

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: P159741

Luminaire Tested: **VST-E02-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159741
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-E02-LED-E-U-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6108.1 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 52.1
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

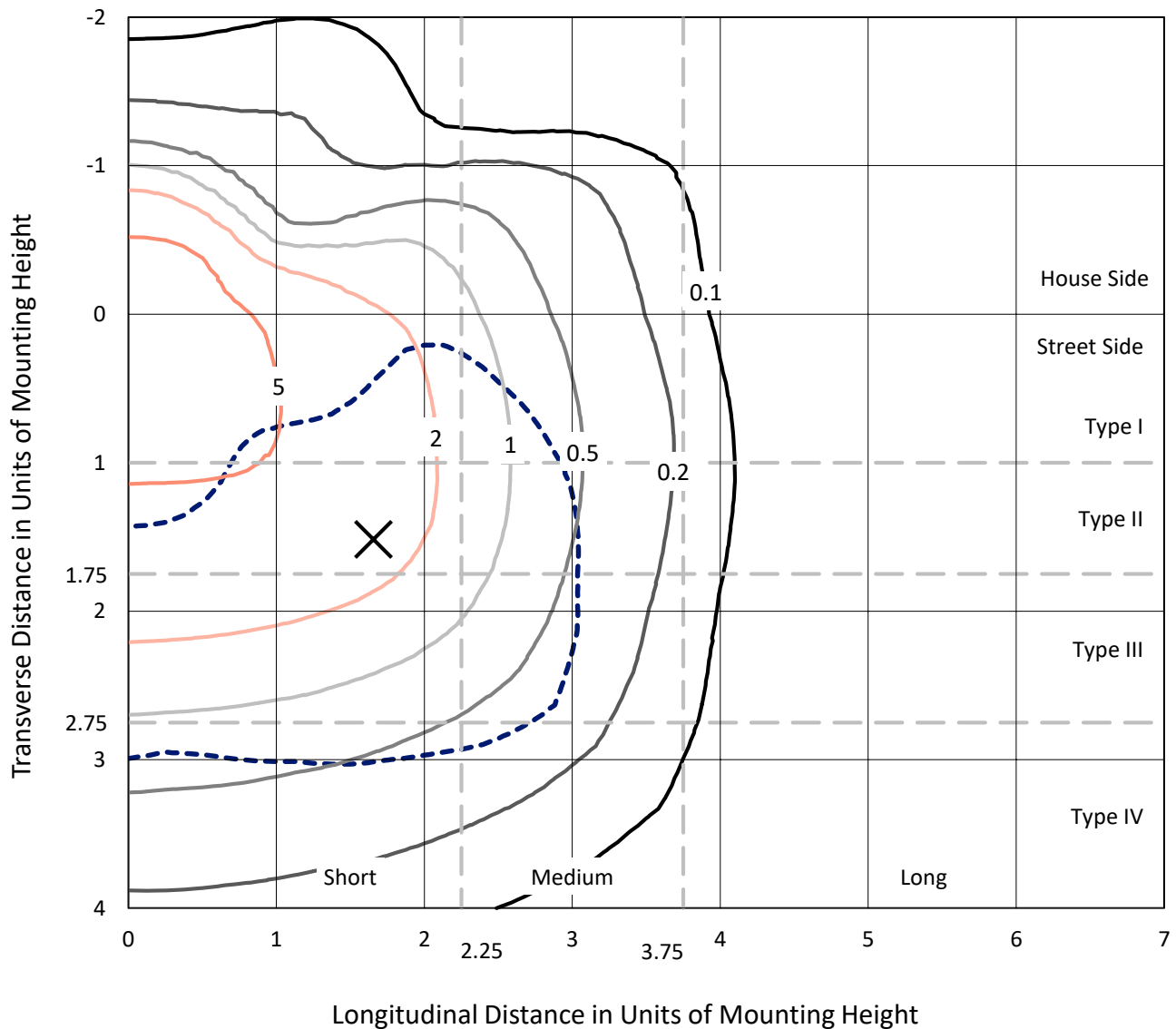


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

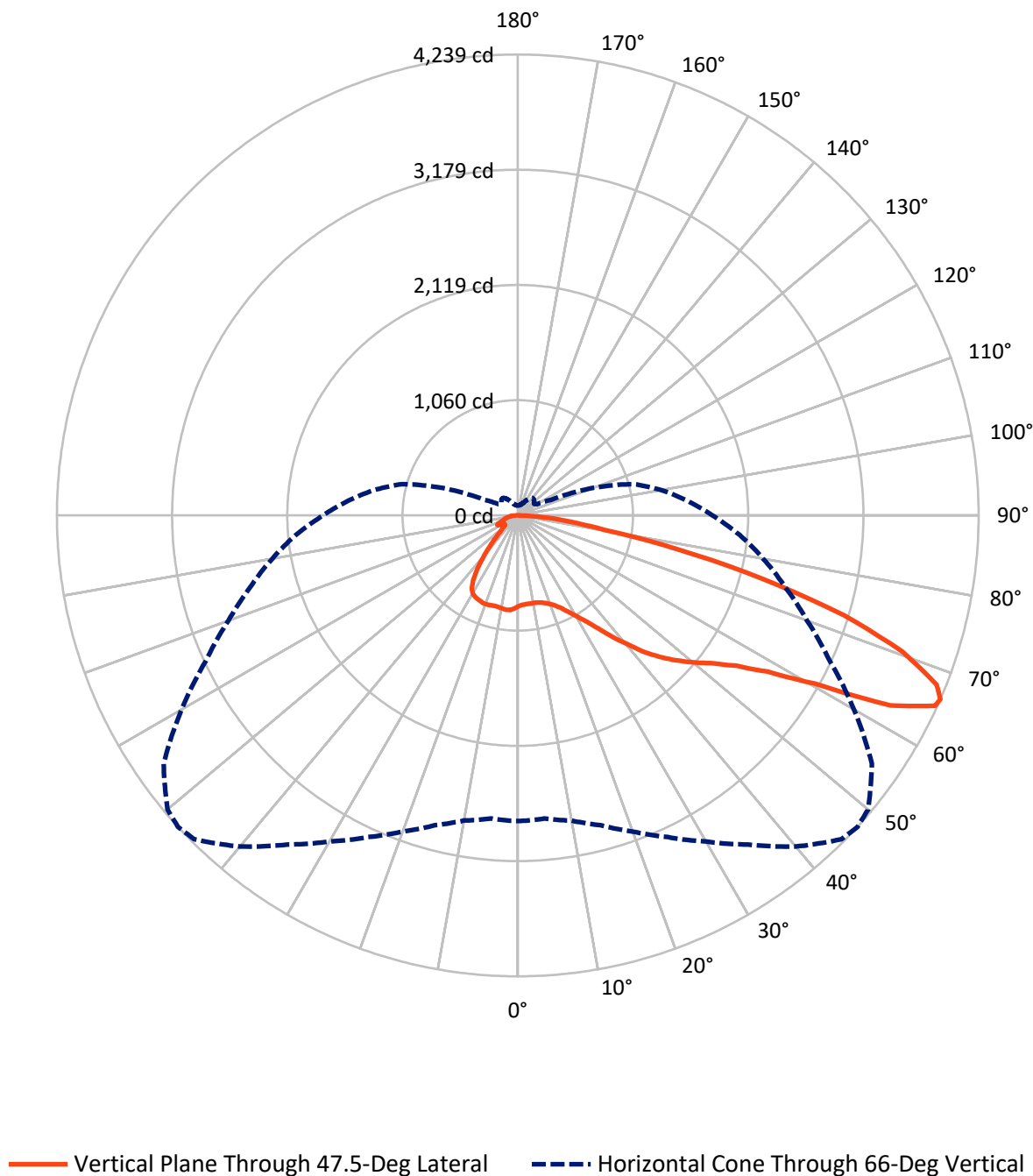


Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1264.6	0.0	1264.6
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	4843.5	0.0	4843.5
	% Fixture	79.3	0.0	79.3
Total	Lumens	6108.1	0.0	6108.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	1.3
10°-20°	241.5	4.0
20°-30°	412.1	6.7
30°-40°	622.0	10.2
40°-50°	808.5	13.2
50°-60°	1109.2	18.2
60°-70°	1706.2	27.9
70°-80°	986.3	16.1
80°-90°	141.7	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°	6108.1	100.0
0°-180°	6108.1	100.0

Coefficient of Utilization



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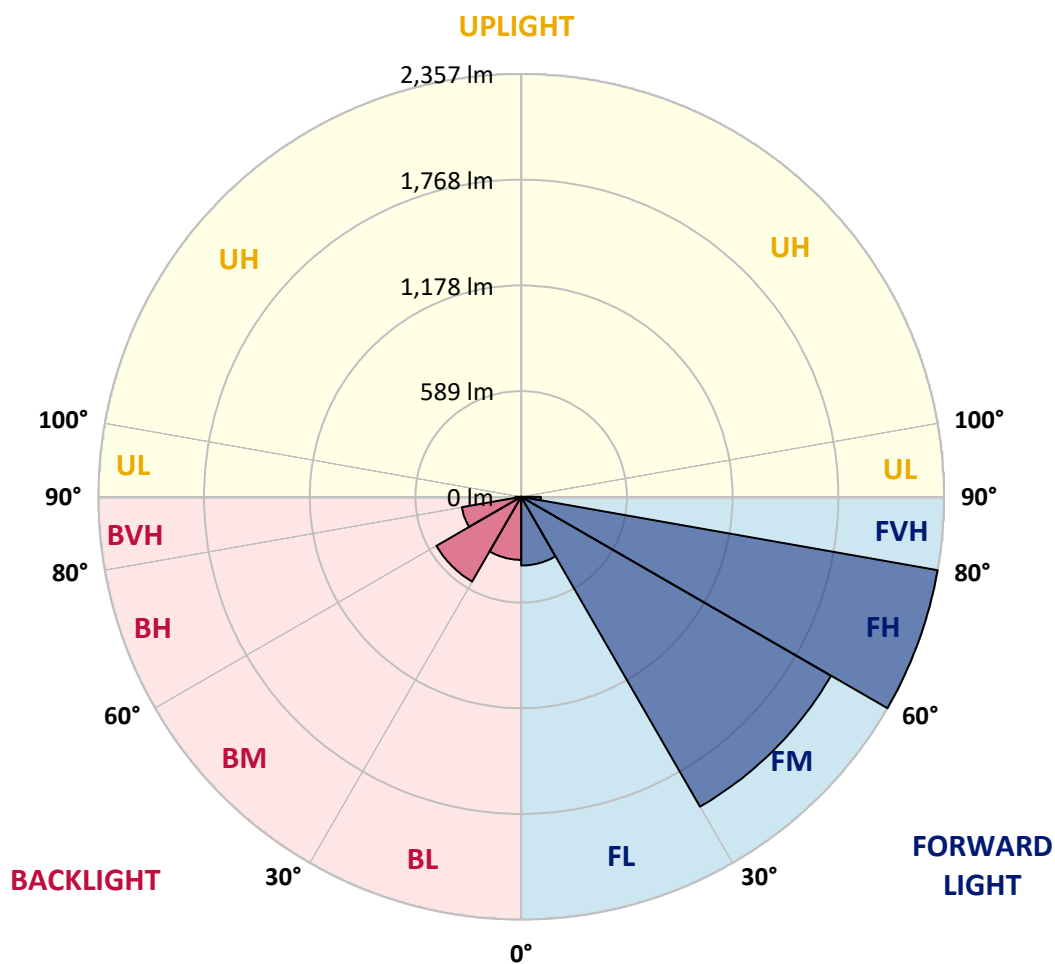
CATALOG NUMBER: VST-E02-LED-E-U-T4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	382.9	6.3			
FM	(30°-60°)	1994.0	32.6			
FH	(60°-80°)	2356.9	38.6			G2/5000
FVH	(80°-90°)	109.7	1.8			G2/225
BL	(0°-30°)	351.3	5.8	B1/500		
BM	(30°-60°)	545.6	8.9	B1/1000		
BH	(60°-80°)	335.6	5.5	B1/500		G1/500
BVH	(80°-90°)	32.0	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°	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7
