

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: P522128

Luminaire Tested: **CTN-CA10-310-722-U-T5R-HSS-HM-EX90**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522128  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-310-722-U-T5R-HSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (10) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33437.1 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B5 - U1 - G5

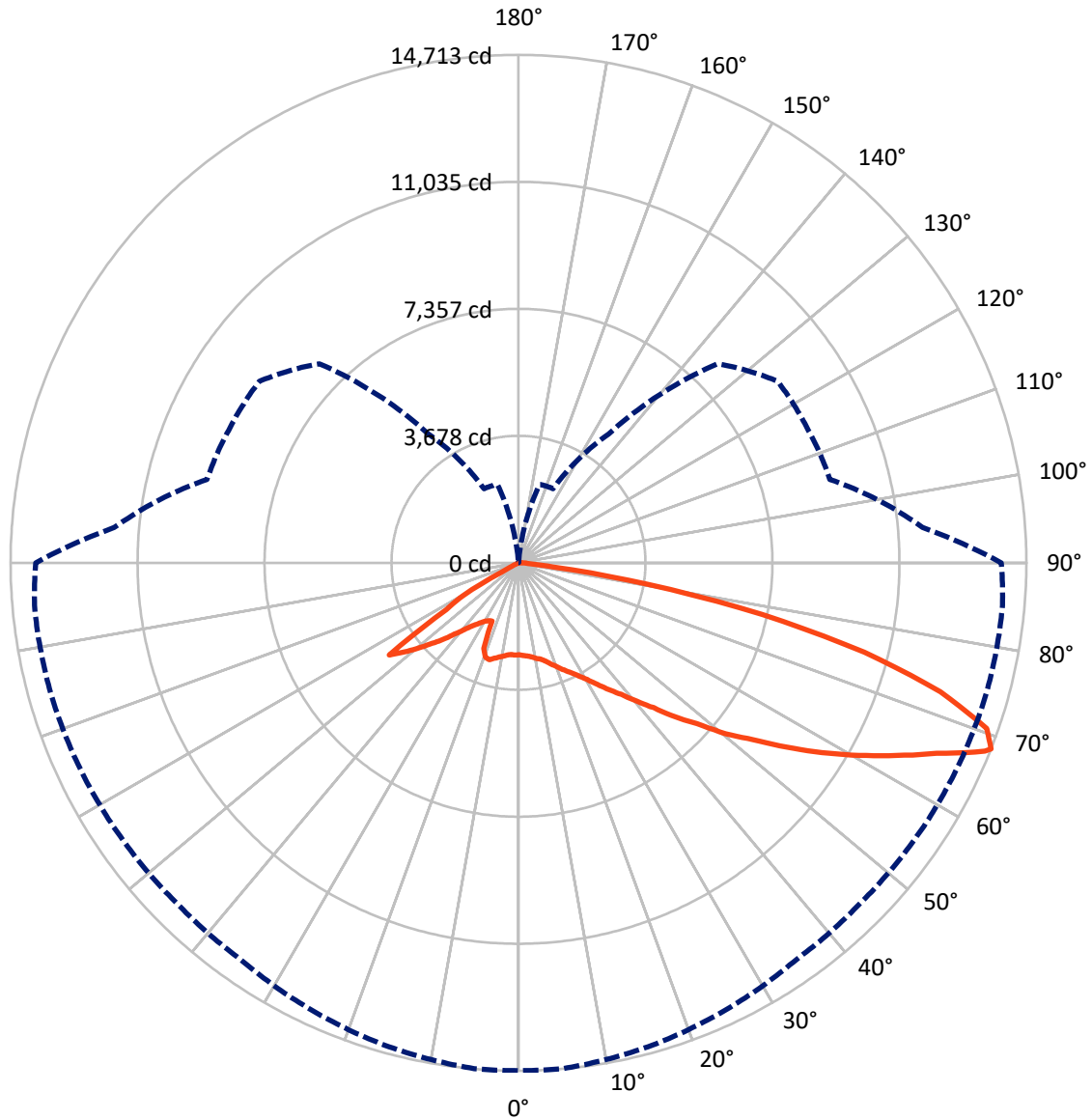
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT





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### Luminous Intensity Polar Plot



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

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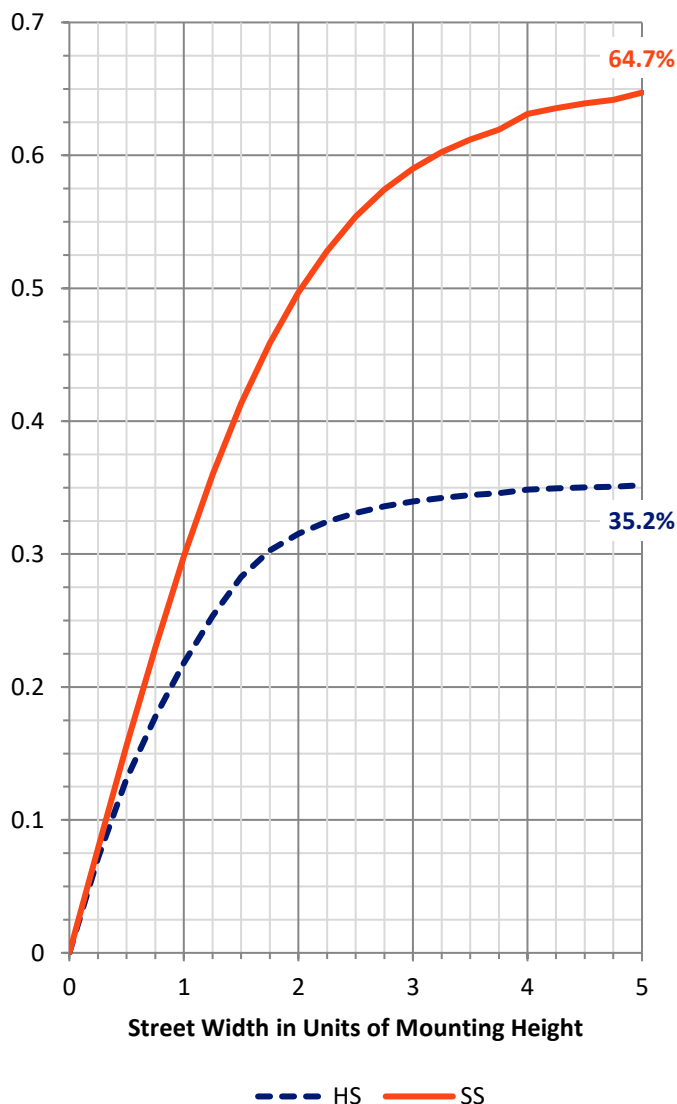
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11767.5	2.1	11769.6
	% Fixture	35.2	0.0	35.2
<b>Street Side</b>	Lumens	21658.6	8.8	21667.5
	% Fixture	64.8	0.0	64.8
<b>Total</b>	Lumens	33426.2	10.9	33437.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.4	0.8
10°-20°	824.8	2.5
20°-30°	1472.4	4.4
30°-40°	2395.3	7.2
40°-50°	4090.5	12.2
50°-60°	6825.1	20.4
60°-70°	9495.1	28.4
70°-80°	7360.2	22.0
80°-90°	705.3	2.1
90°-100°	8.5	0.0
100°-110°	0.7	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°	33426.2	100.0
0°-180°	33437.1	100.0

**Coefficient of Utilization**



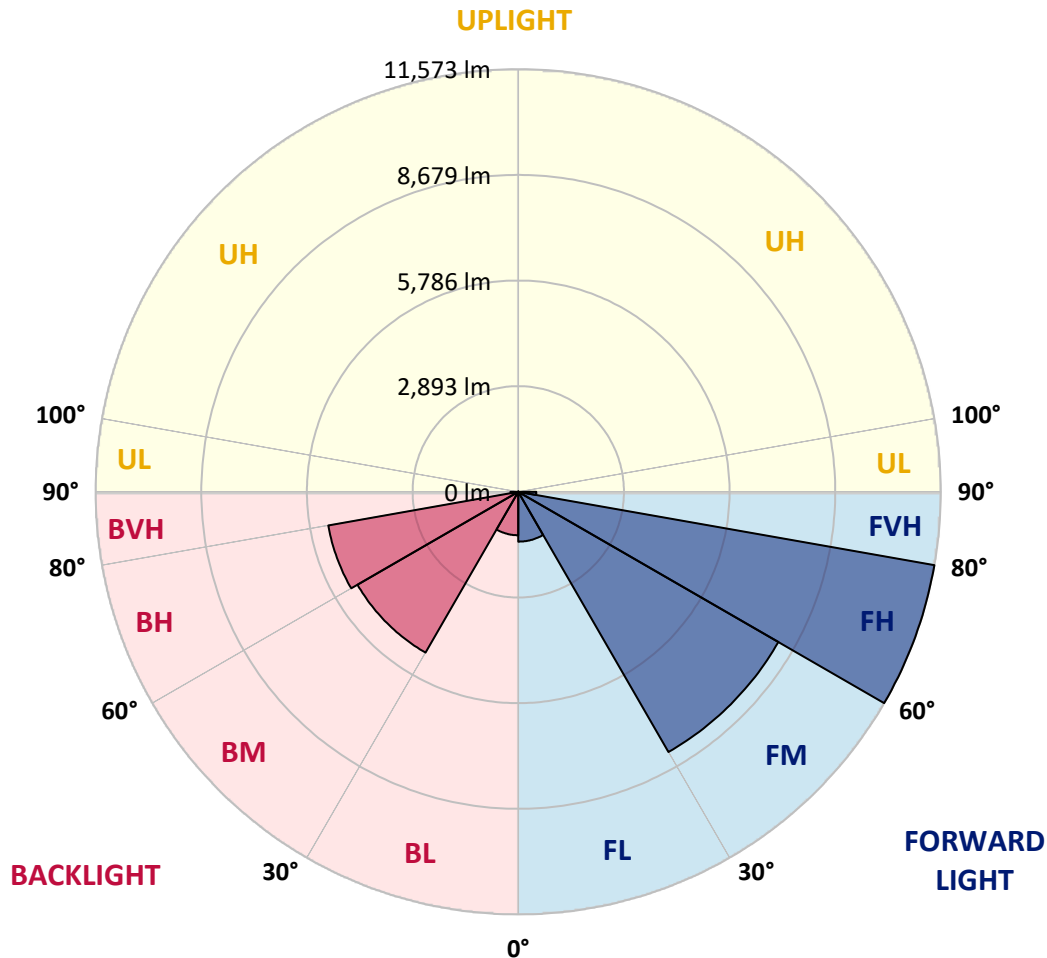
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1364.7	4.1			
FM	(30°-60°)	8227.8	24.6			
FH	(60°-80°)	11572.7	34.6			G4/12000
FVH	(80°-90°)	493.4	1.5			G3/500
BL	(0°-30°)	1189.9	3.6	B3/2500		
