

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: P301660

Luminaire Tested: **GLNA-AF-07-LED-E1-T2R-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301660
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-07-LED-E1-T2R-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(7) 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: 35309.9 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 295
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

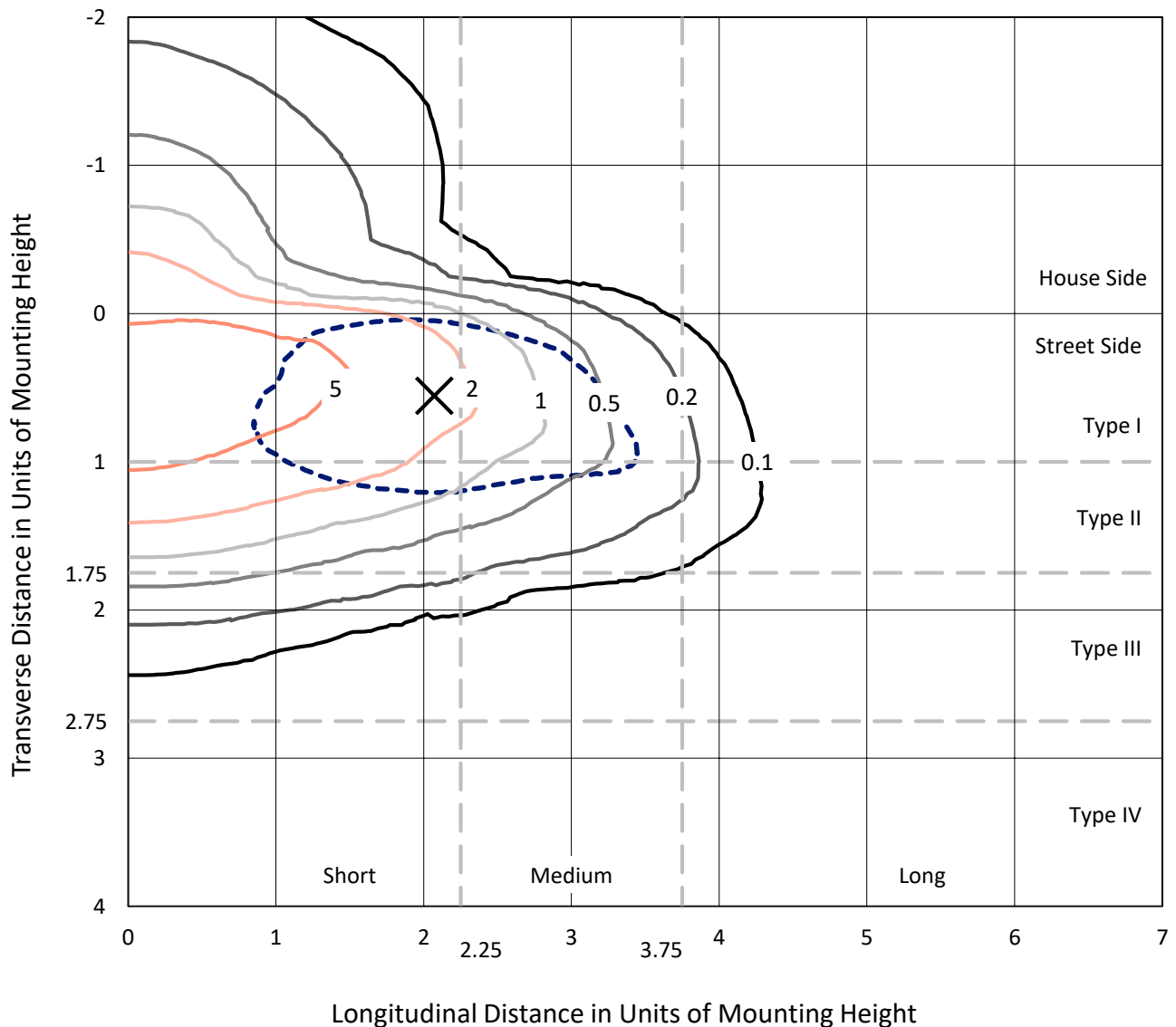


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Iso-Footcandle Lines of Horizontal Illumination

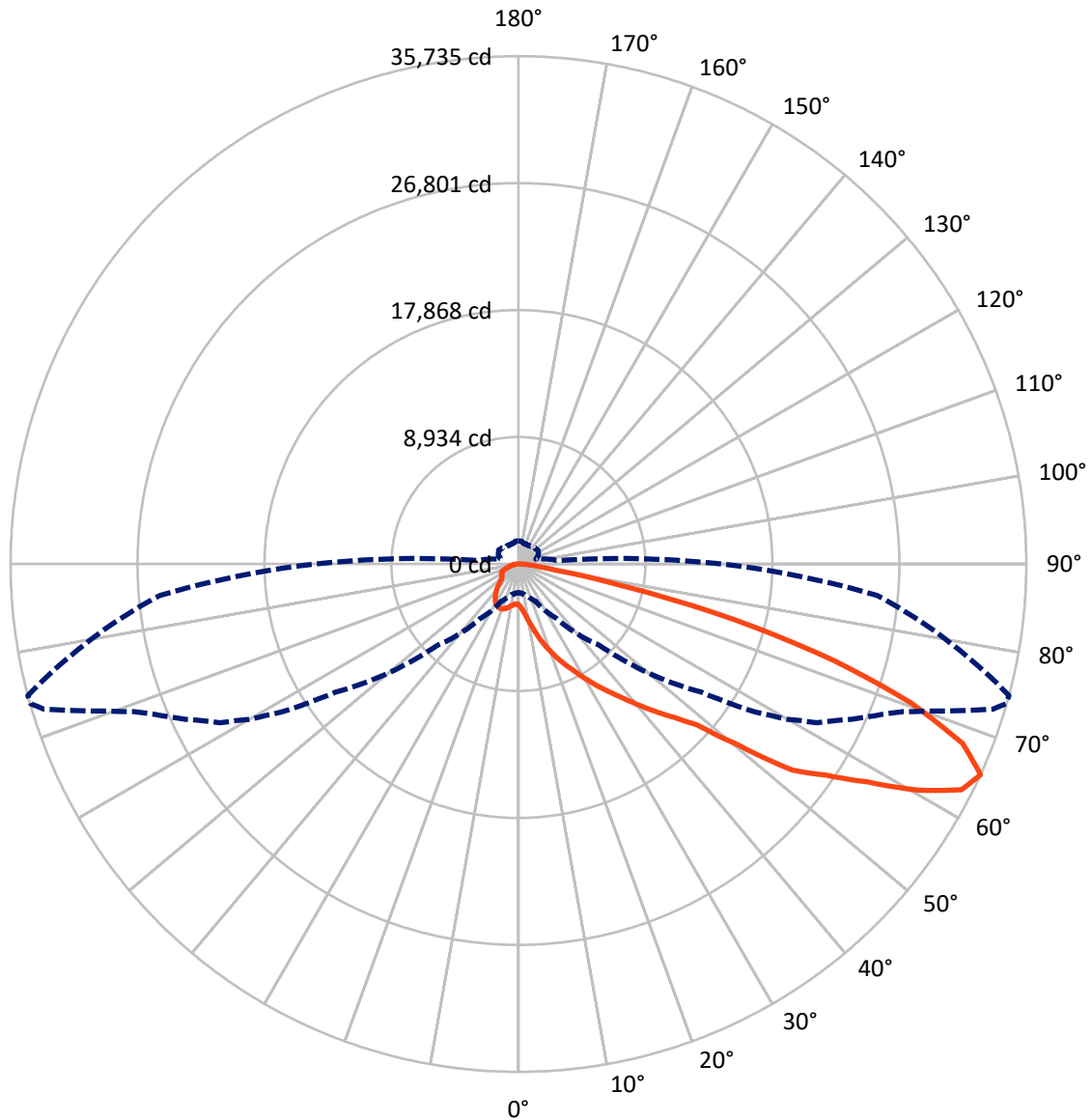
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.9 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	5444.0	0.0	5444.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	29865.9	0.0	29865.9
	% Fixture	84.6	0.0	84.6
Total	Lumens	35309.9	0.0	35309.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.7	1.0
10°-20°	1385.9	3.9
20°-30°	2843.3	8.1
30°-40°	4783.8	13.5
40°-50°	6609.8	18.7
50°-60°	8251.0	23.4
60°-70°	7425.1	21.0
70°-80°	3112.5	8.8
80°-90°	543.8	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°	35309.9	100.0
0°-180°	35309.9	100.0

Coefficient of Utilization



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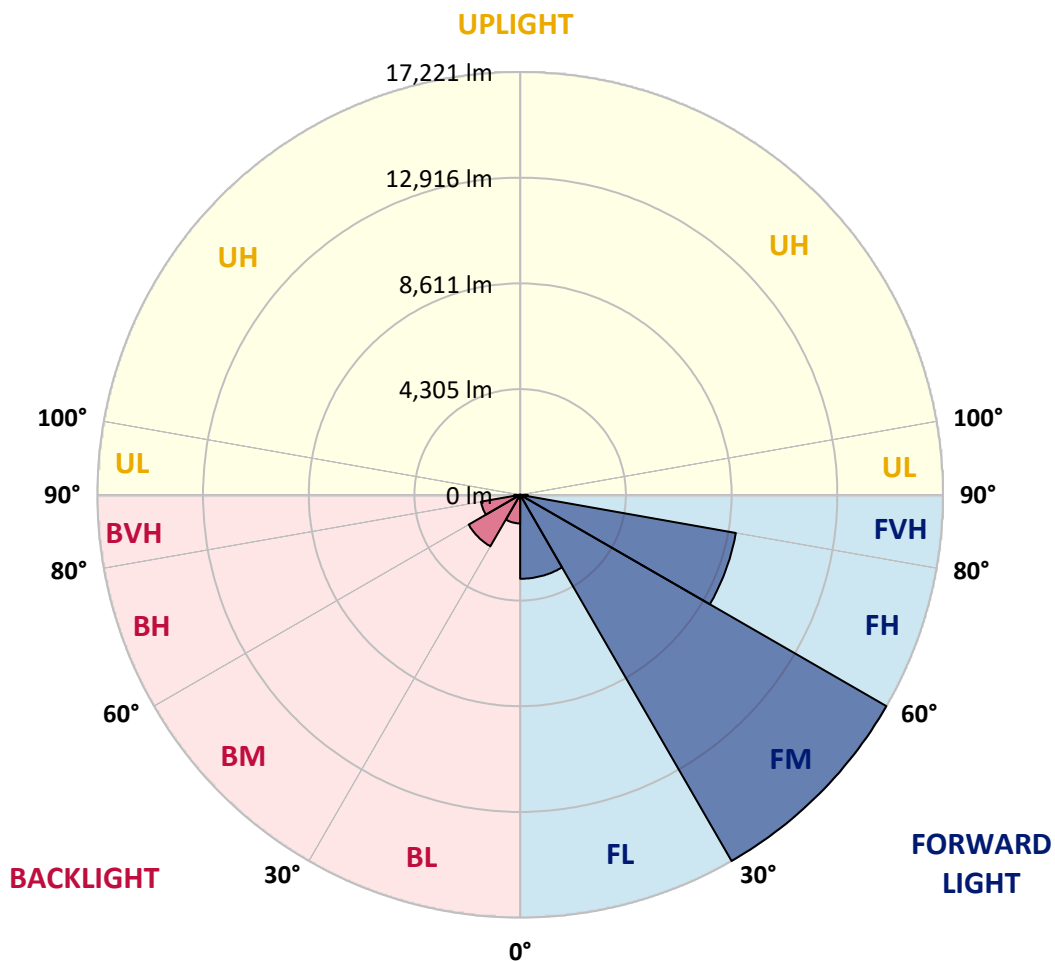
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3419.7	9.7			
FM	(30°-60°)	17221.5	48.8			
FH	(60°-80°)	8919.1	25.3			G4/12000
FVH	(80°-90°)	305.6	0.9			G3/500
BL	(0°-30°)	1164.2	3.3	B3/2500		
BM	(30°-60°)	2423.2	6.9	B2/2500		
BH	(60°-80°)	1618.4	4.6	B3/2500		G3/2500
BVH	(80°-90°)	238.1	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°	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6
2.5°	3643.5	3603.4	3613.3	3546.4	3464.5	3357.5	3239.0	3237.5	3239.0	3227.1	3183.9
