

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: P196629

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196629
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-03-D-UNV-SL3-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1200mA 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: 19193.6 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

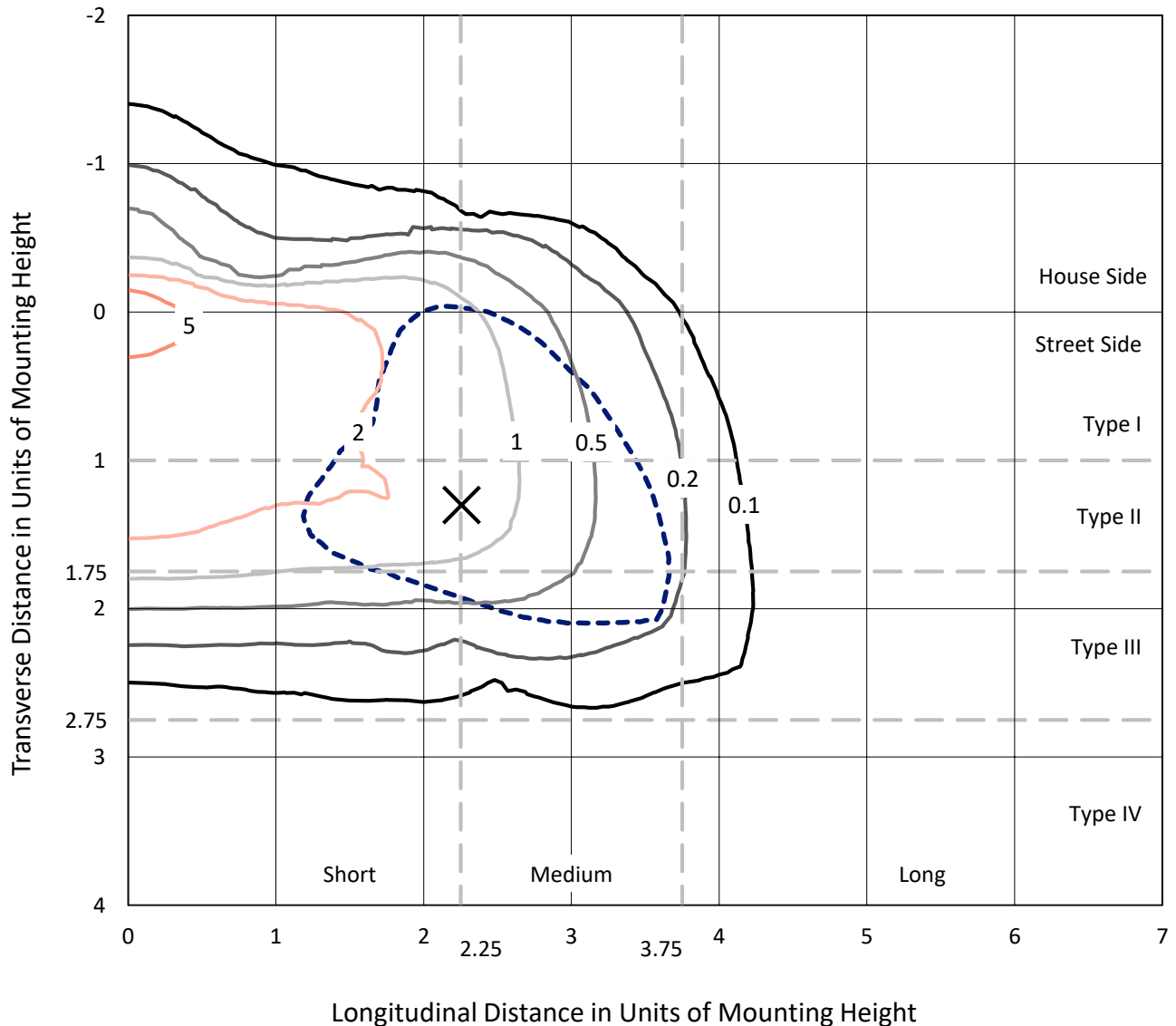
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

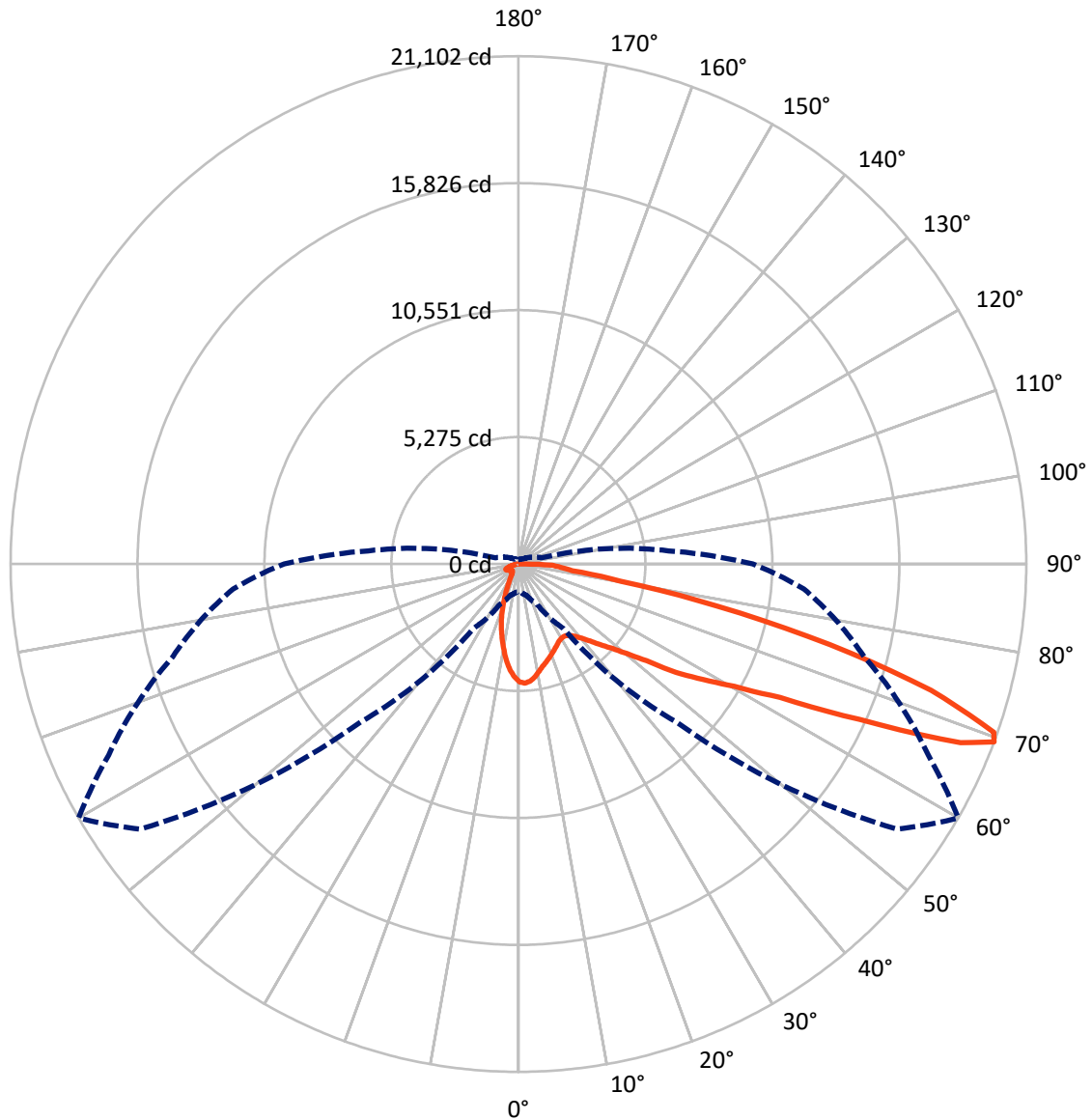
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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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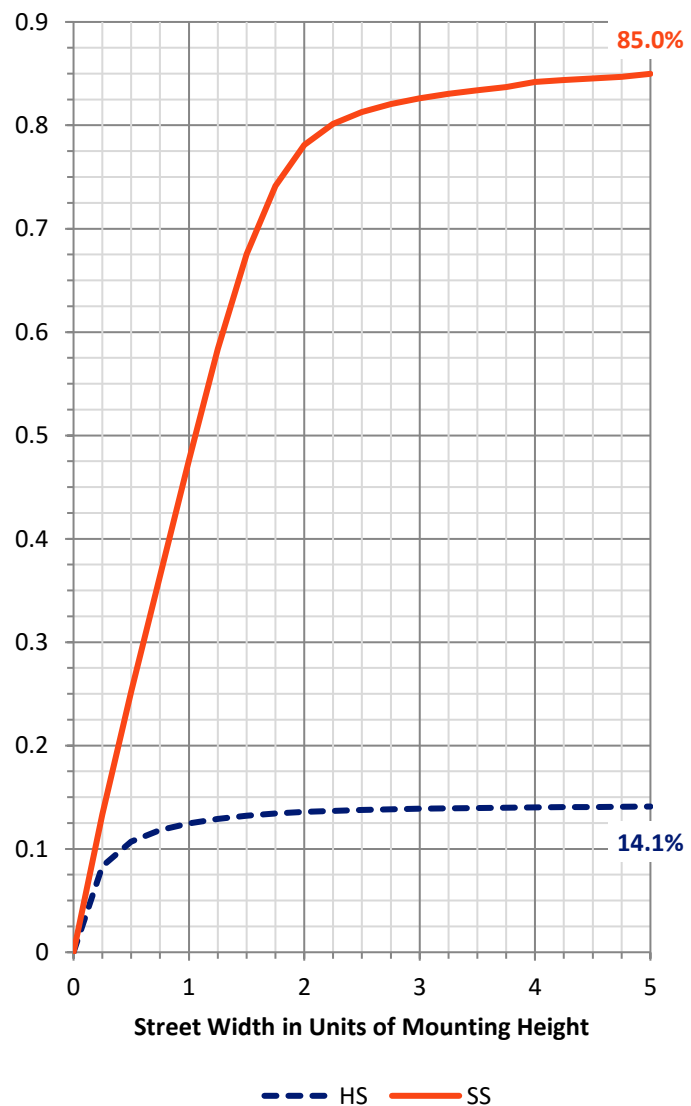
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2737.6	0.0	2737.6
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	16455.9	0.0	16455.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	19193.6	0.0	19193.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	415.5	2.2
10°-20°	889.5	4.6
20°-30°	1134.8	5.9
30°-40°	1561.6	8.1
40°-50°	2529.4	13.2
50°-60°	3969.8	20.7
60°-70°	5292.5	27.6
70°-80°	2943.9	15.3
80°-90°	456.6	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°	19193.6	100.0
0°-180°	19193.6	100.0

Coefficient of Utilization



