

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: P301603

Luminaire Tested: **GLNA-AF-08-LED-E1-T2R-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301603
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-08-LED-E1-T2R-7030
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(8) 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: 47901.3 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G5

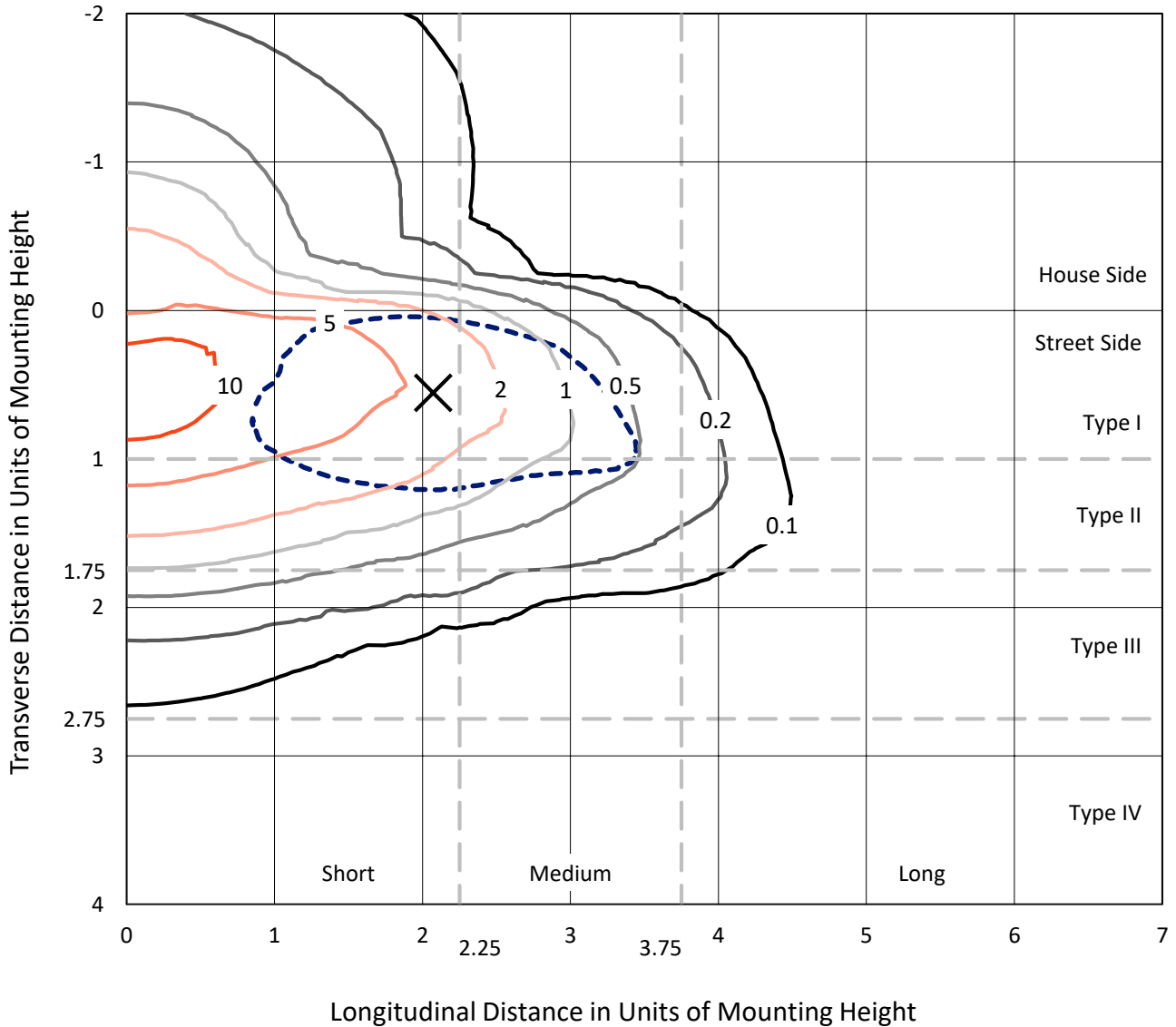
Input Watts (W): 445
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

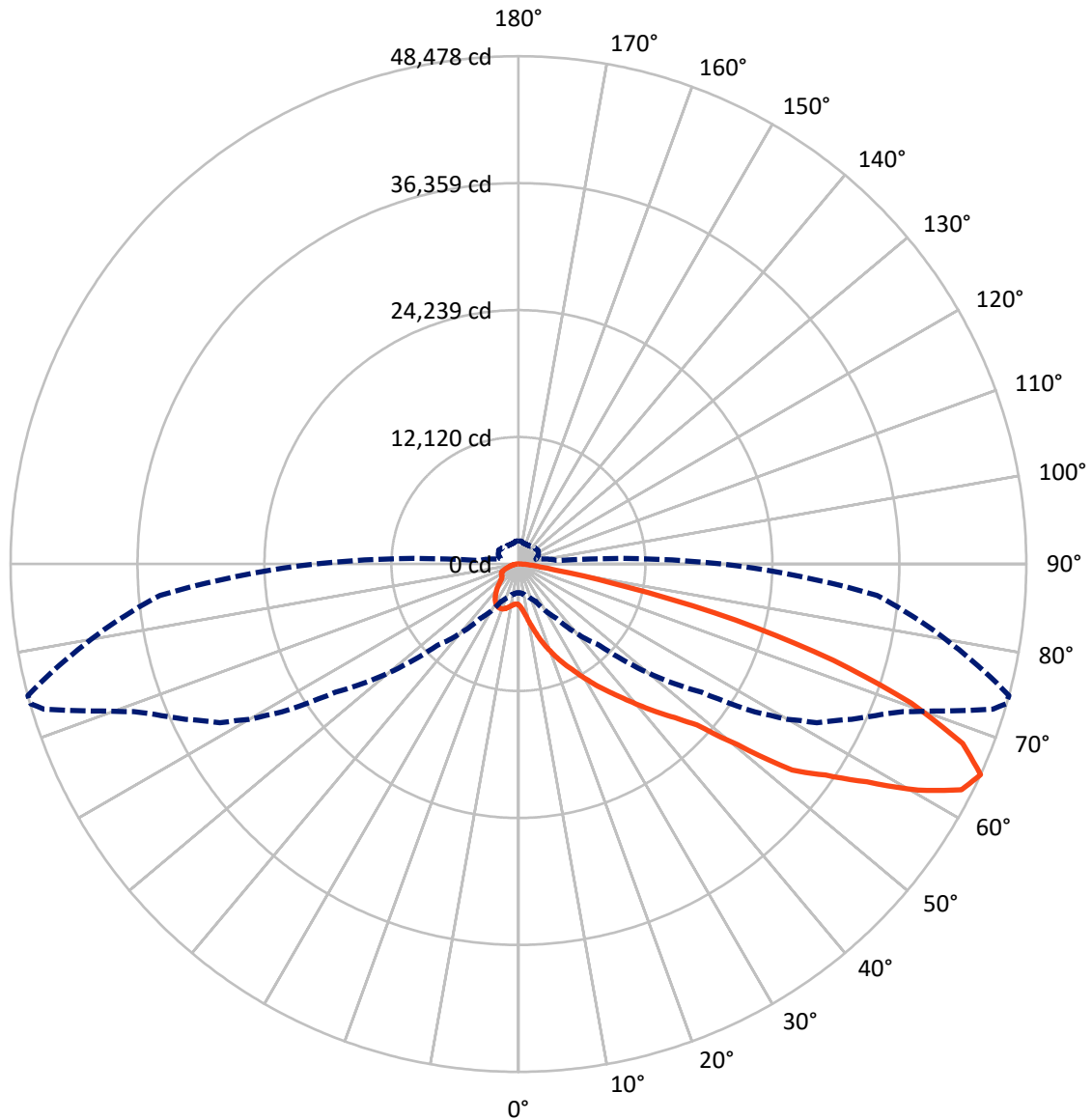
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.4 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	7385.2	0.0	7385.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	40516.1	0.0	40516.1
	% Fixture	84.6	0.0	84.6
Total	Lumens	47901.3	0.0	47901.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.2	1.0
10°-20°	1880.1	3.9
20°-30°	3857.3	8.1
30°-40°	6489.7	13.5
40°-50°	8966.9	18.7
50°-60°	11193.3	23.4
60°-70°	10072.8	21.0
70°-80°	4222.4	8.8
80°-90°	737.7	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°	47901.3	100.0
0°-180°	47901.3	100.0



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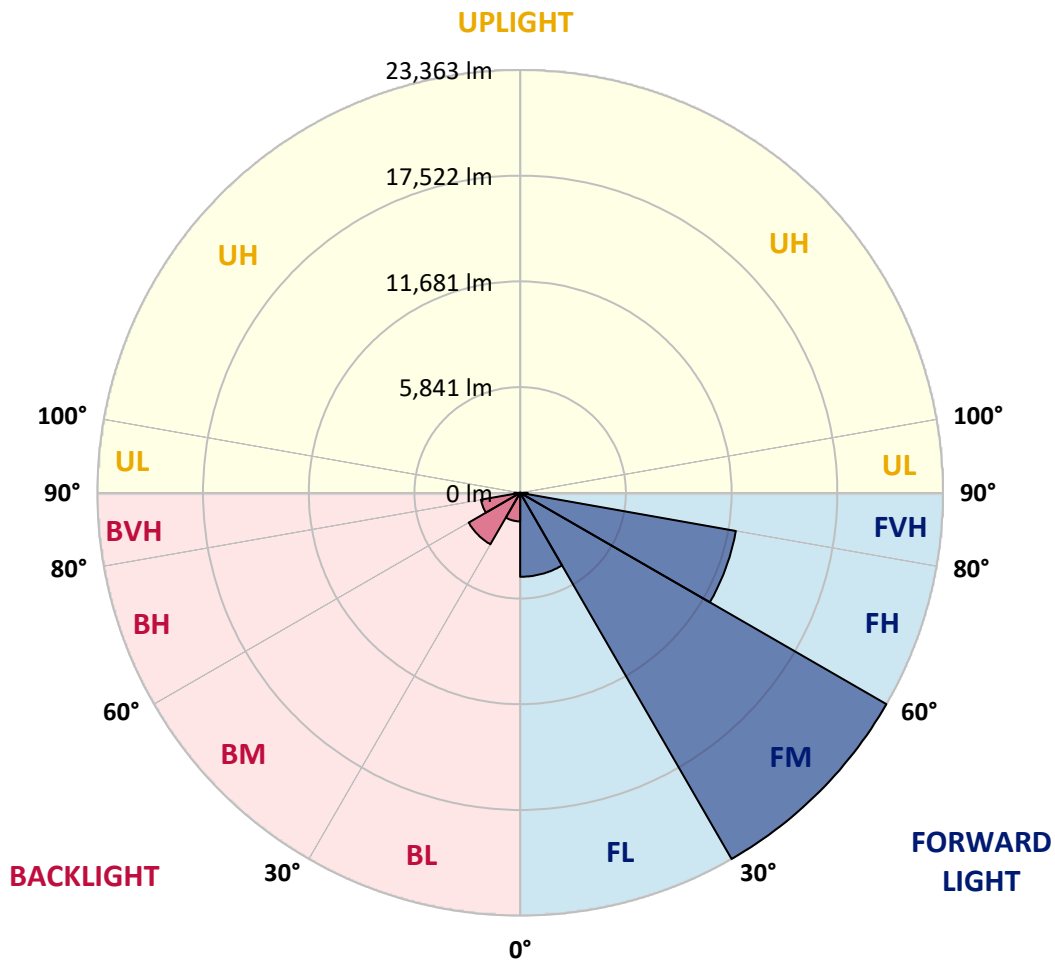
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4639.1	9.7			
FM	(30°-60°)	23362.6	48.8			
FH	(60°-80°)	12099.7	25.3			G5
FVH	(80°-90°)	414.6	0.9			G3/500
BL	(0°-30°)	1579.4	3.3	B3/2500		
BM	(30°-60°)	3287.3	6.9	B3/5000		
BH	(60°-80°)	2195.5	4.6	B3/2500		G3/2500
BVH	(80°-90°)	323.0	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°	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9
2.5°	4942.8	4888.3	4901.8	4811.0	4700.0	4554.7	4394.0	4392.0	4394.0	4377.8	4319.3
5°	6853.6	6788.4	6763.5	6559.0	6259.7	5834.0	5371.2	5321.5	5300.6	5248.8	5128.4
