

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: P195147

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7060-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195147  
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-03-D-UNV-SL3-7060-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 615mA 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: 10131 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 96  
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

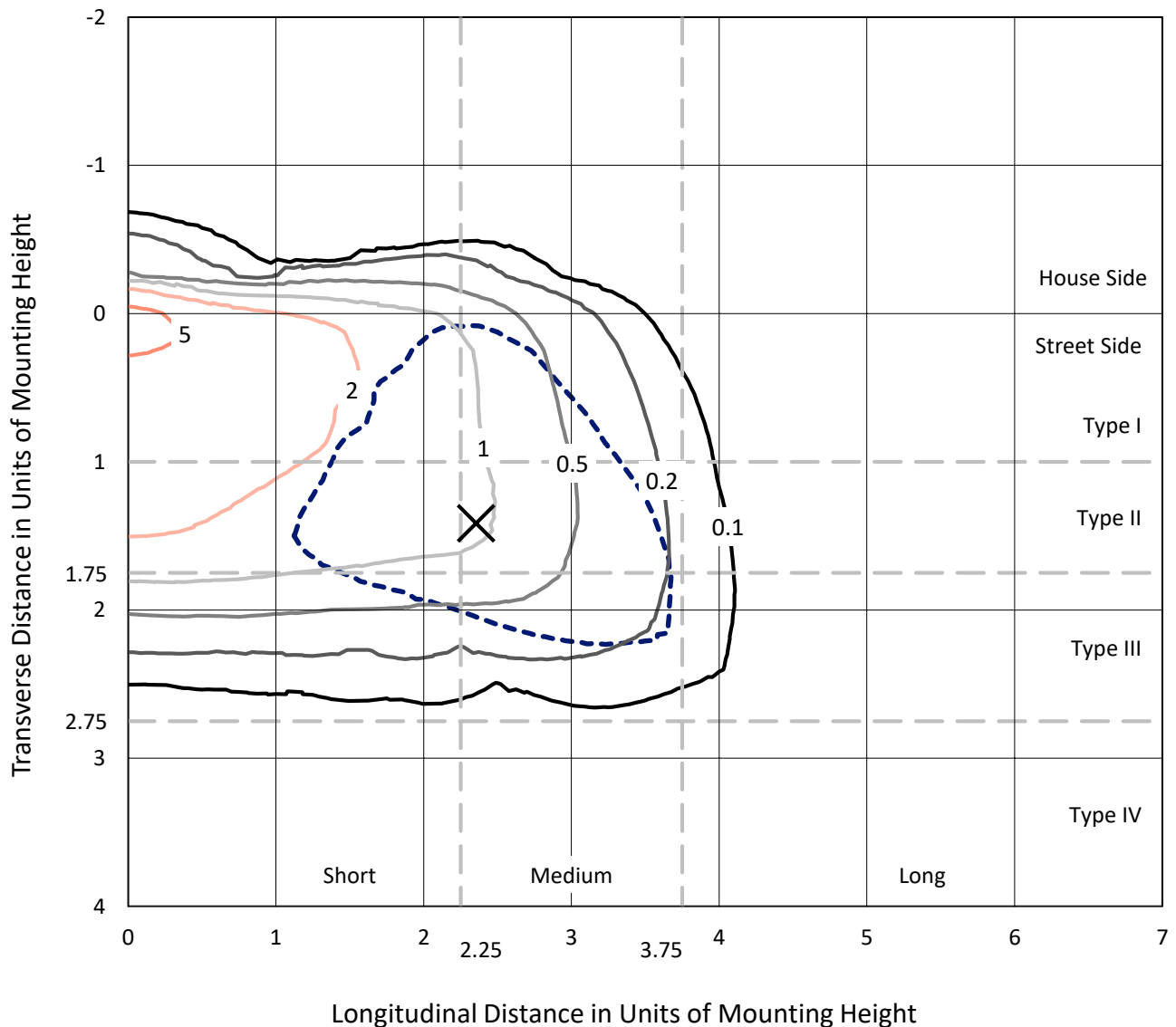


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### Iso-Footcandle Lines of Horizontal Illumination

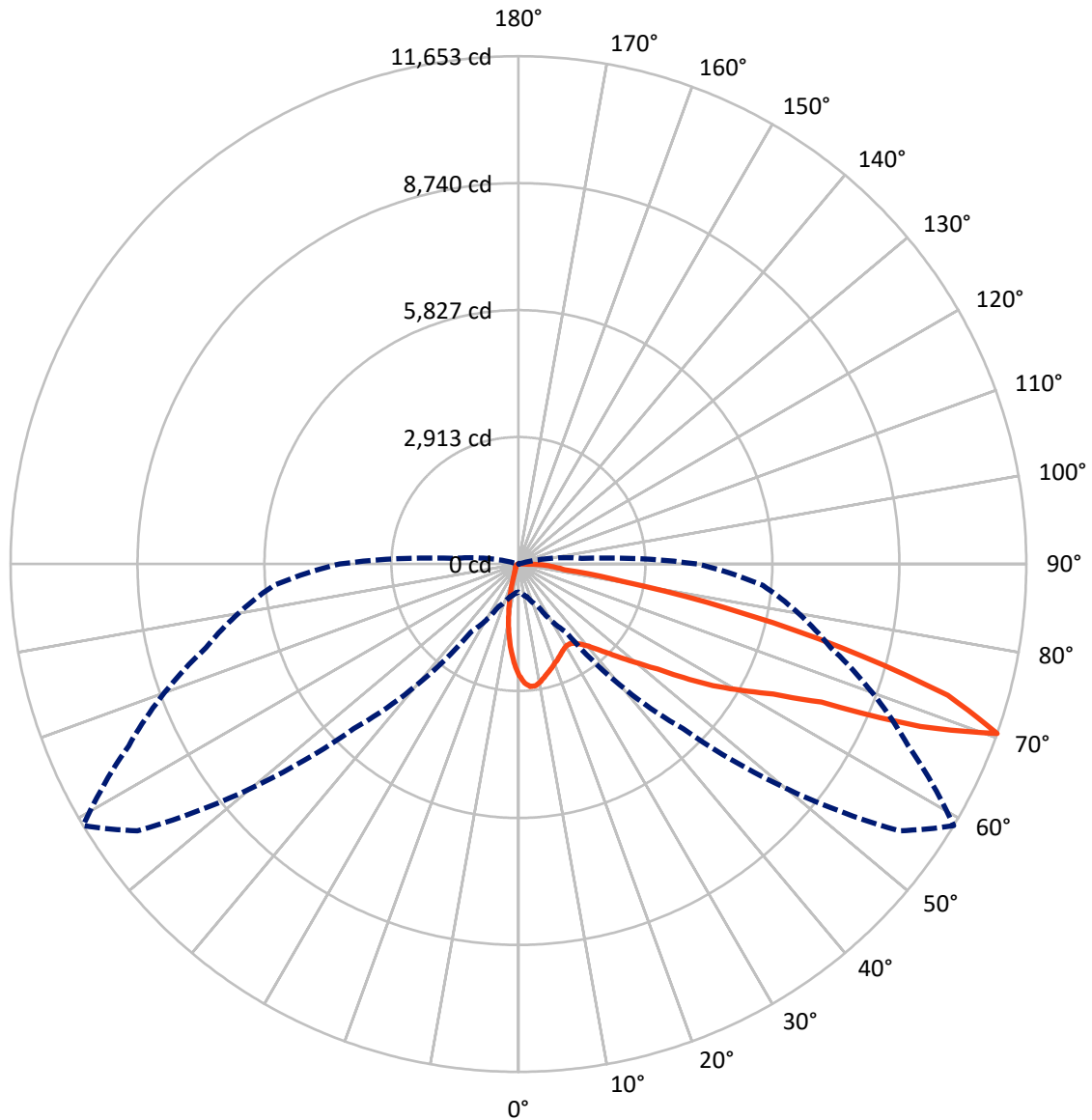
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.8 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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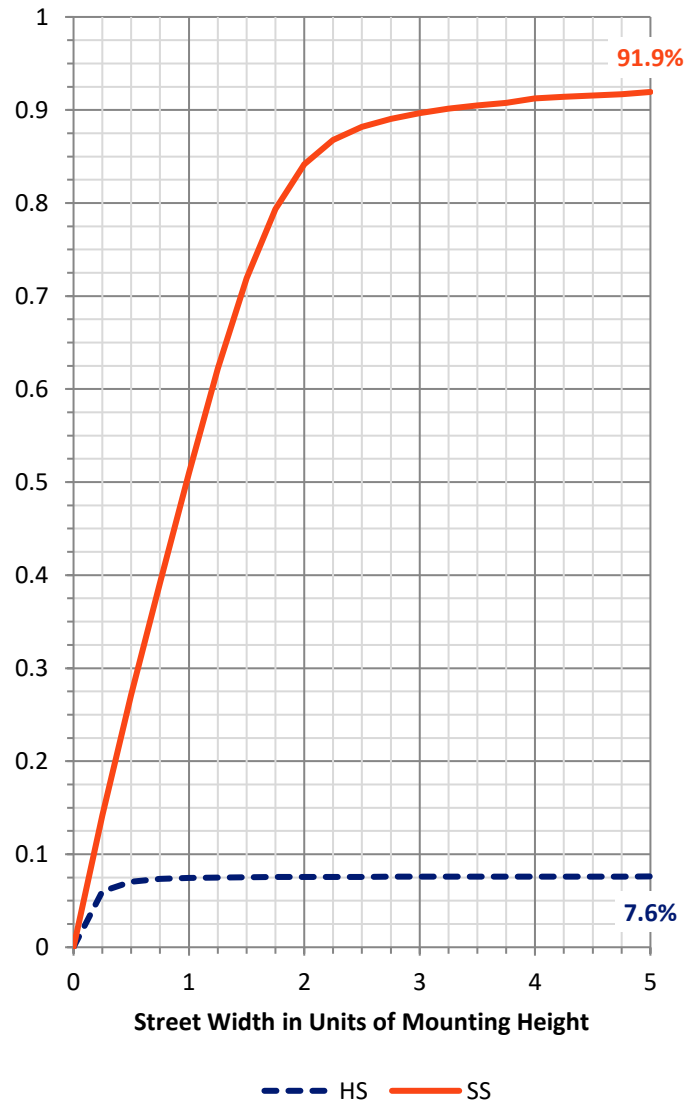
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	778.8	0.0	778.8
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	9352.2	0.0	9352.2
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	10131.0	0.0	10131.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.7	2.1
10°-20°	441.8	4.4
20°-30°	598.1	5.9
