

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: P158496

Luminaire Tested: **VST-F09-LED-E-U-SL3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158496
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-F09-LED-E-U-SL3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (63) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22999.6 lumens
Efficiency: N/A
Efficacy: 98.0 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): 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



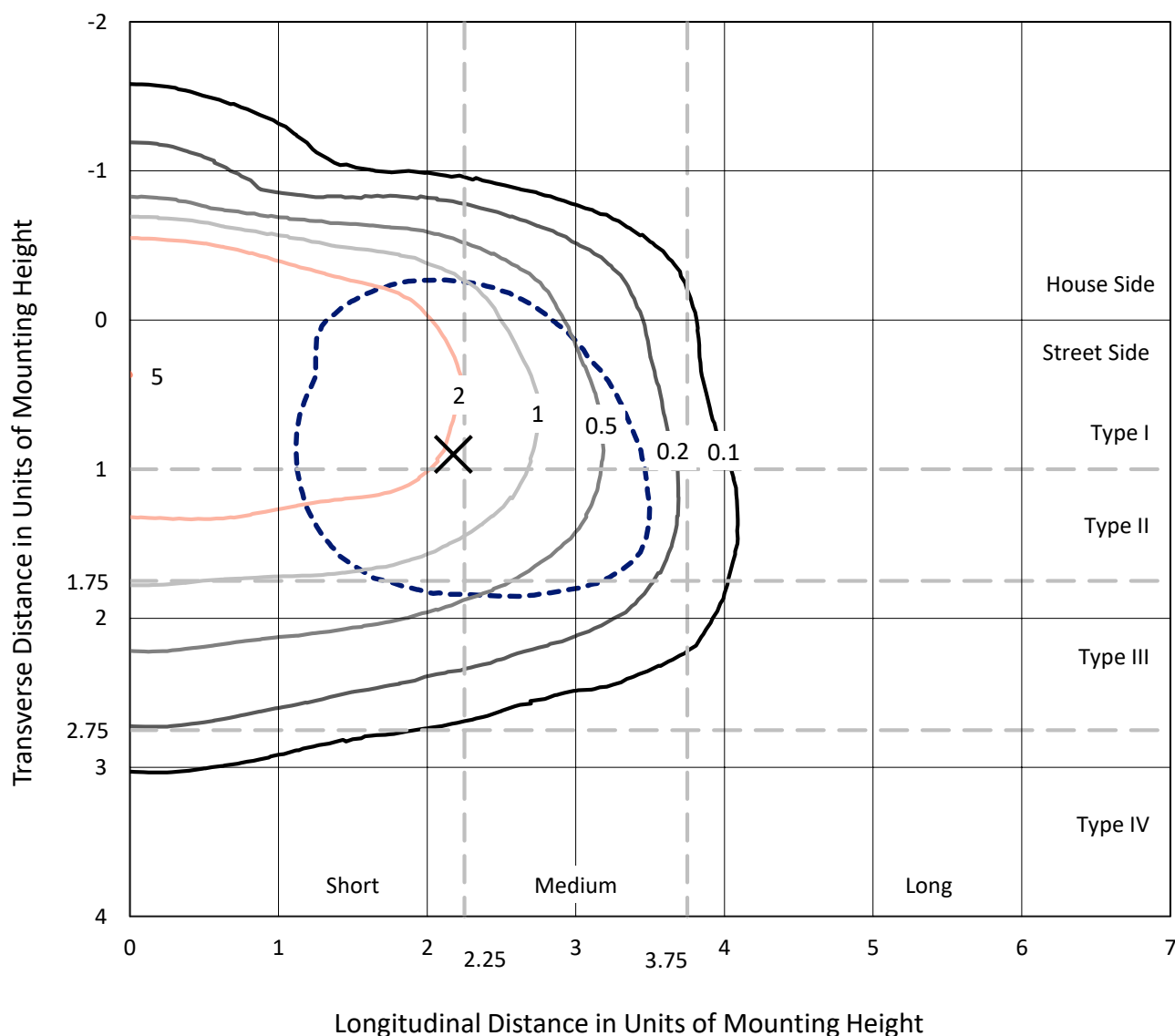
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

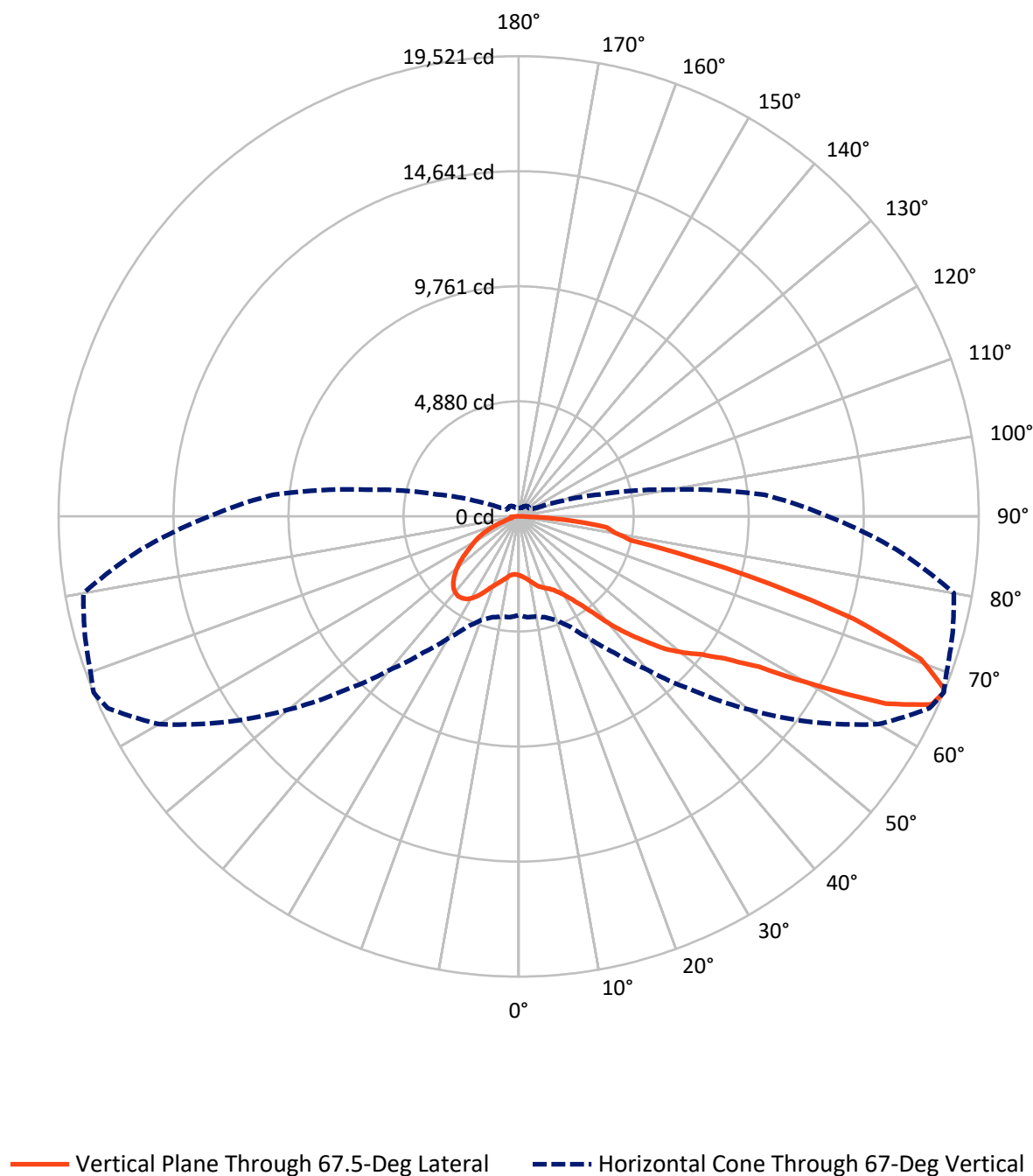


Based on 25 foot mounting height. Maximum calculated value = 5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5517.7	0.0	5517.7
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	17482.0	0.0	17482.0
	% Fixture	76.0	0.0	76.0
Total	Lumens	22999.6	0.0	22999.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.8	1.1
10°-20°	844.1	3.7
20°-30°	1507.1	6.6
30°-40°	2208.7	9.6
40°-50°	3412.8	14.8
50°-60°	4969.6	21.6
60°-70°	6473.7	28.1
70°-80°	2897.8	12.6
80°-90°	438.2	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°	22999.6	100.0
0°-180°	22999.6	100.0

Coefficient of Utilization



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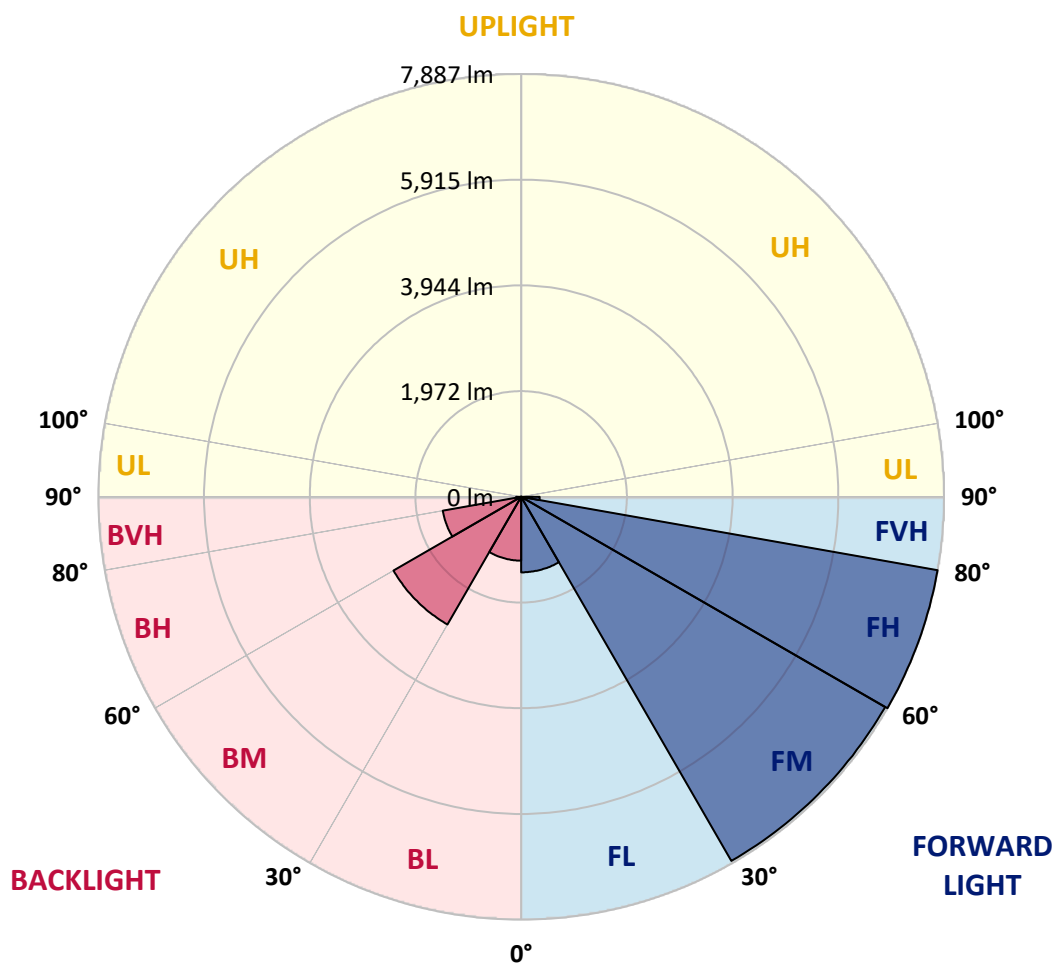
CATALOG NUMBER: VST-F09-LED-E-U-SL3-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1409.2	6.1			
FM	(30°-60°)	7841.7	34.1			
FH	(60°-80°)	7887.0	34.3			G4/12000
FVH	(80°-90°)	344.1	1.5			G3/500
BL	(0°-30°)	1189.8	5.2	B3/2500		
BM	(30°-60°)	2749.3	12.0	B3/5000		
BH	(60°-80°)	1484.5	6.5	B3/2500		G3/2500
BVH	(80°-90°)	94.1	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9
