

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: P591034

Luminaire Tested: **CTN-CA8-230-727-U-T3-HSS-HM-EX120**

Issue Date: 12/14/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P591034  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2112-474-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 12/14/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-727-U-T3-HSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (8) 2700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27631 lumens  
Efficiency: N/A  
Efficacy: 121.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G4

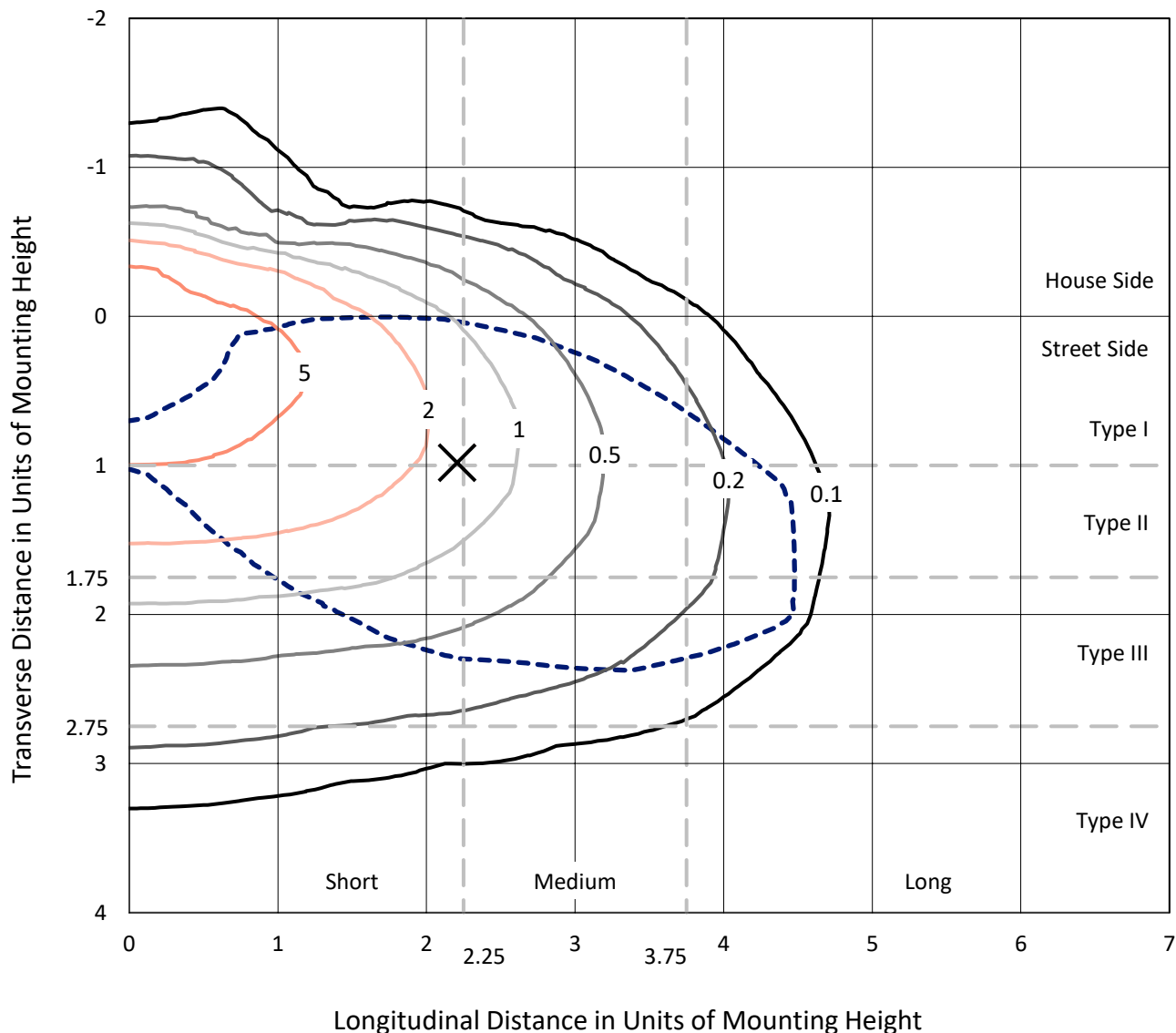
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P591034  
 CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

