

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: P158665

Luminaire Tested: **VST-F04-LED-E-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158665
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
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-SL4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9579.2 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

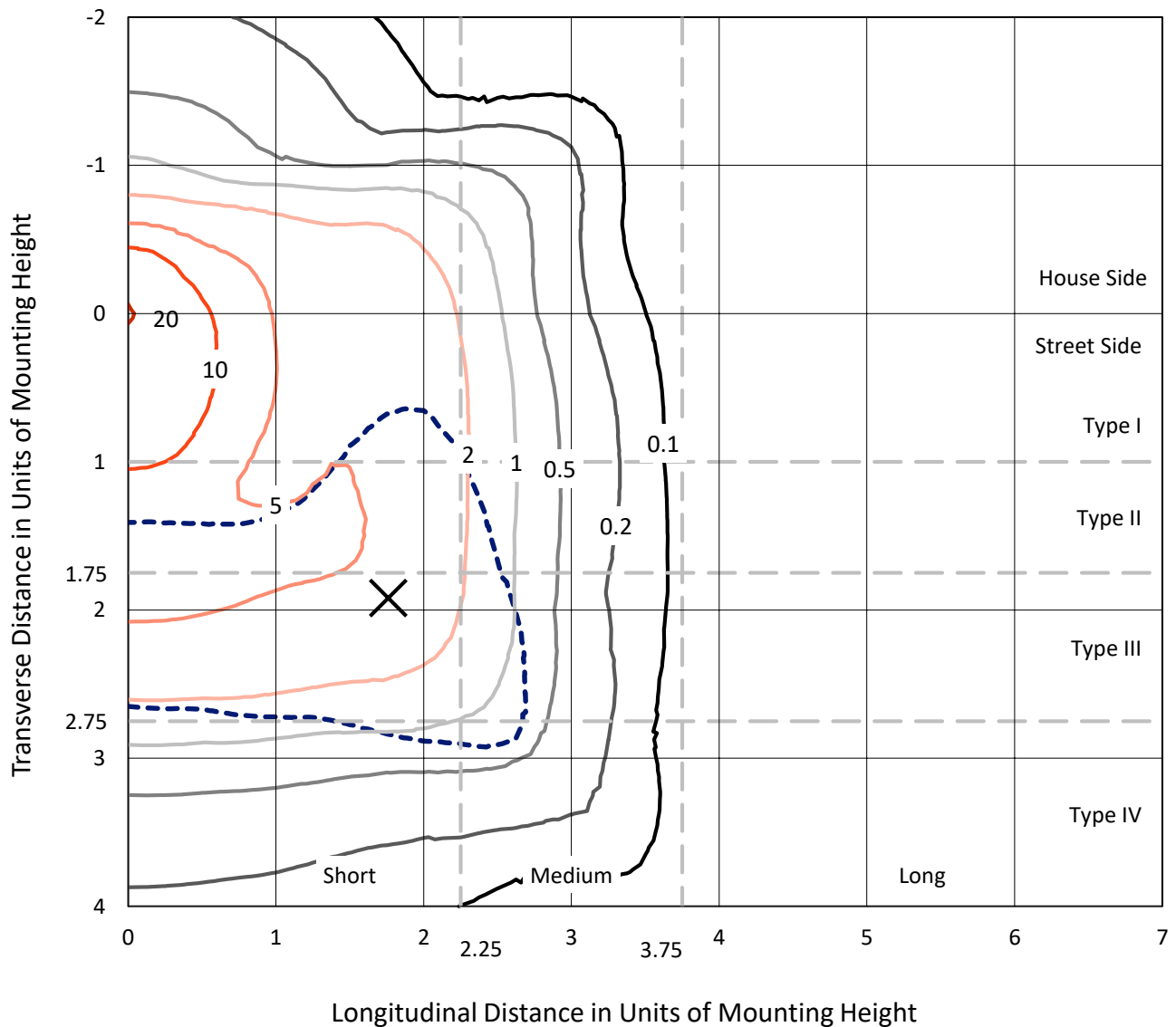
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

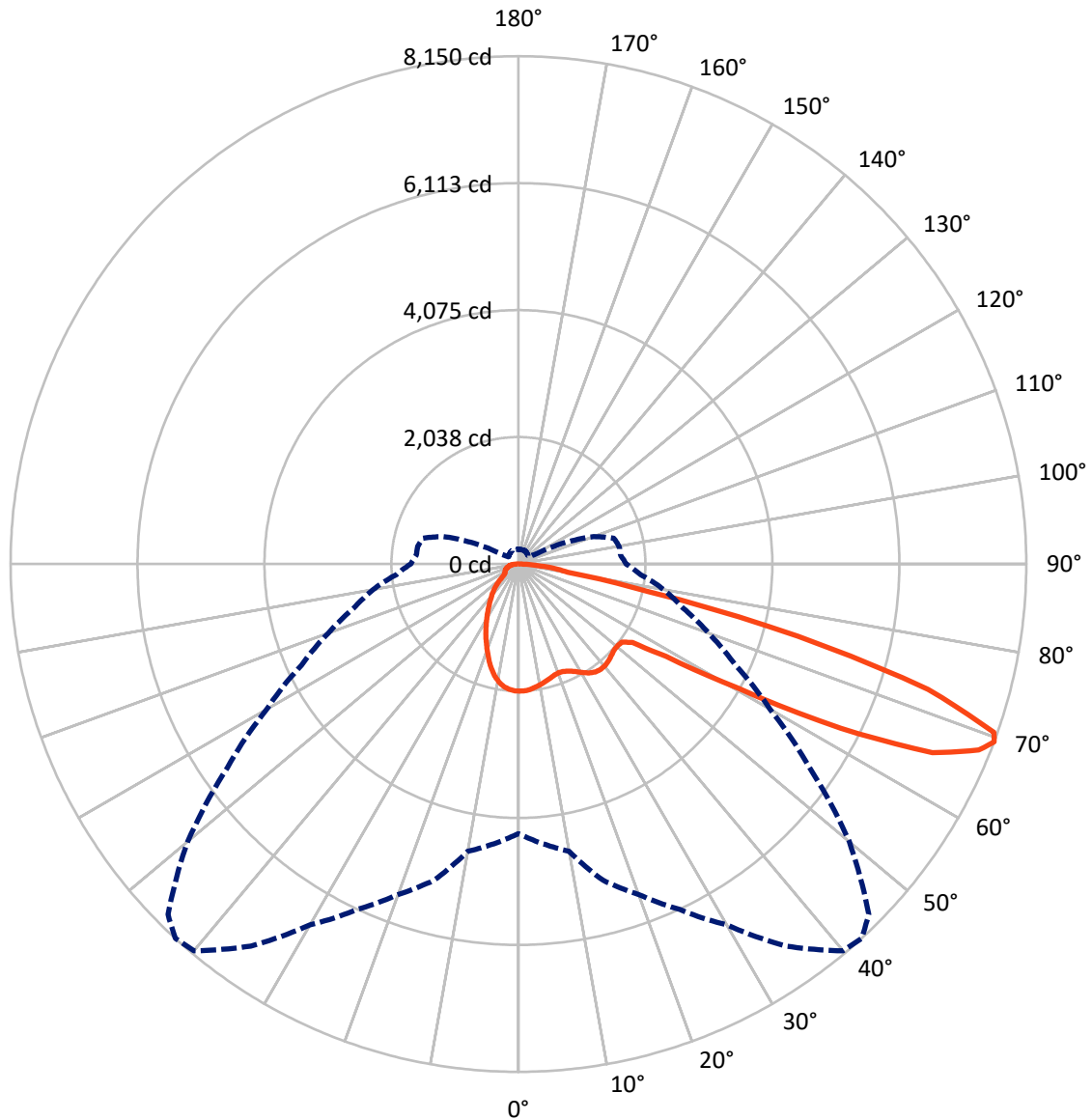
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.4 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2129.6	0.0	2129.6
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	7449.6	0.0	7449.6
	% Fixture	77.8	0.0	77.8
Total	Lumens	9579.2	0.0	9579.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.9	2.0
10°-20°	511.8	5.3
20°-30°	746.3	7.8
30°-40°	951.4	9.9
40°-50°	1107.0	11.6
50°-60°	1684.3	17.6
60°-70°	2975.3	31.1
70°-80°	1227.8	12.8
80°-90°	185.4	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°	9579.2	100.0
0°-180°	9579.2	100.0

Coefficient of Utilization



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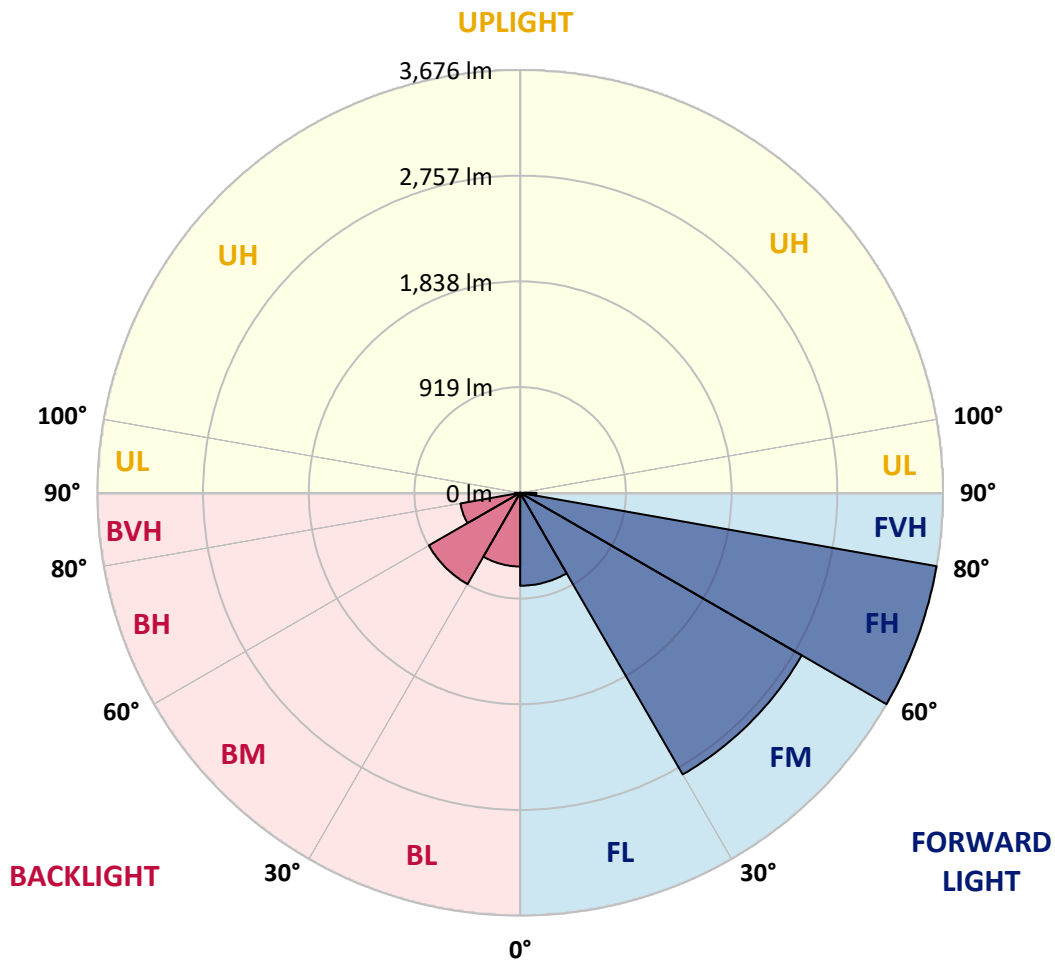
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	807.8	8.4			
FM (30°-60°)	2826.1	29.5			
FH (60°-80°)	3675.5	38.4			G2/5000
FVH (80°-90°)	140.2	1.5			G2/225
BL (0°-30°)	640.3	6.7	B2/1000		
BM (30°-60°)	916.6	9.6	B1/1000		
BH (60°-80°)	527.5	5.5	B2/1000		G2/1000
BVH (80°-90°)	45.2	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°	42.5°	45°
0°	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0
2.5°	2033.4	2040.7	2038.1	2038.1	2040.0	2036.7	2036.7	2038.1	2034.8	2036.7	2036.1
