

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: P158440

Luminaire Tested: **VST-E04-LED-E-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158440
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12067.5 lumens
Efficiency: N/A
Efficacy: 124.2 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

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



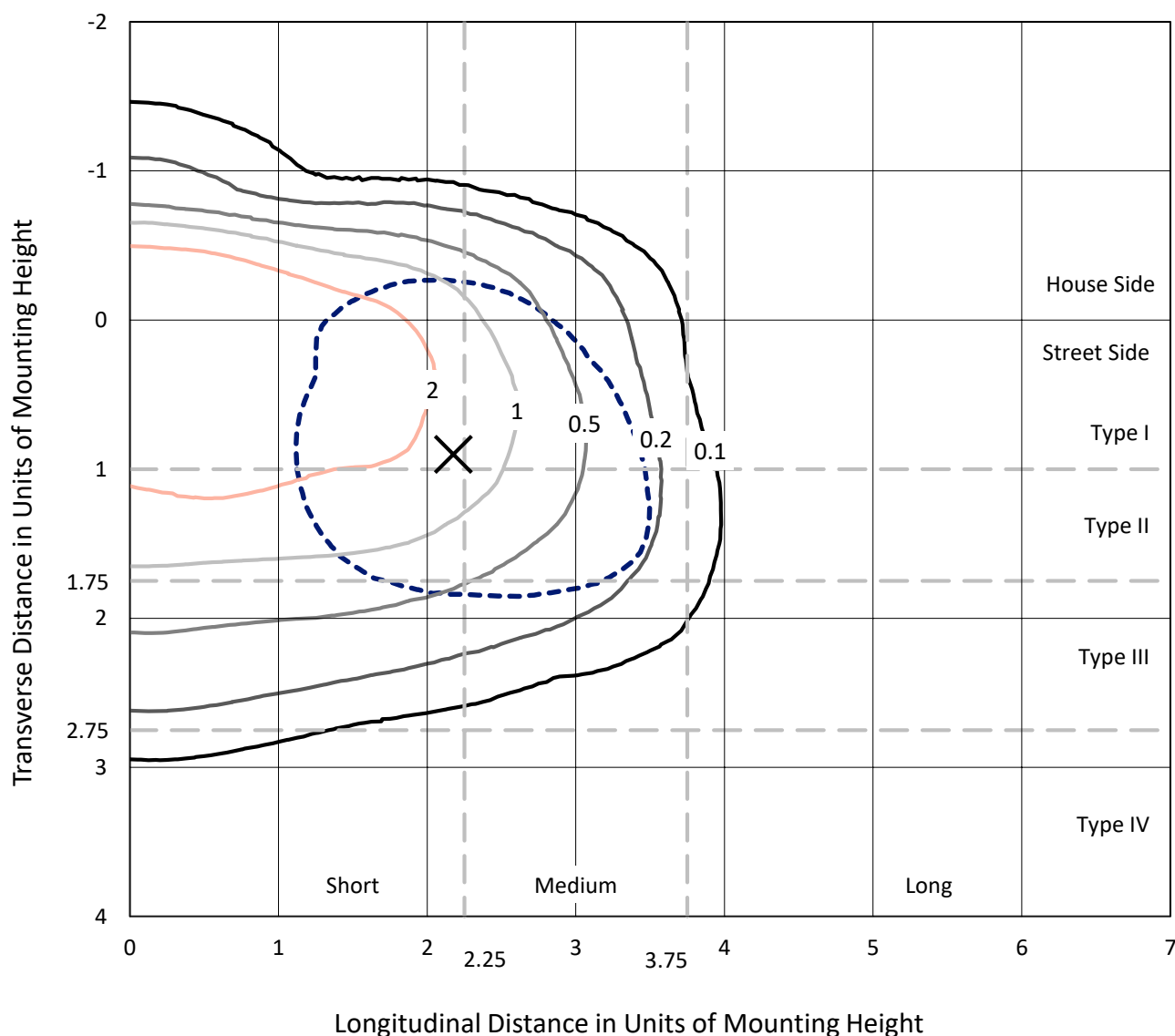
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

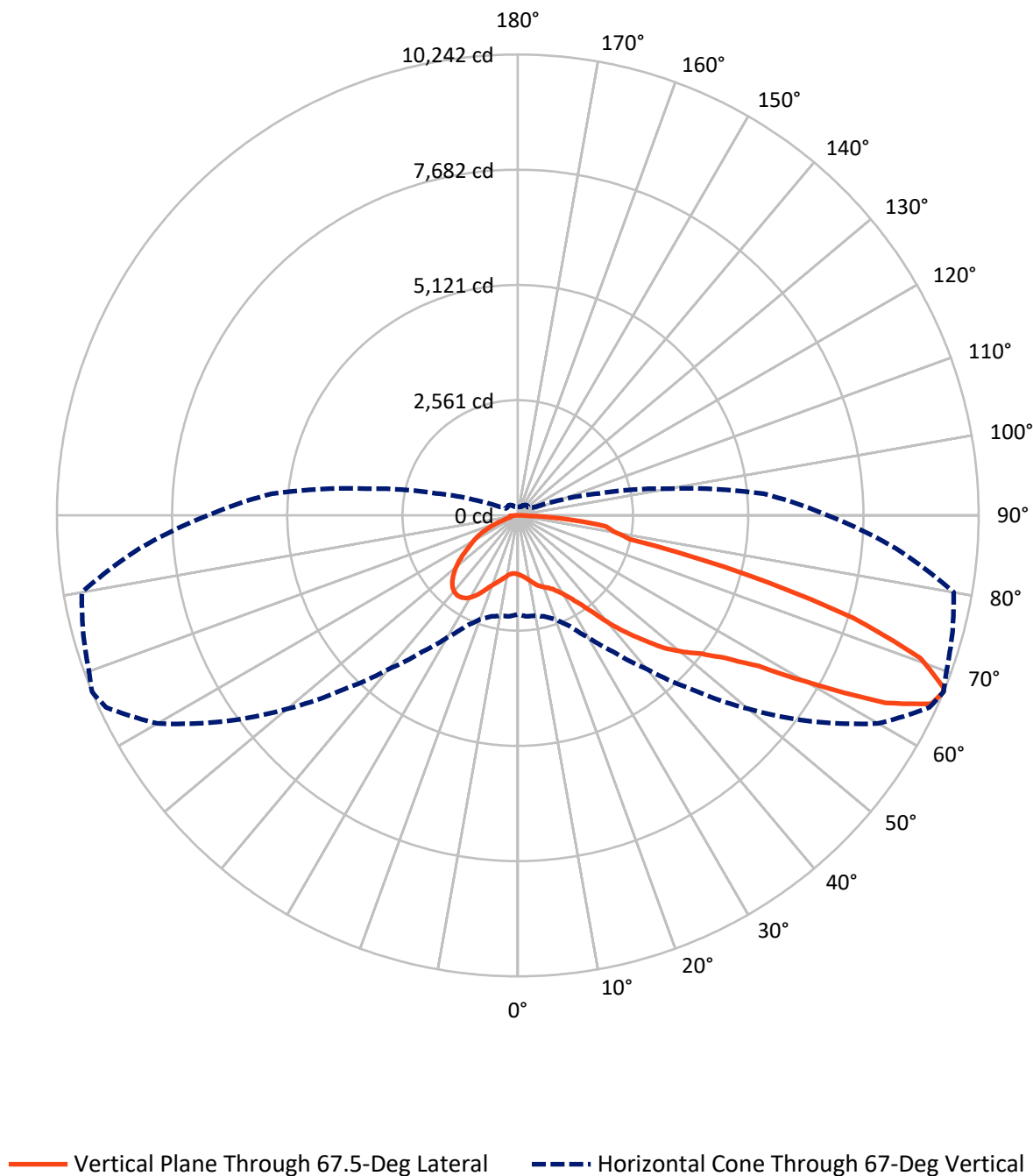


Based on 20 foot mounting height. Maximum calculated value = 4.1 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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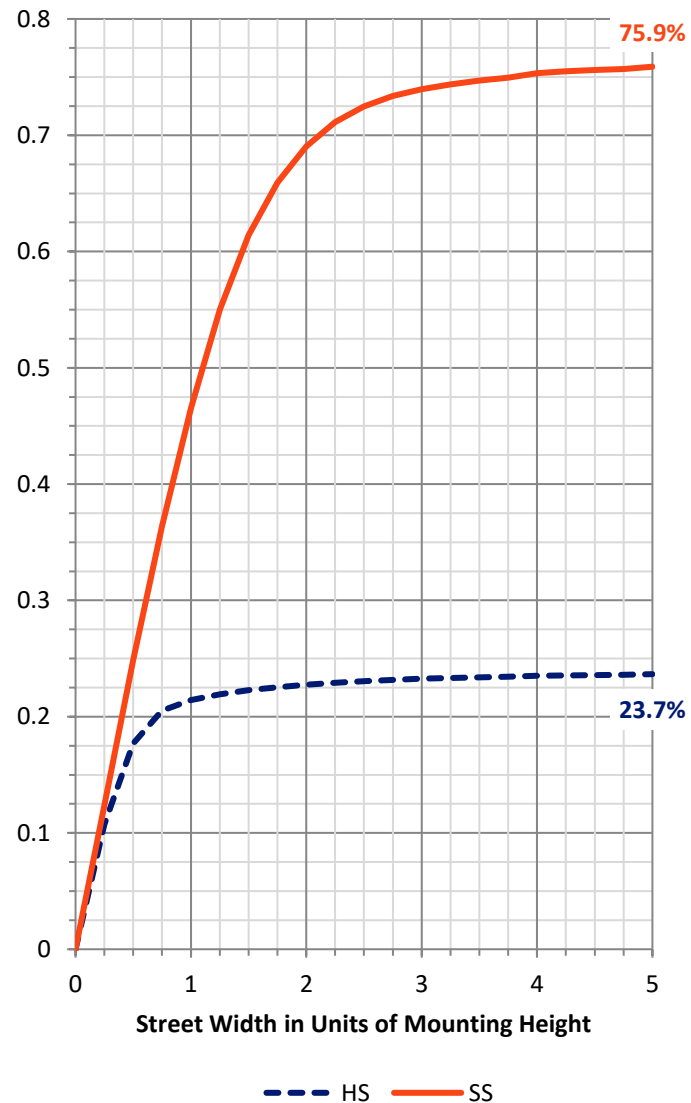
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2895.0	0.0	2895.0
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	9172.5	0.0	9172.5
	% Fixture	76.0	0.0	76.0
Total	Lumens	12067.5	0.0	12067.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	1.1
10°-20°	442.9	3.7
20°-30°	790.7	6.6
30°-40°	1158.9	9.6
40°-50°	1790.6	14.8
50°-60°	2607.4	21.6
60°-70°	3396.6	28.1
70°-80°	1520.4	12.6
80°-90°	229.9	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°	12067.5	100.0
0°-180°	12067.5	100.0

Coefficient of Utilization



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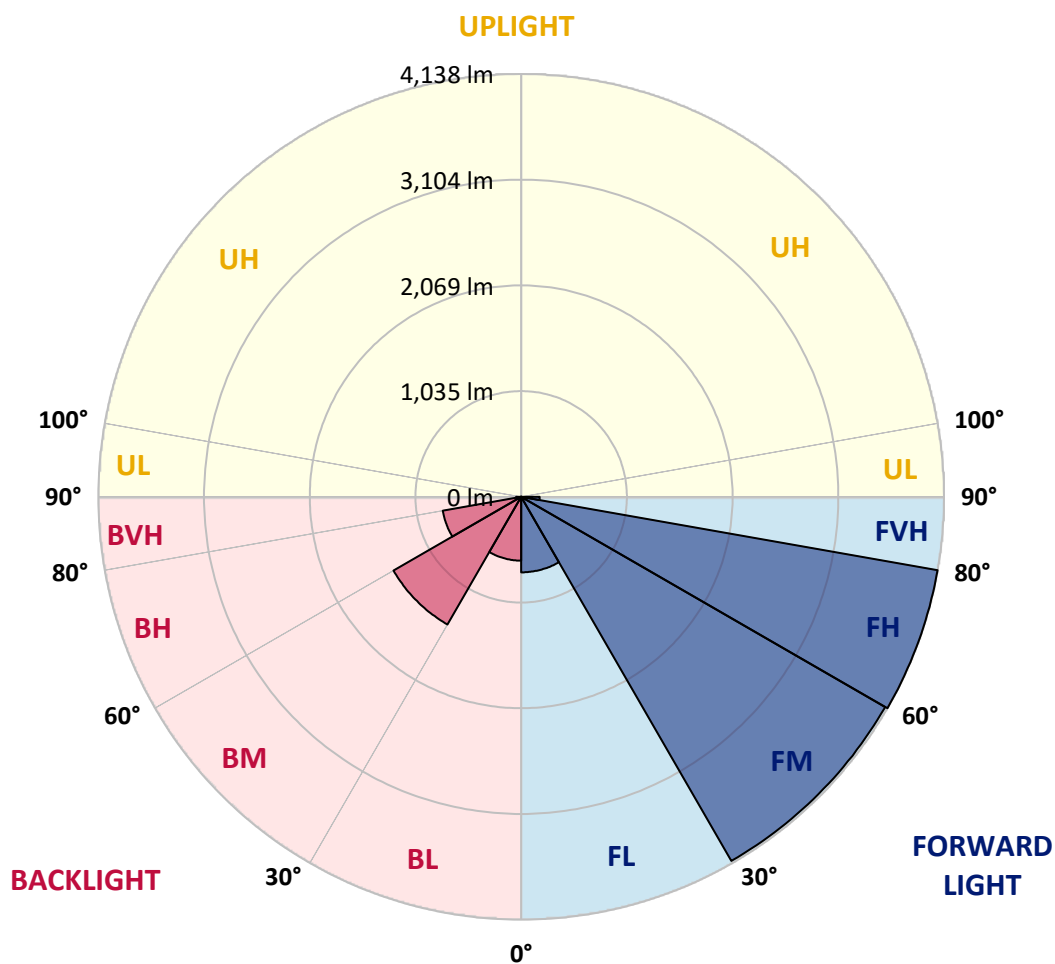
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	739.4	6.1			
FM	(30°-60°)	4114.4	34.1			
FH	(60°-80°)	4138.2	34.3			G2/5000