7.5°	8248.5	8212.2	8173.2	8019.2	7747.5	7271.3	6649.8	6543.5	6441.3	6416.4	6280.6
10°	9148.5	9139.0	9057.7	9016.6	8847.1	8434.2	7828.9	7726.6	7615.6	7577.3	7434.0
12.5°	9860.1	9858.0	9819.7	9831.1	9683.2	9384.5	8862.6	8769.8	8688.4	8570.0	8468.5
15°	10352.4	10354.4	10411.6	10474.8	10451.9	10250.1	9760.5	9719.5	9649.5	9568.2	9447.8
17.5°	10755.9	10767.4	10825.9	10941.6	11066.7	11050.5	10663.1	10628.8	10567.6	10456.6	10393.4
20°	11667.3	11710.3	11597.3	11597.3	11610.8	11672.0	11485.7	11458.8	11372.7	11313.5	11263.7
22.5°	13206.8	13256.6	13000.3	12740.0	12483.8	12297.5	12111.9	12145.5	12087.0	12045.9	12016.3
25°	15206.4	15245.4	14830.4	14390.6	13868.6	13188.7	12728.6	12707.8	12676.2	12651.3	12637.8
27.5°	17088.3	17104.4	16712.3	16068.0	15462.7	14485.4	13354.1	13329.2	13290.9	13243.1	13202.1
30°	18698.4	18693.7	18290.2	17675.5	17027.1	15945.6	14304.5	14227.1	14113.5	13984.3	13884.8
32.5°	20092.7	20086.0	19643.4	19006.5	18326.5	17392.3	15605.9	15447.2	15270.3	15018.1	14866.8
35°	21189.7	21185.7	20768.0	20104.1	19324.0	18754.9	17097.7	16902.7	16678.0	16340.4	16107.0
37.5°	21604.7	21604.7	21371.3	20918.0	20228.6	19838.5	18754.9	18518.9	18278.8	17895.4	17632.4
40°	21361.9	21366.6	21416.4	21333.0	20997.3	20698.0	20301.2	20160.6	19954.2	19609.8	19335.4
42.5°	20548.1	20572.9	20904.5	21310.1	21477.6	21430.5	21672.6	21609.4	21464.1	21199.1	20981.2
45°	19516.3	19593.7	19956.2	20722.9	21611.4	22062.7	22822.0	22828.8	22801.9	22659.3	22491.1
47.5°	18099.9	18208.1	18687.0	19722.8	21298.7	22677.4	23989.7	24050.9	24108.0	24015.2	23937.9
50°	16218.0	16347.1	17063.4	18437.5	20661.7	23314.4	26195.7	26472.8	26731.1	26699.5	26751.3
52.5°	14202.2	14354.2	15231.3	16762.1	19566.8	23461.7	27606.1	28057.4	28508.7	28878.0	29270.1
55°	12383.6	12302.2	13179.9	14791.4	17766.3	22797.2	28873.9	29418.1	29921.2	30374.5	30841.9
