

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: P270337

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270337  
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-02-D-UNV-AFL-7027-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 800mA 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: 7177.5 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 85  
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

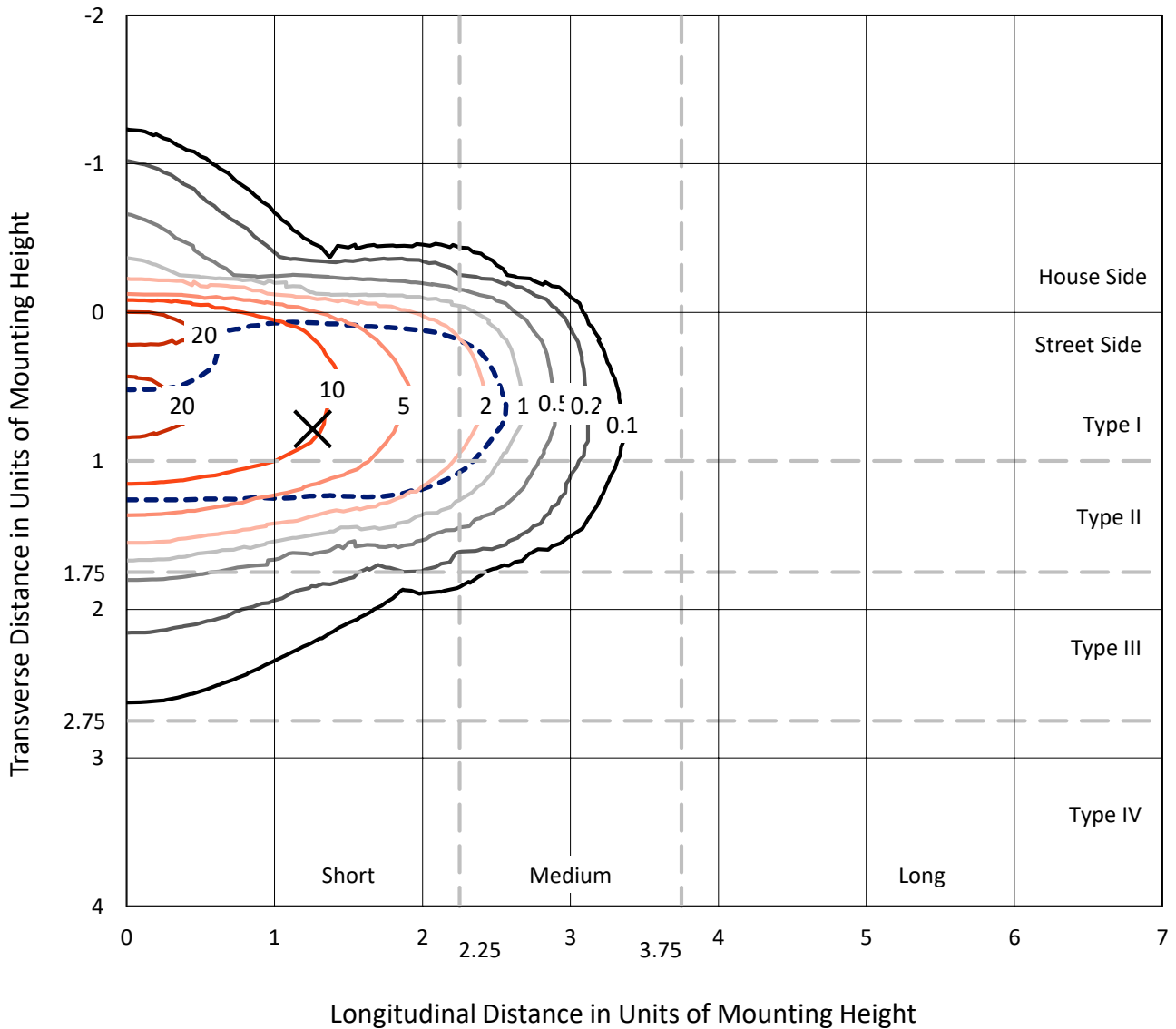


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

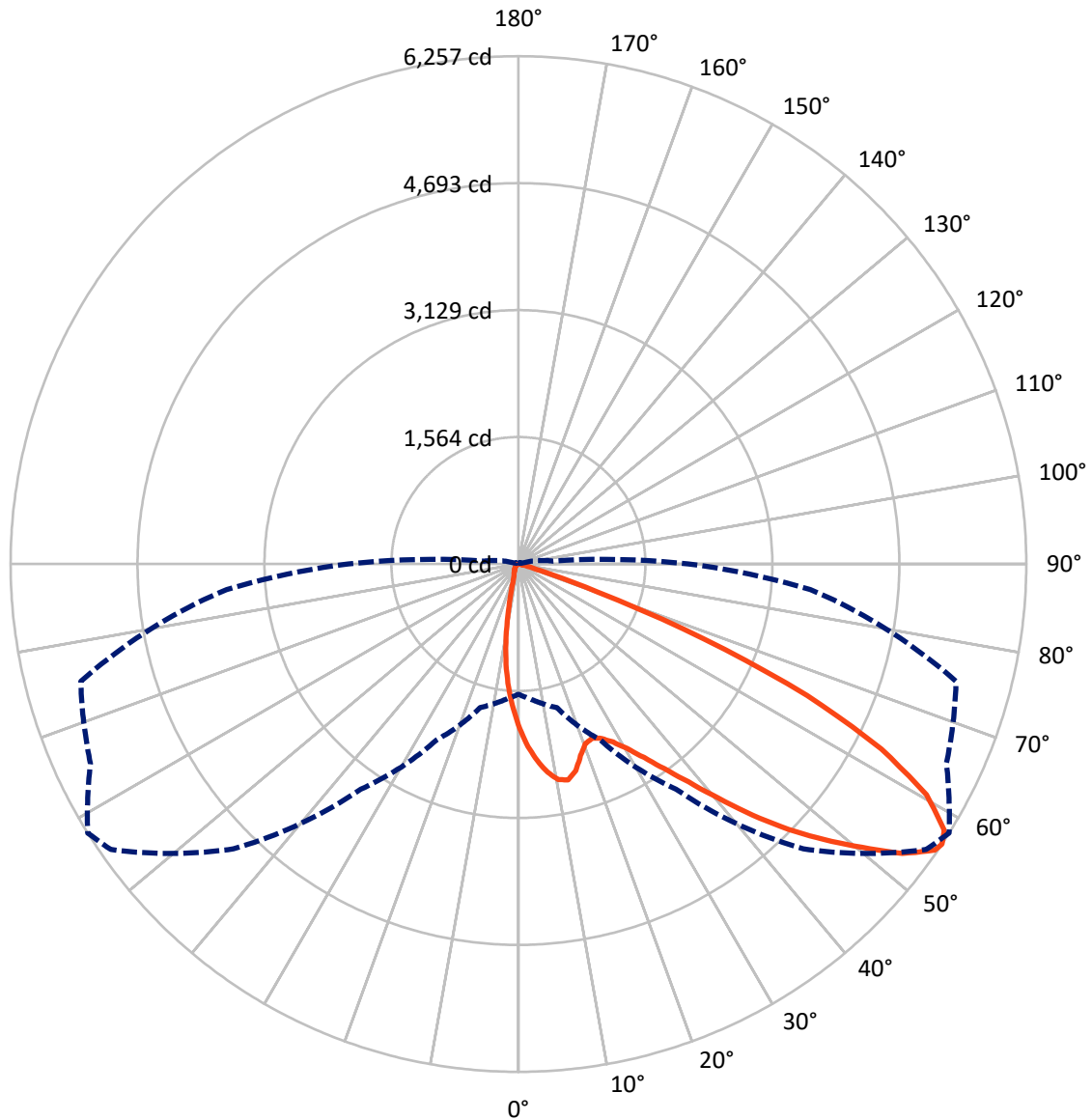


Based on 10 foot mounting height. Maximum calculated value = 25.3 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



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

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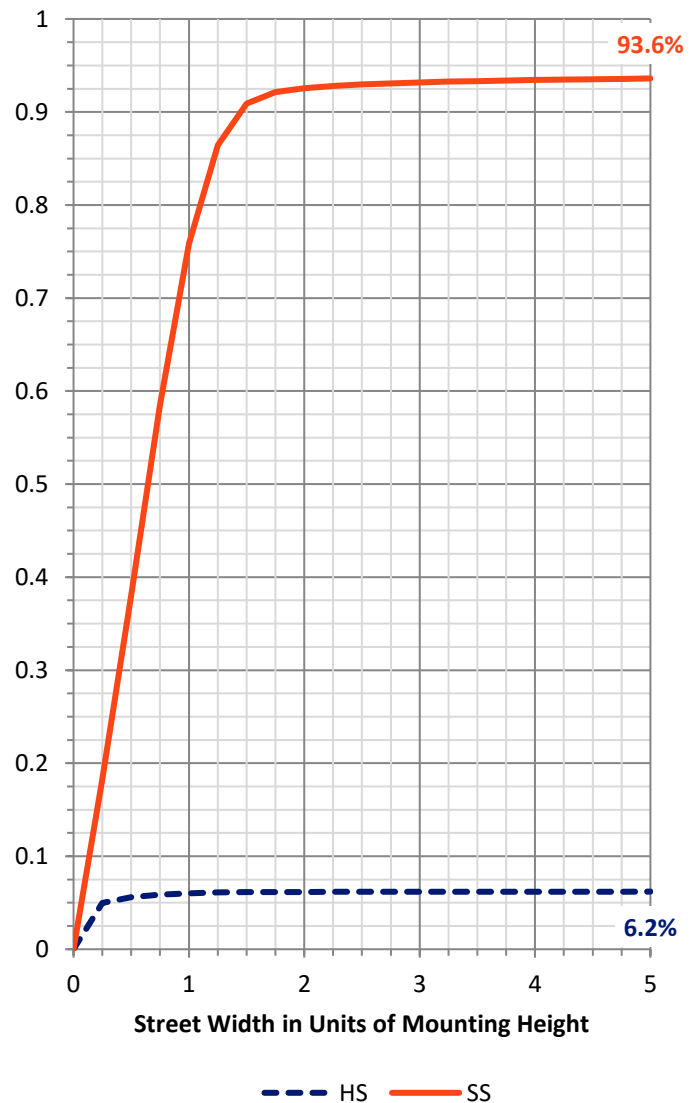
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	448.0	0.0	448.0
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	6729.5	0.0	6729.5
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	7177.5	0.0	7177.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.4	2.4
10°-20°	403.4	5.6
20°-30°	678.7	9.5
30°-40°	1162.3	16.2
