

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: P159624

Luminaire Tested: **VST-F12-LED-E-U-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159624
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-F12-LED-E-U-T3-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27671.8 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 306.6
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



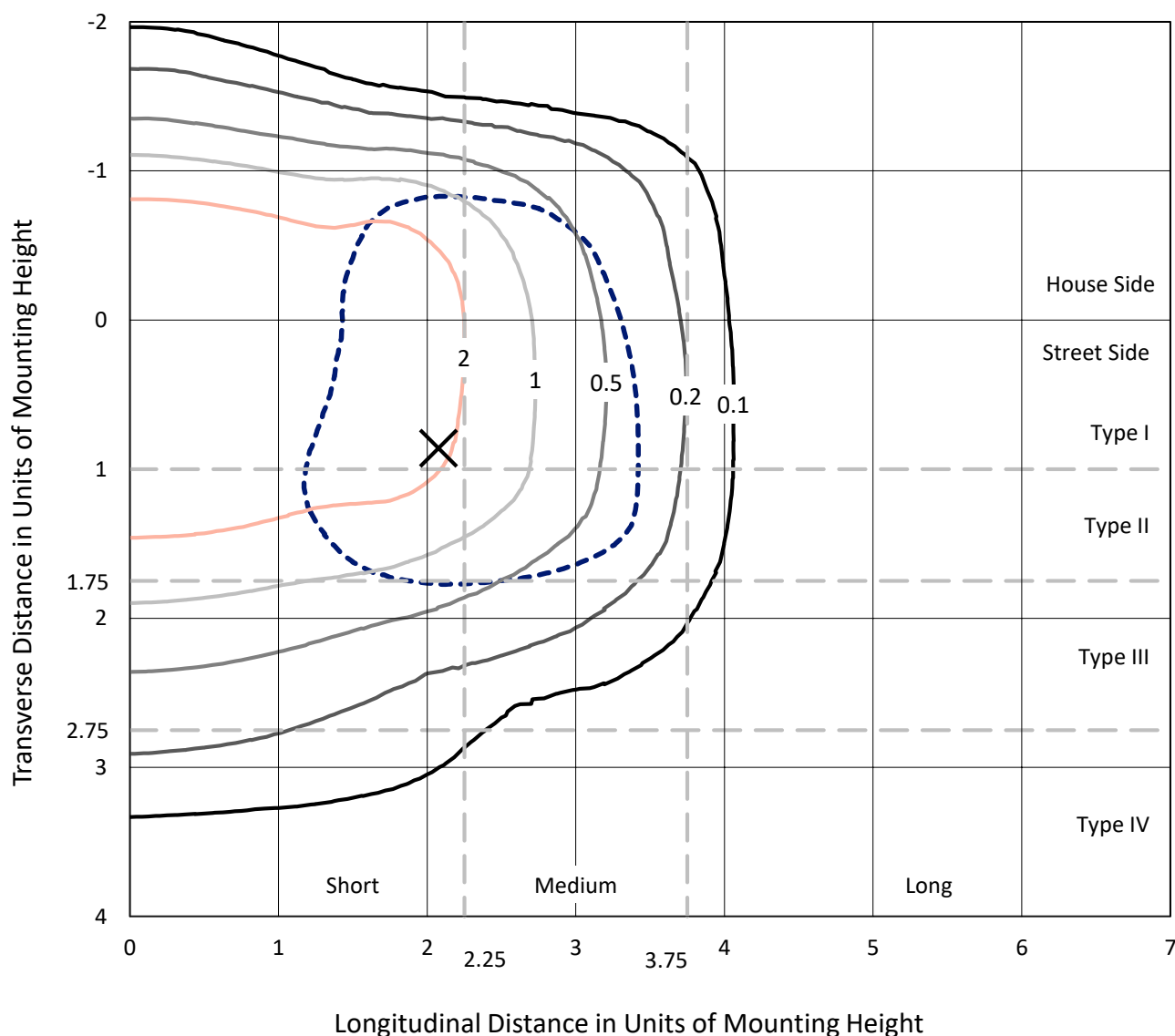
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

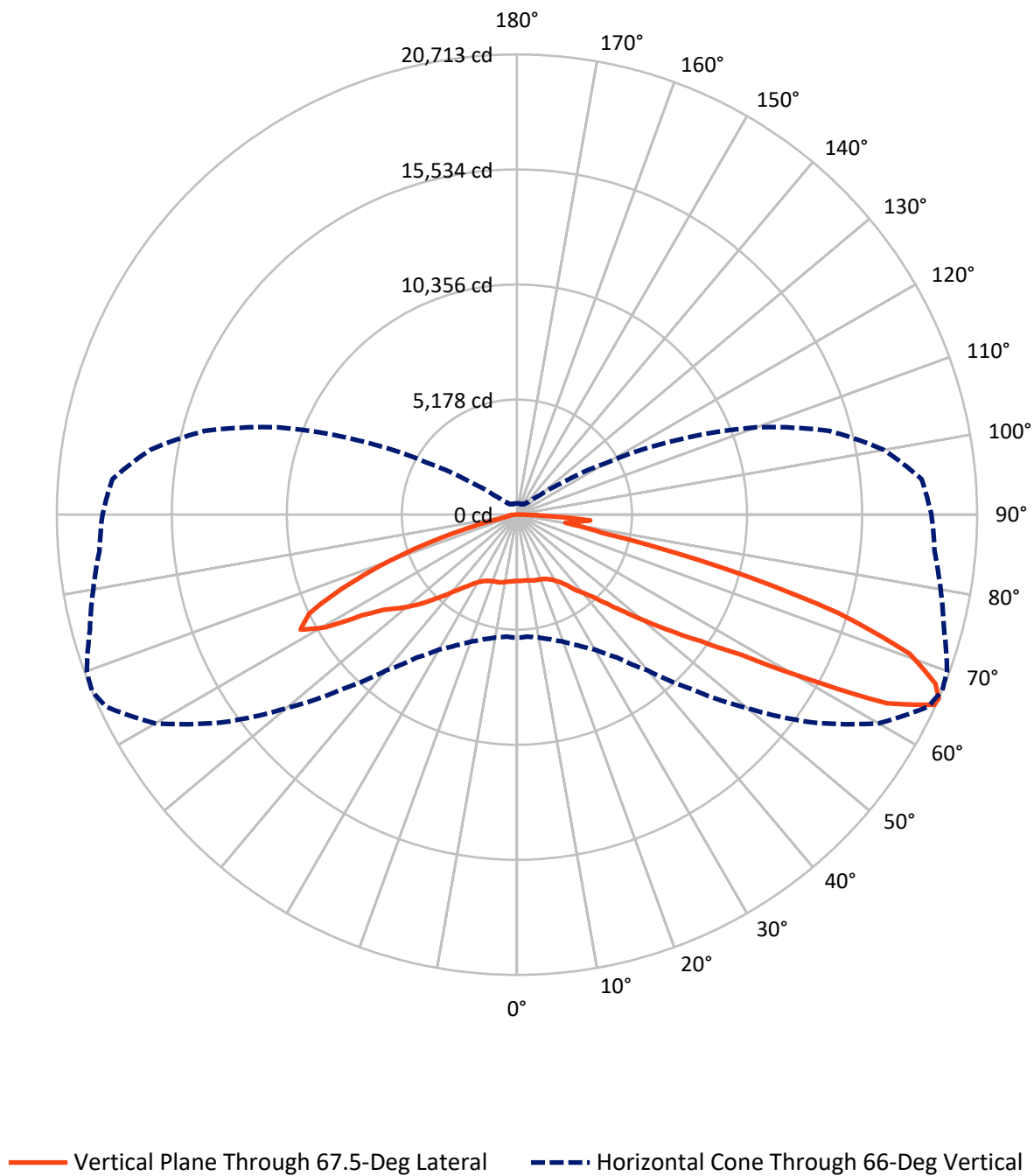


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9575.7	0.0	9575.7
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	18096.1	0.0	18096.1
	% Fixture	65.4	0.0	65.4
Total	Lumens	27671.8	0.0	27671.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.5	1.0
10°-20°	848.4	3.1
20°-30°	1458.4	5.3
30°-40°	2357.1	8.5
40°-50°	3906.3	14.1
50°-60°	6130.5	22.2
60°-70°	8381.7	30.3
70°-80°	3685.9	13.3
80°-90°	617.0	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°	27671.8	100.0
0°-180°	27671.8	100.0

Coefficient of Utilization



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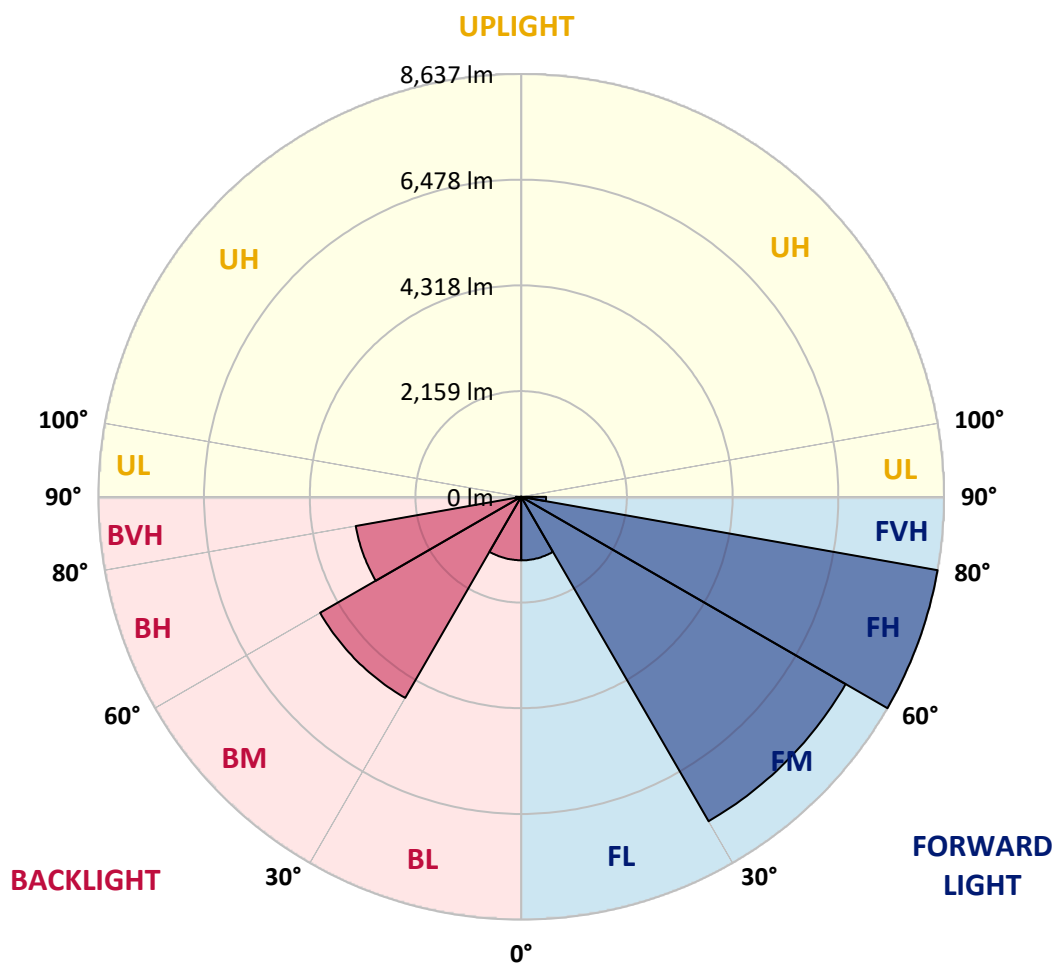
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1298.0	4.7			
FM	(30°-60°)	7652.1	27.7			
FH	(60°-80°)	8637.0	31.2			G4/12000
FVH	(80°-90°)	509.0	1.8			G4/750
BL	(0°-30°)	1295.4	4.7	B3/2500		
BM	(30°-60°)	4741.8	17.1	B3/5000		
BH	(60°-80°)	3430.5	12.4	B4/5000		G4/5000
BVH	(80°-90°)	107.9	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°	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8
2.5°	2980.4	2980.4	2982.2	2980.4	2980.4	2978.6	2985.8	2985.8	2985.8	2984.0	2989.4
5°	2973.1	2973.1	2975.0	2975.0	2976.8	2975.0	2980.4	2982.2	2982.2	2982.2	2987.6
