

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: P196559

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196559
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-SL2-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA 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: 26023.4 lumens
Efficiency: N/A
Efficacy: 81.3 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 - G4

Input Watts (W): 320
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

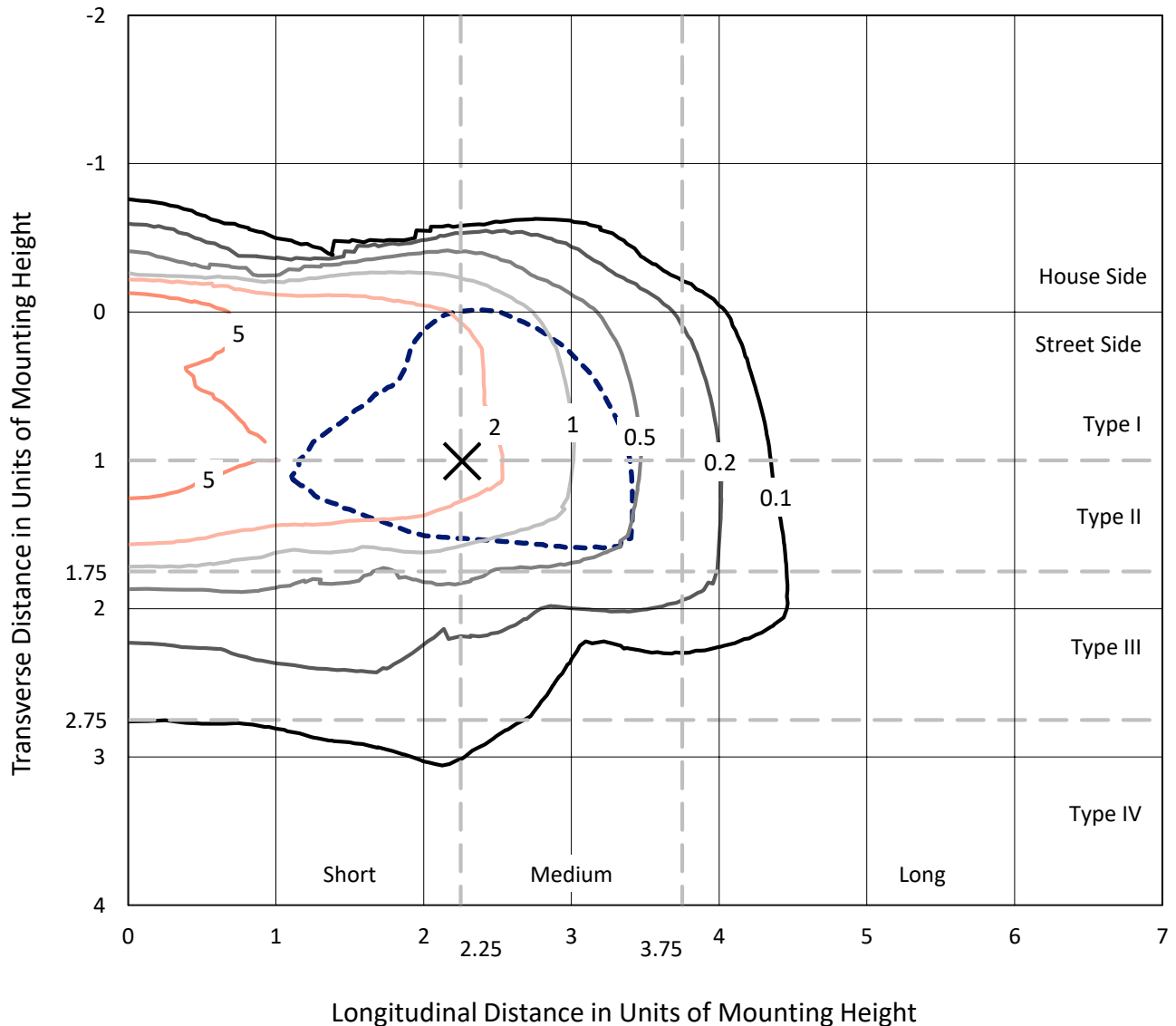


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

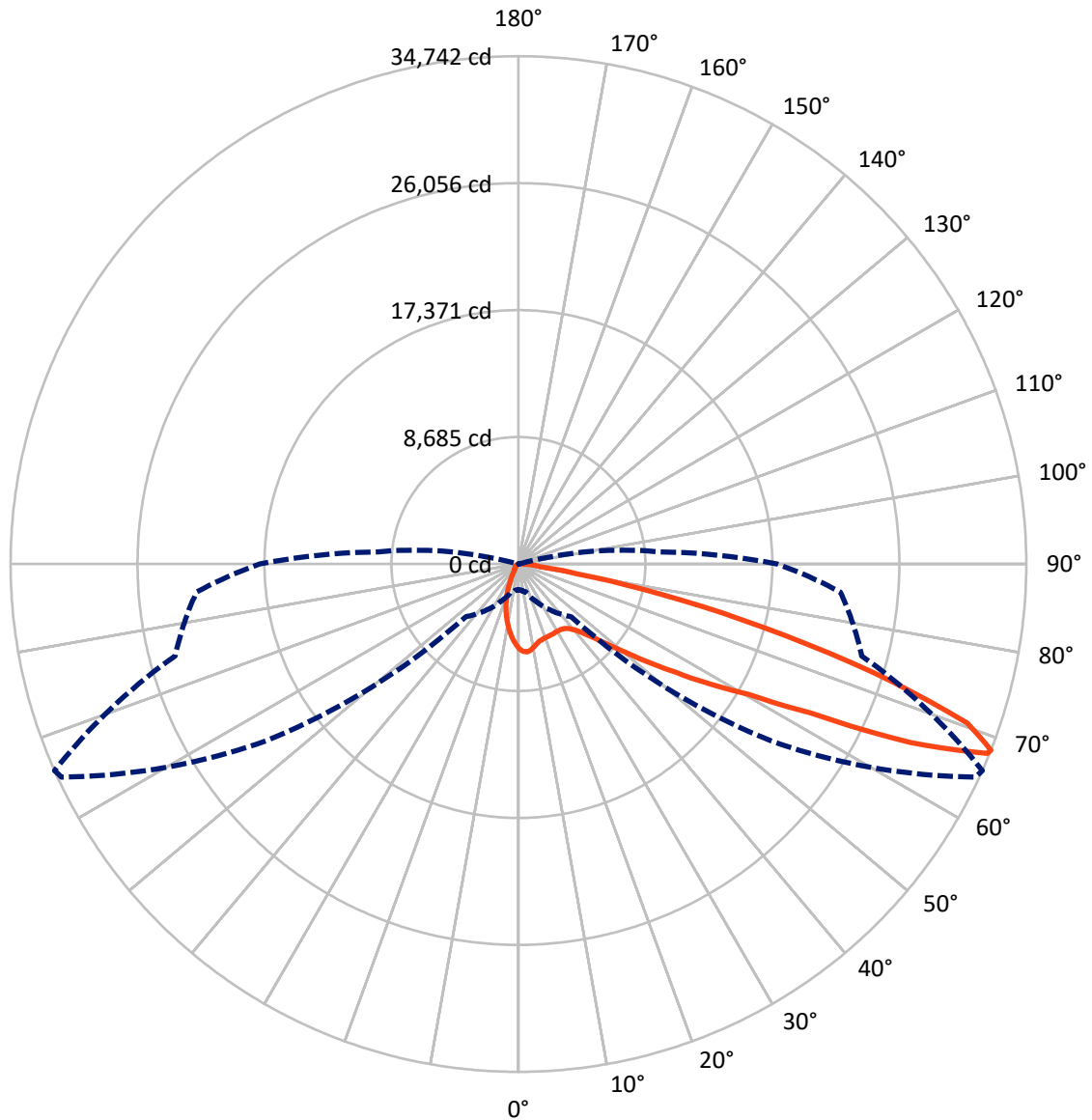


Based on 25 foot mounting height. Maximum calculated value = 9.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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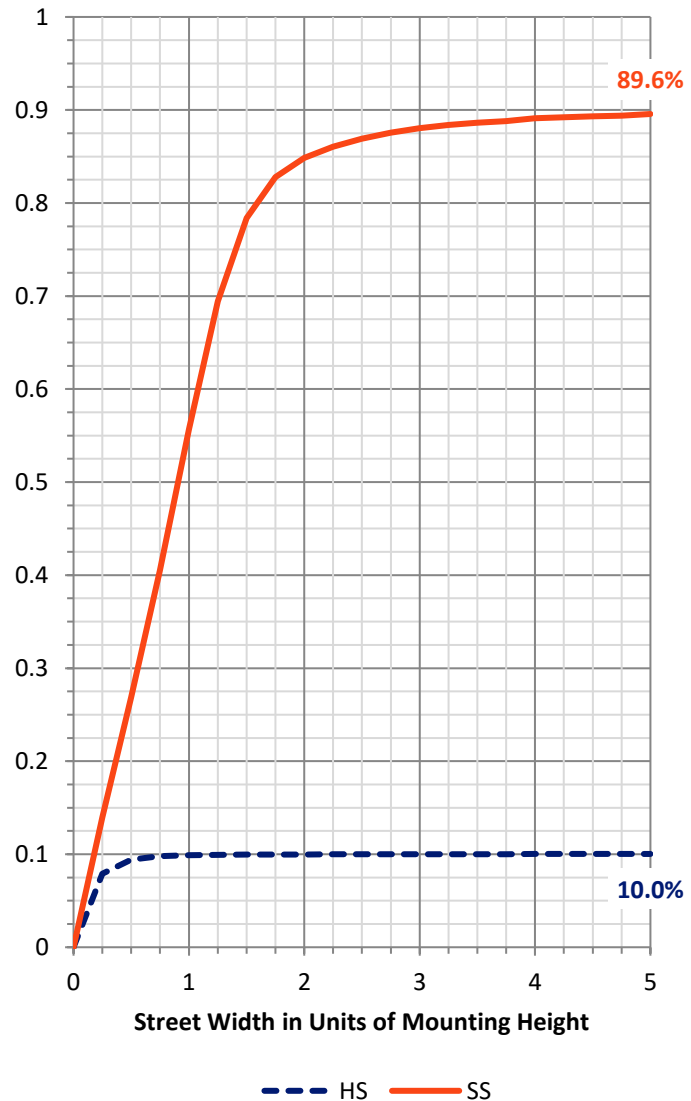
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2635.9	0.0	2635.9
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	23387.5	0.0	23387.5
	% Fixture	89.9	0.0	89.9
Total	Lumens	26023.4	0.0	26023.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	475.3	1.8
10°-20°	1022.6	3.9
20°-30°	1481.9	5.7
30°-40°	2268.5	8.7
40°-50°	3880.1	14.9
50°-60°	6069.7	23.3
60°-70°	6989.0	26.9
70°-80°	3497.4	13.4
