

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: P196176

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196176  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-SL4-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32929.8 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G5

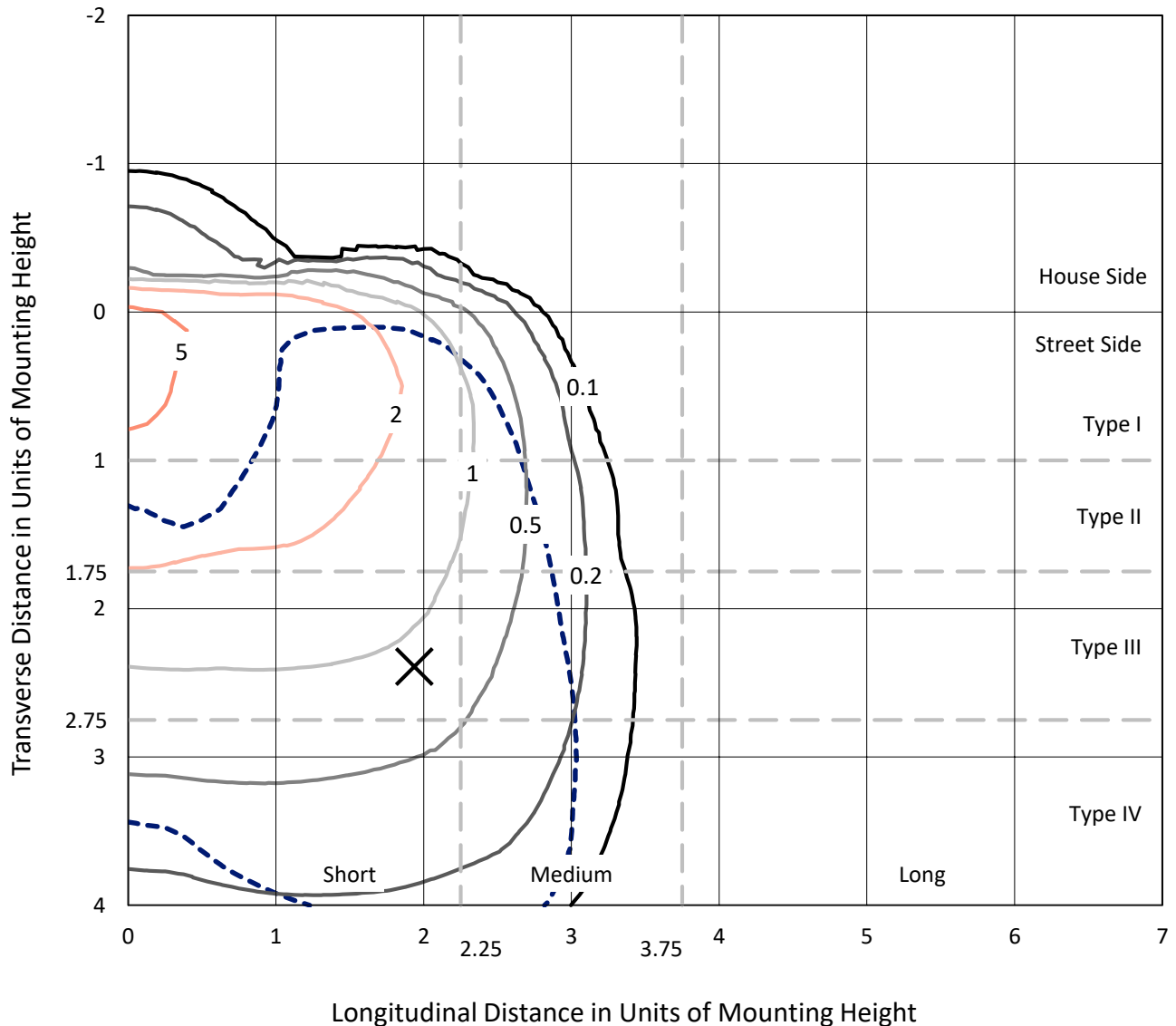
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

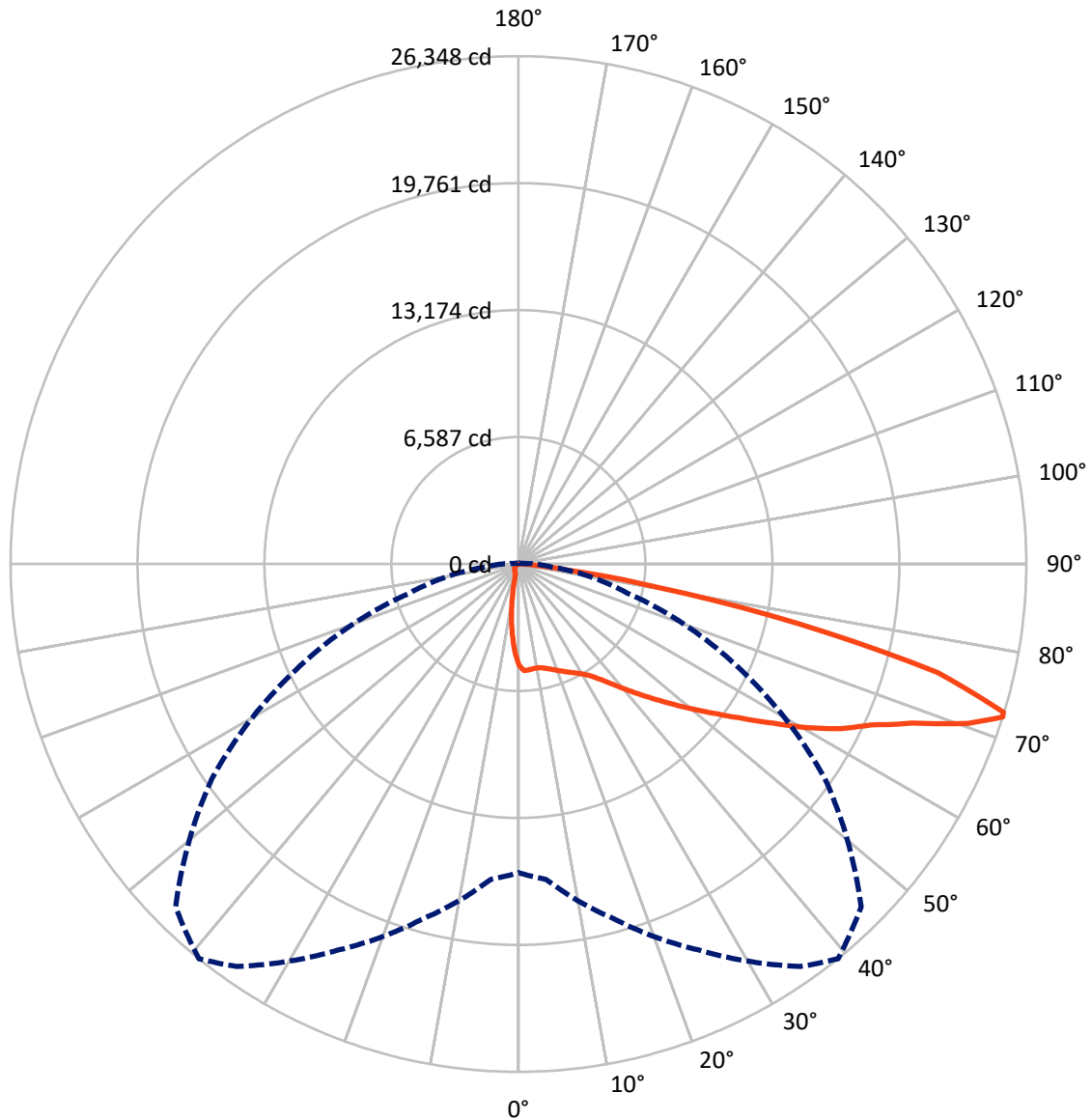
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.2 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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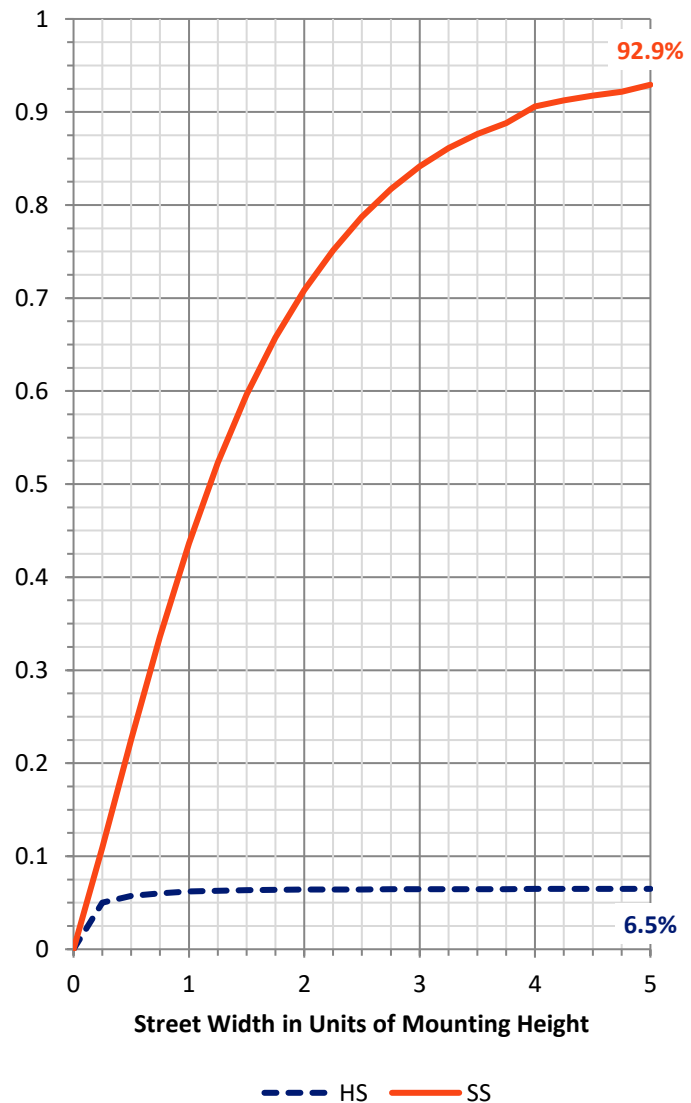
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2158.2	0.0	2158.2
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	30771.7	0.0	30771.7
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	32929.8	0.0	32929.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	428.7	1.3
10°-20°	1037.9	3.2
20°-30°	1723.7	5.2
30°-40°	2747.3	8.3
40°-50°	4534.7	13.8
50°-60°	6848.3	20.8
60°-70°	8921.0	27.1
70°-80°	6028.0	18.3
80°-90°	660.2	2.0
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°	32929.8	100.0
0°-180°	32929.8	100.0



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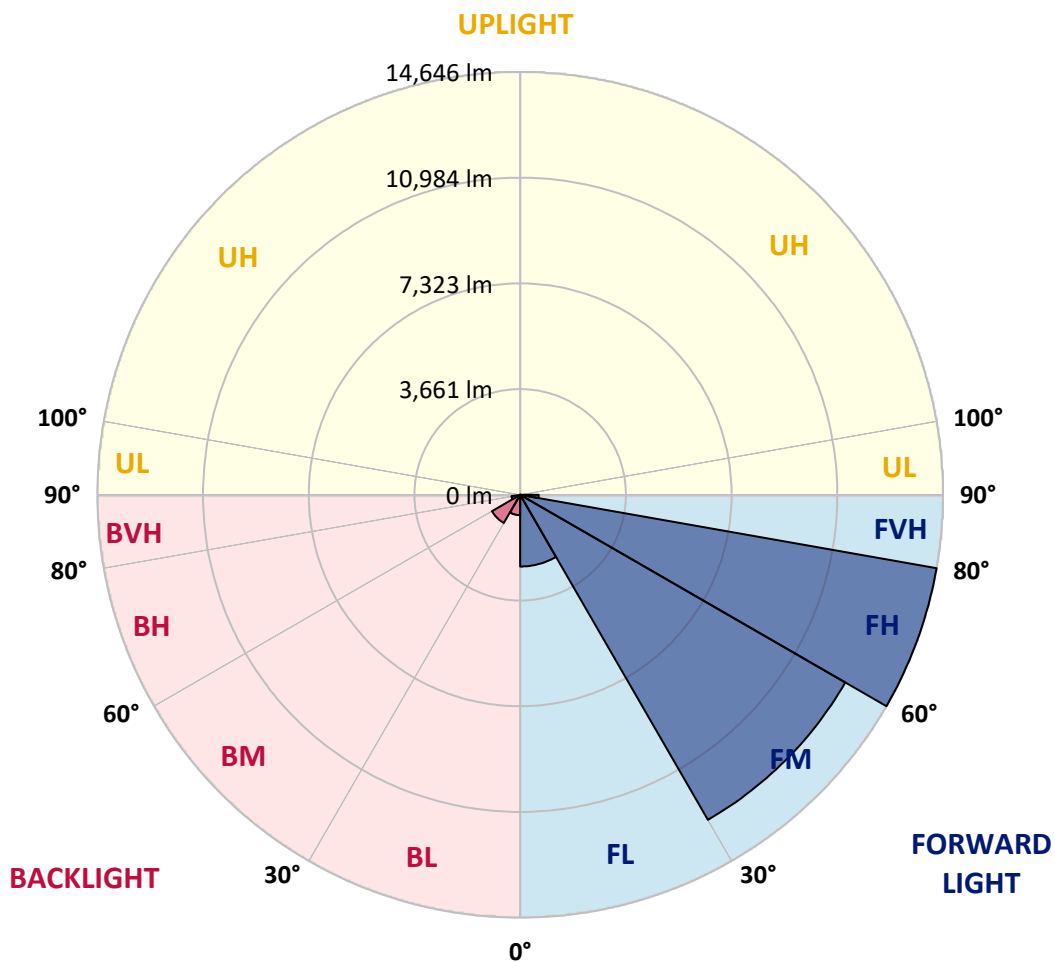
