

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: P237522

Luminaire Tested: **CTN-10-4-D-E1-T4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237522
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-10-4-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: 38118 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

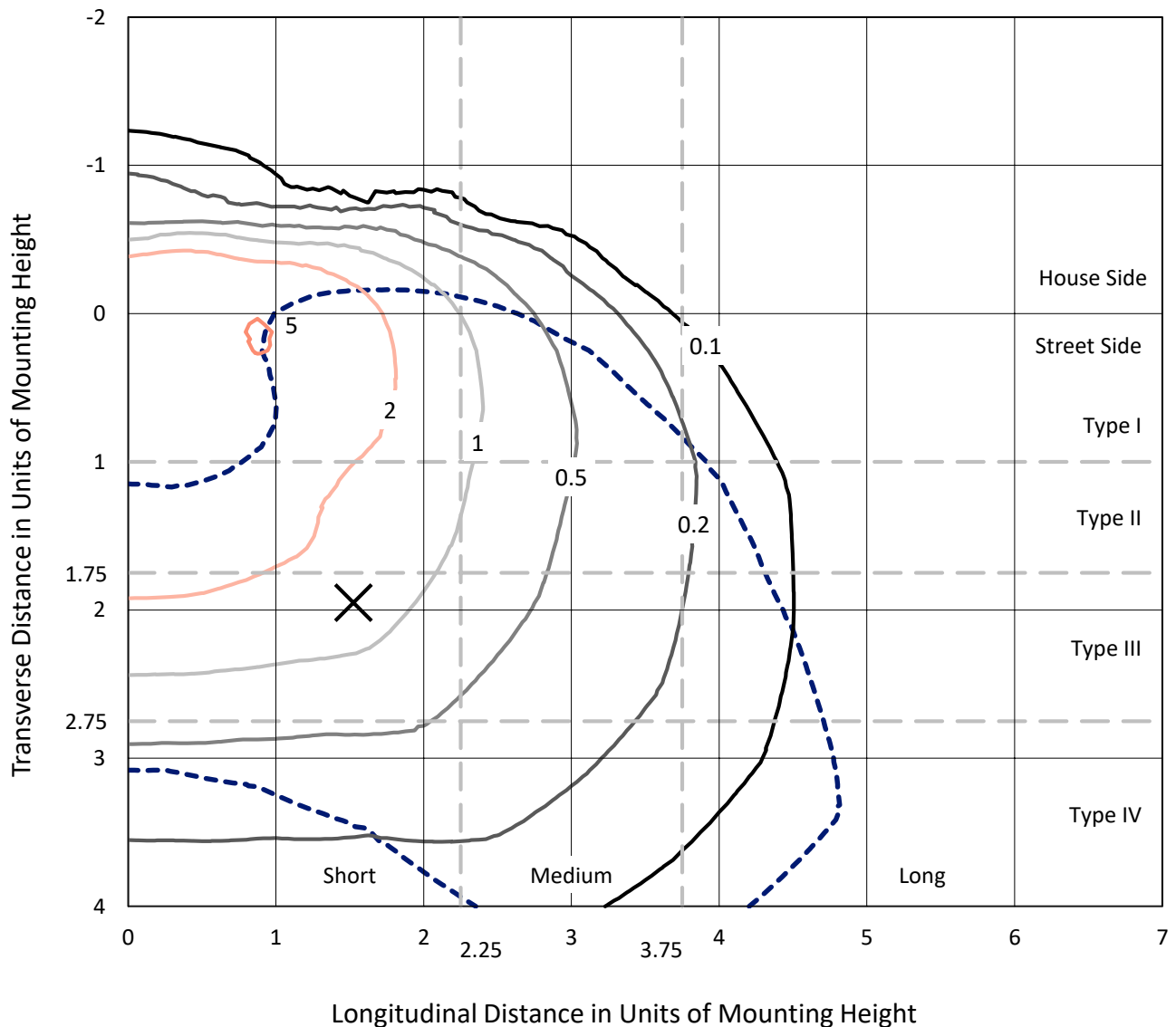
Input Watts (W): 308
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

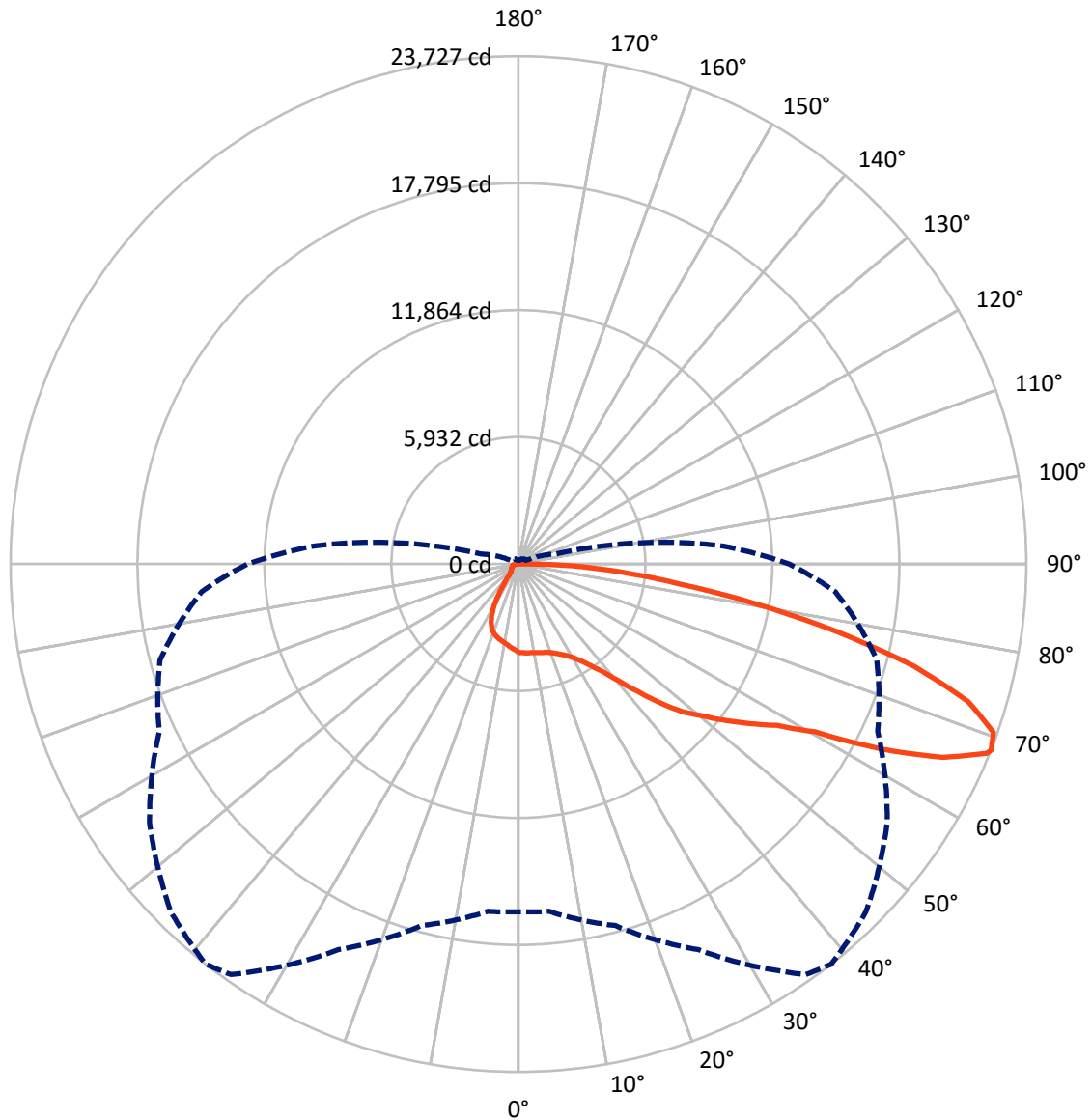
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 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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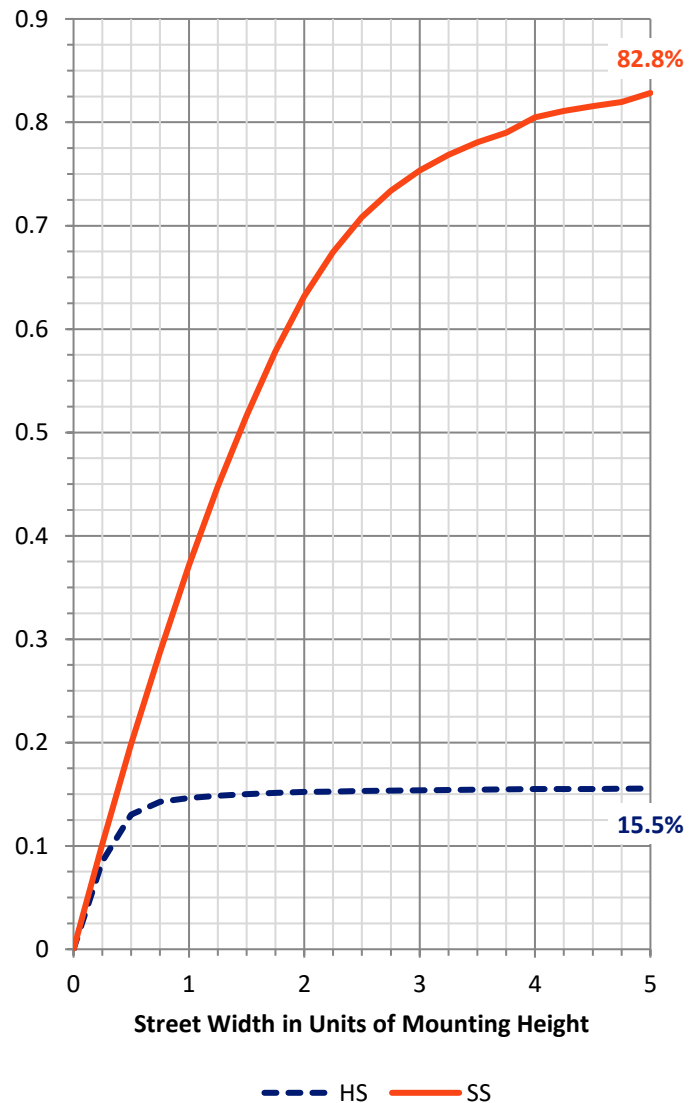
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6012.3	0.0	6012.3
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	32105.7	0.0	32105.7
	% Fixture	84.2	0.0	84.2
Total	Lumens	38118.0	0.0	38118.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.3	1.0
10°-20°	1159.1	3.0
20°-30°	1934.4	5.1
30°-40°	2967.1	7.8
40°-50°	5108.3	13.4
50°-60°	7591.6	19.9
60°-70°	10043.1	26.3
70°-80°	7375.8	19.3
80°-90°	1548.2	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°	38118.0	100.0
0°-180°	38118.0	100.0



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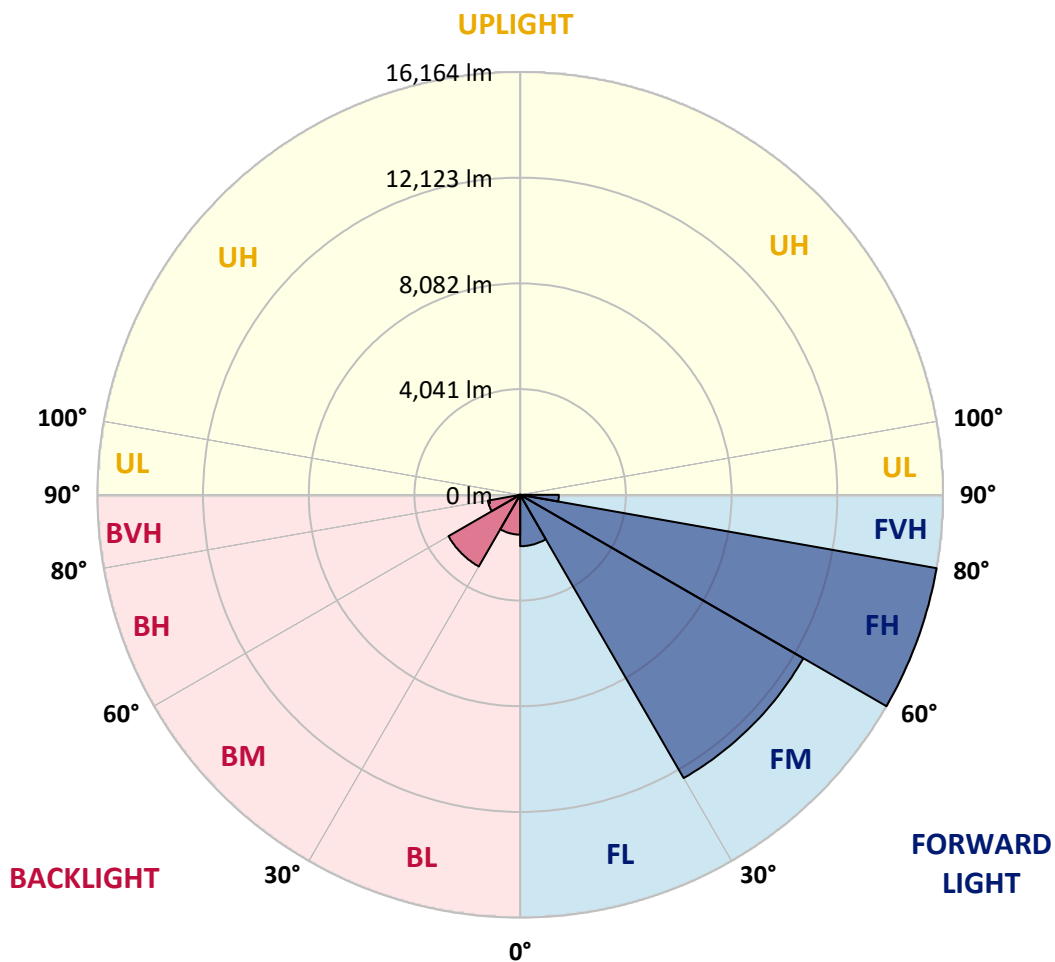
