

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: P237573

Luminaire Tested: **CTN-10-9-D-E1-T2-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237573  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-25)  
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-T2-7050-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 5000K LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 84894 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G5

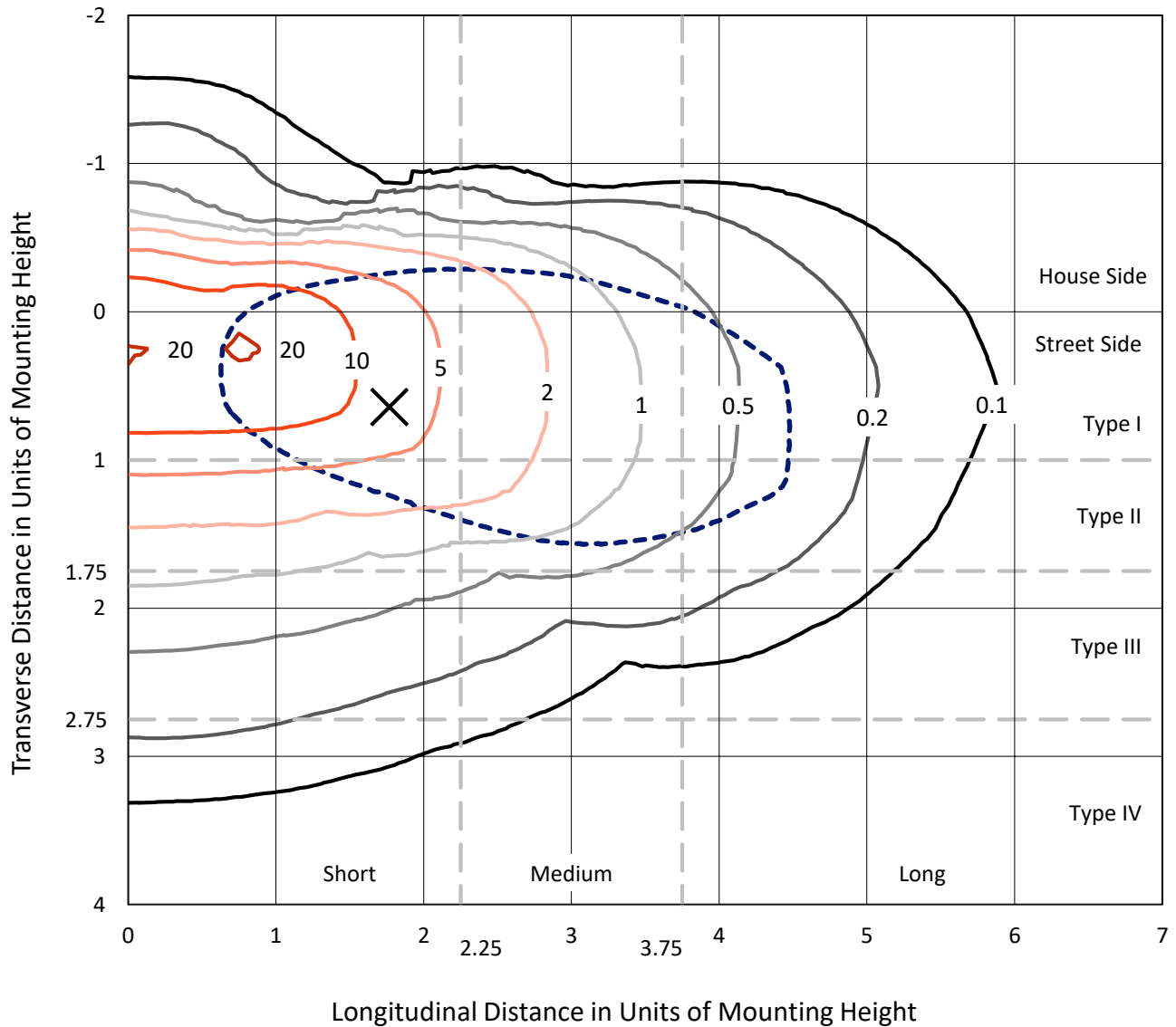
Input Watts (W): 760  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

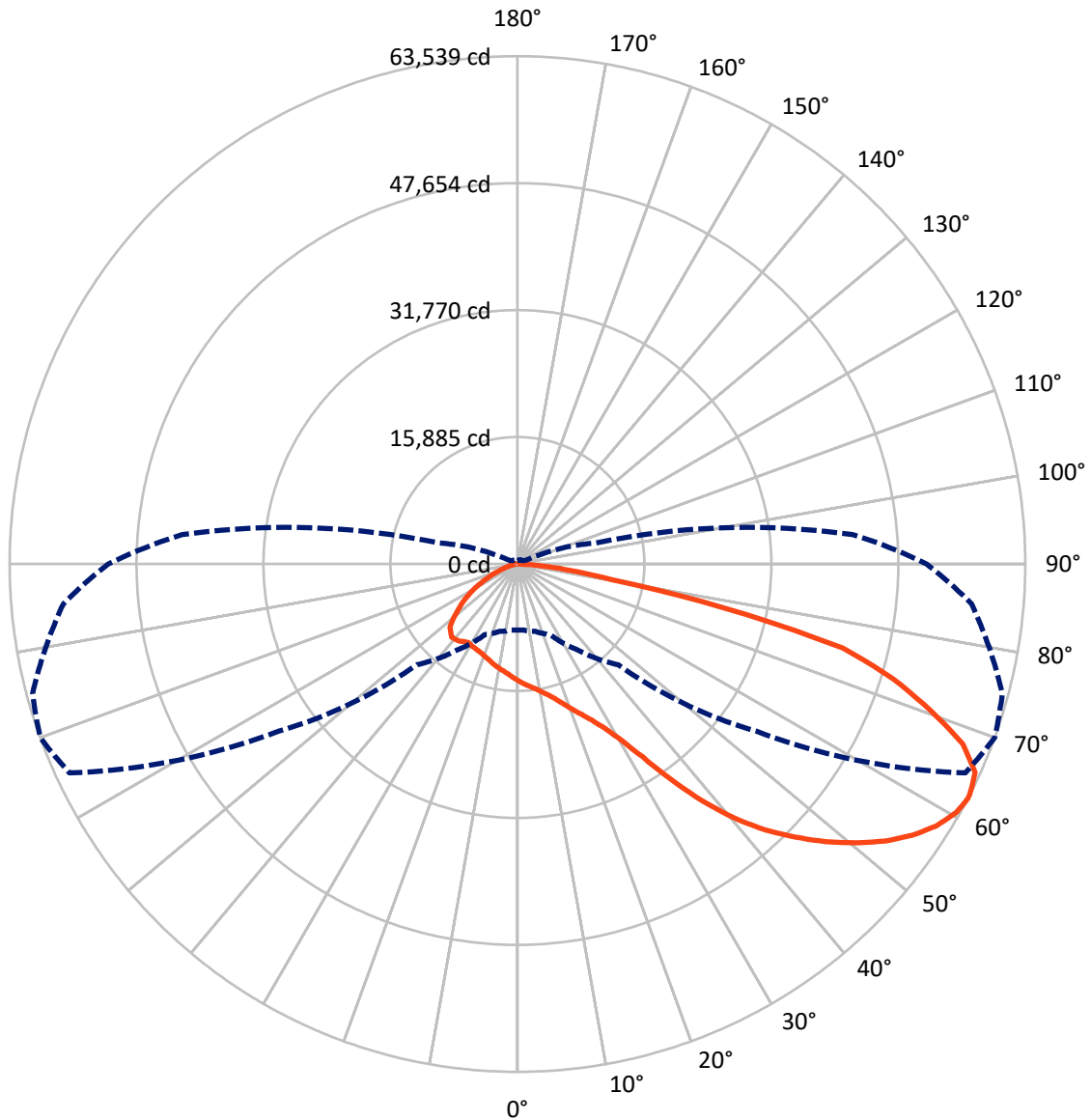
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 20.9 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral    - - - Horizontal Cone Through 62-Deg Vertical

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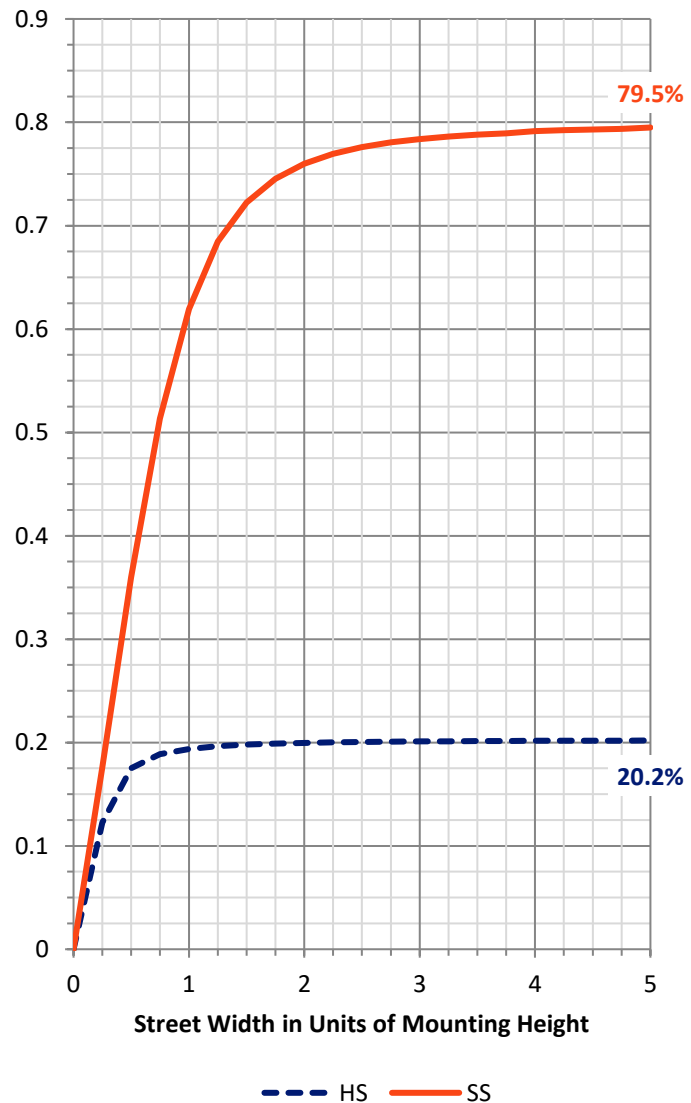
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	17365.8	0.0	17365.8
	% Fixture	20.5	0.0	20.5
<b>Street Side</b>	Lumens	67528.2	0.0	67528.2
	% Fixture	79.5	0.0	79.5
<b>Total</b>	Lumens	84894.0	0.0	84894.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1391.2	1.6
10°-20°	4232.6	5.0
20°-30°	7126.1	8.4
30°-40°	10760.1	12.7
40°-50°	15089.1	17.8
50°-60°	17635.6	20.8
60°-70°	17109.8	20.2
70°-80°	10002.3	11.8
80°-90°	1547.2	1.8
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°	84894.0	100.0
