

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: P270685

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270685
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-SL4-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 20598.3 lumens
Efficiency: N/A
Efficacy: 82.7 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

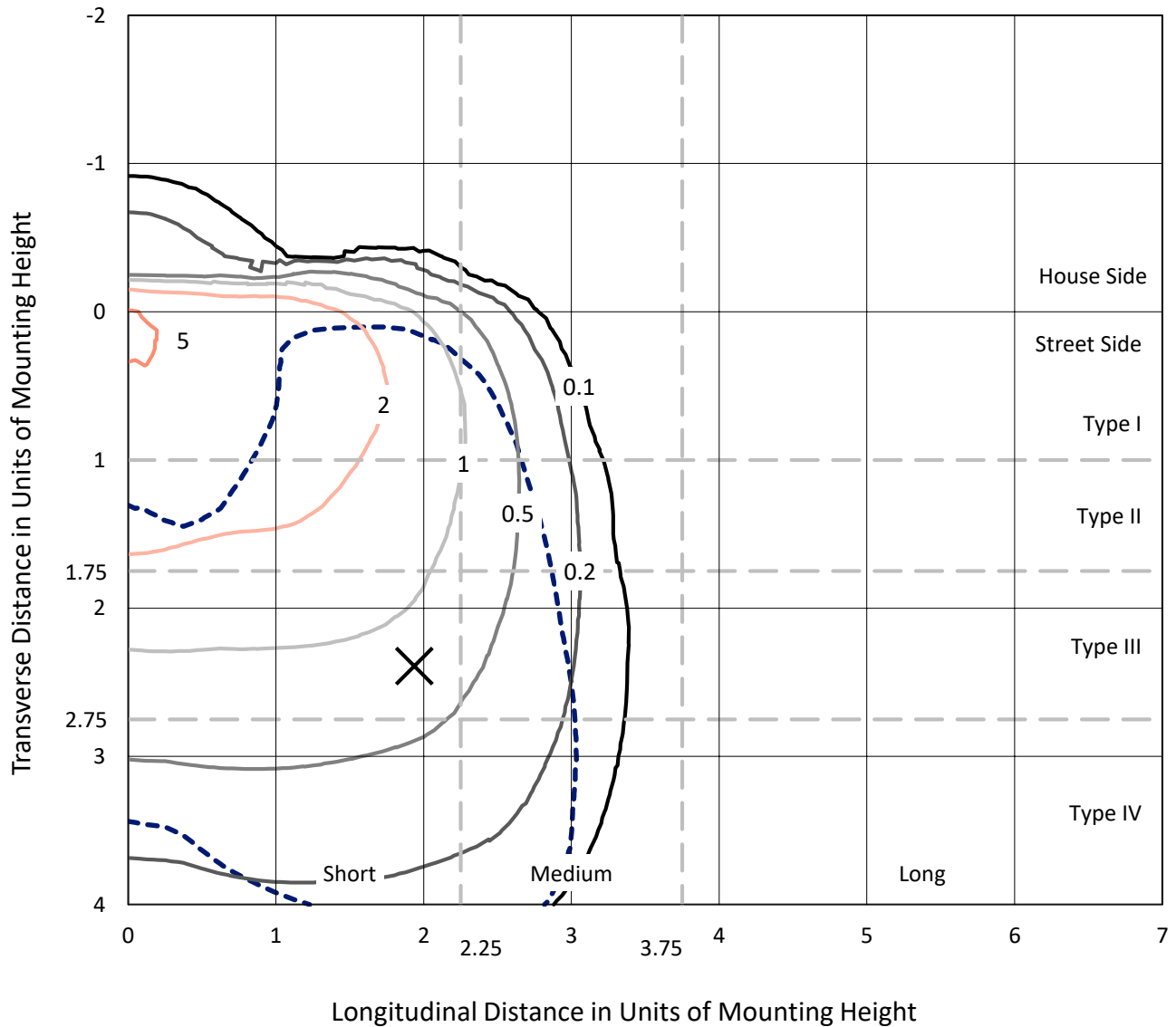
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

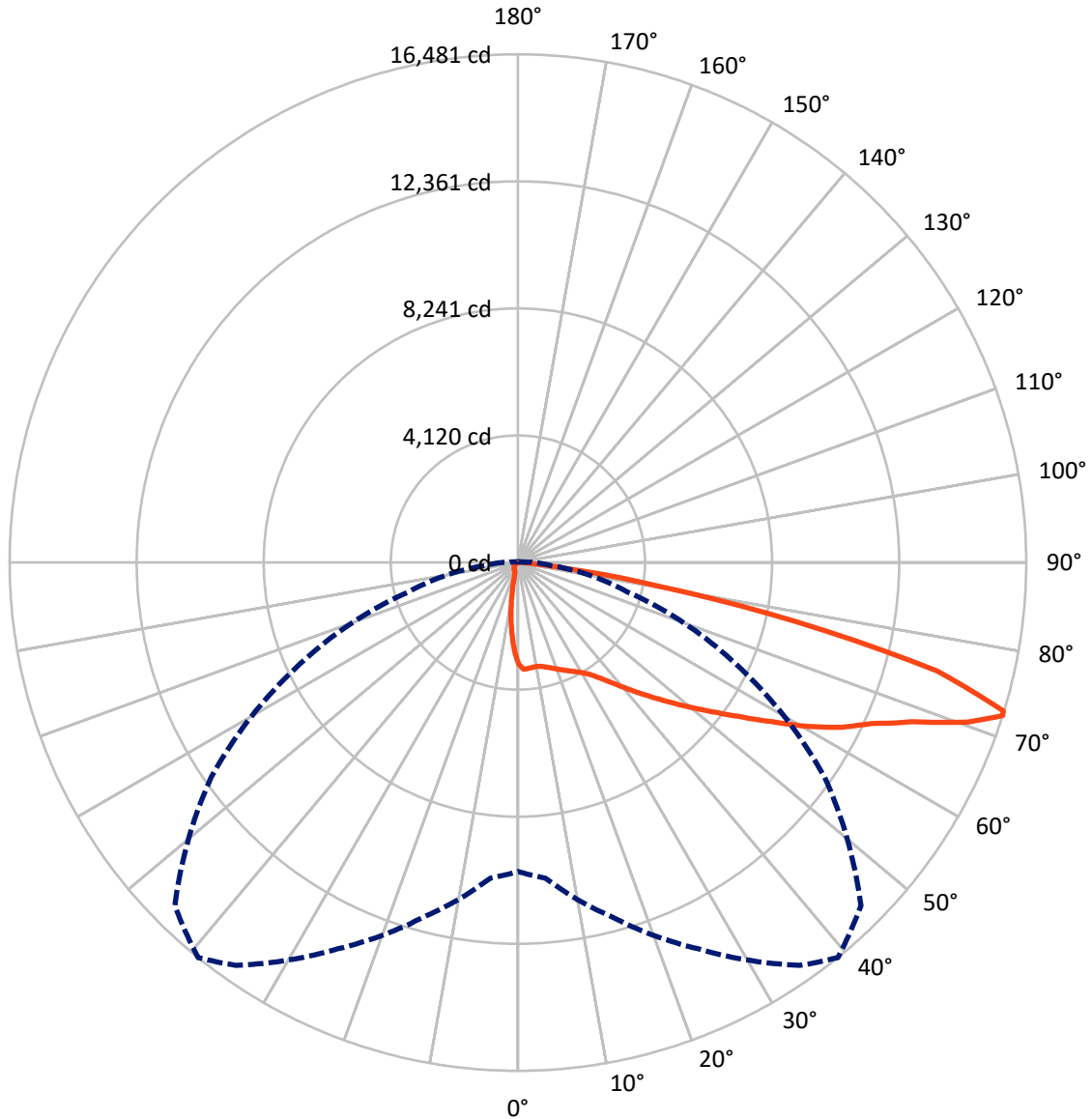
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 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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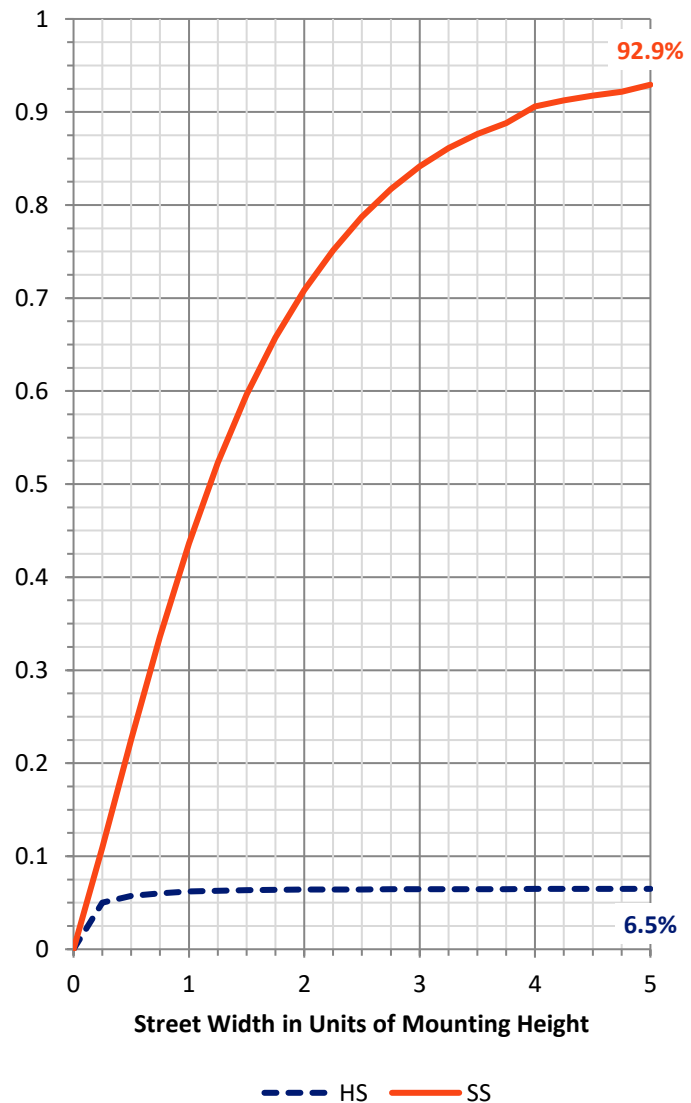
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1350.0	0.0	1350.0
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	19248.4	0.0	19248.4
	% Fixture	93.4	0.0	93.4
Total	Lumens	20598.3	0.0	20598.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.2	1.3
10°-20°	649.2	3.2
20°-30°	1078.2	5.2
30°-40°	1718.5	8.3
40°-50°	2836.6	13.8
50°-60°	4283.8	20.8
60°-70°	5580.3	27.1
70°-80°	3770.7	18.3
80°-90°	413.0	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°	20598.3	100.0
0°-180°	20598.3	100.0



