

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: P159616

Luminaire Tested: **VST-F11-LED-E-U-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159616
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-T3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (77) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28497.3 lumens
Efficiency: N/A
Efficacy: 100.8 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

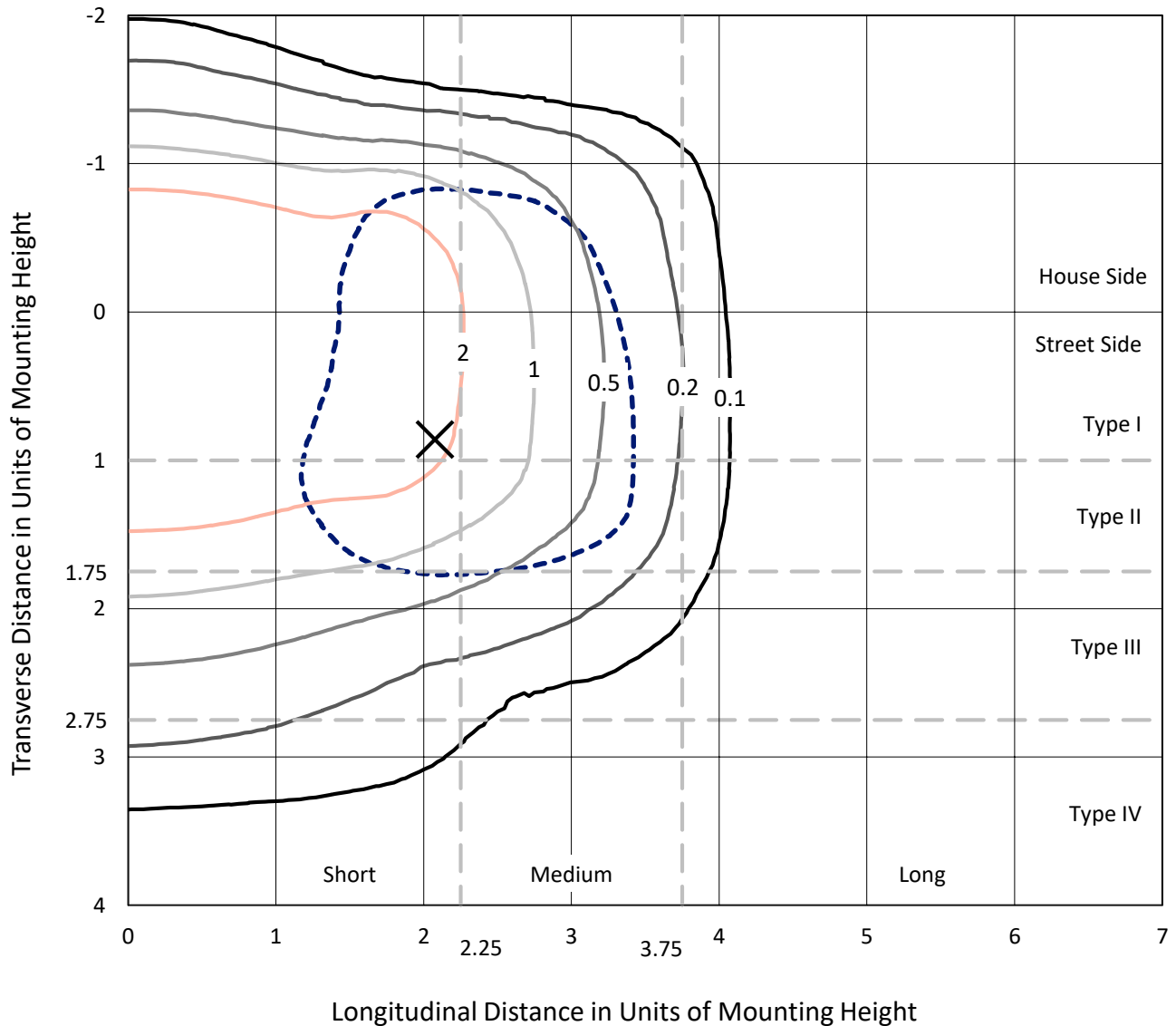
Input Watts (W): 282.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

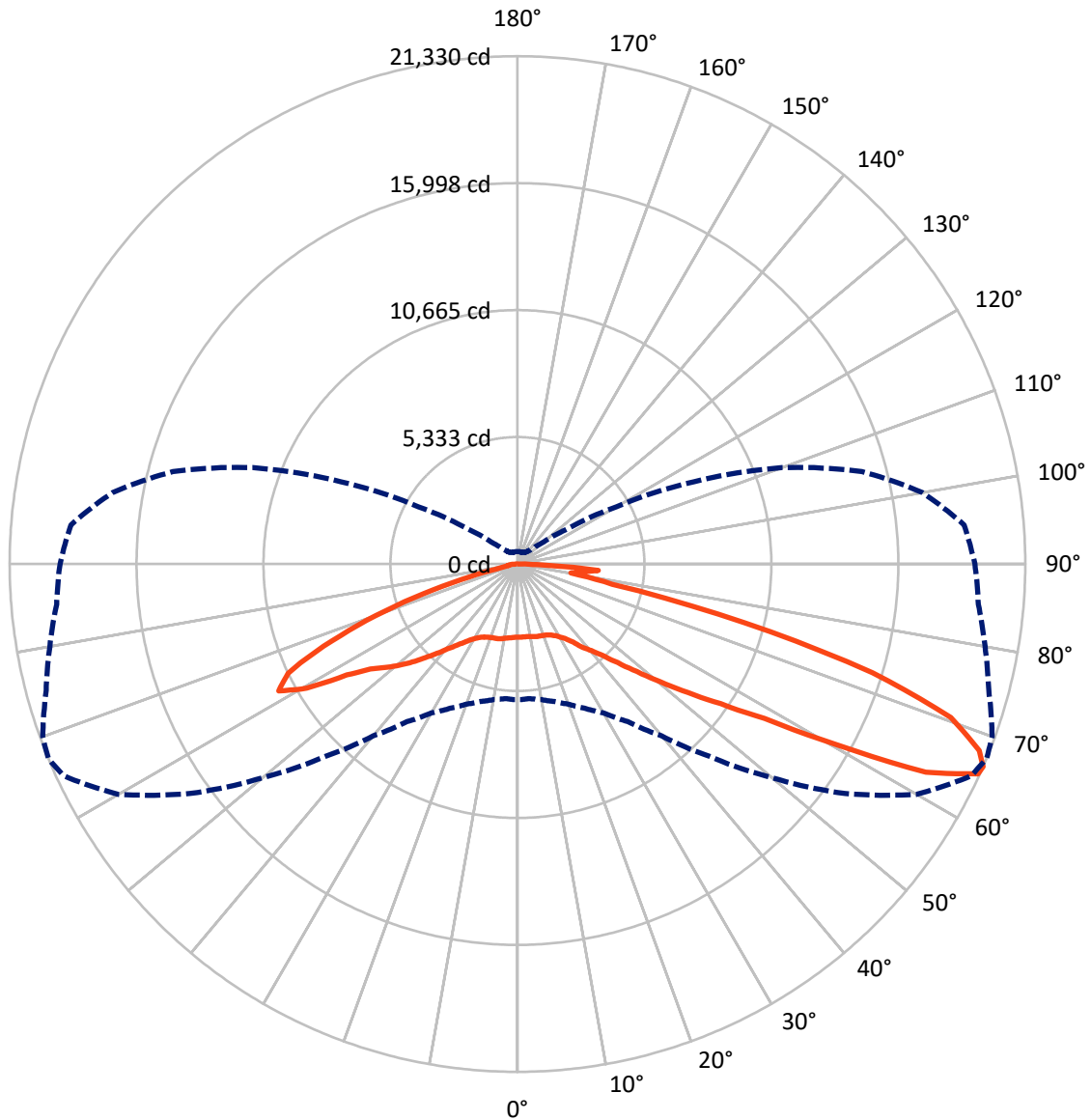


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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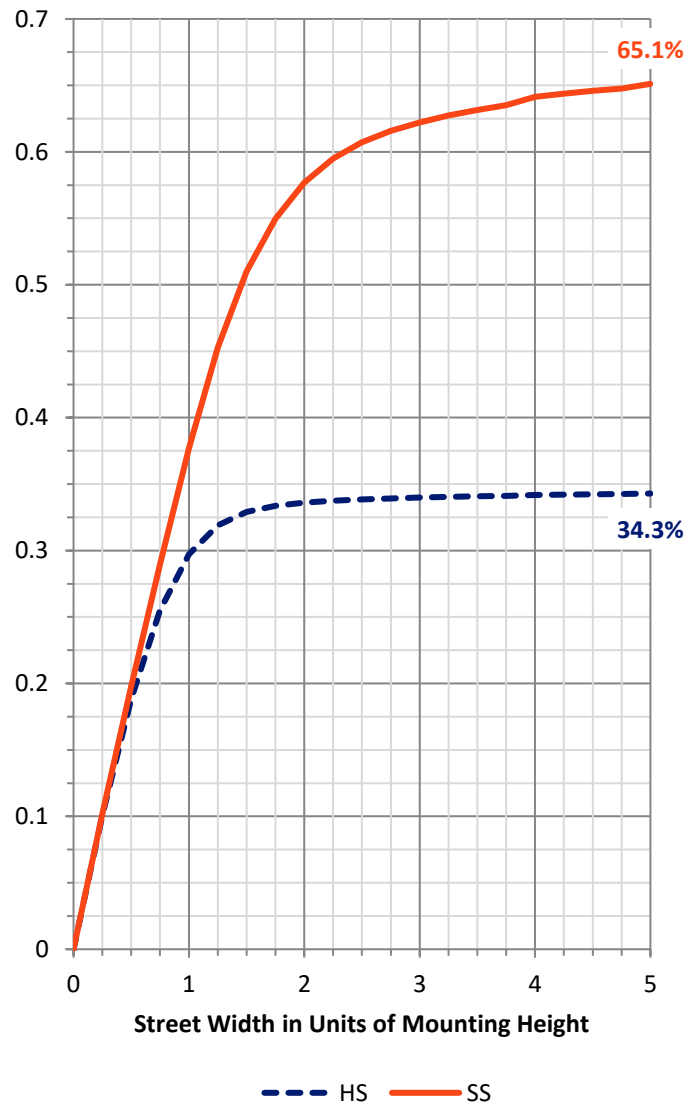
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9861.3	0.0	9861.3
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	18636.0	0.0	18636.0
	% Fixture	65.4	0.0	65.4
Total	Lumens	28497.3	0.0	28497.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.1	1.0
10°-20°	873.7	3.1
20°-30°	1502.0	5.3
30°-40°	2427.4	8.5
40°-50°	4022.8	14.1
50°-60°	6313.4	22.2
60°-70°	8631.7	30.3
70°-80°	3795.8	13.3
80°-90°	635.4	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°	28497.3	100.0
0°-180°	28497.3	100.0

Coefficient of Utilization



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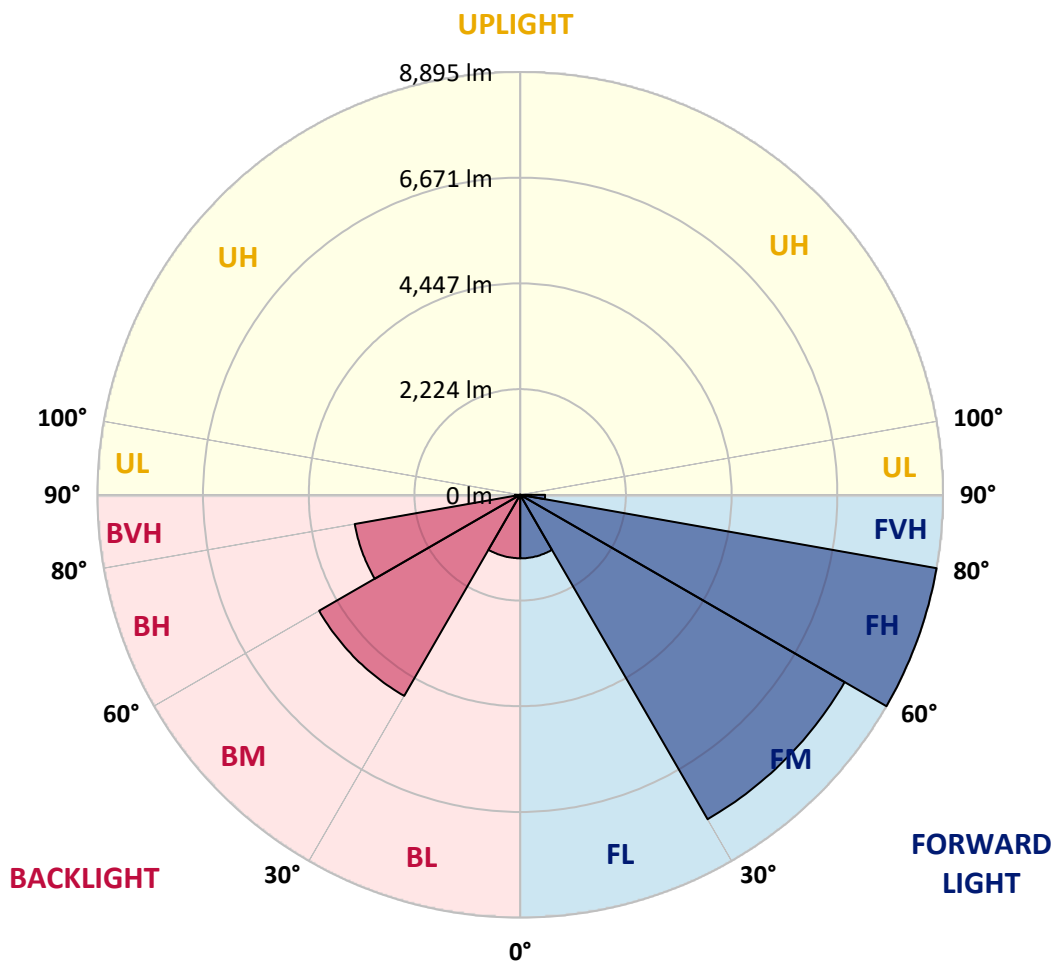
CATALOG NUMBER: VST-F11-LED-E-U-T3-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1336.8	4.7			
FM	(30°-60°)	7880.4	27.7			
FH	(60°-80°)	8894.6	31.2			G4/12000
