

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: P298943

Luminaire Tested: **GLNA-AF-05-LED-E1-SLL-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298943
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-05-LED-E1-SLL-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21052.8 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

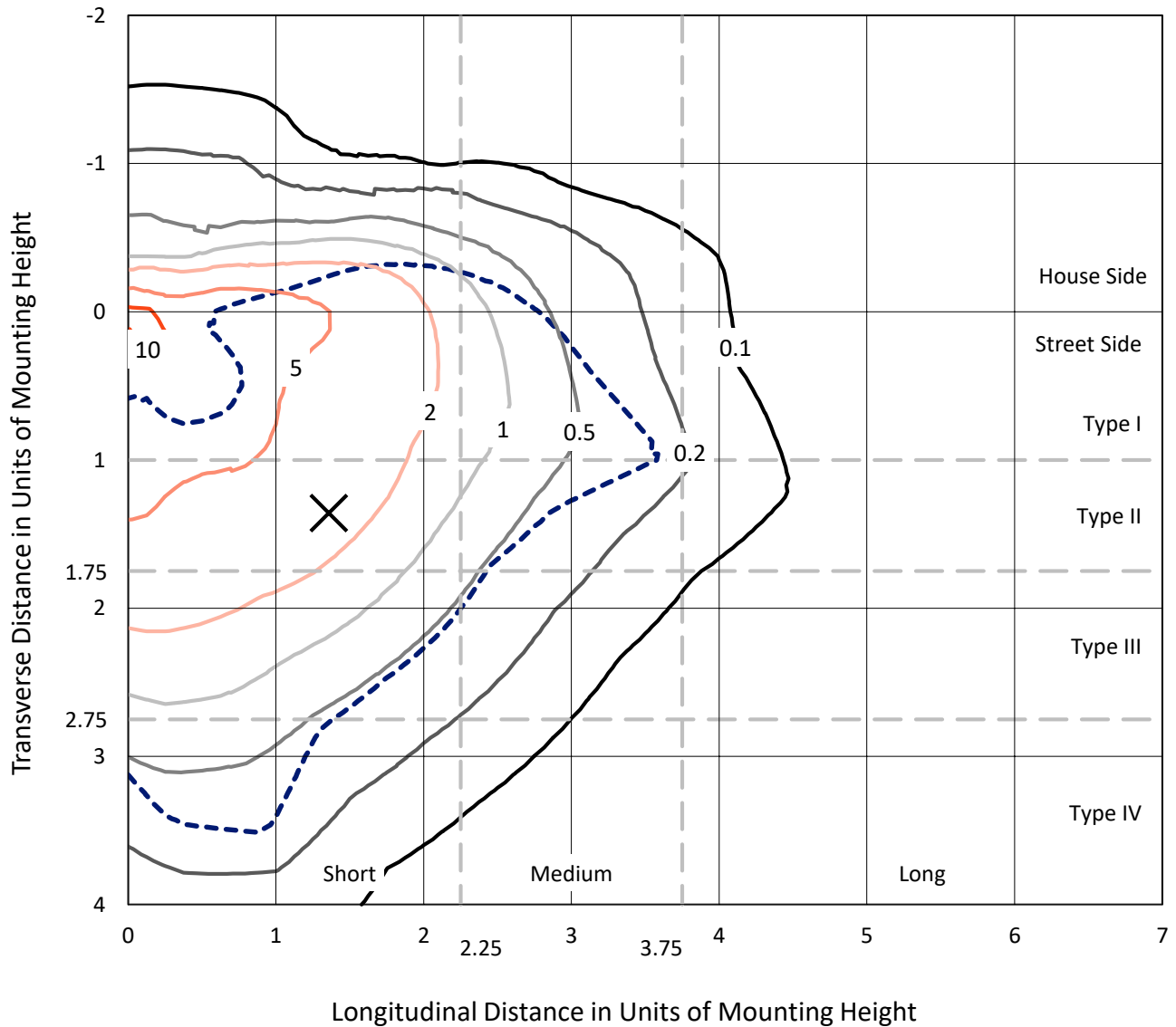
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

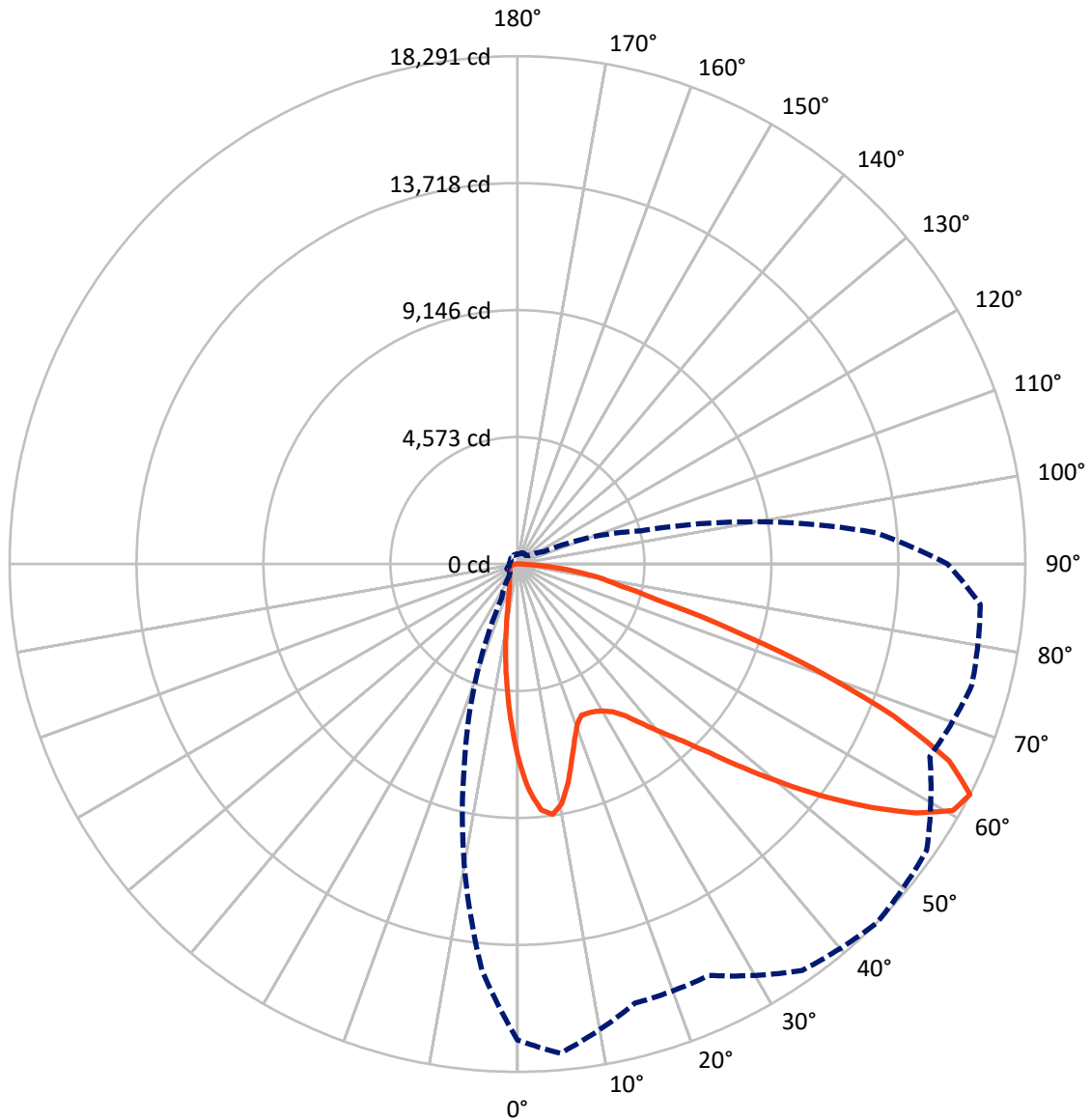
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.4 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	3483.9	0.0	3483.9
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	17568.8	0.0	17568.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	21052.8	0.0	21052.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	517.8	2.5
10°-20°	949.5	4.5
20°-30°	1384.3	6.6
30°-40°	2132.1	10.1
40°-50°	3137.8	14.9
50°-60°	4602.5	21.9
60°-70°	5144.9	24.4
70°-80°	2518.9	12.0
80°-90°	665.0	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°	21052.8	100.0
0°-180°	21052.8	100.0

Coefficient of Utilization



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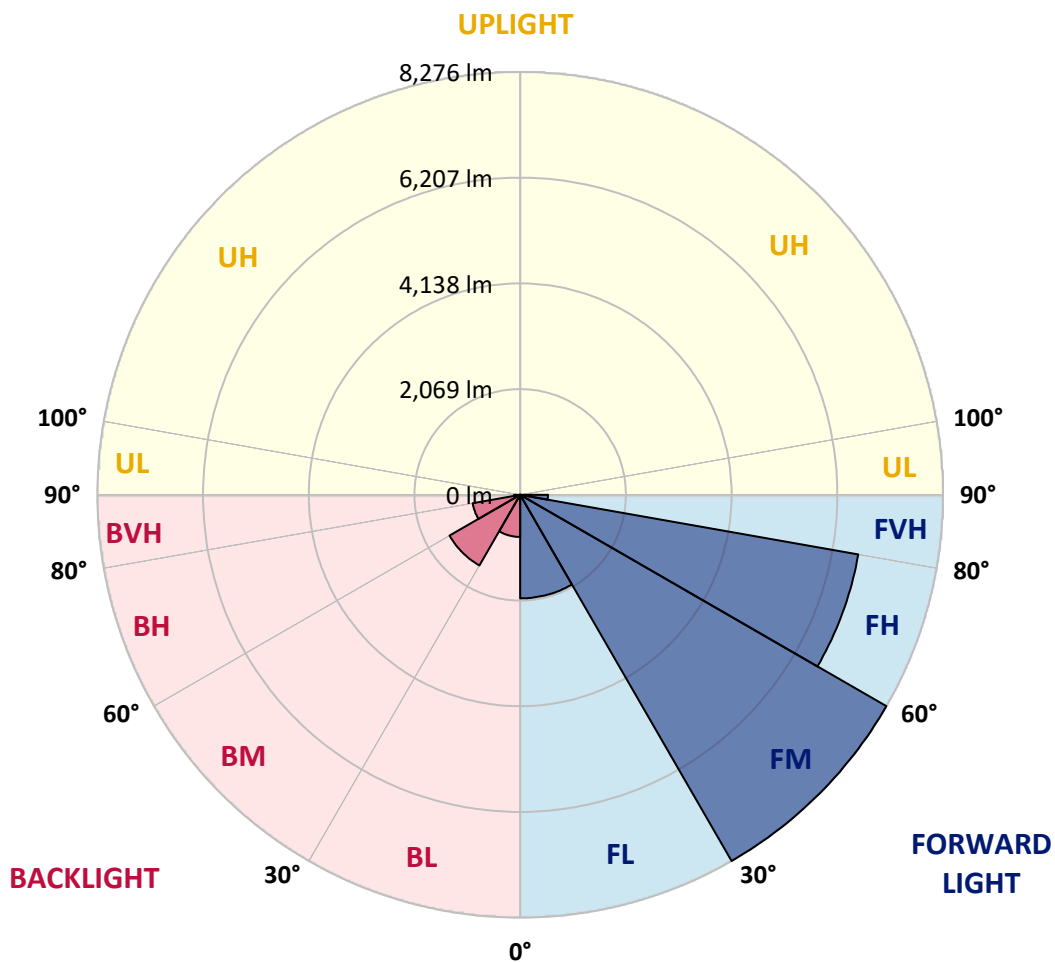
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2027.3	9.6			
FM	(30°-60°)	8276.0	39.3			
FH	(60°-80°)	6719.3	31.9			G3/7500
FVH	(80°-90°)	546.2	2.6			G4/750
BL	(0°-30°)	824.2	3.9	B2/1000		
BM	(30°-60°)	1596.3	7.6	B2/2500		
BH	(60°-80°)	944.5	4.5	B2/1000		G2/1000
BVH	(80°-90°)	118.9	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0
2.5°	7390.3	7508.6	7738.9	7911.0	8121.0	8169.4	8236.7	8170.6	8053.7	7898.6	7847.9
5°	6949.6	7202.0	7760.7	8252.8	8690.2	8893.8	8950.9	8782.6	8443.7	7998.1	7726.1
7.5°	6242.5	6601.3	7357.9	8082.7	8727.0	9107.9	9098.5	8708.6	8084.9	7359.1	6922.9
