

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: P196560

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7030-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196560  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-7030-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31176 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

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

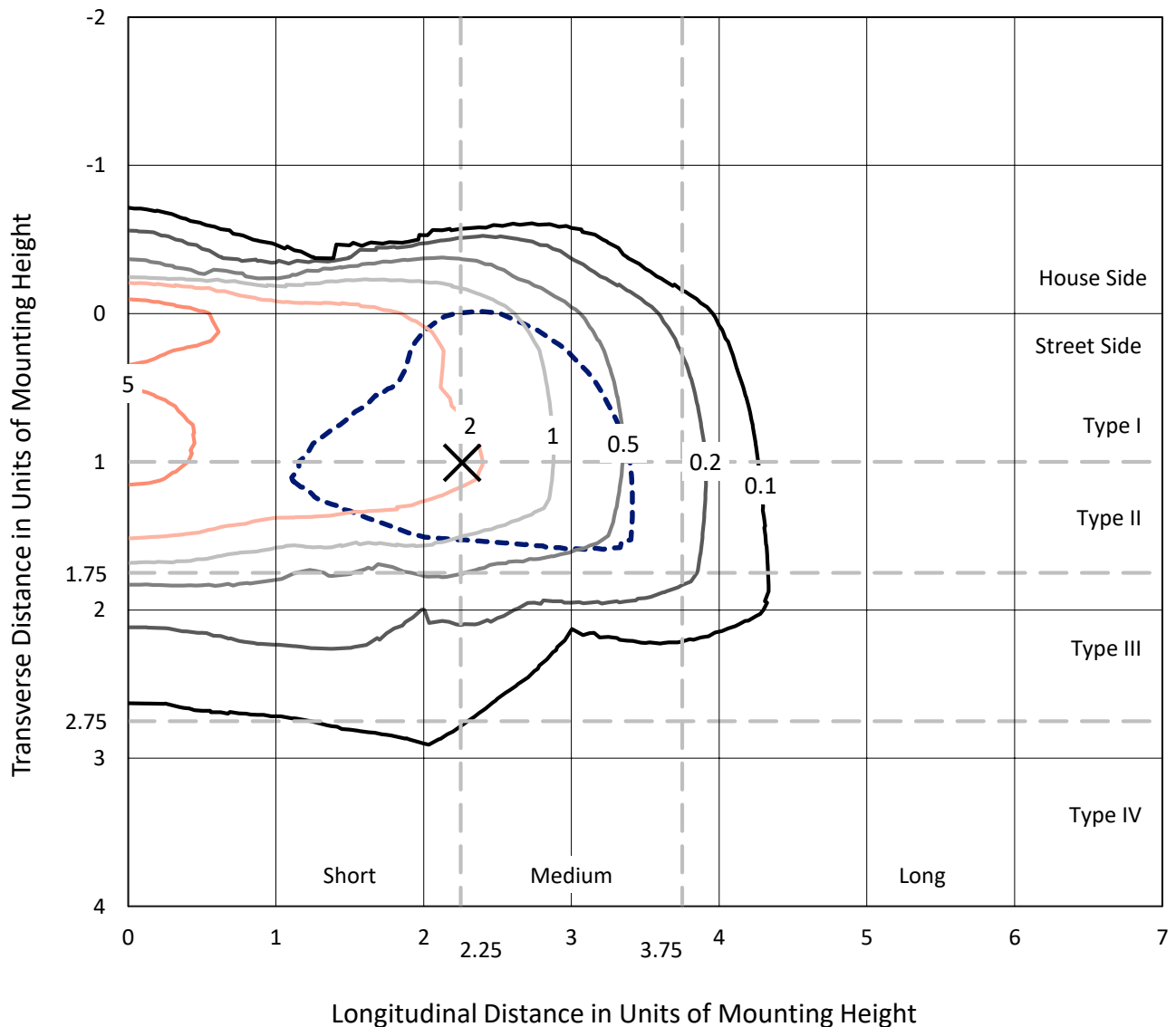


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### Iso-Footcandle Lines of Horizontal Illumination

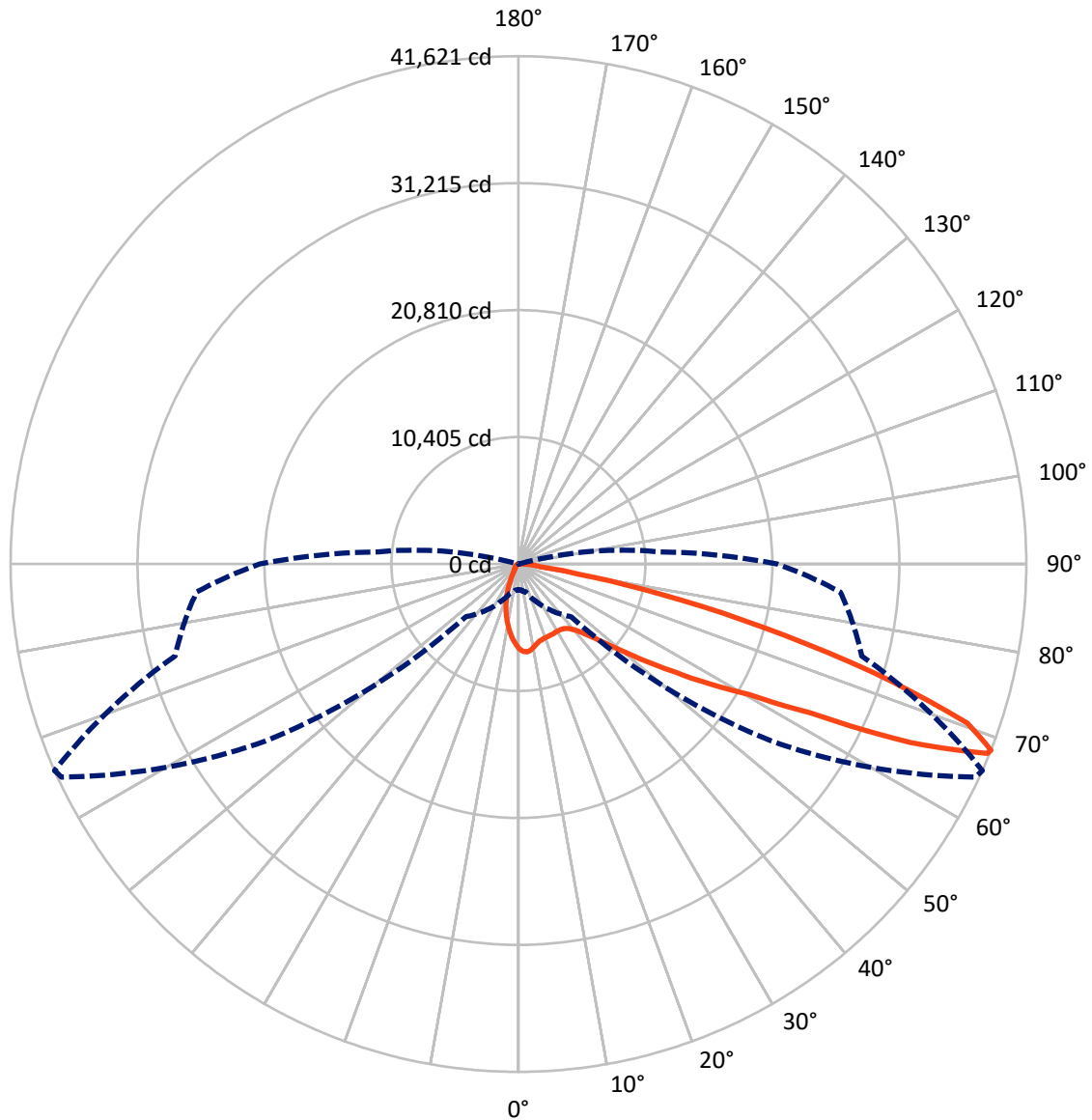
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.7 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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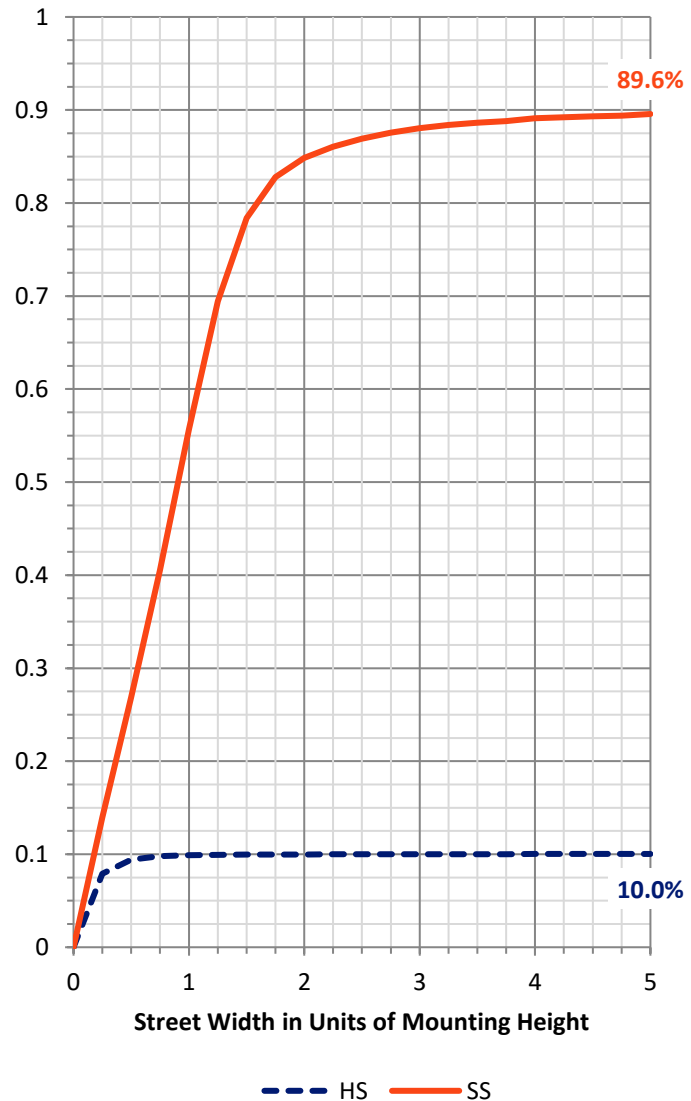
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3157.8	0.0	3157.8
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	28018.2	0.0	28018.2
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	31176.0	0.0	31176.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	569.4	1.8
10°-20°	1225.1	3.9
20°-30°	1775.3	5.7
30°-40°	2717.7	8.7
40°-50°	4648.4	14.9
50°-60°	7271.5	23.3
60°-70°	8372.9	26.9
70°-80°	4189.9	13.4
80°-90°	405.8	1.3
