

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: P270609

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270609
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-SLL-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT 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

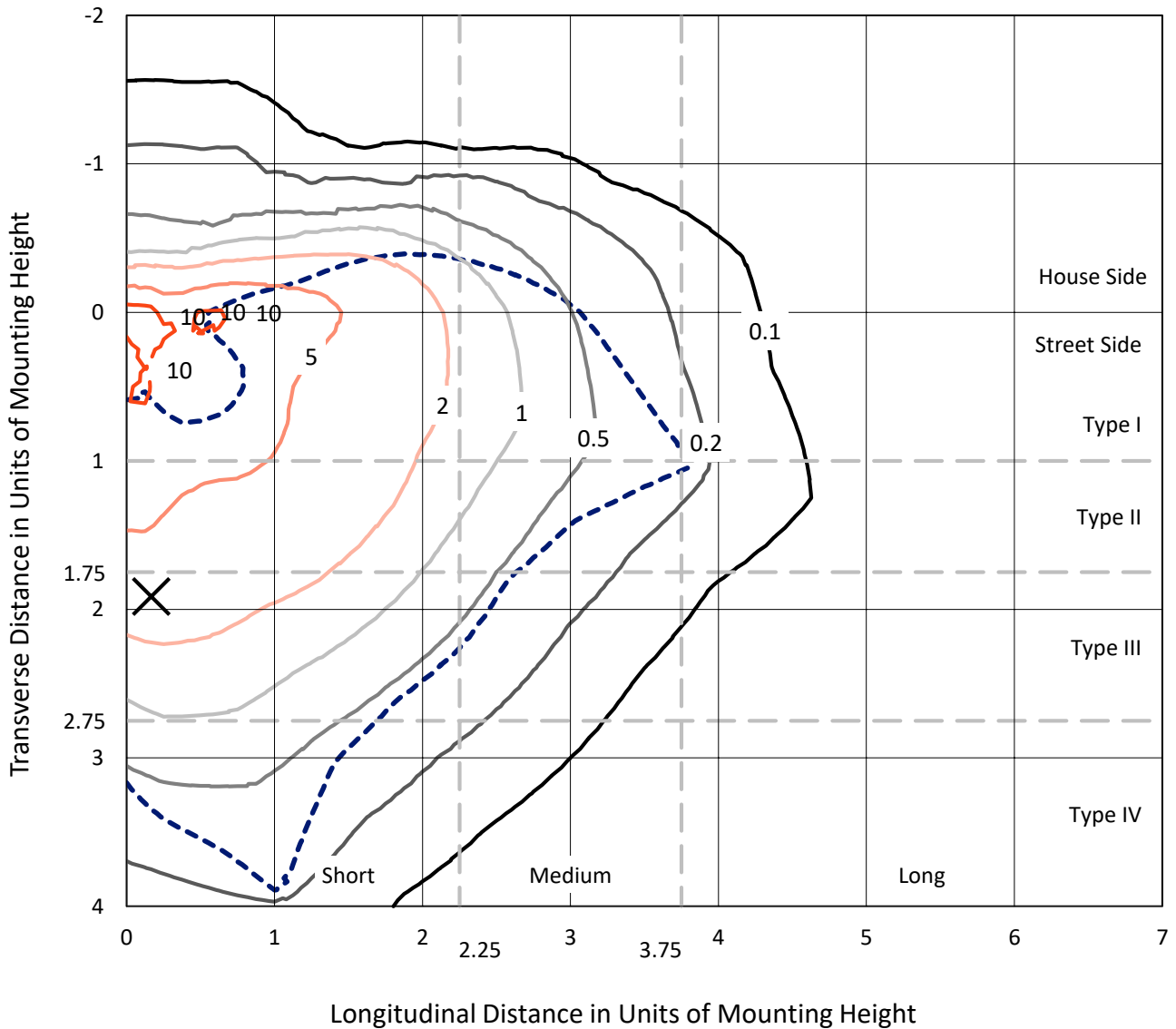
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270609
 CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7027