80°-90°	338.7	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°	26023.4	100.0
0°-180°	26023.4	100.0



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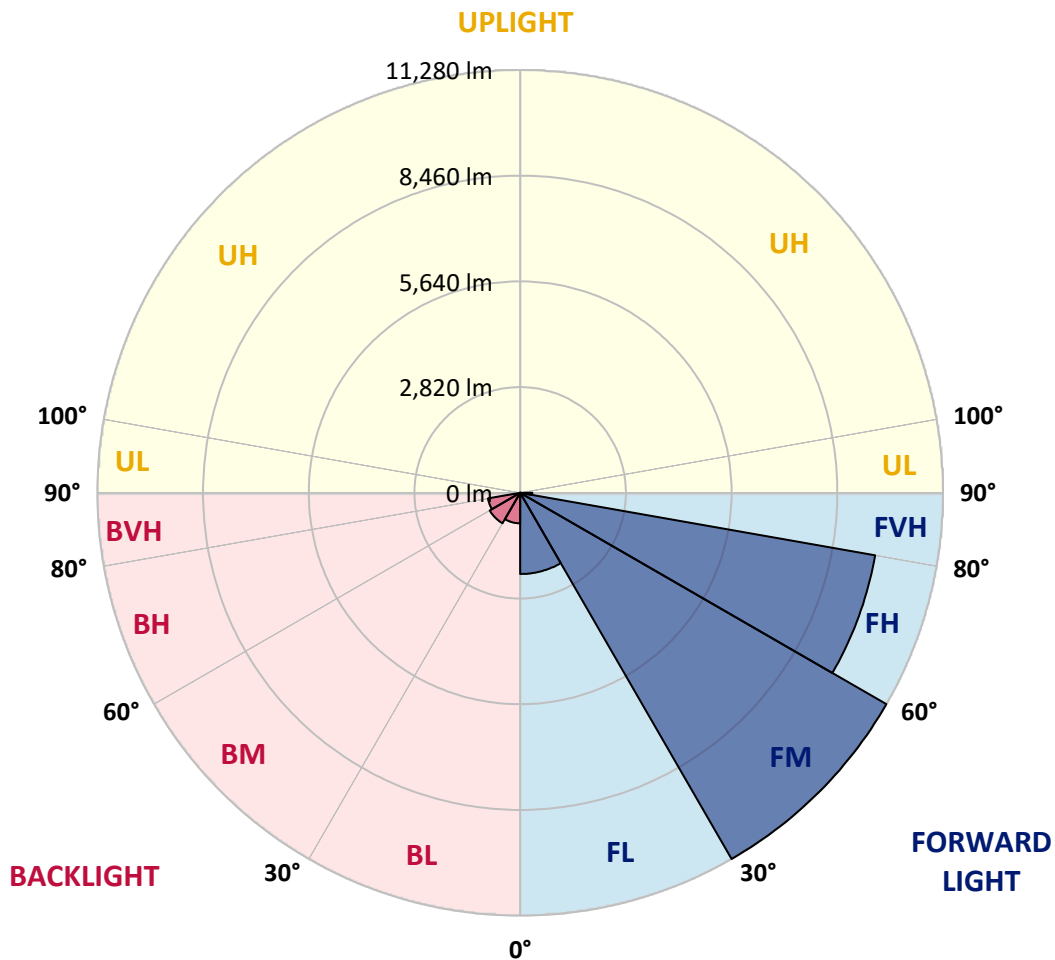
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2166.3	8.3			
FM (30°-60°)	11279.7	43.3			
FH (60°-80°)	9615.6	36.9			G4/12000
FVH (80°-90°)	325.9	1.3			G3/500
BL (0°-30°)	813.6	3.1	B2/1000		
BM (30°-60°)	938.6	3.6	B1/1000		
BH (60°-80°)	870.9	3.3	B2/1000		G2/1000
BVH (80°-90°)	12.8	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8
2.5°	6098.1	6102.1	6100.2	6106.3	6102.1	6071.5	6038.9	5969.4	5975.5	5885.6	5785.5
5°	5669.0	5703.8	5738.6	5773.3	5857.0	5930.6	6018.4	6038.9	6038.9	5961.1	5814.1
7.5°	5231.9	5233.9	5272.8	5319.8	5432.1	5566.9	5771.2	5955.0	5959.1	5979.5	5818.2
10°	4903.0	4913.2	4939.7	4990.9	5103.2	5235.9	5464.8	5752.8	5775.3	5926.4	5777.3
12.5°	4647.6	4659.9	4688.5	4747.8	4849.8	4986.7	5227.8	5556.7	5587.3	5875.4	5765.1
15°	4451.4	4467.8	4490.3	4549.5	4659.9	4804.9	5068.4	5426.0	5462.8	5854.9	5803.9
17.5°	4369.9	4369.9	4367.7	4408.6	4518.9	4666.0	4941.8	5356.6	5403.5	5871.3	5869.3
20°	4404.5	4398.3	4355.5	4345.2	4412.7	4559.7	4841.8	5311.5	5364.6	5901.9	5948.9
22.5°	4588.4	4576.1	4480.0	4400.4	4379.9	4478.0	4774.3	5280.9	5344.2	5965.2	6055.1
