

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: P301678

Luminaire Tested: **GLNA-AF-10-LED-E1-T2R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301678
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-10-LED-E1-T2R-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 49410.9 lumens
Efficiency: N/A
Efficacy: 117.9 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

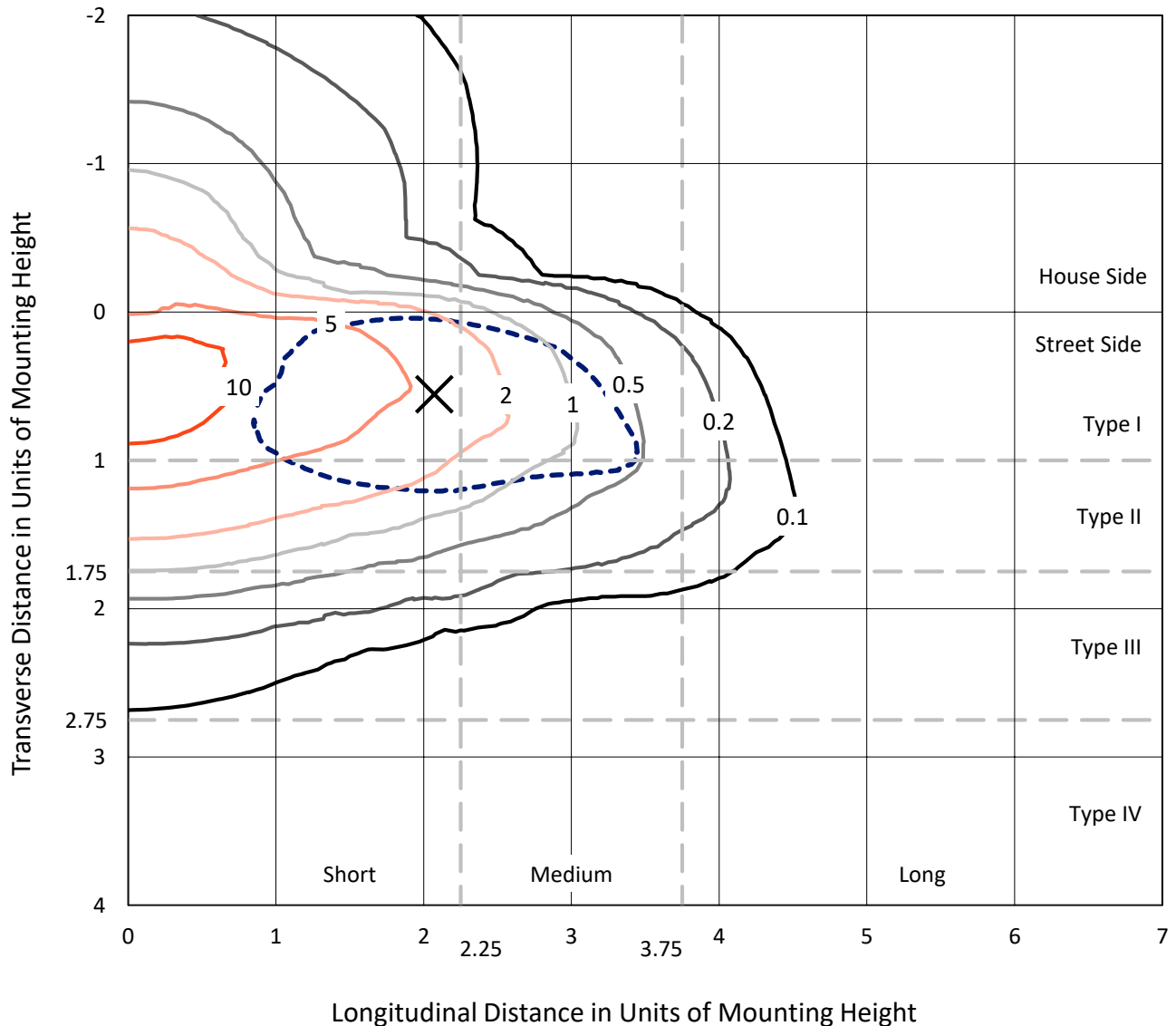
Input Watts (W): 419
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

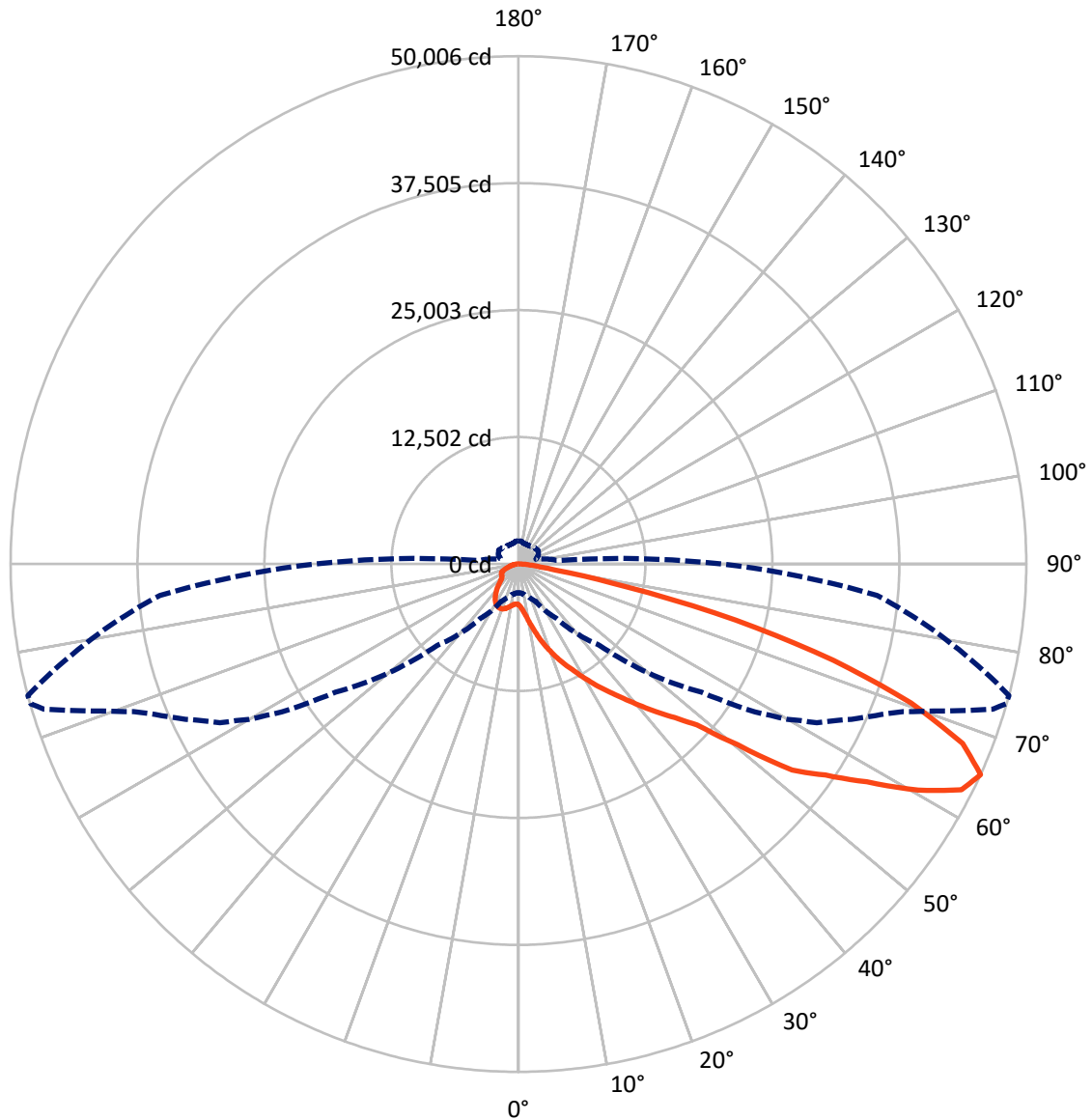
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.9 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	7618.0	0.0	7618.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	41792.9	0.0	41792.9
	% Fixture	84.6	0.0	84.6
Total	Lumens	49410.9	0.0	49410.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.3	1.0
10°-20°	1939.3	3.9
20°-30°	3978.8	8.1
30°-40°	6694.2	13.5
40°-50°	9249.5	18.7
50°-60°	11546.1	23.4
60°-70°	10390.3	21.0
70°-80°	4355.5	8.8
80°-90°	760.9	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°	49410.9	100.0
0°-180°	49410.9	100.0



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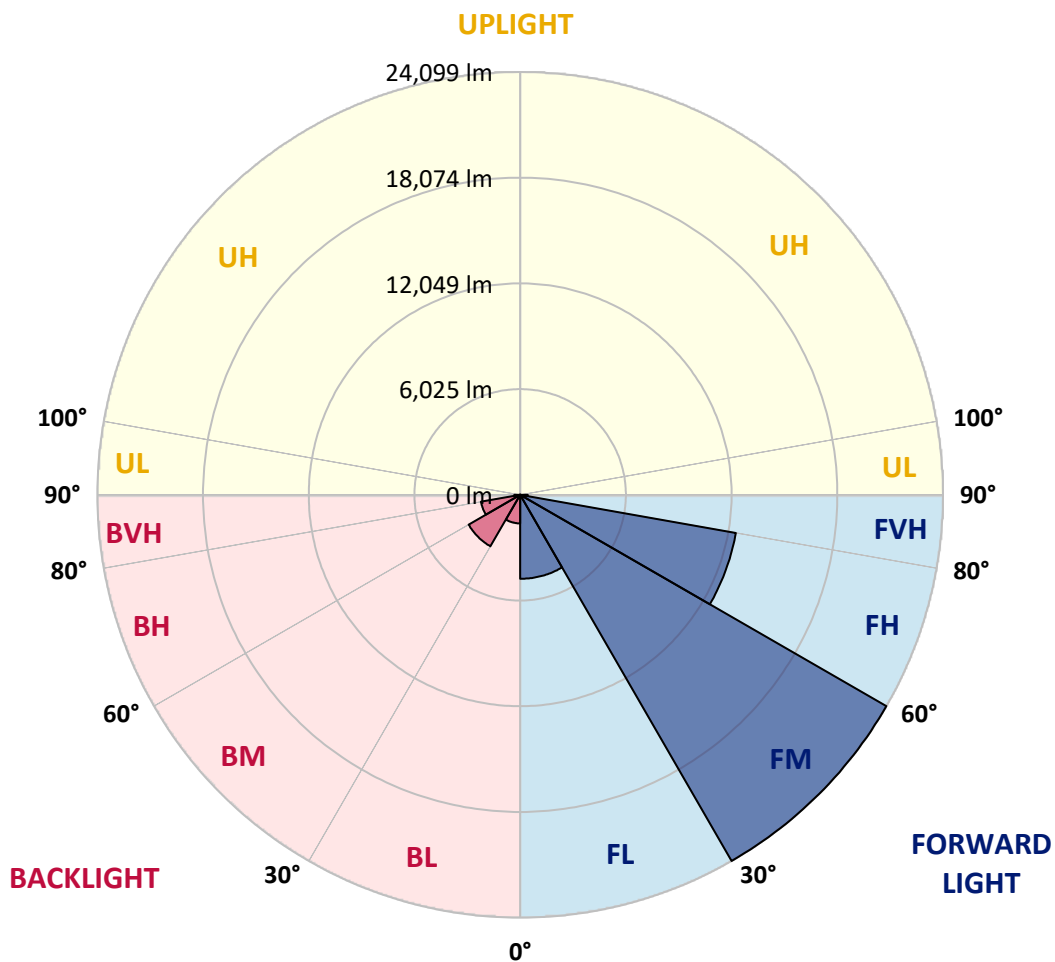
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4785.3	9.7			
FM (30°-60°)	24098.9	48.8			
FH (60°-80°)	12481.0	25.3			G5
FVH (80°-90°)	427.7	0.9			G3/500
BL (0°-30°)	1629.2	3.3	B3/2500		
BM (30°-60°)	3390.9	6.9	B3/5000		
BH (60°-80°)	2264.7	4.6	B3/2500		G3/2500
BVH (80°-90°)	333.2	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°	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	5098.6	5042.4	5056.3	4962.6	4848.1	4698.3	4532.5	4530.4	4532.5	4515.8	4455.4
5°	7069.6	7002.3	6976.6	6765.7	6457.0	6017.8	5540.5	5489.2	5467.7	5414.2	5290.1
7.5°	8508.5	8471.0	8430.8	8271.9	7991.6	7500.4	6859.4	6749.8	6644.3	6618.6	6478.5
