

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: P270589

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270589  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-7027-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17217.1 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 210  
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

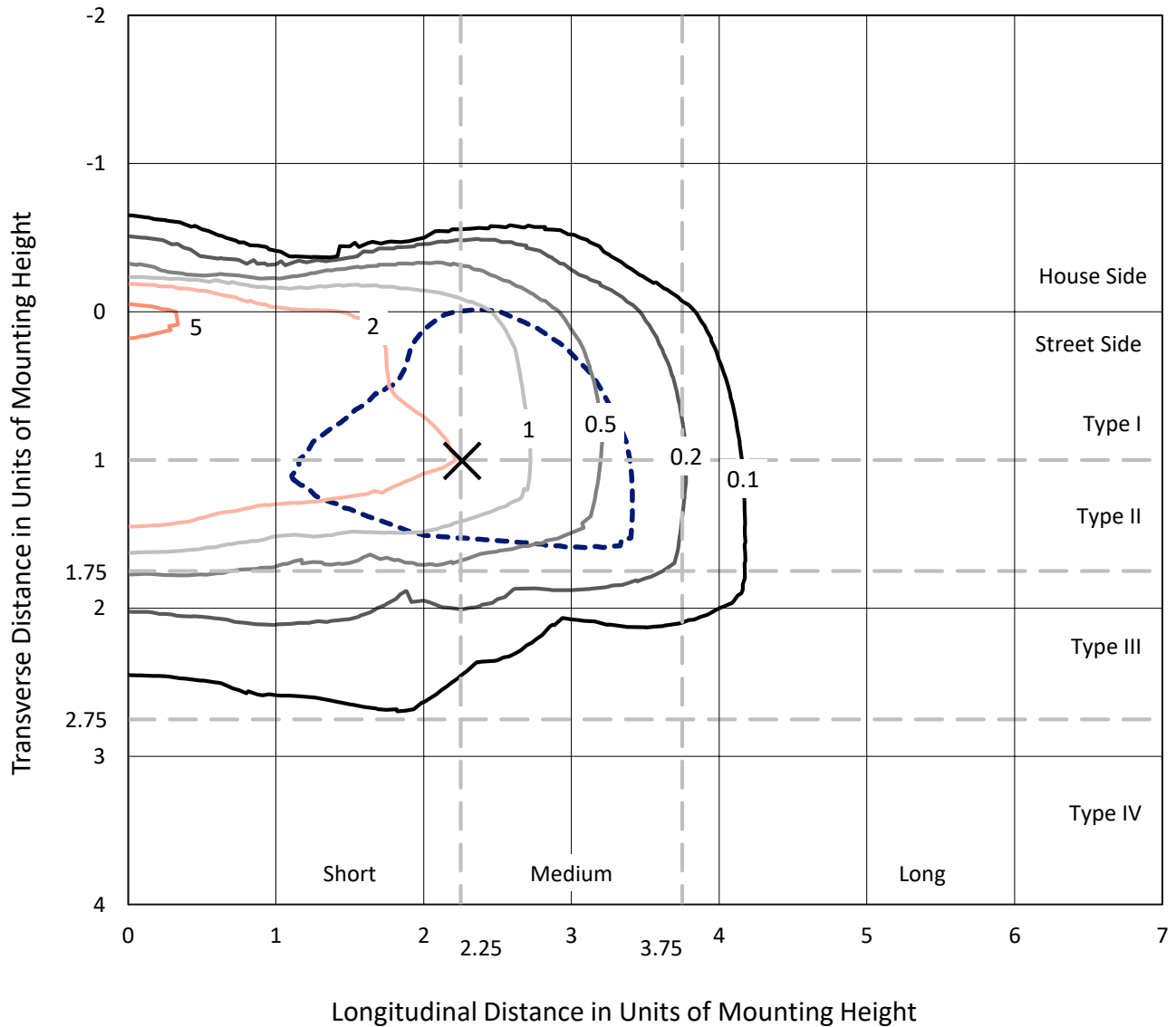


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

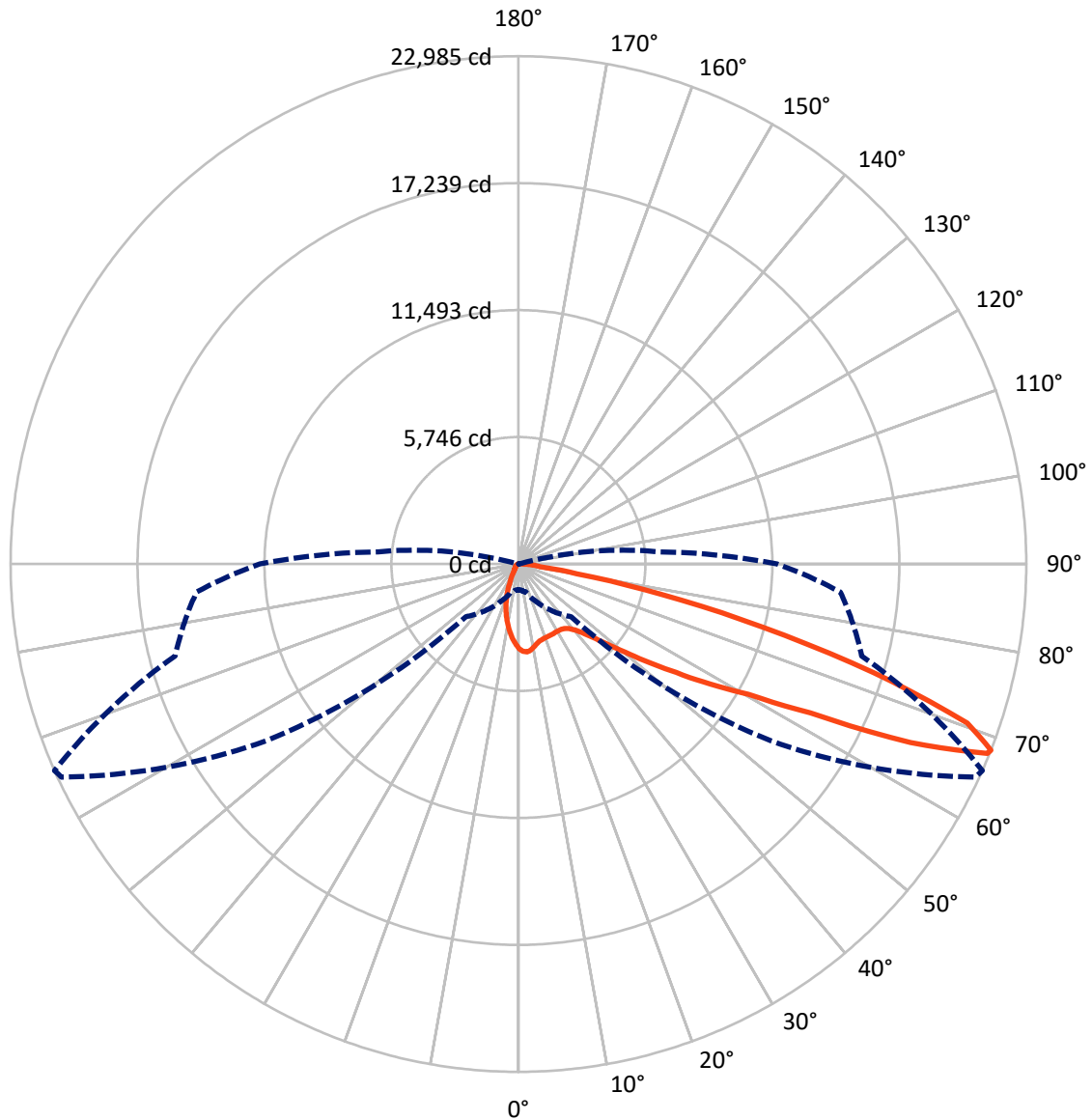


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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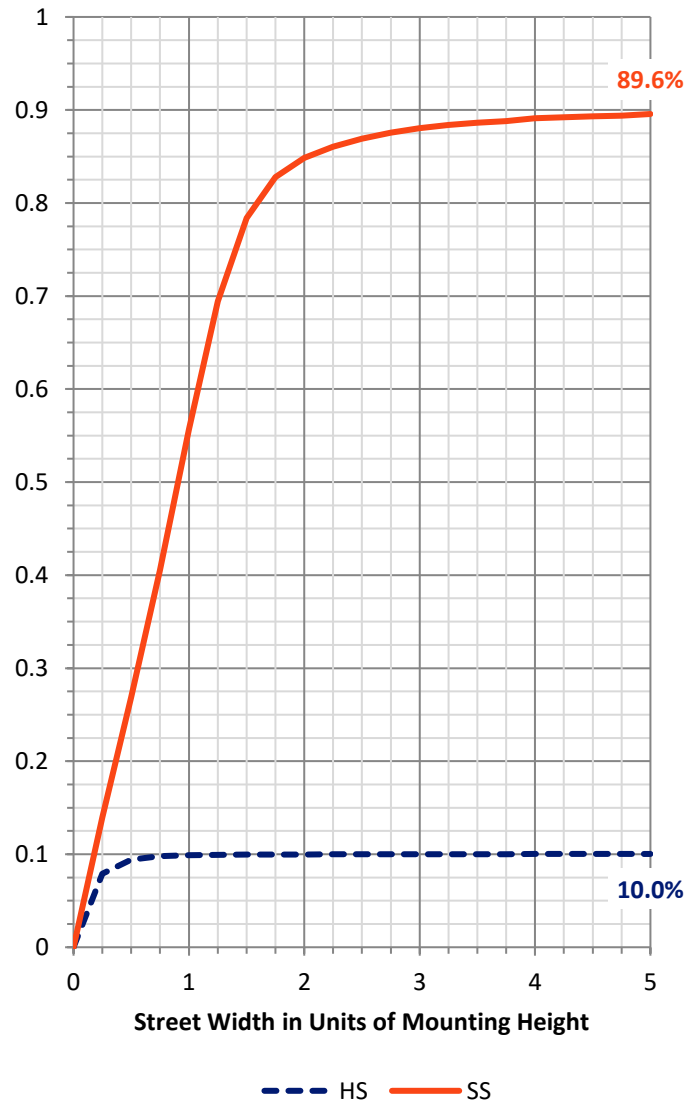
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1743.9	0.0	1743.9
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	15473.3	0.0	15473.3
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	17217.1	0.0	17217.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	314.5	1.8
10°-20°	676.6	3.9
20°-30°	980.4	5.7
30°-40°	1500.9	8.7
40°-50°	2567.1	14.9
50°-60°	4015.7	23.3
60°-70°	4624.0	26.9
70°-80°	2313.9	13.4
80°-90°	224.1	1.3
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°	17217.1	100.0
0°-180°	17217.1	100.0



