

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: P195749

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195749  
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-05-D-UNV-SLR-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 615mA 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: 17498 lumens  
Efficiency: N/A  
Efficacy: 108.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 162  
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

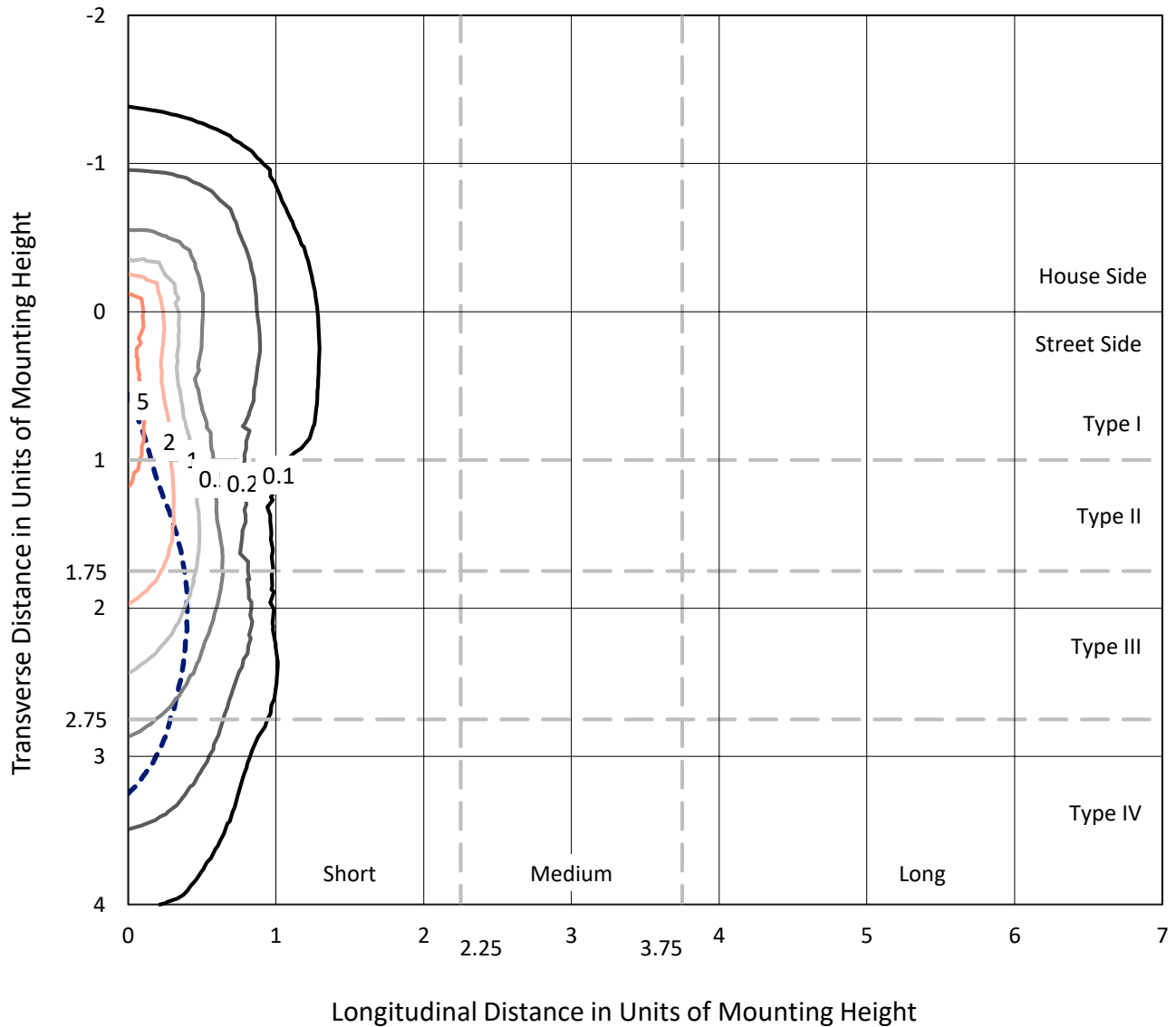


REPORT NUMBER: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

### Iso-Footcandle Lines of Horizontal Illumination

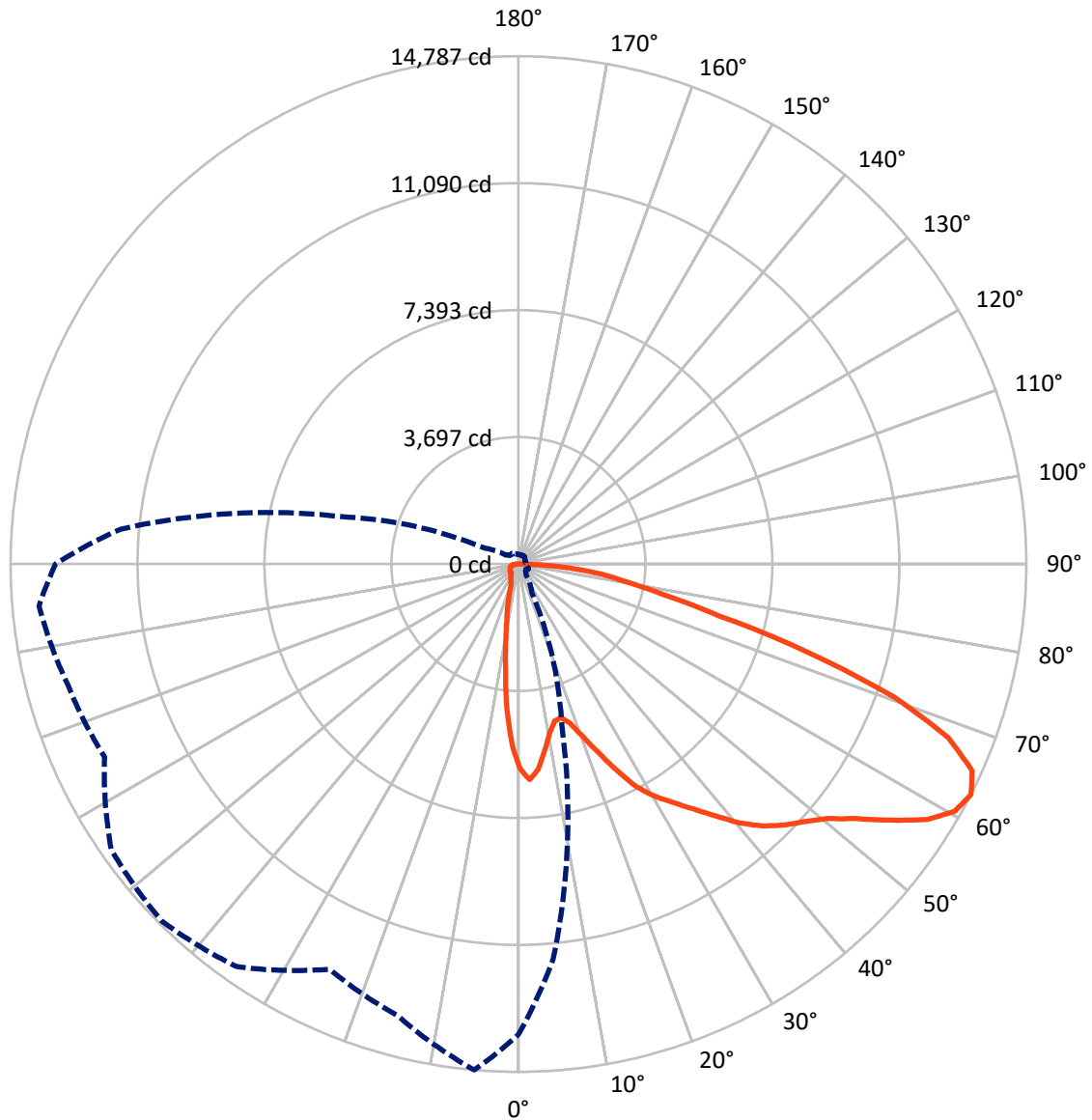
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195749  
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3099.8	0.0	3099.8
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	14398.2	0.0	14398.2
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	17498.0	0.0	17498.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	433.8	2.5
10°-20°	792.4	4.5
20°-30°	1139.7	6.5
30°-40°	1745.5	10.0
40°-50°	2552.0	14.6
50°-60°	3713.2	21.2
60°-70°	4302.2	24.6
70°-80°	2242.7	12.8
80°-90°	576.5	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°	17498.0	100.0
0°-180°	17498.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P195749

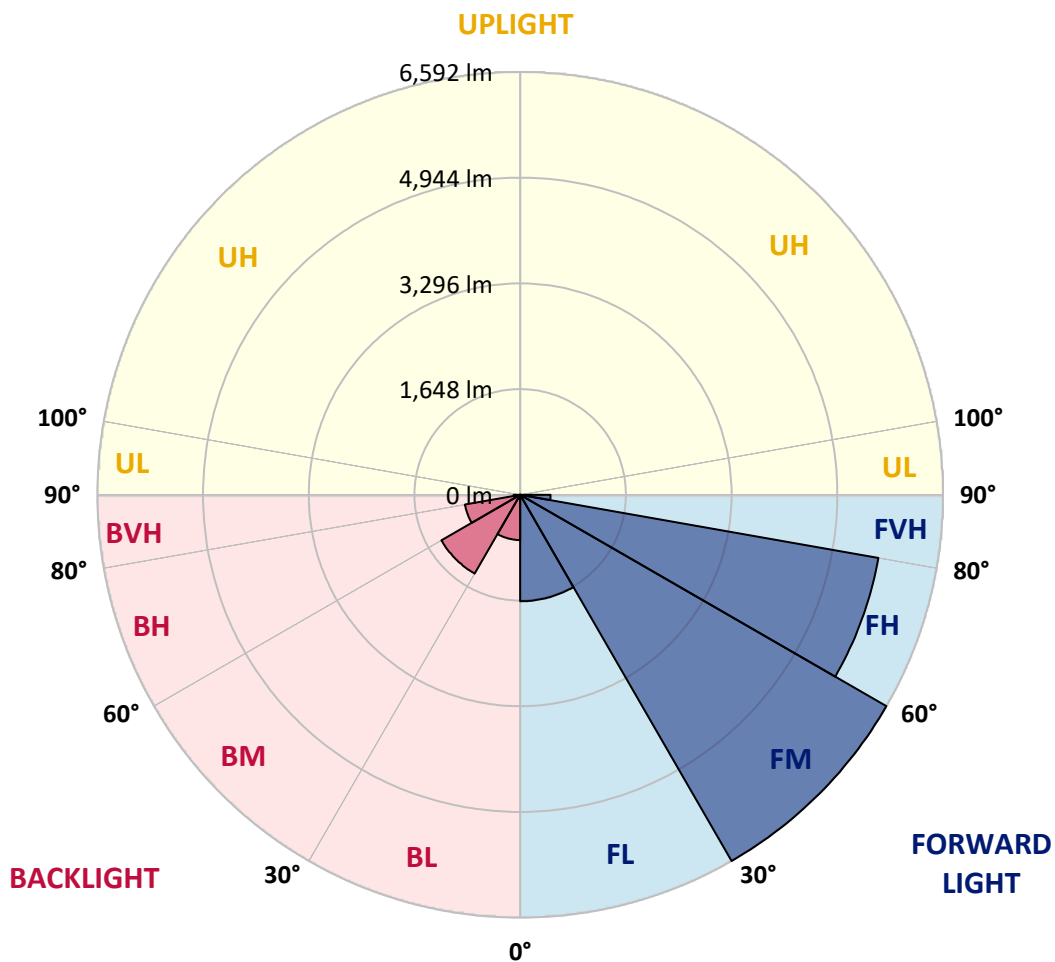
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1660.6	9.5			
FM	(30°-60°)	6592.4	37.7			
FH	(60°-80°)	5670.9	32.4			G3/7500
FVH	(80°-90°)	474.3	2.7			G3/500
BL	(0°-30°)	705.3	4.0	B2/1000		
BM	(30°-60°)	1418.3	8.1	B2/2500		
BH	(60°-80°)	874.0	5.0	B2/1000		G2/1000
BVH	(80°-90°)	102.2	0.6			G2/225
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: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4
