

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: P270655

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7027-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270655  
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-06-D-UNV-AFL-7027-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 2700K, 615mA 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: 17307.5 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 193  
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

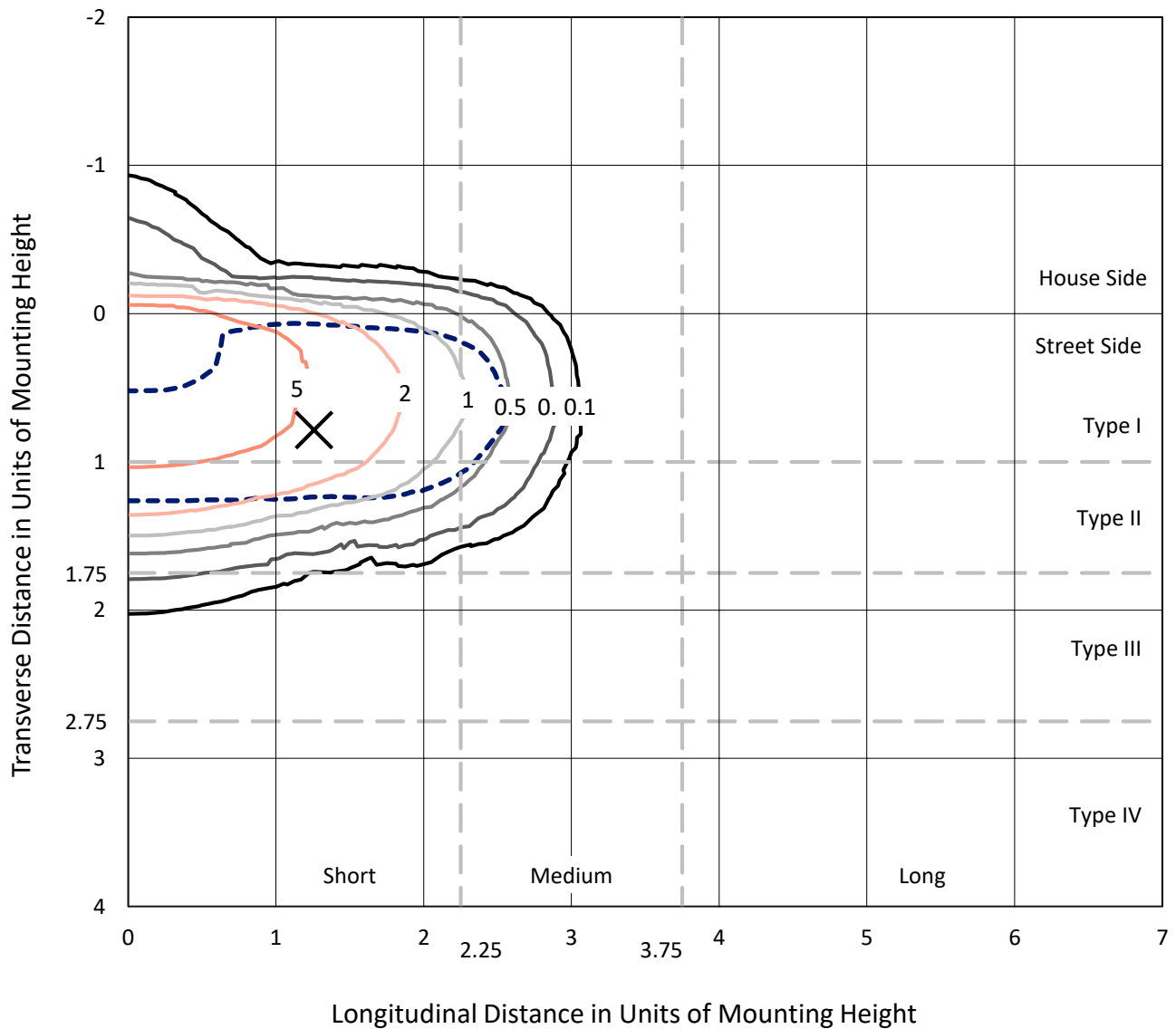


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

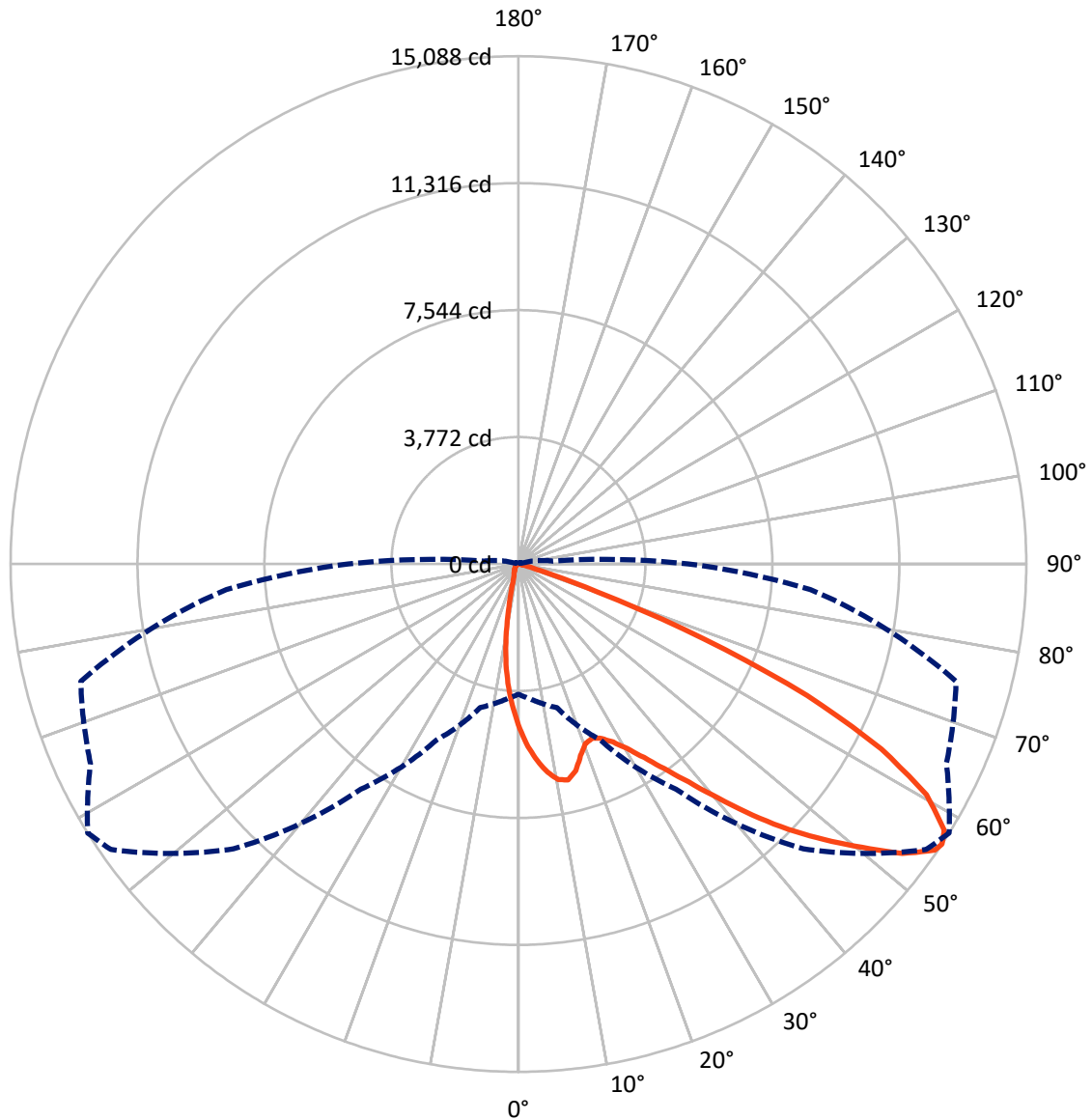


Based on 25 foot mounting height. Maximum calculated value = 9.7 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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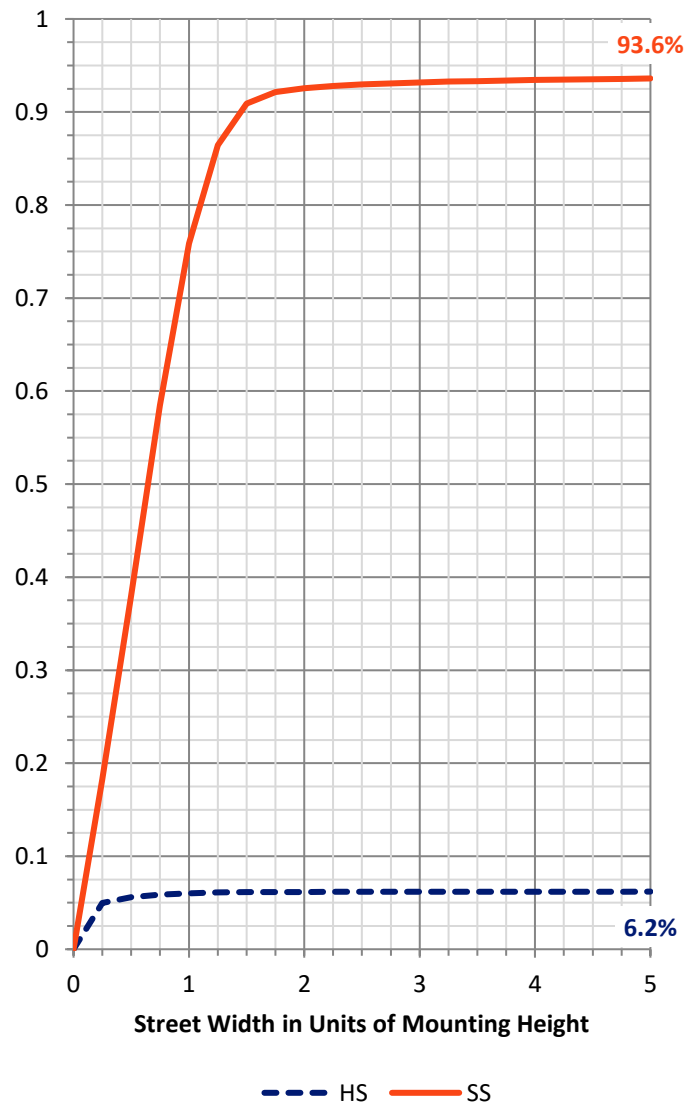
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1080.4	0.0	1080.4
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	16227.1	0.0	16227.1
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	17307.5	0.0	17307.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	418.0	2.4
10°-20°	972.7	5.6
20°-30°	1636.7	9.5
30°-40°	2802.7	16.2
40°-50°	4229.3	24.4
50°-60°	4396.2	25.4
