

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: P227716

Luminaire Tested: **ISS-AF-1200-LED-E1-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227716
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29759)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISS-AF-1200-LED-E1-T3-8030
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5366 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

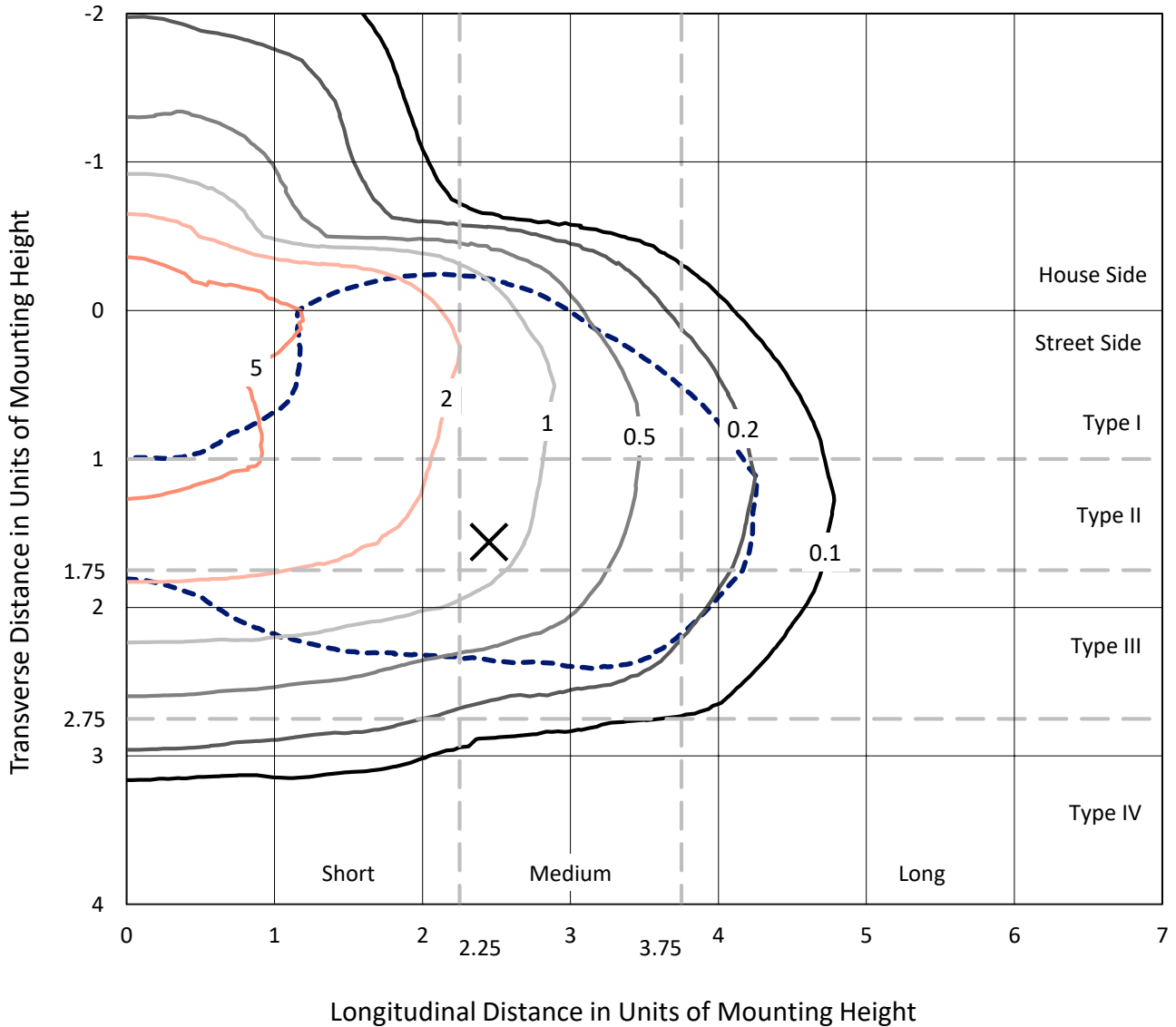
Input Watts (W): 66
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

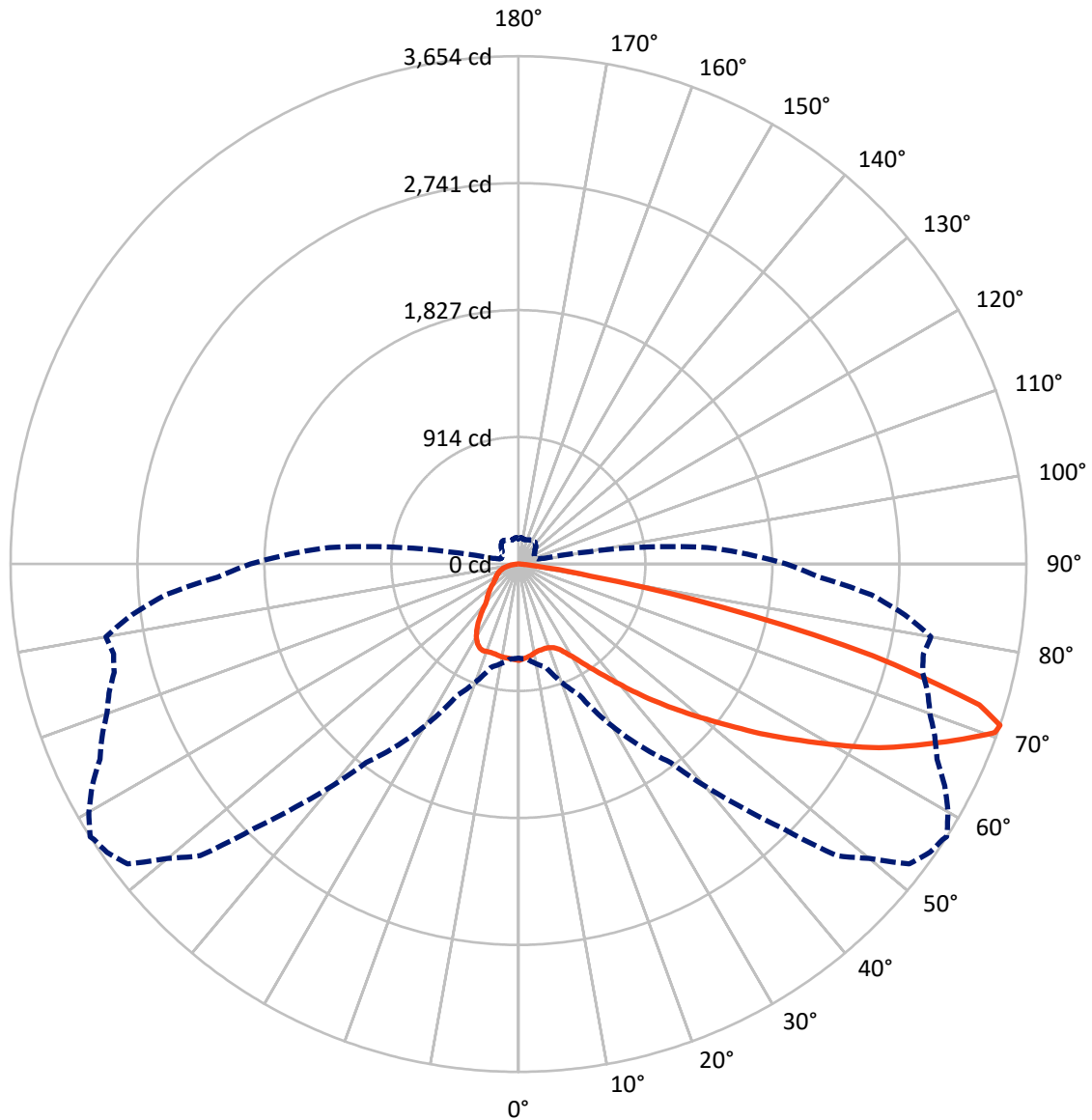
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57.5-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1168.2	0.0	1168.2
	% Fixture	21.8	0.0	21.8
Street Side	Lumens	4197.8	0.0	4197.8
	% Fixture	78.2	0.0	78.2
Total	Lumens	5366.0	0.0	5366.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.2	1.2
10°-20°	188.0	3.5
20°-30°	312.1	5.8
30°-40°	496.8	9.3
40°-50°	807.1	15.0
50°-60°	1210.1	22.6
60°-70°	1443.6	26.9
70°-80°	779.7	14.5
80°-90°	63.5	1.2
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°	5366.0	100.0
0°-180°	5366.0	100.0



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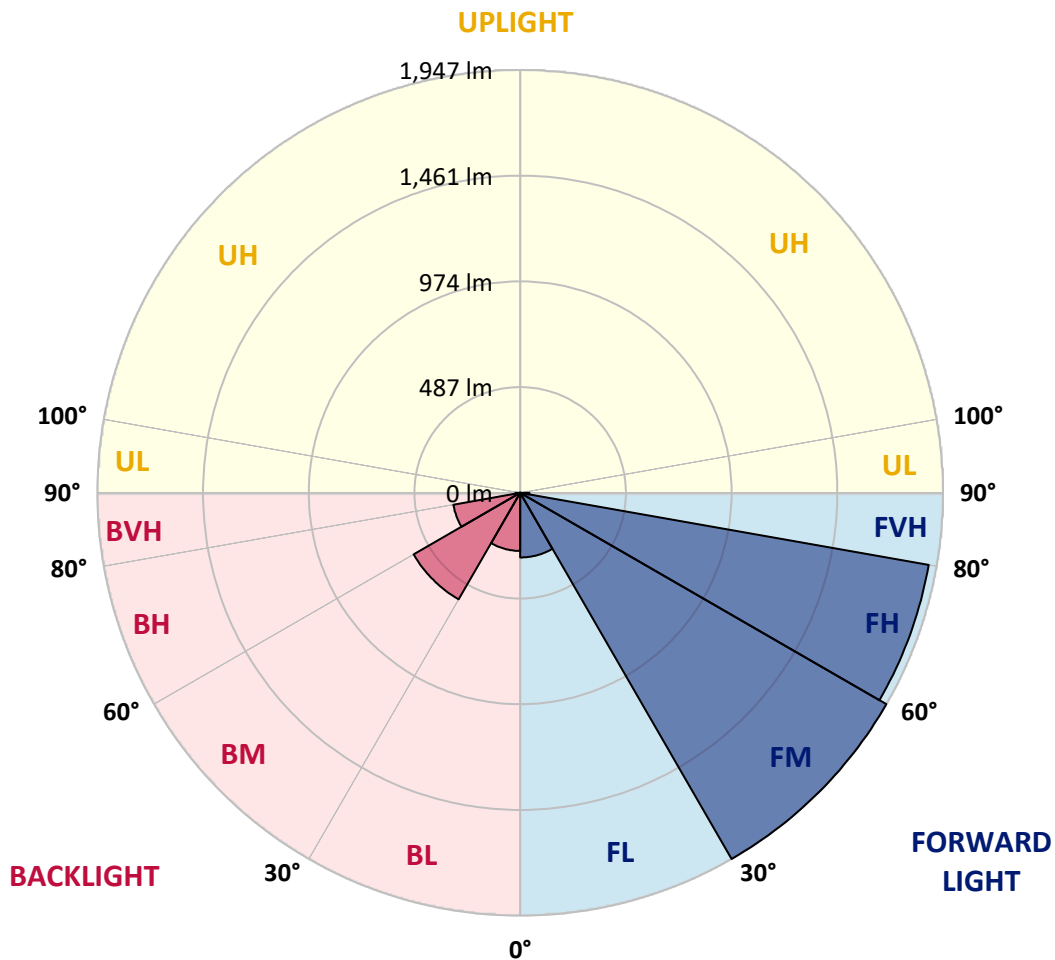
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	297.7	5.5			
FM	(30°-60°)	1947.5	36.3			
FH	(60°-80°)	1910.8	35.6			G2/5000
FVH	(80°-90°)	41.8	0.8			G1/100
BL	(0°-30°)	267.6	5.0	B1/500		
BM	(30°-60°)	566.5	10.6	B1/1000		
BH	(60°-80°)	312.5	5.8	B1/500		G1/500
BVH	(80°-90°)	21.7	0.4			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2
2.5°	693.2	691.4	689.7	689.7	689.7	687.9	682.6	684.3	689.7	686.1	691.4
5°	691.4	687.9	686.1	686.1	686.1	680.8	679.0	677.2	687.9	679.0	686.1
