

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: P196212

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196212  
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-06-D-UNV-SLL-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 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: 26294.9 lumens  
Efficiency: N/A  
Efficacy: 105.6 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

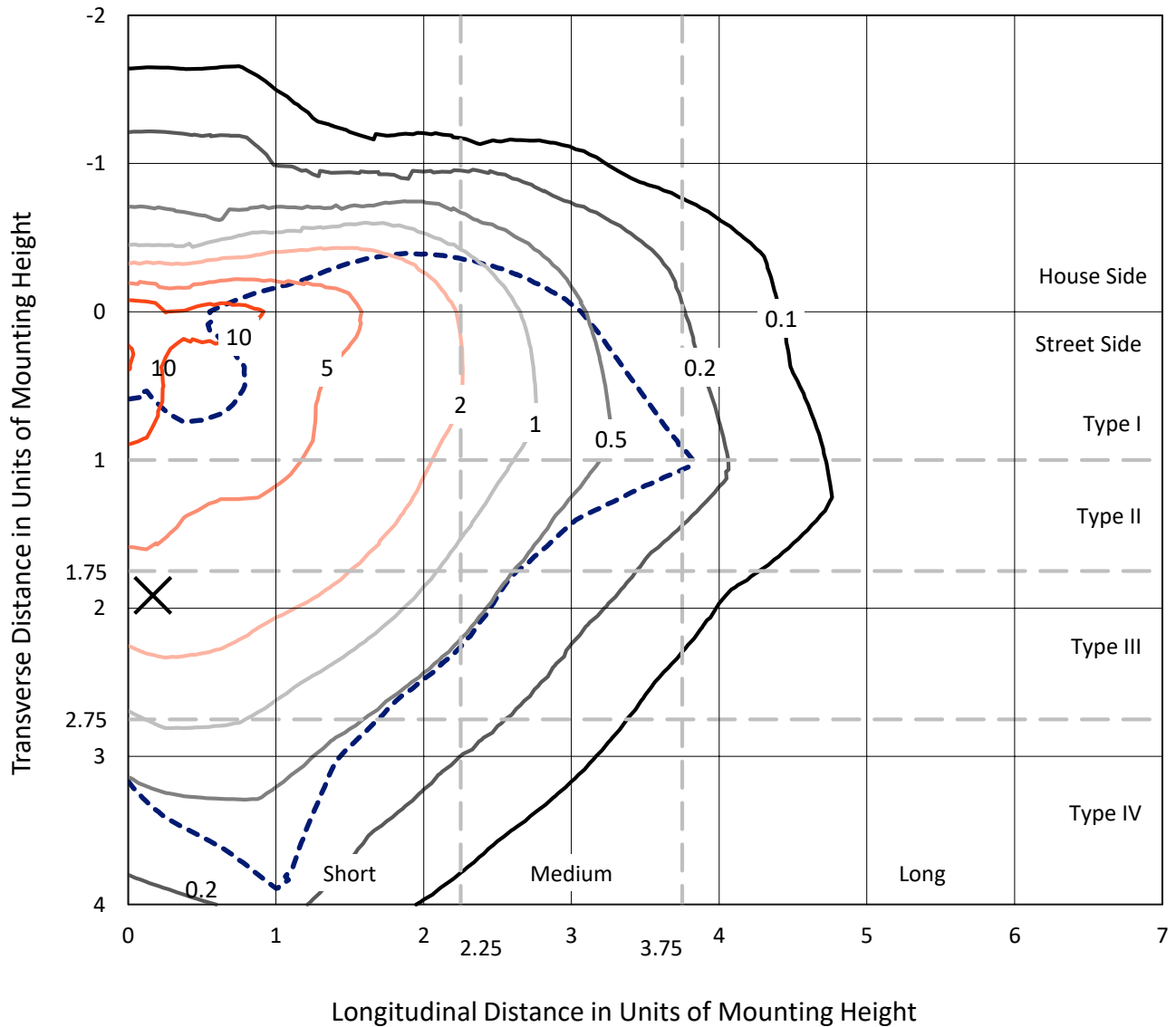
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

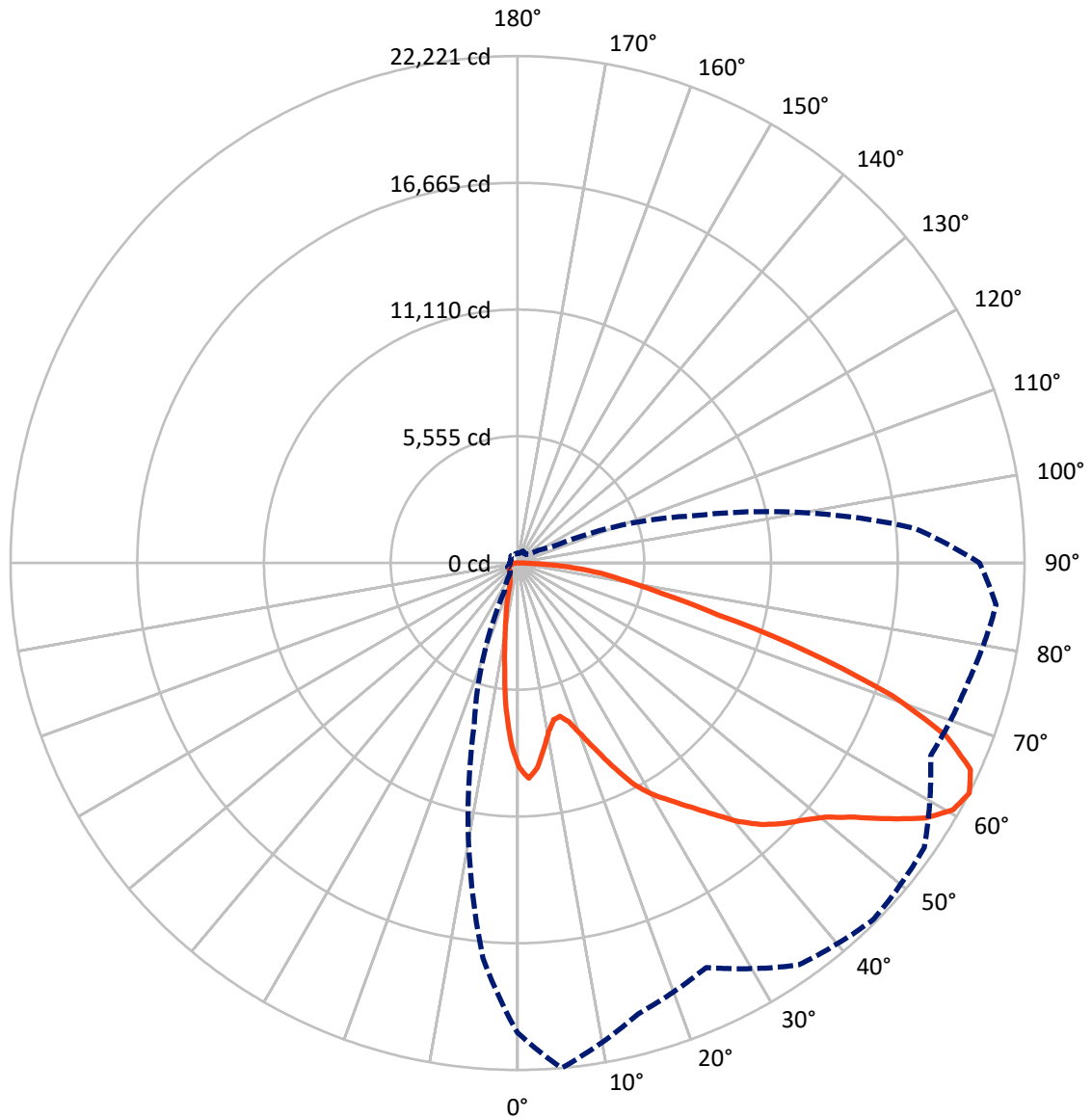
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 16.5 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4658.2	0.0	4658.2
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	21636.8	0.0	21636.8
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	26294.9	0.0	26294.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	651.9	2.5
10°-20°	1190.8	4.5
20°-30°	1712.6	6.5
30°-40°	2623.1	10.0
40°-50°	3835.0	14.6
50°-60°	5580.0	21.2
60°-70°	6465.1	24.6
70°-80°	3370.2	12.8
80°-90°	866.3	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°	26294.9	100.0
0°-180°	26294.9	100.0



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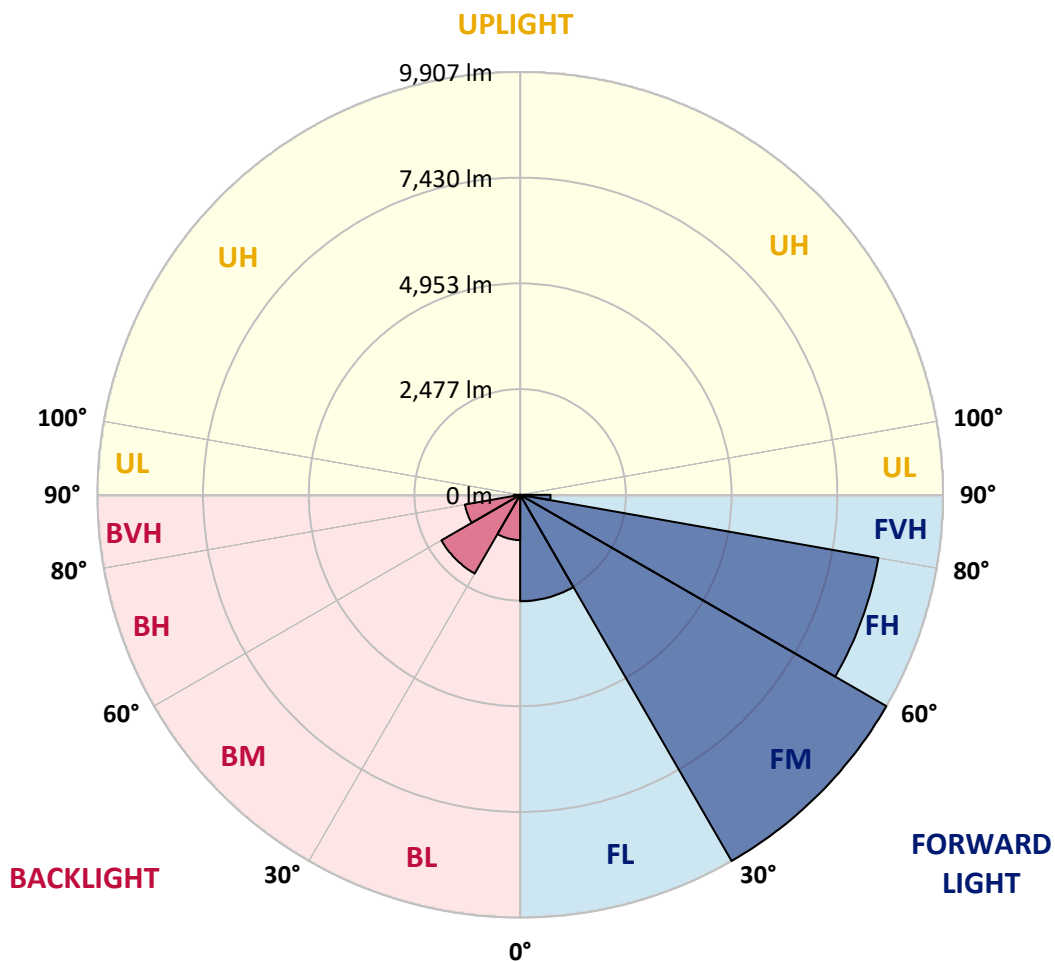
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2495.5	9.5			
FM	(30°-60°)	9906.7	37.7			
FH	(60°-80°)	8521.8	32.4			G4/12000
FVH	(80°-90°)	712.7	2.7			G4/750
BL	(0°-30°)	1059.8	4.0	B3/2500		
BM	(30°-60°)	2131.3	8.1	B2/2500		
BH	(60°-80°)	1313.5	5.0	B3/2500		G3/2500
BVH	(80°-90°)	153.6	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4
2.5°	9254.2	9450.6	9675.6	9969.2	10169.4	10249.5	10316.2	10203.7	10095.0	9891.0	9818.6
5°	8644.1	9021.7	9641.3	10230.4	10749.0	11046.4	11137.9	10930.1	10560.2	10026.5	9744.2
