

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: McGRAW-EDISON

Report Number: P579507

Luminaire Tested: **CTN-CA8-230-740-U-T5N-HSS-HM-EX90**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579507  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-740-U-T5N-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (8) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 29555 lumens  
Efficiency: N/A  
Efficacy: 129.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U2 - G4

Input Watts (W): 228.4  
Input Voltage (V): 120  
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: 24 FT

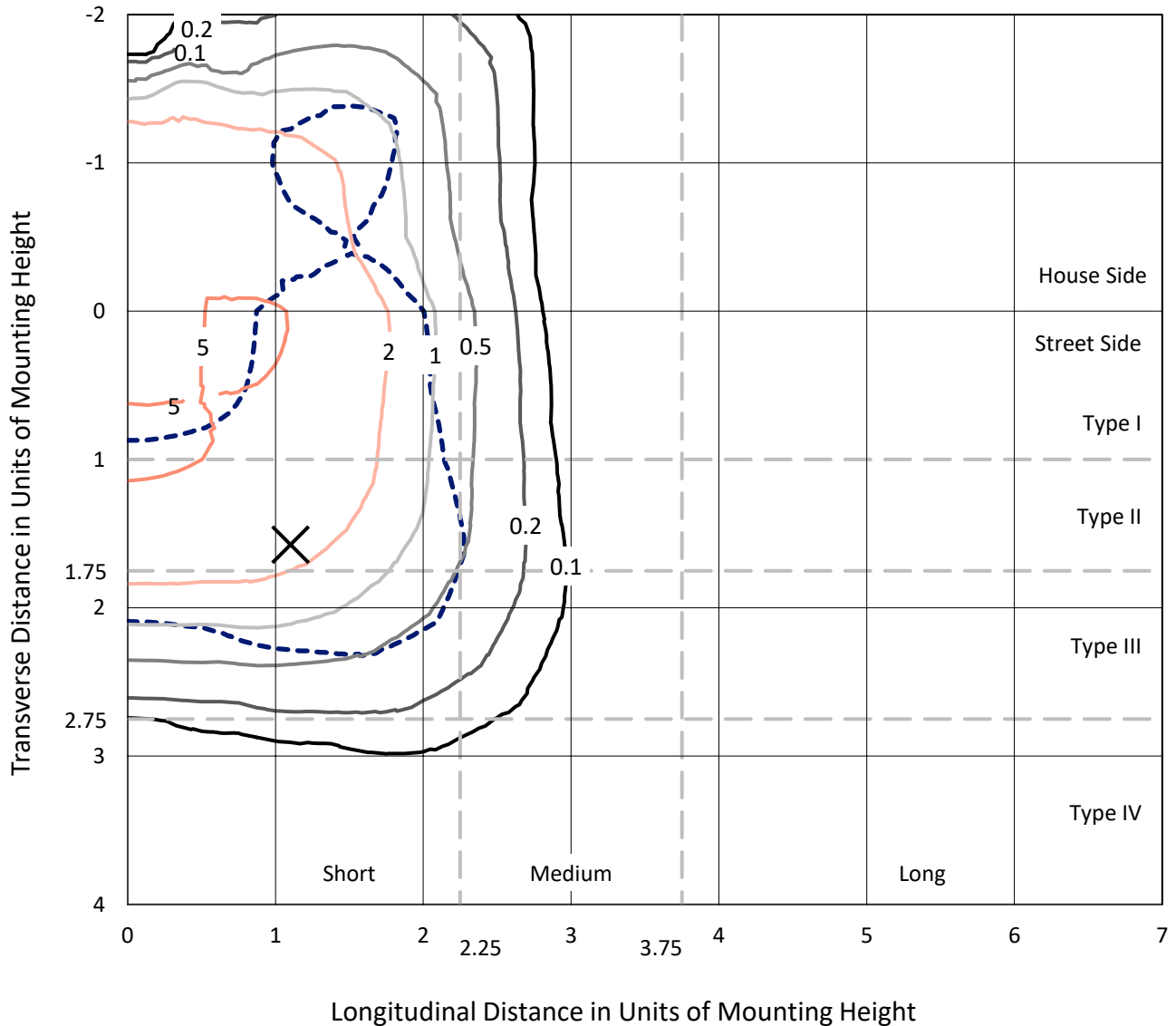




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### Iso-Footcandle Lines of Horizontal Illumination