57.5°	9919.2	10053.1	10932.8	12526.8	15383.3	20922.0	29746.3	30542.6	31265.6	32016.2	32678.1
60°	7250.4	7384.3	8338.7	9957.6	12796.5	18079.0	29079.8	30286.4	31444.5	32594.0	33491.9
62.5°	4377.8	4478.1	5318.8	6861.0	9867.4	14708.0	26109.6	27692.2	29397.2	30771.3	32147.4
65°	2725.3	2781.8	3092.5	3940.7	6337.1	10980.6	21333.0	23058.1	24894.3	26638.3	28068.9
67.5°	2231.0	2251.1	2308.3	2489.2	3479.9	7160.3	15877.6	17405.7	19063.0	20749.8	22341.8
70°	2006.3	1992.9	1992.9	2004.3	2231.0	3849.9	10395.4	11390.8	12771.7	14238.6	15694.0
72.5°	1811.3	1797.8	1772.9	1739.3	1820.7	2348.7	5373.3	6123.9	7119.3	8422.7	9817.0
75°	1627.6	1609.5	1580.6	1537.5	1594.0	1772.9	2580.0	2895.5	3380.4	4074.5	4852.0
77.5°	1437.3	1414.4	1387.5	1355.9	1428.6	1378.8	1512.0	1625.6	1811.3	2033.9	2326.5
80°	1222.1	1201.9	1192.5	1177.0	1263.1	1049.9	1068.1	1138.0	1247.0	1367.4	1503.2
82.5°	957.1	957.1	992.7	1000.1	1095.0	755.3	798.4	859.6	916.1	979.3	1043.2
85°	630.2	634.9	757.3	805.1	863.6	507.8	598.6	618.8	664.5	700.8	727.7
87.5°	197.1	213.2	462.7	512.5	496.4	287.9	367.2	376.6	408.3	433.1	456.0
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9
2.5°	4319.3	4291.7	4266.9	4264.8	4246.7	4221.8	4230.5	4192.2	4194.2	4174.0	4151.2
5°	5078.7	5060.5	4969.7	4944.8	4876.9	4833.8	4827.1	4736.3	4724.9	4673.1	4615.9
7.5°	6171.6	6112.4	5985.3	5924.1	5808.4	5722.3	5682.0	5561.6	5502.4	5366.5	5305.3
10°	7316.3	7241.7	7085.0	6998.9	6887.9	6749.4	6674.7	6500.5	6431.9	6307.5	6158.2
12.5°	8377.7	8303.0	8141.6	8075.7	7928.4	7781.1	7699.7	7502.7	7413.9	7214.1	7096.4
15°	9359.0	9284.3	9143.8	9075.8	8928.5	8808.1	8699.2	8504.8	8400.5	8214.2	8060.2
17.5°	10311.4	10232.0	10109.6	10048.4	9905.8	9783.4	9665.7	9481.4	9375.1	9189.5	9050.9
20°	11195.8	11136.6	11048.5	10966.4	10823.9	10712.9	10572.3	10413.6	10259.6	10123.0	9991.9
