4	953.7	1186.4	1876.3	2810.8	1098.6	961.6
87.5°	164.4	603.5	2349.2	769.0	471.8	254.1	563.4	1056.5	1804.9	224.1	195.5
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: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0
2.5°	7709.6	7555.7	7354.5	7168.0	6975.0	6782.9	6532.2	6374.9	6266.4	6245.4	6199.6
5°	7522.3	7011.1	6624.9	6290.8	5987.9	5559.7	5322.9	5126.2	5021.1	5011.0	4985.4
7.5°	6658.3	5953.0	5431.7	4958.8	4529.8	4184.1	3802.4	3624.9	3551.7	3569.0	3586.2
10°	5759.7	4971.6	4372.5	3889.1	3511.2	3219.9	2913.7	2706.8	2563.1	2534.2	2528.6
12.5°	5103.3	4238.5	3657.2	3315.6	3023.6	2749.3	2424.6	2180.3	1994.5	1930.7	1888.3
15°	4825.6	3880.1	3271.0	2903.1	2580.4	2232.4	1930.7	1675.1	1504.3	1448.8	1417.6
17.5°	4884.9	3780.7	3004.9	2534.2	2121.7	1758.4	1378.2	1159.4	1056.5	1030.3	1030.3
20°	5194.9	3762.3	2784.9	2194.5	1679.6	1258.8	946.9	822.0	788.6	785.2	794.2
22.5°	5629.5	3827.2	2621.3	1899.9	1305.4	919.2	737.5	691.3	676.3	680.1	690.2
25°	6276.9	4045.6	2502.3	1637.2	1024.3	752.5	657.6	630.2	623.0	632.4	645.2
27.5°	7044.5	4264.1	2428.0	1439.4	864.7	688.0	625.3	596.8	601.3	612.9	624.2
30°	7718.6	4443.5	2311.3	1298.6	815.2	691.3	625.3	586.3	581.8	584.0	587.4
32.5°	8323.6	4564.7	2174.6	1164.3	703.0	614.0	584.0	578.4	552.5	543.1	544.6
35°	8844.9	4564.7	2092.8	1085.8	630.2	544.6	496.2	467.3	454.1	455.3	468.4
37.5°	9347.9	4473.1	2052.3	1041.5	590.8	517.9	475.2	449.6	432.4	429.0	431.2
40°	9791.5	4340.3	2006.1	1023.1	560.7	501.8	461.7	440.3	421.9	416.2	417.4
42.5°	10147.7	4232.5	1955.1	999.1	542.0	490.2	451.9	433.5	412.9	406.9	405.7
45°	10532.8	4196.9	1888.3	950.3	551.4	491.3	449.6	430.1	409.1	402.3	400.1
47.5°	11040.2	4309.1	1818.8	892.5	571.2	497.3	453.0	430.1	408.0	402.3	400.1
50°	11679.4	4572.6	1730.6	808.1	551.4	513.4	451.9	426.4	408.0	402.3	397.8
52.5°	12500.6	4928.8	1615.4	711.2	539.7	552.5	449.6	419.6	402.3	394.5	386.2
55°	13498.2	5220.0	1477.3	631.3	513.4	542.0	446.3	411.7	393.3	381.7	374.6
57.5°	14229.0	5325.1	1300.9	579.5	476.3	524.7	441.4	401.2	381.7	372.3	363.3
60°	14084.5	5121.7	1151.5	546.8	454.1	474.0	438.0	391.8	371.2	364.4	355.8
62.5°	12927.3	4589.9	1055.4	531.8	440.3	432.4	441.4	382.8	362.2	354.7	352.4
65°	11191.8	3804.7	1017.5	528.5	429.0	408.0	410.6	372.3	351.3	345.7	343.4
67.5°	9231.9	3070.9	984.1	539.7	414.0	390.7	379.5	358.4	340.8	335.2	330.7
70°	7280.2	2554.1	968.7	533.0	395.6	373.4	361.1	343.4	328.4	322.4	319.0
72.5°	5862.6	2157.4	960.5	525.8	371.2	350.2	338.5	323.5	307.4	305.1	301.8
75°	4961.4	1696.1	880.1	504.1	343.4	322.4	314.5	300.6	284.5	284.5	282.2
77.5°	3827.2	1226.6	731.9	446.3	314.5	291.3	284.5	274.0	255.6	259.0	257.8
