

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: P197118

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197118  
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-SL4-8030-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 615mA 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: 15777 lumens  
Efficiency: N/A  
Efficacy: 81.7 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 - G3

Input Watts (W): 193  
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

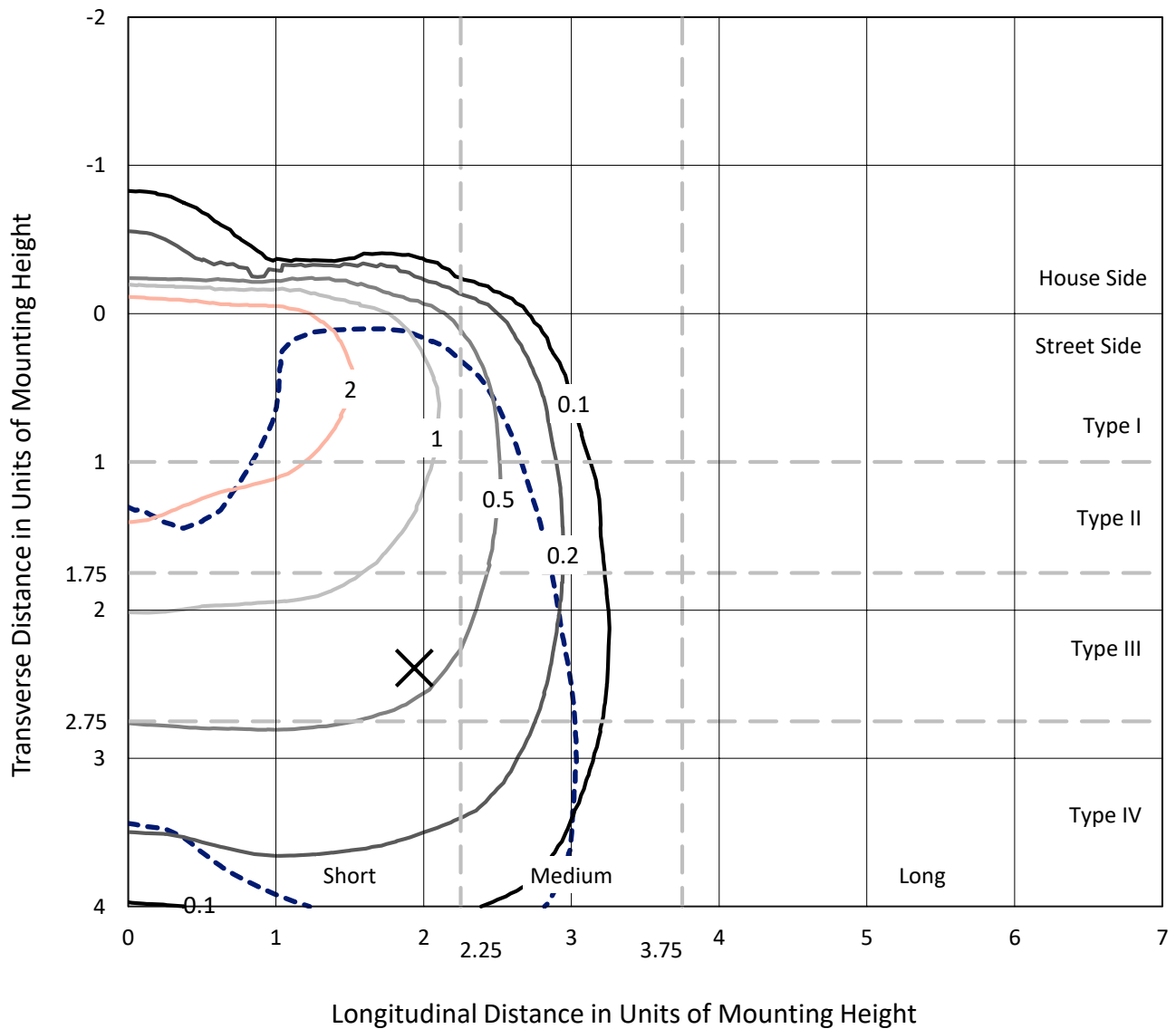


REPORT NUMBER: P197118

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

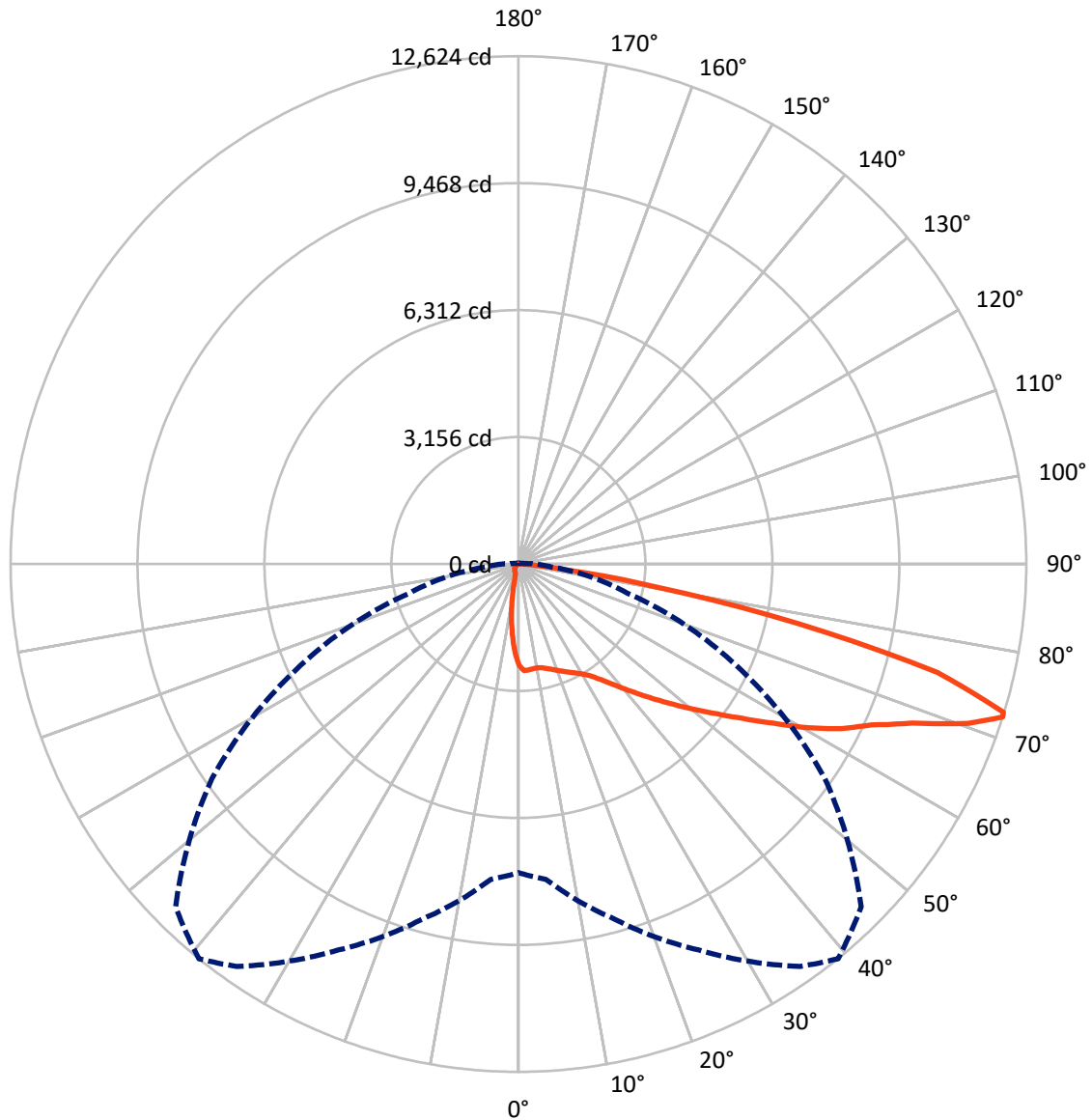


Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197118

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P197118

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

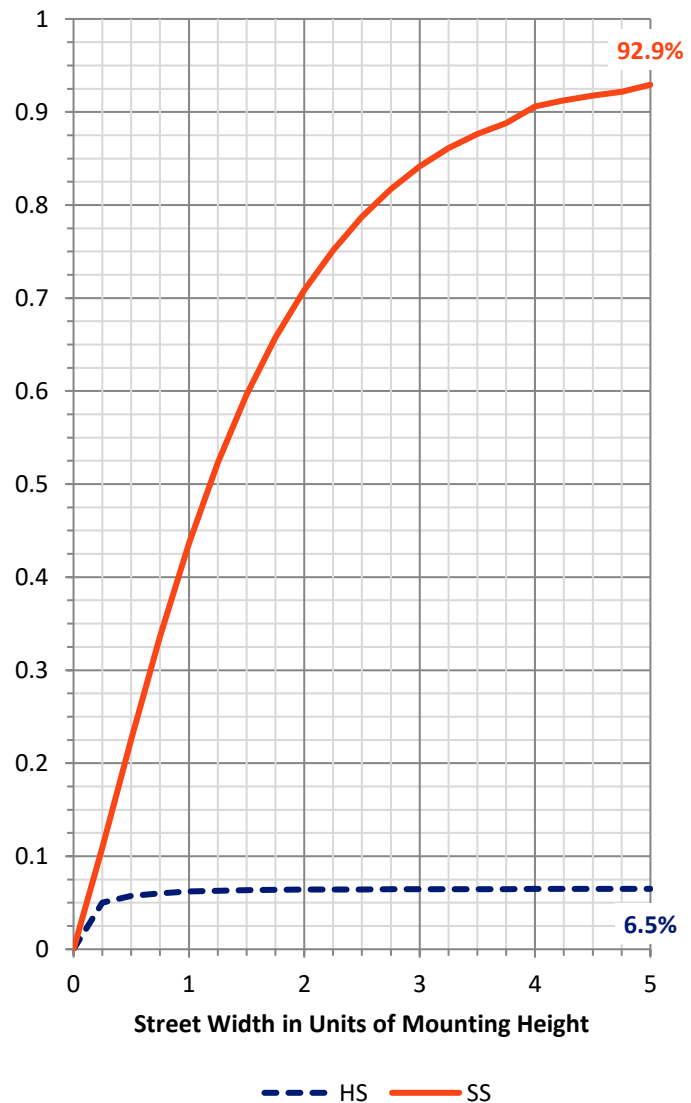
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1034.0	0.0	1034.0
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	14743.0	0.0	14743.0
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	15777.0	0.0	15777.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.4	1.3
10°-20°	497.3	3.2
20°-30°	825.9	5.2
30°-40°	1316.2	8.3
40°-50°	2172.6	13.8
50°-60°	3281.1	20.8
60°-70°	4274.1	27.1
70°-80°	2888.1	18.3
80°-90°	316.3	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°	15777.0	100.0
0°-180°	15777.0	100.0