FVH	(80°-90°)	524.2	1.8			G4/750
BL	(0°-30°)	1334.0	4.7	B3/2500		
BM	(30°-60°)	4883.3	17.1	B3/5000		
BH	(60°-80°)	3532.9	12.4	B4/5000		G4/5000
BVH	(80°-90°)	111.2	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°	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9
2.5°	3069.3	3069.3	3071.2	3069.3	3069.3	3067.4	3074.9	3074.9	3074.9	3073.0	3078.6
5°	3061.8	3061.8	3063.7	3063.7	3065.6	3063.7	3069.3	3071.2	3071.2	3071.2	3076.7
7.5°	3043.2	3048.8	3045.1	3046.9	3048.8	3054.4	3061.8	3065.6	3069.3	3074.9	3076.7
10°	3004.1	3013.4	3011.5	3017.1	3019.0	3035.7	3041.3	3048.8	3061.8	3069.3	3074.9
12.5°	2950.0	2955.6	2957.5	2964.9	2972.4	2992.9	3007.8	3020.8	3039.5	3058.1	3076.7
15°	2907.2	2910.9	2910.9	2918.3	2929.5	2948.2	2966.8	2989.2	3017.1	3048.8	3078.6
17.5°	2920.2	2929.5	2922.1	2920.2	2923.9	2935.1	2951.9	2970.5	3004.1	3039.5	3074.9
20°	3005.9	3007.8	3004.1	2994.8	2987.3	2989.2	2989.2	2992.9	3013.4	3041.3	3069.3
22.5°	3076.7	3084.2	3082.3	3084.2	3082.3	3089.8	3086.1	3078.6	3071.2	3073.0	3086.1
25°	3138.2	3145.7	3145.7	3151.3	3160.6	3175.5	3186.7	3184.8	3173.7	3158.7	3153.2
27.5°	3238.9	3238.9	3238.9	3244.5	3257.5	3276.1	3294.8	3306.0	3315.3	3300.4	3268.7
30°	3397.3	3399.1	3393.6	3395.4	3404.7	3429.0	3451.3	3468.1	3486.7	3484.9	3443.9
32.5°	3570.6	3578.0	3576.2	3583.6	3596.7	3619.0	3643.3	3669.4	3693.6	3708.5	3682.4
35°	3794.2	3801.7	3803.5	3814.7	3829.6	3863.2	3896.7	3930.3	3956.4	3967.5	3961.9
37.5°	4161.3	4163.2	4155.8	4139.0	4144.6	4170.7	4209.8	4263.8	4280.6	4291.8	4317.9
40°	4711.1	4705.5	4675.7	4660.8	4651.5	4662.6	4655.2	4698.1	4737.2	4739.0	4737.2
