

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: P158641

Luminaire Tested: **VST-E02-LED-E-U-SL4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158641
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-SL4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5953.3 lumens
Efficiency: N/A
Efficacy: 114.3 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

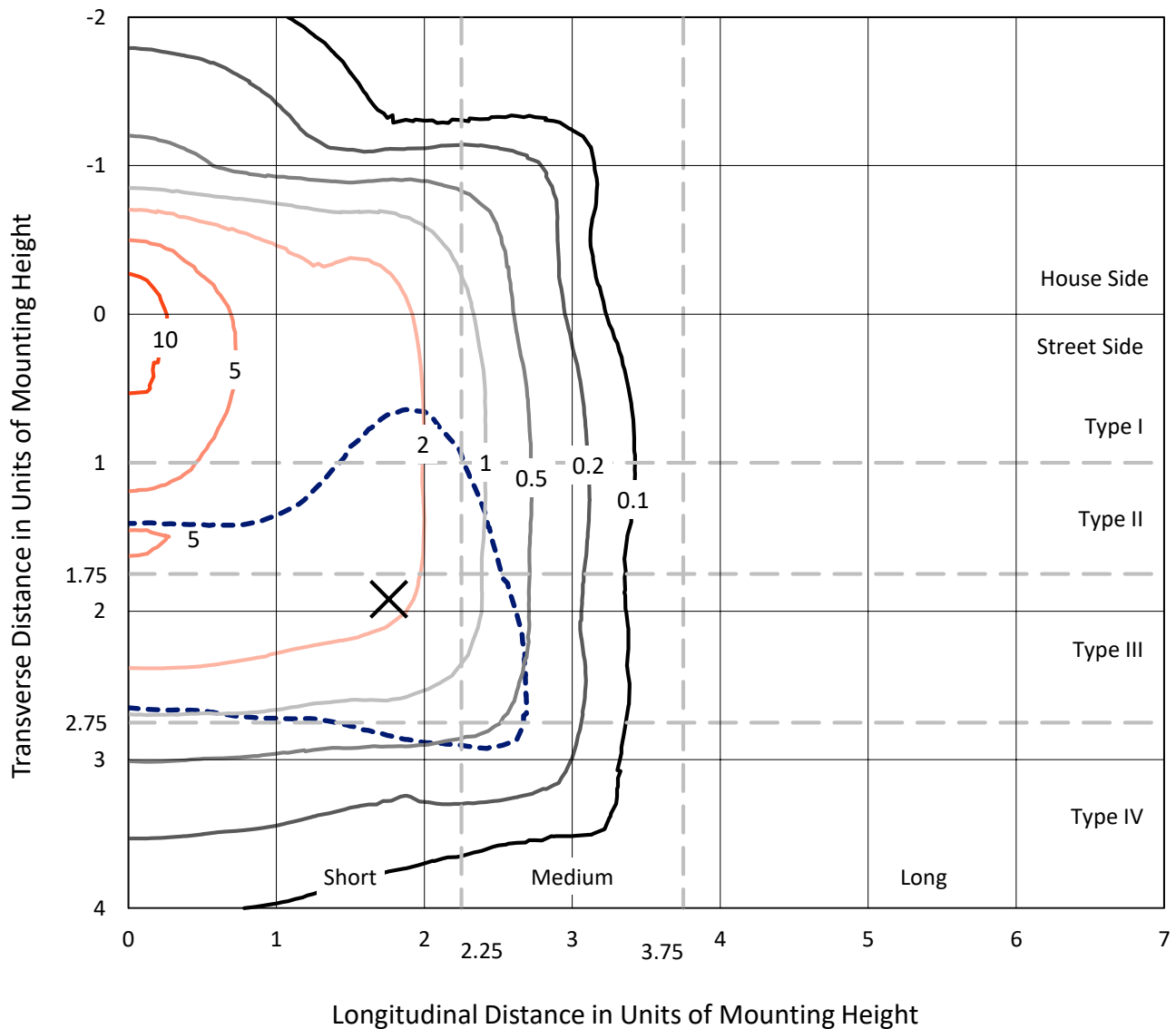


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

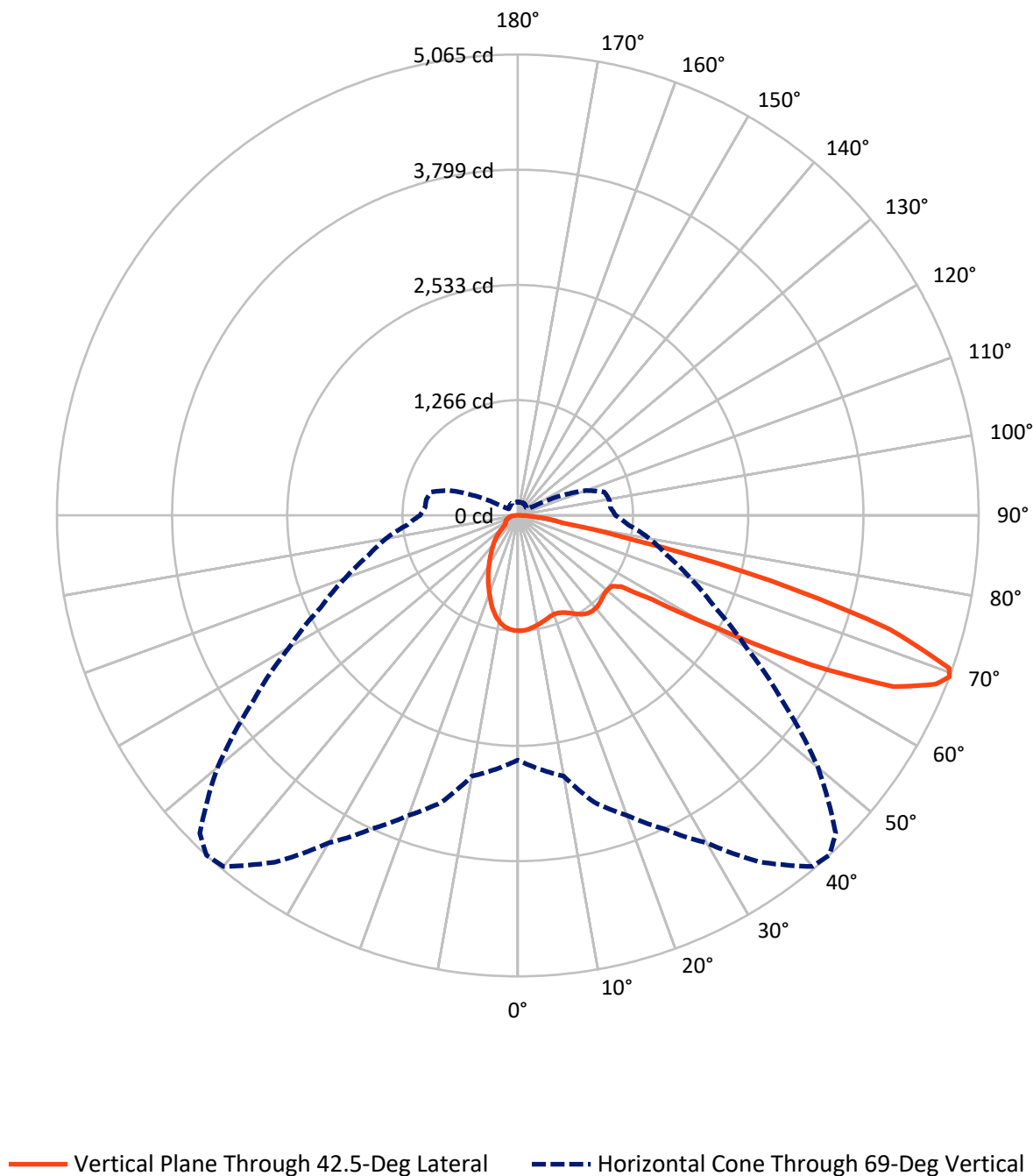


Based on 10 foot mounting height. Maximum calculated value = 12.7 fc
Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1323.5	0.0	1323.5
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	4629.8	0.0	4629.8
	% Fixture	77.8	0.0	77.8
Total	Lumens	5953.3	0.0	5953.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	2.0
10°-20°	318.1	5.3
20°-30°	463.8	7.8
30°-40°	591.3	9.9
40°-50°	688.0	11.6
50°-60°	1046.8	17.6
60°-70°	1849.1	31.1
70°-80°	763.0	12.8
80°-90°	115.2	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°	5953.3	100.0
0°-180°	5953.3	100.0

Coefficient of Utilization



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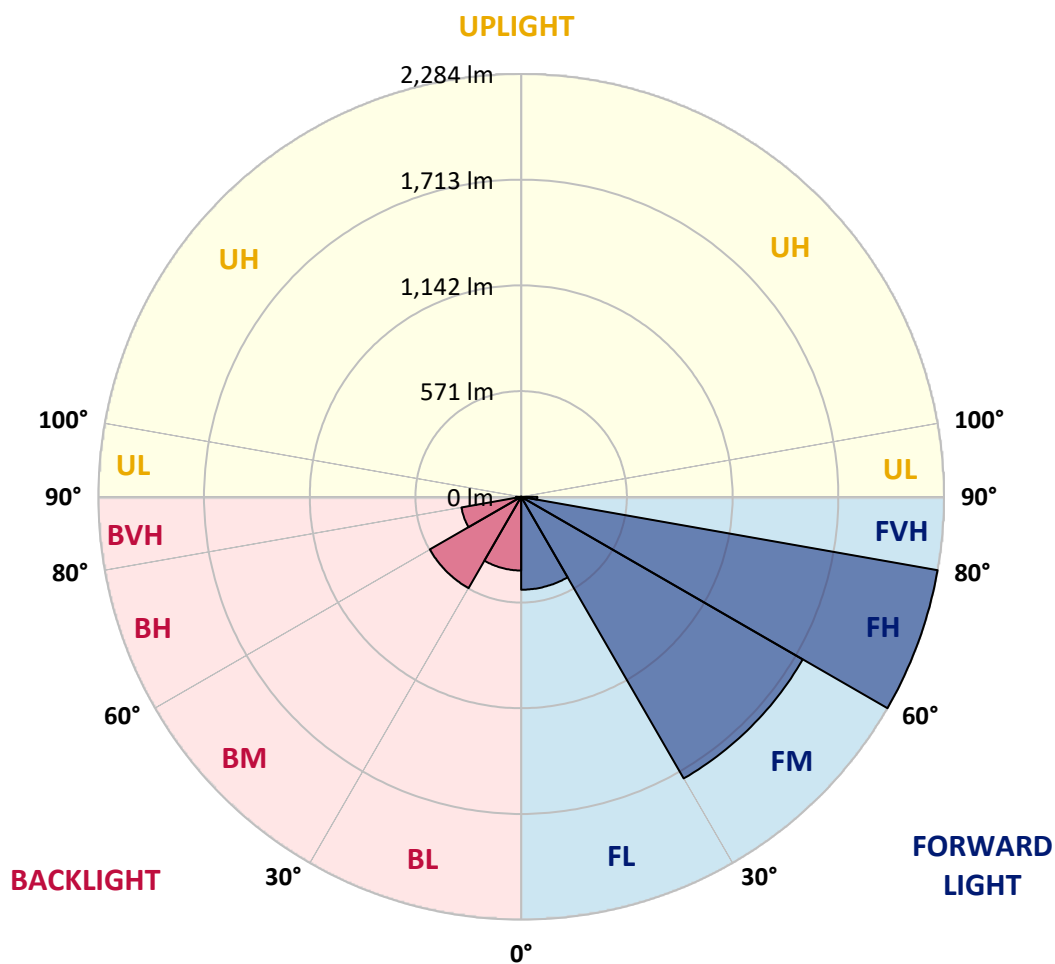
CATALOG NUMBER: VST-E02-LED-E-U-SL4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	502.0	8.4			
FM	(30°-60°)	1756.4	29.5			
FH	(60°-80°)	2284.3	38.4			G2/5000
FVH	(80°-90°)	87.1	1.5			G1/100
BL	(0°-30°)	397.9	6.7	B1/500		
BM	(30°-60°)	569.7	9.6	B1/1000		
BH	(60°-80°)	327.8	5.5	B1/500		G1/500
BVH	(80°-90°)	28.1	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°	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1263.8	1268.3	1266.6	1266.6	1267.9	1265.8	1265.8	1266.6	1264.6	1265.8	1265.4
