

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: P196484

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7030-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196484  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-AFL-7030-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10847.2 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 129  
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

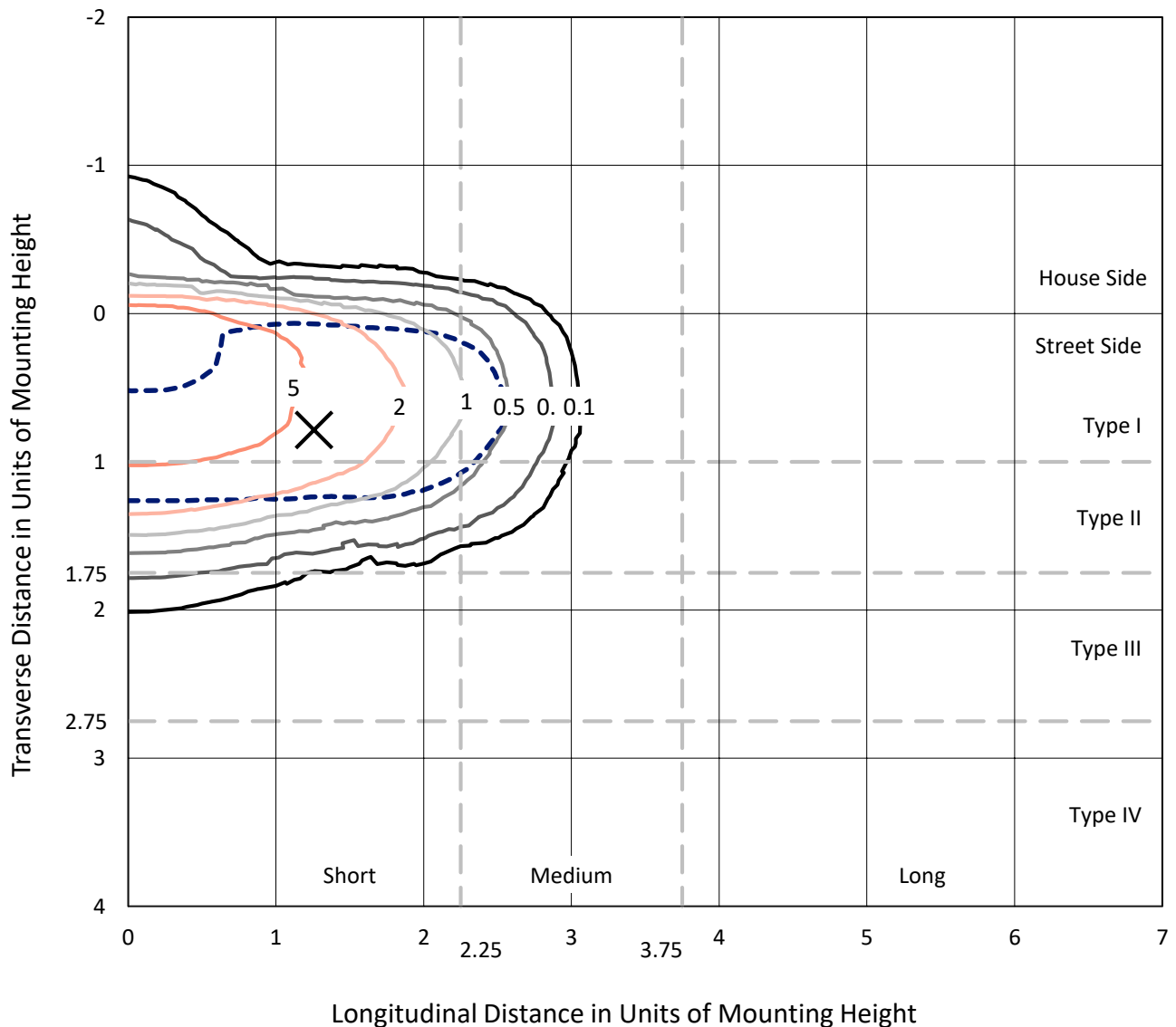