80°	2827.0	800.2	572.4	370.1	278.9	256.7	253.0	242.8	222.9	227.8	227.8
82.5°	1936.7	524.7	411.7	302.9	238.0	217.3	217.3	206.8	185.0	187.3	194.4
85°	972.5	361.1	307.4	234.6	185.0	174.5	174.5	166.6	144.5	145.6	155.0
87.5°	296.1	217.3	203.4	167.8	132.9	130.6	124.6	119.0	105.1	104.0	110.0
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: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0
2.5°	6128.7	6062.6	5983.4	5807.4	5748.5	5744.7	5798.4	5742.5	5849.1	5804.0	5853.6
5°	4942.3	4878.1	4788.8	4564.7	4428.1	4335.4	4291.8	4162.4	4255.8	4187.5	4244.6
7.5°	3635.0	3650.0	3591.1	3459.4	3162.1	3013.1	2925.3	2846.5	2914.8	2907.6	3016.5
10°	2555.2	2595.4	2554.1	2421.2	2180.3	2098.4	2114.6	2145.7	2235.1	2280.9	2448.6
12.5°	1839.5	1837.2	1810.6	1691.6	1533.2	1542.2	1608.3	1662.3	1744.5	1793.3	1964.1
15°	1373.3	1352.7	1341.0	1243.8	1153.7	1173.6	1205.9	1211.6	1263.7	1292.6	1431.5
17.5°	1038.1	1048.7	1061.0	992.0	923.7	910.9	885.8	854.2	869.6	875.3	944.3
20°	824.2	865.9	897.4	848.6	779.6	742.0	709.7	689.1	689.1	688.0	707.5
22.5°	720.2	750.3	784.1	750.3	688.0	655.3	636.9	620.8	618.5	618.5	636.9
25°	664.0	685.7	718.0	695.1	648.6	624.2	606.9	586.3	578.4	575.7	588.5
27.5°	635.8	645.2	661.3	640.3	601.3	589.6	585.1	566.7	555.9	550.2	563.4
30°	588.5	586.3	587.4	566.7	535.2	534.1	542.0	545.7	542.0	540.8	560.7
32.5°	544.6	539.7	538.6	520.2	491.3	484.5	491.3	498.4	506.3	517.9	540.8
35°	489.0	500.7	507.4	491.3	456.4	435.8	427.9	415.1	408.0	408.0	434.6
37.5°	445.1	471.8	482.3	467.3	429.0	400.1	386.2	384.0	385.1	389.6	415.1
40°	430.1	449.6	458.6	444.0	405.7	379.5	371.2	368.9	371.2	378.3	403.5
42.5°	420.7	434.6	433.5	415.1	384.0	365.6	361.1	358.4	361.1	367.8	395.6
45°	412.9	421.9	412.9	390.7	362.2	352.4	353.6	352.4	354.7	362.2	388.5
47.5°	405.7	409.1	397.8	375.7	345.7	343.4	347.9	351.3	353.6	359.9	387.3
50°	395.6	395.6	385.1	362.2	331.8	332.9	338.5	346.8	347.9	354.7	377.2
52.5°	382.8	381.7	374.6	352.4	320.2	323.5	323.5	332.9	335.2	343.4	366.7
55°	372.3	370.1	366.7	345.7	310.0	315.6	312.3	315.6	321.3	329.5	354.7
57.5°	363.3	358.4	358.4	339.7	301.8	304.0	296.1	300.6	307.4	314.5	340.8
60°	353.6	349.1	351.3	331.8	289.0	286.7	283.4	292.4	295.0	302.9	329.5
62.5°	343.4	339.7	340.8	322.4	280.0	274.0	274.0	282.2	283.4	295.0	320.2
65°	335.2	330.7	329.5	313.4	269.5	262.7	266.1	269.5	271.7	283.4	307.4
67.5°	327.3	317.9	317.9	305.1	257.8	250.7	257.8	256.7	260.5	270.6	290.1
70°	316.8	304.0	305.1	299.5	246.2	238.0	244.0	242.8	245.1	251.8	271.7
72.5°	300.6	290.1	292.4	290.1	234.6	222.9	225.2	225.2	225.2	231.2	251.8
75°	280.0	271.7	278.9	284.5	220.7	204.6	206.8	206.8	203.4	206.8	232.3
