

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: P197075

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197075  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-8030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16828 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 210  
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

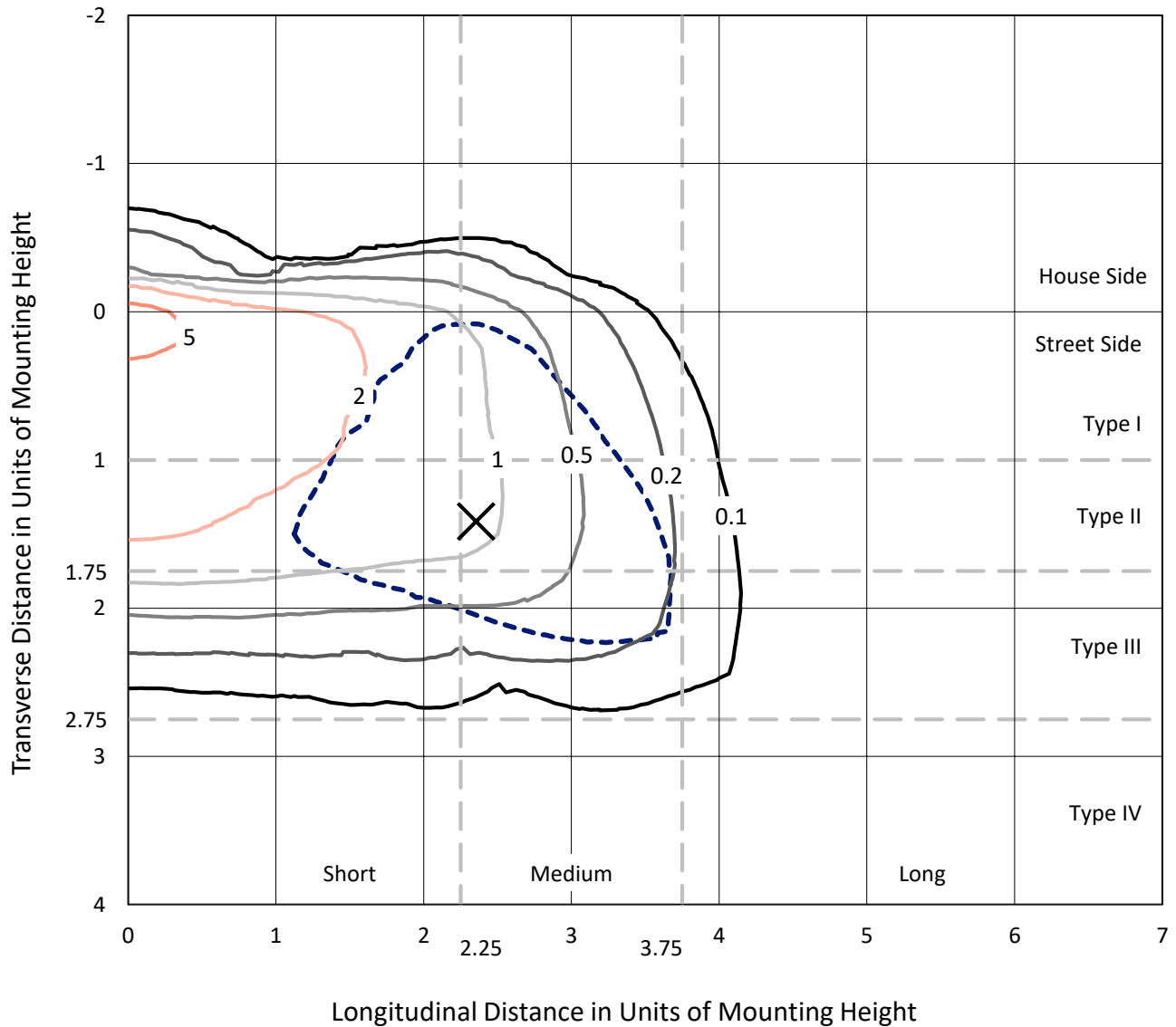


REPORT NUMBER: P197075

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

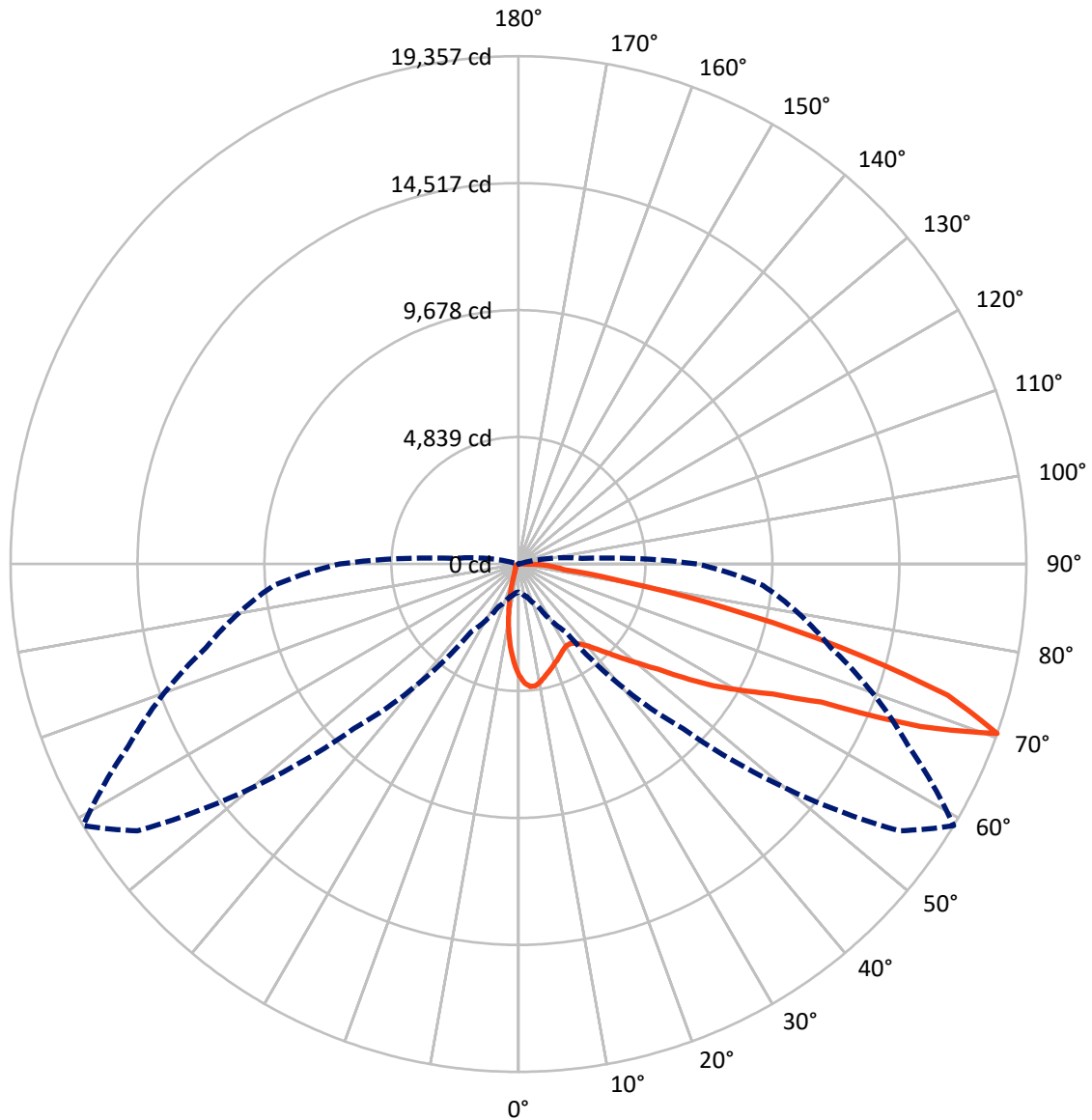


Based on 25 foot mounting height. Maximum calculated value = 7.2 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P197075

