

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: P301648

Luminaire Tested: **GLNA-AF-05-LED-E1-T2R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301648
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-05-LED-E1-T2R-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 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: 24950.3 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

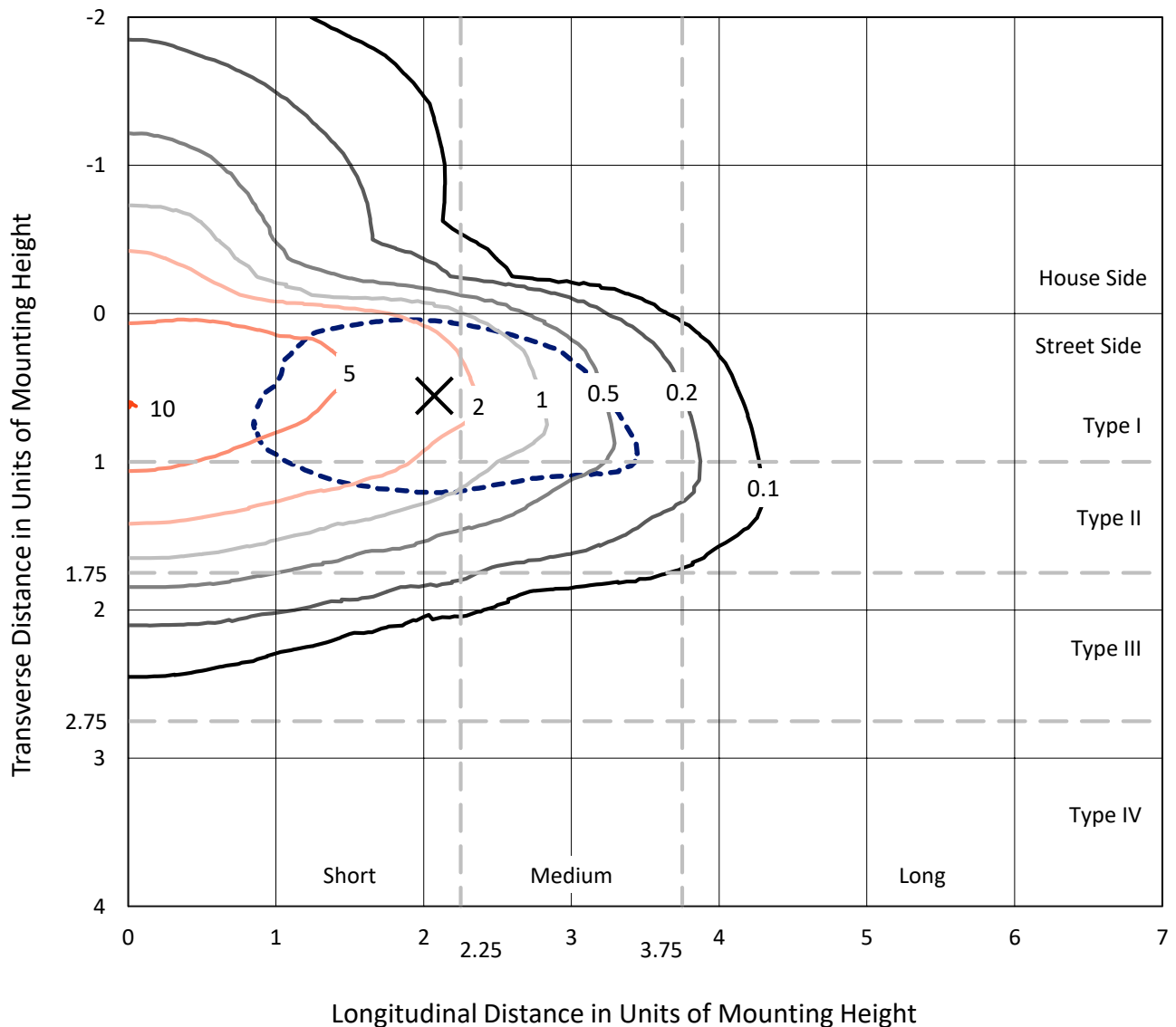
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

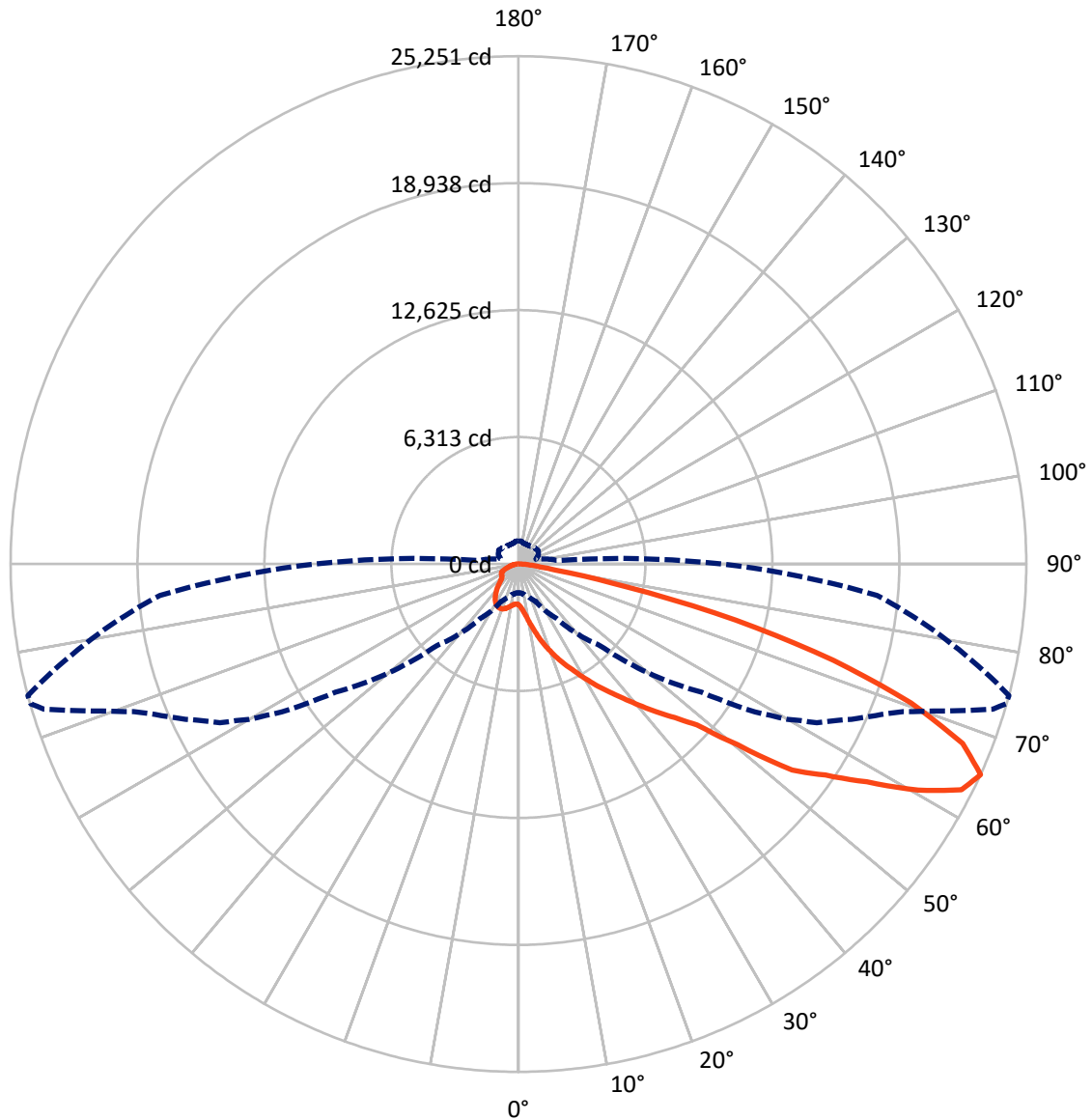
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 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	3846.7	0.0	3846.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	21103.5	0.0	21103.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	24950.3	0.0	24950.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.6	1.0
10°-20°	979.3	3.9
20°-30°	2009.1	8.1
30°-40°	3380.3	13.5
40°-50°	4670.6	18.7
50°-60°	5830.3	23.4
60°-70°	5246.6	21.0
70°-80°	2199.3	8.8
80°-90°	384.2	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°	24950.3	100.0
0°-180°	24950.3	100.0



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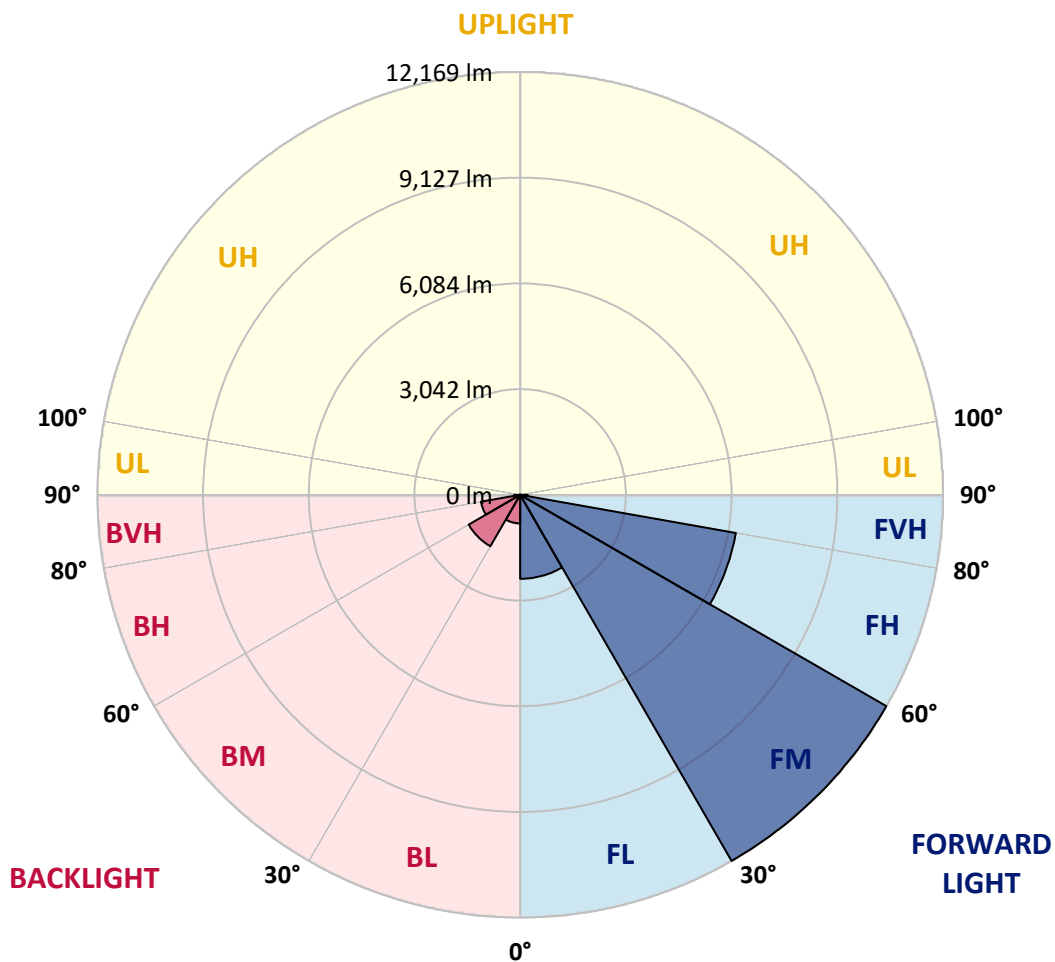
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2416.4	9.7			
FM (30°-60°)	12168.9	48.8			
FH (60°-80°)	6302.4	25.3			G3/7500
FVH (80°-90°)	216.0	0.9			G2/225
BL (0°-30°)	822.7	3.3	B2/1000		
BM (30°-60°)	1712.2	6.9	B2/2500		
BH (60°-80°)	1143.6	4.6	B3/2500		G3/2500
BVH (80°-90°)	168.3	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7
2.5°	2574.6	2546.2	2553.2	2505.9	2448.1	2372.4	2288.7	2287.6	2288.7	2280.3	2249.8
5°	3569.8	3535.8	3522.9	3416.4	3260.5	3038.7	2797.7	2771.8	2760.9	2734.0	2671.2
