

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: P158491

Luminaire Tested: **VST-E09-LED-E-U-SL3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158491
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E09-LED-E-U-SL3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (189) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27860.6 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 225.7
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



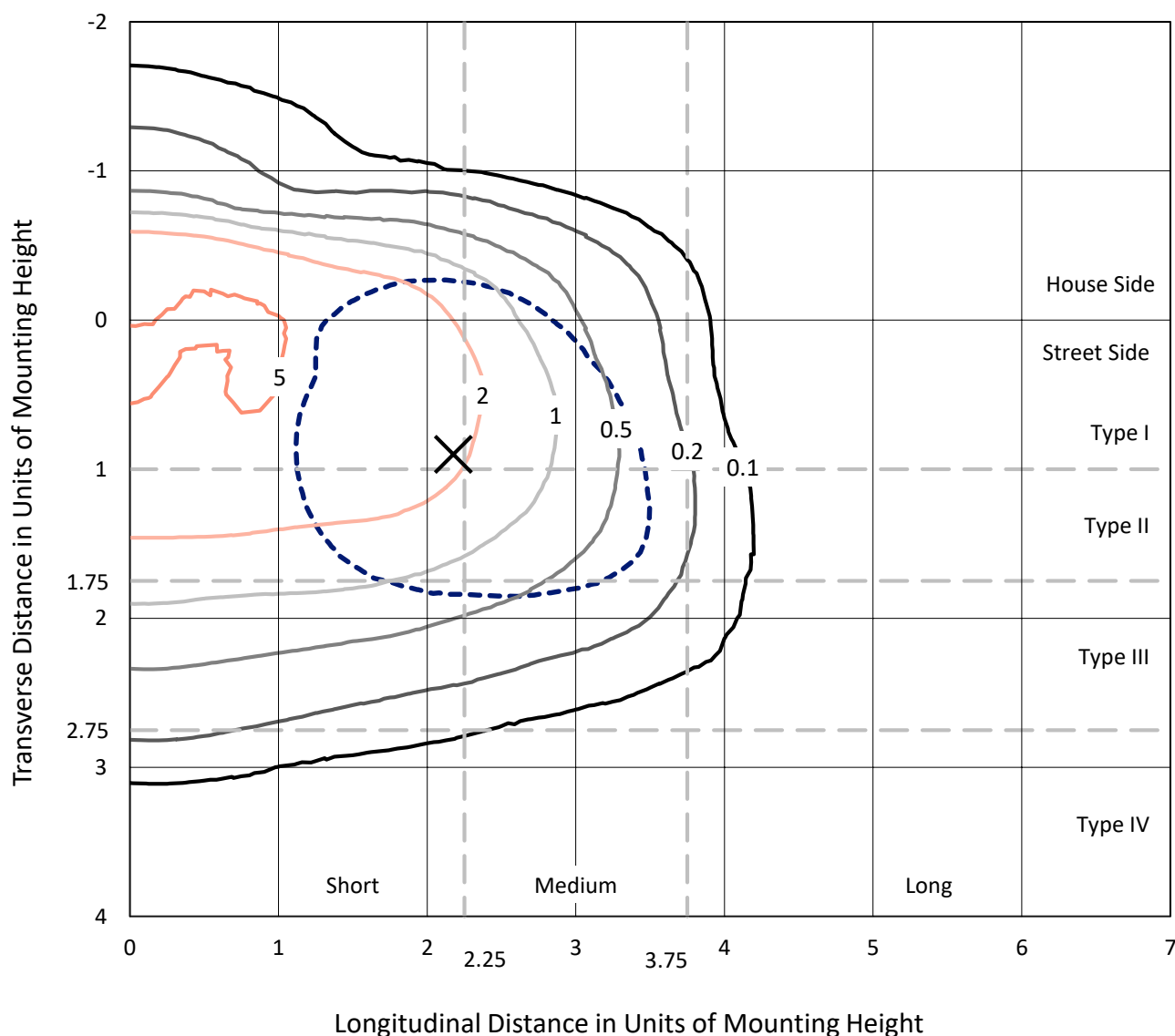
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

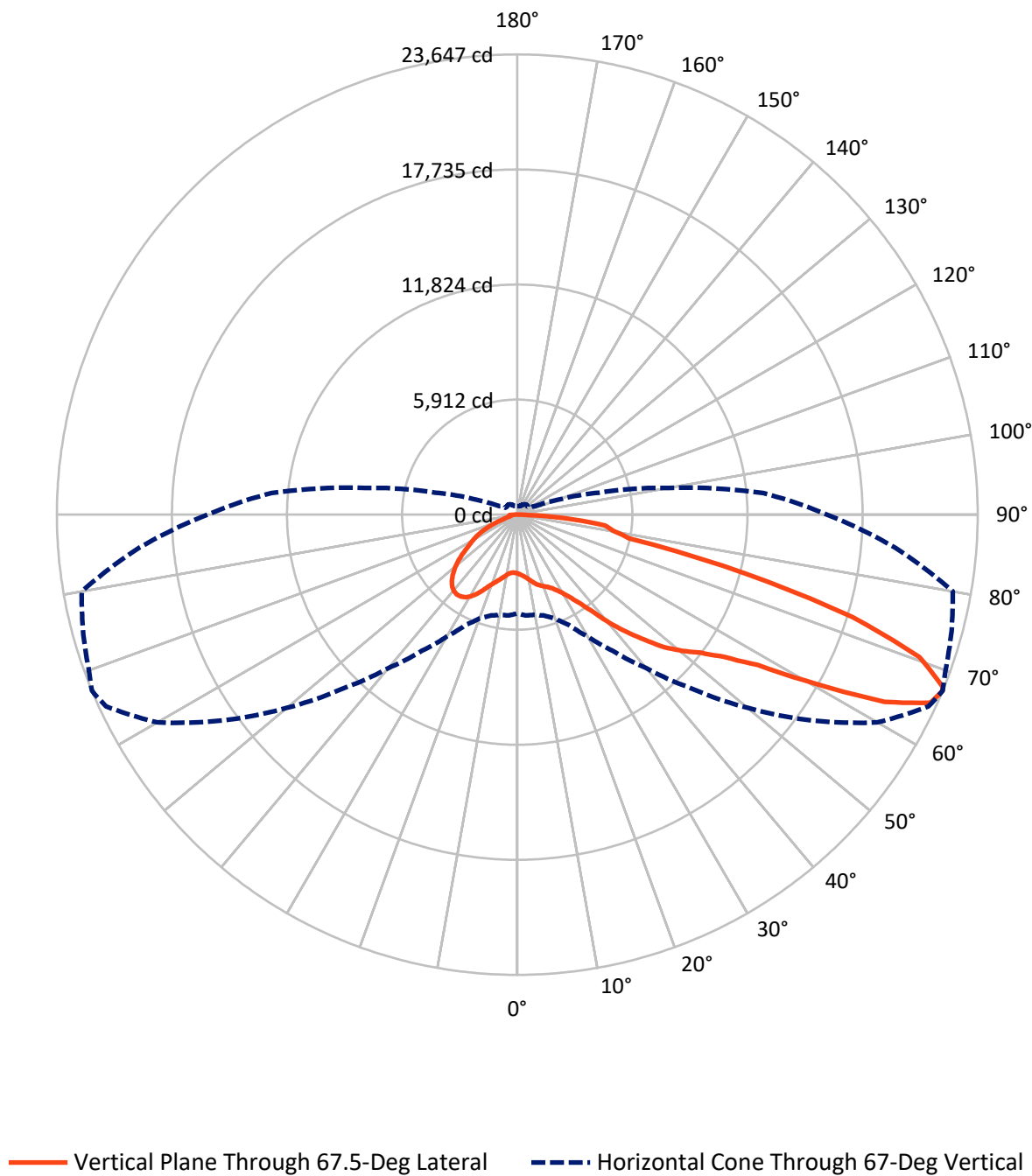


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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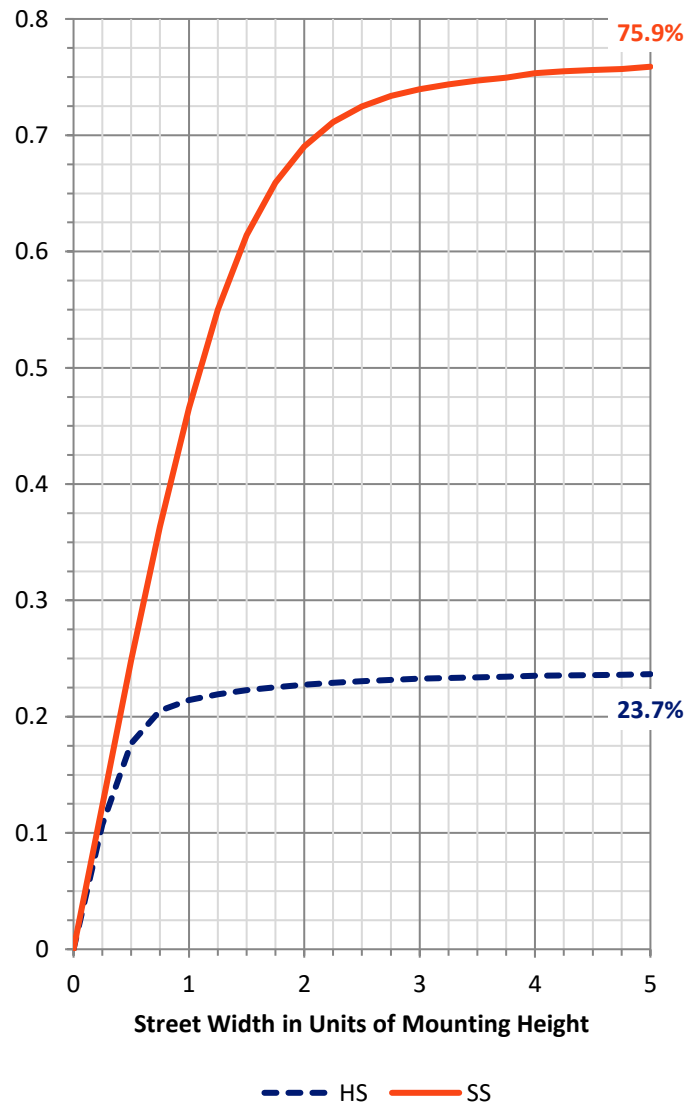
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6683.8	0.0	6683.8
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	21176.8	0.0	21176.8
	% Fixture	76.0	0.0	76.0
Total	Lumens	27860.6	0.0	27860.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.1	1.1
10°-20°	1022.6	3.7
20°-30°	1825.6	6.6
30°-40°	2675.5	9.6
40°-50°	4134.0	14.8
50°-60°	6019.9	21.6
60°-70°	7841.9	28.1
70°-80°	3510.3	12.6
80°-90°	530.8	1.9
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°	27860.6	100.0
0°-180°	27860.6	100.0

Coefficient of Utilization



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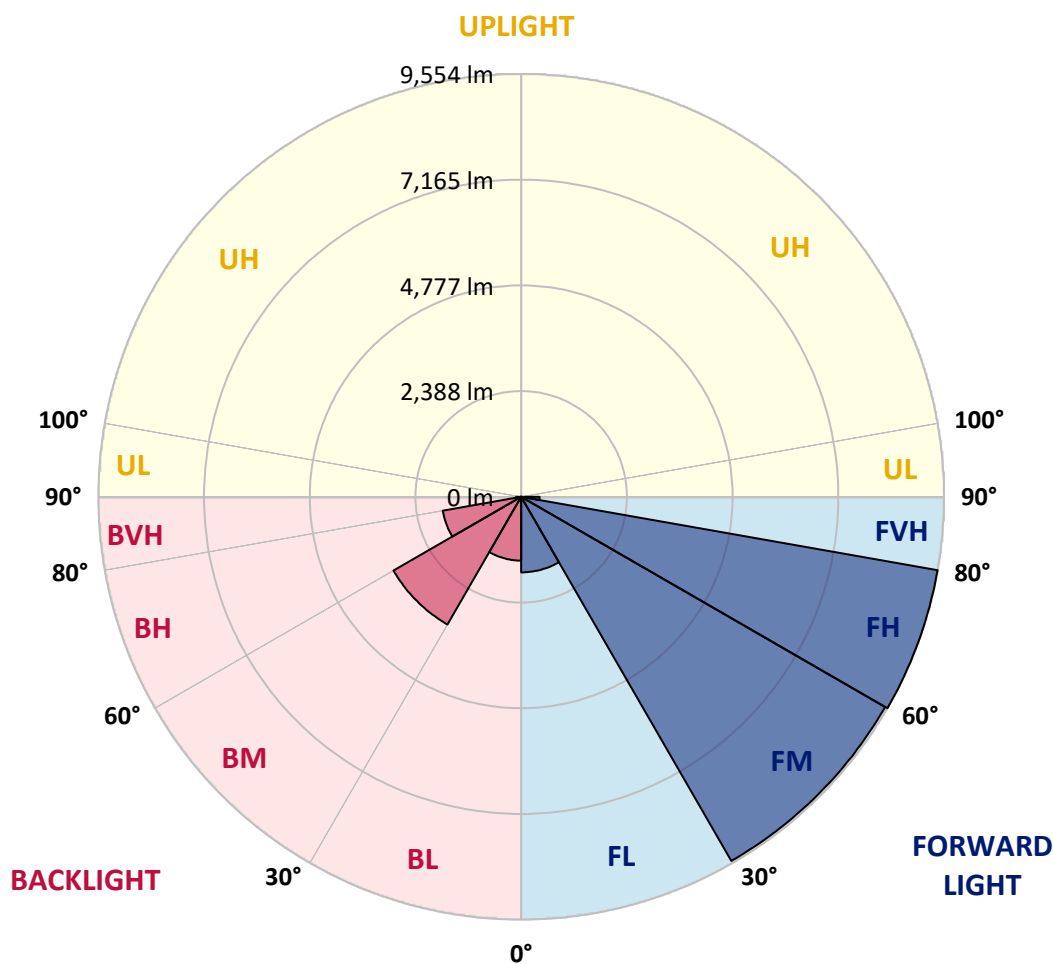
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1707.0	6.1			
FM	(30°-60°)	9499.0	34.1			
FH	(60°-80°)	9554.0	34.3			G4/12000
