

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: P196128

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196128  
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-06-D-UNV-SL3-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1200mA 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: 34314.9 lumens  
Efficiency: N/A  
Efficacy: 89.8 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 - G5

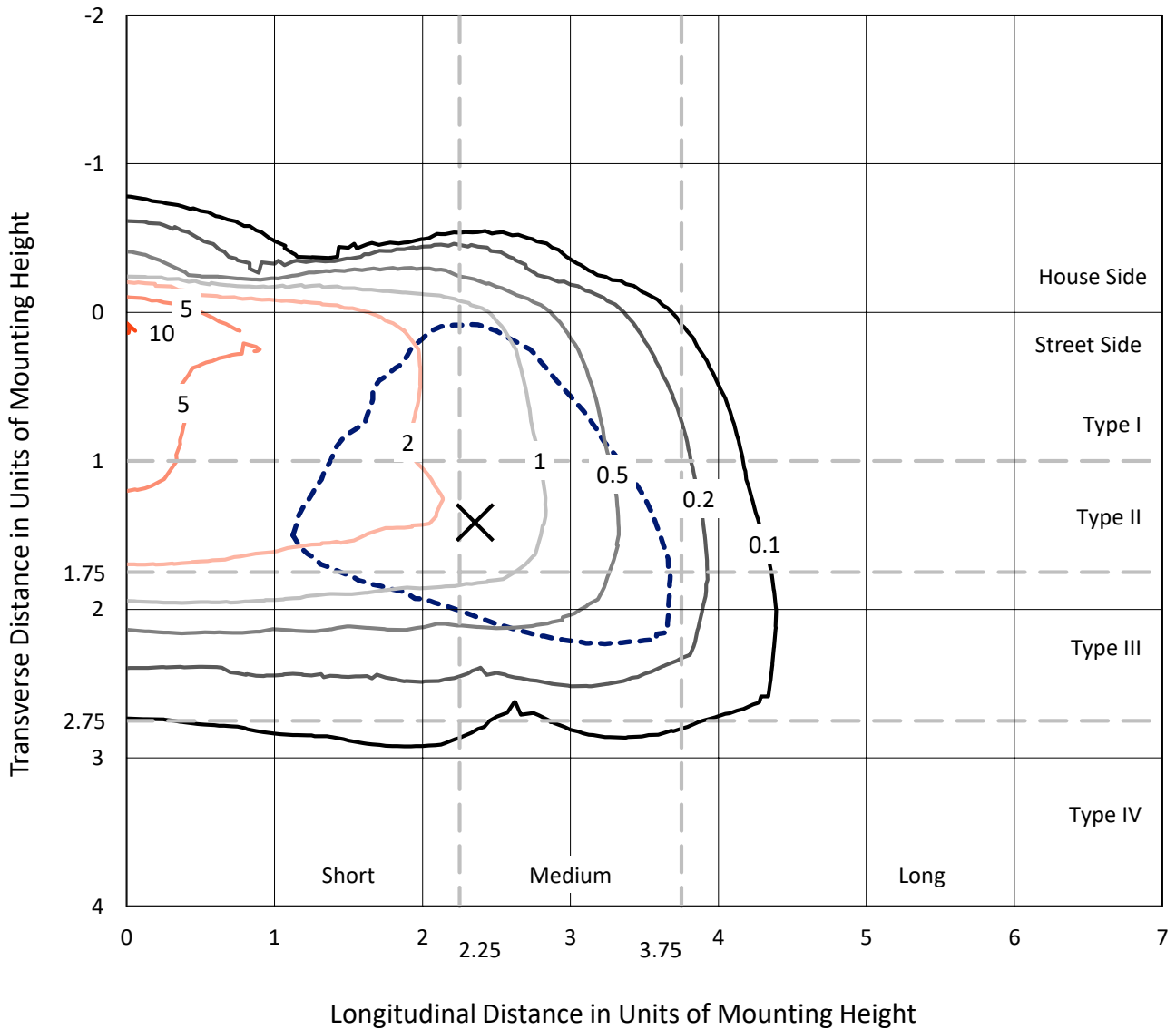
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

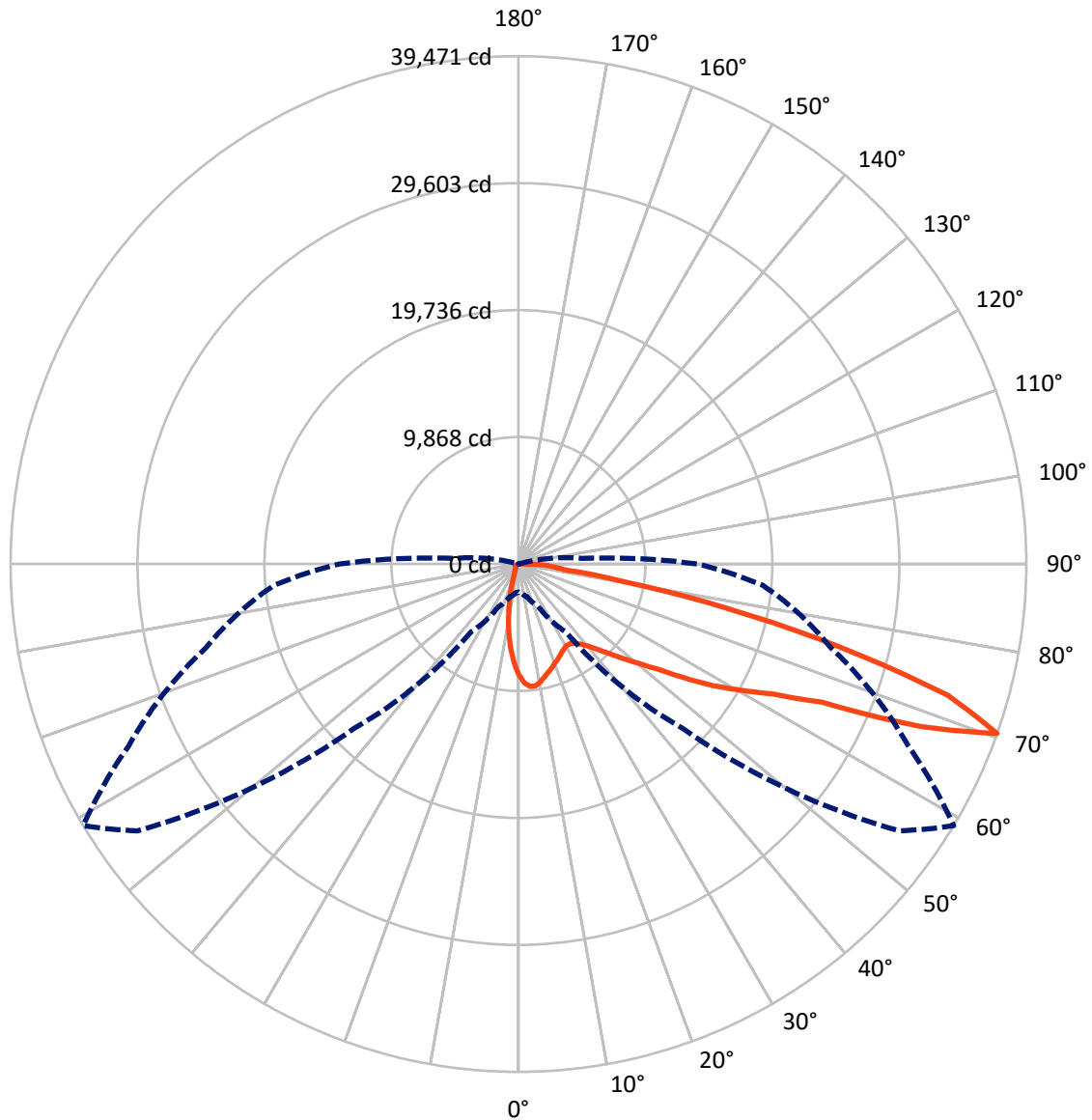
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.3 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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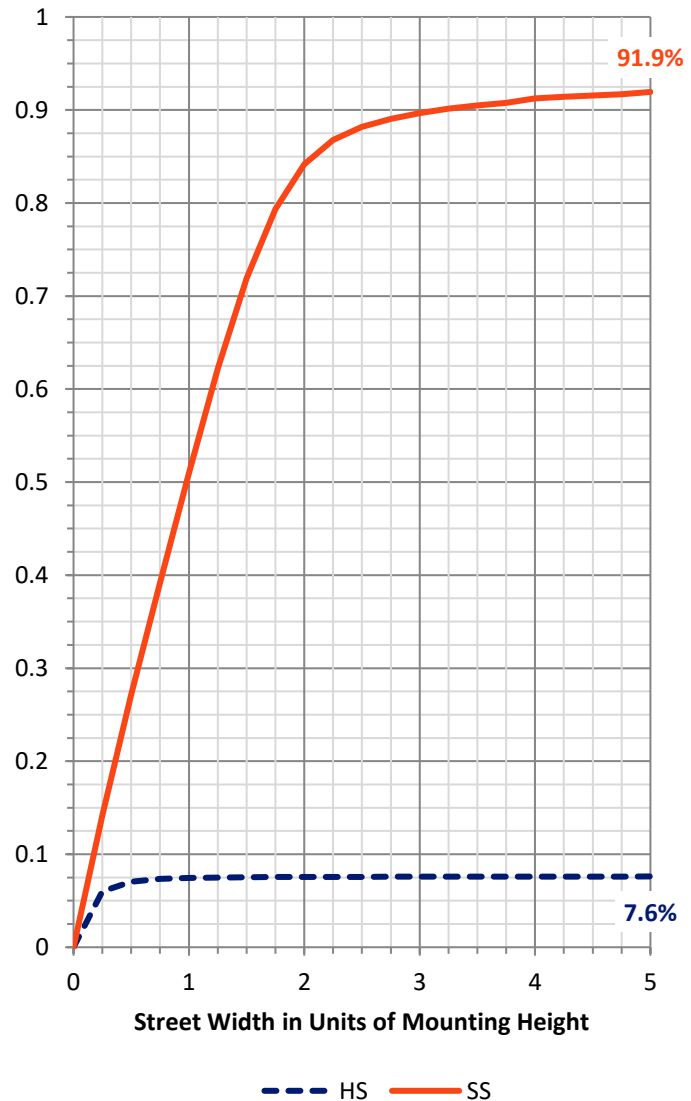
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2637.9	0.0	2637.9
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	31677.0	0.0	31677.0
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	34314.9	0.0	34314.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	713.5	2.1
10°-20°	1496.5	4.4
20°-30°	2025.8	5.9
30°-40°	2923.6	8.5
40°-50°	4855.4	14.1
50°-60°	7426.9	21.6
60°-70°	9237.3	26.9
70°-80°	5106.3	14.9
80°-90°	529.5	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°	34314.9	100.0