40°-50°	1753.9	24.4
50°-60°	1823.1	25.4
60°-70°	1023.5	14.3
70°-80°	140.3	2.0
80°-90°	19.0	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°	7177.5	100.0
0°-180°	7177.5	100.0

**Coefficient of Utilization**



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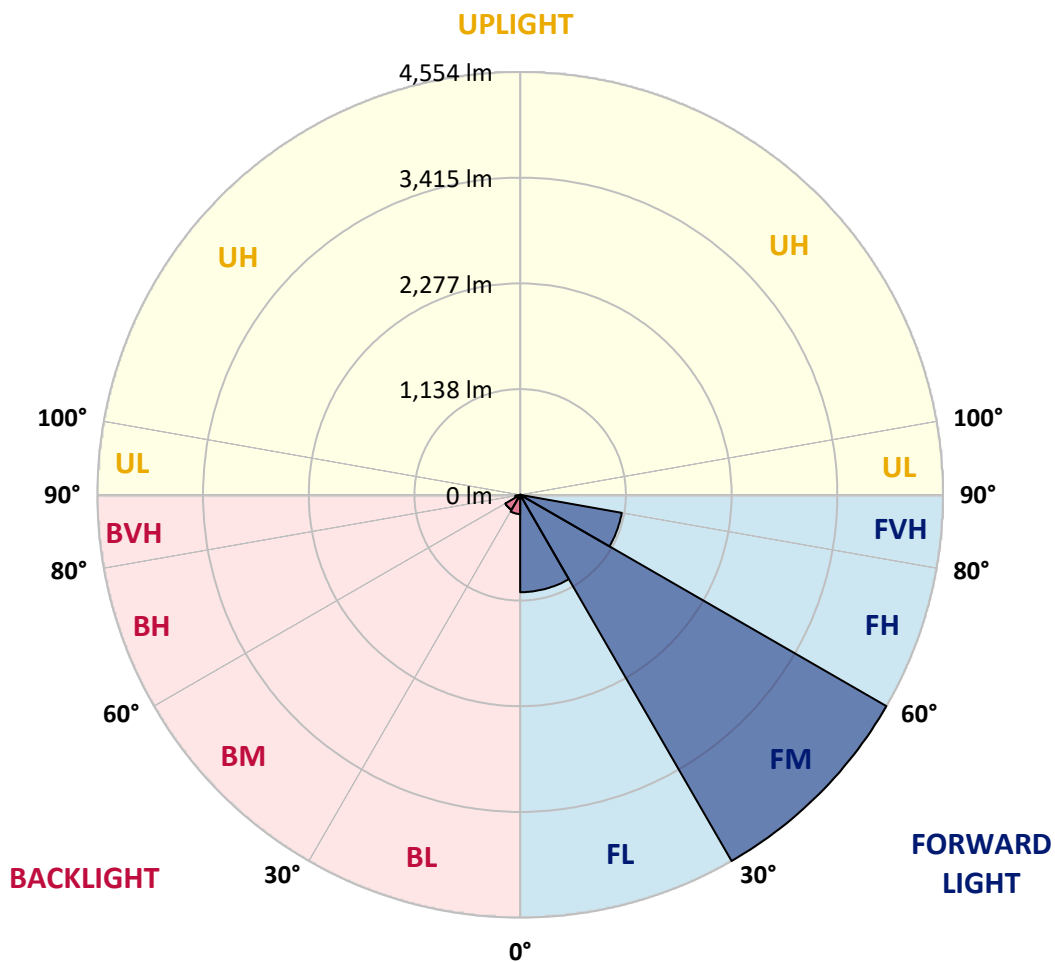
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1048.8	14.6			
FM	(30°-60°)	4553.8	63.4			
FH	(60°-80°)	1110.6	15.5			G1/1800
FVH	(80°-90°)	16.4	0.2			G1/100
BL	(0°-30°)	206.7	2.9	B1/500		
BM	(30°-60°)	185.6	2.6	B0/220		
BH	(60°-80°)	53.1	0.7	B0/110		G0/110
BVH	(80°-90°)	2.6	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-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1
2.5°	2445.0	2430.4	2415.0	2386.4	2360.1	2319.8	2263.8	2250.2	2206.3	2134.1	2066.7
5°	2655.8	2653.1	2642.8	2619.7	2591.3	2542.1	2479.1	2436.9	2369.0	2255.0	2125.3
7.5°	2531.1	2554.2	2591.9	2645.5	2681.7	2676.7	2628.5	2591.9	2524.4	2369.0	2182.8
10°	2133.6	2137.8	2189.9	2302.7	2481.2	2647.8	2710.6	2700.8	2639.0	2468.6	2233.1
12.5°	1993.2	1996.0	2008.2	2044.3	2160.3	2392.5	2677.8	2729.3	2724.4	2563.9	2286.8
15°	2004.3	2005.9	2009.1	2020.6	2053.5	2170.1	2511.3	2642.3	2779.1	2654.3	2339.4
