

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: P237521

Luminaire Tested: **CTN-8-4-D-E1-T4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237521
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-8-4-D-E1-T4-7050-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 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: 38270 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

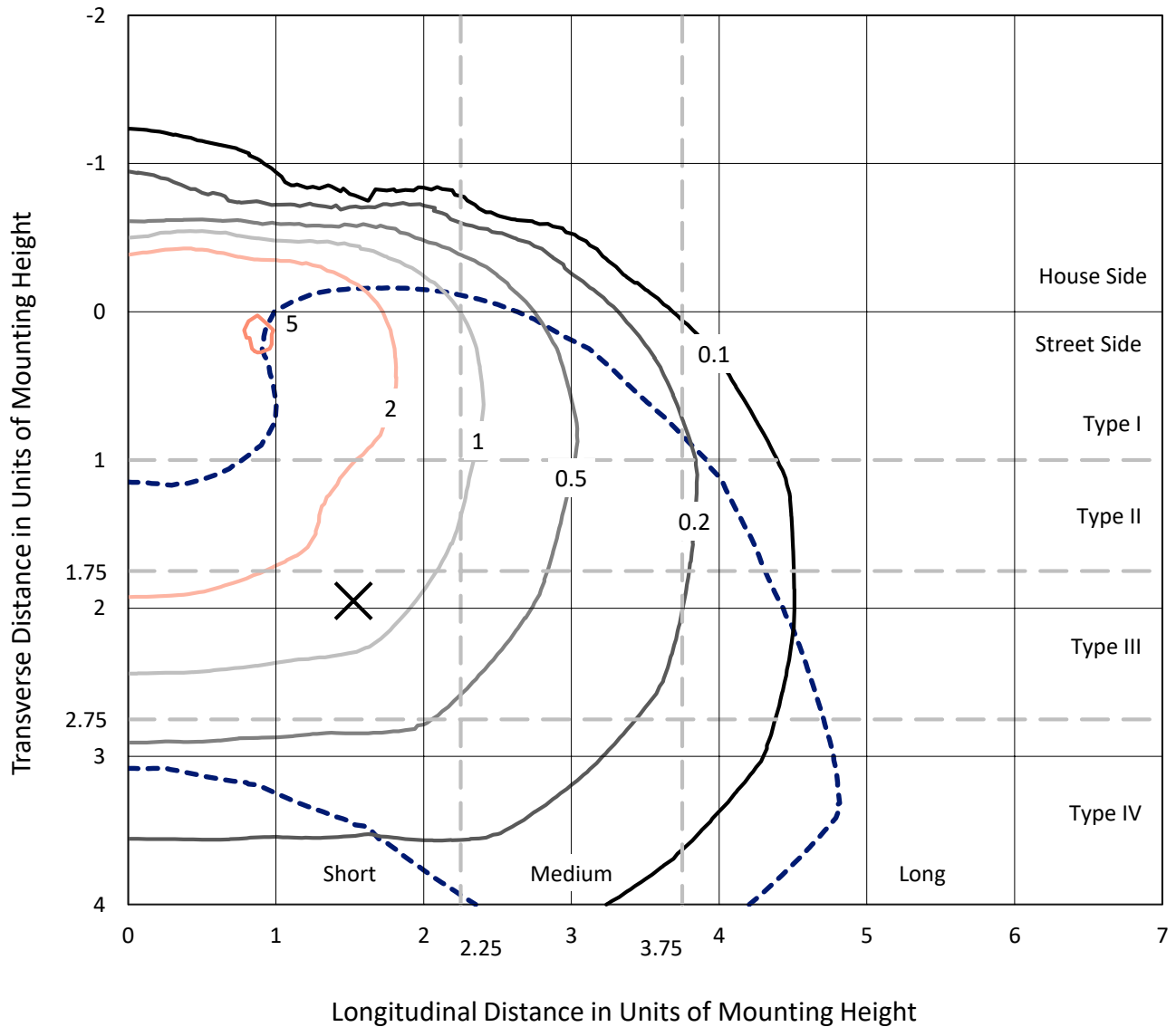
Input Watts (W): 325
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

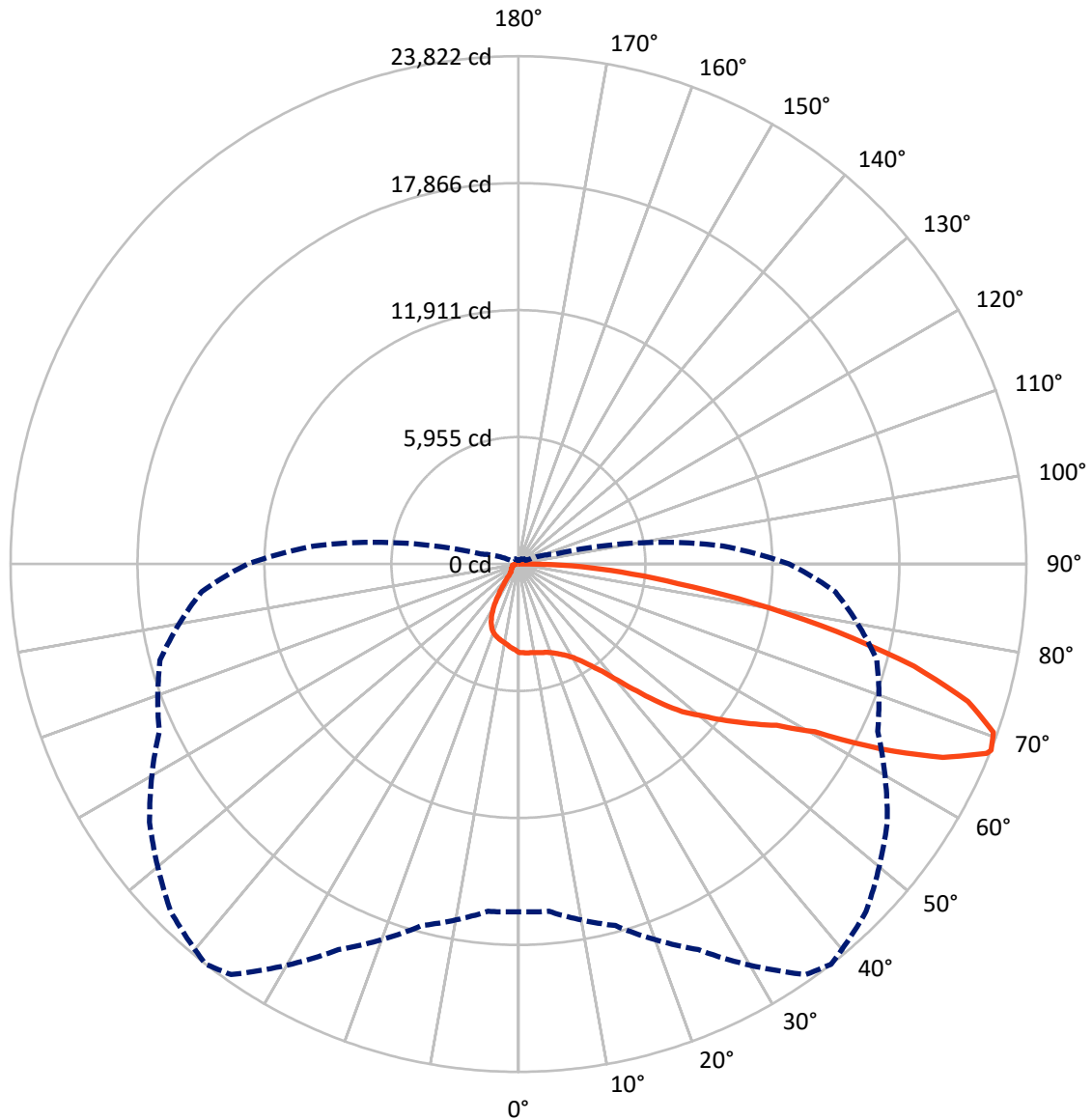
✕ Max cd
 - - - 1/2 Max cd



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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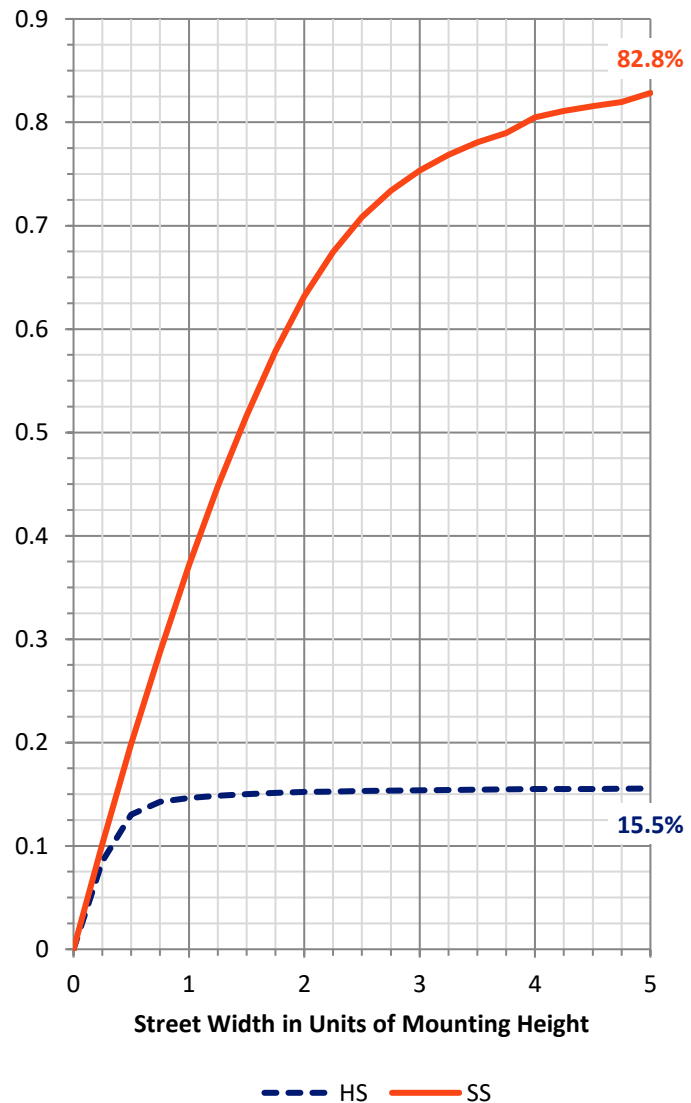
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6036.3	0.0	6036.3
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	32233.7	0.0	32233.7
	% Fixture	84.2	0.0	84.2
Total	Lumens	38270.0	0.0	38270.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.8	1.0
10°-20°	1163.7	3.0
20°-30°	1942.1	5.1
30°-40°	2979.0	7.8
40°-50°	5128.7	13.4
50°-60°	7621.9	19.9
60°-70°	10083.1	26.3
70°-80°	7405.2	19.3
80°-90°	1554.4	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°	38270.0	100.0
0°-180°	38270.0	100.0



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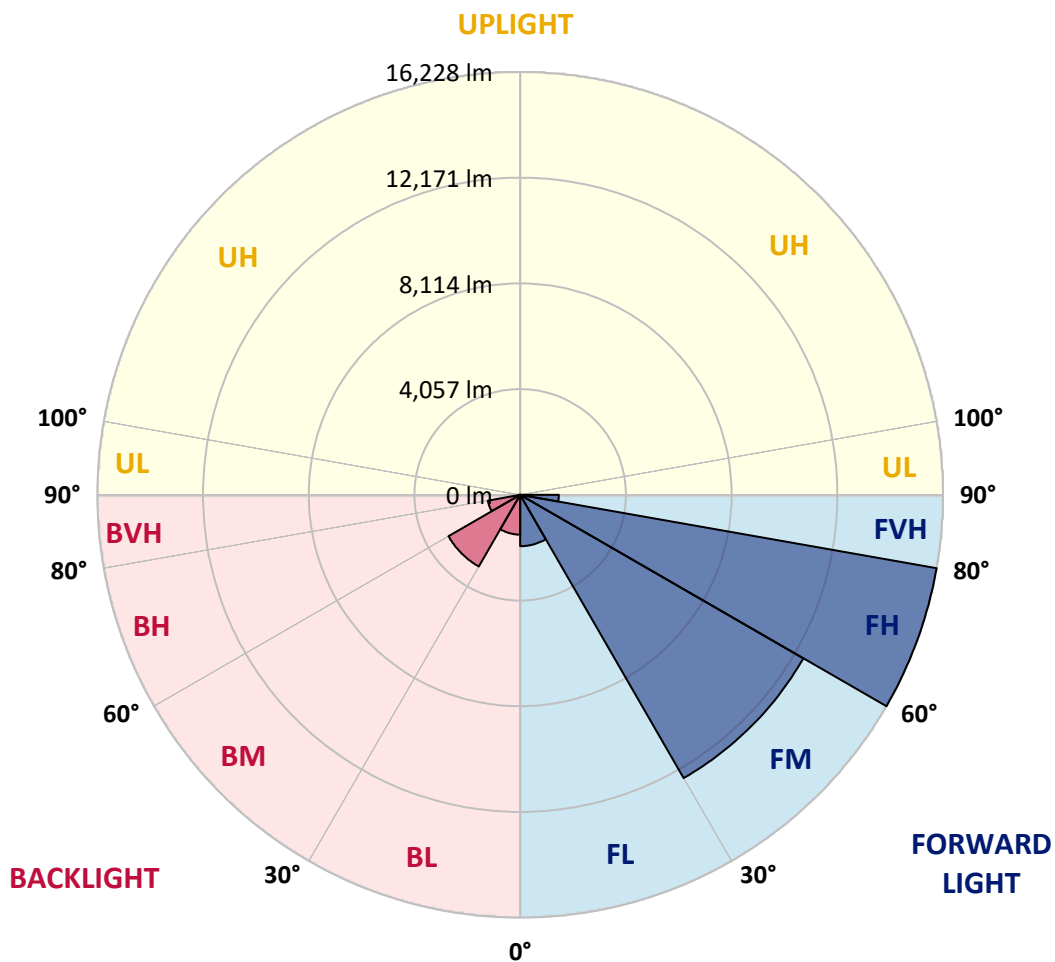
