

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: P237514

Luminaire Tested: **CTN-10-4-D-E1-T4-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237514  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-27)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-4-D-E1-T4-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 37735 lumens  
Efficiency: N/A  
Efficacy: 122.5 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - 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: 25 FT

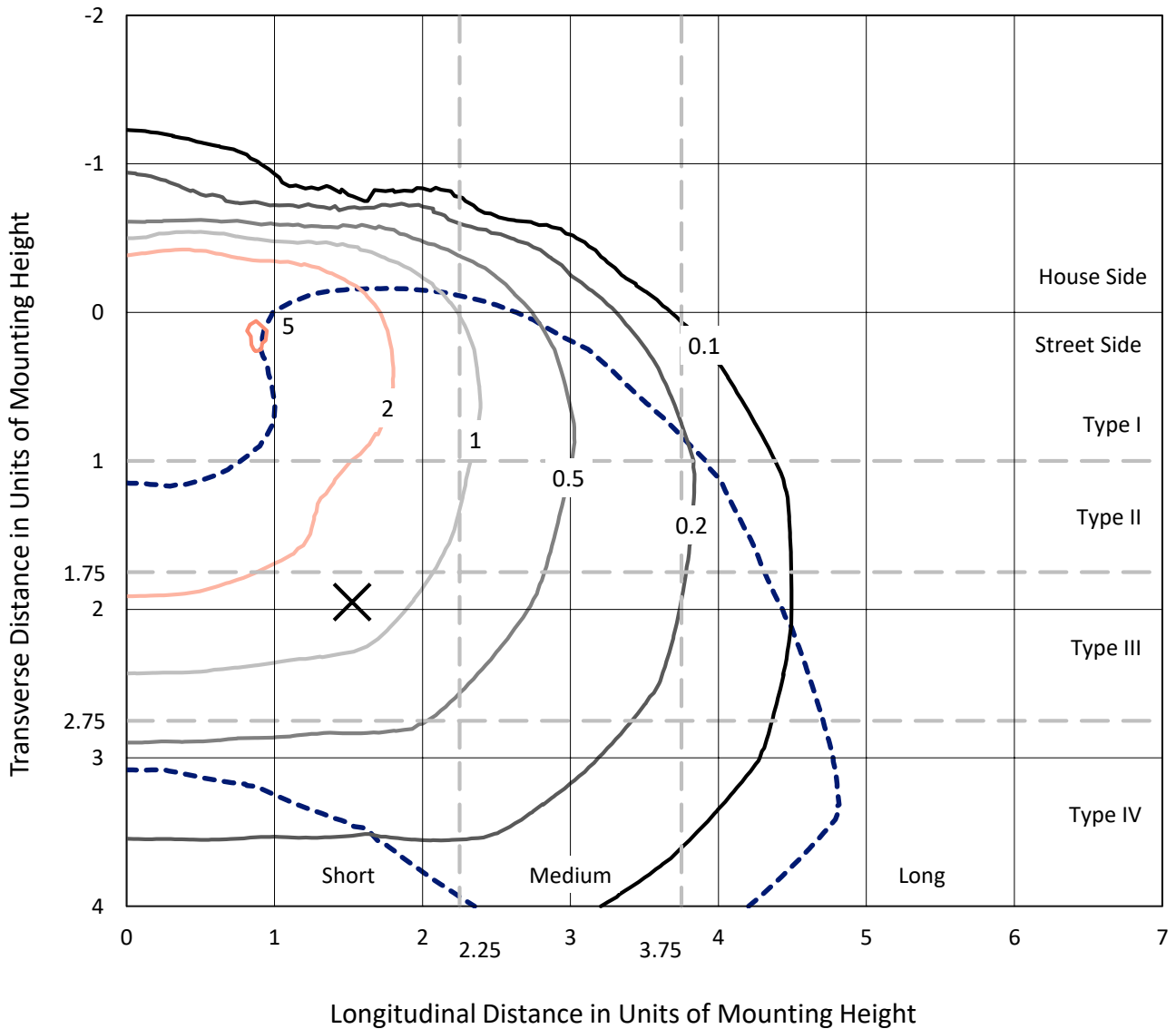


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

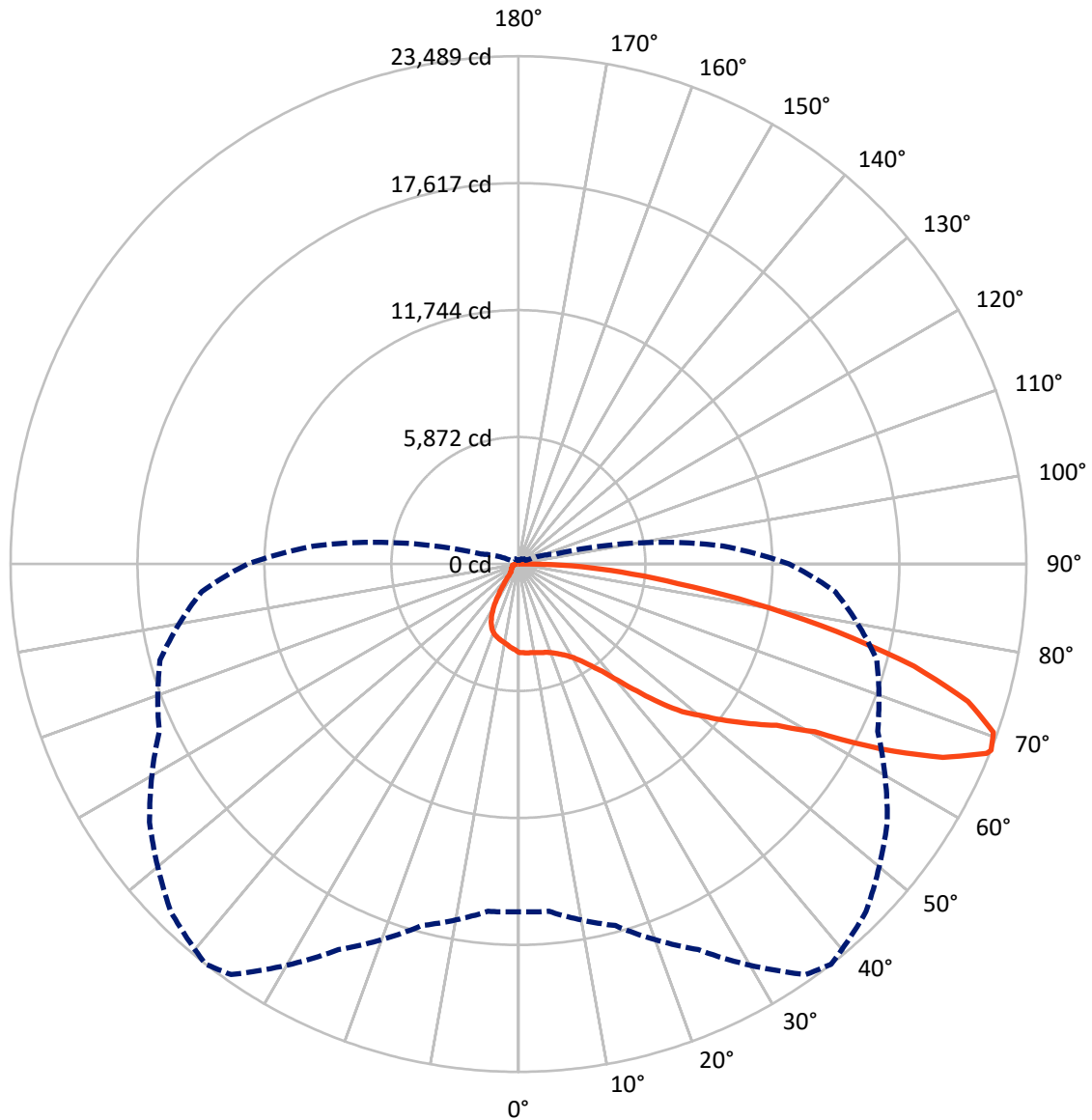


Based on 30 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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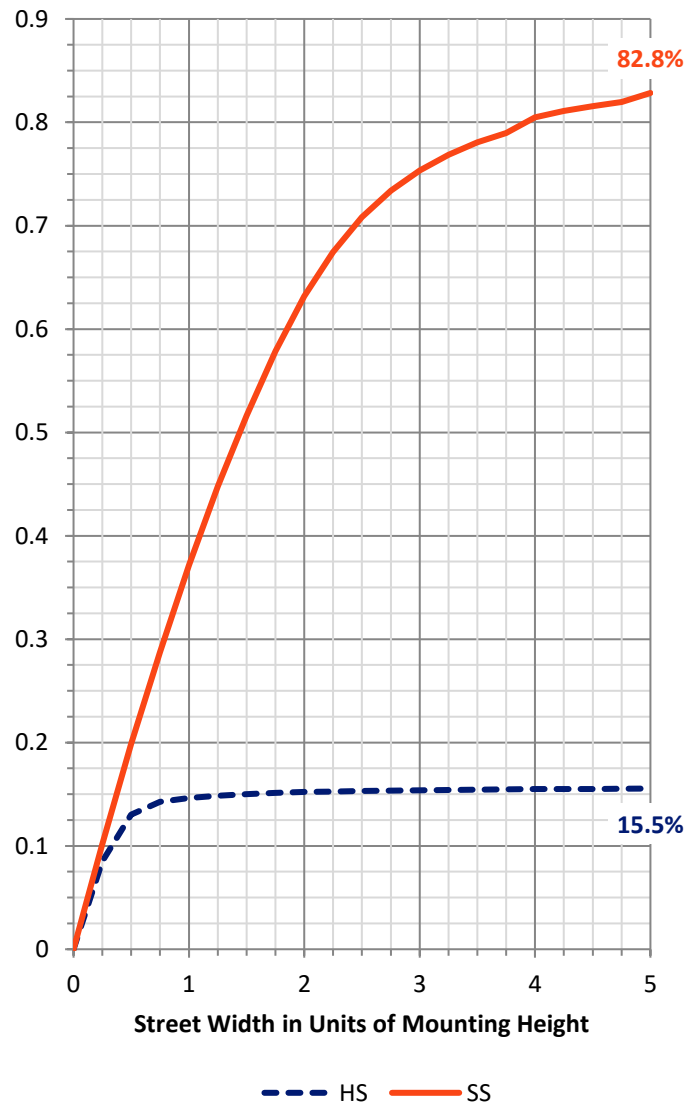
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5951.9	0.0	5951.9
	% Fixture	15.8	0.0	15.8
<b>Street Side</b>	Lumens	31783.1	0.0	31783.1
	% Fixture	84.2	0.0	84.2
<b>Total</b>	Lumens	37735.0	0.0	37735.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	386.4	1.0
10°-20°	1147.5	3.0
20°-30°	1915.0	5.1
30°-40°	2937.3	7.8
40°-50°	5057.0	13.4
50°-60°	7515.4	19.9
60°-70°	9942.2	26.3
70°-80°	7301.7	19.3
80°-90°	1532.7	4.1
90°-100°	0.0	0.0
100°-110°	0.0	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°	37735.0	100.0