FVH	(80°-90°)	180.5	1.5			G2/225
BL	(0°-30°)	624.3	5.2	B2/1000		
BM	(30°-60°)	1442.5	12.0	B2/2500		
BH	(60°-80°)	778.9	6.5	B2/1000		G2/1000
BVH	(80°-90°)	49.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0
2.5°	1359.2	1362.4	1363.2	1362.4	1363.2	1360.0	1359.2	1354.4	1356.8	1350.4	1348.8
5°	1432.8	1435.2	1436.8	1430.4	1432.0	1428.8	1424.8	1420.0	1413.6	1404.8	1399.2
7.5°	1504.8	1508.8	1508.0	1505.6	1500.0	1496.8	1488.8	1481.6	1470.4	1460.0	1452.8
10°	1601.6	1600.8	1600.8	1587.2	1579.2	1572.0	1557.6	1546.4	1535.2	1520.0	1512.0
12.5°	1713.6	1708.0	1705.6	1696.0	1679.2	1666.4	1645.6	1624.0	1604.0	1588.0	1575.2
15°	1821.6	1821.6	1815.2	1800.0	1784.0	1767.2	1737.6	1706.4	1673.6	1648.0	1635.2
17.5°	1920.0	1911.2	1905.6	1885.6	1868.8	1841.6	1808.8	1775.2	1734.4	1698.4	1673.6
20°	1992.0	1984.8	1972.8	1948.0	1919.2	1887.2	1848.8	1809.6	1765.6	1726.4	1698.4
22.5°	2033.6	2024.8	2006.4	1973.6	1934.4	1889.6	1844.8	1808.0	1768.0	1738.4	1715.2
25°	2055.2	2046.4	2021.6	1978.4	1925.6	1866.4	1815.2	1779.2	1756.0	1748.8	1745.6
27.5°	2054.4	2047.2	2020.8	1971.2	1903.2	1835.2	1780.0	1749.6	1747.2	1775.2	1796.0
30°	2033.6	2028.8	2004.8	1955.2	1884.0	1812.8	1761.6	1745.6	1770.4	1829.6	1880.8
32.5°	2012.8	2010.4	1993.6	1948.8	1888.0	1828.0	1792.8	1794.4	1845.6	1936.8	2019.2
35°	2015.2	2018.4	2016.0	1992.0	1953.6	1922.4	1905.6	1940.8	2020.8	2131.2	2241.6
37.5°	2036.0	2048.0	2063.2	2065.6	2066.4	2061.6	2096.8	2171.2	2288.0	2432.0	2604.8
