

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: P196691

Luminaire Tested: **NAV-AF-05-D-UNV-SLL-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196691  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)  
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-SLL-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20752.7 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G4

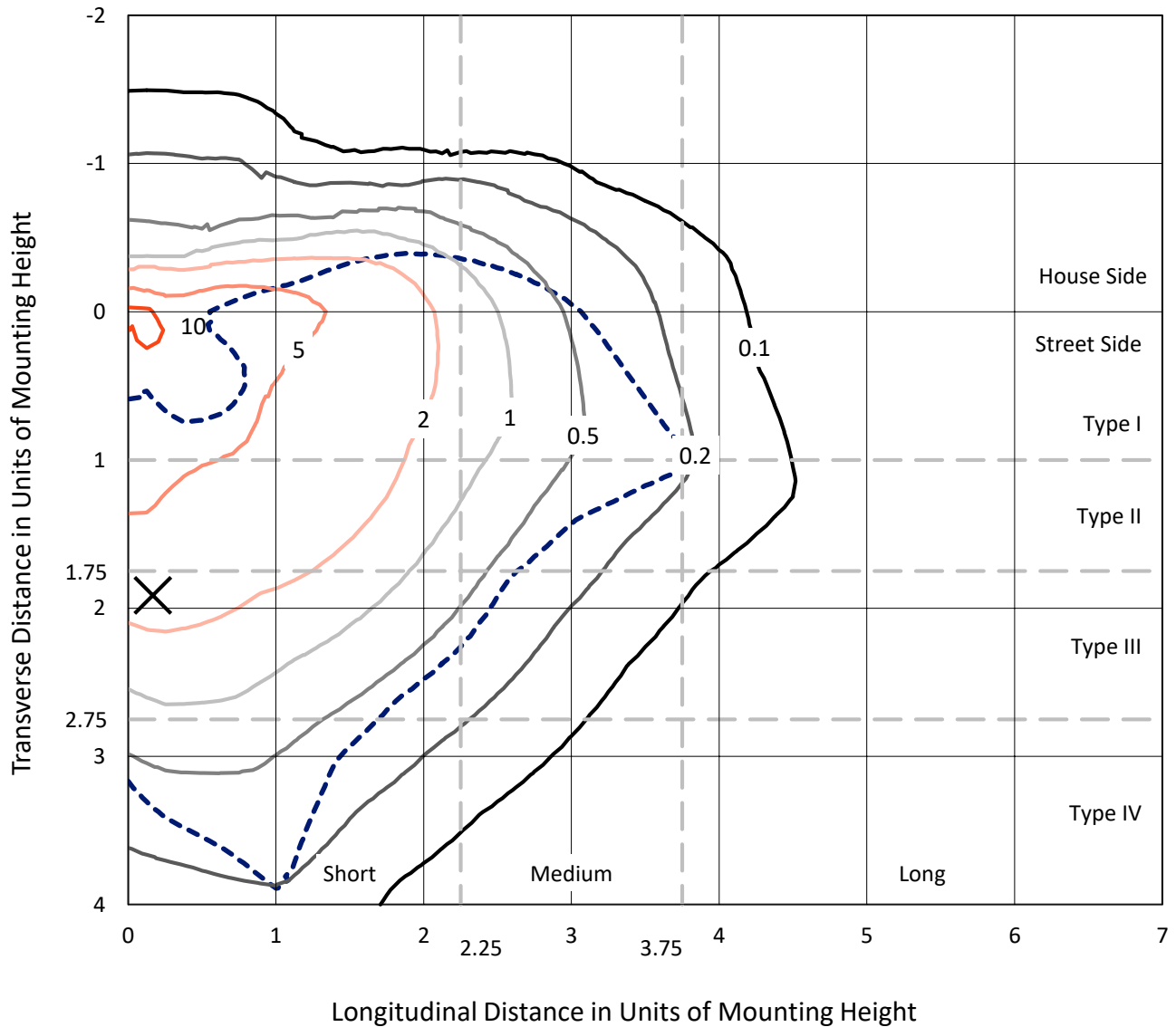
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196691  
 CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

