

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: P158660

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158660
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
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11603.7 lumens
Efficiency: N/A
Efficacy: 119.4 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

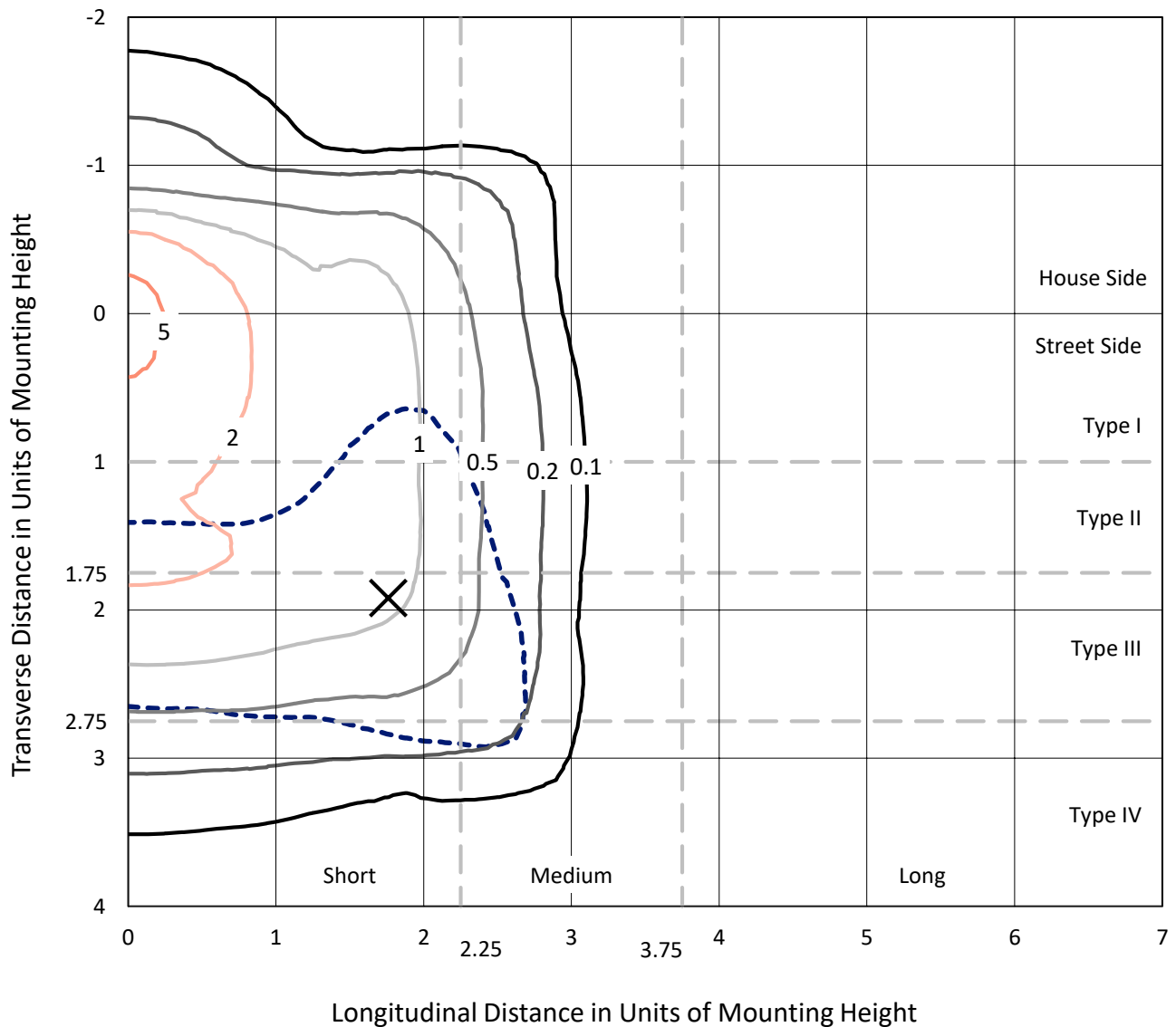
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

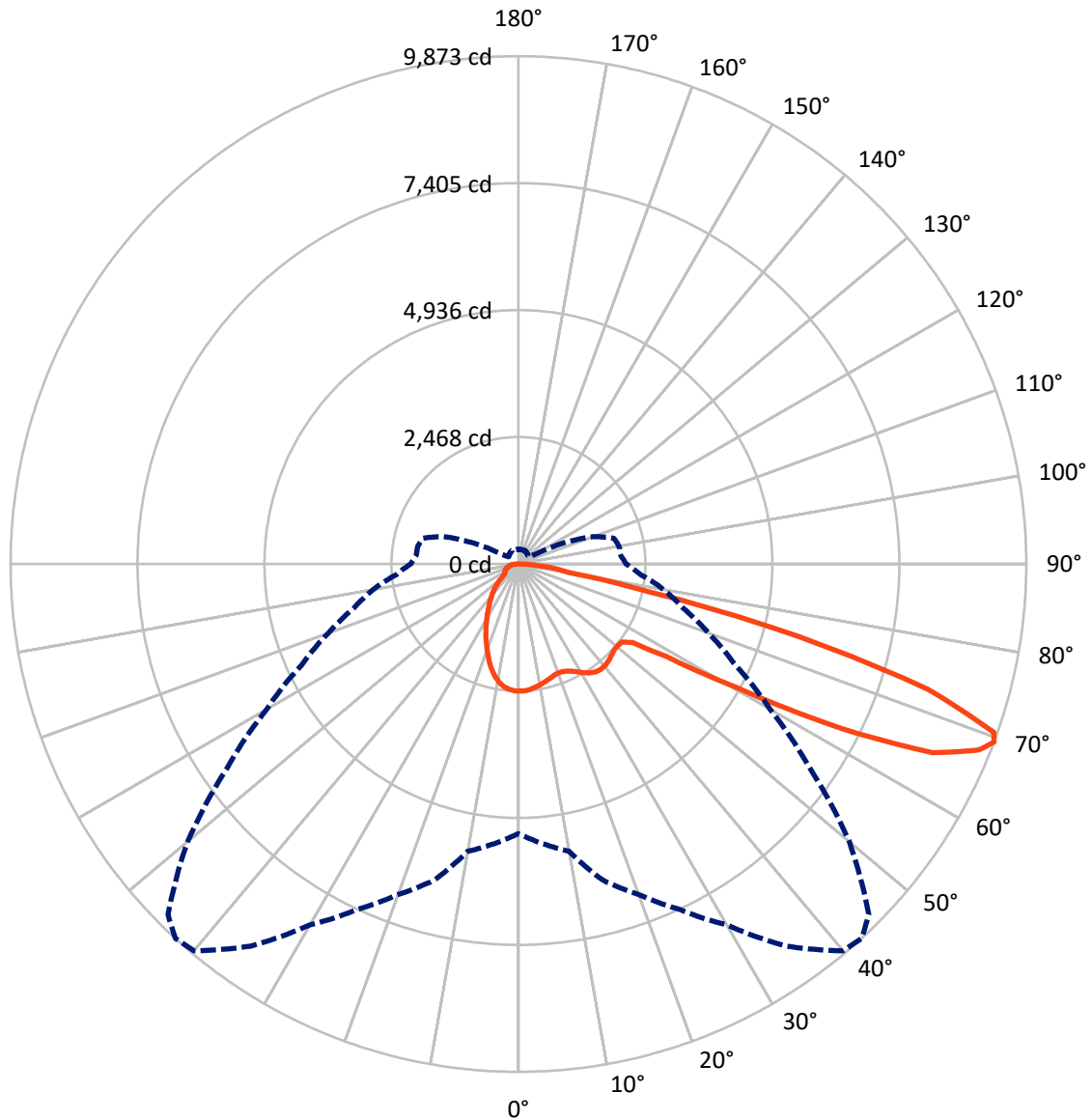


Based on 20 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Full Cutoff

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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	2579.7	0.0	2579.7
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	9024.0	0.0	9024.0
	% Fixture	77.8	0.0	77.8
Total	Lumens	11603.7	0.0	11603.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.0	2.0
10°-20°	620.0	5.3
20°-30°	904.1	7.8
30°-40°	1152.5	9.9
40°-50°	1341.0	11.6
50°-60°	2040.3	17.6
60°-70°	3604.1	31.1
70°-80°	1487.3	12.8
80°-90°	224.6	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°	11603.7	100.0
0°-180°	11603.7	100.0



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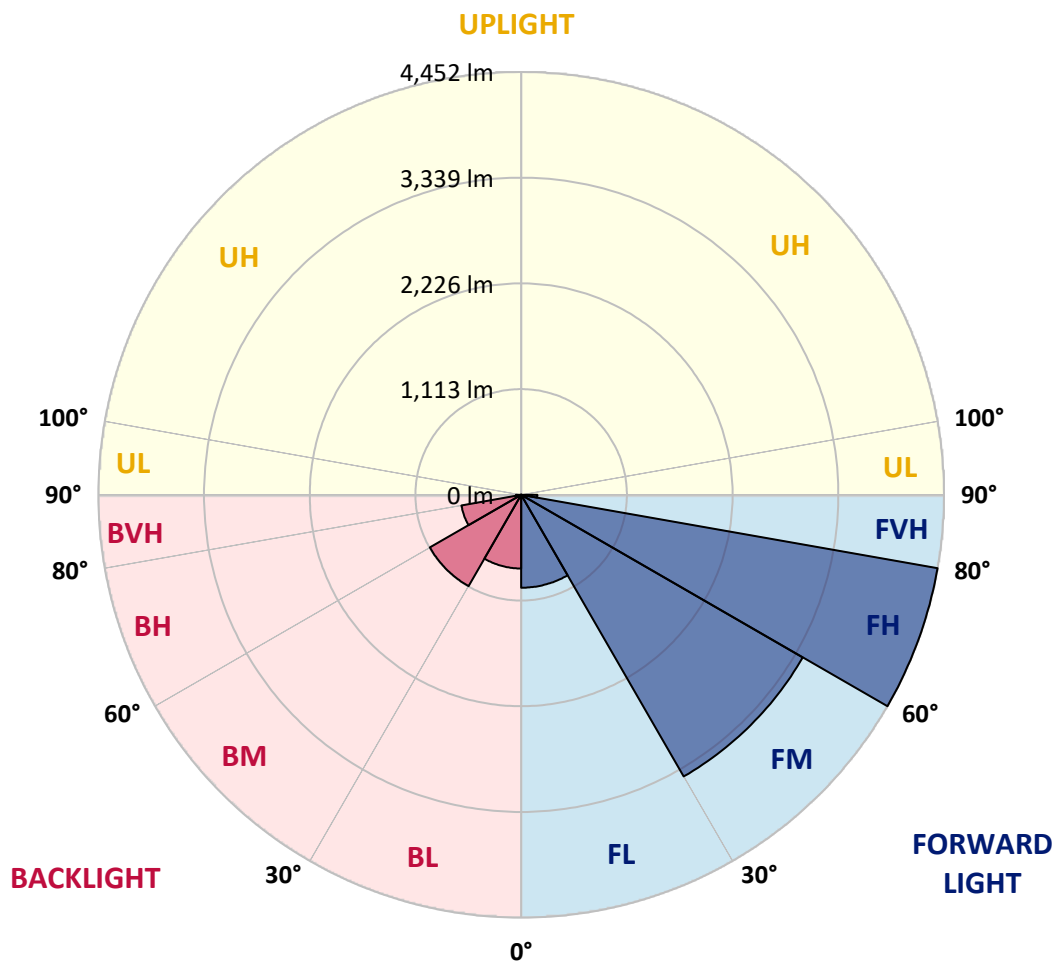
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	978.5	8.4			
FM	(30°-60°)	3423.4	29.5			
FH	(60°-80°)	4452.3	38.4			G2/5000
FVH	(80°-90°)	169.8	1.5			G2/225
BL	(0°-30°)	775.6	6.7	B2/1000		
BM	(30°-60°)	1110.3	9.6	B2/2500		
BH	(60°-80°)	639.0	5.5	B2/1000		G2/1000
BVH	(80°-90°)	54.7	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°	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2
2.5°	2463.2	2472.0	2468.8	2468.8	2471.2	2467.2	2467.2	2468.8	2464.8	2467.2	2466.4
