

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: P270425

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270425  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
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-SL2-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15427.9 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

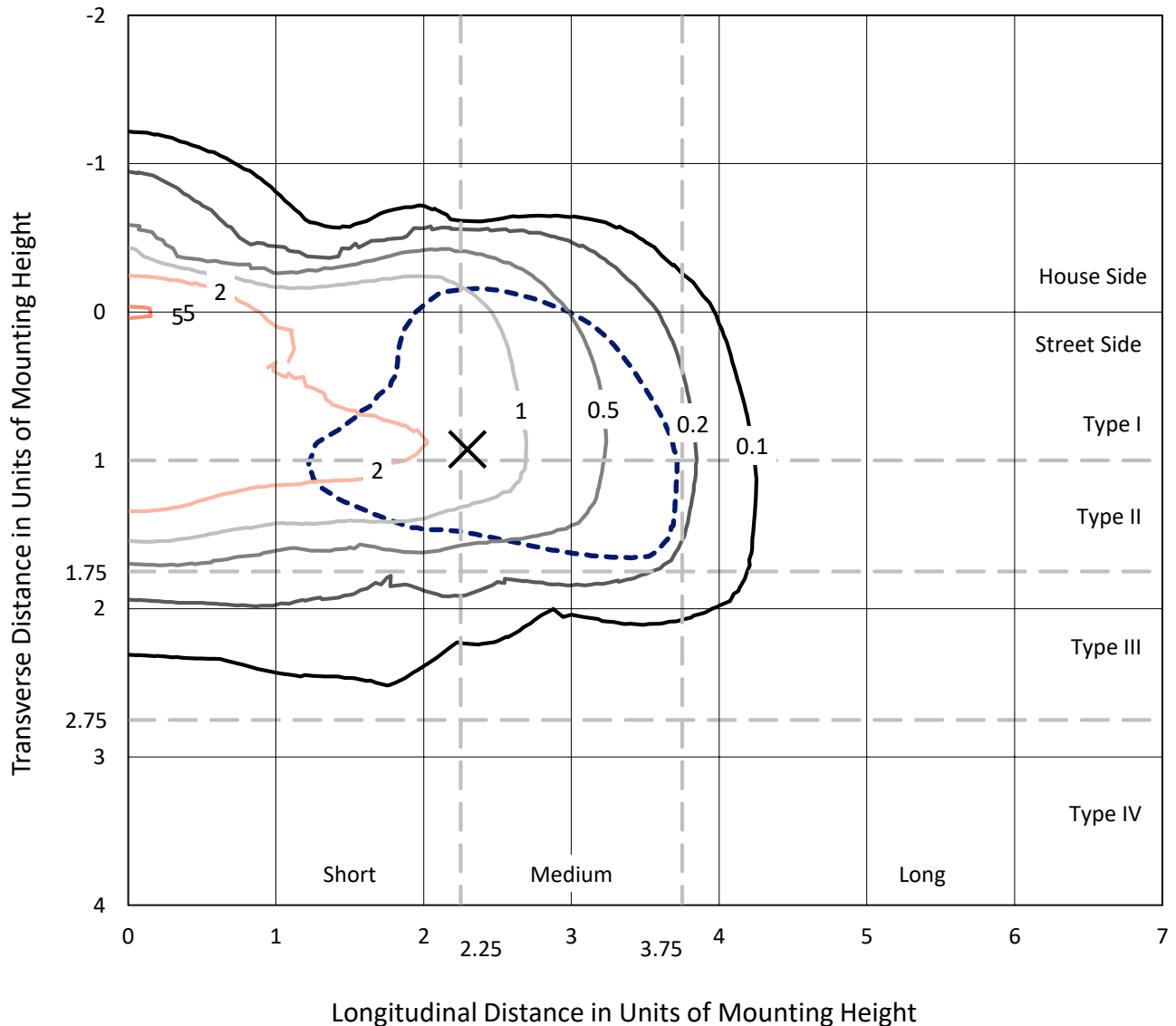
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

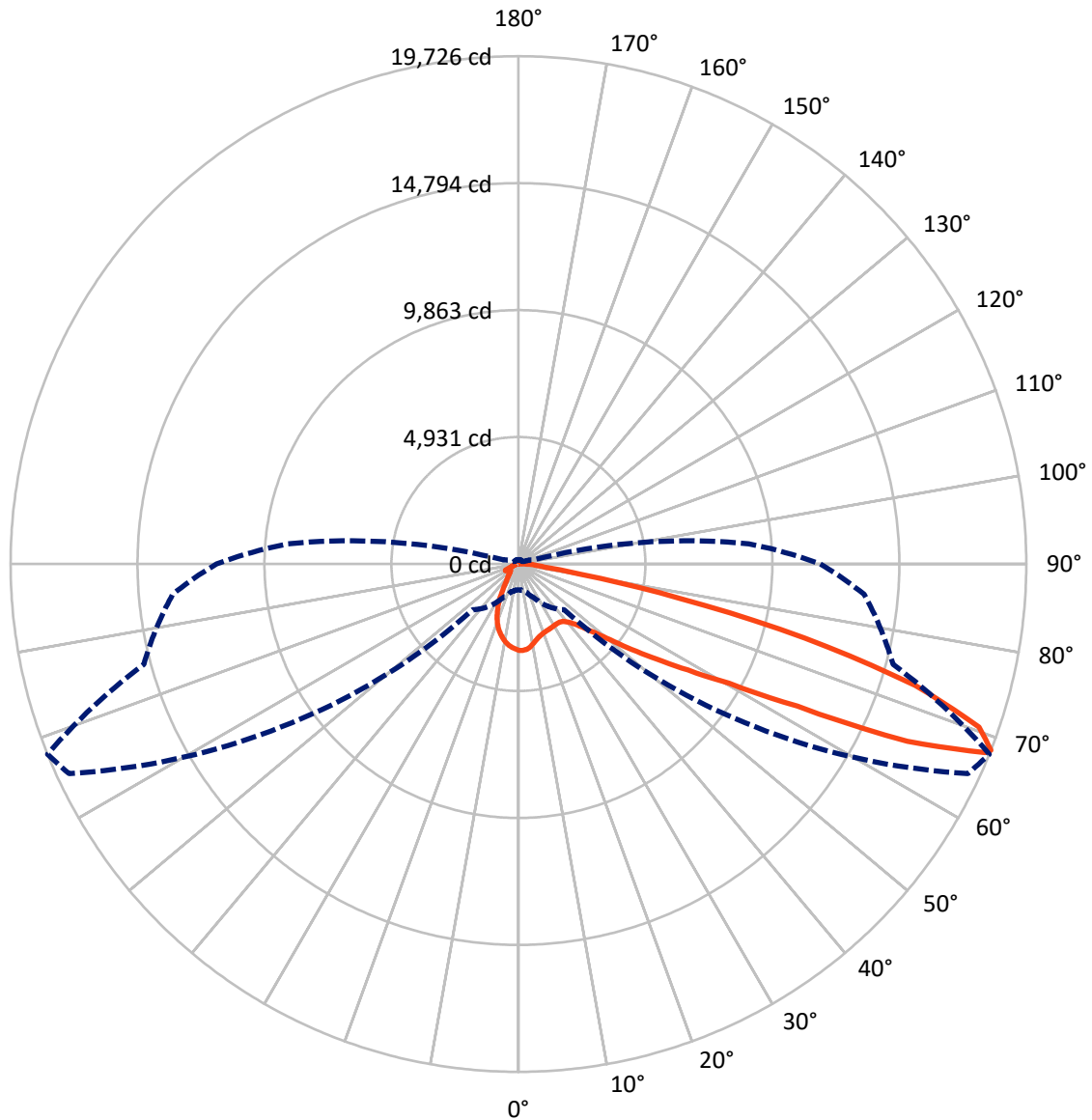
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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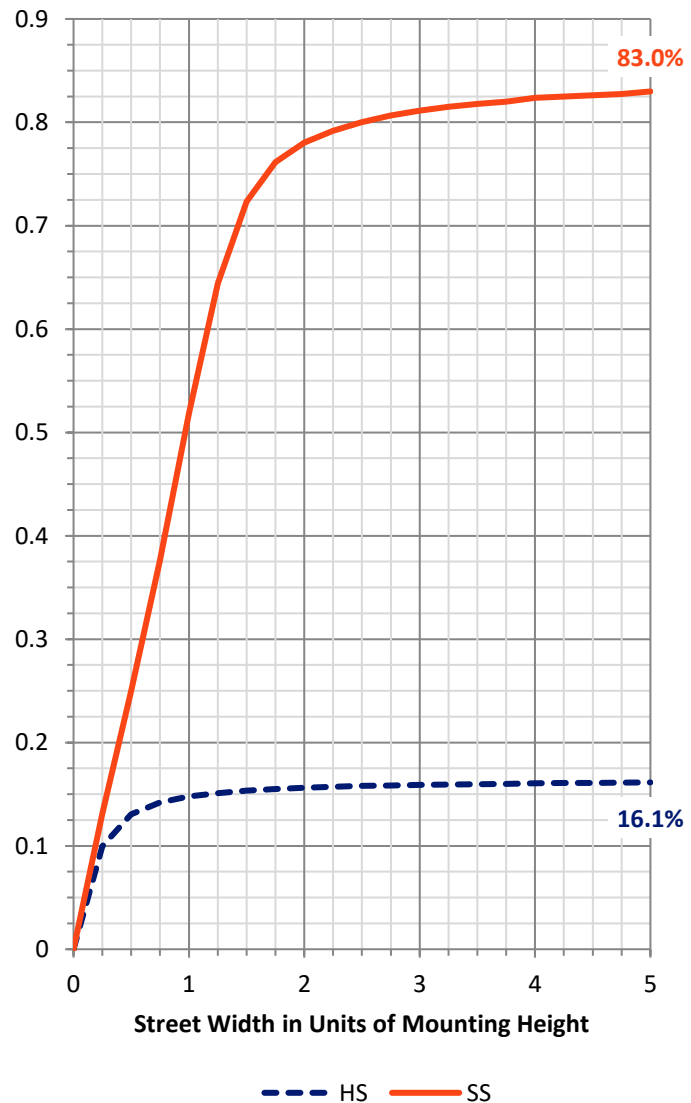
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2524.0	0.0	2524.0
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	12903.8	0.0	12903.8
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	15427.9	0.0	15427.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	287.6	1.9
10°-20°	667.1	4.3
20°-30°	902.3	5.8
30°-40°	1272.2	8.2
40°-50°	2091.9	13.6
50°-60°	3242.6	21.0
60°-70°	4204.3	27.3
70°-80°	2412.7	15.6
80°-90°	347.1	2.3
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°	15427.9	100.0
0°-180°	15427.9	100.0



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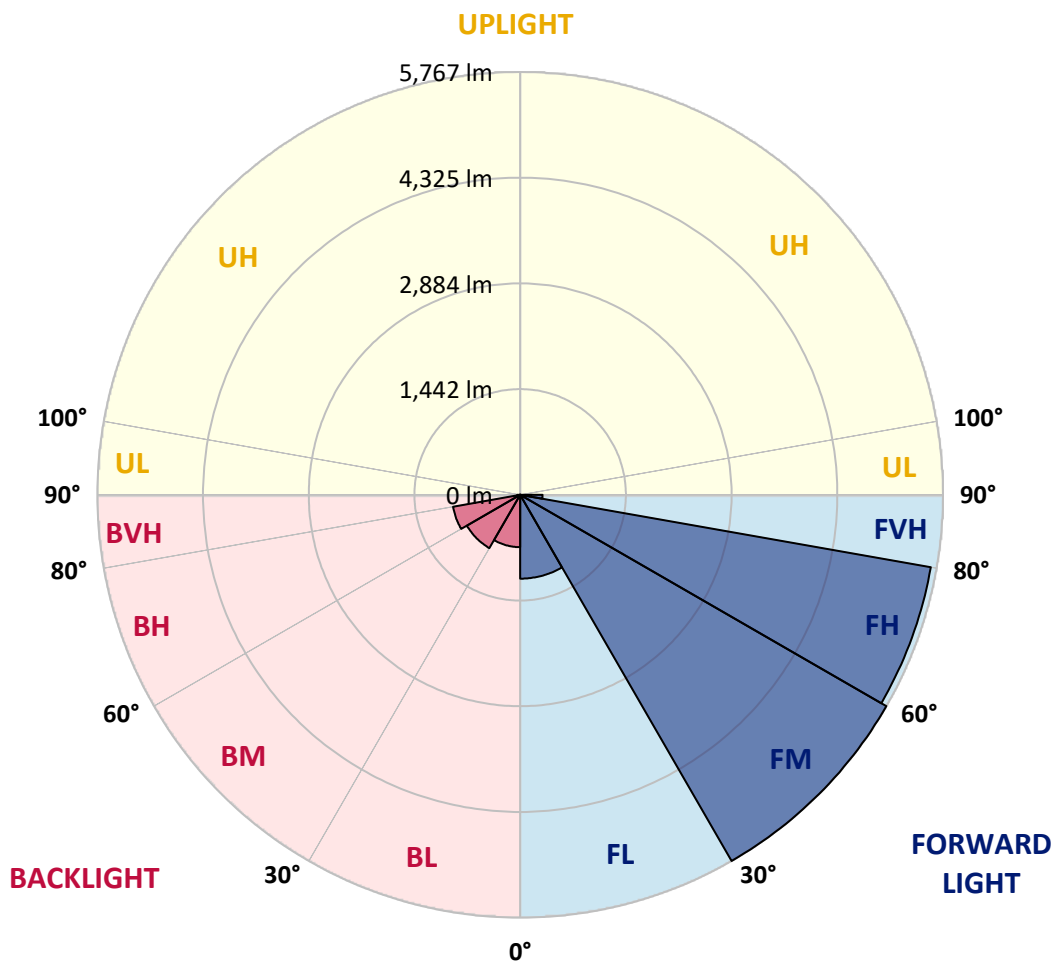
