

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: P301606

Luminaire Tested: **GLNA-AF-08-LED-E1-T2R-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301606
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-7050
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 49521.7 lumens
Efficiency: N/A
Efficacy: 111.3 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

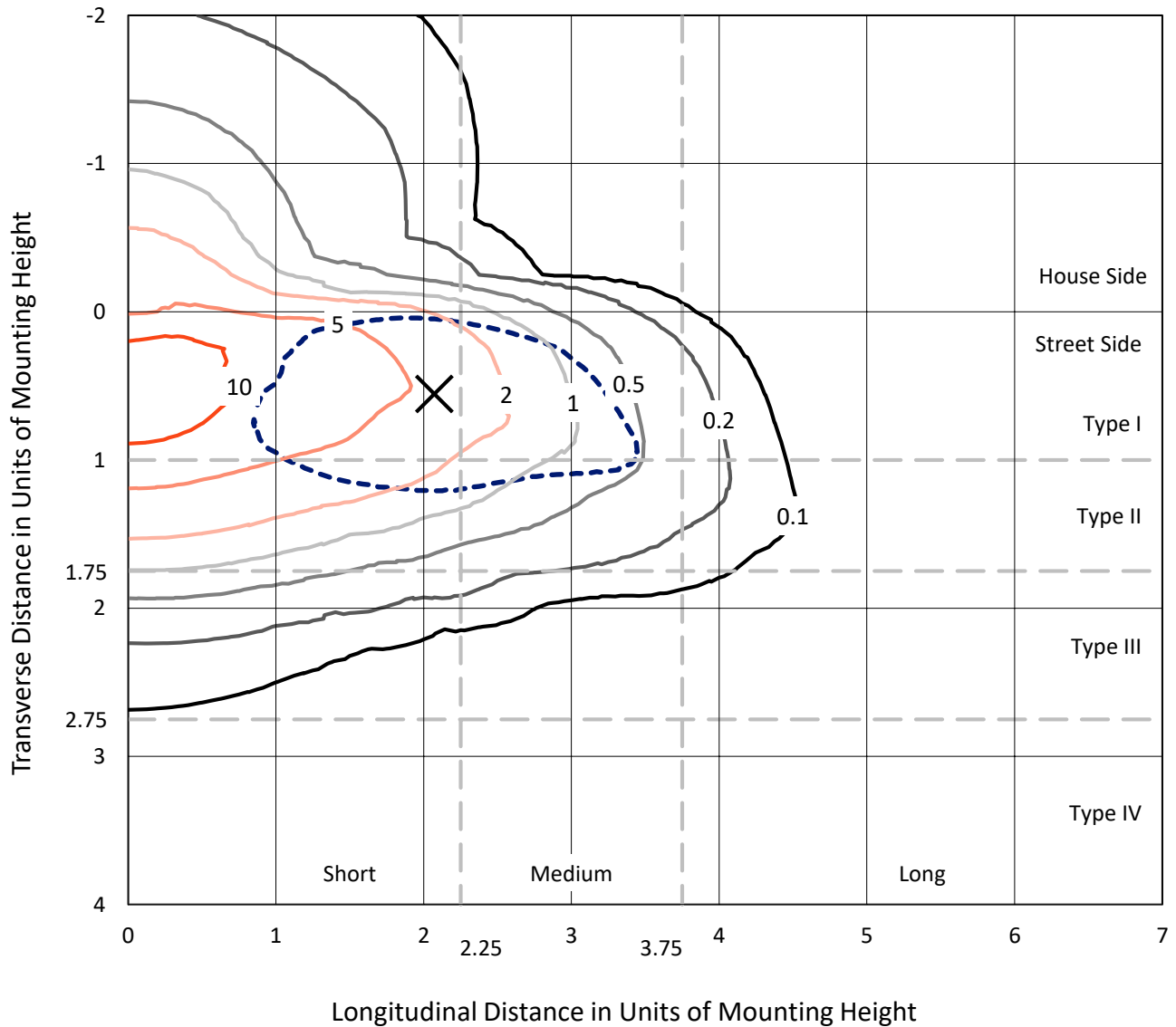


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Iso-Footcandle Lines of Horizontal Illumination

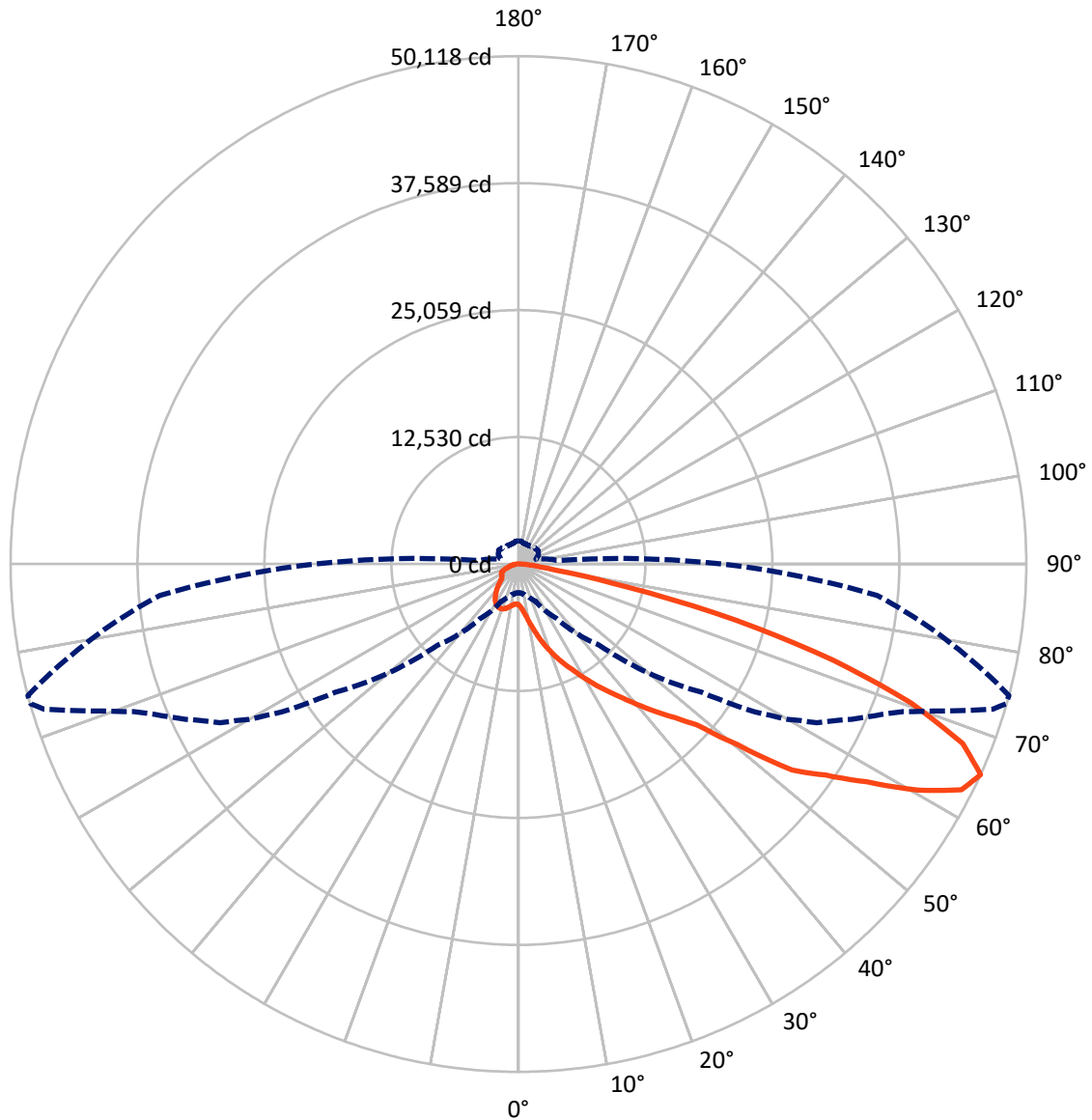
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.9 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	7635.1	0.0	7635.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	41886.6	0.0	41886.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	49521.7	0.0	49521.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	497.5	1.0
10°-20°	1943.7	3.9
20°-30°	3987.8	8.1
30°-40°	6709.2	13.5
40°-50°	9270.2	18.7
50°-60°	11572.0	23.4
60°-70°	10413.6	21.0
70°-80°	4365.3	8.8
80°-90°	762.6	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°	49521.7	100.0
0°-180°	49521.7	100.0

Coefficient of Utilization



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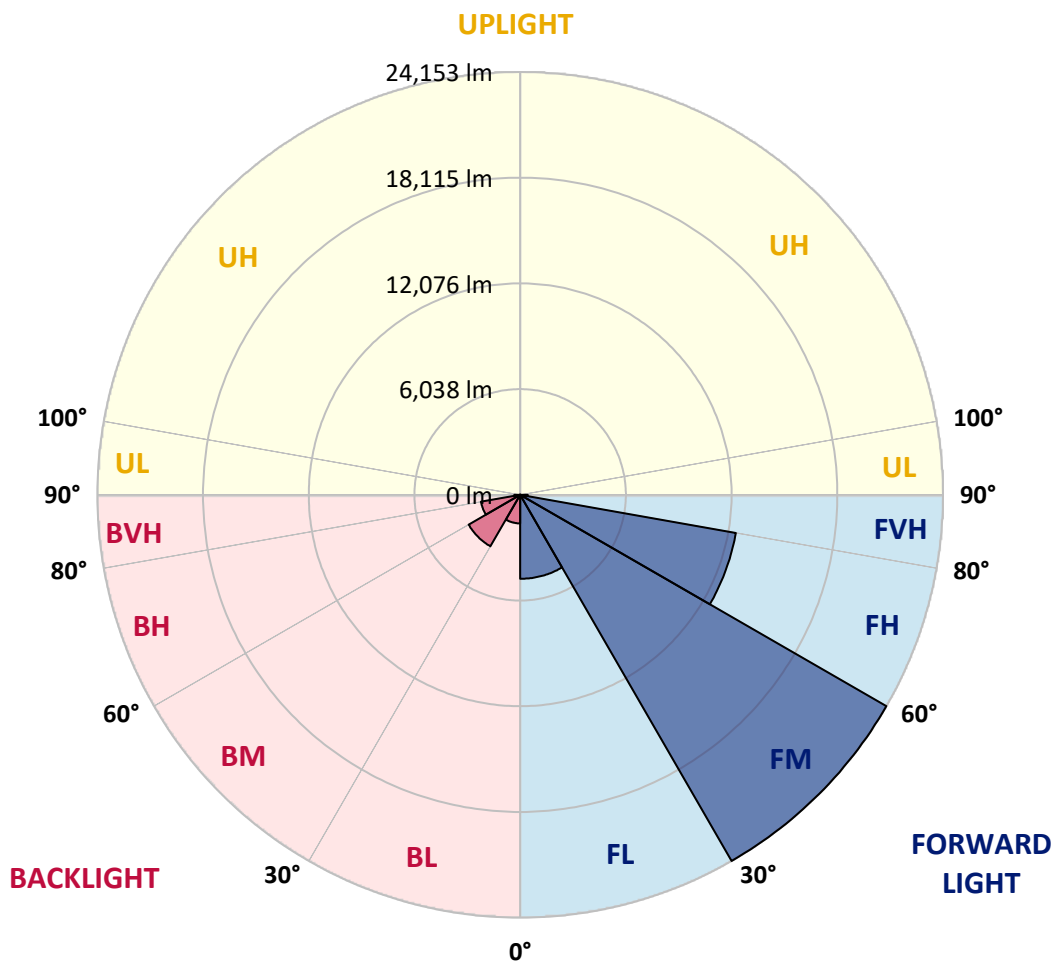
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4796.0	9.7			
FM (30°-60°)	24152.9	48.8			
FH (60°-80°)	12509.0	25.3			G5
FVH (80°-90°)	428.7	0.9			G3/500
BL (0°-30°)	1632.8	3.3	B3/2500		
BM (30°-60°)	3398.5	6.9	B3/5000		
BH (60°-80°)	2269.8	4.6	B3/2500		G3/2500
