

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: P159813

Luminaire Tested: **VST-F09-LED-E-U-T4-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P159813  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-F09-LED-E-U-T4-8030  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT  
Light Source: (63) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18663.6 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

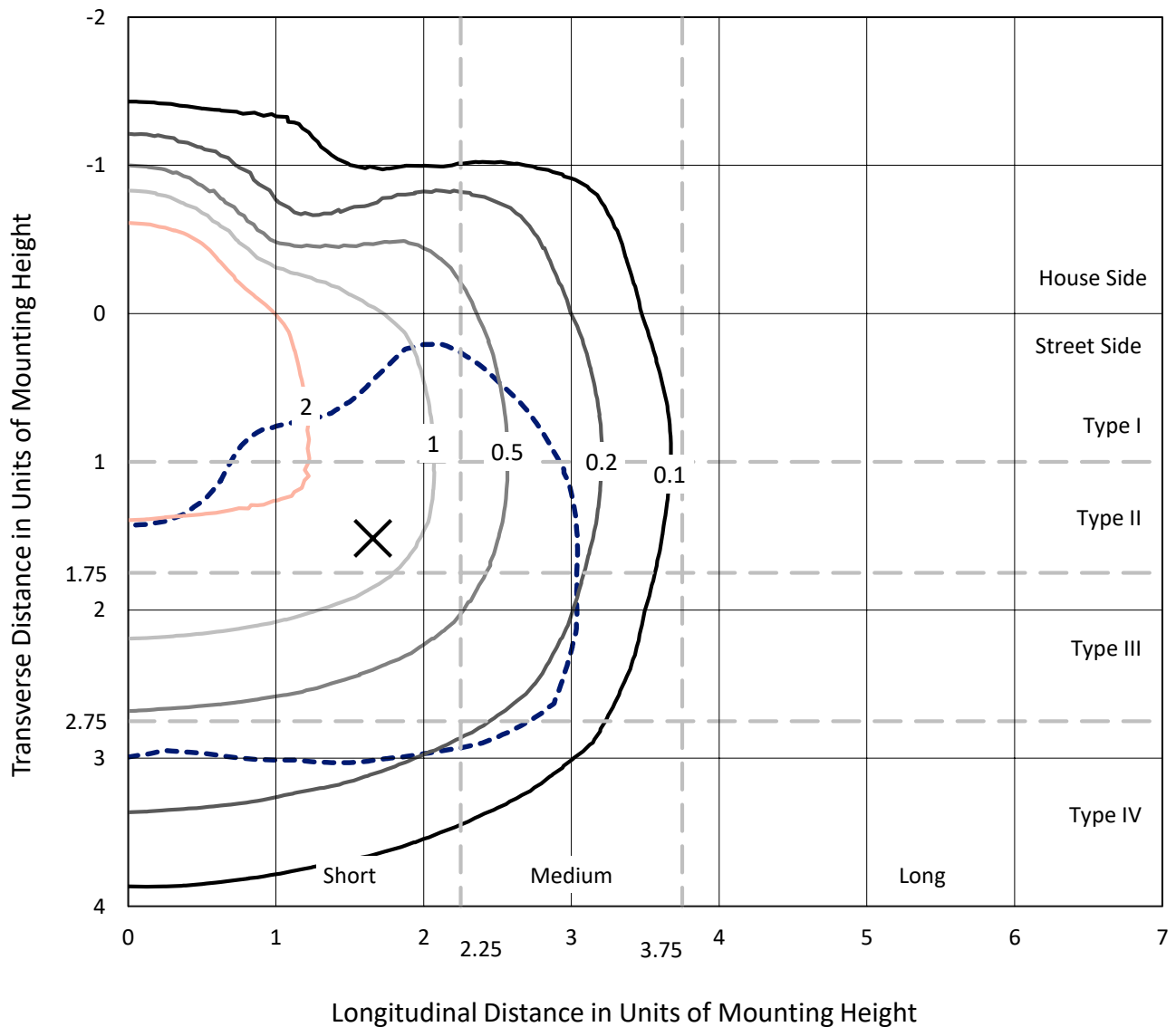
Input Watts (W): 234.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

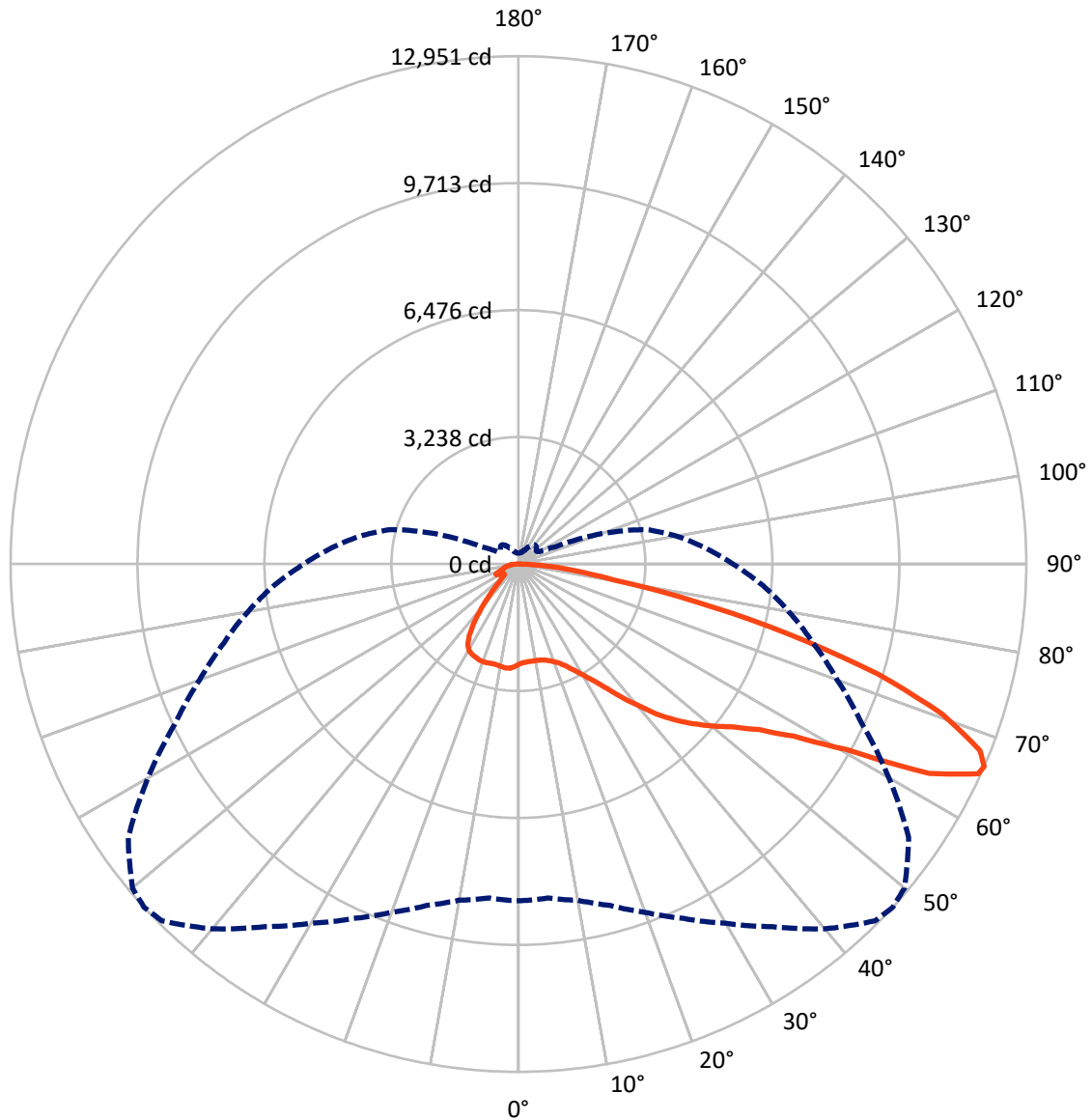
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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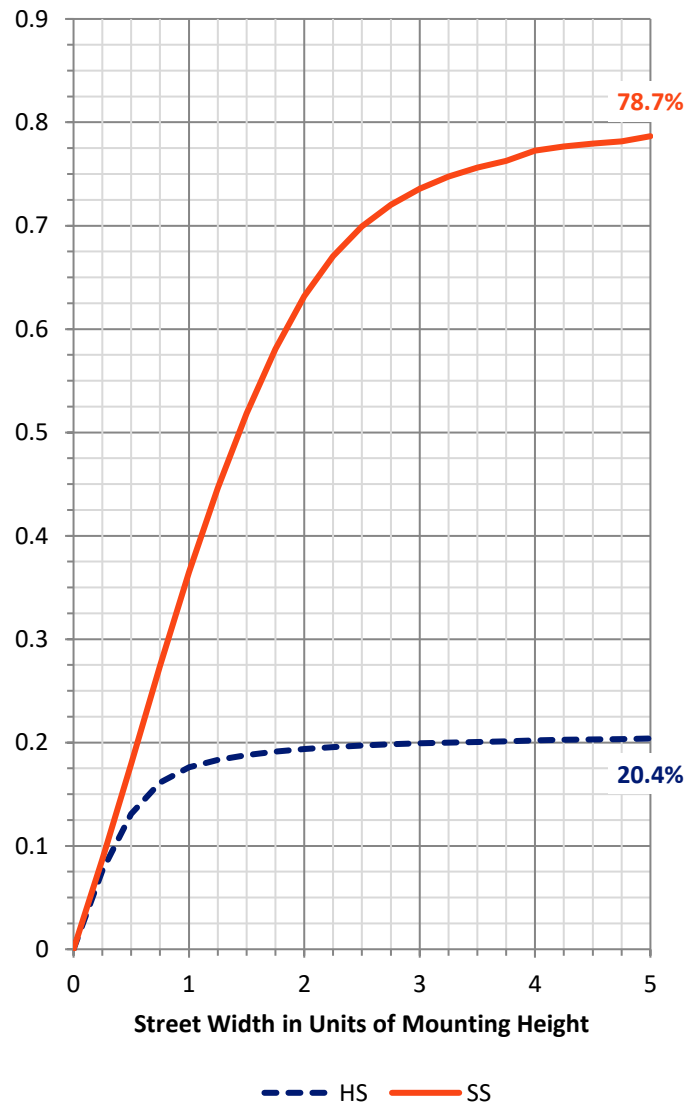
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3864.2	0.0	3864.2
	% Fixture	20.7	0.0	20.7
<b>Street Side</b>	Lumens	14799.4	0.0	14799.4
	% Fixture	79.3	0.0	79.3
<b>Total</b>	Lumens	18663.6	0.0	18663.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	246.1	1.3
10°-20°	738.0	4.0
20°-30°	1259.2	6.7
30°-40°	1900.6	10.2
40°-50°	2470.4	13.2
50°-60°	3389.1	18.2
60°-70°	5213.5	27.9
70°-80°	3013.7	16.1
80°-90°	432.9	2.3
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°	18663.6	100.0
0°-180°	18663.6	100.0

**Coefficient of Utilization**



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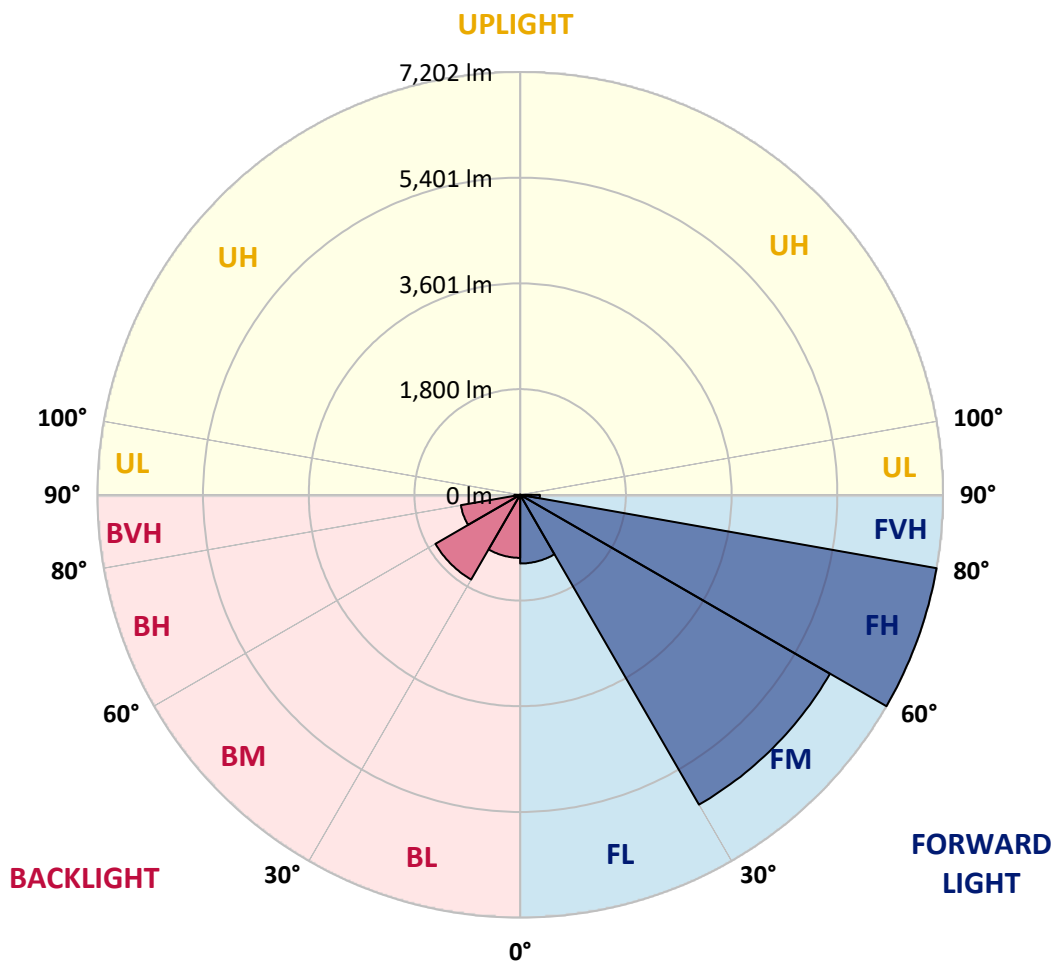
CATALOG NUMBER: VST-F09-LED-E-U-T4-8030

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1169.8	6.3			
FM	(30°-60°)	6092.9	32.6			
FH	(60°-80°)	7201.7	38.6			G3/7500
