

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: P196565

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196565  
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-05-D-UNV-SL2-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 615mA 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: 18784.9 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

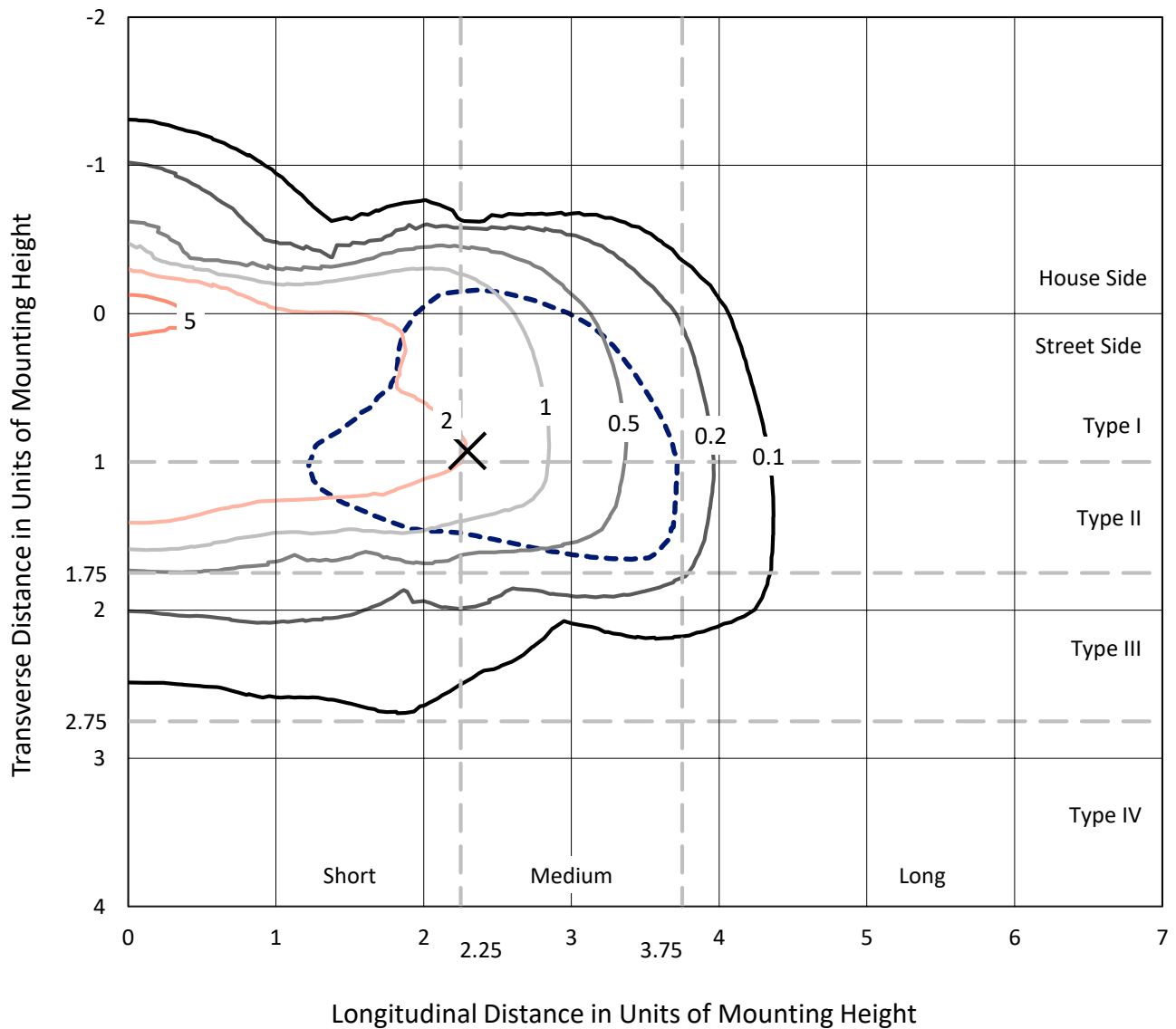
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

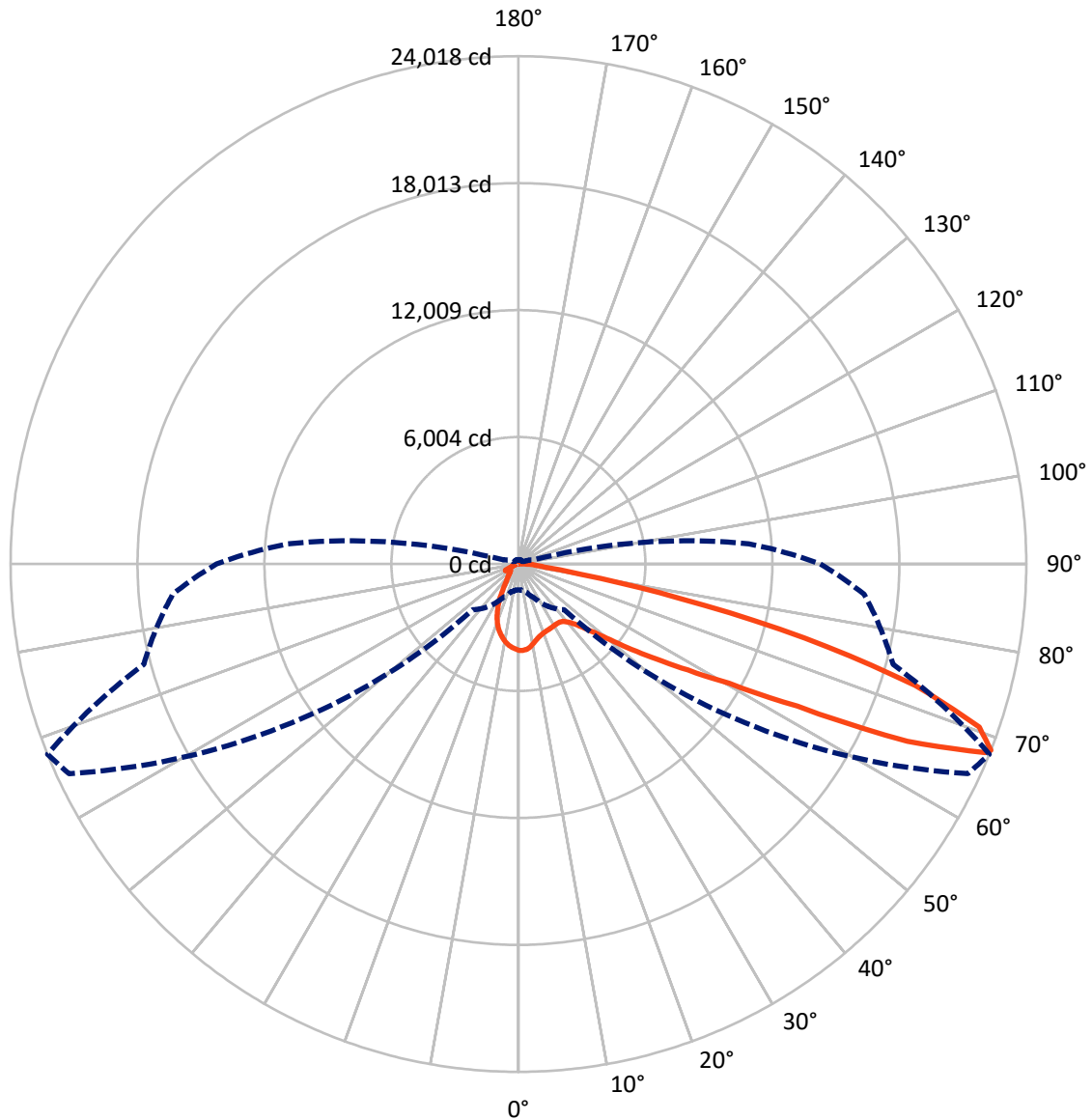
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.5 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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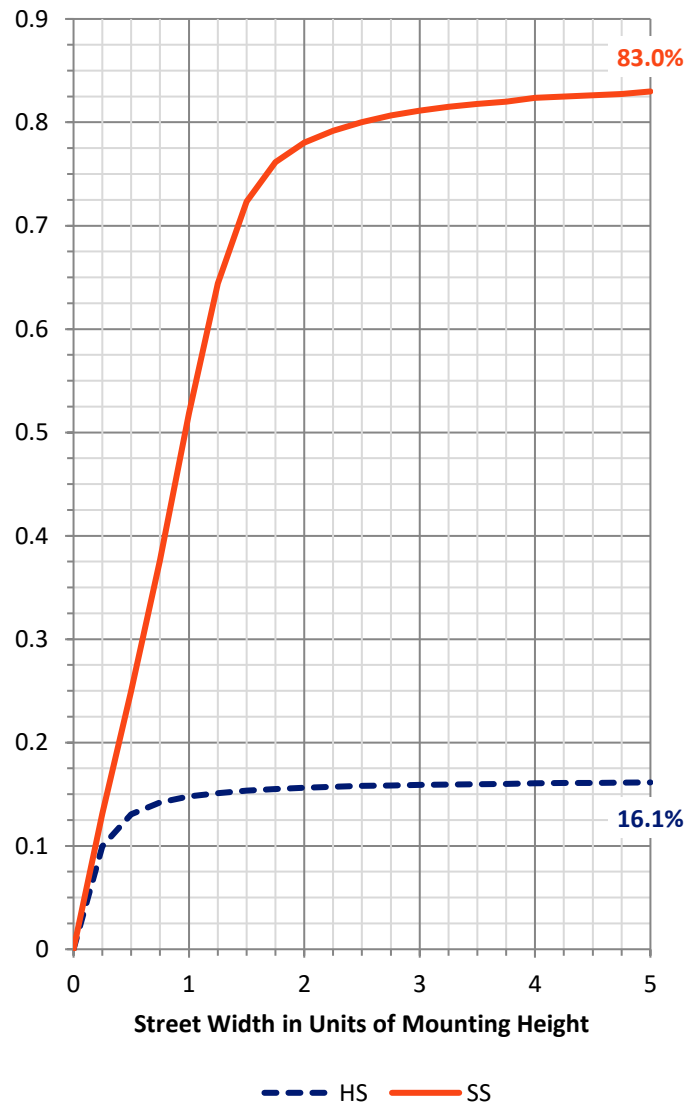
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3073.3	0.0	3073.3
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	15711.7	0.0	15711.7
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	18784.9	0.0	18784.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	350.2	1.9
10°-20°	812.3	4.3
20°-30°	1098.6	5.8
30°-40°	1549.0	8.2
40°-50°	2547.1	13.6
50°-60°	3948.2	21.0
60°-70°	5119.2	27.3
70°-80°	2937.6	15.6
80°-90°	422.7	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°	18784.9	100.0
0°-180°	18784.9	100.0



