

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: P256756

Luminaire Tested: **CST-10-4-D-U-T5R-7050-HSS-HM-EX180**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P256756
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-7)
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-EX180
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE V ROUND WITH EXTERNAL FIELD INSTALLED
180 DEGREE SHIELD - BLACK
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28923 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U2 - G4

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

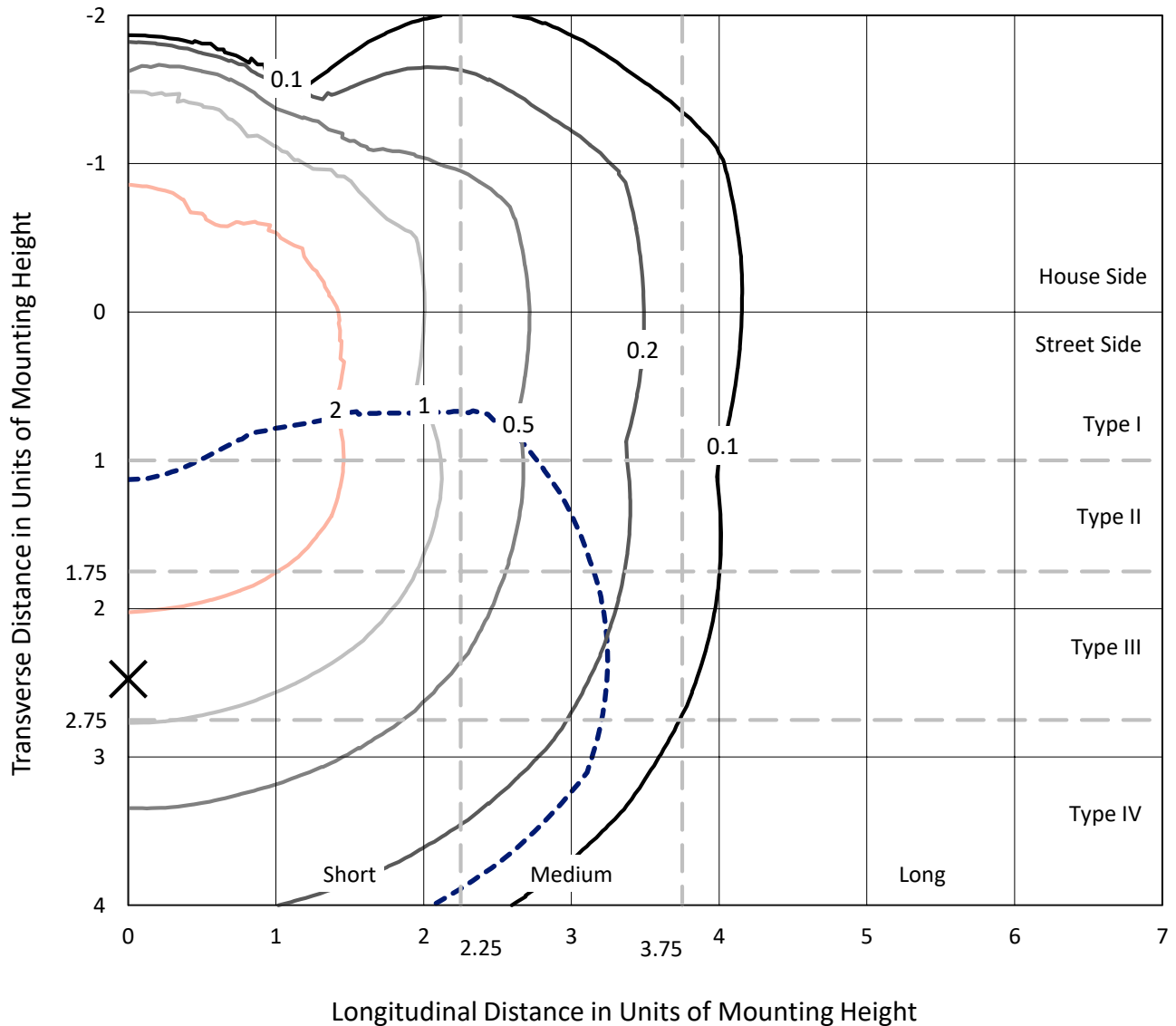


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

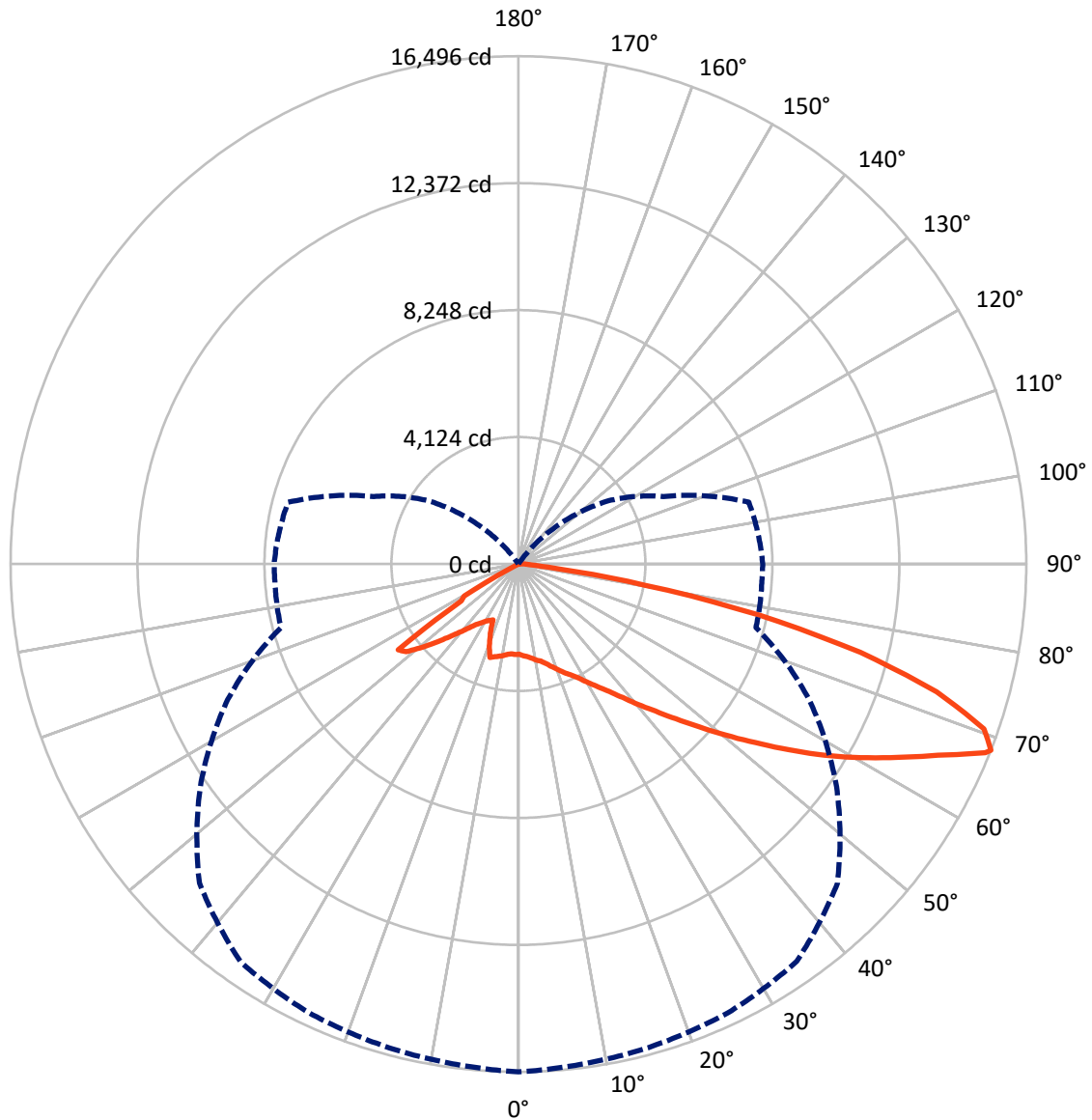


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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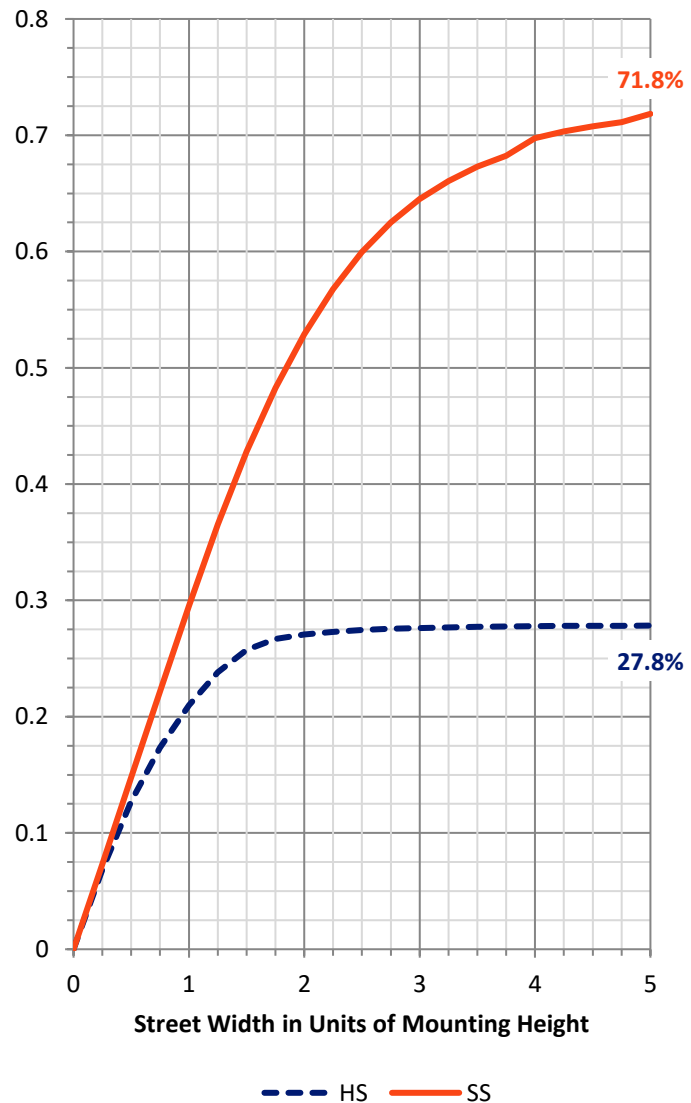
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8078.2	0.2	8078.4
	% Fixture	27.9	0.0	27.9
Street Side	Lumens	20828.0	16.6	20844.6
	% Fixture	72.0	0.1	72.1
Total	Lumens	28906.3	16.7	28923.0
	% Fixture	99.9	0.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.4	1.0
10°-20°	901.2	3.1
20°-30°	1525.7	5.3
30°-40°	2417.0	8.4
40°-50°	3951.6	13.7
50°-60°	6052.9	20.9
60°-70°	7442.5	25.7
70°-80°	5750.8	19.9
80°-90°	580.2	2.0
90°-100°	16.5	0.1
100°-110°	0.3	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°	28906.3	99.9
0°-180°	28923.0	100.0



