

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: P158714

Luminaire Tested: **VST-F09-LED-E-U-SL4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158714
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F09-LED-E-U-SL4-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (63) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19685.6 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 234.8
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



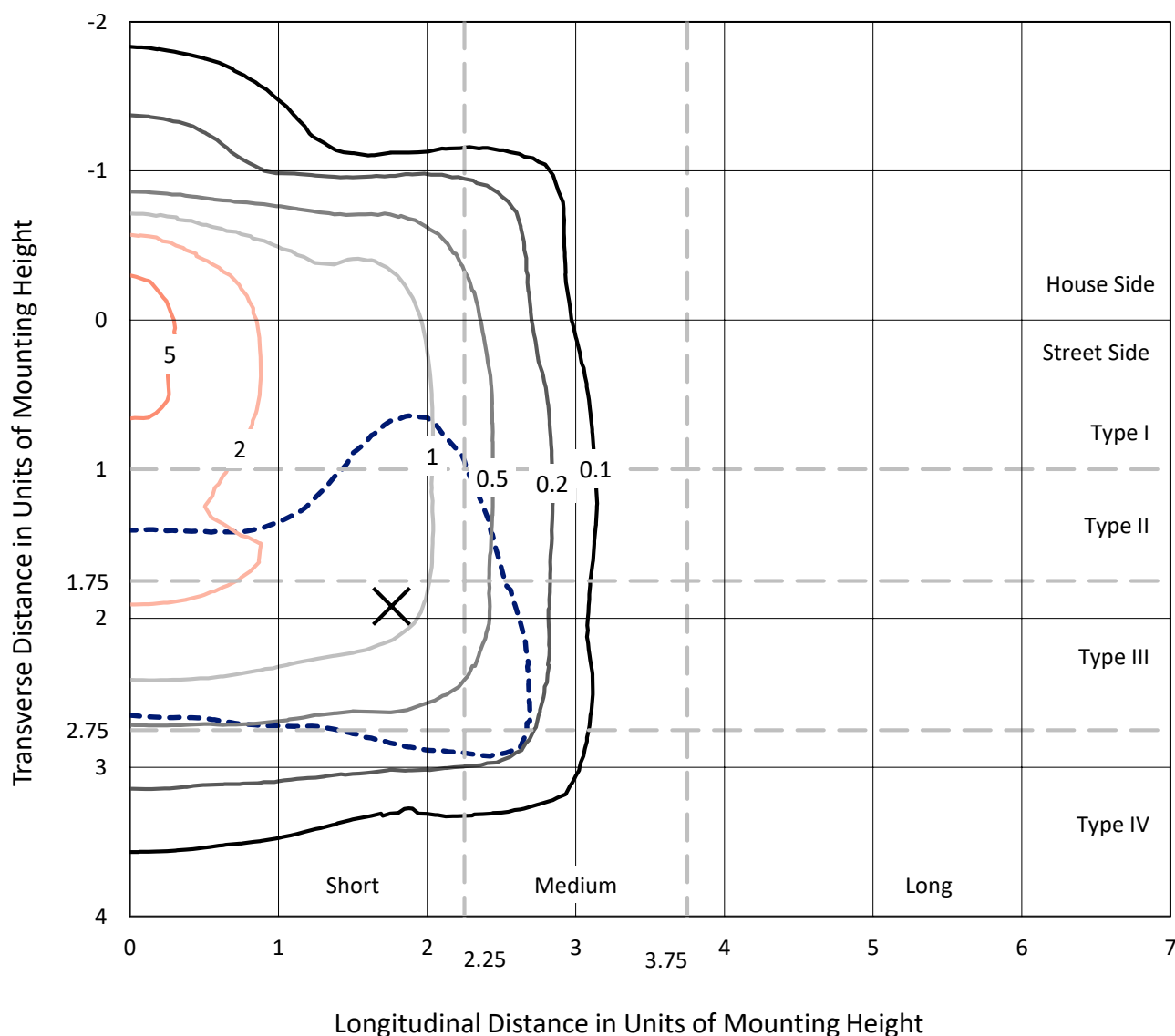
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

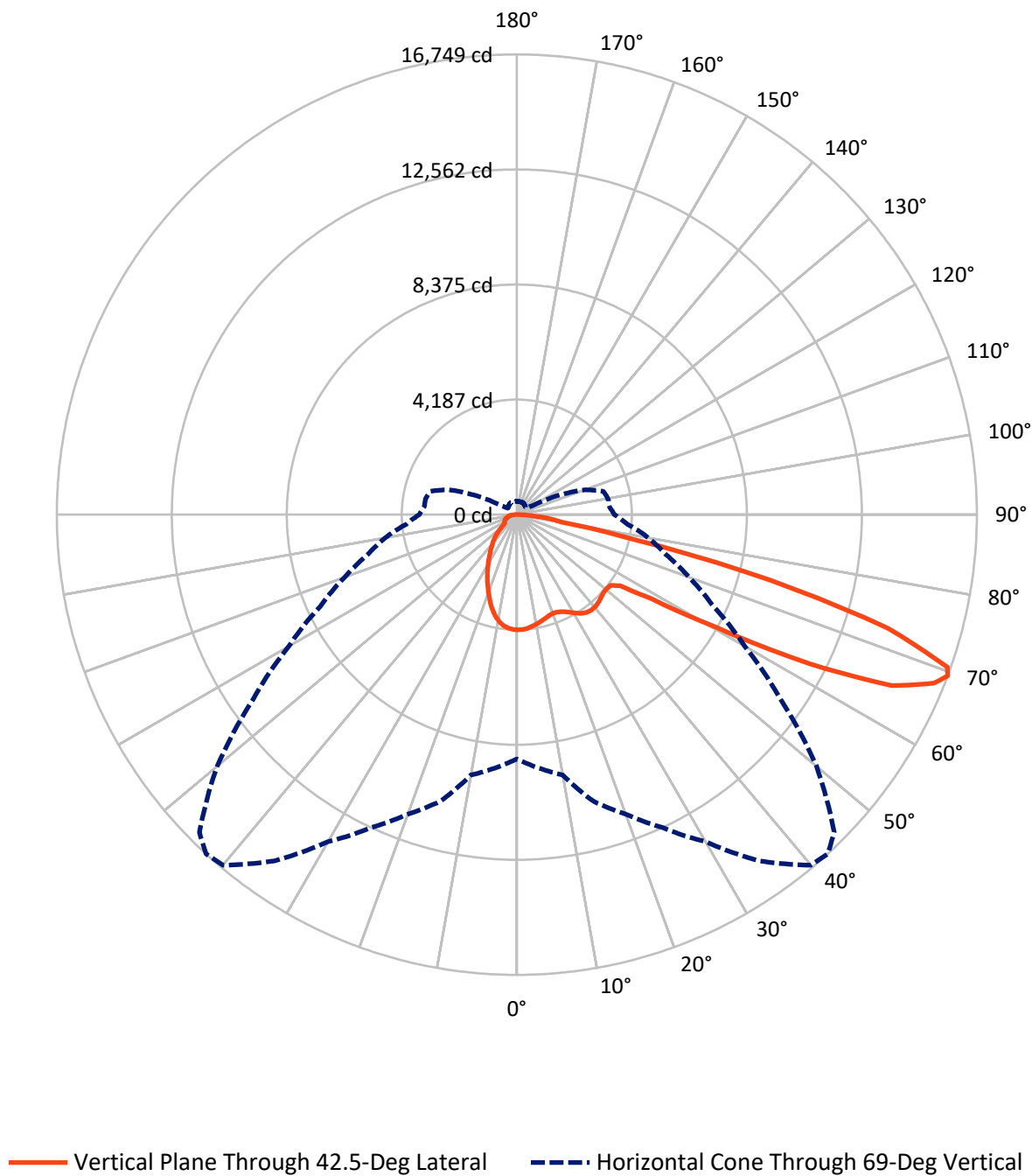


Based on 25 foot mounting height. Maximum calculated value = 6.7 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4376.4	0.0	4376.4
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	15309.2	0.0	15309.2
	% Fixture	77.8	0.0	77.8
Total	Lumens	19685.6	0.0	19685.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.3	2.0
10°-20°	1051.8	5.3
20°-30°	1533.7	7.8
30°-40°	1955.2	9.9
40°-50°	2274.9	11.6
50°-60°	3461.3	17.6
60°-70°	6114.3	31.1
70°-80°	2523.1	12.8
80°-90°	381.0	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°	19685.6	100.0
0°-180°	19685.6	100.0

Coefficient of Utilization



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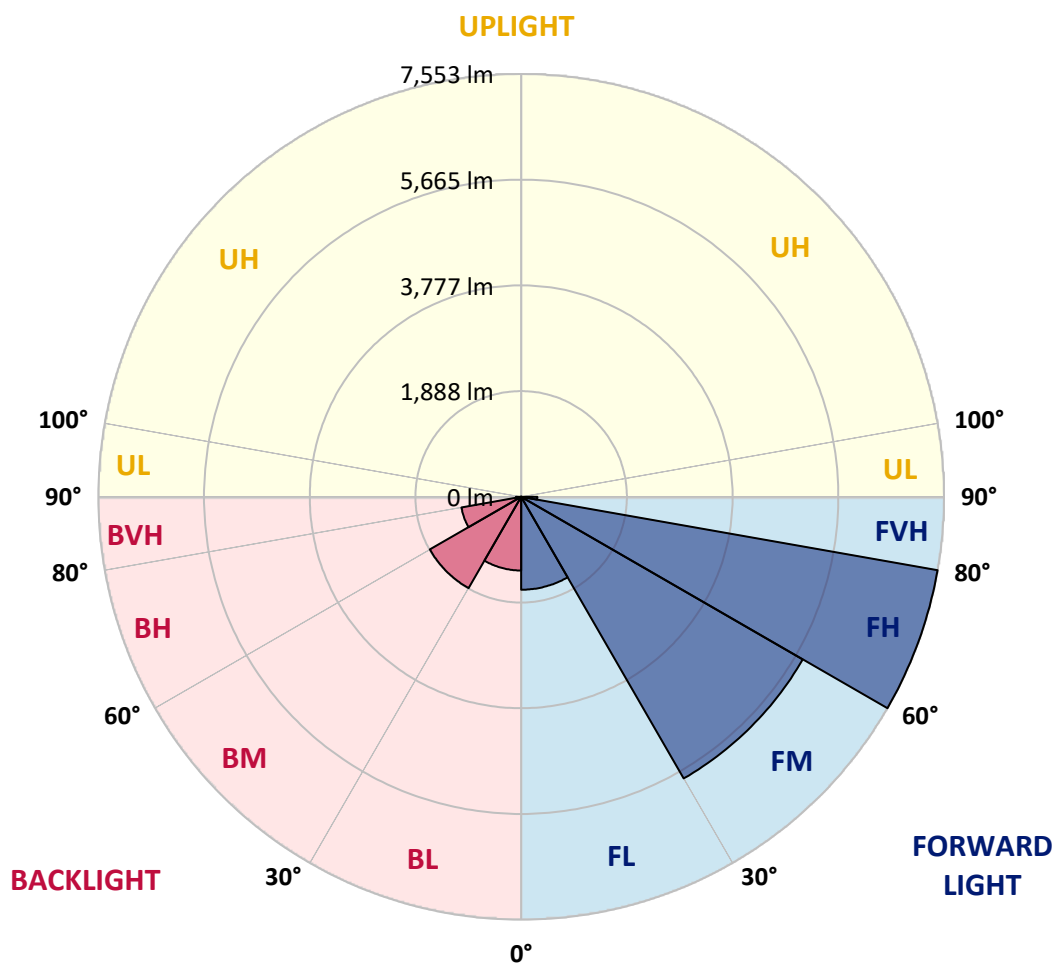
CATALOG NUMBER: VST-F09-LED-E-U-SL4-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1660.0	8.4			
FM	(30°-60°)	5807.8	29.5			
FH	(60°-80°)	7553.3	38.4			G4/12000
FVH	(80°-90°)	288.1	1.5			G3/500
BL	(0°-30°)	1315.8	6.7	B3/2500		
BM	(30°-60°)	1883.7	9.6	B2/2500		
BH	(60°-80°)	1084.0	5.5	B3/2500		G3/2500
BVH	(80°-90°)	92.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4