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°	31176.0	100.0
0°-180°	31176.0	100.0

**Coefficient of Utilization**



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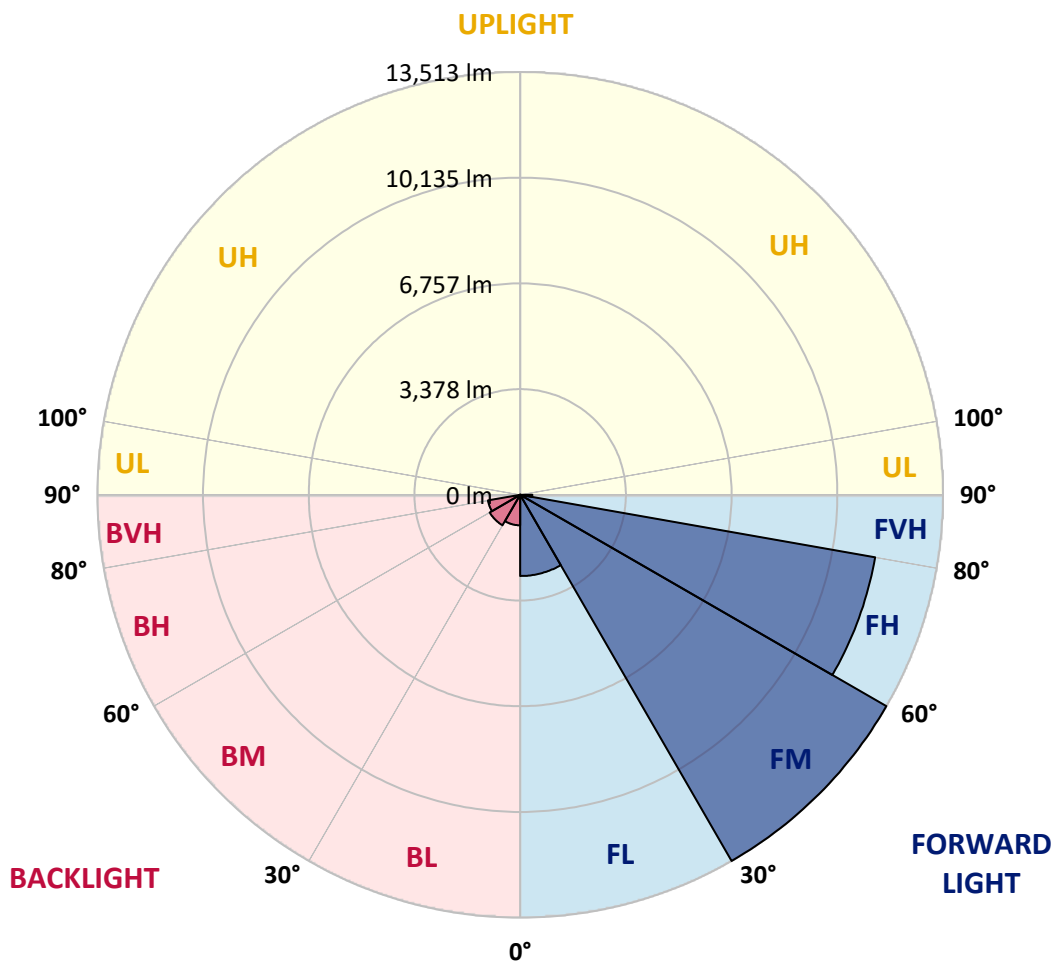
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2595.2	8.3			
FM (30°-60°)	13513.1	43.3			
FH (60°-80°)	11519.5	36.9			G4/12000
FVH (80°-90°)	390.4	1.3			G3/500
BL (0°-30°)	974.6	3.1	B2/1000		
BM (30°-60°)	1124.5	3.6	B2/2500		
BH (60°-80°)	1043.3	3.3	B3/2500		G3/2500
BVH (80°-90°)	15.4	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7
2.5°	7305.5	7310.4	7308.0	7315.2	7310.4	7273.7	7234.5	7151.3	7158.6	7050.9	6931.1
5°	6791.5	6833.2	6874.7	6916.3	7016.7	7104.8	7210.0	7234.5	7234.5	7141.5	6965.3
7.5°	6267.7	6270.3	6316.8	6373.0	6507.6	6669.1	6913.9	7134.2	7139.1	7163.6	6970.2
10°	5873.8	5886.1	5917.8	5979.0	6113.6	6272.7	6546.9	6891.8	6918.9	7099.8	6921.2
12.5°	5567.9	5582.5	5616.8	5687.7	5810.1	5974.1	6262.8	6656.9	6693.7	7038.7	6906.6
15°	5332.8	5352.5	5379.4	5450.4	5582.5	5756.4	6072.0	6500.3	6544.3	7014.2	6953.0
17.5°	5234.9	5234.9	5232.5	5281.5	5413.7	5589.8	5920.2	6417.2	6473.4	7033.8	7031.4
20°	5276.5	5269.2	5217.9	5205.6	5286.4	5462.6	5800.3	6363.3	6426.8	7070.5	7126.9
22.5°	5496.9	5482.2	5367.2	5271.6	5247.1	5364.7	5719.6	6326.5	6402.4	7146.4	7254.0
