

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: P237524

Luminaire Tested: **CTN-10-8-D-E1-T4-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237524  
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-10-8-D-E1-T4-7050-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 5000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 71451 lumens  
Efficiency: N/A  
Efficacy: 113.2 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G5

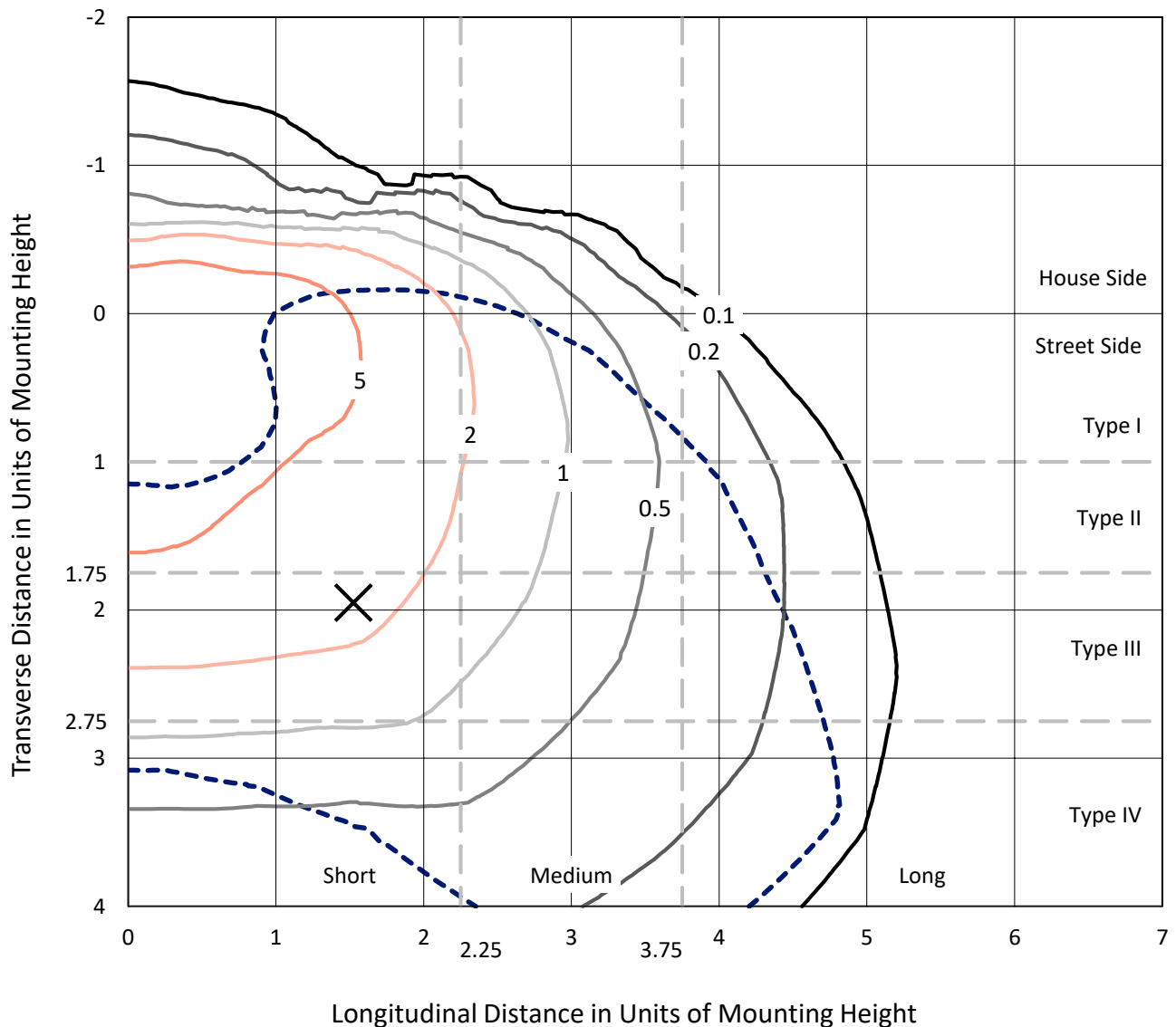
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

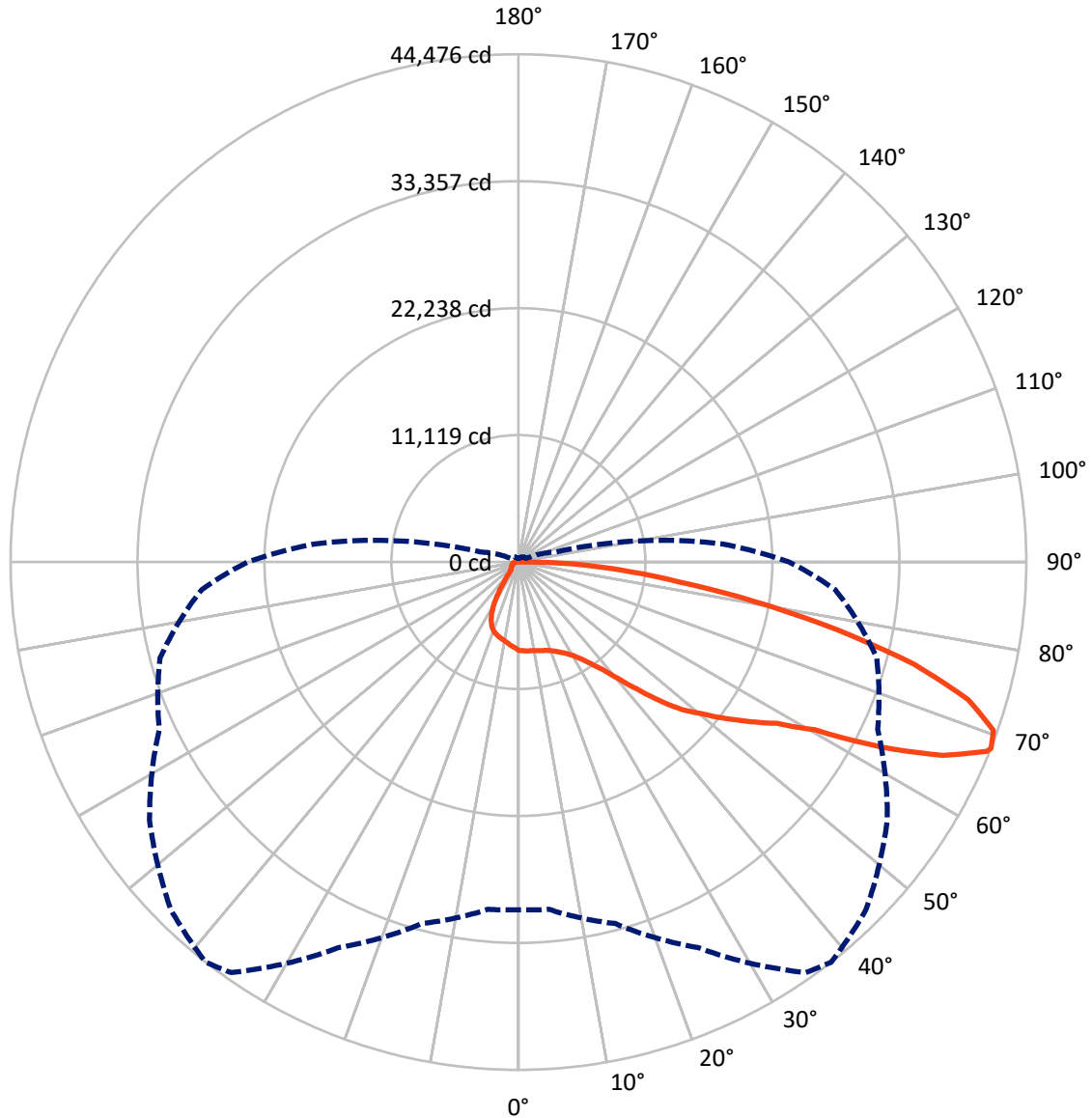
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.7 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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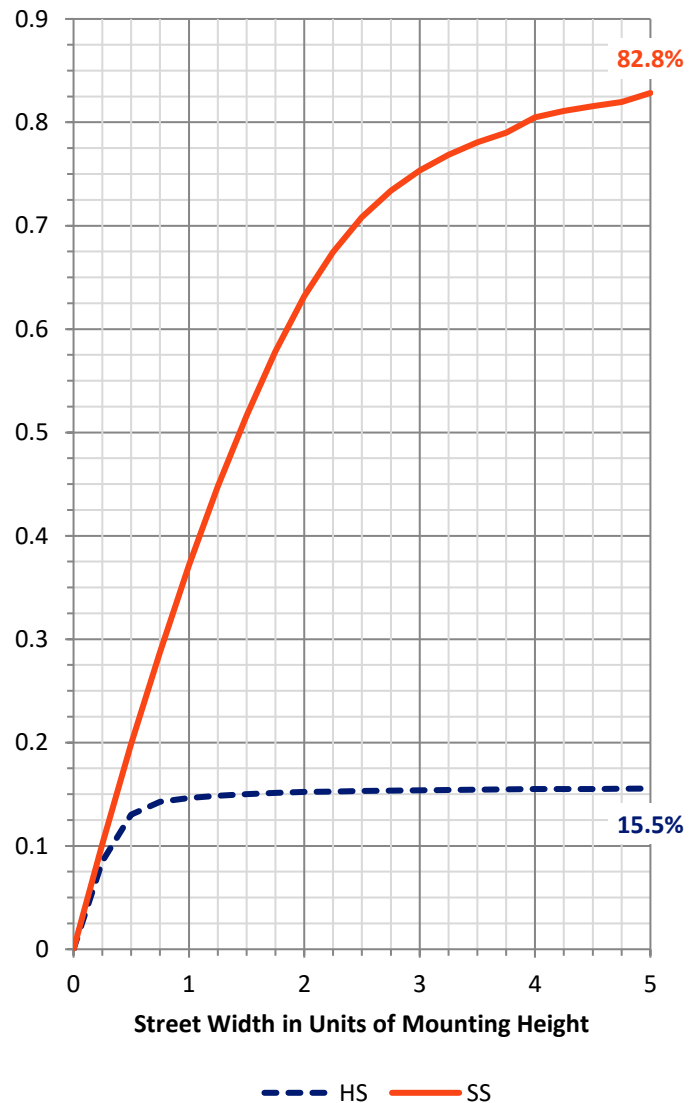
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11269.9	0.0	11269.9
	% Fixture	15.8	0.0	15.8
<b>Street Side</b>	Lumens	60181.1	0.0	60181.1
	% Fixture	84.2	0.0	84.2
<b>Total</b>	Lumens	71451.0	0.0	71451.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	731.6	1.0
10°-20°	2172.7	3.0
20°-30°	3626.0	5.1
30°-40°	5561.8	7.8
40°-50°	9575.4	13.4
50°-60°	14230.3	19.9
60°-70°	18825.4	26.3
70°-80°	13825.6	19.3
80°-90°	2902.1	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°	71451.0	100.0
0°-180°	71451.0	100.0