FVH	(80°-90°)	335.0	1.8			G3/500
BL	(0°-30°)	1073.5	5.8	B3/2500		
BM	(30°-60°)	1667.2	8.9	B2/2500		
BH	(60°-80°)	1025.6	5.5	B3/2500		G3/2500
BVH	(80°-90°)	97.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°	
0°	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4
2.5°	2488.2	2489.4	2490.7	2490.7	2494.5	2494.5	2500.7	2504.5	2505.7	2513.3	2513.3	2518.3
5°	2441.8	2440.5	2441.8	2444.3	2450.6	2455.6	2468.1	2476.9	2484.4	2497.0	2497.0	2503.2
7.5°	2421.7	2424.2	2426.7	2428.0	2433.0	2445.5	2456.8	2465.6	2480.7	2495.7	2495.7	2502.0
10°	2448.1	2451.8	2448.1	2450.6	2450.6	2461.8	2466.9	2473.1	2484.4	2498.2	2498.2	2502.0
12.5°	2509.5	2517.0	2509.5	2503.2	2498.2	2508.2	2505.7	2500.7	2507.0	2510.8	2510.8	2510.8
15°	2611.1	2611.1	2606.1	2597.3	2584.7	2586.0	2574.7	2563.4	2558.4	2549.6	2549.6	2543.4
17.5°	2710.2	2707.7	2696.4	2685.1	2676.3	2672.5	2656.2	2641.2	2623.6	2609.8	2609.8	2594.8
20°	2806.7	2816.8	2803.0	2786.7	2772.9	2764.1	2751.5	2721.4	2700.1	2677.6	2677.6	2662.5
22.5°	2973.5	2964.7	2949.7	2925.9	2912.1	2897.0	2870.7	2838.1	2805.5	2777.9	2777.9	2759.1
25°	3145.3	3136.6	3115.2	3097.7	3077.6	3065.1	3036.2	2996.1	2964.7	2922.1	2922.1	2897.0
27.5°	3329.7	3322.2	3297.1	3283.3	3269.5	3254.5	3229.4	3188.0	3159.1	3110.2	3110.2	3083.9
30°	3537.9	3536.6	3502.8	3500.3	3480.2	3463.9	3446.3	3411.2	3382.4	3333.5	3333.5	3302.1
32.5°	3759.9	3754.8	3731.0	3723.5	3737.3	3726.0	3700.9	3664.6	3626.9	3598.1	3598.1	3563.0
35°	4075.9	4067.1	4053.3	4059.6	4068.4	4099.7	4060.9	4029.5	3984.4	3946.7	3946.7	3897.8