### Iso-Footcandle Lines of Horizontal Illumination

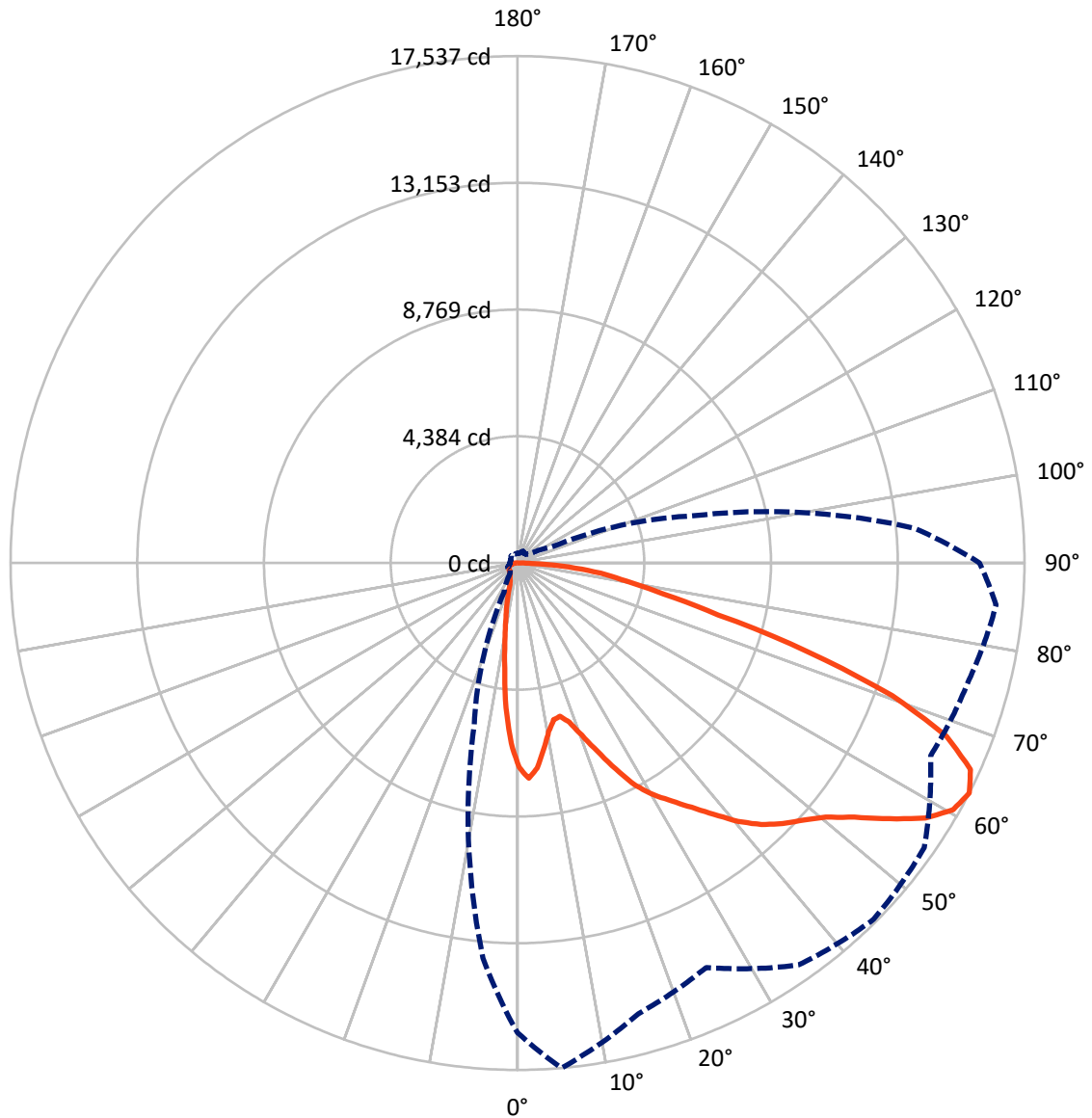
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196691  
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P196691

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3676.4	0.0	3676.4
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	17076.3	0.0	17076.3
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	20752.7	0.0	20752.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	514.5	2.5
10°-20°	939.8	4.5
20°-30°	1351.7	6.5
30°-40°	2070.2	10.0
40°-50°	3026.7	14.6
50°-60°	4403.9	21.2
60°-70°	5102.5	24.6
70°-80°	2659.8	12.8
80°-90°	683.7	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°	20752.7	100.0
0°-180°	20752.7	100.0



