

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: P270373

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270373
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-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 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: 9346.6 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - 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

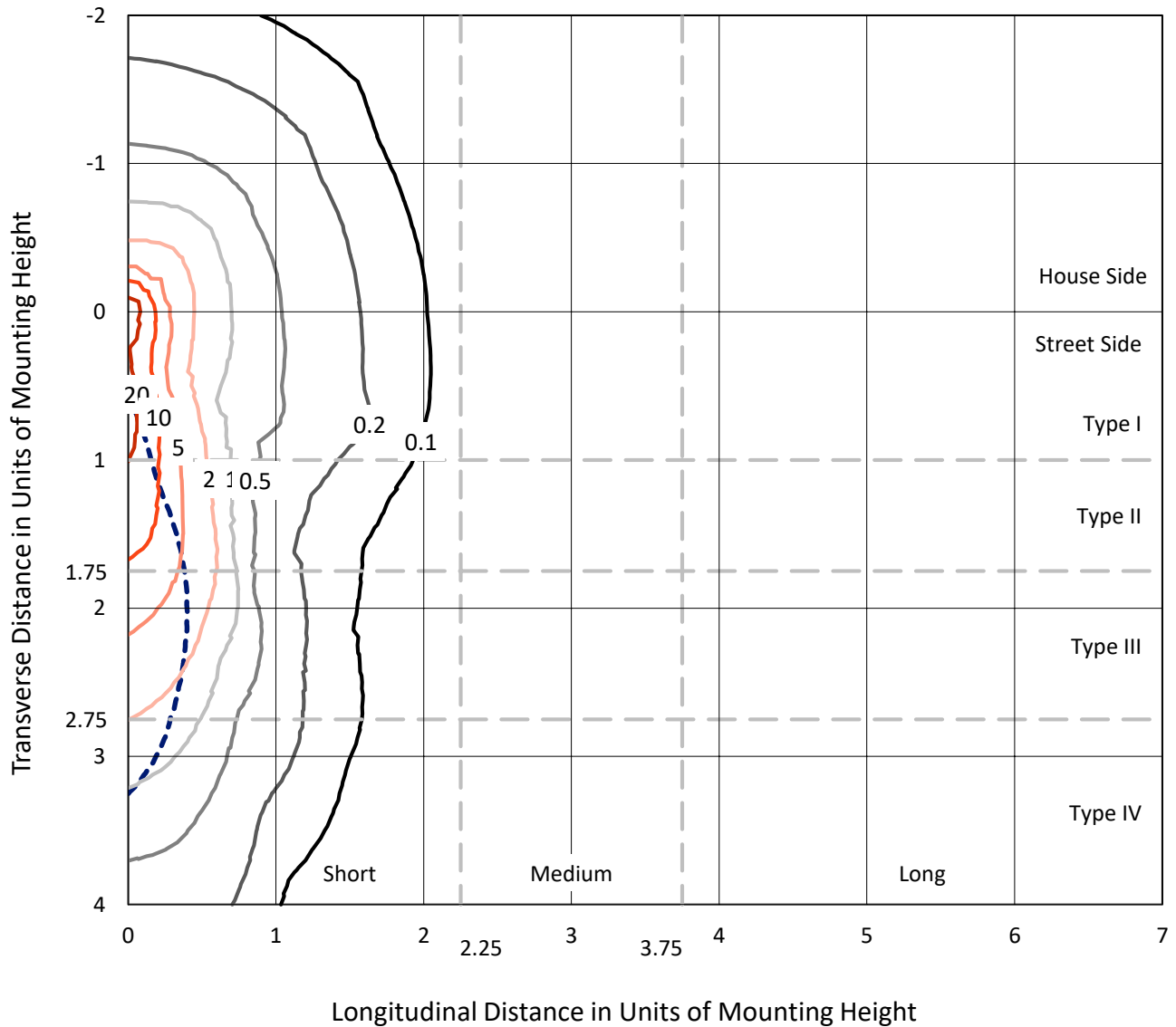


REPORT NUMBER: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

Iso-Footcandle Lines of Horizontal Illumination

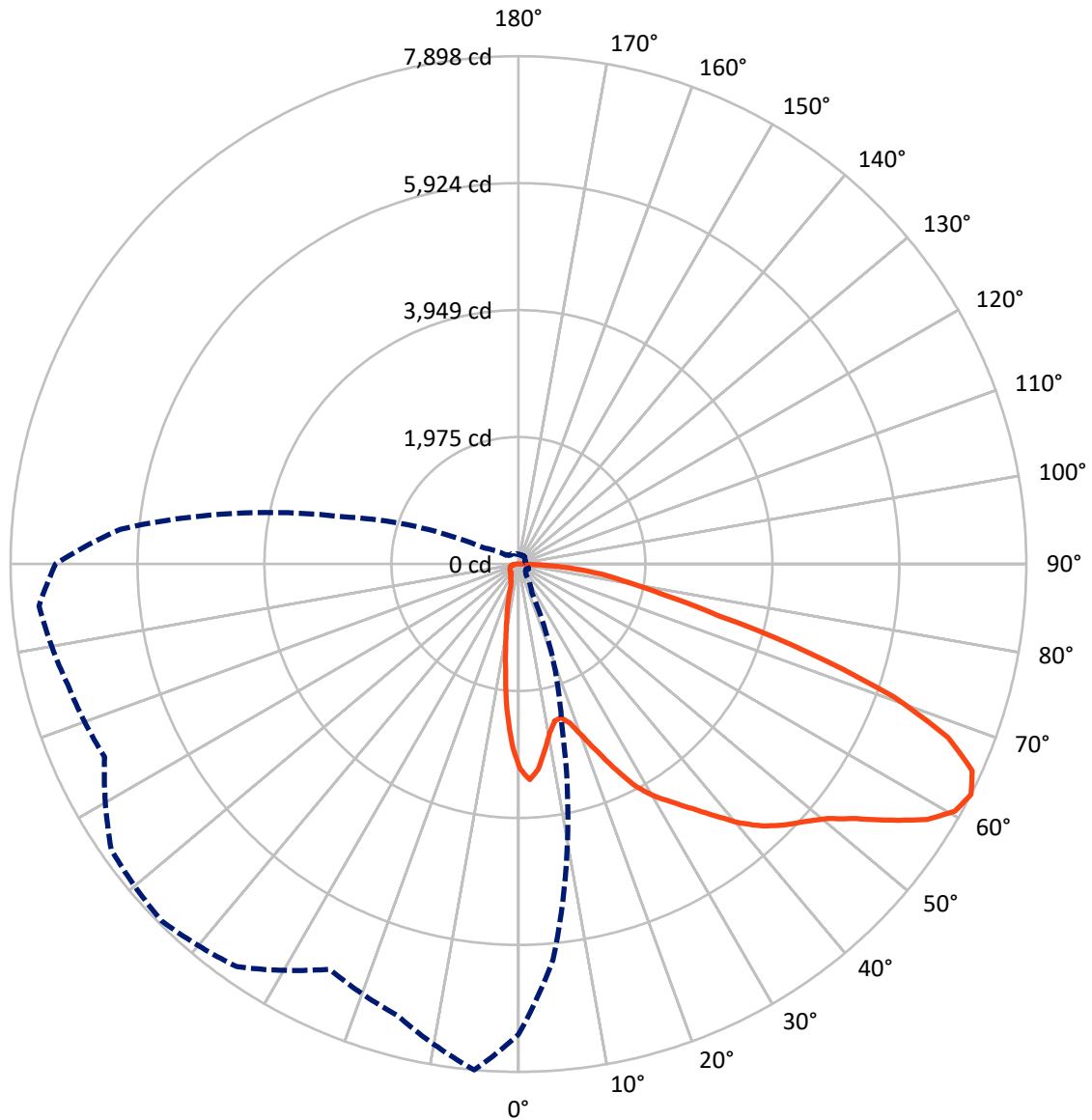
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 31.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270373
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1655.8	0.0	1655.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	7690.9	0.0	7690.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	9346.6	0.0	9346.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.7	2.5
10°-20°	423.3	4.5
20°-30°	608.8	6.5
30°-40°	932.4	10.0
40°-50°	1363.2	14.6
50°-60°	1983.4	21.2
60°-70°	2298.1	24.6
70°-80°	1197.9	12.8
80°-90°	307.9	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°	9346.6	100.0
0°-180°	9346.6	100.0



REPORT NUMBER: P270373

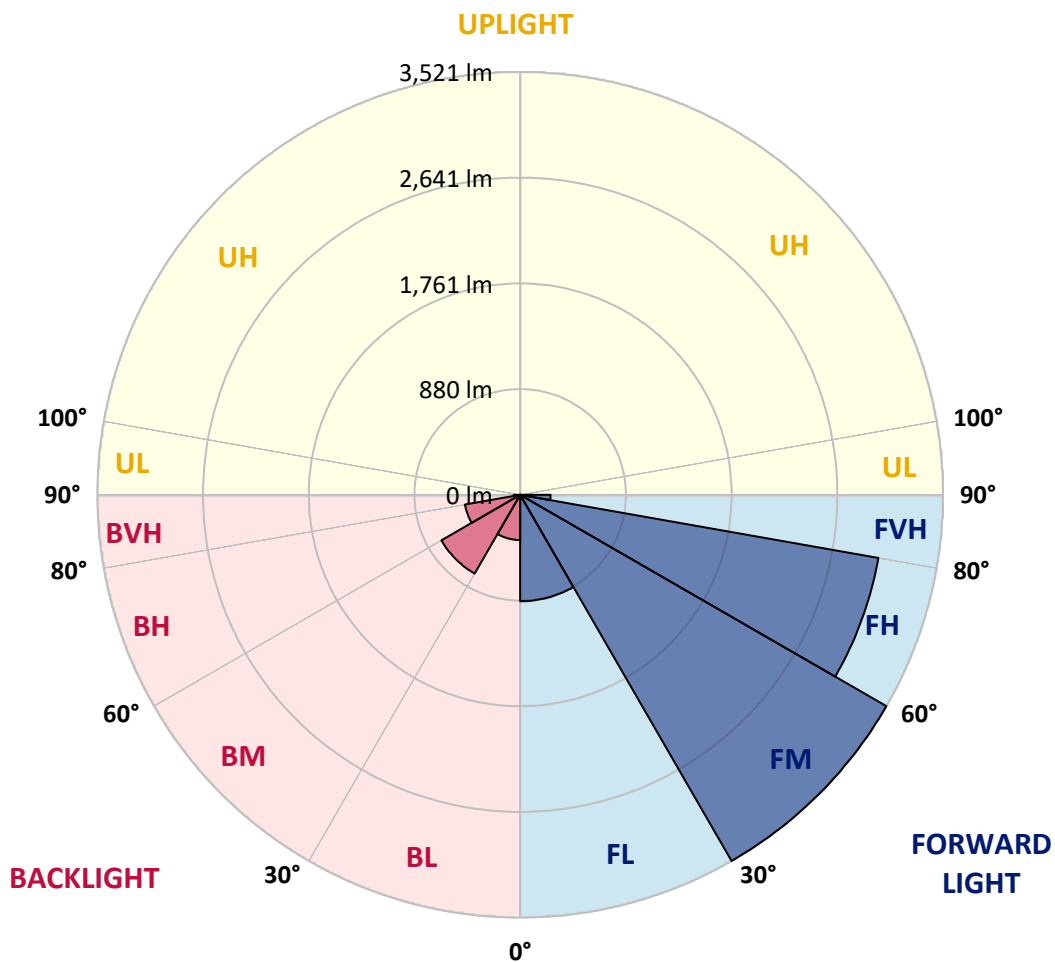
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	887.0	9.5			
FM	(30°-60°)	3521.4	37.7			
FH	(60°-80°)	3029.1	32.4			G2/5000
FVH	(80°-90°)	253.3	2.7			G3/500
BL	(0°-30°)	376.7	4.0	B1/500		
BM	(30°-60°)	757.6	8.1	B1/1000		
BH	(60°-80°)	466.9	5.0	B1/500		G1/500
BVH	(80°-90°)	54.6	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





REPORT NUMBER: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5