60°-70°	2468.0	14.3
70°-80°	338.2	2.0
80°-90°	45.8	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°	17307.5	100.0
0°-180°	17307.5	100.0



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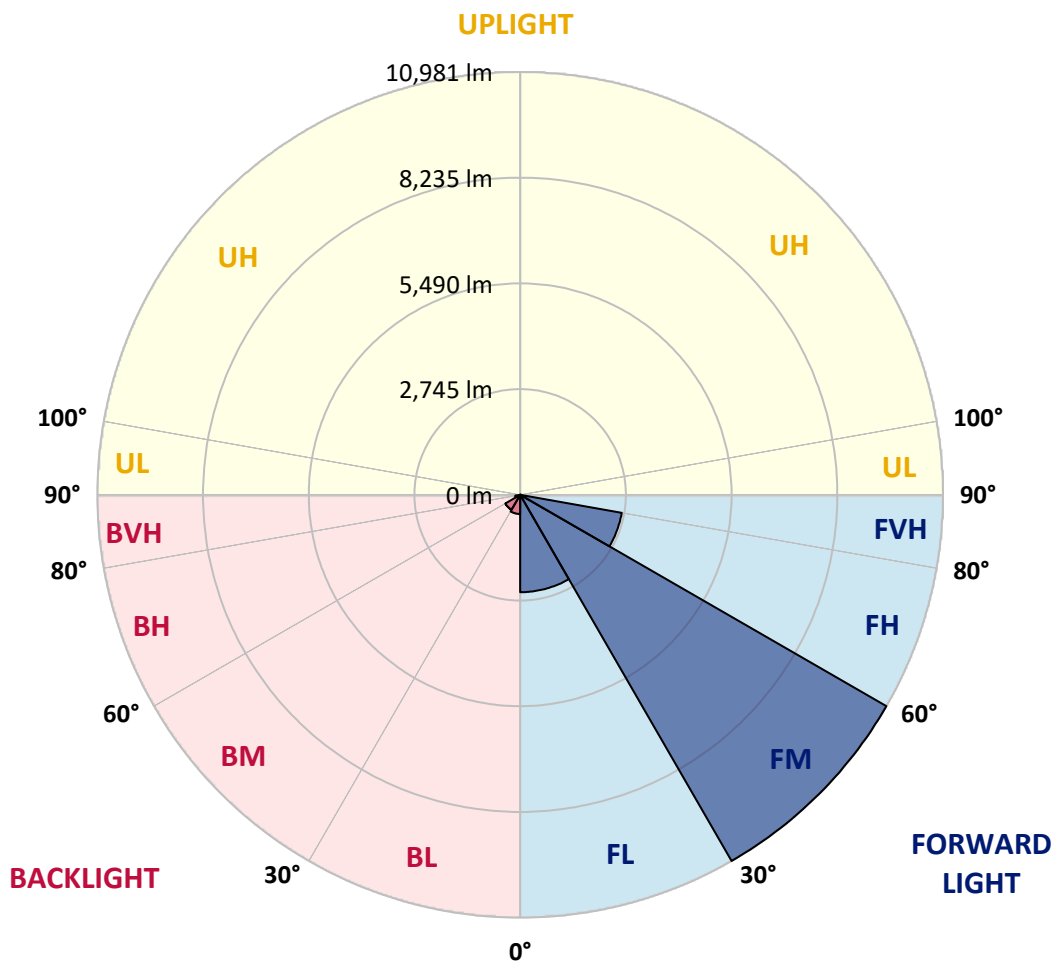
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2529.0	14.6			
FM (30°-60°)	10980.6	63.4			
FH (60°-80°)	2678.0	15.5			G2/5000
FVH (80°-90°)	39.5	0.2			G1/100
BL (0°-30°)	498.4	2.9	B1/500		
BM (30°-60°)	447.5	2.6	B1/1000		
BH (60°-80°)	128.2	0.7	B1/500		G1/500
BVH (80°-90°)	6.3	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°	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3
2.5°	5895.8	5860.3	5823.3	5754.6	5691.2	5593.4	5458.8	5425.9	5320.2	5145.9	4983.4
5°	6404.2	6397.6	6372.5	6317.2	6248.5	6129.7	5977.9	5876.2	5712.3	5437.7	5124.7
7.5°	6103.3	6158.7	6249.8	6379.1	6466.3	6454.4	6338.3	6249.8	6087.4	5712.3	5263.3
10°	5144.6	5155.2	5280.5	5552.6	5983.0	6384.4	6536.2	6512.5	6363.4	5952.7	5384.9
12.5°	4806.6	4813.1	4842.1	4929.3	5209.2	5769.2	6457.0	6581.3	6569.3	6182.5	5514.2
15°	4832.9	4836.8	4844.7	4872.5	4951.7	5233.0	6055.7	6371.3	6701.4	6400.3	5641.0
17.5°	5041.6	5039.0	5013.8	4987.4	5012.5	5105.0	5646.3	5979.1	6673.7	6583.9	5745.4
