

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: P159763

Luminaire Tested: **VST-F04-LED-E-U-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159763
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-F04-LED-E-U-T4-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (28) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8294.9 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 102.2
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

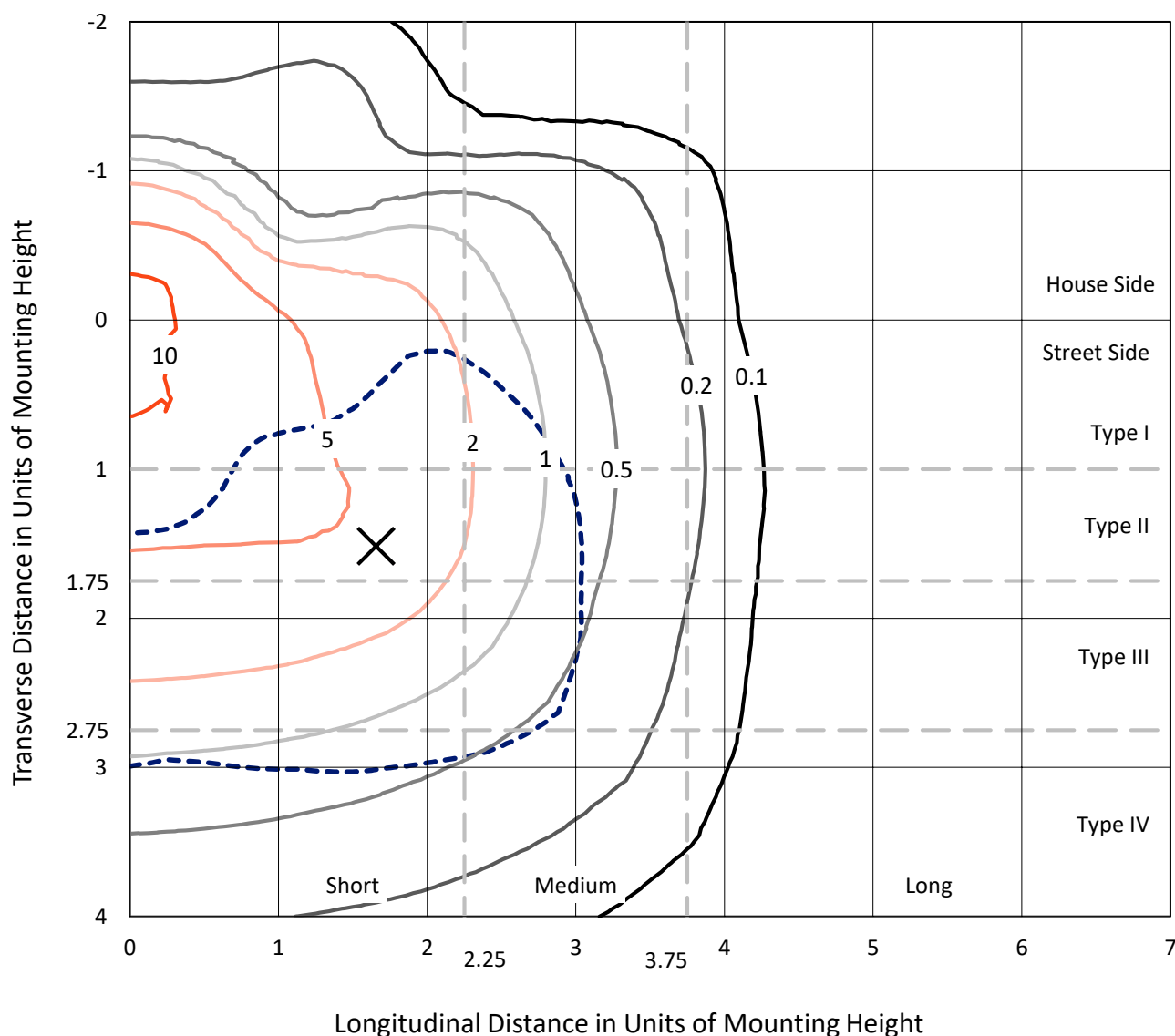


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

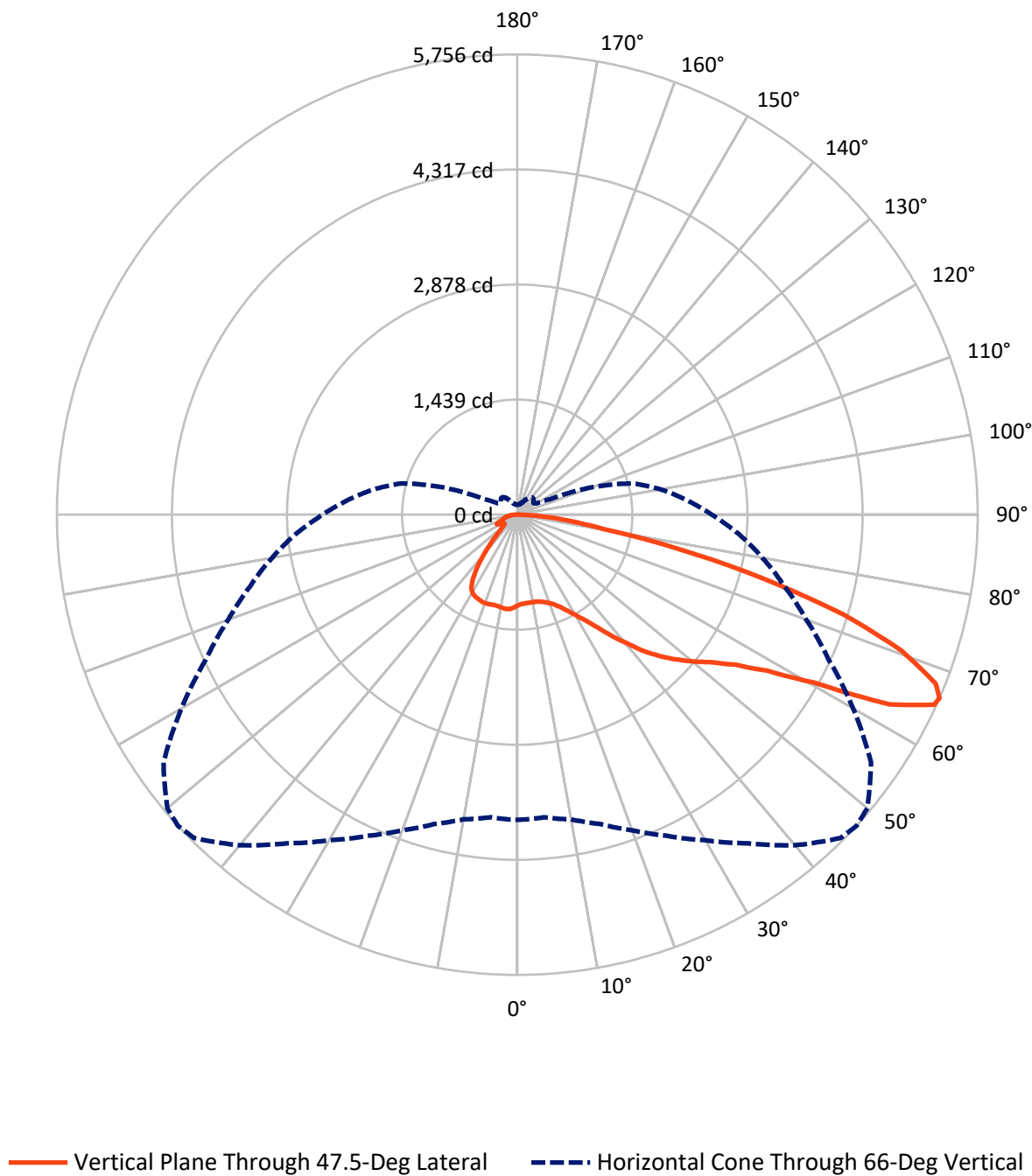


Based on 10 foot mounting height. Maximum calculated value = 11.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1717.4	0.0	1717.4
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	6577.5	0.0	6577.5
	% Fixture	79.3	0.0	79.3
Total	Lumens	8294.9	0.0	8294.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.4	1.3
10°-20°	328.0	4.0
20°-30°	559.7	6.7
30°-40°	844.7	10.2
40°-50°	1097.9	13.2
50°-60°	1506.3	18.2
60°-70°	2317.1	27.9
70°-80°	1339.4	16.1
80°-90°	192.4	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°	8294.9	100.0
0°-180°	8294.9	100.0

Coefficient of Utilization



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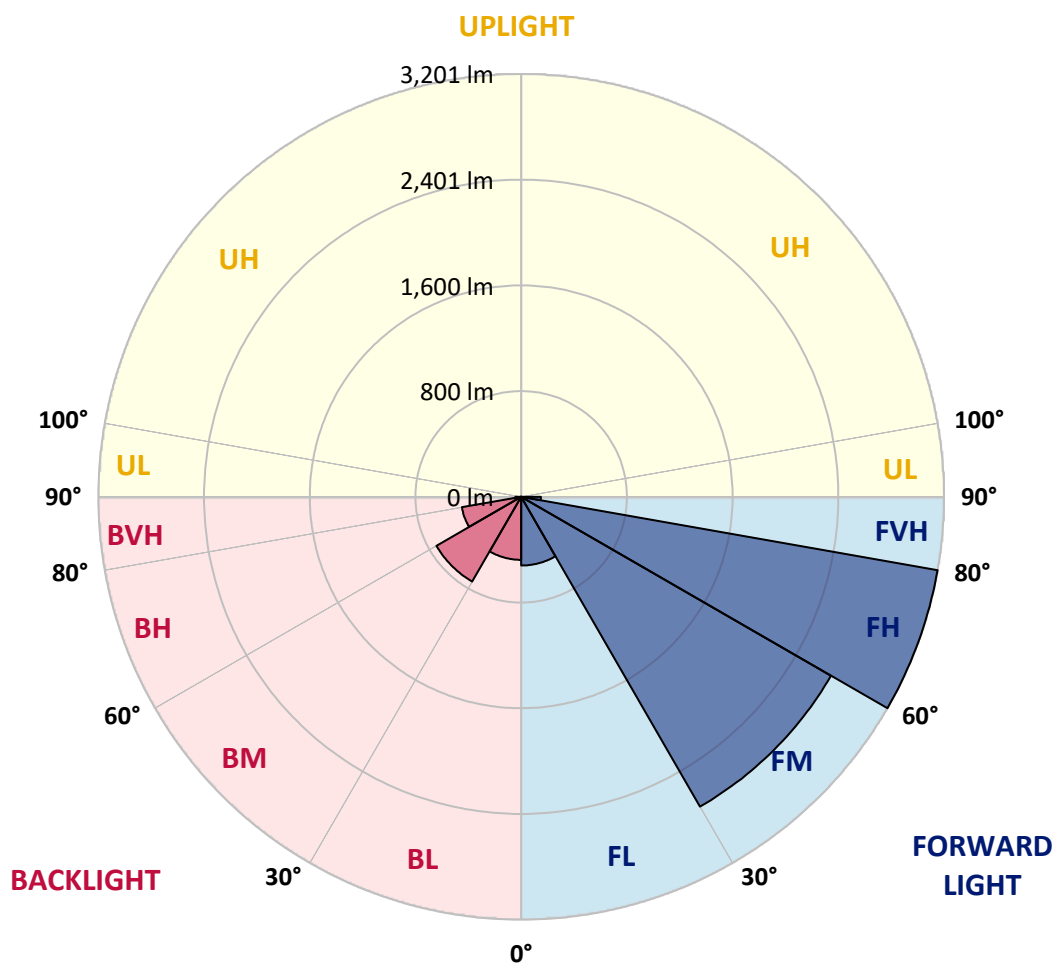
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	519.9	6.3			
FM	(30°-60°)	2707.9	32.6			
FH	(60°-80°)	3200.7	38.6			G2/5000
FVH	(80°-90°)	148.9	1.8			G2/225
BL	(0°-30°)	477.1	5.8	B1/500		
BM	(30°-60°)	741.0	8.9	B1/1000		
BH	(60°-80°)	455.8	5.5	B1/500		G1/500
BVH	(80°-90°)	43.5	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°	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8
