

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: P197093

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197093  
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-05-D-UNV-SL3-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 615mA 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: 16145 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

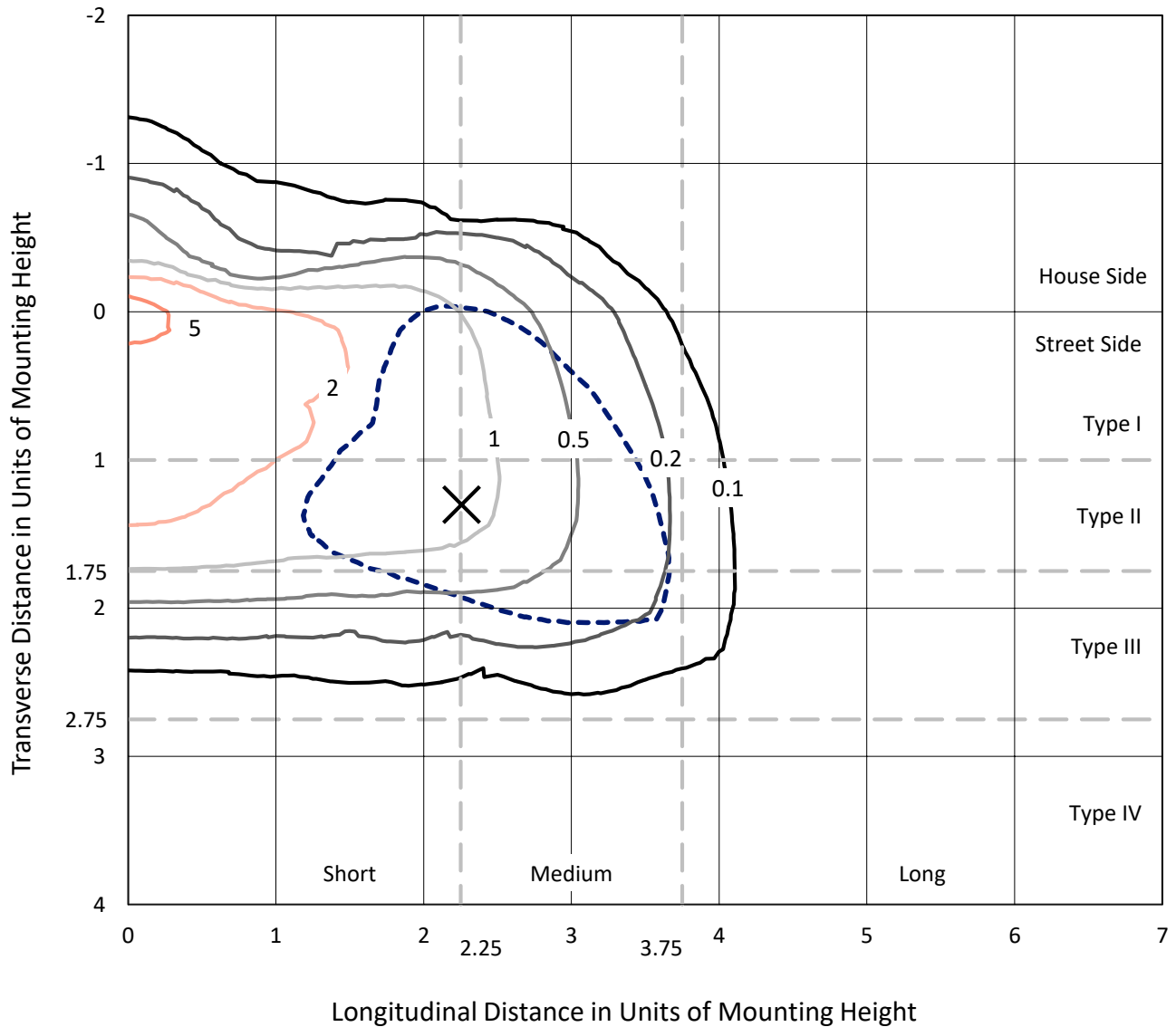
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

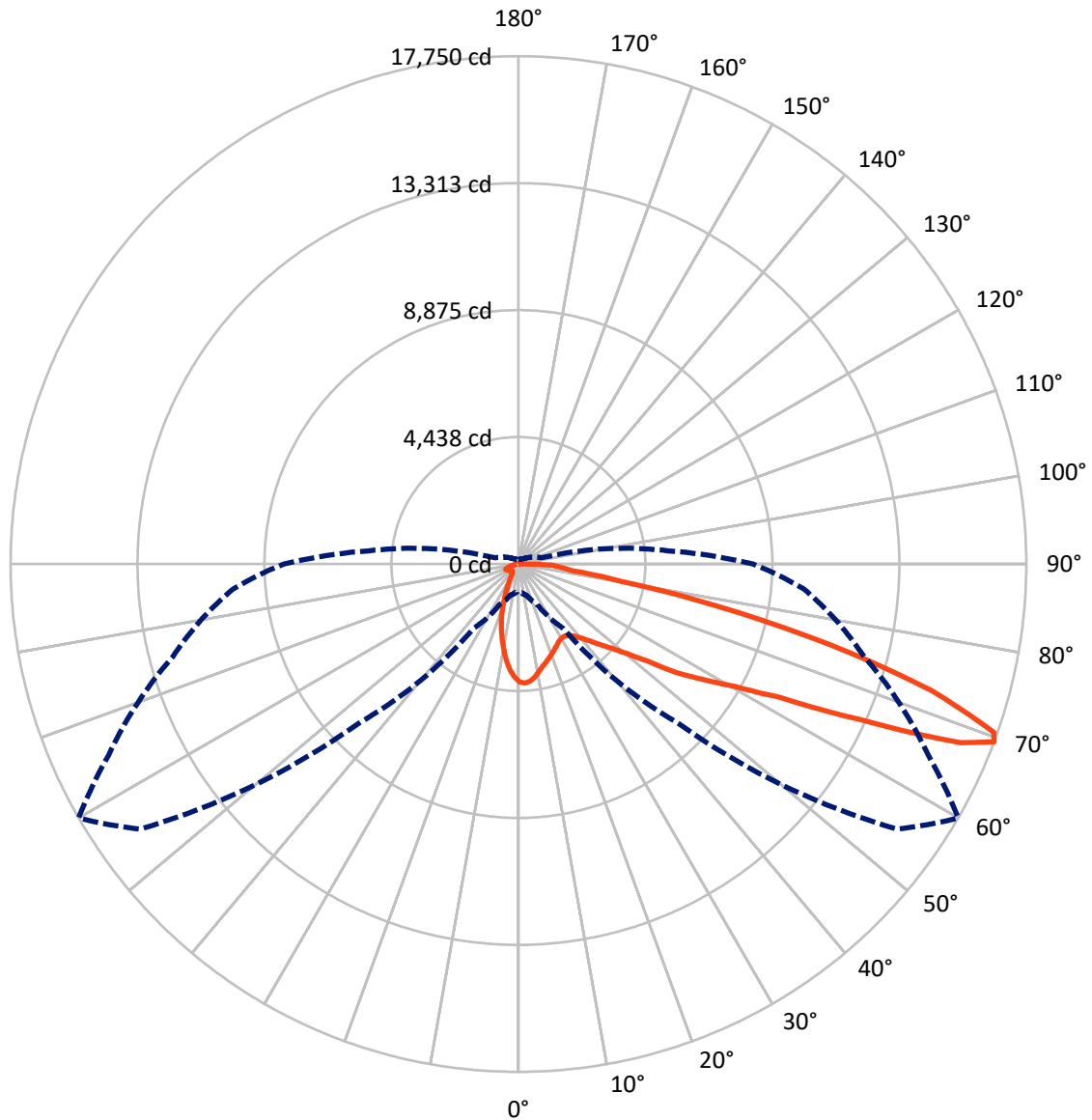
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 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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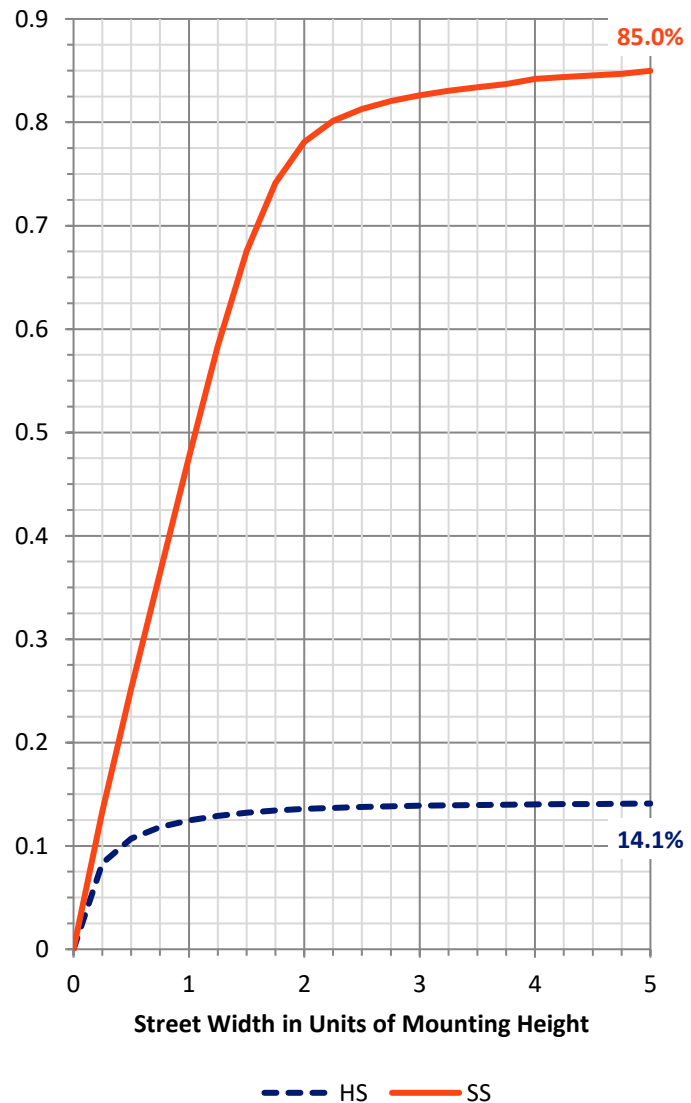
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2302.8	0.0	2302.8
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	13842.2	0.0	13842.2
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	16145.0	0.0	16145.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.5	2.2
10°-20°	748.3	4.6
20°-30°	954.5	5.9
30°-40°	1313.5	8.1
40°-50°	2127.7	13.2
50°-60°	3339.3	20.7
60°-70°	4451.9	27.6
70°-80°	2476.3	15.3
80°-90°	384.1	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°	16145.0	100.0
0°-180°	16145.0	100.0

