

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: P195696

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195696
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-SL4-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA 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: 32191 lumens
Efficiency: N/A
Efficacy: 84.3 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 - G5

Input Watts (W): 382
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

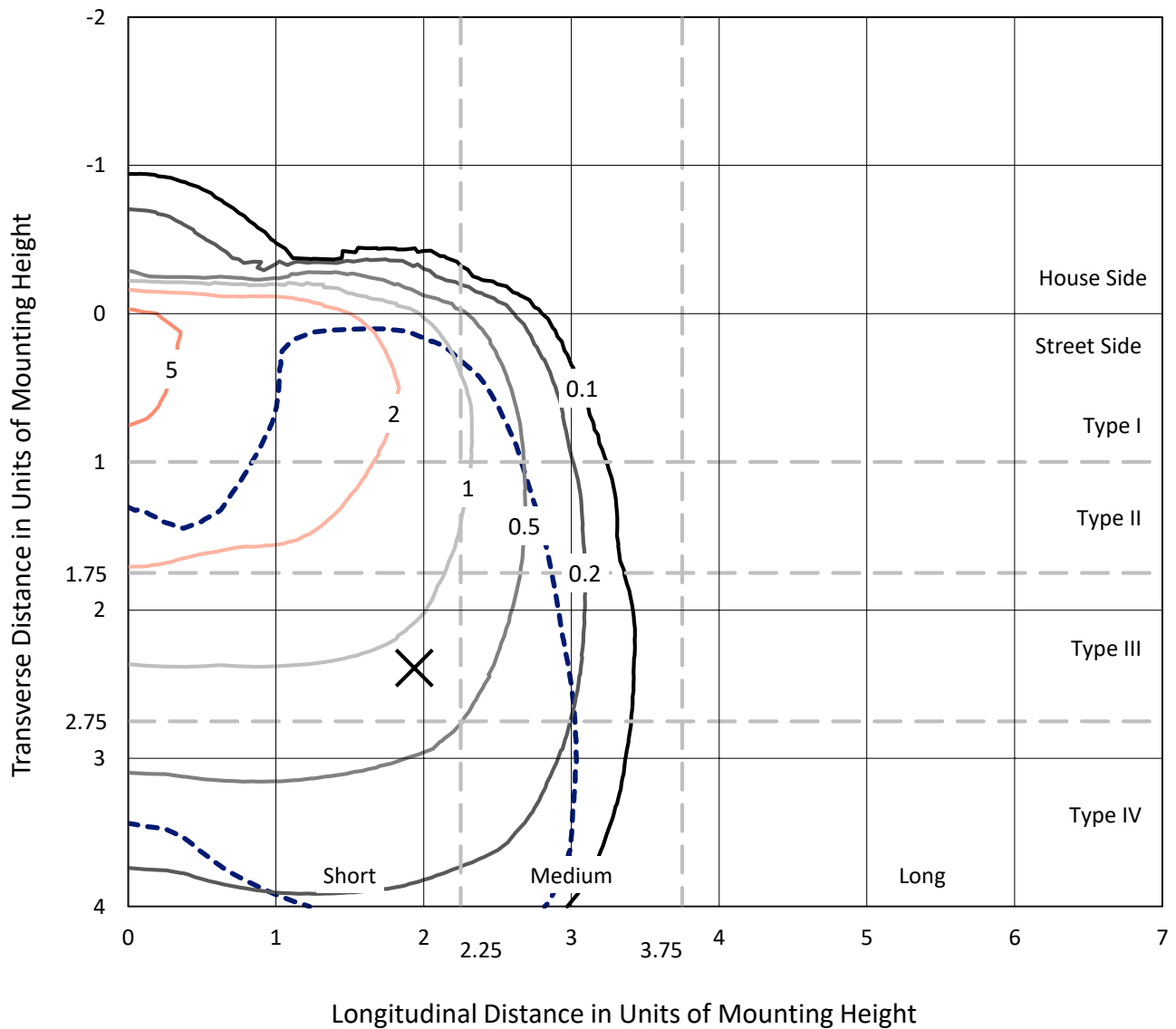


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

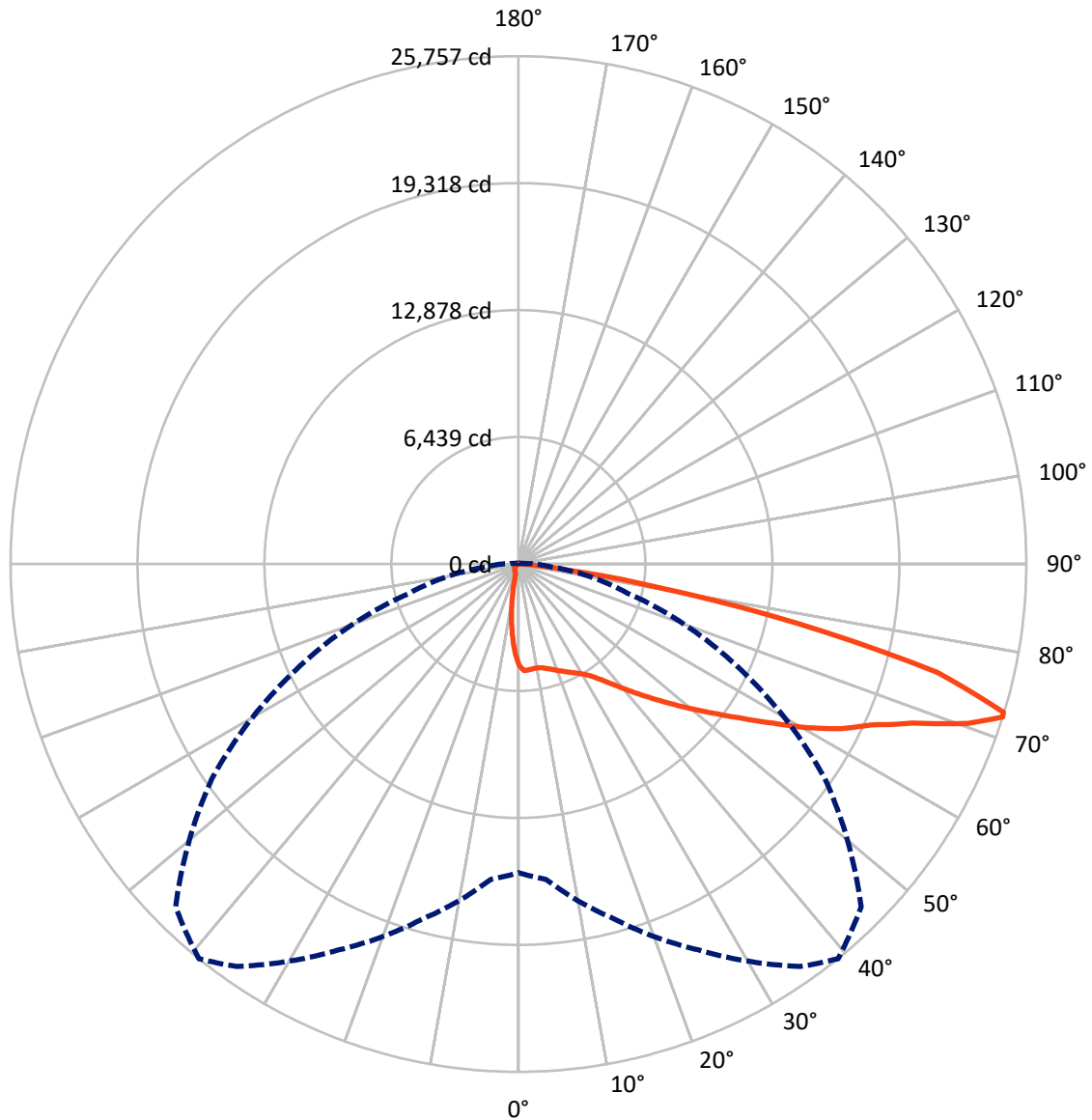


Based on 30 foot mounting height. Maximum calculated value = 6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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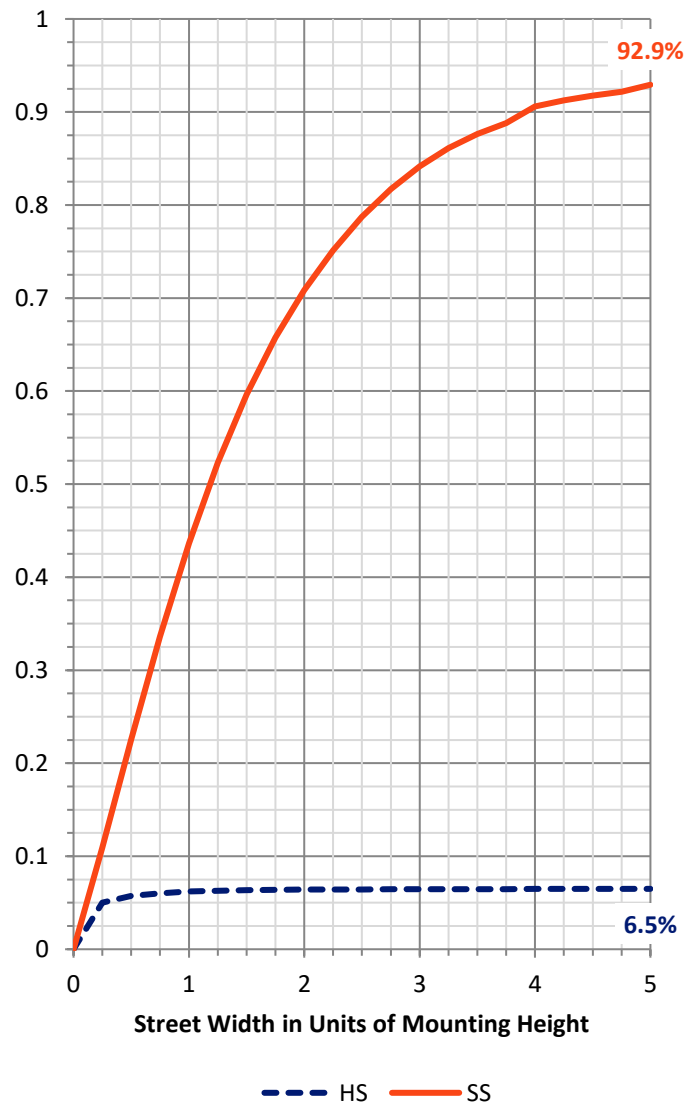
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2109.7	0.0	2109.7
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	30081.3	0.0	30081.3
	% Fixture	93.4	0.0	93.4
Total	Lumens	32191.0	0.0	32191.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	419.1	1.3
10°-20°	1014.6	3.2
20°-30°	1685.1	5.2
30°-40°	2685.6	8.3
40°-50°	4433.0	13.8
50°-60°	6694.6	20.8
60°-70°	8720.9	27.1
70°-80°	5892.8	18.3