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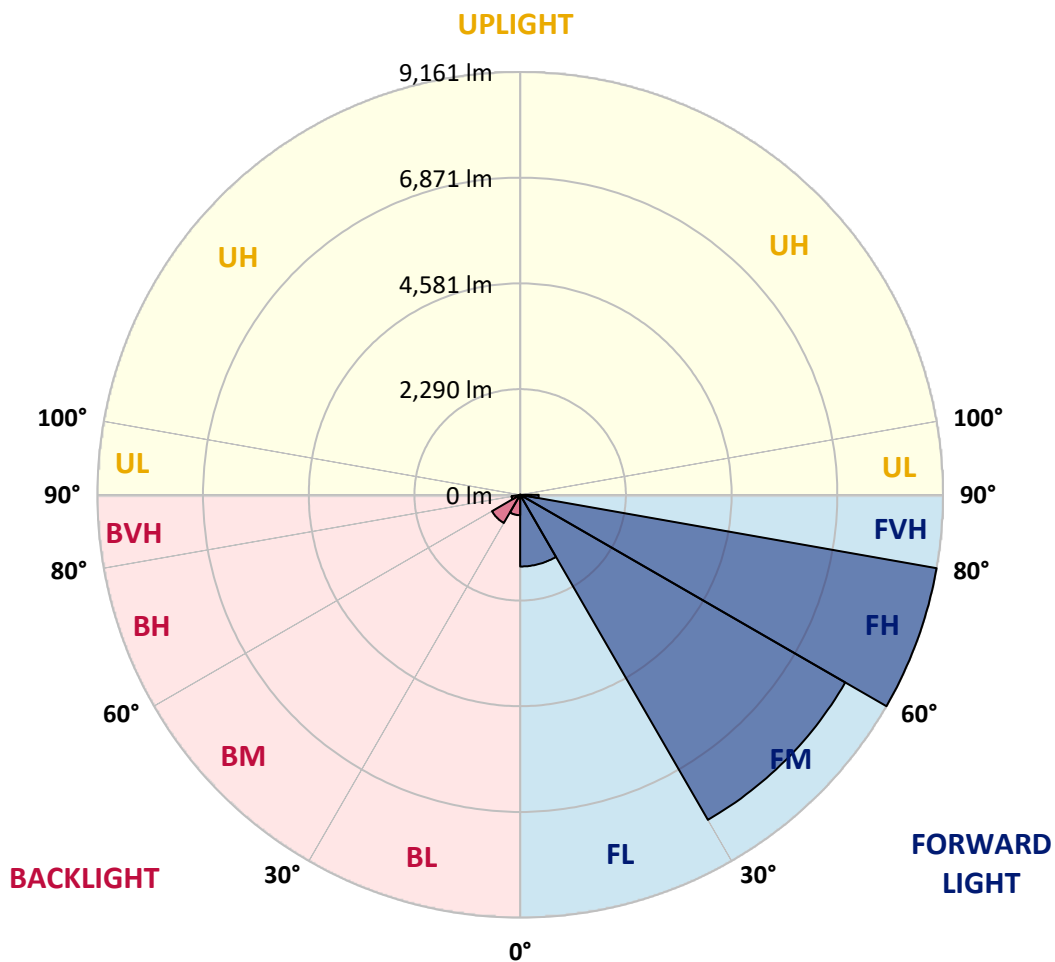
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1553.6	7.5			
FM	(30°-60°)	8132.5	39.5			
FH	(60°-80°)	9161.2	44.5			G4/12000
FVH	(80°-90°)	401.1	1.9			G3/500
BL	(0°-30°)	442.0	2.1	B1/500		
BM	(30°-60°)	706.3	3.4	B1/1000		
BH	(60°-80°)	189.7	0.9	B1/500		G1/500
BVH	(80°-90°)	11.9	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°	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9
2.5°	3510.7	3517.1	3509.0	3494.4	3473.3	3460.5	3442.7	3403.8	3355.2	3313.0	3264.5
5°	3538.2	3541.4	3531.6	3504.2	3471.8	3454.0	3431.3	3389.1	3339.0	3280.7	3193.2
7.5°	3546.2	3544.6	3533.4	3499.3	3449.1	3426.4	3387.6	3335.8	3283.9	3230.6	3131.8
10°	3543.1	3543.1	3534.9	3502.5	3445.9	3424.8	3381.1	3326.1	3261.2	3207.8	3102.6
12.5°	3531.6	3538.2	3533.4	3515.4	3473.3	3457.1	3418.3	3363.3	3301.8	3246.7	3134.9
15°	3546.2	3556.0	3565.7	3559.3	3534.9	3520.4	3484.7	3428.0	3377.8	3319.5	3199.8
17.5°	3604.5	3625.6	3648.2	3650.0	3624.0	3598.2	3557.6	3499.3	3450.7	3397.3	3267.8
20°	3714.8	3730.9	3773.1	3781.1	3729.3	3692.0	3635.4	3567.3	3518.8	3473.3	3330.9
22.5°	3878.3	3896.0	3930.1	3918.6	3831.4	3787.6	3716.3	3638.6	3588.4	3562.5	3403.8
