

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: P196713

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196713
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 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: 12501.4 lumens
Efficiency: N/A
Efficacy: 100.8 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): 124
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

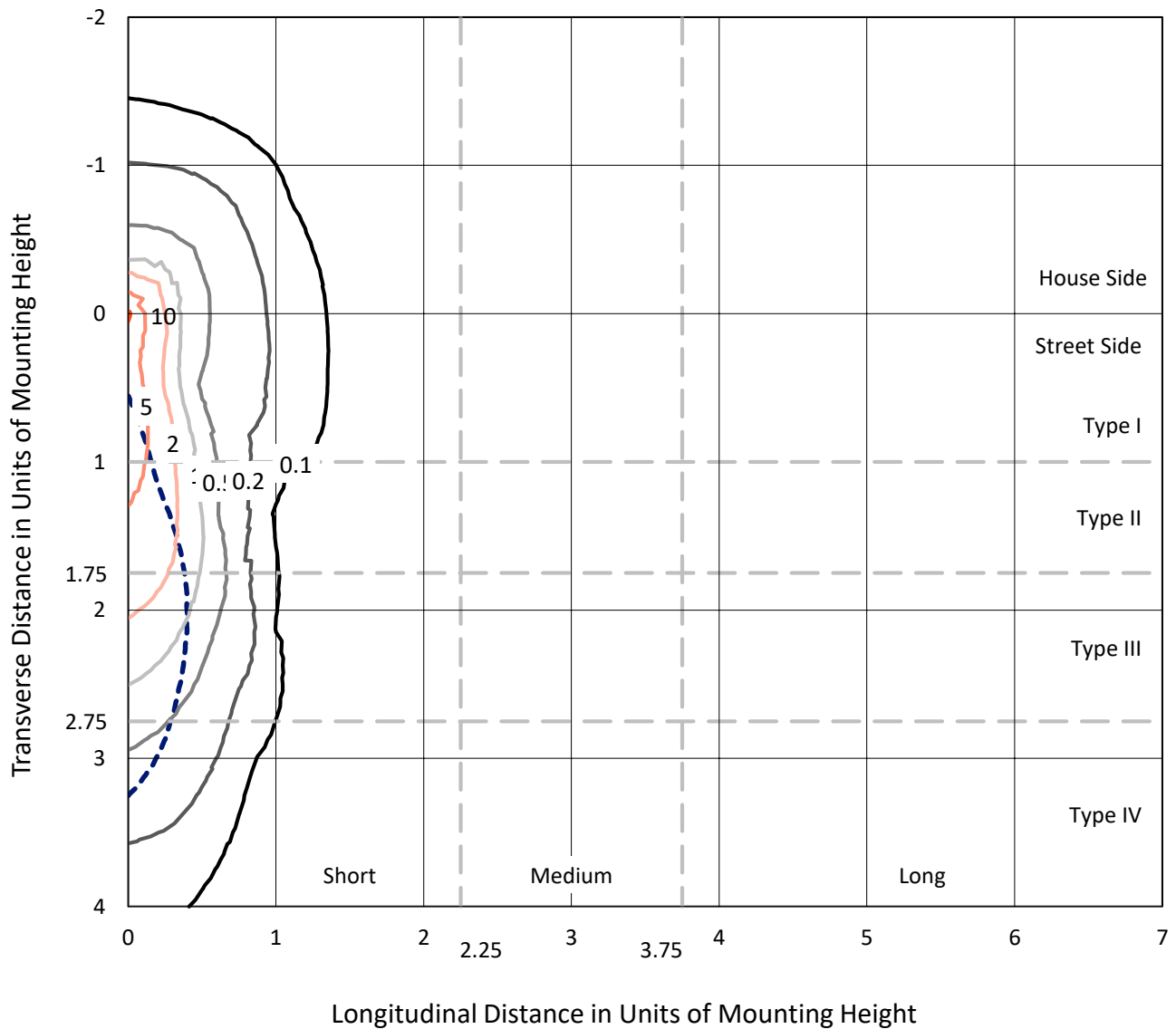


REPORT NUMBER: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

Iso-Footcandle Lines of Horizontal Illumination

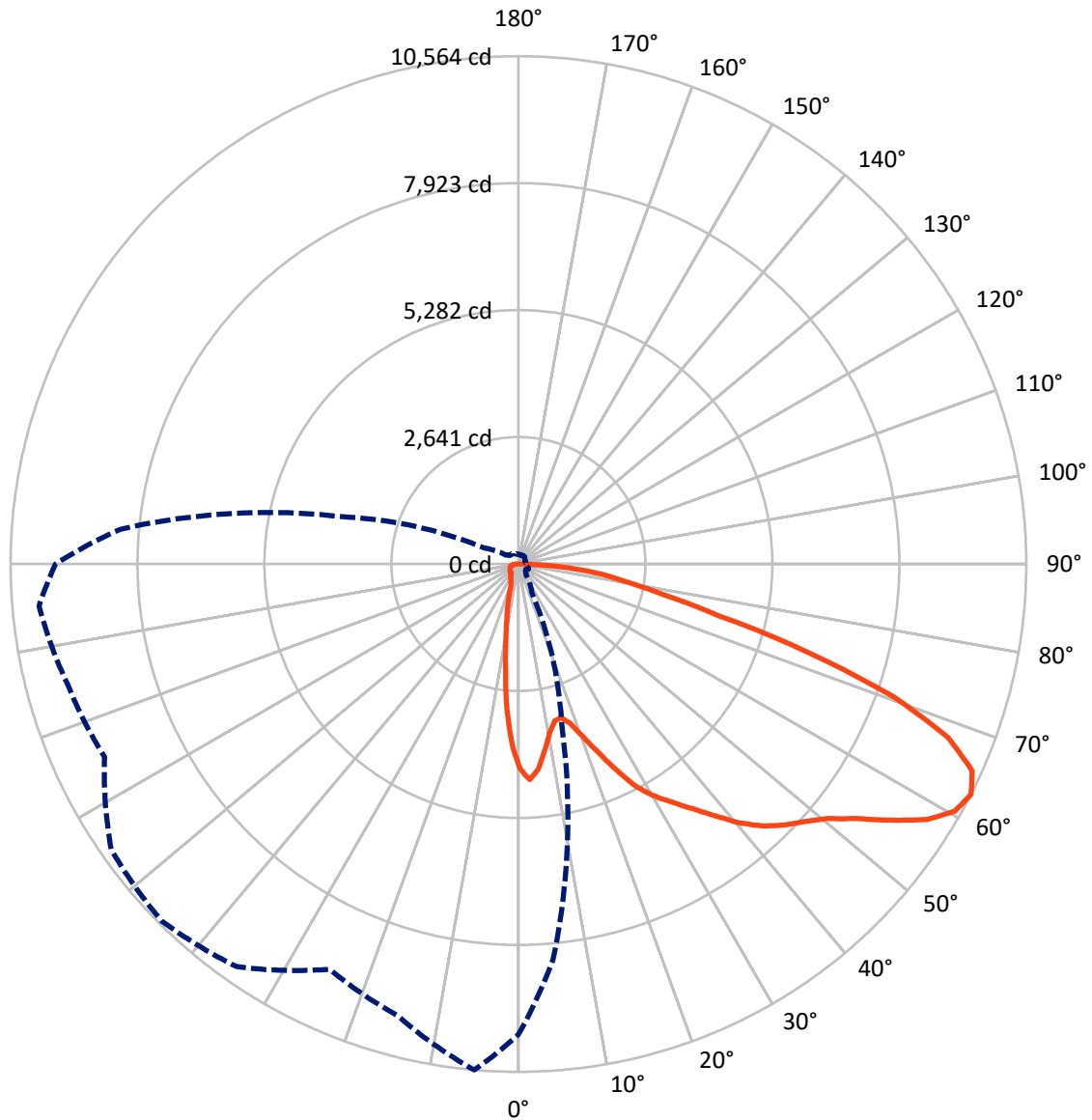
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196713
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2214.7	0.0	2214.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	10286.8	0.0	10286.8
	% Fixture	82.3	0.0	82.3
Total	Lumens	12501.4	0.0	12501.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.0	2.5
10°-20°	566.1	4.5
20°-30°	814.2	6.5
30°-40°	1247.1	10.0
40°-50°	1823.3	14.6
50°-60°	2652.9	21.2
60°-70°	3073.7	24.6
70°-80°	1602.3	12.8
80°-90°	411.9	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°	12501.4	100.0
0°-180°	12501.4	100.0



REPORT NUMBER: P196713

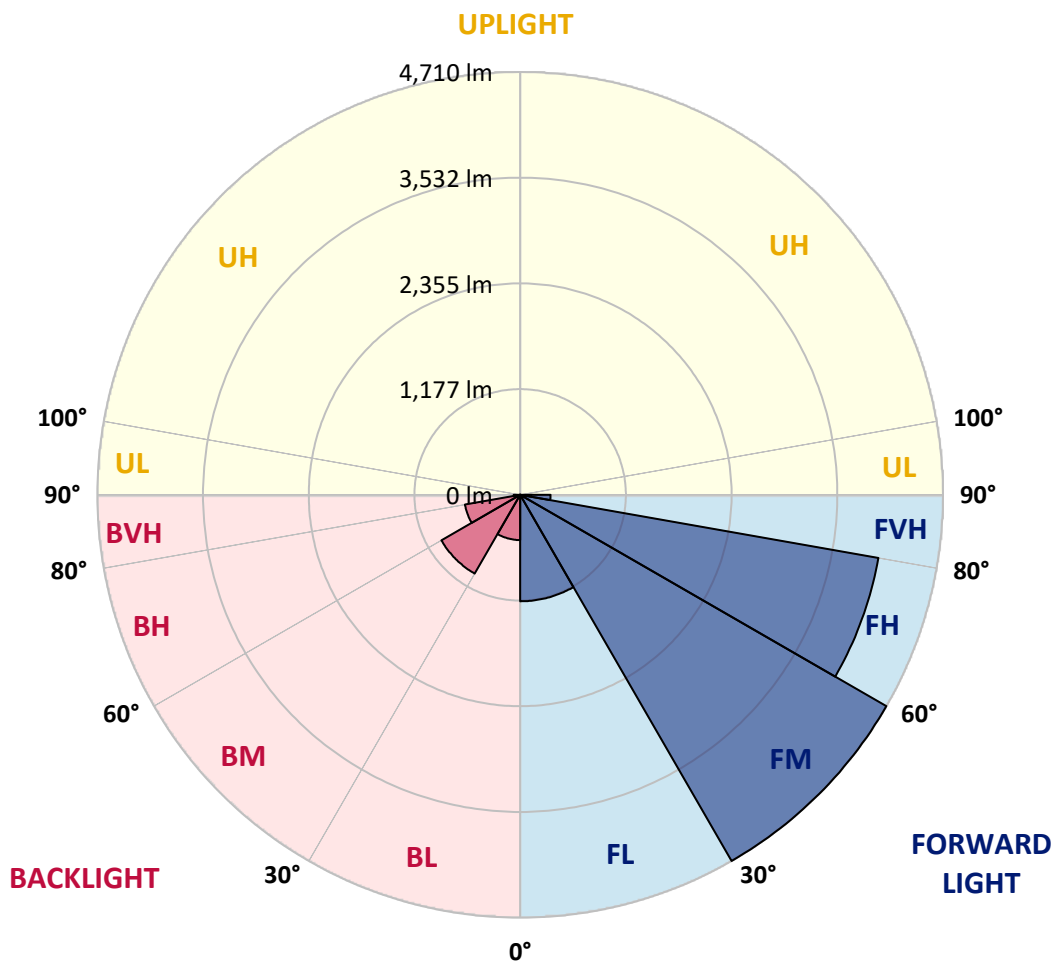
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1186.4	9.5			
FM (30°-60°)	4710.0	37.7			
FH (60°-80°)	4051.5	32.4			G2/5000
FVH (80°-90°)	338.8	2.7			G3/500
BL (0°-30°)	503.9	4.0	B2/1000		
BM (30°-60°)	1013.3	8.1	B2/2500		
BH (60°-80°)	624.5	5.0	B2/1000		G2/1000
BVH (80°-90°)	73.0	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: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	4399.8	4338.1	4195.8	4070.8	3914.9	3797.9	3655.6	3580.3	3525.0	3487.9	3457.9