25°	5964.4	5920.2	5761.1	5545.8	5352.5	5340.3	5663.2	6307.0	6387.8	7234.5	7393.6
27.5°	6571.3	6559.1	6304.5	6015.7	5643.7	5421.0	5646.2	6292.2	6373.0	7298.2	7506.2
30°	7325.1	7329.9	7036.3	6659.4	6096.4	5648.6	5699.9	6284.9	6368.1	7303.0	7555.2
32.5°	8103.3	8108.2	7863.5	7459.6	6715.6	6040.2	5851.7	6319.2	6395.1	7283.4	7552.6
35°	8852.3	8859.7	8712.8	8387.3	7542.9	6583.5	6138.0	6436.7	6490.5	7295.7	7547.7
37.5°	9799.4	9828.8	9647.7	9344.2	8580.5	7381.3	6605.5	6674.1	6718.2	7396.1	7584.4
40°	11414.7	11375.5	10856.6	10342.7	9706.4	8353.0	7281.0	7082.7	7097.5	7655.5	7724.0
42.5°	13296.8	13247.8	12359.4	11473.5	10863.9	9525.3	8144.9	7709.4	7706.8	8091.0	8027.5
45°	14916.9	14887.5	13952.6	12770.6	12146.5	10820.0	9209.6	8612.4	8583.1	8844.9	8580.5
47.5°	16067.2	16042.7	15335.4	14150.9	13629.5	12244.3	10538.5	9843.5	9782.3	9831.2	9478.8
50°	16179.7	16152.9	15905.6	15144.5	15362.3	14334.5	12180.8	11456.3	11377.9	11302.1	10837.1
52.5°	15127.4	15125.0	15254.7	15205.7	16576.3	17024.1	14195.0	13450.9	13357.9	13164.5	12702.1
55°	12976.1	12963.9	13455.9	14170.5	16549.3	19799.5	17266.5	15824.9	15702.5	15315.9	14708.9
57.5°	9481.2	9417.6	10445.5	11960.5	15386.8	21013.4	22144.1	18774.0	18570.9	17344.7	16409.8
