

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: P237525

Luminaire Tested: **CTN-10-9-D-E1-T4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237525
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-27)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-9-D-E1-T4-7050-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 82042 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

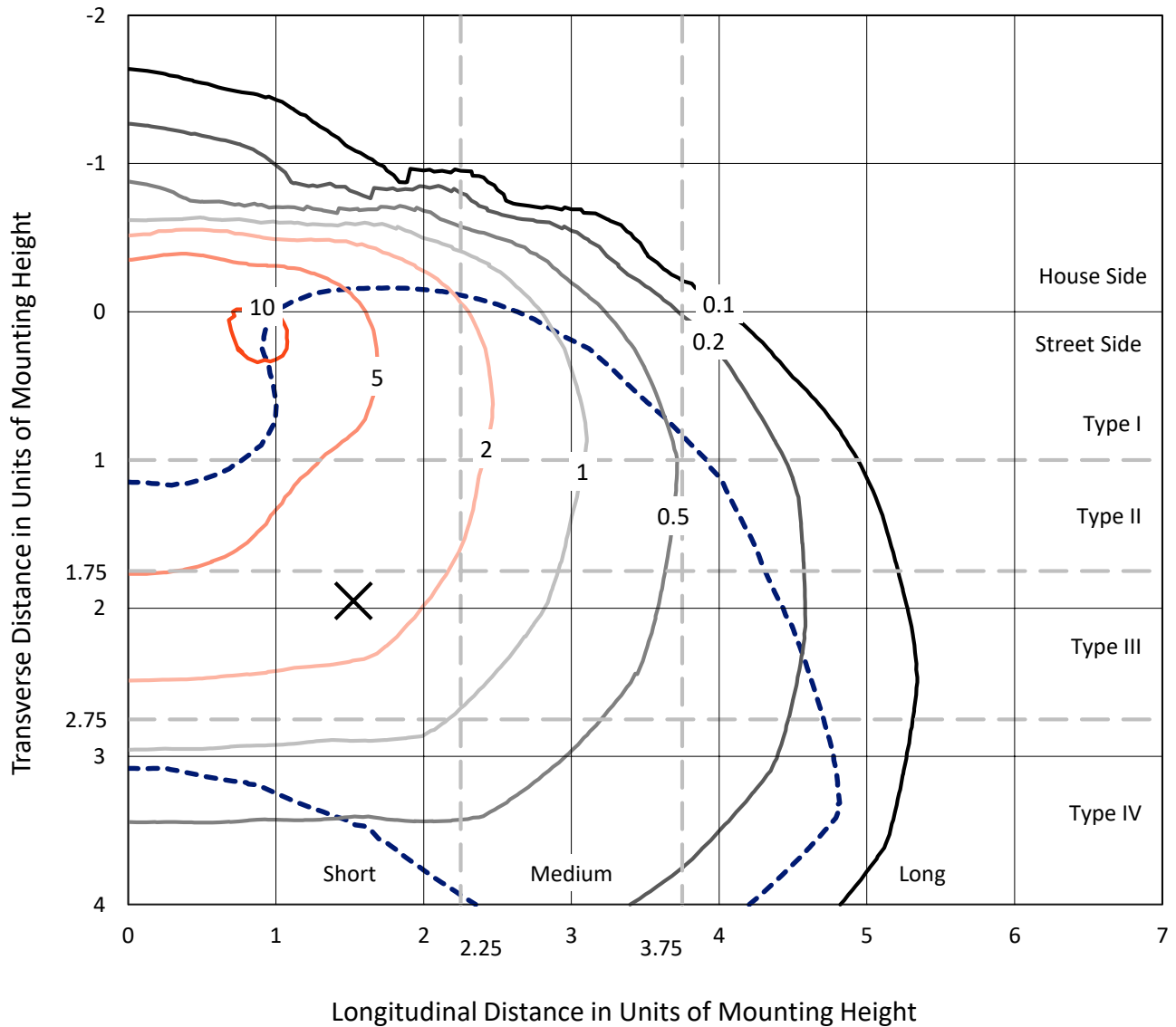
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

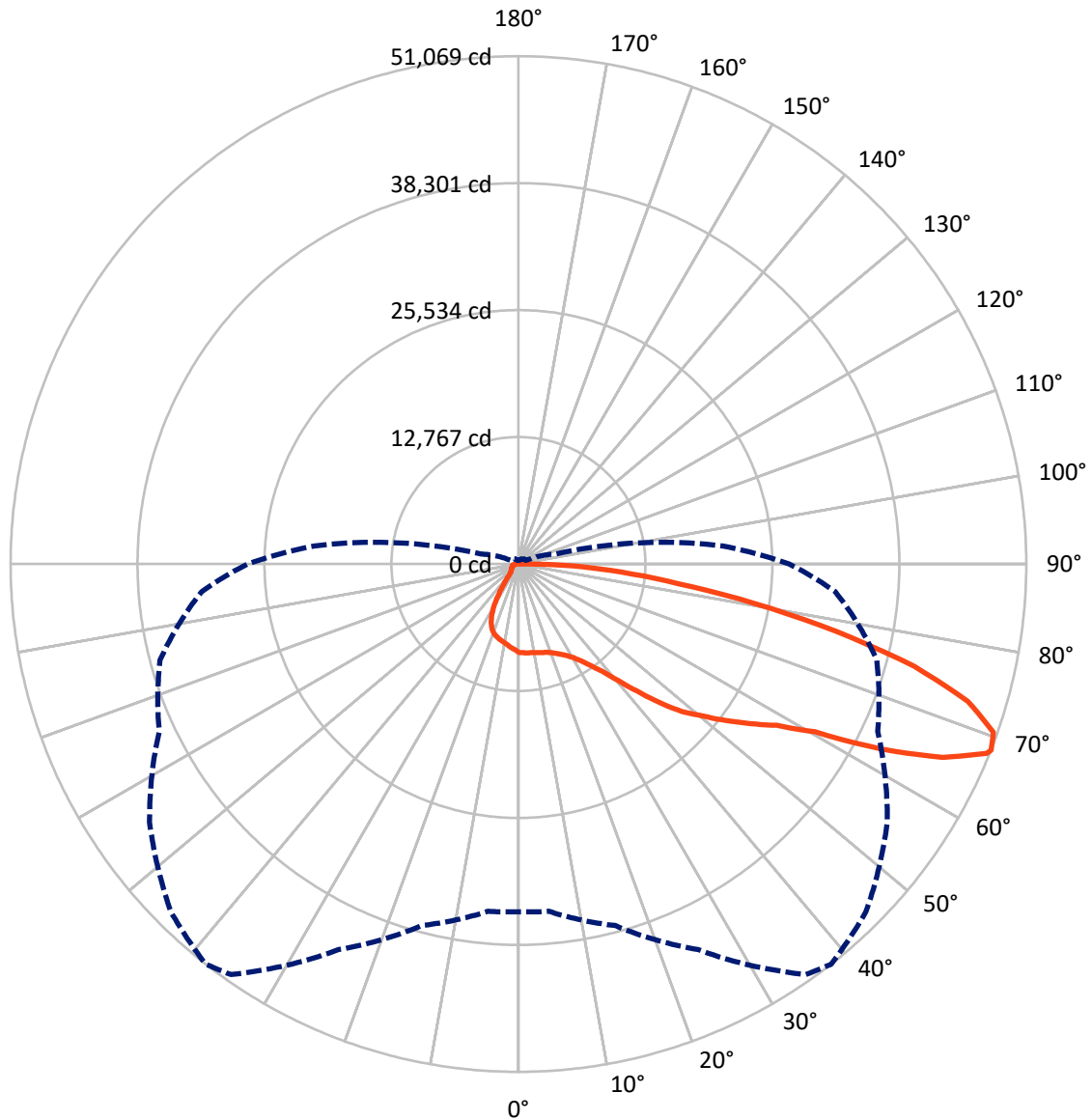
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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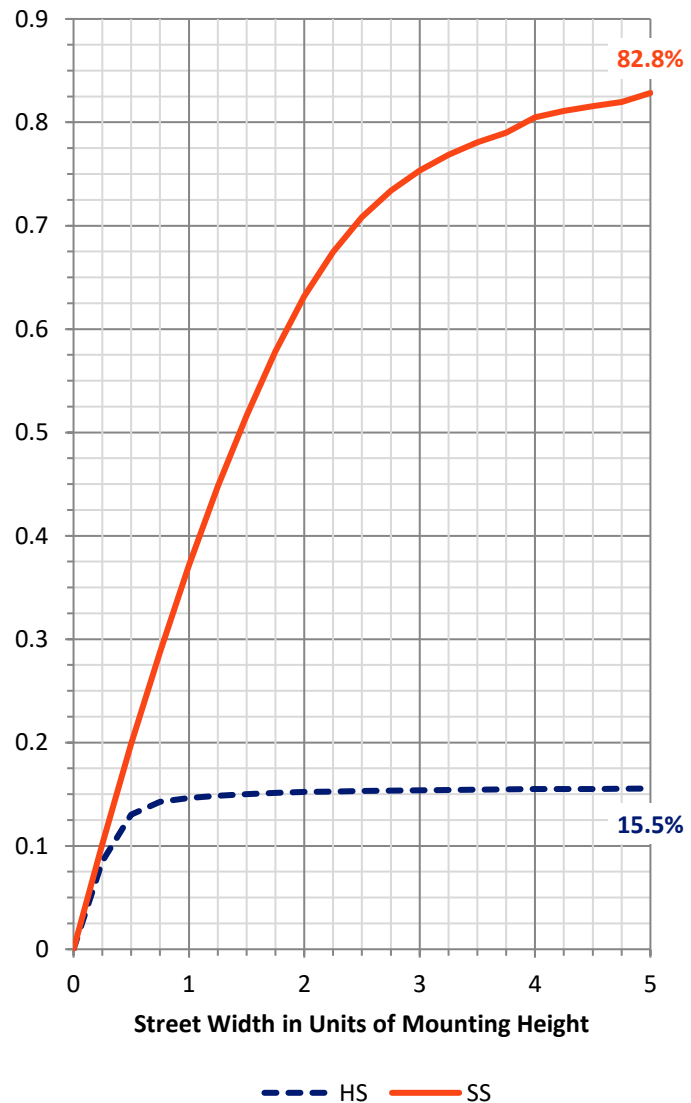
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12940.4	0.0	12940.4
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	69101.6	0.0	69101.6
	% Fixture	84.2	0.0	84.2
Total	Lumens	82042.0	0.0	82042.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	840.0	1.0
10°-20°	2494.8	3.0
20°-30°	4163.5	5.1
30°-40°	6386.2	7.8
40°-50°	10994.7	13.4
50°-60°	16339.6	19.9
60°-70°	21615.9	26.3
70°-80°	15875.0	19.3
80°-90°	3332.3	4.1
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°	82042.0	100.0
0°-180°	82042.0	100.0



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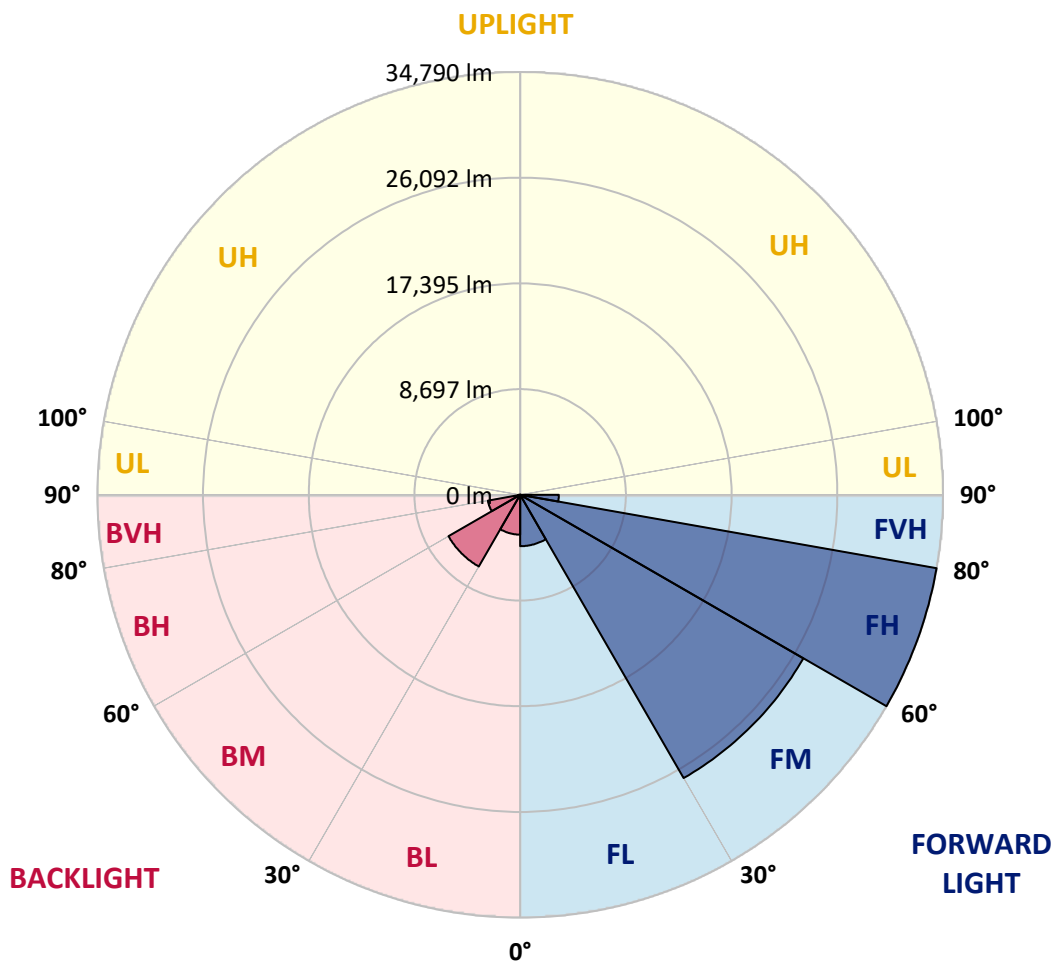