FVH	(80°-90°)	416.8	1.5			G3/500
BL	(0°-30°)	1441.2	5.2	B3/2500		
BM	(30°-60°)	3330.4	12.0	B3/5000		
BH	(60°-80°)	1798.2	6.5	B3/2500		G3/2500
BVH	(80°-90°)	114.0	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8
2.5°	3138.0	3145.4	3147.3	3145.4	3147.3	3139.9	3138.0	3127.0	3132.5	3117.7	3114.0
5°	3308.0	3313.5	3317.2	3302.4	3306.1	3298.7	3289.5	3278.4	3263.6	3243.3	3230.4
7.5°	3474.2	3483.4	3481.6	3476.0	3463.1	3455.7	3437.2	3420.6	3394.8	3370.8	3354.1
10°	3697.7	3695.8	3695.8	3664.4	3646.0	3629.3	3596.1	3570.2	3544.4	3509.3	3490.8
12.5°	3956.3	3943.3	3937.8	3915.6	3876.8	3847.3	3799.3	3749.4	3703.2	3666.3	3636.7
15°	4205.6	4205.6	4190.8	4155.7	4118.8	4080.0	4011.7	3939.6	3863.9	3804.8	3775.2
17.5°	4432.8	4412.5	4399.5	4353.4	4314.6	4251.8	4176.0	4098.5	4004.3	3921.2	3863.9
20°	4599.0	4582.4	4554.7	4497.4	4430.9	4357.0	4268.4	4177.9	4076.3	3985.8	3921.2
22.5°	4695.0	4674.7	4632.3	4556.5	4466.0	4362.6	4259.2	4174.2	4081.8	4013.5	3959.9
25°	4744.9	4724.6	4667.3	4567.6	4445.7	4309.0	4190.8	4107.7	4054.1	4037.5	4030.1
27.5°	4743.1	4726.4	4665.5	4551.0	4394.0	4237.0	4109.6	4039.4	4033.8	4098.5	4146.5
30°	4695.0	4684.0	4628.6	4514.0	4349.7	4185.3	4067.1	4030.1	4087.4	4224.1	4342.3
32.5°	4647.0	4641.5	4602.7	4499.3	4358.9	4220.4	4139.1	4142.8	4261.0	4471.6	4661.8
35°	4652.6	4660.0	4654.4	4599.0	4510.3	4438.3	4399.5	4480.8	4665.5	4920.4	5175.3
37.5°	4700.6	4728.3	4763.4	4768.9	4770.8	4759.7	4841.0	5012.7	5282.4	5614.8	6013.8
40°	4805.9	4837.3	4938.9	5027.5	5142.0	5278.7	5443.1	5681.3	6015.6	6425.7	6915.1
