

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: P196487

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7030-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196487  
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-05-D-UNV-AFL-7030-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 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: 26778.3 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 320  
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

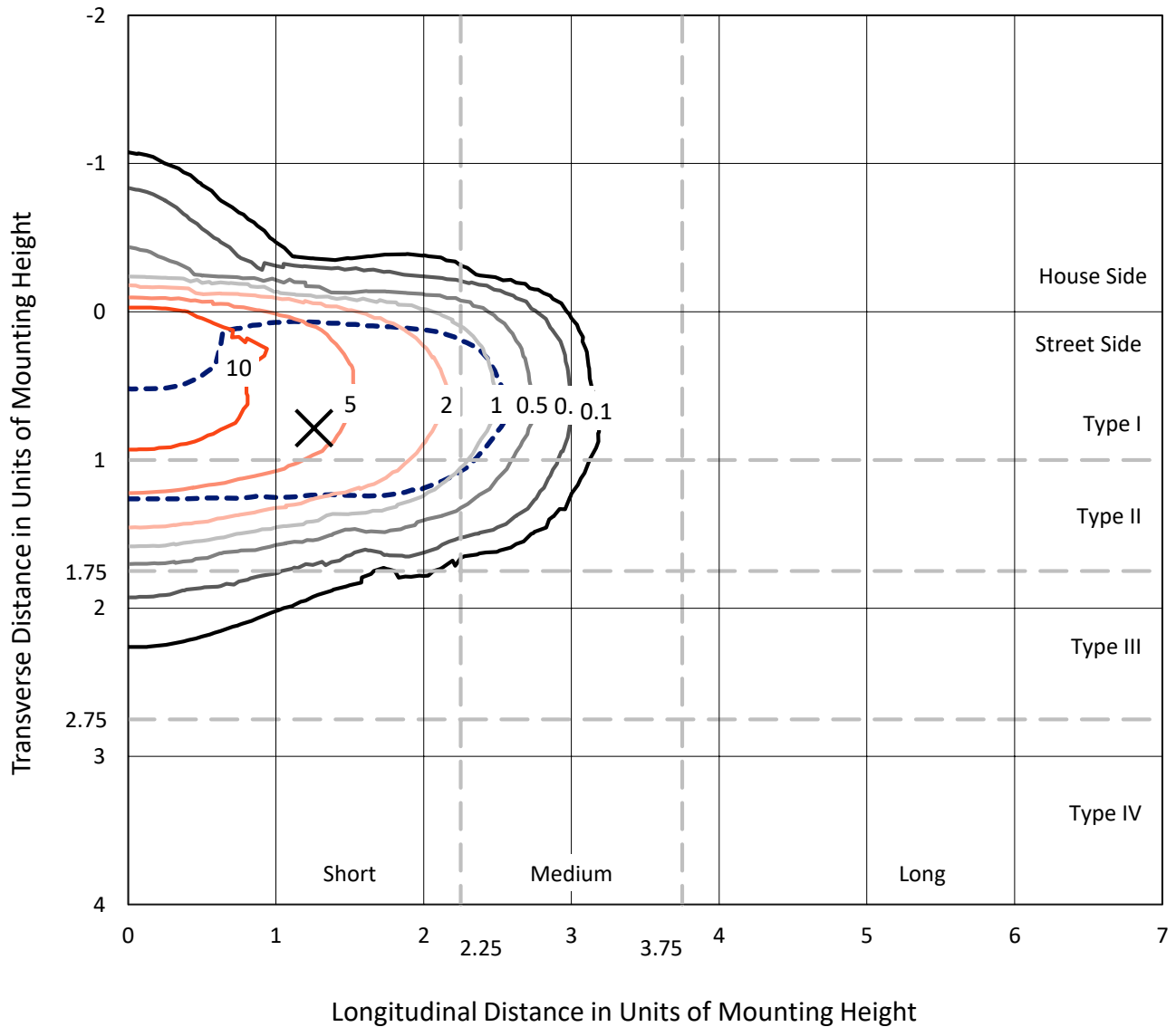


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

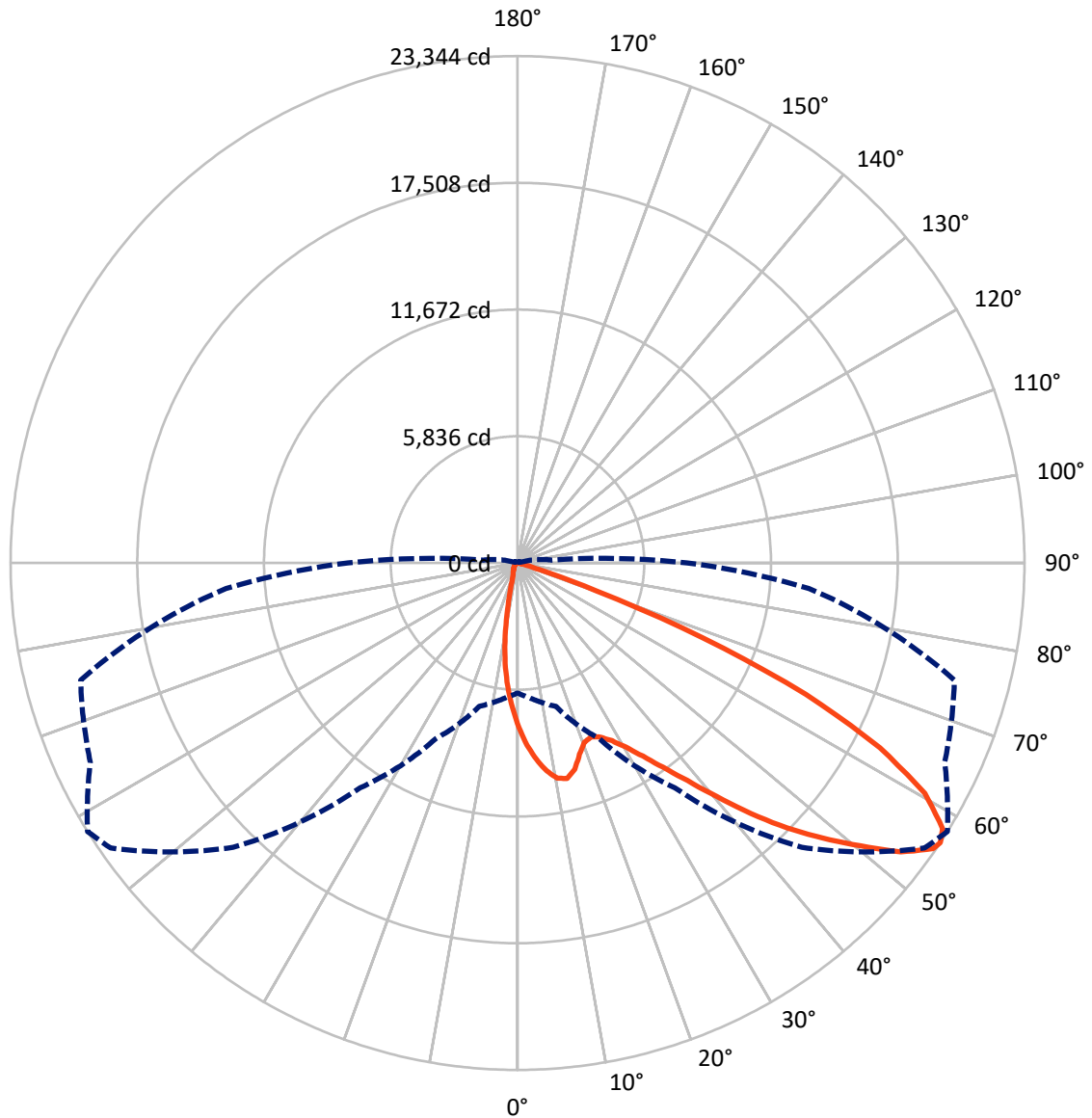


Based on 25 foot mounting height. Maximum calculated value = 15.1 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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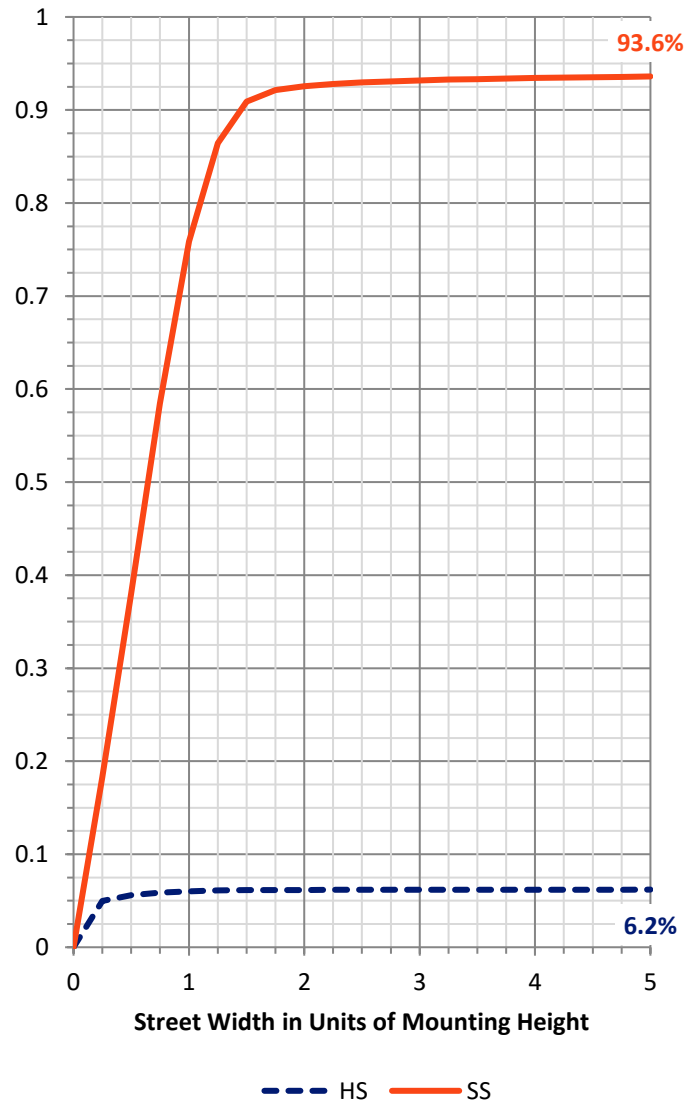
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1671.5	0.0	1671.5
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	25106.8	0.0	25106.8
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	26778.3	0.0	26778.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	646.8	2.4
10°-20°	1504.9	5.6
20°-30°	2532.3	9.5
30°-40°	4336.3	16.2
40°-50°	6543.6	24.4
50°-60°	6801.8	25.4
60°-70°	3818.4	14.3
70°-80°	523.3	2.0