25°	4125.9	4130.9	4138.9	4088.7	3944.5	3896.0	3808.6	3721.1	3680.6	3677.4	3507.4
27.5°	4417.4	4424.0	4388.3	4276.7	4070.8	4007.8	3909.1	3829.7	3810.3	3834.5	3638.6
30°	4751.0	4752.7	4653.8	4472.5	4216.6	4147.0	4045.0	3957.6	3975.4	4035.2	3806.9
32.5°	5092.8	5076.5	4940.5	4704.1	4415.9	4331.6	4244.2	4156.7	4208.6	4330.0	4053.2
35°	5405.2	5398.8	5238.5	4963.1	4674.9	4600.4	4537.2	4445.1	4529.2	4726.7	4388.3
37.5°	5717.7	5713.0	5530.0	5243.2	4993.9	4940.5	4893.5	4822.3	4959.9	5249.8	4836.8
40°	6062.8	6054.5	5829.6	5554.2	5364.8	5335.7	5308.1	5277.4	5512.1	5915.2	5395.5
42.5°	6488.5	6453.0	6146.9	5892.6	5772.8	5781.0	5782.5	5813.3	6180.9	6707.1	6054.5
45°	6977.6	6898.3	6465.9	6255.3	6221.3	6269.9	6318.5	6446.4	6959.8	7618.9	6783.2
47.5°	7452.0	7324.2	6833.4	6645.7	6715.2	6815.6	6932.2	7181.6	7834.2	8572.5	7444.0
50°	7860.1	7728.9	7197.8	7042.4	7264.2	7413.2	7620.4	7997.7	8757.1	9379.1	7860.1
52.5°	8180.8	8077.1	7583.2	7479.6	7873.0	8077.1	8402.6	8898.2	9628.4	9910.1	8151.6
55°	8417.1	8365.3	7952.3	7967.0	8549.9	8844.6	9249.5	9809.8	10363.6	10323.1	8370.1
57.5°	8684.4	8643.9	8339.4	8541.9	9364.4	9745.0	10212.9	10663.2	10897.9	10654.9	8583.9
60°	8958.0	8971.0	8809.0	9238.1	10371.7	10792.6	11200.6	11312.4	11356.2	10991.8	8809.0