42.5°	5132.8	5177.1	5302.7	5467.1	5677.6	5891.9	6137.5	6462.6	6872.6	7304.8	7818.3
45°	5559.4	5651.8	5790.3	5973.2	6289.0	6590.1	6907.7	7271.6	7707.5	8248.7	8765.8
47.5°	6091.4	6183.7	6385.0	6580.8	6953.9	7328.9	7676.1	8056.6	8529.4	9083.5	9656.1
50°	6556.8	6662.1	6841.3	7105.4	7537.6	7997.5	8381.6	8793.5	9190.6	9774.3	10352.4
52.5°	6922.5	6998.2	7170.0	7412.0	7894.0	8398.3	8884.0	9342.1	9813.1	10396.7	10932.3
55°	6968.7	7038.9	7207.0	7484.0	7973.5	8533.1	9092.7	9635.7	10302.5	10939.7	11649.0
57.5°	6769.2	6826.5	6996.4	7243.9	7720.4	8357.6	9065.0	9761.3	10614.7	11475.3	12341.6
60°	6486.6	6543.9	6676.9	6874.5	7304.8	7991.9	8817.5	9770.6	10904.6	12147.7	13422.1
62.5°	6176.3	6226.2	6333.3	6473.7	6852.3	7485.8	8431.5	9709.6	11141.0	12816.3	14781.5
65°	5653.6	5773.7	5819.9	5963.9	6342.6	6941.0	7903.3	9297.7	11045.0	13113.6	15634.8
67°	5075.5	5197.4	5221.4	5367.4	5670.3	6244.7	7223.6	8534.9	10284.0	12600.2	15446.4
67.5°	4890.8	4994.3	5031.2	5177.1	5463.4	6004.6	6933.6	8259.7	10051.3	12319.4	15219.2
70°	3596.1	3710.6	3751.2	3812.2	4017.2	4467.9	5082.9	6233.6	8014.1	10053.2	12838.4
72.5°	1924.6	2016.9	2055.7	2146.2	2251.5	2497.1	2968.1	3793.7	4918.5	6726.7	9133.4
75°	1302.1	1339.1	1366.8	1429.6	1538.5	1734.3	1941.2	2231.2	2910.9	3795.6	5197.4
77.5°	742.5	759.1	762.8	773.9	860.7	1047.2	1387.1	1878.4	2408.5	2750.2	3324.6
80°	321.4	354.6	380.5	363.9	358.3	397.1	496.8	740.6	1451.7	2305.0	2735.4
82.5°	173.6	188.4	210.6	212.4	223.5	236.4	256.7	304.8	428.5	864.4	1885.8
85°	90.5	94.2	125.6	144.1	153.3	160.7	164.4	182.9	210.6	267.8	469.1