80°-90°	70.9	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°	26778.3	100.0
0°-180°	26778.3	100.0

**Coefficient of Utilization**



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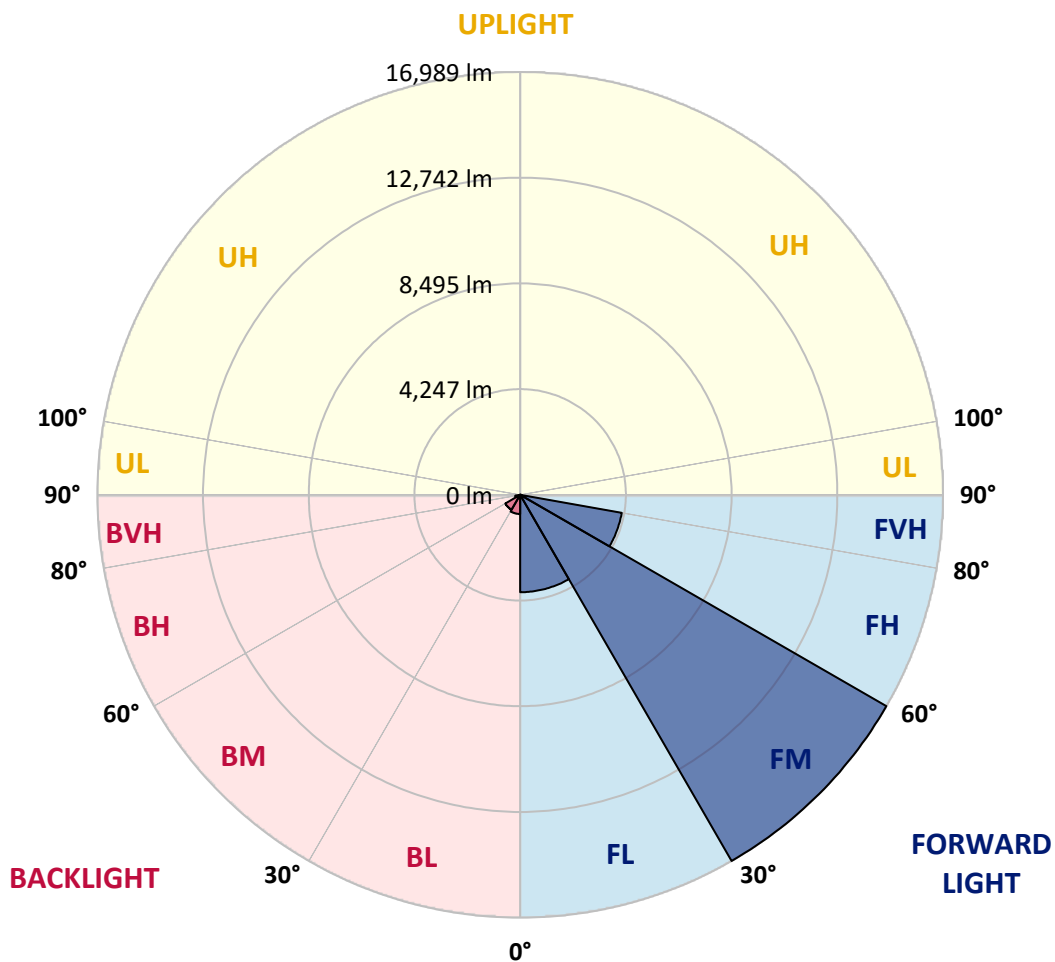
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3912.9	14.6			
FM	(30°-60°)	16989.3	63.4			
FH	(60°-80°)	4143.5	15.5			G2/5000
FVH	(80°-90°)	61.1	0.2			G1/100
BL	(0°-30°)	771.1	2.9	B2/1000		
BM	(30°-60°)	692.4	2.6	B1/1000		
BH	(60°-80°)	198.3	0.7	B1/500		G1/500
BVH	(80°-90°)	9.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7
2.5°	9122.3	9067.1	9009.8	8903.6	8805.5	8654.3	8446.0	8394.9	8231.5	7961.7	7710.4
5°	9908.8	9898.6	9859.8	9774.0	9667.7	9483.8	9248.9	9091.6	8838.2	8413.3	7929.1
7.5°	9442.9	9528.8	9669.8	9869.9	10004.9	9986.4	9806.7	9669.8	9418.4	8838.2	8143.6
10°	7959.7	7976.0	8170.2	8591.0	9257.1	9878.1	10113.1	10076.3	9845.5	9210.1	8331.6
12.5°	7436.7	7446.9	7491.9	7626.8	8059.8	8926.1	9990.5	10182.5	10164.2	9565.5	8531.7
15°	7477.6	7483.7	7495.9	7538.9	7661.5	8096.6	9369.4	9857.7	10368.4	9902.7	8727.9
17.5°	7800.3	7796.3	7757.5	7716.7	7755.4	7898.5	8736.1	9251.0	10325.5	10186.7	8889.4
20°	8429.7	8450.1	8319.3	8137.5	8043.4	8049.5	8423.5	8809.7	10084.5	10407.3	9009.8