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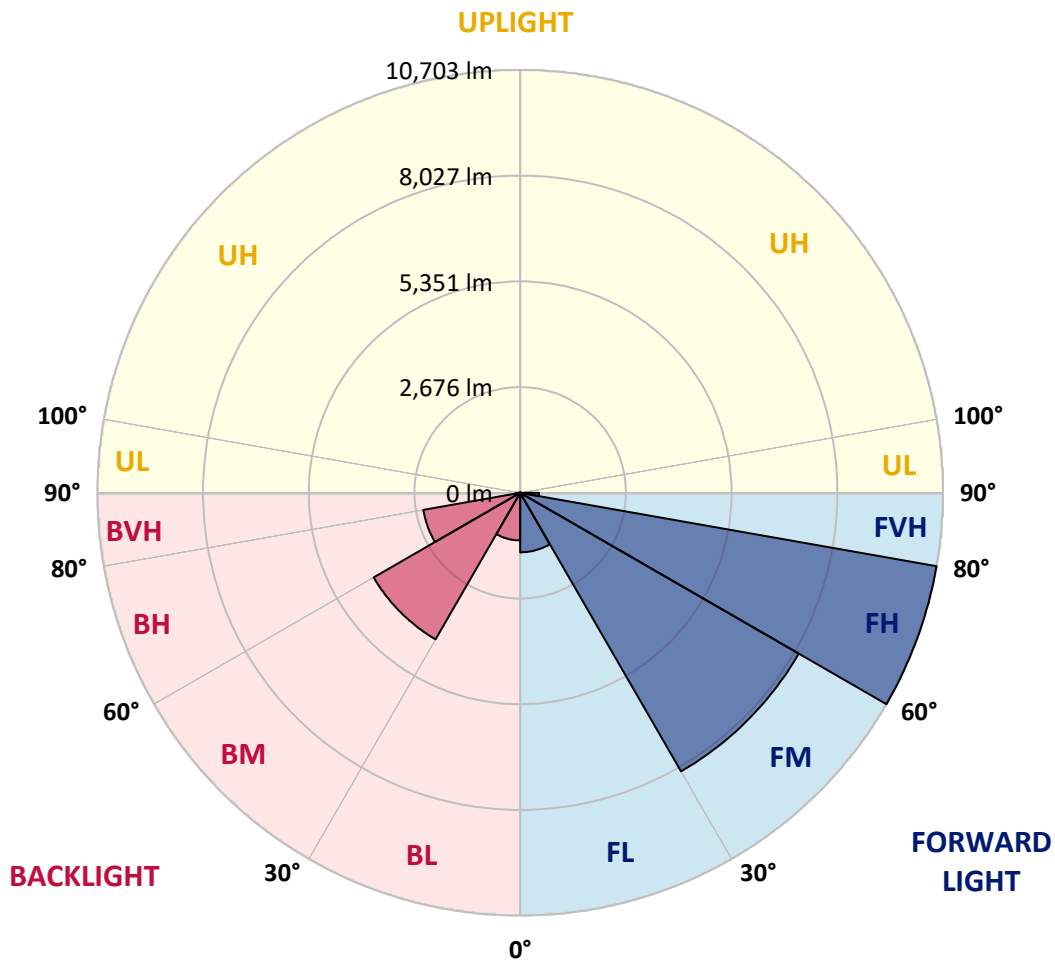
CATALOG NUMBER: CST-10-4-D-U-T5R-7050-HSS-HM-EX180

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1505.5	5.2			
FM	(30°-60°)	8141.3	28.1			
FH	(60°-80°)	10702.7	37.0			G4/12000
FVH	(80°-90°)	478.5	1.7			G3/500
BL	(0°-30°)	1205.8	4.2	B3/2500		
BM	(30°-60°)	4280.2	14.8	B3/5000		
BH	(60°-80°)	2490.5	8.6	B3/2500		G3/2500
BVH	(80°-90°)	101.7	0.4			G2/225
UL	(90°-100°)	16.5	0.1		U2/50	
UH	(100°-180°)	0.2	0.0		U1/10	