2.5°	6158.3	6072.0	5872.8	5697.7	5479.5	5315.8	5116.7	5011.4	4934.0	4881.9	4840.1
5°	5752.3	5544.2	5163.6	4829.9	4469.6	4209.5	3905.1	3738.9	3636.1	3580.3	3554.9
7.5°	5149.6	4874.3	4382.1	3934.2	3483.8	3159.1	2928.2	2682.0	2551.4	2466.3	2438.4
10°	4623.1	4312.3	3724.9	3221.2	2873.6	2642.7	2444.8	2219.0	2051.5	1905.6	1851.0
12.5°	4317.4	3955.8	3285.9	2830.5	2538.7	2291.3	2081.9	1838.3	1662.0	1509.8	1451.4
15°	4252.7	3849.2	3102.0	2581.8	2224.0	1925.9	1674.7	1409.5	1237.0	1111.4	1070.8
17.5°	4448.1	3950.7	3024.6	2354.7	1923.3	1559.2	1249.7	965.5	822.1	753.6	737.1
20°	4850.2	4174.0	2987.8	2150.4	1631.5	1200.2	864.0	655.9	584.9	564.6	563.3
22.5°	5379.3	4536.9	3028.4	1983.0	1357.5	885.6	633.1	539.2	510.0	498.6	498.6
25°	5976.8	5027.8	3136.2	1854.8	1116.5	688.9	545.5	494.8	470.7	459.3	460.5
27.5°	6707.6	5625.4	3283.4	1736.8	943.9	603.9	510.0	466.9	442.8	431.4	432.6
30°	7258.2	6139.2	3410.3	1629.0	855.1	569.6	491.0	450.4	423.7	407.3	406.0
32.5°	7773.3	6592.2	3513.0	1551.6	804.4	508.7	444.0	413.6	390.8	371.7	367.9
35°	8343.0	7018.4	3561.2	1549.1	771.4	459.3	406.0	369.2	346.4	324.8	321.0
37.5°	8988.7	7539.9	3601.8	1564.3	753.6	427.6	388.2	352.7	333.7	312.1	307.0
40°	9661.1	8049.9	3633.6	1577.0	751.1	406.0	374.3	342.5	323.5	300.7	295.6
42.5°	10238.4	8501.5	3676.7	1571.9	733.3	402.2	365.4	333.7	315.9	293.1	286.7
45°	10700.2	8860.6	3743.9	1570.6	706.7	411.1	362.8	331.1	309.6	285.5	280.4
47.5°	11130.3	9265.3	3886.0	1565.6	677.5	408.5	376.8	328.6	307.0	282.9	279.1
50°	11622.5	9809.6	4128.3	1527.5	636.9	390.8	402.2	326.1	300.7	279.1	275.3
52.5°	12307.6	10606.3	4487.4	1459.0	581.1	371.7	406.0	324.8	290.5	271.5	266.4
55°	13113.3	11460.1	4874.3	1360.0	507.5	338.7	385.7	319.7	280.4	260.1	252.5
57.5°	13736.2	12090.7	5144.6	1217.9	435.2	319.7	343.8	308.3	267.7	247.4	241.1
