

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: LUMARK

Report Number: P196468

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196468  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-AFL-7030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13048.8 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 129  
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

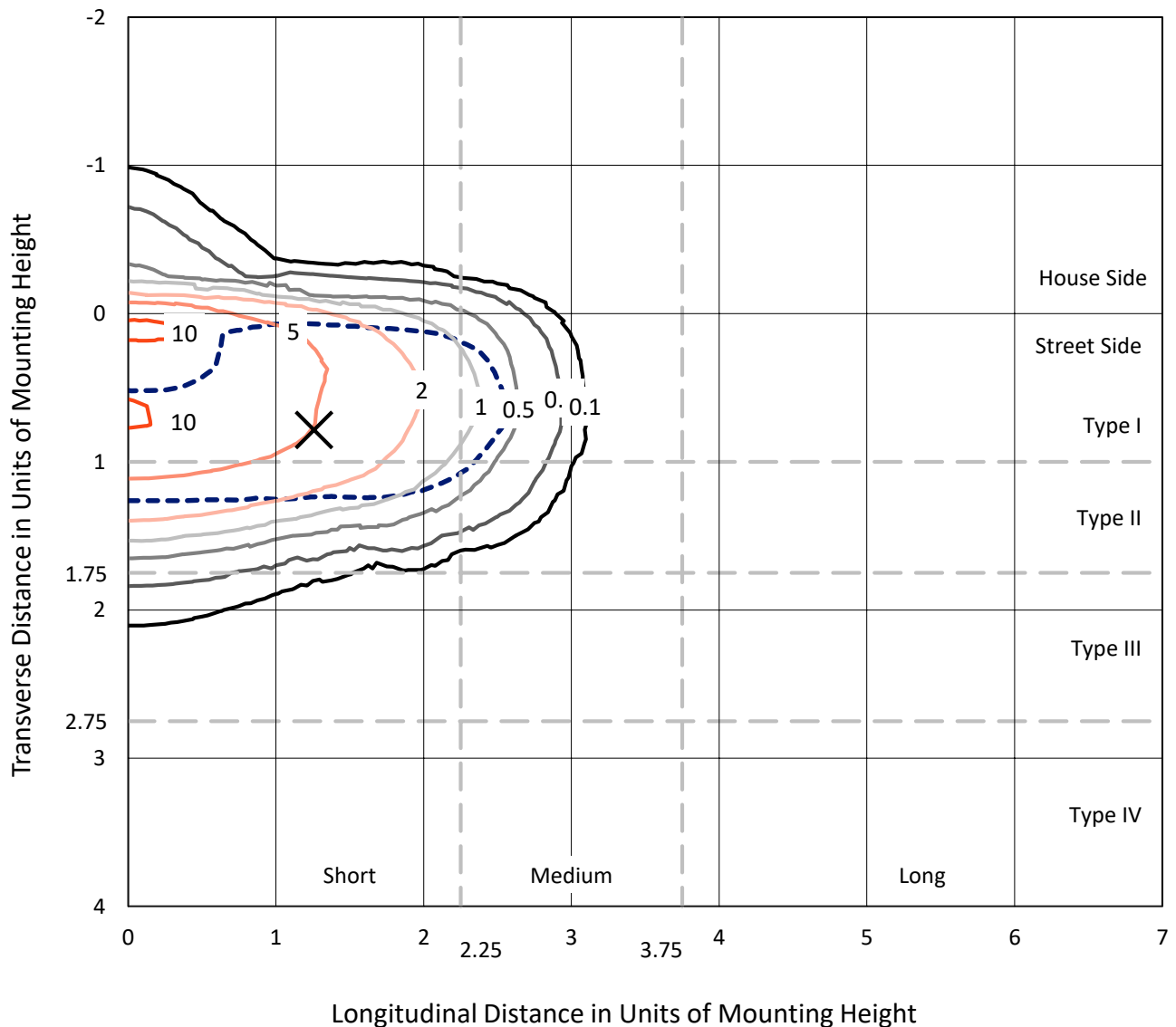


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

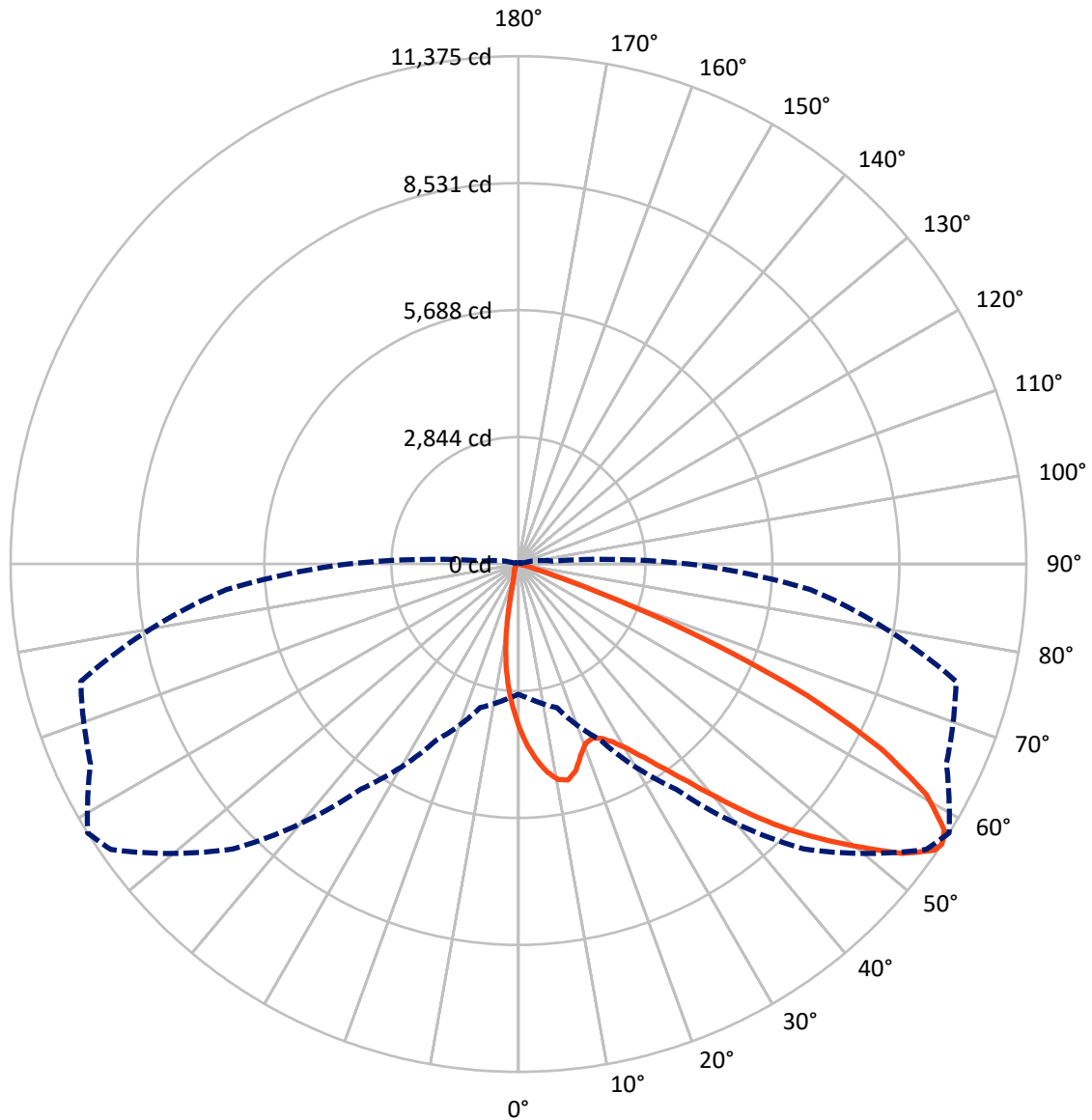


Based on 20 foot mounting height. Maximum calculated value = 11.5 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 56-Deg Vertical

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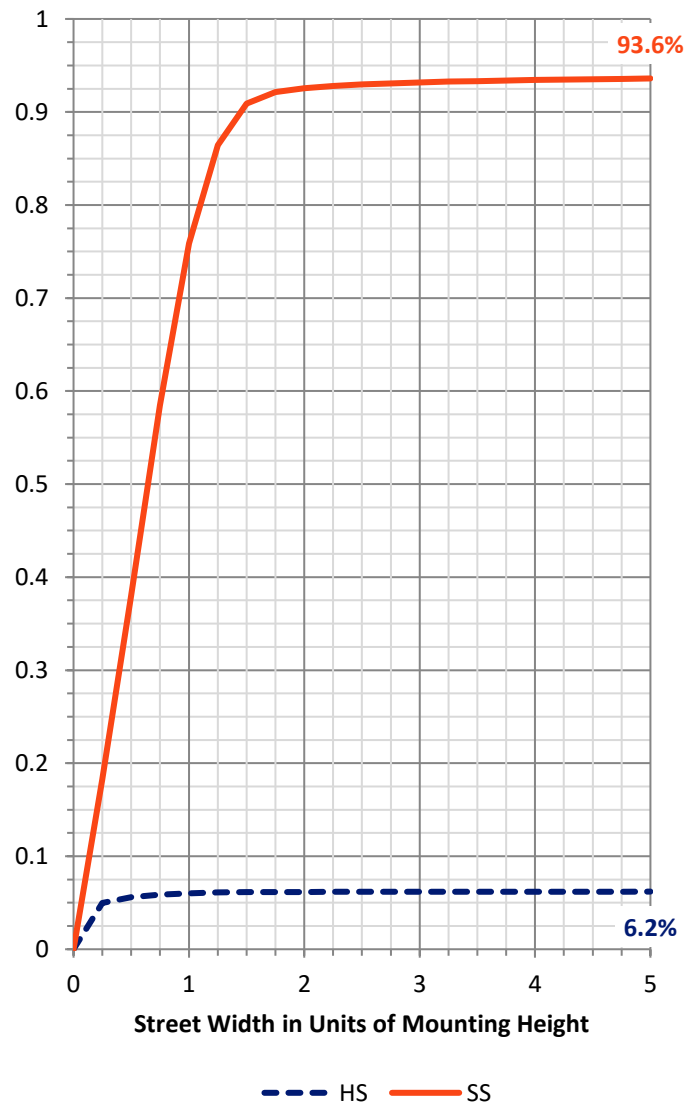
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	814.5	0.0	814.5
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	12234.3	0.0	12234.3
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	13048.8	0.0	13048.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	315.2	2.4
10°-20°	733.3	5.6
20°-30°	1234.0	9.5
30°-40°	2113.0	16.2
40°-50°	3188.6	24.4
50°-60°	3314.5	25.4
60°-70°	1860.7	14.3
70°-80°	255.0	2.0
80°-90°	34.6	0.3
