

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: P196718

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196718
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-02-D-UNV-SLR-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 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: 10404.8 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

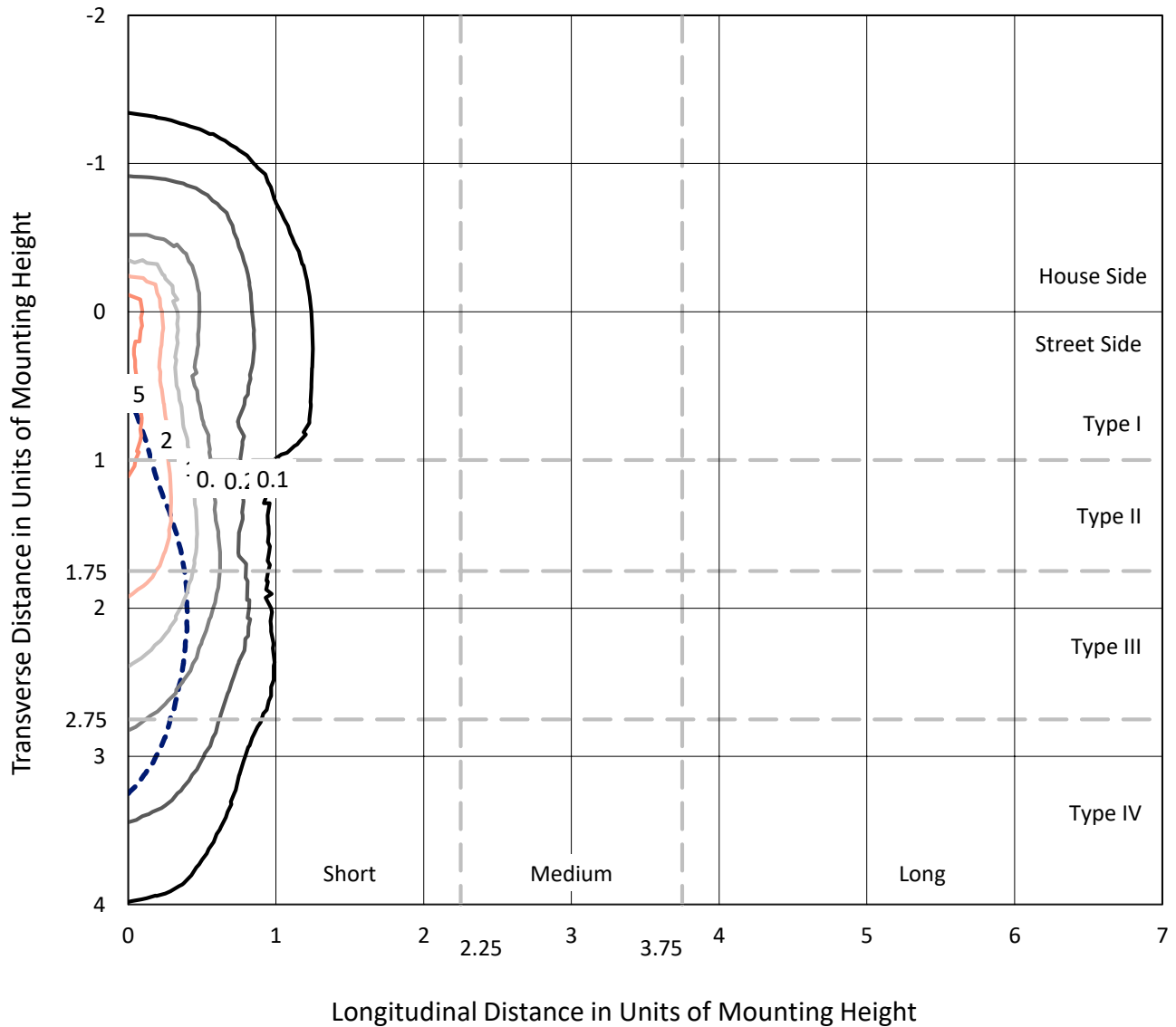
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196718
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

Iso-Footcandle Lines of Horizontal Illumination

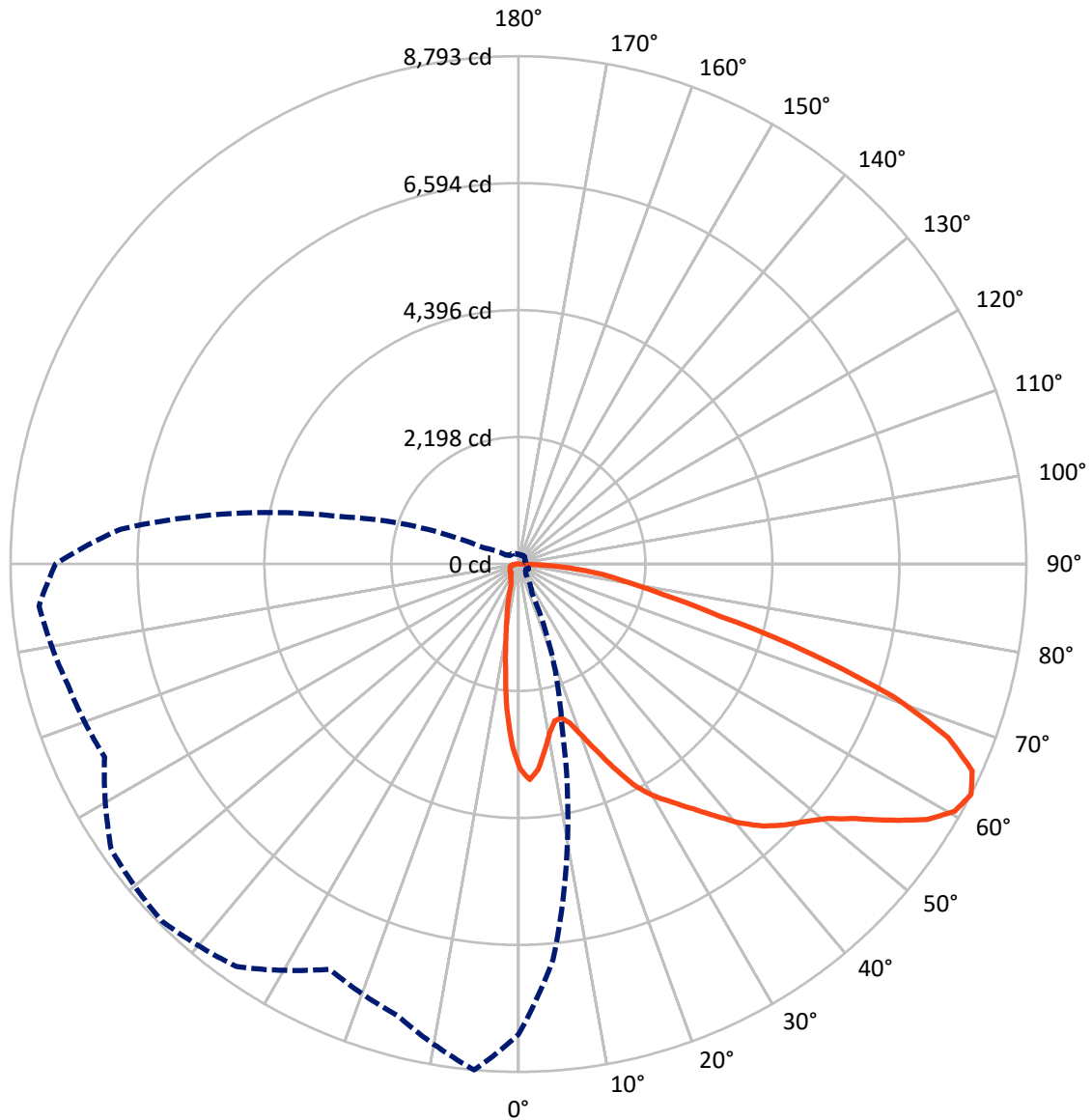
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196718
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196718

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1843.2	0.0	1843.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	8561.5	0.0	8561.5
	% Fixture	82.3	0.0	82.3
Total	Lumens	10404.8	0.0	10404.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.0	2.5
10°-20°	471.2	4.5
20°-30°	677.7	6.5
30°-40°	1037.9	10.0
40°-50°	1517.5	14.6
50°-60°	2208.0	21.2
60°-70°	2558.2	24.6
70°-80°	1333.6	12.8
80°-90°	342.8	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°	10404.8	100.0
0°-180°	10404.8	100.0



REPORT NUMBER: P196718

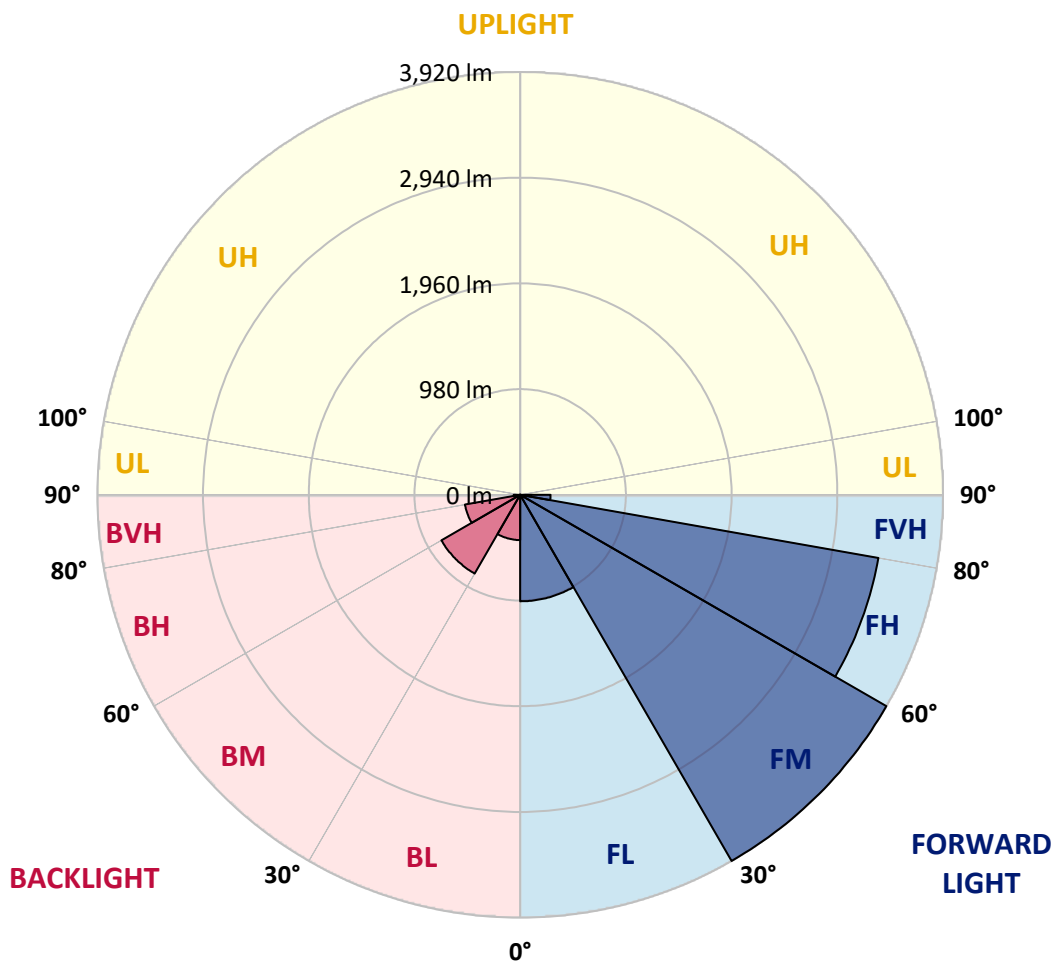
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	987.5	9.5			
FM	(30°-60°)	3920.0	37.7			
FH	(60°-80°)	3372.0	32.4			G2/5000
FVH	(80°-90°)	282.0	2.7			G3/500
BL	(0°-30°)	419.4	4.0	B1/500		
BM	(30°-60°)	843.3	8.1	B1/1000		
BH	(60°-80°)	519.7	5.0	B2/1000		G2/1000
BVH	(80°-90°)	60.8	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: P196718
