

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: P237516

Luminaire Tested: **CTN-10-8-D-E1-T4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237516
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-10-8-D-E1-T4-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 70738 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

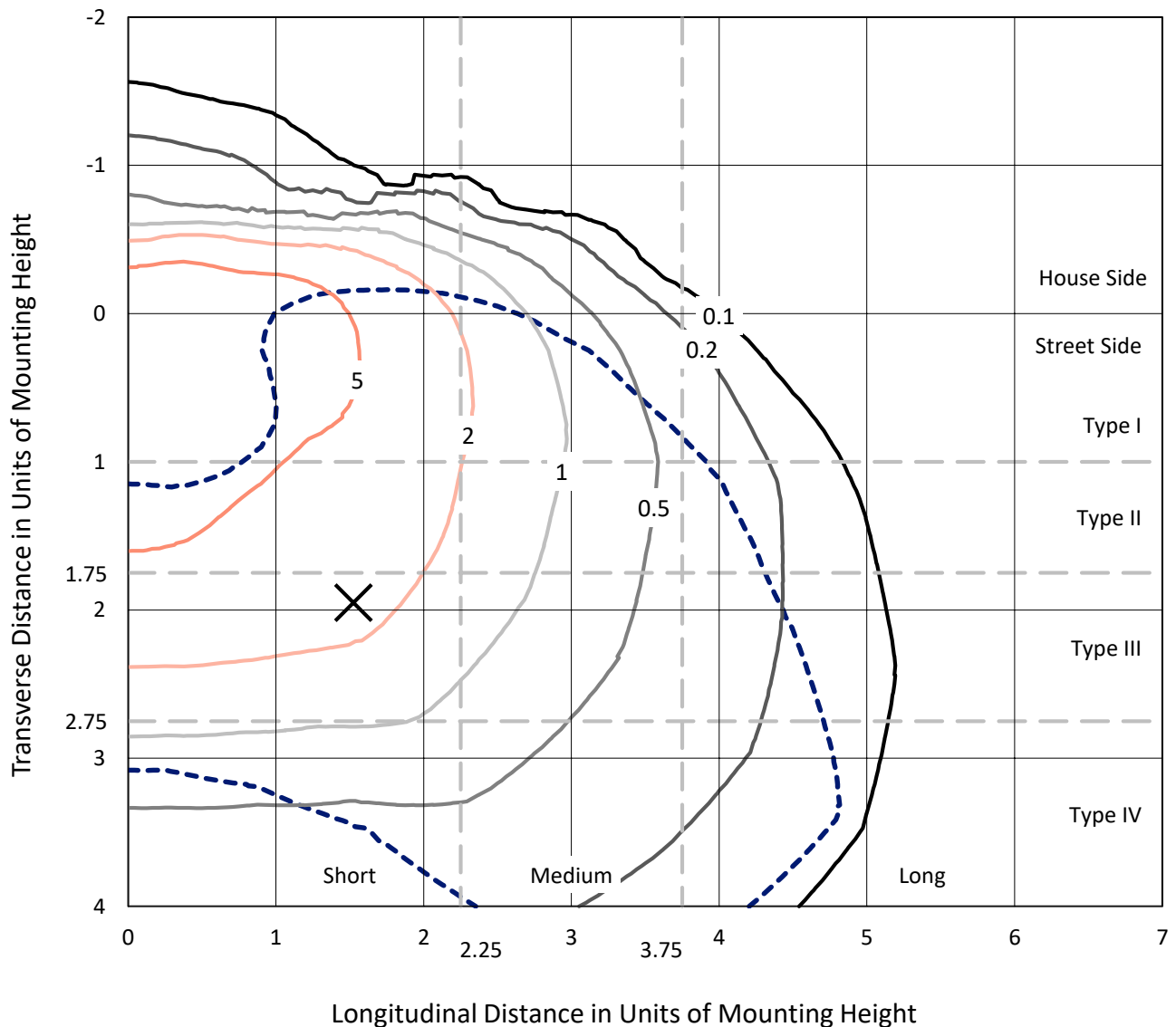
Input Watts (W): 631
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

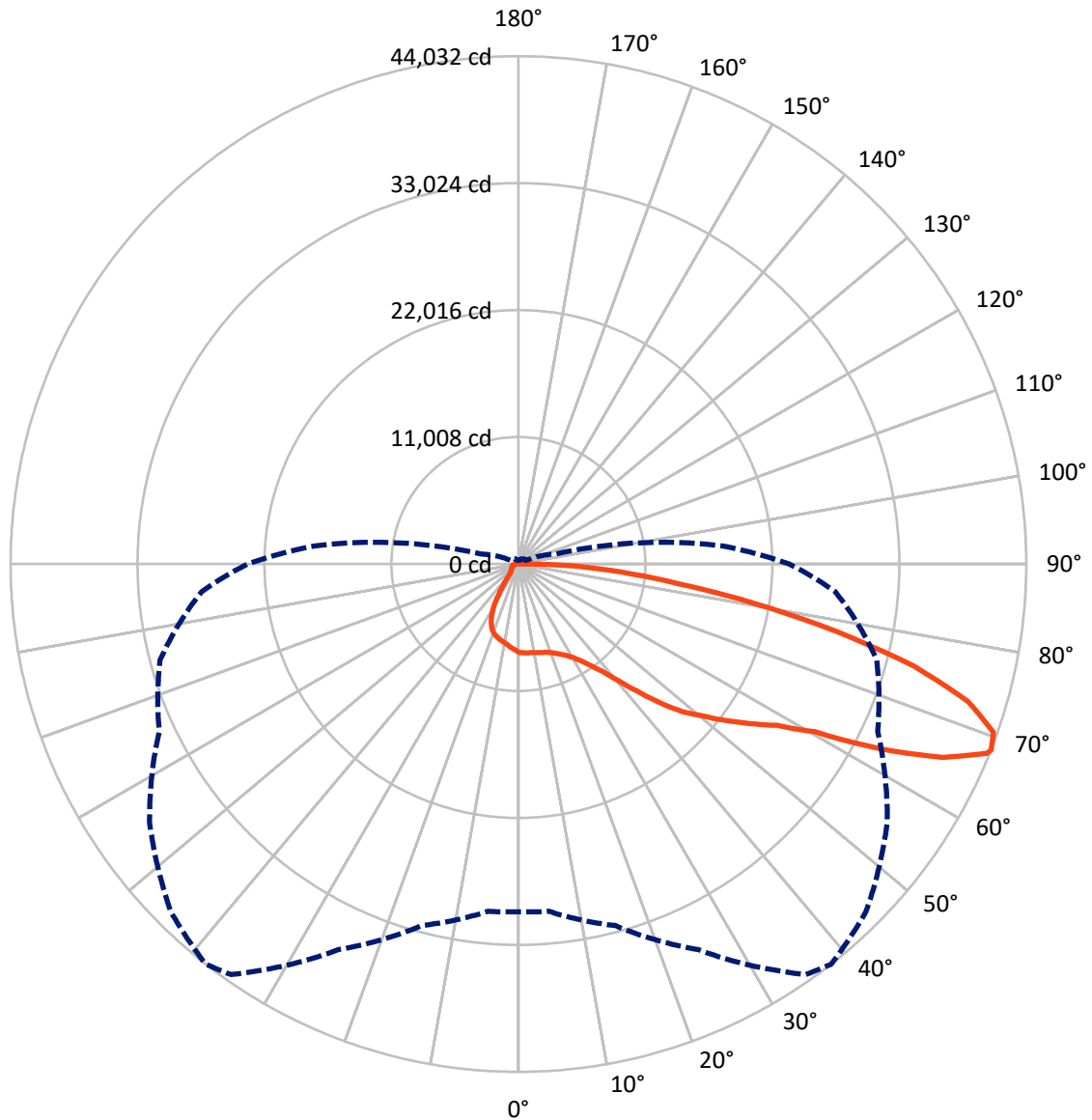


Based on 30 foot mounting height. Maximum calculated value = 9.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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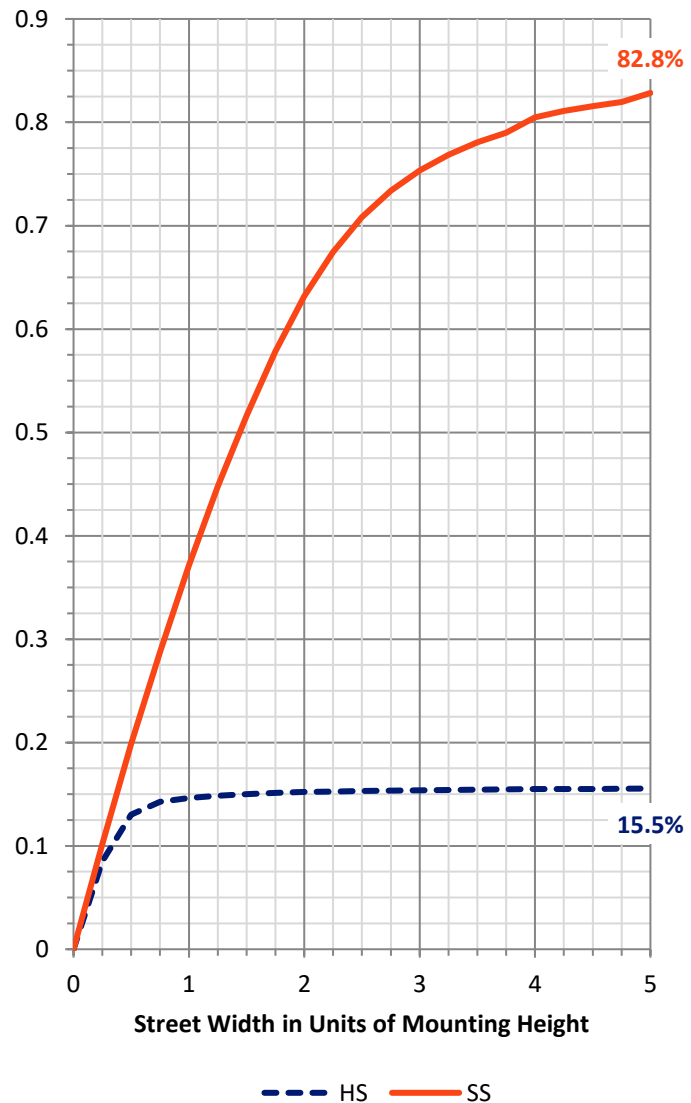
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11157.4	0.0	11157.4
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	59580.6	0.0	59580.6
	% Fixture	84.2	0.0	84.2
Total	Lumens	70738.0	0.0	70738.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	724.3	1.0
10°-20°	2151.0	3.0
20°-30°	3589.8	5.1
30°-40°	5506.3	7.8
40°-50°	9479.8	13.4
50°-60°	14088.3	19.9
60°-70°	18637.6	26.3
70°-80°	13687.7	19.3
80°-90°	2873.2	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°	70738.0	100.0
0°-180°	70738.0	100.0



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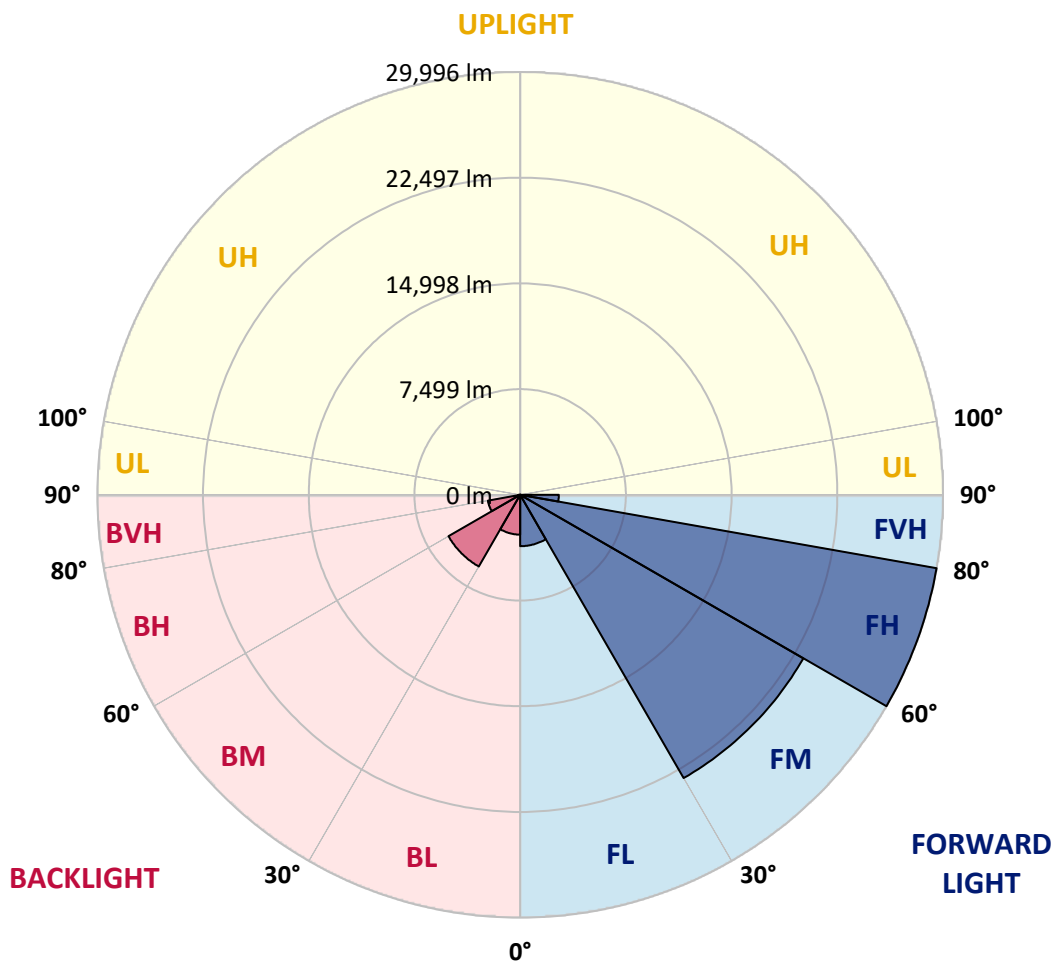
