

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: P270613

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270613
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-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 23073.7 lumens
Efficiency: N/A
Efficacy: 82.7 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

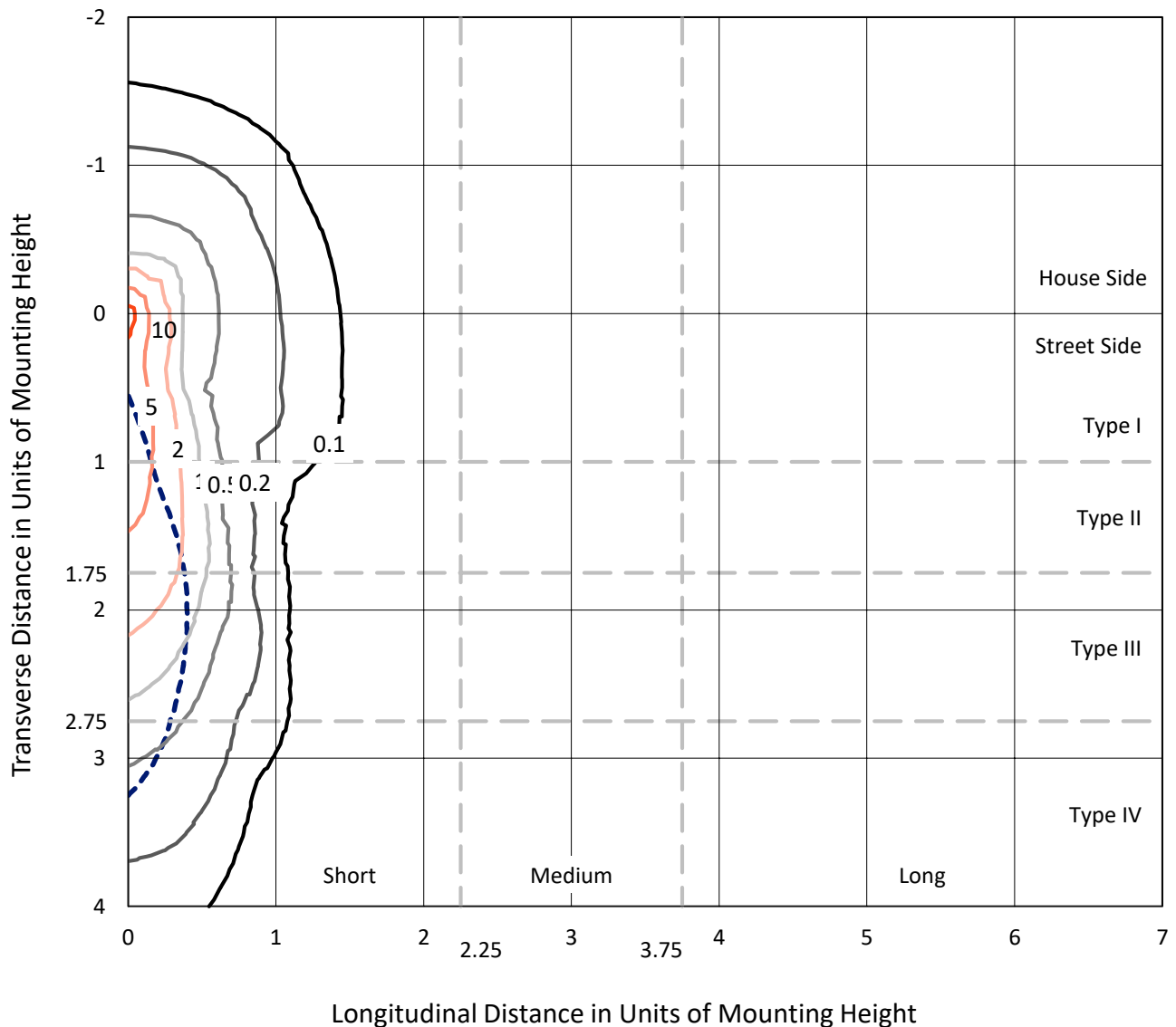
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270613
 CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

Iso-Footcandle Lines of Horizontal Illumination

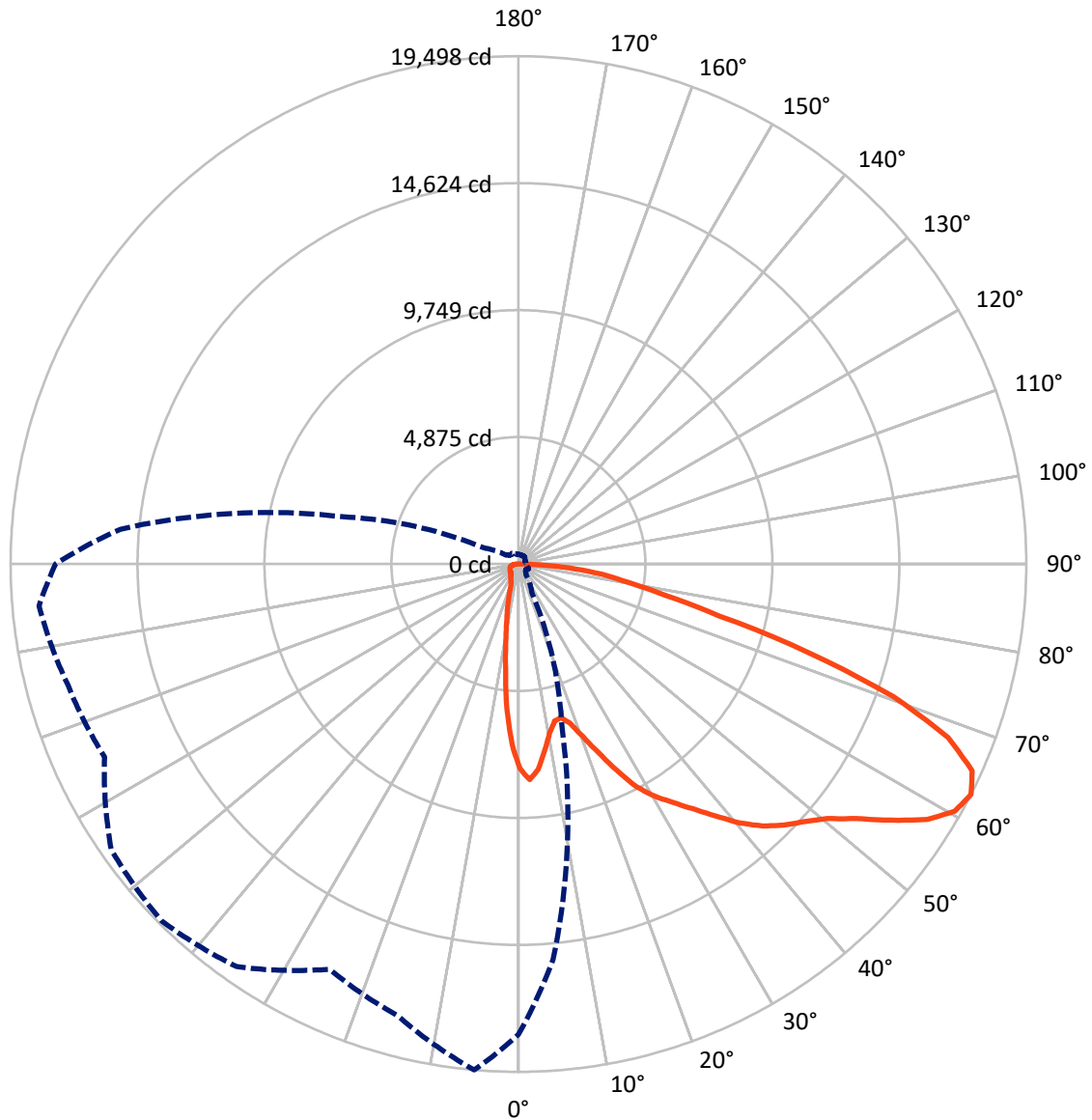
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.6 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270613
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270613

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4087.5	0.0	4087.5
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	18986.1	0.0	18986.1
	% Fixture	82.3	0.0	82.3
Total	Lumens	23073.7	0.0	23073.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	572.1	2.5
10°-20°	1044.9	4.5
20°-30°	1502.8	6.5
30°-40°	2301.7	10.0
40°-50°	3365.2	14.6
50°-60°	4896.4	21.2
60°-70°	5673.1	24.6
70°-80°	2957.3	12.8
80°-90°	760.2	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°	23073.7	100.0
0°-180°	23073.7	100.0



REPORT NUMBER: P270613

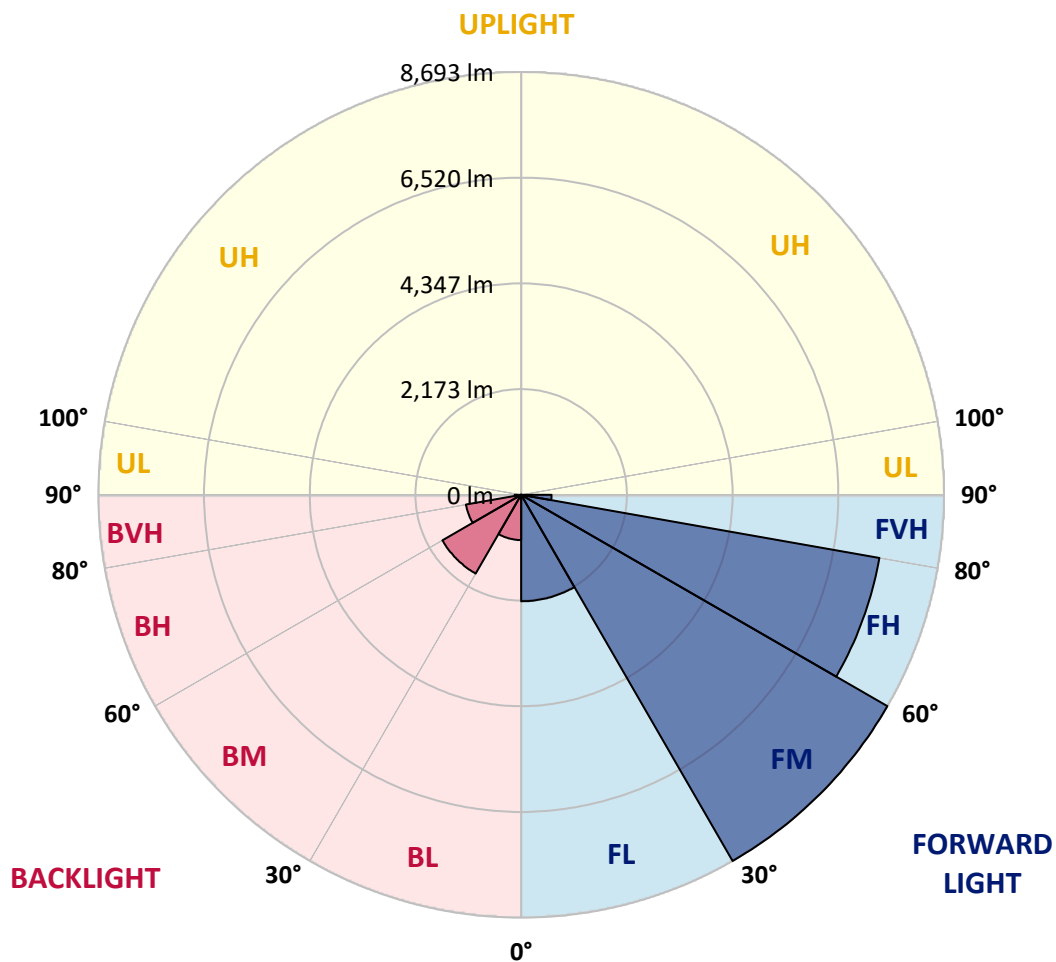
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2189.8	9.5			
FM	(30°-60°)	8693.1	37.7			
FH	(60°-80°)	7477.9	32.4			G3/7500
FVH	(80°-90°)	625.4	2.7			G4/750
BL	(0°-30°)	930.0	4.0	B2/1000		
BM	(30°-60°)	1870.2	8.1	B2/2500		
BH	(60°-80°)	1152.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	134.8	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: P270613

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3
