

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: P159766

Luminaire Tested: **VST-F04-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159766
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-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10084.8 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - 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

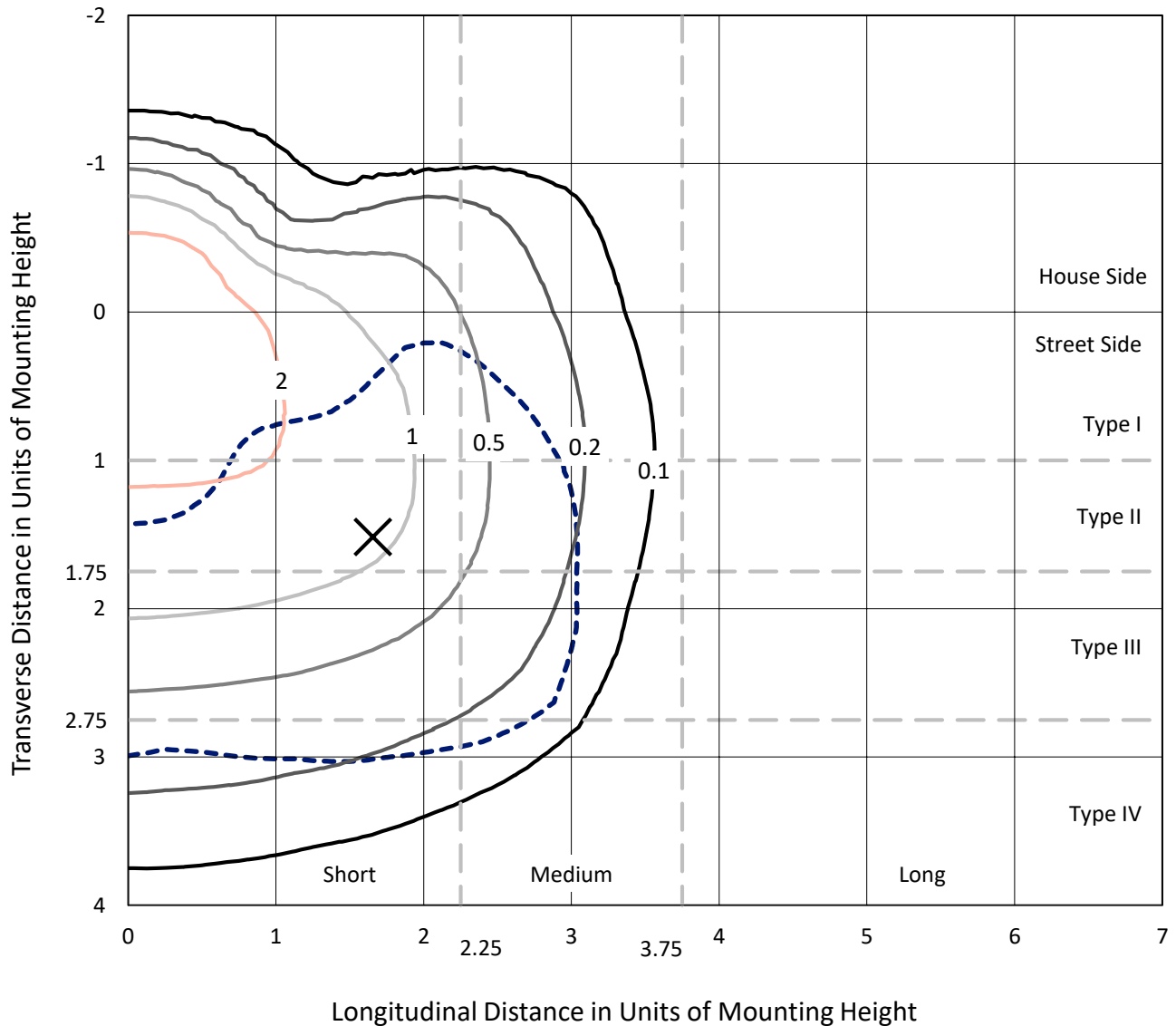


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

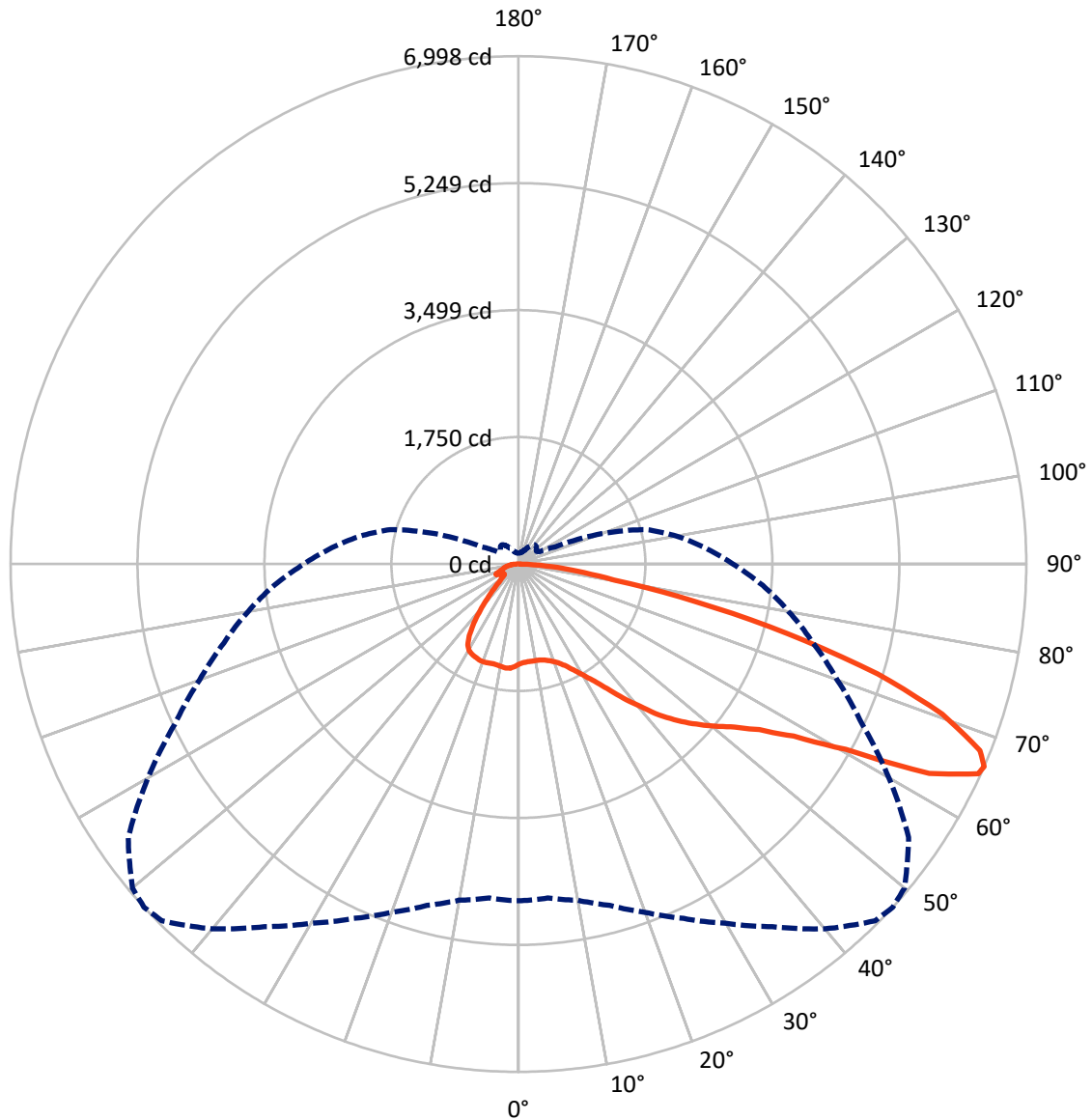


Based on 20 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical



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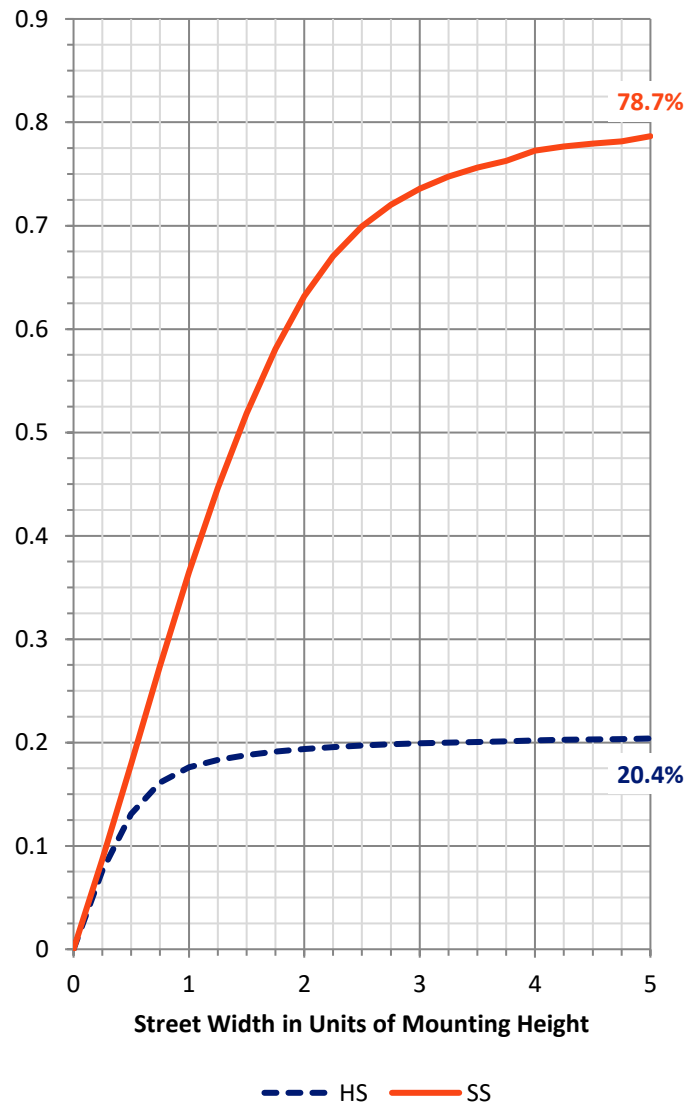
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2088.0	0.0	2088.0
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	7996.8	0.0	7996.8
	% Fixture	79.3	0.0	79.3
Total	Lumens	10084.8	0.0	10084.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	1.3
10°-20°	398.8	4.0
20°-30°	680.4	6.7
30°-40°	1027.0	10.2
40°-50°	1334.8	13.2
50°-60°	1831.3	18.2
60°-70°	2817.1	27.9
70°-80°	1628.5	16.1
80°-90°	233.9	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°	10084.8	100.0
0°-180°	10084.8	100.0



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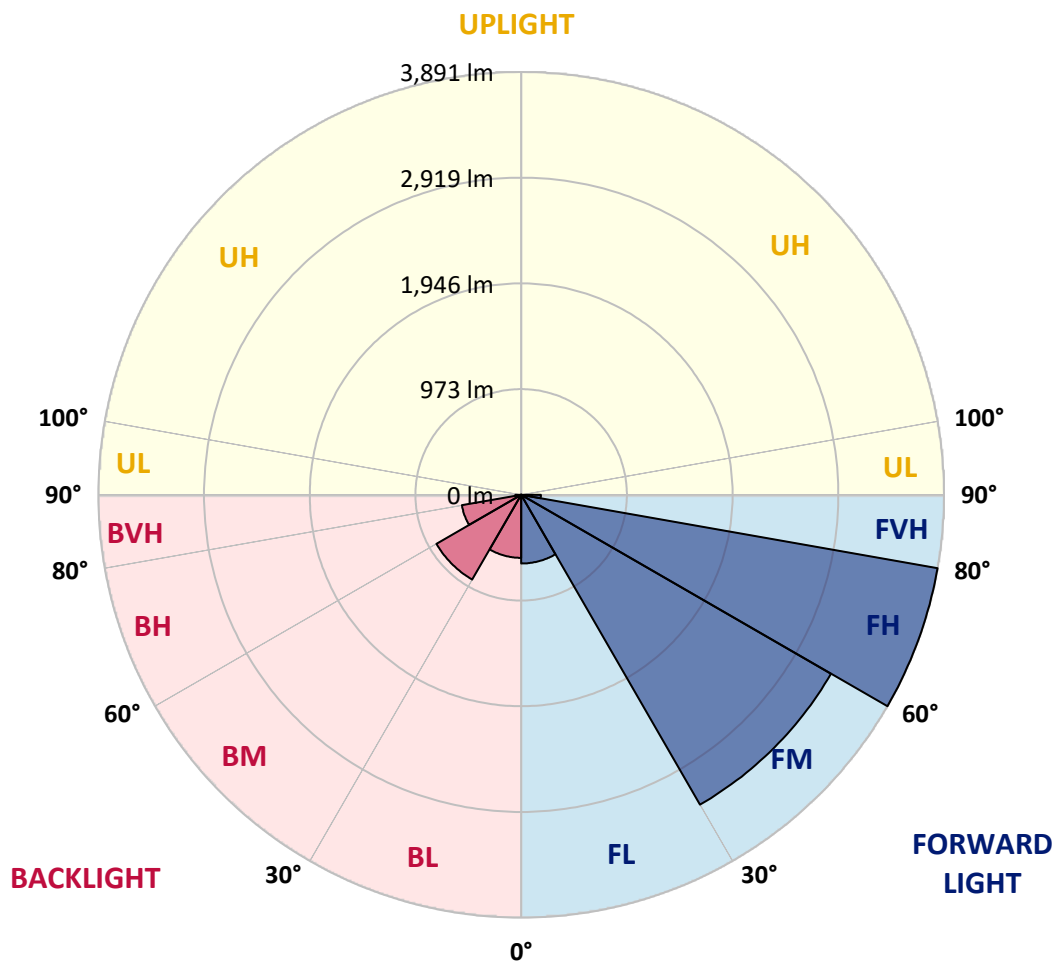
CATALOG NUMBER: VST-F04-LED-E-U-T4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	632.1	6.3			
FM (30°-60°)	3292.2	32.6			
FH (60°-80°)	3891.4	38.6			G2/5000
FVH (80°-90°)	181.0	1.8			G2/225