Iso-Footcandle Lines of Horizontal Illumination

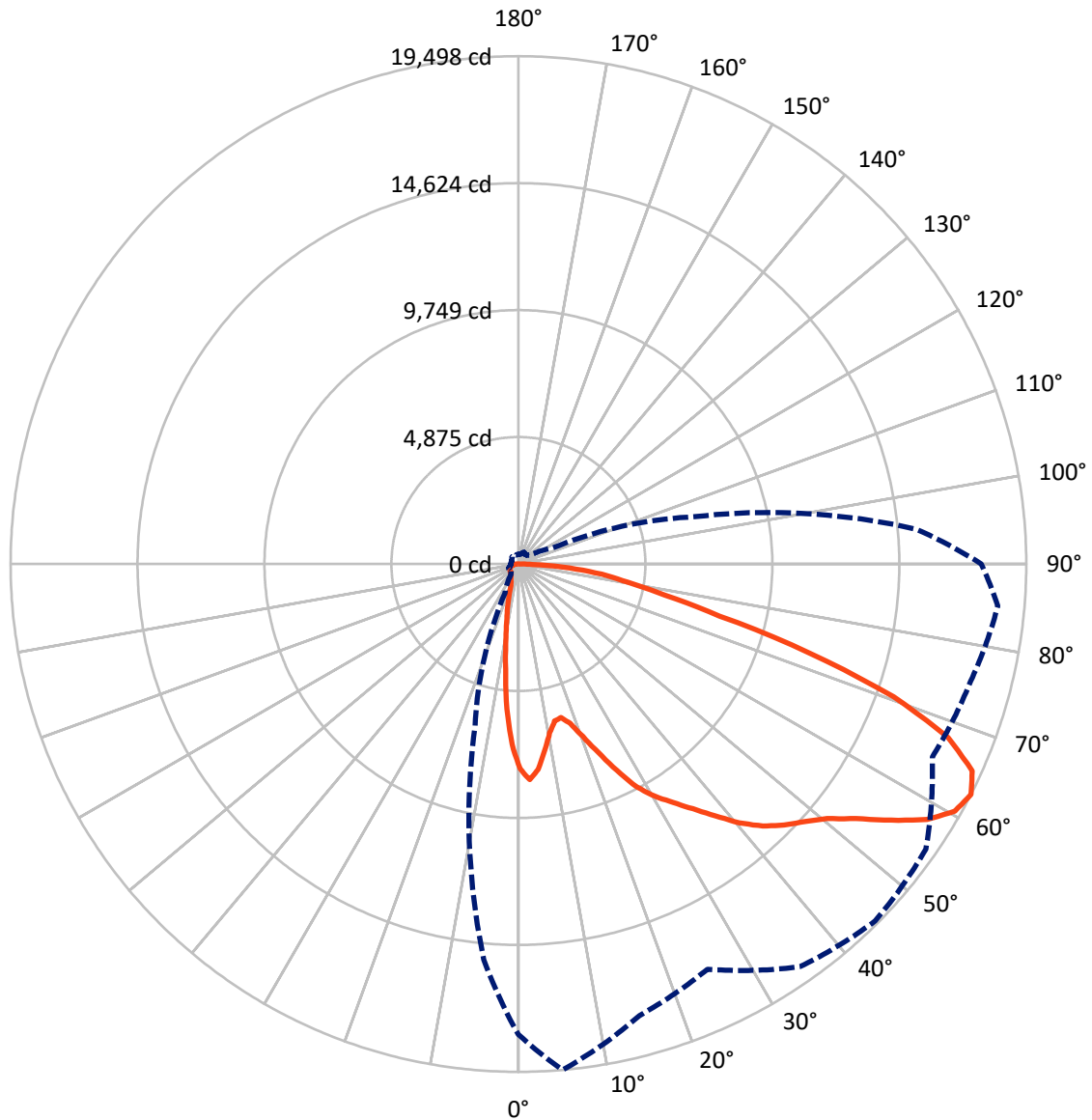
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270609
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7027

Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P270609

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-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: P270609

