

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: P196236

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196236
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-SLR-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT 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

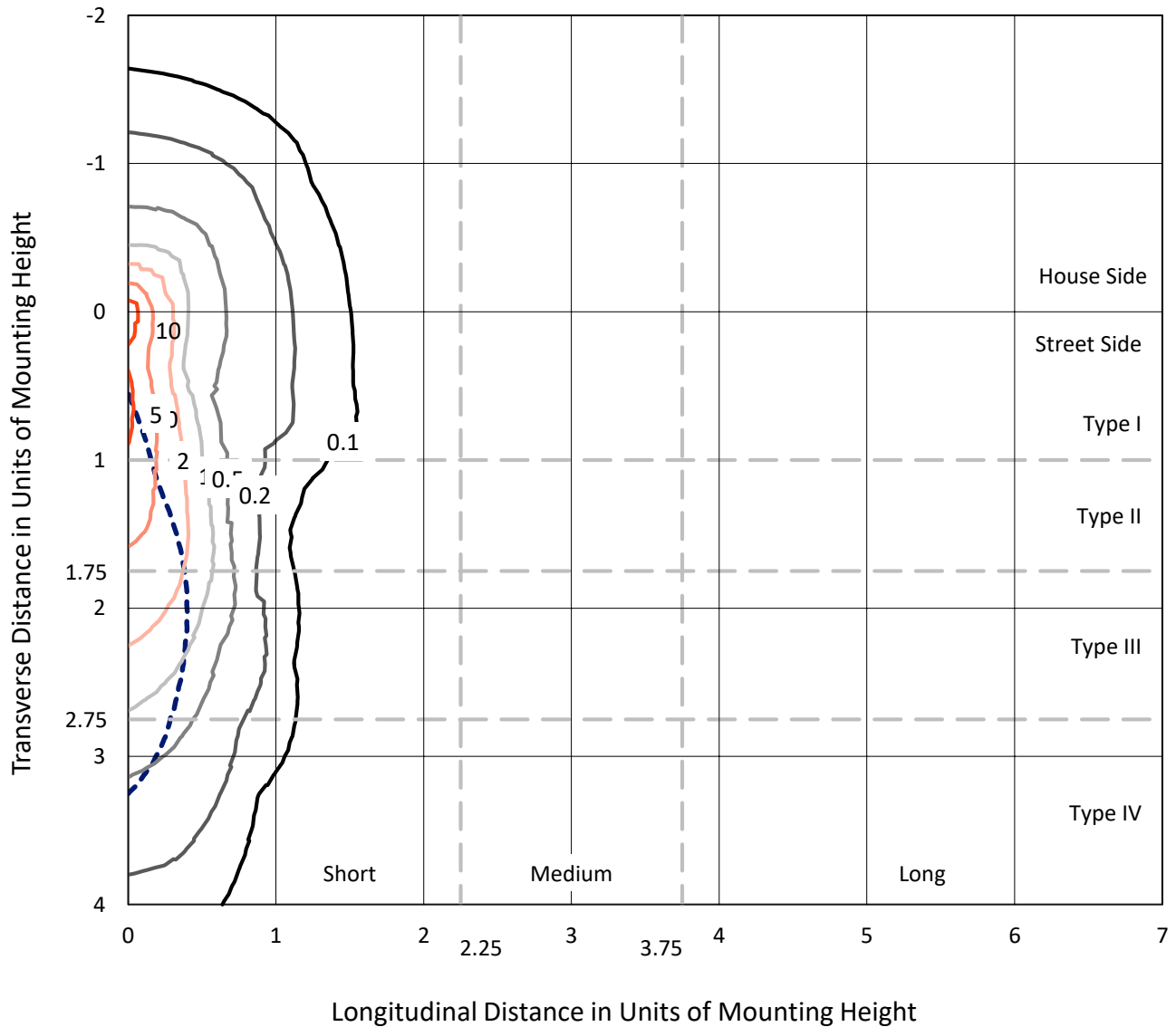
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

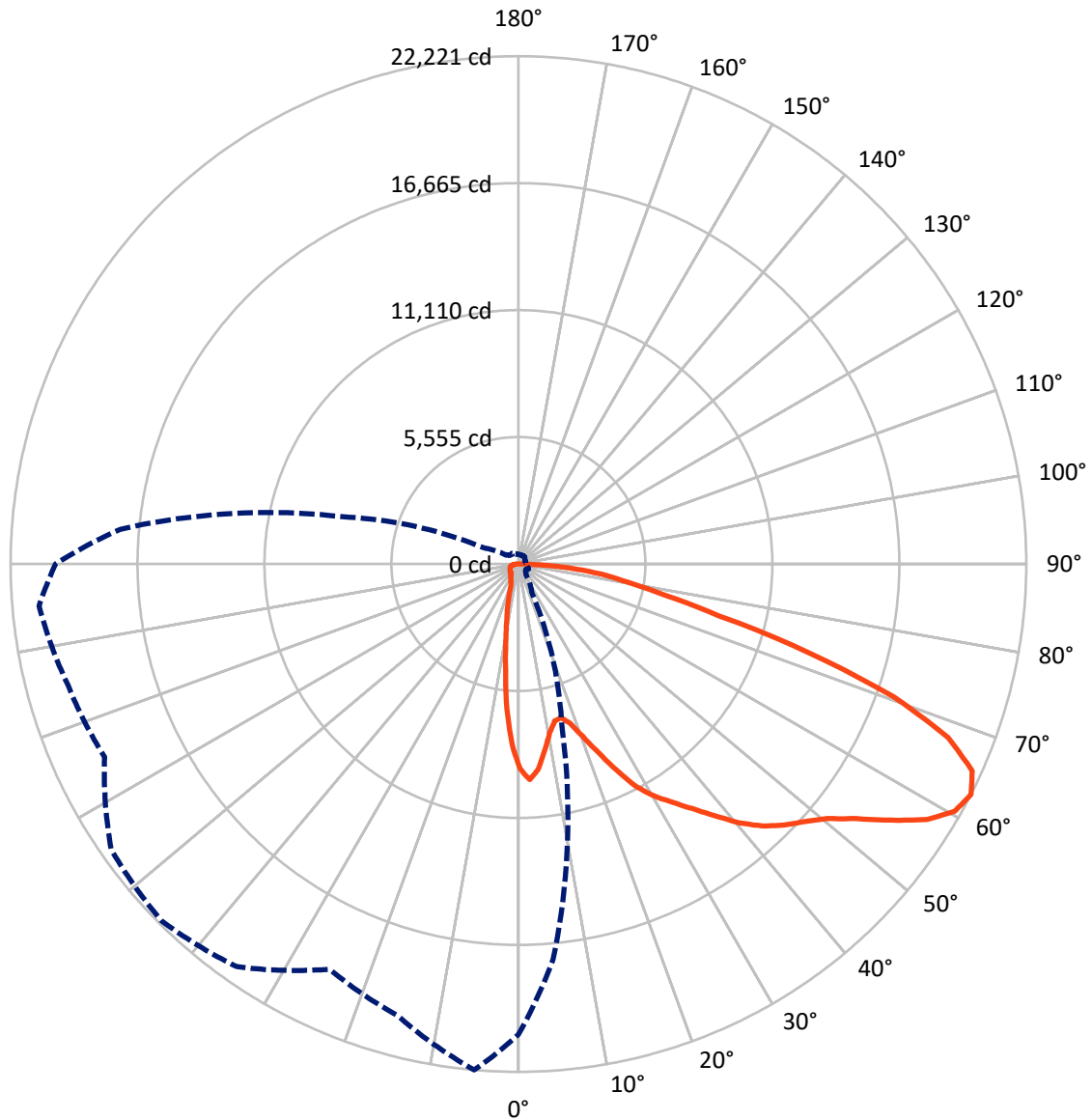
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

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

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

Coefficient of Utilization



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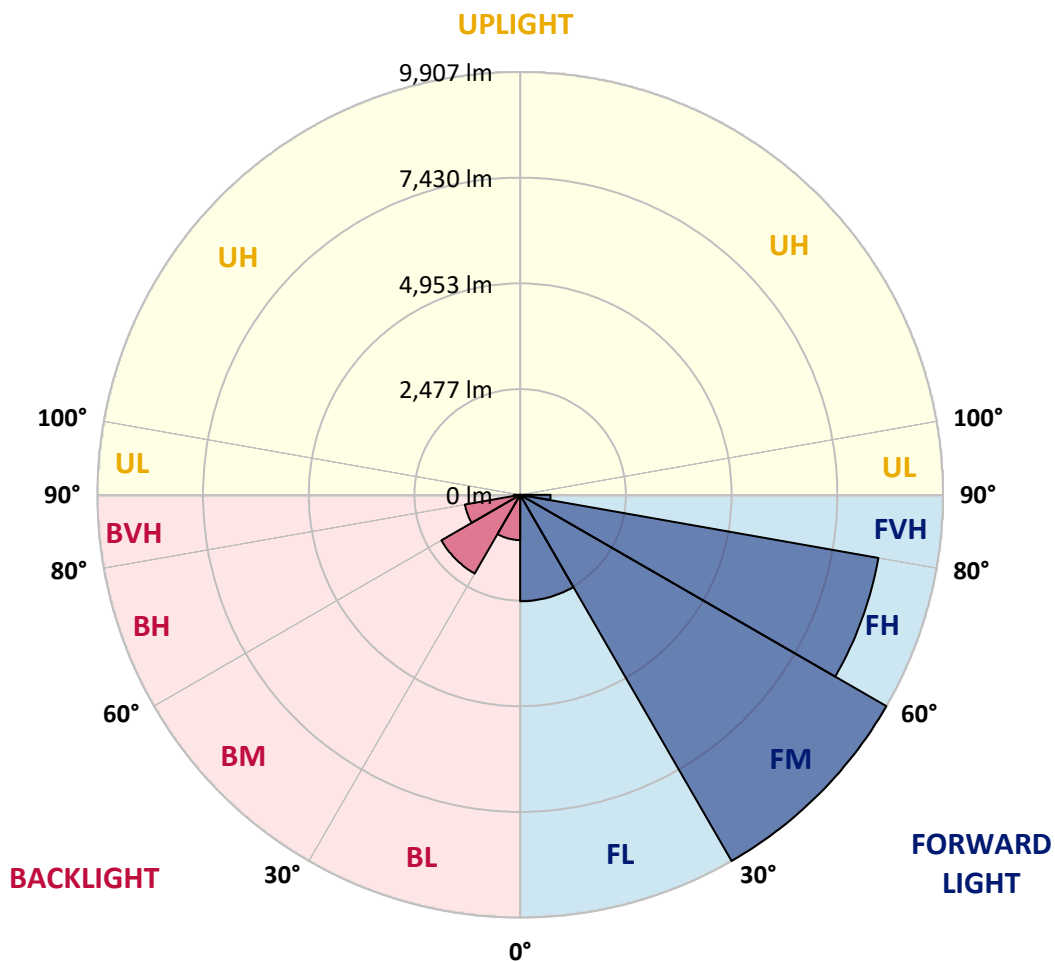
CATALOG NUMBER: NAV-AF-06-D-UNV-SLR-800

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	9124.6	8825.3	8562.2	8234.2	7988.3	7689.0	7530.8	7414.4	7336.3	7273.4
5°	8644.1	8331.5	7759.6	7258.1	6716.7	6325.8	5868.3	5618.6	5464.1	5380.2	5342.1
7.5°	7738.6	7324.8	6585.1	5912.1	5235.4	4747.2	4400.2	4030.4	3834.0	3706.3	3664.3
10°	6947.4	6480.3	5597.6	4840.7	4318.3	3971.3	3673.8	3334.5	3082.9	2863.6	2781.6
12.5°	6487.9	5944.6	4937.9	4253.4	3815.0	3443.2	3128.6	2762.6	2497.5	2268.8	2181.0
15°	6390.7	5784.4	4661.5	3879.7	3342.2	2894.1	2516.6	2118.1	1858.9	1670.1	1609.1
17.5°	6684.3	5936.9	4545.2	3538.5	2890.2	2343.1	1877.9	1450.9	1235.4	1132.5	1107.7
20°	7288.6	6272.4	4489.8	3231.6	2451.8	1803.6	1298.3	985.7	878.9	848.4	846.5
22.5°	8083.7	6817.8	4550.9	2979.9	2040.0	1330.8	951.3	810.3	766.4	749.3	749.3
25°	8981.6	7555.5	4712.9	2787.3	1677.7	1035.2	819.8	743.6	707.4	690.2	692.0
27.5°	10079.7	8453.6	4934.1	2610.1	1418.4	907.5	766.4	701.6	665.3	648.2	650.1
