

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: P158661

Luminaire Tested: **VST-E04-LED-E-U-SL4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158661
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-E04-LED-E-U-SL4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11906.7 lumens
Efficiency: N/A
Efficacy: 122.5 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): 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

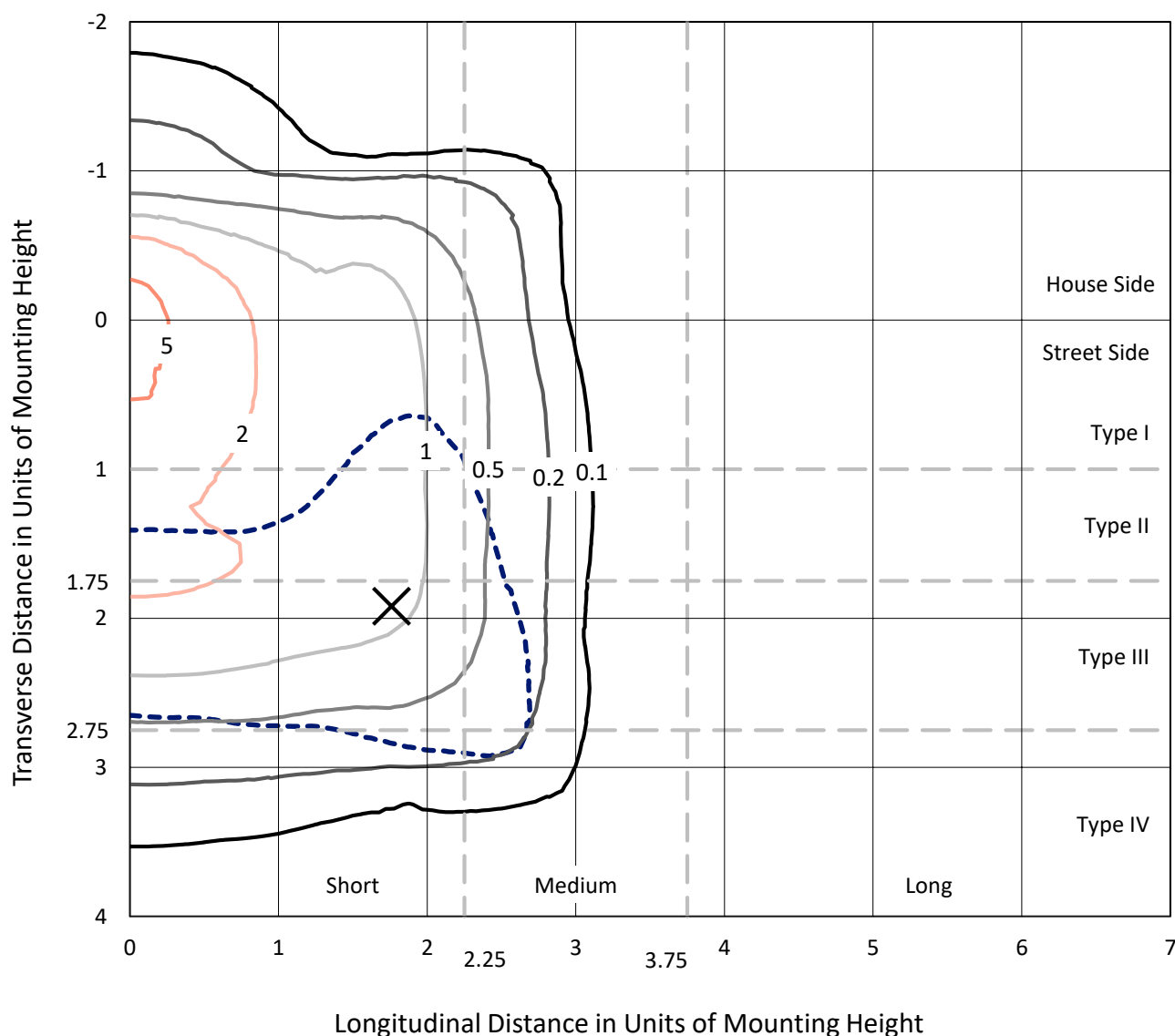


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

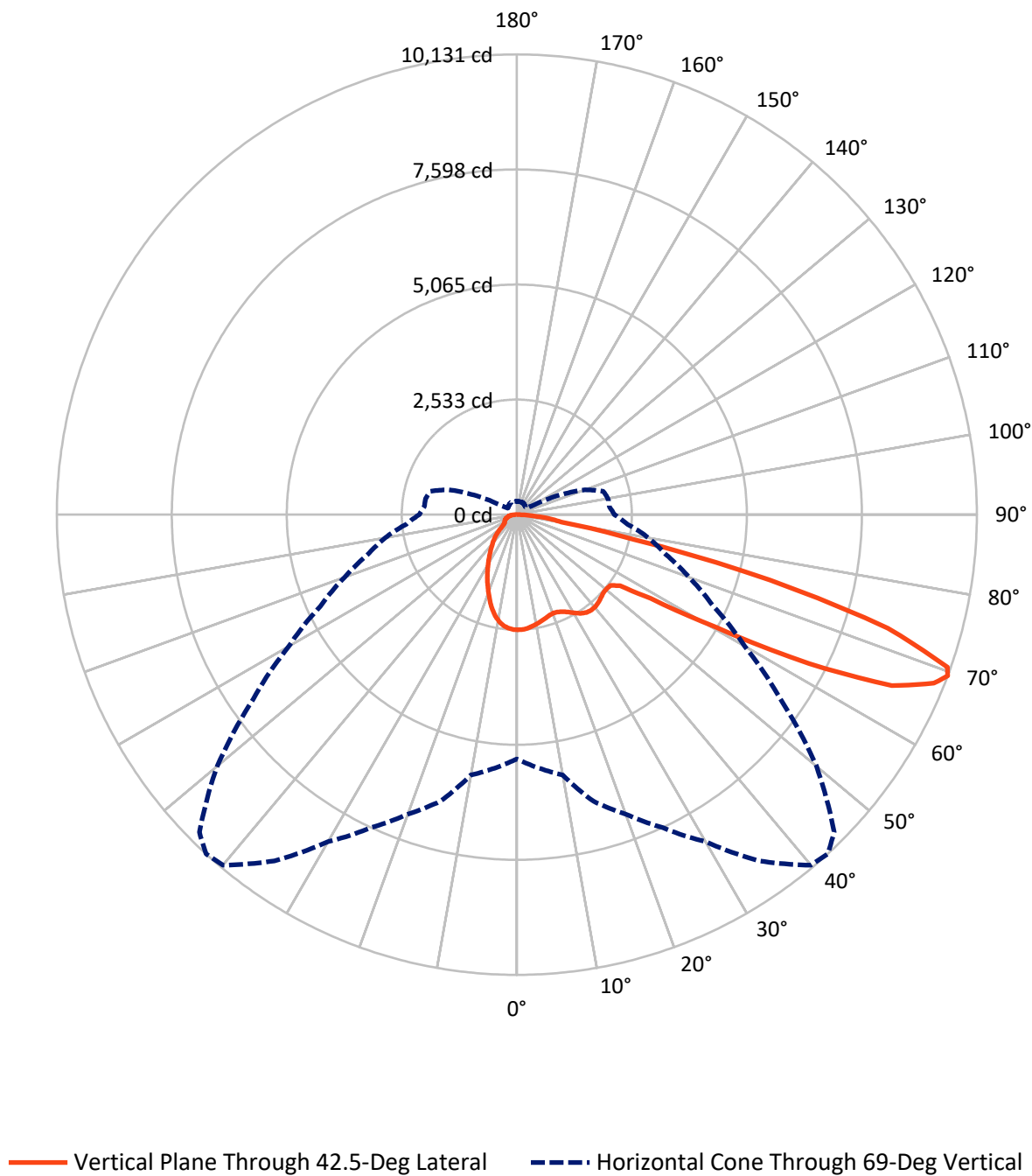


Based on 20 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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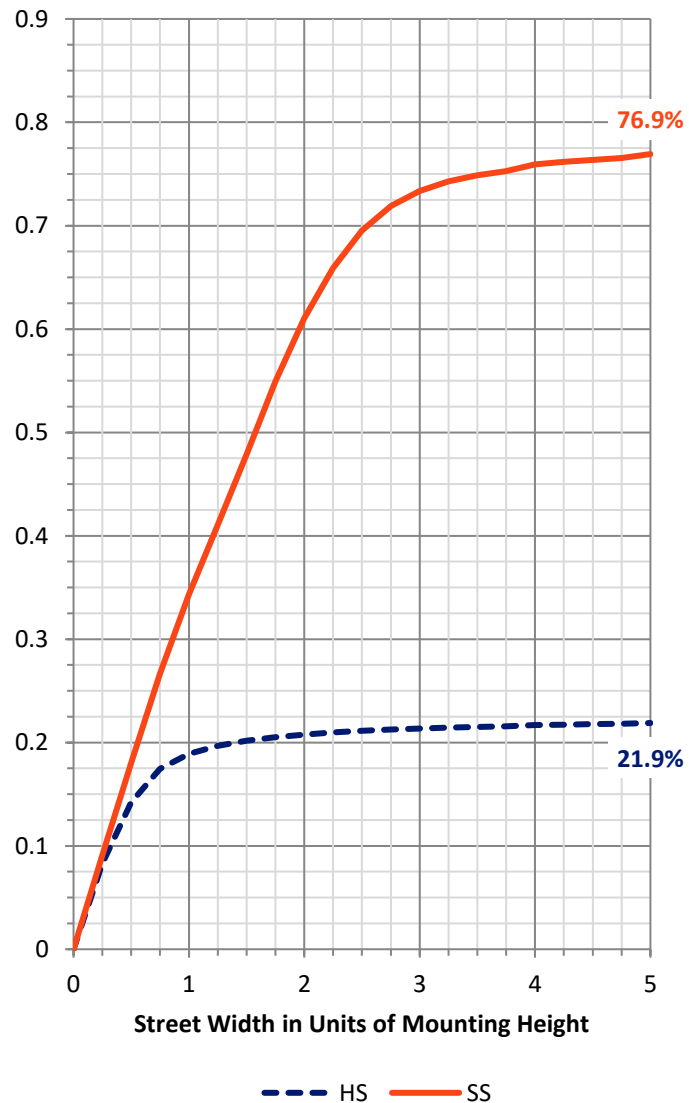
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2647.0	0.0	2647.0
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	9259.6	0.0	9259.6
	% Fixture	77.8	0.0	77.8
Total	Lumens	11906.7	0.0	11906.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.0	2.0
10°-20°	636.2	5.3
20°-30°	927.7	7.8
30°-40°	1182.6	9.9
40°-50°	1376.0	11.6
50°-60°	2093.5	17.6
60°-70°	3698.2	31.1
70°-80°	1526.1	12.8
80°-90°	230.4	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°	11906.7	100.0
0°-180°	11906.7	100.0

Coefficient of Utilization



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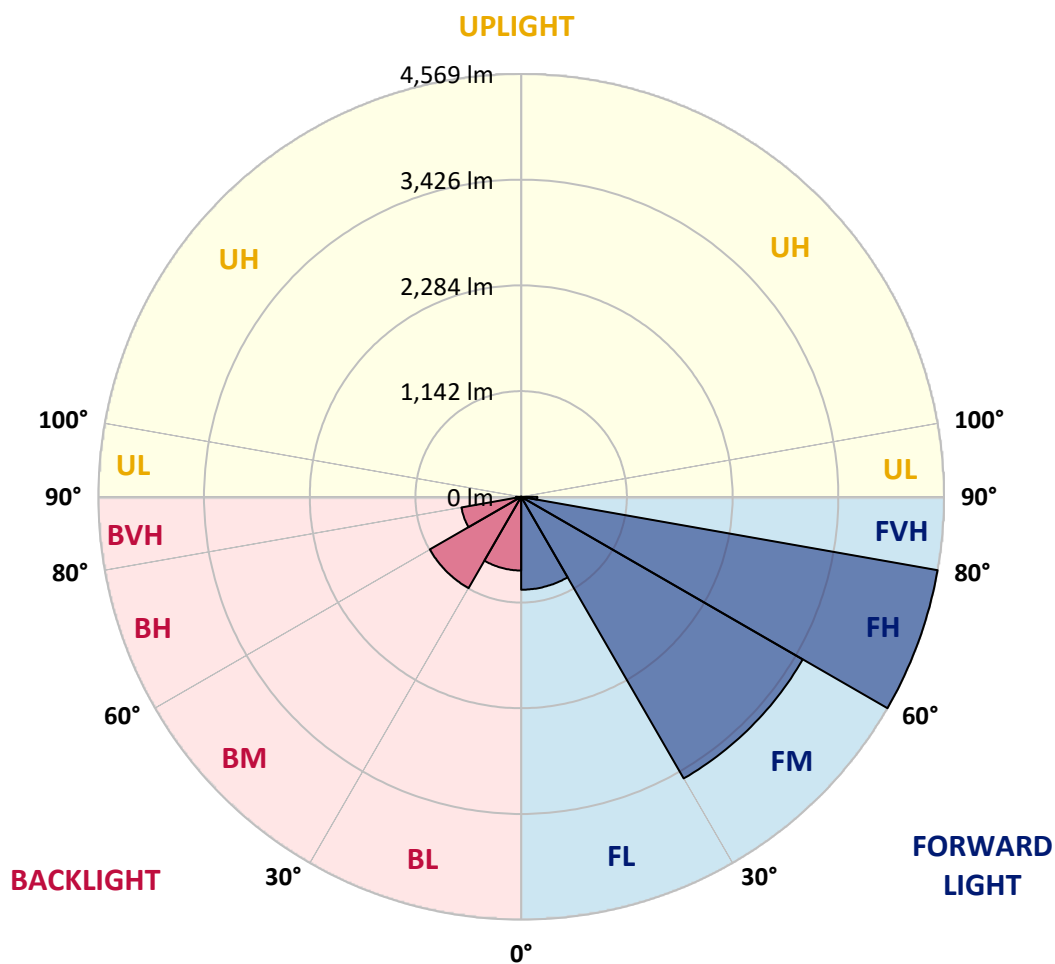
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1004.0	8.4			
FM	(30°-60°)	3512.8	29.5			
FH	(60°-80°)	4568.6	38.4			G2/5000
