

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: P591397

Luminaire Tested: **CTN-CA10-310-740-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591397  
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-CA10-310-740-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 41183 lumens  
Efficiency: N/A  
Efficacy: 131.8 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

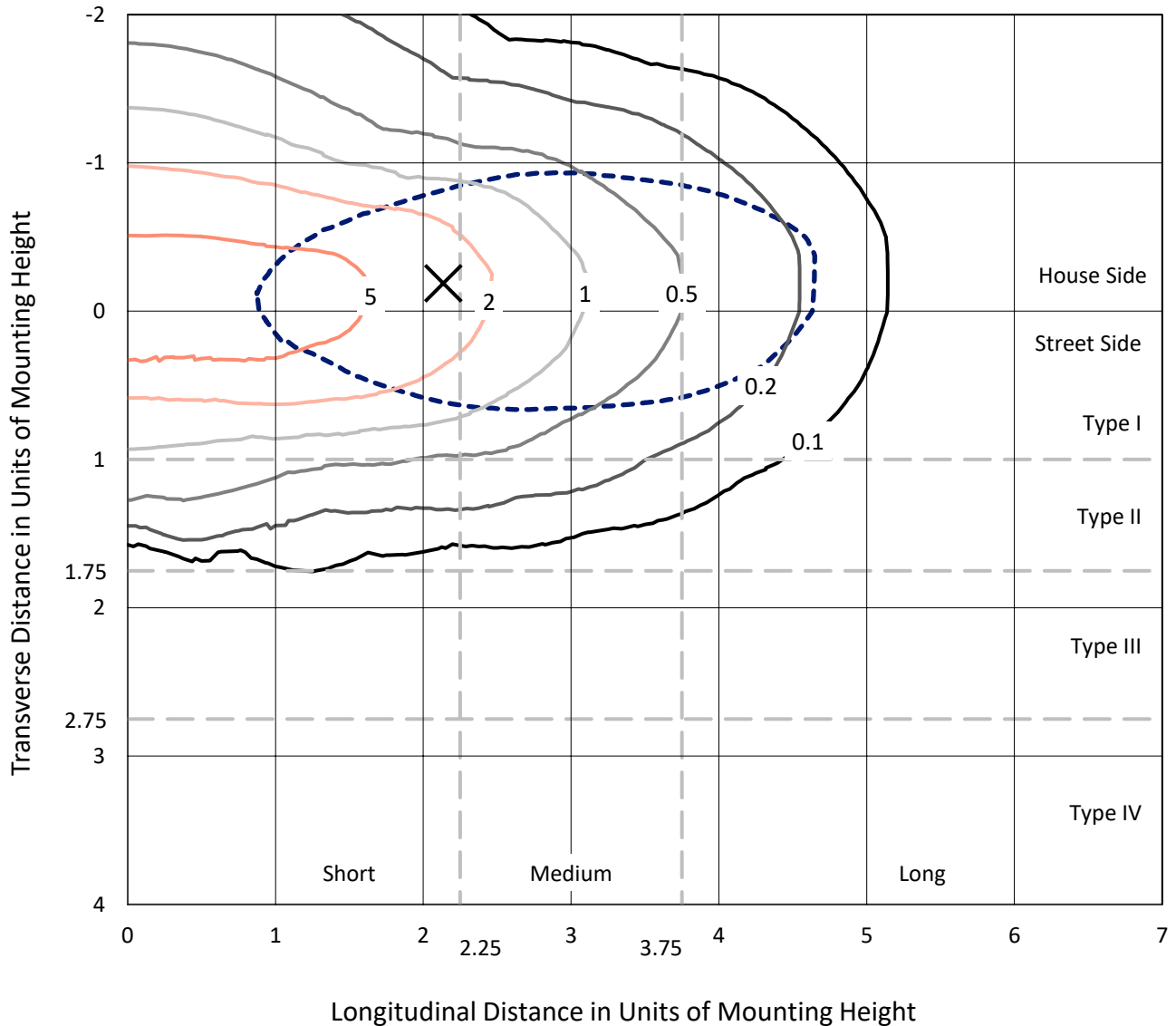
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

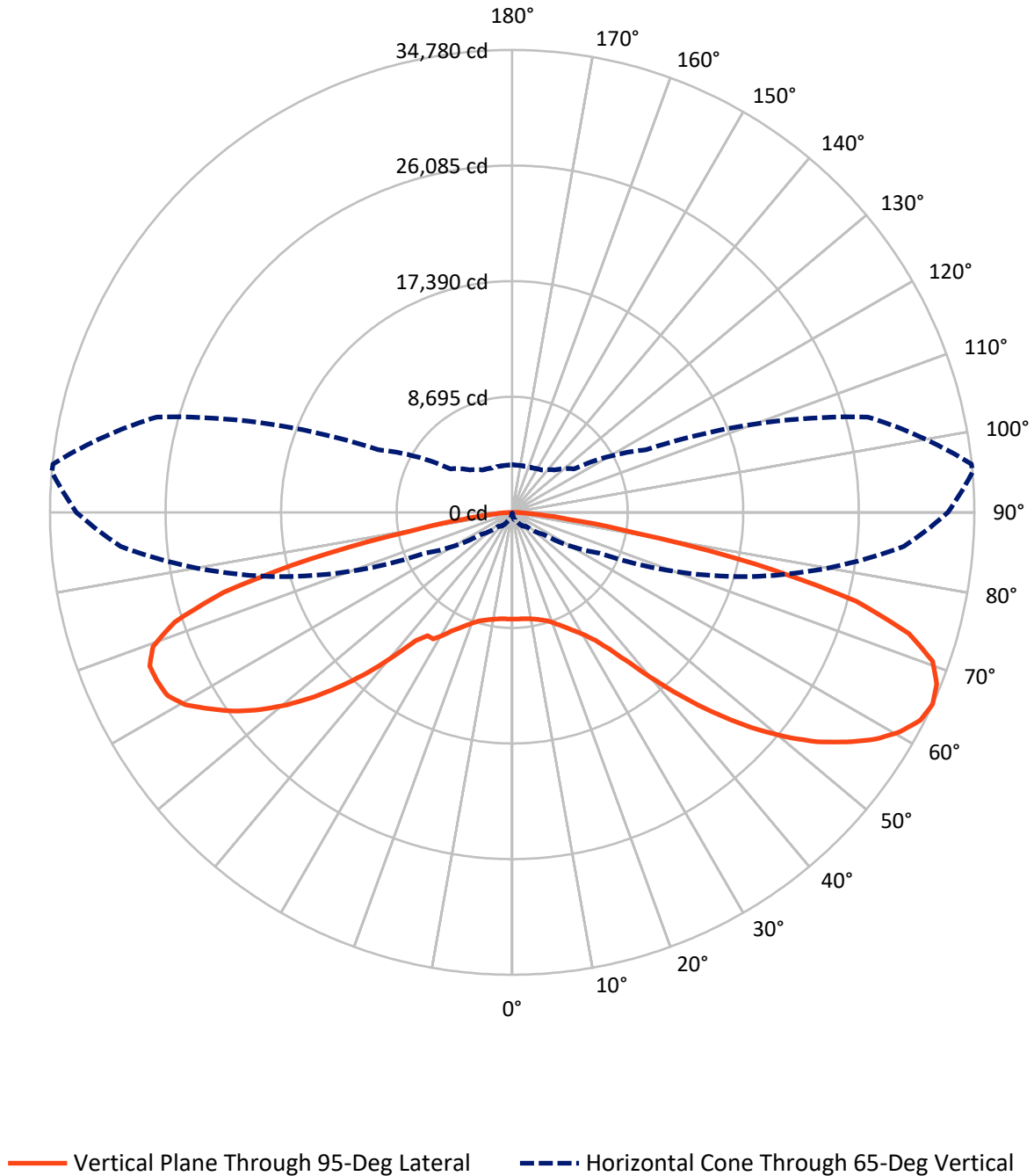
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.9 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot





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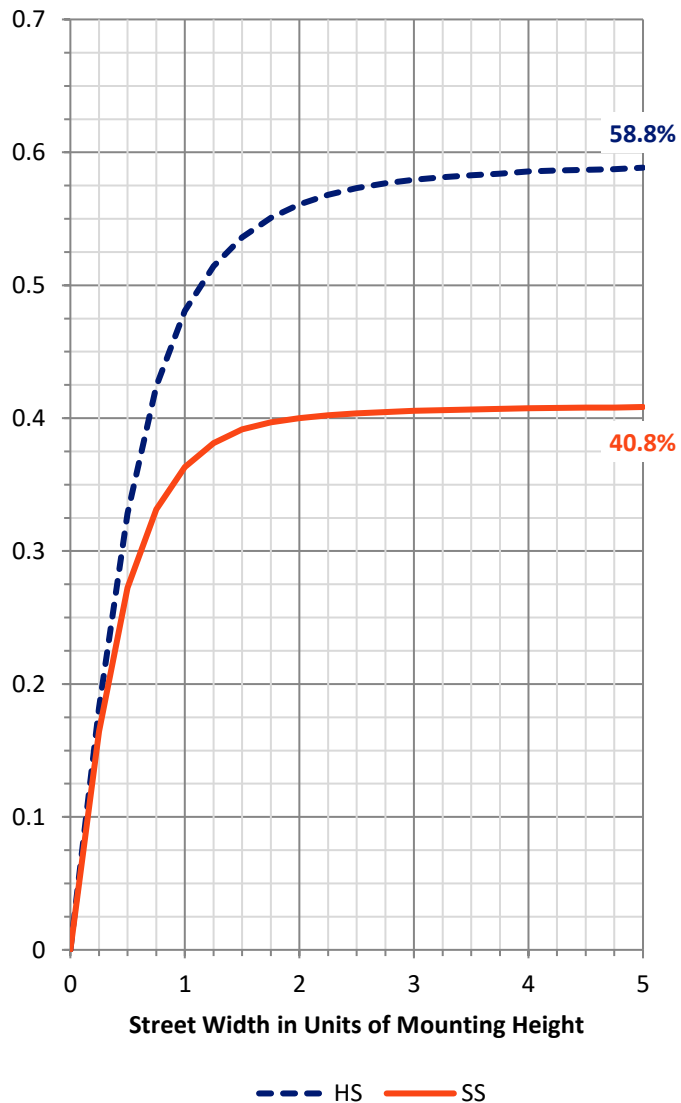
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	24419.1	0.0	24419.1
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	16763.9	0.0	16763.9
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	41183.0	0.0	41183.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	764.1	1.9
10°-20°	2200.4	5.3
20°-30°	3307.2	8.0
30°-40°	4611.0	11.2
40°-50°	6620.0	16.1
50°-60°	8438.8	20.5
60°-70°	8786.6	21.3
70°-80°	5658.1	13.7
80°-90°	796.9	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°	41183.0	100.0
0°-180°	41183.0	100.0

