

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: P197148

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197148  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22656 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G4

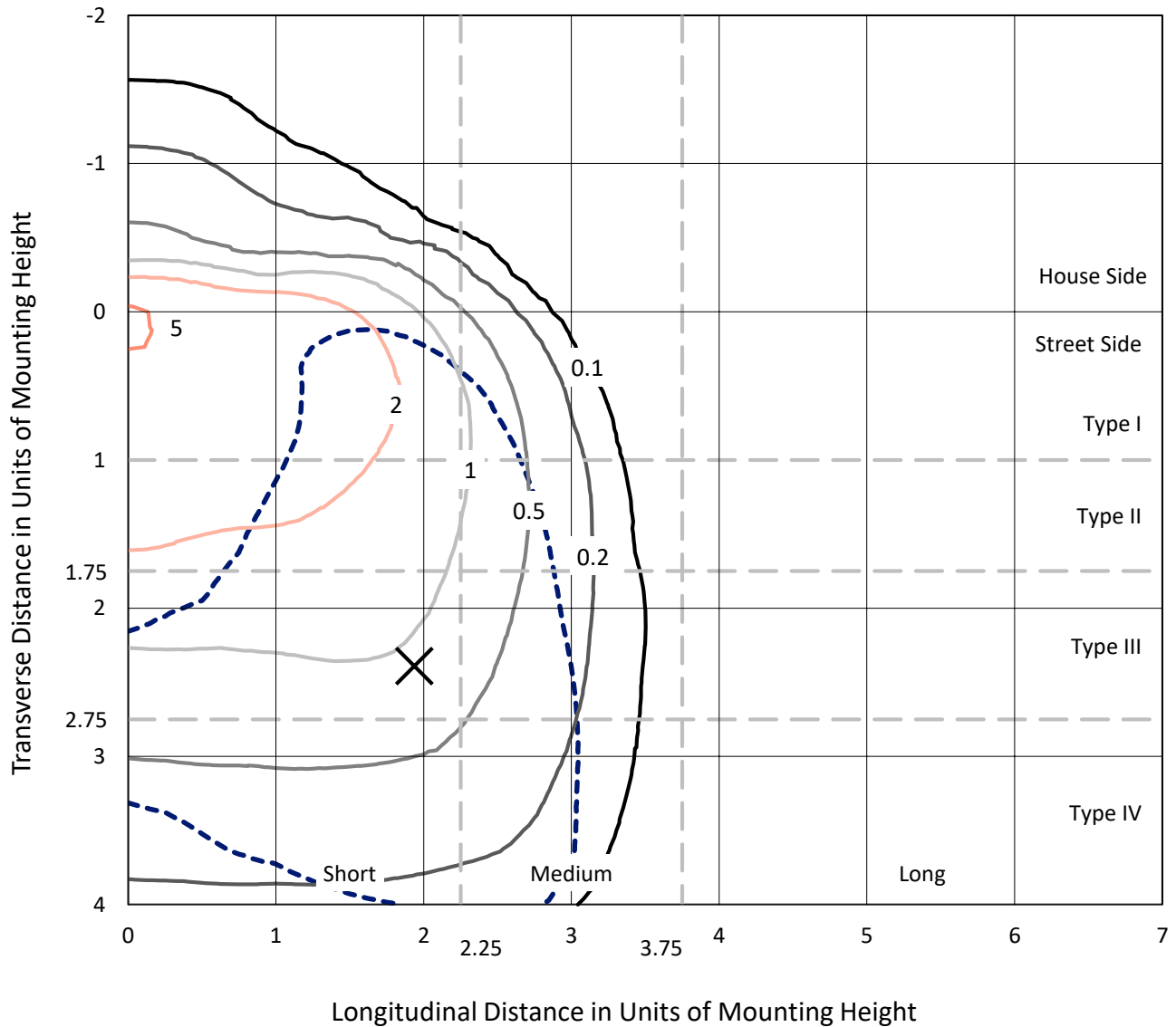
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

