

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: P158490

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158490
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
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (189) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27151.8 lumens
Efficiency: N/A
Efficacy: 120.3 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



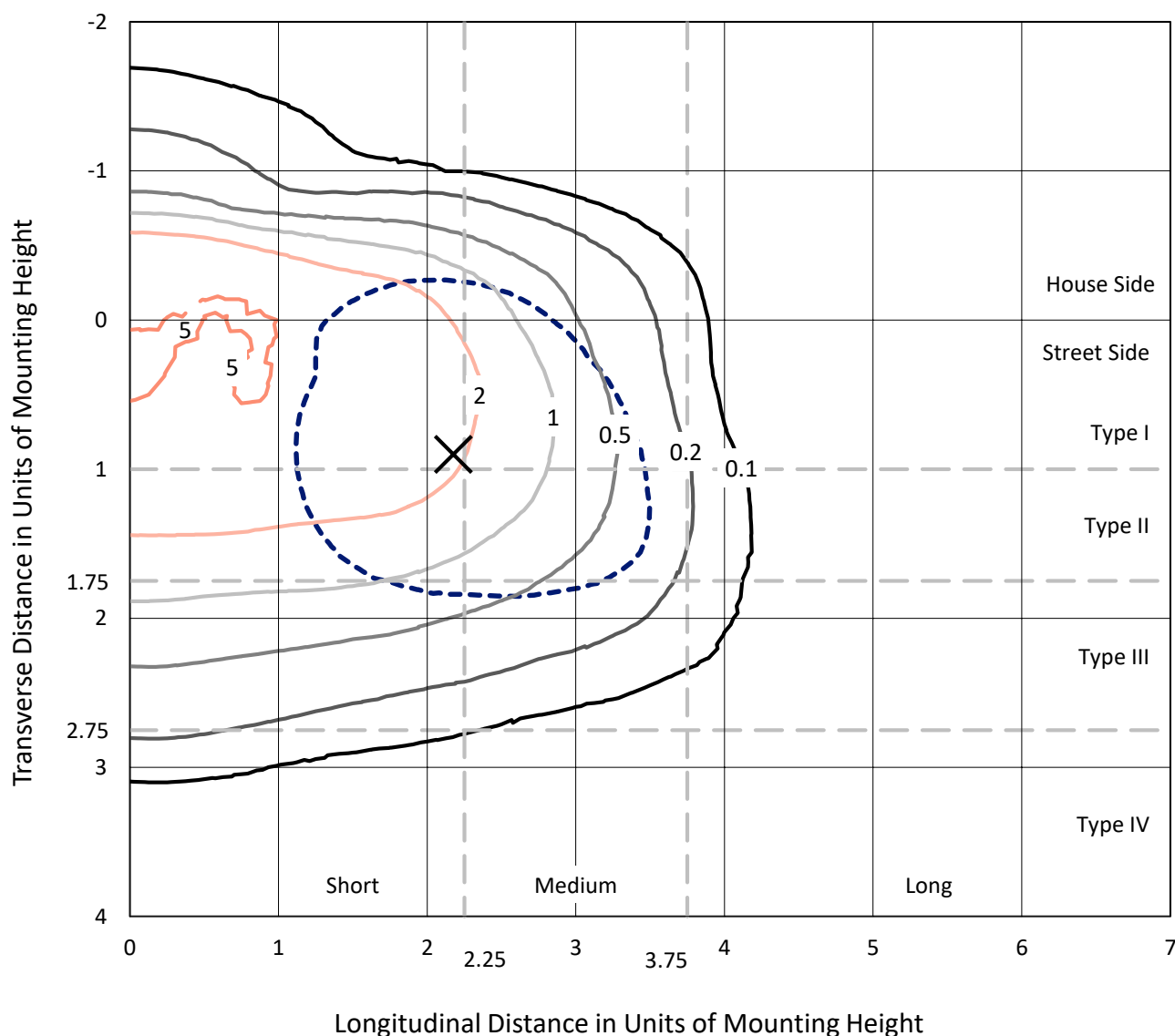
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

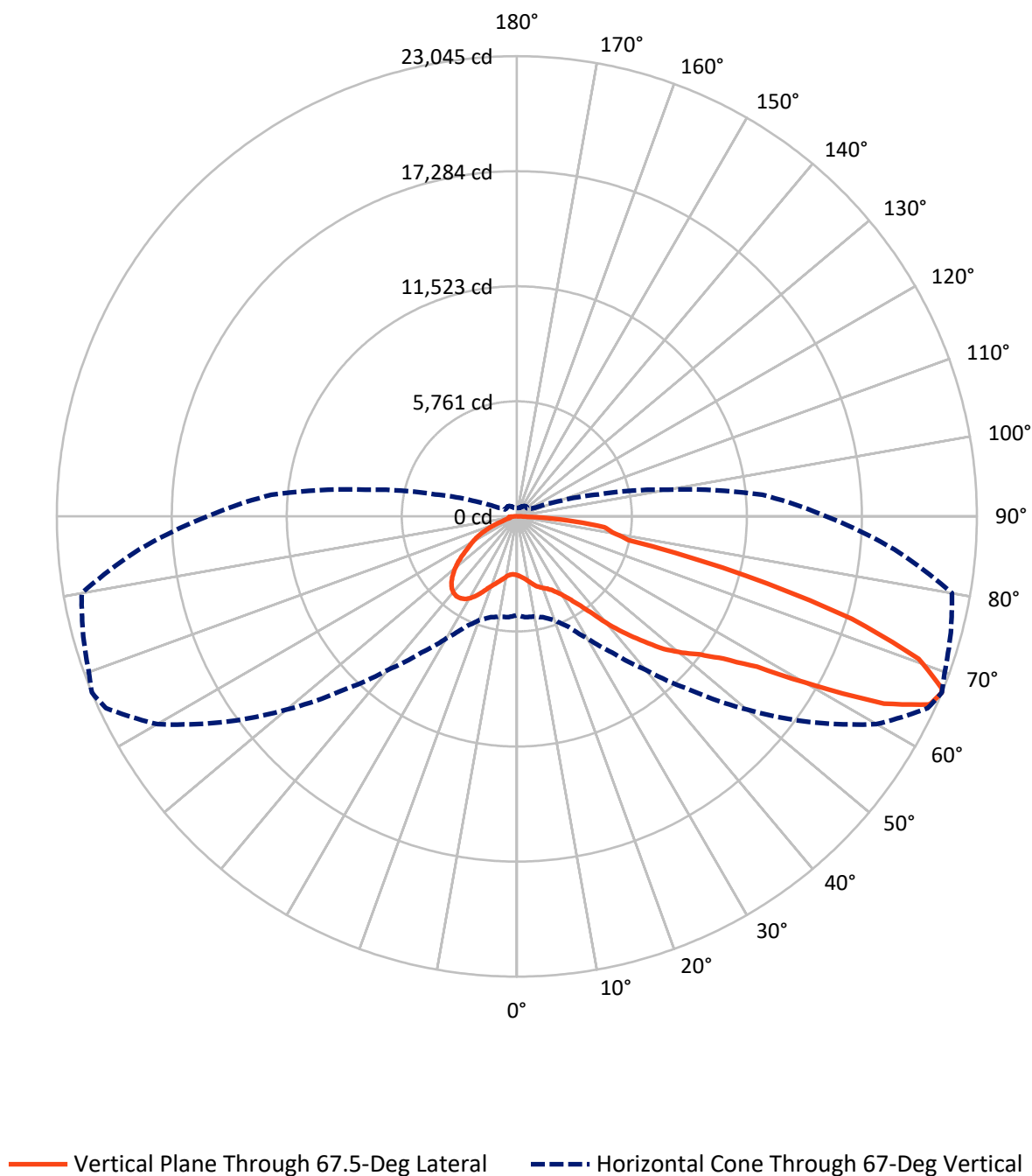


Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6513.8	0.0	6513.8
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	20638.0	0.0	20638.0
	% Fixture	76.0	0.0	76.0
Total	Lumens	27151.8	0.0	27151.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.5	1.1
10°-20°	996.5	3.7
20°-30°	1779.1	6.6
30°-40°	2607.4	9.6
40°-50°	4028.9	14.8
50°-60°	5866.7	21.6
60°-70°	7642.4	28.1
70°-80°	3421.0	12.6
80°-90°	517.3	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°	27151.8	100.0
0°-180°	27151.8	100.0

Coefficient of Utilization



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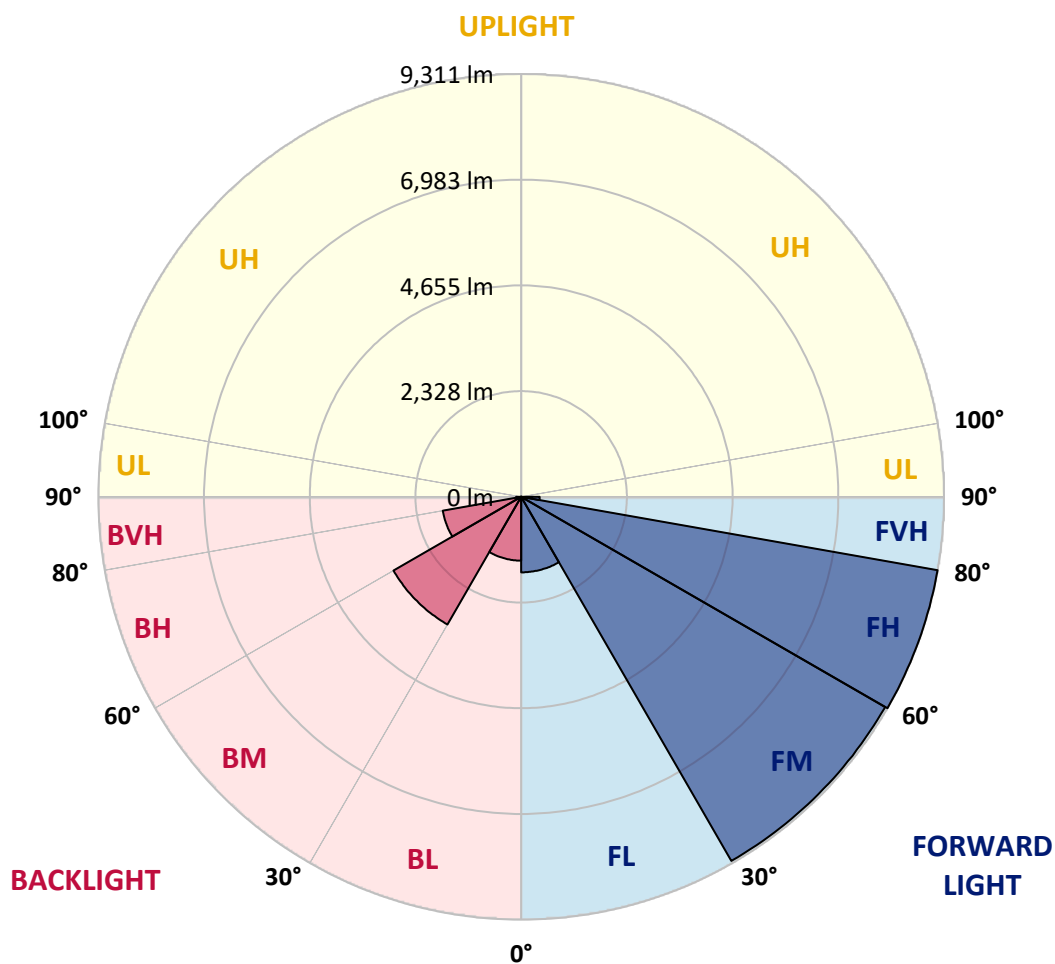
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1663.6	6.1			
FM	(30°-60°)	9257.4	34.1			
FH	(60°-80°)	9310.9	34.3			G4/12000
FVH	(80°-90°)	406.2	1.5			G3/500
BL	(0°-30°)	1404.6	5.2	B3/2500		
BM	(30°-60°)	3245.7	12.0	B3/5000		
BH	(60°-80°)	1752.4	6.5	B3/2500		G3/2500
BVH	(80°-90°)	111.1	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°	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0
2.5°	3058.2	3065.4	3067.2	3065.4	3067.2	3060.0	3058.2	3047.4	3052.8	3038.4	3034.8
5°	3223.8	3229.2	3232.8	3218.4	3222.0	3214.8	3205.8	3195.0	3180.6	3160.8	3148.2
