

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: P159588

Luminaire Tested: **VST-E09-LED-E-U-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159588
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-E09-LED-E-U-T3-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (189) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23231.1 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 225.7
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

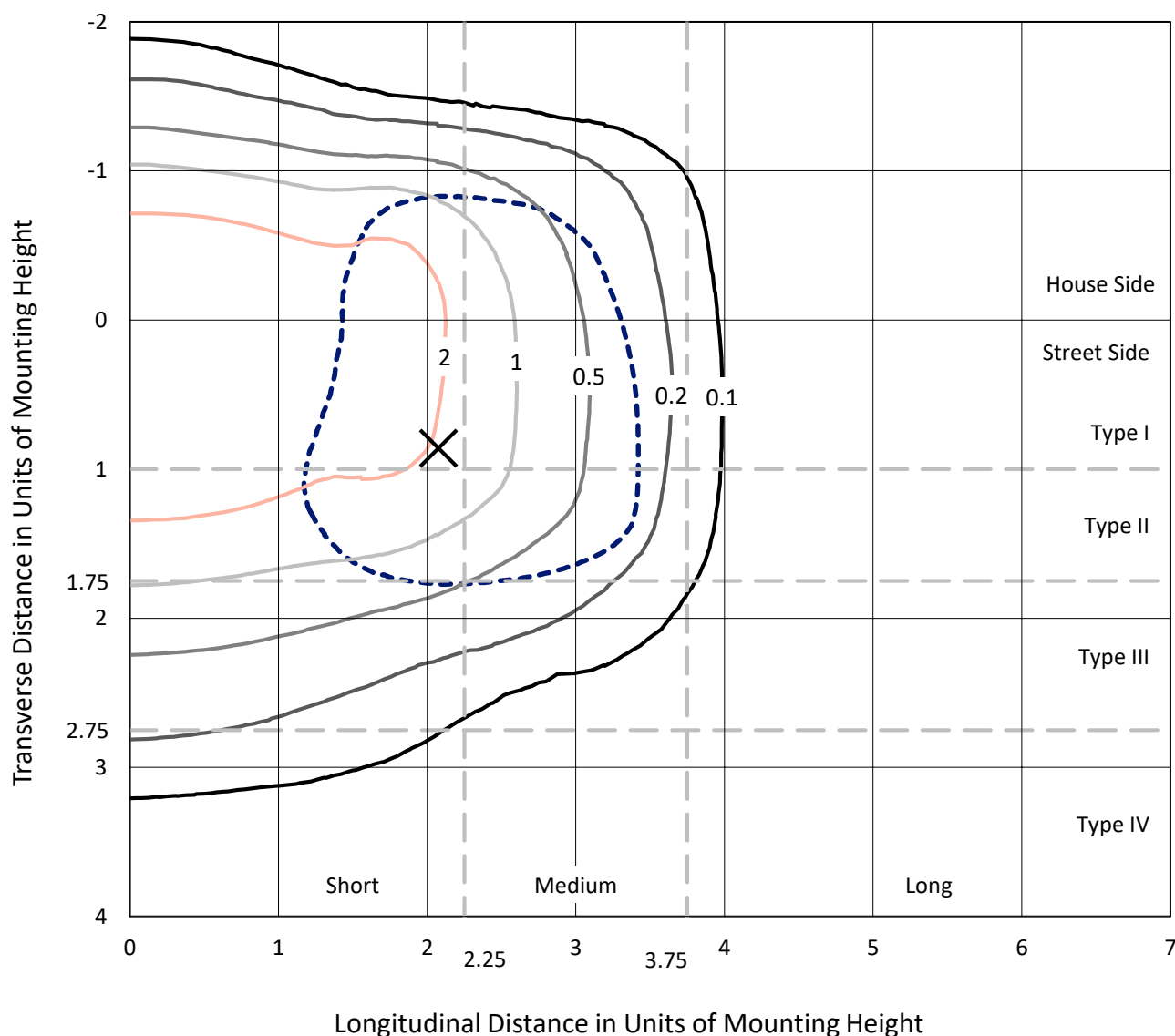


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

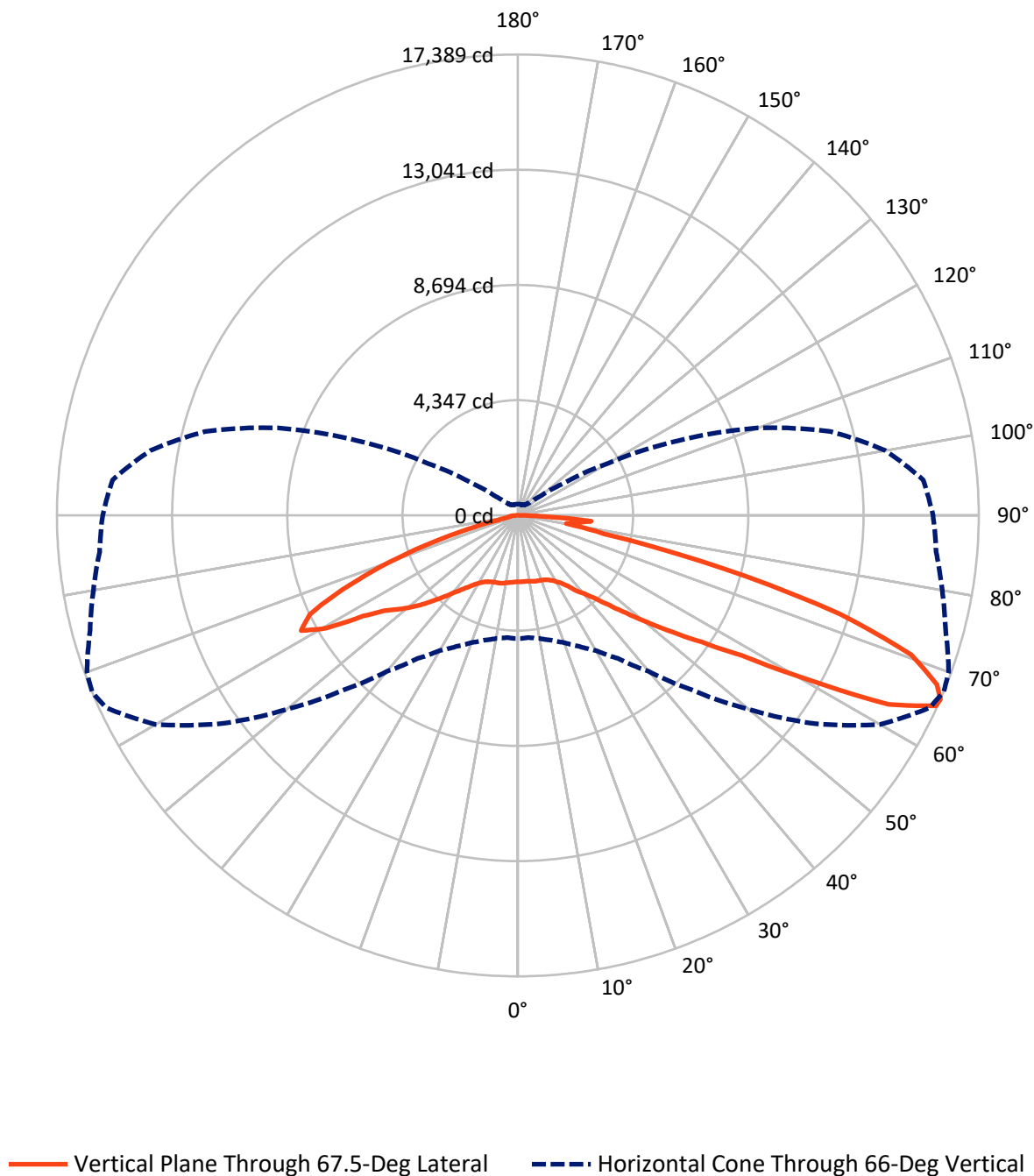


Based on 25 foot mounting height. Maximum calculated value = 4 fc
Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8039.0	0.0	8039.0
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	15192.1	0.0	15192.1
	% Fixture	65.4	0.0	65.4
Total	Lumens	23231.1	0.0	23231.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.5	1.0
10°-20°	712.3	3.1
20°-30°	1224.4	5.3
30°-40°	1978.8	8.5
40°-50°	3279.4	14.1
50°-60°	5146.7	22.2
60°-70°	7036.6	30.3
70°-80°	3094.4	13.3
80°-90°	517.9	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°	23231.1	100.0
0°-180°	23231.1	100.0

Coefficient of Utilization



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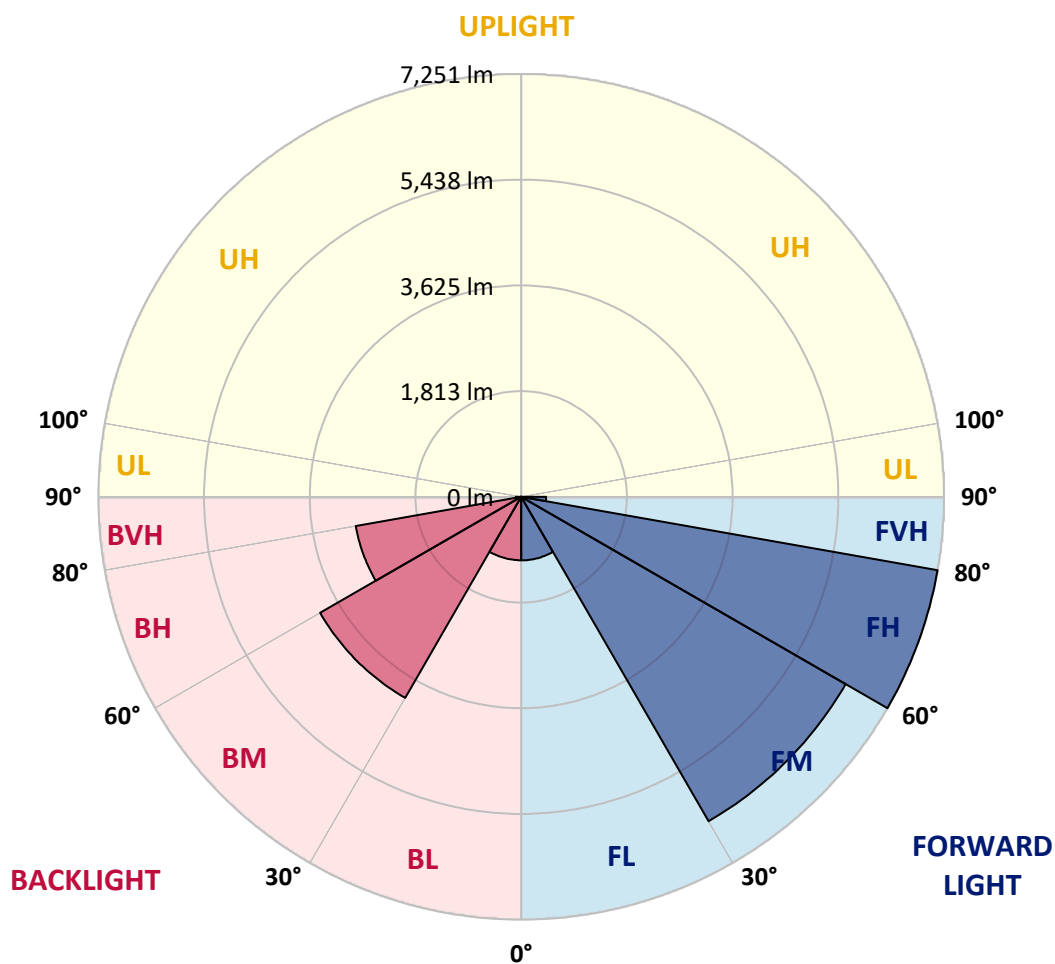
CATALOG NUMBER: VST-E09-LED-E-U-T3-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1089.7	4.7			
FM	(30°-60°)	6424.1	27.7			
FH	(60°-80°)	7250.9	31.2			G3/7500
FVH	(80°-90°)	427.3	1.8			G3/500
BL	(0°-30°)	1087.5	4.7	B3/2500		
BM	(30°-60°)	3980.9	17.1	B3/5000		
BH	(60°-80°)	2880.0	12.4	B4/5000		G4/5000
BVH	(80°-90°)	90.6	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°	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7
