

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: P197199

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197199
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-03-D-UNV-SLR-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA 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: 13055 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

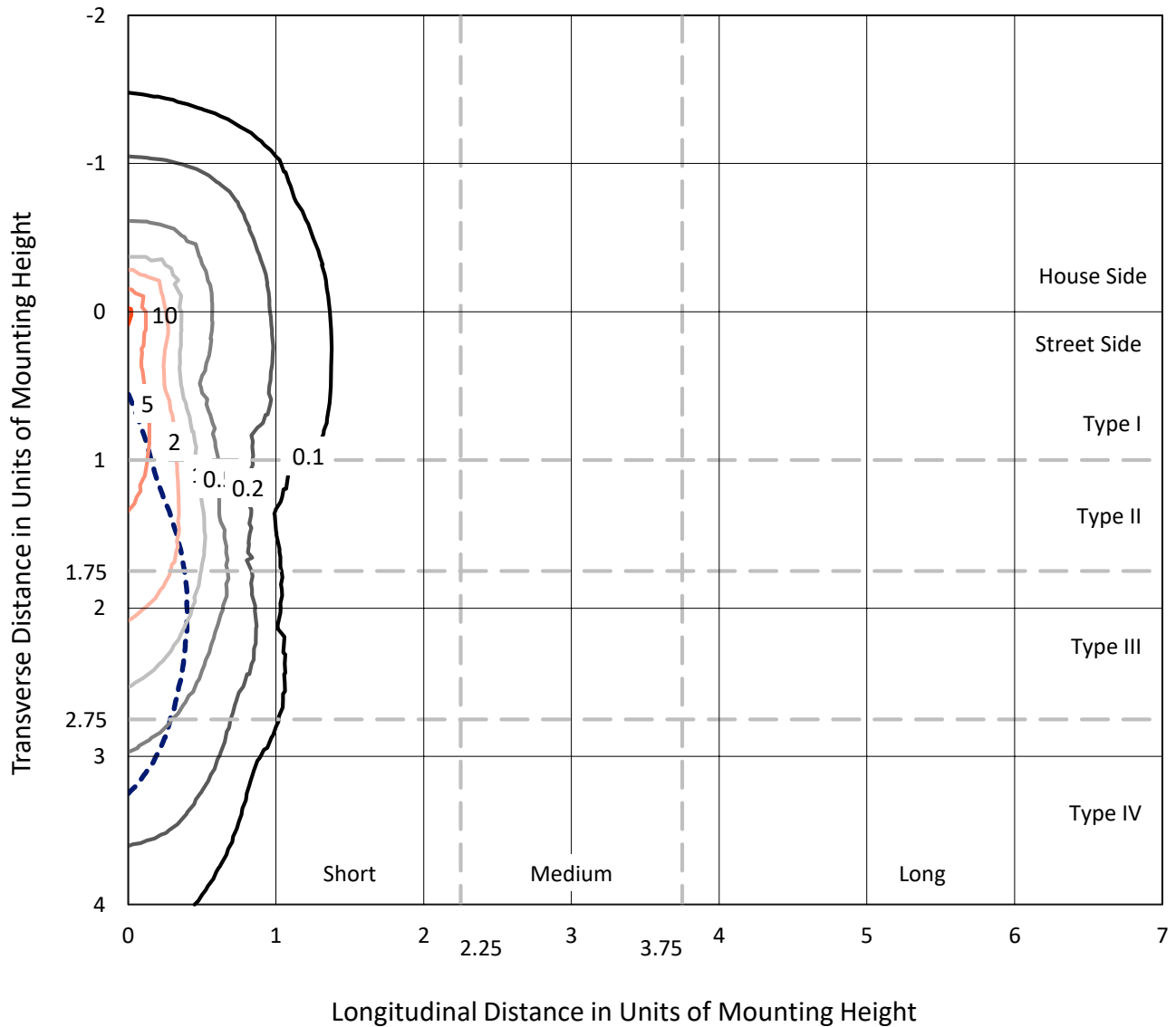
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197199
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

Iso-Footcandle Lines of Horizontal Illumination

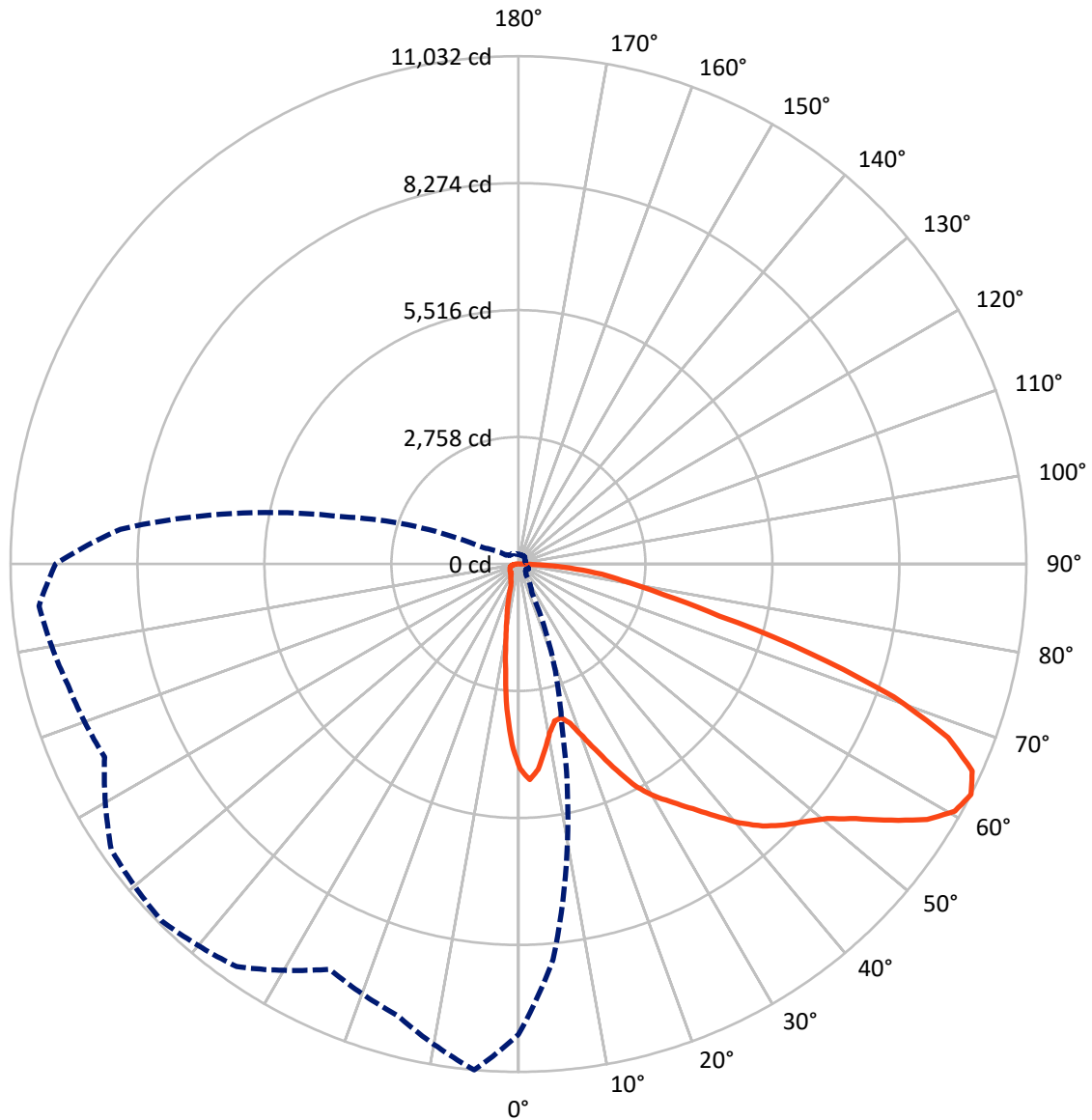
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.1 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197199
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197199

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2312.7	0.0	2312.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	10742.3	0.0	10742.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	13055.0	0.0	13055.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.7	2.5
10°-20°	591.2	4.5
20°-30°	850.3	6.5
30°-40°	1302.3	10.0
40°-50°	1904.0	14.6
50°-60°	2770.4	21.2
60°-70°	3209.8	24.6
70°-80°	1673.2	12.8
80°-90°	430.1	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°	13055.0	100.0
0°-180°	13055.0	100.0



REPORT NUMBER: P197199

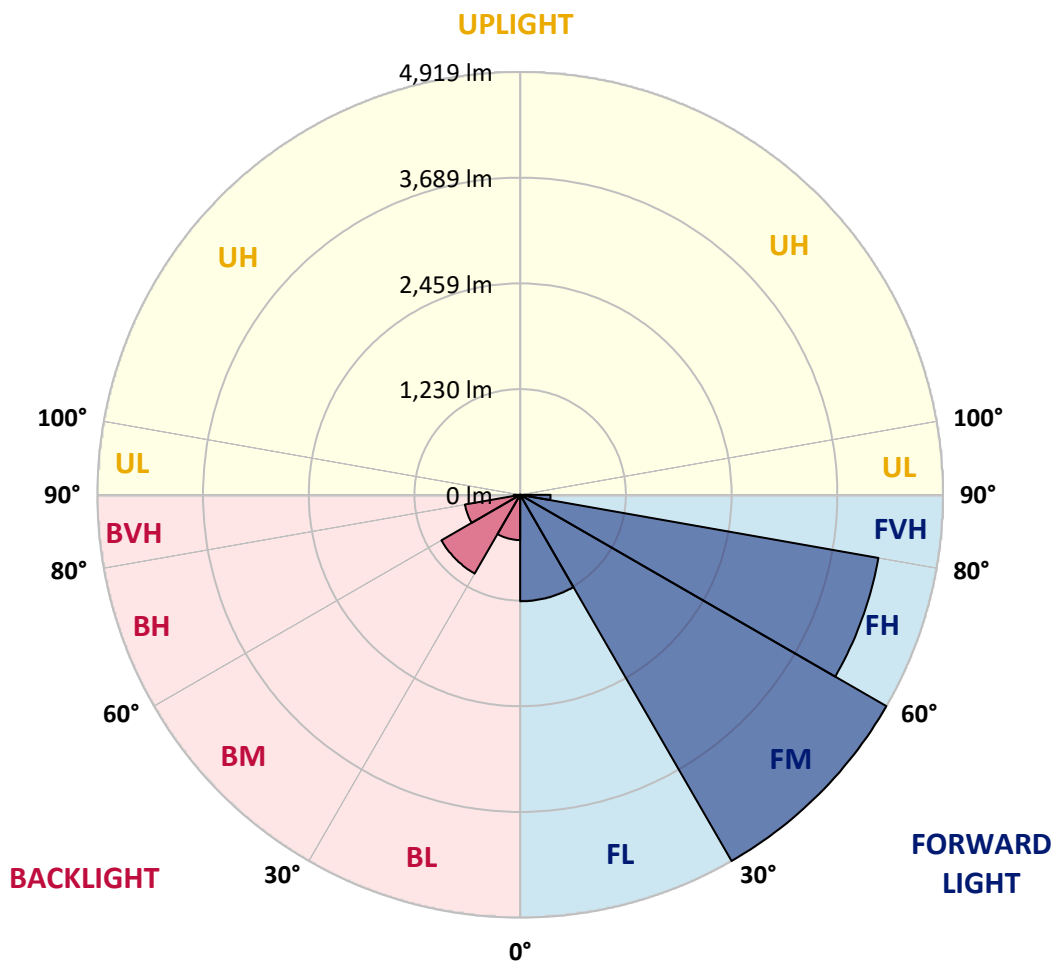
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1239.0	9.5			
FM	(30°-60°)	4918.5	37.7			
FH	(60°-80°)	4230.9	32.4			G2/5000
FVH	(80°-90°)	353.8	2.7			G3/500
BL	(0°-30°)	526.2	4.0	B2/1000		
BM	(30°-60°)	1058.1	8.1	B2/2500		
BH	(60°-80°)	652.1	5.0	B2/1000		G2/1000
BVH	(80°-90°)	76.3	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P197199
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7
