

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: STREETWORKS

Report Number: P239125

Luminaire Tested: **ARCH-AF24-90-D-U-T2U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239125
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1802-616-1)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-AF24-90-D-U-T2U
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1180mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10061.7 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 94
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: 28.75 FT

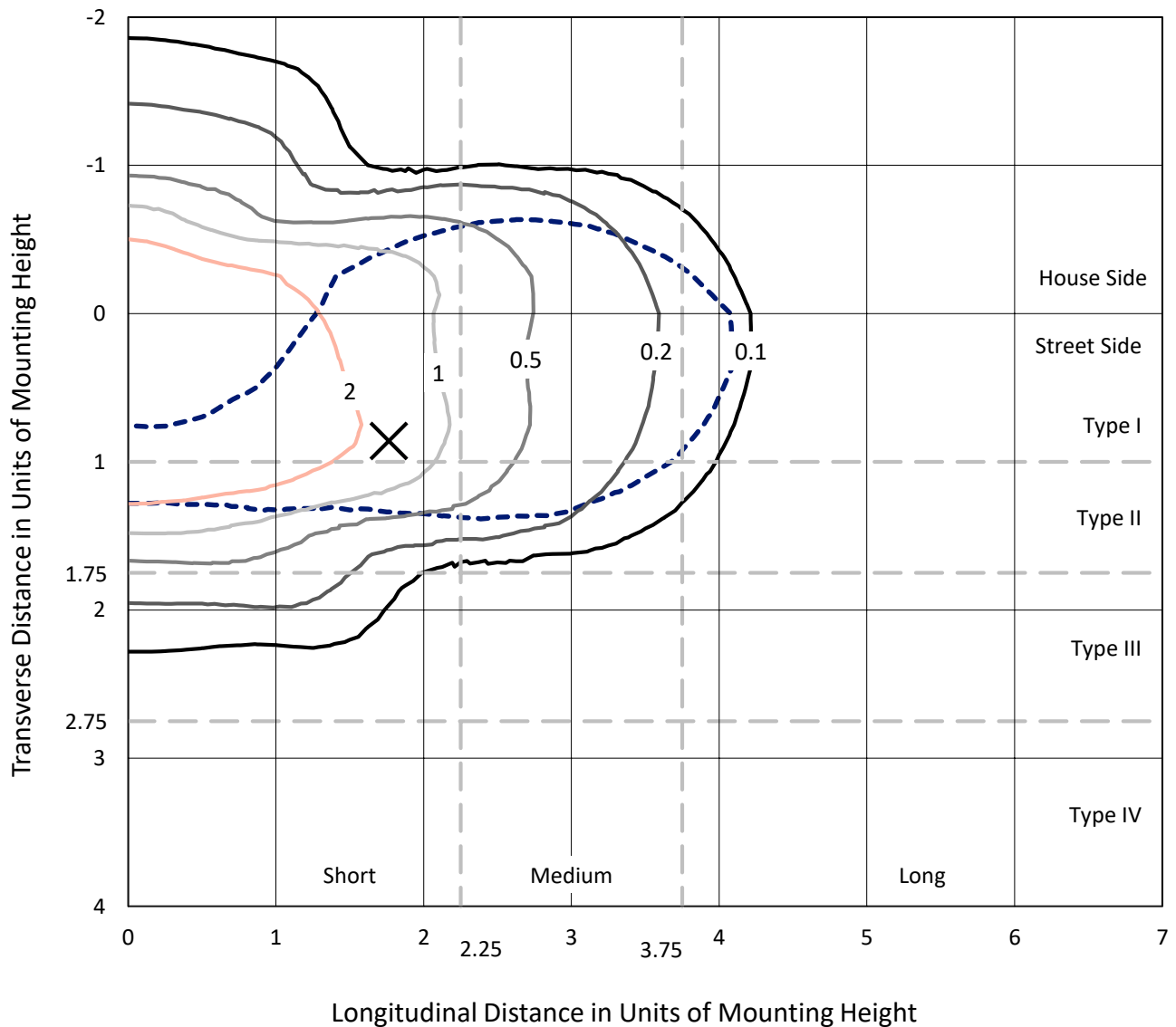


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

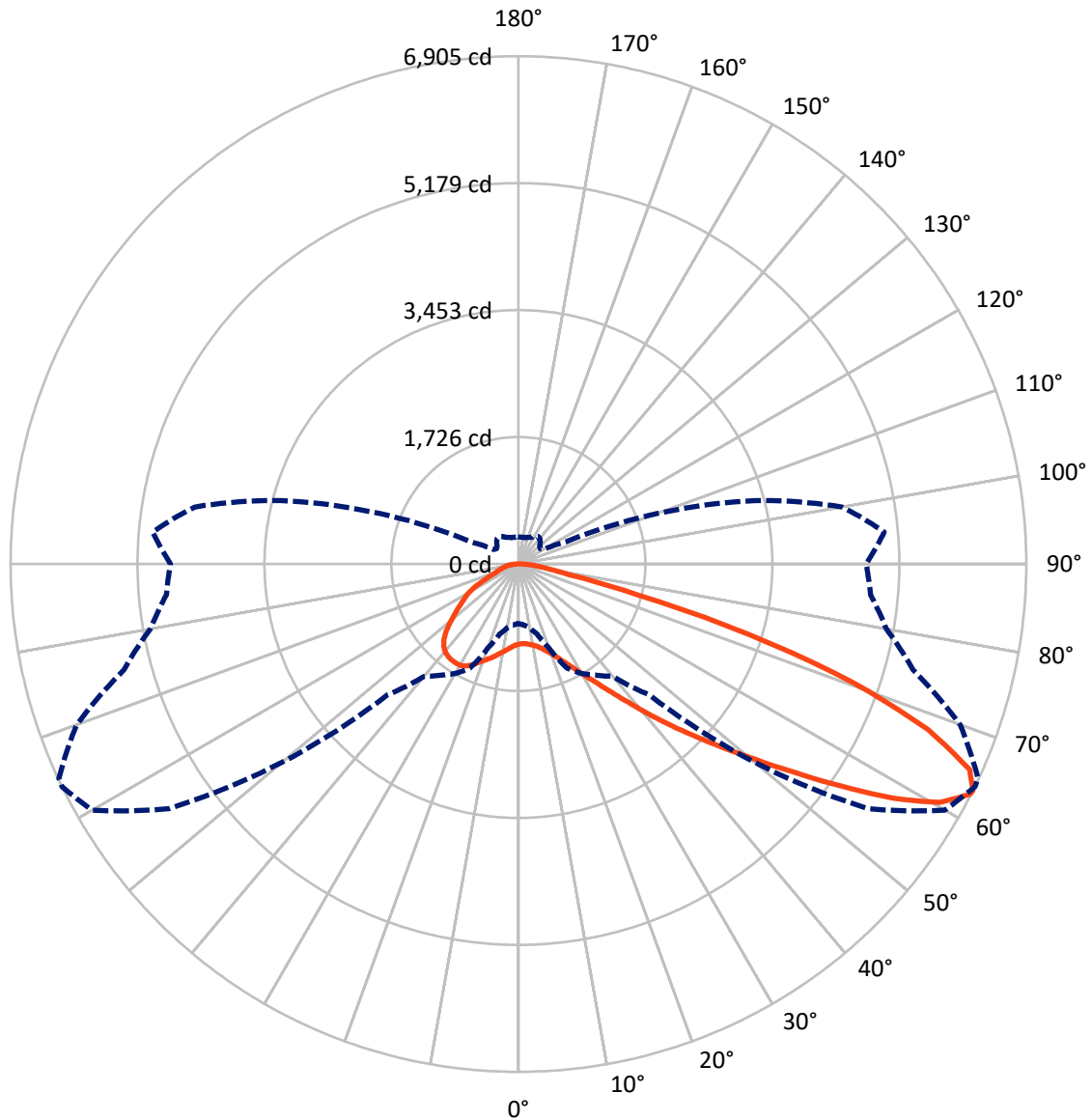


Based on 20 foot mounting height. Maximum calculated value = 4.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2957.8	0.0	2957.8
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	7104.0	0.0	7104.0
	% Fixture	70.6	0.0	70.6
Total	Lumens	10061.7	0.0	10061.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.8	1.1
10°-20°	362.4	3.6
20°-30°	680.2	6.8
30°-40°	1140.1	11.3
40°-50°	1912.9	19.0
50°-60°	2424.9	24.1
60°-70°	2139.2	21.3
70°-80°	1104.3	11.0
80°-90°	189.0	1.9
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°	10061.7	100.0
0°-180°	10061.7	100.0



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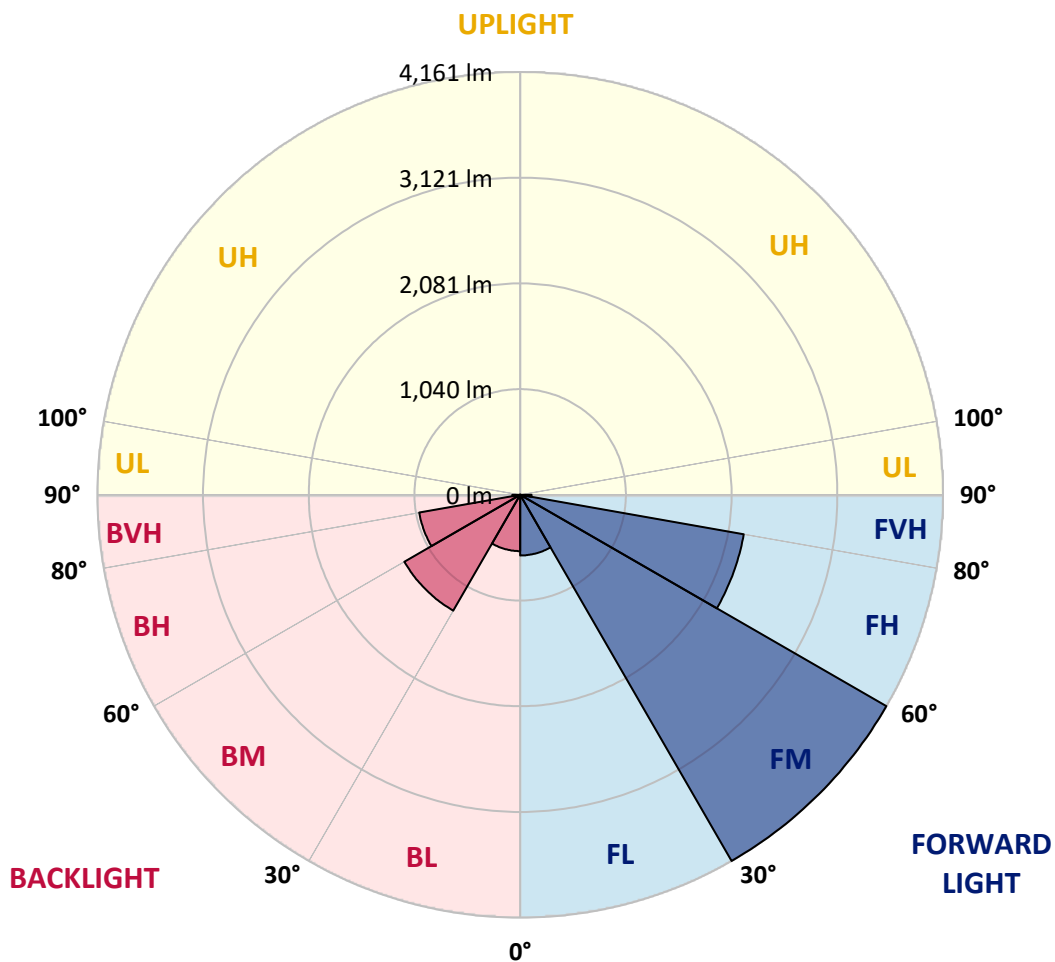
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	597.2	5.9			
FM (30°-60°)	4161.3	41.4			
FH (60°-80°)	2234.3	22.2			G2/5000
FVH (80°-90°)	111.2	1.1			G2/225
BL (0°-30°)	554.2	5.5	B2/1000		
BM (30°-60°)	1316.7	13.1	B2/2500		
BH (60°-80°)	1009.2	10.0	B3/2500		G3/2500
BVH (80°-90°)	77.8	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6