5°	4109.7	3961.0	3689.1	3450.7	3193.3	3007.5	2789.9	2671.2	2597.7	2557.9	2539.8
7.5°	3679.2	3482.4	3130.9	2810.8	2489.0	2257.0	2092.0	1916.2	1822.8	1762.2	1742.1
10°	3303.0	3080.9	2661.2	2301.4	2053.1	1888.1	1746.7	1585.4	1465.7	1361.5	1322.5
12.5°	3084.5	2826.2	2347.7	2022.3	1813.7	1637.0	1487.4	1313.4	1187.4	1078.6	1037.0
15°	3038.3	2750.0	2216.3	1844.6	1588.9	1375.9	1196.5	1007.1	883.8	794.0	765.1
17.5°	3178.0	2822.6	2160.9	1682.3	1374.2	1114.0	892.8	689.8	587.4	538.4	526.6
20°	3465.2	2982.1	2134.6	1536.4	1165.7	857.4	617.4	468.6	417.8	403.3	402.4
22.5°	3843.2	3241.4	2163.7	1416.8	969.9	632.7	452.4	385.2	364.4	356.1	356.1
25°	4270.2	3592.1	2240.7	1325.2	797.7	492.2	389.7	353.5	336.3	328.1	329.0
27.5°	4792.2	4019.1	2345.8	1240.8	674.3	431.5	364.4	333.6	316.3	308.2	309.1
30°	5185.7	4386.2	2436.5	1163.8	611.0	407.0	350.8	321.8	302.7	290.9	290.1
32.5°	5553.6	4709.7	2509.9	1108.6	574.7	363.5	317.3	295.5	279.1	265.6	262.9
35°	5960.6	5014.4	2544.3	1106.7	551.1	328.1	290.1	263.8	247.5	232.0	229.3
37.5°	6422.0	5386.8	2573.4	1117.6	538.4	305.5	277.4	252.0	238.4	223.0	219.4
40°	6902.4	5751.2	2596.0	1126.7	536.6	290.1	267.3	244.7	231.1	214.8	211.2
42.5°	7314.8	6073.9	2626.8	1123.0	523.9	287.4	261.0	238.4	225.7	209.3	204.9
45°	7644.8	6330.5	2674.8	1122.2	504.9	293.7	259.3	236.5	221.1	204.0	200.3
47.5°	7952.0	6619.6	2776.4	1118.5	484.0	291.8	269.3	234.8	219.4	202.1	199.4
50°	8303.7	7008.4	2949.5	1091.3	455.1	279.1	287.4	232.9	214.8	199.4	196.6
52.5°	8793.1	7577.6	3206.0	1042.4	415.1	265.6	290.1	232.0	207.6	193.9	190.3
55°	9368.8	8187.7	3482.4	971.7	362.5	242.0	275.6	228.5	200.3	185.8	180.4
57.5°	9813.7	8638.1	3675.6	870.1	311.0	228.5	245.7	220.2	191.2	176.8	172.2
60°	9938.9	8658.1	3710.0	748.8	284.6	219.4	211.2	240.2	184.0	168.6	164.1