42.5°	5378.3	5361.5	5333.5	5329.8	5326.1	5322.3	5301.8	5303.7	5339.1	5348.4	5337.3
45°	6041.7	6021.2	6000.7	6019.3	5997.0	6054.7	6071.5	6116.2	6121.8	6140.5	6112.5
47.5°	6585.8	6587.7	6587.7	6613.8	6658.5	6768.5	6867.2	6953.0	6984.6	7029.4	7035.0
50°	6997.7	7008.9	7044.3	7128.1	7223.2	7407.7	7573.5	7728.2	7868.0	7920.2	8058.1
52.5°	7238.1	7267.9	7342.5	7482.2	7651.8	7890.3	8151.2	8414.0	8656.3	8861.3	9025.3
55°	7195.2	7217.6	7348.0	7566.1	7830.7	8151.2	8516.5	8896.7	9275.0	9621.6	9889.9
57.5°	6919.4	6934.3	7064.8	7310.8	7640.6	8071.1	8587.3	9152.0	9683.1	10242.2	10700.6
60°	6557.9	6580.3	6701.4	6895.2	7240.0	7698.4	8296.6	9062.5	9910.4	10790.0	11647.3
62.5°	6326.8	6321.2	6427.4	6600.8	6859.8	7275.4	7851.2	8758.8	9932.8	11419.9	13113.9
65°	5942.9	5926.1	6036.1	6233.6	6515.0	6917.6	7463.6	8335.7	9698.0	11658.5	14060.6
66°	5704.4	5670.8	5780.8	5980.2	6261.6	6690.2	7213.9	8074.8	9412.9	11425.5	13960.0
67.5°	5286.9	5270.2	5322.3	5478.9	5687.6	6090.1	6636.2	7502.7	8738.3	10724.8	13222.0
70°	4297.4	4260.1	4301.1	4371.9	4452.1	4550.8	4886.3	5573.9	6619.4	8544.5	10652.1
72.5°	2927.7	2909.0	2985.4	3093.5	3307.8	3408.5	3540.8	3652.6	4021.6	5385.7	7430.0
75°	2227.0	2238.1	2335.0	2514.0	2789.8	3087.9	3378.6	3484.9	3361.9	3255.7	4217.3
77.5°	1248.6	1313.8	1431.2	1658.6	1951.2	2372.3	2879.2	3438.3	3717.8	3648.9	3412.2
80°	514.3	505.0	562.8	687.7	788.3	1133.0	1733.1	2433.8	3220.2	3717.8	3639.5
82.5°	143.5	147.2	190.1	244.1	314.9	400.7	626.2	1006.3	1639.9	2551.2	3339.5
85°	44.7	44.7	61.5	91.3	108.1	124.9	158.4	260.9	445.4	888.9	1802.1
