

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: P159610

Luminaire Tested: **VST-E11-LED-E-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159610
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-E11-LED-E-U-T3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (231) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33642 lumens
Efficiency: N/A
Efficacy: 124.7 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): 269.7
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



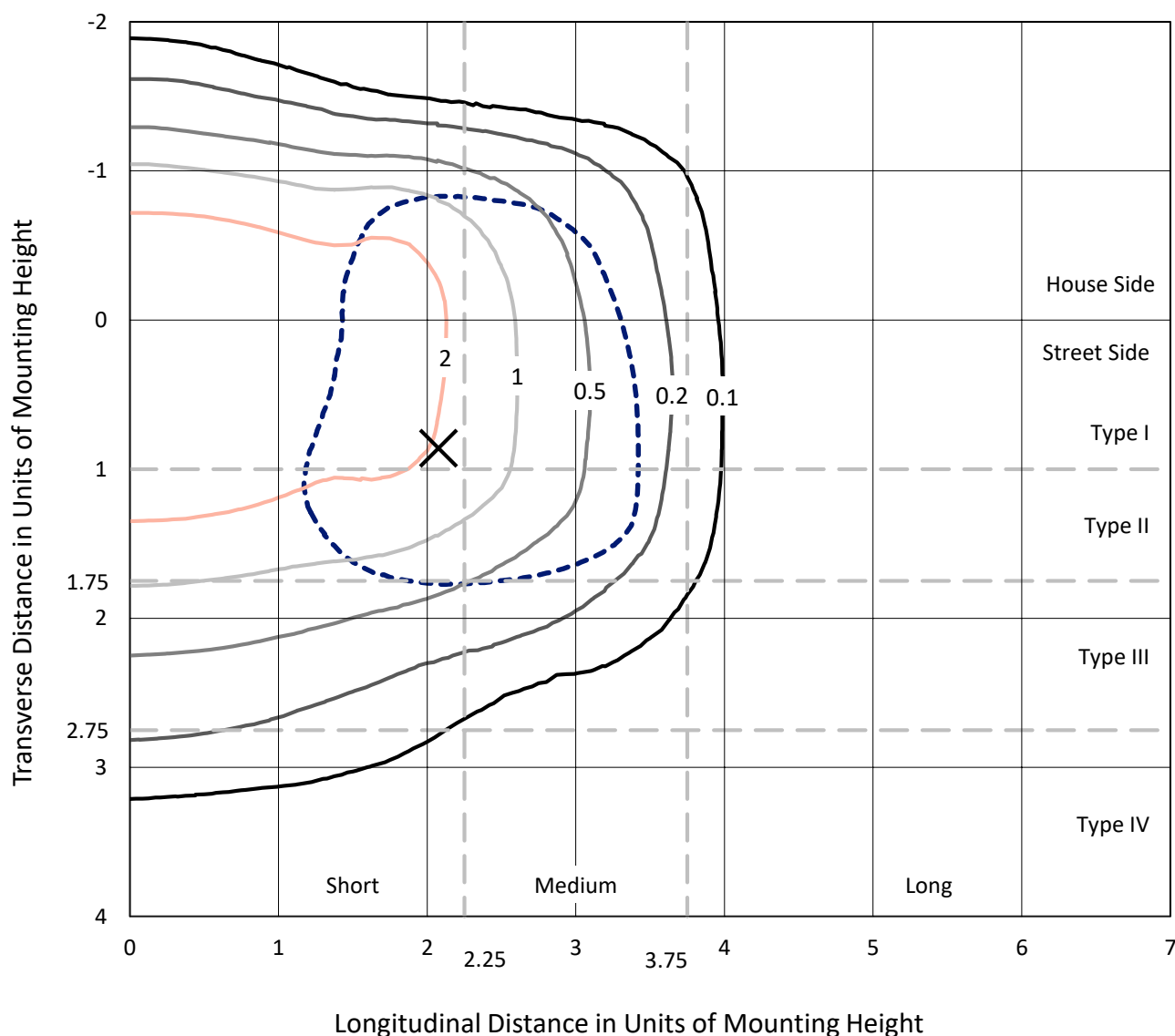
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

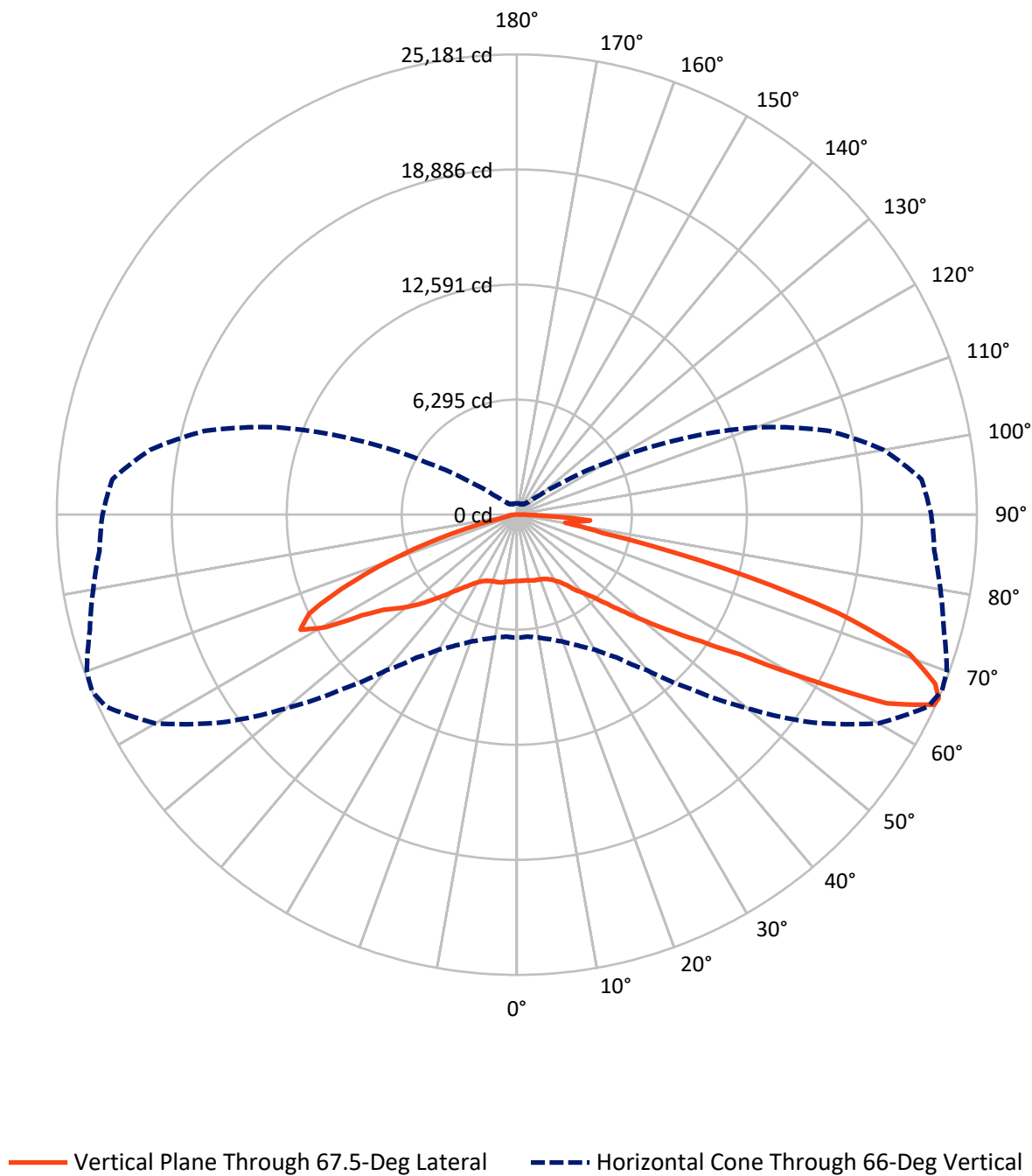


Based on 30 foot mounting height. Maximum calculated value = 4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11641.6	0.0	11641.6
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	22000.4	0.0	22000.4
	% Fixture	65.4	0.0	65.4
Total	Lumens	33642.0	0.0	33642.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.3	1.0
10°-20°	1031.5	3.1
20°-30°	1773.1	5.3
30°-40°	2865.6	8.5
40°-50°	4749.1	14.1
50°-60°	7453.2	22.2
60°-70°	10190.0	30.3
70°-80°	4481.1	13.3
80°-90°	750.1	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°	33642.0	100.0
0°-180°	33642.0	100.0

Coefficient of Utilization



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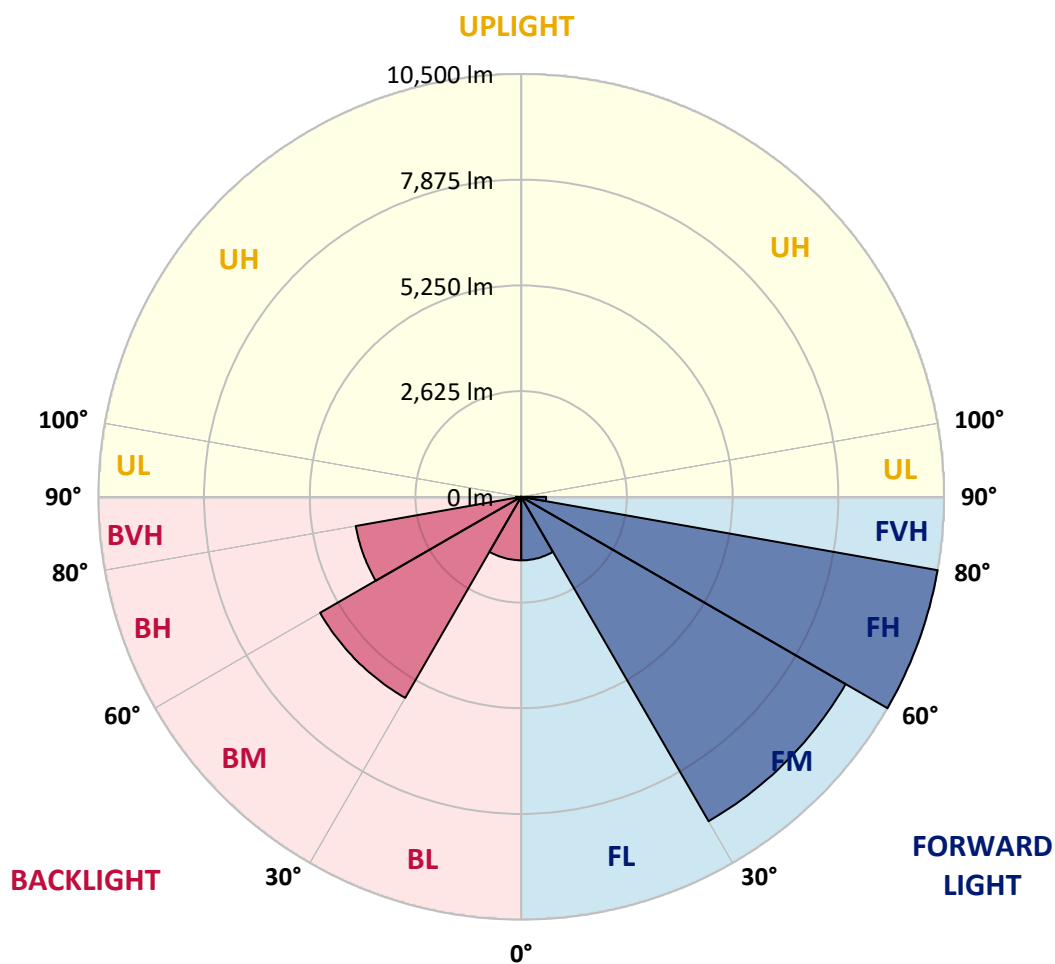
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1578.1	4.7			
FM	(30°-60°)	9303.0	27.7			
FH	(60°-80°)	10500.4	31.2			G4/12000
FVH	(80°-90°)	618.8	1.8			G4/750
BL	(0°-30°)	1574.8	4.7	B3/2500		
BM	(30°-60°)	5764.9	17.1	B4/8500		
BH	(60°-80°)	4170.7	12.4	B4/5000		G4/5000
BVH	(80°-90°)	131.2	0.4			G2/225
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°	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0
