

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: P197129

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197129
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-05-D-UNV-SL4-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1050mA 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: 19989 lumens
Efficiency: N/A
Efficacy: 71.6 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

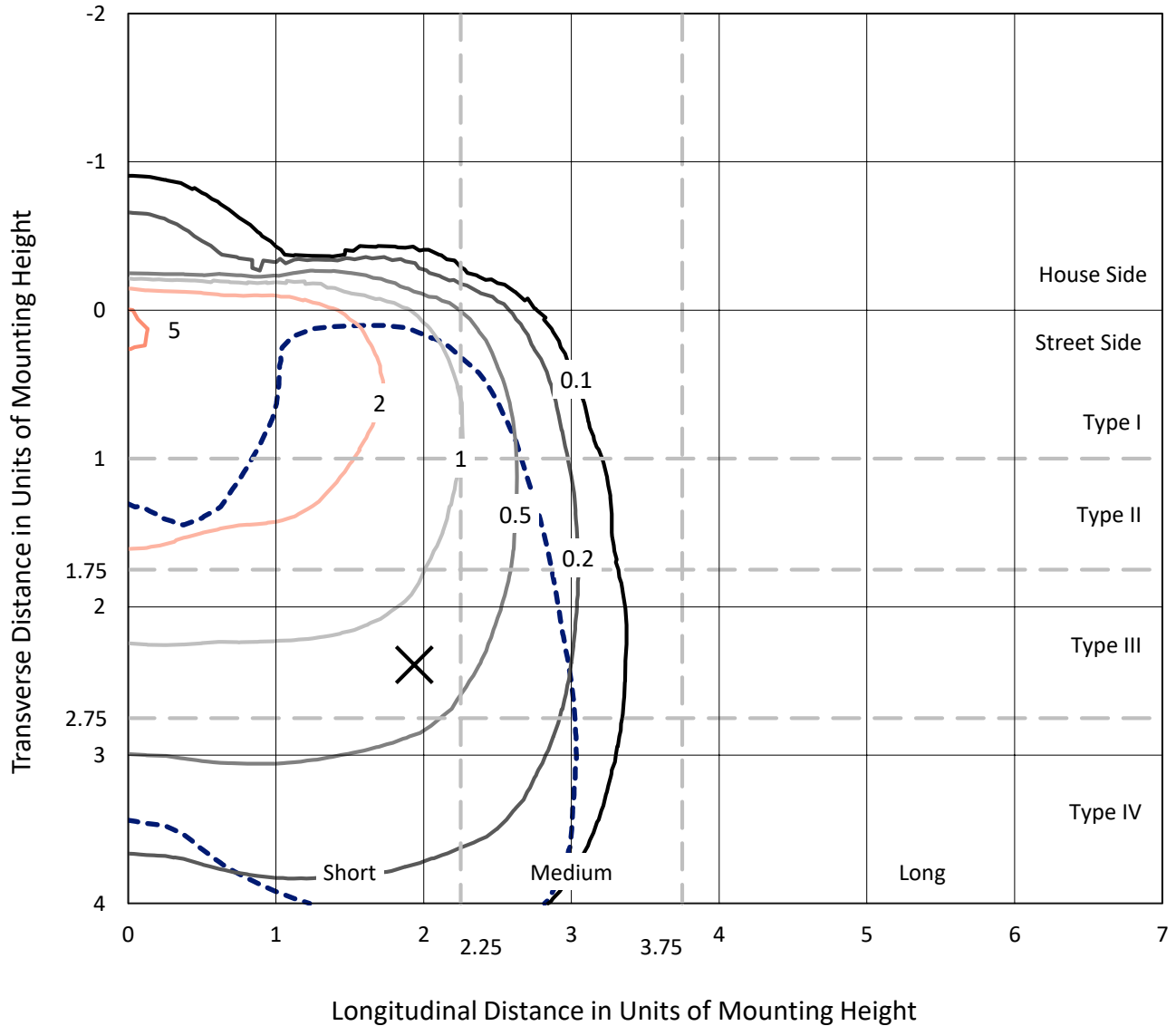
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

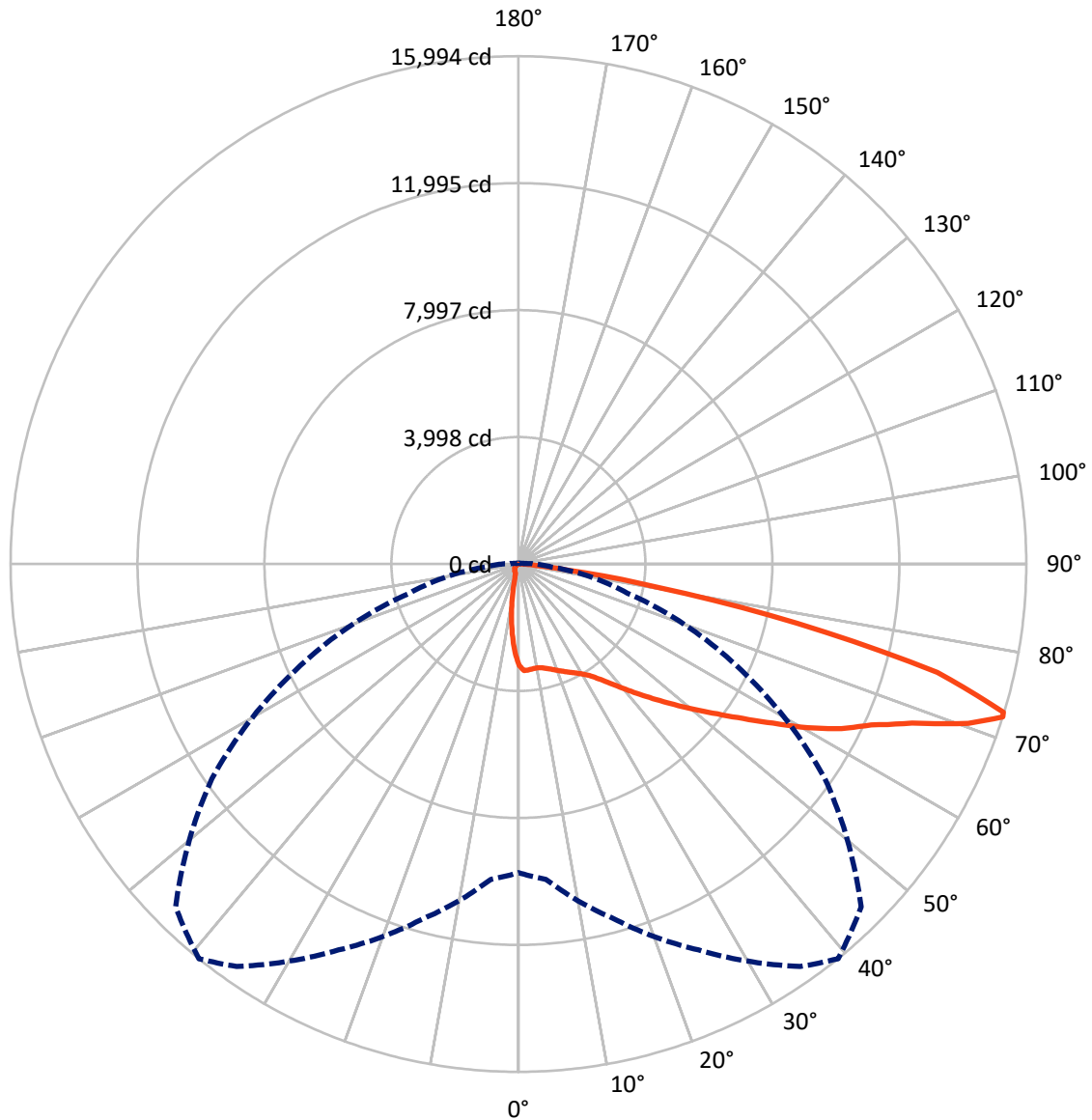


Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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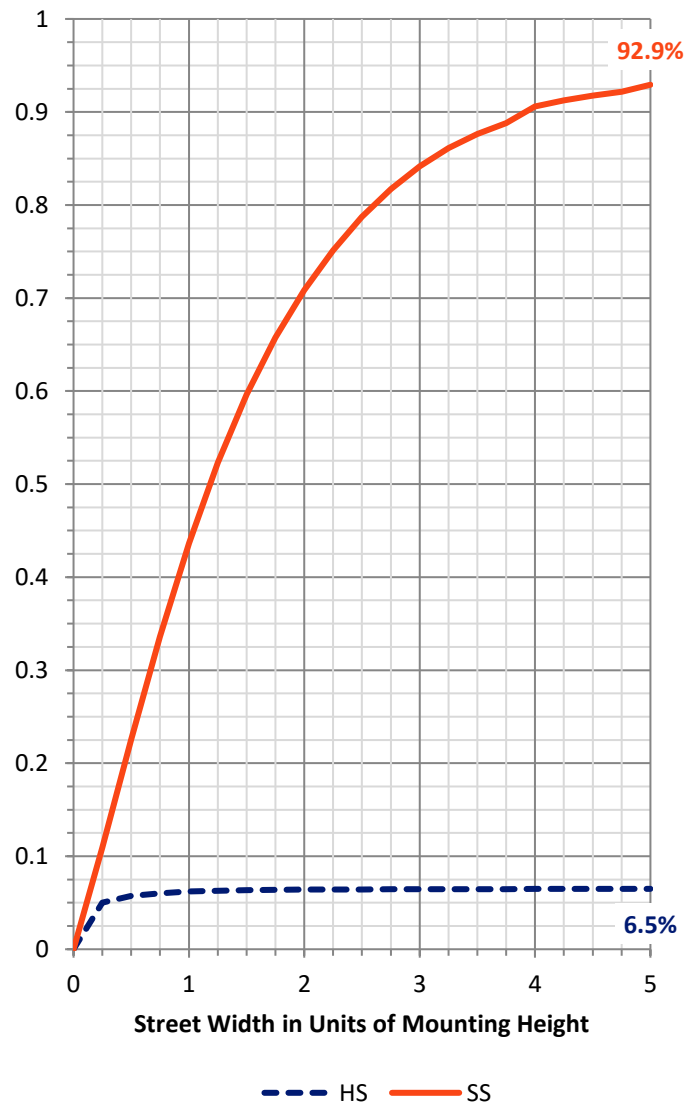
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1310.0	0.0	1310.0
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	18679.0	0.0	18679.0
	% Fixture	93.4	0.0	93.4
Total	Lumens	19989.0	0.0	19989.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.2	1.3
10°-20°	630.0	3.2
20°-30°	1046.3	5.2
30°-40°	1667.6	8.3
40°-50°	2752.7	13.8
50°-60°	4157.0	20.8
60°-70°	5415.2	27.1
70°-80°	3659.1	18.3
80°-90°	400.7	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°	19989.0	100.0
0°-180°	19989.0	100.0

Coefficient of Utilization



