

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: P232696

Luminaire Tested: **CTN-8-3-D-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232696  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-8-3-D-E1-T3  
Description: CELESTEON HIGH MAST LUMINAIRE  
(8) 70 CRI, 4000K LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31341 lumens  
Efficiency: N/A  
Efficacy: 138.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

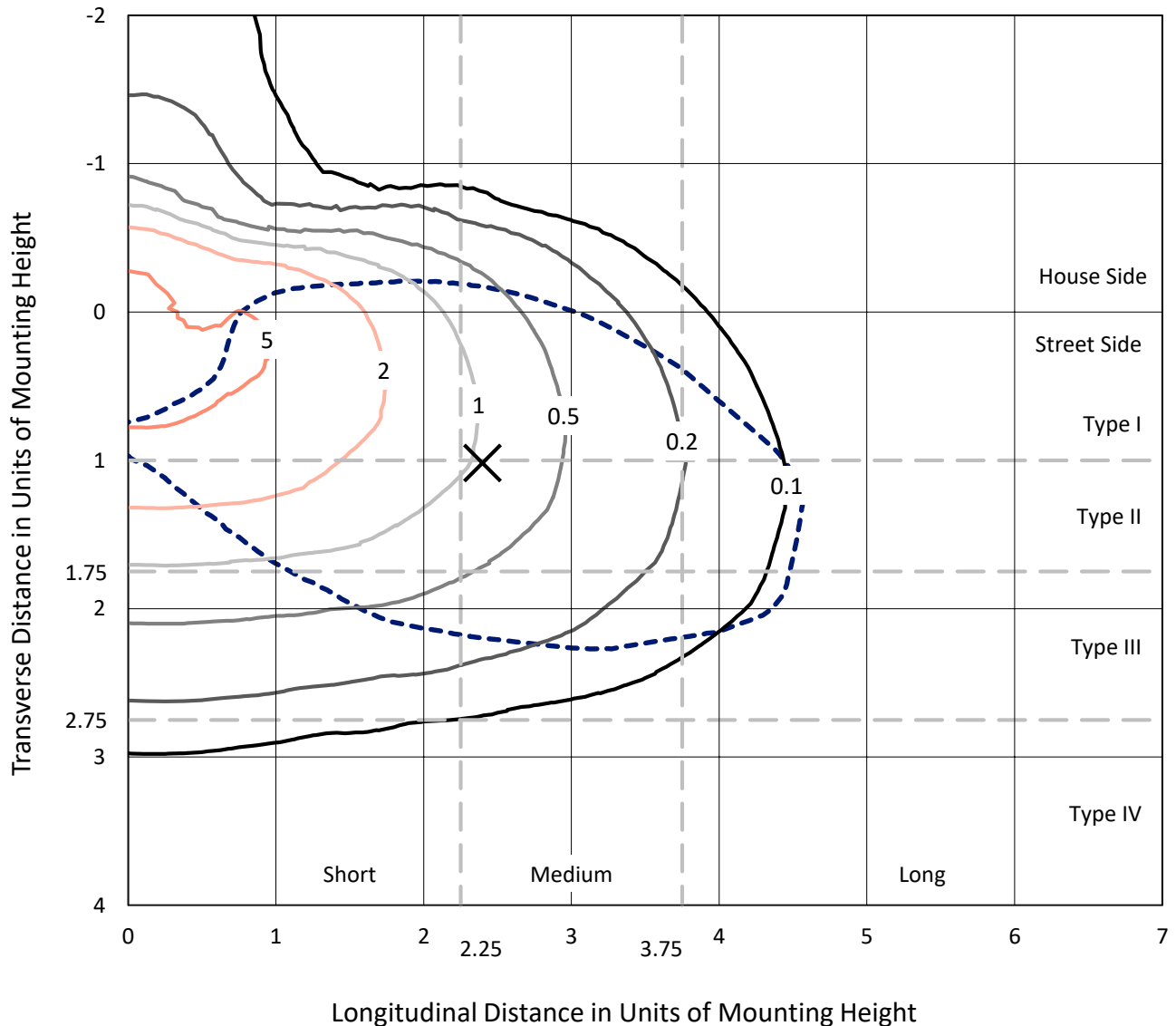
Input Watts (W): 226  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

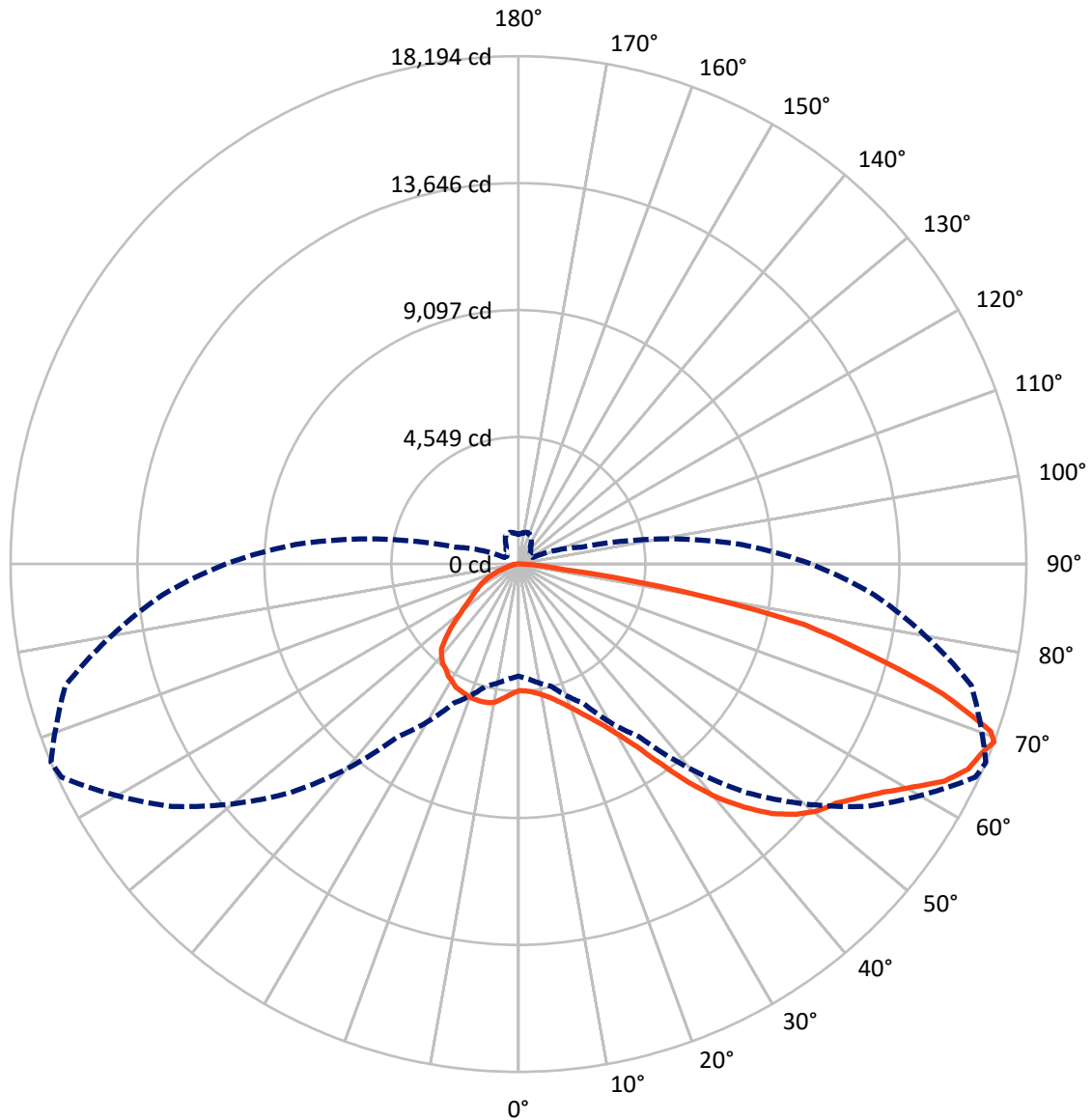
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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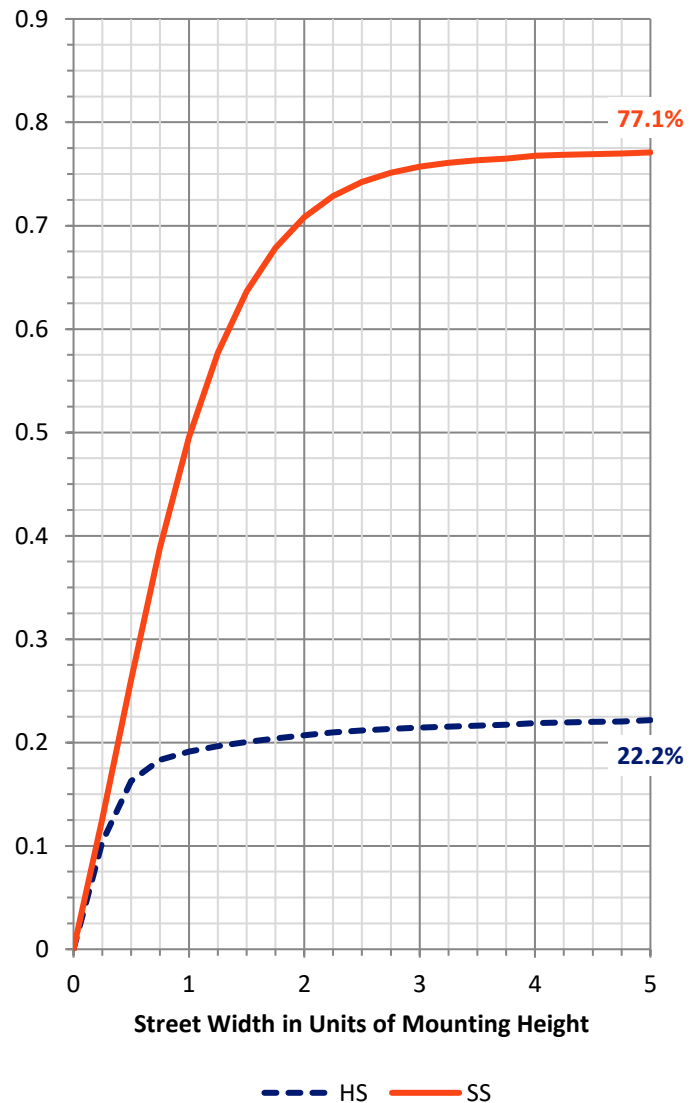
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7129.4	0.0	7129.4
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	24211.6	0.0	24211.6
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	31341.0	0.0	31341.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	460.4	1.5
10°-20°	1478.7	4.7
20°-30°	2571.5	8.2
30°-40°	3873.6	12.4
40°-50°	5349.8	17.1
50°-60°	6385.0	20.4
60°-70°	6724.6	21.5
70°-80°	3944.7	12.6
80°-90°	552.9	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°	31341.0	100.0
0°-180°	31341.0	100.0