25°	4978.5	4941.8	4809.0	4629.2	4467.8	4457.7	4727.3	5264.5	5332.0	6038.9	6171.6
27.5°	5485.2	5475.0	5262.5	5021.4	4710.9	4525.1	4713.0	5252.3	5319.8	6092.0	6265.6
30°	6114.3	6118.5	5873.3	5558.8	5088.9	4715.0	4757.9	5246.2	5315.7	6096.0	6306.5
32.5°	6764.0	6768.2	6563.9	6226.8	5605.8	5041.9	4884.6	5274.8	5338.1	6079.7	6304.4
35°	7389.2	7395.3	7272.8	7001.0	6296.3	5495.4	5123.6	5372.9	5417.7	6089.9	6300.3
37.5°	8179.8	8204.3	8053.2	7799.8	7162.4	6161.3	5513.8	5571.0	5607.7	6173.7	6330.9
40°	9528.1	9495.4	9062.3	8633.3	8102.1	6972.4	6077.6	5912.1	5924.5	6390.2	6447.4
42.5°	11099.1	11058.2	10316.7	9577.1	9068.4	7951.1	6798.7	6435.2	6433.0	6753.9	6700.8
45°	12451.5	12426.9	11646.6	10659.9	10138.9	9031.7	7687.5	7188.9	7164.4	7383.0	7162.4
47.5°	13411.7	13391.3	12800.9	11812.0	11376.9	10220.6	8796.8	8216.6	8165.5	8206.4	7912.1
50°	13505.6	13483.1	13276.8	12641.6	12823.3	11965.3	10167.5	9562.8	9497.5	9434.1	9046.0
52.5°	12627.2	12625.1	12733.4	12692.5	13836.6	14210.5	11848.8	11227.8	11150.1	10988.8	10602.6
55°	10831.5	10821.2	11231.9	11828.4	13814.0	16527.1	14412.7	13209.5	13107.3	12784.5	12277.9
57.5°	7914.2	7861.1	8719.1	9983.7	12843.8	17540.4	18484.2	15671.2	15501.6	14478.1	13697.8
