

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: P197124

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197124
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-SL4-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 19347 lumens
Efficiency: N/A
Efficacy: 77.7 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

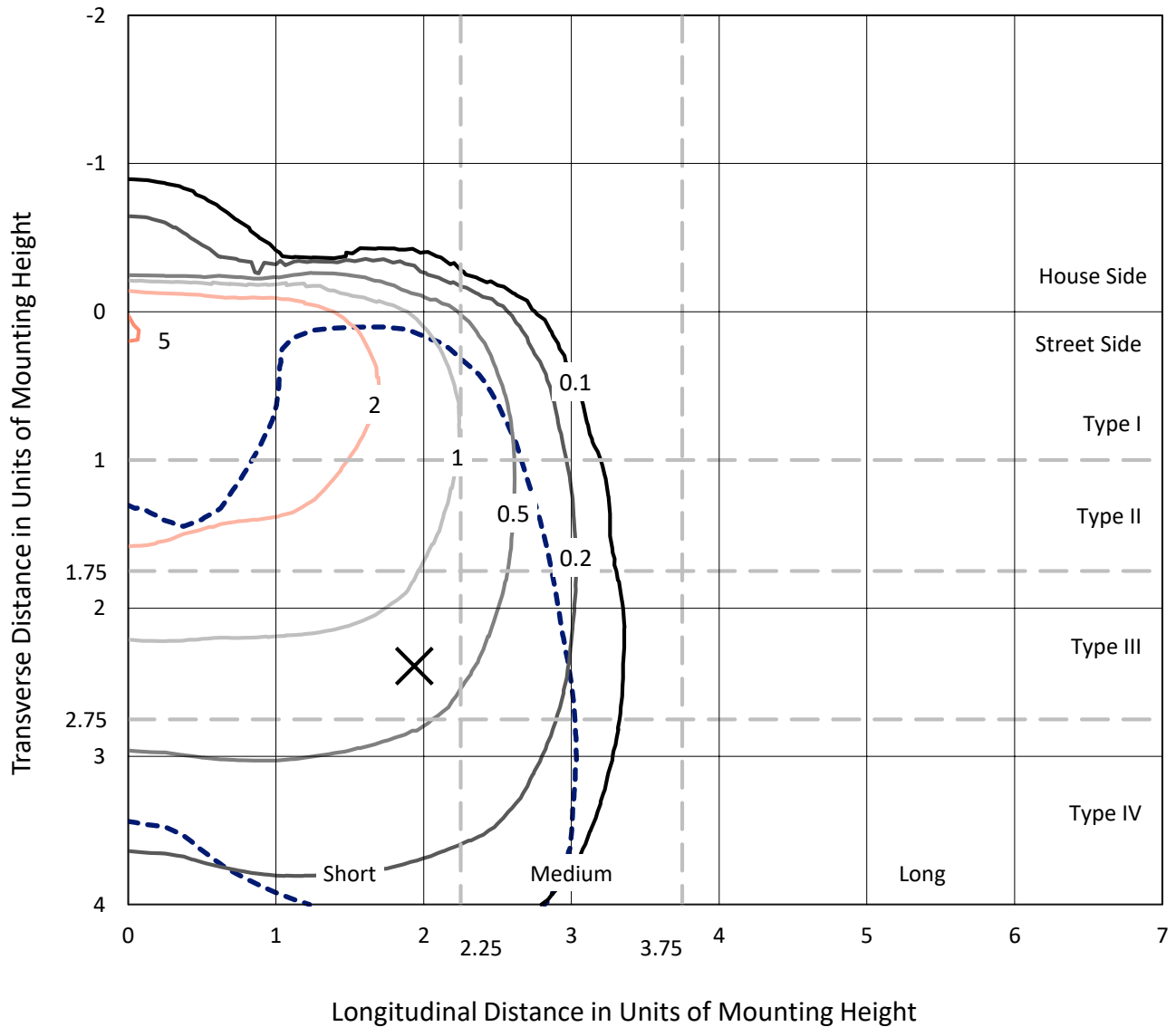


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

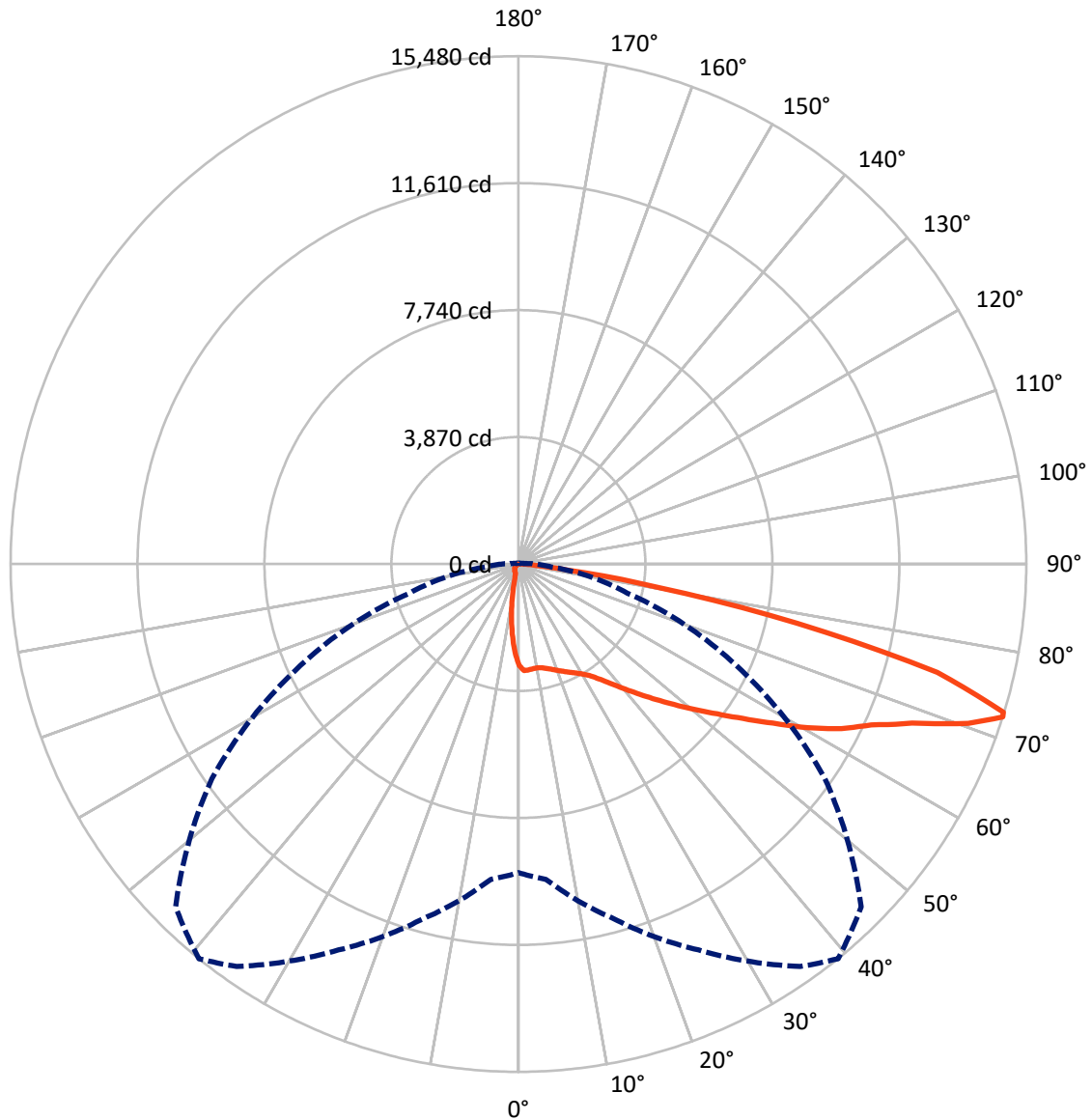


Based on 25 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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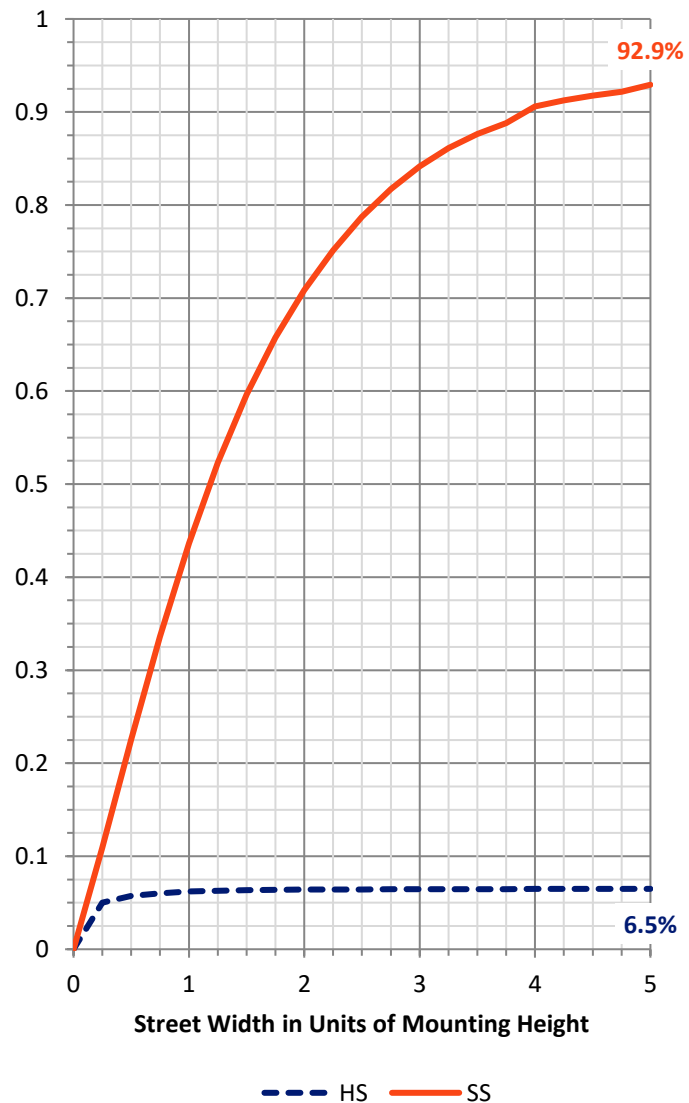
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1268.0	0.0	1268.0
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	18079.0	0.0	18079.0
	% Fixture	93.4	0.0	93.4
Total	Lumens	19347.0	0.0	19347.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.9	1.3
10°-20°	609.8	3.2
20°-30°	1012.7	5.2
30°-40°	1614.1	8.3
40°-50°	2664.3	13.8
50°-60°	4023.5	20.8
60°-70°	5241.3	27.1
70°-80°	3541.6	18.3
80°-90°	387.9	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°	19347.0	100.0
0°-180°	19347.0	100.0

Coefficient of Utilization