22.5°	11966.6	11943.7	11848.9	11812.6	11690.1	11594.6	11472.2	11316.2	11204.5	11032.4	10910.0
25°	12631.1	12624.4	12578.6	12567.2	12481.1	12390.3	12363.4	12234.3	12132.0	11980.0	11853.6
27.5°	13202.1	13208.8	13198.1	13229.7	13206.8	13165.8	13168.5	13125.4	13066.2	12939.1	12828.2
30°	13837.0	13800.7	13821.6	13866.6	13880.1	13884.8	13959.4	13984.3	13980.3	13896.2	13841.7
32.5°	14734.9	14648.8	14569.5	14562.7	14607.8	14626.0	14753.1	14819.0	14875.5	14895.7	14905.1
35°	15879.7	15707.5	15542.0	15453.9	15376.6	15396.7	15487.5	15594.5	15718.9	15805.0	15907.2
37.5°	17321.7	17111.2	16818.6	16610.1	16557.6	16444.6	16503.1	16587.2	16709.6	16843.5	17020.4
40°	19069.7	18750.2	18421.3	18144.9	17995.6	17786.4	17784.4	17768.3	17843.6	17968.0	18217.6
42.5°	20752.5	20468.7	20119.6	19829.7	19634.7	19355.6	19299.1	19151.8	19185.4	19294.4	19537.2
45°	22327.7	22094.3	21881.1	21546.2	21380.0	21078.7	20983.2	20809.0	20711.5	20761.3	21004.1
47.5°	23853.8	23704.5	23481.9	23264.6	23137.5	22867.8	22745.4	22620.3	22495.8	22491.1	22745.4
50°	26828.6	26749.3	26486.3	26259.6	26320.8	25989.9	26010.1	25674.5	25826.5	25844.6	26377.3
52.5°	29623.9	29901.0	30096.0	30333.4	30488.1	30517.7	30619.3	30771.3	30954.9	31317.4	31811.8
55°	31224.6	31571.7	31773.4	31955.0	32254.3	32317.6	32487.7	32689.5	32850.2	33258.5	33678.2
57.5°	33127.3	33771.0	34083.8	34371.6	34775.2	34929.2	35213.0	35433.0	35641.5	36124.4	36632.2
60°	34299.0	35083.9	35720.8	36176.2	36681.9	37045.1	37473.6	37817.9	38307.6	38886.0	39643.3
62.5°	33367.5	34518.9	35365.0	36147.2	36833.9	37528.1	38142.1	38786.5	39529.7	40404.7	41579.7
65°	29656.2	30827.8	32276.5	33088.3	33997.7	35067.7	36002.0	37045.1	38058.0	39332.6	41069.2
67.5°	23874.6	25236.6	26864.9	27683.5	28728.7	29923.2	30971.1	32244.9	33428.7	34972.2	37119.8
70°	17208.7	18970.2	20339.5	21194.4	22414.5	23645.3	24656.9	26139.2	27118.5	28701.1	30921.3
