

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: P159835

Luminaire Tested: **VST-F11-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159835
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
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-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (77) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27027.6 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

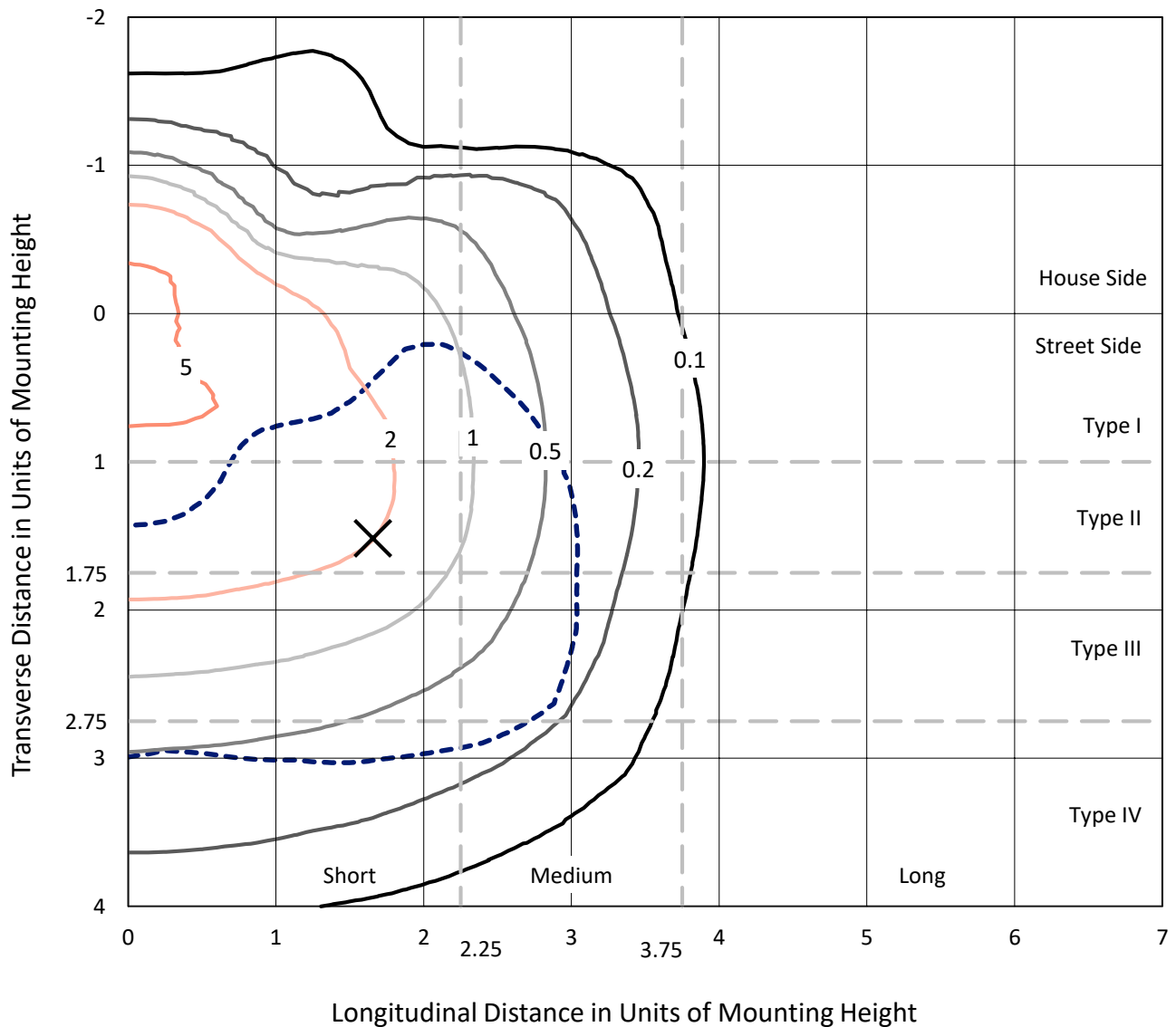
Input Watts (W): 282.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

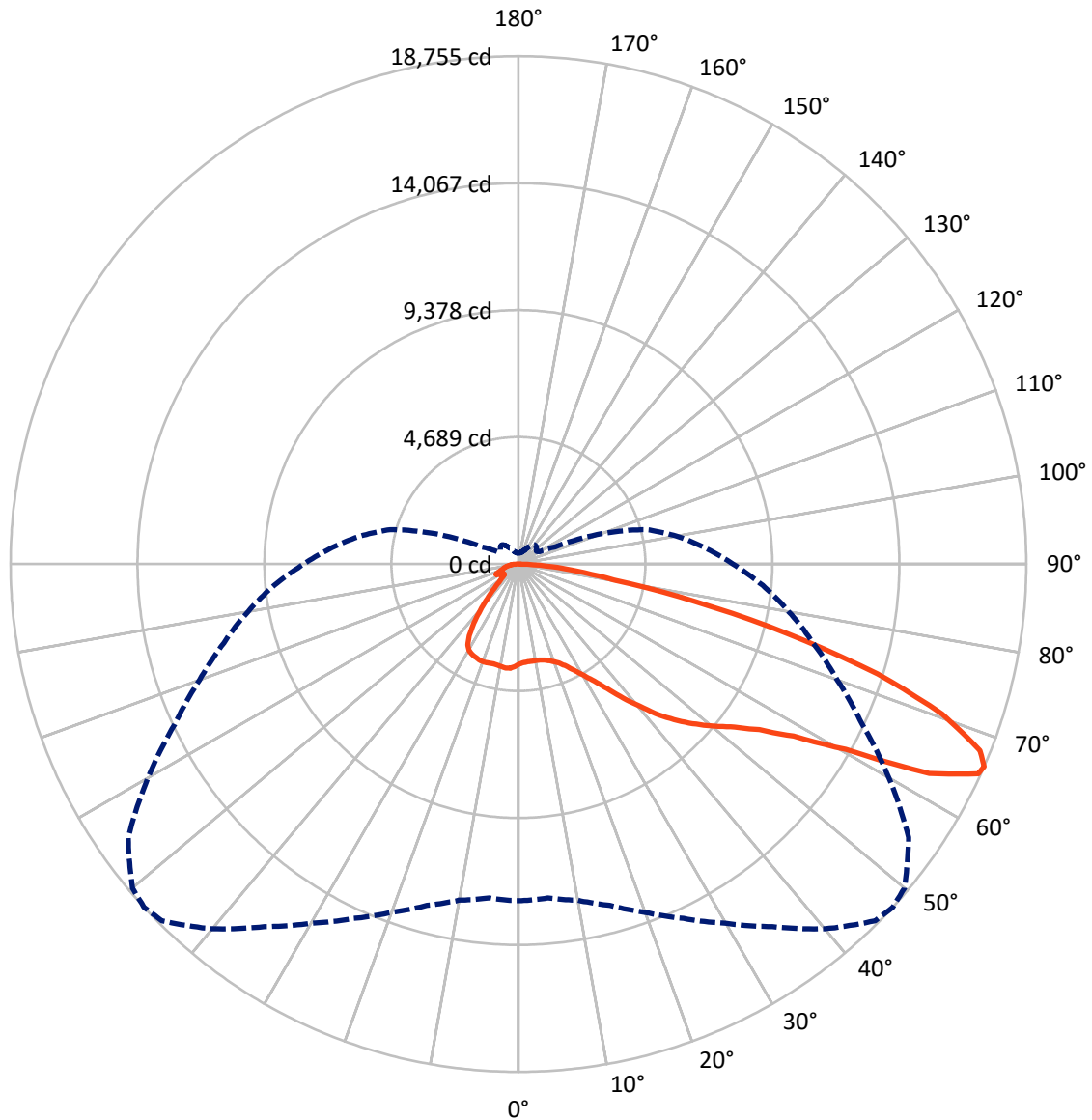
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical



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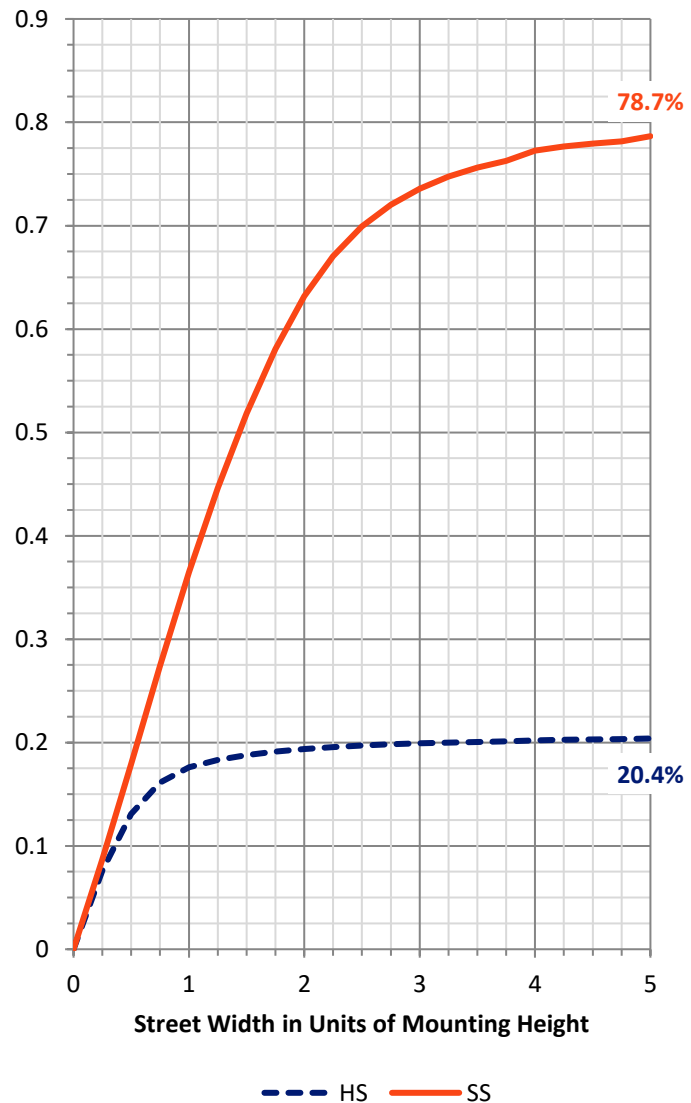
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5595.9	0.0	5595.9
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	21431.7	0.0	21431.7
	% Fixture	79.3	0.0	79.3
Total	Lumens	27027.6	0.0	27027.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.4	1.3
10°-20°	1068.7	4.0
20°-30°	1823.5	6.7
30°-40°	2752.4	10.2
40°-50°	3577.4	13.2
50°-60°	4907.9	18.2
60°-70°	7549.9	27.9
70°-80°	4364.3	16.1
80°-90°	627.0	2.3
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°	27027.6	100.0
0°-180°	27027.6	100.0

Coefficient of Utilization



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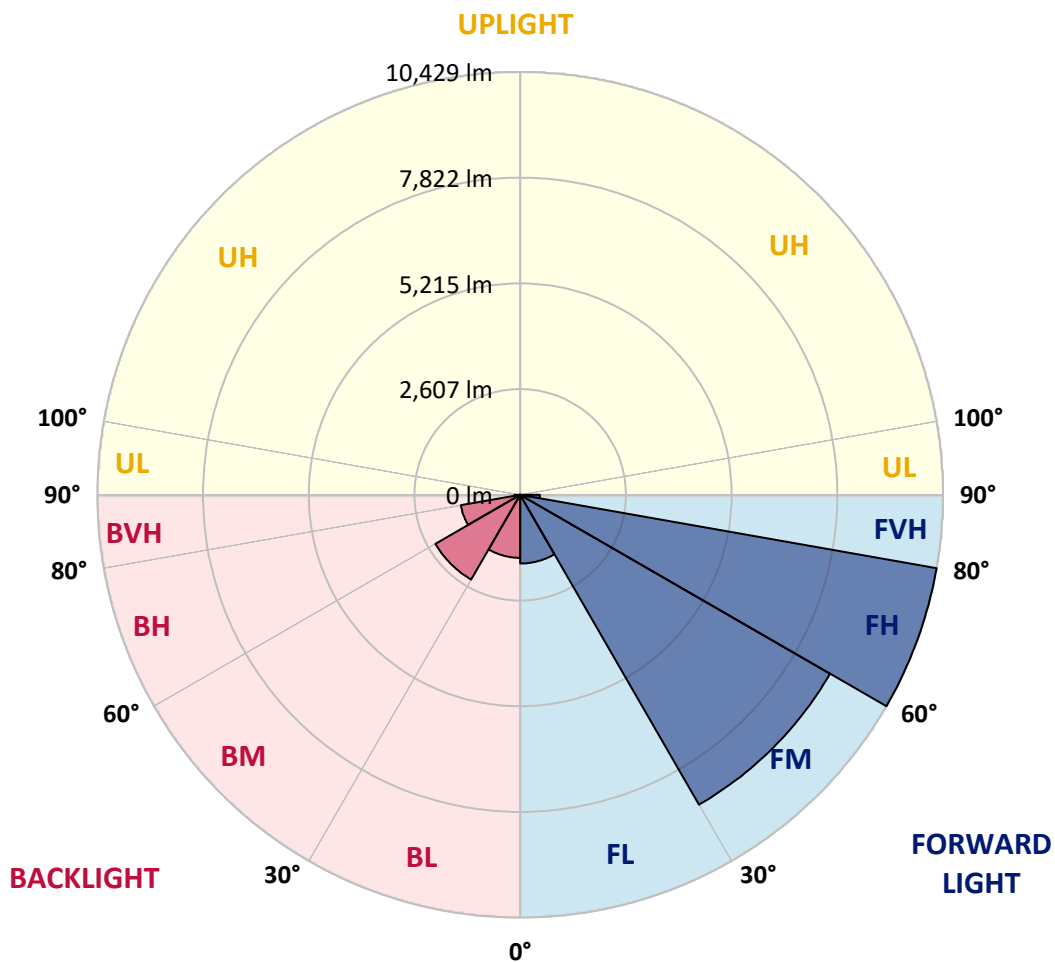
CATALOG NUMBER: VST-F11-LED-E-U-T4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1694.1	6.3			
FM	(30°-60°)	8823.4	32.6			