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	3661.9	3610.6	3492.2	3388.0	3258.2	3161.0	3042.6	2979.8	2933.8	2902.9	2878.0
5°	3420.5	3296.7	3070.4	2872.0	2657.7	2503.1	2322.1	2223.2	2162.1	2128.9	2113.8
7.5°	3062.1	2898.4	2605.8	2339.3	2071.5	1878.5	1741.1	1594.7	1517.1	1466.6	1450.0
10°	2749.1	2564.2	2214.9	1915.5	1708.7	1571.3	1453.7	1319.5	1219.9	1133.1	1100.7
12.5°	2567.3	2352.3	1953.9	1683.0	1509.5	1362.5	1238.0	1093.1	988.2	897.8	863.0
15°	2528.7	2288.9	1844.6	1535.2	1322.5	1145.1	995.8	838.1	735.6	660.8	636.8
17.5°	2644.9	2349.2	1798.5	1400.1	1143.6	927.2	743.1	574.0	488.8	448.1	438.3
20°	2884.1	2482.0	1776.7	1278.7	970.1	713.7	513.7	390.0	347.8	335.8	335.0
22.5°	3198.7	2697.7	1800.7	1179.1	807.2	526.5	376.4	320.5	303.3	296.5	296.5
25°	3553.9	2989.7	1864.8	1103.0	663.9	409.6	324.4	294.2	279.9	273.0	273.8
27.5°	3988.5	3345.0	1952.4	1032.8	561.3	359.1	303.3	277.6	263.4	256.5	257.2
30°	4316.0	3650.6	2027.9	968.7	508.5	338.7	291.9	267.8	252.0	242.1	241.4
32.5°	4622.2	3919.9	2088.9	922.5	478.3	302.5	264.1	246.0	232.4	221.0	218.7
35°	4960.9	4173.3	2117.6	921.2	458.7	273.0	241.4	219.5	206.0	193.2	190.8
37.5°	5345.0	4483.5	2141.7	930.2	448.1	254.2	230.9	209.8	198.5	185.6	182.6
40°	5744.8	4786.6	2160.6	937.8	446.7	241.4	222.6	203.7	192.4	178.7	175.8
42.5°	6088.0	5055.2	2186.3	934.7	436.1	239.2	217.3	198.5	187.8	174.3	170.5
45°	6362.6	5268.7	2226.2	933.9	420.2	244.4	215.8	196.8	184.1	169.8	166.7
47.5°	6618.4	5509.4	2310.8	930.9	402.8	242.9	224.1	195.3	182.6	168.3	166.0
50°	6911.0	5833.1	2454.8	908.3	378.7	232.4	239.2	193.9	178.7	166.0	163.7
52.5°	7318.4	6306.8	2668.3	867.5	345.5	221.0	241.4	193.2	172.7	161.4	158.4
55°	7797.5	6814.5	2898.4	808.7	301.8	201.5	229.3	190.1	166.7	154.6	150.1
57.5°	8167.9	7189.5	3059.0	724.2	258.7	190.1	204.5	183.3	159.2	147.1	143.3