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°	13048.8	100.0
0°-180°	13048.8	100.0

**Coefficient of Utilization**



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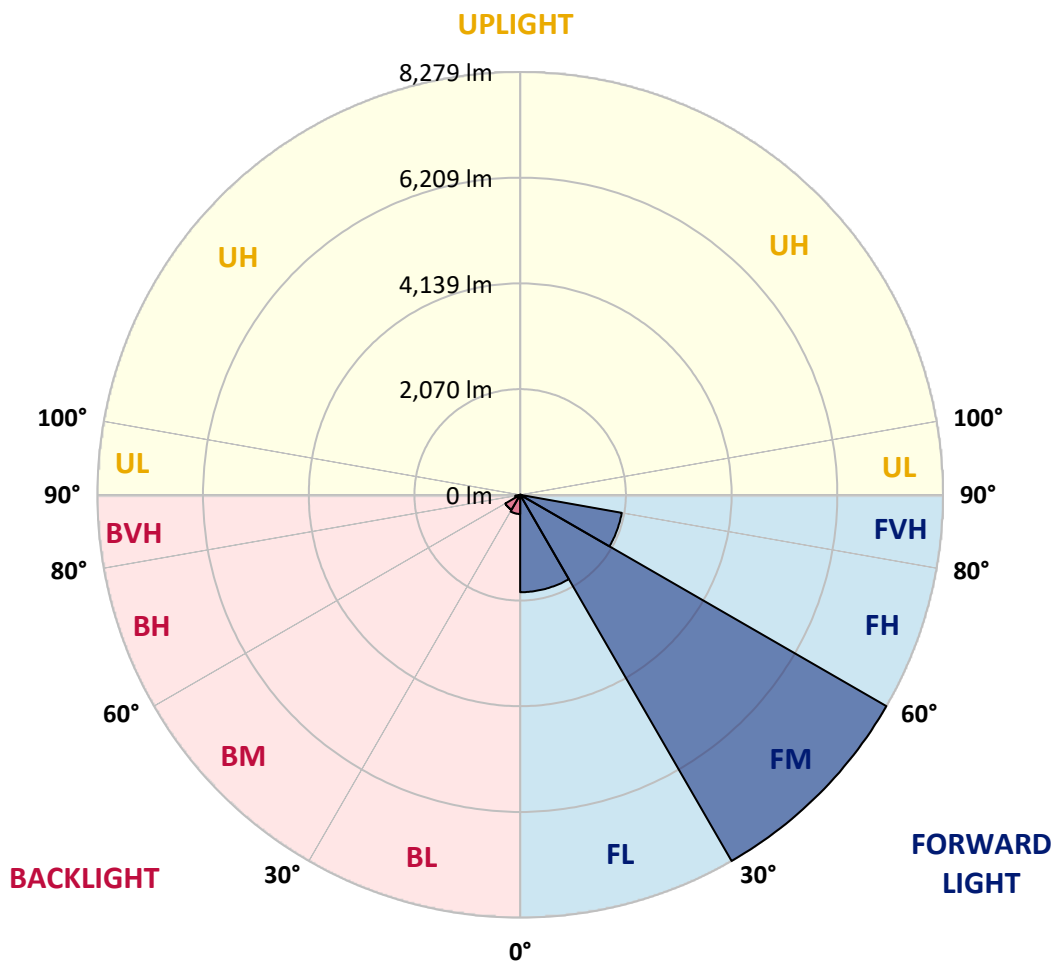
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1906.7	14.6			
FM	(30°-60°)	8278.7	63.4			
FH	(60°-80°)	2019.1	15.5			G2/5000
FVH	(80°-90°)	29.8	0.2			G1/100
BL	(0°-30°)	375.7	2.9	B1/500		
BM	(30°-60°)	337.4	2.6	B1/1000		
BH	(60°-80°)	96.6	0.7	B0/110		G0/110
BVH	(80°-90°)	4.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5
2.5°	4445.2	4418.3	4390.4	4338.6	4290.8	4217.2	4115.7	4090.7	4011.1	3879.7	3757.2
5°	4828.5	4823.5	4804.5	4762.7	4710.9	4621.3	4507.0	4430.3	4306.8	4099.7	3863.7
7.5°	4601.5	4643.3	4712.1	4809.6	4875.2	4866.3	4778.7	4712.1	4589.6	4306.8	3968.3
10°	3878.7	3886.7	3981.2	4186.4	4510.9	4813.5	4928.0	4910.1	4797.6	4488.0	4059.8
12.5°	3623.8	3628.8	3650.7	3716.5	3927.5	4349.6	4868.3	4961.9	4952.9	4661.2	4157.5
15°	3643.8	3646.7	3652.7	3673.7	3733.4	3945.4	4565.6	4803.6	5052.4	4825.4	4253.0
17.5°	3801.0	3799.1	3780.2	3760.2	3779.2	3848.8	4257.0	4507.9	5031.6	4963.8	4331.7
20°	4107.7	4117.7	4053.9	3965.3	3919.5	3922.5	4104.7	4292.8	4914.1	5071.4	4390.4