2.5°	3289.5	3243.4	3137.1	3043.5	2926.9	2839.5	2733.2	2676.8	2635.4	2607.7	2585.3
5°	3072.7	2961.4	2758.2	2579.9	2387.4	2248.5	2086.0	1997.1	1942.2	1912.4	1898.8
7.5°	2750.7	2603.6	2340.8	2101.4	1860.8	1687.5	1564.0	1432.5	1362.8	1317.5	1302.5
10°	2469.5	2303.4	1989.7	1720.7	1534.9	1411.5	1305.9	1185.3	1095.8	1017.9	988.8
12.5°	2306.2	2113.1	1755.2	1511.8	1356.0	1223.9	1112.1	981.9	887.7	806.5	775.2
15°	2271.5	2056.1	1657.0	1379.1	1188.0	1028.6	894.5	752.9	660.8	593.6	572.0
17.5°	2375.9	2110.3	1615.6	1257.7	1027.3	832.9	667.5	515.6	439.1	402.5	393.7
20°	2590.8	2229.6	1596.0	1148.7	871.4	641.1	461.5	350.3	312.4	301.7	300.9
22.5°	2873.4	2423.4	1617.6	1059.2	725.1	473.0	338.1	287.9	272.5	266.3	266.3
25°	3192.5	2685.7	1675.2	990.8	596.4	367.9	291.4	264.3	251.4	245.2	246.0
27.5°	3582.9	3004.8	1753.9	927.8	504.2	322.6	272.5	249.4	236.6	230.4	231.0
30°	3877.1	3279.4	1821.7	870.2	456.8	304.3	262.2	240.6	226.4	217.5	216.9
32.5°	4152.1	3521.3	1876.5	828.7	429.7	271.7	237.2	221.0	208.8	198.5	196.5
35°	4456.4	3748.9	1902.3	827.5	412.1	245.2	216.9	197.2	185.1	173.6	171.4
37.5°	4801.4	4027.6	1923.9	835.6	402.5	228.3	207.4	188.5	178.3	166.7	164.0
40°	5160.6	4299.8	1940.9	842.4	401.3	216.9	200.0	183.0	172.8	160.5	157.9
42.5°	5468.9	4541.1	1964.0	839.6	391.8	214.9	195.2	178.3	168.7	156.6	153.2
45°	5715.6	4732.9	1999.8	838.9	377.5	219.5	193.9	176.8	165.4	152.5	149.7
47.5°	5945.3	4949.1	2075.8	836.2	361.8	218.2	201.3	175.4	164.0	151.2	149.1
50°	6208.2	5239.9	2205.2	815.9	340.2	208.8	214.9	174.2	160.5	149.1	147.1
52.5°	6574.2	5665.4	2396.9	779.3	310.4	198.5	216.9	173.6	155.1	145.0	142.3
55°	7004.5	6121.5	2603.6	726.5	271.1	181.0	206.0	170.8	149.7	138.9	134.8
