

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: P159611

Luminaire Tested: **VST-E11-LED-E-U-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159611
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-T3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (231) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34520.2 lumens
Efficiency: N/A
Efficacy: 128.0 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



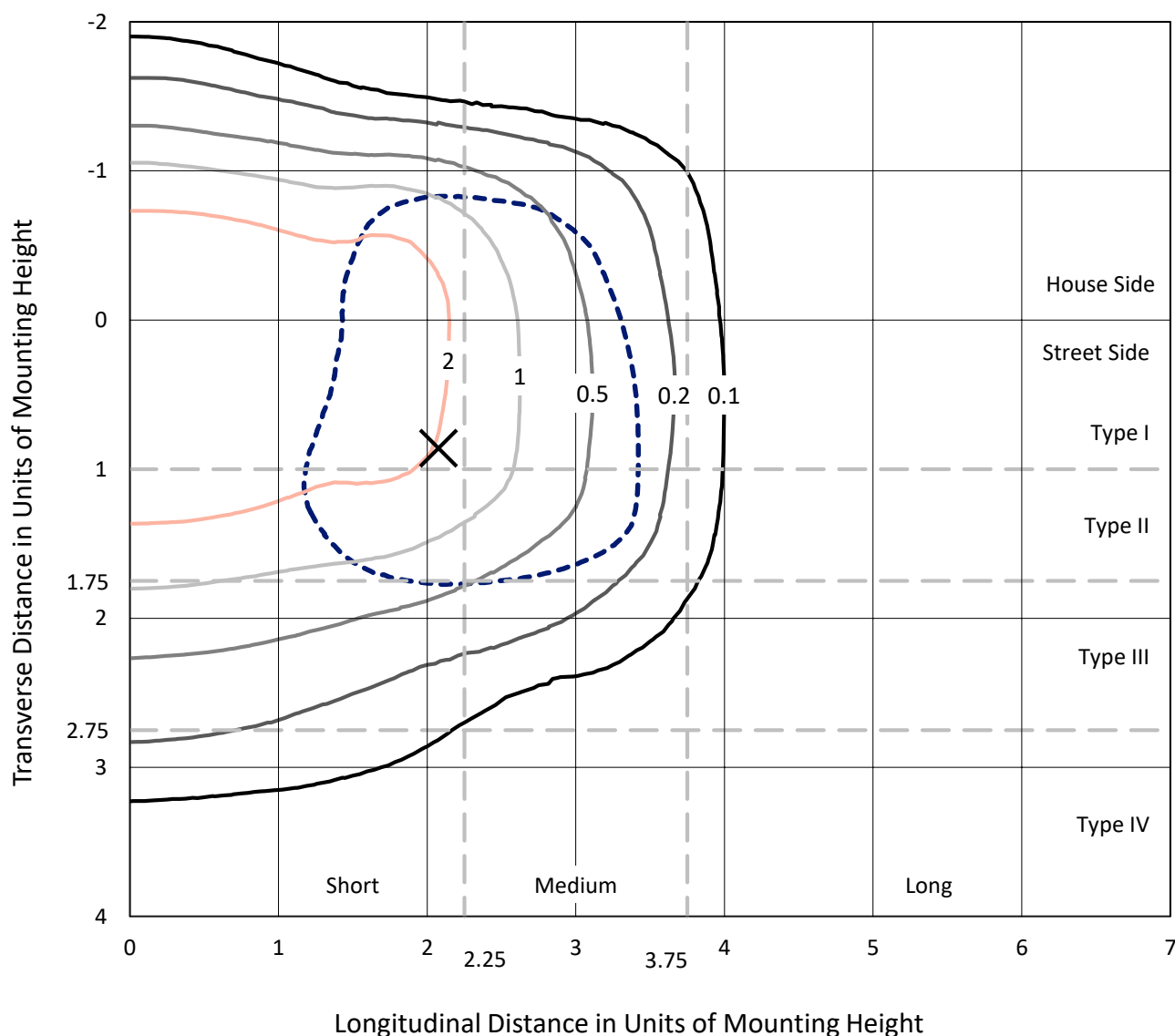
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

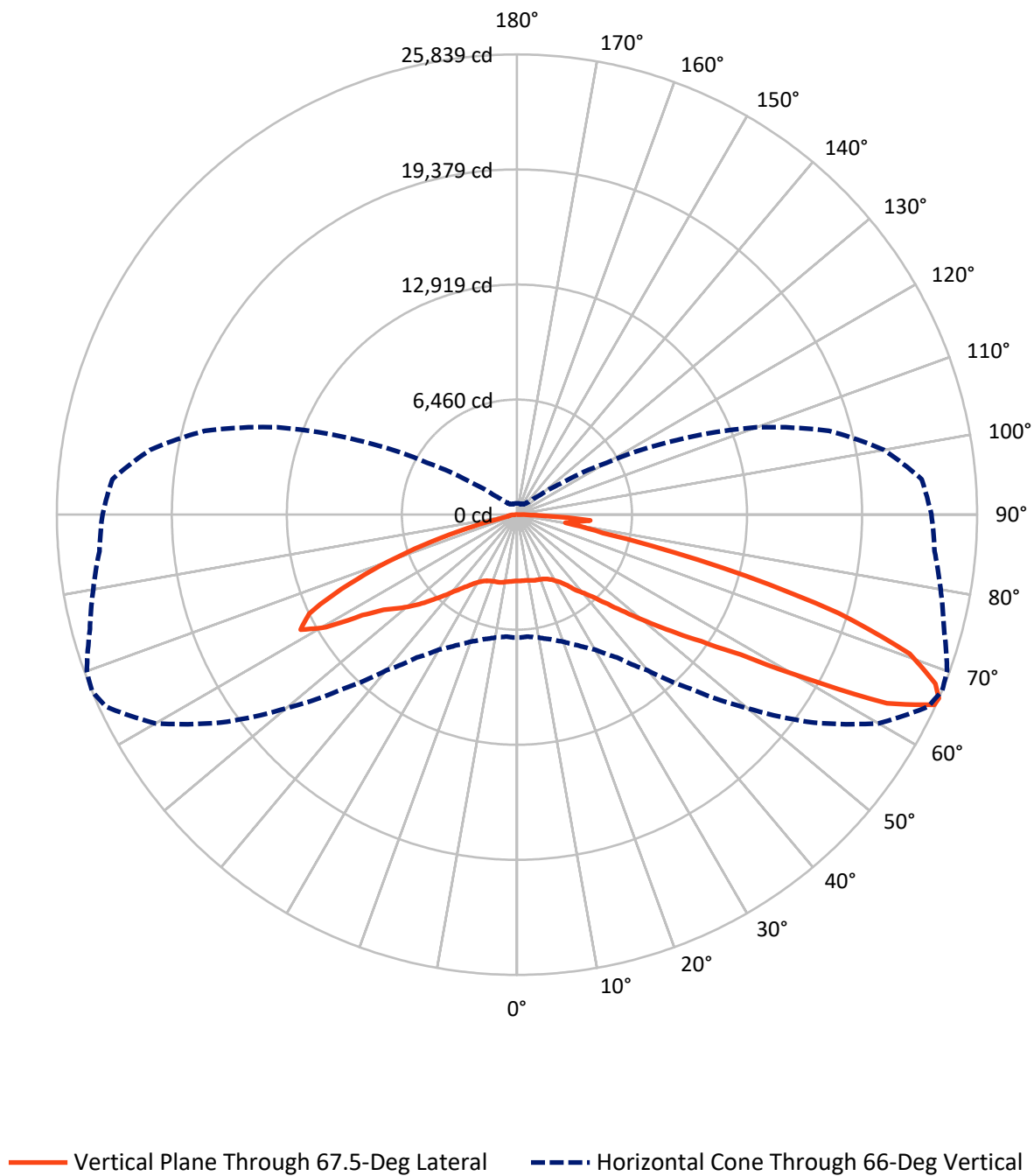


Based on 30 foot mounting height. Maximum calculated value = 4.1 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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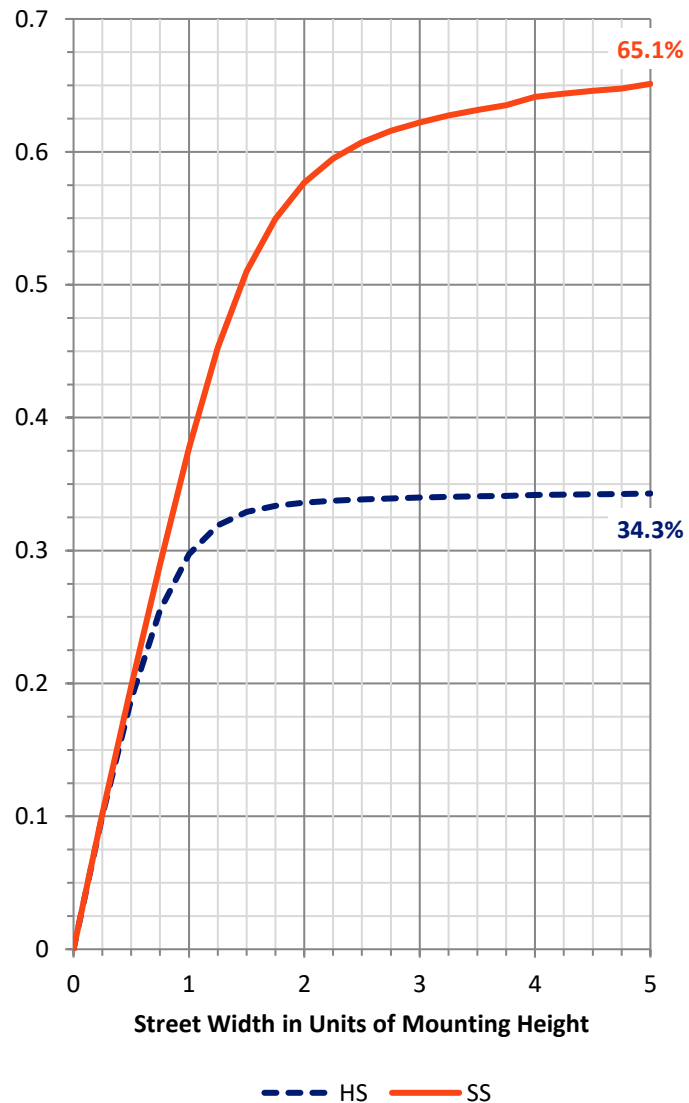
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11945.5	0.0	11945.5
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	22574.7	0.0	22574.7
	% Fixture	65.4	0.0	65.4
Total	Lumens	34520.2	0.0	34520.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.4	1.0
10°-20°	1058.4	3.1
20°-30°	1819.4	5.3
30°-40°	2940.4	8.5
40°-50°	4873.0	14.1
50°-60°	7647.8	22.2
60°-70°	10456.0	30.3
70°-80°	4598.1	13.3
80°-90°	769.6	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°	34520.2	100.0
0°-180°	34520.2	100.0

Coefficient of Utilization



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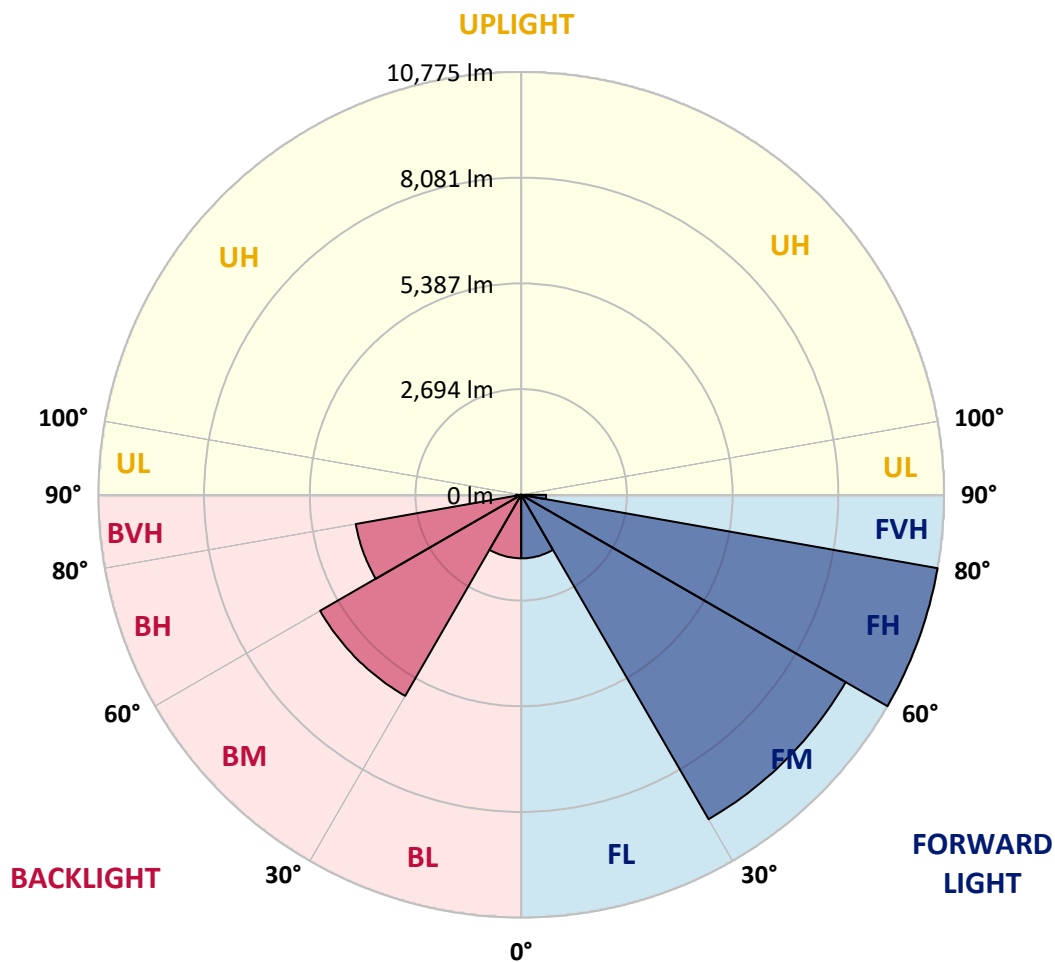
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1619.3	4.7			
FM	(30°-60°)	9545.9	27.7			
FH	(60°-80°)	10774.5	31.2			G4/12000
