

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: P256692

Luminaire Tested: **CST-10-4-D-U-T5R-7030-HSS-HM-EX90**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P256692  
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-7030-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K 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: 35671.9 lumens  
Efficiency: N/A  
Efficacy: 115.8 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

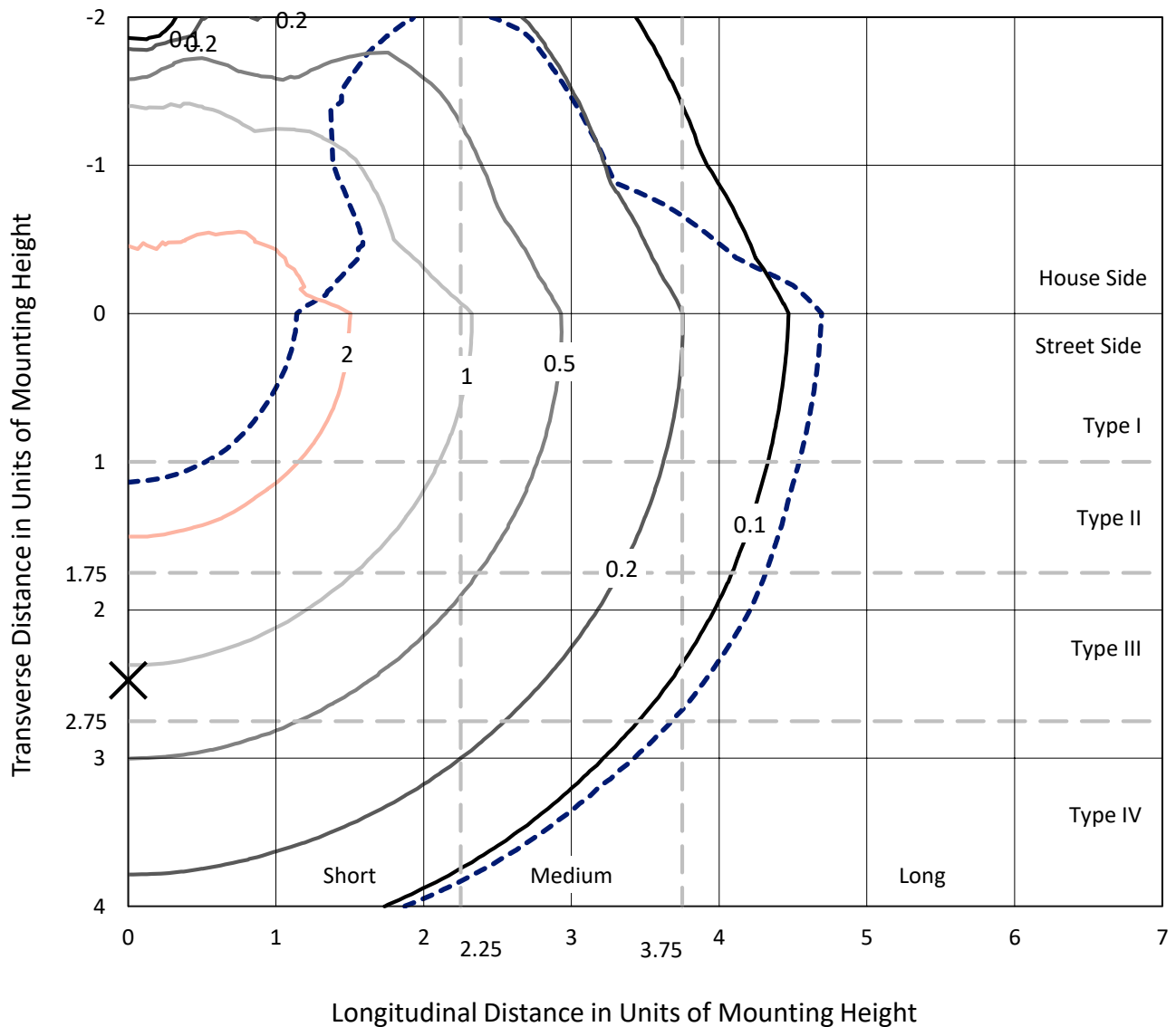


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

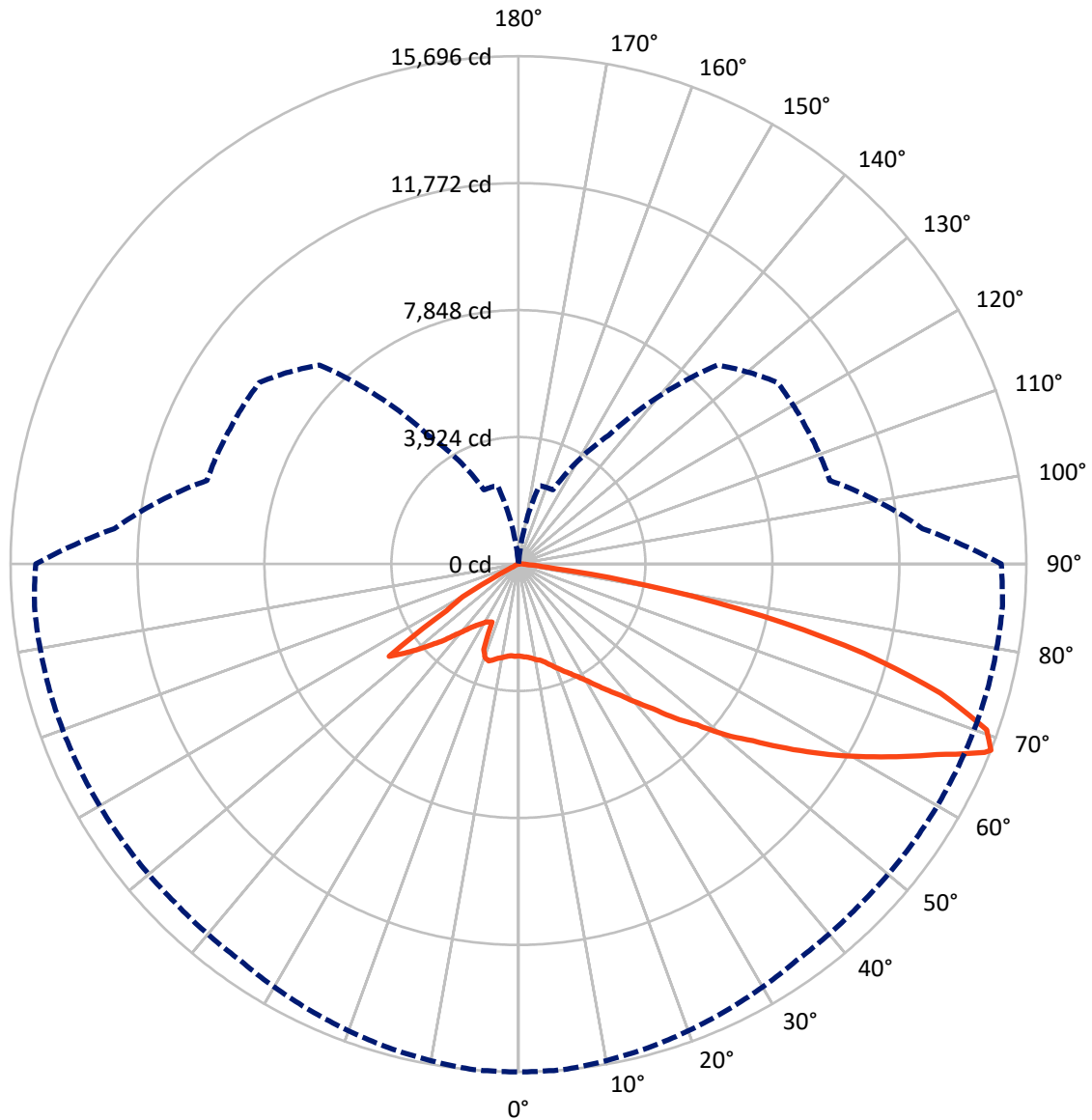


Based on 30 foot mounting height. Maximum calculated value = 3.2 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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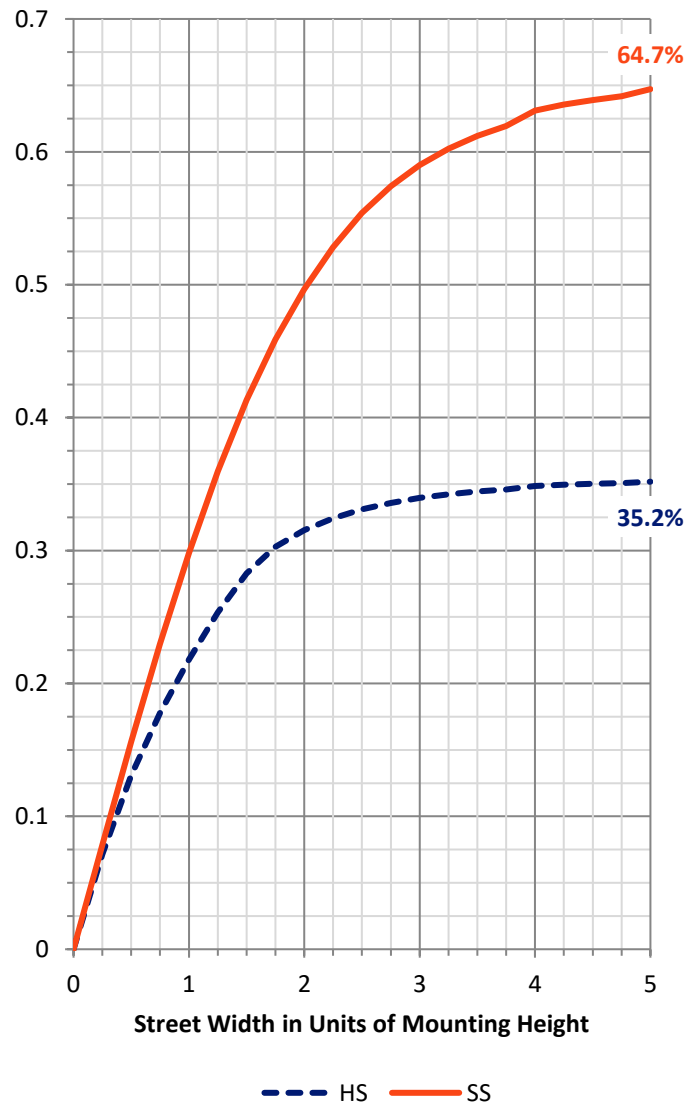
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12554.1	2.1	12556.2
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	23106.3	9.4	23115.7
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	35660.4	11.5	35671.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.6	0.8
10°-20°	879.9	2.5
20°-30°	1570.8	4.4
30°-40°	2555.4	7.2
40°-50°	4363.9	12.2
50°-60°	7281.4	20.4
60°-70°	10129.8	28.4
70°-80°	7852.2	22.0
80°-90°	752.4	2.1
90°-100°	9.1	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°	35660.4	100.0
0°-180°	35671.9	100.0

**Coefficient of Utilization**



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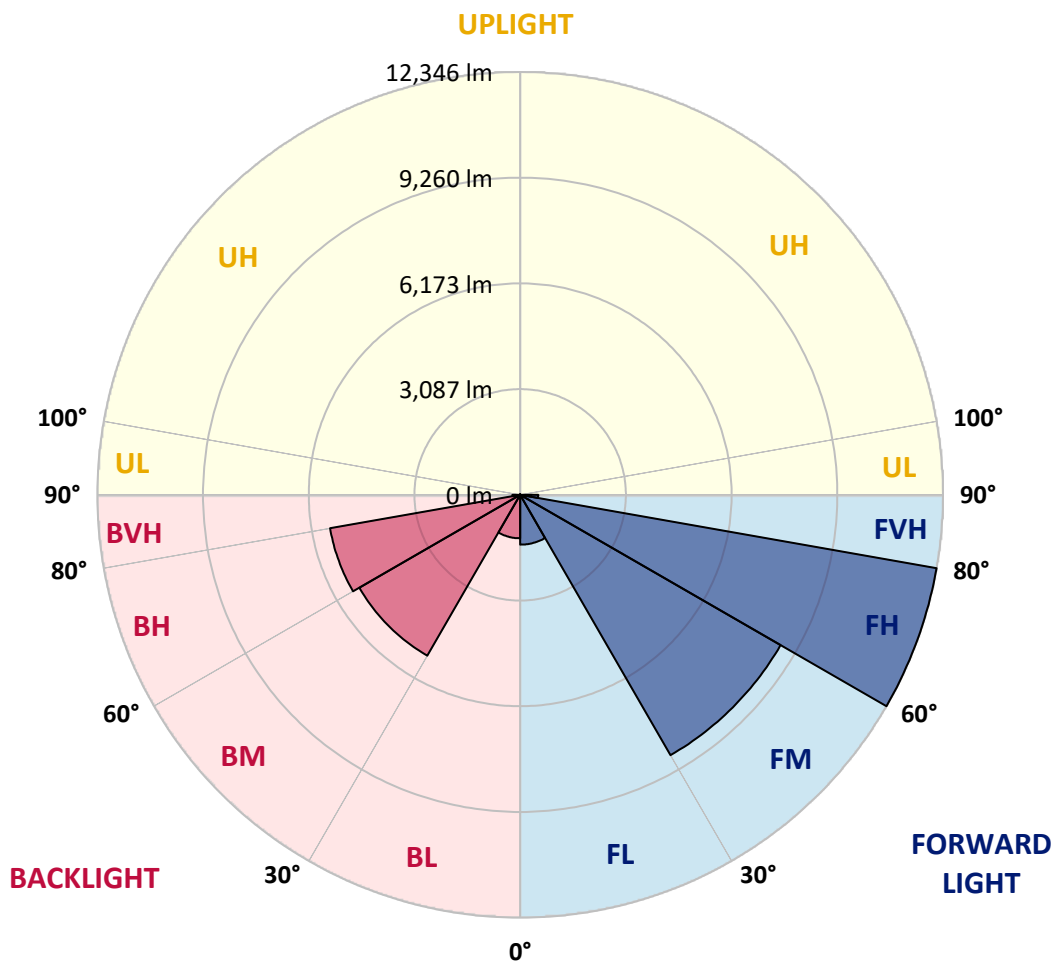
