

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: P237549

Luminaire Tested: **CTN-10-9-D-E1-T3-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237549  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-26)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-9-D-E1-T3-7050-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 5000K LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 86553 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B4 - U0 - G5

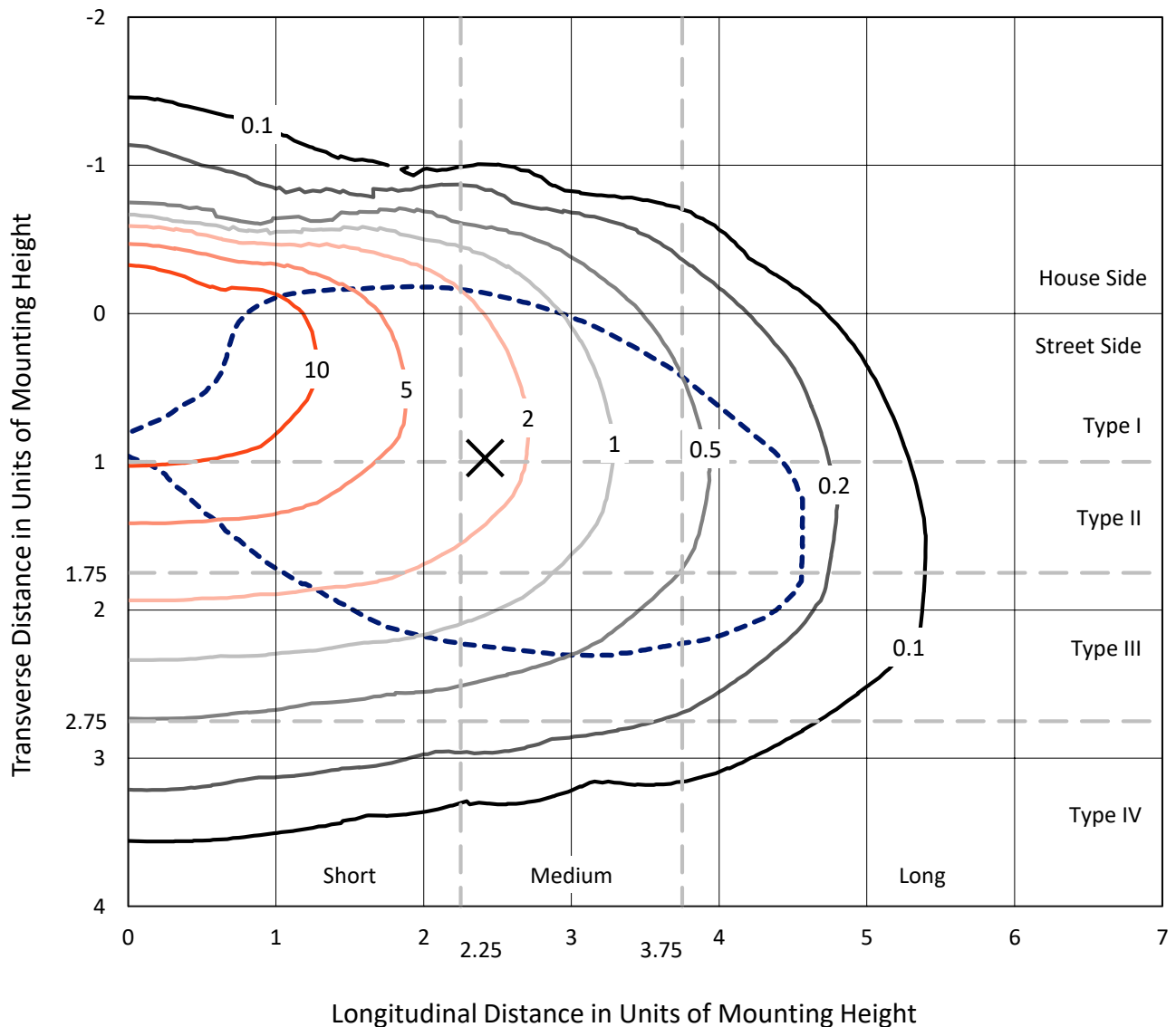
Input Watts (W): 760  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

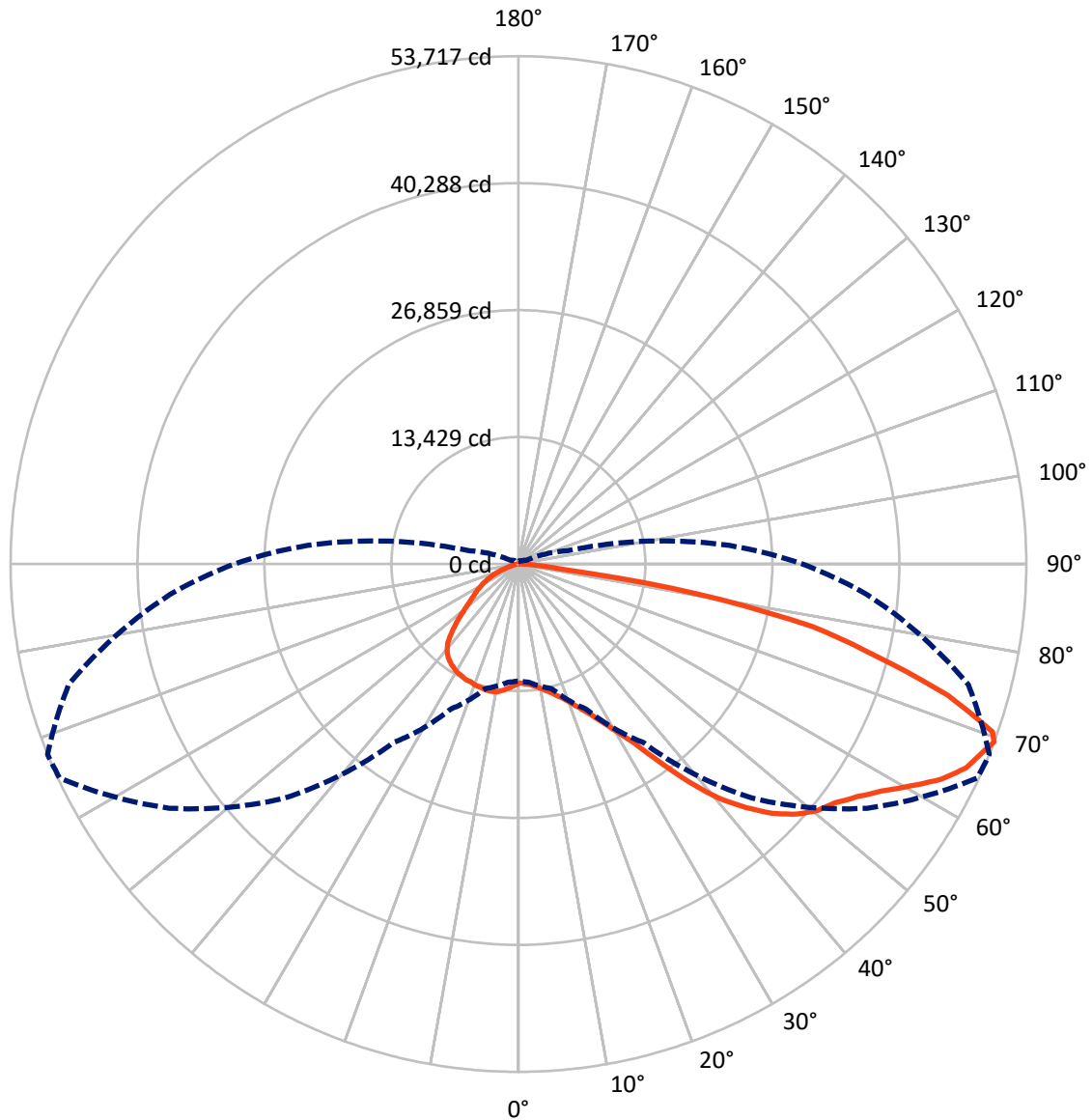
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 17.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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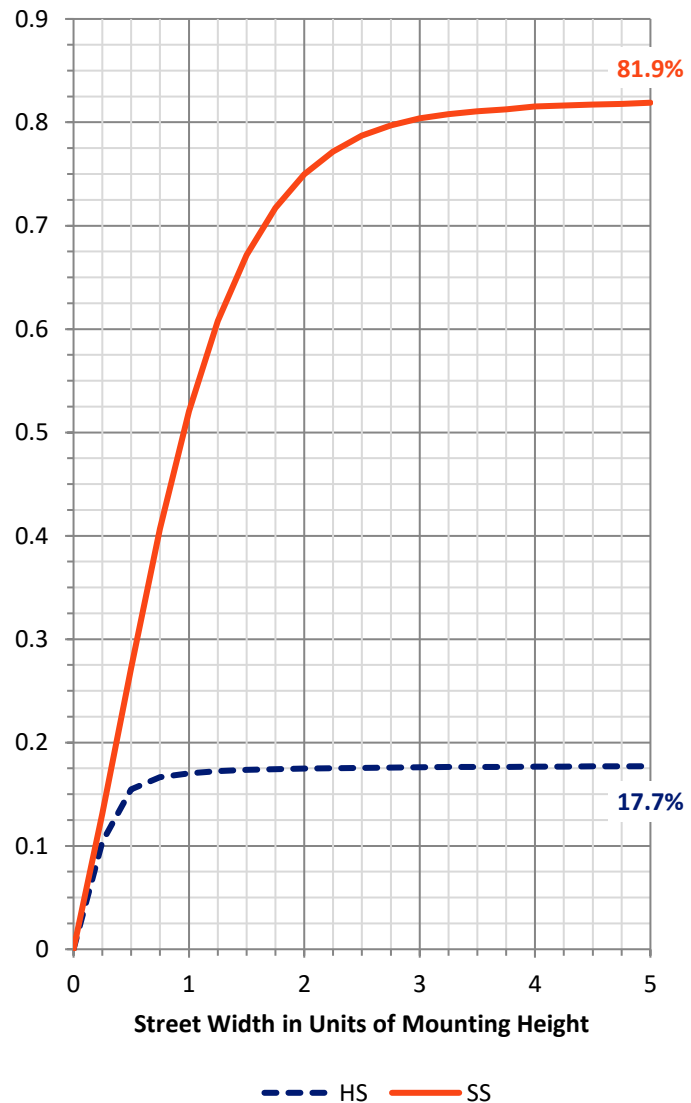
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	15533.2	0.0	15533.2
	% Fixture	17.9	0.0	17.9
<b>Street Side</b>	Lumens	71019.9	0.0	71019.9
	% Fixture	82.1	0.0	82.1
<b>Total</b>	Lumens	86553.0	0.0	86553.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1264.3	1.5
10°-20°	3967.5	4.6
20°-30°	6782.0	7.8
30°-40°	10450.3	12.1
40°-50°	14996.7	17.3
50°-60°	18049.1	20.9
60°-70°	18940.9	21.9
70°-80°	10973.1	12.7
80°-90°	1129.1	1.3
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°	86553.0	100.0
0°-180°	86553.0	100.0