FVH	(80°-90°)	635.0	1.8			G4/750
BL	(0°-30°)	1615.9	4.7	B3/2500		
BM	(30°-60°)	5915.4	17.1	B4/8500		
BH	(60°-80°)	4279.6	12.4	B4/5000		G4/5000
BVH	(80°-90°)	134.7	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°	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8
2.5°	3718.0	3718.0	3720.2	3718.0	3718.0	3715.7	3724.8	3724.8	3724.8	3722.5	3729.3
5°	3709.0	3709.0	3711.2	3711.2	3713.5	3711.2	3718.0	3720.2	3720.2	3720.2	3727.0
7.5°	3686.4	3693.2	3688.6	3690.9	3693.2	3699.9	3709.0	3713.5	3718.0	3724.8	3727.0
10°	3639.0	3650.3	3648.0	3654.8	3657.0	3677.4	3684.1	3693.2	3709.0	3718.0	3724.8
12.5°	3573.5	3580.3	3582.5	3591.6	3600.6	3625.4	3643.5	3659.3	3681.9	3704.4	3727.0
15°	3521.6	3526.1	3526.1	3535.1	3548.7	3571.3	3593.8	3620.9	3654.8	3693.2	3729.3
17.5°	3537.4	3548.7	3539.7	3537.4	3541.9	3555.5	3575.8	3598.3	3639.0	3681.9	3724.8
20°	3641.2	3643.5	3639.0	3627.7	3618.7	3620.9	3620.9	3625.4	3650.3	3684.1	3718.0
22.5°	3727.0	3736.0	3733.8	3736.0	3733.8	3742.8	3738.3	3729.3	3720.2	3722.5	3738.3
25°	3801.5	3810.5	3810.5	3817.3	3828.6	3846.7	3860.2	3858.0	3844.4	3826.3	3819.6
27.5°	3923.4	3923.4	3923.4	3930.2	3946.0	3968.6	3991.1	4004.7	4016.0	3997.9	3959.5
30°	4115.3	4117.6	4110.8	4113.0	4124.3	4153.7	4180.8	4201.1	4223.7	4221.4	4171.7
32.5°	4325.2	4334.3	4332.0	4341.0	4356.8	4383.9	4413.3	4444.9	4474.2	4492.3	4460.7
35°	4596.1	4605.2	4607.4	4621.0	4639.0	4679.7	4720.3	4760.9	4792.5	4806.1	4799.3
37.5°	5040.8	5043.1	5034.1	5013.8	5020.5	5052.1	5099.5	5165.0	5185.3	5198.9	5230.5