62.5°	9165.2	9220.4	9234.8	9989.5	11404.7	11764.3	11940.7	11861.4	11851.7	11443.6	8791.3
65°	9403.3	9547.4	9787.0	10813.6	12343.9	12580.4	12706.6	12821.7	12578.7	11578.1	7926.5
67.5°	9814.6	10041.3	10580.5	11824.1	13428.9	13778.7	14136.4	14015.0	12687.2	10212.9	6038.3
70°	10368.3	10645.3	11597.5	13143.9	14900.8	15487.0	15786.5	13919.5	10771.5	7056.9	3185.2
72°	10018.6	10269.7	11911.5	13817.5	15943.7	16481.3	15731.5	12141.5	7808.2	3658.0	1067.1
72.5°	9678.6	9937.7	11811.2	13809.5	16047.3	16458.6	15373.7	11440.4	6909.6	2846.6	735.2
75°	6715.2	7042.4	10125.4	12413.6	14491.2	14039.3	11762.5	6927.4	2503.4	489.0	242.9
77.5°	3471.8	3724.5	6142.0	8771.8	10099.6	9249.5	6951.7	3005.4	693.0	259.2	160.3
80°	2152.1	2276.8	2872.6	4321.9	5246.6	4589.1	3067.0	1214.5	443.8	153.8	127.9
82.5°	1114.1	1209.6	1808.7	1744.0	1938.4	1611.2	1131.9	1016.9	273.7	95.5	131.2
85°	366.0	388.6	1110.8	1159.4	829.0	557.0	502.1	970.0	79.3	61.5	111.7
87.5°	48.6	56.7	390.3	663.8	408.1	252.7	301.2	341.6	27.5	34.0	30.7
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°	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9	3296.9
2.5°	3232.1	3211.1	3144.6	3078.3	3002.1	2932.5	2877.5	2841.9	2858.0	2804.6	2812.8
5°	3139.8	3086.3	2940.6	2783.6	2613.6	2454.9	2328.5	2234.7	2216.8	2135.9	2139.1