2.5°	1082.9	1081.3	1081.3	1081.3	1081.3	1079.6	1081.3	1084.6	1082.9	1081.3	1084.6
5°	1086.3	1084.6	1084.6	1084.6	1086.3	1084.6	1086.3	1091.4	1088.0	1088.0	1091.4
7.5°	1094.8	1093.0	1094.8	1093.0	1093.0	1093.0	1094.8	1099.8	1098.1	1099.8	1104.9
10°	1104.9	1104.9	1104.9	1104.9	1104.9	1104.9	1108.2	1111.5	1113.3	1114.9	1121.7
12.5°	1135.2	1135.2	1135.2	1133.4	1133.4	1128.4	1135.2	1138.5	1141.9	1145.3	1150.3
15°	1199.2	1199.2	1197.5	1190.7	1190.7	1180.6	1182.3	1184.0	1184.0	1187.3	1190.7
17.5°	1283.4	1281.7	1278.3	1273.3	1266.5	1254.8	1251.4	1248.0	1243.0	1241.2	1241.2
20°	1401.2	1399.6	1392.8	1379.3	1371.0	1352.4	1338.9	1325.4	1320.4	1312.0	1310.3
22.5°	1569.7	1569.7	1556.2	1536.0	1529.3	1490.5	1451.8	1423.1	1413.0	1401.2	1401.2
25°	1773.5	1771.8	1753.2	1729.7	1701.1	1660.7	1613.5	1574.7	1549.5	1522.6	1512.4
27.5°	2017.7	2012.7	1987.4	1958.7	1904.8	1854.3	1798.8	1758.4	1714.6	1680.8	1650.5
30°	2304.0	2299.0	2255.2	2201.3	2145.6	2095.1	2014.3	1965.5	1896.4	1856.0	1822.3
32.5°	2635.7	2630.7	2551.5	2499.4	2440.5	2378.1	2282.1	2204.7	2117.1	2059.8	2012.7
35°	3058.5	3038.3	2925.4	2853.0	2760.4	2698.1	2597.1	2492.6	2389.9	2309.0	2240.0
37.5°	3515.0	3491.3	3392.0	3284.2	3193.2	3117.4	2974.3	2843.0	2721.7	2610.6	2524.6
40°	3991.6	3929.3	3823.2	3744.0	3681.7	3609.3	3459.3	3321.2	3130.9	3006.4	2876.6
42.5°	4321.7	4261.0	4186.9	4134.8	4104.4	4048.8	3964.7	3845.1	3675.0	3678.3	3336.5
45°	4538.9	4449.6	4399.2	4402.5	4414.3	4414.3	4399.2	4380.6	4306.5	4357.1	4070.7
47.5°	4461.5	4402.5	4370.6	4437.9	4522.1	4606.3	4704.0	4810.1	4931.3	5074.6	4722.6
50°	4006.7	4028.6	4043.8	4186.9	4367.2	4559.2	4783.1	5072.8	5411.4	5477.1	5307.0
