

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: P301578

Luminaire Tested: **GLNA-AF-04-LED-E1-T2R-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301578  
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-04-LED-E1-T2R-7027  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

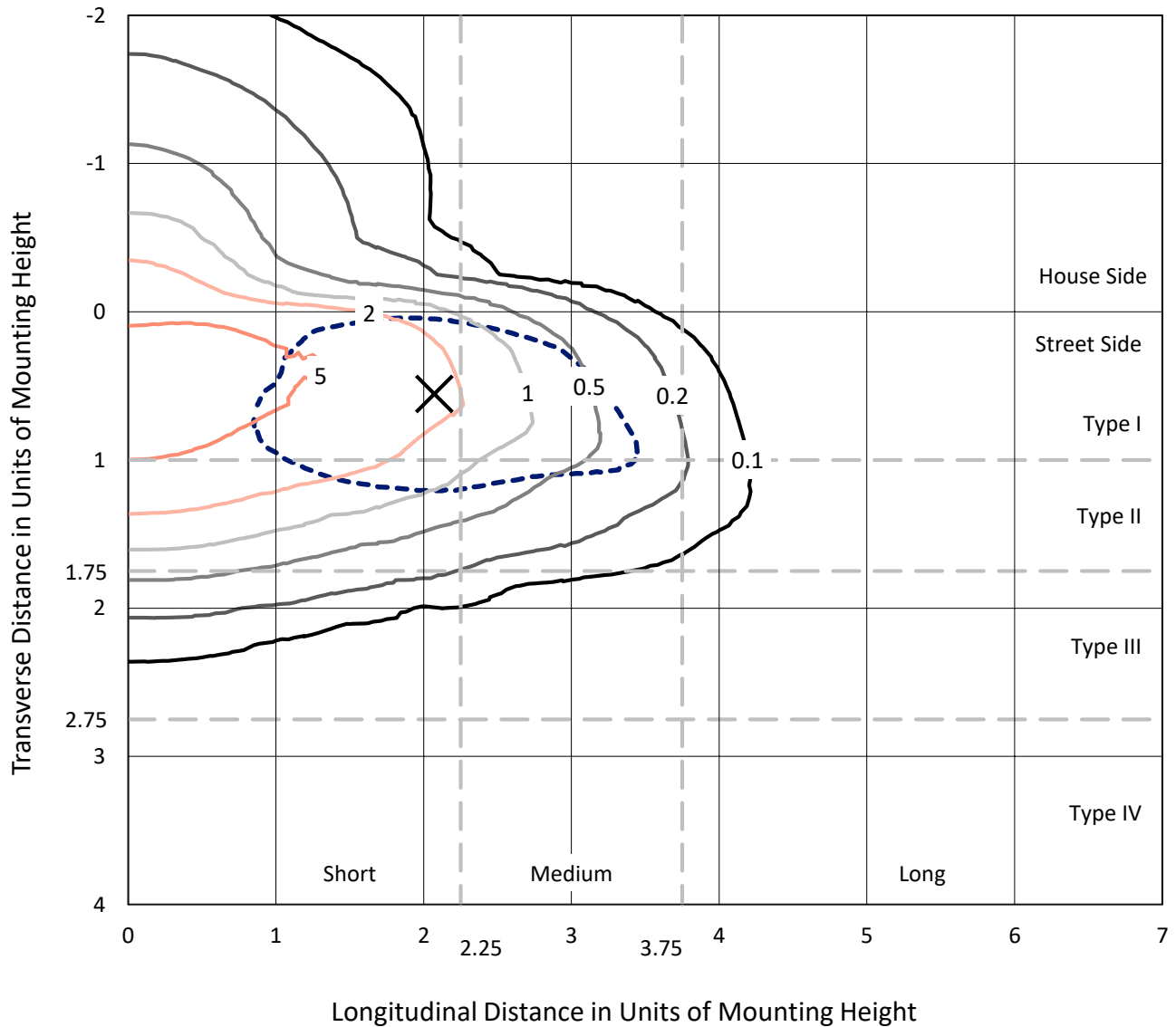
Lumens per Lamp: N/A  
Luminaire Lumens: 21656.6 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (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

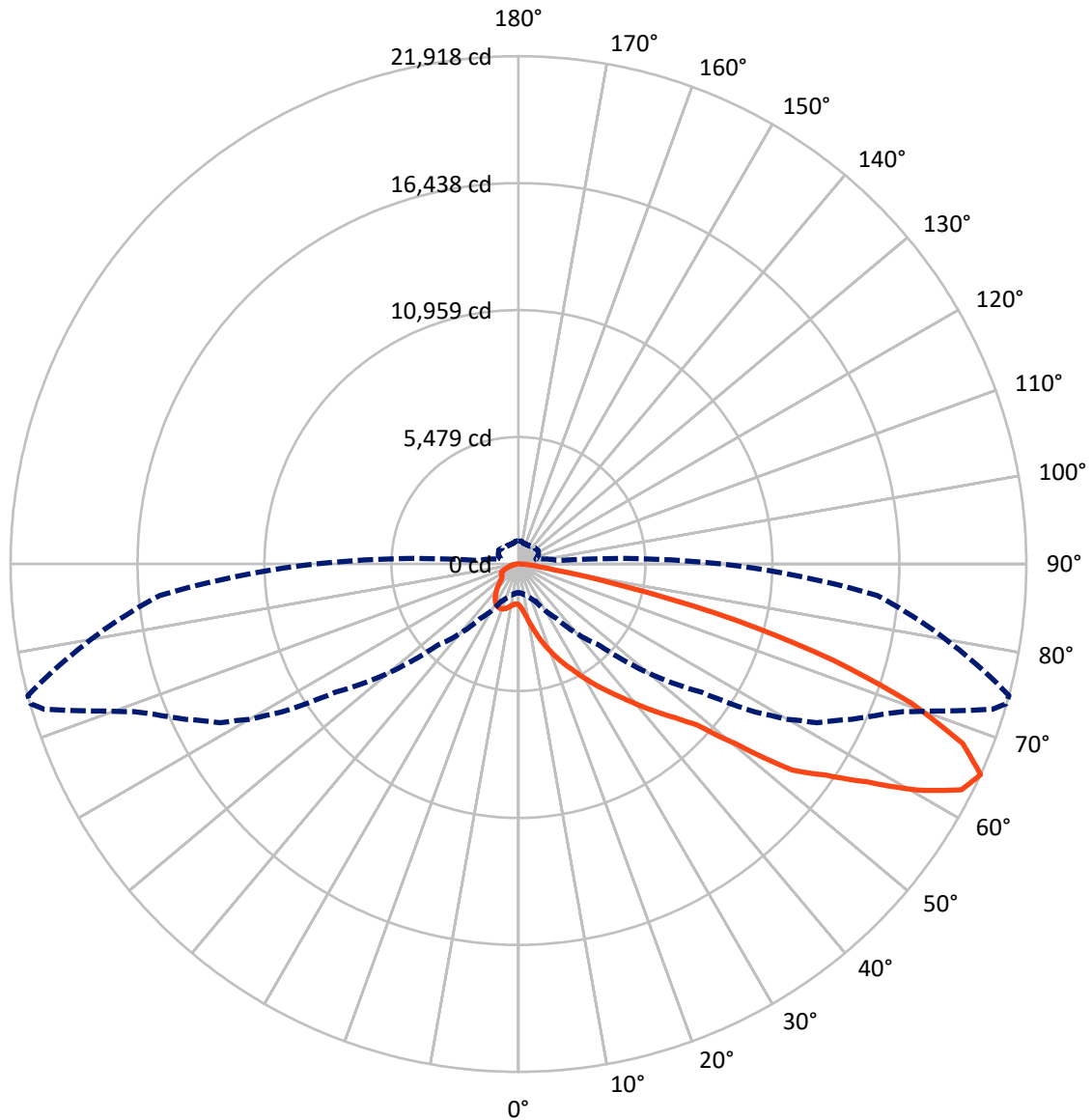
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.7 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	3338.9	0.0	3338.9
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	18317.6	0.0	18317.6
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	21656.6	0.0	21656.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.5	1.0
10°-20°	850.0	3.9
20°-30°	1743.9	8.1
30°-40°	2934.0	13.5
40°-50°	4054.0	18.7
50°-60°	5060.6	23.4
60°-70°	4554.0	21.0
70°-80°	1909.0	8.8
80°-90°	333.5	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°	21656.6	100.0
0°-180°	21656.6	100.0

**Coefficient of Utilization**



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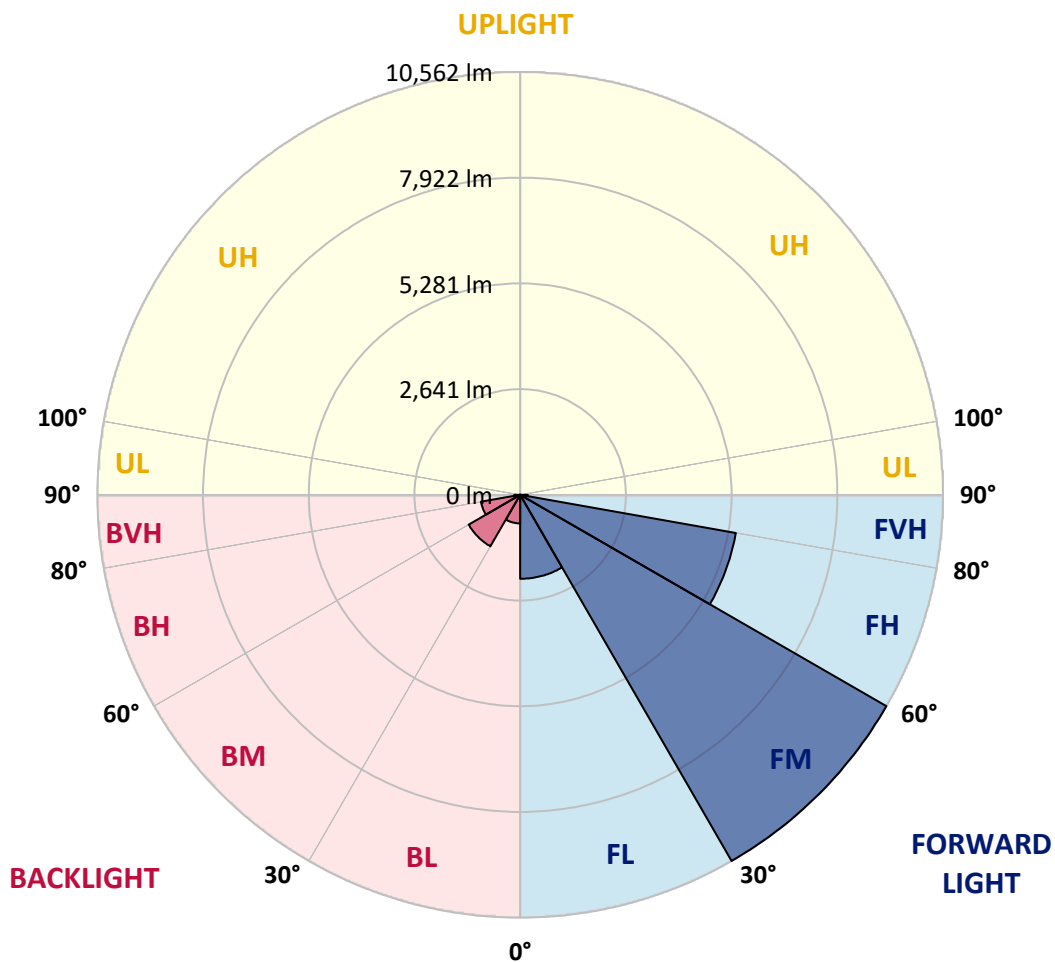
CATALOG NUMBER: GLNA-AF-04-LED-E1-T2R-7027

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2097.4	9.7			
FM	(30°-60°)	10562.4	48.8			
FH	(60°-80°)	5470.4	25.3			G3/7500
FVH	(80°-90°)	187.5	0.9			G2/225
BL	(0°-30°)	714.1	3.3	B2/1000		
BM	(30°-60°)	1486.2	6.9	B2/2500		
BH	(60°-80°)	992.6	4.6	B2/1000		G2/1000
BVH	(80°-90°)	146.1	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0
2.5°	2234.7	2210.1	2216.1	2175.1	2124.9	2059.2	1986.6	1985.6	1986.6	1979.3	1952.8