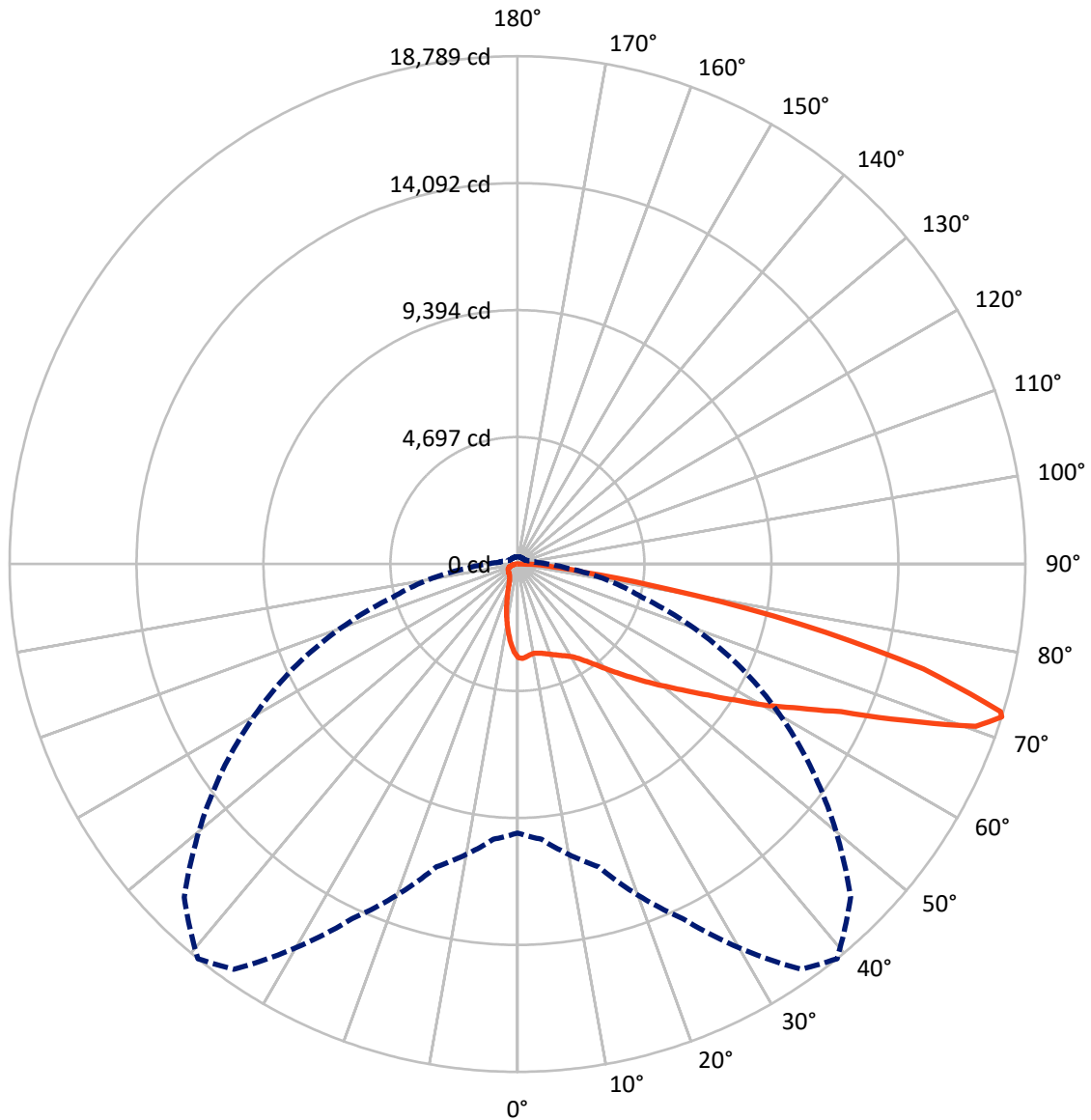
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197148  
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-800