5°	1259.2	1261.7	1260.9	1260.9	1260.9	1259.2	1258.4	1258.0	1255.1	1255.1	1253.9
7.5°	1249.4	1250.2	1251.4	1249.8	1249.4	1249.0	1246.1	1244.5	1241.2	1238.3	1239.1
10°	1236.2	1235.8	1237.9	1236.7	1235.0	1233.8	1231.3	1228.4	1224.8	1221.1	1220.6
12.5°	1221.5	1221.1	1222.7	1221.9	1220.6	1218.2	1216.1	1211.2	1205.5	1201.0	1200.5
15°	1212.1	1210.8	1212.4	1210.8	1208.8	1206.3	1202.6	1196.5	1186.2	1181.6	1178.0
17.5°	1221.1	1219.0	1219.9	1217.8	1214.9	1208.3	1199.7	1186.6	1171.8	1164.0	1158.2
20°	1252.7	1249.0	1249.8	1247.8	1241.2	1232.6	1216.1	1193.2	1168.1	1155.4	1146.4
22.5°	1297.8	1294.9	1296.2	1294.1	1287.5	1274.4	1249.8	1217.0	1181.3	1162.8	1148.4
25°	1366.4	1368.8	1369.6	1360.2	1356.5	1332.3	1298.2	1252.7	1205.0	1183.3	1163.6
27.5°	1443.5	1443.5	1447.2	1443.5	1436.2	1407.8	1359.8	1304.8	1243.6	1214.1	1190.3
30°	1518.7	1517.8	1524.8	1524.0	1512.1	1480.1	1425.5	1358.6	1288.8	1255.6	1225.1
32.5°	1598.3	1600.7	1605.2	1603.6	1588.0	1543.7	1478.0	1405.4	1331.9	1295.3	1261.3
35°	1684.4	1685.7	1687.3	1686.5	1654.9	1599.1	1516.6	1435.3	1359.0	1322.9	1287.5
37.5°	1770.7	1769.4	1767.4	1749.7	1713.6	1636.0	1540.0	1452.5	1372.5	1333.5	1297.0
40°	1847.8	1840.9	1834.3	1806.8	1751.3	1657.0	1549.0	1456.7	1371.3	1331.0	1295.3
42.5°	1890.1	1882.3	1868.8	1834.3	1766.9	1659.0	1542.8	1444.3	1358.6	1318.7	1283.5
45°	1897.9	1892.2	1879.0	1840.4	1763.3	1645.9	1524.0	1424.2	1339.7	1299.9	1266.6
47.5°	1879.4	1874.9	1862.2	1824.0	1747.3	1626.2	1502.2	1402.9	1321.2	1283.9	1251.8
50°	1851.1	1847.0	1837.1	1802.3	1729.2	1612.6	1491.1	1391.8	1315.1	1281.0	1251.4