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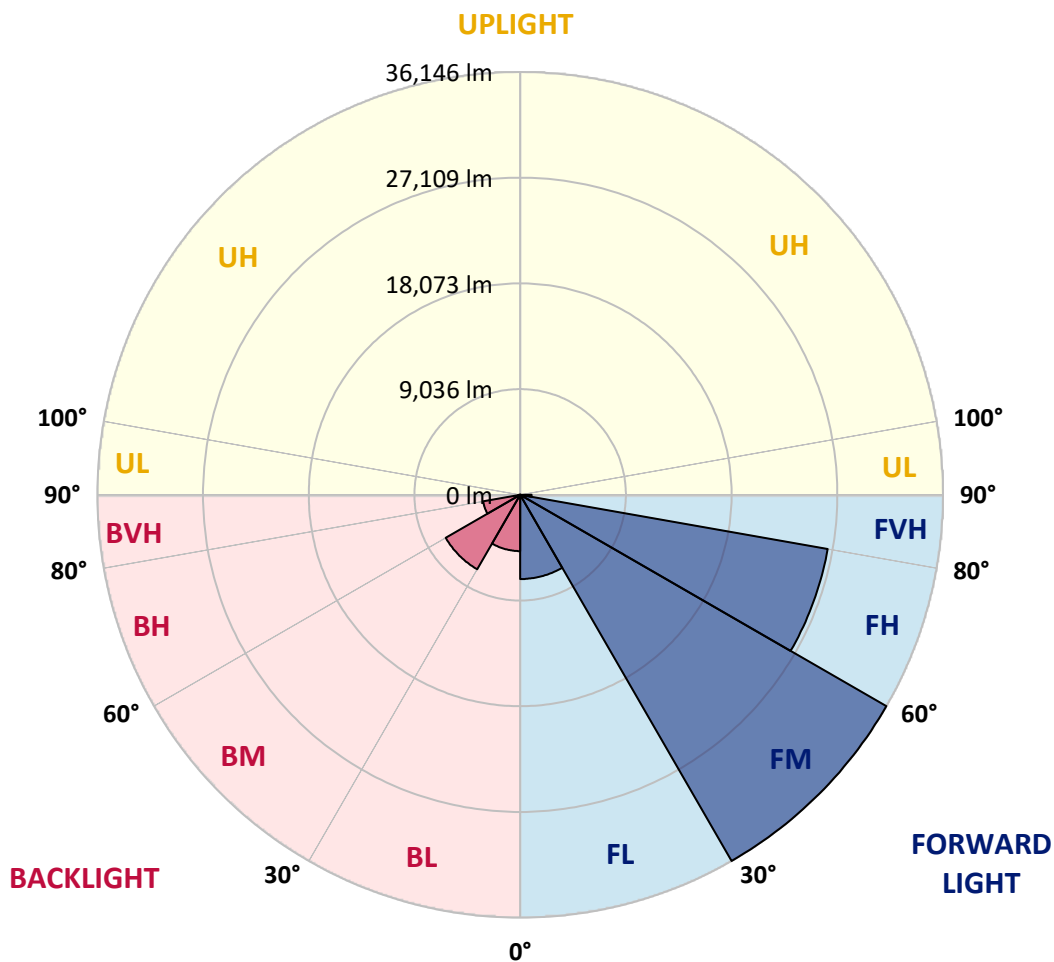
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	7200.8	8.3			
FM	(30°-60°)	36145.8	41.8			
FH	(60°-80°)	26692.0	30.8			G5
FVH	(80°-90°)	981.3	1.1			G5
BL	(0°-30°)	4813.0	5.6	B4/5000		
BM	(30°-60°)	7350.3	8.5	B4/8500		
BH	(60°-80°)	3222.0	3.7	B4/5000		G4/5000
BVH	(80°-90°)	147.8	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6
2.5°	12730.5	12628.6	12640.6	12721.5	12481.6	12583.6	12520.6	12652.6	12673.6	12610.6	12667.6
5°	12982.4	12895.5	12892.5	12973.4	12706.5	12784.5	12685.5	12775.5	12802.5	12736.5	12835.5
7.5°	13471.3	13378.3	13360.3	13441.3	13102.4	13126.4	12991.4	13036.4	13060.4	12970.4	13069.4
10°	14173.0	14071.1	14005.1	14050.1	13669.2	13609.2	13378.3	13372.3	13408.3	13285.3	13444.3
12.5°	14958.8	14838.8	14742.8	14751.8	14317.0	14215.0	13909.1	13801.2	13825.1	13660.2	13852.1
15°	15813.5	15639.5	15549.5	15552.5	15063.7	14892.8	14499.9	14323.0	14308.0	14149.0	14260.0
17.5°	16842.1	16701.1	16587.2	16527.2	16008.4	15669.5	15201.7	14970.7	14886.8	14781.8	14724.8
20°	18050.7	17873.7	17753.8	17732.8	17097.0	16647.2	16026.4	15720.5	15621.5	15534.5	15279.6
22.5°	19397.2	19217.3	19052.3	19025.3	18350.6	17807.8	16974.0	16596.2	16509.2	16410.2	15900.4
25°	20638.8	20617.8	20434.8	20404.8	19754.1	19049.3	18071.7	17588.8	17588.8	17471.9	16689.1