7.5°	7738.6	8236.2	9107.4	9974.9	10718.5	11214.2	11250.4	10838.6	10110.3	9235.2	8777.6
10°	6947.4	7509.8	8518.3	9488.8	10276.2	10783.3	10684.1	10106.4	9227.5	8232.4	7715.7
12.5°	6487.9	7050.3	8077.9	9063.7	9805.3	9997.8	9795.7	9309.6	8476.4	7479.3	6958.8
15°	6390.7	6970.3	7921.6	8752.9	9212.3	9088.4	8888.2	8642.3	8049.3	7233.4	6730.0
17.5°	6684.3	7332.5	8129.4	8585.1	8566.0	8268.6	8100.8	8148.5	8047.5	7500.3	6974.1
20°	7288.6	8055.0	8657.5	8539.3	8051.2	7633.7	7536.5	7910.2	8377.3	8169.5	7591.7
22.5°	8083.7	8956.9	9378.2	8670.8	7782.4	7332.5	7313.4	7896.8	8977.8	9181.8	8478.3
25°	8981.6	9999.8	10104.6	8903.5	7753.9	7305.8	7288.6	8102.7	9700.4	10184.6	9471.6
27.5°	10079.7	11052.2	10710.8	9214.2	7879.7	7384.0	7395.4	8453.6	10453.4	11176.0	10590.7
30°	10907.2	11799.4	11084.5	9519.3	8081.7	7521.2	7549.8	8832.9	10859.5	11864.3	11484.9
32.5°	11681.3	12438.2	11442.9	9820.5	8377.3	7725.2	7824.3	9305.8	11347.6	12455.3	12329.5
35°	12537.3	13153.1	11841.4	10142.7	8800.5	8083.7	8226.7	9755.7	11831.9	13046.3	13166.4
37.5°	13507.8	13971.1	12274.2	10598.4	9410.6	8747.2	8827.2	10215.2	12169.3	13700.3	14064.4
40°	14518.1	14888.0	12747.0	11206.5	10297.1	9643.2	9681.3	10804.3	12434.4	14377.1	14935.7
42.5°	15385.7	15673.6	13221.7	11961.6	11315.2	10556.4	10588.9	11439.1	12687.9	14960.5	15633.5
45°	16079.7	16291.2	13669.8	12756.5	12401.9	11696.5	11688.8	12085.4	13027.3	15452.4	16169.3
47.5°	16726.0	16838.4	14169.3	13530.6	13528.7	13164.6	12891.9	12848.1	13479.1	15866.1	16636.4
50°	17465.7	17507.6	14828.9	14312.3	14905.2	14848.0	14344.6	13816.6	14064.4	16331.3	17126.3
52.5°	18495.2	18497.1	15646.9	15074.9	16424.7	16605.9	16020.5	14912.8	14930.0	17236.9	17972.8
55°	19705.8	19789.7	16712.6	15988.1	18014.8	18323.6	17772.6	16215.0	16173.1	18697.3	19345.5
