

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: P195635

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7050-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195635  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-SL3-7050-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20623 lumens  
Efficiency: N/A  
Efficacy: 98.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G4

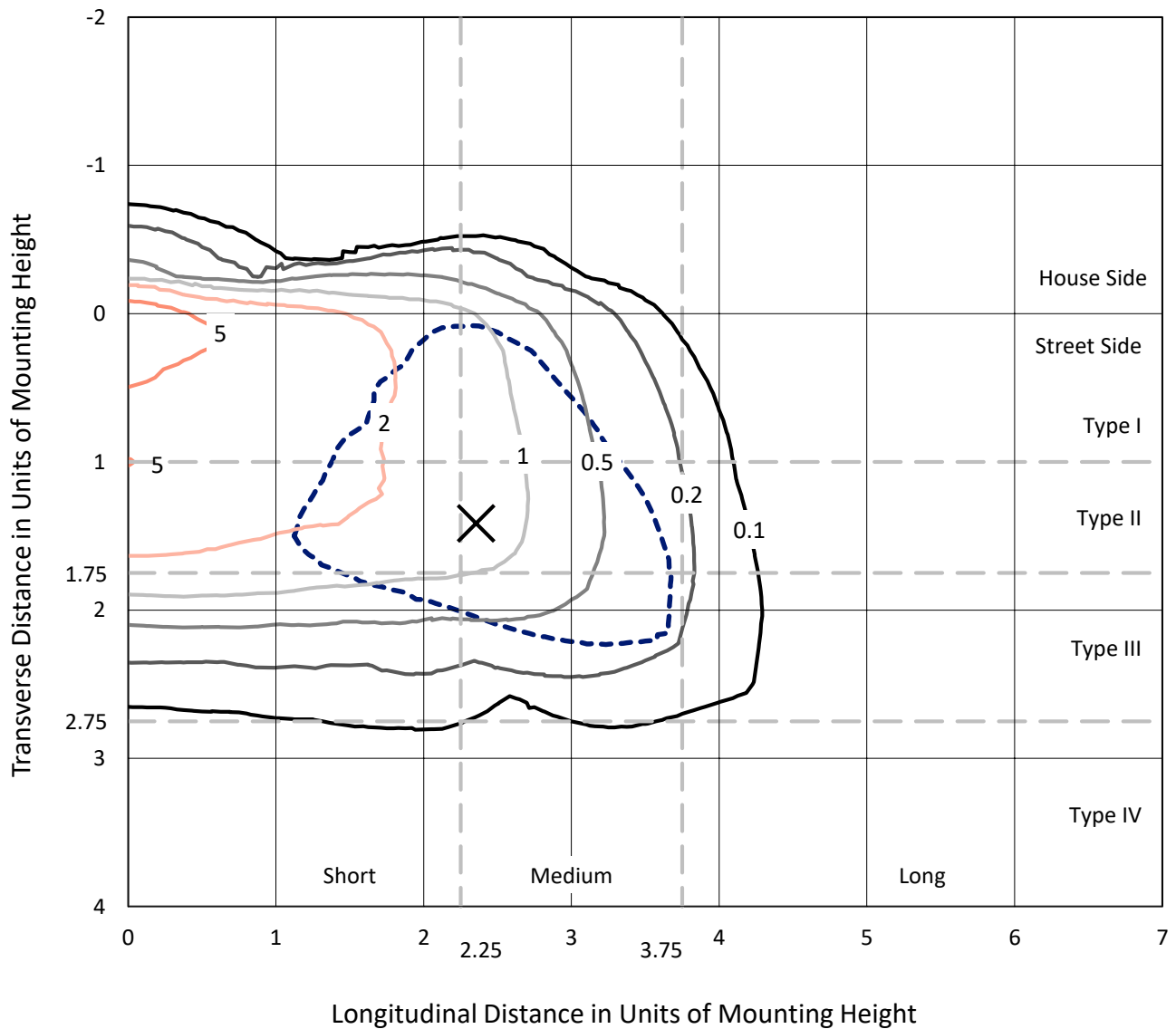
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

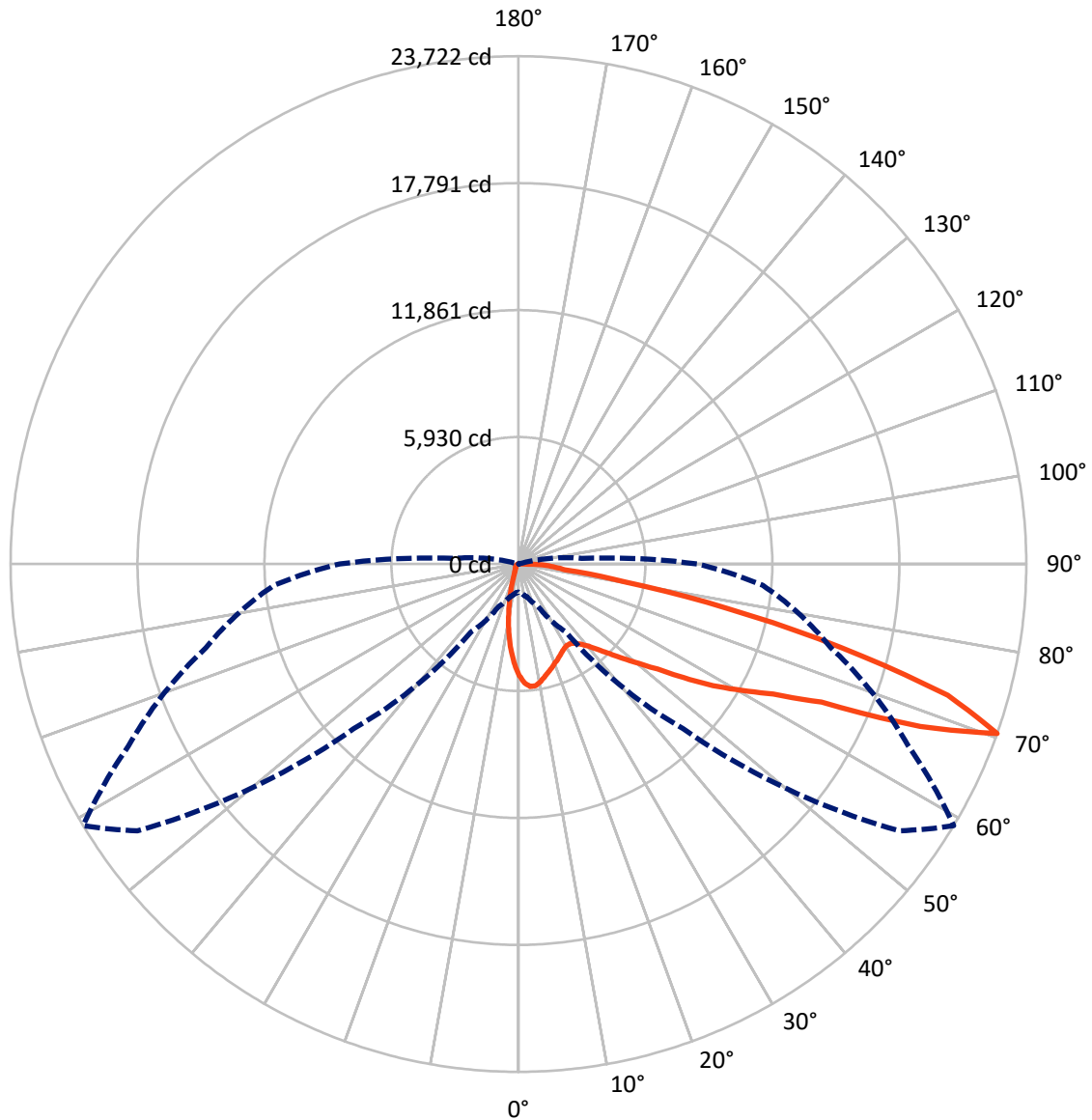
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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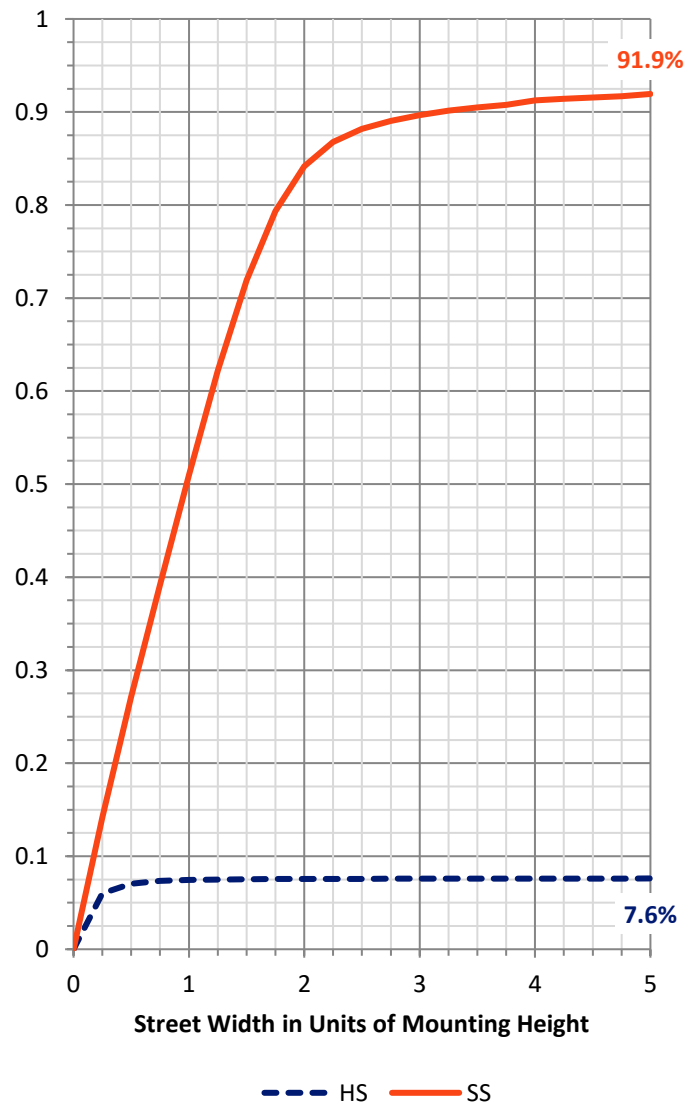
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1585.3	0.0	1585.3
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	19037.6	0.0	19037.6
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	20623.0	0.0	20623.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	428.8	2.1
10°-20°	899.4	4.4
20°-30°	1217.5	5.9
30°-40°	1757.1	8.5
40°-50°	2918.1	14.1
50°-60°	4463.5	21.6
60°-70°	5551.6	26.9
70°-80°	3068.9	14.9
80°-90°	318.2	1.5
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°	20623.0	100.0