7.5°	2955.1	2960.5	2956.9	2958.7	2960.5	2965.9	2973.1	2976.8	2980.4	2985.8	2987.6
10°	2917.0	2926.1	2924.3	2929.7	2931.5	2947.8	2953.2	2960.5	2973.1	2980.4	2985.8
12.5°	2864.6	2870.0	2871.8	2879.0	2886.3	2906.2	2920.7	2933.3	2951.4	2969.5	2987.6
15°	2823.0	2826.6	2826.6	2833.8	2844.7	2862.8	2880.9	2902.6	2929.7	2960.5	2989.4
17.5°	2835.6	2844.7	2837.4	2835.6	2839.2	2850.1	2866.4	2884.5	2917.0	2951.4	2985.8
20°	2918.9	2920.7	2917.0	2908.0	2900.8	2902.6	2902.6	2906.2	2926.1	2953.2	2980.4
22.5°	2987.6	2994.9	2993.1	2994.9	2993.1	3000.3	2996.7	2989.4	2982.2	2984.0	2996.7
25°	3047.3	3054.6	3054.6	3060.0	3069.1	3083.5	3094.4	3092.6	3081.7	3067.2	3061.8
27.5°	3145.1	3145.1	3145.1	3150.5	3163.2	3181.2	3199.3	3210.2	3219.3	3204.8	3174.0
30°	3298.9	3300.7	3295.3	3297.1	3306.1	3329.6	3351.4	3367.6	3385.7	3383.9	3344.1
32.5°	3467.2	3474.4	3472.6	3479.8	3492.5	3514.2	3537.7	3563.1	3586.6	3601.1	3575.7
35°	3684.3	3691.6	3693.4	3704.2	3718.7	3751.3	3783.8	3816.4	3841.7	3852.6	3847.2
37.5°	4040.8	4042.6	4035.4	4019.1	4024.5	4049.8	4087.9	4140.3	4156.6	4167.5	4192.8
40°	4574.6	4569.2	4540.2	4525.8	4516.7	4527.6	4520.3	4562.0	4600.0	4601.8	4600.0
42.5°	5222.5	5206.2	5179.0	5175.4	5171.8	5168.2	5148.3	5150.1	5184.5	5193.5	5182.6
45°	5866.7	5846.8	5826.9	5845.0	5823.2	5879.3	5895.6	5939.1	5944.5	5962.6	5935.4
47.5°	6395.1	6396.9	6396.9	6422.2	6465.6	6572.4	6668.3	6751.6	6782.3	6825.8	6831.2
50°	6795.0	6805.8	6840.2	6921.7	7013.9	7193.1	7354.2	7504.3	7640.1	7690.7	7824.6
52.5°	7028.4	7057.4	7129.8	7265.5	7430.2	7661.8	7915.1	8170.3	8405.5	8604.6	8763.8
55°	6986.8	7008.5	7135.2	7346.9	7603.9	7915.1	8269.8	8639.0	9006.3	9342.9	9603.5
57.5°	6719.0	6733.5	6860.1	7099.0	7419.3	7837.3	8338.6	8886.9	9402.6	9945.5	10390.6