2.5°	8120.6	8006.9	7744.2	7513.2	7225.5	7009.7	6747.1	6608.2	6506.2	6437.6	6382.4
5°	7585.2	7310.9	6809.0	6369.0	5893.8	5550.8	5149.4	4930.2	4794.8	4721.1	4687.6
7.5°	6790.6	6427.6	5778.3	5187.8	4593.9	4165.7	3861.2	3536.6	3364.3	3252.3	3215.5
10°	6096.3	5686.5	4911.8	4247.6	3789.3	3484.7	3223.7	2926.0	2705.2	2512.7	2440.9
12.5°	5693.1	5216.3	4333.0	3732.4	3347.7	3021.4	2745.3	2424.2	2191.5	1990.9	1913.8
15°	5607.8	5075.8	4090.4	3404.4	2932.6	2539.6	2208.4	1858.7	1631.1	1465.6	1412.0
17.5°	5865.5	5209.6	3988.4	3105.0	2536.3	2056.1	1647.9	1273.1	1084.1	993.7	972.0
20°	6395.8	5504.1	3939.8	2835.7	2151.4	1582.6	1139.3	864.9	771.3	744.4	742.8
22.5°	7093.3	5982.5	3993.3	2614.8	1790.1	1167.7	834.9	711.0	672.6	657.5	657.5
25°	7881.3	6629.9	4135.5	2445.8	1472.2	908.5	719.4	652.4	620.6	605.5	607.3
27.5°	8844.9	7417.9	4329.7	2290.3	1244.7	796.3	672.6	615.7	583.9	568.7	570.5
30°	9571.0	8095.4	4496.9	2148.0	1127.6	751.2	647.5	593.9	558.7	537.0	535.3
32.5°	10250.2	8692.7	4632.4	2046.0	1060.7	670.9	585.5	545.5	515.3	490.1	485.2
35°	11001.5	9254.8	4696.0	2042.7	1017.2	605.5	535.3	486.8	456.7	428.3	423.2
37.5°	11853.0	9942.4	4749.6	2062.8	993.7	563.7	511.9	465.1	440.0	411.6	404.9
40°	12739.7	10614.9	4791.4	2079.4	990.4	535.3	493.4	451.7	426.6	396.5	389.9
42.5°	13500.7	11210.5	4848.2	2072.7	966.9	530.3	481.9	440.0	416.5	386.5	378.0
45°	14109.8	11684.0	4936.9	2071.1	931.8	542.0	478.4	436.7	408.2	376.4	369.7
47.5°	14676.9	12217.7	5124.3	2064.5	893.4	538.8	496.9	433.3	404.9	373.1	368.0
50°	15326.1	12935.4	5443.8	2014.3	839.8	515.3	530.3	430.0	396.5	368.0	363.1
52.5°	16229.4	13985.9	5917.2	1923.9	766.3	490.1	535.3	428.3	383.0	358.1	351.3
55°	17291.7	15111.8	6427.6	1793.5	669.1	446.6	508.6	421.6	369.7	343.0	332.9
57.5°	18113.2	15943.3	6783.9	1606.0	573.8	421.6	453.4	406.6	353.0	326.3	317.9