52.5°	3280.8	3328.0	3378.5	3597.5	3834.9	4166.7	4559.2	5037.4	5492.2	5760.0	5743.2
55°	2548.2	2607.2	2714.9	2878.3	3066.9	3380.2	3865.2	4603.0	5312.0	5738.1	5997.5
57.5°	1813.9	1899.8	2041.3	2268.6	2435.3	2612.2	2971.0	3789.4	4565.8	5359.1	5955.3
60°	1205.9	1246.4	1338.9	1621.9	1903.2	2088.5	2342.8	2639.1	3274.1	4367.2	5520.9
62.5°	855.6	882.5	939.8	1067.8	1322.1	1657.3	1810.5	1947.0	2150.8	2809.2	4432.9
63°	808.4	832.0	879.1	986.9	1216.0	1563.0	1719.6	1844.2	1992.4	2512.9	4193.7
65°	670.3	680.5	705.7	757.9	880.9	1168.8	1424.9	1500.7	1525.9	1615.1	2627.3
67.5°	565.9	572.6	581.0	596.2	645.1	778.1	1062.7	1158.7	1130.1	1069.5	1298.5
70°	491.8	496.8	510.4	528.9	545.6	579.4	730.9	874.1	842.1	759.5	794.9
72.5°	392.4	400.8	416.0	448.0	481.7	525.5	562.5	651.8	631.6	552.4	560.9
75°	309.9	315.0	328.5	352.0	384.0	434.5	507.0	537.3	481.7	407.5	407.5
77.5°	245.9	250.9	262.7	281.3	301.5	336.9	387.4	466.6	432.8	306.5	304.8
80°	185.3	190.3	202.1	218.9	239.2	264.4	294.7	330.1	397.5	286.3	229.0
82.5°	136.5	138.1	158.4	170.1	176.9	197.0	222.3	242.5	272.8	264.4	203.8
85°	102.7	101.1	114.6	123.0	124.6	129.7	144.8	165.0	178.5	171.8	158.4
87.5°	57.3	50.5	58.9	67.4	67.4	69.0	72.4	84.2	96.0	92.7	84.2
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):

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6
2.5°	1084.6	1084.6	1082.9	1082.9	1084.6	1084.6	1082.9	1088.0	1091.4	1091.4	1093.0
5°	1089.6	1091.4	1089.6	1089.6	1091.4	1091.4	1093.0	1098.1	1103.2	1106.5	1111.5
7.5°	1104.9	1106.5	1104.9	1104.9	1106.5	1108.2	1111.5	1118.3	1121.7	1128.4	1136.8
10°	1121.7	1123.4	1121.7	1123.4	1125.0	1126.8	1131.8	1136.8	1141.9	1148.7	1162.1
12.5°	1152.0	1153.7	1150.3	1152.0	1157.1	1157.1	1160.4	1163.8	1172.2	1180.6	1194.1
