

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: P301734

Luminaire Tested: **GLNA-AF-10-LED-E1-T2R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301734
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-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35006.2 lumens
Efficiency: N/A
Efficacy: 108.4 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 - G4

Input Watts (W): 323
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

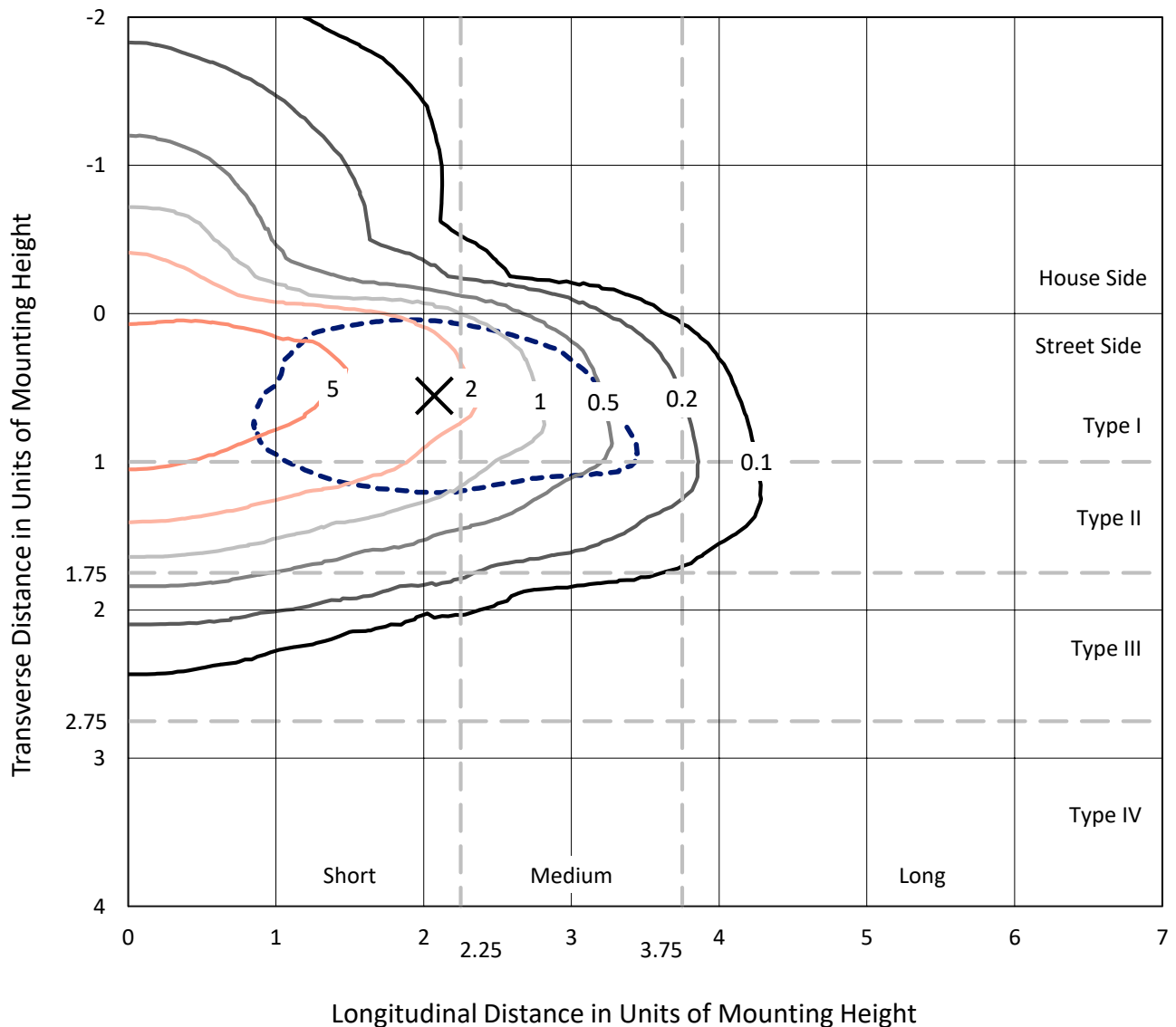


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Iso-Footcandle Lines of Horizontal Illumination

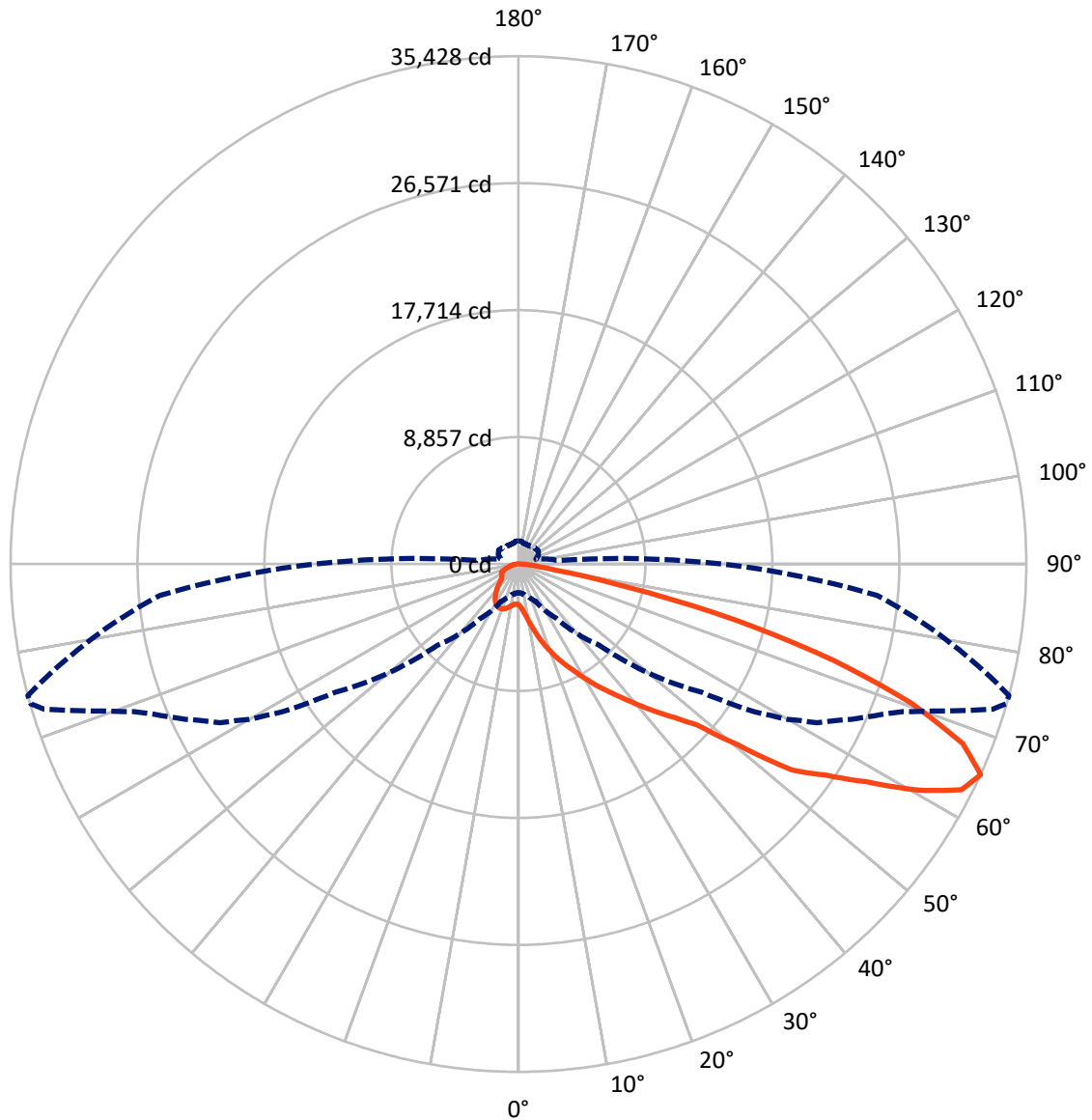
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.8 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	5397.1	0.0	5397.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	29609.0	0.0	29609.0
	% Fixture	84.6	0.0	84.6
Total	Lumens	35006.2	0.0	35006.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.6	1.0
10°-20°	1373.9	3.9
20°-30°	2818.9	8.1
30°-40°	4742.6	13.5
40°-50°	6553.0	18.7
50°-60°	8180.1	23.4
60°-70°	7361.2	21.0
70°-80°	3085.7	8.8
80°-90°	539.1	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°	35006.2	100.0
0°-180°	35006.2	100.0

Coefficient of Utilization



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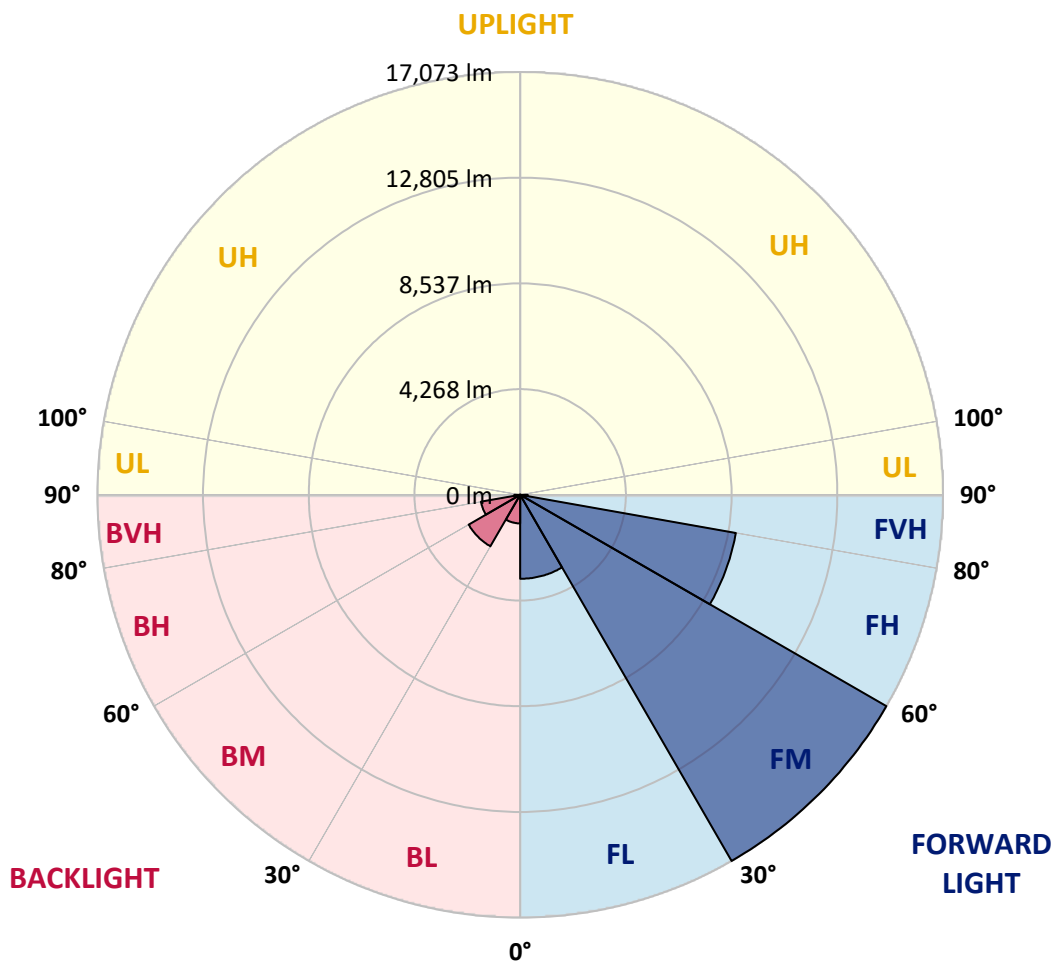
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3390.2	9.7			
FM (30°-60°)	17073.3	48.8			
FH (60°-80°)	8842.4	25.3			G4/12000
FVH (80°-90°)	303.0	0.9			G3/500
BL (0°-30°)	1154.2	3.3	B3/2500		
BM (30°-60°)	2402.3	6.9	B2/2500		
BH (60°-80°)	1604.5	4.6	B3/2500		G3/2500
BVH (80°-90°)	236.1	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-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9
2.5°	3612.2	3572.4	3582.2	3515.8	3434.7	3328.6	3211.1	3209.6	3211.1	3199.3	3156.5