0°-180°	84894.0	100.0



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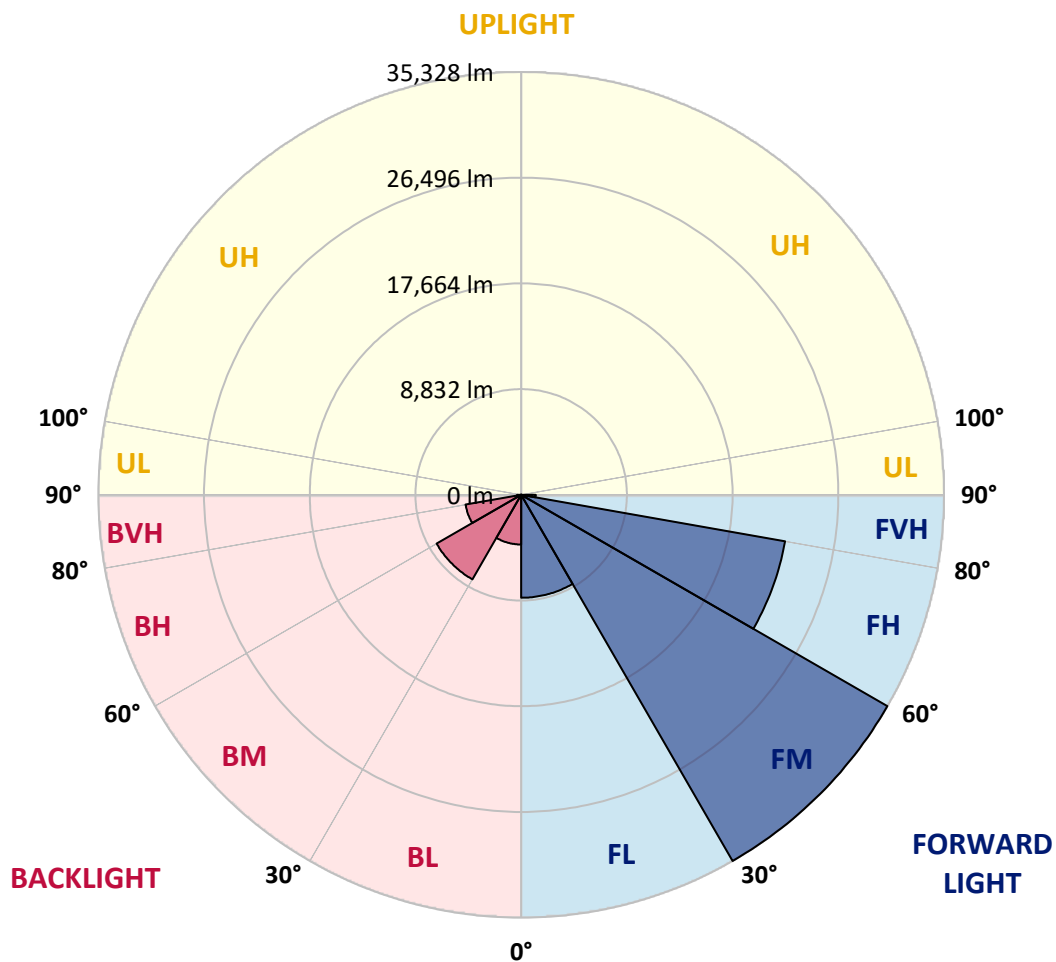
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	8597.9	10.1			
FM	(30°-60°)	35327.5	41.6			
FH	(60°-80°)	22390.2	26.4			G5
FVH	(80°-90°)	1212.5	1.4			G5
BL	(0°-30°)	4152.0	4.9	B4/5000		
BM	(30°-60°)	8157.3	9.6	B4/8500		
BH	(60°-80°)	4721.8	5.6	B4/5000		G4/5000
BVH	(80°-90°)	334.7	0.4			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0
2.5°	15849.6	15744.6	15699.6	15765.6	15324.8	15333.8	15120.8	15087.9	14985.9	14841.9	14683.0
5°	16755.3	16632.3	16569.4	16608.3	16143.5	16062.5	15714.6	15543.7	15342.8	15162.8	14817.9
7.5°	17625.0	17499.0	17451.1	17430.1	16869.2	16746.3	16302.4	15999.5	15726.6	15495.7	15027.9
10°	18500.7	18371.7	18272.8	18299.8	17712.0	17493.0	16980.2	16563.4	16212.5	15912.6	15267.8
12.5°	19370.4	19214.5	19106.5	19106.5	18527.7	18314.8	17739.0	17205.1	16758.3	16380.4	15570.7
15°	20261.1	20057.2	20033.2	20033.2	19418.4	19160.5	18593.7	18002.9	17454.1	16968.2	15936.6
17.5°	21181.8	20923.9	20917.9	20956.9	20393.0	20102.1	19568.3	19016.5	18317.8	17703.0	16383.4
20°	21787.6	21556.7	21502.7	21619.6	21175.8	20986.8	20414.0	20027.2	19355.4	18623.7	16959.2
22.5°	22249.4	22108.5	22159.4	22351.4	22135.5	21973.5	21370.7	21022.8	20417.0	19667.3	17736.0