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1970.4	5.1			
FM	(30°-60°)	12551.9	32.8			
FH	(60°-80°)	16228.4	42.4			G5
FVH	(80°-90°)	1482.9	3.9			G5
BL	(0°-30°)	1527.3	4.0	B3/2500		
BM	(30°-60°)	3177.6	8.3	B3/5000		
BH	(60°-80°)	1259.9	3.3	B3/2500		G3/2500
BVH	(80°-90°)	71.5	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°	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1
2.5°	4244.3	4214.9	4220.5	4238.7	4164.5	4158.9	4182.7	4156.1	4191.1	4174.3	4175.7
5°	4255.5	4227.5	4238.7	4266.6	4196.7	4195.3	4221.9	4188.3	4214.9	4193.9	4188.3
7.5°	4245.7	4220.5	4228.9	4255.5	4195.3	4199.5	4234.5	4223.3	4262.5	4241.5	4226.1
10°	4241.5	4224.7	4226.1	4262.5	4214.9	4226.1	4270.8	4277.8	4340.8	4322.6	4315.6
12.5°	4203.7	4191.1	4203.7	4261.1	4245.7	4268.0	4328.2	4364.6	4438.7	4431.7	4445.7
15°	4181.3	4175.7	4185.5	4252.7	4270.8	4307.2	4387.0	4458.3	4547.8	4560.4	4592.6
17.5°	4207.9	4216.3	4234.5	4289.0	4314.2	4352.0	4441.5	4539.4	4666.7	4721.3	4759.1
20°	4319.8	4329.6	4346.4	4381.4	4409.3	4441.5	4521.2	4633.2	4802.4	4887.8	4947.9
22.5°	4482.1	4465.3	4489.1	4518.5	4526.8	4554.8	4636.0	4747.9	4939.5	5068.2	5152.2
25°	4608.0	4596.8	4620.6	4670.9	4669.5	4694.7	4774.4	4889.2	5096.2	5280.9	5429.1
