

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: P196080

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196080  
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-SL2-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 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: 32973.8 lumens  
Efficiency: N/A  
Efficacy: 86.3 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 - 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

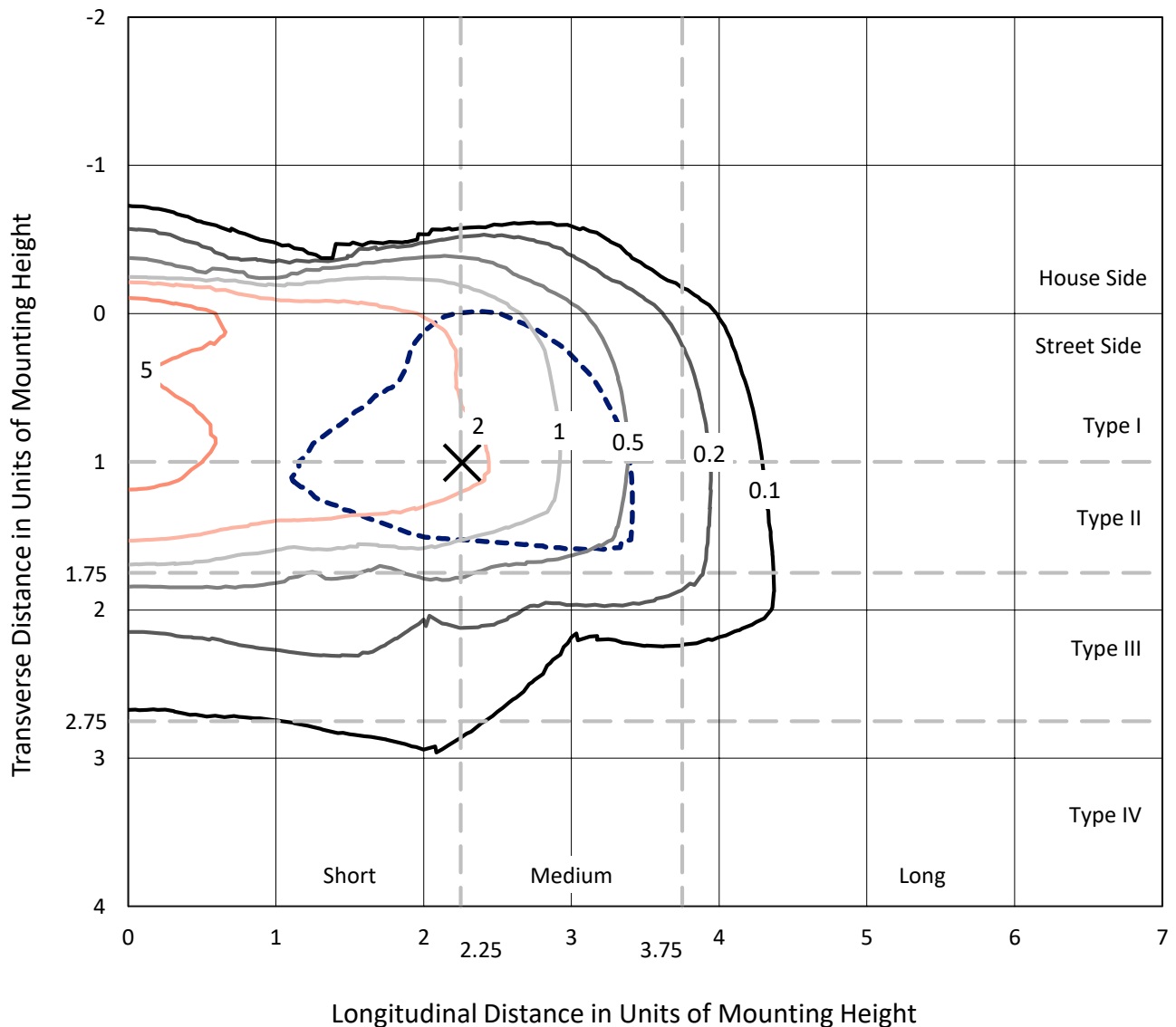


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### Iso-Footcandle Lines of Horizontal Illumination

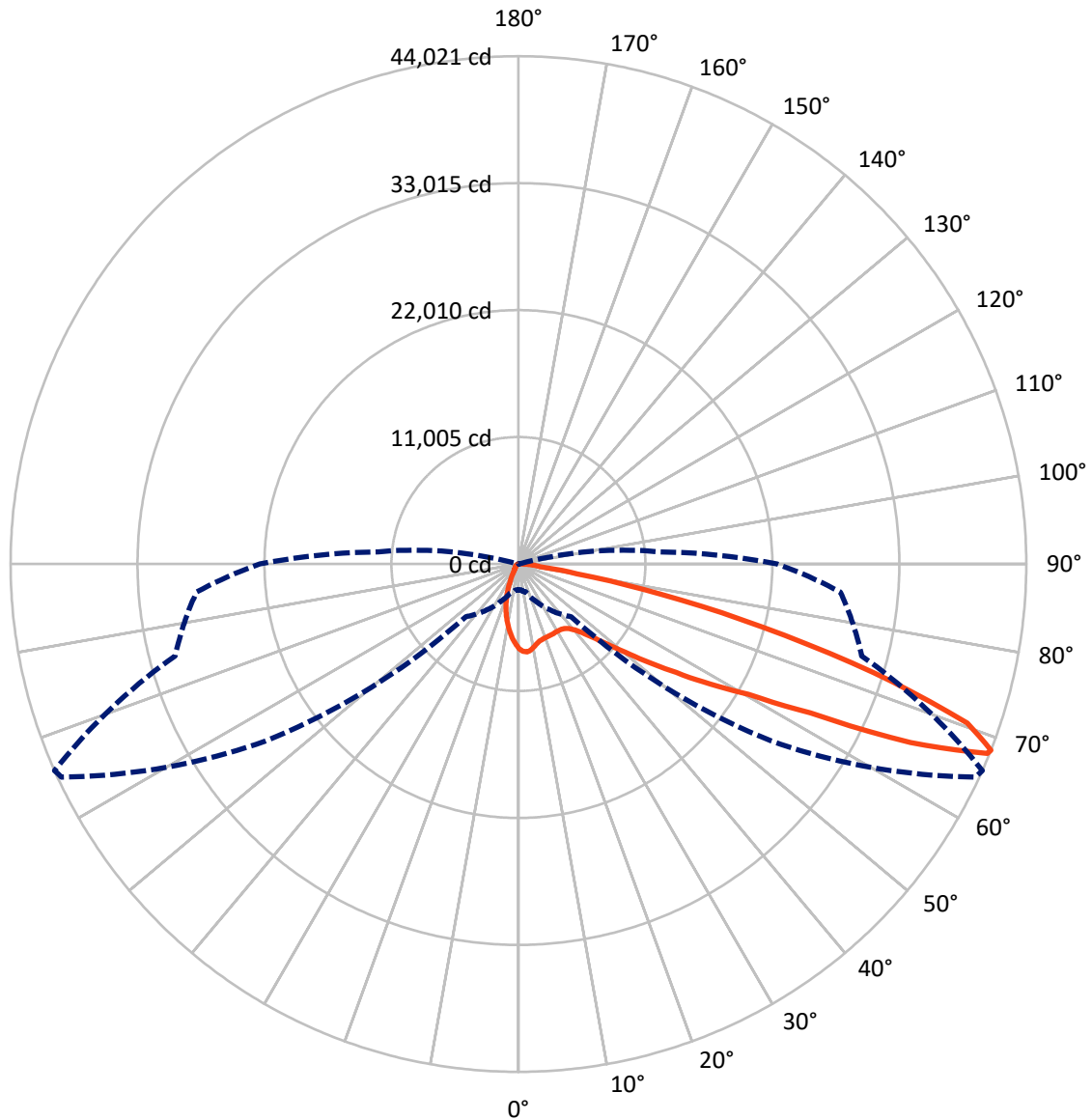
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.2 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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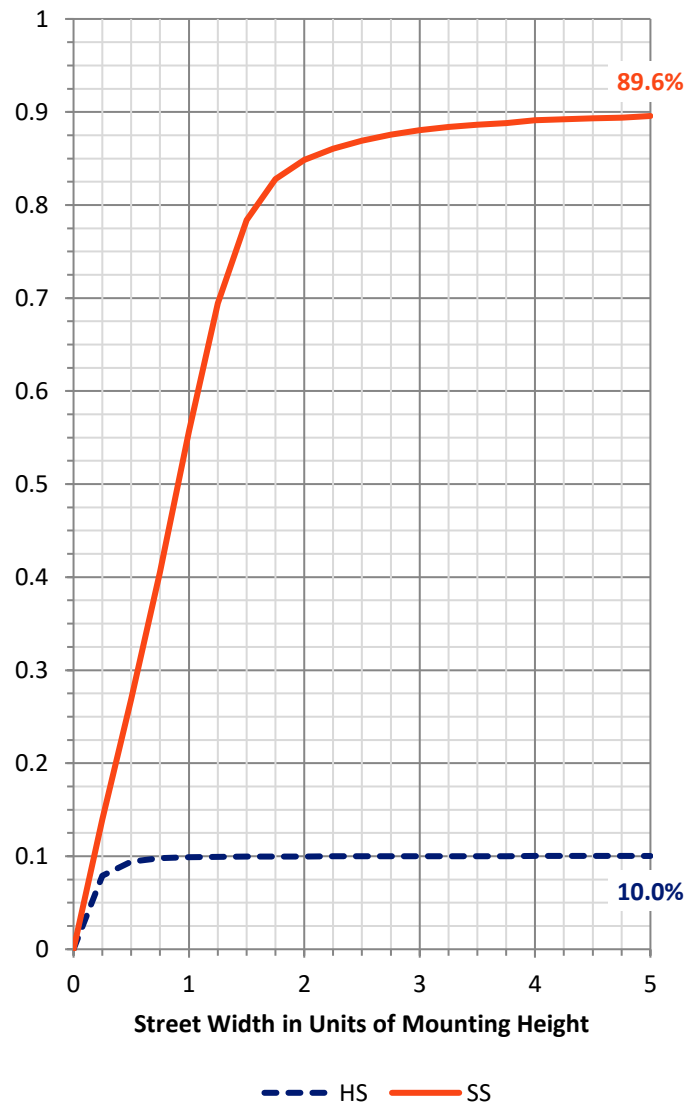
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3339.9	0.0	3339.9
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	29633.9	0.0	29633.9
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	32973.8	0.0	32973.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	602.2	1.8
10°-20°	1295.8	3.9
20°-30°	1877.7	5.7
30°-40°	2874.4	8.7
40°-50°	4916.5	14.9
50°-60°	7690.8	23.3
60°-70°	8855.7	26.9
70°-80°	4431.5	13.4