FVH	(80°-90°)	174.3	1.5			G2/225
BL	(0°-30°)	795.9	6.7	B2/1000		
BM	(30°-60°)	1139.3	9.6	B2/2500		
BH	(60°-80°)	655.7	5.5	B2/1000		G2/1000
BVH	(80°-90°)	56.2	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°	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7
2.5°	2527.5	2536.5	2533.2	2533.2	2535.7	2531.6	2531.6	2533.2	2529.1	2531.6	2530.8
5°	2518.5	2523.4	2521.8	2521.8	2521.8	2518.5	2516.8	2516.0	2510.3	2510.3	2507.8
7.5°	2498.8	2500.4	2502.9	2499.6	2498.8	2498.0	2492.2	2488.9	2482.4	2476.6	2478.2
10°	2472.5	2471.7	2475.8	2473.3	2470.0	2467.6	2462.7	2456.9	2449.5	2442.1	2441.3
12.5°	2443.0	2442.1	2445.4	2443.8	2441.3	2436.4	2432.3	2422.4	2410.9	2401.9	2401.1
15°	2424.1	2421.6	2424.9	2421.6	2417.5	2412.6	2405.2	2392.9	2372.4	2363.3	2355.9
17.5°	2442.1	2438.0	2439.7	2435.6	2429.8	2416.7	2399.4	2373.2	2343.6	2328.0	2316.5
20°	2505.3	2498.0	2499.6	2495.5	2482.4	2465.1	2432.3	2386.3	2336.2	2310.8	2292.7
22.5°	2595.6	2589.9	2592.4	2588.2	2575.1	2548.8	2499.6	2433.9	2362.5	2325.6	2296.8
25°	2732.7	2737.6	2739.3	2720.4	2713.0	2664.6	2596.5	2505.3	2410.1	2366.6	2327.2
27.5°	2887.1	2887.1	2894.4	2887.1	2872.3	2815.6	2719.6	2609.6	2487.3	2428.2	2380.6
30°	3037.3	3035.6	3049.6	3047.9	3024.1	2960.1	2850.9	2717.1	2577.6	2511.1	2450.3
32.5°	3196.5	3201.4	3210.5	3207.2	3176.0	3087.3	2956.0	2810.7	2663.8	2590.7	2522.6
35°	3368.9	3371.4	3374.7	3373.0	3309.8	3198.2	3033.2	2870.6	2717.9	2645.7	2575.1
37.5°	3541.3	3538.8	3534.7	3499.4	3427.2	3272.0	3080.0	2905.1	2745.0	2667.1	2594.0