22.5°	9314.3	9328.5	9114.1	8799.4	8523.7	8384.7	8488.9	8693.2	9806.7	10611.6	9108.0
25°	10370.6	10370.6	10070.2	9622.8	9195.8	8891.4	8801.5	8879.1	9700.4	10842.5	9205.9
27.5°	11510.6	11551.4	11159.2	10572.8	10008.9	9563.6	9281.6	9267.3	9782.1	11132.5	9316.3
30°	12750.7	12787.4	12321.6	11604.5	10936.5	10366.4	9933.3	9839.4	10094.7	11522.8	9477.7
32.5°	13984.6	14015.3	13500.5	12769.0	11990.6	11320.6	10750.6	10601.4	10656.6	12092.9	9714.7
35°	15553.7	15559.8	14908.1	14037.8	13206.2	12419.7	11698.5	11551.4	11490.1	12812.0	10055.9
37.5°	16802.0	16753.0	16340.3	15517.0	14562.8	13741.5	12893.6	12701.6	12554.6	13823.3	10585.0
40°	17096.3	17096.3	17034.9	16787.8	16029.8	15239.2	14417.9	14131.8	13807.0	15014.4	11296.0
42.5°	16330.1	16379.2	16783.7	17321.0	17327.1	16820.5	16017.5	15776.5	15204.4	16371.0	12072.4
45°	14615.9	14630.3	15600.7	17051.3	18036.1	18326.2	17733.7	17400.6	16608.0	17780.7	12783.4
47.5°	13999.0	14043.9	14456.6	16230.0	18089.2	19545.8	19380.4	18922.7	17907.4	19067.8	13447.4
50°	13051.0	13106.2	13610.8	15020.5	17611.1	20328.3	20955.6	20465.3	19090.3	20140.5	13776.3
52.5°	10783.3	10869.0	11582.0	13420.8	16415.8	20361.0	22397.9	22103.8	20301.8	20714.5	13737.5
55°	7420.4	7483.7	8315.1	10476.8	14005.1	19362.0	23019.1	23221.3	21382.6	20843.2	13549.5
