

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: P256708

Luminaire Tested: **CST-10-4-D-U-T5R-7050-HSS-HM-EX90**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256708
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-10-4-D-U-T5R-7050-HSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K 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: 37030 lumens
Efficiency: N/A
Efficacy: 120.2 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): 308
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

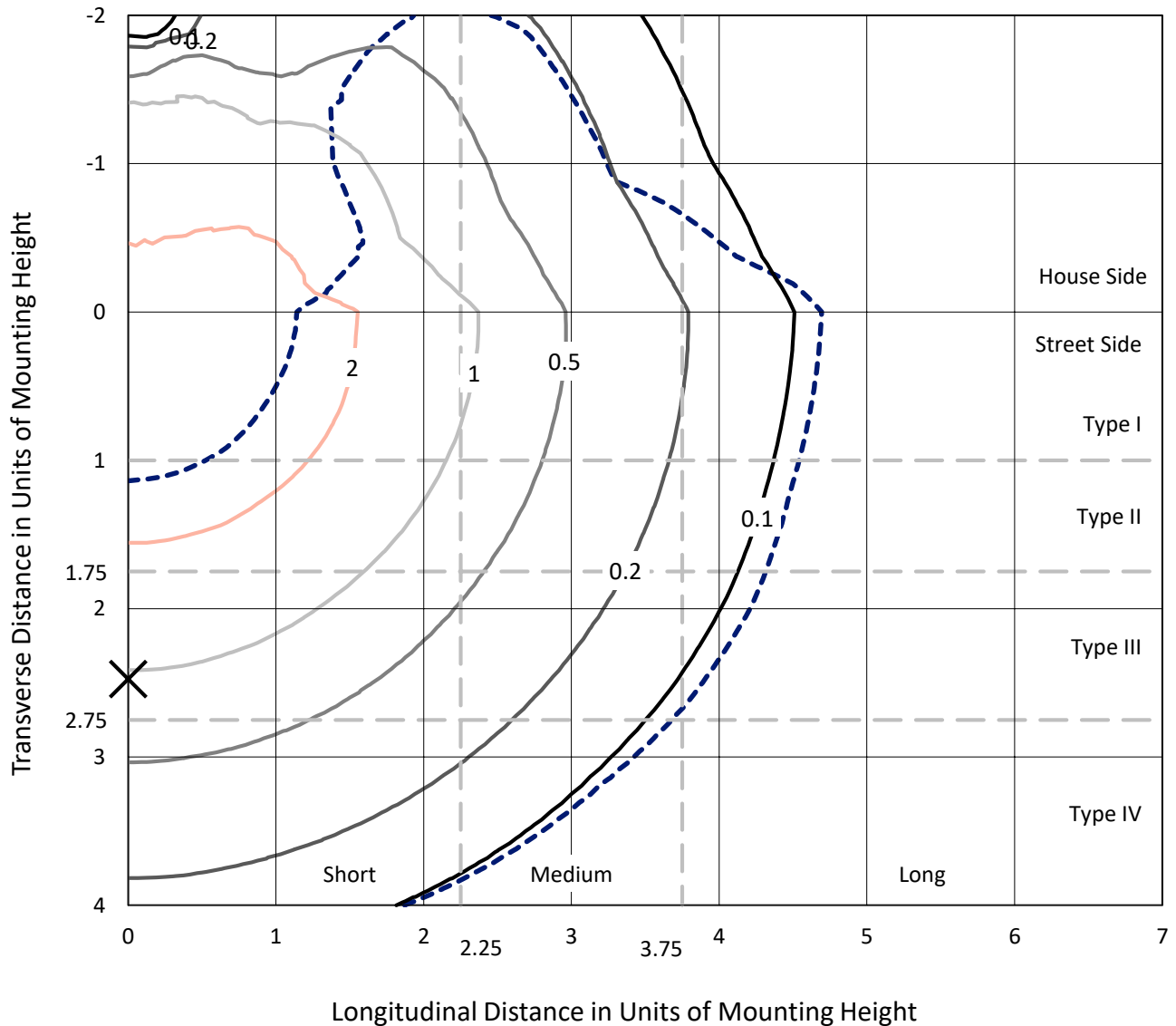


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

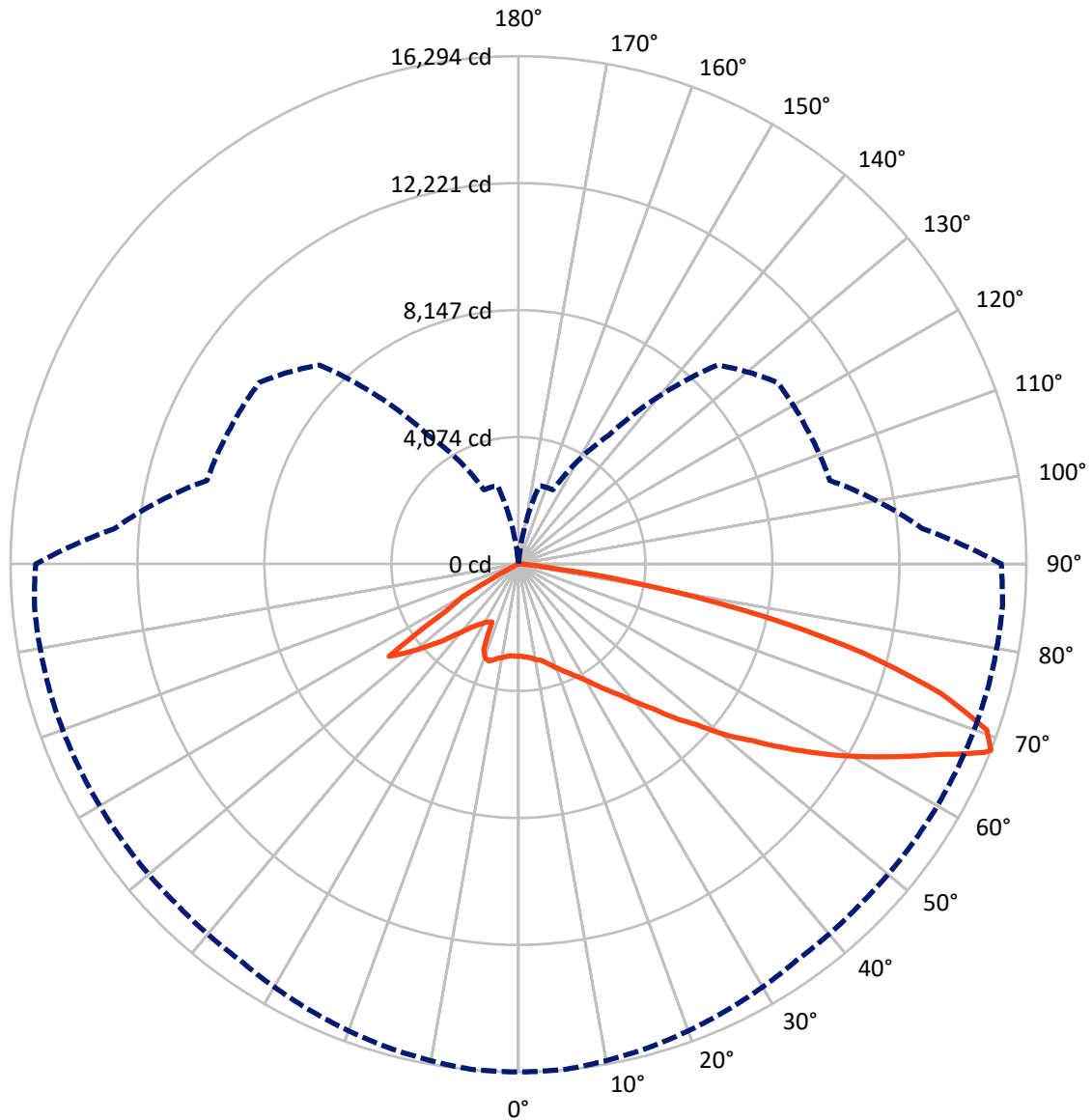


Based on 30 foot mounting height. Maximum calculated value = 3.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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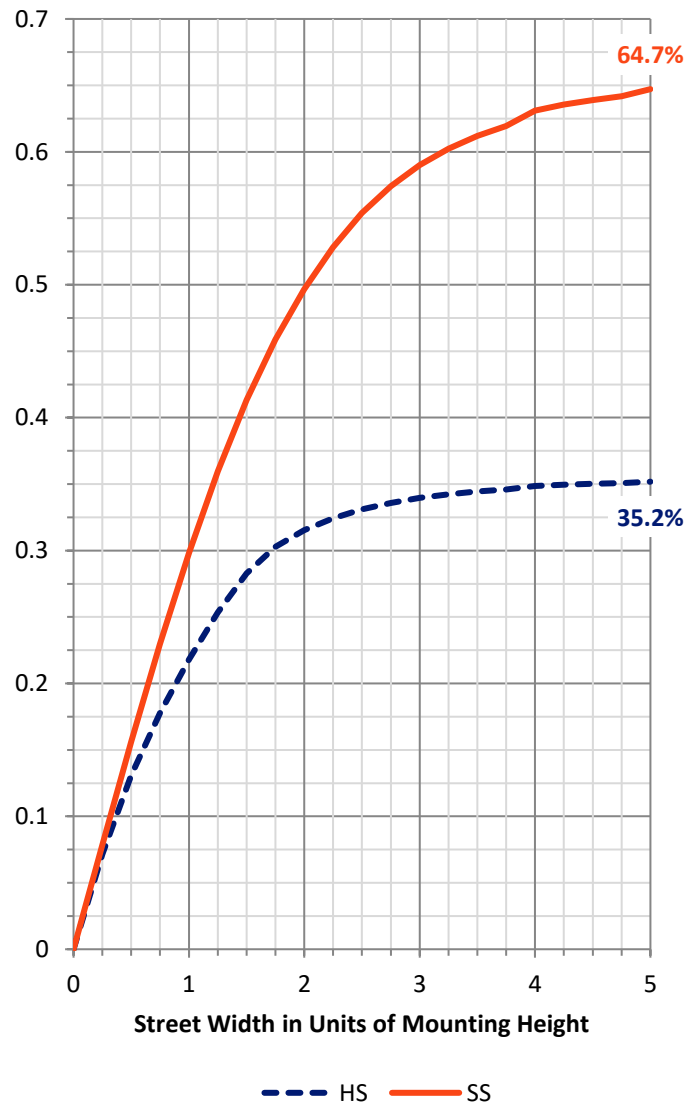
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13032.0	2.2	13034.3
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	23986.0	9.8	23995.7
	% Fixture	64.8	0.0	64.8
Total	Lumens	37018.0	12.0	37030.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.1	0.8
10°-20°	913.4	2.5
20°-30°	1630.6	4.4
30°-40°	2652.7	7.2
40°-50°	4530.0	12.2
50°-60°	7558.5	20.4
60°-70°	10515.5	28.4
70°-80°	8151.1	22.0
80°-90°	781.1	2.1