87.5°	12.9	18.5	22.2	29.6	33.2	35.1	40.6	51.7	61.0	73.9	125.6
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°	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8
2.5°	3097.4	3093.7	3082.6	3075.2	3067.9	3060.5	3051.2	3043.8	3030.9	3021.7	3010.6
5°	3211.9	3189.8	3175.0	3154.7	3151.0	3127.0	3102.9	3091.9	3069.7	3051.2	3029.1
7.5°	3328.3	3302.4	3278.4	3261.8	3252.5	3219.3	3195.3	3167.6	3141.7	3117.7	3091.9
10°	3465.0	3439.1	3413.2	3402.2	3385.5	3354.1	3333.8	3298.7	3272.9	3243.3	3208.2
12.5°	3607.2	3588.7	3570.2	3555.5	3548.1	3533.3	3503.7	3474.2	3439.1	3409.5	3368.9
15°	3732.8	3719.8	3712.4	3708.8	3708.8	3699.5	3671.8	3644.1	3607.2	3573.9	3529.6
17.5°	3821.4	3815.9	3821.4	3827.0	3834.4	3827.0	3821.4	3790.0	3766.0	3725.4	3681.1
20°	3873.1	3884.2	3911.9	3930.4	3947.0	3959.9	3965.5	3939.6	3908.2	3878.7	3849.1
22.5°	3928.5	3959.9	4008.0	4035.7	4063.4	4109.6	4120.6	4102.2	4078.2	4059.7	4028.3
25°	4020.9	4067.1	4150.2	4194.5	4233.3	4301.6	4310.9	4314.6	4309.0	4294.3	4255.5
27.5°	4165.0	4255.5	4366.3	4423.5	4466.0	4554.7	4589.8	4589.8	4575.0	4591.6	4591.6
30°	4416.2	4536.2	4680.3	4713.5	4780.0	4857.6	4914.8	4922.2	4924.1	4959.2	5010.9
32.5°	4802.2	4916.7	5077.4	5114.3	5171.6	5245.5	5310.1	5302.7	5319.3	5395.1	5463.4
35°	5363.7	5480.0	5585.3	5635.2	5661.0	5727.5	5751.5	5792.2	5842.0	5936.2	5927.0
37.5°	6194.8	6298.2	6313.0	6344.4	6313.0	6325.9	6344.4	6392.4	6525.4	6610.4	6473.7
40°	7195.9	7367.6	7351.0	7314.1	7243.9	7149.7	7182.9	7256.8	7400.9	7327.0	6959.5
