

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: P195278

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195278
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-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 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: 10758 lumens
Efficiency: N/A
Efficacy: 95.2 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

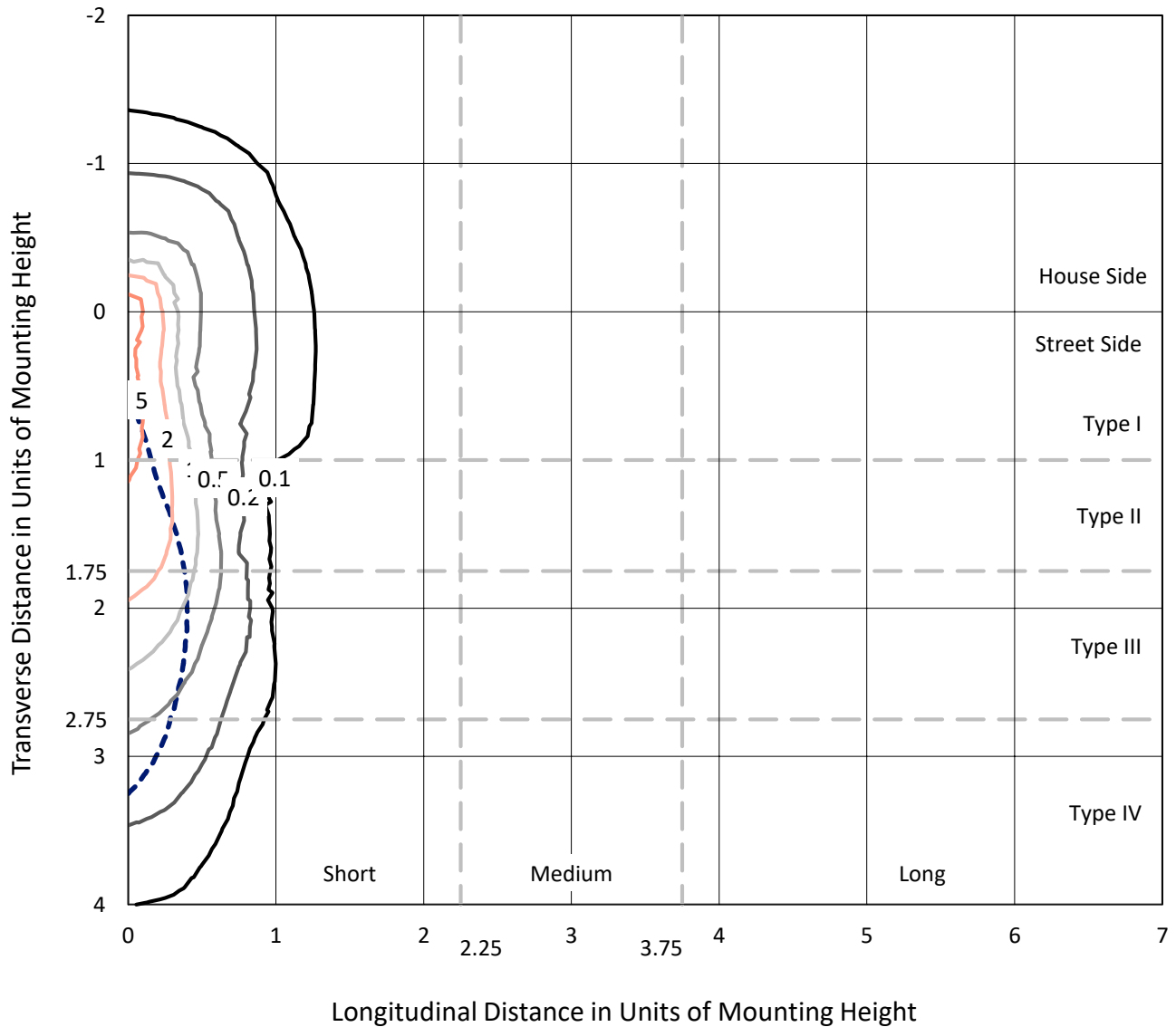
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195278
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