2.5°	814.3	814.7	815.2	815.2	816.4	816.4	818.4	819.7	820.1	822.5	824.2
5°	799.1	798.7	799.1	800.0	802.0	803.6	807.8	810.6	813.1	817.2	819.2
7.5°	792.5	793.4	794.2	794.6	796.3	800.3	804.1	806.9	811.9	816.8	818.8
10°	801.2	802.4	801.2	802.0	802.0	805.7	807.4	809.4	813.1	817.6	818.8
12.5°	821.3	823.7	821.3	819.2	817.6	820.9	820.1	818.4	820.5	821.7	821.7
15°	854.5	854.5	852.9	850.0	845.9	846.4	842.6	838.9	837.3	834.4	832.4
17.5°	887.0	886.1	882.5	878.8	875.9	874.7	869.3	864.4	858.7	854.2	849.2
20°	918.5	921.8	917.3	912.0	907.5	904.6	900.5	890.6	883.7	876.3	871.4
22.5°	973.1	970.3	965.3	957.5	953.0	948.1	939.5	928.9	918.2	909.1	903.0
25°	1029.4	1026.5	1019.5	1013.8	1007.2	1003.1	993.7	980.5	970.3	956.3	948.1
27.5°	1089.7	1087.3	1079.0	1074.5	1070.0	1065.1	1056.9	1043.3	1033.9	1017.9	1009.3
30°	1157.9	1157.5	1146.4	1145.5	1139.0	1133.6	1127.9	1116.4	1106.9	1091.0	1080.7
32.5°	1230.5	1228.9	1221.1	1218.6	1223.1	1219.4	1211.2	1199.3	1187.0	1177.6	1166.0
35°	1333.9	1331.0	1326.5	1328.6	1331.5	1341.7	1329.0	1318.7	1304.0	1291.7	1275.7
37.5°	1409.5	1405.4	1410.7	1422.2	1438.6	1446.4	1457.5	1457.9	1450.9	1434.5	1420.6
40°	1478.8	1477.2	1489.5	1505.5	1535.9	1558.0	1579.0	1589.2	1591.7	1581.0	1560.1
42.5°	1537.5	1542.4	1558.9	1583.5	1626.2	1659.8	1698.8	1723.0	1738.2	1732.5	1723.0
45°	1607.3	1609.7	1629.8	1661.0	1701.7	1757.5	1808.8	1849.9	1876.6	1876.1	1865.5
47.5°	1694.7	1695.1	1712.3	1748.9	1792.4	1849.0	1913.9	1968.5	2003.8	2005.4	1997.2
50°	1798.6	1797.7	1816.6	1851.1	1897.5	1952.0	2021.0	2089.1	2138.4	2138.4	2126.5
52.5°	1932.4	1930.7	1941.0	1971.4	2016.1	2073.5	2142.1	2220.9	2274.2	2285.8	2259.9
