

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: P158495

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158495
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
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22414.5 lumens
Efficiency: N/A
Efficacy: 95.5 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



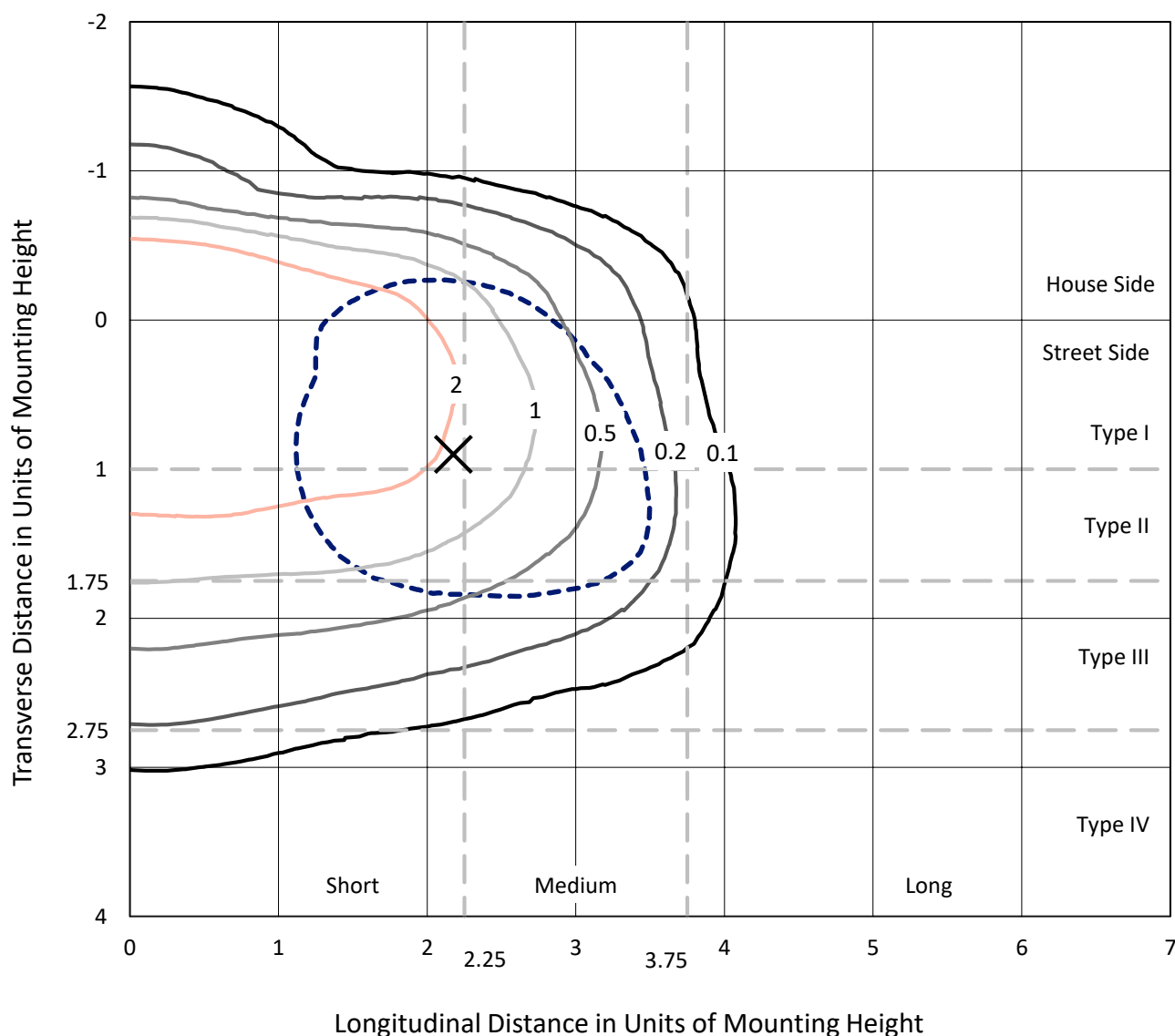
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

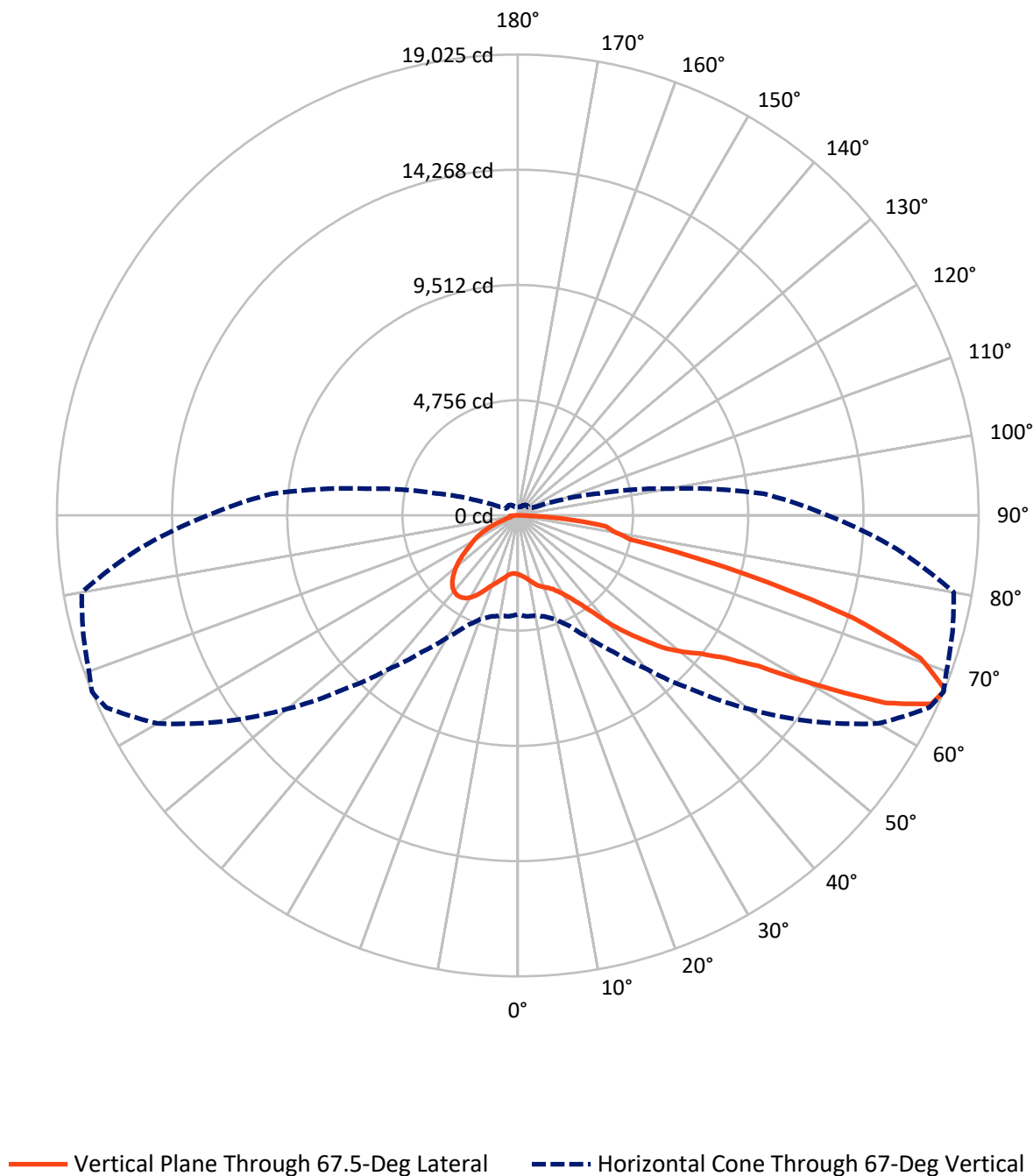


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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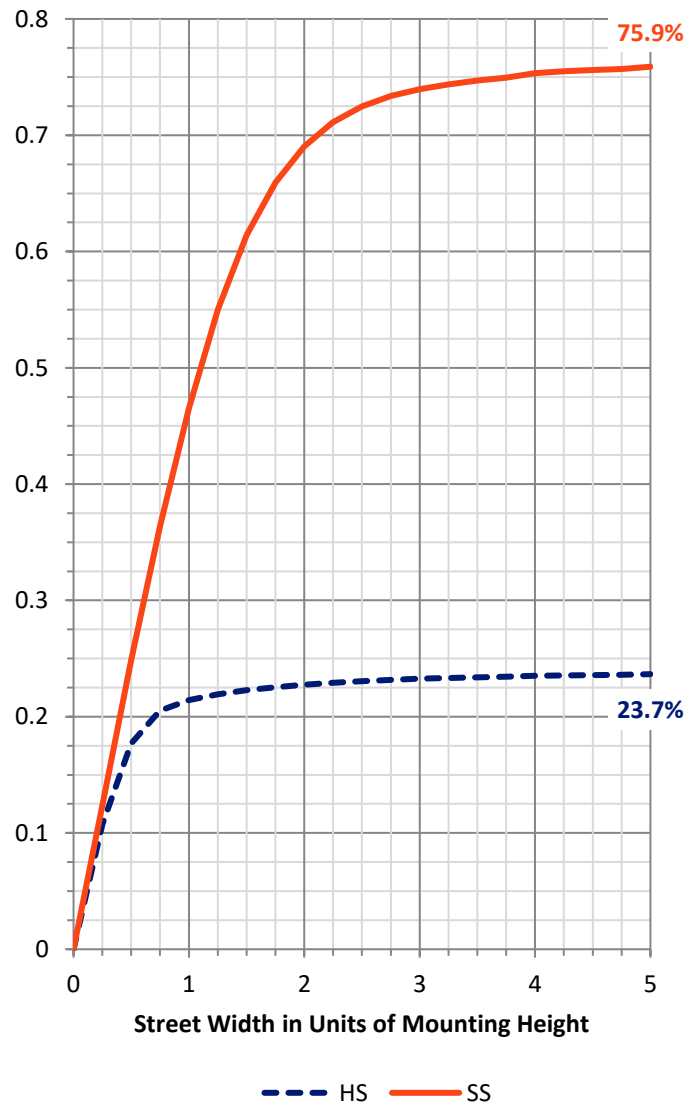
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5377.3	0.0	5377.3
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	17037.2	0.0	17037.2
	% Fixture	76.0	0.0	76.0
Total	Lumens	22414.5	0.0	22414.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.5	1.1
10°-20°	822.7	3.7
20°-30°	1468.7	6.6
30°-40°	2152.5	9.6
40°-50°	3325.9	14.8
50°-60°	4843.1	21.6
60°-70°	6309.0	28.1
70°-80°	2824.1	12.6
80°-90°	427.0	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°	22414.5	100.0
0°-180°	22414.5	100.0

Coefficient of Utilization



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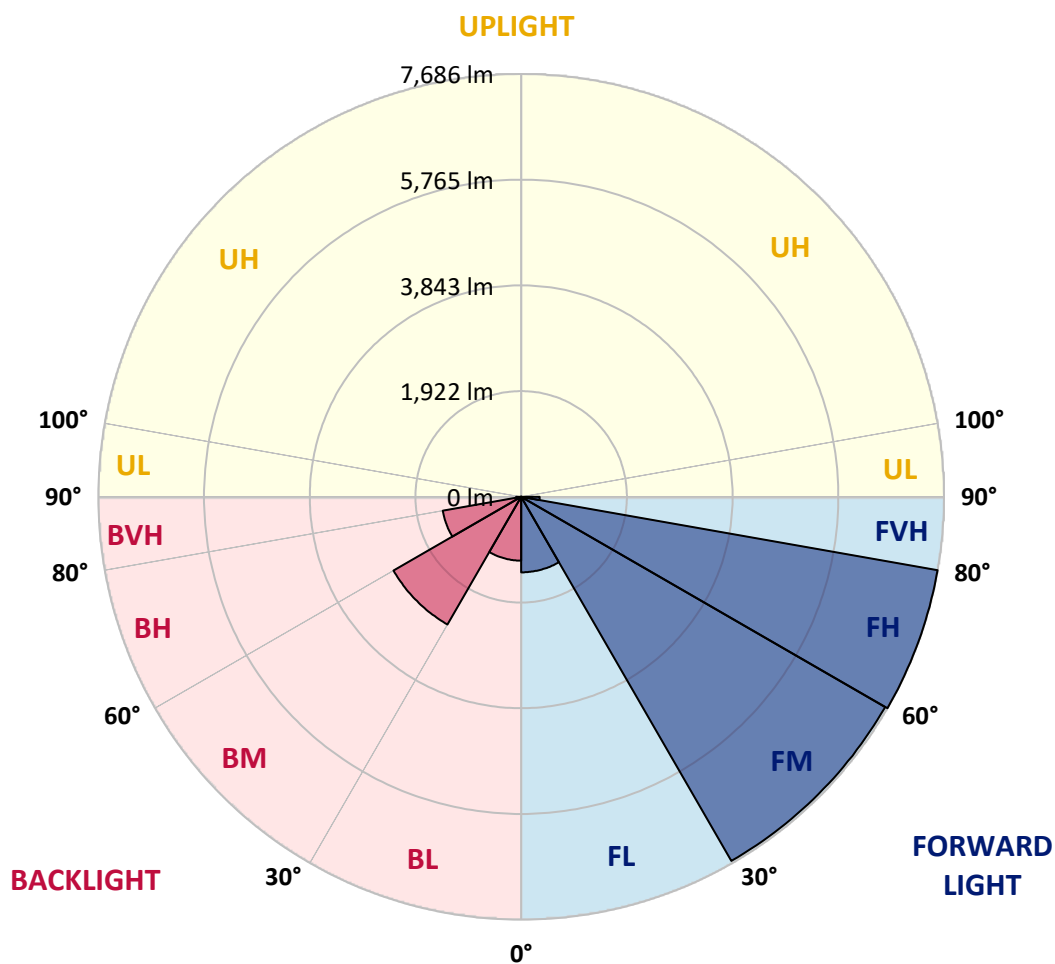
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1373.3	6.1			
FM	(30°-60°)	7642.2	34.1			
FH	(60°-80°)	7686.4	34.3			G4/12000
FVH	(80°-90°)	335.3	1.5			G3/500
BL	(0°-30°)	1159.5	5.2	B3/2500		
BM	(30°-60°)	2679.4	12.0	B3/5000		
