

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: P159615

Luminaire Tested: **VST-F11-LED-E-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159615
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-F11-LED-E-U-T3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (77) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27772.3 lumens
Efficiency: N/A
Efficacy: 98.2 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): 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



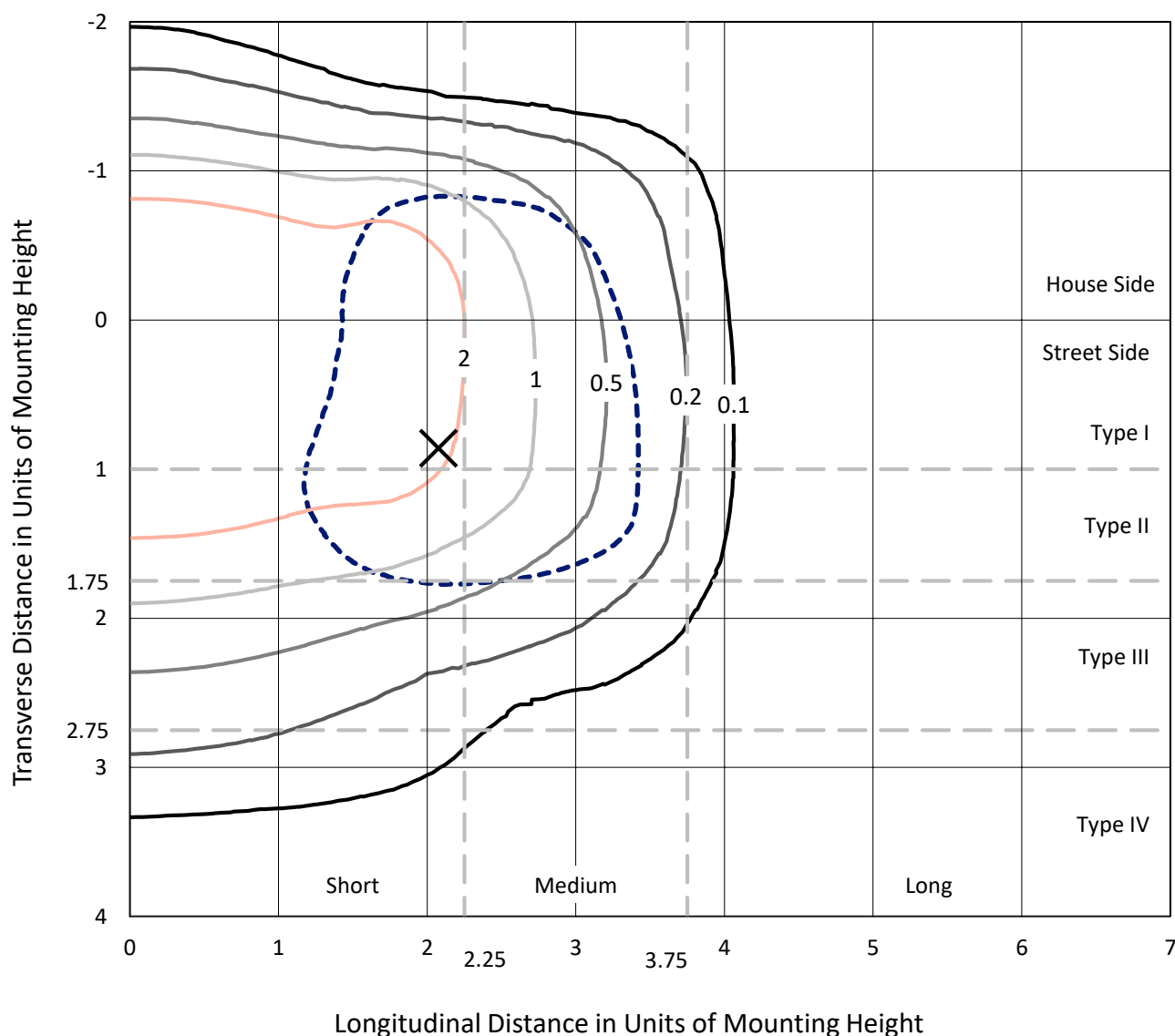
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

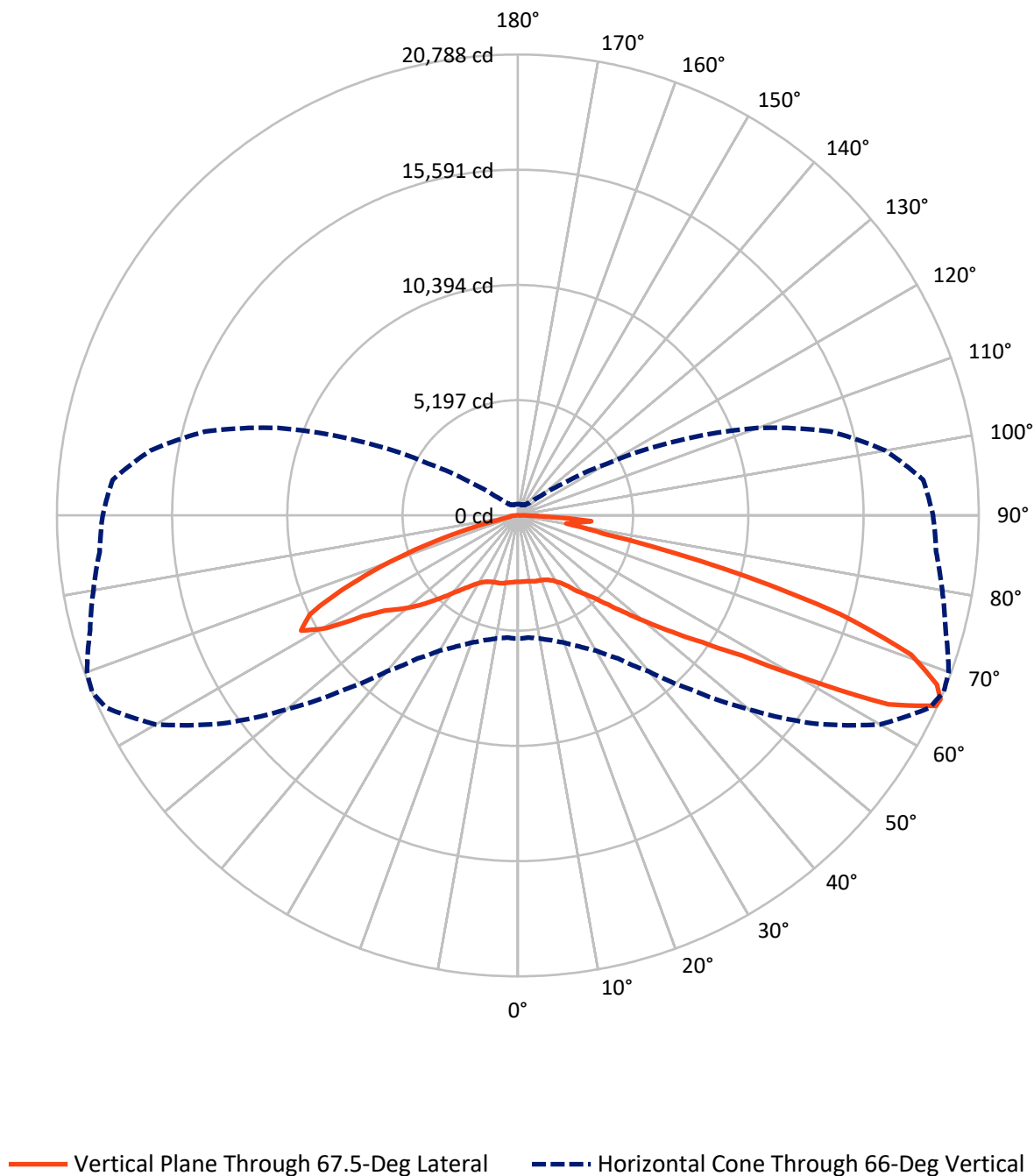


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9610.4	0.0	9610.4
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	18161.9	0.0	18161.9
	% Fixture	65.4	0.0	65.4
Total	Lumens	27772.3	0.0	27772.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.6	1.0
10°-20°	851.5	3.1
20°-30°	1463.7	5.3
30°-40°	2365.7	8.5
40°-50°	3920.5	14.1
50°-60°	6152.8	22.2
60°-70°	8412.1	30.3
70°-80°	3699.3	13.3
80°-90°	619.2	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°	27772.3	100.0
0°-180°	27772.3	100.0

Coefficient of Utilization



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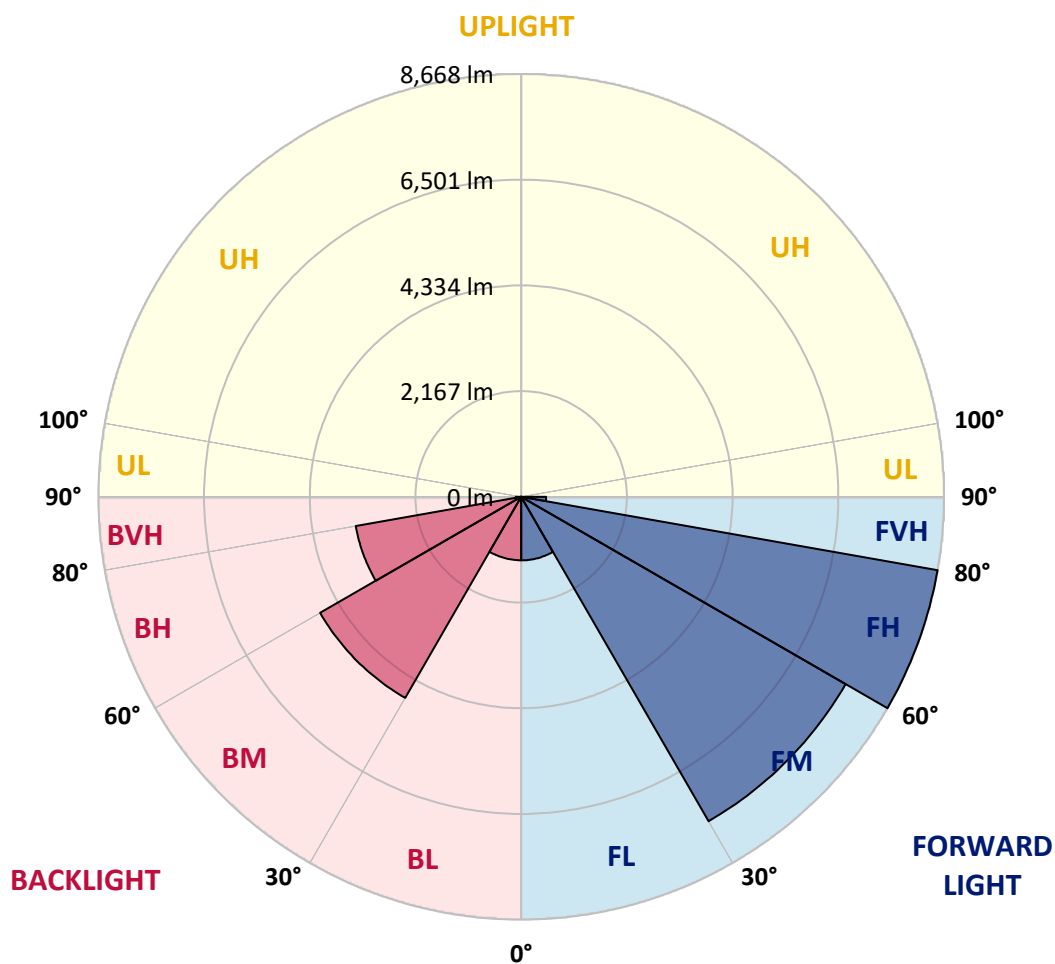
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1302.8	4.7			
FM	(30°-60°)	7679.9	27.7			
FH	(60°-80°)	8668.4	31.2			G4/12000
FVH	(80°-90°)	510.9	1.8			G4/750
BL	(0°-30°)	1300.1	4.7	B3/2500		
BM	(30°-60°)	4759.1	17.1	B3/5000		
BH	(60°-80°)	3443.0	12.4	B4/5000		G4/5000
BVH	(80°-90°)	108.3	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°	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7
2.5°	2991.2	2991.2	2993.0	2991.2	2991.2	2989.4	2996.7	2996.7	2996.7	2994.8	3000.3