20°	5448.3	5461.4	5377.0	5259.4	5198.8	5202.7	5444.3	5693.8	6517.8	6726.5	5823.3
22.5°	6020.0	6029.2	5890.6	5687.3	5508.9	5419.3	5486.6	5618.5	6338.3	6858.5	5886.7
25°	6702.8	6702.8	6508.6	6219.4	5943.5	5746.6	5688.5	5738.7	6269.6	7007.8	5950.1
27.5°	7439.6	7466.0	7212.4	6833.4	6469.0	6181.1	5998.9	5989.7	6322.5	7195.2	6021.2
30°	8241.1	8264.9	7963.7	7500.3	7068.5	6700.1	6420.1	6359.5	6524.4	7447.5	6125.6
32.5°	9038.7	9058.4	8725.6	8252.9	7749.9	7316.8	6948.3	6851.9	6887.6	7815.9	6278.9
35°	10052.8	10056.6	9635.5	9072.9	8535.5	8027.2	7561.0	7466.0	7426.3	8280.7	6499.3
37.5°	10859.5	10827.8	10561.2	10028.9	9412.4	8881.5	8333.4	8209.4	8114.3	8934.4	6841.3
40°	11049.7	11049.7	11010.0	10850.3	10360.4	9849.3	9318.6	9133.6	8923.8	9704.1	7300.9
42.5°	10554.5	10586.2	10847.7	11194.9	11198.9	10871.4	10352.4	10196.8	9826.9	10581.0	7802.7
45°	9446.7	9455.9	10083.0	11020.6	11657.0	11844.6	11461.7	11246.4	10734.0	11492.0	8262.3
47.5°	9047.9	9077.0	9343.6	10489.8	11691.4	12633.0	12526.0	12230.2	11573.9	12323.9	8691.3
50°	8435.2	8470.7	8796.9	9708.2	11382.5	13138.7	13544.0	13227.2	12338.5	13017.2	8903.9
52.5°	6969.4	7024.8	7485.8	8674.2	10610.1	13159.8	14476.2	14286.1	13121.5	13388.2	8878.8
55°	4796.0	4836.8	5374.3	6771.3	9051.9	12514.1	14877.6	15008.4	13820.1	13471.4	8757.3
