

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: P196005

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196005  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-AFL-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17061.8 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

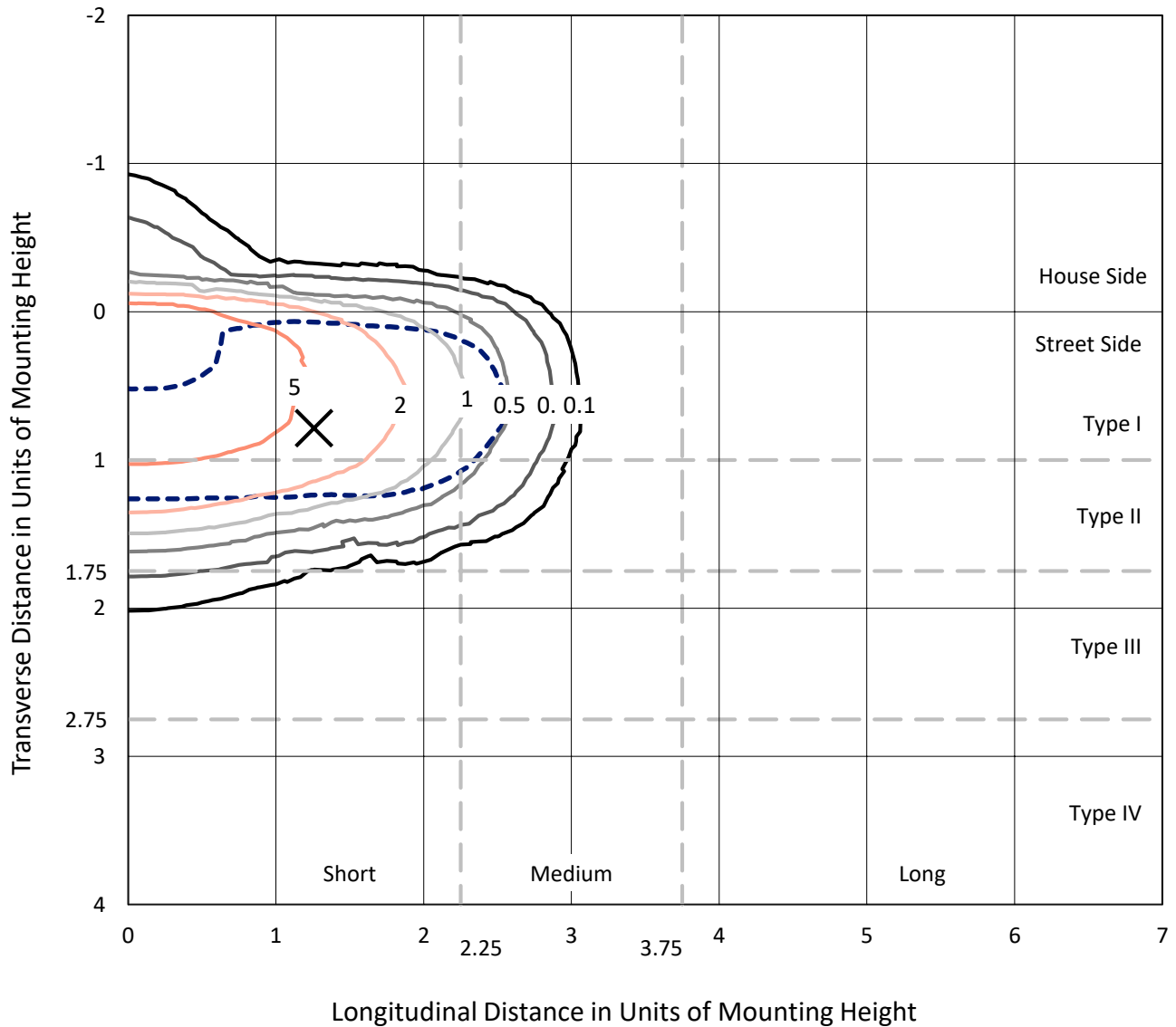
Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

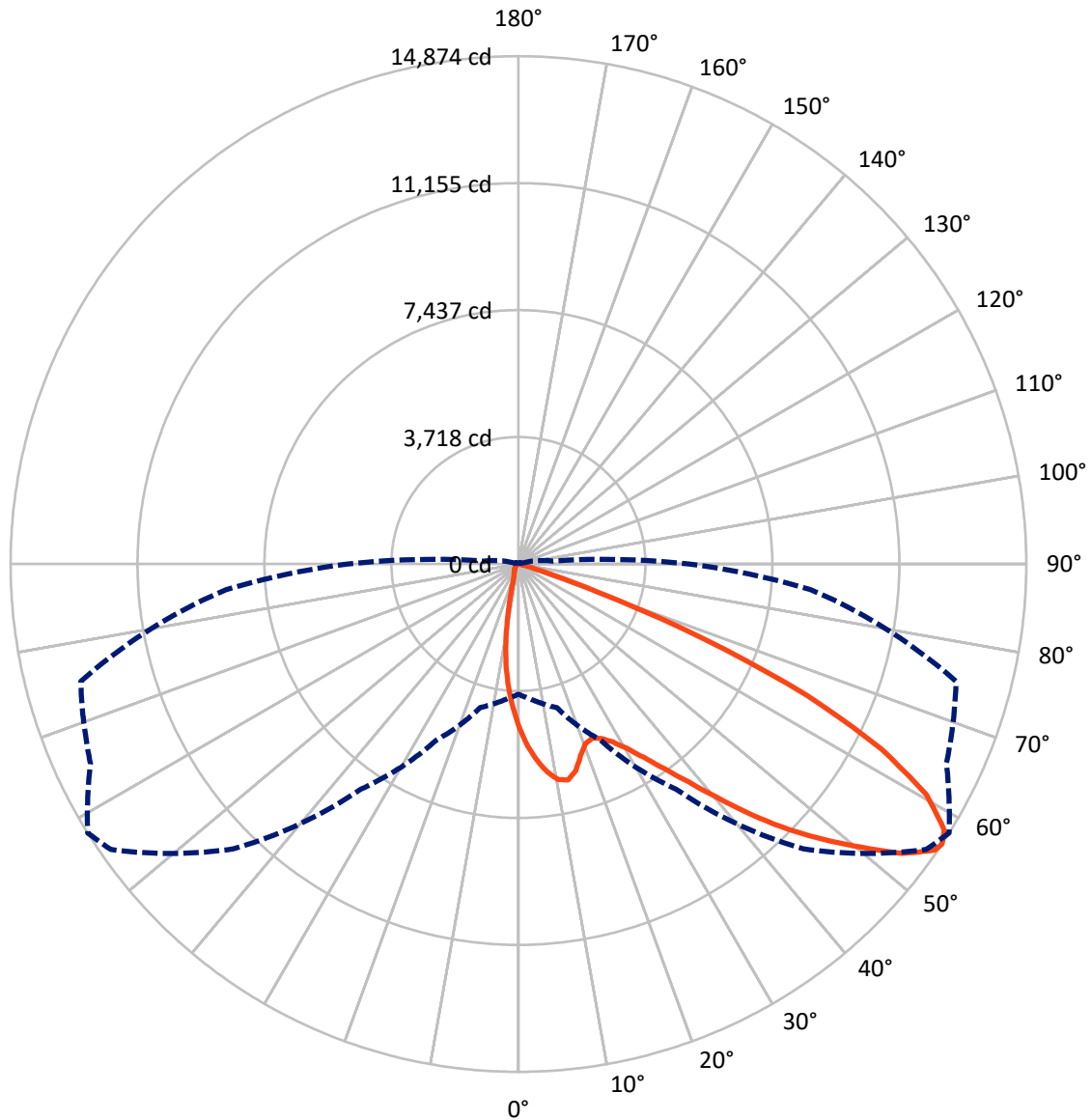
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

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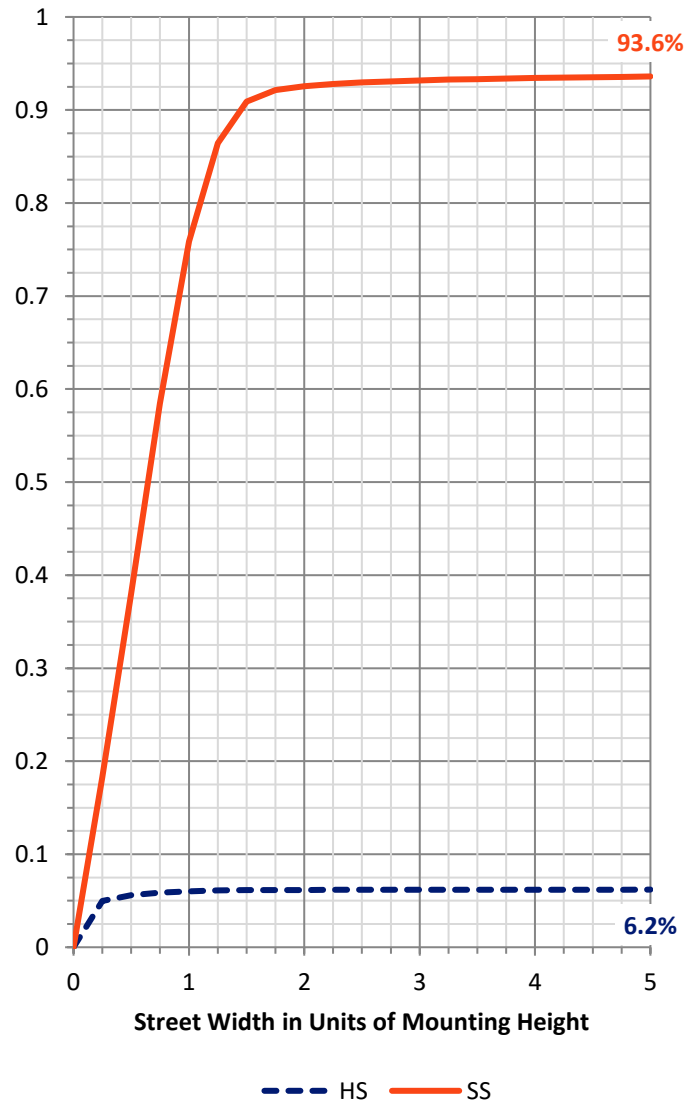
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1065.0	0.0	1065.0
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	15996.8	0.0	15996.8
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	17061.8	0.0	17061.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	412.1	2.4
10°-20°	958.9	5.6
20°-30°	1613.4	9.5
30°-40°	2762.9	16.2
40°-50°	4169.2	24.4
50°-60°	4333.8	25.4
60°-70°	2432.9	14.3
70°-80°	333.4	2.0
80°-90°	45.2	0.3
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°	17061.8	100.0
0°-180°	17061.8	100.0

**Coefficient of Utilization**



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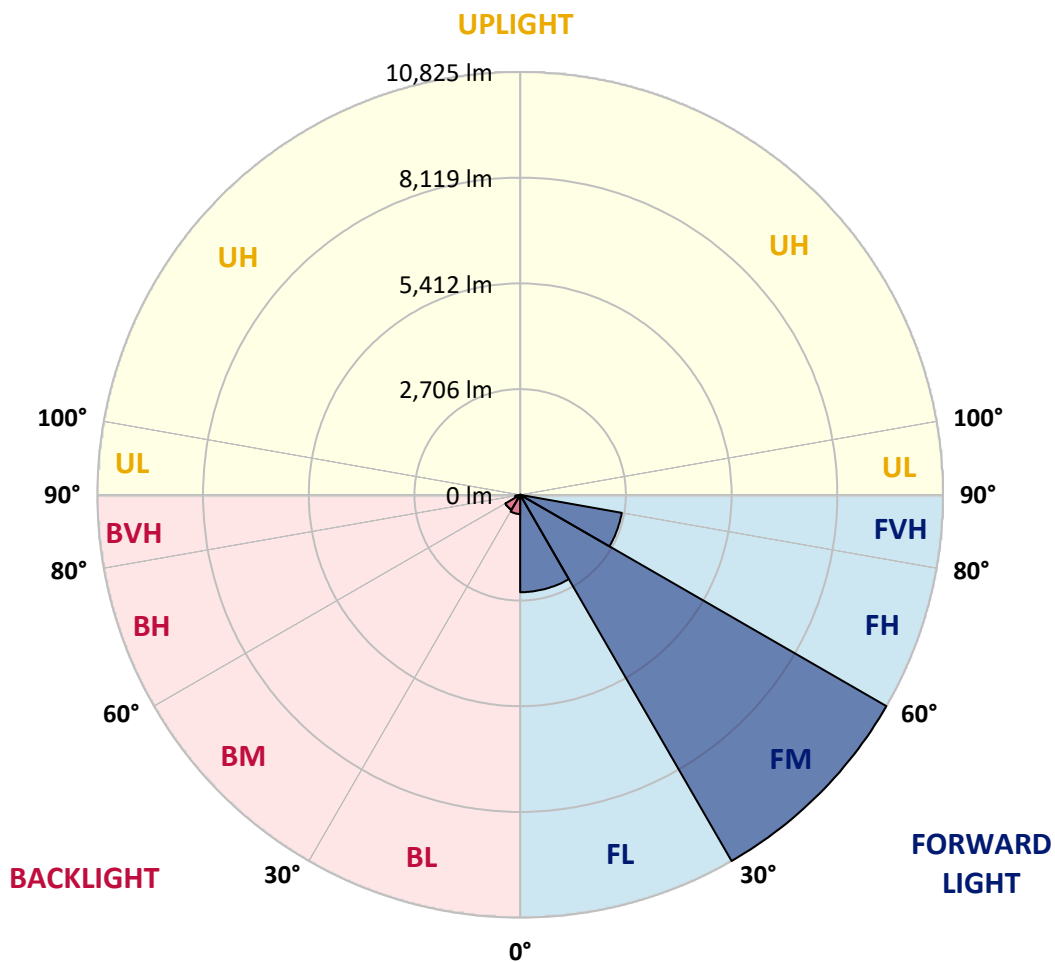