40°	3695.6	3681.7	3668.5	3613.5	3502.7	3313.9	3098.0	2913.3	2742.6	2662.1	2590.7
42.5°	3780.2	3764.6	3737.5	3668.5	3533.9	3318.0	3085.7	2888.7	2717.1	2637.5	2566.9
45°	3795.8	3784.3	3758.0	3680.8	3526.5	3291.7	3047.9	2848.5	2679.4	2599.7	2533.2
47.5°	3758.8	3749.8	3724.4	3648.0	3494.5	3252.3	3004.4	2805.8	2642.4	2567.7	2503.7
50°	3702.2	3694.0	3674.3	3604.5	3458.4	3225.3	2982.3	2783.6	2630.1	2562.0	2502.9
52.5°	3794.1	3800.7	3743.2	3666.9	3497.0	3249.1	3006.9	2806.6	2652.3	2585.0	2523.4
55°	5223.3	5214.3	4868.7	4578.9	4060.9	3591.4	3240.9	2988.8	2823.8	2756.5	2699.1
57.5°	6787.1	6755.9	6613.9	6343.0	5786.4	5043.5	4367.9	3793.3	3566.7	3469.9	3476.4
60°	7297.7	7309.2	7278.8	7182.7	6983.3	6596.6	6082.8	5651.0	5225.7	5018.1	5041.9
62.5°	7580.9	7601.4	7627.7	7606.3	7541.5	7452.0	7387.1	7426.5	7367.4	7218.0	7099.0
65°	7620.3	7662.1	7749.1	7818.1	7851.8	7936.3	8135.0	8611.1	9046.1	9074.9	8865.6
67.5°	6840.4	6956.2	7145.0	7464.3	7737.7	8038.1	8517.5	9241.5	9883.4	9904.8	9709.4
69°	5378.4	5600.9	5821.7	6535.1	7015.3	7603.9	8313.1	9302.3	10071.4	10130.5	9884.3
70°	4309.6	4441.8	4632.3	5348.9	6066.3	6816.6	7844.4	9102.0	9942.6	10061.6	9789.9
72.5°	2587.4	2638.3	2704.0	2960.9	3330.3	3998.5	5361.2	7420.8	8387.0	8546.2	8200.6
75°	1673.0	1669.7	1675.4	1746.8	1768.2	1896.2	2325.6	3817.9	5471.2	5760.1	5346.4
77.5°	1260.1	1271.5	1253.5	1260.1	1254.3	1288.8	1301.9	1366.8	2159.7	2660.5	2378.9
80°	1112.3	1118.0	1118.9	1115.6	1075.4	1072.1	1093.4	1056.5	981.8	996.6	954.7