22.5°	4538.7	4545.7	4441.2	4287.9	4153.5	4085.7	4136.5	4236.1	4778.7	5170.9	4438.2
25°	5053.5	5053.5	4907.2	4689.1	4481.0	4332.6	4288.9	4326.6	4726.9	5283.4	4485.9
27.5°	5609.0	5628.9	5437.8	5152.0	4877.3	4660.2	4522.8	4515.9	4766.8	5424.8	4539.7
30°	6213.2	6231.2	6004.3	5654.8	5329.2	5051.5	4840.4	4794.7	4919.1	5615.0	4618.4
32.5°	6814.6	6829.6	6578.6	6222.2	5842.9	5516.4	5238.7	5166.0	5192.9	5892.7	4733.8
35°	7579.2	7582.1	7264.6	6840.5	6435.3	6052.0	5700.6	5628.9	5599.0	6243.2	4900.2
37.5°	8187.5	8163.7	7962.5	7561.3	7096.4	6696.2	6283.0	6189.4	6117.8	6736.0	5158.0
40°	8330.8	8330.8	8301.0	8180.5	7811.2	7426.0	7025.7	6886.3	6727.9	7316.3	5504.5
42.5°	7957.5	7981.4	8178.5	8440.4	8443.3	8196.4	7805.2	7687.7	7409.0	7977.4	5882.7
45°	7122.3	7129.1	7602.0	8308.9	8788.9	8930.2	8641.5	8479.2	8093.0	8664.4	6229.2
47.5°	6821.6	6843.5	7044.6	7908.7	8814.7	9524.5	9443.9	9220.8	8726.1	9291.5	6552.8
50°	6359.7	6386.5	6632.4	7319.4	8581.8	9905.8	10211.5	9972.5	9302.6	9814.2	6713.1
52.5°	5254.6	5296.4	5643.8	6539.8	7999.3	9921.8	10914.4	10771.0	9892.9	10094.0	6694.1
55°	3615.8	3646.7	4051.9	5105.2	6824.6	9434.9	11217.0	11315.6	10419.5	10156.7	6602.5