2.5°	4178.8	4193.7	4188.3	4188.3	4192.4	4185.6	4185.6	4188.3	4181.5	4185.6	4184.2
5°	4163.9	4172.0	4169.3	4169.3	4169.3	4163.9	4161.1	4159.8	4150.3	4150.3	4146.2
7.5°	4131.3	4134.0	4138.1	4132.6	4131.3	4129.9	4120.4	4115.0	4104.1	4094.6	4097.4
10°	4087.9	4086.5	4093.3	4089.2	4083.8	4079.7	4071.6	4062.1	4049.8	4037.6	4036.3
12.5°	4039.0	4037.6	4043.1	4040.3	4036.3	4028.1	4021.3	4005.1	3986.1	3971.1	3969.8
15°	4007.8	4003.7	4009.1	4003.7	3996.9	3988.8	3976.6	3956.2	3922.3	3907.3	3895.1
17.5°	4037.6	4030.8	4033.6	4026.8	4017.3	3995.6	3967.1	3923.6	3874.8	3849.0	3830.0
20°	4142.1	4129.9	4132.6	4125.9	4104.1	4075.6	4021.3	3945.3	3862.6	3820.5	3790.6
22.5°	4291.4	4281.9	4286.0	4279.2	4257.5	4214.1	4132.6	4024.1	3906.0	3844.9	3797.4
25°	4518.1	4526.2	4528.9	4497.7	4485.5	4405.4	4292.8	4142.1	3984.7	3912.8	3847.6
27.5°	4773.2	4773.2	4785.4	4773.2	4748.8	4655.2	4496.4	4314.5	4112.3	4014.6	3935.8
30°	5021.6	5018.9	5042.0	5039.2	4999.9	4894.0	4713.5	4492.3	4261.6	4151.6	4051.2
32.5°	5284.9	5293.0	5308.0	5302.5	5251.0	5104.4	4887.2	4647.0	4404.1	4283.3	4170.6
35°	5569.9	5574.0	5579.4	5576.7	5472.2	5287.6	5014.8	4746.1	4493.7	4374.2	4257.5
37.5°	5854.9	5850.8	5844.1	5785.7	5666.3	5409.8	5092.2	4803.1	4538.4	4409.5	4288.7
40°	6110.1	6087.0	6065.3	5974.3	5791.1	5479.0	5122.0	4816.7	4534.4	4401.4	4283.3
42.5°	6249.9	6224.1	6179.3	6065.3	5842.7	5485.8	5101.7	4775.9	4492.3	4360.6	4243.9
45°	6275.6	6256.6	6213.2	6085.6	5830.5	5442.3	5039.2	4709.4	4429.9	4298.2	4188.3
47.5°	6214.6	6199.6	6157.6	6031.3	5777.6	5377.2	4967.3	4638.9	4368.8	4245.3	4139.4
50°	6120.9	6107.3	6074.8	5959.4	5717.8	5332.4	4930.7	4602.2	4348.4	4235.8	4138.1
52.5°	6272.9	6283.8	6188.8	6062.6	5781.6	5371.8	4971.4	4640.2	4385.1	4273.8	4172.0