**Coefficient of Utilization**

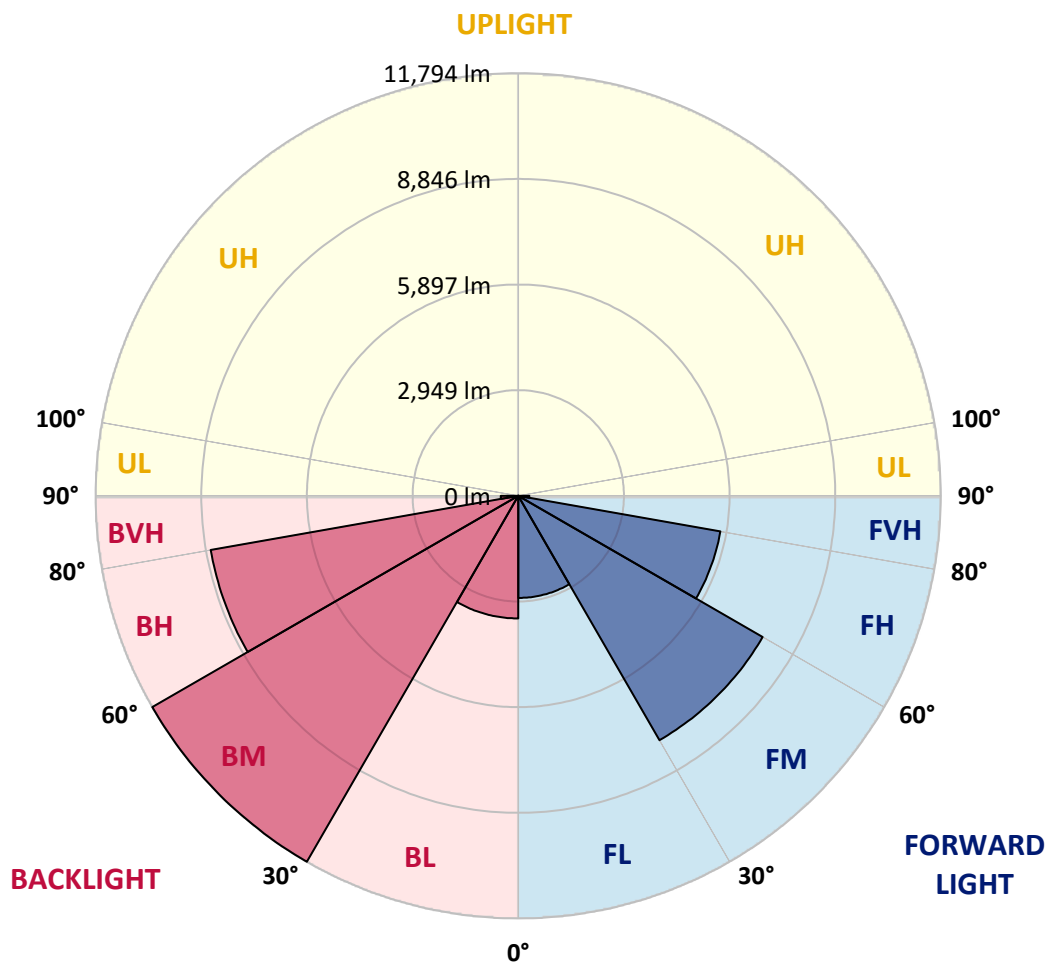


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2849.9	6.9			
FM (30°-60°)	7875.7	19.1			
FH (60°-80°)	5728.4	13.9			G3/7500
FVH (80°-90°)	309.9	0.8			G3/500
BL (0°-30°)	3421.7	8.3	B4/5000		
BM (30°-60°)	11794.1	28.6	B5		
BH (60°-80°)	8716.2	21.2	B5		G5
BVH (80°-90°)	487.0	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°	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4
2.5°	8050.4	7984.5	7997.9	8062.3	7944.0	8008.4	7960.5	8038.4	8018.9	8024.9	8062.3
5°	7983.0	7915.6	7941.0	8020.4	7909.6	7987.5	7951.5	8015.9	8009.9	8032.4	8056.4
7.5°	7921.6	7849.7	7882.6	7941.0	7881.1	7948.5	7929.1	8009.9	8006.9	8072.8	8089.3
10°	7852.7	7786.8	7815.3	7887.1	7837.7	7918.6	7935.1	8030.9	8062.3	8152.2	8159.7
12.5°	7731.4	7667.0	7680.5	7771.8	7779.3	7902.1	7959.0	8110.3	8143.2	8246.5	8251.0
15°	7297.1	7282.2	7409.4	7556.2	7616.1	7798.8	7989.0	8195.6	8245.0	8375.3	8388.8
17.5°	6075.2	5925.5	5700.8	5879.0	6271.4	6776.0	7917.1	8322.9	8414.2	8544.5	8585.0
20°	4074.6	4210.9	4718.5	4946.1	5295.0	6145.6	7899.1	8460.7	8658.3	8815.6	8891.9
22.5°	3366.3	3358.8	3966.8	4733.5	5007.5	5398.4	7261.2	8623.9	8951.8	9157.0	9252.8
25°	3126.7	3129.7	3240.5	4209.4	4887.7	5301.0	6669.7	8409.8	9273.8	9567.3	9681.1