82.5°	634.5	633.7	641.1	696.9	719.9	795.4	826.6	843.9	779.0	730.6	660.8
85°	411.3	414.5	422.8	440.0	422.8	429.3	421.9	436.7	400.6	371.9	332.5
87.5°	168.3	168.3	179.0	194.5	181.4	178.1	152.7	151.0	128.1	115.7	90.3
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7
2.5°	2525.9	2530.8	2528.3	2531.6	2529.1	2529.1	2525.9	2525.0	2527.5	2524.2	2525.0
5°	2503.7	2504.5	2500.4	2502.1	2497.1	2495.5	2493.0	2486.5	2490.6	2486.5	2488.1
7.5°	2471.7	2469.2	2463.5	2455.3	2449.5	2447.1	2442.1	2433.1	2434.7	2427.4	2431.5
10°	2430.6	2422.4	2412.6	2400.3	2392.1	2384.7	2374.0	2363.3	2357.6	2351.0	2350.2
12.5°	2384.7	2374.8	2361.7	2342.8	2324.7	2312.4	2296.0	2277.1	2271.4	2260.7	2255.0
15°	2334.6	2319.0	2303.4	2282.1	2262.4	2243.5	2221.3	2197.5	2181.9	2165.5	2153.2
17.5°	2289.4	2271.4	2250.9	2230.3	2209.0	2186.0	2158.1	2128.6	2105.6	2075.2	2050.6
20°	2254.1	2231.2	2210.6	2189.3	2165.5	2137.6	2103.9	2066.2	2027.6	1993.9	1965.2
22.5°	2240.2	2204.1	2179.4	2158.1	2134.3	2101.5	2060.4	2016.1	1969.3	1922.5	1884.8
25°	2251.7	2198.3	2159.7	2134.3	2113.8	2080.1	2034.2	1980.0	1925.8	1870.0	1819.1
27.5°	2285.3	2217.2	2161.4	2121.2	2097.4	2063.7	2015.3	1957.8	1893.8	1831.4	1769.0
30°	2337.9	2249.2	2178.6	2122.0	2085.0	2046.5	1995.6	1929.1	1864.2	1792.8	1724.7
32.5°	2388.8	2282.9	2198.3	2125.3	2068.6	2018.6	1961.9	1896.2	1826.5	1751.8	1681.2
35°	2424.9	2305.0	2205.7	2117.9	2043.2	1980.8	1920.0	1854.4	1786.2	1709.9	1637.7
37.5°	2442.1	2317.4	2206.5	2098.2	2009.5	1940.6	1875.7	1810.9	1746.8	1674.6	1606.5
