

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: P591169

Luminaire Tested: **CTN-CA8-330-722-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591169  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-330-722-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33908 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

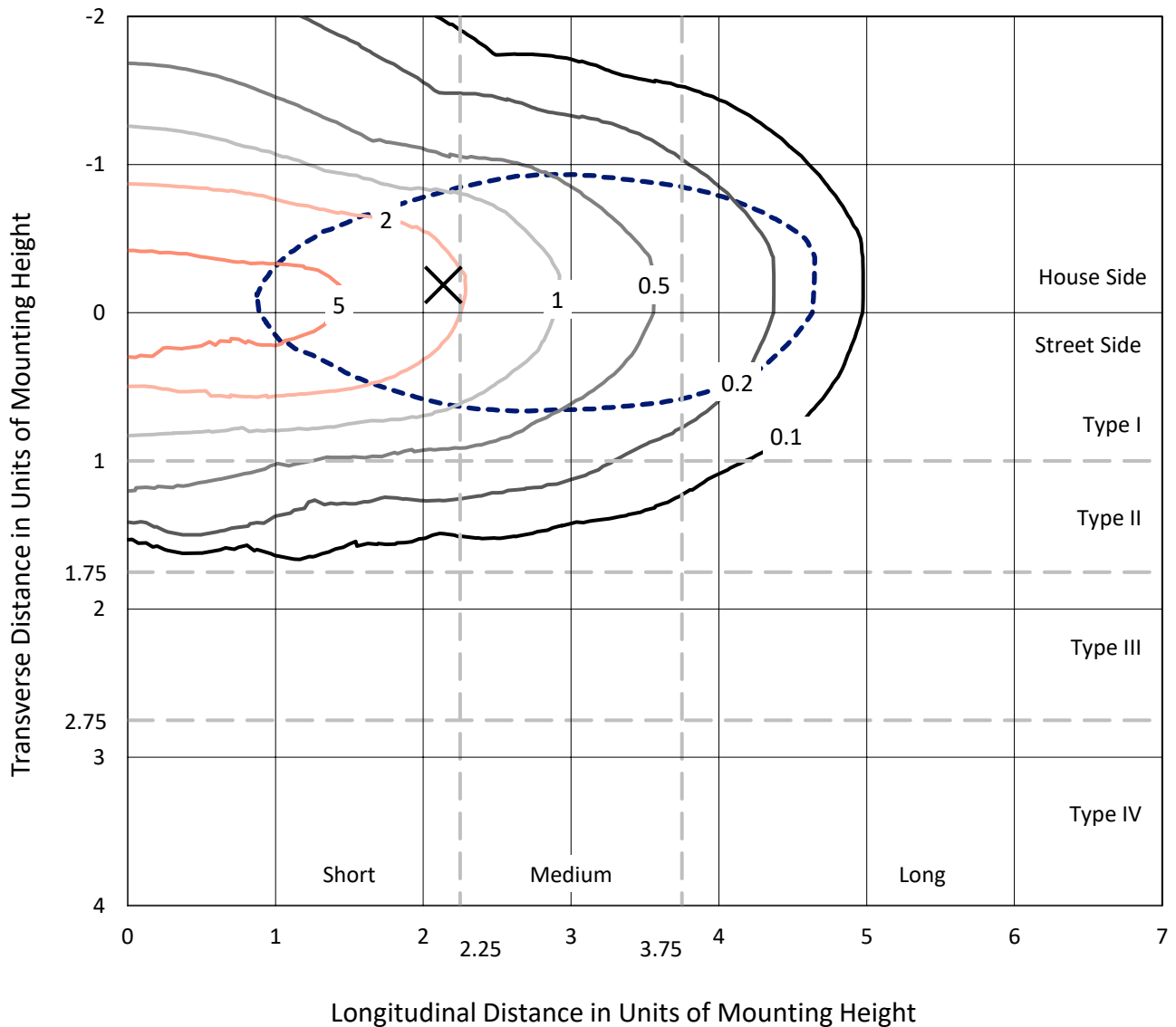
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

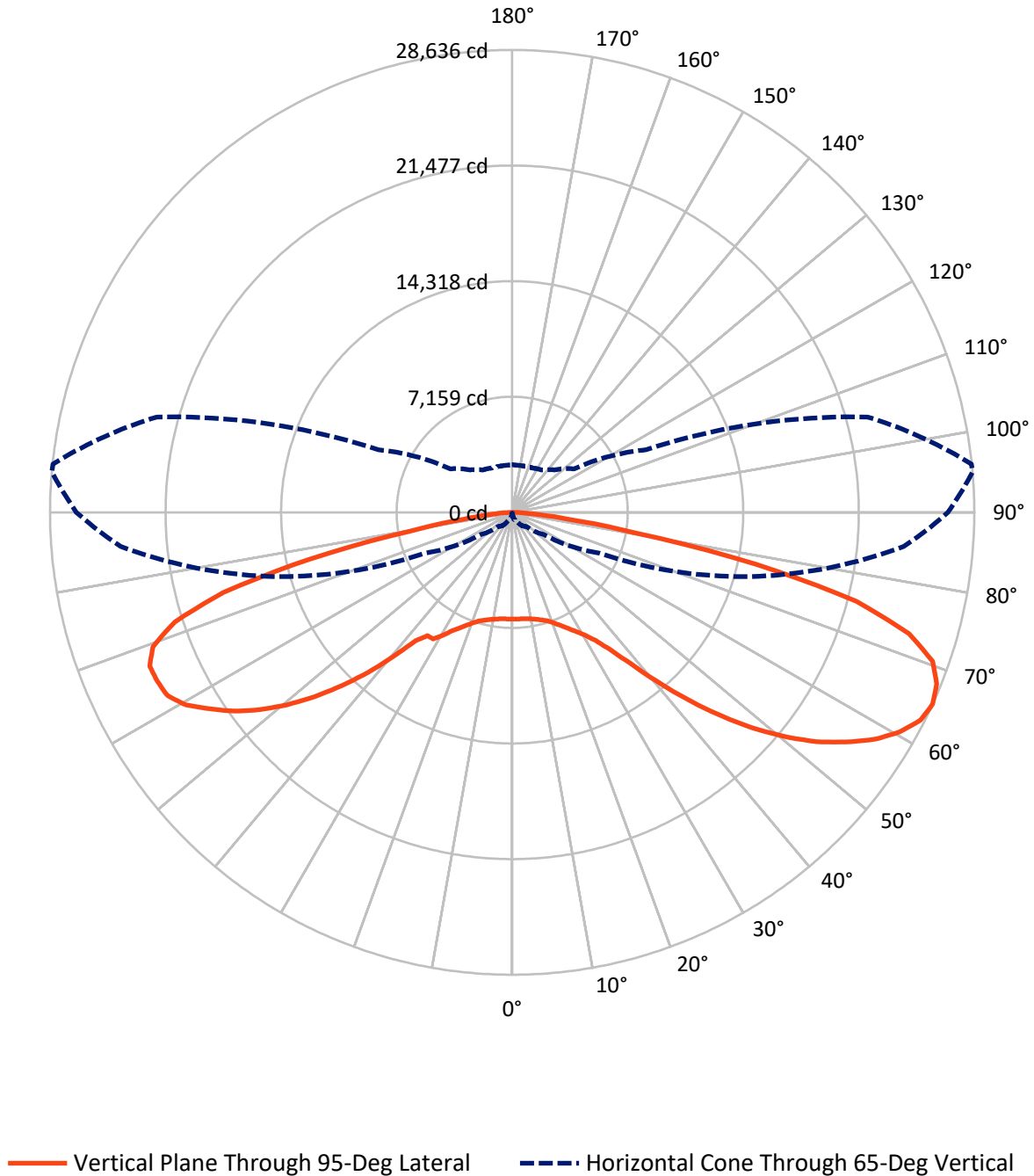
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.3 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



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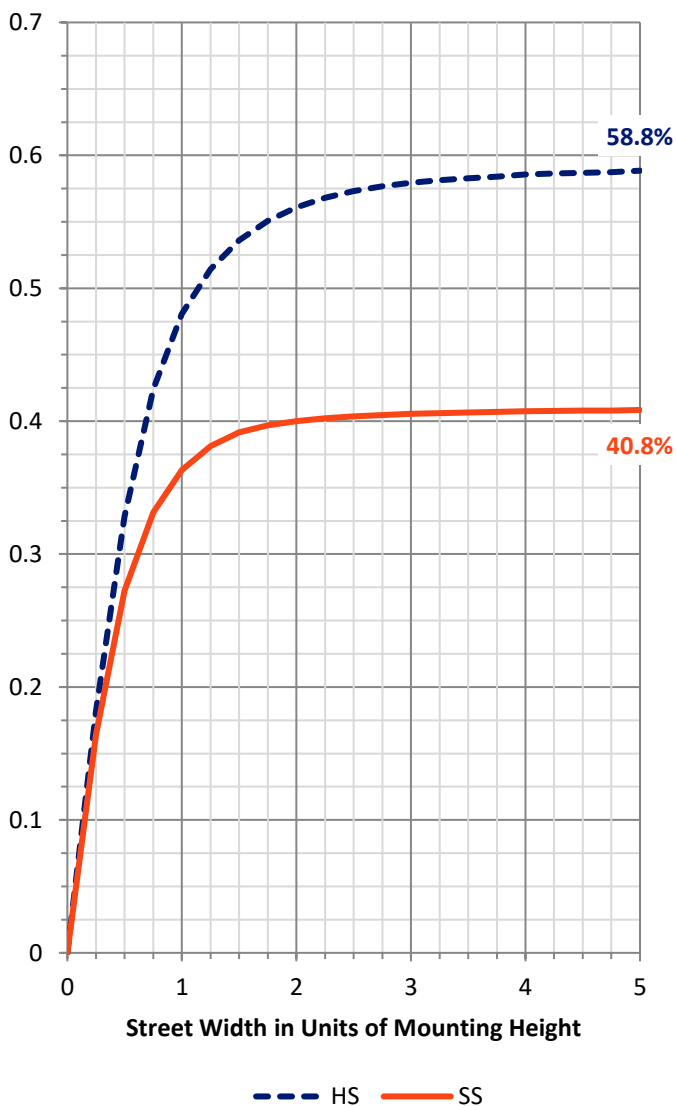
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	20105.4	0.0	20105.4
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	13802.6	0.0	13802.6
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	33908.0	0.0	33908.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	629.1	1.9
10°-20°	1811.7	5.3
20°-30°	2722.9	8.0
30°-40°	3796.5	11.2
40°-50°	5450.6	16.1
50°-60°	6948.1	20.5
60°-70°	7234.4	21.3
70°-80°	4658.6	13.7
80°-90°	656.1	1.9
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°	33908.0	100.0
0°-180°	33908.0	100.0