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4224.2	5.1			
FM	(30°-60°)	26908.5	32.8			
FH	(60°-80°)	34789.9	42.4			G5
FVH	(80°-90°)	3179.0	3.9			G5
BL	(0°-30°)	3274.1	4.0	B4/5000		
BM	(30°-60°)	6812.1	8.3	B4/8500		
BH	(60°-80°)	2700.9	3.3	B4/5000		G4/5000
BVH	(80°-90°)	153.3	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8
2.5°	9098.7	9035.7	9047.7	9086.7	8927.8	8915.8	8966.8	8909.8	8984.8	8948.8	8951.8
5°	9122.7	9062.7	9086.7	9146.7	8996.8	8993.8	9050.7	8978.8	9035.7	8990.8	8978.8
7.5°	9101.7	9047.7	9065.7	9122.7	8993.8	9002.8	9077.7	9053.7	9137.7	9092.7	9059.7
10°	9092.7	9056.7	9059.7	9137.7	9035.7	9059.7	9155.7	9170.7	9305.6	9266.7	9251.7
12.5°	9011.8	8984.8	9011.8	9134.7	9101.7	9149.7	9278.7	9356.6	9515.6	9500.6	9530.6
15°	8963.8	8951.8	8972.8	9116.7	9155.7	9233.7	9404.6	9557.6	9749.5	9776.5	9845.5
17.5°	9020.7	9038.7	9077.7	9194.7	9248.7	9329.6	9521.6	9731.5	10004.4	10121.4	10202.3
20°	9260.7	9281.7	9317.6	9392.6	9452.6	9521.6	9692.5	9932.4	10295.3	10478.2	10607.2
22.5°	9608.5	9572.6	9623.5	9686.5	9704.5	9764.5	9938.4	10178.3	10589.2	10865.1	11045.0
25°	9878.4	9854.4	9905.4	10013.4	10010.4	10064.4	10235.3	10481.2	10925.1	11320.9	11638.8
27.5°	10160.3	10145.3	10166.3	10310.3	10367.3	10433.2	10583.2	10859.1	11359.9	11857.7	12358.5
30°	10568.2	10601.2	10565.2	10730.1	10853.1	10928.1	11081.0	11419.9	11956.7	12637.4	13270.2