30°-40°	863.2	8.5
40°-50°	1433.5	14.1
50°-60°	2192.7	21.6
60°-70°	2727.2	26.9
70°-80°	1507.6	14.9
80°-90°	156.3	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°	10131.0	100.0
0°-180°	10131.0	100.0



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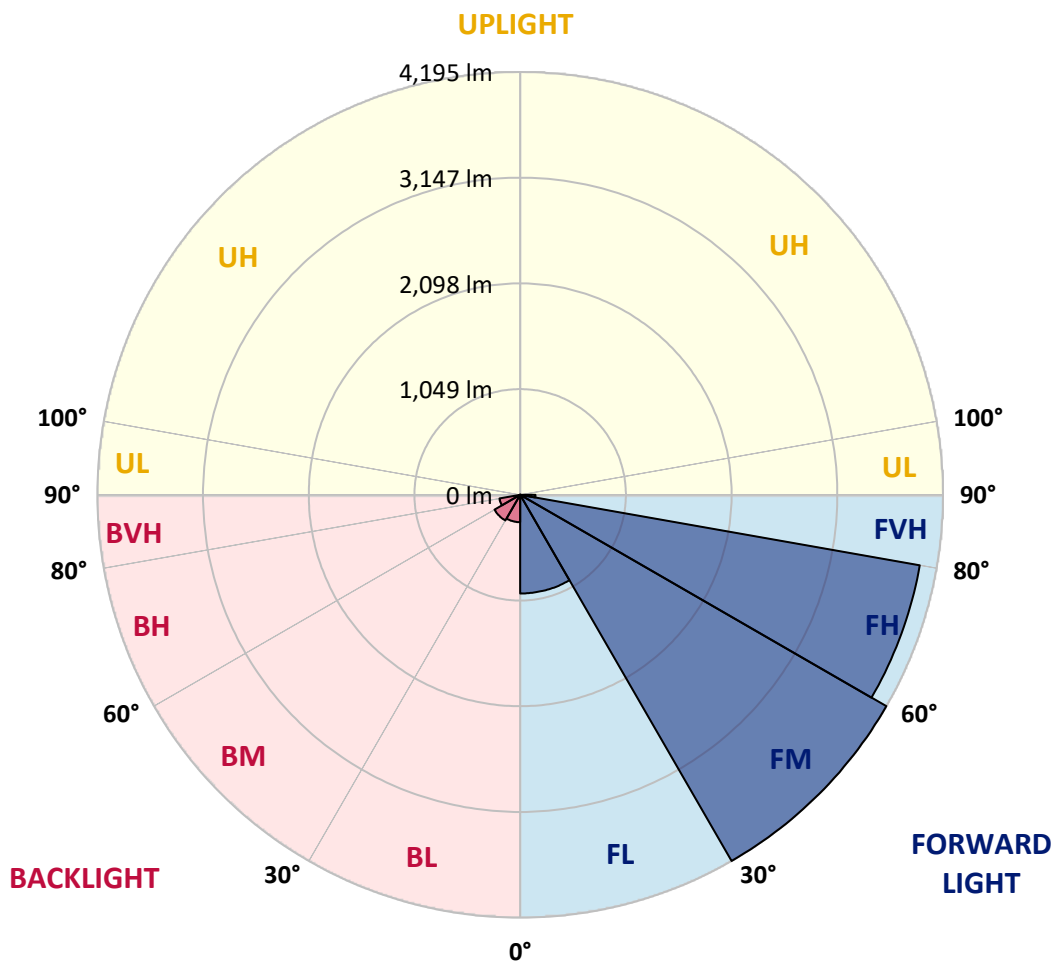
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	979.2	9.7			
FM	(30°-60°)	4195.4	41.4			
FH	(60°-80°)	4025.8	39.7			G2/5000
FVH	(80°-90°)	151.8	1.5			G2/225
BL	(0°-30°)	271.4	2.7	B1/500		
BM	(30°-60°)	294.0	2.9	B1/1000		
BH	(60°-80°)	208.9	2.1	B1/500		G1/500
BVH	(80°-90°)	4.5	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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8
2.5°	2895.7	2891.2	2872.1	2868.2	2846.8	2804.0	2754.4	2734.5	2694.0	2629.8	2558.7
5°	2943.9	2946.2	2947.7	2939.3	2936.2	2901.1	2846.1	2822.4	2768.1	2662.6	2532.7
7.5°	2763.5	2769.6	2788.7	2797.2	2833.8	2847.6	2836.1	2820.8	2778.0	2653.5	2470.8
10°	2573.2	2584.7	2605.3	2619.1	2664.2	2700.9	2747.5	2751.3	2742.1	2622.9	2401.3
12.5°	2409.7	2420.4	2443.3	2470.8	2516.7	2564.1	2633.6	2658.1	2688.6	2603.0	2351.6
15°	2269.1	2272.1	2294.3	2328.7	2389.0	2454.0	2536.5	2572.5	2632.1	2595.4	2313.4