52.5°	1897.1	1900.3	1871.6	1833.4	1748.5	1624.6	1503.4	1403.3	1326.1	1292.5	1261.7
55°	2611.6	2607.1	2434.3	2289.4	2030.5	1795.7	1620.4	1494.4	1411.9	1378.3	1349.5
57.5°	3393.5	3377.9	3307.0	3171.5	2893.2	2521.7	2183.9	1896.7	1783.4	1735.0	1738.2
60°	3648.8	3654.6	3639.4	3591.4	3491.6	3298.3	3041.4	2825.5	2612.9	2509.0	2521.0
62.5°	3790.4	3800.7	3813.8	3803.2	3770.8	3726.0	3693.5	3713.3	3683.7	3609.0	3549.5
65°	3810.1	3831.1	3874.6	3909.1	3925.9	3968.2	4067.5	4305.5	4523.1	4537.4	4432.8
67.5°	3420.2	3478.1	3572.5	3732.2	3868.8	4019.0	4258.7	4620.8	4941.7	4952.4	4854.7
69°	2689.2	2800.4	2910.8	3267.5	3507.7	3801.9	4156.6	4651.1	5035.7	5065.3	4942.1
70°	2154.8	2220.9	2316.1	2674.4	3033.2	3408.3	3922.2	4551.0	4971.3	5030.8	4894.9
72.5°	1293.7	1319.2	1352.0	1480.4	1665.2	1999.3	2680.6	3710.4	4193.5	4273.1	4100.3
75°	836.5	834.8	837.7	873.4	884.1	948.1	1162.8	1909.0	2735.6	2880.1	2673.2
77.5°	630.0	635.8	626.8	630.0	627.2	644.4	650.9	683.4	1079.9	1330.3	1189.4
80°	556.1	559.0	559.4	557.8	537.7	536.0	546.7	528.2	490.9	498.3	477.4
82.5°	317.3	316.9	320.6	348.5	359.9	397.7	413.3	421.9	389.5	365.3	330.4
85°	205.6	207.3	211.4	220.0	211.4	214.7	211.0	218.3	200.3	185.9	166.2
87.5°	84.1	84.1	89.5	97.3	90.7	89.0	76.3	75.5	64.0	57.9	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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1262.9	1265.4	1264.1	1265.8	1264.6	1264.6	1262.9	1262.5	1263.8	1262.1	1262.5
5°	1251.8	1252.3	1250.2	1251.0	1248.5	1247.8	1246.5	1243.2	1245.3	1243.2	1244.0
7.5°	1235.8	1234.6	1231.7	1227.7	1224.8	1223.5	1221.1	1216.6	1217.4	1213.7	1215.7
10°	1215.3	1211.2	1206.3	1200.1	1196.0	1192.3	1187.0	1181.6	1178.8	1175.5	1175.1