FH	(60°-80°)	10429.1	38.6			G4/12000
FVH	(80°-90°)	485.2	1.8			G3/500
BL	(0°-30°)	1554.6	5.8	B3/2500		
BM	(30°-60°)	2414.3	8.9	B2/2500		
BH	(60°-80°)	1485.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	141.8	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7
2.5°	3603.3	3605.1	3606.9	3606.9	3612.3	3612.3	3621.4	3626.9	3628.7	3639.6	3646.8
5°	3536.1	3534.2	3536.1	3539.7	3548.8	3556.0	3574.2	3586.9	3597.8	3616.0	3625.0
7.5°	3507.0	3510.6	3514.3	3516.1	3523.3	3541.5	3557.8	3570.6	3592.4	3614.1	3623.2
10°	3545.1	3550.6	3545.1	3548.8	3548.8	3565.1	3572.4	3581.5	3597.8	3617.8	3623.2
12.5°	3634.1	3645.0	3634.1	3625.0	3617.8	3632.3	3628.7	3621.4	3630.5	3635.9	3635.9
15°	3781.2	3781.2	3774.0	3761.3	3743.1	3744.9	3728.6	3712.2	3705.0	3692.2	3683.2
17.5°	3924.7	3921.1	3904.7	3888.4	3875.7	3870.2	3846.6	3824.8	3799.4	3779.4	3757.6
20°	4064.6	4079.1	4059.1	4035.5	4015.5	4002.8	3984.6	3941.1	3910.2	3877.5	3855.7
22.5°	4306.1	4293.4	4271.6	4237.1	4217.1	4195.3	4157.2	4110.0	4062.7	4022.8	3995.5
25°	4554.9	4542.2	4511.3	4485.9	4456.8	4438.7	4396.9	4338.8	4293.4	4231.6	4195.3
27.5°	4821.9	4811.0	4774.7	4754.7	4734.7	4712.9	4676.6	4616.7	4574.9	4504.1	4465.9
30°	5123.4	5121.6	5072.5	5068.9	5039.8	5016.2	4990.8	4939.9	4898.2	4827.3	4781.9
32.5°	5444.8	5437.6	5403.1	5392.2	5412.1	5395.8	5359.5	5306.8	5252.3	5210.5	5159.7
35°	5902.5	5889.8	5869.8	5878.9	5891.6	5937.0	5880.7	5835.3	5769.9	5715.4	5644.6
37.5°	6236.7	6218.5	6242.1	6293.0	6365.6	6400.1	6449.2	6451.0	6420.1	6347.5	6285.7
40°	6543.6	6536.3	6590.8	6661.7	6796.1	6894.1	6986.7	7032.2	7043.0	6995.8	6903.2