60°	13911.3	12118.6	5192.8	1047.9	398.4	307.0	295.6	336.2	257.5	236.0	229.6
62.5°	13701.9	11564.2	4878.1	928.7	385.7	294.3	269.0	321.0	247.4	225.8	219.5
65°	13081.5	10627.9	4174.0	910.9	398.4	282.9	255.0	256.3	237.2	215.7	209.3
67.5°	11632.7	9250.1	3288.5	922.3	413.6	271.5	244.9	233.4	225.8	206.8	199.2
70°	9460.7	7447.3	2590.7	942.6	427.6	256.3	232.2	218.2	211.9	191.6	187.8
72.5°	7287.4	5960.3	2043.9	928.7	441.5	241.1	214.4	203.0	195.4	176.3	172.5
75°	5175.0	4736.0	1502.1	796.7	404.7	219.5	194.1	184.0	177.6	157.3	156.0
77.5°	3730.0	3547.3	1045.4	598.8	319.7	192.8	171.3	162.4	158.6	135.8	135.8
80°	2975.1	2699.8	625.5	390.8	233.4	159.9	143.4	139.6	135.8	112.9	114.2
82.5°	2137.8	1872.6	399.6	243.6	171.3	121.8	111.6	110.4	104.0	83.7	83.7
85°	1096.2	956.6	256.3	163.7	120.5	78.7	73.6	71.0	67.2	52.0	52.0
87.5°	213.1	293.1	142.1	79.9	58.4	27.9	27.9	24.1	27.9	19.0	20.3
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: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4
2.5°	4920.0	4894.6	4876.9	4868.0	4996.1	5049.4	5110.3	5197.9	5257.5	5232.1	5313.3
5°	3674.1	3691.9	3732.5	3795.9	3974.8	4059.8	4114.4	4186.7	4238.7	4186.7	4273.0
7.5°	2512.0	2538.7	2624.9	2755.6	2971.3	3066.4	3085.5	3086.7	3075.3	2990.3	3048.7
10°	1849.8	1796.5	1815.5	1909.4	2102.2	2187.2	2196.1	2173.3	2169.5	2135.2	2201.2
12.5°	1433.6	1360.0	1316.9	1332.1	1476.8	1546.5	1558.0	1570.6	1622.7	1639.2	1720.4
15°	1069.5	1031.5	999.7	985.8	1080.9	1135.5	1141.8	1172.3	1226.8	1242.1	1311.8
17.5°	752.3	762.5	779.0	785.3	853.8	889.4	879.2	879.2	888.1	884.3	923.6
20°	574.7	595.0	626.7	657.2	719.4	739.7	714.3	682.6	662.3	652.1	661.0
22.5°	507.5	521.4	541.7	581.1	633.1	643.2	610.2	584.9	565.8	555.7	557.0
25°	470.7	484.6	501.1	532.9	577.3	582.3	551.9	535.4	520.2	510.0	507.5