BUG Rating: B3-U2-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2
2.5°	2983.2	2977.6	2972.0	2984.5	2935.8	2956.7	2940.0	2955.3	2944.1	2956.7	2952.5
5°	3022.2	3016.6	2999.9	3013.8	2981.8	2990.1	2969.2	2974.8	2937.2	2959.5	2958.1
7.5°	3086.3	3070.9	3059.8	3059.8	3031.9	3030.5	2997.1	2998.5	2969.2	2966.4	2972.0
10°	3172.7	3161.5	3130.9	3133.6	3094.6	3089.0	3047.2	3045.9	3022.2	3008.2	3020.8
12.5°	3236.7	3247.9	3220.0	3220.0	3181.0	3153.1	3123.9	3104.4	3086.3	3065.4	3055.6
15°	3353.8	3364.9	3327.3	3325.9	3310.6	3277.2	3245.1	3203.3	3171.3	3161.5	3146.2
17.5°	3505.7	3498.7	3466.6	3468.0	3470.8	3416.5	3384.4	3330.1	3284.1	3250.7	3242.3
20°	3660.3	3660.3	3625.5	3636.6	3622.7	3572.5	3551.6	3476.4	3412.3	3376.1	3346.8
22.5°	3833.1	3826.1	3802.4	3826.1	3798.3	3748.1	3713.3	3638.0	3555.8	3351.0	3267.4
25°	3997.5	3993.3	4003.1	4010.1	3975.2	3912.5	3888.8	3809.4	3580.9	3312.0	3143.4
27.5°	4205.1	4191.2	4213.5	4227.4	4192.6	4138.2	4088.1	3998.9	3515.4	3303.6	3285.5
30°	4471.2	4440.6	4472.6	4479.6	4443.4	4409.9	4334.7	3888.8	3537.7	3476.4	3470.8
32.5°	4755.5	4719.3	4761.1	4766.6	4719.3	4691.4	4501.9	3831.7	3756.5	3685.4	3692.4
35°	5092.7	5092.7	5113.6	5116.4	5081.5	5034.2	4312.4	4110.4	4043.5	3978.0	3976.6
37.5°	5503.7	5491.2	5546.9	5580.4	5542.7	5407.6	4588.3	4493.5	4390.4	4306.8	4134.1
40°	5999.8	6022.0	6037.4	6070.8	6034.6	5730.8	4991.0	4883.7	4802.9	4522.8	4086.7
42.5°	6534.8	6540.4	6573.8	6615.6	6615.6	6295.1	5461.9	5370.0	5265.5	4422.5	4226.0
45°	7174.3	7161.8	7225.9	7292.8	7274.7	6943.0	6009.5	5941.2	5452.2	4713.7	4715.1
47.5°	7900.3	7884.9	7976.9	8064.7	7974.1	7662.0	6611.4	6558.5	5262.7	5206.9	5195.8
50°	8739.1	8701.5	8807.3	8924.4	8850.5	8464.6	7342.9	6325.8	5790.7	5746.2	5739.2
52.5°	9635.0	9605.7	9669.8	9869.1	9771.5	9304.8	8035.4	6526.4	6402.4	6352.3	6339.7
55°	10646.6	10589.4	10727.4	10879.3	10766.4	10234.1	8718.2	7192.5	7064.3	6977.9	6852.5
57.5°	11709.7	11627.5	11698.5	11889.4	11780.7	11185.8	9598.8	7878.0	7726.1	6394.1	5885.5
60°	12768.6	12731.0	12758.9	12927.5	12793.7	12111.0	10423.6	8564.9	6539.0	6324.4	6349.5
62.5°	13833.1	13750.9	13776.0	13948.8	13777.4	12991.6	11205.3	9189.1	6881.7	6806.5	6833.0
65°	14974.3	14876.8	14899.1	14949.2	14737.4	13781.6	11896.4	9778.5	7397.3	7317.9	7347.1
67.5°	16349.5	16260.4	16139.1	15990.0	15697.4	14620.4	12583.3	10398.5	7976.9	7932.3	7942.1
68°	16495.8	16409.4	16263.1	16086.2	15757.4	14655.2	12612.6	10416.7	7985.3	7929.5	7932.3
70°	16040.2	16091.8	15926.0	15629.2	15354.7	14145.3	12134.7	10015.4	7630.0	7547.8	7526.9
72.5°	14205.2	14318.0	14089.5	14039.4	13702.2	12601.4	10618.7	8690.3	6636.5	6663.0	6587.7
75°	11468.6	11634.4	11357.2	11372.5	11180.2	10511.4	8899.3	7235.6	5449.4	5570.6	5592.9
77.5°	7975.5	8213.8	8092.6	8213.8	8119.0	7878.0	6887.3	5572.0	4157.7	4297.1	4351.4
80°	4159.1	4442.0	4602.2	4652.4	4683.0	4673.3	4194.0	3344.0	2403.5	2455.1	2452.3
82.5°	1315.3	1247.0	1287.5	1276.3	1241.5	1255.4	1131.4	884.8	613.1	675.8	646.5
85°	397.1	399.9	388.7	386.0	356.7	313.5	256.4	147.7	72.5	85.0	79.4
87.5°	292.6	295.4	273.1	259.2	242.4	210.4	163.0	92.0	34.8	33.4	26.5
90°	161.6	156.1	144.9	133.8	126.8	108.7	82.2	34.8	12.5	9.8	8.4
92.5°	87.8	83.6	78.0	73.8	64.1	51.6	33.4	11.1	5.6	1.4	0.0
95°	40.4	37.6	36.2	32.0	27.9	19.5	11.1	7.0	4.2	1.4	0.0
97.5°	18.1	16.7	15.3	12.5	9.8	5.6	5.6	4.2	2.8	1.4	0.0
100°	4.2	4.2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.4	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0