60°	4369.9	4390.1	5493.3	6990.9	10545.4	17340.2	22230.9	18541.4	18096.1	15938.7	15152.2
62.5°	2449.5	2500.5	3321.8	4543.4	6723.2	15716.1	24241.2	23481.1	22408.6	17642.5	16990.8
65°	1852.9	1883.5	2296.2	3505.6	4239.0	10982.6	24561.8	30388.2	29462.8	20224.8	19918.3
67.5°	1744.7	1769.1	1971.4	2907.1	3861.1	5695.5	22147.1	34474.0	34590.5	23746.7	22185.9
68°	1756.9	1787.6	1989.8	2796.7	3855.0	5095.0	21117.5	34494.5	34741.6	24314.7	22108.3
70°	1613.9	1622.1	2104.3	2743.6	3736.4	4014.3	15276.8	32130.8	32574.1	24990.9	20069.5
72.5°	617.0	619.0	943.8	2375.9	3914.2	4036.8	7695.5	25395.3	25417.8	21748.7	15646.6
75°	320.7	269.7	296.2	743.6	3738.6	3934.7	3861.1	17340.2	17232.0	14708.9	9587.4
77.5°	220.6	187.9	198.2	257.5	1554.6	3932.6	2788.6	9971.4	9948.9	6257.4	2735.5
80°	124.7	108.2	118.4	216.6	545.4	3691.6	2598.6	4286.0	4038.8	1099.0	443.3
82.5°	63.4	53.1	63.4	181.8	339.1	2322.8	2527.0	1681.3	1497.4	261.4	288.0
85°	16.4	16.4	30.6	126.6	210.5	762.0	2265.6	1213.5	1091.0	114.4	204.4
87.5°	4.1	2.0	12.2	47.0	75.6	165.5	1256.4	676.2	582.3	59.2	118.4
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°	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8	5797.8
2.5°	5744.7	5687.5	5575.1	5448.4	5358.5	5260.5	5203.3	5133.8	5080.7	5033.7	5068.4
