

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: P196721

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196721
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-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 25685.8 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

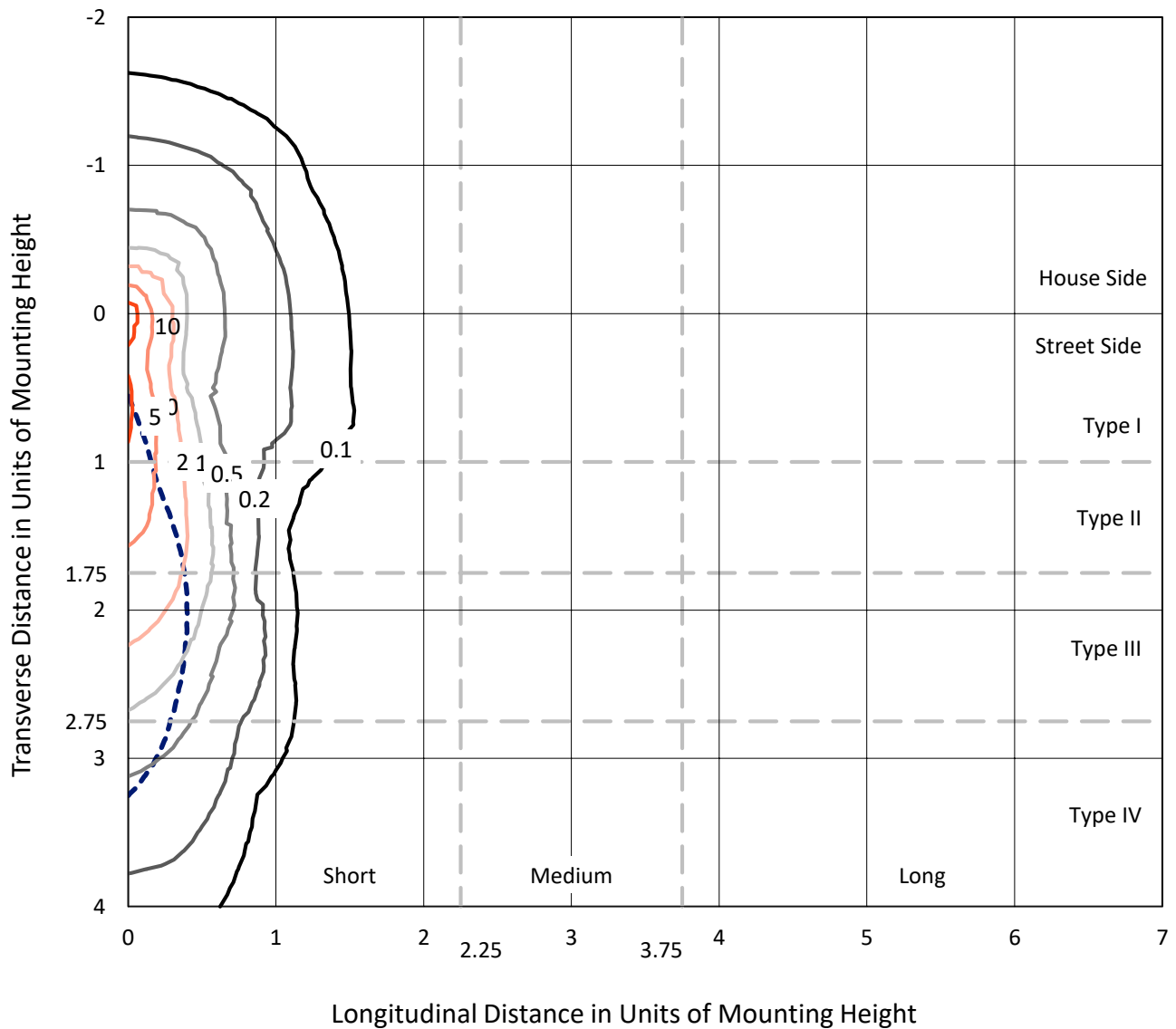
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196721
 CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