**Coefficient of Utilization**

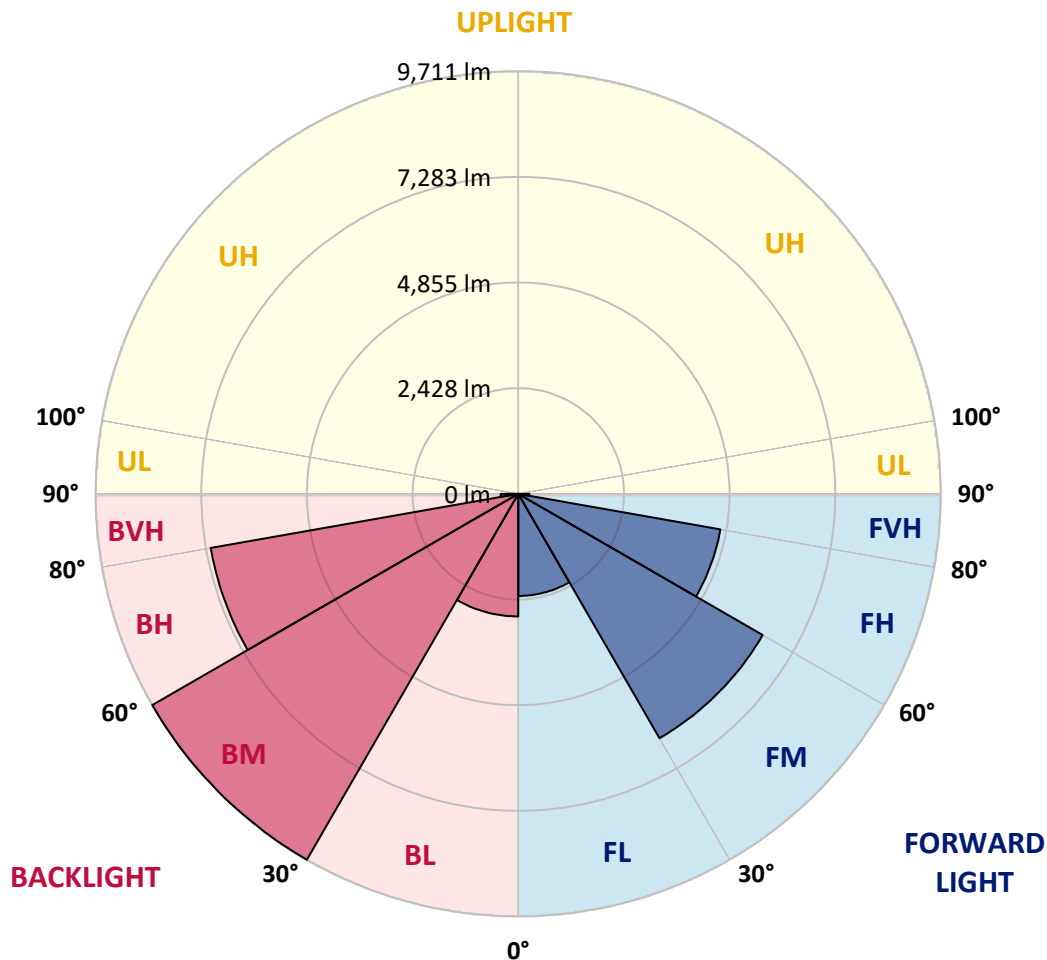


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2346.4	6.9			
FM (30°-60°)	6484.5	19.1			
FH (60°-80°)	4716.5	13.9			G2/5000
FVH (80°-90°)	255.1	0.8			G3/500
BL (0°-30°)	2817.3	8.3	B4/5000		
BM (30°-60°)	9710.7	28.6	B5		
BH (60°-80°)	7176.5	21.2	B5		G5
BVH (80°-90°)	401.0	1.2			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5
2.5°	6628.3	6574.0	6585.1	6638.1	6540.7	6593.7	6554.3	6618.4	6602.4	6607.3	6638.1
5°	6572.8	6517.3	6538.3	6603.6	6512.4	6576.5	6546.9	6599.9	6595.0	6613.5	6633.2
7.5°	6522.2	6463.0	6490.2	6538.3	6488.9	6544.4	6528.4	6595.0	6592.5	6646.8	6660.3
10°	6465.5	6411.3	6434.7	6493.9	6453.2	6519.8	6533.3	6612.2	6638.1	6712.1	6718.3
12.5°	6365.6	6312.6	6323.7	6398.9	6405.1	6506.2	6553.1	6677.6	6704.7	6789.8	6793.5
15°	6008.1	5995.8	6100.6	6221.4	6270.7	6421.1	6577.7	6747.9	6788.5	6895.8	6906.9
17.5°	5002.0	4878.7	4693.8	4840.5	5163.5	5579.0	6518.5	6852.7	6927.9	7035.1	7068.4
20°	3354.8	3467.0	3885.0	4072.4	4359.7	5060.0	6503.7	6966.1	7128.8	7258.3	7321.2
22.5°	2771.6	2765.5	3266.0	3897.3	4122.9	4444.7	5978.5	7100.5	7370.5	7539.4	7618.3
25°	2574.4	2576.8	2668.1	3465.8	4024.3	4364.6	5491.5	6924.2	7635.6	7877.2	7970.9