80°-90°	645.4	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°	32191.0	100.0
0°-180°	32191.0	100.0



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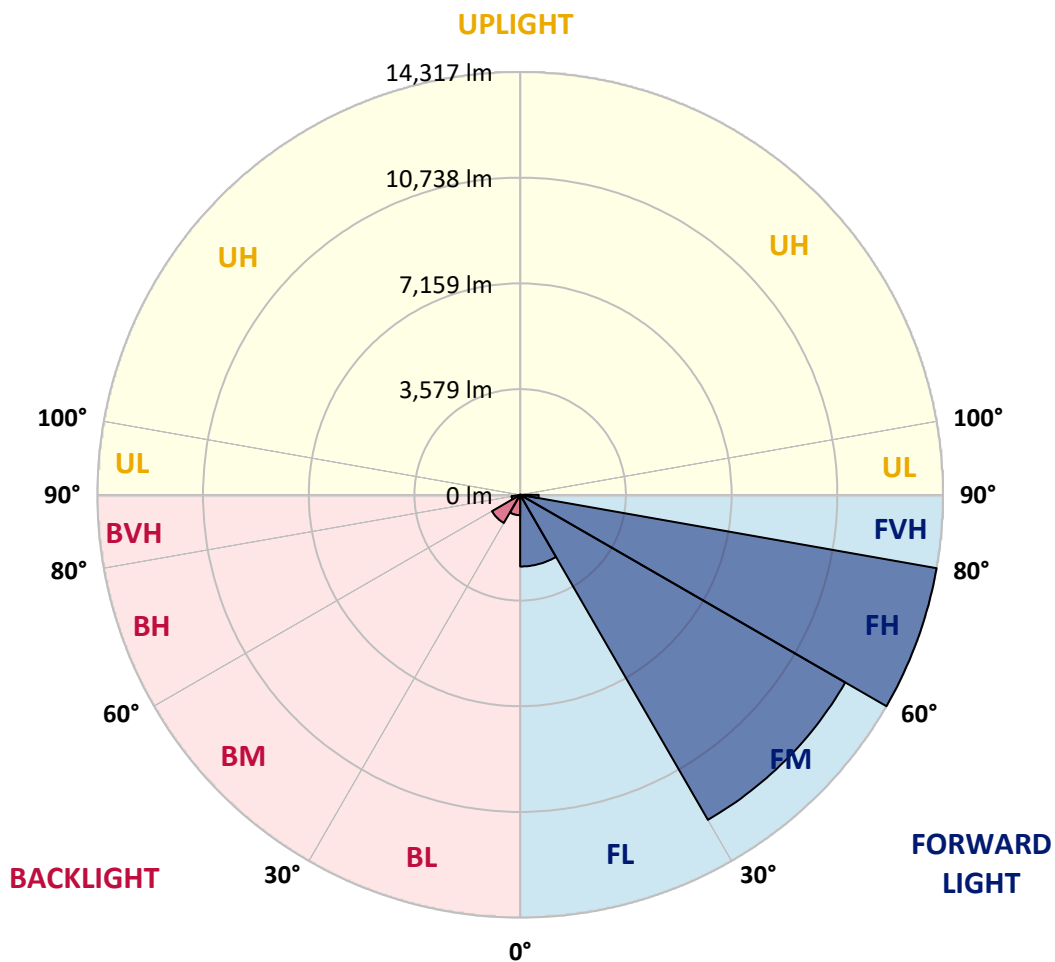
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2428.0	7.5			
FM (30°-60°)	12709.4	39.5			
FH (60°-80°)	14317.1	44.5			G5
FVH (80°-90°)	626.8	1.9			G4/750
BL (0°-30°)	690.8	2.1	B2/1000		
BM (30°-60°)	1103.8	3.4	B2/2500		
BH (60°-80°)	296.5	0.9	B1/500		G1/500
BVH (80°-90°)	18.6	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4
2.5°	5486.4	5496.5	5483.9	5461.1	5428.2	5408.0	5380.1	5319.4	5243.5	5177.7	5101.8
5°	5529.4	5534.5	5519.3	5476.3	5425.7	5397.8	5362.4	5296.6	5218.2	5127.1	4990.4
7.5°	5542.1	5539.6	5521.9	5468.7	5390.3	5354.8	5294.1	5213.1	5132.1	5048.6	4894.3
10°	5537.0	5537.0	5524.4	5473.8	5385.2	5352.3	5284.0	5197.9	5096.7	5013.2	4848.7
12.5°	5519.3	5529.4	5521.9	5494.0	5428.2	5402.9	5342.2	5256.1	5160.0	5073.9	4899.3
15°	5542.1	5557.3	5572.5	5562.3	5524.4	5501.6	5445.9	5357.4	5278.9	5187.8	5000.5
17.5°	5633.2	5666.1	5701.5	5704.1	5663.6	5623.1	5559.8	5468.7	5392.8	5309.3	5106.8
20°	5805.3	5830.6	5896.4	5909.0	5828.1	5769.9	5681.3	5575.0	5499.1	5428.2	5205.5
22.5°	6060.9	6088.7	6141.9	6124.1	5987.5	5919.2	5807.8	5686.3	5607.9	5567.4	5319.4
