

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: P158664

Luminaire Tested: **VST-F04-LED-E-U-SL4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158664
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-SL4-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8749.1 lumens
Efficiency: N/A
Efficacy: 85.6 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

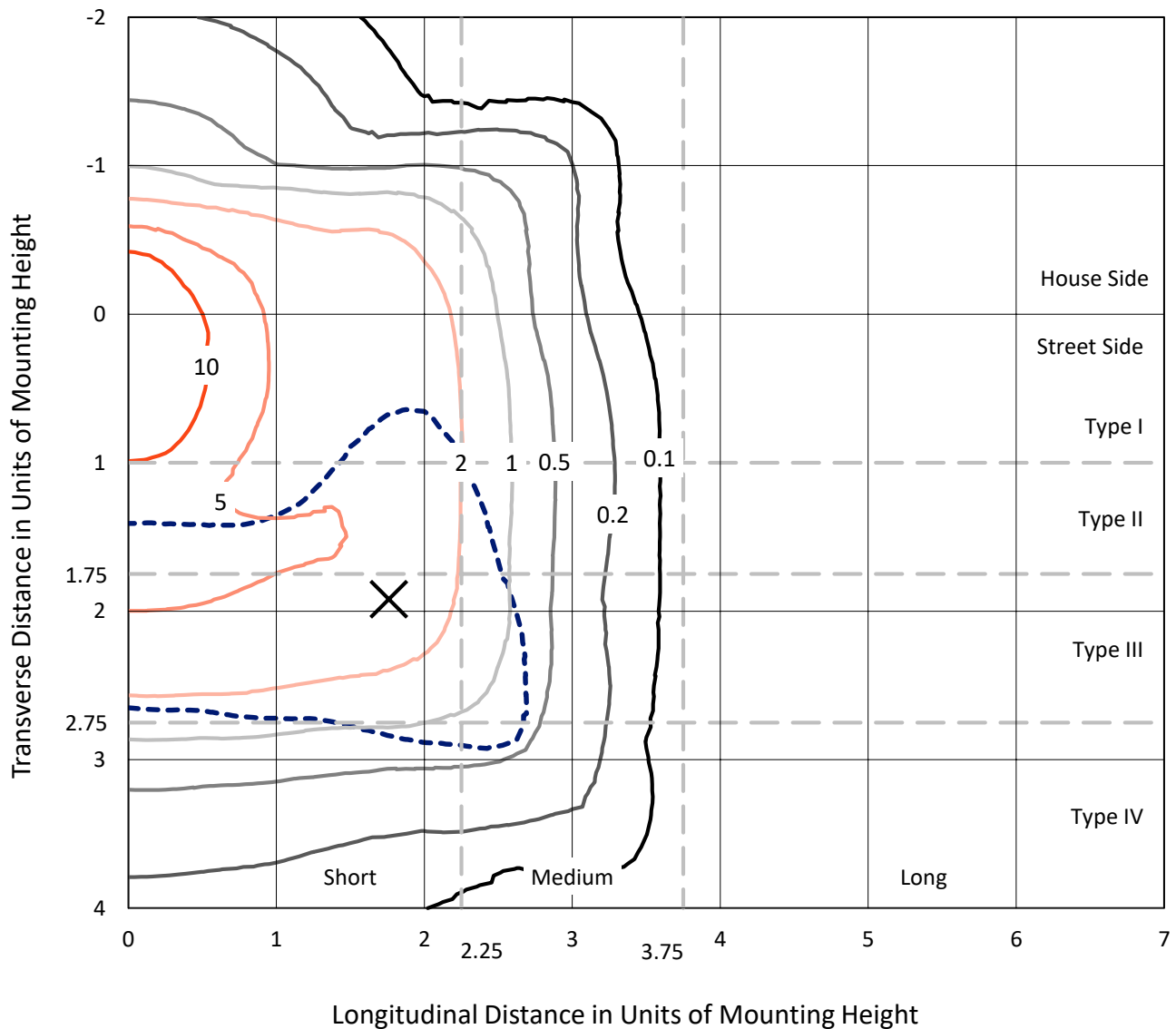


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

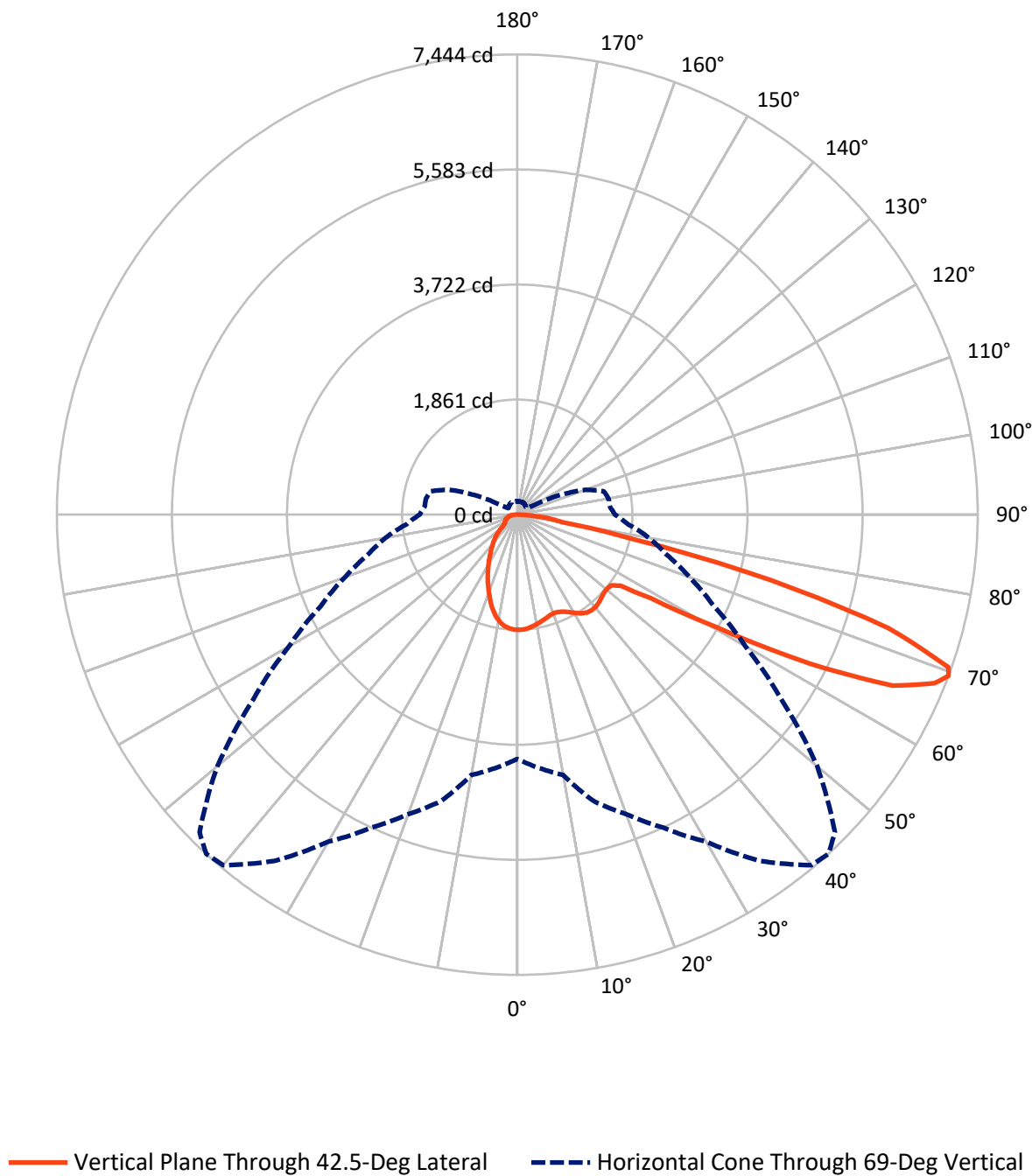


Based on 10 foot mounting height. Maximum calculated value = 18.6 fc
Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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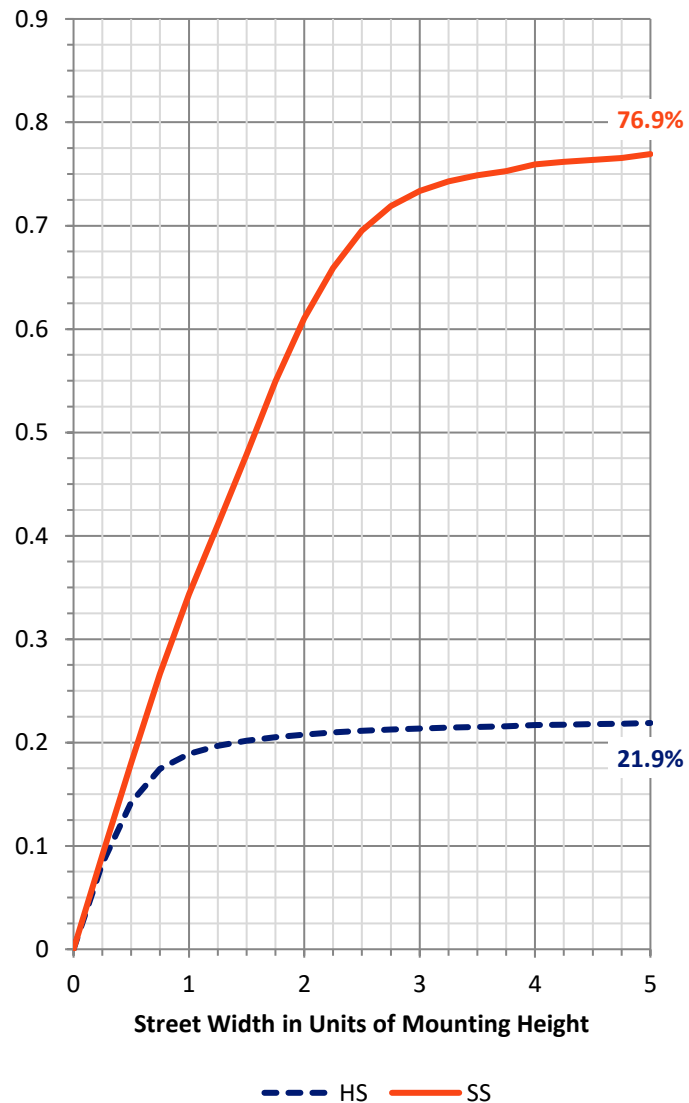
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1945.1	0.0	1945.1
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	6804.1	0.0	6804.1
	% Fixture	77.8	0.0	77.8
Total	Lumens	8749.1	0.0	8749.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.4	2.0
10°-20°	467.5	5.3
20°-30°	681.7	7.8
30°-40°	869.0	9.9
40°-50°	1011.1	11.6
50°-60°	1538.4	17.6
60°-70°	2717.4	31.1
70°-80°	1121.4	12.8
80°-90°	169.3	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°	8749.1	100.0
0°-180°	8749.1	100.0

Coefficient of Utilization



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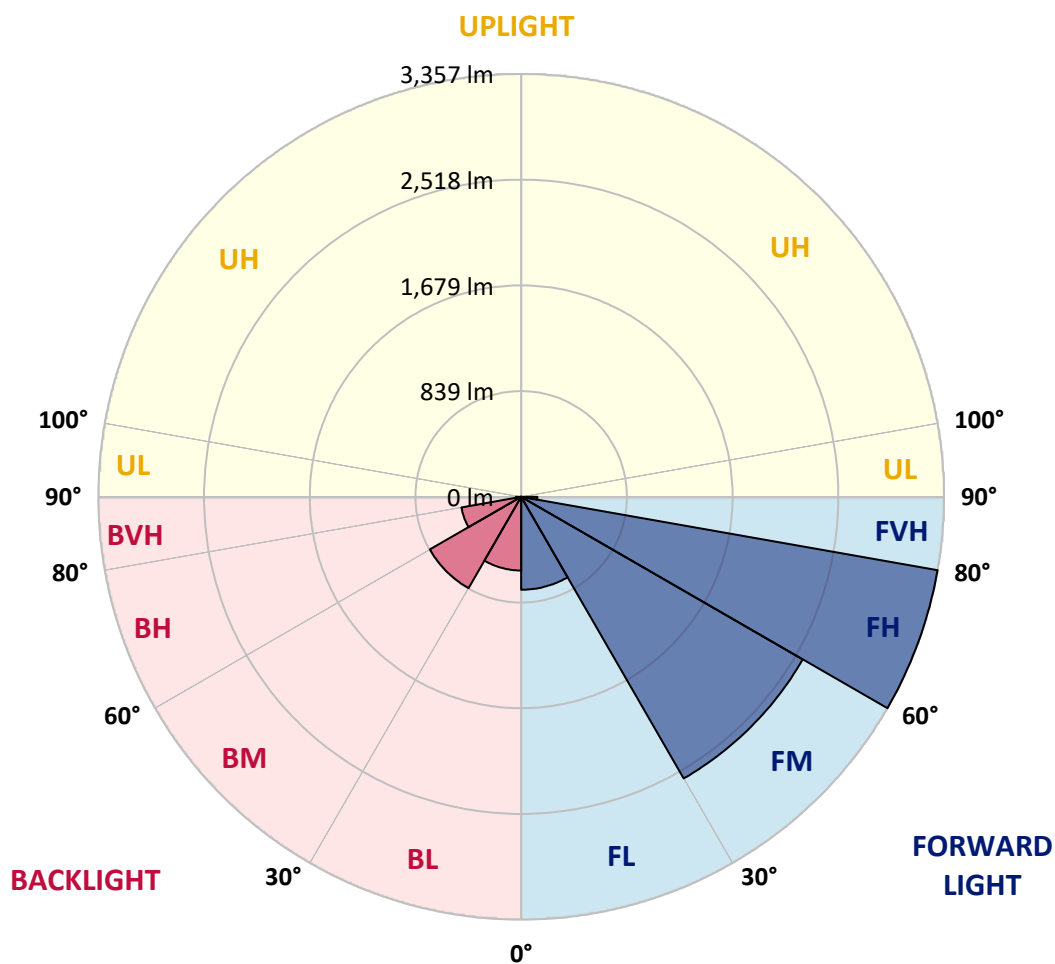
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	737.8	8.4			
FM	(30°-60°)	2581.2	29.5			
FH	(60°-80°)	3357.0	38.4			G2/5000