5°	2454.4	2459.2	2457.6	2457.6	2457.6	2454.4	2452.8	2452.0	2446.4	2446.4	2444.0
7.5°	2435.2	2436.8	2439.2	2436.0	2435.2	2434.4	2428.8	2425.6	2419.2	2413.6	2415.2
10°	2409.6	2408.8	2412.8	2410.4	2407.2	2404.8	2400.0	2394.4	2387.2	2380.0	2379.2
12.5°	2380.8	2380.0	2383.2	2381.6	2379.2	2374.4	2370.4	2360.8	2349.6	2340.8	2340.0
15°	2362.4	2360.0	2363.2	2360.0	2356.0	2351.2	2344.0	2332.0	2312.0	2303.2	2296.0
17.5°	2380.0	2376.0	2377.6	2373.6	2368.0	2355.2	2338.4	2312.8	2284.0	2268.8	2257.6
20°	2441.6	2434.4	2436.0	2432.0	2419.2	2402.4	2370.4	2325.6	2276.8	2252.0	2234.4
22.5°	2529.6	2524.0	2526.4	2522.4	2509.6	2484.0	2436.0	2372.0	2302.4	2266.4	2238.4
25°	2663.2	2668.0	2669.6	2651.2	2644.0	2596.8	2530.4	2441.6	2348.8	2306.4	2268.0
27.5°	2813.6	2813.6	2820.8	2813.6	2799.2	2744.0	2650.4	2543.2	2424.0	2366.4	2320.0
30°	2960.0	2958.4	2972.0	2970.4	2947.2	2884.8	2778.4	2648.0	2512.0	2447.2	2388.0
32.5°	3115.2	3120.0	3128.8	3125.6	3095.2	3008.8	2880.8	2739.2	2596.0	2524.8	2458.4
35°	3283.2	3285.6	3288.8	3287.2	3225.6	3116.8	2956.0	2797.6	2648.8	2578.4	2509.6
37.5°	3451.2	3448.8	3444.8	3410.4	3340.0	3188.8	3001.6	2831.2	2675.2	2599.2	2528.0
40°	3601.6	3588.0	3575.2	3521.6	3413.6	3229.6	3019.2	2839.2	2672.8	2594.4	2524.8
42.5°	3684.0	3668.8	3642.4	3575.2	3444.0	3233.6	3007.2	2815.2	2648.0	2570.4	2501.6
45°	3699.2	3688.0	3662.4	3587.2	3436.8	3208.0	2970.4	2776.0	2611.2	2533.6	2468.8
47.5°	3663.2	3654.4	3629.6	3555.2	3405.6	3169.6	2928.0	2734.4	2575.2	2502.4	2440.0
50°	3608.0	3600.0	3580.8	3512.8	3370.4	3143.2	2906.4	2712.8	2563.2	2496.8	2439.2
52.5°	3697.6	3704.0	3648.0	3573.6	3408.0	3166.4	2930.4	2735.2	2584.8	2519.2	2459.2
55°	5090.4	5081.6	4744.8	4462.4	3957.6	3500.0	3158.4	2912.8	2752.0	2686.4	2630.4