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3642.1	5.1			
FM	(30°-60°)	23200.9	32.8			
FH	(60°-80°)	29996.5	42.4			G5
FVH	(80°-90°)	2741.0	3.9			G5
BL	(0°-30°)	2823.0	4.0	B4/5000		
BM	(30°-60°)	5873.5	8.3	B4/8500		
BH	(60°-80°)	2328.8	3.3	B3/2500		G3/2500
BVH	(80°-90°)	132.1	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°	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2
2.5°	7845.1	7790.8	7801.1	7834.7	7697.7	7687.3	7731.3	7682.2	7746.8	7715.8	7718.4
5°	7865.8	7814.0	7834.7	7886.4	7757.2	7754.6	7803.7	7741.6	7790.8	7752.0	7741.6
7.5°	7847.7	7801.1	7816.6	7865.8	7754.6	7762.3	7827.0	7806.3	7878.7	7839.9	7811.5
10°	7839.9	7808.9	7811.5	7878.7	7790.8	7811.5	7894.2	7907.1	8023.5	7989.9	7976.9
12.5°	7770.1	7746.8	7770.1	7876.1	7847.7	7889.0	8000.2	8067.4	8204.5	8191.6	8217.4
15°	7728.7	7718.4	7736.5	7860.6	7894.2	7961.4	8108.8	8240.7	8406.2	8429.4	8488.9
17.5°	7777.8	7793.4	7827.0	7927.8	7974.4	8044.2	8209.7	8390.7	8626.0	8726.8	8796.6
20°	7984.7	8002.8	8033.8	8098.5	8150.2	8209.7	8357.0	8563.9	8876.8	9034.5	9145.7
22.5°	8284.6	8253.6	8297.6	8351.9	8367.4	8419.1	8569.1	8775.9	9130.2	9368.1	9523.2
25°	8517.4	8496.7	8540.6	8633.7	8631.1	8677.7	8825.1	9037.1	9419.8	9761.1	10035.2
27.5°	8760.4	8747.5	8765.6	8889.7	8938.8	8995.7	9125.0	9362.9	9794.7	10223.9	10655.7
