

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: P159547

Luminaire Tested: **VST-F04-LED-E-U-T3-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159547
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33706)
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-T3-7060
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (28) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10362.7 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

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

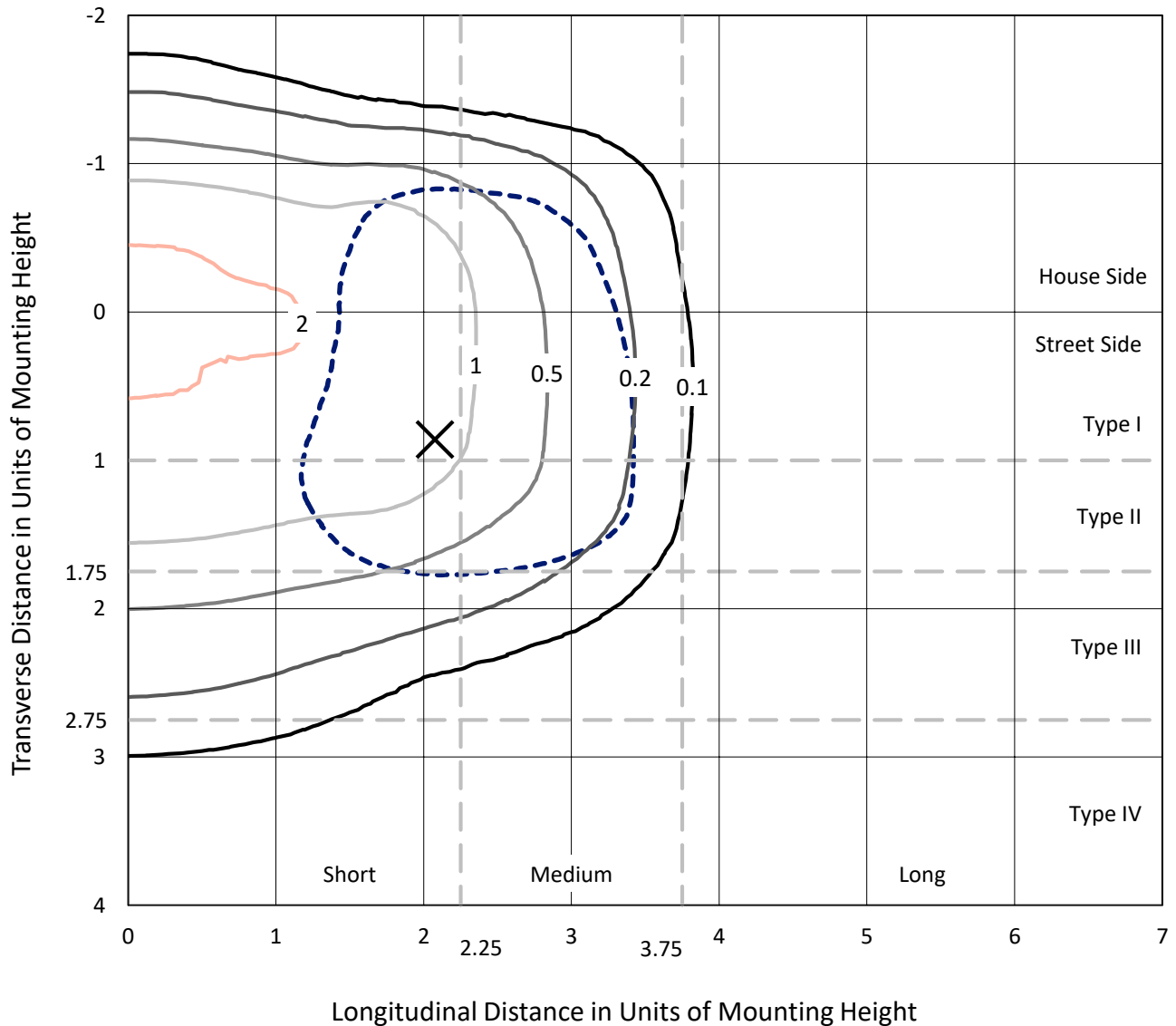


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

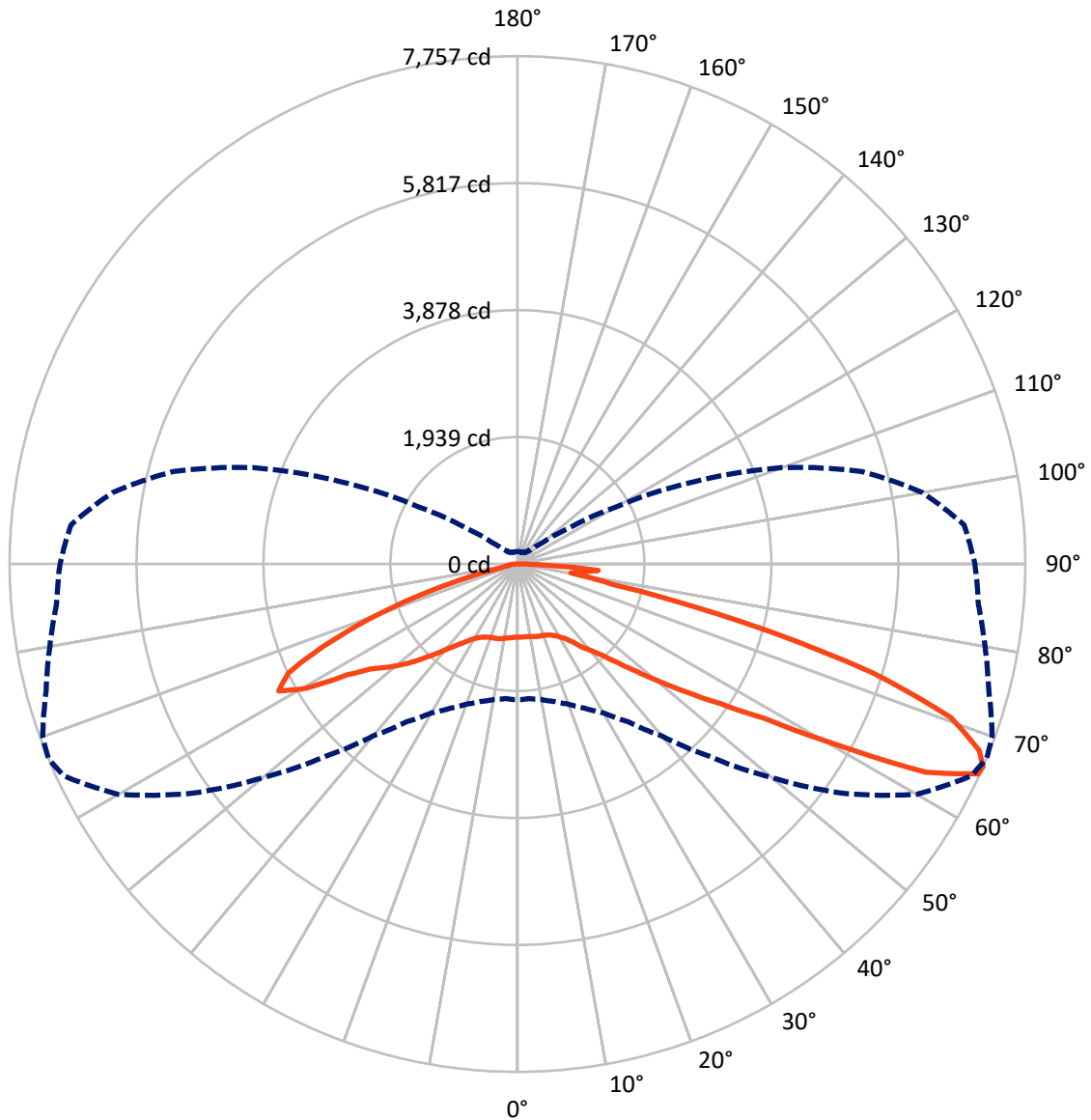


Based on 20 foot mounting height. Maximum calculated value = 2.8 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical



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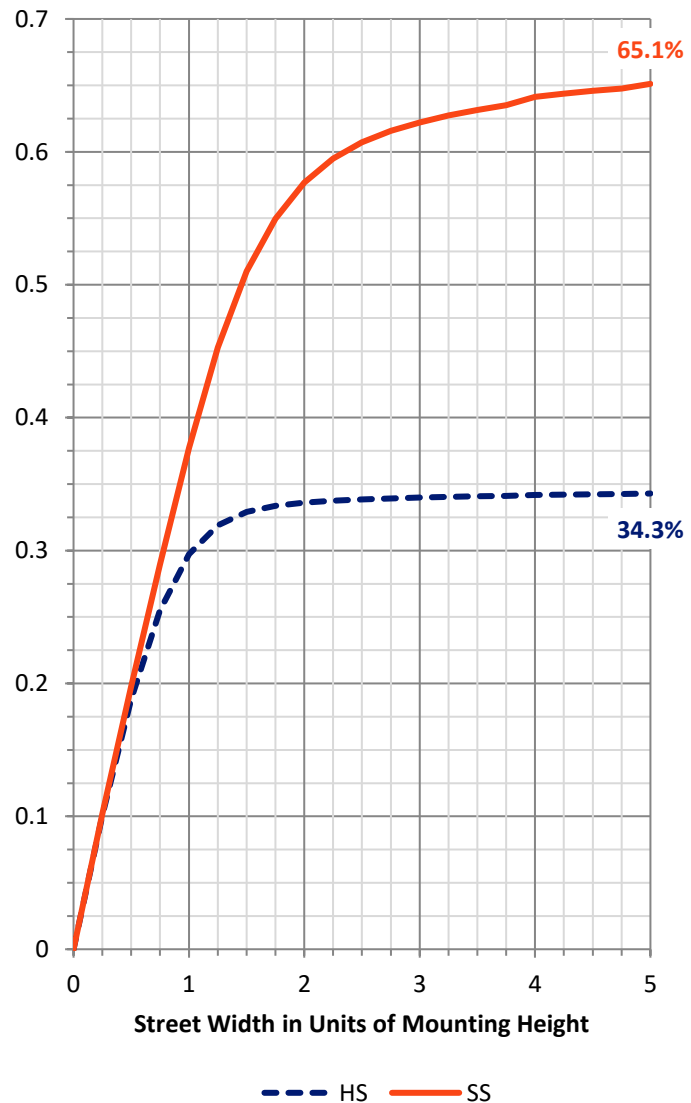
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3585.9	0.0	3585.9
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	6776.7	0.0	6776.7
	% Fixture	65.4	0.0	65.4
Total	Lumens	10362.7	0.0	10362.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	1.0
10°-20°	317.7	3.1
20°-30°	546.2	5.3
30°-40°	882.7	8.5
40°-50°	1462.8	14.1
50°-60°	2295.8	22.2
60°-70°	3138.8	30.3
70°-80°	1380.3	13.3
80°-90°	231.0	2.2
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°	10362.7	100.0
0°-180°	10362.7	100.0

Coefficient of Utilization



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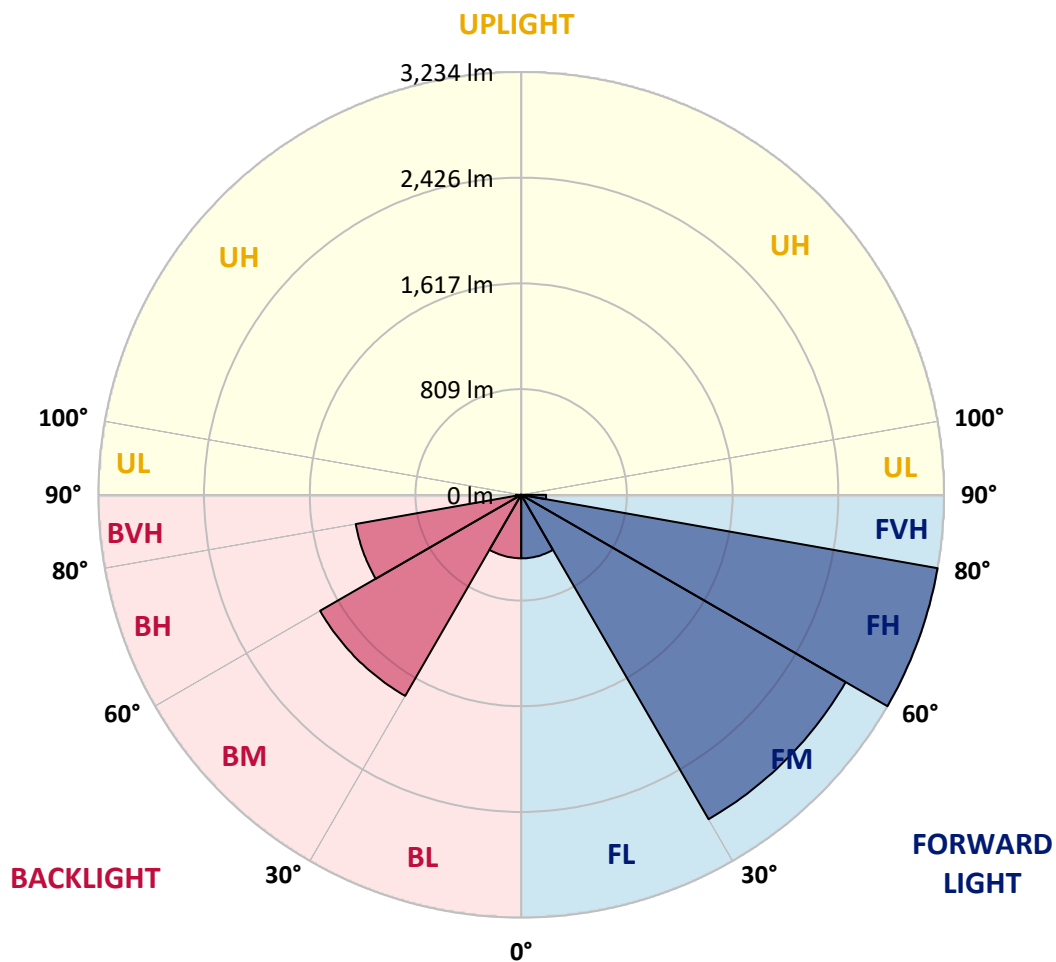