0°-180°	34314.9	100.0



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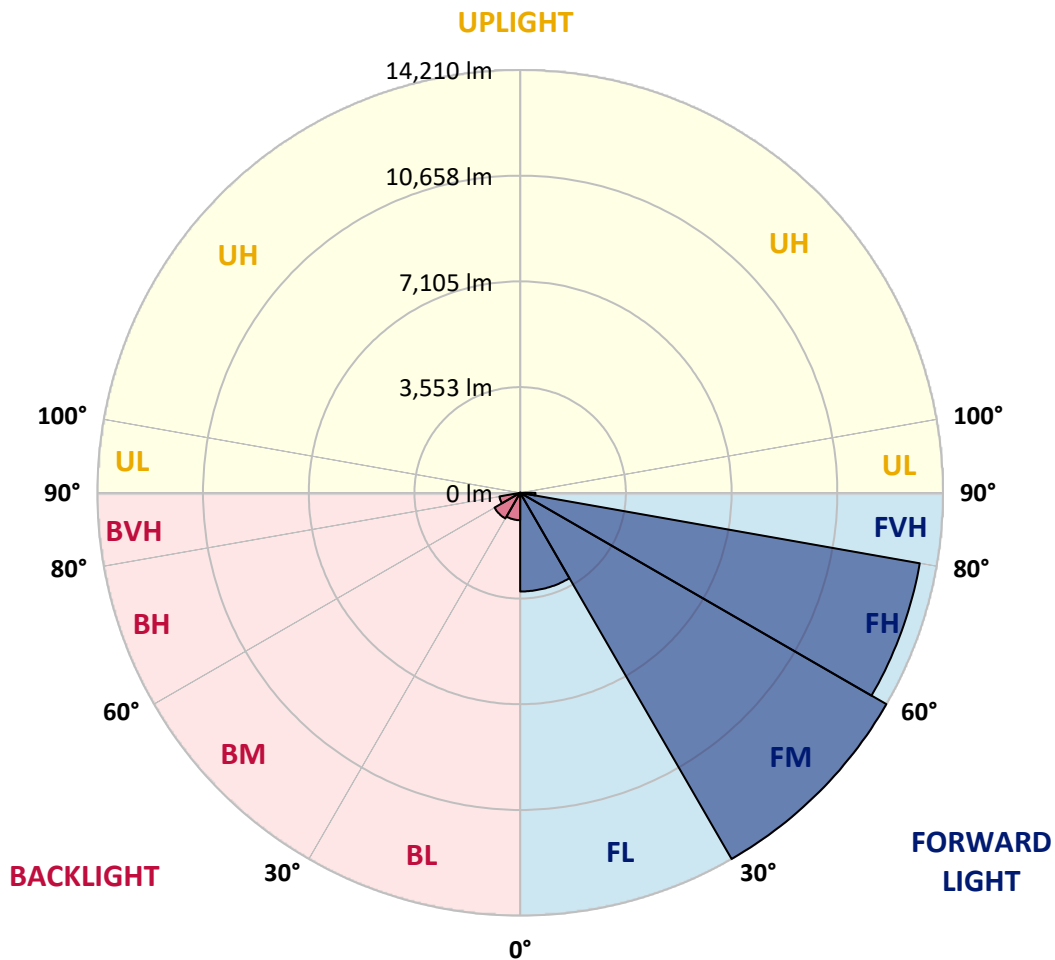
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3316.6	9.7			
FM	(30°-60°)	14210.2	41.4			
FH	(60°-80°)	13636.0	39.7			G5
FVH	(80°-90°)	514.2	1.5			G4/750
BL	(0°-30°)	919.2	2.7	B2/1000		
BM	(30°-60°)	995.7	2.9	B1/1000		
BH	(60°-80°)	707.6	2.1	B2/1000		G2/1000
BVH	(80°-90°)	15.3	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0
2.5°	9808.3	9792.7	9728.0	9715.1	9642.5	9497.6	9329.3	9262.0	9124.8	8907.3	8666.6
5°	9971.3	9979.1	9984.2	9955.8	9945.4	9826.4	9640.0	9559.7	9376.0	9018.7	8578.7
7.5°	9360.4	9381.1	9445.8	9474.3	9598.6	9645.1	9606.3	9554.6	9409.6	8987.6	8369.0
10°	8715.8	8754.6	8824.6	8871.1	9023.9	9148.1	9306.0	9319.0	9287.9	8884.1	8133.4
12.5°	8161.8	8198.1	8275.8	8369.0	8524.2	8684.8	8920.3	9003.2	9106.7	8816.8	7965.1
15°	7685.5	7696.0	7770.9	7887.5	8092.0	8312.0	8591.6	8713.3	8915.1	8790.9	7835.7
17.5°	7268.8	7271.3	7320.5	7426.7	7675.2	7965.1	8291.3	8451.8	8708.1	8754.6	7721.8
20°	6994.4	6991.9	6994.4	7051.4	7271.3	7615.7	8011.8	8180.0	8508.7	8710.6	7605.3
22.5°	6901.2	6888.2	6828.7	6808.0	6947.8	7250.7	7724.4	7944.4	8330.1	8697.7	7519.9