2.5°	2502.1	2502.1	2503.6	2502.1	2502.1	2500.6	2506.7	2506.7	2506.7	2505.1	2509.7
5°	2496.0	2496.0	2497.5	2497.5	2499.1	2497.5	2502.1	2503.6	2503.6	2503.6	2508.2
7.5°	2480.8	2485.4	2482.3	2483.9	2485.4	2489.9	2496.0	2499.1	2502.1	2506.7	2508.2
10°	2448.9	2456.5	2455.0	2459.6	2461.1	2474.8	2479.3	2485.4	2496.0	2502.1	2506.7
12.5°	2404.9	2409.4	2410.9	2417.0	2423.1	2439.8	2452.0	2462.6	2477.8	2493.0	2508.2
15°	2369.9	2373.0	2373.0	2379.0	2388.2	2403.3	2418.5	2436.8	2459.6	2485.4	2509.7
17.5°	2380.6	2388.2	2382.1	2380.6	2383.6	2392.7	2406.4	2421.6	2448.9	2477.8	2506.7
20°	2450.4	2452.0	2448.9	2441.3	2435.3	2436.8	2436.8	2439.8	2456.5	2479.3	2502.1
22.5°	2508.2	2514.2	2512.7	2514.2	2512.7	2518.8	2515.8	2509.7	2503.6	2505.1	2515.8
25°	2558.3	2564.4	2564.4	2568.9	2576.5	2588.7	2597.8	2596.3	2587.2	2575.0	2570.5
27.5°	2640.3	2640.3	2640.3	2644.9	2655.5	2670.7	2685.9	2695.0	2702.6	2690.5	2664.6
30°	2769.5	2771.0	2766.4	2768.0	2775.5	2795.3	2813.5	2827.2	2842.4	2840.9	2807.5
32.5°	2910.8	2916.8	2915.3	2921.4	2932.0	2950.3	2970.0	2991.3	3011.0	3023.2	3001.9
35°	3093.1	3099.1	3100.7	3109.8	3121.9	3149.3	3176.6	3204.0	3225.2	3234.3	3229.8
37.5°	3392.3	3393.9	3387.8	3374.1	3378.7	3399.9	3431.8	3475.9	3489.6	3498.7	3519.9
40°	3840.5	3835.9	3811.6	3799.5	3791.9	3801.0	3794.9	3829.9	3861.8	3863.3	3861.8
42.5°	4384.4	4370.7	4347.9	4344.9	4341.8	4338.8	4322.1	4323.6	4352.5	4360.1	4350.9
45°	4925.2	4908.5	4891.8	4907.0	4888.7	4935.8	4949.5	4986.0	4990.5	5005.7	4982.9
47.5°	5368.8	5370.3	5370.3	5391.6	5428.0	5517.7	5598.2	5668.1	5693.9	5730.4	5734.9
50°	5704.5	5713.6	5742.5	5810.9	5888.4	6038.8	6174.0	6300.1	6414.0	6456.5	6569.0
52.5°	5900.5	5924.8	5985.6	6099.5	6237.8	6432.2	6644.9	6859.1	7056.6	7223.7	7357.4
