

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: P256699

Luminaire Tested: **CST-8-4-D-U-T5R-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: CST-8-4-D-U-T5R-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 4000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED 90
DEGREE SHIELD - BLACK
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36803 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B5 - U1 - G5

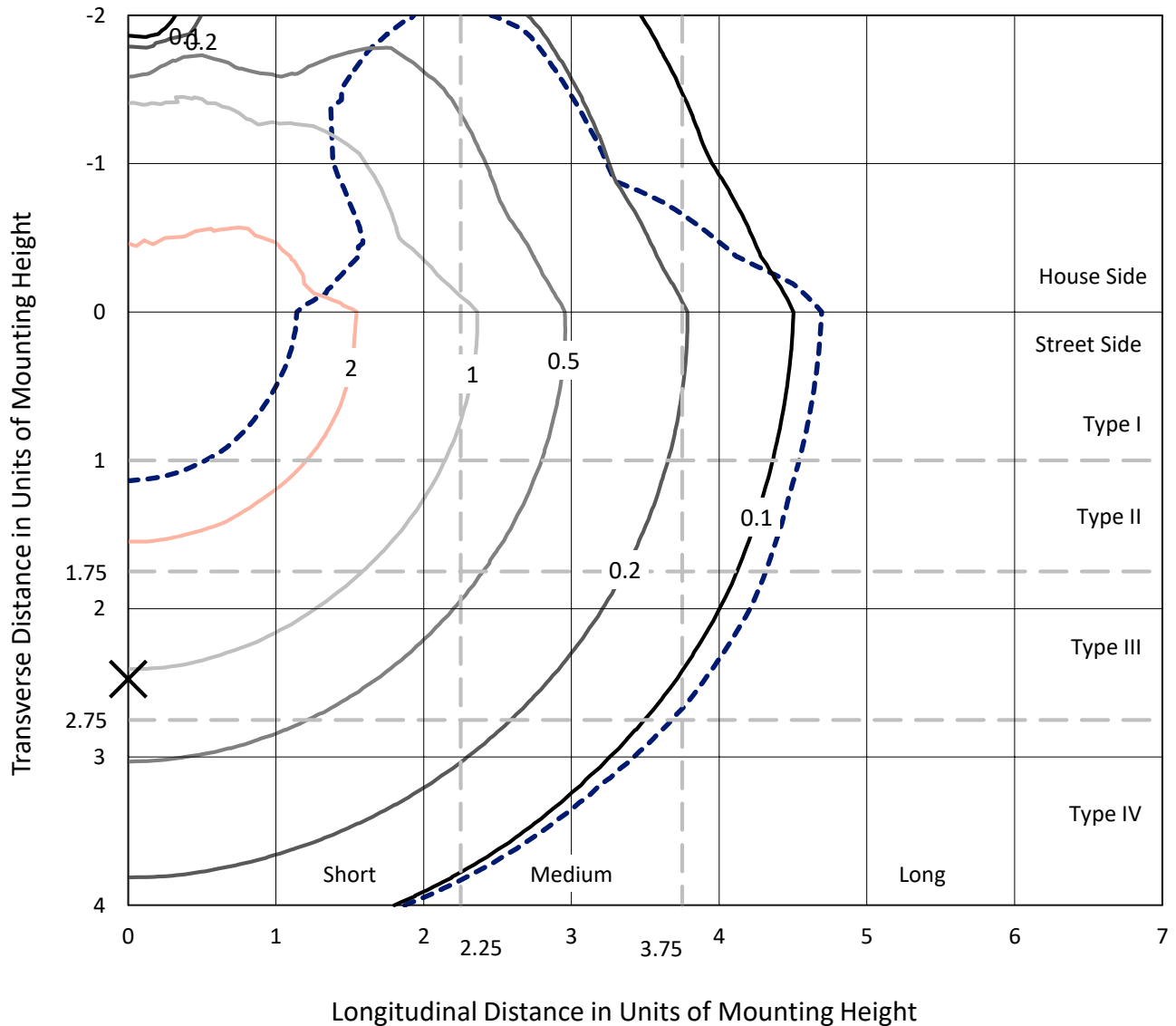
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

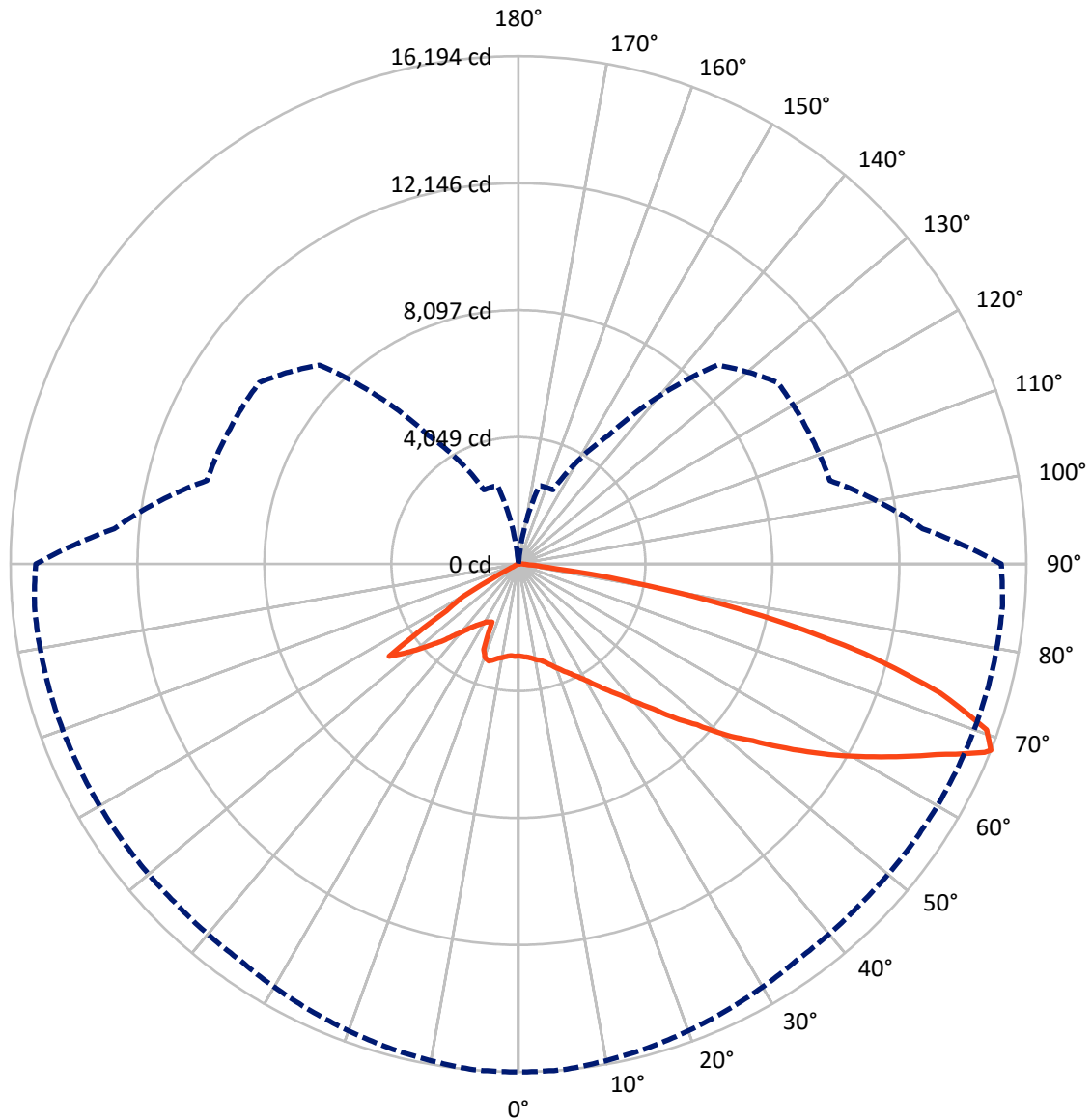
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical



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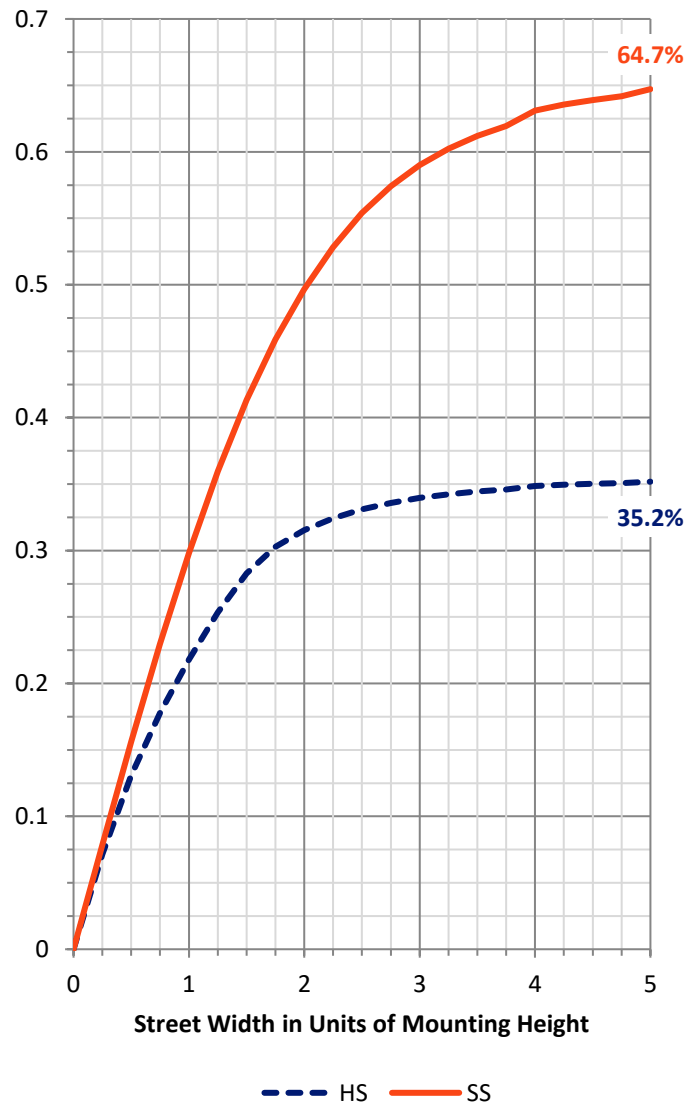
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12952.2	2.2	12954.4
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	23838.9	9.7	23848.6
	% Fixture	64.8	0.0	64.8
Total	Lumens	36791.1	12.0	36803.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.4	0.8
10°-20°	907.8	2.5
20°-30°	1620.6	4.4
30°-40°	2636.4	7.2
40°-50°	4502.2	12.2
50°-60°	7512.2	20.4
60°-70°	10451.0	28.4
70°-80°	8101.1	22.0
80°-90°	776.3	2.1
90°-100°	9.4	0.0
100°-110°	0.8	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	36791.1	100.0
0°-180°	36803.0	100.0



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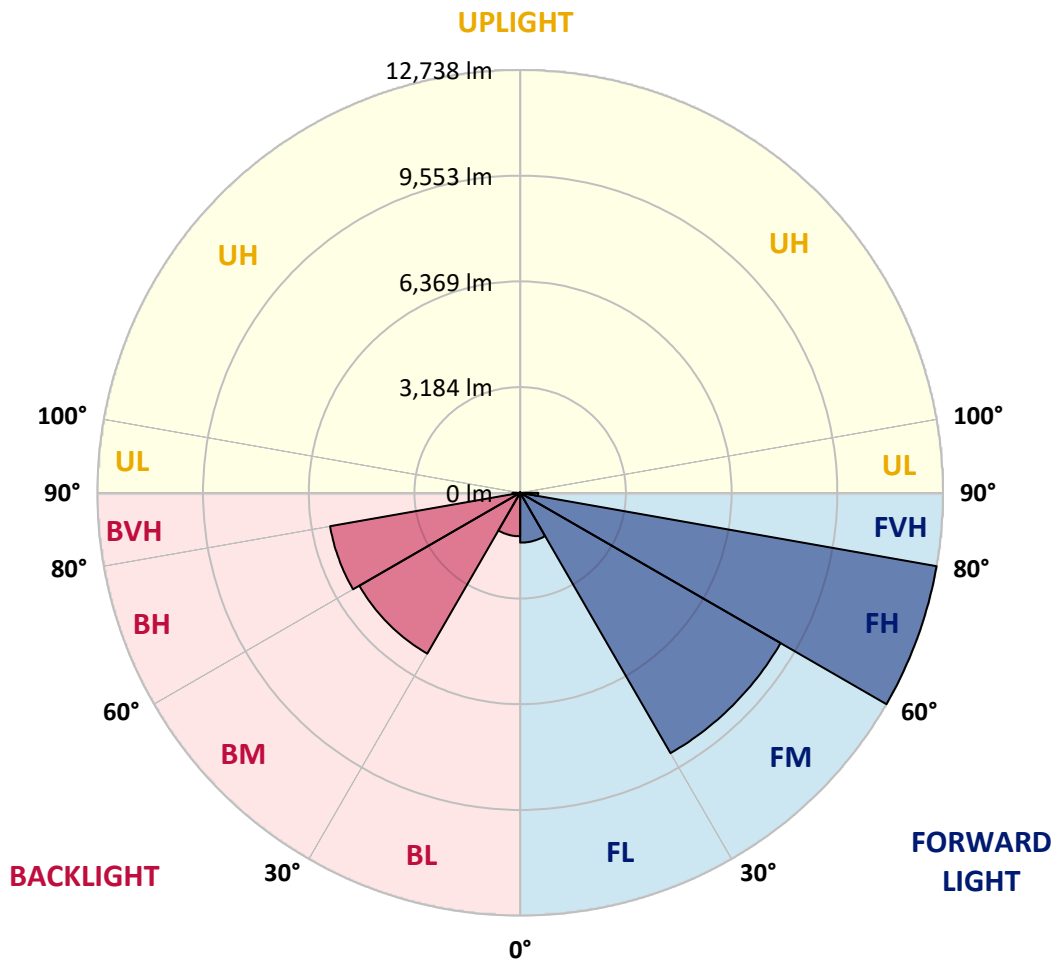
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1502.1	4.1			
