

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: P159540

Luminaire Tested: **VST-E04-LED-E-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159540
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-E04-LED-E-U-T3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12233.4 lumens
Efficiency: N/A
Efficacy: 125.9 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

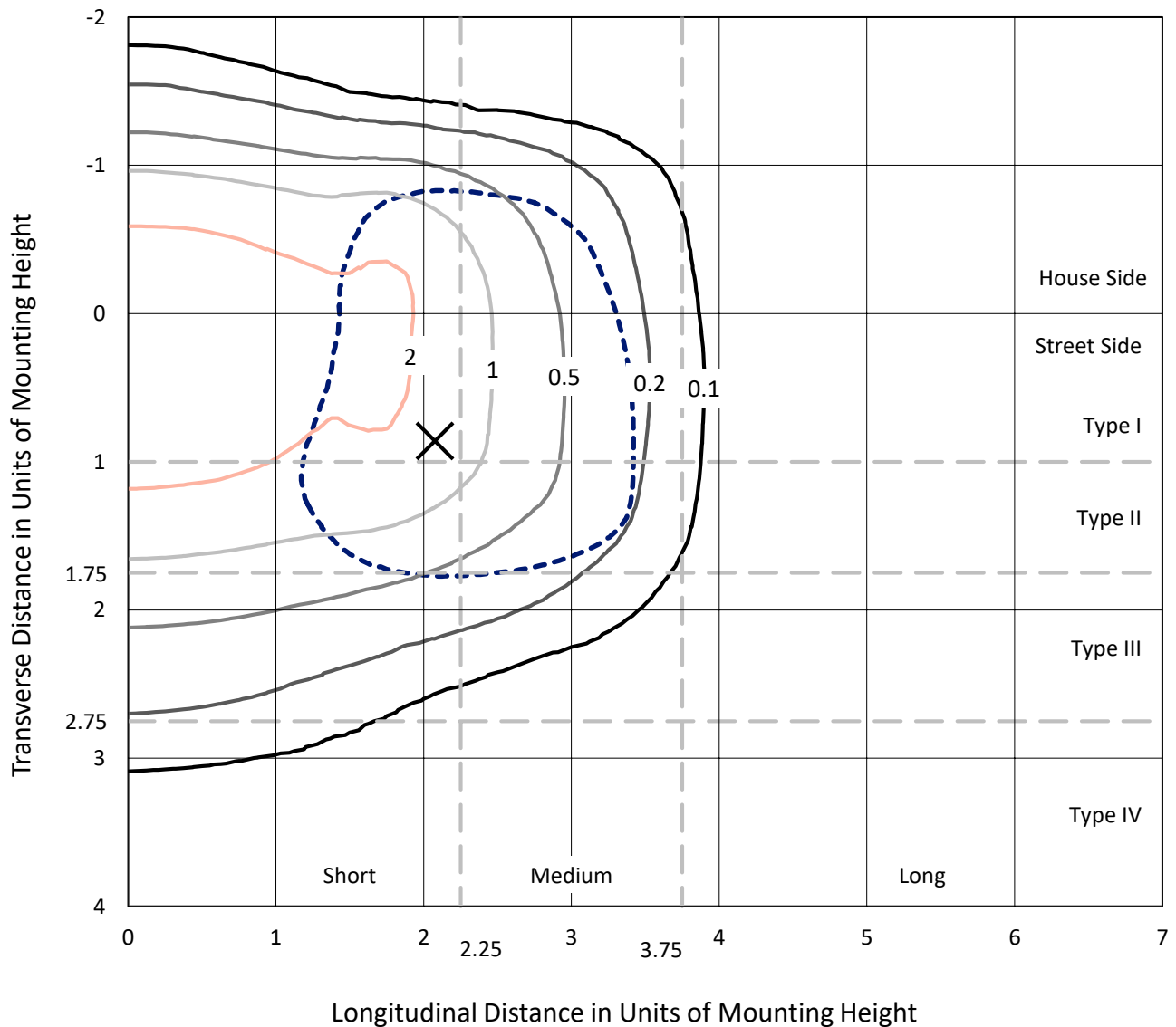
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

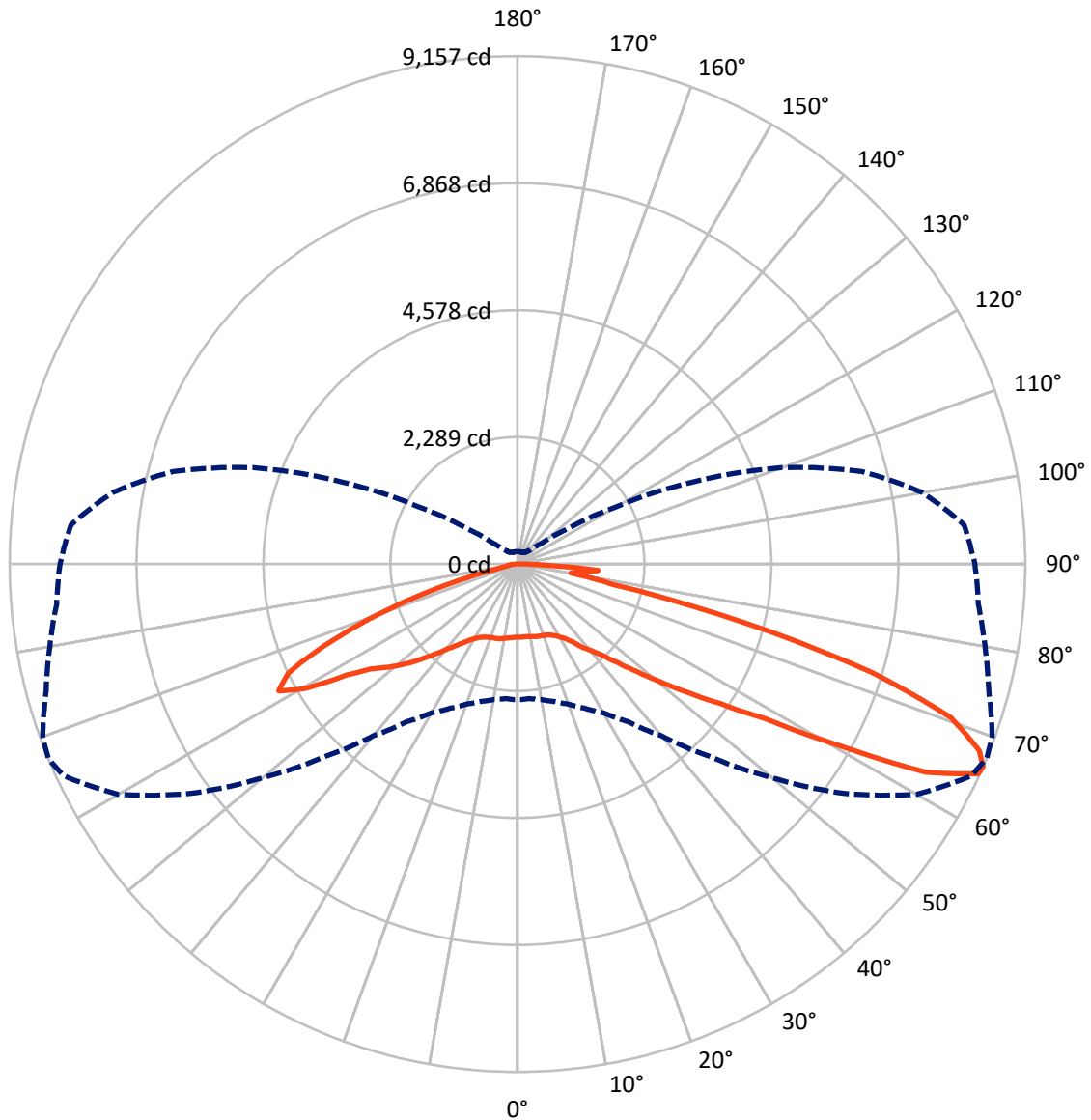
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.3 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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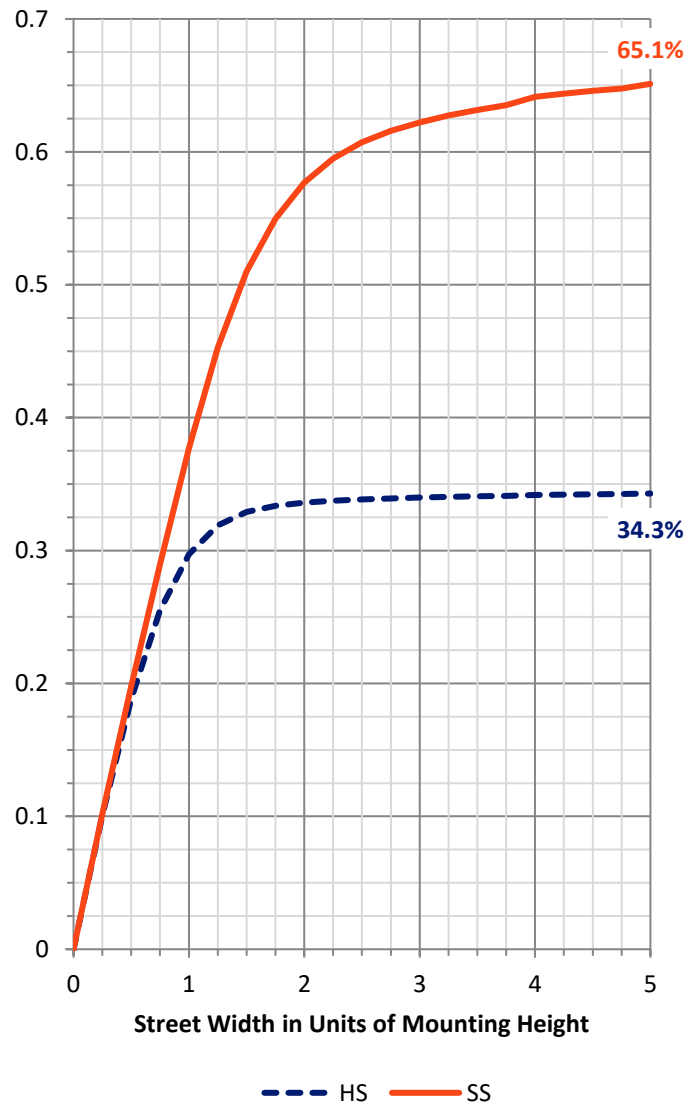
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4233.3	0.0	4233.3
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	8000.1	0.0	8000.1
	% Fixture	65.4	0.0	65.4
Total	Lumens	12233.4	0.0	12233.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.7	1.0
10°-20°	375.1	3.1
20°-30°	644.8	5.3
30°-40°	1042.1	8.5
40°-50°	1726.9	14.1
50°-60°	2710.3	22.2
60°-70°	3705.5	30.3
70°-80°	1629.5	13.3
80°-90°	272.7	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°	12233.4	100.0
0°-180°	12233.4	100.0

Coefficient of Utilization



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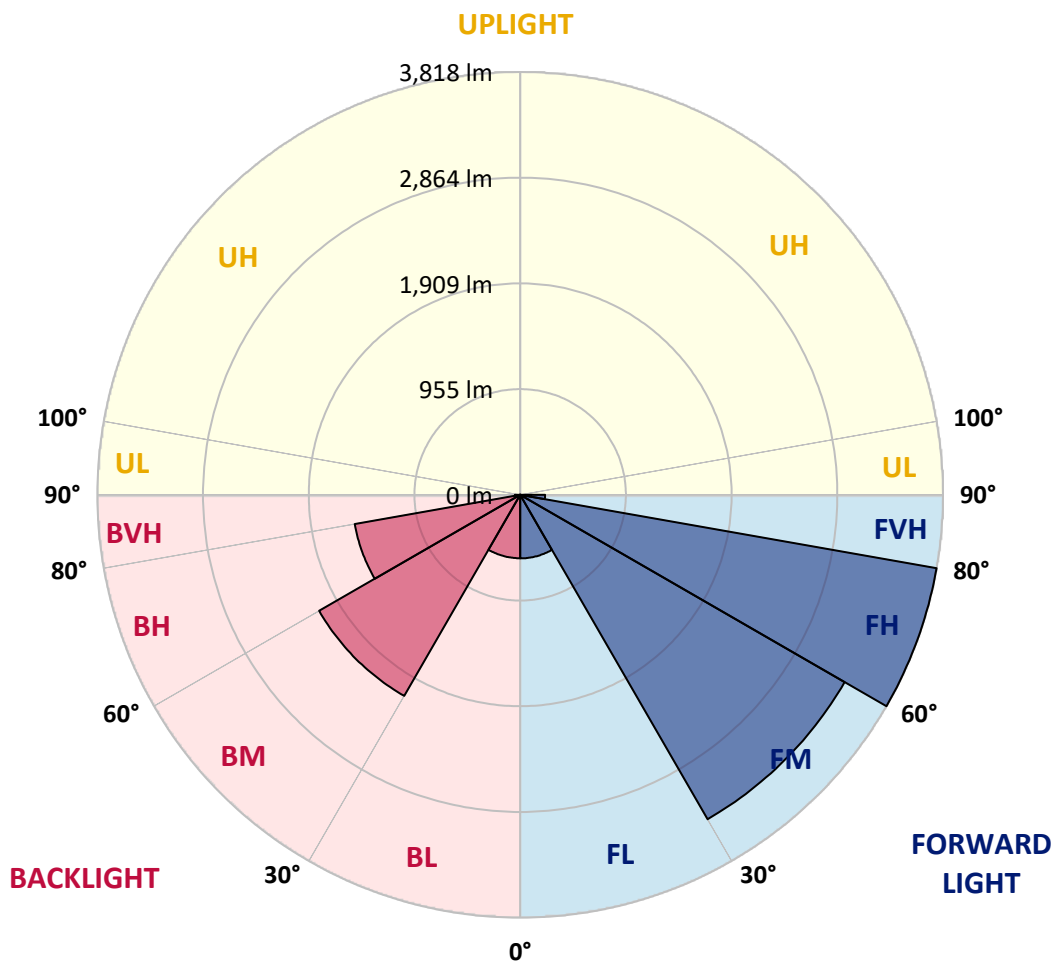
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	573.9	4.7			
FM (30°-60°)	3382.9	27.7			
FH (60°-80°)	3818.3	31.2			G2/5000
