

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: P158666

Luminaire Tested: **VST-F04-LED-E-U-SL4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158666
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-SL4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9829.2 lumens
Efficiency: N/A
Efficacy: 96.2 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

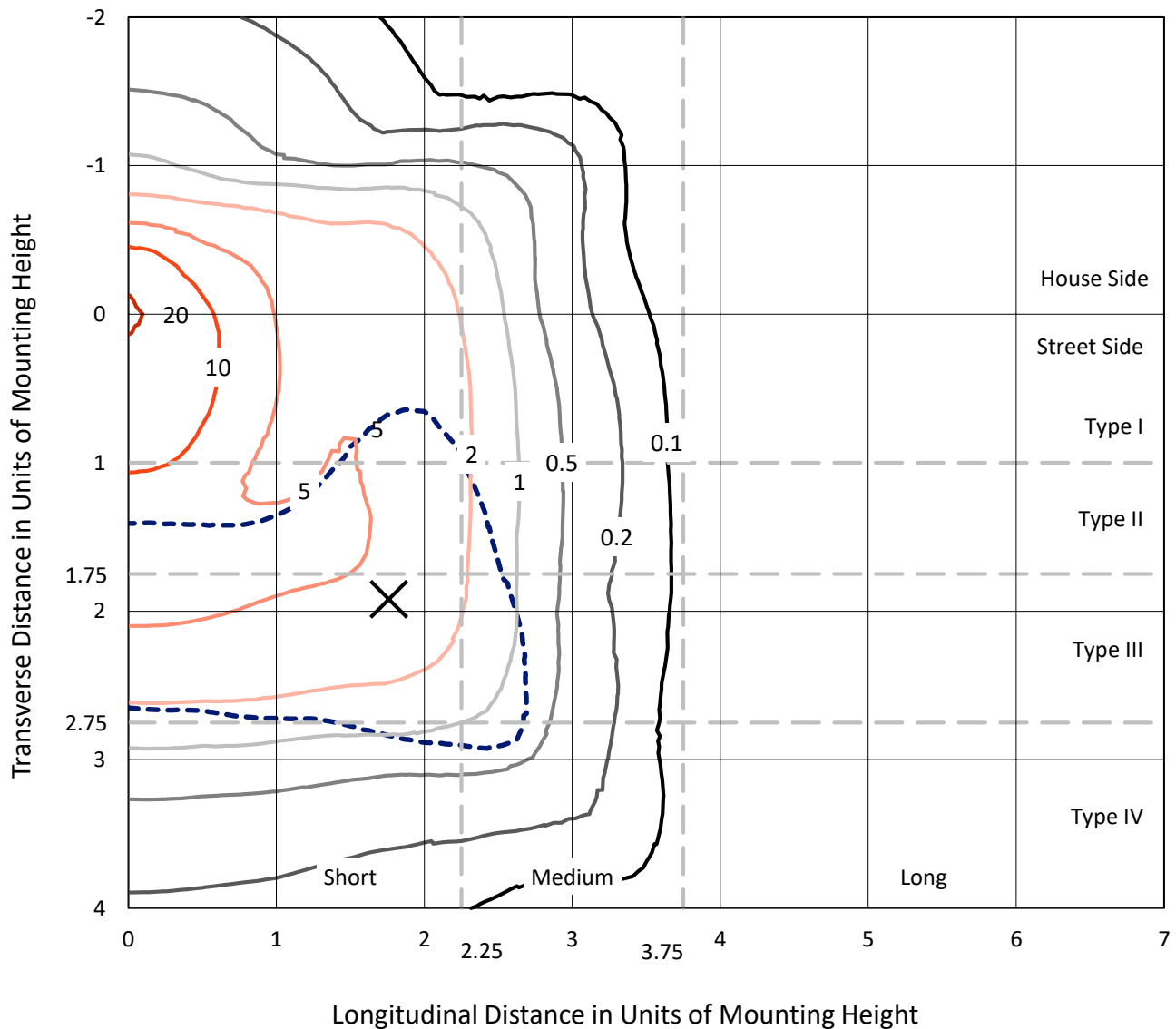


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

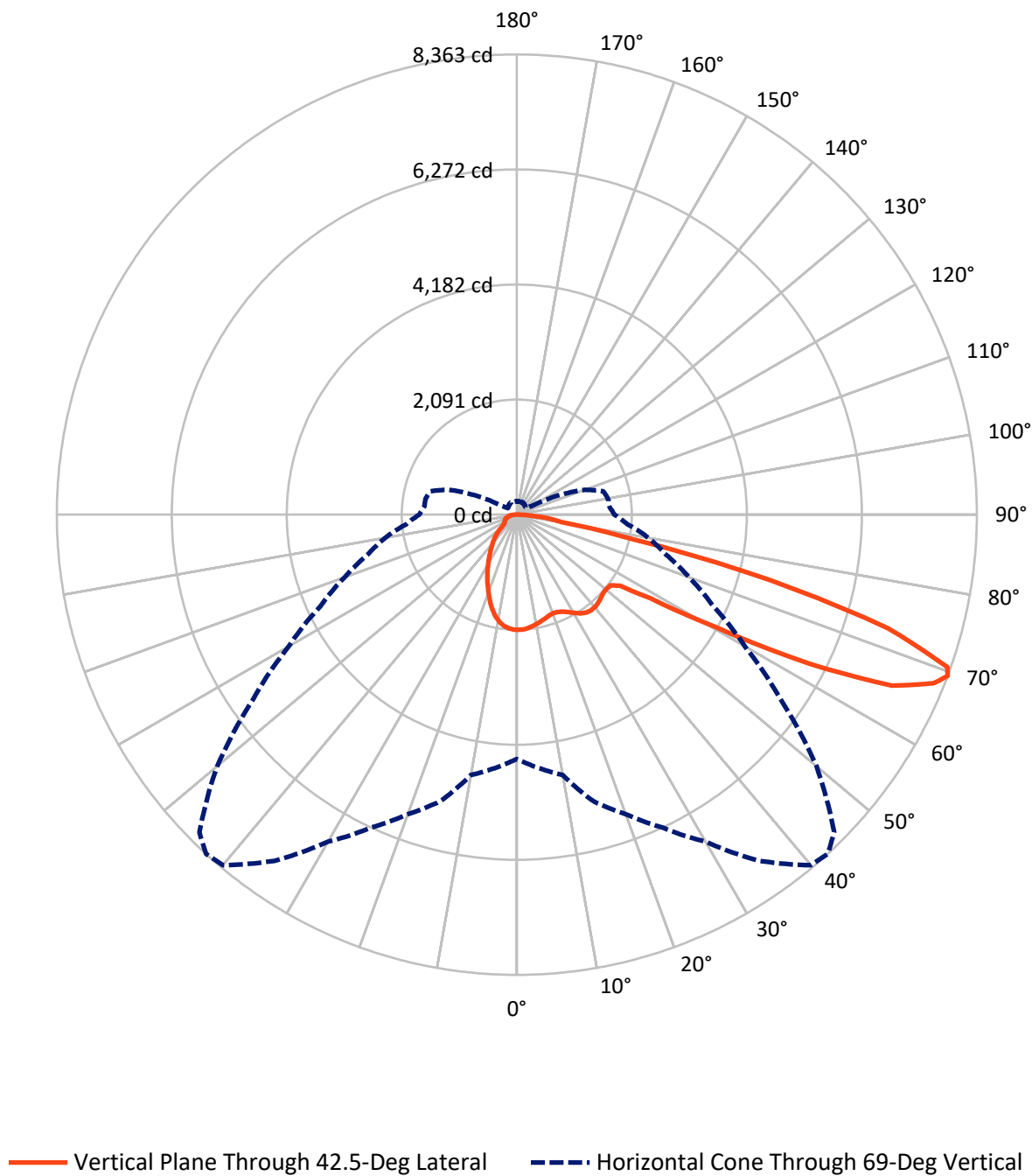


Based on 10 foot mounting height. Maximum calculated value = 20.9 fc
Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2185.2	0.0	2185.2
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	7644.0	0.0	7644.0
	% Fixture	77.8	0.0	77.8
Total	Lumens	9829.2	0.0	9829.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	2.0
10°-20°	525.2	5.3
20°-30°	765.8	7.8
30°-40°	976.3	9.9
40°-50°	1135.9	11.6
50°-60°	1728.3	17.6
60°-70°	3052.9	31.1
70°-80°	1259.8	12.8
80°-90°	190.2	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°	9829.2	100.0
0°-180°	9829.2	100.0

Coefficient of Utilization



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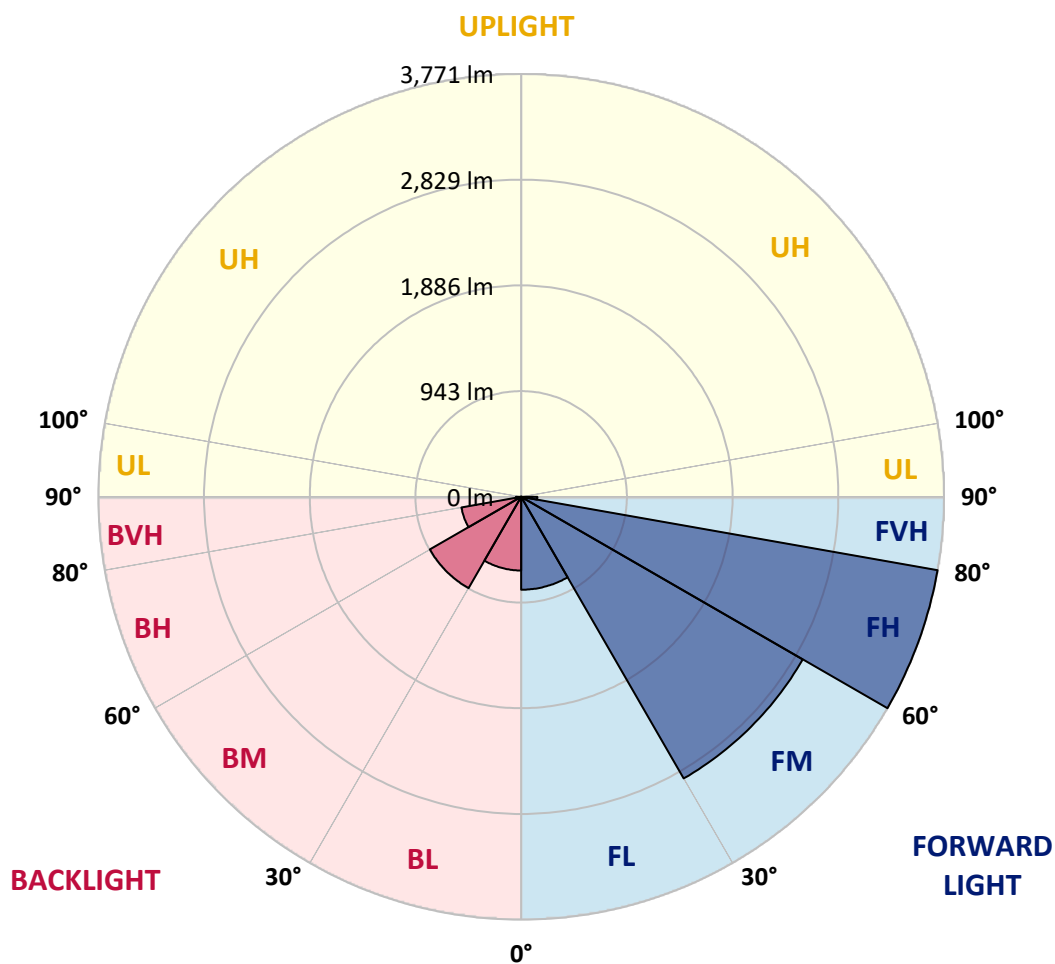
CATALOG NUMBER: VST-F04-LED-E-U-SL4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	828.8	8.4			
FM	(30°-60°)	2899.9	29.5			
FH	(60°-80°)	3771.5	38.4			G2/5000
FVH	(80°-90°)	143.9	1.5			G2/225
BL	(0°-30°)	657.0	6.7	B2/1000		
BM	(30°-60°)	940.5	9.6	B1/1000		
BH	(60°-80°)	541.3	5.5	B2/1000		G2/1000
BVH	(80°-90°)	46.4	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°	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3
2.5°	2086.5	2094.0	2091.3	2091.3	2093.3	2089.9	2089.9	2091.3	2087.9	2089.9	2089.2