10°	5632.4	6042.3	6910.5	7720.5	8404.3	8773.6	8630.8	8132.6	7388.0	6552.5	6079.5
12.5°	5291.3	5692.9	6573.5	7386.9	7958.7	8086.0	7977.1	7488.7	6787.3	5942.7	5528.3
15°	5231.9	5673.3	6439.4	7101.3	7421.8	7311.0	7181.0	6962.3	6466.8	5745.8	5314.2
17.5°	5488.1	5973.9	6593.4	6902.2	6847.8	6654.3	6617.5	6641.9	6522.8	5964.5	5467.1
20°	5978.8	6561.9	6960.1	6808.7	6411.6	6145.2	6154.6	6526.2	6878.9	6519.0	5950.6
22.5°	6667.0	7332.8	7488.7	6858.3	6227.5	5911.5	5988.2	6590.0	7447.4	7329.4	6603.6
25°	7558.2	8164.9	8052.6	7038.6	6245.9	5940.5	6001.7	6809.8	8118.4	8139.4	7411.7
27.5°	8421.5	8984.3	8525.6	7278.3	6322.5	6008.8	6090.0	7155.4	8759.7	9018.9	8335.1
30°	9095.2	9486.6	8713.1	7497.0	6472.8	6141.8	6242.5	7484.2	9051.6	9612.5	9045.6
32.5°	9653.1	9934.1	9011.7	7767.8	6749.3	6351.1	6528.4	7883.5	9471.6	10177.5	9741.0
35°	10365.7	10445.8	9383.3	8069.9	7176.5	6715.9	6935.7	8274.6	9872.1	10747.8	10426.2
37.5°	11201.7	11098.7	9733.8	8483.1	7728.8	7286.2	7468.0	8704.1	10201.6	11394.8	11126.1
40°	12027.8	11779.9	10174.1	9124.1	8534.2	7958.7	8174.0	9162.4	10509.6	12042.8	11810.3
42.5°	12730.4	12363.3	10607.7	9828.9	9283.7	8700.7	8957.6	9624.1	10803.4	12595.9	12403.9
45°	13249.9	12793.8	11021.0	10505.9	10317.3	9686.5	9808.2	10152.7	11121.6	13058.0	12892.3
47.5°	13713.9	13226.6	11488.3	11188.9	11221.2	10968.7	10773.0	10768.5	11497.0	13435.2	13354.0
50°	14335.3	13827.4	11990.6	11892.2	12577.5	12409.5	11977.8	11487.2	11971.1	13863.4	13854.1
52.5°	15191.9	14779.0	12604.1	12650.3	13843.9	13953.6	13418.6	12350.9	12713.8	14649.0	14593.8
55°	16204.8	15963.6	13440.0	13521.9	15396.7	15475.5	14943.9	13430.3	13806.7	15787.0	15633.0
57.5°	16994.8	16944.1	14356.4	14568.2	16556.4	16910.7	16422.3	14680.6	15037.9	16745.0	16358.4