55°	5865.6	5883.8	5990.1	6167.9	6383.6	6644.9	6942.7	7252.6	7561.0	7843.5	8062.3
57.5°	5640.7	5652.9	5759.2	5959.8	6228.7	6579.6	7000.4	7460.7	7893.7	8349.4	8723.2
60°	5346.0	5364.2	5463.0	5621.0	5902.0	6275.7	6763.4	7387.8	8079.0	8796.1	9494.9
62.5°	5157.6	5153.1	5239.7	5380.9	5592.1	5930.9	6400.3	7140.2	8097.2	9309.6	10690.5
65°	4844.7	4831.0	4920.6	5081.7	5311.1	5639.2	6084.3	6795.3	7905.8	9504.0	11462.2
66°	4650.2	4622.9	4712.5	4875.1	5104.5	5453.9	5880.8	6582.6	7673.4	9314.1	11380.2
67.5°	4309.9	4296.3	4338.8	4466.4	4636.5	4964.7	5409.8	6116.2	7123.5	8742.9	10778.6
70°	3503.2	3472.9	3506.3	3564.0	3629.3	3709.8	3983.3	4543.9	5396.1	6965.5	8683.7
72.5°	2386.6	2371.4	2433.7	2521.8	2696.6	2778.6	2886.4	2977.6	3278.4	4390.4	6057.0
75°	1815.4	1824.5	1903.5	2049.4	2274.2	2517.3	2754.3	2840.9	2740.6	2654.0	3437.9
77.5°	1017.9	1071.0	1166.7	1352.1	1590.6	1933.9	2347.1	2802.9	3030.8	2974.6	2781.6
80°	419.3	411.7	458.8	560.6	642.6	923.7	1412.8	1984.1	2625.1	3030.8	2967.0
82.5°	117.0	120.0	155.0	199.0	256.7	326.6	510.4	820.4	1336.9	2079.8	2722.4
85°	36.5	36.5	50.1	74.4	88.1	101.8	129.1	212.7	363.1	724.7	1469.1
87.5°	7.6	7.6	10.6	21.3	22.8	22.8	28.9	39.5	34.9	31.9	142.8
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°	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7
2.5°	2505.1	2502.1	2503.6	2505.1	2503.6	2503.6	2502.1	2500.6	2502.1	2502.1	2506.7
5°	2503.6	2502.1	2503.6	2503.6	2503.6	2505.1	2505.1	2505.1	2509.7	2509.7	2517.3
7.5°	2506.7	2506.7	2509.7	2509.7	2509.7	2509.7	2511.2	2514.2	2521.8	2520.3	2534.0
10°	2512.7	2515.8	2523.4	2524.9	2524.9	2529.4	2532.5	2538.6	2546.2	2549.2	2561.3
12.5°	2520.3	2535.5	2549.2	2552.2	2556.8	2564.4	2568.9	2572.0	2585.7	2590.2	2605.4
15°	2529.4	2550.7	2567.4	2573.5	2579.6	2588.7	2594.8	2599.3	2611.5	2617.6	2635.8