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1962.6	5.1			
FM	(30°-60°)	12502.1	32.8			
FH	(60°-80°)	16163.9	42.4			G5
FVH	(80°-90°)	1477.0	3.9			G5
BL	(0°-30°)	1521.2	4.0	B3/2500		
BM	(30°-60°)	3165.0	8.3	B3/5000		
BH	(60°-80°)	1254.9	3.3	B3/2500		G3/2500
BVH	(80°-90°)	71.2	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6
2.5°	4227.4	4198.1	4203.7	4221.8	4148.0	4142.4	4166.1	4139.6	4174.5	4157.7	4159.1
5°	4238.6	4210.7	4221.8	4249.7	4180.0	4178.6	4205.1	4171.7	4198.1	4177.2	4171.7
7.5°	4228.8	4203.7	4212.1	4238.6	4178.6	4182.8	4217.7	4206.5	4245.5	4224.6	4209.3
10°	4224.6	4207.9	4209.3	4245.5	4198.1	4209.3	4253.9	4260.8	4323.5	4305.4	4298.5
12.5°	4187.0	4174.5	4187.0	4244.1	4228.8	4251.1	4311.0	4347.2	4421.1	4414.1	4428.1
15°	4164.7	4159.1	4168.9	4235.8	4253.9	4290.1	4369.5	4440.6	4529.8	4542.3	4574.4
17.5°	4191.2	4199.5	4217.7	4272.0	4297.1	4334.7	4423.9	4521.4	4648.2	4702.5	4740.2
20°	4302.6	4312.4	4329.1	4364.0	4391.8	4423.9	4503.3	4614.8	4783.4	4868.3	4928.3
22.5°	4464.3	4447.6	4471.2	4500.5	4508.9	4536.7	4617.5	4729.0	4919.9	5048.1	5131.7
25°	4589.7	4578.5	4602.2	4652.4	4651.0	4676.1	4755.5	4869.7	5076.0	5259.9	5407.6
27.5°	4720.7	4713.7	4723.4	4790.3	4816.8	4847.4	4917.1	5045.3	5278.0	5509.3	5742.0