5°	5724.2	5613.8	5364.6	5084.8	4849.8	4625.2	4457.7	4298.3	4177.7	4102.1	4132.8
7.5°	5671.1	5507.6	5103.2	4666.0	4282.0	3920.3	3626.2	3362.7	3158.3	3048.0	3082.7
10°	5581.2	5350.3	4807.0	4200.3	3662.9	3152.2	2715.0	2322.8	2026.5	1887.7	1920.3
12.5°	5515.9	5211.4	4500.5	3750.8	3044.0	2318.7	1738.6	1289.0	1058.1	919.3	931.6
15°	5487.2	5103.2	4214.4	3276.8	2367.7	1489.3	939.7	680.2	600.6	572.0	574.0
17.5°	5491.4	5017.4	3942.8	2784.5	1685.5	855.9	576.2	518.9	506.6	500.5	500.5
20°	5501.5	4931.5	3660.8	2271.7	1078.6	551.5	480.0	461.7	455.6	447.4	449.5
22.5°	5532.3	4866.2	3376.8	1756.9	664.0	449.5	424.9	408.6	398.4	386.1	388.2
25°	5579.3	4817.1	3097.1	1264.5	467.8	392.2	369.8	347.3	328.9	314.5	316.7
27.5°	5607.7	4747.8	2798.7	862.0	388.2	343.2	312.6	281.9	261.4	249.2	247.2
30°	5587.3	4635.4	2459.7	565.9	343.2	296.2	259.5	224.7	204.4	194.1	194.1
32.5°	5532.3	4490.3	2085.8	412.7	304.4	255.3	210.5	179.7	165.5	159.3	161.3
35°	5468.9	4339.1	1687.4	349.3	273.8	216.6	171.6	147.1	141.0	138.9	138.9
37.5°	5434.1	4208.3	1305.4	316.7	245.2	179.7	141.0	126.6	120.5	120.5	120.5
40°	5472.9	4108.2	966.3	292.2	216.6	149.1	118.4	108.2	106.2	106.2	106.2
42.5°	5638.5	4073.5	706.8	271.7	187.9	124.7	102.1	94.0	91.9	94.0	94.0
45°	5961.1	4149.1	535.3	251.3	161.3	102.1	87.9	81.7	81.7	83.8	83.8
