

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: P159836

Luminaire Tested: **VST-F11-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159836
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-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (77) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27733.2 lumens
Efficiency: N/A
Efficacy: 98.1 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

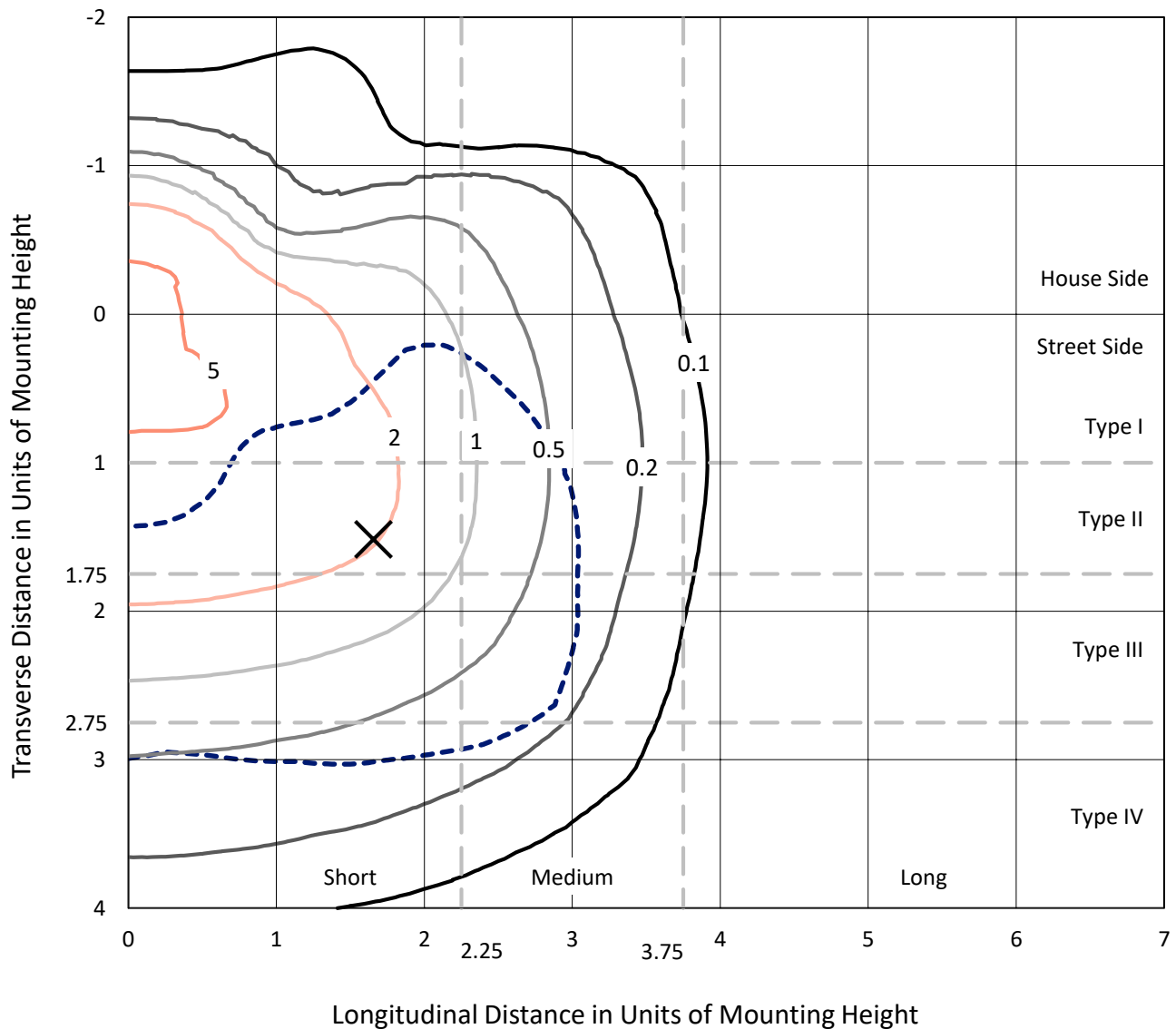


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

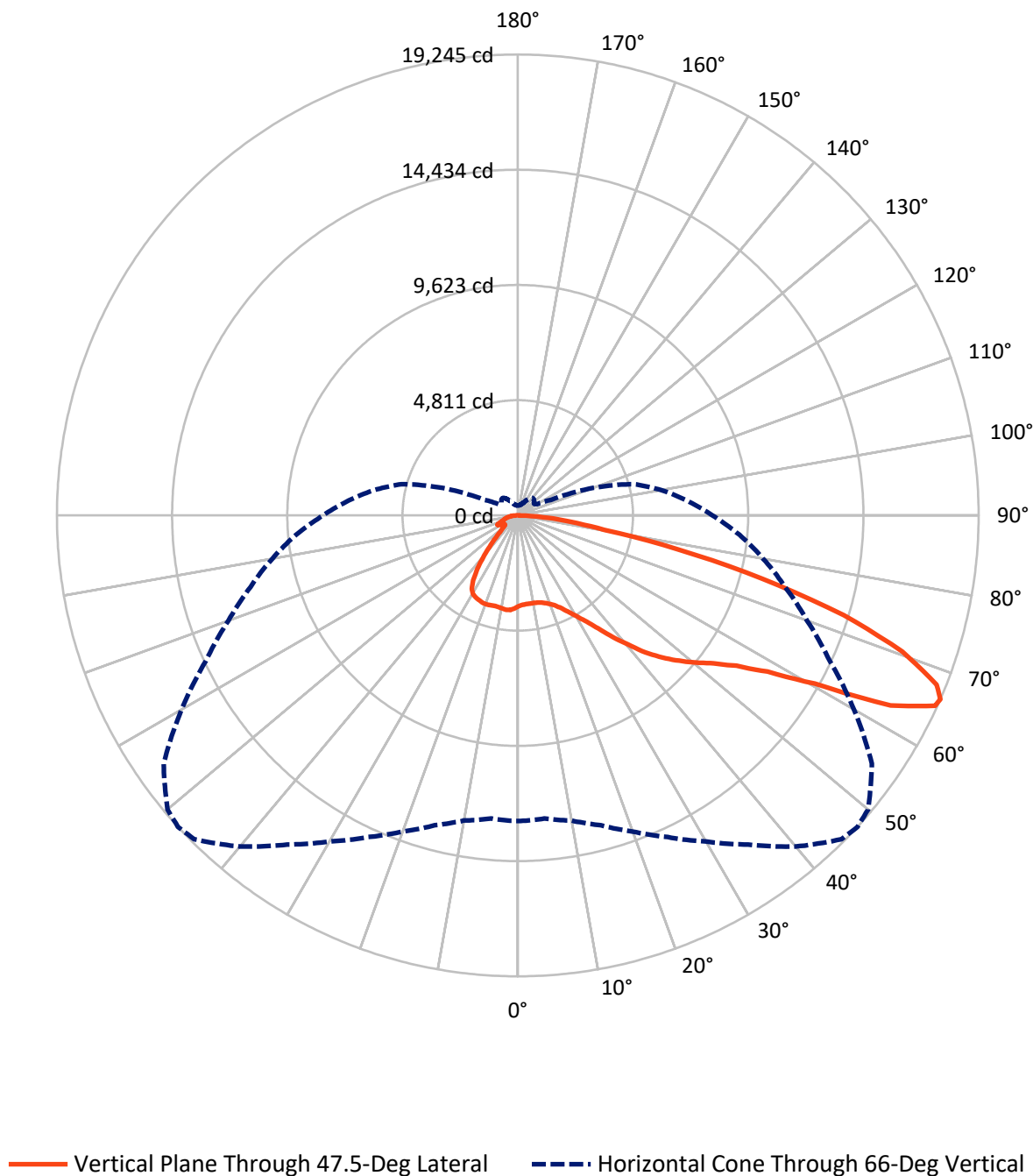


Based on 25 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5742.0	0.0	5742.0
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	21991.2	0.0	21991.2
	% Fixture	79.3	0.0	79.3
Total	Lumens	27733.2	0.0	27733.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.7	1.3
10°-20°	1096.6	4.0
20°-30°	1871.2	6.7
30°-40°	2824.2	10.2
40°-50°	3670.8	13.2
50°-60°	5036.0	18.2
60°-70°	7747.0	27.9
70°-80°	4478.3	16.1
80°-90°	643.3	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°	27733.2	100.0
0°-180°	27733.2	100.0

Coefficient of Utilization



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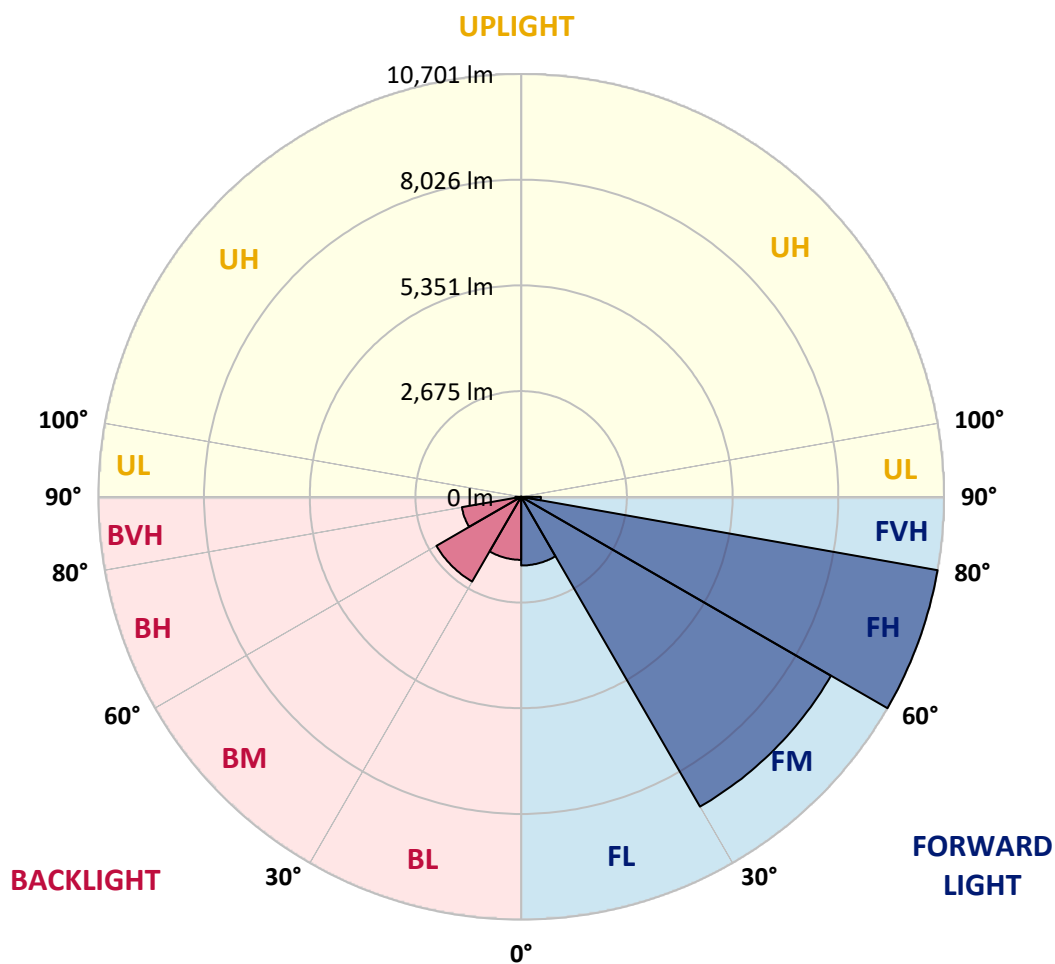
CATALOG NUMBER: VST-F11-LED-E-U-T4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1738.3	6.3			
FM	(30°-60°)	9053.7	32.6			
FH	(60°-80°)	10701.3	38.6			G4/12000
FVH	(80°-90°)	497.9	1.8			G3/500
BL	(0°-30°)	1595.2	5.8	B3/2500		
BM	(30°-60°)	2477.4	8.9	B2/2500		
BH	(60°-80°)	1524.0	5.5	B3/2500		G3/2500
BVH	(80°-90°)	145.5	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°	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2
2.5°	3697.3	3699.2	3701.0	3701.0	3706.6	3706.6	3716.0	3721.5	3723.4	3734.6	3742.0
