

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: P159745

Luminaire Tested: **VST-F02-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159745
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-F02-LED-E-U-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4914.1 lumens
Efficiency: N/A
Efficacy: 89.3 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

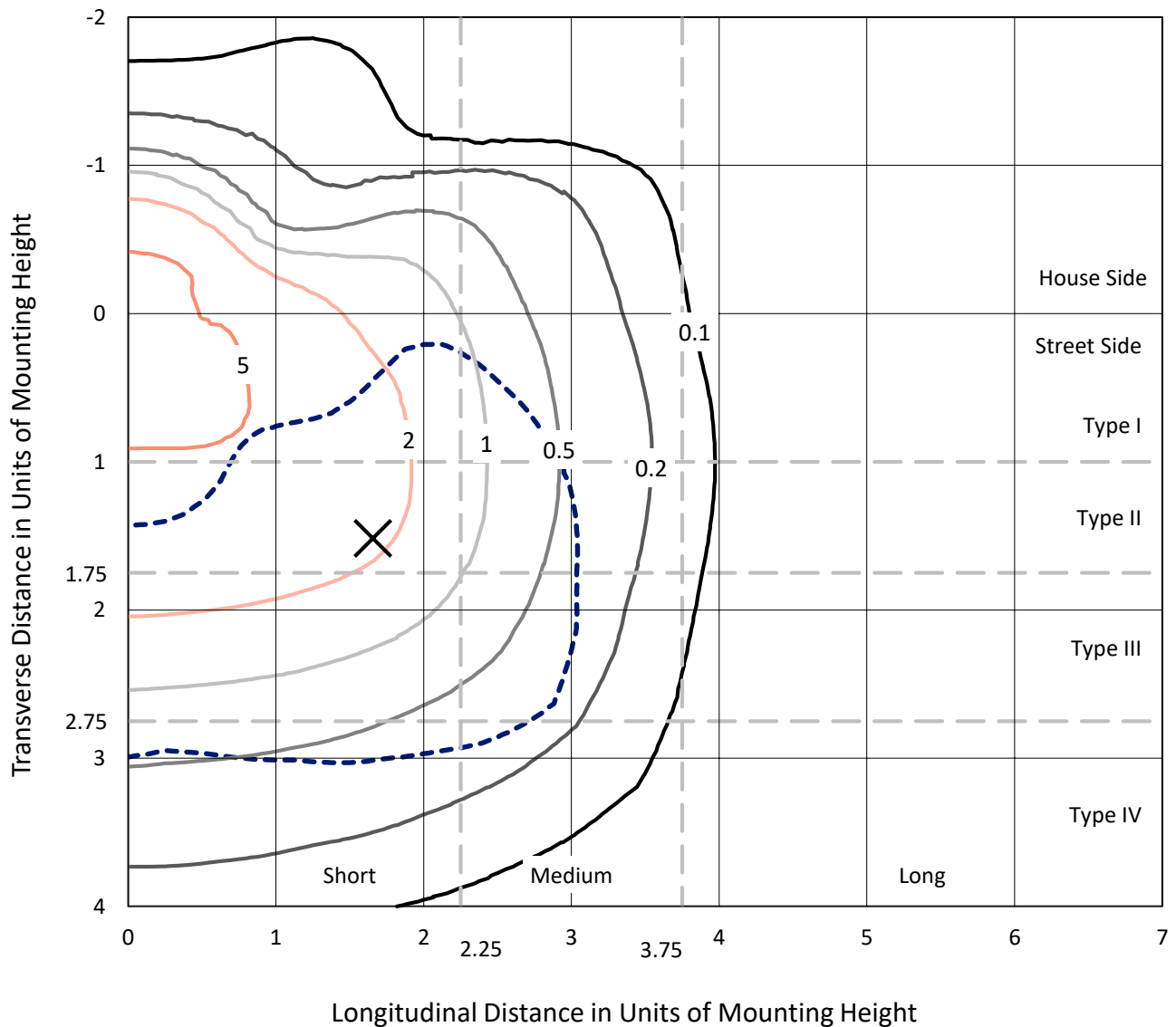
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

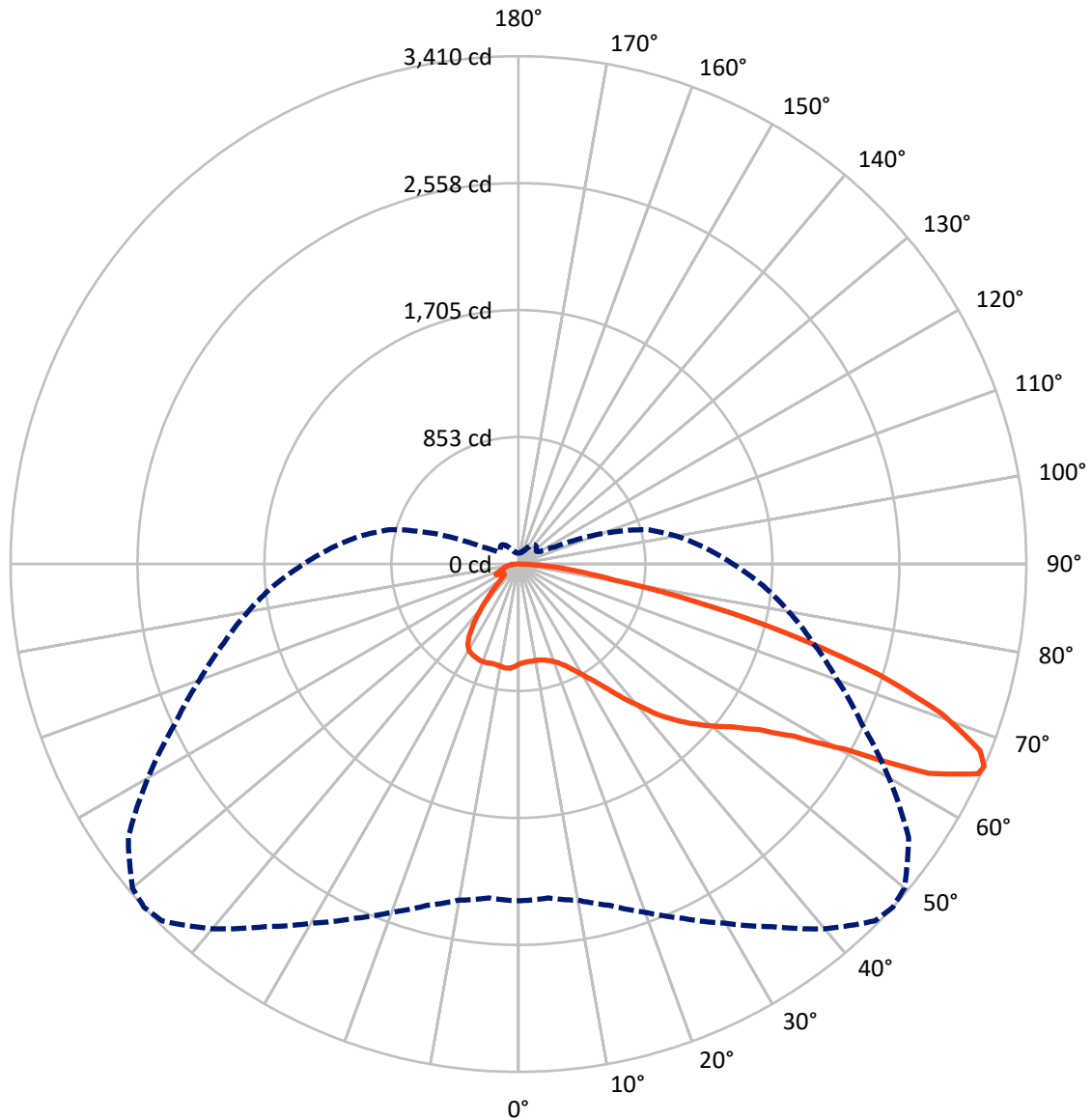
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical



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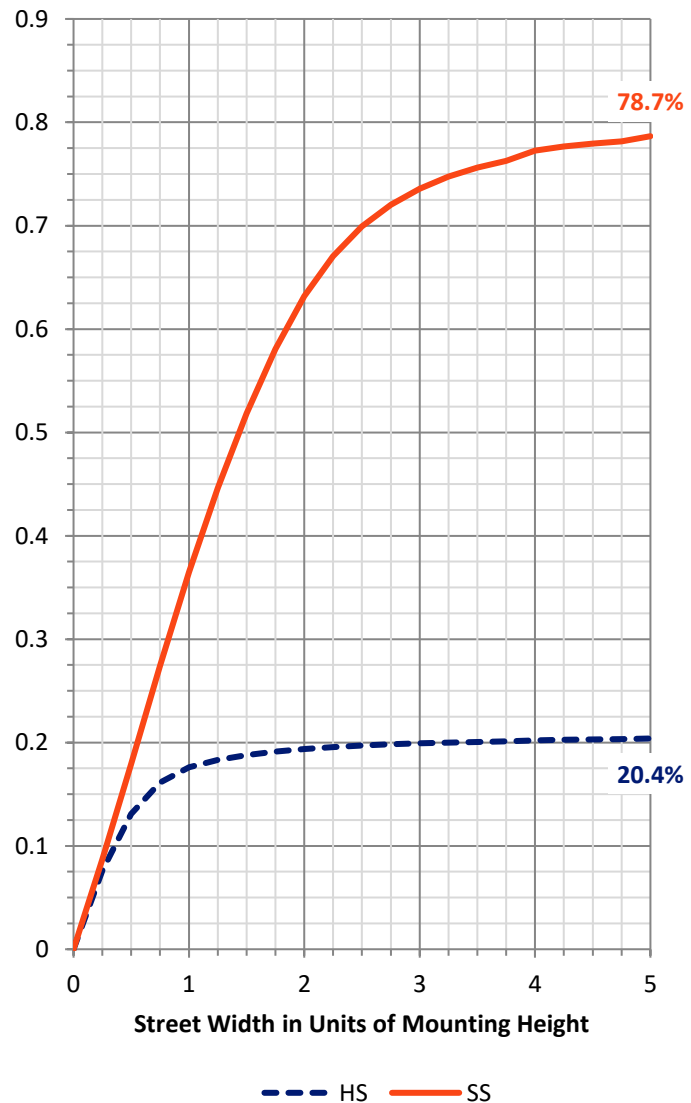
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1017.4	0.0	1017.4
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	3896.7	0.0	3896.7
	% Fixture	79.3	0.0	79.3
Total	Lumens	4914.1	0.0	4914.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	1.3
10°-20°	194.3	4.0
20°-30°	331.6	6.7
30°-40°	500.4	10.2
40°-50°	650.4	13.2
50°-60°	892.3	18.2
60°-70°	1372.7	27.9
70°-80°	793.5	16.1
80°-90°	114.0	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°	4914.1	100.0
0°-180°	4914.1	100.0

Coefficient of Utilization



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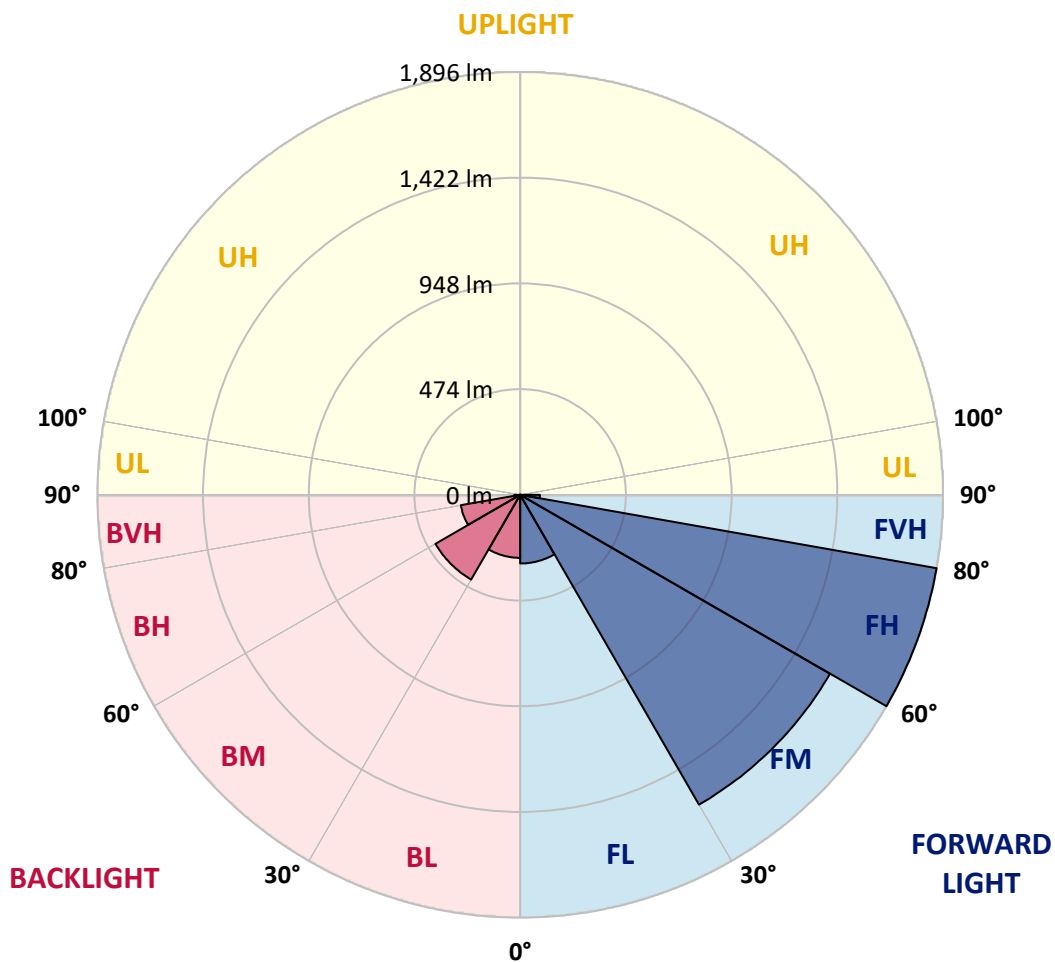
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	308.0	6.3			
FM	(30°-60°)	1604.2	32.6			