60°	8272.0	7206.0	3087.7	623.1	236.9	182.6	175.8	200.0	153.2	140.3	136.6
62.5°	8147.6	6876.3	2900.7	552.2	229.3	175.1	159.9	190.8	147.1	134.3	130.6
65°	7778.6	6319.7	2482.0	541.7	236.9	168.3	151.7	152.4	141.1	128.3	124.4
67.5°	6917.1	5500.3	1955.4	548.5	246.0	161.4	145.7	138.8	134.3	122.9	118.4
70°	5625.5	4428.3	1540.4	560.5	254.2	152.4	138.1	129.8	125.9	113.9	111.7
72.5°	4333.2	3544.2	1215.3	552.2	262.6	143.3	127.5	120.7	116.2	104.9	102.6
75°	3077.2	2816.1	893.2	473.7	240.7	130.6	115.4	109.4	105.7	93.5	92.8
77.5°	2218.0	2109.2	621.5	356.0	190.1	114.7	101.8	96.5	94.3	80.8	80.8
80°	1769.0	1605.3	371.9	232.4	138.8	95.0	85.2	83.0	80.8	67.2	67.8
82.5°	1271.1	1113.5	237.6	144.9	101.8	72.4	66.4	65.7	61.8	49.8	49.8
85°	651.8	568.8	152.4	97.4	71.7	46.8	43.7	42.3	40.0	30.9	30.9
87.5°	126.7	174.3	84.4	47.5	34.8	16.6	16.6	14.3	16.6	11.4	12.0
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: P196718

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	2925.5	2910.4	2900.0	2894.6	2970.9	3002.6	3038.7	3090.7	3126.2	3111.1	3159.4
5°	2184.7	2195.3	2219.5	2257.2	2363.5	2414.1	2446.6	2489.5	2520.5	2489.5	2540.9
7.5°	1493.7	1509.5	1560.9	1638.6	1766.8	1823.4	1834.7	1835.4	1828.7	1778.0	1812.8
10°	1099.9	1068.2	1079.6	1135.4	1250.0	1300.6	1305.8	1292.3	1290.1	1269.7	1308.9
12.5°	852.4	808.7	783.1	792.1	878.1	919.6	926.4	933.9	964.9	974.7	1023.0
15°	636.0	613.4	594.5	586.1	642.8	675.2	678.9	697.1	729.6	738.6	780.0
17.5°	447.3	453.4	463.2	467.0	507.7	528.9	522.8	522.8	528.0	525.9	549.2
20°	341.8	353.8	372.7	390.8	427.7	439.8	424.7	405.9	393.8	387.8	393.0
22.5°	301.8	310.1	322.1	345.5	376.4	382.5	362.8	347.8	336.4	330.4	331.2
25°	279.9	288.2	297.9	316.9	343.3	346.3	328.3	318.4	309.3	303.3	301.8