5°	5052.1	5004.0	4985.6	4834.9	4614.3	4300.4	3959.3	3922.7	3907.3	3869.1	3780.4
7.5°	6080.3	6053.5	6024.8	5911.2	5711.0	5359.9	4901.8	4823.5	4748.1	4729.8	4629.6
10°	6743.7	6736.7	6676.7	6646.5	6521.6	6217.1	5770.9	5695.6	5613.8	5585.5	5479.9
12.5°	7268.2	7266.7	7238.5	7246.9	7137.8	6917.7	6533.0	6464.5	6404.6	6317.3	6242.4
15°	7631.1	7632.6	7674.8	7721.4	7704.5	7555.8	7194.8	7164.6	7113.0	7053.0	6964.3
17.5°	7928.6	7937.0	7980.2	8065.4	8157.7	8145.8	7860.2	7834.9	7789.8	7708.0	7661.4
20°	8600.4	8632.1	8548.8	8548.8	8558.7	8603.9	8466.5	8446.7	8383.2	8339.6	8302.9
22.5°	9735.2	9771.9	9583.0	9391.2	9202.3	9064.9	8928.1	8952.9	8909.8	8879.5	8857.7
25°	11209.2	11238.0	10932.1	10607.8	10223.1	9721.9	9382.7	9367.4	9344.1	9325.7	9315.8
27.5°	12596.4	12608.3	12319.3	11844.3	11398.1	10677.7	9843.8	9825.5	9797.2	9762.0	9731.8
30°	13783.3	13779.9	13482.4	13029.2	12551.3	11754.1	10544.4	10487.3	10403.6	10308.4	10235.0
32.5°	14811.1	14806.1	14479.9	14010.4	13509.2	12820.5	11503.7	11386.7	11256.3	11070.4	10958.8
35°	15619.7	15616.7	15308.9	14819.5	14244.4	13825.0	12603.4	12459.6	12294.0	12045.1	11873.1
37.5°	15925.6	15925.6	15753.6	15419.4	14911.2	14623.7	13825.0	13651.0	13474.0	13191.4	12997.5
40°	15746.6	15750.1	15786.8	15725.3	15477.9	15257.3	14964.8	14861.2	14709.0	14455.1	14252.8
42.5°	15146.7	15165.1	15409.5	15708.5	15831.9	15797.2	15975.7	15929.1	15822.0	15626.7	15466.0
45°	14386.2	14443.2	14710.4	15275.6	15930.6	16263.2	16823.0	16827.9	16808.1	16703.0	16579.1
47.5°	13342.1	13421.9	13774.9	14538.4	15700.0	16716.4	17683.7	17728.8	17770.9	17702.5	17645.5
50°	11954.9	12050.1	12578.1	13591.0	15230.5	17185.9	19309.8	19514.1	19704.5	19681.2	19719.4
52.5°	10469.0	10581.1	11227.6	12356.0	14423.4	17294.5	20349.5	20682.2	21014.9	21287.0	21576.1