REPORT NUMBER: P196691

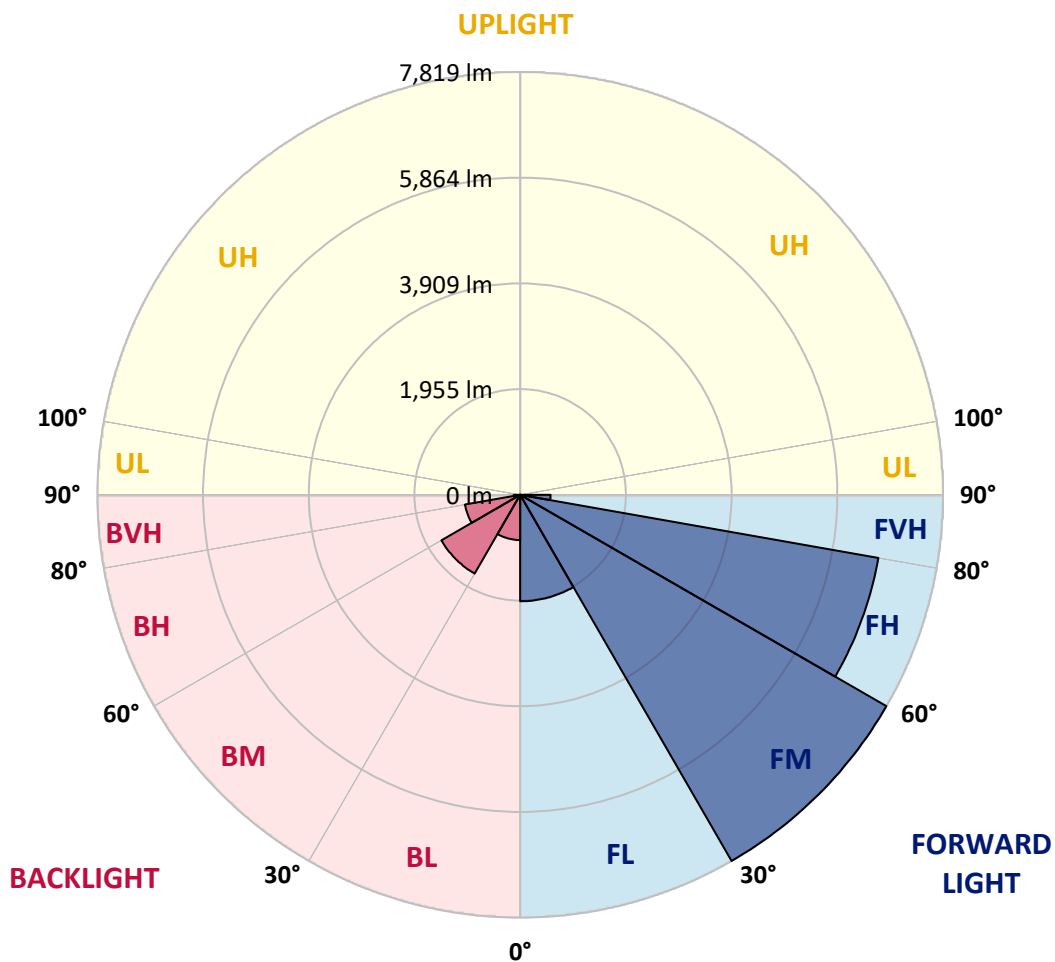
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1969.5	9.5			
FM	(30°-60°)	7818.7	37.7			
FH	(60°-80°)	6725.7	32.4			G3/7500
FVH	(80°-90°)	562.5	2.7			G4/750
BL	(0°-30°)	836.4	4.0	B2/1000		
BM	(30°-60°)	1682.1	8.1	B2/2500		
BH	(60°-80°)	1036.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	121.2	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type IV Short