30°	4910.1	4925.5	4908.8	4985.4	5042.5	5077.3	5148.4	5305.9	5555.3	5871.6	6165.6
32.5°	5204.1	5211.1	5183.2	5268.2	5350.4	5403.4	5471.7	5677.9	5951.0	6336.9	6715.9
35°	5831.1	5832.5	5718.3	5705.7	5751.7	5828.4	5928.7	6235.2	6642.1	7237.0	7666.2
37.5°	6781.4	6735.4	6626.7	6415.0	6346.7	6360.6	6504.1	6930.5	7547.7	8645.7	9056.7
40°	7871.0	7818.1	7627.2	7347.1	7146.5	7133.9	7182.7	7694.1	8596.9	10229.9	10437.5
42.5°	9047.0	9010.8	8701.4	8411.6	8155.2	8114.8	8004.8	8517.5	9753.4	11644.2	11642.8
45°	10132.4	10125.4	9747.8	9604.3	9332.6	9226.7	9095.8	9494.3	10941.9	12758.9	12625.1
47.5°	11150.9	11130.0	10728.8	10564.3	10356.7	10299.6	10144.9	10423.6	11957.7	13799.7	13466.7
50°	12232.2	12168.1	11571.7	11405.9	11201.1	11156.5	11075.7	11396.2	13064.0	14709.5	14157.8
52.5°	13489.0	13391.4	12577.7	12269.8	12123.5	12152.8	12101.2	12388.2	14301.3	15470.3	14723.5
55°	14975.7	14683.1	13905.6	13346.9	13022.2	13157.4	13057.0	13415.1	15488.4	16062.5	15135.9
57.5°	16066.7	16065.3	15749.0	14954.8	14219.1	14226.1	14024.0	14432.3	16448.4	16651.9	15377.0
60°	17315.1	17388.9	17497.6	17145.1	16277.1	15913.4	15202.8	15439.7	17220.4	17079.6	15484.2
62.5°	18400.5	18443.7	18924.4	19059.6	19126.4	19037.3	17457.2	16600.3	17851.5	17317.9	15514.9
65°	18361.5	18357.3	19396.8	20302.4	21709.7	21789.1	21333.5	18323.9	18340.6	17348.5	15356.1