57.5°	6614.4	6584.0	6445.6	6181.6	5639.2	4915.2	4256.8	3696.8	3476.0	3381.6	3388.0
60°	7112.0	7123.2	7093.6	7000.0	6805.6	6428.8	5928.0	5507.2	5092.8	4890.4	4913.6
62.5°	7388.0	7408.0	7433.6	7412.8	7349.6	7262.4	7199.2	7237.6	7180.0	7034.4	6918.4
65°	7426.4	7467.2	7552.0	7619.2	7652.0	7734.4	7928.0	8392.0	8816.0	8844.0	8640.0
67.5°	6666.4	6779.2	6963.2	7274.4	7540.8	7833.6	8300.8	9006.4	9632.0	9652.8	9462.4
69°	5241.6	5458.4	5673.6	6368.8	6836.8	7410.4	8101.6	9065.6	9815.2	9872.8	9632.8
70°	4200.0	4328.8	4514.4	5212.8	5912.0	6643.2	7644.8	8870.4	9689.6	9805.6	9540.8
72.5°	2521.6	2571.2	2635.2	2885.6	3245.6	3896.8	5224.8	7232.0	8173.6	8328.8	7992.0
75°	1630.4	1627.2	1632.8	1702.4	1723.2	1848.0	2266.4	3720.8	5332.0	5613.6	5210.4
77.5°	1228.0	1239.2	1221.6	1228.0	1222.4	1256.0	1268.8	1332.0	2104.8	2592.8	2318.4
80°	1084.0	1089.6	1090.4	1087.2	1048.0	1044.8	1065.6	1029.6	956.8	971.2	930.4
82.5°	618.4	617.6	624.8	679.2	701.6	775.2	805.6	822.4	759.2	712.0	644.0
85°	400.8	404.0	412.0	428.8	412.0	418.4	411.2	425.6	390.4	362.4	324.0
87.5°	164.0	164.0	174.4	189.6	176.8	173.6	148.8	147.2	124.8	112.8	88.0
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°	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2
2.5°	2461.6	2466.4	2464.0	2467.2	2464.8	2464.8	2461.6	2460.8	2463.2	2460.0	2460.8
5°	2440.0	2440.8	2436.8	2438.4	2433.6	2432.0	2429.6	2423.2	2427.2	2423.2	2424.8
7.5°	2408.8	2406.4	2400.8	2392.8	2387.2	2384.8	2380.0	2371.2	2372.8	2365.6	2369.6
10°	2368.8	2360.8	2351.2	2339.2	2331.2	2324.0	2313.6	2303.2	2297.6	2291.2	2290.4
12.5°	2324.0	2314.4	2301.6	2283.2	2265.6	2253.6	2237.6	2219.2	2213.6	2203.2	2197.6
