

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: P301692

Luminaire Tested: **GLNA-AF-03-LED-E1-T2R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301692
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-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10797.3 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - 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

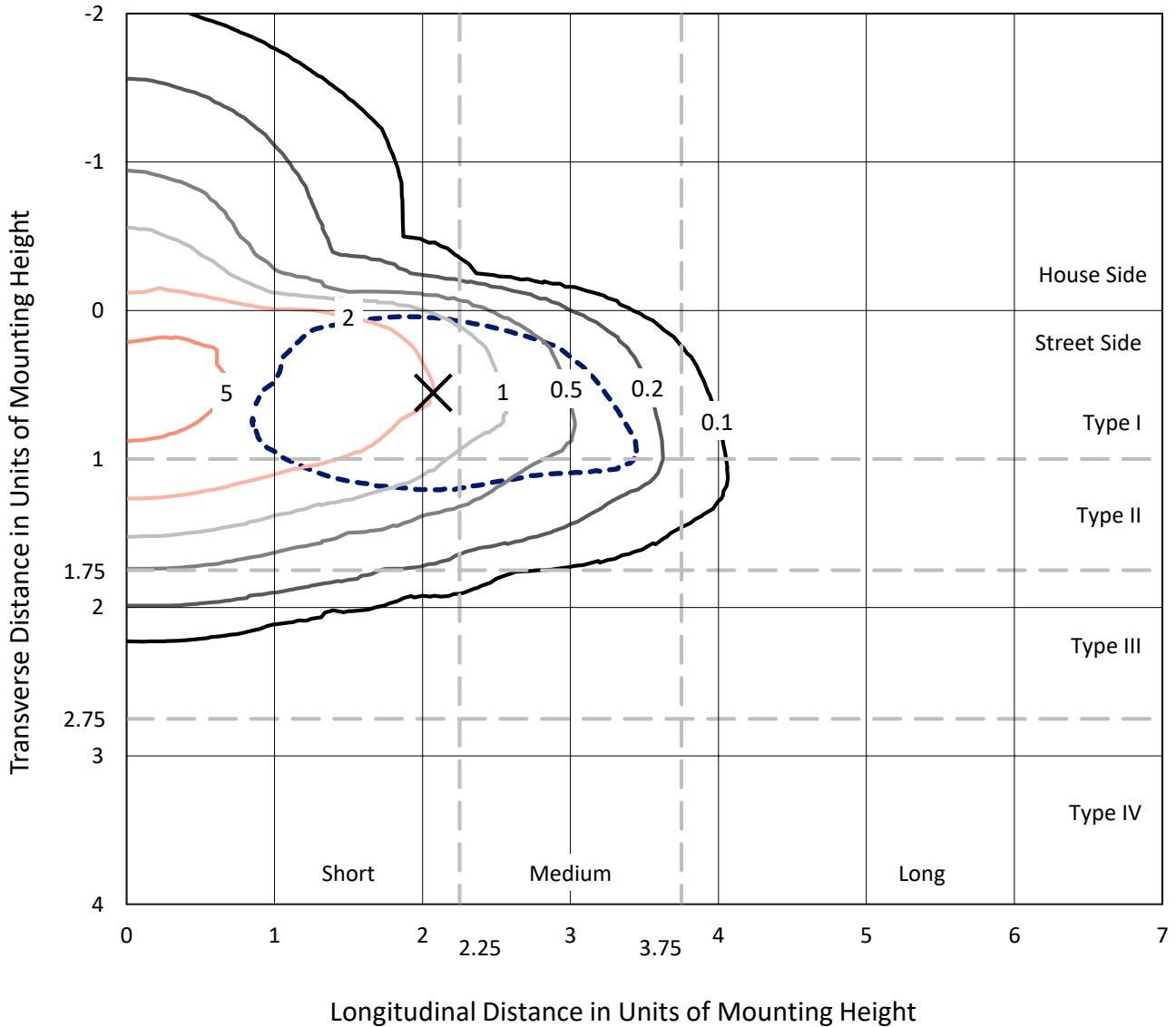


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Iso-Footcandle Lines of Horizontal Illumination

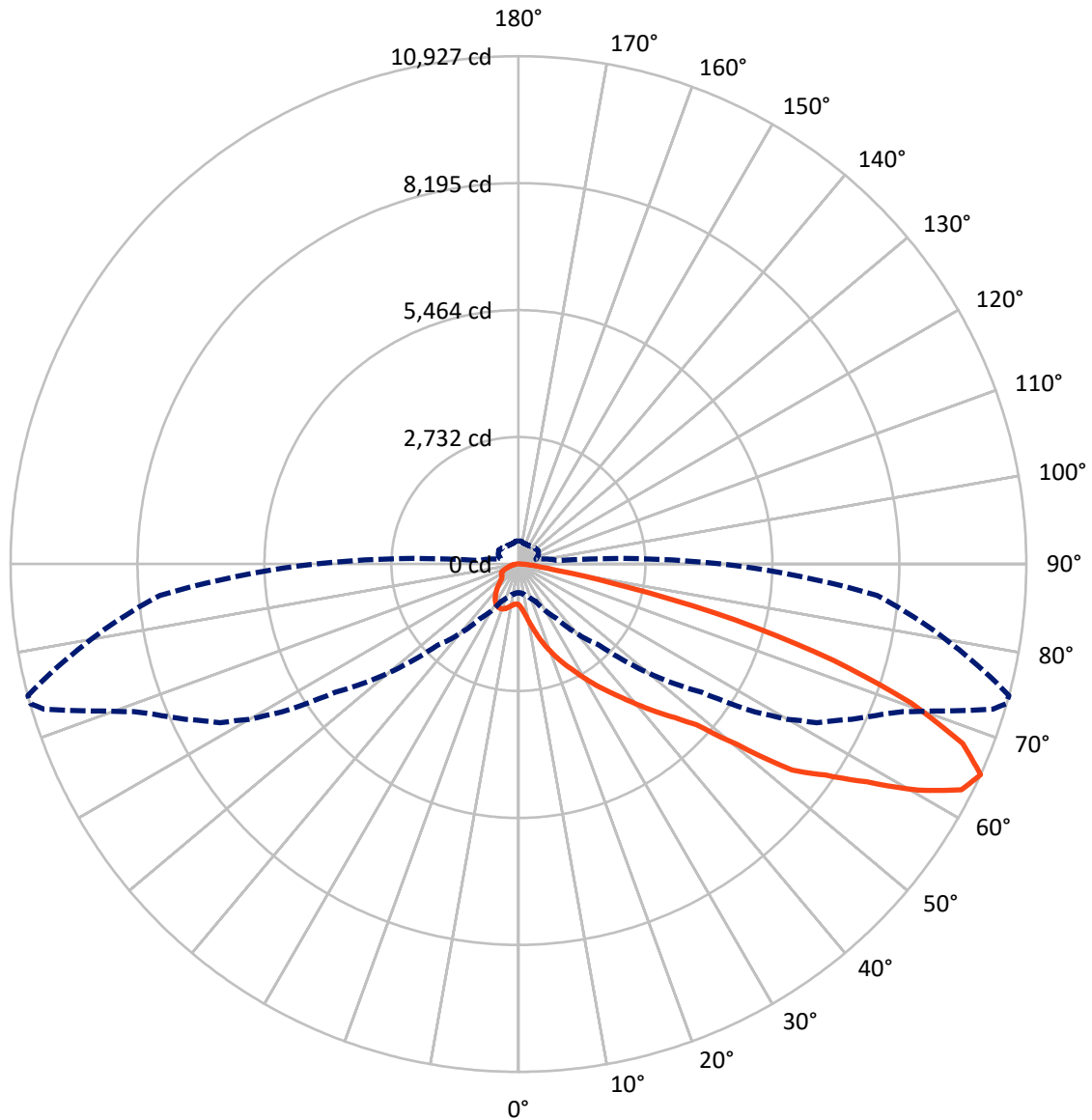
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.8 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	1664.7	0.0	1664.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	9132.6	0.0	9132.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	10797.3	0.0	10797.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	1.0
10°-20°	423.8	3.9
20°-30°	869.5	8.1
30°-40°	1462.8	13.5
40°-50°	2021.2	18.7
50°-60°	2523.0	23.4
60°-70°	2270.5	21.0
70°-80°	951.8	8.8
80°-90°	166.3	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°	10797.3	100.0
0°-180°	10797.3	100.0



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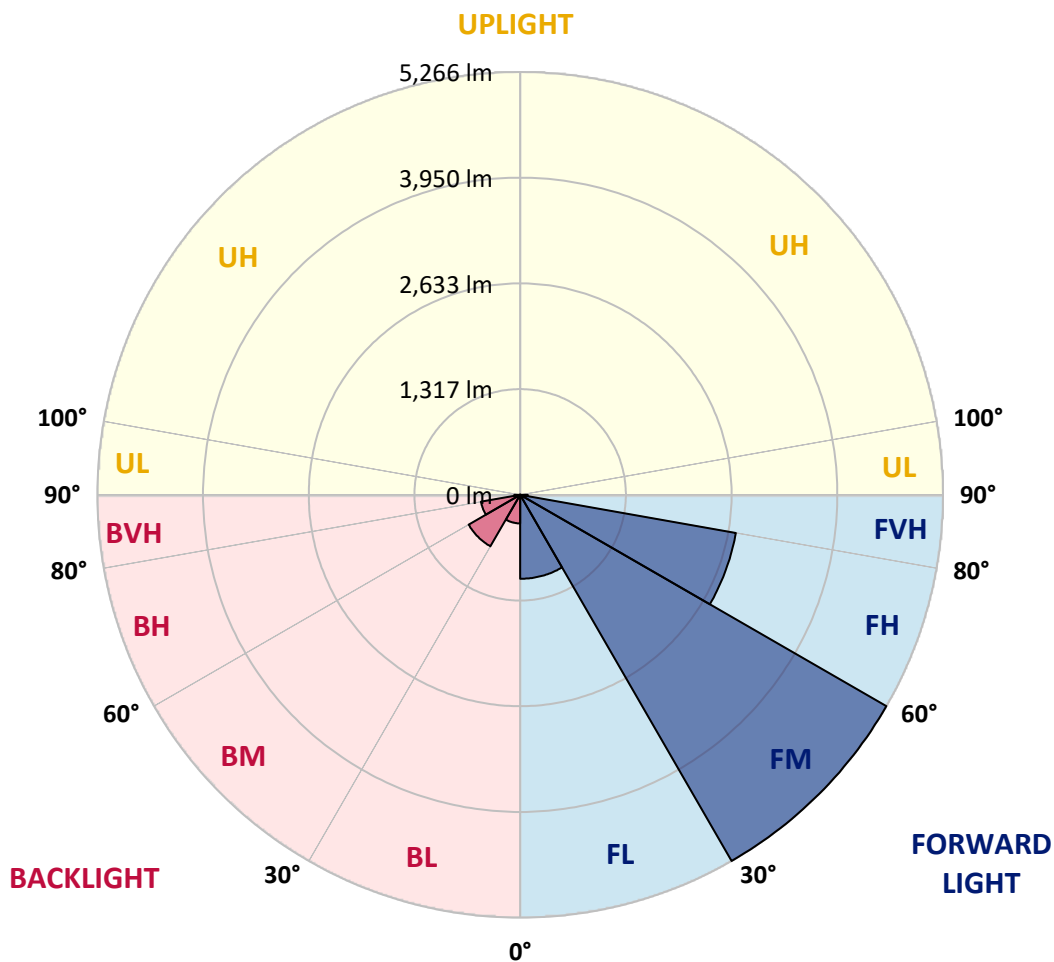
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1045.7	9.7			
FM	(30°-60°)	5266.1	48.8			
FH	(60°-80°)	2727.3	25.3			G2/5000
FVH	(80°-90°)	93.5	0.9			G1/100
BL	(0°-30°)	356.0	3.3	B1/500		
BM	(30°-60°)	741.0	6.9	B1/1000		
BH	(60°-80°)	494.9	4.6	B1/500		G1/500
BVH	(80°-90°)	72.8	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5
2.5°	1114.1	1101.9	1104.9	1084.4	1059.4	1026.7	990.4	990.0	990.4	986.8	973.6