7.5°	671.9	671.9	668.4	671.9	675.5	670.2	666.6	668.4	677.2	668.4	677.2
10°	657.7	654.2	652.4	652.4	656.0	648.9	645.3	648.9	659.5	648.9	661.3
12.5°	652.4	654.2	648.9	648.9	647.1	638.2	638.2	638.2	647.1	638.2	648.9
15°	661.3	659.5	654.2	650.7	645.3	638.2	636.5	638.2	645.3	634.7	647.1
17.5°	673.7	673.7	664.8	656.0	650.7	643.6	643.6	640.0	645.3	638.2	647.1
20°	705.6	700.3	687.9	673.7	659.5	656.0	648.9	648.9	652.4	645.3	650.7
22.5°	760.6	755.3	734.0	707.4	684.3	675.5	671.9	670.2	666.6	663.1	663.1
25°	833.3	824.4	799.6	767.7	728.7	721.6	714.5	709.2	696.8	696.8	687.9
27.5°	911.3	902.4	875.8	840.4	792.5	781.9	773.0	765.9	744.6	744.6	728.7
30°	999.9	989.3	957.4	918.4	863.4	859.9	847.4	836.8	808.4	806.7	785.4
32.5°	1102.7	1088.6	1056.7	1005.2	946.7	948.5	929.0	921.9	884.7	886.5	858.1
35°	1219.8	1203.8	1171.9	1104.5	1044.2	1049.6	1031.8	1019.4	973.3	973.3	943.2
37.5°	1343.9	1343.9	1303.1	1225.1	1152.4	1164.8	1143.5	1131.1	1085.0	1092.1	1044.2
40°	1482.1	1491.0	1446.7	1358.0	1283.6	1288.9	1272.9	1258.8	1203.8	1216.2	1164.8
42.5°	1627.5	1643.5	1604.5	1512.3	1429.0	1446.7	1420.1	1405.9	1347.4	1374.0	1313.7
45°	1838.5	1842.0	1769.4	1680.7	1611.6	1627.5	1590.3	1585.0	1512.3	1540.7	1480.4
47.5°	1971.5	1962.6	1909.4	1856.2	1815.5	1847.4	1813.7	1804.8	1721.5	1741.0	1655.9
50°	2061.9	2067.2	2026.4	2021.1	2028.2	2088.5	2083.2	2065.4	1966.2	1952.0	1845.6
52.5°	2143.4	2120.4	2113.3	2162.9	2239.2	2310.1	2338.5	2315.4	2207.3	2168.3	2065.4
55°	2129.3	2095.6	2132.8	2253.4	2404.1	2514.0	2517.5	2501.6	2404.1	2388.1	2276.4
57.5°	2033.5	2040.6	2116.8	2288.8	2544.1	2657.6	2677.1	2657.6	2577.8	2592.0	2499.8
60°	1900.6	1914.7	2035.3	2256.9	2655.8	2753.3	2762.2	2785.2	2732.0	2769.3	2705.5
