

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: P237546

Luminaire Tested: **CTN-10-4-D-E1-T3-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237546  
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-T3-7050-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: 40214 lumens  
Efficiency: N/A  
Efficacy: 130.6 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G5

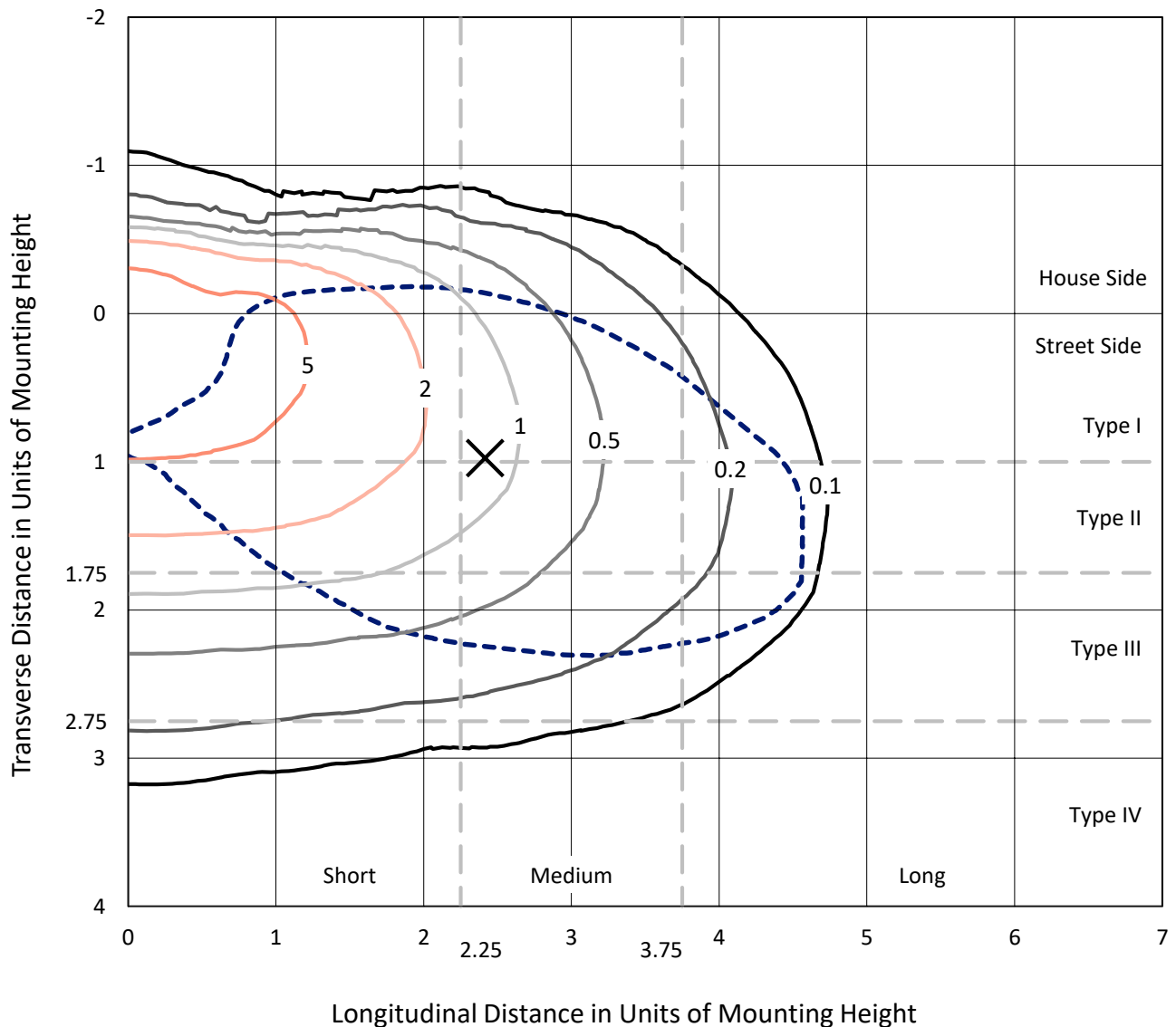
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

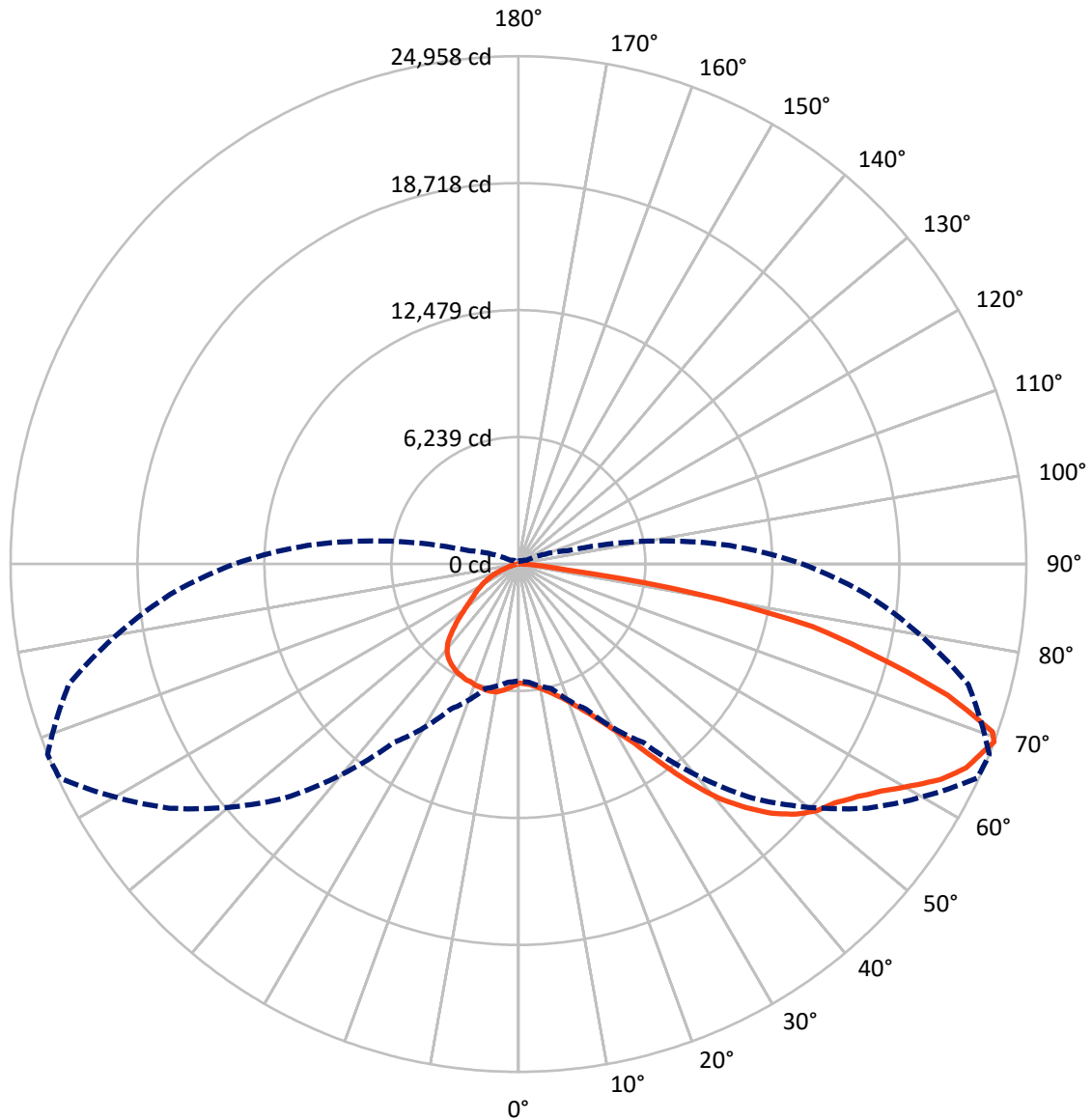
× Max cd  
 - - - 1/2 Max cd



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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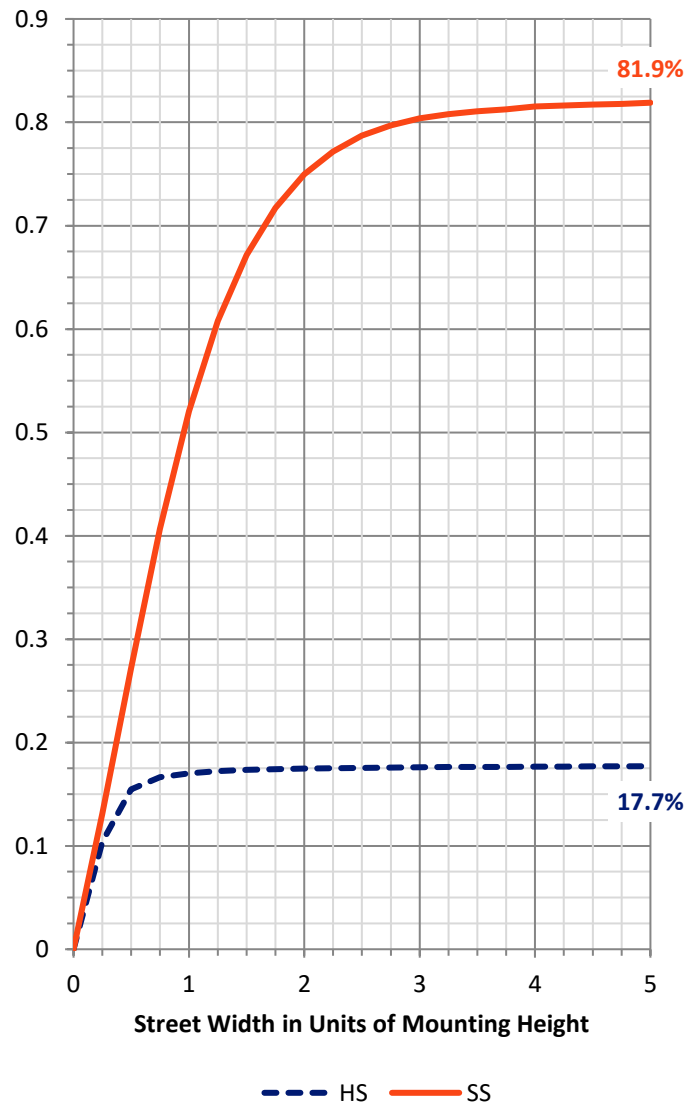
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7217.0	0.0	7217.0
	% Fixture	17.9	0.0	17.9
<b>Street Side</b>	Lumens	32997.0	0.0	32997.0
	% Fixture	82.1	0.0	82.1
<b>Total</b>	Lumens	40214.0	0.0	40214.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	587.4	1.5
10°-20°	1843.4	4.6
20°-30°	3151.0	7.8
30°-40°	4855.4	12.1
40°-50°	6967.7	17.3
50°-60°	8385.9	20.9
60°-70°	8800.3	21.9
70°-80°	5098.3	12.7
80°-90°	524.6	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°	40214.0	100.0
0°-180°	40214.0	100.0

**Coefficient of Utilization**



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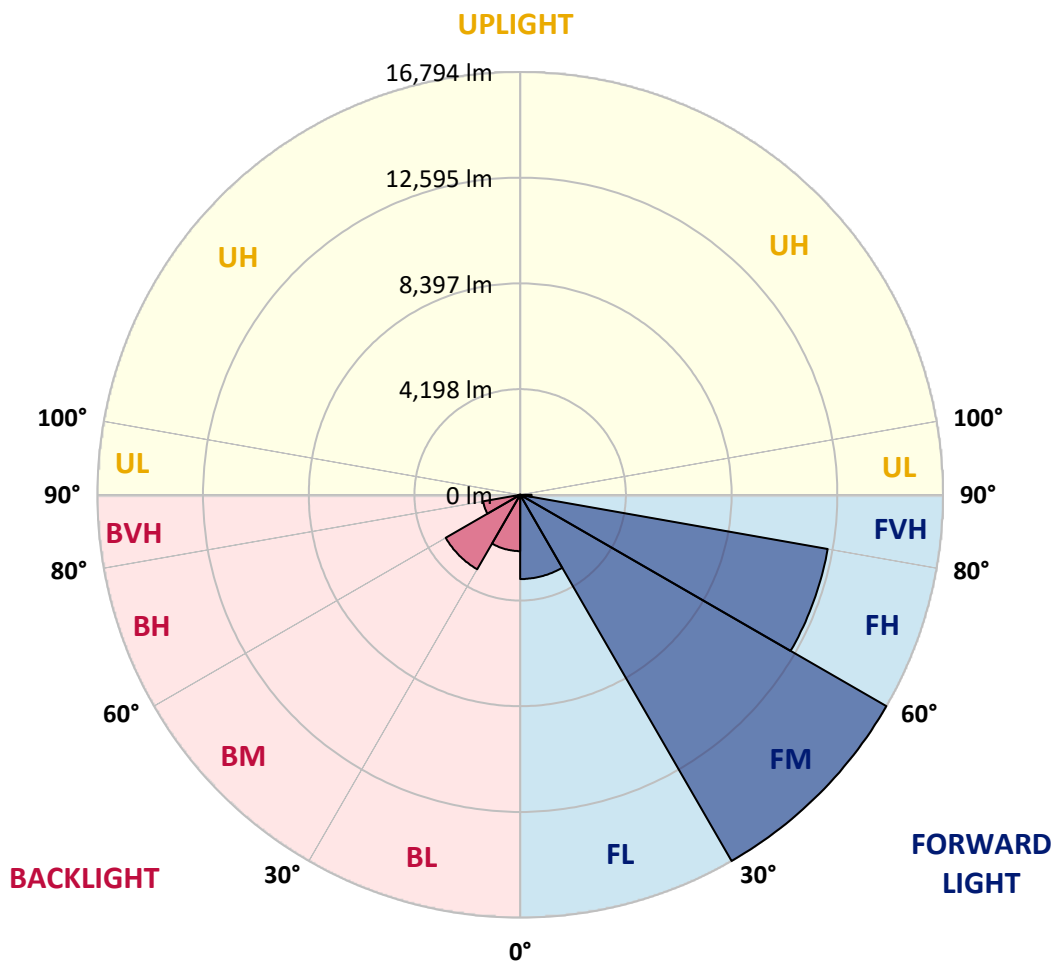
