

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: P301707

Luminaire Tested: **GLNA-AF-05-LED-E1-T2R-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301707  
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-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20345 lumens  
Efficiency: N/A  
Efficacy: 125.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G3

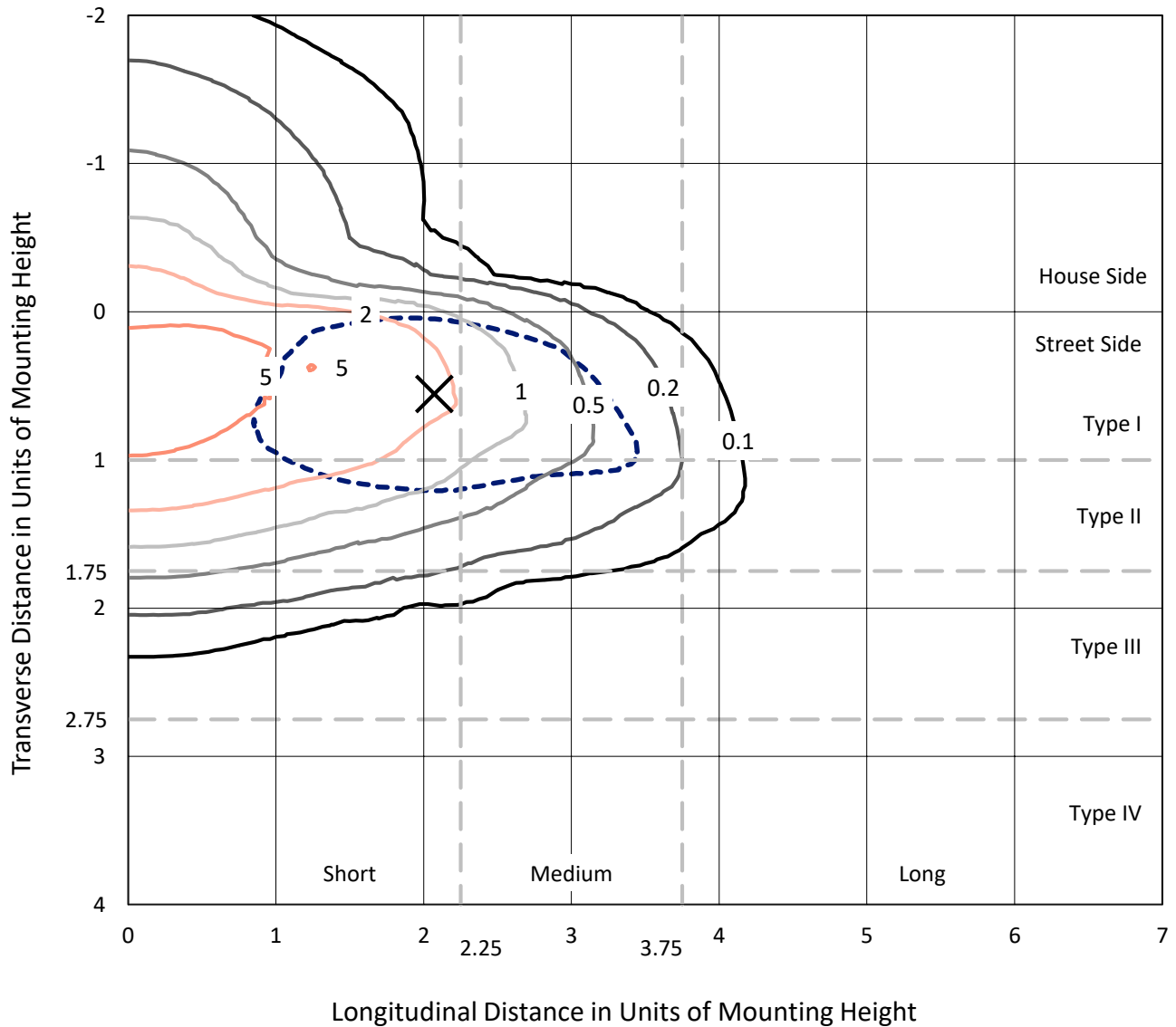
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

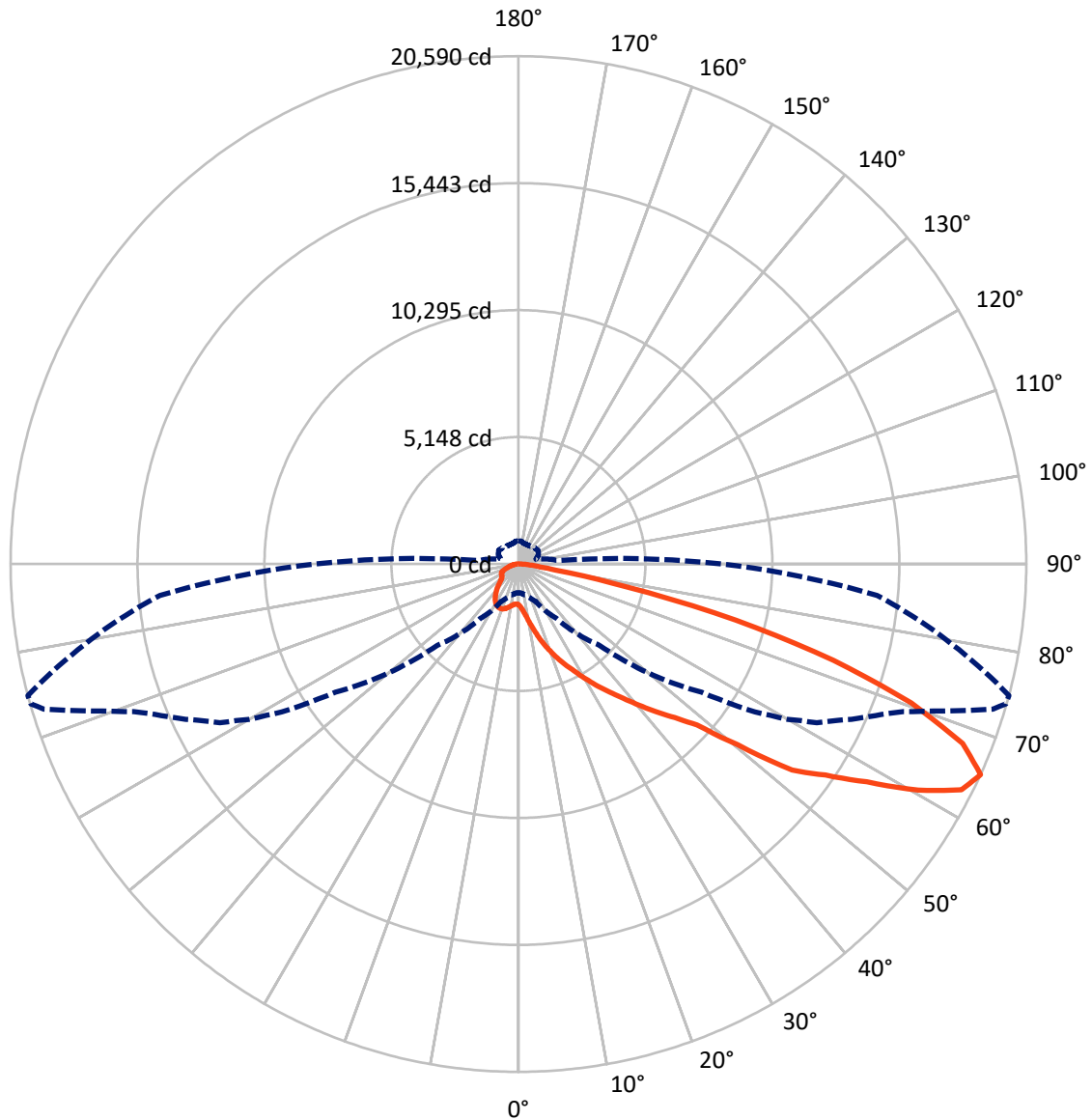
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 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	3136.7	0.0	3136.7
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	17208.3	0.0	17208.3
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	20345.0	0.0	20345.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.4	1.0
10°-20°	798.5	3.9
20°-30°	1638.3	8.1
30°-40°	2756.3	13.5
40°-50°	3808.5	18.7
50°-60°	4754.1	23.4
60°-70°	4278.2	21.0
70°-80°	1793.4	8.8
80°-90°	313.3	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°	20345.0	100.0
0°-180°	20345.0	100.0

**Coefficient of Utilization**



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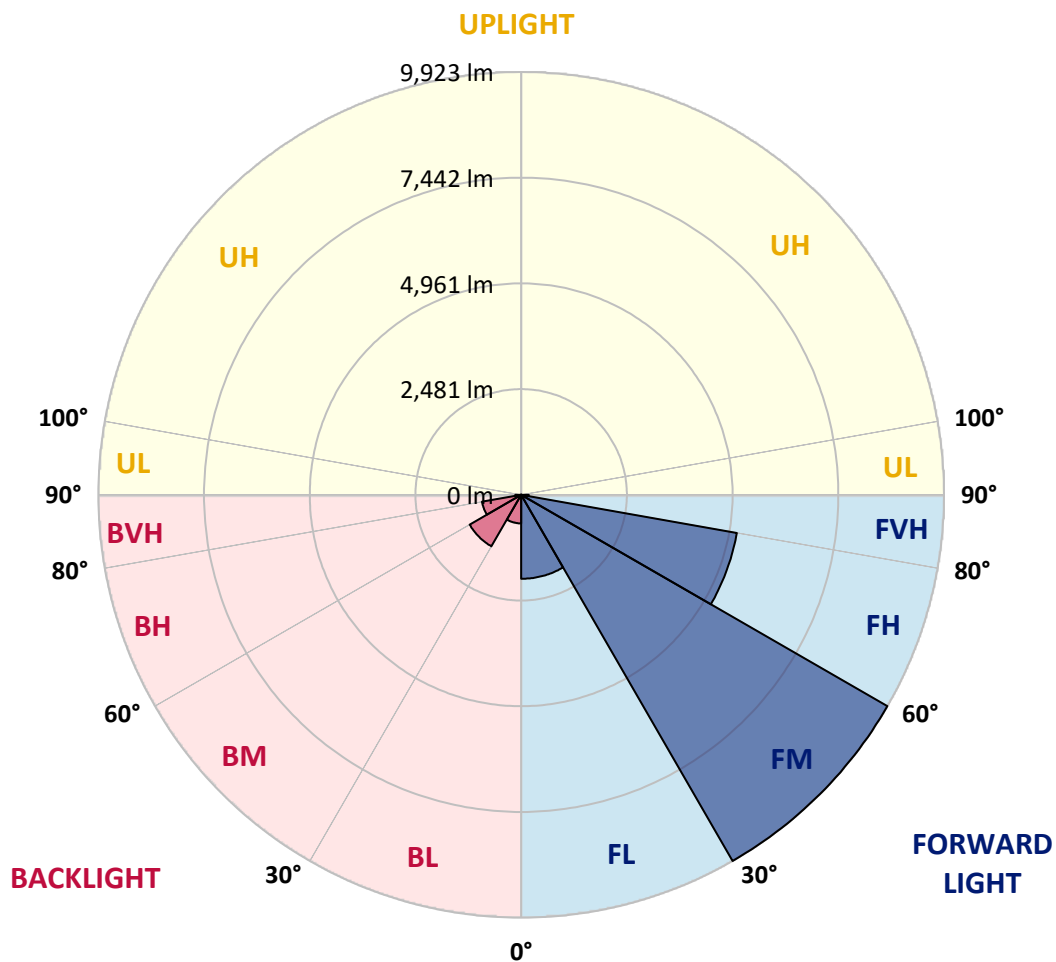
CATALOG NUMBER: GLNA-AF-05-LED-E1-T2R-600

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1970.4	9.7			
FM (30°-60°)	9922.8	48.8			
FH (60°-80°)	5139.1	25.3			G3/7500
FVH (80°-90°)	176.1	0.9			G2/225
BL (0°-30°)	670.8	3.3	B2/1000		
BM (30°-60°)	1396.2	6.9	B2/2500		
BH (60°-80°)	932.5	4.6	B2/1000		G2/1000
BVH (80°-90°)	137.2	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°	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4
2.5°	2099.3	2076.2	2081.9	2043.4	1996.2	1934.5	1866.2	1865.4	1866.2	1859.4	1834.5