25°	22714.3	22621.3	22738.2	23077.1	23095.1	23140.1	22636.3	22192.4	21628.6	20959.9	18746.6
27.5°	22570.3	22543.3	22897.2	23596.0	23979.8	24183.8	23901.9	23745.9	23230.1	22525.3	20018.2
30°	22675.3	22609.3	23035.1	23919.8	24774.6	25365.4	25365.4	25719.2	25494.3	24786.6	21958.5
32.5°	22363.4	22240.4	22729.3	23997.8	25467.3	26615.9	27125.8	28379.3	28772.2	28517.3	25806.2
35°	20926.9	21019.8	21976.5	23685.9	25944.2	27839.5	29189.1	31876.1	33084.7	33372.6	30235.7
37.5°	20030.2	20069.2	21043.8	23176.1	26112.1	29042.1	31447.3	35912.8	37625.2	37802.1	34122.4
40°	18794.6	18941.5	20033.2	22492.3	26016.1	30058.8	33879.5	39892.4	41796.8	41649.8	37523.2
42.5°	17819.9	17861.9	18815.6	21406.7	25596.3	30868.5	36332.6	43506.2	45500.5	45089.6	40885.1
45°	16605.3	16683.3	17586.0	20057.2	24849.5	31279.3	38449.9	46895.0	48721.4	48208.6	43797.1
47.5°	15135.8	15477.7	16422.4	18602.7	23584.0	31237.4	40243.3	49828.0	51912.3	51123.6	46520.1
50°	12190.8	12607.7	14497.1	17292.1	21925.5	30649.6	41670.8	53057.9	54842.3	54047.6	49006.3
52.5°	10649.4	10730.3	11693.0	15819.6	19982.2	29336.0	42642.5	55727.0	57586.4	56749.7	51396.5
55°	9953.6	10037.6	10523.4	13435.4	18197.8	27008.8	42999.3	58273.1	59922.6	58962.9	53366.8
57.5°	9344.8	9371.8	9944.6	11363.1	16497.4	23943.8	42246.6	60396.4	61808.9	60504.4	54734.3
60°	8649.1	8757.0	9320.8	10373.5	14581.0	20384.1	39667.5	61754.9	63089.5	61928.9	56152.9