FM	(30°-60°)	9056.1	24.6			
FH	(60°-80°)	12737.6	34.6			G5
FVH	(80°-90°)	543.1	1.5			G4/750
BL	(0°-30°)	1309.7	3.6	B3/2500		
BM	(30°-60°)	5594.8	15.2	B4/8500		
BH	(60°-80°)	5814.5	15.8	B5		G5
BVH	(80°-90°)	233.2	0.6			G3/500
UL	(90°-100°)	9.4	0.0		U1/10	
UH	(100°-180°)	2.2	0.0		U1/10	

BUG Rating: B5-U1-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9
2.5°	2962.1	2958.0	2955.2	2973.2	2922.0	2942.7	2928.9	2946.9	2942.7	2951.1	2952.4
5°	2982.9	2976.0	2966.3	2985.7	2955.2	2969.1	2953.8	2962.1	2935.8	2958.0	2960.7
7.5°	3030.0	3010.6	3009.2	3014.8	2994.0	3003.7	2977.4	2987.1	2973.2	2964.9	2973.2
10°	3100.6	3084.0	3066.0	3077.1	3042.5	3054.9	3027.2	3035.5	3028.6	3010.6	3027.2
12.5°	3149.1	3154.6	3142.2	3150.5	3120.0	3108.9	3099.2	3097.8	3093.7	3067.4	3063.2
15°	3257.1	3259.9	3237.7	3243.3	3236.3	3230.8	3216.9	3205.9	3183.7	3167.1	3156.0
17.5°	3398.4	3383.1	3362.3	3367.9	3387.3	3362.3	3354.0	3333.3	3301.4	3273.7	3268.2
20°	3546.5	3536.8	3517.4	3528.5	3527.1	3510.5	3514.7	3480.1	3434.4	3410.8	3392.8
22.5°	3711.3	3697.5	3683.6	3704.4	3687.8	3676.7	3672.5	3649.0	3592.2	3565.9	3561.8
25°	3876.1	3869.2	3878.9	3872.0	3848.4	3840.1	3845.7	3837.3	3770.9	3739.0	3719.6
27.5°	4082.5	4065.8	4081.1	4072.8	4047.8	4049.2	4050.6	4052.0	3977.2	3935.7	3908.0
30°	4317.9	4312.3	4331.7	4305.4	4281.9	4297.1	4309.6	4281.9	4216.8	4155.9	4146.2