Iso-Footcandle Lines of Horizontal Illumination

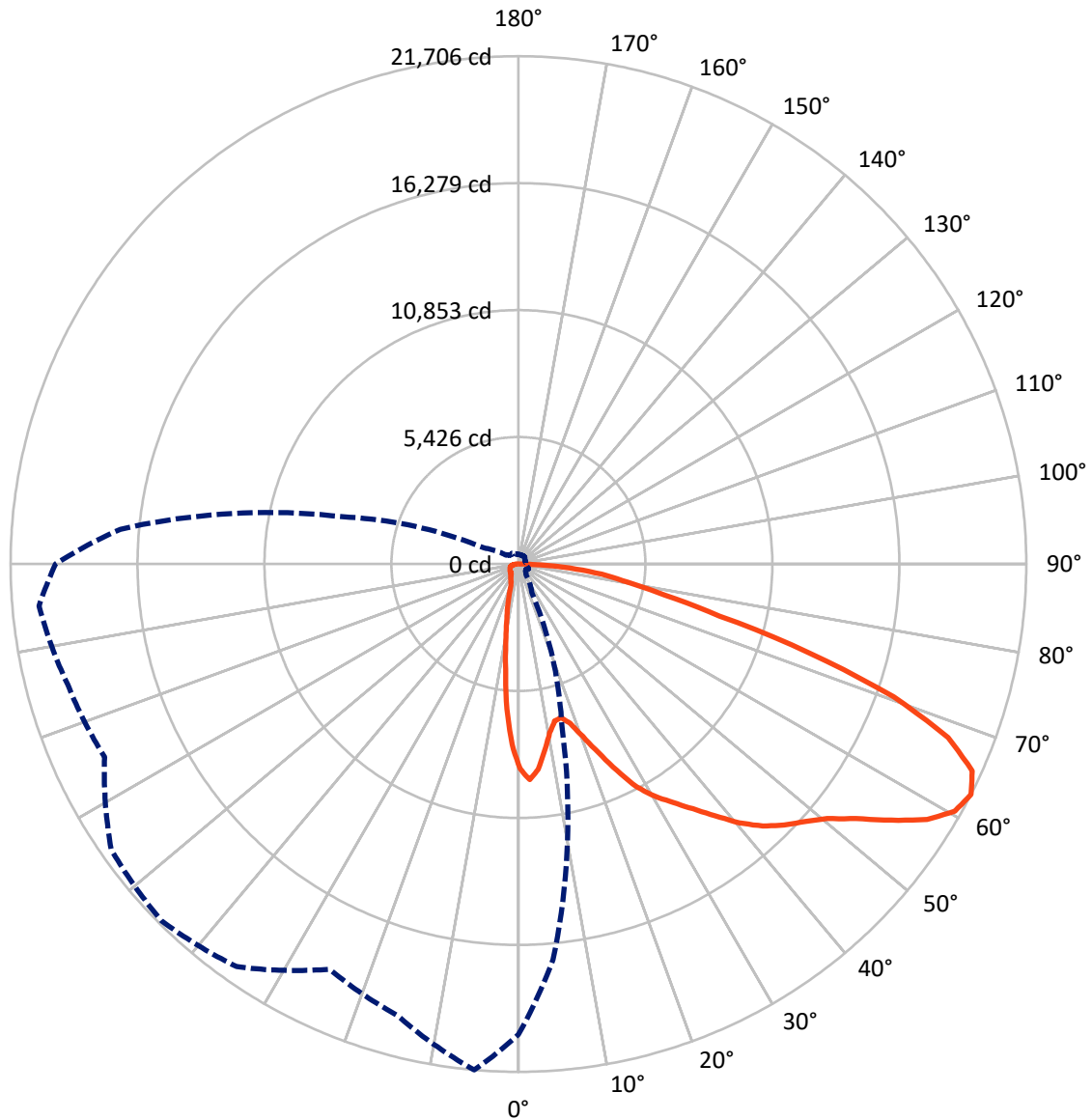
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196721
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196721

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4550.3	0.0	4550.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	21135.5	0.0	21135.5
	% Fixture	82.3	0.0	82.3
Total	Lumens	25685.8	0.0	25685.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	636.8	2.5
10°-20°	1163.2	4.5
20°-30°	1673.0	6.5
30°-40°	2562.3	10.0
40°-50°	3746.1	14.6
50°-60°	5450.7	21.2
60°-70°	6315.3	24.6
70°-80°	3292.1	12.8
80°-90°	846.2	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°	25685.8	100.0
0°-180°	25685.8	100.0



