

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: P158421

Luminaire Tested: **VST-E02-LED-E-U-SL3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158421
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6191.2 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - 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



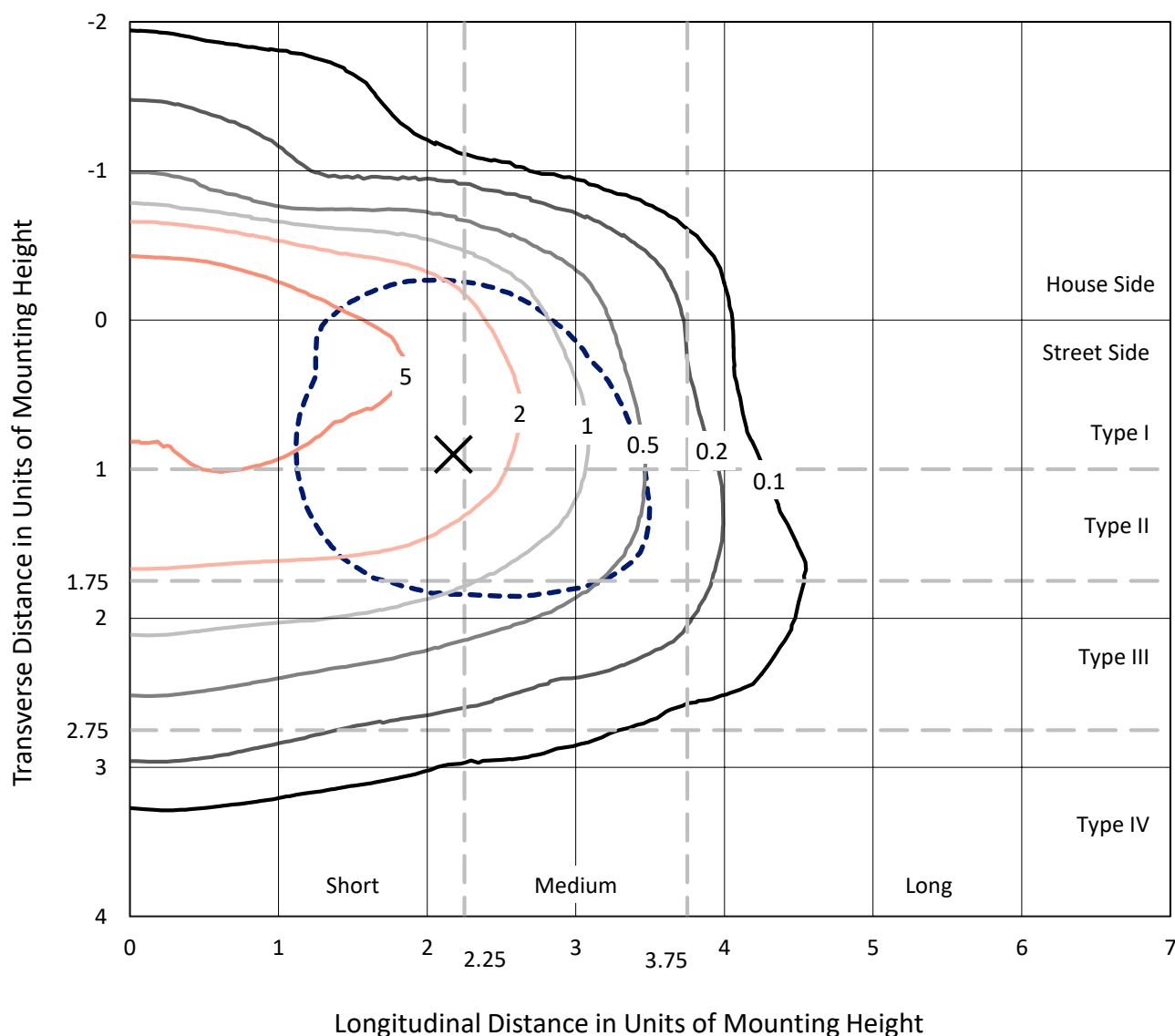
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

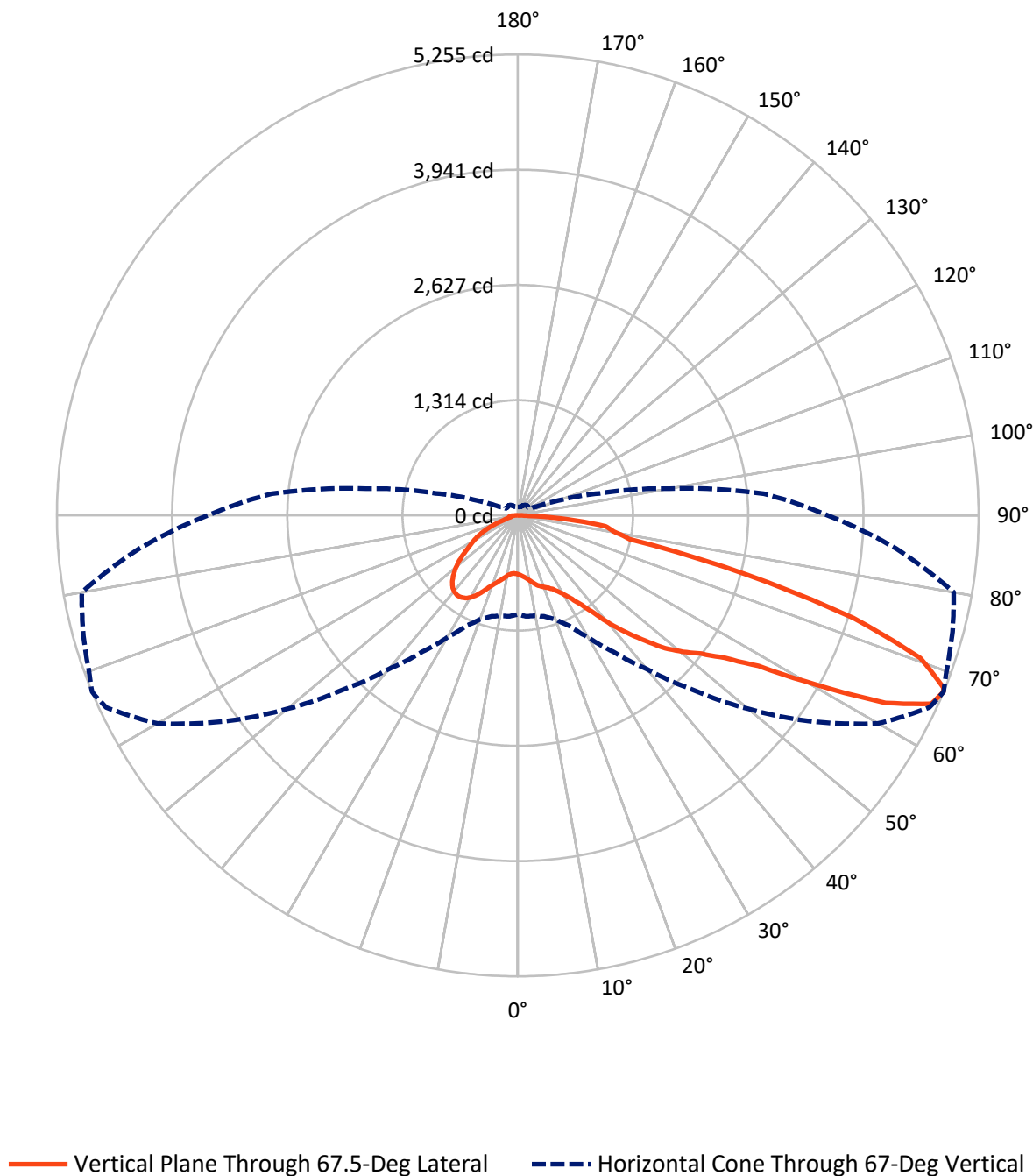


Based on 10 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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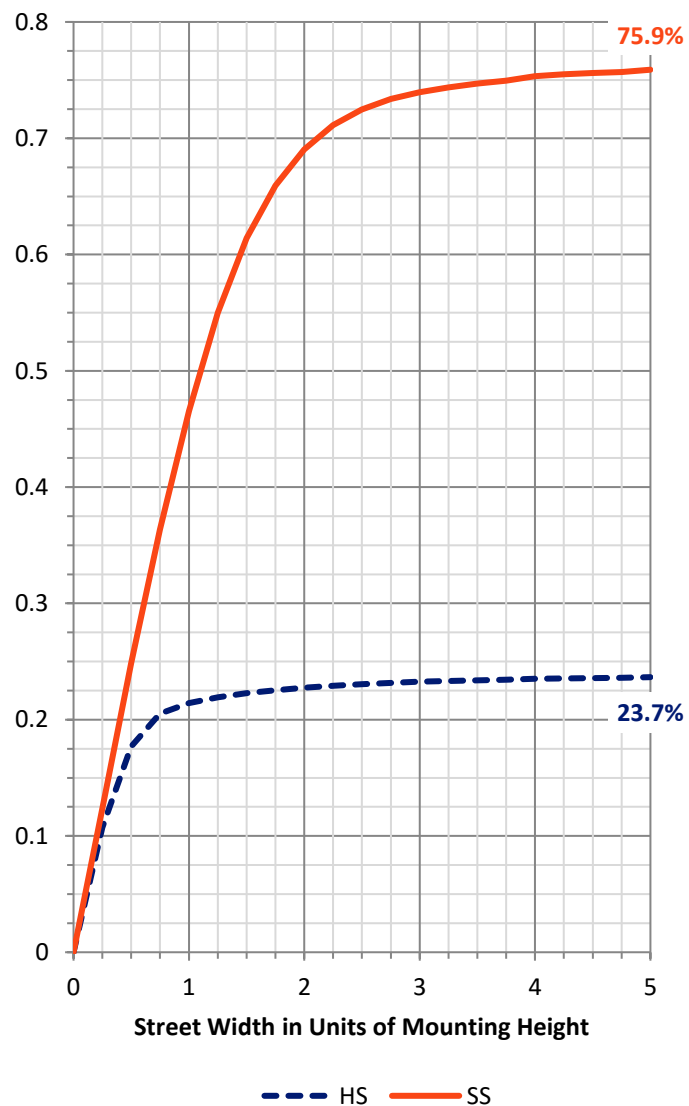
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1485.3	0.0	1485.3
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	4706.0	0.0	4706.0
	% Fixture	76.0	0.0	76.0
Total	Lumens	6191.2	0.0	6191.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.1
10°-20°	227.2	3.7
20°-30°	405.7	6.6
30°-40°	594.6	9.6
40°-50°	918.7	14.8
50°-60°	1337.7	21.6
60°-70°	1742.6	28.1
70°-80°	780.1	12.6
80°-90°	117.9	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°	6191.2	100.0
0°-180°	6191.2	100.0

Coefficient of Utilization



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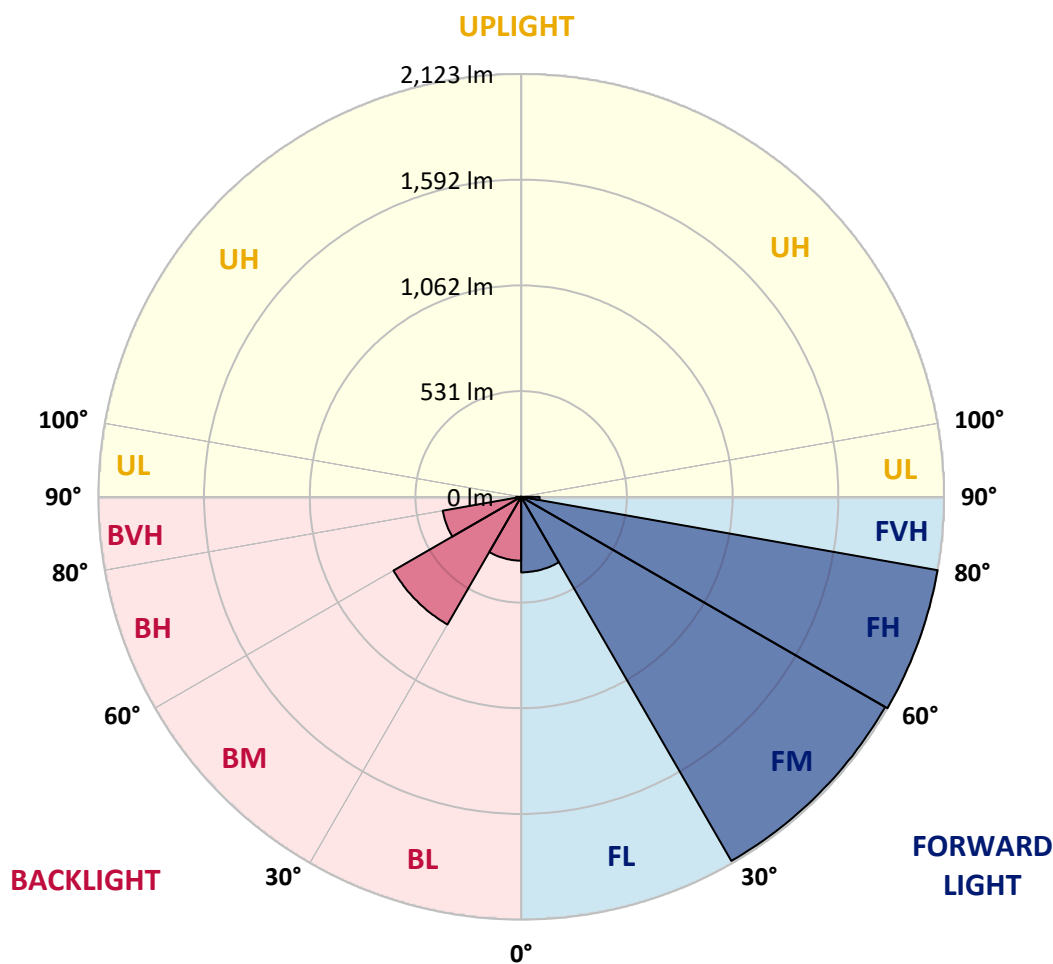
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	379.3	6.1			
FM	(30°-60°)	2110.9	34.1			
FH	(60°-80°)	2123.1	34.3			G2/5000
FVH	(80°-90°)	92.6	1.5			G1/100