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3345.6	8.3			
FM	(30°-60°)	16793.9	41.8			
FH	(60°-80°)	12401.6	30.8			G5
FVH	(80°-90°)	455.9	1.1			G3/500
BL	(0°-30°)	2236.2	5.6	B3/2500		
BM	(30°-60°)	3415.1	8.5	B3/5000		
BH	(60°-80°)	1497.0	3.7	B3/2500		G3/2500
BVH	(80°-90°)	68.7	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°	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3
2.5°	5914.8	5867.4	5873.0	5910.6	5799.2	5846.5	5817.3	5878.6	5888.3	5859.1	5885.6
5°	6031.9	5991.5	5990.1	6027.7	5903.7	5939.9	5893.9	5935.7	5948.3	5917.6	5963.6
7.5°	6259.0	6215.8	6207.4	6245.0	6087.6	6098.7	6036.0	6056.9	6068.1	6026.3	6072.3
10°	6585.0	6537.7	6507.0	6527.9	6350.9	6323.1	6215.8	6213.0	6229.7	6172.6	6246.4
12.5°	6950.1	6894.4	6849.8	6853.9	6651.9	6604.5	6462.4	6412.3	6423.4	6346.8	6435.9
15°	7347.2	7266.4	7224.6	7226.0	6998.9	6919.4	6736.9	6654.7	6647.7	6573.9	6625.4
17.5°	7825.1	7759.6	7706.7	7678.8	7437.8	7280.3	7063.0	6955.7	6916.7	6867.9	6841.4
20°	8386.6	8304.4	8248.7	8239.0	7943.6	7734.6	7446.1	7304.0	7258.0	7217.6	7099.2
22.5°	9012.3	8928.7	8852.0	8839.5	8526.0	8273.8	7886.4	7710.9	7670.5	7624.5	7387.6
25°	9589.1	9579.4	9494.4	9480.4	9178.1	8850.6	8396.4	8172.1	8172.1	8117.7	7754.1