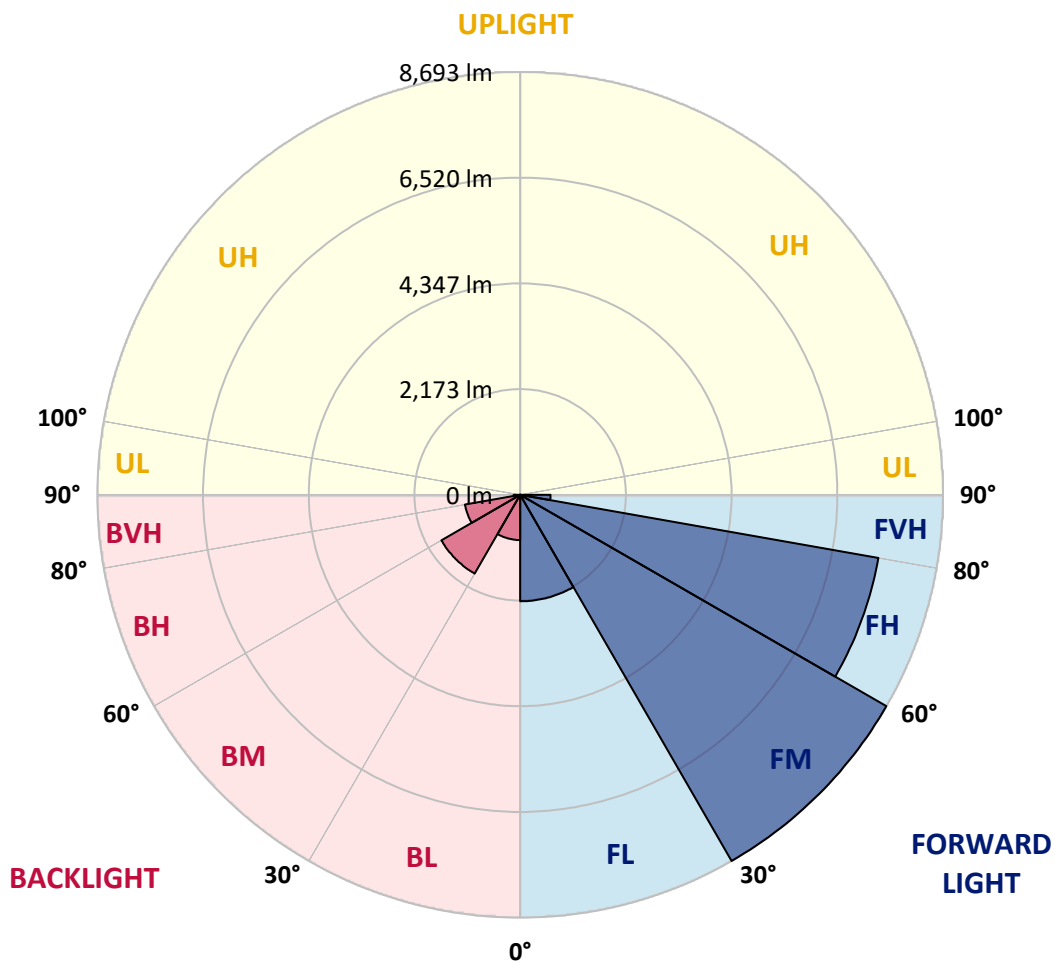
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7027