32.5°	4623.9	4589.3	4611.5	4578.2	4542.2	4578.2	4600.4	4545.0	4492.4	4414.8	4428.7
35°	4963.2	4952.1	4952.1	4909.2	4889.8	4946.6	4968.7	4914.7	4833.0	4765.2	4748.6
37.5°	5323.3	5334.3	5369.0	5351.0	5333.0	5367.6	5417.4	5345.4	5240.2	5168.2	5148.8
40°	5801.0	5828.7	5852.3	5828.7	5807.9	5830.1	5886.9	5792.7	5719.3	5680.5	5639.0
42.5°	6314.8	6361.9	6346.6	6349.4	6367.4	6399.3	6456.0	6370.2	6285.7	6284.3	6223.4
45°	7010.0	7010.0	6978.1	7008.6	7005.8	7084.8	7109.7	7062.6	6992.0	6971.2	6918.6
47.5°	7659.5	7727.3	7714.8	7759.2	7724.5	7791.0	7875.5	7835.3	7753.6	7680.2	7669.1
50°	8565.1	8548.5	8531.9	8598.4	8592.8	8638.5	8716.1	8691.1	8577.6	8494.5	8479.3
52.5°	9361.4	9448.6	9427.9	9527.6	9472.2	9537.3	9630.1	9625.9	9487.4	9405.7	9382.2
55°	10366.8	10424.9	10420.8	10523.3	10447.1	10533.0	10610.5	10618.8	10467.9	10351.5	10387.6
57.5°	11413.7	11462.2	11434.5	11519.0	11444.2	11561.9	11609.0	11578.5	11489.9	11343.1	11397.1
60°	12462.0	12503.6	12535.4	12542.3	12499.4	12568.6	12613.0	12639.3	12499.4	12331.8	12396.9
62.5°	13526.9	13574.0	13546.3	13557.4	13438.3	13532.5	13587.9	13594.8	13434.2	13286.0	13331.7
65°	14648.6	14713.7	14614.0	14547.6	14400.8	14399.4	14472.8	14485.2	14371.7	14266.4	14248.4
67.5°	16037.6	16066.7	15853.4	15630.5	15382.6	15328.6	15379.8	15408.9	15474.0	15471.2	15389.5
68°	16194.1	16188.6	15972.5	15706.7	15440.8	15378.5	15403.4	15440.8	15483.7	15492.0	15393.7
70°	15838.2	15770.4	15647.1	15312.0	15048.9	14885.5	14798.2	14867.5	14751.1	14752.5	14568.3