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	486.1	4.7			
FM	(30°-60°)	2865.6	27.7			
FH	(60°-80°)	3234.4	31.2			G2/5000
FVH	(80°-90°)	190.6	1.8			G2/225
BL	(0°-30°)	485.1	4.7	B1/500		
BM	(30°-60°)	1775.7	17.1	B2/2500		
BH	(60°-80°)	1284.7	12.4	B3/2500		G3/2500
BVH	(80°-90°)	40.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1116.1	1116.1	1116.8	1116.1	1116.1	1115.4	1118.1	1118.1	1118.1	1117.5	1119.5
5°	1113.4	1113.4	1114.1	1114.1	1114.8	1114.1	1116.1	1116.8	1116.8	1116.8	1118.8
7.5°	1106.6	1108.7	1107.3	1108.0	1108.7	1110.7	1113.4	1114.8	1116.1	1118.1	1118.8
10°	1092.4	1095.8	1095.1	1097.1	1097.8	1103.9	1105.9	1108.7	1113.4	1116.1	1118.1
12.5°	1072.7	1074.8	1075.4	1078.2	1080.9	1088.3	1093.7	1098.5	1105.3	1112.0	1118.8
15°	1057.2	1058.5	1058.5	1061.2	1065.3	1072.1	1078.8	1087.0	1097.1	1108.7	1119.5
17.5°	1061.9	1065.3	1062.6	1061.9	1063.2	1067.3	1073.4	1080.2	1092.4	1105.3	1118.1
20°	1093.1	1093.7	1092.4	1089.0	1086.3	1087.0	1087.0	1088.3	1095.8	1105.9	1116.1
22.5°	1118.8	1121.5	1120.9	1121.5	1120.9	1123.6	1122.2	1119.5	1116.8	1117.5	1122.2
25°	1141.2	1143.9	1143.9	1145.9	1149.3	1154.7	1158.8	1158.1	1154.1	1148.6	1146.6
27.5°	1177.8	1177.8	1177.8	1179.8	1184.6	1191.3	1198.1	1202.2	1205.6	1200.1	1188.6
30°	1235.4	1236.1	1234.0	1234.7	1238.1	1246.9	1255.0	1261.1	1267.9	1267.2	1252.3
32.5°	1298.4	1301.1	1300.4	1303.1	1307.9	1316.0	1324.8	1334.3	1343.1	1348.5	1339.1
35°	1379.7	1382.4	1383.1	1387.2	1392.6	1404.8	1417.0	1429.2	1438.7	1442.7	1440.7