FVH	(80°-90°)	128.0	1.5			G2/225
BL	(0°-30°)	584.8	6.7	B2/1000		
BM	(30°-60°)	837.2	9.6	B1/1000		
BH	(60°-80°)	481.8	5.5	B1/500		G1/500
BVH	(80°-90°)	41.3	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°	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3
2.5°	1857.2	1863.9	1861.5	1861.5	1863.3	1860.3	1860.3	1861.5	1858.4	1860.3	1859.6
5°	1850.6	1854.2	1853.0	1853.0	1853.0	1850.6	1849.4	1848.8	1844.6	1844.6	1842.8
7.5°	1836.1	1837.3	1839.1	1836.7	1836.1	1835.5	1831.3	1828.9	1824.1	1819.8	1821.0
10°	1816.8	1816.2	1819.2	1817.4	1815.0	1813.2	1809.6	1805.4	1799.9	1794.5	1793.9
12.5°	1795.1	1794.5	1796.9	1795.7	1793.9	1790.3	1787.3	1780.0	1771.6	1764.9	1764.3
15°	1781.2	1779.4	1781.8	1779.4	1776.4	1772.8	1767.4	1758.3	1743.2	1736.6	1731.2
17.5°	1794.5	1791.5	1792.7	1789.7	1785.5	1775.8	1763.1	1743.8	1722.1	1710.7	1702.2
20°	1841.0	1835.5	1836.7	1833.7	1824.1	1811.4	1787.3	1753.5	1716.7	1698.0	1684.7
22.5°	1907.3	1903.1	1904.9	1901.9	1892.2	1872.9	1836.7	1788.5	1736.0	1708.9	1687.7
25°	2008.0	2011.7	2012.9	1999.0	1993.6	1958.0	1907.9	1841.0	1771.0	1739.0	1710.1
27.5°	2121.4	2121.4	2126.9	2121.4	2110.6	2069.0	1998.4	1917.6	1827.7	1784.3	1749.3
30°	2231.8	2230.6	2240.9	2239.7	2222.2	2175.1	2094.9	1996.6	1894.0	1845.2	1800.5
32.5°	2348.8	2352.5	2359.1	2356.7	2333.8	2268.6	2172.1	2065.3	1957.4	1903.7	1853.6
35°	2475.5	2477.3	2479.7	2478.5	2432.1	2350.0	2228.8	2109.4	1997.2	1944.1	1892.2
37.5°	2602.2	2600.4	2597.4	2571.4	2518.3	2404.3	2263.2	2134.7	2017.1	1959.8	1906.1
