

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: P196760

Luminaire Tested: **NAV-AF-02-D-UNV-T2R-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196760  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)  
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-T2R-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9974.3 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 85  
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

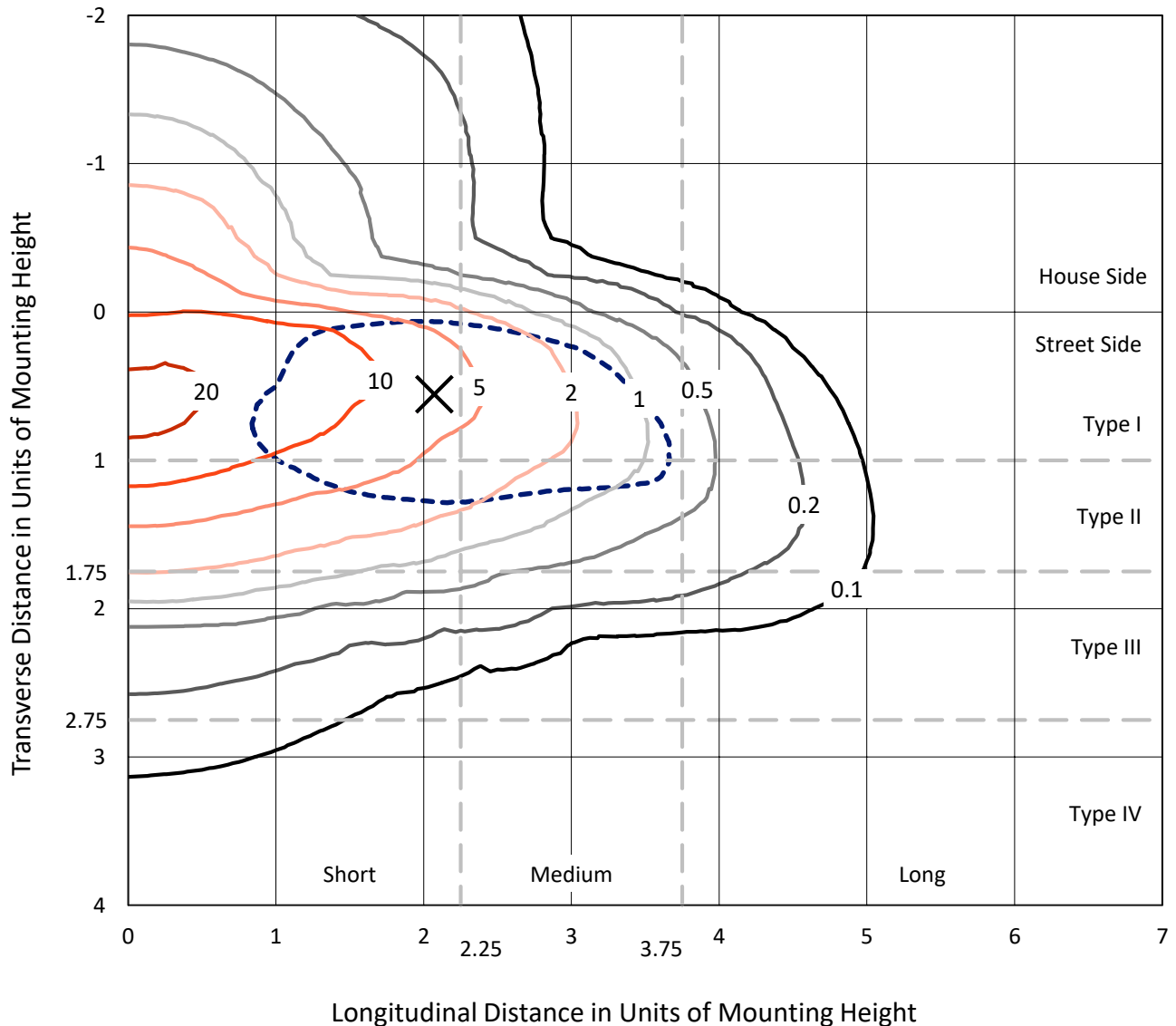


REPORT NUMBER: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

### Iso-Footcandle Lines of Horizontal Illumination

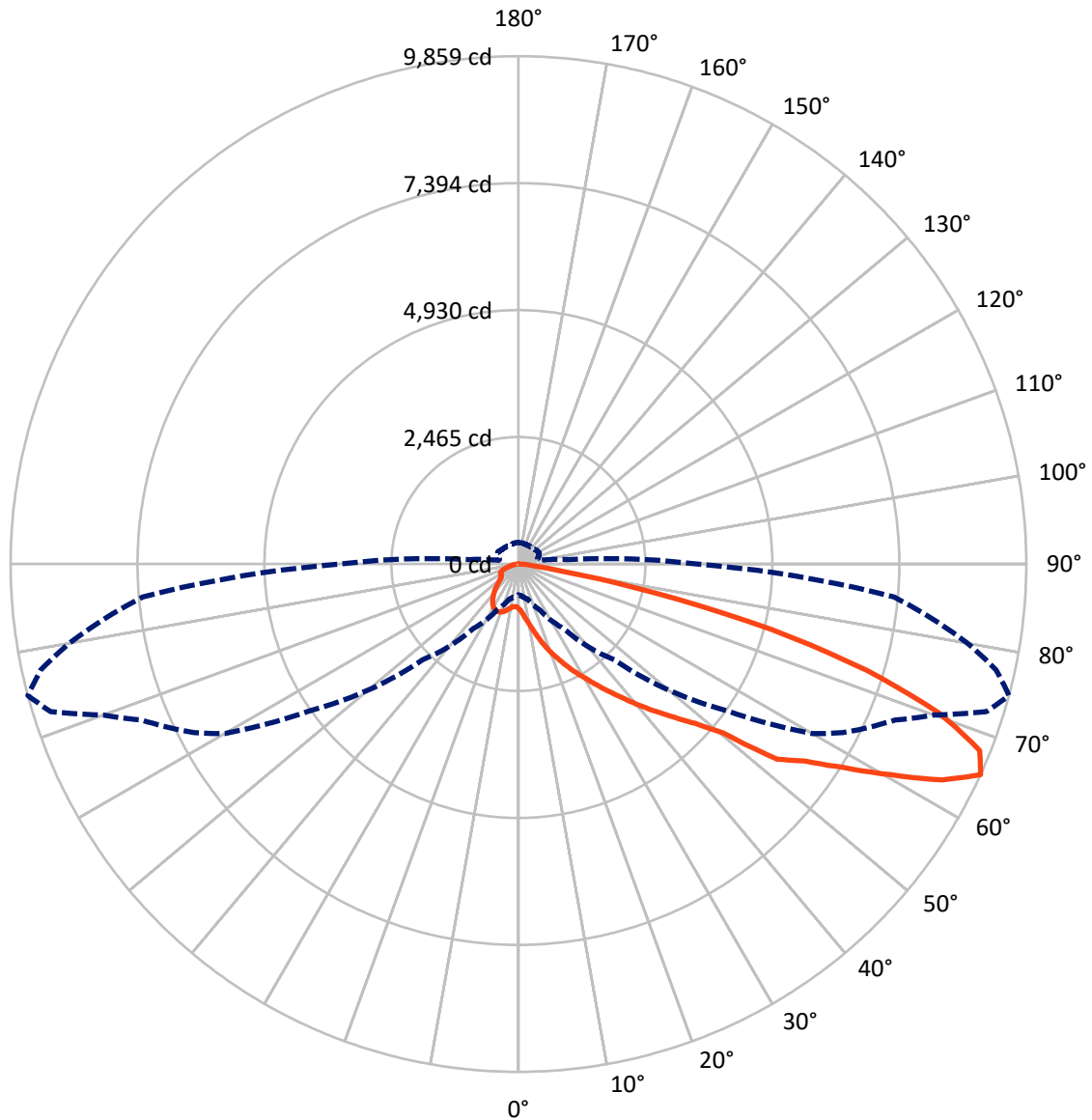
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.8 fc  
 Type II - Short - Semi-Cutoff