BL	(0°-30°)	320.3	5.2	B1/500		
BM	(30°-60°)	740.1	12.0	B1/1000		
BH	(60°-80°)	399.6	6.5	B1/500		G1/500
BVH	(80°-90°)	25.3	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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1
2.5°	697.3	699.0	699.4	699.0	699.4	697.7	697.3	694.9	696.1	692.8	692.0
5°	735.1	736.3	737.2	733.9	734.7	733.0	731.0	728.5	725.3	720.7	717.8
7.5°	772.0	774.1	773.7	772.4	769.6	767.9	763.9	760.1	754.4	749.0	745.4
10°	821.7	821.3	821.3	814.3	810.2	806.5	799.1	793.4	787.6	779.8	775.7
12.5°	879.2	876.3	875.0	870.1	861.5	854.9	844.3	833.2	823.0	814.7	808.1
15°	934.6	934.6	931.3	923.5	915.3	906.7	891.5	875.5	858.7	845.5	838.9
17.5°	985.1	980.5	977.7	967.4	958.8	944.8	928.0	910.8	889.9	871.4	858.7
20°	1022.0	1018.3	1012.1	999.4	984.7	968.2	948.5	928.4	905.8	885.7	871.4
22.5°	1043.3	1038.8	1029.4	1012.6	992.5	969.5	946.5	927.6	907.1	891.9	880.0
25°	1054.4	1049.9	1037.2	1015.0	988.0	957.5	931.3	912.8	900.9	897.2	895.6
27.5°	1054.0	1050.3	1036.8	1011.3	976.4	941.6	913.3	897.7	896.4	910.8	921.4
30°	1043.3	1040.9	1028.6	1003.1	966.6	930.1	903.8	895.6	908.3	938.7	964.9
32.5°	1032.7	1031.5	1022.8	999.8	968.6	937.9	919.8	920.6	946.9	993.7	1036.0
35°	1033.9	1035.5	1034.3	1022.0	1002.3	986.3	977.7	995.8	1036.8	1093.4	1150.1
37.5°	1044.6	1050.7	1058.5	1059.8	1060.2	1057.7	1075.7	1114.0	1173.8	1247.8	1336.4
40°	1068.0	1075.0	1097.5	1117.2	1142.7	1173.1	1209.6	1262.5	1336.8	1427.9	1536.7
