

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: P579458

Luminaire Tested: **CTN-CA8-230-730-U-T5N-HSS-HM-EX180**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579458  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-730-U-T5N-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (8) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23841 lumens  
Efficiency: N/A  
Efficacy: 104.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U2 - G3

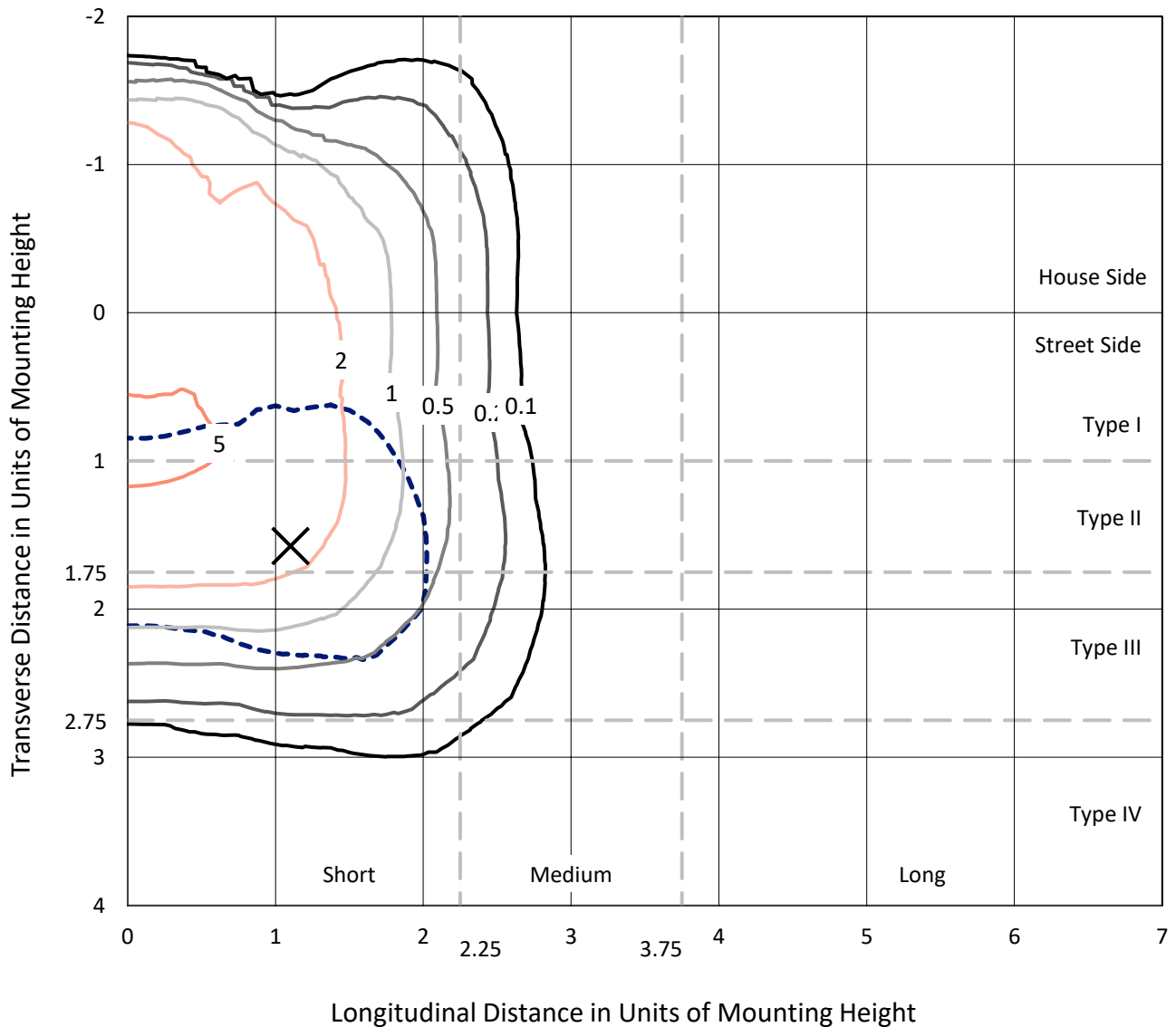
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

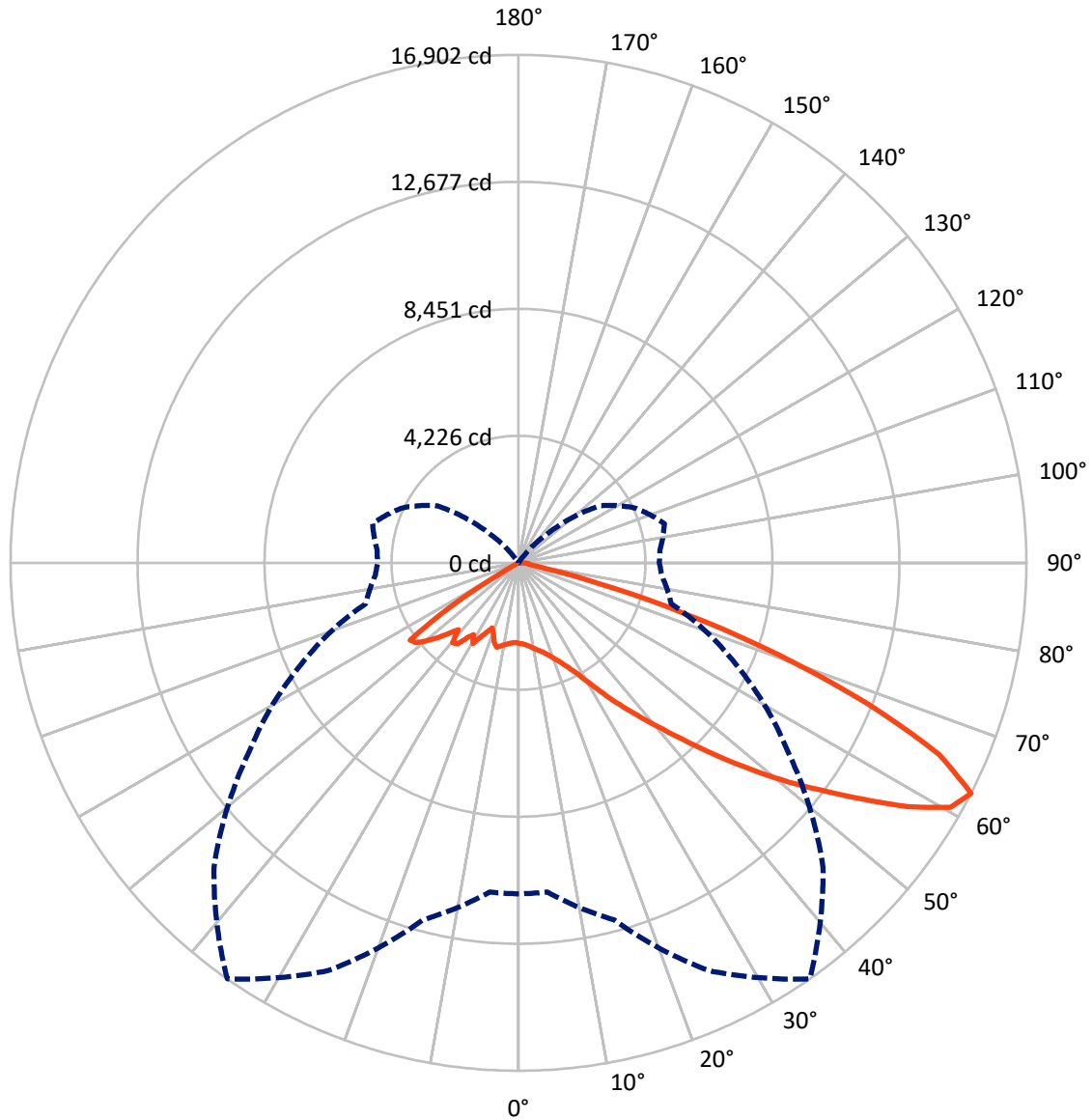
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 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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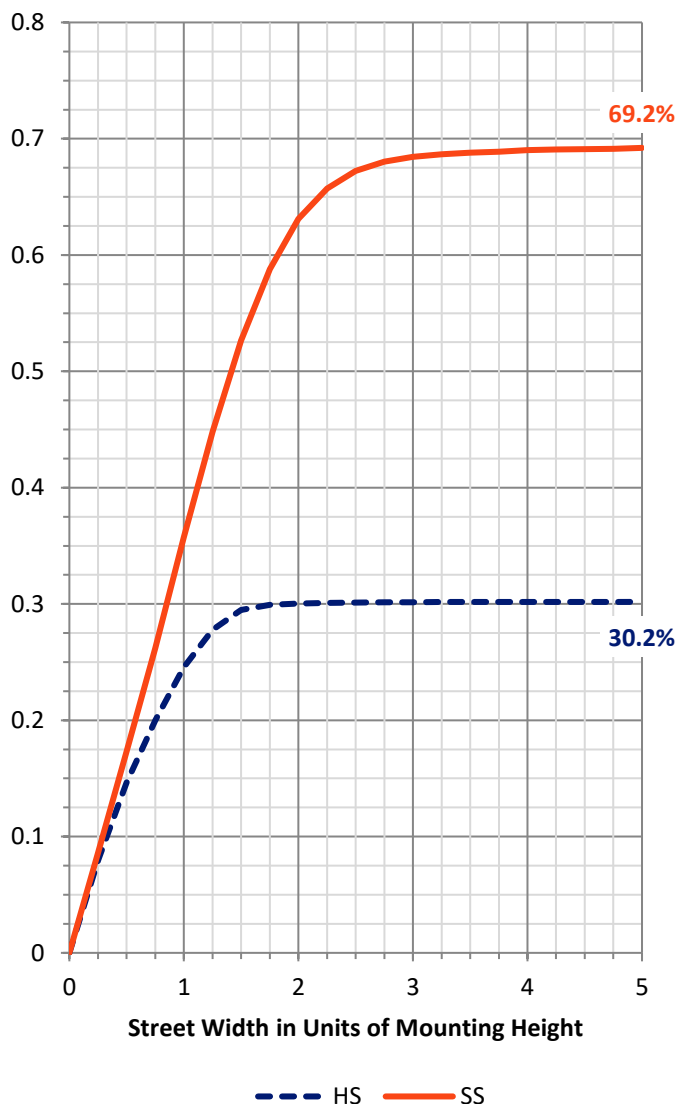
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7235.8	0.0	7235.8
	% Fixture	30.4	0.0	30.4
<b>Street Side</b>	Lumens	16584.5	20.7	16605.2
	% Fixture	69.6	0.1	69.6
<b>Total</b>	Lumens	23820.3	20.7	23841.0
	% Fixture	99.9	0.1	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.9	1.1
10°-20°	850.2	3.6
20°-30°	1553.9	6.5
30°-40°	2961.2	12.4
40°-50°	5082.7	21.3
50°-60°	6818.5	28.6
60°-70°	5183.4	21.7
70°-80°	981.5	4.1
80°-90°	123.9	0.5
90°-100°	18.2	0.1
100°-110°	2.5	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°	23820.3	99.9
