

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: P299362

Luminaire Tested: **GLNA-AF-05-LED-E1-SLR**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299362
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194679)
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-SLR
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Right OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26059.3 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 279
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

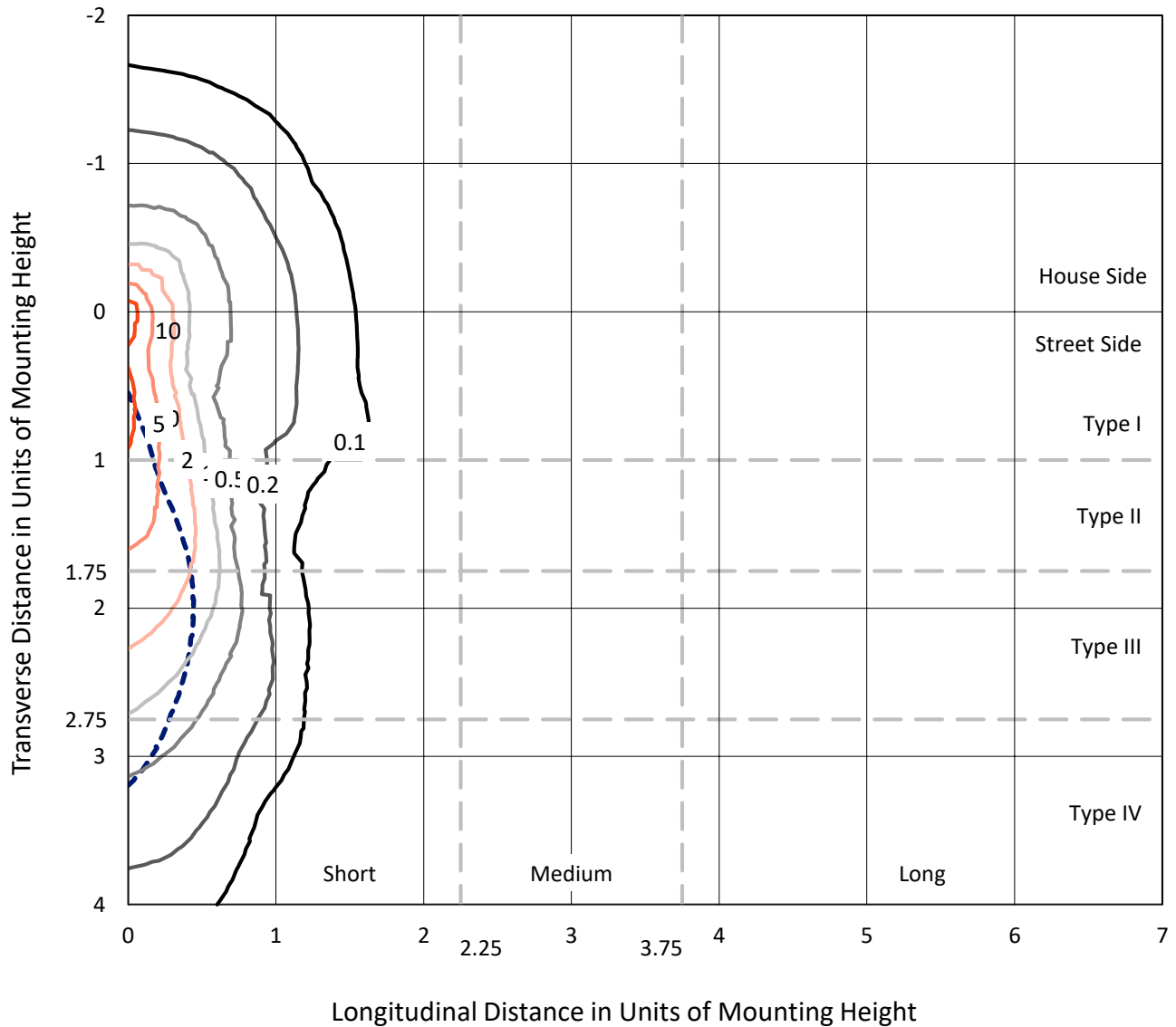


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

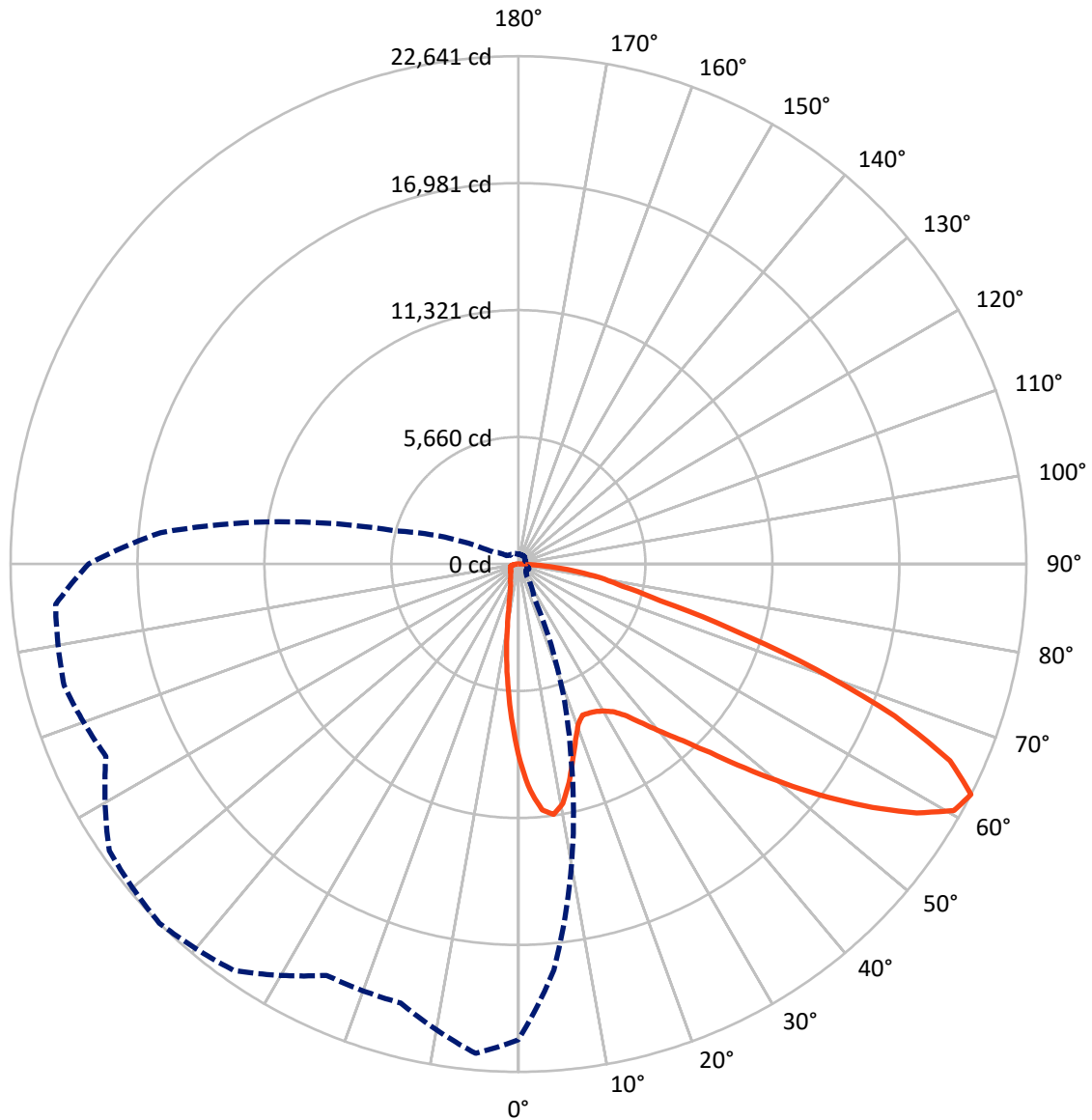


Based on 25 foot mounting height. Maximum calculated value = 14.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4312.5	0.0	4312.5
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	21746.8	0.0	21746.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	26059.3	0.0	26059.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	640.9	2.5
10°-20°	1175.3	4.5
20°-30°	1713.5	6.6
30°-40°	2639.1	10.1
40°-50°	3884.0	14.9
50°-60°	5697.0	21.9
60°-70°	6368.4	24.4
70°-80°	3117.9	12.0
80°-90°	823.2	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°	26059.3	100.0
0°-180°	26059.3	100.0



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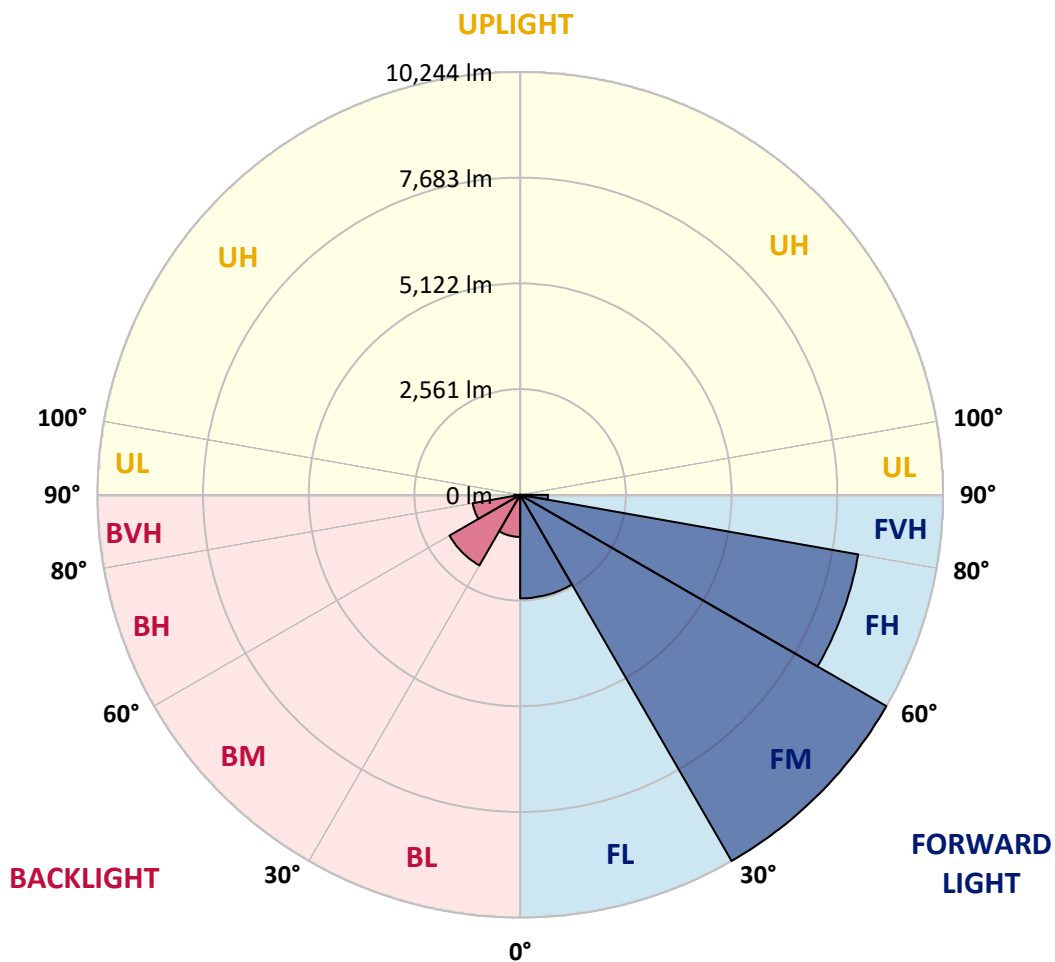
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2509.4	9.6			
FM (30°-60°)	10244.1	39.3			
FH (60°-80°)	8317.2	31.9			G4/12000
FVH (80°-90°)	676.0	2.6			G4/750
BL (0°-30°)	1020.3	3.9	B3/2500		
BM (30°-60°)	1975.9	7.6	B2/2500		
BH (60°-80°)	1169.1	4.5	B3/2500		G3/2500
BVH (80°-90°)	147.2	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4
2.5°	9147.8	8961.8	8652.2	8329.9	8133.9	7904.5	7725.4	7568.0	7252.7	7191.1	7247.1