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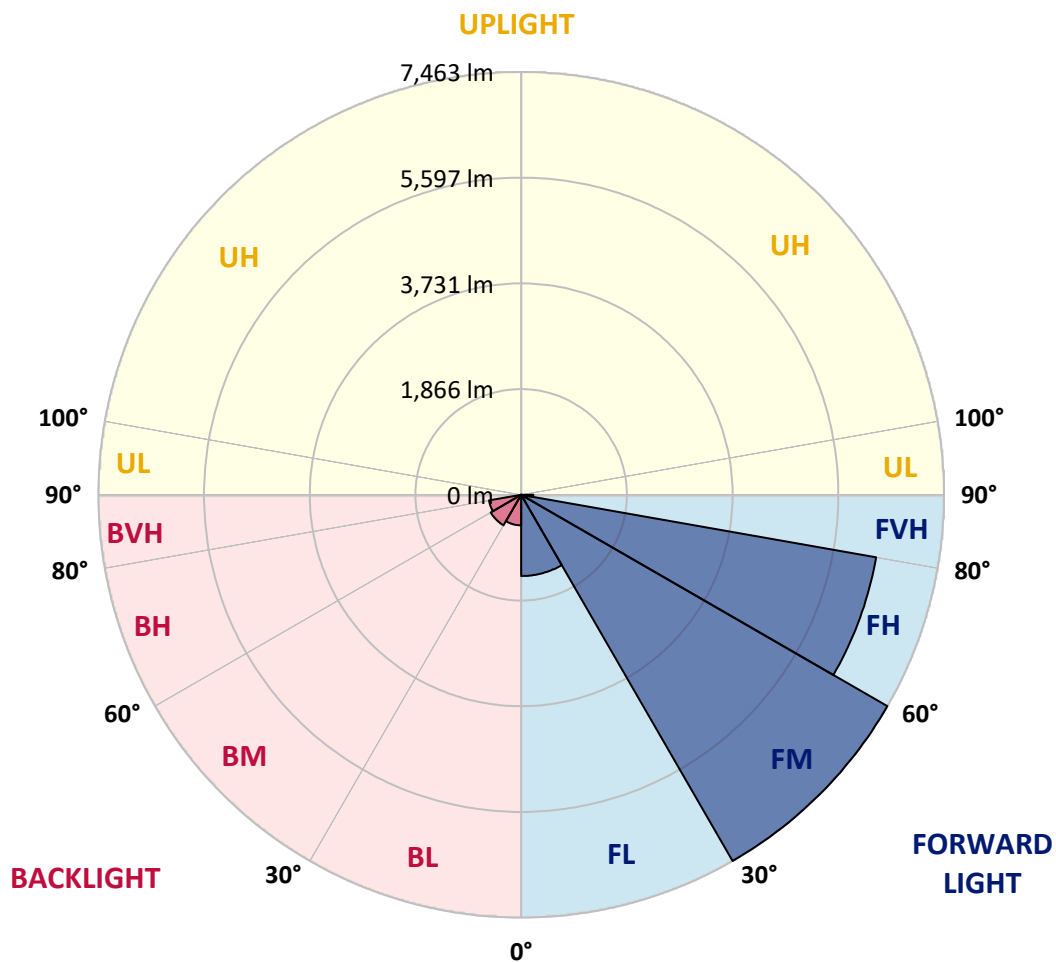
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1433.2	8.3			
FM	(30°-60°)	7462.7	43.3			
FH	(60°-80°)	6361.7	36.9			G3/7500
FVH	(80°-90°)	215.6	1.3			G2/225
BL	(0°-30°)	538.3	3.1	B2/1000		
BM	(30°-60°)	621.0	3.6	B1/1000		
BH	(60°-80°)	576.2	3.3	B2/1000		G2/1000
BVH	(80°-90°)	8.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

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

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9
2.5°	4034.5	4037.3	4035.8	4039.9	4037.3	4017.0	3995.3	3949.4	3953.4	3894.0	3827.7
5°	3750.7	3773.6	3796.6	3819.7	3875.0	3923.6	3981.7	3995.3	3995.3	3944.0	3846.6
7.5°	3461.3	3462.7	3488.5	3519.6	3593.8	3683.1	3818.2	3939.8	3942.7	3956.1	3849.3
10°	3243.8	3250.5	3268.2	3301.9	3376.3	3464.1	3615.5	3806.1	3820.9	3920.9	3822.3
12.5°	3074.9	3083.1	3101.8	3141.2	3208.7	3299.2	3458.7	3676.4	3696.6	3887.1	3814.3
15°	2945.2	2956.0	2970.9	3010.0	3083.1	3178.9	3353.4	3589.8	3614.2	3873.8	3839.9
17.5°	2891.0	2891.0	2889.7	2916.7	2989.6	3087.0	3269.6	3543.9	3575.0	3884.5	3883.2
20°	2914.0	2910.0	2881.7	2874.8	2919.4	3016.8	3203.3	3514.1	3549.3	3904.8	3935.8
22.5°	3035.7	3027.6	2964.0	2911.3	2897.8	2962.7	3158.7	3493.9	3535.8	3946.7	4006.1