60°	18344.0	15980.0	6847.4	1381.9	525.2	404.9	389.9	443.4	339.6	311.2	302.8
62.5°	18068.0	15249.1	6432.6	1224.6	508.6	388.2	354.7	423.2	326.3	297.8	289.4
65°	17250.0	14014.4	5504.1	1201.3	525.2	373.1	336.2	337.9	312.8	284.5	276.0
67.5°	15339.4	12197.5	4336.3	1216.2	545.5	358.1	322.9	307.8	297.8	272.6	262.7
70°	12475.3	9820.4	3416.2	1243.1	563.7	337.9	306.1	287.7	279.5	252.7	247.7
72.5°	9609.4	7859.6	2695.2	1224.6	582.2	317.9	282.7	267.6	257.6	232.5	227.5
75°	6824.1	6245.1	1980.9	1050.6	533.7	289.4	255.9	242.6	234.2	207.5	205.8
77.5°	4918.5	4677.7	1378.4	789.6	421.6	254.3	225.8	214.2	209.1	179.0	179.0
80°	3923.1	3560.1	824.7	515.3	307.8	210.8	189.1	184.1	179.0	148.8	150.6
82.5°	2818.9	2469.4	526.9	321.2	225.8	160.5	147.2	145.5	137.3	110.4	110.4
85°	1445.5	1261.4	337.9	215.9	158.9	103.8	97.0	93.8	88.7	68.6	68.6
87.5°	281.1	386.5	187.3	105.5	77.0	36.8	36.8	31.8	36.8	25.2	26.8
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: P270613

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3
2.5°	6487.7	6454.3	6430.8	6419.2	6588.1	6658.3	6738.6	6854.1	6932.8	6899.3	7006.4
5°	4844.9	4868.4	4921.9	5005.4	5241.4	5353.4	5425.5	5520.8	5589.3	5520.8	5634.4
7.5°	3312.5	3347.7	3461.3	3633.6	3918.0	4043.5	4068.7	4070.3	4055.3	3943.2	4020.2
10°	2439.2	2368.9	2394.1	2517.8	2772.1	2884.2	2895.9	2865.9	2860.7	2815.6	2902.7
12.5°	1890.5	1793.5	1736.6	1756.6	1947.3	2039.3	2054.5	2071.1	2139.8	2161.4	2268.5
15°	1410.2	1360.2	1318.4	1299.8	1425.4	1497.4	1505.6	1545.9	1617.8	1637.8	1729.9
17.5°	992.1	1005.5	1027.2	1035.6	1125.8	1172.7	1159.4	1159.4	1171.1	1166.1	1217.9
20°	757.9	784.6	826.4	866.5	948.6	975.3	941.9	900.0	873.3	859.9	871.6
22.5°	669.1	687.7	714.3	766.3	834.9	848.2	804.7	771.3	746.1	732.7	734.5
25°	620.6	639.1	660.9	702.7	761.3	768.0	727.7	706.0	685.9	672.6	669.1