62.5°	1702.0	1721.5	1875.7	2177.1	2577.8	2723.2	2804.7	2857.9	2847.3	2932.4	2898.7
65°	1563.7	1563.7	1714.4	2084.9	2501.6	2693.0	2815.4	2914.7	2928.8	3063.6	3051.2
67.5°	1306.6	1315.5	1444.9	1827.9	2409.4	2625.7	2810.1	2978.5	3063.6	3276.3	3287.0
70°	904.2	911.3	996.4	1304.9	1946.7	2131.0	2402.3	2677.1	2932.4	3253.3	3419.9
71°	677.2	686.1	769.4	1040.7	1648.8	1801.3	2083.2	2368.6	2689.5	3106.1	3294.1
72.5°	331.5	336.9	418.4	668.4	1147.1	1342.1	1505.2	1778.2	2118.6	2595.5	2861.5
75°	154.2	156.0	173.7	241.1	437.9	521.2	593.9	769.4	980.4	1398.8	1721.5
77.5°	113.5	113.5	124.1	157.8	226.9	230.5	226.9	232.3	280.1	400.7	602.8
80°	83.3	83.3	90.4	106.4	150.7	150.7	145.4	147.2	141.8	147.2	166.7
82.5°	55.0	55.0	58.5	63.8	92.2	92.2	88.6	88.6	85.1	83.3	90.4
85°	31.9	33.7	35.5	30.1	39.0	37.2	33.7	37.2	35.5	31.9	39.0
87.5°	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8	0.0	1.8
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):

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2
2.5°	684.3	689.7	689.7	682.6	687.9	682.6	686.1	680.8	686.1	677.2	687.9
5°	679.0	684.3	684.3	673.7	684.3	673.7	682.6	670.2	682.6	668.4	682.6
7.5°	664.8	677.2	677.2	663.1	675.5	664.8	675.5	663.1	673.7	657.7	675.5
10°	648.9	661.3	663.1	648.9	663.1	650.7	666.6	650.7	666.6	648.9	668.4
12.5°	638.2	652.4	656.0	640.0	657.7	641.8	661.3	643.6	661.3	641.8	664.8
15°	636.5	648.9	652.4	638.2	654.2	636.5	659.5	638.2	661.3	640.0	666.6
17.5°	638.2	648.9	652.4	636.5	652.4	638.2	657.7	640.0	661.3	641.8	666.6
20°	643.6	650.7	650.7	641.8	654.2	641.8	657.7	640.0	663.1	645.3	668.4
22.5°	659.5	661.3	661.3	654.2	661.3	652.4	664.8	652.4	668.4	654.2	675.5
25°	686.1	684.3	680.8	679.0	680.8	675.5	682.6	673.7	689.7	677.2	698.5
27.5°	732.2	725.1	721.6	721.6	719.8	721.6	721.6	718.0	725.1	721.6	735.8
