

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: P237506

Luminaire Tested: **CTN-10-4-D-E1-T4-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237506  
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-T4-7030-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 36720 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

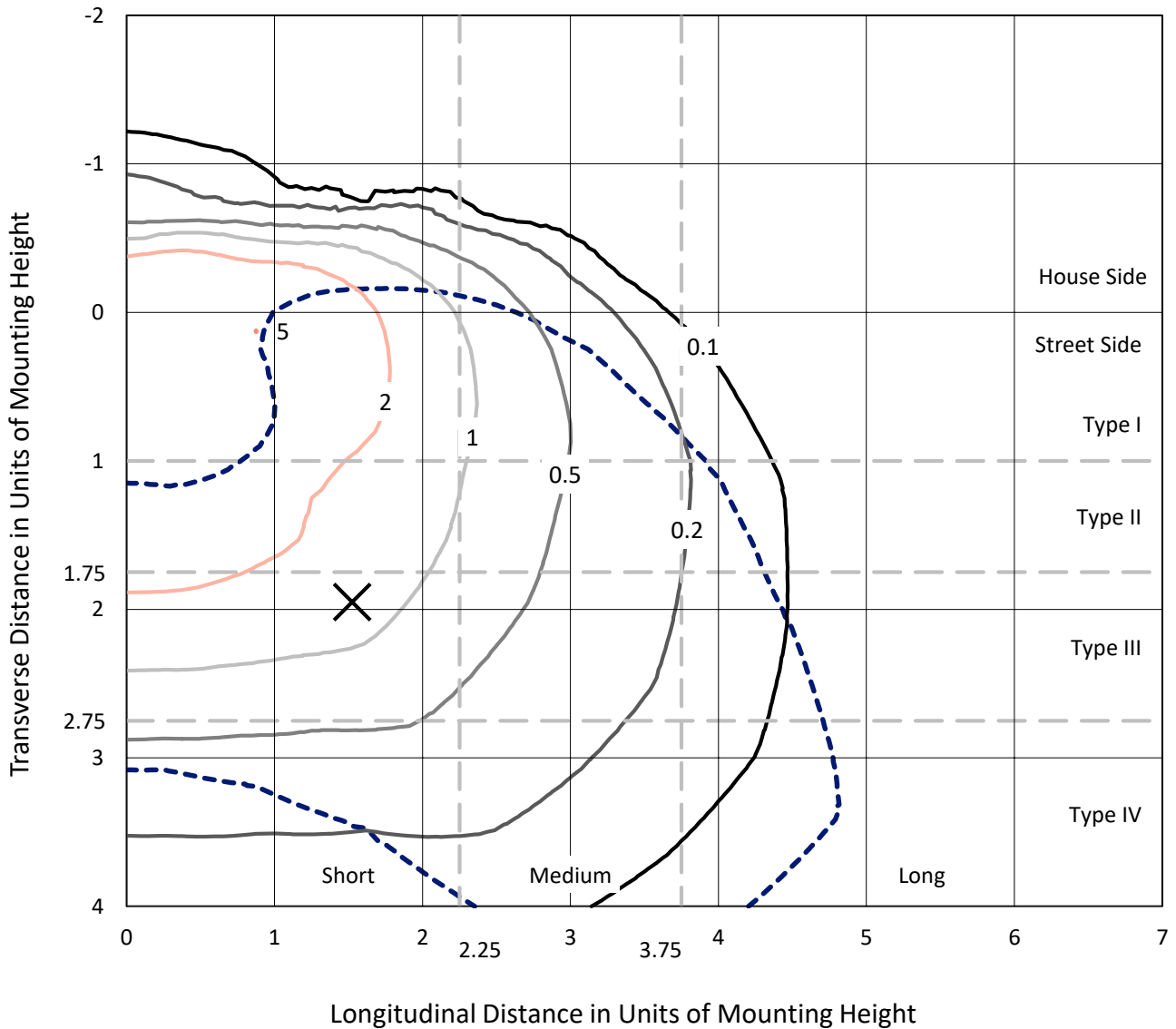
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

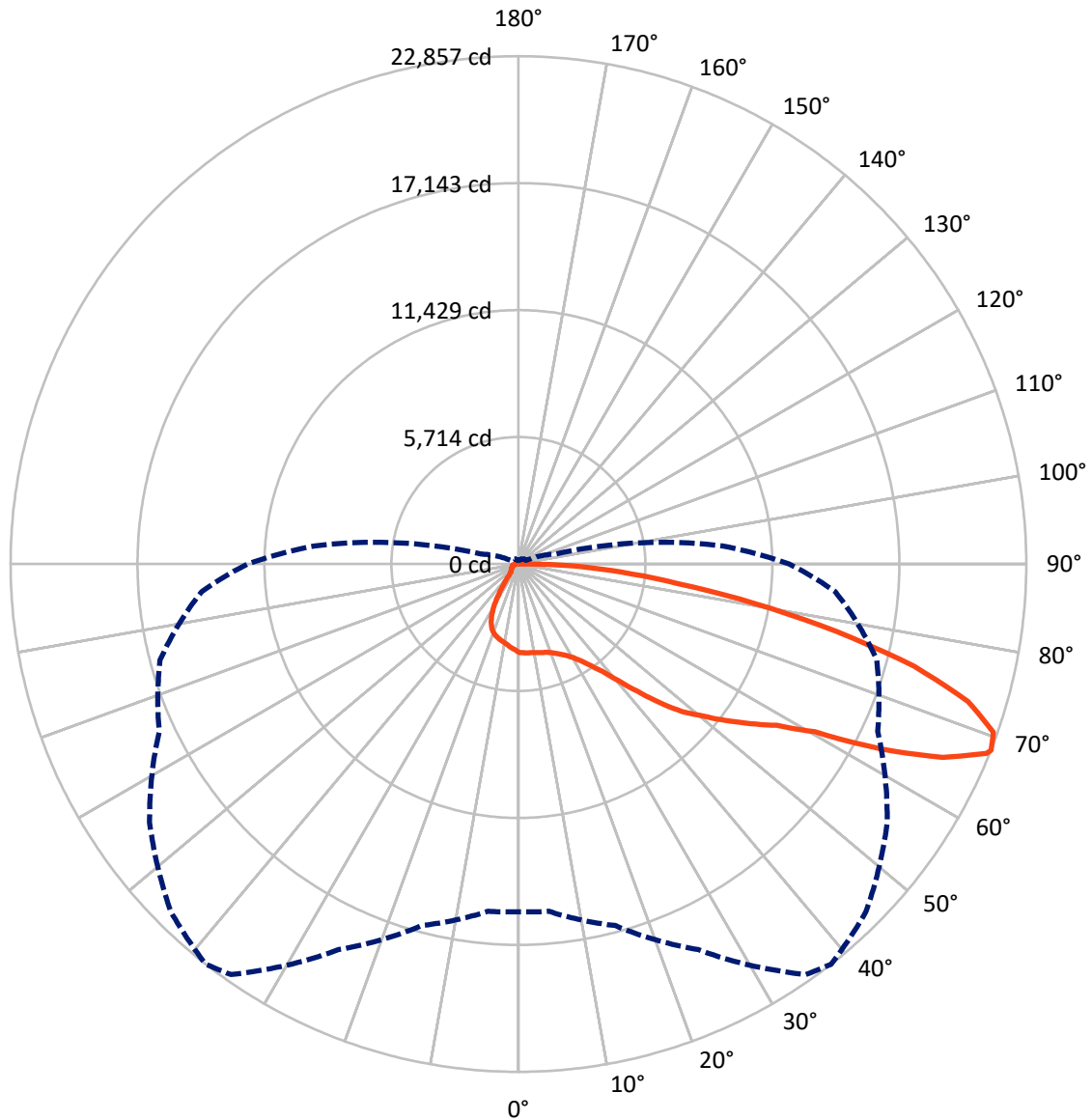
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5 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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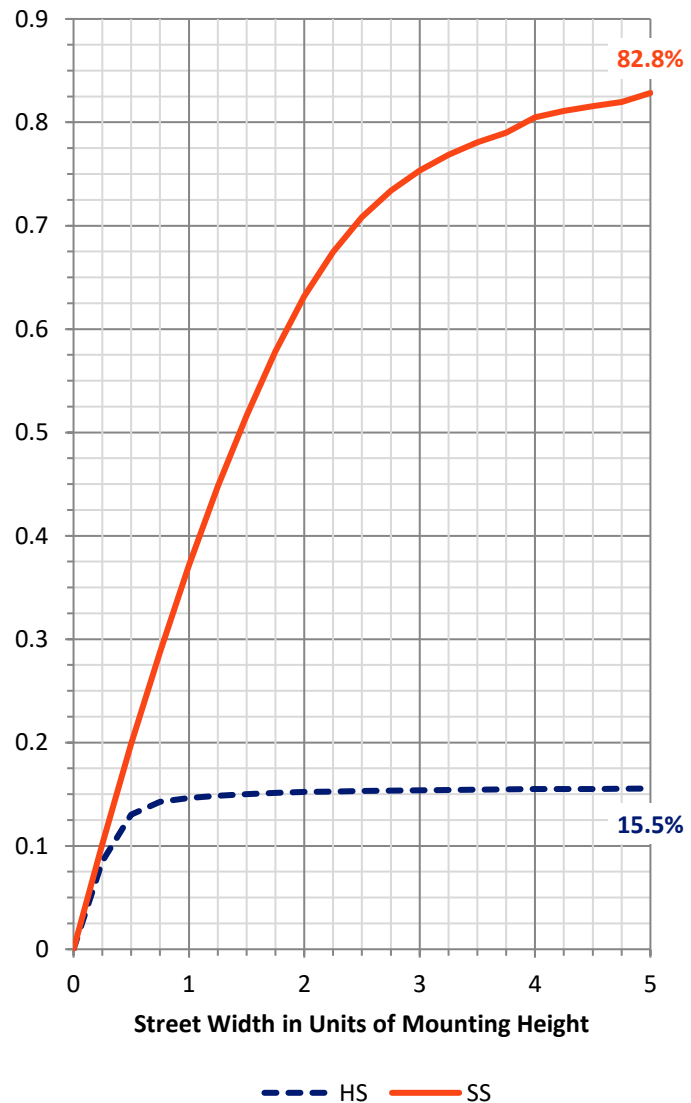
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5791.8	0.0	5791.8
	% Fixture	15.8	0.0	15.8
<b>Street Side</b>	Lumens	30928.2	0.0	30928.2
	% Fixture	84.2	0.0	84.2
<b>Total</b>	Lumens	36720.0	0.0	36720.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	376.0	1.0
10°-20°	1116.6	3.0
20°-30°	1863.5	5.1
30°-40°	2858.3	7.8
40°-50°	4921.0	13.4
50°-60°	7313.2	19.9
60°-70°	9674.7	26.3
70°-80°	7105.3	19.3
80°-90°	1491.4	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°	36720.0	100.0
0°-180°	36720.0	100.0



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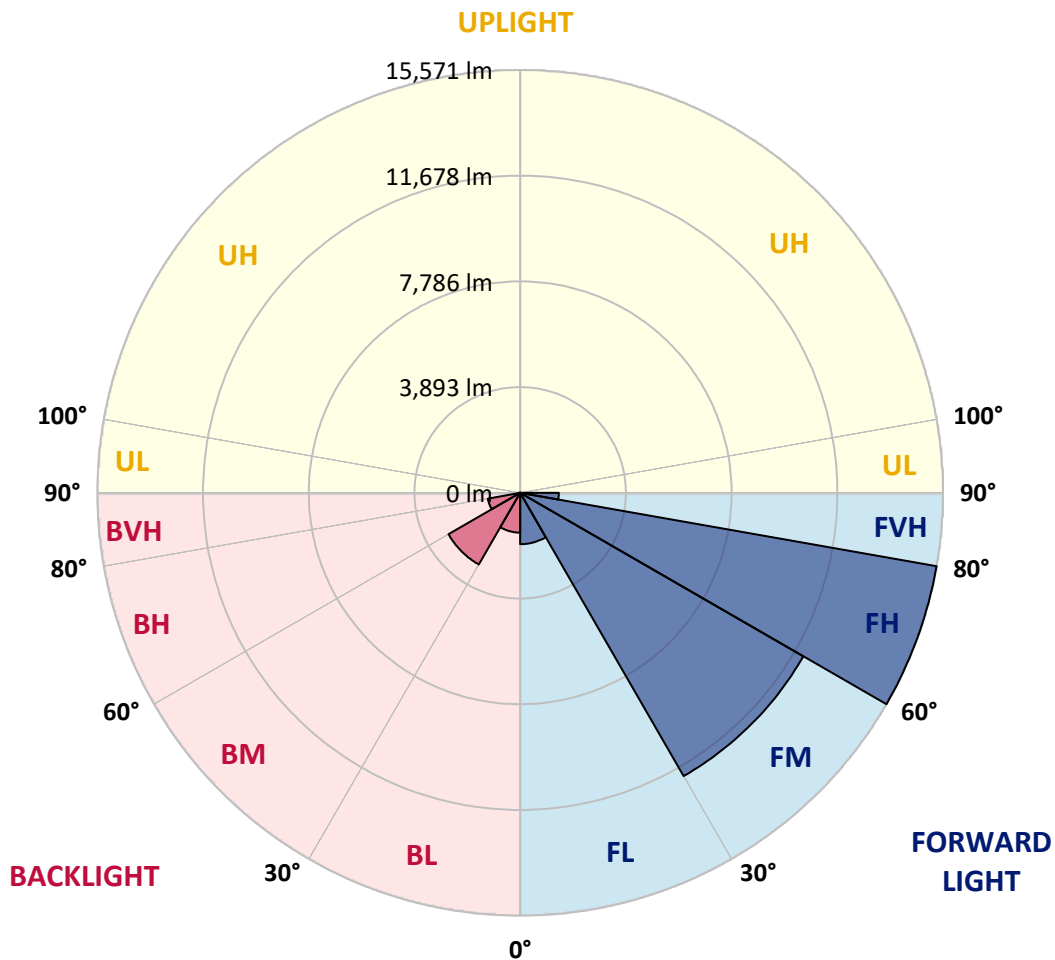