### Iso-Footcandle Lines of Horizontal Illumination

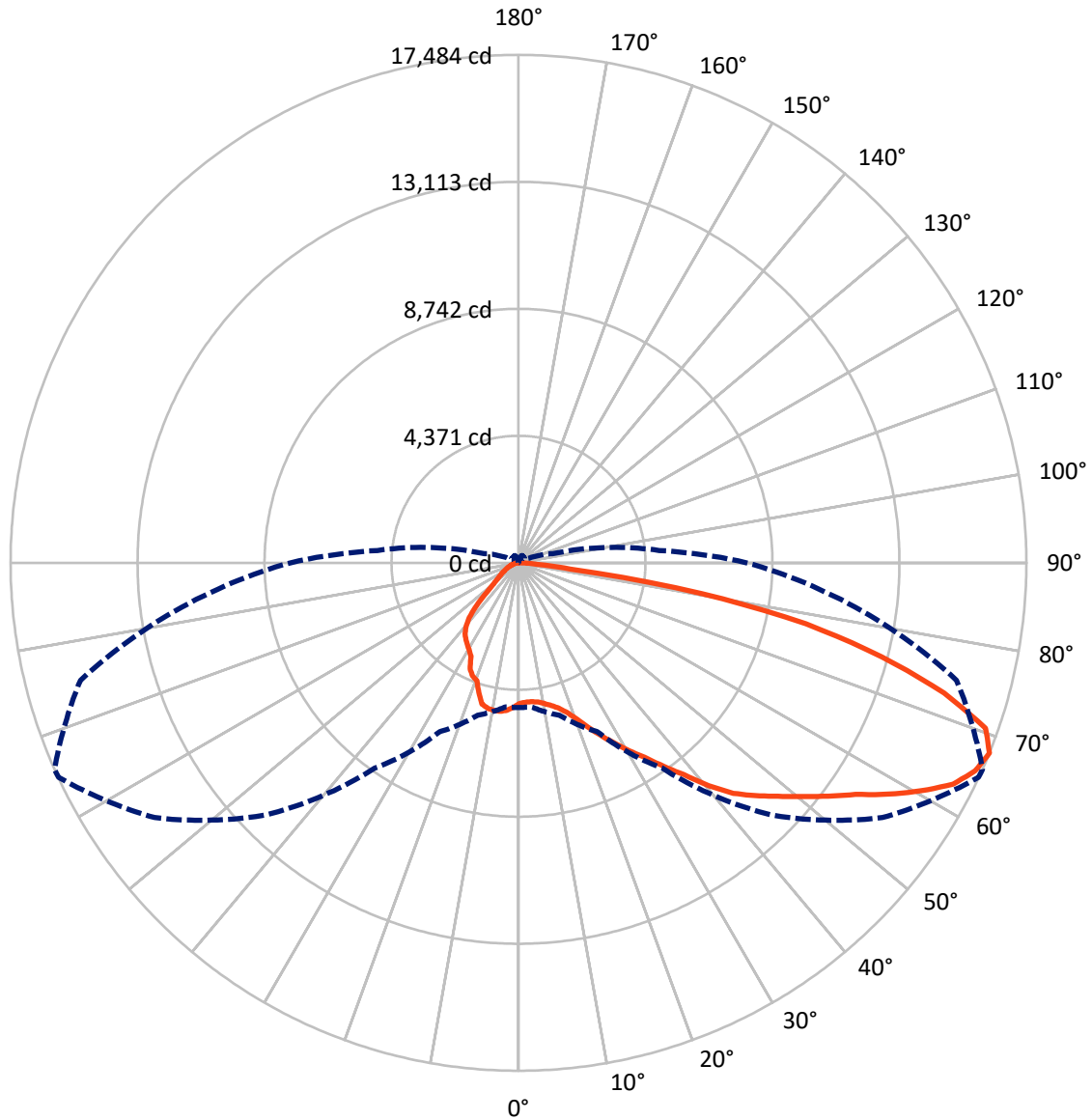
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.7 fc  
 Type III - Short - N/A

REPORT NUMBER: P591034  
CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P591034  
 CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