42.5°	6803.3	6825.1	6897.8	7006.7	7195.6	7344.5	7517.1	7624.2	7691.4	7666.0	7624.2
45°	7112.1	7123.0	7212.0	7350.0	7529.8	7776.8	8003.8	8185.4	8303.5	8301.6	8254.4
47.5°	7498.9	7500.7	7577.0	7738.6	7931.1	8181.8	8468.7	8710.3	8866.5	8873.7	8837.4
50°	7958.4	7954.8	8038.3	8190.9	8396.1	8637.6	8942.7	9244.2	9462.2	9462.2	9409.5
52.5°	8550.5	8543.2	8588.6	8723.0	8921.0	9175.2	9478.5	9827.2	10063.3	10114.2	9999.7
55°	9340.5	9351.4	9362.3	9480.3	9649.2	9850.8	10199.5	10521.0	10837.0	10866.1	10798.9
57.5°	10254.0	10217.7	10295.8	10488.3	10680.8	10933.3	11180.2	11559.8	11934.0	11997.5	11988.4
60°	11681.5	11634.3	11714.2	11959.4	12171.9	12569.6	12992.8	13483.1	13926.3	14057.0	13899.0
62.5°	12994.6	13052.7	13161.7	13446.8	13755.6	14285.9	14921.5	15762.4	16603.3	17061.0	17028.3
65°	12876.5	12822.1	13030.9	13419.6	13978.9	14654.6	15444.6	16458.0	17669.4	18588.3	18670.1
66°	12438.8	12382.5	12607.7	13052.7	13692.0	14443.9	15321.1	16352.7	17591.3	18630.1	18755.4
67.5°	11716.0	11659.7	11914.0	12319.0	12978.2	13924.5	14872.5	16000.3	17288.0	18283.2	18384.9
70°	10321.2	10244.9	10442.9	10900.6	11434.5	12349.9	13252.5	14447.5	15769.7	16565.1	16603.3
72.5°	8743.0	8565.0	8775.7	9128.0	9509.4	10266.7	11053.1	11870.4	12923.8	13659.3	13870.0
75°	6343.8	6436.5	6498.2	6730.7	6983.1	7609.7	8071.0	8755.7	9571.1	10103.3	10272.2
77.5°	3365.3	3505.2	3592.4	3824.8	4242.5	4720.2	5219.6	5642.8	6178.6	6476.4	6683.4
80°	1888.8	1986.9	2128.5	2312.0	2515.4	2882.2	3178.3	3396.2	3472.5	3525.2	3572.4