BM	(30°-60°)	5083.1	15.2	B4/8500		
BH	(60°-80°)	5282.7	15.8	B5		G5
BVH	(80°-90°)	211.9	0.6			G2/225
UL	(90°-100°)	8.5	0.0		U1/10	
UH	(100°-180°)	2.4	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°	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0
2.5°	2691.2	2687.4	2684.9	2701.3	2654.7	2673.6	2661.0	2677.4	2673.6	2681.2	2682.4
5°	2710.1	2703.8	2695.0	2712.6	2684.9	2697.5	2683.7	2691.2	2667.3	2687.4	2690.0
7.5°	2752.9	2735.3	2734.0	2739.0	2720.2	2729.0	2705.1	2713.9	2701.3	2693.7	2701.3
10°	2817.0	2801.9	2785.6	2795.6	2764.2	2775.5	2750.4	2757.9	2751.6	2735.3	2750.4
12.5°	2861.1	2866.1	2854.8	2862.3	2834.6	2824.6	2815.8	2814.5	2810.7	2786.8	2783.1
15°	2959.2	2961.7	2941.6	2946.6	2940.3	2935.3	2922.7	2912.7	2892.5	2877.4	2867.4
17.5°	3087.5	3073.7	3054.8	3059.9	3077.5	3054.8	3047.3	3028.4	2999.5	2974.3	2969.3
20°	3222.2	3213.4	3195.7	3205.8	3204.6	3189.5	3193.2	3161.8	3120.3	3098.9	3082.5
22.5°	3371.9	3359.3	3346.7	3365.6	3350.5	3340.4	3336.7	3315.3	3263.7	3239.8	3236.0
25°	3521.6	3515.3	3524.1	3517.8	3496.4	3488.9	3493.9	3486.4	3426.0	3397.0	3379.4
27.5°	3709.1	3694.0	3707.8	3700.3	3677.6	3678.9	3680.1	3681.4	3613.5	3575.7	3550.5
30°	3923.0	3917.9	3935.5	3911.6	3890.3	3904.1	3915.4	3890.3	3831.1	3775.8	3767.0
32.5°	4201.0	4169.6	4189.7	4159.5	4126.8	4159.5	4179.6	4129.3	4081.5	4011.0	4023.6
35°	4509.3	4499.2	4499.2	4460.2	4442.6	4494.2	4514.3	4465.2	4391.0	4329.4	4314.3
37.5°	4836.4	4846.5	4877.9	4861.6	4845.2	4876.7	4921.9	4856.5	4760.9	4695.5	4677.9
40°	5270.5	5295.6	5317.0	5295.6	5276.8	5296.9	5348.5	5262.9	5196.2	5161.0	5123.3
42.5°	5737.2	5780.0	5766.2	5768.7	5785.0	5814.0	5865.6	5787.6	5710.8	5709.6	5654.2