7.5°	4296.4	4277.5	4257.2	4176.9	4035.4	3787.4	3463.7	3408.3	3355.1	3342.1	3271.4
10°	4765.1	4760.2	4717.9	4696.5	4608.2	4393.1	4077.8	4024.6	3966.8	3946.8	3872.2
12.5°	5135.8	5134.7	5114.8	5120.7	5043.7	4888.1	4616.3	4567.9	4525.5	4463.9	4411.0
15°	5392.2	5393.3	5423.1	5456.0	5444.1	5339.0	5083.9	5062.6	5026.1	4983.7	4921.0
17.5°	5602.4	5608.4	5638.9	5699.1	5764.3	5755.9	5554.1	5536.2	5504.3	5446.5	5413.6
20°	6077.1	6099.5	6040.7	6040.7	6047.7	6079.6	5982.5	5968.5	5923.7	5892.8	5866.9
22.5°	6879.0	6904.9	6771.5	6635.9	6502.4	6405.4	6308.7	6326.2	6295.7	6274.4	6258.9
25°	7920.5	7940.9	7724.7	7495.6	7223.7	6869.6	6629.9	6619.1	6602.6	6589.6	6582.6
27.5°	8900.8	8909.2	8704.9	8369.3	8054.0	7545.0	6955.7	6942.8	6922.8	6897.9	6876.6
30°	9739.4	9737.0	9526.8	9206.6	8868.9	8305.5	7450.8	7410.5	7351.3	7284.0	7232.1
32.5°	10465.7	10462.2	10231.6	9899.9	9545.7	9059.1	8128.6	8046.0	7953.8	7822.4	7743.6
35°	11037.0	11034.9	10817.4	10471.6	10065.2	9768.9	8905.7	8804.1	8687.1	8511.2	8389.6
37.5°	11253.2	11253.2	11131.6	10895.5	10536.4	10333.2	9768.9	9645.9	9520.8	9321.1	9184.2
40°	11126.7	11129.2	11155.1	11111.7	10936.9	10781.0	10574.3	10501.0	10393.5	10214.1	10071.2
42.5°	10702.8	10715.8	10888.5	11099.8	11187.0	11162.5	11288.6	11255.7	11180.0	11042.0	10928.4
45°	10165.4	10205.7	10394.5	10793.9	11256.7	11491.8	11887.3	11890.8	11876.8	11802.5	11714.9
47.5°	9427.6	9484.0	9733.5	10273.0	11093.8	11812.0	12495.5	12527.3	12557.1	12508.8	12468.5
50°	8447.4	8514.7	8887.8	9603.5	10762.0	12143.7	13644.5	13788.9	13923.4	13906.9	13933.9
52.5°	7397.5	7476.7	7933.5	8730.8	10191.7	12220.5	14379.2	14614.2	14849.3	15041.6	15245.9
55°	6450.2	6407.8	6865.0	7704.4	9253.9	11874.3	15039.5	15322.9	15585.0	15821.1	16064.6
57.5°	5166.6	5236.3	5694.6	6524.8	8012.7	10897.6	15493.9	15908.7	16285.3	16676.3	17021.0