55°	8635.8	8620.9	8049.5	7570.4	6714.0	5937.7	5358.2	4941.5	4668.7	4557.4	4462.4
57.5°	11221.2	11169.7	10934.9	10487.0	9566.8	8338.6	7221.6	6271.6	5897.0	5736.8	5747.7
60°	12065.4	12084.4	12034.2	11875.4	11545.6	10906.4	10056.8	9342.9	8639.9	8296.5	8335.9
62.5°	12533.6	12567.6	12611.0	12575.7	12468.5	12320.6	12213.3	12278.5	12180.8	11933.8	11737.0
65°	12598.8	12668.0	12811.9	12925.9	12981.5	13121.3	13449.7	14236.9	14956.2	15003.7	14657.6
67.5°	11309.4	11500.8	11813.0	12340.9	12792.9	13289.6	14082.2	15279.2	16340.5	16375.8	16052.8
69°	8892.3	9260.1	9625.2	10804.6	11598.5	12571.6	13744.2	15379.7	16651.3	16749.1	16341.9
70°	7125.2	7343.7	7658.6	8843.4	10029.6	11270.1	12969.3	15048.5	16438.3	16635.1	16185.8
72.5°	4277.9	4362.0	4470.6	4895.4	5506.1	6610.9	8863.8	12269.0	13866.4	14129.7	13558.3
75°	2765.9	2760.5	2770.0	2888.1	2923.4	3135.1	3844.9	6312.3	9045.7	9523.4	8839.4
77.5°	2083.3	2102.3	2072.4	2083.3	2073.8	2130.8	2152.5	2259.7	3570.8	4398.6	3933.1
80°	1839.0	1848.5	1849.8	1844.4	1777.9	1772.5	1807.8	1746.7	1623.2	1647.6	1578.4
82.5°	1049.1	1047.7	1060.0	1152.3	1190.3	1315.1	1366.7	1395.2	1288.0	1207.9	1092.5
85°	680.0	685.4	699.0	727.5	699.0	709.8	697.6	722.0	662.3	614.8	549.7
87.5°	278.2	278.2	295.9	321.7	299.9	294.5	252.4	249.7	211.7	191.4	149.3
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4
2.5°	4176.1	4184.2	4180.1	4185.6	4181.5	4181.5	4176.1	4174.7	4178.8	4173.4	4174.7
5°	4139.4	4140.8	4134.0	4136.7	4128.6	4125.9	4121.8	4110.9	4117.7	4110.9	4113.6
7.5°	4086.5	4082.4	4072.9	4059.4	4049.8	4045.8	4037.6	4022.7	4025.4	4013.2	4020.0
10°	4018.6	4005.1	3988.8	3968.4	3954.8	3942.6	3925.0	3907.3	3897.8	3887.0	3885.6
12.5°	3942.6	3926.3	3904.6	3873.4	3843.6	3823.2	3796.1	3764.8	3755.3	3737.7	3728.2