57.5°	7337.3	6458.4	2747.9	650.6	232.4	170.8	183.7	164.7	143.0	132.1	128.7
60°	7430.8	6473.2	2773.7	559.7	212.8	164.0	157.9	179.7	137.6	126.0	122.7
62.5°	7319.0	6177.0	2605.7	496.0	206.0	157.3	143.6	171.4	132.1	120.6	117.3
65°	6987.6	5677.0	2229.6	486.6	212.8	151.2	136.3	136.9	126.8	115.3	111.7
67.5°	6213.7	4940.9	1756.5	492.7	221.0	145.0	130.9	124.7	120.6	110.4	106.4
70°	5053.4	3978.0	1383.7	503.5	228.3	136.9	124.1	116.6	113.1	102.3	100.3
72.5°	3892.5	3183.8	1091.7	496.0	235.9	128.7	114.5	108.4	104.4	94.2	92.2
75°	2764.3	2529.7	802.4	425.5	216.2	117.3	103.7	98.3	95.0	84.0	83.4
77.5°	1992.4	1894.7	558.3	319.8	170.8	103.0	91.4	86.7	84.7	72.6	72.6
80°	1589.1	1442.0	334.1	208.8	124.7	85.3	76.5	74.6	72.6	60.4	60.9
82.5°	1141.8	1000.3	213.4	130.2	91.4	65.0	59.6	59.0	55.5	44.7	44.7
85°	585.5	511.0	136.9	87.5	64.4	42.0	39.3	38.0	35.9	27.8	27.8
87.5°	113.8	156.6	75.8	42.7	31.3	14.9	14.9	12.8	14.9	10.2	10.8
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: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5
2.5°	2628.0	2614.4	2605.1	2600.2	2668.8	2697.3	2729.7	2776.4	2808.3	2794.7	2838.1
5°	1962.5	1972.0	1993.8	2027.7	2123.1	2168.6	2197.8	2236.3	2264.2	2236.3	2282.5
7.5°	1341.8	1356.0	1402.2	1472.0	1587.1	1638.0	1648.1	1648.7	1642.7	1597.2	1628.4
10°	988.0	959.6	969.8	1019.9	1122.9	1168.3	1173.0	1160.9	1158.9	1140.6	1175.8
12.5°	765.7	726.5	703.5	711.5	788.8	826.1	832.2	838.9	866.8	875.6	919.0
15°	571.3	551.0	534.0	526.5	577.4	606.5	609.9	626.2	655.4	663.5	700.7
17.5°	401.8	407.3	416.1	419.5	456.1	475.1	469.6	469.6	474.3	472.4	493.3
20°	307.0	317.8	334.8	351.1	384.2	395.1	381.5	364.6	353.8	348.4	353.0
22.5°	271.1	278.6	289.3	310.4	338.1	343.6	325.9	312.4	302.2	296.8	297.5
25°	251.4	258.9	267.6	284.7	308.4	311.1	294.9	286.0	277.8	272.5	271.1