2.5°	2590.5	2596.6	2598.2	2596.6	2598.2	2592.1	2590.5	2581.4	2586.0	2573.8	2570.7
5°	2730.8	2735.4	2738.4	2726.2	2729.3	2723.2	2715.6	2706.4	2694.2	2677.4	2666.8
7.5°	2868.0	2875.7	2874.1	2869.6	2858.9	2852.8	2837.5	2823.8	2802.5	2782.6	2768.9
10°	3052.5	3051.0	3051.0	3025.1	3009.8	2996.1	2968.7	2947.3	2926.0	2897.0	2881.8
12.5°	3266.0	3255.3	3250.7	3232.4	3200.4	3176.0	3136.4	3095.2	3057.1	3026.6	3002.2
15°	3471.8	3471.8	3459.6	3430.7	3400.2	3368.1	3311.7	3252.3	3189.7	3141.0	3116.6
17.5°	3659.4	3642.6	3631.9	3593.8	3561.8	3509.9	3447.4	3383.4	3305.6	3237.0	3189.7
20°	3796.6	3782.9	3760.0	3712.7	3657.8	3596.9	3523.7	3449.0	3365.1	3290.4	3237.0
22.5°	3875.9	3859.1	3824.0	3761.5	3686.8	3601.4	3516.0	3445.9	3369.7	3313.3	3269.0
25°	3917.0	3900.3	3853.0	3770.7	3670.0	3557.2	3459.6	3391.0	3346.8	3333.1	3327.0
27.5°	3915.5	3901.8	3851.5	3756.9	3627.3	3497.7	3392.5	3334.6	3330.0	3383.4	3423.0
30°	3875.9	3866.7	3821.0	3726.5	3590.8	3455.1	3357.5	3327.0	3374.2	3487.1	3584.7
32.5°	3836.2	3831.7	3799.6	3714.3	3598.4	3484.0	3416.9	3420.0	3517.6	3691.4	3848.4
35°	3840.8	3846.9	3842.3	3796.6	3723.4	3663.9	3631.9	3699.0	3851.5	4061.9	4272.3
37.5°	3880.5	3903.3	3932.3	3936.9	3938.4	3929.2	3996.3	4138.1	4360.7	4635.2	4964.5
40°	3967.4	3993.3	4077.1	4150.3	4244.9	4357.7	4493.4	4690.1	4966.1	5304.6	5708.6
42.5°	4237.2	4273.8	4377.5	4513.2	4687.0	4863.9	5066.7	5335.1	5673.5	6030.3	6454.2
45°	4589.5	4665.7	4780.0	4931.0	5191.7	5440.3	5702.5	6002.9	6362.7	6809.5	7236.4
47.5°	5028.6	5104.8	5271.0	5432.6	5740.6	6050.2	6336.8	6650.9	7041.2	7498.7	7971.3
50°	5412.8	5499.7	5647.6	5865.7	6222.4	6602.1	6919.3	7259.3	7587.1	8068.9	8546.1
52.5°	5714.7	5777.2	5919.0	6118.8	6516.7	6933.0	7334.0	7712.1	8100.9	8582.7	9024.9