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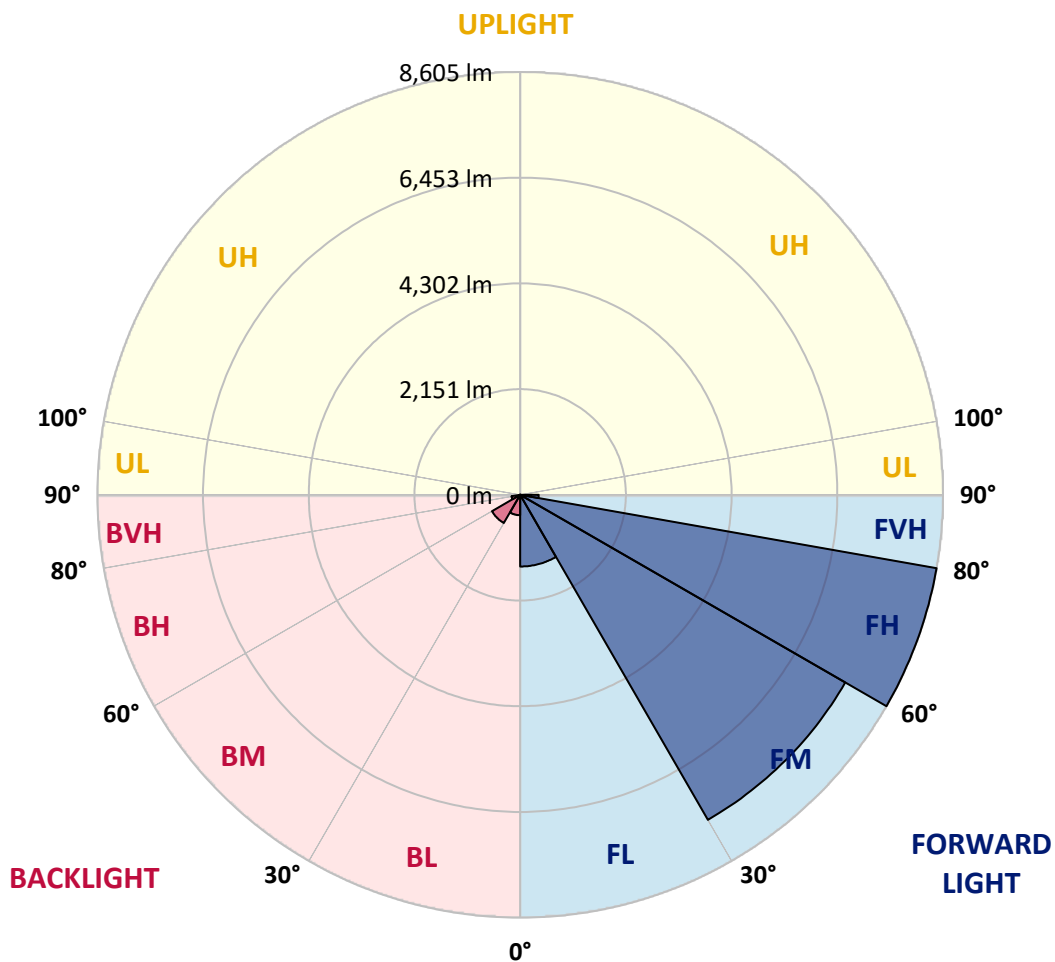
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1459.2	7.5			
FM	(30°-60°)	7638.4	39.5			
FH	(60°-80°)	8604.7	44.5			G4/12000
FVH	(80°-90°)	376.7	1.9			G3/500
BL	(0°-30°)	415.2	2.1	B1/500		
BM	(30°-60°)	663.4	3.4	B1/1000		
BH	(60°-80°)	178.2	0.9	B1/500		G1/500
BVH	(80°-90°)	11.2	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°	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6
2.5°	3297.4	3303.5	3295.9	3282.2	3262.4	3250.2	3233.5	3197.0	3151.4	3111.8	3066.2
5°	3323.2	3326.3	3317.1	3291.3	3260.9	3244.1	3222.8	3183.3	3136.2	3081.4	2999.3
7.5°	3330.8	3329.3	3318.7	3286.7	3239.6	3218.3	3181.8	3133.1	3084.4	3034.3	2941.5
10°	3327.8	3327.8	3320.2	3289.8	3236.5	3216.8	3175.7	3124.0	3063.2	3013.0	2914.1
12.5°	3317.1	3323.2	3318.7	3301.9	3262.4	3247.2	3210.7	3159.0	3101.2	3049.5	2944.5
15°	3330.8	3340.0	3349.1	3343.0	3320.2	3306.5	3273.0	3219.8	3172.7	3117.9	3005.4
17.5°	3385.6	3405.4	3426.7	3428.2	3403.8	3379.5	3341.5	3286.7	3241.1	3190.9	3069.2
20°	3489.0	3504.2	3543.8	3551.4	3502.7	3467.7	3414.5	3350.6	3305.0	3262.4	3128.6
22.5°	3642.6	3659.4	3691.3	3680.6	3598.5	3557.5	3490.5	3417.5	3370.4	3346.0	3197.0