12.5°	1192.3	1187.4	1180.9	1171.4	1162.4	1156.2	1148.0	1138.6	1135.7	1130.3	1127.5
15°	1167.3	1159.5	1151.7	1141.0	1131.2	1121.8	1110.7	1098.8	1091.0	1082.8	1076.6
17.5°	1144.7	1135.7	1125.4	1115.2	1104.5	1093.0	1079.0	1064.3	1052.8	1037.6	1025.3
20°	1127.1	1115.6	1105.3	1094.6	1082.8	1068.8	1052.0	1033.1	1013.8	997.0	982.6
22.5°	1120.1	1102.0	1089.7	1079.0	1067.2	1050.7	1030.2	1008.1	984.7	961.3	942.4
25°	1125.8	1099.1	1079.9	1067.2	1056.9	1040.0	1017.1	990.0	962.9	935.0	909.5
27.5°	1142.7	1108.6	1080.7	1060.6	1048.7	1031.9	1007.6	978.9	946.9	915.7	884.5
30°	1168.9	1124.6	1089.3	1061.0	1042.5	1023.2	997.8	964.6	932.1	896.4	862.3
32.5°	1194.4	1141.4	1099.1	1062.7	1034.3	1009.3	980.9	948.1	913.3	875.9	840.6
35°	1212.4	1152.5	1102.9	1058.9	1021.6	990.4	960.0	927.2	893.1	854.9	818.8
37.5°	1221.1	1158.7	1103.3	1049.1	1004.8	970.3	937.9	905.5	873.4	837.3	803.2
40°	1220.6	1158.2	1097.5	1036.4	984.7	948.1	916.1	884.5	854.5	823.0	792.2
42.5°	1211.6	1151.7	1089.3	1024.1	970.3	929.6	896.4	866.0	840.6	812.7	786.8
45°	1197.7	1140.6	1080.7	1018.3	966.2	925.6	890.2	860.7	838.1	812.7	790.5
47.5°	1187.0	1134.5	1081.9	1028.6	978.9	936.6	899.3	866.9	847.6	827.0	811.4
50°	1188.7	1137.4	1086.0	1034.7	988.0	945.2	909.1	879.6	865.6	860.3	856.6
52.5°	1197.2	1141.9	1098.4	1067.6	1051.6	1019.5	998.2	979.7	990.0	969.9	946.1
55°	1307.3	1289.2	1331.5	1371.3	1421.8	1440.7	1422.6	1419.3	1435.7	1367.6	1211.2
57.5°	1761.6	1808.4	1873.7	1908.1	1950.0	1938.9	1897.1	1862.2	1821.1	1741.5	1546.6
60°	2534.5	2499.2	2469.7	2386.3	2318.2	2238.5	2149.9	2074.0	2001.3	1886.8	1675.9
62.5°	3330.7	3085.7	2880.9	2683.1	2523.8	2391.7	2263.2	2149.1	2039.1	1879.4	1652.5