30°	788.9	776.5	771.2	776.5	769.4	776.5	774.8	773.0	780.1	776.5	788.9
32.5°	863.4	842.1	838.6	849.2	835.0	847.4	836.8	842.1	847.4	851.0	858.1
35°	950.3	925.5	921.9	932.5	916.6	934.3	921.9	929.0	932.5	941.4	946.7
37.5°	1053.1	1023.0	1017.6	1031.8	1010.6	1030.1	1012.3	1033.6	1028.3	1040.7	1046.0
40°	1177.2	1141.8	1129.3	1148.8	1124.0	1140.0	1122.2	1145.3	1140.0	1164.8	1170.1
42.5°	1329.7	1278.3	1265.9	1285.4	1248.1	1253.4	1239.3	1265.9	1262.3	1296.0	1301.3
45°	1487.5	1425.4	1407.7	1427.2	1384.6	1395.3	1374.0	1402.4	1400.6	1427.2	1448.5
47.5°	1663.0	1586.8	1563.7	1585.0	1533.6	1546.0	1524.7	1554.8	1556.6	1586.8	1608.0
50°	1845.6	1765.8	1735.7	1755.2	1707.3	1716.2	1694.9	1732.1	1730.4	1771.1	1787.1
52.5°	2044.2	1962.6	1939.6	1948.4	1891.7	1902.3	1884.6	1930.7	1920.1	1944.9	1976.8
55°	2264.0	2170.0	2143.4	2170.0	2102.7	2116.8	2093.8	2136.4	2118.6	2150.5	2159.4
57.5°	2489.2	2397.0	2375.7	2395.2	2331.4	2342.0	2311.9	2347.3	2333.1	2354.4	2368.6
60°	2728.5	2645.2	2623.9	2645.2	2583.1	2584.9	2533.5	2570.7	2549.4	2576.0	2570.7
62.5°	2957.2	2886.3	2881.0	2911.1	2833.1	2824.2	2762.2	2788.8	2758.6	2776.4	2755.1
65°	3152.2	3111.4	3118.5	3143.4	3074.2	3052.9	2982.0	2996.2	2951.9	2951.9	2925.3
67.5°	3407.5	3363.2	3363.2	3384.5	3297.6	3242.6	3145.1	3132.7	3060.0	3045.9	2983.8
70°	3620.3	3632.7	3618.5	3636.2	3533.4	3421.7	3292.3	3230.2	3134.5	3088.4	3015.7
71°	3544.0	3615.0	3639.8	3654.0	3568.9	3457.2	3322.4	3242.6	3150.5	3088.4	3010.4
72.5°	3198.3	3370.3	3467.8	3467.8	3478.4	3407.5	3278.1	3191.2	3086.6	3005.1	2932.4
75°	2241.0	2521.1	2646.9	2632.8	2725.0	2756.9	2767.5	2730.3	2671.8	2554.8	2503.3
77.5°	998.1	1315.5	1505.2	1507.0	1606.3	1693.1	1762.3	1835.0	1808.4	1751.6	1748.1