56°	5986.1	6223.1	6832.0	8926.1	12632.2	18512.2	22876.0	23343.9	21703.4	20822.7	13467.9
57.5°	3957.4	4002.3	4666.4	6468.2	10143.7	16667.2	22230.4	23082.4	22116.0	20718.7	13408.6
60°	1861.2	1881.7	2120.7	2984.9	5489.7	12146.0	20132.2	21546.0	22267.2	20500.0	13406.5
62.5°	1213.6	1217.7	1246.2	1423.9	2245.3	6615.4	16689.7	18724.6	21014.8	20475.4	13367.7
65°	999.0	1009.2	974.5	997.0	1174.7	2494.6	11772.0	14597.6	18074.9	19899.3	12930.5
67.5°	880.5	882.6	835.7	809.1	860.1	1095.1	5931.0	9208.1	13518.8	16908.3	10650.4
70°	802.9	800.9	747.8	686.4	688.6	727.3	1932.7	3824.6	7479.6	10039.5	6114.8
72.5°	713.0	717.1	686.4	600.7	572.1	514.8	727.3	1031.7	2545.6	3223.9	1612.0
75°	625.2	617.0	586.4	531.2	478.1	345.3	365.7	439.2	664.0	657.8	347.3
77.5°	473.9	465.8	480.0	453.5	373.8	241.0	200.3	228.8	300.4	279.9	141.0
80°	361.6	357.5	326.9	388.2	341.2	181.8	136.9	141.0	163.5	149.1	69.5
82.5°	261.4	259.5	247.3	239.1	216.6	132.8	104.3	110.4	122.6	104.3	51.1
85°	100.1	100.1	194.1	163.5	149.1	89.9	73.5	79.6	94.0	75.6	34.8
87.5°	16.4	16.4	130.8	108.2	67.4	44.9	47.0	51.1	55.1	44.9	26.6
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°	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7	7581.7
2.5°	7561.3	7424.5	7124.1	6834.0	6580.6	6302.8	6161.9	5998.5	5937.1	5814.6	5826.8