5°	2983.9	2983.9	2985.8	2985.8	2987.6	2985.8	2991.2	2993.0	2993.0	2993.0	2998.5
7.5°	2965.8	2971.2	2967.6	2969.4	2971.2	2976.7	2983.9	2987.6	2991.2	2996.7	2998.5
10°	2927.6	2936.7	2934.9	2940.4	2942.2	2958.5	2964.0	2971.2	2983.9	2991.2	2996.7
12.5°	2875.0	2880.4	2882.2	2889.5	2896.8	2916.7	2931.3	2944.0	2962.1	2980.3	2998.5
15°	2833.2	2836.8	2836.8	2844.1	2855.0	2873.2	2891.3	2913.1	2940.4	2971.2	3000.3
17.5°	2845.9	2855.0	2847.7	2845.9	2849.5	2860.4	2876.8	2895.0	2927.6	2962.1	2996.7
20°	2929.5	2931.3	2927.6	2918.6	2911.3	2913.1	2913.1	2916.7	2936.7	2964.0	2991.2
22.5°	2998.5	3005.7	3003.9	3005.7	3003.9	3011.2	3007.6	3000.3	2993.0	2994.8	3007.6
25°	3058.4	3065.7	3065.7	3071.1	3080.2	3094.7	3105.6	3103.8	3092.9	3078.4	3072.9
27.5°	3156.5	3156.5	3156.5	3161.9	3174.6	3192.8	3211.0	3221.9	3230.9	3216.4	3185.5
30°	3310.9	3312.7	3307.2	3309.0	3318.1	3341.7	3363.5	3379.9	3398.0	3396.2	3356.3
32.5°	3479.8	3487.0	3485.2	3492.5	3505.2	3527.0	3550.6	3576.0	3599.6	3614.1	3588.7
35°	3697.7	3705.0	3706.8	3717.7	3732.2	3764.9	3797.6	3830.3	3855.7	3866.6	3861.1
37.5°	4055.5	4057.3	4050.0	4033.7	4039.1	4064.6	4102.7	4155.4	4171.7	4182.6	4208.0
40°	4591.2	4585.8	4556.7	4542.2	4533.1	4544.0	4536.8	4578.5	4616.7	4618.5	4616.7
42.5°	5241.4	5225.1	5197.8	5194.2	5190.6	5186.9	5167.0	5168.8	5203.3	5212.4	5201.5
45°	5888.0	5868.0	5848.0	5866.2	5844.4	5900.7	5917.0	5960.6	5966.1	5984.2	5957.0
47.5°	6418.3	6420.1	6420.1	6445.5	6489.1	6596.3	6692.5	6776.1	6806.9	6850.5	6856.0
50°	6819.7	6830.6	6865.1	6946.8	7039.4	7219.2	7380.9	7531.6	7667.8	7718.7	7853.1
52.5°	7053.9	7083.0	7155.7	7291.9	7457.1	7689.6	7943.9	8199.9	8436.0	8635.8	8795.6
55°	7012.2	7034.0	7161.1	7373.6	7631.5	7943.9	8299.8	8670.3	9039.0	9376.8	9638.3
57.5°	6743.4	6757.9	6885.0	7124.8	7446.2	7865.8	8368.8	8919.1	9436.7	9981.6	10428.4