0°-180°	20623.0	100.0



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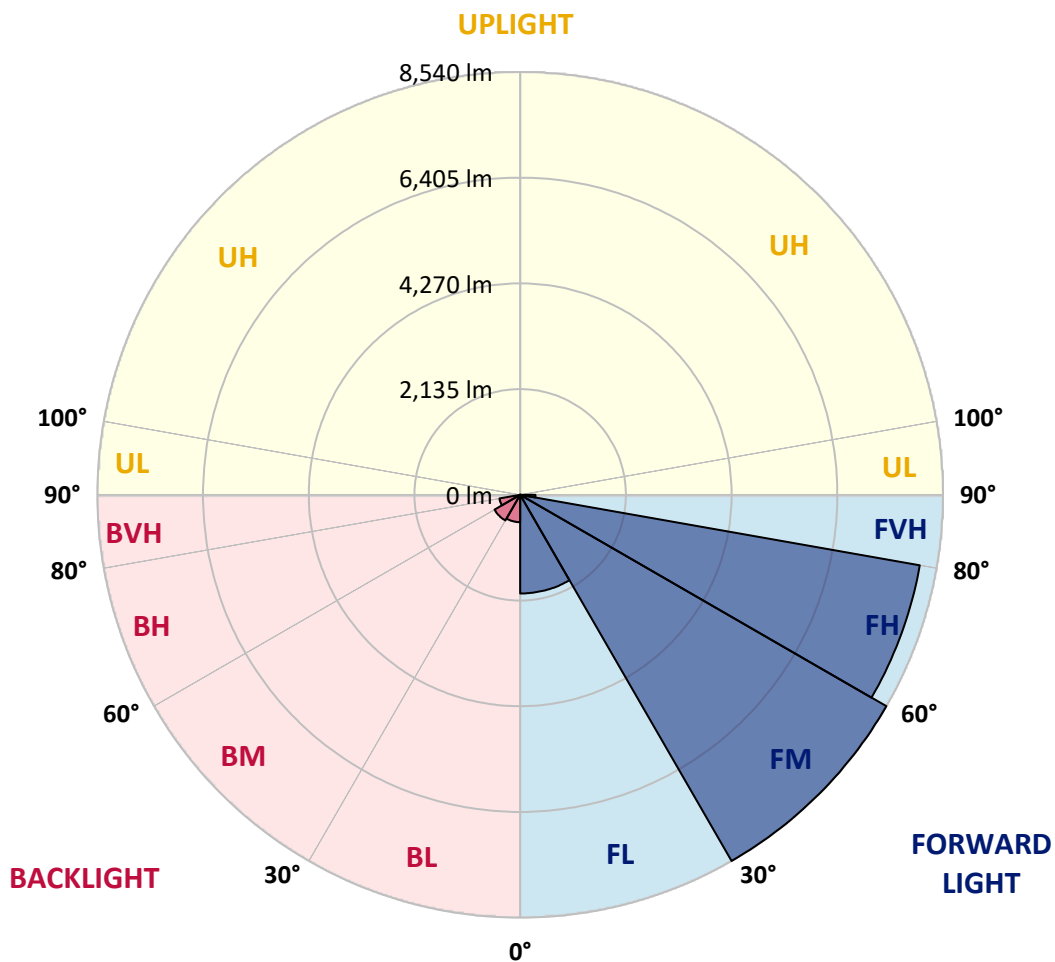
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1993.3	9.7			
FM	(30°-60°)	8540.2	41.4			
FH	(60°-80°)	8195.1	39.7			G4/12000
FVH	(80°-90°)	309.0	1.5			G3/500
BL	(0°-30°)	552.5	2.7	B2/1000		
BM	(30°-60°)	598.4	2.9	B1/1000		
BH	(60°-80°)	425.3	2.1	B1/500		G1/500
BVH	(80°-90°)	9.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8
2.5°	5894.7	5885.3	5846.4	5838.7	5795.1	5708.0	5606.9	5566.4	5484.0	5353.3	5208.6
5°	5992.7	5997.3	6000.5	5983.3	5977.1	5905.6	5793.5	5745.3	5634.9	5420.2	5155.7
7.5°	5625.5	5638.0	5676.9	5694.0	5768.7	5796.7	5773.3	5742.2	5655.1	5401.5	5029.7
10°	5238.2	5261.5	5303.5	5331.5	5423.3	5498.0	5592.9	5600.6	5582.0	5339.3	4888.1
12.5°	4905.2	4927.0	4973.7	5029.7	5123.0	5219.5	5361.1	5410.8	5473.1	5298.8	4787.0
15°	4619.0	4625.2	4670.3	4740.3	4863.2	4995.5	5163.5	5236.6	5357.9	5283.3	4709.2
17.5°	4368.5	4370.1	4399.6	4463.4	4612.7	4787.0	4983.0	5079.5	5233.5	5261.5	4640.7
20°	4203.6	4202.0	4203.6	4237.8	4370.1	4577.0	4815.0	4916.1	5113.7	5235.0	4570.7
22.5°	4147.6	4139.8	4104.0	4091.6	4175.6	4357.6	4642.3	4774.5	5006.3	5227.3	4519.4