5°	2910.9	2883.2	2872.6	2785.8	2658.7	2477.9	2281.3	2260.2	2251.3	2229.3	2178.2
7.5°	3503.4	3488.0	3471.4	3406.0	3290.6	3088.3	2824.4	2779.2	2735.8	2725.2	2667.5
10°	3885.6	3881.6	3847.0	3829.6	3757.6	3582.2	3325.1	3281.7	3234.6	3218.3	3157.4
12.5°	4187.8	4187.0	4170.7	4175.6	4112.7	3985.9	3764.2	3724.8	3690.2	3639.9	3596.8
15°	4396.9	4397.8	4422.1	4448.9	4439.2	4353.5	4145.6	4128.1	4098.4	4063.9	4012.7
17.5°	4568.3	4573.2	4598.1	4647.2	4700.3	4693.5	4528.9	4514.4	4488.4	4441.2	4414.4
20°	4955.4	4973.7	4925.7	4925.7	4931.4	4957.4	4878.3	4866.9	4830.3	4805.2	4784.0
22.5°	5609.3	5630.4	5521.6	5411.1	5302.2	5223.1	5144.2	5158.5	5133.7	5116.2	5103.7
25°	6458.6	6475.2	6298.9	6112.1	5890.4	5601.6	5406.2	5397.3	5383.9	5373.3	5367.6
27.5°	7257.9	7264.7	7098.2	6824.5	6567.4	6152.3	5671.9	5661.3	5645.0	5624.7	5607.3
30°	7941.8	7939.8	7768.4	7507.3	7231.9	6772.5	6075.5	6042.7	5994.4	5939.5	5897.3
32.5°	8533.9	8531.1	8343.1	8072.6	7783.8	7387.0	6628.3	6560.8	6485.7	6378.6	6314.3
35°	8999.9	8998.1	8820.7	8538.8	8207.4	7965.7	7261.9	7179.0	7083.6	6940.2	6841.1
37.5°	9176.1	9176.1	9077.0	8884.4	8591.6	8426.0	7965.7	7865.5	7763.5	7600.7	7489.0
40°	9073.0	9075.0	9096.1	9060.7	8918.2	8791.0	8622.5	8562.8	8475.1	8328.8	8212.3
42.5°	8727.3	8737.9	8878.7	9051.0	9122.1	9102.1	9205.0	9178.1	9116.4	9003.8	8911.3
45°	8289.1	8322.0	8475.9	8801.6	9179.0	9370.6	9693.2	9696.0	9684.6	9624.0	9552.6
47.5°	7687.5	7733.5	7936.9	8376.8	9046.1	9631.7	10189.1	10215.1	10239.3	10199.9	10167.1
50°	6888.2	6943.1	7247.3	7830.9	8775.6	9902.3	11126.0	11243.7	11353.4	11340.0	11362.0
52.5°	6032.1	6096.6	6469.2	7119.3	8310.5	9964.8	11725.1	11916.8	12108.4	12265.3	12431.8
55°	5259.6	5225.1	5597.9	6282.3	7545.8	9682.6	12263.6	12494.7	12708.3	12900.9	13099.4