5°	1544.8	1530.1	1524.5	1478.4	1411.0	1315.0	1210.7	1199.5	1194.8	1183.1	1156.0
7.5°	1859.3	1851.1	1842.3	1807.6	1746.3	1639.0	1498.9	1475.0	1451.9	1446.3	1415.7
10°	2062.1	2060.0	2041.7	2032.4	1994.2	1901.1	1764.7	1741.6	1716.6	1708.0	1675.7
12.5°	2222.5	2222.1	2213.4	2216.0	2182.6	2115.3	1997.7	1976.8	1958.4	1931.7	1908.8
15°	2333.5	2333.9	2346.8	2361.1	2355.9	2310.4	2200.1	2190.8	2175.1	2156.7	2129.6
17.5°	2424.5	2427.0	2440.2	2466.3	2494.5	2490.9	2403.5	2395.8	2382.0	2357.0	2342.7
20°	2629.9	2639.6	2614.1	2614.1	2617.1	2630.9	2588.9	2582.9	2563.5	2550.1	2538.9
22.5°	2976.9	2988.1	2930.4	2871.7	2813.9	2771.9	2730.1	2737.7	2724.5	2715.2	2708.6
25°	3427.6	3436.4	3342.9	3243.7	3126.1	2972.8	2869.1	2864.4	2857.3	2851.7	2848.6
27.5°	3851.8	3855.4	3767.1	3621.8	3485.4	3265.1	3010.1	3004.5	2995.8	2985.1	2975.8
30°	4214.7	4213.7	4122.7	3984.2	3838.0	3594.2	3224.3	3206.9	3181.3	3152.2	3129.7
32.5°	4529.0	4527.5	4427.7	4284.2	4130.9	3920.3	3517.7	3481.9	3442.0	3385.2	3351.1
35°	4776.3	4775.4	4681.2	4531.6	4355.7	4227.5	3853.9	3810.0	3759.3	3683.2	3630.6
37.5°	4869.8	4869.8	4817.2	4715.0	4559.6	4471.7	4227.5	4174.3	4120.1	4033.7	3974.5
40°	4815.1	4816.2	4827.4	4808.6	4732.9	4665.5	4576.0	4544.3	4497.8	4420.2	4358.3
42.5°	4631.7	4637.3	4712.0	4803.4	4841.2	4830.6	4885.1	4870.9	4838.1	4778.4	4729.3
45°	4399.1	4416.5	4498.2	4671.1	4871.3	4973.1	5144.2	5145.7	5139.7	5107.5	5069.6
47.5°	4079.8	4104.2	4212.2	4445.6	4800.8	5111.6	5407.4	5421.2	5434.1	5413.2	5395.7
50°	3655.6	3684.7	3846.2	4155.9	4657.3	5255.2	5904.7	5967.1	6025.4	6018.2	6029.9
52.5°	3201.3	3235.5	3433.2	3778.3	4410.5	5288.4	6222.6	6324.3	6426.0	6509.3	6597.7