REPORT NUMBER: P196760  
CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1498.8	0.0	1498.8
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	8475.5	0.0	8475.5
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	9974.3	0.0	9974.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.0	1.0
10°-20°	389.7	3.9
20°-30°	786.4	7.9
30°-40°	1335.6	13.4
40°-50°	1862.8	18.7
50°-60°	2283.1	22.9
60°-70°	2148.1	21.5
70°-80°	941.9	9.4
80°-90°	124.6	1.2
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°	9974.3	100.0
0°-180°	9974.3	100.0



REPORT NUMBER: P196760

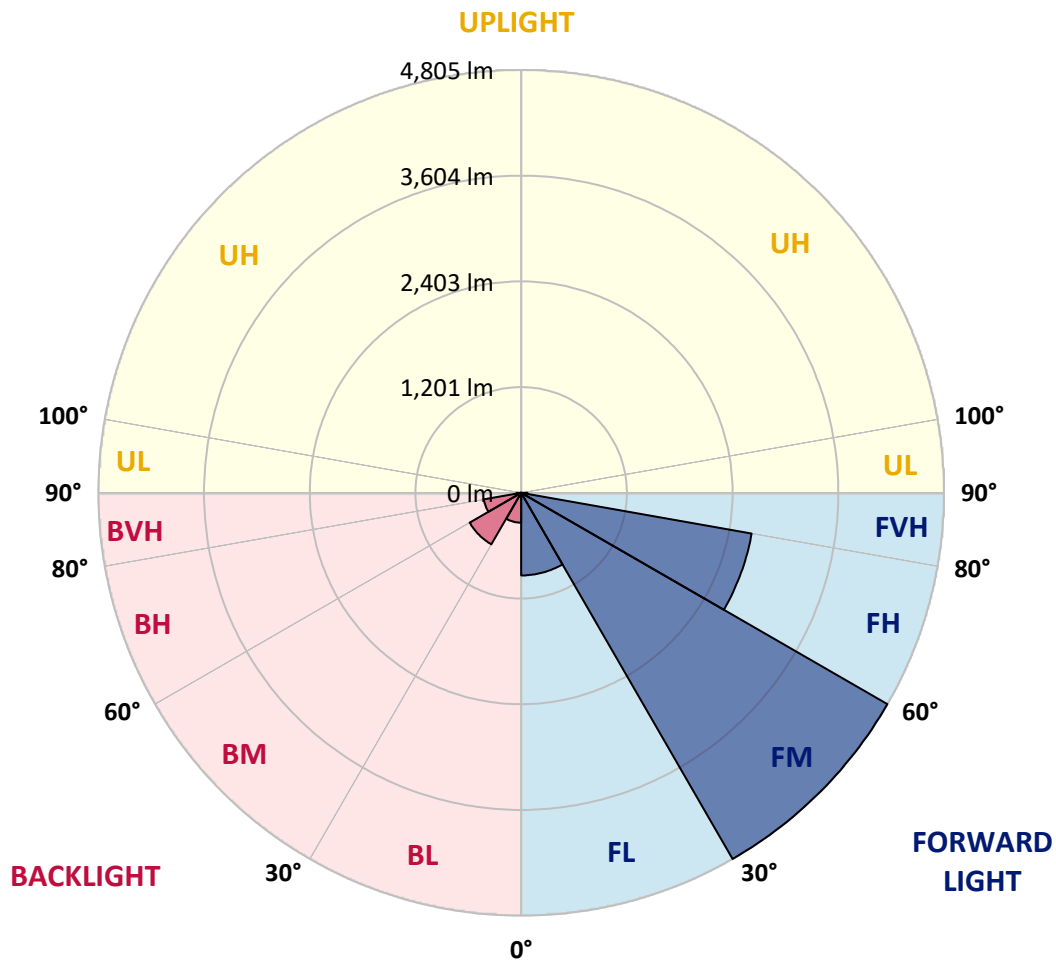
CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	938.9	9.4			
FM (30°-60°)	4805.2	48.2			
FH (60°-80°)	2659.2	26.7			G2/5000
FVH (80°-90°)	72.2	0.7			G1/100
BL (0°-30°)	339.3	3.4	B1/500		
BM (30°-60°)	676.3	6.8	B1/1000		
BH (60°-80°)	430.8	4.3	B1/500		G1/500
BVH (80°-90°)	52.4	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