57.5°	4213.0	4269.8	4643.5	5320.5	6533.7	8886.2	12634.1	12972.3	13279.4	13598.2	13879.3
60°	3079.5	3136.3	3541.7	4229.3	5435.0	7678.7	12351.0	12863.5	13355.4	13843.6	14224.9
62.5°	1859.4	1902.0	2259.0	2914.1	4191.0	6246.9	11089.5	11761.7	12485.8	13069.4	13653.9
65°	1157.5	1181.5	1313.5	1673.7	2691.5	4663.8	9060.7	9793.4	10573.3	11314.0	11921.6
67.5°	947.5	956.1	980.4	1057.2	1478.0	3041.2	6743.7	7392.7	8096.6	8813.0	9489.2
70°	852.1	846.4	846.4	851.3	947.5	1635.1	4415.2	4838.0	5424.5	6047.5	6665.7
72.5°	769.3	763.6	753.0	738.7	773.3	997.5	2282.2	2601.0	3023.8	3577.4	4169.6
75°	691.3	683.6	671.3	653.0	677.0	753.0	1095.8	1229.8	1435.7	1730.6	2060.8
77.5°	610.5	600.8	589.3	575.9	606.8	585.6	642.2	690.5	769.3	863.8	988.1
80°	519.1	510.5	506.5	499.9	536.5	445.9	453.6	483.3	529.6	580.8	638.5
82.5°	406.5	406.5	421.6	424.8	465.1	320.8	339.1	365.1	389.1	415.9	443.1
85°	267.7	269.7	321.7	341.9	366.8	215.7	254.2	262.8	282.2	297.7	309.1
87.5°	83.7	90.6	196.5	217.7	210.8	122.3	156.0	160.0	173.4	184.0	193.7
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):**

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4
2.5°	1834.5	1822.8	1812.3	1811.4	1803.7	1793.1	1796.8	1780.5	1781.4	1772.8	1763.1
5°	2157.1	2149.3	2110.8	2100.2	2071.4	2053.1	2050.2	2011.6	2006.8	1984.8	1960.5
7.5°	2621.3	2596.1	2542.1	2516.1	2467.0	2430.4	2413.3	2362.2	2337.0	2279.3	2253.3
10°	3107.5	3075.7	3009.2	2972.6	2925.5	2866.6	2834.9	2760.9	2731.8	2679.0	2615.5
12.5°	3558.2	3526.5	3458.0	3430.0	3367.4	3304.8	3270.3	3186.6	3148.9	3064.0	3014.0
15°	3975.0	3943.3	3883.6	3854.8	3792.2	3741.1	3694.8	3612.2	3567.9	3488.8	3423.4
17.5°	4379.5	4345.8	4293.8	4267.8	4207.3	4155.3	4105.3	4027.0	3981.9	3903.0	3844.2
20°	4755.2	4730.0	4692.6	4657.8	4597.2	4550.1	4490.4	4422.9	4357.5	4299.5	4243.8
