

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: P270511

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL2-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18967.1 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 258
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

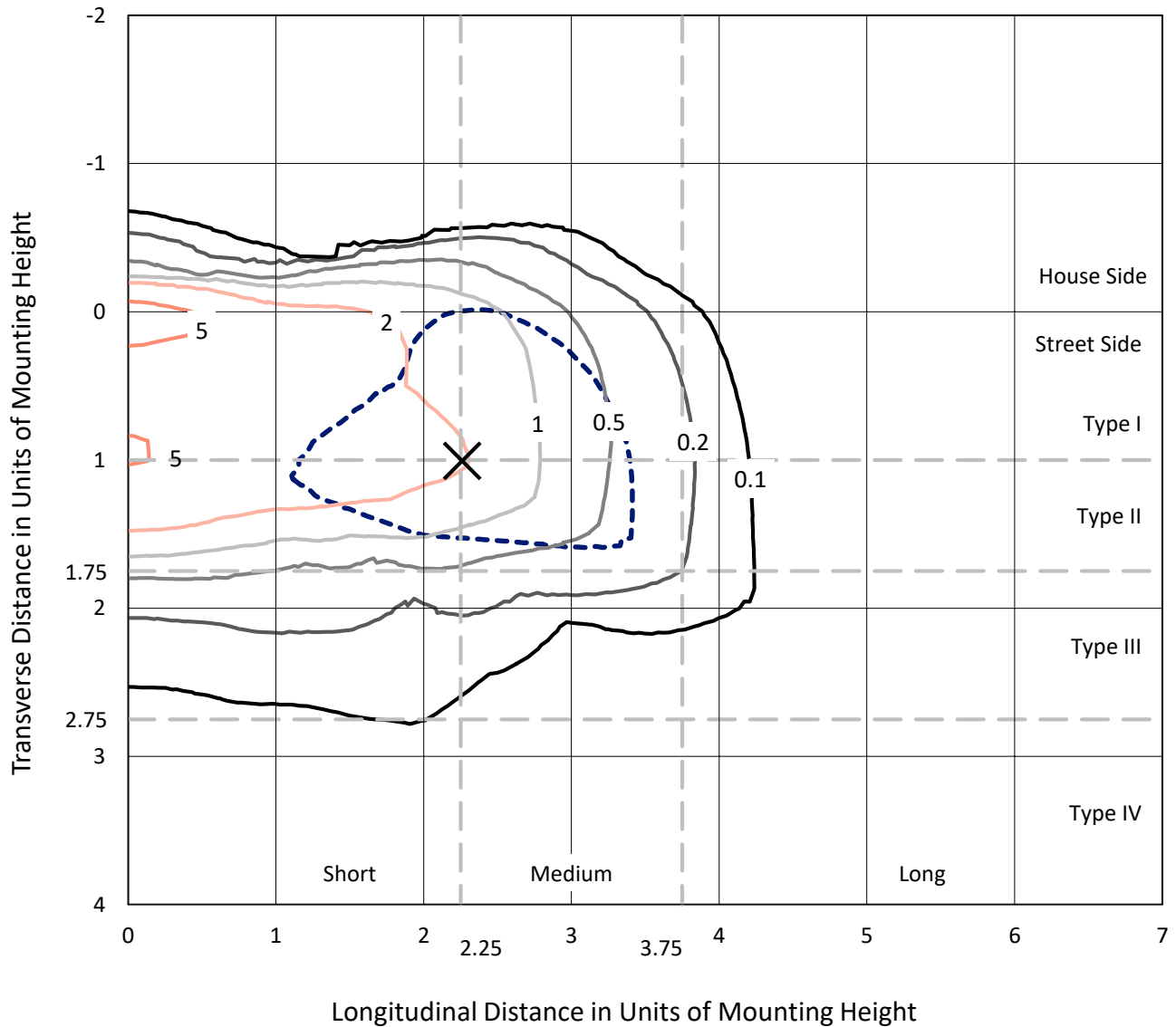


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

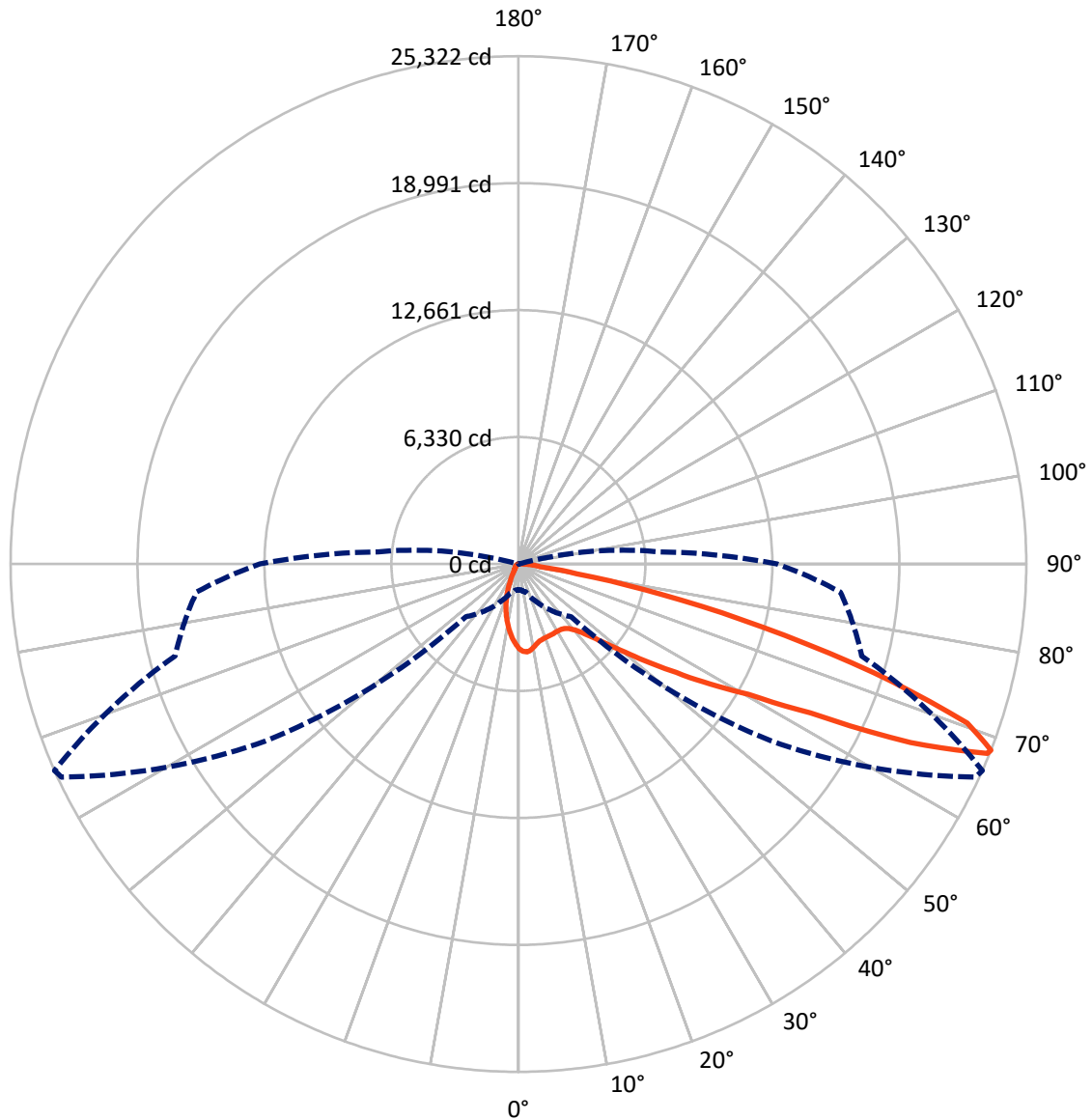


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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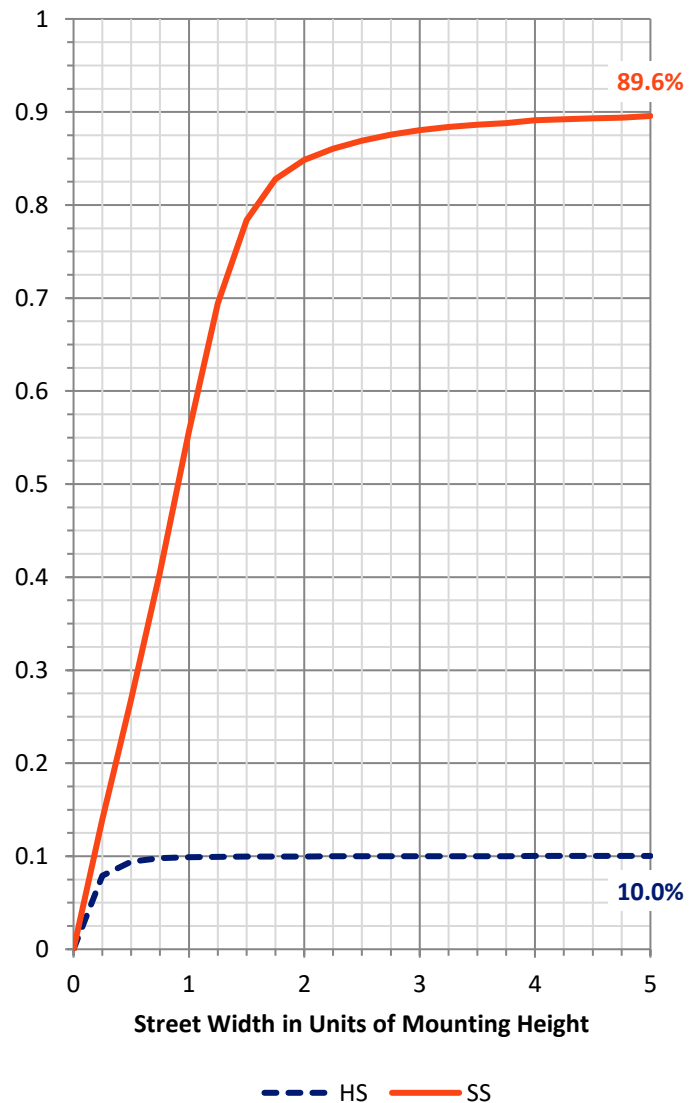
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1921.2	0.0	1921.2
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	17046.0	0.0	17046.0
	% Fixture	89.9	0.0	89.9
Total	Lumens	18967.1	0.0	18967.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.4	1.8
10°-20°	745.3	3.9
20°-30°	1080.1	5.7
30°-40°	1653.4	8.7
40°-50°	2828.1	14.9
50°-60°	4423.9	23.3
60°-70°	5093.9	26.9
70°-80°	2549.1	13.4
80°-90°	246.9	1.3
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°	18967.1	100.0
0°-180°	18967.1	100.0

Coefficient of Utilization



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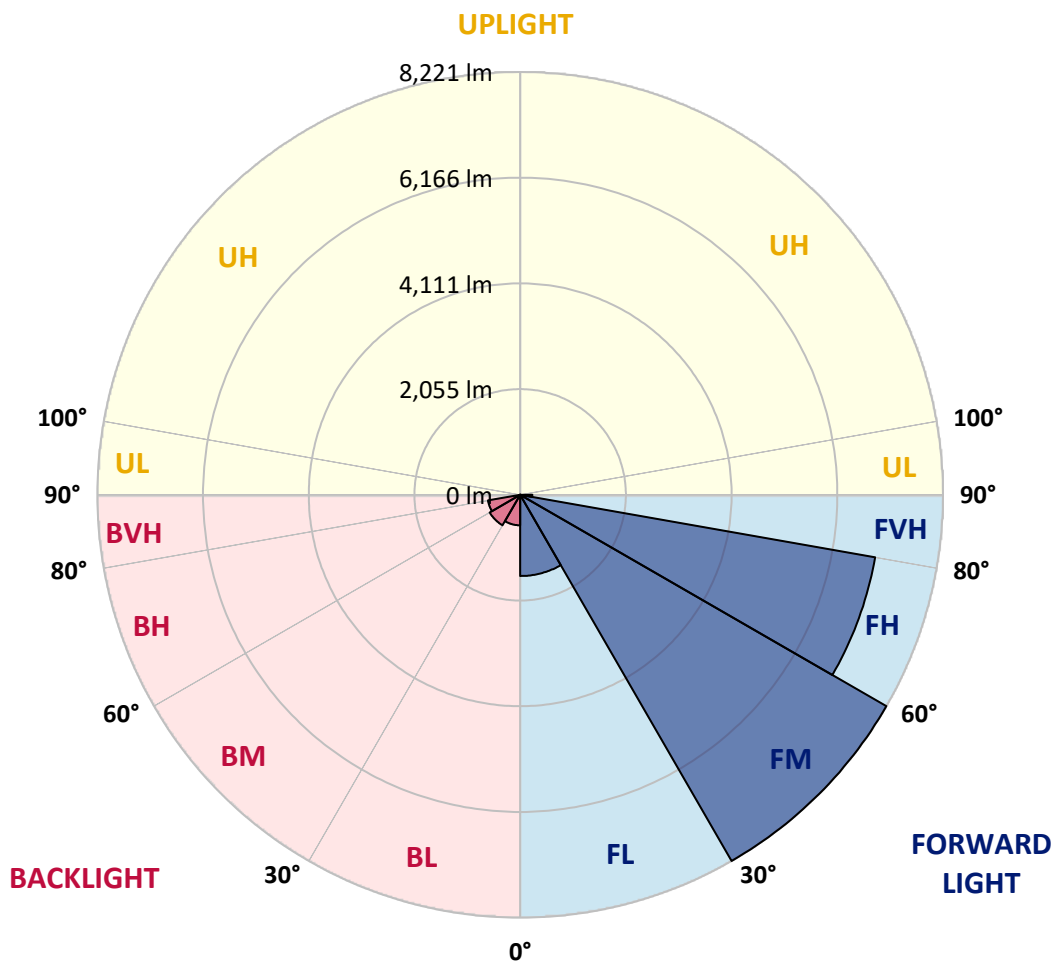