87.5°	9.3	9.3	13.0	26.1	28.0	28.0	35.4	48.5	42.9	39.1	175.2
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°	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9
2.5°	3073.0	3069.3	3071.2	3073.0	3071.2	3071.2	3069.3	3067.4	3069.3	3069.3	3074.9
5°	3071.2	3069.3	3071.2	3071.2	3071.2	3073.0	3073.0	3073.0	3078.6	3078.6	3087.9
7.5°	3074.9	3074.9	3078.6	3078.6	3078.6	3078.6	3080.5	3084.2	3093.5	3091.7	3108.4
10°	3082.3	3086.1	3095.4	3097.2	3097.2	3102.8	3106.6	3114.0	3123.3	3127.1	3142.0
12.5°	3091.7	3110.3	3127.1	3130.8	3136.4	3145.7	3151.3	3155.0	3171.8	3177.4	3196.0
15°	3102.8	3128.9	3149.4	3156.9	3164.3	3175.5	3183.0	3188.6	3203.5	3210.9	3233.3
17.5°	3104.7	3134.5	3158.7	3169.9	3179.2	3192.3	3203.5	3214.7	3231.4	3242.6	3265.0
20°	3102.8	3142.0	3179.2	3194.2	3203.5	3227.7	3244.5	3259.4	3279.9	3291.1	3313.4
22.5°	3123.3	3168.1	3218.4	3237.0	3251.9	3285.5	3307.8	3332.1	3358.1	3365.6	3382.4
25°	3171.8	3218.4	3281.7	3307.8	3333.9	3378.6	3410.3	3445.7	3471.8	3475.6	3481.1
27.5°	3253.8	3296.6	3373.1	3412.2	3455.1	3518.4	3565.0	3600.4	3637.7	3637.7	3634.0
30°	3419.6	3429.0	3509.1	3559.4	3622.8	3716.0	3784.9	3824.0	3852.0	3852.0	3820.3
32.5°	3634.0	3622.8	3695.5	3749.5	3837.1	3967.5	4060.7	4090.5	4120.3	4111.0	4057.0
35°	3943.3	3911.6	3952.6	4034.6	4133.4	4312.3	4409.2	4476.3	4494.9	4468.8	4383.1
37.5°	4332.8	4329.1	4349.6	4440.9	4550.8	4781.9	4880.7	4923.5	4908.6	4862.0	4711.1
40°	4744.6	4733.5	4720.4	4781.9	4904.9	5182.6	5357.8	5380.1	5359.6	5290.7	5100.6