FH	(60°-80°)	1896.2	38.6			G2/5000
FVH	(80°-90°)	88.2	1.8			G1/100
BL	(0°-30°)	282.7	5.8	B1/500		
BM	(30°-60°)	439.0	8.9	B1/1000		
BH	(60°-80°)	270.0	5.5	B1/500		G1/500
BVH	(80°-90°)	25.8	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°	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3
2.5°	655.1	655.4	655.8	655.8	656.8	656.8	658.4	659.4	659.8	661.7	663.1
5°	642.9	642.6	642.9	643.6	645.2	646.6	649.9	652.1	654.1	657.4	659.1
7.5°	637.6	638.3	638.9	639.3	640.6	643.9	646.9	649.2	653.2	657.1	658.7
10°	644.6	645.5	644.6	645.2	645.2	648.2	649.5	651.2	654.1	657.8	658.7
12.5°	660.8	662.8	660.8	659.1	657.8	660.4	659.8	658.4	660.1	661.1	661.1
15°	687.5	687.5	686.2	683.9	680.6	680.9	677.9	674.9	673.6	671.3	669.7
17.5°	713.6	712.9	710.0	707.0	704.6	703.7	699.4	695.4	690.8	687.2	683.2
20°	739.0	741.7	738.0	733.7	730.1	727.8	724.5	716.6	710.9	705.0	701.0
22.5°	782.9	780.6	776.6	770.4	766.7	762.8	755.9	747.2	738.7	731.4	726.5
25°	828.2	825.8	820.3	815.6	810.4	807.1	799.4	788.9	780.6	769.4	762.8
27.5°	876.7	874.7	868.1	864.5	860.9	856.9	850.3	839.4	831.8	818.9	812.0
30°	931.5	931.2	922.3	921.6	916.3	912.1	907.4	898.2	890.6	877.7	869.5
32.5°	989.9	988.6	982.4	980.4	984.0	981.1	974.5	964.9	955.0	947.4	938.1
35°	1073.2	1070.9	1067.2	1068.9	1071.2	1079.5	1069.2	1061.0	1049.1	1039.2	1026.3
37.5°	1133.9	1130.6	1135.0	1144.2	1157.4	1163.6	1172.6	1172.9	1167.3	1154.1	1142.9