27.5°	2417.8	2427.6	2505.3	2775.3	3940.5	4347.3	5505.1	6419.9	7915.4	8238.5	8347.0
30°	2293.3	2288.3	2382.0	2607.7	3279.6	4353.5	5569.2	6521.0	7655.3	8751.4	8811.8
32.5°	2189.7	2176.1	2271.1	2497.9	2864.1	4305.4	5665.3	6804.6	7471.6	9244.5	9480.0
35°	2089.8	2084.9	2168.7	2391.9	2765.5	3575.5	5777.5	7156.0	8068.3	9260.6	10397.3
37.5°	2012.2	2008.5	2075.0	2285.9	2676.7	3257.4	5870.0	7598.6	8845.1	9944.9	11156.8
40°	1949.3	1939.4	1992.4	2192.2	2575.6	3204.4	5113.0	8060.9	9793.2	11541.5	12996.4
42.5°	1896.3	1882.7	1934.5	2099.7	2478.2	3145.2	4748.0	8527.0	10907.8	13319.4	14785.4
45°	1823.5	1822.3	1875.3	2029.4	2374.6	3058.9	4782.6	7749.0	12160.4	15020.9	16664.4
47.5°	1786.5	1777.9	1817.3	1964.1	2277.2	2928.2	4749.3	7416.1	13119.7	16728.5	18495.3
50°	1728.6	1721.2	1759.4	1888.9	2181.1	2763.0	4628.4	7620.8	12329.4	18346.1	20216.4
52.5°	1625.0	1337.7	1702.7	1826.0	2077.5	2584.2	4399.1	7734.2	12636.4	19845.3	21819.3
55°	638.7	856.9	1629.9	1747.1	1971.5	2416.6	4051.4	7702.1	13652.3	21188.0	23200.1
57.5°	556.1	558.5	1082.5	1458.6	1845.7	2241.5	3627.3	7519.7	14548.6	22337.1	24545.3
60°	78.9	80.1	548.7	614.0	1210.7	1593.0	3195.8	7192.9	15080.0	23486.2	25705.5
62.5°	53.0	55.5	499.3	557.3	1104.7	1412.9	2795.1	6612.2	15336.5	24184.0	26541.4