5°	5008.6	4960.9	4942.7	4793.3	4574.6	4263.5	3925.3	3888.9	3873.7	3835.8	3747.8
7.5°	6028.0	6001.5	5973.0	5860.4	5661.8	5313.8	4859.7	4782.0	4707.3	4689.1	4589.8
10°	6685.7	6678.8	6619.3	6589.3	6465.5	6163.7	5721.3	5646.6	5565.5	5537.5	5432.8
12.5°	7205.7	7204.2	7176.2	7184.6	7076.4	6858.2	6476.8	6408.9	6349.5	6263.0	6188.7
15°	7565.5	7567.0	7608.7	7654.9	7638.2	7490.8	7133.0	7103.0	7051.9	6992.4	6904.4
17.5°	7860.4	7868.8	7911.5	7996.1	8087.5	8075.7	7792.6	7767.5	7722.8	7641.7	7595.5
20°	8526.4	8557.9	8475.3	8475.3	8485.1	8529.9	8393.7	8374.0	8311.1	8267.9	8231.5
22.5°	9651.5	9687.9	9500.6	9310.4	9123.1	8987.0	8851.3	8875.9	8833.1	8803.1	8781.5
25°	11112.8	11141.3	10838.0	10516.6	10135.2	9638.2	9302.0	9286.8	9263.7	9245.5	9235.7
27.5°	12488.1	12499.9	12213.3	11742.4	11300.1	10585.9	9759.1	9741.0	9712.9	9678.0	9648.1
30°	13664.8	13661.3	13366.4	12917.2	12443.3	11653.0	10453.7	10397.1	10314.1	10219.7	10147.0
32.5°	14683.7	14678.8	14355.4	13889.9	13393.0	12710.2	11404.8	11288.8	11159.5	10975.2	10864.6
35°	15485.4	15482.4	15177.2	14692.1	14121.9	13706.1	12495.0	12352.4	12188.2	11941.5	11770.9
37.5°	15788.6	15788.6	15618.1	15286.8	14783.0	14497.9	13706.1	13533.5	13358.1	13077.9	12885.7
40°	15611.2	15614.6	15651.0	15590.1	15344.8	15126.1	14836.1	14733.3	14582.4	14330.8	14130.2
42.5°	15016.5	15034.6	15277.0	15573.4	15695.7	15661.3	15838.3	15792.1	15685.9	15492.3	15333.0
45°	14262.5	14319.0	14583.9	15144.3	15793.6	16123.4	16678.3	16683.2	16663.5	16559.3	16436.5
47.5°	13227.3	13306.5	13656.4	14413.4	15565.0	16572.6	17531.6	17576.3	17618.1	17550.2	17493.7
50°	11852.0	11946.4	12469.9	13474.1	15099.5	17038.1	19143.8	19346.3	19535.0	19511.9	19549.8
52.5°	10379.0	10490.0	11131.0	12249.7	14299.3	17145.7	20174.5	20504.3	20834.1	21103.9	21390.5