2.5°	4594.6	4530.2	4381.6	4251.0	4088.2	3966.1	3817.5	3738.9	3681.2	3642.4	3611.1
5°	4291.7	4136.5	3852.5	3603.5	3334.7	3140.7	2913.5	2789.5	2712.8	2671.2	2652.3
7.5°	3842.1	3636.7	3269.4	2935.3	2599.2	2356.9	2184.7	2001.0	1903.5	1840.1	1819.3
10°	3449.3	3217.3	2779.1	2403.3	2144.0	1971.7	1824.0	1655.5	1530.6	1421.7	1381.0
12.5°	3221.1	2951.4	2451.6	2111.8	1894.1	1709.5	1553.3	1371.6	1240.0	1126.4	1082.9
15°	3172.9	2871.9	2314.3	1926.2	1659.3	1436.9	1249.5	1051.6	922.9	829.2	798.9
17.5°	3318.6	2947.6	2256.6	1756.8	1435.0	1163.3	932.4	720.3	613.4	562.3	549.9
20°	3618.7	3114.2	2229.1	1604.4	1217.3	895.4	644.6	489.4	436.4	421.2	420.3
22.5°	4013.4	3384.9	2259.4	1479.5	1012.8	660.7	472.3	402.3	380.5	372.0	372.0
25°	4459.2	3751.2	2339.9	1383.9	833.0	514.0	407.0	369.2	351.2	342.7	343.6
27.5°	5004.4	4197.0	2449.7	1295.8	704.2	450.6	380.5	348.3	330.3	321.8	322.8
30°	5415.3	4580.4	2544.3	1215.4	638.0	425.0	366.3	336.0	316.1	303.8	302.9
32.5°	5799.6	4918.3	2621.0	1157.6	600.1	379.6	331.3	308.6	291.5	277.3	274.5
35°	6224.6	5236.4	2657.0	1155.7	575.5	342.7	302.9	275.4	258.4	242.3	239.5
37.5°	6706.4	5625.4	2687.3	1167.1	562.3	319.0	289.6	263.1	248.9	232.9	229.1
40°	7208.0	6005.9	2710.9	1176.6	560.4	302.9	279.2	255.6	241.4	224.3	220.5
42.5°	7638.7	6342.9	2743.1	1172.8	547.1	300.1	272.6	248.9	235.7	218.7	213.9
45°	7983.3	6610.8	2793.3	1171.8	527.2	306.7	270.7	247.1	231.0	213.0	209.2
47.5°	8304.1	6912.7	2899.3	1168.1	505.5	304.8	281.1	245.2	229.1	211.1	208.2
50°	8671.4	7318.8	3080.1	1139.7	475.2	291.5	300.1	243.3	224.3	208.2	205.4
52.5°	9182.5	7913.2	3348.0	1088.5	433.5	277.3	302.9	242.3	216.8	202.6	198.8
55°	9783.6	8550.2	3636.7	1014.7	378.6	252.7	287.8	238.5	209.2	194.0	188.4