REPORT NUMBER: P197118

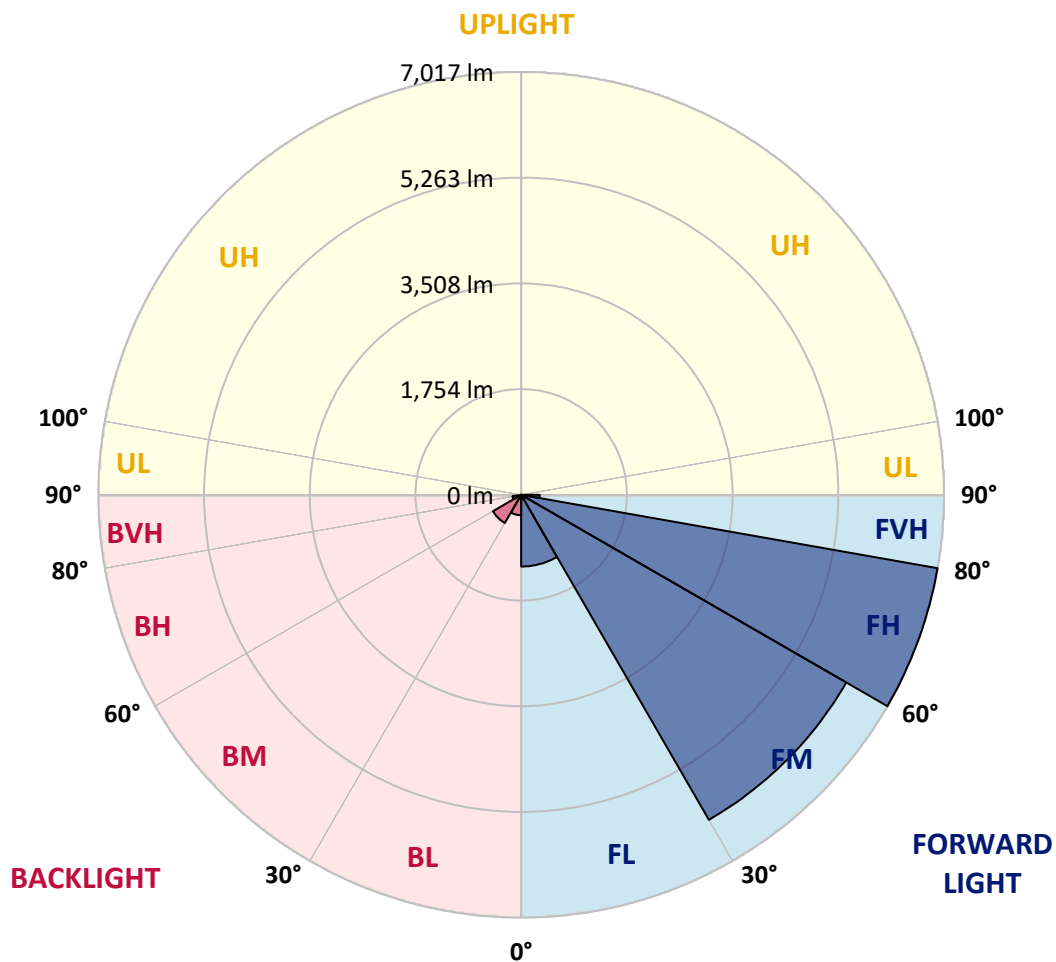
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1190.0	7.5			
FM	(30°-60°)	6229.0	39.5			
FH	(60°-80°)	7016.9	44.5			G3/7500
FVH	(80°-90°)	307.2	1.9			G3/500
BL	(0°-30°)	338.6	2.1	B1/500		
BM	(30°-60°)	541.0	3.4	B1/1000		
BH	(60°-80°)	145.3	0.9	B1/500		G1/500
BVH	(80°-90°)	9.1	0.1			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 IV Short