42.5°	8139.7	8317.0	8283.7	8241.3	8086.1	8051.0	8047.3	8108.3	8185.9	7975.3	7339.9
45°	9068.7	9249.7	9192.5	9168.5	9065.0	8989.3	9052.1	9055.8	9035.5	8584.8	7672.4
47.5°	10027.3	10193.5	10156.6	10176.9	10069.8	10019.9	10025.5	9999.6	9809.4	9102.0	7931.0
50°	10801.2	11024.7	11046.8	11000.7	10943.4	10867.7	11061.6	10991.4	10568.5	9604.3	8180.3
52.5°	11403.3	11704.4	11818.9	11789.3	11743.2	11752.4	12116.3	12195.7	11495.7	10237.9	8455.5
55°	12116.3	12590.9	12777.5	12888.3	12840.3	13025.0	13858.0	13898.6	12784.9	11065.3	8813.8
57.5°	13145.0	13824.7	14413.9	14570.9	14722.4	15322.6	16674.6	16262.7	14458.2	12317.6	9268.2
60°	14709.4	16198.1	17154.8	17657.2	18011.8	18850.4	20135.9	19092.3	16543.5	13808.1	9838.9
62.5°	16900.0	19075.7	20675.2	21179.4	21325.3	21807.4	22738.3	20741.7	17679.4	14476.7	9888.8
65°	18530.8	21140.6	23056.0	23314.6	23140.9	23150.2	23394.0	20654.9	17256.4	13893.1	9031.8
67°	18423.7	21345.7	23307.2	23647.0	23406.9	23091.1	22710.6	19478.4	15897.0	12670.4	7908.8
67.5°	18259.3	21148.0	23198.2	23556.5	23336.7	22976.6	22420.6	19022.1	15474.1	12289.9	7679.8
70°	15784.4	18652.7	21414.0	21918.2	22010.6	21681.8	20121.1	16039.3	12563.2	9997.8	5963.9
72.5°	12286.2	14840.6	17572.3	18010.0	18364.6	17417.1	14644.8	11078.2	9157.4	7205.1	4318.3
75°	8112.0	10710.7	12088.5	12153.2	11700.7	9946.0	7155.2	5548.4	5106.9	4235.1	2672.6
77.5°	4340.4	6298.2	6337.0	5867.9	5653.6	4214.8	1710.3	943.8	1050.9	1193.2	1063.9
80°	3237.8	4011.7	4648.9	4998.0	5101.4	3614.6	884.7	500.5	437.7	398.9	393.4
82.5°	2920.1	3875.0	4344.1	4534.4	4486.3	2973.7	496.8	336.2	278.9	302.9	345.4