5°	7639.0	7352.9	6750.2	6114.8	5532.6	4940.0	4519.2	4122.9	3902.2	3683.5	3683.5
7.5°	7718.6	7281.5	6349.8	5334.4	4353.8	3338.3	2619.2	2043.0	1722.3	1507.8	1501.7
10°	7773.8	7189.5	5894.2	4429.4	2982.9	1720.3	1037.9	817.3	737.5	702.7	700.8
12.5°	7845.4	7097.6	5375.2	3362.9	1656.9	817.3	647.7	613.0	598.6	590.4	590.4
15°	7906.6	6966.8	4746.0	2261.6	870.4	613.0	557.8	545.5	543.4	541.4	543.4
17.5°	7920.9	6780.8	3992.2	1323.9	631.3	535.3	510.8	500.5	500.5	498.6	498.6
20°	7888.2	6535.7	3158.5	817.3	545.5	492.3	465.8	453.5	451.6	451.6	451.6
22.5°	7820.8	6223.1	2335.2	619.1	496.5	453.5	418.8	406.6	406.6	408.6	410.7
25°	7737.0	5853.3	1603.8	533.1	459.7	412.7	377.9	365.7	369.9	373.8	376.0
27.5°	7630.7	5412.0	1050.1	461.7	410.7	371.8	341.2	333.0	341.2	349.4	353.5
30°	7524.5	4927.8	710.9	400.4	355.5	326.9	308.5	306.5	318.7	337.1	339.1
32.5°	7455.1	4431.3	537.3	359.6	312.6	288.1	279.9	284.0	302.3	322.8	326.9
35°	7449.0	3947.2	457.7	326.9	284.0	261.4	257.5	269.7	290.1	306.5	310.6
37.5°	7545.0	3493.6	414.7	302.3	261.4	239.1	232.9	255.3	273.8	290.1	294.2
40°	7739.1	3087.0	386.1	279.9	243.1	216.6	212.5	230.9	249.2	267.6	273.8
42.5°	7982.2	2707.0	353.5	257.5	222.7	192.1	187.9	202.2	220.7	247.3	251.3