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1578.9	8.3			
FM (30°-60°)	8221.2	43.3			
FH (60°-80°)	7008.3	36.9			G3/7500
FVH (80°-90°)	237.5	1.3			G3/500
BL (0°-30°)	593.0	3.1	B2/1000		
BM (30°-60°)	684.1	3.6	B1/1000		
BH (60°-80°)	634.8	3.3	B2/1000		G2/1000
BVH (80°-90°)	9.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6
2.5°	4444.5	4447.6	4446.2	4450.6	4447.6	4425.2	4401.3	4350.9	4355.3	4289.8	4216.7
5°	4131.9	4157.1	4182.5	4207.8	4268.8	4322.5	4386.6	4401.3	4401.3	4344.8	4237.7
7.5°	3813.2	3814.7	3842.9	3877.3	3959.2	4057.5	4206.4	4340.3	4343.3	4358.1	4240.5
10°	3573.5	3581.0	3600.3	3637.5	3719.4	3816.2	3982.9	4193.0	4209.3	4319.5	4210.9
12.5°	3387.4	3396.3	3417.2	3460.5	3534.8	3634.6	3810.3	4050.0	4072.3	4282.3	4201.9
15°	3244.5	3256.4	3272.7	3316.0	3396.3	3502.0	3694.1	3954.7	3981.5	4267.4	4230.2
17.5°	3184.9	3184.9	3183.5	3213.1	3293.5	3400.9	3601.8	3904.0	3938.3	4279.3	4277.8
20°	3210.3	3205.7	3174.5	3167.1	3216.2	3323.4	3528.8	3871.3	3910.1	4301.7	4335.8
22.5°	3344.2	3335.2	3265.2	3207.3	3192.3	3263.8	3479.8	3849.0	3895.1	4347.7	4413.4
25°	3628.7	3601.8	3505.0	3374.0	3256.4	3248.9	3445.4	3837.1	3886.2	4401.3	4498.3