**Coefficient of Utilization**



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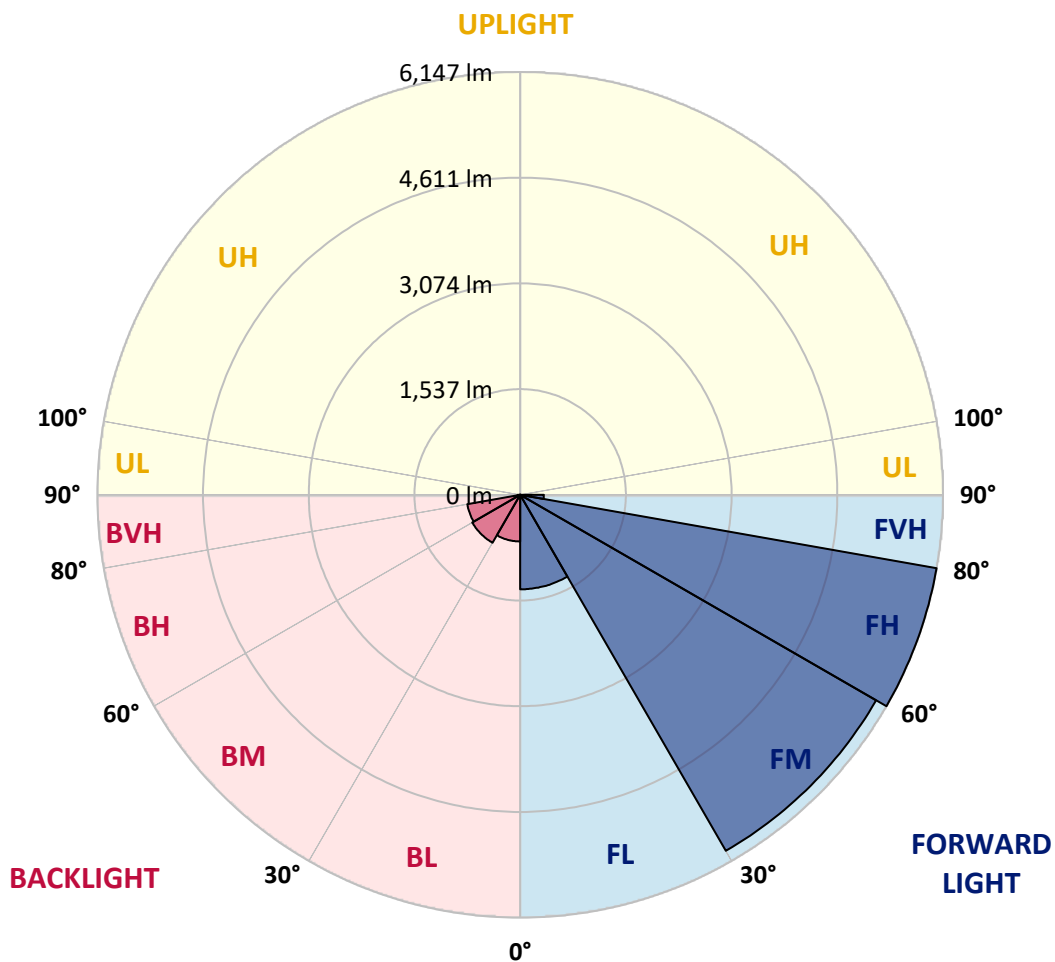
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1373.6	8.5			
FM	(30°-60°)	5976.0	37.0			
FH	(60°-80°)	6147.4	38.1			G3/7500
FVH	(80°-90°)	345.1	2.1			G3/500
BL	(0°-30°)	678.6	4.2	B2/1000		
BM	(30°-60°)	804.5	5.0	B1/1000		
BH	(60°-80°)	780.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	38.9	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°	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4
2.5°	4229.2	4240.6	4240.6	4231.3	4226.1	4196.1	4178.5	4166.0	4144.3	4103.9	4067.7
5°	4078.0	4099.8	4109.1	4113.2	4140.2	4130.8	4131.9	4123.6	4105.0	4061.5	4002.5
7.5°	3800.6	3804.7	3821.3	3849.2	3914.5	3960.0	3997.3	4004.5	4000.4	3968.3	3885.5
10°	3527.3	3534.5	3554.2	3601.8	3663.9	3729.1	3809.9	3843.0	3867.9	3857.5	3753.0
12.5°	3300.5	3301.6	3323.3	3378.2	3447.5	3529.3	3639.1	3690.8	3749.8	3773.7	3656.7
15°	3082.1	3096.6	3117.3	3183.5	3269.5	3373.0	3499.3	3570.7	3648.4	3716.7	3582.1
17.5°	2916.4	2927.8	2940.2	2995.1	3094.5	3223.9	3380.2	3456.9	3559.4	3663.9	3505.5
20°	2825.3	2829.5	2820.1	2847.1	2930.9	3070.7	3251.9	3344.0	3466.2	3613.2	3426.8
22.5°	2806.7	2806.7	2772.5	2767.3	2804.6	2922.6	3119.4	3232.2	3381.3	3578.0	3356.4