27.5°	22024.3	22054.3	21889.3	21853.3	21241.5	20461.8	19298.2	18836.4	18932.4	18722.4	17681.8
30°	23484.8	23421.8	23376.8	23415.8	22849.0	22024.3	20812.7	20422.8	20572.8	20332.9	19013.3
32.5°	24792.3	24744.3	24774.3	24924.3	24516.4	23754.7	22714.0	22471.1	22615.1	22765.0	21400.5
35°	25826.9	25725.0	26102.8	26432.7	26315.8	25593.0	24756.3	25269.1	25665.0	26348.8	24918.3
37.5°	26738.6	26663.6	27122.5	27797.2	27944.2	27542.3	27284.4	28714.9	29167.8	30088.4	28004.2
40°	27194.5	27179.5	27743.3	28622.0	29218.7	29479.7	29932.5	31881.8	32541.6	32793.5	30352.3
42.5°	27047.5	27095.5	28091.1	29446.7	30412.3	31530.9	32442.6	34586.9	35192.7	34985.7	32409.6
45°	26636.7	26660.6	27671.3	29785.5	31447.0	33639.2	34856.8	37094.0	37630.8	36902.1	34047.1
47.5°	26066.9	26075.8	27143.5	29551.6	32292.7	35546.5	36938.0	39097.3	39532.1	38503.5	35225.6
50°	25296.1	25311.1	26585.7	29257.7	33021.4	37109.0	38566.5	40650.7	40986.6	39640.1	36245.3
52.5°	24321.5	24453.4	25847.9	28786.9	33477.3	38218.6	39799.0	41790.3	41955.3	40998.6	37148.0
55°	23196.9	23334.8	24909.3	28148.1	33654.2	38848.4	40662.7	43193.8	43457.8	42516.1	37882.7
57.5°	21865.3	22054.3	23712.7	27110.5	33240.3	39112.3	41541.4	44927.2	45284.1	44102.5	38638.4
60°	20320.9	20554.8	22300.2	25814.9	32283.7	39391.2	43184.8	47251.4	47665.3	45808.9	39298.2
62.5°	18707.4	18857.4	20434.8	24048.6	30751.2	39607.1	44954.2	50115.4	50151.4	47305.4	39664.1
