

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: P237538

Luminaire Tested: **CTN-10-4-D-E1-T3-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237538  
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-10-4-D-E1-T3-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 39809 lumens  
Efficiency: N/A  
Efficacy: 129.2 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G5

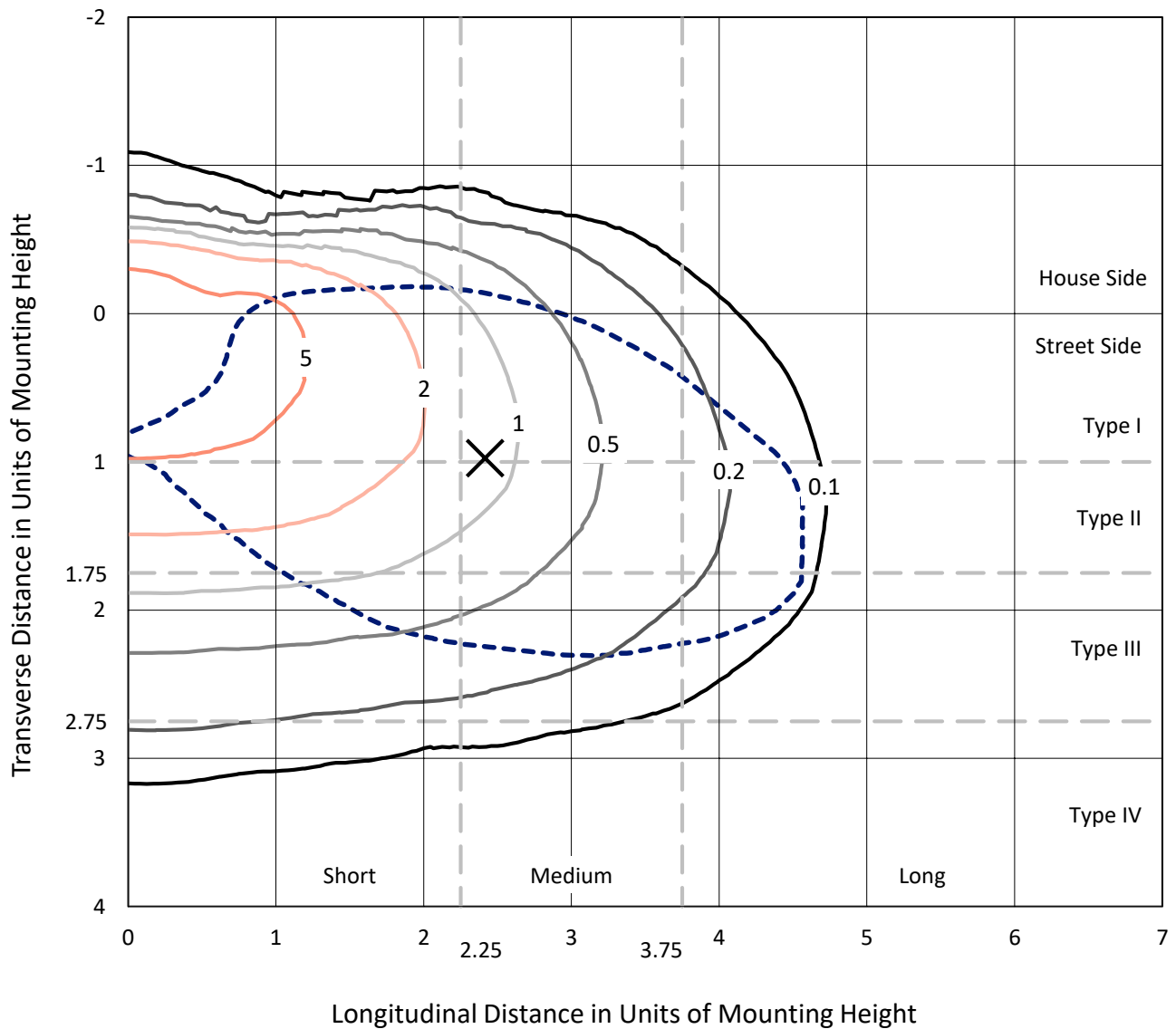
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

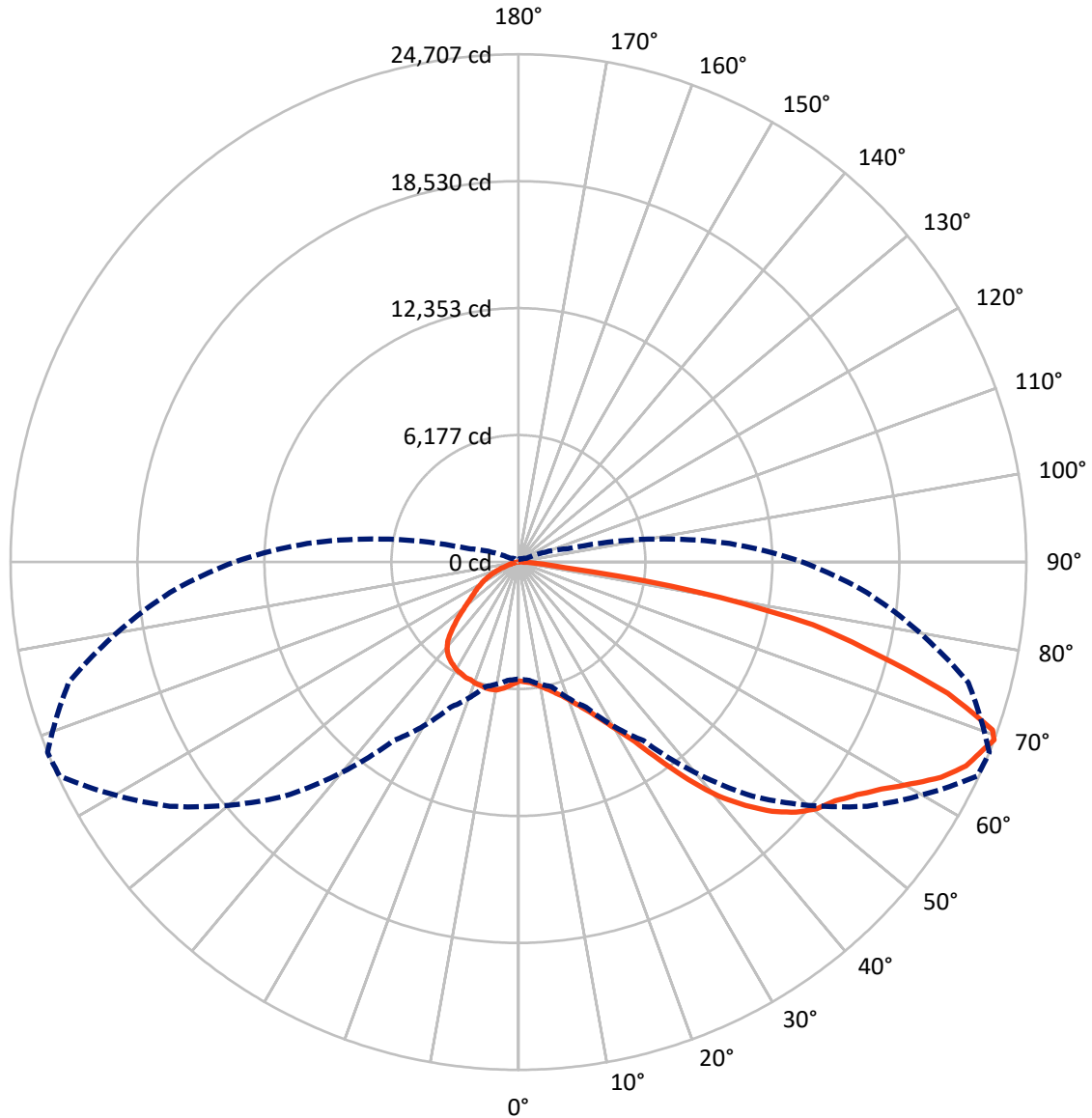
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.9 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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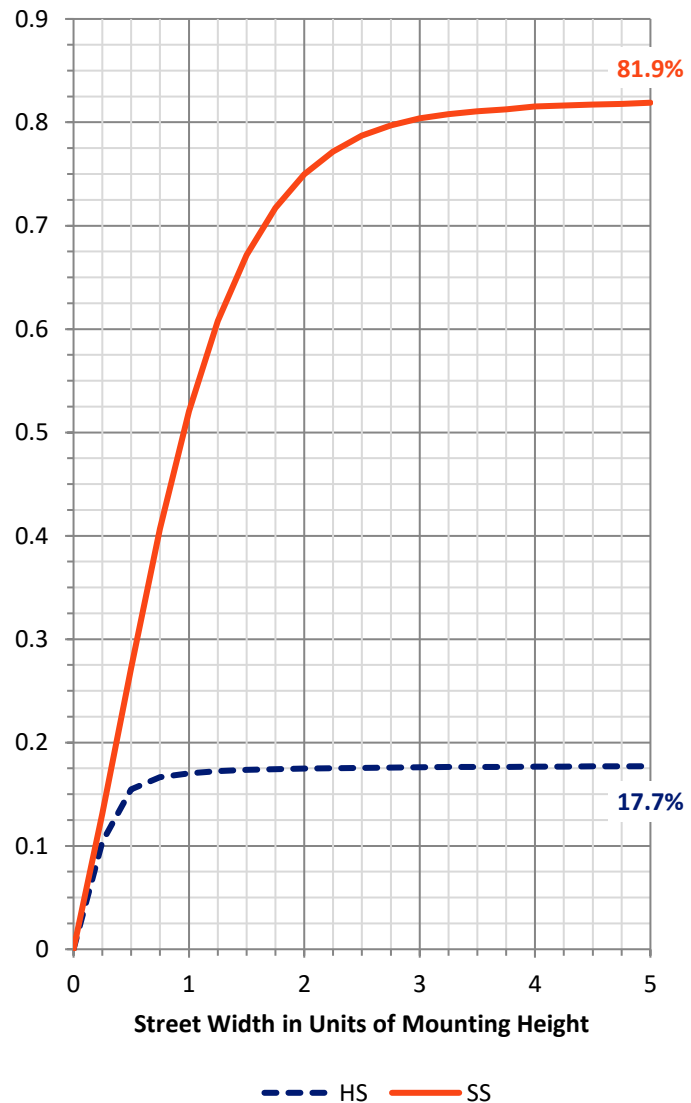
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7144.3	0.0	7144.3
	% Fixture	17.9	0.0	17.9
<b>Street Side</b>	Lumens	32664.7	0.0	32664.7
	% Fixture	82.1	0.0	82.1
<b>Total</b>	Lumens	39809.0	0.0	39809.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	581.5	1.5
10°-20°	1824.8	4.6
20°-30°	3119.3	7.8
30°-40°	4806.5	12.1
40°-50°	6897.5	17.3
50°-60°	8301.5	20.9
60°-70°	8711.6	21.9
70°-80°	5046.9	12.7
80°-90°	519.3	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°	39809.0	100.0
0°-180°	39809.0	100.0