55°	2110.9	2113.4	2115.8	2142.5	2180.7	2226.2	2305.0	2377.7	2449.1	2455.7	2440.5
57.5°	2317.4	2309.2	2326.8	2370.3	2413.8	2470.9	2526.7	2612.5	2697.0	2711.4	2709.3
60°	2639.9	2629.3	2647.4	2702.8	2750.8	2840.7	2936.3	3047.1	3147.3	3176.8	3141.1
62.5°	2936.7	2949.8	2974.5	3038.9	3108.7	3228.5	3372.2	3562.2	3752.3	3855.7	3848.3
65°	2910.1	2897.7	2944.9	3032.8	3159.2	3311.9	3490.4	3719.4	3993.2	4200.9	4219.3
66°	2811.1	2798.4	2849.3	2949.8	3094.3	3264.2	3462.5	3695.6	3975.5	4210.3	4238.6
67.5°	2647.7	2635.0	2692.5	2784.0	2933.0	3146.9	3361.1	3616.0	3907.0	4131.9	4154.9
70°	2332.6	2315.3	2360.0	2463.5	2584.1	2791.0	2995.0	3265.1	3563.9	3743.6	3752.3
72.5°	1975.9	1935.7	1983.2	2062.9	2149.1	2320.2	2498.0	2682.7	2920.7	3086.9	3134.5
75°	1433.7	1454.6	1468.6	1521.1	1578.2	1719.8	1824.0	1978.7	2163.1	2283.3	2321.5
77.5°	760.6	792.2	811.9	864.4	958.8	1066.7	1179.6	1275.2	1396.3	1463.6	1510.4
80°	426.8	449.0	481.0	522.5	568.4	651.4	718.3	767.5	784.7	796.7	807.4
82.5°	234.8	291.0	338.6	367.3	394.4	427.7	467.5	508.6	521.7	502.0	491.7
85°	36.5	53.8	163.7	199.9	217.6	243.0	271.7	302.1	302.5	260.2	284.0
87.5°	10.3	11.5	23.4	35.3	34.5	27.9	34.5	62.8	37.0	18.5	21.4
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7
2.5°	825.0	825.8	827.9	829.9	832.0	834.0	835.3	837.3	838.9	841.4	844.3
5°	821.7	823.7	827.5	832.0	836.1	839.8	842.6	846.7	850.4	853.7	858.7
7.5°	821.7	825.8	832.0	836.9	840.6	845.1	849.6	853.7	857.8	861.1	864.4
10°	822.1	826.2	832.4	838.1	842.2	847.1	850.9	854.5	859.1	861.1	865.2
12.5°	823.7	825.4	829.9	835.7	840.6	845.5	849.2	852.9	857.8	858.7	861.5