5°	3628.4	3626.5	3628.4	3632.1	3641.4	3648.9	3667.5	3680.5	3691.7	3710.4	3719.7
7.5°	3598.5	3602.3	3606.0	3607.9	3615.3	3634.0	3650.7	3663.8	3686.1	3708.5	3717.8
10°	3637.7	3643.3	3637.7	3641.4	3641.4	3658.2	3665.6	3675.0	3691.7	3712.2	3717.8
12.5°	3729.0	3740.2	3729.0	3719.7	3712.2	3727.1	3723.4	3716.0	3725.3	3730.9	3730.9
15°	3879.9	3879.9	3872.5	3859.4	3840.8	3842.7	3825.9	3809.1	3801.7	3788.6	3779.3
17.5°	4027.2	4023.4	4006.7	3989.9	3976.9	3971.3	3947.0	3924.7	3898.6	3878.1	3855.7
20°	4170.7	4185.6	4165.1	4140.8	4120.3	4107.3	4088.7	4043.9	4012.3	3978.7	3956.4
22.5°	4418.5	4405.5	4383.1	4347.7	4327.2	4304.8	4265.7	4217.3	4168.8	4127.8	4099.8
25°	4673.8	4660.8	4629.1	4603.0	4573.2	4554.6	4511.7	4452.1	4405.5	4342.1	4304.8
27.5°	4947.8	4936.6	4899.3	4878.8	4858.3	4836.0	4798.7	4737.2	4694.3	4621.6	4582.5
30°	5257.1	5255.3	5204.9	5201.2	5171.4	5147.2	5121.1	5068.9	5026.0	4953.4	4906.8
32.5°	5587.0	5579.5	5544.1	5532.9	5553.4	5536.7	5499.4	5445.3	5389.4	5346.6	5294.4
35°	6056.6	6043.5	6023.0	6032.4	6045.4	6092.0	6034.2	5987.6	5920.6	5864.6	5792.0
37.5°	6399.5	6380.9	6405.1	6457.3	6531.8	6567.2	6617.5	6619.4	6587.7	6513.2	6449.8
40°	6714.4	6707.0	6762.9	6835.6	6973.5	7074.1	7169.1	7215.7	7226.9	7178.5	7083.4
42.5°	6980.9	7003.3	7077.8	7189.6	7383.4	7536.3	7713.3	7823.3	7892.2	7866.1	7823.3
45°	7297.7	7308.9	7400.2	7541.9	7726.3	7979.8	8212.7	8399.1	8520.2	8518.4	8469.9
47.5°	7694.7	7696.5	7774.8	7940.7	8138.2	8395.4	8689.8	8937.7	9097.9	9105.4	9068.1
50°	8166.1	8162.4	8248.1	8404.7	8615.3	8863.1	9176.2	9485.6	9709.2	9709.2	9655.1
52.5°	8773.7	8766.2	8812.8	8950.7	9153.8	9414.7	9726.0	10083.8	10326.0	10378.2	10260.8
55°	9584.3	9595.5	9606.7	9727.8	9901.1	10108.0	10465.8	10795.6	11119.9	11149.7	11080.8