40°	5706.8	5700.0	5663.9	5645.8	5634.6	5648.1	5639.1	5691.0	5738.4	5740.6	5738.4
42.5°	6514.9	6494.6	6460.8	6456.3	6451.7	6447.2	6422.4	6424.7	6467.5	6478.8	6465.3
45°	7318.6	7293.8	7268.9	7291.5	7264.4	7334.4	7354.7	7408.9	7415.7	7438.2	7404.4
47.5°	7977.8	7980.0	7980.0	8011.6	8065.8	8199.0	8318.6	8422.5	8460.9	8515.0	8521.8
50°	8476.7	8490.2	8533.1	8634.7	8749.8	8973.3	9174.2	9361.6	9530.9	9594.1	9761.1
52.5°	8767.9	8804.0	8894.3	9063.6	9269.0	9558.0	9874.0	10192.3	10485.8	10734.1	10932.7
55°	8715.9	8743.0	8901.1	9165.2	9485.7	9874.0	10316.5	10777.0	11235.2	11655.1	11980.2
57.5°	8381.8	8399.9	8557.9	8855.9	9255.5	9776.9	10402.2	11086.2	11729.6	12406.8	12962.2
60°	7943.9	7971.0	8117.7	8352.5	8770.1	9325.5	10050.1	10977.9	12005.0	13070.5	14108.9
62.5°	7664.0	7657.2	7785.9	7995.8	8309.6	8813.0	9510.6	10609.9	12032.1	13833.5	15885.5
65°	7199.0	7178.6	7311.8	7551.1	7892.0	8379.6	9041.0	10097.5	11747.7	14122.5	17032.3
66°	6910.0	6869.4	7002.6	7244.1	7585.0	8104.2	8738.5	9781.5	11402.3	13840.3	16910.4
67.5°	6404.3	6384.0	6447.2	6636.8	6889.7	7377.3	8038.7	9088.4	10585.1	12991.5	16016.5
70°	5205.6	5160.5	5210.2	5295.9	5393.0	5512.6	5919.0	6752.0	8018.4	10350.3	12903.5
72.5°	3546.4	3523.9	3616.4	3747.3	4006.9	4128.8	4289.1	4424.6	4871.5	6524.0	9000.4
75°	2697.6	2711.2	2828.6	3045.3	3379.4	3740.6	4092.7	4221.4	4072.4	3943.7	5108.6
77.5°	1512.5	1591.5	1733.7	2009.1	2363.5	2873.7	3487.7	4165.0	4503.6	4420.1	4133.4
80°	623.1	611.8	681.7	833.0	954.9	1372.5	2099.4	2948.2	3900.8	4503.6	4408.8
82.5°	173.8	178.3	230.3	295.7	381.5	485.3	758.5	1219.0	1986.5	3090.4	4045.3