27.5°	439.0	447.9	458.0	478.3	524.0	526.5	506.2	496.1	485.9	478.3	475.8
30°	409.8	413.6	417.4	437.7	472.0	475.8	465.6	460.5	456.7	451.7	451.7
32.5°	371.7	376.8	383.1	400.9	433.9	439.0	432.6	428.8	422.5	419.9	416.1
35°	326.1	338.7	352.7	374.3	409.8	412.3	404.7	393.3	378.1	374.3	371.7
37.5°	307.0	309.6	327.3	352.7	389.5	392.0	381.9	362.8	351.4	352.7	355.2
40°	294.3	298.1	308.3	333.7	370.5	374.3	365.4	351.4	340.0	341.3	345.1
42.5°	284.2	289.3	295.6	312.1	348.9	356.5	354.0	341.3	329.9	332.4	337.5
45°	279.1	282.9	282.9	294.3	329.9	341.3	342.5	332.4	323.5	326.1	332.4
47.5°	276.6	276.6	272.8	281.7	317.2	328.6	331.1	326.1	321.0	323.5	329.9
50°	272.8	267.7	263.9	271.5	307.0	317.2	319.7	315.9	318.4	323.5	327.3
52.5°	261.4	256.3	256.3	261.4	296.9	307.0	308.3	305.8	310.8	317.2	323.5
55°	247.4	247.4	248.7	253.7	291.8	299.4	298.1	295.6	300.7	308.3	314.6
57.5°	234.7	233.4	239.8	246.1	285.5	290.5	288.0	288.0	291.8	298.1	304.5
60°	227.1	220.8	225.8	236.0	279.1	284.2	280.4	279.1	285.5	290.5	295.6
62.5°	219.5	213.1	216.9	227.1	270.2	274.0	271.5	271.5	277.8	281.7	286.7
65°	208.1	205.5	208.1	218.2	262.6	263.9	263.9	265.2	270.2	272.8	277.8
67.5°	197.9	197.9	199.2	209.3	256.3	253.7	253.7	260.1	261.4	263.9	269.0
70°	185.2	187.8	187.8	200.5	251.2	242.3	243.6	248.7	251.2	253.7	255.0
72.5°	171.3	172.5	175.1	191.6	243.6	230.9	232.2	236.0	237.2	241.1	242.3
75°	156.0	157.3	161.1	182.7	238.5	219.5	216.9	219.5	222.0	224.6	223.3
77.5°	138.3	140.8	144.6	177.6	222.0	216.9	197.9	200.5	203.0	203.0	201.7
80°	116.7	120.5	126.9	170.0	187.8	209.3	176.3	177.6	178.9	178.9	176.3
82.5°	87.5	95.2	104.0	140.8	147.2	178.9	152.2	154.8	151.0	148.4	147.2
85°	57.1	63.4	76.1	97.7	107.8	140.8	125.6	126.9	119.3	118.0	118.0
87.5°	22.8	24.1	34.3	49.5	64.7	87.5	90.1	92.6	86.3	86.3	88.8
