

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: P195204

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL4-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23709 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 249
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

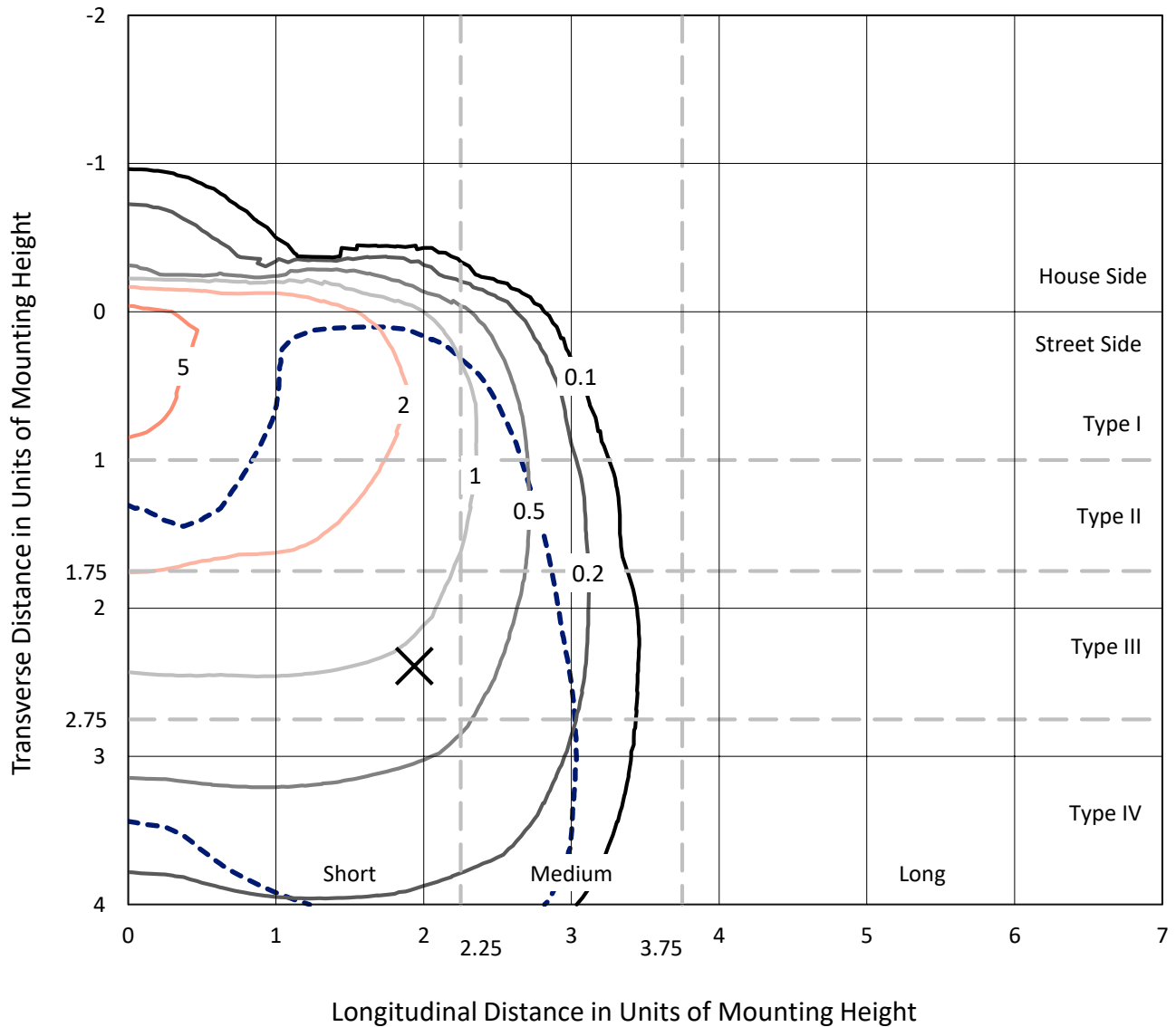


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

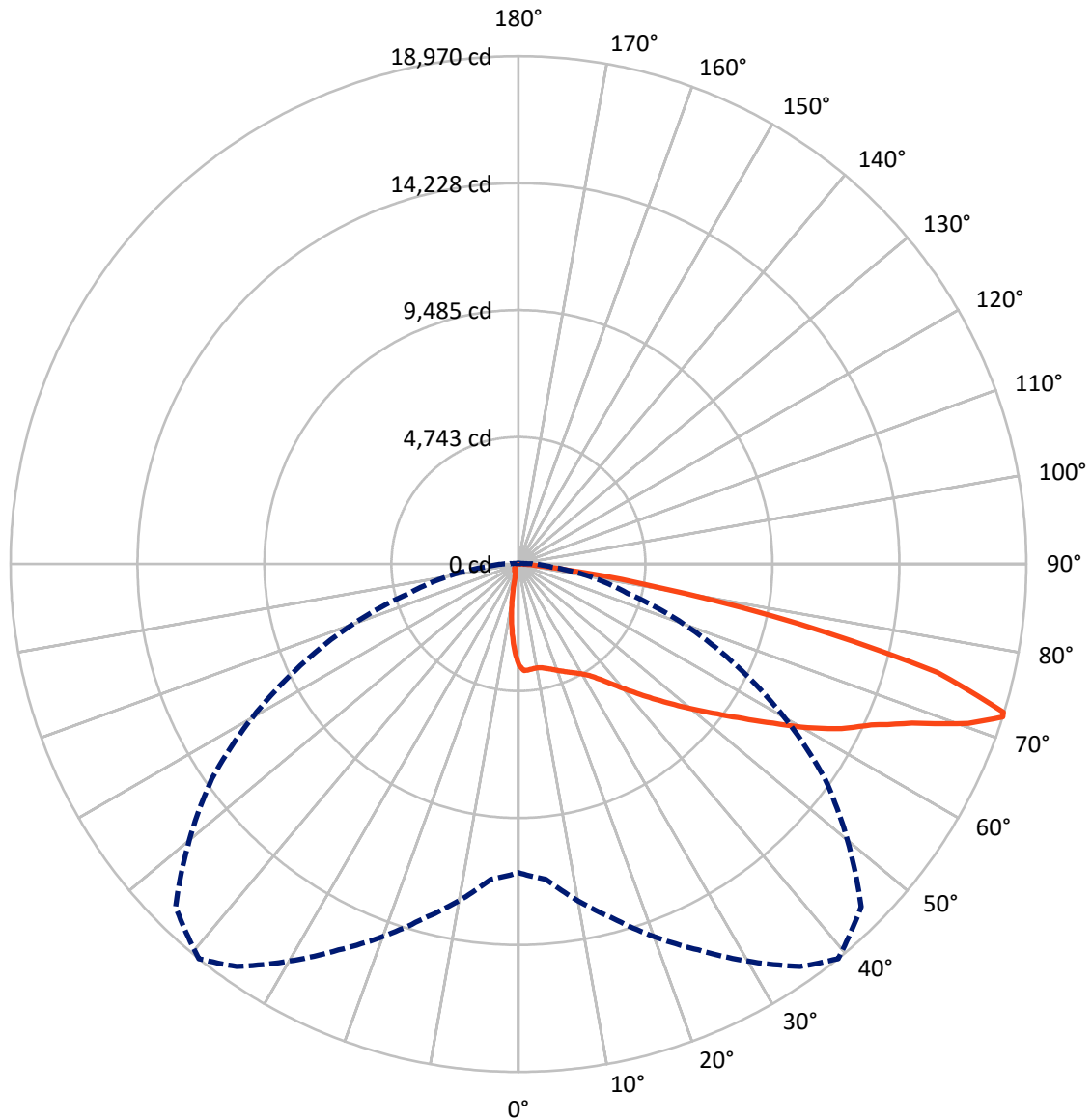


Based on 25 foot mounting height. Maximum calculated value = 6.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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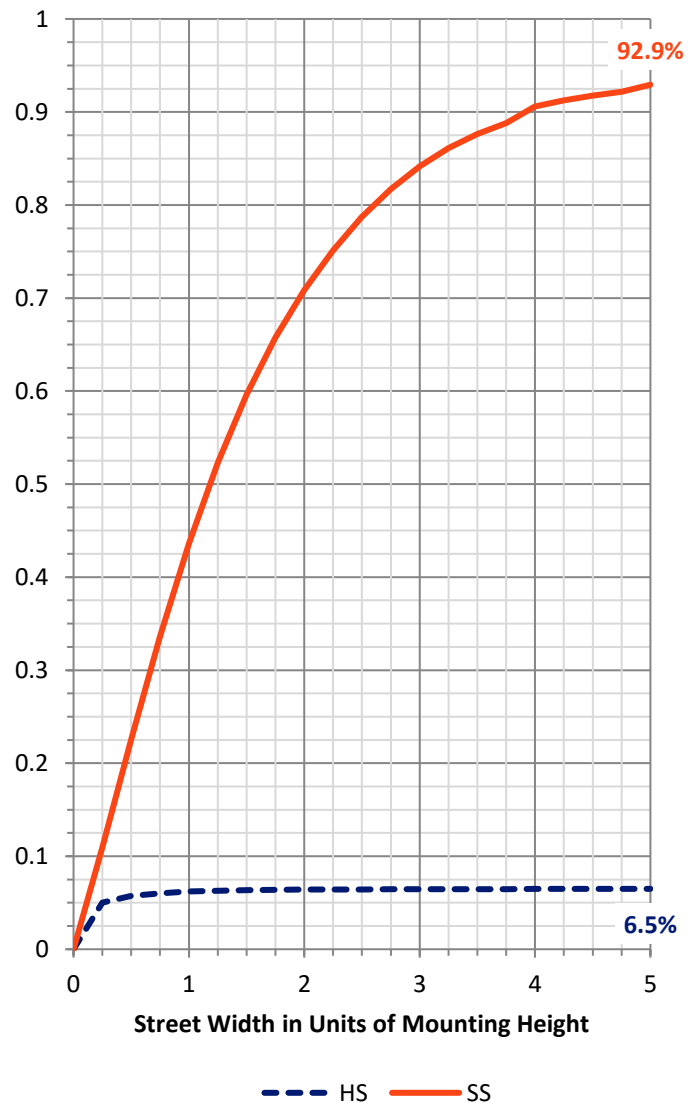
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1553.8	0.0	1553.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	22155.2	0.0	22155.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	23709.0	0.0	23709.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.7	1.3
10°-20°	747.3	3.2
20°-30°	1241.1	5.2
30°-40°	1978.0	8.3
40°-50°	3264.9	13.8
50°-60°	4930.7	20.8
60°-70°	6423.0	27.1
70°-80°	4340.1	18.3
80°-90°	475.3	2.0
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°	23709.0	100.0
0°-180°	23709.0	100.0

Coefficient of Utilization