42.5°	1140.6	1150.4	1178.4	1214.9	1261.7	1309.3	1363.9	1436.2	1527.2	1623.3	1737.4
45°	1235.5	1256.0	1286.8	1327.4	1397.6	1464.5	1535.0	1615.9	1712.8	1833.1	1948.0
47.5°	1353.7	1374.2	1418.9	1462.4	1545.3	1628.6	1705.8	1790.3	1895.4	2018.6	2145.8
50°	1457.0	1480.4	1520.3	1579.0	1675.0	1777.2	1862.6	1954.1	2042.3	2172.1	2300.5
52.5°	1538.3	1555.1	1593.4	1647.1	1754.2	1866.3	1974.2	2076.0	2180.7	2310.4	2429.4
55°	1548.6	1564.2	1601.5	1663.1	1771.9	1896.2	2020.6	2141.3	2289.4	2431.0	2588.6
57.5°	1504.3	1517.0	1554.8	1609.7	1715.6	1857.2	2014.4	2169.2	2358.8	2550.1	2742.6
60°	1441.5	1454.2	1483.7	1527.7	1623.3	1776.0	1959.5	2171.2	2423.3	2699.5	2982.7
62.5°	1372.5	1383.6	1407.4	1438.6	1522.7	1663.5	1873.7	2157.7	2475.8	2848.1	3284.8
65°	1256.3	1283.0	1293.3	1325.3	1409.5	1542.4	1756.3	2066.2	2454.4	2914.1	3474.4
67°	1127.9	1155.0	1160.3	1192.7	1260.1	1387.7	1605.2	1896.7	2285.3	2800.0	3432.5
67.5°	1086.8	1109.8	1118.0	1150.4	1214.1	1334.3	1540.8	1835.5	2233.6	2737.6	3382.0
70°	799.1	824.6	833.6	847.1	892.7	992.9	1129.6	1385.2	1780.9	2234.0	2853.0
72.5°	427.7	448.2	456.8	476.9	500.3	554.9	659.6	843.1	1093.0	1494.8	2029.6
75°	289.4	297.6	303.7	317.7	341.9	385.4	431.4	495.8	646.9	843.5	1155.0
77.5°	165.0	168.7	169.5	172.0	191.3	232.7	308.2	417.4	535.2	611.2	738.8
80°	71.4	78.8	84.5	80.9	79.6	88.3	110.4	164.6	322.6	512.2	607.9