30°	10907.2	9225.7	5124.8	2448.0	1285.0	856.0	737.9	676.8	636.8	612.0	610.1
32.5°	11681.3	9906.3	5279.1	2331.7	1208.7	764.6	667.3	621.5	587.2	558.6	552.9
35°	12537.3	10546.9	5351.6	2327.8	1159.2	690.2	610.1	554.8	520.5	488.0	482.3
37.5°	13507.8	11330.5	5412.6	2350.7	1132.5	642.5	583.4	530.0	501.5	469.0	461.4
40°	14518.1	12096.9	5460.3	2369.8	1128.6	610.1	562.4	514.7	486.2	451.8	444.3
42.5°	15385.7	12775.6	5525.1	2362.2	1101.9	604.4	549.1	501.5	474.8	440.4	430.9
45°	16079.7	13315.1	5626.1	2360.3	1061.9	617.8	545.2	497.6	465.2	428.9	421.4
47.5°	16726.0	13923.4	5839.7	2352.7	1018.0	613.9	566.2	493.8	461.4	425.1	419.4
50°	17465.7	14741.2	6203.8	2295.5	957.1	587.2	604.4	490.0	451.8	419.4	413.7
52.5°	18495.2	15938.5	6743.4	2192.5	873.2	558.6	610.1	488.0	436.6	408.0	400.4
55°	19705.8	17221.6	7324.8	2043.8	762.6	509.0	579.6	480.5	421.4	390.9	379.4
57.5°	20641.9	18169.1	7731.0	1830.3	654.0	480.5	516.7	463.3	402.3	371.7	362.2
60°	20905.0	18211.1	7803.4	1574.8	598.6	461.4	444.3	505.2	387.0	354.7	345.0
62.5°	20590.5	17378.0	7330.6	1395.6	579.6	442.3	404.2	482.3	371.7	339.3	329.8
65°	19658.1	15970.9	6272.4	1368.9	598.6	425.1	383.2	385.1	356.5	324.1	314.6
67.5°	17480.9	13900.5	4941.7	1386.0	621.5	408.0	368.0	350.8	339.3	310.8	299.3
70°	14217.0	11191.3	3893.1	1416.6	642.5	385.1	348.9	328.0	318.3	287.9	282.1
72.5°	10951.1	8956.9	3071.4	1395.6	663.5	362.2	322.2	305.0	293.6	265.0	259.3
75°	7776.7	7117.1	2257.3	1197.3	608.1	329.8	291.7	276.4	266.9	236.4	234.5
77.5°	5605.2	5330.6	1570.9	899.9	480.5	289.8	257.4	244.1	238.3	204.0	204.0
80°	4470.8	4057.1	939.9	587.2	350.8	240.2	215.4	209.7	204.0	169.7	171.5