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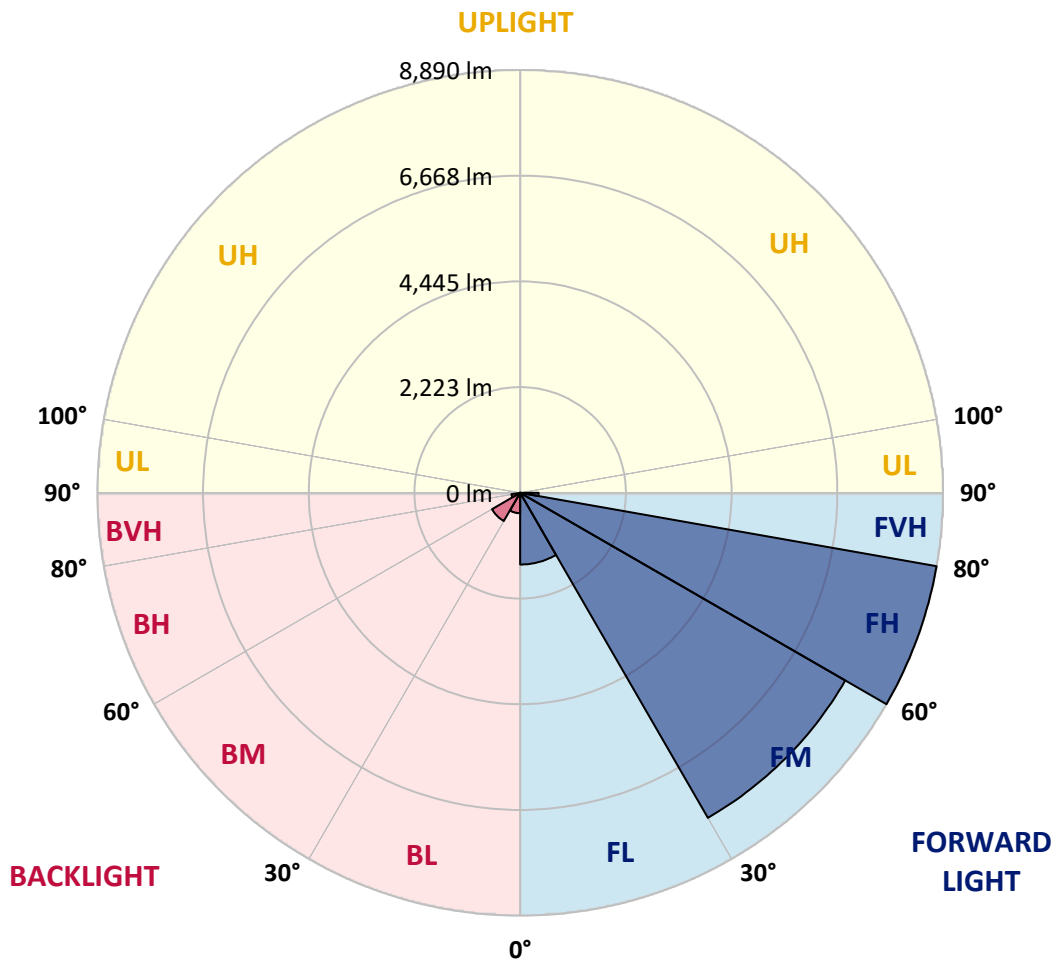
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1507.6	7.5			
FM	(30°-60°)	7891.9	39.5			
FH	(60°-80°)	8890.2	44.5			G4/12000
FVH	(80°-90°)	389.2	1.9			G3/500
BL	(0°-30°)	429.0	2.1	B1/500		
BM	(30°-60°)	685.4	3.4	B1/1000		
BH	(60°-80°)	184.1	0.9	B1/500		G1/500
BVH	(80°-90°)	11.5	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°	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4
2.5°	3406.8	3413.1	3405.2	3391.1	3370.7	3358.1	3340.8	3303.1	3255.9	3215.1	3167.9
5°	3433.5	3436.7	3427.2	3400.5	3369.1	3351.8	3329.8	3288.9	3240.2	3183.7	3098.8
7.5°	3441.4	3439.8	3428.8	3395.8	3347.1	3325.1	3287.4	3237.1	3186.8	3134.9	3039.1
10°	3438.2	3438.2	3430.4	3398.9	3343.9	3323.5	3281.1	3227.7	3164.8	3112.9	3010.8
12.5°	3427.2	3433.5	3428.8	3411.5	3370.7	3354.9	3317.2	3263.8	3204.1	3150.7	3042.2
15°	3441.4	3450.8	3460.2	3453.9	3430.4	3416.2	3381.7	3326.7	3277.9	3221.4	3105.1
17.5°	3497.9	3518.4	3540.4	3541.9	3516.8	3491.6	3452.4	3395.8	3348.7	3296.8	3171.1
20°	3604.8	3620.5	3661.4	3669.2	3618.9	3582.8	3527.8	3461.8	3414.7	3370.7	3232.4
22.5°	3763.5	3780.8	3813.8	3802.8	3717.9	3675.5	3606.4	3530.9	3482.2	3457.1	3303.1