72.5°	14068.4	14060.1	13833.0	13666.8	13432.8	13161.4	13036.7	13035.3	13046.4	12966.1	12776.4
75°	11395.7	11406.8	11142.3	11027.3	10955.3	10904.1	10930.4	11012.1	11020.4	11019.0	10952.6
77.5°	7947.5	7993.2	7922.6	7735.6	7936.4	8108.1	8439.1	8608.1	8554.0	8716.1	8818.5
80°	4165.5	4256.9	4259.7	4391.3	4553.3	4709.8	4995.1	5251.2	5062.9	4979.8	4894.0
82.5°	1095.4	1128.6	1178.5	1102.3	1125.9	1149.4	1371.0	1350.2	1246.3	1301.7	1384.8
85°	313.0	322.7	308.8	279.7	256.2	235.4	241.0	203.6	177.3	175.9	170.3
87.5°	220.2	236.8	209.1	180.0	162.0	150.9	145.4	123.2	99.7	87.2	69.2
90°	102.5	101.1	87.2	67.9	59.5	56.8	56.8	44.3	24.9	15.2	13.8
92.5°	42.9	44.3	36.0	29.1	24.9	19.4	15.2	9.7	5.5	2.8	1.4
95°	15.2	16.6	13.8	11.1	9.7	8.3	6.9	5.5	2.8	1.4	1.4
97.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	2.8	2.8	1.4	1.4
100°	0.0	0.0	0.0	1.4	2.8	2.8	2.8	2.8	1.4	1.4	1.4
102.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
105°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
165°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
167.5°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
170°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
172.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
175°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
177.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
180°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9	2928.9