BH	(60°-80°)	1446.7	6.5	B3/2500		G3/2500
BVH	(80°-90°)	91.7	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°	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2524.6	2530.6	2532.1	2530.6	2532.1	2526.1	2524.6	2515.7	2520.2	2508.3	2505.3
5°	2661.3	2665.8	2668.8	2656.9	2659.8	2653.9	2646.5	2637.6	2625.7	2609.3	2598.9
7.5°	2795.1	2802.5	2801.0	2796.5	2786.1	2780.2	2765.3	2752.0	2731.2	2711.8	2698.5
10°	2974.9	2973.4	2973.4	2948.1	2933.3	2919.9	2893.1	2872.3	2851.5	2823.3	2808.4
12.5°	3182.9	3172.5	3168.0	3150.2	3119.0	3095.2	3056.6	3016.5	2979.3	2949.6	2925.8
15°	3383.5	3383.5	3371.6	3343.4	3313.7	3282.5	3227.5	3169.5	3108.6	3061.0	3037.3
17.5°	3566.3	3549.9	3539.5	3502.4	3471.2	3420.6	3359.7	3297.3	3221.5	3154.7	3108.6
20°	3700.0	3686.6	3664.3	3618.3	3564.8	3505.3	3434.0	3361.2	3279.5	3206.7	3154.7
22.5°	3777.3	3760.9	3726.7	3665.8	3593.0	3509.8	3426.6	3358.2	3283.9	3229.0	3185.9
25°	3817.4	3801.0	3755.0	3674.7	3576.7	3466.7	3371.6	3304.7	3261.6	3248.3	3242.3
27.5°	3815.9	3802.5	3753.5	3661.4	3535.1	3408.8	3306.2	3249.8	3245.3	3297.3	3335.9
30°	3777.3	3768.4	3723.8	3631.6	3499.4	3367.2	3272.1	3242.3	3288.4	3398.4	3493.5
32.5°	3738.6	3734.2	3703.0	3619.8	3506.8	3395.4	3330.0	3333.0	3428.1	3597.5	3750.5
35°	3743.1	3749.0	3744.6	3700.0	3628.7	3570.7	3539.5	3604.9	3753.5	3958.6	4163.6
37.5°	3781.7	3804.0	3832.3	3836.7	3838.2	3829.3	3894.7	4032.9	4249.8	4517.3	4838.2
40°	3866.4	3891.7	3973.4	4044.7	4136.9	4246.8	4379.1	4570.8	4839.7	5169.6	5563.4