60°	17309.7	17556.1	15332.0	15623.6	17629.4	18021.2	17593.3	15778.4	16129.3	17142.1	16308.8
62.5°	17139.9	17690.3	16371.2	16346.8	17868.7	18291.0	17990.1	16389.6	16938.5	16732.2	15483.8
65°	16353.9	17207.9	16974.2	16160.4	17049.3	17083.9	16986.6	16116.5	17129.3	15437.2	13888.6
67.5°	14641.9	15871.2	16180.0	14563.7	14838.7	14613.3	14449.9	14621.2	16133.8	13496.4	11672.4
70°	11926.0	13775.5	13923.2	11648.4	11523.3	11371.5	11046.5	11987.2	14170.0	11061.5	9262.0
72.5°	8769.1	10713.3	11167.9	8543.3	7964.7	7995.5	7738.9	9033.5	11521.0	8216.8	6915.0
75°	5999.4	7757.3	8737.9	5961.1	5267.2	5279.6	5246.9	6401.1	9176.3	5715.8	5174.4
77.5°	4382.8	5542.2	6590.0	4007.5	3890.7	3818.9	3801.6	4478.6	7035.2	4150.3	4018.0
80°	3516.9	4094.7	4426.4	2777.5	2986.8	2981.1	2884.9	3079.6	4594.3	3035.6	3005.2
82.5°	2439.8	3146.8	3586.4	2176.8	2016.0	1982.2	2005.8	2293.6	3247.5	2075.0	1973.1
85°	1287.1	2090.0	3551.8	1929.2	1196.6	954.6	1187.6	1878.1	2813.6	1099.7	962.5
87.5°	164.6	604.1	2351.5	769.8	472.2	254.3	563.9	1057.6	1806.7	224.3	195.7
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°	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0
2.5°	7717.1	7563.1	7361.7	7175.0	6981.9	6789.5	6538.6	6381.1	6272.6	6251.5	6205.7
5°	7529.6	7017.9	6631.4	6297.0	5993.8	5565.1	5328.1	5131.2	5026.0	5015.9	4990.3
7.5°	6664.8	5958.9	5437.0	4963.7	4534.2	4188.2	3806.1	3628.4	3555.2	3572.5	3589.7
10°	5765.4	4976.4	4376.8	3892.9	3514.6	3223.1	2916.5	2709.5	2565.6	2536.7	2531.0
12.5°	5108.3	4242.7	3660.8	3318.9	3026.6	2752.0	2427.0	2182.4	1996.4	1932.6	1890.1
15°	4830.3	3883.9	3274.2	2906.0	2582.9	2234.6	1932.6	1676.7	1505.8	1450.2	1419.0
17.5°	4889.6	3784.4	3007.8	2536.7	2123.8	1760.1	1379.5	1160.5	1057.6	1031.3	1031.3