42.5°	5294.4	5294.4	5232.9	5249.7	5352.2	5663.4	5870.2	5941.0	5942.9	5842.3	5588.8
45°	6051.0	6043.5	5935.5	5909.4	5987.6	6293.3	6559.8	6598.9	6598.9	6466.6	6188.9
47.5°	6960.4	6951.1	6844.9	6753.6	6768.5	7098.3	7320.1	7379.7	7327.5	7228.8	6898.9
50°	7985.4	7968.6	7860.5	7774.8	7737.5	8071.1	8259.3	8287.3	8210.9	8093.5	7735.7
52.5°	9025.3	9075.6	9012.2	8965.6	8978.7	9194.8	9388.6	9256.3	9217.2	9090.5	8730.8
55°	10108.0	10262.7	10402.4	10361.4	10409.9	10620.5	10657.7	10482.6	10411.7	10320.4	9919.8
57.5°	11198.2	11649.2	12107.6	12236.2	12355.4	12657.3	12614.5	12327.5	12381.5	12517.6	12066.6
60°	12720.7	14023.3	15186.2	15400.5	15771.4	16028.5	16086.3	16030.4	16282.0	16211.2	15812.4
62.5°	15059.5	17230.5	18848.1	19250.6	19623.4	19610.3	19414.6	19213.4	19461.2	19461.2	18419.5
65°	16729.2	19192.9	20924.1	21257.7	21242.8	20793.7	20331.5	19929.0	19893.6	19617.8	18095.2
66°	16807.5	19343.8	21039.7	21330.4	21218.6	20495.5	19942.0	19431.4	19213.4	18829.5	17269.7
67.5°	16103.1	18917.1	20663.2	20916.7	20622.2	19586.1	18823.9	18140.0	17823.1	17176.5	15708.0
70°	13209.0	16257.8	18797.8	19315.9	18982.3	17670.3	16626.7	15702.4	15096.8	14163.1	13104.6
72.5°	9642.1	12003.2	14753.9	15596.2	15544.0	14336.4	13495.9	12649.9	11854.1	11004.4	10231.0
75°	6267.2	7808.3	9342.1	9834.0	9597.4	8898.5	8296.6	7802.8	7048.0	6457.3	6313.8
77.5°	3578.0	4371.9	4135.3	4073.8	3777.4	3048.8	2027.6	1421.9	1284.0	1602.7	1757.3
80°	3404.7	3086.1	2527.0	2279.1	2094.6	1427.5	749.2	527.4	462.2	473.3	508.8
82.5°	3838.9	4001.1	3272.4	2733.9	2379.8	1736.8	948.6	441.7	322.4	382.0	428.6
