

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: P195755

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195755
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-SLR-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 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: 21457 lumens
Efficiency: N/A
Efficacy: 102.2 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

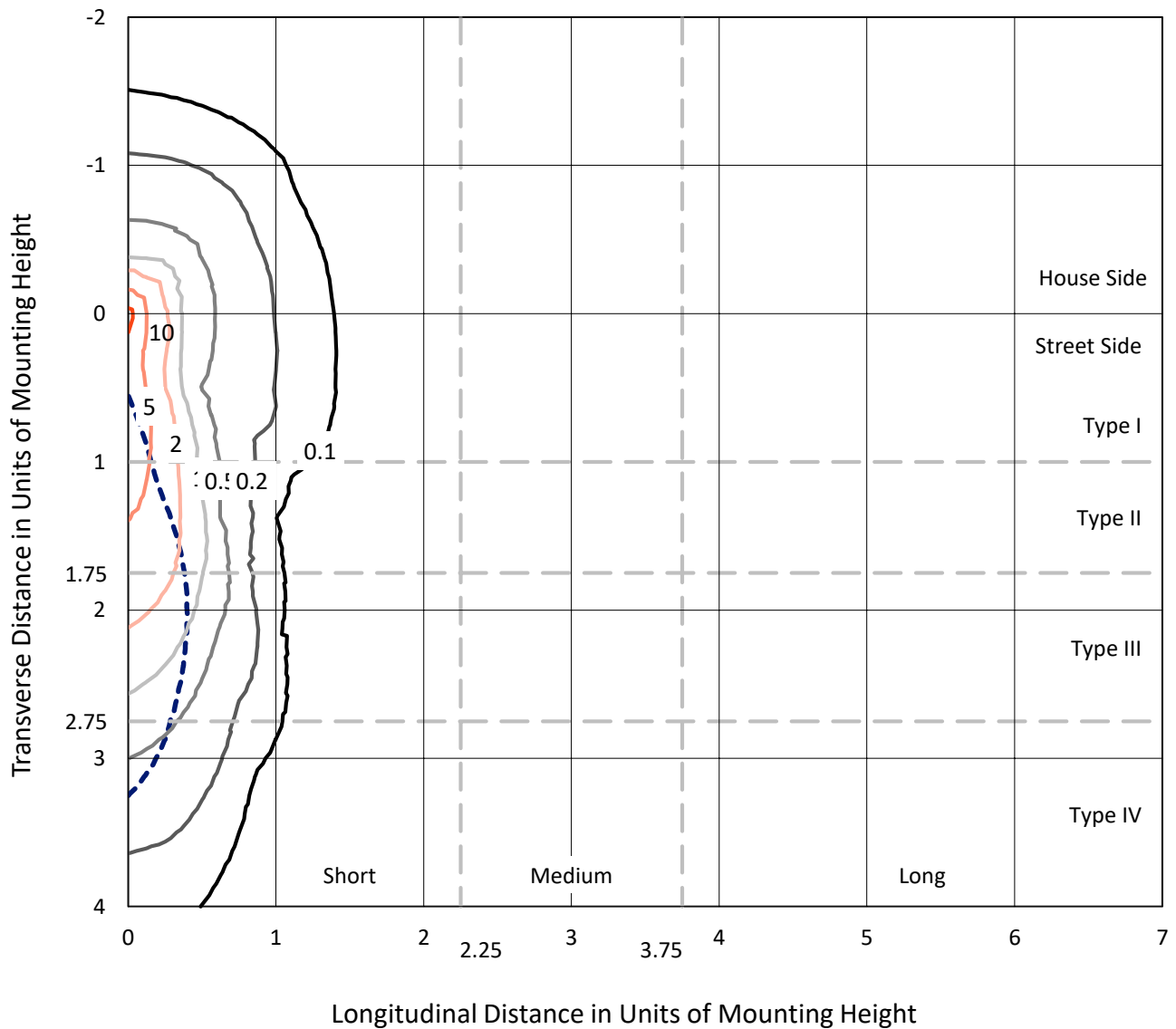


REPORT NUMBER: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

Iso-Footcandle Lines of Horizontal Illumination

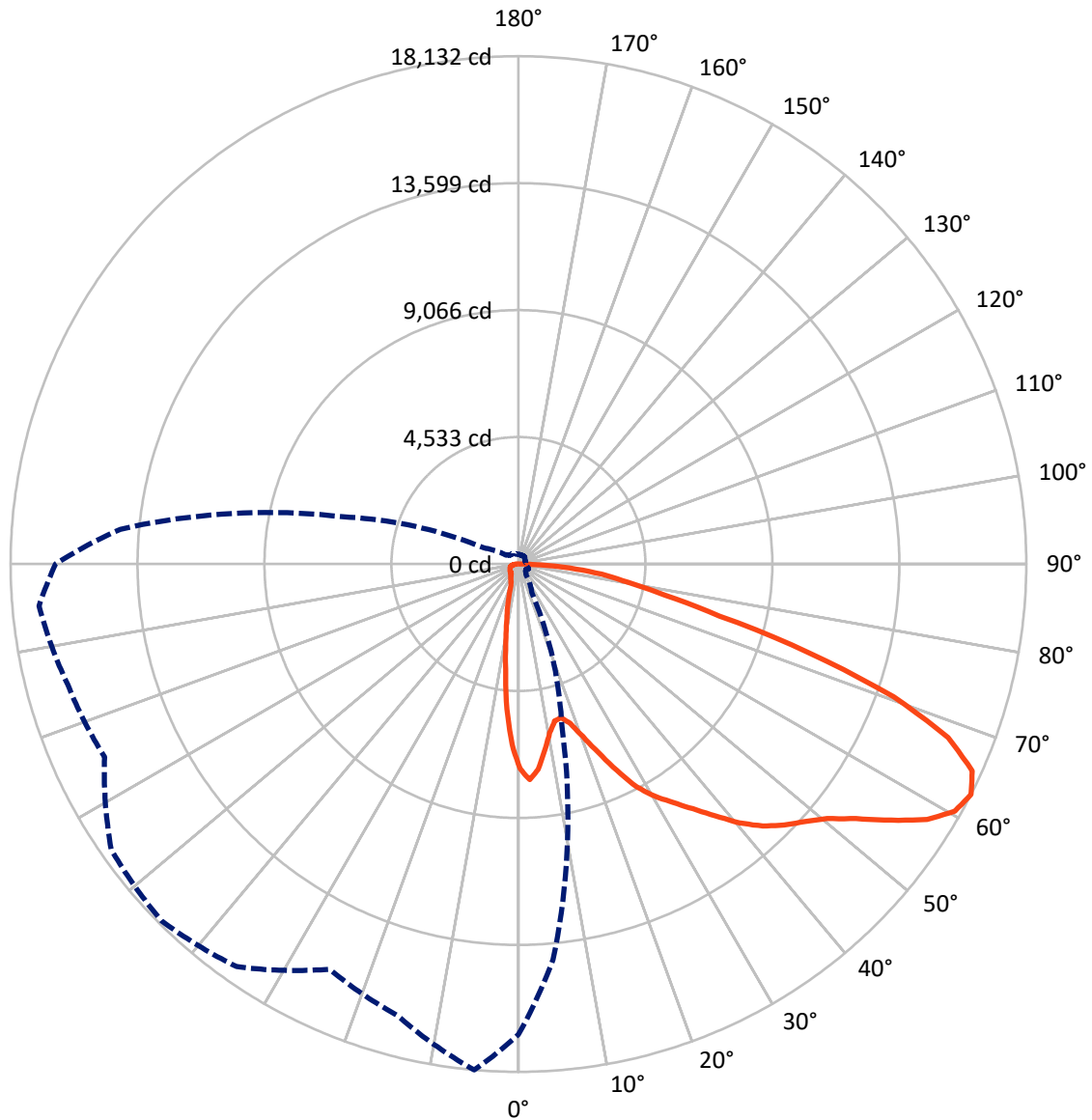
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195755
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3801.1	0.0	3801.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17655.9	0.0	17655.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	21457.0	0.0	21457.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	532.0	2.5
10°-20°	971.7	4.5
20°-30°	1397.5	6.5
30°-40°	2140.5	10.0
40°-50°	3129.4	14.6
50°-60°	4553.3	21.2
60°-70°	5275.6	24.6
70°-80°	2750.1	12.8
80°-90°	706.9	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°	21457.0	100.0
0°-180°	21457.0	100.0



REPORT NUMBER: P195755

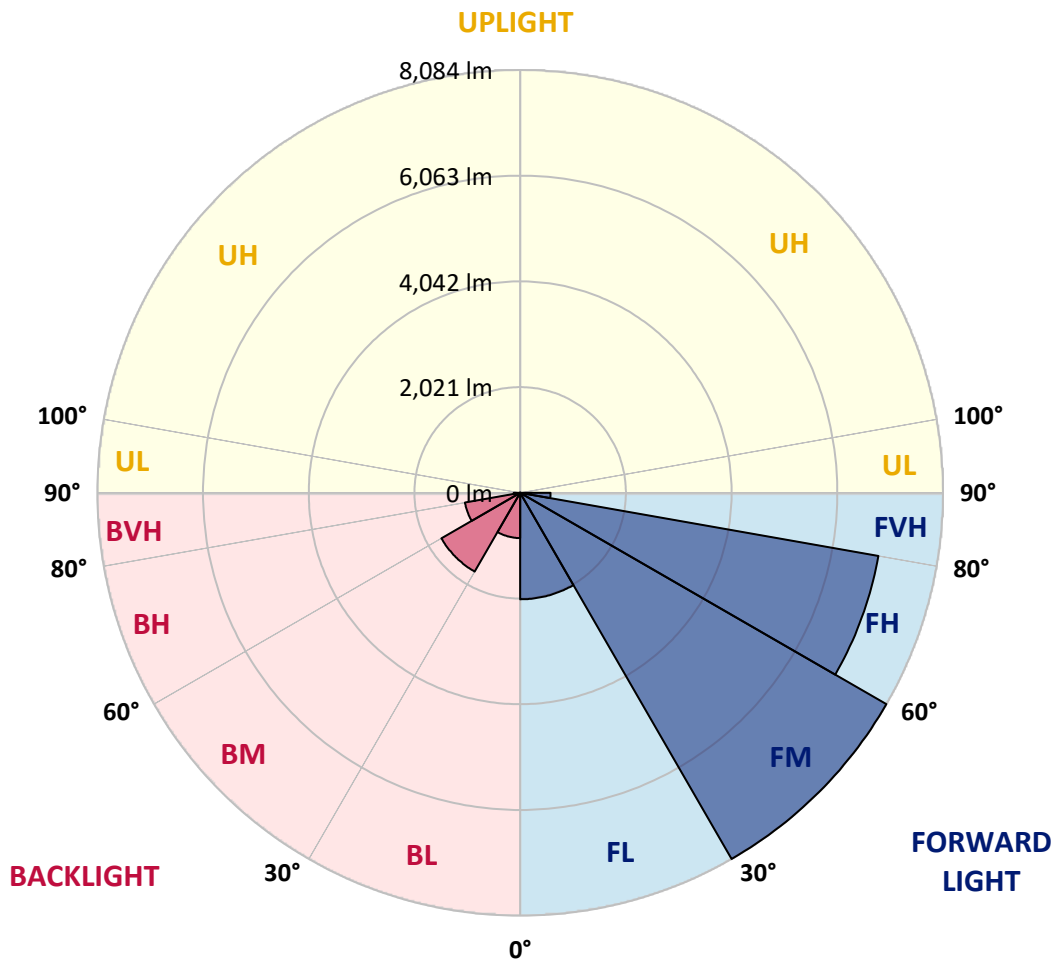
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2036.4	9.5			
FM	(30°-60°)	8084.0	37.7			
FH	(60°-80°)	6953.9	32.4			G3/7500
FVH	(80°-90°)	581.6	2.7			G4/750
BL	(0°-30°)	864.8	4.0	B2/1000		
BM	(30°-60°)	1739.2	8.1	B2/2500		
BH	(60°-80°)	1071.8	5.0	B3/2500		G3/2500
BVH	(80°-90°)	125.4	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: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	7551.6	7445.8	7201.5	6986.9	6719.3	6518.6	6274.3	6145.2	6050.3	5986.5	5935.2