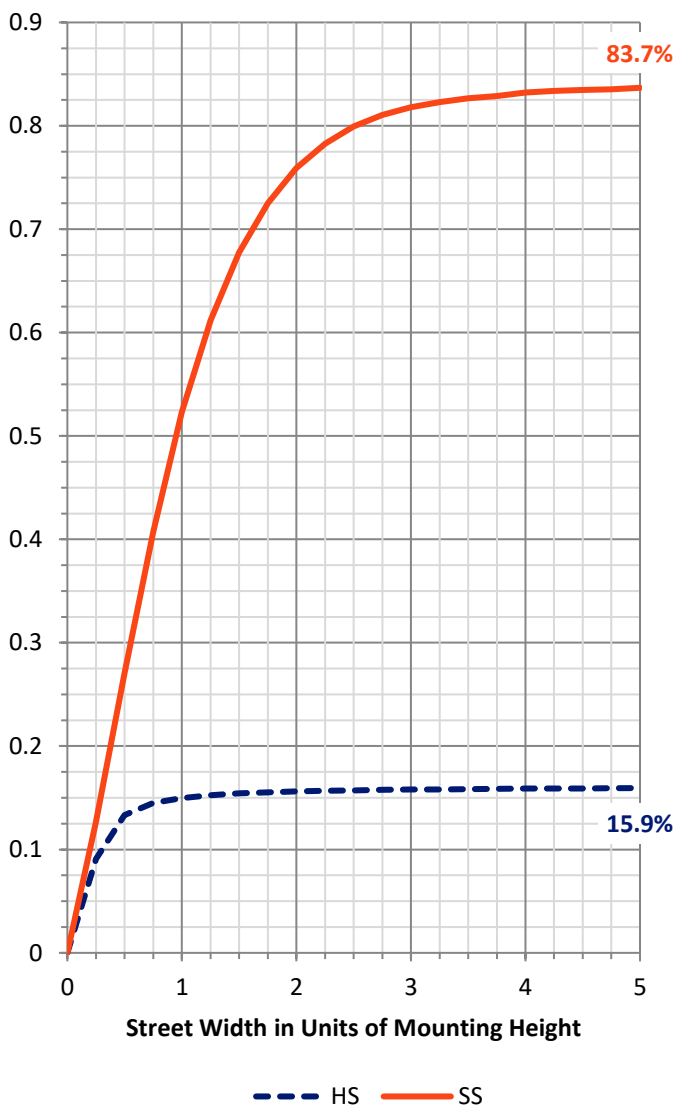
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4460.2	0.0	4460.2
	% Fixture	16.1	0.0	16.1
<b>Street Side</b>	Lumens	23170.8	0.0	23170.8
	% Fixture	83.9	0.0	83.9
<b>Total</b>	Lumens	27631.0	0.0	27631.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	479.4	1.7
10°-20°	1445.5	5.2
20°-30°	2349.7	8.5
30°-40°	3432.4	12.4
40°-50°	4571.6	16.5
50°-60°	5530.1	20.0
60°-70°	5920.6	21.4
70°-80°	3513.6	12.7
80°-90°	388.0	1.4
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°	27631.0	100.0
0°-180°	27631.0	100.0