82.5°	38.6	41.9	46.8	47.2	49.7	52.6	57.1	67.7	95.2	192.1	419.0
85°	20.1	20.9	27.9	32.0	34.1	35.7	36.5	40.6	46.8	59.5	104.3
87.5°	2.9	4.1	4.9	6.5	7.4	7.8	9.0	11.5	13.6	16.4	27.9
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°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1
2.5°	688.3	687.5	685.0	683.4	681.7	680.1	678.1	676.4	673.6	671.5	669.0
5°	713.8	708.8	705.5	701.0	700.2	694.9	689.5	687.1	682.1	678.1	673.1
7.5°	739.6	733.9	728.5	724.9	722.8	715.4	710.0	703.9	698.2	692.8	687.1
10°	770.0	764.2	758.5	756.1	752.3	745.4	740.8	733.0	727.3	720.7	712.9
12.5°	801.6	797.5	793.4	790.1	788.5	785.2	778.6	772.0	764.2	757.7	748.6
15°	829.5	826.6	825.0	824.2	824.2	822.1	815.9	809.8	801.6	794.2	784.4
17.5°	849.2	848.0	849.2	850.4	852.1	850.4	849.2	842.2	836.9	827.9	818.0
20°	860.7	863.2	869.3	873.4	877.1	880.0	881.2	875.5	868.5	861.9	855.4
22.5°	873.0	880.0	890.6	896.8	903.0	913.3	915.7	911.6	906.2	902.2	895.2
25°	893.5	903.8	922.3	932.1	940.7	955.9	958.0	958.8	957.5	954.3	945.7
27.5°	925.6	945.7	970.3	983.0	992.5	1012.1	1019.9	1019.9	1016.6	1020.4	1020.4
30°	981.4	1008.1	1040.0	1047.4	1062.2	1079.5	1092.2	1093.8	1094.2	1102.0	1113.5
32.5°	1067.2	1092.6	1128.3	1136.5	1149.2	1165.7	1180.0	1178.4	1182.1	1198.9	1214.1
35°	1191.9	1217.8	1241.2	1252.3	1258.0	1272.8	1278.1	1287.1	1298.2	1319.2	1317.1
37.5°	1376.6	1399.6	1402.9	1409.9	1402.9	1405.7	1409.9	1420.6	1450.1	1469.0	1438.6