2.5°	3623.4	3623.4	3625.6	3623.4	3623.4	3621.2	3630.0	3630.0	3630.0	3627.8	3634.4
5°	3614.6	3614.6	3616.8	3616.8	3619.0	3616.8	3623.4	3625.6	3625.6	3625.6	3632.2
7.5°	3592.6	3599.2	3594.8	3597.0	3599.2	3605.8	3614.6	3619.0	3623.4	3630.0	3632.2
10°	3546.4	3557.4	3555.2	3561.8	3564.0	3583.8	3590.4	3599.2	3614.6	3623.4	3630.0
12.5°	3482.6	3489.2	3491.4	3500.2	3509.0	3533.2	3550.8	3566.2	3588.2	3610.2	3632.2
15°	3432.0	3436.4	3436.4	3445.2	3458.4	3480.4	3502.4	3528.8	3561.8	3599.2	3634.4
17.5°	3447.4	3458.4	3449.6	3447.4	3451.8	3465.0	3484.8	3506.8	3546.4	3588.2	3630.0
20°	3548.6	3550.8	3546.4	3535.4	3526.6	3528.8	3528.8	3533.2	3557.4	3590.4	3623.4
22.5°	3632.2	3641.0	3638.8	3641.0	3638.8	3647.6	3643.2	3634.4	3625.6	3627.8	3643.2
25°	3704.8	3713.6	3713.6	3720.2	3731.2	3748.8	3762.0	3759.8	3746.6	3729.0	3722.4
27.5°	3823.6	3823.6	3823.6	3830.2	3845.6	3867.6	3889.6	3902.8	3913.8	3896.2	3858.8
30°	4010.6	4012.8	4006.2	4008.4	4019.4	4048.0	4074.4	4094.2	4116.2	4114.0	4065.6
32.5°	4215.2	4224.0	4221.8	4230.6	4246.0	4272.4	4301.0	4331.8	4360.4	4378.0	4347.2
35°	4479.2	4488.0	4490.2	4503.4	4521.0	4560.6	4600.2	4639.8	4670.6	4683.8	4677.2
37.5°	4912.6	4914.8	4906.0	4886.2	4892.8	4923.6	4969.8	5033.6	5053.4	5066.6	5097.4
40°	5561.6	5555.0	5519.8	5502.2	5491.2	5504.4	5495.6	5546.2	5592.4	5594.6	5592.4
42.5°	6349.2	6329.4	6296.4	6292.0	6287.6	6283.2	6259.0	6261.2	6303.0	6314.0	6300.8
45°	7132.4	7108.2	7084.0	7106.0	7079.6	7147.8	7167.6	7220.4	7227.0	7249.0	7216.0
47.5°	7774.8	7777.0	7777.0	7807.8	7860.6	7990.4	8107.0	8208.2	8245.6	8298.4	8305.0
50°	8261.0	8274.2	8316.0	8415.0	8527.2	8745.0	8940.8	9123.4	9288.4	9350.0	9512.8
52.5°	8544.8	8580.0	8668.0	8833.0	9033.2	9314.8	9622.8	9933.0	10219.0	10461.0	10654.6
55°	8494.2	8520.6	8674.6	8932.0	9244.4	9622.8	10054.0	10502.8	10949.4	11358.6	11675.4