17.5°	2531.0	2555.3	2575.0	2584.1	2591.7	2602.4	2611.5	2620.6	2634.3	2643.4	2661.6
20°	2529.4	2561.3	2591.7	2603.9	2611.5	2631.2	2644.9	2657.1	2673.8	2682.9	2701.1
22.5°	2546.2	2582.6	2623.6	2638.8	2651.0	2678.3	2696.6	2716.3	2737.6	2743.6	2757.3
25°	2585.7	2623.6	2675.3	2696.6	2717.8	2754.3	2780.1	2809.0	2830.2	2833.3	2837.8
27.5°	2652.5	2687.4	2749.7	2781.6	2816.6	2868.2	2906.2	2935.1	2965.4	2965.4	2962.4
30°	2787.7	2795.3	2860.6	2901.6	2953.3	3029.3	3085.5	3117.4	3140.2	3140.2	3114.3
32.5°	2962.4	2953.3	3012.5	3056.6	3128.0	3234.3	3310.3	3334.6	3358.9	3351.3	3307.3
35°	3214.6	3188.8	3222.2	3289.0	3369.5	3515.4	3594.4	3649.1	3664.3	3643.0	3573.1
37.5°	3532.1	3529.1	3545.8	3620.2	3709.8	3898.2	3978.7	4013.7	4001.5	3963.6	3840.5
40°	3867.8	3858.7	3848.1	3898.2	3998.5	4224.8	4367.7	4385.9	4369.2	4313.0	4158.0
42.5°	4316.0	4316.0	4265.9	4279.5	4363.1	4616.8	4785.4	4843.2	4844.7	4762.6	4556.0
45°	4932.8	4926.7	4838.6	4817.3	4881.1	5130.3	5347.5	5379.4	5379.4	5271.6	5045.2
47.5°	5674.2	5666.6	5580.0	5505.5	5517.7	5786.6	5967.4	6016.0	5973.4	5892.9	5624.0
50°	6509.7	6496.0	6407.9	6338.0	6307.7	6579.6	6733.0	6755.8	6693.5	6597.8	6306.1
52.5°	7357.4	7398.4	7346.8	7308.8	7319.4	7495.7	7653.6	7545.8	7513.9	7410.6	7117.4
55°	8240.1	8366.1	8480.1	8446.7	8486.2	8657.8	8688.2	8545.4	8487.7	8413.2	8086.6
57.5°	9128.8	9496.4	9870.1	9975.0	10072.2	10318.3	10283.4	10049.4	10093.5	10204.4	9836.7
60°	10369.9	11431.9	12379.8	12554.5	12856.9	13066.5	13113.6	13068.0	13273.1	13215.4	12890.3
62.5°	12276.5	14046.4	15365.0	15693.2	15997.0	15986.4	15826.9	15662.8	15864.8	15864.8	15015.6
65°	13637.7	15646.1	17057.4	17329.3	17317.2	16951.1	16574.3	16246.2	16217.3	15992.4	14751.3