27.5°	578.9	590.5	603.9	630.7	690.9	694.3	667.5	654.1	640.8	630.7	627.3
30°	540.4	545.5	550.4	577.3	622.3	627.3	614.0	607.3	602.3	595.5	595.5
32.5°	490.1	496.9	505.2	528.7	572.1	578.9	570.5	565.5	557.0	553.7	548.8
35°	430.0	446.6	465.1	493.4	540.4	543.7	533.7	518.6	498.5	493.4	490.1
37.5°	404.9	408.2	431.6	465.1	513.7	517.0	503.6	478.4	463.4	465.1	468.5
40°	388.2	393.2	406.6	440.0	488.5	493.4	481.9	463.4	448.3	450.1	455.0
42.5°	374.8	381.4	389.9	411.6	460.0	470.2	466.8	450.1	435.0	438.4	445.0
45°	368.0	373.1	373.1	388.2	435.0	450.1	451.7	438.4	426.6	430.0	438.4
47.5°	364.7	364.7	359.7	371.4	418.3	433.3	436.7	430.0	423.2	426.6	435.0
50°	359.7	353.0	348.0	358.1	404.9	418.3	421.6	416.5	419.9	426.6	431.6
52.5°	344.6	337.9	337.9	344.6	391.5	404.9	406.6	403.2	409.8	418.3	426.6
55°	326.3	326.3	327.9	334.6	384.7	394.9	393.2	389.9	396.5	406.6	414.8
57.5°	309.5	307.8	316.3	324.6	376.4	383.0	379.8	379.8	384.7	393.2	401.5
60°	299.4	291.1	297.8	311.2	368.0	374.8	369.7	368.0	376.4	383.0	389.9
62.5°	289.4	281.1	286.1	299.4	356.4	361.4	358.1	358.1	366.4	371.4	378.0
65°	274.3	271.0	274.3	287.7	346.2	348.0	348.0	349.6	356.4	359.7	366.4
67.5°	261.0	261.0	262.7	276.0	337.9	334.6	334.6	343.0	344.6	348.0	354.7
70°	244.2	247.7	247.7	264.3	331.3	319.5	321.2	327.9	331.3	334.6	336.2
72.5°	225.8	227.5	230.9	252.7	321.2	304.4	306.1	311.2	312.8	317.9	319.5
75°	205.8	207.5	212.4	240.9	314.5	289.4	286.1	289.4	292.8	296.1	294.5
77.5°	182.4	185.7	190.7	234.2	292.8	286.1	261.0	264.3	267.6	267.6	266.0
80°	153.9	158.9	167.4	224.1	247.7	276.0	232.5	234.2	235.9	235.9	232.5
82.5°	115.4	125.5	137.3	185.7	194.0	235.9	200.7	204.2	199.1	195.7	194.0
85°	75.3	83.6	100.4	128.7	142.2	185.7	165.6	167.4	157.3	155.5	155.5
87.5°	30.2	31.8	45.2	65.2	85.2	115.4	118.8	122.1	113.7	113.7	117.0
