

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: P195222

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195222
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-SL4-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 615mA 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: 22642 lumens
Efficiency: N/A
Efficacy: 117.3 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

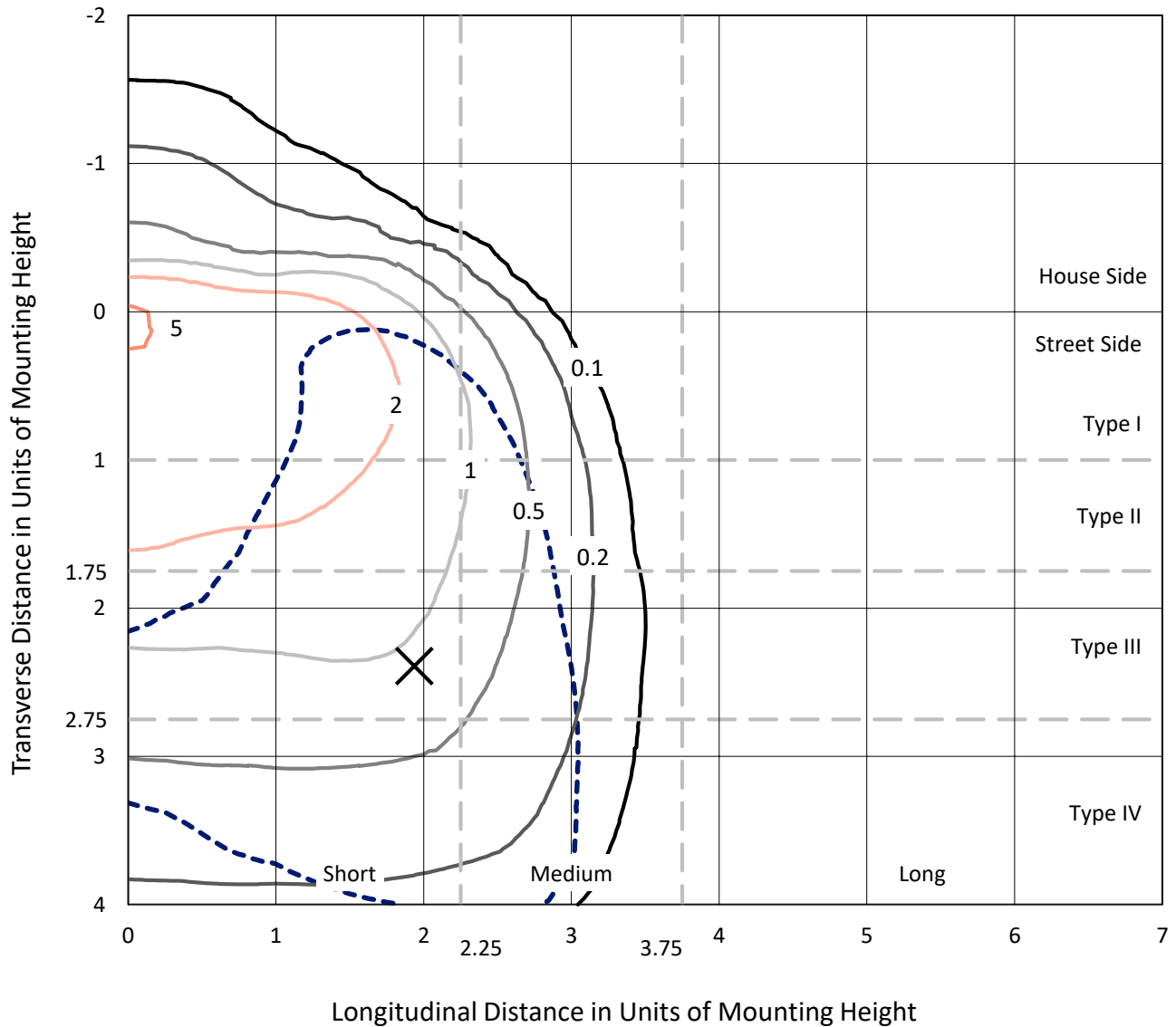
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195222
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