27.5°	3997.8	3990.5	3835.7	3659.9	3433.5	3298.0	3435.1	3828.1	3877.3	4440.1	4566.7
30°	4456.5	4459.5	4280.9	4051.4	3709.0	3436.6	3467.7	3823.6	3874.3	4443.0	4596.4
32.5°	4930.0	4933.0	4784.1	4538.3	4085.8	3674.7	3560.2	3844.6	3890.6	4431.2	4595.0
35°	5385.6	5390.1	5300.7	5102.7	4589.0	4005.4	3734.3	3916.0	3948.8	4438.6	4592.0
37.5°	5961.8	5979.7	5869.5	5684.8	5220.3	4490.7	4018.7	4060.3	4087.2	4499.7	4614.4
40°	6944.5	6920.7	6605.1	6292.4	5905.3	5081.8	4429.7	4309.1	4318.1	4657.5	4699.3
42.5°	8089.5	8059.9	7519.4	6980.3	6609.5	5795.1	4955.3	4690.3	4688.8	4922.5	4883.8
45°	9075.2	9057.4	8488.7	7769.4	7389.7	6582.7	5603.0	5239.6	5221.8	5381.1	5220.3
47.5°	9775.0	9760.3	9329.8	8609.3	8292.1	7449.4	6411.6	5988.6	5951.5	5981.2	5766.8
50°	9843.5	9827.2	9676.8	9213.7	9346.2	8720.8	7410.6	6969.9	6922.2	6876.0	6593.2
52.5°	9203.3	9201.9	9280.7	9250.9	10084.8	10357.3	8636.0	8183.4	8126.7	8009.2	7727.8
55°	7894.6	7887.1	8186.3	8621.2	10068.5	12045.7	10504.7	9627.7	9553.3	9317.9	8948.7
57.5°	5768.2	5729.6	6354.9	7276.6	9361.1	12784.3	13472.2	11421.9	11298.3	10552.3	9983.6
60°	3184.9	3199.9	4003.8	5095.2	7686.1	12638.3	16203.0	13513.9	13189.4	11616.9	11043.8