32.5°	11201.0	11216.0	11156.0	11338.9	11515.9	11629.8	11776.8	12220.6	12808.4	13639.1	14454.8
35°	12550.5	12553.5	12307.6	12280.6	12379.5	12544.5	12760.4	13420.2	14295.8	15576.4	16500.1
37.5°	14595.7	14496.8	14262.9	13807.0	13660.1	13690.1	13999.0	14916.6	16245.1	18608.3	19493.0
40°	16940.9	16826.9	16416.1	15813.3	15381.5	15354.5	15459.4	16560.0	18503.3	22018.1	22464.9
42.5°	19472.0	19394.0	18728.3	18104.5	17552.7	17465.7	17228.8	18332.4	20992.4	25062.0	25059.0
45°	21808.1	21793.1	20980.4	20671.6	20086.8	19858.8	19576.9	20434.6	23550.5	27461.1	27173.2
47.5°	24000.4	23955.4	23091.7	22737.8	22291.0	22168.0	21835.1	22434.9	25736.7	29701.3	28984.6
50°	26327.5	26189.6	24906.0	24549.2	24108.3	24012.3	23838.4	24528.2	28117.9	31659.6	30472.0
52.5°	29032.5	28822.6	27071.2	26408.5	26093.6	26156.6	26045.6	26663.4	30780.9	33297.0	31689.6
55°	32232.4	31602.6	29929.2	28726.6	28027.9	28318.8	28102.9	28873.6	33336.0	34571.5	32577.3
57.5°	34580.5	34577.5	33896.8	32187.4	30604.0	30619.0	30184.1	31062.8	35402.2	35840.1	33096.1
60°	37267.6	37426.5	37660.4	36901.7	35033.4	34250.7	32721.2	33231.0	37063.6	36760.8	33327.0
62.5°	39603.7	39696.7	40731.3	41022.2	41166.2	40974.2	37573.5	35729.1	38422.2	37273.6	33393.0
65°	39519.8	39510.8	41748.0	43697.3	46726.2	46897.1	45916.5	39438.8	39474.8	37339.5	33051.1