85°	1145.1	2068.6	2720.6	2633.8	2212.7	1108.2	271.5	181.0	181.0	262.3	339.8
87.5°	234.6	424.8	576.3	550.4	495.0	214.3	133.0	109.0	110.8	212.4	321.4
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°	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8	3019.8
2.5°	2999.5	2988.4	2981.0	2973.7	2966.3	2962.6	2957.0	2957.0	2945.9	2942.3	2938.6
5°	3012.4	2994.0	2981.0	2964.4	2951.5	2940.4	2925.6	2921.9	2909.0	2899.8	2896.1
7.5°	3067.9	3040.1	3012.4	2992.1	2973.7	2949.6	2933.0	2918.2	2905.3	2896.1	2885.0
10°	3173.1	3143.6	3104.8	3067.9	3043.8	3006.9	2981.0	2955.2	2940.4	2929.3	2914.5
12.5°	3328.3	3285.8	3239.6	3195.3	3154.7	3106.6	3080.8	3049.4	3030.9	3021.7	3010.6
15°	3487.1	3440.9	3383.7	3341.2	3295.0	3258.1	3234.1	3206.4	3191.6	3180.5	3173.1
17.5°	3649.7	3596.1	3555.5	3513.0	3490.8	3463.1	3431.7	3396.6	3354.1	3328.3	3293.2
20°	3815.9	3775.2	3751.2	3727.2	3701.4	3662.6	3599.8	3527.8	3448.3	3372.6	3300.6
22.5°	4009.8	3985.8	3982.1	3959.9	3906.4	3814.0	3697.7	3562.8	3428.0	3302.4	3204.5
25°	4283.2	4283.2	4264.7	4174.2	4048.6	3882.4	3686.6	3492.7	3313.5	3141.7	3012.4
27.5°	4626.7	4613.8	4523.3	4336.7	4111.4	3852.8	3590.5	3344.9	3115.9	2927.5	2761.2
30°	5005.3	4914.8	4720.9	4427.2	4089.2	3756.8	3435.4	3151.0	2881.3	2650.4	2454.6
32.5°	5398.8	5179.0	4829.9	4427.2	4011.7	3612.7	3241.5	2892.4	2583.9	2325.4	2092.6
35°	5755.2	5354.4	4855.7	4355.2	3860.2	3400.3	2970.0	2574.7	2205.3	1926.4	1671.5
37.5°	6078.4	5470.8	4828.0	4214.8	3640.4	3101.1	2596.9	2161.0	1743.6	1473.9	1256.0