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1455.9	4.1			
FM	(30°-60°)	8777.8	24.6			
FH	(60°-80°)	12346.2	34.6			G5
FVH	(80°-90°)	526.4	1.5			G4/750
BL	(0°-30°)	1269.5	3.6	B3/2500		
BM	(30°-60°)	5422.8	15.2	B4/8500		
BH	(60°-80°)	5635.8	15.8	B5		G5
BVH	(80°-90°)	226.0	0.6			G3/500
UL	(90°-100°)	9.1	0.0		U1/10	
UH	(100°-180°)	2.1	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°	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9
2.5°	2871.1	2867.1	2864.4	2881.8	2832.2	2852.3	2838.9	2856.3	2852.3	2860.4	2861.7
5°	2891.2	2884.5	2875.1	2893.9	2864.4	2877.8	2863.1	2871.1	2845.6	2867.1	2869.8
7.5°	2936.9	2918.1	2916.7	2922.1	2902.0	2911.4	2885.9	2895.3	2881.8	2873.8	2881.8
10°	3005.3	2989.2	2971.8	2982.5	2949.0	2961.0	2934.2	2942.2	2935.5	2918.1	2934.2
12.5°	3052.3	3057.7	3045.6	3053.7	3024.1	3013.4	3004.0	3002.6	2998.6	2973.1	2969.1
15°	3157.0	3159.7	3138.2	3143.6	3136.9	3131.5	3118.1	3107.3	3085.9	3069.8	3059.0
17.5°	3293.9	3279.2	3259.0	3264.4	3283.2	3259.0	3251.0	3230.8	3200.0	3173.1	3167.7
20°	3437.5	3428.1	3409.4	3420.1	3418.7	3402.6	3406.7	3373.1	3328.8	3306.0	3288.5
22.5°	3597.3	3583.8	3570.4	3590.6	3574.5	3563.7	3559.7	3536.9	3481.8	3456.3	3452.3
25°	3757.0	3750.3	3759.7	3753.0	3730.2	3722.1	3727.5	3719.4	3655.0	3624.1	3605.3
27.5°	3957.0	3940.9	3955.7	3947.6	3923.4	3924.8	3926.1	3927.5	3855.0	3814.7	3787.9
30°	4185.2	4179.8	4198.6	4173.1	4150.3	4165.0	4177.1	4150.3	4087.2	4028.1	4018.7
32.5°	4481.8	4448.3	4469.7	4437.5	4402.6	4437.5	4459.0	4405.3	4354.3	4279.1	4292.6
