

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: P301695

Luminaire Tested: **GLNA-AF-03-LED-E1-T2R-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301695
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-03-LED-E1-T2R-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 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: 12427.2 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

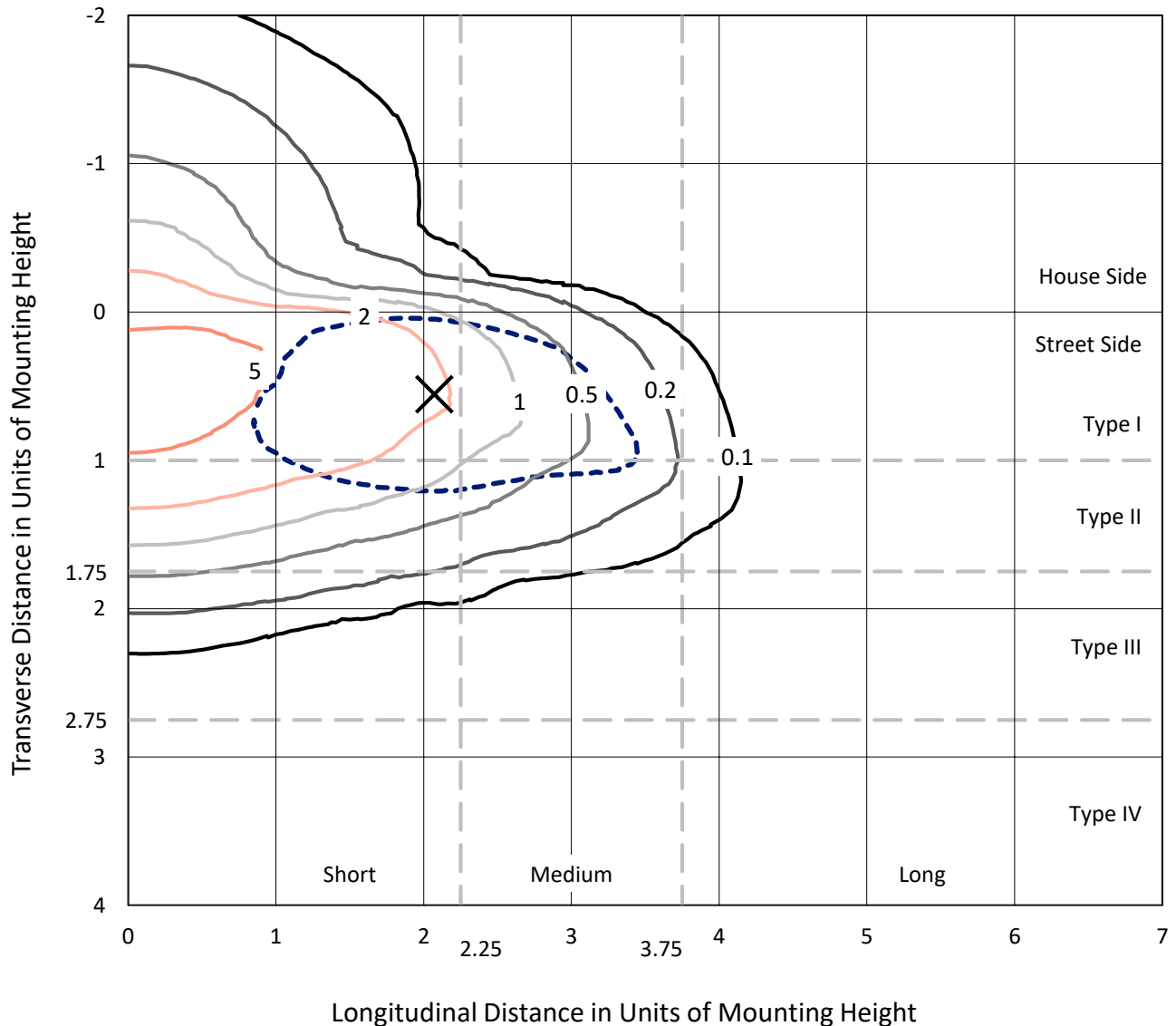
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

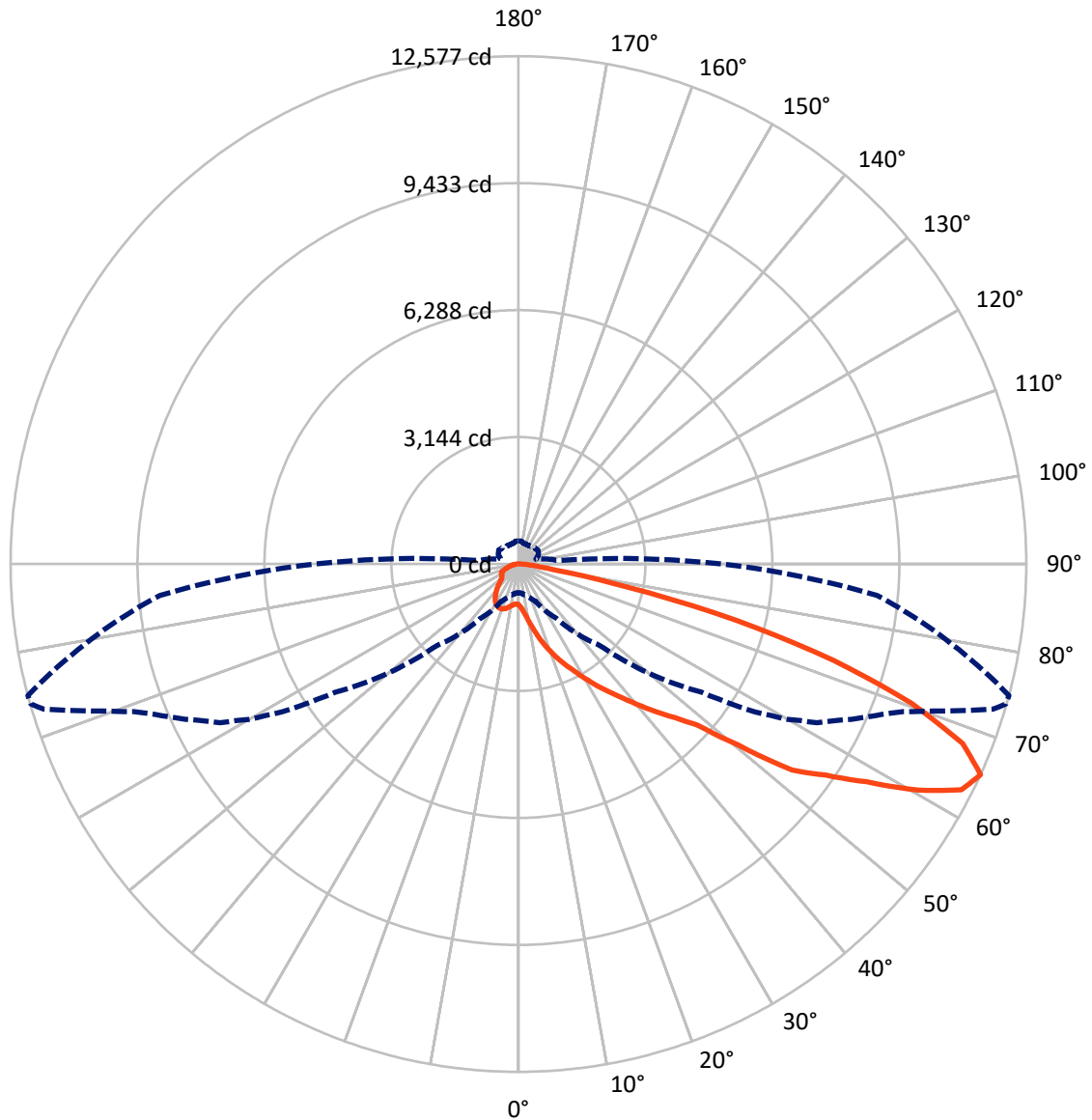
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.8 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	1916.0	0.0	1916.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	10511.2	0.0	10511.2
	% Fixture	84.6	0.0	84.6
Total	Lumens	12427.2	0.0	12427.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	1.0
10°-20°	487.8	3.9
20°-30°	1000.7	8.1
30°-40°	1683.6	13.5
40°-50°	2326.3	18.7
50°-60°	2903.9	23.4
60°-70°	2613.2	21.0
70°-80°	1095.4	8.8
80°-90°	191.4	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°	12427.2	100.0
0°-180°	12427.2	100.0



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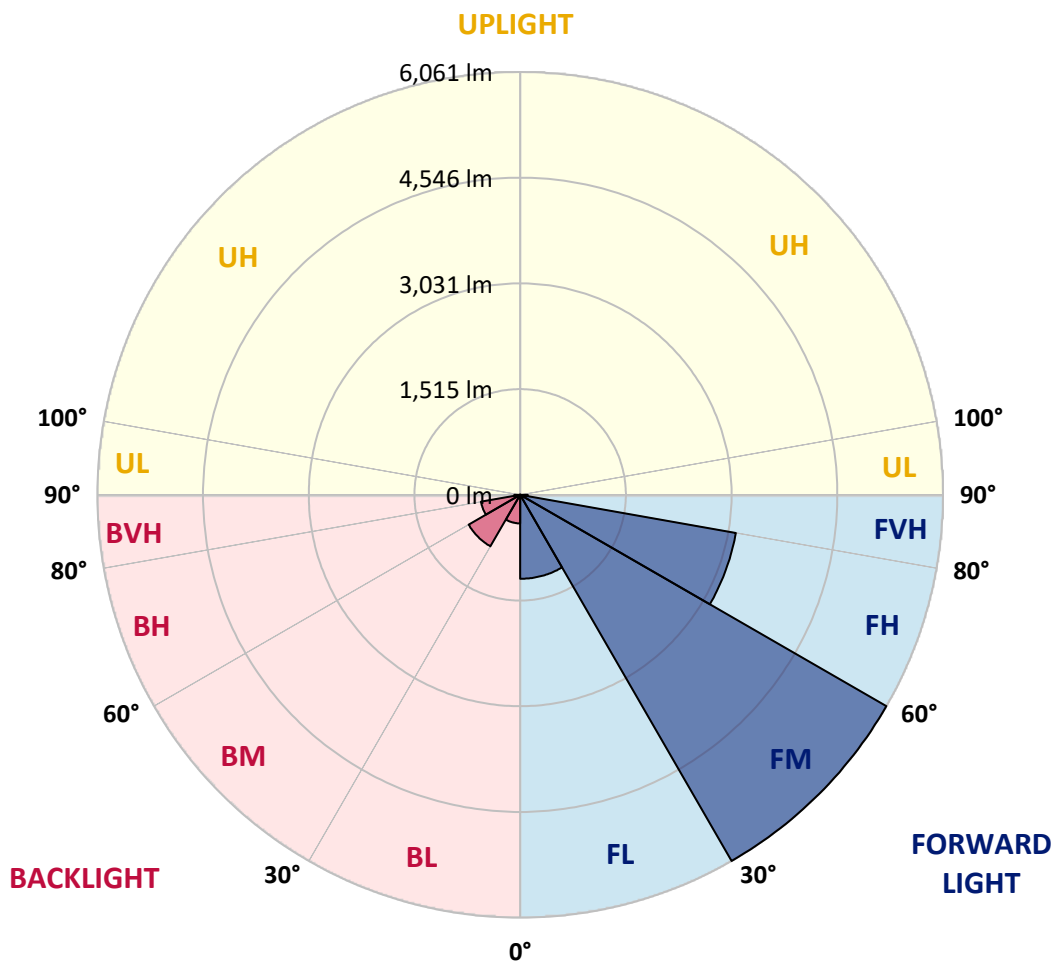
CATALOG NUMBER: GLNA-AF-03-LED-E1-T2R-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1203.5	9.7			
FM	(30°-60°)	6061.1	48.8			
FH	(60°-80°)	3139.1	25.3			G2/5000
FVH	(80°-90°)	107.6	0.9			G2/225
BL	(0°-30°)	409.7	3.3	B1/500		
BM	(30°-60°)	852.8	6.9	B1/1000		
BH	(60°-80°)	569.6	4.6	B2/1000		G2/1000
BVH	(80°-90°)	83.8	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	1282.3	1268.2	1271.7	1248.1	1219.3	1181.6	1139.9	1139.4	1139.9	1135.8	1120.6