25°	7015.1	7007.3	6880.5	6761.4	6774.4	6963.3	7431.8	7701.1	8190.4	8744.3	7499.2
27.5°	7382.7	7367.2	7173.0	6940.0	6792.5	6826.2	7214.5	7496.6	8079.1	8858.2	7527.7
30°	7864.1	7866.8	7659.7	7377.5	7030.6	6839.0	7097.9	7364.5	8004.0	9029.1	7589.8
32.5°	8400.1	8397.4	8249.9	7923.7	7481.0	7077.3	7149.7	7375.0	8014.3	9280.1	7708.9
35°	8954.0	8925.6	8876.3	8589.0	8071.3	7494.0	7385.3	7550.9	8123.0	9611.4	7910.8
37.5°	9593.3	9583.0	9632.2	9329.3	8801.3	8107.5	7799.5	7910.8	8397.4	10100.7	8236.9
40°	10610.7	10553.8	10577.0	10165.5	9624.4	8933.2	8379.3	8407.7	8834.9	10747.8	8752.1
42.5°	12549.6	12319.2	11886.9	11115.5	10530.5	9849.7	9137.8	9088.6	9453.6	11532.2	9430.3
45°	14866.3	14602.3	13512.5	12163.8	11436.5	10833.4	10074.8	9942.9	10214.7	12466.7	10305.2
47.5°	16800.0	16515.3	15070.8	13258.9	12358.0	11848.0	11112.8	10957.5	11125.8	13551.3	11356.2
50°	17460.1	17302.2	16033.8	14170.0	13287.3	12987.0	12414.9	12156.1	12197.5	14721.4	12583.2
52.5°	17157.2	17102.9	16253.9	14793.9	14146.7	14245.1	13841.2	13569.4	13522.9	16000.2	13939.6
55°	16517.9	16492.0	16077.8	15140.7	14905.2	15397.0	15842.2	15606.6	15166.7	17359.2	15060.5
57.5°	15604.1	15702.5	16000.2	15808.6	15837.1	16613.6	17700.8	17822.6	17165.0	18441.2	15891.4
