

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: P158489

Luminaire Tested: **VST-E09-LED-E-U-SL3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158489
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (189) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24799.1 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - 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



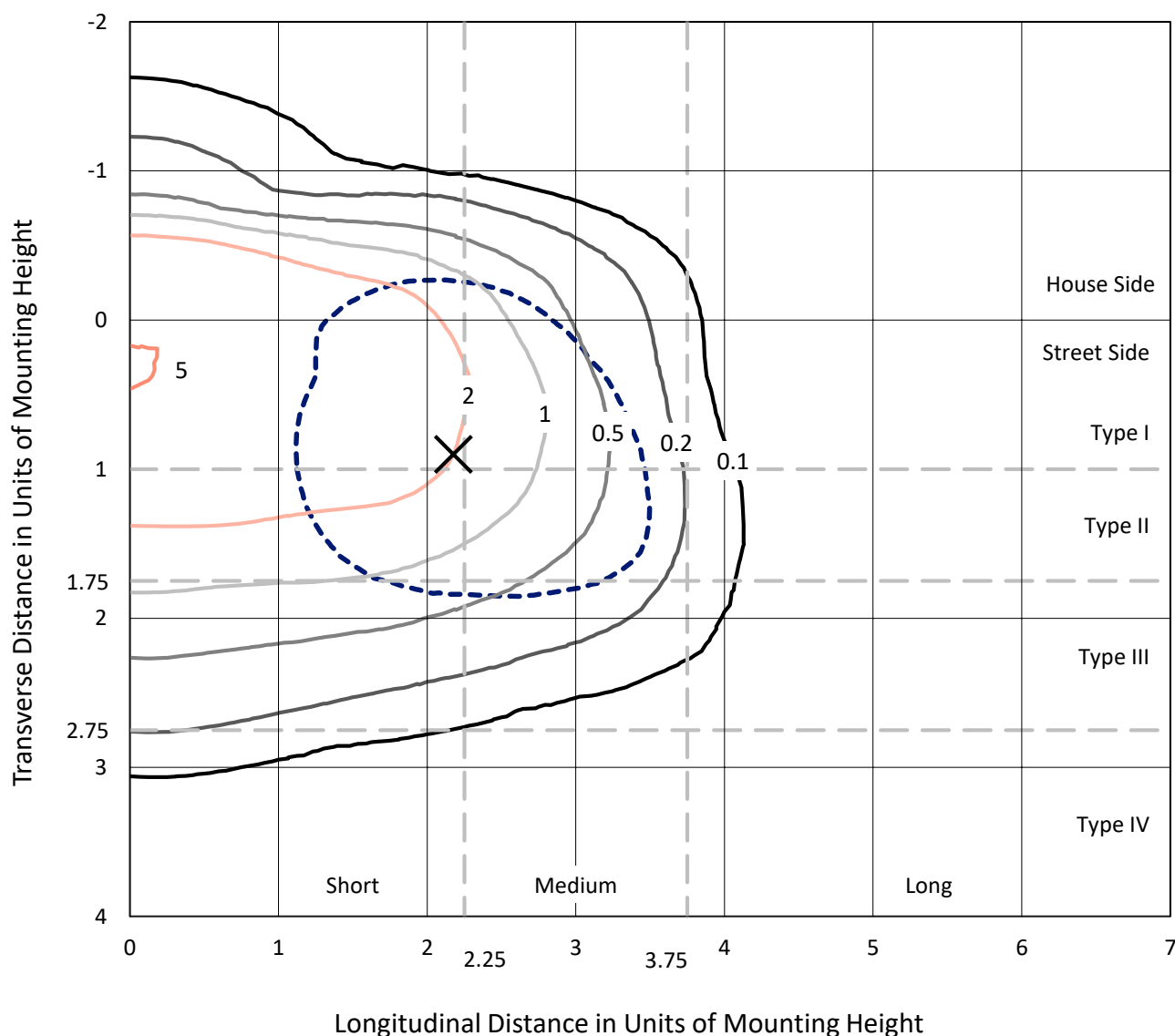
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

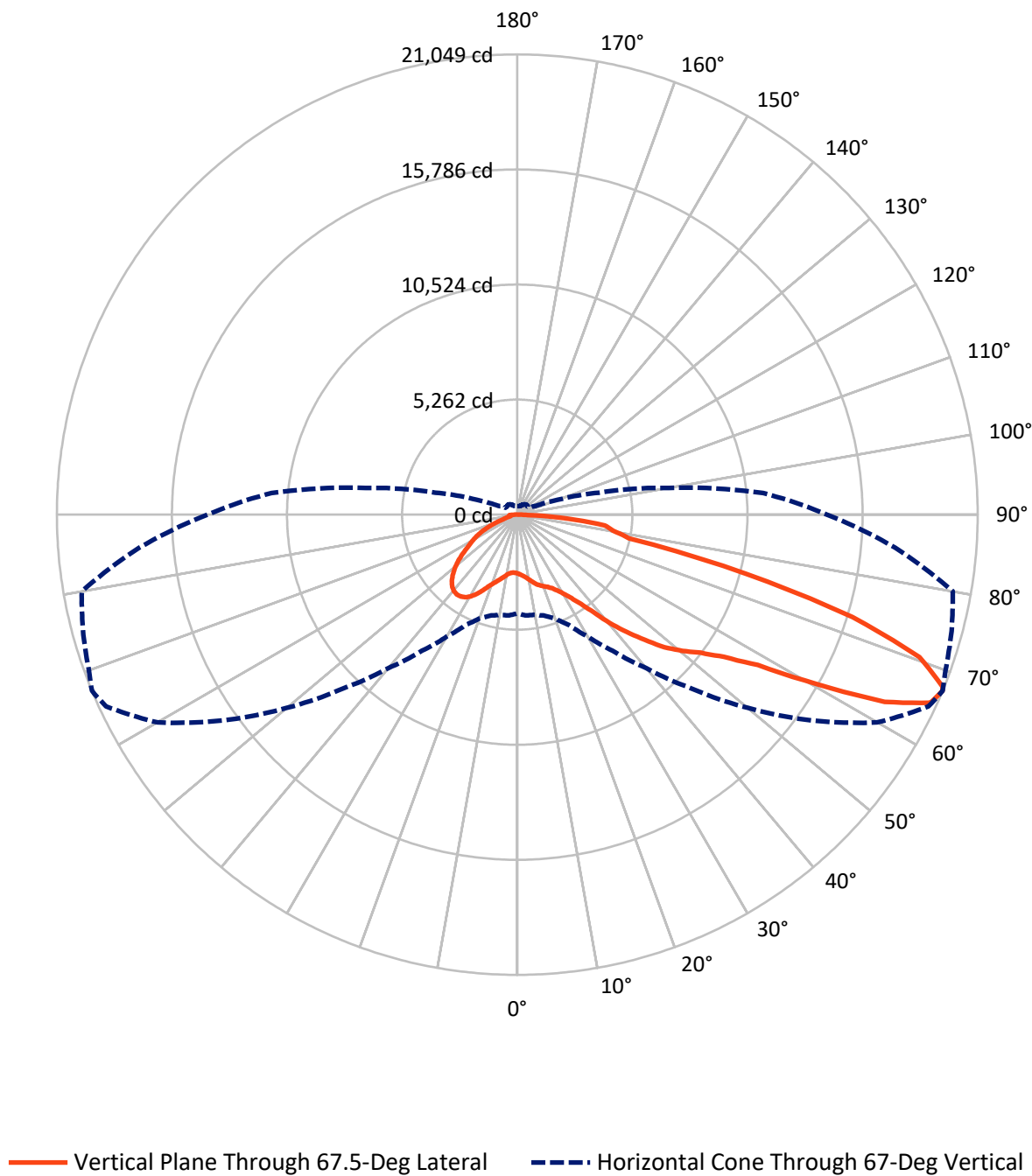


Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5949.3	0.0	5949.3
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	18849.8	0.0	18849.8
	% Fixture	76.0	0.0	76.0
Total	Lumens	24799.1	0.0	24799.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.1	1.1
10°-20°	910.2	3.7
20°-30°	1625.0	6.6
30°-40°	2381.5	9.6
40°-50°	3679.8	14.8
50°-60°	5358.4	21.6
60°-70°	6980.2	28.1
70°-80°	3124.5	12.6
80°-90°	472.4	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°	24799.1	100.0
0°-180°	24799.1	100.0

Coefficient of Utilization



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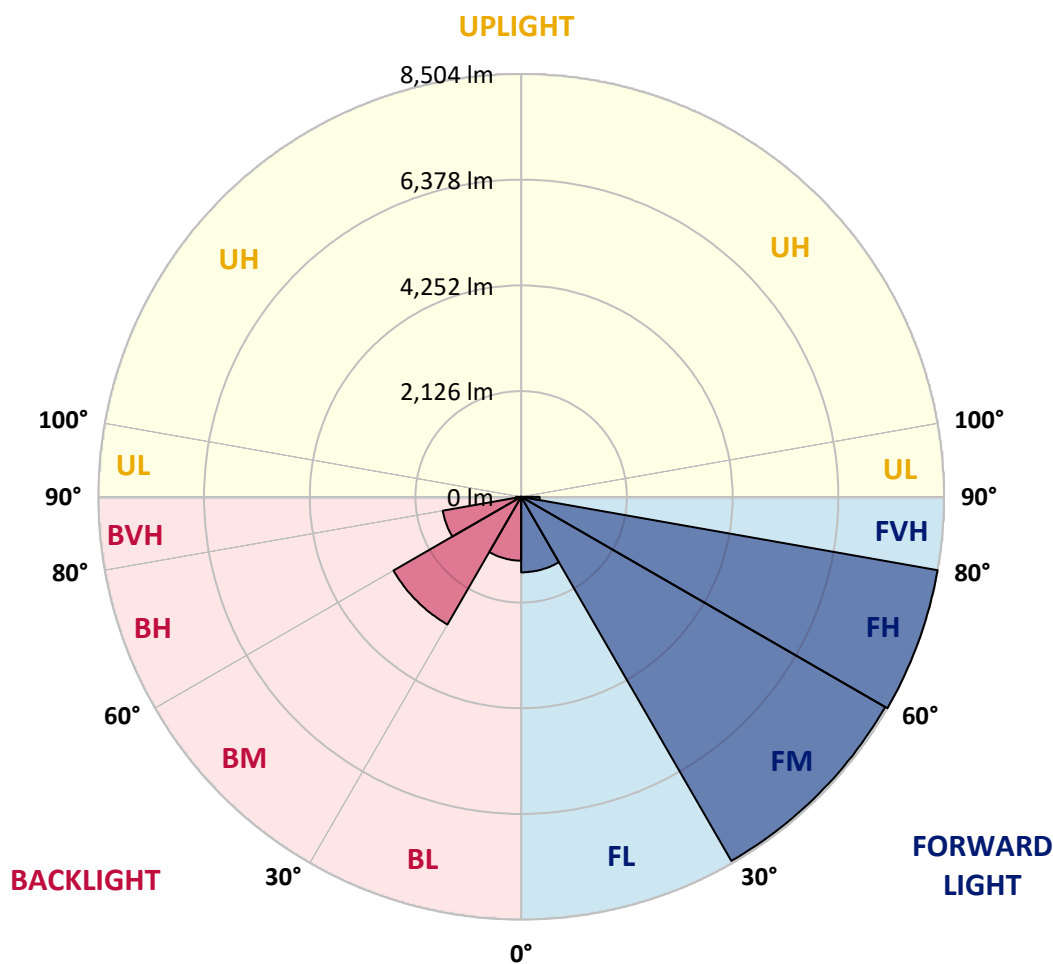
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1519.5	6.1			
FM	(30°-60°)	8455.2	34.1			
FH	(60°-80°)	8504.1	34.3			G4/12000
FVH	(80°-90°)	371.0	1.5			G3/500
BL	(0°-30°)	1282.9	5.2	B3/2500		
BM	(30°-60°)	2964.4	12.0	B3/5000		
BH	(60°-80°)	1600.6	6.5	B3/2500		G3/2500
BVH	(80°-90°)	101.4	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0
2.5°	2793.2	2799.8	2801.4	2799.8	2801.4	2794.9	2793.2	2783.3	2788.3	2775.1	2771.8
5°	2944.5	2949.4	2952.7	2939.5	2942.8	2936.2	2928.0	2918.2	2905.0	2886.9	2875.4