BVH (80°-90°)	334.0	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°	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6
2.5°	5110.0	5053.7	5067.6	4973.7	4859.0	4708.8	4542.6	4540.5	4542.6	4525.9	4465.4
5°	7085.5	7018.0	6992.3	6780.9	6471.5	6031.3	5552.9	5501.5	5479.9	5426.4	5301.9
7.5°	8527.6	8490.0	8449.7	8290.5	8009.5	7517.3	6874.8	6764.9	6659.2	6633.5	6493.0
10°	9457.9	9448.2	9364.1	9321.6	9146.4	8719.5	8093.7	7988.0	7873.3	7833.6	7685.5
12.5°	10193.6	10191.5	10151.9	10163.7	10010.7	9702.0	9162.4	9066.5	8982.3	8859.9	8754.9
15°	10702.6	10704.7	10763.8	10829.1	10805.5	10596.9	10090.7	10048.3	9976.0	9891.8	9767.4
17.5°	11119.8	11131.6	11192.1	11311.7	11441.0	11424.3	11023.8	10988.4	10925.1	10810.4	10745.0
20°	12062.0	12106.5	11989.6	11989.6	12003.5	12066.8	11874.2	11846.4	11757.4	11696.2	11644.8
22.5°	13653.6	13705.0	13440.1	13171.0	12906.1	12713.5	12521.6	12556.3	12495.8	12453.4	12422.8
25°	15720.8	15761.1	15332.1	14877.4	14337.8	13634.8	13159.2	13137.6	13105.0	13079.2	13065.3
27.5°	17666.3	17683.0	17277.7	16611.5	15985.7	14975.4	13805.9	13780.1	13740.5	13691.1	13648.7
30°	19331.0	19326.1	18908.9	18273.4	17603.1	16485.0	14788.4	14708.4	14590.9	14457.4	14354.5
32.5°	20772.4	20765.4	20307.9	19649.4	18946.5	17980.6	16133.8	15969.7	15786.9	15526.1	15369.7
35°	21906.5	21902.3	21470.5	20784.2	19977.6	19389.4	17676.1	17474.4	17242.2	16893.1	16651.9
37.5°	22335.5	22335.5	22094.2	21625.6	20912.9	20509.6	19389.4	19145.3	18897.1	18500.7	18228.9
40°	22084.5	22089.4	22140.8	22054.6	21707.6	21398.2	20988.0	20842.6	20629.2	20273.1	19989.5
42.5°	21243.1	21268.9	21611.7	22031.0	22204.1	22155.4	22405.7	22340.4	22190.2	21916.2	21690.9