REPORT NUMBER: P197118

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2
2.5°	2688.9	2693.9	2687.7	2676.5	2660.4	2650.5	2636.8	2607.1	2569.9	2537.6	2500.4
5°	2710.0	2712.5	2705.1	2684.0	2659.2	2645.5	2628.2	2595.9	2557.5	2512.8	2445.8
7.5°	2716.2	2715.0	2706.3	2680.2	2641.8	2624.4	2594.7	2555.0	2515.3	2474.4	2398.7
10°	2713.7	2713.7	2707.5	2682.7	2639.3	2623.2	2589.7	2547.5	2497.9	2457.0	2376.4
12.5°	2705.1	2710.0	2706.3	2692.6	2660.4	2648.0	2618.2	2576.1	2528.9	2486.8	2401.2
15°	2716.2	2723.7	2731.1	2726.1	2707.5	2696.4	2669.1	2625.7	2587.2	2542.6	2450.8
17.5°	2760.9	2777.0	2794.4	2795.6	2775.7	2755.9	2724.9	2680.2	2643.0	2602.1	2502.9
20°	2845.2	2857.6	2889.9	2896.1	2856.4	2827.8	2784.4	2732.3	2695.1	2660.4	2551.3
22.5°	2970.5	2984.1	3010.2	3001.5	2934.5	2901.0	2846.4	2786.9	2748.5	2728.6	2607.1
25°	3160.2	3164.0	3170.2	3131.7	3021.3	2984.1	2917.1	2850.2	2819.2	2816.7	2686.4
27.5°	3383.5	3388.4	3361.2	3275.6	3118.1	3069.7	2994.0	2933.3	2918.4	2937.0	2786.9
30°	3639.0	3640.2	3564.6	3425.7	3229.7	3176.4	3098.2	3031.2	3044.9	3090.8	2915.9
32.5°	3900.7	3888.3	3784.1	3603.0	3382.2	3317.8	3250.8	3183.8	3223.5	3316.5	3104.4
35°	4140.1	4135.1	4012.3	3801.5	3580.7	3523.6	3475.3	3404.6	3469.1	3620.4	3361.2
37.5°	4379.4	4375.7	4235.6	4016.0	3825.0	3784.1	3748.1	3693.6	3799.0	4021.0	3704.7
40°	4643.6	4637.4	4465.0	4254.2	4109.0	4086.7	4065.6	4042.1	4221.9	4530.7	4132.6
42.5°	4969.8	4942.5	4708.1	4513.4	4421.6	4427.8	4429.0	4452.6	4734.2	5137.2	4637.4
45°	5344.4	5283.6	4952.4	4791.2	4765.2	4802.4	4839.6	4937.6	5330.7	5835.5	5195.5
47.5°	5707.8	5609.8	5234.0	5090.1	5143.4	5220.3	5309.6	5500.6	6000.5	6566.0	5701.6
50°	6020.3	5919.9	5513.0	5394.0	5563.9	5678.0	5836.8	6125.7	6707.4	7183.7	6020.3
52.5°	6265.9	6186.5	5808.2	5728.9	6030.2	6186.5	6435.8	6815.3	7374.7	7590.5	6243.6
55°	6447.0	6407.3	6091.0	6102.2	6548.7	6774.4	7084.5	7513.6	7937.8	7906.8	6411.0
57.5°	6651.6	6620.6	6387.4	6542.5	7172.5	7464.0	7822.4	8167.2	8347.1	8161.0	6574.7
60°	6861.2	6871.2	6747.1	7075.8	7944.0	8266.5	8579.0	8664.6	8698.1	8419.0	6747.1
62.5°	7020.0	7062.2	7073.3	7651.3	8735.3	9010.6	9145.8	9085.1	9077.6	8765.1	6733.5
65°	7202.3	7312.7	7496.3	8282.6	9454.7	9635.7	9732.5	9820.5	9634.5	8868.0	6071.2
67.5°	7517.3	7691.0	8104.0	9056.5	10285.6	10553.5	10827.6	10734.6	9717.6	7822.4	4625.0
70°	7941.5	8153.6	8882.9	10067.4	11413.1	11862.0	12091.5	10661.5	8250.3	5405.1	2439.6
72°	7673.6	7865.9	9123.5	10583.3	12211.8	12623.6	12049.3	9299.6	5980.6	2801.8	817.3
72.5°	7413.2	7611.6	9046.6	10577.1	12291.2	12606.2	11775.2	8762.6	5292.3	2180.4	563.1
75°	5143.4	5394.0	7755.5	9508.0	11099.3	10753.2	9009.4	5305.9	1917.5	374.6	186.0
77.5°	2659.2	2852.6	4704.4	6718.6	7735.6	7084.5	5324.5	2302.0	530.8	198.4	122.8
80°	1648.3	1743.8	2200.3	3310.3	4018.5	3515.0	2349.1	930.2	339.8	117.8	98.0
82.5°	853.3	926.5	1385.4	1335.8	1484.6	1234.1	867.0	778.9	209.6	73.2	100.5
85°	280.3	297.7	850.8	888.0	635.0	426.7	384.5	742.9	60.8	47.1	85.6
87.5°	37.2	43.4	298.9	508.5	312.6	193.5	230.7	261.7	21.1	26.0	23.6
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: P197118