Iso-Footcandle Lines of Horizontal Illumination

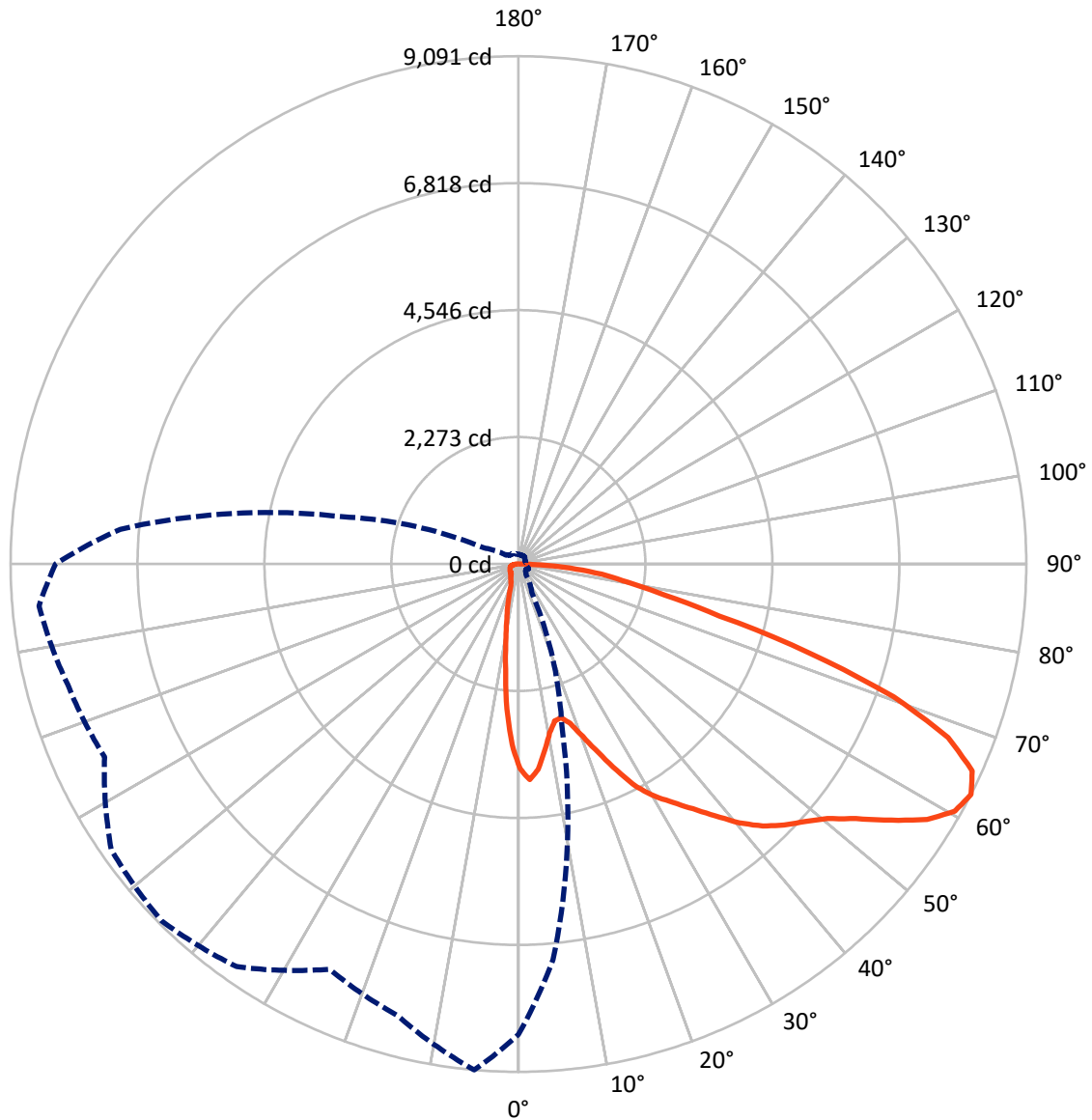
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.2 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195278
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195278

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1905.8	0.0	1905.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	8852.2	0.0	8852.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	10758.0	0.0	10758.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.7	2.5
10°-20°	487.2	4.5
20°-30°	700.7	6.5
30°-40°	1073.2	10.0
40°-50°	1569.0	14.6
50°-60°	2282.9	21.2
60°-70°	2645.1	24.6
70°-80°	1378.8	12.8
80°-90°	354.4	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°	10758.0	100.0
0°-180°	10758.0	100.0