80°	226.9	411.3	526.6	531.9	622.3	702.1	749.9	822.6	831.5	749.9	703.8
82.5°	97.5	115.2	131.2	129.4	159.6	191.5	226.9	246.4	237.6	196.8	186.2
85°	40.8	53.2	56.7	53.2	65.6	72.7	85.1	86.9	101.1	90.4	95.7
87.5°	0.0	1.8	1.8	0.0	3.5	0.0	3.5	1.8	8.9	3.5	10.6
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):

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2
2.5°	680.8	689.7	680.8	689.7	684.3	689.7	687.9	689.7	680.8	689.7	679.0
5°	668.4	682.6	670.2	680.8	670.2	682.6	682.6	682.6	670.2	684.3	671.9
7.5°	657.7	673.7	657.7	673.7	663.1	675.5	675.5	680.8	666.6	682.6	664.8
10°	647.1	666.6	647.1	670.2	652.4	671.9	673.7	677.2	657.7	679.0	661.3
12.5°	641.8	666.6	643.6	666.6	645.3	671.9	673.7	677.2	656.0	682.6	659.5
15°	641.8	668.4	643.6	668.4	645.3	671.9	675.5	679.0	656.0	684.3	659.5
17.5°	641.8	668.4	647.1	670.2	648.9	673.7	677.2	680.8	659.5	684.3	663.1
20°	647.1	671.9	650.7	675.5	654.2	679.0	680.8	686.1	663.1	686.1	666.6
22.5°	659.5	680.8	663.1	686.1	670.2	689.7	691.4	696.8	679.0	698.5	682.6
25°	680.8	703.8	689.7	707.4	698.5	714.5	718.0	718.0	710.9	723.3	718.0
27.5°	725.1	742.8	732.2	748.2	742.8	755.3	755.3	757.0	762.3	765.9	771.2
30°	781.9	794.3	790.7	799.6	801.4	808.4	808.4	819.1	840.4	819.1	817.3
32.5°	858.1	865.2	867.0	870.5	877.6	882.9	890.0	902.4	920.1	870.5	854.5
35°	952.1	953.8	959.1	964.5	976.9	980.4	1003.5	994.6	994.6	916.6	882.9
37.5°	1054.9	1054.9	1069.1	1069.1	1099.2	1101.0	1124.0	1077.9	1051.3	950.3	900.6
40°	1184.3	1182.5	1198.5	1202.0	1242.8	1244.6	1241.0	1140.0	1083.2	959.1	891.8
42.5°	1320.8	1326.1	1347.4	1354.5	1384.6	1395.3	1351.0	1182.5	1097.4	953.8	861.6
45°	1469.7	1480.4	1507.0	1526.5	1558.4	1546.0	1439.6	1202.0	1081.5	921.9	803.1