27.5°	10232.9	10246.8	10170.2	10153.4	9869.2	9506.9	8966.3	8751.7	8796.3	8698.8	8215.3
30°	10911.4	10882.2	10861.3	10879.4	10616.0	10232.9	9669.9	9488.8	9558.5	9447.0	8833.9
32.5°	11518.9	11496.6	11510.6	11580.2	11390.7	11036.8	10553.3	10440.5	10507.3	10577.0	9943.0
35°	11999.6	11952.3	12127.8	12281.1	12226.8	11891.0	11502.2	11740.5	11924.4	12242.1	11577.4
37.5°	12423.2	12388.4	12601.6	12915.1	12983.3	12796.6	12676.8	13341.4	13551.8	13979.6	13011.2
40°	12635.0	12628.0	12890.0	13298.2	13575.5	13696.8	13907.1	14812.8	15119.4	15236.4	14102.2
42.5°	12566.7	12589.0	13051.6	13681.4	14130.1	14649.8	15073.4	16069.6	16351.1	16255.0	15058.1
45°	12375.8	12387.0	12856.6	13838.9	14610.8	15629.3	16195.0	17234.5	17483.9	17145.3	15818.8
47.5°	12111.1	12115.3	12611.3	13730.2	15003.7	16515.5	17162.0	18165.3	18367.3	17889.4	16366.4
50°	11753.0	11760.0	12352.2	13593.6	15342.3	17241.5	17918.6	18887.0	19043.1	18417.5	16840.2
52.5°	11300.2	11361.5	12009.4	13374.9	15554.1	17757.0	18491.3	19416.5	19493.1	19048.7	17259.6
55°	10777.7	10841.8	11573.3	13078.1	15636.3	18049.6	18892.6	20068.6	20191.2	19753.7	17601.0
57.5°	10159.0	10246.8	11017.3	12596.0	15444.0	18172.2	19300.9	20874.0	21039.8	20490.8	17952.1
60°	9441.4	9550.1	10361.0	11994.1	14999.5	18301.8	20064.4	21953.8	22146.1	21283.6	18258.6
62.5°	8691.8	8761.5	9494.4	11173.4	14287.5	18402.1	20886.5	23284.5	23301.2	21978.9	18428.6