20°	5200.0	3765.9	2787.6	2196.7	1681.2	1260.1	947.9	822.8	789.3	785.9	795.0
22.5°	5635.0	3830.9	2623.8	1901.8	1306.7	920.1	738.2	692.0	677.0	680.8	690.9
25°	6283.1	4049.6	2504.7	1638.8	1025.3	753.3	658.2	630.8	623.7	633.0	645.8
27.5°	7051.4	4268.2	2430.4	1440.8	865.6	688.6	625.9	597.4	601.9	613.5	624.8
30°	7726.1	4447.8	2313.5	1299.9	816.0	692.0	625.9	586.8	582.3	584.6	588.0
32.5°	8331.7	4569.2	2176.8	1165.4	703.7	614.6	584.6	578.9	553.0	543.6	545.1
35°	8853.6	4569.2	2094.9	1086.9	630.8	545.1	496.7	467.7	454.6	455.7	468.9
37.5°	9357.0	4477.5	2054.3	1042.5	591.3	518.5	475.6	450.1	432.8	429.4	431.7
40°	9801.1	4344.5	2008.1	1024.1	561.3	502.3	462.1	440.7	422.3	416.6	417.8
42.5°	10157.6	4236.7	1957.0	1000.1	542.5	490.7	452.3	433.9	413.3	407.3	406.1
45°	10543.1	4201.0	1890.1	951.3	551.9	491.8	450.1	430.5	409.5	402.7	400.5
47.5°	11051.0	4313.3	1820.6	893.4	571.8	497.8	453.5	430.5	408.4	402.7	400.5
50°	11690.8	4577.1	1732.3	808.9	551.9	513.9	452.3	426.8	408.4	402.7	398.2
52.5°	12512.8	4933.6	1617.0	711.9	540.2	553.0	450.1	420.0	402.7	394.9	386.6
55°	13511.4	5225.1	1478.7	631.9	513.9	542.5	446.7	412.1	393.7	382.1	374.9
57.5°	14242.9	5330.3	1302.2	580.1	476.8	525.2	441.8	401.6	382.1	372.7	363.7
60°	14098.3	5126.7	1152.6	547.4	454.6	474.5	438.4	392.2	371.6	364.8	356.2
62.5°	12940.0	4594.3	1056.4	532.4	440.7	432.8	441.8	383.2	362.5	355.0	352.8
65°	11202.8	3808.4	1018.5	529.0	429.4	408.4	411.0	372.7	351.6	346.0	343.8
67.5°	9240.9	3073.9	985.1	540.2	414.4	391.1	379.8	358.8	341.1	335.5	331.0
70°	7287.3	2556.6	969.7	533.5	396.0	373.8	361.4	343.8	328.7	322.7	319.3
72.5°	5868.3	2159.5	961.4	526.3	371.6	350.5	338.9	323.8	307.7	305.4	302.1
75°	4966.3	1697.8	881.0	504.6	343.8	322.7	314.8	300.9	284.8	284.8	282.5