10°	9436.8	9427.1	9343.1	9300.8	9126.0	8700.0	8075.6	7970.1	7855.6	7816.1	7668.3
12.5°	10170.8	10168.7	10129.2	10141.0	9988.3	9680.3	9141.9	9046.2	8962.2	8840.1	8735.4
15°	10678.6	10680.7	10739.7	10804.9	10781.3	10573.2	10068.1	10025.8	9953.6	9869.7	9745.5
17.5°	11094.9	11106.7	11167.0	11286.4	11415.4	11398.8	10999.2	10963.8	10900.6	10786.2	10721.0
20°	12035.0	12079.4	11962.8	11962.8	11976.7	12039.8	11847.6	11819.9	11731.1	11670.0	11618.7
22.5°	13623.0	13674.4	13410.0	13141.5	12877.2	12685.0	12493.6	12528.2	12467.9	12425.6	12395.0
25°	15685.6	15725.9	15297.8	14844.1	14305.7	13604.3	13129.7	13108.2	13075.6	13050.0	13036.1
27.5°	17626.8	17643.5	17239.0	16574.4	15950.0	14941.9	13775.0	13749.3	13709.7	13660.5	13618.2
30°	19287.7	19282.9	18866.6	18232.5	17563.7	16448.1	14755.3	14675.5	14558.2	14425.0	14322.4
32.5°	20725.9	20719.0	20262.5	19605.5	18904.1	17940.4	16097.7	15934.0	15751.5	15491.4	15335.3
35°	21857.5	21853.3	21422.5	20737.7	19932.9	19346.0	17636.5	17435.3	17203.6	16855.3	16614.6
37.5°	22285.5	22285.5	22044.8	21577.2	20866.1	20463.7	19346.0	19102.5	18854.8	18459.3	18188.1
40°	22035.1	22039.9	22091.3	22005.2	21659.1	21350.3	20941.0	20796.0	20583.0	20227.8	19944.7
42.5°	21195.6	21221.3	21563.3	21981.7	22154.4	22105.8	22355.6	22290.4	22140.5	21867.2	21642.4
45°	20131.4	20211.1	20585.1	21376.0	22292.5	22758.0	23541.3	23548.2	23520.5	23373.4	23199.9
47.5°	18670.3	18782.0	19275.9	20344.3	21969.9	23392.1	24745.7	24808.8	24867.8	24772.0	24692.2
50°	16729.1	16862.3	17601.1	19018.5	21312.9	24049.1	27021.3	27307.1	27573.5	27540.9	27594.3
52.5°	14649.8	14806.6	15711.3	17290.3	20183.4	24201.1	28476.1	28941.6	29407.2	29788.0	30192.5
55°	12773.8	12689.9	13595.3	15257.6	18326.1	23515.6	29783.9	30345.2	30864.1	31331.7	31813.9
57.5°	10231.8	10369.9	11277.4	12921.6	15868.1	21581.3	30683.7	31505.1	32251.0	33025.2	33707.9