67.5°	35663.1	35846.1	38839.0	43016.5	50240.9	50780.7	49428.2	44824.8	39864.6	37309.6	32235.4
68°	34973.4	35051.4	37639.4	42776.6	50390.8	51068.6	49434.2	45274.7	39852.6	37312.6	31983.5
70°	30580.0	30696.9	33713.9	39870.6	50432.8	50666.7	48693.5	45520.6	39456.8	37033.7	30166.1
72.5°	24141.3	24276.3	27026.3	33641.9	47290.0	47281.0	45373.7	43460.3	38116.3	34994.4	25589.8
75°	17489.7	17930.5	20335.7	26423.5	40482.4	41100.2	40854.3	40473.4	34301.6	29572.3	18059.5
77.5°	12262.6	12487.5	14751.7	19873.8	31812.5	32757.2	34415.6	34907.4	28594.7	21961.1	8133.1
80°	7734.2	8157.1	10031.4	14112.9	23175.6	24048.3	26057.6	26885.3	21106.4	10772.1	1424.5
82.5°	4507.4	4759.3	6138.8	9140.7	15582.4	16191.2	17507.7	16491.1	8555.9	1433.5	791.7
85°	2183.2	2414.1	3295.8	5200.1	9728.5	10343.3	11054.0	7191.4	1415.5	563.8	533.8
87.5°	884.7	908.7	1349.5	2309.2	4849.3	5377.1	5203.1	2360.1	368.9	203.9	167.9
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°	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8	8909.8
2.5°	8966.8	8921.8	8867.8	8849.8	8723.9	8717.9	8612.9	8765.8	8720.9	8723.9	8759.8
5°	8972.8	8921.8	8816.8	8768.8	8633.9	8597.9	8424.0	8519.9	8418.0	8409.0	8468.9
7.5°	9035.7	8978.8	8828.8	8753.8	8501.9	8382.0	8217.0	8301.0	8145.1	8112.1	8124.1
10°	9203.7	9131.7	8948.8	8771.8	8460.0	8286.0	7962.1	7989.1	7851.2	7806.2	7845.2