40°	2441.3	2316.5	2195.0	2072.7	1969.3	1896.2	1832.2	1769.0	1709.1	1645.9	1584.3
42.5°	2423.3	2303.4	2178.6	2048.1	1940.6	1859.3	1792.8	1732.1	1681.2	1625.4	1573.6
45°	2395.3	2281.2	2161.4	2036.6	1932.4	1851.1	1780.5	1721.4	1676.2	1625.4	1581.0
47.5°	2374.0	2268.9	2163.9	2057.1	1957.8	1873.3	1798.6	1733.7	1695.1	1654.1	1622.9
50°	2377.3	2274.7	2172.1	2069.4	1975.9	1890.5	1818.3	1759.2	1731.2	1720.6	1713.2
52.5°	2394.5	2283.7	2196.7	2135.1	2103.1	2039.1	1996.4	1959.5	1980.0	1939.7	1892.1
55°	2614.5	2578.4	2662.9	2742.6	2843.5	2881.3	2845.2	2838.6	2871.5	2735.2	2422.4
57.5°	3523.2	3616.8	3747.3	3816.3	3900.0	3877.9	3794.1	3724.4	3642.3	3483.0	3093.1
60°	5069.0	4998.4	4939.3	4772.6	4636.4	4477.1	4299.8	4147.9	4002.6	3773.6	3351.7
62.5°	6661.5	6171.4	5761.8	5366.1	5047.6	4783.3	4526.4	4298.2	4078.2	3758.8	3304.9
65°	8038.9	7007.1	6237.9	5657.5	5192.1	4790.7	4460.7	4145.5	3865.5	3491.2	3042.2
67.5°	8657.9	7365.0	6246.1	5414.6	4770.2	4225.1	3798.2	3322.1	3008.5	2768.8	2516.0
69°	8611.9	7091.6	5800.4	4776.7	4036.3	3400.9	2942.9	2446.2	2145.8	2044.0	2038.3
70°	8393.5	6628.6	5279.9	4258.7	3411.6	2780.3	2341.2	1895.4	1615.5	1545.7	1669.7
72.5°	6852.7	4684.0	3309.0	2526.7	1943.0	1535.9	1252.7	994.1	793.8	687.9	710.9
75°	3870.5	2168.8	1402.1	1059.8	895.6	740.4	635.4	541.8	490.1	398.1	315.2
77.5°	1407.0	930.9	740.4	640.3	453.9	312.8	261.9	229.0	207.7	207.7	197.8
80°	889.8	701.0	489.2	334.9	247.9	215.9	188.8	165.8	152.7	149.4	152.7
82.5°	555.7	429.3	274.2	210.1	176.5	158.4	137.9	120.7	110.0	107.5	112.5