60°	6367.9	6389.6	6507.3	6695.5	7030.2	7475.4	8056.3	8800.0	9623.4	10477.5	11309.9
62.5°	6143.5	6138.1	6241.3	6409.5	6661.1	7064.6	7623.8	8505.0	9645.1	11089.1	12734.0
65°	5770.8	5754.5	5861.2	6053.1	6326.3	6717.2	7247.4	8094.3	9417.1	11320.8	13653.3
66°	5539.1	5506.6	5613.3	5807.0	6080.2	6496.4	7004.9	7840.9	9140.2	11094.6	13555.6
67.5°	5133.8	5117.5	5168.2	5320.2	5522.9	5913.7	6443.9	7285.4	8485.1	10414.2	12839.0
70°	4172.9	4136.7	4176.5	4245.3	4323.1	4419.0	4744.7	5412.5	6427.6	8296.9	10343.6
72.5°	2842.9	2824.8	2899.0	3003.9	3212.0	3309.7	3438.2	3546.8	3905.1	5229.7	7214.8
75°	2162.5	2173.3	2267.4	2441.1	2708.9	2998.5	3280.8	3383.9	3264.5	3161.3	4095.1
77.5°	1212.4	1275.8	1389.8	1610.5	1894.6	2303.6	2795.8	3338.7	3610.1	3543.2	3313.3
80°	499.4	490.4	546.5	667.7	765.5	1100.2	1682.9	2363.3	3127.0	3610.1	3534.1
82.5°	139.3	143.0	184.6	237.1	305.8	389.1	608.0	977.2	1592.4	2477.3	3242.8
85°	43.4	43.4	59.7	88.7	105.0	121.2	153.8	253.3	432.5	863.2	1749.9
87.5°	9.0	9.0	12.7	25.3	27.1	27.1	34.4	47.0	41.6	38.0	170.1
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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CATALOG NUMBER: VST-F12-LED-E-U-T3-7030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8
2.5°	2984.0	2980.4	2982.2	2984.0	2982.2	2982.2	2980.4	2978.6	2980.4	2980.4	2985.8
5°	2982.2	2980.4	2982.2	2982.2	2982.2	2984.0	2984.0	2984.0	2989.4	2989.4	2998.5
7.5°	2985.8	2985.8	2989.4	2989.4	2989.4	2991.2	2994.9	3003.9	3002.1	3002.1	3018.4
10°	2993.1	2996.7	3005.7	3007.5	3007.5	3013.0	3016.6	3023.8	3032.9	3036.5	3051.0
12.5°	3002.1	3020.2	3036.5	3040.1	3045.5	3054.6	3060.0	3063.6	3079.9	3085.3	3103.4
15°	3013.0	3038.3	3058.2	3065.4	3072.7	3083.5	3090.8	3096.2	3110.7	3117.9	3139.6