47.5°	6508.7	4343.2	439.2	230.9	134.8	85.8	75.6	71.4	71.4	73.5	73.5
50°	7358.5	4702.7	394.3	208.3	112.3	73.5	63.4	61.3	61.3	63.4	65.3
52.5°	8649.6	5387.1	371.8	185.8	91.9	61.3	53.1	51.1	53.1	55.1	55.1
55°	10085.8	6263.5	345.3	163.5	77.7	51.1	42.9	42.9	44.9	49.0	49.0
57.5°	11423.9	7109.3	320.7	134.8	67.4	40.9	34.8	34.8	38.8	42.9	42.9
60°	12837.6	7938.8	288.0	108.2	57.3	32.7	28.6	28.6	34.8	38.8	40.9
62.5°	14584.3	8903.0	245.2	85.8	44.9	24.5	20.4	26.6	32.7	38.8	38.8
65°	17109.4	10102.1	192.1	67.4	34.8	18.3	16.4	24.5	30.6	36.8	38.8
67.5°	18026.5	9948.9	145.1	55.1	26.6	14.3	14.3	22.5	30.6	36.8	36.8
68°	17691.6	9613.9	138.9	53.1	24.5	14.3	14.3	22.5	30.6	36.8	36.8
70°	15415.7	7859.0	114.4	40.9	20.4	12.2	12.2	20.4	30.6	34.8	36.8
72.5°	11542.3	5221.6	98.0	26.6	18.3	12.2	10.2	20.4	28.6	34.8	34.8
75°	6621.0	2167.4	83.8	20.4	16.4	10.2	10.2	18.3	28.6	34.8	34.8
77.5°	1871.3	506.6	67.4	16.4	14.3	10.2	8.2	18.3	26.6	32.7	32.7
80°	343.2	151.3	53.1	14.3	12.2	10.2	8.2	18.3	26.6	32.7	32.7
82.5°	226.7	71.4	38.8	14.3	12.2	10.2	8.2	16.4	24.5	30.6	30.6
85°	169.6	51.1	24.5	14.3	12.2	10.2	8.2	16.4	24.5	30.6	30.6
87.5°	94.0	22.5	18.3	16.4	14.3	10.2	8.2	14.3	22.5	28.6	28.6
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)