55°	9049.9	8990.4	9631.8	10809.5	12983.5	16660.1	21101.0	21498.6	21866.3	22197.6	22539.2
57.5°	7249.0	7346.8	7989.7	9154.6	11242.1	15289.7	21738.5	22320.5	22848.8	23397.4	23881.0
60°	5298.6	5396.4	6093.9	7277.0	9351.7	13212.1	21251.4	22133.2	22979.6	23819.6	24475.8
62.5°	3199.3	3272.5	3886.9	5014.0	7211.1	10748.6	19080.8	20237.4	21483.4	22487.6	23493.2
65°	1991.6	2032.9	2260.0	2879.8	4631.1	8024.6	15590.1	16850.8	18192.7	19467.2	20512.6
67.5°	1630.4	1645.1	1686.9	1819.1	2543.1	5232.7	11603.3	12720.1	13931.2	15163.9	16327.3
70°	1466.2	1456.4	1456.4	1464.7	1630.4	2813.5	7596.9	8324.4	9333.5	10405.5	11469.2
72.5°	1323.7	1313.8	1295.6	1271.1	1330.5	1716.4	3926.8	4475.3	5202.7	6155.3	7174.2
75°	1189.5	1176.2	1155.1	1123.6	1164.9	1295.6	1885.5	2116.0	2470.4	2977.6	3545.8
77.5°	1050.4	1033.7	1014.0	990.9	1044.0	1007.6	1104.9	1188.0	1323.7	1486.4	1700.2
80°	893.1	878.3	871.5	860.2	923.1	767.3	780.5	831.7	911.3	999.3	1098.5
82.5°	699.4	699.4	725.5	730.9	800.2	552.0	583.4	628.2	669.5	715.7	762.3
85°	460.6	464.0	553.5	588.4	631.1	371.1	437.5	452.2	485.6	512.2	531.8
87.5°	144.0	155.8	338.2	374.5	362.7	210.4	268.4	275.3	298.4	316.5	333.3
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9
2.5°	3156.5	3136.4	3118.2	3116.7	3103.5	3085.3	3091.7	3063.7	3065.1	3050.4	3033.7
5°	3711.5	3698.2	3631.8	3613.7	3564.0	3532.6	3527.6	3461.3	3452.9	3415.1	3373.3
7.5°	4510.2	4466.9	4374.0	4329.3	4244.8	4181.9	4152.4	4064.4	4021.1	3921.8	3877.1
10°	5346.8	5292.2	5177.7	5114.8	5033.7	4932.4	4877.9	4750.6	4700.4	4609.5	4500.4
12.5°	6122.4	6067.8	5949.9	5901.7	5794.0	5686.4	5626.9	5482.9	5418.0	5272.1	5186.0
15°	6839.5	6785.0	6682.2	6632.6	6524.9	6437.0	6357.3	6215.3	6139.1	6002.9	5890.4
17.5°	7535.5	7477.5	7388.1	7343.3	7239.1	7149.7	7063.6	6929.0	6851.3	6715.7	6614.4
20°	8181.9	8138.6	8074.2	8014.2	7910.0	7828.9	7726.2	7610.2	7497.7	7397.9	7302.0