90°-100°	9.5	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°	37018.0	100.0
0°-180°	37030.0	100.0

Coefficient of Utilization



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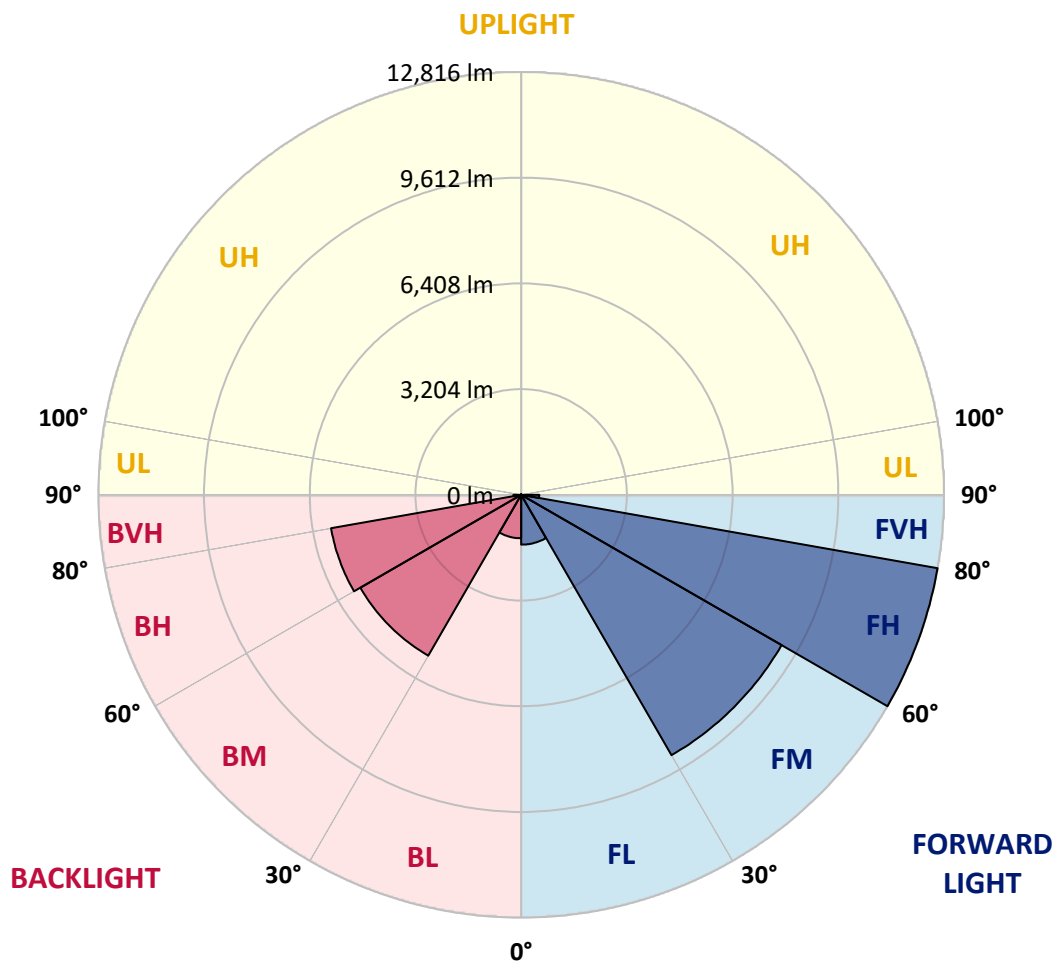
CATALOG NUMBER: CST-10-4-D-U-T5R-7050-HSS-HM-EX90

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1511.3	4.1			
FM	(30°-60°)	9112.0	24.6			
FH	(60°-80°)	12816.2	34.6			G5
FVH	(80°-90°)	546.4	1.5			G4/750
BL	(0°-30°)	1317.8	3.6	B3/2500		
BM	(30°-60°)	5629.3	15.2	B4/8500		
BH	(60°-80°)	5850.3	15.8	B5		G5
BVH	(80°-90°)	234.6	0.6			G3/500
UL	(90°-100°)	9.5	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°	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0
2.5°	2980.4	2976.2	2973.4	2991.6	2940.0	2960.9	2947.0	2965.1	2960.9	2969.3	2970.7
5°	3001.3	2994.3	2984.6	3004.1	2973.4	2987.4	2972.0	2980.4	2953.9	2976.2	2979.0
7.5°	3048.7	3029.2	3027.8	3033.4	3012.5	3022.2	2995.7	3005.5	2991.6	2983.2	2991.6
10°	3119.7	3103.0	3084.9	3096.1	3061.2	3073.8	3045.9	3054.3	3047.3	3029.2	3045.9
12.5°	3168.5	3174.1	3161.5	3169.9	3139.2	3128.1	3118.3	3117.0	3112.8	3086.3	3082.1
15°	3277.2	3280.0	3257.7	3263.3	3256.3	3250.7	3236.8	3225.6	3203.3	3186.6	3175.5
17.5°	3419.3	3404.0	3383.1	3388.7	3408.2	3383.1	3374.7	3353.8	3321.8	3293.9	3288.3
20°	3568.4	3558.7	3539.1	3550.3	3548.9	3532.2	3536.4	3501.5	3455.5	3431.9	3413.7