62.5°	1785.3	1822.5	2421.0	3311.5	4900.3	11454.6	17668.1	17114.1	16332.5	12858.8	12383.8
65°	1350.5	1372.8	1673.6	2555.0	3089.6	8004.6	17902.0	22148.4	21474.0	14740.7	14517.5
67.5°	1271.6	1289.4	1436.8	2118.8	2814.2	4151.2	16142.0	25126.4	25211.2	17307.9	16170.2
68°	1280.5	1302.8	1450.3	2038.4	2809.7	3713.6	15391.5	25141.3	25321.5	17721.8	16113.6
70°	1176.3	1182.2	1533.6	1999.6	2723.3	2925.8	11134.5	23418.5	23741.7	18214.6	14627.6
72.5°	449.7	451.2	687.9	1731.7	2852.8	2942.2	5608.9	18509.3	18525.7	15851.6	11404.1
75°	233.7	196.5	216.0	541.9	2724.7	2867.7	2814.2	12638.3	12559.5	10720.6	6987.7
77.5°	160.7	137.0	144.4	187.7	1133.1	2866.2	2032.4	7267.6	7251.3	4560.8	1993.7
80°	90.8	79.0	86.3	157.8	397.6	2690.6	1893.9	3123.9	2943.7	801.1	323.1
82.5°	46.2	38.6	46.2	132.5	247.2	1692.9	1841.9	1225.4	1091.4	190.6	209.9
85°	11.9	11.9	22.4	92.3	153.4	555.4	1651.3	884.4	795.1	83.5	148.8
87.5°	3.0	1.4	9.0	34.2	55.1	120.6	915.7	492.8	424.4	43.2	86.3
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°	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6	4225.6
2.5°	4187.0	4145.3	4063.5	3971.0	3905.7	3834.1	3792.5	3741.8	3703.1	3668.8	3694.1
5°	4172.1	4091.7	3910.1	3706.0	3534.8	3371.0	3248.9	3132.7	3045.0	2989.9	3012.1