REPORT NUMBER: P196484

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7030-1200-HSS

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

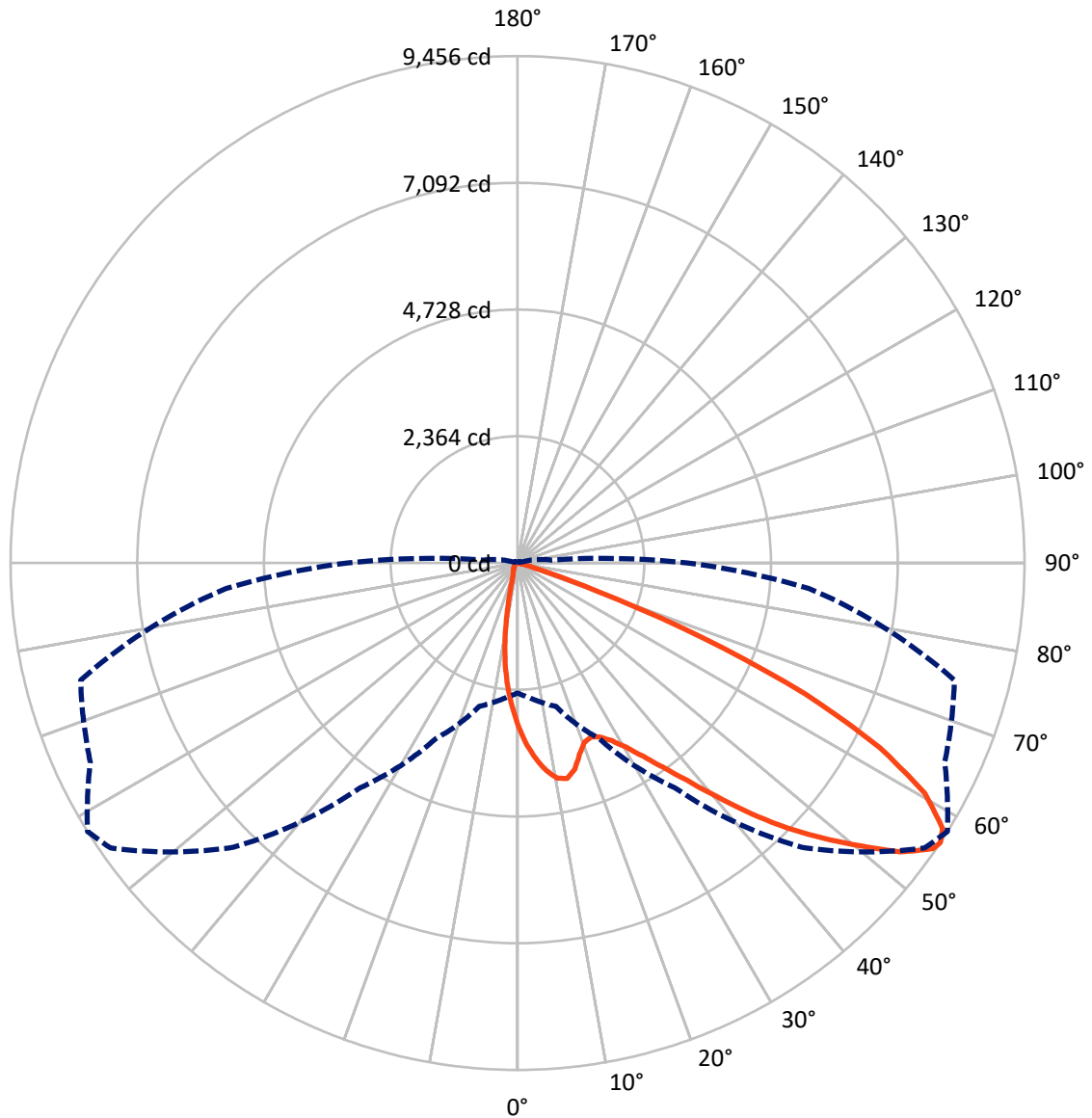


Based on 20 foot mounting height. Maximum calculated value = 9.5 fc  
 Type II - Short - Full Cutoff

REPORT NUMBER: P196484

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7030-1200-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