2.5°	2949.7	2942.7	2940.0	2905.4	2915.1	2894.3	2942.7	2928.9	2926.1	2945.5
5°	2956.6	2924.7	2944.1	2922.0	2927.5	2897.0	2935.8	2919.2	2920.6	2930.3
7.5°	2960.7	2942.7	2962.1	2923.4	2938.6	2927.5	2955.2	2938.6	2955.2	2963.5
10°	3002.3	2994.0	2980.1	2969.1	2980.1	2953.8	2988.4	2985.7	2995.4	3020.3
12.5°	3059.1	3049.4	3035.5	3016.1	3024.5	3014.8	3041.1	3043.8	3061.8	3074.3
15°	3143.5	3131.1	3124.2	3104.8	3107.5	3100.6	3115.9	3118.6	3154.6	3150.5
17.5°	3262.6	3248.8	3254.3	3236.3	3229.4	3212.8	3185.1	3175.4	3218.3	3230.8
20°	3392.8	3377.6	3384.5	3369.3	3240.5	2978.8	3154.6	3275.1	3183.7	3176.8
22.5°	3541.0	3524.4	3529.9	3506.4	3347.1	2856.9	2485.8	2455.3	2804.3	2945.5
25°	3704.4	3682.2	3679.5	3649.0	3125.5	2586.8	2545.3	2491.3	2236.5	2034.3
27.5°	3906.6	3873.3	3856.7	3397.0	3103.4	2687.9	2625.6	2433.1	2063.4	2075.8
30°	4125.4	4076.9	3765.3	3462.1	3265.4	2807.0	2723.9	2132.6	2135.4	2129.9
32.5°	4374.7	4266.6	3689.2	3661.5	3459.3	2934.4	2261.4	2236.5	2239.3	2247.6
35°	4701.5	3960.6	3945.4	3946.7	3696.1	2838.9	2395.7	2372.2	2375.0	2380.5
37.5°	4770.7	4269.4	4272.2	4240.3	3948.1	2593.8	2559.2	2557.8	2552.2	2546.7
40°	4826.1	4658.5	4618.4	4567.1	3660.1	2793.2	2782.1	2773.8	2778.0	2789.0
42.5°	5259.6	5133.5	5094.8	5033.8	3754.3	3095.1	3059.1	3049.4	3060.5	3054.9
45°	5835.6	5730.4	5654.2	4654.4	4147.5	3423.3	3394.2	3381.7	3385.9	3420.5