57.5°	8168.6	8186.2	8340.2	8630.6	9020.0	9528.2	10137.6	10804.2	11431.2	12091.2	12632.4
60°	7741.8	7768.2	7911.2	8140.0	8547.0	9088.2	9794.4	10698.6	11699.6	12738.0	13750.0
62.5°	7469.0	7462.4	7587.8	7792.4	8098.2	8588.8	9268.6	10340.0	11726.0	13481.6	15481.4
65°	7015.8	6996.0	7125.8	7359.0	7691.2	8166.4	8811.0	9840.6	11448.8	13763.2	16599.0
66°	6734.2	6694.6	6824.4	7059.8	7392.0	7898.0	8516.2	9532.6	11112.2	13488.2	16480.2
67.5°	6241.4	6221.6	6283.2	6468.0	6714.4	7189.6	7834.2	8857.2	10315.8	12661.0	15609.0
70°	5073.2	5029.2	5077.6	5161.2	5255.8	5372.4	5768.4	6580.2	7814.4	10087.0	12575.2
72.5°	3456.2	3434.2	3524.4	3652.0	3905.0	4023.8	4180.0	4312.0	4747.6	6358.0	8771.4
75°	2629.0	2642.2	2756.6	2967.8	3293.4	3645.4	3988.6	4114.0	3968.8	3843.4	4978.6
77.5°	1474.0	1551.0	1689.6	1958.0	2303.4	2800.6	3399.0	4059.0	4389.0	4307.6	4028.2
80°	607.2	596.2	664.4	811.8	930.6	1337.6	2046.0	2873.2	3801.6	4389.0	4296.6
82.5°	169.4	173.8	224.4	288.2	371.8	473.0	739.2	1188.0	1936.0	3011.8	3942.4
85°	52.8	52.8	72.6	107.8	127.6	147.4	187.0	308.0	525.8	1049.4	2127.4
87.5°	11.0	11.0	15.4	30.8	33.0	33.0	41.8	57.2	50.6	46.2	206.8
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°	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0
2.5°	3627.8	3623.4	3625.6	3627.8	3625.6	3625.6	3623.4	3621.2	3623.4	3623.4	3630.0
5°	3625.6	3623.4	3625.6	3625.6	3625.6	3627.8	3627.8	3627.8	3634.4	3634.4	3645.4
7.5°	3630.0	3630.0	3634.4	3634.4	3634.4	3634.4	3636.6	3641.0	3652.0	3649.8	3669.6
10°	3638.8	3643.2	3654.2	3656.4	3656.4	3663.0	3667.4	3676.2	3687.2	3691.6	3709.2
12.5°	3649.8	3671.8	3691.6	3696.0	3702.6	3713.6	3720.2	3724.6	3744.4	3751.0	3773.0
15°	3663.0	3693.8	3718.0	3726.8	3735.6	3748.8	3757.6	3764.2	3781.8	3790.6	3817.0