40°	6289.0	5494.8	4713.5	3995.0	3326.4	2696.6	2138.8	1651.2	1320.6	1074.9	929.0
42.5°	6420.1	5448.6	4528.8	3694.0	2903.5	2188.7	1605.0	1183.9	938.3	801.6	746.2
45°	6494.0	5328.6	4255.5	3282.1	2391.9	1664.1	1139.6	855.2	722.2	674.2	655.7
47.5°	6490.3	5134.6	3913.8	2805.6	1826.7	1159.9	807.1	666.8	629.8	615.0	611.4
50°	6451.5	4896.4	3513.0	2288.4	1318.8	809.0	639.1	598.4	589.2	580.0	576.3
52.5°	6398.0	4600.9	3069.7	1784.2	936.4	646.4	580.0	568.9	561.5	552.2	548.6
55°	6298.2	4237.0	2589.5	1342.8	733.3	583.6	559.6	555.9	546.7	533.8	526.4
57.5°	6176.3	3867.6	2129.6	1049.1	648.3	568.9	555.9	550.4	537.5	522.7	507.9
60°	6132.0	3562.8	1769.4	884.7	628.0	574.4	565.2	557.8	539.3	517.2	500.5
62.5°	5855.0	3219.3	1510.8	820.1	639.1	598.4	594.7	583.6	555.9	530.1	504.2
65°	5138.3	2722.5	1280.0	775.7	661.2	639.1	642.8	626.1	598.4	563.3	517.2
67°	4346.0	2220.1	1065.7	733.3	677.8	681.5	694.5	681.5	646.4	596.6	533.8
67.5°	4135.4	2092.6	1012.2	720.3	681.5	692.6	707.4	698.2	663.1	605.8	541.2
70°	3073.4	1473.9	755.4	652.0	681.5	725.9	759.1	768.3	729.6	650.1	555.9
72.5°	2164.7	951.2	580.0	565.2	618.7	677.8	740.6	772.0	727.7	640.9	535.6
75°	1300.3	594.7	471.0	480.2	520.9	581.8	631.7	644.6	589.2	533.8	463.6
77.5°	602.1	395.3	369.4	382.3	421.1	448.8	448.8	423.0	380.5	347.2	332.5
80°	354.6	323.2	321.4	345.4	371.2	350.9	319.5	284.4	262.3	251.2	245.6
82.5°	332.5	345.4	367.6	373.1	352.8	302.9	264.1	229.0	217.9	212.4	206.9
85°	391.6	419.3	382.3	352.8	312.1	254.9	206.9	177.3	171.8	166.2	158.8
87.5°	362.0	345.4	301.1	258.6	214.3	155.1	112.7	101.6	109.0	107.1	103.4