55°	9128.4	9068.4	9715.4	10903.3	13096.2	16804.6	21284.1	21685.2	22056.0	22390.2	22734.7
57.5°	7311.8	7410.5	8059.0	9234.0	11339.6	15422.4	21927.1	22514.1	23047.1	23600.4	24088.2
60°	5344.6	5443.2	6146.7	7340.1	9432.8	13326.7	21435.8	22325.2	23179.0	24026.3	24688.1
62.5°	3227.1	3300.9	3920.7	5057.5	7273.7	10841.8	19246.4	20413.0	21669.8	22682.7	23697.1
65°	2008.9	2050.6	2279.6	2904.8	4671.3	8094.2	15725.3	16997.0	18350.5	19636.1	20690.6
67.5°	1644.5	1659.4	1701.5	1834.9	2565.2	5278.1	11704.0	12830.4	14052.0	15295.5	16469.0
70°	1478.9	1469.0	1469.0	1477.4	1644.5	2837.9	7662.9	8396.6	9414.5	10495.8	11568.7
72.5°	1335.1	1325.2	1306.9	1282.1	1342.1	1731.3	3960.8	4514.1	5247.9	6208.7	7236.5
75°	1199.8	1186.4	1165.1	1133.4	1175.0	1306.9	1901.8	2134.4	2491.8	3003.5	3576.6
77.5°	1059.5	1042.6	1022.8	999.5	1053.0	1016.4	1114.5	1198.3	1335.1	1499.3	1714.9
80°	900.8	886.0	879.0	867.6	931.1	773.9	787.3	838.9	919.2	1007.9	1108.1
82.5°	705.5	705.5	731.8	737.2	807.1	556.8	588.5	633.6	675.3	721.9	769.0
85°	464.6	468.0	558.3	593.5	636.6	374.3	441.2	456.1	489.8	516.6	536.4
87.5°	145.3	157.2	341.1	377.8	365.9	212.2	270.7	277.6	300.9	319.3	336.1
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6
2.5°	3183.9	3163.6	3145.3	3143.8	3130.4	3112.0	3118.5	3090.2	3091.7	3076.8	3060.0
5°	3743.7	3730.3	3663.4	3645.0	3594.9	3563.2	3558.3	3491.3	3482.9	3444.7	3402.6
7.5°	4549.3	4505.7	4412.0	4366.9	4281.6	4218.1	4188.4	4099.6	4056.0	3955.9	3910.8
10°	5393.2	5338.1	5222.6	5159.1	5077.3	4975.2	4920.2	4791.8	4741.2	4649.5	4539.4
12.5°	6175.5	6120.5	6001.5	5952.9	5844.3	5735.7	5675.8	5530.5	5465.0	5317.8	5231.0
15°	6898.9	6843.8	6740.2	6690.1	6581.6	6492.8	6412.5	6269.2	6192.4	6055.0	5941.5
17.5°	7600.9	7542.4	7452.1	7407.0	7301.9	7211.7	7124.9	6989.1	6910.8	6773.9	6671.8
20°	8252.8	8209.2	8144.3	8083.8	7978.7	7896.9	7793.2	7676.2	7562.7	7462.1	7365.4