40°	1189.7	1188.4	1198.3	1211.2	1235.6	1253.5	1270.3	1278.6	1280.6	1271.9	1255.1
42.5°	1237.0	1240.9	1254.1	1274.0	1308.3	1335.4	1366.7	1386.2	1398.4	1393.8	1386.2
45°	1293.1	1295.1	1311.2	1336.4	1369.1	1414.0	1455.2	1488.2	1509.7	1509.4	1500.8
47.5°	1363.4	1363.7	1377.7	1407.0	1442.0	1487.6	1539.8	1583.7	1612.1	1613.4	1606.8
50°	1447.0	1446.3	1461.5	1489.3	1526.6	1570.5	1625.9	1680.8	1720.4	1720.4	1710.8
52.5°	1554.6	1553.3	1561.6	1586.0	1622.0	1668.2	1723.4	1786.7	1829.7	1838.9	1818.1
55°	1698.2	1700.3	1702.3	1723.7	1754.4	1791.1	1854.5	1912.9	1970.3	1975.6	1963.4
57.5°	1864.4	1857.8	1871.9	1907.0	1942.0	1987.9	2032.8	2101.8	2169.8	2181.4	2179.7
60°	2123.9	2115.3	2129.9	2174.5	2213.0	2285.4	2362.3	2451.5	2532.1	2555.8	2527.1
62.5°	2362.7	2373.2	2393.0	2444.9	2501.0	2597.5	2713.0	2865.9	3018.8	3102.0	3096.1
65°	2341.2	2331.3	2369.3	2439.9	2541.6	2664.5	2808.1	2992.4	3212.6	3379.7	3394.6
66°	2261.6	2251.4	2292.3	2373.2	2489.5	2626.1	2785.7	2973.2	3198.4	3387.3	3410.1
67.5°	2130.2	2119.9	2166.2	2239.8	2359.7	2531.7	2704.1	2909.2	3143.3	3324.2	3342.7
70°	1876.6	1862.7	1898.7	1981.9	2079.0	2245.4	2409.5	2626.8	2867.2	3011.8	3018.8
72.5°	1589.6	1557.3	1595.6	1659.7	1729.0	1866.7	2009.6	2158.3	2349.8	2483.5	2521.8
75°	1153.4	1170.2	1181.5	1223.8	1269.7	1383.6	1467.5	1591.9	1740.2	1837.0	1867.7
77.5°	611.9	637.3	653.2	695.4	771.4	858.2	949.0	1025.9	1123.4	1177.5	1215.2