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: P270609

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-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	8292.9	8490.3	8748.0	8923.6	8993.8	9052.4	8953.6	8858.4	8679.3	8615.7
5°	7585.2	7916.5	8460.1	8977.1	9432.2	9693.2	9773.4	9591.2	9266.6	8798.1	8550.4
7.5°	6790.6	7227.3	7991.7	8752.9	9405.4	9840.4	9872.2	9510.7	8871.8	8103.8	7702.2
10°	6096.3	6589.7	7474.7	8326.3	9017.2	9462.2	9375.3	8868.3	8097.1	7223.8	6770.4
12.5°	5693.1	6186.5	7088.3	7953.2	8604.1	8772.9	8595.7	8169.0	7438.0	6563.0	6106.3
15°	5607.8	6116.4	6951.2	7680.6	8083.8	7975.1	7799.4	7583.5	7063.3	6347.2	5905.5
17.5°	5865.5	6434.2	7133.5	7533.4	7516.6	7255.6	7108.4	7150.1	7061.5	6581.4	6119.8
20°	6395.8	7068.3	7597.0	7493.2	7064.9	6698.5	6613.2	6941.2	7351.0	7168.7	6661.7
22.5°	7093.3	7859.6	8229.4	7608.6	6829.1	6434.2	6417.5	6929.4	7878.0	8057.0	7439.7
25°	7881.3	8774.6	8866.7	7812.6	6803.9	6410.8	6395.8	7110.1	8512.0	8937.0	8311.3
27.5°	8844.9	9698.1	9398.6	8085.5	6914.3	6479.4	6489.4	7417.9	9172.9	9806.8	9293.2
30°	9571.0	10354.0	9726.6	8353.1	7091.7	6599.8	6624.9	7750.8	9529.2	10410.8	10077.9
32.5°	10250.2	10914.3	10041.2	8617.4	7351.0	6778.8	6865.8	8165.8	9957.4	10929.5	10819.0
35°	11001.5	11541.8	10390.8	8900.1	7722.4	7093.3	7218.8	8560.6	10382.4	11448.1	11553.6
37.5°	11853.0	12259.4	10770.5	9300.1	8257.7	7675.6	7745.8	8963.7	10678.5	12021.8	12341.5
40°	12739.7	13064.2	11185.4	9833.7	9035.7	8461.9	8495.4	9480.7	10911.1	12615.7	13106.0
42.5°	13500.7	13753.4	11602.0	10496.2	9929.1	9263.2	9291.6	10037.8	11133.6	13127.7	13718.2
45°	14109.8	14295.4	11995.2	11193.8	10882.5	10263.7	10256.9	10604.9	11431.3	13559.3	14188.4
47.5°	14676.9	14775.6	12433.4	11873.0	11871.3	11551.8	11312.5	11274.1	11827.9	13922.4	14598.3
50°	15326.1	15362.9	13012.3	12558.9	13079.2	13029.0	12587.4	12124.0	12341.5	14330.7	15028.3
52.5°	16229.4	16231.0	13730.1	13228.1	14412.5	14571.4	14057.8	13085.9	13101.1	15125.2	15771.1
55°	17291.7	17365.3	14665.2	14029.5	15807.8	16078.9	15595.4	14228.6	14191.8	16406.7	16975.5
57.5°	18113.2	18503.0	15754.3	15031.6	17111.0	17464.0	17074.3	15412.9	15531.8	17728.4	17969.2
60°	18344.0	19255.8	16840.0	16155.7	18213.6	18743.9	18347.3	16692.8	16843.4	18586.7	18255.4
62.5°	18068.0	19498.4	17945.9	17162.8	18867.7	19376.3	19091.9	17531.0	17912.5	18476.2	17771.9
65°	17250.0	19147.1	18906.2	17591.1	18491.3	18671.9	18596.6	17574.5	18492.9	17432.2	16435.2
67.5°	15339.4	17791.9	18477.9	16676.0	16733.0	16539.0	16440.2	16380.0	17840.5	15747.6	14327.2
70°	12475.3	15287.5	16435.2	13955.9	13534.3	13346.8	13022.3	13825.4	16035.4	13417.2	11791.1
72.5°	9609.4	11695.7	13480.8	10579.8	9703.2	9766.7	9398.6	10571.4	13283.2	10372.4	9002.3
75°	6824.1	7975.1	10760.4	7601.9	6440.8	6437.6	6409.0	7608.6	10481.2	7444.7	6586.5
77.5°	4918.5	5741.5	8430.1	5087.6	4570.5	4629.1	4535.5	5171.2	8170.8	5355.2	4880.0
80°	3923.1	4251.0	5448.8	3392.8	3402.8	3540.0	3519.9	3536.6	5375.2	3878.0	3648.7
82.5°	2818.9	3227.2	4165.7	2599.8	2250.2	2395.7	2424.2	2623.2	3792.6	2741.9	2405.8
85°	1445.5	1967.4	3832.8	2251.8	1406.9	1166.1	1341.7	2069.4	3294.1	1642.8	1172.7
87.5°	281.1	545.5	2808.9	1251.3	632.3	319.5	526.9	876.7	1915.5	297.8	145.5
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: P270609