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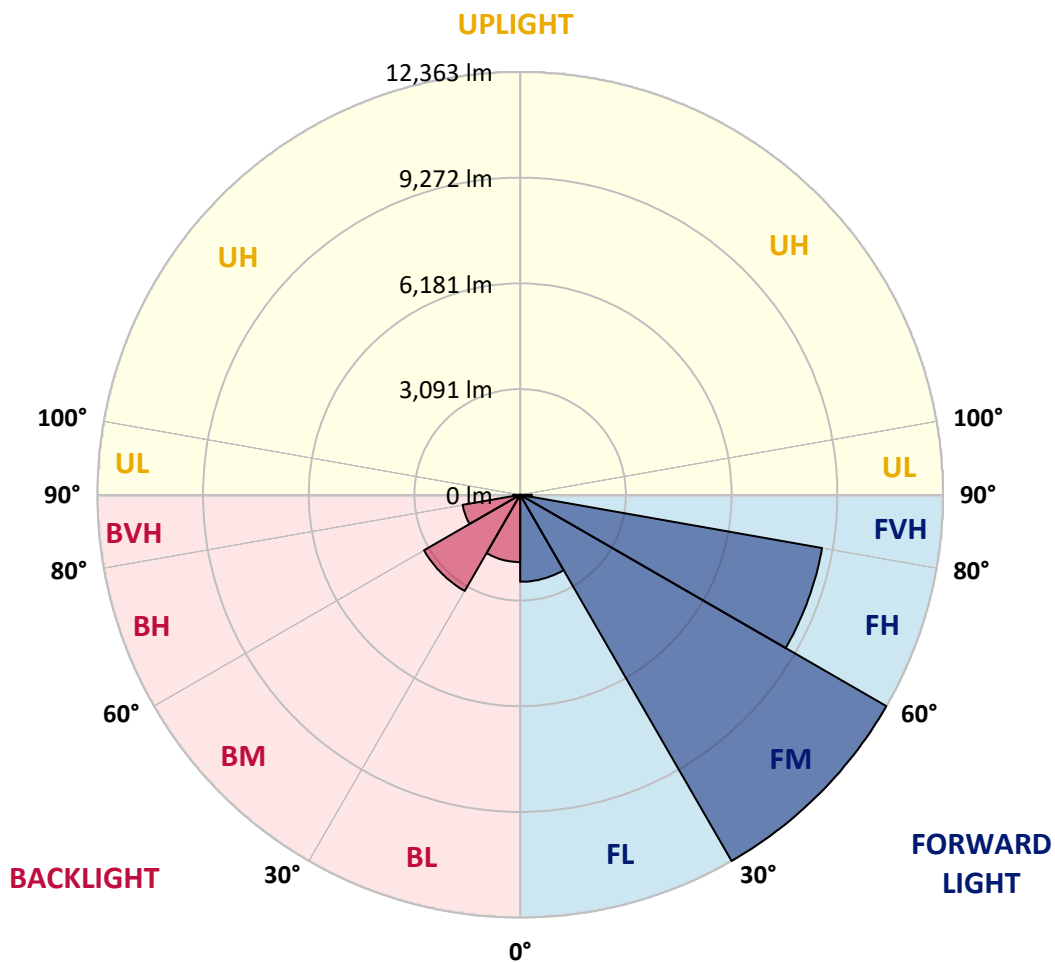
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2543.3	8.1			
FM (30°-60°)	12362.5	39.4			
FH (60°-80°)	8962.2	28.6			G4/12000
FVH (80°-90°)	343.6	1.1			G3/500
BL (0°-30°)	1967.3	6.3	B3/2500		
BM (30°-60°)	3245.8	10.4	B3/5000		
BH (60°-80°)	1707.1	5.4	B3/2500		G3/2500
BVH (80°-90°)	209.3	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5
2.5°	4554.6	4560.6	4554.6	4544.5	4511.4	4526.5	4513.4	4555.6	4552.5	4536.5	4565.6
5°	4660.9	4667.9	4654.9	4646.8	4595.7	4602.7	4574.6	4597.7	4589.7	4562.6	4607.7
7.5°	4834.4	4841.5	4825.4	4814.4	4742.2	4726.1	4674.9	4682.0	4666.9	4623.8	4675.9
10°	5068.2	5074.2	5047.1	5020.0	4927.7	4888.6	4803.3	4789.3	4767.2	4725.1	4778.3
12.5°	5320.0	5329.0	5295.9	5260.8	5153.5	5089.3	4967.9	4924.7	4897.6	4846.5	4904.7
15°	5589.9	5600.9	5566.8	5526.7	5408.3	5309.0	5157.5	5092.3	5066.2	5002.0	5038.1
17.5°	5944.0	5941.0	5912.9	5857.7	5716.3	5570.8	5384.2	5286.9	5268.8	5206.6	5215.7
20°	6354.3	6340.3	6314.2	6237.9	6084.4	5903.9	5660.1	5536.7	5518.6	5466.5	5411.3
22.5°	6799.7	6785.7	6760.6	6663.3	6511.8	6275.1	5983.1	5837.7	5813.6	5748.4	5656.1
25°	7238.1	7223.1	7209.0	7116.7	6969.3	6700.4	6349.3	6163.7	6152.7	6086.4	5916.9
27.5°	7693.6	7684.6	7688.6	7609.3	7461.8	7183.0	6784.7	6583.0	6564.0	6479.7	6249.0