5°	7053.8	6798.6	6331.9	5922.7	5480.9	5162.0	4788.6	4584.8	4458.8	4390.3	4359.2
7.5°	6314.8	5977.2	5373.5	4824.4	4272.1	3873.8	3590.7	3288.8	3128.6	3024.4	2990.1
10°	5669.1	5288.0	4567.7	3950.0	3523.8	3240.6	2997.9	2721.0	2515.6	2336.7	2269.8
12.5°	5294.2	4850.8	4029.4	3470.9	3113.0	2809.7	2553.0	2254.3	2038.0	1851.3	1779.8
15°	5214.9	4720.1	3803.8	3165.9	2727.2	2361.6	2053.6	1728.4	1516.9	1362.8	1313.0
17.5°	5454.4	4844.6	3708.9	2887.5	2358.5	1912.0	1532.4	1183.9	1008.1	924.1	903.9
20°	5947.6	5118.4	3663.8	2637.0	2000.7	1471.7	1059.5	804.3	717.2	692.3	690.8
22.5°	6596.4	5563.3	3713.6	2431.6	1664.6	1085.9	776.3	661.2	625.4	611.4	611.4
25°	7329.1	6165.4	3845.8	2274.5	1369.1	844.8	669.0	606.7	577.2	563.2	564.7
27.5°	8225.2	6898.2	4026.3	2129.8	1157.5	740.5	625.4	572.5	543.0	529.0	530.5
30°	8900.4	7528.3	4181.8	1997.6	1048.6	698.5	602.1	552.3	519.6	499.4	497.8
32.5°	9532.1	8083.7	4307.9	1902.7	986.3	623.9	544.5	507.2	479.2	455.8	451.2
35°	10230.6	8606.4	4367.0	1899.6	945.9	563.2	497.8	452.7	424.7	398.3	393.6
37.5°	11022.5	9245.8	4416.8	1918.2	924.1	524.3	476.1	432.5	409.2	382.7	376.5
40°	11847.0	9871.2	4455.7	1933.8	921.0	497.8	458.9	420.1	396.7	368.7	362.5
42.5°	12554.9	10425.1	4508.6	1927.6	899.2	493.2	448.1	409.2	387.4	359.4	351.6
45°	13121.2	10865.3	4591.0	1926.0	866.6	504.1	444.9	406.0	379.6	350.0	343.8
47.5°	13648.6	11361.6	4765.3	1919.8	830.8	501.0	462.1	402.9	376.5	346.9	342.3
50°	14252.2	12029.0	5062.4	1873.1	781.0	479.2	493.2	399.8	368.7	342.3	337.6
52.5°	15092.3	13006.0	5502.7	1789.1	712.5	455.8	497.8	398.3	356.3	332.9	326.7
55°	16080.2	14053.1	5977.2	1667.8	622.3	415.4	472.9	392.0	343.8	318.9	309.6
57.5°	16844.1	14826.3	6308.6	1493.5	533.6	392.0	421.6	378.0	328.3	303.4	295.6
60°	17058.8	14860.5	6367.7	1285.0	488.5	376.5	362.5	412.3	315.8	289.4	281.6