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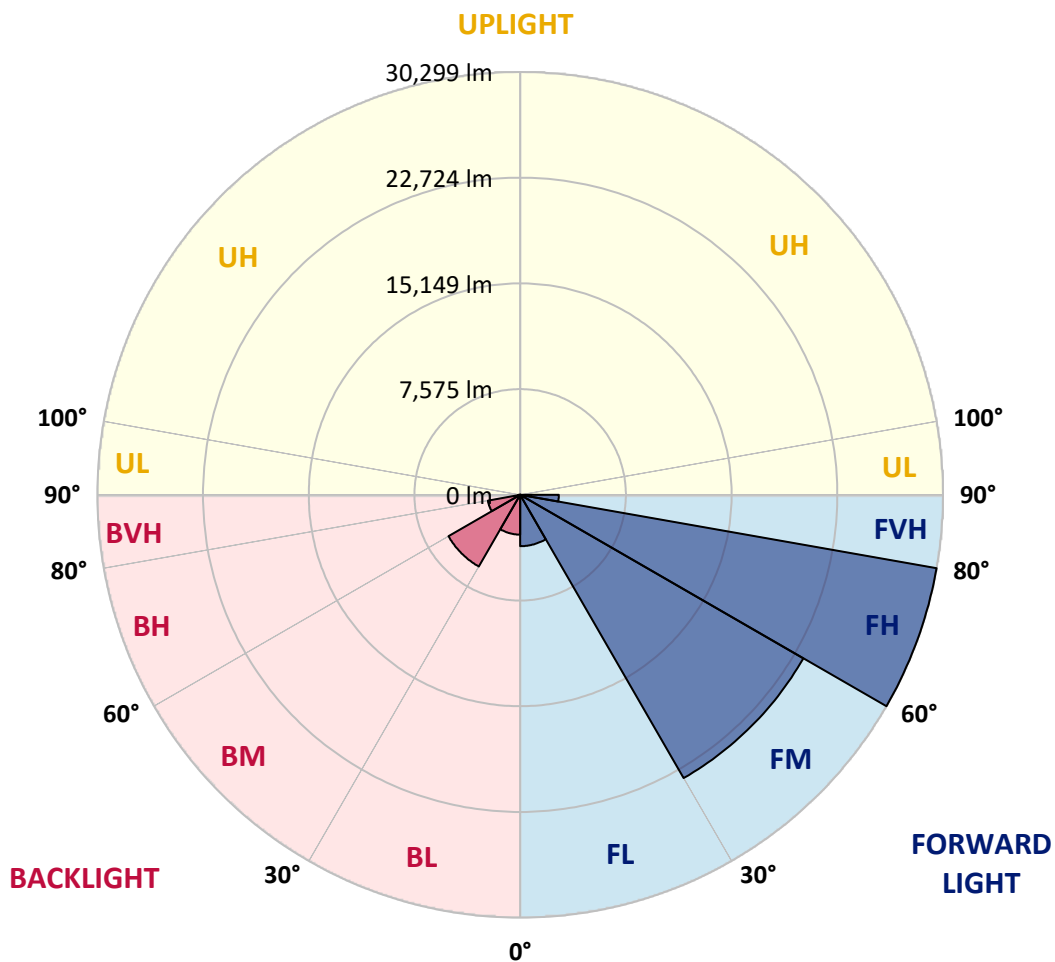
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3678.9	5.1			
FM	(30°-60°)	23434.8	32.8			
FH	(60°-80°)	30298.8	42.4			G5
FVH	(80°-90°)	2768.6	3.9			G5
BL	(0°-30°)	2851.5	4.0	B4/5000		
BM	(30°-60°)	5932.7	8.3	B4/8500		
BH	(60°-80°)	2352.3	3.3	B3/2500		G3/2500
BVH	(80°-90°)	133.5	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6
2.5°	7924.1	7869.3	7879.7	7913.7	7775.3	7764.8	7809.2	7759.6	7824.9	7793.6	7796.2
5°	7945.0	7892.8	7913.7	7965.9	7835.3	7832.7	7882.4	7819.7	7869.3	7830.1	7819.7
7.5°	7926.8	7879.7	7895.4	7945.0	7832.7	7840.6	7905.9	7885.0	7958.1	7918.9	7890.2
10°	7918.9	7887.6	7890.2	7958.1	7869.3	7890.2	7973.8	7986.8	8104.4	8070.4	8057.3
12.5°	7848.4	7824.9	7848.4	7955.5	7926.8	7968.5	8080.9	8148.8	8287.2	8274.1	8300.2
15°	7806.6	7796.2	7814.5	7939.8	7973.8	8041.7	8190.5	8323.7	8490.9	8514.4	8574.5
17.5°	7856.2	7871.9	7905.9	8007.7	8054.7	8125.3	8292.4	8475.2	8712.9	8814.8	8885.3
20°	8065.2	8083.5	8114.8	8180.1	8232.3	8292.4	8441.3	8650.2	8966.2	9125.6	9237.9
22.5°	8368.1	8336.8	8381.2	8436.1	8451.7	8504.0	8655.4	8864.4	9222.2	9462.5	9619.2
25°	8603.2	8582.3	8626.7	8720.7	8718.1	8765.1	8914.0	9128.2	9514.7	9859.5	10136.3
27.5°	8848.7	8835.7	8853.9	8979.3	9028.9	9086.4	9217.0	9457.3	9893.4	10327.0	10763.2