7.5°	3092.4	3100.6	3099.0	3094.1	3082.6	3076.0	3059.5	3044.7	3021.7	3000.4	2985.6
10°	3291.3	3289.7	3289.7	3261.8	3245.3	3230.5	3200.9	3177.9	3154.9	3123.7	3107.2
12.5°	3521.5	3510.0	3505.1	3485.3	3450.8	3424.5	3381.8	3337.4	3296.3	3263.4	3237.1
15°	3743.5	3743.5	3730.3	3699.1	3666.2	3631.7	3570.8	3506.7	3439.3	3386.7	3360.4
17.5°	3945.7	3927.6	3916.1	3875.0	3840.5	3784.6	3717.2	3648.1	3564.3	3490.3	3439.3
20°	4093.6	4078.8	4054.2	4003.2	3944.0	3878.3	3799.4	3718.8	3628.4	3547.8	3490.3
22.5°	4179.1	4161.0	4123.2	4055.8	3975.3	3883.2	3791.1	3715.5	3633.3	3572.5	3524.8
25°	4223.5	4205.4	4154.5	4065.7	3957.2	3835.5	3730.3	3656.3	3608.6	3593.9	3587.3
27.5°	4221.9	4207.1	4152.8	4050.9	3911.1	3771.4	3658.0	3595.5	3590.6	3648.1	3690.8
30°	4179.1	4169.3	4119.9	4018.0	3871.7	3725.4	3620.2	3587.3	3638.2	3759.9	3865.1
32.5°	4136.4	4131.4	4096.9	4004.9	3879.9	3756.6	3684.3	3687.6	3792.8	3980.2	4149.5
35°	4141.3	4147.9	4143.0	4093.6	4014.7	3950.6	3916.1	3988.4	4152.8	4379.7	4606.6
37.5°	4184.1	4208.7	4240.0	4244.9	4246.5	4236.7	4309.0	4461.9	4701.9	4997.9	5353.0
40°	4277.8	4305.7	4396.1	4475.1	4577.0	4698.6	4845.0	5057.0	5354.6	5719.6	6155.3
42.5°	4568.8	4608.2	4720.0	4866.3	5053.8	5244.5	5463.1	5752.5	6117.4	6502.1	6959.2
45°	4948.5	5030.7	5154.0	5316.8	5597.9	5865.9	6148.7	6472.5	6860.5	7342.2	7802.6
47.5°	5422.0	5504.2	5683.4	5857.7	6189.8	6523.5	6832.6	7171.3	7592.1	8085.3	8595.0
50°	5836.3	5930.0	6089.5	6324.6	6709.3	7118.7	7460.6	7827.2	8180.7	8700.2	9214.8
52.5°	6161.8	6229.2	6382.1	6597.5	7026.6	7475.4	7907.8	8315.5	8734.7	9254.2	9731.0
55°	6202.9	6265.4	6415.0	6661.6	7097.3	7595.4	8093.6	8576.9	9170.4	9737.6	10368.9
57.5°	6025.4	6076.3	6227.6	6447.9	6872.0	7439.2	8068.9	8688.7	9448.2	10214.4	10985.4