60°	7478.9	7617.0	8601.5	10271.4	13199.8	18648.8	29996.2	31240.8	32435.5	33621.2	34547.4
62.5°	4515.8	4619.2	5486.4	7077.2	10178.4	15171.5	26932.5	28564.9	30323.6	31741.0	33160.5
65°	2811.2	2869.5	3190.0	4064.8	6536.8	11326.6	22005.2	23784.8	25678.8	27477.8	28953.4
67.5°	2301.3	2322.1	2381.0	2567.7	3589.6	7386.0	16378.0	17954.3	19663.7	21403.7	23045.9
70°	2069.5	2055.7	2055.7	2067.5	2301.3	3971.2	10723.0	11749.8	13174.1	14687.3	16188.6
72.5°	1868.3	1854.5	1828.8	1794.1	1878.1	2422.7	5542.6	6316.8	7343.6	8688.2	10126.4
75°	1678.9	1660.2	1630.4	1586.0	1644.3	1828.8	2661.3	2986.7	3486.9	4202.9	5004.9
77.5°	1482.6	1459.0	1431.3	1398.7	1473.6	1422.2	1559.6	1676.9	1868.3	2098.0	2399.8
80°	1260.6	1239.8	1230.1	1214.1	1302.9	1083.0	1101.7	1173.9	1286.3	1410.5	1550.6
82.5°	987.2	987.2	1024.0	1031.6	1129.5	779.1	823.5	886.6	944.9	1010.1	1076.0
85°	650.1	654.9	781.2	830.5	890.8	523.8	617.5	638.3	685.5	722.9	750.7
87.5°	203.3	219.9	477.3	528.7	512.0	296.9	378.8	388.5	421.1	446.8	470.4
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°	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4455.4	4427.0	4401.3	4399.2	4380.5	4354.8	4363.9	4324.3	4326.4	4305.6	4282.0
5°	5238.7	5220.0	5126.3	5100.7	5030.6	4986.2	4979.2	4885.6	4873.8	4820.4	4761.4
7.5°	6366.1	6305.1	6173.9	6110.8	5991.5	5902.7	5861.0	5736.8	5675.8	5535.7	5472.5
10°	7546.9	7469.9	7308.3	7219.5	7105.0	6962.1	6885.1	6705.4	6634.6	6506.2	6352.2
12.5°	8641.7	8564.7	8398.2	8330.2	8178.3	8026.3	7942.4	7739.1	7647.5	7441.5	7320.1
15°	9653.9	9576.9	9431.9	9361.8	9209.9	9085.7	8973.3	8772.8	8665.3	8473.1	8314.2
17.5°	10636.3	10554.4	10428.2	10365.0	10218.0	10091.7	9970.3	9780.2	9670.6	9479.1	9336.2
20°	11548.6	11487.6	11396.7	11312.0	11165.0	11050.5	10905.5	10741.8	10582.9	10442.1	10306.8