REPORT NUMBER: P196484

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7030-1200-HSS

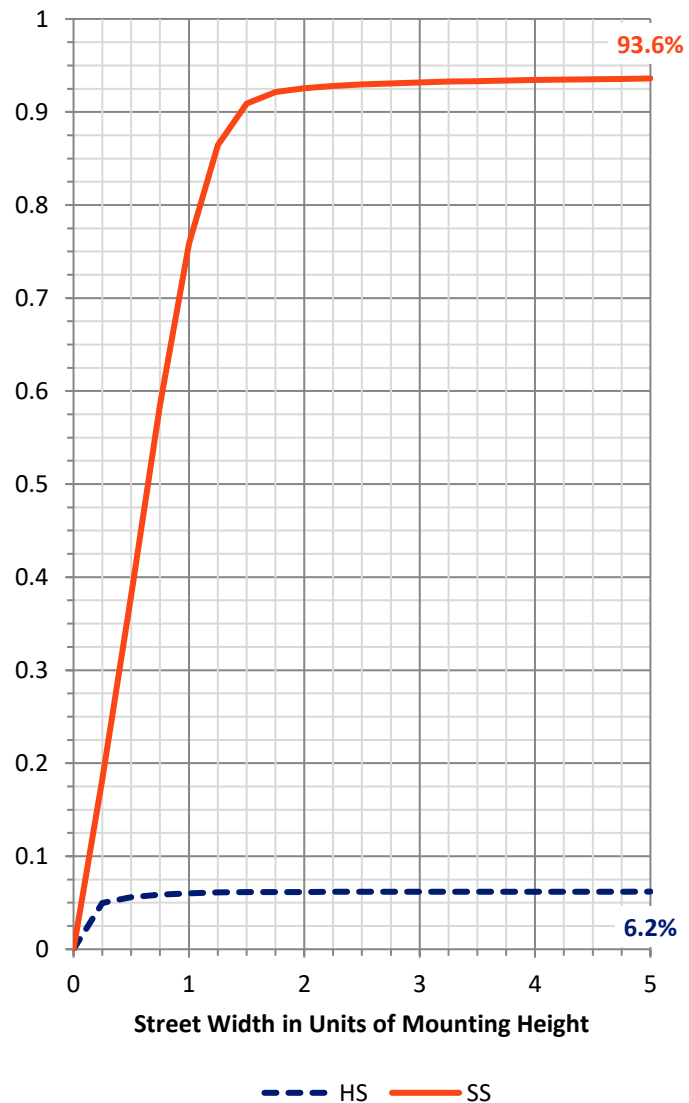
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	677.1	0.0	677.1
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	10170.2	0.0	10170.2
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	10847.2	0.0	10847.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	262.0	2.4
10°-20°	609.6	5.6
20°-30°	1025.8	9.5
30°-40°	1756.5	16.2
40°-50°	2650.6	24.4
50°-60°	2755.2	25.4
60°-70°	1546.8	14.3
70°-80°	212.0	2.0
80°-90°	28.7	0.3
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°	10847.2	100.0
0°-180°	10847.2	100.0