60°	5773.8	5824.8	5943.2	6119.1	6502.1	7113.7	7848.6	8696.9	9706.4	10812.8	11947.2
62.5°	5497.6	5542.0	5637.4	5762.3	6099.4	6663.3	7505.0	8642.7	9916.8	11407.9	13157.2
65°	5032.4	5139.2	5180.3	5308.6	5645.6	6178.3	7034.8	8276.1	9831.3	11672.6	13916.7
67°	4517.8	4626.3	4647.7	4777.6	5047.2	5558.5	6429.8	7597.1	9154.0	11215.6	13749.0
67.5°	4353.4	4445.5	4478.3	4608.2	4863.0	5344.7	6171.7	7352.1	8946.8	10965.7	13546.8
70°	3200.9	3302.9	3339.0	3393.3	3575.8	3976.9	4524.4	5548.6	7133.4	8948.5	11427.7
72.5°	1713.1	1795.3	1829.8	1910.4	2004.1	2222.7	2642.0	3376.8	4378.1	5987.6	8129.7
75°	1159.0	1191.9	1216.6	1272.5	1369.5	1543.7	1727.9	1986.0	2591.0	3378.5	4626.3
77.5°	660.9	675.7	679.0	688.8	766.1	932.2	1234.7	1672.0	2143.8	2448.0	2959.3
80°	286.1	315.7	338.7	323.9	318.9	353.5	442.2	659.3	1292.2	2051.8	2434.8
82.5°	154.5	167.7	187.4	189.1	198.9	210.4	228.5	271.3	381.4	769.4	1678.6
85°	80.6	83.8	111.8	128.2	136.5	143.0	146.3	162.8	187.4	238.4	417.6
87.5°	11.5	16.4	19.7	26.3	29.6	31.2	36.2	46.0	54.3	65.8	111.8
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°	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0
2.5°	2757.0	2753.8	2743.9	2737.3	2730.7	2724.2	2715.9	2709.4	2697.9	2689.6	2679.8
5°	2859.0	2839.2	2826.1	2808.0	2804.7	2783.3	2762.0	2752.1	2732.4	2715.9	2696.2
7.5°	2962.5	2939.5	2918.2	2903.4	2895.1	2865.5	2844.2	2819.5	2796.5	2775.1	2752.1
10°	3084.2	3061.2	3038.2	3028.3	3013.5	2985.6	2967.5	2936.2	2913.2	2886.9	2855.7
12.5°	3210.8	3194.4	3177.9	3164.8	3158.2	3145.0	3118.7	3092.4	3061.2	3034.9	2998.7
15°	3322.6	3311.1	3304.5	3301.2	3301.2	3293.0	3268.3	3243.7	3210.8	3181.2	3141.7
17.5°	3401.5	3396.6	3401.5	3406.4	3413.0	3406.4	3401.5	3373.6	3352.2	3316.0	3276.6