40°	2081.6	2095.2	2139.2	2177.6	2227.2	2286.4	2357.6	2460.8	2605.6	2783.2	2995.2
42.5°	2223.2	2242.4	2296.8	2368.0	2459.2	2552.0	2658.4	2799.2	2976.8	3164.0	3386.4
45°	2408.0	2448.0	2508.0	2587.2	2724.0	2854.4	2992.0	3149.6	3338.4	3572.8	3796.8
47.5°	2638.4	2678.4	2765.6	2850.4	3012.0	3174.4	3324.8	3489.6	3694.4	3934.4	4182.4
50°	2840.0	2885.6	2963.2	3077.6	3264.8	3464.0	3630.4	3808.8	3980.8	4233.6	4484.0
52.5°	2998.4	3031.2	3105.6	3210.4	3419.2	3637.6	3848.0	4046.4	4250.4	4503.2	4735.2
55°	3018.4	3048.8	3121.6	3241.6	3453.6	3696.0	3938.4	4173.6	4462.4	4738.4	5045.6
57.5°	2932.0	2956.8	3030.4	3137.6	3344.0	3620.0	3926.4	4228.0	4597.6	4970.4	5345.6
60°	2809.6	2834.4	2892.0	2977.6	3164.0	3461.6	3819.2	4232.0	4723.2	5261.6	5813.6
62.5°	2675.2	2696.8	2743.2	2804.0	2968.0	3242.4	3652.0	4205.6	4825.6	5551.2	6402.4
65°	2448.8	2500.8	2520.8	2583.2	2747.2	3006.4	3423.2	4027.2	4784.0	5680.0	6772.0
67°	2198.4	2251.2	2261.6	2324.8	2456.0	2704.8	3128.8	3696.8	4454.4	5457.6	6690.4
67.5°	2118.4	2163.2	2179.2	2242.4	2366.4	2600.8	3003.2	3577.6	4353.6	5336.0	6592.0
70°	1557.6	1607.2	1624.8	1651.2	1740.0	1935.2	2201.6	2700.0	3471.2	4354.4	5560.8
72.5°	833.6	873.6	890.4	929.6	975.2	1081.6	1285.6	1643.2	2130.4	2913.6	3956.0
75°	564.0	580.0	592.0	619.2	666.4	751.2	840.8	966.4	1260.8	1644.0	2251.2
77.5°	321.6	328.8	330.4	335.2	372.8	453.6	600.8	813.6	1043.2	1191.2	1440.0
80°	139.2	153.6	164.8	157.6	155.2	172.0	215.2	320.8	628.8	998.4	1184.8
82.5°	75.2	81.6	91.2	92.0	96.8	102.4	111.2	132.0	185.6	374.4	816.8