5°	8602.3	8228.5	7645.2	7058.0	6666.8	6247.0	5920.5	5658.5	5258.7	5188.4	5273.0
7.5°	7727.1	7280.0	6509.4	5760.0	5207.1	4682.8	4330.6	4049.6	3737.4	3602.9	3611.2
10°	6972.1	6467.8	5556.6	4741.8	4289.0	3935.1	3638.5	3350.5	3034.0	2826.2	2769.0
12.5°	6549.3	5969.5	4919.1	4191.4	3771.6	3399.5	3079.9	2772.0	2433.8	2221.7	2161.8
15°	6476.4	5845.9	4680.2	3839.3	3313.2	2842.3	2465.4	2121.5	1773.3	1601.5	1565.5
17.5°	6793.0	6066.6	4602.5	3525.3	2882.2	2300.6	1837.9	1454.1	1170.5	1084.6	1077.2
20°	7400.1	6490.7	4592.6	3230.4	2456.7	1775.0	1280.6	1001.3	876.9	852.2	853.9
22.5°	8252.7	7148.2	4715.7	3008.4	2065.6	1323.6	962.7	837.9	789.3	766.3	766.3
25°	9355.6	8053.7	4999.4	2846.6	1726.0	1057.3	849.6	775.0	729.0	713.4	716.4
27.5°	10424.6	8934.5	5328.9	2719.1	1504.0	959.7	804.9	737.7	697.8	681.7	689.1
30°	11258.1	9716.8	5603.9	2545.6	1390.8	932.4	820.9	752.0	694.7	670.5	671.8
32.5°	11948.5	10401.6	5834.6	2420.7	1290.6	799.3	707.7	677.4	670.5	641.8	627.5
35°	12831.0	11147.9	5989.4	2423.8	1243.3	713.4	630.1	577.2	538.6	505.7	505.7
37.5°	13865.3	12004.4	6154.2	2456.7	1226.4	663.1	603.2	549.9	514.3	482.7	477.0
40°	14887.9	12844.0	6304.7	2488.4	1216.0	633.2	581.6	533.0	500.0	468.4	459.7
42.5°	15757.8	13534.4	6439.1	2504.0	1181.8	630.1	565.9	521.3	490.0	455.4	447.1
45°	16401.0	14112.9	6584.0	2528.3	1147.5	641.8	565.9	520.0	481.4	448.4	439.7
47.5°	16975.2	14792.1	6826.0	2528.3	1105.9	620.1	584.6	521.3	480.1	445.4	438.4
50°	17744.5	15723.2	7284.4	2469.8	1047.3	597.2	615.8	515.6	467.1	439.7	431.1
52.5°	18804.4	16916.6	8012.1	2367.8	957.1	552.9	611.5	513.0	454.1	425.4	415.5
55°	20058.1	18194.2	8805.7	2249.0	822.2	521.3	590.2	505.7	439.7	408.1	398.1
57.5°	21036.5	19073.7	9364.2	2065.6	704.7	504.4	523.0	498.7	422.4	389.4	381.2
60°	21425.9	19039.4	9517.8	1820.5	647.5	490.0	457.1	558.6	408.1	375.1	365.2