15°	1194.1	1194.1	1190.7	1192.5	1197.5	1197.5	1199.2	1202.5	1212.6	1222.7	1236.2
17.5°	1243.0	1246.4	1244.6	1246.4	1249.6	1251.4	1251.4	1254.8	1261.5	1268.3	1281.7
20°	1308.7	1310.3	1306.9	1310.3	1313.7	1310.3	1306.9	1305.3	1308.7	1312.0	1327.2
22.5°	1397.9	1396.2	1387.8	1387.8	1387.8	1381.1	1372.6	1362.6	1362.6	1357.5	1369.2
25°	1504.0	1498.9	1487.2	1488.8	1477.0	1466.9	1451.8	1436.6	1423.1	1418.1	1419.8
27.5°	1628.6	1618.5	1606.7	1603.4	1591.6	1573.1	1547.8	1519.2	1497.3	1480.4	1477.0
30°	1785.3	1763.4	1743.1	1739.8	1721.2	1690.9	1650.5	1611.8	1574.7	1546.1	1536.0
32.5°	1970.5	1936.9	1904.8	1901.5	1871.2	1830.8	1781.9	1728.0	1674.1	1628.6	1606.7
35°	2187.8	2137.3	2107.0	2098.5	2054.7	2004.2	1950.4	1881.3	1805.5	1741.5	1701.1
37.5°	2452.2	2400.0	2347.8	2349.5	2288.9	2229.9	2157.5	2073.2	1977.3	1888.0	1830.8
40°	2778.9	2704.9	2637.5	2622.3	2570.1	2487.6	2408.4	2310.7	2192.8	2075.0	1992.4
42.5°	3174.7	3053.5	2960.8	2947.3	2878.3	2777.2	2681.3	2551.5	2432.0	2288.9	2189.4
45°	3624.4	3430.8	3319.6	3299.3	3188.2	3085.4	2969.2	2831.1	2684.6	2522.9	2405.1
47.5°	4183.6	3907.4	3718.7	3685.1	3531.7	3397.0	3275.8	3122.6	2947.3	2767.2	2637.5
50°	4835.4	4427.7	4173.4	4121.3	3915.8	3757.5	3602.5	3410.5	3223.6	3035.0	2885.0
52.5°	5488.8	5050.9	4712.4	4648.4	4345.3	4133.0	3929.3	3737.2	3516.6	3329.7	3159.6
55°	6014.3	5722.9	5330.5	5241.3	4806.7	4518.7	4251.0	4032.0	3813.0	3664.8	3464.4
57.5°	6330.9	6315.8	6005.8	5883.0	5288.5	4862.3	4564.2	4314.9	4102.7	4040.5	3774.3
60°	6322.6	6715.0	6581.9	6489.3	5775.2	5214.3	4826.9	4557.5	4382.3	4453.0	4085.9
62.5°	5936.8	6731.7	6891.8	6866.6	6293.9	5497.2	5042.5	4764.6	4672.0	4882.5	4409.2
63°	5797.1	6693.1	6905.2	6895.1	6393.2	5551.1	5079.6	4805.0	4729.3	4992.0	4468.2