85°	39.2	40.8	54.4	62.4	66.4	69.6	71.2	79.2	91.2	116.0	203.2
87.5°	5.6	8.0	9.6	12.8	14.4	15.2	17.6	22.4	26.4	32.0	54.4
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0
2.5°	1341.6	1340.0	1335.2	1332.0	1328.8	1325.6	1321.6	1318.4	1312.8	1308.8	1304.0
5°	1391.2	1381.6	1375.2	1366.4	1364.8	1354.4	1344.0	1339.2	1329.6	1321.6	1312.0
7.5°	1441.6	1430.4	1420.0	1412.8	1408.8	1394.4	1384.0	1372.0	1360.8	1350.4	1339.2
10°	1500.8	1489.6	1478.4	1473.6	1466.4	1452.8	1444.0	1428.8	1417.6	1404.8	1389.6
12.5°	1562.4	1554.4	1546.4	1540.0	1536.8	1530.4	1517.6	1504.8	1489.6	1476.8	1459.2
15°	1616.8	1611.2	1608.0	1606.4	1606.4	1602.4	1590.4	1578.4	1562.4	1548.0	1528.8
17.5°	1655.2	1652.8	1655.2	1657.6	1660.8	1657.6	1655.2	1641.6	1631.2	1613.6	1594.4
20°	1677.6	1682.4	1694.4	1702.4	1709.6	1715.2	1717.6	1706.4	1692.8	1680.0	1667.2
22.5°	1701.6	1715.2	1736.0	1748.0	1760.0	1780.0	1784.8	1776.8	1766.4	1758.4	1744.8
25°	1741.6	1761.6	1797.6	1816.8	1833.6	1863.2	1867.2	1868.8	1866.4	1860.0	1843.2
27.5°	1804.0	1843.2	1891.2	1916.0	1934.4	1972.8	1988.0	1988.0	1981.6	1988.8	1988.8
30°	1912.8	1964.8	2027.2	2041.6	2070.4	2104.0	2128.8	2132.0	2132.8	2148.0	2170.4
32.5°	2080.0	2129.6	2199.2	2215.2	2240.0	2272.0	2300.0	2296.8	2304.0	2336.8	2366.4
35°	2323.2	2373.6	2419.2	2440.8	2452.0	2480.8	2491.2	2508.8	2530.4	2571.2	2567.2
37.5°	2683.2	2728.0	2734.4	2748.0	2734.4	2740.0	2748.0	2768.8	2826.4	2863.2	2804.0
40°	3116.8	3191.2	3184.0	3168.0	3137.6	3096.8	3111.2	3143.2	3205.6	3173.6	3014.4