22.5°	3734.2	3720.3	3706.3	3727.2	3710.5	3699.4	3695.2	3671.5	3614.4	3587.9	3583.7
25°	3900.0	3893.1	3902.8	3895.8	3872.2	3863.8	3869.4	3861.0	3794.1	3762.1	3742.6
27.5°	4107.6	4090.9	4106.2	4097.9	4072.8	4074.2	4075.6	4077.0	4001.7	3959.9	3932.1
30°	4344.5	4338.9	4358.4	4332.0	4308.3	4323.6	4336.1	4308.3	4242.8	4181.5	4171.7
32.5°	4652.4	4617.6	4639.9	4606.5	4570.2	4606.5	4628.8	4573.0	4520.1	4442.0	4456.0
35°	4993.8	4982.7	4982.7	4939.5	4920.0	4977.1	4999.4	4945.0	4862.8	4794.6	4777.8
37.5°	5356.1	5367.2	5402.1	5384.0	5365.8	5400.7	5450.8	5378.4	5272.5	5200.0	5180.5
40°	5836.8	5864.7	5888.4	5864.7	5843.8	5866.1	5923.2	5828.4	5754.6	5715.6	5673.8
42.5°	6353.7	6401.1	6385.8	6388.6	6406.7	6438.7	6495.9	6409.5	6324.5	6323.1	6261.8
45°	7053.2	7053.2	7021.2	7051.8	7049.0	7128.4	7153.5	7106.2	7035.1	7014.2	6961.2
47.5°	7706.7	7775.0	7762.4	7807.0	7772.2	7839.1	7924.1	7883.7	7801.4	7727.6	7716.4
50°	8618.0	8601.2	8584.5	8651.4	8645.8	8691.8	8769.8	8744.8	8630.5	8546.9	8531.6
52.5°	9419.1	9506.9	9486.0	9586.3	9530.6	9596.1	9689.5	9685.3	9545.9	9463.7	9440.0
55°	10430.7	10489.2	10485.1	10588.2	10511.5	10597.9	10676.0	10684.3	10532.4	10415.4	10451.6
57.5°	11484.1	11532.9	11505.0	11590.0	11514.8	11633.2	11680.6	11649.9	11560.7	11413.0	11467.4
60°	12538.9	12580.7	12612.7	12619.7	12576.5	12646.2	12690.8	12717.2	12576.5	12407.9	12473.4