25°	3875.3	3879.9	3887.5	3840.3	3705.0	3659.4	3577.2	3495.1	3457.1	3454.0	3294.3
27.5°	4149.1	4155.2	4121.7	4016.8	3823.6	3764.3	3671.5	3597.0	3578.7	3601.6	3417.5
30°	4462.4	4463.9	4371.2	4200.8	3960.5	3895.1	3799.3	3717.2	3733.9	3790.2	3575.7
32.5°	4783.3	4768.1	4640.4	4418.3	4147.6	4068.5	3986.4	3904.2	3952.9	4067.0	3806.9
35°	5076.9	5070.8	4920.2	4661.6	4390.9	4321.0	4261.6	4175.0	4254.0	4439.6	4121.7
37.5°	5370.4	5365.8	5194.0	4924.8	4690.5	4640.4	4596.2	4529.3	4658.6	4930.9	4543.0
40°	5694.4	5686.8	5475.3	5216.8	5038.8	5011.5	4985.6	4956.7	5177.2	5556.0	5067.7
42.5°	6094.4	6060.9	5773.4	5534.7	5422.1	5429.7	5431.2	5460.1	5805.4	6299.7	5686.8
45°	6553.7	6479.2	6073.1	5875.4	5843.4	5889.0	5934.7	6054.8	6537.0	7156.0	6371.2
47.5°	6999.3	6879.2	6418.3	6241.9	6307.3	6401.6	6511.1	6745.3	7358.3	8051.8	6991.7
50°	7382.6	7259.4	6760.5	6614.5	6822.9	6962.8	7157.5	7511.9	8225.2	8809.2	7382.6
52.5°	7683.7	7586.4	7122.5	7025.2	7394.8	7586.4	7892.1	8357.5	9043.4	9308.1	7656.4
55°	7905.8	7857.1	7469.3	7483.0	8030.5	8307.3	8687.5	9213.8	9733.9	9695.9	7861.7
57.5°	8156.7	8118.7	7832.8	8022.9	8795.5	9153.0	9592.5	10015.3	10235.9	10007.7	8062.4
60°	8413.8	8425.9	8273.9	8676.9	9741.6	10137.0	10520.3	10625.2	10666.3	10324.1	8273.9