42.5°	4129.4	4165.1	4266.1	4398.4	4567.8	4740.2	4937.8	5199.3	5529.2	5876.9	6290.0
45°	4472.7	4547.0	4658.4	4805.5	5059.6	5301.9	5557.4	5850.2	6200.8	6636.2	7052.3
47.5°	4900.6	4974.9	5136.9	5294.4	5594.6	5896.2	6175.6	6481.7	6862.1	7307.9	7768.5
50°	5275.1	5359.8	5503.9	5716.4	6064.1	6434.1	6743.2	7074.6	7394.1	7863.6	8328.7
52.5°	5569.3	5630.2	5768.4	5963.1	6350.9	6756.6	7147.4	7515.9	7894.8	8364.4	8795.3
55°	5606.5	5662.9	5798.2	6021.0	6414.8	6865.1	7315.3	7752.2	8288.6	8801.3	9371.9
57.5°	5446.0	5492.1	5628.8	5827.9	6211.2	6723.9	7293.0	7853.2	8539.7	9232.2	9929.1
60°	5218.6	5264.7	5371.7	5530.7	5876.9	6429.7	7093.9	7860.6	8773.0	9773.1	10798.4
62.5°	4969.0	5009.1	5095.3	5208.2	5512.9	6022.5	6783.3	7811.6	8963.2	10311.0	11892.0
65°	4548.5	4645.1	4682.2	4798.1	5102.7	5584.2	6358.4	7480.2	8886.0	10550.2	12578.5
67°	4083.4	4181.4	4200.8	4318.2	4561.9	5024.0	5811.5	6866.6	8273.7	10137.1	12427.0
67.5°	3934.8	4018.0	4047.7	4165.1	4395.4	4830.8	5578.2	6645.1	8086.5	9911.3	12244.2
70°	2893.1	2985.3	3018.0	3067.0	3231.9	3594.5	4089.3	5015.1	6447.5	8088.0	10328.8
72.5°	1548.4	1622.7	1653.9	1726.7	1811.4	2009.0	2387.9	3052.1	3957.1	5411.8	7348.0
75°	1047.6	1077.3	1099.6	1150.1	1237.8	1395.3	1561.7	1795.0	2341.8	3053.6	4181.4
77.5°	597.3	610.7	613.7	622.6	692.5	842.5	1115.9	1511.2	1937.7	2212.6	2674.7
80°	258.6	285.3	306.1	292.7	288.3	319.5	399.7	595.9	1168.0	1854.5	2200.7
82.5°	139.7	151.6	169.4	170.9	179.8	190.2	206.5	245.2	344.7	695.4	1517.1
85°	72.8	75.8	101.0	115.9	123.3	129.3	132.2	147.1	169.4	215.5	377.4