27.5°	234.5	239.2	244.7	255.5	279.9	281.2	270.4	265.0	259.5	255.5	254.1
30°	218.8	221.0	223.0	233.7	252.2	254.1	248.7	246.0	244.0	241.3	241.3
32.5°	198.5	201.3	204.6	214.2	231.8	234.5	231.0	229.1	225.7	224.2	222.3
35°	174.2	181.0	188.5	200.0	218.8	220.3	216.2	210.1	201.9	200.0	198.5
37.5°	164.0	165.4	174.8	188.5	208.0	209.5	203.9	193.9	187.7	188.5	189.7
40°	157.3	159.3	164.7	178.3	197.8	200.0	195.2	187.7	181.5	182.3	184.3
42.5°	151.9	154.5	157.9	166.7	186.4	190.4	189.1	182.3	176.2	177.5	180.3
45°	149.1	151.2	151.2	157.3	176.2	182.3	183.0	177.5	172.8	174.2	177.5
47.5°	147.7	147.7	145.7	150.5	169.4	175.4	176.8	174.2	171.4	172.8	176.2
50°	145.7	143.0	140.9	145.0	164.0	169.4	170.8	168.7	170.0	172.8	174.8
52.5°	139.5	136.9	136.9	139.5	158.6	164.0	164.7	163.3	166.0	169.4	172.8
55°	132.1	132.1	132.8	135.6	155.9	160.0	159.3	157.9	160.5	164.7	168.1
57.5°	125.4	124.7	128.1	131.5	152.5	155.1	153.8	153.8	155.9	159.3	162.7
60°	121.4	117.9	120.6	126.0	149.1	151.9	149.7	149.1	152.5	155.1	157.9
62.5°	117.3	113.8	115.9	121.4	144.4	146.3	145.0	145.0	148.4	150.5	153.2
65°	111.1	109.9	111.1	116.6	140.2	140.9	140.9	141.7	144.4	145.7	148.4
67.5°	105.7	105.7	106.4	111.7	136.9	135.6	135.6	138.9	139.5	140.9	143.6
70°	99.0	100.3	100.3	107.1	134.1	129.4	130.2	132.8	134.1	135.6	136.3
72.5°	91.4	92.2	93.6	102.3	130.2	123.3	124.1	126.0	126.8	128.7	129.4
75°	83.4	84.0	86.1	97.6	127.4	117.3	115.9	117.3	118.5	120.0	119.3
77.5°	73.9	75.2	77.3	95.0	118.5	115.9	105.7	107.1	108.4	108.4	107.7
80°	62.3	64.4	67.7	90.8	100.3	111.7	94.2	95.0	95.6	95.6	94.2
82.5°	46.7	50.8	55.5	75.2	78.6	95.6	81.3	82.6	80.7	79.3	78.6
85°	30.5	33.9	40.7	52.2	57.6	75.2	67.2	67.7	63.7	63.1	63.1