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2483.7	7.5			
FM (30°-60°)	13001.1	39.5			
FH (60°-80°)	14645.7	44.5			G5
FVH (80°-90°)	641.2	1.9			G4/750
BL (0°-30°)	706.7	2.1	B2/1000		
BM (30°-60°)	1129.2	3.4	B2/2500		
BH (60°-80°)	303.3	0.9	B1/500		G1/500
BVH (80°-90°)	19.0	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7
2.5°	5612.3	5622.6	5609.8	5586.4	5552.8	5532.1	5503.6	5441.5	5363.8	5296.5	5218.9
5°	5656.3	5661.5	5646.0	5602.0	5550.2	5521.7	5485.5	5418.2	5338.0	5244.8	5104.9
7.5°	5669.3	5666.7	5648.6	5594.2	5514.0	5477.7	5415.6	5332.7	5249.9	5164.5	5006.6
10°	5664.1	5664.1	5651.2	5599.4	5508.8	5475.1	5405.3	5317.2	5213.7	5128.3	4960.0
12.5°	5646.0	5656.3	5648.6	5620.1	5552.8	5526.9	5464.8	5376.7	5278.4	5190.4	5011.7
15°	5669.3	5684.8	5700.4	5690.0	5651.2	5627.9	5570.9	5480.4	5400.1	5306.9	5115.3
17.5°	5762.5	5796.1	5832.4	5835.0	5793.6	5752.2	5687.4	5594.2	5516.6	5431.2	5224.0
20°	5938.5	5964.4	6031.7	6044.6	5961.9	5902.3	5811.7	5703.0	5625.3	5552.8	5325.0
22.5°	6200.0	6228.4	6282.9	6264.7	6124.9	6055.1	5941.1	5816.8	5736.6	5695.2	5441.5
25°	6596.1	6603.9	6616.8	6536.6	6306.1	6228.4	6088.7	5948.9	5884.1	5879.0	5607.2
27.5°	7062.0	7072.4	7015.4	6836.8	6508.0	6407.0	6249.2	6122.4	6091.3	6130.0	5816.8