40°	2715.6	2705.3	2695.7	2655.3	2573.8	2435.1	2276.5	2140.7	2015.3	1956.2	1903.7
42.5°	2777.7	2766.3	2746.3	2695.7	2596.8	2438.1	2267.4	2122.6	1996.6	1938.1	1886.2
45°	2789.2	2780.7	2761.4	2704.7	2591.3	2418.8	2239.7	2093.1	1968.8	1910.3	1861.5
47.5°	2762.0	2755.4	2736.7	2680.6	2567.8	2389.9	2207.7	2061.7	1941.7	1886.8	1839.7
50°	2720.4	2714.4	2699.9	2648.6	2541.3	2370.0	2191.4	2045.4	1932.6	1882.6	1839.1
52.5°	2788.0	2792.8	2750.6	2694.5	2569.6	2387.4	2209.5	2062.3	1948.9	1899.5	1854.2
55°	3838.1	3831.5	3577.5	3364.6	2984.0	2639.0	2381.4	2196.2	2075.0	2025.5	1983.3
57.5°	4987.2	4964.3	4859.9	4660.9	4251.9	3706.0	3209.6	2787.4	2620.9	2549.7	2554.5
60°	5362.4	5370.8	5348.5	5278.0	5131.4	4847.3	4469.7	4152.4	3839.9	3687.3	3704.8
62.5°	5570.5	5585.6	5604.9	5589.2	5541.6	5475.8	5428.1	5457.1	5413.7	5303.9	5216.4
65°	5599.5	5630.2	5694.2	5744.8	5769.6	5831.7	5977.7	6327.5	6647.2	6668.3	6514.5
67.5°	5026.4	5111.5	5250.2	5484.9	5685.7	5906.5	6258.7	6790.8	7262.5	7278.1	7134.6
69°	3952.1	4115.6	4277.9	4802.0	5154.9	5587.4	6108.6	6835.4	7400.6	7444.0	7263.1
70°	3166.8	3263.9	3403.8	3930.4	4457.6	5008.9	5764.1	6688.2	7305.9	7393.4	7193.7
72.5°	1901.3	1938.7	1986.9	2175.7	2447.2	2938.2	3939.5	5452.9	6162.8	6279.9	6025.9
75°	1229.3	1226.9	1231.1	1283.6	1299.3	1393.4	1708.9	2805.5	4020.3	4232.6	3928.6
77.5°	925.9	934.3	921.1	925.9	921.7	947.0	956.7	1004.3	1587.0	1955.0	1748.1
80°	817.3	821.6	822.2	819.7	790.2	787.8	803.5	776.3	721.4	732.3	701.5