77.5°	3830.9	1227.8	732.6	446.7	314.8	291.5	284.8	274.3	255.8	259.2	258.1
80°	2829.7	801.0	572.9	370.4	279.1	257.0	253.2	243.1	223.2	228.0	228.0
82.5°	1938.6	525.2	412.1	303.2	238.2	217.5	217.5	207.0	185.2	187.5	194.6
85°	973.4	361.4	307.7	234.8	185.2	174.7	174.7	166.8	144.6	145.8	155.2
87.5°	296.4	217.5	203.6	167.9	133.0	130.7	124.7	119.1	105.2	104.1	110.1
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0
2.5°	6134.7	6068.6	5989.3	5813.1	5754.1	5750.4	5804.1	5748.1	5854.8	5809.7	5859.3
5°	4947.1	4882.9	4793.5	4569.2	4432.4	4339.6	4296.0	4166.4	4260.0	4191.6	4248.7
7.5°	3638.6	3653.6	3594.6	3462.8	3165.2	3016.1	2928.2	2849.3	2917.6	2910.5	3019.4
10°	2557.7	2597.9	2556.6	2423.6	2182.4	2100.5	2116.7	2147.8	2237.3	2283.1	2451.0
12.5°	1841.3	1839.0	1812.3	1693.2	1534.7	1543.7	1609.8	1663.9	1746.2	1795.1	1966.0
15°	1374.7	1354.0	1342.4	1245.0	1154.9	1174.8	1207.1	1212.7	1265.0	1293.9	1432.9
17.5°	1039.2	1049.7	1062.1	993.0	924.6	911.8	886.6	855.1	870.5	876.1	945.2
20°	825.0	866.7	898.3	849.4	780.3	742.7	710.4	689.8	689.8	688.6	708.2
22.5°	721.0	751.0	784.8	751.0	688.6	656.0	637.6	621.4	619.1	619.1	637.6
25°	664.6	686.4	718.7	695.8	649.2	624.8	607.5	586.8	578.9	576.3	589.1
27.5°	636.4	645.8	662.0	640.9	601.9	590.2	585.7	567.3	556.4	550.8	563.9
30°	589.1	586.8	588.0	567.3	535.7	534.6	542.5	546.3	542.5	541.4	561.3
32.5°	545.1	540.2	539.1	520.7	491.8	485.0	491.8	498.9	506.8	518.5	541.4
35°	489.5	501.2	507.9	491.8	456.8	436.2	428.3	415.5	408.4	408.4	435.1
37.5°	445.6	472.2	482.8	467.7	429.4	400.5	386.6	384.3	385.5	390.0	415.5
40°	430.5	450.1	459.1	444.4	406.1	379.8	371.6	369.3	371.6	378.7	403.9
42.5°	421.2	435.1	433.9	415.5	384.3	365.9	361.4	358.8	361.4	368.2	396.0
45°	413.3	422.3	413.3	391.1	362.5	352.8	353.9	352.8	355.0	362.5	388.8