5°	2079.1	2083.1	2081.8	2081.8	2081.8	2079.1	2077.7	2077.0	2072.3	2072.3	2070.3
7.5°	2062.8	2064.2	2066.2	2063.5	2062.8	2062.1	2057.4	2054.7	2049.2	2044.5	2045.9
10°	2041.1	2040.4	2043.8	2041.8	2039.1	2037.0	2033.0	2028.2	2022.1	2016.0	2015.4
12.5°	2016.7	2016.0	2018.8	2017.4	2015.4	2011.3	2007.9	1999.8	1990.3	1982.8	1982.2
15°	2001.1	1999.1	2001.8	1999.1	1995.7	1991.6	1985.5	1975.4	1958.4	1951.0	1944.9
17.5°	2016.0	2012.7	2014.0	2010.6	2005.9	1995.0	1980.8	1959.1	1934.7	1921.8	1912.4
20°	2068.2	2062.1	2063.5	2060.1	2049.2	2035.0	2007.9	1970.0	1928.6	1907.6	1892.7
22.5°	2142.8	2138.0	2140.1	2136.7	2125.8	2104.1	2063.5	2009.3	1950.3	1919.8	1896.1
25°	2255.9	2260.0	2261.4	2245.8	2239.7	2199.7	2143.4	2068.2	1989.6	1953.7	1921.2
27.5°	2383.3	2383.3	2389.4	2383.3	2371.1	2324.4	2245.1	2154.3	2053.3	2004.5	1965.2
30°	2507.3	2506.0	2517.5	2516.2	2496.5	2443.6	2353.5	2243.1	2127.9	2073.0	2022.8
32.5°	2638.8	2642.9	2650.3	2647.6	2621.9	2548.7	2440.3	2320.3	2199.0	2138.7	2082.5
35°	2781.1	2783.2	2785.9	2784.5	2732.3	2640.2	2504.0	2369.8	2243.7	2184.1	2125.8
37.5°	2923.4	2921.4	2918.0	2888.9	2829.2	2701.2	2542.6	2398.2	2266.1	2201.7	2141.4
40°	3050.8	3039.3	3028.5	2983.1	2891.6	2735.7	2557.5	2405.0	2264.1	2197.7	2138.7
42.5°	3120.6	3107.8	3085.4	3028.5	2917.3	2739.1	2547.3	2384.7	2243.1	2177.3	2119.0
45°	3133.5	3124.0	3102.3	3038.6	2911.2	2717.4	2516.2	2351.5	2211.9	2146.2	2091.3
47.5°	3103.0	3095.6	3074.5	3011.5	2884.8	2684.9	2480.2	2316.2	2181.4	2119.7	2066.9
50°	3056.2	3049.5	3033.2	2975.6	2855.0	2662.5	2461.9	2297.9	2171.2	2115.0	2066.2
52.5°	3132.1	3137.6	3090.1	3027.1	2886.8	2682.2	2482.3	2316.9	2189.5	2134.0	2083.1
55°	4312.0	4304.5	4019.2	3780.0	3352.4	2964.8	2675.4	2467.4	2331.2	2275.6	2228.1