42.5°	3525.6	3602.4	3588.0	3569.6	3502.4	3487.2	3485.6	3512.0	3545.6	3454.4	3179.2
45°	3928.0	4006.4	3981.6	3971.2	3926.4	3893.6	3920.8	3922.4	3913.6	3718.4	3323.2
47.5°	4343.2	4415.2	4399.2	4408.0	4361.6	4340.0	4342.4	4331.2	4248.8	3942.4	3435.2
50°	4678.4	4775.2	4784.8	4764.8	4740.0	4707.2	4791.2	4760.8	4577.6	4160.0	3543.2
52.5°	4939.2	5069.6	5119.2	5106.4	5086.4	5090.4	5248.0	5282.4	4979.2	4434.4	3662.4
55°	5248.0	5453.6	5534.4	5582.4	5561.6	5641.6	6002.4	6020.0	5537.6	4792.8	3817.6
57.5°	5693.6	5988.0	6243.2	6311.2	6376.8	6636.8	7222.4	7044.0	6262.4	5335.2	4014.4
60°	6371.2	7016.0	7430.4	7648.0	7801.6	8164.8	8721.6	8269.6	7165.6	5980.8	4261.6
62.5°	7320.0	8262.4	8955.2	9173.6	9236.8	9445.6	9848.8	8984.0	7657.6	6270.4	4283.2
65°	8026.4	9156.8	9986.4	10098.4	10023.2	10027.2	10132.8	8946.4	7474.4	6017.6	3912.0
67°	7980.0	9245.6	10095.2	10242.4	10138.4	10001.6	9836.8	8436.8	6885.6	5488.0	3425.6
67.5°	7908.8	9160.0	10048.0	10203.2	10108.0	9952.0	9711.2	8239.2	6702.4	5323.2	3326.4
70°	6836.8	8079.2	9275.2	9493.6	9533.6	9391.2	8715.2	6947.2	5441.6	4330.4	2583.2
72.5°	5321.6	6428.0	7611.2	7800.8	7954.4	7544.0	6343.2	4798.4	3966.4	3120.8	1870.4
75°	3513.6	4639.2	5236.0	5264.0	5068.0	4308.0	3099.2	2403.2	2212.0	1834.4	1157.6
77.5°	1880.0	2728.0	2744.8	2541.6	2448.8	1825.6	740.8	408.8	455.2	516.8	460.8
80°	1402.4	1737.6	2013.6	2164.8	2209.6	1565.6	383.2	216.8	189.6	172.8	170.4
82.5°	1264.8	1678.4	1881.6	1964.0	1943.2	1288.0	215.2	145.6	120.8	131.2	149.6