65°	7688.6	7762.4	8418.7	10136.7	13218.8	18083.1	21301.7	24218.0	24167.9	22523.7	18371.5
67.5°	6540.4	6610.1	7146.6	8847.9	11751.6	17188.5	21159.6	24590.1	24623.5	22919.4	17823.9
69°	5743.4	5835.4	6341.2	7868.3	10715.0	16273.1	20921.3	24879.9	24957.9	22883.2	17189.9
70°	5062.1	5180.5	5661.2	7003.0	9837.1	15441.2	20461.5	24715.5	24721.0	22516.7	16606.1
72.5°	3306.4	3378.9	3462.5	4543.8	7076.9	12236.5	18106.7	21919.0	22063.9	20092.3	14518.8
75°	1635.8	1699.9	2012.0	2403.5	3639.5	8197.1	14355.8	17957.7	18232.1	17063.1	11895.1
77.5°	902.9	915.4	1025.5	1574.5	1886.6	3706.3	9812.1	14315.4	14796.1	13905.8	8542.7
80°	562.9	560.1	585.2	732.9	1057.6	1757.0	4143.9	8034.1	8898.0	7260.8	3376.1
82.5°	438.9	430.5	431.9	473.7	447.3	827.7	1725.0	2339.5	2360.4	2095.6	1313.9
85°	224.3	253.6	301.0	314.9	264.7	450.1	794.2	923.8	946.1	829.1	684.1
87.5°	75.2	76.6	80.8	79.4	71.1	154.7	294.0	342.8	305.1	172.8	234.1
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°	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3	5849.3
2.5°	5926.0	5913.4	5938.5	5995.6	5948.3	5991.5	5948.3	6093.2	6076.5	6066.7	6094.6
5°	6008.2	6006.8	6047.2	6139.2	6135.0	6211.6	6169.8	6313.3	6292.4	6289.6	6314.7
7.5°	6119.6	6146.1	6189.3	6284.1	6285.5	6348.2	6300.8	6413.6	6367.7	6356.5	6391.4