7.5°	3385.8	3394.8	3393.0	3387.6	3375.0	3367.8	3349.8	3333.6	3308.4	3285.0	3268.8
10°	3603.6	3601.8	3601.8	3571.2	3553.2	3537.0	3504.6	3479.4	3454.2	3420.0	3402.0
12.5°	3855.6	3843.0	3837.6	3816.0	3778.2	3749.4	3702.6	3654.0	3609.0	3573.0	3544.2
15°	4098.6	4098.6	4084.2	4050.0	4014.0	3976.2	3909.6	3839.4	3765.6	3708.0	3679.2
17.5°	4320.0	4300.2	4287.6	4242.6	4204.8	4143.6	4069.8	3994.2	3902.4	3821.4	3765.6
20°	4482.0	4465.8	4438.8	4383.0	4318.2	4246.2	4159.8	4071.6	3972.6	3884.4	3821.4
22.5°	4575.6	4555.8	4514.4	4440.6	4352.4	4251.6	4150.8	4068.0	3978.0	3911.4	3859.2
25°	4624.2	4604.4	4548.6	4451.4	4332.6	4199.4	4084.2	4003.2	3951.0	3934.8	3927.6
27.5°	4622.4	4606.2	4546.8	4435.2	4282.2	4129.2	4005.0	3936.6	3931.2	3994.2	4041.0
30°	4575.6	4564.8	4510.8	4399.2	4239.0	4078.8	3963.6	3927.6	3983.4	4116.6	4231.8
32.5°	4528.8	4523.4	4485.6	4384.8	4248.0	4113.0	4033.8	4037.4	4152.6	4357.8	4543.2
35°	4534.2	4541.4	4536.0	4482.0	4395.6	4325.4	4287.6	4366.8	4546.8	4795.2	5043.6
37.5°	4581.0	4608.0	4642.2	4647.6	4649.4	4638.6	4717.8	4885.2	5148.0	5472.0	5860.8
40°	4683.6	4714.2	4813.2	4899.6	5011.2	5144.4	5304.6	5536.8	5862.6	6262.2	6739.2
42.5°	5002.2	5045.4	5167.8	5328.0	5533.2	5742.0	5981.4	6298.2	6697.8	7119.0	7619.4
45°	5418.0	5508.0	5643.0	5821.2	6129.0	6422.4	6732.0	7086.6	7511.4	8038.8	8542.8
47.5°	5936.4	6026.4	6222.6	6413.4	6777.0	7142.4	7480.8	7851.6	8312.4	8852.4	9410.4
50°	6390.0	6492.6	6667.2	6924.6	7345.8	7794.0	8168.4	8569.8	8956.8	9525.6	10089.0
52.5°	6746.4	6820.2	6987.6	7223.4	7693.2	8184.6	8658.0	9104.4	9563.4	10132.2	10654.2
55°	6791.4	6859.8	7023.6	7293.6	7770.6	8316.0	8861.4	9390.6	10040.4	10661.4	11352.6
