

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: P196622

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196622  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
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-SL3-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11765 lumens  
Efficiency: N/A  
Efficacy: 104.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

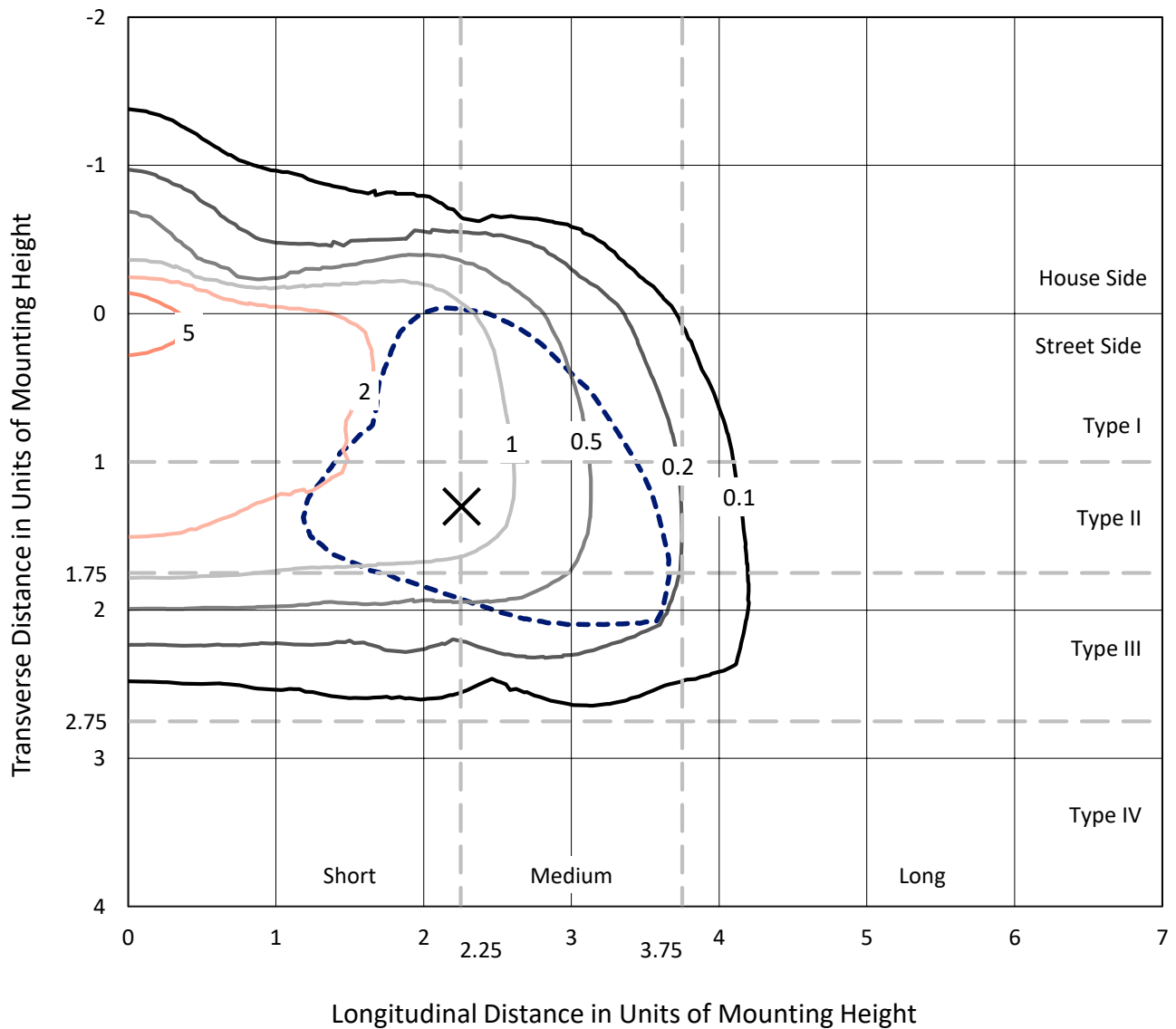
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

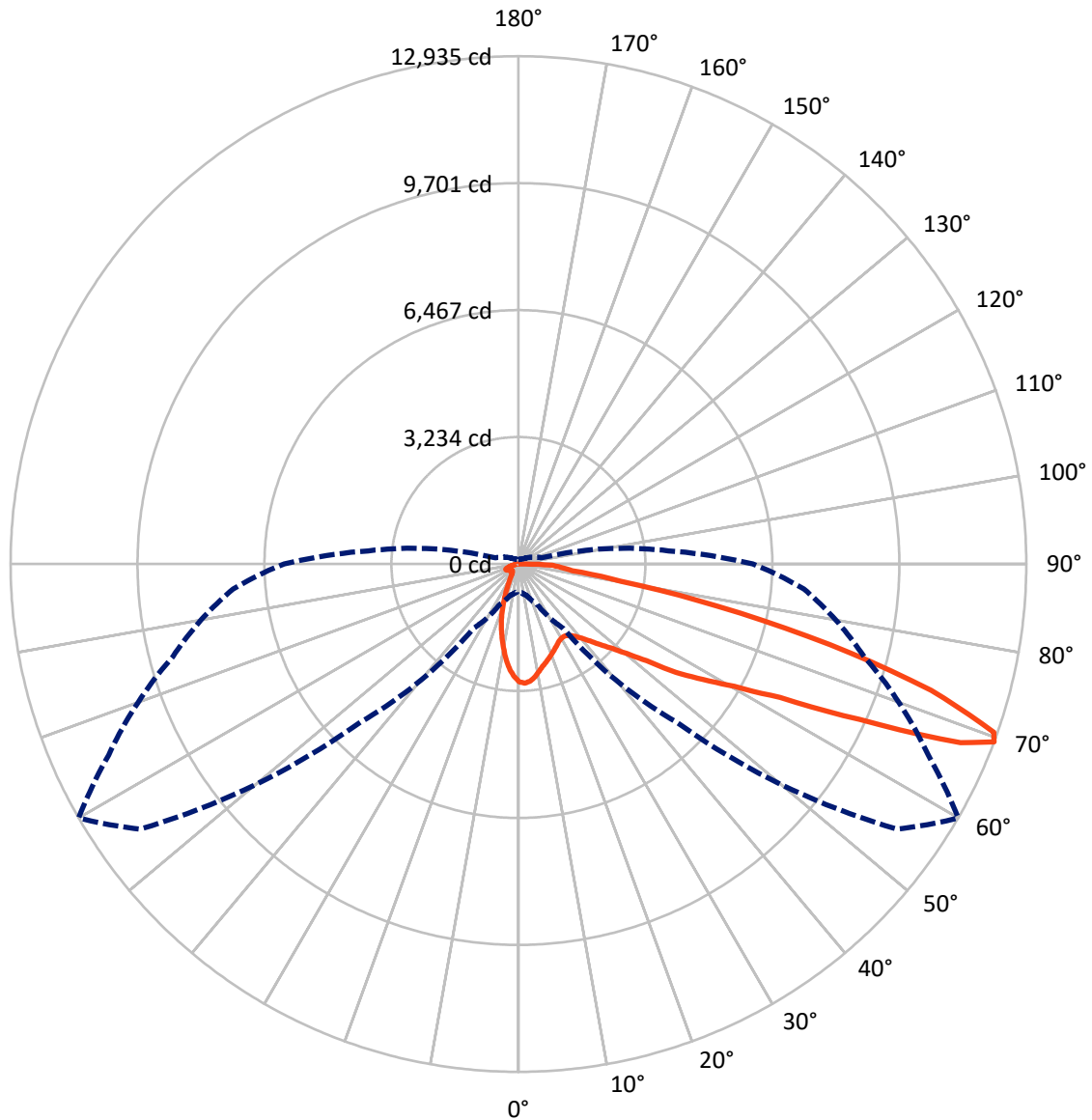
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.5 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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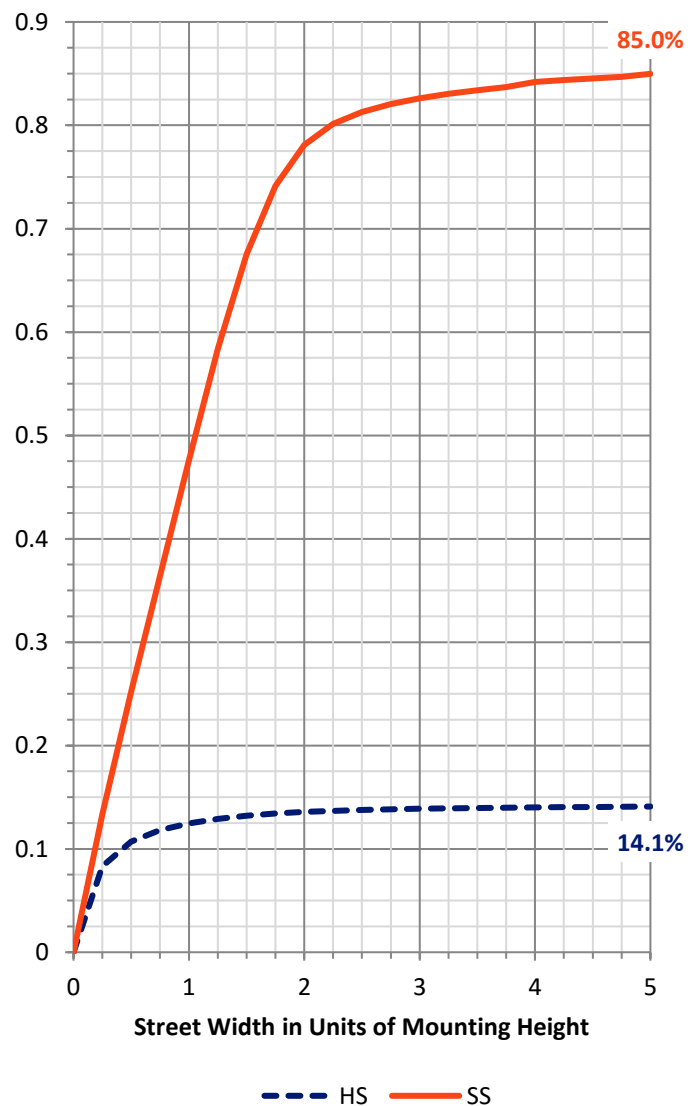
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1678.1	0.0	1678.1
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	10087.0	0.0	10087.0
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	11765.0	0.0	11765.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.7	2.2
10°-20°	545.3	4.6
20°-30°	695.6	5.9
30°-40°	957.2	8.1
40°-50°	1550.5	13.2
50°-60°	2433.4	20.7
60°-70°	3244.1	27.6
70°-80°	1804.5	15.3
80°-90°	279.9	2.4
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°	11765.0	100.0