87.5°	12.1	12.8	18.2	26.4	34.6	46.7	48.1	49.4	46.2	46.2	47.4
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: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5
2.5°	2904.0	2971.7	3049.6	3128.8	3194.0	3277.9	3359.2	3446.0	3490.1	3515.7	3588.3
5°	2354.3	2447.2	2557.6	2681.6	2784.6	2960.9	3150.5	3361.9	3463.7	3563.9	3753.7
7.5°	1684.1	1774.8	1903.6	2064.2	2210.5	2443.0	2693.1	2979.0	3120.1	3282.6	3593.8
10°	1250.4	1346.6	1463.1	1599.3	1743.7	1985.7	2266.2	2587.4	2742.5	2926.1	3280.0
12.5°	1013.7	1126.4	1246.9	1368.8	1493.0	1655.5	1949.7	2306.8	2473.6	2658.5	3012.9
15°	790.9	911.5	1041.6	1174.4	1297.7	1479.4	1779.6	2201.7	2392.2	2571.0	2861.2
17.5°	559.7	673.5	820.1	981.3	1160.3	1375.0	1743.0	2247.9	2479.0	2666.0	2860.6
20°	381.5	460.1	606.5	797.7	1018.6	1291.0	1756.5	2409.9	2698.5	2904.0	2977.7
22.5°	305.0	342.3	441.2	635.7	896.6	1230.0	1812.2	2632.2	3013.6	3263.7	3191.1
25°	277.1	298.1	349.7	502.2	788.2	1189.4	1920.5	2925.6	3366.7	3620.2	3448.1
27.5°	260.1	278.6	311.7	412.7	694.6	1162.9	2058.1	3271.2	3764.4	3972.6	3715.7
30°	249.4	267.6	298.1	370.7	624.1	1123.6	2178.7	3586.9	4082.3	4217.3	3860.0
32.5°	228.3	242.6	267.6	332.1	571.3	1077.4	2283.1	3869.5	4382.7	4427.2	4033.6
35°	206.7	221.6	246.7	300.9	540.2	1041.6	2338.0	4120.3	4680.1	4637.4	4205.7
37.5°	198.5	210.7	233.7	278.6	523.2	1017.9	2358.9	4367.0	4999.2	4869.8	4325.7
40°	193.1	203.9	224.2	263.7	518.4	995.5	2354.3	4601.5	5309.0	5110.4	4419.8
42.5°	189.1	198.5	217.5	253.4	505.6	974.5	2338.6	4804.0	5556.9	5317.7	4510.0
45°	185.7	195.8	214.9	258.9	481.9	951.5	2329.1	4989.0	5747.4	5492.5	4630.7
47.5°	184.3	195.8	215.6	257.5	456.1	925.8	2363.1	5194.4	5913.5	5639.6	4791.2
50°	182.3	195.2	230.4	245.2	420.9	893.9	2477.6	5439.1	6087.6	5804.9	4999.2