45°	6368.8	6368.8	6339.9	6367.6	6365.1	6436.8	6459.4	6416.6	6352.5	6333.6	6285.8
47.5°	6958.9	7020.6	7009.2	7049.5	7018.1	7078.4	7155.2	7118.7	7044.5	6977.8	6967.7
50°	7781.8	7766.7	7751.6	7812.0	7806.9	7848.4	7918.9	7896.3	7793.1	7717.6	7703.8
52.5°	8505.2	8584.5	8565.6	8656.2	8605.9	8665.0	8749.3	8745.5	8619.7	8545.5	8524.1
55°	9418.6	9471.5	9467.7	9560.8	9491.6	9569.6	9640.1	9647.6	9510.5	9404.8	9437.5
57.5°	10369.8	10413.8	10388.7	10465.4	10397.5	10504.4	10547.2	10519.5	10439.0	10305.6	10354.7
60°	11322.2	11360.0	11388.9	11395.2	11356.2	11419.1	11459.4	11483.3	11356.2	11204.0	11263.1
62.5°	12289.8	12332.5	12307.4	12317.4	12209.2	12294.8	12345.1	12351.4	12205.5	12070.8	12112.4
65°	13308.9	13368.0	13277.4	13217.0	13083.7	13082.4	13149.1	13160.4	13057.3	12961.6	12945.3
67.5°	14570.8	14597.2	14403.5	14200.9	13975.7	13926.6	13973.2	13999.6	14058.8	14056.2	13982.0
68°	14713.0	14708.0	14511.7	14270.1	14028.6	13971.9	13994.6	14028.6	14067.6	14075.1	13985.8
70°	14389.6	14328.0	14216.0	13911.5	13672.5	13524.0	13444.8	13507.7	13402.0	13403.2	13235.9
72.5°	12781.7	12774.2	12567.8	12416.8	12204.2	11957.6	11844.4	11843.1	11853.2	11780.2	11607.8
75°	10353.5	10363.5	10123.2	10018.8	9953.4	9906.8	9930.7	10004.9	10012.5	10011.2	9950.8
77.5°	7220.6	7262.1	7198.0	7028.1	7210.6	7366.6	7667.3	7820.8	7771.7	7918.9	8012.0
80°	3784.6	3867.6	3870.1	3989.6	4136.9	4279.0	4538.2	4771.0	4599.9	4524.4	4446.4
82.5°	995.2	1025.4	1070.7	1001.5	1022.9	1044.3	1245.6	1226.7	1132.3	1182.7	1258.2
85°	284.3	293.2	280.6	254.1	232.8	213.9	218.9	185.0	161.0	159.8	154.8