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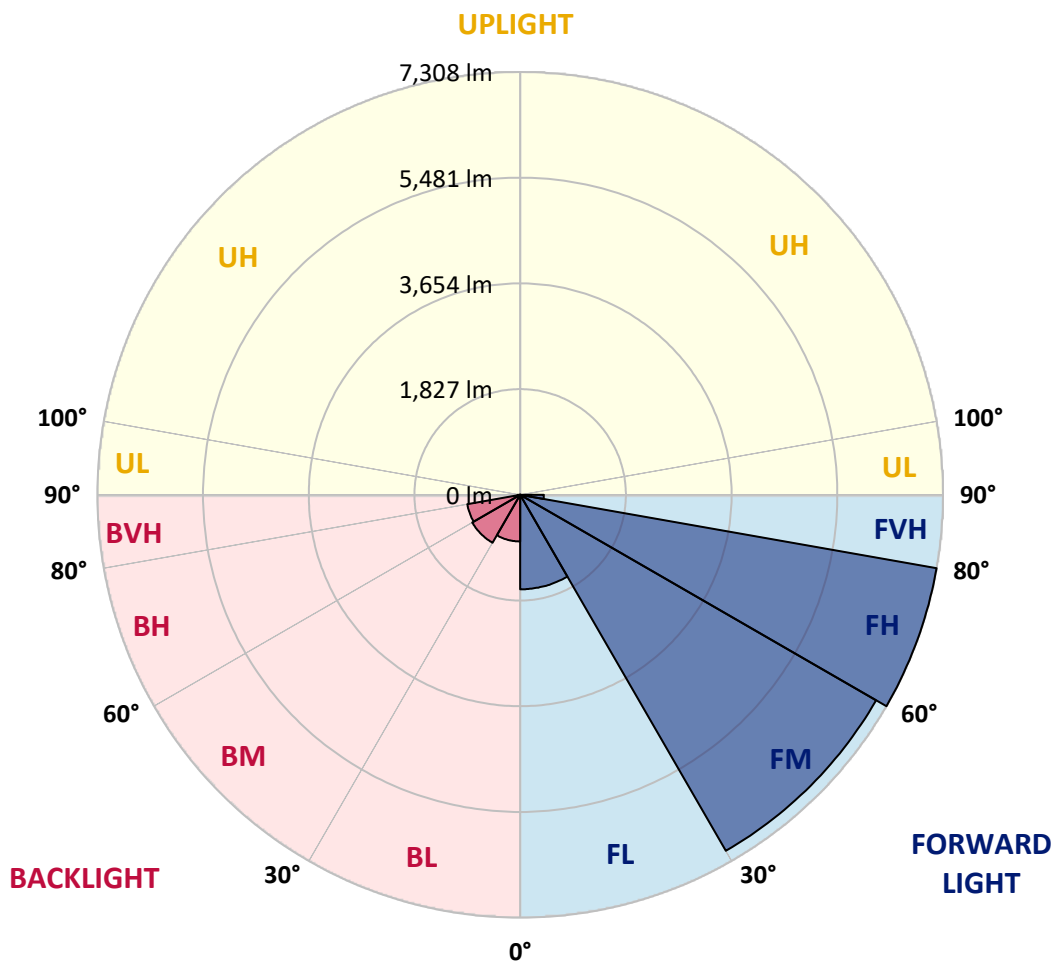
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1633.0	8.5			
FM	(30°-60°)	7104.5	37.0			
FH	(60°-80°)	7308.2	38.1			G3/7500
FVH	(80°-90°)	410.3	2.1			G3/500
BL	(0°-30°)	806.8	4.2	B2/1000		
BM	(30°-60°)	956.4	5.0	B1/1000		
BH	(60°-80°)	928.2	4.8	B2/1000		G2/1000
BVH	(80°-90°)	46.3	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°	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3
2.5°	5027.8	5041.3	5041.3	5030.2	5024.1	4988.3	4967.5	4952.7	4926.8	4878.9	4835.9
5°	4848.1	4873.9	4885.0	4889.9	4921.9	4910.8	4912.1	4902.3	4880.1	4828.3	4758.2
7.5°	4518.2	4523.2	4542.8	4576.1	4653.6	4707.8	4752.1	4760.7	4755.7	4717.6	4619.2
10°	4193.3	4201.9	4225.3	4281.9	4355.7	4433.3	4529.4	4568.6	4598.1	4585.9	4461.6
12.5°	3923.7	3925.0	3950.9	4016.1	4098.6	4195.8	4326.2	4387.8	4457.9	4486.1	4347.1
15°	3664.0	3681.3	3705.8	3784.6	3886.8	4010.0	4160.0	4244.9	4337.3	4418.6	4258.5
17.5°	3467.2	3480.7	3495.4	3560.6	3678.9	3832.7	4018.5	4109.6	4231.4	4355.7	4167.4
20°	3358.8	3363.8	3352.6	3384.7	3484.4	3650.5	3865.9	3975.4	4120.7	4295.4	4074.0
22.5°	3336.7	3336.7	3296.1	3289.9	3334.1	3474.6	3708.4	3842.5	4019.7	4253.6	3990.2