57.5°	6597.0	6652.8	6818.4	7059.6	7524.0	8145.0	8834.4	9513.0	10344.6	11183.4	12027.6
60°	6321.6	6377.4	6507.0	6699.6	7119.0	7788.6	8593.2	9522.0	10627.2	11838.6	13080.6
62.5°	6019.2	6067.8	6172.2	6309.0	6678.0	7295.4	8217.0	9462.6	10857.6	12490.2	14405.4
65°	5509.8	5626.8	5671.8	5812.2	6181.2	6764.4	7702.2	9061.2	10764.0	12780.0	15237.0
67°	4946.4	5065.2	5088.6	5230.8	5526.0	6085.8	7039.8	8317.8	10022.4	12279.6	15053.4
67.5°	4766.4	4867.2	4903.2	5045.4	5324.4	5851.8	6757.2	8049.6	9795.6	12006.0	14832.0
70°	3504.6	3616.2	3655.8	3715.2	3915.0	4354.2	4953.6	6075.0	7810.2	9797.4	12511.8
72.5°	1875.6	1965.6	2003.4	2091.6	2194.2	2433.6	2892.6	3697.2	4793.4	6555.6	8901.0
75°	1269.0	1305.0	1332.0	1393.2	1499.4	1690.2	1891.8	2174.4	2836.8	3699.0	5065.2
77.5°	723.6	739.8	743.4	754.2	838.8	1020.6	1351.8	1830.6	2347.2	2680.2	3240.0
80°	313.2	345.6	370.8	354.6	349.2	387.0	484.2	721.8	1414.8	2246.4	2665.8
82.5°	169.2	183.6	205.2	207.0	217.8	230.4	250.2	297.0	417.6	842.4	1837.8
85°	88.2	91.8	122.4	140.4	149.4	156.6	160.2	178.2	205.2	261.0	457.2
87.5°	12.6	18.0	21.6	28.8	32.4	34.2	39.6	50.4	59.4	72.0	122.4
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0
2.5°	3018.6	3015.0	3004.2	2997.0	2989.8	2982.6	2973.6	2966.4	2953.8	2944.8	2934.0
5°	3130.2	3108.6	3094.2	3074.4	3070.8	3047.4	3024.0	3013.2	2991.6	2973.6	2952.0
7.5°	3243.6	3218.4	3195.0	3178.8	3169.8	3137.4	3114.0	3087.0	3061.8	3038.4	3013.2
10°	3376.8	3351.6	3326.4	3315.6	3299.4	3268.8	3249.0	3214.8	3189.6	3160.8	3126.6
12.5°	3515.4	3497.4	3479.4	3465.0	3457.8	3443.4	3414.6	3385.8	3351.6	3322.8	3283.2
15°	3637.8	3625.2	3618.0	3614.4	3614.4	3605.4	3578.4	3551.4	3515.4	3483.0	3439.8
17.5°	3724.2	3718.8	3724.2	3729.6	3736.8	3729.6	3724.2	3693.6	3670.2	3630.6	3587.4
