

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: P159755

Luminaire Tested: **VST-F03-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159755
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F03-LED-E-U-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7371.2 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 78.3
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

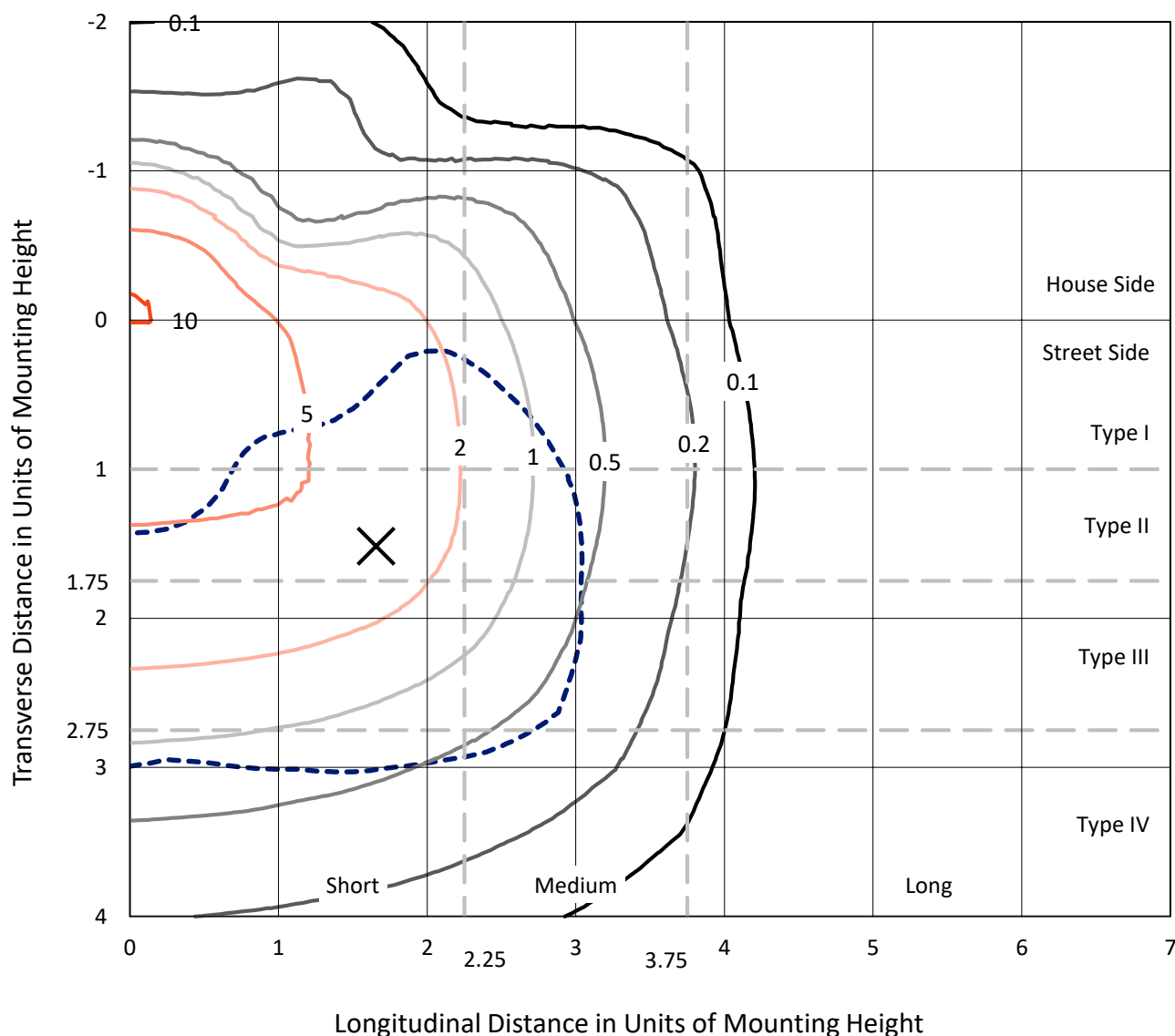


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

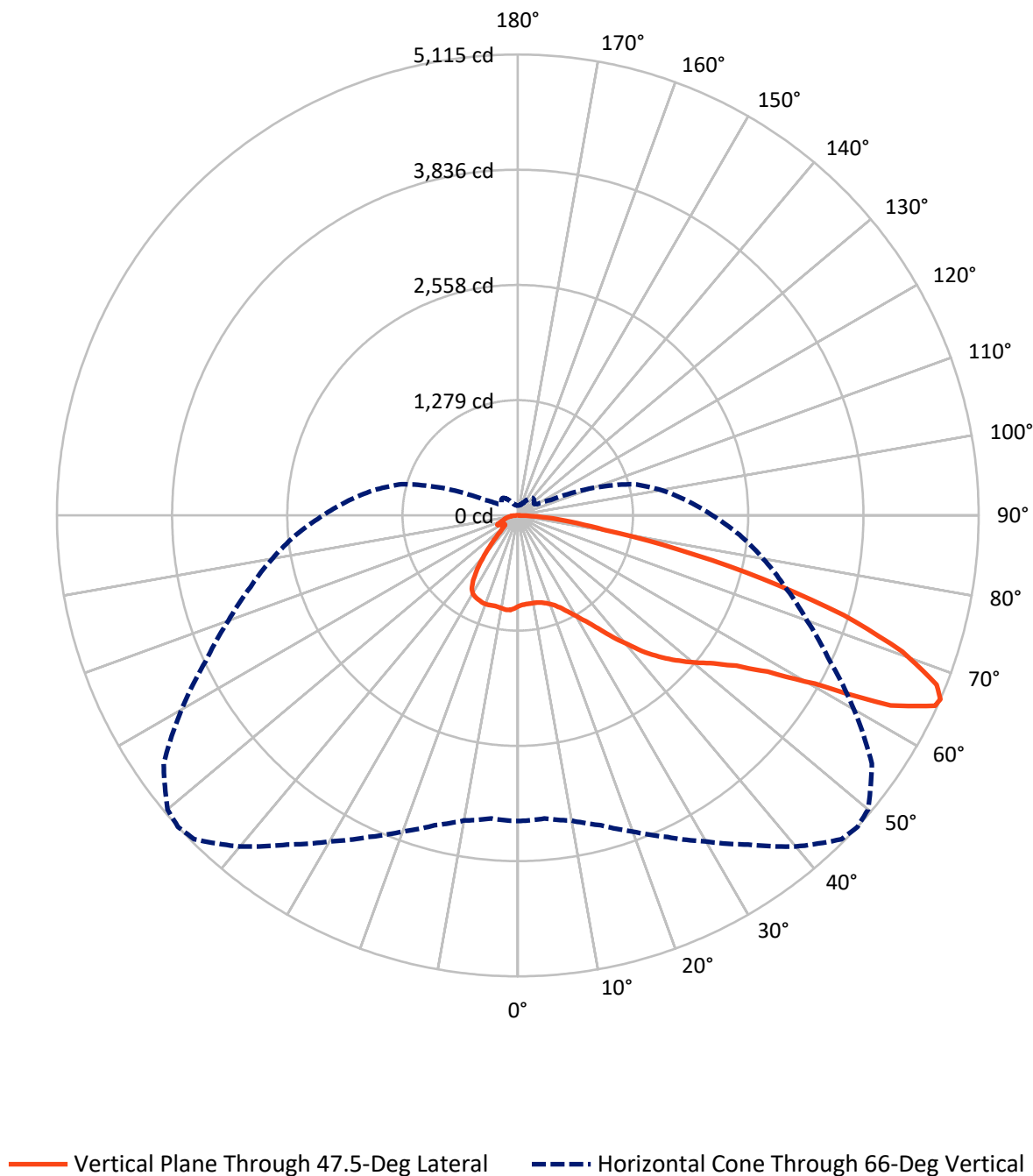


Based on 10 foot mounting height. Maximum calculated value = 10.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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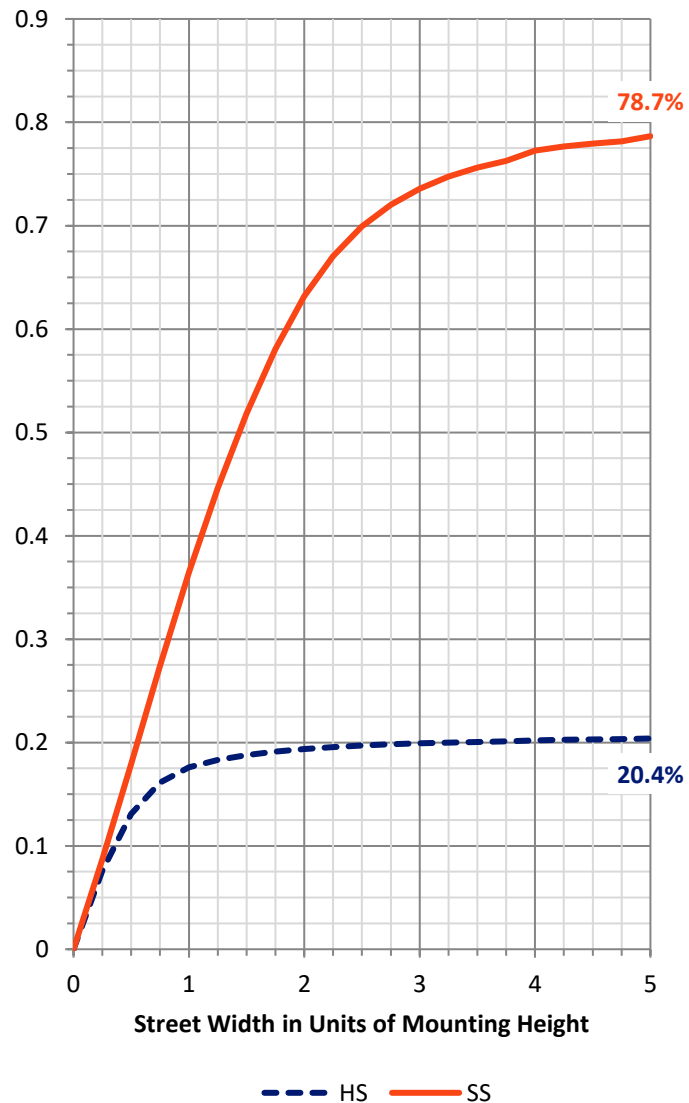
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1526.2	0.0	1526.2
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	5845.0	0.0	5845.0
	% Fixture	79.3	0.0	79.3
Total	Lumens	7371.2	0.0	7371.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	1.3
10°-20°	291.5	4.0
20°-30°	497.3	6.7
30°-40°	750.6	10.2
40°-50°	975.7	13.2
50°-60°	1338.5	18.2
60°-70°	2059.1	27.9
70°-80°	1190.3	16.1
80°-90°	171.0	2.3
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°	7371.2	100.0
0°-180°	7371.2	100.0

Coefficient of Utilization



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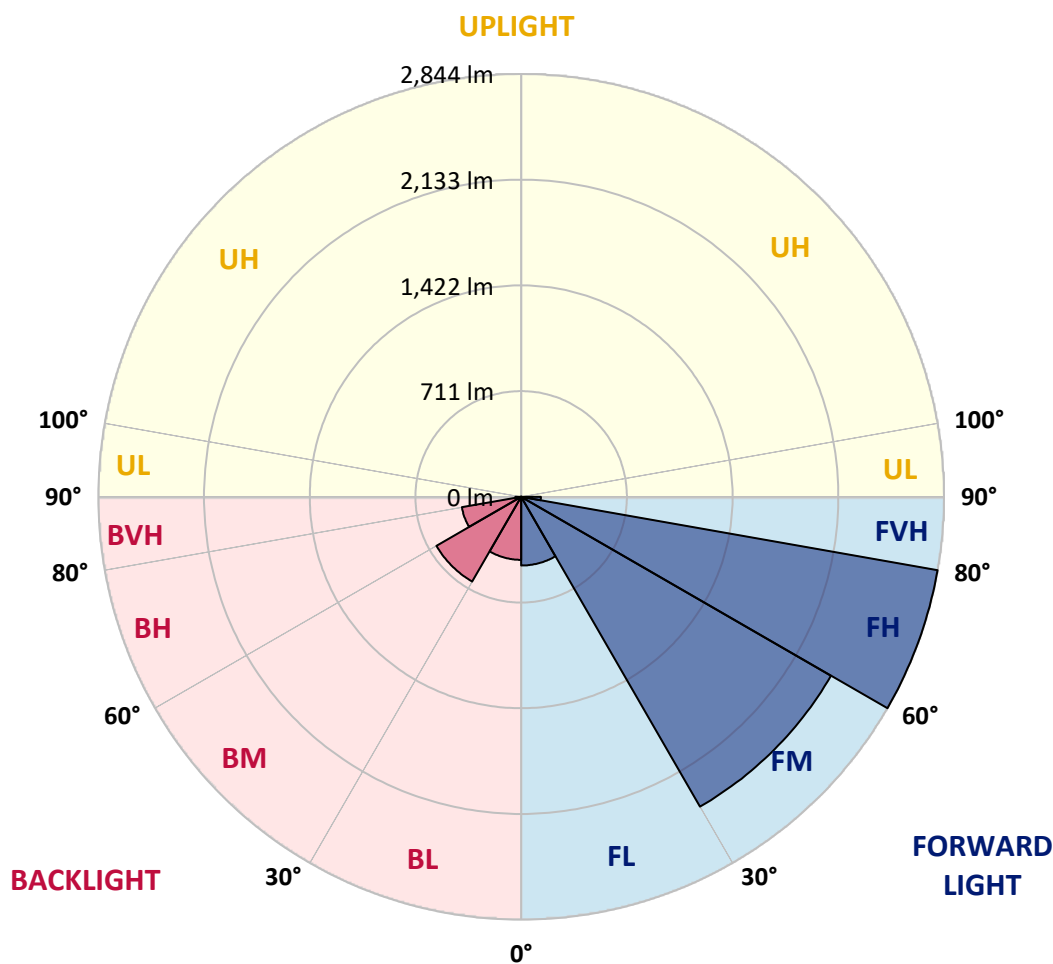
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	462.0	6.3			
FM	(30°-60°)	2406.4	32.6			