56°	3869.0	4022.2	4415.7	5769.2	8164.4	11964.7	14785.4	15087.8	14027.4	13458.2	8704.5
57.5°	2557.7	2586.8	3016.0	4180.6	6556.1	10772.4	14368.0	14918.6	14294.1	13390.9	8666.3
60°	1202.9	1216.1	1370.6	1929.2	3548.0	7850.2	13011.9	13925.6	14391.7	13249.6	8665.0
62.5°	784.4	786.9	805.5	920.4	1451.2	4275.8	10786.8	12102.1	13582.4	13233.7	8639.8
65°	645.7	652.3	629.8	644.4	759.2	1612.3	7608.6	9434.8	11682.2	12861.4	8357.2
67.5°	569.2	570.5	540.2	523.0	556.0	707.8	3833.2	5951.4	8737.5	10928.2	6883.6
70°	519.0	517.7	483.3	443.7	445.0	470.2	1249.2	2472.0	4834.1	6488.7	3952.2
72.5°	460.8	463.4	443.7	388.2	369.7	332.7	470.2	666.8	1645.2	2083.7	1041.9
75°	404.1	398.8	378.9	343.3	308.9	223.1	236.3	284.0	429.1	425.2	224.4
77.5°	306.3	301.0	310.4	293.1	241.6	155.9	129.4	148.0	194.2	180.9	91.1
80°	233.6	231.0	211.3	250.8	220.5	117.5	88.5	91.1	105.6	96.4	44.8
82.5°	169.1	167.8	159.8	154.5	140.0	85.8	67.4	71.3	79.2	67.4	33.0
85°	64.7	64.7	125.5	105.6	96.4	58.1	47.5	51.6	60.7	48.9	22.5
87.5°	10.6	10.6	84.5	70.0	43.6	29.0	30.4	33.0	35.7	29.0	17.2
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°	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3	4900.3
2.5°	4887.0	4798.6	4604.5	4417.0	4253.3	4073.6	3982.5	3876.8	3837.3	3758.1	3766.0
