

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: P159613

Luminaire Tested: **VST-F11-LED-E-U-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159613
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33706)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F11-LED-E-U-T3-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (77) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23439.6 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 282.7
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

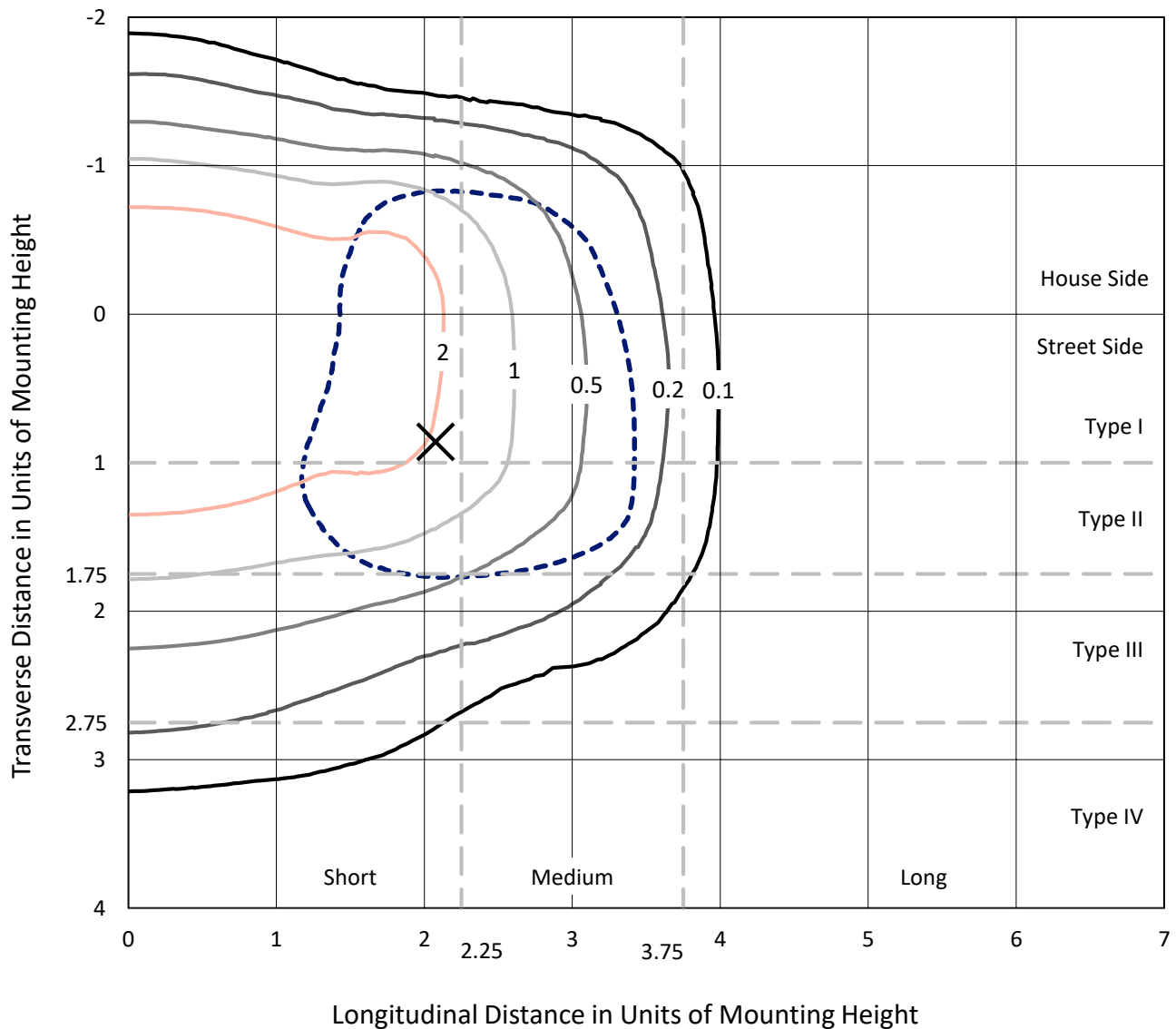


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

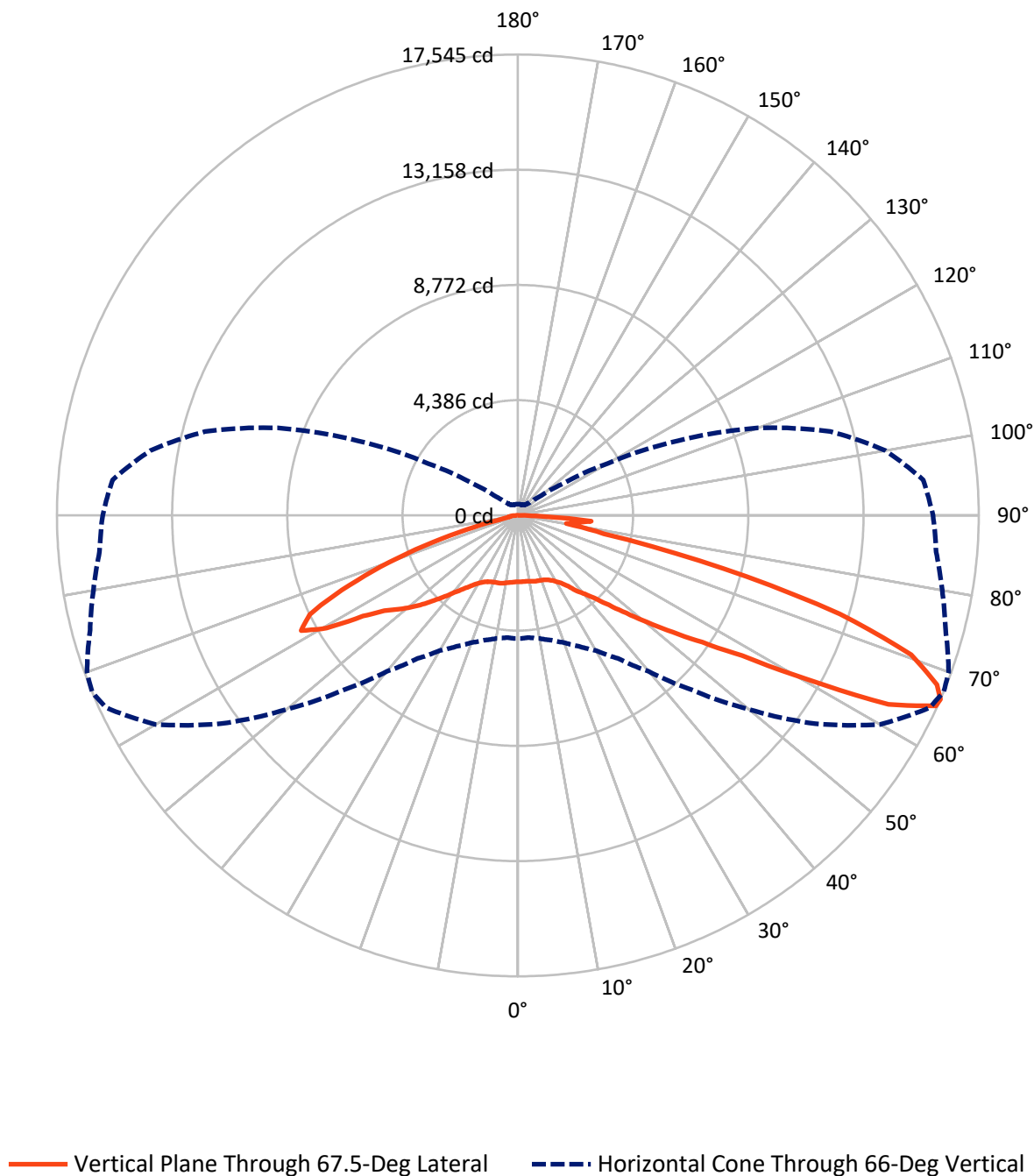


Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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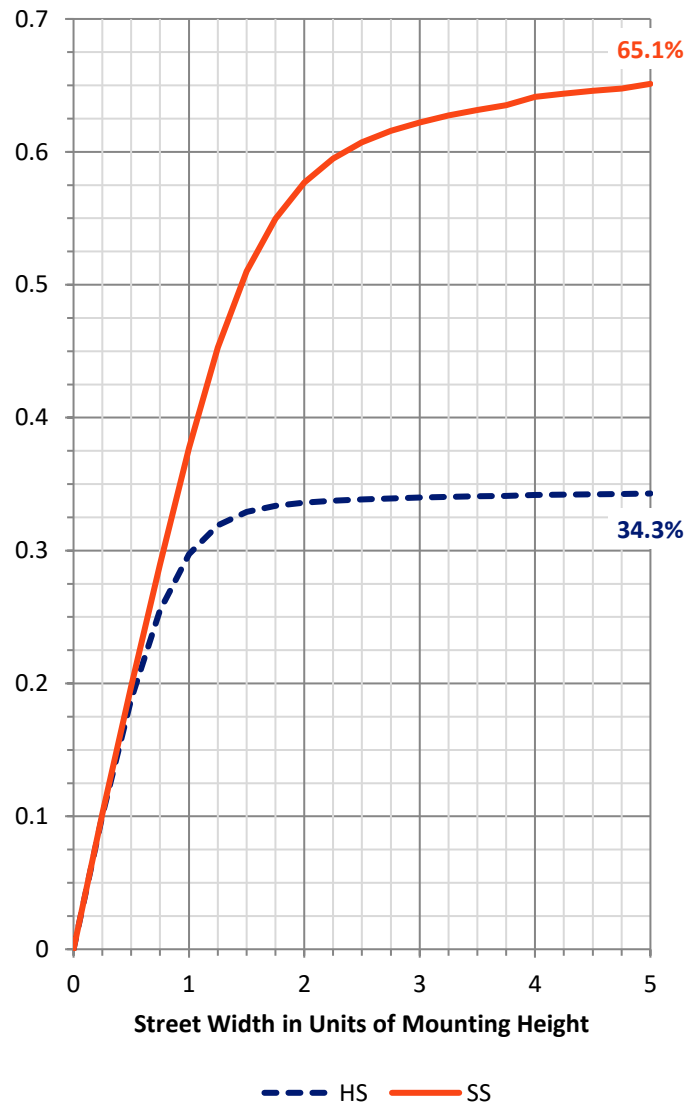
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8111.1	0.0	8111.1
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	15328.4	0.0	15328.4
	% Fixture	65.4	0.0	65.4
Total	Lumens	23439.6	0.0	23439.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.7	1.0
10°-20°	718.7	3.1
20°-30°	1235.4	5.3
30°-40°	1996.6	8.5
40°-50°	3308.8	14.1
50°-60°	5192.9	22.2
60°-70°	7099.7	30.3
70°-80°	3122.1	13.3
80°-90°	522.6	2.2
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°	23439.6	100.0
0°-180°	23439.6	100.0

Coefficient of Utilization



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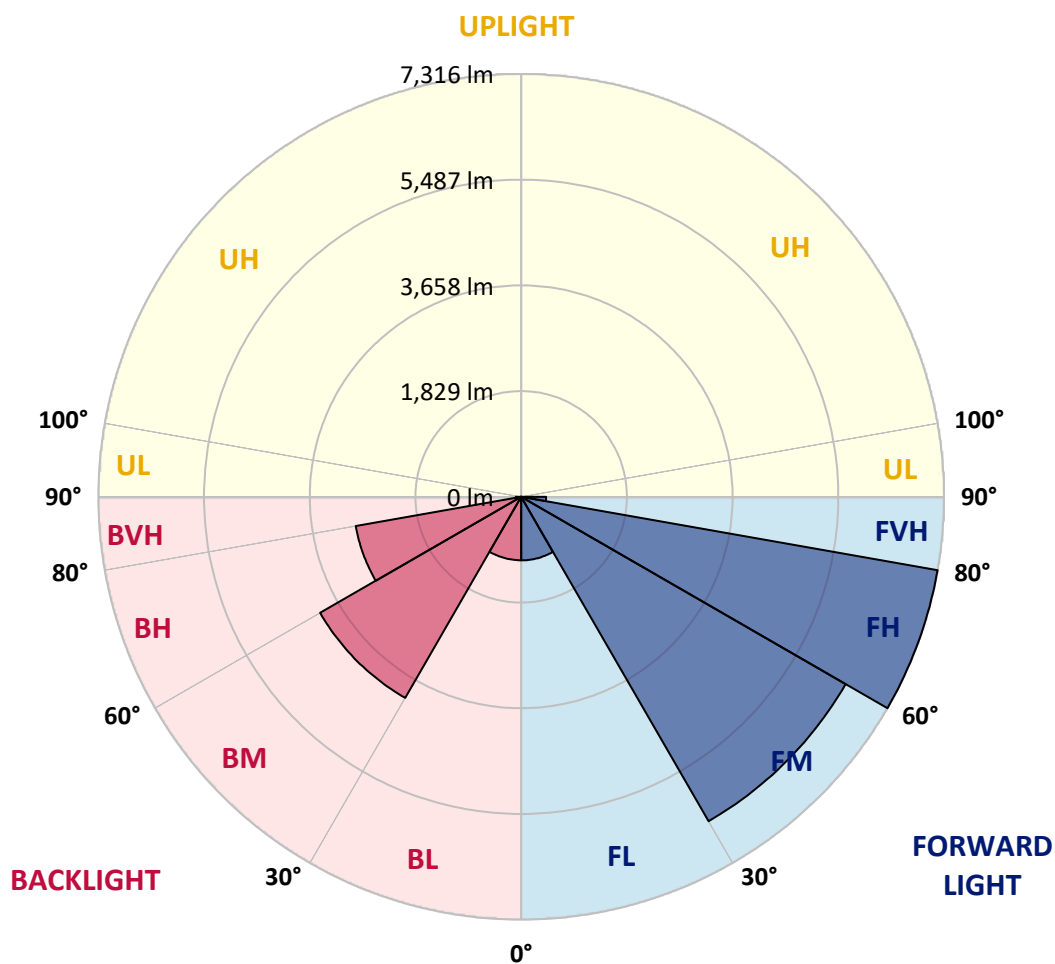
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1099.5	4.7			
FM	(30°-60°)	6481.7	27.7			