80°	343.4	361.3	387.0	420.4	457.3	524.0	577.9	617.5	631.4	640.9	649.5
82.5°	188.9	234.1	272.4	295.6	317.3	344.1	376.1	409.1	419.7	403.9	395.6
85°	29.4	43.3	131.8	160.8	175.0	195.5	218.6	243.1	243.4	209.3	228.5
87.5°	8.3	9.2	18.8	28.4	27.7	22.4	27.7	50.5	29.7	14.9	17.2
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3
2.5°	663.7	664.4	666.1	667.7	669.4	671.0	672.0	673.6	674.9	676.9	679.3
5°	661.1	662.8	665.7	669.4	672.7	675.6	677.9	681.2	684.2	686.8	690.8
7.5°	661.1	664.4	669.4	673.3	676.3	679.9	683.5	686.8	690.1	692.8	695.4
10°	661.4	664.7	669.7	674.3	677.6	681.5	684.5	687.5	691.1	692.8	696.1
12.5°	662.8	664.1	667.7	672.3	676.3	680.2	683.2	686.2	690.1	690.8	693.1
15°	669.4	667.4	668.3	671.6	676.0	679.3	682.6	684.8	687.5	686.8	688.8
17.5°	681.5	676.6	674.6	674.9	676.9	679.3	680.6	680.9	681.2	678.2	678.6
20°	698.0	691.1	686.5	684.2	681.5	679.3	675.6	671.3	667.4	661.4	660.8
22.5°	722.8	712.6	707.6	701.3	693.4	683.5	674.6	664.1	655.4	646.6	643.3
25°	758.8	748.3	743.0	733.1	718.9	704.6	691.8	677.6	665.0	654.5	649.5
27.5°	807.1	796.4	790.9	780.6	763.1	748.9	731.1	715.9	700.7	685.2	678.9
30°	865.5	856.3	850.0	841.7	826.5	811.0	790.2	766.7	742.6	717.9	705.7
32.5°	934.5	924.2	919.6	910.1	894.2	878.0	854.9	824.9	784.6	745.6	721.2
35°	1020.7	1009.1	1003.9	991.3	972.8	949.0	924.2	884.0	829.5	775.3	735.4
37.5°	1135.9	1110.2	1092.7	1063.9	1034.2	1000.9	965.5	924.2	859.9	792.8	737.3