66°	13701.5	15769.1	17151.6	17388.6	17297.4	16708.0	16256.8	15840.5	15662.8	15349.8	14078.3
67.5°	13127.3	15421.2	16844.7	17051.3	16811.3	15966.6	15345.3	14787.7	14529.5	14002.3	12805.2
70°	10768.0	13253.4	15324.0	15746.3	15474.4	14404.9	13554.2	12800.6	12306.9	11545.8	10682.9
72.5°	7860.3	9785.1	12027.4	12714.0	12671.5	11687.1	11001.9	10312.2	9663.5	8970.8	8340.3
75°	5109.0	6365.4	7615.7	8016.7	7823.8	7254.1	6763.4	6360.8	5745.6	5264.0	5147.0
77.5°	2916.8	3564.0	3371.1	3320.9	3079.4	2485.4	1652.9	1159.1	1046.7	1306.5	1432.6
80°	2775.5	2515.8	2060.0	1858.0	1707.6	1163.7	610.7	429.9	376.8	385.9	414.7
82.5°	3129.5	3261.7	2667.7	2228.6	1940.0	1415.9	773.3	360.0	262.8	311.4	349.4
85°	2345.6	3302.7	3273.8	2774.0	2275.7	1631.6	914.5	275.0	158.0	218.8	285.6
87.5°	475.5	782.4	753.5	662.4	563.6	393.5	153.4	86.6	79.0	107.9	164.1
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7	2506.7
2.5°	2509.7	2509.7	2512.7	2517.3	2518.8	2518.8	2521.8	2518.8	2524.9	2526.4	2527.9
5°	2523.4	2527.9	2531.0	2538.6	2543.1	2546.2	2550.7	2547.7	2553.7	2555.3	2558.3
7.5°	2538.6	2546.2	2552.2	2555.3	2561.3	2561.3	2562.9	2559.8	2558.3	2553.7	2552.2
10°	2565.9	2570.5	2578.1	2575.0	2572.0	2561.3	2552.2	2538.6	2531.0	2517.3	2509.7
12.5°	2610.0	2613.0	2613.0	2599.3	2579.6	2555.3	2532.5	2509.7	2491.5	2476.3	2467.2
15°	2640.3	2646.4	2638.8	2619.1	2590.2	2556.8	2526.4	2496.0	2471.7	2452.0	2439.8
17.5°	2663.1	2661.6	2647.9	2620.6	2593.2	2564.4	2537.0	2505.1	2474.8	2445.9	2427.7
20°	2698.1	2682.9	2658.6	2629.7	2600.8	2576.5	2555.3	2524.9	2493.0	2453.5	2426.1
22.5°	2745.2	2717.8	2682.9	2652.5	2625.1	2602.4	2578.1	2552.2	2518.8	2474.8	2436.8
25°	2812.0	2764.9	2725.4	2695.0	2670.7	2644.9	2617.6	2584.1	2550.7	2505.1	2459.6
27.5°	2913.8	2843.9	2793.8	2766.4	2743.6	2708.7	2673.8	2634.3	2591.7	2544.6	2493.0