87.5°	10.4	14.9	17.8	23.8	26.7	28.2	32.7	41.6	49.0	59.4	101.0
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°	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2491.9	2489.0	2480.0	2474.1	2468.2	2462.2	2454.8	2448.8	2438.4	2431.0	2422.1
5°	2584.1	2566.2	2554.3	2538.0	2535.0	2515.7	2496.4	2487.5	2469.6	2454.8	2436.9
7.5°	2677.7	2656.9	2637.6	2624.2	2616.7	2590.0	2570.7	2548.4	2527.6	2508.3	2487.5
10°	2787.6	2766.8	2746.0	2737.1	2723.7	2698.5	2682.1	2653.9	2633.1	2609.3	2581.1
12.5°	2902.1	2887.2	2872.3	2860.4	2854.5	2842.6	2818.8	2795.1	2766.8	2743.1	2710.4
15°	3003.1	2992.7	2986.7	2983.8	2983.8	2976.3	2954.1	2931.8	2902.1	2875.3	2839.6
17.5°	3074.4	3070.0	3074.4	3078.9	3084.8	3078.9	3074.4	3049.2	3029.8	2997.2	2961.5
20°	3116.0	3124.9	3147.2	3162.1	3175.5	3185.9	3190.3	3169.5	3144.3	3120.5	3096.7
22.5°	3160.6	3185.9	3224.5	3246.8	3269.1	3306.2	3315.1	3300.3	3281.0	3266.1	3240.8
25°	3234.9	3272.1	3338.9	3374.6	3405.8	3460.8	3468.2	3471.2	3466.7	3454.8	3423.6
27.5°	3350.8	3423.6	3512.8	3558.8	3593.0	3664.3	3692.6	3692.6	3680.7	3694.1	3694.1
30°	3552.9	3649.5	3765.4	3792.1	3845.6	3908.0	3954.1	3960.0	3961.5	3989.8	4031.4
32.5°	3863.5	3955.6	4084.9	4114.6	4160.6	4220.1	4272.1	4266.1	4279.5	4340.4	4395.4
35°	4315.2	4408.8	4493.5	4533.6	4554.4	4607.9	4627.2	4659.9	4700.0	4775.8	4768.4
37.5°	4983.9	5067.1	5079.0	5104.2	5079.0	5089.4	5104.2	5142.9	5249.8	5318.2	5208.2
40°	5789.2	5927.4	5914.1	5884.3	5827.9	5752.1	5778.8	5838.3	5954.2	5894.7	5599.0