FH	(60°-80°)	2844.3	38.6			G2/5000
FVH	(80°-90°)	132.3	1.8			G2/225
BL	(0°-30°)	424.0	5.8	B1/500		
BM	(30°-60°)	658.5	8.9	B1/1000		
BH	(60°-80°)	405.1	5.5	B1/500		G1/500
BVH	(80°-90°)	38.7	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5
2.5°	982.7	983.2	983.7	983.7	985.2	985.2	987.7	989.2	989.6	992.6	994.6
5°	964.4	963.9	964.4	965.3	967.9	969.8	974.8	978.2	981.2	986.2	988.6
7.5°	956.5	957.4	958.4	958.9	960.9	965.9	970.3	973.8	979.7	985.7	988.1
10°	966.8	968.3	966.8	967.9	967.9	972.3	974.3	976.7	981.2	986.6	988.1
12.5°	991.1	994.1	991.1	988.6	986.6	990.6	989.6	987.7	990.1	991.6	991.6
15°	1031.2	1031.2	1029.2	1025.8	1020.8	1021.3	1016.9	1012.4	1010.5	1007.0	1004.5
17.5°	1070.4	1069.4	1064.9	1060.4	1057.0	1055.5	1049.1	1043.2	1036.2	1030.7	1024.8
20°	1108.5	1112.5	1107.0	1100.6	1095.1	1091.7	1086.7	1074.8	1066.4	1057.5	1051.6
22.5°	1174.4	1170.9	1165.0	1155.5	1150.1	1144.2	1133.8	1120.9	1108.0	1097.1	1089.7
25°	1242.2	1238.8	1230.4	1223.4	1215.5	1210.6	1199.2	1183.3	1170.9	1154.1	1144.2
27.5°	1315.1	1312.1	1302.2	1296.7	1291.3	1285.3	1275.4	1259.1	1247.7	1228.4	1218.0
30°	1397.3	1396.8	1383.4	1382.4	1374.5	1368.1	1361.1	1347.2	1335.8	1316.5	1304.2
32.5°	1484.9	1483.0	1473.5	1470.6	1476.1	1471.6	1461.7	1447.3	1432.4	1421.0	1407.2
35°	1609.8	1606.3	1600.9	1603.3	1606.8	1619.2	1603.8	1591.4	1573.6	1558.7	1539.4
37.5°	1700.9	1696.0	1702.4	1716.2	1736.1	1745.5	1758.8	1759.4	1750.9	1731.1	1714.3