15°	2275.2	2260.0	2244.8	2224.0	2204.8	2186.4	2164.8	2141.6	2126.4	2110.4	2098.4
17.5°	2231.2	2213.6	2193.6	2173.6	2152.8	2130.4	2103.2	2074.4	2052.0	2022.4	1998.4
20°	2196.8	2174.4	2154.4	2133.6	2110.4	2083.2	2050.4	2013.6	1976.0	1943.2	1915.2
22.5°	2183.2	2148.0	2124.0	2103.2	2080.0	2048.0	2008.0	1964.8	1919.2	1873.6	1836.8
25°	2194.4	2142.4	2104.8	2080.0	2060.0	2027.2	1982.4	1929.6	1876.8	1822.4	1772.8
27.5°	2227.2	2160.8	2106.4	2067.2	2044.0	2011.2	1964.0	1908.0	1845.6	1784.8	1724.0
30°	2278.4	2192.0	2123.2	2068.0	2032.0	1994.4	1944.8	1880.0	1816.8	1747.2	1680.8
32.5°	2328.0	2224.8	2142.4	2071.2	2016.0	1967.2	1912.0	1848.0	1780.0	1707.2	1638.4
35°	2363.2	2246.4	2149.6	2064.0	1991.2	1930.4	1871.2	1807.2	1740.8	1666.4	1596.0
37.5°	2380.0	2258.4	2150.4	2044.8	1958.4	1891.2	1828.0	1764.8	1702.4	1632.0	1565.6
40°	2379.2	2257.6	2139.2	2020.0	1919.2	1848.0	1785.6	1724.0	1665.6	1604.0	1544.0
42.5°	2361.6	2244.8	2123.2	1996.0	1891.2	1812.0	1747.2	1688.0	1638.4	1584.0	1533.6
45°	2334.4	2223.2	2106.4	1984.8	1883.2	1804.0	1735.2	1677.6	1633.6	1584.0	1540.8
47.5°	2313.6	2211.2	2108.8	2004.8	1908.0	1825.6	1752.8	1689.6	1652.0	1612.0	1581.6
50°	2316.8	2216.8	2116.8	2016.8	1925.6	1842.4	1772.0	1714.4	1687.2	1676.8	1669.6
52.5°	2333.6	2225.6	2140.8	2080.8	2049.6	1987.2	1945.6	1909.6	1929.6	1890.4	1844.0
55°	2548.0	2512.8	2595.2	2672.8	2771.2	2808.0	2772.8	2766.4	2798.4	2665.6	2360.8
57.5°	3433.6	3524.8	3652.0	3719.2	3800.8	3779.2	3697.6	3629.6	3549.6	3394.4	3014.4
60°	4940.0	4871.2	4813.6	4651.2	4518.4	4363.2	4190.4	4042.4	3900.8	3677.6	3266.4
62.5°	6492.0	6014.4	5615.2	5229.6	4919.2	4661.6	4411.2	4188.8	3974.4	3663.2	3220.8
65°	7834.4	6828.8	6079.2	5513.6	5060.0	4668.8	4347.2	4040.0	3767.2	3402.4	2964.8