67.5°	16569.7	16654.7	18045.2	19986.1	23342.7	23593.5	22965.1	20826.3	18521.7	17334.6	14977.1
68°	16249.2	16285.4	17487.9	19874.7	23412.4	23727.3	22967.9	21035.3	18516.2	17336.0	14860.0
70°	14207.9	14262.3	15664.0	18524.5	23431.9	23540.6	22623.7	21149.6	18332.2	17206.4	14015.7
72.5°	11216.4	11279.1	12556.8	15630.5	21971.7	21967.5	21081.3	20192.4	17709.4	16258.9	11889.4
75°	8126.0	8330.8	9448.3	12276.8	18808.8	19095.8	18981.5	18804.6	15937.1	13739.8	8390.7
77.5°	5697.4	5801.9	6853.9	9233.7	14780.6	15219.5	15990.0	16218.5	13285.5	10203.5	3778.8
80°	3593.4	3789.9	4660.7	6557.1	10767.8	11173.2	12106.8	12491.3	9806.4	5004.9	661.8
82.5°	2094.2	2211.2	2852.2	4246.9	7239.8	7522.7	8134.3	7662.0	3975.2	666.0	367.8
85°	1014.4	1121.6	1531.3	2416.1	4520.0	4805.6	5135.9	3341.2	657.7	261.9	248.0
87.5°	411.0	422.2	627.0	1072.9	2253.0	2498.3	2417.5	1096.6	171.4	94.7	78.0
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°	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6	4139.6
2.5°	4166.1	4145.2	4120.1	4111.8	4053.2	4050.5	4001.7	4072.7	4051.8	4053.2	4070.0
5°	4168.9	4145.2	4096.4	4074.1	4011.4	3994.7	3913.9	3958.5	3911.1	3906.9	3934.8
7.5°	4198.1	4171.7	4102.0	4067.2	3950.1	3894.4	3817.8	3856.8	3784.3	3769.0	3774.6