62.5°	13610.4	13657.8	13629.9	13641.0	13521.2	13616.0	13671.7	13678.7	13517.0	13367.9	13413.9
65°	14739.0	14804.5	14704.2	14637.3	14489.6	14488.2	14562.0	14574.6	14460.3	14354.4	14336.3
67.5°	16136.5	16165.8	15951.2	15726.9	15477.5	15423.1	15474.7	15504.0	15569.4	15566.7	15484.5
68°	16294.0	16288.4	16071.1	15803.5	15536.0	15473.3	15498.4	15536.0	15579.2	15587.6	15488.6
70°	15935.9	15867.6	15743.6	15406.4	15141.7	14977.3	14889.5	14959.2	14842.1	14843.5	14658.2
72.5°	14155.2	14146.8	13918.3	13751.1	13515.6	13242.5	13117.1	13115.7	13126.9	13046.1	12855.2
75°	11466.0	11477.1	11211.0	11095.4	11022.9	10971.3	10997.8	11080.0	11088.4	11087.0	11020.1
77.5°	7996.5	8042.5	7971.4	7783.3	7985.4	8158.1	8491.2	8661.1	8606.8	8769.8	8872.9
80°	4191.2	4283.2	4286.0	4418.4	4581.4	4738.8	5025.9	5283.6	5094.1	5010.5	4924.1
82.5°	1102.2	1135.6	1185.8	1109.1	1132.8	1156.5	1379.4	1358.5	1254.0	1309.8	1393.4
85°	314.9	324.7	310.7	281.5	257.8	236.9	242.4	204.8	178.4	177.0	171.4
87.5°	221.5	238.3	210.4	181.1	163.0	151.9	146.3	124.0	100.3	87.8	69.7
90°	103.1	101.7	87.8	68.3	59.9	57.1	57.1	44.6	25.1	15.3	13.9
92.5°	43.2	44.6	36.2	29.3	25.1	19.5	15.3	9.8	5.6	2.8	1.4
95°	15.3	16.7	13.9	11.1	9.8	8.4	7.0	5.6	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°	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0	2947.0