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1890.6	5.1			
FM	(30°-60°)	12043.6	32.8			
FH	(60°-80°)	15571.1	42.4			G5
FVH	(80°-90°)	1422.9	3.9			G5
BL	(0°-30°)	1465.4	4.0	B3/2500		
BM	(30°-60°)	3048.9	8.3	B3/5000		
BH	(60°-80°)	1208.9	3.3	B3/2500		G3/2500
BVH	(80°-90°)	68.6	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°	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8
2.5°	4072.4	4044.2	4049.5	4067.0	3995.9	3990.5	4013.3	3987.8	4021.4	4005.3	4006.6
5°	4083.1	4056.3	4067.0	4093.8	4026.7	4025.4	4050.9	4018.7	4044.2	4024.0	4018.7
7.5°	4073.7	4049.5	4057.6	4083.1	4025.4	4029.4	4063.0	4052.2	4089.8	4069.7	4054.9
10°	4069.7	4053.6	4054.9	4089.8	4044.2	4054.9	4097.9	4104.6	4165.0	4147.5	4140.8
12.5°	4033.4	4021.4	4033.4	4088.5	4073.7	4095.2	4152.9	4187.8	4258.9	4252.2	4265.6
15°	4012.0	4006.6	4016.0	4080.4	4097.9	4132.8	4209.3	4277.7	4363.6	4375.7	4406.6
17.5°	4037.5	4045.5	4063.0	4115.3	4139.5	4175.7	4261.6	4355.6	4477.7	4530.1	4566.3
20°	4144.8	4154.2	4170.3	4203.9	4230.8	4261.6	4338.1	4445.5	4607.9	4689.8	4747.5
22.5°	4300.5	4284.4	4307.3	4335.4	4343.5	4370.3	4448.2	4555.6	4739.5	4862.9	4943.5
25°	4421.3	4410.6	4433.4	4481.8	4480.4	4504.6	4581.1	4691.1	4889.8	5067.0	5209.2
27.5°	4547.5	4540.8	4550.2	4614.6	4640.1	4669.7	4736.8	4860.3	5084.4	5307.2	5531.4