0°-180°	37735.0	100.0

**Coefficient of Utilization**



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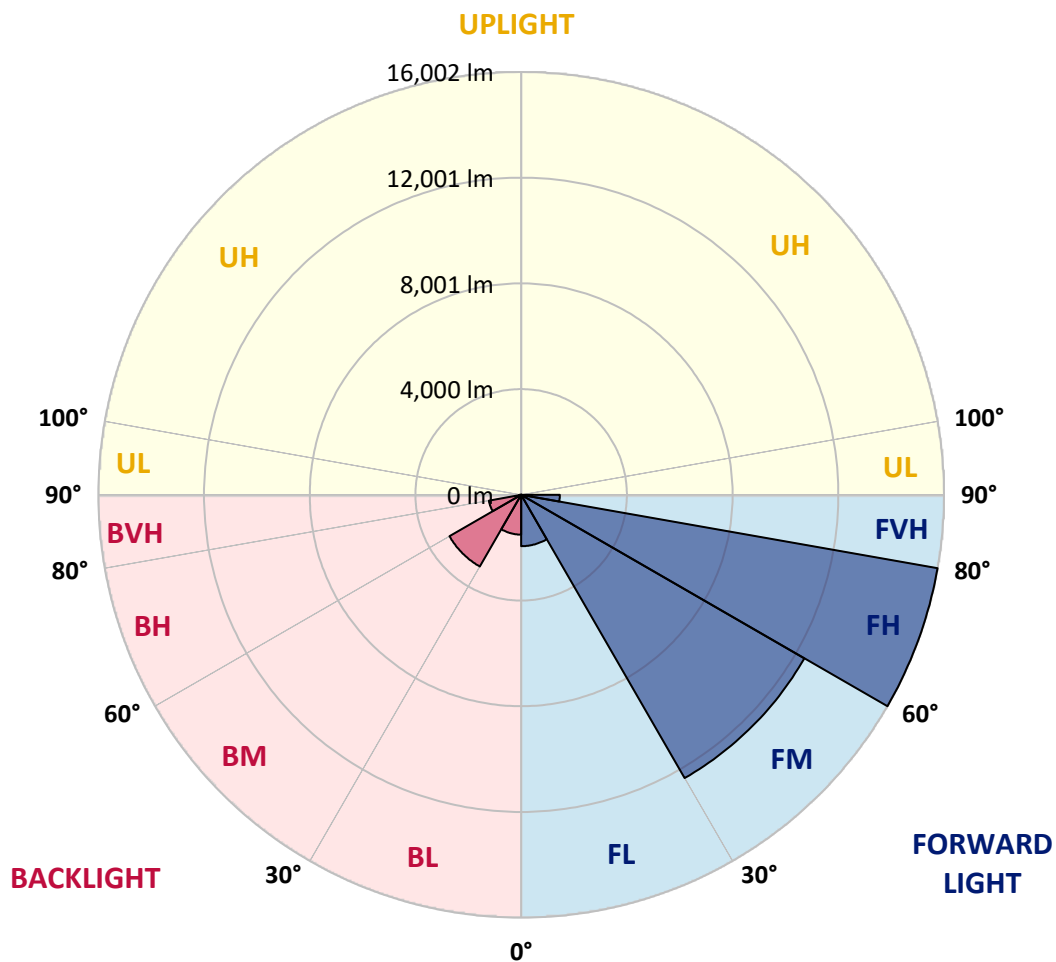
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1942.9	5.1			
FM	(30°-60°)	12376.5	32.8			
FH	(60°-80°)	16001.5	42.4			G5
FVH	(80°-90°)	1462.2	3.9			G5
BL	(0°-30°)	1505.9	4.0	B3/2500		
BM	(30°-60°)	3133.2	8.3	B3/5000		
BH	(60°-80°)	1242.3	3.3	B3/2500		G3/2500
BVH	(80°-90°)	70.5	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0
2.5°	4184.9	4156.0	4161.5	4179.4	4106.3	4100.8	4124.2	4098.0	4132.5	4116.0	4117.3
5°	4196.0	4168.4	4179.4	4207.0	4138.0	4136.7	4162.9	4129.8	4156.0	4135.3	4129.8
7.5°	4186.3	4161.5	4169.8	4196.0	4136.7	4140.8	4175.3	4164.2	4202.9	4182.2	4167.0
10°	4182.2	4165.6	4167.0	4202.9	4156.0	4167.0	4211.1	4218.0	4280.1	4262.2	4255.3
12.5°	4144.9	4132.5	4144.9	4201.5	4186.3	4208.4	4267.7	4303.6	4376.7	4369.8	4383.6
15°	4122.9	4117.3	4127.0	4193.2	4211.1	4247.0	4325.6	4396.0	4484.3	4496.7	4528.4
17.5°	4149.1	4157.3	4175.3	4229.1	4253.9	4291.1	4379.4	4476.0	4601.5	4655.3	4692.5
20°	4259.4	4269.1	4285.6	4320.1	4347.7	4379.4	4458.0	4568.4	4735.3	4819.4	4878.7
22.5°	4419.4	4402.9	4426.3	4455.3	4463.6	4491.1	4571.1	4681.5	4870.5	4997.4	5080.1
25°	4543.6	4532.5	4556.0	4605.6	4604.3	4629.1	4707.7	4820.8	5025.0	5207.0	5353.2