30°	9112.1	9140.5	9109.5	9251.7	9357.7	9422.4	9554.2	9846.4	10309.3	10896.2	11441.8
32.5°	9657.7	9670.6	9618.9	9776.6	9929.2	10027.4	10154.1	10536.8	11043.6	11759.9	12463.2
35°	10821.2	10823.8	10611.8	10588.5	10673.8	10816.1	11002.2	11571.1	12326.1	13430.2	14226.6
37.5°	12584.7	12499.4	12297.7	11904.7	11778.0	11803.8	12070.1	12861.4	14006.8	16044.4	16807.2
40°	14606.7	14508.5	14154.2	13634.5	13262.2	13238.9	13329.4	14278.3	15953.9	18984.3	19369.6
42.5°	16789.1	16721.8	16147.8	15610.0	15134.2	15059.2	14855.0	15806.5	18100.0	21608.9	21606.3
45°	18803.3	18790.4	18089.7	17823.4	17319.1	17122.6	16879.6	17619.1	20305.7	23677.4	23429.2
47.5°	20693.5	20654.7	19910.0	19604.9	19219.6	19113.6	18826.6	19343.8	22190.6	25609.0	24991.0
50°	22700.0	22581.1	21474.4	21166.7	20786.6	20703.9	20553.9	21148.6	24243.7	27297.4	26273.5
52.5°	25032.3	24851.3	23341.3	22769.8	22498.3	22552.6	22457.0	22989.6	26539.8	28709.2	27323.3
55°	27791.3	27248.3	25805.5	24768.6	24166.1	24416.9	24230.8	24895.3	28742.9	29808.2	28088.7
57.5°	29815.9	29813.3	29226.4	27752.5	26387.3	26400.2	26025.3	26782.9	30524.4	30901.9	28536.0
60°	32132.7	32269.8	32471.5	31817.3	30206.4	29531.5	28212.8	28652.4	31956.9	31695.7	28735.1
62.5°	34147.0	34227.2	35119.2	35370.1	35494.2	35328.7	32396.5	30806.3	33128.2	32137.9	28792.0