0°-180°	23841.0	100.0

**Coefficient of Utilization**

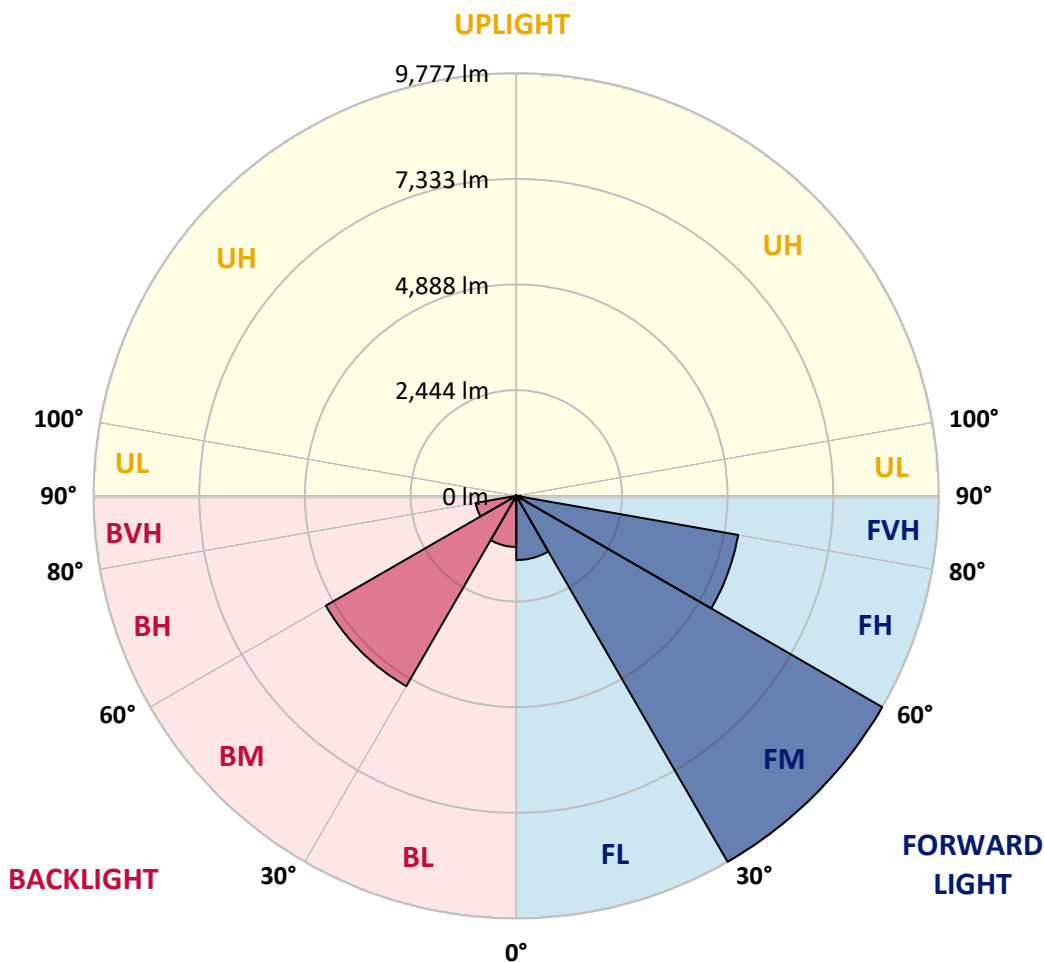


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1486.2	6.2			
FM (30°-60°)	9776.8	41.0			
FH (60°-80°)	5212.1	21.9			G3/7500
FVH (80°-90°)	109.4	0.5			G2/225
BL (0°-30°)	1182.8	5.0	B3/2500		
BM (30°-60°)	5085.7	21.3	B4/8500		
BH (60°-80°)	952.9	4.0	B2/1000		G2/1000
BVH (80°-90°)	14.5	0.1			G1/100
UL (90°-100°)	18.2	0.1		U2/50	
UH (100°-180°)	2.5	0.0		U1/10	

**BUG Rating: B4-U2-G3**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8
2.5°	2751.1	2730.9	2732.0	2750.0	2698.3	2717.4	2694.9	2717.4	2705.0	2714.0	2718.5
5°	2799.4	2779.2	2776.9	2796.0	2752.2	2765.7	2743.2	2759.0	2742.1	2753.3	2753.3
7.5°	2872.5	2852.2	2845.5	2860.1	2819.6	2829.8	2806.2	2815.2	2796.0	2810.7	2802.8
10°	2959.0	2936.5	2928.7	2936.5	2901.7	2907.3	2879.2	2889.3	2861.2	2878.1	2866.8
12.5°	3051.2	3021.9	3021.9	3028.7	2991.6	2992.7	2966.9	2972.5	2944.4	2962.4	2948.9
15°	3151.2	3118.6	3123.1	3129.8	3090.5	3097.2	3070.3	3079.2	3050.0	3068.0	3054.5
17.5°	3283.8	3248.9	3244.4	3264.7	3227.6	3240.0	3209.6	3220.8	3195.0	3200.6	3193.9
20°	3467.0	3423.1	3413.0	3440.0	3398.4	3407.4	3384.9	3407.4	3380.4	3340.0	3226.5
22.5°	3686.1	3647.9	3631.0	3649.0	3599.6	3615.3	3614.2	3650.1	3576.0	3320.9	3207.4