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: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4
2.5°	5436.4	5563.2	5709.1	5857.6	5979.4	6136.7	6288.9	6451.3	6533.8	6582.0	6717.8
5°	4407.5	4581.3	4788.1	5020.2	5213.1	5542.9	5898.2	6294.0	6484.3	6672.1	7027.3
7.5°	3152.7	3322.7	3563.8	3864.5	4138.5	4573.7	5041.8	5577.2	5841.1	6145.6	6727.9
10°	2340.7	2520.9	2739.1	2994.1	3264.4	3717.3	4242.5	4843.9	5134.4	5478.2	6140.5
12.5°	1898.0	2108.6	2334.4	2562.8	2794.9	3099.4	3650.0	4318.6	4630.7	4977.1	5640.6
15°	1480.6	1706.4	1950.0	2198.7	2429.6	2769.6	3331.6	4122.0	4478.5	4813.4	5356.4
17.5°	1047.9	1261.1	1535.1	1837.1	2172.0	2574.2	3263.1	4208.3	4640.9	4991.1	5355.2
20°	714.3	861.4	1135.5	1493.3	1906.9	2416.9	3288.5	4511.5	5052.0	5436.4	5574.7
22.5°	570.9	640.7	825.9	1190.0	1678.5	2302.7	3392.5	4927.6	5641.9	6110.0	5974.3
25°	518.9	558.2	654.6	940.1	1475.5	2226.6	3595.5	5477.0	6302.9	6777.4	6455.1
27.5°	487.2	521.4	583.6	772.6	1300.4	2177.1	3853.0	6124.0	7047.6	7437.1	6956.3
30°	466.9	501.1	558.2	694.0	1168.5	2103.5	4078.9	6715.2	7642.6	7895.1	7226.5
32.5°	427.6	454.2	501.1	621.7	1069.5	2017.2	4274.2	7244.3	8204.7	8288.4	7551.3
35°	387.0	414.9	461.8	563.3	1011.2	1950.0	4377.0	7713.7	8761.6	8681.7	7873.5
37.5°	371.7	394.6	437.7	521.4	979.4	1905.6	4416.3	8175.5	9359.2	9116.9	8098.1
40°	361.6	381.9	419.9	493.5	970.6	1863.7	4407.5	8614.5	9939.0	9567.2	8274.4
42.5°	354.0	371.7	407.3	474.5	946.4	1824.4	4378.3	8993.8	10403.3	9955.5	8443.2
45°	347.6	366.7	402.2	484.6	902.0	1781.3	4360.5	9340.2	10759.8	10282.8	8669.0
47.5°	345.1	366.7	403.4	482.1	853.8	1733.0	4423.9	9724.6	11070.7	10558.1	8969.7
50°	341.3	365.4	431.4	459.3	787.9	1673.4	4638.4	10182.6	11396.7	10867.7	9359.2
52.5°	334.9	364.1	460.5	441.5	702.9	1590.9	4986.0	10829.6	11960.0	11470.3	9935.2