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P197148

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-800

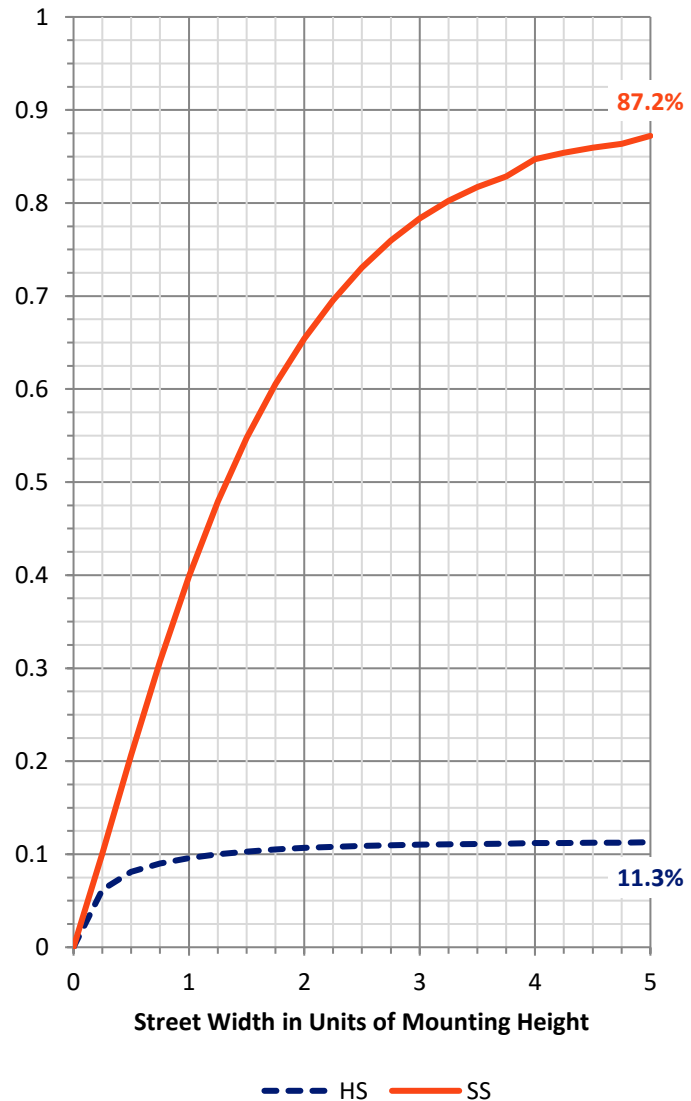
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2597.8	0.0	2597.8
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	20058.2	0.0	20058.2
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	22656.0	0.0	22656.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.3	1.3
10°-20°	747.1	3.3
20°-30°	1164.3	5.1
30°-40°	1792.7	7.9
40°-50°	2922.5	12.9
50°-60°	4541.3	20.0
60°-70°	6078.4	26.8
70°-80°	4371.2	19.3
80°-90°	741.0	3.3
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°	22656.0	100.0
0°-180°	22656.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P197148