60°	3776.5	3846.2	4343.4	5186.6	6665.3	9416.8	15146.7	15775.2	16378.5	16977.2	17444.9
62.5°	2280.3	2332.5	2770.4	3573.7	5139.6	7660.9	13599.7	14424.0	15312.1	16027.8	16744.6
65°	1419.5	1449.0	1610.8	2052.6	3300.8	5719.4	11111.7	12010.3	12966.6	13875.0	14620.2
67.5°	1162.0	1172.5	1202.3	1296.6	1812.6	3729.6	8270.2	9066.1	9929.3	10807.9	11637.2
70°	1045.0	1038.0	1038.0	1044.0	1162.0	2005.3	5414.7	5933.1	6652.4	7416.4	8174.5
72.5°	943.4	936.4	923.5	905.9	948.3	1223.3	2798.8	3189.7	3708.2	4387.1	5113.4
75°	847.8	838.3	823.3	800.8	830.3	923.5	1343.9	1508.2	1760.7	2122.3	2527.3
77.5°	748.6	736.7	722.7	706.3	744.1	718.2	787.5	846.7	943.4	1059.4	1211.8
80°	636.5	626.0	621.1	613.1	657.9	546.9	556.3	592.8	649.5	712.2	783.0
82.5°	498.5	498.5	517.1	520.9	570.3	393.4	415.8	447.7	477.1	510.1	543.4
85°	328.3	330.7	394.5	419.3	449.8	264.5	311.8	322.3	346.1	365.0	379.1
87.5°	102.6	111.1	241.0	266.9	258.5	149.9	191.3	196.2	212.6	225.6	237.5
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7
2.5°	2249.8	2235.4	2222.5	2221.4	2212.0	2199.0	2203.6	2183.6	2184.6	2174.1	2162.2
5°	2645.3	2635.9	2588.6	2575.6	2540.2	2517.8	2514.3	2467.0	2461.0	2434.1	2404.3
7.5°	3214.6	3183.8	3117.6	3085.7	3025.4	2980.6	2959.6	2896.9	2866.0	2795.3	2763.4
10°	3810.9	3772.0	3690.3	3645.5	3587.7	3515.5	3476.6	3385.9	3350.2	3285.4	3207.6
12.5°	4363.7	4324.8	4240.7	4206.4	4129.7	4052.9	4010.5	3907.9	3861.7	3757.6	3696.3
15°	4874.8	4835.9	4762.7	4727.3	4650.6	4587.9	4531.1	4429.9	4375.6	4278.5	4198.3
17.5°	5370.9	5329.5	5265.8	5233.9	5159.6	5095.9	5034.5	4938.6	4883.2	4786.5	4714.3
20°	5831.5	5800.7	5754.8	5712.1	5637.8	5580.0	5506.8	5424.1	5343.9	5272.8	5204.5
22.5°	6233.0	6221.1	6171.7	6152.8	6089.0	6039.3	5975.5	5894.2	5836.1	5746.4	5682.7