65°	16548.2	16707.1	18119.6	21817.3	28451.0	38920.3	45847.9	52124.7	52016.7	48478.0	39541.1
67.5°	14077.1	14227.0	15381.6	19043.3	25293.1	36995.0	45542.0	52925.4	52997.4	49329.7	38362.5
69°	12361.7	12559.6	13648.2	16935.1	23061.9	35024.7	45029.2	53549.2	53717.2	49251.7	36998.0
70°	10895.2	11150.1	12184.7	15072.7	21172.6	33234.3	44039.5	53195.3	53207.3	48463.0	35741.5
72.5°	7116.5	7272.4	7452.4	9779.6	15231.7	26336.8	38971.3	47176.4	47488.3	43244.8	31249.0
75°	3520.8	3658.7	4330.5	5173.2	7833.3	17642.8	30898.2	38650.4	39241.2	36725.1	25602.0
77.5°	1943.3	1970.3	2207.2	3388.8	4060.6	7977.2	21118.6	30811.2	31845.8	29929.5	18386.5
80°	1211.6	1205.6	1259.6	1577.4	2276.2	3781.7	8918.9	17291.9	19151.3	15627.5	7266.5
82.5°	944.7	926.7	929.7	1019.6	962.7	1781.4	3712.7	5035.2	5080.2	4510.4	2828.0
85°	482.8	545.8	647.8	677.8	569.8	968.7	1709.4	1988.3	2036.3	1784.4	1472.5
87.5°	161.9	164.9	173.9	170.9	152.9	332.9	632.8	737.7	656.8	371.9	503.8
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°	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6	12589.6
2.5°	12754.5	12727.5	12781.5	12904.5	12802.5	12895.5	12802.5	13114.4	13078.4	13057.4	13117.4
5°	12931.5	12928.5	13015.4	13213.4	13204.4	13369.3	13279.3	13588.2	13543.2	13537.2	13591.2
7.5°	13171.4	13228.4	13321.3	13525.3	13528.3	13663.2	13561.2	13804.2	13705.2	13681.2	13756.2