30°	3036.8	2953.3	2895.6	2871.3	2843.9	2804.4	2766.4	2711.7	2652.5	2596.3	2532.5
32.5°	3181.2	3096.1	3038.4	3020.1	2976.1	2930.5	2877.3	2804.4	2726.9	2643.4	2567.4
35°	3399.9	3292.1	3238.9	3196.4	3135.6	3080.9	2991.3	2895.6	2784.7	2673.8	2579.6
37.5°	3624.8	3515.4	3460.7	3401.5	3322.5	3222.2	3102.2	2965.4	2818.1	2681.4	2565.9
40°	3925.6	3807.1	3737.2	3646.0	3518.4	3362.0	3184.2	2997.3	2818.1	2647.9	2508.2
42.5°	4276.5	4167.1	4059.3	3908.9	3703.8	3475.9	3226.7	2986.7	2769.5	2573.5	2426.1
45°	4762.6	4575.8	4404.1	4162.6	3863.3	3542.7	3231.3	2936.6	2685.9	2468.7	2304.6
47.5°	5309.5	5068.0	4764.2	4385.9	3977.2	3568.6	3187.2	2842.4	2553.7	2318.3	2139.0
50°	5940.0	5569.3	5102.9	4563.6	4035.0	3533.6	3082.4	2684.4	2371.4	2101.0	1909.6
52.5°	6661.6	6096.5	5409.8	4689.7	4025.8	3427.3	2909.2	2476.3	2126.9	1839.7	1651.4
55°	7462.2	6670.7	5703.0	4770.2	3943.8	3220.7	2637.3	2183.1	1823.0	1540.5	1374.9
57.5°	8873.6	7678.0	6262.1	4878.1	3772.1	2907.7	2292.4	1812.4	1487.3	1247.2	1089.3
60°	11495.7	9438.7	7320.9	5131.8	3513.9	2515.8	1858.0	1422.0	1150.0	975.3	858.3
62.5°	13118.2	10678.3	7837.5	5095.3	3094.6	1979.5	1379.4	1054.3	840.1	724.7	651.7
65°	12733.8	10192.2	7207.0	4376.8	2407.9	1403.7	913.0	689.7	577.3	518.0	483.1
66°	12211.2	9648.3	6673.8	3919.5	2098.0	1172.8	753.5	578.8	496.8	452.7	434.5
67.5°	11115.9	8654.8	5756.2	3138.6	1572.4	873.5	556.0	454.2	404.1	381.3	369.2
70°	9303.5	6973.1	4071.4	1853.4	852.3	474.0	355.5	316.0	303.8	296.2	291.7
72.5°	7193.3	5048.2	2379.0	911.5	429.9	306.9	270.4	253.7	249.1	249.1	250.7
75°	4531.7	2901.6	1064.9	439.0	291.7	247.6	230.9	223.3	224.8	226.4	224.8
77.5°	1505.5	1001.1	443.6	311.4	253.7	224.8	211.2	208.1	211.2	212.7	212.7
80°	433.0	378.3	320.5	275.0	232.4	209.6	197.5	196.0	203.6	205.1	202.1