**Coefficient of Utilization**



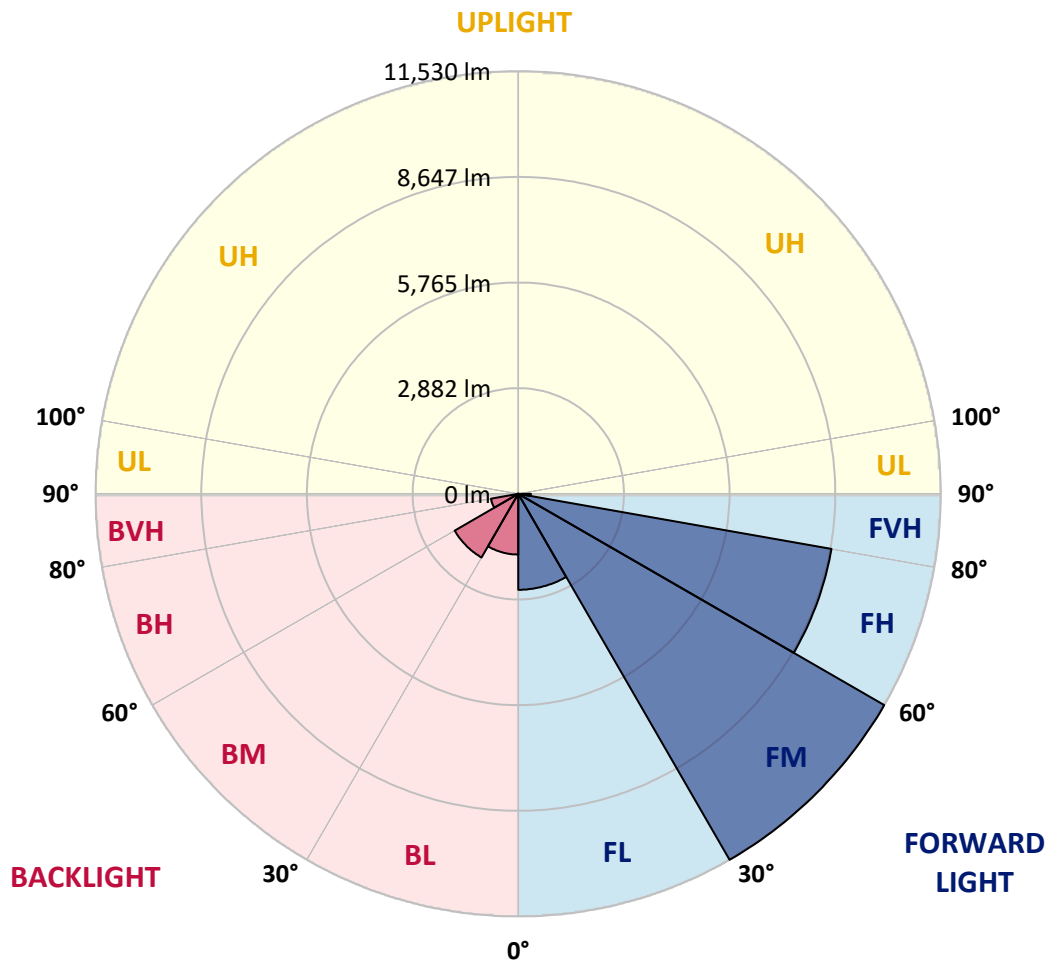
REPORT NUMBER: P591034  
 CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2618.2	9.5			
FM (30°-60°)	11529.9	41.7			
FH (60°-80°)	8678.7	31.4			G4/12000
FVH (80°-90°)	343.9	1.2			G3/500
BL (0°-30°)	1656.5	6.0	B3/2500		
BM (30°-60°)	2004.2	7.3	B2/2500		
BH (60°-80°)	755.5	2.7	B2/1000		G2/1000
BVH (80°-90°)	44.0	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-G4**