85°	54.2	54.2	74.5	110.6	130.9	151.2	191.9	316.0	539.5	1076.8	2182.9
87.5°	11.3	11.3	15.8	31.6	33.9	33.9	42.9	58.7	51.9	47.4	212.2
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8
2.5°	3722.5	3718.0	3720.2	3722.5	3720.2	3720.2	3718.0	3715.7	3718.0	3718.0	3724.8
5°	3720.2	3718.0	3720.2	3720.2	3720.2	3722.5	3722.5	3722.5	3729.3	3729.3	3740.6
7.5°	3724.8	3724.8	3729.3	3729.3	3729.3	3729.3	3731.5	3736.0	3747.3	3745.1	3765.4
10°	3733.8	3738.3	3749.6	3751.9	3751.9	3758.6	3763.1	3772.2	3783.5	3788.0	3806.0
12.5°	3745.1	3767.7	3788.0	3792.5	3799.3	3810.5	3817.3	3821.8	3842.1	3848.9	3871.5
15°	3758.6	3790.2	3815.1	3824.1	3833.1	3846.7	3855.7	3862.5	3880.5	3889.6	3916.6
17.5°	3760.9	3797.0	3826.3	3839.9	3851.2	3867.0	3880.5	3894.1	3914.4	3927.9	3955.0
20°	3758.6	3806.0	3851.2	3869.2	3880.5	3909.9	3930.2	3948.2	3973.1	3986.6	4013.7
22.5°	3783.5	3837.6	3898.6	3921.2	3939.2	3979.9	4006.9	4036.3	4067.9	4076.9	4097.2
25°	3842.1	3898.6	3975.3	4006.9	4038.5	4092.7	4131.1	4174.0	4205.6	4210.1	4216.9
27.5°	3941.5	3993.4	4086.0	4133.4	4185.3	4262.0	4318.5	4361.4	4406.5	4406.5	4402.0
30°	4142.4	4153.7	4250.7	4311.7	4388.4	4501.3	4584.8	4632.3	4666.1	4666.1	4627.7
32.5°	4402.0	4388.4	4476.5	4542.0	4648.1	4806.1	4918.9	4955.1	4991.2	4979.9	4914.4
35°	4776.7	4738.3	4788.0	4887.3	5007.0	5223.7	5341.1	5422.4	5444.9	5413.3	5309.5
37.5°	5248.5	5244.0	5268.8	5379.5	5512.6	5792.6	5912.2	5964.1	5946.1	5889.6	5706.8
40°	5747.4	5733.9	5718.1	5792.6	5941.6	6277.9	6490.1	6517.2	6492.4	6408.8	6178.6
42.5°	6413.4	6413.4	6338.9	6359.2	6483.3	6860.3	7110.9	7196.7	7199.0	7077.0	6770.0