60°	5234.9	5259.4	6581.0	8375.0	12633.5	20773.6	26632.6	22212.6	21679.1	19094.5	18152.4
62.5°	2934.4	2995.7	3979.4	5443.0	8054.4	18827.9	29040.9	28130.4	26845.5	21135.7	20355.0
65°	2219.8	2256.5	2750.9	4199.7	5078.4	13157.2	29425.1	36405.0	35296.4	24229.3	23862.2
67.5°	2090.1	2119.4	2361.7	3482.6	4625.6	6823.4	26532.3	41299.9	41439.5	28448.6	26578.7
68°	2104.8	2141.5	2383.8	3350.6	4618.3	6103.8	25298.8	41324.4	41620.5	29128.9	26485.7
70°	1933.5	1943.2	2520.8	3286.8	4476.4	4809.1	18301.7	38492.7	39023.8	29939.1	24043.3
72.5°	739.1	741.6	1130.8	2846.3	4689.2	4836.1	9219.4	30423.7	30450.5	26055.0	18744.6
75°	384.3	323.1	354.9	890.9	4478.7	4713.7	4625.6	20773.6	20643.9	17621.4	11485.7
77.5°	264.3	225.2	237.4	308.3	1862.5	4711.3	3340.7	11945.8	11918.9	7496.4	3277.1
80°	149.2	129.7	141.9	259.4	653.5	4422.5	3113.2	5134.6	4838.5	1316.7	531.1
82.5°	75.8	63.6	75.8	217.9	406.2	2782.8	3027.5	2014.2	1793.9	313.2	345.0
85°	19.5	19.5	36.7	151.8	252.1	912.9	2714.2	1453.8	1307.0	137.0	244.7
87.5°	4.9	2.4	14.6	56.3	90.5	198.2	1505.1	810.0	697.5	71.0	141.9
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°	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7	6945.7
2.5°	6882.1	6813.5	6678.9	6527.2	6419.5	6302.1	6233.6	6150.3	6086.8	6030.3	6072.0