**Coefficient of Utilization**



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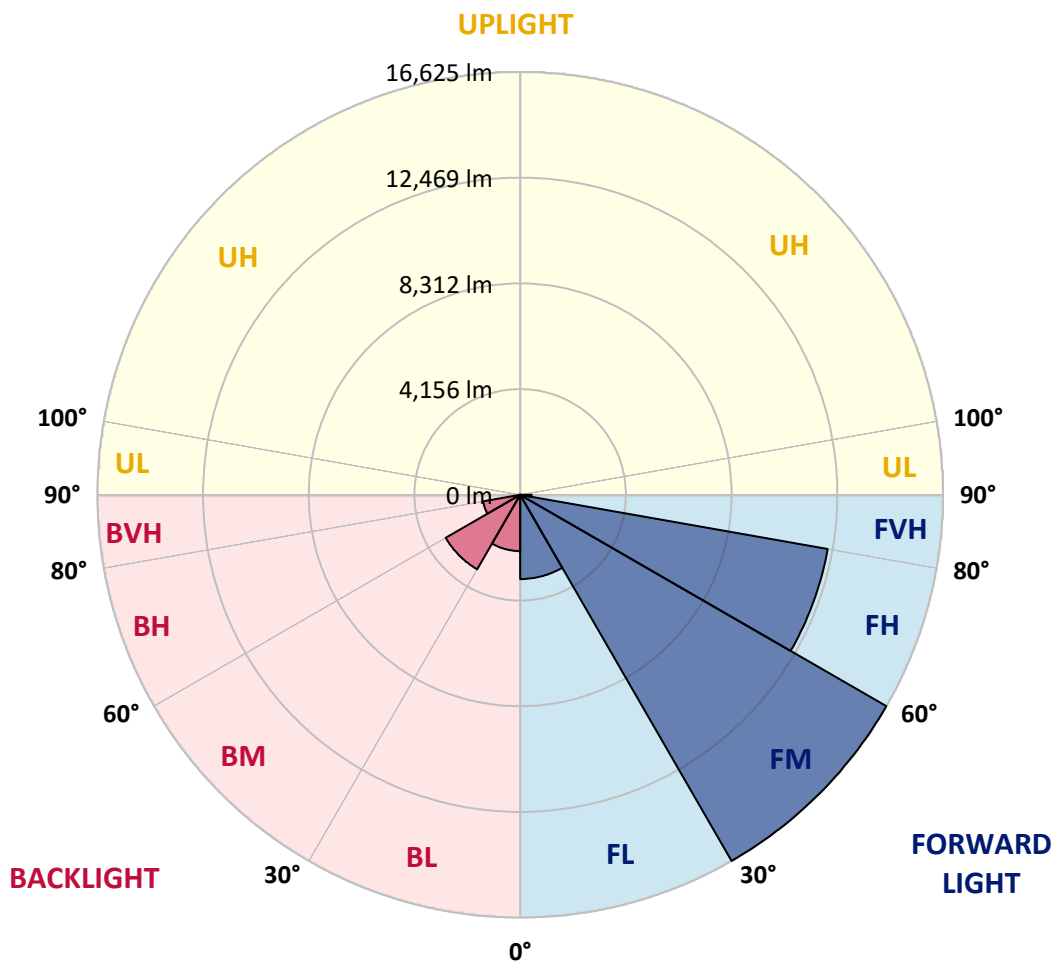
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3311.9	8.3			
FM (30°-60°)	16624.8	41.8			
FH (60°-80°)	12276.7	30.8			G5
FVH (80°-90°)	451.3	1.1			G3/500
BL (0°-30°)	2213.7	5.6	B3/2500		
BM (30°-60°)	3380.7	8.5	B3/5000		
BH (60°-80°)	1481.9	3.7	B3/2500		G3/2500
BVH (80°-90°)	68.0	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4
2.5°	5855.3	5808.4	5813.9	5851.1	5740.8	5787.7	5758.7	5819.4	5829.0	5800.1	5826.3
5°	5971.1	5931.1	5929.7	5967.0	5844.2	5880.1	5834.6	5875.9	5888.4	5858.0	5903.5
7.5°	6195.9	6153.2	6144.9	6182.2	6026.3	6037.3	5975.3	5995.9	6007.0	5965.6	6011.1
10°	6518.7	6471.8	6441.5	6462.2	6287.0	6259.4	6153.2	6150.4	6167.0	6110.4	6183.5
12.5°	6880.1	6824.9	6780.8	6784.9	6584.9	6538.0	6397.3	6347.7	6358.7	6282.8	6371.1
15°	7273.2	7193.2	7151.8	7153.2	6928.4	6849.8	6669.1	6587.7	6580.8	6507.7	6558.7
17.5°	7746.3	7681.5	7629.1	7601.5	7362.9	7207.0	6991.8	6885.6	6847.0	6798.7	6772.5
20°	8302.2	8220.8	8165.6	8156.0	7863.6	7656.7	7371.1	7230.4	7184.9	7144.9	7027.7
22.5°	8921.5	8838.7	8762.9	8750.5	8440.1	8190.5	7807.0	7633.2	7593.2	7547.7	7313.2
25°	9492.5	9482.9	9398.8	9385.0	9085.6	8761.5	8311.8	8089.8	8089.8	8036.0	7676.0
27.5°	10129.8	10143.6	10067.7	10051.2	9769.8	9411.2	8876.0	8663.6	8707.7	8611.2	8132.5