FH	(60°-80°)	7316.0	31.2			G3/7500
FVH	(80°-90°)	431.2	1.8			G3/500
BL	(0°-30°)	1097.2	4.7	B3/2500		
BM	(30°-60°)	4016.6	17.1	B3/5000		
BH	(60°-80°)	2905.9	12.4	B4/5000		G4/5000
BVH	(80°-90°)	91.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2
2.5°	2524.6	2524.6	2526.1	2524.6	2524.6	2523.0	2529.2	2529.2	2529.2	2527.6	2532.2
5°	2518.4	2518.4	2520.0	2520.0	2521.5	2520.0	2524.6	2526.1	2526.1	2526.1	2530.7
7.5°	2503.1	2507.7	2504.6	2506.2	2507.7	2512.3	2518.4	2521.5	2524.6	2529.2	2530.7
10°	2470.9	2478.6	2477.0	2481.6	2483.2	2497.0	2501.6	2507.7	2518.4	2524.6	2529.2
12.5°	2426.5	2431.0	2432.6	2438.7	2444.8	2461.7	2474.0	2484.7	2500.0	2515.4	2530.7
15°	2391.2	2394.3	2394.3	2400.4	2409.6	2424.9	2440.2	2458.6	2481.6	2507.7	2532.2
17.5°	2401.9	2409.6	2403.5	2401.9	2405.0	2414.2	2428.0	2443.3	2470.9	2500.0	2529.2
20°	2472.4	2474.0	2470.9	2463.2	2457.1	2458.6	2458.6	2461.7	2478.6	2501.6	2524.6
22.5°	2530.7	2536.8	2535.3	2536.8	2535.3	2541.4	2538.3	2532.2	2526.1	2527.6	2538.3
25°	2581.3	2587.4	2587.4	2592.0	2599.7	2611.9	2621.1	2619.6	2610.4	2598.1	2593.5
27.5°	2664.0	2664.0	2664.0	2668.6	2679.4	2694.7	2710.0	2719.2	2726.9	2714.6	2688.6
30°	2794.3	2795.9	2791.3	2792.8	2800.5	2820.4	2838.8	2852.6	2867.9	2866.4	2832.6
32.5°	2936.9	2943.0	2941.5	2947.6	2958.3	2976.7	2996.7	3018.1	3038.0	3050.3	3028.8
35°	3120.8	3126.9	3128.5	3137.7	3149.9	3177.5	3205.1	3232.7	3254.2	3263.4	3258.8
37.5°	3422.8	3424.3	3418.2	3404.4	3409.0	3430.4	3462.6	3507.1	3520.9	3530.1	3551.5
40°	3875.0	3870.4	3845.8	3833.6	3825.9	3835.1	3829.0	3864.2	3896.4	3898.0	3896.4