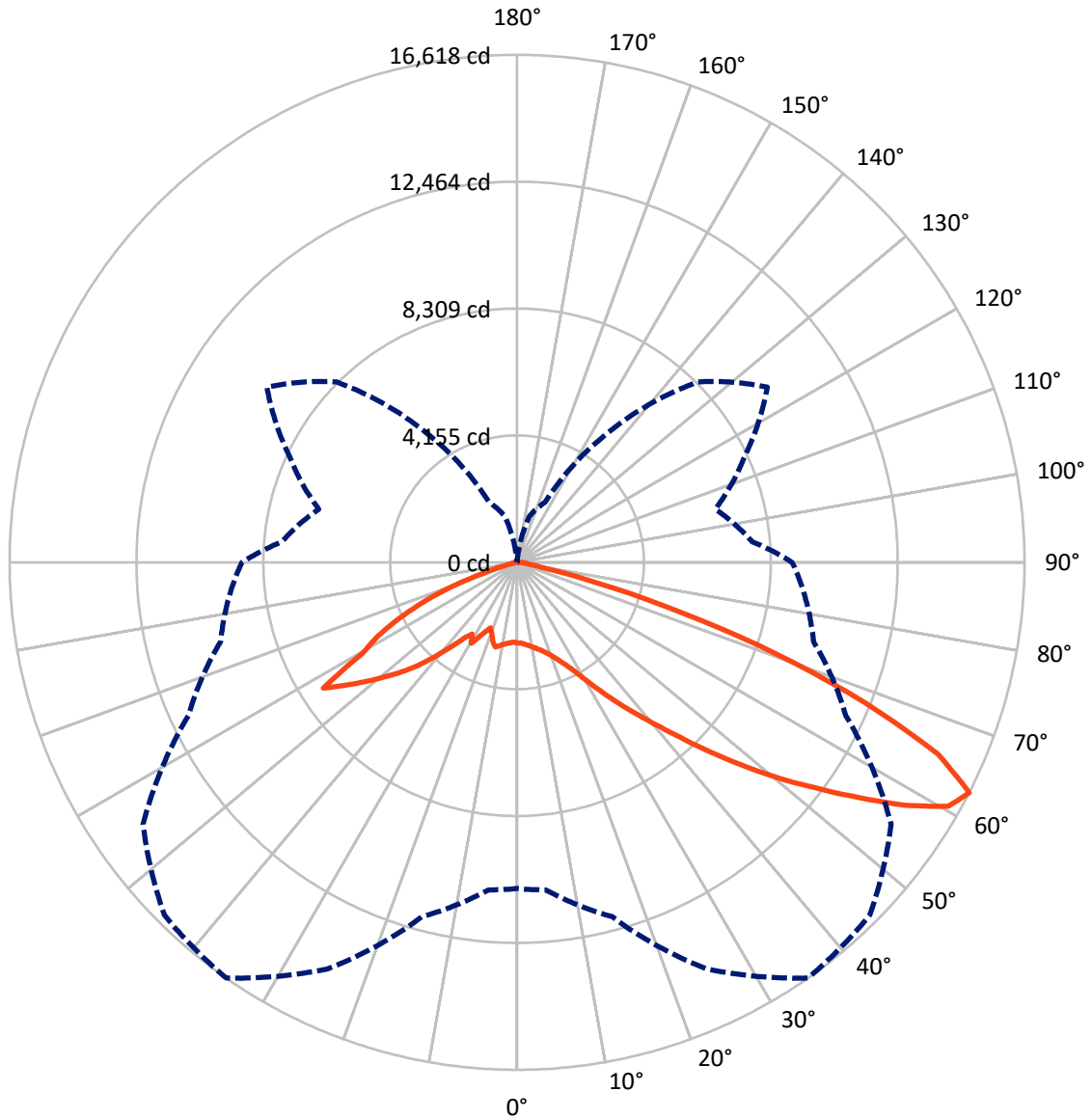
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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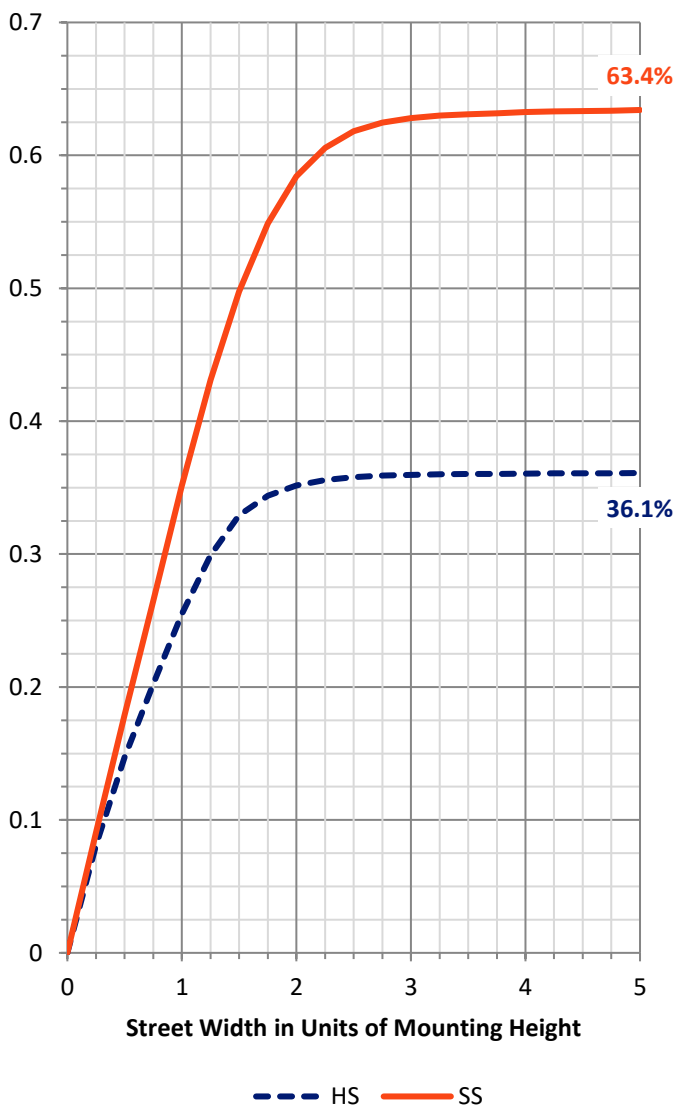
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10727.8	0.0	10727.8
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	18813.2	14.0	18827.2
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	29541.0	14.0	29555.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.0	0.9
10°-20°	840.3	2.8
20°-30°	1616.5	5.5
30°-40°	3224.9	10.9
40°-50°	5888.4	19.9
50°-60°	8799.3	29.8
60°-70°	7373.0	24.9
70°-80°	1379.8	4.7
80°-90°	158.8	0.5
90°-100°	12.6	0.0
100°-110°	1.4	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°	29541.0	100.0
0°-180°	29555.0	100.0

