

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: P196644

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196644
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-SL4-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 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: 22930.2 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - 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

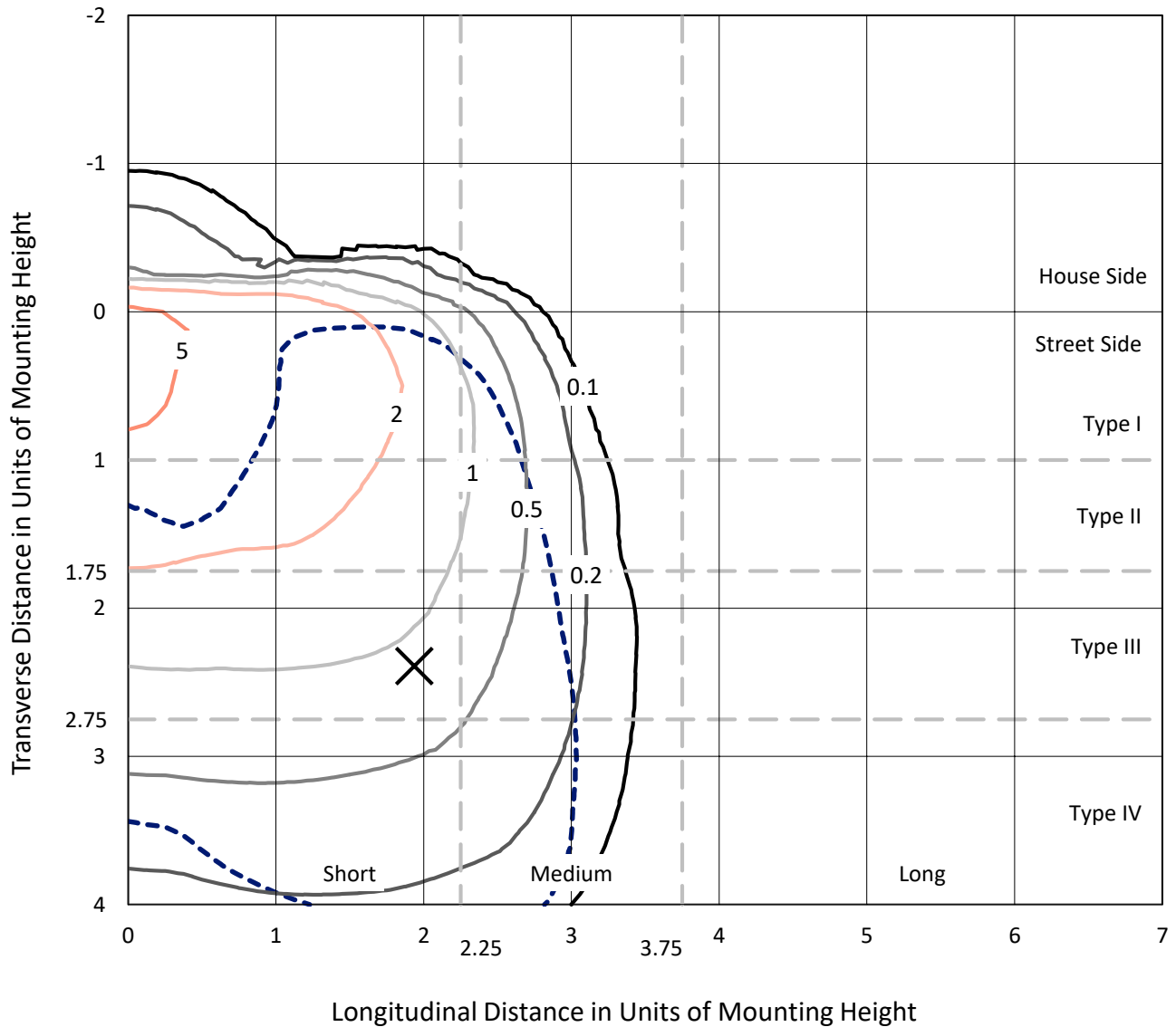


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

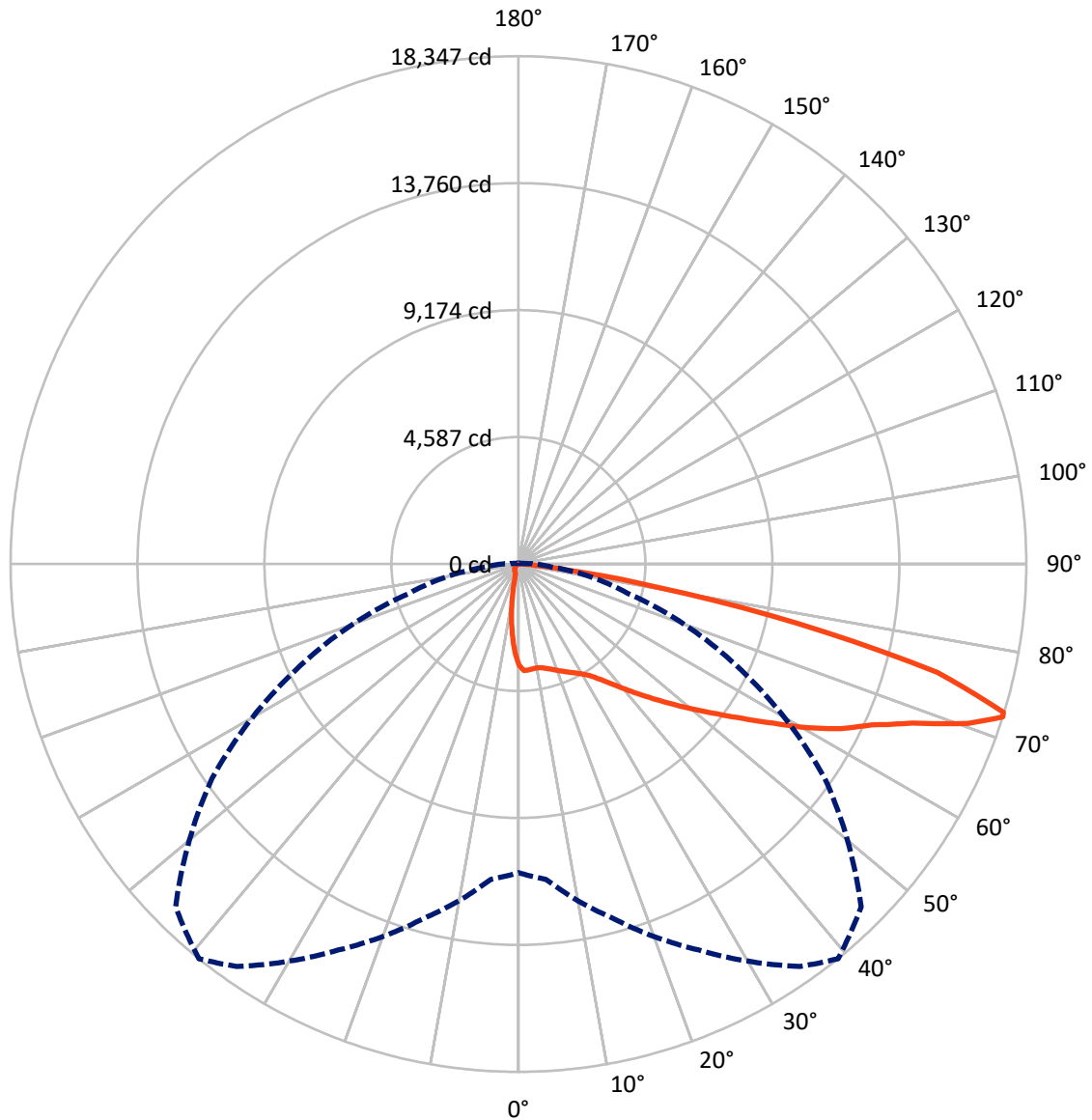


Based on 25 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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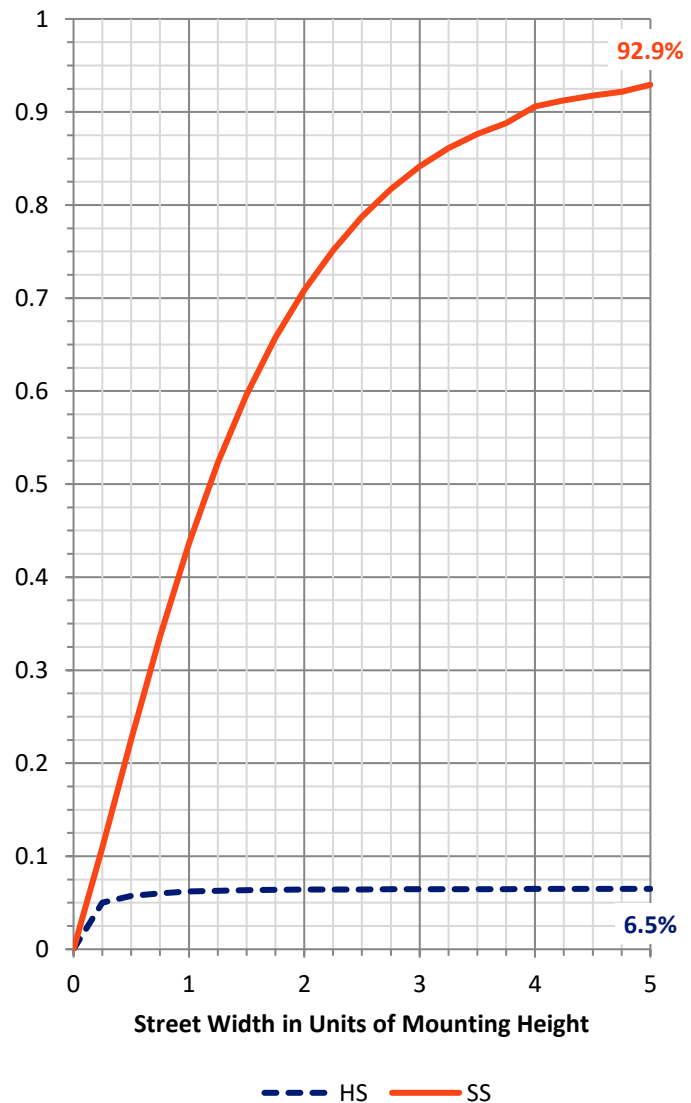
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1502.8	0.0	1502.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	21427.4	0.0	21427.4
	% Fixture	93.4	0.0	93.4
Total	Lumens	22930.2	0.0	22930.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.5	1.3
10°-20°	722.7	3.2
20°-30°	1200.3	5.2
30°-40°	1913.0	8.3
40°-50°	3157.7	13.8
50°-60°	4768.7	20.8
60°-70°	6212.0	27.1
70°-80°	4197.5	18.3
80°-90°	459.7	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°	22930.2	100.0
0°-180°	22930.2	100.0

Coefficient of Utilization