2.5°	1105.9	1106.4	1107.0	1107.0	1108.6	1108.6	1111.4	1113.1	1113.7	1117.0	1119.2
5°	1085.2	1084.7	1085.2	1086.4	1089.1	1091.4	1096.9	1100.8	1104.2	1109.8	1112.5
7.5°	1076.3	1077.4	1078.5	1079.1	1081.3	1086.9	1091.9	1095.8	1102.5	1109.2	1112.0
10°	1088.0	1089.7	1088.0	1089.1	1089.1	1094.2	1096.4	1099.2	1104.2	1110.3	1112.0
12.5°	1115.3	1118.7	1115.3	1112.5	1110.3	1114.8	1113.7	1111.4	1114.2	1115.9	1115.9
15°	1160.5	1160.5	1158.3	1154.4	1148.8	1149.3	1144.3	1139.3	1137.1	1133.2	1130.4
17.5°	1204.5	1203.4	1198.4	1193.4	1189.5	1187.8	1180.5	1173.9	1166.1	1159.9	1153.2
20°	1247.4	1251.9	1245.8	1238.5	1232.4	1228.5	1222.9	1209.5	1200.1	1190.0	1183.3
22.5°	1321.6	1317.7	1311.0	1300.4	1294.3	1287.6	1275.9	1261.4	1246.9	1234.6	1226.3
25°	1397.9	1394.0	1384.6	1376.7	1367.8	1362.3	1349.4	1331.6	1317.7	1298.7	1287.6
27.5°	1479.9	1476.5	1465.4	1459.2	1453.1	1446.4	1435.3	1416.9	1404.1	1382.3	1370.6
30°	1572.4	1571.8	1556.8	1555.7	1546.8	1539.5	1531.7	1516.1	1503.3	1481.5	1467.6
32.5°	1671.1	1668.8	1658.2	1654.9	1661.0	1656.0	1644.9	1628.7	1612.0	1599.1	1583.5
35°	1811.5	1807.6	1801.5	1804.3	1808.2	1822.1	1804.8	1790.9	1770.8	1754.1	1732.4
37.5°	1914.1	1908.5	1915.7	1931.4	1953.6	1964.2	1979.3	1979.8	1970.4	1948.1	1929.1
40°	2008.3	2006.0	2022.8	2044.5	2085.7	2115.8	2144.3	2158.2	2161.6	2147.1	2118.6
42.5°	2088.0	2094.7	2117.0	2150.4	2208.4	2254.1	2307.0	2339.9	2360.5	2352.7	2339.9
45°	2182.7	2186.1	2213.4	2255.8	2310.9	2386.7	2456.4	2512.1	2548.4	2547.8	2533.3
47.5°	2301.5	2302.0	2325.4	2375.0	2434.1	2511.0	2599.1	2673.2	2721.2	2723.4	2712.3
50°	2442.5	2441.4	2467.0	2513.8	2576.8	2650.9	2744.6	2837.1	2904.0	2904.0	2887.8
52.5°	2624.2	2622.0	2635.9	2677.1	2737.9	2815.9	2909.0	3016.0	3088.5	3104.1	3069.0