**Coefficient of Utilization**

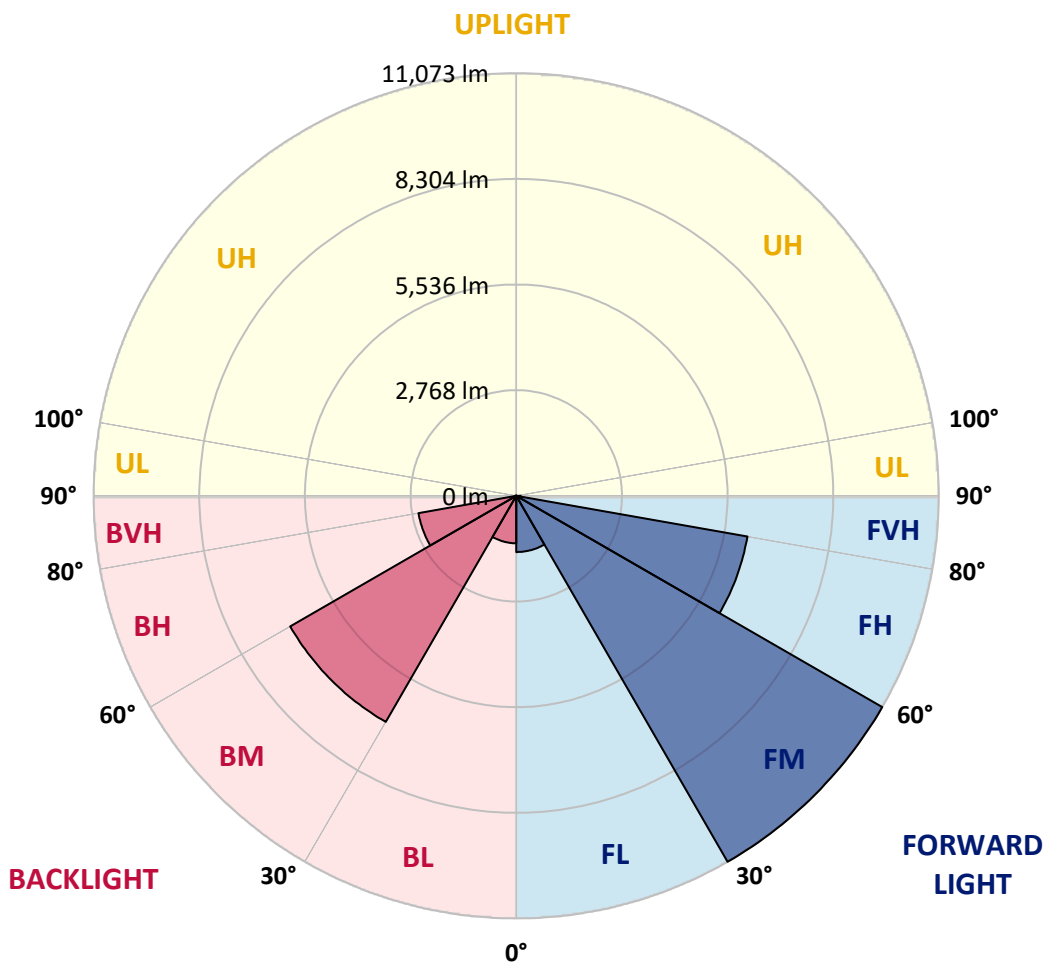


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1473.7	5.0			
FM	(30°-60°)	11072.7	37.5			
FH	(60°-80°)	6151.2	20.8			G3/7500
FVH	(80°-90°)	115.7	0.4			G2/225
BL	(0°-30°)	1243.1	4.2	B3/2500		
BM	(30°-60°)	6839.9	23.1	B4/8500		
BH	(60°-80°)	2601.5	8.8	B4/5000		G4/5000
BVH	(80°-90°)	43.2	0.1			G1/100
UL	(90°-100°)	12.6	0.0		U2/50	
UH	(100°-180°)	1.4	0.0		U1/10	