62.5°	16802.1	14180.6	5981.8	1138.8	472.9	360.9	329.8	393.6	303.4	276.9	269.1
65°	16041.3	13032.5	5118.4	1117.0	488.5	346.9	312.7	314.3	290.9	264.5	256.7
67.5°	14264.6	11342.9	4032.5	1131.0	507.2	332.9	300.3	286.3	276.9	253.6	244.3
70°	11601.2	9132.2	3176.8	1155.9	524.3	314.3	284.7	267.6	259.8	234.9	230.3
72.5°	8936.2	7308.9	2506.3	1138.8	541.4	295.6	262.9	248.9	239.6	216.2	211.6
75°	6345.9	5807.6	1842.0	977.0	496.3	269.1	238.0	225.6	217.8	192.9	191.4
77.5°	4573.9	4349.9	1281.9	734.3	392.0	236.5	210.0	199.1	194.5	166.5	166.5
80°	3648.2	3310.6	767.0	479.2	286.3	196.0	175.8	171.1	166.5	138.5	140.0
82.5°	2621.4	2296.3	490.1	298.7	210.0	149.4	136.9	135.3	127.6	102.7	102.7
85°	1344.2	1173.0	314.3	200.7	147.8	96.5	90.2	87.1	82.5	63.8	63.8
87.5°	261.4	359.4	174.2	98.0	71.6	34.2	34.2	29.6	34.2	23.3	24.9
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: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	6033.2	6002.1	5980.3	5969.4	6126.5	6191.9	6266.5	6373.9	6447.0	6415.9	6515.5
5°	4505.4	4527.2	4577.0	4654.8	4874.2	4978.4	5045.3	5134.0	5197.7	5134.0	5239.8
7.5°	3080.4	3113.0	3218.8	3379.1	3643.6	3760.2	3783.6	3785.1	3771.1	3666.9	3738.5
10°	2268.3	2202.9	2226.3	2341.4	2577.9	2682.1	2693.0	2665.0	2660.3	2618.3	2699.2
12.5°	1758.0	1667.8	1614.9	1633.5	1810.9	1896.5	1910.5	1926.0	1989.8	2010.0	2109.6
15°	1311.5	1264.8	1225.9	1208.8	1325.5	1392.4	1400.2	1437.5	1504.4	1523.1	1608.6
17.5°	922.6	935.0	955.2	963.0	1047.0	1090.6	1078.1	1078.1	1089.0	1084.4	1132.6
20°	704.8	729.6	768.5	805.9	882.1	907.0	875.9	837.0	812.1	799.7	810.5
22.5°	622.3	639.4	664.3	712.5	776.3	788.8	748.3	717.2	693.9	681.4	683.0
25°	577.2	594.3	614.5	653.4	707.9	714.1	676.7	656.5	637.9	625.4	622.3
27.5°	538.3	549.2	561.6	586.5	642.5	645.6	620.7	608.3	595.9	586.5	583.4