BL (0°-30°)	580.1	5.8	B2/1000		
BM (30°-60°)	900.9	8.9	B1/1000		
BH (60°-80°)	554.2	5.5	B2/1000		G2/1000
BVH (80°-90°)	52.9	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-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°	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7
2.5°	1344.5	1345.2	1345.8	1345.8	1347.9	1347.9	1351.3	1353.3	1354.0	1358.0	1360.7
5°	1319.4	1318.7	1319.4	1320.8	1324.1	1326.9	1333.6	1338.4	1342.4	1349.2	1352.6
7.5°	1308.6	1309.9	1311.3	1312.0	1314.7	1321.4	1327.5	1332.3	1340.4	1348.5	1351.9
10°	1322.8	1324.8	1322.8	1324.1	1324.1	1330.2	1333.0	1336.3	1342.4	1349.9	1351.9
12.5°	1356.0	1360.1	1356.0	1352.6	1349.9	1355.3	1354.0	1351.3	1354.6	1356.7	1356.7
15°	1410.9	1410.9	1408.2	1403.4	1396.7	1397.3	1391.2	1385.1	1382.4	1377.7	1374.3
17.5°	1464.4	1463.1	1457.0	1450.9	1446.1	1444.1	1435.3	1427.2	1417.7	1410.2	1402.1
20°	1516.6	1522.0	1514.6	1505.8	1498.3	1493.6	1486.8	1470.5	1459.0	1446.8	1438.7
22.5°	1606.7	1602.0	1593.9	1581.0	1573.5	1565.4	1551.2	1533.5	1515.9	1501.0	1490.9
25°	1699.6	1694.8	1683.3	1673.8	1663.0	1656.2	1640.6	1618.9	1602.0	1578.9	1565.4
27.5°	1799.2	1795.1	1781.6	1774.1	1766.7	1758.5	1745.0	1722.6	1707.0	1680.6	1666.4
30°	1911.7	1911.0	1892.7	1891.4	1880.5	1871.7	1862.2	1843.2	1827.7	1801.2	1784.3
32.5°	2031.6	2028.9	2016.0	2012.0	2019.4	2013.3	1999.8	1980.1	1959.8	1944.2	1925.2
35°	2202.4	2197.7	2190.2	2193.6	2198.3	2215.3	2194.3	2177.3	2152.9	2132.6	2106.2
37.5°	2327.1	2320.3	2329.1	2348.1	2375.2	2388.1	2406.4	2407.1	2395.5	2368.4	2345.4