25°	3293.8	3269.6	3181.6	3062.7	2956.0	2949.1	3127.5	3483.1	3527.6	3995.3	4083.2
27.5°	3629.1	3622.2	3481.7	3322.2	3116.8	2993.8	3118.1	3475.0	3519.6	4030.4	4145.3
30°	4045.2	4048.0	3885.8	3677.8	3366.8	3119.5	3147.9	3471.0	3516.9	4033.1	4172.4
32.5°	4475.1	4477.8	4342.6	4119.6	3708.7	3335.8	3231.7	3489.8	3531.6	4022.3	4171.0
35°	4888.7	4892.8	4811.7	4631.9	4165.6	3635.8	3389.8	3554.8	3584.4	4029.1	4168.3
37.5°	5411.7	5428.0	5327.9	5160.4	4738.6	4076.4	3647.9	3685.7	3710.1	4084.6	4188.5
40°	6303.9	6282.1	5995.6	5711.9	5360.5	4612.9	4021.1	3911.5	3919.7	4227.8	4265.6
42.5°	7343.1	7316.2	6825.5	6336.3	5999.7	5260.4	4498.2	4257.4	4256.2	4468.3	4433.2
45°	8237.9	8221.7	7705.4	7052.7	6708.0	5975.3	5086.1	4756.3	4740.0	4884.7	4738.6
47.5°	8873.2	8859.7	8469.1	7815.0	7527.0	6762.0	5819.9	5436.2	5402.2	5429.4	5234.8
50°	8935.4	8920.4	8783.9	8363.7	8484.0	7916.3	6726.9	6326.9	6283.6	6241.7	5984.9
52.5°	8354.1	8352.8	8424.5	8397.4	9154.4	9401.8	7839.1	7428.4	7377.1	7270.3	7014.8
55°	7166.1	7159.4	7431.0	7825.8	9139.4	10934.3	9535.5	8739.4	8671.8	8458.4	8123.1
57.5°	5236.1	5200.9	5768.6	6605.2	8497.4	11604.8	12229.2	10368.1	10255.9	9578.7	9062.5