40°	1784.6	1782.7	1797.5	1816.8	1853.5	1880.2	1905.5	1917.8	1920.8	1907.9	1882.7
42.5°	1855.4	1861.4	1881.2	1910.9	1962.4	2003.0	2050.1	2079.4	2097.7	2090.7	2079.4
45°	1939.7	1942.6	1966.9	2004.5	2053.6	2120.9	2182.9	2232.4	2264.6	2264.1	2251.2
47.5°	2045.2	2045.6	2066.5	2110.6	2163.1	2231.4	2309.6	2375.5	2418.1	2420.1	2410.2
50°	2170.5	2169.5	2192.3	2233.9	2289.8	2355.7	2438.9	2521.1	2580.6	2580.6	2566.2
52.5°	2332.0	2330.0	2342.3	2379.0	2433.0	2502.4	2585.0	2680.1	2744.5	2758.4	2727.2
55°	2547.4	2550.4	2553.4	2585.5	2631.6	2686.6	2781.7	2869.4	2955.5	2963.5	2945.2
57.5°	2796.5	2786.6	2807.9	2860.4	2912.9	2981.8	3049.1	3152.7	3254.7	3272.0	3269.6
60°	3185.9	3173.0	3194.8	3261.7	3319.6	3428.1	3543.5	3677.2	3798.1	3833.8	3790.6
62.5°	3544.0	3559.8	3589.6	3667.3	3751.5	3896.2	4069.5	4298.8	4528.1	4653.0	4644.1
65°	3511.8	3496.9	3553.9	3659.9	3812.5	3996.7	4212.2	4488.5	4818.9	5069.5	5091.8
66°	3392.4	3377.0	3438.5	3559.8	3734.2	3939.2	4178.5	4459.8	4797.6	5080.9	5115.1
67.5°	3195.3	3179.9	3249.2	3359.7	3539.5	3797.6	4056.1	4363.7	4714.9	4986.4	5014.1
70°	2814.9	2794.1	2848.1	2972.9	3118.5	3368.2	3614.3	3940.3	4300.8	4517.8	4528.1
72.5°	2384.5	2335.9	2393.3	2489.5	2593.4	2800.0	3014.5	3237.4	3524.6	3725.3	3782.7
75°	1730.2	1755.4	1772.2	1835.6	1904.5	2075.3	2201.2	2387.9	2610.3	2755.4	2801.5
77.5°	917.8	956.0	979.7	1043.2	1157.0	1287.3	1423.6	1538.9	1685.0	1766.3	1822.7
80°	515.1	541.9	580.5	630.5	686.0	786.1	866.8	926.2	947.0	961.4	974.3