Iso-Footcandle Lines of Horizontal Illumination

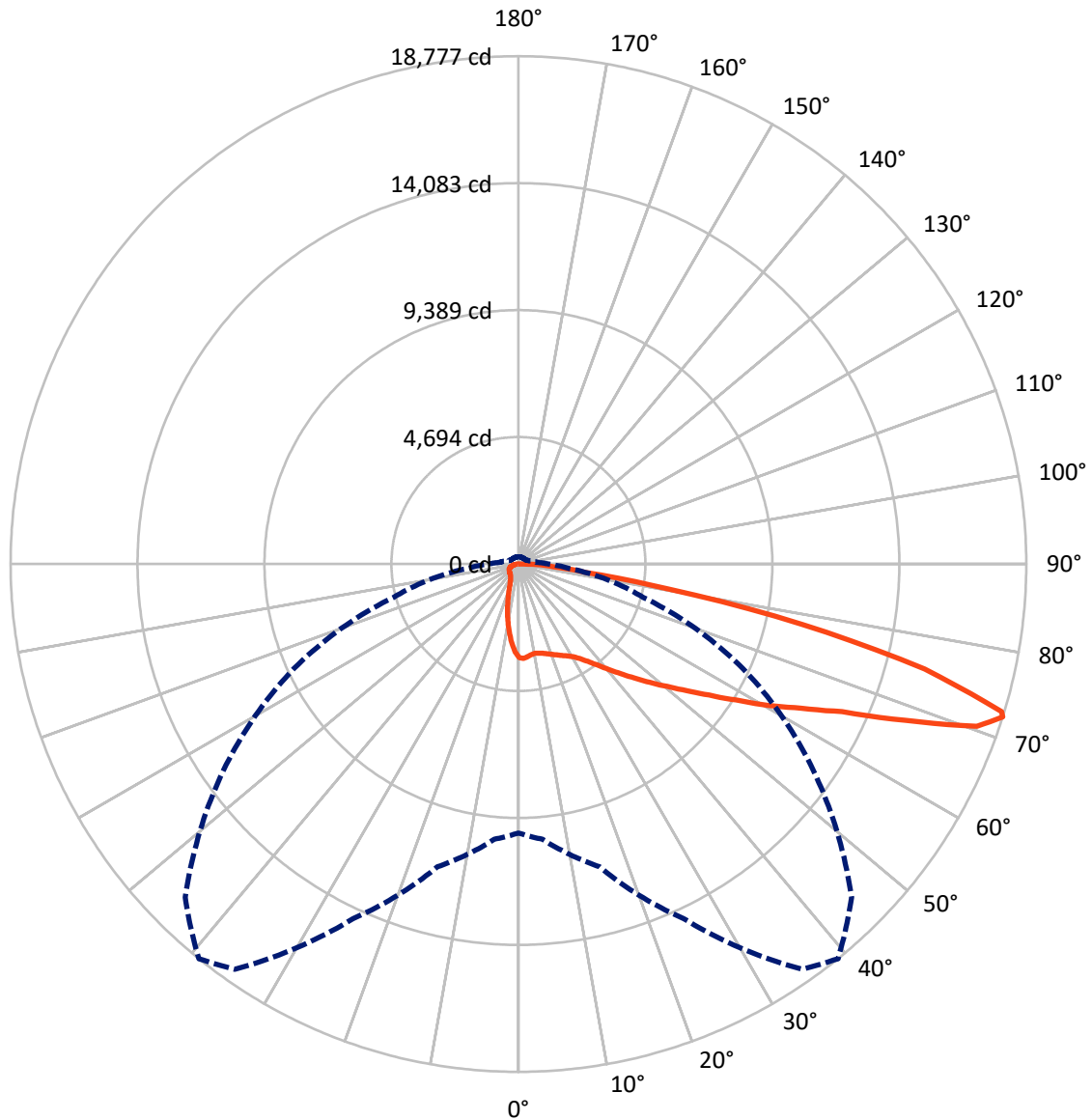
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P195222
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195222