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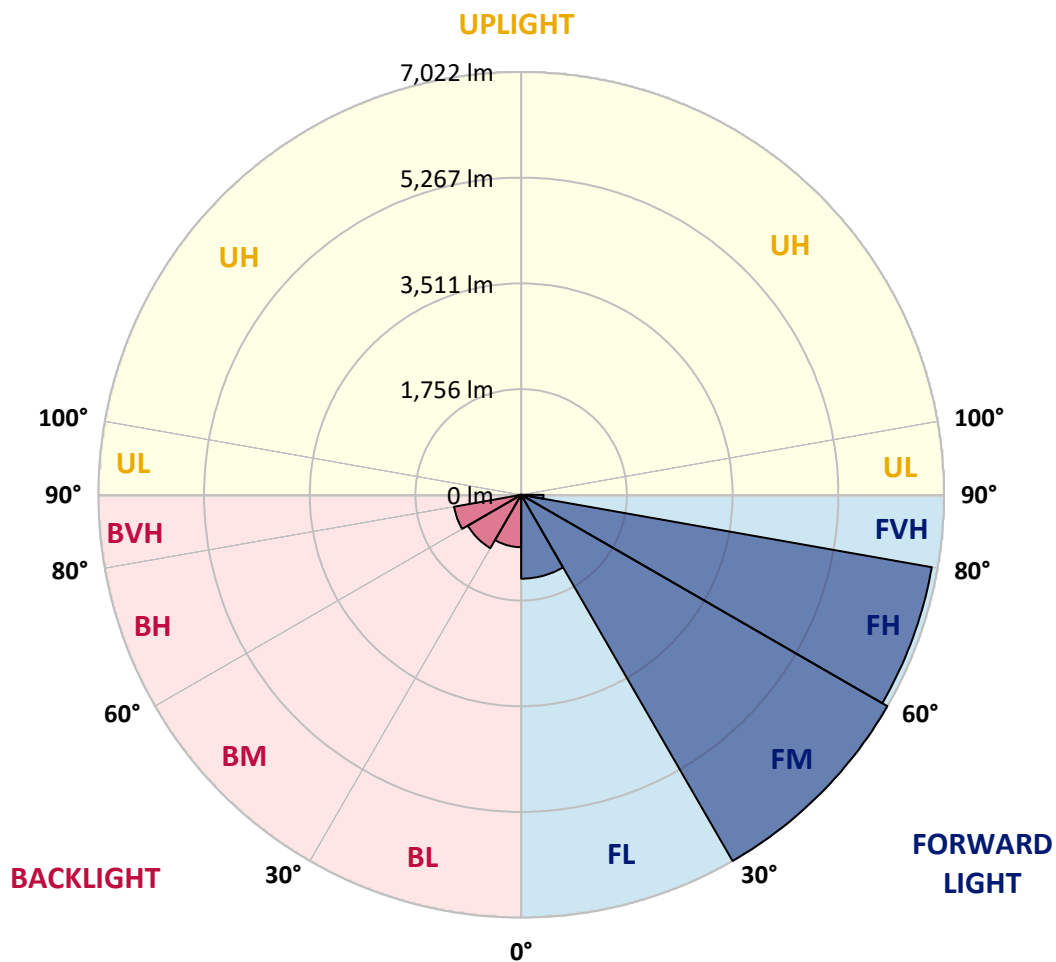
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1392.3	7.4			
FM	(30°-60°)	7022.1	37.4			
FH	(60°-80°)	6925.0	36.9			G3/7500
FVH	(80°-90°)	372.3	2.0			G3/500
BL	(0°-30°)	868.8	4.6	B2/1000		
BM	(30°-60°)	1022.2	5.4	B2/2500		
BH	(60°-80°)	1131.8	6.0	B3/2500		G3/2500
BVH	(80°-90°)	50.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4
2.5°	3978.2	4010.2	4010.2	4033.5	4054.3	4071.4	4086.2	4086.2	4086.2	4076.4	4067.8
5°	3559.7	3602.8	3608.9	3667.8	3745.1	3839.6	3945.2	4038.3	4056.8	4091.1	4104.7
7.5°	3268.9	3282.4	3305.7	3346.3	3424.8	3541.4	3707.0	3915.7	3966.0	4074.0	4130.4
10°	3062.9	3073.9	3093.4	3134.0	3205.1	3310.7	3473.9	3745.1	3828.6	4019.9	4131.6
12.5°	2911.9	2920.5	2938.8	2975.6	3048.2	3142.7	3309.5	3591.7	3694.8	3966.0	4148.8
15°	2794.1	2808.8	2823.6	2859.1	2932.7	3023.5	3192.9	3480.0	3591.7	3923.0	4180.7
17.5°	2747.5	2754.9	2757.2	2775.7	2842.0	2933.9	3103.3	3401.5	3516.8	3888.6	4205.3
20°	2777.0	2778.1	2753.6	2741.4	2779.3	2864.0	3028.4	3342.6	3460.3	3858.0	4215.0
22.5°	2905.8	2905.8	2842.0	2788.0	2762.2	2814.9	2978.2	3302.2	3429.7	3834.7	4215.0
25°	3151.1	3140.1	3040.6	2933.9	2819.9	2797.8	2946.2	3276.3	3406.3	3822.4	4199.1