82.5°	1038.8	1287.7	1498.3	1625.5	1745.3	1892.4	2068.6	2250.2	2308.3	2221.2	2175.8
85°	161.6	237.9	724.6	884.5	962.6	1075.2	1202.3	1336.7	1338.5	1151.4	1256.8
87.5°	45.4	50.9	103.5	156.2	152.6	123.5	152.6	277.9	163.5	81.7	94.4
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7
2.5°	3650.5	3654.1	3663.2	3672.3	3681.3	3690.4	3695.9	3705.0	3712.2	3723.1	3735.8
5°	3635.9	3645.0	3661.4	3681.3	3699.5	3715.9	3728.6	3746.7	3763.1	3777.6	3799.4
7.5°	3635.9	3654.1	3681.3	3703.1	3719.5	3739.5	3759.4	3777.6	3795.8	3810.3	3824.8
10°	3637.8	3655.9	3683.2	3708.6	3726.7	3748.5	3764.9	3781.2	3801.2	3810.3	3828.5
12.5°	3645.0	3652.3	3672.3	3697.7	3719.5	3741.3	3757.6	3774.0	3795.8	3799.4	3812.1
15°	3681.3	3670.4	3675.9	3694.1	3717.7	3735.8	3754.0	3766.7	3781.2	3777.6	3788.5
17.5°	3748.5	3721.3	3710.4	3712.2	3723.1	3735.8	3743.1	3744.9	3746.7	3730.4	3732.2
20°	3839.4	3801.2	3775.8	3763.1	3748.5	3735.8	3715.9	3692.2	3670.4	3637.8	3634.1
22.5°	3975.6	3919.3	3892.0	3857.5	3813.9	3759.4	3710.4	3652.3	3605.1	3556.0	3537.9
25°	4173.5	4115.4	4086.3	4031.9	3953.8	3875.7	3804.8	3726.7	3657.7	3599.6	3572.4
27.5°	4438.7	4380.6	4349.7	4293.4	4197.1	4119.0	4021.0	3937.4	3853.9	3768.5	3734.0
30°	4760.1	4709.3	4674.8	4629.4	4545.8	4460.5	4346.1	4217.1	4084.5	3948.3	3881.1
32.5°	5139.7	5083.4	5058.0	5005.3	4918.1	4829.2	4702.0	4536.8	4315.2	4100.9	3966.5
35°	5613.7	5550.2	5521.1	5452.1	5350.4	5219.6	5083.4	4861.8	4562.2	4264.3	4044.6
37.5°	6247.6	6105.9	6009.7	5851.7	5688.2	5504.8	5310.4	5083.4	4729.3	4360.6	4055.5