5°	2026.2	2030.1	2028.8	2028.8	2028.8	2026.2	2024.8	2024.2	2019.6	2019.6	2017.6
7.5°	2010.3	2011.6	2013.6	2011.0	2010.3	2009.7	2005.0	2002.4	1997.1	1992.5	1993.8
10°	1989.2	1988.5	1991.8	1989.8	1987.2	1985.2	1981.3	1976.6	1970.7	1964.7	1964.1
12.5°	1965.4	1964.7	1967.4	1966.1	1964.1	1960.1	1956.8	1948.9	1939.7	1932.4	1931.7
15°	1950.2	1948.2	1950.9	1948.2	1944.9	1941.0	1935.0	1925.1	1908.6	1901.3	1895.4
17.5°	1964.7	1961.4	1962.8	1959.5	1954.8	1944.3	1930.4	1909.3	1885.5	1873.0	1863.7
20°	2015.6	2009.7	2011.0	2007.7	1997.1	1983.2	1956.8	1919.8	1879.6	1859.1	1844.6
22.5°	2088.2	2083.6	2085.6	2082.3	2071.7	2050.6	2011.0	1958.1	1900.7	1871.0	1847.9
25°	2198.5	2202.5	2203.8	2188.6	2182.7	2143.7	2088.9	2015.6	1939.0	1904.0	1872.3
27.5°	2322.7	2322.7	2328.6	2322.7	2310.8	2265.2	2188.0	2099.5	2001.1	1953.5	1915.2
30°	2443.6	2442.2	2453.5	2452.1	2433.0	2381.5	2293.6	2186.0	2073.7	2020.2	1971.4
32.5°	2571.7	2575.6	2582.9	2580.3	2555.2	2483.8	2378.2	2261.3	2143.1	2084.3	2029.5
35°	2710.4	2712.3	2715.0	2713.7	2662.8	2573.0	2440.3	2309.5	2186.7	2128.5	2071.7
37.5°	2849.1	2847.1	2843.8	2815.4	2757.3	2632.4	2477.9	2337.2	2208.4	2145.7	2086.9
40°	2973.2	2962.0	2951.4	2907.2	2818.0	2666.1	2492.4	2343.8	2206.5	2141.7	2084.3
42.5°	3041.2	3028.7	3006.9	2951.4	2843.1	2669.4	2482.5	2324.0	2186.0	2121.9	2065.1
45°	3053.8	3044.5	3023.4	2961.3	2837.2	2648.3	2452.1	2291.7	2155.6	2091.5	2038.1
47.5°	3024.1	3016.8	2996.3	2934.9	2811.4	2616.6	2417.1	2257.3	2125.9	2065.8	2014.3
50°	2978.5	2971.9	2956.0	2899.9	2782.3	2594.8	2399.3	2239.5	2116.0	2061.2	2013.6
52.5°	3052.5	3057.7	3011.5	2950.1	2813.4	2613.9	2419.1	2258.0	2133.8	2079.7	2030.1