57.5°	10521.7	10484.4	10564.6	10762.1	10959.6	11218.7	11472.1	11861.6	12245.5	12310.7	12301.4
60°	11986.5	11938.0	12020.0	12271.6	12489.6	12897.7	13332.0	13835.1	14289.8	14424.0	14261.9
62.5°	13333.8	13393.5	13505.3	13797.8	14114.7	14658.8	15311.1	16173.9	17036.7	17506.3	17472.8
65°	13212.7	13156.8	13371.1	13769.9	14343.9	15037.1	15847.8	16887.6	18130.6	19073.6	19157.5
66°	12763.6	12705.8	12936.9	13393.5	14049.4	14820.9	15721.0	16779.6	18050.5	19116.5	19245.0
67.5°	12021.9	11964.1	12225.0	12640.6	13317.0	14288.0	15260.7	16418.0	17739.3	18760.5	18864.9
70°	10590.6	10512.4	10715.5	11185.1	11733.0	12672.3	13598.4	14824.7	16181.3	16997.6	17036.7
72.5°	8971.2	8788.6	9004.8	9366.3	9757.6	10534.7	11341.7	12180.3	13261.1	14015.9	14232.1
75°	6509.4	6604.5	6667.8	6906.4	7165.4	7808.3	8281.7	8984.3	9821.0	10367.0	10540.3
77.5°	3453.2	3596.7	3686.1	3924.7	4353.3	4843.4	5355.9	5790.1	6339.9	6645.5	6857.9
80°	1938.1	2038.7	2184.1	2372.3	2581.0	2957.5	3261.2	3484.9	3563.1	3617.2	3665.6
82.5°	1066.0	1321.3	1537.4	1667.9	1790.9	1941.8	2122.6	2309.0	2368.6	2279.1	2232.6
85°	165.9	244.1	743.6	907.6	987.7	1103.2	1233.7	1371.6	1373.4	1181.5	1289.6
87.5°	46.6	52.2	106.2	160.3	156.5	126.7	156.5	285.1	167.7	83.9	96.9
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°	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2
2.5°	3745.8	3749.5	3758.8	3768.1	3777.4	3786.8	3792.4	3801.7	3809.1	3820.3	3833.4
5°	3730.9	3740.2	3756.9	3777.4	3796.1	3812.9	3825.9	3844.5	3861.3	3876.2	3898.6
7.5°	3730.9	3749.5	3777.4	3799.8	3816.6	3837.1	3857.6	3876.2	3894.9	3909.8	3924.7
10°	3732.7	3751.4	3779.3	3805.4	3824.0	3846.4	3863.2	3879.9	3900.4	3909.8	3928.4
12.5°	3740.2	3747.6	3768.1	3794.2	3816.6	3838.9	3855.7	3872.5	3894.9	3898.6	3911.6