37.5°	1513.2	1513.9	1511.2	1505.1	1507.1	1516.6	1530.8	1550.5	1556.6	1560.7	1570.1
40°	1713.1	1711.1	1700.3	1694.8	1691.4	1695.5	1692.8	1708.4	1722.6	1723.3	1722.6
42.5°	1955.7	1949.6	1939.5	1938.1	1936.8	1935.4	1927.9	1928.6	1941.5	1944.9	1940.8
45°	2197.0	2189.5	2182.1	2188.8	2180.7	2201.7	2207.8	2224.1	2226.1	2232.9	2222.7
47.5°	2394.9	2395.5	2395.5	2405.0	2421.3	2461.3	2497.2	2528.4	2539.9	2556.1	2558.2
50°	2544.6	2548.7	2561.6	2592.1	2626.6	2693.7	2754.0	2810.3	2861.1	2880.1	2930.2
52.5°	2632.0	2642.9	2670.0	2720.8	2782.5	2869.2	2964.1	3059.6	3147.7	3222.3	3281.9
55°	2616.4	2624.6	2672.0	2751.3	2847.5	2964.1	3096.9	3235.2	3372.7	3498.8	3596.3
57.5°	2516.2	2521.6	2569.0	2658.5	2778.4	2934.9	3122.7	3328.0	3521.1	3724.4	3891.1
60°	2384.7	2392.8	2436.9	2507.3	2632.7	2799.4	3016.9	3295.5	3603.8	3923.7	4235.4
62.5°	2300.7	2298.6	2337.3	2400.3	2494.5	2645.6	2855.0	3185.0	3611.9	4152.7	4768.7
65°	2161.1	2155.0	2194.9	2266.8	2369.1	2515.5	2714.0	3031.2	3526.5	4239.4	5112.9
66°	2074.3	2062.1	2102.1	2174.6	2276.9	2432.8	2623.2	2936.3	3422.9	4154.7	5076.4
67.5°	1922.5	1916.4	1935.4	1992.3	2068.2	2214.6	2413.1	2728.3	3177.6	3899.9	4808.0
70°	1562.7	1549.1	1564.0	1589.8	1618.9	1654.8	1776.8	2026.9	2407.1	3107.1	3873.5
72.5°	1064.6	1057.8	1085.6	1124.9	1202.8	1239.4	1287.6	1328.2	1462.4	1958.4	2701.8
75°	809.8	813.9	849.1	914.2	1014.5	1122.9	1228.6	1267.2	1222.5	1183.9	1533.5
77.5°	454.0	477.8	520.4	603.1	709.5	862.7	1047.0	1250.3	1351.9	1326.9	1240.8
80°	187.0	183.6	204.7	250.1	286.7	412.0	630.2	885.0	1171.0	1351.9	1323.5