65°	4019.5	3503.5	3119.0	2828.8	2596.0	2395.3	2230.3	2072.8	1932.8	1745.6	1521.1
67.5°	4328.9	3682.5	3123.1	2707.3	2385.1	2112.5	1899.1	1661.0	1504.3	1384.4	1258.0
69°	4306.0	3545.8	2900.2	2388.4	2018.2	1700.5	1471.4	1223.1	1072.9	1022.0	1019.1
70°	4196.8	3314.3	2639.9	2129.4	1705.8	1390.1	1170.6	947.7	807.8	772.9	834.8
72.5°	3426.4	2342.0	1654.5	1263.4	971.5	767.9	626.3	497.0	396.9	344.0	355.4
75°	1935.2	1084.4	701.0	529.9	447.8	370.2	317.7	270.9	245.0	199.1	157.6
77.5°	703.5	465.4	370.2	320.2	227.0	156.4	130.9	114.5	103.9	103.9	98.9
80°	444.9	350.5	244.6	167.5	124.0	107.9	94.4	82.9	76.3	74.7	76.3
82.5°	277.9	214.7	137.1	105.1	88.3	79.2	68.9	60.4	55.0	53.8	56.2
85°	137.1	106.3	83.3	74.3	69.8	64.9	57.1	48.8	47.2	50.5	59.1
87.5°	41.0	36.5	29.9	31.2	32.8	32.0	25.4	22.1	20.9	27.5	43.1
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°	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1263.4	1262.9	1263.8	1262.5	1263.4	1263.8	1262.9	1266.6	1264.1	1264.6	1266.2
5°	1244.9	1244.0	1247.3	1246.5	1248.2	1249.8	1249.0	1254.3	1252.3	1253.9	1257.2
7.5°	1214.1	1215.7	1216.1	1216.1	1219.4	1224.8	1226.0	1229.3	1229.3	1233.8	1237.1
10°	1173.1	1173.5	1175.9	1175.5	1179.6	1185.4	1186.2	1191.9	1194.0	1201.4	1205.9
12.5°	1125.4	1123.4	1123.0	1122.5	1127.9	1134.1	1134.9	1144.7	1148.8	1155.4	1162.8
15°	1072.1	1066.7	1065.1	1068.4	1067.2	1070.8	1074.5	1079.9	1085.6	1098.8	1105.3
17.5°	1019.9	1009.3	1006.4	1002.7	999.0	999.0	1000.7	1007.2	1019.1	1026.1	1040.9
20°	966.6	953.9	943.6	933.8	925.1	921.8	922.3	930.5	939.1	950.6	964.6
22.5°	921.8	902.6	884.9	871.8	854.2	853.7	851.3	853.7	863.2	866.0	873.8
25°	883.3	857.4	833.6	812.3	795.0	786.0	783.5	782.7	778.2	776.9	771.2