30°	4730.1	4744.8	4728.7	4802.5	4857.6	4891.1	4959.6	5111.3	5351.5	5656.2	5939.4
32.5°	5013.3	5020.0	4993.1	5075.0	5154.2	5205.2	5271.0	5469.6	5732.7	6104.5	6469.6
35°	5617.3	5618.6	5508.6	5496.5	5540.8	5614.6	5711.2	6006.5	6398.5	6971.6	7385.0
37.5°	6532.7	6488.4	6383.7	6179.7	6113.9	6127.3	6265.6	6676.3	7270.9	8328.6	8724.6
40°	7582.3	7531.3	7347.4	7077.6	6884.4	6872.3	6919.3	7411.9	8281.6	9854.8	10054.7
42.5°	8715.2	8680.3	8382.3	8103.1	7856.1	7817.2	7711.2	8205.1	9395.7	11217.1	11215.8
45°	9760.8	9754.1	9390.3	9252.1	8990.3	8888.3	8762.2	9146.0	10540.6	12290.9	12162.1
47.5°	10742.0	10721.8	10335.3	10176.9	9976.9	9921.9	9772.9	10041.3	11519.1	13293.6	12972.8
50°	11783.6	11721.8	11147.3	10987.6	10790.3	10747.3	10669.5	10978.2	12584.9	14170.1	13638.5
52.5°	12994.3	12900.3	12116.4	11819.8	11678.9	11707.0	11657.4	11933.9	13776.8	14902.9	14183.5
55°	14426.4	14144.6	13395.6	12857.3	12544.6	12674.8	12578.2	12923.1	14920.4	15473.4	14580.8
57.5°	15477.4	15476.1	15171.4	14406.3	13697.6	13704.3	13509.7	13903.0	15845.2	16041.1	14813.0
60°	16680.1	16751.2	16855.9	16516.3	15680.1	15329.8	14645.2	14873.4	16588.8	16453.2	14916.3
62.5°	17725.7	17767.3	18230.3	18360.5	18425.0	18339.1	16817.0	15991.5	17196.8	16682.7	14945.9