REPORT NUMBER: P195278

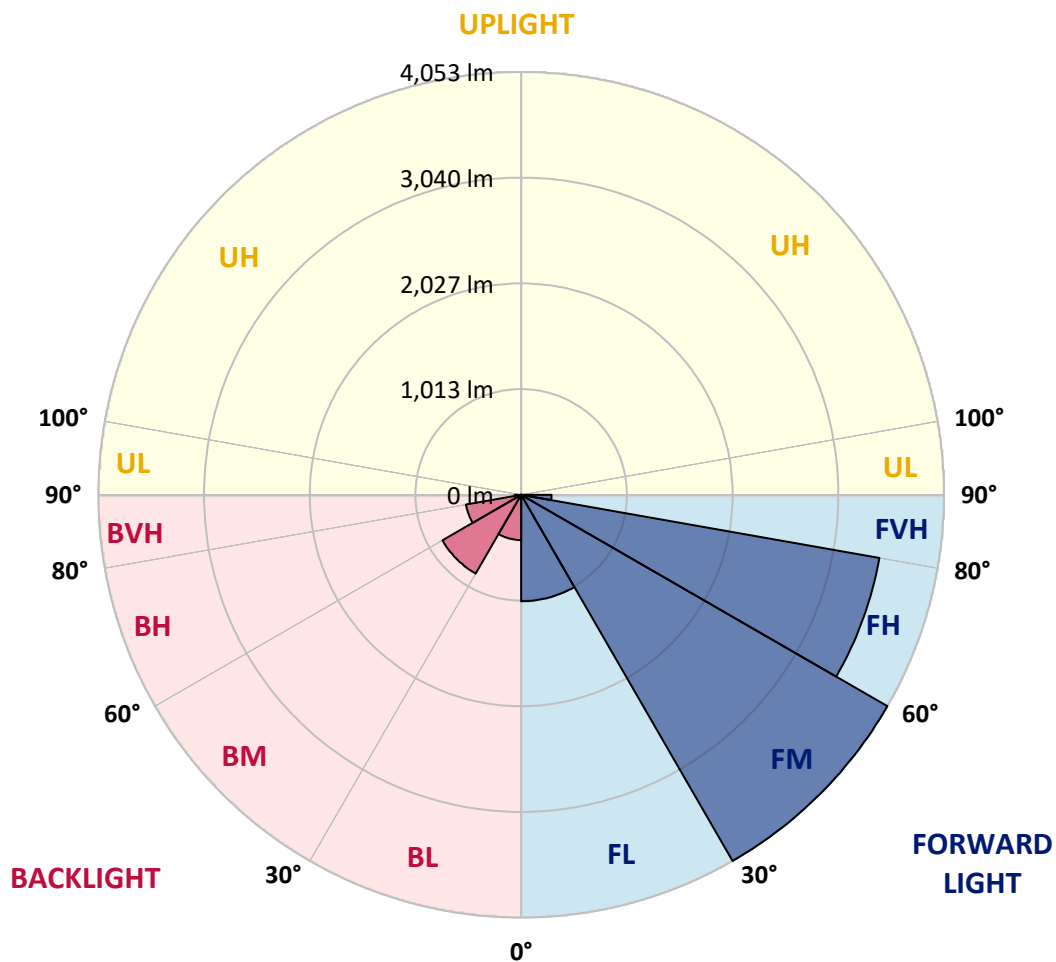
CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1021.0	9.5			
FM	(30°-60°)	4053.1	37.7			
FH	(60°-80°)	3486.5	32.4			G2/5000
FVH	(80°-90°)	291.6	2.7			G3/500
BL	(0°-30°)	433.6	4.0	B1/500		
BM	(30°-60°)	872.0	8.1	B1/1000		
BH	(60°-80°)	537.4	5.0	B2/1000		G2/1000
BVH	(80°-90°)	62.8	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: P195278