5°	6857.6	6725.5	6426.8	6091.5	5810.1	5540.9	5340.3	5149.3	5004.9	4914.4	4951.1
7.5°	6794.0	6598.1	6113.6	5589.8	5129.7	4696.6	4344.1	4028.4	3783.6	3651.6	3693.2
10°	6686.3	6409.7	5758.7	5031.8	4388.2	3776.3	3252.6	2782.8	2427.8	2261.4	2300.6
12.5°	6608.0	6243.3	5391.6	4493.4	3646.6	2777.8	2082.7	1544.3	1267.7	1101.4	1116.0
15°	6573.7	6113.6	5049.0	3925.6	2836.6	1784.2	1125.8	815.0	719.6	685.3	687.7
17.5°	6578.6	6010.8	4723.5	3335.8	2019.1	1025.5	690.2	621.6	606.9	599.7	599.7
20°	6590.8	5907.9	4385.7	2721.5	1292.2	660.8	575.1	553.1	545.8	536.0	538.4
22.5°	6627.5	5829.7	4045.6	2104.8	795.4	538.4	509.0	489.5	477.3	462.6	465.0
25°	6683.8	5771.0	3710.2	1515.0	560.5	470.0	442.9	416.1	394.0	377.0	379.3
27.5°	6718.2	5687.7	3352.9	1032.8	465.0	411.2	374.4	337.7	313.2	298.6	296.1
30°	6693.7	5553.1	2946.7	678.0	411.2	354.9	310.9	269.3	244.7	232.5	232.5
32.5°	6627.5	5379.4	2498.8	494.4	364.7	305.9	252.1	215.3	198.2	190.8	193.4
35°	6551.7	5198.2	2021.6	418.5	328.0	259.4	205.6	176.2	169.0	166.4	166.4
37.5°	6510.1	5041.7	1563.9	379.3	293.7	215.3	169.0	151.8	144.4	144.4	144.4
40°	6556.5	4921.7	1157.6	349.9	259.4	178.6	141.9	129.7	127.3	127.3	127.3
42.5°	6754.9	4880.1	846.8	325.5	225.2	149.2	122.4	112.5	110.2	112.5	112.5
45°	7141.5	4970.6	641.3	301.0	193.4	122.4	105.2	97.9	97.9	100.3	100.3