22.5°	8745.1	8728.4	8659.1	8632.6	8543.1	8473.3	8383.9	8269.8	8188.2	8062.4	7973.0
25°	9230.8	9225.8	9192.4	9184.1	9121.2	9054.8	9035.1	8940.8	8866.1	8755.0	8662.6
27.5°	9648.1	9653.0	9645.1	9668.2	9651.5	9621.5	9623.5	9592.0	9548.8	9455.9	9374.8
30°	10112.1	10085.5	10100.8	10133.7	10143.5	10147.0	10201.5	10219.7	10216.8	10155.3	10115.5
32.5°	10768.2	10705.3	10647.3	10642.4	10675.3	10688.6	10781.5	10829.7	10871.0	10885.7	10892.6
35°	11604.8	11479.0	11358.1	11293.7	11237.2	11251.9	11318.3	11396.4	11487.3	11550.3	11625.0
37.5°	12658.6	12504.8	12291.0	12138.6	12100.3	12017.7	12060.5	12121.9	12211.3	12309.2	12438.4
40°	13936.1	13702.6	13462.3	13260.3	13151.1	12998.3	12996.8	12985.0	13040.1	13131.0	13313.3
42.5°	15165.9	14958.5	14703.4	14491.5	14349.0	14145.0	14103.7	13996.1	14020.6	14100.3	14277.7
45°	16317.0	16146.5	15990.7	15745.9	15624.5	15404.3	15334.5	15207.2	15135.9	15172.3	15349.7
47.5°	17432.3	17323.2	17160.5	17001.7	16908.8	16711.7	16622.3	16530.8	16439.9	16436.5	16622.3
50°	19606.3	19548.3	19356.1	19190.5	19235.2	18993.4	19008.1	18762.8	18873.9	18887.2	19276.5
52.5°	21649.0	21851.5	21994.1	22167.6	22280.6	22302.3	22376.5	22487.6	22621.8	22886.7	23248.0
55°	22818.9	23072.5	23219.9	23352.7	23571.4	23617.6	23741.9	23889.4	24006.9	24305.2	24611.9
57.5°	24209.4	24679.8	24908.3	25118.7	25413.6	25526.2	25733.6	25894.3	26046.7	26399.6	26770.7
60°	25065.6	25639.2	26104.7	26437.4	26807.1	27072.5	27385.6	27637.2	27995.1	28417.8	28971.2
62.5°	24384.8	25226.3	25844.7	26416.3	26918.1	27425.4	27874.2	28345.0	28888.2	29527.6	30386.3
65°	21672.6	22528.9	23587.6	24180.9	24845.4	25627.4	26310.1	27072.5	27812.7	28744.1	30013.3
67.5°	17447.5	18442.9	19632.8	20231.0	20994.8	21867.8	22633.6	23564.5	24429.6	25557.6	27127.0
70°	12576.1	13863.3	14864.1	15488.8	16380.4	17279.9	18019.2	19102.5	19818.1	20974.7	22597.2