55°	2866.6	2870.0	2873.3	2909.6	2961.4	3023.3	3130.3	3229.0	3325.9	3334.9	3314.2
57.5°	3147.0	3135.9	3159.8	3218.9	3278.0	3355.5	3431.3	3547.8	3662.6	3682.1	3679.3
60°	3585.1	3570.6	3595.2	3670.4	3735.6	3857.7	3987.6	4138.1	4274.1	4314.2	4265.7
62.5°	3988.1	4006.0	4039.4	4126.9	4221.7	4384.4	4579.5	4837.6	5095.6	5236.1	5226.1
65°	3951.9	3935.2	3999.3	4118.5	4290.2	4497.6	4740.0	5051.1	5422.8	5704.9	5730.0
66°	3817.6	3800.3	3869.4	4006.0	4202.2	4432.9	4702.1	5018.7	5398.9	5717.7	5756.2
67.5°	3595.7	3578.4	3656.5	3780.8	3983.1	4273.5	4564.5	4910.6	5305.8	5611.2	5642.4
70°	3167.6	3144.2	3205.0	3345.4	3509.3	3790.2	4067.3	4434.0	4839.8	5083.9	5095.6
72.5°	2683.3	2628.6	2693.3	2801.4	2918.5	3150.9	3392.3	3643.1	3966.4	4192.1	4256.8
75°	1947.0	1975.4	1994.3	2065.7	2143.2	2335.5	2477.0	2687.2	2937.4	3100.8	3152.6
77.5°	1032.8	1075.8	1102.5	1173.9	1302.1	1448.7	1601.9	1731.8	1896.2	1987.6	2051.2
80°	579.7	609.8	653.3	709.6	772.0	884.6	975.4	1042.3	1065.7	1081.9	1096.4
82.5°	318.8	395.2	459.8	498.9	535.7	580.8	634.9	690.6	708.4	681.7	667.8
85°	49.6	73.0	222.4	271.4	295.4	330.0	369.0	410.2	410.8	353.4	385.7
87.5°	13.9	15.6	31.8	47.9	46.8	37.9	46.8	85.3	50.2	25.1	29.0
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8
2.5°	1120.4	1121.5	1124.3	1127.0	1129.8	1132.6	1134.3	1137.1	1139.3	1142.6	1146.5
5°	1115.9	1118.7	1123.7	1129.8	1135.4	1140.4	1144.3	1149.9	1154.9	1159.4	1166.1
7.5°	1115.9	1121.5	1129.8	1136.5	1141.5	1147.7	1153.8	1159.4	1164.9	1169.4	1173.9
10°	1116.4	1122.0	1130.4	1138.2	1143.8	1150.4	1155.5	1160.5	1166.6	1169.4	1175.0
12.5°	1118.7	1120.9	1127.0	1134.8	1141.5	1148.2	1153.2	1158.3	1164.9	1166.1	1170.0