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6
2.5°	3786.2	3733.1	3610.7	3503.0	3368.9	3268.3	3145.8	3081.0	3033.5	3001.5	2975.7
5°	3536.6	3408.7	3174.6	2969.5	2748.0	2588.1	2400.9	2298.7	2235.5	2201.2	2185.6
7.5°	3166.1	2996.8	2694.2	2418.8	2141.9	1942.2	1800.3	1648.9	1568.6	1516.3	1499.2
10°	2842.4	2651.3	2290.1	1980.5	1766.7	1624.8	1503.1	1364.2	1261.3	1171.6	1138.0
12.5°	2654.4	2432.1	2020.2	1740.2	1560.8	1408.7	1280.0	1130.2	1021.8	928.2	892.3
15°	2614.6	2366.6	1907.1	1587.3	1367.4	1184.1	1029.6	866.6	760.5	683.3	658.3
17.5°	2734.7	2429.0	1859.5	1447.7	1182.5	958.6	768.3	593.6	505.4	463.3	453.2
20°	2982.0	2566.2	1836.9	1322.1	1003.1	737.9	531.2	403.3	359.6	347.1	346.3
22.5°	3307.3	2789.3	1861.9	1219.2	834.6	544.4	389.2	331.5	313.6	306.5	306.5
25°	3674.6	3091.2	1928.2	1140.4	686.4	423.5	335.4	304.2	289.4	282.4	283.1
27.5°	4123.9	3458.6	2018.7	1067.8	580.3	371.3	313.6	287.0	272.2	265.2	266.0
30°	4462.4	3774.5	2096.7	1001.5	525.7	350.2	301.9	276.9	260.5	250.4	249.6
32.5°	4779.1	4052.9	2159.9	954.0	494.5	312.8	273.0	254.3	240.2	228.5	226.2
35°	5129.4	4315.0	2189.5	952.4	474.2	282.4	249.6	227.0	212.9	199.7	197.3
37.5°	5526.4	4635.6	2214.5	961.8	463.3	262.9	238.7	216.8	205.1	191.9	188.8
40°	5939.8	4949.2	2234.0	969.6	461.8	249.6	230.1	210.6	198.9	184.9	181.7
42.5°	6294.7	5226.9	2260.5	966.4	450.8	247.3	224.6	205.1	194.2	180.2	176.3
45°	6578.6	5447.6	2301.8	965.7	434.5	252.7	223.1	203.6	190.3	175.5	172.4
47.5°	6843.0	5696.4	2389.2	962.5	416.5	251.2	231.7	202.0	188.8	173.9	171.6
50°	7145.7	6031.1	2538.2	939.1	391.6	240.2	247.3	200.5	184.9	171.6	169.3
52.5°	7566.9	6520.9	2758.9	897.0	357.2	228.5	249.6	199.7	178.6	166.9	163.8
55°	8062.2	7045.8	2996.8	836.2	312.0	208.3	237.1	196.6	172.4	159.9	155.2
57.5°	8445.2	7433.5	3162.9	748.8	267.5	196.6	211.4	189.5	164.6	152.1	148.2
60°	8552.8	7450.7	3192.6	644.3	244.9	188.8	181.7	206.7	158.3	145.1	141.2
62.5°	8424.1	7109.8	2999.1	571.0	237.1	181.0	165.4	197.3	152.1	138.8	134.9
65°	8042.7	6534.2	2566.2	560.0	244.9	173.9	156.8	157.6	145.9	132.6	128.7
67.5°	7151.9	5687.1	2021.8	567.1	254.3	166.9	150.5	143.5	138.8	127.1	122.5
70°	5816.5	4578.7	1592.8	579.5	262.9	157.6	142.7	134.2	130.3	117.8	115.4
72.5°	4480.4	3664.5	1256.6	571.0	271.4	148.2	131.8	124.8	120.1	108.4	106.1
75°	3181.7	2911.8	923.5	489.8	248.8	134.9	119.3	113.1	109.2	96.7	95.9
77.5°	2293.2	2180.9	642.7	368.2	196.6	118.6	105.3	99.8	97.5	83.5	83.5
80°	1829.1	1659.9	384.5	240.2	143.5	98.3	88.1	85.8	83.5	69.4	70.2
82.5°	1314.3	1151.3	245.7	149.8	105.3	74.9	68.6	67.9	64.0	51.5	51.5
85°	673.9	588.1	157.6	100.6	74.1	48.4	45.2	43.7	41.3	32.0	32.0
87.5°	131.0	180.2	87.4	49.1	35.9	17.2	17.2	14.8	17.2	11.7	12.5
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: P195278

