

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: P301729

Luminaire Tested: **GLNA-AF-09-LED-E1-T2R-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301729  
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-09-LED-E1-T2R-7030-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 35200.3 lumens  
Efficiency: N/A  
Efficacy: 121.4 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): 290  
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

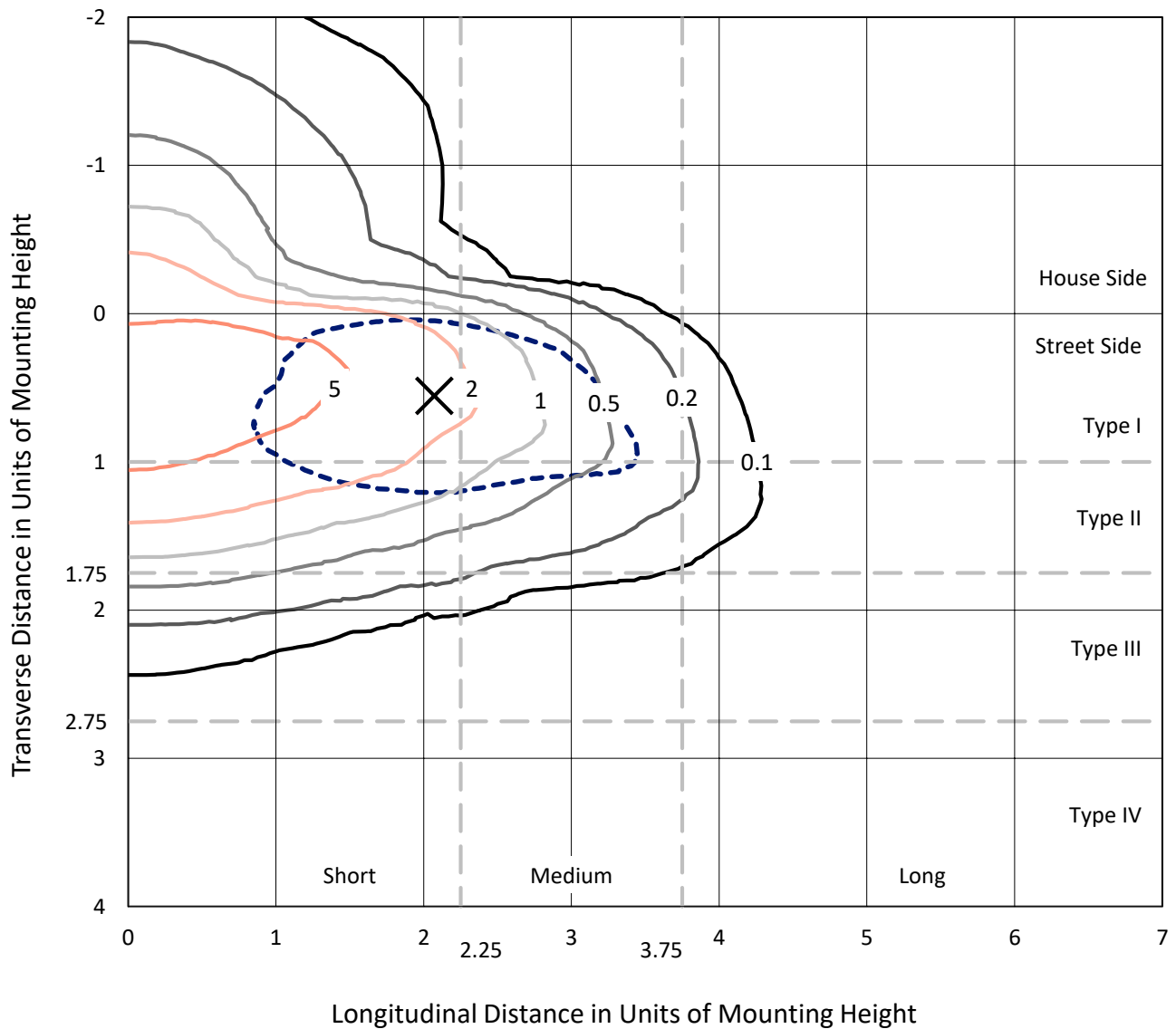


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### Iso-Footcandle Lines of Horizontal Illumination

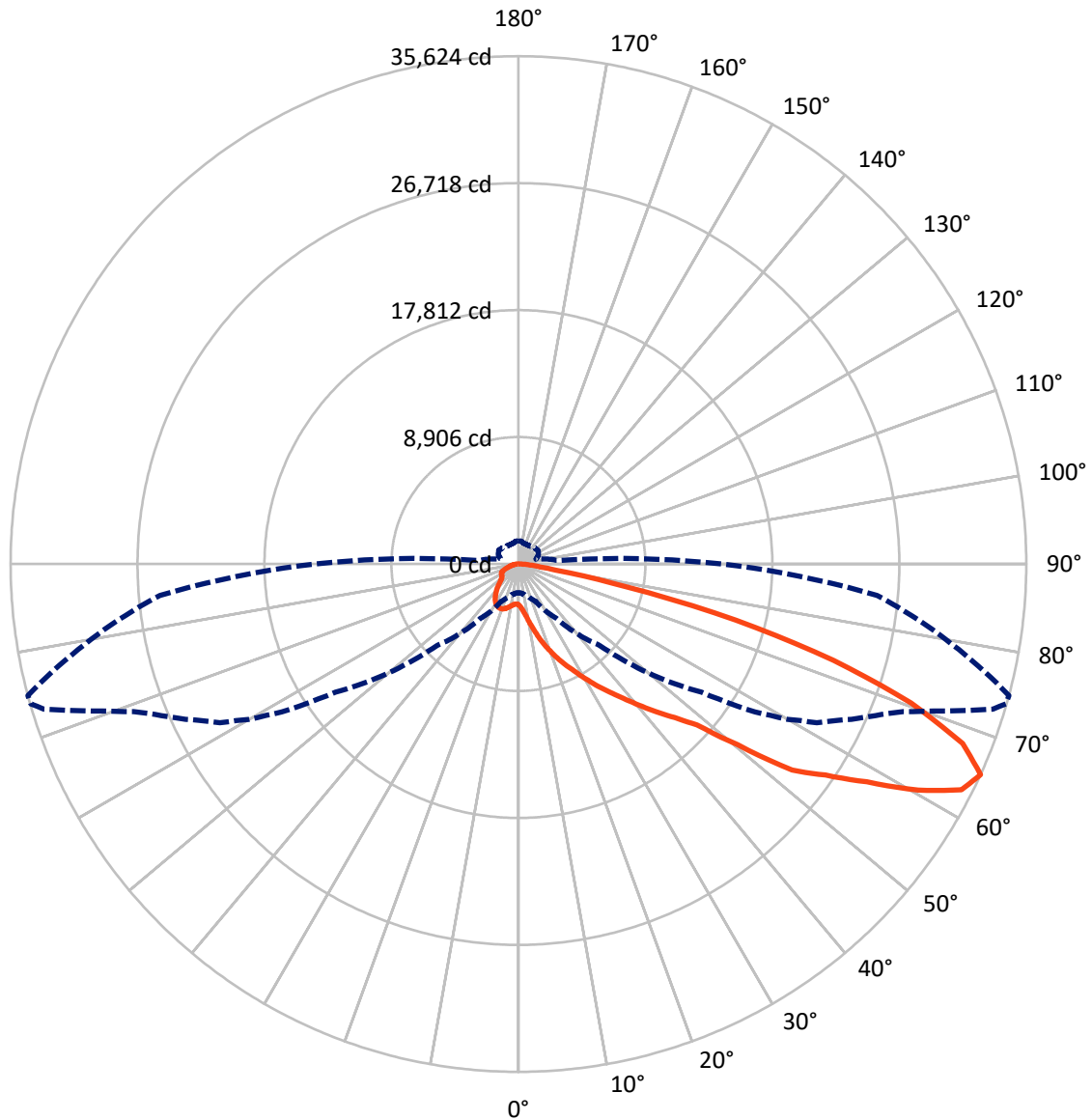
× Max cd  
 - - - 1/2 Max cd



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
<b>House Side</b>	Lumens	5427.1	0.0	5427.1
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	29773.3	0.0	29773.3
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	35200.3	0.0	35200.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	353.6	1.0
10°-20°	1381.6	3.9
20°-30°	2834.5	8.1
30°-40°	4768.9	13.5
40°-50°	6589.3	18.7
50°-60°	8225.4	23.4
60°-70°	7402.0	21.0
70°-80°	3102.9	8.8
80°-90°	542.1	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°	35200.3	100.0
0°-180°	35200.3	100.0



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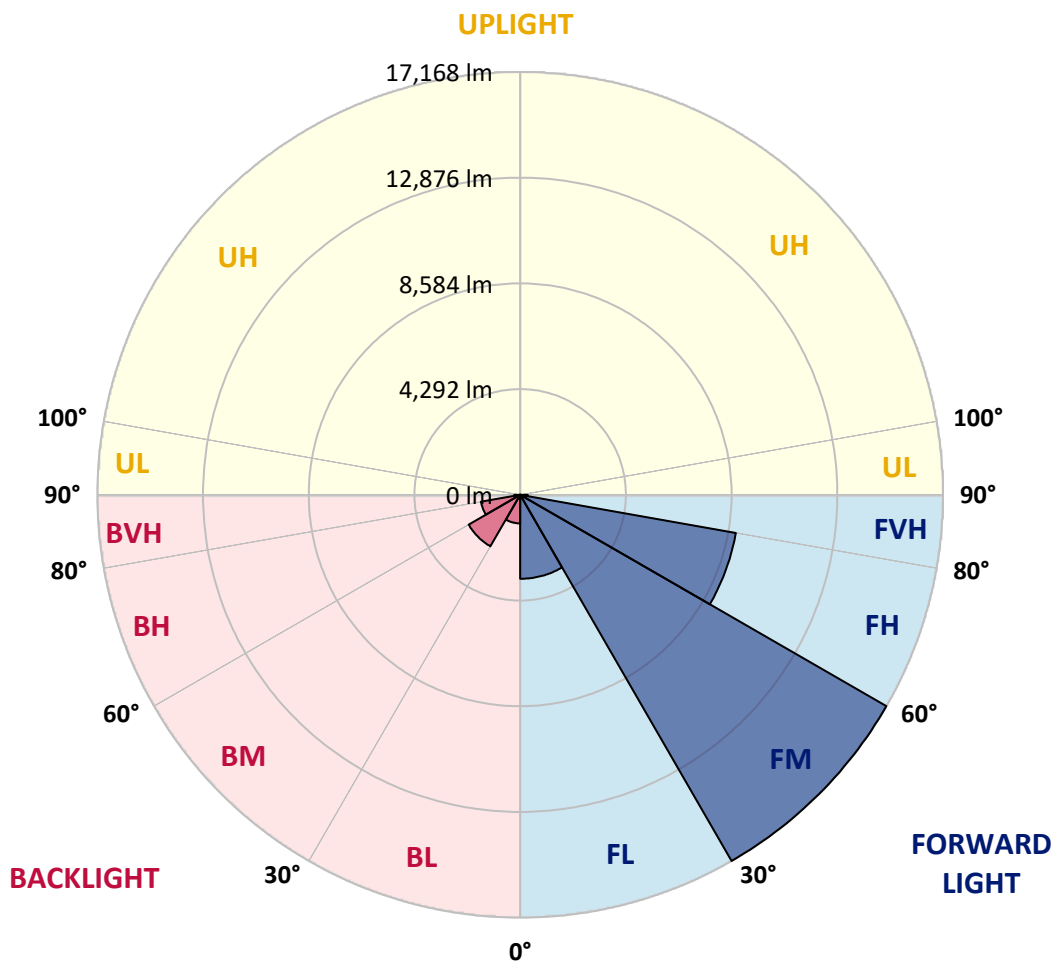
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3409.0	9.7			
FM (30°-60°)	17168.0	48.8			
FH (60°-80°)	8891.5	25.3			G4/12000
FVH (80°-90°)	304.7	0.9			G3/500
BL (0°-30°)	1160.6	3.3	B3/2500		
BM (30°-60°)	2415.6	6.9	B2/2500		
BH (60°-80°)	1613.4	4.6	B3/2500		G3/2500