17.5°	3014.8	3043.7	3067.2	3078.1	3087.2	3099.8	3110.7	3121.5	3137.8	3148.7	3170.4
20°	3013.0	3051.0	3087.2	3101.6	3110.7	3134.2	3150.5	3165.0	3184.9	3195.7	3217.4
22.5°	3032.9	3076.3	3125.2	3143.2	3157.7	3190.3	3212.0	3235.5	3260.9	3268.1	3284.4
25°	3079.9	3125.2	3186.7	3212.0	3237.3	3280.8	3311.5	3345.9	3371.3	3374.9	3380.3
27.5°	3159.5	3201.2	3275.3	3313.3	3355.0	3416.5	3461.7	3496.1	3532.3	3532.3	3528.7
30°	3320.6	3329.6	3407.4	3456.3	3517.8	3608.3	3675.3	3713.3	3740.4	3740.4	3709.6
32.5°	3528.7	3517.8	3588.4	3640.9	3725.9	3852.6	3943.1	3972.0	4001.0	3991.9	3939.5
35°	3829.1	3798.3	3838.1	3917.8	4013.7	4187.4	4281.5	4346.6	4364.7	4339.4	4256.1
37.5°	4207.3	4203.7	4223.6	4312.2	4419.0	4643.4	4739.3	4780.9	4766.4	4721.2	4574.6
40°	4607.2	4596.3	4583.7	4643.4	4762.8	5032.5	5202.6	5224.3	5204.4	5137.4	4952.8
42.5°	5141.0	5141.0	5081.3	5097.6	5197.1	5499.3	5700.2	5769.0	5770.8	5673.0	5426.9
45°	5875.7	5868.5	5763.5	5738.2	5814.2	6111.0	6369.7	6407.7	6407.7	6279.3	6009.6
47.5°	6758.8	6749.7	6646.6	6557.9	6572.4	6892.7	7108.0	7166.0	7115.3	7019.4	6699.1
50°	7754.1	7737.8	7632.8	7549.6	7513.4	7837.3	8020.1	8047.2	7973.0	7859.0	7511.6
52.5°	8763.8	8812.7	8751.1	8705.9	8718.6	8928.5	9116.7	8988.2	8950.2	8827.2	8477.9
55°	9815.2	9965.4	10101.1	10061.3	10108.3	10312.8	10349.0	10178.9	10110.1	10021.5	9632.4
57.5°	10873.8	11311.7	11756.9	11881.7	11997.5	12290.7	12249.1	11970.4	12022.9	12155.0	11717.1
60°	12352.2	13617.1	14746.3	14954.4	15314.5	15564.2	15620.3	15566.0	15810.3	15741.6	15354.3
62.5°	14623.3	16731.4	18302.1	18693.0	19054.9	19042.3	18852.2	18656.8	18897.5	18897.5	17885.9
65°	16244.6	18636.9	20318.0	20641.9	20627.5	20191.3	19742.6	19351.7	19317.3	19049.5	17571.1
66°	16320.6	18783.5	20430.2	20712.5	20603.9	19901.8	19364.4	18868.5	18656.8	18284.0	16769.4