10°	6289.6	6296.6	6330.0	6395.5	6303.6	6331.4	6253.4	6342.6	6278.5	6271.5	6323.1
12.5°	6452.7	6462.4	6412.3	6391.4	6272.9	6236.7	6100.1	6147.5	6073.7	6066.7	6091.8
15°	6626.8	6561.3	6441.5	6373.2	6168.4	6037.4	5884.2	5790.8	5664.0	5605.5	5627.8
17.5°	6808.0	6681.2	6456.8	6291.0	6016.5	5825.6	5520.5	5361.7	5173.6	5077.4	5059.3
20°	7005.8	6827.5	6494.5	6249.2	5863.3	5487.1	5115.0	4751.4	4536.8	4437.9	4411.4
22.5°	7228.8	7011.4	6547.4	6109.9	5623.6	5166.6	4538.2	4079.8	3767.7	3671.5	3645.0
25°	7507.4	7217.6	6619.9	6075.1	5393.7	4642.7	3861.0	3341.3	2977.6	2831.3	2800.7
27.5°	7846.0	7501.9	6738.3	5909.2	4989.6	4058.9	3188.0	2590.3	2212.7	2039.9	2002.3
30°	8339.3	7865.5	6817.7	5811.7	4630.1	3452.8	2477.4	1810.0	1451.9	1325.1	1291.6
32.5°	9311.8	8489.8	6979.4	5587.4	4099.3	2747.7	1705.5	1110.5	859.7	787.2	759.4
35°	10756.8	9665.8	7212.0	5321.3	3502.9	1954.9	1013.0	643.7	516.9	490.5	482.1
37.5°	12073.5	10826.4	7662.1	4911.6	2719.8	1202.5	586.6	412.4	380.4	384.6	384.6
40°	13067.0	11688.9	8187.4	4371.0	1844.8	674.4	402.7	342.8	349.7	351.1	349.7
42.5°	13997.7	12479.0	8441.0	3774.6	1068.7	447.3	349.7	319.1	324.7	320.5	317.7
45°	14729.2	13044.7	8516.2	2972.0	585.2	399.9	328.8	296.8	294.0	296.8	299.6
47.5°	15204.4	13390.2	8344.8	2275.4	441.7	372.0	316.3	281.5	274.5	294.0	292.6