85°	496.0	896.0	1178.4	1140.8	958.4	480.0	117.6	78.4	78.4	113.6	147.2
87.5°	101.6	184.0	249.6	238.4	214.4	92.8	57.6	47.2	48.0	92.0	139.2
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°	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0	1308.0
2.5°	1299.2	1294.4	1291.2	1288.0	1284.8	1283.2	1280.8	1280.8	1276.0	1274.4	1272.8
5°	1304.8	1296.8	1291.2	1284.0	1278.4	1273.6	1267.2	1265.6	1260.0	1256.0	1254.4
7.5°	1328.8	1316.8	1304.8	1296.0	1288.0	1277.6	1270.4	1264.0	1258.4	1254.4	1249.6
10°	1374.4	1361.6	1344.8	1328.8	1318.4	1302.4	1291.2	1280.0	1273.6	1268.8	1262.4
12.5°	1441.6	1423.2	1403.2	1384.0	1366.4	1345.6	1334.4	1320.8	1312.8	1308.8	1304.0
15°	1510.4	1490.4	1465.6	1447.2	1427.2	1411.2	1400.8	1388.8	1382.4	1377.6	1374.4
17.5°	1580.8	1557.6	1540.0	1521.6	1512.0	1500.0	1486.4	1471.2	1452.8	1441.6	1426.4
20°	1652.8	1635.2	1624.8	1614.4	1603.2	1586.4	1559.2	1528.0	1493.6	1460.8	1429.6
22.5°	1736.8	1726.4	1724.8	1715.2	1692.0	1652.0	1601.6	1543.2	1484.8	1430.4	1388.0
25°	1855.2	1855.2	1847.2	1808.0	1753.6	1681.6	1596.8	1512.8	1435.2	1360.8	1304.8
27.5°	2004.0	1998.4	1959.2	1878.4	1780.8	1668.8	1555.2	1448.8	1349.6	1268.0	1196.0
30°	2168.0	2128.8	2044.8	1917.6	1771.2	1627.2	1488.0	1364.8	1248.0	1148.0	1063.2
32.5°	2338.4	2243.2	2092.0	1917.6	1737.6	1564.8	1404.0	1252.8	1119.2	1007.2	906.4
35°	2492.8	2319.2	2103.2	1886.4	1672.0	1472.8	1286.4	1115.2	955.2	834.4	724.0
37.5°	2632.8	2369.6	2091.2	1825.6	1576.8	1343.2	1124.8	936.0	755.2	638.4	544.0