42.5°	4423.7	4409.9	4386.9	4383.9	4380.8	4377.7	4360.9	4362.4	4391.5	4399.2	4390.0
45°	4969.4	4952.5	4935.7	4951.0	4932.6	4980.1	4993.9	5030.7	5035.3	5050.6	5027.6
47.5°	5417.0	5418.5	5418.5	5440.0	5476.8	5567.2	5648.4	5718.9	5745.0	5781.8	5786.4
50°	5755.7	5764.9	5794.1	5863.0	5941.2	6093.0	6229.4	6356.6	6471.6	6514.5	6627.9
52.5°	5953.5	5978.0	6039.3	6154.3	6293.8	6490.0	6704.5	6920.7	7119.9	7288.6	7423.4
55°	5918.2	5936.6	6043.9	6223.2	6440.9	6704.5	7005.0	7317.7	7628.8	7913.9	8134.7
57.5°	5691.4	5703.6	5810.9	6013.2	6284.6	6638.6	7063.2	7527.7	7964.5	8424.4	8801.4
60°	5394.0	5412.4	5512.0	5671.4	5955.0	6332.1	6824.1	7454.1	8151.5	8875.0	9580.1
62.5°	5203.9	5199.3	5286.7	5429.2	5642.3	5984.1	6457.8	7204.2	8169.9	9393.1	10786.4
65°	4888.2	4874.4	4964.8	5127.3	5358.7	5689.8	6138.9	6856.3	7976.8	9589.3	11565.1
66°	4692.0	4664.4	4754.8	4918.8	5150.3	5502.8	5933.5	6641.7	7742.3	9397.7	11482.3
67.5°	4348.6	4334.8	4377.7	4506.5	4678.2	5009.2	5458.4	6171.1	7187.4	8821.4	10875.3
70°	3534.7	3504.0	3537.7	3596.0	3661.9	3743.1	4019.0	4584.7	5444.6	7028.0	8761.6
72.5°	2408.1	2392.7	2455.6	2544.5	2720.8	2803.5	2912.4	3004.3	3307.8	4429.8	6111.3
75°	1831.7	1840.9	1920.6	2067.8	2294.6	2539.9	2779.0	2866.4	2765.2	2677.8	3468.8
77.5°	1027.0	1080.6	1177.2	1364.2	1604.9	1951.3	2368.2	2828.0	3058.0	3001.3	2806.6
80°	423.1	415.4	462.9	565.6	648.4	932.0	1425.5	2001.9	2648.7	3058.0	2993.6
82.5°	118.0	121.1	156.3	200.8	259.0	329.6	515.0	827.7	1348.9	2098.4	2746.8
85°	36.8	36.8	50.6	75.1	88.9	102.7	130.3	214.6	366.3	731.2	1482.2
