

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: P301609

Luminaire Tested: **GLNA-AF-09-LED-E1-T2R-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301609
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-09-LED-E1-T2R-7030
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53433.9 lumens
Efficiency: N/A
Efficacy: 106.7 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 - G5

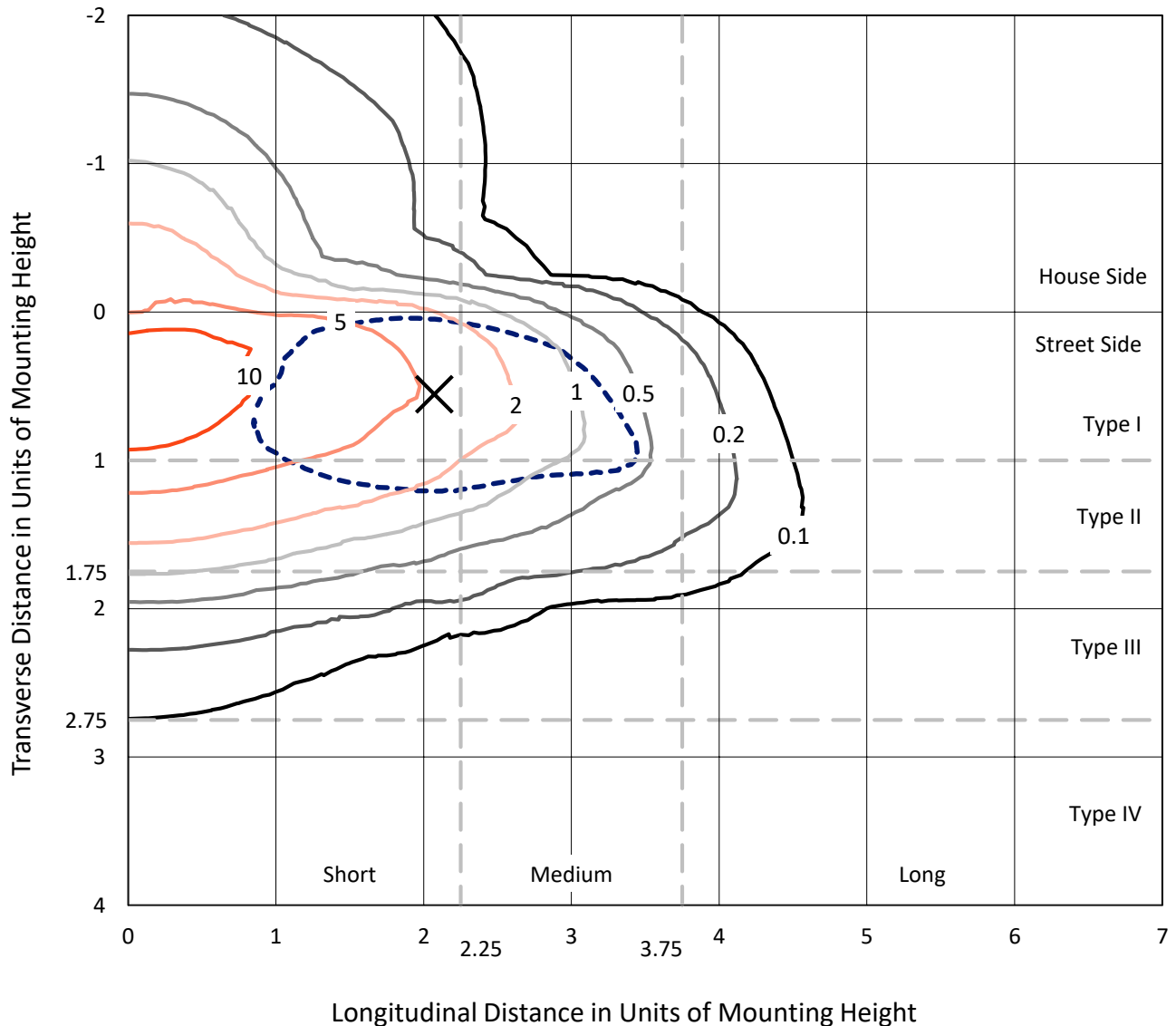
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

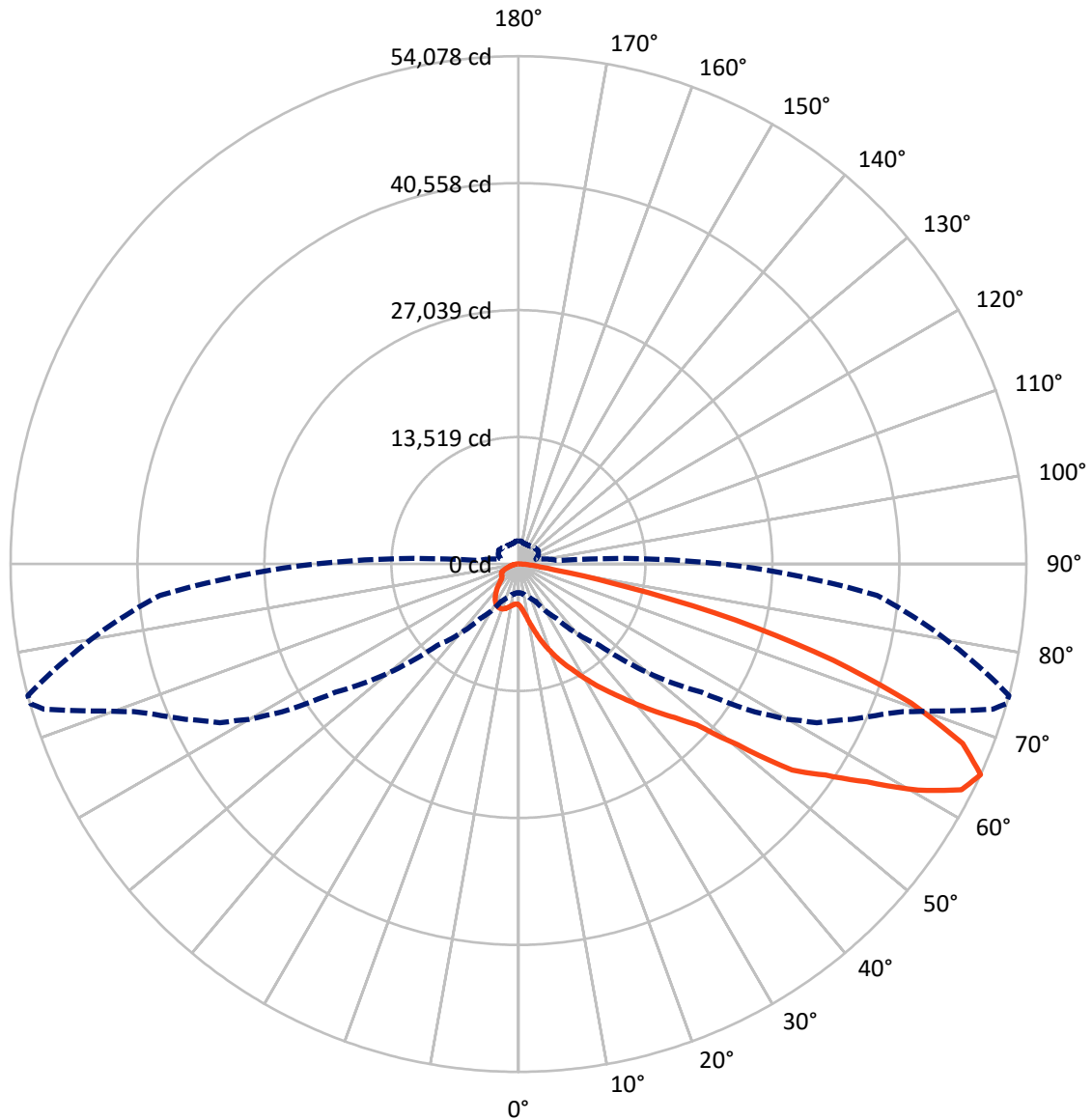
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8238.3	0.0	8238.3
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	45195.7	0.0	45195.7
	% Fixture	84.6	0.0	84.6
Total	Lumens	53433.9	0.0	53433.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	536.8	1.0
10°-20°	2097.2	3.9
20°-30°	4302.8	8.1
30°-40°	7239.2	13.5
40°-50°	10002.6	18.7
50°-60°	12486.2	23.4
60°-70°	11236.2	21.0
70°-80°	4710.1	8.8
80°-90°	822.9	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°	53433.9	100.0
0°-180°	53433.9	100.0



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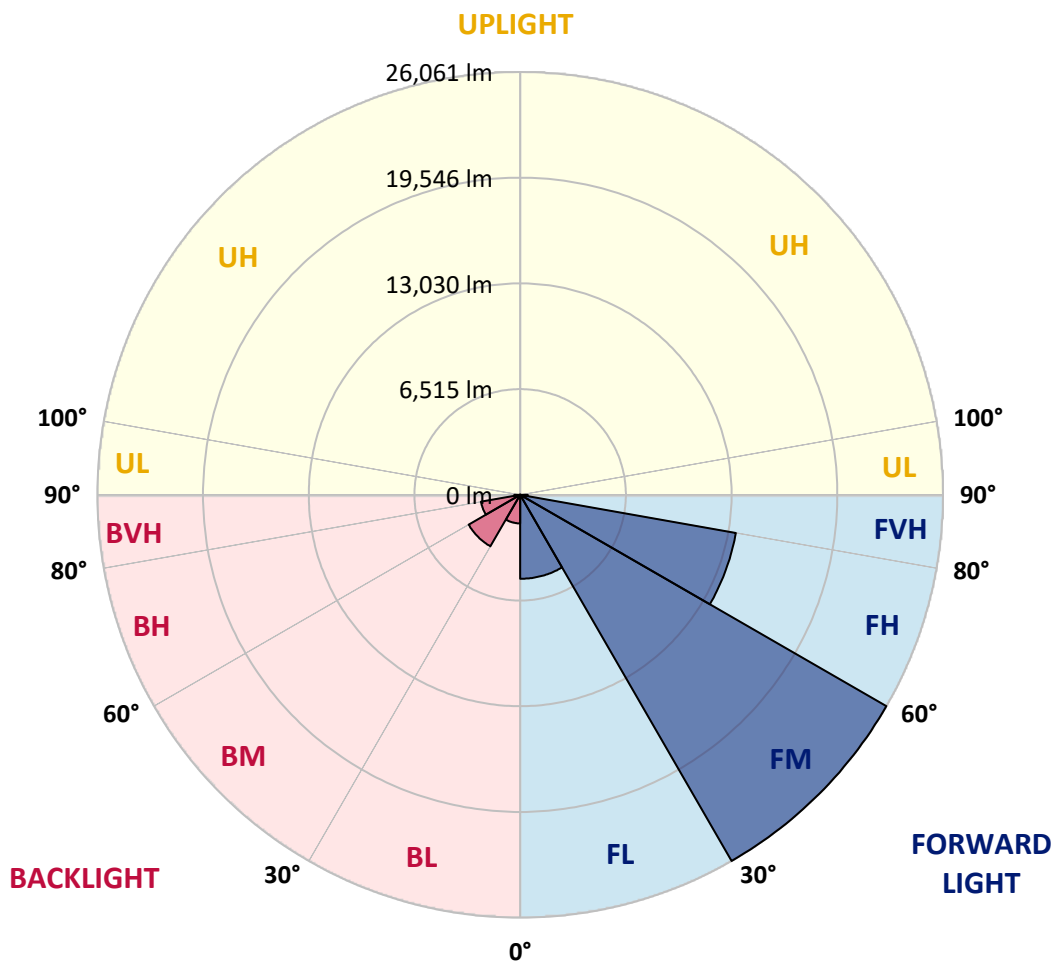
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5174.9	9.7			
FM	(30°-60°)	26061.0	48.8			
FH	(60°-80°)	13497.2	25.3			G5
FVH	(80°-90°)	462.5	0.9			G3/500
BL	(0°-30°)	1761.8	3.3	B3/2500		
BM	(30°-60°)	3666.9	6.9	B3/5000		
BH	(60°-80°)	2449.1	4.6	B3/2500		G3/2500
BVH	(80°-90°)	360.4	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-G5

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5