27.5°	2936.5	2948.5	3042.8	3370.8	4785.9	5280.1	6686.2	7797.3	9613.7	10006.0	10137.8
30°	2785.3	2779.3	2893.1	3167.1	3983.3	5287.5	6764.0	7920.1	9297.7	10629.0	10702.4
32.5°	2659.5	2643.0	2758.3	3033.9	3478.6	5229.1	6880.8	8264.5	9074.6	11228.0	11514.0
35°	2538.2	2532.2	2634.0	2905.1	3358.8	4342.6	7017.1	8691.3	9799.4	11247.4	12628.1
37.5°	2443.9	2439.4	2520.2	2776.3	3251.0	3956.3	7129.4	9228.9	10742.8	12078.5	13550.5
40°	2367.5	2355.5	2419.9	2662.5	3128.2	3891.9	6210.0	9790.4	11894.3	14017.8	15784.8
42.5°	2303.1	2286.6	2349.5	2550.2	3009.9	3820.0	5766.7	10356.5	13248.1	16177.1	17957.6
45°	2214.7	2213.3	2277.6	2464.8	2884.1	3715.2	5808.7	9411.6	14769.5	18243.6	20239.7
47.5°	2169.8	2159.3	2207.3	2385.5	2765.8	3556.5	5768.2	9007.2	15934.5	20317.6	22463.4
50°	2099.4	2090.5	2136.9	2294.1	2649.0	3355.8	5621.5	9255.8	14974.6	22282.2	24553.9
52.5°	1973.7	1624.7	2068.0	2217.7	2523.2	3138.7	5342.9	9393.6	15347.5	24103.2	26500.6
55°	775.7	1040.7	1979.6	2121.9	2394.4	2935.0	4920.7	9354.7	16581.4	25733.9	28177.8
57.5°	675.4	678.4	1314.8	1771.5	2241.7	2722.4	4405.5	9133.0	17670.1	27129.5	29811.5
60°	95.8	97.3	666.4	745.7	1470.5	1934.7	3881.4	8736.2	18315.5	28525.2	31220.6
62.5°	64.4	67.4	606.5	676.9	1341.7	1716.1	3394.7	8030.9	18626.9	29372.7	32235.9