57.5°	5602.9	5577.1	5459.9	5236.3	4776.8	4163.5	3605.8	3131.5	2944.4	2864.5	2869.9
60°	6024.4	6033.9	6008.8	5929.5	5764.9	5445.7	5021.5	4665.0	4314.0	4142.5	4162.2
62.5°	6258.2	6275.1	6296.8	6279.2	6225.7	6151.8	6098.3	6130.8	6082.0	5958.7	5860.4
65°	6290.7	6325.3	6397.1	6454.0	6481.8	6551.6	6715.6	7108.7	7467.8	7491.5	7318.7
67.5°	5646.9	5742.5	5898.4	6162.0	6387.6	6635.7	7031.4	7629.1	8159.0	8176.7	8015.4
69°	4440.0	4623.7	4806.0	5394.9	5791.3	6277.2	6862.7	7679.2	8314.2	8363.0	8159.7
70°	3557.7	3666.8	3824.0	4415.6	5007.9	5627.3	6475.7	7513.9	8207.8	8306.1	8081.8
72.5°	2136.0	2178.0	2232.2	2444.3	2749.3	3300.9	4425.8	6126.1	6923.7	7055.1	6769.8
75°	1381.1	1378.4	1383.1	1442.1	1459.7	1565.4	1919.8	3151.8	4516.6	4755.1	4413.6
77.5°	1040.2	1049.7	1034.8	1040.2	1035.5	1063.9	1074.8	1128.3	1782.9	2196.3	1963.9
80°	918.2	923.0	923.7	920.9	887.7	885.0	902.6	872.1	810.5	822.7	788.1
82.5°	523.8	523.2	529.3	575.3	594.3	656.7	682.4	696.6	643.1	603.1	545.5
85°	339.5	342.2	349.0	363.2	349.0	354.4	348.3	360.5	330.7	307.0	274.5
87.5°	138.9	138.9	147.7	160.6	149.8	147.1	126.0	124.7	105.7	95.6	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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CATALOG NUMBER: VST-F04-LED-E-U-SL4-7050

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3
2.5°	2085.2	2089.2	2087.2	2089.9	2087.9	2087.9	2085.2	2084.5	2086.5	2083.8	2084.5
5°	2066.9	2067.5	2064.2	2065.5	2061.4	2060.1	2058.1	2052.6	2056.0	2052.6	2054.0
7.5°	2040.4	2038.4	2033.7	2026.9	2022.1	2020.1	2016.0	2008.6	2009.9	2003.8	2007.2
10°	2006.6	1999.8	1991.6	1981.5	1974.7	1968.6	1959.8	1951.0	1946.2	1940.8	1940.1