15°	3859.8	3834.1	3808.3	3773.0	3740.4	3709.2	3672.6	3633.2	3607.4	3580.3	3559.9
17.5°	3785.2	3755.3	3721.4	3687.5	3652.2	3614.2	3568.0	3519.2	3481.2	3431.0	3390.3
20°	3726.8	3688.8	3654.9	3619.6	3580.3	3534.1	3478.5	3416.0	3352.3	3296.6	3249.1
22.5°	3703.8	3644.1	3603.3	3568.0	3528.7	3474.4	3406.5	3333.3	3255.9	3178.5	3116.1
25°	3722.8	3634.6	3570.8	3528.7	3494.8	3439.1	3363.1	3273.5	3184.0	3091.7	3007.5
27.5°	3778.4	3665.8	3573.5	3507.0	3467.6	3412.0	3331.9	3236.9	3131.0	3027.9	2924.7
30°	3865.3	3718.7	3602.0	3508.3	3447.3	3383.5	3299.3	3189.4	3082.2	2964.1	2851.5
32.5°	3949.4	3774.3	3634.6	3513.8	3420.1	3337.3	3243.7	3135.1	3019.7	2896.2	2779.5
35°	4009.1	3811.0	3646.8	3501.5	3378.0	3274.9	3174.5	3065.9	2953.2	2827.0	2707.6
37.5°	4037.6	3831.3	3648.1	3469.0	3322.4	3208.4	3101.2	2994.0	2888.1	2768.7	2656.0
40°	4036.3	3830.0	3629.1	3426.9	3255.9	3135.1	3029.2	2924.7	2825.7	2721.2	2619.4
42.5°	4006.4	3808.3	3602.0	3386.2	3208.4	3074.0	2964.1	2863.7	2779.5	2687.2	2601.7
45°	3960.3	3771.6	3573.5	3367.2	3194.8	3060.5	2943.7	2846.0	2771.4	2687.2	2613.9
47.5°	3925.0	3751.3	3577.5	3401.1	3236.9	3097.1	2973.6	2866.4	2802.6	2734.7	2683.2
50°	3930.4	3760.8	3591.1	3421.5	3266.8	3125.6	3006.2	2908.5	2862.3	2844.7	2832.5
52.5°	3958.9	3775.7	3631.8	3530.0	3477.1	3371.3	3300.7	3239.6	3273.5	3207.0	3128.3
55°	4322.6	4262.9	4402.7	4534.4	4701.3	4763.7	4704.0	4693.2	4747.4	4522.2	4005.1
57.5°	5825.1	5979.8	6195.6	6309.6	6448.0	6411.4	6272.9	6157.6	6021.8	5758.5	5113.9
60°	8380.6	8263.9	8166.2	7890.7	7665.4	7402.1	7109.0	6857.9	6617.6	6239.0	5541.4
62.5°	11013.6	10203.3	9526.1	8871.9	8345.4	7908.3	7483.5	7106.2	6742.5	6214.6	5464.0
65°	13290.9	11585.0	10313.3	9353.7	8584.2	7920.6	7375.0	6853.8	6391.0	5772.1	5029.7