25°	2893.7	2887.4	2823.3	2764.2	2750.8	2810.8	2993.0	3131.8	3308.8	3577.0	3303.6
27.5°	3058.3	3050.0	2970.3	2870.9	2784.9	2759.1	2895.7	3037.6	3251.9	3612.2	3276.7
30°	3263.3	3260.2	3179.4	3055.2	2913.3	2779.8	2857.4	2988.9	3213.6	3677.4	3275.7
32.5°	3487.9	3473.4	3423.7	3299.5	3115.2	2894.7	2880.2	2991.0	3203.2	3772.6	3299.5
35°	3727.1	3716.7	3704.3	3579.0	3372.0	3097.6	2980.6	3062.4	3253.9	3905.1	3366.8
37.5°	4031.4	4020.1	4040.8	3904.1	3677.4	3363.7	3150.4	3205.3	3357.5	4097.7	3492.1
40°	4572.9	4539.8	4481.8	4271.6	4033.5	3689.8	3395.8	3404.1	3534.5	4355.5	3692.9
42.5°	5462.2	5355.6	5068.8	4682.6	4409.3	4068.7	3715.7	3676.3	3778.8	4696.1	3984.9
45°	6353.6	6233.5	5749.0	5130.9	4798.6	4475.6	4111.2	4017.0	4083.2	5092.6	4360.7
47.5°	6929.2	6870.2	6323.6	5579.2	5206.5	4918.7	4563.6	4408.3	4455.9	5541.9	4824.5
50°	7098.0	7047.3	6617.6	5930.2	5591.6	5453.9	5123.7	4917.7	4925.9	6066.8	5380.4
52.5°	6971.7	6951.0	6666.3	6147.6	5945.7	6018.2	5899.1	5612.3	5544.0	6642.5	5983.0
55°	6802.9	6810.2	6700.4	6366.0	6306.0	6544.1	6913.7	6682.8	6393.0	7241.9	6610.4
57.5°	6271.8	6277.0	6564.8	6782.2	6993.4	7281.2	7703.6	7606.3	7268.8	7889.0	7313.3
60°	5050.2	5090.6	5731.4	6696.3	7779.2	8733.8	8837.3	8669.6	8200.6	8634.4	8227.5