60°	13163.0	13427.0	14791.3	16525.7	17853.6	18638.0	19691.5	19919.3	18858.0	19181.6	16851.8
62.5°	9730.5	10108.5	12052.5	15239.1	18964.1	22487.2	22339.6	22238.6	20473.2	20173.0	18599.1
65°	5715.6	6158.3	7802.0	11907.6	17289.3	24961.9	27283.8	25886.1	22935.1	22233.5	21381.8
67.5°	2847.5	2850.0	3593.0	6285.1	12777.4	23235.3	34501.0	33693.2	28169.2	25270.0	22479.4
70°	2189.9	2249.5	2658.5	3652.5	6461.2	18096.9	36155.1	39471.1	33429.2	25135.3	19072.8
72.5°	1856.0	1894.8	2366.0	3178.8	4830.4	9935.1	31298.8	34889.2	31899.4	21236.9	14058.7
75°	1335.8	1366.8	2094.2	2883.7	4447.2	4928.7	21469.9	25875.6	23934.2	14938.9	7737.3
77.5°	331.3	328.8	730.0	2340.1	3978.7	4105.5	12319.2	16593.0	13732.5	6116.8	1988.0
80°	147.5	142.4	165.7	491.8	3701.8	3875.1	5418.0	8379.3	5267.8	991.4	608.3
82.5°	103.5	98.4	103.5	181.2	1237.4	3595.6	3274.6	3631.8	1928.5	339.1	258.9
85°	33.7	31.1	57.0	152.7	346.9	2073.5	3194.4	2712.9	1434.1	145.0	173.4
87.5°	5.2	5.2	20.7	82.9	101.0	691.2	1874.1	1879.4	644.6	85.4	77.6
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°	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0	8677.0
2.5°	8545.0	8392.3	8177.4	7962.5	7768.4	7569.1	7408.6	7333.5	7299.9	7253.2	7152.3