82.5°	52.2	53.5	69.1	88.8	114.5	145.7	227.7	365.9	596.3	927.7	1214.4
85°	16.3	16.3	22.4	33.2	39.3	45.4	57.6	94.9	162.0	323.2	655.3
87.5°	3.4	3.4	4.7	9.5	10.2	10.2	12.9	17.6	15.6	14.2	63.7
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1117.5	1116.1	1116.8	1117.5	1116.8	1116.8	1116.1	1115.4	1116.1	1116.1	1118.1
5°	1116.8	1116.1	1116.8	1116.8	1116.8	1117.5	1117.5	1117.5	1119.5	1119.5	1122.9
7.5°	1118.1	1118.1	1119.5	1119.5	1119.5	1119.5	1120.2	1121.5	1124.9	1124.2	1130.3
10°	1120.9	1122.2	1125.6	1126.3	1126.3	1128.3	1129.7	1132.4	1135.8	1137.1	1142.5
12.5°	1124.2	1131.0	1137.1	1138.5	1140.5	1143.9	1145.9	1147.3	1153.4	1155.4	1162.2
15°	1128.3	1137.8	1145.2	1148.0	1150.7	1154.7	1157.4	1159.5	1164.9	1167.6	1175.7
17.5°	1129.0	1139.8	1148.6	1152.7	1156.1	1160.8	1164.9	1169.0	1175.1	1179.1	1187.3
20°	1128.3	1142.5	1156.1	1161.5	1164.9	1173.7	1179.8	1185.2	1192.7	1196.7	1204.9
22.5°	1135.8	1152.0	1170.3	1177.1	1182.5	1194.7	1202.8	1211.7	1221.1	1223.9	1230.0
25°	1153.4	1170.3	1193.4	1202.8	1212.3	1228.6	1240.1	1253.0	1262.5	1263.8	1265.9
27.5°	1183.2	1198.8	1226.6	1240.8	1256.4	1279.4	1296.4	1309.2	1322.8	1322.8	1321.4
30°	1243.5	1246.9	1276.0	1294.3	1317.4	1351.3	1376.3	1390.6	1400.7	1400.7	1389.2
32.5°	1321.4	1317.4	1343.8	1363.5	1395.3	1442.7	1476.6	1487.5	1498.3	1494.9	1475.3
35°	1433.9	1422.4	1437.3	1467.1	1503.1	1568.1	1603.3	1627.7	1634.5	1625.0	1593.9
37.5°	1575.6	1574.2	1581.7	1614.9	1654.8	1738.9	1774.8	1790.4	1785.0	1768.0	1713.1