82.5°	3212.5	2814.0	600.6	366.0	257.4	183.0	167.8	165.8	156.3	125.8	125.8
85°	1647.3	1437.6	385.1	245.9	181.2	118.3	110.6	106.8	101.1	78.2	78.2
87.5°	320.3	440.4	213.5	120.1	87.7	41.9	41.9	36.2	41.9	28.6	30.5
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°	7393.5	7355.3	7328.7	7315.3	7507.8	7587.9	7679.5	7811.0	7900.7	7862.5	7984.5
5°	5521.3	5548.0	5608.9	5704.3	5973.1	6100.9	6182.8	6291.6	6369.7	6291.6	6421.2
7.5°	3774.9	3815.0	3944.6	4141.0	4465.1	4608.1	4636.6	4638.6	4621.4	4493.7	4581.4
10°	2779.7	2699.7	2728.2	2869.3	3159.1	3286.8	3300.1	3265.9	3260.1	3208.7	3307.8
12.5°	2154.3	2043.8	1979.0	2001.8	2219.2	2324.0	2341.2	2360.3	2438.4	2463.3	2585.2
15°	1607.2	1550.0	1502.3	1481.3	1624.3	1706.4	1715.9	1761.6	1843.6	1866.5	1971.3
17.5°	1130.6	1145.8	1170.6	1180.2	1283.1	1336.5	1321.2	1321.2	1334.5	1328.8	1387.9
20°	863.7	894.2	941.8	987.6	1081.0	1111.5	1073.4	1025.7	995.2	980.0	993.3
22.5°	762.6	783.6	814.1	873.2	951.3	966.6	917.1	878.9	850.3	835.0	837.0
25°	707.4	728.3	753.1	800.8	867.5	875.1	829.3	804.6	781.6	766.4	762.6
27.5°	659.7	673.0	688.2	718.7	787.4	791.3	760.7	745.4	730.2	718.7	714.9
30°	615.8	621.5	627.3	657.8	709.2	714.9	699.7	692.0	686.3	678.7	678.7
32.5°	558.6	566.2	575.8	602.4	652.0	659.7	650.1	644.4	634.8	631.1	625.3
35°	490.0	509.0	530.0	562.4	615.8	619.6	608.1	591.1	568.1	562.4	558.6
37.5°	461.4	465.2	491.8	530.0	585.3	589.1	573.9	545.2	528.1	530.0	533.8
40°	442.3	448.1	463.3	501.5	556.7	562.4	549.1	528.1	511.0	512.8	518.5
42.5°	427.1	434.7	444.3	469.0	524.3	535.7	531.9	512.8	495.7	499.5	507.2
45°	419.4	425.1	425.1	442.3	495.7	512.8	514.7	499.5	486.2	490.0	499.5
47.5°	415.6	415.6	409.9	423.3	476.6	493.8	497.6	490.0	482.3	486.2	495.7