60°	2891.0	2904.6	3634.5	4625.2	6977.0	11472.3	14707.9	12267.1	11972.4	10545.2	10024.7
62.5°	1620.5	1654.4	2197.8	3006.0	4448.0	10397.8	16038.0	15535.2	14825.5	11672.3	11241.2
65°	1225.8	1246.2	1519.3	2319.3	2804.6	7266.2	16250.2	20105.0	19492.6	13380.8	13178.0
67.5°	1154.2	1170.5	1304.2	1923.4	2554.5	3768.2	14652.7	22808.1	22885.1	15710.8	14678.2
68°	1162.3	1182.7	1316.5	1850.2	2550.5	3370.9	13971.3	22821.6	22985.2	16086.7	14626.9
70°	1067.7	1073.1	1392.2	1815.1	2472.0	2655.8	10107.2	21257.9	21551.1	16534.1	13278.0
72.5°	408.2	409.5	624.4	1571.9	2589.6	2670.8	5091.5	16801.7	16816.5	14389.1	10351.9
75°	212.2	178.5	196.0	492.0	2473.5	2603.2	2554.5	11472.3	11400.7	9731.5	6343.0
77.5°	146.0	124.3	131.2	170.3	1028.6	2601.9	1844.8	6597.2	6582.2	4139.8	1809.7
80°	82.5	71.7	78.4	143.3	360.8	2442.3	1719.3	2835.6	2672.1	727.2	293.2
82.5°	42.0	35.2	42.0	120.4	224.3	1536.8	1671.9	1112.3	990.7	173.1	190.6
85°	10.8	10.8	20.3	83.8	139.1	504.2	1498.9	802.8	721.8	75.6	135.1
87.5°	2.8	1.3	8.2	31.1	50.0	109.5	831.2	447.4	385.3	39.2	78.4
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°	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9	3835.9
2.5°	3800.6	3762.8	3688.5	3604.7	3545.3	3480.4	3442.6	3396.5	3361.4	3330.3	3353.4