REPORT NUMBER: P196691

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	7303.8	7458.7	7636.2	7868.0	8025.9	8089.1	8141.8	8053.1	7967.3	7806.2	7749.1
5°	6822.2	7120.1	7609.2	8074.2	8483.4	8718.2	8790.4	8626.3	8334.4	7913.1	7690.4
7.5°	6107.5	6500.3	7187.8	7872.4	8459.3	8850.5	8879.2	8554.1	7979.3	7288.6	6927.6
10°	5483.0	5927.0	6722.9	7488.8	8110.2	8510.4	8432.2	7976.4	7282.6	6497.2	6089.4
12.5°	5120.4	5564.3	6375.4	7153.2	7738.7	7890.6	7731.0	7347.3	6689.8	5902.8	5492.1
15°	5043.7	5501.1	6252.0	6908.0	7270.6	7172.8	7014.8	6820.7	6352.8	5708.8	5311.5
17.5°	5275.4	5787.0	6415.9	6775.6	6760.5	6525.8	6393.5	6431.0	6351.2	5919.4	5504.2
20°	5752.4	6357.2	6832.7	6739.4	6354.3	6024.8	5948.0	6243.0	6611.6	6447.6	5991.7
22.5°	6379.8	7069.0	7401.6	6843.2	6142.1	5787.0	5771.9	6232.3	7085.6	7246.5	6691.4
25°	7088.5	7892.1	7974.9	7026.9	6119.5	5765.9	5752.4	6395.0	7655.8	8037.9	7475.3
27.5°	7955.2	8722.6	8453.3	7272.1	6218.8	5827.7	5836.6	6671.8	8250.1	8820.4	8358.6
30°	8608.3	9312.5	8748.2	7512.8	6378.3	5935.9	5958.6	6971.2	8570.7	9363.6	9064.1
32.5°	9219.2	9816.5	9031.1	7750.7	6611.6	6097.0	6175.3	7344.3	8955.9	9830.0	9730.7
35°	9894.7	10380.8	9345.6	8004.9	6945.6	6379.8	6492.7	7699.5	9338.1	10296.5	10391.3
37.5°	10660.7	11026.3	9687.2	8364.6	7427.1	6903.4	6966.7	8062.1	9604.3	10812.7	11100.0
40°	11458.1	11750.1	10060.3	8844.5	8126.8	7610.7	7640.7	8527.0	9813.5	11346.8	11787.7
42.5°	12142.7	12370.0	10435.0	9440.3	8930.3	8331.4	8357.0	9028.1	10013.6	11807.2	12338.4
45°	12690.5	12857.5	10788.6	10067.8	9788.0	9231.2	9225.2	9538.3	10281.6	12195.4	12761.2
47.5°	13200.6	13289.3	11182.8	10678.7	10677.3	10389.8	10174.7	10140.1	10638.1	12521.9	13129.8
50°	13784.3	13817.5	11703.5	11295.7	11763.6	11718.5	11321.2	10904.4	11100.0	12889.1	13516.6
52.5°	14596.9	14598.4	12348.9	11897.5	12962.8	13105.7	12643.8	11769.6	11783.2	13603.9	14184.6
55°	15552.4	15618.6	13190.0	12618.3	14217.7	14461.4	14026.6	12797.3	12764.2	14756.4	15268.0
57.5°	16291.2	16641.9	14169.7	13519.5	15389.9	15707.3	15356.8	13862.6	13969.5	15945.1	16161.7
60°	16498.8	17318.9	15146.1	14530.7	16381.5	16858.4	16501.9	15013.8	15149.2	16717.0	16419.1
62.5°	16250.5	17537.1	16140.8	15436.4	16969.8	17427.2	17171.4	15767.5	16110.6	16617.7	15984.2
65°	15514.9	17221.1	17004.3	15821.8	16631.2	16793.7	16726.1	15806.6	16632.7	15678.8	14782.0
67.5°	13796.3	16002.3	16619.2	14998.7	15049.8	14875.3	14786.5	14732.3	16046.0	14163.6	12886.0
70°	11220.4	13749.7	14782.0	12552.0	12172.9	12004.4	11712.5	12434.7	14422.3	12067.5	10605.0
72.5°	8642.9	10519.3	12124.7	9515.6	8727.2	8784.3	8453.3	9508.1	11947.2	9329.0	8096.6
75°	6137.6	7172.8	9678.0	6837.2	5793.0	5789.9	5764.4	6843.2	9426.8	6695.9	5923.9
77.5°	4423.8	5164.0	7582.0	4575.8	4110.8	4163.5	4079.2	4650.9	7348.9	4816.4	4389.2
80°	3528.5	3823.4	4900.8	3051.5	3060.6	3184.0	3165.9	3180.9	4834.5	3487.9	3281.7
82.5°	2535.4	2902.6	3746.6	2338.2	2023.8	2154.7	2180.3	2359.4	3411.1	2466.2	2163.8
85°	1300.0	1769.5	3447.2	2025.3	1265.4	1048.8	1206.8	1861.3	2962.7	1477.6	1054.8
87.5°	252.8	490.6	2526.4	1125.5	568.8	287.4	473.9	788.5	1722.9	267.8	130.9
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: P196691