62.5°	3608.0	3644.2	4386.6	5813.2	7687.1	10377.8	10930.7	10263.9	9464.7	9749.4	9513.3
65°	1895.6	1889.4	2464.0	4017.0	6474.7	10758.8	14229.1	13094.4	11594.3	11282.7	10755.7
67.5°	1059.1	1093.3	1315.9	2026.1	4219.9	9468.8	16336.0	16670.4	14555.2	12499.1	10701.9
69°	979.4	990.8	1139.9	1566.4	2750.8	7812.4	16154.8	17750.2	15803.8	12504.3	10012.4
70°	951.4	963.9	1099.5	1443.2	2310.8	6401.2	15495.3	17623.9	16107.2	12226.9	9385.0
72.5°	853.1	869.6	1001.1	1297.2	1947.4	3299.5	12481.5	15084.3	14590.4	10686.3	7277.1
75°	727.8	755.8	954.5	1287.9	1844.9	2097.5	8323.8	11238.2	10859.2	7642.6	4128.8
77.5°	301.3	304.4	417.2	943.2	1936.0	2007.4	4473.5	7118.7	6301.9	3351.3	1243.4
80°	210.2	206.0	208.1	275.4	1562.3	2020.9	2295.3	3620.4	2813.9	884.1	581.8
82.5°	177.0	175.0	183.2	172.9	529.0	2293.2	1919.4	1887.3	1325.2	476.2	277.5
85°	117.0	113.9	150.1	157.4	251.6	1821.1	2064.4	1483.6	987.7	254.7	118.0
87.5°	56.9	58.0	85.9	106.6	133.6	576.7	1977.4	1173.0	763.0	110.8	47.6
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°	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4	4119.4
2.5°	4053.2	4022.1	3994.2	3959.0	3932.1	3909.3	3878.2	3877.2	3872.0	3879.3	3881.3
5°	3963.1	3911.4	3832.7	3744.7	3682.6	3600.8	3521.0	3494.1	3464.1	3461.0	3470.3