REPORT NUMBER: P196721

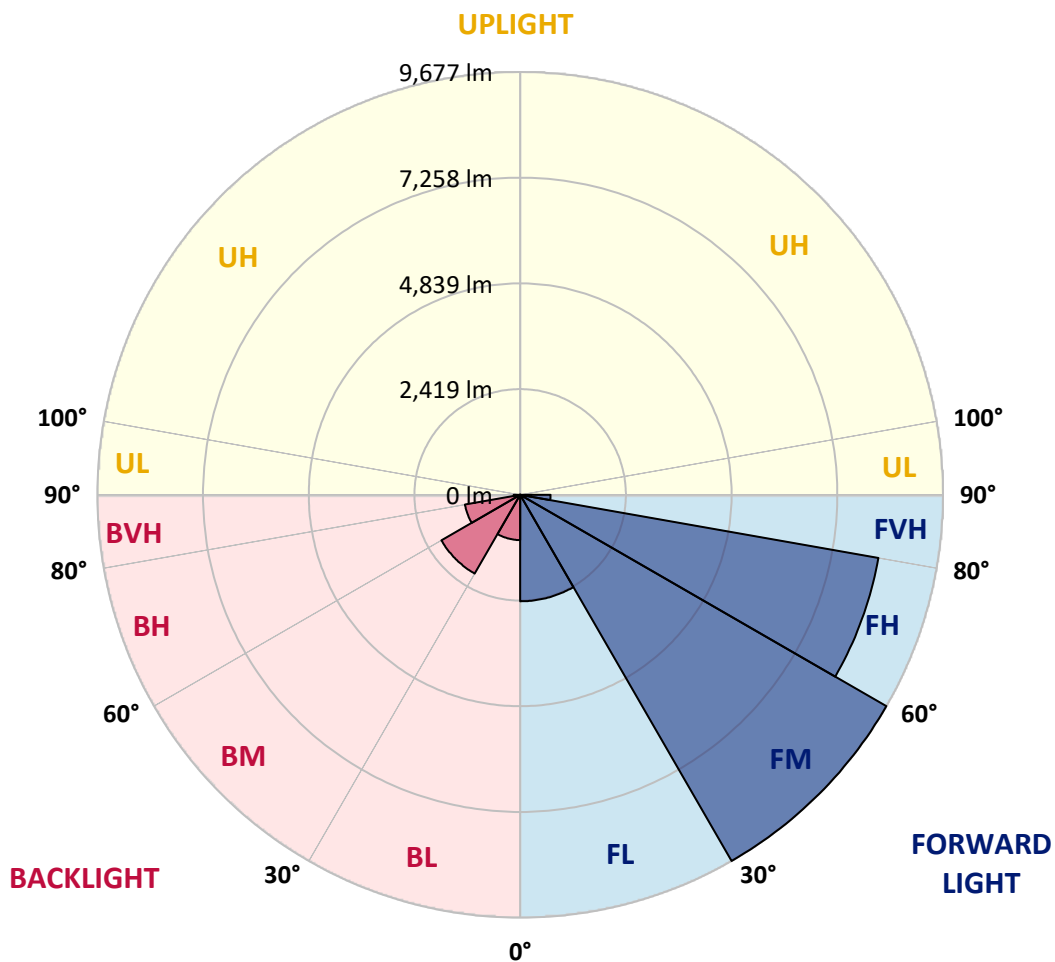
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2437.7	9.5			
FM	(30°-60°)	9677.2	37.7			
FH	(60°-80°)	8324.4	32.4			G4/12000
FVH	(80°-90°)	696.2	2.7			G4/750
BL	(0°-30°)	1035.3	4.0	B3/2500		
BM	(30°-60°)	2081.9	8.1	B2/2500		
BH	(60°-80°)	1283.0	5.0	B3/2500		G3/2500
BVH	(80°-90°)	150.1	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