72.5°	10896.5	12286.1	13964.1	15040.9	16124.5	17372.1	18405.9	19684.5	20597.8	22039.8	24050.9
75°	5858.9	6883.2	8356.8	9379.8	10540.7	11606.1	12816.7	13673.6	14349.5	15490.2	17122.6
77.5°	2745.5	3369.0	4114.9	4901.8	5688.7	6509.2	7307.6	8001.0	8291.6	8944.7	9907.8
80°	1666.7	1868.4	2085.7	2328.5	2657.4	2922.4	3274.1	3527.7	3545.9	3752.3	4046.9
82.5°	1113.1	1187.8	1253.7	1314.9	1399.0	1464.9	1539.5	1627.6	1664.0	1711.7	1807.2
85°	759.3	795.7	809.1	848.1	838.7	861.6	891.2	920.8	936.2	934.2	977.3
87.5°	466.8	484.9	494.3	503.1	496.4	487.6	501.1	517.2	521.3	507.8	512.5
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9
2.5°	4155.9	4135.7	4114.9	4101.4	4096.7	3977.0	3924.5	3890.9	3818.2	3759.1	3711.3
5°	4584.3	4541.3	4507.6	4466.6	4443.7	4139.7	4028.8	3952.1	3825.0	3750.3	3681.7
7.5°	5273.7	5153.3	5083.4	5004.0	4936.1	4387.3	4203.6	4083.2	3906.4	3806.8	3729.5
10°	6055.9	5931.5	5819.9	5697.4	5591.2	4716.1	4448.5	4262.2	4028.8	3899.6	3797.4
12.5°	6928.9	6806.5	6666.0	6509.2	6373.4	5133.1	4761.2	4496.2	4176.1	4003.9	3861.3
15°	7960.7	7744.8	7574.6	7393.7	7235.0	5632.2	5126.4	4759.2	4332.8	4099.4	3909.0
17.5°	8919.1	8692.4	8461.8	8303.0	8119.4	6191.8	5493.6	5026.2	4461.9	4160.6	3917.8
20°	9856.0	9608.5	9409.4	9196.2	9003.2	6772.2	5885.8	5262.3	4546.0	4162.6	3861.3
22.5°	10681.3	10526.6	10304.6	10073.3	9878.2	7352.7	6253.0	5462.0	4577.6	4110.8	3761.1
25°	11619.5	11456.8	11184.4	10989.3	10772.1	7944.5	6613.5	5616.1	4559.4	4013.3	3607.1
27.5°	12621.7	12440.7	12161.6	11957.8	11694.9	8558.6	6944.4	5727.0	4491.5	3854.6	3400.6
30°	13666.9	13501.4	13227.0	13021.2	12755.5	9209.7	7314.3	5801.7	4355.6	3634.6	3160.5
32.5°	14789.4	14650.9	14379.1	14163.9	13880.1	9914.5	7658.7	5824.6	4149.2	3373.7	2906.9
35°	15854.8	15759.9	15530.6	15328.8	15034.2	10581.1	8023.9	5813.1	3904.3	3087.8	2675.5