27.5°	4739.5	4732.5	4742.3	4809.4	4836.0	4866.8	4936.7	5065.4	5299.0	5531.3	5764.9
30°	4929.7	4945.1	4928.3	5005.3	5062.6	5097.6	5168.9	5327.0	5577.4	5895.0	6190.1
32.5°	5224.9	5231.9	5203.9	5289.2	5371.8	5424.9	5493.5	5700.5	5974.7	6362.2	6742.7
35°	5854.4	5855.8	5741.1	5728.5	5774.7	5851.6	5952.3	6260.1	6668.6	7265.9	7696.8
37.5°	6808.5	6762.3	6653.2	6440.5	6372.0	6386.0	6530.1	6958.1	7577.8	8680.2	9092.9
40°	7902.4	7849.2	7657.6	7376.4	7175.0	7162.4	7211.3	7724.7	8631.2	10270.7	10479.2
42.5°	9083.1	9046.7	8736.1	8445.2	8187.8	8147.2	8036.7	8551.5	9792.3	11690.6	11689.2
45°	10172.8	10165.8	9786.7	9642.6	9369.8	9263.5	9132.0	9532.1	10985.6	12809.7	12675.4
47.5°	11195.4	11174.4	10771.5	10606.5	10398.0	10340.7	10185.4	10465.2	12005.4	13854.7	13520.4
50°	12281.0	12216.6	11617.9	11451.4	11245.8	11201.0	11119.9	11441.6	13116.1	14768.2	14214.2
52.5°	13542.8	13444.8	12627.9	12318.7	12171.8	12201.2	12149.5	12437.6	14358.3	15532.0	14782.2
55°	15035.4	14741.6	13961.0	13400.1	13074.1	13209.8	13109.1	13468.6	15550.2	16126.5	15196.3
57.5°	16130.7	16129.3	15811.8	15014.4	14275.8	14282.8	14079.9	14489.8	16514.0	16718.3	15438.3
60°	17384.1	17458.3	17567.4	17213.5	16342.0	15976.8	15263.4	15501.2	17289.0	17147.7	15546.0
62.5°	18473.9	18517.3	18999.9	19135.6	19202.7	19113.2	17526.8	16666.5	17922.7	17386.9	15576.8