15°	832.0	829.5	830.8	834.8	840.2	844.3	848.4	851.3	854.5	853.7	856.2
17.5°	847.1	841.0	838.6	838.9	841.4	844.3	845.9	846.4	846.7	843.1	843.5
20°	867.7	859.1	853.3	850.4	847.1	844.3	839.8	834.4	829.5	822.1	821.3
22.5°	898.4	885.7	879.6	871.8	861.9	849.6	838.6	825.4	814.7	803.6	799.6
25°	943.2	930.1	923.5	911.2	893.5	875.9	859.9	842.2	826.6	813.5	807.4
27.5°	1003.1	990.0	983.0	970.3	948.5	930.9	908.7	889.9	871.0	851.6	843.8
30°	1075.7	1064.3	1056.5	1046.2	1027.3	1008.1	982.2	953.0	923.1	892.3	877.1
32.5°	1161.5	1148.8	1143.1	1131.2	1111.5	1091.3	1062.7	1025.3	975.2	926.8	896.4
35°	1268.7	1254.3	1247.8	1232.2	1209.2	1179.6	1148.8	1098.8	1031.0	963.7	914.0
37.5°	1411.9	1379.9	1358.2	1322.5	1285.5	1244.0	1200.1	1148.8	1068.8	985.5	916.5
40°	1538.8	1506.3	1464.5	1413.2	1355.7	1298.6	1248.5	1190.3	1103.3	1001.0	908.7
42.5°	1696.4	1638.9	1572.0	1502.6	1426.3	1356.1	1296.6	1228.0	1126.7	1005.2	887.0
45°	1840.4	1771.9	1682.4	1590.1	1495.3	1407.0	1340.1	1263.8	1146.8	1005.2	860.7
47.5°	1971.8	1889.7	1782.5	1667.6	1557.2	1460.8	1384.9	1300.3	1175.1	1017.9	852.9
50°	2093.3	1998.8	1877.0	1743.5	1619.6	1516.6	1434.9	1347.1	1218.2	1050.7	871.8
52.5°	2221.3	2121.2	1972.6	1831.0	1694.3	1583.9	1496.9	1405.0	1274.0	1102.4	905.0
55°	2389.2	2271.8	2103.1	1947.1	1796.9	1675.0	1576.1	1474.3	1335.2	1160.8	945.7
57.5°	2653.9	2483.6	2314.9	2112.1	1970.5	1810.1	1701.7	1584.7	1434.5	1236.7	1006.8
60°	3117.3	2908.0	2705.2	2472.1	2297.2	2129.4	1965.6	1812.9	1631.9	1408.2	1141.0
62.5°	3778.9	3566.3	3247.8	2962.6	2698.7	2476.2	2262.8	2068.6	1836.3	1591.7	1306.4
65°	4174.2	3930.8	3551.2	3167.8	2847.2	2571.4	2327.2	2089.6	1838.8	1600.3	1356.5