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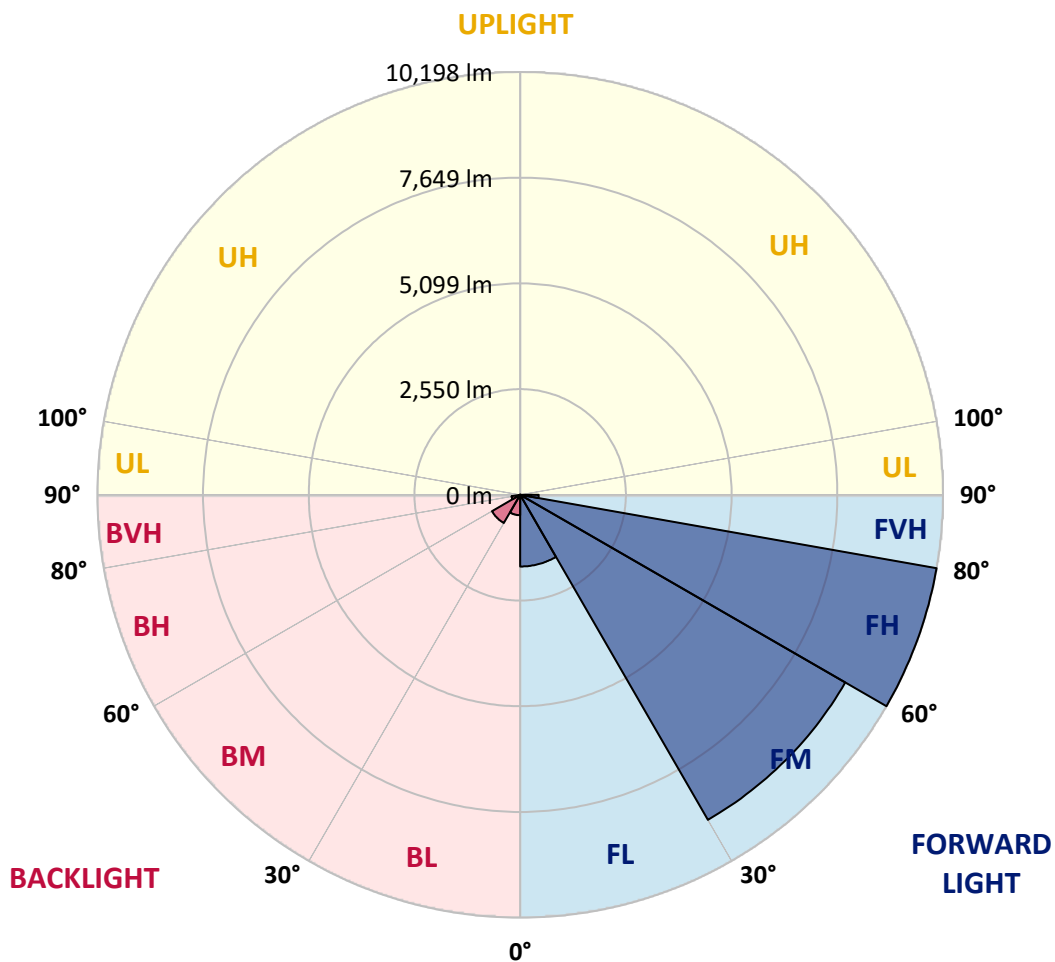
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1729.5	7.5			
FM	(30°-60°)	9053.1	39.5			
FH	(60°-80°)	10198.3	44.5			G4/12000
FVH	(80°-90°)	446.5	1.9			G3/500
BL	(0°-30°)	492.1	2.1	B1/500		
BM	(30°-60°)	786.3	3.4	B1/1000		
BH	(60°-80°)	211.2	0.9	B1/500		G1/500
BVH	(80°-90°)	13.2	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1
2.5°	3908.1	3915.3	3906.2	3890.0	3866.5	3852.2	3832.4	3789.1	3735.0	3688.1	3634.1
5°	3938.7	3942.3	3931.4	3900.9	3864.8	3845.0	3819.7	3772.8	3717.0	3652.1	3554.7
7.5°	3947.7	3945.9	3933.4	3895.4	3839.6	3814.3	3771.1	3713.4	3655.7	3596.3	3486.3
10°	3944.2	3944.2	3935.1	3899.0	3836.0	3812.5	3763.9	3702.6	3630.4	3571.0	3453.8
12.5°	3931.4	3938.7	3933.4	3913.4	3866.5	3848.5	3805.3	3744.0	3675.6	3614.3	3489.8
15°	3947.7	3958.6	3969.4	3962.2	3935.1	3918.9	3879.2	3816.1	3760.2	3695.3	3562.0
17.5°	4012.6	4036.0	4061.2	4063.2	4034.3	4005.5	3960.3	3895.4	3841.3	3781.9	3637.7
20°	4135.3	4153.3	4200.2	4209.1	4151.5	4110.0	4046.9	3971.1	3917.1	3866.5	3708.0
22.5°	4317.3	4337.1	4375.0	4362.2	4265.1	4216.4	4137.0	4050.5	3994.6	3965.8	3789.1
25°	4593.0	4598.5	4607.5	4551.6	4391.1	4337.1	4239.8	4142.4	4097.3	4093.7	3904.5