40°	2441.6	2438.9	2459.2	2485.7	2535.8	2572.4	2607.0	2623.9	2628.0	2610.3	2575.8
42.5°	2538.5	2546.6	2573.8	2614.4	2684.9	2740.5	2804.8	2844.8	2869.9	2860.4	2844.8
45°	2653.7	2657.8	2691.0	2742.5	2809.6	2901.7	2986.4	3054.2	3098.3	3097.6	3080.0
47.5°	2798.1	2798.7	2827.2	2887.5	2959.3	3052.9	3159.9	3250.1	3308.3	3311.0	3297.5
50°	2969.5	2968.2	2999.3	3056.2	3132.8	3223.0	3336.8	3449.3	3530.6	3530.6	3511.0
52.5°	3190.4	3187.7	3204.7	3254.8	3328.7	3423.5	3536.7	3666.8	3754.9	3773.9	3731.2
55°	3485.2	3489.3	3493.3	3537.4	3600.4	3675.6	3805.7	3925.7	4043.6	4054.4	4029.4
57.5°	3826.1	3812.5	3841.7	3913.5	3985.3	4079.5	4171.7	4313.3	4452.9	4476.6	4473.2
60°	4358.7	4341.1	4370.9	4462.4	4541.7	4690.1	4848.0	5031.0	5196.3	5245.1	5186.1
62.5°	4848.7	4870.3	4911.0	5017.4	5132.6	5330.5	5567.7	5881.4	6195.2	6365.9	6353.7
65°	4804.6	4784.3	4862.2	5007.2	5216.0	5468.0	5762.8	6141.0	6593.0	6935.9	6966.3
66°	4641.3	4620.3	4704.3	4870.3	5108.9	5389.4	5716.7	6101.7	6563.8	6951.4	6998.2
67.5°	4371.6	4350.6	4445.5	4596.6	4842.6	5195.6	5549.4	5970.2	6450.7	6822.0	6860.0
70°	3851.1	3822.7	3896.5	4067.3	4266.6	4608.1	4944.9	5390.8	5884.1	6180.9	6195.2
72.5°	3262.3	3195.8	3274.5	3405.9	3548.2	3830.8	4124.2	4429.2	4822.2	5096.7	5175.3
75°	2367.1	2401.6	2424.7	2511.4	2605.6	2839.4	3011.5	3267.0	3571.3	3769.8	3832.8
77.5°	1255.7	1307.9	1340.4	1427.2	1583.0	1761.2	1947.6	2105.5	2305.4	2416.5	2493.8
80°	704.8	741.4	794.2	862.7	938.6	1075.4	1185.9	1267.2	1295.7	1315.3	1333.0