FVH (80°-90°)	225.0	1.8			G3/500
BL (0°-30°)	572.7	4.7	B2/1000		
BM (30°-60°)	2096.3	17.1	B2/2500		
BH (60°-80°)	1516.6	12.4	B3/2500		G3/2500
BVH (80°-90°)	47.7	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°	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0
2.5°	1317.6	1317.6	1318.4	1317.6	1317.6	1316.8	1320.0	1320.0	1320.0	1319.2	1321.6
5°	1314.4	1314.4	1315.2	1315.2	1316.0	1315.2	1317.6	1318.4	1318.4	1318.4	1320.8
7.5°	1306.4	1308.8	1307.2	1308.0	1308.8	1311.2	1314.4	1316.0	1317.6	1320.0	1320.8
10°	1289.6	1293.6	1292.8	1295.2	1296.0	1303.2	1305.6	1308.8	1314.4	1317.6	1320.0
12.5°	1266.4	1268.8	1269.6	1272.8	1276.0	1284.8	1291.2	1296.8	1304.8	1312.8	1320.8
15°	1248.0	1249.6	1249.6	1252.8	1257.6	1265.6	1273.6	1283.2	1295.2	1308.8	1321.6
17.5°	1253.6	1257.6	1254.4	1253.6	1255.2	1260.0	1267.2	1275.2	1289.6	1304.8	1320.0
20°	1290.4	1291.2	1289.6	1285.6	1282.4	1283.2	1283.2	1284.8	1293.6	1305.6	1317.6
22.5°	1320.8	1324.0	1323.2	1324.0	1323.2	1326.4	1324.8	1321.6	1318.4	1319.2	1324.8
25°	1347.2	1350.4	1350.4	1352.8	1356.8	1363.2	1368.0	1367.2	1362.4	1356.0	1353.6
27.5°	1390.4	1390.4	1390.4	1392.8	1398.4	1406.4	1414.4	1419.2	1423.2	1416.8	1403.2
30°	1458.4	1459.2	1456.8	1457.6	1461.6	1472.0	1481.6	1488.8	1496.8	1496.0	1478.4
32.5°	1532.8	1536.0	1535.2	1538.4	1544.0	1553.6	1564.0	1575.2	1585.6	1592.0	1580.8
35°	1628.8	1632.0	1632.8	1637.6	1644.0	1658.4	1672.8	1687.2	1698.4	1703.2	1700.8
37.5°	1786.4	1787.2	1784.0	1776.8	1779.2	1790.4	1807.2	1830.4	1837.6	1842.4	1853.6