40°	1725.3	1721.3	1716.5	1738.9	1783.6	1884.6	1948.3	1956.4	1949.0	1923.9	1854.8
42.5°	1925.2	1925.2	1902.9	1909.0	1946.2	2059.4	2134.6	2160.4	2161.1	2124.5	2032.3
45°	2200.4	2197.7	2158.3	2148.9	2177.3	2288.5	2385.4	2399.6	2399.6	2351.5	2250.5
47.5°	2531.1	2527.7	2489.0	2455.8	2461.3	2581.2	2661.9	2683.5	2664.6	2628.6	2508.7
50°	2903.8	2897.7	2858.4	2827.2	2813.6	2934.9	3003.4	3013.6	2985.8	2943.1	2813.0
52.5°	3281.9	3300.2	3277.2	3260.2	3265.0	3343.6	3414.1	3365.9	3351.7	3305.6	3174.8
55°	3675.6	3731.9	3782.7	3767.8	3785.4	3862.0	3875.5	3811.8	3786.1	3752.9	3607.2
57.5°	4072.1	4236.1	4402.8	4449.5	4492.9	4602.7	4587.1	4482.7	4502.4	4551.8	4387.9
60°	4625.7	5099.4	5522.3	5600.2	5735.0	5828.6	5849.6	5829.2	5920.7	5895.0	5749.9
62.5°	5476.2	6265.6	6853.9	7000.2	7135.8	7131.0	7059.9	6986.7	7076.8	7076.8	6698.0
65°	6083.4	6979.2	7608.8	7730.1	7724.7	7561.3	7393.3	7246.9	7234.0	7133.7	6580.1
66°	6111.8	7034.1	7650.8	7756.5	7715.8	7452.9	7251.6	7066.0	6986.7	6847.1	6279.9
67.5°	5855.7	6878.9	7513.9	7606.1	7499.0	7122.2	6845.0	6596.3	6481.1	6246.0	5712.0
70°	4803.3	5911.9	6835.6	7024.0	6902.6	6425.6	6046.1	5710.0	5489.7	5150.2	4765.3
72.5°	3506.2	4364.8	5365.0	5671.3	5652.4	5213.2	4907.6	4600.0	4310.6	4001.6	3720.4
75°	2279.0	2839.4	3397.1	3576.0	3490.0	3235.8	3016.9	2837.4	2562.9	2348.1	2295.9
77.5°	1301.1	1589.8	1503.7	1481.4	1373.6	1108.7	737.3	517.1	466.9	582.8	639.0
80°	1238.1	1122.2	918.9	828.8	761.7	519.1	272.4	191.8	168.1	172.1	185.0
82.5°	1396.0	1454.9	1190.0	994.1	865.4	631.6	344.9	160.6	117.2	138.9	155.9