37.5°	4306.7	4294.1	4310.4	4345.5	4395.7	4419.5	4453.4	4454.6	4433.3	4383.2	4383.2	4340.5
40°	4518.6	4513.6	4551.2	4600.1	4692.9	4760.7	4824.6	4856.0	4863.5	4830.9	4830.9	4766.9
42.5°	4697.9	4713.0	4763.2	4838.4	4968.8	5071.7	5190.8	5264.8	5311.2	5293.7	5293.7	5264.8
45°	4911.1	4918.7	4980.1	5075.4	5199.6	5370.2	5526.9	5652.3	5733.9	5732.6	5732.6	5700.0
47.5°	5178.3	5179.5	5232.2	5343.8	5476.8	5649.8	5848.0	6014.8	6122.6	6127.6	6127.6	6102.6
50°	5495.6	5493.1	5550.8	5656.1	5797.8	5964.6	6175.3	6383.5	6534.0	6534.0	6534.0	6497.6
52.5°	5904.4	5899.4	5930.8	6023.6	6160.3	6335.8	6545.3	6786.1	6949.1	6984.2	6984.2	6905.2
55°	6450.0	6457.5	6465.0	6546.5	6663.2	6802.4	7043.2	7265.1	7483.4	7503.4	7503.4	7457.0
57.5°	7080.8	7055.7	7109.6	7242.6	7375.5	7549.8	7720.4	7982.5	8240.8	8284.7	8284.7	8278.5
60°	8066.5	8033.9	8089.1	8258.4	8405.1	8679.8	8972.0	9310.6	9616.6	9706.9	9706.9	9597.8
62.5°	8973.3	9013.4	9088.6	9285.5	9498.7	9864.9	10303.9	10884.5	11465.2	11781.2	11781.2	11758.7
65°	8891.7	8854.1	8998.3	9266.7	9653.0	10119.5	10665.1	11364.9	12201.4	12836.0	12836.0	12892.4
66°	8589.5	8550.6	8706.1	9013.4	9454.8	9974.0	10579.8	11292.1	12147.4	12864.8	12864.8	12951.3
67.5°	8090.4	8051.5	8227.1	8506.7	8962.0	9615.4	10270.0	11048.8	11938.0	12625.3	12625.3	12695.5
70°	7127.2	7074.5	7211.2	7527.3	7896.0	8528.0	9151.3	9976.6	10889.6	11438.9	11438.9	11465.2
72.5°	6037.4	5914.4	6059.9	6303.2	6566.6	7089.6	7632.6	8197.0	8924.3	9432.3	9432.3	9577.7
75°	4380.7	4444.6	4487.3	4647.8	4822.1	5254.8	5573.3	6046.1	6609.2	6976.7	6976.7	7093.3
77.5°	2323.9	2420.5	2480.7	2641.2	2929.6	3259.5	3604.4	3896.6	4266.5	4472.2	4472.2	4615.2