27.5°	4673.2	4666.3	4676.0	4742.2	4768.4	4798.7	4867.7	4994.6	5225.0	5453.9	5684.3
30°	4860.8	4876.0	4859.4	4935.3	4991.8	5026.3	5096.7	5252.5	5499.4	5812.6	6103.6
32.5°	5151.9	5158.8	5131.2	5215.3	5296.7	5349.1	5416.7	5620.8	5891.2	6273.3	6648.4
35°	5772.6	5773.9	5660.8	5648.4	5693.9	5769.8	5869.1	6172.6	6575.3	7164.3	7589.2
37.5°	6713.3	6667.8	6560.2	6350.5	6282.9	6296.7	6438.8	6860.9	7471.9	8558.8	8965.7
40°	7791.9	7739.5	7550.5	7273.3	7074.7	7062.2	7110.5	7616.7	8510.6	10127.2	10332.7
42.5°	8956.1	8920.2	8614.0	8327.1	8073.3	8033.3	7924.3	8431.9	9655.4	11527.2	11525.8
45°	10030.6	10023.7	9649.9	9507.8	9238.9	9134.0	9004.4	9398.9	10832.0	12630.7	12498.2
47.5°	11038.9	11018.2	10621.0	10458.2	10252.7	10196.1	10043.0	10318.9	11837.5	13661.0	13331.4
50°	12109.3	12045.8	11455.5	11291.3	11088.6	11044.4	10964.4	11281.7	12932.7	14561.7	14015.5
52.5°	13353.4	13256.9	12451.3	12146.5	12001.7	12030.6	11979.6	12263.8	14157.6	15314.9	14575.5
55°	14825.2	14535.5	13765.9	13212.7	12891.4	13025.2	12925.8	13280.3	15332.8	15901.1	14983.8
57.5°	15905.2	15903.8	15590.7	14804.5	14076.2	14083.1	13883.1	14287.3	16283.2	16484.6	15222.5
60°	17141.1	17214.2	17321.8	16972.8	16113.5	15753.5	15050.0	15284.5	17047.3	16908.0	15328.7
62.5°	18215.6	18258.4	18734.3	18868.1	18934.3	18846.0	17281.8	16433.5	17672.2	17143.9	15359.0