67.5°	15636.6	18369.1	20064.7	20310.8	20024.9	19018.7	18278.6	17614.5	17306.9	16678.9	15253.0
70°	12826.3	15786.8	18253.3	18756.3	18432.4	17158.5	16145.1	15247.6	14659.4	13752.8	12725.0
72.5°	9362.8	11655.5	14326.5	15144.4	15093.7	13921.1	13105.0	12283.5	11510.8	10685.6	9934.6
75°	6085.6	7582.2	9071.4	9549.2	9319.4	8640.8	8056.3	7576.7	6843.8	6270.2	6130.9
77.5°	3474.4	4245.3	4015.5	3955.8	3668.0	2960.5	1968.8	1380.7	1246.8	1556.2	1706.4
80°	3306.1	2996.7	2453.8	2213.1	2034.0	1386.1	727.5	512.1	448.8	459.6	494.0
82.5°	3727.7	3885.2	3177.6	2654.7	2310.8	1686.5	921.1	428.9	313.1	371.0	416.2
85°	2794.0	3934.0	3899.7	3304.3	2710.8	1943.5	1089.4	327.5	188.2	260.6	340.2
87.5°	566.4	931.9	897.6	789.0	671.4	468.7	182.8	103.1	94.1	128.5	195.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8	2985.8
2.5°	2989.4	2989.4	2993.1	2998.5	3000.3	3000.3	3003.9	3000.3	3007.5	3009.3	3011.1
5°	3005.7	3011.1	3014.8	3023.8	3029.2	3032.9	3038.3	3034.7	3041.9	3043.7	3047.3
7.5°	3023.8	3032.9	3040.1	3043.7	3051.0	3051.0	3052.8	3049.1	3047.3	3041.9	3040.1
10°	3056.4	3061.8	3070.9	3067.2	3063.6	3051.0	3040.1	3023.8	3014.8	2998.5	2989.4
12.5°	3108.9	3112.5	3112.5	3096.2	3072.7	3043.7	3016.6	2989.4	2967.7	2949.6	2938.8
15°	3145.1	3152.3	3143.2	3119.7	3085.3	3045.5	3009.3	2973.1	2944.2	2920.7	2906.2
17.5°	3172.2	3170.4	3154.1	3121.5	3089.0	3054.6	3022.0	2984.0	2947.8	2913.4	2891.7
20°	3213.8	3195.7	3166.8	3132.4	3098.0	3069.1	3043.7	3007.5	2969.5	2922.5	2889.9
22.5°	3269.9	3237.3	3195.7	3159.5	3127.0	3099.8	3070.9	3040.1	3000.3	2947.8	2902.6
25°	3349.5	3293.4	3246.4	3210.2	3181.2	3150.5	3117.9	3078.1	3038.3	2984.0	2929.7
27.5°	3470.8	3387.5	3327.8	3295.3	3268.1	3226.5	3184.9	3137.8	3087.2	3031.1	2969.5