85°	1046.3	1473.2	1460.4	1237.4	1015.1	727.8	408.0	122.7	70.5	97.6	127.4
87.5°	212.1	349.0	336.1	295.5	251.4	175.5	68.4	38.6	35.2	48.1	73.2
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1119.5	1119.5	1120.9	1122.9	1123.6	1123.6	1124.9	1123.6	1126.3	1126.9	1127.6
5°	1125.6	1127.6	1129.0	1132.4	1134.4	1135.8	1137.8	1136.4	1139.1	1139.8	1141.2
7.5°	1132.4	1135.8	1138.5	1139.8	1142.5	1142.5	1143.2	1141.9	1141.2	1139.1	1138.5
10°	1144.6	1146.6	1150.0	1148.6	1147.3	1142.5	1138.5	1132.4	1129.0	1122.9	1119.5
12.5°	1164.2	1165.6	1165.6	1159.5	1150.7	1139.8	1129.7	1119.5	1111.4	1104.6	1100.5
15°	1177.8	1180.5	1177.1	1168.3	1155.4	1140.5	1126.9	1113.4	1102.6	1093.7	1088.3
17.5°	1187.9	1187.3	1181.2	1169.0	1156.8	1143.9	1131.7	1117.5	1103.9	1091.0	1082.9
20°	1203.5	1196.7	1185.9	1173.0	1160.2	1149.3	1139.8	1126.3	1112.0	1094.4	1082.2
22.5°	1224.5	1212.3	1196.7	1183.2	1171.0	1160.8	1150.0	1138.5	1123.6	1103.9	1087.0
25°	1254.3	1233.3	1215.7	1202.2	1191.3	1179.8	1167.6	1152.7	1137.8	1117.5	1097.1
27.5°	1299.8	1268.6	1246.2	1234.0	1223.9	1208.3	1192.7	1175.1	1156.1	1135.1	1112.0
30°	1354.6	1317.4	1291.6	1280.8	1268.6	1251.0	1234.0	1209.6	1183.2	1158.1	1129.7
32.5°	1419.0	1381.1	1355.3	1347.2	1327.5	1307.2	1283.5	1251.0	1216.4	1179.1	1145.2
35°	1516.6	1468.5	1444.8	1425.8	1398.7	1374.3	1334.3	1291.6	1242.2	1192.7	1150.7
37.5°	1616.9	1568.1	1543.7	1517.3	1482.0	1437.3	1383.8	1322.8	1257.1	1196.1	1144.6
40°	1751.1	1698.2	1667.0	1626.4	1569.5	1499.7	1420.4	1337.0	1257.1	1181.2	1118.8