20°	3447.5	3457.4	3482.1	3498.5	3513.3	3524.8	3529.7	3506.7	3478.8	3452.5	3426.2
22.5°	3496.9	3524.8	3567.5	3592.2	3616.9	3658.0	3667.8	3651.4	3630.0	3613.6	3585.6
25°	3579.1	3620.2	3694.1	3733.6	3768.1	3828.9	3837.2	3840.5	3835.5	3822.4	3787.8
27.5°	3707.3	3787.8	3886.5	3937.5	3975.3	4054.2	4085.4	4085.4	4072.3	4087.1	4087.1
30°	3930.9	4037.7	4166.0	4195.6	4254.8	4323.8	4374.8	4381.3	4383.0	4414.2	4460.3
32.5°	4274.5	4376.4	4519.4	4552.3	4603.3	4669.0	4726.6	4720.0	4734.8	4802.2	4863.0
35°	4774.3	4877.8	4971.5	5015.9	5039.0	5098.1	5119.5	5155.7	5200.1	5283.9	5275.7
37.5°	5514.1	5606.1	5619.3	5647.2	5619.3	5630.8	5647.2	5690.0	5808.4	5884.0	5762.3
40°	6405.1	6558.0	6543.2	6510.4	6447.9	6364.0	6393.6	6459.4	6587.6	6521.9	6194.7
42.5°	7245.2	7403.1	7373.5	7335.7	7197.6	7166.3	7163.0	7217.3	7286.3	7098.9	6533.4
45°	8072.2	8233.3	8182.3	8161.0	8068.9	8001.5	8057.4	8060.7	8042.6	7641.5	6829.3
47.5°	8925.4	9073.4	9040.5	9058.6	8963.3	8918.9	8923.8	8900.8	8731.4	8101.8	7059.5
50°	9614.3	9813.2	9832.9	9791.8	9740.9	9673.5	9846.1	9783.6	9407.1	8549.0	7281.4
52.5°	10150.2	10418.2	10520.2	10493.8	10452.7	10461.0	10784.8	10855.5	10232.4	9112.9	7526.4
55°	10784.8	11207.4	11373.4	11472.0	11429.3	11593.7	12335.2	12371.3	11380.0	9849.4	7845.3
57.5°	11700.6	12305.6	12830.0	12969.8	13104.6	13638.9	14842.3	14475.7	12869.5	10964.0	8249.7
60°	13093.1	14418.1	15269.8	15716.9	16032.6	16779.0	17923.2	16994.3	14725.6	12290.8	8757.8
62.5°	15042.9	16979.5	18403.3	18852.1	18982.0	19411.1	20239.7	18462.5	15736.7	12885.9	8802.1
65°	16494.6	18817.6	20522.4	20752.6	20598.1	20606.3	20823.3	18385.2	15360.2	12366.4	8039.3
67°	16399.2	19000.1	20746.0	21048.5	20834.8	20553.7	20215.0	17337.9	14150.2	11278.0	7039.7