7.5°	3050.7	2963.2	2727.0	2467.9	2186.0	1957.8	1750.4	1569.1	1504.3	1437.9	1399.1
10°	3002.1	2882.3	2547.1	2169.9	1773.2	1437.9	1146.4	918.2	822.6	753.0	719.0
12.5°	3016.8	2858.0	2412.8	1899.5	1378.0	952.2	647.7	481.0	422.7	390.3	378.9
15°	3065.3	2862.9	2291.2	1635.5	1002.4	576.4	380.5	325.5	320.6	319.0	317.5
17.5°	3110.7	2867.7	2163.4	1360.3	670.3	367.5	306.1	301.2	301.2	301.2	301.2
20°	3157.6	2869.4	2022.5	1071.9	440.4	301.2	288.3	285.0	288.3	288.3	288.3
22.5°	3212.7	2880.8	1886.5	791.9	325.5	283.3	275.3	273.7	275.3	275.3	273.7
25°	3280.7	2904.9	1739.1	566.7	294.7	272.0	263.9	262.3	263.9	262.3	262.3
27.5°	3371.3	2937.4	1567.5	406.5	281.8	260.7	252.7	252.7	252.7	250.9	250.9
30°	3487.9	2976.3	1337.5	320.6	268.9	249.4	242.9	242.9	241.3	239.7	239.7
32.5°	3654.8	3039.4	1086.6	289.9	254.2	234.7	228.3	230.0	228.3	226.7	225.0
35°	3891.2	3138.1	838.7	273.7	239.7	220.3	213.7	213.7	213.7	210.6	210.6
37.5°	4226.3	3288.9	628.3	257.5	225.0	205.6	197.5	197.5	195.9	192.6	194.4
40°	4641.0	3478.2	455.0	242.9	210.6	189.5	183.0	179.8	176.4	173.3	173.3
42.5°	5139.7	3662.8	341.6	228.3	195.9	176.4	168.4	165.2	158.7	155.4	153.8
45°	5698.3	3858.8	283.3	210.6	179.8	162.0	155.4	148.9	140.9	136.1	134.3