82.5°	466.3	465.7	471.1	512.1	529.0	584.5	607.4	620.1	572.4	536.8	485.6
85°	302.2	304.6	310.6	323.3	310.6	315.5	310.0	320.9	294.4	273.2	244.3
87.5°	123.7	123.7	131.5	143.0	133.3	130.9	112.2	111.0	94.1	85.1	66.4
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3
2.5°	1856.0	1859.6	1857.8	1860.3	1858.4	1858.4	1856.0	1855.4	1857.2	1854.8	1855.4
5°	1839.7	1840.3	1837.3	1838.5	1834.9	1833.7	1831.9	1827.1	1830.1	1827.1	1828.3
7.5°	1816.2	1814.4	1810.2	1804.2	1799.9	1798.1	1794.5	1787.9	1789.1	1783.6	1786.7
10°	1786.1	1780.0	1772.8	1763.7	1757.7	1752.3	1744.4	1736.6	1732.4	1727.5	1726.9
12.5°	1752.3	1745.0	1735.4	1721.5	1708.2	1699.2	1687.1	1673.3	1669.0	1661.2	1657.0
15°	1715.5	1704.0	1692.6	1676.9	1662.4	1648.5	1632.2	1614.8	1603.3	1591.2	1582.2
17.5°	1682.3	1669.0	1654.0	1638.9	1623.2	1606.3	1585.8	1564.1	1547.2	1524.9	1506.8
20°	1656.4	1639.5	1624.4	1608.7	1591.2	1570.7	1546.0	1518.2	1489.9	1465.2	1444.0
22.5°	1646.1	1619.6	1601.5	1585.8	1568.3	1544.2	1514.0	1481.4	1447.1	1412.7	1384.9
25°	1654.6	1615.4	1587.0	1568.3	1553.2	1528.5	1494.7	1454.9	1415.1	1374.1	1336.7
27.5°	1679.3	1629.2	1588.2	1558.7	1541.2	1516.4	1480.8	1438.6	1391.6	1345.7	1299.9
30°	1717.9	1652.8	1600.9	1559.3	1532.1	1503.8	1466.4	1417.5	1369.9	1317.4	1267.3
32.5°	1755.3	1677.5	1615.4	1561.7	1520.1	1483.3	1441.6	1393.4	1342.1	1287.2	1235.3
35°	1781.8	1693.8	1620.8	1556.2	1501.4	1455.5	1410.9	1362.6	1312.6	1256.5	1203.4
37.5°	1794.5	1702.8	1621.4	1541.8	1476.6	1426.0	1378.3	1330.6	1283.6	1230.5	1180.5