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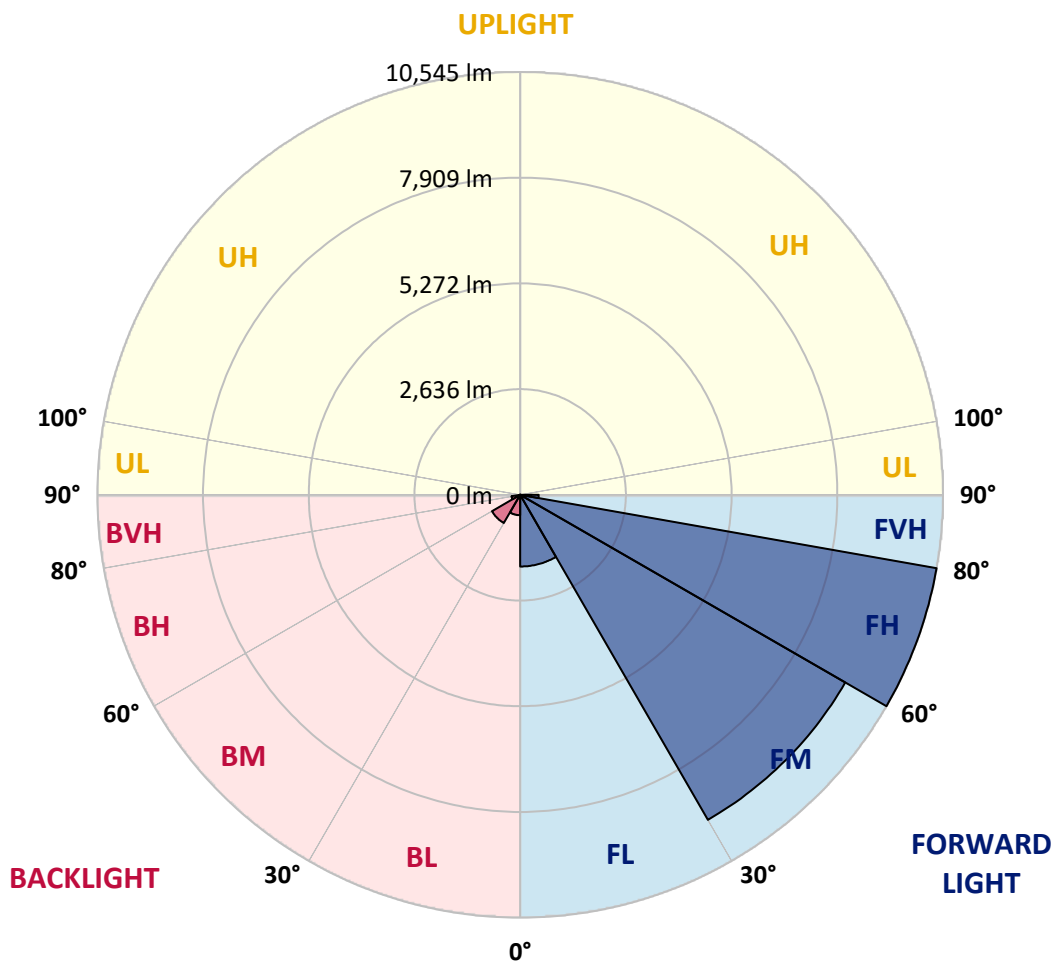
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1788.2	7.5			
FM	(30°-60°)	9360.6	39.5			
FH	(60°-80°)	10544.7	44.5			G4/12000
FVH	(80°-90°)	461.7	1.9			G3/500
BL	(0°-30°)	508.8	2.1	B2/1000		
BM	(30°-60°)	813.0	3.4	B1/1000		
BH	(60°-80°)	218.4	0.9	B1/500		G1/500
BVH	(80°-90°)	13.7	0.1			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8
2.5°	4040.8	4048.3	4038.9	4022.2	3997.9	3983.0	3962.5	3917.8	3861.9	3813.4	3757.5
5°	4072.5	4076.2	4065.0	4033.4	3996.1	3975.6	3949.5	3901.0	3843.2	3776.1	3675.5
7.5°	4081.8	4079.9	4066.9	4027.8	3970.0	3943.9	3899.2	3839.5	3779.9	3718.4	3604.7
10°	4078.1	4078.1	4068.8	4031.5	3966.3	3942.0	3891.7	3828.3	3753.8	3692.3	3571.1
12.5°	4065.0	4072.5	4066.9	4046.4	3997.9	3979.3	3934.6	3871.2	3800.4	3737.0	3608.4
15°	4081.8	4093.0	4104.2	4096.7	4068.8	4052.0	4011.0	3945.7	3888.0	3820.9	3682.9
17.5°	4148.9	4173.1	4199.2	4201.1	4171.3	4141.5	4094.9	4027.8	3971.8	3910.3	3761.2
20°	4275.6	4294.3	4342.7	4352.1	4292.4	4249.6	4184.3	4106.0	4050.1	3997.9	3833.9
22.5°	4463.9	4484.4	4523.5	4510.5	4409.8	4359.5	4277.5	4188.0	4130.3	4100.4	3917.8
25°	4749.1	4754.7	4764.0	4706.2	4540.3	4484.4	4383.8	4283.1	4236.5	4232.8	4037.1