25°	6448.1	6455.7	6468.3	6389.9	6164.6	6088.7	5952.1	5815.4	5752.1	5747.1	5481.4
27.5°	6903.6	6913.7	6858.0	6683.4	6362.0	6263.3	6109.0	5985.0	5954.6	5992.5	5686.3
30°	7424.9	7427.4	7273.1	6989.6	6589.8	6481.0	6321.5	6184.9	6212.7	6306.3	5949.5
32.5°	7958.9	7933.5	7721.0	7351.5	6901.0	6769.5	6632.8	6496.1	6577.1	6766.9	6334.2
35°	8447.3	8437.1	8186.6	7756.4	7306.0	7189.5	7090.8	6946.6	7078.2	7386.9	6858.0
37.5°	8935.7	8928.1	8642.1	8194.2	7804.5	7721.0	7647.6	7536.2	7751.3	8204.3	7559.0
40°	9474.7	9462.1	9110.3	8680.1	8384.0	8338.5	8295.4	8247.3	8614.3	9244.4	8432.1
42.5°	10140.3	10084.6	9606.3	9209.0	9021.7	9034.4	9036.9	9085.0	9659.4	10481.9	9462.1
45°	10904.5	10780.5	10104.8	9775.9	9722.7	9798.6	9874.5	10074.5	10876.7	11906.6	10600.8
47.5°	11646.0	11446.1	10679.3	10385.7	10494.6	10651.5	10833.7	11223.4	12243.2	13397.2	11633.3
50°	12283.7	12078.7	11248.7	11005.7	11352.4	11585.3	11909.2	12498.8	13685.7	14657.5	12283.7
52.5°	12784.8	12622.8	11851.0	11689.0	12304.0	12622.8	13131.5	13905.9	15047.2	15487.5	12739.2
55°	13154.3	13073.3	12428.0	12450.7	13361.8	13822.3	14455.0	15330.6	16196.1	16132.8	13080.9
57.5°	13571.8	13508.5	13032.8	13349.1	14634.7	15229.4	15960.7	16664.2	17031.2	16651.6	13414.9
60°	13999.5	14019.7	13766.7	14437.3	16208.7	16866.7	17504.4	17679.0	17747.4	17178.0	13766.7