62.5°	21215.6	18159.9	9088.0	1648.8	634.5	471.4	428.5	516.9	396.8	365.2	350.8
65°	20242.9	16601.3	7949.2	1602.8	671.8	452.8	409.8	405.5	381.2	350.8	336.5
67.5°	18123.9	14272.1	6364.5	1607.2	719.0	434.1	391.2	371.2	359.5	335.2	322.2
70°	14762.1	11284.1	4744.4	1618.9	743.3	412.4	371.2	349.5	336.5	312.2	303.6
72.5°	10854.3	8696.8	3446.8	1544.3	747.6	388.1	343.9	325.3	312.2	286.7	279.3
75°	7426.2	6652.5	2390.8	1279.3	651.8	353.9	313.5	296.6	288.0	256.3	252.0
77.5°	5424.8	4993.7	1530.0	949.7	502.6	310.9	276.7	263.7	258.0	223.3	217.7
80°	4353.6	3950.7	957.1	650.5	368.2	260.6	232.0	225.1	219.0	184.7	180.4
82.5°	3019.6	2645.8	614.5	422.4	276.7	202.1	183.4	180.4	171.7	140.5	136.2
85°	1592.9	1436.7	389.4	288.0	200.4	138.8	127.5	127.5	123.2	93.2	90.2
87.5°	203.4	330.9	197.8	150.5	110.2	61.6	61.6	60.3	64.6	52.9	46.0
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°	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4
2.5°	7115.2	7184.2	7118.3	7122.6	7195.5	7413.2	7512.0	7593.6	7681.2	7738.4	7764.0
5°	5157.2	5317.7	5371.9	5486.4	5655.5	5933.5	6043.6	6123.9	6177.2	6208.4	6221.4
7.5°	3527.0	3624.2	3733.0	3917.8	4286.0	4449.5	4522.3	4503.7	4443.8	4422.1	4400.9
10°	2658.8	2620.2	2599.9	2701.8	2999.7	3164.5	3216.1	3165.8	3132.8	3140.2	3175.8
12.5°	2059.9	1992.7	1911.2	1899.5	2095.9	2243.4	2276.3	2278.9	2339.2	2392.1	2471.1
15°	1501.4	1494.0	1454.1	1429.8	1541.3	1661.8	1676.1	1701.7	1756.4	1795.0	1863.5
17.5°	1058.6	1097.2	1128.8	1144.5	1229.0	1314.9	1299.3	1286.3	1276.3	1276.3	1309.3
20°	853.9	879.5	919.8	965.4	1051.7	1111.5	1072.9	1021.3	984.0	972.7	977.1
22.5°	769.3	789.3	812.3	852.2	929.8	971.4	929.8	892.5	855.2	842.2	837.9
25°	726.4	752.0	773.7	803.6	860.8	889.5	849.6	822.2	799.3	783.6	771.9
27.5°	702.1	724.7	730.7	745.0	793.6	819.2	799.3	788.0	773.7	759.4	745.0