40°	1238.0	1211.9	1178.2	1136.9	1090.7	1044.8	1004.5	957.6	887.6	805.4	731.1
42.5°	1364.8	1318.5	1264.7	1208.9	1147.5	1091.0	1043.2	988.0	906.4	808.7	713.6
45°	1480.7	1425.5	1353.5	1279.3	1202.9	1132.0	1078.1	1016.7	922.6	808.7	692.5
47.5°	1586.3	1520.3	1434.1	1341.7	1252.8	1175.2	1114.1	1046.1	945.4	818.9	686.2
50°	1684.1	1608.1	1510.1	1402.7	1303.0	1220.1	1154.4	1083.7	980.0	845.3	701.3
52.5°	1787.1	1706.5	1587.0	1473.1	1363.1	1274.3	1204.3	1130.3	1025.0	886.9	728.1
55°	1922.2	1827.7	1692.0	1566.5	1445.6	1347.6	1268.0	1186.1	1074.2	933.8	760.8
57.5°	2135.2	1998.1	1862.4	1699.3	1585.3	1456.2	1369.1	1274.9	1154.1	994.9	810.0
60°	2507.9	2339.5	2176.4	1988.9	1848.2	1713.1	1581.4	1458.5	1312.9	1133.0	918.0
62.5°	3040.3	2869.2	2612.9	2383.4	2171.2	1992.2	1820.5	1664.3	1477.4	1280.6	1051.1
65°	3358.3	3162.4	2857.0	2548.6	2290.7	2068.7	1872.3	1681.1	1479.4	1287.5	1091.3
66°	3383.6	3198.4	2872.1	2546.2	2278.4	2048.3	1843.9	1646.1	1439.4	1255.8	1078.1
67.5°	3336.4	3176.9	2841.1	2501.3	2227.6	1978.9	1768.9	1561.6	1353.8	1183.8	1034.2
70°	3003.2	2888.0	2600.1	2281.7	2008.7	1789.4	1567.9	1368.4	1171.6	1028.6	917.6
72.5°	2462.0	2316.1	2114.6	1900.7	1685.7	1491.2	1289.8	1120.1	955.0	851.0	772.4
75°	1808.6	1677.1	1455.2	1321.9	1179.8	1057.7	922.0	761.2	643.9	591.7	572.6
77.5°	1146.5	1003.9	816.6	669.4	575.6	494.6	390.0	310.1	248.3	258.5	286.3