22.5°	5082.5	5072.8	5032.5	5017.1	4965.1	4924.6	4872.6	4806.3	4758.9	4685.7	4633.8
25°	5364.8	5361.9	5342.5	5337.6	5301.1	5262.5	5251.1	5196.2	5152.8	5088.3	5034.5
27.5°	5607.3	5610.2	5605.6	5619.0	5609.3	5591.9	5593.0	5574.7	5549.6	5495.6	5448.5
30°	5877.0	5861.5	5870.4	5889.5	5895.3	5897.3	5929.0	5939.5	5937.8	5902.1	5879.0
32.5°	6258.3	6221.8	6188.1	6185.2	6204.3	6212.1	6266.0	6294.0	6318.0	6326.6	6330.6
35°	6744.5	6671.4	6601.1	6563.7	6530.9	6539.4	6578.0	6623.4	6676.3	6712.8	6756.2
37.5°	7357.0	7267.6	7143.3	7054.8	7032.5	6984.5	7009.3	7045.1	7097.0	7153.9	7229.0
40°	8099.4	7963.7	7824.1	7706.6	7643.2	7554.4	7553.5	7546.7	7578.7	7631.5	7737.5
42.5°	8814.2	8693.6	8545.4	8422.2	8339.4	8220.8	8196.8	8134.3	8148.6	8194.8	8298.0
45°	9483.2	9384.1	9293.5	9151.3	9080.7	8952.7	8912.2	8838.2	8796.7	8817.9	8921.0
47.5°	10131.4	10067.9	9973.4	9881.1	9827.1	9712.6	9660.6	9607.5	9554.6	9552.6	9660.6
50°	11394.9	11361.2	11249.5	11153.2	11179.2	11038.6	11047.2	10904.7	10969.2	10976.9	11203.2
52.5°	12582.1	12699.8	12782.6	12883.5	12949.2	12961.7	13004.9	13069.4	13147.4	13301.4	13511.3
55°	13262.0	13409.4	13495.1	13572.2	13699.3	13726.2	13798.4	13884.1	13952.4	14125.8	14304.1
57.5°	14070.1	14343.5	14476.3	14598.6	14770.0	14835.4	14955.9	15049.4	15137.9	15343.0	15558.7
60°	14567.7	14901.1	15171.6	15365.0	15579.8	15734.1	15916.1	16062.3	16270.3	16516.0	16837.6
62.5°	14172.1	14661.1	15020.5	15352.7	15644.4	15939.2	16200.0	16473.7	16789.3	17161.0	17660.0
65°	12595.8	13093.4	13708.7	14053.5	14439.8	14894.2	15291.0	15734.1	16164.3	16705.6	17443.2
67.5°	10140.2	10718.7	11410.3	11757.9	12201.9	12709.2	13154.3	13695.3	14198.1	14853.7	15765.8
70°	7309.0	8057.2	8638.8	9001.9	9520.0	10042.8	10472.4	11102.1	11518.0	12190.1	13133.1