27.5°	4917.5	4924.8	4885.1	4760.8	4531.7	4461.5	4351.6	4263.2	4241.6	4268.6	4050.5
30°	5288.9	5290.7	5180.7	4978.8	4694.0	4616.5	4502.9	4405.6	4425.4	4492.0	4237.9
32.5°	5669.3	5651.2	5499.8	5236.6	4915.8	4822.0	4724.7	4627.3	4685.0	4820.2	4512.0
35°	6017.1	6010.0	5831.5	5525.0	5204.1	5121.2	5050.9	4948.3	5041.9	5261.8	4885.1
37.5°	6365.0	6359.7	6156.0	5836.8	5559.3	5499.8	5447.5	5368.2	5521.4	5844.1	5384.4
40°	6749.1	6739.9	6489.5	6183.0	5972.1	5939.7	5909.0	5874.8	6136.1	6584.9	6006.3
42.5°	7223.1	7183.5	6842.8	6559.7	6426.3	6435.4	6437.1	6471.4	6880.6	7466.4	6739.9
45°	7767.5	7679.2	7197.9	6963.5	6925.6	6979.7	7033.8	7176.2	7747.7	8481.4	7551.1
47.5°	8295.6	8153.3	7607.0	7398.0	7475.4	7587.2	7717.0	7994.6	8721.1	9543.0	8286.7
50°	8749.9	8603.9	8012.6	7839.6	8086.6	8252.4	8483.1	8903.1	9748.5	10440.9	8749.9
52.5°	9106.9	8991.5	8441.7	8326.3	8764.3	8991.5	9353.8	9905.5	10718.4	11032.0	9074.4
55°	9370.0	9312.3	8852.6	8868.9	9517.8	9845.9	10296.6	10920.3	11536.8	11491.7	9317.7
57.5°	9667.5	9622.4	9283.5	9508.9	10424.5	10848.2	11369.1	11870.3	12131.6	11861.1	9555.7
60°	9972.1	9986.6	9806.2	10283.9	11545.8	12014.4	12468.6	12593.1	12641.8	12236.2	9806.2