85°	274.2	212.6	166.6	148.6	139.6	129.7	114.1	97.7	94.4	101.0	118.2
87.5°	82.1	73.1	59.9	62.4	65.7	64.0	50.9	44.3	41.9	55.0	86.2
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°	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7	2535.7
2.5°	2526.7	2525.9	2527.5	2525.0	2526.7	2527.5	2525.9	2533.2	2528.3	2529.1	2532.4
5°	2489.7	2488.1	2494.7	2493.0	2496.3	2499.6	2498.0	2508.6	2504.5	2507.8	2514.4
7.5°	2428.2	2431.5	2432.3	2432.3	2438.8	2449.5	2452.0	2458.5	2458.5	2467.6	2474.1
10°	2346.1	2346.9	2351.8	2351.0	2359.2	2370.7	2372.4	2383.8	2388.0	2402.7	2411.8
12.5°	2250.9	2246.8	2245.9	2245.1	2255.8	2268.1	2269.7	2289.4	2297.7	2310.8	2325.6
15°	2144.1	2133.5	2130.2	2136.8	2134.3	2141.7	2149.1	2159.7	2171.2	2197.5	2210.6
17.5°	2039.9	2018.6	2012.8	2005.4	1998.0	1998.0	2001.3	2014.5	2038.3	2052.2	2081.8
20°	1933.2	1907.7	1887.2	1867.5	1850.3	1843.7	1844.5	1860.9	1878.2	1901.2	1929.1
22.5°	1843.7	1805.1	1769.8	1743.6	1708.3	1707.4	1702.5	1707.4	1726.3	1732.1	1747.7
25°	1766.5	1714.8	1667.2	1624.5	1590.1	1572.0	1567.1	1565.4	1556.4	1553.9	1542.4
27.5°	1706.6	1644.2	1582.7	1530.9	1488.3	1463.6	1432.4	1410.3	1378.3	1370.1	1349.5
30°	1657.4	1590.1	1522.7	1455.4	1407.0	1362.7	1310.1	1271.5	1222.3	1190.3	1162.4
32.5°	1609.8	1541.6	1473.5	1407.0	1332.3	1263.3	1194.4	1134.5	1079.5	1030.2	989.2
35°	1570.4	1505.5	1436.5	1356.1	1260.9	1161.6	1078.6	1010.5	935.0	883.3	831.6
37.5°	1544.9	1485.8	1416.8	1306.0	1183.7	1077.0	982.6	899.7	822.5	744.5	686.3