5°	8348.2	8071.3	7600.1	7136.8	6704.5	6290.3	5935.7	5733.7	5516.4	5505.9	5399.9
7.5°	8032.4	7639.0	6896.0	6176.4	5516.4	4884.7	4341.1	3989.0	3748.3	3598.1	3494.6
10°	7680.4	7175.6	6191.9	5179.8	4281.6	3437.6	2738.7	2283.1	2006.2	1866.4	1786.2
12.5°	7400.8	6766.6	5498.2	4224.6	3098.5	2130.4	1480.7	1149.4	1001.8	944.8	918.9
15°	7160.0	6391.3	4848.5	3370.3	2068.3	1224.4	856.8	748.1	724.8	724.8	722.2
17.5°	6916.8	6028.9	4216.8	2531.7	1302.1	802.5	675.7	660.1	662.7	670.4	670.4
20°	6686.3	5684.5	3608.6	1804.3	854.3	642.0	613.5	608.3	616.1	626.5	623.9
22.5°	6500.0	5381.7	3039.0	1239.9	657.6	582.5	564.4	556.6	561.7	569.5	566.9
25°	6368.0	5122.8	2516.2	864.6	572.0	530.7	509.9	499.6	494.4	499.6	497.1
27.5°	6287.7	4905.4	2024.3	649.8	512.5	478.8	453.0	432.3	419.3	419.3	414.2
30°	6235.9	4700.9	1586.8	538.4	463.4	427.1	390.9	362.4	341.7	336.6	333.9
32.5°	6233.4	4524.9	1185.6	476.3	416.8	375.3	331.3	295.1	271.8	266.6	264.0
35°	6298.1	4382.5	872.4	429.7	375.3	326.1	277.0	238.1	217.5	217.5	214.8
37.5°	6466.4	4299.7	660.1	393.4	341.7	284.8	232.9	196.7	178.6	183.8	183.8
40°	6779.5	4284.1	538.4	365.0	313.2	248.5	188.9	160.5	152.7	160.5	160.5
42.5°	7258.4	4367.0	478.8	344.3	287.3	212.3	157.9	137.2	134.6	142.4	142.4