65°	18177.0	18172.9	19201.9	20098.4	21491.6	21570.2	21119.2	18139.8	18156.3	17174.2	15201.8
67.5°	16403.2	16487.3	17863.9	19785.3	23108.2	23356.4	22734.4	20617.1	18335.6	17160.4	14826.6
68°	16085.9	16121.8	17312.2	19675.0	23177.1	23488.9	22737.1	20824.0	18330.1	17161.8	14710.7
70°	14065.2	14119.0	15506.6	18338.4	23196.4	23304.0	22396.4	20937.1	18148.0	17033.5	13874.8
72.5°	11103.7	11165.8	12430.7	15473.5	21750.9	21746.8	20869.5	19989.5	17531.5	16095.6	11770.0
75°	8044.3	8247.1	9353.3	12153.4	18619.8	18903.9	18790.8	18615.6	15776.9	13601.7	8306.4
77.5°	5640.1	5743.6	6785.0	9140.9	14632.1	15066.6	15829.4	16055.6	13152.1	10100.9	3740.8
80°	3557.3	3751.8	4613.9	6491.2	10659.6	11061.0	11985.1	12365.8	9707.8	4954.6	655.2
82.5°	2073.2	2189.0	2823.5	4204.2	7167.1	7447.1	8052.6	7585.0	3935.3	659.3	364.1
85°	1004.2	1110.4	1515.9	2391.8	4474.6	4757.4	5084.3	3307.7	651.1	259.3	245.5
87.5°	406.9	417.9	620.7	1062.1	2230.4	2473.2	2393.2	1085.5	169.7	93.8	77.2
90°	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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0	4098.0
2.5°	4124.2	4103.6	4078.7	4070.4	4012.5	4009.8	3961.5	4031.8	4011.1	4012.5	4029.1
5°	4127.0	4103.6	4055.3	4033.2	3971.1	3954.6	3874.6	3918.7	3871.8	3867.7	3895.3
7.5°	4156.0	4129.8	4060.8	4026.3	3910.4	3855.3	3779.4	3818.0	3746.3	3731.1	3736.6