82.5°	283.3	351.2	408.7	443.3	476.0	516.1	564.2	613.7	629.5	605.8	593.4
85°	44.1	64.9	197.6	241.2	262.5	293.2	327.9	364.6	365.0	314.0	342.8
87.5°	12.4	13.9	28.3	42.6	41.6	33.7	41.6	75.8	44.6	22.3	25.7
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5
2.5°	995.6	996.6	999.1	1001.5	1004.0	1006.5	1007.9	1010.5	1012.4	1015.4	1018.9
5°	991.6	994.1	998.6	1004.0	1009.0	1013.4	1016.9	1021.9	1026.3	1030.3	1036.2
7.5°	991.6	996.6	1004.0	1009.9	1014.4	1019.9	1025.3	1030.3	1035.2	1039.2	1043.2
10°	992.1	997.1	1004.5	1011.4	1016.4	1022.3	1026.8	1031.2	1036.7	1039.2	1044.1
12.5°	994.1	996.1	1001.5	1008.5	1014.4	1020.4	1024.8	1029.2	1035.2	1036.2	1039.7
15°	1004.0	1001.0	1002.5	1007.5	1013.9	1018.9	1023.8	1027.3	1031.2	1030.3	1033.2
17.5°	1022.3	1014.9	1011.9	1012.4	1015.4	1018.9	1020.8	1021.3	1021.9	1017.4	1017.9
20°	1047.1	1036.7	1029.8	1026.3	1022.3	1018.9	1013.4	1007.0	1001.0	992.1	991.1
22.5°	1084.3	1068.9	1061.5	1052.0	1040.2	1025.3	1011.9	996.1	983.2	969.8	964.9
25°	1138.3	1122.4	1114.4	1099.6	1078.3	1057.0	1037.7	1016.4	997.6	981.7	974.3
27.5°	1210.6	1194.7	1186.3	1170.9	1144.7	1123.4	1096.6	1073.8	1051.1	1027.8	1018.4
30°	1298.2	1284.4	1274.9	1262.6	1239.8	1216.5	1185.3	1150.1	1114.0	1076.8	1058.5
32.5°	1401.7	1386.4	1379.5	1365.1	1341.3	1317.1	1282.4	1237.3	1176.8	1118.4	1081.7
35°	1531.0	1513.7	1505.8	1486.9	1459.2	1423.6	1386.4	1325.9	1244.2	1163.0	1103.0
37.5°	1703.9	1665.2	1639.0	1595.9	1551.3	1501.3	1448.3	1386.4	1289.8	1189.3	1106.0