55°	2791.3	2773.0	2970.8	3334.1	4004.6	5138.6	6508.4	6631.0	6744.4	6846.6	6952.0
57.5°	2235.9	2266.0	2464.3	2823.6	3467.5	4715.9	6705.0	6884.5	7047.5	7216.7	7365.8
60°	1634.3	1664.5	1879.6	2244.5	2884.4	4075.1	6554.8	6826.7	7087.8	7346.9	7549.3
62.5°	986.8	1009.4	1198.9	1546.5	2224.2	3315.3	5885.3	6242.0	6626.3	6936.0	7246.2
65°	614.3	627.0	697.1	888.2	1428.4	2475.1	4808.6	5197.4	5611.3	6004.4	6326.9
67.5°	502.9	507.4	520.3	561.1	784.4	1614.0	3578.9	3923.4	4296.9	4677.1	5036.0
70°	452.2	449.2	449.2	451.8	502.9	867.8	2343.2	2567.6	2878.8	3209.5	3537.5
72.5°	408.3	405.2	399.6	392.0	410.4	529.4	1211.2	1380.4	1604.7	1898.5	2212.8
75°	366.9	362.8	356.3	346.6	359.3	399.6	581.6	652.7	762.0	918.4	1093.7
77.5°	324.0	318.8	312.8	305.6	322.0	310.8	340.8	366.4	408.3	458.5	524.4
80°	275.5	270.9	268.8	265.3	284.7	236.7	240.7	256.5	281.1	308.2	338.8
82.5°	215.7	215.7	223.8	225.4	246.8	170.3	180.0	193.8	206.5	220.7	235.1
85°	142.1	143.1	170.7	181.5	194.7	114.5	134.9	139.5	149.8	158.0	164.0
87.5°	44.4	48.1	104.3	115.5	111.9	64.9	82.8	84.9	92.0	97.6	102.8
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5
2.5°	973.6	967.4	961.8	961.3	957.2	951.6	953.6	944.9	945.4	940.9	935.7
5°	1144.8	1140.7	1120.2	1114.6	1099.3	1089.6	1088.1	1067.6	1065.0	1053.3	1040.5
7.5°	1391.1	1377.8	1349.1	1335.3	1309.3	1289.8	1280.8	1253.6	1240.3	1209.6	1195.9
10°	1649.1	1632.3	1597.0	1577.6	1552.6	1521.3	1504.5	1465.3	1449.8	1421.7	1388.1
12.5°	1888.4	1871.6	1835.2	1820.3	1787.1	1753.9	1735.6	1691.1	1671.1	1626.1	1599.6
15°	2109.6	2092.7	2061.1	2045.7	2012.5	1985.4	1960.8	1917.0	1893.5	1851.5	1816.8
17.5°	2324.2	2306.4	2278.8	2265.0	2232.8	2205.2	2178.7	2137.2	2113.2	2071.4	2040.1