30°	3617.4	3517.8	3449.1	3420.1	3387.5	3340.5	3295.3	3230.1	3159.5	3092.6	3016.6
32.5°	3789.3	3687.9	3619.2	3597.5	3545.0	3490.7	3427.4	3340.5	3248.2	3148.7	3058.2
35°	4049.8	3921.4	3858.0	3807.4	3735.0	3669.8	3563.1	3449.1	3317.0	3184.9	3072.7
37.5°	4317.7	4187.4	4122.2	4051.7	3957.6	3838.1	3695.2	3532.3	3356.8	3193.9	3056.4
40°	4676.0	4534.8	4451.6	4343.0	4191.0	4004.6	3792.9	3570.3	3356.8	3154.1	2987.6
42.5°	5094.0	4963.7	4835.2	4656.1	4411.8	4140.3	3843.6	3557.6	3298.9	3065.4	2889.9
45°	5673.0	5450.5	5246.0	4958.3	4601.8	4220.0	3849.0	3497.9	3199.3	2940.6	2745.1
47.5°	6324.5	6036.8	5674.9	5224.3	4737.5	4250.7	3796.5	3385.7	3041.9	2761.4	2547.9
50°	7075.5	6633.9	6078.4	5436.0	4806.3	4209.1	3671.6	3197.5	2824.8	2502.7	2274.6
52.5°	7935.0	7261.9	6443.9	5586.2	4795.4	4082.4	3465.4	2949.6	2533.4	2191.4	1967.0
55°	8888.7	7945.9	6793.2	5682.1	4697.7	3836.3	3141.4	2600.4	2171.5	1834.9	1637.7
57.5°	10569.8	9145.6	7459.1	5810.6	4493.2	3463.5	2730.7	2158.8	1771.6	1485.7	1297.5
60°	13693.1	11242.9	8720.4	6112.8	4185.6	2996.7	2213.1	1693.8	1369.9	1161.8	1022.4
62.5°	15625.8	12719.6	9335.6	6069.3	3686.1	2357.9	1643.1	1255.9	1000.7	863.2	776.3
65°	15167.9	12140.5	8584.7	5213.4	2868.2	1672.1	1087.6	821.6	687.6	617.1	575.4
66°	14545.4	11492.7	7949.5	4668.7	2499.0	1397.0	897.6	689.5	591.7	539.3	517.5
67.5°	13240.7	10309.2	6856.5	3738.6	1872.9	1040.5	662.3	541.1	481.3	454.2	439.7
70°	11081.9	8306.0	4849.7	2207.7	1015.2	564.6	423.4	376.4	361.9	352.9	347.4
72.5°	8568.4	6013.2	2833.8	1085.8	512.1	365.5	322.1	302.2	296.8	296.8	298.6
75°	5398.0	3456.3	1268.5	523.0	347.4	295.0	275.1	266.0	267.8	269.6	267.8
77.5°	1793.3	1192.5	528.4	371.0	302.2	267.8	251.5	247.9	251.5	253.3	253.3
80°	515.7	450.6	381.8	327.5	276.9	249.7	235.2	233.4	242.5	244.3	240.7