87.5°	200.0	215.1	190.0	163.6	147.2	137.1	132.1	112.0	90.6	79.3	62.9
90°	93.1	91.8	79.3	61.7	54.1	51.6	51.6	40.3	22.6	13.8	12.6
92.5°	39.0	40.3	32.7	26.4	22.6	17.6	13.8	8.8	5.0	2.5	1.3
95°	13.8	15.1	12.6	10.1	8.8	7.5	6.3	5.0	2.5	1.3	1.3
97.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.5	2.5	1.3	1.3
100°	0.0	0.0	0.0	1.3	2.5	2.5	2.5	2.5	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°	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0	2661.0
2.5°	2679.9	2673.6	2671.1	2639.6	2648.4	2629.6	2673.6	2661.0	2658.5	2676.1
5°	2686.2	2657.2	2674.9	2654.7	2659.8	2632.1	2667.3	2652.2	2653.5	2662.3
7.5°	2690.0	2673.6	2691.2	2656.0	2669.8	2659.8	2684.9	2669.8	2684.9	2692.5
10°	2727.7	2720.2	2707.6	2697.5	2707.6	2683.7	2715.1	2712.6	2721.4	2744.1
12.5°	2779.3	2770.5	2757.9	2740.3	2747.8	2739.0	2762.9	2765.4	2781.8	2793.1
15°	2856.0	2844.7	2838.4	2820.8	2823.3	2817.0	2830.9	2833.4	2866.1	2862.3
17.5°	2964.2	2951.7	2956.7	2940.3	2934.0	2918.9	2893.8	2885.0	2924.0	2935.3
20°	3082.5	3068.7	3075.0	3061.1	2944.1	2706.3	2866.1	2975.6	2892.5	2886.2
22.5°	3217.1	3202.0	3207.1	3185.7	3041.0	2595.6	2258.4	2230.7	2547.8	2676.1
25°	3365.6	3345.5	3342.9	3315.3	2839.7	2350.3	2312.5	2263.4	2031.9	1848.2
27.5°	3549.3	3519.1	3504.0	3086.3	2819.6	2442.1	2385.5	2210.6	1874.7	1886.0
30°	3748.1	3704.0	3421.0	3145.4	2966.8	2550.3	2474.8	1937.6	1940.1	1935.1
32.5°	3974.5	3876.4	3351.8	3326.6	3142.9	2666.1	2054.6	2031.9	2034.5	2042.0
35°	4271.5	3598.4	3584.5	3585.8	3358.0	2579.2	2176.6	2155.2	2157.8	2162.8
37.5°	4334.4	3878.9	3881.4	3852.5	3587.0	2356.5	2325.1	2323.8	2318.8	2313.8