17.5°	2146.0	2146.8	2161.3	2192.6	2266.0	2351.6	2447.9	2495.3	2570.9	2584.7	2279.8
20°	2065.0	2064.2	2065.0	2081.8	2146.8	2248.4	2365.4	2415.0	2512.1	2571.7	2245.4
22.5°	2037.5	2033.7	2016.1	2010.0	2051.2	2140.7	2280.5	2345.5	2459.4	2567.9	2220.1
25°	2071.1	2068.8	2031.4	1996.2	2000.0	2055.8	2194.2	2273.6	2418.1	2581.6	2214.0
27.5°	2179.6	2175.1	2117.7	2049.0	2005.4	2015.3	2130.0	2213.3	2385.2	2615.3	2222.4
30°	2321.8	2322.6	2261.4	2178.1	2075.7	2019.1	2095.6	2174.3	2363.1	2665.7	2240.8
32.5°	2480.0	2479.2	2435.7	2339.4	2208.7	2089.5	2110.9	2177.3	2366.1	2739.8	2275.9
35°	2643.5	2635.1	2620.6	2535.8	2382.9	2212.5	2180.4	2229.3	2398.2	2837.7	2335.5
37.5°	2832.3	2829.3	2843.8	2754.4	2598.4	2393.6	2302.7	2335.5	2479.2	2982.1	2431.8
40°	3132.7	3115.8	3122.7	3001.2	2841.5	2637.4	2473.9	2482.3	2608.4	3173.2	2583.9
42.5°	3705.1	3637.1	3509.4	3281.7	3109.0	2908.0	2697.8	2683.3	2791.0	3404.7	2784.2
45°	4389.1	4311.1	3989.4	3591.2	3376.5	3198.4	2974.5	2935.5	3015.7	3680.6	3042.5
47.5°	4960.0	4875.9	4449.5	3914.5	3648.5	3498.0	3280.9	3235.1	3284.7	4000.8	3352.8
50°	5154.9	5108.2	4733.8	4183.5	3922.9	3834.2	3665.3	3588.9	3601.1	4346.3	3715.0
52.5°	5065.4	5049.4	4798.7	4367.7	4176.6	4205.7	4086.4	4006.2	3992.4	4723.8	4115.5