BVH (80°-90°)	237.4	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°	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7
2.5°	3632.2	3592.2	3602.1	3535.4	3453.8	3347.0	3228.9	3227.4	3228.9	3217.1	3174.1
5°	5036.4	4988.4	4970.2	4819.9	4600.0	4287.1	3947.1	3910.5	3895.2	3857.1	3768.6
7.5°	6061.5	6034.8	6006.1	5892.9	5693.2	5343.3	4886.6	4808.5	4733.4	4715.1	4615.3
10°	6722.8	6715.8	6656.0	6625.9	6501.3	6197.9	5753.0	5677.9	5596.4	5568.2	5462.9
12.5°	7245.7	7244.2	7216.0	7224.4	7115.7	6896.2	6512.7	6444.5	6384.7	6297.7	6223.1
15°	7607.5	7608.9	7651.0	7697.4	7680.6	7532.3	7172.5	7142.4	7091.0	7031.2	6942.7
17.5°	7904.0	7912.4	7955.4	8040.4	8132.3	8120.5	7835.8	7810.6	7765.6	7684.1	7637.6
20°	8573.7	8605.3	8522.3	8522.3	8532.2	8577.2	8440.3	8420.5	8357.2	8313.7	8277.2
22.5°	9705.0	9741.6	9553.3	9362.0	9173.7	9036.8	8900.4	8925.1	8882.1	8852.0	8830.2
25°	11174.4	11203.1	10898.2	10574.9	10191.4	9691.7	9353.6	9338.3	9315.1	9296.8	9286.9
27.5°	12557.3	12569.2	12281.1	11807.6	11362.7	10644.6	9813.3	9795.0	9766.8	9731.7	9701.6
30°	13740.6	13737.1	13440.6	12988.8	12512.4	11717.6	10511.7	10454.8	10371.3	10276.4	10203.2
32.5°	14765.1	14760.2	14435.0	13966.9	13467.3	12780.7	11468.0	11351.4	11221.4	11036.1	10924.8
35°	15571.3	15568.3	15261.4	14773.5	14200.2	13782.1	12564.3	12420.9	12255.9	12007.7	11836.2
37.5°	15876.2	15876.2	15704.7	15371.6	14865.0	14578.3	13782.1	13608.6	13432.2	13150.4	12957.2
40°	15697.8	15701.3	15737.8	15676.5	15429.9	15210.0	14918.4	14815.1	14663.3	14410.3	14208.6
42.5°	15099.8	15118.0	15361.7	15659.7	15782.8	15748.2	15926.1	15879.7	15772.9	15578.2	15418.0