40°	1856.9	1817.8	1767.3	1705.4	1636.0	1567.2	1506.7	1436.4	1331.4	1208.1	1096.6
42.5°	2047.1	1977.8	1897.1	1813.3	1721.2	1636.5	1564.7	1482.0	1359.7	1213.0	1070.4
45°	2221.0	2138.3	2030.3	1918.9	1804.4	1697.9	1617.2	1525.1	1383.9	1213.0	1038.7
47.5°	2379.5	2280.4	2151.2	2012.5	1879.2	1762.8	1671.2	1569.2	1418.1	1228.4	1029.2
50°	2526.1	2412.2	2265.1	2104.1	1954.5	1830.2	1731.6	1625.6	1470.1	1268.0	1052.0
52.5°	2680.6	2559.8	2380.5	2209.6	2044.7	1911.4	1806.4	1695.5	1537.4	1330.4	1092.2
55°	2883.2	2741.6	2538.0	2349.8	2168.5	2021.4	1902.0	1779.2	1611.2	1400.8	1141.2
57.5°	3202.7	2997.2	2793.6	2548.9	2378.0	2184.4	2053.6	1912.4	1731.1	1492.4	1215.0
60°	3761.9	3509.3	3264.6	2983.3	2772.3	2569.7	2372.0	2187.8	1969.4	1699.4	1377.0
62.5°	4560.4	4303.8	3919.4	3575.2	3256.7	2988.2	2730.7	2496.4	2216.0	1920.8	1576.6
65°	5037.4	4743.7	4285.4	3822.8	3436.0	3103.1	2808.4	2521.6	2219.0	1931.2	1637.0
66°	5075.5	4797.6	4308.2	3819.4	3417.7	3072.4	2765.8	2469.1	2159.1	1883.7	1617.2
67.5°	5004.7	4765.4	4261.7	3752.0	3341.4	2968.4	2653.4	2342.3	2030.8	1775.7	1551.3
70°	4504.9	4332.0	3900.1	3422.6	3013.0	2684.1	2351.8	2052.6	1757.4	1542.9	1376.5
72.5°	3693.1	3474.1	3172.0	2851.0	2528.6	2236.9	1934.7	1680.1	1432.4	1276.4	1158.5
75°	2712.8	2515.7	2182.9	1982.8	1769.8	1586.5	1382.9	1141.7	965.9	887.6	858.9
77.5°	1719.7	1505.8	1224.9	1004.0	863.3	742.0	584.9	465.1	372.5	387.8	429.4
80°	868.8	748.4	560.2	442.3	382.4	318.0	251.6	190.7	139.2	159.0	179.8