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-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°	8506.9	8292.9	8092.1	7884.7	7724.0	7528.3	7336.0	7168.7	7006.4	6899.3	6932.8
5°	8299.6	7777.5	7309.1	6874.2	6619.9	6313.7	6041.0	5811.9	5634.4	5520.8	5589.3
7.5°	7354.3	6648.4	6031.0	5457.3	5095.8	4699.4	4381.6	4157.3	4020.2	3943.2	4055.3
10°	6387.4	5594.4	4901.8	4304.5	3948.2	3611.9	3324.2	3086.7	2902.7	2815.6	2860.7
12.5°	5694.7	4813.1	4087.1	3685.6	3379.3	3078.2	2780.4	2502.8	2268.5	2161.4	2139.8
15°	5435.5	4393.3	3652.1	3203.7	2899.2	2571.4	2250.2	1952.3	1729.9	1637.8	1617.8
17.5°	5549.2	4302.8	3394.4	2864.2	2422.5	2024.3	1662.9	1381.9	1217.9	1166.1	1171.1
20°	5949.0	4336.3	3186.9	2514.4	1969.1	1497.4	1135.9	941.9	871.6	859.9	873.3
22.5°	6497.8	4473.5	3036.5	2213.3	1569.2	1089.0	844.9	752.8	734.5	732.7	746.1
25°	7222.2	4741.2	2936.0	1945.6	1239.8	863.2	736.2	684.2	669.1	672.6	685.9
27.5°	8075.5	5080.8	2870.9	1714.8	1018.9	769.6	687.7	642.4	627.3	630.7	640.8
30°	8855.0	5378.6	2773.7	1540.9	915.2	736.2	660.9	615.7	595.5	595.5	602.3
32.5°	9552.5	5636.2	2660.1	1410.2	819.8	660.9	598.9	563.7	548.8	553.7	557.0
35°	10171.6	5771.7	2571.4	1333.4	742.8	609.0	547.1	510.2	490.1	493.4	498.5
37.5°	10780.6	5823.6	2512.7	1291.6	687.7	577.3	520.3	490.1	468.5	465.1	463.4
40°	11359.3	5811.9	2457.7	1279.8	650.8	553.7	503.6	476.8	455.0	450.1	448.3
42.5°	11859.7	5773.3	2405.8	1248.0	625.7	537.0	490.1	466.8	445.0	438.4	435.0
45°	12316.3	5750.1	2348.9	1189.4	639.1	530.3	483.5	458.3	438.4	430.0	426.6
47.5°	12823.2	5833.7	2285.3	1125.8	635.7	531.9	483.5	455.0	435.0	426.6	423.2
50°	13427.1	6116.4	2206.6	1038.9	605.5	568.7	481.9	450.1	431.6	426.6	419.9
52.5°	14280.4	6574.8	2097.9	926.8	582.2	607.3	480.1	441.6	426.6	418.3	409.8
55°	15449.8	7033.1	1957.3	808.0	545.5	580.6	483.5	431.6	414.8	406.6	396.5
57.5°	16408.4	7381.2	1780.0	709.3	511.9	548.8	478.4	419.9	401.5	393.2	384.7
60°	16346.5	7414.6	1611.1	645.7	491.8	493.4	490.1	411.6	389.9	383.0	376.4
62.5°	15334.3	7001.3	1453.7	614.0	476.8	450.1	500.3	401.5	378.0	371.4	366.4
65°	13649.7	6039.3	1370.2	614.0	463.4	426.6	436.7	388.2	366.4	359.7	356.4
67.5°	11513.3	4853.3	1291.6	627.3	445.0	409.8	396.5	374.8	354.7	348.0	344.6
70°	9228.1	3819.4	1236.2	620.6	428.3	391.5	374.8	356.4	336.2	334.6	331.3
72.5°	7238.9	3068.3	1211.3	620.6	403.2	369.7	353.0	339.6	319.5	317.9	312.8
75°	5800.1	2303.7	1107.5	609.0	378.0	341.3	326.3	314.5	294.5	296.1	292.8
77.5°	4492.0	1629.4	925.2	548.8	346.2	309.5	297.8	289.4	266.0	267.6	267.6
80°	3513.2	1060.7	717.7	455.0	309.5	272.6	264.3	257.6	232.5	235.9	235.9
82.5°	2407.4	630.7	520.3	366.4	266.0	232.5	230.9	220.9	194.0	195.7	199.1
85°	1314.9	414.8	346.2	271.0	209.1	189.1	185.7	180.6	155.5	155.5	157.3
87.5°	242.6	222.5	204.2	179.0	140.6	135.6	130.6	135.6	117.0	113.7	113.7
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: P270609