50°	409.9	402.3	396.6	408.0	461.4	476.6	480.5	474.8	478.5	486.2	491.8
52.5°	392.7	385.1	385.1	392.7	446.1	461.4	463.3	459.5	467.1	476.6	486.2
55°	371.7	371.7	373.7	381.3	438.5	449.9	448.1	444.3	451.8	463.3	472.8
57.5°	352.7	350.8	360.3	369.9	428.9	436.6	432.8	432.8	438.5	448.1	457.6
60°	341.3	331.7	339.3	354.7	419.4	427.1	421.4	419.4	428.9	436.6	444.3
62.5°	329.8	320.3	326.0	341.3	406.1	411.8	408.0	408.0	417.6	423.3	430.9
65°	312.7	308.8	312.7	328.0	394.7	396.6	396.6	398.4	406.1	409.9	417.6
67.5°	297.4	297.4	299.3	314.6	385.1	381.3	381.3	390.9	392.7	396.6	404.2
70°	278.3	282.1	282.1	301.3	377.5	364.2	366.0	373.7	377.5	381.3	383.2
72.5°	257.4	259.3	263.1	287.9	366.0	347.0	348.9	354.7	356.5	362.2	364.2
75°	234.5	236.4	242.1	274.6	358.4	329.8	326.0	329.8	333.7	337.5	335.5
77.5°	207.8	211.6	217.4	266.9	333.7	326.0	297.4	301.3	305.0	305.0	303.1
80°	175.4	181.2	190.7	255.4	282.1	314.6	265.0	266.9	268.8	268.8	265.0
82.5°	131.6	143.0	156.3	211.6	221.2	268.8	228.7	232.6	226.9	223.1	221.2
85°	85.8	95.3	114.4	146.8	162.0	211.6	188.7	190.7	179.2	177.3	177.3
87.5°	34.3	36.2	51.5	74.4	97.3	131.6	135.3	139.2	129.6	129.6	133.5
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°	8169.5	8360.1	8579.4	8802.4	8985.4	9221.9	9450.6	9694.7	9818.6	9891.0	10095.0
5°	6623.3	6884.5	7195.2	7544.2	7833.9	8329.6	8863.5	9458.3	9744.2	10026.5	10560.2
7.5°	4737.7	4993.2	5355.5	5807.3	6219.0	6873.0	7576.5	8381.0	8777.6	9235.2	10110.3
10°	3517.5	3788.3	4116.1	4499.3	4905.5	5586.1	6375.4	7279.1	7715.7	8232.4	9227.5
12.5°	2852.2	3168.7	3508.0	3851.2	4200.0	4657.6	5485.1	6489.8	6958.8	7479.3	8476.4