40°	2022.4	2020.0	2007.2	2000.8	1996.8	2001.6	1998.4	2016.8	2033.6	2034.4	2033.6
42.5°	2308.8	2301.6	2289.6	2288.0	2286.4	2284.8	2276.0	2276.8	2292.0	2296.0	2291.2
45°	2593.6	2584.8	2576.0	2584.0	2574.4	2599.2	2606.4	2625.6	2628.0	2636.0	2624.0
47.5°	2827.2	2828.0	2828.0	2839.2	2858.4	2905.6	2948.0	2984.8	2998.4	3017.6	3020.0
50°	3004.0	3008.8	3024.0	3060.0	3100.8	3180.0	3251.2	3317.6	3377.6	3400.0	3459.2
52.5°	3107.2	3120.0	3152.0	3212.0	3284.8	3387.2	3499.2	3612.0	3716.0	3804.0	3874.4
55°	3088.8	3098.4	3154.4	3248.0	3361.6	3499.2	3656.0	3819.2	3981.6	4130.4	4245.6
57.5°	2970.4	2976.8	3032.8	3138.4	3280.0	3464.8	3686.4	3928.8	4156.8	4396.8	4593.6
60°	2815.2	2824.8	2876.8	2960.0	3108.0	3304.8	3561.6	3890.4	4254.4	4632.0	5000.0
62.5°	2716.0	2713.6	2759.2	2833.6	2944.8	3123.2	3370.4	3760.0	4264.0	4902.4	5629.6
65°	2551.2	2544.0	2591.2	2676.0	2796.8	2969.6	3204.0	3578.4	4163.2	5004.8	6036.0
66°	2448.8	2434.4	2481.6	2567.2	2688.0	2872.0	3096.8	3466.4	4040.8	4904.8	5992.8
67.5°	2269.6	2262.4	2284.8	2352.0	2441.6	2614.4	2848.8	3220.8	3751.2	4604.0	5676.0
70°	1844.8	1828.8	1846.4	1876.8	1911.2	1953.6	2097.6	2392.8	2841.6	3668.0	4572.8
72.5°	1256.8	1248.8	1281.6	1328.0	1420.0	1463.2	1520.0	1568.0	1726.4	2312.0	3189.6
75°	956.0	960.8	1002.4	1079.2	1197.6	1325.6	1450.4	1496.0	1443.2	1397.6	1810.4
77.5°	536.0	564.0	614.4	712.0	837.6	1018.4	1236.0	1476.0	1596.0	1566.4	1464.8
80°	220.8	216.8	241.6	295.2	338.4	486.4	744.0	1044.8	1382.4	1596.0	1562.4
82.5°	61.6	63.2	81.6	104.8	135.2	172.0	268.8	432.0	704.0	1095.2	1433.6