27.5°	853.3	822.1	791.3	765.5	744.1	731.8	716.2	705.1	689.2	685.0	674.8
30°	828.7	795.0	761.4	727.7	703.5	681.4	655.1	635.8	611.2	595.1	581.2
32.5°	804.9	770.8	736.7	703.5	666.1	631.7	597.2	567.2	539.8	515.1	494.6
35°	785.2	752.8	718.3	678.1	630.4	580.8	539.3	505.3	467.5	441.7	415.8
37.5°	772.4	742.9	708.4	653.0	591.8	538.5	491.3	449.8	411.2	372.3	343.1
40°	766.7	740.8	697.7	630.0	558.2	499.1	447.0	401.0	351.7	307.9	276.7
42.5°	766.3	740.0	683.0	604.6	530.3	465.8	408.0	353.0	298.4	253.3	222.5
45°	773.7	738.8	667.4	583.3	505.7	438.4	369.4	302.5	241.3	207.7	191.3
47.5°	793.4	740.8	654.7	563.5	482.3	405.1	325.1	247.1	196.6	181.0	181.0
50°	828.7	752.8	651.4	549.6	458.9	366.5	270.9	199.5	174.0	174.0	179.0
52.5°	882.8	777.8	657.1	539.8	429.7	315.7	213.4	172.0	167.0	171.5	178.1
55°	1007.6	822.1	664.9	522.9	385.4	250.4	176.1	162.5	164.6	169.9	176.1
57.5°	1236.7	916.9	673.1	485.9	314.0	192.9	159.7	158.8	162.5	167.5	172.8
60°	1387.3	1037.6	694.1	430.1	237.7	159.2	151.4	156.4	160.9	165.0	169.1
62.5°	1387.3	1071.7	709.7	367.7	178.6	144.9	146.1	153.9	159.2	161.3	163.7
65°	1298.6	1009.3	656.7	299.6	145.3	136.7	141.2	149.0	153.9	155.6	157.6
67.5°	1134.9	891.5	553.3	225.7	129.7	129.7	135.4	141.2	145.3	148.6	151.9
69°	986.7	800.0	487.2	191.3	123.5	124.4	130.1	135.1	140.0	144.1	148.1
70°	880.0	731.4	441.2	173.6	119.8	120.2	126.0	131.3	135.8	140.4	145.3
72.5°	471.2	505.3	335.3	142.4	110.4	111.7	117.0	121.9	126.0	130.5	135.1
75°	160.5	217.1	213.4	116.6	99.7	103.0	106.3	110.8	116.2	119.0	121.5
77.5°	94.0	97.3	113.7	94.8	89.9	91.5	95.2	98.9	103.4	106.3	108.4
80°	78.8	78.4	78.8	77.2	78.4	82.1	84.5	89.5	93.6	94.4	94.0