2.5°	5513.7	5452.9	5467.9	5366.6	5242.9	5080.8	4901.5	4899.2	4901.5	4883.5	4818.2
5°	7645.2	7572.4	7544.7	7316.6	6982.7	6507.8	5991.6	5936.1	5912.8	5855.1	5720.8
7.5°	9201.2	9160.7	9117.2	8945.4	8642.3	8111.1	7417.9	7299.3	7185.3	7157.5	7006.0
10°	10205.1	10194.6	10103.8	10058.1	9869.0	9408.3	8733.1	8619.0	8495.2	8452.5	8292.7
12.5°	10998.9	10996.6	10953.9	10966.6	10801.6	10468.4	9886.2	9782.7	9691.9	9559.9	9446.6
15°	11548.1	11550.3	11614.1	11684.6	11659.1	11434.0	10887.8	10842.1	10764.1	10673.3	10539.0
17.5°	11998.2	12011.0	12076.3	12205.3	12344.9	12326.9	11894.7	11856.4	11788.2	11664.4	11593.8
20°	13014.8	13062.9	12936.8	12936.8	12951.8	13020.1	12812.3	12782.3	12686.2	12620.2	12564.7
22.5°	14732.2	14787.7	14501.9	14211.5	13925.7	13717.8	13510.8	13548.3	13483.0	13437.2	13404.2
25°	16962.7	17006.3	16543.3	16052.7	15470.5	14711.9	14198.8	14175.5	14140.2	14112.5	14097.5
27.5°	19062.0	19080.0	18642.6	17923.8	17248.6	16158.5	14896.5	14868.7	14826.0	14772.7	14726.9
30°	20858.1	20852.9	20402.7	19717.0	18993.7	17787.3	15956.6	15870.4	15743.6	15599.5	15488.5
32.5°	22413.4	22405.9	21912.2	21201.7	20443.2	19401.1	17408.4	17231.3	17034.0	16752.7	16583.9
35°	23637.1	23632.6	23166.7	22426.2	21555.9	20921.1	19072.5	18854.9	18604.3	18227.7	17967.3
37.5°	24100.0	24100.0	23839.7	23334.0	22565.0	22129.8	20921.1	20657.8	20389.9	19962.3	19668.9
40°	23829.2	23834.4	23889.9	23796.9	23422.5	23088.7	22646.0	22489.2	22258.9	21874.7	21568.6
42.5°	22921.3	22949.1	23319.0	23771.4	23958.2	23905.7	24175.8	24105.3	23943.2	23647.6	23404.5
45°	21770.4	21856.7	22261.1	23116.4	24107.5	24610.9	25458.0	25465.5	25435.5	25276.4	25088.9