72.5°	7963.1	8978.6	10205.0	10991.9	11783.7	12695.5	13451.0	14385.3	15052.8	16106.7	17576.3
75°	4281.6	5030.2	6107.1	6854.8	7703.1	8481.7	9366.4	9992.6	10486.6	11320.2	12513.1
77.5°	2006.4	2462.0	3007.1	3582.2	4157.3	4756.9	5340.4	5847.1	6059.5	6536.7	7240.6
80°	1218.0	1365.4	1524.2	1701.6	1942.0	2135.7	2392.7	2578.0	2591.3	2742.2	2957.5
82.5°	813.5	868.0	916.2	960.9	1022.4	1070.5	1125.1	1189.5	1216.0	1250.9	1320.7
85°	554.9	581.5	591.3	619.8	612.9	629.6	651.3	672.9	684.2	682.7	714.2
87.5°	341.1	354.4	361.3	367.7	362.7	356.4	366.2	378.0	380.9	371.1	374.5
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°	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9
2.5°	3037.1	3022.4	3007.1	2997.3	2993.9	2906.4	2868.0	2843.4	2790.4	2747.1	2712.2
5°	3350.2	3318.7	3294.2	3264.2	3247.5	3025.3	2944.2	2888.2	2795.3	2740.7	2690.6
7.5°	3854.0	3766.0	3714.9	3656.9	3607.3	3206.2	3072.0	2984.0	2854.8	2782.0	2725.5
10°	4425.7	4334.7	4253.1	4163.7	4086.0	3446.5	3250.9	3114.8	2944.2	2849.8	2775.1
12.5°	5063.6	4974.2	4871.5	4756.9	4657.7	3751.3	3479.5	3285.8	3051.9	2926.0	2821.8
15°	5817.6	5659.9	5535.5	5403.3	5287.3	4116.0	3746.4	3478.0	3166.4	2995.8	2856.7
17.5°	6518.1	6352.4	6183.8	6067.8	5933.6	4524.9	4014.7	3673.1	3260.8	3040.5	2863.1
20°	7202.7	7021.9	6876.4	6720.6	6579.5	4949.1	4301.3	3845.7	3322.2	3042.0	2821.8
22.5°	7805.8	7692.8	7530.6	7361.5	7219.0	5373.3	4569.7	3991.6	3345.3	3004.2	2748.6
25°	8491.5	8372.6	8173.5	8031.0	7872.2	5805.8	4833.1	4104.2	3332.0	2932.9	2636.0
27.5°	9223.9	9091.7	8887.7	8738.8	8546.6	6254.6	5075.0	4185.3	3282.4	2816.9	2485.1
30°	9987.7	9866.8	9666.3	9515.8	9321.7	6730.4	5345.3	4239.9	3183.1	2656.2	2309.7
32.5°	10808.1	10706.8	10508.2	10350.9	10143.5	7245.5	5596.9	4256.6	3032.2	2465.5	2124.4