40°	6808.8	6665.3	6480.0	6253.0	5998.8	5746.3	5524.7	5266.8	4881.8	4429.6	4021.0
42.5°	7506.2	7251.9	6955.9	6648.9	6311.1	6000.6	5737.2	5433.9	4985.3	4447.8	3924.7
45°	8143.6	7840.3	7444.4	7035.8	6616.3	6225.8	5929.7	5591.9	5074.3	4447.8	3808.5
47.5°	8724.8	8361.6	7887.6	7379.0	6890.5	6463.7	6127.7	5753.6	5199.7	4504.1	3774.0
50°	9262.4	8844.7	8305.3	7715.0	7166.5	6710.7	6349.3	5960.6	5390.3	4649.4	3857.5
52.5°	9829.0	9385.9	8728.4	8101.9	7497.1	7008.5	6623.5	6216.7	5637.3	4878.2	4004.6
55°	10571.8	10052.4	9306.0	8615.8	7951.1	7411.7	6974.0	6523.6	5908.0	5136.1	4184.4
57.5°	11743.3	10989.6	10243.1	9345.9	8719.4	8009.2	7529.8	7012.2	6347.5	5472.1	4455.0
60°	13793.7	12867.5	11970.3	10938.7	10165.0	9422.2	8697.6	8022.0	7221.0	6231.2	5048.9
62.5°	16721.3	15780.6	14371.2	13109.0	11941.2	10956.9	10012.5	9153.4	8125.5	7043.0	5780.8
65°	18470.3	17393.3	15713.4	14017.1	12598.7	11378.2	10297.6	9246.0	8136.4	7081.2	6002.4
66°	18610.1	17591.3	15796.9	14004.4	12531.5	11265.6	10141.4	9053.5	7916.6	6906.8	5929.7
67.5°	18350.4	17473.2	15626.2	13757.4	12251.8	10884.2	9729.1	8588.6	7446.2	6510.9	5688.2
70°	16517.9	15884.1	14300.4	12549.6	11047.7	9841.7	8623.1	7526.1	6443.7	5657.3	5047.1
72.5°	13541.3	12738.5	11630.7	10453.8	9271.5	8201.8	7093.9	6160.4	5252.3	4680.2	4248.0
75°	9947.1	9224.3	8003.8	7270.1	6489.1	5817.1	5070.7	4186.2	3541.5	3254.5	3149.2
77.5°	6305.7	5521.1	4491.4	3681.3	3165.6	2720.6	2144.9	1705.4	1365.7	1422.0	1574.6
80°	3185.5	2744.2	2054.1	1621.8	1402.1	1166.0	922.6	699.2	510.3	583.0	659.3