30°	8162.1	8164.1	8202.2	8117.9	7982.5	7701.6	7306.3	7100.7	7103.7	7028.5	6691.4
32.5°	8581.4	8583.4	8668.7	8626.6	8552.3	8272.4	7909.3	7764.8	7793.9	7787.9	7442.8
35°	8884.4	8897.4	9088.0	9145.2	9117.1	8873.4	8654.7	8689.8	8782.1	9042.9	8680.7
37.5°	9169.3	9174.3	9418.1	9550.5	9654.8	9508.4	9464.2	9797.3	9942.8	10303.9	9768.2
40°	9251.6	9320.8	9628.8	9813.4	10056.1	10128.4	10352.1	10844.7	11016.2	11233.9	10500.6
42.5°	9176.3	9274.6	9660.9	10099.3	10436.3	10794.5	11204.8	11762.6	11918.1	12052.5	11201.8
45°	9018.8	9094.1	9495.3	10151.4	10762.4	11472.7	11946.2	12614.3	12754.8	12667.5	11749.5
47.5°	8809.1	8866.3	9313.8	10068.2	11023.2	12080.6	12625.3	13297.5	13399.8	13196.2	12121.7
50°	8518.2	8586.4	9086.0	9953.8	11214.8	12589.2	13171.1	13811.1	13897.4	13525.2	12486.9
52.5°	8159.1	8244.3	8825.2	9759.2	11358.3	12968.4	13552.3	14153.2	14240.5	13998.7	12775.8
55°	7751.8	7870.1	8468.1	9522.4	11368.3	13170.1	13790.1	14654.8	14779.2	14518.4	13028.6
57.5°	7338.4	7414.7	8047.7	9160.3	11179.7	13237.3	14075.0	15238.7	15420.3	15022.0	13304.5
60°	6833.8	6907.1	7534.1	8675.7	10803.5	13340.6	14644.8	16074.4	16218.8	15608.9	13539.3
62.5°	6236.9	6320.2	6889.0	8012.6	10246.7	13382.8	15225.6	16963.2	17128.7	16142.6	13674.7