62.5°	9789.3	8262.0	3485.2	663.5	275.6	210.4	192.2	229.3	176.8	161.3	156.8
65°	9346.1	7593.1	2982.1	650.8	284.6	202.1	182.3	183.1	169.5	154.0	149.5
67.5°	8311.1	6608.8	2349.4	659.0	295.5	193.9	175.0	166.7	161.3	147.7	142.2
70°	6759.3	5320.7	1851.0	673.5	305.5	183.1	165.8	155.9	151.4	136.9	134.2
72.5°	5206.5	4258.4	1460.2	663.5	315.4	172.2	153.2	145.0	139.7	125.9	123.3
75°	3697.4	3383.6	1073.3	569.2	289.1	156.8	138.6	131.4	126.8	112.4	111.5
77.5°	2664.9	2534.4	746.9	427.9	228.5	137.7	122.4	116.1	113.3	97.0	97.0
80°	2125.5	1928.9	446.9	279.1	166.7	114.1	102.3	99.8	97.0	80.7	81.6
82.5°	1527.3	1337.9	285.5	174.0	122.4	87.0	79.8	78.8	74.3	59.9	59.9
85°	783.2	683.4	183.1	116.9	86.1	56.2	52.6	50.8	48.1	37.1	37.1
87.5°	152.3	209.3	101.5	57.2	41.7	20.0	20.0	17.3	20.0	13.5	14.5
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: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	3515.1	3497.0	3484.3	3477.9	3569.5	3607.5	3651.1	3713.6	3756.3	3738.1	3796.1
5°	2625.0	2637.7	2666.7	2712.1	2839.8	2900.5	2939.5	2991.2	3028.3	2991.2	3052.8
7.5°	1794.7	1813.7	1875.4	1968.8	2122.8	2190.8	2204.5	2205.3	2197.2	2136.4	2178.1
10°	1321.6	1283.5	1297.1	1364.2	1502.0	1562.6	1569.0	1552.7	1550.0	1525.5	1572.7
12.5°	1024.3	971.7	940.8	951.7	1055.1	1104.9	1113.2	1122.2	1159.4	1171.1	1229.0
15°	764.2	737.0	714.2	704.2	772.3	811.2	815.7	837.6	876.5	887.4	937.2
17.5°	537.5	544.7	556.5	561.0	610.0	635.5	628.1	628.1	634.5	631.7	659.9
20°	410.6	425.1	447.8	469.5	513.9	528.5	510.4	487.7	473.2	465.9	472.2
22.5°	362.5	372.6	387.0	415.1	452.4	459.6	436.0	417.8	404.3	397.0	397.9
25°	336.3	346.3	358.1	380.7	412.5	416.1	394.3	382.5	371.6	364.4	362.5
27.5°	313.6	320.0	327.2	341.8	374.3	376.2	361.6	354.4	347.1	341.8	339.9