82.5°	387.6	480.5	559.1	606.5	651.2	706.1	771.9	839.6	861.3	828.8	811.8
85°	60.3	88.8	270.4	330.0	359.2	401.2	448.6	498.8	499.4	429.6	468.9
87.5°	16.9	19.0	38.6	58.3	56.9	46.1	56.9	103.7	61.0	30.5	35.2
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7
2.5°	1362.1	1363.5	1366.8	1370.2	1373.6	1377.0	1379.0	1382.4	1385.1	1389.2	1393.9
5°	1356.7	1360.1	1366.2	1373.6	1380.4	1386.5	1391.2	1398.0	1404.1	1409.5	1417.7
7.5°	1356.7	1363.5	1373.6	1381.7	1387.8	1395.3	1402.8	1409.5	1416.3	1421.7	1427.2
10°	1357.4	1364.1	1374.3	1383.8	1390.6	1398.7	1404.8	1410.9	1418.3	1421.7	1428.5
12.5°	1360.1	1362.8	1370.2	1379.7	1387.8	1396.0	1402.1	1408.2	1416.3	1417.7	1422.4
15°	1373.6	1369.6	1371.6	1378.4	1387.2	1393.9	1400.7	1405.5	1410.9	1409.5	1413.6
17.5°	1398.7	1388.5	1384.5	1385.1	1389.2	1393.9	1396.7	1397.3	1398.0	1391.9	1392.6
20°	1432.6	1418.3	1408.9	1404.1	1398.7	1393.9	1386.5	1377.7	1369.6	1357.4	1356.0
22.5°	1483.4	1462.4	1452.2	1439.4	1423.1	1402.8	1384.5	1362.8	1345.2	1326.9	1320.1
25°	1557.3	1535.6	1524.7	1504.4	1475.3	1446.1	1419.7	1390.6	1364.8	1343.1	1333.0
27.5°	1656.2	1634.5	1623.0	1602.0	1566.1	1536.9	1500.3	1469.2	1438.0	1406.1	1393.3
30°	1776.1	1757.2	1744.3	1727.4	1696.2	1664.3	1621.6	1573.5	1524.1	1473.2	1448.2
32.5°	1917.8	1896.8	1887.3	1867.6	1835.1	1801.9	1754.5	1692.8	1610.1	1530.2	1480.0
35°	2094.6	2070.9	2060.1	2034.3	1996.4	1947.6	1896.8	1814.1	1702.3	1591.1	1509.1
37.5°	2331.2	2278.3	2242.4	2183.4	2122.4	2054.0	1981.5	1896.8	1764.6	1627.1	1513.2