35°	4810.7	4799.9	4799.9	4758.3	4739.5	4794.6	4816.0	4763.7	4684.5	4618.7	4602.6
37.5°	5159.7	5170.4	5204.0	5186.5	5169.1	5202.6	5250.9	5181.1	5079.1	5009.3	4990.5
40°	5622.7	5649.6	5672.4	5649.6	5629.5	5650.9	5706.0	5614.7	5543.6	5506.0	5465.7
42.5°	6120.7	6166.4	6151.6	6154.3	6171.7	6202.6	6257.6	6174.4	6092.5	6091.2	6032.1
45°	6794.5	6794.5	6763.7	6793.2	6790.5	6867.0	6891.2	6845.6	6777.1	6757.0	6706.0
47.5°	7424.1	7489.8	7477.8	7520.7	7487.2	7551.6	7633.5	7594.5	7515.3	7444.2	7433.5
50°	8301.9	8285.8	8269.7	8334.1	8328.8	8373.0	8448.2	8424.1	8314.0	8233.5	8218.7
52.5°	9073.7	9158.3	9138.1	9234.8	9181.1	9244.2	9334.1	9330.1	9195.9	9116.7	9093.8
55°	10048.2	10104.6	10100.5	10199.9	10126.0	10209.3	10284.4	10292.5	10146.2	10033.4	10068.3
57.5°	11062.9	11109.9	11083.1	11165.0	11092.5	11206.6	11252.2	11222.7	11136.8	10994.5	11046.8
60°	12079.0	12119.3	12150.2	12156.9	12115.3	12182.4	12225.3	12250.9	12115.3	11952.9	12016.0
62.5°	13111.2	13156.9	13130.0	13140.8	13025.3	13116.6	13170.3	13177.0	13021.3	12877.7	12922.0
65°	14198.5	14261.6	14164.9	14100.5	13958.2	13956.9	14028.0	14040.1	13930.0	13828.0	13810.6
67.5°	15544.8	15573.0	15366.2	15150.1	14909.9	14857.5	14907.2	14935.4	14998.5	14995.8	14916.6
68°	15696.4	15691.1	15481.7	15224.0	14966.3	14905.9	14930.0	14966.3	15007.9	15015.9	14920.6
70°	15351.5	15285.7	15166.3	14841.4	14586.4	14428.0	14343.4	14410.6	14297.8	14299.1	14120.6
72.5°	13636.1	13628.0	13407.9	13246.8	13020.0	12756.9	12636.1	12634.7	12645.5	12567.6	12383.7