30°	10801.5	10772.6	10751.9	10769.8	10509.1	10129.8	9572.5	9393.2	9462.2	9351.9	8744.9
32.5°	11402.9	11380.8	11394.6	11463.6	11276.0	10925.7	10447.0	10335.3	10401.5	10470.5	9842.9
35°	11878.8	11831.9	12005.7	12157.4	12103.6	11771.2	11386.4	11622.2	11804.3	12118.8	11460.8
37.5°	12298.1	12263.6	12474.7	12785.0	12852.6	12667.8	12549.1	13207.1	13415.4	13838.8	12880.2
40°	12507.8	12500.9	12760.2	13164.3	13438.8	13558.8	13767.1	14663.7	14967.1	15083.0	13960.2
42.5°	12440.2	12462.2	12920.2	13543.6	13987.8	14502.3	14921.6	15907.8	16186.4	16091.3	14906.4
45°	12251.2	12262.2	12727.1	13699.5	14463.6	15471.9	16031.9	17060.9	17307.8	16972.6	15659.5
47.5°	11989.1	11993.3	12484.3	13591.9	14852.6	16349.2	16989.2	17982.3	18182.3	17709.2	16201.6
50°	11634.6	11641.5	12227.8	13456.7	15187.8	17067.8	17738.2	18696.8	18851.3	18232.0	16670.6
52.5°	11186.4	11247.1	11888.4	13240.2	15397.5	17578.2	18305.1	19221.0	19296.8	18856.8	17085.8
55°	10669.1	10732.6	11456.7	12946.4	15478.8	17867.8	18702.3	19866.5	19987.9	19554.8	17423.7
57.5°	10056.7	10143.6	10906.4	12469.1	15288.5	17989.2	19106.5	20663.7	20827.9	20284.4	17771.3
60°	9346.3	9453.9	10256.7	11873.3	14848.5	18117.5	19862.3	21732.7	21923.1	21069.3	18074.7
62.5°	8604.3	8673.2	9398.8	11060.8	14143.6	18216.8	20676.1	23050.0	23066.5	21757.5	18243.0