85°	2877.3	4051.4	4016.0	3402.9	2791.6	2001.5	1121.9	337.3	193.8	268.4	350.4
87.5°	583.3	959.7	924.3	812.5	691.4	482.7	188.2	106.2	96.9	132.3	201.3
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°	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9	3074.9
2.5°	3078.6	3078.6	3082.3	3087.9	3089.8	3089.8	3093.5	3089.8	3097.2	3099.1	3101.0
5°	3095.4	3101.0	3104.7	3114.0	3119.6	3123.3	3128.9	3125.2	3132.7	3134.5	3138.2
7.5°	3114.0	3123.3	3130.8	3134.5	3142.0	3142.0	3143.8	3140.1	3138.2	3132.7	3130.8
10°	3147.6	3153.2	3162.5	3158.7	3155.0	3142.0	3130.8	3114.0	3104.7	3087.9	3078.6
12.5°	3201.6	3205.3	3205.3	3188.6	3164.3	3134.5	3106.6	3078.6	3056.2	3037.6	3026.4
15°	3238.9	3246.3	3237.0	3212.8	3177.4	3136.4	3099.1	3061.8	3032.0	3007.8	2992.9
17.5°	3266.8	3265.0	3248.2	3214.7	3181.1	3145.7	3112.2	3073.0	3035.7	3000.3	2978.0
20°	3309.7	3291.1	3261.2	3225.8	3190.4	3160.6	3134.5	3097.2	3058.1	3009.7	2976.1
22.5°	3367.5	3333.9	3291.1	3253.8	3220.2	3192.3	3162.5	3130.8	3089.8	3035.7	2989.2
25°	3449.5	3391.7	3343.2	3306.0	3276.1	3244.5	3210.9	3169.9	3128.9	3073.0	3017.1
27.5°	3574.3	3488.6	3427.1	3393.6	3365.6	3322.7	3279.9	3231.4	3179.2	3121.5	3058.1
30°	3725.3	3622.8	3552.0	3522.1	3488.6	3440.1	3393.6	3326.5	3253.8	3184.8	3106.6
32.5°	3902.3	3797.9	3727.1	3704.8	3650.7	3594.8	3529.6	3440.1	3345.1	3242.6	3149.4
35°	4170.7	4038.3	3973.1	3920.9	3846.4	3779.3	3669.4	3552.0	3415.9	3279.9	3164.3
37.5°	4446.5	4312.3	4245.2	4172.5	4075.6	3952.6	3805.4	3637.7	3456.9	3289.2	3147.6
40°	4815.5	4670.1	4584.4	4472.6	4316.0	4124.1	3906.0	3676.8	3456.9	3248.2	3076.7