30°	292.9	295.5	298.2	312.7	337.2	339.9	332.7	329.0	326.3	322.7	322.7
32.5°	265.6	269.3	273.7	286.5	310.0	313.6	309.1	306.4	301.9	300.0	297.3
35°	232.9	242.0	252.0	267.3	292.9	294.6	289.1	281.1	270.1	267.3	265.6
37.5°	219.4	221.1	233.9	252.0	278.3	280.0	272.8	259.3	251.1	252.0	253.8
40°	210.4	213.0	220.2	238.4	264.6	267.3	261.0	251.1	242.9	243.8	246.6
42.5°	203.0	206.7	211.2	223.0	249.2	254.7	252.9	243.8	235.7	237.5	241.1
45°	199.4	202.1	202.1	210.4	235.7	243.8	244.7	237.5	231.1	232.9	237.5
47.5°	197.6	197.6	194.9	201.2	226.6	234.8	236.5	232.9	229.3	231.1	235.7
50°	194.9	191.2	188.6	193.9	219.4	226.6	228.5	225.7	227.5	231.1	233.9
52.5°	186.8	183.1	183.1	186.8	212.1	219.4	220.2	218.4	222.2	226.6	231.1
55°	176.8	176.8	177.6	181.3	208.4	213.9	213.0	211.2	214.8	220.2	224.7
57.5°	167.7	166.7	171.3	175.8	204.0	207.6	205.7	205.7	208.4	213.0	217.5
60°	162.2	157.8	161.3	168.6	199.4	203.0	200.3	199.4	204.0	207.6	211.2
62.5°	156.8	152.3	155.0	162.2	193.1	195.8	193.9	193.9	198.6	201.2	204.9
65°	148.7	146.9	148.7	155.9	187.6	188.6	188.6	189.4	193.1	194.9	198.6
67.5°	141.4	141.4	142.2	149.5	183.1	181.3	181.3	185.8	186.8	188.6	192.2
70°	132.3	134.2	134.2	143.2	179.5	173.1	174.0	177.6	179.5	181.3	182.3
72.5°	122.4	123.3	125.1	136.9	174.0	165.0	165.8	168.6	169.5	172.2	173.1
75°	111.5	112.4	115.2	130.6	170.5	156.8	155.0	156.8	158.7	160.4	159.5
77.5°	98.8	100.6	103.4	126.8	158.7	155.0	141.4	143.2	145.0	145.0	144.1
80°	83.4	86.1	90.6	121.5	134.2	149.5	125.9	126.8	127.9	127.9	125.9
82.5°	62.5	68.0	74.3	100.6	105.1	127.9	108.8	110.6	107.8	106.1	105.1
85°	40.8	45.4	54.4	69.8	77.0	100.6	89.7	90.6	85.2	84.3	84.3
87.5°	16.3	17.3	24.5	35.4	46.2	62.5	64.4	66.2	61.6	61.6	63.5