82.5°	557.7	465.6	371.0	292.3	246.7	217.4	173.9	126.3	94.1	106.0	129.8
85°	335.8	283.8	226.4	185.2	161.0	134.2	98.6	69.8	69.4	74.3	91.6
87.5°	51.0	72.8	42.1	45.1	47.6	51.0	45.1	38.2	33.2	43.1	54.5
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5
2.5°	1022.3	1023.3	1025.3	1027.8	1027.3	1030.7	1032.7	1030.7	1035.2	1035.2	1037.7
5°	1041.2	1042.6	1046.1	1048.6	1049.6	1052.5	1053.5	1053.1	1054.0	1054.5	1055.5
7.5°	1046.6	1050.5	1052.0	1053.5	1054.0	1055.0	1055.0	1054.0	1054.0	1053.5	1054.5
10°	1045.1	1046.6	1047.6	1047.1	1047.1	1046.1	1045.6	1045.1	1045.1	1044.1	1045.6
12.5°	1040.2	1040.2	1040.2	1039.2	1039.2	1038.7	1038.7	1038.7	1039.7	1040.2	1042.6
15°	1030.3	1030.3	1031.2	1030.7	1032.2	1034.7	1037.7	1039.7	1042.1	1042.6	1044.1
17.5°	1014.9	1015.4	1018.4	1024.8	1031.2	1038.7	1044.1	1045.6	1043.6	1038.7	1035.2
20°	988.1	994.6	1006.5	1021.9	1036.2	1045.6	1048.1	1042.1	1032.7	1019.9	1012.9
22.5°	964.4	977.3	998.6	1023.8	1041.7	1048.1	1040.6	1026.8	1009.9	995.1	984.7
25°	973.8	988.6	1010.9	1032.7	1044.1	1040.6	1025.8	1006.0	988.1	970.8	954.0
27.5°	1013.4	1028.3	1044.1	1050.5	1046.6	1033.7	1012.9	991.6	967.9	943.1	922.3
30°	1051.1	1059.5	1060.4	1054.0	1039.7	1018.9	994.6	969.8	939.6	909.9	883.6
32.5°	1063.0	1053.1	1035.2	1016.9	997.1	975.8	947.5	914.8	882.7	848.9	819.7
35°	1059.5	1019.3	975.3	936.1	912.4	888.1	862.3	818.8	782.6	753.8	735.1
37.5°	1028.3	955.0	887.1	830.2	793.0	764.3	726.1	690.0	658.7	645.9	630.5