45°	14341.6	14398.4	14664.8	15228.3	15881.2	16212.8	16770.8	16775.7	16756.0	16651.2	16527.6
47.5°	13300.7	13380.3	13732.2	14493.3	15651.3	16664.5	17628.8	17673.8	17715.8	17647.6	17590.8
50°	11917.8	12012.7	12539.1	13548.8	15183.3	17132.6	19249.9	19453.6	19643.4	19620.1	19658.2
52.5°	10436.5	10548.2	11192.7	12317.6	14378.6	17240.8	20286.4	20618.0	20949.7	21221.0	21509.2
55°	9100.1	9040.3	9685.3	10869.5	13055.5	16752.5	21218.0	21617.9	21987.6	22320.7	22664.2
57.5°	7289.2	7387.5	8034.0	9205.4	11304.4	15374.6	21859.1	22444.3	22975.6	23527.2	24013.5
60°	5328.0	5426.3	6127.7	7317.3	9403.6	13285.4	21369.3	22256.0	23107.1	23951.7	24611.5
62.5°	3217.1	3290.7	3908.5	5041.8	7251.1	10808.2	19186.7	20349.6	21602.6	22612.3	23623.5
65°	2002.7	2044.2	2272.5	2895.8	4656.8	8069.1	15676.5	16944.3	18293.6	19575.2	20626.4
67.5°	1639.4	1654.2	1696.3	1829.2	2557.2	5261.8	11667.7	12790.6	14008.5	15248.0	16417.9
70°	1474.3	1464.5	1464.5	1472.9	1639.4	2829.1	7639.1	8370.6	9385.3	10463.2	11532.8
72.5°	1331.0	1321.1	1302.8	1278.1	1337.9	1725.9	3948.5	4500.1	5231.6	6189.5	7214.0
75°	1196.1	1182.7	1161.5	1129.8	1171.4	1302.8	1895.9	2127.7	2484.1	2994.2	3565.5
77.5°	1056.2	1039.4	1019.6	996.4	1049.8	1013.2	1111.1	1194.6	1331.0	1494.6	1709.6
80°	898.0	883.2	876.3	864.9	928.2	771.5	784.9	836.3	916.3	1004.8	1104.6
82.5°	703.3	703.3	729.5	734.9	804.6	555.0	586.7	631.6	673.2	719.6	766.6
85°	463.1	466.6	556.5	591.6	634.6	373.2	439.9	454.7	488.3	515.0	534.8
87.5°	144.8	156.7	340.0	376.6	364.8	211.5	269.9	276.8	300.0	318.3	335.1