47.5°	1632.8	1643.5	1664.8	1702.0	1716.2	1702.0	1512.3	1209.1	1056.7	872.3	718.0
50°	1797.7	1815.5	1845.6	1898.8	1905.9	1870.4	1600.9	1235.7	1037.1	820.9	620.5
52.5°	1983.9	2001.6	2037.1	2125.7	2108.0	2035.3	1705.5	1285.4	1042.5	788.9	537.2
55°	2180.7	2205.5	2274.6	2361.5	2322.5	2209.0	1820.8	1358.0	1063.7	755.3	445.0
57.5°	2388.1	2414.7	2505.1	2607.9	2531.7	2379.2	1937.8	1414.8	1074.4	686.1	343.9
60°	2593.8	2631.0	2748.0	2833.1	2714.3	2524.6	2042.4	1452.0	1046.0	554.9	265.9
62.5°	2781.7	2842.0	2973.2	3019.3	2829.6	2616.8	2099.1	1425.4	930.8	382.9	214.5
65°	2914.7	2992.7	3077.8	3072.4	2808.3	2586.7	2056.6	1303.1	693.2	253.5	182.6
67.5°	2971.4	3044.1	3063.6	2973.2	2655.8	2453.7	1904.1	1049.6	398.9	189.7	159.6
70°	2992.7	3054.7	2944.8	2726.7	2358.0	2127.5	1556.6	668.4	218.1	154.2	138.3
71°	2983.8	3013.9	2804.7	2549.4	2168.3	1927.1	1365.1	508.8	186.2	143.6	131.2
72.5°	2863.2	2820.7	2498.0	2214.4	1838.5	1593.8	1062.0	320.9	152.5	129.4	122.3
75°	2340.2	2148.8	1838.5	1570.8	1251.7	1001.7	576.2	164.9	122.3	111.7	106.4
77.5°	1530.0	1363.4	1108.1	900.6	684.3	519.5	235.8	113.5	97.5	94.0	92.2
80°	546.1	437.9	331.5	290.8	219.8	180.8	115.2	86.9	76.2	78.0	76.2
82.5°	154.2	141.8	122.3	113.5	99.3	97.5	74.5	65.6	60.3	63.8	62.1
85°	76.2	65.6	47.9	46.1	35.5	40.8	37.2	44.3	39.0	40.8	37.2
87.5°	5.3	7.1	1.8	5.3	0.0	5.3	7.1	8.9	1.8	7.1	5.3
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):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°
0°	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2	693.2
2.5°	691.4	684.3	693.2	684.3	693.2	687.9	693.2	687.9	693.2	696.8	696.8
5°	687.9	675.5	691.4	682.6	693.2	684.3	691.4	686.1	695.0	698.5	702.1
7.5°	686.1	673.7	689.7	677.2	693.2	680.8	691.4	684.3	695.0	698.5	705.6