62.5°	10202.8	10264.2	10280.3	11120.4	12695.8	13096.1	13292.5	13204.2	13193.4	12739.1	9786.5
65°	10467.8	10628.2	10895.0	12037.8	13741.3	14004.6	14145.1	14273.2	14002.7	12888.8	8823.8
67.5°	10925.7	11178.1	11778.3	13162.7	14949.1	15338.5	15736.8	15601.6	14123.5	11369.1	6721.9
70°	11542.1	11850.4	12910.4	14631.9	16587.7	17240.2	17573.7	15495.3	11990.9	7855.8	3545.8
72°	11152.8	11432.3	13260.0	15381.7	17748.6	18347.1	17512.4	13516.0	8692.2	4072.1	1187.9
72.5°	10774.3	11062.7	13148.3	15372.8	17864.0	18321.8	17114.1	12735.5	7691.8	3168.9	818.4
75°	7475.4	7839.6	11271.7	13818.9	16131.7	15628.7	13094.1	7711.6	2786.8	544.4	270.4
77.5°	3864.8	4146.1	6837.3	9764.8	11242.9	10296.6	7738.7	3345.6	771.5	288.5	178.4
80°	2395.7	2534.5	3197.8	4811.2	5840.5	5108.6	3414.2	1352.0	494.0	171.2	142.4
82.5°	1240.2	1346.5	2013.5	1941.4	2157.8	1793.6	1260.0	1132.0	304.7	106.3	146.0
85°	407.4	432.6	1236.6	1290.7	922.9	620.1	558.9	1079.8	88.3	68.5	124.3
87.5°	54.1	63.1	434.5	739.0	454.3	281.3	335.3	380.3	30.6	37.8	34.2
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°	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1	3670.1
2.5°	3598.0	3574.6	3500.6	3426.8	3342.0	3264.5	3203.3	3163.6	3181.6	3122.1	3131.2
5°	3495.3	3435.7	3273.5	3098.7	2909.5	2732.8	2592.1	2487.7	2467.8	2377.7	2381.3