57.5°	10248.4	9020.7	3838.3	908.7	324.7	238.5	256.5	230.0	199.7	184.6	179.8
60°	10379.0	9041.5	3874.3	781.9	297.2	229.1	220.5	250.8	192.2	176.1	171.3
62.5°	10222.8	8627.9	3639.5	692.9	287.8	219.6	200.7	239.5	184.6	168.5	163.8
65°	9759.9	7929.3	3114.2	679.6	297.2	211.1	190.3	191.2	177.0	160.9	156.2
67.5°	8679.0	6901.3	2453.5	688.1	308.6	202.6	182.7	174.2	168.5	154.3	148.6
70°	7058.5	5556.3	1932.9	703.3	319.0	191.2	173.2	162.8	158.1	142.9	140.1
72.5°	5437.0	4446.9	1524.9	692.9	329.4	179.8	160.0	151.4	145.8	131.6	128.7
75°	3861.0	3533.5	1120.7	594.4	302.0	163.8	144.8	137.3	132.5	117.4	116.4
77.5°	2782.9	2646.6	780.0	446.8	238.5	143.9	127.8	121.2	118.3	101.3	101.3
80°	2219.7	2014.3	466.7	291.5	174.2	119.3	107.0	104.1	101.3	84.2	85.2
82.5°	1594.9	1397.1	298.2	181.7	127.8	90.9	83.3	82.4	77.6	62.5	62.5
85°	817.8	713.7	191.2	122.1	89.9	58.7	54.9	53.0	50.2	38.8	38.8
87.5°	159.0	218.7	106.0	59.6	43.5	20.8	20.8	18.0	20.8	14.2	15.1
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: P197199

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7
2.5°	3670.7	3651.8	3638.6	3631.9	3727.5	3767.3	3812.7	3878.0	3922.5	3903.6	3964.2
5°	2741.2	2754.5	2784.8	2832.1	2965.6	3029.0	3069.7	3123.6	3162.4	3123.6	3188.0
7.5°	1874.2	1894.1	1958.4	2055.9	2216.8	2287.8	2302.0	2303.0	2294.5	2231.0	2274.6
10°	1380.1	1340.3	1354.5	1424.6	1568.4	1631.9	1638.5	1621.5	1618.6	1593.1	1642.3
12.5°	1069.6	1014.7	982.5	993.9	1101.8	1153.9	1162.4	1171.8	1210.6	1223.0	1283.5
15°	797.9	769.6	745.9	735.5	806.5	847.2	851.9	874.6	915.3	926.7	978.7
17.5°	561.3	568.9	581.2	585.9	637.0	663.5	656.0	656.0	662.6	659.8	689.1
20°	428.8	443.9	467.6	490.3	536.7	551.8	532.9	509.2	494.1	486.5	493.2
22.5°	378.6	389.0	404.2	433.5	472.3	479.9	455.3	436.4	422.2	414.6	415.5
25°	351.2	361.6	373.9	397.6	430.7	434.5	411.8	399.4	388.1	380.5	378.6