REPORT NUMBER: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2
2.5°	1088.2	1075.5	1076.8	1059.0	1032.9	1004.4	980.9	968.2	957.4	954.3	936.6
5°	1423.2	1407.4	1401.7	1361.1	1300.0	1227.7	1156.1	1128.2	1105.3	1091.4	1057.1
7.5°	1697.4	1689.0	1681.5	1644.1	1583.7	1491.1	1375.7	1334.4	1296.4	1254.4	1213.3
10°	1883.8	1880.7	1877.5	1851.5	1801.3	1720.9	1596.4	1551.4	1503.9	1450.5	1396.6
12.5°	2024.8	2024.8	2027.3	2005.7	1975.3	1913.0	1800.1	1758.2	1710.0	1654.1	1592.7
15°	2119.3	2121.9	2135.2	2141.5	2125.6	2085.6	1986.7	1949.8	1904.2	1849.0	1788.0
17.5°	2182.1	2187.2	2206.8	2227.8	2248.1	2234.2	2160.5	2126.3	2085.0	2034.3	1977.1
20°	2328.0	2321.6	2322.3	2316.0	2345.8	2356.6	2316.0	2287.5	2254.4	2208.1	2156.1
22.5°	2634.5	2622.4	2591.4	2512.1	2476.0	2472.1	2448.0	2432.7	2407.3	2378.1	2326.1
25°	3034.2	3020.3	2958.7	2828.0	2720.1	2620.6	2576.2	2566.6	2550.1	2530.5	2493.0
27.5°	3447.3	3432.1	3352.7	3187.8	3046.9	2845.7	2707.5	2694.8	2679.6	2671.3	2653.6
30°	3810.9	3794.3	3716.4	3548.8	3378.9	3138.9	2884.6	2840.0	2814.1	2816.6	2806.5
32.5°	4130.1	4115.5	4028.0	3857.2	3684.7	3451.7	3114.2	3045.0	2986.7	2965.1	2972.7
35°	4397.8	4384.5	4288.7	4116.8	3942.8	3749.3	3409.9	3305.8	3210.7	3151.0	3144.1
37.5°	4555.2	4547.6	4480.2	4334.5	4161.8	4019.6	3741.1	3625.7	3485.4	3398.5	3360.4
40°	4546.3	4554.6	4543.1	4477.1	4343.3	4239.8	4086.3	3972.1	3835.0	3705.5	3628.2
42.5°	4417.0	4428.3	4479.6	4513.9	4477.8	4414.9	4387.7	4302.6	4179.6	4042.5	3935.3
45°	4239.2	4249.3	4316.0	4439.8	4543.1	4560.9	4651.6	4609.1	4505.1	4388.3	4270.3
47.5°	3966.9	3986.7	4064.1	4260.8	4507.0	4678.3	4873.1	4892.7	4832.4	4736.1	4625.6
50°	3573.0	3599.0	3707.5	3987.3	4370.0	4798.8	5202.4	5277.2	5253.1	5155.4	5043.7
52.5°	3169.4	3195.4	3340.0	3637.7	4149.1	4848.4	5526.7	5718.3	5856.7	5957.5	5977.1
55°	2749.4	2778.6	2937.2	3279.9	3854.6	4785.5	5758.2	5975.8	6116.2	6221.4	6264.0
57.5°	2275.4	2308.3	2461.9	2808.4	3438.4	4532.9	6015.9	6324.3	6532.9	6695.4	6786.7
60°	1731.5	1772.8	1932.1	2281.2	2891.4	4049.4	6130.6	6586.9	6918.8	7162.4	7307.0
62.5°	1097.7	1139.6	1305.2	1667.6	2269.0	3388.9	5805.8	6471.4	7037.4	7397.8	7663.0
65°	599.0	617.5	709.4	982.2	1529.8	2629.5	4982.2	5767.1	6582.5	7093.2	7500.6
67.5°	449.3	451.8	461.3	527.9	814.7	1775.4	3895.3	4614.2	5519.7	6177.0	6663.7
70°	393.5	393.5	394.7	395.3	442.3	961.9	2638.9	3300.7	4130.6	4795.7	5400.3
72.5°	352.8	349.0	347.7	340.2	346.5	493.0	1436.5	2031.1	2730.9	3477.1	4041.3
75°	304.7	304.0	304.0	296.3	300.1	347.1	623.1	974.6	1517.2	2212.0	2767.1
77.5°	263.4	258.8	259.5	255.1	267.1	265.8	295.6	401.6	660.6	1161.8	1622.5
80°	217.0	213.8	215.8	213.2	232.2	196.6	199.3	245.5	328.0	509.4	718.3
82.5°	160.5	161.8	173.8	172.6	195.5	132.6	146.0	183.3	220.8	253.8	276.0
85°	93.9	95.8	125.0	131.3	143.3	69.8	89.5	109.2	123.1	136.5	142.1
87.5°	10.2	13.3	69.8	71.7	64.1	21.0	36.2	45.7	48.8	52.0	45.7
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: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