5°	4937.3	4752.4	4362.8	3952.2	3575.9	3192.8	2920.8	2664.7	2522.1	2380.8	2380.8
7.5°	4988.7	4706.1	4104.0	3447.8	2813.9	2157.6	1692.9	1320.5	1113.2	974.5	970.6
10°	5024.4	4646.8	3809.5	2862.8	1927.9	1111.8	670.9	528.3	476.7	454.3	452.9
12.5°	5070.7	4587.4	3474.1	2173.4	1070.9	528.3	418.6	396.2	386.9	381.6	381.6
15°	5110.2	4502.8	3067.4	1461.7	562.5	396.2	360.5	352.6	351.2	349.9	351.2
17.5°	5119.5	4382.7	2580.2	855.6	408.0	345.9	330.0	323.5	323.5	322.2	322.2
20°	5098.3	4224.2	2041.5	528.3	352.6	318.2	301.0	293.1	291.8	291.8	291.8
22.5°	5054.8	4022.2	1509.3	400.1	320.9	293.1	270.7	262.8	262.8	264.1	265.4
25°	5000.7	3783.1	1036.6	344.6	297.1	266.7	244.2	236.3	238.9	241.6	243.0
27.5°	4932.0	3497.9	678.7	298.4	265.4	240.3	220.5	215.2	220.5	225.8	228.4
30°	4863.2	3185.0	459.6	258.8	229.7	211.3	199.5	198.0	206.0	217.8	219.1
32.5°	4818.4	2864.1	347.3	232.4	201.9	186.2	180.9	183.6	195.4	208.6	211.3
35°	4814.5	2551.1	295.8	211.3	183.6	169.1	166.4	174.4	187.4	198.0	200.7
37.5°	4876.4	2258.0	268.1	195.4	169.1	154.5	150.6	165.1	177.0	187.4	190.1
40°	5001.9	1995.2	249.5	180.9	157.2	140.0	137.4	149.2	161.1	173.0	177.0
42.5°	5159.1	1749.5	228.4	166.4	143.9	124.1	121.5	130.8	142.7	159.8	162.5