25°	6579.1	6575.6	6551.8	6545.9	6501.0	6453.7	6439.7	6372.4	6319.2	6240.0	6174.2
27.5°	6876.6	6880.1	6874.5	6890.9	6879.0	6857.6	6859.0	6836.6	6805.8	6739.6	6681.8
30°	7207.3	7188.4	7199.2	7222.7	7229.7	7232.1	7271.0	7284.0	7281.9	7238.1	7209.7
32.5°	7675.0	7630.1	7588.8	7585.3	7608.7	7618.2	7684.4	7718.8	7748.2	7758.7	7763.6
35°	8271.2	8181.5	8095.4	8049.5	8009.2	8019.7	8067.0	8122.7	8187.5	8232.3	8285.6
37.5°	9022.3	8912.7	8760.3	8651.7	8624.3	8565.5	8596.0	8639.8	8703.5	8773.2	8865.4
40°	9932.8	9766.4	9595.1	9451.1	9373.3	9264.4	9263.3	9254.9	9294.2	9359.0	9489.0
42.5°	10809.3	10661.5	10479.7	10328.7	10227.1	10081.7	10052.3	9975.6	9993.1	10049.8	10176.3
45°	11629.8	11508.2	11397.2	11222.7	11136.2	10979.2	10929.5	10838.8	10788.0	10813.9	10940.4
47.5°	12424.7	12346.9	12231.0	12117.8	12051.6	11911.1	11847.4	11782.2	11717.4	11714.9	11847.4
50°	13974.2	13932.8	13795.9	13677.8	13709.7	13537.3	13547.8	13373.0	13452.2	13461.7	13739.1
52.5°	15430.1	15574.5	15676.1	15799.7	15880.3	15895.7	15948.6	16027.8	16123.4	16312.3	16569.8
55°	16263.9	16444.7	16549.8	16644.4	16800.3	16833.2	16921.8	17026.9	17110.7	17323.3	17541.9
57.5°	17255.0	17590.3	17753.2	17903.1	18113.3	18193.5	18341.4	18455.9	18564.5	18816.1	19080.6
60°	17865.3	18274.1	18605.9	18843.0	19106.5	19295.7	19518.8	19698.2	19953.2	20254.5	20649.0
62.5°	17380.1	17979.8	18420.5	18828.0	19185.6	19547.2	19867.0	20202.6	20589.8	21045.5	21657.6
65°	15447.0	16057.2	16811.8	17234.7	17708.3	18265.7	18752.3	19295.7	19823.2	20487.1	21391.7
67.5°	12435.6	13145.0	13993.1	14419.5	14963.9	15586.0	16131.8	16795.4	17411.9	18215.9	19334.5
70°	8963.5	9881.0	10594.2	11039.5	11675.0	12316.1	12843.0	13615.1	14125.2	14949.5	16105.9
72.5°	5675.6	6399.4	7273.5	7834.4	8398.7	9048.6	9587.0	10253.0	10728.8	11479.9	12527.3