65°	18434.7	18430.5	19474.1	20383.4	21796.3	21876.0	21418.6	18396.9	18413.7	17417.7	15417.3
67.5°	16635.7	16721.1	18117.2	20065.8	23435.8	23687.6	23056.7	20909.4	18595.6	17403.7	15036.8
68°	16314.0	16350.4	17557.6	19953.9	23505.7	23821.9	23059.5	21119.2	18590.0	17405.1	14919.3
70°	14264.6	14319.2	15726.4	18598.4	23525.3	23634.4	22714.0	21233.9	18405.3	17275.0	14071.5
72.5°	11261.2	11324.1	12606.9	15692.9	22059.3	22055.1	21165.4	20272.9	17780.0	16323.8	11936.8
75°	8158.4	8364.0	9485.9	12325.7	18883.8	19171.9	19057.2	18879.6	16000.6	13794.6	8424.2
77.5°	5720.1	5825.0	6881.2	9270.5	14839.5	15280.2	16053.8	16283.2	13338.5	10244.2	3793.8
80°	3607.8	3805.0	4679.3	6583.2	10810.7	11217.8	12155.1	12541.1	9845.5	5024.9	664.5
82.5°	2102.5	2220.1	2863.6	4263.9	7268.7	7552.7	8166.8	7692.6	3991.1	668.7	369.3
85°	1018.4	1126.1	1537.4	2425.7	4538.0	4824.8	5156.3	3354.6	660.3	263.0	249.0
87.5°	412.7	423.9	629.5	1077.2	2262.0	2508.2	2427.1	1100.9	172.1	95.1	78.3
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°	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1	4156.1
2.5°	4182.7	4161.7	4136.6	4128.2	4069.4	4066.6	4017.6	4089.0	4068.0	4069.4	4086.2
5°	4185.5	4161.7	4112.8	4090.4	4027.4	4010.6	3929.5	3974.3	3926.7	3922.5	3950.5
7.5°	4214.9	4188.3	4118.4	4083.4	3965.9	3909.9	3833.0	3872.2	3799.4	3784.0	3789.6