30°	9203.9	9232.6	9201.3	9345.0	9452.0	9517.3	9650.5	9945.7	10413.2	11006.0	11557.1
32.5°	9755.0	9768.1	9715.8	9875.1	10029.2	10128.5	10256.5	10643.0	11154.9	11878.4	12588.8
35°	10930.3	10932.9	10718.8	10695.2	10781.4	10925.1	11113.1	11687.7	12450.4	13565.6	14370.0
37.5°	12711.5	12625.4	12421.6	12024.6	11896.7	11922.8	12191.8	12991.0	14148.0	16206.1	16976.6
40°	14754.0	14654.7	14296.9	13771.9	13395.8	13372.3	13463.7	14422.3	16114.7	19175.7	19564.9
42.5°	16958.3	16890.4	16310.6	15767.3	15286.8	15211.0	15004.7	15965.8	18282.5	21826.7	21824.0
45°	18992.9	18979.8	18272.0	18003.0	17493.7	17295.2	17049.7	17796.7	20510.3	23916.1	23665.4
47.5°	20902.1	20862.9	20110.7	19802.5	19413.4	19306.3	19016.4	19538.7	22414.3	25867.1	25242.9
50°	22928.8	22808.7	21690.8	21380.0	20996.1	20912.5	20761.1	21361.8	24488.1	27572.6	26538.3
52.5°	25284.7	25101.8	23576.6	22999.3	22725.1	22780.0	22683.3	23221.4	26807.3	28998.6	27598.7
55°	28071.4	27523.0	26065.6	25018.3	24409.7	24663.1	24475.0	25146.2	29032.6	30108.6	28371.8
57.5°	30116.5	30113.8	29521.0	28032.3	26653.2	26666.3	26287.6	27052.8	30832.1	31213.4	28823.6
60°	32456.6	32595.0	32798.8	32138.0	30510.8	29829.2	28497.1	28941.2	32279.0	32015.2	29024.7
62.5°	34491.2	34572.2	35473.2	35726.6	35851.9	35684.8	32723.0	31116.8	33462.1	32461.8	29082.2