27.5°	5084.6	5092.0	5051.0	4922.4	4685.7	4613.0	4499.3	4408.0	4385.6	4413.6	4188.0
30°	5468.5	5470.4	5356.7	5147.9	4853.4	4773.3	4655.9	4555.2	4575.7	4644.7	4381.9
32.5°	5861.8	5843.1	5686.6	5414.5	5082.7	4985.8	4885.1	4784.5	4844.1	4983.9	4665.2
35°	6221.5	6214.0	6029.5	5712.7	5380.9	5295.2	5222.5	5116.2	5213.2	5440.5	5051.0
37.5°	6581.2	6575.6	6365.0	6035.1	5748.1	5686.6	5632.5	5550.5	5708.9	6042.6	5567.3
40°	6978.2	6968.9	6709.8	6393.0	6174.9	6141.4	6109.7	6074.3	6344.5	6808.6	6210.3
42.5°	7468.4	7427.4	7075.1	6782.5	6644.6	6653.9	6655.8	6691.2	7114.3	7720.0	6968.9
45°	8031.3	7940.0	7442.3	7200.0	7160.9	7216.8	7272.7	7419.9	8010.8	8769.4	7807.6
47.5°	8577.4	8430.1	7865.4	7649.2	7729.3	7844.9	7979.1	8266.1	9017.3	9867.2	8568.1
50°	9047.1	8896.1	8284.8	8105.8	8361.2	8532.7	8771.2	9205.5	10079.6	10795.4	9047.1
52.5°	9416.1	9296.8	8728.4	8609.1	9062.0	9296.8	9671.5	10241.8	11082.4	11406.7	9382.6
55°	9688.2	9628.6	9153.3	9170.1	9841.1	10180.3	10646.3	11291.1	11928.6	11882.0	9634.2
57.5°	9995.8	9949.2	9598.8	9831.8	10778.6	11216.6	11755.2	12273.4	12543.6	12264.1	9880.2
60°	10310.8	10325.7	10139.3	10633.2	11937.9	12422.5	12892.2	13020.8	13071.1	12651.7	10139.3