17.5°	3665.2	3700.4	3729.0	3742.2	3753.2	3768.6	3781.8	3795.0	3814.8	3828.0	3854.4
20°	3663.0	3709.2	3753.2	3770.8	3781.8	3810.4	3830.2	3847.8	3872.0	3885.2	3911.6
22.5°	3687.2	3740.0	3799.4	3821.4	3839.0	3878.6	3905.0	3933.6	3964.4	3973.2	3993.0
25°	3744.4	3799.4	3874.2	3905.0	3935.8	3988.6	4026.0	4067.8	4098.6	4103.0	4109.6
27.5°	3841.2	3891.8	3982.0	4028.2	4078.8	4153.6	4208.6	4250.4	4294.4	4294.4	4290.0
30°	4037.0	4048.0	4142.6	4202.0	4276.8	4386.8	4468.2	4514.4	4547.4	4547.4	4510.0
32.5°	4290.0	4276.8	4362.6	4426.4	4529.8	4683.8	4793.8	4829.0	4864.2	4853.2	4789.4
35°	4655.2	4617.8	4666.2	4763.0	4879.6	5090.8	5205.2	5284.4	5306.4	5275.6	5174.4
37.5°	5115.0	5110.6	5134.8	5242.6	5372.4	5645.2	5761.8	5812.4	5794.8	5739.8	5561.6
40°	5601.2	5588.0	5572.6	5645.2	5790.4	6118.2	6325.0	6351.4	6327.2	6245.8	6021.4
42.5°	6250.2	6250.2	6177.6	6197.4	6318.4	6685.8	6930.0	7013.6	7015.8	6897.0	6597.8
45°	7143.4	7134.6	7007.0	6976.2	7068.6	7429.4	7744.0	7790.2	7790.2	7634.0	7306.2
47.5°	8217.0	8206.0	8080.6	7972.8	7990.4	8379.8	8641.6	8712.0	8650.4	8533.8	8144.4
50°	9427.0	9407.2	9279.6	9178.4	9134.4	9528.2	9750.4	9783.4	9693.2	9554.6	9132.2
52.5°	10654.6	10714.0	10639.2	10584.2	10599.6	10854.8	11083.6	10927.4	10881.2	10731.6	10307.0
55°	11932.8	12115.4	12280.4	12232.0	12289.2	12537.8	12581.8	12375.0	12291.4	12183.6	11710.6
57.5°	13219.8	13752.2	14293.4	14445.2	14586.0	14942.4	14891.8	14553.0	14616.8	14777.4	14245.0
60°	15017.2	16555.0	17927.8	18180.8	18618.6	18922.2	18990.4	18924.4	19221.4	19137.8	18667.0
62.5°	17778.2	20341.2	22250.8	22726.0	23166.0	23150.6	22919.6	22682.0	22974.6	22974.6	21744.8
65°	19749.4	22657.8	24701.6	25095.4	25077.8	24547.6	24002.0	23526.8	23485.0	23159.4	21362.0
66°	19841.8	22836.0	24838.0	25181.2	25049.2	24195.6	23542.2	22939.4	22682.0	22228.8	20387.4