45°	8192.6	2353.6	318.7	232.9	200.3	165.5	163.5	179.8	194.1	218.6	222.7
47.5°	8370.4	2059.4	286.0	206.4	171.6	147.1	145.1	153.2	161.3	183.9	187.9
50°	8276.4	1810.1	253.4	169.6	139.0	126.6	124.7	124.7	134.8	157.4	161.3
52.5°	8045.6	1654.8	222.7	141.0	114.4	108.2	102.1	104.3	114.4	124.7	126.6
55°	7859.6	1581.3	196.1	124.7	96.0	89.9	83.8	81.7	83.8	79.6	75.6
56°	7814.7	1573.2	190.0	120.5	91.9	83.8	75.6	71.4	69.5	61.3	59.2
57.5°	7794.2	1573.2	179.8	112.3	85.8	75.6	65.3	57.3	49.0	42.9	42.9
60°	7777.9	1583.3	167.5	98.2	73.5	61.3	47.0	34.8	28.6	28.6	28.6
62.5°	7743.2	1579.3	153.2	81.7	63.4	47.0	28.6	22.5	20.4	22.5	24.5
65°	7352.9	1467.0	134.8	65.3	49.0	32.7	16.4	16.4	18.3	22.5	24.5
67.5°	5924.8	1111.3	110.4	51.1	34.8	24.5	14.3	14.3	18.3	22.5	24.5
70°	3254.7	586.4	94.0	36.8	26.6	20.4	14.3	12.2	18.3	22.5	24.5
72.5°	794.8	245.2	85.8	28.6	24.5	18.3	12.2	12.2	18.3	22.5	24.5
75°	196.1	183.9	69.5	22.5	20.4	16.4	12.2	12.2	18.3	22.5	24.5
77.5°	91.9	243.1	47.0	20.4	18.3	14.3	12.2	12.2	18.3	22.5	22.5
80°	55.1	183.9	28.6	18.3	16.4	14.3	12.2	12.2	18.3	22.5	24.5
82.5°	32.7	53.1	20.4	18.3	16.4	12.2	12.2	12.2	18.3	22.5	24.5
85°	28.6	26.6	20.4	18.3	16.4	14.3	12.2	12.2	20.4	24.5	24.5
87.5°	22.5	20.4	18.3	16.4	16.4	14.3	12.2	12.2	18.3	22.5	24.5
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)