30°	502.5	507.2	511.8	536.7	578.7	583.4	571.0	564.7	560.1	553.8	553.8
32.5°	455.8	462.1	469.8	491.6	532.1	538.3	530.5	525.8	518.1	515.0	510.3
35°	399.8	415.4	432.5	458.9	502.5	505.6	496.3	482.3	463.6	458.9	455.8
37.5°	376.5	379.6	401.4	432.5	477.6	480.7	468.3	444.9	430.9	432.5	435.6
40°	360.9	365.6	378.0	409.2	454.3	458.9	448.1	430.9	416.9	418.5	423.2
42.5°	348.5	354.7	362.5	382.7	427.8	437.2	434.1	418.5	404.5	407.6	413.8
45°	342.3	346.9	346.9	360.9	404.5	418.5	420.1	407.6	396.7	399.8	407.6
47.5°	339.2	339.2	334.5	345.4	388.9	402.9	406.0	399.8	393.6	396.7	404.5
50°	334.5	328.3	323.6	332.9	376.5	388.9	392.0	387.4	390.5	396.7	401.4
52.5°	320.5	314.3	314.3	320.5	364.0	376.5	378.0	374.9	381.2	388.9	396.7
55°	303.4	303.4	304.9	311.1	357.8	367.2	365.6	362.5	368.7	378.0	385.8
57.5°	287.8	286.3	294.0	301.8	350.0	356.3	353.2	353.2	357.8	365.6	373.4
60°	278.5	270.7	276.9	289.4	342.3	348.5	343.8	342.3	350.0	356.3	362.5
62.5°	269.1	261.4	266.0	278.5	331.4	336.0	332.9	332.9	340.7	345.4	351.6
65°	255.1	252.0	255.1	267.6	322.0	323.6	323.6	325.2	331.4	334.5	340.7
67.5°	242.7	242.7	244.3	256.7	314.3	311.1	311.1	318.9	320.5	323.6	329.8
70°	227.1	230.3	230.3	245.8	308.0	297.1	298.7	304.9	308.0	311.1	312.7
72.5°	210.0	211.6	214.7	234.9	298.7	283.1	284.7	289.4	290.9	295.6	297.1
75°	191.4	192.9	197.6	224.0	292.5	269.1	266.0	269.1	272.3	275.4	273.8
77.5°	169.6	172.7	177.4	217.8	272.3	266.0	242.7	245.8	248.9	248.9	247.4
80°	143.1	147.8	155.6	208.5	230.3	256.7	216.2	217.8	219.4	219.4	216.2
82.5°	107.3	116.7	127.6	172.7	180.5	219.4	186.7	189.8	185.1	182.0	180.5
85°	70.0	77.8	93.3	119.8	132.2	172.7	154.0	155.6	146.2	144.7	144.7
87.5°	28.0	29.6	42.0	60.7	79.3	107.3	110.5	113.6	105.8	105.8	108.9