27.5°	327.5	334.1	341.7	356.9	390.9	392.8	377.7	370.1	362.5	356.9	355.0
30°	305.7	308.6	311.4	326.6	352.1	355.0	347.4	343.6	340.8	337.0	337.0
32.5°	277.3	281.1	285.9	299.1	323.7	327.5	322.8	319.9	315.2	313.3	310.5
35°	243.3	252.7	263.1	279.2	305.7	307.6	302.0	293.4	282.1	279.2	277.3
37.5°	229.1	231.0	244.2	263.1	290.6	292.5	284.9	270.7	262.2	263.1	265.0
40°	219.6	222.4	230.0	248.9	276.4	279.2	272.6	262.2	253.7	254.6	257.5
42.5°	212.0	215.8	220.5	232.9	260.3	266.0	264.1	254.6	246.1	248.0	251.8
45°	208.2	211.1	211.1	219.6	246.1	254.6	255.6	248.0	241.4	243.3	248.0
47.5°	206.3	206.3	203.5	210.1	236.6	245.2	247.1	243.3	239.5	241.4	246.1
50°	203.5	199.7	196.9	202.6	229.1	236.6	238.5	235.7	237.6	241.4	244.2
52.5°	195.0	191.2	191.2	195.0	221.5	229.1	230.0	228.1	231.9	236.6	241.4
55°	184.6	184.6	185.5	189.3	217.7	223.4	222.4	220.5	224.3	230.0	234.7
57.5°	175.1	174.2	178.9	183.6	213.0	216.8	214.9	214.9	217.7	222.4	227.2
60°	169.4	164.7	168.5	176.1	208.2	212.0	209.2	208.2	213.0	216.8	220.5
62.5°	163.8	159.0	161.9	169.4	201.6	204.5	202.6	202.6	207.3	210.1	213.9
65°	155.2	153.3	155.2	162.8	195.9	196.9	196.9	197.8	201.6	203.5	207.3
67.5°	147.7	147.7	148.6	156.2	191.2	189.3	189.3	194.0	195.0	196.9	200.7
70°	138.2	140.1	140.1	149.6	187.4	180.8	181.7	185.5	187.4	189.3	190.3
72.5°	127.8	128.7	130.6	142.9	181.7	172.3	173.2	176.1	177.0	179.8	180.8
75°	116.4	117.4	120.2	136.3	178.0	163.8	161.9	163.8	165.6	167.5	166.6
77.5°	103.2	105.1	107.9	132.5	165.6	161.9	147.7	149.6	151.4	151.4	150.5
80°	87.1	89.9	94.7	126.8	140.1	156.2	131.6	132.5	133.5	133.5	131.6
82.5°	65.3	71.0	77.6	105.1	109.8	133.5	113.6	115.5	112.6	110.7	109.8
85°	42.6	47.3	56.8	72.9	80.5	105.1	93.7	94.7	89.0	88.0	88.0