45°	7329.9	7320.9	7189.9	7158.3	7253.1	7623.3	7946.2	7993.6	7993.6	7833.3	7496.9
47.5°	8431.5	8420.2	8291.5	8180.9	8199.0	8598.6	8867.2	8939.4	8876.2	8756.6	8357.0
50°	9673.1	9652.8	9521.8	9418.0	9372.9	9776.9	10004.9	10038.8	9946.2	9804.0	9370.6
52.5°	10932.7	10993.7	10916.9	10860.5	10876.3	11138.2	11372.9	11212.7	11165.3	11011.8	10576.1
55°	12244.3	12431.7	12601.0	12551.3	12610.0	12865.1	12910.3	12698.1	12612.3	12501.7	12016.3
57.5°	13564.9	14111.2	14666.5	14822.3	14966.8	15332.5	15280.6	14932.9	14998.4	15163.2	14616.9
60°	15409.2	16987.2	18395.8	18655.4	19104.6	19416.2	19486.2	19418.4	19723.2	19637.4	19154.3
62.5°	18242.3	20872.2	22831.7	23319.3	23770.8	23755.0	23517.9	23274.1	23574.4	23574.4	22312.5
65°	20265.0	23249.3	25346.4	25750.5	25732.5	25188.4	24628.6	24141.0	24098.1	23764.0	21919.7
66°	20359.8	23432.1	25486.4	25838.6	25703.1	24827.2	24156.8	23538.2	23274.1	22809.1	20919.6
67.5°	19506.5	22915.2	25030.4	25337.4	24980.7	23725.6	22802.3	21973.8	21590.1	20806.8	19027.9
70°	16000.7	19693.8	22770.7	23398.3	22994.2	21405.0	20140.8	19021.1	18287.5	17156.5	15874.3
72.5°	11680.0	14540.1	17872.1	18892.4	18829.2	17366.4	16348.3	15323.4	14359.5	13330.1	12393.3
75°	7591.7	9458.6	11316.5	11912.5	11625.8	10779.2	10050.1	9451.9	8537.6	7822.0	7648.2
77.5°	4334.3	5295.9	5009.2	4934.7	4575.8	3693.2	2456.1	1722.4	1555.4	1941.4	2128.8
80°	4124.3	3738.3	3061.1	2760.8	2537.4	1729.2	907.5	638.9	559.8	573.4	616.3
82.5°	4650.3	4846.7	3964.1	3311.7	2882.7	2103.9	1149.0	535.0	390.5	462.8	519.2