25°	3440.0	3432.7	3356.3	3286.2	3270.2	3341.5	3558.2	3723.1	3933.6	4252.4	3927.5
27.5°	3635.7	3625.9	3531.2	3412.9	3310.8	3280.1	3442.5	3611.1	3865.9	4294.2	3895.4
30°	3879.5	3875.8	3779.8	3632.1	3463.4	3304.6	3397.0	3553.3	3820.4	4371.8	3894.2
32.5°	4146.5	4129.4	4070.2	3922.5	3703.5	3441.2	3424.0	3555.8	3808.0	4485.0	3922.5
35°	4430.8	4418.6	4403.8	4254.9	4008.7	3682.5	3543.4	3640.6	3868.4	4642.5	4002.5
37.5°	4792.6	4779.1	4803.8	4641.4	4371.8	3998.8	3745.3	3810.5	3991.5	4871.5	4151.5
40°	5436.4	5397.0	5328.0	5078.3	4795.2	4386.5	4037.0	4046.9	4201.9	5177.9	4390.2
42.5°	6493.6	6366.9	6025.9	5566.9	5241.9	4837.0	4417.3	4370.5	4492.4	5582.8	4737.3
45°	7553.3	7410.6	6834.6	6099.7	5704.7	5320.7	4887.5	4775.5	4854.2	6054.3	5184.1
47.5°	8237.7	8167.4	7517.7	6632.7	6189.6	5847.4	5425.3	5240.7	5297.3	6588.5	5735.4
50°	8438.3	8378.0	7867.2	7050.0	6647.5	6483.8	6091.2	5846.3	5856.1	7212.4	6396.4
52.5°	8288.1	8263.5	7925.0	7308.5	7068.4	7154.6	7013.1	6672.1	6590.8	7896.7	7112.7
55°	8087.5	8096.1	7965.6	7568.1	7496.8	7779.8	8219.2	7944.7	7600.1	8609.3	7858.6
57.5°	7456.1	7462.3	7804.4	8062.9	8314.0	8656.2	9158.3	9042.7	8641.4	9378.6	8694.3
60°	6003.8	6051.8	6813.6	7960.7	9248.1	10382.9	10506.1	10306.7	9749.1	10264.8	9781.1
62.5°	4289.3	4332.3	5214.8	6910.8	9138.6	12337.4	12994.6	12202.1	11251.8	11590.3	11309.8