67.5°	14314.3	12176.7	10326.8	8952.0	7886.6	6985.4	6279.7	5492.5	4974.1	4577.8	4159.8
69°	14238.3	11724.7	9589.9	7897.5	6673.3	5622.8	4865.5	4044.4	3547.7	3379.4	3369.9
70°	13877.2	10959.3	8729.4	7041.1	5640.5	4596.8	3870.7	3133.7	2670.9	2555.6	2760.5
72.5°	11329.8	7744.1	5470.8	4177.4	3212.5	2539.3	2071.1	1643.6	1312.4	1137.3	1175.3
75°	6399.1	3585.7	2318.1	1752.1	1480.7	1224.2	1050.5	895.7	810.2	658.2	521.2
77.5°	2326.2	1539.1	1224.2	1058.6	750.5	517.1	432.9	378.7	343.4	343.4	327.1
80°	1471.2	1159.0	808.9	553.7	409.9	356.9	312.2	274.2	252.4	247.0	252.4
82.5°	918.8	709.8	453.3	347.4	291.8	261.9	228.0	199.5	181.9	177.8	185.9
85°	453.3	351.5	275.5	245.7	230.7	214.4	188.6	161.5	156.1	166.9	195.4
87.5°	135.7	120.8	99.1	103.1	108.6	105.9	84.1	73.3	69.2	90.9	142.5
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°	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4	4192.4
2.5°	4177.4	4176.1	4178.8	4174.7	4177.4	4178.8	4176.1	4188.3	4180.1	4181.5	4186.9
5°	4116.4	4113.6	4124.5	4121.8	4127.2	4132.6	4129.9	4147.6	4140.8	4146.2	4157.1
7.5°	4014.6	4020.0	4021.3	4021.3	4032.2	4049.8	4053.9	4064.8	4064.8	4079.7	4090.6
10°	3878.8	3880.2	3888.3	3887.0	3900.6	3919.6	3922.3	3941.3	3948.1	3972.5	3987.4
12.5°	3721.4	3714.6	3713.3	3711.9	3729.6	3749.9	3752.6	3785.2	3798.8	3820.5	3844.9
15°	3545.0	3527.3	3521.9	3532.8	3528.7	3540.9	3553.1	3570.8	3589.8	3633.2	3654.9
17.5°	3372.6	3337.3	3327.8	3315.6	3303.4	3303.4	3308.8	3330.5	3369.9	3393.0	3441.8
20°	3196.2	3154.1	3120.2	3087.6	3059.1	3048.2	3049.6	3076.7	3105.2	3143.2	3189.4
22.5°	3048.2	2984.5	2926.1	2882.7	2824.3	2823.0	2814.8	2823.0	2854.2	2863.7	2889.5
25°	2920.7	2835.2	2756.4	2685.9	2628.9	2599.0	2590.9	2588.2	2573.2	2569.2	2550.2