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: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	6666.4	6821.9	7000.9	7182.9	7332.2	7525.1	7711.8	7911.0	8012.1	8071.2	8237.7
5°	5404.7	5617.8	5871.4	6156.1	6392.6	6797.1	7232.7	7718.1	7951.4	8181.7	8617.3
7.5°	3866.0	4074.5	4370.1	4738.8	5074.8	5608.5	6182.5	6839.1	7162.7	7536.0	8250.1
10°	2870.4	3091.3	3358.9	3671.6	4002.9	4558.3	5202.4	5939.8	6296.1	6717.7	7529.8
12.5°	2327.4	2585.7	2862.6	3142.6	3427.3	3800.7	4475.9	5295.8	5678.5	6103.2	6916.8
15°	1815.6	2092.5	2391.2	2696.1	2979.3	3396.2	4085.4	5054.6	5491.8	5902.5	6568.4
17.5°	1285.0	1546.4	1882.5	2252.7	2663.4	3156.6	4001.4	5160.4	5690.9	6120.3	6566.8
20°	875.9	1056.4	1392.4	1831.1	2338.3	2963.7	4032.5	5532.2	6195.0	6666.4	6835.9
22.5°	700.1	785.7	1012.8	1459.3	2058.3	2823.7	4160.1	6042.5	6918.4	7492.5	7326.0
25°	636.3	684.5	802.8	1152.8	1809.3	2730.3	4409.0	6716.2	7728.9	8310.8	7915.6
27.5°	597.4	639.4	715.6	947.4	1594.6	2669.7	4724.8	7509.6	8642.2	9119.8	8530.2
30°	572.5	614.5	684.5	851.0	1432.8	2579.4	5001.7	8234.6	9371.8	9681.4	8861.5
32.5°	524.3	557.0	614.5	762.3	1311.5	2473.6	5241.3	8883.3	10061.0	10163.7	9259.8
35°	474.5	508.7	566.3	690.8	1239.9	2391.2	5367.3	9458.9	10744.0	10646.0	9655.0
37.5°	455.8	483.8	536.7	639.4	1201.0	2336.7	5415.6	10025.2	11476.7	11179.6	9930.3
40°	443.4	468.3	515.0	605.2	1190.1	2285.4	5404.7	10563.5	12187.7	11731.9	10146.6
42.5°	434.1	455.8	499.4	581.8	1160.6	2237.2	5368.9	11028.7	12757.1	12207.9	10353.5
45°	426.3	449.6	493.2	594.3	1106.1	2184.3	5347.1	11453.4	13194.3	12609.3	10630.4
47.5°	423.2	449.6	494.7	591.2	1047.0	2125.1	5424.9	11924.8	13575.4	12946.9	10999.1
50°	418.5	448.1	529.0	563.2	966.1	2052.0	5687.8	12486.4	13975.3	13326.5	11476.7
52.5°	410.7	446.5	564.7	541.4	861.9	1950.9	6114.1	13279.8	14666.0	14065.5	12183.0