65°	17688.1	17684.1	18685.4	19557.8	20913.5	20990.0	20551.1	17651.8	17667.9	16712.3	14792.9
67.5°	15962.0	16043.8	17383.4	19253.1	22486.6	22728.2	22122.9	20062.5	17842.4	16698.8	14427.8
68°	15653.2	15688.1	16846.5	19145.8	22553.7	22857.1	22125.5	20263.8	17837.1	16700.2	14315.0
70°	13686.9	13739.2	15089.5	17845.1	22572.5	22677.2	21794.0	20373.9	17659.9	16575.4	13501.6
72.5°	10805.1	10865.5	12096.3	15057.3	21165.8	21161.8	20308.1	19451.8	17059.9	15662.6	11453.4
75°	7828.0	8025.3	9101.8	11826.5	18118.9	18395.4	18285.4	18114.9	15352.6	13235.9	8083.0
77.5°	5488.4	5589.1	6602.5	8895.0	14238.5	14661.3	15403.6	15623.7	12798.3	9829.2	3640.2
80°	3461.6	3650.9	4489.8	6316.6	10372.9	10763.4	11662.8	12033.2	9446.7	4821.3	637.6
82.5°	2017.4	2130.1	2747.6	4091.2	6974.3	7246.8	7836.0	7381.0	3829.4	641.6	354.4
85°	977.2	1080.5	1475.1	2327.4	4354.2	4629.4	4947.5	3218.7	633.5	252.3	238.9
87.5°	396.0	406.7	604.0	1033.5	2170.4	2406.6	2328.8	1056.3	165.1	91.3	75.2
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°	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8	3987.8
2.5°	4013.3	3993.2	3969.0	3961.0	3904.6	3901.9	3854.9	3923.4	3903.2	3904.6	3920.7
5°	4016.0	3993.2	3946.2	3924.7	3864.3	3848.2	3770.4	3813.3	3767.7	3763.7	3790.5
7.5°	4044.2	4018.7	3951.6	3918.0	3805.3	3751.6	3677.7	3715.3	3645.5	3630.8	3636.1