10°	4293.2	4259.7	4174.3	4091.8	3946.3	3865.2	3714.1	3726.7	3662.3	3641.3	3659.5
12.5°	4412.1	4371.6	4269.4	4147.7	3963.1	3820.4	3635.7	3561.6	3463.7	3431.5	3441.3
15°	4574.4	4526.8	4392.5	4251.3	3999.5	3799.4	3547.6	3393.7	3203.5	3150.3	3130.7
17.5°	4752.1	4701.7	4546.4	4368.8	4063.8	3775.6	3446.9	3202.1	2927.9	2807.6	2800.6
20°	4960.5	4905.9	4743.7	4505.9	4115.6	3746.3	3321.0	2969.9	2613.1	2411.7	2397.7
22.5°	5199.7	5152.2	4968.9	4627.6	4142.1	3669.3	3130.7	2673.3	2227.1	1975.2	1962.7
25°	5480.9	5436.1	5178.7	4712.9	4112.8	3533.6	2870.5	2309.6	1772.4	1520.6	1509.4
27.5°	5816.6	5746.7	5343.8	4738.1	4026.0	3311.2	2544.6	1842.4	1309.4	1117.7	1107.9
30°	6198.5	6074.0	5499.1	4731.1	3872.2	3027.2	2095.6	1358.3	930.3	801.6	797.4
32.5°	6679.8	6461.5	5647.4	4675.1	3652.5	2655.1	1594.7	942.9	668.7	605.7	604.3
35°	7482.7	7015.5	5809.6	4574.4	3354.6	2166.9	1105.1	642.1	544.2	531.6	531.6
37.5°	8680.2	7929.0	6040.5	4413.5	2968.5	1652.1	727.4	510.6	512.0	519.0	520.4
40°	9909.8	8979.5	6374.8	4174.3	2518.0	1161.1	528.8	474.2	491.0	502.2	510.6
42.5°	11038.7	9930.8	6746.9	3847.0	2008.8	766.6	472.8	456.0	464.4	472.8	481.2
45°	11985.8	10764.5	7098.0	3473.5	1488.4	545.6	468.6	435.1	430.9	436.5	442.1
47.5°	12784.6	11443.0	7344.2	3052.4	1012.8	467.2	457.4	412.7	398.7	400.1	402.9