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P197075

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

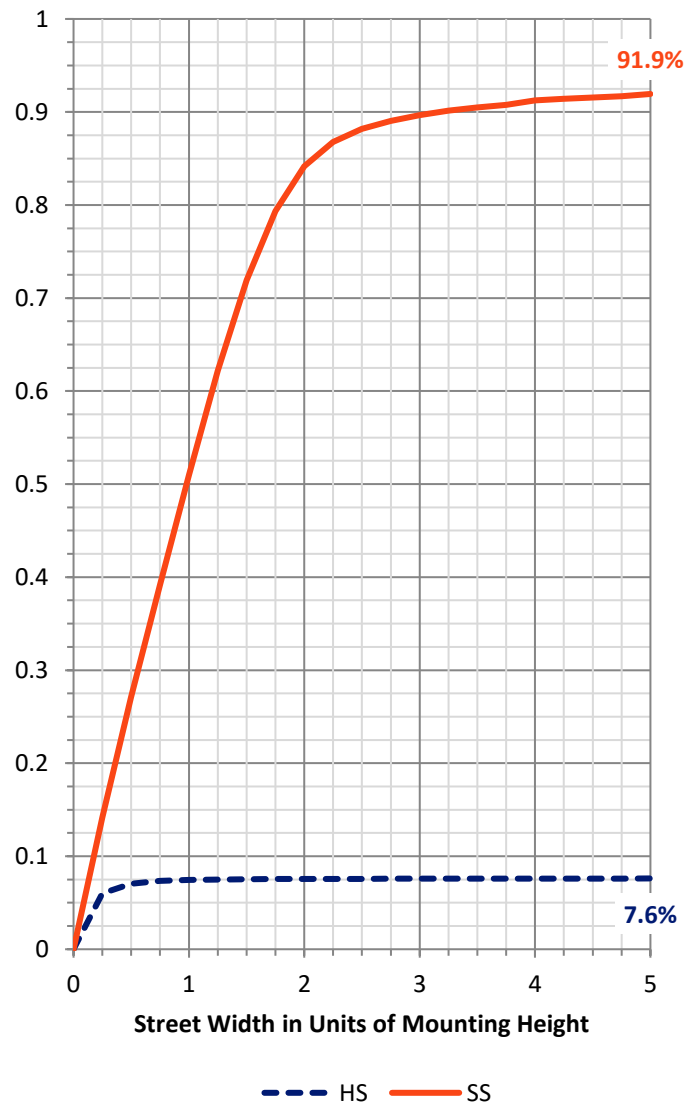
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1293.6	0.0	1293.6
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	15534.4	0.0	15534.4
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	16828.0	0.0	16828.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.9	2.1
10°-20°	733.9	4.4
20°-30°	993.5	5.9
30°-40°	1433.7	8.5
40°-50°	2381.1	14.1
50°-60°	3642.1	21.6
60°-70°	4530.0	26.9
70°-80°	2504.1	14.9
80°-90°	259.7	1.5
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°	16828.0	100.0
0°-180°	16828.0	100.0