67.5°	19010.2	22332.2	24393.6	24692.8	24345.2	23122.0	22222.2	21414.8	21040.8	20277.4	18543.8
70°	15593.6	19192.8	22191.4	22803.0	22409.2	20860.4	19628.4	18537.2	17822.2	16720.0	15470.4
72.5°	11382.8	14170.2	17417.4	18411.8	18350.2	16924.6	15932.4	14933.6	13994.2	12991.0	12078.0
75°	7398.6	9218.0	11028.6	11609.4	11330.0	10505.0	9794.4	9211.4	8320.4	7623.0	7453.6
77.5°	4224.0	5161.2	4881.8	4809.2	4459.4	3599.2	2393.6	1678.6	1515.8	1892.0	2074.6
80°	4019.4	3643.2	2983.2	2690.6	2472.8	1685.2	884.4	622.6	545.6	558.8	600.6
82.5°	4532.0	4723.4	3863.2	3227.4	2809.4	2050.4	1119.8	521.4	380.6	451.0	506.0
85°	3396.8	4782.8	4741.0	4017.2	3295.6	2362.8	1324.4	398.2	228.8	316.8	413.6
87.5°	688.6	1133.0	1091.2	959.2	816.2	569.8	222.2	125.4	114.4	156.2	237.6
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°	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0	3630.0
2.5°	3634.4	3634.4	3638.8	3645.4	3647.6	3647.6	3652.0	3647.6	3656.4	3658.6	3660.8
5°	3654.2	3660.8	3665.2	3676.2	3682.8	3687.2	3693.8	3689.4	3698.2	3700.4	3704.8
7.5°	3676.2	3687.2	3696.0	3700.4	3709.2	3709.2	3711.4	3707.0	3704.8	3698.2	3696.0
10°	3715.8	3722.4	3733.4	3729.0	3724.6	3709.2	3696.0	3676.2	3665.2	3645.4	3634.4
12.5°	3779.6	3784.0	3784.0	3764.2	3735.6	3700.4	3667.4	3634.4	3608.0	3586.0	3572.8
15°	3823.6	3832.4	3821.4	3792.8	3751.0	3702.6	3658.6	3614.6	3579.4	3550.8	3533.2
17.5°	3856.6	3854.4	3834.6	3795.0	3755.4	3713.6	3674.0	3627.8	3583.8	3542.0	3515.6
20°	3907.2	3885.2	3850.0	3808.2	3766.4	3731.2	3700.4	3656.4	3610.2	3553.0	3513.4
22.5°	3975.4	3935.8	3885.2	3841.2	3801.6	3768.6	3733.4	3696.0	3647.6	3583.8	3528.8
25°	4072.2	4004.0	3946.8	3902.8	3867.6	3830.2	3790.6	3742.2	3693.8	3627.8	3561.8
27.5°	4219.6	4118.4	4045.8	4006.2	3973.2	3922.6	3872.0	3814.8	3753.2	3685.0	3610.2