42.5°	1907.6	1858.8	1810.7	1743.6	1652.1	1550.5	1439.4	1332.3	1235.4	1148.0	1082.2
45°	2124.5	2041.1	1964.5	1856.8	1723.3	1580.3	1441.4	1309.9	1198.1	1101.2	1028.0
47.5°	2368.4	2260.7	2125.1	1956.4	1774.1	1591.8	1421.7	1267.9	1139.1	1034.1	954.1
50°	2649.7	2484.3	2276.3	2035.7	1799.9	1576.2	1375.0	1197.4	1057.8	937.2	851.8
52.5°	2971.5	2719.5	2413.1	2091.9	1795.8	1528.8	1297.7	1104.6	948.7	820.6	736.6
55°	3328.7	2975.6	2543.9	2127.9	1759.2	1436.6	1176.4	973.8	813.2	687.1	613.3
57.5°	3958.2	3424.9	2793.3	2176.0	1682.6	1297.0	1022.6	808.4	663.4	556.4	485.9
60°	5127.9	4210.3	3265.6	2289.1	1567.4	1122.2	828.8	634.3	513.0	435.1	382.9
62.5°	5851.6	4763.3	3496.1	2272.9	1380.4	883.0	615.3	470.3	374.7	323.2	290.7
65°	5680.2	4546.4	3214.8	1952.3	1074.1	626.2	407.3	307.7	257.5	231.1	215.5
66°	5447.0	4303.8	2977.0	1748.4	935.8	523.2	336.1	258.2	221.6	201.9	193.8
67.5°	4958.4	3860.6	2567.7	1400.0	701.4	389.7	248.0	202.6	180.3	170.1	164.7
70°	4150.0	3110.5	1816.1	826.7	380.2	211.4	158.6	141.0	135.5	132.1	130.1
72.5°	3208.7	2251.9	1061.2	406.6	191.8	136.9	120.6	113.2	111.1	111.1	111.8
75°	2021.5	1294.3	475.0	195.8	130.1	110.5	103.0	99.6	100.3	101.0	100.3
77.5°	671.6	446.6	197.9	138.9	113.2	100.3	94.2	92.8	94.2	94.9	94.9
80°	193.1	168.7	143.0	122.7	103.7	93.5	88.1	87.4	90.8	91.5	90.1
82.5°	148.4	138.9	129.4	118.6	99.6	88.1	86.1	86.7	88.8	87.4	81.3
85°	136.2	134.9	96.9	96.2	86.7	84.0	82.0	82.7	80.6	73.2	66.4
87.5°	76.6	71.2	54.9	55.6	64.4	66.4	54.9	58.3	54.2	47.4	43.4