27.5°	2821.6	2718.4	2616.7	2531.2	2460.6	2419.9	2368.3	2331.6	2278.7	2265.1	2231.2
30°	2740.2	2628.9	2517.6	2406.3	2326.2	2252.9	2166.1	2102.3	2020.9	1967.9	1921.8
32.5°	2661.4	2548.8	2436.2	2326.2	2202.7	2088.7	1974.7	1875.6	1784.7	1703.3	1635.4
35°	2596.3	2489.1	2375.1	2242.1	2084.6	1920.4	1783.3	1670.7	1545.8	1460.3	1374.8
37.5°	2554.2	2456.5	2342.5	2159.3	1957.1	1780.6	1624.6	1487.5	1359.9	1231.0	1134.6
40°	2535.2	2449.7	2307.2	2083.3	1845.8	1650.3	1478.0	1326.0	1163.1	1017.9	914.7
42.5°	2533.9	2447.0	2258.4	1999.1	1753.5	1540.4	1349.0	1167.2	986.7	837.4	735.6
45°	2558.3	2442.9	2206.8	1928.6	1672.1	1449.5	1221.5	1000.2	798.0	686.7	632.4
47.5°	2623.4	2449.7	2164.7	1863.4	1594.7	1339.5	1074.9	817.0	650.1	598.5	598.5
50°	2740.2	2489.1	2153.9	1817.3	1517.3	1212.0	895.7	659.6	575.4	575.4	591.7
52.5°	2919.3	2571.9	2172.9	1784.7	1421.0	1043.7	705.7	568.7	552.4	567.3	589.0
55°	3331.9	2718.4	2198.6	1729.1	1274.4	827.9	582.2	537.4	544.2	561.9	582.2
57.5°	4089.2	3032.0	2225.8	1606.9	1038.2	637.9	527.9	525.2	537.4	553.7	571.4
60°	4587.3	3431.0	2295.0	1422.3	785.8	526.6	500.8	517.1	532.0	545.6	559.2
62.5°	4587.3	3543.6	2346.6	1216.0	590.4	479.1	483.2	508.9	526.6	533.4	541.5
65°	4294.1	3337.3	2171.5	990.7	480.4	451.9	466.9	492.7	508.9	514.4	521.2
67.5°	3752.6	2947.8	1829.5	746.5	428.9	428.9	447.9	466.9	480.4	491.3	502.2
69°	3262.7	2645.2	1611.0	632.4	408.5	411.2	430.2	446.5	462.8	476.4	489.9
70°	2909.8	2418.5	1459.0	574.1	396.3	397.7	416.7	434.3	449.2	464.2	480.4
72.5°	1558.1	1670.7	1108.8	470.9	365.1	369.2	386.8	403.1	416.7	431.6	446.5
75°	530.7	718.0	705.7	385.4	329.8	340.7	351.5	366.4	384.1	393.6	401.7
77.5°	310.8	321.7	375.9	313.5	297.2	302.7	314.9	327.1	342.0	351.5	358.3
80°	260.6	259.2	260.6	255.2	259.2	271.4	279.6	295.9	309.4	312.2	310.8