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2493.1	14.6			
FM	(30°-60°)	10824.7	63.4			
FH	(60°-80°)	2640.0	15.5			G2/5000
FVH	(80°-90°)	38.9	0.2			G1/100
BL	(0°-30°)	491.3	2.9	B1/500		
BM	(30°-60°)	441.1	2.6	B1/1000		
BH	(60°-80°)	126.3	0.7	B1/500		G1/500
BVH	(80°-90°)	6.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7
2.5°	5812.2	5777.1	5740.6	5673.0	5610.5	5514.1	5381.3	5348.8	5244.7	5072.8	4912.7
5°	6313.3	6306.9	6282.1	6227.4	6159.8	6042.6	5892.9	5792.7	5631.2	5360.5	5052.0
7.5°	6016.6	6071.2	6161.0	6288.7	6374.5	6362.9	6248.3	6161.0	6000.9	5631.2	5188.7
10°	5071.5	5081.9	5205.6	5473.8	5898.1	6293.8	6443.6	6420.1	6273.0	5868.2	5308.4
12.5°	4738.3	4744.8	4773.4	4859.3	5135.3	5687.2	6365.4	6487.8	6476.1	6094.6	5436.1
15°	4764.3	4768.2	4776.1	4803.4	4881.5	5158.7	5969.7	6280.8	6606.2	6309.5	5561.0
17.5°	4970.0	4967.3	4942.7	4916.6	4941.4	5032.5	5566.2	5894.2	6578.9	6490.4	5663.8
20°	5370.9	5384.0	5300.6	5184.8	5124.9	5128.8	5367.0	5613.0	6425.4	6631.0	5740.6
22.5°	5934.5	5943.7	5807.0	5606.6	5430.8	5342.3	5408.6	5538.9	6248.3	6761.2	5803.1
25°	6607.5	6607.5	6416.3	6131.2	5859.1	5665.1	5607.8	5657.3	6180.6	6908.3	5865.6