12.5°	9458.6	9371.6	9152.7	8891.8	8495.9	8190.0	7794.2	7635.2	7425.3	7356.3	7377.3
15°	9806.5	9704.5	9416.6	9113.7	8573.9	8145.1	7605.3	7275.4	6867.5	6753.6	6711.6
17.5°	10187.3	10079.4	9746.5	9365.6	8711.9	8094.1	7389.3	6864.5	6276.7	6018.8	6003.8
20°	10634.2	10517.2	10169.3	9659.5	8822.8	8031.1	7119.4	6366.7	5602.0	5170.1	5140.1
22.5°	11147.0	11045.0	10652.2	9920.4	8879.8	7866.2	6711.6	5730.9	4774.3	4234.5	4207.5
25°	11749.8	11653.8	11102.0	10103.4	8816.8	7575.3	6153.8	4951.2	3799.6	3259.8	3235.8
27.5°	12469.5	12319.6	11455.9	10157.3	8630.9	7098.4	5455.0	3949.6	2807.0	2396.1	2375.1
30°	13288.2	13021.3	11788.8	10142.3	8301.0	6489.7	4492.4	2912.0	1994.3	1718.4	1709.4
32.5°	14319.8	13852.0	12106.6	10022.4	7830.2	5691.9	3418.8	2021.3	1433.5	1298.5	1295.5
35°	16041.2	15039.6	12454.5	9806.5	7191.4	4645.3	2369.1	1376.5	1166.6	1139.6	1139.6
37.5°	18608.3	16997.9	12949.3	9461.6	6363.7	3541.7	1559.4	1094.6	1097.6	1112.6	1115.6
40°	21244.3	19250.1	13666.1	8948.8	5398.1	2489.1	1133.6	1016.6	1052.6	1076.6	1094.6
42.5°	23664.5	21289.3	14463.8	8247.0	4306.4	1643.4	1013.6	977.6	995.6	1013.6	1031.6
45°	25694.7	23076.7	15216.5	7446.3	3190.9	1169.6	1004.6	932.7	923.7	935.7	947.7
47.5°	27407.1	24531.2	15744.3	6543.6	2171.2	1001.6	980.6	884.7	854.7	857.7	863.7