40°	1533.4	1481.7	1395.5	1260.1	1116.4	998.2	893.9	802.0	703.5	615.7	553.3
42.5°	1532.6	1480.1	1366.0	1209.2	1060.6	931.7	816.0	706.0	596.8	506.5	444.9
45°	1547.4	1477.6	1334.8	1166.5	1011.3	876.7	738.8	605.0	482.7	415.4	382.5
47.5°	1586.8	1481.7	1309.3	1127.1	964.5	810.2	650.1	494.2	393.2	362.0	362.0
50°	1657.4	1505.5	1302.7	1099.2	917.7	733.0	541.8	398.9	348.1	348.1	357.9
52.5°	1765.7	1555.6	1314.2	1079.5	859.5	631.3	426.9	344.0	334.1	343.1	356.3
55°	2015.3	1644.2	1329.8	1045.8	770.8	500.7	352.2	325.1	329.2	339.8	352.2
57.5°	2473.3	1833.9	1346.3	971.9	628.0	385.8	319.3	317.7	325.1	334.9	345.6
60°	2774.6	2075.2	1388.1	860.3	475.3	318.5	302.9	312.8	321.8	330.0	338.2
62.5°	2774.6	2143.3	1419.3	735.5	357.1	289.8	292.2	307.8	318.5	322.6	327.5
65°	2597.3	2018.6	1313.4	599.2	290.6	273.4	282.4	298.0	307.8	311.1	315.2
67.5°	2269.7	1783.0	1106.6	451.5	259.4	259.4	270.9	282.4	290.6	297.2	303.7
69°	1973.4	1599.9	974.4	382.5	247.1	248.7	260.2	270.1	279.9	288.1	296.3
70°	1760.0	1462.8	882.5	347.2	239.7	240.5	252.0	262.7	271.7	280.7	290.6
72.5°	942.4	1010.5	670.7	284.8	220.8	223.3	234.0	243.8	252.0	261.0	270.1
75°	321.0	434.2	426.9	233.1	199.5	206.0	212.6	221.6	232.3	238.1	243.0
77.5°	188.0	194.5	227.4	189.6	179.8	183.1	190.4	197.8	206.9	212.6	216.7
80°	157.6	156.8	157.6	154.3	156.8	164.2	169.1	179.0	187.2	188.8	188.0
82.5°	128.1	134.6	135.4	133.8	141.2	146.9	151.0	156.8	156.0	157.6	160.9
85°	114.1	113.3	119.0	119.8	119.8	115.7	116.6	116.6	116.6	119.0	119.8