REPORT NUMBER: P196721

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8
2.5°	9039.9	8913.3	8620.9	8363.8	8043.5	7803.3	7510.9	7356.3	7242.7	7166.4	7104.9
5°	8443.9	8138.5	7579.8	7090.0	6561.0	6179.2	5732.3	5488.3	5337.6	5255.6	5218.3
7.5°	7559.3	7155.2	6432.5	5775.1	5114.0	4637.3	4298.3	3937.0	3745.2	3620.5	3579.5
10°	6786.4	6330.2	5467.9	4728.5	4218.3	3879.2	3588.7	3257.2	3011.4	2797.2	2717.2
12.5°	6337.6	5806.8	4823.5	4154.9	3726.7	3363.4	3056.1	2698.6	2439.6	2216.3	2130.5
15°	6242.6	5650.4	4553.5	3789.8	3264.6	2827.1	2458.4	2069.1	1815.8	1631.5	1571.8
17.5°	6529.5	5799.4	4439.9	3456.5	2823.4	2288.9	1834.5	1417.2	1206.8	1106.2	1082.0
20°	7119.8	6127.2	4385.8	3156.7	2395.0	1761.8	1268.3	962.8	858.6	828.7	826.9
22.5°	7896.3	6659.8	4445.4	2910.8	1992.7	1299.9	929.4	791.5	748.7	731.9	731.9
25°	8773.5	7380.5	4603.7	2722.7	1638.9	1011.3	800.8	726.3	690.9	674.1	676.0
27.5°	9846.2	8257.7	4819.8	2549.6	1385.6	886.5	748.7	685.4	650.0	633.1	635.1
30°	10654.5	9011.9	5006.0	2391.2	1255.3	836.2	720.8	661.1	622.0	597.8	595.9
32.5°	11410.6	9676.8	5156.8	2277.6	1180.8	746.8	651.8	607.2	573.6	545.6	540.1
35°	12246.9	10302.5	5227.6	2273.9	1132.4	674.1	595.9	541.9	508.4	476.8	471.1
37.5°	13194.8	11068.0	5287.3	2296.3	1106.2	627.5	569.9	517.8	489.8	458.2	450.7
40°	14181.9	11816.6	5333.8	2314.8	1102.5	595.9	549.3	502.8	474.9	441.4	434.0
42.5°	15029.1	12479.6	5397.1	2307.4	1076.4	590.3	536.4	489.8	463.7	430.2	420.8
45°	15707.1	13006.7	5495.8	2305.6	1037.3	603.4	532.6	486.1	454.4	419.0	411.6
47.5°	16338.4	13600.8	5704.4	2298.2	994.5	599.8	553.1	482.4	450.7	415.3	409.7
50°	17061.1	14399.8	6060.1	2242.3	934.9	573.6	590.3	478.7	441.4	409.7	404.2
52.5°	18066.7	15569.2	6587.1	2141.7	853.0	545.6	595.9	476.8	426.4	398.6	391.1
55°	19249.3	16822.6	7155.2	1996.5	744.9	497.2	566.2	469.3	411.6	381.8	370.6
57.5°	20163.7	17748.2	7551.9	1787.8	638.8	469.3	504.7	452.6	393.0	363.2	353.9
60°	20420.7	17789.1	7622.6	1538.3	584.7	450.7	434.0	493.6	378.0	346.4	337.1
62.5°	20113.4	16975.4	7160.8	1363.2	566.2	432.1	394.9	471.1	363.2	331.5	322.2
65°	19202.8	15600.9	6127.2	1337.3	584.7	415.3	374.3	376.2	348.2	316.7	307.2
67.5°	17075.9	13578.4	4827.2	1353.9	607.2	398.6	359.5	342.6	331.5	303.5	292.4
70°	13887.6	10932.1	3802.9	1383.8	627.5	376.2	340.8	320.3	311.1	281.3	275.7
72.5°	10697.3	8749.4	3000.3	1363.2	648.1	353.9	314.7	297.9	286.8	258.8	253.3
75°	7596.6	6952.1	2205.1	1169.5	594.1	322.2	284.9	270.1	260.7	231.0	229.1
77.5°	5475.3	5207.2	1534.5	879.0	469.3	283.1	251.4	238.4	232.8	199.3	199.3
80°	4367.2	3963.1	918.1	573.6	342.6	234.7	210.5	204.9	199.3	165.7	167.6
82.5°	3138.0	2748.9	586.6	357.6	251.4	178.7	163.9	162.0	152.8	122.9	122.9
85°	1609.1	1404.2	376.2	240.3	176.9	115.5	108.0	104.4	98.7	76.4	76.4
87.5°	312.9	430.2	208.5	117.4	85.7	41.0	41.0	35.4	41.0	28.0	29.8
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: P196721