47.5°	406.1	409.5	398.2	376.1	346.0	343.8	348.3	351.6	353.9	360.3	387.7
50°	396.0	396.0	385.5	362.5	332.1	333.2	338.9	347.1	348.3	355.0	377.6
52.5°	383.2	382.1	374.9	352.8	320.5	323.8	323.8	333.2	335.5	343.8	367.1
55°	372.7	370.4	367.1	346.0	310.3	316.0	312.6	316.0	321.6	329.9	355.0
57.5°	363.7	358.8	358.8	340.0	302.1	304.3	296.4	300.9	307.7	314.8	341.1
60°	353.9	349.4	351.6	332.1	289.3	287.0	283.6	292.7	295.3	303.2	329.9
62.5°	343.8	340.0	341.1	322.7	280.3	274.3	274.3	282.5	283.6	295.3	320.5
65°	335.5	331.0	329.9	313.7	269.7	263.0	266.4	269.7	272.0	283.6	307.7
67.5°	327.6	318.2	318.2	305.4	258.1	251.0	258.1	257.0	260.7	270.9	290.4
70°	317.1	304.3	305.4	299.8	246.5	238.2	244.2	243.1	245.3	252.1	272.0
72.5°	300.9	290.4	292.7	290.4	234.8	223.2	225.4	225.4	225.4	231.4	252.1
75°	280.3	272.0	279.1	284.8	220.9	204.8	207.0	207.0	203.6	207.0	232.6
77.5°	254.3	249.8	273.1	265.2	204.8	185.2	185.2	183.0	176.2	180.7	208.1
80°	226.9	223.2	252.1	222.0	186.3	161.2	158.5	152.5	145.8	149.2	177.3
82.5°	198.0	194.6	211.9	170.2	161.2	133.0	127.4	116.8	110.1	113.5	138.6
85°	162.3	162.3	163.4	128.5	122.5	101.8	95.1	81.1	72.9	75.1	99.6
87.5°	115.7	119.1	110.1	87.9	72.9	56.7	52.2	44.0	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



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CATALOG NUMBER: GLNA-AF-05-LED-E1-SLL-7050-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0	7113.0
2.5°	6114.0	6241.4	6386.0	6570.9	6729.8	6989.8	7240.0	7390.3
5°	4571.4	4783.3	5046.7	5386.3	5702.3	6176.4	6647.5	6949.6
7.5°	3271.5	3498.5	3783.2	4206.6	4653.7	5258.6	5881.5	6242.5
10°	2707.2	2939.8	3179.1	3465.0	3830.9	4489.2	5225.1	5632.4
12.5°	2239.5	2488.2	2746.3	3047.2	3386.1	3974.1	4822.4	5291.3
15°	1713.9	1991.5	2295.9	2676.8	3101.3	3781.0	4722.8	5231.9