40°	1599.1	1637.3	1633.6	1625.3	1609.7	1588.8	1596.2	1612.6	1644.7	1628.2	1546.6
42.5°	1808.8	1848.2	1840.9	1831.4	1796.9	1789.1	1788.3	1801.9	1819.1	1772.3	1631.1
45°	2015.3	2055.5	2042.8	2037.4	2014.4	1997.6	2011.6	2012.4	2007.9	1907.8	1705.0
47.5°	2228.3	2265.2	2257.0	2261.5	2237.8	2226.7	2227.9	2222.2	2179.9	2022.7	1762.4
50°	2400.2	2449.9	2454.8	2444.6	2431.9	2415.1	2458.1	2442.5	2348.6	2134.3	1817.8
52.5°	2534.0	2601.0	2626.4	2619.8	2609.6	2611.6	2692.5	2710.1	2554.6	2275.1	1879.0
55°	2692.5	2798.0	2839.4	2864.0	2853.4	2894.5	3079.6	3088.6	2841.1	2459.0	1958.6
57.5°	2921.1	3072.2	3203.1	3238.0	3271.6	3405.0	3705.5	3613.9	3212.9	2737.3	2059.6
60°	3268.7	3599.6	3812.2	3923.8	4002.7	4189.0	4474.6	4242.7	3676.3	3068.5	2186.4
62.5°	3755.5	4239.1	4594.5	4706.5	4739.0	4846.1	5053.0	4609.3	3928.7	3217.0	2197.5
65°	4118.0	4697.9	5123.5	5181.0	5142.4	5144.5	5198.6	4590.0	3834.8	3087.4	2007.1
67°	4094.2	4743.5	5179.4	5254.9	5201.5	5131.3	5046.8	4328.5	3532.7	2815.6	1757.5
67.5°	4057.6	4699.6	5155.1	5234.8	5185.9	5105.9	4982.3	4227.1	3438.7	2731.1	1706.6
70°	3507.7	4145.0	4758.7	4870.7	4891.3	4818.2	4471.4	3564.3	2791.8	2221.7	1325.3
72.5°	2730.2	3297.9	3904.9	4002.2	4081.0	3870.5	3254.4	2461.9	2035.0	1601.2	959.6
75°	1802.6	2380.1	2686.3	2700.7	2600.2	2210.2	1590.1	1232.9	1134.9	941.2	593.9
77.5°	964.6	1399.6	1408.2	1304.0	1256.3	936.6	380.0	209.8	233.5	265.1	236.4