55°	401.4	449.6	539.8	507.2	751.4	1820.2	6540.4	14367.3	15786.2	15257.2	13197.4
57.5°	390.5	444.9	510.3	476.1	659.6	1655.3	6864.0	15258.8	16710.3	16486.2	14443.5
60°	382.7	455.8	458.9	457.4	600.5	1498.2	6895.1	15201.2	16976.3	17284.3	15663.3
62.5°	373.4	465.2	418.5	443.4	571.0	1351.9	6510.8	14260.0	16526.7	17181.7	16657.4
65°	360.9	406.0	396.7	430.9	571.0	1274.2	5616.2	12693.3	15283.7	16210.9	17197.2
67.5°	348.5	368.7	381.2	413.8	583.4	1201.0	4513.2	10706.6	13323.4	14644.2	16590.5
70°	331.4	348.5	364.0	398.3	577.2	1149.7	3551.8	8581.5	10964.9	12477.1	14911.8
72.5°	315.8	328.3	343.8	374.9	577.2	1126.4	2853.2	6731.7	8371.5	9645.6	12352.6
75°	292.5	303.4	317.4	351.6	566.3	1029.9	2142.3	5393.8	6125.0	6923.1	9746.8
77.5°	269.1	276.9	287.8	322.0	510.3	860.3	1515.3	4177.2	4538.1	4979.9	7598.3
80°	239.6	245.8	253.6	287.8	423.2	667.4	986.3	3267.1	3393.1	3606.2	4998.6
82.5°	205.4	214.7	216.2	247.4	340.7	483.8	586.5	2238.7	2237.2	2549.9	3526.9
85°	168.0	172.7	175.8	194.5	252.0	322.0	385.8	1222.8	1090.6	1527.7	3063.3
87.5°	126.0	121.3	126.0	130.7	166.5	189.8	206.9	225.6	135.3	276.9	1781.3
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: P195755

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	8326.4	8418.1	8363.7	8298.4	8135.0	7895.4	7711.8	7551.6
5°	8919.1	9088.7	9014.0	8771.3	8348.1	7867.4	7361.8	7053.8
7.5°	8844.4	9180.5	9150.9	8746.4	8139.7	7431.8	6720.8	6314.8
10°	8247.0	8718.4	8799.3	8385.5	7742.9	6951.1	6128.1	5669.1
12.5°	7596.7	7993.4	8158.3	8001.2	7396.0	6591.7	5753.1	5294.2
15°	7052.2	7252.9	7416.2	7517.4	7142.4	6464.1	5687.8	5214.9
17.5°	6649.3	6610.4	6747.3	6990.0	7005.5	6633.7	5983.4	5454.4
20°	6454.8	6149.9	6229.2	6569.9	6968.2	7064.6	6573.0	5947.6
22.5°	6443.9	5967.8	5983.4	6350.6	7075.5	7652.7	7308.9	6596.4