55°	5752.8	5810.8	5949.5	6178.2	6582.3	7044.3	7506.3	7954.5	8505.0	9031.0	9616.5
57.5°	5588.2	5635.4	5775.7	5980.0	6373.4	6899.4	7483.4	8058.2	8762.7	9473.2	10188.3
60°	5354.9	5402.1	5511.9	5675.1	6030.3	6597.5	7279.1	8065.9	9002.0	10028.2	11080.3
62.5°	5098.7	5139.9	5228.3	5344.2	5656.8	6179.8	6960.4	8015.5	9197.2	10580.1	12202.5
65°	4667.2	4766.3	4804.4	4923.4	5235.9	5730.0	6524.3	7675.5	9117.9	10825.6	12906.9
67°	4190.0	4290.6	4310.4	4430.9	4680.9	5155.1	5963.2	7045.8	8489.7	10401.7	12751.4
67.5°	4037.5	4122.9	4153.4	4273.8	4510.2	4956.9	5723.9	6818.6	8297.6	10170.0	12563.8
70°	2968.7	3063.2	3096.7	3147.1	3316.3	3688.3	4196.1	5146.0	6615.8	8299.1	10598.4
72.5°	1588.8	1665.0	1697.0	1771.7	1858.7	2061.4	2450.3	3131.8	4060.4	5553.1	7539.8
75°	1074.9	1105.4	1128.3	1180.1	1270.1	1431.7	1602.5	1841.9	2403.0	3133.3	4290.6
77.5°	612.9	626.7	629.7	638.9	710.5	864.5	1145.1	1550.7	1988.3	2270.3	2744.5
80°	265.3	292.7	314.1	300.4	295.8	327.8	410.2	611.4	1198.4	1902.9	2258.1
82.5°	143.3	155.5	173.8	175.3	184.5	195.2	211.9	251.6	353.7	713.6	1556.8
85°	74.7	77.8	103.7	118.9	126.6	132.7	135.7	150.9	173.8	221.1	387.3
87.5°	10.7	15.2	18.3	24.4	27.4	29.0	33.5	42.7	50.3	61.0	103.7
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-F09-LED-E-U-SL3-7050

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9
2.5°	2557.0	2553.9	2544.8	2538.7	2532.6	2526.5	2518.9	2512.8	2502.1	2494.5	2485.3
5°	2651.5	2633.2	2621.0	2604.2	2601.2	2581.4	2561.6	2552.4	2534.1	2518.9	2500.6
7.5°	2747.6	2726.2	2706.4	2692.7	2685.1	2657.6	2637.8	2614.9	2593.6	2573.8	2552.4
10°	2860.4	2839.1	2817.7	2808.6	2794.8	2768.9	2752.1	2723.2	2701.8	2677.4	2648.5
12.5°	2977.8	2962.6	2947.3	2935.1	2929.0	2916.8	2892.4	2868.0	2839.1	2814.7	2781.1