62.5°	8608.5	8660.2	8673.9	9382.6	10711.9	11049.6	11215.3	11140.8	11131.7	10748.4	8257.1
65°	8832.0	8967.4	9192.5	10156.8	11594.0	11816.1	11934.7	12042.7	11814.6	10874.6	7444.9
67.5°	9218.4	9431.3	9937.8	11105.8	12613.1	12941.6	13277.7	13163.6	11916.5	9592.5	5671.5
70°	9738.5	9998.6	10892.9	12345.4	13995.6	14546.2	14827.5	13073.9	10117.2	6628.2	2991.7
72°	9410.0	9645.7	11188.0	12978.1	14975.1	15480.0	14775.8	11403.9	7333.9	3435.8	1002.3
72.5°	9090.6	9333.9	11093.7	12970.5	15072.4	15458.7	14439.7	10745.4	6489.8	2673.8	690.5
75°	6307.3	6614.5	9510.4	11659.4	13610.8	13186.5	11048.0	6506.5	2351.4	459.3	228.1
77.5°	3260.9	3498.1	5768.9	8238.9	9486.0	8687.5	6529.4	2822.8	651.0	243.3	150.6
80°	2021.3	2138.4	2698.1	4059.4	4927.8	4310.3	2880.6	1140.7	416.7	144.5	120.2
82.5°	1046.4	1136.1	1698.9	1638.0	1820.6	1513.3	1063.1	955.1	257.0	89.7	123.2
85°	343.7	365.0	1043.4	1089.0	778.7	523.2	471.5	911.0	74.5	57.8	104.9
87.5°	45.6	53.2	366.5	623.6	383.3	237.3	282.9	320.9	25.9	31.9	28.9
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°	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6	3096.6
2.5°	3035.8	3016.0	2953.6	2891.3	2819.8	2754.4	2702.7	2669.2	2684.4	2634.2	2641.9
5°	2949.1	2898.9	2762.0	2614.5	2454.8	2305.7	2187.1	2098.9	2082.2	2006.1	2009.1