27.5°	3473.9	3464.1	3337.7	3179.5	2973.3	2834.6	2935.2	3255.5	3383.1	3804.0	4164.8
30°	3866.5	3858.0	3714.4	3507.0	3202.7	2951.2	2960.9	3240.7	3364.6	3773.3	4107.0
32.5°	4258.1	4253.1	4139.0	3926.7	3519.2	3148.8	3028.4	3238.3	3355.0	3736.4	4037.1
35°	4651.9	4651.9	4582.0	4402.8	3945.2	3445.7	3169.6	3283.7	3373.3	3716.9	3977.0
37.5°	5233.5	5210.2	5080.1	4894.9	4481.4	3830.9	3397.9	3379.4	3444.4	3750.0	3957.4
40°	6134.3	6066.7	5741.6	5429.8	5066.7	4324.3	3731.5	3564.7	3603.9	3862.9	4004.1
42.5°	7076.6	6969.8	6539.1	6041.0	5671.6	4932.9	4169.7	3865.4	3864.1	4081.3	4152.5
45°	7885.2	7830.1	7363.7	6731.8	6362.5	5617.6	4723.1	4312.0	4267.7	4420.0	4438.3
47.5°	8355.3	8318.5	8037.4	7463.2	7182.1	6426.3	5424.9	4931.6	4848.3	4939.1	4910.7
50°	8225.1	8260.8	8179.8	7886.6	8063.3	7562.6	6319.5	5780.8	5622.5	5713.2	5644.7
52.5°	7540.4	7636.1	7708.6	7765.0	8570.0	9082.9	7443.5	6841.0	6709.7	6693.8	6627.5
55°	6307.2	6459.4	6687.6	7102.4	8433.8	10303.9	9406.9	8123.3	7931.9	7831.2	7857.1
57.5°	4292.4	4523.0	5015.1	5804.2	7725.7	10824.2	12310.1	9779.9	9456.0	9097.7	9181.0
60°	2364.6	2557.2	3142.7	3937.7	6109.7	10746.8	14883.4	12472.2	11452.4	10502.6	10674.4
62.5°	1530.1	1571.9	2007.5	2689.8	3750.0	9487.8	16313.0	16971.9	14810.9	12355.6	12597.3