67.5°	8437.6	7177.6	6087.2	5276.8	4648.8	4117.6	3701.6	3237.6	2932.0	2698.4	2452.0
69°	8392.8	6911.2	5652.8	4655.2	3933.6	3314.4	2868.0	2384.0	2091.2	1992.0	1986.4
70°	8180.0	6460.0	5145.6	4150.4	3324.8	2709.6	2281.6	1847.2	1574.4	1506.4	1627.2
72.5°	6678.4	4564.8	3224.8	2462.4	1893.6	1496.8	1220.8	968.8	773.6	670.4	692.8
75°	3772.0	2113.6	1366.4	1032.8	872.8	721.6	619.2	528.0	477.6	388.0	307.2
77.5°	1371.2	907.2	721.6	624.0	442.4	304.8	255.2	223.2	202.4	202.4	192.8
80°	867.2	683.2	476.8	326.4	241.6	210.4	184.0	161.6	148.8	145.6	148.8
82.5°	541.6	418.4	267.2	204.8	172.0	154.4	134.4	117.6	107.2	104.8	109.6
85°	267.2	207.2	162.4	144.8	136.0	126.4	111.2	95.2	92.0	98.4	115.2
87.5°	80.0	71.2	58.4	60.8	64.0	62.4	49.6	43.2	40.8	53.6	84.0
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°	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2	2471.2
2.5°	2462.4	2461.6	2463.2	2460.8	2462.4	2463.2	2461.6	2468.8	2464.0	2464.8	2468.0
5°	2426.4	2424.8	2431.2	2429.6	2432.8	2436.0	2434.4	2444.8	2440.8	2444.0	2450.4
7.5°	2366.4	2369.6	2370.4	2370.4	2376.8	2387.2	2389.6	2396.0	2396.0	2404.8	2411.2
10°	2286.4	2287.2	2292.0	2291.2	2299.2	2310.4	2312.0	2323.2	2327.2	2341.6	2350.4
12.5°	2193.6	2189.6	2188.8	2188.0	2198.4	2210.4	2212.0	2231.2	2239.2	2252.0	2266.4
15°	2089.6	2079.2	2076.0	2082.4	2080.0	2087.2	2094.4	2104.8	2116.0	2141.6	2154.4
17.5°	1988.0	1967.2	1961.6	1954.4	1947.2	1947.2	1950.4	1963.2	1986.4	2000.0	2028.8
20°	1884.0	1859.2	1839.2	1820.0	1803.2	1796.8	1797.6	1813.6	1830.4	1852.8	1880.0
22.5°	1796.8	1759.2	1724.8	1699.2	1664.8	1664.0	1659.2	1664.0	1682.4	1688.0	1703.2
25°	1721.6	1671.2	1624.8	1583.2	1549.6	1532.0	1527.2	1525.6	1516.8	1514.4	1503.2