5°	3098.6	3069.1	3057.8	2965.4	2830.1	2637.6	2428.4	2405.9	2396.5	2373.0	2318.6
7.5°	3729.2	3712.8	3695.2	3625.5	3502.7	3287.4	3006.4	2958.4	2912.2	2900.9	2839.5
10°	4136.1	4131.8	4095.0	4076.5	3999.9	3813.2	3539.5	3493.3	3443.1	3425.8	3361.0
12.5°	4457.8	4456.9	4439.6	4444.7	4377.8	4242.8	4006.9	3964.9	3928.1	3874.6	3828.7
15°	4680.4	4681.3	4707.2	4735.7	4725.4	4634.2	4412.8	4394.3	4362.6	4325.8	4271.4
17.5°	4862.8	4868.0	4894.5	4946.8	5003.3	4996.0	4820.9	4805.4	4777.7	4727.5	4698.9
20°	5274.9	5294.3	5243.2	5243.2	5249.3	5277.0	5192.8	5180.6	5141.7	5114.9	5092.4
22.5°	5970.9	5993.4	5877.6	5759.9	5644.0	5559.8	5475.9	5491.1	5464.6	5446.1	5432.7
25°	6874.9	6892.6	6705.0	6506.1	6270.1	5962.7	5754.7	5745.3	5731.0	5719.7	5713.7
27.5°	7725.8	7733.0	7555.8	7264.5	6990.8	6549.0	6037.5	6026.2	6008.9	5987.3	5968.8
30°	8453.7	8451.6	8269.1	7991.2	7698.1	7209.1	6467.2	6432.2	6380.8	6322.4	6277.4
32.5°	9084.1	9081.0	8880.9	8593.0	8285.6	7863.2	7055.6	6983.8	6903.8	6789.8	6721.4
35°	9580.0	9578.2	9389.4	9089.2	8736.5	8479.3	7730.0	7641.8	7540.3	7387.6	7282.1
37.5°	9767.6	9767.6	9662.1	9457.2	9145.5	8969.1	8479.3	8372.5	8264.0	8090.6	7971.8
40°	9657.9	9660.0	9682.5	9644.8	9493.1	9357.7	9178.3	9114.8	9021.4	8865.7	8741.7
42.5°	9289.9	9301.2	9451.1	9634.5	9710.2	9688.9	9798.4	9769.8	9704.1	9584.3	9485.8
45°	8823.5	8858.4	9022.3	9369.0	9770.7	9974.7	10318.0	10321.1	10308.9	10244.4	10168.4
47.5°	8183.1	8232.0	8448.5	8916.8	9629.3	10252.7	10845.9	10873.6	10899.4	10857.5	10822.5
50°	7332.3	7390.7	7714.5	8335.7	9341.3	10540.6	11843.3	11968.6	12085.3	12071.0	12094.5
52.5°	6420.9	6489.7	6886.2	7578.3	8846.3	10607.2	12480.9	12685.0	12889.0	13056.0	13233.2
55°	5598.7	5561.9	5958.7	6687.3	8032.3	10306.8	13054.1	13300.1	13527.6	13732.5	13943.9