82.5°	64.0	67.3	67.7	66.9	70.6	73.4	75.5	78.4	78.0	78.8	80.5
85°	57.1	56.6	59.5	59.9	59.9	57.9	58.3	58.3	58.3	59.5	59.9
87.5°	57.1	47.6	37.0	33.2	34.9	32.8	31.2	30.8	34.1	37.4	36.5
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):

	160°	165°	170°	175°	180°
0°	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1267.0	1268.3	1267.4	1267.4	1268.3
5°	1258.4	1260.5	1259.6	1260.5	1260.5
7.5°	1238.7	1241.6	1243.6	1245.7	1244.5
10°	1210.4	1215.3	1218.6	1221.1	1219.9
12.5°	1168.1	1172.6	1179.6	1183.7	1180.4
15°	1110.2	1123.0	1127.1	1132.8	1129.6
17.5°	1049.9	1057.7	1062.7	1068.0	1071.2
20°	969.5	975.6	982.2	984.7	980.9
22.5°	872.6	875.9	874.7	878.3	871.0
25°	766.3	768.4	767.1	770.4	764.2
27.5°	665.8	665.3	665.8	661.6	657.5
30°	568.9	565.2	563.5	557.4	556.1
32.5°	482.3	469.6	463.0	454.0	451.9
35°	395.6	377.6	365.7	355.4	350.9
37.5°	318.1	296.3	282.4	273.4	272.1
40°	251.6	231.5	221.6	216.7	215.9
42.5°	205.2	196.6	194.2	194.2	194.2
45°	187.1	186.8	188.8	190.4	190.9
47.5°	183.5	185.9	188.8	191.3	192.1
50°	183.5	185.9	188.0	190.4	191.3
52.5°	182.6	184.7	185.5	187.1	188.0
55°	180.2	181.4	181.4	182.2	183.1
57.5°	176.1	176.9	175.7	176.5	178.6
60°	172.0	172.8	170.8	172.8	174.0
62.5°	167.5	167.9	167.0	168.7	168.7
65°	160.1	159.2	160.5	161.7	162.1
67.5°	152.7	150.7	151.9	152.3	153.1
69°	146.9	145.7	146.1	146.9	147.8
70°	142.9	142.0	142.9	144.1	145.3
72.5°	132.6	133.0	135.8	138.3	140.8
75°	123.1	126.0	129.7	135.1	137.9
77.5°	111.7	113.7	116.6	122.3	127.6
80°	96.5	97.7	98.1	100.1	99.7
82.5°	78.4	77.2	76.3	75.5	75.1
85°	56.2	55.8	52.6	50.1	50.1
87.5°	33.7	32.0	30.4	28.3	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)