47.5°	20190.4	20311.2	20845.4	22000.8	23758.6	25296.7	26760.4	26828.7	26892.5	26789.0	26702.7
50°	18091.1	18235.2	19034.2	20567.0	23048.1	26007.2	29221.3	29530.4	29818.5	29783.3	29841.0
52.5°	15842.6	16012.2	16990.5	18698.1	21826.7	26171.5	30794.6	31298.0	31801.5	32213.4	32650.8
55°	13813.9	13723.1	14702.2	16499.8	19818.2	25430.2	32208.9	32815.8	33377.0	33882.7	34404.1
57.5°	11064.9	11214.2	12195.6	13973.7	17160.1	23338.5	33182.0	34070.3	34876.8	35714.1	36452.4
60°	8087.9	8237.2	9301.8	11107.7	14274.5	20167.1	32438.5	33784.4	35076.4	36358.6	37360.2
62.5°	4883.5	4995.3	5933.1	7653.5	11007.1	16406.8	29125.3	30890.7	32792.6	34325.4	35860.4
65°	3040.1	3103.1	3449.7	4395.8	7069.0	12248.8	23796.9	25721.3	27769.6	29715.0	31310.8
67.5°	2488.6	2511.1	2574.9	2776.7	3881.9	7987.3	17711.5	19416.1	21264.8	23146.4	24922.3
70°	2238.0	2223.0	2223.0	2235.8	2488.6	4294.5	11596.1	12706.5	14246.8	15883.1	17506.7
72.5°	2020.5	2005.5	1977.7	1940.2	2031.0	2619.9	5993.9	6831.2	7941.6	9395.6	10950.9
75°	1815.6	1795.4	1763.1	1715.1	1778.1	1977.7	2878.0	3229.9	3770.8	4545.1	5412.4
77.5°	1603.3	1577.8	1547.8	1512.5	1593.6	1538.0	1686.6	1813.4	2020.5	2268.8	2595.2
80°	1363.2	1340.7	1330.2	1313.0	1409.0	1171.2	1191.4	1269.4	1391.0	1525.3	1676.8
82.5°	1067.6	1067.6	1107.4	1115.6	1221.4	842.5	890.6	958.8	1021.9	1092.4	1163.7
85°	703.0	708.3	844.8	898.1	963.3	566.4	667.7	690.2	741.3	781.8	811.8
87.5°	219.8	237.8	516.2	571.7	553.7	321.1	409.6	420.1	455.4	483.2	508.7
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5
2.5°	4818.2	4787.4	4759.7	4757.4	4737.2	4709.4	4719.2	4676.4	4678.7	4656.1	4630.6