10°	684.3	668.4	689.7	671.9	691.4	679.0	691.4	680.8	693.2	696.8	698.5
12.5°	684.3	666.6	689.7	670.2	691.4	673.7	689.7	673.7	691.4	689.7	684.3
15°	686.1	663.1	689.7	666.6	689.7	668.4	687.9	666.6	684.3	679.0	675.5
17.5°	686.1	663.1	687.9	664.8	686.1	666.6	682.6	663.1	679.0	677.2	671.9
20°	689.7	666.6	687.9	671.9	687.9	668.4	680.8	663.1	675.5	664.8	643.6
22.5°	700.3	684.3	700.3	684.3	691.4	673.7	679.0	657.7	656.0	638.2	604.6
25°	725.1	718.0	714.5	695.0	689.7	666.6	659.5	634.7	625.8	599.2	553.1
27.5°	757.0	741.1	719.8	696.8	673.7	645.3	625.8	606.3	586.8	553.1	494.6
30°	778.3	755.3	710.9	679.0	636.5	613.4	579.7	558.5	530.1	487.5	430.8
32.5°	792.5	757.0	689.7	652.4	595.7	565.6	521.2	498.2	457.4	416.6	375.9
35°	796.0	749.9	661.3	620.5	546.1	512.4	453.9	429.0	390.0	361.7	345.7
37.5°	781.9	725.1	617.0	563.8	482.2	443.2	388.3	370.5	347.5	336.9	329.8
40°	753.5	677.2	547.8	485.8	402.4	372.3	343.9	343.9	331.5	326.2	313.8
42.5°	702.1	606.3	459.2	398.9	342.2	336.9	320.9	328.0	319.1	315.6	297.8
45°	622.3	505.3	370.5	335.1	308.5	312.0	301.4	308.5	303.2	301.4	280.1
47.5°	519.5	402.4	312.0	299.6	281.9	287.2	278.3	287.2	281.9	283.7	267.7
50°	414.9	326.2	276.6	269.5	257.1	260.6	255.3	264.2	262.4	269.5	260.6
52.5°	331.5	278.3	246.4	241.1	234.0	235.8	234.0	242.9	244.7	258.8	258.8
55°	274.8	239.3	221.6	219.8	212.7	214.5	216.3	225.2	232.3	250.0	258.8
57.5°	235.8	214.5	202.1	200.3	196.8	198.6	202.1	212.7	219.8	242.9	262.4
60°	207.4	195.0	186.2	186.2	182.6	186.2	189.7	200.3	209.2	235.8	255.3
62.5°	186.2	177.3	172.0	173.7	172.0	175.5	179.1	189.7	200.3	225.2	244.7
65°	166.7	161.3	157.8	159.6	159.6	164.9	168.4	179.1	187.9	211.0	235.8
67.5°	150.7	147.2	145.4	147.2	148.9	154.2	159.6	166.7	173.7	195.0	223.4