7.5°	4133.5	4014.3	3719.4	3400.9	3120.9	2857.2	2643.0	2450.8	2301.9	2221.6	2246.8
10°	4067.9	3899.6	3503.6	3061.3	2669.8	2297.4	1978.8	1692.9	1477.1	1375.8	1399.6
12.5°	4020.3	3798.4	3280.3	2733.7	2218.5	1690.0	1267.1	939.5	771.3	670.0	678.9
15°	3999.3	3719.4	3071.8	2388.4	1725.7	1085.4	684.9	495.9	437.7	417.0	418.4
17.5°	4002.4	3656.9	2873.7	2029.5	1228.4	623.9	419.9	378.1	369.3	364.8	364.8
20°	4009.9	3594.4	2668.2	1655.8	786.1	402.0	349.9	336.5	332.1	326.1	327.6
22.5°	4032.1	3546.7	2461.3	1280.5	483.8	327.6	309.6	297.8	290.3	281.3	282.8
25°	4066.4	3510.9	2257.4	921.8	340.9	285.9	269.5	253.1	239.7	229.2	230.8
27.5°	4087.2	3460.5	2040.0	628.4	282.8	250.2	227.8	205.5	190.6	181.6	180.2
30°	4072.3	3378.4	1792.7	412.4	250.2	216.0	189.2	163.9	148.8	141.5	141.5
32.5°	4032.1	3272.7	1520.2	300.8	221.8	186.0	153.4	131.1	120.6	116.2	117.6
35°	3986.0	3162.6	1229.9	254.6	199.6	157.8	125.0	107.2	102.8	101.2	101.2
37.5°	3960.6	3067.4	951.5	230.8	178.7	131.1	102.8	92.3	87.9	87.9	87.9
40°	3989.0	2994.3	704.4	212.9	157.8	108.7	86.3	79.0	77.4	77.4	77.4
42.5°	4109.6	2969.0	515.2	198.0	137.0	90.8	74.5	68.5	67.1	68.5	68.5
45°	4344.8	3024.1	390.1	183.2	117.6	74.5	64.0	59.6	59.6	61.1	61.1