5°	5665.3	5645.0	5543.7	5515.9	5440.2	5392.2	5384.7	5283.4	5270.6	5212.8	5149.1
7.5°	6884.4	6818.4	6676.6	6608.3	6479.3	6383.3	6338.2	6203.9	6137.9	5986.4	5918.1
10°	8161.4	8078.1	7903.3	7807.3	7683.5	7528.9	7445.6	7251.3	7174.8	7036.0	6869.4
12.5°	9345.3	9262.0	9082.0	9008.4	8844.1	8679.8	8589.0	8369.2	8270.2	8047.3	7916.0
15°	10439.9	10356.7	10199.9	10124.1	9959.8	9825.5	9703.9	9487.1	9370.8	9163.0	8991.2
17.5°	11502.3	11413.8	11277.2	11209.0	11049.9	10913.4	10782.1	10576.5	10457.9	10250.9	10096.3
20°	12488.9	12422.9	12324.6	12233.1	12074.0	11950.2	11793.4	11616.4	11444.5	11292.2	11145.9
22.5°	13348.7	13323.2	13217.4	13176.9	13040.4	12933.8	12797.3	12623.2	12498.7	12306.6	12170.0
25°	14090.0	14082.5	14031.5	14018.7	13922.7	13821.4	13791.4	13647.3	13533.3	13363.7	13222.7
27.5°	14726.9	14734.5	14722.4	14757.7	14732.2	14686.4	14689.4	14641.4	14575.4	14433.6	14309.8
30°	15435.2	15394.7	15417.9	15468.2	15483.2	15488.5	15571.7	15599.5	15595.0	15501.2	15440.5
32.5°	16436.8	16340.8	16252.2	16244.7	16295.0	16315.3	16457.1	16530.6	16593.6	16616.1	16626.6
35°	17713.8	17521.7	17337.1	17238.8	17152.6	17175.1	17276.3	17395.6	17534.4	17630.5	17744.5
37.5°	19322.3	19087.5	18761.1	18528.5	18470.0	18344.0	18409.2	18503.0	18639.6	18788.9	18986.2
40°	21272.3	20915.9	20549.0	20240.6	20074.1	19840.8	19838.5	19820.5	19904.5	20043.3	20321.7
42.5°	23149.4	22832.8	22443.4	22120.1	21902.5	21591.1	21528.1	21363.8	21401.3	21522.8	21793.7
45°	24906.5	24646.2	24408.4	24034.7	23849.4	23513.3	23406.8	23212.4	23103.7	23159.2	23430.0