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	7651.3	7458.7	7278.2	7091.6	6947.1	6771.1	6598.0	6447.6	6301.6	6205.3	6235.4
5°	7464.7	6995.3	6573.9	6182.8	5954.0	5678.6	5433.4	5227.3	5067.8	4965.4	5027.1
7.5°	6614.5	5979.6	5424.4	4908.3	4583.2	4226.7	3940.8	3739.2	3615.7	3546.5	3647.3
10°	5744.9	5031.6	4408.7	3871.5	3551.0	3248.6	2989.8	2776.2	2610.6	2532.4	2573.0
12.5°	5122.0	4329.0	3675.9	3314.8	3039.5	2768.6	2500.7	2251.0	2040.3	1944.0	1924.5
15°	4888.7	3951.3	3284.8	2881.5	2607.6	2312.7	2023.8	1756.1	1555.9	1473.1	1455.0
17.5°	4991.1	3870.1	3053.0	2576.0	2178.7	1820.7	1495.6	1242.9	1095.5	1048.8	1053.3
20°	5350.7	3900.1	2866.4	2261.5	1771.0	1346.7	1021.7	847.1	783.9	773.4	785.5
22.5°	5844.2	4023.5	2731.1	1990.7	1411.4	979.5	759.9	677.1	660.6	659.1	671.1
25°	6495.7	4264.3	2640.7	1749.9	1115.0	776.4	662.1	615.4	601.9	604.9	616.9
27.5°	7263.1	4569.8	2582.1	1542.3	916.3	692.1	618.4	577.8	564.3	567.3	576.4
30°	7964.2	4837.6	2494.7	1385.9	823.0	662.1	594.4	553.7	535.7	535.7	541.7
32.5°	8591.7	5069.3	2392.4	1268.5	737.3	594.4	538.6	507.1	493.6	498.0	501.1
35°	9148.5	5191.1	2312.7	1199.2	668.1	547.7	492.0	458.9	440.9	443.9	448.4
37.5°	9696.2	5237.8	2260.0	1161.7	618.4	519.1	467.9	440.9	421.3	418.4	416.9
40°	10216.9	5227.3	2210.5	1151.0	585.3	498.0	452.9	428.9	409.2	404.8	403.2
42.5°	10666.7	5192.6	2163.8	1122.5	562.8	483.0	440.9	419.8	400.2	394.2	391.2
45°	11077.5	5171.6	2112.5	1069.8	574.8	477.0	434.9	412.2	394.2	386.7	383.7
47.5°	11533.4	5246.8	2055.3	1012.7	571.8	478.4	434.9	409.2	391.2	383.7	380.7
50°	12076.5	5501.1	1984.7	934.3	544.6	511.6	433.3	404.8	388.2	383.7	377.7
52.5°	12844.0	5913.4	1886.9	833.5	523.7	546.2	431.8	397.2	383.7	376.2	368.6
55°	13895.7	6325.7	1760.5	726.8	490.6	522.1	434.9	388.2	373.1	365.7	356.6
57.5°	14757.8	6638.7	1600.9	638.0	460.4	493.6	430.4	377.7	361.1	353.6	346.1
60°	14702.3	6668.7	1449.0	580.8	442.4	443.9	440.9	370.2	350.6	344.6	338.6
62.5°	13791.9	6297.0	1307.7	552.2	428.9	404.8	449.9	361.1	340.1	334.0	329.5
65°	12276.7	5432.0	1232.3	552.2	416.9	383.7	392.7	349.1	329.5	323.5	320.4
67.5°	10355.3	4365.1	1161.7	564.3	400.2	368.6	356.6	337.1	319.0	313.0	310.0
70°	8299.8	3435.2	1111.9	558.2	385.2	352.2	337.1	320.4	302.4	300.9	297.9
72.5°	6510.8	2759.6	1089.5	558.2	362.6	332.5	317.5	305.5	287.4	285.9	281.4
75°	5216.7	2072.0	996.1	547.7	340.1	306.9	293.4	282.9	264.9	266.4	263.4
77.5°	4040.1	1465.6	832.1	493.6	311.5	278.4	267.8	260.2	239.3	240.7	240.7
80°	3159.8	954.0	645.5	409.2	278.4	245.3	237.7	231.7	209.1	212.2	212.2
82.5°	2165.2	567.3	467.9	329.5	239.3	209.1	207.6	198.7	174.6	176.0	179.0
85°	1182.7	373.1	311.5	243.7	188.0	170.0	167.0	162.5	140.0	140.0	141.5
87.5°	218.2	200.2	183.5	161.0	126.4	122.0	117.4	122.0	105.3	102.2	102.2
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: P196691