45°	7882.3	4530.0	445.3	326.1	258.9	176.0	132.1	119.1	116.5	126.8	126.8
47.5°	8638.2	4750.1	414.2	305.5	230.4	145.0	111.3	101.0	101.0	111.3	113.9
50°	9533.8	5047.8	383.1	284.8	207.0	121.6	93.2	85.4	88.0	98.4	101.0
52.5°	10564.1	5412.7	354.7	266.6	181.2	98.4	77.6	72.5	75.1	85.4	88.0
55°	11451.9	5731.2	321.0	248.5	147.5	80.2	64.8	62.1	64.8	77.6	77.6
57.5°	12226.0	6036.6	289.9	220.0	116.5	64.8	51.8	51.8	57.0	69.9	72.5
60°	13253.7	6518.1	264.0	186.4	88.0	49.2	41.4	44.0	51.8	62.1	64.8
62.5°	15073.5	7336.1	230.4	155.3	64.8	38.9	33.7	36.2	46.5	59.5	62.1
65°	17351.4	8110.1	191.6	129.4	49.2	28.4	25.9	33.7	46.5	59.5	62.1
67.5°	17118.5	7054.0	150.2	103.5	36.2	23.3	20.7	31.1	44.0	59.5	62.1
70°	13882.7	4944.2	111.3	69.9	28.4	20.7	20.7	31.1	44.0	57.0	59.5
72.5°	9629.6	2751.6	85.4	46.5	25.9	20.7	18.1	28.4	41.4	57.0	59.5
75°	4581.8	843.9	67.3	33.7	23.3	18.1	15.5	28.4	41.4	57.0	59.5
77.5°	880.1	214.8	54.3	28.4	20.7	18.1	15.5	25.9	41.4	54.3	57.0
80°	297.7	95.7	44.0	25.9	20.7	18.1	15.5	25.9	38.9	51.8	54.3
82.5°	163.1	54.3	38.9	23.3	20.7	15.5	13.0	23.3	36.2	51.8	54.3
85°	126.8	38.9	31.1	23.3	20.7	15.5	13.0	23.3	36.2	49.2	51.8
87.5°	64.8	28.4	25.9	23.3	20.7	15.5	13.0	20.7	33.7	46.5	51.8
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)