75°	11045.5	11056.2	10799.9	10688.5	10618.7	10569.0	10594.5	10673.7	10681.7	10680.4	10616.0
77.5°	7703.3	7747.6	7679.1	7497.9	7692.5	7859.0	8179.8	8343.5	8291.2	8448.2	8547.5
80°	4037.5	4126.1	4128.8	4256.3	4413.4	4565.0	4841.5	5089.9	4907.3	4826.8	4743.6
82.5°	1061.7	1093.9	1142.3	1068.4	1091.3	1114.1	1328.8	1308.7	1208.0	1261.7	1342.3
85°	303.4	312.7	299.3	271.1	248.3	228.2	233.6	197.3	171.8	170.5	165.1
87.5°	213.4	229.5	202.7	174.5	157.0	146.3	140.9	119.5	96.6	84.6	67.1
90°	99.3	98.0	84.6	65.8	57.7	55.0	55.0	43.0	24.2	14.8	13.4
92.5°	41.6	43.0	34.9	28.2	24.2	18.8	14.8	9.4	5.4	2.7	1.3
95°	14.8	16.1	13.4	10.7	9.4	8.1	6.7	5.4	2.7	1.3	1.3
97.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.7	2.7	1.3	1.3
100°	0.0	0.0	0.0	1.3	2.7	2.7	2.7	2.7	1.3	1.3	1.3
102.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
105°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3



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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	1.3	1.3	1.3	1.3
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
145°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
150°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
160°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
165°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
167.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3
170°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
172.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
175°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