56°	2917.0	3032.5	3329.1	4349.6	6155.5	9020.8	11147.2	11375.3	10575.9	10146.7	6562.7
57.5°	1928.4	1950.3	2273.9	3151.9	4943.0	8121.8	10832.7	11247.8	10776.9	10096.0	6533.8
60°	907.0	916.9	1033.4	1454.5	2675.1	5918.6	9810.3	10499.2	10850.6	9989.5	6532.8
62.5°	591.3	593.4	607.3	693.9	1094.1	3223.5	8132.7	9124.4	10240.4	9977.4	6513.9
65°	486.9	491.7	474.8	485.8	572.4	1215.6	5736.4	7113.3	8807.7	9696.8	6300.9
67.5°	429.1	430.1	407.2	394.2	419.1	533.6	2890.1	4486.9	6587.6	8239.2	5189.9
70°	391.2	390.3	364.4	334.6	335.5	354.4	941.9	1863.6	3644.8	4892.2	2979.7
72.5°	347.5	349.4	334.6	292.7	278.7	250.9	354.4	502.8	1240.4	1571.0	785.5
75°	304.7	300.7	285.7	258.8	232.9	168.3	178.2	214.0	323.5	320.5	169.3
77.5°	231.0	227.0	234.0	221.0	182.1	117.5	97.6	111.6	146.3	136.3	68.8
80°	176.2	174.3	159.3	189.1	166.3	88.6	66.6	68.8	79.6	72.6	33.9
82.5°	127.4	126.4	120.5	116.5	105.6	64.7	50.8	53.7	59.8	50.8	24.9
85°	48.7	48.7	94.6	79.6	72.6	43.8	35.8	38.8	45.8	36.8	16.9
87.5°	7.9	7.9	63.7	52.8	32.9	21.9	23.0	24.9	26.9	21.9	12.9
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°	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5	3694.5
2.5°	3684.6	3617.9	3471.5	3330.1	3206.6	3071.3	3002.6	2923.0	2893.0	2833.3	2839.3