27.5°	1663.2	1602.4	1542.4	1492.0	1450.4	1426.4	1396.0	1374.4	1343.2	1335.2	1315.2
30°	1615.2	1549.6	1484.0	1418.4	1371.2	1328.0	1276.8	1239.2	1191.2	1160.0	1132.8
32.5°	1568.8	1502.4	1436.0	1371.2	1298.4	1231.2	1164.0	1105.6	1052.0	1004.0	964.0
35°	1530.4	1467.2	1400.0	1321.6	1228.8	1132.0	1051.2	984.8	911.2	860.8	810.4
37.5°	1505.6	1448.0	1380.8	1272.8	1153.6	1049.6	957.6	876.8	801.6	725.6	668.8
40°	1494.4	1444.0	1360.0	1228.0	1088.0	972.8	871.2	781.6	685.6	600.0	539.2
42.5°	1493.6	1442.4	1331.2	1178.4	1033.6	908.0	795.2	688.0	581.6	493.6	433.6
45°	1508.0	1440.0	1300.8	1136.8	985.6	854.4	720.0	589.6	470.4	404.8	372.8
47.5°	1546.4	1444.0	1276.0	1098.4	940.0	789.6	633.6	481.6	383.2	352.8	352.8
50°	1615.2	1467.2	1269.6	1071.2	894.4	714.4	528.0	388.8	339.2	339.2	348.8
52.5°	1720.8	1516.0	1280.8	1052.0	837.6	615.2	416.0	335.2	325.6	334.4	347.2
55°	1964.0	1602.4	1296.0	1019.2	751.2	488.0	343.2	316.8	320.8	331.2	343.2
57.5°	2410.4	1787.2	1312.0	947.2	612.0	376.0	311.2	309.6	316.8	326.4	336.8
60°	2704.0	2022.4	1352.8	838.4	463.2	310.4	295.2	304.8	313.6	321.6	329.6
62.5°	2704.0	2088.8	1383.2	716.8	348.0	282.4	284.8	300.0	310.4	314.4	319.2
65°	2531.2	1967.2	1280.0	584.0	283.2	266.4	275.2	290.4	300.0	303.2	307.2
67.5°	2212.0	1737.6	1078.4	440.0	252.8	252.8	264.0	275.2	283.2	289.6	296.0
69°	1923.2	1559.2	949.6	372.8	240.8	242.4	253.6	263.2	272.8	280.8	288.8
70°	1715.2	1425.6	860.0	338.4	233.6	234.4	245.6	256.0	264.8	273.6	283.2
72.5°	918.4	984.8	653.6	277.6	215.2	217.6	228.0	237.6	245.6	254.4	263.2
75°	312.8	423.2	416.0	227.2	194.4	200.8	207.2	216.0	226.4	232.0	236.8
77.5°	183.2	189.6	221.6	184.8	175.2	178.4	185.6	192.8	201.6	207.2	211.2
80°	153.6	152.8	153.6	150.4	152.8	160.0	164.8	174.4	182.4	184.0	183.2