57.5°	4484.6	4545.1	4942.8	5663.5	6954.9	9459.0	13448.5	13808.6	14135.4	14474.8	14774.0
60°	3278.0	3338.5	3770.0	4501.9	5785.4	8173.7	13147.2	13692.7	14216.3	14736.0	15141.9
62.5°	1979.3	2024.6	2404.7	3101.9	4461.2	6649.6	11804.4	12519.9	13290.7	13911.9	14534.1
65°	1232.1	1257.7	1398.2	1781.6	2865.0	4964.4	9644.8	10424.8	11254.9	12043.4	12690.2
67.5°	1008.6	1017.8	1043.6	1125.4	1573.3	3237.2	7178.4	7869.3	8618.5	9381.2	10100.9
70°	907.1	901.0	901.0	906.2	1008.6	1740.6	4699.9	5149.9	5774.2	6437.4	7095.4
72.5°	818.9	812.8	801.6	786.3	823.1	1061.8	2429.3	2768.6	3218.7	3808.0	4438.3
75°	735.9	727.7	714.6	695.1	720.7	801.6	1166.4	1309.1	1528.3	1842.1	2193.6
77.5°	649.8	639.5	627.3	613.0	645.9	623.4	683.6	735.0	818.9	919.5	1051.8
80°	552.5	543.4	539.1	532.1	571.1	474.7	482.9	514.5	563.8	618.2	679.6
82.5°	432.7	432.7	448.8	452.2	495.0	341.5	360.9	388.6	414.2	442.7	471.6
85°	284.9	287.1	342.4	364.0	390.4	229.6	270.6	279.8	300.4	316.9	329.0
87.5°	89.1	96.4	209.2	231.7	224.4	130.1	166.0	170.3	184.6	195.8	206.2
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°	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0
2.5°	1952.8	1940.3	1929.1	1928.2	1920.0	1908.7	1912.7	1895.3	1896.2	1887.1	1876.8
5°	2296.1	2287.9	2246.8	2235.6	2204.9	2185.4	2182.4	2141.3	2136.2	2112.7	2086.9
7.5°	2790.2	2763.5	2706.0	2678.3	2626.0	2587.1	2568.9	2514.4	2487.7	2426.3	2398.6
10°	3307.8	3274.0	3203.2	3164.3	3114.1	3051.4	3017.7	2938.9	2907.9	2851.7	2784.2
12.5°	3787.6	3753.9	3680.9	3651.1	3584.5	3517.9	3481.1	3392.0	3351.9	3261.6	3208.3
15°	4231.3	4197.5	4134.0	4103.3	4036.7	3982.2	3933.0	3845.1	3798.0	3713.7	3644.1
17.5°	4661.8	4626.0	4570.6	4542.9	4478.5	4423.1	4369.9	4286.6	4238.6	4154.6	4092.0
20°	5061.7	5035.0	4995.1	4958.0	4893.6	4843.4	4779.8	4708.1	4638.4	4576.7	4517.4