7.5°	3827.5	3746.7	3612.2	3477.6	3343.0	3205.3	3074.8	3008.6	2944.4	2924.7	2934.0
10°	3676.3	3573.8	3367.8	3148.3	2958.9	2753.9	2555.1	2426.7	2309.7	2260.1	2272.5
12.5°	3558.3	3427.9	3138.0	2853.3	2569.6	2275.6	2013.7	1760.0	1568.5	1482.5	1487.7
15°	3456.9	3290.2	2922.6	2543.7	2188.6	1785.9	1422.5	1128.5	960.8	898.6	896.6
17.5°	3347.1	3145.2	2698.0	2255.9	1795.2	1297.2	952.5	778.5	712.3	691.6	691.6
20°	3230.1	2996.2	2463.0	1942.2	1381.1	905.9	716.4	649.1	624.3	618.1	617.0
22.5°	3121.4	2850.2	2226.9	1607.8	999.1	687.4	609.8	583.9	579.8	584.9	584.9
25°	3035.5	2721.8	1987.8	1255.8	726.8	575.6	542.5	539.4	554.9	573.6	576.7
27.5°	2971.3	2606.9	1751.7	917.3	571.5	501.1	489.7	503.2	539.4	576.7	583.9
30°	2926.8	2508.5	1469.1	659.5	476.2	439.0	444.1	468.0	522.8	579.8	595.3
32.5°	2907.1	2428.8	1184.4	506.3	406.9	386.2	399.6	430.7	487.6	544.6	563.2
35°	2925.8	2370.8	921.4	420.3	356.1	340.6	356.1	388.2	425.5	453.5	464.8
37.5°	2993.0	2350.1	693.6	372.7	323.0	307.5	319.9	341.6	358.2	368.6	373.7
40°	3134.9	2371.9	543.5	347.9	304.4	286.8	289.9	300.2	311.6	319.9	320.9
42.5°	3360.6	2443.3	483.5	338.5	293.0	270.2	265.0	272.3	284.7	296.1	298.2
45°	3660.8	2562.4	477.3	341.6	287.8	256.8	246.4	253.6	270.2	288.8	292.0
47.5°	4049.0	2750.8	506.3	358.2	290.9	249.5	234.0	241.2	263.0	287.8	292.0