65°	5478.5	5570.8	6089.5	7210.0	9451.2	13083.8	15476.5	17620.3	17705.6	16551.9	13616.5
67.5°	4649.9	4726.1	5139.4	6211.8	8350.7	12304.3	15345.0	17863.1	17949.4	16829.8	13268.4
69°	4015.8	4133.2	4530.5	5500.6	7559.2	11591.0	15144.4	18062.7	18194.1	16798.7	12810.9
70°	3508.2	3639.6	3998.8	4873.6	6887.0	10850.7	14771.2	17911.2	17948.3	16498.7	12398.6
72.5°	2217.1	2260.2	2423.7	3005.6	4845.5	8435.0	12926.3	15900.8	15890.8	14720.0	10823.6
75°	1095.5	1151.7	1461.7	1687.4	2387.6	5425.3	10174.5	13059.7	13061.7	12423.7	8898.4
77.5°	658.1	682.2	761.4	1087.5	1364.4	2434.8	6906.1	10339.0	10497.5	10111.3	6403.5
80°	453.4	441.4	464.5	534.7	734.3	1280.1	2839.1	5844.7	6016.2	5548.7	2727.7
82.5°	357.1	347.1	354.1	372.2	350.1	592.9	1200.8	1747.6	1696.4	1495.8	1048.3
85°	249.8	229.7	242.8	235.8	208.7	348.1	583.9	726.3	721.3	745.4	570.8
87.5°	79.3	70.2	72.2	70.2	58.2	123.4	209.7	282.9	260.8	264.8	200.6
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°	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5	4535.5
2.5°	4572.6	4564.6	4573.6	4620.8	4609.7	4650.9	4660.9	4728.1	4731.1	4725.1	4755.2
5°	4628.8	4636.8	4670.9	4746.2	4771.2	4859.5	4899.7	4981.9	4989.9	4993.0	5022.0
7.5°	4710.0	4724.1	4797.3	4895.6	4942.8	5058.2	5118.4	5219.7	5226.7	5237.7	5270.8
10°	4830.4	4850.5	4908.7	5043.1	5058.2	5149.5	5204.6	5291.9	5285.9	5300.9	5331.0