80°	1304.3	1372.0	1469.8	1596.5	1737.0	1990.3	2194.7	2345.2	2397.9	2434.3	2434.3	2466.9
82.5°	717.4	889.2	1034.7	1122.4	1205.2	1306.8	1428.4	1553.9	1594.0	1533.8	1533.8	1502.4
85°	111.6	164.3	500.4	610.8	664.7	742.4	830.2	923.0	924.3	795.1	795.1	867.9
87.5°	31.4	35.1	71.5	107.9	105.3	85.3	105.3	191.9	112.9	56.4	56.4	65.2
90°	0.0	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°	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4
2.5°	2520.8	2523.3	2529.6	2535.8	2542.1	2548.4	2552.1	2558.4	2563.4	2571.0	2579.7
5°	2510.8	2517.0	2528.3	2542.1	2554.7	2565.9	2574.7	2587.3	2598.5	2608.6	2623.6
7.5°	2510.8	2523.3	2542.1	2557.2	2568.4	2582.2	2596.0	2608.6	2621.1	2631.2	2641.2
10°	2512.0	2524.6	2543.4	2560.9	2573.5	2588.5	2599.8	2611.1	2624.9	2631.2	2643.7
12.5°	2517.0	2522.0	2535.8	2553.4	2568.4	2583.5	2594.8	2606.1	2621.1	2623.6	2632.4
15°	2542.1	2534.6	2538.3	2550.9	2567.2	2579.7	2592.3	2601.1	2611.1	2608.6	2616.1
17.5°	2588.5	2569.7	2562.2	2563.4	2571.0	2579.7	2584.7	2586.0	2587.3	2576.0	2577.2
20°	2651.2	2624.9	2607.3	2598.5	2588.5	2579.7	2565.9	2549.6	2534.6	2512.0	2509.5
22.5°	2745.3	2706.4	2687.6	2663.8	2633.7	2596.0	2562.2	2522.0	2489.4	2455.6	2443.0
25°	2882.0	2841.8	2821.8	2784.2	2730.2	2676.3	2627.4	2573.5	2525.8	2485.7	2466.9
27.5°	3065.1	3024.9	3003.6	2964.7	2898.3	2844.4	2776.6	2718.9	2661.3	2602.3	2578.5
30°	3287.1	3251.9	3228.1	3196.8	3139.1	3080.1	3001.1	2912.1	2820.5	2726.5	2680.1
32.5°	3549.2	3510.3	3492.7	3456.4	3396.2	3334.7	3246.9	3132.8	2979.8	2831.8	2739.0