7.5°	3396.1	3298.7	3035.7	2747.3	2433.5	2179.4	1948.6	1746.7	1674.6	1600.7	1557.5
10°	3342.0	3208.6	2835.5	2415.5	1973.9	1600.7	1276.2	1022.1	915.7	838.2	800.4
12.5°	3358.3	3181.6	2685.9	2114.5	1534.0	1060.0	721.0	535.4	470.5	434.5	421.8
15°	3412.3	3187.0	2550.6	1820.7	1115.9	641.7	423.6	362.3	356.9	355.1	353.4
17.5°	3462.9	3192.4	2408.3	1514.3	746.2	409.1	340.7	335.3	335.3	335.3	335.3
20°	3515.1	3194.2	2251.5	1193.3	490.3	335.3	320.9	317.3	320.9	320.9	320.9
22.5°	3576.4	3206.9	2100.1	881.5	362.3	315.4	306.5	304.7	306.5	306.5	304.7
25°	3652.1	3233.8	1936.0	630.9	328.1	302.8	293.8	292.0	293.8	292.0	292.0
27.5°	3753.0	3269.9	1745.0	452.5	313.7	290.2	281.3	281.3	281.3	279.3	279.3
30°	3882.8	3313.2	1488.9	356.9	299.3	277.6	270.4	270.4	268.6	266.8	266.8
32.5°	4068.5	3383.5	1209.6	322.7	283.0	261.3	254.1	256.0	254.1	252.4	250.5
35°	4331.7	3493.4	933.7	304.7	266.8	245.2	237.9	237.9	237.9	234.4	234.4
37.5°	4704.8	3661.2	699.4	286.6	250.5	228.9	219.9	219.9	218.1	214.4	216.4
40°	5166.4	3872.0	506.5	270.4	234.4	210.9	203.7	200.1	196.4	192.9	192.9
42.5°	5721.5	4077.5	380.3	254.1	218.1	196.4	187.5	183.9	176.7	173.0	171.2
45°	6343.4	4295.6	315.4	234.4	200.1	180.3	173.0	165.8	156.8	151.5	149.5