60°	6391.0	6412.8	6530.9	6719.8	7055.8	7502.5	8085.5	8832.0	9658.3	10515.5	11351.0
62.5°	6165.8	6160.4	6263.9	6432.8	6685.3	7090.3	7651.5	8535.9	9680.1	11129.4	12780.3
65°	5791.7	5775.4	5882.5	6075.0	6349.3	6741.6	7273.7	8123.7	9451.3	11361.9	13702.9
66°	5559.2	5526.6	5633.7	5828.0	6102.3	6520.0	7030.3	7869.4	9173.4	11134.8	13604.8
67.5°	5152.4	5136.1	5186.9	5339.5	5542.9	5935.2	6467.3	7311.8	8516.0	10452.0	12885.6
70°	4188.1	4151.7	4191.7	4260.7	4338.8	4435.1	4762.0	5432.1	6451.0	8327.1	10381.1
72.5°	2853.2	2835.0	2909.5	3014.8	3223.7	3321.7	3450.7	3559.7	3919.3	5248.7	7241.0
75°	2170.3	2181.2	2275.6	2450.0	2718.8	3009.4	3292.7	3396.2	3276.3	3172.8	4110.0
77.5°	1216.8	1280.4	1394.8	1616.4	1901.5	2312.0	2806.0	3350.8	3623.2	3556.0	3325.4
80°	501.3	492.2	548.5	670.2	768.2	1104.2	1689.0	2371.9	3138.3	3623.2	3547.0
82.5°	139.8	143.5	185.2	237.9	306.9	390.5	610.2	980.7	1598.2	2486.3	3254.5
85°	43.6	43.6	59.9	89.0	105.3	121.7	154.4	254.3	434.1	866.3	1756.2
87.5°	9.1	9.1	12.7	25.4	27.2	27.2	34.5	47.2	41.8	38.1	170.7
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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CATALOG NUMBER: VST-F11-LED-E-U-T3

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7
2.5°	2994.8	2991.2	2993.0	2994.8	2993.0	2993.0	2991.2	2989.4	2991.2	2991.2	2996.7
5°	2993.0	2991.2	2993.0	2993.0	2993.0	2994.8	2994.8	2994.8	3000.3	3000.3	3009.4
7.5°	2996.7	2996.7	3000.3	3000.3	3000.3	3000.3	3002.1	3005.7	3014.8	3013.0	3029.3
10°	3003.9	3007.6	3016.6	3018.4	3018.4	3023.9	3027.5	3034.8	3043.9	3047.5	3062.0
12.5°	3013.0	3031.2	3047.5	3051.1	3056.6	3065.7	3071.1	3074.8	3091.1	3096.5	3114.7
15°	3023.9	3049.3	3069.3	3076.6	3083.8	3094.7	3102.0	3107.4	3122.0	3129.2	3151.0