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1143.5	7.4			
FM	(30°-60°)	5767.2	37.4			
FH	(60°-80°)	5687.4	36.9			G3/7500
FVH	(80°-90°)	305.8	2.0			G3/500
BL	(0°-30°)	713.6	4.6	B2/1000		
BM	(30°-60°)	839.5	5.4	B1/1000		
BH	(60°-80°)	929.6	6.0	B2/1000		G2/1000
BVH	(80°-90°)	41.4	0.3			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0
2.5°	3267.2	3293.5	3293.5	3312.6	3329.7	3343.9	3356.0	3356.0	3356.0	3348.0	3340.8
5°	2923.7	2958.8	2964.0	3012.2	3075.7	3153.4	3240.0	3316.6	3331.8	3360.0	3371.1
7.5°	2684.8	2695.9	2714.9	2748.3	2812.8	2908.5	3044.5	3215.9	3257.3	3345.8	3392.3
10°	2515.4	2524.5	2540.6	2574.0	2632.4	2719.0	2853.0	3075.7	3144.3	3301.5	3393.3
12.5°	2391.5	2398.6	2413.7	2443.8	2503.3	2581.0	2718.0	2949.9	3034.5	3257.3	3407.5
15°	2294.8	2306.8	2319.0	2348.2	2408.6	2483.3	2622.3	2858.0	2949.9	3222.0	3433.6
17.5°	2256.5	2262.6	2264.4	2279.7	2334.1	2409.7	2548.8	2793.5	2888.3	3193.7	3453.8
20°	2280.6	2281.7	2261.6	2251.4	2282.7	2352.2	2487.2	2745.2	2842.0	3168.5	3461.8
22.5°	2386.4	2386.4	2334.1	2289.7	2268.6	2311.9	2445.9	2712.1	2816.7	3149.4	3461.8
25°	2588.0	2578.9	2497.3	2409.7	2315.9	2297.8	2419.8	2690.9	2797.6	3139.2	3448.8