20°	3774.6	3785.4	3812.4	3830.4	3846.6	3859.2	3864.6	3839.4	3808.8	3780.0	3751.2
22.5°	3828.6	3859.2	3906.0	3933.0	3960.0	4005.0	4015.8	3997.8	3974.4	3956.4	3925.8
25°	3918.6	3963.6	4044.6	4087.8	4125.6	4192.2	4201.2	4204.8	4199.4	4185.0	4147.2
27.5°	4059.0	4147.2	4255.2	4311.0	4352.4	4438.8	4473.0	4473.0	4458.6	4474.8	4474.8
30°	4303.8	4420.8	4561.2	4593.6	4658.4	4734.0	4789.8	4797.0	4798.8	4833.0	4883.4
32.5°	4680.0	4791.6	4948.2	4984.2	5040.0	5112.0	5175.0	5167.8	5184.0	5257.8	5324.4
35°	5227.2	5340.6	5443.2	5491.8	5517.0	5581.8	5605.2	5644.8	5693.4	5785.2	5776.2
37.5°	6037.2	6138.0	6152.4	6183.0	6152.4	6165.0	6183.0	6229.8	6359.4	6442.2	6309.0
40°	7012.8	7180.2	7164.0	7128.0	7059.6	6967.8	7000.2	7072.2	7212.6	7140.6	6782.4
42.5°	7932.6	8105.4	8073.0	8031.6	7880.4	7846.2	7842.6	7902.0	7977.6	7772.4	7153.2
45°	8838.0	9014.4	8958.6	8935.2	8834.4	8760.6	8821.8	8825.4	8805.6	8366.4	7477.2
47.5°	9772.2	9934.2	9898.2	9918.0	9813.6	9765.0	9770.4	9745.2	9559.8	8870.4	7729.2
50°	10526.4	10744.2	10765.8	10720.8	10665.0	10591.2	10780.2	10711.8	10299.6	9360.0	7972.2
52.5°	11113.2	11406.6	11518.2	11489.4	11444.4	11453.4	11808.0	11885.4	11203.2	9977.4	8240.4
55°	11808.0	12270.6	12452.4	12560.4	12513.6	12693.6	13505.4	13545.0	12459.6	10783.8	8589.6
57.5°	12810.6	13473.0	14047.2	14200.2	14347.8	14932.8	16250.4	15849.0	14090.4	12004.2	9032.4
60°	14335.2	15786.0	16718.4	17208.0	17553.6	18370.8	19623.6	18606.6	16122.6	13456.8	9588.6
62.5°	16470.0	18590.4	20149.2	20640.6	20782.8	21252.6	22159.8	20214.0	17229.6	14108.4	9637.2
65°	18059.4	20602.8	22469.4	22721.4	22552.2	22561.2	22798.8	20129.4	16817.4	13539.6	8802.0
67°	17955.0	20802.6	22714.2	23045.4	22811.4	22503.6	22132.8	18982.8	15492.6	12348.0	7707.6
