

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: P158638

Luminaire Tested: **VST-E02-LED-E-U-SL4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158638
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
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-SL4-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4896.7 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

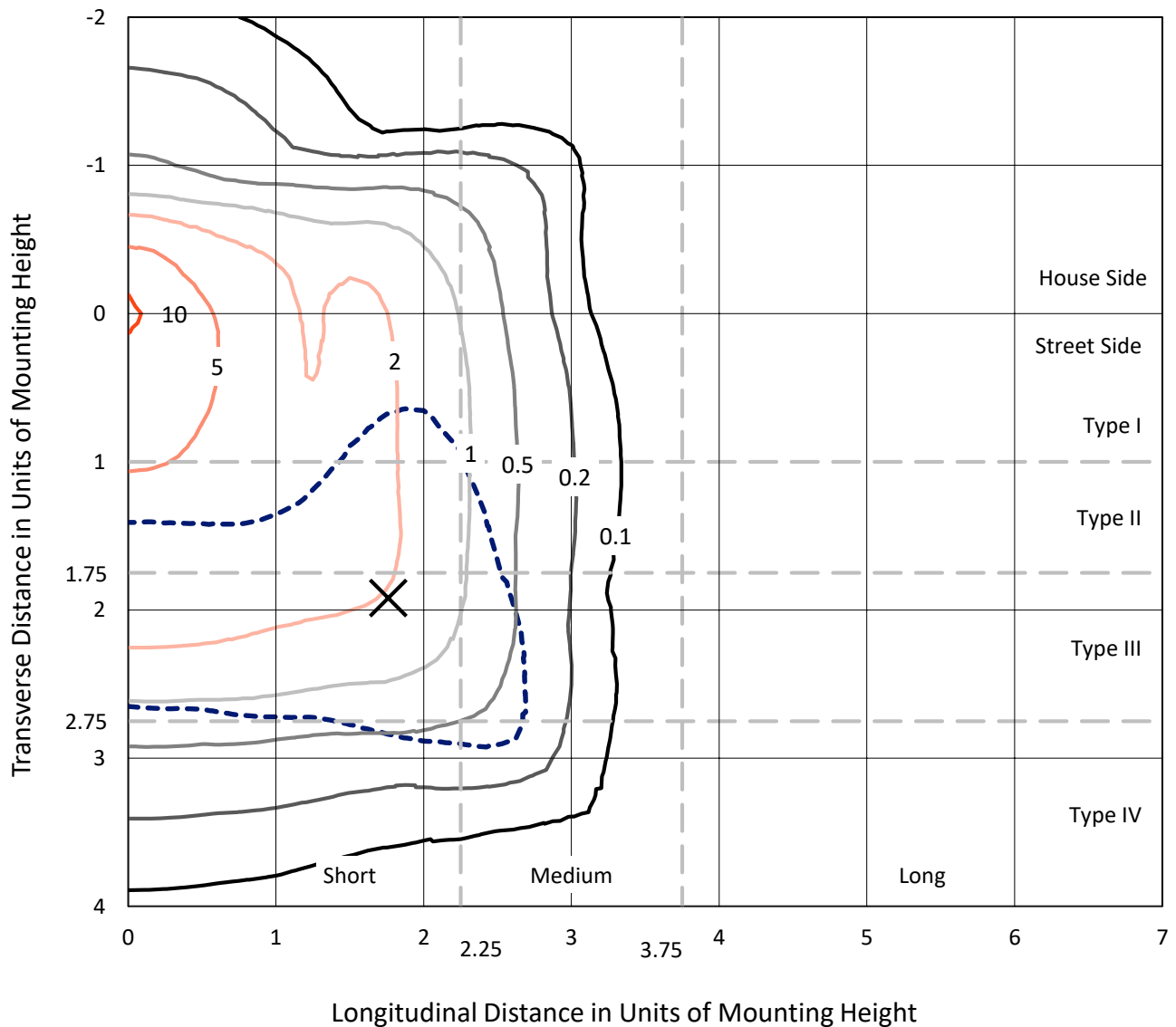
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

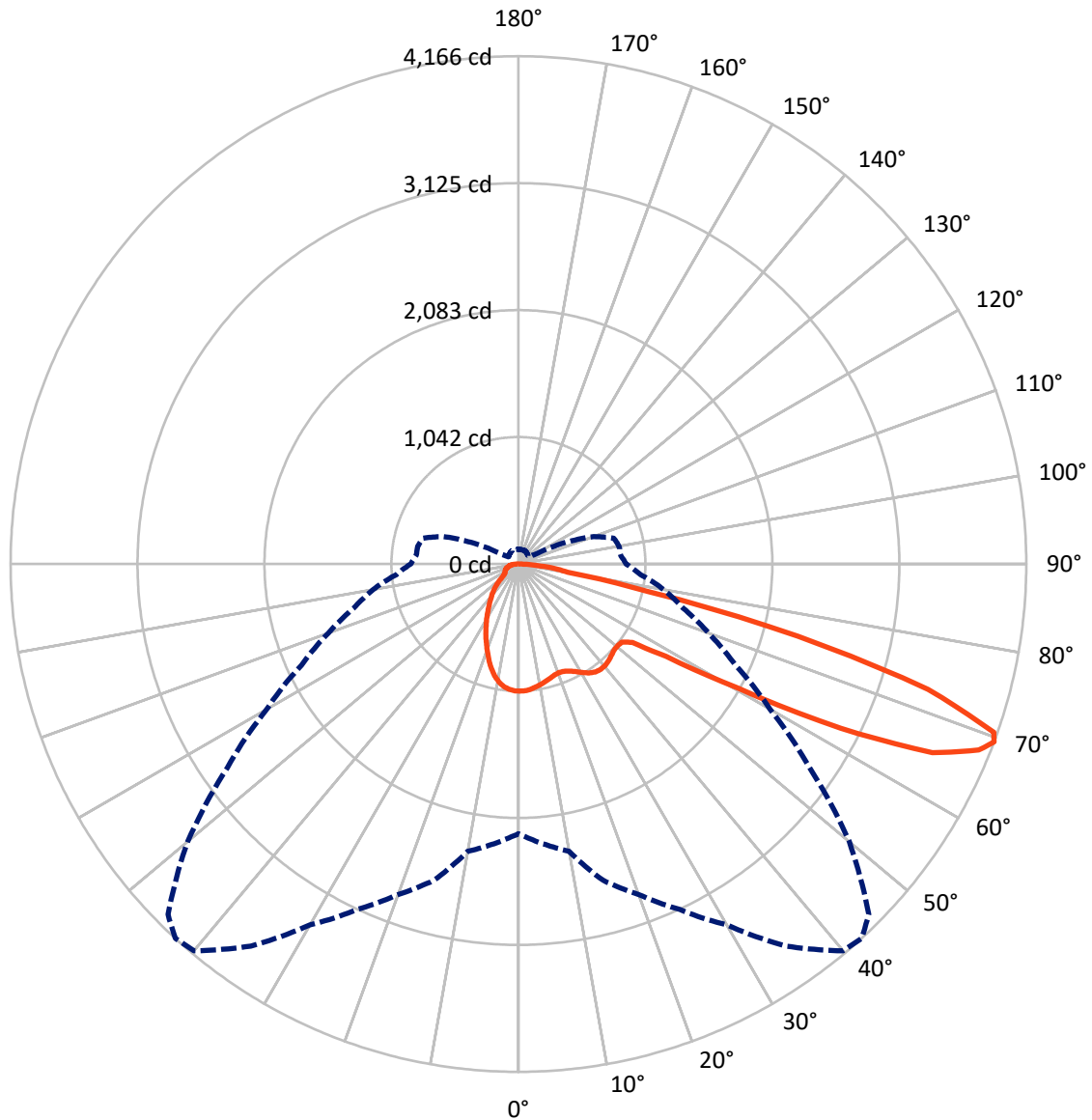
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.4 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1088.6	0.0	1088.6
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	3808.1	0.0	3808.1
	% Fixture	77.8	0.0	77.8
Total	Lumens	4896.7	0.0	4896.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.1	2.0
10°-20°	261.6	5.3
20°-30°	381.5	7.8
30°-40°	486.3	9.9
40°-50°	565.9	11.6
50°-60°	861.0	17.6
60°-70°	1520.9	31.1
70°-80°	627.6	12.8
80°-90°	94.8	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°	4896.7	100.0
0°-180°	4896.7	100.0



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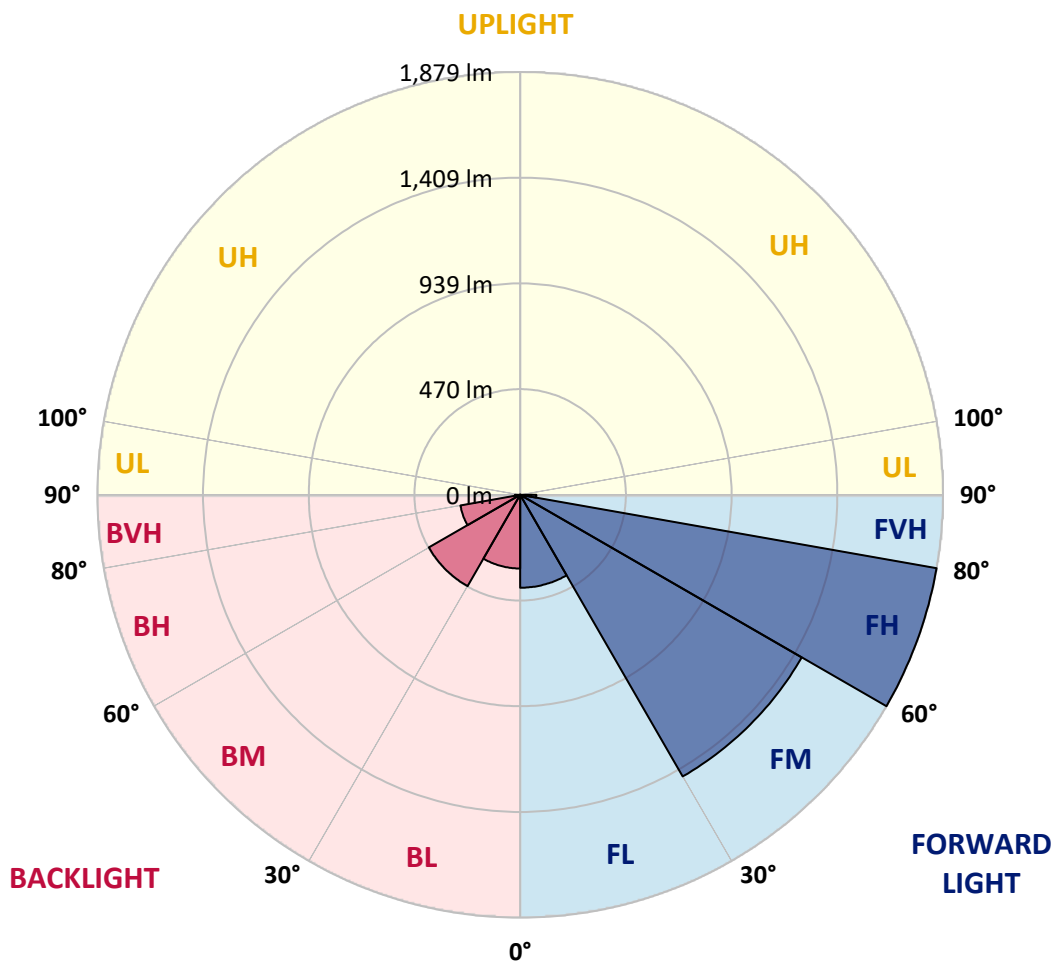
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	412.9	8.4			
FM (30°-60°)	1444.7	29.5			
FH (60°-80°)	1878.9	38.4			G2/5000
FVH (80°-90°)	71.7	1.5			G1/100
BL (0°-30°)	327.3	6.7	B1/500		
BM (30°-60°)	468.6	9.6	B1/1000		
BH (60°-80°)	269.7	5.5	B1/500		G1/500
BVH (80°-90°)	23.1	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°	42.5°	45°
0°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1039.4	1043.2	1041.8	1041.8	1042.9	1041.1	1041.1	1041.8	1040.2	1041.1	1040.8