27.5°	7333.9	7359.9	7110.0	6736.4	6377.2	6093.4	5913.8	5904.7	6232.6	7093.1	5935.9
30°	8124.1	8147.5	7850.7	7393.8	6968.1	6605.0	6329.0	6269.2	6431.8	7341.7	6038.7
32.5°	8910.3	8929.8	8601.8	8135.8	7639.8	7212.8	6849.7	6754.6	6789.8	7705.0	6189.7
35°	9910.0	9913.9	9498.7	8944.2	8414.4	7913.2	7453.7	7359.9	7321.0	8163.1	6407.2
37.5°	10705.4	10674.2	10411.2	9886.6	9278.7	8755.4	8215.2	8092.9	7999.1	8807.5	6744.2
40°	10892.9	10892.9	10853.8	10696.3	10213.3	9709.5	9186.3	9004.0	8797.1	9566.4	7197.3
42.5°	10404.7	10435.9	10693.7	11036.0	11040.0	10717.1	10205.6	10051.9	9687.4	10430.7	7691.9
45°	9312.5	9321.6	9940.0	10864.2	11491.6	11676.5	11299.0	11086.8	10581.7	11329.0	8144.9
47.5°	8919.4	8948.1	9211.1	10340.9	11525.5	12453.6	12348.1	12056.6	11409.7	12149.0	8567.9
50°	8315.5	8350.6	8672.1	9570.3	11220.8	12952.2	13351.9	13039.5	12163.3	12832.4	8777.5
52.5°	6870.5	6925.2	7379.5	8551.1	10459.4	12973.1	14270.9	14083.4	12935.3	13198.2	8752.8
55°	4727.9	4768.2	5298.1	6675.3	8923.3	12336.5	14666.6	14795.4	13623.9	13280.3	8633.1
56°	3814.1	3965.1	4353.0	5687.2	8048.6	11794.9	14575.4	14873.5	13828.2	13267.2	8581.0