65°	34074.6	34066.8	35995.8	37676.5	40288.1	40435.5	39589.9	34004.8	34035.8	32194.8	28497.2
67.5°	30749.4	30907.1	33487.6	37089.6	43318.6	43784.0	42617.8	38648.7	34372.0	32168.9	27793.9
68°	30154.7	30221.9	32453.4	36882.7	43447.8	44032.2	42623.0	39036.6	34361.6	32171.5	27576.7
70°	26366.6	26467.4	29068.7	34377.1	43484.0	43685.7	41984.3	39248.6	34020.3	31931.0	26009.7
72.5°	20815.0	20931.4	23302.5	29006.6	40774.2	40766.4	39121.9	37472.2	32864.5	30172.8	22063.9
75°	15079.9	15460.0	17533.8	22782.8	34904.6	35437.3	35225.3	34896.9	29575.5	25497.8	15571.2
77.5°	10573.0	10766.9	12719.2	17135.6	27429.3	28243.8	29673.7	30097.8	24654.8	18935.2	7012.5
80°	6668.6	7033.2	8649.2	12168.4	19982.4	20734.9	22467.3	23181.0	18198.3	9287.9	1228.2
82.5°	3886.3	4103.5	5293.0	7881.3	13435.4	13960.3	15095.4	14218.9	7377.1	1236.0	682.6
85°	1882.4	2081.5	2841.7	4483.6	8388.1	8918.1	9531.0	6200.6	1220.5	486.1	460.3
87.5°	762.8	783.5	1163.6	1991.0	4181.1	4636.2	4486.2	2035.0	318.0	175.8	144.8
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°	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2	7682.2
2.5°	7731.3	7692.5	7646.0	7630.5	7521.9	7516.7	7426.2	7558.1	7519.3	7521.9	7552.9
5°	7736.5	7692.5	7602.0	7560.6	7444.3	7413.3	7263.3	7346.0	7258.1	7250.4	7302.1
7.5°	7790.8	7741.6	7612.4	7547.7	7330.5	7227.1	7084.9	7157.3	7022.8	6994.4	7004.7