85°	3485.5	4907.7	4864.8	4122.1	3381.6	2424.5	1359.0	408.6	234.8	325.1	424.4
87.5°	706.6	1162.6	1119.7	984.2	837.5	584.7	228.0	128.7	117.4	160.3	243.8
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8	3724.8
2.5°	3729.3	3729.3	3733.8	3740.6	3742.8	3742.8	3747.3	3742.8	3751.9	3754.1	3756.4
5°	3749.6	3756.4	3760.9	3772.2	3778.9	3783.5	3790.2	3785.7	3794.7	3797.0	3801.5
7.5°	3772.2	3783.5	3792.5	3797.0	3806.0	3806.0	3808.3	3803.8	3801.5	3794.7	3792.5
10°	3812.8	3819.6	3830.9	3826.3	3821.8	3806.0	3792.5	3772.2	3760.9	3740.6	3729.3
12.5°	3878.3	3882.8	3882.8	3862.5	3833.1	3797.0	3763.1	3729.3	3702.2	3679.6	3666.1
15°	3923.4	3932.4	3921.2	3891.8	3848.9	3799.3	3754.1	3709.0	3672.8	3643.5	3625.4
17.5°	3957.3	3955.0	3934.7	3894.1	3853.4	3810.5	3769.9	3722.5	3677.4	3634.5	3607.4
20°	4009.2	3986.6	3950.5	3907.6	3864.7	3828.6	3797.0	3751.9	3704.4	3645.8	3605.1
22.5°	4079.2	4038.5	3986.6	3941.5	3900.8	3867.0	3830.9	3792.5	3742.8	3677.4	3620.9
25°	4178.5	4108.5	4049.8	4004.7	3968.6	3930.2	3889.6	3839.9	3790.2	3722.5	3654.8
27.5°	4329.8	4225.9	4151.4	4110.8	4076.9	4025.0	3973.1	3914.4	3851.2	3781.2	3704.4
30°	4512.6	4388.4	4302.7	4266.5	4225.9	4167.2	4110.8	4029.5	3941.5	3858.0	3763.1
32.5°	4727.1	4600.6	4514.9	4487.8	4422.3	4354.6	4275.6	4167.2	4052.1	3927.9	3815.1
35°	5052.1	4891.9	4812.8	4749.6	4659.3	4578.1	4444.9	4302.7	4137.9	3973.1	3833.1
37.5°	5386.2	5223.7	5142.4	5054.4	4937.0	4788.0	4609.7	4406.5	4187.5	3984.4	3812.8
40°	5833.2	5657.1	5553.3	5417.8	5228.2	4995.7	4731.6	4453.9	4187.5	3934.7	3727.0