42.5°	6548.6	6691.2	6664.5	6630.3	6505.5	6477.2	6474.3	6523.3	6585.7	6416.3	5905.1
45°	7296.0	7441.6	7395.5	7376.2	7293.0	7232.1	7282.6	7285.6	7269.2	6906.7	6172.6
47.5°	8067.2	8200.9	8171.2	8187.6	8101.4	8061.3	8065.7	8044.9	7891.9	7322.7	6380.6
50°	8689.8	8869.6	8887.4	8850.3	8804.2	8743.3	8899.3	8842.9	8502.6	7726.9	6581.2
52.5°	9174.2	9416.4	9508.6	9484.8	9447.6	9455.1	9747.8	9811.7	9248.5	8236.6	6802.7
55°	9747.8	10129.7	10279.8	10368.9	10330.3	10478.9	11149.0	11181.7	10285.7	8902.3	7090.9
57.5°	10575.5	11122.3	11596.3	11722.6	11844.5	12327.4	13415.1	13083.7	11632.0	9909.8	7456.5
60°	11834.1	13031.7	13801.5	14205.6	14490.9	15165.6	16199.8	15360.2	13309.6	11108.9	7915.6
62.5°	13596.4	15346.8	16633.7	17039.3	17156.7	17544.6	18293.5	16687.2	14223.5	11646.8	7955.7
65°	14908.5	17008.1	18549.0	18757.1	18617.4	18624.8	18821.0	16617.3	13883.2	11177.3	7266.3
67°	14822.3	17173.1	18751.1	19024.6	18831.4	18577.3	18271.2	15670.8	12789.5	10193.6	6362.8
67.5°	14690.1	17014.1	18663.5	18951.7	18774.9	18485.2	18037.9	15303.7	12449.2	9887.5	6178.6
70°	12698.9	15006.6	17228.0	17633.7	17708.0	17443.5	16187.9	12903.9	10107.4	8043.4	4798.1
72.5°	9884.5	11939.6	14137.3	14489.4	14774.7	14012.5	11782.1	8912.7	7367.3	5796.7	3474.1
75°	6526.3	8617.0	9725.5	9777.5	9413.5	8001.8	5756.6	4463.8	4108.6	3407.3	2150.2
77.5°	3492.0	5067.1	5098.3	4720.8	4548.5	3390.9	1376.0	759.3	845.5	959.9	855.9
80°	2604.9	3227.5	3740.1	4021.0	4104.2	2908.0	711.8	402.7	352.2	321.0	316.5
82.5°	2349.3	3117.5	3494.9	3648.0	3609.4	2392.4	399.7	270.4	224.4	243.7	277.9