57.5°	2521.5	2550.1	2973.1	4121.3	6463.1	10619.5	14164.1	14707.0	14091.2	13200.8	8543.3
60°	1185.9	1198.9	1351.2	1901.9	3497.8	7738.7	12827.2	13728.0	14187.5	13061.5	8541.9
62.5°	773.2	775.8	794.0	907.3	1430.6	4215.0	10633.8	11930.4	13389.6	13045.9	8517.2
65°	636.6	643.0	620.9	635.3	748.5	1589.4	7500.6	9300.9	11516.4	12678.9	8238.6
67.5°	561.1	562.3	532.4	515.5	548.0	697.8	3778.9	5866.9	8613.6	10773.1	6785.9
70°	511.6	510.2	476.4	437.4	438.6	463.4	1231.4	2436.9	4765.6	6396.7	3896.1
72.5°	454.3	457.0	437.4	382.7	364.5	328.1	463.4	657.3	1622.0	2054.1	1027.0
75°	398.3	393.1	373.6	338.5	304.6	220.0	233.0	279.9	423.1	419.2	221.3
77.5°	302.0	296.8	305.9	289.0	238.2	153.6	127.6	145.8	191.4	178.3	89.8
80°	230.4	227.8	208.3	247.3	217.4	115.9	87.3	89.8	104.1	95.0	44.3
82.5°	166.6	165.3	157.5	152.3	138.0	84.6	66.4	70.3	78.2	66.4	32.5
85°	63.8	63.8	123.7	104.1	95.0	57.3	46.9	50.7	59.8	48.2	22.1
87.5°	10.4	10.4	83.3	68.9	43.0	28.6	30.0	32.5	35.2	28.6	16.9
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°	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7	4830.7
2.5°	4817.7	4730.4	4539.1	4354.3	4192.9	4015.8	3926.0	3821.8	3782.8	3704.7	3712.5
5°	4867.2	4684.9	4300.9	3896.1	3525.1	3147.6	2879.4	2626.8	2486.3	2347.1	2347.1