17.5°	3025.7	3054.8	3078.4	3089.3	3098.4	3111.1	3122.0	3132.9	3149.2	3160.1	3181.9
20°	3023.9	3062.0	3098.4	3112.9	3122.0	3145.6	3161.9	3176.5	3196.4	3207.3	3229.1
22.5°	3043.9	3087.5	3136.5	3154.7	3169.2	3201.9	3223.7	3247.3	3272.7	3280.0	3296.3
25°	3091.1	3136.5	3198.2	3223.7	3249.1	3292.7	3323.6	3358.1	3383.5	3387.1	3392.6
27.5°	3171.0	3212.8	3287.2	3325.4	3367.2	3428.9	3474.3	3508.8	3545.1	3545.1	3541.5
30°	3332.6	3341.7	3419.8	3468.9	3530.6	3621.4	3688.6	3726.7	3754.0	3754.0	3723.1
32.5°	3541.5	3530.6	3601.4	3654.1	3739.5	3866.6	3957.4	3986.5	4015.5	4006.4	3953.8
35°	3843.0	3812.1	3852.1	3932.0	4028.2	4202.6	4297.0	4362.4	4380.6	4355.1	4271.6
37.5°	4222.6	4218.9	4238.9	4327.9	4435.1	4660.3	4756.5	4798.3	4783.8	4738.3	4591.2
40°	4623.9	4613.0	4600.3	4660.3	4780.1	5050.7	5221.4	5243.2	5223.3	5156.1	4970.8
42.5°	5159.7	5159.7	5099.8	5116.1	5216.0	5519.3	5720.9	5789.9	5791.7	5693.6	5446.6
45°	5897.1	5889.8	5784.5	5759.0	5835.3	6133.2	6392.9	6431.0	6431.0	6302.1	6031.5
47.5°	6783.3	6774.3	6670.7	6581.7	6596.3	6917.7	7133.9	7192.0	7141.1	7044.9	6723.4
50°	7782.2	7765.9	7660.5	7577.0	7540.7	7865.8	8049.2	8076.4	8002.0	7887.6	7538.9
52.5°	8795.6	8844.7	8782.9	8737.5	8750.2	8960.9	9149.8	9020.8	8982.7	8859.2	8508.7
55°	9850.8	10001.6	10137.8	10097.8	10145.0	10350.3	10386.6	10215.9	10146.9	10057.9	9667.4
57.5°	10913.3	11352.8	11799.6	11924.9	12041.1	12335.3	12293.6	12013.9	12066.5	12199.1	11759.6
60°	12397.1	13666.6	14799.8	15008.7	15370.1	15620.7	15677.0	15622.6	15867.7	15798.7	15410.1
62.5°	14676.3	16792.2	18368.6	18760.9	19124.1	19111.4	18920.7	18724.6	18966.1	18966.1	17950.9
65°	16303.6	18704.6	20391.8	20716.9	20702.3	20264.7	19814.2	19422.0	19387.5	19118.7	17634.9
66°	16379.9	18851.7	20504.4	20787.7	20678.7	19974.1	19434.7	18937.0	18724.6	18350.4	16830.3