62.5°	14323.4	14409.4	14432.2	15611.5	17823.3	18385.1	18660.9	18536.9	18521.7	17884.0	13738.8
65°	14695.4	14920.6	15295.2	16899.6	19291.0	19660.5	19857.9	20037.6	19658.0	18094.1	12387.5
67.5°	15338.2	15692.5	16535.2	18478.7	20986.6	21533.2	22092.5	21902.7	19827.5	15960.7	9436.7
70°	16203.7	16636.4	18124.4	20541.2	23286.9	24203.0	24671.2	21753.4	16833.8	11028.5	4977.8
72°	15657.1	16049.3	18615.4	21593.9	24916.7	25756.8	24585.1	18974.7	12202.7	5716.7	1667.7
72.5°	15125.6	15530.5	18458.5	21581.3	25078.6	25721.4	24025.9	17879.0	10798.2	4448.9	1148.9
75°	10494.6	11005.7	15824.1	19399.9	22646.7	21940.6	18382.6	10826.1	3912.4	764.3	379.6
77.5°	5425.7	5820.5	9598.7	13708.5	15783.6	14455.0	10864.0	4696.9	1083.1	404.9	250.5
80°	3363.2	3558.1	4489.4	6754.3	8199.3	7171.8	4793.0	1898.0	693.4	240.4	199.9
82.5°	1741.1	1890.4	2826.7	2725.5	3029.2	2518.0	1768.9	1589.2	427.7	149.3	205.0
85°	571.9	607.4	1736.0	1811.9	1295.7	870.5	784.5	1515.9	124.0	96.2	174.6
87.5°	75.9	88.6	609.9	1037.6	637.7	394.8	470.7	534.0	43.0	53.1	48.1
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°	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4	5152.4
2.5°	5051.2	5018.3	4914.5	4810.7	4691.8	4583.0	4496.9	4441.3	4466.6	4383.1	4395.7