25°	4216.0	4211.4	4135.1	4063.6	4071.4	4184.9	4466.5	4628.3	4922.3	5255.3	4507.0
27.5°	4436.9	4427.6	4310.9	4170.9	4082.2	4102.5	4335.8	4505.4	4855.4	5323.7	4524.1
30°	4726.3	4727.9	4603.4	4433.8	4225.4	4110.2	4265.8	4426.1	4810.3	5426.4	4561.4
32.5°	5048.4	5046.8	4958.1	4762.1	4496.1	4253.4	4296.9	4432.3	4816.5	5577.3	4633.0
35°	5381.3	5364.2	5334.6	5161.9	4850.8	4503.8	4438.5	4538.1	4881.9	5776.4	4754.3
37.5°	5765.5	5759.3	5788.9	5606.9	5289.5	4872.6	4687.4	4754.3	5046.8	6070.5	4950.3
40°	6376.9	6342.7	6356.7	6109.4	5784.2	5368.8	5035.9	5053.0	5309.7	6459.4	5259.9
42.5°	7542.2	7403.7	7143.9	6680.3	6328.7	5919.6	5491.7	5462.2	5681.5	6930.8	5667.5
45°	8934.6	8775.9	8120.9	7310.4	6873.2	6510.7	6054.9	5975.6	6138.9	7492.4	6193.4
47.5°	10096.7	9925.6	9057.5	7968.5	7427.1	7120.6	6678.8	6585.4	6686.5	8144.3	6825.0
50°	10493.4	10398.5	9636.2	8516.1	7985.6	7805.1	7461.3	7305.7	7330.6	8847.4	7562.4
52.5°	10311.4	10278.7	9768.4	8891.0	8502.1	8561.2	8318.5	8155.1	8127.1	9616.0	8377.6
55°	9927.1	9911.6	9662.7	9099.5	8957.9	9253.5	9521.1	9379.5	9115.0	10432.7	9051.3
57.5°	9378.0	9437.1	9616.0	9500.9	9518.0	9984.7	10638.1	10711.2	10316.1	11083.0	9550.6