62.5°	10549.3	10612.7	10629.5	11498.0	13127.0	13540.8	13744.0	13652.6	13641.4	13171.8	10118.8
65°	10823.3	10989.2	11265.1	12446.7	14208.1	14480.2	14625.6	14757.9	14478.3	13326.5	9123.5
67.5°	11296.7	11557.7	12178.3	13609.8	15456.8	15859.4	16271.3	16131.5	14603.2	11755.2	6950.3
70°	11934.2	12252.9	13348.8	15128.8	17151.1	17825.8	18170.6	16021.6	12398.3	8122.6	3666.2
72°	11531.6	11820.5	13710.4	15904.1	18351.4	18970.2	18107.2	13975.1	8987.4	4210.4	1228.3
72.5°	11140.2	11438.4	13594.9	15894.8	18470.7	18944.1	17695.3	13168.0	7953.0	3276.6	846.2
75°	7729.3	8105.8	11654.6	14288.2	16679.5	16159.5	13538.9	7973.5	2881.5	562.9	279.6
77.5°	3996.1	4286.8	7069.5	10096.4	11624.8	10646.3	8001.5	3459.3	797.7	298.2	184.5
80°	2477.0	2620.6	3306.5	4974.6	6038.8	5282.1	3530.1	1397.9	510.7	177.1	147.2
82.5°	1282.3	1392.3	2081.9	2007.4	2231.0	1854.5	1302.8	1170.5	315.0	110.0	151.0
85°	421.2	447.3	1278.6	1334.5	954.3	641.2	577.8	1116.4	91.3	70.8	128.6
87.5°	55.9	65.2	449.2	764.2	469.7	290.8	346.7	393.3	31.7	39.1	35.4
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°	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8	3794.8
2.5°	3720.2	3696.0	3619.6	3543.2	3455.6	3375.4	3312.0	3271.0	3289.7	3228.2	3237.5
5°	3614.0	3552.5	3384.7	3203.9	3008.2	2825.6	2680.2	2572.1	2551.6	2458.4	2462.1