15°	2224.9	2564.2	2930.3	3304.0	3651.0	4162.0	5006.5	6194.3	6730.0	7233.4	8049.3
17.5°	1574.8	1895.1	2306.9	2760.6	3263.9	3868.3	4903.6	6324.0	6974.1	7500.3	8047.5
20°	1073.4	1294.5	1706.4	2243.9	2865.5	3631.9	4941.7	6779.6	7591.7	8169.5	8377.3
22.5°	857.9	962.8	1241.1	1788.3	2522.3	3460.3	5098.1	7404.9	8478.3	9181.8	8977.8
25°	779.8	838.8	983.8	1412.7	2217.2	3346.0	5403.1	8230.5	9471.6	10184.6	9700.4
27.5°	732.1	783.6	877.0	1161.0	1954.1	3271.6	5790.1	9202.8	10590.7	11176.0	10453.4
30°	701.6	753.1	838.8	1042.9	1755.9	3161.0	6129.5	10091.2	11484.9	11864.3	10859.5
32.5°	642.5	682.5	753.1	934.2	1607.2	3031.4	6423.1	10886.2	12329.5	12455.3	11347.6
35°	581.4	623.4	694.0	846.5	1519.5	2930.3	6577.5	11591.7	13166.4	13046.3	11831.9
37.5°	558.6	592.9	657.8	783.6	1471.8	2863.6	6636.6	12285.6	14064.4	13700.3	12169.3
40°	543.4	573.9	631.1	741.6	1458.5	2800.6	6623.3	12945.3	14935.7	14377.1	12434.4
42.5°	531.9	558.6	612.0	713.0	1422.3	2741.6	6579.4	13515.3	15633.5	14960.5	12687.9
45°	522.4	551.0	604.4	728.3	1355.5	2676.8	6552.7	14035.8	16169.3	15452.4	13027.3
47.5°	518.5	551.0	606.3	724.5	1283.1	2604.3	6648.1	14613.5	16636.4	15866.1	13479.1
50°	512.8	549.1	648.2	690.2	1184.0	2514.7	6970.3	15301.7	17126.3	16331.3	14064.4
52.5°	503.3	547.2	692.0	663.5	1056.2	2390.7	7492.6	16274.1	17972.8	17236.9	14930.0
55°	491.8	551.0	661.5	621.5	920.9	2230.6	8015.0	17606.7	19345.5	18697.3	16173.1
57.5°	478.5	545.2	625.3	583.4	808.3	2028.5	8411.6	18699.1	20477.9	20203.4	17700.1
60°	469.0	558.6	562.4	560.5	735.9	1836.0	8449.7	18628.7	20804.0	21181.4	19194.9
62.5°	457.6	570.1	512.8	543.4	699.7	1656.8	7978.8	17475.2	20253.0	21055.6	20413.2
65°	442.3	497.6	486.2	528.1	699.7	1561.4	6882.5	15555.3	18729.7	19866.0	21074.7