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-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°	6854.1	6738.6	6658.3	6588.1	6419.2	6430.8	6454.3	6487.7	6382.4	6437.6	6506.2
5°	5520.8	5425.5	5353.4	5241.4	5005.4	4921.9	4868.4	4844.9	4687.6	4721.1	4794.8
7.5°	4070.3	4068.7	4043.5	3918.0	3633.6	3461.3	3347.7	3312.5	3215.5	3252.3	3364.3
10°	2865.9	2895.9	2884.2	2772.1	2517.8	2394.1	2368.9	2439.2	2440.9	2512.7	2705.2
12.5°	2071.1	2054.5	2039.3	1947.3	1756.6	1736.6	1793.5	1890.5	1913.8	1990.9	2191.5
15°	1545.9	1505.6	1497.4	1425.4	1299.8	1318.4	1360.2	1410.2	1412.0	1465.6	1631.1
17.5°	1159.4	1159.4	1172.7	1125.8	1035.6	1027.2	1005.5	992.1	972.0	993.7	1084.1
20°	900.0	941.9	975.3	948.6	866.5	826.4	784.6	757.9	742.8	744.4	771.3
22.5°	771.3	804.7	848.2	834.9	766.3	714.3	687.7	669.1	657.5	657.5	672.6
25°	706.0	727.7	768.0	761.3	702.7	660.9	639.1	620.6	607.3	605.5	620.6
27.5°	654.1	667.5	694.3	690.9	630.7	603.9	590.5	578.9	570.5	568.7	583.9
30°	607.3	614.0	627.3	622.3	577.3	550.4	545.5	540.4	535.3	537.0	558.7
32.5°	565.5	570.5	578.9	572.1	528.7	505.2	496.9	490.1	485.2	490.1	515.3
35°	518.6	533.7	543.7	540.4	493.4	465.1	446.6	430.0	423.2	428.3	456.7
37.5°	478.4	503.6	517.0	513.7	465.1	431.6	408.2	404.9	404.9	411.6	440.0
40°	463.4	481.9	493.4	488.5	440.0	406.6	393.2	388.2	389.9	396.5	426.6
42.5°	450.1	466.8	470.2	460.0	411.6	389.9	381.4	374.8	378.0	386.5	416.5
45°	438.4	451.7	450.1	435.0	388.2	373.1	373.1	368.0	369.7	376.4	408.2
47.5°	430.0	436.7	433.3	418.3	371.4	359.7	364.7	364.7	368.0	373.1	404.9
50°	416.5	421.6	418.3	404.9	358.1	348.0	353.0	359.7	363.1	368.0	396.5
52.5°	403.2	406.6	404.9	391.5	344.6	337.9	337.9	344.6	351.3	358.1	383.0
55°	389.9	393.2	394.9	384.7	334.6	327.9	326.3	326.3	332.9	343.0	369.7
57.5°	379.8	379.8	383.0	376.4	324.6	316.3	307.8	309.5	317.9	326.3	353.0
60°	368.0	369.7	374.8	368.0	311.2	297.8	291.1	299.4	302.8	311.2	339.6
62.5°	358.1	358.1	361.4	356.4	299.4	286.1	281.1	289.4	289.4	297.8	326.3
65°	349.6	348.0	348.0	346.2	287.7	274.3	271.0	274.3	276.0	284.5	312.8
67.5°	343.0	334.6	334.6	337.9	276.0	262.7	261.0	261.0	262.7	272.6	297.8
70°	327.9	321.2	319.5	331.3	264.3	247.7	247.7	244.2	247.7	252.7	279.5
72.5°	311.2	306.1	304.4	321.2	252.7	230.9	227.5	225.8	227.5	232.5	257.6
75°	289.4	286.1	289.4	314.5	240.9	212.4	207.5	205.8	205.8	207.5	234.2
77.5°	264.3	261.0	286.1	292.8	234.2	190.7	185.7	182.4	179.0	179.0	209.1
80°	234.2	232.5	276.0	247.7	224.1	167.4	158.9	153.9	150.6	148.8	179.0
82.5°	204.2	200.7	235.9	194.0	185.7	137.3	125.5	115.4	110.4	110.4	137.3
85°	167.4	165.6	185.7	142.2	128.7	100.4	83.6	75.3	68.6	68.6	88.7
87.5°	122.1	118.8	115.4	85.2	65.2	45.2	31.8	30.2	26.8	25.2	36.8
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: P270609