25°	3974.9	3949.1	3916.5	3918.7	3859.2	3882.8	3925.5	3953.6	3637.8	3414.1	3416.4
27.5°	4360.4	4334.5	4289.6	4272.7	4186.2	4243.5	4309.8	4035.6	3787.2	3844.6	3813.1
30°	4852.6	4848.1	4757.1	4727.9	4633.5	4705.4	4648.1	4178.3	4263.7	4343.5	4295.2
32.5°	5507.8	5476.3	5344.9	5292.0	5193.1	5234.7	4729.0	4661.6	4788.6	4896.5	4845.9
35°	6300.1	6204.6	6070.8	5966.3	5794.4	5562.9	5036.9	5168.4	5358.3	5506.7	5261.7
37.5°	7220.5	7117.1	6908.1	6720.4	6449.6	5728.1	5501.1	5764.0	6002.3	5841.6	5276.3
40°	8167.9	8075.7	7879.1	7637.4	7180.0	6240.5	6064.1	6378.8	6649.6	5729.2	5448.2
42.5°	9108.5	9029.8	8871.4	8633.1	8044.3	6850.8	6681.1	7019.3	6764.2	5948.3	5939.4
45°	10057.0	10017.7	9837.9	9634.4	9068.0	7631.8	7372.2	7636.3	6509.1	6473.2	6451.8
47.5°	10825.7	10832.4	10769.5	10663.9	10160.4	8489.3	8151.0	7367.7	6819.3	6858.6	6868.7
50°	11618.0	11567.4	11564.0	11570.8	11360.6	9594.0	8681.5	7246.3	7225.0	7221.6	7212.6
52.5°	12252.9	12188.9	12321.5	12427.1	12551.9	10826.8	8601.7	7657.7	7535.2	7492.5	7230.6
55°	12769.9	12745.2	12960.9	13318.3	13873.5	12132.7	9307.4	8058.9	7813.9	6815.9	6148.4
57.5°	13083.4	13119.4	13564.4	14266.8	15306.3	13214.9	10128.9	8465.7	6690.1	6003.4	5960.7
60°	12483.3	12673.2	13430.7	14972.6	16517.8	14233.1	10740.3	8547.7	6020.3	5652.8	5567.4
62.5°	11014.5	10996.5	12297.9	14972.6	16902.1	14334.2	10933.6	7966.7	5259.4	4780.7	4685.2