82.5°	2045.0	1707.2	1360.3	1071.5	904.4	797.3	637.5	463.1	345.1	388.7	475.8
85°	1231.4	1040.7	830.0	679.2	590.3	492.2	361.4	256.1	254.3	272.4	336.0
87.5°	187.1	267.0	154.4	165.3	174.4	187.1	165.3	139.8	121.7	158.0	199.8
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°	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7	3697.7
2.5°	3748.5	3752.2	3759.4	3768.5	3766.7	3779.4	3786.7	3779.4	3795.8	3795.8	3804.8
5°	3817.6	3823.0	3835.7	3844.8	3848.4	3859.3	3863.0	3861.1	3864.8	3866.6	3870.2
7.5°	3837.5	3852.1	3857.5	3863.0	3864.8	3868.4	3868.4	3864.8	3864.8	3863.0	3866.6
10°	3832.1	3837.5	3841.2	3839.4	3839.4	3835.7	3833.9	3832.1	3832.1	3828.5	3833.9
12.5°	3813.9	3813.9	3813.9	3810.3	3810.3	3808.5	3808.5	3808.5	3812.1	3813.9	3823.0
15°	3777.6	3777.6	3781.2	3779.4	3784.9	3793.9	3804.8	3812.1	3821.2	3823.0	3828.5
17.5°	3721.3	3723.1	3734.0	3757.6	3781.2	3808.5	3828.5	3833.9	3826.6	3808.5	3795.8
20°	3623.2	3646.8	3690.4	3746.7	3799.4	3833.9	3843.0	3821.2	3786.7	3739.5	3714.0
22.5°	3536.1	3583.3	3661.4	3754.0	3819.4	3843.0	3815.7	3764.9	3703.1	3648.7	3610.5
25°	3570.6	3625.0	3706.8	3786.7	3828.5	3815.7	3761.3	3688.6	3623.2	3559.7	3497.9
27.5°	3715.9	3770.3	3828.5	3852.1	3837.5	3790.3	3714.0	3635.9	3548.8	3458.0	3381.7
30°	3853.9	3884.8	3888.4	3864.8	3812.1	3735.8	3646.8	3556.0	3445.2	3336.3	3240.0
32.5°	3897.5	3861.1	3795.8	3728.6	3655.9	3577.8	3474.3	3354.4	3236.4	3112.9	3005.7
35°	3884.8	3737.6	3576.0	3432.5	3345.4	3256.4	3161.9	3002.1	2869.5	2764.2	2695.2
37.5°	3770.3	3501.5	3252.7	3043.9	2907.7	2802.3	2662.5	2529.9	2415.5	2368.3	2312.0