65°	7611.1	7684.2	8333.9	10034.6	13085.7	17900.9	21087.2	23974.1	23924.5	22296.9	18186.5
67.5°	6474.6	6543.5	7074.6	8758.7	11633.3	17015.4	20946.5	24342.4	24375.5	22688.6	17644.4
69°	5685.6	5776.6	6277.3	7789.1	10607.0	16109.2	20710.6	24629.3	24706.6	22652.7	17016.8
70°	5011.1	5128.3	5604.2	6932.5	9738.1	15285.7	20255.5	24466.5	24472.1	22290.0	16438.8
72.5°	3273.1	3344.9	3427.6	4498.0	7005.6	12113.3	17924.4	21698.2	21841.7	19889.9	14372.6
75°	1619.3	1682.8	1991.8	2379.3	3602.8	8114.6	14211.2	17776.8	18048.5	16891.3	11775.3
77.5°	893.8	906.2	1015.2	1558.6	1867.6	3669.0	9713.2	14171.2	14647.1	13765.7	8456.7
80°	557.2	554.5	579.3	725.5	1046.9	1739.3	4102.1	7953.2	8808.4	7187.7	3342.1
82.5°	434.5	426.2	427.6	469.0	442.8	819.3	1707.6	2315.9	2336.6	2074.5	1300.7
85°	222.1	251.0	297.9	311.7	262.1	445.5	786.2	914.5	936.6	820.7	677.3
87.5°	74.5	75.9	80.0	78.6	70.3	153.1	291.0	339.3	302.1	171.0	231.7
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°	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4	5790.4
2.5°	5866.3	5853.9	5878.7	5935.3	5888.4	5931.1	5888.4	6031.8	6015.3	6005.6	6033.2
5°	5947.7	5946.3	5986.3	6077.3	6073.2	6149.1	6107.7	6249.7	6229.1	6226.3	6251.1
7.5°	6058.0	6084.2	6127.0	6220.8	6222.2	6284.2	6237.3	6349.1	6303.5	6292.5	6327.0