35°	11586.6	11517.3	11349.7	11202.3	10987.0	7732.6	5863.8	4248.2	2853.3	2256.6	1955.3
37.5°	12463.5	12421.7	12339.1	12151.9	11888.4	8393.7	6183.8	4213.3	2634.6	2049.6	1826.0
40°	13397.9	13401.3	13311.9	13184.1	12938.8	9195.9	6564.8	4145.5	2395.7	1867.3	1708.0
42.5°	14386.8	14438.4	14395.2	14304.2	14068.8	10004.4	7020.4	4062.9	2164.2	1689.8	1592.5
45°	15520.3	15583.2	15649.5	15515.4	15286.8	11071.5	7620.0	3955.3	1913.5	1542.4	1512.9
47.5°	16827.7	16927.0	16986.5	16988.4	16759.9	12393.7	8594.2	3890.4	1691.8	1443.1	1474.6
50°	19586.1	19618.1	19758.7	20003.9	19828.4	15453.9	10295.9	3850.6	1540.9	1381.7	1446.5
52.5°	23561.1	23907.6	24151.4	24134.7	23895.8	17397.4	11233.7	3645.1	1451.5	1358.6	1433.3
55°	25180.1	25612.7	26063.4	26182.3	25997.0	19056.3	12120.4	3439.7	1408.2	1375.3	1438.2
57.5°	27337.4	28066.3	28684.7	28944.7	28676.3	21178.7	13286.8	3332.0	1394.9	1420.0	1469.6
60°	29857.4	30758.9	31570.9	32037.8	32037.8	23617.6	14496.4	3287.3	1376.8	1486.4	1522.7
62.5°	31476.5	32800.2	34026.5	34710.7	34690.6	25315.8	15033.2	3134.9	1335.5	1532.6	1595.5
65°	31482.9	33057.2	34619.3	35388.5	35427.8	25107.4	14147.0	2768.7	1259.3	1539.4	1668.7
67.5°	28858.7	30536.7	32357.8	33218.0	33416.5	23112.3	12246.2	2276.7	1134.9	1473.1	1695.3
70°	24373.1	26011.8	27870.7	28716.1	29069.0	19702.1	9863.4	1754.7	976.2	1327.1	1640.2
72.5°	19201.8	20809.0	22103.2	22721.0	22996.3	15059.7	7182.6	1325.6	800.2	1118.2	1492.7
75°	13595.0	14801.2	15488.8	15626.4	15669.2	9078.4	4364.2	986.0	659.6	870.0	1260.8
77.5°	7673.1	8190.2	8133.7	8195.1	7684.9	3504.5	1900.7	705.8	543.6	661.1	977.6
80°	2995.8	3088.7	2901.4	2843.4	2608.0	1304.0	838.5	492.0	434.0	500.4	684.2
82.5°	1320.7	1363.5	1323.7	1334.0	1276.0	672.9	501.8	356.4	331.3	366.2	454.2
85°	727.5	740.7	737.3	758.9	727.5	268.4	238.4	218.7	232.0	248.7	291.5
87.5°	354.4	357.8	346.5	364.7	352.9	135.7	117.5	124.4	135.7	139.1	139.1