5°	1035.7	1037.8	1037.1	1037.1	1037.1	1035.7	1035.1	1034.8	1032.4	1032.4	1031.3
7.5°	1027.6	1028.3	1029.4	1028.0	1027.6	1027.3	1024.9	1023.6	1020.9	1018.5	1019.2
10°	1016.8	1016.5	1018.2	1017.2	1015.8	1014.8	1012.8	1010.4	1007.4	1004.3	1004.0
12.5°	1004.7	1004.3	1005.7	1005.0	1004.0	1002.0	1000.3	996.2	991.5	987.8	987.5
15°	996.9	995.9	997.3	995.9	994.2	992.2	989.2	984.1	975.7	971.9	968.9
17.5°	1004.3	1002.7	1003.3	1001.6	999.3	993.9	986.8	976.0	963.8	957.4	952.7
20°	1030.3	1027.3	1028.0	1026.3	1020.9	1013.8	1000.3	981.4	960.8	950.3	942.9
22.5°	1067.5	1065.1	1066.1	1064.5	1059.1	1048.3	1028.0	1001.0	971.6	956.4	944.6
25°	1123.9	1125.9	1126.6	1118.8	1115.8	1095.8	1067.8	1030.3	991.2	973.3	957.1
27.5°	1187.3	1187.3	1190.3	1187.3	1181.2	1157.9	1118.5	1073.2	1022.9	998.6	979.0
30°	1249.1	1248.4	1254.2	1253.5	1243.7	1217.4	1172.5	1117.4	1060.1	1032.7	1007.7
32.5°	1314.6	1316.6	1320.4	1319.0	1306.1	1269.7	1215.7	1155.9	1095.5	1065.5	1037.5
35°	1385.5	1386.5	1387.9	1387.2	1361.2	1315.3	1247.4	1180.6	1117.8	1088.1	1059.1
37.5°	1456.4	1455.4	1453.7	1439.2	1409.5	1345.7	1266.7	1194.8	1128.9	1096.9	1066.8
40°	1519.9	1514.1	1508.7	1486.1	1440.5	1362.9	1274.1	1198.1	1127.9	1094.8	1065.5
42.5°	1554.7	1548.2	1537.1	1508.7	1453.4	1364.6	1269.0	1188.0	1117.4	1084.7	1055.6
45°	1561.0	1556.3	1545.5	1513.8	1450.3	1353.8	1253.5	1171.4	1101.9	1069.1	1041.8
47.5°	1545.8	1542.1	1531.7	1500.3	1437.1	1337.6	1235.6	1153.9	1086.7	1056.0	1029.7
50°	1522.6	1519.2	1511.1	1482.4	1422.3	1326.4	1226.5	1144.8	1081.7	1053.7	1029.4