40°	1793.9	1702.2	1612.9	1523.1	1447.1	1393.4	1346.3	1299.9	1255.9	1209.4	1164.2
42.5°	1780.6	1692.6	1600.9	1505.0	1426.0	1366.2	1317.4	1272.7	1235.3	1194.3	1156.3
45°	1760.1	1676.3	1588.2	1496.5	1419.9	1360.2	1308.3	1264.9	1231.7	1194.3	1161.8
47.5°	1744.4	1667.2	1590.0	1511.6	1438.6	1376.5	1321.6	1273.9	1245.6	1215.4	1192.5
50°	1746.9	1671.5	1596.1	1520.7	1451.9	1389.2	1336.1	1292.6	1272.1	1264.3	1258.9
52.5°	1759.5	1678.1	1614.1	1568.9	1545.4	1498.3	1467.0	1439.8	1454.9	1425.3	1390.4
55°	1921.2	1894.6	1956.8	2015.3	2089.5	2117.2	2090.7	2085.8	2110.0	2009.8	1780.0
57.5°	2588.9	2657.7	2753.6	2804.3	2865.8	2849.5	2788.0	2736.7	2676.4	2559.4	2272.8
60°	3724.7	3672.9	3629.4	3507.0	3406.8	3289.8	3159.5	3047.9	2941.2	2772.9	2462.8
62.5°	4894.9	4534.8	4233.8	3943.1	3709.0	3514.8	3326.0	3158.3	2996.7	2762.0	2428.5
65°	5907.1	5148.9	4583.7	4157.2	3815.2	3520.2	3277.8	3046.1	2840.4	2565.4	2235.4
67.5°	6361.9	5411.9	4589.7	3978.7	3505.2	3104.6	2791.0	2441.1	2210.7	2034.6	1848.8
69°	6328.1	5211.0	4262.2	3510.0	2965.9	2499.0	2162.5	1797.5	1576.8	1502.0	1497.7
70°	6167.7	4870.8	3879.7	3129.4	2506.9	2043.0	1720.3	1392.8	1187.1	1135.8	1226.9
72.5°	5035.5	3441.8	2431.5	1856.6	1427.8	1128.6	920.5	730.5	583.3	505.5	522.4
75°	2844.1	1593.6	1030.3	778.7	658.1	544.1	466.9	398.1	360.1	292.5	231.6
77.5°	1033.9	684.0	544.1	470.5	333.6	229.8	192.4	168.3	152.6	152.6	145.4
80°	653.9	515.1	359.5	246.1	182.2	158.6	138.7	121.8	112.2	109.8	112.2
82.5°	408.4	315.5	201.5	154.4	129.7	116.4	101.3	88.7	80.8	79.0	82.6