0°-180°	11765.0	100.0

**Coefficient of Utilization**



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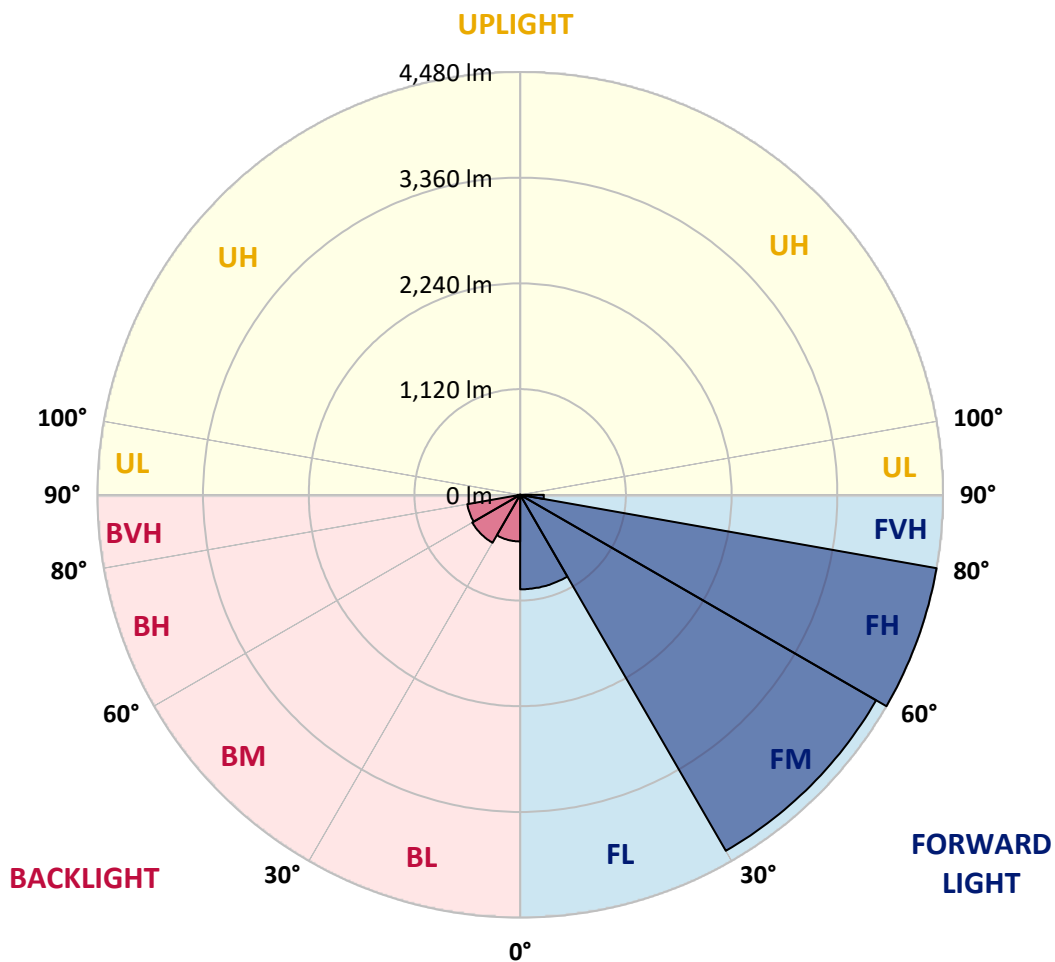
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1001.0	8.5			
FM	(30°-60°)	4354.8	37.0			
FH	(60°-80°)	4479.7	38.1			G2/5000
FVH	(80°-90°)	251.5	2.1			G3/500
BL	(0°-30°)	494.5	4.2	B1/500		
BM	(30°-60°)	586.2	5.0	B1/1000		
BH	(60°-80°)	568.9	4.8	B2/1000		G2/1000
BVH	(80°-90°)	28.4	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9
2.5°	3081.8	3090.2	3090.2	3083.4	3079.6	3057.7	3044.8	3035.9	3020.0	2990.5	2964.2
5°	2971.8	2987.5	2994.4	2997.3	3016.9	3010.2	3010.9	3004.9	2991.3	2959.7	2916.6
7.5°	2769.5	2772.6	2784.6	2805.0	2852.5	2885.7	2912.9	2918.1	2915.1	2891.8	2831.4
10°	2570.4	2575.7	2590.0	2624.6	2670.0	2717.5	2776.3	2800.5	2818.6	2811.0	2734.9
12.5°	2405.2	2405.9	2421.7	2461.7	2512.3	2571.9	2651.8	2689.5	2732.6	2749.9	2664.7
15°	2246.0	2256.5	2271.6	2319.9	2382.5	2457.9	2550.0	2602.0	2658.6	2708.4	2610.3
17.5°	2125.2	2133.5	2142.6	2182.6	2255.0	2349.3	2463.2	2519.1	2593.7	2670.0	2554.5
20°	2058.9	2061.8	2055.0	2074.8	2135.8	2237.6	2369.8	2436.8	2525.8	2632.9	2497.1
22.5°	2045.3	2045.3	2020.4	2016.6	2043.8	2129.8	2273.1	2355.3	2464.1	2607.4	2445.9