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	6164.6	6060.8	5988.6	5925.4	5773.5	5783.9	5805.1	5835.1	5740.4	5789.9	5851.7
5°	4965.4	4879.6	4814.9	4714.2	4502.0	4426.7	4378.7	4357.6	4216.1	4246.3	4312.5
7.5°	3660.8	3659.4	3636.8	3523.9	3268.2	3113.3	3010.8	2979.3	2892.0	2925.1	3025.9
10°	2577.5	2604.6	2594.1	2493.3	2264.5	2153.2	2130.7	2193.8	2195.3	2260.0	2433.1
12.5°	1862.8	1847.8	1834.3	1751.4	1579.9	1561.9	1613.0	1700.3	1721.4	1790.5	1971.1
15°	1390.4	1354.2	1346.7	1281.9	1169.2	1185.7	1223.2	1268.5	1269.9	1318.1	1467.1
17.5°	1042.8	1042.8	1054.8	1012.7	931.4	923.9	904.3	892.3	874.2	893.7	975.0
20°	809.5	847.1	877.3	853.2	779.4	743.3	705.7	681.7	668.1	669.5	693.7
22.5°	693.7	723.8	762.8	750.8	689.1	642.5	618.4	601.9	591.3	591.3	604.9
25°	635.1	654.6	690.6	684.6	631.9	594.4	574.8	558.2	546.2	544.6	558.2
27.5°	588.4	600.4	624.4	621.4	567.3	543.2	531.1	520.6	513.1	511.6	525.1
30°	546.2	552.2	564.3	559.7	519.1	495.1	490.6	485.9	481.5	483.0	502.6
32.5°	508.6	513.1	520.6	514.6	475.5	454.4	446.9	440.9	436.4	440.9	463.5
35°	466.4	479.9	489.1	485.9	443.9	418.4	401.7	386.7	380.7	385.2	410.9
37.5°	430.4	452.9	464.9	461.9	418.4	388.2	367.1	364.2	364.2	370.2	395.7
40°	416.9	433.3	443.9	439.3	395.7	365.7	353.6	349.1	350.6	356.6	383.7
42.5°	404.8	419.8	422.9	413.8	370.2	350.6	343.1	337.1	340.1	347.6	374.6
45°	394.2	406.2	404.8	391.2	349.1	335.5	335.5	331.0	332.5	338.6	367.1
47.5°	386.7	392.7	389.7	376.2	334.0	323.5	328.0	328.0	331.0	335.5	364.2
50°	374.6	379.1	376.2	364.2	322.0	313.0	317.5	323.5	326.4	331.0	356.6
52.5°	362.6	365.7	364.2	352.2	310.0	304.0	304.0	310.0	316.0	322.0	344.6
55°	350.6	353.6	355.1	346.1	300.9	294.9	293.4	293.4	299.5	308.4	332.5
57.5°	341.6	341.6	344.6	338.6	291.9	284.4	276.9	278.4	285.9	293.4	317.5
60°	331.0	332.5	337.1	331.0	279.9	267.8	261.7	269.4	272.4	279.9	305.5
62.5°	322.0	322.0	325.0	320.4	269.4	257.3	252.8	260.2	260.2	267.8	293.4
65°	314.4	313.0	313.0	311.5	258.8	246.8	243.7	246.8	248.2	255.7	281.4
67.5°	308.4	300.9	300.9	304.0	248.2	236.2	234.7	234.7	236.2	245.3	267.8
70°	294.9	288.9	287.4	297.9	237.7	222.7	222.7	219.7	222.7	227.3	251.3
72.5°	279.9	275.4	273.8	288.9	227.3	207.6	204.7	203.1	204.7	209.1	231.7
75°	260.2	257.3	260.2	282.9	216.7	191.1	186.7	185.0	185.0	186.7	210.7
77.5°	237.7	234.7	257.3	263.4	210.7	171.5	167.0	164.0	161.0	161.0	188.0
80°	210.7	209.1	248.2	222.7	201.6	150.4	142.9	138.4	135.4	134.0	161.0
82.5°	183.5	180.6	212.2	174.6	167.0	123.4	112.9	103.8	99.3	99.3	123.4
85°	150.4	148.9	167.0	128.0	115.9	90.2	75.3	67.7	61.7	61.7	79.8
87.5°	109.8	106.8	103.8	76.7	58.7	40.7	28.6	27.1	24.0	22.6	33.1
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: P196691