2.5°	2967.9	2960.9	2958.1	2923.3	2933.0	2912.1	2960.9	2947.0	2944.2	2963.7
5°	2974.8	2942.8	2962.3	2940.0	2945.6	2914.9	2953.9	2937.2	2938.6	2948.4
7.5°	2979.0	2960.9	2980.4	2941.4	2956.7	2945.6	2973.4	2956.7	2973.4	2981.8
10°	3020.8	3012.5	2998.5	2987.4	2998.5	2972.0	3006.9	3004.1	3013.8	3038.9
12.5°	3077.9	3068.2	3054.3	3034.7	3043.1	3033.4	3059.8	3062.6	3080.7	3093.3
15°	3162.9	3150.4	3143.4	3123.9	3126.7	3119.7	3135.1	3137.9	3174.1	3169.9
17.5°	3282.8	3268.8	3274.4	3256.3	3249.3	3232.6	3204.7	3195.0	3238.2	3250.7
20°	3413.7	3398.4	3405.4	3390.1	3260.5	2997.1	3174.1	3295.3	3203.3	3196.4
22.5°	3562.8	3546.1	3551.7	3528.0	3367.8	2874.5	2501.1	2470.4	2821.6	2963.7
25°	3727.2	3705.0	3702.2	3671.5	3144.8	2602.8	2561.0	2506.7	2250.3	2046.9
27.5°	3930.7	3897.2	3880.5	3417.9	3122.5	2704.5	2641.8	2448.1	2076.1	2088.7
30°	4150.8	4102.1	3788.6	3483.4	3285.6	2824.3	2740.7	2145.8	2148.6	2143.0
32.5°	4401.6	4293.0	3711.9	3684.1	3480.6	2952.5	2275.4	2250.3	2253.1	2261.4
35°	4730.5	3985.0	3969.7	3971.1	3718.9	2856.4	2410.5	2386.8	2389.6	2395.2
37.5°	4800.1	4295.7	4298.5	4266.5	3972.5	2609.8	2574.9	2573.5	2568.0	2562.4
40°	4855.9	4687.3	4646.9	4595.3	3682.7	2810.4	2799.3	2790.9	2795.1	2806.2
42.5°	5292.0	5165.2	5126.2	5064.9	3777.4	3114.2	3077.9	3068.2	3079.3	3073.8
45°	5871.6	5765.7	5689.1	4683.1	4173.1	3444.4	3415.1	3402.6	3406.8	3441.6