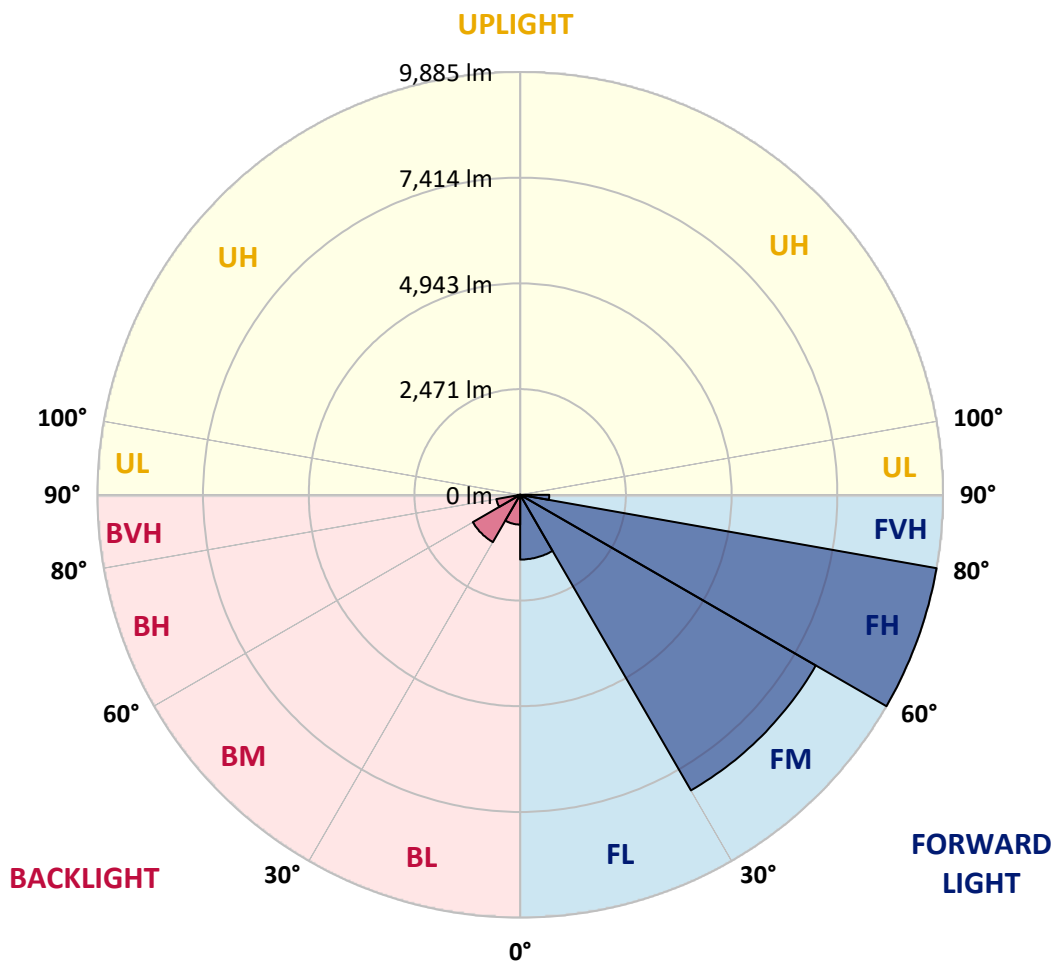
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1513.4	6.7			
FM	(30°-60°)	7979.9	35.2			
FH	(60°-80°)	9885.2	43.6			G4/12000
FVH	(80°-90°)	679.8	3.0			G4/750
BL	(0°-30°)	695.4	3.1	B2/1000		
BM	(30°-60°)	1276.7	5.6	B2/2500		
BH	(60°-80°)	564.4	2.5	B2/1000		G2/1000
BVH	(80°-90°)	61.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type IV Short