25°	2108.6	2104.2	2057.4	2014.3	2004.6	2048.3	2181.1	2282.2	2411.2	2606.6	2407.4
27.5°	2228.6	2222.6	2164.4	2092.0	2029.4	2010.6	2110.2	2213.5	2369.8	2632.2	2387.8
30°	2377.9	2375.8	2316.9	2226.3	2123.0	2025.6	2082.3	2178.1	2341.8	2679.7	2387.0
32.5°	2541.7	2531.1	2494.9	2404.4	2270.1	2109.4	2098.9	2179.5	2334.3	2749.2	2404.4
35°	2715.9	2708.4	2699.4	2608.0	2457.2	2257.3	2172.0	2231.6	2371.2	2845.7	2453.4
37.5°	2937.8	2929.5	2944.5	2845.0	2679.7	2451.1	2295.7	2335.8	2446.7	2986.0	2544.6
40°	3332.3	3308.2	3266.0	3112.8	2939.3	2688.8	2474.5	2480.6	2575.7	3173.9	2691.0
42.5°	3980.5	3902.6	3693.7	3412.2	3213.1	2965.0	2707.7	2679.0	2753.7	3422.1	2903.8
45°	4630.0	4542.5	4189.3	3739.0	3496.9	3261.4	2995.9	2927.2	2975.4	3711.1	3177.7
47.5°	5049.4	5006.4	4608.1	4065.6	3794.0	3584.4	3325.6	3212.3	3247.0	4038.4	3515.6
50°	5172.5	5135.4	4822.3	4321.4	4074.8	3974.3	3733.7	3583.6	3589.6	4420.9	3920.8
52.5°	5080.3	5065.3	4857.7	4479.8	4332.6	4385.5	4298.8	4089.8	4040.0	4840.4	4359.9
55°	4957.4	4962.7	4882.7	4639.0	4595.2	4768.7	5038.1	4869.9	4658.6	5277.2	4817.0
57.5°	4570.4	4574.1	4783.8	4942.3	5096.2	5305.9	5613.7	5542.8	5296.9	5748.7	5329.3
60°	3680.1	3709.6	4176.6	4879.6	5668.8	6364.4	6439.8	6317.6	5975.8	6291.9	5995.5