10°	4233.2	4200.1	4116.0	4034.6	3891.1	3811.1	3662.2	3674.6	3611.1	3590.4	3608.4
12.5°	4350.5	4310.5	4209.8	4089.8	3907.7	3767.0	3584.9	3511.8	3415.3	3383.5	3393.2
15°	4510.5	4463.6	4331.1	4191.8	3943.5	3746.3	3498.0	3346.3	3158.7	3106.3	3087.0
17.5°	4685.6	4636.0	4482.9	4307.7	4007.0	3722.9	3398.7	3157.3	2887.0	2768.3	2761.4
20°	4891.2	4837.4	4677.4	4442.9	4058.0	3693.9	3274.6	2928.3	2576.6	2378.0	2364.2
22.5°	5127.0	5080.1	4899.4	4562.9	4084.2	3618.0	3087.0	2635.9	2195.9	1947.6	1935.2
25°	5404.3	5360.1	5106.3	4647.0	4055.3	3484.2	2830.4	2277.3	1747.6	1499.3	1488.3
27.5°	5735.3	5666.3	5269.1	4671.8	3969.8	3264.9	2509.0	1816.6	1291.1	1102.1	1092.4
30°	6111.9	5989.1	5422.2	4664.9	3818.0	2984.9	2066.3	1339.3	917.3	790.4	786.2
32.5°	6586.4	6371.2	5568.4	4609.8	3601.5	2618.0	1572.5	929.7	659.3	597.3	595.9
35°	7378.1	6917.4	5728.4	4510.5	3307.7	2136.6	1089.7	633.1	536.6	524.2	524.2
37.5°	8558.8	7818.1	5956.0	4351.8	2927.0	1629.0	717.3	503.5	504.8	511.7	513.1
40°	9771.3	8854.0	6285.7	4116.0	2482.8	1144.9	521.4	467.6	484.2	495.2	503.5
42.5°	10884.4	9792.0	6652.6	3793.2	1980.7	755.9	466.2	449.7	457.9	466.2	474.5
45°	11818.2	10614.1	6998.8	3424.9	1467.6	537.9	462.1	429.0	424.8	430.4	435.9
47.5°	12605.8	11283.0	7241.6	3009.7	998.6	460.7	451.0	406.9	393.1	394.5	397.3