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°	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7
2.5°	3174.1	3153.8	3135.5	3134.0	3120.7	3102.4	3108.8	3080.6	3082.1	3067.3	3050.5
5°	3732.1	3718.7	3652.0	3633.7	3583.8	3552.2	3547.2	3480.5	3472.1	3434.0	3392.0
7.5°	4535.2	4491.7	4398.3	4353.3	4268.3	4205.1	4175.4	4086.9	4043.4	3943.6	3898.6
10°	5376.4	5321.6	5206.4	5143.1	5061.6	4959.8	4904.9	4776.9	4726.5	4635.1	4525.3
12.5°	6156.3	6101.5	5982.9	5934.4	5826.2	5717.9	5658.1	5513.3	5448.1	5301.3	5214.8
15°	6877.5	6822.6	6719.3	6669.4	6561.1	6472.7	6392.6	6249.8	6173.2	6036.2	5923.1
17.5°	7577.3	7519.0	7429.0	7384.1	7279.3	7189.3	7102.8	6967.4	6889.3	6752.9	6651.1
20°	8227.2	8183.7	8119.0	8058.7	7953.9	7872.4	7769.1	7652.4	7539.3	7438.9	7342.5
22.5°	8793.7	8776.8	8707.2	8680.5	8590.5	8520.3	8430.4	8315.7	8233.7	8107.1	8017.2
25°	9282.0	9277.0	9243.4	9235.0	9171.7	9105.0	9085.3	8990.4	8915.2	8803.5	8710.6
27.5°	9701.6	9706.5	9698.6	9721.8	9705.0	9674.9	9676.9	9645.2	9601.7	9508.3	9426.8
30°	10168.2	10141.5	10156.8	10189.9	10199.8	10203.2	10258.1	10276.4	10273.4	10211.6	10171.6
32.5°	10828.0	10764.7	10706.4	10701.4	10734.6	10747.9	10841.3	10889.8	10931.3	10946.1	10953.0
35°	11669.2	11542.7	11421.1	11356.3	11299.5	11314.3	11381.0	11459.6	11551.1	11614.3	11689.4
37.5°	12728.8	12574.1	12359.2	12205.9	12167.4	12084.3	12127.3	12189.1	12279.1	12377.4	12507.4
40°	14013.4	13778.6	13536.9	13333.8	13224.1	13070.4	13068.9	13057.0	13112.4	13203.8	13387.2
42.5°	15250.0	15041.4	14784.9	14571.9	14428.6	14223.5	14181.9	14073.7	14098.4	14178.5	14356.9
45°	16407.5	16236.0	16079.4	15833.2	15711.1	15489.7	15419.5	15291.5	15219.9	15256.4	15434.9