5°	1778.1	1761.1	1754.7	1701.6	1624.0	1513.5	1393.5	1380.6	1375.2	1361.7	1330.5
7.5°	2140.0	2130.5	2120.4	2080.4	2010.0	1886.4	1725.2	1697.6	1671.1	1664.6	1629.4
10°	2373.4	2371.0	2349.9	2339.2	2295.2	2188.1	2031.1	2004.5	1975.8	1965.8	1928.6
12.5°	2558.0	2557.5	2547.6	2550.5	2512.1	2434.7	2299.3	2275.2	2254.1	2223.4	2197.0
15°	2685.8	2686.3	2701.1	2717.5	2711.6	2659.2	2532.2	2521.6	2503.4	2482.3	2451.1
17.5°	2790.5	2793.4	2808.6	2838.6	2871.1	2866.9	2766.4	2757.5	2741.6	2712.8	2696.4
20°	3026.9	3038.1	3008.7	3008.7	3012.2	3028.1	2979.8	2972.8	2950.5	2935.1	2922.2
22.5°	3426.3	3439.2	3372.7	3305.2	3238.7	3190.4	3142.2	3150.9	3135.8	3125.1	3117.4
25°	3945.1	3955.2	3847.5	3733.4	3598.0	3421.6	3302.2	3296.8	3288.6	3282.2	3278.7
27.5°	4433.3	4437.5	4335.7	4168.6	4011.5	3758.0	3464.5	3458.1	3448.1	3435.7	3425.1
30°	4851.0	4849.8	4745.1	4585.6	4417.4	4136.8	3711.1	3691.0	3661.5	3628.0	3602.2
32.5°	5212.7	5211.0	5096.2	4930.9	4754.5	4512.1	4048.7	4007.5	3961.6	3896.2	3856.9
35°	5497.3	5496.3	5387.9	5215.7	5013.3	4865.7	4435.7	4385.1	4326.8	4239.2	4178.7
37.5°	5605.0	5605.0	5544.4	5426.8	5248.0	5146.8	4865.7	4804.4	4742.1	4642.7	4574.4
40°	5542.0	5543.2	5556.1	5534.5	5447.4	5369.8	5266.8	5230.4	5176.8	5087.4	5016.3
42.5°	5330.9	5337.3	5423.3	5528.6	5572.0	5559.8	5622.6	5606.2	5568.5	5499.8	5443.2
45°	5063.2	5083.3	5177.3	5376.2	5606.7	5723.8	5920.8	5922.6	5915.6	5878.6	5835.0
47.5°	4695.7	4723.8	4848.0	5116.8	5525.6	5883.3	6223.7	6239.6	6254.4	6230.4	6210.3
50°	4207.5	4241.0	4426.8	4783.3	5360.3	6048.5	6796.1	6867.9	6934.9	6926.7	6940.2
52.5°	3684.5	3724.0	3951.5	4348.7	5076.3	6086.8	7162.0	7279.0	7396.1	7491.9	7593.7
55°	3212.7	3191.6	3419.3	3837.4	4609.2	5914.4	7490.9	7632.0	7762.6	7880.2	8001.4