**BUG Rating: B4-U2-G4**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5
2.5°	2701.0	2678.8	2682.1	2697.7	2648.9	2668.9	2647.8	2667.7	2661.1	2670.0	2676.6
5°	2739.8	2712.1	2714.3	2732.0	2694.3	2711.0	2689.9	2703.2	2692.1	2704.3	2705.4
7.5°	2792.9	2769.7	2766.3	2784.1	2751.9	2766.3	2745.3	2751.9	2740.9	2755.3	2750.8
10°	2863.8	2842.8	2837.2	2849.4	2824.0	2831.7	2809.6	2818.4	2801.8	2818.4	2810.7
12.5°	2942.5	2914.8	2915.9	2929.2	2903.7	2909.3	2891.5	2901.5	2881.6	2899.3	2893.7
15°	3035.6	2995.7	3003.4	3017.8	2993.5	3010.1	2989.0	3003.4	2984.6	3003.4	2996.8
17.5°	3156.3	3110.9	3116.4	3139.7	3119.8	3146.3	3122.0	3139.7	3130.8	3143.0	3140.8
20°	3309.2	3279.3	3273.7	3302.6	3273.7	3307.0	3293.7	3324.7	3326.9	3339.1	3344.7
22.5°	3513.0	3493.1	3479.8	3499.8	3474.3	3497.5	3516.4	3569.5	3589.5	3621.6	3623.8
25°	3784.5	3783.4	3753.5	3754.6	3722.4	3753.5	3806.6	3889.7	3942.9	3983.9	3968.4
27.5°	4151.2	4157.8	4112.4	4094.7	4057.0	4103.5	4213.2	4316.2	4412.6	4470.2	4470.2
30°	4629.8	4636.4	4570.0	4534.5	4500.2	4581.0	4711.8	4845.8	4983.2	5066.3	5047.4
32.5°	5263.5	5242.4	5147.2	5082.9	5024.2	5117.2	5267.9	5419.7	5606.9	5726.6	5712.2
35°	6032.3	5955.9	5860.6	5741.0	5614.7	5687.8	5829.6	6020.1	6280.5	6460.0	6414.5
37.5°	6925.3	6849.9	6687.1	6481.0	6260.6	6269.4	6381.3	6711.5	7037.2	7183.4	7152.4
40°	7852.6	7793.8	7644.3	7379.5	6980.7	6888.7	7072.6	7470.3	7781.7	7965.6	7913.5
42.5°	8797.6	8737.7	8624.7	8358.9	7830.4	7608.8	7800.5	8233.7	8566.0	8746.6	8686.8
45°	9740.4	9671.7	9581.9	9347.1	8843.0	8518.4	8625.9	9023.6	9327.1	9532.1	9409.1
47.5°	10569.1	10523.6	10462.7	10367.4	9926.5	9567.5	9559.8	9822.3	10031.7	10166.9	10016.2
50°	11290.3	11258.1	11292.5	11272.5	11111.9	10785.1	10584.6	10566.8	10634.4	10733.0	10518.1
52.5°	11937.3	11880.8	12008.2	12166.6	12285.1	12218.7	11569.5	11205.0	11130.7	11164.0	10920.2
55°	12466.8	12440.2	12654.1	13051.8	13600.2	13746.4	12580.9	11825.4	11551.7	11534.0	11257.0
57.5°	12790.3	12828.0	13255.6	14013.4	15019.4	15065.9	13822.9	12489.0	11961.6	11771.1	11452.0
60°	12275.2	12420.3	13150.4	14713.6	16223.6	16252.4	14734.6	12610.8	11449.8	11023.3	10627.8
62.5°	10682.1	10768.5	12010.4	14690.3	16618.0	16336.6	14951.8	11875.2	10052.8	9372.6	9007.0
65°	7524.6	7686.4	9016.9	13216.9	15143.4	15178.9	13716.5	10267.7	8027.6	7275.4	7039.4
67.5°	4544.5	4699.6	6116.5	9541.0	12310.6	12708.3	11442.1	7773.9	5756.5	4805.9	4567.7
70°	1475.7	1644.1	2787.4	5623.5	9055.7	10009.6	8610.3	5059.6	3014.5	2111.6	1855.7
72.5°	560.6	611.5	907.3	2456.1	5640.2	6682.7	5325.5	2538.1	933.9	556.1	488.6
75°	364.5	372.2	424.3	860.8	2719.8	3679.2	2566.9	743.4	374.5	332.4	308.0
77.5°	313.5	319.1	341.2	428.7	866.4	1407.0	736.7	380.0	312.4	277.0	260.3
80°	295.8	298.0	312.4	363.4	405.5	469.7	354.5	318.0	272.5	260.3	248.2
82.5°	280.3	288.0	295.8	330.1	329.0	337.9	284.7	249.3	231.5	243.7	239.3
85°	261.5	265.9	271.4	294.7	268.1	227.1	219.4	171.7	167.3	178.4	167.3
87.5°	183.9	195.0	188.3	198.3	186.1	145.1	123.0	97.5	77.6	64.3	62.0
90°	75.3	76.4	72.0	66.5	58.7	48.7	38.8	24.4	11.1	5.5	2.2
92.5°	58.7	58.7	56.5	51.0	44.3	36.6	27.7	15.5	7.8	3.3	1.1
95°	36.6	37.7	35.5	32.1	27.7	22.2	16.6	8.9	5.5	2.2	1.1
97.5°	23.3	23.3	21.0	18.8	15.5	11.1	7.8	6.6	4.4	2.2	0.0