40°	2540.5	2487.0	2417.9	2333.2	2238.3	2144.1	2061.4	1965.2	1821.6	1652.8	1500.3
42.5°	2800.8	2705.9	2595.4	2480.9	2354.9	2239.0	2140.7	2027.6	1860.2	1659.6	1464.4
45°	3038.6	2925.5	2777.7	2625.3	2468.7	2323.0	2212.6	2086.5	1893.4	1659.6	1421.1
47.5°	3255.5	3119.9	2943.1	2753.3	2571.0	2411.8	2286.4	2146.8	1940.1	1680.6	1408.2
50°	3456.1	3300.2	3098.9	2878.7	2674.0	2504.0	2369.1	2224.1	2011.3	1734.8	1439.4
52.5°	3667.5	3502.1	3256.8	3023.0	2797.4	2615.1	2471.4	2319.6	2103.5	1820.2	1494.2
55°	3944.7	3750.9	3472.3	3214.8	2966.8	2765.5	2602.2	2434.2	2204.4	1916.4	1561.3
57.5°	4381.8	4100.5	3822.0	3487.2	3253.4	2988.5	2809.6	2616.4	2368.4	2041.8	1662.3
60°	5146.8	4801.2	4466.5	4081.5	3792.9	3515.7	3245.3	2993.2	2694.4	2325.1	1883.9
62.5°	6239.2	5888.2	5362.3	4891.4	4455.6	4088.3	3735.9	3415.4	3031.9	2628.0	2157.0
65°	6891.8	6490.0	5863.1	5230.2	4700.9	4245.5	3842.3	3450.0	3035.9	2642.2	2239.7
66°	6944.0	6563.8	5894.3	5225.4	4675.9	4203.5	3784.1	3378.1	2953.9	2577.1	2212.6
67.5°	6847.1	6519.8	5830.6	5133.3	4571.5	4061.2	3630.2	3204.7	2778.4	2429.4	2122.4
70°	6163.3	5926.8	5335.9	4682.6	4122.2	3672.2	3217.5	2808.2	2404.3	2110.9	1883.2
72.5°	5052.6	4753.1	4339.7	3900.6	3459.5	3060.3	2646.9	2298.6	1959.8	1746.3	1585.0
75°	3711.5	3441.8	2986.4	2712.7	2421.3	2170.5	1892.0	1562.0	1321.4	1214.4	1175.1
77.5°	2352.8	2060.1	1675.9	1373.6	1181.2	1015.1	800.3	636.3	509.6	530.6	587.5
80°	1188.6	1023.9	766.4	605.2	523.2	435.1	344.3	260.9	190.4	217.5	246.0