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: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	3884.0	3974.7	4078.8	4184.9	4271.9	4384.3	4493.2	4609.1	4668.1	4702.5	4799.5
5°	3148.9	3273.1	3420.8	3586.7	3724.4	3960.1	4213.9	4496.8	4632.7	4766.9	5020.7
7.5°	2252.5	2373.8	2546.2	2761.0	2956.8	3267.6	3602.2	3984.5	4173.1	4390.7	4806.8
10°	1672.3	1801.0	1957.0	2139.2	2332.2	2655.8	3031.1	3460.7	3668.3	3913.8	4387.1
12.5°	1356.0	1506.4	1667.9	1830.9	1996.8	2214.3	2607.8	3085.5	3308.5	3555.9	4029.9
15°	1057.7	1219.2	1393.2	1570.8	1735.8	1978.6	2380.2	2945.0	3199.6	3438.9	3827.0
17.5°	748.8	901.0	1096.8	1312.5	1551.8	1839.2	2331.3	3006.6	3315.7	3565.9	3826.0
20°	510.4	615.4	811.2	1066.8	1362.4	1726.8	2349.4	3223.2	3609.4	3884.0	3982.8
22.5°	407.9	457.8	590.1	850.2	1199.2	1645.1	2423.8	3520.6	4030.9	4365.4	4268.3
25°	370.7	398.8	467.7	671.6	1054.2	1590.9	2568.8	3913.0	4503.1	4842.2	4611.9
27.5°	348.1	372.6	417.0	552.0	929.0	1555.5	2752.8	4375.3	5035.2	5313.4	4969.8
30°	333.6	358.1	398.8	495.8	834.8	1502.9	2914.2	4797.7	5460.2	5640.6	5162.9
32.5°	305.5	324.5	358.1	444.1	764.2	1441.2	3053.7	5175.6	5861.9	5921.7	5395.0
35°	276.4	296.4	330.0	402.4	722.4	1393.2	3127.1	5511.0	6259.8	6202.6	5625.2
37.5°	265.6	281.9	312.7	372.6	699.8	1361.5	3155.3	5841.0	6686.6	6513.5	5785.8
40°	258.3	272.8	300.0	352.6	693.4	1331.6	3148.9	6154.6	7100.9	6835.4	5911.7
42.5°	252.9	265.6	290.9	339.0	676.2	1303.5	3128.1	6425.6	7432.7	7112.7	6032.2
45°	248.3	262.0	287.4	346.3	644.4	1272.7	3115.4	6673.1	7687.4	7346.6	6193.6
47.5°	246.6	262.0	288.2	344.5	610.0	1238.1	3160.7	6947.7	7909.4	7543.3	6408.4
50°	243.8	261.0	308.2	328.1	562.9	1195.6	3313.9	7274.9	8142.3	7764.4	6686.6
52.5°	239.3	260.1	329.0	315.4	502.1	1136.7	3562.3	7737.2	8544.8	8195.0	7098.1