20°	2523.6	2510.3	2490.4	2471.9	2439.8	2414.7	2383.1	2347.3	2312.6	2281.8	2252.2
22.5°	2697.3	2692.2	2670.8	2662.6	2635.0	2613.5	2585.9	2550.7	2525.6	2486.8	2459.2
25°	2847.1	2845.6	2835.3	2832.7	2813.3	2792.9	2786.8	2757.7	2734.6	2700.4	2671.9
27.5°	2975.8	2977.4	2974.9	2982.1	2976.9	2967.7	2968.3	2958.6	2945.2	2916.6	2891.5
30°	3119.0	3110.8	3115.5	3125.6	3128.7	3129.7	3146.5	3152.2	3151.2	3132.3	3120.0
32.5°	3321.3	3301.9	3284.0	3282.5	3292.7	3296.8	3325.4	3340.3	3353.0	3357.6	3359.7
35°	3579.4	3540.6	3503.3	3483.4	3466.0	3470.5	3491.0	3515.1	3543.1	3562.5	3585.6
37.5°	3904.4	3857.0	3791.0	3744.0	3732.2	3706.7	3719.9	3738.9	3766.5	3796.6	3836.5
40°	4298.4	4226.4	4152.3	4090.0	4056.3	4009.2	4008.7	4005.1	4022.1	4050.1	4106.3
42.5°	4677.7	4613.8	4535.1	4469.7	4425.8	4362.9	4350.1	4316.9	4324.5	4349.1	4403.8
45°	5032.8	4980.2	4932.1	4856.6	4819.2	4751.3	4729.7	4690.5	4668.5	4679.7	4734.4
47.5°	5376.8	5343.1	5293.0	5244.0	5215.3	5154.5	5126.9	5098.7	5070.7	5069.6	5126.9
50°	6047.3	6029.4	5970.2	5919.1	5932.9	5858.3	5862.8	5787.2	5821.4	5825.5	5945.6
52.5°	6677.4	6739.9	6783.8	6837.3	6872.2	6878.9	6901.8	6936.0	6977.4	7059.1	7170.6
55°	7038.2	7116.4	7161.9	7202.9	7270.3	7284.6	7322.9	7368.4	7404.6	7496.7	7591.3
57.5°	7467.1	7612.2	7682.7	7747.6	7838.5	7873.3	7937.2	7986.8	8033.8	8142.7	8257.1
60°	7731.2	7908.1	8051.7	8154.3	8268.3	8350.2	8446.8	8524.4	8634.8	8765.1	8935.8
62.5°	7521.2	7780.8	7971.5	8147.8	8302.6	8459.1	8597.5	8742.7	8910.2	9107.5	9372.3
65°	6684.7	6948.8	7275.3	7458.3	7663.3	7904.5	8115.1	8350.2	8578.5	8865.8	9257.2
67.5°	5381.5	5688.5	6055.5	6240.0	6475.6	6744.9	6981.1	7268.2	7535.0	7883.0	8367.0