45°	20176.5	20256.5	20631.2	21423.9	22342.5	22809.0	23594.1	23601.0	23573.2	23425.8	23252.0
47.5°	18712.1	18824.1	19319.2	20390.0	22019.1	23444.6	24801.2	24864.4	24923.5	24827.6	24747.6
50°	16766.6	16900.1	17640.6	19061.2	21360.7	24103.0	27081.9	27368.3	27635.3	27602.7	27656.2
52.5°	14682.7	14839.8	15746.5	17329.1	20228.6	24255.3	28540.0	29006.5	29473.1	29854.8	30260.2
55°	12802.5	12718.3	13625.8	15291.8	18367.2	23568.3	29850.7	30413.2	30933.3	31402.0	31885.2
57.5°	10254.8	10393.2	11302.6	12950.6	15903.7	21629.7	30752.5	31575.8	32323.3	33099.3	33783.5
60°	7495.7	7634.1	8620.7	10294.4	13229.4	18690.6	30063.4	31310.9	32508.2	33696.6	34624.8
62.5°	4525.9	4629.5	5498.7	7093.1	10201.2	15205.6	26992.9	28629.0	30391.6	31812.2	33234.9
65°	2817.5	2875.9	3197.1	4074.0	6551.4	11352.0	22054.6	23838.1	25736.4	27539.4	29018.4
67.5°	2306.4	2327.3	2386.4	2573.4	3597.7	7402.5	16414.7	17994.5	19707.8	21451.7	23097.6
70°	2074.2	2060.3	2060.3	2072.1	2306.4	3980.1	10747.1	11776.2	13203.7	14720.2	16224.9
72.5°	1872.5	1858.6	1832.9	1798.1	1882.3	2428.1	5555.0	6331.0	7360.1	8707.7	10149.1
75°	1682.7	1663.9	1634.0	1589.5	1647.9	1832.9	2667.3	2993.4	3494.7	4212.3	5016.1
77.5°	1485.9	1462.3	1434.5	1401.8	1476.9	1425.4	1563.1	1680.6	1872.5	2102.7	2405.2
80°	1263.4	1242.6	1232.8	1216.8	1305.8	1085.4	1104.2	1176.5	1289.1	1413.6	1554.1
82.5°	989.5	989.5	1026.3	1034.0	1132.0	780.9	825.4	888.6	947.0	1012.4	1078.5
85°	651.5	656.4	782.9	832.3	892.8	525.0	618.8	639.7	687.0	724.5	752.4
87.5°	203.7	220.4	478.4	529.8	513.2	297.6	379.7	389.4	422.1	447.8	471.4
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°	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6