15°	3777.4	3766.3	3771.9	3790.5	3814.7	3833.4	3852.0	3865.0	3879.9	3876.2	3887.4
17.5°	3846.4	3818.4	3807.3	3809.1	3820.3	3833.4	3840.8	3842.7	3844.5	3827.8	3829.6
20°	3939.6	3900.4	3874.4	3861.3	3846.4	3833.4	3812.9	3788.6	3766.3	3732.7	3729.0
22.5°	4079.3	4021.6	3993.6	3958.2	3913.5	3857.6	3807.3	3747.6	3699.2	3648.9	3630.2
25°	4282.5	4222.8	4193.0	4137.1	4057.0	3976.9	3904.2	3824.0	3753.2	3693.6	3665.6
27.5°	4554.6	4494.9	4463.2	4405.5	4306.7	4226.6	4125.9	4040.2	3954.5	3866.9	3831.5
30°	4884.4	4832.2	4796.8	4750.2	4664.5	4576.9	4459.5	4327.2	4191.2	4051.4	3982.4
32.5°	5273.9	5216.1	5190.0	5136.0	5046.5	4955.2	4824.8	4655.2	4427.8	4207.9	4070.0
35°	5760.3	5695.1	5665.2	5594.4	5490.1	5355.9	5216.1	4988.8	4681.3	4375.7	4150.2
37.5°	6410.7	6265.3	6166.5	6004.4	5836.7	5648.5	5449.1	5216.1	4852.7	4474.4	4161.3
40°	6986.5	6839.3	6649.2	6416.3	6155.4	5896.3	5669.0	5404.3	5009.3	4545.2	4125.9
42.5°	7702.1	7441.2	7137.5	6822.5	6475.9	6157.2	5887.0	5575.8	5115.5	4563.9	4027.2
45°	8356.2	8045.0	7638.8	7219.5	6789.0	6388.3	6084.5	5737.9	5206.8	4563.9	3907.9
47.5°	8952.6	8579.9	8093.5	7571.7	7070.4	6632.4	6287.7	5903.8	5335.4	4621.6	3872.5
50°	9504.2	9075.6	8522.1	7916.4	7353.6	6885.9	6515.0	6116.2	5531.1	4770.7	3958.2
52.5°	10085.6	9630.9	8956.3	8313.4	7692.8	7191.5	6796.4	6379.0	5784.5	5005.5	4109.2
55°	10847.8	10314.8	9548.9	8840.8	8158.7	7605.2	7156.1	6693.9	6062.2	5270.2	4293.7
57.5°	12049.8	11276.4	10510.5	9589.9	8947.0	8218.3	7726.3	7195.2	6513.2	5614.9	4571.3
60°	14153.8	13203.4	12282.8	11224.3	10430.4	9668.2	8924.6	8231.4	7409.5	6393.9	5180.7
62.5°	17157.9	16192.5	14746.4	13451.2	12252.9	11242.9	10273.8	9392.4	8337.6	7226.9	5931.7
65°	18952.5	17847.4	16123.6	14383.0	12927.6	11675.2	10566.4	9487.4	8348.8	7266.0	6159.1