50°	13394.5	11922.8	7453.3	2589.4	671.5	454.6	436.5	388.9	366.5	366.5	369.3
52.5°	13805.8	12223.6	7389.0	2067.6	482.6	447.6	419.7	363.7	337.1	341.3	344.1
55°	14110.7	12384.5	7135.8	1519.2	425.3	426.7	400.1	334.3	312.0	323.1	327.3
57.5°	14229.6	12380.3	6710.5	1049.2	422.5	394.5	372.1	309.2	291.0	306.4	313.4
60°	14186.3	12176.0	6092.2	714.8	414.1	369.3	342.7	285.4	271.4	271.4	272.8
62.5°	14099.5	11889.3	5195.5	530.2	394.5	351.1	320.3	265.8	249.0	240.6	237.8
65°	13707.8	11194.0	3814.8	457.4	374.9	341.3	299.4	247.6	225.2	211.2	208.4
67.5°	12932.8	9997.9	2131.9	422.5	360.9	335.7	285.4	230.8	205.6	188.9	187.5
68°	12695.0	9624.4	1807.4	419.7	363.7	335.7	284.0	226.6	202.8	184.7	183.3
70°	11287.7	7763.9	747.0	394.5	383.3	337.1	277.0	214.0	191.6	173.5	172.1
72.5°	8537.5	4497.5	394.5	342.7	373.5	331.5	279.8	204.2	181.9	160.9	158.1
75°	4704.5	1288.4	351.1	278.4	345.5	349.7	285.4	202.8	176.3	149.7	144.1
77.5°	1045.0	419.7	327.3	243.4	298.0	321.7	264.4	193.0	179.1	137.1	131.5
80°	400.1	341.3	310.6	187.5	236.4	272.8	219.6	172.1	183.3	128.7	121.7
82.5°	334.3	299.4	285.4	145.5	163.7	200.0	176.3	146.9	169.3	118.9	113.3
85°	246.2	289.6	201.4	114.7	120.3	123.1	123.1	114.7	145.5	104.9	99.3
87.5°	99.3	139.9	85.3	53.2	61.6	57.4	50.4	61.6	83.9	74.1	74.1
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)