55°	4202.3	4195.0	3917.0	3683.8	3267.1	2889.3	2607.3	2404.6	2271.8	2217.7	2171.5
57.5°	5460.4	5435.3	5321.0	5103.1	4655.3	4057.6	3514.1	3051.8	2869.5	2791.6	2796.9
60°	5871.1	5880.4	5855.9	5778.7	5618.2	5307.1	4893.7	4546.3	4204.2	4037.1	4056.3
62.5°	6099.0	6115.5	6136.6	6119.5	6067.3	5995.3	5943.1	5974.8	5927.3	5807.1	5711.3
65°	6130.7	6164.4	6234.4	6289.8	6316.9	6384.9	6544.8	6927.8	7277.8	7300.9	7132.5
67.5°	5503.3	5596.4	5748.3	6005.2	6225.1	6466.8	6852.5	7435.0	7951.5	7968.6	7811.4
69°	4327.1	4506.0	4683.7	5257.6	5643.9	6117.5	6688.1	7483.9	8102.7	8150.2	7952.1
70°	3467.2	3573.5	3726.7	4303.3	4880.5	5484.1	6311.0	7322.7	7999.0	8094.8	7876.2
72.5°	2081.6	2122.6	2175.4	2382.1	2679.3	3216.9	4313.2	5970.2	6747.5	6875.6	6597.6
75°	1345.9	1343.3	1347.9	1405.4	1422.5	1525.6	1871.0	3071.6	4401.7	4634.2	4301.3
77.5°	1013.7	1023.0	1008.5	1013.7	1009.1	1036.9	1047.4	1099.6	1737.6	2140.4	1913.9
80°	894.9	899.5	900.2	897.5	865.2	862.5	879.7	850.0	789.9	801.7	768.1
82.5°	510.5	509.8	515.8	560.7	579.2	639.9	665.0	678.9	626.7	587.8	531.6
85°	330.9	333.5	340.1	354.0	340.1	345.4	339.5	351.3	322.3	299.2	267.5
87.5°	135.4	135.4	144.0	156.5	146.0	143.3	122.8	121.5	103.0	93.1	72.6
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°	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0
2.5°	2032.1	2036.1	2034.1	2036.7	2034.8	2034.8	2032.1	2031.5	2033.4	2030.8	2031.5
5°	2014.3	2014.9	2011.6	2013.0	2009.0	2007.7	2005.7	2000.4	2003.7	2000.4	2001.7
7.5°	1988.5	1986.5	1981.9	1975.3	1970.7	1968.7	1964.7	1957.5	1958.8	1952.9	1956.2
10°	1955.5	1948.9	1941.0	1931.1	1924.5	1918.5	1909.9	1901.3	1896.7	1891.4	1890.8
12.5°	1918.5	1910.6	1900.0	1884.8	1870.3	1860.4	1847.2	1832.0	1827.4	1818.8	1814.2