57.5°	2573.4	2608.1	2836.3	3249.9	3990.9	5427.9	7717.2	7923.8	8111.4	8306.1	8477.8
60°	1881.0	1915.7	2163.3	2583.3	3319.9	4690.3	7544.3	7857.3	8157.8	8456.0	8688.9
62.5°	1135.8	1161.8	1379.9	1780.0	2559.9	3815.8	6773.7	7184.3	7626.6	7983.1	8340.1
65°	707.0	721.7	802.3	1022.3	1644.0	2848.7	5534.5	5982.1	6458.4	6910.9	7282.0
67.5°	578.8	584.0	598.9	645.8	902.8	1857.6	4119.2	4515.6	4945.6	5383.2	5796.2
70°	520.5	517.0	517.0	520.0	578.8	998.8	2696.9	2955.2	3313.4	3694.0	4071.6
72.5°	469.9	466.4	460.0	451.2	472.3	609.3	1394.0	1588.7	1847.0	2185.1	2546.9
75°	422.3	417.6	410.1	398.9	413.5	460.0	669.3	751.2	877.0	1057.1	1258.8
77.5°	372.9	367.0	360.0	351.8	370.6	357.7	392.3	421.7	469.9	527.7	603.6
80°	317.0	311.8	309.4	305.4	327.7	272.4	277.1	295.2	323.5	354.7	390.0
82.5°	248.3	248.3	257.5	259.5	284.1	196.0	207.1	223.0	237.7	254.1	270.6
85°	163.5	164.7	196.5	208.9	224.0	131.7	155.3	160.5	172.4	181.8	188.8
87.5°	51.1	55.3	120.0	133.0	128.8	74.7	95.3	97.7	105.9	112.4	118.3
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°	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	1120.6	1113.4	1107.0	1106.4	1101.7	1095.3	1097.5	1087.6	1088.1	1082.9	1077.0
5°	1317.6	1312.9	1289.3	1282.9	1265.2	1254.1	1252.3	1228.8	1225.8	1212.4	1197.5
7.5°	1601.1	1585.8	1552.8	1536.9	1506.9	1484.6	1474.1	1442.9	1427.5	1392.3	1376.4
10°	1898.1	1878.7	1838.1	1815.7	1787.0	1751.0	1731.6	1686.5	1668.7	1636.4	1597.6
12.5°	2173.5	2154.1	2112.2	2095.1	2056.9	2018.7	1997.6	1946.4	1923.4	1871.6	1841.0
15°	2428.0	2408.7	2372.2	2354.6	2316.4	2285.1	2256.9	2206.4	2179.4	2131.1	2091.1
17.5°	2675.1	2654.5	2622.8	2606.9	2569.9	2538.1	2507.6	2459.8	2432.2	2384.1	2348.1