82.5°	332.7	311.4	290.2	265.9	223.3	197.5	192.9	194.5	199.0	196.0	182.3
85°	305.4	302.3	217.2	215.7	194.5	188.4	183.8	185.3	180.8	164.1	148.9
87.5°	171.7	159.5	123.1	124.6	144.3	148.9	123.1	130.6	121.5	106.3	97.2
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°	2506.7	2506.7	2506.7	2506.7	2506.7
2.5°	2531.0	2529.4	2529.4	2534.0	2527.9
5°	2559.8	2558.3	2558.3	2562.9	2558.3
7.5°	2546.2	2541.6	2538.6	2537.0	2537.0
10°	2500.6	2496.0	2486.9	2483.9	2480.8
12.5°	2453.5	2448.9	2438.3	2438.3	2435.3
15°	2424.6	2418.5	2410.9	2406.4	2403.3
17.5°	2409.4	2400.3	2391.2	2386.6	2383.6
20°	2403.3	2391.2	2380.6	2373.0	2373.0
22.5°	2404.9	2389.7	2377.5	2368.4	2365.4
25°	2420.1	2397.3	2382.1	2373.0	2369.9
27.5°	2441.3	2414.0	2394.2	2382.1	2377.5
30°	2470.2	2432.2	2404.9	2389.7	2383.6
32.5°	2489.9	2436.8	2401.8	2380.6	2373.0
35°	2488.4	2420.1	2377.5	2350.2	2341.1
37.5°	2461.1	2380.6	2324.4	2290.9	2275.7
40°	2400.3	2307.6	2248.4	2216.5	2198.3
42.5°	2312.2	2211.9	2158.8	2123.8	2104.1
45°	2174.0	2075.2	2009.9	1982.5	1956.7
47.5°	1982.5	1882.3	1826.1	1786.6	1769.8
50°	1757.7	1657.4	1598.2	1566.3	1551.1
52.5°	1511.6	1415.9	1373.3	1343.0	1321.7
55°	1256.4	1168.3	1150.0	1116.6	1096.9
57.5°	1016.3	964.7	948.0	914.5	897.8
60°	794.5	777.8	759.6	738.3	729.2
62.5°	615.3	600.1	595.5	581.8	580.3
65°	469.4	470.9	467.9	464.9	461.8
66°	426.9	425.4	426.9	423.9	422.3
67.5°	363.1	369.2	373.7	372.2	372.2
70°	294.7	299.3	305.4	303.8	303.8
72.5°	252.2	259.8	262.8	261.3	261.3
75°	227.9	235.5	235.5	232.4	230.9
77.5°	212.7	215.7	212.7	209.6	206.6
80°	197.5	194.5	189.9	185.3	182.3
82.5°	171.7	164.1	159.5	151.9	151.9
85°	138.2	132.2	121.5	113.9	106.3
87.5°	89.6	86.6	79.0	59.2	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)