65°	38.2	39.5	452.5	504.3	983.9	1253.9	2422.7	5981.0	15359.9	24345.5	27000.1
67.5°	35.8	37.0	416.7	464.8	895.1	1113.3	2100.9	5424.9	14712.6	24393.6	26981.6
70°	37.0	37.0	379.7	420.4	794.0	965.4	1743.4	4871.3	13080.2	23764.8	26375.0
72.5°	37.0	38.2	331.7	369.9	684.3	817.4	1429.0	3960.2	10593.4	21984.5	24910.2
75°	37.0	38.2	261.4	305.8	568.4	655.9	1172.5	3193.3	8158.3	18553.2	21794.6
77.5°	38.2	38.2	192.3	234.3	438.9	493.2	890.2	2453.5	6011.8	12860.7	15173.7
80°	38.2	40.7	135.6	172.6	324.3	356.3	646.1	1565.8	3237.7	6522.2	7533.2
82.5°	39.5	40.7	101.1	129.5	224.4	256.5	394.5	770.6	1496.8	3018.2	3418.9
85°	37.0	38.2	82.6	90.0	128.2	154.1	245.4	382.2	526.5	1187.3	1234.2
87.5°	25.9	24.7	25.9	29.6	41.9	67.8	115.9	129.5	127.0	319.3	371.1
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5	6608.5
2.5°	6619.6	6622.1	6612.2	6650.5	6612.2	6633.2	6577.7	6664.0	6655.4	6632.0	6661.5
5°	6618.4	6624.6	6622.1	6656.6	6608.5	6625.8	6570.3	6661.5	6630.7	6609.8	6645.5
7.5°	6648.0	6656.6	6652.9	6676.3	6620.9	6619.6	6565.4	6633.2	6603.6	6559.2	6603.6
10°	6713.3	6713.3	6702.2	6715.8	6635.7	6627.0	6535.8	6613.5	6562.9	6523.5	6577.7
12.5°	6797.2	6804.6	6776.2	6773.7	6662.8	6636.9	6522.2	6560.4	6487.7	6450.7	6503.7
15°	6920.5	6925.4	6888.4	6865.0	6729.4	6672.6	6487.7	6480.3	6379.2	6343.5	6381.7