17.5°	2090.7	2089.6	2079.2	2068.3	2078.8	2117.0	2341.6	2479.6	2767.7	2730.4	2382.7
20°	2259.4	2264.9	2229.9	2181.2	2155.9	2157.5	2257.8	2361.4	2703.0	2789.5	2415.0
22.5°	2496.6	2500.4	2442.9	2358.6	2284.6	2247.4	2275.3	2330.2	2628.5	2844.4	2441.2
25°	2779.6	2779.6	2699.1	2579.3	2464.8	2383.3	2359.0	2379.9	2600.1	2906.1	2467.6
27.5°	3085.3	3096.2	2991.0	2834.0	2682.8	2563.4	2487.8	2484.0	2622.0	2983.9	2497.1
30°	3417.6	3427.6	3302.7	3110.4	2931.3	2778.5	2662.4	2637.3	2705.8	3088.6	2540.3
32.5°	3748.4	3756.6	3618.6	3422.6	3214.0	3034.4	2881.6	2841.6	2856.3	3241.4	2603.8
35°	4168.9	4170.7	3995.9	3762.6	3539.9	3328.8	3135.7	3096.2	3079.7	3434.1	2695.4
37.5°	4503.6	4490.4	4379.7	4159.2	3903.3	3683.2	3456.0	3404.4	3365.1	3705.1	2837.1
40°	4582.4	4582.4	4565.9	4499.7	4296.6	4084.7	3864.5	3787.9	3700.7	4024.3	3027.7
42.5°	4377.0	4390.1	4498.6	4642.7	4644.2	4508.6	4293.3	4228.6	4075.3	4388.0	3235.9
45°	3917.6	3921.5	4181.6	4570.3	4834.3	4912.1	4753.3	4664.0	4451.6	4765.9	3426.4
47.5°	3752.2	3764.3	3874.8	4350.2	4848.5	5239.1	5194.7	5072.0	4799.9	5110.8	3604.4
50°	3498.1	3512.9	3648.1	4026.1	4720.5	5448.7	5616.8	5485.4	5116.8	5398.4	3692.6
52.5°	2890.2	2913.4	3104.5	3597.3	4400.1	5457.6	6003.5	5924.6	5441.7	5552.2	3682.2