10°	4276.2	4242.7	4157.7	4075.5	3930.6	3849.8	3699.3	3711.9	3647.8	3626.9	3645.0
12.5°	4394.6	4354.2	4252.5	4131.3	3947.3	3805.2	3621.3	3547.5	3449.9	3417.9	3427.6
15°	4556.2	4508.9	4375.1	4234.4	3983.6	3784.3	3533.5	3380.3	3190.8	3137.8	3118.3
17.5°	4733.2	4683.0	4528.4	4351.4	4047.7	3760.6	3433.2	3189.4	2916.3	2796.4	2789.5
20°	4940.8	4886.5	4724.8	4488.0	4099.2	3731.4	3307.8	2958.1	2602.8	2402.1	2388.2
22.5°	5179.1	5131.7	4949.2	4609.2	4125.7	3654.7	3118.3	2662.7	2218.2	1967.4	1954.9
25°	5459.1	5414.5	5158.2	4694.2	4096.4	3519.6	2859.1	2300.4	1765.4	1514.6	1503.4
27.5°	5793.5	5723.9	5322.6	4719.3	4010.0	3298.0	2534.5	1835.0	1304.2	1113.3	1103.5
30°	6173.9	6049.9	5477.2	4712.3	3856.8	3015.2	2087.2	1352.9	926.6	798.4	794.2
32.5°	6653.2	6435.9	5624.9	4656.6	3638.0	2644.6	1588.4	939.1	666.0	603.3	601.9
35°	7453.0	6987.6	5786.6	4556.2	3341.2	2158.3	1100.7	639.5	542.0	529.5	529.5
37.5°	8645.7	7897.5	6016.5	4396.0	2956.7	1645.5	724.5	508.6	510.0	516.9	518.3
40°	9870.5	8943.9	6349.5	4157.7	2508.0	1156.5	526.7	472.3	489.1	500.2	508.6
42.5°	10994.9	9891.4	6720.1	3831.7	2000.8	763.6	471.0	454.2	462.6	471.0	479.3
45°	11938.2	10721.8	7069.8	3459.7	1482.5	543.4	466.8	433.3	429.2	434.7	440.3
47.5°	12733.8	11397.6	7315.1	3040.3	1008.8	465.4	455.6	411.0	397.1	398.5	401.3