87.5°	7.7	7.7	10.7	21.5	23.0	23.0	29.1	39.9	35.3	32.2	144.1
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2
2.5°	2527.6	2524.6	2526.1	2527.6	2526.1	2526.1	2524.6	2523.0	2524.6	2524.6	2529.2
5°	2526.1	2524.6	2526.1	2526.1	2526.1	2527.6	2527.6	2527.6	2532.2	2532.2	2539.9
7.5°	2529.2	2529.2	2532.2	2532.2	2532.2	2532.2	2533.7	2536.8	2544.5	2542.9	2556.7
10°	2535.3	2538.3	2546.0	2547.5	2547.5	2552.1	2555.2	2561.3	2569.0	2572.1	2584.3
12.5°	2542.9	2558.3	2572.1	2575.1	2579.7	2587.4	2592.0	2595.1	2608.9	2613.5	2628.8
15°	2552.1	2573.6	2590.5	2596.6	2602.7	2611.9	2618.1	2622.7	2634.9	2641.0	2659.4
17.5°	2553.7	2578.2	2598.1	2607.3	2615.0	2625.7	2634.9	2644.1	2657.9	2667.1	2685.5
20°	2552.1	2584.3	2615.0	2627.3	2634.9	2654.8	2668.6	2680.9	2697.8	2707.0	2725.4
22.5°	2569.0	2605.8	2647.2	2662.5	2674.8	2702.4	2720.8	2740.7	2762.1	2768.3	2782.1
25°	2608.9	2647.2	2699.3	2720.8	2742.2	2779.0	2805.1	2834.2	2855.6	2858.7	2863.3
27.5°	2676.3	2711.6	2774.4	2806.6	2841.8	2894.0	2932.3	2961.4	2992.1	2992.1	2989.0
30°	2812.7	2820.4	2886.3	2927.7	2979.8	3056.4	3113.2	3145.3	3168.3	3168.3	3142.3
32.5°	2989.0	2979.8	3039.6	3084.0	3156.1	3263.4	3340.0	3364.5	3389.1	3381.4	3336.9
35°	3243.4	3217.4	3251.1	3318.6	3399.8	3546.9	3626.6	3681.8	3697.2	3675.7	3605.2
37.5°	3563.8	3560.7	3577.6	3652.7	3743.1	3933.2	4014.5	4049.7	4037.4	3999.1	3875.0
40°	3902.6	3893.4	3882.6	3933.2	4034.4	4262.8	4406.9	4425.2	4408.4	4351.7	4195.3
42.5°	4354.7	4354.7	4304.2	4317.9	4402.3	4658.2	4828.4	4886.6	4888.2	4805.4	4596.9