**CANDELA DISTRIBUTION (continued):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2
2.5°	930.9	922.5	913.7	908.6	899.7	892.1	878.1	866.8	854.1	845.1	841.4
5°	1039.9	1020.3	999.4	984.1	965.1	948.6	916.9	878.8	866.8	841.4	835.1
7.5°	1182.0	1146.5	1111.0	1081.8	1048.9	1021.6	968.2	899.7	890.9	850.2	841.4
10°	1349.1	1296.9	1244.3	1199.2	1151.0	1109.1	1030.5	934.0	924.5	872.4	863.5
12.5°	1535.5	1472.0	1404.2	1336.9	1279.9	1220.8	1113.6	987.2	972.1	910.5	898.4
15°	1727.8	1659.2	1580.6	1499.4	1428.9	1350.9	1215.7	1057.1	1029.2	956.9	940.4
17.5°	1917.5	1843.3	1760.8	1670.0	1587.5	1494.2	1326.2	1135.1	1086.9	1002.6	981.5
20°	2100.8	2025.3	1938.5	1849.6	1746.8	1640.2	1439.1	1211.9	1138.4	1040.5	1013.3
22.5°	2267.7	2203.0	2116.2	2013.9	1909.9	1790.0	1553.8	1288.7	1183.4	1069.7	1034.9
25°	2443.5	2384.5	2298.3	2199.8	2078.6	1945.5	1672.5	1361.7	1219.6	1085.7	1042.6
27.5°	2621.1	2570.5	2489.3	2385.7	2255.6	2107.8	1793.2	1428.9	1248.8	1090.7	1038.7
30°	2810.9	2771.6	2696.7	2581.2	2449.8	2286.1	1924.5	1494.8	1267.1	1083.8	1021.6
32.5°	2990.4	2989.3	2922.5	2802.6	2661.1	2481.0	2062.9	1561.6	1276.7	1064.0	991.7
35°	3177.0	3203.1	3152.9	3038.7	2889.6	2689.8	2215.8	1632.7	1277.2	1029.2	953.1
37.5°	3388.9	3435.2	3413.0	3304.5	3147.9	2927.6	2395.3	1712.5	1273.5	980.9	896.6
40°	3630.0	3693.5	3692.9	3601.5	3434.0	3194.2	2604.0	1802.0	1264.5	920.7	830.0
42.5°	3906.1	3981.6	4002.5	3912.5	3743.0	3485.4	2843.3	1900.3	1250.6	861.1	759.5
45°	4222.1	4288.7	4328.0	4244.2	4074.3	3802.7	3118.0	2012.0	1233.5	784.3	678.9
47.5°	4560.3	4637.7	4696.7	4625.0	4443.5	4164.3	3443.6	2156.1	1227.2	696.7	591.9
50°	4979.7	5059.6	5187.2	5154.9	5055.2	4830.6	4131.9	2496.1	1229.7	613.6	519.0
52.5°	6020.3	6203.6	6364.8	6293.2	6056.5	5671.3	4691.6	2685.3	1176.4	545.6	468.2
55°	6334.5	6542.5	6780.4	6750.6	6523.5	6135.1	5133.9	2843.3	1125.1	496.1	435.3
57.5°	6883.9	7129.3	7461.9	7455.6	7177.0	6739.8	5703.0	3032.4	1102.8	467.6	418.8
60°	7465.6	7778.5	8237.9	8309.6	8006.9	7552.0	6375.6	3264.5	1105.9	451.8	409.2
62.5°	7890.8	8349.6	9017.7	9232.2	8875.5	8374.2	7073.6	3496.9	1086.9	433.3	397.8
65°	7916.8	8577.4	9525.3	9859.1	9498.0	8854.1	7319.9	3451.2	972.7	408.6	379.4
67.5°	7282.3	8142.8	9294.3	9660.4	9291.2	8558.4	6888.2	3017.0	790.6	365.5	347.7
70°	6065.3	7064.0	8259.5	8667.4	8362.2	7620.5	5994.9	2409.9	590.8	308.3	300.1
72.5°	4687.1	5618.6	6704.2	7081.8	6848.4	6196.1	4728.4	1756.4	422.0	249.9	243.6
75°	3350.9	4143.9	4932.1	5076.0	4845.7	4246.8	3067.9	1097.1	295.6	205.0	196.0
77.5°	2074.9	2590.7	2873.7	2688.5	2394.6	1990.4	1248.8	541.9	196.6	166.8	158.0
80°	920.7	1080.6	1008.9	899.1	710.0	583.8	381.4	240.5	126.8	128.8	123.7
82.5°	309.6	327.4	318.5	316.7	285.5	249.9	161.8	104.1	71.0	82.5	80.7
85°	151.0	158.0	158.7	164.3	142.8	111.0	43.8	41.2	30.5	44.5	46.3
87.5°	45.7	46.3	41.8	45.7	36.8	25.3	8.2	11.5	5.7	10.8	10.8
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: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