17.5°	1174.8	1485.1	1858.6	2328.5	2848.1	3718.2	4901.3	5488.1
20°	808.9	1034.7	1434.0	1984.8	2609.9	3710.3	5243.5	5978.8
22.5°	677.0	777.7	1069.2	1668.8	2430.4	3809.9	5775.2	6667.0
25°	625.9	686.4	854.0	1394.6	2299.6	4039.1	6506.6	7558.2
27.5°	596.2	650.3	775.4	1215.4	2196.7	4305.1	7218.2	8421.5
30°	607.5	663.1	753.3	1123.7	2056.5	4527.1	7850.1	9095.2
32.5°	547.4	571.8	645.8	1042.5	1955.9	4713.4	8403.1	9653.1
35°	466.6	509.1	576.3	1004.6	1958.1	4838.6	9006.1	10365.7
37.5°	444.4	487.3	535.7	990.7	1984.8	4971.9	9698.1	11201.7
40°	430.5	470.0	511.7	982.8	2010.3	5093.3	10376.6	12027.8
42.5°	421.2	456.8	509.1	954.6	2023.1	5202.2	10934.2	12730.4
45°	420.0	456.8	518.5	926.8	2042.6	5319.1	11401.9	13249.9
47.5°	421.2	472.2	501.2	893.4	2042.6	5514.4	11950.4	13713.9
50°	416.6	497.8	482.8	846.1	1995.3	5884.9	12702.6	14335.3
52.5°	414.4	494.4	446.7	773.2	1913.0	6472.8	13666.6	15191.9
55°	408.4	476.8	421.2	664.6	1817.2	7114.1	14699.0	16204.8
57.5°	402.7	422.3	407.3	569.6	1668.8	7565.3	15409.4	16994.8
60°	451.2	369.3	396.0	523.0	1470.8	7688.9	15382.0	17309.7
62.5°	417.8	346.0	381.0	512.8	1332.2	7341.8	14671.2	17139.9
65°	327.6	331.0	365.9	542.5	1295.0	6422.1	13411.9	16353.9
67.5°	299.8	316.0	350.5	581.2	1298.8	5141.7	11530.4	14641.9
70°	282.5	299.8	333.2	600.7	1307.8	3833.2	9115.8	11926.0
72.5°	263.0	278.0	313.7	604.1	1247.3	2784.3	7026.2	8769.1
75°	239.3	253.2	285.9	526.3	1033.5	1931.4	5374.7	5999.4
77.5°	213.0	223.2	251.0	406.1	767.5	1236.0	4034.2	4382.8
80°	181.8	187.5	210.8	297.5	525.2	773.2	3191.9	3516.9
82.5°	145.8	148.0	163.4	223.2	341.1	496.7	2137.7	2439.8
85°	102.9	102.9	112.3	162.3	232.6	314.8	1160.5	1287.1
87.5°	48.5	49.6	49.6	89.0	121.3	160.0	267.5	164.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)