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7030-800

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0	7075.0
2.5°	5943.4	6068.4	6304.6	6498.7	6757.5	6965.2	7201.4	7303.8
5°	4434.3	4631.4	4992.5	5301.0	5728.4	6124.1	6575.4	6822.2
7.5°	3180.9	3472.8	3746.6	4131.8	4666.0	5197.1	5781.0	6107.5
10°	2631.7	2899.5	3134.2	3408.2	3820.4	4417.8	5114.4	5483.0
12.5°	2180.3	2469.2	2717.5	3010.8	3357.0	3897.2	4691.6	5120.4
15°	1671.6	1986.3	2284.1	2637.7	3062.0	3679.0	4565.2	5043.7
17.5°	1145.0	1482.1	1849.2	2281.2	2792.6	3587.2	4685.6	5275.4
20°	777.9	1024.7	1423.4	1935.0	2550.4	3543.5	4950.4	5752.4
22.5°	639.5	750.8	1050.3	1610.1	2351.8	3591.7	5380.7	6379.8
25°	586.8	647.1	817.0	1324.1	2199.8	3719.6	5963.1	7088.5
27.5°	553.7	604.9	716.2	1119.5	2059.9	3894.1	6671.8	7955.2
30°	534.2	582.4	675.6	1014.2	1932.0	4044.6	7281.1	8608.3
32.5°	490.6	526.6	603.3	954.0	1840.3	4166.5	7818.4	9219.2
35°	437.9	481.5	544.6	914.8	1837.2	4223.6	8323.9	9894.7
37.5°	418.4	460.4	507.1	893.7	1855.2	4271.8	8942.4	10660.7
40°	406.2	443.9	481.5	890.8	1870.3	4309.4	9547.2	11458.1
42.5°	395.7	433.3	477.0	869.7	1864.3	4360.5	10082.9	12142.7
45°	392.7	430.4	487.6	838.1	1862.8	4440.3	10508.7	12690.5
47.5°	389.7	446.9	484.4	803.5	1856.8	4608.9	10988.6	13200.6
50°	386.7	477.0	463.5	755.3	1811.6	4896.2	11634.2	13784.3
52.5°	385.2	481.5	440.9	689.1	1730.3	5322.0	12579.1	14596.9
55°	379.1	457.5	401.7	601.9	1613.0	5781.0	13591.8	15552.4
57.5°	365.7	407.7	379.1	516.1	1444.5	6101.5	14339.6	16291.2
60°	398.7	350.6	364.2	472.4	1242.9	6158.6	14372.7	16498.8
62.5°	380.7	319.0	349.1	457.5	1101.5	5785.5	13715.2	16250.5
65°	304.0	302.4	335.5	472.4	1080.3	4950.4	12604.7	15514.9
67.5°	276.9	290.4	322.0	490.6	1093.9	3900.1	10970.6	13796.3
70°	258.8	275.4	304.0	507.1	1117.9	3072.6	8832.5	11220.4
72.5°	240.7	254.2	285.9	523.7	1101.5	2424.0	7069.0	8642.9
75°	218.2	230.2	260.2	479.9	945.0	1781.6	5617.0	6137.6
77.5°	192.7	203.1	228.7	379.1	710.1	1239.9	4207.1	4423.8
80°	165.5	170.0	189.6	276.9	463.5	741.8	3202.0	3528.5
82.5°	130.9	132.4	144.4	203.1	288.9	473.9	2220.9	2535.4
85°	84.2	87.3	93.3	142.9	194.2	304.0	1134.5	1300.0
87.5°	28.6	33.1	33.1	69.2	94.8	168.5	347.6	252.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)