47.5°	6445.0	6382.6	6150.0	5028.3	4605.9	3811.0	3781.9	3762.6	3769.5	3761.2
50°	7108.3	7051.5	5693.0	5591.9	5112.8	4229.2	4186.3	4179.4	4182.2	4180.8
52.5°	7828.4	6641.6	6309.3	6204.0	5647.3	4666.9	4651.6	4614.2	4622.5	4614.2
55°	8673.1	6996.1	6987.8	6864.6	6248.3	5175.1	5157.1	5104.5	4773.5	5062.9
57.5°	9475.0	7673.3	7673.3	7554.2	6863.2	5680.5	5651.5	5612.7	3392.8	2736.4
60°	10352.9	8351.9	8332.5	8234.2	7455.9	6162.5	5008.9	4997.8	2049.5	2056.5
62.5°	11111.8	8957.0	8991.7	8900.3	8026.4	4614.2	2321.0	2273.9	202.2	311.6
65°	11962.1	9625.9	9667.4	9573.3	8644.1	4894.0	2519.0	2495.4	45.7	41.5
67.5°	12925.9	10293.4	10199.2	10095.4	9005.5	5039.4	2617.3	2596.5	12.5	8.3
68°	12934.2	10279.5	10157.7	10087.0	8970.9	5011.7	2609.0	2589.6	12.5	8.3
70°	12269.5	9761.6	9639.7	9657.8	8541.6	4792.9	2501.0	2465.0	12.5	8.3
72.5°	10764.2	8687.0	8549.9	8453.0	7575.0	4261.1	2242.0	2174.2	12.5	8.3
75°	9210.5	7361.7	7134.6	6921.3	6094.6	3487.0	1839.0	1762.9	12.5	8.3
77.5°	7259.2	5611.3	5288.6	5148.8	4579.6	2575.8	1366.8	1283.7	12.5	6.9
80°	4011.8	3219.7	2945.5	2859.7	2618.7	1513.6	783.8	734.0	11.1	6.9
82.5°	1037.2	778.3	678.6	655.0	614.9	358.7	191.1	181.4	9.7	5.5
85°	148.2	109.4	120.5	142.6	137.1	92.8	66.5	56.8	8.3	4.2
87.5°	77.6	65.1	76.2	85.9	87.2	54.0	27.7	15.2	4.2	0.0
90°	12.5	12.5	13.8	15.2	15.2	6.9	5.5	0.0	0.0	0.0
92.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.4	2.8	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)