7.5°	2865.4	2783.3	2561.2	2317.9	2053.3	1838.8	1644.1	1473.8	1412.9	1350.6	1314.1
10°	2819.8	2707.3	2392.4	2038.0	1665.4	1350.6	1076.8	862.4	772.6	707.2	675.3
12.5°	2833.5	2684.4	2266.2	1784.1	1294.3	894.3	608.4	451.7	397.0	366.5	355.9
15°	2879.1	2689.0	2152.1	1536.1	941.5	541.5	357.4	305.7	301.1	299.6	298.1
17.5°	2921.7	2693.6	2032.0	1277.6	629.7	345.3	287.5	282.9	282.9	282.9	282.9
20°	2965.8	2695.1	1899.6	1006.9	413.7	282.9	270.7	267.7	270.7	270.7	270.7
22.5°	3017.5	2705.7	1771.9	743.7	305.7	266.2	258.6	257.0	258.6	258.6	257.0
25°	3081.4	2728.5	1633.5	532.3	276.8	255.5	247.9	246.4	247.9	246.4	246.4
27.5°	3166.6	2759.0	1472.3	381.8	264.6	244.9	237.3	237.3	237.3	235.7	235.7
30°	3276.1	2795.5	1256.3	301.1	252.5	234.2	228.1	228.1	226.6	225.1	225.1
32.5°	3432.7	2854.8	1020.5	272.2	238.8	220.5	214.5	216.0	214.5	212.9	211.4
35°	3654.8	2947.6	787.8	257.0	225.1	206.8	200.8	200.8	200.8	197.7	197.7
37.5°	3969.6	3089.0	590.1	241.8	211.4	193.2	185.6	185.6	184.0	181.0	182.5
40°	4359.0	3267.0	427.4	228.1	197.7	177.9	171.9	168.8	165.8	162.7	162.7
42.5°	4827.4	3440.3	320.9	214.5	184.0	165.8	158.2	155.1	149.1	146.0	144.5
45°	5352.2	3624.4	266.2	197.7	168.8	152.1	146.0	139.9	132.3	127.8	126.2