62°	8259.2	8286.2	8727.0	9758.7	13096.5	17810.9	36455.6	61832.9	63539.3	62804.6	57025.6
62.5°	8145.2	8163.2	8580.1	9602.7	12790.6	17301.1	35579.9	61769.9	63512.4	62957.5	57217.5
65°	7491.4	7533.4	7908.3	8865.0	11450.1	15312.8	31477.3	60741.3	62933.5	62699.6	57199.5
67.5°	6696.7	6708.7	7107.6	7968.3	10067.6	13444.4	26439.0	58774.0	60099.5	59796.6	54695.4
70°	5476.1	5695.1	6129.9	6888.7	8328.2	11153.2	20111.1	52647.1	54821.3	55121.2	50208.9
72.5°	4162.6	4147.6	4300.5	4828.4	6066.9	8568.1	13576.4	44112.0	49150.2	50772.7	45257.6
75°	2570.1	2669.1	3310.9	3733.7	4348.5	6042.9	8511.1	30706.5	42027.7	44831.7	40003.4
77.5°	1997.3	2015.3	2348.2	3080.0	3562.8	4282.5	5308.2	16731.3	26346.0	33318.6	31156.4
80°	1520.5	1553.5	1772.4	1931.3	2507.1	2609.1	3541.8	8655.0	11998.9	16806.3	20929.9
82.5°	917.7	968.7	1172.6	1265.6	1382.5	1307.6	1904.4	4669.4	6651.7	8601.1	10658.4
85°	461.8	554.8	779.7	737.7	626.8	578.8	815.7	2258.2	3178.9	4207.6	4891.3
87.5°	117.0	141.0	182.9	218.9	185.9	152.9	221.9	611.8	629.8	602.8	1688.4
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°	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0	14605.0
2.5°	14629.0	14506.1	14281.1	14152.2	13831.3	13708.3	13477.4	13561.4	13510.4	13459.4	13462.4
5°	14653.0	14431.1	14002.2	13693.3	13228.5	12991.6	12688.7	12640.7	12508.7	12427.8	12436.8
7.5°	14704.0	14386.1	13780.3	13288.5	12634.7	12262.8	11858.0	11789.0	11591.0	11501.1	11513.1