10°	4119.3	4087.1	4005.3	3926.1	3786.5	3708.6	3563.7	3575.7	3514.0	3493.9	3511.3
12.5°	4233.4	4194.5	4096.5	3979.8	3802.6	3665.7	3488.5	3417.4	3323.4	3292.5	3301.9
15°	4389.1	4343.5	4214.6	4079.1	3837.5	3645.5	3403.9	3256.3	3073.7	3022.7	3003.9
17.5°	4559.6	4511.3	4362.3	4191.8	3899.2	3622.7	3307.3	3072.4	2809.3	2693.9	2687.2
20°	4759.6	4707.2	4551.5	4323.4	3948.9	3594.5	3186.5	2849.6	2507.3	2314.0	2300.6
22.5°	4989.1	4943.5	4767.6	4440.1	3974.4	3520.7	3003.9	2565.0	2136.9	1895.2	1883.2
25°	5258.9	5216.0	4969.0	4522.0	3946.2	3390.5	2754.3	2216.0	1700.6	1459.0	1448.3
27.5°	5581.0	5513.9	5127.4	4546.2	3863.0	3177.1	2441.5	1767.7	1256.3	1072.5	1063.1
30°	5947.5	5828.0	5276.4	4539.5	3715.3	2904.6	2010.7	1303.3	892.6	769.1	765.1
32.5°	6409.2	6199.8	5418.6	4485.8	3504.6	2547.6	1530.2	904.7	641.6	581.2	579.8
35°	7179.7	6731.3	5574.3	4389.1	3218.7	2079.1	1060.4	616.1	522.1	510.1	510.1
37.5°	8328.6	7607.8	5795.8	4234.8	2848.2	1585.2	698.0	489.9	491.3	498.0	499.3
40°	9508.5	8615.9	6116.6	4005.3	2416.0	1114.1	507.4	455.0	471.1	481.9	489.9
42.5°	10591.6	9528.6	6473.6	3691.2	1927.5	735.5	453.7	437.6	445.6	453.7	461.7
45°	11500.3	10328.6	6810.5	3332.8	1428.1	523.5	449.7	417.4	413.4	418.8	424.1
47.5°	12266.8	10979.5	7046.8	2928.8	971.8	448.3	438.9	396.0	382.5	383.9	386.6