47.5°	17529.0	17419.3	17255.7	17096.0	17002.6	16804.4	16714.5	16622.5	16531.1	16527.6	16714.5
50°	19715.0	19656.7	19463.5	19296.9	19341.9	19098.7	19113.5	18866.9	18978.6	18992.0	19383.4
52.5°	21769.1	21972.8	22116.1	22290.6	22404.2	22426.0	22500.6	22612.3	22747.2	23013.6	23376.9
55°	22945.4	23200.5	23348.7	23482.2	23702.1	23748.6	23873.6	24021.9	24140.0	24440.0	24748.5
57.5°	24343.7	24816.7	25046.5	25258.0	25554.6	25667.8	25876.3	26037.9	26191.2	26546.0	26919.2
60°	25204.6	25781.4	26249.5	26584.1	26955.8	27222.7	27537.5	27790.5	28150.4	28575.4	29131.9
62.5°	24520.1	25366.3	25988.0	26562.8	27067.5	27577.5	28028.8	28502.3	29048.4	29691.4	30554.9
65°	21792.9	22653.8	23718.4	24315.0	24983.2	25769.6	26456.1	27222.7	27967.0	28903.6	30179.7
67.5°	17544.3	18545.2	19741.7	20343.2	21111.3	21989.1	22759.1	23695.2	24565.1	25699.4	27277.5
70°	12645.8	13940.2	14946.5	15574.7	16471.3	17375.8	18119.1	19208.4	19928.1	21091.0	22722.5
72.5°	8007.3	9028.4	10261.6	11052.9	11849.1	12765.9	13525.6	14465.1	15136.3	16196.0	17673.8
75°	4305.4	5058.1	6141.0	6892.8	7745.8	8528.7	9418.4	10048.1	10544.8	11383.0	12582.6
77.5°	2017.5	2475.7	3023.8	3602.1	4180.3	4783.3	5370.0	5879.6	6093.1	6573.0	7280.8
80°	1224.7	1373.0	1532.7	1711.1	1952.8	2147.5	2406.0	2592.3	2605.7	2757.4	2973.9
82.5°	818.0	872.8	921.3	966.3	1028.0	1076.5	1131.3	1196.1	1222.8	1257.9	1328.0
85°	558.0	584.7	594.6	623.2	616.3	633.1	654.9	676.6	688.0	686.5	718.1
87.5°	343.0	356.4	363.3	369.7	364.8	358.3	368.2	380.1	383.0	373.2	376.6
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°	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7