12.5°	1968.6	1960.5	1949.6	1934.0	1919.1	1909.0	1895.4	1879.8	1875.1	1866.3	1861.5
15°	1927.3	1914.4	1901.5	1883.9	1867.6	1852.0	1833.7	1814.1	1801.2	1787.7	1777.5
17.5°	1890.0	1875.1	1858.1	1841.2	1823.6	1804.6	1781.6	1757.2	1738.2	1713.1	1692.8
20°	1860.9	1841.9	1824.9	1807.3	1787.7	1764.6	1736.8	1705.7	1673.8	1646.0	1622.3
22.5°	1849.3	1819.5	1799.2	1781.6	1761.9	1734.8	1700.9	1664.3	1625.7	1587.1	1555.9
25°	1858.8	1814.8	1782.9	1761.9	1745.0	1717.2	1679.2	1634.5	1589.8	1543.7	1501.7
27.5°	1886.6	1830.4	1784.3	1751.1	1731.4	1703.6	1663.7	1616.2	1563.4	1511.9	1460.4
30°	1930.0	1856.8	1798.5	1751.8	1721.3	1689.4	1647.4	1592.5	1539.0	1480.0	1423.8
32.5°	1972.0	1884.6	1814.8	1754.5	1707.7	1666.4	1619.6	1565.4	1507.8	1446.1	1387.8
35°	2001.8	1902.9	1820.9	1748.4	1686.7	1635.2	1585.0	1530.8	1474.6	1411.6	1351.9
37.5°	2016.0	1913.0	1821.6	1732.1	1658.9	1602.0	1548.5	1494.9	1442.1	1382.4	1326.2
40°	2015.4	1912.4	1812.1	1711.1	1625.7	1565.4	1512.5	1460.4	1410.9	1358.7	1307.9
42.5°	2000.5	1901.5	1798.5	1690.8	1602.0	1534.9	1480.0	1429.9	1387.8	1341.8	1299.1
45°	1977.4	1883.2	1784.3	1681.3	1595.2	1528.1	1469.8	1421.1	1383.8	1341.8	1305.2
47.5°	1959.8	1873.1	1786.3	1698.2	1616.2	1546.4	1484.8	1431.2	1399.4	1365.5	1339.7
50°	1962.5	1877.8	1793.1	1708.4	1631.1	1560.7	1501.0	1452.2	1429.2	1420.4	1414.3
52.5°	1976.7	1885.3	1813.4	1762.6	1736.2	1683.3	1648.1	1617.6	1634.5	1601.3	1562.0
55°	2158.3	2128.5	2198.3	2264.1	2347.4	2378.6	2348.8	2343.3	2370.5	2258.0	1999.8
57.5°	2908.5	2985.8	3093.5	3150.4	3219.6	3201.3	3132.1	3074.5	3006.8	2875.3	2553.4
60°	4184.6	4126.3	4077.5	3939.9	3827.4	3696.0	3549.6	3424.2	3304.3	3115.2	2766.9
62.5°	5499.2	5094.7	4756.5	4429.9	4166.9	3948.7	3736.6	3548.2	3366.6	3103.0	2728.3