5°	3787.2	3714.2	3549.3	3364.2	3208.7	3059.9	2949.1	2843.8	2764.1	2714.0	2734.4
7.5°	3752.0	3643.9	3376.3	3087.0	2833.0	2593.6	2399.1	2224.7	2089.5	2016.5	2039.5
10°	3692.6	3539.9	3180.3	2778.8	2423.4	2085.5	1796.3	1536.8	1340.8	1248.9	1270.6
12.5°	3649.4	3448.0	2977.5	2481.5	2013.9	1534.0	1150.2	852.9	700.0	608.2	616.3
15°	3630.4	3376.3	2788.2	2168.0	1566.6	985.4	621.7	450.1	397.4	378.5	379.9
17.5°	3633.0	3319.4	2608.6	1842.2	1115.1	566.3	381.2	343.3	335.2	331.1	331.1
20°	3639.8	3262.7	2422.1	1503.0	713.7	364.9	317.6	305.5	301.4	296.0	297.3
22.5°	3660.1	3219.4	2234.2	1162.3	439.4	297.3	281.1	270.3	263.6	255.5	256.7
25°	3691.1	3187.0	2049.0	836.6	309.6	259.5	244.7	229.7	217.6	208.1	209.5
27.5°	3710.1	3141.2	1851.6	570.3	256.7	227.1	206.8	186.5	173.1	164.8	163.5
30°	3696.6	3066.8	1627.3	374.5	227.1	196.0	171.7	148.7	135.1	128.4	128.4
32.5°	3660.1	2970.9	1379.9	273.1	201.4	168.9	139.1	118.9	109.5	105.5	106.8
35°	3618.3	2870.8	1116.5	231.1	181.1	143.3	113.5	97.3	93.2	91.8	91.8
37.5°	3595.2	2784.2	863.7	209.5	162.2	118.9	93.2	83.8	79.7	79.7	79.7
40°	3620.9	2718.0	639.4	193.2	143.3	98.6	78.4	71.7	70.2	70.2	70.2
42.5°	3730.4	2695.1	467.7	179.8	124.3	82.5	67.6	62.2	60.8	62.2	62.2