30°	7595.3	7597.9	7440.0	7150.0	6741.0	6629.7	6466.6	6326.8	6355.3	6451.0	6086.0
32.5°	8141.6	8115.6	7898.2	7520.2	7059.4	6924.9	6785.0	6645.2	6728.0	6922.2	6479.6
35°	8641.2	8630.7	8374.5	7934.4	7473.7	7354.5	7253.5	7106.0	7240.7	7556.4	7015.4
37.5°	9140.8	9133.0	8840.4	8382.3	7983.6	7898.2	7823.1	7709.2	7929.2	8392.6	7732.5
40°	9692.2	9679.3	9319.4	8879.3	8576.4	8529.9	8485.8	8436.6	8812.0	9456.6	8625.6
42.5°	10373.0	10316.0	9826.8	9420.4	9228.8	9241.7	9244.3	9293.5	9881.1	10722.5	9679.3
45°	11154.8	11027.9	10336.7	10000.3	9945.8	10023.5	10101.1	10305.7	11126.3	12179.9	10844.1
47.5°	11913.3	11708.8	10924.4	10624.1	10735.5	10896.0	11082.3	11481.0	12524.2	13704.7	11900.3
50°	12565.6	12355.9	11506.9	11258.3	11612.9	11851.2	12182.5	12785.7	13999.8	14993.9	12565.6
52.5°	13078.2	12912.5	12123.0	11957.3	12586.4	12912.5	13432.9	14225.1	15392.5	15843.0	13031.6
55°	13456.2	13373.3	12713.2	12736.5	13668.5	14139.5	14786.8	15682.4	16567.8	16503.1	13381.1
57.5°	13883.3	13818.5	13331.9	13655.5	14970.6	15578.9	16327.0	17046.7	17422.1	17033.8	13722.8
60°	14320.8	14341.5	14082.7	14768.6	16580.7	17253.8	17906.1	18084.7	18154.7	17572.2	14082.7
62.5°	14652.1	14740.1	14763.4	15969.8	18232.4	18807.1	19089.2	18962.3	18946.8	18294.5	14054.1