27.5°	2853.0	2845.0	2741.2	2611.3	2442.0	2328.0	2410.6	2673.6	2778.5	3124.1	3420.4
30°	3175.6	3168.5	3050.6	2880.2	2630.3	2423.7	2431.8	2661.6	2763.4	3099.1	3373.0
32.5°	3497.0	3493.0	3399.2	3224.9	2890.3	2586.0	2487.2	2659.6	2755.3	3068.7	3315.6
35°	3820.5	3820.5	3763.1	3615.9	3240.0	2829.9	2603.2	2696.9	2770.5	3052.6	3266.2
37.5°	4298.3	4279.0	4172.3	4020.2	3680.4	3146.4	2790.6	2775.5	2828.9	3079.7	3250.2
40°	5038.0	4982.5	4715.6	4459.5	4161.2	3551.4	3064.7	2927.7	2959.8	3172.5	3288.4
42.5°	5811.9	5724.3	5370.5	4961.3	4658.0	4051.4	3424.5	3174.6	3173.5	3351.9	3410.3
45°	6476.2	6430.7	6047.7	5528.8	5225.4	4613.8	3879.1	3541.4	3505.1	3630.1	3645.2
47.5°	6862.2	6831.9	6601.0	6129.5	5898.6	5277.8	4455.5	4050.4	3981.7	4056.3	4033.2
50°	6755.3	6784.4	6718.0	6477.0	6622.2	6211.1	5190.1	4747.7	4617.7	4692.2	4635.9
52.5°	6192.9	6271.5	6331.0	6377.3	7038.5	7459.7	6113.2	5618.4	5510.7	5497.5	5443.1
55°	5180.0	5305.0	5492.4	5833.1	6926.7	8462.5	7725.8	6671.6	6514.4	6431.8	6453.0
57.5°	3525.3	3714.8	4118.9	4766.9	6345.1	8889.7	10110.2	8032.1	7766.0	7471.8	7540.4
60°	1942.0	2100.2	2581.0	3234.0	5017.8	8826.2	12223.5	10243.3	9405.8	8625.7	8766.7
62.5°	1256.6	1291.0	1648.7	2209.1	3079.7	7792.3	13397.7	13938.9	12164.0	10147.6	10346.0