67.5°	15693.4	18435.8	20137.5	20384.5	20097.6	19087.8	18345.0	17678.5	17369.7	16739.5	15308.4
70°	12872.9	15844.1	18319.6	18824.4	18499.4	17220.8	16203.7	15302.9	14712.7	13802.8	12771.2
72.5°	9396.8	11697.9	14378.5	15199.4	15148.5	13971.7	13152.6	12328.1	11552.6	10724.4	9970.7
75°	6107.7	7609.7	9104.4	9583.8	9353.2	8672.1	8085.5	7604.2	6868.7	6293.0	6153.1
77.5°	3487.0	4260.7	4030.0	3970.1	3681.3	2971.2	1976.0	1385.7	1251.3	1561.9	1712.6
80°	3318.1	3007.6	2462.7	2221.2	2041.4	1391.2	730.1	514.0	450.4	461.3	495.8
82.5°	3741.3	3899.3	3189.2	2664.3	2319.2	1692.7	924.4	430.4	314.2	372.3	417.7
85°	2804.1	3948.3	3913.8	3316.3	2720.6	1950.6	1093.3	328.7	188.9	261.5	341.4
87.5°	568.5	935.3	900.8	791.8	673.8	470.4	183.4	103.5	94.4	128.9	196.1
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°	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7	2996.7
2.5°	3000.3	3000.3	3003.9	3009.4	3011.2	3011.2	3014.8	3011.2	3018.4	3020.3	3022.1
5°	3016.6	3022.1	3025.7	3034.8	3040.2	3043.9	3049.3	3045.7	3053.0	3054.8	3058.4
7.5°	3034.8	3043.9	3051.1	3054.8	3062.0	3062.0	3063.9	3060.2	3058.4	3053.0	3051.1
10°	3067.5	3072.9	3082.0	3078.4	3074.8	3062.0	3051.1	3034.8	3025.7	3009.4	3000.3
12.5°	3120.2	3123.8	3123.8	3107.4	3083.8	3054.8	3027.5	3000.3	2978.5	2960.3	2949.4
15°	3156.5	3163.7	3154.7	3131.1	3096.5	3056.6	3020.3	2983.9	2954.9	2931.3	2916.7
17.5°	3183.7	3181.9	3165.6	3132.9	3100.2	3065.7	3033.0	2994.8	2958.5	2924.0	2902.2
20°	3225.5	3207.3	3178.3	3143.8	3109.3	3080.2	3054.8	3018.4	2980.3	2933.1	2900.4
22.5°	3281.8	3249.1	3207.3	3171.0	3138.3	3111.1	3082.0	3051.1	3011.2	2958.5	2913.1
25°	3361.7	3305.4	3258.2	3221.9	3192.8	3161.9	3129.2	3089.3	3049.3	2994.8	2940.4
27.5°	3483.4	3399.8	3339.9	3307.2	3280.0	3238.2	3196.4	3149.2	3098.4	3042.1	2980.3