80°	719.5	891.5	1033.1	1110.7	1133.6	803.2	196.6	111.2	97.3	88.7	87.4
82.5°	648.9	861.1	965.3	1007.6	997.0	660.8	110.4	74.7	62.0	67.3	76.7
85°	254.5	459.7	604.6	585.3	491.7	246.2	60.4	40.2	40.2	58.3	75.5
87.5°	52.1	94.4	128.0	122.3	110.0	47.6	29.6	24.2	24.6	47.2	71.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1	671.1
2.5°	666.5	664.1	662.5	660.8	659.2	658.3	657.1	657.1	654.7	653.8	653.0
5°	669.4	665.3	662.5	658.7	655.9	653.4	650.2	649.3	646.4	644.4	643.6
7.5°	681.7	675.6	669.4	664.9	660.8	655.5	651.8	648.5	645.6	643.6	641.1
10°	705.1	698.6	689.9	681.7	676.4	668.2	662.5	656.7	653.4	650.9	647.7
12.5°	739.6	730.2	719.9	710.0	701.0	690.4	684.6	677.6	673.6	671.5	669.0
15°	774.9	764.6	751.9	742.5	732.2	724.0	718.7	712.5	709.3	706.8	705.1
17.5°	811.0	799.1	790.1	780.7	775.7	769.6	762.6	754.8	745.4	739.6	731.8
20°	848.0	838.9	833.6	828.3	822.5	813.9	800.0	784.0	766.3	749.5	733.4
22.5°	891.1	885.7	884.9	880.0	868.1	847.6	821.7	791.8	761.8	733.9	712.1
25°	951.8	951.8	947.7	927.6	899.7	862.7	819.2	776.2	736.3	698.2	669.4
27.5°	1028.2	1025.3	1005.2	963.7	913.6	856.2	797.9	743.3	692.4	650.6	613.6
30°	1112.3	1092.2	1049.1	983.8	908.7	834.8	763.4	700.2	640.3	589.0	545.5
32.5°	1199.7	1150.9	1073.3	983.8	891.5	802.8	720.3	642.8	574.2	516.7	465.1
35°	1279.0	1189.9	1079.0	967.8	857.8	755.6	660.0	572.2	490.1	428.1	371.5
37.5°	1350.8	1215.7	1072.9	936.6	809.0	689.2	577.1	480.2	387.5	327.5	279.1