55°	1988.9	2005.9	2228.8	2808.1	3753.8	5189.7	6170.0	6224.1	5731.2	5586.6	3631.8
56°	1604.6	1668.1	1831.3	2392.5	3385.9	4961.9	6131.7	6257.1	5817.2	5581.3	3609.8
57.5°	1060.7	1072.8	1250.7	1733.8	2718.9	4467.5	5958.5	6186.9	5927.8	5553.3	3593.9
60°	498.9	504.4	568.4	800.1	1471.5	3255.5	5396.2	5775.2	5968.3	5494.8	3593.4
62.5°	325.2	326.4	334.0	381.7	601.9	1773.2	4473.4	5018.9	5632.7	5488.1	3583.0
65°	267.8	270.5	261.1	267.2	314.9	668.7	3155.3	3912.7	4844.6	5333.7	3465.8
67.5°	236.1	236.6	223.9	216.9	230.5	293.6	1589.7	2468.2	3623.6	4531.9	2854.8
70°	215.2	214.7	200.4	184.1	184.5	194.9	518.1	1025.1	2004.7	2691.0	1639.0
72.5°	191.1	192.1	184.1	160.9	153.3	138.0	194.9	276.6	682.4	864.1	432.1
75°	167.5	165.4	157.2	142.4	128.2	92.5	98.1	117.8	178.0	176.3	93.2
77.5°	127.0	124.9	128.6	121.6	100.3	64.6	53.7	61.4	80.5	75.0	37.8
80°	96.9	95.8	87.7	104.1	91.4	48.8	36.7	37.8	43.7	40.0	18.7
82.5°	70.1	69.6	66.3	64.0	58.0	35.7	27.9	29.6	32.9	27.9	13.7
85°	26.8	26.8	52.0	43.7	40.0	24.1	19.8	21.4	25.2	20.2	9.3
87.5°	4.4	4.4	35.0	29.0	18.1	12.0	12.5	13.7	14.8	12.0	7.1
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°	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1	2032.1