20°	2904.6	2889.2	2866.4	2845.1	2808.1	2779.3	2742.8	2701.6	2661.7	2626.3	2592.2
22.5°	3104.5	3098.6	3074.0	3064.6	3032.8	3008.0	2976.3	2935.8	2906.8	2862.2	2830.4
25°	3276.9	3275.2	3263.3	3260.4	3238.0	3214.5	3207.5	3174.0	3147.5	3108.0	3075.2
27.5°	3425.1	3426.8	3424.0	3432.2	3426.3	3415.7	3416.3	3405.2	3389.8	3356.8	3328.1
30°	3589.8	3580.4	3585.8	3597.5	3601.0	3602.2	3621.5	3628.0	3627.0	3605.1	3591.0
32.5°	3822.7	3800.4	3779.8	3778.1	3789.8	3794.5	3827.4	3844.5	3859.2	3864.4	3866.9
35°	4119.7	4075.1	4032.1	4009.3	3989.2	3994.4	4018.0	4045.7	4078.0	4100.4	4126.9
37.5°	4493.8	4439.2	4363.3	4309.2	4295.6	4266.3	4281.5	4303.3	4335.0	4369.8	4415.7
40°	4947.3	4864.4	4779.1	4707.4	4668.7	4614.4	4613.9	4609.7	4629.2	4661.5	4726.2
42.5°	5383.9	5310.3	5219.7	5144.5	5093.9	5021.5	5006.8	4968.6	4977.3	5005.6	5068.6
45°	5792.6	5732.0	5676.7	5589.8	5546.7	5468.5	5443.8	5398.6	5373.3	5386.2	5449.2
47.5°	6188.5	6149.7	6092.0	6035.6	6002.6	5932.7	5900.9	5868.5	5836.2	5835.0	5900.9
50°	6960.3	6939.7	6871.4	6812.6	6828.5	6742.7	6747.9	6660.8	6700.3	6705.0	6843.2
52.5°	7685.4	7757.3	7807.9	7869.5	7909.7	7917.3	7943.7	7983.1	8030.7	8124.8	8253.1
55°	8100.7	8190.8	8243.1	8290.2	8367.9	8384.3	8428.4	8480.8	8522.5	8628.4	8737.3
57.5°	8594.4	8761.3	8842.5	8917.2	9021.9	9061.8	9135.4	9192.5	9246.6	9371.9	9503.6
60°	8898.3	9101.9	9267.2	9385.3	9516.5	9610.8	9721.9	9811.3	9938.3	10088.3	10284.8
62.5°	8656.6	8955.4	9174.9	9377.8	9556.0	9736.0	9895.4	10062.5	10255.3	10482.3	10787.2
65°	7693.8	7997.8	8373.6	8584.2	8820.1	9097.8	9340.1	9610.8	9873.5	10204.2	10654.7
67.5°	6193.9	6547.2	6969.7	7182.0	7453.2	7763.1	8034.9	8365.4	8672.5	9073.0	9630.1