47.5°	26608.9	26442.3	26194.0	25951.7	25809.9	25509.0	25372.5	25232.9	25094.1	25088.9	25372.5
50°	29927.3	29838.8	29545.4	29292.6	29360.9	28991.7	29014.2	28639.9	28809.4	28829.7	29423.9
52.5°	33045.4	33354.5	33572.1	33836.9	34009.5	34042.5	34155.8	34325.4	34530.2	34934.6	35486.0
55°	34831.0	35218.2	35443.3	35645.8	35979.7	36050.2	36240.0	36465.1	36644.4	37099.8	37568.0
57.5°	36953.5	37671.6	38020.4	38341.5	38791.7	38963.5	39280.1	39525.5	39758.0	40296.7	40863.2
60°	38260.5	39136.1	39846.6	40354.5	40918.7	41323.8	41801.8	42185.9	42732.1	43377.3	44222.1
62.5°	37221.4	38505.8	39449.7	40322.2	41088.3	41862.5	42547.5	43266.3	44095.3	45071.4	46382.1
65°	33081.4	34388.4	36004.5	36910.0	37924.4	39118.1	40160.2	41323.8	42453.7	43875.5	45812.7
67.5°	26632.2	28151.4	29967.8	30880.9	32046.8	33379.3	34548.2	35969.2	37289.7	39011.5	41407.1
70°	19196.3	21161.2	22688.8	23642.3	25003.3	26376.3	27504.7	29158.3	30250.7	32016.1	34492.7
72.5°	12155.0	13705.1	15577.0	16778.2	17986.9	19378.6	20531.7	21958.0	22976.9	24585.4	26828.7
75°	6535.6	7678.2	9322.0	10463.2	11758.2	12946.6	14297.0	15252.9	16006.9	17279.4	19100.2
77.5°	3062.6	3758.1	4590.1	5467.9	6345.7	7261.1	8151.6	8925.2	9249.3	9977.8	11052.2
80°	1859.2	2084.2	2326.6	2597.4	2964.3	3259.9	3652.3	3935.1	3955.4	4185.7	4514.3
82.5°	1241.7	1325.0	1398.5	1466.8	1560.6	1634.1	1717.4	1815.6	1856.2	1909.4	2016.0
85°	847.0	887.6	902.6	946.1	935.6	961.1	994.1	1027.1	1044.4	1042.1	1090.1
87.5°	520.7	540.9	551.4	561.2	553.7	543.9	558.9	577.0	581.5	566.4	571.7
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5
2.5°	4635.9	4613.4	4590.1	4575.1	4569.9	4436.3	4377.8	4340.3	4259.3	4193.2	4140.0