62.5°	2629.3	2655.6	3196.5	4236.1	5601.6	7562.4	7965.3	7479.5	6897.0	7104.5	6932.5
65°	1381.4	1376.8	1795.5	2927.2	4718.3	7840.0	10368.9	9542.0	8448.9	8221.8	7837.8
67.5°	771.8	796.7	958.9	1476.4	3075.1	6900.0	11904.3	12147.9	10606.6	9108.3	7798.6
69°	713.7	721.9	830.6	1141.4	2004.6	5693.0	11772.1	12934.7	11516.4	9112.0	7296.2
70°	693.4	702.4	801.2	1051.7	1683.9	4664.6	11291.6	12842.7	11737.5	8909.9	6839.0
72.5°	621.6	633.7	729.6	945.3	1419.1	2404.4	9095.4	10992.0	10632.2	7787.2	5302.9
75°	530.4	550.7	695.6	938.5	1344.4	1528.4	6065.6	8189.3	7913.2	5569.3	3008.7
77.5°	219.5	221.8	304.1	687.2	1410.7	1462.9	3259.9	5187.5	4592.2	2442.1	906.1
80°	153.2	150.1	151.7	200.7	1138.5	1472.7	1672.5	2638.3	2050.6	644.3	424.0
82.5°	129.0	127.5	133.6	125.9	385.4	1671.1	1398.7	1375.3	965.7	347.0	202.2
85°	85.2	83.0	109.4	114.7	183.3	1327.1	1504.4	1081.1	719.7	185.6	86.0
87.5°	41.5	42.3	62.6	77.7	97.4	420.2	1441.0	854.7	556.0	80.8	34.8
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°	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9	3001.9
2.5°	2953.6	2931.0	2910.5	2885.0	2865.4	2848.7	2826.1	2825.3	2821.6	2826.9	2828.4
5°	2887.9	2850.2	2792.8	2728.8	2683.5	2624.0	2565.9	2546.2	2524.3	2522.0	2528.8
7.5°	2789.2	2730.3	2632.2	2534.2	2436.1	2335.8	2240.7	2192.4	2145.7	2131.3	2138.1