67.5°	427.1	451.8	467.1	507.2	714.9	1471.8	5530.8	13120.7	16327.4	17946.1	20331.1
70°	406.1	427.1	446.1	488.0	707.4	1408.9	4352.6	10516.3	13437.2	15290.4	18274.0
72.5°	387.0	402.3	421.4	459.5	707.4	1380.4	3496.5	8249.5	10259.0	11820.4	15137.8
75°	358.4	371.7	388.9	430.9	694.0	1262.1	2625.3	6609.9	7506.0	8484.0	11944.4
77.5°	329.8	339.3	352.7	394.7	625.3	1054.4	1857.0	5119.1	5561.4	6102.8	9311.4
80°	293.6	301.3	310.8	352.7	518.5	817.8	1208.7	4003.7	4158.1	4419.4	6125.6
82.5°	251.6	263.1	265.0	303.1	417.6	592.9	718.7	2743.5	2741.6	3124.8	4322.1
85°	205.9	211.6	215.4	238.3	308.8	394.7	472.8	1498.5	1336.5	1872.2	3753.9
87.5°	154.5	148.7	154.5	160.2	204.0	232.6	253.6	276.4	165.8	339.3	2183.0
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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CATALOG NUMBER: NAV-AF-06-D-UNV-SLR-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°	10203.7	10316.2	10249.5	10169.4	9969.2	9675.6	9450.6	9254.2
5°	10930.1	11137.9	11046.4	10749.0	10230.4	9641.3	9021.7	8644.1
7.5°	10838.6	11250.4	11214.2	10718.5	9974.9	9107.4	8236.2	7738.6
10°	10106.4	10684.1	10783.3	10276.2	9488.8	8518.3	7509.8	6947.4
12.5°	9309.6	9795.7	9997.8	9805.3	9063.7	8077.9	7050.3	6487.9
15°	8642.3	8888.2	9088.4	9212.3	8752.9	7921.6	6970.3	6390.7
17.5°	8148.5	8100.8	8268.6	8566.0	8585.1	8129.4	7332.5	6684.3
20°	7910.2	7536.5	7633.7	8051.2	8539.3	8657.5	8055.0	7288.6
22.5°	7896.8	7313.4	7332.5	7782.4	8670.8	9378.2	8956.9	8083.7
25°	8102.7	7288.6	7305.8	7753.9	8903.5	10104.6	9999.8	8981.6
27.5°	8453.6	7395.4	7384.0	7879.7	9214.2	10710.8	11052.2	10079.7
30°	8832.9	7549.8	7521.2	8081.7	9519.3	11084.5	11799.4	10907.2