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):

	160°	165°	170°	175°	180°
0°	1118.1	1118.1	1118.1	1118.1	1118.1
2.5°	1129.0	1128.3	1128.3	1130.3	1127.6
5°	1141.9	1141.2	1141.2	1143.2	1141.2
7.5°	1135.8	1133.7	1132.4	1131.7	1131.7
10°	1115.4	1113.4	1109.3	1108.0	1106.6
12.5°	1094.4	1092.4	1087.6	1087.6	1086.3
15°	1081.5	1078.8	1075.4	1073.4	1072.1
17.5°	1074.8	1070.7	1066.6	1064.6	1063.2
20°	1072.1	1066.6	1061.9	1058.5	1058.5
22.5°	1072.7	1066.0	1060.5	1056.5	1055.1
25°	1079.5	1069.3	1062.6	1058.5	1057.2
27.5°	1089.0	1076.8	1068.0	1062.6	1060.5
30°	1101.9	1084.9	1072.7	1066.0	1063.2
32.5°	1110.7	1087.0	1071.4	1061.9	1058.5
35°	1110.0	1079.5	1060.5	1048.3	1044.3
37.5°	1097.8	1061.9	1036.8	1021.9	1015.1
40°	1070.7	1029.4	1002.9	988.7	980.6
42.5°	1031.4	986.7	963.0	947.4	938.6
45°	969.7	925.7	896.5	884.3	872.8
47.5°	884.3	839.6	814.5	796.9	789.5
50°	784.1	739.3	712.9	698.7	691.9
52.5°	674.3	631.6	612.6	599.1	589.6
55°	560.4	521.1	513.0	498.1	489.3
57.5°	453.4	430.3	422.9	408.0	400.5
60°	354.4	347.0	338.8	329.3	325.3
62.5°	274.5	267.7	265.6	259.5	258.9
65°	209.4	210.1	208.7	207.4	206.0
66°	190.4	189.7	190.4	189.1	188.4
67.5°	162.0	164.7	166.7	166.0	166.0
70°	131.5	133.5	136.2	135.5	135.5
72.5°	112.5	115.9	117.2	116.6	116.6
75°	101.6	105.0	105.0	103.7	103.0
77.5°	94.9	96.2	94.9	93.5	92.2
80°	88.1	86.7	84.7	82.7	81.3
82.5°	76.6	73.2	71.2	67.8	67.8
85°	61.7	59.0	54.2	50.8	47.4
87.5°	40.0	38.6	35.2	26.4	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)