REPORT NUMBER: P197075

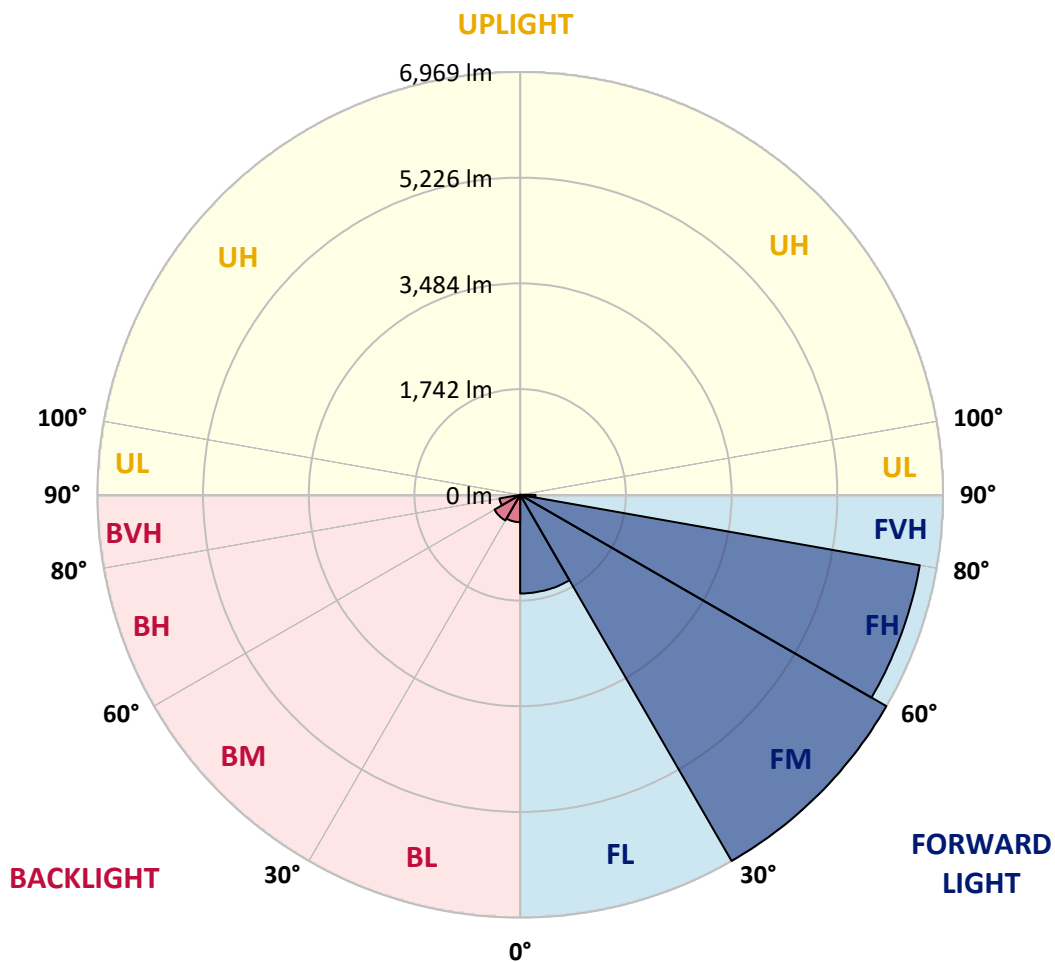
CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1626.5	9.7			
FM	(30°-60°)	6968.7	41.4			
FH	(60°-80°)	6687.1	39.7			G3/7500
FVH	(80°-90°)	252.2	1.5			G3/500
BL	(0°-30°)	450.8	2.7	B1/500		
BM	(30°-60°)	488.3	2.9	B1/1000		
BH	(60°-80°)	347.0	2.1	B1/500		G1/500
BVH	(80°-90°)	7.5	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-G3**