40°	1397.6	1221.1	1047.4	887.8	739.2	599.2	475.3	367.0	293.5	238.9	206.5
42.5°	1426.7	1210.8	1006.4	820.9	645.2	486.4	356.7	263.1	208.5	178.1	165.8
45°	1443.1	1184.1	945.7	729.4	531.5	369.8	253.3	190.0	160.5	149.8	145.7
47.5°	1442.3	1141.0	869.7	623.5	405.9	257.8	179.3	148.1	140.0	136.7	135.8
50°	1433.7	1088.1	780.7	508.6	293.0	179.8	142.0	133.0	130.9	128.9	128.0
52.5°	1421.8	1022.4	682.1	396.5	208.1	143.6	128.9	126.4	124.8	122.7	121.9
55°	1399.6	941.6	575.5	298.4	163.0	129.7	124.4	123.5	121.5	118.6	117.0
57.5°	1372.5	859.4	473.2	233.2	144.1	126.4	123.5	122.3	119.5	116.2	112.9
60°	1362.7	791.8	393.2	196.6	139.6	127.6	125.6	124.0	119.8	114.9	111.2
62.5°	1301.1	715.4	335.8	182.2	142.0	133.0	132.2	129.7	123.5	117.8	112.1
65°	1141.9	605.0	284.5	172.4	146.9	142.0	142.9	139.1	133.0	125.2	114.9
67°	965.8	493.4	236.8	163.0	150.7	151.4	154.3	151.4	143.6	132.6	118.6
67.5°	919.0	465.1	224.9	160.1	151.4	153.9	157.2	155.2	147.4	134.6	120.2
70°	683.0	327.5	167.9	144.9	151.4	161.3	168.7	170.8	162.1	144.5	123.5
72.5°	481.0	211.4	128.9	125.6	137.5	150.7	164.6	171.5	161.7	142.4	119.0
75°	289.0	132.2	104.6	106.7	115.7	129.3	140.4	143.2	130.9	118.6	103.0
77.5°	133.8	87.8	82.1	85.0	93.6	99.7	99.7	94.0	84.5	77.2	73.9
80°	78.8	71.8	71.4	76.7	82.5	78.0	71.0	63.2	58.3	55.8	54.6
82.5°	73.9	76.7	81.7	82.9	78.4	67.3	58.7	50.9	48.4	47.2	46.0
85°	87.0	93.2	85.0	78.4	69.4	56.6	46.0	39.4	38.2	37.0	35.3