5°	3722.4	3583.0	3289.4	2979.7	2696.0	2407.3	2202.2	2009.1	1901.5	1795.0	1795.0
7.5°	3761.2	3548.2	3094.2	2599.4	2121.5	1626.8	1276.2	995.6	839.2	734.8	731.7
10°	3788.1	3503.4	2872.2	2158.4	1453.4	838.2	505.8	398.2	359.4	342.4	341.4
12.5°	3823.0	3458.6	2619.3	1638.7	807.4	398.2	315.5	298.8	291.7	287.7	287.7
15°	3852.8	3394.9	2312.7	1102.1	424.2	298.8	271.8	265.8	264.9	263.9	264.9
17.5°	3859.8	3304.2	1945.4	645.1	307.7	260.8	248.9	243.8	243.8	242.9	242.9
20°	3843.8	3184.8	1539.1	398.2	265.8	240.0	227.0	221.0	220.0	220.0	220.0
22.5°	3811.0	3032.5	1137.9	301.7	241.9	221.0	204.1	198.1	198.1	199.1	200.1
25°	3770.2	2852.3	781.5	259.8	224.0	201.1	184.2	178.2	180.2	182.1	183.2
27.5°	3718.4	2637.2	511.8	225.0	200.1	181.2	166.3	162.2	166.3	170.2	172.2
30°	3666.6	2401.3	346.5	195.1	173.1	159.3	150.3	149.3	155.2	164.2	165.3
32.5°	3632.8	2159.4	261.7	175.3	152.3	140.4	136.3	138.4	147.4	157.4	159.3
35°	3629.8	1923.4	223.0	159.3	138.4	127.4	125.4	131.4	141.4	149.3	151.4
37.5°	3676.6	1702.4	202.1	147.4	127.4	116.5	113.5	124.4	133.4	141.4	143.3
40°	3771.2	1504.3	188.2	136.3	118.4	105.6	103.6	112.5	121.5	130.4	133.4
42.5°	3889.6	1319.1	172.2	125.4	108.5	93.6	91.6	98.6	107.5	120.5	122.5