85°	921.3	1664.3	2188.8	2119.0	1780.2	891.6	218.4	145.6	145.6	211.0	273.4
87.5°	188.7	341.8	463.6	442.8	398.2	172.4	107.0	87.7	89.2	170.9	258.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2413.2	2404.3	2398.3	2392.4	2386.4	2383.5	2379.0	2379.0	2370.1	2367.1	2364.1
5°	2423.6	2408.7	2398.3	2384.9	2374.5	2365.6	2353.7	2350.8	2340.4	2332.9	2330.0
7.5°	2468.2	2445.9	2423.6	2407.2	2392.4	2373.1	2359.7	2347.8	2337.4	2330.0	2321.0
10°	2552.9	2529.1	2497.9	2468.2	2448.8	2419.1	2398.3	2377.5	2365.6	2356.7	2344.8
12.5°	2677.7	2643.5	2606.3	2570.7	2538.0	2499.4	2478.6	2453.3	2438.4	2431.0	2422.1
15°	2805.5	2768.3	2722.3	2688.1	2650.9	2621.2	2601.9	2579.6	2567.7	2558.8	2552.9
17.5°	2936.2	2893.1	2860.4	2826.3	2808.4	2786.1	2760.9	2732.7	2698.5	2677.7	2649.4
20°	3070.0	3037.3	3018.0	2998.6	2977.8	2946.6	2896.1	2838.2	2774.3	2713.3	2655.4
22.5°	3226.0	3206.7	3203.7	3185.9	3142.8	3068.5	2974.9	2866.4	2757.9	2656.9	2578.1
25°	3445.9	3445.9	3431.0	3358.2	3257.2	3123.5	2965.9	2809.9	2665.8	2527.6	2423.6
27.5°	3722.3	3711.9	3639.1	3489.0	3307.7	3099.7	2888.7	2691.0	2506.8	2355.2	2221.5
30°	4026.9	3954.1	3798.1	3561.8	3289.9	3022.4	2763.9	2535.0	2318.1	2132.3	1974.8
32.5°	4343.4	4166.6	3885.7	3561.8	3227.5	2906.5	2607.8	2327.0	2078.8	1870.8	1683.6
35°	4630.2	4307.8	3906.5	3503.9	3105.6	2735.6	2389.4	2071.4	1774.2	1549.8	1344.8
37.5°	4890.2	4401.4	3884.3	3390.9	2928.8	2494.9	2089.2	1738.6	1402.7	1185.8	1010.4
40°	5059.6	4420.7	3792.1	3214.1	2676.2	2169.5	1720.7	1328.4	1062.5	864.8	747.4