55°	4876.7	4869.0	4746.8	4470.1	4400.6	4545.8	4677.2	4607.7	4477.7	5125.1	4446.4
57.5°	4606.9	4635.9	4723.8	4667.3	4675.7	4905.0	5225.9	5261.9	5067.7	5444.5	4691.7
60°	3886.2	3964.2	4366.9	4879.0	5271.0	5502.6	5813.6	5880.9	5567.6	5663.1	4975.3
62.5°	2872.8	2984.4	3558.3	4499.1	5598.9	6639.0	6595.5	6565.7	6044.5	5955.8	5491.1
65°	1687.5	1818.2	2303.4	3515.5	5104.4	7369.7	8055.2	7642.5	6771.3	6564.1	6312.7
67.5°	840.7	841.4	1060.8	1855.6	3772.3	6859.9	10185.9	9947.5	8316.6	7460.6	6636.7
70°	646.6	664.1	784.9	1078.4	1907.6	5342.9	10674.3	11653.3	9869.5	7420.9	5631.0
72.5°	548.0	559.4	698.5	938.5	1426.1	2933.2	9240.5	10300.6	9417.9	6269.9	4150.6
75°	394.4	403.5	618.3	851.4	1313.0	1455.1	6338.7	7639.4	7066.3	4410.5	2284.3
77.5°	97.8	97.1	215.5	690.9	1174.7	1212.1	3637.1	4898.8	4054.3	1805.9	586.9
80°	43.6	42.0	48.9	145.2	1092.9	1144.1	1599.6	2473.9	1555.2	292.7	179.6
82.5°	30.6	29.0	30.6	53.5	365.3	1061.5	966.8	1072.2	569.4	100.1	76.4
85°	9.9	9.2	16.8	45.1	102.4	612.2	943.1	800.9	423.4	42.8	51.2
87.5°	1.5	1.5	6.1	24.5	29.8	204.1	553.3	554.8	190.3	25.2	22.9
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°	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8	2561.8