52.5°	1560.4	1563.1	1539.4	1508.0	1438.1	1336.2	1236.6	1154.2	1090.8	1063.1	1037.8
55°	2148.1	2144.4	2002.3	1883.1	1670.1	1477.0	1332.8	1229.2	1161.4	1133.6	1110.0
57.5°	2791.3	2778.4	2720.0	2608.6	2379.7	2074.2	1796.3	1560.1	1466.9	1427.0	1429.7
60°	3001.3	3005.9	2993.5	2954.0	2872.0	2712.9	2501.6	2324.0	2149.1	2063.7	2073.5
62.5°	3117.7	3126.1	3136.9	3128.2	3101.5	3064.7	3038.0	3054.2	3029.9	2968.5	2919.5
65°	3133.9	3151.1	3186.9	3215.3	3229.1	3263.9	3345.6	3541.4	3720.3	3732.1	3646.0
67.5°	2813.2	2860.8	2938.4	3069.8	3182.2	3305.8	3502.9	3800.6	4064.6	4073.5	3993.1
69°	2212.0	2303.4	2394.2	2687.6	2885.1	3127.1	3418.9	3825.7	4142.0	4166.3	4065.0
70°	1772.4	1826.8	1905.1	2199.8	2494.9	2803.4	3226.1	3743.3	4088.9	4137.9	4026.2
72.5°	1064.1	1085.0	1112.0	1217.7	1369.6	1644.4	2204.8	3051.9	3449.2	3514.7	3372.6
75°	688.0	686.7	689.0	718.4	727.2	779.8	956.4	1570.1	2250.1	2368.9	2198.8
77.5°	518.2	523.0	515.5	518.2	515.8	530.0	535.4	562.1	888.2	1094.2	978.4
80°	457.4	459.8	460.1	458.8	442.3	440.9	449.7	434.5	403.7	409.9	392.6
82.5°	260.9	260.6	263.6	286.6	296.1	327.1	340.0	347.0	320.4	300.5	271.7
85°	169.1	170.5	173.9	181.0	173.9	176.6	173.5	179.6	164.8	152.9	136.7
87.5°	69.2	69.2	73.6	80.0	74.6	73.3	62.8	62.1	52.7	47.6	37.1
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1038.8	1040.8	1039.8	1041.1	1040.2	1040.2	1038.8	1038.4	1039.4	1038.1	1038.4
5°	1029.7	1030.0	1028.3	1029.0	1027.0	1026.3	1025.3	1022.6	1024.3	1022.6	1023.2
7.5°	1016.5	1015.5	1013.1	1009.7	1007.4	1006.4	1004.3	1000.6	1001.3	998.3	1000.0
10°	999.6	996.2	992.2	987.1	983.8	980.7	976.3	971.9	969.6	966.9	966.5