47.5°	6484.7	6422.0	6187.9	5059.3	4634.3	3834.5	3805.3	3785.8	3792.7	3784.4
50°	7152.1	7095.0	5728.1	5626.4	5144.3	4255.3	4212.1	4205.2	4208.0	4206.6
52.5°	7876.7	6682.6	6348.2	6242.3	5682.1	4695.6	4680.3	4642.7	4651.0	4642.7
55°	8726.6	7039.3	7030.9	6906.9	6286.9	5207.0	5188.9	5135.9	4802.9	5094.1
57.5°	9533.4	7720.6	7720.6	7600.8	6905.5	5715.6	5686.3	5647.3	3413.7	2753.3
60°	10416.8	8403.4	8383.9	8284.9	7501.9	6200.5	5039.8	5028.6	2062.2	2069.1
62.5°	11180.4	9012.3	9047.1	8955.1	8075.9	4642.7	2335.3	2287.9	203.4	313.5
65°	12035.9	9685.3	9727.1	9632.3	8697.4	4924.1	2534.5	2510.8	46.0	41.8
67.5°	13005.7	10356.9	10262.1	10157.6	9061.0	5070.5	2633.5	2612.6	12.5	8.4
68°	13014.0	10342.9	10220.3	10149.3	9026.2	5042.6	2625.1	2605.6	12.5	8.4
70°	12345.2	9821.8	9699.2	9717.3	8594.3	4822.4	2516.4	2480.2	12.5	8.4
72.5°	10830.6	8740.6	8602.6	8505.1	7621.7	4287.4	2255.9	2187.6	12.5	8.4
75°	9267.3	7407.1	7178.6	6964.0	6132.2	3508.5	1850.4	1773.8	12.5	8.4
77.5°	7304.0	5645.9	5321.3	5180.5	4607.9	2591.7	1375.3	1291.6	12.5	7.0
80°	4036.6	3239.6	2963.7	2877.3	2634.9	1522.9	788.6	738.5	11.1	7.0
82.5°	1043.6	783.1	682.7	659.1	618.7	360.9	192.3	182.5	9.8	5.6
85°	149.1	110.1	121.2	143.5	137.9	93.4	66.9	57.1	8.4	4.2
87.5°	78.0	65.5	76.6	86.4	87.8	54.3	27.9	15.3	4.2	0.0
90°	12.5	12.5	13.9	15.3	15.3	7.0	5.6	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)