55°	327.3	366.7	440.2	413.6	612.8	1484.4	5333.6	11716.4	12873.5	12442.1	10762.4
57.5°	318.4	362.8	416.1	388.2	537.9	1349.9	5597.5	12443.4	13627.1	13444.4	11778.6
60°	312.1	371.7	374.3	373.0	489.7	1221.8	5622.9	12396.4	13844.0	14095.2	12773.2
62.5°	304.5	379.3	341.3	361.6	465.6	1102.5	5309.5	11628.9	13477.4	14011.5	13583.9
65°	294.3	331.1	323.5	351.4	465.6	1039.1	4580.0	10351.3	12463.7	13219.8	14024.2
67.5°	284.2	300.7	310.8	337.5	475.8	979.4	3680.5	8731.2	10865.1	11942.3	13529.4
70°	270.2	284.2	296.9	324.8	470.7	937.6	2896.4	6998.1	8941.8	10175.0	12160.5
72.5°	257.5	267.7	280.4	305.8	470.7	918.5	2326.8	5489.7	6826.9	7865.9	10073.5
75°	238.5	247.4	258.8	286.7	461.8	839.9	1747.0	4398.6	4994.9	5645.7	7948.4
77.5°	219.5	225.8	234.7	262.6	416.1	701.6	1235.7	3406.5	3700.8	4061.1	6196.3
80°	195.4	200.5	206.8	234.7	345.1	544.3	804.4	2664.3	2767.0	2940.8	4076.3
82.5°	167.5	175.1	176.3	201.7	277.8	394.6	478.3	1825.7	1824.4	2079.4	2876.1
85°	137.0	140.8	143.4	158.6	205.5	262.6	314.6	997.2	889.4	1245.9	2498.1
87.5°	102.8	99.0	102.8	106.6	135.8	154.8	168.7	184.0	110.4	225.8	1452.7
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: P195749

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7050-600

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4	5965.4
2.5°	6790.1	6864.9	6820.5	6767.2	6634.0	6438.6	6288.9	6158.3
5°	7273.4	7411.7	7350.8	7152.9	6807.8	6415.8	6003.5	5752.3
7.5°	7212.5	7486.6	7462.5	7132.6	6637.8	6060.6	5480.8	5149.6
10°	6725.4	7109.8	7175.8	6838.3	6314.3	5668.5	4997.4	4623.1
12.5°	6195.1	6518.6	6653.1	6524.9	6031.4	5375.5	4691.6	4317.4
15°	5751.0	5914.7	6047.9	6130.3	5824.6	5271.4	4638.4	4252.7
17.5°	5422.4	5390.7	5502.3	5700.3	5712.9	5409.7	4879.4	4448.1
20°	5263.8	5015.2	5079.9	5357.7	5682.5	5761.2	5360.2	4850.2