40°	4384.7	4232.5	4196.0	4149.4	3325.3	2537.7	2527.7	2520.1	2523.9	2533.9
42.5°	4778.5	4664.0	4628.8	4573.4	3410.9	2812.0	2779.3	2770.5	2780.5	2775.5
45°	5301.9	5206.3	5137.1	4228.7	3768.2	3110.2	3083.8	3072.4	3076.2	3107.7
47.5°	5855.5	5798.9	5587.5	4568.4	4184.7	3462.5	3436.1	3418.4	3424.7	3417.2
50°	6458.2	6406.6	5172.3	5080.5	4645.2	3842.4	3803.4	3797.1	3799.7	3798.4
52.5°	7112.4	6034.2	5732.2	5636.6	5130.8	4240.0	4226.2	4192.2	4199.8	4192.2
55°	7879.9	6356.3	6348.7	6236.7	5676.8	4701.8	4685.4	4637.6	4336.9	4599.9
57.5°	8608.4	6971.5	6971.5	6863.3	6235.5	5161.0	5134.6	5099.3	3082.5	2486.1
60°	9406.1	7588.0	7570.4	7481.1	6774.0	5598.8	4550.8	4540.7	1862.1	1868.4
62.5°	10095.5	8137.8	8169.3	8086.2	7292.3	4192.2	2108.7	2065.9	183.7	283.1
65°	10868.0	8745.5	8783.3	8697.7	7853.5	4446.4	2288.6	2267.2	41.5	37.7
67.5°	11743.7	9352.0	9266.4	9172.0	8181.9	4578.5	2377.9	2359.1	11.3	7.5
68°	11751.3	9339.4	9228.7	9164.5	8150.4	4553.3	2370.4	2352.8	11.3	7.5
70°	11147.4	8868.8	8758.1	8774.5	7760.4	4354.5	2272.2	2239.5	11.3	7.5
72.5°	9779.7	7892.5	7767.9	7679.8	6882.2	3871.4	2037.0	1975.3	11.3	7.5
75°	8368.1	6688.4	6482.1	6288.3	5537.2	3168.1	1670.8	1601.6	11.3	7.5
77.5°	6595.3	5098.1	4804.9	4677.9	4160.8	2340.2	1241.8	1166.3	11.3	6.3
80°	3644.9	2925.2	2676.1	2598.1	2379.2	1375.2	712.1	666.8	10.1	6.3
82.5°	942.4	707.1	616.5	595.1	558.6	325.9	173.6	164.8	8.8	5.0
85°	134.6	99.4	109.5	129.6	124.6	84.3	60.4	51.6	7.5	3.8
87.5°	70.5	59.1	69.2	78.0	79.3	49.1	25.2	13.8	3.8	0.0
90°	11.3	11.3	12.6	13.8	13.8	6.3	5.0	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	2.5	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)