45°	3944.0	2745.1	354.1	166.2	106.8	67.6	58.1	54.1	54.1	55.4	55.4
47.5°	4306.1	2873.5	290.6	152.7	89.2	56.8	50.0	47.3	47.3	48.7	48.7
50°	4868.5	3111.4	260.9	137.9	74.3	48.7	42.0	40.6	40.6	42.0	43.3
52.5°	5722.7	3564.1	246.0	123.0	60.8	40.6	35.2	33.7	35.2	36.6	36.6
55°	6672.8	4144.1	228.3	108.2	51.4	33.7	28.3	28.3	29.7	32.5	32.5
57.5°	7558.1	4703.5	212.2	89.2	44.6	26.9	22.9	22.9	25.7	28.3	28.3
60°	8493.5	5252.3	190.6	71.7	37.9	21.6	19.0	19.0	22.9	25.7	26.9
62.5°	9649.1	5890.2	162.2	56.8	29.7	16.2	13.6	17.5	21.6	25.7	25.7
65°	11319.6	6683.6	127.0	44.6	22.9	12.1	10.8	16.2	20.3	24.3	25.7
67.5°	11926.4	6582.2	95.9	36.6	17.5	9.4	9.4	14.8	20.3	24.3	24.3
68°	11704.7	6360.5	91.8	35.2	16.2	9.4	9.4	14.8	20.3	24.3	24.3
70°	10199.0	5199.6	75.6	26.9	13.6	8.2	8.2	13.6	20.3	22.9	24.3
72.5°	7636.5	3454.7	64.9	17.5	12.1	8.2	6.7	13.6	19.0	22.9	22.9
75°	4380.6	1434.1	55.4	13.6	10.8	6.7	6.7	12.1	19.0	22.9	22.9
77.5°	1238.0	335.2	44.6	10.8	9.4	6.7	5.4	12.1	17.5	21.6	21.6
80°	227.1	100.0	35.2	9.4	8.2	6.7	5.4	12.1	17.5	21.6	21.6
82.5°	150.0	47.3	25.7	9.4	8.2	6.7	5.4	10.8	16.2	20.3	20.3
85°	112.2	33.7	16.2	9.4	8.2	6.7	5.4	10.8	16.2	20.3	20.3
87.5°	62.2	14.8	12.1	10.8	9.4	6.7	5.4	9.4	14.8	19.0	19.0
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)