177.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9	2838.9
2.5°	2859.0	2852.3	2849.6	2816.1	2825.5	2805.3	2852.3	2838.9	2836.2	2855.0
5°	2865.7	2834.9	2853.7	2832.2	2837.5	2808.0	2845.6	2829.5	2830.8	2840.2
7.5°	2869.8	2852.3	2871.1	2833.5	2848.3	2837.5	2864.4	2848.3	2864.4	2872.4
10°	2910.0	2902.0	2888.6	2877.8	2888.6	2863.1	2896.6	2893.9	2903.3	2927.5
12.5°	2965.1	2955.7	2942.2	2923.5	2931.5	2922.1	2947.6	2950.3	2967.7	2979.8
15°	3046.9	3034.9	3028.1	3009.4	3012.0	3005.3	3020.1	3022.8	3057.7	3053.7
17.5°	3162.4	3149.0	3154.3	3136.9	3130.2	3114.1	3087.2	3077.8	3119.4	3131.5
20°	3288.5	3273.8	3280.5	3265.7	3140.9	2887.2	3057.7	3174.5	3085.9	3079.2
22.5°	3432.2	3416.1	3421.4	3398.6	3244.3	2769.1	2409.4	2379.8	2718.1	2855.0
25°	3590.6	3569.1	3566.4	3536.9	3029.5	2507.4	2467.1	2414.7	2167.8	1971.8
27.5°	3786.5	3754.3	3738.2	3292.6	3008.0	2605.3	2544.9	2358.4	2000.0	2012.1
30°	3998.6	3951.6	3649.6	3355.7	3165.1	2720.8	2640.2	2067.1	2069.8	2064.4
32.5°	4240.2	4135.5	3575.8	3548.9	3353.0	2844.3	2191.9	2167.8	2170.4	2178.5
35°	4557.0	3838.9	3824.1	3825.5	3582.5	2751.6	2322.1	2299.3	2302.0	2307.4
37.5°	4624.1	4138.2	4140.9	4110.0	3826.8	2514.1	2480.5	2479.2	2473.8	2468.4
40°	4677.8	4515.4	4476.5	4426.8	3547.6	2707.3	2696.6	2688.6	2692.6	2703.3
42.5°	5097.9	4975.8	4938.2	4879.1	3638.9	3000.0	2965.1	2955.7	2966.4	2961.0
45°	5656.3	5554.3	5480.5	4511.4	4020.1	3318.1	3289.9	3277.8	3281.8	3315.4
47.5°	6246.9	6186.5	5961.0	4873.8	4464.4	3693.9	3665.7	3646.9	3653.6	3645.6