2.5°	2522.8	2477.7	2414.3	2350.8	2293.5	2234.7	2187.3	2165.1	2155.2	2141.4	2111.6
5°	2464.7	2382.9	2243.8	2107.0	1979.4	1857.1	1752.4	1692.8	1628.6	1625.6	1594.2
7.5°	2371.5	2255.3	2036.0	1823.5	1628.6	1442.1	1281.6	1177.7	1106.6	1062.3	1031.7
10°	2267.5	2118.5	1828.1	1529.3	1264.1	1014.9	808.6	674.1	592.3	551.0	527.3
12.5°	2185.0	1997.7	1623.3	1247.3	914.8	629.0	437.2	339.3	295.8	279.0	271.3
15°	2113.9	1886.9	1431.4	995.1	610.6	361.5	253.0	220.9	214.0	214.0	213.2
17.5°	2042.1	1779.9	1245.0	747.4	384.4	236.9	199.5	194.9	195.6	197.9	197.9
20°	1974.1	1678.3	1065.4	532.7	252.2	189.5	181.1	179.6	181.9	184.9	184.2
22.5°	1919.0	1588.9	897.2	366.1	194.1	172.0	166.6	164.3	165.8	168.1	167.4
25°	1880.1	1512.5	742.9	255.3	168.9	156.7	150.6	147.5	146.0	147.5	146.7
27.5°	1856.4	1448.3	597.6	191.8	151.3	141.4	133.7	127.6	123.8	123.8	122.3
30°	1841.1	1387.9	468.5	159.0	136.8	126.1	115.4	107.0	100.9	99.4	98.6
32.5°	1840.3	1335.9	350.0	140.6	123.0	110.8	97.8	87.1	80.2	78.7	78.0
35°	1859.4	1293.9	257.6	126.9	110.8	96.3	81.8	70.3	64.2	64.2	63.4
37.5°	1909.1	1269.4	194.9	116.2	100.9	84.1	68.8	58.1	52.7	54.3	54.3
40°	2001.6	1264.8	159.0	107.8	92.5	73.4	55.8	47.4	45.1	47.4	47.4