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):

	160°	165°	170°	175°	180°
0°	3019.8	3019.8	3019.8	3019.8	3019.8
2.5°	2940.4	2940.4	2933.0	2929.3	2938.6
5°	2888.7	2890.5	2885.0	2883.2	2885.0
7.5°	2877.6	2875.8	2872.1	2868.4	2872.1
10°	2910.9	2909.0	2903.5	2907.2	2901.6
12.5°	3010.6	3021.7	3019.8	3023.5	3030.9
15°	3173.1	3171.3	3165.7	3169.4	3175.0
17.5°	3265.5	3250.7	3237.8	3232.2	3232.2
20°	3243.3	3200.8	3178.7	3165.7	3162.0
22.5°	3112.2	3051.2	3005.1	2994.0	2984.7
25°	2897.9	2822.2	2763.1	2750.2	2726.2
27.5°	2648.6	2547.0	2476.8	2462.0	2449.1
30°	2321.7	2205.3	2124.0	2072.3	2088.9
32.5°	1922.7	1811.9	1717.7	1634.6	1621.7
35°	1485.0	1363.1	1280.0	1243.0	1219.0
37.5°	1108.2	1006.6	951.2	916.1	918.0
40°	847.8	794.2	764.7	740.6	742.5
42.5°	707.4	683.4	676.0	664.9	659.4
45°	640.9	633.5	635.4	624.3	620.6
47.5°	604.0	598.4	600.3	592.9	591.0
50°	574.4	570.7	572.6	567.0	565.2
52.5°	544.9	546.7	544.9	541.2	541.2
55°	519.0	517.2	520.9	515.3	515.3
57.5°	498.7	496.8	496.8	495.0	495.0
60°	487.6	480.2	478.4	478.4	480.2
62.5°	482.1	469.1	467.3	467.3	469.1
65°	483.9	463.6	456.2	454.4	452.5
67°	485.8	456.2	441.4	434.0	432.2
67.5°	487.6	452.5	435.9	428.5	424.8
70°	476.5	426.7	402.6	389.7	386.0
72.5°	448.8	395.3	365.7	349.1	345.4
75°	398.9	358.3	332.5	314.0	306.6
77.5°	308.4	290.0	280.7	269.7	266.0
80°	240.1	230.9	227.2	219.8	217.9
82.5°	199.5	190.2	184.7	175.5	169.9
85°	155.1	144.1	140.4	133.0	129.3
87.5°	101.6	96.0	94.2	85.0	81.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)