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2	2525.2
2.5°	2475.6	2459.5	2408.6	2357.8	2299.5	2246.1	2204.0	2176.7	2189.1	2148.2	2154.4
5°	2404.9	2364.0	2252.3	2132.0	2001.8	1880.3	1783.5	1711.6	1697.9	1635.9	1638.4
7.5°	2336.7	2269.7	2088.6	1890.2	1674.4	1499.5	1340.7	1201.8	1152.2	1101.4	1071.6
10°	2299.5	2207.7	1951.0	1662.0	1358.1	1101.4	878.1	703.2	630.1	576.7	550.7
12.5°	2310.6	2189.1	1848.0	1454.8	1055.5	729.3	496.1	368.4	323.7	298.9	290.2
15°	2347.9	2192.8	1755.0	1252.7	767.7	441.5	291.5	249.3	245.6	244.3	243.1
17.5°	2382.6	2196.5	1657.0	1041.8	513.5	281.5	234.4	230.7	230.7	230.7	230.7
20°	2418.5	2197.8	1549.1	821.1	337.4	230.7	220.8	218.3	220.8	220.8	220.8
22.5°	2460.7	2206.5	1444.9	606.5	249.3	217.0	210.8	209.6	210.8	210.8	209.6
25°	2512.8	2225.1	1332.1	434.1	225.7	208.4	202.2	200.9	202.2	200.9	200.9
27.5°	2582.3	2249.9	1200.6	311.3	215.8	199.7	193.5	193.5	193.5	192.2	192.2
30°	2671.6	2279.6	1024.5	245.6	205.9	191.0	186.0	186.0	184.8	183.6	183.6
32.5°	2799.3	2328.0	832.2	222.0	194.7	179.8	174.9	176.1	174.9	173.6	172.4
35°	2980.4	2403.7	642.5	209.6	183.6	168.7	163.7	163.7	163.7	161.2	161.2
37.5°	3237.1	2519.0	481.2	197.2	172.4	157.5	151.3	151.3	150.1	147.6	148.8
40°	3554.6	2664.1	348.5	186.0	161.2	145.1	140.2	137.7	135.2	132.7	132.7
42.5°	3936.7	2805.5	261.7	174.9	150.1	135.2	129.0	126.5	121.5	119.1	117.8
45°	4364.5	2955.6	217.0	161.2	137.7	124.0	119.1	114.1	107.9	104.2	102.9
47.5°	4725.5	3047.4	193.5	147.6	125.3	112.9	107.9	100.5	93.0	90.5	90.5
50°	4942.5	3008.9	173.6	134.0	112.9	101.7	95.5	85.6	80.6	78.1	76.9
52.5°	5064.1	2894.8	157.5	122.8	101.7	89.3	80.6	71.9	69.5	67.0	67.0
55°	5147.2	2729.9	140.2	111.6	91.8	78.1	68.2	62.0	59.5	58.3	57.1
57.5°	5226.5	2528.9	124.0	101.7	81.9	69.5	58.3	55.8	50.9	49.6	49.6
60°	5250.1	2252.3	109.1	90.5	73.2	60.8	50.9	47.1	42.2	40.9	40.9
62.5°	4950.0	1792.2	96.7	76.9	64.5	52.1	44.7	39.7	34.7	34.7	34.7
65°	4136.3	1216.7	83.1	67.0	57.1	44.7	38.4	32.2	29.8	29.8	29.8
67.5°	2881.2	678.4	70.7	57.1	48.4	37.2	32.2	27.3	26.0	27.3	27.3
70°	1298.6	269.1	59.5	47.1	39.7	31.0	27.3	23.6	26.0	26.0	26.0
72°	389.4	143.9	49.6	38.4	32.2	27.3	23.6	22.3	24.8	26.0	26.0
72.5°	289.0	129.0	47.1	37.2	32.2	26.0	22.3	22.3	24.8	26.0	26.0
75°	148.8	88.1	36.0	27.3	23.6	21.1	18.6	21.1	24.8	24.8	24.8
77.5°	116.6	71.9	29.8	21.1	19.8	18.6	17.4	19.8	22.3	22.3	22.3
80°	109.1	47.1	23.6	19.8	17.4	16.1	16.1	17.4	19.8	21.1	21.1
82.5°	110.4	38.4	21.1	18.6	16.1	14.9	14.9	16.1	18.6	19.8	19.8
85°	70.7	26.0	18.6	16.1	14.9	13.6	13.6	14.9	17.4	18.6	18.6
87.5°	23.6	19.8	16.1	14.9	12.4	12.4	12.4	12.4	14.9	16.1	17.4
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)