70°	4464.5	4921.5	5276.8	5498.5	5815.1	6134.4	6396.8	6781.4	7035.5	7446.0	8022.0
72.5°	2826.9	3187.4	3622.8	3902.1	4183.2	4506.9	4775.1	5106.8	5343.8	5717.9	6239.6
75°	1520.0	1785.7	2168.0	2433.4	2734.6	3011.0	3325.1	3547.4	3722.8	4018.7	4442.2
77.5°	712.3	874.0	1067.5	1271.7	1475.8	1688.7	1895.8	2075.7	2151.1	2320.5	2570.4
80°	432.4	484.7	541.1	604.1	689.4	758.2	849.4	915.2	919.9	973.5	1049.9
82.5°	288.8	308.2	325.3	341.1	362.9	380.0	399.4	422.3	431.7	444.1	468.9
85°	197.0	206.4	209.9	220.0	217.6	223.5	231.2	238.9	242.9	242.4	253.5
87.5°	121.1	125.8	128.3	130.5	128.8	126.5	130.0	134.2	135.2	131.7	133.0
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°	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	1078.2	1072.9	1067.5	1064.0	1062.8	1031.8	1018.2	1009.4	990.6	975.2	962.8
5°	1189.3	1178.2	1169.4	1158.8	1152.9	1074.0	1045.2	1025.3	992.3	973.0	955.2
7.5°	1368.2	1336.9	1318.8	1298.2	1280.6	1138.2	1090.6	1059.3	1013.4	987.6	967.5
10°	1571.1	1538.8	1509.9	1478.1	1450.5	1223.5	1154.1	1105.7	1045.2	1011.7	985.2
12.5°	1797.6	1765.8	1729.4	1688.7	1653.5	1331.7	1235.2	1166.5	1083.4	1038.7	1001.7
15°	2065.3	2009.3	1965.1	1918.2	1877.0	1461.2	1330.0	1234.7	1124.1	1063.5	1014.1
17.5°	2313.9	2255.1	2195.3	2154.1	2106.4	1606.4	1425.2	1304.0	1157.6	1079.4	1016.4
20°	2557.0	2492.8	2441.1	2385.8	2335.7	1756.9	1527.0	1365.2	1179.4	1079.9	1001.7
22.5°	2771.1	2731.0	2673.4	2613.3	2562.7	1907.5	1622.2	1417.0	1187.6	1066.5	975.8
25°	3014.5	2972.3	2901.6	2851.0	2794.6	2061.1	1715.8	1457.0	1182.9	1041.2	935.8
27.5°	3274.5	3227.6	3155.1	3102.3	3034.0	2220.4	1801.6	1485.8	1165.2	1000.0	882.2
30°	3545.6	3502.7	3431.5	3378.1	3309.2	2389.3	1897.6	1505.2	1130.0	942.9	819.9