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8
2.5°	7222.2	7185.0	7158.8	7145.9	7333.9	7412.1	7501.5	7630.0	7717.6	7680.4	7799.6
5°	5393.4	5419.5	5479.1	5572.1	5834.8	5959.5	6039.7	6145.8	6222.1	6145.8	6272.3
7.5°	3687.5	3726.7	3853.2	4045.0	4361.6	4501.3	4529.3	4531.1	4514.4	4389.6	4475.3
10°	2715.3	2637.1	2665.1	2802.8	3085.9	3210.7	3223.7	3190.3	3184.6	3134.3	3231.3
12.5°	2104.5	1996.5	1933.2	1955.5	2167.8	2270.2	2287.1	2305.6	2382.0	2406.1	2525.3
15°	1569.9	1514.2	1467.6	1447.0	1586.8	1666.9	1676.1	1720.9	1800.9	1823.2	1925.7
17.5°	1104.4	1119.3	1143.5	1152.8	1253.3	1305.5	1290.6	1290.6	1303.7	1298.1	1355.8
20°	843.7	873.4	920.0	964.6	1056.0	1085.7	1048.5	1001.9	972.2	957.2	970.3
22.5°	744.9	765.5	795.2	853.0	929.4	944.2	895.8	858.6	830.6	815.7	817.6
25°	690.9	711.4	735.7	782.2	847.5	854.9	810.1	785.9	763.6	748.7	744.9
27.5°	644.4	657.4	672.3	702.1	769.1	772.9	743.1	728.2	713.3	702.1	698.3
30°	601.6	607.2	612.7	642.6	692.8	698.3	683.5	676.0	670.5	662.9	662.9
32.5°	545.6	553.1	562.4	588.5	636.9	644.4	635.1	629.5	620.1	616.4	610.9
35°	478.7	497.2	517.8	549.3	601.6	605.3	594.1	577.3	554.9	549.3	545.6
37.5°	450.7	454.4	480.5	517.8	571.8	575.5	560.6	532.6	515.9	517.8	521.5
40°	432.1	437.7	452.6	489.8	543.8	549.3	536.4	515.9	499.1	501.0	506.5
42.5°	417.2	424.6	434.0	458.2	512.1	523.4	519.6	501.0	484.2	488.0	495.4
45°	409.7	415.3	415.3	432.1	484.2	501.0	502.8	488.0	474.9	478.7	488.0
47.5°	406.0	406.0	400.4	413.4	465.6	482.4	486.1	478.7	471.1	474.9	484.2
50°	400.4	393.0	387.4	398.6	450.7	465.6	469.3	463.7	467.4	474.9	480.5
52.5°	383.6	376.2	376.2	383.6	435.8	450.7	452.6	448.8	456.2	465.6	474.9
55°	363.2	363.2	365.0	372.5	428.3	439.6	437.7	434.0	441.4	452.6	461.8
57.5°	344.5	342.6	352.1	361.3	419.0	426.4	422.8	422.8	428.3	437.7	447.0
60°	333.3	324.1	331.5	346.4	409.7	417.2	411.6	409.7	419.0	426.4	434.0
62.5°	322.2	312.9	318.5	333.3	396.7	402.3	398.6	398.6	407.9	413.4	420.8
65°	305.4	301.7	305.4	320.3	385.4	387.4	387.4	389.2	396.7	400.4	407.9
67.5°	290.5	290.5	292.4	307.2	376.2	372.5	372.5	381.8	383.6	387.4	394.9
70°	271.9	275.7	275.7	294.2	368.8	355.7	357.6	365.0	368.8	372.5	374.3
72.5°	251.4	253.3	257.0	281.3	357.6	338.9	340.8	346.4	348.2	353.9	355.7
75°	229.1	231.0	236.5	268.2	350.1	322.2	318.5	322.2	325.9	329.6	327.8
77.5°	203.0	206.7	212.3	260.7	325.9	318.5	290.5	294.2	297.9	297.9	296.1
80°	171.3	176.9	186.3	249.5	275.7	307.2	258.8	260.7	262.6	262.6	258.8
82.5°	128.5	139.7	152.8	206.7	216.0	262.6	223.4	227.3	221.6	217.9	216.0
85°	83.8	93.1	111.8	143.3	158.3	206.7	184.3	186.3	175.1	173.1	173.1
87.5°	33.6	35.4	50.3	72.6	94.9	128.5	132.2	135.9	126.6	126.6	130.3
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: P196721