37.5°	17054.7	16997.5	16884.5	16628.2	16267.7	11485.7	8461.8	5765.4	3605.0	2804.7	2498.6
40°	18333.2	18337.9	18215.5	18040.7	17705.0	12583.3	8983.0	5672.6	3278.2	2555.1	2337.2
42.5°	19686.5	19757.1	19697.9	19573.5	19251.3	13689.7	9606.5	5559.6	2961.4	2312.3	2179.2
45°	21237.4	21323.5	21414.3	21230.7	20918.0	15149.9	10427.0	5412.3	2618.4	2110.6	2070.2
47.5°	23026.5	23162.4	23243.8	23246.4	22933.7	16959.2	11760.1	5323.5	2315.0	1974.7	2017.7
50°	26801.0	26844.8	27037.1	27372.7	27132.6	21146.6	14088.6	5269.0	2108.5	1890.6	1979.4
52.5°	32240.2	32714.4	33048.0	33025.1	32698.2	23806.0	15371.9	4987.9	1986.1	1859.0	1961.2
55°	34455.7	35047.6	35664.3	35827.1	35573.5	26076.0	16585.2	4706.7	1926.9	1881.9	1968.0
57.5°	37407.7	38405.1	39251.2	39607.0	39239.8	28980.2	18181.2	4559.4	1908.8	1943.1	2011.0
60°	40856.0	42089.5	43200.6	43839.6	43839.6	32317.6	19836.5	4498.2	1883.9	2033.9	2083.7
62.5°	43071.5	44882.7	46560.8	47497.1	47469.5	34641.3	20570.9	4289.7	1827.4	2097.1	2183.2
65°	43080.2	45234.5	47372.0	48424.6	48478.4	34356.2	19358.3	3788.7	1723.2	2106.5	2283.4
67.5°	39489.3	41785.5	44277.4	45454.4	45726.2	31626.1	16757.4	3115.4	1553.0	2015.7	2319.7
70°	33351.3	35593.7	38137.4	39294.3	39777.2	26959.8	13496.7	2401.1	1335.7	1816.0	2244.4
72.5°	26275.1	28474.4	30245.3	31090.8	31467.4	20607.2	9828.4	1814.0	1095.0	1530.1	2042.6
75°	18602.9	20253.5	21194.4	21382.7	21441.2	12422.6	5971.9	1349.2	902.6	1190.5	1725.2
77.5°	10499.7	11207.2	11129.9	11214.0	10515.8	4795.5	2600.9	965.8	743.9	904.6	1337.8
80°	4099.4	4226.5	3970.3	3890.9	3568.7	1784.4	1147.4	673.3	593.9	684.7	936.2
82.5°	1807.2	1865.7	1811.3	1825.4	1746.0	920.8	686.7	487.6	453.3	501.1	621.5
85°	995.4	1013.6	1008.9	1038.5	995.4	367.2	326.2	299.3	317.5	340.3	398.8
87.5°	484.9	489.6	474.2	499.1	482.9	185.6	160.7	170.2	185.6	190.3	190.3