15°	1129.8	1126.5	1128.2	1133.7	1141.0	1146.5	1152.1	1156.0	1160.5	1159.4	1162.7
17.5°	1150.4	1142.1	1138.7	1139.3	1142.6	1146.5	1148.8	1149.3	1149.9	1144.9	1145.4
20°	1178.3	1166.6	1158.8	1154.9	1150.4	1146.5	1140.4	1133.2	1126.5	1116.4	1115.3
22.5°	1220.1	1202.8	1194.5	1183.9	1170.5	1153.8	1138.7	1120.9	1106.4	1091.4	1085.8
25°	1280.9	1263.0	1254.1	1237.4	1213.4	1189.5	1167.7	1143.8	1122.6	1104.7	1096.4
27.5°	1362.3	1344.4	1334.9	1317.7	1288.1	1264.2	1234.1	1208.4	1182.8	1156.6	1146.0
30°	1460.9	1445.3	1434.7	1420.8	1395.1	1368.9	1333.8	1294.3	1253.6	1211.8	1191.1
32.5°	1577.4	1560.1	1552.3	1536.2	1509.4	1482.1	1443.1	1392.4	1324.4	1258.6	1217.3
35°	1722.9	1703.4	1694.5	1673.3	1642.1	1601.9	1560.1	1492.1	1400.2	1308.7	1241.3
37.5°	1917.4	1873.9	1844.4	1795.9	1745.7	1689.4	1629.8	1560.1	1451.4	1338.3	1244.6
40°	2089.6	2045.6	1988.8	1919.1	1841.1	1763.6	1695.6	1616.4	1498.3	1359.5	1234.1
42.5°	2303.7	2225.7	2134.8	2040.6	1936.9	1841.6	1760.8	1667.7	1530.0	1365.0	1204.5
45°	2499.3	2406.2	2284.7	2159.3	2030.6	1910.7	1819.9	1716.2	1557.3	1365.0	1168.8
47.5°	2677.7	2566.2	2420.7	2264.7	2114.7	1983.7	1880.6	1765.8	1595.8	1382.3	1158.3
50°	2842.7	2714.5	2548.9	2367.8	2199.5	2059.6	1948.6	1829.3	1654.3	1426.9	1183.9
52.5°	3016.6	2880.6	2678.8	2486.5	2300.9	2151.0	2032.8	1907.9	1730.1	1497.1	1229.0
55°	3244.6	3085.1	2856.1	2644.3	2440.2	2274.7	2140.4	2002.1	1813.2	1576.3	1284.2
57.5°	3604.1	3372.8	3143.7	2868.3	2676.0	2458.1	2310.9	2152.1	1948.1	1679.4	1367.3
60°	4233.4	3949.1	3673.7	3357.2	3119.7	2891.7	2669.3	2462.0	2216.2	1912.4	1549.5
62.5°	5131.9	4843.1	4410.6	4023.2	3664.8	3362.7	3072.9	2809.2	2493.8	2161.6	1774.2
65°	5668.6	5338.1	4822.5	4301.9	3866.6	3492.0	3160.4	2837.7	2497.1	2173.3	1842.2