22.5°	8821.0	8804.2	8734.3	8707.5	8617.2	8546.8	8456.6	8341.6	8259.3	8132.4	8042.1
25°	9310.8	9305.9	9272.2	9263.7	9200.3	9133.4	9113.5	9018.3	8943.0	8830.9	8737.7
27.5°	9731.8	9736.7	9728.8	9752.1	9735.2	9705.0	9707.0	9675.3	9631.6	9537.9	9456.1
30°	10199.8	10173.0	10188.4	10221.6	10231.5	10235.0	10290.0	10308.4	10305.4	10243.4	10203.3
32.5°	10861.7	10798.2	10739.7	10734.7	10768.0	10781.3	10875.1	10923.6	10965.3	10980.2	10987.1
35°	11705.5	11578.6	11456.6	11391.7	11334.6	11349.5	11416.4	11495.3	11587.0	11650.5	11725.8
37.5°	12768.5	12613.3	12397.6	12243.9	12205.2	12122.0	12165.1	12227.1	12317.3	12416.0	12546.3
40°	14057.0	13821.5	13579.1	13375.3	13265.2	13111.0	13109.6	13097.7	13153.2	13244.9	13428.8
42.5°	15297.5	15088.2	14830.9	14617.2	14473.5	14267.7	14226.1	14117.5	14142.3	14222.6	14401.6
45°	16458.6	16286.5	16129.4	15882.5	15760.0	15537.9	15467.5	15339.1	15267.2	15303.9	15482.9
47.5°	17583.5	17473.5	17309.4	17149.2	17055.5	16856.7	16766.5	16674.3	16582.5	16579.1	16766.5
50°	19776.4	19717.9	19524.0	19356.9	19402.1	19158.1	19173.0	18925.6	19037.7	19051.0	19443.7
52.5°	21836.9	22041.1	22184.9	22359.9	22474.0	22495.8	22570.6	22682.7	22818.0	23085.3	23449.7
55°	23016.8	23272.7	23421.4	23555.3	23775.9	23822.5	23947.9	24096.7	24215.1	24516.1	24825.5
57.5°	24419.4	24893.9	25124.4	25336.6	25634.1	25747.6	25956.8	26119.0	26272.7	26628.6	27002.9
60°	25283.1	25861.7	26331.2	26666.8	27039.6	27307.4	27623.2	27877.0	28238.0	28664.3	29222.6
62.5°	24596.4	25445.2	26068.9	26645.5	27151.7	27663.3	28116.0	28590.9	29138.8	29783.8	30649.9
65°	21860.7	22724.3	23792.2	24390.7	25061.0	25849.8	26538.4	27307.4	28054.0	28993.5	30273.6
67.5°	17598.9	18602.9	19803.2	20406.5	21177.0	22057.5	22829.9	23768.9	24641.5	25779.4	27362.4
70°	12685.2	13983.6	14993.0	15623.2	16522.5	17429.8	18175.5	19268.2	19990.1	21156.6	22793.2