12.5°	980.7	976.7	971.3	963.5	956.1	951.0	944.3	936.5	934.1	929.8	927.4
15°	960.1	953.7	947.3	938.5	930.4	922.7	913.6	903.7	897.4	890.6	885.5
17.5°	941.6	934.1	925.7	917.2	908.5	899.0	887.5	875.4	865.9	853.4	843.3
20°	927.1	917.6	909.1	900.4	890.6	879.1	865.3	849.7	833.9	820.0	808.2
22.5°	921.3	906.4	896.3	887.5	877.7	864.2	847.4	829.1	809.9	790.7	775.1
25°	926.0	904.1	888.2	877.7	869.3	855.5	836.6	814.3	792.0	769.0	748.1
27.5°	939.8	911.8	888.9	872.3	862.6	848.7	828.8	805.1	778.9	753.2	727.5
30°	961.5	925.0	896.0	872.7	857.5	841.6	820.7	793.4	766.7	737.3	709.3
32.5°	982.4	938.9	904.1	874.0	850.7	830.2	806.9	779.8	751.1	720.4	691.4
35°	997.3	948.0	907.1	871.0	840.3	814.6	789.7	762.7	734.6	703.2	673.5
37.5°	1004.3	953.0	907.4	862.9	826.4	798.1	771.4	744.7	718.4	688.7	660.7
40°	1004.0	952.7	902.8	852.4	809.9	779.8	753.5	727.5	702.9	676.9	651.5
42.5°	996.6	947.3	896.0	842.3	798.1	764.6	737.3	712.3	691.4	668.5	647.2
45°	985.1	938.2	888.9	837.6	794.7	761.3	732.2	707.9	689.4	668.5	650.2
47.5°	976.3	933.1	889.9	846.0	805.1	770.4	739.7	713.0	697.1	680.3	667.4
50°	977.7	935.5	893.3	851.1	812.6	777.5	747.8	723.5	712.0	707.6	704.6
52.5°	984.8	939.2	903.4	878.1	864.9	838.6	821.0	805.9	814.3	797.8	778.1
55°	1075.3	1060.4	1095.2	1127.9	1169.5	1184.9	1170.1	1167.4	1180.9	1124.9	996.2
57.5°	1448.9	1487.5	1541.1	1569.5	1603.9	1594.8	1560.4	1531.7	1497.9	1432.4	1272.1
60°	2084.6	2055.6	2031.3	1962.8	1906.7	1841.3	1768.3	1705.9	1646.1	1552.0	1378.4
62.5°	2739.6	2538.1	2369.6	2206.9	2075.9	1967.2	1861.5	1767.7	1677.2	1545.8	1359.2
65°	3306.1	2881.7	2565.4	2326.7	2135.3	1970.2	1834.5	1704.8	1589.8	1435.8	1251.1