65°	7795.9	7843.1	9233.2	13492.5	15397.4	13332.9	10085.1	6773.2	4195.2	3755.8	3626.5
67.5°	4824.5	4821.2	6182.1	9936.8	12533.9	11162.8	8490.4	5192.0	2911.8	2497.1	2356.6
70°	1666.6	1713.8	2780.3	5814.6	9226.5	8745.5	6354.0	3278.2	1535.1	1094.6	923.8
72.5°	663.0	678.8	997.9	2592.6	5764.0	5842.7	3861.4	1592.4	459.6	292.2	274.2
75°	433.8	436.0	478.7	936.1	2797.2	3143.3	1793.6	457.4	213.5	195.5	191.0
77.5°	374.2	375.4	397.8	474.2	911.4	1222.7	510.2	270.8	178.7	160.7	156.2
80°	347.3	348.4	359.6	407.9	439.4	416.9	272.0	218.0	150.6	142.7	141.6
82.5°	328.2	332.6	338.3	367.5	355.1	313.5	225.9	176.4	115.8	123.6	127.0
85°	302.3	306.8	310.2	327.0	296.7	229.3	175.3	132.6	74.2	80.9	79.8
87.5°	227.0	229.3	224.8	222.5	206.8	160.7	115.8	84.3	29.2	27.0	24.7
90°	109.0	107.9	103.4	95.5	83.2	65.2	48.3	27.0	12.4	5.6	2.2
92.5°	86.5	85.4	83.2	75.3	65.2	48.3	34.8	19.1	11.2	4.5	1.1
95°	58.4	56.2	53.9	48.3	40.5	29.2	20.2	13.5	9.0	3.4	1.1
97.5°	38.2	37.1	33.7	29.2	22.5	15.7	12.4	10.1	7.9	3.4	1.1
100°	23.6	23.6	21.4	16.9	11.2	9.0	7.9	7.9	5.6	2.2	0.0
102.5°	14.6	13.5	12.4	7.9	5.6	5.6	5.6	5.6	4.5	2.2	0.0
105°	7.9	7.9	5.6	4.5	3.4	2.2	3.4	4.5	3.4	1.1	0.0
107.5°	2.2	2.2	2.2	1.1	1.1	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	0.0



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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°	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8	2684.8