65°	2253.6	2246.2	2929.2	4775.5	7697.4	12790.3	16915.9	15567.0	13783.6	13413.1	12786.6
67.5°	1259.1	1299.7	1564.4	2408.6	5016.6	11256.8	19420.7	19818.1	17303.6	14859.3	12722.7
69°	1164.3	1177.9	1355.2	1862.3	3270.2	9287.5	19205.1	21101.9	18788.0	14865.5	11902.9
70°	1131.1	1145.9	1307.1	1715.7	2747.1	7609.9	18421.2	20951.7	19148.6	14535.7	11157.1
72.5°	1014.2	1033.8	1190.2	1542.2	2315.1	3922.5	14838.4	17932.6	17345.5	12704.2	8651.1
75°	865.3	898.4	1134.7	1531.0	2193.3	2493.7	9895.5	13360.2	12909.7	9085.7	4908.4
77.5°	358.2	361.8	496.0	1121.2	2301.5	2386.5	5318.2	8462.9	7491.8	3984.0	1478.2
80°	249.8	245.0	247.4	327.3	1857.3	2402.5	2728.6	4304.0	3345.3	1051.1	691.7
82.5°	210.5	208.0	217.9	205.5	628.9	2726.2	2281.9	2243.7	1575.4	566.2	329.9
85°	139.1	135.4	178.4	187.1	299.1	2165.0	2454.2	1763.8	1174.2	302.7	140.3
87.5°	67.7	69.0	102.1	126.7	158.8	685.6	2350.8	1394.4	907.1	131.6	56.6
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°	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3	4897.3
2.5°	4818.6	4781.6	4748.4	4706.6	4674.5	4647.5	4610.5	4609.3	4603.1	4611.8	4614.2
5°	4711.5	4650.0	4556.3	4451.8	4377.9	4280.7	4185.9	4153.9	4118.2	4114.4	4125.6
7.5°	4550.2	4454.2	4294.2	4134.3	3974.2	3810.5	3655.5	3576.7	3500.3	3476.9	3488.1