42.5°	5245.9	5111.8	4979.4	4795.0	4543.4	4263.8	3958.2	3663.8	3397.3	3156.9	2976.1
45°	5842.3	5613.1	5402.5	5106.2	4739.0	4345.8	3963.8	3602.3	3294.8	3028.3	2827.0
47.5°	6513.2	6216.9	5844.1	5380.1	4878.8	4377.5	3909.8	3486.7	3132.7	2843.8	2623.9
50°	7286.5	6831.8	6259.7	5598.2	4949.6	4334.7	3781.2	3292.9	2909.0	2577.3	2342.5
52.5°	8171.7	7478.5	6636.2	5752.8	4938.5	4204.2	3568.7	3037.6	2609.0	2256.8	2025.7
55°	9153.8	8182.9	6995.8	5851.6	4837.8	3950.8	3235.2	2677.9	2236.3	1889.7	1686.5
57.5°	10885.1	9418.5	7681.6	5983.9	4627.2	3566.9	2812.1	2223.2	1824.4	1530.0	1336.2
60°	14101.6	11578.3	8980.5	6295.1	4310.4	3086.1	2279.1	1744.3	1410.7	1196.4	1052.9
62.5°	16091.9	13099.0	9614.1	6250.4	3796.1	2428.2	1692.1	1293.3	1030.6	888.9	799.5
65°	15620.4	12502.7	8840.8	5368.9	2953.8	1721.9	1120.0	846.1	708.2	635.5	592.6
66°	14979.3	11835.5	8186.6	4808.0	2573.6	1438.7	924.3	710.0	609.4	555.3	533.0
67.5°	13635.7	10616.7	7061.1	3850.1	1928.8	1071.6	682.1	557.2	495.7	467.8	452.8
70°	11412.5	8553.8	4994.4	2273.6	1045.5	581.4	436.1	387.6	372.7	363.4	357.8
72.5°	8824.0	6192.6	2918.3	1118.1	527.4	376.4	331.7	311.2	305.6	305.6	307.5
75°	5559.0	3559.4	1306.4	538.6	357.8	303.8	283.3	273.9	275.8	277.7	275.8
77.5°	1846.8	1228.1	544.2	382.0	311.2	275.8	259.0	255.3	259.0	260.9	260.9
80°	531.1	464.0	393.2	337.3	285.1	257.2	242.3	240.4	249.7	251.6	247.9
82.5°	408.1	382.0	355.9	326.1	273.9	242.3	236.7	238.5	244.1	240.4	223.6
85°	374.6	370.8	266.5	264.6	238.5	231.1	225.5	227.4	221.8	201.3	182.6
87.5°	210.6	195.7	150.9	152.8	177.0	182.6	150.9	160.3	149.1	130.4	119.3