35°	3876.5	3832.6	3812.5	3764.9	3694.6	3604.4	3510.3	3357.3	3150.4	2944.7	2792.9
37.5°	4314.2	4216.4	4149.9	4040.8	3927.9	3801.2	3667.1	3510.3	3265.7	3011.2	2800.5
40°	4701.7	4602.6	4474.7	4317.9	4142.4	3968.0	3815.0	3637.0	3371.1	3058.8	2776.6
42.5°	5183.3	5007.7	4803.3	4591.3	4358.1	4143.6	3961.8	3752.3	3442.6	3071.3	2710.2
45°	5623.5	5414.1	5140.7	4858.5	4568.8	4299.1	4094.7	3861.4	3504.0	3071.3	2629.9
47.5°	6024.8	5774.0	5446.7	5095.5	4758.1	4463.4	4231.4	3973.1	3590.6	3110.2	2606.1
50°	6396.0	6107.6	5735.1	5327.5	4948.8	4634.0	4384.4	4116.0	3722.2	3210.6	2663.8
52.5°	6787.3	6481.3	6027.3	5594.6	5177.0	4839.7	4573.8	4292.9	3892.8	3368.6	2765.3
55°	7300.3	6941.6	6426.1	5949.6	5490.6	5118.1	4815.8	4504.8	4079.7	3546.7	2889.5
57.5°	8109.2	7588.7	7073.3	6453.7	6021.0	5530.7	5199.6	4842.2	4383.2	3778.7	3076.4
60°	9525.1	8885.5	8265.9	7553.6	7019.3	6506.4	6006.0	5539.5	4986.4	4302.9	3486.5
62.5°	11546.7	10897.1	9923.9	9052.3	8245.9	7566.1	6914.0	6320.8	5611.0	4863.5	3991.9
65°	12754.4	12010.7	10850.7	9679.3	8699.9	7857.1	7110.9	6384.7	5618.5	4889.8	4144.9
66°	12851.0	12147.4	10908.4	9670.6	8653.5	7779.3	7003.0	6251.8	5466.7	4769.4	4094.7
67.5°	12671.7	12065.9	10790.5	9500.0	8460.3	7516.0	6718.3	5930.8	5141.9	4496.0	3927.9
70°	11406.3	10968.6	9875.0	8666.0	7628.8	6796.1	5954.6	5197.1	4449.6	3906.6	3485.2
72.5°	9350.7	8796.4	8031.4	7218.7	6402.3	5663.6	4898.6	4254.0	3626.9	3231.9	2933.4
75°	6868.8	6369.7	5526.9	5020.3	4481.0	4017.0	3501.5	2890.8	2445.5	2247.4	2174.7
77.5°	4354.3	3812.5	3101.4	2542.1	2185.9	1878.7	1481.1	1177.6	943.1	982.0	1087.3