66°	19096.0	18050.5	16209.3	14370.0	12858.6	11559.7	10406.2	9289.9	8123.3	7087.1	6084.5
67.5°	18829.5	17929.4	16034.1	14116.5	12571.6	11168.4	9983.1	8812.8	7640.6	6680.9	5836.7
70°	16949.1	16298.8	14673.7	12877.2	11336.1	10098.7	8848.2	7722.6	6611.9	5805.0	5178.9
72.5°	13894.8	13071.1	11934.3	10726.7	9513.5	8415.9	7279.1	6321.2	5389.4	4802.4	4358.9
75°	10206.8	9465.1	8212.7	7459.9	6658.5	5969.0	5203.1	4295.5	3634.0	3339.5	3231.4
77.5°	6470.3	5665.2	4608.6	3777.4	3248.2	2791.6	2200.9	1749.9	1401.4	1459.2	1615.7
80°	3268.7	2815.8	2107.7	1664.2	1438.7	1196.4	946.7	717.5	523.7	598.2	676.5
82.5°	2098.4	1751.8	1395.8	1099.5	928.1	818.1	654.1	475.2	354.1	398.8	488.3
85°	1263.5	1067.8	851.6	697.0	605.7	505.0	370.8	262.8	260.9	279.5	344.8
87.5°	191.9	273.9	158.4	169.6	178.9	191.9	169.6	143.5	124.9	162.1	205.0
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°	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2	3794.2
2.5°	3846.4	3850.1	3857.6	3866.9	3865.0	3878.1	3885.5	3878.1	3894.9	3894.9	3904.2
5°	3917.2	3922.8	3935.9	3945.2	3948.9	3960.1	3963.8	3961.9	3965.7	3967.5	3971.3
7.5°	3937.7	3952.6	3958.2	3963.8	3965.7	3969.4	3969.4	3965.7	3965.7	3963.8	3967.5
10°	3932.1	3937.7	3941.4	3939.6	3939.6	3935.9	3934.0	3932.1	3932.1	3928.4	3934.0
12.5°	3913.5	3913.5	3913.5	3909.8	3909.8	3907.9	3907.9	3907.9	3911.6	3913.5	3922.8
15°	3876.2	3876.2	3879.9	3878.1	3883.7	3893.0	3904.2	3911.6	3920.9	3922.8	3928.4
17.5°	3818.4	3820.3	3831.5	3855.7	3879.9	3907.9	3928.4	3934.0	3926.5	3907.9	3894.9
20°	3717.8	3742.0	3786.8	3844.5	3898.6	3934.0	3943.3	3920.9	3885.5	3837.1	3811.0
22.5°	3628.4	3676.8	3756.9	3852.0	3919.1	3943.3	3915.4	3863.2	3799.8	3743.9	3704.8
25°	3663.8	3719.7	3803.5	3885.5	3928.4	3915.4	3859.4	3784.9	3717.8	3652.6	3589.2