REPORT NUMBER: P197148

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0
2.5°	3534.5	3536.0	3531.5	3517.8	3505.6	3499.5	3488.9	3470.6	3446.3	3429.6	3415.9
5°	3501.0	3505.6	3502.6	3479.7	3458.5	3446.3	3429.6	3403.7	3371.8	3358.1	3326.1
7.5°	3475.2	3478.2	3469.1	3443.2	3402.2	3387.0	3356.6	3323.1	3294.2	3274.4	3236.4
10°	3456.9	3460.0	3452.4	3426.5	3380.9	3362.6	3326.1	3289.6	3251.6	3227.3	3184.7
12.5°	3431.1	3437.2	3437.2	3425.0	3394.6	3382.4	3345.9	3306.4	3271.4	3245.5	3192.3
15°	3426.5	3434.1	3447.8	3446.3	3437.2	3428.0	3399.1	3359.6	3329.2	3298.8	3233.4
17.5°	3464.5	3481.3	3508.6	3517.8	3511.7	3491.9	3458.5	3422.0	3388.5	3359.6	3279.0
20°	3560.4	3569.5	3610.5	3628.8	3598.4	3569.5	3525.4	3478.2	3447.8	3425.0	3321.6
22.5°	3704.8	3717.0	3750.5	3752.0	3688.1	3653.1	3596.9	3539.1	3510.2	3501.0	3379.4
25°	3936.0	3933.0	3942.1	3904.1	3788.5	3747.4	3679.0	3612.1	3592.3	3610.5	3464.5
27.5°	4212.8	4205.2	4176.3	4077.5	3902.6	3849.3	3767.2	3707.9	3707.9	3750.5	3580.1
30°	4532.2	4524.6	4430.3	4264.5	4037.9	3977.1	3890.4	3828.0	3860.0	3942.1	3736.8
32.5°	4869.8	4842.4	4710.1	4488.1	4231.1	4164.1	4080.5	4016.6	4077.5	4217.4	3961.9
35°	5187.7	5172.5	5009.7	4746.6	4480.5	4424.2	4366.4	4287.3	4384.7	4602.2	4279.7
37.5°	5516.2	5504.0	5304.8	5025.0	4784.7	4746.6	4698.0	4643.2	4799.9	5085.8	4710.1
40°	5882.7	5858.4	5607.4	5327.6	5139.0	5120.8	5094.9	5079.7	5332.2	5758.0	5254.6
42.5°	6297.9	6250.8	5926.8	5660.7	5525.3	5540.5	5526.8	5587.7	5974.0	6533.7	5902.5
45°	6772.4	6678.1	6244.7	6015.0	5952.7	6013.5	6042.4	6197.5	6732.9	7429.4	6626.4
47.5°	7216.5	7094.9	6593.0	6399.8	6434.8	6539.7	6621.9	6895.6	7564.8	8314.6	7365.6
50°	7625.6	7488.8	6965.6	6798.3	6968.6	7117.7	7288.0	7674.3	8450.0	9225.6	8043.9
52.5°	7928.3	7829.4	7338.2	7233.3	7581.5	7779.2	8051.5	8539.7	9344.2	10094.0	8649.2
55°	8162.5	8109.3	7701.7	7732.1	8275.1	8557.9	8888.0	9449.2	10290.2	10872.7	9135.9
57.5°	8433.2	8393.7	8116.9	8334.4	9135.9	9491.7	9881.1	10504.6	11190.6	11558.6	9517.6
60°	8719.1	8719.1	8579.2	9059.8	10212.6	10620.2	11008.1	11493.2	12087.9	12176.1	9672.7
62.5°	8935.1	8991.4	9041.6	9832.4	11234.7	11741.1	12167.0	12632.3	13017.1	12480.3	9307.7
65°	9248.4	9368.6	9651.4	10725.2	12500.0	13163.1	13738.0	14128.9	13770.0	12238.4	8116.9
67.5°	9786.8	9964.7	10567.0	12054.4	14437.6	15430.7	15988.9	15313.6	13622.4	10716.0	6217.3
70°	10272.0	10522.9	11552.5	13741.1	16956.2	17987.3	17730.3	15038.4	11864.3	7855.3	3825.0
72°	9949.5	10223.3	11598.2	14475.6	18302.1	18788.8	17433.7	13327.4	9167.8	4793.8	1885.9
72.5°	9738.1	10022.5	11450.6	14457.4	18338.6	18686.9	17021.6	12647.6	8322.2	4194.6	1525.4
75°	8135.1	8378.5	9846.1	12813.3	16160.8	15522.0	13283.3	8185.3	3825.0	1355.1	784.8
77.5°	5312.4	5497.9	6789.2	8877.3	11319.8	10705.4	8084.9	3832.6	1434.2	822.8	590.1
80°	2669.1	2801.4	3633.4	4667.5	6109.3	5621.1	3732.2	1853.9	959.7	594.7	463.9
82.5°	1857.0	1978.7	2501.8	2383.2	2553.5	2471.4	1755.1	1546.7	717.9	375.7	243.3
85°	1557.4	1683.6	2069.9	1698.8	1390.1	1266.9	1257.8	1461.6	474.5	185.5	205.3
87.5°	1358.1	1549.8	1707.9	1241.0	953.6	841.0	926.2	1339.9	150.6	101.9	62.4
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: P197148