65°	1009.9	1033.9	1209.4	1781.8	2145.6	5012.8	13450.1	17772.4	16602.5	12215.5	12221.6
67.5°	986.6	997.7	1099.5	1498.6	2012.6	2729.1	11626.0	19284.3	19555.4	14656.3	13476.3
68°	1000.7	1013.8	1116.7	1452.2	2011.6	2515.4	10745.2	19261.1	19725.6	15064.5	13476.3
70°	882.9	898.9	1138.8	1502.7	1925.8	2162.7	7357.9	18238.1	18985.9	16002.9	12787.0
72.5°	461.5	448.4	563.3	1186.2	2167.8	2253.5	3887.1	15237.0	16109.7	14820.6	11047.4
75°	359.9	327.5	315.5	468.6	1906.7	2337.1	2257.5	10829.7	11489.0	10683.6	7384.2
77.5°	338.7	299.3	276.0	277.1	839.5	2431.8	1826.2	6373.4	6373.4	5096.4	2356.3
80°	272.0	235.9	220.8	252.0	405.1	2241.4	1905.8	2904.5	2477.2	1317.2	649.0
82.5°	179.4	160.3	161.2	204.5	307.4	1496.5	2207.0	1434.1	1077.3	583.4	382.0
85°	113.8	97.7	108.9	143.1	229.7	667.3	2184.9	996.7	713.6	327.5	190.5
87.5°	57.4	44.3	54.3	74.6	140.0	191.5	1798.9	890.0	529.1	136.1	103.8
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°	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0	3357.0
2.5°	3340.8	3318.7	3307.6	3289.5	3267.2	3245.0	3229.9	3222.8	3218.8	3221.0	3220.0
5°	3365.1	3335.9	3288.4	3221.0	3151.3	3077.9	3021.4	2978.1	2950.8	2942.8	2940.7
7.5°	3383.1	3340.8	3252.1	3129.2	3010.3	2881.4	2771.5	2683.7	2624.3	2597.1	2596.1