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: P270613

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3
2.5°	7168.7	7336.0	7528.3	7724.0	7884.7	8092.1	8292.9	8506.9	8615.7	8679.3	8858.4
5°	5811.9	6041.0	6313.7	6619.9	6874.2	7309.1	7777.5	8299.6	8550.4	8798.1	9266.6
7.5°	4157.3	4381.6	4699.4	5095.8	5457.3	6031.0	6648.4	7354.3	7702.2	8103.8	8871.8
10°	3086.7	3324.2	3611.9	3948.2	4304.5	4901.8	5594.4	6387.4	6770.4	7223.8	8097.1
12.5°	2502.8	2780.4	3078.2	3379.3	3685.6	4087.1	4813.1	5694.7	6106.3	6563.0	7438.0
15°	1952.3	2250.2	2571.4	2899.2	3203.7	3652.1	4393.3	5435.5	5905.5	6347.2	7063.3
17.5°	1381.9	1662.9	2024.3	2422.5	2864.2	3394.4	4302.8	5549.2	6119.8	6581.4	7061.5
20°	941.9	1135.9	1497.4	1969.1	2514.4	3186.9	4336.3	5949.0	6661.7	7168.7	7351.0
22.5°	752.8	844.9	1089.0	1569.2	2213.3	3036.5	4473.5	6497.8	7439.7	8057.0	7878.0
25°	684.2	736.2	863.2	1239.8	1945.6	2936.0	4741.2	7222.2	8311.3	8937.0	8512.0
27.5°	642.4	687.7	769.6	1018.9	1714.8	2870.9	5080.8	8075.5	9293.2	9806.8	9172.9
30°	615.7	660.9	736.2	915.2	1540.9	2773.7	5378.6	8855.0	10077.9	10410.8	9529.2
32.5°	563.7	598.9	660.9	819.8	1410.2	2660.1	5636.2	9552.5	10819.0	10929.5	9957.4
35°	510.2	547.1	609.0	742.8	1333.4	2571.4	5771.7	10171.6	11553.6	11448.1	10382.4
37.5°	490.1	520.3	577.3	687.7	1291.6	2512.7	5823.6	10780.6	12341.5	12021.8	10678.5
40°	476.8	503.6	553.7	650.8	1279.8	2457.7	5811.9	11359.3	13106.0	12615.7	10911.1
42.5°	466.8	490.1	537.0	625.7	1248.0	2405.8	5773.3	11859.7	13718.2	13127.7	11133.6
45°	458.3	483.5	530.3	639.1	1189.4	2348.9	5750.1	12316.3	14188.4	13559.3	11431.3
47.5°	455.0	483.5	531.9	635.7	1125.8	2285.3	5833.7	12823.2	14598.3	13922.4	11827.9
50°	450.1	481.9	568.7	605.5	1038.9	2206.6	6116.4	13427.1	15028.3	14330.7	12341.5