85°	201.5	156.2	122.4	109.2	102.5	95.3	83.8	71.8	69.4	74.2	86.9
87.5°	60.3	53.7	44.0	45.8	48.3	47.0	37.4	32.6	30.8	40.4	63.3
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°	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3	1863.3
2.5°	1856.6	1856.0	1857.2	1855.4	1856.6	1857.2	1856.0	1861.5	1857.8	1858.4	1860.9
5°	1829.5	1828.3	1833.1	1831.9	1834.3	1836.7	1835.5	1843.4	1840.3	1842.8	1847.6
7.5°	1784.3	1786.7	1787.3	1787.3	1792.1	1799.9	1801.7	1806.6	1806.6	1813.2	1818.0
10°	1723.9	1724.5	1728.2	1727.5	1733.6	1742.0	1743.2	1751.7	1754.7	1765.6	1772.2
12.5°	1654.0	1650.9	1650.3	1649.7	1657.6	1666.6	1667.8	1682.3	1688.3	1698.0	1708.9
15°	1575.5	1567.7	1565.3	1570.1	1568.3	1573.7	1579.2	1587.0	1595.5	1614.8	1624.4
17.5°	1498.9	1483.3	1479.0	1473.6	1468.2	1468.2	1470.6	1480.2	1497.7	1508.0	1529.7
20°	1420.5	1401.8	1386.7	1372.3	1359.6	1354.8	1355.4	1367.4	1380.1	1397.0	1417.5
22.5°	1354.8	1326.4	1300.5	1281.2	1255.2	1254.6	1251.0	1254.6	1268.5	1272.7	1284.2
25°	1298.1	1260.1	1225.1	1193.7	1168.4	1155.1	1151.5	1150.3	1143.7	1141.8	1133.4
27.5°	1254.0	1208.2	1163.0	1125.0	1093.6	1075.5	1052.6	1036.3	1012.8	1006.7	991.7
30°	1217.9	1168.4	1118.9	1069.5	1033.9	1001.3	962.7	934.3	898.2	874.6	854.1
32.5°	1182.9	1132.8	1082.7	1033.9	979.0	928.3	877.6	833.6	793.2	757.0	726.8
35°	1153.9	1106.3	1055.6	996.5	926.5	853.5	792.6	742.5	687.0	649.0	611.0
37.5°	1135.2	1091.8	1041.1	959.7	869.8	791.4	722.0	661.1	604.4	547.1	504.3