57.5°	20641.9	21086.2	17953.7	17130.1	19499.9	19902.2	19458.0	17564.8	17700.1	20203.4	20477.9
60°	20905.0	21944.0	19191.1	18411.3	20756.3	21360.6	20908.8	19023.3	19194.9	21181.4	20804.0
62.5°	20590.5	22220.5	20451.2	19559.0	21501.8	22081.3	21757.2	19978.4	20413.2	21055.6	20253.0
65°	19658.1	21820.2	21545.6	20047.1	21072.8	21278.7	21192.9	20028.0	21074.7	19866.0	18729.7
67.5°	17480.9	20275.9	21057.5	19004.2	19069.0	18847.9	18735.4	18666.8	20331.1	17946.1	16327.4
70°	14217.0	17421.8	18729.7	15904.2	15423.7	15210.3	14840.4	15755.5	18274.0	15290.4	13437.2
72.5°	10951.1	13328.5	15362.8	12056.8	11057.8	11130.3	10710.8	12047.3	15137.8	11820.4	10259.0
75°	7776.7	9088.4	12262.7	8663.3	7340.1	7336.3	7303.9	8670.8	11944.4	8484.0	7506.0
77.5°	5605.2	6543.2	9606.9	5797.8	5208.7	5275.4	5168.6	5893.0	9311.4	6102.8	5561.4
80°	4470.8	4844.5	6209.5	3866.4	3877.9	4034.2	4011.3	4030.4	6125.6	4419.4	4158.1
82.5°	3212.5	3677.7	4747.2	2962.8	2564.2	2730.2	2762.6	2989.5	4322.1	3124.8	2741.6
85°	1647.3	2242.1	4367.8	2566.2	1603.4	1328.8	1529.0	2358.4	3753.9	1872.2	1336.5
87.5°	320.3	621.5	3201.0	1426.1	720.7	364.2	600.6	999.0	2183.0	339.3	165.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4
2.5°	9694.7	9450.6	9221.9	8985.4	8802.4	8579.4	8360.1	8169.5	7984.5	7862.5	7900.7
5°	9458.3	8863.5	8329.6	7833.9	7544.2	7195.2	6884.5	6623.3	6421.2	6291.6	6369.7
7.5°	8381.0	7576.5	6873.0	6219.0	5807.3	5355.5	4993.2	4737.7	4581.4	4493.7	4621.4
10°	7279.1	6375.4	5586.1	4905.5	4499.3	4116.1	3788.3	3517.5	3307.8	3208.7	3260.1
12.5°	6489.8	5485.1	4657.6	4200.0	3851.2	3508.0	3168.7	2852.2	2585.2	2463.3	2438.4
15°	6194.3	5006.5	4162.0	3651.0	3304.0	2930.3	2564.2	2224.9	1971.3	1866.5	1843.6
17.5°	6324.0	4903.6	3868.3	3263.9	2760.6	2306.9	1895.1	1574.8	1387.9	1328.8	1334.5