80°	2199.7	1895.0	1418.4	1119.9	968.2	805.1	637.1	482.8	352.4	402.6	455.2
82.5°	1412.1	1178.9	939.3	739.9	624.6	550.6	440.2	319.8	238.3	268.4	328.6
85°	850.3	718.6	573.1	469.0	407.6	339.9	249.6	176.8	175.6	188.1	232.0
87.5°	129.2	184.4	106.6	114.1	120.4	129.2	114.1	96.6	84.0	109.1	138.0
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°	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4	2553.4
2.5°	2588.5	2591.0	2596.0	2602.3	2601.1	2609.8	2614.8	2609.8	2621.1	2621.1	2627.4
5°	2636.2	2639.9	2648.7	2655.0	2657.5	2665.0	2667.5	2666.3	2668.8	2670.0	2672.5
7.5°	2650.0	2660.0	2663.8	2667.5	2668.8	2671.3	2671.3	2668.8	2668.8	2667.5	2670.0
10°	2646.2	2650.0	2652.5	2651.2	2651.2	2648.7	2647.5	2646.2	2646.2	2643.7	2647.5
12.5°	2633.7	2633.7	2633.7	2631.2	2631.2	2629.9	2629.9	2629.9	2632.4	2633.7	2639.9
15°	2608.6	2608.6	2611.1	2609.8	2613.6	2619.9	2627.4	2632.4	2638.7	2639.9	2643.7
17.5°	2569.7	2571.0	2578.5	2594.8	2611.1	2629.9	2643.7	2647.5	2642.4	2629.9	2621.1
20°	2502.0	2518.3	2548.4	2587.3	2623.6	2647.5	2653.7	2638.7	2614.8	2582.2	2564.7
22.5°	2441.8	2474.4	2528.3	2592.3	2637.4	2653.7	2634.9	2599.8	2557.2	2519.5	2493.2
25°	2465.6	2503.2	2559.7	2614.8	2643.7	2634.9	2597.3	2547.1	2502.0	2458.1	2415.4
27.5°	2565.9	2603.6	2643.7	2660.0	2650.0	2617.4	2564.7	2510.8	2450.6	2387.9	2335.2
30°	2661.3	2682.6	2685.1	2668.8	2632.4	2579.7	2518.3	2455.6	2379.1	2303.8	2237.4
32.5°	2691.4	2666.3	2621.1	2574.7	2524.6	2470.6	2399.1	2316.4	2234.8	2149.6	2075.6
35°	2682.6	2581.0	2469.4	2370.3	2310.1	2248.6	2183.4	2073.1	1981.5	1908.8	1861.1