2.5°	3054.0	3039.1	3023.8	3013.9	3010.5	2922.5	2883.9	2859.2	2805.8	2762.3	2727.3
5°	3368.8	3337.2	3312.4	3282.3	3265.5	3042.1	2960.5	2904.2	2810.8	2755.9	2705.5
7.5°	3875.4	3786.9	3735.5	3677.2	3627.3	3224.0	3089.0	3000.6	2870.6	2797.4	2740.6
10°	4450.2	4358.8	4276.7	4186.8	4108.7	3465.7	3269.0	3132.0	2960.5	2865.6	2790.5
12.5°	5091.7	5001.8	4898.5	4783.3	4683.5	3772.1	3498.8	3304.0	3068.8	2942.3	2837.5
15°	5849.9	5691.3	5566.2	5433.3	5316.6	4138.8	3767.2	3497.3	3183.9	3012.4	2872.6
17.5°	6554.2	6387.7	6218.1	6101.5	5966.6	4550.0	4037.0	3693.5	3278.8	3057.4	2879.0
20°	7242.7	7060.8	6914.5	6757.8	6616.0	4976.6	4325.2	3867.0	3340.6	3058.9	2837.5
22.5°	7849.1	7735.5	7572.4	7402.3	7259.0	5403.1	4595.0	4013.8	3363.8	3020.8	2763.8
25°	8538.6	8419.0	8218.8	8075.5	7915.9	5838.1	4859.9	4127.0	3350.5	2949.2	2650.6
27.5°	9275.0	9142.1	8937.0	8787.2	8594.0	6289.3	5103.1	4208.5	3300.6	2832.5	2498.9
30°	10043.1	9921.5	9719.9	9568.6	9373.4	6767.7	5374.9	4263.4	3200.7	2670.9	2322.5
32.5°	10868.0	10766.2	10566.5	10408.4	10199.8	7285.7	5628.0	4280.2	3049.0	2479.1	2136.1
35°	11650.9	11581.2	11412.7	11264.4	11047.9	7775.5	5896.4	4271.8	2869.1	2269.1	1966.1
37.5°	12532.6	12490.6	12407.6	12219.3	11954.4	8440.3	6218.1	4236.7	2649.2	2061.0	1836.1
40°	13472.2	13475.7	13385.7	13257.2	13010.6	9246.9	6601.2	4168.5	2409.0	1877.6	1717.5
42.5°	14466.6	14518.5	14475.0	14383.6	14146.8	10059.9	7059.3	4085.4	2176.2	1699.2	1601.4
45°	15606.4	15669.6	15736.3	15601.4	15371.6	11132.9	7662.3	3977.2	1924.1	1550.9	1521.3
47.5°	16921.1	17020.9	17080.7	17082.7	16852.8	12462.4	8641.9	3912.0	1701.2	1451.1	1482.7