75°	3051.7	3585.2	4352.8	4885.7	5490.3	6045.2	6675.8	7122.1	7474.2	8068.4	8918.6
77.5°	1430.0	1754.8	2143.3	2553.2	2963.1	3390.5	3806.3	4167.5	4318.8	4659.0	5160.7
80°	868.1	973.2	1086.4	1212.8	1384.1	1522.2	1705.4	1837.5	1846.9	1954.5	2107.9
82.5°	579.8	618.7	653.0	684.9	728.7	763.0	801.9	847.8	866.7	891.6	941.3
85°	395.5	414.4	421.4	441.8	436.9	448.8	464.2	479.6	487.7	486.6	509.0
87.5°	243.1	252.6	257.5	262.0	258.5	254.0	261.0	269.4	271.5	264.5	266.9
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°	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7
2.5°	2164.7	2154.2	2143.3	2136.3	2133.8	2071.5	2044.2	2026.6	1988.8	1958.0	1933.1
5°	2387.8	2365.4	2347.9	2326.5	2314.6	2156.3	2098.5	2058.5	1992.3	1953.4	1917.7
7.5°	2746.9	2684.2	2647.8	2606.4	2571.0	2285.2	2189.5	2126.8	2034.7	1982.8	1942.6
10°	3154.3	3089.5	3031.4	2967.6	2912.3	2456.5	2317.1	2220.0	2098.5	2031.2	1977.9
12.5°	3609.1	3545.3	3472.1	3390.5	3319.7	2673.7	2480.0	2341.9	2175.2	2085.5	2011.2
15°	4146.5	4034.0	3945.4	3851.1	3768.5	2933.6	2670.2	2478.9	2256.8	2135.2	2036.1
17.5°	4645.7	4527.6	4407.5	4324.8	4229.1	3225.1	2861.5	2618.0	2324.1	2167.1	2040.7
20°	5133.7	5004.8	4901.1	4790.0	4689.5	3527.4	3065.7	2741.0	2367.9	2168.2	2011.2
22.5°	5563.5	5483.0	5367.4	5246.8	5145.3	3829.8	3257.0	2845.0	2384.3	2141.2	1959.0
25°	6052.2	5967.5	5825.6	5724.0	5610.8	4138.1	3444.8	2925.2	2374.9	2090.4	1878.8
27.5°	6574.2	6480.0	6334.6	6228.5	6091.5	4457.9	3617.1	2983.0	2339.5	2007.7	1771.3
30°	7118.6	7032.5	6889.5	6782.3	6643.9	4797.0	3809.8	3021.9	2268.7	1893.2	1646.2
32.5°	7703.3	7631.2	7489.6	7377.5	7229.7	5164.2	3989.2	3033.8	2161.2	1757.2	1514.1
35°	8258.3	8208.9	8089.4	7984.3	7830.9	5511.3	4179.4	3027.9	2033.6	1608.4	1393.6