Type III Short





REPORT NUMBER: P591034

CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4
2.5°	4776.2	4749.2	4761.4	4793.2	4732.2	4771.0	4743.6	4791.4	4804.5	4809.7	4828.8
5°	4869.7	4834.1	4834.9	4854.9	4785.8	4802.7	4756.2	4789.7	4800.1	4814.0	4860.6
7.5°	5033.8	4994.2	4990.7	4995.9	4909.8	4890.6	4824.9	4831.9	4839.7	4848.0	4908.5
10°	5259.2	5218.7	5211.7	5198.2	5084.7	5034.6	4937.2	4921.9	4929.3	4915.9	4987.6
12.5°	5529.8	5481.1	5455.4	5416.7	5285.3	5206.9	5078.2	5036.4	5042.9	5014.6	5064.7
15°	5814.4	5762.6	5748.7	5689.0	5527.2	5420.1	5253.5	5190.0	5191.7	5159.1	5156.9
17.5°	6118.1	6071.9	6060.6	6022.8	5843.5	5716.0	5510.2	5424.1	5417.5	5385.3	5289.6
20°	6462.7	6433.5	6427.4	6405.7	6243.4	6094.1	5860.0	5744.3	5737.8	5686.9	5482.4
22.5°	6886.5	6852.1	6833.8	6815.1	6693.7	6538.4	6286.9	6123.7	6149.4	6063.7	5732.6
25°	7308.1	7280.7	7265.0	7252.8	7152.7	7005.7	6751.1	6559.7	6585.4	6493.6	6036.7
27.5°	7726.7	7666.2	7691.4	7720.1	7620.1	7503.0	7226.3	7017.9	7025.7	6926.5	6400.9
30°	8115.6	8083.9	8127.4	8154.4	8081.3	7989.9	7699.2	7497.8	7509.5	7391.6	6818.6
32.5°	8461.1	8415.4	8512.5	8565.1	8521.6	8446.3	8165.7	7974.7	7978.1	7906.8	7317.2
35°	8714.8	8717.8	8851.8	8993.3	8992.8	8886.7	8648.2	8559.5	8599.9	8568.2	7929.0
37.5°	8973.2	8950.2	9105.1	9315.2	9384.0	9289.6	9148.2	9200.8	9255.2	9352.7	8506.8
40°	9095.5	9096.4	9283.9	9526.7	9685.5	9667.7	9618.1	9970.1	10082.8	10111.9	8275.3
42.5°	8948.0	8958.4	9293.0	9722.5	9969.2	10063.6	10172.4	10772.0	10848.1	10683.2	8548.1
45°	8754.8	8769.2	9162.1	9789.9	10220.7	10486.5	10786.3	11371.1	11430.3	11211.0	8945.0
47.5°	8573.4	8599.9	9008.9	9749.5	10420.0	10963.0	11335.4	11935.5	12007.7	11718.3	9314.8
50°	8334.9	8394.1	8811.4	9642.0	10570.1	11377.7	11842.8	12614.7	12642.5	12213.5	9648.1
52.5°	8104.3	8121.7	8587.7	9504.5	10683.2	11753.6	12448.0	13312.6	13344.8	12755.6	9955.7
55°	7788.4	7814.5	8335.4	9332.2	10752.8	12068.6	13060.7	14040.1	14068.8	13407.0	10286.4
57.5°	7440.8	7459.9	8008.2	9067.7	10700.6	12348.4	13713.7	14956.4	15026.9	14077.1	10583.6
60°	7004.4	7029.6	7586.1	8700.9	10520.5	12674.7	14520.4	15935.8	15935.8	14692.3	10819.0
62.5°	6389.6	6424.8	6988.3	8172.6	10146.3	12863.5	15164.4	16788.7	16783.0	15177.0	10898.6
65°	5675.1	5680.8	6191.6	7429.5	9525.0	12763.0	15409.8	17286.9	17274.2	15527.7	10789.0
67.5°	4982.0	4975.9	5429.3	6413.1	8629.1	12268.3	15292.8	17468.7	17484.0	15612.1	10380.4
70°	3998.6	3990.8	4407.6	5211.7	7274.1	11202.7	14627.5	17007.1	17053.2	15130.0	9702.0
72.5°	2861.3	2849.5	3049.2	3580.9	5341.8	9215.6	12968.8	15232.7	15317.1	13585.8	8463.3
75°	1675.6	1688.2	1896.6	2202.5	3172.4	6062.4	10518.7	12792.6	12913.2	11557.4	6656.7
77.5°	932.0	929.4	1082.5	1312.7	1560.3	3036.2	7343.3	10074.5	10115.4	9056.3	4476.4
80°	449.9	447.7	489.1	617.0	889.8	1364.1	3606.6	6259.5	6383.5	5504.1	2188.6
82.5°	323.7	325.5	348.5	338.5	332.0	601.8	1203.5	1971.5	1800.0	1389.3	676.6
85°	243.2	243.2	264.1	243.7	238.0	306.3	585.2	704.4	676.2	618.3	402.0
87.5°	114.4	108.8	115.7	109.6	101.8	135.8	256.7	297.6	275.4	240.2	175.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P591034