**CANDELA DISTRIBUTION (continued):**

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2	864.2
2.5°	834.4	831.9	827.4	822.2	821.1	814.7	812.8	809.6	807.8	804.5	802.1
5°	826.8	822.2	817.3	811.6	811.6	802.6	798.9	795.1	795.1	789.3	786.7
7.5°	834.4	828.7	822.9	818.0	819.8	809.6	805.8	802.1	801.4	795.7	793.1
10°	855.9	850.2	843.3	838.2	836.3	828.0	823.6	818.0	814.1	810.2	806.5
12.5°	889.0	881.4	872.4	861.6	857.2	850.2	843.3	835.7	826.8	822.9	817.3
15°	928.2	915.6	903.6	890.3	878.1	871.3	861.6	849.6	837.6	832.4	824.9
17.5°	960.6	947.3	930.3	914.4	892.7	887.0	873.7	859.1	839.4	837.6	826.1
20°	987.9	967.6	946.7	927.6	894.7	891.4	874.9	857.9	830.0	830.0	815.9
22.5°	1003.2	975.2	950.5	925.1	883.9	881.4	862.3	842.0	807.8	808.9	791.9
25°	1005.7	972.1	940.9	910.5	862.9	858.4	834.4	812.3	774.7	772.3	754.4
27.5°	995.6	956.2	920.1	883.3	831.9	822.2	795.7	769.0	732.2	725.9	706.8
30°	972.1	925.8	885.1	842.6	788.8	773.4	745.5	718.3	680.8	672.6	654.8
32.5°	934.6	881.9	836.9	794.5	734.8	715.7	687.8	660.6	624.4	618.0	601.5
35°	885.1	826.1	778.6	733.4	673.8	654.1	627.5	603.4	570.5	567.9	556.4
37.5°	822.9	761.4	710.6	667.5	611.1	600.9	573.6	555.8	528.6	531.1	525.4
40°	752.6	689.8	641.5	603.4	554.6	545.6	529.2	515.8	492.4	499.4	500.0
42.5°	681.4	618.6	574.9	540.7	498.8	493.0	481.7	473.9	456.2	470.2	476.0
45°	600.9	542.5	505.1	479.1	448.0	448.0	442.3	441.6	429.6	449.3	454.9
47.5°	522.8	477.1	451.1	435.3	413.6	423.8	422.0	426.9	418.1	438.4	443.5
50°	463.8	432.1	416.3	408.6	393.5	409.2	413.1	420.1	412.5	430.2	434.0
52.5°	426.4	405.5	396.6	394.7	383.8	403.6	409.9	416.3	407.3	423.8	423.3
55°	405.5	391.4	388.3	392.1	383.8	402.9	409.2	413.6	406.1	417.5	416.9
57.5°	397.8	390.3	392.1	397.8	392.1	408.0	411.2	416.3	408.6	413.6	416.3
60°	397.1	397.1	404.8	412.5	408.6	420.1	422.0	421.3	414.3	414.9	416.3
62.5°	393.5	402.9	415.6	427.6	426.4	440.4	441.6	433.3	427.6	421.3	419.4
65°	381.4	397.1	415.6	432.1	434.7	456.2	458.8	450.4	446.7	436.0	427.6
67.5°	354.6	375.0	396.6	416.9	421.3	450.4	456.2	459.4	461.3	454.3	443.5
70°	309.6	330.6	352.8	376.3	382.6	414.9	426.9	441.6	453.1	463.2	459.4
72.5°	252.0	271.0	290.0	311.5	321.1	354.6	370.6	395.9	413.6	439.8	450.4
75°	199.8	211.3	222.7	236.0	243.6	276.7	296.3	326.8	350.9	387.1	411.2
77.5°	157.4	163.2	168.8	174.5	177.6	196.0	212.0	242.3	270.3	316.0	351.5
80°	121.2	124.3	125.0	126.8	125.6	134.5	140.2	158.7	182.8	227.8	269.7
82.5°	78.0	80.7	81.8	85.0	78.6	90.1	93.9	95.8	108.5	141.5	171.3
85°	43.8	44.5	45.1	46.3	37.4	48.8	49.5	46.3	45.1	58.4	66.0
87.5°	10.8	10.2	10.8	10.8	4.5	10.2	10.2	7.0	5.0	9.5	7.6
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: P196760