40°	3610.5	3200.1	2855.0	2562.6	2420.9	2286.5	2130.3	2028.6	1996.0	1952.4	1954.2
42.5°	3381.7	2847.7	2402.8	2066.8	1912.4	1765.3	1654.5	1594.6	1596.4	1560.1	1567.3
45°	3140.1	2493.6	1934.2	1600.0	1447.5	1322.2	1260.4	1242.2	1244.1	1245.9	1235.0
47.5°	2993.0	2217.5	1551.0	1213.2	1078.8	1008.0	975.3	966.2	968.0	969.8	957.1
50°	2971.2	2074.0	1294.9	928.1	840.9	800.9	784.6	775.5	775.5	768.2	757.3
52.5°	3033.0	2037.7	1169.6	804.6	721.0	684.7	672.0	664.7	653.8	639.3	619.3
55°	3131.1	2070.4	1131.5	762.8	681.1	644.7	628.4	624.8	606.6	579.4	546.7
57.5°	3312.7	2188.5	1156.9	773.7	688.3	655.6	644.7	641.1	615.7	573.9	532.1
60°	3833.9	2531.7	1284.0	835.4	741.0	713.7	713.7	708.3	673.8	613.9	553.9
62.5°	4553.1	3034.8	1456.6	920.8	813.6	810.0	840.9	842.7	780.9	684.7	590.3
65°	4900.0	3270.9	1516.5	939.0	833.6	875.4	937.1	937.1	850.0	717.4	595.7
66°	4901.8	3265.4	1498.3	917.2	811.8	866.3	929.9	929.9	839.1	708.3	586.6
67.5°	4776.5	3163.7	1438.4	877.2	762.8	813.6	869.9	868.1	786.4	672.0	561.2
70°	4284.3	2798.7	1267.7	811.8	704.7	706.5	726.5	713.7	659.3	581.2	510.3
72.5°	3694.1	2341.0	1098.8	770.0	659.3	624.8	608.4	597.5	563.0	515.8	472.2
75°	2833.2	1818.0	957.1	731.9	619.3	559.4	537.6	528.5	504.9	477.6	443.1
77.5°	1736.2	1245.9	811.8	670.2	573.9	519.4	495.8	477.6	454.0	428.6	405.0
80°	748.3	751.9	650.2	568.5	499.4	435.9	405.0	383.2	370.5	361.4	348.7
82.5°	523.1	539.4	495.8	441.3	381.4	336.0	308.7	303.3	305.1	305.1	301.5
85°	392.3	385.0	346.9	316.0	288.8	259.7	237.9	236.1	243.4	243.4	237.9