82.5°	124.8	131.2	132.0	130.4	137.6	143.2	147.2	152.8	152.0	153.6	156.8
85°	111.2	110.4	116.0	116.8	116.8	112.8	113.6	113.6	113.6	116.0	116.8
87.5°	111.2	92.8	72.0	64.8	68.0	64.0	60.8	60.0	66.4	72.8	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):

	160°	165°	170°	175°	180°
0°	2471.2	2471.2	2471.2	2471.2	2471.2
2.5°	2469.6	2472.0	2470.4	2470.4	2472.0
5°	2452.8	2456.8	2455.2	2456.8	2456.8
7.5°	2414.4	2420.0	2424.0	2428.0	2425.6
10°	2359.2	2368.8	2375.2	2380.0	2377.6
12.5°	2276.8	2285.6	2299.2	2307.2	2300.8
15°	2164.0	2188.8	2196.8	2208.0	2201.6
17.5°	2046.4	2061.6	2071.2	2081.6	2088.0
20°	1889.6	1901.6	1914.4	1919.2	1912.0
22.5°	1700.8	1707.2	1704.8	1712.0	1697.6
25°	1493.6	1497.6	1495.2	1501.6	1489.6
27.5°	1297.6	1296.8	1297.6	1289.6	1281.6
30°	1108.8	1101.6	1098.4	1086.4	1084.0
32.5°	940.0	915.2	902.4	884.8	880.8
35°	771.2	736.0	712.8	692.8	684.0
37.5°	620.0	577.6	550.4	532.8	530.4
40°	490.4	451.2	432.0	422.4	420.8
42.5°	400.0	383.2	378.4	378.4	378.4
45°	364.8	364.0	368.0	371.2	372.0
47.5°	357.6	362.4	368.0	372.8	374.4
50°	357.6	362.4	366.4	371.2	372.8
52.5°	356.0	360.0	361.6	364.8	366.4
55°	351.2	353.6	353.6	355.2	356.8
57.5°	343.2	344.8	342.4	344.0	348.0
60°	335.2	336.8	332.8	336.8	339.2
62.5°	326.4	327.2	325.6	328.8	328.8
65°	312.0	310.4	312.8	315.2	316.0
67.5°	297.6	293.6	296.0	296.8	298.4
69°	286.4	284.0	284.8	286.4	288.0
70°	278.4	276.8	278.4	280.8	283.2
72.5°	258.4	259.2	264.8	269.6	274.4
75°	240.0	245.6	252.8	263.2	268.8
77.5°	217.6	221.6	227.2	238.4	248.8
80°	188.0	190.4	191.2	195.2	194.4
82.5°	152.8	150.4	148.8	147.2	146.4
85°	109.6	108.8	102.4	97.6	97.6
87.5°	65.6	62.4	59.2	55.2	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)