47.5°	7797.4	5203.2	526.2	276.5	161.4	102.8	90.5	85.7	85.7	88.1	88.1
50°	8815.6	5634.0	472.3	249.6	134.6	88.1	75.8	73.4	73.4	75.8	78.3
52.5°	10362.2	6453.8	445.4	222.7	110.2	73.4	63.6	61.1	63.6	66.1	66.1
55°	12082.9	7503.7	413.6	195.8	93.0	61.1	51.4	51.4	53.9	58.8	58.8
57.5°	13686.0	8517.0	384.3	161.4	80.8	48.9	41.6	41.6	46.6	51.4	51.4
60°	15379.5	9510.6	345.0	129.7	68.5	39.2	34.3	34.3	41.6	46.6	48.9
62.5°	17471.9	10665.8	293.7	102.8	53.9	29.4	24.5	31.8	39.2	46.6	46.6
65°	20497.0	12102.4	230.1	80.8	41.6	22.1	19.5	29.4	36.7	44.0	46.6
67.5°	21595.8	11918.9	173.7	66.1	31.8	17.2	17.2	26.9	36.7	44.0	44.0
68°	21194.5	11517.4	166.4	63.6	29.4	17.2	17.2	26.9	36.7	44.0	44.0
70°	18468.1	9415.2	137.0	48.9	24.5	14.6	14.6	24.5	36.7	41.6	44.0
72.5°	13827.9	6255.5	117.5	31.8	22.1	14.6	12.2	24.5	34.3	41.6	41.6
75°	7932.0	2596.6	100.3	24.5	19.5	12.2	12.2	22.1	34.3	41.6	41.6
77.5°	2241.8	606.9	80.8	19.5	17.2	12.2	9.9	22.1	31.8	39.2	39.2
80°	411.2	181.2	63.6	17.2	14.6	12.2	9.9	22.1	31.8	39.2	39.2
82.5°	271.6	85.7	46.6	17.2	14.6	12.2	9.9	19.5	29.4	36.7	36.7
85°	203.1	61.1	29.4	17.2	14.6	12.2	9.9	19.5	29.4	36.7	36.7
87.5°	112.5	26.9	22.1	19.5	17.2	12.2	9.9	17.2	26.9	34.3	34.3
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)