65°	15032.7	15263.0	15646.2	17287.5	19733.7	20111.7	20313.7	20497.5	20109.2	18509.4	12671.8
67.5°	15690.2	16052.7	16914.7	18902.8	21468.3	22027.4	22599.5	22405.4	20282.6	16327.0	9653.3
70°	16575.6	17018.2	18540.4	21012.6	23821.4	24758.5	25237.4	22252.7	17220.1	11281.6	5092.0
72°	16016.4	16417.6	19042.6	22089.5	25488.6	26347.9	25149.3	19410.2	12482.8	5847.9	1706.0
72.5°	15472.7	15886.9	18882.1	22076.6	25654.2	26311.7	24577.3	18289.3	11046.0	4551.0	1175.3
75°	10735.5	11258.3	16187.3	19845.1	23166.5	22444.2	18804.5	11074.6	4002.2	781.8	388.3
77.5°	5550.2	5954.1	9819.0	14023.1	16145.8	14786.8	11113.3	4804.7	1108.0	414.2	256.2
80°	3440.4	3639.8	4592.4	6909.3	8387.5	7336.4	4903.0	1941.6	709.3	245.9	204.5
82.5°	1781.1	1933.8	2891.6	2788.1	3098.7	2575.8	1809.5	1625.7	437.5	152.7	209.7
85°	585.0	621.3	1775.8	1853.5	1325.4	890.5	802.5	1550.7	126.8	98.4	178.6
87.5°	77.6	90.6	623.9	1061.4	652.3	403.9	481.5	546.3	44.0	54.3	49.2
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°	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7	5270.7
2.5°	5167.1	5133.5	5027.3	4921.1	4799.5	4688.2	4600.1	4543.2	4569.1	4483.7	4496.6
5°	5019.5	4934.1	4701.1	4450.0	4178.1	3924.4	3722.6	3572.5	3543.9	3414.5	3419.7