40°	2724.0	2380.0	2041.6	1730.4	1440.8	1168.0	926.4	715.2	572.0	465.6	402.4
42.5°	2780.8	2360.0	1961.6	1600.0	1257.6	948.0	695.2	512.8	406.4	347.2	323.2
45°	2812.8	2308.0	1843.2	1421.6	1036.0	720.8	493.6	370.4	312.8	292.0	284.0
47.5°	2811.2	2224.0	1695.2	1215.2	791.2	502.4	349.6	288.8	272.8	266.4	264.8
50°	2794.4	2120.8	1521.6	991.2	571.2	350.4	276.8	259.2	255.2	251.2	249.6
52.5°	2771.2	1992.8	1329.6	772.8	405.6	280.0	251.2	246.4	243.2	239.2	237.6
55°	2728.0	1835.2	1121.6	581.6	317.6	252.8	242.4	240.8	236.8	231.2	228.0
57.5°	2675.2	1675.2	922.4	454.4	280.8	246.4	240.8	238.4	232.8	226.4	220.0
60°	2656.0	1543.2	766.4	383.2	272.0	248.8	244.8	241.6	233.6	224.0	216.8
62.5°	2536.0	1394.4	654.4	355.2	276.8	259.2	257.6	252.8	240.8	229.6	218.4
65°	2225.6	1179.2	554.4	336.0	286.4	276.8	278.4	271.2	259.2	244.0	224.0
67°	1882.4	961.6	461.6	317.6	293.6	295.2	300.8	295.2	280.0	258.4	231.2
67.5°	1791.2	906.4	438.4	312.0	295.2	300.0	306.4	302.4	287.2	262.4	234.4
70°	1331.2	638.4	327.2	282.4	295.2	314.4	328.8	332.8	316.0	281.6	240.8
72.5°	937.6	412.0	251.2	244.8	268.0	293.6	320.8	334.4	315.2	277.6	232.0
75°	563.2	257.6	204.0	208.0	225.6	252.0	273.6	279.2	255.2	231.2	200.8
77.5°	260.8	171.2	160.0	165.6	182.4	194.4	194.4	183.2	164.8	150.4	144.0
80°	153.6	140.0	139.2	149.6	160.8	152.0	138.4	123.2	113.6	108.8	106.4
82.5°	144.0	149.6	159.2	161.6	152.8	131.2	114.4	99.2	94.4	92.0	89.6
85°	169.6	181.6	165.6	152.8	135.2	110.4	89.6	76.8	74.4	72.0	68.8