72.5°	4628.0	5218.2	5931.0	6388.3	6848.5	7378.4	7817.5	8360.5	8748.5	9360.9	10215.1
75°	2488.4	2923.5	3549.4	3983.9	4476.9	4929.4	5443.6	5807.6	6094.6	6579.1	7272.4
77.5°	1166.1	1430.9	1747.7	2081.9	2416.1	2764.7	3103.7	3398.3	3521.7	3799.0	4208.1
80°	707.9	793.6	885.8	989.0	1128.7	1241.2	1390.6	1498.3	1506.0	1593.7	1718.8
82.5°	472.8	504.5	532.5	558.5	594.2	622.2	653.9	691.3	706.7	727.0	767.6
85°	322.5	337.9	343.7	360.2	356.2	365.9	378.5	391.1	397.6	396.8	415.1
87.5°	198.3	206.0	210.0	213.7	210.8	207.1	212.8	219.7	221.4	215.7	217.7
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°	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4
2.5°	1765.1	1756.5	1747.7	1742.0	1740.0	1689.1	1666.9	1652.6	1621.7	1596.6	1576.3
5°	1947.1	1928.8	1914.5	1897.1	1887.4	1758.3	1711.1	1678.6	1624.6	1592.9	1563.7
7.5°	2239.9	2188.8	2159.0	2125.3	2096.5	1863.4	1785.4	1734.3	1659.1	1616.9	1584.0
10°	2572.1	2519.3	2471.9	2419.9	2374.7	2003.1	1889.4	1810.3	1711.1	1656.3	1612.9
12.5°	2942.9	2890.9	2831.2	2764.7	2707.0	2180.2	2022.2	1909.7	1773.7	1700.6	1640.0
15°	3381.1	3289.4	3217.2	3140.3	3072.9	2392.2	2177.3	2021.4	1840.2	1741.1	1660.3
17.5°	3788.2	3691.9	3593.9	3526.5	3448.5	2629.8	2333.3	2134.8	1895.1	1767.1	1664.0
20°	4186.1	4081.0	3996.4	3905.9	3823.9	2876.4	2499.8	2235.0	1930.8	1768.0	1640.0
22.5°	4536.6	4470.9	4376.7	4278.4	4195.6	3122.9	2655.8	2319.9	1944.2	1746.0	1597.4
25°	4935.1	4866.0	4750.3	4667.5	4575.2	3374.3	2808.9	2385.3	1936.5	1704.6	1532.0
27.5°	5360.8	5283.9	5165.4	5078.8	4967.1	3635.1	2949.5	2432.4	1907.7	1637.1	1444.3
30°	5804.7	5734.4	5617.9	5530.5	5417.6	3911.6	3106.6	2464.1	1850.0	1543.7	1342.3
32.5°	6281.5	6222.6	6107.2	6015.8	5895.3	4211.0	3252.9	2473.9	1762.3	1432.9	1234.6