7.5°	4877.1	4737.4	4359.4	3945.2	3494.8	3129.7	2798.4	2508.5	2405.0	2298.8	2236.7
10°	4799.5	4607.9	4072.1	3468.9	2834.6	2298.8	1832.8	1467.8	1315.1	1203.7	1149.4
12.5°	4822.8	4569.1	3857.1	3036.5	2203.0	1522.2	1035.5	768.8	675.7	623.9	605.8
15°	4900.4	4576.9	3663.1	2614.6	1602.5	921.6	608.3	520.4	512.6	509.9	507.4
17.5°	4973.0	4584.7	3458.5	2174.5	1071.7	587.7	489.3	481.5	481.5	481.5	481.5
20°	5048.0	4587.2	3233.3	1713.7	704.1	481.5	460.8	455.6	460.8	460.8	460.8
22.5°	5136.0	4605.3	3015.9	1265.9	520.4	453.1	440.1	437.5	440.1	440.1	437.5
25°	5244.8	4644.2	2780.3	906.0	471.2	434.9	422.0	419.4	422.0	419.4	419.4
27.5°	5389.7	4696.0	2505.9	649.8	450.4	416.8	403.9	403.9	403.9	401.2	401.2
30°	5576.1	4758.1	2138.3	512.6	429.7	398.6	388.3	388.3	385.8	383.1	383.1
32.5°	5842.7	4859.0	1737.1	463.4	406.4	375.3	365.0	367.6	365.0	362.4	359.9
35°	6220.7	5017.0	1341.0	437.5	383.1	352.1	341.7	341.7	341.7	336.6	336.6
37.5°	6756.6	5257.7	1004.4	411.6	359.9	328.8	315.8	315.8	313.2	308.0	310.7
40°	7419.3	5560.6	727.4	388.3	336.6	302.9	292.6	287.3	282.1	277.0	277.0
42.5°	8216.5	5855.7	546.3	365.0	313.2	282.1	269.2	264.0	253.7	248.5	245.9
45°	9109.7	6168.9	453.1	336.6	287.3	258.9	248.5	238.1	225.3	217.5	214.8