10°	7935.6	7873.5	7715.8	7563.2	7294.3	7144.3	6865.1	6888.4	6769.4	6730.6	6764.2
12.5°	8155.4	8080.4	7891.6	7666.7	7325.3	7061.6	6720.3	6583.2	6402.2	6342.8	6360.9
15°	8455.3	8367.4	8119.2	7858.0	7392.6	7022.8	6557.4	6273.0	5921.3	5823.0	5786.8
17.5°	8783.7	8690.6	8403.6	8075.2	7511.5	6978.9	6371.2	5918.7	5411.9	5189.5	5176.6
20°	9169.0	9068.1	8768.2	8328.6	7607.2	6924.6	6138.5	5489.5	4830.1	4457.8	4431.9
22.5°	9611.1	9523.2	9184.5	8553.6	7656.3	6782.3	5786.8	4941.3	4116.5	3651.0	3627.8
25°	10130.8	10048.1	9572.3	8711.3	7602.0	6531.5	5305.9	4269.0	3276.1	2810.7	2790.0
27.5°	10751.4	10622.1	9877.4	8757.8	7441.7	6120.4	4703.4	3405.4	2420.2	2066.0	2047.9
30°	11457.3	11227.2	10164.5	8744.9	7157.3	5595.5	3873.4	2510.7	1719.5	1481.6	1473.9
32.5°	12346.8	11943.4	10438.5	8641.5	6751.3	4907.7	2947.7	1742.8	1236.0	1119.6	1117.0
35°	13831.0	12967.4	10738.5	8455.3	6200.6	4005.3	2042.7	1186.8	1005.8	982.6	982.6
37.5°	16044.4	14655.9	11165.1	8157.9	5486.9	3053.7	1344.6	943.8	946.4	959.3	961.9
40°	18317.2	16597.7	11783.1	7715.8	4654.3	2146.1	977.4	876.6	907.6	928.3	943.8
42.5°	20403.9	18356.0	12470.9	7110.7	3713.1	1417.0	874.0	842.9	858.5	874.0	889.5
45°	22154.4	19897.1	13119.9	6420.3	2751.2	1008.4	866.2	804.2	796.4	806.7	817.1
47.5°	23630.9	21151.2	13575.0	5642.0	1872.1	863.6	845.5	762.8	736.9	739.5	744.7