67.5°	17794.8	20610.0	22608.0	22957.2	22743.0	22392.0	21850.2	18538.2	15080.4	11977.2	7484.4
70°	15382.8	18178.2	20869.2	21360.6	21450.6	21130.2	19609.2	15631.2	12243.6	9743.4	5812.2
72.5°	11973.6	14463.0	17125.2	17551.8	17897.4	16974.0	14272.2	10796.4	8924.4	7021.8	4208.4
75°	7905.6	10438.2	11781.0	11844.0	11403.0	9693.0	6973.2	5407.2	4977.0	4127.4	2604.6
77.5°	4230.0	6138.0	6175.8	5718.6	5509.8	4107.6	1666.8	919.8	1024.2	1162.8	1036.8
80°	3155.4	3909.6	4530.6	4870.8	4971.6	3522.6	862.2	487.8	426.6	388.8	383.4
82.5°	2845.8	3776.4	4233.6	4419.0	4372.2	2898.0	484.2	327.6	271.8	295.2	336.6
85°	1116.0	2016.0	2651.4	2566.8	2156.4	1080.0	264.6	176.4	176.4	255.6	331.2
87.5°	228.6	414.0	561.6	536.4	482.4	208.8	129.6	106.2	108.0	207.0	313.2
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0	2943.0
2.5°	2923.2	2912.4	2905.2	2898.0	2890.8	2887.2	2881.8	2881.8	2871.0	2867.4	2863.8
5°	2935.8	2917.8	2905.2	2889.0	2876.4	2865.6	2851.2	2847.6	2835.0	2826.0	2822.4
7.5°	2989.8	2962.8	2935.8	2916.0	2898.0	2874.6	2858.4	2844.0	2831.4	2822.4	2811.6
10°	3092.4	3063.6	3025.8	2989.8	2966.4	2930.4	2905.2	2880.0	2865.6	2854.8	2840.4
12.5°	3243.6	3202.2	3157.2	3114.0	3074.4	3027.6	3002.4	2971.8	2953.8	2944.8	2934.0
15°	3398.4	3353.4	3297.6	3256.2	3211.2	3175.2	3151.8	3124.8	3110.4	3099.6	3092.4
17.5°	3556.8	3504.6	3465.0	3423.6	3402.0	3375.0	3344.4	3310.2	3268.8	3243.6	3209.4
20°	3718.8	3679.2	3655.8	3632.4	3607.2	3569.4	3508.2	3438.0	3360.6	3286.8	3216.6
22.5°	3907.8	3884.4	3880.8	3859.2	3807.0	3717.0	3603.6	3472.2	3340.8	3218.4	3123.0
25°	4174.2	4174.2	4156.2	4068.0	3945.6	3783.6	3592.8	3403.8	3229.2	3061.8	2935.8