30°	676.1	671.8	661.8	663.1	702.1	727.7	726.4	729.0	727.7	723.4	720.8
32.5°	617.5	608.9	600.2	608.9	644.4	667.4	669.2	674.8	674.8	673.5	684.8
35°	514.3	529.9	539.9	565.9	608.9	628.8	620.1	605.8	580.3	564.2	562.9
37.5°	475.7	478.3	495.7	531.2	578.9	597.2	584.6	551.6	534.3	531.2	535.6
40°	457.1	459.7	469.7	502.6	549.9	568.5	557.3	533.0	516.9	515.6	523.0
42.5°	444.1	447.1	452.8	475.7	514.3	537.3	538.6	521.3	502.6	504.4	511.3
45°	436.7	438.4	436.7	448.4	484.0	511.3	523.0	511.3	495.7	498.7	507.0
47.5°	435.4	431.1	425.4	428.5	465.8	492.6	507.0	502.6	495.7	498.7	505.7
50°	429.8	419.8	412.4	411.1	448.4	477.0	490.0	490.0	492.6	498.7	505.7
52.5°	412.4	401.1	401.1	396.8	436.7	464.0	472.7	474.0	478.3	488.3	498.7
55°	391.2	386.8	391.2	383.8	428.5	454.1	458.4	461.4	464.0	472.7	487.0
57.5°	372.5	366.9	376.9	373.8	421.1	444.1	444.1	449.7	449.7	461.4	472.7
60°	362.5	350.8	355.2	358.2	411.1	435.4	432.8	438.4	441.0	451.5	459.7
62.5°	349.5	339.6	339.6	346.5	399.8	422.4	421.1	425.4	436.7	439.7	448.4
65°	333.9	329.6	325.3	333.9	388.1	408.1	409.8	415.5	425.4	428.5	435.4
67.5°	317.9	319.6	310.9	319.6	378.2	393.8	393.8	405.5	409.8	415.5	422.4
70°	301.0	302.3	294.9	305.3	371.2	378.2	376.9	392.5	395.5	399.8	406.8
72.5°	279.3	279.3	276.7	291.0	359.5	362.5	359.5	372.5	373.8	378.2	381.2
75°	256.3	256.3	253.7	273.6	352.6	345.2	336.5	346.5	349.5	352.6	352.6
77.5°	226.4	229.4	229.4	253.7	327.9	338.3	309.2	315.3	319.6	320.9	316.6
80°	189.1	196.5	199.1	230.7	274.9	312.2	276.7	280.6	282.3	282.3	276.7
82.5°	144.8	157.4	164.8	199.1	210.8	261.9	240.7	245.0	240.7	232.0	229.4
85°	100.2	117.5	126.2	151.8	159.2	202.1	200.4	200.4	192.1	180.4	179.1
87.5°	54.6	64.6	70.3	90.2	108.9	136.2	147.4	143.1	136.2	128.8	130.5
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°	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4