82.5°	763.0	637.0	507.6	399.8	337.5	297.5	237.9	172.8	128.8	145.0	177.5
85°	459.5	388.3	309.7	253.4	220.2	183.6	134.9	95.6	94.9	101.6	125.4
87.5°	69.8	99.6	57.6	61.7	65.1	69.8	61.7	52.2	45.4	59.0	74.5
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°	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7	1379.7
2.5°	1398.7	1400.0	1402.8	1406.1	1405.5	1410.2	1412.9	1410.2	1416.3	1416.3	1419.7
5°	1424.4	1426.5	1431.2	1434.6	1436.0	1440.0	1441.4	1440.7	1442.1	1442.7	1444.1
7.5°	1431.9	1437.3	1439.4	1441.4	1442.1	1443.4	1443.4	1442.1	1442.1	1441.4	1442.7
10°	1429.9	1431.9	1433.3	1432.6	1432.6	1431.2	1430.5	1429.9	1429.9	1428.5	1430.5
12.5°	1423.1	1423.1	1423.1	1421.7	1421.7	1421.1	1421.1	1421.1	1422.4	1423.1	1426.5
15°	1409.5	1409.5	1410.9	1410.2	1412.2	1415.6	1419.7	1422.4	1425.8	1426.5	1428.5
17.5°	1388.5	1389.2	1393.3	1402.1	1410.9	1421.1	1428.5	1430.5	1427.8	1421.1	1416.3
20°	1351.9	1360.7	1377.0	1398.0	1417.7	1430.5	1433.9	1425.8	1412.9	1395.3	1385.8
22.5°	1319.4	1337.0	1366.2	1400.7	1425.1	1433.9	1423.8	1404.8	1381.7	1361.4	1347.2
25°	1332.3	1352.6	1383.1	1412.9	1428.5	1423.8	1403.4	1376.3	1351.9	1328.2	1305.2
27.5°	1386.5	1406.8	1428.5	1437.3	1431.9	1414.3	1385.8	1356.7	1324.1	1290.3	1261.8
30°	1438.0	1449.5	1450.9	1442.1	1422.4	1393.9	1360.7	1326.9	1285.5	1244.9	1208.9
32.5°	1454.3	1440.7	1416.3	1391.2	1364.1	1335.0	1296.4	1251.6	1207.6	1161.5	1121.5
35°	1449.5	1394.6	1334.3	1280.8	1248.3	1215.0	1179.8	1120.2	1070.7	1031.4	1005.6
37.5°	1406.8	1306.5	1213.7	1135.8	1084.9	1045.6	993.5	944.0	901.3	883.7	862.7