27.5°	4509.0	4496.4	4408.2	4226.4	4006.8	3754.8	3499.2	3259.8	3036.6	2853.0	2691.0
30°	4878.0	4789.8	4600.8	4314.6	3985.2	3661.2	3348.0	3070.8	2808.0	2583.0	2392.2
32.5°	5261.4	5047.2	4707.0	4314.6	3909.6	3520.8	3159.0	2818.8	2518.2	2266.2	2039.4
35°	5608.8	5218.2	4732.2	4244.4	3762.0	3313.8	2894.4	2509.2	2149.2	1877.4	1629.0
37.5°	5923.8	5331.6	4705.2	4107.6	3547.8	3022.2	2530.8	2106.0	1699.2	1436.4	1224.0
40°	6129.0	5355.0	4593.6	3893.4	3241.8	2628.0	2084.4	1609.2	1287.0	1047.6	905.4
42.5°	6256.8	5310.0	4413.6	3600.0	2829.6	2133.0	1564.2	1153.8	914.4	781.2	727.2
45°	6328.8	5193.0	4147.2	3198.6	2331.0	1621.8	1110.6	833.4	703.8	657.0	639.0
47.5°	6325.2	5004.0	3814.2	2734.2	1780.2	1130.4	786.6	649.8	613.8	599.4	595.8
50°	6287.4	4771.8	3423.6	2230.2	1285.2	788.4	622.8	583.2	574.2	565.2	561.6
52.5°	6235.2	4483.8	2991.6	1738.8	912.6	630.0	565.2	554.4	547.2	538.2	534.6
55°	6138.0	4129.2	2523.6	1308.6	714.6	568.8	545.4	541.8	532.8	520.2	513.0
57.5°	6019.2	3769.2	2075.4	1022.4	631.8	554.4	541.8	536.4	523.8	509.4	495.0
60°	5976.0	3472.2	1724.4	862.2	612.0	559.8	550.8	543.6	525.6	504.0	487.8
62.5°	5706.0	3137.4	1472.4	799.2	622.8	583.2	579.6	568.8	541.8	516.6	491.4
65°	5007.6	2653.2	1247.4	756.0	644.4	622.8	626.4	610.2	583.2	549.0	504.0
67°	4235.4	2163.6	1038.6	714.6	660.6	664.2	676.8	664.2	630.0	581.4	520.2
67.5°	4030.2	2039.4	986.4	702.0	664.2	675.0	689.4	680.4	646.2	590.4	527.4
70°	2995.2	1436.4	736.2	635.4	664.2	707.4	739.8	748.8	711.0	633.6	541.8
72.5°	2109.6	927.0	565.2	550.8	603.0	660.6	721.8	752.4	709.2	624.6	522.0
75°	1267.2	579.6	459.0	468.0	507.6	567.0	615.6	628.2	574.2	520.2	451.8
77.5°	586.8	385.2	360.0	372.6	410.4	437.4	437.4	412.2	370.8	338.4	324.0
80°	345.6	315.0	313.2	336.6	361.8	342.0	311.4	277.2	255.6	244.8	239.4