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

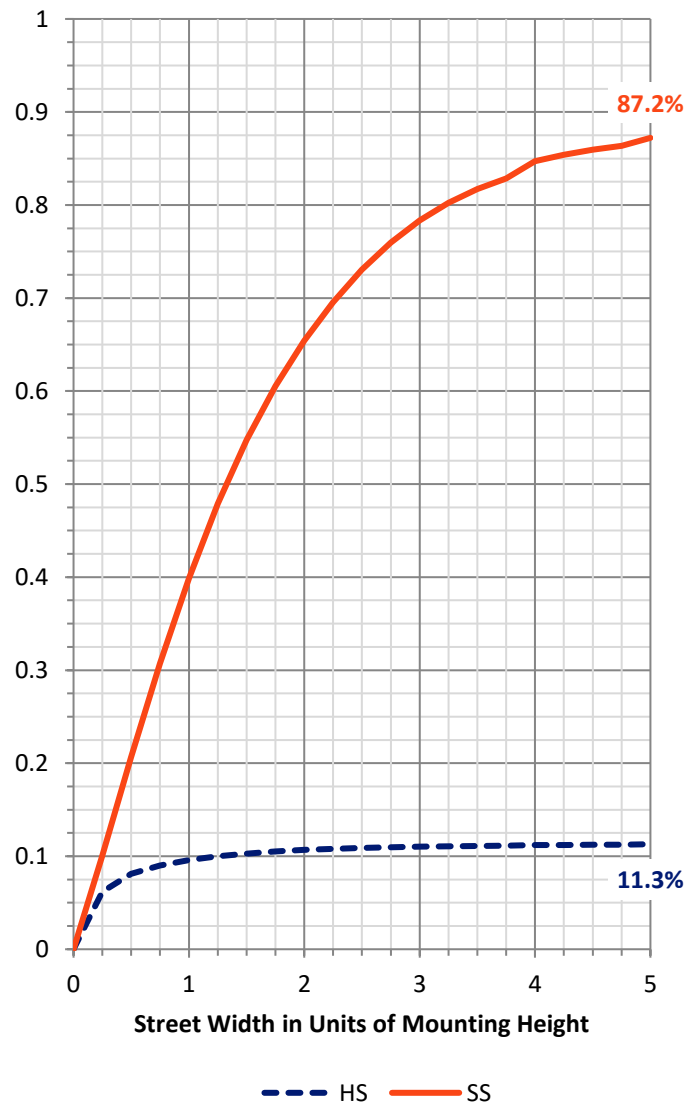
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2596.2	0.0	2596.2
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	20045.8	0.0	20045.8
	% Fixture	88.5	0.0	88.5
Total	Lumens	22642.0	0.0	22642.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.2	1.3
10°-20°	746.7	3.3
20°-30°	1163.6	5.1
30°-40°	1791.6	7.9
40°-50°	2920.7	12.9
50°-60°	4538.5	20.0
60°-70°	6074.6	26.8
70°-80°	4368.5	19.3
80°-90°	740.6	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°	22642.0	100.0
0°-180°	22642.0	100.0