40°	984.7	872.8	778.6	698.9	660.2	623.6	581.0	553.3	544.4	532.4	533.0
42.5°	922.3	776.6	655.3	563.6	521.6	481.4	451.3	434.9	435.4	425.5	427.4
45°	856.4	680.0	527.5	436.4	394.7	360.6	343.7	338.8	339.3	339.8	336.8
47.5°	816.3	604.8	423.0	330.9	294.2	274.9	266.0	263.5	264.0	264.5	261.1
50°	810.4	565.6	353.2	253.1	229.3	218.5	214.0	211.5	211.5	209.5	206.5
52.5°	827.2	555.7	319.0	219.4	196.6	186.7	183.2	181.3	178.3	174.4	168.9
55°	853.9	564.7	308.6	208.0	185.8	175.9	171.4	170.4	165.4	158.0	149.1
57.5°	903.5	596.9	315.5	211.0	187.7	178.8	175.9	174.8	167.9	156.5	145.1
60°	1045.6	690.5	350.2	227.8	202.1	194.6	194.6	193.2	183.8	167.4	151.1
62.5°	1241.8	827.7	397.3	251.1	221.9	220.9	229.3	229.8	213.0	186.7	161.0
65°	1336.4	892.1	413.6	256.1	227.3	238.7	255.6	255.6	231.8	195.7	162.5
66°	1336.9	890.6	408.7	250.1	221.4	236.3	253.6	253.6	228.8	193.2	160.0
67.5°	1302.7	862.9	392.3	239.2	208.0	221.9	237.2	236.8	214.5	183.2	153.1
70°	1168.4	763.3	345.7	221.4	192.2	192.7	198.1	194.6	179.8	158.5	139.2
72.5°	1007.5	638.5	299.6	210.0	179.8	170.4	166.0	163.0	153.5	140.6	128.8
75°	772.7	495.8	261.1	199.6	168.9	152.6	146.6	144.1	137.7	130.3	120.8
77.5°	473.5	339.8	221.4	182.8	156.5	141.7	135.2	130.3	123.8	116.9	110.5
80°	204.1	205.1	177.3	155.0	136.2	118.9	110.5	104.5	101.0	98.6	95.1
82.5°	142.7	147.1	135.2	120.4	104.0	91.6	84.2	82.7	83.2	83.2	82.2
85°	107.0	105.0	94.6	86.2	78.8	70.9	64.9	64.4	66.4	66.4	64.9
87.5°	61.9	62.4	53.5	50.0	52.0	44.6	40.6	41.1	46.1	45.5	44.6