80°-90°	429.2	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°	32973.8	100.0
0°-180°	32973.8	100.0



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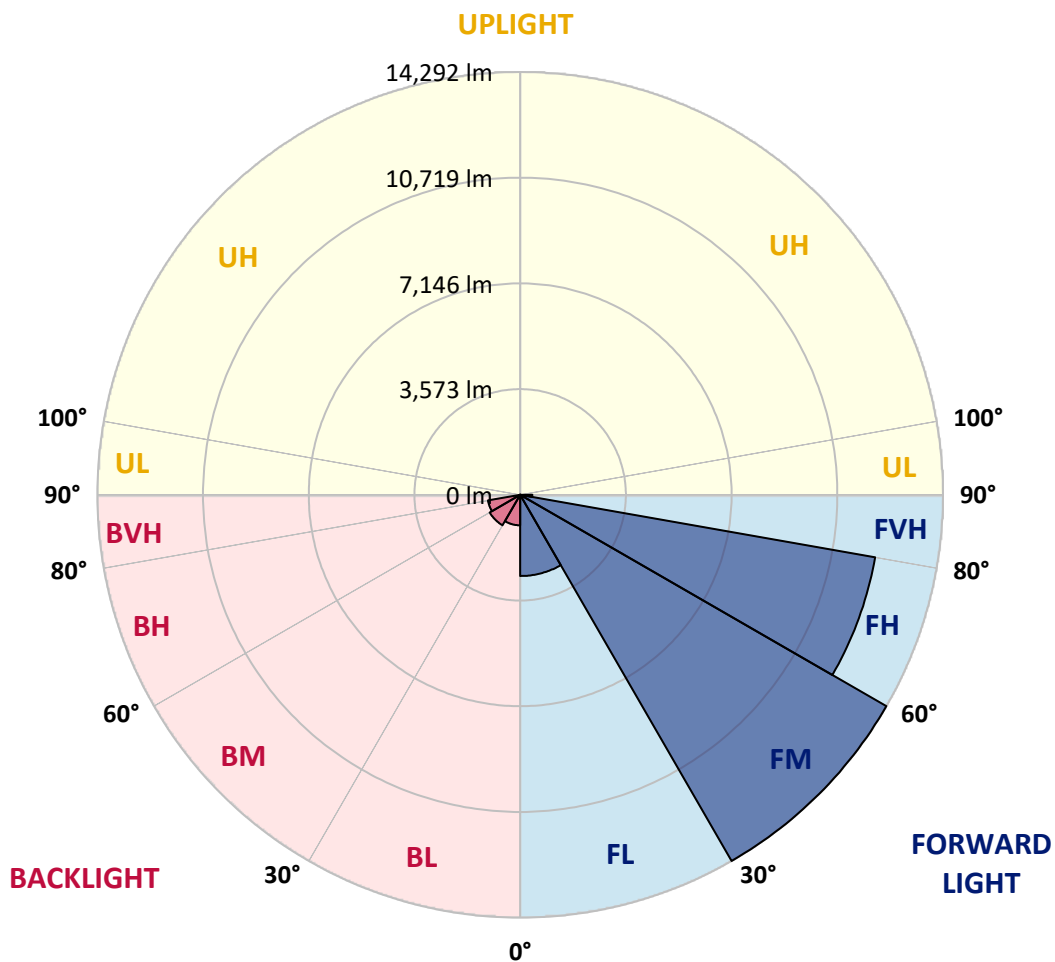
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2744.9	8.3			
FM (30°-60°)	14292.4	43.3			
FH (60°-80°)	12183.7	36.9			G5
FVH (80°-90°)	412.9	1.3			G3/500
BL (0°-30°)	1030.8	3.1	B3/2500		
BM (30°-60°)	1189.3	3.6	B2/2500		
BH (60°-80°)	1103.5	3.3	B3/2500		G3/2500
BVH (80°-90°)	16.3	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-G5**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2
2.5°	7726.8	7732.0	7729.3	7737.1	7732.0	7693.1	7651.7	7563.7	7571.5	7457.5	7330.7
5°	7183.2	7227.1	7271.1	7315.2	7421.3	7514.5	7625.8	7651.7	7651.7	7553.4	7367.0
7.5°	6629.2	6631.8	6681.0	6740.5	6882.9	7053.8	7312.6	7545.6	7550.7	7576.6	7372.1
10°	6212.5	6225.4	6259.0	6323.8	6466.2	6634.4	6924.4	7289.3	7317.8	7509.3	7320.3
12.5°	5888.9	5904.5	5940.7	6015.8	6145.2	6318.6	6624.0	7040.8	7079.6	7444.6	7304.8
15°	5640.4	5661.1	5689.6	5764.6	5904.5	6088.2	6422.2	6875.2	6921.7	7418.7	7354.0
17.5°	5536.8	5536.8	5534.3	5586.0	5725.9	5912.2	6261.7	6787.2	6846.7	7439.4	7436.9
20°	5580.9	5573.1	5518.7	5505.8	5591.2	5777.6	6134.8	6730.2	6797.5	7478.3	7537.8