70°	138.3	134.7	134.7	134.7	136.5	141.8	148.9	152.5	159.6	182.6	209.2
71°	131.2	129.4	129.4	129.4	131.2	136.5	143.6	147.2	154.2	177.3	202.1
72.5°	122.3	122.3	124.1	122.3	125.9	127.6	134.7	138.3	147.2	170.2	193.2
75°	108.1	108.1	109.9	109.9	113.5	113.5	118.8	122.3	133.0	152.5	173.7
77.5°	95.7	95.7	99.3	97.5	97.5	94.0	101.1	104.6	113.5	133.0	154.2
80°	81.6	79.8	83.3	78.0	76.2	72.7	78.0	83.3	97.5	109.9	113.5
82.5°	63.8	58.5	60.3	55.0	55.0	51.4	56.7	58.5	67.4	79.8	86.9
85°	39.0	31.9	35.5	30.1	33.7	30.1	31.9	33.7	40.8	49.6	47.9
87.5°	8.9	5.3	7.1	1.8	5.3	0.0	5.3	1.8	5.3	1.8	0.0
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):

	155°	165°	175°	180°
0°	693.2	693.2	693.2	693.2
2.5°	700.3	698.5	700.3	698.5
5°	709.2	709.2	710.9	712.7
7.5°	710.9	714.5	718.0	716.3
10°	698.5	695.0	698.5	695.0
12.5°	679.0	675.5	679.0	679.0
15°	677.2	675.5	677.2	677.2
17.5°	664.8	656.0	652.4	650.7
20°	629.4	613.4	609.9	604.6
22.5°	579.7	556.7	549.6	544.3
25°	519.5	487.5	475.1	468.0
27.5°	453.9	422.0	409.5	409.5
30°	402.4	377.6	365.2	365.2
32.5°	365.2	351.0	342.2	343.9
35°	335.1	326.2	320.9	322.7
37.5°	315.6	301.4	289.0	289.0
40°	296.1	278.3	262.4	262.4
42.5°	278.3	260.6	250.0	248.2
45°	260.6	248.2	239.3	237.6
47.5°	251.8	241.1	232.3	230.5
50°	248.2	237.6	225.2	225.2
52.5°	251.8	242.9	219.8	219.8
55°	258.8	253.5	219.8	216.3
57.5°	251.8	242.9	221.6	216.3
60°	235.8	221.6	218.1	214.5
62.5°	225.2	211.0	218.1	216.3
65°	216.3	205.7	221.6	218.1
67.5°	207.4	196.8	221.6	214.5
70°	196.8	186.2	202.1	189.7
71°	191.5	179.1	191.5	180.8
72.5°	182.6	168.4	172.0	164.9
75°	164.9	150.7	147.2	145.4
77.5°	136.5	120.6	115.2	113.5
80°	104.6	94.0	94.0	88.6
82.5°	78.0	69.1	67.4	58.5
85°	40.8	31.9	26.6	26.6
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)