47.5°	4743.9	3165.5	320.2	168.3	98.3	62.5	55.1	52.1	52.1	53.5	53.5
50°	5363.3	3427.7	287.4	151.9	81.8	53.5	46.2	44.6	44.6	46.2	47.6
52.5°	6304.2	3926.4	271.0	135.6	67.1	44.6	38.6	37.2	38.6	40.2	40.2
55°	7351.0	4565.1	251.6	119.1	56.6	37.2	31.4	31.4	32.8	35.8	35.8
57.5°	8326.3	5181.7	233.7	98.3	49.1	29.7	25.3	25.3	28.2	31.4	31.4
60°	9356.7	5786.2	209.9	79.0	41.7	23.9	20.8	20.8	25.3	28.2	29.7
62.5°	10629.7	6488.9	178.7	62.5	32.8	17.8	14.9	19.4	23.9	28.2	28.2
65°	12470.1	7363.0	140.0	49.1	25.3	13.5	11.9	17.8	22.4	26.8	28.2
67.5°	13138.7	7251.3	105.7	40.2	19.4	10.4	10.4	16.3	22.4	26.8	26.8
68°	12894.5	7007.0	101.2	38.6	17.8	10.4	10.4	16.3	22.4	26.8	26.8
70°	11235.8	5728.0	83.5	29.7	14.9	9.0	9.0	14.9	22.4	25.3	26.8
72.5°	8412.6	3805.8	71.4	19.4	13.5	9.0	7.5	14.9	20.8	25.3	25.3
75°	4825.8	1579.8	61.1	14.9	11.9	7.5	7.5	13.5	20.8	25.3	25.3
77.5°	1363.8	369.3	49.1	11.9	10.4	7.5	6.0	13.5	19.4	23.9	23.9
80°	250.2	110.2	38.6	10.4	9.0	7.5	6.0	13.5	19.4	23.9	23.9
82.5°	165.3	52.1	28.2	10.4	9.0	7.5	6.0	11.9	17.8	22.4	22.4
85°	123.5	37.2	17.8	10.4	9.0	7.5	6.0	11.9	17.8	22.4	22.4
87.5°	68.5	16.3	13.5	11.9	10.4	7.5	6.0	10.4	16.3	20.8	20.8
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)