25°	4003.9	4008.6	4016.5	3967.8	3827.9	3780.8	3695.9	3611.1	3571.8	3568.6	3403.7
27.5°	4286.8	4293.1	4258.5	4150.1	3950.5	3889.2	3793.4	3716.4	3697.5	3721.1	3530.9
30°	4610.5	4612.1	4516.2	4340.2	4091.9	4024.4	3925.4	3840.5	3857.8	3915.9	3694.4
32.5°	4942.1	4926.3	4794.3	4564.9	4285.2	4203.5	4118.6	4033.8	4084.1	4201.9	3933.2
35°	5245.3	5239.0	5083.5	4816.3	4536.6	4464.3	4403.1	4313.5	4395.2	4586.9	4258.5
37.5°	5548.6	5543.9	5366.3	5088.2	4846.2	4794.3	4748.8	4679.6	4813.2	5094.5	4693.8
40°	5883.3	5875.5	5657.0	5389.9	5206.0	5177.8	5151.0	5121.2	5349.0	5740.3	5235.9
42.5°	6296.6	6262.0	5965.0	5718.3	5602.0	5609.9	5611.5	5641.3	5998.0	6508.7	5875.5
45°	6771.2	6694.2	6274.6	6070.3	6037.3	6084.5	6131.6	6255.7	6753.9	7393.4	6582.6
47.5°	7231.6	7107.4	6631.3	6449.0	6516.6	6614.0	6727.2	6969.2	7602.4	8319.0	7223.7
50°	7627.6	7500.3	6984.9	6834.0	7049.3	7193.9	7395.0	7761.1	8498.1	9101.5	7627.6
52.5°	7938.7	7838.1	7358.9	7258.3	7640.1	7838.1	8154.0	8634.8	9343.5	9617.0	7910.4
55°	8168.1	8117.8	7717.1	7731.3	8297.0	8583.0	8975.8	9519.5	10057.0	10017.7	8122.6
57.5°	8427.4	8388.1	8092.7	8289.1	9087.4	9456.7	9910.8	10347.7	10575.5	10339.8	8330.0
60°	8693.0	8705.6	8548.4	8964.8	10064.8	10473.4	10869.4	10977.8	11020.2	10666.7	8548.4