45°	5295.1	1521.2	206.0	150.6	129.4	107.0	105.6	116.2	125.5	141.4	143.9
47.5°	5410.0	1331.0	185.0	133.4	110.9	95.1	93.8	99.1	104.4	118.8	121.5
50°	5349.1	1170.0	163.8	109.7	89.8	81.8	80.6	80.6	87.1	101.7	104.4
52.5°	5200.0	1069.6	143.9	91.1	73.9	70.0	66.0	67.4	73.9	80.6	81.8
55°	5079.8	1022.0	126.8	80.6	62.1	58.1	54.2	52.8	54.2	51.6	48.9
56°	5050.8	1016.7	122.8	78.0	59.4	54.2	48.9	46.3	44.8	39.6	38.3
57.5°	5037.5	1016.7	116.2	72.7	55.4	48.9	42.3	37.0	31.7	27.8	27.8
60°	5027.1	1023.3	108.2	63.4	47.5	39.6	30.4	22.5	18.4	18.4	18.4
62.5°	5004.5	1020.7	99.1	52.8	41.0	30.4	18.4	14.6	13.2	14.6	15.8
65°	4752.4	948.2	87.1	42.3	31.7	21.1	10.6	10.6	11.9	14.6	15.8
67.5°	3829.4	718.4	71.3	33.0	22.5	15.8	9.3	9.3	11.9	14.6	15.8
70°	2103.6	378.9	60.7	23.7	17.2	13.2	9.3	7.9	11.9	14.6	15.8
72.5°	513.7	158.5	55.4	18.4	15.8	11.9	7.9	7.9	11.9	14.6	15.8
75°	126.8	118.8	44.8	14.6	13.2	10.6	7.9	7.9	11.9	14.6	15.8
77.5°	59.4	157.2	30.4	13.2	11.9	9.3	7.9	7.9	11.9	14.6	14.6
80°	35.7	118.8	18.4	11.9	10.6	9.3	7.9	7.9	11.9	14.6	15.8
82.5°	21.1	34.3	13.2	11.9	10.6	7.9	7.9	7.9	11.9	14.6	15.8
85°	18.4	17.2	13.2	11.9	10.6	9.3	7.9	7.9	13.2	15.8	15.8
87.5°	14.6	13.2	11.9	10.6	10.6	9.3	7.9	7.9	11.9	14.6	15.8
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)