50°	28714.7	25559.8	15978.2	5551.0	1439.5	974.6	935.7	833.7	785.7	785.7	791.7
52.5°	29596.3	26204.6	15840.3	4432.4	1034.6	959.7	899.7	779.7	722.7	731.7	737.7
55°	30250.1	26549.4	15297.5	3256.8	911.7	914.7	857.7	716.7	668.8	692.8	701.7
57.5°	30505.0	26540.4	14385.8	2249.2	905.7	845.7	797.7	662.8	623.8	656.8	671.8
60°	30412.0	26102.6	13060.3	1532.4	887.7	791.7	734.7	611.8	581.8	581.8	584.8
62.5°	30226.1	25487.8	11138.0	1136.6	845.7	752.7	686.8	569.8	533.8	515.8	509.8
65°	29386.4	23997.4	8178.1	980.6	803.7	731.7	641.8	530.8	482.8	452.8	446.8
67.5°	27725.0	21433.3	4570.4	905.7	773.7	719.7	611.8	494.8	440.8	404.9	401.9
68°	27215.2	20632.6	3874.6	899.7	779.7	719.7	608.8	485.8	434.8	395.9	392.9
70°	24198.3	16644.0	1601.4	845.7	821.7	722.7	593.8	458.8	410.9	371.9	368.9
72.5°	18302.4	9641.5	845.7	734.7	800.7	710.7	599.8	437.8	389.9	344.9	338.9
75°	10085.4	2762.0	752.7	596.8	740.7	749.7	611.8	434.8	377.9	320.9	308.9
77.5°	2240.2	899.7	701.7	521.8	638.8	689.8	566.8	413.9	383.9	293.9	281.9
80°	857.7	731.7	665.8	401.9	506.8	584.8	470.8	368.9	392.9	275.9	260.9
82.5°	716.7	641.8	611.8	311.9	350.9	428.8	377.9	314.9	362.9	254.9	242.9
85°	527.8	620.8	431.8	245.9	257.9	263.9	263.9	245.9	311.9	224.9	212.9
87.5°	212.9	299.9	182.9	114.0	132.0	123.0	108.0	132.0	179.9	158.9	158.9
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)