45°	4977.1	4970.9	4882.0	4860.6	4924.9	5176.3	5395.5	5427.7	5427.7	5318.9	5090.5
47.5°	5725.1	5717.4	5630.0	5554.9	5567.2	5838.5	6020.9	6070.0	6027.0	5945.8	5674.5
50°	6568.1	6554.3	6465.4	6394.9	6364.3	6638.6	6793.5	6816.4	6753.6	6657.0	6362.7
52.5°	7423.4	7464.8	7412.7	7374.4	7385.1	7562.9	7722.3	7613.5	7581.3	7477.1	7181.3
55°	8314.0	8441.2	8556.2	8522.5	8562.3	8735.5	8766.2	8622.1	8563.9	8488.7	8159.2
57.5°	9210.7	9581.6	9958.7	10064.5	10162.6	10410.9	10375.6	10139.6	10184.0	10295.9	9925.0
60°	10463.0	11534.5	12490.9	12667.2	12972.2	13183.8	13231.3	13185.3	13392.2	13334.0	13006.0
62.5°	12386.7	14172.4	15502.9	15834.0	16140.6	16129.8	15968.9	15803.4	16007.2	16007.2	15150.4
65°	13760.1	15786.5	17210.5	17484.9	17472.6	17103.2	16723.0	16392.0	16362.8	16136.0	14883.7
66°	13824.5	15910.7	17305.5	17544.6	17452.7	16857.9	16402.7	15982.7	15803.4	15487.6	14204.6
67.5°	13245.1	15559.6	16995.9	17204.4	16962.2	16109.9	15483.0	14920.5	14659.9	14128.0	12920.1
70°	10864.6	13372.3	15461.5	15887.7	15613.3	14534.2	13675.8	12915.5	12417.4	11649.4	10778.8
72.5°	7930.8	9872.9	12135.3	12828.2	12785.2	11792.0	11100.7	10404.8	9750.3	9051.3	8415.2
75°	5154.9	6422.5	7684.0	8088.7	7894.0	7319.2	6824.1	6417.9	5797.1	5311.2	5193.2
77.5°	2943.0	3596.0	3401.3	3350.7	3107.0	2507.7	1667.7	1169.5	1056.1	1318.2	1445.4
80°	2800.5	2538.3	2078.5	1874.6	1722.9	1174.1	616.2	433.8	380.1	389.3	418.5
82.5°	3157.6	3291.0	2691.6	2248.6	1957.4	1428.6	780.2	363.3	265.2	314.2	352.5
85°	2366.7	3332.3	3303.2	2798.9	2296.2	1646.2	922.8	277.4	159.4	220.7	288.2