27.5°	261.0	266.3	272.4	284.4	311.6	313.0	301.0	295.0	288.9	284.4	282.9
30°	243.6	246.0	248.2	260.2	280.7	282.9	276.9	273.8	271.6	268.6	268.6
32.5°	221.0	224.1	227.8	238.4	258.0	261.0	257.2	255.0	251.2	249.6	247.5
35°	193.9	201.5	209.8	222.6	243.6	245.2	240.7	233.9	224.8	222.6	221.0
37.5°	182.6	184.1	194.6	209.8	231.6	233.2	227.0	215.8	209.0	209.8	211.2
40°	175.1	177.3	183.3	198.5	220.2	222.6	217.3	209.0	202.1	202.9	205.2
42.5°	169.1	172.0	175.8	185.6	207.5	212.0	210.5	202.9	196.1	197.6	200.7
45°	166.0	168.3	168.3	175.1	196.1	202.9	203.7	197.6	192.4	193.9	197.6
47.5°	164.4	164.4	162.2	167.5	188.6	195.3	196.8	193.9	190.8	192.4	196.1
50°	162.2	159.2	156.9	161.4	182.6	188.6	190.1	187.8	189.3	192.4	194.6
52.5°	155.3	152.4	152.4	155.3	176.6	182.6	183.3	181.8	184.8	188.6	192.4
55°	147.1	147.1	147.8	150.9	173.5	178.1	177.3	175.8	178.7	183.3	187.1
57.5°	139.6	138.8	142.6	146.4	169.8	172.7	171.2	171.2	173.5	177.3	181.1
60°	135.1	131.2	134.3	140.3	166.0	169.1	166.7	166.0	169.8	172.7	175.8
62.5°	130.6	126.7	129.0	135.1	160.7	162.9	161.4	161.4	165.2	167.5	170.5
65°	123.7	122.3	123.7	129.8	156.1	156.9	156.9	157.7	160.7	162.2	165.2
67.5°	117.7	117.7	118.4	124.4	152.4	150.9	150.9	154.6	155.3	156.9	159.9
70°	110.2	111.7	111.7	119.2	149.3	144.1	144.9	147.8	149.3	150.9	151.7
72.5°	101.8	102.6	104.2	113.9	144.9	137.3	138.1	140.3	141.1	143.3	144.1
75°	92.8	93.5	95.8	108.6	141.8	130.6	129.0	130.6	131.9	133.6	132.8
77.5°	82.3	83.7	86.0	105.7	131.9	129.0	117.7	119.2	120.7	120.7	119.9
80°	69.4	71.7	75.4	101.1	111.7	124.4	104.9	105.7	106.4	106.4	104.9
82.5°	52.0	56.6	61.8	83.7	87.5	106.4	90.5	92.0	89.8	88.3	87.5
85°	34.0	37.7	45.3	58.1	64.1	83.7	74.8	75.4	70.9	70.2	70.2