65°	6636.3	5784.5	5149.5	4670.4	4286.2	3954.8	3682.4	3422.2	3191.1	2882.1	2511.4
67.5°	7147.3	6080.0	5156.3	4469.8	3937.9	3487.9	3135.5	2742.5	2483.6	2285.7	2077.0
69°	7109.3	5854.3	4788.3	3943.3	3332.1	2807.5	2429.4	2019.4	1771.4	1687.4	1682.6
70°	6929.1	5472.1	4358.7	3515.7	2816.4	2295.2	1932.7	1564.7	1333.6	1276.0	1378.4
72.5°	5657.1	3866.7	2731.6	2085.8	1604.0	1267.9	1034.1	820.6	655.3	567.9	586.9
75°	3195.2	1790.4	1157.4	874.9	739.3	611.2	524.5	447.3	404.6	328.7	260.2
77.5°	1161.5	768.5	611.2	528.6	374.7	258.2	216.2	189.1	171.4	171.4	163.3
80°	734.6	578.7	403.9	276.5	204.7	178.2	155.9	136.9	126.0	123.3	126.0
82.5°	458.8	354.4	226.3	173.5	145.7	130.8	113.8	99.6	90.8	88.8	92.8
85°	226.3	175.5	137.6	122.7	115.2	107.1	94.2	80.6	77.9	83.4	97.6
87.5°	67.8	60.3	49.5	51.5	54.2	52.9	42.0	36.6	34.6	45.4	71.2
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°	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3	2093.3
2.5°	2085.8	2085.2	2086.5	2084.5	2085.8	2086.5	2085.2	2091.3	2087.2	2087.9	2090.6
5°	2055.3	2054.0	2059.4	2058.1	2060.8	2063.5	2062.1	2070.9	2067.5	2070.3	2075.7
7.5°	2004.5	2007.2	2007.9	2007.9	2013.3	2022.1	2024.2	2029.6	2029.6	2037.0	2042.5
10°	1936.8	1937.4	1941.5	1940.8	1947.6	1957.1	1958.4	1967.9	1971.3	1983.5	1991.0
12.5°	1858.1	1854.8	1854.1	1853.4	1862.2	1872.4	1873.7	1890.0	1896.8	1907.6	1919.8
15°	1770.0	1761.2	1758.5	1764.0	1761.9	1768.0	1774.1	1782.9	1792.4	1814.1	1824.9
17.5°	1684.0	1666.4	1661.6	1655.5	1649.4	1649.4	1652.1	1663.0	1682.6	1694.2	1718.5
20°	1595.9	1574.9	1557.9	1541.7	1527.4	1522.0	1522.7	1536.3	1550.5	1569.5	1592.5
22.5°	1522.0	1490.2	1461.0	1439.4	1410.2	1409.5	1405.5	1409.5	1425.1	1429.9	1442.7
25°	1458.3	1415.6	1376.3	1341.1	1312.6	1297.7	1293.7	1292.3	1284.8	1282.8	1273.3