40°	1347.2	1194.0	1065.3	956.2	903.3	853.2	794.9	756.9	744.7	728.5	729.2
42.5°	1261.8	1062.6	896.5	771.2	713.6	658.7	617.3	595.0	595.7	582.1	584.8
45°	1171.7	930.4	721.7	597.0	540.1	493.3	470.3	463.5	464.2	464.9	460.8
47.5°	1116.8	827.4	578.7	452.7	402.5	376.1	363.9	360.5	361.2	361.9	357.1
50°	1108.7	773.9	483.2	346.3	313.8	298.8	292.7	289.4	289.4	286.7	282.6
52.5°	1131.7	760.3	436.4	300.2	269.0	255.5	250.7	248.0	244.0	238.5	231.1
55°	1168.3	772.5	422.2	284.6	254.1	240.6	234.5	233.1	226.3	216.2	204.0
57.5°	1236.1	816.6	431.7	288.7	256.8	244.6	240.6	239.2	229.7	214.1	198.6
60°	1430.5	944.7	479.1	311.7	276.5	266.3	266.3	264.3	251.4	229.0	206.7
62.5°	1698.9	1132.4	543.5	343.6	303.6	302.2	313.8	314.4	291.4	255.5	220.2
65°	1828.3	1220.5	565.8	350.4	311.0	326.6	349.7	349.7	317.1	267.7	222.3
66°	1829.0	1218.4	559.1	342.2	302.9	323.2	347.0	347.0	313.1	264.3	218.9
67.5°	1782.2	1180.5	536.7	327.3	284.6	303.6	324.6	323.9	293.4	250.7	209.4
70°	1598.6	1044.3	473.0	302.9	262.9	263.6	271.1	266.3	246.0	216.9	190.4
72.5°	1378.4	873.5	410.0	287.3	246.0	233.1	227.0	223.0	210.1	192.5	176.2
75°	1057.2	678.3	357.1	273.1	231.1	208.7	200.6	197.2	188.4	178.2	165.3
77.5°	647.8	464.9	302.9	250.1	214.1	193.8	185.0	178.2	169.4	159.9	151.1
80°	279.2	280.6	242.6	212.1	186.4	162.6	151.1	143.0	138.2	134.9	130.1
82.5°	195.2	201.3	185.0	164.7	142.3	125.4	115.2	113.2	113.8	113.8	112.5
85°	146.4	143.7	129.4	117.9	107.7	96.9	88.8	88.1	90.8	90.8	88.8