37.5°	2603.6	2418.0	2246.1	2101.9	2007.9	1935.1	1838.5	1747.0	1668.0	1635.4	1596.5
40°	2493.2	2209.8	1971.5	1769.6	1671.7	1578.9	1471.1	1400.9	1378.3	1348.2	1349.4
42.5°	2335.2	1966.5	1659.2	1427.2	1320.6	1219.0	1142.5	1101.1	1102.4	1077.3	1082.3
45°	2168.4	1721.9	1335.6	1104.9	999.5	913.0	870.4	857.8	859.1	860.3	852.8
47.5°	2066.8	1531.3	1071.0	837.8	744.9	696.0	673.5	667.2	668.4	669.7	660.9
50°	2051.7	1432.2	894.2	640.9	580.7	553.1	541.8	535.5	535.5	530.5	523.0
52.5°	2094.4	1407.1	807.7	555.6	497.9	472.8	464.0	459.0	451.5	441.5	427.7
55°	2162.1	1429.7	781.3	526.7	470.3	445.2	433.9	431.4	418.9	400.1	377.5
57.5°	2287.5	1511.2	798.9	534.3	475.3	452.7	445.2	442.7	425.1	396.3	367.5
60°	2647.5	1748.2	886.7	576.9	511.7	492.9	492.9	489.1	465.3	423.9	382.5
62.5°	3144.1	2095.6	1005.8	635.8	561.8	559.3	580.7	581.9	539.3	472.8	407.6
65°	3383.6	2258.7	1047.2	648.4	575.6	604.5	647.1	647.1	586.9	495.4	411.4
66°	3384.9	2254.9	1034.7	633.3	560.6	598.2	642.1	642.1	579.4	489.1	405.1
67.5°	3298.3	2184.7	993.3	605.7	526.7	561.8	600.7	599.5	543.0	464.0	387.5
70°	2958.5	1932.6	875.4	560.6	486.6	487.9	501.6	492.9	455.2	401.3	352.4
72.5°	2550.9	1616.6	758.7	531.7	455.2	431.4	420.1	412.6	388.8	356.2	326.1
75°	1956.4	1255.4	660.9	505.4	427.7	386.3	371.2	365.0	348.6	329.8	306.0
77.5°	1198.9	860.3	560.6	462.8	396.3	358.7	342.4	329.8	313.5	296.0	279.7
80°	516.7	519.2	449.0	392.5	344.9	301.0	279.7	264.6	255.8	249.6	240.8
82.5°	361.2	372.5	342.4	304.8	263.4	232.0	213.2	209.4	210.7	210.7	208.2
85°	270.9	265.9	239.5	218.2	199.4	179.3	164.3	163.0	168.1	168.1	164.3