50°	13341.3	11875.5	7423.7	2579.1	668.8	452.8	434.7	387.3	365.1	365.1	367.8
52.5°	13750.9	12175.0	7359.6	2059.4	480.7	445.9	418.0	362.3	335.8	340.0	342.8
55°	14054.7	12335.3	7107.5	1513.2	423.6	425.0	398.5	333.0	310.7	321.9	326.0
57.5°	14173.1	12331.1	6683.9	1045.0	420.8	392.9	370.6	307.9	289.8	305.1	312.1
60°	14129.9	12127.7	6068.0	712.0	412.4	367.8	341.4	284.2	270.3	270.3	271.7
62.5°	14043.5	11842.0	5174.9	528.1	392.9	349.7	319.1	264.7	248.0	239.7	236.9
65°	13653.4	11149.5	3799.7	455.6	373.4	340.0	298.2	246.6	224.3	210.4	207.6
67.5°	12881.5	9958.2	2123.5	420.8	359.5	334.4	284.2	229.9	204.8	188.1	186.7
68°	12644.6	9586.2	1800.2	418.0	362.3	334.4	282.8	225.7	202.0	183.9	182.5
70°	11242.9	7733.1	744.0	392.9	381.8	335.8	275.9	213.2	190.9	172.8	171.4
72.5°	8503.6	4479.6	392.9	341.4	372.0	330.2	278.7	203.4	181.1	160.2	157.4
75°	4685.8	1283.3	349.7	277.3	344.2	348.3	284.2	202.0	175.6	149.1	143.5
77.5°	1040.8	418.0	326.0	242.4	296.8	320.5	263.3	192.3	178.3	136.5	131.0
80°	398.5	340.0	309.3	186.7	235.5	271.7	218.8	171.4	182.5	128.2	121.2
82.5°	333.0	298.2	284.2	144.9	163.0	199.2	175.6	146.3	168.6	118.4	112.9
85°	245.2	288.4	200.6	114.3	119.8	122.6	122.6	114.3	144.9	104.5	98.9
87.5°	98.9	139.3	85.0	52.9	61.3	57.1	50.2	61.3	83.6	73.8	73.8
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)