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



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2	2930.2
2.5°	2948.3	2940.0	2935.8	2909.3	2917.7	2894.0	2940.0	2928.8	2921.8	2941.4
5°	2951.1	2921.8	2940.0	2924.6	2930.2	2896.8	2933.0	2917.7	2916.3	2924.6
7.5°	2958.1	2938.6	2956.7	2926.0	2940.0	2926.0	2952.5	2937.2	2949.7	2958.1
10°	2995.7	2984.5	2976.2	2969.2	2979.0	2951.1	2984.5	2985.9	2990.1	3015.2
12.5°	3048.6	3037.5	3023.6	3005.4	3015.2	3004.1	3029.1	3036.1	3051.4	3064.0
15°	3122.5	3101.6	3096.0	3079.3	3089.0	3083.5	3089.0	3084.9	3114.1	3109.9
17.5°	3224.2	3200.5	3121.1	3040.3	2988.7	3004.1	3068.1	3151.8	3172.7	3175.4
20°	3261.8	3094.6	3086.3	2994.3	2952.5	2949.7	2817.3	2619.5	2679.4	2820.1
22.5°	3217.2	2988.7	2965.0	2946.9	2768.6	2476.0	2448.1	2418.8	2411.9	2432.8
25°	3116.9	3090.4	3069.5	2832.7	2551.2	2552.6	2512.2	2319.9	2020.4	1995.3
27.5°	3270.2	3234.0	3031.9	2666.9	2661.3	2658.5	2598.6	2105.3	2041.3	2056.6
30°	3444.4	3384.4	2856.4	2809.0	2807.6	2782.5	2329.7	2123.5	2123.5	2126.2
32.5°	3645.0	3273.0	2956.7	2979.0	2977.6	2859.1	2250.3	2236.3	2230.7	2244.7
35°	3798.3	3183.8	3172.7	3213.1	3185.2	2425.8	2391.0	2378.4	2372.9	2365.9
37.5°	3750.9	3440.2	3440.2	3465.3	3240.9	2583.3	2566.5	2566.5	2555.4	2549.8
40°	3823.3	3759.2	3727.2	3737.0	2354.8	2774.2	2786.7	2783.9	2782.5	2792.3
42.5°	4205.1	4148.0	4118.7	3773.2	2636.2	2757.4	3064.0	3062.6	3066.8	3062.6
45°	4691.4	4638.5	4561.8	3530.7	2992.9	2417.5	3377.5	3392.8	3394.2	3392.8
47.5°	5201.4	5167.9	4383.5	3908.3	3380.3	2594.4	3228.4	3770.4	3763.4	3771.8
50°	5740.6	5590.1	4361.2	4355.6	3792.7	2887.0	2888.4	4100.6	4171.7	4194.0
52.5°	6341.1	5067.6	4833.5	4409.9	4210.7	3188.0	3157.3	3633.8	4603.6	4625.9
55°	5889.7	5353.2	5349.1	3925.1	4380.7	3477.8	3482.0	3448.5	4221.8	4798.7
57.5°	5860.4	5873.0	5863.2	4379.3	3196.3	3260.4	3794.1	3764.8	2733.7	2215.4
60°	6366.2	6384.3	5696.0	4729.0	3455.5	2005.0	2336.6	1985.5	2012.0	2032.9
62.5°	6849.7	6855.3	4632.9	3100.2	1712.4	80.8	39.0	32.0	30.7	30.7
65°	7384.7	7384.7	4965.9	3381.7	1653.9	30.7	5.6	4.2	15.3	15.3
67.5°	7901.7	7787.4	5209.7	3590.7	1683.2	4.2	0.0	0.0	0.0	0.0
68°	7872.4	7747.0	5187.4	3585.1	1679.0	2.8	0.0	0.0	0.0	0.0
70°	7434.9	7313.7	4921.3	3422.1	1616.3	2.8	0.0	0.0	0.0	0.0
72.5°	6562.7	6451.2	4358.4	3016.6	1457.4	1.4	0.0	0.0	0.0	0.0
75°	5555.3	5539.9	3764.8	2545.6	1249.8	1.4	0.0	0.0	0.0	0.0
77.5°	4469.9	4400.2	2942.7	1995.3	1007.4	0.0	0.0	0.0	0.0	0.0
80°	2489.9	2593.0	1722.2	1173.2	634.0	0.0	0.0	0.0	0.0	0.0
82.5°	673.0	629.8	376.2	255.0	121.2	0.0	0.0	0.0	0.0	0.0
85°	86.4	94.7	43.2	34.8	8.4	0.0	0.0	0.0	0.0	0.0
87.5°	44.6	52.9	13.9	11.1	2.8	0.0	0.0	0.0	0.0	0.0
90°	8.4	9.8	4.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	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°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	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)