47.5°	5794.7	3736.9	237.3	181.0	153.6	138.4	132.3	123.2	114.1	111.0	111.0
50°	6060.9	3689.8	212.9	164.3	138.4	124.7	117.1	104.9	98.9	95.8	94.3
52.5°	6210.0	3549.8	193.2	150.6	124.7	109.5	98.9	88.2	85.2	82.1	82.1
55°	6311.9	3347.6	171.9	136.9	112.5	95.8	83.7	76.0	73.0	71.5	70.0
57.5°	6409.2	3101.2	152.1	124.7	100.4	85.2	71.5	68.4	62.4	60.8	60.8
60°	6438.1	2762.0	133.8	111.0	89.7	74.5	62.4	57.8	51.7	50.2	50.2
62.5°	6070.0	2197.7	118.6	94.3	79.1	63.9	54.8	48.7	42.6	42.6	42.6
65°	5072.3	1492.0	101.9	82.1	70.0	54.8	47.1	39.5	36.5	36.5	36.5
67.5°	3533.1	831.9	86.7	70.0	59.3	45.6	39.5	33.5	31.9	33.5	33.5
70°	1592.4	330.0	73.0	57.8	48.7	38.0	33.5	28.9	31.9	31.9	31.9
72°	477.6	176.4	60.8	47.1	39.5	33.5	28.9	27.4	30.4	31.9	31.9
72.5°	354.4	158.2	57.8	45.6	39.5	31.9	27.4	27.4	30.4	31.9	31.9
75°	182.5	108.0	44.1	33.5	28.9	25.9	22.8	25.9	30.4	30.4	30.4
77.5°	143.0	88.2	36.5	25.9	24.3	22.8	21.3	24.3	27.4	27.4	27.4
80°	133.8	57.8	28.9	24.3	21.3	19.8	19.8	21.3	24.3	25.9	25.9
82.5°	135.4	47.1	25.9	22.8	19.8	18.3	18.3	19.8	22.8	24.3	24.3
85°	86.7	31.9	22.8	19.8	18.3	16.7	16.7	18.3	21.3	22.8	22.8
87.5°	28.9	24.3	19.8	18.3	15.2	15.2	15.2	15.2	18.3	19.8	21.3
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)