15°	3081.5	3070.8	3064.7	3061.7	3061.7	3054.0	3031.2	3008.3	2977.8	2950.4	2913.8
17.5°	3154.7	3150.1	3154.7	3159.3	3165.4	3159.3	3154.7	3128.8	3108.9	3075.4	3038.8
20°	3197.4	3206.5	3229.4	3244.6	3258.4	3269.0	3273.6	3252.3	3226.3	3201.9	3177.6
22.5°	3243.1	3269.0	3308.7	3331.5	3354.4	3392.5	3401.7	3386.4	3366.6	3351.4	3325.4
25°	3319.4	3357.5	3426.1	3462.7	3494.7	3551.1	3558.7	3561.8	3557.2	3545.0	3513.0
27.5°	3438.3	3513.0	3604.5	3651.7	3686.8	3760.0	3789.0	3789.0	3776.8	3790.5	3790.5
30°	3645.6	3744.8	3863.7	3891.1	3946.0	4010.1	4057.3	4063.4	4064.9	4093.9	4136.6
32.5°	3964.3	4058.8	4191.5	4222.0	4269.3	4330.3	4383.6	4377.5	4391.2	4453.8	4510.2
35°	4427.8	4523.9	4610.8	4652.0	4673.3	4728.2	4748.0	4781.6	4822.7	4900.5	4892.9
37.5°	5114.0	5199.4	5211.5	5237.5	5211.5	5222.2	5237.5	5277.1	5386.9	5457.0	5344.2
40°	5940.4	6082.2	6068.4	6038.0	5980.0	5902.3	5929.7	5990.7	6109.6	6048.6	5745.2
42.5°	6719.5	6865.9	6838.4	6803.4	6675.3	6646.3	6643.3	6693.6	6757.6	6583.8	6059.3
45°	7486.5	7635.9	7588.6	7568.8	7483.4	7420.9	7472.7	7475.8	7459.0	7087.0	6333.8
47.5°	8277.8	8415.0	8384.5	8401.3	8312.9	8271.7	8276.3	8254.9	8097.9	7513.9	6547.2
50°	8916.7	9101.1	9119.4	9081.3	9034.1	8971.5	9131.6	9073.7	8724.5	7928.6	6753.1
52.5°	9413.7	9662.3	9756.8	9732.4	9694.3	9701.9	10002.3	10067.8	9490.0	8451.6	6980.2
55°	10002.3	10394.1	10548.1	10639.6	10600.0	10752.4	11440.1	11473.6	10554.2	9134.7	7276.0
57.5°	10851.5	11412.6	11899.0	12028.6	12153.7	12649.2	13765.3	13425.3	11935.6	10168.5	7651.1
60°	12143.0	13371.9	14161.7	14576.5	14869.2	15561.5	16622.7	15761.2	13657.1	11398.9	8122.3
62.5°	13951.3	15747.5	17067.9	17484.1	17604.6	18002.6	18771.0	17122.8	14594.8	11950.9	8163.4
65°	15297.7	17452.1	19033.3	19246.7	19103.4	19111.0	19312.3	17051.1	14245.6	11469.1	7456.0