52.5°	441.6	480.1	607.3	582.2	926.8	2097.9	6574.8	14280.4	15771.1	15125.2	13101.1
55°	431.6	483.5	580.6	545.5	808.0	1957.3	7033.1	15449.8	16975.5	16406.7	14191.8
57.5°	419.9	478.4	548.8	511.9	709.3	1780.0	7381.2	16408.4	17969.2	17728.4	15531.8
60°	411.6	490.1	493.4	491.8	645.7	1611.1	7414.6	16346.5	18255.4	18586.7	16843.4
62.5°	401.5	500.3	450.1	476.8	614.0	1453.7	7001.3	15334.3	17771.9	18476.2	17912.5
65°	388.2	436.7	426.6	463.4	614.0	1370.2	6039.3	13649.7	16435.2	17432.2	18492.9
67.5°	374.8	396.5	409.8	445.0	627.3	1291.6	4853.3	11513.3	14327.2	15747.6	17840.5
70°	356.4	374.8	391.5	428.3	620.6	1236.2	3819.4	9228.1	11791.1	13417.2	16035.4
72.5°	339.6	353.0	369.7	403.2	620.6	1211.3	3068.3	7238.9	9002.3	10372.4	13283.2
75°	314.5	326.3	341.3	378.0	609.0	1107.5	2303.7	5800.1	6586.5	7444.7	10481.2
77.5°	289.4	297.8	309.5	346.2	548.8	925.2	1629.4	4492.0	4880.0	5355.2	8170.8
80°	257.6	264.3	272.6	309.5	455.0	717.7	1060.7	3513.2	3648.7	3878.0	5375.2
82.5°	220.9	230.9	232.5	266.0	366.4	520.3	630.7	2407.4	2405.8	2741.9	3792.6
85°	180.6	185.7	189.1	209.1	271.0	346.2	414.8	1314.9	1172.7	1642.8	3294.1
87.5°	135.6	130.6	135.6	140.6	179.0	204.2	222.5	242.6	145.5	297.8	1915.5
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: P270613

CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3	7866.3
2.5°	8953.6	9052.4	8993.8	8923.6	8748.0	8490.3	8292.9	8120.6
5°	9591.2	9773.4	9693.2	9432.2	8977.1	8460.1	7916.5	7585.2
7.5°	9510.7	9872.2	9840.4	9405.4	8752.9	7991.7	7227.3	6790.6
10°	8868.3	9375.3	9462.2	9017.2	8326.3	7474.7	6589.7	6096.3
12.5°	8169.0	8595.7	8772.9	8604.1	7953.2	7088.3	6186.5	5693.1
15°	7583.5	7799.4	7975.1	8083.8	7680.6	6951.2	6116.4	5607.8
17.5°	7150.1	7108.4	7255.6	7516.6	7533.4	7133.5	6434.2	5865.5
20°	6941.2	6613.2	6698.5	7064.9	7493.2	7597.0	7068.3	6395.8