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0	3460.0
2.5°	3393.1	3388.5	3365.7	3330.7	3304.8	3288.1	3256.2	3254.7	3257.7	3230.3	3241.0
5°	3297.2	3279.0	3219.7	3139.1	3073.7	3011.3	2942.9	2920.1	2900.3	2859.2	2863.8
7.5°	3196.9	3164.9	3061.5	2929.2	2803.0	2687.4	2573.3	2517.0	2474.5	2421.2	2421.2
10°	3137.6	3087.4	2929.2	2736.0	2535.3	2366.5	2196.1	2094.2	2019.7	1951.3	1946.7
12.5°	3134.5	3058.5	2837.9	2571.8	2296.5	2059.3	1826.6	1669.9	1558.9	1478.3	1470.7
15°	3158.8	3052.4	2761.9	2418.2	2071.4	1762.7	1475.2	1276.0	1134.6	1044.8	1035.7
17.5°	3180.1	3044.8	2679.8	2257.0	1852.4	1476.8	1157.4	950.5	816.7	743.7	736.1
20°	3199.9	3028.1	2574.8	2086.6	1610.6	1209.1	904.9	737.6	649.4	608.3	603.8
22.5°	3228.8	3012.8	2465.3	1895.0	1373.3	984.0	746.7	626.6	579.5	559.7	556.6
25°	3276.0	3014.4	2358.9	1698.8	1155.9	819.7	646.4	571.8	546.0	532.3	532.3
27.5°	3344.4	3032.6	2253.9	1499.6	971.8	707.2	587.1	543.0	526.2	515.6	512.5
30°	3444.8	3066.1	2142.9	1311.0	825.8	629.6	552.1	524.7	511.0	501.9	500.4
32.5°	3590.8	3125.4	2025.8	1139.1	714.8	574.9	526.2	509.5	498.8	491.2	489.7
35°	3808.3	3230.3	1911.7	993.1	635.7	535.3	504.9	491.2	485.2	482.1	480.6
37.5°	4127.6	3399.1	1803.8	879.1	584.0	509.5	483.6	476.0	473.0	473.0	473.0
40°	4529.1	3621.2	1706.4	798.5	555.1	489.7	468.4	462.3	462.3	463.9	463.9
42.5°	5017.3	3899.5	1622.8	743.7	538.4	476.0	457.8	454.7	453.2	453.2	454.7
45°	5584.6	4228.0	1571.1	701.1	526.2	468.4	450.2	448.7	442.6	439.5	439.5
47.5°	6155.0	4579.3	1568.0	676.8	511.0	459.3	442.6	442.6	430.4	424.3	425.8
50°	6687.3	4894.2	1601.5	670.7	501.9	445.6	435.0	436.5	419.8	412.2	410.6
52.5°	7116.1	5134.5	1642.5	678.3	501.9	433.4	421.3	428.9	410.6	401.5	400.0
55°	7447.7	5301.8	1657.7	695.0	508.0	422.8	409.1	421.3	407.6	395.4	395.4
57.5°	7685.0	5355.0	1592.4	702.6	517.1	421.3	396.9	419.8	412.2	396.9	396.9
60°	7598.3	5046.2	1349.0	673.7	515.6	418.2	387.8	422.8	427.4	410.6	410.6
62.5°	6921.5	4221.9	1082.9	608.3	489.7	407.6	377.2	419.8	438.0	431.9	428.9
65°	5634.8	3096.5	839.5	530.8	445.6	384.8	354.4	392.4	413.7	419.8	421.3
67.5°	3971.0	1960.4	652.5	451.7	390.9	351.3	328.5	346.8	354.4	357.4	363.5
70°	2171.8	1061.6	518.6	380.2	334.6	317.9	301.1	302.7	299.6	296.6	299.6
72°	1090.5	693.5	438.0	330.0	296.6	285.9	278.3	273.8	273.8	269.2	270.7
72.5°	938.4	644.8	422.8	317.9	287.4	278.3	272.2	267.7	266.2	263.1	264.6
75°	625.1	511.0	352.8	266.2	244.9	238.8	241.8	237.3	238.8	235.7	237.3
77.5°	504.9	439.5	299.6	225.1	209.9	200.8	206.8	208.4	211.4	208.4	206.8
80°	422.8	374.1	250.9	185.5	174.9	167.3	170.3	181.0	182.5	173.4	171.9
82.5°	273.8	301.1	197.7	144.5	133.8	130.8	138.4	149.0	152.1	139.9	136.9
85°	229.7	241.8	143.0	98.9	88.2	85.2	100.4	111.0	118.6	106.5	103.4
87.5°	63.9	118.6	70.0	47.1	39.5	39.5	48.7	57.8	68.4	70.0	70.0
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)