2.5°	4465.4	4436.9	4411.2	4409.1	4390.3	4364.6	4373.6	4334.0	4336.1	4315.2	4291.6
5°	5250.5	5231.7	5137.8	5112.1	5041.9	4997.4	4990.4	4896.5	4884.7	4831.2	4772.1
7.5°	6380.4	6319.2	6187.8	6124.5	6004.9	5915.9	5874.2	5749.7	5688.5	5548.1	5484.8
10°	7563.8	7486.7	7324.6	7235.6	7120.9	6977.7	6900.5	6720.4	6649.5	6520.8	6366.5
12.5°	8661.1	8583.9	8417.0	8348.9	8196.6	8044.3	7960.2	7756.4	7664.7	7458.1	7336.5
15°	9675.6	9598.4	9453.1	9382.8	9230.6	9106.1	8993.4	8792.5	8684.7	8492.1	8332.9
17.5°	10660.2	10578.1	10451.6	10388.3	10240.9	10114.3	9992.6	9802.1	9692.3	9500.3	9357.1
20°	11574.5	11513.3	11422.2	11337.4	11190.0	11075.3	10930.0	10765.9	10606.6	10465.5	10329.9
22.5°	12371.4	12347.7	12249.7	12212.1	12085.6	11986.9	11860.3	11699.0	11583.6	11405.6	11279.0
25°	13058.4	13051.4	13004.1	12992.3	12903.3	12809.4	12781.6	12648.1	12542.4	12385.3	12254.6
27.5°	13648.7	13655.7	13644.5	13677.2	13653.6	13611.2	13613.9	13569.4	13508.2	13376.8	13262.1
30°	14305.1	14267.6	14289.1	14335.7	14349.6	14354.5	14431.7	14457.4	14453.2	14366.3	14310.0
32.5°	15233.4	15144.4	15062.3	15055.4	15102.0	15120.7	15252.1	15320.3	15378.7	15399.6	15409.3
35°	16416.8	16238.8	16067.8	15976.7	15896.7	15917.6	16011.4	16122.0	16250.6	16339.6	16445.3
37.5°	17907.6	17690.0	17387.5	17172.0	17117.7	17000.9	17061.4	17148.3	17274.9	17413.2	17596.1
40°	19714.8	19384.5	19044.5	18758.7	18604.3	18388.1	18386.0	18369.3	18447.2	18575.8	18833.8
42.5°	21454.5	21161.1	20800.2	20500.5	20298.9	20010.3	19951.9	19799.6	19834.4	19947.0	20198.1
45°	23083.0	22841.7	22621.3	22275.0	22103.3	21791.8	21693.0	21512.9	21412.1	21463.6	21714.6