87.5°	17.0	18.0	25.6	36.9	48.3	65.3	67.2	69.1	64.4	64.4	66.3
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: P197199

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7
2.5°	4056.0	4150.7	4259.5	4370.3	4461.1	4578.5	4692.1	4813.2	4874.8	4910.7	5012.0
5°	3288.3	3418.0	3572.3	3745.5	3889.4	4135.5	4400.5	4695.9	4837.9	4977.9	5243.0
7.5°	2352.2	2479.0	2658.9	2883.2	3087.7	3412.3	3761.6	4161.1	4357.9	4585.1	5019.6
10°	1746.4	1880.8	2043.6	2233.9	2435.5	2773.4	3165.3	3614.0	3830.7	4087.2	4581.3
12.5°	1416.0	1573.2	1741.7	1912.0	2085.3	2312.4	2723.2	3222.1	3454.9	3713.3	4208.4
15°	1104.6	1273.1	1454.9	1640.4	1812.7	2066.3	2485.7	3075.4	3341.3	3591.2	3996.4
17.5°	781.9	940.9	1145.3	1370.6	1620.5	1920.6	2434.5	3139.7	3462.5	3723.8	3995.4
20°	532.9	642.7	847.2	1114.1	1422.7	1803.2	2453.5	3366.0	3769.2	4056.0	4159.2
22.5°	426.0	478.0	616.2	887.9	1252.3	1718.0	2531.1	3676.4	4209.3	4558.6	4457.3
25°	387.1	416.5	488.4	701.4	1100.8	1661.2	2682.5	4086.3	4702.5	5056.5	4816.1
27.5°	363.5	389.0	435.4	576.5	970.2	1624.3	2874.7	4569.0	5258.1	5548.7	5190.0
30°	348.3	373.9	416.5	517.8	871.8	1569.4	3043.2	5010.1	5702.1	5890.4	5391.6
32.5°	319.0	338.9	373.9	463.8	797.9	1505.0	3188.9	5404.8	6121.4	6183.9	5633.9
35°	288.7	309.5	344.5	420.3	754.4	1454.9	3265.6	5755.1	6536.9	6477.3	5874.3
37.5°	277.3	294.4	326.6	389.0	730.7	1421.7	3295.0	6099.6	6982.7	6802.0	6041.9
40°	269.8	284.9	313.3	368.2	724.1	1390.5	3288.3	6427.1	7415.3	7138.0	6173.4
42.5°	264.1	277.3	303.8	354.0	706.1	1361.1	3266.6	6710.1	7761.8	7427.6	6299.3
45°	259.4	273.6	300.1	361.6	673.0	1329.0	3253.3	6968.6	8027.7	7671.8	6467.8
47.5°	257.5	273.6	301.0	359.7	637.0	1293.0	3300.6	7255.4	8259.7	7877.2	6692.2
50°	254.6	272.6	321.8	342.7	587.8	1248.5	3460.6	7597.1	8502.9	8108.2	6982.7