65°	4899.3	6354.5	6741.9	6787.4	6607.1	5736.4	5165.5	4907.8	4899.3	5236.2	4608.0
67.5°	2986.1	5369.3	6005.8	6093.5	6305.7	5795.3	5116.6	4872.4	4993.6	5271.6	4565.8
70°	1276.6	3543.6	4826.9	4968.4	5487.1	5502.4	4976.9	4727.6	4971.7	4995.4	4266.1
72.5°	756.2	1670.8	3285.9	3594.1	4341.9	4734.3	4656.9	4474.9	4683.8	4387.3	3632.8
75°	535.6	781.4	1669.0	1997.5	3023.1	3614.3	3912.4	3996.7	3988.2	3479.6	2726.8
77.5°	384.0	501.9	704.0	830.3	1687.6	2320.9	2684.6	2930.5	2851.4	2329.3	1680.8
80°	267.8	347.0	431.2	458.1	783.2	1192.5	1414.7	1522.6	1475.4	1163.8	752.9
82.5°	193.6	227.4	277.9	294.7	394.1	550.8	655.2	577.7	554.1	429.4	325.1
85°	149.9	146.5	173.5	180.2	230.8	288.0	294.7	229.0	200.4	178.5	181.9
87.5°	106.1	90.9	92.7	96.0	119.6	153.2	149.9	94.3	80.8	85.9	97.7
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6	1089.6
2.5°	1096.4	1098.1	1101.5	1103.2	1106.5	1106.5	1109.9	1111.5	1114.9	1118.3	1120.0
5°	1116.7	1121.7	1128.4	1131.8	1138.5	1143.6	1150.3	1153.7	1160.4	1165.4	1172.2
7.5°	1146.9	1155.3	1163.8	1173.9	1184.0	1192.5	1199.2	1207.6	1219.4	1227.7	1232.9
10°	1175.6	1187.3	1202.5	1214.3	1229.5	1241.2	1251.4	1266.5	1280.0	1291.8	1298.5
12.5°	1212.6	1227.7	1243.0	1261.5	1281.7	1296.8	1312.0	1332.2	1350.7	1364.2	1371.0
15°	1256.4	1274.9	1291.8	1313.7	1337.3	1357.5	1379.3	1401.2	1414.7	1414.7	1411.4
17.5°	1301.9	1317.0	1337.3	1362.6	1394.5	1419.8	1431.6	1435.0	1429.9	1418.1	1409.7
20°	1347.3	1360.8	1382.7	1413.0	1446.8	1451.8	1440.0	1424.9	1409.7	1389.5	1376.0
22.5°	1384.5	1403.0	1436.6	1472.0	1473.7	1445.0	1413.0	1387.8	1364.2	1340.7	1315.4
25°	1428.2	1453.5	1498.9	1512.4	1468.7	1414.7	1369.2	1332.2	1293.5	1254.8	1226.1