30°	4397.8	4276.8	4193.2	4158.0	4118.4	4061.2	4006.2	3927.0	3841.2	3759.8	3667.4
32.5°	4606.8	4483.6	4400.0	4373.6	4309.8	4243.8	4166.8	4061.2	3949.0	3828.0	3718.0
35°	4923.6	4767.4	4690.4	4628.8	4540.8	4461.6	4331.8	4193.2	4032.6	3872.0	3735.6
37.5°	5249.2	5090.8	5011.6	4925.8	4811.4	4666.2	4492.4	4294.4	4081.0	3883.0	3715.8
40°	5684.8	5513.2	5412.0	5280.0	5095.2	4868.6	4611.2	4340.6	4081.0	3834.6	3632.2
42.5°	6193.0	6034.6	5878.4	5660.6	5363.6	5033.6	4672.8	4325.2	4010.6	3726.8	3513.4
45°	6897.0	6626.4	6377.8	6028.0	5594.6	5130.4	4679.4	4252.6	3889.6	3575.0	3337.4
47.5°	7689.0	7339.2	6899.2	6351.4	5759.6	5167.8	4615.6	4116.2	3698.2	3357.2	3097.6
50°	8602.0	8065.2	7389.8	6608.8	5843.2	5117.2	4463.8	3887.4	3434.2	3042.6	2765.4
52.5°	9647.0	8828.6	7834.2	6791.4	5830.0	4963.2	4213.0	3586.0	3080.0	2664.2	2391.4
55°	10806.4	9660.2	8258.8	6908.0	5711.2	4664.0	3819.2	3161.4	2640.0	2230.8	1991.0
57.5°	12850.2	11118.8	9068.4	7064.2	5462.6	4210.8	3319.8	2624.6	2153.8	1806.2	1577.4
60°	16647.4	13668.6	10601.8	7431.6	5088.6	3643.2	2690.6	2059.2	1665.4	1412.4	1243.0
62.5°	18997.0	15463.8	11349.8	7378.8	4481.4	2866.6	1997.6	1526.8	1216.6	1049.4	943.8
65°	18440.4	14759.8	10436.8	6338.2	3487.0	2032.8	1322.2	998.8	836.0	750.2	699.6
66°	17683.6	13972.2	9664.6	5676.0	3038.2	1698.4	1091.2	838.2	719.4	655.6	629.2
67.5°	16097.4	12533.4	8335.8	4545.2	2277.0	1265.0	805.2	657.8	585.2	552.2	534.6
70°	13472.8	10098.0	5896.0	2684.0	1234.2	686.4	514.8	457.6	440.0	429.0	422.4
72.5°	10417.0	7310.6	3445.2	1320.0	622.6	444.4	391.6	367.4	360.8	360.8	363.0
75°	6562.6	4202.0	1542.2	635.8	422.4	358.6	334.4	323.4	325.6	327.8	325.6
77.5°	2180.2	1449.8	642.4	451.0	367.4	325.6	305.8	301.4	305.8	308.0	308.0
80°	627.0	547.8	464.2	398.2	336.6	303.6	286.0	283.8	294.8	297.0	292.6