52.5°	249.9	271.7	343.6	329.4	524.4	1187.0	3720.0	8079.8	8923.2	8557.8	7412.5
55°	244.2	273.6	328.5	308.6	457.2	1107.5	3979.3	8741.5	9604.7	9282.9	8029.6
57.5°	237.6	270.7	310.5	289.6	401.3	1007.1	4176.2	9283.8	10167.0	10030.7	8787.8
60°	232.9	277.3	279.2	278.3	365.4	911.5	4195.1	9248.8	10328.8	10516.2	9529.9
62.5°	227.2	283.0	254.6	269.8	347.4	822.6	3961.3	8676.1	10055.3	10453.8	10134.8
65°	219.6	247.1	241.4	262.2	347.4	775.2	3417.1	7723.0	9299.0	9863.1	10463.2
67.5°	212.0	224.3	231.9	251.8	355.0	730.7	2746.0	6514.2	8106.3	8909.9	10094.1
70°	201.6	212.0	221.5	242.3	351.2	699.5	2161.0	5221.2	6671.3	7591.4	9072.7
72.5°	192.2	199.7	209.2	228.1	351.2	685.3	1736.0	4095.8	5093.4	5868.7	7515.7
75°	178.0	184.6	193.1	213.9	344.5	626.6	1303.4	3281.7	3726.6	4212.2	5930.2
77.5°	163.8	168.5	175.1	195.9	310.5	523.4	921.9	2541.5	2761.1	3029.9	4623.0
80°	145.8	149.6	154.3	175.1	257.5	406.1	600.1	1987.8	2064.4	2194.1	3041.3
82.5°	124.9	130.6	131.6	150.5	207.3	294.4	356.9	1362.1	1361.1	1551.4	2145.8
85°	102.2	105.1	107.0	118.3	153.3	195.9	234.7	744.0	663.5	929.5	1863.8
87.5°	76.7	73.8	76.7	79.5	101.3	115.5	125.9	137.3	82.4	168.5	1083.8
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: P197199
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-8030

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7	4450.7
2.5°	5066.0	5121.8	5088.7	5048.9	4949.5	4803.8	4692.1	4594.6
5°	5426.6	5529.8	5484.3	5336.7	5079.2	4786.7	4479.1	4291.7
7.5°	5381.2	5585.6	5567.6	5321.5	4952.4	4521.7	4089.1	3842.1
10°	5017.7	5304.5	5353.7	5101.9	4711.0	4229.2	3728.5	3449.3
12.5°	4622.0	4863.4	4963.7	4868.1	4499.9	4010.6	3500.4	3221.1
15°	4290.7	4412.8	4512.2	4573.8	4345.6	3932.9	3460.6	3172.9
17.5°	4045.6	4021.9	4105.2	4252.9	4262.3	4036.1	3640.5	3318.6