87.5°	84.7	85.4	73.2	68.4	71.2	61.0	55.6	56.2	63.0	62.3	61.0
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°	1379.7	1379.7	1379.7	1379.7	1379.7
2.5°	1419.7	1421.7	1421.1	1423.1	1421.1
5°	1446.1	1445.4	1444.8	1447.5	1444.1
7.5°	1442.1	1442.7	1442.7	1442.7	1442.1
10°	1431.9	1434.6	1436.0	1438.7	1438.0
12.5°	1428.5	1432.6	1436.6	1440.7	1441.4
15°	1429.2	1431.9	1433.9	1436.0	1436.6
17.5°	1411.6	1410.9	1408.9	1407.5	1406.1
20°	1375.7	1372.3	1368.9	1363.5	1366.2
22.5°	1330.9	1321.4	1310.6	1301.8	1301.1
25°	1278.7	1261.1	1243.5	1232.0	1227.9
27.5°	1232.7	1211.7	1193.4	1183.2	1180.5
30°	1177.8	1158.8	1142.5	1133.7	1128.3
32.5°	1096.5	1081.5	1061.2	1054.4	1053.8
35°	983.3	971.8	957.5	954.8	951.4
37.5°	855.2	851.1	844.4	836.2	834.9
40°	718.3	721.0	719.0	714.3	706.8
42.5°	586.2	590.9	591.6	595.0	598.4
45°	466.9	471.0	471.0	474.4	478.4
47.5°	358.5	355.8	357.8	361.2	363.2
50°	271.1	269.0	265.6	262.9	260.2
52.5°	218.2	214.1	204.7	201.9	199.2
55°	192.5	185.0	178.2	175.5	175.5
57.5°	185.0	175.5	168.1	164.7	163.3
60°	186.4	172.8	163.3	157.9	155.9
62.5°	192.5	173.5	160.6	154.5	152.5
65°	191.8	172.1	159.9	153.2	151.1
66°	188.4	170.1	158.6	152.5	151.1
67.5°	183.0	167.4	157.2	151.8	149.8
70°	172.1	162.0	154.5	149.8	147.7
72.5°	163.3	156.5	149.8	144.3	143.0
75°	155.2	148.4	142.3	139.6	137.6
77.5°	143.0	136.9	133.5	130.8	129.4
80°	126.7	122.7	118.6	115.9	113.8
82.5°	110.5	105.0	101.0	98.9	97.6
85°	90.1	86.7	80.6	76.6	75.9
87.5°	60.3	56.9	54.9	51.5	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)