52.5°	178.9	194.6	246.0	235.9	375.4	849.7	2663.3	5784.6	6388.4	6126.9	5306.9
55°	174.8	195.8	235.1	221.0	327.3	792.8	2849.0	6258.4	6876.4	6646.0	5748.8
57.5°	170.0	193.9	222.3	207.4	287.4	721.1	2989.9	6646.6	7279.0	7181.4	6291.5
60°	166.7	198.5	200.0	199.2	261.5	652.6	3003.6	6621.6	7394.8	7529.1	6822.8
62.5°	162.7	202.6	182.3	193.1	248.7	588.8	2836.0	6211.6	7198.9	7484.3	7255.9
65°	157.3	176.8	172.8	187.7	248.7	555.1	2446.4	5529.2	6657.6	7061.4	7491.1
67.5°	151.9	160.5	166.0	180.3	254.1	523.2	1965.9	4663.8	5803.7	6379.0	7226.9
70°	144.4	151.9	158.6	173.6	251.4	500.9	1547.2	3738.0	4776.3	5435.0	6495.6
72.5°	137.6	143.0	149.7	163.3	251.4	490.7	1242.8	2932.3	3646.6	4201.6	5380.8
75°	127.4	132.1	138.2	153.2	246.7	448.7	933.2	2349.5	2668.1	3015.7	4245.7
77.5°	117.3	120.6	125.4	140.2	222.3	374.8	660.1	1819.5	1976.8	2169.2	3309.7
80°	104.4	107.1	110.4	125.4	184.3	290.7	429.7	1423.2	1478.0	1570.9	2177.4
82.5°	89.4	93.6	94.2	107.7	148.4	210.7	255.5	975.2	974.5	1110.8	1536.3
85°	73.2	75.2	76.5	84.7	109.9	140.2	168.1	532.6	475.1	665.5	1334.3
87.5°	54.8	52.9	54.8	57.0	72.6	82.6	90.1	98.3	59.0	120.6	776.0
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: P270373

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5	3186.5
2.5°	3626.9	3666.9	3643.3	3614.8	3543.6	3439.3	3359.2	3289.5
5°	3885.2	3959.0	3926.5	3820.9	3636.5	3427.0	3206.8	3072.7
7.5°	3852.7	3999.1	3986.0	3809.9	3545.6	3237.3	2927.5	2750.7
10°	3592.4	3797.8	3833.0	3652.7	3372.9	3027.8	2669.5	2469.5
12.5°	3309.1	3481.9	3553.8	3485.3	3221.7	2871.3	2506.1	2306.2
15°	3071.9	3159.3	3230.6	3274.5	3111.2	2815.7	2477.6	2271.5
17.5°	2896.4	2879.4	2939.2	3044.9	3051.6	2889.7	2606.3	2375.9
20°	2811.8	2678.8	2713.4	2861.8	3035.4	3077.4	2863.2	2590.8