27.5°	1482.2	1519.2	1564.6	1525.9	1440.0	1364.2	1301.9	1246.4	1195.8	1141.9	1109.9
30°	1539.3	1596.6	1606.7	1505.7	1391.1	1293.5	1209.2	1125.0	1061.0	1012.2	993.7
32.5°	1608.4	1682.5	1621.9	1470.3	1325.4	1197.5	1084.6	983.6	929.7	899.4	891.0
35°	1712.8	1773.5	1630.3	1433.3	1249.6	1082.9	941.4	860.6	827.0	806.7	796.7
37.5°	1862.7	1861.1	1628.6	1387.8	1162.1	958.3	827.0	769.7	742.8	725.9	707.4
40°	2037.9	1928.5	1618.5	1322.1	1044.2	838.7	747.8	693.9	668.6	648.4	626.6
42.5°	2211.4	1973.9	1589.9	1224.4	897.6	752.9	690.5	641.7	614.7	592.8	562.5
45°	2361.3	1992.4	1534.3	1089.6	766.3	685.5	653.5	611.4	579.4	545.6	522.1
47.5°	2479.1	1989.0	1445.0	931.4	678.7	638.3	623.2	594.5	555.8	513.7	483.3
50°	2578.6	1963.8	1323.8	791.6	619.8	596.2	591.2	582.8	520.4	485.1	466.6
52.5°	2669.5	1926.7	1194.1	697.2	569.3	549.0	559.1	550.8	507.0	476.6	458.1
55°	2794.1	1901.5	1066.1	624.8	510.4	505.2	513.7	525.5	498.5	469.9	449.7
57.5°	2940.7	1915.0	968.4	544.0	454.7	458.1	486.7	503.6	490.1	459.8	439.6
60°	3109.1	1955.4	882.5	466.6	409.3	417.7	459.8	483.3	481.7	446.3	422.8
62.5°	3297.7	1997.5	746.1	407.5	370.5	384.0	427.8	458.1	463.2	432.8	404.2
63°	3334.7	2000.8	710.7	395.8	363.8	378.9	419.4	451.3	458.1	429.4	400.8
65°	3425.7	1970.5	572.6	363.8	336.9	353.6	394.1	422.8	436.2	410.9	387.4
67.5°	3349.9	1723.0	431.2	325.1	315.0	326.7	362.1	389.0	400.8	389.0	365.5
70°	3063.5	1253.0	336.9	289.7	291.3	299.8	326.7	352.0	365.5	362.1	340.2
72.5°	2467.4	710.7	281.3	259.3	264.4	274.6	293.1	316.6	328.5	326.7	311.6
75°	1625.3	363.8	237.4	232.4	235.8	244.2	257.7	276.2	289.7	288.0	281.3
77.5°	805.1	252.7	203.8	205.5	207.1	213.9	224.0	240.8	249.3	250.9	249.3
80°	331.7	197.0	175.1	176.9	178.5	183.6	190.3	205.5	210.5	213.9	215.5