65°	34418.1	34410.2	36358.6	38056.3	40694.2	40843.0	39989.0	34347.5	34378.9	32519.3	28784.4
67.5°	31059.3	31218.6	33825.2	37463.4	43755.2	44225.3	43047.4	39038.3	34718.4	32493.2	28074.0
68°	30458.6	30526.5	32780.5	37254.5	43885.8	44476.0	43052.6	39430.1	34708.0	32495.8	27854.7
70°	26632.3	26734.2	29361.6	34723.6	43922.3	44126.1	42407.5	39644.2	34363.2	32252.9	26271.9
72.5°	21024.8	21142.4	23537.4	29299.0	41185.2	41177.4	39516.3	37849.9	33195.7	30476.9	22286.3
75°	15231.9	15615.8	17710.5	23012.4	35256.4	35794.5	35580.3	35248.6	29873.6	25754.8	15728.1
77.5°	10679.6	10875.5	12847.4	17308.3	27705.8	28528.5	29972.8	30401.1	24903.3	19126.1	7083.2
80°	6735.8	7104.0	8736.4	12291.0	20183.8	20943.9	22693.8	23414.6	18381.7	9381.5	1240.6
82.5°	3925.5	4144.9	5346.3	7960.7	13570.8	14101.0	15247.6	14362.2	7451.4	1248.4	689.5
85°	1901.4	2102.5	2870.3	4528.8	8472.6	9008.0	9627.0	6263.1	1232.8	491.0	464.9
87.5°	770.5	791.4	1175.3	2011.1	4223.3	4682.9	4531.4	2055.5	321.2	177.6	146.3
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°	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6	7759.6
2.5°	7809.2	7770.1	7723.0	7707.4	7597.7	7592.4	7501.0	7634.2	7595.1	7597.7	7629.0
5°	7814.5	7770.1	7678.6	7636.8	7519.3	7488.0	7336.5	7420.1	7331.3	7323.4	7375.7
7.5°	7869.3	7819.7	7689.1	7623.8	7404.4	7299.9	7156.3	7229.4	7093.6	7064.9	7075.3