66°	4205.8	3975.5	3570.0	3164.9	2832.1	2546.0	2291.9	2046.1	1789.1	1560.9	1340.1
67.5°	4147.1	3948.8	3531.4	3109.1	2768.8	2459.8	2198.8	1941.0	1682.8	1471.4	1285.5
70°	3733.0	3589.7	3231.8	2836.1	2496.7	2224.2	1948.8	1700.9	1456.3	1278.5	1140.6
72.5°	3060.2	2878.9	2628.5	2362.5	2095.3	1853.6	1603.2	1392.2	1187.0	1057.7	960.0
75°	2248.0	2084.6	1808.8	1643.0	1466.5	1314.7	1145.9	946.1	800.3	735.5	711.7
77.5°	1425.1	1247.8	1015.0	832.0	715.4	614.8	484.7	385.4	308.6	321.4	355.9
80°	719.9	620.2	464.2	366.5	316.9	263.5	208.5	158.0	115.3	131.8	149.0
82.5°	462.2	385.8	307.4	242.2	204.4	180.2	144.1	104.6	78.0	87.8	107.5
85°	278.3	235.2	187.6	153.5	133.4	111.2	81.7	57.9	57.5	61.6	76.0
87.5°	42.3	60.4	34.9	37.4	39.4	42.3	37.4	31.6	27.5	35.7	45.1
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°	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7
2.5°	847.1	848.0	849.6	851.6	851.3	854.2	855.8	854.2	857.8	857.8	859.9
5°	862.7	864.0	866.9	868.9	869.7	872.2	873.0	872.6	873.4	873.8	874.7
7.5°	867.2	870.5	871.8	873.0	873.4	874.3	874.3	873.4	873.4	873.0	873.8
10°	866.0	867.2	868.1	867.7	867.7	866.9	866.5	866.0	866.0	865.2	866.5
12.5°	861.9	861.9	861.9	861.1	861.1	860.7	860.7	860.7	861.5	861.9	864.0
15°	853.7	853.7	854.5	854.2	855.4	857.4	859.9	861.5	863.6	864.0	865.2
17.5°	841.0	841.4	843.8	849.2	854.5	860.7	865.2	866.5	864.8	860.7	857.8
20°	818.8	824.2	834.0	846.7	858.7	866.5	868.5	863.6	855.8	845.1	839.3
22.5°	799.1	809.8	827.5	848.4	863.2	868.5	862.3	850.9	836.9	824.6	815.9
25°	806.9	819.2	837.7	855.8	865.2	862.3	850.0	833.6	818.8	804.5	790.5