45°	3992.3	1146.9	155.2	113.5	97.6	80.7	79.6	87.6	94.6	106.5	108.5
47.5°	4078.7	1003.5	139.5	100.5	83.6	71.7	70.7	74.7	78.6	89.6	91.6
50°	4033.0	882.0	123.5	82.6	67.7	61.7	60.7	60.7	65.7	76.7	78.6
52.5°	3920.6	806.5	108.5	68.8	55.7	52.8	49.8	50.8	55.7	60.7	61.7
55°	3829.9	770.6	95.6	60.7	46.8	43.8	40.9	39.8	40.9	38.8	36.8
56°	3808.0	766.6	92.6	58.8	44.8	40.9	36.8	34.9	33.9	29.8	28.9
57.5°	3798.1	766.6	87.6	54.7	41.8	36.8	31.9	27.9	23.9	20.9	20.9
60°	3790.1	771.6	81.6	47.7	35.8	29.8	23.0	16.9	13.9	13.9	13.9
62.5°	3773.2	769.5	74.7	39.8	30.8	23.0	13.9	10.9	10.0	10.9	11.9
65°	3583.0	714.8	65.7	31.9	23.9	16.0	7.9	7.9	9.0	10.9	11.9
67.5°	2887.0	541.6	53.7	24.9	16.9	11.9	7.0	7.0	9.0	10.9	11.9
70°	1585.9	285.7	45.8	17.9	12.9	10.0	7.0	6.0	9.0	10.9	11.9
72.5°	387.4	119.4	41.8	13.9	11.9	9.0	6.0	6.0	9.0	10.9	11.9
75°	95.6	89.6	33.9	10.9	10.0	7.9	6.0	6.0	9.0	10.9	11.9
77.5°	44.8	118.4	23.0	10.0	9.0	7.0	6.0	6.0	9.0	10.9	10.9
80°	26.9	89.6	13.9	9.0	7.9	7.0	6.0	6.0	9.0	10.9	11.9
82.5°	16.0	25.9	10.0	9.0	7.9	6.0	6.0	6.0	9.0	10.9	11.9
85°	13.9	12.9	10.0	9.0	7.9	7.0	6.0	6.0	10.0	11.9	11.9
87.5°	10.9	10.0	9.0	7.9	7.9	7.0	6.0	6.0	9.0	10.9	11.9
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)