47.5°	24660.7	24506.3	24276.2	24051.6	23920.2	23641.3	23514.8	23385.5	23256.8	23252.0	23514.8
50°	27736.2	27654.1	27382.2	27147.9	27211.2	26869.1	26889.9	26543.0	26700.1	26718.9	27269.6
52.5°	30626.0	30912.5	31114.1	31359.6	31519.5	31550.1	31655.1	31812.2	32002.0	32376.8	32887.9
55°	32280.9	32639.7	32848.3	33036.0	33345.4	33410.8	33586.7	33795.3	33961.5	34383.6	34817.4
57.5°	34248.0	34913.4	35236.7	35534.3	35951.5	36110.8	36404.2	36631.6	36847.1	37346.4	37871.4
60°	35459.2	36270.7	36929.2	37399.9	37922.8	38298.3	38741.2	39097.2	39603.4	40201.4	40984.4
62.5°	34496.2	35686.6	36561.3	37370.0	38080.0	38797.5	39432.4	40098.5	40866.8	41771.5	42986.2
65°	30659.3	31870.6	33368.4	34207.6	35147.7	36254.0	37219.8	38298.3	39345.5	40663.1	42458.5
67.5°	24682.3	26090.3	27773.7	28619.9	29700.5	30935.4	32018.7	33335.7	34559.5	36155.3	38375.5
70°	17790.8	19611.9	21027.6	21911.4	23172.7	24445.2	25490.9	27023.4	28035.9	29672.0	31967.3
72.5°	11265.1	12701.7	14436.5	15549.7	16669.9	17959.8	19028.5	20350.3	21294.6	22785.4	24864.4
75°	6057.1	7116.0	8639.5	9697.1	10897.3	11998.7	13250.3	14136.1	14834.9	16014.2	17701.8
77.5°	2838.4	3482.9	4254.1	5067.6	5881.1	6729.4	7554.8	8271.7	8572.1	9247.2	10243.0
80°	1723.0	1931.6	2156.2	2407.2	2747.3	3021.2	3384.9	3647.0	3665.8	3879.3	4183.8
82.5°	1150.8	1228.0	1296.1	1359.4	1446.3	1514.4	1591.6	1682.7	1720.3	1769.6	1868.4
85°	785.0	822.6	836.5	876.8	867.1	890.7	921.3	951.9	967.9	965.8	1010.3
87.5°	482.6	501.3	511.1	520.1	513.2	504.1	518.0	534.7	538.9	525.0	529.8
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°	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6