22.5°	5254.9	4866.7	4879.4	5178.8	5770.0	6240.7	5960.3	5379.3
25°	5392.0	4850.2	4861.6	5159.8	5924.8	6724.1	6654.3	5976.8
27.5°	5625.4	4921.3	4913.7	5243.5	6131.6	7127.5	7354.6	6707.6
30°	5877.9	5024.0	5005.0	5378.0	6334.6	7376.2	7852.0	7258.2
32.5°	6192.5	5206.7	5140.8	5574.7	6535.1	7614.7	8277.0	7773.3
35°	6491.9	5474.4	5379.3	5856.3	6749.5	7879.9	8752.7	8343.0
37.5°	6797.7	5874.1	5820.8	6262.3	7052.7	8167.9	9297.0	8988.7
40°	7189.7	6442.4	6417.1	6852.2	7457.4	8482.5	9907.3	9661.1
42.5°	7612.2	7046.3	7024.8	7529.7	7959.8	8798.4	10430.0	10238.4
45°	8042.3	7778.4	7783.5	8252.9	8488.9	9096.6	10841.0	10700.2
47.5°	8549.8	8578.9	8760.4	9002.7	9003.9	9429.0	11205.1	11130.3
50°	9194.3	9545.7	9880.6	9918.7	9524.1	9867.9	11650.5	11622.5
52.5°	9923.8	10660.9	11050.4	10929.8	10031.6	10412.2	12308.9	12307.6
55°	10790.3	11826.8	12193.5	11987.9	10639.3	11121.4	13169.1	13113.3
57.5°	11688.5	12948.3	13243.9	12976.2	11399.2	11947.3	14031.8	13736.2
60°	12659.1	13913.8	14214.5	13812.3	12251.8	12770.7	14602.7	13911.3
62.5°	13294.7	14478.4	14694.1	14308.4	13015.6	13609.3	14786.7	13701.9
65°	13327.7	14102.8	14159.9	14022.9	13340.4	14337.6	14520.2	13081.5
67.5°	12421.8	12467.5	12542.3	12689.5	12646.4	14012.8	13492.6	11632.7
70°	10484.5	9875.5	10121.7	10263.8	10583.5	12463.7	11593.4	9460.7
72.5°	8016.9	7127.5	7406.7	7358.4	8023.2	10223.2	8869.5	7287.4
75°	5770.0	4860.4	4881.9	4884.5	5765.0	8160.3	6047.9	5175.0
77.5°	3921.5	3439.4	3510.5	3466.1	3858.1	6393.0	4354.2	3730.0
80°	2682.0	2669.3	2684.6	2580.5	2572.9	4132.1	3223.8	2975.1
82.5°	1989.3	1838.3	1816.8	1706.4	1971.6	3159.1	2447.3	2137.8
85°	1569.4	1017.5	884.3	1067.0	1707.7	2906.6	1492.0	1096.2
87.5°	664.8	399.6	242.3	479.6	949.0	2130.1	413.6	213.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)