42.5°	5165.1	4383.5	3643.5	2971.9	2335.9	1760.8	1291.3	952.5	754.9	644.9	600.3
45°	5224.6	4287.0	3423.6	2640.5	1924.3	1338.8	916.8	688.0	581.0	542.4	527.5
47.5°	5221.6	4130.9	3148.7	2257.2	1469.6	933.2	649.4	536.4	506.7	494.8	491.8
50°	5190.4	3939.2	2826.3	1841.1	1061.0	650.8	514.1	481.4	474.0	466.6	463.6
52.5°	5147.3	3701.5	2469.6	1435.4	753.4	520.1	466.6	457.7	451.7	444.3	441.3
55°	5067.1	3408.8	2083.3	1080.3	589.9	469.6	450.2	447.3	439.8	429.4	423.5
57.5°	4969.0	3111.6	1713.3	844.0	521.6	457.7	447.3	442.8	432.4	420.5	408.6
60°	4933.3	2866.4	1423.5	711.8	505.2	462.1	454.7	448.8	433.9	416.1	402.7
62.5°	4710.4	2590.0	1215.5	659.8	514.1	481.4	478.5	469.6	447.3	426.5	405.7
65°	4133.9	2190.3	1029.8	624.1	532.0	514.1	517.1	503.7	481.4	453.2	416.1
67°	3496.4	1786.1	857.4	589.9	545.3	548.3	558.7	548.3	520.1	480.0	429.4
67.5°	3327.0	1683.6	814.3	579.5	548.3	557.2	569.1	561.7	533.5	487.4	435.4
70°	2472.6	1185.8	607.8	524.5	548.3	584.0	610.7	618.2	586.9	523.1	447.3
72.5°	1741.5	765.3	466.6	454.7	497.8	545.3	595.9	621.1	585.5	515.6	430.9
75°	1046.1	478.5	378.9	386.3	419.0	468.1	508.2	518.6	474.0	429.4	373.0
77.5°	484.4	318.0	297.2	307.6	338.8	361.1	361.1	340.3	306.1	279.4	267.5
80°	285.3	260.0	258.6	277.9	298.7	282.3	257.1	228.8	211.0	202.1	197.6
82.5°	267.5	277.9	295.7	300.2	283.8	243.7	212.5	184.3	175.3	170.9	166.4
85°	315.0	337.3	307.6	283.8	251.1	205.1	166.4	142.7	138.2	133.7	127.8
87.5°	291.2	277.9	242.2	208.0	172.4	124.8	90.6	81.7	87.7	86.2	83.2