70°	3878.9	4276.0	4584.7	4777.3	5052.4	5329.8	5557.8	5891.9	6112.7	6469.4	6969.8
72.5°	2456.1	2769.4	3147.6	3390.3	3634.6	3915.8	4148.8	4437.0	4642.9	4967.9	5421.2
75°	1320.6	1551.5	1883.7	2114.3	2375.9	2616.1	2889.0	3082.1	3234.5	3491.6	3859.5
77.5°	618.8	759.4	927.5	1104.9	1282.3	1467.2	1647.2	1803.5	1869.0	2016.2	2233.3
80°	375.7	421.2	470.1	524.9	599.0	658.7	738.0	795.2	799.3	845.8	912.2
82.5°	250.9	267.7	282.6	296.4	315.3	330.2	347.0	366.9	375.1	385.8	407.4
85°	171.2	179.3	182.4	191.2	189.1	194.2	200.9	207.5	211.0	210.6	220.3
87.5°	105.2	109.3	111.4	113.4	111.9	109.9	112.9	116.6	117.5	114.5	115.5
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°	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5	877.5
2.5°	936.8	932.2	927.5	924.5	923.4	896.4	884.6	877.0	860.7	847.3	836.6
5°	1033.3	1023.6	1016.1	1006.8	1001.6	933.1	908.1	890.8	862.2	845.3	829.9
7.5°	1188.7	1161.6	1145.8	1127.9	1112.6	988.9	947.5	920.4	880.5	858.1	840.6
10°	1365.0	1337.0	1311.8	1284.2	1260.3	1063.0	1002.7	960.7	908.1	879.0	856.0
12.5°	1561.8	1534.2	1502.5	1467.2	1436.6	1157.0	1073.2	1013.5	941.3	902.5	870.4
15°	1794.4	1745.7	1707.4	1666.6	1630.8	1269.5	1155.5	1072.8	976.6	924.0	881.1
17.5°	2010.4	1959.3	1907.3	1871.6	1830.2	1395.7	1238.3	1132.9	1005.7	937.8	883.1
20°	2221.6	2165.8	2120.9	2072.9	2029.4	1526.5	1326.7	1186.2	1024.7	938.3	870.4
22.5°	2407.6	2372.8	2322.7	2270.6	2226.6	1657.3	1409.5	1231.2	1031.8	926.6	847.8
25°	2619.1	2582.4	2521.0	2477.1	2428.1	1790.7	1490.7	1265.9	1027.7	904.6	813.1
27.5°	2845.0	2804.2	2741.3	2695.4	2636.1	1929.2	1565.3	1290.9	1012.4	868.8	766.5
30°	3080.6	3043.3	2981.4	2935.1	2875.2	2075.9	1648.7	1307.7	981.8	819.3	712.4