50°	6889.8	6834.8	5518.1	5420.1	4955.6	4099.3	4057.7	4051.0	4053.6	4052.3
52.5°	7587.8	6437.5	6115.4	6013.3	5473.8	4523.4	4508.7	4472.4	4480.5	4472.4
55°	8406.6	6781.1	6773.1	6653.6	6056.3	5016.0	4998.6	4947.6	4626.8	4907.3
57.5°	9183.8	7437.5	7437.5	7322.1	6652.3	5506.0	5477.8	5440.2	3288.5	2652.3
60°	10034.8	8095.2	8076.4	7981.1	7226.8	5973.1	4855.0	4844.2	1986.6	1993.3
62.5°	10770.3	8681.8	8715.3	8626.7	7779.8	4472.4	2249.6	2204.0	196.0	302.0
65°	11594.5	9330.1	9370.4	9279.1	8378.4	4743.6	2441.6	2418.8	44.3	40.3
67.5°	12528.7	9977.1	9885.8	9785.1	8728.7	4884.5	2536.9	2516.7	12.1	8.1
68°	12536.8	9963.6	9845.5	9777.1	8695.2	4857.7	2528.8	2510.0	12.1	8.1
70°	11892.5	9461.6	9343.5	9361.0	8279.1	4645.6	2424.1	2389.2	12.1	8.1
72.5°	10433.4	8420.0	8287.1	8193.2	7342.2	4130.1	2173.1	2107.4	12.1	8.1
75°	8927.4	7135.5	6915.3	6708.6	5907.3	3379.8	1782.5	1708.7	12.1	8.1
77.5°	7036.2	5438.9	5126.1	4990.5	4438.9	2496.6	1324.8	1244.3	12.1	6.7
80°	3888.5	3120.8	2855.0	2771.8	2538.2	1467.1	759.7	711.4	10.7	6.7
82.5°	1005.4	754.4	657.7	634.9	596.0	347.6	185.2	175.8	9.4	5.4
85°	143.6	106.0	116.8	138.3	132.9	89.9	64.4	55.0	8.1	4.0
87.5°	75.2	63.1	73.8	83.2	84.6	52.3	26.8	14.8	4.0	0.0
90°	12.1	12.1	13.4	14.8	14.8	6.7	5.4	0.0	0.0	0.0
92.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.3	2.7	1.3	1.3	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°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.3	1.3	1.3	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)