22.5°	12343.7	12320.1	12222.3	12184.8	12058.6	11960.0	11833.8	11672.8	11557.6	11380.0	11253.8
25°	13029.1	13022.2	12975.0	12963.2	12874.4	12780.8	12753.0	12619.8	12514.4	12357.6	12227.1
27.5°	13618.2	13625.1	13614.0	13646.6	13623.0	13580.7	13583.5	13539.1	13478.0	13346.9	13232.4
30°	14273.1	14235.6	14257.1	14303.6	14317.5	14322.4	14399.4	14425.0	14420.9	14334.1	14277.9
32.5°	15199.3	15110.5	15028.6	15021.7	15068.2	15086.9	15218.0	15286.0	15344.3	15365.1	15374.8
35°	16380.1	16202.5	16031.8	15940.9	15861.2	15882.0	15975.6	16085.9	16214.3	16303.1	16408.5
37.5°	17867.6	17650.4	17348.6	17133.5	17079.4	16962.9	17023.2	17110.0	17236.2	17374.3	17556.7
40°	19670.7	19341.1	19001.9	18716.7	18562.7	18347.0	18344.9	18328.2	18405.9	18534.3	18791.7
42.5°	21406.5	21113.7	20753.7	20454.7	20253.5	19965.5	19907.3	19755.3	19790.0	19902.4	20152.9
45°	23031.3	22790.6	22570.7	22225.2	22053.8	21743.0	21644.5	21464.8	21364.2	21415.5	21666.0
47.5°	24605.5	24451.5	24221.9	23997.8	23866.7	23588.4	23462.2	23333.1	23204.8	23199.9	23462.2
50°	27674.1	27592.2	27321.0	27087.2	27150.3	26809.0	26829.8	26483.6	26640.4	26659.1	27208.6
52.5°	30557.4	30843.3	31044.5	31289.4	31449.0	31479.5	31584.2	31741.0	31930.4	32304.4	32814.3
55°	32208.6	32566.6	32774.8	32962.1	33270.8	33336.0	33511.6	33719.7	33885.5	34306.6	34739.5
57.5°	34171.3	34835.3	35157.9	35454.8	35871.1	36030.0	36322.7	36549.6	36764.7	37262.8	37786.6
60°	35379.9	36189.5	36846.5	37316.2	37838.0	38212.6	38654.5	39009.7	39514.8	40111.5	40892.7
62.5°	34419.0	35606.8	36479.5	37286.4	37994.7	38710.7	39344.1	40008.8	40775.4	41678.0	42890.0
65°	30590.7	31799.3	33293.7	34131.1	35069.1	36172.9	37136.5	38212.6	39257.4	40572.1	42363.5
67.5°	24627.0	26031.9	27711.6	28555.9	29634.0	30866.2	31947.1	33261.1	34482.1	36074.4	38289.6
70°	17751.0	19568.0	20980.5	21862.3	23120.8	24390.5	25433.9	26963.0	27973.1	29605.6	31895.7