15°	1878.2	1865.7	1853.1	1836.0	1820.1	1804.9	1787.1	1767.9	1755.4	1742.2	1732.3
17.5°	1841.9	1827.4	1810.9	1794.4	1777.2	1758.7	1736.2	1712.5	1694.0	1669.5	1649.7
20°	1813.5	1795.0	1778.5	1761.3	1742.2	1719.7	1692.7	1662.3	1631.2	1604.2	1581.0
22.5°	1802.3	1773.2	1753.4	1736.2	1717.1	1690.7	1657.7	1622.0	1584.3	1546.7	1516.3
25°	1811.5	1768.6	1737.6	1717.1	1700.6	1673.5	1636.5	1592.9	1549.3	1504.4	1463.5
27.5°	1838.6	1783.8	1738.9	1706.5	1687.4	1660.3	1621.3	1575.1	1523.6	1473.4	1423.2
30°	1880.9	1809.6	1752.8	1707.2	1677.5	1646.4	1605.5	1552.0	1499.8	1442.4	1387.5
32.5°	1921.8	1836.6	1768.6	1709.8	1664.3	1624.0	1578.4	1525.6	1469.4	1409.3	1352.5
35°	1950.9	1854.5	1774.5	1703.9	1643.8	1593.6	1544.7	1491.9	1437.1	1375.7	1317.5
37.5°	1964.7	1864.4	1775.2	1688.0	1616.7	1561.2	1509.1	1456.9	1405.4	1347.3	1292.4
40°	1964.1	1863.7	1766.0	1667.6	1584.3	1525.6	1474.1	1423.2	1375.0	1324.1	1274.6
42.5°	1949.6	1853.1	1752.8	1647.7	1561.2	1495.9	1442.4	1393.5	1352.5	1307.6	1266.0
45°	1927.1	1835.3	1738.9	1638.5	1554.6	1489.2	1432.5	1384.9	1348.6	1307.6	1272.0
47.5°	1909.9	1825.4	1740.9	1655.0	1575.1	1507.1	1447.0	1394.8	1363.8	1330.7	1305.7
50°	1912.6	1830.0	1747.5	1664.9	1589.6	1520.9	1462.8	1415.3	1392.8	1384.2	1378.3
52.5°	1926.4	1837.3	1767.3	1717.8	1692.0	1640.5	1606.1	1576.4	1592.9	1560.6	1522.3
55°	2103.4	2074.4	2142.4	2206.5	2287.7	2318.1	2289.0	2283.7	2310.1	2200.5	1948.9
57.5°	2834.5	2909.8	3014.8	3070.3	3137.7	3119.8	3052.5	2996.3	2930.3	2802.2	2488.5
60°	4078.1	4021.3	3973.7	3839.7	3730.1	3601.9	3459.3	3337.1	3220.2	3036.0	2696.5
62.5°	5359.3	4965.0	4635.5	4317.2	4060.9	3848.3	3641.6	3458.0	3281.0	3024.1	2658.9
65°	6467.5	5637.3	5018.5	4551.6	4177.2	3854.2	3588.7	3335.1	3109.9	2808.8	2447.5