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8
2.5°	7980.2	8166.5	8380.6	8598.4	8777.3	9008.2	9231.7	9470.0	9591.1	9661.9	9861.2
5°	6469.8	6724.9	7028.5	7369.3	7652.4	8136.6	8658.0	9239.2	9518.4	9794.1	10315.6
7.5°	4627.9	4877.6	5231.4	5672.7	6075.1	6713.8	7401.0	8186.9	8574.2	9021.2	9876.1
10°	3436.1	3700.5	4020.8	4395.2	4791.8	5456.7	6227.7	7110.5	7536.9	8041.6	9013.8
12.5°	2786.1	3095.2	3426.7	3761.9	4102.8	4549.8	5358.0	6339.4	6797.6	7306.0	8280.0
15°	2173.3	2504.9	2862.5	3227.4	3566.4	4065.5	4890.6	6050.8	6574.1	7065.8	7862.9
17.5°	1538.3	1851.2	2253.5	2696.7	3188.4	3778.7	4789.9	6177.4	6812.6	7326.5	7860.9
20°	1048.5	1264.5	1666.9	2192.0	2799.1	3547.7	4827.2	6622.5	7415.9	7980.2	8183.2
22.5°	838.0	940.5	1212.3	1746.8	2463.9	3380.2	4979.9	7233.4	8281.9	8969.1	8769.8
25°	761.7	819.5	960.9	1380.1	2165.9	3268.4	5277.9	8039.8	9252.2	9948.7	9475.6
27.5°	715.1	765.5	856.7	1134.2	1908.9	3195.9	5656.0	8989.7	10345.3	10917.0	10211.3
30°	685.4	735.7	819.5	1018.8	1715.3	3087.7	5987.5	9857.5	11218.8	11589.4	10608.0
32.5°	627.5	666.7	735.7	912.6	1569.9	2961.2	6274.3	10633.9	12043.8	12166.8	11084.7
35°	568.0	609.0	677.9	826.9	1484.3	2862.5	6425.1	11323.1	12861.5	12744.1	11557.8
37.5°	545.6	579.2	642.6	765.5	1437.8	2797.2	6482.9	12001.0	13738.6	13382.8	11887.4
40°	530.8	560.6	616.4	724.5	1424.7	2735.9	6469.8	12645.3	14589.7	14043.9	12146.3
42.5°	519.6	545.6	597.8	696.5	1389.3	2678.1	6426.9	13202.3	15271.2	14613.9	12394.0
45°	510.2	538.2	590.3	711.4	1324.1	2614.8	6401.0	13710.6	15794.6	15094.3	12725.4
47.5°	506.5	538.2	592.1	707.7	1253.3	2544.0	6494.1	14274.9	16250.9	15498.5	13166.9
50°	501.0	536.4	633.1	674.1	1156.5	2456.4	6808.8	14947.2	16729.6	15953.0	13738.6
52.5°	491.6	534.5	676.0	648.1	1031.7	2335.4	7319.1	15897.0	17556.5	16837.5	14584.2
55°	480.5	538.2	646.3	607.2	899.5	2178.9	7829.3	17198.8	18897.3	18264.1	15798.4
57.5°	467.4	532.6	610.9	569.9	789.6	1981.5	8216.8	18266.0	20003.5	19735.4	17290.1
60°	458.2	545.6	549.3	547.5	718.8	1793.5	8254.0	18197.0	20322.0	20690.8	18750.2
62.5°	447.0	556.9	501.0	530.8	683.5	1618.3	7793.9	17070.3	19783.8	20567.8	19940.3
65°	432.1	486.1	474.9	515.9	683.5	1525.3	6723.0	15194.9	18295.8	19405.7	20586.4
67.5°	417.2	441.4	456.2	495.4	698.3	1437.8	5402.7	12816.7	15949.2	17530.3	19860.2
70°	396.7	417.2	435.8	476.8	690.9	1376.2	4251.8	10272.8	13125.9	14936.1	17850.7
72.5°	378.0	393.0	411.6	448.8	690.9	1348.4	3415.6	8058.4	10021.4	11546.6	14787.0
75°	350.1	363.2	379.9	420.8	677.9	1232.9	2564.5	6456.7	7332.1	8287.5	11667.7
77.5°	322.2	331.5	344.5	385.4	610.9	1029.9	1813.9	5000.5	5432.5	5961.4	9095.8
80°	286.8	294.2	303.5	344.5	506.5	798.9	1180.8	3910.9	4061.8	4317.0	5983.7
82.5°	245.9	257.0	258.8	296.1	407.9	579.2	702.1	2679.9	2678.1	3052.3	4222.0
85°	201.1	206.7	210.5	232.8	301.7	385.4	461.8	1463.8	1305.5	1828.8	3667.0
87.5°	150.9	145.4	150.9	156.5	199.3	227.3	247.7	270.1	162.0	331.5	2132.4
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: P196721