27.5°	3812.9	3868.8	3928.4	3952.6	3937.7	3889.3	3811.0	3730.9	3641.4	3548.2	3470.0
30°	3954.5	3986.2	3989.9	3965.7	3911.6	3833.4	3742.0	3648.9	3535.2	3423.4	3324.6
32.5°	3999.2	3961.9	3894.9	3825.9	3751.4	3671.2	3565.0	3442.0	3320.9	3194.2	3084.2
35°	3986.2	3835.2	3669.4	3522.1	3432.7	3341.4	3244.5	3080.5	2944.4	2836.3	2765.5
37.5°	3868.8	3593.0	3337.6	3123.3	2983.6	2875.5	2732.0	2595.9	2478.5	2430.1	2372.3
40°	3704.8	3283.6	2929.5	2629.5	2484.1	2346.2	2186.0	2081.6	2048.1	2003.3	2005.2
42.5°	3470.0	2922.1	2465.5	2120.7	1962.3	1811.4	1697.7	1636.2	1638.1	1600.8	1608.3
45°	3222.1	2558.7	1984.7	1641.8	1485.3	1356.7	1293.3	1274.7	1276.5	1278.4	1267.2
47.5°	3071.2	2275.4	1591.5	1244.9	1107.0	1034.3	1000.7	991.4	993.3	995.1	982.1
50°	3048.8	2128.2	1328.7	952.3	862.8	821.8	805.1	795.7	795.7	788.3	777.1
52.5°	3112.2	2090.9	1200.1	825.6	739.8	702.6	689.5	682.1	670.9	656.0	635.5
55°	3212.8	2124.5	1161.0	782.7	698.8	661.6	644.8	641.1	622.4	594.5	560.9
57.5°	3399.1	2245.6	1187.1	793.9	706.3	672.7	661.6	657.8	631.7	588.9	546.0
60°	3934.0	2597.8	1317.5	857.2	760.3	732.4	732.4	726.8	691.4	629.9	568.4
62.5°	4672.0	3114.0	1494.6	944.8	834.9	831.2	862.8	864.7	801.3	702.6	605.7
65°	5027.9	3356.3	1556.1	963.5	855.4	898.2	961.6	961.6	872.1	736.1	611.2
66°	5029.8	3350.7	1537.4	941.1	833.0	888.9	954.1	954.1	861.0	726.8	601.9
67.5°	4901.2	3246.3	1475.9	900.1	782.7	834.9	892.6	890.8	806.9	689.5	575.8
70°	4396.2	2871.8	1300.8	833.0	723.1	724.9	745.4	732.4	676.5	596.3	523.7
72.5°	3790.5	2402.1	1127.5	790.2	676.5	641.1	624.3	613.1	577.7	529.3	484.5
75°	2907.2	1865.4	982.1	751.0	635.5	574.0	551.6	542.3	518.1	490.1	454.7
77.5°	1781.6	1278.4	833.0	687.7	588.9	533.0	508.8	490.1	465.9	439.8	415.6
80°	767.8	771.5	667.2	583.3	512.5	447.3	415.6	393.2	380.2	370.8	357.8