85°	19.2	19.2	26.4	39.2	46.4	53.6	68.0	112.0	191.2	381.6	773.6
87.5°	4.0	4.0	5.6	11.2	12.0	12.0	15.2	20.8	18.4	16.8	75.2
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0
2.5°	1319.2	1317.6	1318.4	1319.2	1318.4	1318.4	1317.6	1316.8	1317.6	1317.6	1320.0
5°	1318.4	1317.6	1318.4	1318.4	1318.4	1319.2	1319.2	1319.2	1321.6	1321.6	1325.6
7.5°	1320.0	1320.0	1321.6	1321.6	1321.6	1321.6	1322.4	1324.0	1328.0	1327.2	1334.4
10°	1323.2	1324.8	1328.8	1329.6	1329.6	1332.0	1333.6	1336.8	1340.8	1342.4	1348.8
12.5°	1327.2	1335.2	1342.4	1344.0	1346.4	1350.4	1352.8	1354.4	1361.6	1364.0	1372.0
15°	1332.0	1343.2	1352.0	1355.2	1358.4	1363.2	1366.4	1368.8	1375.2	1378.4	1388.0
17.5°	1332.8	1345.6	1356.0	1360.8	1364.8	1370.4	1375.2	1380.0	1387.2	1392.0	1401.6
20°	1332.0	1348.8	1364.8	1371.2	1375.2	1385.6	1392.8	1399.2	1408.0	1412.8	1422.4
22.5°	1340.8	1360.0	1381.6	1389.6	1396.0	1410.4	1420.0	1430.4	1441.6	1444.8	1452.0
25°	1361.6	1381.6	1408.8	1420.0	1431.2	1450.4	1464.0	1479.2	1490.4	1492.0	1494.4
27.5°	1396.8	1415.2	1448.0	1464.8	1483.2	1510.4	1530.4	1545.6	1561.6	1561.6	1560.0
30°	1468.0	1472.0	1506.4	1528.0	1555.2	1595.2	1624.8	1641.6	1653.6	1653.6	1640.0
32.5°	1560.0	1555.2	1586.4	1609.6	1647.2	1703.2	1743.2	1756.0	1768.8	1764.8	1741.6
35°	1692.8	1679.2	1696.8	1732.0	1774.4	1851.2	1892.8	1921.6	1929.6	1918.4	1881.6
37.5°	1860.0	1858.4	1867.2	1906.4	1953.6	2052.8	2095.2	2113.6	2107.2	2087.2	2022.4
40°	2036.8	2032.0	2026.4	2052.8	2105.6	2224.8	2300.0	2309.6	2300.8	2271.2	2189.6