65°	1229.5	1259.0	1472.5	2169.5	2612.5	6103.6	16376.8	21639.8	20215.0	14873.6	14880.9
67.5°	1201.3	1214.9	1338.8	1824.6	2450.4	3323.0	14155.7	23480.4	23810.5	17845.6	16408.7
68°	1218.5	1234.4	1359.6	1768.3	2449.3	3062.9	13083.2	23452.2	24017.8	18342.6	16408.7
70°	1074.9	1094.6	1386.6	1829.5	2344.9	2633.3	8958.9	22206.6	23117.2	19485.0	15569.3
72.5°	562.0	546.1	685.9	1444.3	2639.4	2743.7	4732.9	18552.3	19615.0	18045.6	13451.4
75°	438.0	398.8	384.0	570.6	2321.6	2845.6	2748.6	13186.3	13988.8	13008.4	8990.8
77.5°	412.4	364.5	336.2	337.5	1022.1	2960.9	2223.5	7760.1	7760.1	6205.4	2868.9
80°	331.3	287.2	268.8	306.8	493.3	2729.1	2320.4	3536.5	3016.2	1603.8	790.3
82.5°	218.4	195.1	196.3	249.1	374.2	1822.2	2687.3	1746.2	1311.7	710.5	465.1
85°	138.6	119.0	132.5	174.3	279.8	812.4	2660.4	1213.6	868.8	398.8	231.9
87.5°	69.9	54.0	66.2	90.8	170.6	233.2	2190.3	1083.6	644.2	165.6	126.4
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°	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4	4087.4
2.5°	4067.8	4040.9	4027.3	4005.2	3978.2	3951.3	3932.8	3924.3	3919.3	3921.8	3920.6
5°	4097.2	4061.7	4004.1	3921.8	3837.0	3747.5	3678.9	3626.1	3592.9	3583.0	3580.7
7.5°	4119.3	4067.8	3959.8	3810.1	3665.3	3508.2	3374.5	3267.7	3195.4	3162.2	3161.0