Type III Medium





REPORT NUMBER: P197075

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2
2.5°	4809.9	4802.3	4770.6	4764.2	4728.7	4657.6	4575.1	4542.1	4474.8	4368.2	4250.1
5°	4889.9	4893.7	4896.3	4882.3	4877.2	4818.8	4727.4	4688.1	4597.9	4422.8	4207.0
7.5°	4590.3	4600.5	4632.2	4646.2	4707.1	4730.0	4710.9	4685.5	4614.4	4407.5	4104.1
10°	4274.2	4293.3	4327.6	4350.4	4425.3	4486.2	4563.7	4570.0	4554.8	4356.8	3988.6
12.5°	4002.6	4020.3	4058.4	4104.1	4180.3	4259.0	4374.5	4415.1	4465.9	4323.7	3906.1
15°	3769.0	3774.1	3810.9	3868.0	3968.3	4076.2	4213.3	4273.0	4372.0	4311.1	3842.6
17.5°	3564.6	3565.9	3590.0	3642.1	3763.9	3906.1	4066.0	4144.8	4270.4	4293.3	3786.8
20°	3430.1	3428.8	3430.1	3458.0	3565.9	3734.7	3928.9	4011.5	4172.7	4271.7	3729.6
22.5°	3384.4	3378.0	3348.8	3338.7	3407.2	3555.7	3788.0	3895.9	4085.1	4265.4	3687.8
25°	3440.2	3436.4	3374.2	3315.8	3322.2	3414.8	3644.6	3776.6	4016.5	4288.2	3677.6
27.5°	3620.5	3612.9	3517.6	3403.4	3331.0	3347.5	3538.0	3676.3	3962.0	4344.1	3691.6
30°	3856.6	3857.9	3756.3	3617.9	3447.8	3353.9	3480.8	3611.6	3925.1	4427.8	3722.0
32.5°	4119.4	4118.1	4045.7	3885.8	3668.7	3470.7	3506.2	3616.7	3930.2	4551.0	3780.4
35°	4391.0	4377.1	4352.9	4212.0	3958.1	3675.1	3621.7	3703.0	3983.5	4713.5	3879.4
37.5°	4704.6	4699.5	4723.6	4575.1	4316.1	3975.9	3824.9	3879.4	4118.1	4953.4	4039.4
40°	5203.5	5175.5	5187.0	4985.1	4719.8	4380.9	4109.2	4123.2	4332.6	5270.8	4292.0
42.5°	6154.3	6041.3	5829.3	5451.0	5164.1	4830.3	4481.2	4457.0	4636.0	5655.4	4624.6
45°	7290.5	7161.0	6626.5	5965.1	5608.4	5312.6	4940.7	4876.0	5009.2	6113.7	5053.7
47.5°	8238.7	8099.1	7390.7	6502.1	6060.4	5810.3	5449.7	5373.6	5456.1	6645.6	5569.1
50°	8562.4	8485.0	7863.0	6949.0	6516.1	6368.8	6088.3	5961.3	5981.6	7219.4	6170.8
52.5°	8413.9	8387.3	7970.9	7254.9	6937.5	6985.8	6787.7	6654.5	6631.6	7846.5	6836.0
55°	8100.4	8087.7	7884.6	7425.0	7309.5	7550.7	7769.0	7653.5	7437.7	8512.9	7385.7
57.5°	7652.2	7700.5	7846.5	7752.5	7766.5	8147.3	8680.5	8740.2	8417.7	9043.6	7793.2
60°	6455.2	6584.6	7253.6	8104.2	8755.4	9140.0	9656.7	9768.4	9247.9	9406.6	8264.1
62.5°	4771.9	4957.2	5910.6	7473.3	9300.0	11027.7	10955.4	10905.8	10040.1	9892.8	9121.0
65°	2802.9	3020.0	3826.1	5839.5	8478.7	12241.3	13380.0	12694.5	11247.3	10903.3	10485.7
67.5°	1396.4	1397.7	1762.0	3082.2	6266.0	11394.6	16919.2	16523.2	13814.2	12392.4	11023.9
70°	1074.0	1103.2	1303.7	1791.2	3168.5	8874.7	17730.4	19356.6	16393.7	12326.4	9353.3
72.5°	910.2	929.2	1160.3	1558.9	2368.8	4872.1	15348.9	17109.6	15643.4	10414.6	6894.4
75°	655.0	670.3	1027.0	1414.2	2180.9	2417.0	10528.8	12689.4	11737.3	7326.0	3794.4
77.5°	162.5	161.2	358.0	1147.6	1951.1	2013.3	6041.3	8137.2	6734.4	2999.7	974.9
80°	72.4	69.8	81.2	241.2	1815.3	1900.4	2657.0	4109.2	2583.3	486.2	298.3
82.5°	50.8	48.2	50.8	88.9	606.8	1763.3	1605.9	1781.0	945.7	166.3	126.9
85°	16.5	15.2	27.9	74.9	170.1	1016.8	1566.5	1330.4	703.3	71.1	85.1
87.5°	2.5	2.5	10.2	40.6	49.5	338.9	919.1	921.6	316.1	41.9	38.1
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: P197075