60°	7910.9	8069.6	8889.5	9931.8	10729.9	11201.3	11834.5	11971.4	11333.5	11528.0	10127.8
62.5°	5848.0	6075.1	7243.5	9158.6	11397.3	13514.6	13426.0	13365.3	12304.3	12123.8	11177.9
65°	3435.1	3701.1	4689.0	7156.4	10390.7	15001.9	16397.4	15557.3	13783.8	13362.2	12850.3
67.5°	1711.3	1712.9	2159.4	3777.3	7679.1	13964.3	20734.8	20249.4	16929.5	15187.1	13510.0
70°	1316.1	1351.9	1597.7	2195.1	3883.1	10876.1	21728.9	23721.8	20090.7	15106.2	11462.6
72.5°	1115.5	1138.8	1421.9	1910.4	2903.0	5970.9	18810.4	20968.2	19171.3	12763.2	8449.2
75°	802.8	821.4	1258.6	1733.1	2672.7	2962.1	12903.2	15551.1	14384.3	8978.1	4650.1
77.5°	199.1	197.6	438.7	1406.4	2391.2	2467.4	7403.7	9972.2	8253.2	3676.2	1194.8
80°	88.7	85.6	99.6	295.6	2224.7	2328.9	3256.1	5035.9	3165.9	595.8	365.6
82.5°	62.2	59.1	62.2	108.9	743.6	2160.9	1968.0	2182.7	1159.0	203.8	155.6
85°	20.2	18.7	34.2	91.8	208.5	1246.1	1919.8	1630.4	861.9	87.1	104.2
87.5°	3.1	3.1	12.4	49.8	60.7	415.4	1126.4	1129.5	387.4	51.3	46.7
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°	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8	5214.8
2.5°	5135.5	5043.7	4914.6	4785.4	4668.8	4549.0	4452.5	4407.4	4387.2	4359.2	4298.5