12.5°	4951.8	4962.9	5007.0	5099.3	5089.3	5178.5	5202.6	5259.8	5255.8	5254.8	5276.9
15°	5082.2	5063.2	5069.2	5104.3	5067.2	5122.4	5105.3	5147.4	5092.3	5070.2	5085.2
17.5°	5220.7	5174.5	5115.3	5089.3	5019.0	5010.0	4951.8	4931.8	4893.6	4881.6	4893.6
20°	5385.2	5286.9	5143.4	5068.2	4914.7	4835.5	4724.1	4658.9	4570.6	4577.6	4594.7
22.5°	5552.7	5414.3	5197.6	4996.0	4779.3	4618.8	4397.0	4337.9	4222.5	4188.4	4222.5
25°	5758.4	5572.8	5224.7	4931.8	4574.6	4288.7	4064.0	3854.3	3767.0	3681.8	3713.9
27.5°	6028.3	5777.5	5323.0	4852.5	4342.9	3961.7	3604.5	3333.7	3225.3	3134.0	3140.0
30°	6378.4	6051.3	5360.1	4686.0	4064.0	3513.2	3063.8	2762.8	2627.4	2590.3	2574.2
32.5°	7025.4	6492.7	5426.3	4564.6	3716.9	3025.7	2473.9	2150.9	2065.6	2081.7	2133.8
35°	8172.1	7416.7	5627.0	4310.8	3333.7	2494.0	1922.1	1672.3	1686.4	1715.5	1709.5
37.5°	9161.3	8250.4	5961.0	4132.2	2865.2	1889.0	1451.6	1319.2	1403.5	1460.7	1458.7
40°	9833.4	8858.3	6398.4	3798.1	2273.3	1346.3	1068.4	995.2	1102.5	1224.9	1246.0
42.5°	10500.6	9411.1	6610.1	3502.2	1596.1	950.0	773.5	792.5	930.0	1045.3	1066.4
45°	10980.1	9812.4	6703.4	2974.5	1019.3	727.3	675.2	745.4	893.9	985.1	995.2
47.5°	11332.2	10114.3	6602.1	2406.7	750.4	665.1	666.1	755.4	904.9	1008.2	1012.2
50°	11643.2	10327.0	6193.8	1877.0	675.2	644.1	679.2	784.5	937.0	1041.3	1038.3