67°	15209.2	17621.4	19240.6	19521.2	19323.0	19062.3	18748.2	16079.9	13123.4	10459.7	6528.9
67.5°	15073.5	17458.2	19150.7	19446.5	19265.0	18967.7	18508.8	15703.3	12774.2	10145.6	6339.9
70°	13030.4	15398.3	17677.8	18094.0	18170.3	17898.9	16610.5	13240.8	10371.3	8253.4	4923.4
72.5°	10142.5	12251.3	14506.3	14867.7	15160.5	14378.3	12089.6	9145.4	7559.6	5948.0	3564.8
75°	6696.6	8841.9	9979.4	10032.8	9659.2	8210.7	5906.8	4580.3	4215.9	3496.2	2206.3
77.5°	3583.1	5199.4	5231.4	4844.1	4667.2	3479.4	1411.9	779.1	867.6	985.0	878.2
80°	2672.9	3311.7	3837.8	4125.9	4211.3	2983.9	730.3	413.2	361.4	329.3	324.8
82.5°	2410.6	3198.9	3586.2	3743.2	3703.6	2454.8	410.2	277.5	230.2	250.1	285.1
85°	945.3	1707.7	2245.9	2174.3	1826.6	914.8	224.1	149.4	149.4	216.5	280.6
87.5°	193.6	350.7	475.7	454.4	408.6	176.9	109.8	90.0	91.5	175.3	265.3
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°	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9	2492.9
2.5°	2476.2	2467.0	2460.9	2454.8	2448.7	2445.7	2441.1	2441.1	2432.0	2428.9	2425.9
5°	2486.8	2471.6	2460.9	2447.2	2436.5	2427.4	2415.2	2412.1	2401.5	2393.8	2390.8
7.5°	2532.6	2509.7	2486.8	2470.1	2454.8	2435.0	2421.3	2409.1	2398.4	2390.8	2381.6
10°	2619.5	2595.1	2563.1	2532.6	2512.8	2482.3	2460.9	2439.6	2427.4	2418.2	2406.0
12.5°	2747.6	2712.5	2674.4	2637.8	2604.2	2564.6	2543.3	2517.3	2502.1	2494.5	2485.3
15°	2878.7	2840.6	2793.3	2758.2	2720.1	2689.6	2669.8	2646.9	2634.7	2625.6	2619.5
17.5°	3012.9	2968.7	2935.1	2900.0	2881.8	2858.9	2833.0	2804.0	2768.9	2747.6	2718.6
20°	3150.1	3116.6	3096.7	3076.9	3055.6	3023.6	2971.7	2912.2	2846.7	2784.2	2724.7
22.5°	3310.2	3290.4	3287.3	3269.0	3224.8	3148.6	3052.5	2941.2	2829.9	2726.2	2645.4
25°	3535.9	3535.9	3520.6	3445.9	3342.2	3205.0	3043.4	2883.3	2735.4	2593.6	2486.8