20°	6779.6	4941.7	3631.9	2865.5	2243.9	1706.4	1294.5	1073.4	993.3	980.0	995.2
22.5°	7404.9	5098.1	3460.3	2522.3	1788.3	1241.1	962.8	857.9	837.0	835.0	850.3
25°	8230.5	5403.1	3346.0	2217.2	1412.7	983.8	838.8	779.8	762.6	766.4	781.6
27.5°	9202.8	5790.1	3271.6	1954.1	1161.0	877.0	783.6	732.1	714.9	718.7	730.2
30°	10091.2	6129.5	3161.0	1755.9	1042.9	838.8	753.1	701.6	678.7	678.7	686.3
32.5°	10886.2	6423.1	3031.4	1607.2	934.2	753.1	682.5	642.5	625.3	631.1	634.8
35°	11591.7	6577.5	2930.3	1519.5	846.5	694.0	623.4	581.4	558.6	562.4	568.1
37.5°	12285.6	6636.6	2863.6	1471.8	783.6	657.8	592.9	558.6	533.8	530.0	528.1
40°	12945.3	6623.3	2800.6	1458.5	741.6	631.1	573.9	543.4	518.5	512.8	511.0
42.5°	13515.3	6579.4	2741.6	1422.3	713.0	612.0	558.6	531.9	507.2	499.5	495.7
45°	14035.8	6552.7	2676.8	1355.5	728.3	604.4	551.0	522.4	499.5	490.0	486.2
47.5°	14613.5	6648.1	2604.3	1283.1	724.5	606.3	551.0	518.5	495.7	486.2	482.3
50°	15301.7	6970.3	2514.7	1184.0	690.2	648.2	549.1	512.8	491.8	486.2	478.5
52.5°	16274.1	7492.6	2390.7	1056.2	663.5	692.0	547.2	503.3	486.2	476.6	467.1
55°	17606.7	8015.0	2230.6	920.9	621.5	661.5	551.0	491.8	472.8	463.3	451.8
57.5°	18699.1	8411.6	2028.5	808.3	583.4	625.3	545.2	478.5	457.6	448.1	438.5
60°	18628.7	8449.7	1836.0	735.9	560.5	562.4	558.6	469.0	444.3	436.6	428.9
62.5°	17475.2	7978.8	1656.8	699.7	543.4	512.8	570.1	457.6	430.9	423.3	417.6
65°	15555.3	6882.5	1561.4	699.7	528.1	486.2	497.6	442.3	417.6	409.9	406.1
67.5°	13120.7	5530.8	1471.8	714.9	507.2	467.1	451.8	427.1	404.2	396.6	392.7
70°	10516.3	4352.6	1408.9	707.4	488.0	446.1	427.1	406.1	383.2	381.3	377.5
72.5°	8249.5	3496.5	1380.4	707.4	459.5	421.4	402.3	387.0	364.2	362.2	356.5
75°	6609.9	2625.3	1262.1	694.0	430.9	388.9	371.7	358.4	335.5	337.5	333.7