10°	14832.9	14458.1	13636.4	12913.6	12175.8	11660.0	11186.2	11033.2	10844.3	10742.3	10736.3
12.5°	15030.9	14566.0	13432.4	12628.7	11732.0	11063.2	10517.4	10271.5	10001.6	9911.6	9920.6
15°	15345.8	14704.0	13261.5	12235.8	11195.2	10499.4	9824.7	9527.8	9242.8	9137.9	9128.9
17.5°	15729.6	14829.9	13141.5	11774.0	10730.3	9896.6	9302.8	8898.0	8418.1	8349.2	8274.2
20°	16110.5	15081.9	13033.6	11438.1	10178.5	9290.8	8514.1	8100.2	7413.5	7155.6	7062.6
22.5°	16665.3	15480.7	13018.6	11039.2	9623.7	8628.1	7581.4	6912.6	6156.9	5719.1	5623.1
25°	17406.1	15918.6	13057.5	10736.3	9002.9	7785.3	6372.8	5407.2	4687.4	4192.6	4090.6
27.5°	18368.7	16515.4	13174.5	10403.5	8439.1	6774.7	5017.3	4024.6	3415.8	3002.0	2906.0
30°	19787.3	17517.0	13357.4	10094.6	7617.4	5458.1	3688.7	2900.0	2426.2	2171.3	2168.3
32.5°	23098.1	19754.3	13462.4	9710.7	6852.7	4126.6	2654.1	2099.3	1721.4	1625.4	1706.4
35°	26894.8	22924.2	14272.1	9296.8	5656.1	3035.0	1895.4	1493.5	1337.5	1361.5	1406.5
37.5°	30397.6	25971.1	15507.7	8625.1	4528.5	2138.3	1361.5	1187.6	1154.6	1241.6	1322.5
40°	33498.6	28604.2	16566.4	7887.3	3202.9	1493.5	1091.6	1097.6	1064.6	1103.6	1130.6
42.5°	36539.5	31045.4	17685.0	6894.6	2135.3	1103.6	986.7	1040.6	1001.7	1007.7	968.7
45°	39562.5	33621.5	18167.8	5668.1	1430.5	956.7	923.7	986.7	983.7	959.7	902.7
47.5°	42171.6	35396.9	18779.6	4276.5	1064.6	869.7	878.7	923.7	953.7	911.7	884.7