22.5°	5813.8	5798.3	5676.7	5575.7	5549.8	5674.1	6049.4	6691.3	6771.6	7558.5	7672.4
25°	6308.2	6261.7	6093.4	5865.6	5661.1	5648.2	5989.9	6670.7	6756.1	7651.7	7819.9
27.5°	6950.2	6937.2	6668.1	6362.7	5969.1	5733.6	5971.8	6655.1	6740.5	7719.0	7939.0
30°	7747.5	7752.6	7442.1	7043.4	6448.1	5974.3	6028.7	6647.3	6735.3	7724.2	7990.8
32.5°	8570.6	8575.8	8317.0	7889.8	7103.0	6388.5	6189.2	6683.6	6763.9	7703.4	7988.2
35°	9362.8	9370.4	9215.2	8870.9	7977.9	6963.1	6492.1	6807.8	6864.8	7716.4	7983.0
37.5°	10364.4	10395.5	10204.0	9883.0	9075.4	7807.1	6986.4	7059.0	7105.5	7822.5	8021.9
40°	12072.9	12031.5	11482.7	10939.1	10266.1	8834.6	7700.9	7491.2	7506.7	8097.0	8169.4
42.5°	14063.5	14011.8	13072.1	12135.1	11490.5	10074.5	8614.7	8153.8	8151.3	8557.7	8490.4
45°	15777.1	15746.1	14757.2	13506.9	12846.8	11443.9	9740.6	9109.1	9078.0	9355.0	9075.4
47.5°	16993.7	16967.8	16219.7	14966.9	14415.5	12950.5	11146.2	10411.1	10346.3	10398.1	10025.4
50°	17112.7	17084.3	16822.8	16017.9	16248.2	15161.1	12883.1	12117.0	12034.1	11953.8	11462.1
52.5°	15999.7	15997.1	16134.3	16082.5	17532.1	18005.8	15013.4	14226.6	14128.2	13923.7	13434.5
55°	13724.4	13711.4	14231.7	14987.6	17503.6	20941.2	18262.1	16737.4	16608.0	16199.0	15557.0
57.5°	10028.0	9960.7	11047.9	12650.1	16274.1	22225.1	23421.1	19856.6	19641.8	18344.9	17356.1