77.5°	5119.1	1857.0	1054.4	625.3	394.7	352.7	339.3	329.8	303.1	305.0	305.0
80°	4003.7	1208.7	817.8	518.5	352.7	310.8	301.3	293.6	265.0	268.8	268.8
82.5°	2743.5	718.7	592.9	417.6	303.1	265.0	263.1	251.6	221.2	223.1	226.9
85°	1498.5	472.8	394.7	308.8	238.3	215.4	211.6	205.9	177.3	177.3	179.2
87.5°	276.4	253.6	232.6	204.0	160.2	154.5	148.7	154.5	133.5	129.6	129.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4
2.5°	7811.0	7679.5	7587.9	7507.8	7315.3	7328.7	7355.3	7393.5	7273.4	7336.3	7414.4
5°	6291.6	6182.8	6100.9	5973.1	5704.3	5608.9	5548.0	5521.3	5342.1	5380.2	5464.1
7.5°	4638.6	4636.6	4608.1	4465.1	4141.0	3944.6	3815.0	3774.9	3664.3	3706.3	3834.0
10°	3265.9	3300.1	3286.8	3159.1	2869.3	2728.2	2699.7	2779.7	2781.6	2863.6	3082.9
12.5°	2360.3	2341.2	2324.0	2219.2	2001.8	1979.0	2043.8	2154.3	2181.0	2268.8	2497.5
15°	1761.6	1715.9	1706.4	1624.3	1481.3	1502.3	1550.0	1607.2	1609.1	1670.1	1858.9
17.5°	1321.2	1321.2	1336.5	1283.1	1180.2	1170.6	1145.8	1130.6	1107.7	1132.5	1235.4
20°	1025.7	1073.4	1111.5	1081.0	987.6	941.8	894.2	863.7	846.5	848.4	878.9
22.5°	878.9	917.1	966.6	951.3	873.2	814.1	783.6	762.6	749.3	749.3	766.4
25°	804.6	829.3	875.1	867.5	800.8	753.1	728.3	707.4	692.0	690.2	707.4
27.5°	745.4	760.7	791.3	787.4	718.7	688.2	673.0	659.7	650.1	648.2	665.3
30°	692.0	699.7	714.9	709.2	657.8	627.3	621.5	615.8	610.1	612.0	636.8
32.5°	644.4	650.1	659.7	652.0	602.4	575.8	566.2	558.6	552.9	558.6	587.2
35°	591.1	608.1	619.6	615.8	562.4	530.0	509.0	490.0	482.3	488.0	520.5
37.5°	545.2	573.9	589.1	585.3	530.0	491.8	465.2	461.4	461.4	469.0	501.5
40°	528.1	549.1	562.4	556.7	501.5	463.3	448.1	442.3	444.3	451.8	486.2
42.5°	512.8	531.9	535.7	524.3	469.0	444.3	434.7	427.1	430.9	440.4	474.8
45°	499.5	514.7	512.8	495.7	442.3	425.1	425.1	419.4	421.4	428.9	465.2