REPORT NUMBER: P195222

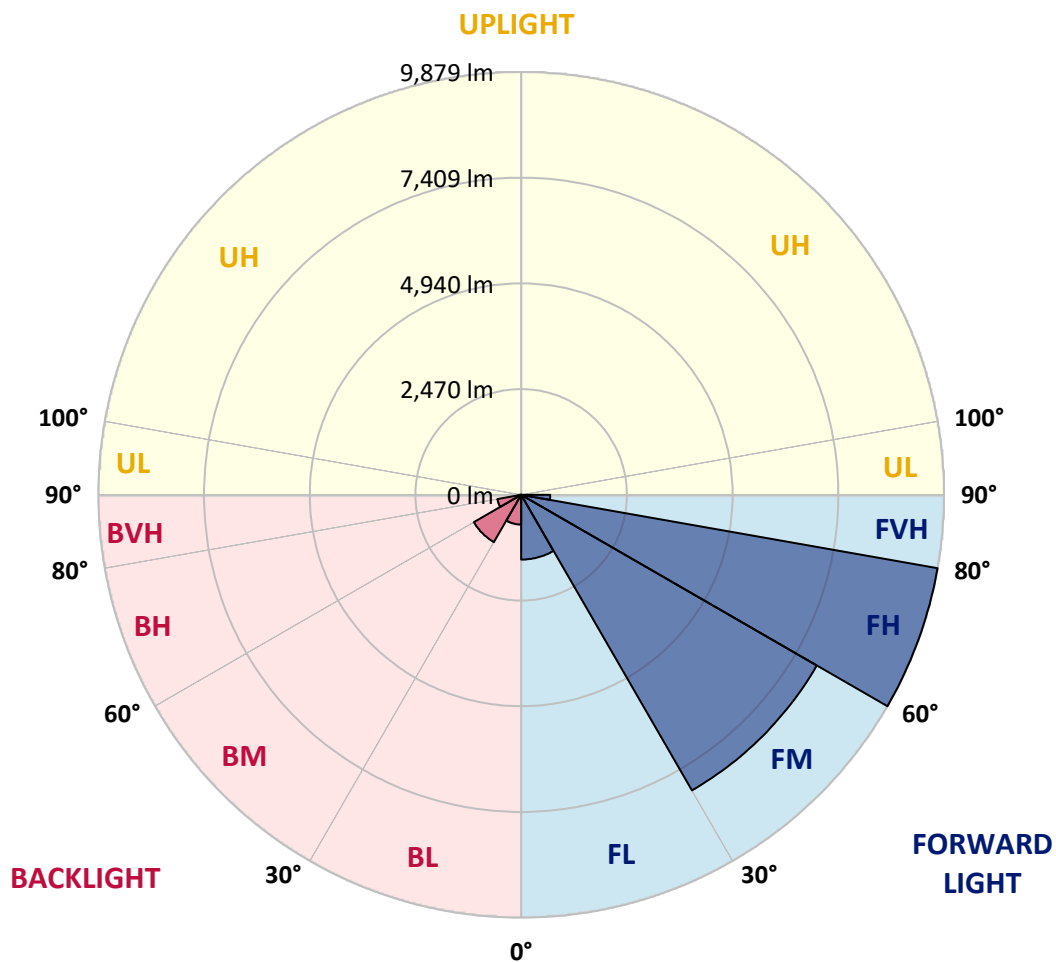
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1512.4	6.7			
FM	(30°-60°)	7975.0	35.2			
FH	(60°-80°)	9879.1	43.6			G4/12000
FVH	(80°-90°)	679.3	3.0			G4/750
BL	(0°-30°)	695.0	3.1	B2/1000		
BM	(30°-60°)	1275.9	5.6	B2/2500		
BH	(60°-80°)	564.1	2.5	B2/1000		G2/1000
BVH	(80°-90°)	61.2	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: P195222