60°	5536.8	5562.7	6960.6	8857.9	13362.0	21971.4	28168.4	23493.5	22929.2	20195.7	19199.2
62.5°	3103.6	3168.4	4208.9	5756.9	8518.8	19913.6	30715.5	29752.5	28393.6	22354.5	21528.8
65°	2347.8	2386.6	2909.5	4442.0	5371.2	13915.9	31121.9	38504.4	37331.8	25626.5	25238.1
67.5°	2210.6	2241.7	2497.9	3683.4	4892.4	7216.8	28062.3	43681.4	43829.0	30089.1	28111.4
68°	2226.1	2264.9	2521.3	3543.7	4884.6	6455.8	26757.6	43707.3	44020.5	30808.7	28013.1
70°	2045.0	2055.3	2666.2	3476.4	4734.4	5086.4	19357.0	40712.4	41274.1	31665.5	25429.7
72.5°	781.7	784.3	1195.9	3010.4	4959.7	5115.0	9751.0	32178.0	32206.5	27557.5	19825.6
75°	406.4	341.7	375.3	942.2	4737.0	4985.6	4892.4	21971.4	21834.3	18637.4	12148.0
77.5°	279.6	238.1	251.1	326.1	1969.9	4982.9	3533.4	12634.6	12606.1	7928.7	3466.1
80°	157.9	137.2	150.2	274.4	691.1	4677.4	3292.6	5430.7	5117.5	1392.6	561.7
82.5°	80.2	67.3	80.2	230.4	429.7	2943.1	3202.0	2130.4	1897.4	331.3	365.0
85°	20.7	20.7	38.9	160.5	266.6	965.6	2870.7	1537.6	1382.3	145.0	258.8
87.5°	5.2	2.6	15.5	59.5	95.7	209.7	1591.9	856.8	737.8	75.1	150.2
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°	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2	7346.2
2.5°	7278.9	7206.5	7064.1	6903.6	6789.7	6665.4	6593.0	6504.9	6437.6	6378.1	6422.2