47.5°	6867.9	4429.1	281.3	214.4	182.0	164.0	156.8	146.0	135.2	131.5	131.5
50°	7183.5	4373.1	252.4	194.7	164.0	147.8	138.8	124.3	117.1	113.5	111.8
52.5°	7360.1	4207.3	228.9	178.4	147.8	129.8	117.1	104.6	100.9	97.4	97.4
55°	7480.9	3967.5	203.7	162.2	133.4	113.5	99.1	90.1	86.6	84.6	82.9
57.5°	7596.2	3675.6	180.3	147.8	119.0	100.9	84.6	81.1	73.9	72.1	72.1
60°	7630.4	3273.5	158.7	131.5	106.3	88.3	73.9	68.5	61.3	59.4	59.4
62.5°	7194.2	2604.7	140.6	111.8	93.8	75.7	64.9	57.7	50.5	50.5	50.5
65°	6011.8	1768.4	120.7	97.4	82.9	64.9	55.8	46.9	43.2	43.2	43.2
67.5°	4187.5	986.1	102.7	82.9	70.3	54.1	46.9	39.7	37.8	39.7	39.7
70°	1887.4	391.1	86.6	68.5	57.7	45.1	39.7	34.2	37.8	37.8	37.8
72°	566.1	209.1	72.1	55.8	46.9	39.7	34.2	32.4	36.0	37.8	37.8
72.5°	420.0	187.5	68.5	54.1	46.9	37.8	32.4	32.4	36.0	37.8	37.8
75°	216.4	128.0	52.2	39.7	34.2	30.6	27.0	30.6	36.0	36.0	36.0
77.5°	169.5	104.6	43.2	30.6	28.9	27.0	25.2	28.9	32.4	32.4	32.4
80°	158.7	68.5	34.2	28.9	25.2	23.4	23.4	25.2	28.9	30.6	30.6
82.5°	160.4	55.8	30.6	27.0	23.4	21.7	21.7	23.4	27.0	28.9	28.9
85°	102.7	37.8	27.0	23.4	21.7	19.7	19.7	21.7	25.2	27.0	27.0
87.5°	34.2	28.9	23.4	21.7	18.0	18.0	18.0	18.0	21.7	23.4	25.2
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)