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°	2844.9	2844.9	2844.9	2844.9	2844.9	2844.9
2.5°	2687.6	2674.4	2675.8	2672.4	2666.0	2666.0
5°	2664.5	2651.3	2651.3	2647.8	2639.5	2640.9
7.5°	2687.6	2666.0	2657.7	2645.9	2634.6	2634.6
10°	2714.2	2675.8	2652.7	2633.1	2617.8	2617.8
12.5°	2733.8	2674.4	2636.0	2609.5	2594.7	2594.7
15°	2740.7	2662.6	2609.5	2578.0	2564.8	2563.3
17.5°	2719.1	2617.8	2553.5	2517.1	2500.4	2495.5
20°	2652.7	2536.7	2459.1	2417.3	2394.2	2385.8
22.5°	2553.5	2420.7	2329.8	2286.6	2256.6	2251.7
25°	2414.4	2271.8	2182.4	2140.6	2124.4	2118.9
27.5°	2251.7	2118.9	2042.8	2016.2	2001.5	2000.0
30°	2097.8	1984.8	1928.7	1908.6	1890.4	1887.4
32.5°	1953.3	1882.0	1860.9	1832.4	1789.6	1784.7
35°	1850.6	1844.2	1829.4	1766.0	1713.4	1698.2
37.5°	1787.7	1849.1	1772.9	1648.6	1610.7	1607.3
40°	1751.3	1798.0	1666.7	1624.0	1626.9	1624.0
42.5°	1668.7	1716.4	1670.2	1650.5	1663.3	1666.7
45°	1585.6	1638.7	1695.3	1682.0	1713.4	1713.4
47.5°	1539.4	1618.6	1693.3	1693.3	1740.0	1756.2
50°	1486.4	1602.4	1666.7	1689.8	1726.7	1713.4
52.5°	1482.9	1573.9	1628.9	1670.2	1686.9	1671.7
55°	1487.8	1550.7	1590.6	1637.3	1656.9	1658.4
57.5°	1494.7	1537.5	1564.0	1585.6	1645.1	1645.1
60°	1510.9	1526.2	1540.9	1552.7	1630.4	1631.8
62.5°	1537.5	1514.4	1510.9	1522.7	1622.0	1615.6
65°	1579.3	1497.7	1473.1	1484.4	1613.7	1594.0
67.5°	1635.3	1473.1	1424.9	1433.3	1607.3	1564.0
70°	1686.9	1433.3	1365.4	1357.1	1544.4	1468.2
72.5°	1691.8	1387.1	1282.4	1257.8	1342.3	1269.1
75°	1608.7	1355.1	1191.4	1118.2	1108.4	1098.5
77.5°	1450.0	1336.9	1085.3	970.8	951.1	957.5
80°	1213.1	1269.1	957.5	821.8	929.5	918.2
82.5°	906.4	1120.2	813.5	727.5	725.5	641.4
85°	503.8	873.4	662.6	545.1	379.5	367.7
87.5°	141.1	485.6	464.0	308.2	210.4	218.7
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)