10°	3380.1	3325.7	3185.7	3004.2	2829.9	2640.5	2468.2	2321.0	2214.1	2162.7	2160.8
12.5°	3383.1	3308.5	3104.1	2858.0	2608.1	2337.1	2081.2	1852.3	1693.0	1617.5	1614.6
15°	3395.2	3290.4	3020.5	2694.8	2349.2	1966.2	1600.4	1313.1	1168.1	1118.7	1118.7
17.5°	3394.2	3260.2	2923.7	2505.5	2041.8	1528.8	1092.5	915.1	901.0	946.4	953.5
20°	3374.2	3211.9	2798.7	2280.6	1681.0	1058.3	740.7	715.5	828.3	953.5	967.5
22.5°	3342.9	3149.4	2654.5	2019.6	1260.7	689.3	571.4	609.7	762.9	918.1	940.3
25°	3299.6	3073.8	2489.3	1716.3	838.5	495.9	476.7	524.0	631.9	735.7	751.8
27.5°	3236.1	2978.1	2308.9	1387.7	535.1	408.2	415.1	448.4	494.8	539.2	548.2
30°	3156.5	2866.2	2112.4	1023.9	406.2	364.8	376.8	397.1	417.3	445.5	451.5
32.5°	3075.7	2752.2	1907.8	703.5	354.7	341.6	353.8	364.8	382.0	401.2	405.1
35°	3003.3	2646.4	1697.2	490.8	332.6	326.5	332.6	339.6	356.7	375.9	377.9
37.5°	2950.8	2559.8	1477.4	388.0	319.4	313.4	316.5	319.4	339.6	367.9	370.9
40°	2943.7	2502.4	1254.8	348.7	309.3	301.3	299.3	301.3	327.5	359.9	362.8
42.5°	3012.2	2505.5	1037.1	332.6	301.3	292.3	284.3	288.3	311.4	336.7	338.7
45°	3174.6	2575.9	848.5	325.5	294.3	287.2	275.2	277.1	288.3	301.3	303.4
47.5°	3460.8	2730.0	704.5	321.6	288.3	282.2	267.1	261.0	262.0	269.1	269.1