37.5°	8883.2	8853.5	8794.6	8661.1	8473.4	5982.5	4407.5	3003.0	1877.8	1460.9	1301.5
40°	9549.2	9551.7	9487.9	9396.8	9222.0	6554.3	4679.0	2954.7	1707.5	1330.9	1217.4
42.5°	10254.1	10290.9	10260.0	10195.2	10027.4	7130.6	5003.7	2895.8	1542.5	1204.4	1135.1
45°	11061.9	11106.8	11154.1	11058.4	10895.5	7891.1	5431.1	2819.1	1363.8	1099.3	1078.3
47.5°	11993.8	12064.6	12106.9	12108.3	11945.4	8833.5	6125.5	2772.8	1205.8	1028.6	1051.0
50°	13959.8	13982.6	14082.8	14257.6	14132.5	11014.6	7338.3	2744.5	1098.3	984.8	1031.0
52.5°	16792.9	17039.9	17213.7	17201.7	17031.5	12399.8	8006.7	2598.0	1034.5	968.3	1021.6
55°	17946.9	18255.2	18576.4	18661.2	18529.1	13582.2	8638.7	2451.6	1003.7	980.2	1025.1
57.5°	19484.5	20004.0	20444.7	20630.0	20438.8	15094.9	9470.0	2374.9	994.2	1012.1	1047.5
60°	21280.6	21923.1	22501.8	22834.7	22834.7	16833.2	10332.2	2343.0	981.3	1059.4	1085.3
62.5°	22434.6	23378.0	24252.1	24739.7	24725.4	18043.6	10714.7	2234.4	951.8	1092.3	1137.2
65°	22439.1	23561.2	24674.6	25222.8	25250.9	17895.0	10083.1	1973.4	897.5	1097.2	1189.4
67.5°	20568.7	21764.8	23062.7	23675.8	23817.3	16473.1	8728.4	1622.7	808.9	1049.9	1208.3
70°	17371.7	18539.6	19864.6	20467.1	20718.7	14042.5	7030.0	1250.7	695.7	945.9	1169.0
72.5°	13685.9	14831.4	15753.8	16194.2	16390.4	10733.7	5119.3	944.8	570.3	797.0	1063.9
75°	9689.7	10549.4	11039.5	11137.6	11168.1	6470.5	3110.6	702.8	470.1	620.1	898.6
77.5°	5469.0	5837.5	5797.2	5841.0	5477.4	2497.8	1354.7	503.1	387.5	471.2	696.8
80°	2135.2	2201.5	2068.0	2026.6	1858.8	929.4	597.7	350.7	309.3	356.6	487.7
82.5°	941.3	971.8	943.4	950.8	909.4	479.6	357.7	254.0	236.1	261.0	323.7
85°	518.5	527.9	525.5	540.9	518.5	191.3	169.9	155.9	165.4	177.3	207.7
87.5°	252.6	255.0	247.0	259.9	251.5	96.7	83.7	88.6	96.7	99.1	99.1