2.5°	7898.9	8093.6	8404.5	8642.2	8881.6	9112.3	9361.6	9552.0	9713.8	9777.1	9968.8
5°	6352.0	6595.3	6888.9	7418.8	7794.4	8208.1	8686.8	9320.0	9563.3	9900.3	10451.5
7.5°	4491.1	4711.4	5184.1	5612.6	6144.2	6730.1	7375.9	8249.7	8569.3	9109.2	10007.4
10°	3353.6	3609.9	3989.3	4350.6	4818.9	5417.8	6159.9	7136.9	7525.0	8110.9	9145.2
12.5°	2701.8	3004.0	3406.5	3746.0	4108.6	4531.0	5251.7	6322.9	6843.3	7355.9	8401.5
15°	2075.5	2392.1	2766.4	3197.5	3596.9	4052.6	4807.7	5979.4	6577.9	7112.6	8004.7
17.5°	1436.7	1707.4	2178.8	2628.5	3140.2	3723.1	4684.5	6052.3	6767.0	7383.2	8073.6
20°	1018.7	1173.1	1559.9	2081.6	2719.1	3450.7	4661.5	6436.1	7365.9	8069.3	8514.7
22.5°	856.5	913.7	1138.8	1617.2	2353.5	3247.3	4741.8	6974.7	8173.8	9071.9	9218.1
25°	780.6	815.3	932.4	1269.4	2028.3	3099.9	5012.4	7777.0	9173.9	10075.0	10049.0
27.5°	739.0	775.0	852.2	1071.6	1783.7	3008.4	5283.0	8728.5	10317.0	11163.5	10842.6
30°	726.4	775.0	856.5	1010.0	1608.9	2863.5	5505.0	9563.3	11196.5	11898.6	11203.9
32.5°	716.4	723.4	760.7	870.8	1442.4	2694.4	5655.5	10312.7	12057.3	12597.7	11723.8
35°	578.9	614.5	674.8	780.6	1345.2	2592.9	5655.5	10958.8	12905.6	13303.7	12219.5
37.5°	557.3	588.9	641.8	732.0	1290.6	2542.6	5542.3	11582.0	13772.1	14104.7	12627.6
40°	546.0	571.6	621.9	694.7	1267.6	2485.4	5377.5	12131.9	14618.6	14906.5	13008.8
42.5°	537.3	560.3	607.6	671.8	1237.7	2422.5	5244.4	12573.0	15353.7	15591.3	13372.7
45°	533.0	557.3	608.9	683.5	1177.4	2339.2	5200.1	13050.0	15958.2	16162.9	13766.4
47.5°	533.0	561.6	615.8	707.7	1105.9	2253.4	5338.9	13679.3	16529.8	16630.0	14230.5
50°	528.6	560.3	636.2	683.5	1001.3	2144.5	5665.5	14471.1	17148.6	17159.9	14818.1
52.5°	520.0	557.3	684.8	669.2	880.8	2001.4	6106.9	15488.5	18064.1	18132.6	15737.5