35°	6734.0	6693.7	6596.3	6510.6	6385.5	4494.1	3408.0	2469.0	1658.3	1311.5	1136.4
37.5°	7243.6	7219.3	7171.3	7062.5	6909.4	4878.3	3593.9	2448.7	1531.2	1191.2	1061.2
40°	7786.6	7788.6	7736.6	7662.4	7519.8	5344.5	3815.3	2409.3	1392.3	1085.2	992.7
42.5°	8361.4	8391.4	8366.2	8313.4	8176.6	5814.4	4080.1	2361.3	1257.8	982.1	925.6
45°	9020.1	9056.7	9095.3	9017.3	8884.4	6434.6	4428.7	2298.7	1112.1	896.4	879.3
47.5°	9780.0	9837.7	9872.3	9873.4	9740.6	7203.0	4994.8	2261.0	983.3	838.7	857.0
50°	11383.1	11401.7	11483.4	11626.0	11524.0	8981.6	5983.8	2237.9	895.6	803.0	840.7
52.5°	13693.3	13894.7	14036.4	14026.7	13887.9	10111.1	6528.9	2118.5	843.6	789.6	833.0
55°	14634.3	14885.7	15147.6	15216.8	15109.1	11075.2	7044.2	1999.1	818.4	799.3	835.9
57.5°	15888.1	16311.7	16671.1	16822.2	16666.2	12308.7	7722.1	1936.5	810.7	825.3	854.1
60°	17352.7	17876.6	18348.5	18619.9	18619.9	13726.2	8425.1	1910.5	800.1	863.8	885.0
62.5°	18293.6	19062.9	19775.7	20173.3	20161.6	14713.1	8737.0	1822.0	776.1	890.7	927.3
65°	18297.4	19212.3	20120.2	20567.3	20590.1	14592.0	8222.0	1609.1	731.9	894.7	969.8
67.5°	16772.2	17747.5	18805.8	19305.8	19421.2	13432.5	7117.3	1323.2	659.6	856.1	985.3
70°	14165.2	15117.6	16198.0	16689.4	16894.5	11450.6	5732.4	1019.8	567.3	771.3	953.3
72.5°	11159.8	12093.9	12846.0	13205.1	13365.1	8752.5	4174.4	770.4	465.1	649.9	867.6
75°	7901.2	8602.2	9001.9	9081.8	9106.7	5276.2	2536.4	573.0	383.4	505.6	732.7
77.5°	4459.5	4760.0	4727.2	4762.9	4466.4	2036.8	1104.7	410.2	315.9	384.2	568.2
80°	1741.1	1795.1	1686.3	1652.6	1515.7	757.9	487.3	285.9	252.2	290.8	397.6
82.5°	767.6	792.4	769.3	775.3	741.6	391.1	291.7	207.1	192.5	212.8	264.0
85°	422.8	430.5	428.5	441.1	422.8	156.0	138.5	127.1	134.8	144.5	169.4
87.5°	206.0	208.0	201.4	212.0	205.1	78.8	68.3	72.3	78.8	80.8	80.8