22.5°	5410.2	5399.8	5357.0	5340.6	5285.2	5242.0	5186.7	5116.1	5065.7	4987.8	4932.5
25°	5710.6	5707.6	5686.9	5681.7	5642.8	5601.8	5589.6	5531.2	5485.0	5416.3	5359.1
27.5°	5968.8	5971.8	5967.0	5981.2	5970.9	5952.4	5953.6	5934.1	5907.4	5849.9	5799.7
30°	6255.8	6239.4	6248.8	6269.2	6275.3	6277.4	6311.2	6322.4	6320.6	6282.6	6258.0
32.5°	6661.8	6622.9	6587.0	6583.9	6604.3	6612.5	6670.0	6699.8	6725.3	6734.5	6738.7
35°	7179.3	7101.5	7026.7	6986.8	6951.9	6961.0	7002.0	7050.4	7106.6	7145.6	7191.8
37.5°	7831.3	7736.1	7603.8	7509.6	7485.8	7434.7	7461.2	7499.2	7554.6	7615.1	7695.0
40°	8621.6	8477.1	8328.4	8203.5	8136.0	8041.4	8040.5	8033.2	8067.2	8123.5	8236.3
42.5°	9382.4	9254.1	9096.2	8965.2	8877.0	8750.8	8725.3	8658.7	8673.9	8723.1	8832.9
45°	10094.5	9989.0	9892.6	9741.2	9666.1	9529.9	9486.7	9407.9	9363.8	9386.3	9496.1
47.5°	10784.5	10717.0	10616.3	10518.1	10460.6	10338.7	10283.4	10226.8	10170.6	10168.4	10283.4
50°	12129.4	12093.6	11974.7	11872.2	11899.9	11750.2	11759.4	11607.6	11676.4	11684.6	11925.4
52.5°	13393.2	13518.5	13606.7	13714.0	13783.9	13797.3	13843.2	13911.9	13995.0	14158.9	14382.4
55°	14116.9	14273.8	14365.0	14447.1	14582.4	14611.0	14688.0	14779.2	14851.9	15036.4	15226.2
57.5°	14977.1	15268.1	15409.5	15539.7	15722.1	15791.8	15920.1	16019.5	16113.8	16332.1	16561.7
60°	15506.8	15861.7	16149.7	16355.5	16584.2	16748.4	16942.1	17097.8	17319.2	17580.7	17923.1
62.5°	15085.7	15606.3	15988.8	16342.5	16652.9	16966.7	17244.4	17535.7	17871.7	18267.3	18798.5
65°	13407.8	13937.5	14592.5	14959.5	15370.6	15854.4	16276.8	16748.4	17206.3	17782.6	18567.7
67.5°	10793.9	11409.7	12145.9	12515.9	12988.5	13528.5	14002.3	14578.2	15113.4	15811.2	16782.2
70°	7780.2	8576.6	9195.7	9582.2	10133.8	10690.2	11147.6	11817.8	12260.5	12976.0	13979.8