82.5°	536.7	553.5	508.8	452.8	391.3	344.8	316.8	311.2	313.1	313.1	309.4
85°	402.5	395.1	355.9	324.3	296.3	266.5	244.1	242.3	249.7	249.7	244.1
87.5°	232.9	234.8	201.3	188.2	195.7	167.7	152.8	154.7	173.3	171.4	167.7
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°	3794.2	3794.2	3794.2	3794.2	3794.2
2.5°	3904.2	3909.8	3907.9	3913.5	3907.9
5°	3976.9	3975.0	3973.1	3980.6	3971.3
7.5°	3965.7	3967.5	3967.5	3967.5	3965.7
10°	3937.7	3945.2	3948.9	3956.4	3954.5
12.5°	3928.4	3939.6	3950.8	3961.9	3963.8
15°	3930.3	3937.7	3943.3	3948.9	3950.8
17.5°	3881.8	3879.9	3874.4	3870.6	3866.9
20°	3783.0	3773.7	3764.4	3749.5	3756.9
22.5°	3660.0	3634.0	3604.1	3579.9	3578.0
25°	3516.5	3468.1	3419.6	3388.0	3376.8
27.5°	3389.8	3332.1	3281.7	3253.8	3246.3
30°	3238.9	3186.7	3142.0	3117.7	3102.8
32.5°	3015.3	2974.3	2918.3	2899.7	2897.8
35°	2704.0	2672.4	2633.2	2625.8	2616.4
37.5°	2351.8	2340.6	2322.0	2299.6	2295.9
40°	1975.4	1982.8	1977.2	1964.2	1943.7
42.5°	1612.0	1625.0	1626.9	1636.2	1645.5
45°	1284.0	1295.2	1295.2	1304.5	1315.7
47.5°	985.8	978.4	984.0	993.3	998.9
50°	745.4	739.8	730.5	723.1	715.6
52.5°	600.1	588.9	562.8	555.3	547.9
55°	529.3	508.8	490.1	482.7	482.7
57.5°	508.8	482.7	462.2	452.8	449.1
60°	512.5	475.2	449.1	434.2	428.6
62.5°	529.3	477.1	441.7	424.9	419.3
65°	527.4	473.3	439.8	421.2	415.6
66°	518.1	467.8	436.1	419.3	415.6
67.5°	503.2	460.3	432.3	417.4	411.8
70°	473.3	445.4	424.9	411.8	406.3
72.5°	449.1	430.5	411.8	396.9	393.2
75°	426.8	408.1	391.3	383.9	378.3
77.5°	393.2	376.4	367.1	359.7	355.9
80°	348.5	337.3	326.1	318.7	313.1
82.5°	303.8	288.9	277.7	272.1	268.4
85°	247.9	238.5	221.8	210.6	208.7
87.5°	165.9	156.5	150.9	141.6	132.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)