2.5°	2026.8	1990.0	1909.5	1831.7	1763.8	1689.4	1651.7	1607.7	1591.3	1558.5	1561.9
5°	2047.5	1970.8	1809.2	1639.0	1482.9	1324.1	1211.4	1105.0	1045.9	987.3	987.3
7.5°	2068.8	1951.7	1702.0	1429.8	1167.0	894.8	702.0	547.5	461.5	404.1	402.5
10°	2083.7	1927.0	1579.8	1187.2	799.5	461.1	278.1	219.0	197.6	188.4	187.8
12.5°	2102.8	1902.4	1440.8	901.4	444.1	219.0	173.6	164.3	160.4	158.2	158.2
15°	2119.2	1867.3	1272.1	606.1	233.3	164.3	149.5	146.2	145.6	145.2	145.6
17.5°	2123.1	1817.5	1070.1	354.8	169.2	143.5	136.9	134.1	134.1	133.6	133.6
20°	2114.3	1751.9	846.7	219.0	146.2	132.1	124.9	121.6	121.0	121.0	121.0
22.5°	2096.3	1668.1	625.8	165.9	133.0	121.6	112.3	109.0	109.0	109.6	110.0
25°	2073.7	1568.9	429.8	142.9	123.2	110.6	101.2	98.1	99.2	100.3	100.8
27.5°	2045.4	1450.7	281.4	123.7	110.0	99.6	91.4	89.2	91.4	93.7	94.7
30°	2016.9	1320.9	190.6	107.3	95.3	87.7	82.6	82.1	85.3	90.4	90.9
32.5°	1998.2	1187.7	144.0	96.4	83.8	77.3	75.0	76.1	81.0	86.5	87.7
35°	1996.7	1057.9	122.7	87.7	76.1	70.1	69.0	72.3	77.8	82.1	83.3
37.5°	2022.4	936.5	111.2	81.0	70.1	64.0	62.4	68.5	73.4	77.8	78.8
40°	2074.4	827.5	103.6	75.0	65.1	58.0	57.0	61.9	66.8	71.8	73.4