62.5°	8894.1	8947.5	8961.7	9694.0	11067.4	11416.2	11587.5	11510.5	11501.1	11105.1	8531.1
65°	9125.1	9265.0	9497.5	10493.8	11978.8	12208.2	12330.8	12442.3	12206.6	11235.5	7692.0
67.5°	9524.3	9744.2	10267.5	11474.4	13031.6	13371.0	13718.3	13600.5	12311.9	9910.8	5859.7
70°	10061.7	10330.4	11254.4	12755.0	14460.0	15028.9	15319.6	13507.7	10452.9	6848.2	3090.9
72°	9722.2	9965.8	11559.2	13408.7	15472.0	15993.7	15266.1	11782.4	7577.3	3549.8	1035.6
72.5°	9392.3	9643.7	11461.8	13400.9	15572.6	15971.7	14918.9	11101.9	6705.2	2762.5	713.4
75°	6516.6	6834.0	9826.0	12046.3	14062.5	13624.0	11414.6	6722.4	2429.4	474.6	235.7
77.5°	3369.1	3614.2	5960.3	8512.3	9800.8	8975.8	6746.0	2916.5	672.6	251.4	155.6
80°	2088.4	2209.4	2787.7	4194.1	5091.3	4453.3	2976.2	1178.5	430.6	149.3	124.1
82.5°	1081.1	1173.8	1755.3	1692.4	1881.0	1563.5	1098.4	986.8	265.6	92.7	127.3
85°	355.1	377.1	1078.0	1125.1	804.6	540.6	487.1	941.3	77.0	59.7	108.4
87.5°	47.1	55.0	378.7	644.3	396.0	245.1	292.3	331.6	26.7	33.0	29.9
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°	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4	3199.4
2.5°	3136.5	3116.1	3051.7	2987.2	2913.4	2845.8	2792.4	2757.8	2773.5	2721.7	2729.5