67.5°	6965.4	5925.3	5025.1	4356.1	3837.7	3399.2	3055.8	2672.7	2420.4	2227.6	2024.2
69°	6928.5	5705.4	4666.5	3843.0	3247.3	2736.1	2367.6	1968.1	1726.3	1644.4	1639.8
70°	6752.8	5332.9	4247.8	3426.3	2744.7	2236.8	1883.5	1524.9	1299.7	1243.6	1343.3
72.5°	5513.2	3768.4	2662.2	2032.8	1563.2	1235.6	1007.8	799.8	638.6	553.4	571.9
75°	3113.9	1744.8	1128.0	852.6	720.5	595.7	511.2	435.9	394.3	320.3	253.6
77.5°	1132.0	748.9	595.7	515.1	365.2	251.6	210.7	184.3	167.1	167.1	159.2
80°	715.9	564.0	393.6	269.5	199.4	173.7	151.9	133.4	122.8	120.2	122.8
82.5°	447.1	345.4	220.6	169.1	142.0	127.5	111.0	97.1	88.5	86.5	90.5
85°	220.6	171.0	134.1	119.5	112.3	104.3	91.8	78.6	75.9	81.2	95.1
87.5°	66.0	58.8	48.2	50.2	52.8	51.5	40.9	35.7	33.7	44.2	69.3
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°	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0	2040.0
2.5°	2032.8	2032.1	2033.4	2031.5	2032.8	2033.4	2032.1	2038.1	2034.1	2034.8	2037.4
5°	2003.1	2001.7	2007.0	2005.7	2008.3	2011.0	2009.7	2018.2	2014.9	2017.6	2022.9
7.5°	1953.5	1956.2	1956.8	1956.8	1962.1	1970.7	1972.7	1978.0	1978.0	1985.2	1990.5
10°	1887.5	1888.1	1892.1	1891.4	1898.0	1907.3	1908.6	1917.9	1921.2	1933.0	1940.3
12.5°	1810.9	1807.6	1806.9	1806.2	1814.8	1824.7	1826.1	1841.9	1848.5	1859.1	1871.0
15°	1725.0	1716.4	1713.8	1719.1	1717.1	1723.0	1729.0	1737.6	1746.8	1767.9	1778.5
17.5°	1641.1	1624.0	1619.3	1613.4	1607.5	1607.5	1610.1	1620.7	1639.8	1651.0	1674.8
20°	1555.3	1534.8	1518.3	1502.5	1488.6	1483.3	1484.0	1497.2	1511.0	1529.5	1552.0
22.5°	1483.3	1452.3	1423.9	1402.7	1374.3	1373.7	1369.7	1373.7	1388.9	1393.5	1406.0
25°	1421.2	1379.6	1341.3	1307.0	1279.2	1264.7	1260.7	1259.4	1252.2	1250.2	1240.9