87.5°	156.8	158.0	135.4	126.7	131.7	112.9	102.8	104.1	116.6	115.4	112.9
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°	2553.4	2553.4	2553.4	2553.4	2553.4
2.5°	2627.4	2631.2	2629.9	2633.7	2629.9
5°	2676.3	2675.0	2673.8	2678.8	2672.5
7.5°	2668.8	2670.0	2670.0	2670.0	2668.8
10°	2650.0	2655.0	2657.5	2662.5	2661.3
12.5°	2643.7	2651.2	2658.7	2666.3	2667.5
15°	2644.9	2650.0	2653.7	2657.5	2658.7
17.5°	2612.3	2611.1	2607.3	2604.8	2602.3
20°	2545.9	2539.6	2533.3	2523.3	2528.3
22.5°	2463.1	2445.5	2425.5	2409.2	2407.9
25°	2366.5	2333.9	2301.3	2280.0	2272.5
27.5°	2281.3	2242.4	2208.5	2189.7	2184.7
30°	2179.7	2144.6	2114.5	2098.1	2088.1
32.5°	2029.2	2001.6	1964.0	1951.4	1950.2
35°	1819.7	1798.4	1772.1	1767.1	1760.8
37.5°	1582.7	1575.2	1562.6	1547.6	1545.1
40°	1329.4	1334.4	1330.6	1321.8	1308.1
42.5°	1084.8	1093.6	1094.9	1101.1	1107.4
45°	864.1	871.6	871.6	877.9	885.4
47.5°	663.4	658.4	662.2	668.4	672.2
50°	501.6	497.9	491.6	486.6	481.6
52.5°	403.8	396.3	378.7	373.7	368.7
55°	356.2	342.4	329.8	324.8	324.8
57.5°	342.4	324.8	311.0	304.8	302.2
60°	344.9	319.8	302.2	292.2	288.4
62.5°	356.2	321.1	297.2	285.9	282.2
65°	354.9	318.5	296.0	283.4	279.7
66°	348.6	314.8	293.5	282.2	279.7
67.5°	338.6	309.8	291.0	280.9	277.2
70°	318.5	299.7	285.9	277.2	273.4
72.5°	302.2	289.7	277.2	267.1	264.6
75°	287.2	274.7	263.4	258.3	254.6
77.5°	264.6	253.3	247.1	242.0	239.5
80°	234.5	227.0	219.5	214.5	210.7
82.5°	204.4	194.4	186.9	183.1	180.6
85°	166.8	160.5	149.2	141.7	140.5
87.5°	111.6	105.3	101.6	95.3	89.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)