42.5°	2272.8	2272.8	2246.4	2253.6	2297.6	2431.2	2520.0	2550.4	2551.2	2508.0	2399.2
45°	2597.6	2594.4	2548.0	2536.8	2570.4	2701.6	2816.0	2832.8	2832.8	2776.0	2656.8
47.5°	2988.0	2984.0	2938.4	2899.2	2905.6	3047.2	3142.4	3168.0	3145.6	3103.2	2961.6
50°	3428.0	3420.8	3374.4	3337.6	3321.6	3464.8	3545.6	3557.6	3524.8	3474.4	3320.8
52.5°	3874.4	3896.0	3868.8	3848.8	3854.4	3947.2	4030.4	3973.6	3956.8	3902.4	3748.0
55°	4339.2	4405.6	4465.6	4448.0	4468.8	4559.2	4575.2	4500.0	4469.6	4430.4	4258.4
57.5°	4807.2	5000.8	5197.6	5252.8	5304.0	5433.6	5415.2	5292.0	5315.2	5373.6	5180.0
60°	5460.8	6020.0	6519.2	6611.2	6770.4	6880.8	6905.6	6881.6	6989.6	6959.2	6788.0
62.5°	6464.8	7396.8	8091.2	8264.0	8424.0	8418.4	8334.4	8248.0	8354.4	8354.4	7907.2
65°	7181.6	8239.2	8982.4	9125.6	9119.2	8926.4	8728.0	8555.2	8540.0	8421.6	7768.0
66°	7215.2	8304.0	9032.0	9156.8	9108.8	8798.4	8560.8	8341.6	8248.0	8083.2	7413.6
67.5°	6912.8	8120.8	8870.4	8979.2	8852.8	8408.0	8080.8	7787.2	7651.2	7373.6	6743.2
70°	5670.4	6979.2	8069.6	8292.0	8148.8	7585.6	7137.6	6740.8	6480.8	6080.0	5625.6
72.5°	4139.2	5152.8	6333.6	6695.2	6672.8	6154.4	5793.6	5430.4	5088.8	4724.0	4392.0
75°	2690.4	3352.0	4010.4	4221.6	4120.0	3820.0	3561.6	3349.6	3025.6	2772.0	2710.4
77.5°	1536.0	1876.8	1775.2	1748.8	1621.6	1308.8	870.4	610.4	551.2	688.0	754.4
80°	1461.6	1324.8	1084.8	978.4	899.2	612.8	321.6	226.4	198.4	203.2	218.4
82.5°	1648.0	1717.6	1404.8	1173.6	1021.6	745.6	407.2	189.6	138.4	164.0	184.0