27.5°	1373.0	1322.8	1273.3	1231.7	1197.3	1177.5	1152.4	1134.6	1108.8	1102.2	1085.7
30°	1333.4	1279.2	1225.1	1170.9	1132.0	1096.3	1054.0	1023.0	983.4	957.6	935.2
32.5°	1295.1	1240.3	1185.5	1132.0	1071.9	1016.4	960.9	912.7	868.5	828.8	795.8
35°	1263.4	1211.2	1155.7	1091.0	1014.4	934.5	867.8	813.0	752.2	710.6	669.0
37.5°	1242.9	1195.4	1139.9	1050.7	952.3	866.5	790.5	723.8	661.7	599.0	552.1
40°	1233.7	1192.1	1122.7	1013.7	898.2	803.1	719.2	645.2	566.0	495.3	445.1
42.5°	1233.0	1190.7	1098.9	972.8	853.3	749.6	656.5	568.0	480.1	407.5	357.9
45°	1244.9	1188.8	1073.8	938.5	813.6	705.3	594.4	486.7	388.3	334.2	307.8
47.5°	1276.6	1192.1	1053.4	906.8	776.0	651.8	523.1	397.6	316.3	291.2	291.2
50°	1333.4	1211.2	1048.1	884.3	738.3	589.8	435.9	321.0	280.0	280.0	287.9
52.5°	1420.6	1251.5	1057.3	868.5	691.5	507.9	343.4	276.7	268.8	276.1	286.6
55°	1621.3	1322.8	1069.9	841.4	620.1	402.9	283.3	261.5	264.8	273.4	283.3
57.5°	1989.8	1475.4	1083.1	781.9	505.2	310.4	256.9	255.6	261.5	269.5	278.0
60°	2232.2	1669.5	1116.8	692.1	382.4	256.2	243.7	251.6	258.9	265.5	272.1
62.5°	2232.2	1724.4	1141.9	591.7	287.3	233.1	235.1	247.7	256.2	259.5	263.5
65°	2089.6	1624.0	1056.7	482.1	233.8	219.9	227.2	239.7	247.7	250.3	253.6
67.5°	1826.1	1434.4	890.2	363.2	208.7	208.7	217.9	227.2	233.8	239.1	244.4
69°	1587.6	1287.2	783.9	307.8	198.8	200.1	209.4	217.3	225.2	231.8	238.4
70°	1415.9	1176.9	710.0	279.4	192.8	193.5	202.7	211.3	218.6	225.9	233.8
72.5°	758.2	813.0	539.6	229.2	177.7	179.6	188.2	196.1	202.7	210.0	217.3
75°	258.2	349.4	343.4	187.6	160.5	165.8	171.0	178.3	186.9	191.5	195.5
77.5°	151.2	156.5	182.9	152.6	144.6	147.3	153.2	159.2	166.4	171.0	174.4