10°	4370.5	4248.6	4003.7	3742.7	3517.6	3273.9	3037.6	2885.0	2745.9	2686.8	2701.6
12.5°	4230.2	4075.2	3730.5	3392.1	3054.8	2705.3	2393.9	2092.4	1864.6	1762.5	1768.7
15°	4109.6	3911.5	3474.6	3024.1	2601.9	2123.1	1691.2	1341.6	1142.2	1068.3	1065.9
17.5°	3979.1	3739.2	3207.5	2681.9	2134.2	1542.2	1132.4	925.5	846.8	822.1	822.1
20°	3840.0	3561.9	2928.0	2308.9	1641.8	1077.0	851.6	771.7	742.2	734.8	733.5
22.5°	3710.8	3388.3	2647.5	1911.4	1187.7	817.3	724.9	694.2	689.2	695.4	695.4
25°	3608.7	3235.7	2363.1	1492.9	864.0	684.3	644.9	641.3	659.7	681.9	685.6
27.5°	3532.4	3099.1	2082.5	1090.5	679.4	595.7	582.2	598.2	641.3	685.6	694.2
30°	3479.5	2982.2	1746.5	784.1	566.2	521.8	528.0	556.3	621.5	689.2	707.7
32.5°	3456.1	2887.4	1408.1	601.9	483.7	459.1	475.1	512.0	579.7	647.4	669.5
35°	3478.2	2818.5	1095.5	499.8	423.4	405.0	423.4	461.5	505.9	539.0	552.7
37.5°	3558.2	2793.9	824.6	443.0	384.0	365.6	380.3	406.1	425.9	438.1	444.3
40°	3726.9	2819.8	646.2	413.5	361.8	340.9	344.6	356.9	370.5	380.3	381.6
42.5°	3995.2	2904.6	574.8	402.5	348.3	321.2	315.1	323.7	338.4	352.1	354.4
45°	4352.1	3046.1	567.4	406.1	342.2	305.3	293.0	301.5	321.2	343.4	347.1
47.5°	4813.6	3270.2	601.9	425.9	345.8	296.6	278.2	286.8	312.6	342.2	347.1