72.5°	4926.4	5554.6	6313.3	6800.1	7290.0	7854.1	8321.4	8899.5	9312.4	9964.4	10873.6
75°	2648.8	3112.0	3778.2	4240.7	4765.5	5247.2	5794.5	6181.9	6487.5	7003.3	7741.3
77.5°	1241.3	1523.1	1860.4	2216.1	2571.9	2942.9	3303.8	3617.3	3748.7	4044.0	4479.4
80°	753.5	844.7	943.0	1052.7	1201.4	1321.2	1480.3	1594.9	1603.1	1696.5	1829.6
82.5°	503.3	537.0	566.8	594.5	632.5	662.3	696.0	735.9	752.3	773.9	817.1
85°	343.3	359.7	365.8	383.4	379.2	389.5	402.9	416.3	423.3	422.4	441.8
87.5°	211.0	219.2	223.5	227.5	224.4	220.5	226.5	233.8	235.7	229.6	231.7
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°	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0
2.5°	1878.9	1869.8	1860.4	1854.3	1852.1	1798.0	1774.3	1759.1	1726.3	1699.5	1677.9
5°	2072.6	2053.1	2037.9	2019.4	2009.1	1871.6	1821.4	1786.8	1729.3	1695.5	1664.5
7.5°	2384.3	2329.9	2298.2	2262.4	2231.6	1983.5	1900.5	1846.1	1766.1	1721.1	1686.1
10°	2737.9	2681.7	2631.2	2575.9	2527.8	2132.2	2011.2	1927.0	1821.4	1763.1	1716.8
12.5°	3132.6	3077.3	3013.7	2942.9	2881.5	2320.7	2152.6	2032.8	1888.0	1810.2	1745.7
15°	3599.1	3501.5	3424.5	3342.7	3271.0	2546.4	2317.7	2151.7	1958.9	1853.4	1767.3
17.5°	4032.4	3929.9	3825.6	3753.9	3670.8	2799.4	2483.7	2272.4	2017.3	1881.0	1771.3
20°	4456.0	4344.1	4254.1	4157.7	4070.4	3061.8	2661.0	2379.1	2055.3	1881.9	1745.7
22.5°	4829.1	4759.2	4658.8	4554.2	4466.0	3324.2	2827.0	2469.4	2069.6	1858.5	1700.4
25°	5253.3	5179.7	5056.5	4968.4	4870.1	3591.8	2990.0	2539.1	2061.4	1814.4	1630.8
27.5°	5706.4	5624.6	5498.4	5406.2	5287.3	3869.4	3139.6	2589.2	2030.6	1742.7	1537.4
30°	6178.9	6104.1	5980.0	5887.0	5766.9	4163.8	3306.9	2623.0	1969.2	1643.2	1428.9
32.5°	6686.4	6623.8	6500.9	6403.6	6275.3	4482.4	3462.6	2633.3	1875.9	1525.3	1314.2