72.5°	8032.2	9056.5	10293.5	11087.2	11886.0	12805.6	13567.7	14510.1	15183.4	16246.4	17728.8
75°	4318.8	5073.9	6160.1	6914.2	7769.9	8555.3	9447.7	10079.3	10577.6	11418.4	12621.7
77.5°	2023.8	2483.4	3033.2	3613.3	4193.4	4798.2	5386.7	5897.9	6112.0	6593.4	7303.4
80°	1228.6	1377.3	1537.4	1716.4	1958.8	2154.2	2413.5	2600.4	2613.8	2766.0	2983.1
82.5°	820.5	875.6	924.1	969.3	1031.2	1079.8	1134.9	1199.8	1226.6	1261.8	1332.2
85°	559.7	586.5	596.4	625.2	618.2	635.1	656.9	678.7	690.1	688.6	720.4
87.5°	344.1	357.5	364.4	370.8	365.9	359.4	369.4	381.3	384.2	374.3	377.8
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°	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6
2.5°	3063.5	3048.6	3033.2	3023.3	3019.8	2931.6	2892.9	2868.1	2814.6	2770.9	2735.7
5°	3379.3	3347.5	3322.8	3292.5	3275.7	3051.6	2969.8	2913.2	2819.5	2764.5	2713.9
7.5°	3887.5	3798.7	3747.1	3688.6	3638.6	3234.0	3098.7	3009.9	2879.5	2806.1	2749.1
10°	4464.1	4372.3	4290.0	4199.8	4121.5	3476.4	3279.1	3141.8	2969.8	2874.6	2799.2
12.5°	5107.6	5017.3	4913.7	4798.2	4698.1	3783.8	3509.7	3314.3	3078.3	2951.4	2846.3
15°	5868.1	5709.0	5583.5	5450.2	5333.2	4151.7	3778.9	3508.2	3193.8	3021.8	2881.5
17.5°	6574.6	6407.5	6237.5	6120.5	5985.1	4564.2	4049.6	3705.0	3289.0	3066.9	2887.9
20°	7265.2	7082.8	6936.0	6778.9	6636.6	4992.1	4338.6	3879.0	3351.0	3068.4	2846.3
22.5°	7873.6	7759.5	7595.9	7425.4	7281.6	5419.9	4609.3	4026.3	3374.3	3030.2	2772.4
25°	8565.2	8445.2	8244.4	8100.6	7940.5	5856.2	4875.1	4139.8	3360.9	2958.4	2658.9
27.5°	9303.9	9170.5	8964.8	8814.6	8620.7	6308.9	5119.0	4221.6	3310.9	2841.3	2506.7
30°	10074.4	9952.4	9750.1	9598.4	9402.6	6788.8	5391.7	4276.6	3210.7	2679.2	2329.7
32.5°	10901.8	10799.7	10599.4	10440.7	10231.5	7308.4	5645.5	4293.5	3058.5	2486.9	2142.8