87.5°	156.8	149.6	130.4	112.0	92.8	67.2	48.8	44.0	47.2	46.4	44.8
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°	1308.0	1308.0	1308.0	1308.0	1308.0
2.5°	1273.6	1273.6	1270.4	1268.8	1272.8
5°	1251.2	1252.0	1249.6	1248.8	1249.6
7.5°	1246.4	1245.6	1244.0	1242.4	1244.0
10°	1260.8	1260.0	1257.6	1259.2	1256.8
12.5°	1304.0	1308.8	1308.0	1309.6	1312.8
15°	1374.4	1373.6	1371.2	1372.8	1375.2
17.5°	1414.4	1408.0	1402.4	1400.0	1400.0
20°	1404.8	1386.4	1376.8	1371.2	1369.6
22.5°	1348.0	1321.6	1301.6	1296.8	1292.8
25°	1255.2	1222.4	1196.8	1191.2	1180.8
27.5°	1147.2	1103.2	1072.8	1066.4	1060.8
30°	1005.6	955.2	920.0	897.6	904.8
32.5°	832.8	784.8	744.0	708.0	702.4
35°	643.2	590.4	554.4	538.4	528.0
37.5°	480.0	436.0	412.0	396.8	397.6
40°	367.2	344.0	331.2	320.8	321.6
42.5°	306.4	296.0	292.8	288.0	285.6
45°	277.6	274.4	275.2	270.4	268.8
47.5°	261.6	259.2	260.0	256.8	256.0
50°	248.8	247.2	248.0	245.6	244.8
52.5°	236.0	236.8	236.0	234.4	234.4
55°	224.8	224.0	225.6	223.2	223.2
57.5°	216.0	215.2	215.2	214.4	214.4
60°	211.2	208.0	207.2	207.2	208.0
62.5°	208.8	203.2	202.4	202.4	203.2
65°	209.6	200.8	197.6	196.8	196.0
67°	210.4	197.6	191.2	188.0	187.2
67.5°	211.2	196.0	188.8	185.6	184.0
70°	206.4	184.8	174.4	168.8	167.2
72.5°	194.4	171.2	158.4	151.2	149.6
75°	172.8	155.2	144.0	136.0	132.8
77.5°	133.6	125.6	121.6	116.8	115.2
80°	104.0	100.0	98.4	95.2	94.4
82.5°	86.4	82.4	80.0	76.0	73.6
85°	67.2	62.4	60.8	57.6	56.0
87.5°	44.0	41.6	40.8	36.8	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)