10°	4115.7	4049.3	3878.8	3658.0	3445.7	3215.0	3005.1	2826.0	2695.9	2633.3	2630.9
12.5°	4119.3	4028.5	3779.4	3480.0	3175.7	2845.6	2533.9	2255.4	2061.5	1969.5	1965.8
15°	4134.1	4006.4	3677.5	3281.3	2860.3	2394.1	1948.6	1598.9	1422.2	1362.0	1362.0
17.5°	4132.8	3969.6	3559.7	3050.5	2486.0	1861.4	1330.1	1114.2	1097.1	1152.2	1160.9
20°	4108.2	3910.7	3407.6	2777.0	2046.8	1288.5	901.9	871.3	1008.7	1160.9	1178.1
22.5°	4070.2	3834.7	3232.1	2459.1	1535.1	839.3	695.8	742.4	928.9	1117.8	1144.9
25°	4017.5	3742.6	3031.0	2089.7	1020.9	603.7	580.3	638.1	769.4	895.8	915.4
27.5°	3940.2	3626.1	2811.2	1689.7	651.6	497.0	505.6	546.1	602.4	656.5	667.6
30°	3843.2	3489.8	2572.0	1246.7	494.5	444.2	458.9	483.5	508.0	542.4	549.7
32.5°	3745.1	3351.2	2322.9	856.5	431.9	415.9	430.7	444.2	465.1	488.4	493.3
35°	3656.7	3222.4	2066.4	597.5	405.0	397.6	405.0	413.5	434.5	457.7	460.2
37.5°	3592.9	3116.8	1799.0	472.4	389.0	381.7	385.3	389.0	413.5	447.9	451.6
40°	3584.4	3046.9	1527.8	424.6	376.7	366.9	364.5	366.9	398.8	438.0	441.7
42.5°	3667.8	3050.5	1262.7	405.0	366.9	355.8	346.1	350.9	379.1	409.8	412.4
45°	3865.4	3136.4	1033.1	396.4	358.3	349.7	335.0	337.5	350.9	366.9	369.4
47.5°	4213.8	3324.2	857.6	391.4	350.9	343.6	325.1	317.8	319.0	327.7	327.7