2.5°	2712.9	2691.5	2697.2	2675.8	2672.4	2650.0	2688.2	2690.4	2680.3	2691.5
5°	2747.7	2721.9	2732.0	2706.1	2701.6	2672.4	2702.8	2699.4	2691.5	2700.5
7.5°	2797.2	2771.3	2776.9	2746.6	2741.0	2708.4	2737.6	2726.4	2716.3	2728.6
10°	2865.7	2836.5	2841.0	2805.0	2800.5	2762.3	2796.0	2779.2	2764.6	2781.4
12.5°	2950.0	2911.8	2907.3	2869.1	2865.7	2829.8	2864.6	2847.7	2833.1	2860.1
15°	3046.7	2996.1	2989.3	2941.0	2935.4	2898.3	2932.0	2907.3	2896.1	2930.9
17.5°	3175.9	2997.2	2897.2	2826.4	2785.9	2765.7	2826.4	2908.4	2883.7	2884.8
20°	3123.1	2930.9	2797.2	2736.5	2692.7	2497.1	2227.4	2304.9	2462.3	2539.8
22.5°	3107.3	3039.9	2984.8	2882.6	2447.7	2337.5	2353.3	2335.3	2038.6	1925.1
25°	3408.5	3331.0	3211.9	2675.8	2549.9	2525.2	2534.2	2224.0	2000.4	2033.0
27.5°	3794.0	3714.2	3126.4	2826.4	2801.7	2769.1	2591.5	2203.8	2234.1	2265.6
30°	4279.5	3860.3	3260.2	3168.0	3122.0	3088.2	2429.7	2461.2	2511.7	2551.1
32.5°	4752.6	3847.9	3643.4	3528.8	3471.5	2817.4	2745.5	2818.5	2870.2	2900.6
35°	4758.2	4288.5	4072.7	3925.5	3561.4	3028.7	3095.0	3217.5	3344.5	3368.1
37.5°	4887.5	4787.4	4540.2	4354.8	2648.8	3380.4	3526.5	3667.0	3794.0	3801.9
40°	5402.2	5294.3	5062.8	4654.8	2925.3	3447.9	4001.9	4160.4	4267.1	4261.5
42.5°	5915.8	5841.6	5601.1	4136.8	3296.1	2987.1	4500.9	4605.4	4672.8	4720.0
