

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: P197166

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197166
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-06-D-UNV-SLL-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA 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: 17105 lumens
Efficiency: N/A
Efficacy: 88.6 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

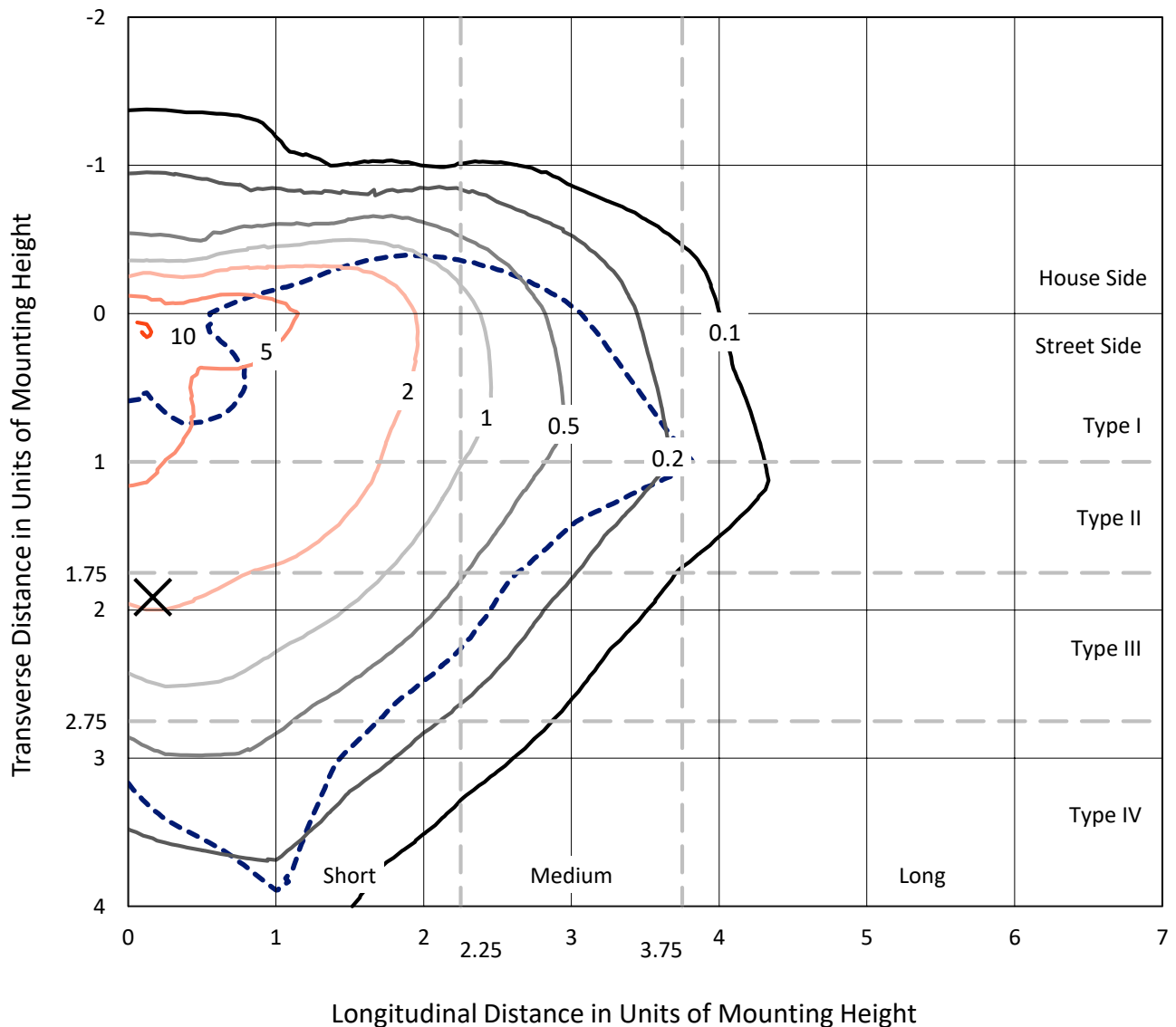
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197166
 CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