47.5°	6169.5	3978.7	252.7	192.6	163.5	147.3	140.9	131.2	121.5	118.1	118.1
50°	6453.0	3928.4	226.7	174.9	147.3	132.8	124.7	111.7	105.2	102.0	100.4
52.5°	6611.6	3779.4	205.6	160.3	132.8	116.6	105.2	94.0	90.6	87.5	87.5
55°	6720.1	3564.0	183.0	145.7	119.8	102.0	89.0	80.9	77.8	76.0	74.5
57.5°	6823.7	3301.8	162.0	132.8	106.9	90.6	76.0	72.9	66.4	64.8	64.8
60°	6854.4	2940.6	142.6	118.1	95.5	79.3	66.4	61.5	55.1	53.4	53.4
62.5°	6462.6	2339.8	126.3	100.4	84.3	68.0	58.3	51.8	45.4	45.4	45.4
65°	5400.4	1588.6	108.4	87.5	74.5	58.3	50.1	42.1	38.8	38.8	38.8
67.5°	3761.7	885.8	92.3	74.5	63.2	48.6	42.1	35.7	34.0	35.7	35.7
70°	1695.5	351.3	77.8	61.5	51.8	40.5	35.7	30.7	34.0	34.0	34.0
72°	508.5	187.8	64.8	50.1	42.1	35.7	30.7	29.1	32.3	34.0	34.0
72.5°	377.3	168.4	61.5	48.6	42.1	34.0	29.1	29.1	32.3	34.0	34.0
75°	194.4	115.0	46.9	35.7	30.7	27.5	24.3	27.5	32.3	32.3	32.3
77.5°	152.3	94.0	38.8	27.5	26.0	24.3	22.6	26.0	29.1	29.1	29.1
80°	142.6	61.5	30.7	26.0	22.6	21.0	21.0	22.6	26.0	27.5	27.5
82.5°	144.1	50.1	27.5	24.3	21.0	19.5	19.5	21.0	24.3	26.0	26.0
85°	92.3	34.0	24.3	21.0	19.5	17.7	17.7	19.5	22.6	24.3	24.3
87.5°	30.7	26.0	21.0	19.5	16.2	16.2	16.2	16.2	19.5	21.0	22.6
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)