87.5°	13.5	14.3	20.3	29.4	38.5	52.0	53.5	55.0	51.4	51.4	52.8
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: P196718
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	3232.7	3308.1	3394.8	3483.0	3555.6	3649.0	3739.5	3836.1	3885.2	3913.7	3994.5
5°	2620.8	2724.2	2847.1	2985.2	3099.8	3296.1	3507.2	3742.5	3855.8	3967.4	4178.6
7.5°	1874.7	1975.7	2119.1	2297.9	2460.8	2719.6	2998.0	3316.3	3473.3	3654.2	4000.6
10°	1391.9	1499.0	1628.7	1780.4	1941.1	2210.5	2522.7	2880.3	3053.0	3257.4	3651.3
12.5°	1128.5	1253.9	1388.1	1523.8	1662.0	1842.9	2170.4	2568.0	2753.6	2959.5	3354.0
15°	880.4	1014.7	1159.5	1307.4	1444.6	1646.9	1981.1	2451.0	2663.0	2862.1	3185.1
17.5°	623.1	749.8	912.9	1092.4	1291.6	1530.7	1940.3	2502.4	2759.6	2967.8	3184.4
20°	424.7	512.2	675.2	888.0	1133.9	1437.1	1955.4	2682.7	3004.0	3232.7	3314.8
22.5°	339.5	381.0	491.1	707.7	998.1	1369.2	2017.3	2930.2	3354.8	3633.2	3552.4
25°	308.5	331.9	389.3	559.0	877.4	1324.0	2137.9	3256.8	3747.8	4030.0	3838.4
27.5°	289.6	310.1	347.0	459.4	773.2	1294.5	2291.1	3641.5	4190.6	4422.3	4136.3
30°	277.6	297.9	331.9	412.7	694.8	1250.8	2425.4	3993.0	4544.5	4694.7	4297.0
32.5°	254.2	270.1	297.9	369.7	636.0	1199.4	2541.6	4307.6	4878.8	4928.4	4490.2
35°	230.1	246.7	274.6	335.0	601.3	1159.5	2602.7	4586.7	5209.9	5162.4	4681.8
37.5°	221.0	234.6	260.2	310.1	582.4	1133.1	2626.0	4861.4	5565.2	5421.1	4815.4
40°	215.0	227.0	249.6	293.5	577.1	1108.2	2620.8	5122.4	5910.0	5688.9	4920.2
42.5°	210.5	221.0	242.1	282.1	562.8	1084.8	2603.4	5347.9	6186.0	5919.7	5020.6
45°	206.7	218.0	239.2	288.2	536.4	1059.2	2592.8	5553.8	6398.1	6114.3	5154.9
47.5°	205.2	218.0	240.0	286.7	507.7	1030.6	2630.6	5782.4	6582.9	6278.1	5333.6
50°	202.9	217.3	256.5	273.0	468.5	995.1	2758.1	6054.8	6776.8	6462.1	5565.2