27.5°	839.8	852.1	865.2	870.5	867.2	856.6	839.3	821.7	802.0	781.5	764.2
30°	871.0	877.9	878.8	873.4	861.5	844.3	824.2	803.6	778.6	754.0	732.2
32.5°	880.8	872.6	857.8	842.6	826.2	808.6	785.2	758.1	731.4	703.5	679.3
35°	877.9	844.7	808.1	775.7	756.1	735.9	714.6	678.5	648.5	624.7	609.1
37.5°	852.1	791.3	735.1	687.9	657.1	633.3	601.7	571.7	545.9	535.2	522.5
40°	815.9	723.2	645.2	579.1	547.1	516.7	481.4	458.5	451.1	441.2	441.7
42.5°	764.2	643.6	543.0	467.1	432.2	398.9	373.9	360.4	360.8	352.6	354.2
45°	709.7	563.5	437.1	361.6	327.1	298.8	284.8	280.7	281.2	281.6	279.1
47.5°	676.4	501.1	350.5	274.2	243.8	227.8	220.4	218.3	218.8	219.2	216.3
50°	671.5	468.7	292.6	209.8	190.0	181.0	177.3	175.3	175.3	173.6	171.2
52.5°	685.4	460.5	264.3	181.8	163.0	154.7	151.9	150.2	147.8	144.5	140.0
55°	707.6	467.9	255.7	172.4	153.9	145.7	142.0	141.2	137.1	130.9	123.5
57.5°	748.6	494.6	261.5	174.8	155.6	148.1	145.7	144.9	139.1	129.7	120.2
60°	866.5	572.2	290.2	188.8	167.5	161.3	161.3	160.1	152.3	138.7	125.2
62.5°	1029.0	685.9	329.2	208.1	183.9	183.1	190.0	190.4	176.5	154.7	133.4
65°	1107.4	739.2	342.7	212.2	188.4	197.8	211.8	211.8	192.1	162.1	134.6
66°	1107.8	738.0	338.6	207.3	183.5	195.8	210.1	210.1	189.6	160.1	132.6
67.5°	1079.5	715.0	325.1	198.2	172.4	183.9	196.6	196.2	177.7	151.9	126.8
70°	968.2	632.5	286.5	183.5	159.2	159.7	164.2	161.3	149.0	131.3	115.3
72.5°	834.8	529.1	248.3	174.0	149.0	141.2	137.5	135.1	127.3	116.6	106.7
75°	640.3	410.9	216.3	165.4	140.0	126.4	121.5	119.5	114.1	107.9	100.1
77.5°	392.4	281.6	183.5	151.4	129.7	117.4	112.1	107.9	102.6	96.8	91.5