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):**

	135°	145°	155°	165°	175°	180°
0°	1653.4	1653.4	1653.4	1653.4	1653.4	1653.4
2.5°	1562.0	1554.3	1555.2	1553.2	1549.4	1549.4
5°	1548.6	1540.9	1540.9	1538.9	1534.0	1534.9
7.5°	1562.0	1549.4	1544.6	1537.7	1531.2	1531.2
10°	1577.4	1555.2	1541.7	1530.3	1521.4	1521.4
12.5°	1588.9	1554.3	1532.0	1516.6	1508.0	1508.0
15°	1592.9	1547.4	1516.6	1498.3	1490.6	1489.7
17.5°	1580.3	1521.4	1484.0	1462.9	1453.2	1450.3
20°	1541.7	1474.3	1429.2	1404.9	1391.5	1386.6
22.5°	1484.0	1406.9	1354.0	1328.9	1311.5	1308.6
25°	1403.2	1320.3	1268.3	1244.1	1234.6	1231.5
27.5°	1308.6	1231.5	1187.2	1171.8	1163.2	1162.4
30°	1219.2	1153.5	1120.9	1109.2	1098.7	1097.0
32.5°	1135.2	1093.8	1081.5	1065.0	1040.1	1037.2
35°	1075.5	1071.8	1063.2	1026.4	995.8	987.0
37.5°	1039.0	1074.7	1030.4	958.1	936.1	934.1
40°	1017.8	1045.0	968.7	943.8	945.5	943.8
42.5°	969.8	997.5	970.7	959.3	966.7	968.7
45°	921.6	952.4	985.3	977.5	995.8	995.8
47.5°	894.7	940.7	984.1	984.1	1011.3	1020.7
50°	863.8	931.3	968.7	982.1	1003.5	995.8
52.5°	861.8	914.7	946.7	970.7	980.4	971.5
55°	864.7	901.3	924.4	951.5	963.0	963.8
57.5°	868.7	893.6	909.0	921.6	956.1	956.1
60°	878.1	887.0	895.6	902.4	947.5	948.4
62.5°	893.6	880.1	878.1	885.0	942.7	939.0
65°	917.8	870.4	856.1	862.7	937.8	926.4
67.5°	950.4	856.1	828.1	833.0	934.1	909.0
70°	980.4	833.0	793.6	788.7	897.6	853.3
72.5°	983.3	806.1	745.3	731.0	780.1	737.6
75°	935.0	787.6	692.5	649.9	644.2	638.5
77.5°	842.7	777.0	630.7	564.2	552.8	556.5
80°	705.0	737.6	556.5	477.6	540.2	533.6
82.5°	526.8	651.0	472.8	422.8	421.6	372.8
85°	292.8	507.6	385.1	316.8	220.5	213.7
87.5°	82.0	282.2	269.7	179.1	122.3	127.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)