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8
2.5°	3532.3	3533.8	3529.3	3515.6	3503.4	3497.4	3486.7	3468.5	3444.2	3427.4	3413.8
5°	3498.9	3503.4	3500.4	3477.6	3456.3	3444.2	3427.4	3401.6	3369.7	3356.0	3324.1
7.5°	3473.0	3476.1	3467.0	3441.1	3400.1	3384.9	3354.5	3321.0	3292.2	3272.4	3234.4
10°	3454.8	3457.8	3450.2	3424.4	3378.8	3360.6	3324.1	3287.6	3249.6	3225.3	3182.7
12.5°	3429.0	3435.0	3435.0	3422.9	3392.5	3380.3	3343.8	3304.3	3269.4	3243.5	3190.3
15°	3424.4	3432.0	3445.7	3444.2	3435.0	3425.9	3397.0	3357.5	3327.1	3296.7	3231.4
17.5°	3462.4	3479.1	3506.5	3515.6	3509.5	3489.8	3456.3	3419.8	3386.4	3357.5	3277.0
20°	3558.2	3567.3	3608.3	3626.6	3596.2	3567.3	3523.2	3476.1	3445.7	3422.9	3319.5
22.5°	3702.5	3714.7	3748.1	3749.7	3685.8	3650.9	3594.6	3536.9	3508.0	3498.9	3377.3
25°	3933.6	3930.5	3939.7	3901.7	3786.1	3745.1	3676.7	3609.8	3590.1	3608.3	3462.4
27.5°	4210.2	4202.6	4173.7	4074.9	3900.1	3846.9	3764.9	3705.6	3705.6	3748.1	3577.9
30°	4529.4	4521.8	4427.6	4261.9	4035.4	3974.6	3888.0	3825.7	3857.6	3939.7	3734.5
32.5°	4866.8	4839.5	4707.2	4485.3	4228.4	4161.6	4078.0	4014.1	4074.9	4214.8	3959.4
35°	5184.5	5169.3	5006.6	4743.7	4477.7	4421.5	4363.7	4284.7	4382.0	4599.3	4277.1
37.5°	5512.8	5500.6	5301.5	5021.8	4781.7	4743.7	4695.1	4640.3	4796.9	5082.6	4707.2
40°	5879.1	5854.8	5604.0	5324.3	5135.8	5117.6	5091.8	5076.6	5328.9	5754.5	5251.4
42.5°	6294.0	6246.9	5923.2	5657.2	5521.9	5537.1	5523.4	5584.2	5970.3	6529.6	5898.8
45°	6768.2	6674.0	6240.8	6011.3	5949.0	6009.8	6038.7	6193.7	6728.7	7424.9	6622.3
47.5°	7212.1	7090.5	6588.9	6395.9	6430.8	6535.7	6617.8	6891.4	7560.1	8309.5	7361.0
50°	7620.9	7484.1	6961.3	6794.1	6964.3	7113.3	7283.5	7669.6	8444.7	9219.9	8038.9
52.5°	7923.4	7824.6	7333.7	7228.8	7576.8	7774.4	8046.5	8534.4	9338.4	10087.8	8643.8
55°	8157.5	8104.3	7696.9	7727.3	8269.9	8552.6	8882.5	9443.3	10283.8	10866.0	9130.2
57.5°	8428.0	8388.5	8111.9	8329.2	9130.2	9485.9	9875.0	10498.2	11183.6	11551.5	9511.7
60°	8713.8	8713.8	8573.9	9054.2	10206.3	10613.7	11001.3	11486.1	12080.4	12168.6	9666.8
62.5°	8929.6	8985.8	9036.0	9826.3	11227.7	11733.9	12159.4	12624.5	13009.1	12472.5	9302.0
65°	9242.7	9362.8	9645.5	10718.5	12492.3	13155.0	13729.5	14120.1	13761.4	12230.9	8111.9
67.5°	9780.7	9958.6	10560.5	12047.0	14428.7	15421.2	15979.0	15304.2	13614.0	10709.4	6213.5
70°	10265.6	10516.4	11545.4	13732.6	16945.7	17976.2	17719.3	15029.1	11857.0	7850.4	3822.6
72°	9943.4	10217.0	11591.0	14466.7	18290.8	18777.2	17423.0	13319.1	9162.1	4790.8	1884.7
72.5°	9732.1	10016.3	11443.6	14448.5	18327.3	18675.4	17011.1	12639.7	8317.1	4192.0	1524.5
75°	8130.1	8373.3	9840.0	12805.4	16150.8	15512.4	13275.1	8180.3	3822.6	1354.3	784.3
77.5°	5309.1	5494.5	6785.0	8871.8	11312.8	10698.8	8079.9	3830.2	1433.3	822.3	589.7
80°	2667.5	2799.7	3631.1	4664.7	6105.6	5617.7	3729.9	1852.8	959.1	594.3	463.6
82.5°	1855.8	1977.4	2500.3	2381.7	2552.0	2469.9	1754.0	1545.8	717.4	375.4	243.2
85°	1556.4	1682.6	2068.6	1697.8	1389.2	1266.1	1257.0	1460.7	474.2	185.4	205.2
87.5°	1357.3	1548.8	1706.9	1240.3	953.0	840.5	925.6	1339.1	150.5	101.8	62.3
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: P195222