82.5°	324.0	336.6	358.2	363.6	343.8	295.2	257.4	223.2	212.4	207.0	201.6
85°	381.6	408.6	372.6	343.8	304.2	248.4	201.6	172.8	167.4	162.0	154.8
87.5°	352.8	336.6	293.4	252.0	208.8	151.2	109.8	99.0	106.2	104.4	100.8
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°	2943.0	2943.0	2943.0	2943.0	2943.0
2.5°	2865.6	2865.6	2858.4	2854.8	2863.8
5°	2815.2	2817.0	2811.6	2809.8	2811.6
7.5°	2804.4	2802.6	2799.0	2795.4	2799.0
10°	2836.8	2835.0	2829.6	2833.2	2827.8
12.5°	2934.0	2944.8	2943.0	2946.6	2953.8
15°	3092.4	3090.6	3085.2	3088.8	3094.2
17.5°	3182.4	3168.0	3155.4	3150.0	3150.0
20°	3160.8	3119.4	3097.8	3085.2	3081.6
22.5°	3033.0	2973.6	2928.6	2917.8	2908.8
25°	2824.2	2750.4	2692.8	2680.2	2656.8
27.5°	2581.2	2482.2	2413.8	2399.4	2386.8
30°	2262.6	2149.2	2070.0	2019.6	2035.8
32.5°	1873.8	1765.8	1674.0	1593.0	1580.4
35°	1447.2	1328.4	1247.4	1211.4	1188.0
37.5°	1080.0	981.0	927.0	892.8	894.6
40°	826.2	774.0	745.2	721.8	723.6
42.5°	689.4	666.0	658.8	648.0	642.6
45°	624.6	617.4	619.2	608.4	604.8
47.5°	588.6	583.2	585.0	577.8	576.0
50°	559.8	556.2	558.0	552.6	550.8
52.5°	531.0	532.8	531.0	527.4	527.4
55°	505.8	504.0	507.6	502.2	502.2
57.5°	486.0	484.2	484.2	482.4	482.4
60°	475.2	468.0	466.2	466.2	468.0
62.5°	469.8	457.2	455.4	455.4	457.2
65°	471.6	451.8	444.6	442.8	441.0
67°	473.4	444.6	430.2	423.0	421.2
67.5°	475.2	441.0	424.8	417.6	414.0
70°	464.4	415.8	392.4	379.8	376.2
72.5°	437.4	385.2	356.4	340.2	336.6
75°	388.8	349.2	324.0	306.0	298.8
77.5°	300.6	282.6	273.6	262.8	259.2
80°	234.0	225.0	221.4	214.2	212.4
82.5°	194.4	185.4	180.0	171.0	165.6
85°	151.2	140.4	136.8	129.6	126.0
87.5°	99.0	93.6	91.8	82.8	79.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)