72.5°	11239.9	12673.2	14404.2	15515.0	16632.6	17919.6	18985.9	20304.8	21246.9	22734.4	24808.8
75°	6043.5	7100.1	8620.2	9675.4	10872.9	11971.8	13220.6	14104.5	14801.8	15978.4	17662.2
77.5°	2832.0	3475.1	4244.5	5056.3	5868.0	6714.4	7537.9	8253.2	8552.9	9226.6	10220.0
80°	1719.2	1927.3	2151.4	2401.9	2741.1	3014.5	3377.3	3638.9	3657.6	3870.6	4174.5
82.5°	1148.2	1225.2	1293.2	1356.3	1443.1	1511.0	1588.1	1678.9	1716.4	1765.7	1864.2
85°	783.3	820.7	834.6	874.9	865.1	888.7	919.3	949.8	965.7	963.7	1008.1
87.5°	481.5	500.2	509.9	518.9	512.0	503.0	516.9	533.5	537.7	523.8	528.7
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°	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4286.9	4266.0	4244.5	4230.7	4225.8	4102.3	4048.2	4013.5	3938.6	3877.5	3828.3
5°	4728.8	4684.4	4649.7	4607.4	4583.8	4270.2	4155.7	4076.6	3945.5	3868.5	3797.7
7.5°	5439.9	5315.7	5243.6	5161.7	5091.6	4525.5	4336.1	4211.9	4029.5	3926.8	3847.0
10°	6246.8	6118.4	6003.3	5877.0	5767.4	4864.8	4588.6	4396.5	4155.7	4022.5	3917.1
12.5°	7147.3	7021.0	6876.0	6714.4	6574.2	5294.9	4911.3	4637.9	4307.7	4130.1	3983.0
15°	8211.6	7988.9	7813.3	7626.7	7463.0	5809.7	5288.0	4909.2	4469.3	4228.6	4032.2
17.5°	9200.2	8966.4	8728.4	8564.7	8375.3	6386.9	5666.8	5184.6	4602.5	4291.7	4041.3
20°	10166.6	9911.3	9706.0	9486.0	9286.9	6985.6	6071.3	5428.1	4689.2	4293.8	3983.0
22.5°	11017.9	10858.3	10629.4	10390.7	10189.5	7584.4	6450.1	5634.2	4721.9	4240.4	3879.6
25°	11985.7	11817.8	11536.8	11335.6	11111.5	8194.9	6821.9	5793.0	4703.1	4139.8	3720.7
27.5°	13019.4	12832.8	12544.9	12334.7	12063.4	8828.3	7163.3	5907.5	4633.0	3976.0	3507.7
30°	14097.6	13926.9	13643.8	13431.5	13157.5	9499.9	7544.8	5984.5	4492.9	3749.2	3260.1
32.5°	15255.5	15112.6	14832.3	14610.3	14317.5	10227.0	7900.0	6008.1	4279.9	3480.0	2998.5