50°	12852.0	11439.9	7151.5	2484.5	644.3	436.2	418.8	373.1	351.7	351.7	354.4
52.5°	13246.6	11728.5	7089.7	1983.8	463.1	429.5	402.7	349.0	323.5	327.5	330.2
55°	13539.2	11882.9	6846.8	1457.7	408.0	409.4	383.9	320.8	299.3	310.1	314.1
57.5°	13653.3	11878.9	6438.7	1006.7	405.4	378.5	357.0	296.6	279.2	294.0	300.7
60°	13611.7	11682.9	5845.5	685.9	397.3	354.4	328.8	273.8	260.4	260.4	261.7
62.5°	13528.5	11407.7	4985.1	508.7	378.5	336.9	307.4	255.0	238.9	230.9	228.2
65°	13152.6	10740.6	3660.3	438.9	359.7	327.5	287.2	237.6	216.1	202.7	200.0
67.5°	12409.0	9593.0	2045.6	405.4	346.3	322.1	273.8	221.5	197.3	181.2	179.9
68°	12180.9	9234.6	1734.2	402.7	349.0	322.1	272.5	217.4	194.6	177.2	175.8
70°	10830.6	7449.5	716.8	378.5	367.8	323.5	265.8	205.4	183.9	166.4	165.1
72.5°	8191.7	4315.3	378.5	328.8	358.4	318.1	268.4	196.0	174.5	154.4	151.7
75°	4514.0	1236.2	336.9	267.1	331.5	335.6	273.8	194.6	169.1	143.6	138.3
77.5°	1002.7	402.7	314.1	233.6	285.9	308.7	253.7	185.2	171.8	131.5	126.2
80°	383.9	327.5	298.0	179.9	226.8	261.7	210.7	165.1	175.8	123.5	116.8
82.5°	320.8	287.2	273.8	139.6	157.0	191.9	169.1	140.9	162.4	114.1	108.7
85°	236.2	277.8	193.3	110.1	115.4	118.1	118.1	110.1	139.6	100.7	95.3
87.5°	95.3	134.2	81.9	51.0	59.1	55.0	48.3	59.1	80.5	71.1	71.1
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)