30°	3630.5	3530.6	3461.6	3432.5	3399.8	3352.6	3307.2	3241.8	3171.0	3103.8	3027.5
32.5°	3803.0	3701.3	3632.3	3610.5	3557.8	3503.4	3439.8	3352.6	3260.0	3160.1	3069.3
35°	4064.6	3935.6	3872.0	3821.2	3748.5	3683.2	3576.0	3461.6	3329.0	3196.4	3083.8
37.5°	4333.3	4202.6	4137.2	4066.4	3971.9	3852.1	3708.6	3545.1	3369.0	3205.5	3067.5
40°	4692.9	4551.3	4467.7	4358.8	4206.2	4019.2	3806.7	3583.3	3369.0	3165.6	2998.5
42.5°	5112.5	4981.7	4852.8	4673.0	4427.8	4155.4	3857.5	3570.6	3310.9	3076.6	2900.4
45°	5693.6	5470.3	5265.0	4976.3	4618.5	4235.3	3863.0	3510.6	3211.0	2951.3	2755.1
47.5°	6347.5	6058.7	5695.5	5243.2	4754.7	4266.1	3810.3	3398.0	3053.0	2771.5	2557.1
50°	7101.2	6658.0	6100.5	5455.7	4823.7	4224.4	3685.0	3209.1	2835.0	2511.7	2282.9
52.5°	7963.8	7288.2	6467.3	5606.5	4812.8	4097.2	3477.9	2960.3	2542.6	2199.4	1974.2
55°	8921.0	7974.7	6817.8	5702.7	4714.7	3850.2	3152.8	2609.8	2179.4	1841.6	1643.6
57.5°	10608.2	9178.8	7486.2	5831.7	4509.5	3476.1	2740.6	2166.7	1778.0	1491.1	1302.2
60°	13742.8	11283.8	8752.1	6135.0	4200.8	3007.6	2221.2	1699.9	1374.8	1166.0	1026.1
62.5°	15682.5	12765.8	9369.5	6091.4	3699.5	2366.4	1649.1	1260.4	1004.3	866.3	779.1
65°	15223.0	12184.6	8615.8	5232.3	2878.6	1678.1	1091.5	824.5	690.1	619.3	577.5
66°	14598.3	11534.4	7978.4	4685.7	2508.1	1402.1	900.8	692.0	593.9	541.2	519.4
67.5°	13288.8	10346.6	6881.4	3752.2	1879.7	1044.3	664.7	543.0	483.1	455.9	441.3
70°	11122.1	8336.2	4867.3	2215.7	1018.9	566.6	425.0	377.8	363.2	354.2	348.7
72.5°	8599.5	6035.1	2844.1	1089.7	514.0	366.9	323.3	303.3	297.8	297.8	299.7
75°	5417.6	3468.9	1273.1	524.9	348.7	296.0	276.1	267.0	268.8	270.6	268.8
77.5°	1799.8	1196.8	530.3	372.3	303.3	268.8	252.4	248.8	252.4	254.3	254.3
80°	517.6	452.2	383.2	328.7	277.9	250.6	236.1	234.3	243.4	245.2	241.5