80°	579.2	499.0	373.4	294.9	254.9	212.0	167.8	127.1	92.8	106.0	119.9
82.5°	371.8	310.4	247.3	194.8	164.5	145.0	115.9	84.2	62.8	70.7	86.5
85°	223.9	189.2	150.9	123.5	107.3	89.5	65.7	46.6	46.2	49.6	61.1
87.5°	34.0	48.5	28.1	30.1	31.7	34.0	30.1	25.4	22.1	28.7	36.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3	672.3
2.5°	681.5	682.2	683.5	685.2	684.8	687.2	688.5	687.2	690.1	690.1	691.8
5°	694.1	695.1	697.4	699.1	699.7	701.7	702.4	702.0	702.7	703.0	703.7
7.5°	697.7	700.4	701.3	702.4	702.7	703.3	703.3	702.7	702.7	702.4	703.0
10°	696.7	697.7	698.4	698.0	698.0	697.4	697.1	696.7	696.7	696.1	697.1
12.5°	693.4	693.4	693.4	692.8	692.8	692.5	692.5	692.5	693.1	693.4	695.1
15°	686.8	686.8	687.5	687.2	688.1	689.8	691.8	693.1	694.7	695.1	696.1
17.5°	676.6	676.9	678.9	683.2	687.5	692.5	696.1	697.1	695.8	692.5	690.1
20°	658.7	663.1	671.0	681.2	690.8	697.1	698.7	694.7	688.5	679.9	675.3
22.5°	642.9	651.5	665.7	682.6	694.4	698.7	693.8	684.5	673.3	663.4	656.5
25°	649.2	659.1	674.0	688.5	696.1	693.8	683.9	670.7	658.7	647.2	636.0
27.5°	675.6	685.5	696.1	700.4	697.7	689.2	675.3	661.1	645.2	628.7	614.9
30°	700.7	706.3	707.0	702.7	693.1	679.3	663.1	646.6	626.4	606.6	589.1
32.5°	708.7	702.0	690.1	677.9	664.7	650.5	631.7	609.9	588.4	566.0	546.5
35°	706.3	679.6	650.2	624.1	608.2	592.1	574.9	545.8	521.8	502.6	490.0
37.5°	685.5	636.7	591.4	553.4	528.7	509.5	484.1	460.0	439.2	430.6	420.4