100°	13.3	13.3	12.2	10.0	7.8	5.5	5.5	4.4	3.3	1.1	0.0
102.5°	7.8	7.8	5.5	4.4	3.3	3.3	3.3	3.3	2.2	1.1	0.0
105°	3.3	3.3	2.2	2.2	1.1	1.1	2.2	2.2	2.2	1.1	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	2.2	1.1	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	1.1	1.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
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°	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5	2644.5
2.5°	2672.2	2652.2	2655.6	2636.7	2633.4	2614.6	2652.2	2656.7	2645.6	2655.6
5°	2703.2	2678.8	2686.6	2665.5	2662.2	2636.7	2670.0	2667.7	2658.9	2668.9
7.5°	2749.7	2724.2	2728.7	2705.4	2701.0	2673.3	2704.3	2694.3	2685.5	2697.7
10°	2815.1	2786.3	2788.5	2758.6	2761.9	2725.4	2763.0	2745.3	2734.2	2750.8
12.5°	2893.7	2861.6	2862.7	2831.7	2830.6	2795.1	2828.4	2818.4	2801.8	2827.3
15°	2995.7	2959.1	2955.8	2914.8	2903.7	2863.8	2894.9	2876.0	2864.9	2901.5
17.5°	3138.6	3097.6	3085.4	3035.6	2828.4	2708.7	2874.9	2931.4	2862.7	2851.6
20°	3329.1	3294.8	3267.1	3191.8	2843.9	2470.5	2194.7	2196.9	2487.2	2621.2
22.5°	3587.3	3546.3	3494.2	3386.7	2609.0	2314.3	2315.4	2312.1	1984.2	1845.7
25°	3940.7	3890.8	3784.5	3177.4	2769.7	2497.1	2490.5	2165.9	1985.3	1995.3
27.5°	4418.2	4316.2	3693.6	3442.1	3055.5	2734.2	2574.7	2180.3	2202.4	2217.9
30°	5025.3	4615.4	3991.6	3842.1	3398.9	3048.8	2380.8	2435.1	2479.4	2489.4
32.5°	5647.9	4628.7	4468.0	4309.6	3822.1	2774.1	2683.3	2786.3	2832.8	2838.4
35°	5642.4	5195.9	4988.7	4810.4	4214.3	2968.0	3025.6	3184.0	3302.6	3297.0
37.5°	5971.4	5821.8	5574.8	5348.8	3793.3	3343.5	3446.6	3626.0	3770.1	3765.6
40°	6659.4	6486.6	6225.1	5750.9	4199.9	3773.4	3917.4	4110.2	4212.1	4217.6
42.5°	7309.7	7166.8	6899.8	5373.2	4708.4	4290.8	4421.5	4551.1	4614.3	4634.2
45°	7956.7	7854.8	6966.3	5938.2	5323.3	4811.5	4897.9	4922.3	4988.7	4981.0
47.5°	8481.8	8368.8	6698.2	6647.2	6068.9	5305.6	5298.9	5266.8	5291.2	5296.7
50°	8961.5	7600.0	7236.6	7406.1	6851.0	5809.7	5683.4	5618.0	5584.8	5570.4
52.5°	9340.4	7602.2	7739.6	8190.5	7734.0	6356.9	6085.5	5901.6	5167.1	5742.1
55°	9662.8	7915.7	8215.9	9029.1	8495.1	6929.7	6448.9	6121.0	3448.8	2765.2
57.5°	9847.8	8153.9	8687.9	9814.6	9159.8	7566.7	5937.1	5133.9	1949.8	1947.6
60°	9133.3	7726.3	8674.6	10226.7	8968.2	5869.5	2417.4	2023.0	368.9	378.9
62.5°	7731.8	6721.4	8227.0	10000.7	8352.2	5163.8	2168.1	1557.7	12.2	10.0
65°	5990.2	5362.1	6927.5	8796.5	7598.9	4308.5	1616.4	1122.3	3.3	0.0
67.5°	3918.5	3778.9	5111.7	7294.2	6197.4	3338.0	1084.6	537.3	2.2	0.0
70°	1670.7	1935.4	3238.3	5289.0	4743.9	2296.6	522.9	193.9	1.1	0.0
72.5°	467.5	619.3	1441.3	3098.7	2983.5	1207.6	203.8	82.0	1.1	0.0
75°	277.0	238.2	413.2	1236.4	1452.4	424.3	94.2	63.1	1.1	0.0
77.5°	230.4	186.1	237.1	315.7	439.8	152.9	79.8	56.5	0.0	0.0
80°	216.0	165.1	205.0	220.5	217.1	127.4	78.7	56.5	0.0	0.0
82.5°	205.0	144.0	169.5	169.5	181.7	117.4	74.2	55.4	0.0	0.0
85°	154.0	100.8	113.0	146.2	130.7	83.1	54.3	44.3	0.0	0.0
87.5°	58.7	36.6	44.3	46.5	37.7	18.8	4.4	4.4	0.0	0.0
90°	1.1	0.0	0.0	0.0	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
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P579507  
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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)