32.5°	3836.9	3800.9	3730.4	3674.6	3601.0	2572.2	1986.9	1511.1	1076.4	875.2	754.1
35°	4113.3	4088.7	4029.2	3976.8	3900.4	2745.1	2081.7	1508.1	1012.9	801.1	694.1
37.5°	4424.6	4409.7	4380.4	4313.9	4220.4	2979.8	2195.3	1495.7	935.3	727.6	648.2
40°	4756.3	4757.5	4725.7	4680.4	4593.3	3264.5	2330.5	1471.7	850.5	662.9	606.4
42.5°	5107.3	5125.7	5110.3	5078.0	4994.4	3551.6	2492.2	1442.3	768.3	599.9	565.3
45°	5509.7	5532.0	5555.6	5508.0	5426.8	3930.4	2705.1	1404.1	679.3	547.6	537.1
47.5°	5973.9	6009.1	6030.2	6030.9	5949.8	4399.8	3051.0	1381.1	600.6	512.3	523.5
50°	6953.1	6964.4	7014.3	7101.4	7039.1	5486.2	3655.1	1367.0	547.0	490.5	513.5
52.5°	8364.2	8487.2	8573.8	8567.8	8483.0	6176.1	3988.0	1294.0	515.3	482.3	508.8
55°	8939.0	9092.5	9252.5	9294.8	9229.0	6765.0	4302.8	1221.1	499.9	488.2	510.6
57.5°	9704.8	9963.6	10183.1	10275.4	10180.1	7518.4	4716.8	1182.9	495.2	504.1	521.7
60°	10599.4	10919.4	11207.7	11373.5	11373.5	8384.3	5146.2	1167.0	488.7	527.7	540.6
62.5°	11174.2	11644.1	12079.5	12322.3	12315.2	8987.1	5336.8	1112.9	474.1	544.1	566.4
65°	11176.5	11735.4	12289.9	12563.0	12576.9	8913.1	5022.2	982.9	447.0	546.5	592.4
67.5°	10244.9	10840.6	11487.1	11792.4	11862.9	8204.9	4347.4	808.2	402.9	522.9	601.8
70°	8652.5	9234.2	9894.1	10194.3	10319.5	6994.3	3501.5	622.9	346.5	471.1	582.3
72.5°	6816.6	7387.2	7846.7	8066.0	8163.7	5346.2	2549.8	470.6	284.1	397.0	529.9
75°	4826.2	5254.4	5498.5	5547.4	5562.6	3222.8	1549.3	350.0	234.2	308.8	447.6
77.5°	2724.0	2907.5	2887.5	2909.3	2728.2	1244.1	674.8	250.6	193.0	234.7	347.1
80°	1063.5	1096.5	1030.0	1009.4	925.8	462.9	297.7	174.7	154.1	177.6	242.9
82.5°	468.9	484.0	469.9	473.6	453.0	238.9	178.2	126.5	117.6	130.0	161.2
85°	258.2	263.0	261.7	269.4	258.2	95.3	84.6	77.6	82.4	88.3	103.5