55°	233.9	262.0	314.5	295.5	437.8	1060.5	3810.6	8370.8	9197.5	8889.3	7689.1
57.5°	227.5	259.3	297.3	277.4	384.4	964.4	3999.1	8890.2	9735.9	9605.3	8415.2
60°	223.0	265.6	267.3	266.5	349.8	872.9	4017.3	8856.7	9890.9	10070.3	9125.9
62.5°	217.5	271.1	243.8	258.3	332.7	787.6	3793.4	8308.3	9628.9	10010.6	9705.1
65°	210.4	236.5	231.1	251.1	332.7	742.3	3272.2	7395.5	8904.6	9444.9	10019.6
67.5°	203.0	214.8	222.2	241.1	339.9	699.8	2629.6	6237.9	7762.6	8532.2	9666.0
70°	193.1	203.0	212.1	232.0	336.3	669.9	2069.4	4999.8	6388.5	7269.4	8688.1
72.5°	184.0	191.2	200.3	218.4	336.3	656.2	1662.4	3922.1	4877.5	5619.9	7197.0
75°	170.5	176.8	184.8	204.9	330.0	600.1	1248.2	3142.6	3568.6	4033.6	5678.8
77.5°	156.8	161.3	167.7	187.6	297.3	501.3	882.9	2433.8	2644.1	2901.5	4426.9
80°	139.7	143.2	147.7	167.7	246.6	388.9	574.7	1903.6	1976.9	2101.0	2912.3
82.5°	119.6	125.1	125.9	144.1	198.6	281.9	341.8	1304.3	1303.5	1485.6	2054.8
85°	97.9	100.6	102.3	113.3	146.9	187.6	224.7	712.5	635.5	890.1	1784.7
87.5°	73.4	70.7	73.4	76.2	97.0	110.6	120.5	131.4	78.8	161.3	1037.9
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: P196713

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7030-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	4851.1	4904.6	4873.0	4834.8	4739.6	4600.1	4493.2	4399.8
5°	5196.5	5295.4	5251.8	5110.4	4863.9	4583.8	4289.2	4109.7
7.5°	5153.0	5348.8	5331.6	5095.9	4742.4	4330.0	3915.8	3679.2
10°	4804.9	5079.6	5126.7	4885.6	4511.2	4049.9	3570.4	3303.0
12.5°	4426.1	4657.1	4753.4	4661.8	4309.0	3840.5	3352.0	3084.5
15°	4108.8	4225.7	4320.8	4379.8	4161.3	3766.1	3313.9	3038.3
17.5°	3874.0	3851.4	3931.1	4072.5	4081.6	3864.9	3486.1	3178.0
20°	3760.7	3583.0	3629.3	3827.8	4059.8	4116.1	3829.6	3465.2
22.5°	3754.3	3477.0	3486.1	3700.1	4122.4	4458.7	4258.4	3843.2