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7030

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8	8756.8
2.5°	9967.2	10077.2	10012.0	9933.8	9738.3	9451.5	9231.7	9039.9
5°	10677.0	10879.8	10790.5	10500.0	9993.4	9417.9	8812.7	8443.9
7.5°	10587.4	10989.8	10954.4	10470.2	9743.8	8896.4	8045.5	7559.3
10°	9872.3	10436.7	10533.4	10038.0	9268.9	8320.9	7335.7	6786.4
12.5°	9093.8	9568.8	9766.1	9578.1	8853.6	7890.8	6886.9	6337.6
15°	8442.0	8682.3	8877.9	8998.9	8550.1	7738.1	6808.8	6242.6
17.5°	7959.6	7913.1	8077.0	8367.5	8386.2	7941.1	7162.6	6529.5
20°	7727.0	7361.9	7456.8	7864.7	8341.5	8457.0	7868.5	7119.8
22.5°	7713.9	7144.0	7162.6	7602.2	8470.0	9161.0	8749.4	7896.3
25°	7915.0	7119.8	7136.5	7574.2	8697.1	9870.5	9768.0	8773.5
27.5°	8257.7	7224.1	7212.9	7697.1	9000.8	10462.6	10796.0	9846.2
30°	8628.3	7374.9	7347.0	7894.5	9298.7	10827.7	11526.1	10654.5
32.5°	9090.2	7643.1	7546.2	8183.2	9593.0	11177.9	12149.9	11410.6
35°	9529.7	8036.0	7896.3	8596.6	9907.7	11567.1	12848.4	12246.9
37.5°	9978.5	8622.7	8544.5	9192.5	10352.9	11989.8	13647.3	13194.8
40°	10554.0	9457.1	9419.8	10058.6	10946.9	12451.7	14543.2	14181.9
42.5°	11174.2	10343.5	10311.9	11053.1	11684.4	12915.4	15310.4	15029.1
45°	11805.5	11418.1	11425.6	12114.5	12461.0	13353.1	15913.8	15707.1
47.5°	12550.4	12593.2	12859.6	13215.2	13217.1	13841.0	16448.3	16338.4
50°	13496.5	14012.4	14504.0	14559.9	13980.7	14485.4	17102.1	17061.1
52.5°	14567.3	15649.3	16221.0	16044.1	14725.6	15284.4	18068.5	18066.7
55°	15839.4	17360.9	17899.1	17597.4	15617.7	16325.4	19331.2	19249.3
57.5°	17157.8	19007.2	19441.1	19048.1	16733.3	17537.8	20597.7	20163.7
60°	18582.6	20424.4	20865.8	20275.5	17984.7	18746.4	21435.7	20420.7
62.5°	19515.6	21253.2	21569.8	21003.7	19105.8	19977.5	21705.8	20113.4
65°	19564.1	20701.9	20785.7	20584.6	19582.6	21046.5	21314.7	19202.8
67.5°	18234.3	18301.4	18411.3	18627.3	18563.9	20569.7	19806.1	17075.9
70°	15390.5	14496.5	14857.8	15066.5	15535.8	18295.8	17018.2	13887.6
72.5°	11768.2	10462.6	10872.4	10801.7	11777.5	15006.9	13019.7	10697.3
75°	8470.0	7134.6	7166.4	7170.0	8462.5	11978.6	8877.9	7596.6
77.5°	5756.6	5048.9	5153.1	5087.9	5663.5	9384.4	6391.5	5475.3
80°	3937.0	3918.4	3940.8	3788.0	3776.9	6065.6	4732.2	4367.2
82.5°	2920.2	2698.6	2666.9	2504.9	2894.1	4637.3	3592.5	3138.0
85°	2303.7	1493.6	1298.1	1566.2	2506.7	4266.7	2190.1	1609.1
87.5°	975.9	586.6	355.7	703.9	1393.0	3126.9	607.2	312.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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