52.5°	11855.9	10389.2	5698.2	1537.9	654.1	632.0	690.2	811.6	947.0	1017.3	1011.2
55°	11997.3	10295.9	5317.0	1266.0	636.0	631.0	708.3	845.7	957.1	985.1	971.1
57.5°	12084.6	10107.3	4995.0	1088.5	621.0	631.0	728.3	858.7	994.2	1045.3	1029.3
60°	12058.5	10023.0	4558.6	943.0	599.9	633.0	739.4	877.8	1143.7	1264.0	1267.0
62.5°	12006.4	9858.5	4132.2	827.6	574.8	645.1	753.4	988.2	1404.5	1405.5	1355.3
65°	11758.6	9362.9	3512.2	723.3	548.8	648.1	756.4	1169.7	1575.0	1442.6	1377.4
67.5°	11076.4	8637.6	2786.9	626.0	519.7	630.0	753.4	1144.7	1272.1	1138.6	1105.5
69°	10481.5	8008.6	2328.4	567.8	498.6	612.0	756.4	1097.5	1177.8	1098.5	1068.4
70°	10048.1	7499.0	1978.3	532.7	479.5	602.9	756.4	1080.5	1164.7	1089.5	1060.4
72.5°	8624.6	5890.8	1185.8	444.4	424.4	567.8	749.4	1054.4	1174.8	1110.5	1072.4
75°	6607.1	4284.7	690.2	365.2	357.1	509.6	712.3	1038.3	1208.9	1111.6	1028.3
77.5°	4233.5	1977.3	514.6	296.9	289.9	441.4	665.1	986.2	1242.0	1165.7	1060.4
80°	1470.7	896.9	384.2	234.8	224.7	361.2	582.9	888.8	1182.8	1190.8	1111.6
82.5°	806.6	590.9	271.9	174.6	165.5	226.7	453.4	766.4	1094.5	1178.8	1184.8
85°	443.4	333.1	178.6	112.4	126.4	194.6	314.0	595.9	880.8	1024.3	1069.4
87.5°	179.6	120.4	70.2	44.1	52.2	77.2	106.3	305.0	531.7	686.2	755.4
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)