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6
2.5°	3024.9	3009.3	2998.4	2992.9	3071.7	3104.4	3141.9	3195.7	3232.4	3216.8	3266.7
5°	2258.9	2269.8	2294.8	2333.8	2443.8	2496.0	2529.6	2574.0	2606.0	2574.0	2627.1
7.5°	1544.4	1560.8	1613.8	1694.2	1826.8	1885.3	1897.0	1897.8	1890.7	1838.5	1874.4
10°	1137.3	1104.5	1116.2	1173.9	1292.5	1344.7	1350.2	1336.2	1333.8	1312.8	1353.3
12.5°	881.4	836.2	809.7	819.0	907.9	950.8	957.9	965.7	997.6	1007.8	1057.7
15°	657.6	634.1	614.6	606.1	664.6	698.1	702.0	720.7	754.3	763.6	806.5
17.5°	462.5	468.8	478.9	482.8	524.9	546.8	540.5	540.5	546.0	543.7	567.8
20°	353.3	365.8	385.3	404.0	442.3	454.7	439.1	419.6	407.2	400.9	406.4
22.5°	312.0	320.6	333.1	357.2	389.2	395.5	375.2	359.6	347.9	341.6	342.4
25°	289.4	298.0	308.1	327.6	354.9	358.0	339.3	329.2	319.8	313.6	312.0
27.5°	269.9	275.3	281.6	294.1	322.1	323.7	311.2	305.0	298.7	294.1	292.5
30°	251.9	254.3	256.6	269.1	290.2	292.5	286.3	283.1	280.8	277.7	277.7
32.5°	228.5	231.7	235.6	246.5	266.8	269.9	266.0	263.6	259.7	258.2	255.8
35°	200.5	208.3	216.8	230.1	251.9	253.5	248.8	241.8	232.4	230.1	228.5
37.5°	188.8	190.3	201.2	216.8	239.5	241.0	234.8	223.1	216.1	216.8	218.4
40°	181.0	183.3	189.5	205.1	227.8	230.1	224.6	216.1	209.0	209.8	212.2
42.5°	174.7	177.8	181.7	191.9	214.5	219.2	217.6	209.8	202.8	204.4	207.5
45°	171.6	173.9	173.9	181.0	202.8	209.8	210.6	204.4	198.9	200.5	204.4
47.5°	170.0	170.0	167.7	173.2	195.0	202.0	203.6	200.5	197.3	198.9	202.8
50°	167.7	164.6	162.2	166.9	188.8	195.0	196.6	194.2	195.8	198.9	201.2
52.5°	160.7	157.6	157.6	160.7	182.5	188.8	189.5	188.0	191.1	195.0	198.9
55°	152.1	152.1	152.9	156.0	179.4	184.1	183.3	181.7	184.9	189.5	193.4
57.5°	144.3	143.5	147.4	151.3	175.5	178.6	177.1	177.1	179.4	183.3	187.2
60°	139.6	135.7	138.8	145.1	171.6	174.7	172.4	171.6	175.5	178.6	181.7
62.5°	134.9	131.0	133.4	139.6	166.1	168.5	166.9	166.9	170.8	173.2	176.3
65°	127.9	126.4	127.9	134.2	161.5	162.2	162.2	163.0	166.1	167.7	170.8
67.5°	121.7	121.7	122.5	128.7	157.6	156.0	156.0	159.9	160.7	162.2	165.4
70°	113.9	115.4	115.4	123.2	154.4	149.0	149.8	152.9	154.4	156.0	156.8
72.5°	105.3	106.1	107.6	117.8	149.8	142.0	142.7	145.1	145.9	148.2	149.0
75°	95.9	96.7	99.1	112.3	146.6	134.9	133.4	134.9	136.5	138.1	137.3
77.5°	85.0	86.6	88.9	109.2	136.5	133.4	121.7	123.2	124.8	124.8	124.0
80°	71.8	74.1	78.0	104.5	115.4	128.7	108.4	109.2	110.0	110.0	108.4
82.5°	53.8	58.5	64.0	86.6	90.5	110.0	93.6	95.2	92.8	91.3	90.5
85°	35.1	39.0	46.8	60.1	66.3	86.6	77.2	78.0	73.3	72.5	72.5
87.5°	14.0	14.8	21.1	30.4	39.8	53.8	55.4	56.9	53.0	53.0	54.6
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: P195278