5°	5113.8	5065.8	5028.3	4982.5	4957.0	4617.9	4494.1	4408.6	4266.8	4183.5	4106.9
7.5°	5882.8	5748.5	5670.5	5582.0	5506.2	4894.0	4689.2	4554.9	4357.5	4246.5	4160.2
10°	6755.4	6616.6	6492.0	6355.5	6237.0	5260.9	4962.3	4754.4	4494.1	4350.0	4236.0
12.5°	7729.2	7592.7	7435.9	7261.1	7109.5	5726.0	5311.1	5015.5	4658.4	4466.3	4307.3
15°	8880.1	8639.3	8449.5	8247.7	8070.6	6282.7	5718.5	5308.9	4833.2	4572.9	4360.5
17.5°	9949.3	9696.4	9439.1	9262.0	9057.2	6906.9	6128.2	5606.7	4977.3	4641.1	4370.3
20°	10994.4	10718.3	10496.2	10258.4	10043.0	7554.4	6565.6	5870.1	5071.0	4643.4	4307.3
22.5°	11915.0	11742.4	11494.8	11236.7	11019.1	8201.9	6975.2	6092.9	5106.3	4585.6	4195.5
25°	12961.6	12780.0	12476.2	12258.6	12016.2	8862.1	7377.4	6264.7	5086.0	4476.8	4023.7
27.5°	14079.5	13877.6	13566.3	13339.0	13045.6	9547.1	7746.5	6388.5	5010.3	4299.8	3793.3
30°	15245.4	15060.8	14754.7	14525.1	14228.8	10273.4	8159.1	6471.8	4858.7	4054.4	3525.5
32.5°	16497.6	16343.0	16039.9	15799.8	15483.2	11059.7	8543.3	6497.3	4628.4	3763.3	3242.6
35°	17686.0	17580.2	17324.4	17099.3	16770.7	11803.2	8950.7	6484.5	4355.3	3444.5	2984.6
37.5°	19024.5	18960.7	18834.6	18548.8	18146.7	12812.3	9439.1	6431.3	4021.4	3128.6	2787.2
40°	20450.7	20456.0	20319.4	20124.4	19750.0	14036.7	10020.5	6327.7	3656.8	2850.3	2607.2
42.5°	21960.3	22039.0	21973.0	21834.2	21474.8	15270.9	10716.0	6201.7	3303.4	2579.4	2430.9
45°	23690.4	23786.4	23887.7	23682.9	23334.0	16899.7	11631.4	6037.4	2920.8	2354.3	2309.3
47.5°	25686.1	25837.6	25928.4	25931.4	25582.5	18917.9	13118.4	5938.3	2582.4	2202.8	2250.8