80°	126.8	126.1	126.8	124.2	126.1	132.1	136.0	144.0	150.6	151.9	151.2
82.5°	103.0	108.3	109.0	107.6	113.6	118.2	121.5	126.1	125.5	126.8	129.4
85°	91.8	91.1	95.8	96.4	96.4	93.1	93.8	93.8	93.8	95.8	96.4
87.5°	91.8	76.6	59.4	53.5	56.1	52.8	50.2	49.5	54.8	60.1	58.8
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°	2040.0	2040.0	2040.0	2040.0	2040.0
2.5°	2038.7	2040.7	2039.4	2039.4	2040.7
5°	2024.8	2028.1	2026.8	2028.1	2028.1
7.5°	1993.1	1997.8	2001.1	2004.4	2002.4
10°	1947.6	1955.5	1960.8	1964.7	1962.8
12.5°	1879.6	1886.8	1898.0	1904.7	1899.4
15°	1786.4	1806.9	1813.5	1822.8	1817.5
17.5°	1689.4	1701.9	1709.8	1718.4	1723.7
20°	1559.9	1569.8	1580.4	1584.3	1578.4
22.5°	1404.1	1409.3	1407.4	1413.3	1401.4
25°	1233.0	1236.3	1234.3	1239.6	1229.7
27.5°	1071.2	1070.5	1071.2	1064.6	1058.0
30°	915.3	909.4	906.8	896.9	894.9
32.5°	776.0	755.5	745.0	730.4	727.1
35°	636.6	607.6	588.4	571.9	564.7
37.5°	511.8	476.8	454.4	439.8	437.9
40°	404.8	372.5	356.6	348.7	347.4
42.5°	330.2	316.3	312.4	312.4	312.4
45°	301.2	300.5	303.8	306.4	307.1
47.5°	295.2	299.2	303.8	307.8	309.1
50°	295.2	299.2	302.5	306.4	307.8
52.5°	293.9	297.2	298.5	301.2	302.5
55°	289.9	291.9	291.9	293.2	294.5
57.5°	283.3	284.6	282.7	284.0	287.3
60°	276.7	278.0	274.7	278.0	280.0
62.5°	269.5	270.1	268.8	271.4	271.4
65°	257.6	256.2	258.2	260.2	260.9
67.5°	245.7	242.4	244.4	245.0	246.3
69°	236.4	234.4	235.1	236.4	237.8
70°	229.8	228.5	229.8	231.8	233.8
72.5°	213.3	214.0	218.6	222.6	226.5
75°	198.1	202.7	208.7	217.3	221.9
77.5°	179.6	182.9	187.6	196.8	205.4
80°	155.2	157.2	157.8	161.1	160.5
82.5°	126.1	124.2	122.8	121.5	120.9
85°	90.5	89.8	84.5	80.6	80.6
87.5°	54.2	51.5	48.9	45.6	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)