47.5°	490.0	497.6	493.8	476.6	423.3	409.9	415.6	415.6	419.4	425.1	461.4
50°	474.8	480.5	476.6	461.4	408.0	396.6	402.3	409.9	413.7	419.4	451.8
52.5°	459.5	463.3	461.4	446.1	392.7	385.1	385.1	392.7	400.4	408.0	436.6
55°	444.3	448.1	449.9	438.5	381.3	373.7	371.7	371.7	379.4	390.9	421.4
57.5°	432.8	432.8	436.6	428.9	369.9	360.3	350.8	352.7	362.2	371.7	402.3
60°	419.4	421.4	427.1	419.4	354.7	339.3	331.7	341.3	345.0	354.7	387.0
62.5°	408.0	408.0	411.8	406.1	341.3	326.0	320.3	329.8	329.8	339.3	371.7
65°	398.4	396.6	396.6	394.7	328.0	312.7	308.8	312.7	314.6	324.1	356.5
67.5°	390.9	381.3	381.3	385.1	314.6	299.3	297.4	297.4	299.3	310.8	339.3
70°	373.7	366.0	364.2	377.5	301.3	282.1	282.1	278.3	282.1	287.9	318.3
72.5°	354.7	348.9	347.0	366.0	287.9	263.1	259.3	257.4	259.3	265.0	293.6
75°	329.8	326.0	329.8	358.4	274.6	242.1	236.4	234.5	234.5	236.4	266.9
77.5°	301.3	297.4	326.0	333.7	266.9	217.4	211.6	207.8	204.0	204.0	238.3
80°	266.9	265.0	314.6	282.1	255.4	190.7	181.2	175.4	171.5	169.7	204.0
82.5°	232.6	228.7	268.8	221.2	211.6	156.3	143.0	131.6	125.8	125.8	156.3
85°	190.7	188.7	211.6	162.0	146.8	114.4	95.3	85.8	78.2	78.2	101.1
87.5°	139.2	135.3	131.6	97.3	74.4	51.5	36.2	34.3	30.5	28.6	41.9
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: P196212

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-800

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4	8964.4
2.5°	7530.8	7689.0	7988.3	8234.2	8562.2	8825.3	9124.6	9254.2
5°	5618.6	5868.3	6325.8	6716.7	7258.1	7759.6	8331.5	8644.1
7.5°	4030.4	4400.2	4747.2	5235.4	5912.1	6585.1	7324.8	7738.6
10°	3334.5	3673.8	3971.3	4318.3	4840.7	5597.6	6480.3	6947.4
12.5°	2762.6	3128.6	3443.2	3815.0	4253.4	4937.9	5944.6	6487.9
15°	2118.1	2516.6	2894.1	3342.2	3879.7	4661.5	5784.4	6390.7