85°	1235.2	1739.2	1724.0	1460.8	1198.4	859.2	481.6	144.8	83.2	115.2	150.4
87.5°	250.4	412.0	396.8	348.8	296.8	207.2	80.8	45.6	41.6	56.8	86.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0	1320.0
2.5°	1321.6	1321.6	1323.2	1325.6	1326.4	1326.4	1328.0	1326.4	1329.6	1330.4	1331.2
5°	1328.8	1331.2	1332.8	1336.8	1339.2	1340.8	1343.2	1341.6	1344.8	1345.6	1347.2
7.5°	1336.8	1340.8	1344.0	1345.6	1348.8	1348.8	1349.6	1348.0	1347.2	1344.8	1344.0
10°	1351.2	1353.6	1357.6	1356.0	1354.4	1348.8	1344.0	1336.8	1332.8	1325.6	1321.6
12.5°	1374.4	1376.0	1376.0	1368.8	1358.4	1345.6	1333.6	1321.6	1312.0	1304.0	1299.2
15°	1390.4	1393.6	1389.6	1379.2	1364.0	1346.4	1330.4	1314.4	1301.6	1291.2	1284.8
17.5°	1402.4	1401.6	1394.4	1380.0	1365.6	1350.4	1336.0	1319.2	1303.2	1288.0	1278.4
20°	1420.8	1412.8	1400.0	1384.8	1369.6	1356.8	1345.6	1329.6	1312.8	1292.0	1277.6
22.5°	1445.6	1431.2	1412.8	1396.8	1382.4	1370.4	1357.6	1344.0	1326.4	1303.2	1283.2
25°	1480.8	1456.0	1435.2	1419.2	1406.4	1392.8	1378.4	1360.8	1343.2	1319.2	1295.2
27.5°	1534.4	1497.6	1471.2	1456.8	1444.8	1426.4	1408.0	1387.2	1364.8	1340.0	1312.8
30°	1599.2	1555.2	1524.8	1512.0	1497.6	1476.8	1456.8	1428.0	1396.8	1367.2	1333.6
32.5°	1675.2	1630.4	1600.0	1590.4	1567.2	1543.2	1515.2	1476.8	1436.0	1392.0	1352.0
35°	1790.4	1733.6	1705.6	1683.2	1651.2	1622.4	1575.2	1524.8	1466.4	1408.0	1358.4
37.5°	1908.8	1851.2	1822.4	1791.2	1749.6	1696.8	1633.6	1561.6	1484.0	1412.0	1351.2
40°	2067.2	2004.8	1968.0	1920.0	1852.8	1770.4	1676.8	1578.4	1484.0	1394.4	1320.8