REPORT NUMBER: P196484

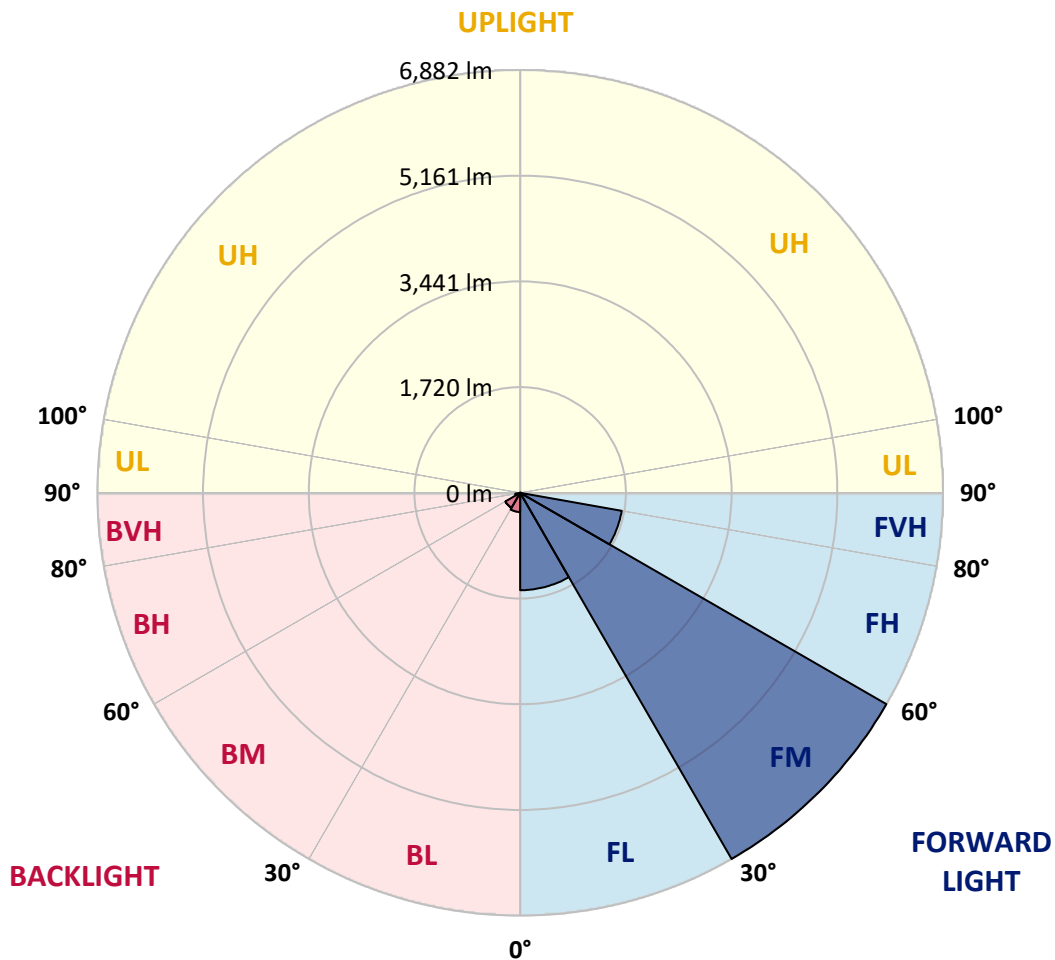
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1585.0	14.6			
FM	(30°-60°)	6882.0	63.4			
FH	(60°-80°)	1678.4	15.5			G1/1800
FVH	(80°-90°)	24.8	0.2			G1/100
BL	(0°-30°)	312.3	2.9	B1/500		
BM	(30°-60°)	280.5	2.6	B1/1000		
BH	(60°-80°)	80.3	0.7	B0/110		G0/110
BVH	(80°-90°)	4.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