45°	6432.7	6358.5	5546.0	4542.5	3737.8	3271.4	4379.5	4971.7	5045.9	5069.5
47.5°	6836.2	6653.0	5081.9	5080.8	4289.6	3635.5	3616.4	5302.1	5367.3	5350.5
50°	7209.3	5939.4	5493.2	5257.2	4860.5	3978.3	3845.7	4461.5	5658.4	5633.7
52.5°	6559.7	5764.0	5846.1	4781.8	5319.0	4318.8	4104.2	4000.8	5141.4	5803.4
55°	5866.3	5978.7	6206.8	5253.8	3859.2	4428.9	4323.3	4117.7	3469.2	2919.7
57.5°	5986.6	6154.0	6165.2	5691.0	3994.0	2766.8	3543.4	3101.7	1959.9	1964.4
60°	5585.4	5803.4	4506.5	3794.0	2147.6	576.5	56.2	49.4	341.6	415.8
62.5°	4722.3	5025.7	4302.0	3305.1	1377.8	21.4	5.6	1.1	0.0	0.0
65°	3656.9	4022.1	3635.5	2852.2	1222.7	6.7	0.0	0.0	0.0	0.0
67.5°	2411.7	2741.0	2762.3	2385.9	1019.3	3.4	0.0	0.0	0.0	0.0
70°	1010.3	1422.7	1719.4	1773.4	801.3	1.1	0.0	0.0	0.0	0.0
72.5°	292.2	451.8	827.1	1065.4	509.1	0.0	0.0	0.0	0.0	0.0
75°	194.4	207.9	239.4	479.9	254.0	0.0	0.0	0.0	0.0	0.0
77.5°	160.7	164.1	137.1	131.5	73.0	0.0	0.0	0.0	0.0	0.0
80°	146.1	143.8	110.1	77.5	27.0	0.0	0.0	0.0	0.0	0.0
82.5°	134.9	128.1	79.8	40.5	18.0	0.0	0.0	0.0	0.0	0.0
85°	91.0	89.9	36.0	24.7	3.4	0.0	0.0	0.0	0.0	0.0
87.5°	24.7	31.5	7.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	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: P579458  
 CATALOG NUMBER: CTN-CA8-230-730-U-T5N-HSS-HM-EX180

**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)