25°	3852.3	3465.2	3473.4	3686.4	4233.0	4804.0	4754.2	4270.2
27.5°	4019.1	3516.0	3510.6	3746.3	4380.8	5092.2	5254.5	4792.2
30°	4199.5	3589.3	3575.8	3842.3	4525.7	5269.9	5609.8	5185.7
32.5°	4424.2	3720.0	3672.9	3982.8	4668.9	5440.3	5913.4	5553.6
35°	4638.2	3911.2	3843.2	4184.1	4822.1	5629.8	6253.4	5960.6
37.5°	4856.6	4196.7	4158.6	4474.0	5038.8	5835.5	6642.3	6422.0
40°	5136.8	4602.8	4584.6	4895.6	5327.9	6060.3	7078.3	6902.4
42.5°	5438.5	5034.2	5018.9	5379.6	5686.8	6286.0	7451.7	7314.8
45°	5745.8	5557.3	5560.9	5896.2	6064.9	6499.1	7745.4	7644.8
47.5°	6108.3	6129.2	6258.8	6432.0	6432.8	6736.5	8005.5	7952.0
50°	6568.8	6820.0	7059.2	7086.4	6804.4	7050.2	8323.7	8303.7
52.5°	7090.1	7616.7	7895.0	7808.9	7167.1	7439.0	8794.1	8793.1
55°	7709.2	8449.7	8711.6	8564.8	7601.2	7945.7	9408.7	9368.8
57.5°	8350.9	9251.0	9462.2	9270.8	8144.1	8535.8	10025.0	9813.7
60°	9044.3	9940.7	10155.5	9868.2	8753.3	9124.0	10432.9	9938.9
62.5°	9498.4	10344.1	10498.1	10222.7	9298.9	9723.2	10564.4	9789.3
65°	9522.0	10075.8	10116.6	10018.6	9531.0	10243.5	10373.9	9346.1
67.5°	8874.8	8907.4	8960.9	9066.0	9035.2	10011.4	9639.8	8311.1
70°	7490.7	7055.6	7231.5	7332.9	7561.4	8904.6	8282.8	6759.3
72.5°	5727.7	5092.2	5291.7	5257.2	5732.2	7304.0	6336.8	5206.5
75°	4122.4	3472.5	3487.9	3489.7	4118.7	5830.1	4320.8	3697.4
77.5°	2801.7	2457.3	2508.0	2476.4	2756.4	4567.5	3110.8	2664.9
80°	1916.2	1907.1	1917.9	1843.6	1838.2	2952.1	2303.1	2125.5
82.5°	1421.3	1313.4	1298.0	1219.2	1408.6	2257.0	1748.4	1527.3
85°	1121.2	726.9	631.7	762.3	1220.0	2076.6	1066.0	783.2
87.5°	474.9	285.5	173.1	342.6	678.0	1521.9	295.5	152.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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