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):

	160°	165°	170°	175°	180°
0°	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2365.6	2365.6	2359.7	2356.7	2364.1
5°	2324.0	2325.5	2321.0	2319.6	2321.0
7.5°	2315.1	2313.6	2310.6	2307.7	2310.6
10°	2341.8	2340.4	2335.9	2338.9	2334.4
12.5°	2422.1	2431.0	2429.5	2432.5	2438.4
15°	2552.9	2551.4	2546.9	2549.9	2554.3
17.5°	2627.2	2615.3	2604.9	2600.4	2600.4
20°	2609.3	2575.1	2557.3	2546.9	2543.9
22.5°	2503.8	2454.8	2417.6	2408.7	2401.3
25°	2331.4	2270.5	2223.0	2212.6	2193.3
27.5°	2130.8	2049.1	1992.7	1980.8	1970.4
30°	1867.8	1774.2	1708.8	1667.2	1680.6
32.5°	1546.9	1457.7	1381.9	1315.1	1304.7
35°	1194.7	1096.6	1029.8	1000.0	980.7
37.5°	891.6	809.8	765.3	737.0	738.5
40°	682.0	639.0	615.2	595.9	597.3
42.5°	569.1	549.8	543.9	534.9	530.5
45°	515.6	509.7	511.2	502.2	499.3
47.5°	485.9	481.4	482.9	477.0	475.5
50°	462.1	459.2	460.6	456.2	454.7
52.5°	438.4	439.8	438.4	435.4	435.4
55°	417.6	416.1	419.0	414.6	414.6
57.5°	401.2	399.7	399.7	398.2	398.2
60°	392.3	386.3	384.9	384.9	386.3
62.5°	387.8	377.4	375.9	375.9	377.4
65°	389.3	373.0	367.0	365.5	364.1
67°	390.8	367.0	355.1	349.2	347.7
67.5°	392.3	364.1	350.7	344.7	341.8
70°	383.4	343.3	323.9	313.5	310.6
72.5°	361.1	318.0	294.2	280.8	277.9
75°	321.0	288.3	267.5	252.6	246.7
77.5°	248.2	233.3	225.9	216.9	214.0
80°	193.2	185.7	182.8	176.8	175.3
82.5°	160.5	153.1	148.6	141.2	136.7
85°	124.8	115.9	112.9	107.0	104.0
87.5°	81.7	77.3	75.8	68.4	65.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)