10°	13537.2	13552.2	13624.2	13765.2	13567.2	13627.2	13459.3	13651.2	13513.3	13498.3	13609.2
12.5°	13888.1	13909.1	13801.2	13756.2	13501.3	13423.3	13129.4	13231.4	13072.4	13057.4	13111.4
15°	14263.0	14122.0	13864.1	13717.2	13276.3	12994.4	12664.6	12463.6	12190.7	12064.8	12112.7
17.5°	14652.9	14380.0	13897.1	13540.2	12949.5	12538.6	11881.8	11540.0	11135.1	10928.2	10889.2
20°	15078.7	14694.8	13978.1	13450.3	12619.6	11809.9	11009.1	10226.4	9764.6	9551.6	9494.7
22.5°	15558.5	15090.7	14092.1	13150.4	12103.8	11120.1	9767.6	8780.9	8109.2	7902.2	7845.2
25°	16158.3	15534.5	14248.0	13075.4	11608.9	9992.5	8310.1	7191.5	6408.8	6093.9	6027.9
27.5°	16887.1	16146.3	14502.9	12718.5	10739.2	8735.9	6861.6	5575.0	4762.3	4390.5	4309.5
30°	17948.7	16929.1	14673.9	12508.6	9965.5	7431.4	5332.1	3895.6	3124.9	2852.0	2780.0
32.5°	20042.0	18272.6	15021.7	12025.8	8822.9	5913.9	3670.7	2390.2	1850.4	1694.4	1634.4
35°	23151.9	20803.7	15522.6	11453.0	7539.4	4207.5	2180.2	1385.5	1112.6	1055.6	1037.6
37.5°	25985.9	23301.8	16491.2	10571.3	5853.9	2588.1	1262.6	887.7	818.7	827.7	827.7
40°	28124.1	25158.2	17621.8	9407.7	3970.6	1451.5	866.7	737.7	752.7	755.7	752.7
42.5°	30127.4	26858.6	18167.6	8124.1	2300.2	962.7	752.7	686.8	698.8	689.8	683.8
45°	31701.9	28076.1	18329.6	6396.8	1259.6	860.7	707.8	638.8	632.8	638.8	644.8
47.5°	32724.5	28819.9	17960.7	4897.3	950.7	800.7	680.8	605.8	590.8	632.8	629.8