66°	5711.6	5398.9	4848.2	4298.0	3846.0	3457.5	3112.5	2778.6	2429.7	2119.7	1819.9
67.5°	5631.9	5362.6	4795.8	4222.2	3760.1	3340.4	2985.9	2635.9	2285.3	1998.2	1745.7
70°	5069.4	4874.9	4388.9	3851.6	3390.6	3020.5	2646.5	2309.8	1977.6	1736.3	1549.0
72.5°	4155.9	3909.5	3569.5	3208.3	2845.5	2517.2	2177.2	1890.7	1612.0	1436.4	1303.7
75°	3052.8	2831.0	2456.4	2231.2	1991.5	1785.3	1556.2	1284.8	1086.9	998.8	966.5
77.5°	1935.3	1694.5	1378.4	1129.8	971.5	835.0	658.3	523.4	419.2	436.4	483.3
80°	977.7	842.2	630.4	497.7	430.3	357.8	283.2	214.6	156.6	178.9	202.3
82.5°	627.6	523.9	417.5	328.9	277.6	244.7	195.6	142.1	105.9	119.3	146.0
85°	377.9	319.4	254.7	208.5	181.2	151.1	110.9	78.6	78.0	83.6	103.1
87.5°	57.4	81.9	47.4	50.7	53.5	57.4	50.7	42.9	37.3	48.5	61.3
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°	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8	1134.8
2.5°	1150.4	1151.6	1153.8	1156.6	1156.0	1159.9	1162.2	1159.9	1164.9	1164.9	1167.7
5°	1171.6	1173.3	1177.2	1180.0	1181.1	1184.5	1185.6	1185.0	1186.1	1186.7	1187.8
7.5°	1177.8	1182.2	1183.9	1185.6	1186.1	1187.2	1187.2	1186.1	1186.1	1185.6	1186.7
10°	1176.1	1177.8	1178.9	1178.3	1178.3	1177.2	1176.6	1176.1	1176.1	1175.0	1176.6
12.5°	1170.5	1170.5	1170.5	1169.4	1169.4	1168.8	1168.8	1168.8	1170.0	1170.5	1173.3
15°	1159.4	1159.4	1160.5	1159.9	1161.6	1164.4	1167.7	1170.0	1172.7	1173.3	1175.0
17.5°	1142.1	1142.6	1146.0	1153.2	1160.5	1168.8	1175.0	1176.6	1174.4	1168.8	1164.9
20°	1112.0	1119.2	1132.6	1149.9	1166.1	1176.6	1179.4	1172.7	1162.2	1147.7	1139.9
22.5°	1085.2	1099.7	1123.7	1152.1	1172.2	1179.4	1171.1	1155.5	1136.5	1119.8	1108.1
25°	1095.8	1112.5	1137.6	1162.2	1175.0	1171.1	1154.4	1132.1	1112.0	1092.5	1073.5