67.5°	3560.6	3028.9	2568.8	2226.8	1961.8	1737.6	1562.0	1366.3	1237.3	1138.7	1034.8
69°	3541.7	2916.5	2385.5	1964.5	1660.0	1398.7	1210.3	1006.0	882.5	840.6	838.3
70°	3451.9	2726.1	2171.4	1751.5	1403.0	1143.4	962.8	779.5	664.4	635.7	686.7
72.5°	2818.3	1926.3	1360.9	1039.1	799.1	631.6	515.2	408.8	326.5	282.9	292.4
75°	1591.7	891.9	576.6	435.8	368.3	304.5	261.3	222.8	201.5	163.7	129.7
77.5°	578.6	382.9	304.5	263.3	186.7	128.6	107.7	94.2	85.4	85.4	81.4
80°	365.9	288.3	201.2	137.8	101.9	88.8	77.6	68.2	62.8	61.4	62.8
82.5°	228.5	176.6	112.7	86.4	72.6	65.2	56.7	49.6	45.2	44.2	46.3
85°	112.7	87.4	68.5	61.1	57.4	53.3	46.9	40.2	38.8	41.5	48.6
87.5°	33.8	30.1	24.7	25.7	27.0	26.3	20.9	18.2	17.2	22.6	35.5
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°	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1039.1	1038.8	1039.4	1038.4	1039.1	1039.4	1038.8	1041.8	1039.8	1040.2	1041.5
5°	1023.9	1023.2	1025.9	1025.3	1026.7	1028.0	1027.3	1031.7	1030.0	1031.3	1034.0
7.5°	998.6	1000.0	1000.3	1000.3	1003.0	1007.4	1008.4	1011.1	1011.1	1014.8	1017.5
10°	964.9	965.2	967.2	966.9	970.3	975.0	975.7	980.4	982.1	988.1	991.9
12.5°	925.7	924.0	923.6	923.3	927.7	932.8	933.5	941.6	944.9	950.3	956.4
15°	881.8	877.4	876.1	878.8	877.7	880.8	883.8	888.2	892.9	903.7	909.1
17.5°	838.9	830.2	827.8	824.8	821.7	821.7	823.1	828.5	838.3	844.0	856.1
20°	795.1	784.6	776.2	768.1	760.9	758.2	758.6	765.4	772.4	781.9	793.4
22.5°	758.2	742.4	727.9	717.1	702.5	702.2	700.2	702.2	710.0	712.3	718.7
25°	726.5	705.2	685.7	668.1	653.9	646.5	644.5	643.8	640.1	639.1	634.3