50°	44414.9	37280.3	18308.8	2831.0	950.7	812.7	845.7	845.7	893.7	821.7	788.7
52.5°	46559.1	39154.7	17100.2	1865.4	872.7	773.7	806.7	785.7	806.7	734.7	725.8
55°	47845.7	40123.3	15639.7	1454.5	824.7	740.7	755.7	749.7	731.8	656.8	671.8
57.5°	49261.2	41238.9	13822.3	1220.6	803.7	701.8	704.8	695.8	641.8	590.8	593.8
60°	50391.8	42072.7	11879.0	1076.6	779.7	680.8	638.8	623.8	548.8	518.8	521.8
62°	51183.6	42111.6	10184.5	1001.7	749.7	665.8	599.8	566.8	482.8	458.8	455.8
62.5°	51270.5	41964.7	9770.7	983.7	737.7	659.8	596.8	548.8	464.8	446.8	440.8
65°	50946.6	40330.3	7794.3	884.7	686.8	623.8	554.8	476.8	398.9	374.9	365.9
67.5°	48535.5	37403.3	5953.0	803.7	623.8	599.8	512.8	419.9	353.9	323.9	317.9
70°	43833.1	33441.6	4249.6	701.8	560.8	545.8	515.8	383.9	326.9	284.9	278.9
72.5°	38608.8	29225.0	2891.0	623.8	497.8	449.8	380.9	362.9	305.9	251.9	245.9
75°	32856.8	23275.1	2057.3	536.8	428.9	380.9	320.9	335.9	287.9	224.9	218.9
77.5°	25209.4	17118.2	1526.5	440.8	332.9	308.9	269.9	296.9	260.9	203.9	200.9
80°	17214.1	11822.0	1085.6	332.9	218.9	218.9	227.9	254.9	230.9	182.9	179.9
82.5°	9677.7	6222.9	641.8	239.9	149.9	149.9	176.9	206.9	191.9	158.9	155.9
85°	4009.6	2252.2	338.9	149.9	99.0	102.0	126.0	152.9	149.9	126.0	123.0
87.5°	1394.5	566.8	99.0	51.0	42.0	45.0	51.0	72.0	72.0	63.0	66.0
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)