5°	7253.0	7113.3	6797.5	6442.9	6145.2	5860.4	5648.2	5446.3	5293.6	5197.8	5236.6
7.5°	7185.7	6978.7	6466.2	5912.2	5425.5	4967.3	4594.7	4260.7	4001.9	3862.0	3906.1
10°	7071.9	6779.4	6090.9	5322.0	4641.2	3994.1	3440.2	2943.1	2567.8	2391.8	2433.2
12.5°	6989.0	6603.4	5702.5	4752.5	3856.9	2938.0	2202.8	1633.3	1340.9	1164.8	1180.4
15°	6952.8	6466.2	5340.1	4152.0	3000.1	1887.0	1190.7	861.9	761.1	724.8	727.4
17.5°	6958.0	6357.4	4995.9	3528.2	2135.5	1084.6	730.0	657.5	642.0	634.2	634.2
20°	6970.9	6248.7	4638.7	2878.5	1366.8	698.9	608.3	585.0	577.3	566.9	569.5
22.5°	7009.8	6165.8	4278.8	2226.1	841.3	569.5	538.4	517.7	504.7	489.3	491.8
25°	7069.3	6103.7	3924.2	1602.4	592.8	496.9	468.5	440.1	416.8	398.6	401.2
27.5°	7105.5	6015.8	3546.3	1092.4	491.8	434.9	396.1	357.2	331.3	315.8	313.2
30°	7079.6	5873.4	3116.6	717.0	434.9	375.3	328.8	284.8	258.8	245.9	245.9
32.5°	7009.8	5689.6	2642.9	522.9	385.7	323.6	266.6	227.8	209.7	201.9	204.5
35°	6929.5	5498.1	2138.2	442.6	346.9	274.4	217.5	186.4	178.6	176.0	176.0
37.5°	6885.5	5332.3	1654.1	401.2	310.7	227.8	178.6	160.5	152.7	152.7	152.7
40°	6934.7	5205.5	1224.4	370.2	274.4	188.9	150.2	137.2	134.6	134.6	134.6
42.5°	7144.4	5161.5	895.6	344.3	238.1	157.9	129.4	119.1	116.5	119.1	119.1