65°	46.4	47.9	549.6	612.5	1195.0	1522.9	2942.5	7264.2	18655.4	29568.9	32792.9
67.5°	43.4	44.9	506.1	564.5	1087.2	1352.2	2551.7	6588.8	17869.2	29627.3	32770.5
70°	44.9	44.9	461.2	510.6	964.4	1172.5	2117.4	5916.5	15886.6	28863.6	32033.7
72.5°	44.9	46.4	402.8	449.2	831.1	992.8	1735.6	4809.9	12866.2	26701.3	30254.7
75°	44.9	46.4	317.5	371.4	690.3	796.7	1424.1	3878.4	9908.7	22533.8	26470.7
77.5°	46.4	46.4	233.6	284.5	533.1	599.0	1081.2	2980.0	7301.6	15620.0	18429.3
80°	46.4	49.4	164.7	209.6	393.8	432.8	784.7	1901.8	3932.3	7921.6	9149.5
82.5°	47.9	49.4	122.8	157.2	272.5	311.5	479.2	935.9	1817.9	3665.8	4152.5
85°	44.9	46.4	100.3	109.3	155.7	187.2	298.0	464.2	639.4	1442.1	1499.0
87.5°	31.4	29.9	31.4	35.9	50.9	82.4	140.8	157.2	154.2	387.8	450.7
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4	8026.4
2.5°	8039.9	8042.9	8030.9	8077.3	8030.9	8056.4	7989.0	8093.8	8083.3	8054.9	8090.8
5°	8038.4	8045.9	8042.9	8084.8	8026.4	8047.4	7980.0	8090.8	8053.4	8027.9	8071.3
7.5°	8074.3	8084.8	8080.3	8108.8	8041.4	8039.9	7974.0	8056.4	8020.4	7966.5	8020.4
10°	8153.7	8153.7	8140.2	8156.7	8059.3	8048.9	7938.1	8032.4	7971.0	7923.1	7989.0
12.5°	8255.5	8264.5	8230.1	8227.1	8092.3	8060.8	7921.6	7968.0	7879.7	7834.7	7899.1