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7060-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8	3457.8
2.5°	3391.0	3386.4	3363.6	3328.6	3302.8	3286.1	3254.2	3252.6	3255.7	3228.3	3239.0
5°	3295.2	3277.0	3217.7	3137.1	3071.8	3009.5	2941.1	2918.3	2898.5	2857.5	2862.0
7.5°	3194.9	3163.0	3059.6	2927.4	2801.2	2685.7	2571.7	2515.5	2472.9	2419.7	2419.7
10°	3135.6	3085.5	2927.4	2734.4	2533.7	2365.0	2194.8	2092.9	2018.5	1950.1	1945.5
12.5°	3132.6	3056.6	2836.2	2570.2	2295.1	2058.0	1825.4	1668.9	1557.9	1477.4	1469.8
15°	3156.9	3050.5	2760.2	2416.7	2070.1	1761.6	1474.3	1275.2	1133.9	1044.2	1035.1
17.5°	3178.2	3042.9	2678.1	2255.6	1851.3	1475.9	1156.7	950.0	816.2	743.2	735.6
20°	3197.9	3026.2	2573.2	2085.3	1609.6	1208.3	904.4	737.2	649.0	608.0	603.4
22.5°	3226.8	3011.0	2463.8	1893.8	1372.5	983.4	746.3	626.2	579.1	559.3	556.3
25°	3273.9	3012.5	2357.4	1697.8	1155.1	819.2	646.0	571.5	545.7	532.0	532.0
27.5°	3342.3	3030.7	2252.5	1498.7	971.2	706.8	586.7	542.6	525.9	515.3	512.2
30°	3442.6	3064.2	2141.6	1310.2	825.3	629.3	551.7	524.4	510.7	501.6	500.1
32.5°	3588.6	3123.5	2024.5	1138.4	714.4	574.5	525.9	509.2	498.5	490.9	489.4
35°	3805.9	3228.3	1910.6	992.5	635.3	535.0	504.6	490.9	484.9	481.8	480.3
37.5°	4125.1	3397.0	1802.6	878.5	583.7	509.2	483.3	475.7	472.7	472.7	472.7
40°	4526.4	3619.0	1705.4	798.0	554.8	489.4	468.1	462.1	462.1	463.6	463.6
42.5°	5014.2	3897.1	1621.8	743.2	538.1	475.7	457.5	454.5	452.9	452.9	454.5
45°	5581.2	4225.4	1570.1	700.7	525.9	468.1	449.9	448.4	442.3	439.3	439.3
47.5°	6151.2	4576.5	1567.0	676.4	510.7	459.0	442.3	442.3	430.1	424.1	425.6
50°	6683.1	4891.1	1600.5	670.3	501.6	445.3	434.7	436.2	419.5	411.9	410.4
52.5°	7111.8	5131.3	1641.5	677.9	501.6	433.2	421.0	428.6	410.4	401.3	399.7
55°	7443.1	5298.5	1656.7	694.6	507.7	422.5	408.9	421.0	407.3	395.2	395.2
57.5°	7680.2	5351.7	1591.4	702.2	516.8	421.0	396.7	419.5	411.9	396.7	396.7
60°	7593.6	5043.1	1348.2	673.3	515.3	418.0	387.6	422.5	427.1	410.4	410.4
62.5°	6917.2	4219.3	1082.2	608.0	489.4	407.3	376.9	419.5	437.7	431.7	428.6
65°	5631.3	3094.6	839.0	530.5	445.3	384.5	354.1	392.1	413.4	419.5	421.0
67.5°	3968.5	1959.2	652.0	451.4	390.6	351.1	328.3	346.5	354.1	357.2	363.3
70°	2170.5	1060.9	518.3	380.0	334.4	317.7	300.9	302.5	299.4	296.4	299.4
72°	1089.8	693.1	437.7	329.8	296.4	285.7	278.1	273.6	273.6	269.0	270.5
72.5°	937.8	644.5	422.5	317.7	287.3	278.1	272.1	267.5	266.0	262.9	264.5
75°	624.7	510.7	352.6	266.0	244.7	238.6	241.7	237.1	238.6	235.6	237.1
77.5°	504.6	439.3	299.4	224.9	209.8	200.6	206.7	208.2	211.3	208.2	206.7
80°	422.5	373.9	250.8	185.4	174.8	167.2	170.2	180.9	182.4	173.3	171.8
82.5°	273.6	300.9	197.6	144.4	133.8	130.7	138.3	149.0	152.0	139.8	136.8
85°	229.5	241.7	142.9	98.8	88.2	85.1	100.3	111.0	118.6	106.4	103.4
87.5°	63.8	118.6	69.9	47.1	39.5	39.5	48.6	57.8	68.4	69.9	69.9
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)