77.5°	254.1	249.6	272.9	265.0	204.6	185.0	185.0	182.8	176.0	180.5	207.9
80°	226.7	222.9	251.8	221.8	186.2	161.0	158.4	152.4	145.6	149.0	177.2
82.5°	197.8	194.4	211.7	170.0	161.0	132.9	127.2	116.7	110.0	113.3	138.5
85°	162.1	162.1	163.3	128.4	122.4	101.7	95.0	81.1	72.8	75.1	99.5
87.5°	115.6	119.0	110.0	87.8	72.8	56.7	52.2	43.9	36.8	42.8	52.2
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: P298876

CATALOG NUMBER: GLNA-AF-04-LED-E1-SLL

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0	7106.0
2.5°	6108.0	6235.3	6379.8	6564.4	6723.2	6982.9	7232.9	7383.0
5°	4567.0	4778.6	5041.7	5381.0	5696.7	6170.3	6641.0	6942.8
7.5°	3268.3	3495.0	3779.5	4202.5	4649.2	5253.4	5875.7	6236.4
10°	2704.6	2936.9	3176.0	3461.6	3827.2	4484.8	5220.0	5626.9
12.5°	2237.3	2485.8	2743.6	3044.3	3382.8	3970.2	4817.7	5286.1
15°	1712.2	1989.6	2293.6	2674.2	3098.3	3777.3	4718.2	5226.8
17.5°	1173.6	1483.7	1856.7	2326.3	2845.3	3714.6	4896.5	5482.8
20°	808.1	1033.6	1432.6	1982.8	2607.4	3706.7	5238.4	5972.9
22.5°	676.3	776.9	1068.2	1667.2	2428.0	3806.2	5769.5	6660.5
25°	625.3	685.7	853.1	1393.2	2297.4	4035.1	6500.3	7550.8
27.5°	595.6	649.7	774.7	1214.2	2194.5	4300.9	7211.1	8413.3
30°	606.9	662.4	752.5	1122.6	2054.5	4522.7	7842.4	9086.3
32.5°	546.8	571.2	645.2	1041.5	1953.9	4708.8	8394.9	9643.6
35°	466.2	508.6	575.7	1003.6	1956.2	4833.8	8997.3	10355.6
37.5°	444.0	486.8	535.2	989.7	1982.8	4967.1	9688.6	11190.7
40°	430.1	469.5	511.2	981.9	2008.4	5088.3	10366.5	12016.0
42.5°	420.7	456.4	508.6	953.7	2021.1	5197.1	10923.5	12717.9
45°	419.6	456.4	517.9	925.9	2040.6	5313.9	11390.7	13237.0
47.5°	420.7	471.8	500.7	892.5	2040.6	5509.0	11938.7	13700.5
50°	416.2	497.3	482.3	845.2	1993.4	5879.1	12690.1	14321.3
52.5°	414.0	493.9	446.3	772.4	1911.2	6466.5	13653.2	15177.0
55°	408.0	476.3	420.7	664.0	1815.4	7107.2	14684.6	16188.9
57.5°	402.3	421.9	406.9	569.0	1667.2	7557.9	15394.3	16978.2
60°	450.8	368.9	395.6	522.5	1469.4	7681.4	15366.9	17292.7
62.5°	417.4	345.7	380.6	512.3	1330.9	7334.6	14656.8	17123.1
65°	327.3	330.7	365.6	542.0	1293.7	6415.8	13398.7	16337.9
67.5°	299.5	315.6	350.2	580.6	1297.5	5136.7	11519.1	14627.6
70°	282.2	299.5	332.9	600.1	1306.5	3829.4	9106.9	11914.3
72.5°	262.7	277.7	313.4	603.5	1246.1	2781.5	7019.3	8760.5
75°	239.1	253.0	285.6	525.8	1032.5	1929.5	5369.4	5993.6
77.5°	212.8	222.9	250.7	405.7	766.8	1234.8	4030.2	4378.5
80°	181.7	187.3	210.6	297.3	524.7	772.4	3188.8	3513.4
82.5°	145.6	147.9	163.3	222.9	340.8	496.2	2135.6	2437.4
85°	102.8	102.8	112.2	162.1	232.3	314.5	1159.4	1285.9
87.5°	48.4	49.5	49.5	89.0	121.2	159.9	267.2	164.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)