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-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°	6608.2	6747.1	7009.7	7225.5	7513.2	7744.2	8006.9	8120.6
5°	4930.2	5149.4	5550.8	5893.8	6369.0	6809.0	7310.9	7585.2
7.5°	3536.6	3861.2	4165.7	4593.9	5187.8	5778.3	6427.6	6790.6
10°	2926.0	3223.7	3484.7	3789.3	4247.6	4911.8	5686.5	6096.3
12.5°	2424.2	2745.3	3021.4	3347.7	3732.4	4333.0	5216.3	5693.1
15°	1858.7	2208.4	2539.6	2932.6	3404.4	4090.4	5075.8	5607.8
17.5°	1273.1	1647.9	2056.1	2536.3	3105.0	3988.4	5209.6	5865.5
20°	864.9	1139.3	1582.6	2151.4	2835.7	3939.8	5504.1	6395.8
22.5°	711.0	834.9	1167.7	1790.1	2614.8	3993.3	5982.5	7093.3
25°	652.4	719.4	908.5	1472.2	2445.8	4135.5	6629.9	7881.3
27.5°	615.7	672.6	796.3	1244.7	2290.3	4329.7	7417.9	8844.9
30°	593.9	647.5	751.2	1127.6	2148.0	4496.9	8095.4	9571.0
32.5°	545.5	585.5	670.9	1060.7	2046.0	4632.4	8692.7	10250.2
35°	486.8	535.3	605.5	1017.2	2042.7	4696.0	9254.8	11001.5
37.5°	465.1	511.9	563.7	993.7	2062.8	4749.6	9942.4	11853.0
40°	451.7	493.4	535.3	990.4	2079.4	4791.4	10614.9	12739.7
42.5°	440.0	481.9	530.3	966.9	2072.7	4848.2	11210.5	13500.7
45°	436.7	478.4	542.0	931.8	2071.1	4936.9	11684.0	14109.8
47.5°	433.3	496.9	538.8	893.4	2064.5	5124.3	12217.7	14676.9
50°	430.0	530.3	515.3	839.8	2014.3	5443.8	12935.4	15326.1
52.5°	428.3	535.3	490.1	766.3	1923.9	5917.2	13985.9	16229.4
55°	421.6	508.6	446.6	669.1	1793.5	6427.6	15111.8	17291.7
57.5°	406.6	453.4	421.6	573.8	1606.0	6783.9	15943.3	18113.2
60°	443.4	389.9	404.9	525.2	1381.9	6847.4	15980.0	18344.0
62.5°	423.2	354.7	388.2	508.6	1224.6	6432.6	15249.1	18068.0
65°	337.9	336.2	373.1	525.2	1201.3	5504.1	14014.4	17250.0
67.5°	307.8	322.9	358.1	545.5	1216.2	4336.3	12197.5	15339.4
70°	287.7	306.1	337.9	563.7	1243.1	3416.2	9820.4	12475.3
72.5°	267.6	282.7	317.9	582.2	1224.6	2695.2	7859.6	9609.4
75°	242.6	255.9	289.4	533.7	1050.6	1980.9	6245.1	6824.1
77.5°	214.2	225.8	254.3	421.6	789.6	1378.4	4677.7	4918.5
80°	184.1	189.1	210.8	307.8	515.3	824.7	3560.1	3923.1
82.5°	145.5	147.2	160.5	225.8	321.2	526.9	2469.4	2818.9
85°	93.8	97.0	103.8	158.9	215.9	337.9	1261.4	1445.5
87.5°	31.8	36.8	36.8	77.0	105.5	187.3	386.5	281.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)