50°	13207.2	11756.2	7349.2	2553.2	662.1	448.3	430.4	383.5	361.4	361.4	364.1
52.5°	13612.8	12052.7	7285.7	2038.7	475.9	441.4	413.8	358.6	332.4	336.6	339.3
55°	13913.5	12211.3	7036.0	1498.0	419.3	420.7	394.5	329.7	307.6	318.6	322.8
57.5°	14030.7	12207.2	6616.7	1034.5	416.6	389.0	366.9	304.8	286.9	302.1	309.0
60°	13987.9	12005.8	6007.0	704.8	408.3	364.1	337.9	281.4	267.6	267.6	269.0
62.5°	13902.4	11723.1	5122.9	522.8	389.0	346.2	315.9	262.1	245.5	237.2	234.5
65°	13516.2	11037.5	3761.5	451.0	369.7	336.6	295.2	244.1	222.1	208.3	205.5
67.5°	12752.0	9858.2	2102.1	416.6	355.9	331.0	281.4	227.6	202.8	186.2	184.8
68°	12517.6	9489.9	1782.1	413.8	358.6	331.0	280.0	223.5	200.0	182.1	180.7
70°	11129.9	7655.4	736.6	389.0	377.9	332.4	273.1	211.0	189.0	171.0	169.7
72.5°	8418.1	4434.6	389.0	337.9	368.3	326.9	275.9	201.4	179.3	158.6	155.9
75°	4638.7	1270.4	346.2	274.5	340.7	344.8	281.4	200.0	173.8	147.6	142.1
77.5°	1030.4	413.8	322.8	240.0	293.8	317.2	260.7	190.3	176.6	135.2	129.7
80°	394.5	336.6	306.2	184.8	233.1	269.0	216.6	169.7	180.7	126.9	120.0
82.5°	329.7	295.2	281.4	143.5	161.4	197.2	173.8	144.8	166.9	117.2	111.7
85°	242.8	285.5	198.6	113.1	118.6	121.4	121.4	113.1	143.5	103.5	97.9
87.5°	97.9	137.9	84.1	52.4	60.7	56.6	49.7	60.7	82.8	73.1	73.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)