35°	7168.1	7125.2	7021.5	6930.3	6797.1	4783.8	3627.7	2628.2	1765.2	1396.0	1209.6
37.5°	7710.5	7684.7	7633.6	7517.8	7354.8	5192.8	3825.6	2606.6	1629.9	1268.0	1129.7
40°	8288.6	8290.7	8235.4	8156.3	8004.6	5689.0	4061.3	2564.6	1482.1	1155.2	1056.7
42.5°	8900.4	8932.3	8905.6	8849.3	8703.7	6189.2	4343.2	2513.5	1338.9	1045.4	985.2
45°	9601.6	9640.5	9681.6	9598.6	9457.2	6849.4	4714.1	2446.9	1183.8	954.2	936.0
47.5°	10410.5	10471.9	10508.7	10509.9	10368.5	7667.4	5316.8	2406.8	1046.6	892.8	912.2
50°	12117.0	12136.7	12223.7	12375.4	12266.9	9560.6	6369.6	2382.2	953.3	854.8	894.9
52.5°	14576.1	14790.4	14941.3	14930.9	14783.1	10762.9	6949.7	2255.1	897.9	840.5	886.7
55°	15577.7	15845.3	16124.1	16197.7	16083.1	11789.2	7498.3	2127.9	871.2	850.8	889.7
57.5°	16912.3	17363.3	17745.8	17906.6	17740.6	13102.2	8219.9	2061.4	863.0	878.5	909.2
60°	18471.3	19029.0	19531.3	19820.2	19820.2	14611.0	8968.2	2033.7	851.7	919.5	942.0
62.5°	19473.0	20291.8	21050.5	21473.8	21461.3	15661.6	9300.3	1939.4	826.2	948.1	987.0
65°	19476.9	20450.9	21417.2	21893.1	21917.5	15532.7	8752.0	1712.9	779.1	952.4	1032.4
67.5°	17853.4	18891.6	20018.2	20550.3	20673.2	14298.4	7576.1	1408.5	702.1	911.3	1048.8
70°	15078.4	16092.2	17242.2	17765.2	17983.6	12188.7	6102.0	1085.6	603.9	821.0	1014.7
72.5°	11879.2	12873.5	13674.2	14056.4	14226.7	9316.7	4443.5	820.1	495.0	691.8	923.5
75°	8410.5	9156.7	9582.2	9667.3	9693.8	5616.4	2699.9	610.0	408.1	538.2	780.0
77.5°	4747.0	5066.9	5031.9	5069.9	4754.3	2168.1	1175.9	436.7	336.3	409.0	604.8
80°	1853.4	1910.8	1795.0	1759.1	1613.4	806.7	518.8	304.4	268.5	309.6	423.3
82.5°	817.1	843.5	818.9	825.3	789.4	416.3	310.5	220.5	204.9	226.5	281.0
85°	450.0	458.2	456.1	469.5	450.0	166.0	147.5	135.3	143.5	153.9	180.3
87.5°	219.2	221.4	214.4	225.6	218.3	83.9	72.7	76.9	83.9	86.1	86.1