REPORT NUMBER: P196484

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3695.1	3672.9	3649.7	3606.6	3566.9	3505.7	3421.2	3400.5	3334.4	3225.2	3123.2
5°	4013.8	4009.7	3994.0	3959.2	3916.2	3841.7	3746.5	3682.8	3580.2	3408.1	3211.9
7.5°	3825.1	3859.9	3917.0	3998.2	4052.8	4045.3	3972.4	3917.0	3815.3	3580.2	3298.7
10°	3224.2	3230.9	3309.6	3480.0	3749.8	4001.4	4096.5	4081.7	3988.2	3730.7	3374.9
12.5°	3012.4	3016.5	3034.7	3089.5	3264.8	3615.7	4047.0	4124.7	4117.2	3874.8	3456.0
15°	3029.0	3031.5	3036.5	3053.8	3103.5	3279.8	3795.3	3993.1	4200.0	4011.4	3535.4
17.5°	3159.8	3158.0	3142.4	3125.8	3141.5	3199.4	3538.8	3747.4	4182.7	4126.4	3600.8
20°	3414.7	3422.9	3370.0	3296.3	3258.2	3260.8	3412.1	3568.5	4084.9	4215.8	3649.7
22.5°	3772.9	3778.7	3691.9	3564.5	3452.7	3396.5	3438.6	3521.4	3972.4	4298.5	3689.3
25°	4200.8	4200.8	4079.2	3898.0	3724.9	3601.6	3565.2	3596.7	3929.4	4392.0	3729.1
27.5°	4662.6	4679.2	4520.3	4282.8	4054.4	3873.9	3759.7	3753.9	3962.5	4509.5	3773.9
30°	5165.0	5179.9	4991.2	4700.7	4430.1	4199.2	4023.7	3985.7	4089.1	4667.5	3839.2
32.5°	5664.9	5677.2	5468.8	5172.5	4857.1	4585.7	4354.7	4294.3	4316.8	4898.5	3935.2
35°	6300.4	6302.9	6039.0	5686.4	5349.6	5031.0	4738.8	4679.2	4654.3	5189.9	4073.4
37.5°	6806.1	6786.2	6619.0	6285.5	5899.0	5566.3	5222.9	5145.1	5085.6	5599.4	4287.8
40°	6925.3	6925.3	6900.5	6800.3	6493.3	6173.0	5840.4	5724.4	5592.9	6081.9	4575.8
42.5°	6614.9	6634.8	6798.6	7016.3	7018.9	6813.5	6488.4	6390.7	6159.0	6631.5	4890.2
45°	5920.5	5926.3	6319.4	6907.1	7305.9	7423.5	7183.5	7048.6	6727.5	7202.5	5178.3
47.5°	5670.7	5688.8	5856.1	6574.3	7327.5	7917.6	7850.5	7665.2	7253.8	7723.9	5447.2
50°	5286.6	5309.0	5513.4	6084.4	7133.9	8234.6	8488.6	8289.9	7733.1	8158.4	5580.4
52.5°	4367.9	4402.8	4691.6	5436.4	6649.7	8247.8	9072.9	8953.7	8223.7	8390.9	5564.7
55°	3005.8	3031.5	3368.3	4243.8	5673.2	7843.0	9324.5	9406.3	8661.5	8443.1	5488.5
56°	2424.8	2520.8	2767.4	3615.7	5116.9	7498.8	9266.5	9456.1	8791.4	8434.9	5455.5
57.5°	1603.1	1621.3	1890.1	2620.1	4109.0	6751.4	9005.0	9350.1	8958.7	8392.6	5431.5
60°	753.9	762.2	859.0	1209.1	2223.8	4920.1	8155.1	8727.7	9019.9	8304.0	5430.6
62.5°	491.5	493.2	504.8	576.8	909.5	2679.7	6760.6	7584.9	8512.6	8294.1	5414.9
65°	404.7	408.8	394.8	403.8	475.9	1010.5	4768.6	5913.1	7321.7	8060.7	5237.8
67.5°	356.7	357.5	338.4	327.8	348.4	443.6	2402.5	3730.0	5476.2	6849.1	4314.2
70°	325.3	324.4	302.8	278.1	278.9	294.7	783.0	1549.3	3029.8	4066.7	2477.0
72.5°	288.9	290.5	278.1	243.3	231.7	208.5	294.7	417.9	1031.2	1305.9	653.0
75°	253.3	249.9	237.5	215.1	193.6	139.9	148.1	178.0	269.0	266.5	140.7
77.5°	192.0	188.7	194.5	183.8	151.5	97.7	81.1	92.7	121.6	113.4	57.2
80°	146.5	144.9	132.4	157.3	138.2	73.6	55.4	57.2	66.2	60.4	28.2
82.5°	106.0	105.1	100.2	96.8	87.7	53.7	42.2	44.7	49.6	42.2	20.6
85°	40.5	40.5	78.6	66.2	60.4	36.4	29.8	32.2	38.0	30.6	14.1
87.5°	6.7	6.7	53.0	43.8	27.4	18.2	19.0	20.6	22.4	18.2	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196484