67.5°	16252.9	18824.2	20649.0	20968.0	20772.3	20451.7	19956.9	16931.9	13773.7	10939.4	6835.9
70°	14049.9	16603.1	19060.9	19509.7	19591.9	19299.3	17910.1	14276.8	11182.7	8899.1	5308.6
72.5°	10936.1	13209.8	15641.3	16030.9	16346.6	15503.2	13035.5	9860.9	8151.1	6413.4	3843.7
75°	7220.6	9533.7	10760.2	10817.7	10414.9	8853.1	6369.0	4938.7	4545.7	3769.8	2378.9
77.5°	3863.5	5606.1	5640.7	5223.1	5032.4	3751.7	1522.4	840.1	935.5	1062.0	947.0
80°	2882.0	3570.8	4138.0	4448.7	4540.8	3217.4	787.5	445.5	389.6	355.1	350.2
82.5°	2599.2	3449.2	3866.8	4036.1	3993.4	2646.9	442.2	299.2	248.2	269.6	307.4
85°	1019.3	1841.3	2421.7	2344.4	1969.5	986.4	241.7	161.1	161.1	233.5	302.5
87.5°	208.8	378.1	512.9	489.9	440.6	190.7	118.4	97.0	98.6	189.1	286.1
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°	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0	2688.0
2.5°	2669.9	2660.0	2653.5	2646.9	2640.3	2637.0	2632.1	2632.1	2622.2	2618.9	2615.7
5°	2681.4	2665.0	2653.5	2638.7	2627.2	2617.3	2604.1	2600.9	2589.3	2581.1	2577.8
7.5°	2730.7	2706.1	2681.4	2663.3	2646.9	2625.5	2610.7	2597.6	2586.1	2577.8	2568.0
10°	2824.4	2798.1	2763.6	2730.7	2709.4	2676.5	2653.5	2630.4	2617.3	2607.4	2594.3
12.5°	2962.5	2924.7	2883.6	2844.2	2808.0	2765.3	2742.2	2714.3	2697.9	2689.6	2679.8
15°	3103.9	3062.8	3011.9	2974.1	2933.0	2900.1	2878.7	2854.0	2840.9	2831.0	2824.4
17.5°	3248.6	3200.9	3164.8	3126.9	3107.2	3082.6	3054.6	3023.4	2985.6	2962.5	2931.3
20°	3396.6	3360.4	3339.0	3317.7	3294.6	3260.1	3204.2	3140.1	3069.4	3002.0	2937.9
22.5°	3569.2	3547.8	3544.5	3524.8	3477.1	3394.9	3291.3	3171.3	3051.3	2939.5	2852.4
25°	3812.5	3812.5	3796.1	3715.5	3603.7	3455.8	3281.5	3108.9	2949.4	2796.5	2681.4