27.5°	3819.5	3808.8	3734.1	3580.1	3394.1	3180.6	2964.1	2761.3	2572.2	2416.7	2279.5
30°	4132.0	4057.3	3897.2	3654.8	3375.8	3101.3	2836.0	2601.2	2378.6	2188.0	2026.4
32.5°	4456.8	4275.4	3987.2	3654.8	3311.7	2982.4	2675.9	2387.7	2133.1	1919.6	1727.5
35°	4751.1	4420.2	4008.5	3595.3	3186.7	2807.0	2451.8	2125.5	1820.5	1590.3	1379.9
37.5°	5017.9	4516.3	3985.7	3479.4	3005.3	2560.0	2143.8	1783.9	1439.4	1216.7	1036.8
40°	5191.7	4536.1	3891.1	3298.0	2746.0	2226.1	1765.6	1363.1	1090.2	887.4	766.9
42.5°	5300.0	4498.0	3738.7	3049.5	2396.9	1806.8	1325.0	977.4	774.6	661.7	616.0
45°	5361.0	4398.9	3513.0	2709.5	1974.5	1373.8	940.8	706.0	596.2	556.5	541.3
47.5°	5357.9	4238.8	3230.9	2316.1	1508.0	957.5	666.3	550.4	519.9	507.7	504.7
50°	5325.9	4042.1	2900.0	1889.1	1088.7	667.8	527.6	494.0	486.4	478.8	475.7
52.5°	5281.7	3798.1	2534.1	1472.9	773.0	533.7	478.8	469.6	463.5	455.9	452.8
55°	5199.4	3497.7	2137.7	1108.5	605.3	481.8	462.0	458.9	451.3	440.6	434.5
57.5°	5098.7	3192.8	1758.0	866.1	535.2	469.6	458.9	454.4	443.7	431.5	419.3
60°	5062.1	2941.2	1460.7	730.3	518.4	474.2	466.6	460.5	445.2	426.9	413.2
62.5°	4833.4	2657.6	1247.2	677.0	527.6	494.0	491.0	481.8	458.9	437.6	416.3
65°	4241.8	2247.5	1056.6	640.4	545.9	527.6	530.6	516.9	494.0	465.0	426.9
67°	3587.7	1832.7	879.8	605.3	559.6	562.6	573.3	562.6	533.7	492.5	440.6
67.5°	3413.9	1727.5	835.6	594.6	562.6	571.8	584.0	576.4	547.4	500.1	446.7
70°	2537.2	1216.7	623.6	538.2	562.6	599.2	626.7	634.3	602.3	536.7	458.9
72.5°	1787.0	785.2	478.8	466.6	510.8	559.6	611.4	637.3	600.7	529.1	442.2
75°	1073.4	491.0	388.8	396.4	430.0	480.3	521.5	532.1	486.4	440.6	382.7
77.5°	497.1	326.3	304.9	315.6	347.6	370.5	370.5	349.2	314.1	286.7	274.5