40°	1126.8	1088.8	1025.4	925.9	820.3	733.5	656.9	589.3	516.9	452.4	406.6
42.5°	1126.2	1087.6	1003.7	888.5	779.3	684.6	599.6	518.7	438.5	372.2	326.9
45°	1137.0	1085.8	980.8	857.1	743.1	644.2	542.9	444.6	354.7	305.2	281.1
47.5°	1166.0	1088.8	962.1	828.2	708.8	595.4	477.7	363.1	288.9	266.0	266.0
50°	1217.9	1106.3	957.3	807.7	674.4	538.7	398.1	293.2	255.8	255.8	263.0
52.5°	1297.5	1143.1	965.7	793.2	631.5	463.9	313.7	252.7	245.5	252.1	261.8
55°	1480.8	1208.2	977.2	768.5	566.4	367.9	258.8	238.9	241.9	249.7	258.8
57.5°	1817.4	1347.5	989.2	714.2	461.4	283.5	234.6	233.4	238.9	246.1	253.9
60°	2038.8	1524.9	1020.0	632.1	349.2	234.0	222.6	229.8	236.5	242.5	248.5
62.5°	2038.8	1574.9	1042.9	540.5	262.4	212.9	214.7	226.2	234.0	237.1	240.7
65°	1908.5	1483.3	965.1	440.3	213.5	200.9	207.5	219.0	226.2	228.6	231.6
67.5°	1667.8	1310.1	813.1	331.8	190.6	190.6	199.1	207.5	213.5	218.4	223.2
69°	1450.1	1175.6	716.0	281.1	181.6	182.8	191.2	198.5	205.7	211.7	217.8
70°	1293.2	1074.9	648.4	255.2	176.1	176.7	185.2	193.0	199.7	206.3	213.5
72.5°	692.5	742.5	492.8	209.3	162.3	164.1	171.9	179.1	185.2	191.8	198.5
75°	235.8	319.1	313.7	171.3	146.6	151.4	156.2	162.9	170.7	174.9	178.5
77.5°	138.1	143.0	167.1	139.3	132.1	134.5	139.9	145.4	152.0	156.2	159.2
80°	115.8	115.2	115.8	113.4	115.2	120.6	124.3	131.5	137.5	138.7	138.1
82.5°	94.1	98.9	99.5	98.3	103.7	108.0	111.0	115.2	114.6	115.8	118.2
85°	83.8	83.2	87.5	88.1	88.1	85.1	85.7	85.7	85.7	87.5	88.1
87.5°	83.8	70.0	54.3	48.9	51.3	48.3	45.8	45.2	50.1	54.9	53.7