82.5°	198.8	149.9	139.8	143.1	144.8	149.9	155.0	168.4	173.5	178.5	178.5
85°	131.3	104.4	101.1	104.4	107.8	111.2	112.8	121.2	129.7	136.5	139.8
87.5°	70.7	62.3	60.7	62.3	62.3	65.7	69.0	77.4	87.6	94.3	97.7
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):

	160°	165°	170°	175°	180°
0°	1089.6	1089.6	1089.6	1089.6	1089.6
2.5°	1116.7	1118.3	1116.7	1118.3	1120.0
5°	1172.2	1175.6	1173.9	1173.9	1180.6
7.5°	1236.2	1243.0	1243.0	1246.4	1249.6
10°	1305.3	1312.0	1317.0	1317.0	1322.1
12.5°	1374.3	1377.7	1382.7	1382.7	1382.7
15°	1409.7	1408.0	1406.4	1404.6	1404.6
17.5°	1404.6	1397.9	1394.5	1391.1	1392.8
20°	1367.6	1355.8	1352.4	1347.3	1350.7
22.5°	1303.5	1286.8	1280.0	1271.5	1274.9
25°	1207.6	1187.3	1184.0	1173.9	1179.0
27.5°	1096.4	1086.3	1084.6	1082.9	1091.4
30°	992.0	995.3	997.1	1000.4	1008.8
32.5°	896.0	902.8	904.4	906.1	917.9
35°	801.7	793.3	801.7	798.3	808.4
37.5°	699.0	692.2	685.5	677.1	683.7
40°	613.1	601.3	581.0	570.9	572.6
42.5°	545.6	530.5	513.7	503.6	503.6
45°	501.9	483.3	468.2	461.5	461.5
47.5°	468.2	459.8	451.3	446.3	446.3
50°	454.7	444.7	439.6	436.2	436.2
52.5°	444.7	434.5	429.4	426.1	422.8
55°	436.2	421.0	416.0	414.3	414.3
57.5°	424.4	410.9	404.2	402.5	402.5
60°	405.9	395.8	389.0	387.4	387.4
62.5°	387.4	377.3	370.5	370.5	370.5
63°	384.0	372.3	367.1	367.1	367.1
65°	368.9	357.0	352.0	352.0	350.4
67.5°	348.6	336.9	333.5	333.5	330.1
70°	325.1	315.0	311.6	313.2	306.5
72.5°	301.5	291.3	286.3	286.3	279.6
75°	274.6	264.4	257.7	256.0	249.3
77.5°	244.2	235.8	229.0	222.3	218.9
80°	212.2	205.5	197.0	192.0	187.0
82.5°	178.5	171.8	166.7	173.5	148.2
85°	139.8	133.1	126.3	136.5	106.1
87.5°	102.7	99.3	92.7	80.8	70.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)