82.5°	481.8	451.0	420.2	385.0	323.4	286.0	279.4	281.6	288.2	283.8	264.0
85°	442.2	437.8	314.6	312.4	281.6	272.8	266.2	268.4	261.8	237.6	215.6
87.5°	248.6	231.0	178.2	180.4	209.0	215.6	178.2	189.2	176.0	154.0	140.8
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):

	160°	165°	170°	175°	180°
0°	3630.0	3630.0	3630.0	3630.0	3630.0
2.5°	3665.2	3663.0	3663.0	3669.6	3660.8
5°	3707.0	3704.8	3704.8	3711.4	3704.8
7.5°	3687.2	3680.6	3676.2	3674.0	3674.0
10°	3621.2	3614.6	3601.4	3597.0	3592.6
12.5°	3553.0	3546.4	3531.0	3531.0	3526.6
15°	3511.2	3502.4	3491.4	3484.8	3480.4
17.5°	3489.2	3476.0	3462.8	3456.2	3451.8
20°	3480.4	3462.8	3447.4	3436.4	3436.4
22.5°	3482.6	3460.6	3443.0	3429.8	3425.4
25°	3504.6	3471.6	3449.6	3436.4	3432.0
27.5°	3535.4	3495.8	3467.2	3449.6	3443.0
30°	3577.2	3522.2	3482.6	3460.6	3451.8
32.5°	3605.8	3528.8	3478.2	3447.4	3436.4
35°	3603.6	3504.6	3443.0	3403.4	3390.2
37.5°	3564.0	3447.4	3366.0	3317.6	3295.6
40°	3476.0	3341.8	3256.0	3209.8	3183.4
42.5°	3348.4	3203.2	3126.2	3075.6	3047.0
45°	3148.2	3005.2	2910.6	2871.0	2833.6
47.5°	2871.0	2725.8	2644.4	2587.2	2563.0
50°	2545.4	2400.2	2314.4	2268.2	2246.2
52.5°	2189.0	2050.4	1988.8	1944.8	1914.0
55°	1819.4	1691.8	1665.4	1617.0	1588.4
57.5°	1471.8	1397.0	1372.8	1324.4	1300.2
60°	1150.6	1126.4	1100.0	1069.2	1056.0
62.5°	891.0	869.0	862.4	842.6	840.4
65°	679.8	682.0	677.6	673.2	668.8
66°	618.2	616.0	618.2	613.8	611.6
67.5°	525.8	534.6	541.2	539.0	539.0
70°	426.8	433.4	442.2	440.0	440.0
72.5°	365.2	376.2	380.6	378.4	378.4
75°	330.0	341.0	341.0	336.6	334.4
77.5°	308.0	312.4	308.0	303.6	299.2
80°	286.0	281.6	275.0	268.4	264.0
82.5°	248.6	237.6	231.0	220.0	220.0
85°	200.2	191.4	176.0	165.0	154.0
87.5°	129.8	125.4	114.4	85.8	68.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)