27.5°	1408.9	1357.4	1306.5	1263.8	1228.6	1208.3	1182.5	1164.2	1137.8	1131.0	1114.1
30°	1368.2	1312.6	1257.1	1201.5	1161.5	1124.9	1081.5	1049.7	1009.0	982.6	959.6
32.5°	1328.9	1272.6	1216.4	1161.5	1099.8	1042.9	986.0	936.5	891.1	850.5	816.6
35°	1296.4	1242.8	1185.9	1119.5	1040.9	958.9	890.4	834.2	771.9	729.2	686.5
37.5°	1275.4	1226.6	1169.6	1078.2	977.2	889.1	811.2	742.7	679.0	614.6	566.5
40°	1265.9	1223.2	1152.0	1040.2	921.6	824.0	738.0	662.1	580.8	508.2	456.7
42.5°	1265.2	1221.8	1127.6	998.2	875.5	769.1	673.6	582.8	492.7	418.1	367.3
45°	1277.4	1219.8	1101.9	963.0	834.9	723.7	609.9	499.4	398.5	342.9	315.8
47.5°	1309.9	1223.2	1080.9	930.4	796.3	668.9	536.7	408.0	324.6	298.8	298.8
50°	1368.2	1242.8	1075.4	907.4	757.6	605.2	447.3	329.3	287.3	287.3	295.5
52.5°	1457.6	1284.2	1084.9	891.1	709.5	521.1	352.4	283.9	275.8	283.3	294.1
55°	1663.7	1357.4	1097.8	863.3	636.3	413.4	290.7	268.4	271.7	280.6	290.7
57.5°	2041.8	1513.9	1111.4	802.4	518.4	318.5	263.6	262.3	268.4	276.5	285.3
60°	2290.5	1713.1	1145.9	710.2	392.4	262.9	250.1	258.2	265.6	272.4	279.2
62.5°	2290.5	1769.4	1171.7	607.2	294.8	239.2	241.2	254.1	262.9	266.3	270.4
65°	2144.1	1666.4	1084.3	494.7	239.9	225.7	233.1	246.0	254.1	256.8	260.2
67.5°	1873.7	1471.9	913.5	372.7	214.1	214.1	223.6	233.1	239.9	245.3	250.7
69°	1629.1	1320.8	804.4	315.8	204.0	205.3	214.8	223.0	231.1	237.9	244.6
70°	1452.9	1207.6	728.5	286.7	197.9	198.6	208.0	216.9	224.3	231.8	239.9
72.5°	778.0	834.2	553.6	235.1	182.3	184.3	193.1	201.3	208.0	215.5	223.0
75°	265.0	358.5	352.4	192.5	164.7	170.1	175.5	183.0	191.8	196.5	200.6
77.5°	155.2	160.6	187.7	156.5	148.4	151.1	157.2	163.3	170.8	175.5	178.9