5°	4906.9	4823.4	4595.6	4350.2	4084.4	3836.4	3639.1	3492.3	3464.4	3337.9	3343.0
7.5°	4767.7	4631.1	4261.6	3856.7	3416.4	3059.5	2735.6	2452.2	2351.0	2247.2	2186.5
10°	4691.8	4504.5	3980.7	3391.1	2771.0	2247.2	1791.7	1434.9	1285.6	1176.7	1123.6
12.5°	4714.6	4466.6	3770.6	2968.4	2153.6	1488.0	1012.3	751.6	660.5	609.9	592.2
15°	4790.5	4474.2	3580.9	2555.9	1566.5	900.9	594.7	508.7	501.1	498.5	496.0
17.5°	4861.4	4481.8	3380.9	2125.7	1047.7	574.5	478.3	470.7	470.7	470.7	470.7
20°	4934.7	4484.3	3160.8	1675.3	688.3	470.7	450.5	445.4	450.5	450.5	450.5
22.5°	5020.8	4502.0	2948.2	1237.5	508.7	442.9	430.2	427.7	430.2	430.2	427.7
25°	5127.1	4540.0	2717.9	885.7	460.6	425.1	412.5	410.0	412.5	410.0	410.0
27.5°	5268.8	4590.6	2449.7	635.2	440.3	407.4	394.8	394.8	394.8	392.2	392.2
30°	5451.0	4651.3	2090.3	501.1	420.1	389.7	379.6	379.6	377.1	374.5	374.5
32.5°	5711.6	4750.0	1698.1	453.0	397.3	366.9	356.8	359.4	356.8	354.3	351.8
35°	6081.1	4904.4	1310.9	427.7	374.5	344.2	334.0	334.0	334.0	329.0	329.0
37.5°	6605.0	5139.7	981.9	402.4	351.8	321.4	308.7	308.7	306.2	301.1	303.7
40°	7252.8	5435.8	711.1	379.6	329.0	296.1	286.0	280.9	275.8	270.8	270.8
42.5°	8032.2	5724.3	534.0	356.8	306.2	275.8	263.2	258.1	248.0	242.9	240.4
45°	8905.3	6030.5	442.9	329.0	280.9	253.1	242.9	232.8	220.2	212.6	210.0