87.5°	114.1	95.2	73.9	66.5	69.8	65.7	62.4	61.6	68.1	74.7	73.1
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°	2535.7	2535.7	2535.7	2535.7	2535.7
2.5°	2534.1	2536.5	2534.9	2534.9	2536.5
5°	2516.8	2520.9	2519.3	2520.9	2520.9
7.5°	2477.4	2483.2	2487.3	2491.4	2488.9
10°	2420.8	2430.6	2437.2	2442.1	2439.7
12.5°	2336.2	2345.3	2359.2	2367.4	2360.9
15°	2220.5	2245.9	2254.1	2265.6	2259.1
17.5°	2099.8	2115.4	2125.3	2135.9	2142.5
20°	1938.9	1951.2	1964.4	1969.3	1961.9
22.5°	1745.2	1751.8	1749.3	1756.7	1741.9
25°	1532.6	1536.7	1534.2	1540.8	1528.5
27.5°	1331.5	1330.7	1331.5	1323.3	1315.1
30°	1137.7	1130.4	1127.1	1114.8	1112.3
32.5°	964.5	939.1	926.0	907.9	903.8
35°	791.3	755.2	731.4	710.9	701.9
37.5°	636.2	592.7	564.8	546.7	544.2
40°	503.2	463.0	443.3	433.4	431.8
42.5°	410.4	393.2	388.3	388.3	388.3
45°	374.3	373.5	377.6	380.9	381.7
47.5°	366.9	371.9	377.6	382.5	384.2
50°	366.9	371.9	376.0	380.9	382.5
52.5°	365.3	369.4	371.0	374.3	376.0
55°	360.4	362.8	362.8	364.5	366.1
57.5°	352.2	353.8	351.3	353.0	357.1
60°	344.0	345.6	341.5	345.6	348.1
62.5°	334.9	335.7	334.1	337.4	337.4
65°	320.1	318.5	321.0	323.4	324.2
67.5°	305.4	301.3	303.7	304.5	306.2
69°	293.9	291.4	292.2	293.9	295.5
70°	285.7	284.0	285.7	288.1	290.6
72.5°	265.1	266.0	271.7	276.6	281.6
75°	246.3	252.0	259.4	270.1	275.8
77.5°	223.3	227.4	233.1	244.6	255.3
80°	192.9	195.4	196.2	200.3	199.5
82.5°	156.8	154.3	152.7	151.0	150.2
85°	112.5	111.6	105.1	100.1	100.1
87.5°	67.3	64.0	60.7	56.6	54.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)