2.5°	4296.5	4275.6	4254.1	4240.1	4235.3	4111.5	4057.3	4022.5	3947.4	3886.2	3836.9
5°	4739.4	4694.9	4660.1	4617.7	4594.1	4279.8	4165.0	4085.8	3954.4	3877.2	3806.3
7.5°	5452.1	5327.6	5255.3	5173.3	5103.1	4535.7	4345.8	4221.4	4038.5	3935.6	3855.6
10°	6260.8	6132.1	6016.7	5890.2	5780.3	4875.7	4598.9	4406.3	4165.0	4031.5	3925.9
12.5°	7163.3	7036.8	6891.5	6729.4	6589.0	5306.8	4922.3	4648.3	4317.3	4139.3	3991.9
15°	8230.0	8006.8	7830.8	7643.8	7479.7	5822.7	5299.8	4920.2	4479.3	4238.1	4041.3
17.5°	9220.8	8986.5	8748.0	8583.9	8394.1	6401.2	5679.5	5196.2	4612.8	4301.3	4050.3
20°	10189.4	9933.5	9727.7	9507.3	9307.7	7001.3	6084.9	5440.3	4699.8	4303.4	3991.9
22.5°	11042.6	10882.7	10653.2	10414.0	10212.4	7601.4	6464.5	5646.8	4732.4	4249.9	3888.3
25°	12012.6	11844.3	11562.7	11361.1	11136.5	8213.3	6837.2	5806.0	4713.7	4149.1	3729.1
27.5°	13048.6	12861.6	12573.0	12362.3	12090.5	8848.1	7179.3	5920.8	4643.4	3985.0	3515.6
30°	14129.2	13958.1	13674.4	13461.7	13187.0	9521.2	7561.8	5997.9	4503.0	3757.6	3267.4
32.5°	15289.7	15146.5	14865.5	14643.0	14349.6	10249.9	7917.8	6021.6	4289.5	3487.8	3005.2
35°	16391.1	16293.1	16056.0	15847.4	15542.8	10939.0	8295.3	6009.8	4036.4	3192.3	2766.0
37.5°	17631.6	17572.5	17455.7	17190.7	16818.0	11874.2	8748.0	5960.4	3727.0	2899.5	2583.2
40°	18953.4	18958.3	18831.7	18650.9	18304.0	13009.0	9286.9	5864.4	3389.1	2641.6	2416.3
42.5°	20352.4	20425.4	20364.2	20235.6	19902.5	14152.8	9931.5	5747.6	3061.6	2390.6	2252.9
45°	21955.9	22044.9	22138.7	21948.9	21625.6	15662.4	10779.8	5595.4	2706.9	2182.0	2140.2