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°	1760.0	1760.0	1760.0	1760.0	1760.0	1760.0
2.5°	1662.7	1654.5	1655.4	1653.3	1649.3	1649.3
5°	1648.4	1640.2	1640.2	1638.1	1632.9	1633.8
7.5°	1662.7	1649.3	1644.2	1636.9	1629.9	1629.9
10°	1679.1	1655.4	1641.1	1629.0	1619.5	1619.5
12.5°	1691.3	1654.5	1630.8	1614.4	1605.2	1605.2
15°	1695.5	1647.2	1614.4	1594.9	1586.7	1585.8
17.5°	1682.2	1619.5	1579.7	1557.2	1546.9	1543.8
20°	1641.1	1569.4	1521.3	1495.5	1481.2	1476.0
22.5°	1579.7	1497.6	1441.3	1414.6	1396.0	1393.0
25°	1493.6	1405.5	1350.1	1324.3	1314.2	1310.9
27.5°	1393.0	1310.9	1263.8	1247.3	1238.2	1237.3
30°	1297.8	1227.9	1193.2	1180.7	1169.5	1167.7
32.5°	1208.4	1164.3	1151.2	1133.6	1107.2	1104.1
35°	1144.9	1140.9	1131.8	1092.6	1060.0	1050.6
37.5°	1105.9	1143.9	1096.8	1019.9	996.5	994.3
40°	1083.4	1112.3	1031.1	1004.7	1006.5	1004.7
42.5°	1032.4	1061.8	1033.3	1021.1	1029.0	1031.1
45°	981.0	1013.8	1048.8	1040.6	1060.0	1060.0
47.5°	952.4	1001.3	1047.6	1047.6	1076.4	1086.5
50°	919.5	991.3	1031.1	1045.4	1068.2	1060.0
52.5°	917.4	973.7	1007.7	1033.3	1043.6	1034.2
55°	920.4	959.4	984.0	1012.9	1025.1	1026.0
57.5°	924.7	951.2	967.6	981.0	1017.8	1017.8
60°	934.7	944.2	953.3	960.6	1008.6	1009.5
62.5°	951.2	936.9	934.7	942.0	1003.5	999.5
65°	977.0	926.5	911.3	918.3	998.3	986.1
67.5°	1011.7	911.3	881.5	886.7	994.3	967.6
70°	1043.6	886.7	844.7	839.6	955.4	908.3
72.5°	1046.6	858.1	793.3	778.1	830.4	785.1
75°	995.3	838.3	737.1	691.8	685.7	679.6
77.5°	897.0	827.1	671.4	600.6	588.4	592.3
80°	750.5	785.1	592.3	508.4	575.0	568.0
82.5°	560.7	693.0	503.3	450.0	448.8	396.8
85°	311.7	540.3	409.9	337.2	234.7	227.5
87.5°	87.3	300.4	287.1	190.7	130.1	135.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)