5°	3046.9	2995.1	2853.7	2701.2	2536.2	2382.2	2259.7	2168.5	2151.2	2072.7	2075.8
7.5°	2960.5	2875.7	2646.2	2394.8	2121.4	1899.8	1698.7	1522.7	1459.8	1395.4	1357.7
10°	2913.4	2797.1	2471.8	2105.7	1720.7	1395.4	1112.6	891.0	798.3	730.7	697.7
12.5°	2927.5	2773.5	2341.4	1843.3	1337.3	924.0	628.6	466.7	410.1	378.7	367.7
15°	2974.7	2778.2	2223.5	1587.1	972.7	559.4	369.3	315.9	311.1	309.6	308.0
17.5°	3018.7	2782.9	2099.4	1320.0	650.6	356.7	297.0	292.3	292.3	292.3	292.3
20°	3064.2	2784.5	1962.7	1040.3	427.4	292.3	279.7	276.6	279.7	279.7	279.7
22.5°	3117.7	2795.5	1830.7	768.4	315.9	275.0	267.1	265.6	267.1	267.1	265.6
25°	3183.7	2819.1	1687.7	550.0	286.0	264.0	256.1	254.6	256.1	254.6	254.6
27.5°	3271.7	2850.5	1521.1	394.4	273.4	253.0	245.1	245.1	245.1	243.6	243.6
30°	3384.8	2888.2	1298.0	311.1	260.9	242.0	235.7	235.7	234.1	232.6	232.6
32.5°	3546.6	2949.5	1054.4	281.3	246.7	227.9	221.6	223.1	221.6	220.0	218.4
35°	3776.1	3045.4	814.0	265.6	232.6	213.7	207.4	207.4	207.4	204.3	204.3
37.5°	4101.4	3191.5	609.7	249.9	218.4	199.6	191.7	191.7	190.1	187.0	188.6
40°	4503.6	3375.4	441.6	235.7	204.3	183.9	177.6	174.4	171.3	168.1	168.1
42.5°	4987.6	3554.5	331.6	221.6	190.1	171.3	163.4	160.3	154.0	150.9	149.3
45°	5529.8	3744.6	275.0	204.3	174.4	157.1	150.9	144.6	136.7	132.0	130.4