82.5°	397.7	372.3	346.9	317.8	267.0	236.1	230.7	232.5	237.9	234.3	217.9
85°	365.0	361.4	259.7	257.9	232.5	225.2	219.8	221.6	216.1	196.1	178.0
87.5°	205.2	190.7	147.1	148.9	172.5	178.0	147.1	156.2	145.3	127.1	116.2
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):

	160°	165°	170°	175°	180°
0°	2996.7	2996.7	2996.7	2996.7	2996.7
2.5°	3025.7	3023.9	3023.9	3029.3	3022.1
5°	3060.2	3058.4	3058.4	3063.9	3058.4
7.5°	3043.9	3038.4	3034.8	3033.0	3033.0
10°	2989.4	2983.9	2973.0	2969.4	2965.8
12.5°	2933.1	2927.6	2914.9	2914.9	2911.3
15°	2898.6	2891.3	2882.2	2876.8	2873.2
17.5°	2880.4	2869.5	2858.6	2853.2	2849.5
20°	2873.2	2858.6	2845.9	2836.8	2836.8
22.5°	2875.0	2856.8	2842.3	2831.4	2827.8
25°	2893.1	2865.9	2847.7	2836.8	2833.2
27.5°	2918.6	2885.9	2862.3	2847.7	2842.3
30°	2953.1	2907.7	2875.0	2856.8	2849.5
32.5°	2976.7	2913.1	2871.3	2845.9	2836.8
35°	2974.9	2893.1	2842.3	2809.6	2798.7
37.5°	2942.2	2845.9	2778.7	2738.8	2720.6
40°	2869.5	2758.7	2687.9	2649.8	2628.0
42.5°	2764.2	2644.3	2580.8	2539.0	2515.4
45°	2598.9	2480.9	2402.8	2370.1	2339.2
47.5°	2370.1	2250.2	2183.0	2135.8	2115.8
50°	2101.3	1981.4	1910.6	1872.5	1854.3
52.5°	1807.1	1692.7	1641.8	1605.5	1580.1
55°	1502.0	1396.6	1374.8	1334.9	1311.3
57.5°	1215.0	1153.3	1133.3	1093.3	1073.3
60°	949.8	929.9	908.1	882.7	871.8
62.5°	735.5	717.4	711.9	695.6	693.8
65°	561.2	563.0	559.4	555.7	552.1
66°	510.3	508.5	510.3	506.7	504.9
67.5°	434.1	441.3	446.8	445.0	445.0
70°	352.3	357.8	365.0	363.2	363.2
72.5°	301.5	310.6	314.2	312.4	312.4
75°	272.4	281.5	281.5	277.9	276.1
77.5°	254.3	257.9	254.3	250.6	247.0
80°	236.1	232.5	227.0	221.6	217.9
82.5°	205.2	196.1	190.7	181.6	181.6
85°	165.3	158.0	145.3	136.2	127.1
87.5°	107.2	103.5	94.4	70.8	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)