7.5°	4917.9	4639.4	4045.8	3398.9	2773.9	2127.0	1668.8	1301.7	1097.3	960.7	956.8
10°	4953.0	4580.8	3755.5	2822.1	1900.5	1096.1	661.2	520.7	469.9	447.7	446.5
12.5°	4998.6	4522.2	3424.8	2142.7	1055.7	520.7	412.7	390.6	381.4	376.2	376.2
15°	5037.7	4438.9	3023.9	1441.0	554.5	390.6	355.4	347.6	346.3	344.9	346.3
17.5°	5046.8	4320.4	2543.6	843.5	402.2	341.1	325.4	319.0	319.0	317.6	317.6
20°	5026.0	4164.2	2012.5	520.7	347.6	313.7	296.8	289.0	287.7	287.7	287.7
22.5°	4983.0	3965.1	1487.9	394.4	316.3	289.0	266.9	259.0	259.0	260.3	261.7
25°	4929.6	3729.5	1021.8	339.7	292.9	262.9	240.8	233.0	235.6	238.2	239.5
27.5°	4862.0	3448.3	669.1	294.2	261.7	236.9	217.4	212.2	217.4	222.6	225.2
30°	4794.3	3139.7	453.0	255.1	226.5	208.3	196.6	195.3	203.1	214.8	216.0
32.5°	4750.0	2823.4	342.4	229.1	199.2	183.5	178.3	181.0	192.6	205.7	208.3
35°	4746.1	2514.9	291.5	208.3	181.0	166.6	164.0	171.9	184.8	195.3	197.8
37.5°	4807.3	2225.9	264.2	192.6	166.6	152.3	148.4	162.8	174.4	184.8	187.4
40°	4930.9	1966.9	246.0	178.3	154.9	138.0	135.3	147.1	158.8	170.5	174.4
42.5°	5085.8	1724.8	225.2	164.0	141.9	122.3	119.8	128.9	140.6	157.5	160.1
45°	5219.9	1499.5	203.1	148.4	127.6	105.5	104.1	114.6	123.7	139.3	141.9