27.5°	4118.3	4106.8	4026.2	3860.2	3659.6	3429.4	3196.0	2977.3	2773.5	2605.8	2457.8
30°	4455.3	4374.8	4202.1	3940.7	3639.9	3344.0	3057.9	2804.7	2564.7	2359.2	2184.9
32.5°	4805.5	4609.9	4299.1	3940.7	3570.8	3215.7	2885.3	2574.6	2300.0	2069.8	1862.7
35°	5122.8	4766.0	4322.2	3876.6	3436.0	3026.7	2643.6	2291.8	1963.0	1714.7	1487.8
37.5°	5410.5	4869.6	4297.5	3751.7	3240.4	2760.3	2311.5	1923.5	1552.0	1311.9	1117.9
40°	5597.9	4891.0	4195.6	3556.0	2960.9	2400.3	1903.8	1469.8	1175.5	956.8	826.9
42.5°	5714.7	4849.9	4031.2	3288.1	2584.4	1948.2	1428.7	1053.8	835.2	713.5	664.2
45°	5780.4	4743.0	3787.8	2921.4	2129.0	1481.3	1014.4	761.2	642.8	600.1	583.6
47.5°	5777.1	4570.4	3483.7	2497.3	1625.9	1032.5	718.4	593.5	560.6	547.5	544.2
50°	5742.6	4358.3	3126.9	2037.0	1173.8	720.1	568.8	532.7	524.4	516.2	512.9
52.5°	5694.9	4095.3	2732.4	1588.1	833.5	575.4	516.2	506.4	499.8	491.6	488.3
55°	5606.1	3771.4	2304.9	1195.2	652.7	519.5	498.1	494.9	486.6	475.1	468.5
57.5°	5497.6	3442.6	1895.6	933.8	577.1	506.4	494.9	489.9	478.4	465.3	452.1
60°	5458.2	3171.3	1575.0	787.5	559.0	511.3	503.1	496.5	480.1	460.3	445.5
62.5°	5211.6	2865.5	1344.8	729.9	568.8	532.7	529.4	519.5	494.9	471.8	448.8
65°	4573.7	2423.3	1139.3	690.5	588.6	568.8	572.1	557.3	532.7	501.4	460.3
67°	3868.4	1976.1	948.6	652.7	603.4	606.6	618.2	606.6	575.4	531.0	475.1
67.5°	3681.0	1862.7	900.9	641.2	606.6	616.5	629.7	621.4	590.2	539.2	481.7
70°	2735.7	1311.9	672.4	580.3	606.6	646.1	675.7	683.9	649.4	578.7	494.9
72.5°	1926.8	846.7	516.2	503.1	550.8	603.4	659.3	687.2	647.7	570.5	476.8
75°	1157.4	529.4	419.2	427.4	463.6	517.9	562.3	573.8	524.4	475.1	412.7
77.5°	536.0	351.8	328.8	340.3	374.8	399.5	399.5	376.5	338.7	309.1	295.9
80°	315.7	287.7	286.1	307.4	330.5	312.4	284.4	253.2	233.5	223.6	218.7