5°	5017.2	4850.8	4567.6	4289.2	4029.3	3780.4	3567.3	3445.9	3315.3	3309.0	3245.3
7.5°	4827.4	4591.0	4144.5	3712.0	3315.3	2935.7	2609.0	2397.4	2252.7	2162.5	2100.2
10°	4615.9	4312.5	3721.3	3113.0	2573.2	2066.0	1646.0	1372.2	1205.7	1121.7	1073.5
12.5°	4447.8	4066.7	3304.4	2539.0	1862.2	1280.4	889.9	690.7	602.1	567.8	552.3
15°	4303.2	3841.1	2913.9	2025.6	1243.0	735.9	514.9	449.6	435.6	435.6	434.0
17.5°	4156.9	3623.3	2534.3	1521.5	782.5	482.3	406.0	396.7	398.3	402.9	402.9
20°	4018.5	3416.4	2168.7	1084.3	513.4	385.8	368.7	365.6	370.3	376.5	374.9
22.5°	3906.4	3234.4	1826.4	745.2	395.2	350.0	339.1	334.5	337.6	342.3	340.7
25°	3827.1	3078.8	1512.2	519.6	343.8	318.9	306.5	300.3	297.1	300.3	298.7
27.5°	3778.9	2948.1	1216.6	390.5	308.0	287.8	272.3	259.8	252.0	252.0	248.9
30°	3747.8	2825.2	953.7	323.6	278.5	256.7	234.9	217.8	205.4	202.2	200.7
32.5°	3746.2	2719.4	712.5	286.3	250.5	225.6	199.1	177.4	163.4	160.2	158.7
35°	3785.1	2633.9	524.3	258.3	225.6	196.0	166.5	143.1	130.7	130.7	129.1
37.5°	3886.2	2584.1	396.7	236.5	205.4	171.1	140.0	118.2	107.3	110.5	110.5
40°	4074.5	2574.7	323.6	219.4	188.2	149.4	113.6	96.5	91.8	96.5	96.5
42.5°	4362.3	2624.5	287.8	206.9	172.7	127.6	94.9	82.5	80.9	85.6	85.6