87.5°	80.5	76.7	66.9	57.5	47.6	34.5	25.0	22.6	24.2	23.8	23.0
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°	671.1	671.1	671.1	671.1	671.1
2.5°	653.4	653.4	651.8	650.9	653.0
5°	641.9	642.4	641.1	640.7	641.1
7.5°	639.5	639.1	638.2	637.4	638.2
10°	646.9	646.4	645.2	646.0	644.8
12.5°	669.0	671.5	671.1	671.9	673.6
15°	705.1	704.7	703.5	704.3	705.5
17.5°	725.6	722.4	719.5	718.3	718.3
20°	720.7	711.3	706.4	703.5	702.7
22.5°	691.6	678.1	667.8	665.3	663.3
25°	644.0	627.2	614.0	611.2	605.8
27.5°	588.6	566.0	550.4	547.1	544.3
30°	515.9	490.1	472.0	460.5	464.2
32.5°	427.3	402.7	381.7	363.2	360.4
35°	330.0	302.9	284.5	276.2	270.9
37.5°	246.2	223.7	211.4	203.6	204.0
40°	188.4	176.5	169.9	164.6	165.0
42.5°	157.2	151.9	150.2	147.8	146.5
45°	142.4	140.8	141.2	138.7	137.9
47.5°	134.2	133.0	133.4	131.8	131.3
50°	127.6	126.8	127.3	126.0	125.6
52.5°	121.1	121.5	121.1	120.2	120.2
55°	115.3	114.9	115.7	114.5	114.5
57.5°	110.8	110.4	110.4	110.0	110.0
60°	108.4	106.7	106.3	106.3	106.7
62.5°	107.1	104.3	103.9	103.9	104.3
65°	107.5	103.0	101.4	101.0	100.6
67°	107.9	101.4	98.1	96.5	96.1
67.5°	108.4	100.6	96.8	95.2	94.4
70°	105.9	94.8	89.5	86.6	85.8
72.5°	99.7	87.8	81.2	77.6	76.7
75°	88.7	79.6	73.9	69.8	68.2
77.5°	68.5	64.4	62.4	59.9	59.1
80°	53.3	51.3	50.5	48.8	48.4
82.5°	44.3	42.3	41.0	39.0	37.7
85°	34.5	32.0	31.2	29.6	28.7
87.5°	22.6	21.4	20.9	18.9	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)