47.5°	23805.4	23945.9	24030.0	24032.8	23709.5	17532.8	12157.9	5503.6	2393.3	2041.5	2086.0
50°	27707.7	27752.9	27951.7	28298.7	28050.5	21862.0	14565.2	5447.2	2179.9	1954.6	2046.4
52.5°	33330.8	33821.0	34165.9	34142.3	33804.3	24611.3	15891.9	5156.6	2053.3	1921.9	2027.6
55°	35621.3	36233.1	36870.8	37039.0	36776.9	26958.1	17146.2	4865.9	1992.1	1945.5	2034.5
57.5°	38673.1	39704.3	40579.0	40946.8	40567.2	29960.5	18796.3	4713.7	1973.4	2008.8	2079.0
60°	42238.0	43513.3	44662.0	45322.5	45322.5	33410.8	20507.5	4650.4	1947.6	2102.7	2154.1
62.5°	44528.5	46401.0	48135.9	49103.8	49075.3	35813.2	21266.8	4434.8	1889.2	2168.1	2257.1
65°	44537.5	46764.7	48974.4	50062.6	50118.3	35518.3	20013.1	3916.8	1781.4	2177.8	2360.7
67.5°	40825.1	43199.0	45775.2	46992.0	47273.0	32696.0	17324.2	3220.8	1605.5	2083.9	2398.2
70°	34479.5	36797.8	39427.5	40623.5	41122.7	27871.8	13953.3	2482.3	1380.9	1877.4	2320.3
72.5°	27163.9	29437.6	31268.5	32142.5	32531.9	21304.3	10160.9	1875.3	1132.0	1581.9	2111.7
75°	19232.2	20938.6	21911.4	22106.0	22166.5	12842.8	6173.9	1394.8	933.1	1230.7	1783.5
77.5°	10854.9	11586.3	11506.4	11593.3	10871.5	4957.7	2688.9	998.5	769.0	935.2	1383.0
80°	4238.1	4369.5	4104.6	4022.5	3689.4	1844.7	1186.2	696.0	614.0	707.8	967.9
82.5°	1868.4	1928.9	1872.5	1887.1	1805.1	951.9	709.9	504.1	468.7	518.0	642.5
85°	1029.1	1047.9	1043.0	1073.6	1029.1	379.7	337.2	309.4	328.2	351.8	412.3
87.5°	501.3	506.2	490.2	515.9	499.2	191.9	166.2	175.9	191.9	196.8	196.8
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°	4024.6	4024.6	4024.6	4024.6	4024.6	4024.6
2.5°	3802.1	3783.3	3785.4	3780.5	3771.5	3771.5
5°	3769.4	3750.6	3750.6	3745.8	3733.9	3736.0