47.5°	9641.7	6217.8	394.8	301.1	255.6	230.3	220.2	205.0	189.8	184.7	184.7
50°	10084.6	6139.3	354.3	273.3	230.3	207.5	194.9	174.6	164.5	159.4	156.9
52.5°	10332.6	5906.5	321.4	250.5	207.5	182.2	164.5	146.8	141.7	136.7	136.7
55°	10502.1	5569.9	286.0	227.8	187.3	159.4	139.2	126.5	121.5	118.9	116.4
57.5°	10664.1	5160.0	253.1	207.5	167.0	141.7	118.9	113.9	103.8	101.2	101.2
60°	10712.2	4595.6	222.7	184.7	149.3	124.0	103.8	96.2	86.0	83.5	83.5
62.5°	10099.8	3656.8	197.4	156.9	131.6	106.3	91.1	81.0	70.9	70.9	70.9
65°	8439.7	2482.6	169.6	136.7	116.4	91.1	78.4	65.8	60.7	60.7	60.7
67.5°	5878.7	1384.3	144.2	116.4	98.7	75.9	65.8	55.7	53.1	55.7	55.7
70°	2649.6	549.1	121.5	96.2	81.0	63.3	55.7	48.1	53.1	53.1	53.1
72°	794.6	293.6	101.2	78.4	65.8	55.7	48.1	45.6	50.6	53.1	53.1
72.5°	589.6	263.2	96.2	75.9	65.8	53.1	45.6	45.6	50.6	53.1	53.1
75°	303.7	179.7	73.4	55.7	48.1	43.0	38.0	43.0	50.6	50.6	50.6
77.5°	237.9	146.8	60.7	43.0	40.5	38.0	35.4	40.5	45.6	45.6	45.6
80°	222.7	96.2	48.1	40.5	35.4	32.9	32.9	35.4	40.5	43.0	43.0
82.5°	225.2	78.4	43.0	38.0	32.9	30.4	30.4	32.9	38.0	40.5	40.5
85°	144.2	53.1	38.0	32.9	30.4	27.8	27.8	30.4	35.4	38.0	38.0
87.5°	48.1	40.5	32.9	30.4	25.3	25.3	25.3	25.3	30.4	32.9	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

(END OF REPORT)