80°	169.1	169.9	146.9	128.5	112.9	98.5	91.5	86.6	83.8	81.7	78.8
82.5°	118.2	121.9	112.1	99.7	86.2	76.0	69.8	68.5	68.9	68.9	68.2
85°	88.7	87.0	78.4	71.4	65.3	58.7	53.8	53.3	55.0	55.0	53.8
87.5°	51.3	51.7	44.3	41.5	43.1	37.0	33.7	34.1	38.2	37.7	37.0
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):

	160°	165°	170°	175°	180°
0°	835.7	835.7	835.7	835.7	835.7
2.5°	859.9	861.1	860.7	861.9	860.7
5°	875.9	875.5	875.0	876.7	874.7
7.5°	873.4	873.8	873.8	873.8	873.4
10°	867.2	868.9	869.7	871.4	871.0
12.5°	865.2	867.7	870.1	872.6	873.0
15°	865.6	867.2	868.5	869.7	870.1
17.5°	854.9	854.5	853.3	852.5	851.6
20°	833.2	831.1	829.1	825.8	827.5
22.5°	806.1	800.3	793.8	788.5	788.0
25°	774.5	763.9	753.2	746.2	743.7
27.5°	746.6	733.9	722.8	716.6	715.0
30°	713.3	701.9	692.0	686.6	683.4
32.5°	664.1	655.1	642.8	638.6	638.2
35°	595.6	588.6	580.0	578.3	576.2
37.5°	518.0	515.5	511.4	506.5	505.7
40°	435.1	436.7	435.5	432.6	428.1
42.5°	355.0	357.9	358.3	360.4	362.4
45°	282.8	285.2	285.2	287.3	289.8
47.5°	217.1	215.5	216.7	218.8	220.0
50°	164.2	163.0	160.9	159.2	157.6
52.5°	132.2	129.7	124.0	122.3	120.7
55°	116.6	112.1	107.9	106.3	106.3
57.5°	112.1	106.3	101.8	99.7	98.9
60°	112.9	104.6	98.9	95.6	94.4
62.5°	116.6	105.1	97.3	93.6	92.3
65°	116.2	104.3	96.8	92.8	91.5
66°	114.1	103.0	96.1	92.3	91.5
67.5°	110.8	101.4	95.2	91.9	90.7
70°	104.3	98.1	93.6	90.7	89.5
72.5°	98.9	94.8	90.7	87.4	86.6
75°	94.0	89.9	86.2	84.5	83.3
77.5°	86.6	82.9	80.9	79.2	78.4
80°	76.7	74.3	71.8	70.2	68.9
82.5°	66.9	63.6	61.1	59.9	59.1
85°	54.6	52.6	48.8	46.4	46.0
87.5°	36.5	34.5	33.2	31.2	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)