35°	16354.4	16256.6	16020.0	15811.9	15508.0	10914.5	8276.8	5996.3	4027.4	3185.1	2759.8
37.5°	17592.1	17533.2	17416.6	17152.3	16780.4	11847.6	8728.4	5947.1	3718.6	2893.1	2577.4
40°	18911.0	18915.9	18789.6	18609.2	18263.0	12979.9	9266.1	5851.3	3381.5	2635.7	2410.9
42.5°	20306.9	20379.7	20318.7	20190.3	19858.0	14121.2	9909.2	5734.8	3054.7	2385.2	2247.8
45°	21906.7	21995.5	22089.2	21899.8	21577.2	15627.3	10755.6	5582.8	2700.9	2177.1	2135.4
47.5°	23752.2	23892.3	23976.3	23979.0	23656.4	17493.6	12130.7	5491.3	2388.0	2036.9	2081.3
50°	27645.7	27690.8	27889.2	28235.4	27987.7	21813.1	14532.6	5435.1	2175.0	1950.2	2041.8
52.5°	33256.2	33745.4	34089.5	34065.9	33728.7	24556.3	15856.3	5145.1	2048.7	1917.6	2023.1
55°	35541.5	36152.1	36788.3	36956.2	36694.6	26897.8	17107.9	4855.1	1987.7	1941.2	2030.0
57.5°	38586.5	39615.4	40488.2	40855.2	40476.4	29893.5	18754.2	4703.1	1968.9	2004.3	2074.4
60°	42143.5	43415.9	44562.0	45221.1	45221.1	33336.0	20461.6	4640.0	1943.3	2098.0	2149.3
62.5°	44428.8	46297.2	48028.2	48993.9	48965.5	35733.0	21219.2	4424.9	1885.0	2163.2	2252.0
65°	44437.9	46660.0	48864.9	49950.6	50006.1	35438.9	19968.3	3908.1	1777.5	2172.9	2355.4
67.5°	40733.8	43102.3	45672.8	46886.9	47167.2	32622.8	17285.5	3213.6	1601.9	2079.3	2392.8
70°	34402.4	36715.4	39339.3	40532.6	41030.7	27809.4	13922.0	2476.8	1377.8	1873.2	2315.1
72.5°	27103.1	29371.8	31198.5	32070.6	32459.1	21256.7	10138.2	1871.1	1129.5	1578.3	2107.0
75°	19189.2	20891.7	21862.3	22056.6	22116.9	12814.1	6160.1	1391.7	931.0	1228.0	1779.5
77.5°	10830.6	11560.4	11480.6	11567.4	10847.2	4946.6	2682.8	996.3	767.3	933.1	1379.9
80°	4228.6	4359.7	4095.4	4013.5	3681.2	1840.6	1183.6	694.5	612.6	706.3	965.7
82.5°	1864.2	1924.5	1868.3	1882.9	1801.0	949.8	708.3	503.0	467.6	516.9	641.1
85°	1026.8	1045.5	1040.7	1071.2	1026.8	378.8	336.5	308.7	327.5	351.1	411.4
87.5°	500.2	505.1	489.1	514.8	498.1	191.5	165.8	175.5	191.5	196.3	196.3