10°	8015.6	7952.9	7793.6	7639.5	7367.8	7216.4	6934.3	6957.8	6837.6	6798.5	6832.4
12.5°	8237.6	8161.8	7971.2	7743.9	7399.2	7132.8	6788.0	6649.6	6466.8	6406.7	6425.0
15°	8540.5	8451.7	8201.0	7937.2	7467.1	7093.6	6623.5	6336.2	5981.0	5881.7	5845.2
17.5°	8872.2	8778.2	8488.3	8156.6	7587.2	7049.2	6435.4	5978.4	5466.5	5241.8	5228.8
20°	9261.4	9159.5	8856.6	8412.5	7683.9	6994.4	6200.4	5544.8	4878.8	4502.7	4476.6
22.5°	9708.0	9619.2	9277.0	8639.8	7733.5	6850.7	5845.2	4991.1	4158.0	3687.8	3664.3
25°	10233.0	10149.4	9668.8	8799.1	7678.6	6597.4	5359.4	4312.1	3309.1	2839.0	2818.1
27.5°	10859.8	10729.2	9977.0	8846.1	7516.7	6182.1	4750.8	3439.7	2444.6	2086.8	2068.5
30°	11572.8	11340.4	10266.9	8833.0	7229.4	5651.9	3912.4	2536.0	1736.8	1496.6	1488.7
32.5°	12471.3	12063.8	10543.8	8728.6	6819.4	4957.2	2977.4	1760.3	1248.4	1130.9	1128.3
35°	13970.4	13098.1	10846.7	8540.5	6263.1	4045.6	2063.3	1198.8	1016.0	992.5	992.5
37.5°	16206.1	14803.6	11277.7	8240.2	5542.2	3084.5	1358.1	953.3	955.9	969.0	971.6
40°	18501.9	16765.0	11901.9	7793.6	4701.2	2167.8	987.3	885.4	916.7	937.6	953.3
42.5°	20609.6	18541.0	12596.6	7182.4	3750.5	1431.3	882.8	851.4	867.1	882.8	898.5
45°	22377.7	20097.7	13252.2	6485.1	2778.9	1018.6	874.9	812.3	804.4	814.9	825.3
47.5°	23869.1	21364.4	13711.9	5698.9	1890.9	872.3	854.1	770.5	744.4	747.0	752.2