27.5°	1140.4	1157.1	1175.0	1182.2	1177.8	1163.3	1139.9	1115.9	1089.1	1061.3	1037.9
30°	1182.8	1192.3	1193.4	1186.1	1170.0	1146.5	1119.2	1091.4	1057.4	1023.9	994.4
32.5°	1196.2	1185.0	1164.9	1144.3	1122.0	1098.1	1066.3	1029.5	993.3	955.4	922.5
35°	1192.3	1147.1	1097.5	1053.5	1026.7	999.4	970.4	921.4	880.7	848.3	827.2
37.5°	1157.1	1074.6	998.3	934.2	892.4	860.1	817.1	776.4	741.3	726.8	709.6
40°	1108.1	982.1	876.2	786.5	743.0	701.8	653.8	622.6	612.6	599.2	599.7
42.5°	1037.9	874.0	737.4	634.3	586.9	541.8	507.8	489.4	489.9	478.8	481.0
45°	963.7	765.3	593.6	491.1	444.2	405.8	386.8	381.3	381.8	382.4	379.0
47.5°	918.6	680.6	476.0	372.3	331.1	309.4	299.3	296.5	297.1	297.6	293.7
50°	911.9	636.5	397.4	284.8	258.1	245.8	240.8	238.0	238.0	235.8	232.4
52.5°	930.8	625.4	359.0	246.9	221.3	210.1	206.2	204.0	200.7	196.2	190.1
55°	960.9	635.4	347.3	234.1	209.0	197.9	192.9	191.7	186.2	177.8	167.8
57.5°	1016.7	671.7	355.1	237.4	211.3	201.2	197.9	196.8	189.0	176.1	163.3
60°	1176.6	777.0	394.1	256.4	227.4	219.1	219.1	217.4	206.8	188.4	170.0
62.5°	1397.4	931.4	447.0	282.6	249.7	248.6	258.1	258.6	239.7	210.1	181.2
65°	1503.8	1003.9	465.4	288.2	255.8	268.7	287.6	287.6	260.9	220.2	182.8
66°	1504.4	1002.2	459.8	281.5	249.2	265.9	285.4	285.4	257.5	217.4	180.0
67.5°	1465.9	971.0	441.5	269.2	234.1	249.7	267.0	266.4	241.3	206.2	172.2
70°	1314.9	858.9	389.1	249.2	216.3	216.8	223.0	219.1	202.3	178.4	156.6
72.5°	1133.7	718.5	337.2	236.3	202.3	191.7	186.7	183.4	172.8	158.3	144.9
75°	869.5	557.9	293.7	224.6	190.1	171.7	165.0	162.2	155.0	146.6	136.0
77.5°	532.9	382.4	249.2	205.7	176.1	159.4	152.2	146.6	139.3	131.5	124.3
80°	229.6	230.8	199.5	174.5	153.3	133.8	124.3	117.6	113.7	110.9	107.0