10°	2679.0	2604.3	2454.2	2294.2	2156.1	2006.8	1861.9	1768.4	1683.1	1647.0	1656.0
12.5°	2592.9	2497.8	2286.7	2079.2	1872.4	1658.2	1467.4	1282.4	1143.0	1080.3	1084.1
15°	2519.1	2397.5	2129.8	1853.7	1594.8	1301.4	1036.6	822.2	700.2	654.9	653.4
17.5°	2439.1	2291.9	1966.0	1644.0	1308.2	945.3	694.2	567.4	519.1	504.0	504.0
20°	2353.9	2183.3	1794.8	1415.4	1006.4	660.2	522.0	473.0	454.9	450.3	449.6
22.5°	2274.6	2076.9	1622.8	1171.6	728.0	501.0	444.3	425.4	422.5	426.2	426.2
25°	2212.0	1983.4	1448.6	915.1	529.6	419.4	395.3	393.0	404.4	417.9	420.2
27.5°	2165.2	1899.7	1276.4	668.4	416.5	365.2	356.8	366.7	393.0	420.2	425.4
30°	2132.7	1828.0	1070.5	480.5	347.0	319.9	323.6	341.0	381.0	422.5	433.8
32.5°	2118.4	1769.9	863.0	369.0	296.5	281.5	291.1	313.8	355.3	396.8	410.4
35°	2131.9	1727.6	671.4	306.3	259.5	248.2	259.5	282.9	310.1	330.4	338.7
37.5°	2181.1	1712.5	505.5	271.6	235.4	224.1	233.2	249.0	261.0	268.6	272.4
40°	2284.4	1728.4	396.1	253.5	221.8	209.0	211.2	218.7	227.0	233.2	234.0
42.5°	2448.9	1780.5	352.4	246.7	213.5	196.8	193.2	198.5	207.5	215.8	217.3
45°	2667.7	1867.2	347.8	249.0	209.8	187.1	179.5	184.8	196.8	210.5	212.7
47.5°	2950.5	2004.6	369.0	261.0	212.0	181.8	170.6	175.8	191.6	209.8	212.7