35°	11687.1	11617.2	11448.2	11299.4	11082.3	7799.7	5914.7	4285.1	2878.0	2276.2	1972.2
37.5°	12571.6	12529.5	12446.2	12257.3	11991.6	8466.5	6237.5	4249.9	2657.4	2067.4	1841.8
40°	13514.1	13517.6	13427.4	13298.5	13051.1	9275.6	6621.7	4181.5	2416.5	1883.5	1722.9
42.5°	14511.6	14563.7	14520.1	14428.3	14190.9	10091.2	7081.3	4098.2	2182.9	1704.5	1606.3
45°	15654.9	15718.4	15785.3	15650.0	15419.4	11167.6	7686.2	3989.6	1930.1	1555.8	1526.0
47.5°	16973.7	17073.9	17133.8	17135.8	16905.3	12501.2	8668.8	3924.1	1706.5	1455.6	1487.4
50°	19756.1	19788.3	19930.1	20177.5	20000.5	15588.0	10385.2	3884.0	1554.3	1393.7	1459.1
52.5°	23765.5	24115.0	24360.9	24344.1	24103.1	17548.3	11331.2	3676.7	1464.1	1370.4	1445.7
55°	25398.6	25834.9	26289.5	26409.5	26222.6	19221.6	12225.6	3469.5	1420.4	1387.2	1450.7
57.5°	27574.6	28309.8	28933.5	29195.8	28925.1	21362.4	13402.1	3360.9	1407.0	1432.3	1482.4
60°	30116.5	31025.8	31844.8	32315.8	32315.8	23822.5	14622.2	3315.8	1388.7	1499.3	1535.9
62.5°	31749.6	33084.7	34321.7	35011.9	34991.5	25535.4	15163.6	3162.1	1347.0	1545.9	1609.3
65°	31756.0	33344.0	34919.6	35695.6	35735.2	25325.2	14269.7	2792.8	1270.2	1552.8	1683.2
67.5°	29109.0	30801.7	32638.5	33506.2	33706.5	23312.8	12352.5	2296.5	1144.8	1485.9	1710.0
70°	24584.5	26237.5	28112.5	28965.3	29321.2	19873.1	9948.9	1770.0	984.6	1338.6	1654.4
72.5°	19368.4	20989.6	22295.0	22918.2	23195.8	15190.4	7244.9	1337.1	807.1	1127.9	1505.7
75°	13712.9	14929.6	15623.2	15762.0	15805.1	9157.2	4402.1	994.5	665.3	877.5	1271.7
77.5°	7739.7	8261.3	8204.3	8266.2	7751.6	3534.9	1917.2	711.9	548.3	666.8	986.1
80°	3021.8	3115.5	2926.6	2868.1	2630.6	1315.3	845.8	496.3	437.8	504.7	690.1
82.5°	1332.2	1375.3	1335.1	1345.6	1287.1	678.7	506.2	359.4	334.2	369.4	458.1
85°	733.8	747.1	743.7	765.5	733.8	270.7	240.5	220.6	234.0	250.9	294.0