7.5°	3511.5	3410.8	3138.7	2840.5	2516.2	2253.4	2014.8	1806.1	1731.5	1655.1	1610.4
10°	3455.6	3317.6	2931.8	2497.5	2040.9	1655.1	1319.6	1056.8	946.8	866.7	827.5
12.5°	3472.3	3289.7	2777.1	2186.3	1586.1	1095.9	745.5	553.6	486.5	449.2	436.1
15°	3528.2	3295.3	2637.3	1882.5	1153.7	663.5	438.0	374.6	369.0	367.2	365.3
17.5°	3580.4	3300.9	2490.1	1565.6	771.6	423.1	352.3	346.7	346.7	346.7	346.7
20°	3634.5	3302.7	2327.9	1233.9	507.0	346.7	331.8	328.0	331.8	331.8	331.8
22.5°	3697.9	3315.8	2171.4	911.4	374.6	326.2	316.9	315.0	316.9	316.9	315.0
25°	3776.1	3343.7	2001.8	652.3	339.2	313.1	303.8	301.9	303.8	301.9	301.9
27.5°	3880.5	3381.0	1804.2	467.8	324.3	300.1	290.8	290.8	290.8	288.9	288.9
30°	4014.7	3425.7	1539.5	369.0	309.4	287.0	279.6	279.6	277.7	275.8	275.8
32.5°	4206.7	3498.4	1250.6	333.6	292.6	270.3	262.8	264.7	262.8	260.9	259.1
35°	4478.8	3612.1	965.5	315.0	275.8	253.5	246.0	246.0	246.0	242.3	242.3
37.5°	4864.6	3785.5	723.2	296.4	259.1	236.7	227.4	227.4	225.5	221.8	223.7
40°	5341.8	4003.5	523.7	279.6	242.3	218.1	210.6	206.9	203.2	199.4	199.4
42.5°	5915.8	4216.0	393.3	262.8	225.5	203.2	193.8	190.1	182.7	178.9	177.1
45°	6558.9	4441.5	326.2	242.3	206.9	186.4	178.9	171.5	162.2	156.6	154.7