87.5°	479.8	789.4	760.3	668.3	568.7	397.0	154.8	87.4	79.7	108.8	165.5
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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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2	2529.2
2.5°	2532.2	2532.2	2535.3	2539.9	2541.4	2541.4	2544.5	2541.4	2547.5	2549.1	2550.6
5°	2546.0	2550.6	2553.7	2561.3	2565.9	2569.0	2573.6	2570.5	2576.7	2578.2	2581.3
7.5°	2561.3	2569.0	2575.1	2578.2	2584.3	2584.3	2585.9	2582.8	2581.3	2576.7	2575.1
10°	2588.9	2593.5	2601.2	2598.1	2595.1	2584.3	2575.1	2561.3	2553.7	2539.9	2532.2
12.5°	2633.4	2636.4	2636.4	2622.7	2602.7	2578.2	2555.2	2532.2	2513.8	2498.5	2489.3
15°	2664.0	2670.2	2662.5	2642.6	2613.5	2579.7	2549.1	2518.4	2493.9	2474.0	2461.7
17.5°	2687.0	2685.5	2671.7	2644.1	2616.5	2587.4	2559.8	2527.6	2497.0	2467.8	2449.4
20°	2722.3	2707.0	2682.4	2653.3	2624.2	2599.7	2578.2	2547.5	2515.4	2475.5	2447.9
22.5°	2769.8	2742.2	2707.0	2676.3	2648.7	2625.7	2601.2	2575.1	2541.4	2497.0	2458.6
25°	2837.2	2789.7	2749.9	2719.2	2694.7	2668.6	2641.0	2607.3	2573.6	2527.6	2481.6
27.5°	2939.9	2869.4	2818.9	2791.3	2768.3	2733.0	2697.8	2657.9	2615.0	2567.5	2515.4
30°	3064.1	2979.8	2921.6	2897.0	2869.4	2829.6	2791.3	2736.1	2676.3	2619.6	2555.2
32.5°	3209.7	3123.9	3065.6	3047.2	3002.8	2956.8	2903.2	2829.6	2751.4	2667.1	2590.5
35°	3430.4	3321.6	3268.0	3225.0	3163.7	3108.6	3018.1	2921.6	2809.7	2697.8	2602.7
37.5°	3657.3	3546.9	3491.8	3432.0	3352.3	3251.1	3130.0	2992.1	2843.4	2705.4	2588.9
40°	3960.8	3841.2	3770.7	3678.8	3550.0	3392.1	3212.8	3024.3	2843.4	2671.7	2530.7