87.5°	125.8	127.0	123.0	129.5	125.3	48.2	41.7	44.1	48.2	49.4	49.4
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°	1010.0	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	954.1	949.4	949.9	948.7	946.4	946.4
5°	945.9	941.2	941.2	940.0	937.0	937.5
7.5°	954.1	946.4	943.5	939.3	935.3	935.3
10°	963.5	949.9	941.7	934.7	929.3	929.3
12.5°	970.5	949.4	935.8	926.4	921.1	921.1
15°	973.0	945.2	926.4	915.2	910.5	910.0
17.5°	965.3	929.3	906.5	893.6	887.6	885.9
20°	941.7	900.5	873.0	858.1	849.9	847.0
22.5°	906.5	859.4	827.1	811.7	801.1	799.3
25°	857.1	806.5	774.7	759.9	754.1	752.2
27.5°	799.3	752.2	725.2	715.8	710.5	710.0
30°	744.7	704.6	684.7	677.5	671.1	670.0
32.5°	693.4	668.1	660.6	650.5	635.3	633.6
35°	657.0	654.7	649.5	626.9	608.3	602.9
37.5°	634.6	656.4	629.4	585.2	571.8	570.6
40°	621.7	638.3	591.7	576.5	577.6	576.5
42.5°	592.4	609.3	592.9	585.9	590.5	591.7
45°	562.9	581.8	601.8	597.1	608.3	608.3
47.5°	546.5	574.6	601.1	601.1	617.7	623.5
50°	527.7	568.8	591.7	599.9	613.0	608.3
52.5°	526.4	558.7	578.3	592.9	598.9	593.4
55°	528.2	550.5	564.7	581.2	588.2	588.7
57.5°	530.6	545.8	555.2	562.9	584.0	584.0
60°	536.4	541.8	547.0	551.2	578.8	579.3
62.5°	545.8	537.6	536.4	540.6	575.8	573.6
65°	560.6	531.7	522.9	527.0	572.9	565.9
67.5°	580.5	522.9	505.8	508.8	570.6	555.2
70°	598.9	508.8	484.7	481.8	548.2	521.2
72.5°	600.6	492.4	455.2	446.5	476.5	450.5
75°	571.1	481.1	423.0	397.0	393.5	390.0
77.5°	514.7	474.6	385.3	344.6	337.6	339.9
80°	430.6	450.5	339.9	291.7	330.0	325.9
82.5°	321.8	397.7	288.8	258.2	257.5	227.7
85°	178.9	310.1	235.2	193.5	134.7	130.5
87.5°	50.1	172.4	164.7	109.4	74.7	77.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)