50°	3285.5	2194.7	408.2	279.1	222.6	181.8	166.7	171.2	187.8	208.2	211.2
52.5°	3680.1	2459.4	448.8	297.3	237.6	188.6	168.3	167.5	182.6	201.5	205.2
55°	4115.5	2788.4	488.2	313.1	246.0	197.6	172.0	162.9	175.1	190.1	193.2
57.5°	4627.6	3238.8	556.7	328.3	250.4	204.5	176.6	158.4	165.2	175.8	178.1
60°	5322.6	3900.4	690.3	353.8	258.7	207.5	177.3	153.9	153.2	160.7	161.4
62.5°	6228.6	4675.2	817.8	384.0	275.4	208.2	174.3	150.9	143.3	145.7	145.7
65°	6872.9	4960.4	780.8	409.6	290.4	207.5	171.2	148.6	135.8	131.9	131.9
67.5°	6506.2	4381.8	663.1	416.5	291.9	199.2	164.4	143.3	129.0	119.9	119.9
69°	5967.5	3840.8	608.8	404.4	279.9	189.3	156.9	138.1	124.4	113.9	113.9
70°	5528.5	3431.2	575.6	390.0	265.6	181.1	150.1	132.8	119.9	110.9	110.2
72.5°	4127.5	2289.7	491.8	336.5	218.1	153.2	131.2	118.4	107.8	101.8	101.8
75°	2178.1	1147.4	402.8	274.6	168.3	122.3	107.8	99.5	93.5	92.8	92.0
77.5°	713.7	519.1	289.7	206.7	123.7	95.0	86.0	80.8	80.0	83.0	83.0
80°	385.4	310.1	186.4	139.6	86.0	70.9	66.4	65.7	67.8	72.4	72.4
82.5°	187.1	153.2	110.9	86.0	58.9	52.0	52.0	52.8	55.8	61.0	61.0
85°	80.8	72.4	64.1	48.3	36.2	32.4	36.9	40.8	43.0	46.8	48.3
87.5°	38.5	34.0	29.4	18.9	15.9	16.6	19.6	24.1	28.6	31.6	32.4
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)