50°	33483.3	29329.7	16530.2	3724.7	926.7	749.7	647.8	566.8	572.8	623.8	617.8
52.5°	34035.1	29461.7	14961.7	2987.0	884.7	713.7	617.8	548.8	542.8	581.8	584.8
55°	34472.9	29107.8	13984.1	2351.2	848.7	677.8	593.8	530.8	500.8	512.8	509.8
57.5°	34745.8	28702.9	12868.5	1961.3	815.7	638.8	560.8	482.8	437.8	440.8	437.8
60°	34685.8	28433.0	11587.9	1607.4	773.7	602.8	515.8	431.8	386.9	374.9	374.9
62.5°	34565.9	27878.2	10265.4	1400.5	737.7	590.8	461.8	392.9	359.9	347.9	347.9
65°	33750.2	26555.7	8496.0	1199.6	701.8	557.8	431.8	377.9	338.9	326.9	326.9
67.5°	31725.9	24369.4	6579.7	1043.6	674.8	503.8	422.9	368.9	326.9	311.9	311.9
69°	30016.5	22426.1	5404.1	959.7	647.8	479.8	422.9	371.9	320.9	302.9	302.9
70°	28681.9	20899.7	4471.4	908.7	620.8	464.8	422.9	374.9	317.9	296.9	293.9
72.5°	24612.4	16317.3	2483.1	770.7	515.8	422.9	413.9	377.9	302.9	272.9	269.9
75°	18884.4	11471.0	1478.5	650.8	434.8	386.9	392.9	362.9	278.9	245.9	245.9
77.5°	11800.9	5269.2	1100.6	509.8	353.9	335.9	341.9	320.9	251.9	224.9	224.9
80°	4030.6	2378.2	830.7	392.9	254.9	260.9	281.9	269.9	224.9	203.9	200.9
82.5°	2207.2	1547.5	587.8	272.9	176.9	215.9	215.9	218.9	194.9	179.9	176.9
85°	1199.6	806.7	362.9	164.9	126.0	158.9	152.9	164.9	158.9	146.9	143.9
87.5°	416.9	275.9	120.0	60.0	51.0	54.0	63.0	84.0	81.0	84.0	87.0
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)