10°	6226.3	6233.2	6266.3	6331.1	6240.1	6267.7	6190.4	6278.7	6215.3	6208.4	6259.4
12.5°	6387.7	6397.3	6347.7	6327.0	6209.7	6173.9	6038.7	6085.6	6012.5	6005.6	6030.4
15°	6560.1	6495.3	6376.6	6309.1	6106.3	5976.6	5824.9	5732.5	5607.0	5549.0	5571.1
17.5°	6739.4	6613.9	6391.8	6227.7	5955.9	5767.0	5464.9	5307.7	5121.5	5026.3	5008.3
20°	6935.3	6758.7	6429.1	6186.3	5804.2	5431.8	5063.5	4703.5	4491.1	4393.2	4367.0
22.5°	7156.0	6940.8	6481.5	6048.4	5567.0	5114.6	4492.5	4038.7	3729.7	3634.5	3608.3
25°	7431.8	7144.9	6553.2	6013.9	5339.4	4595.9	3822.1	3307.6	2947.6	2802.8	2772.5
27.5°	7767.0	7426.3	6670.4	5849.7	4939.4	4018.0	3155.9	2564.2	2190.4	2019.3	1982.1
30°	8255.3	7786.3	6749.1	5753.2	4583.5	3418.0	2452.4	1791.7	1437.3	1311.7	1278.6
32.5°	9218.1	8404.3	6909.1	5531.1	4058.0	2720.0	1688.3	1099.3	851.0	779.3	751.7
35°	10648.4	9568.4	7139.4	5267.7	3467.6	1935.2	1002.8	637.3	511.7	485.5	477.2
37.5°	11951.9	10717.4	7584.9	4862.1	2692.5	1190.4	580.7	408.3	376.6	380.7	380.7
40°	12935.4	11571.2	8104.9	4327.0	1826.2	667.6	398.6	339.3	346.2	347.6	346.2
42.5°	13856.7	12353.3	8356.0	3736.6	1057.9	442.8	346.2	315.9	321.4	317.2	314.5
45°	14580.9	12913.3	8430.5	2942.1	579.3	395.9	325.5	293.8	291.0	293.8	296.6
47.5°	15051.2	13255.4	8260.8	2252.4	437.2	368.3	313.1	278.6	271.7	291.0	289.7