17.5°	7063.5	7062.3	7010.5	7000.6	6841.6	6709.6	6459.3	6382.9	6253.4	6212.8	6246.1
20°	7292.8	7279.3	7222.5	7165.8	6934.0	6733.1	6418.7	6258.4	6078.4	6020.4	6047.5
22.5°	7601.0	7596.1	7507.3	7343.4	7032.7	6755.3	6349.6	6106.7	5867.5	5762.7	5780.0
25°	7938.9	7935.2	7808.2	7562.8	7119.0	6771.3	6269.5	5936.6	5613.6	5454.5	5450.8
27.5°	8330.9	8321.1	8149.7	7799.5	7238.6	6776.2	6183.2	5756.6	5362.0	5163.5	5172.2
30°	8808.1	8790.8	8556.6	8062.2	7390.2	6791.0	6109.2	5554.4	5127.8	4916.9	4912.0
32.5°	9440.6	9415.9	9052.2	8407.4	7586.3	6828.0	6020.4	5354.6	4909.5	4697.5	4679.0
35°	10403.5	10353.0	9751.3	8848.8	7804.5	6852.7	5878.6	5164.8	4698.7	4499.0	4484.2
37.5°	11828.8	11743.7	10631.6	9312.4	8021.5	6847.7	5717.1	4960.1	4527.3	4333.8	4330.1
40°	13707.8	13574.6	11688.2	9809.2	8229.8	6820.6	5543.3	4777.6	4384.3	4217.9	4230.2
42.5°	15763.1	15622.5	12940.9	10314.7	8386.4	6736.8	5357.1	4605.0	4252.4	4119.2	4120.5
45°	17834.4	17703.7	14382.2	10790.7	8464.1	6578.9	5163.5	4441.0	4113.1	3997.2	4010.7
47.5°	19897.1	19800.9	15809.9	11192.6	8425.9	6331.1	4930.5	4285.7	3975.0	3880.0	3910.9
50°	21815.6	21713.2	17331.4	11525.5	8233.5	5985.9	4691.3	4132.8	3862.8	3780.2	3806.1