27.5°	701.9	676.2	650.9	629.6	612.1	601.9	589.1	580.0	566.8	563.5	555.0
30°	681.6	653.9	626.2	598.6	578.6	560.4	538.8	523.0	502.7	489.5	478.0
32.5°	662.0	634.0	606.0	578.6	547.9	519.5	491.2	466.6	443.9	423.7	406.8
35°	645.8	619.1	590.8	557.7	518.5	477.7	443.6	415.6	384.5	363.2	342.0
37.5°	635.3	611.0	582.7	537.1	486.8	442.9	404.1	370.0	338.3	306.2	282.2
40°	630.7	609.4	573.9	518.2	459.1	410.5	367.6	329.8	289.3	253.2	227.5
42.5°	630.3	608.7	561.8	497.3	436.2	383.2	335.6	290.3	245.5	208.3	183.0
45°	636.4	607.7	548.9	479.7	415.9	360.5	303.8	248.8	198.5	170.8	157.3
47.5°	652.6	609.4	538.4	463.5	396.7	333.2	267.4	203.2	161.7	148.9	148.9
50°	681.6	619.1	535.7	452.0	377.5	301.5	222.8	164.1	143.2	143.2	147.2
52.5°	726.2	639.7	540.5	443.9	353.5	259.6	175.6	141.5	137.4	141.1	146.5
55°	828.8	676.2	546.9	430.1	317.0	205.9	144.8	133.7	135.4	139.7	144.8
57.5°	1017.2	754.2	553.7	399.7	258.2	158.7	131.3	130.6	133.7	137.8	142.1
60°	1141.1	853.4	570.9	353.8	195.5	131.0	124.6	128.6	132.4	135.7	139.1
62.5°	1141.1	881.5	583.7	302.5	146.9	119.2	120.2	126.6	131.0	132.7	134.7
65°	1068.2	830.2	540.2	246.4	119.5	112.4	116.2	122.5	126.6	127.9	129.7
67.5°	933.5	733.3	455.1	185.7	106.7	106.7	111.4	116.2	119.5	122.2	124.9
69°	811.6	658.0	400.7	157.3	101.6	102.3	107.0	111.1	115.1	118.5	121.9
70°	723.8	601.6	362.9	142.8	98.6	98.9	103.6	108.1	111.7	115.4	119.5
72.5°	387.5	415.6	275.8	117.1	90.8	91.8	96.2	100.3	103.6	107.3	111.1
75°	132.0	178.6	175.6	95.9	82.0	84.7	87.4	91.1	95.5	97.9	99.9
77.5°	77.3	80.0	93.5	78.0	73.9	75.3	78.3	81.4	85.1	87.4	89.1
80°	64.8	64.5	64.8	63.5	64.5	67.5	69.5	73.6	77.0	77.6	77.3