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6
2.5°	3342.4	3420.4	3510.1	3601.3	3676.2	3772.9	3866.5	3966.4	4017.1	4046.7	4130.2
5°	2709.8	2816.6	2943.8	3086.5	3205.1	3407.9	3626.3	3869.6	3986.6	4102.1	4320.5
7.5°	1938.3	2042.9	2191.1	2375.9	2544.4	2811.9	3099.8	3428.9	3591.2	3778.4	4136.4
10°	1439.1	1549.9	1684.0	1840.8	2007.0	2285.4	2608.4	2978.1	3156.7	3368.1	3775.3
12.5°	1166.9	1296.4	1435.2	1575.6	1718.4	1905.6	2244.1	2655.2	2847.0	3060.0	3467.9
15°	910.3	1049.1	1198.9	1351.8	1493.7	1702.8	2048.3	2534.3	2753.4	2959.4	3293.2
17.5°	644.3	775.3	943.8	1129.5	1335.4	1582.6	2006.2	2587.3	2853.3	3068.6	3292.4
20°	439.1	529.6	698.1	918.1	1172.4	1485.9	2021.8	2773.7	3106.0	3342.4	3427.4
22.5°	351.0	393.9	507.8	731.7	1032.0	1415.7	2085.8	3029.6	3468.7	3756.5	3673.1
25°	319.0	343.2	402.5	578.0	907.2	1368.9	2210.6	3367.3	3875.1	4166.8	3968.7
27.5°	299.5	320.6	358.8	475.0	799.5	1338.5	2368.9	3765.1	4333.0	4572.4	4276.8
30°	287.0	308.1	343.2	426.7	718.4	1293.3	2507.7	4128.6	4698.8	4854.0	4442.9
32.5°	262.9	279.2	308.1	382.2	657.6	1240.2	2627.9	4453.9	5044.3	5095.8	4642.6
35°	237.9	255.1	283.9	346.3	621.7	1198.9	2691.0	4742.5	5386.8	5337.6	4840.8
37.5°	228.5	242.6	269.1	320.6	602.2	1171.6	2715.2	5026.4	5754.1	5605.2	4978.8
40°	222.3	234.8	258.2	303.4	596.7	1145.8	2709.8	5296.3	6110.6	5882.1	5087.2
42.5°	217.6	228.5	250.4	291.7	581.9	1121.7	2691.8	5529.5	6396.1	6120.8	5191.0
45°	213.7	225.4	247.3	298.0	554.6	1095.1	2680.9	5742.4	6615.3	6322.0	5329.8
47.5°	212.2	225.4	248.0	296.4	524.9	1065.5	2719.9	5978.8	6806.4	6491.3	5514.7
50°	209.8	224.6	265.2	282.4	484.4	1028.8	2851.7	6260.4	7006.8	6681.6	5754.1
52.5°	205.9	223.9	283.1	271.4	432.1	978.1	3065.4	6658.2	7353.2	7052.1	6108.3
55°	201.2	225.4	270.7	254.3	376.7	912.6	3279.2	7203.4	7914.8	7649.6	6616.8
57.5°	195.8	223.1	255.8	238.7	330.7	829.9	3441.4	7650.4	8378.1	8265.8	7241.6
60°	191.9	228.5	230.1	229.3	301.1	751.2	3457.0	7621.5	8511.5	8665.9	7853.2
62.5°	187.2	233.2	209.8	222.3	286.3	677.8	3264.4	7149.6	8286.1	8614.5	8351.6
65°	181.0	203.6	198.9	216.1	286.3	638.8	2815.8	6364.1	7662.8	8127.7	8622.3
67.5°	174.7	184.9	191.1	207.5	292.5	602.2	2262.8	5368.0	6680.0	7342.3	8318.0
70°	166.1	174.7	182.5	199.7	289.4	576.4	1780.8	4302.5	5497.5	6255.7	7476.4
72.5°	158.3	164.6	172.4	188.0	289.4	564.7	1430.5	3375.1	4197.2	4836.1	6193.3
75°	146.6	152.1	159.1	176.3	283.9	516.4	1074.1	2704.3	3070.9	3471.1	4886.8
77.5°	134.9	138.8	144.3	161.5	255.8	431.3	759.7	2094.3	2275.3	2496.8	3809.6
80°	120.1	123.2	127.1	144.3	212.2	334.6	494.5	1638.0	1701.2	1808.1	2506.2
82.5°	103.0	107.6	108.4	124.0	170.8	242.6	294.1	1122.4	1121.7	1278.4	1768.3
85°	84.2	86.6	88.1	97.5	126.4	161.5	193.4	613.1	546.8	766.0	1535.8
87.5°	63.2	60.8	63.2	65.5	83.5	95.2	103.7	113.1	67.9	138.8	893.1
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: P195278