45°	4737.2	2722.5	267.6	196.0	155.6	105.8	79.3	71.6	70.0	76.2	76.2
47.5°	5191.5	2854.8	248.9	183.6	138.5	87.1	66.9	60.7	60.7	66.9	68.5
50°	5729.8	3033.7	230.2	171.1	124.5	73.1	56.0	51.3	52.9	59.1	60.7
52.5°	6348.9	3253.0	213.1	160.2	108.9	59.1	46.7	43.6	45.1	51.3	52.9
55°	6882.6	3444.4	192.9	149.4	88.7	48.2	38.9	37.3	38.9	46.7	46.7
57.5°	7347.7	3628.0	174.2	132.2	70.0	38.9	31.1	31.1	34.2	42.0	43.6
60°	7965.3	3917.3	158.7	112.0	52.9	29.6	24.9	26.4	31.1	37.3	38.9
62.5°	9059.0	4408.9	138.5	93.3	38.9	23.3	20.2	21.8	28.0	35.8	37.3
65°	10428.1	4874.1	115.1	77.8	29.6	17.1	15.6	20.2	28.0	35.8	37.3
67.5°	10288.1	4239.4	90.2	62.2	21.8	14.0	12.4	18.7	26.4	35.8	37.3
70°	8343.4	2971.4	66.9	42.0	17.1	12.4	12.4	18.7	26.4	34.2	35.8
72.5°	5787.3	1653.7	51.3	28.0	15.6	12.4	10.9	17.1	24.9	34.2	35.8
75°	2753.6	507.2	40.4	20.2	14.0	10.9	9.3	17.1	24.9	34.2	35.8
77.5°	528.9	129.1	32.7	17.1	12.4	10.9	9.3	15.6	24.9	32.7	34.2
80°	178.9	57.6	26.4	15.6	12.4	10.9	9.3	15.6	23.3	31.1	32.7
82.5°	98.0	32.7	23.3	14.0	12.4	9.3	7.8	14.0	21.8	31.1	32.7
85°	76.2	23.3	18.7	14.0	12.4	9.3	7.8	14.0	21.8	29.6	31.1
87.5°	38.9	17.1	15.6	14.0	12.4	9.3	7.8	12.4	20.2	28.0	31.1
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)