47.5°	5987.0	3860.9	245.1	187.0	158.7	143.0	136.7	127.3	117.9	114.7	114.7
50°	6262.0	3812.2	220.0	169.7	143.0	128.9	121.0	108.4	102.1	99.0	97.4
52.5°	6416.0	3667.6	199.6	155.6	128.9	113.1	102.1	91.1	88.0	84.9	84.9
55°	6521.3	3458.6	177.6	141.4	116.3	99.0	86.4	78.6	75.4	73.9	72.3
57.5°	6621.9	3204.1	157.1	128.9	103.7	88.0	73.9	70.7	64.4	62.9	62.9
60°	6651.7	2853.7	138.3	114.7	92.7	77.0	64.4	59.7	53.4	51.9	51.9
62.5°	6271.5	2270.7	122.6	97.4	81.7	66.0	56.6	50.3	44.0	44.0	44.0
65°	5240.6	1541.5	105.3	84.9	72.3	56.6	48.7	40.9	37.7	37.7	37.7
67.5°	3650.4	859.6	89.6	72.3	61.3	47.1	40.9	34.6	33.0	34.6	34.6
70°	1645.3	341.0	75.4	59.7	50.3	39.3	34.6	29.9	33.0	33.0	33.0
72°	493.4	182.3	62.9	48.7	40.9	34.6	29.9	28.3	31.4	33.0	33.0
72.5°	366.1	163.4	59.7	47.1	40.9	33.0	28.3	28.3	31.4	33.0	33.0
75°	188.6	111.6	45.6	34.6	29.9	26.7	23.6	26.7	31.4	31.4	31.4
77.5°	147.7	91.1	37.7	26.7	25.1	23.6	22.0	25.1	28.3	28.3	28.3
80°	138.3	59.7	29.9	25.1	22.0	20.4	20.4	22.0	25.1	26.7	26.7
82.5°	139.9	48.7	26.7	23.6	20.4	18.9	18.9	20.4	23.6	25.1	25.1
85°	89.6	33.0	23.6	20.4	18.9	17.3	17.3	18.9	22.0	23.6	23.6
87.5°	29.9	25.1	20.4	18.9	15.7	15.7	15.7	15.7	18.9	20.4	22.0
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)