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):

	160°	165°	170°	175°	180°
0°	1863.3	1863.3	1863.3	1863.3	1863.3
2.5°	1862.1	1863.9	1862.7	1862.7	1863.9
5°	1849.4	1852.4	1851.2	1852.4	1852.4
7.5°	1820.4	1824.7	1827.7	1830.7	1828.9
10°	1778.8	1786.1	1790.9	1794.5	1792.7
12.5°	1716.7	1723.3	1733.6	1739.6	1734.8
15°	1631.6	1650.3	1656.4	1664.8	1660.0
17.5°	1543.0	1554.4	1561.7	1569.5	1574.3
20°	1424.7	1433.8	1443.4	1447.1	1441.6
22.5°	1282.4	1287.2	1285.4	1290.8	1280.0
25°	1126.2	1129.2	1127.4	1132.2	1123.1
27.5°	978.4	977.8	978.4	972.3	966.3
30°	836.0	830.6	828.2	819.1	817.3
32.5°	708.8	690.1	680.4	667.1	664.1
35°	581.5	554.9	537.4	522.4	515.7
37.5°	467.5	435.5	415.0	401.7	399.9
40°	369.8	340.2	325.7	318.5	317.3
42.5°	301.6	288.9	285.3	285.3	285.3
45°	275.1	274.5	277.5	279.9	280.5
47.5°	269.6	273.2	277.5	281.1	282.3
50°	269.6	273.2	276.3	279.9	281.1
52.5°	268.4	271.4	272.6	275.1	276.3
55°	264.8	266.6	266.6	267.8	269.0
57.5°	258.8	260.0	258.2	259.4	262.4
60°	252.7	253.9	250.9	253.9	255.8
62.5°	246.1	246.7	245.5	247.9	247.9
65°	235.2	234.0	235.8	237.7	238.3
67.5°	224.4	221.4	223.2	223.8	225.0
69°	215.9	214.1	214.7	215.9	217.2
70°	209.9	208.7	209.9	211.7	213.5
72.5°	194.8	195.4	199.7	203.3	206.9
75°	181.0	185.2	190.6	198.5	202.7
77.5°	164.1	167.1	171.3	179.8	187.6
80°	141.8	143.6	144.2	147.2	146.6
82.5°	115.2	113.4	112.2	111.0	110.4
85°	82.6	82.0	77.2	73.6	73.6
87.5°	49.5	47.0	44.6	41.6	39.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)