42.5°	2252.0	2194.4	2137.6	2058.4	1950.4	1830.4	1699.2	1572.8	1458.4	1355.2	1277.6
45°	2508.0	2409.6	2319.2	2192.0	2034.4	1865.6	1701.6	1546.4	1414.4	1300.0	1213.6
47.5°	2796.0	2668.8	2508.8	2309.6	2094.4	1879.2	1678.4	1496.8	1344.8	1220.8	1126.4
50°	3128.0	2932.8	2687.2	2403.2	2124.8	1860.8	1623.2	1413.6	1248.8	1106.4	1005.6
52.5°	3508.0	3210.4	2848.8	2469.6	2120.0	1804.8	1532.0	1304.0	1120.0	968.8	869.6
55°	3929.6	3512.8	3003.2	2512.0	2076.8	1696.0	1388.8	1149.6	960.0	811.2	724.0
57.5°	4672.8	4043.2	3297.6	2568.8	1986.4	1531.2	1207.2	954.4	783.2	656.8	573.6
60°	6053.6	4970.4	3855.2	2702.4	1850.4	1324.8	978.4	748.8	605.6	513.6	452.0
62.5°	6908.0	5623.2	4127.2	2683.2	1629.6	1042.4	726.4	555.2	442.4	381.6	343.2
65°	6705.6	5367.2	3795.2	2304.8	1268.0	739.2	480.8	363.2	304.0	272.8	254.4
66°	6430.4	5080.8	3514.4	2064.0	1104.8	617.6	396.8	304.8	261.6	238.4	228.8
67.5°	5853.6	4557.6	3031.2	1652.8	828.0	460.0	292.8	239.2	212.8	200.8	194.4
70°	4899.2	3672.0	2144.0	976.0	448.8	249.6	187.2	166.4	160.0	156.0	153.6
72.5°	3788.0	2658.4	1252.8	480.0	226.4	161.6	142.4	133.6	131.2	131.2	132.0
75°	2386.4	1528.0	560.8	231.2	153.6	130.4	121.6	117.6	118.4	119.2	118.4
77.5°	792.8	527.2	233.6	164.0	133.6	118.4	111.2	109.6	111.2	112.0	112.0
80°	228.0	199.2	168.8	144.8	122.4	110.4	104.0	103.2	107.2	108.0	106.4
82.5°	175.2	164.0	152.8	140.0	117.6	104.0	101.6	102.4	104.8	103.2	96.0
85°	160.8	159.2	114.4	113.6	102.4	99.2	96.8	97.6	95.2	86.4	78.4
87.5°	90.4	84.0	64.8	65.6	76.0	78.4	64.8	68.8	64.0	56.0	51.2