25°	6611.9	5947.6	5961.6	6327.2	7265.3	8245.5	8159.9	7329.1
27.5°	6898.2	6034.7	6025.4	6429.9	7518.9	8740.2	9018.7	8225.2
30°	7207.8	6160.8	6137.4	6594.8	7767.8	9045.1	9628.5	8900.4
32.5°	7593.6	6384.8	6303.9	6835.9	8013.6	9337.6	10149.7	9532.1
35°	7960.8	6713.0	6596.4	7181.3	8276.6	9662.7	10733.1	10230.6
37.5°	8335.7	7203.1	7137.8	7679.2	8648.4	10015.9	11400.5	11022.5
40°	8816.4	7900.1	7869.0	8402.6	9144.7	10401.7	12148.8	11847.0
42.5°	9334.5	8640.6	8614.2	9233.4	9760.8	10789.1	12789.8	12554.9
45°	9861.9	9538.3	9544.5	10120.1	10409.5	11154.7	13293.9	13121.2
47.5°	10484.2	10520.0	10742.4	11039.6	11041.1	11562.3	13740.4	13648.6
50°	11274.5	11705.4	12116.2	12162.8	11679.0	12100.6	14286.4	14252.2
52.5°	12169.0	13072.9	13550.5	13402.8	12301.3	12768.0	15093.8	15092.3
55°	13231.6	14502.7	14952.3	14700.2	13046.5	13637.7	16148.6	16080.2
57.5°	14333.1	15877.9	16240.4	15912.2	13978.4	14650.5	17206.6	16844.1
60°	15523.2	17061.9	17430.6	16937.4	15023.8	15660.1	17906.6	17058.8
62.5°	16302.7	17754.2	18018.7	17545.7	15960.4	16688.5	18132.2	16802.1
65°	16343.1	17293.7	17363.7	17195.7	16358.7	17581.5	17805.5	16041.3
67.5°	15232.3	15288.3	15380.1	15560.6	15507.7	17183.2	16545.4	14264.6
70°	12856.7	12109.9	12411.7	12586.0	12978.0	15283.7	14216.4	11601.2
72.5°	9830.8	8740.2	9082.4	9023.3	9838.5	12536.2	10876.2	8936.2
75°	7075.5	5960.1	5986.5	5989.6	7069.3	10006.6	7416.2	6345.9
77.5°	4808.8	4217.6	4304.7	4250.3	4731.0	7839.4	5339.3	4573.9
80°	3288.8	3273.3	3292.0	3164.4	3155.1	5067.1	3953.2	3648.2
82.5°	2439.4	2254.3	2227.8	2092.5	2417.6	3873.8	3001.0	2621.4
85°	1924.5	1247.7	1084.4	1308.4	2094.0	3564.2	1829.6	1344.2
87.5°	815.2	490.1	297.1	588.1	1163.7	2612.1	507.2	261.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)