22.5°	6929.4	6417.5	6434.2	6829.1	7608.6	8229.4	7859.6	7093.3
25°	7110.1	6395.8	6410.8	6803.9	7812.6	8866.7	8774.6	7881.3
27.5°	7417.9	6489.4	6479.4	6914.3	8085.5	9398.6	9698.1	8844.9
30°	7750.8	6624.9	6599.8	7091.7	8353.1	9726.6	10354.0	9571.0
32.5°	8165.8	6865.8	6778.8	7351.0	8617.4	10041.2	10914.3	10250.2
35°	8560.6	7218.8	7093.3	7722.4	8900.1	10390.8	11541.8	11001.5
37.5°	8963.7	7745.8	7675.6	8257.7	9300.1	10770.5	12259.4	11853.0
40°	9480.7	8495.4	8461.9	9035.7	9833.7	11185.4	13064.2	12739.7
42.5°	10037.8	9291.6	9263.2	9929.1	10496.2	11602.0	13753.4	13500.7
45°	10604.9	10256.9	10263.7	10882.5	11193.8	11995.2	14295.4	14109.8
47.5°	11274.1	11312.5	11551.8	11871.3	11873.0	12433.4	14775.6	14676.9
50°	12124.0	12587.4	13029.0	13079.2	12558.9	13012.3	15362.9	15326.1
52.5°	13085.9	14057.8	14571.4	14412.5	13228.1	13730.1	16231.0	16229.4
55°	14228.6	15595.4	16078.9	15807.8	14029.5	14665.2	17365.3	17291.7
57.5°	15412.9	17074.3	17464.0	17111.0	15031.6	15754.3	18503.0	18113.2
60°	16692.8	18347.3	18743.9	18213.6	16155.7	16840.0	19255.8	18344.0
62.5°	17531.0	19091.9	19376.3	18867.7	17162.8	17945.9	19498.4	18068.0
65°	17574.5	18596.6	18671.9	18491.3	17591.1	18906.2	19147.1	17250.0
67.5°	16380.0	16440.2	16539.0	16733.0	16676.0	18477.9	17791.9	15339.4
70°	13825.4	13022.3	13346.8	13534.3	13955.9	16435.2	15287.5	12475.3
72.5°	10571.4	9398.6	9766.7	9703.2	10579.8	13480.8	11695.7	9609.4
75°	7608.6	6409.0	6437.6	6440.8	7601.9	10760.4	7975.1	6824.1
77.5°	5171.2	4535.5	4629.1	4570.5	5087.6	8430.1	5741.5	4918.5
80°	3536.6	3519.9	3540.0	3402.8	3392.8	5448.8	4251.0	3923.1
82.5°	2623.2	2424.2	2395.7	2250.2	2599.8	4165.7	3227.2	2818.9
85°	2069.4	1341.7	1166.1	1406.9	2251.8	3832.8	1967.4	1445.5
87.5°	876.7	526.9	319.5	632.3	1251.3	2808.9	545.5	281.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)