50°	4771.0	3638.4	750.9	386.6	344.8	331.3	310.4	295.8	292.0	296.9	298.2
52.5°	5601.6	4177.0	699.5	376.7	333.8	315.3	292.0	277.3	271.2	276.1	276.1
55°	6724.5	5037.2	674.9	363.2	320.2	295.8	274.9	262.6	257.8	261.3	261.3
57.5°	8004.4	6155.1	716.6	344.8	303.0	274.9	260.1	251.6	247.9	251.6	252.8
60°	9524.6	7617.8	1003.8	321.6	284.7	256.4	247.9	243.0	240.5	244.2	244.2
62.5°	11545.7	9563.9	1553.4	303.0	265.1	239.3	236.9	234.4	231.9	235.6	235.6
65°	13727.5	11334.7	1598.9	292.0	247.9	224.5	225.8	225.8	223.3	227.0	227.0
67.5°	14422.0	11181.3	893.3	278.5	227.0	209.8	214.7	214.7	213.5	217.2	216.0
68°	14274.7	10938.3	777.9	274.9	223.3	206.2	211.1	212.3	211.1	214.7	213.5
70°	13177.8	9603.3	511.7	254.0	207.4	193.8	201.2	202.4	201.2	206.2	205.0
72.5°	10878.2	7203.0	377.9	222.2	187.7	177.9	185.3	186.5	187.7	192.7	191.4
75°	6908.5	3978.2	298.2	189.0	168.2	159.5	166.8	170.6	173.0	180.4	176.7
77.5°	1892.2	1207.5	241.8	160.7	144.8	141.2	146.0	150.9	153.4	161.9	155.8
80°	662.6	533.7	201.2	136.2	120.3	119.0	123.9	128.8	131.3	138.6	131.3
82.5°	402.5	348.5	160.7	106.7	94.5	93.3	99.4	104.4	106.7	106.7	101.8
85°	209.8	184.1	117.8	74.9	65.0	61.4	72.4	78.5	79.8	78.5	74.9
87.5°	117.8	104.4	62.6	35.6	29.5	30.7	38.0	46.7	50.3	49.0	46.7
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)