40°	656.5	581.8	519.1	465.9	440.2	415.7	387.4	368.8	362.9	355.0	355.3
42.5°	614.9	517.7	436.9	375.8	347.7	320.9	300.8	289.9	290.3	283.7	285.0
45°	571.0	453.4	351.7	290.9	263.2	240.4	229.1	225.8	226.2	226.5	224.5
47.5°	544.2	403.2	282.0	220.6	196.1	183.2	177.3	175.7	176.0	176.3	174.0
50°	540.2	377.1	235.4	168.7	152.9	145.6	142.7	141.0	141.0	139.7	137.7
52.5°	551.5	370.5	212.6	146.3	131.1	124.5	122.2	120.8	118.9	116.2	112.6
55°	569.3	376.4	205.7	138.7	123.8	117.2	114.2	113.6	110.3	105.4	99.4
57.5°	602.3	397.9	210.4	140.6	125.2	119.2	117.2	116.6	112.0	104.3	96.8
60°	697.1	460.3	233.5	151.9	134.7	129.8	129.8	128.8	122.5	111.6	100.7
62.5°	827.8	551.8	264.8	167.4	148.0	147.3	152.9	153.2	142.0	124.5	107.3
65°	890.9	594.7	275.7	170.7	151.6	159.2	170.4	170.4	154.6	130.4	108.3
66°	891.2	593.7	272.4	166.7	147.6	157.5	169.1	169.1	152.6	128.8	106.7
67.5°	868.4	575.2	261.5	159.5	138.7	148.0	158.2	157.9	143.0	122.2	102.1
70°	779.0	508.9	230.5	147.6	128.1	128.5	132.1	129.8	119.9	105.7	92.8
72.5°	671.6	425.6	199.8	140.0	119.9	113.6	110.6	108.7	102.4	93.8	85.9
75°	515.1	330.5	174.0	133.1	112.6	101.7	97.7	96.1	91.8	86.8	80.6
77.5°	315.7	226.5	147.6	121.9	104.3	94.4	90.1	86.8	82.6	77.9	73.6
80°	136.0	136.7	118.2	103.4	90.8	79.3	73.6	69.7	67.4	65.7	63.4
82.5°	95.1	98.1	90.1	80.2	69.4	61.1	56.2	55.1	55.5	55.5	54.8
85°	71.3	70.0	63.1	57.5	52.5	47.2	43.3	42.9	44.2	44.2	43.3