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°	2027.7	2027.7	2027.7	2027.7	2027.7	2027.7
2.5°	1915.6	1906.1	1907.2	1904.7	1900.2	1900.2
5°	1899.1	1889.7	1889.7	1887.2	1881.3	1882.3
7.5°	1915.6	1900.2	1894.2	1885.8	1877.8	1877.8
10°	1934.5	1907.2	1890.7	1876.7	1865.8	1865.8
12.5°	1948.5	1906.1	1878.8	1859.9	1849.4	1849.4
15°	1953.4	1897.7	1859.9	1837.5	1828.0	1827.0
17.5°	1938.0	1865.8	1819.9	1794.0	1782.1	1778.6
20°	1890.7	1808.0	1752.7	1722.9	1706.4	1700.5
22.5°	1819.9	1725.4	1660.5	1629.7	1608.4	1604.8
25°	1720.8	1619.2	1555.5	1525.7	1514.1	1510.3
27.5°	1604.8	1510.3	1456.0	1437.0	1426.5	1425.5
30°	1495.2	1414.6	1374.7	1360.3	1347.4	1345.3
32.5°	1392.2	1341.4	1326.3	1306.0	1275.5	1272.0
35°	1319.0	1314.4	1303.9	1258.7	1221.2	1210.4
37.5°	1274.1	1317.9	1263.6	1175.0	1148.0	1145.6
40°	1248.2	1281.5	1188.0	1157.5	1159.6	1157.5
42.5°	1189.4	1223.3	1190.4	1176.4	1185.5	1188.0
45°	1130.2	1168.0	1208.3	1198.8	1221.2	1221.2
47.5°	1097.2	1153.6	1206.9	1206.9	1240.2	1251.7
50°	1059.4	1142.1	1188.0	1204.4	1230.7	1221.2
52.5°	1056.9	1121.7	1161.0	1190.4	1202.3	1191.5
55°	1060.4	1105.3	1133.7	1166.9	1181.0	1182.0
57.5°	1065.3	1095.8	1114.7	1130.2	1172.5	1172.5
60°	1076.9	1087.8	1098.3	1106.7	1162.0	1163.1
62.5°	1095.8	1079.4	1076.9	1085.3	1156.1	1151.5
65°	1125.6	1067.4	1049.9	1058.0	1150.1	1136.1
67.5°	1165.5	1049.9	1015.6	1021.6	1145.6	1114.7
70°	1202.3	1021.6	973.2	967.3	1100.7	1046.4
72.5°	1205.8	988.6	914.0	896.5	956.7	904.5
75°	1146.6	965.9	849.2	797.0	790.0	783.0
77.5°	1033.5	952.9	773.5	691.9	677.9	682.4
80°	864.6	904.5	682.4	585.7	662.5	654.4
82.5°	646.0	798.4	579.8	518.5	517.1	457.2
85°	359.1	622.5	472.2	388.5	270.5	262.0
87.5°	100.5	346.1	330.7	219.7	149.9	155.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)