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7030-800

**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
0°	864.2	864.2	864.2	864.2	864.2	864.2
2.5°	796.3	795.1	795.7	792.4	791.2	791.9
5°	783.6	781.1	781.1	779.2	776.7	776.7
7.5°	789.3	784.3	782.4	778.6	774.7	775.4
10°	798.2	789.3	783.0	777.3	772.8	772.8
12.5°	803.9	788.1	778.6	771.0	765.9	765.9
15°	805.2	781.1	767.1	759.0	753.8	753.8
17.5°	797.6	767.1	749.4	738.6	732.9	734.1
20°	778.6	741.1	720.1	708.8	703.1	703.6
22.5°	748.8	705.6	681.4	668.1	662.4	662.4
25°	708.1	661.1	635.2	624.4	619.3	619.3
27.5°	661.8	613.6	590.8	582.5	579.3	579.3
30°	609.7	569.8	553.3	547.6	542.5	542.5
32.5°	566.0	537.4	531.8	524.1	510.8	510.1
35°	531.1	527.9	523.5	500.6	481.7	479.1
37.5°	512.1	531.1	503.1	463.8	448.6	448.0
40°	501.9	519.6	471.5	452.5	450.4	450.4
42.5°	477.8	490.5	469.5	458.8	458.8	459.4
45°	452.5	463.2	473.9	464.5	467.6	468.2
47.5°	434.7	456.2	473.9	465.8	472.1	476.0
50°	418.1	449.8	464.5	464.5	471.5	472.1
52.5°	414.3	441.0	455.6	462.6	463.2	460.0
55°	414.9	434.0	448.6	457.5	453.7	453.7
57.5°	414.3	430.2	442.9	446.1	448.0	448.0
60°	414.9	425.1	435.3	434.0	440.4	440.4
62.5°	416.9	418.1	423.3	422.0	431.5	431.5
65°	421.3	409.2	406.1	407.3	418.8	418.1
67.5°	429.6	397.1	387.1	387.7	404.2	401.6
70°	441.6	380.7	365.5	361.6	389.6	385.1
72.5°	445.4	361.6	337.6	333.8	350.2	337.6
75°	427.6	346.5	307.8	295.0	288.1	284.3
77.5°	381.4	336.9	276.7	249.9	239.2	236.6
80°	316.0	317.3	236.0	204.4	237.3	236.6
82.5°	238.6	274.1	189.1	177.0	172.0	143.3
85°	115.5	206.2	145.4	121.9	72.9	69.2
87.5°	10.2	86.4	83.8	54.5	24.7	23.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)