50°	15400.2	13489.8	7602.9	1713.1	426.2	344.8	297.9	260.7	263.5	286.9	284.1
52.5°	15654.0	13550.5	6881.5	1373.8	406.9	328.3	284.1	252.4	249.7	267.6	269.0
55°	15855.4	13387.8	6431.8	1081.4	390.4	311.7	273.1	244.1	230.3	235.9	234.5
57.5°	15980.9	13201.6	5918.7	902.1	375.2	293.8	257.9	222.1	201.4	202.8	201.4
60°	15953.3	13077.4	5329.7	739.3	355.9	277.2	237.2	198.6	177.9	172.4	172.4
62.5°	15898.2	12822.2	4721.4	644.1	339.3	271.7	212.4	180.7	165.5	160.0	160.0
65°	15523.0	12214.0	3907.6	551.7	322.8	256.6	198.6	173.8	155.9	150.3	150.3
67.5°	14591.9	11208.4	3026.2	480.0	310.3	231.7	194.5	169.7	150.3	143.5	143.5
69°	13805.7	10314.6	2485.6	441.4	297.9	220.7	194.5	171.0	147.6	139.3	139.3
70°	13191.9	9612.5	2056.6	417.9	285.5	213.8	194.5	172.4	146.2	136.6	135.2
72.5°	11320.2	7504.9	1142.1	354.5	237.2	194.5	190.3	173.8	139.3	125.5	124.1
75°	8685.6	5275.9	680.0	299.3	200.0	177.9	180.7	166.9	128.3	113.1	113.1
77.5°	5427.7	2423.5	506.2	234.5	162.8	154.5	157.2	147.6	115.9	103.4	103.4
80°	1853.8	1093.8	382.1	180.7	117.2	120.0	129.7	124.1	103.4	93.8	92.4
82.5°	1015.2	711.7	270.3	125.5	81.4	99.3	99.3	100.7	89.7	82.8	81.4
85°	551.7	371.0	166.9	75.9	57.9	73.1	70.3	75.9	73.1	67.6	66.2
87.5°	191.7	126.9	55.2	27.6	23.4	24.8	29.0	38.6	37.2	38.6	40.0
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)