47.5°	9863.0	6360.5	403.9	308.0	261.5	235.6	225.3	209.7	194.2	188.9	188.9
50°	10316.0	6280.2	362.4	279.6	235.6	212.3	199.4	178.6	168.3	163.1	160.5
52.5°	10569.7	6042.1	328.8	256.2	212.3	186.4	168.3	150.2	145.0	139.8	139.8
55°	10743.1	5697.7	292.6	233.0	191.6	163.1	142.4	129.4	124.3	121.6	119.1
57.5°	10908.8	5278.4	258.9	212.3	170.8	145.0	121.6	116.5	106.2	103.5	103.5
60°	10958.1	4701.1	227.8	188.9	152.7	126.8	106.2	98.4	88.0	85.4	85.4
62.5°	10331.6	3740.7	201.9	160.5	134.6	108.7	93.2	82.9	72.5	72.5	72.5
65°	8633.4	2539.6	173.5	139.8	119.1	93.2	80.2	67.3	62.1	62.1	62.1
67.5°	6013.6	1416.1	147.5	119.1	101.0	77.6	67.3	57.0	54.3	57.0	57.0
70°	2710.4	561.7	124.3	98.4	82.9	64.8	57.0	49.2	54.3	54.3	54.3
72°	812.8	300.3	103.5	80.2	67.3	57.0	49.2	46.6	51.8	54.3	54.3
72.5°	603.1	269.2	98.4	77.6	67.3	54.3	46.6	46.6	51.8	54.3	54.3
75°	310.7	183.8	75.1	57.0	49.2	44.0	38.9	44.0	51.8	51.8	51.8
77.5°	243.4	150.2	62.1	44.0	41.4	38.9	36.2	41.4	46.6	46.6	46.6
80°	227.8	98.4	49.2	41.4	36.2	33.7	33.7	36.2	41.4	44.0	44.0
82.5°	230.4	80.2	44.0	38.9	33.7	31.1	31.1	33.7	38.9	41.4	41.4
85°	147.5	54.3	38.9	33.7	31.1	28.4	28.4	31.1	36.2	38.9	38.9
87.5°	49.2	41.4	33.7	31.1	25.9	25.9	25.9	25.9	31.1	33.7	36.2
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)