22.5°	2806.9	2599.5	2606.3	2766.3	3082.1	3333.5	3183.8	2873.4
25°	2880.1	2590.8	2596.9	2756.1	3164.8	3591.8	3554.5	3192.5
27.5°	3004.8	2628.7	2624.7	2800.8	3275.2	3807.1	3928.5	3582.9
30°	3139.7	2683.6	2673.4	2872.7	3383.6	3940.1	4194.1	3877.1
32.5°	3307.7	2781.2	2745.9	2977.7	3490.8	4067.4	4421.2	4152.1
35°	3467.6	2924.3	2873.4	3128.2	3605.3	4209.1	4675.3	4456.4
37.5°	3630.9	3137.7	3109.3	3345.0	3767.2	4362.9	4966.0	4801.4
40°	3840.4	3441.2	3427.8	3660.1	3983.4	4531.1	5292.1	5160.6
42.5°	4066.1	3763.9	3752.3	4022.0	4251.8	4699.8	5571.2	5468.9
45°	4295.9	4154.9	4157.5	4408.3	4534.4	4859.0	5790.7	5715.6
47.5°	4567.0	4582.4	4679.5	4808.8	4809.5	5036.5	5985.2	5945.3
50°	4911.2	5098.9	5277.8	5298.2	5087.3	5271.1	6223.2	6208.2
52.5°	5300.8	5694.5	5902.7	5838.3	5358.4	5561.8	6574.9	6574.2
55°	5763.6	6317.3	6513.3	6403.4	5683.0	5940.5	7034.4	7004.5
57.5°	6243.5	6916.4	7074.3	6931.3	6089.0	6381.6	7495.2	7337.3
60°	6761.9	7432.1	7592.7	7377.9	6544.3	6821.5	7800.2	7430.8
62.5°	7101.5	7733.7	7848.9	7642.9	6952.3	7269.4	7898.3	7319.0
65°	7119.1	7533.0	7563.5	7490.3	7125.9	7658.5	7756.1	6987.6
67.5°	6635.2	6659.6	6699.6	6778.3	6755.2	7484.9	7207.1	6213.7
70°	5600.4	5275.0	5406.5	5482.4	5653.3	6657.6	6192.6	5053.4
72.5°	4282.3	3807.1	3956.3	3930.5	4285.6	5460.7	4737.8	3892.5
75°	3082.1	2596.2	2607.7	2609.0	3079.4	4358.8	3230.6	2764.3
77.5°	2094.7	1837.3	1875.1	1851.4	2060.8	3414.8	2325.8	1992.4
80°	1432.5	1425.8	1434.0	1378.4	1374.3	2207.2	1722.1	1589.1
82.5°	1062.7	981.9	970.4	911.5	1053.2	1687.5	1307.3	1141.8
85°	838.3	543.6	472.4	570.0	912.1	1552.6	796.9	585.5
87.5°	355.1	213.4	129.4	256.1	507.0	1137.9	221.0	113.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)