42.5°	4314.9	4204.5	4095.7	3943.9	3737.0	3507.1	3255.7	3013.5	2794.3	2596.6	2447.9
45°	4805.4	4616.8	4443.6	4199.9	3898.0	3574.5	3260.3	2962.9	2710.0	2490.8	2325.3
47.5°	5357.2	5113.5	4806.9	4425.2	4012.9	3600.6	3215.9	2867.9	2576.7	2339.1	2158.2
50°	5993.3	5619.3	5148.7	4604.6	4071.2	3565.3	3110.1	2708.5	2392.7	2119.9	1926.8
52.5°	6721.4	6151.2	5458.4	4731.8	4062.0	3458.0	2935.3	2498.5	2145.9	1856.2	1666.2
55°	7529.2	6730.6	5754.2	4813.0	3979.2	3249.6	2661.0	2202.7	1839.4	1554.3	1387.2
57.5°	8953.2	7746.9	6318.3	4921.9	3806.0	2933.8	2313.0	1828.7	1500.6	1258.4	1099.0
60°	11598.8	9523.4	7386.7	5177.9	3545.4	2538.3	1874.6	1434.7	1160.3	984.1	866.0
62.5°	13235.9	10774.2	7907.8	5141.1	3122.4	1997.3	1391.8	1063.8	847.6	731.2	657.6
65°	12848.1	10283.7	7271.7	4416.0	2429.5	1416.3	921.2	695.9	582.5	522.7	487.4
66°	12320.8	9734.9	6733.7	3954.7	2116.8	1183.3	760.3	584.0	501.2	456.8	438.4
67.5°	11215.6	8732.5	5807.8	3166.8	1586.5	881.4	561.0	458.3	407.7	384.7	372.5
70°	9387.0	7035.6	4108.0	1870.0	859.9	478.2	358.7	318.8	306.6	298.9	294.3
72.5°	7257.9	5093.6	2400.4	919.7	433.8	309.6	272.8	256.0	251.4	251.4	252.9
75°	4572.4	2927.7	1074.5	443.0	294.3	249.8	233.0	225.3	226.9	228.4	226.9
77.5°	1519.0	1010.1	447.6	314.2	256.0	226.9	213.1	210.0	213.1	214.6	214.6
80°	436.9	381.7	323.4	277.4	234.5	211.5	199.3	197.7	205.4	206.9	203.9
82.5°	335.7	314.2	292.8	268.2	225.3	199.3	194.7	196.2	200.8	197.7	183.9
85°	308.1	305.0	219.2	217.7	196.2	190.1	185.5	187.0	182.4	165.5	150.2
87.5°	173.2	160.9	124.2	125.7	145.6	150.2	124.2	131.8	122.6	107.3	98.1