15°	8405.3	8411.2	8366.3	8337.9	8173.2	8104.3	7879.7	7870.7	7747.9	7704.4	7750.9
17.5°	8579.0	8577.5	8514.6	8502.6	8309.4	8149.2	7845.2	7752.4	7595.1	7545.7	7586.1
20°	8857.5	8841.0	8772.1	8703.3	8421.7	8177.6	7795.8	7601.1	7382.5	7312.1	7345.1
22.5°	9231.9	9225.9	9118.1	8918.9	8541.5	8204.6	7711.9	7416.9	7126.4	6999.1	7020.1
25°	9642.2	9637.7	9483.4	9185.4	8646.4	8224.1	7614.6	7210.3	6817.9	6624.8	6620.3
27.5°	10118.4	10106.4	9898.2	9473.0	8791.6	8230.1	7509.8	6991.7	6512.5	6271.4	6281.9
30°	10697.9	10676.9	10392.4	9791.9	8975.8	8248.0	7419.9	6746.1	6227.9	5971.9	5965.9
32.5°	11466.1	11436.1	10994.4	10211.2	9213.9	8293.0	7312.1	6503.5	5962.9	5705.3	5682.9
35°	12635.6	12574.2	11843.4	10747.3	9478.9	8322.9	7139.9	6272.9	5706.8	5464.2	5446.3
37.5°	14366.7	14263.3	12912.6	11310.3	9742.5	8316.9	6943.7	6024.3	5498.7	5263.6	5259.1
40°	16648.8	16487.1	14195.9	11913.8	9995.6	8284.0	6732.6	5802.7	5325.0	5122.8	5137.8
42.5°	19145.1	18974.4	15717.4	12527.8	10185.7	8182.1	6506.5	5593.0	5164.7	5003.0	5004.5
45°	21660.8	21502.1	17467.9	13105.8	10280.1	7990.5	6271.4	5393.9	4995.5	4854.8	4871.2
47.5°	24166.1	24049.3	19202.0	13594.0	10233.7	7689.5	5988.4	5205.2	4827.8	4712.5	4750.0
50°	26496.1	26371.8	21049.8	13998.3	10000.1	7270.2	5697.8	5019.5	4691.6	4591.2	4622.7