50°	24758.3	22038.1	13776.7	4786.2	1241.1	840.4	806.7	718.8	677.5	677.5	682.6
52.5°	25518.5	22594.0	13657.8	3821.7	892.1	827.4	775.7	672.3	623.2	630.9	636.1
55°	26082.1	22891.4	13189.8	2808.1	786.1	788.6	739.5	618.0	576.6	597.3	605.1
57.5°	26301.9	22883.6	12403.7	1939.3	780.9	729.2	687.8	571.4	537.8	566.3	579.2
60°	26221.8	22506.1	11260.8	1321.3	765.4	682.6	633.5	527.5	501.6	501.6	504.2
62.5°	26061.5	21976.0	9603.4	980.0	729.2	649.0	592.1	491.3	460.3	444.7	439.6
65°	25337.5	20690.9	7051.3	845.5	693.0	630.9	553.3	457.7	416.3	390.4	385.3
67.5°	23905.0	18480.1	3940.6	780.9	667.1	620.6	527.5	426.6	380.1	349.1	346.5
68°	23465.4	17789.7	3340.7	775.7	672.3	620.6	524.9	418.9	374.9	341.3	338.7
70°	20864.2	14350.7	1380.8	729.2	708.5	623.2	512.0	395.6	354.2	320.6	318.0
72.5°	15780.6	8313.1	729.2	633.5	690.4	612.8	517.1	377.5	336.1	297.4	292.2
75°	8695.8	2381.4	649.0	514.6	638.7	646.4	527.5	374.9	325.8	276.7	266.3
77.5°	1931.5	775.7	605.1	449.9	550.8	594.7	488.7	356.8	331.0	253.4	243.1
80°	739.5	630.9	574.0	346.5	437.0	504.2	406.0	318.0	338.7	237.9	225.0
82.5°	618.0	553.3	527.5	268.9	302.5	369.8	325.8	271.5	312.9	219.8	209.4
85°	455.1	535.2	372.3	212.0	222.4	227.5	227.5	212.0	268.9	193.9	183.6
87.5°	183.6	258.6	157.7	98.3	113.8	106.0	93.1	113.8	155.1	137.0	137.0
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)