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°	2529.2	2529.2	2529.2	2529.2	2529.2
2.5°	2553.7	2552.1	2552.1	2556.7	2550.6
5°	2582.8	2581.3	2581.3	2585.9	2581.3
7.5°	2569.0	2564.4	2561.3	2559.8	2559.8
10°	2523.0	2518.4	2509.2	2506.2	2503.1
12.5°	2475.5	2470.9	2460.2	2460.2	2457.1
15°	2446.4	2440.2	2432.6	2428.0	2424.9
17.5°	2431.0	2421.9	2412.7	2408.1	2405.0
20°	2424.9	2412.7	2401.9	2394.3	2394.3
22.5°	2426.5	2411.1	2398.9	2389.7	2386.6
25°	2441.8	2418.8	2403.5	2394.3	2391.2
27.5°	2463.2	2435.6	2415.7	2403.5	2398.9
30°	2492.4	2454.0	2426.5	2411.1	2405.0
32.5°	2512.3	2458.6	2423.4	2401.9	2394.3
35°	2510.8	2441.8	2398.9	2371.3	2362.1
37.5°	2483.2	2401.9	2345.2	2311.5	2296.2
40°	2421.9	2328.4	2268.6	2236.4	2218.0
42.5°	2332.9	2231.8	2178.1	2142.9	2123.0
45°	2193.5	2093.8	2027.9	2000.3	1974.3
47.5°	2000.3	1899.2	1842.4	1802.6	1785.7
50°	1773.5	1672.3	1612.5	1580.3	1565.0
52.5°	1525.2	1428.6	1385.7	1355.0	1333.6
55°	1267.6	1178.7	1160.3	1126.6	1106.7
57.5°	1025.5	973.3	956.5	922.8	905.9
60°	801.7	784.8	766.4	744.9	735.8
62.5°	620.8	605.5	600.9	587.1	585.5
65°	473.6	475.2	472.1	469.0	466.0
66°	430.7	429.2	430.7	427.7	426.1
67.5°	366.3	372.5	377.1	375.5	375.5
70°	297.4	302.0	308.1	306.6	306.6
72.5°	254.4	262.1	265.2	263.6	263.6
75°	229.9	237.6	237.6	234.5	233.0
77.5°	214.6	217.7	214.6	211.5	208.5
80°	199.3	196.2	191.6	187.0	183.9
82.5°	173.2	165.5	160.9	153.3	153.3
85°	139.5	133.4	122.6	115.0	107.3
87.5°	90.4	87.4	79.7	59.8	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)