17.5°	1450.9	1877.9	2343.1	2890.2	3538.5	4545.2	5936.9	6684.3
20°	985.7	1298.3	1803.6	2451.8	3231.6	4489.8	6272.4	7288.6
22.5°	810.3	951.3	1330.8	2040.0	2979.9	4550.9	6817.8	8083.7
25°	743.6	819.8	1035.2	1677.7	2787.3	4712.9	7555.5	8981.6
27.5°	701.6	766.4	907.5	1418.4	2610.1	4934.1	8453.6	10079.7
30°	676.8	737.9	856.0	1285.0	2448.0	5124.8	9225.7	10907.2
32.5°	621.5	667.3	764.6	1208.7	2331.7	5279.1	9906.3	11681.3
35°	554.8	610.1	690.2	1159.2	2327.8	5351.6	10546.9	12537.3
37.5°	530.0	583.4	642.5	1132.5	2350.7	5412.6	11330.5	13507.8
40°	514.7	562.4	610.1	1128.6	2369.8	5460.3	12096.9	14518.1
42.5°	501.5	549.1	604.4	1101.9	2362.2	5525.1	12775.6	15385.7
45°	497.6	545.2	617.8	1061.9	2360.3	5626.1	13315.1	16079.7
47.5°	493.8	566.2	613.9	1018.0	2352.7	5839.7	13923.4	16726.0
50°	490.0	604.4	587.2	957.1	2295.5	6203.8	14741.2	17465.7
52.5°	488.0	610.1	558.6	873.2	2192.5	6743.4	15938.5	18495.2
55°	480.5	579.6	509.0	762.6	2043.8	7324.8	17221.6	19705.8
57.5°	463.3	516.7	480.5	654.0	1830.3	7731.0	18169.1	20641.9
60°	505.2	444.3	461.4	598.6	1574.8	7803.4	18211.1	20905.0
62.5°	482.3	404.2	442.3	579.6	1395.6	7330.6	17378.0	20590.5
65°	385.1	383.2	425.1	598.6	1368.9	6272.4	15970.9	19658.1
67.5°	350.8	368.0	408.0	621.5	1386.0	4941.7	13900.5	17480.9
70°	328.0	348.9	385.1	642.5	1416.6	3893.1	11191.3	14217.0
72.5°	305.0	322.2	362.2	663.5	1395.6	3071.4	8956.9	10951.1
75°	276.4	291.7	329.8	608.1	1197.3	2257.3	7117.1	7776.7
77.5°	244.1	257.4	289.8	480.5	899.9	1570.9	5330.6	5605.2
80°	209.7	215.4	240.2	350.8	587.2	939.9	4057.1	4470.8
82.5°	165.8	167.8	183.0	257.4	366.0	600.6	2814.0	3212.5
85°	106.8	110.6	118.3	181.2	245.9	385.1	1437.6	1647.3
87.5°	36.2	41.9	41.9	87.7	120.1	213.5	440.4	320.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)