CATALOG NUMBER: NAV-AF-02-D-UNV-AFL-7030-1200-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3062.9	3007.5	2885.7	2768.3	2665.7	2553.1	2496.0	2429.8	2405.1	2355.3	2360.3
5°	3094.3	2978.5	2734.3	2477.0	2241.1	2001.1	1830.6	1670.0	1580.7	1492.2	1492.2
7.5°	3126.7	2949.6	2572.2	2160.8	1763.6	1352.3	1061.0	827.6	697.6	610.8	608.2
10°	3149.0	2912.3	2387.7	1794.2	1208.3	696.8	420.4	331.0	298.8	284.7	283.8
12.5°	3178.0	2875.0	2177.4	1362.3	671.2	331.0	262.3	248.2	242.4	239.2	239.2
15°	3202.8	2822.0	1922.5	916.1	352.6	248.2	225.9	220.9	220.1	219.3	220.1
17.5°	3208.6	2746.8	1617.1	536.3	255.7	216.9	206.9	202.7	202.7	201.9	201.9
20°	3195.3	2647.5	1279.4	331.0	220.9	199.4	188.7	183.8	182.9	182.9	182.9
22.5°	3168.0	2520.8	945.9	250.7	201.1	183.8	169.7	164.7	164.7	165.5	166.3
25°	3134.1	2371.0	649.6	216.0	186.2	167.1	153.1	148.1	149.8	151.5	152.3
27.5°	3091.1	2192.3	425.3	187.1	166.3	150.7	138.2	134.9	138.2	141.5	143.1
30°	3048.0	1996.1	288.0	162.2	144.0	132.4	125.0	124.1	129.2	136.6	137.3
32.5°	3019.9	1795.0	217.7	145.7	126.6	116.7	113.4	115.0	122.5	130.8	132.4
35°	3017.4	1598.9	185.4	132.4	115.0	106.0	104.3	109.3	117.6	124.1	125.7
37.5°	3056.3	1415.1	168.0	122.5	106.0	96.8	94.3	103.5	110.9	117.6	119.2
40°	3134.8	1250.5	156.5	113.4	98.5	87.7	86.1	93.5	100.9	108.3	110.9
42.5°	3233.4	1096.5	143.1	104.3	90.2	77.8	76.2	82.0	89.4	100.2	101.8
45°	3318.6	953.4	129.2	94.3	81.1	67.0	66.2	72.8	78.6	88.5	90.2
47.5°	3390.7	834.2	115.9	83.6	69.5	59.5	58.8	62.1	65.3	74.6	76.2
50°	3352.6	733.2	102.6	68.8	56.3	51.4	50.5	50.5	54.6	63.7	65.3
52.5°	3259.1	670.3	90.2	57.2	46.3	43.8	41.4	42.2	46.3	50.5	51.4
55°	3183.7	640.6	79.4	50.5	38.9	36.4	34.0	33.1	34.0	32.2	30.6
56°	3165.6	637.2	76.9	48.8	37.2	34.0	30.6	29.0	28.2	24.8	24.0
57.5°	3157.3	637.2	72.8	45.6	34.8	30.6	26.4	23.2	19.8	17.4	17.4
60°	3150.6	641.4	67.8	39.8	29.8	24.8	19.0	14.1	11.6	11.6	11.6
62.5°	3136.7	639.7	62.1	33.1	25.6	19.0	11.6	9.1	8.3	9.1	10.0
65°	2978.5	594.3	54.6	26.4	19.8	13.2	6.7	6.7	7.4	9.1	10.0
67.5°	2400.0	450.2	44.7	20.6	14.1	10.0	5.8	5.8	7.4	9.1	10.0
70°	1318.3	237.5	38.0	14.9	10.7	8.3	5.8	4.9	7.4	9.1	10.0
72.5°	322.0	99.3	34.8	11.6	10.0	7.4	4.9	4.9	7.4	9.1	10.0
75°	79.4	74.6	28.2	9.1	8.3	6.7	4.9	4.9	7.4	9.1	10.0
77.5°	37.2	98.5	19.0	8.3	7.4	5.8	4.9	4.9	7.4	9.1	9.1
80°	22.4	74.6	11.6	7.4	6.7	5.8	4.9	4.9	7.4	9.1	10.0
82.5°	13.2	21.6	8.3	7.4	6.7	4.9	4.9	4.9	7.4	9.1	10.0
85°	11.6	10.7	8.3	7.4	6.7	5.8	4.9	4.9	8.3	10.0	10.0
87.5°	9.1	8.3	7.4	6.7	6.7	5.8	4.9	4.9	7.4	9.1	10.0
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)