50°	3918.2	2988.1	616.7	317.5	283.1	272.0	254.9	242.9	239.8	243.9	244.9
52.5°	4600.6	3430.5	574.5	309.3	274.2	259.0	239.8	227.8	222.7	226.7	226.7
55°	5522.7	4137.1	554.3	298.2	263.1	242.9	225.7	215.7	211.6	214.7	214.7
57.5°	6573.8	5055.1	588.6	283.1	248.9	225.7	213.6	206.6	203.6	206.6	207.6
60°	7822.5	6256.4	824.4	264.0	233.7	210.7	203.6	199.6	197.5	200.5	200.5
62.5°	9482.4	7854.8	1275.9	248.9	217.7	196.5	194.6	192.4	190.5	193.4	193.4
65°	11274.3	9309.0	1313.1	239.8	203.6	184.4	185.4	185.4	183.4	186.5	186.5
67.5°	11844.6	9183.1	733.6	228.8	186.5	172.4	176.3	176.3	175.3	178.4	177.3
68°	11723.7	8983.5	639.0	225.7	183.4	169.3	173.4	174.4	173.4	176.3	175.3
70°	10822.7	7886.9	420.2	208.6	170.3	159.2	165.3	166.2	165.3	169.3	168.3
72.5°	8934.2	5915.8	310.5	182.4	154.1	146.2	152.2	153.3	154.1	158.2	157.3
75°	5674.0	3267.2	244.9	155.1	138.1	131.1	137.0	140.0	142.1	148.1	145.2
77.5°	1554.0	991.6	198.5	132.1	118.9	115.9	120.0	124.0	126.0	132.9	128.0
80°	544.3	438.5	165.3	111.8	98.8	97.7	101.8	105.8	107.8	113.8	107.8
82.5°	330.5	286.2	132.1	87.7	77.7	76.5	81.7	85.7	87.7	87.7	83.6
85°	172.4	151.2	96.7	61.4	53.4	50.3	59.5	64.5	65.4	64.5	61.4
87.5°	96.7	85.7	51.5	29.3	24.2	25.2	31.3	38.3	41.3	40.3	38.3
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)