87.5°	227.0	228.8	196.1	183.4	190.7	163.5	148.9	150.7	168.9	167.1	163.5
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°	3697.7	3697.7	3697.7	3697.7	3697.7
2.5°	3804.8	3810.3	3808.5	3813.9	3808.5
5°	3875.7	3873.9	3872.0	3879.3	3870.2
7.5°	3864.8	3866.6	3866.6	3866.6	3864.8
10°	3837.5	3844.8	3848.4	3855.7	3853.9
12.5°	3828.5	3839.4	3850.2	3861.1	3863.0
15°	3830.3	3837.5	3843.0	3848.4	3850.2
17.5°	3783.1	3781.2	3775.8	3772.2	3768.5
20°	3686.8	3677.7	3668.6	3654.1	3661.4
22.5°	3566.9	3541.5	3512.4	3488.8	3487.0
25°	3427.1	3379.9	3332.6	3301.8	3290.9
27.5°	3303.6	3247.3	3198.2	3171.0	3163.7
30°	3156.5	3105.6	3062.0	3038.4	3023.9
32.5°	2938.5	2898.6	2844.1	2825.9	2824.1
35°	2635.2	2604.4	2566.2	2559.0	2549.9
37.5°	2292.0	2281.1	2262.9	2241.1	2237.5
40°	1925.1	1932.4	1926.9	1914.2	1894.2
42.5°	1571.0	1583.7	1585.5	1594.6	1603.7
45°	1251.3	1262.2	1262.2	1271.3	1282.2
47.5°	960.7	953.5	958.9	968.0	973.5
50°	726.5	721.0	711.9	704.7	697.4
52.5°	584.8	573.9	548.5	541.2	533.9
55°	515.8	495.8	477.6	470.4	470.4
57.5°	495.8	470.4	450.4	441.3	437.7
60°	499.4	463.1	437.7	423.2	417.7
62.5°	515.8	464.9	430.4	414.1	408.6
65°	514.0	461.3	428.6	410.5	405.0
66°	504.9	455.9	425.0	408.6	405.0
67.5°	490.4	448.6	421.3	406.8	401.4
70°	461.3	434.1	414.1	401.4	395.9
72.5°	437.7	419.5	401.4	386.8	383.2
75°	415.9	397.7	381.4	374.1	368.7
77.5°	383.2	366.9	357.8	350.5	346.9
80°	339.6	328.7	317.8	310.6	305.1
82.5°	296.0	281.5	270.6	265.2	261.5
85°	241.5	232.5	216.1	205.2	203.4
87.5°	161.6	152.6	147.1	138.0	128.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)