42.5°	2143.0	1289.3	141.4	101.6	84.8	62.7	46.6	40.5	39.7	42.0	42.0
45°	2327.1	1337.4	131.5	96.3	76.4	52.0	39.0	35.2	34.4	37.4	37.4
47.5°	2550.3	1402.4	122.3	90.2	68.0	42.8	32.9	29.8	29.8	32.9	33.6
50°	2814.7	1490.3	113.1	84.1	61.1	35.9	27.5	25.2	26.0	29.0	29.8
52.5°	3118.9	1598.0	104.7	78.7	53.5	29.0	22.9	21.4	22.2	25.2	26.0
55°	3381.0	1692.0	94.8	73.4	43.6	23.7	19.1	18.3	19.1	22.9	22.9
57.5°	3609.6	1782.2	85.6	65.0	34.4	19.1	15.3	15.3	16.8	20.6	21.4
60°	3913.0	1924.4	78.0	55.0	26.0	14.5	12.2	13.0	15.3	18.3	19.1
62.5°	4450.2	2165.9	68.0	45.9	19.1	11.5	9.9	10.7	13.8	17.6	18.3
65°	5122.8	2394.4	56.6	38.2	14.5	8.4	7.6	9.9	13.8	17.6	18.3
67.5°	5054.0	2082.6	44.3	30.6	10.7	6.9	6.1	9.2	13.0	17.6	18.3
70°	4098.7	1459.7	32.9	20.6	8.4	6.1	6.1	9.2	13.0	16.8	17.6
72.5°	2843.0	812.4	25.2	13.8	7.6	6.1	5.3	8.4	12.2	16.8	17.6
75°	1352.7	249.1	19.9	9.9	6.9	5.3	4.6	8.4	12.2	16.8	17.6
77.5°	259.8	63.4	16.0	8.4	6.1	5.3	4.6	7.6	12.2	16.0	16.8
80°	87.9	28.3	13.0	7.6	6.1	5.3	4.6	7.6	11.5	15.3	16.0
82.5°	48.1	16.0	11.5	6.9	6.1	4.6	3.8	6.9	10.7	15.3	16.0
85°	37.4	11.5	9.2	6.9	6.1	4.6	3.8	6.9	10.7	14.5	15.3
87.5°	19.1	8.4	7.6	6.9	6.1	4.6	3.8	6.1	9.9	13.8	15.3
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)