CATALOG NUMBER: CTN-CA8-230-727-U-T3-HSS-HM-EX120

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4	4838.4
2.5°	4861.5	4871.0	4921.1	4986.3	4992.4	5048.6	5066.0	5135.6	5133.0	5113.8	5133.8
5°	4894.1	4923.3	5009.0	5100.8	5124.3	5194.8	5210.0	5278.3	5282.7	5259.2	5278.7
7.5°	4946.3	4989.0	5069.9	5160.8	5171.3	5233.9	5231.3	5296.1	5284.8	5264.4	5290.5
10°	5010.3	5043.3	5097.3	5157.3	5152.6	5202.6	5186.9	5233.5	5210.0	5193.5	5223.5
12.5°	5074.7	5076.0	5080.3	5118.2	5088.6	5099.9	5069.0	5103.4	5067.3	5039.4	5057.7
15°	5139.1	5102.5	5041.2	5017.7	4935.4	4893.2	4848.8	4890.2	4805.8	4761.4	4772.7
17.5°	5230.0	5142.1	4935.9	4637.4	4384.2	4244.5	4139.6	4058.7	4060.4	4100.5	4124.4
20°	5302.7	4968.5	4464.6	4280.2	4090.9	3835.5	3439.1	3330.3	3258.5	3257.2	3269.0
22.5°	5277.0	4784.9	4465.1	4176.6	3765.0	3254.6	3083.2	2983.5	2816.0	2457.9	2428.8
25°	5513.3	4947.6	4490.8	3962.5	3245.9	2987.0	2751.6	2558.0	2135.1	2068.5	2065.9
27.5°	5796.5	5167.3	4525.6	3500.4	3038.4	2689.0	2389.6	1921.9	1719.1	1690.4	1680.4
30°	6124.2	5426.2	4313.2	3352.5	2817.3	2342.2	1945.4	1475.9	1311.0	1301.0	1303.6
32.5°	6534.9	5721.7	4091.8	3230.7	2549.7	1940.6	1326.6	1125.6	1031.2	928.1	961.2
35°	6972.6	5551.5	4224.0	3080.1	2214.7	1459.4	1007.7	894.1	817.6	684.0	629.6
37.5°	6800.3	5668.6	4377.6	2914.8	1796.1	989.4	779.7	681.4	609.6	498.2	496.0
40°	7012.6	6003.6	4487.3	2648.5	1298.8	701.8	568.3	527.4	494.3	432.5	423.8
42.5°	7387.7	6296.0	4561.7	2306.9	776.2	522.1	485.1	491.2	462.5	415.1	409.4
45°	7757.1	6551.9	4491.6	1786.1	552.2	470.8	473.0	470.4	435.5	418.1	412.0
47.5°	8093.5	6768.1	4294.5	1178.3	479.1	459.0	463.8	452.1	412.9	402.9	402.0
50°	8382.4	6996.5	3400.4	902.9	460.8	443.4	453.8	434.7	367.2	356.4	345.0
52.5°	8560.3	6616.7	3021.0	693.6	441.6	419.0	422.1	437.7	345.9	275.4	258.0
55°	8533.3	5960.6	2808.6	577.4	411.2	385.1	391.2	416.4	312.8	215.4	194.9
57.5°	8661.7	5906.6	2588.5	491.2	354.6	349.0	336.8	379.4	284.6	142.7	135.3
60°	8640.8	5900.1	2310.0	386.4	313.3	293.3	278.0	308.9	204.1	53.1	48.3
62.5°	8606.9	5732.6	1993.7	346.3	288.5	280.6	267.6	302.4	173.6	37.0	27.4
65°	8436.8	5460.6	1635.1	303.3	269.3	253.2	252.4	286.3	143.2	20.5	9.1
67.5°	7855.9	4868.4	1216.6	279.3	258.0	249.8	265.0	275.9	137.5	20.9	8.3
70°	7133.6	4087.4	784.9	251.9	241.9	246.3	258.9	278.9	133.6	19.1	7.4
72.5°	5964.9	3161.9	476.0	225.0	218.9	231.9	255.4	278.9	123.6	16.1	6.1
75°	4537.7	2109.0	354.2	198.8	191.9	208.4	232.8	268.0	121.4	13.9	3.9
77.5°	2817.3	996.0	279.3	167.1	159.7	176.7	195.4	221.0	123.1	13.5	2.2
80°	1139.5	416.0	219.3	134.4	125.3	134.4	158.4	188.4	97.9	19.1	0.0
82.5°	479.5	292.8	179.3	107.0	100.1	88.3	107.9	139.7	77.0	15.2	0.0
85°	317.2	203.2	128.4	72.7	64.0	43.1	52.6	63.1	43.9	0.0	0.0
87.5°	143.6	90.1	56.1	24.8	20.9	11.7	7.0	6.1	0.0	0.0	0.0
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)