32.5°	3333.6	3302.4	3241.1	3192.6	3128.7	2234.8	1726.3	1312.9	935.2	760.4	655.2
35°	3573.8	3552.4	3500.7	3455.2	3388.8	2385.0	1808.6	1310.3	880.1	696.0	603.1
37.5°	3844.2	3831.3	3805.9	3748.1	3666.8	2588.9	1907.3	1299.6	812.6	632.2	563.2
40°	4132.4	4133.5	4105.9	4066.5	3990.8	2836.4	2024.8	1278.6	738.9	575.9	526.8
42.5°	4437.5	4453.4	4440.0	4412.0	4339.4	3085.7	2165.4	1253.2	667.5	521.2	491.2
45°	4787.1	4806.5	4826.9	4785.5	4715.0	3414.9	2350.3	1220.0	590.2	475.7	466.6
47.5°	5190.3	5220.9	5239.3	5239.9	5169.4	3822.7	2650.8	1199.9	521.8	445.1	454.8
50°	6041.1	6051.0	6094.3	6170.0	6115.9	4766.6	3175.7	1187.7	475.3	426.2	446.2
52.5°	7267.1	7374.0	7449.2	7444.1	7370.4	5366.0	3464.9	1124.3	447.7	419.0	442.1
55°	7766.5	7899.9	8039.0	8075.6	8018.5	5877.7	3738.4	1060.9	434.3	424.2	443.6
57.5°	8431.9	8656.7	8847.5	8927.7	8844.9	6532.3	4098.2	1027.7	430.3	438.0	453.3
60°	9209.2	9487.2	9737.7	9881.7	9881.7	7284.6	4471.3	1013.9	424.6	458.5	469.7
62.5°	9708.6	10116.8	10495.1	10706.1	10699.9	7808.4	4636.8	966.9	411.9	472.7	492.1
65°	9710.5	10196.1	10677.9	10915.2	10927.3	7744.1	4363.5	854.0	388.4	474.8	514.7
67.5°	8901.1	9418.7	9980.4	10245.7	10307.0	7128.7	3777.2	702.2	350.1	454.4	522.9
70°	7517.6	8023.0	8596.4	8857.2	8966.0	6076.9	3042.2	541.2	301.1	409.3	505.9
72.5°	5922.6	6418.3	6817.5	7008.1	7092.9	4645.0	2215.4	408.9	246.8	344.9	460.4
75°	4193.2	4565.3	4777.3	4819.8	4833.0	2800.1	1346.1	304.1	203.5	268.3	388.9
77.5°	2366.7	2526.2	2508.7	2527.7	2370.3	1080.9	586.3	217.7	167.7	203.9	301.5
80°	924.0	952.7	894.9	877.0	804.4	402.2	258.6	151.8	133.9	154.3	211.0
82.5°	407.4	420.5	408.3	411.5	393.6	207.5	154.8	109.9	102.2	112.9	140.1
85°	224.4	228.5	227.4	234.1	224.4	82.8	73.5	67.5	71.6	76.7	89.9