52.5°	28655.5	28489.2	23029.5	14231.9	9579.3	6828.4	5441.8	4856.3	4559.8	4459.4	4492.4
55°	30489.8	30482.4	24841.4	14251.4	8921.9	6376.2	5194.7	4667.6	4431.0	4348.6	4356.1
57.5°	32207.4	32274.8	26400.3	14014.8	8143.2	5956.9	4911.7	4472.9	4282.7	4197.4	4204.9
60°	33519.2	33603.1	27457.5	13325.9	7313.6	5494.2	4607.7	4266.3	4098.6	4017.7	4041.7
62.5°	34461.1	34353.3	28017.5	12337.6	6482.5	4997.0	4278.3	4002.7	3869.4	3820.0	3821.5
65°	34780.1	34745.6	27689.6	11120.2	5697.8	4507.4	3888.9	3674.8	3592.4	3558.0	3583.4
67.5°	34453.6	34474.6	26412.3	10085.4	4952.1	3954.8	3451.7	3313.9	3272.0	3270.5	3297.4
70°	33559.6	33394.9	23763.2	9258.8	4252.8	3340.8	2981.4	2915.6	2902.1	2935.0	2957.5
72.5°	31223.6	30984.0	19706.6	7942.5	3264.5	2457.3	2258.2	2348.0	2345.0	2363.0	2384.0
75°	26749.2	26118.7	15435.8	6323.8	2418.4	1738.6	1506.4	1503.5	1499.0	1651.7	1707.1
77.5°	18748.2	18327.4	11395.7	4815.8	1608.3	1040.7	1033.2	1114.1	1127.6	1027.3	1046.7
80°	9405.6	9589.8	6576.9	2975.5	1069.2	733.8	769.7	757.7	768.2	780.2	787.7
82.5°	4335.2	4428.0	3147.7	1449.5	688.8	557.1	527.1	573.5	594.5	593.0	588.5
85°	1537.9	1546.9	995.8	621.4	422.3	362.4	368.4	428.3	452.2	431.3	420.8
87.5°	446.2	423.8	203.7	184.2	194.7	193.2	199.2	211.1	227.6	224.6	208.1
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)