50°	15556.9	13627.1	7680.2	1730.6	430.5	348.3	301.0	263.3	266.1	289.8	287.0
52.5°	15813.3	13688.4	6951.5	1387.8	411.0	331.6	287.0	255.0	252.2	270.3	271.7
55°	16016.7	13524.0	6497.2	1092.4	394.3	314.9	275.9	246.6	232.7	238.3	236.9
57.5°	16143.5	13335.9	5978.9	911.3	379.0	296.8	260.6	224.3	203.4	204.8	203.4
60°	16115.6	13210.5	5384.0	746.8	359.5	280.1	239.7	200.6	179.7	174.2	174.2
62.5°	16059.9	12952.7	4769.5	650.7	342.8	274.5	214.6	182.5	167.2	161.6	161.6
65°	15680.9	12338.2	3947.4	557.3	326.0	259.2	200.6	175.6	157.4	151.9	151.9
67.5°	14740.4	11322.5	3057.0	484.9	313.5	234.1	196.5	171.4	151.9	144.9	144.9
69°	13946.2	10419.6	2510.8	445.9	301.0	222.9	196.5	172.8	149.1	140.7	140.7
70°	13326.1	9710.3	2077.5	422.2	288.4	216.0	196.5	174.2	147.7	137.9	136.5
72.5°	11435.3	7581.3	1153.7	358.1	239.7	196.5	192.3	175.6	140.7	126.8	125.4
75°	8774.0	5329.6	686.9	302.4	202.0	179.7	182.5	168.6	129.6	114.3	114.3
77.5°	5482.9	2448.1	511.4	236.9	164.4	156.1	158.8	149.1	117.0	104.5	104.5
80°	1872.7	1104.9	386.0	182.5	118.4	121.2	131.0	125.4	104.5	94.7	93.4
82.5°	1025.5	719.0	273.1	126.8	82.2	100.3	100.3	101.7	90.6	83.6	82.2
85°	557.3	374.8	168.6	76.6	58.5	73.8	71.1	76.6	73.8	68.3	66.9
87.5°	193.7	128.2	55.7	27.9	23.7	25.1	29.3	39.0	37.6	39.0	40.4
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)