52.5°	23593.5	23456.6	18961.3	11717.8	7887.1	5622.2	4480.5	3998.4	3754.3	3671.7	3698.8
55°	25103.8	25097.6	20453.2	11733.8	7345.8	5249.8	4277.1	3843.1	3648.3	3580.4	3586.6
57.5°	26518.0	26573.5	21736.6	11539.0	6704.7	4904.6	4044.0	3682.8	3526.2	3455.9	3462.1
60°	27598.0	27667.1	22607.1	10971.9	6021.7	4523.6	3793.7	3512.6	3374.5	3308.0	3327.7
62.5°	28373.5	28284.8	23068.2	10158.2	5337.4	4114.3	3522.5	3295.6	3185.9	3145.2	3146.5
65°	28636.2	28607.8	22798.2	9155.8	4691.3	3711.1	3201.9	3025.6	2957.8	2929.5	2950.4
67.5°	28367.4	28384.6	21746.5	8303.8	4077.3	3256.2	2841.9	2728.5	2694.0	2692.7	2714.9
70°	27631.3	27495.7	19565.5	7623.2	3501.5	2750.7	2454.8	2400.5	2389.4	2416.6	2435.0
72.5°	25707.9	25510.7	16225.4	6539.5	2687.8	2023.2	1859.3	1933.2	1930.8	1945.6	1962.8
75°	22023.9	21504.9	12709.1	5206.7	1991.2	1431.4	1240.3	1237.9	1234.2	1359.9	1405.5
77.5°	15436.4	15089.9	9382.6	3965.1	1324.2	856.9	850.7	917.3	928.4	845.8	861.8
80°	7744.1	7895.7	5415.1	2449.8	880.3	604.1	633.7	623.9	632.5	642.4	648.5
82.5°	3569.3	3645.8	2591.6	1193.5	567.2	458.7	434.0	472.2	489.5	488.2	484.5
85°	1266.2	1273.6	819.9	511.7	347.7	298.4	303.3	352.6	372.3	355.1	346.5
87.5°	367.4	348.9	167.7	151.7	160.3	159.0	164.0	173.8	187.4	184.9	171.4
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)