50°	19694.8	19726.9	19868.3	20114.9	19938.4	15539.6	10353.0	3871.9	1549.5	1389.3	1454.6
52.5°	23691.8	24040.2	24285.3	24268.5	24028.3	17493.9	11296.0	3665.3	1459.5	1366.1	1441.2
55°	25319.8	25754.7	26208.0	26327.6	26141.2	19162.0	12187.6	3458.7	1416.0	1382.9	1446.2
57.5°	27489.1	28222.0	28843.8	29105.2	28835.4	21296.1	13360.5	3350.5	1402.7	1427.9	1477.8
60°	30023.1	30929.5	31746.0	32215.5	32215.5	23748.6	14576.8	3305.5	1384.4	1494.6	1531.2
62.5°	31651.1	32982.1	34215.3	34903.3	34883.0	25456.2	15116.6	3152.3	1342.9	1541.1	1604.3
65°	31657.5	33240.6	34811.3	35584.8	35624.4	25246.7	14225.4	2784.1	1266.3	1548.0	1678.0
67.5°	29018.7	30706.1	32537.3	33402.2	33601.9	23240.5	12314.2	2289.4	1141.2	1481.3	1704.7
70°	24508.2	26156.1	28025.3	28875.4	29230.3	19811.4	9918.1	1764.5	981.6	1334.5	1649.3
72.5°	19308.3	20924.5	22225.8	22847.1	23123.9	15143.2	7222.4	1333.0	804.6	1124.4	1501.0
75°	13670.4	14883.3	15574.7	15713.1	15756.1	9128.7	4388.4	991.5	663.3	874.8	1267.7
77.5°	7715.7	8235.6	8178.8	8240.6	7727.6	3524.0	1911.3	709.7	546.6	664.8	983.1
80°	3012.4	3105.9	2917.5	2859.2	2622.5	1311.2	843.2	494.7	436.4	503.1	688.0
82.5°	1328.0	1371.0	1331.0	1341.4	1283.1	676.6	504.6	358.3	333.1	368.2	456.7
85°	731.5	744.8	741.4	763.1	731.5	269.9	239.7	219.9	233.3	250.1	293.1
87.5°	356.4	359.8	348.4	366.7	354.9	136.4	118.1	125.0	136.4	139.9	139.9
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):**

	135°	145°	155°	165°	175°	180°
0°	2860.7	2860.7	2860.7	2860.7	2860.7	2860.7
2.5°	2702.5	2689.2	2690.7	2687.2	2680.8	2680.8
5°	2679.3	2666.0	2666.0	2662.5	2654.1	2655.6