50°	25007.8	22260.2	13915.6	4834.4	1253.7	848.8	814.9	726.1	684.3	684.3	689.5
52.5°	25775.7	22821.7	13795.4	3860.2	901.1	835.8	783.5	679.1	629.4	637.3	642.5
55°	26345.0	23122.1	13322.7	2836.4	794.0	796.6	747.0	624.2	582.4	603.3	611.2
57.5°	26567.0	23114.3	12528.7	1958.8	788.8	736.5	694.7	577.2	543.3	572.0	585.0
60°	26486.1	22732.9	11374.3	1334.6	773.1	689.5	639.9	532.8	506.7	506.7	509.3
62.5°	26324.1	22197.5	9700.2	989.9	736.5	655.6	598.1	496.2	464.9	449.2	444.0
65°	25592.8	20899.5	7122.3	854.1	700.0	637.3	558.9	462.3	420.5	394.4	389.2
67.5°	24145.9	18666.4	3980.4	788.8	673.8	626.8	532.8	430.9	383.9	352.6	350.0
68°	23701.9	17969.1	3374.4	783.5	679.1	626.8	530.2	423.1	378.7	344.8	342.1
70°	21074.5	14495.4	1394.7	736.5	715.6	629.4	517.1	399.6	357.8	323.9	321.2
72.5°	15939.7	8396.9	736.5	639.9	697.3	619.0	522.4	381.3	339.5	300.4	295.1
75°	8783.4	2405.5	655.6	519.7	645.1	652.9	532.8	378.7	329.1	279.5	269.0
77.5°	1951.0	783.5	611.2	454.5	556.3	600.7	493.6	360.4	334.3	256.0	245.5
80°	747.0	637.3	579.8	350.0	441.4	509.3	410.0	321.2	342.1	240.3	227.2
82.5°	624.2	558.9	532.8	271.6	305.6	373.5	329.1	274.2	316.0	222.0	211.6
85°	459.7	540.6	376.1	214.2	224.6	229.8	229.8	214.2	271.6	195.9	185.4
87.5°	185.4	261.2	159.3	99.2	114.9	107.1	94.0	114.9	156.7	138.4	138.4
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)