82.5°	396.3	371.0	345.6	316.7	266.0	235.2	229.8	231.6	237.1	233.4	217.2
85°	363.7	360.1	258.8	257.0	231.6	224.4	219.0	220.8	215.3	195.4	177.3
87.5°	204.5	190.0	146.6	148.4	171.9	177.3	146.6	155.6	144.8	126.7	115.8
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):

	160°	165°	170°	175°	180°
0°	2985.8	2985.8	2985.8	2985.8	2985.8
2.5°	3014.8	3013.0	3013.0	3018.4	3011.1
5°	3049.1	3047.3	3047.3	3052.8	3047.3
7.5°	3032.9	3027.4	3023.8	3022.0	3022.0
10°	2978.6	2973.1	2962.3	2958.7	2955.1
12.5°	2922.5	2917.0	2904.4	2904.4	2900.8
15°	2888.1	2880.9	2871.8	2866.4	2862.8
17.5°	2870.0	2859.1	2848.3	2842.9	2839.2
20°	2862.8	2848.3	2835.6	2826.6	2826.6
22.5°	2864.6	2846.5	2832.0	2821.1	2817.5
25°	2882.7	2855.5	2837.4	2826.6	2823.0
27.5°	2908.0	2875.4	2851.9	2837.4	2832.0
30°	2942.4	2897.1	2864.6	2846.5	2839.2
32.5°	2965.9	2902.6	2861.0	2835.6	2826.6
35°	2964.1	2882.7	2832.0	2799.4	2788.6
37.5°	2931.5	2835.6	2768.7	2728.9	2710.8
40°	2859.1	2748.8	2678.2	2640.2	2618.5
42.5°	2754.2	2634.8	2571.4	2529.8	2506.3
45°	2589.5	2471.9	2394.1	2361.5	2330.7
47.5°	2361.5	2242.1	2175.1	2128.1	2108.2
50°	2093.7	1974.3	1903.7	1865.7	1847.6
52.5°	1800.5	1686.5	1635.9	1599.7	1574.3
55°	1496.5	1391.6	1369.9	1330.0	1306.5
57.5°	1210.6	1149.1	1129.2	1089.4	1069.5
60°	946.4	926.5	904.8	879.5	868.6
62.5°	732.9	714.8	709.4	693.1	691.3
65°	559.2	561.0	557.4	553.7	550.1
66°	508.5	506.7	508.5	504.9	503.1
67.5°	432.5	439.7	445.2	443.3	443.3
70°	351.1	356.5	363.7	361.9	361.9
72.5°	300.4	309.4	313.1	311.2	311.2
75°	271.4	280.5	280.5	276.9	275.1
77.5°	253.3	257.0	253.3	249.7	246.1
80°	235.2	231.6	226.2	220.8	217.2
82.5°	204.5	195.4	190.0	181.0	181.0
85°	164.7	157.4	144.8	135.7	126.7
87.5°	106.8	103.1	94.1	70.6	56.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)