82.5°	295.9	307.4	327.2	332.1	314.0	269.6	235.1	203.9	194.0	189.1	184.1
85°	348.5	373.2	340.3	314.0	277.8	226.9	184.1	157.8	152.9	148.0	141.4
87.5°	322.2	307.4	268.0	230.2	190.7	138.1	100.3	90.4	97.0	95.4	92.1
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°	2688.0	2688.0	2688.0	2688.0	2688.0
2.5°	2617.3	2617.3	2610.7	2607.4	2615.7
5°	2571.3	2572.9	2568.0	2566.3	2568.0
7.5°	2561.4	2559.8	2556.5	2553.2	2556.5
10°	2591.0	2589.3	2584.4	2587.7	2582.8
12.5°	2679.8	2689.6	2688.0	2691.3	2697.9
15°	2824.4	2822.8	2817.9	2821.2	2826.1
17.5°	2906.6	2893.5	2882.0	2877.1	2877.1
20°	2886.9	2849.1	2829.4	2817.9	2814.6
22.5°	2770.2	2715.9	2674.8	2665.0	2656.8
25°	2579.5	2512.1	2459.5	2448.0	2426.6
27.5°	2357.5	2267.1	2204.6	2191.5	2180.0
30°	2066.5	1963.0	1890.6	1844.6	1859.4
32.5°	1711.4	1612.8	1528.9	1455.0	1443.5
35°	1321.8	1213.3	1139.3	1106.4	1085.1
37.5°	986.4	896.0	846.7	815.4	817.1
40°	754.6	706.9	680.6	659.3	660.9
42.5°	629.7	608.3	601.7	591.9	586.9
45°	570.5	563.9	565.5	555.7	552.4
47.5°	537.6	532.7	534.3	527.7	526.1
50°	511.3	508.0	509.6	504.7	503.1
52.5°	485.0	486.6	485.0	481.7	481.7
55°	462.0	460.3	463.6	458.7	458.7
57.5°	443.9	442.2	442.2	440.6	440.6
60°	434.0	427.4	425.8	425.8	427.4
62.5°	429.1	417.6	415.9	415.9	417.6
65°	430.7	412.7	406.1	404.4	402.8
67°	432.4	406.1	392.9	386.3	384.7
67.5°	434.0	402.8	388.0	381.4	378.1
70°	424.2	379.8	358.4	346.9	343.6
72.5°	399.5	351.8	325.5	310.7	307.4
75°	355.1	318.9	295.9	279.5	272.9
77.5°	274.6	258.1	249.9	240.0	236.7
80°	213.7	205.5	202.2	195.6	194.0
82.5°	177.6	169.3	164.4	156.2	151.3
85°	138.1	128.2	124.9	118.4	115.1
87.5°	90.4	85.5	83.8	75.6	72.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)