82.5°	52.7	55.4	55.7	55.0	58.1	60.4	62.1	64.5	64.1	64.8	66.2
85°	46.9	46.6	49.0	49.3	49.3	47.6	47.9	47.9	47.9	49.0	49.3
87.5°	46.9	39.2	30.4	27.4	28.7	27.0	25.7	25.3	28.0	30.7	30.1
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):

	160°	165°	170°	175°	180°
0°	1042.9	1042.9	1042.9	1042.9	1042.9
2.5°	1042.1	1043.2	1042.5	1042.5	1043.2
5°	1035.1	1036.7	1036.1	1036.7	1036.7
7.5°	1018.9	1021.2	1022.9	1024.6	1023.6
10°	995.6	999.6	1002.3	1004.3	1003.3
12.5°	960.8	964.5	970.3	973.6	970.9
15°	913.2	923.6	927.1	931.7	929.0
17.5°	863.6	870.0	874.0	878.4	881.1
20°	797.4	802.4	807.8	809.9	806.9
22.5°	717.7	720.4	719.4	722.5	716.4
25°	630.3	632.0	631.0	633.7	628.6
27.5°	547.6	547.3	547.6	544.2	540.8
30°	467.9	464.9	463.5	458.5	457.4
32.5°	396.7	386.2	380.8	373.4	371.7
35°	325.4	310.6	300.8	292.4	288.7
37.5°	261.7	243.7	232.3	224.8	223.8
40°	206.9	190.4	182.3	178.3	177.6
42.5°	168.8	161.7	159.7	159.7	159.7
45°	154.0	153.6	155.3	156.7	157.0
47.5°	150.9	152.9	155.3	157.3	158.0
50°	150.9	152.9	154.6	156.7	157.3
52.5°	150.2	151.9	152.6	154.0	154.6
55°	148.2	149.2	149.2	149.9	150.5
57.5°	144.8	145.5	144.5	145.1	146.9
60°	141.5	142.1	140.5	142.1	143.2
62.5°	137.8	138.1	137.4	138.8	138.8
65°	131.6	131.0	132.0	133.0	133.4
67.5°	125.6	123.9	124.9	125.2	125.9
69°	120.8	119.8	120.2	120.8	121.6
70°	117.5	116.8	117.5	118.5	119.5
72.5°	109.0	109.4	111.7	113.8	115.8
75°	101.3	103.6	106.7	111.1	113.5
77.5°	91.8	93.5	95.9	100.6	105.0
80°	79.3	80.3	80.7	82.4	82.0
82.5°	64.5	63.5	62.8	62.1	61.8
85°	46.3	45.9	43.2	41.2	41.2
87.5°	27.7	26.3	25.0	23.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)