82.5°	211.7	222.6	223.9	221.2	233.4	242.9	249.7	259.2	257.9	260.6	266.0
85°	188.6	187.3	196.8	198.1	198.1	191.4	192.7	192.7	192.7	196.8	198.1
87.5°	188.6	157.4	122.1	109.9	115.4	108.6	103.1	101.8	112.6	123.5	120.8
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°	4192.4	4192.4	4192.4	4192.4	4192.4
2.5°	4189.6	4193.7	4191.0	4191.0	4193.7
5°	4161.1	4167.9	4165.2	4167.9	4167.9
7.5°	4096.0	4105.5	4112.3	4119.1	4115.0
10°	4002.3	4018.6	4029.5	4037.6	4033.6
12.5°	3862.6	3877.5	3900.6	3914.1	3903.3
15°	3671.2	3713.3	3726.8	3745.8	3735.0
17.5°	3471.7	3497.5	3513.8	3531.4	3542.3
20°	3205.7	3226.0	3247.8	3255.9	3243.7
22.5°	2885.4	2896.2	2892.2	2904.4	2880.0
25°	2533.9	2540.7	2536.6	2547.4	2527.1
27.5°	2201.4	2200.0	2201.4	2187.8	2174.2
30°	1881.1	1868.8	1863.4	1843.1	1839.0
32.5°	1594.7	1552.6	1530.9	1501.1	1494.3
35°	1308.3	1248.6	1209.3	1175.3	1160.4
37.5°	1051.8	979.9	933.7	903.9	899.8
40°	832.0	765.5	732.9	716.6	713.9
42.5°	678.6	650.1	642.0	642.0	642.0
45°	618.9	617.5	624.3	629.7	631.1
47.5°	606.7	614.8	624.3	632.4	635.2
50°	606.7	614.8	621.6	629.7	632.4
52.5°	603.9	610.7	613.4	618.9	621.6
55°	595.8	599.9	599.9	602.6	605.3
57.5°	582.2	584.9	580.9	583.6	590.4
60°	568.7	571.4	564.6	571.4	575.4
62.5°	553.7	555.1	552.4	557.8	557.8
65°	529.3	526.6	530.7	534.7	536.1
67.5°	504.9	498.1	502.2	503.5	506.2
69°	485.9	481.8	483.2	485.9	488.6
70°	472.3	469.6	472.3	476.4	480.4
72.5°	438.4	439.7	449.2	457.4	465.5
75°	407.2	416.7	428.9	446.5	456.0
77.5°	369.2	375.9	385.4	404.4	422.1
80°	318.9	323.0	324.4	331.2	329.8
82.5°	259.2	255.2	252.4	249.7	248.4
85°	185.9	184.6	173.7	165.6	165.6
87.5°	111.3	105.9	100.4	93.6	89.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)