32.5°	9305.8	7824.3	7725.2	8377.3	9820.5	11442.9	12438.2	11681.3
35°	9755.7	8226.7	8083.7	8800.5	10142.7	11841.4	13153.1	12537.3
37.5°	10215.2	8827.2	8747.2	9410.6	10598.4	12274.2	13971.1	13507.8
40°	10804.3	9681.3	9643.2	10297.1	11206.5	12747.0	14888.0	14518.1
42.5°	11439.1	10588.9	10556.4	11315.2	11961.6	13221.7	15673.6	15385.7
45°	12085.4	11688.8	11696.5	12401.9	12756.5	13669.8	16291.2	16079.7
47.5°	12848.1	12891.9	13164.6	13528.7	13530.6	14169.3	16838.4	16726.0
50°	13816.6	14344.6	14848.0	14905.2	14312.3	14828.9	17507.6	17465.7
52.5°	14912.8	16020.5	16605.9	16424.7	15074.9	15646.9	18497.1	18495.2
55°	16215.0	17772.6	18323.6	18014.8	15988.1	16712.6	19789.7	19705.8
57.5°	17564.8	19458.0	19902.2	19499.9	17130.1	17953.7	21086.2	20641.9
60°	19023.3	20908.8	21360.6	20756.3	18411.3	19191.1	21944.0	20905.0
62.5°	19978.4	21757.2	22081.3	21501.8	19559.0	20451.2	22220.5	20590.5
65°	20028.0	21192.9	21278.7	21072.8	20047.1	21545.6	21820.2	19658.1
67.5°	18666.8	18735.4	18847.9	19069.0	19004.2	21057.5	20275.9	17480.9
70°	15755.5	14840.4	15210.3	15423.7	15904.2	18729.7	17421.8	14217.0
72.5°	12047.3	10710.8	11130.3	11057.8	12056.8	15362.8	13328.5	10951.1
75°	8670.8	7303.9	7336.3	7340.1	8663.3	12262.7	9088.4	7776.7
77.5°	5893.0	5168.6	5275.4	5208.7	5797.8	9606.9	6543.2	5605.2
80°	4030.4	4011.3	4034.2	3877.9	3866.4	6209.5	4844.5	4470.8
82.5°	2989.5	2762.6	2730.2	2564.2	2962.8	4747.2	3677.7	3212.5
85°	2358.4	1529.0	1328.8	1603.4	2566.2	4367.8	2242.1	1647.3
87.5°	999.0	600.6	364.2	720.7	1426.1	3201.0	621.5	320.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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