7.5°	2702.5	2680.8	2672.4	2660.5	2649.2	2649.2
10°	2729.2	2690.7	2667.5	2647.7	2632.4	2632.4
12.5°	2749.0	2689.2	2650.6	2624.0	2609.1	2609.1
15°	2755.9	2677.3	2624.0	2592.3	2579.0	2577.5
17.5°	2734.2	2632.4	2567.6	2531.0	2514.2	2509.3
20°	2667.5	2550.8	2472.7	2430.7	2407.5	2399.1
22.5°	2567.6	2434.2	2342.7	2299.2	2269.1	2264.1
25°	2427.7	2284.4	2194.5	2152.4	2136.1	2130.7
27.5°	2264.1	2130.7	2054.1	2027.4	2012.6	2011.1
30°	2109.4	1995.8	1939.4	1919.2	1900.9	1897.9
32.5°	1964.1	1892.5	1871.2	1842.6	1799.6	1794.6
35°	1860.8	1854.4	1839.6	1775.8	1722.9	1707.6
37.5°	1797.6	1859.4	1782.8	1657.7	1619.6	1616.2
40°	1761.0	1808.0	1676.0	1633.0	1636.0	1633.0
42.5°	1678.0	1725.9	1679.5	1659.7	1672.5	1676.0
45°	1594.4	1647.8	1704.7	1691.3	1722.9	1722.9
47.5°	1548.0	1627.6	1702.7	1702.7	1749.6	1765.9
50°	1494.6	1611.2	1676.0	1699.2	1736.3	1722.9
52.5°	1491.1	1582.6	1637.9	1679.5	1696.3	1680.9
55°	1496.1	1559.4	1599.4	1646.3	1666.1	1667.6
57.5°	1503.0	1546.0	1572.7	1594.4	1654.2	1654.2
60°	1519.3	1534.6	1549.5	1561.3	1639.4	1640.9
62.5°	1546.0	1522.8	1519.3	1531.2	1631.0	1624.6
65°	1588.0	1506.0	1481.3	1492.6	1622.6	1602.8
67.5°	1644.4	1481.3	1432.8	1441.2	1616.2	1572.7
70°	1696.3	1441.2	1373.0	1364.6	1552.9	1476.3
72.5°	1701.2	1394.8	1289.5	1264.8	1349.8	1276.1
75°	1617.7	1362.6	1198.1	1124.4	1114.5	1104.6
77.5°	1458.0	1344.4	1091.3	976.1	956.4	962.8
80°	1219.8	1276.1	962.8	826.4	934.6	923.3
82.5°	911.4	1126.4	818.0	731.5	729.5	645.0
85°	506.6	878.3	666.2	548.1	381.6	369.7
87.5°	141.8	488.3	466.6	309.9	211.5	219.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)