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°	4015.6	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	3793.6	3774.8	3776.9	3772.1	3763.1	3763.1
5°	3761.0	3742.2	3742.2	3737.4	3725.6	3727.7
7.5°	3793.6	3763.1	3751.3	3734.6	3718.6	3718.6
10°	3831.0	3776.9	3744.3	3716.6	3695.1	3695.1
12.5°	3858.8	3774.8	3720.7	3683.3	3662.5	3662.5
15°	3868.5	3758.2	3683.3	3638.9	3620.1	3618.1
17.5°	3838.0	3695.1	3604.2	3552.8	3529.2	3522.3
20°	3744.3	3580.6	3471.0	3412.0	3379.4	3367.6
22.5°	3604.2	3416.9	3288.5	3227.5	3185.1	3178.2
25°	3407.8	3206.6	3080.4	3021.4	2998.5	2990.9
27.5°	3178.2	2990.9	2883.3	2845.9	2825.1	2823.0
30°	2961.0	2801.5	2722.4	2693.9	2668.3	2664.1
32.5°	2757.1	2656.5	2626.6	2586.4	2526.0	2519.1
35°	2612.1	2603.1	2582.2	2492.7	2418.5	2397.0
37.5°	2523.3	2610.0	2502.5	2326.9	2273.5	2268.7
40°	2471.9	2537.8	2352.6	2292.2	2296.4	2292.2
42.5°	2355.4	2422.7	2357.5	2329.7	2347.7	2352.6
45°	2238.1	2313.1	2392.8	2374.1	2418.5	2418.5
47.5°	2172.9	2284.6	2390.1	2390.1	2456.0	2478.9
50°	2098.0	2261.7	2352.6	2385.2	2437.2	2418.5
52.5°	2093.1	2221.5	2299.2	2357.5	2381.0	2359.5
55°	2100.1	2188.9	2245.1	2311.0	2338.7	2340.8
57.5°	2109.8	2170.1	2207.6	2238.1	2322.1	2322.1
60°	2132.7	2154.2	2175.0	2191.6	2301.3	2303.3
62.5°	2170.1	2137.5	2132.7	2149.3	2289.5	2280.4
65°	2229.1	2113.9	2079.3	2095.2	2277.7	2249.9
67.5°	2308.2	2079.3	2011.3	2023.1	2268.7	2207.6
70°	2381.0	2023.1	1927.3	1915.5	2179.9	2072.3
72.5°	2388.0	1957.8	1810.1	1775.4	1894.7	1791.3
75°	2270.7	1912.7	1681.7	1578.3	1564.5	1550.6
77.5°	2046.6	1887.1	1531.9	1370.2	1342.5	1351.5
80°	1712.2	1791.3	1351.5	1160.0	1311.9	1296.0
82.5°	1279.3	1581.1	1148.2	1026.8	1024.0	905.4
85°	711.1	1232.8	935.2	769.4	535.6	518.9
87.5°	199.1	685.5	654.9	435.0	296.9	308.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)