87.5°	357.5	360.9	349.5	367.9	356.0	136.8	118.5	125.4	136.8	140.3	140.3
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°	2869.6	2869.6	2869.6	2869.6	2869.6	2869.6
2.5°	2711.0	2697.6	2699.1	2695.6	2689.1	2689.1
5°	2687.7	2674.3	2674.3	2670.8	2662.4	2663.9
7.5°	2711.0	2689.1	2680.7	2668.8	2657.4	2657.4
10°	2737.7	2699.1	2675.8	2655.9	2640.6	2640.6
12.5°	2757.6	2697.6	2658.9	2632.1	2617.3	2617.3
15°	2764.5	2685.7	2632.1	2600.4	2587.0	2585.5
17.5°	2742.7	2640.6	2575.6	2538.9	2522.1	2517.1
20°	2675.8	2558.7	2480.4	2438.3	2415.0	2406.5
22.5°	2575.6	2441.7	2350.0	2306.4	2276.2	2271.2
25°	2435.3	2291.5	2201.3	2159.1	2142.8	2137.3
27.5°	2271.2	2137.3	2060.5	2033.7	2018.8	2017.4
30°	2116.0	2002.0	1945.5	1925.1	1906.8	1903.8
32.5°	1970.3	1898.4	1877.0	1848.3	1805.2	1800.2
35°	1866.6	1860.2	1845.3	1781.4	1728.3	1712.9
37.5°	1803.2	1865.1	1788.3	1662.9	1624.7	1621.2
40°	1766.5	1813.6	1681.2	1638.1	1641.0	1638.1
42.5°	1683.2	1731.3	1684.7	1664.8	1677.7	1681.2
45°	1599.4	1652.9	1710.0	1696.6	1728.3	1728.3
47.5°	1552.8	1632.6	1708.0	1708.0	1755.1	1771.4
50°	1499.3	1616.3	1681.2	1704.5	1741.7	1728.3
52.5°	1495.8	1587.5	1643.0	1684.7	1701.5	1686.2
55°	1500.7	1564.2	1604.4	1651.5	1671.3	1672.8
57.5°	1507.7	1550.8	1577.6	1599.4	1659.4	1659.4
60°	1524.0	1539.4	1554.3	1566.2	1644.5	1646.0
62.5°	1550.8	1527.5	1524.0	1535.9	1636.1	1629.6
65°	1593.0	1510.7	1485.9	1497.3	1627.7	1607.8
67.5°	1649.5	1485.9	1437.3	1445.7	1621.2	1577.6
70°	1701.5	1445.7	1377.3	1368.9	1557.8	1480.9
72.5°	1706.5	1399.1	1293.5	1268.7	1354.0	1280.1
75°	1622.7	1366.9	1201.8	1127.9	1118.0	1108.1
77.5°	1462.6	1348.5	1094.7	979.2	959.3	965.8
80°	1223.6	1280.1	965.8	829.0	937.5	926.1
82.5°	914.2	1129.9	820.5	733.8	731.8	647.0
85°	508.2	881.0	668.3	549.8	382.7	370.8
87.5°	142.3	489.8	468.0	310.9	212.2	220.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)