87.5°	41.3	41.6	35.6	33.4	34.7	29.7	27.1	27.4	30.7	30.4	29.7
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°	672.3	672.3	672.3	672.3	672.3
2.5°	691.8	692.8	692.5	693.4	692.5
5°	704.6	704.3	704.0	705.3	703.7
7.5°	702.7	703.0	703.0	703.0	702.7
10°	697.7	699.1	699.7	701.0	700.7
12.5°	696.1	698.0	700.0	702.0	702.4
15°	696.4	697.7	698.7	699.7	700.0
17.5°	687.8	687.5	686.5	685.9	685.2
20°	670.3	668.7	667.0	664.4	665.7
22.5°	648.5	643.9	638.6	634.3	634.0
25°	623.1	614.5	605.9	600.3	598.3
27.5°	600.7	590.4	581.5	576.5	575.2
30°	573.9	564.7	556.7	552.4	549.8
32.5°	534.3	527.0	517.1	513.8	513.5
35°	479.2	473.5	466.6	465.2	463.6
37.5°	416.7	414.7	411.4	407.5	406.8
40°	350.0	351.4	350.3	348.1	344.4
42.5°	285.7	287.9	288.3	289.9	291.6
45°	227.5	229.5	229.5	231.1	233.1
47.5°	174.7	173.3	174.4	176.0	177.0
50°	132.1	131.1	129.4	128.1	126.8
52.5°	106.3	104.3	99.7	98.4	97.1
55°	93.8	90.1	86.8	85.5	85.5
57.5°	90.1	85.5	81.9	80.2	79.6
60°	90.8	84.2	79.6	76.9	76.0
62.5°	93.8	84.5	78.2	75.3	74.3
65°	93.4	83.9	77.9	74.6	73.6
66°	91.8	82.9	77.3	74.3	73.6
67.5°	89.2	81.5	76.6	74.0	73.0
70°	83.9	78.9	75.3	73.0	72.0
72.5°	79.6	76.3	73.0	70.3	69.7
75°	75.6	72.3	69.4	68.0	67.0
77.5°	69.7	66.7	65.0	63.7	63.1
80°	61.7	59.8	57.8	56.5	55.5
82.5°	53.8	51.2	49.2	48.2	47.6
85°	43.9	42.2	39.3	37.3	37.0
87.5°	29.4	27.7	26.8	25.1	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)