20°	3927.3	3741.7	3790.0	3997.3	4239.6	4298.3	3999.2	3618.7
22.5°	3920.6	3631.0	3640.5	3863.8	4304.9	4656.1	4446.9	4013.4
25°	4022.9	3618.7	3627.2	3849.6	4420.4	5016.8	4964.7	4459.2
27.5°	4197.0	3671.7	3666.0	3912.1	4574.7	5317.8	5487.2	5004.4
30°	4385.4	3748.4	3734.2	4012.5	4726.2	5503.3	5858.2	5415.3
32.5°	4620.1	3884.7	3835.4	4159.2	4875.7	5681.2	6175.3	5799.6
35°	4843.5	4084.4	4013.4	4369.3	5035.7	5879.1	6530.3	6224.6
37.5°	5071.7	4382.6	4342.8	4672.2	5261.9	6093.9	6936.4	6706.4
40°	5364.1	4806.6	4787.7	5112.4	5563.9	6328.7	7391.7	7208.0
42.5°	5679.3	5257.2	5241.1	5617.8	5938.7	6564.4	7781.6	7638.7
45°	6000.2	5803.3	5807.1	6157.4	6333.4	6786.8	8088.3	7983.3
47.5°	6378.8	6400.6	6536.0	6716.8	6717.7	7034.8	8360.0	8304.1
50°	6859.7	7121.9	7371.8	7400.2	7105.8	7362.3	8692.2	8671.4
52.5°	7404.0	7953.9	8244.5	8154.6	7484.4	7768.4	9183.5	9182.5
55°	8050.5	8823.8	9097.4	8944.0	7937.8	8297.5	9825.3	9783.6
57.5°	8720.6	9660.6	9881.1	9681.4	8504.8	8913.7	10468.9	10248.4
60°	9444.7	10380.9	10605.2	10305.2	9140.9	9528.0	10894.9	10379.0
62.5°	9919.0	10802.1	10963.0	10675.3	9710.7	10153.7	11032.1	10222.8
65°	9943.6	10521.9	10564.5	10462.3	9953.0	10697.0	10833.3	9759.9
67.5°	9267.7	9301.8	9357.7	9467.5	9435.3	10454.7	10066.6	8679.0
70°	7822.3	7368.0	7551.6	7657.6	7896.2	9299.0	8649.6	7058.5
72.5°	5981.3	5317.8	5526.0	5490.0	5986.0	7627.4	6617.4	5437.0
75°	4304.9	3626.3	3642.4	3644.2	4301.2	6088.3	4512.2	3861.0
77.5°	2925.8	2566.1	2619.1	2586.0	2878.5	4769.7	3248.6	2782.9
80°	2001.0	1991.6	2002.9	1925.3	1919.6	3082.9	2405.2	2219.7
82.5°	1484.2	1371.6	1355.5	1273.1	1470.9	2356.9	1825.9	1594.9
85°	1170.9	759.1	659.8	796.1	1274.1	2168.6	1113.2	817.8
87.5°	496.0	298.2	180.8	357.8	708.0	1589.3	308.6	159.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)