87.5°	109.3	110.4	106.9	112.5	108.9	41.8	36.2	38.4	41.8	42.9	42.9
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°	877.5	877.5	877.5	877.5	877.5	877.5
2.5°	829.0	824.9	825.3	824.3	822.3	822.3
5°	821.8	817.8	817.8	816.7	814.1	814.6
7.5°	829.0	822.3	819.7	816.1	812.6	812.6
10°	837.2	825.3	818.2	812.1	807.4	807.4
12.5°	843.2	824.9	813.1	804.9	800.3	800.3
15°	845.3	821.2	804.9	795.2	791.1	790.6
17.5°	838.7	807.4	787.6	776.4	771.2	769.7
20°	818.2	782.4	758.5	745.6	738.5	735.9
22.5°	787.6	746.7	718.6	705.3	696.0	694.5
25°	744.7	700.7	673.1	660.2	655.2	653.6
27.5°	694.5	653.6	630.1	621.9	617.3	616.9
30°	647.0	612.2	594.9	588.7	583.1	582.2
32.5°	602.5	580.5	574.0	565.2	552.0	550.5
35°	570.8	568.8	564.3	544.7	528.5	523.8
37.5°	551.4	570.3	546.8	508.5	496.8	495.7
40°	540.2	554.6	514.1	500.9	501.8	500.9
42.5°	514.7	529.4	515.2	509.1	513.0	514.1
45°	489.1	505.4	522.9	518.8	528.5	528.5
47.5°	474.8	499.2	522.3	522.3	536.7	541.7
50°	458.5	494.2	514.1	521.2	532.6	528.5
52.5°	457.4	485.4	502.4	515.2	520.3	515.6
55°	458.9	478.3	490.6	505.0	511.1	511.5
57.5°	461.0	474.2	482.4	489.1	507.4	507.4
60°	466.0	470.7	475.3	478.9	502.9	503.3
62.5°	474.2	467.1	466.0	469.7	500.3	498.3
65°	487.1	461.9	454.4	457.8	497.7	491.7
67.5°	504.4	454.4	439.5	442.1	495.7	482.4
70°	520.3	442.1	421.2	418.6	476.3	452.8
72.5°	521.8	427.8	395.5	388.0	414.0	391.4
75°	496.2	418.0	367.5	344.9	341.9	338.8
77.5°	447.2	412.4	334.7	299.4	293.4	295.3
80°	374.2	391.4	295.3	253.5	286.7	283.2
82.5°	279.6	345.5	250.9	224.4	223.8	197.8
85°	155.4	269.4	204.4	168.1	117.0	113.4
87.5°	43.5	149.8	143.1	95.1	64.9	67.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)