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):

	160°	165°	170°	175°	180°
0°	1008.5	1008.5	1008.5	1008.5	1008.5
2.5°	1037.7	1039.2	1038.7	1040.2	1038.7
5°	1057.0	1056.5	1056.0	1058.0	1055.5
7.5°	1054.0	1054.5	1054.5	1054.5	1054.0
10°	1046.6	1048.6	1049.6	1051.6	1051.1
12.5°	1044.1	1047.1	1050.1	1053.1	1053.5
15°	1044.6	1046.6	1048.1	1049.6	1050.1
17.5°	1031.8	1031.2	1029.8	1028.8	1027.8
20°	1005.5	1003.0	1000.6	996.6	998.6
22.5°	972.8	965.9	958.0	951.5	951.0
25°	934.7	921.8	908.9	900.5	897.5
27.5°	901.0	885.6	872.2	864.8	862.9
30°	860.9	847.0	835.1	828.7	824.7
32.5°	801.4	790.5	775.7	770.7	770.2
35°	718.7	710.3	699.9	697.9	695.4
37.5°	625.1	622.1	617.2	611.2	610.2
40°	525.1	527.0	525.5	522.1	516.6
42.5°	428.5	431.9	432.4	434.9	437.3
45°	341.3	344.2	344.2	346.7	349.7
47.5°	262.0	260.0	261.5	264.0	265.5
50°	198.1	196.6	194.2	192.2	190.2
52.5°	159.5	156.5	149.6	147.6	145.6
55°	140.6	135.2	130.3	128.3	128.3
57.5°	135.2	128.3	122.8	120.4	119.4
60°	136.2	126.3	119.4	115.4	113.9
62.5°	140.6	126.8	117.4	112.9	111.4
65°	140.2	125.8	116.9	112.0	110.5
66°	137.7	124.3	115.9	111.4	110.5
67.5°	133.7	122.3	114.9	110.9	109.4
70°	125.8	118.4	112.9	109.4	108.0
72.5°	119.4	114.4	109.4	105.5	104.5
75°	113.4	108.5	104.0	102.1	100.6
77.5°	104.5	100.1	97.6	95.6	94.6
80°	92.6	89.6	86.7	84.7	83.2
82.5°	80.8	76.8	73.8	72.3	71.3
85°	65.9	63.4	58.9	56.0	55.5
87.5°	44.1	41.6	40.1	37.6	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)