52.5°	199.2	216.6	273.8	262.6	417.9	945.9	2964.8	6439.5	7111.6	6820.5	5907.7
55°	194.6	218.0	261.7	246.0	364.4	882.6	3171.5	6966.9	7654.9	7398.4	6399.6
57.5°	189.3	215.8	247.5	230.9	319.9	802.7	3328.4	7399.1	8103.0	7994.4	7003.8
60°	185.6	221.0	222.6	221.8	291.1	726.5	3343.6	7371.2	8232.0	8381.4	7595.2
62.5°	181.1	225.5	202.9	215.0	276.9	655.5	3157.1	6914.8	8013.9	8331.6	8077.3
65°	175.1	196.8	192.4	209.0	276.9	617.9	2723.4	6155.1	7411.3	7860.8	8339.1
67.5°	169.1	178.7	184.8	200.7	282.9	582.4	2188.5	5191.8	6460.7	7101.2	8045.0
70°	160.7	169.1	176.6	193.2	279.9	557.6	1722.3	4161.2	5317.0	6050.3	7230.9
72.5°	153.2	159.2	166.7	181.8	279.9	546.2	1383.5	3264.3	4059.4	4677.3	5989.9
75°	141.8	147.1	153.9	170.5	274.6	499.5	1038.8	2615.5	2970.1	3357.1	4726.3
77.5°	130.6	134.3	139.6	156.1	247.5	417.2	734.8	2025.5	2200.6	2414.8	3684.4
80°	116.2	119.2	122.9	139.6	205.2	323.6	478.3	1584.3	1645.3	1748.7	2423.9
82.5°	99.5	104.2	104.9	119.9	165.2	234.6	284.4	1085.6	1084.8	1236.5	1710.2
85°	81.5	83.7	85.2	94.3	122.3	156.1	187.1	592.9	528.9	740.8	1485.4
87.5°	61.0	58.9	61.0	63.4	80.8	92.0	100.3	109.4	65.7	134.3	863.8
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: P196718

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2	3547.2
2.5°	4037.5	4082.0	4055.7	4024.0	3944.8	3828.6	3739.5	3661.9
5°	4325.0	4407.2	4371.0	4253.4	4048.2	3815.0	3569.8	3420.5
7.5°	4288.8	4451.8	4437.3	4241.2	3947.0	3603.8	3258.9	3062.1
10°	3999.1	4227.7	4266.9	4066.2	3754.7	3370.6	2971.7	2749.1
12.5°	3683.7	3876.1	3956.1	3879.9	3586.4	3196.4	2789.8	2567.3
15°	3419.7	3517.0	3596.3	3645.2	3463.4	3134.5	2758.1	2528.7
17.5°	3224.3	3205.4	3271.9	3389.6	3397.1	3216.8	2901.4	2644.9
20°	3130.1	2982.1	3020.6	3185.8	3379.0	3425.8	3187.3	2884.1