82.5°	160.5	165.5	152.2	135.4	117.1	103.1	94.8	93.1	93.6	93.6	92.5
85°	120.4	118.2	106.5	97.0	88.6	79.7	73.0	72.5	74.7	74.7	73.0
87.5°	69.7	70.2	60.2	56.3	58.5	50.2	45.7	46.3	51.8	51.3	50.2
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):

	160°	165°	170°	175°	180°
0°	1134.8	1134.8	1134.8	1134.8	1134.8
2.5°	1167.7	1169.4	1168.8	1170.5	1168.8
5°	1189.5	1188.9	1188.4	1190.6	1187.8
7.5°	1186.1	1186.7	1186.7	1186.7	1186.1
10°	1177.8	1180.0	1181.1	1183.3	1182.8
12.5°	1175.0	1178.3	1181.7	1185.0	1185.6
15°	1175.5	1177.8	1179.4	1181.1	1181.7
17.5°	1161.0	1160.5	1158.8	1157.7	1156.6
20°	1131.5	1128.7	1125.9	1121.5	1123.7
22.5°	1094.7	1086.9	1078.0	1070.7	1070.2
25°	1051.8	1037.3	1022.8	1013.3	1010.0
27.5°	1013.9	996.6	981.6	973.2	971.0
30°	968.7	953.1	939.8	932.5	928.1
32.5°	901.9	889.6	872.9	867.3	866.7
35°	808.8	799.3	787.6	785.4	782.6
37.5°	703.4	700.1	694.5	687.8	686.7
40°	590.8	593.1	591.4	587.5	581.4
42.5°	482.1	486.0	486.6	489.4	492.2
45°	384.0	387.4	387.4	390.2	393.5
47.5°	294.9	292.6	294.3	297.1	298.8
50°	223.0	221.3	218.5	216.3	214.0
52.5°	179.5	176.1	168.3	166.1	163.9
55°	158.3	152.2	146.6	144.4	144.4
57.5°	152.2	144.4	138.2	135.4	134.3
60°	153.3	142.1	134.3	129.9	128.2
62.5°	158.3	142.7	132.1	127.1	125.4
65°	157.7	141.6	131.5	126.0	124.3
66°	155.0	139.9	130.4	125.4	124.3
67.5°	150.5	137.7	129.3	124.9	123.2
70°	141.6	133.2	127.1	123.2	121.5
72.5°	134.3	128.8	123.2	118.7	117.6
75°	127.6	122.1	117.1	114.8	113.1
77.5°	117.6	112.6	109.8	107.6	106.5
80°	104.2	100.9	97.5	95.3	93.6
82.5°	90.9	86.4	83.1	81.4	80.3
85°	74.1	71.3	66.3	63.0	62.4
87.5°	49.6	46.8	45.1	42.4	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)