42.5°	6354.7	6192.1	6031.9	5808.4	5503.6	5165.0	4794.8	4438.1	4115.3	3824.1	3605.1
45°	7077.0	6799.4	6544.3	6185.4	5740.6	5264.3	4801.6	4363.6	3991.1	3668.3	3424.5
47.5°	7889.7	7530.8	7079.3	6517.2	5910.0	5302.7	4736.1	4223.7	3794.7	3444.8	3178.5
50°	8826.6	8275.7	7582.7	6781.3	5995.7	5250.8	4580.3	3988.9	3523.9	3122.0	2837.6
52.5°	9898.8	9059.1	8038.7	6968.7	5982.2	5092.8	4323.0	3679.6	3160.4	2733.8	2453.8
55°	11088.5	9912.4	8474.4	7088.3	5860.3	4785.8	3918.9	3243.9	2708.9	2289.0	2043.0
57.5°	13185.7	11409.1	9305.1	7248.6	5605.2	4320.7	3406.5	2693.1	2210.0	1853.4	1618.6
60°	17082.0	14025.4	10878.6	7625.6	5221.4	3738.3	2760.8	2113.0	1708.9	1449.3	1275.4
62.5°	19492.9	15867.5	11646.1	7571.4	4598.4	2941.4	2049.7	1566.7	1248.4	1076.8	968.4
65°	18921.8	15145.1	10709.3	6503.7	3578.0	2085.9	1356.7	1024.9	857.8	769.8	717.9
66°	18145.2	14337.0	9916.9	5824.2	3117.5	1742.7	1119.7	860.1	738.2	672.7	645.6
67.5°	16517.6	12860.6	8553.4	4663.9	2336.4	1298.0	826.2	675.0	600.5	566.6	548.6
70°	13824.5	10361.6	6049.9	2754.1	1266.4	704.3	528.2	469.5	451.5	440.2	433.4
72.5°	10688.9	7501.4	3535.1	1354.5	638.9	456.0	401.8	377.0	370.2	370.2	372.5
75°	6733.9	4311.7	1582.5	652.4	433.4	368.0	343.1	331.8	334.1	336.4	334.1
77.5°	2237.1	1487.6	659.2	462.8	377.0	334.1	313.8	309.3	313.8	316.0	316.0
80°	643.4	562.1	476.3	408.6	345.4	311.5	293.5	291.2	302.5	304.8	300.2
82.5°	494.4	462.8	431.2	395.1	331.8	293.5	286.7	289.0	295.7	291.2	270.9
85°	453.7	449.2	322.8	320.6	289.0	279.9	273.1	275.4	268.6	243.8	221.2
87.5°	255.1	237.0	182.9	185.1	214.5	221.2	182.9	194.1	180.6	158.0	144.5