CATALOG NUMBER: NAV-AF-02-D-UNV-SLR-7060

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6	3667.6
2.5°	4174.6	4220.6	4193.3	4160.6	4078.7	3958.6	3866.5	3786.2
5°	4471.8	4556.8	4519.4	4397.7	4185.5	3944.5	3691.0	3536.6
7.5°	4434.4	4602.9	4588.0	4385.2	4081.0	3726.1	3369.7	3166.1
10°	4134.8	4371.2	4411.7	4204.3	3882.1	3485.1	3072.5	2842.4
12.5°	3808.8	4007.7	4090.4	4011.6	3708.2	3304.9	2884.5	2654.4
15°	3535.8	3636.4	3718.3	3769.0	3581.0	3240.9	2851.7	2614.6
17.5°	3333.8	3314.3	3382.9	3504.6	3512.4	3326.0	2999.9	2734.7
20°	3236.3	3083.4	3123.2	3294.0	3493.7	3542.0	3295.6	2982.0
22.5°	3230.8	2992.1	2999.9	3184.0	3547.5	3836.9	3664.5	3307.3
25°	3315.1	2982.0	2989.0	3172.3	3642.7	4134.1	4091.2	3674.6
27.5°	3458.6	3025.7	3021.0	3223.8	3769.8	4382.1	4521.7	4123.9
30°	3613.8	3088.8	3077.1	3306.5	3894.6	4535.0	4827.5	4462.4
32.5°	3807.2	3201.2	3160.6	3427.4	4017.8	4681.6	5088.8	4779.1
35°	3991.3	3365.8	3307.3	3600.5	4149.7	4844.7	5381.3	5129.4
37.5°	4179.3	3611.5	3578.7	3850.1	4336.1	5021.7	5715.9	5526.4
40°	4420.3	3960.9	3945.3	4212.8	4584.9	5215.2	6091.1	5939.8
42.5°	4680.1	4332.2	4318.9	4629.4	4893.8	5409.4	6412.5	6294.7
45°	4944.5	4782.3	4785.4	5074.0	5219.1	5592.7	6665.2	6578.6
47.5°	5256.5	5274.4	5386.0	5535.0	5535.7	5797.0	6889.1	6843.0
50°	5652.7	5868.8	6074.7	6098.1	5855.6	6066.9	7162.9	7145.7
52.5°	6101.3	6554.4	6793.9	6719.8	6167.6	6401.6	7567.7	7566.9
55°	6634.0	7271.3	7496.7	7370.3	6541.2	6837.6	8096.5	8062.2
57.5°	7186.3	7960.8	8142.5	7978.0	7008.4	7345.4	8626.9	8445.2
60°	7783.0	8554.4	8739.3	8492.0	7532.6	7851.6	8977.9	8552.8
62.5°	8173.7	8901.5	9034.1	8797.0	8002.1	8367.2	9091.0	8424.1
65°	8194.0	8670.6	8705.7	8621.5	8201.8	8814.9	8927.2	8042.7
67.5°	7637.1	7665.2	7711.2	7801.7	7775.2	8615.2	8295.4	7151.9
70°	6446.0	6071.6	6222.9	6310.3	6506.9	7662.8	7127.7	5816.5
72.5°	4928.9	4382.1	4553.7	4524.1	4932.8	6285.3	5453.1	4480.4
75°	3547.5	2988.2	3001.5	3003.0	3544.4	5017.0	3718.3	3181.7
77.5°	2411.0	2114.6	2158.3	2131.0	2372.0	3930.5	2677.0	2293.2
80°	1648.9	1641.1	1650.5	1586.5	1581.9	2540.5	1982.0	1829.1
82.5°	1223.1	1130.2	1117.0	1049.1	1212.1	1942.2	1504.6	1314.3
85°	964.9	625.6	543.7	656.0	1049.9	1787.0	917.3	673.9
87.5°	408.7	245.7	149.0	294.8	583.4	1309.6	254.3	131.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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