42.5°	2139.6	725.7	94.7	69.0	59.6	51.5	50.3	54.2	59.2	66.3	67.4
45°	2195.9	630.9	85.3	62.4	53.7	44.3	43.7	48.1	52.0	58.6	59.6
47.5°	2243.5	552.0	76.6	55.3	46.1	39.4	38.8	41.1	43.3	49.2	50.3
50°	2218.4	485.2	67.9	45.5	37.2	34.0	33.3	33.3	36.1	42.2	43.3
52.5°	2156.6	443.6	59.6	37.8	30.6	29.0	27.4	27.9	30.6	33.3	34.0
55°	2106.6	423.8	52.6	33.3	25.7	24.1	22.5	21.9	22.5	21.4	20.2
56°	2094.6	421.7	50.9	32.2	24.7	22.5	20.2	19.1	18.7	16.3	15.9
57.5°	2089.2	421.7	48.1	30.2	22.9	20.2	17.5	15.4	13.1	11.5	11.5
60°	2084.7	424.4	44.9	26.3	19.8	16.3	12.5	9.3	7.6	7.6	7.6
62.5°	2075.4	423.3	41.1	21.9	17.0	12.5	7.6	6.0	5.5	6.0	6.6
65°	1970.8	393.2	36.1	17.5	13.1	8.8	4.4	4.4	4.9	6.0	6.6
67.5°	1588.1	297.9	29.6	13.7	9.3	6.6	3.9	3.9	4.9	6.0	6.6
70°	872.3	157.2	25.2	9.8	7.1	5.5	3.9	3.2	4.9	6.0	6.6
72.5°	213.0	65.8	22.9	7.6	6.6	4.9	3.2	3.2	4.9	6.0	6.6
75°	52.6	49.2	18.7	6.0	5.5	4.4	3.2	3.2	4.9	6.0	6.6
77.5°	24.7	65.1	12.5	5.5	4.9	3.9	3.2	3.2	4.9	6.0	6.0
80°	14.8	49.2	7.6	4.9	4.4	3.9	3.2	3.2	4.9	6.0	6.6
82.5°	8.8	14.3	5.5	4.9	4.4	3.2	3.2	3.2	4.9	6.0	6.6
85°	7.6	7.1	5.5	4.9	4.4	3.9	3.2	3.2	5.5	6.6	6.6
87.5°	6.0	5.5	4.9	4.4	4.4	3.9	3.2	3.2	4.9	6.0	6.6
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)