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):

	160°	165°	170°	175°	180°
0°	3724.8	3724.8	3724.8	3724.8	3724.8
2.5°	3760.9	3758.6	3758.6	3765.4	3756.4
5°	3803.8	3801.5	3801.5	3808.3	3801.5
7.5°	3783.5	3776.7	3772.2	3769.9	3769.9
10°	3715.7	3709.0	3695.4	3690.9	3686.4
12.5°	3645.8	3639.0	3623.2	3623.2	3618.7
15°	3602.9	3593.8	3582.5	3575.8	3571.3
17.5°	3580.3	3566.7	3553.2	3546.4	3541.9
20°	3571.3	3553.2	3537.4	3526.1	3526.1
22.5°	3573.5	3550.9	3532.9	3519.3	3514.8
25°	3596.1	3562.2	3539.7	3526.1	3521.6
27.5°	3627.7	3587.1	3557.7	3539.7	3532.9
30°	3670.6	3614.1	3573.5	3550.9	3541.9
32.5°	3699.9	3620.9	3569.0	3537.4	3526.1
35°	3697.7	3596.1	3532.9	3492.2	3478.7
37.5°	3657.0	3537.4	3453.9	3404.2	3381.6
40°	3566.7	3429.0	3341.0	3293.6	3266.5
42.5°	3435.8	3286.8	3207.8	3155.9	3126.5
45°	3230.4	3083.7	2986.6	2945.9	2907.6
47.5°	2945.9	2797.0	2713.4	2654.7	2629.9
50°	2611.8	2462.9	2374.8	2327.4	2304.8
52.5°	2246.1	2103.9	2040.7	1995.6	1964.0
55°	1866.9	1736.0	1708.9	1659.2	1629.9
57.5°	1510.2	1433.5	1408.6	1359.0	1334.1
60°	1180.6	1155.8	1128.7	1097.1	1083.6
62.5°	914.3	891.7	884.9	864.6	862.3
65°	697.5	699.8	695.3	690.8	686.3
66°	634.3	632.1	634.3	629.8	627.6
67.5°	539.5	548.6	555.3	553.1	553.1
70°	437.9	444.7	453.7	451.5	451.5
72.5°	374.7	386.0	390.5	388.3	388.3
75°	338.6	349.9	349.9	345.4	343.1
77.5°	316.0	320.6	316.0	311.5	307.0
80°	293.5	289.0	282.2	275.4	270.9
82.5°	255.1	243.8	237.0	225.7	225.7
85°	205.4	196.4	180.6	169.3	158.0
87.5°	133.2	128.7	117.4	88.0	70.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)