55°	510.0	552.9	671.8	636.2	782.3	1831.0	6467.8	16724.5	19350.4	19540.7	17090.1
57.5°	497.0	547.3	650.5	590.2	717.7	1611.5	6598.3	17630.0	20248.5	20726.8	18614.0
60°	485.7	543.0	587.2	562.9	677.4	1426.8	6345.9	17450.9	20186.9	21218.2	19964.9
62.5°	474.0	547.3	535.6	546.0	658.7	1307.9	5687.2	16016.7	19165.6	20711.2	20966.2
65°	461.4	508.7	505.7	531.2	654.8	1260.7	4714.4	13866.6	17191.6	19108.4	21202.6
67.5°	444.1	469.7	484.0	513.0	669.2	1219.0	3804.6	11438.5	14448.2	16705.8	19970.5
70°	425.4	447.1	462.7	490.0	660.5	1200.4	3164.5	9020.3	11464.5	13691.8	17539.8
72.5°	401.1	419.8	434.1	459.7	651.8	1190.4	2673.1	7264.4	8559.4	10170.9	14260.8
75°	372.5	389.4	399.8	425.4	624.5	1090.2	2101.6	6146.8	6404.9	7075.3	11358.3
77.5°	339.6	352.6	360.8	389.4	552.9	906.8	1520.0	4741.8	4973.8	5136.8	8708.1
80°	301.0	313.5	317.9	345.2	458.4	709.1	991.4	3502.3	3720.0	3757.3	5687.2
82.5°	256.3	269.3	269.3	294.9	375.1	510.0	650.5	2399.5	2442.4	2568.6	4019.7
85°	206.4	216.4	216.4	229.4	291.0	381.2	447.1	1204.7	1191.7	1360.9	3482.4
87.5°	147.4	154.8	161.8	164.8	207.7	252.0	269.3	366.9	242.0	278.0	2236.0
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-SLR

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4	8804.4
2.5°	10113.6	10195.2	10111.9	10052.0	9792.7	9579.3	9294.0	9147.8
5°	10871.2	11079.0	11008.7	10756.8	10215.1	9606.2	8914.5	8602.3
7.5°	10779.7	11262.4	11273.7	10802.7	10004.8	9107.9	8171.2	7727.1
10°	10066.4	10683.5	10860.0	10402.9	9556.4	8553.7	7479.1	6972.1
12.5°	9269.7	9874.2	10009.1	9851.3	9143.9	8136.5	7046.7	6549.3
15°	8617.9	8888.9	9049.0	9186.9	8790.1	7970.4	7022.0	6476.4
17.5°	8221.1	8191.2	8237.1	8476.1	8543.3	8160.8	7394.5	6793.0
20°	8078.0	7618.3	7606.6	7936.2	8427.5	8615.3	8122.2	7400.1
22.5°	8156.9	7411.9	7317.3	7708.5	8489.1	9269.7	9076.3	8252.7