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°	1320.0	1320.0	1320.0	1320.0	1320.0
2.5°	1332.8	1332.0	1332.0	1334.4	1331.2
5°	1348.0	1347.2	1347.2	1349.6	1347.2
7.5°	1340.8	1338.4	1336.8	1336.0	1336.0
10°	1316.8	1314.4	1309.6	1308.0	1306.4
12.5°	1292.0	1289.6	1284.0	1284.0	1282.4
15°	1276.8	1273.6	1269.6	1267.2	1265.6
17.5°	1268.8	1264.0	1259.2	1256.8	1255.2
20°	1265.6	1259.2	1253.6	1249.6	1249.6
22.5°	1266.4	1258.4	1252.0	1247.2	1245.6
25°	1274.4	1262.4	1254.4	1249.6	1248.0
27.5°	1285.6	1271.2	1260.8	1254.4	1252.0
30°	1300.8	1280.8	1266.4	1258.4	1255.2
32.5°	1311.2	1283.2	1264.8	1253.6	1249.6
35°	1310.4	1274.4	1252.0	1237.6	1232.8
37.5°	1296.0	1253.6	1224.0	1206.4	1198.4
40°	1264.0	1215.2	1184.0	1167.2	1157.6
42.5°	1217.6	1164.8	1136.8	1118.4	1108.0
45°	1144.8	1092.8	1058.4	1044.0	1030.4
47.5°	1044.0	991.2	961.6	940.8	932.0
50°	925.6	872.8	841.6	824.8	816.8
52.5°	796.0	745.6	723.2	707.2	696.0
55°	661.6	615.2	605.6	588.0	577.6
57.5°	535.2	508.0	499.2	481.6	472.8
60°	418.4	409.6	400.0	388.8	384.0
62.5°	324.0	316.0	313.6	306.4	305.6
65°	247.2	248.0	246.4	244.8	243.2
66°	224.8	224.0	224.8	223.2	222.4
67.5°	191.2	194.4	196.8	196.0	196.0
70°	155.2	157.6	160.8	160.0	160.0
72.5°	132.8	136.8	138.4	137.6	137.6
75°	120.0	124.0	124.0	122.4	121.6
77.5°	112.0	113.6	112.0	110.4	108.8
80°	104.0	102.4	100.0	97.6	96.0
82.5°	90.4	86.4	84.0	80.0	80.0
85°	72.8	69.6	64.0	60.0	56.0
87.5°	47.2	45.6	41.6	31.2	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)