22.5°	3124.7	2893.8	2901.4	3079.5	3431.0	3710.9	3544.2	3198.7
25°	3206.2	2884.1	2890.9	3068.1	3523.1	3998.4	3956.9	3553.9
27.5°	3345.0	2926.3	2921.8	3117.9	3646.0	4238.1	4373.2	3988.5
30°	3495.1	2987.4	2976.1	3197.9	3766.7	4386.1	4668.9	4316.0
32.5°	3682.2	3096.1	3056.8	3314.8	3886.0	4527.9	4921.7	4622.2
35°	3860.2	3255.3	3198.7	3482.3	4013.4	4685.6	5204.6	4960.9
37.5°	4042.0	3492.9	3461.3	3723.7	4193.7	4856.8	5528.2	5345.0
40°	4275.2	3830.8	3815.8	4074.5	4434.4	5044.0	5891.2	5744.8
42.5°	4526.4	4190.0	4177.1	4477.3	4733.1	5231.8	6201.9	6088.0
45°	4782.2	4625.3	4628.2	4907.4	5047.7	5409.1	6446.3	6362.6
47.5°	5084.0	5101.2	5209.2	5353.2	5354.0	5606.7	6662.8	6618.4
50°	5467.2	5676.1	5875.3	5898.0	5663.2	5867.8	6927.7	6911.0
52.5°	5900.9	6339.2	6570.9	6499.2	5965.0	6191.4	7319.2	7318.4
55°	6416.1	7032.5	7250.6	7128.3	6326.4	6613.0	7830.7	7797.5
57.5°	6950.3	7699.4	7875.2	7716.0	6778.3	7104.1	8343.7	8167.9
60°	7527.4	8273.5	8452.3	8213.1	7285.2	7593.8	8683.2	8272.0
62.5°	7905.4	8609.2	8737.5	8508.1	7739.4	8092.4	8792.5	8147.6
65°	7925.0	8385.8	8419.8	8338.3	7932.6	8525.5	8634.1	7778.6
67.5°	7386.4	7413.5	7458.0	7545.6	7519.9	8332.3	8023.0	6917.1
70°	6234.4	5872.2	6018.6	6103.1	6293.3	7411.3	6893.7	5625.5
72.5°	4767.1	4238.1	4404.2	4375.5	4770.8	6078.9	5274.1	4333.2
75°	3431.0	2890.1	2902.9	2904.4	3428.0	4852.3	3596.3	3077.2
77.5°	2331.8	2045.3	2087.4	2061.0	2294.1	3801.4	2589.1	2218.0
80°	1594.7	1587.2	1596.3	1534.4	1529.9	2457.1	1917.0	1769.0
82.5°	1183.0	1093.1	1080.3	1014.7	1172.4	1878.5	1455.3	1271.1
85°	933.2	605.1	525.9	634.5	1015.4	1728.4	887.1	651.8
87.5°	395.3	237.6	144.1	285.1	564.4	1266.7	246.0	126.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)