80°	292.7	266.8	265.3	285.1	306.5	289.7	263.8	234.8	216.5	207.4	202.8
82.5°	274.5	285.1	303.4	308.0	291.2	250.1	218.0	189.1	179.9	175.3	170.8
85°	323.2	346.1	315.6	291.2	257.7	210.4	170.8	146.4	141.8	137.2	131.1
87.5°	298.8	285.1	248.5	213.5	176.9	128.1	93.0	83.9	90.0	88.4	85.4
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°	2492.9	2492.9	2492.9	2492.9	2492.9
2.5°	2427.4	2427.4	2421.3	2418.2	2425.9
5°	2384.7	2386.2	2381.6	2380.1	2381.6
7.5°	2375.5	2374.0	2371.0	2367.9	2371.0
10°	2403.0	2401.5	2396.9	2399.9	2395.4
12.5°	2485.3	2494.5	2492.9	2496.0	2502.1
15°	2619.5	2618.0	2613.4	2616.4	2621.0
17.5°	2695.7	2683.5	2672.9	2668.3	2668.3
20°	2677.4	2642.4	2624.1	2613.4	2610.3
22.5°	2569.2	2518.9	2480.7	2471.6	2464.0
25°	2392.3	2329.8	2281.0	2270.3	2250.5
27.5°	2186.5	2102.6	2044.7	2032.5	2021.8
30°	1916.6	1820.5	1753.4	1710.8	1724.5
32.5°	1587.3	1495.8	1418.0	1349.4	1338.7
35°	1225.9	1125.3	1056.6	1026.1	1006.3
37.5°	914.8	831.0	785.2	756.3	757.8
40°	699.9	655.6	631.2	611.4	612.9
42.5°	584.0	564.2	558.1	548.9	544.3
45°	529.1	523.0	524.5	515.4	512.3
47.5°	498.6	494.0	495.5	489.4	487.9
50°	474.2	471.1	472.7	468.1	466.6
52.5°	449.8	451.3	449.8	446.7	446.7
55°	428.5	426.9	430.0	425.4	425.4
57.5°	411.7	410.2	410.2	408.6	408.6
60°	402.5	396.4	394.9	394.9	396.4
62.5°	398.0	387.3	385.8	385.8	387.3
65°	399.5	382.7	376.6	375.1	373.6
67°	401.0	376.6	364.4	358.3	356.8
67.5°	402.5	373.6	359.8	353.7	350.7
70°	393.4	352.2	332.4	321.7	318.7
72.5°	370.5	326.3	301.9	288.2	285.1
75°	329.3	295.8	274.5	259.2	253.1
77.5°	254.6	239.4	231.8	222.6	219.6
80°	198.2	190.6	187.5	181.4	179.9
82.5°	164.7	157.0	152.5	144.8	140.3
85°	128.1	118.9	115.9	109.8	106.7
87.5°	83.9	79.3	77.8	70.1	67.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)