50°	5360.0	3580.3	665.8	455.4	363.1	296.6	272.0	279.3	306.5	339.7	344.6
52.5°	6003.8	4012.3	732.4	484.9	387.7	307.7	274.5	273.2	297.8	328.7	334.8
55°	6714.0	4549.0	796.3	510.8	401.2	322.5	280.6	265.8	285.5	310.2	315.1
57.5°	7549.6	5283.8	908.3	535.4	408.6	333.6	288.0	258.5	269.6	286.8	290.4
60°	8683.2	6363.2	1126.1	577.2	422.2	338.4	289.2	251.1	249.8	262.1	263.5
62.5°	10161.3	7627.2	1334.2	626.5	449.3	339.7	284.3	246.2	233.9	237.5	237.5
65°	11212.5	8092.4	1273.9	668.3	473.8	338.4	279.3	242.4	221.6	215.3	215.3
67.5°	10614.3	7148.4	1081.8	679.4	476.3	324.9	268.3	233.9	210.5	195.7	195.7
69°	9735.5	6265.9	993.2	659.7	456.6	308.8	256.0	225.2	203.1	185.8	185.8
70°	9019.3	5597.6	939.1	636.3	433.2	295.4	245.0	216.7	195.7	181.0	179.7
72.5°	6733.6	3735.5	802.5	548.9	355.7	249.8	214.1	193.3	176.0	166.2	166.2
75°	3553.3	1872.0	657.2	448.0	274.5	199.4	176.0	162.5	152.6	151.5	150.1
77.5°	1164.3	846.8	472.6	337.3	201.8	155.0	140.3	131.6	130.4	135.4	135.4
80°	628.9	505.9	304.0	227.7	140.3	115.7	108.2	107.1	110.8	118.1	118.1
82.5°	305.3	249.8	181.0	140.3	96.0	84.9	84.9	86.2	91.1	99.7	99.7
85°	131.6	118.1	104.7	78.7	59.1	52.9	60.3	66.4	70.2	76.3	78.7
87.5°	62.9	55.4	48.0	30.8	25.9	27.1	32.0	39.4	46.8	51.7	52.9
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)