7.5°	3802.1	3771.5	3759.7	3743.0	3727.0	3727.0
10°	3839.6	3785.4	3752.7	3724.9	3703.3	3703.3
12.5°	3867.4	3783.3	3729.1	3691.5	3670.7	3670.7
15°	3877.2	3766.6	3691.5	3647.0	3628.3	3626.2
17.5°	3846.6	3703.3	3612.3	3560.8	3537.2	3530.2
20°	3752.7	3588.6	3478.8	3419.7	3387.0	3375.1
22.5°	3612.3	3424.5	3295.9	3234.7	3192.3	3185.3
25°	3415.5	3213.8	3087.3	3028.2	3005.2	2997.6
27.5°	3185.3	2997.6	2889.8	2852.3	2831.4	2829.3
30°	2967.7	2807.8	2728.5	2700.0	2674.3	2670.1
32.5°	2763.3	2662.4	2632.5	2592.2	2531.7	2524.8
35°	2617.9	2608.9	2588.0	2498.3	2423.9	2402.4
37.5°	2528.9	2615.8	2508.1	2332.1	2278.6	2273.7
40°	2477.5	2543.5	2357.9	2297.4	2301.6	2297.4
42.5°	2360.7	2428.1	2362.7	2334.9	2353.0	2357.9
45°	2243.1	2318.2	2398.2	2379.4	2423.9	2423.9
47.5°	2177.8	2289.7	2395.4	2395.4	2461.5	2484.4
50°	2102.7	2266.8	2357.9	2390.6	2442.7	2423.9
52.5°	2097.8	2226.5	2304.3	2362.7	2386.4	2364.8
55°	2104.8	2193.8	2250.1	2316.2	2344.0	2346.1
57.5°	2114.5	2175.0	2212.6	2243.1	2327.3	2327.3
60°	2137.5	2159.0	2179.9	2196.6	2306.4	2308.5
62.5°	2175.0	2142.3	2137.5	2154.1	2294.6	2285.6
65°	2234.1	2118.7	2083.9	2099.9	2282.8	2255.0
67.5°	2313.4	2083.9	2015.8	2027.6	2273.7	2212.6
70°	2386.4	2027.6	1931.6	1919.8	2184.7	2077.0
72.5°	2393.3	1962.2	1814.1	1779.4	1899.0	1795.4
75°	2275.8	1917.0	1685.5	1581.9	1568.0	1554.1
77.5°	2051.2	1891.3	1535.3	1373.3	1345.5	1354.5
80°	1716.1	1795.4	1354.5	1162.6	1314.9	1298.9
82.5°	1282.2	1584.7	1150.8	1029.1	1026.3	907.4
85°	712.7	1235.6	937.3	771.1	536.8	520.1
87.5°	199.6	687.0	656.4	436.0	297.6	309.4
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)