80°	130.1	129.4	130.1	127.4	129.4	135.5	139.6	147.7	154.5	155.9	155.2
82.5°	105.7	111.1	111.8	110.5	116.6	121.3	124.7	129.4	128.8	130.1	132.8
85°	94.2	93.5	98.3	98.9	98.9	95.6	96.2	96.2	96.2	98.3	98.9
87.5°	94.2	78.6	61.0	54.9	57.6	54.2	51.5	50.8	56.2	61.7	60.3
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):

	160°	165°	170°	175°	180°
0°	2093.3	2093.3	2093.3	2093.3	2093.3
2.5°	2091.9	2094.0	2092.6	2092.6	2094.0
5°	2077.7	2081.1	2079.7	2081.1	2081.1
7.5°	2045.2	2049.9	2053.3	2056.7	2054.7
10°	1998.4	2006.6	2012.0	2016.0	2014.0
12.5°	1928.6	1936.1	1947.6	1954.4	1949.0
15°	1833.1	1854.1	1860.9	1870.3	1864.9
17.5°	1733.5	1746.3	1754.5	1763.3	1768.7
20°	1600.6	1610.8	1621.6	1625.7	1619.6
22.5°	1440.7	1446.1	1444.1	1450.2	1438.0
25°	1265.2	1268.6	1266.5	1272.0	1261.8
27.5°	1099.2	1098.5	1099.2	1092.4	1085.6
30°	939.2	933.1	930.4	920.3	918.2
32.5°	796.3	775.2	764.4	749.5	746.1
35°	653.3	623.4	603.8	586.9	579.4
37.5°	525.2	489.3	466.2	451.3	449.3
40°	415.4	382.2	365.9	357.8	356.4
42.5°	338.8	324.6	320.5	320.5	320.5
45°	309.0	308.3	311.7	314.4	315.1
47.5°	302.9	307.0	311.7	315.8	317.1
50°	302.9	307.0	310.4	314.4	315.8
52.5°	301.6	304.9	306.3	309.0	310.4
55°	297.5	299.5	299.5	300.9	302.2
57.5°	290.7	292.1	290.0	291.4	294.8
60°	283.9	285.3	281.9	285.3	287.3
62.5°	276.5	277.2	275.8	278.5	278.5
65°	264.3	262.9	265.0	267.0	267.7
67.5°	252.1	248.7	250.7	251.4	252.8
69°	242.6	240.6	241.2	242.6	244.0
70°	235.8	234.5	235.8	237.9	239.9
72.5°	218.9	219.6	224.3	228.4	232.4
75°	203.3	208.0	214.1	223.0	227.7
77.5°	184.3	187.7	192.5	201.9	210.8
80°	159.3	161.3	162.0	165.3	164.7
82.5°	129.4	127.4	126.0	124.7	124.0
85°	92.8	92.2	86.7	82.7	82.7
87.5°	55.6	52.9	50.1	46.8	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)