47.5°	7101.2	4579.5	290.8	221.8	188.2	169.6	162.2	151.0	139.8	136.1	136.1
50°	7427.4	4521.7	260.9	201.3	169.6	152.8	143.5	128.6	121.1	117.4	115.6
52.5°	7610.1	4350.2	236.7	184.5	152.8	134.2	121.1	108.1	104.4	100.6	100.6
55°	7734.9	4102.3	210.6	167.7	137.9	117.4	102.5	93.2	89.5	87.6	85.7
57.5°	7854.2	3800.4	186.4	152.8	123.0	104.4	87.6	83.9	76.4	74.6	74.6
60°	7889.6	3384.7	164.0	136.1	110.0	91.3	76.4	70.8	63.4	61.5	61.5
62.5°	7438.6	2693.2	145.4	115.6	96.9	78.3	67.1	59.6	52.2	52.2	52.2
65°	6215.9	1828.4	124.9	100.6	85.7	67.1	57.8	48.5	44.7	44.7	44.7
67.5°	4329.7	1019.5	106.2	85.7	72.7	55.9	48.5	41.0	39.1	41.0	41.0
70°	1951.4	404.5	89.5	70.8	59.6	46.6	41.0	35.4	39.1	39.1	39.1
72°	585.2	216.2	74.6	57.8	48.5	41.0	35.4	33.5	37.3	39.1	39.1
72.5°	434.3	193.8	70.8	55.9	48.5	39.1	33.5	33.5	37.3	39.1	39.1
75°	223.7	132.3	54.1	41.0	35.4	31.7	28.0	31.7	37.3	37.3	37.3
77.5°	175.2	108.1	44.7	31.7	29.8	28.0	26.1	29.8	33.5	33.5	33.5
80°	164.0	70.8	35.4	29.8	26.1	24.2	24.2	26.1	29.8	31.7	31.7
82.5°	165.9	57.8	31.7	28.0	24.2	22.4	22.4	24.2	28.0	29.8	29.8
85°	106.2	39.1	28.0	24.2	22.4	20.5	20.5	22.4	26.1	28.0	28.0
87.5°	35.4	29.8	24.2	22.4	18.6	18.6	18.6	18.6	22.4	24.2	26.1
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)