47.5°	5333.2	1312.1	182.3	131.4	109.4	93.7	92.4	97.6	102.8	117.1	119.8
50°	5273.3	1153.4	161.4	108.0	88.5	80.7	79.4	79.4	85.9	100.2	102.8
52.5°	5126.2	1054.4	141.9	89.8	72.9	68.9	65.1	66.4	72.9	79.4	80.7
55°	5007.8	1007.5	125.0	79.4	61.2	57.3	53.4	52.1	53.4	50.7	48.2
56°	4979.1	1002.3	121.0	76.8	58.6	53.4	48.2	45.5	44.3	39.1	37.7
57.5°	4966.1	1002.3	114.6	71.6	54.6	48.2	41.6	36.4	31.2	27.3	27.3
60°	4955.7	1008.8	106.7	62.5	46.9	39.1	30.0	22.1	18.2	18.2	18.2
62.5°	4933.6	1006.3	97.6	52.1	40.3	30.0	18.2	14.3	13.0	14.3	15.7
65°	4684.9	934.7	85.9	41.6	31.2	20.9	10.4	10.4	11.8	14.3	15.7
67.5°	3775.0	708.2	70.3	32.5	22.1	15.7	9.1	9.1	11.8	14.3	15.7
70°	2073.6	373.6	59.8	23.4	16.9	13.0	9.1	7.8	11.8	14.3	15.7
72.5°	506.4	156.2	54.6	18.2	15.7	11.8	7.8	7.8	11.8	14.3	15.7
75°	125.0	117.1	44.3	14.3	13.0	10.4	7.8	7.8	11.8	14.3	15.7
77.5°	58.6	154.9	30.0	13.0	11.8	9.1	7.8	7.8	11.8	14.3	14.3
80°	35.2	117.1	18.2	11.8	10.4	9.1	7.8	7.8	11.8	14.3	15.7
82.5°	20.9	33.9	13.0	11.8	10.4	7.8	7.8	7.8	11.8	14.3	15.7
85°	18.2	16.9	13.0	11.8	10.4	9.1	7.8	7.8	13.0	15.7	15.7
87.5°	14.3	13.0	11.8	10.4	10.4	9.1	7.8	7.8	11.8	14.3	15.7
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)