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-8030-800-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2	4255.2
2.5°	4190.5	4115.6	4010.2	3904.8	3809.6	3711.9	3633.2	3596.4	3579.8	3557.0	3507.5
5°	4094.0	3958.1	3727.1	3499.9	3287.9	3084.8	2910.8	2811.8	2705.2	2700.1	2648.1
7.5°	3939.1	3746.1	3381.8	3028.9	2705.2	2395.5	2128.9	1956.2	1838.2	1764.5	1713.8
10°	3766.5	3518.9	3036.5	2540.2	2099.7	1685.8	1343.1	1119.7	983.8	915.3	875.9
12.5°	3629.4	3318.3	2696.3	2071.7	1519.5	1044.8	726.1	563.6	491.3	463.3	450.7
15°	3511.3	3134.3	2377.7	1652.8	1014.3	600.4	420.2	366.9	355.4	355.4	354.2
17.5°	3392.0	2956.5	2067.9	1241.5	638.5	393.5	331.3	323.7	325.0	328.8	328.8
20°	3279.0	2787.7	1769.6	884.8	418.9	314.8	300.9	298.3	302.1	307.2	305.9
22.5°	3187.6	2639.2	1490.3	608.1	322.4	285.6	276.7	272.9	275.5	279.3	278.0
25°	3122.8	2512.2	1233.9	424.0	280.5	260.2	250.1	245.0	242.5	245.0	243.7
27.5°	3083.5	2405.6	992.7	318.6	251.4	234.8	222.2	212.0	205.7	205.7	203.1
30°	3058.1	2305.3	778.2	264.0	227.2	209.5	191.7	177.7	167.6	165.0	163.8
32.5°	3056.8	2219.0	581.4	233.6	204.4	184.1	162.5	144.7	133.3	130.8	129.5
35°	3088.6	2149.2	427.8	210.7	184.1	160.0	135.8	116.8	106.6	106.6	105.4
37.5°	3171.1	2108.6	323.7	193.0	167.6	139.6	114.3	96.5	87.6	90.1	90.1
40°	3324.7	2100.9	264.0	179.0	153.6	121.9	92.7	78.7	74.9	78.7	78.7
42.5°	3559.5	2141.6	234.8	168.8	140.9	104.1	77.4	67.3	66.0	69.8	69.8
45°	3865.5	2221.5	218.3	160.0	126.9	86.3	64.7	58.4	57.1	62.2	62.2
47.5°	4236.2	2329.4	203.1	149.8	113.0	71.1	54.6	49.5	49.5	54.6	55.9
50°	4675.4	2475.4	187.9	139.6	101.6	59.7	45.7	41.9	43.2	48.2	49.5
52.5°	5180.6	2654.4	173.9	130.8	88.9	48.2	38.1	35.5	36.8	41.9	43.2
55°	5616.0	2810.6	157.4	121.9	72.4	39.4	31.7	30.5	31.7	38.1	38.1
57.5°	5995.6	2960.4	142.2	107.9	57.1	31.7	25.4	25.4	27.9	34.3	35.5
60°	6499.6	3196.5	129.5	91.4	43.2	24.1	20.3	21.6	25.4	30.5	31.7
62.5°	7392.0	3597.6	113.0	76.2	31.7	19.0	16.5	17.8	22.9	29.2	30.5
65°	8509.1	3977.2	93.9	63.5	24.1	14.0	12.7	16.5	22.9	29.2	30.5
67.5°	8394.9	3459.3	73.6	50.8	17.8	11.4	10.2	15.2	21.6	29.2	30.5
70°	6808.1	2424.6	54.6	34.3	14.0	10.2	10.2	15.2	21.6	27.9	29.2
72.5°	4722.4	1349.4	41.9	22.9	12.7	10.2	8.9	14.0	20.3	27.9	29.2
75°	2246.9	413.8	33.0	16.5	11.4	8.9	7.6	14.0	20.3	27.9	29.2
77.5°	431.6	105.4	26.7	14.0	10.2	8.9	7.6	12.7	20.3	26.7	27.9
80°	146.0	47.0	21.6	12.7	10.2	8.9	7.6	12.7	19.0	25.4	26.7
82.5°	80.0	26.7	19.0	11.4	10.2	7.6	6.3	11.4	17.8	25.4	26.7
85°	62.2	19.0	15.2	11.4	10.2	7.6	6.3	11.4	17.8	24.1	25.4
87.5°	31.7	14.0	12.7	11.4	10.2	7.6	6.3	10.2	16.5	22.9	25.4
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)