45°	7553.4	5257.4	678.2	318.3	204.5	129.4	111.3	103.5	103.5	106.1	106.1
47.5°	8247.0	5503.2	556.5	292.5	170.8	108.7	95.7	90.6	90.6	93.2	93.2
50°	9323.9	5958.8	499.6	264.0	142.4	93.2	80.2	77.6	77.6	80.2	82.9
52.5°	10959.8	6825.9	471.1	235.6	116.5	77.6	67.3	64.8	67.3	69.9	69.9
55°	12779.6	7936.5	437.4	207.0	98.4	64.8	54.3	54.3	57.0	62.1	62.1
57.5°	14475.1	9008.1	406.4	170.8	85.4	51.8	44.0	44.0	49.2	54.3	54.3
60°	16266.4	10059.0	365.0	137.2	72.5	41.4	36.2	36.2	44.0	49.2	51.8
62.5°	18479.5	11280.8	310.7	108.7	57.0	31.1	25.9	33.7	41.4	49.2	49.2
65°	21679.0	12800.3	243.4	85.4	44.0	23.3	20.7	31.1	38.9	46.5	49.2
67.5°	22841.2	12606.1	183.8	69.9	33.7	18.1	18.1	28.4	38.9	46.5	46.5
68°	22416.6	12181.6	176.0	67.3	31.1	18.1	18.1	28.4	38.9	46.5	46.5
70°	19533.0	9958.1	145.0	51.8	25.9	15.5	15.5	25.9	38.9	44.0	46.5
72.5°	14625.2	6616.2	124.3	33.7	23.3	15.5	13.0	25.9	36.2	44.0	44.0
75°	8389.4	2746.4	106.1	25.9	20.7	13.0	13.0	23.3	36.2	44.0	44.0
77.5°	2371.1	642.0	85.4	20.7	18.1	13.0	10.3	23.3	33.7	41.4	41.4
80°	434.9	191.6	67.3	18.1	15.5	13.0	10.3	23.3	33.7	41.4	41.4
82.5°	287.3	90.6	49.2	18.1	15.5	13.0	10.3	20.7	31.1	38.9	38.9
85°	214.8	64.8	31.1	18.1	15.5	13.0	10.3	20.7	31.1	38.9	38.9
87.5°	119.1	28.4	23.3	20.7	18.1	13.0	10.3	18.1	28.4	36.2	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)