50°	29896.6	29945.3	30159.9	30534.3	30266.4	23589.1	15715.8	5877.6	2352.1	2109.0	2208.0
52.5°	35963.9	36492.9	36865.0	36839.5	36474.9	26555.6	17147.3	5564.0	2215.5	2073.7	2187.8
55°	38435.3	39095.6	39783.5	39965.1	39682.3	29087.8	18500.8	5250.4	2149.5	2099.2	2195.3
57.5°	41728.2	42840.9	43784.7	44181.6	43772.0	32327.4	20281.2	5086.0	2129.3	2167.5	2243.3
60°	45574.8	46950.8	48190.3	48903.0	48903.0	36050.2	22127.6	5017.8	2101.5	2268.8	2324.3
62.5°	48046.2	50066.7	51938.6	52983.0	52952.2	38642.4	22946.9	4785.2	2038.5	2339.3	2435.4
65°	48056.0	50459.1	52843.4	54017.6	54077.6	38324.3	21594.1	4226.2	1922.2	2349.8	2547.1
67.5°	44050.3	46611.7	49391.4	50704.4	51007.5	35279.0	18692.8	3475.2	1732.4	2248.5	2587.7
70°	37203.4	39704.8	42542.3	43832.7	44371.4	30073.6	15055.6	2678.4	1490.0	2025.7	2503.6
72.5°	29309.8	31763.2	33738.7	34681.7	35101.9	22987.4	10963.6	2023.5	1221.4	1706.9	2278.6
75°	20751.6	22592.7	23642.3	23852.4	23917.7	13857.4	6661.6	1505.0	1006.9	1328.0	1924.4
77.5°	11712.4	12501.7	12415.4	12509.2	11730.4	5349.4	2901.3	1077.4	829.8	1009.1	1492.3
80°	4572.9	4714.7	4428.8	4340.3	3980.9	1990.5	1280.0	751.0	662.5	763.8	1044.4
82.5°	2016.0	2081.2	2020.5	2036.2	1947.7	1027.1	766.0	543.9	505.7	558.9	693.2
85°	1110.4	1130.6	1125.4	1158.4	1110.4	409.6	363.9	333.9	354.1	379.6	444.9
87.5°	540.9	546.2	528.9	556.7	538.7	207.1	179.3	189.8	207.1	212.3	212.3
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):

	135°	145°	155°	165°	175°	180°
0°	4342.5	4342.5	4342.5	4342.5	4342.5	4342.5
2.5°	4102.4	4082.2	4084.4	4079.2	4069.4	4069.4
5°	4067.2	4046.9	4046.9	4041.7	4028.9	4031.2