50°	4508.7	3011.7	560.1	383.1	305.4	249.5	228.8	235.0	257.8	285.7	289.9
52.5°	5050.2	3375.1	616.0	407.9	326.1	258.8	230.9	229.8	250.5	276.4	281.6
55°	5647.5	3826.5	669.8	429.6	337.5	271.2	236.0	223.6	240.2	260.9	265.0
57.5°	6350.5	4444.5	764.0	450.4	343.7	280.6	242.3	217.4	226.7	241.2	244.3
60°	7304.0	5352.5	947.3	485.6	355.1	284.7	243.3	211.2	210.2	220.5	221.6
62.5°	8547.4	6415.7	1122.3	527.0	377.9	285.7	239.2	207.1	196.7	199.8	199.8
65°	9431.6	6807.1	1071.5	562.2	398.6	284.7	235.0	204.0	186.4	181.2	181.2
67.5°	8928.4	6013.0	910.0	571.5	400.7	273.3	225.7	196.7	177.0	164.6	164.6
69°	8189.2	5270.7	835.5	554.9	384.1	259.9	215.3	189.5	170.8	156.3	156.3
70°	7586.7	4708.5	789.9	535.2	364.4	248.5	206.0	182.2	164.6	152.2	151.2
72.5°	5664.1	3142.1	675.0	461.7	299.2	210.2	180.1	162.5	148.0	139.8	139.8
75°	2988.9	1574.7	552.8	376.8	230.9	167.7	148.0	136.7	128.4	127.3	126.3
77.5°	979.4	712.3	397.6	283.7	169.8	130.4	118.0	110.8	109.7	113.9	113.9
80°	529.0	425.5	255.7	191.5	118.0	97.3	91.1	90.1	93.2	99.4	99.4
82.5°	256.8	210.2	152.2	118.0	80.8	71.4	71.4	72.5	76.6	83.9	83.9
85°	110.8	99.4	88.0	66.3	49.7	44.5	50.7	55.9	59.0	64.2	66.3
87.5°	52.8	46.6	40.4	25.9	21.7	22.8	26.9	33.1	39.3	43.5	44.5
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)