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°	3074.9	3074.9	3074.9	3074.9	3074.9
2.5°	3104.7	3102.8	3102.8	3108.4	3101.0
5°	3140.1	3138.2	3138.2	3143.8	3138.2
7.5°	3123.3	3117.7	3114.0	3112.2	3112.2
10°	3067.4	3061.8	3050.7	3046.9	3043.2
12.5°	3009.7	3004.1	2991.0	2991.0	2987.3
15°	2974.3	2966.8	2957.5	2951.9	2948.2
17.5°	2955.6	2944.4	2933.3	2927.7	2923.9
20°	2948.2	2933.3	2920.2	2910.9	2910.9
22.5°	2950.0	2931.4	2916.5	2905.3	2901.6
25°	2968.7	2940.7	2922.1	2910.9	2907.2
27.5°	2994.8	2961.2	2937.0	2922.1	2916.5
30°	3030.2	2983.6	2950.0	2931.4	2923.9
32.5°	3054.4	2989.2	2946.3	2920.2	2910.9
35°	3052.5	2968.7	2916.5	2882.9	2871.8
37.5°	3019.0	2920.2	2851.3	2810.3	2791.6
40°	2944.4	2830.8	2758.1	2718.9	2696.6
42.5°	2836.3	2713.4	2648.1	2605.3	2581.0
45°	2666.8	2545.6	2465.5	2432.0	2400.3
47.5°	2432.0	2309.0	2240.0	2191.6	2171.1
50°	2156.1	2033.2	1960.5	1921.3	1902.7
52.5°	1854.2	1736.8	1684.7	1647.4	1621.3
55°	1541.2	1433.1	1410.7	1369.7	1345.5
57.5°	1246.7	1183.4	1162.9	1121.9	1101.4
60°	974.6	954.1	931.8	905.7	894.5
62.5°	754.7	736.1	730.5	713.7	711.9
65°	575.8	577.7	574.0	570.3	566.5
66°	523.7	521.8	523.7	519.9	518.1
67.5°	445.4	452.8	458.4	456.6	456.6
70°	361.5	367.1	374.6	372.7	372.7
72.5°	309.4	318.7	322.4	320.5	320.5
75°	279.5	288.9	288.9	285.1	283.3
77.5°	260.9	264.6	260.9	257.2	253.4
80°	242.3	238.5	232.9	227.4	223.6
82.5°	210.6	201.3	195.7	186.4	186.4
85°	169.6	162.1	149.1	139.8	130.4
87.5°	110.0	106.2	96.9	72.7	57.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)