7.5°	4102.4	4069.4	4056.7	4038.7	4021.4	4021.4
10°	4143.0	4084.4	4049.2	4019.2	3995.9	3995.9
12.5°	4173.0	4082.2	4023.7	3983.2	3960.6	3960.6
15°	4183.5	4064.2	3983.2	3935.1	3914.9	3912.6
17.5°	4150.5	3995.9	3897.6	3842.1	3816.6	3809.1
20°	4049.2	3872.1	3753.6	3689.8	3654.5	3641.8
22.5°	3897.6	3695.1	3556.3	3490.2	3444.5	3437.0
25°	3685.3	3467.7	3331.2	3267.4	3242.6	3234.4
27.5°	3437.0	3234.4	3118.1	3077.6	3055.1	3052.8
30°	3202.1	3029.6	2944.0	2913.3	2885.5	2881.0
32.5°	2981.6	2872.8	2840.5	2797.0	2731.7	2724.2
35°	2824.7	2815.0	2792.5	2695.7	2615.4	2592.2
37.5°	2728.7	2822.5	2706.2	2516.4	2458.6	2453.4
40°	2673.2	2744.5	2544.1	2478.9	2483.4	2478.9
42.5°	2547.1	2619.9	2549.4	2519.4	2538.9	2544.1
45°	2420.4	2501.4	2587.7	2567.4	2615.4	2615.4
47.5°	2349.8	2470.6	2584.7	2584.7	2655.9	2680.7
50°	2268.8	2445.9	2544.1	2579.4	2635.7	2615.4
52.5°	2263.5	2402.3	2486.4	2549.4	2574.9	2551.7
55°	2271.1	2367.1	2427.9	2499.1	2529.1	2531.4
57.5°	2281.6	2346.8	2387.3	2420.4	2511.1	2511.1
60°	2306.3	2329.6	2352.1	2370.1	2488.6	2490.9
62.5°	2346.8	2311.6	2306.3	2324.3	2475.9	2466.1
65°	2410.6	2286.1	2248.5	2265.8	2463.1	2433.1
67.5°	2496.1	2248.5	2175.0	2187.8	2453.4	2387.3
70°	2574.9	2187.8	2084.2	2071.5	2357.3	2241.0
72.5°	2582.4	2117.2	1957.4	1919.9	2049.0	1937.2
75°	2455.6	2068.5	1818.6	1706.9	1691.8	1676.8
77.5°	2213.3	2040.7	1656.6	1481.8	1451.8	1461.5
80°	1851.7	1937.2	1461.5	1254.4	1418.8	1401.5
82.5°	1383.5	1709.9	1241.7	1110.4	1107.4	979.1
85°	769.0	1333.2	1011.4	832.0	579.2	561.2
87.5°	215.3	741.3	708.3	470.4	321.1	333.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)