25°	8428.8	7429.2	7352.9	7731.5	8712.4	9967.5	10106.3	9355.6
27.5°	8857.3	7538.1	7437.4	7826.0	9009.1	10553.4	11120.6	10424.6
30°	9264.1	7727.1	7602.2	8012.1	9279.7	10785.4	11742.5	11258.1
32.5°	9758.4	8081.0	7861.6	8354.2	9614.9	11154.9	12296.7	11948.5
35°	10242.4	8584.9	8313.0	8882.9	9988.7	11615.0	12929.9	12831.0
37.5°	10774.1	9244.1	9019.0	9566.3	10500.5	12048.7	13737.8	13865.3
40°	11341.3	10118.0	9851.3	10563.3	11294.1	12593.4	14581.7	14887.9
42.5°	11912.9	11087.6	10769.8	11491.4	12166.2	13130.2	15303.4	15757.8
45°	12567.3	12140.6	11990.1	12770.7	13004.5	13642.0	15836.3	16401.0
47.5°	13329.7	13335.4	13577.3	13889.6	13849.7	14220.5	16372.4	16975.2
50°	14219.2	14826.3	15361.0	15568.3	14720.5	14842.4	17115.7	17744.5
52.5°	15287.7	16610.0	17271.8	17135.6	15659.0	15601.3	18293.1	18804.4
55°	16624.3	18498.2	19155.7	19058.1	16737.5	16635.6	19760.2	20058.1
57.5°	18171.2	20327.4	20932.0	20493.5	18032.4	17770.5	20973.6	21036.5
60°	19530.8	21777.2	22307.1	21821.4	19339.1	18977.8	21731.2	21425.9
62.5°	20287.1	22268.5	22641.1	22118.1	20234.2	20264.1	21897.3	21215.6
65°	19949.3	21026.5	21146.6	21103.7	20003.5	21010.5	21300.2	20242.9
67.5°	18098.4	17886.3	18088.4	18367.7	18026.8	20027.8	19645.3	18123.9
70°	14838.0	13673.2	14076.1	14263.4	14418.2	17234.5	17051.0	14762.1
72.5°	11182.2	9579.3	9897.2	9858.6	10574.6	13823.7	13260.8	10854.3
75°	7923.2	6495.1	6535.0	6519.4	7378.9	10815.3	9602.3	7426.2
77.5°	5543.6	4705.8	4727.4	4815.9	4960.8	8156.9	6860.2	5424.8
80°	3812.0	3571.3	3690.1	3697.5	3438.1	5479.4	5068.3	4353.6
82.5°	2839.2	2482.3	2453.7	2495.3	2694.4	4439.5	3894.8	3019.6
85°	2324.9	1469.7	1181.8	1481.4	2387.8	4396.5	2587.3	1592.9
87.5°	1309.3	697.8	315.3	584.6	952.8	2910.8	747.6	203.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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