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°	3892.9	3892.9	3892.9	3892.9	3892.9	3892.9
2.5°	3677.7	3659.5	3661.5	3656.8	3648.1	3648.1
5°	3646.1	3627.9	3627.9	3623.2	3611.8	3613.8
7.5°	3677.7	3648.1	3636.7	3620.5	3605.0	3605.0
10°	3714.0	3661.5	3629.9	3603.0	3582.2	3582.2
12.5°	3740.9	3659.5	3607.1	3570.7	3550.6	3550.6
15°	3750.3	3643.4	3570.7	3527.7	3509.5	3507.5
17.5°	3720.7	3582.2	3494.1	3444.3	3421.4	3414.7
20°	3629.9	3471.2	3364.9	3307.8	3276.1	3264.7
22.5°	3494.1	3312.5	3188.0	3128.9	3087.8	3081.1
25°	3303.7	3108.7	2986.3	2929.1	2906.9	2899.5
27.5°	3081.1	2899.5	2795.3	2758.9	2738.8	2736.7
30°	2870.6	2715.9	2639.2	2611.6	2586.8	2582.7
32.5°	2672.8	2575.3	2546.4	2507.4	2448.9	2442.1
35°	2532.3	2523.5	2503.3	2416.6	2344.6	2323.8
37.5°	2446.2	2530.3	2426.0	2255.8	2204.1	2199.3
40°	2396.4	2460.3	2280.7	2222.2	2226.2	2222.2
42.5°	2283.4	2348.7	2285.4	2258.5	2276.0	2280.7
45°	2169.7	2242.4	2319.7	2301.6	2344.6	2344.6
47.5°	2106.5	2214.8	2317.0	2317.0	2380.9	2403.1
50°	2033.9	2192.6	2280.7	2312.3	2362.8	2344.6
52.5°	2029.2	2153.6	2228.9	2285.4	2308.3	2287.5
55°	2035.9	2122.0	2176.5	2240.4	2267.3	2269.3
57.5°	2045.3	2103.8	2140.2	2169.7	2251.1	2251.1
60°	2067.5	2088.4	2108.5	2124.7	2231.0	2233.0
62.5°	2103.8	2072.2	2067.5	2083.7	2219.5	2210.8
65°	2161.0	2049.4	2015.7	2031.2	2208.1	2181.2
67.5°	2237.7	2015.7	1949.8	1961.2	2199.3	2140.2
70°	2308.3	1961.2	1868.4	1857.0	2113.3	2009.0
72.5°	2315.0	1898.0	1754.8	1721.1	1836.8	1736.6
75°	2201.4	1854.3	1630.3	1530.1	1516.7	1503.2
77.5°	1984.1	1829.4	1485.1	1328.3	1301.4	1310.2
80°	1659.9	1736.6	1310.2	1124.6	1271.9	1256.4
82.5°	1240.2	1532.8	1113.1	995.4	992.7	877.7
85°	689.4	1195.2	906.6	745.9	519.2	503.1
87.5°	193.0	664.5	634.9	421.7	287.9	299.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)