Iso-Footcandle Lines of Horizontal Illumination

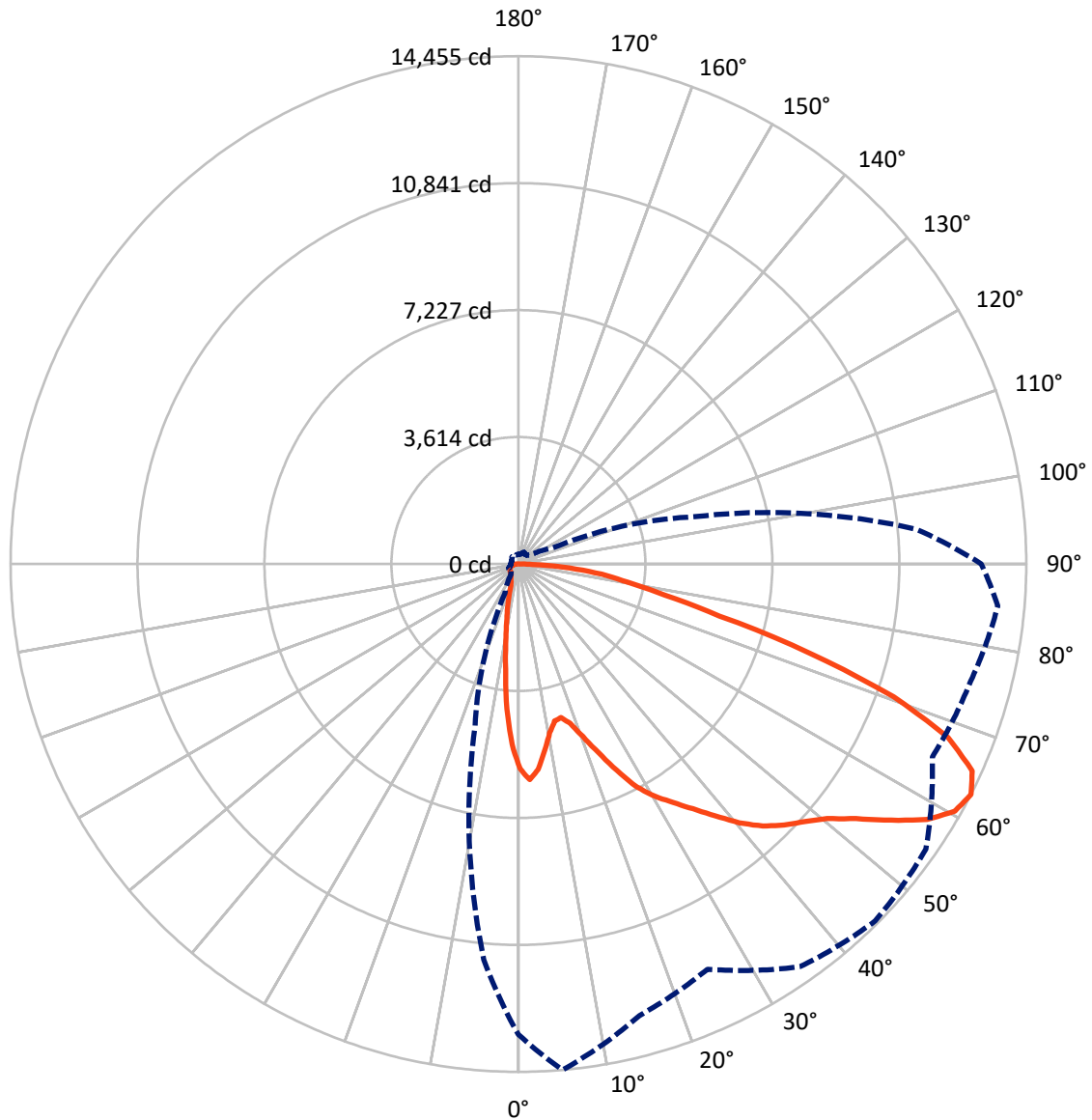
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197166
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197166

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3030.2	0.0	3030.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	14074.8	0.0	14074.8
	% Fixture	82.3	0.0	82.3
Total	Lumens	17105.0	0.0	17105.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	424.1	2.5
10°-20°	774.6	4.5
20°-30°	1114.1	6.5
30°-40°	1706.3	10.0
40°-50°	2494.7	14.6
50°-60°	3629.8	21.2
60°-70°	4205.6	24.6
70°-80°	2192.3	12.8
80°-90°	563.5	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°	17105.0	100.0
0°-180°	17105.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197166

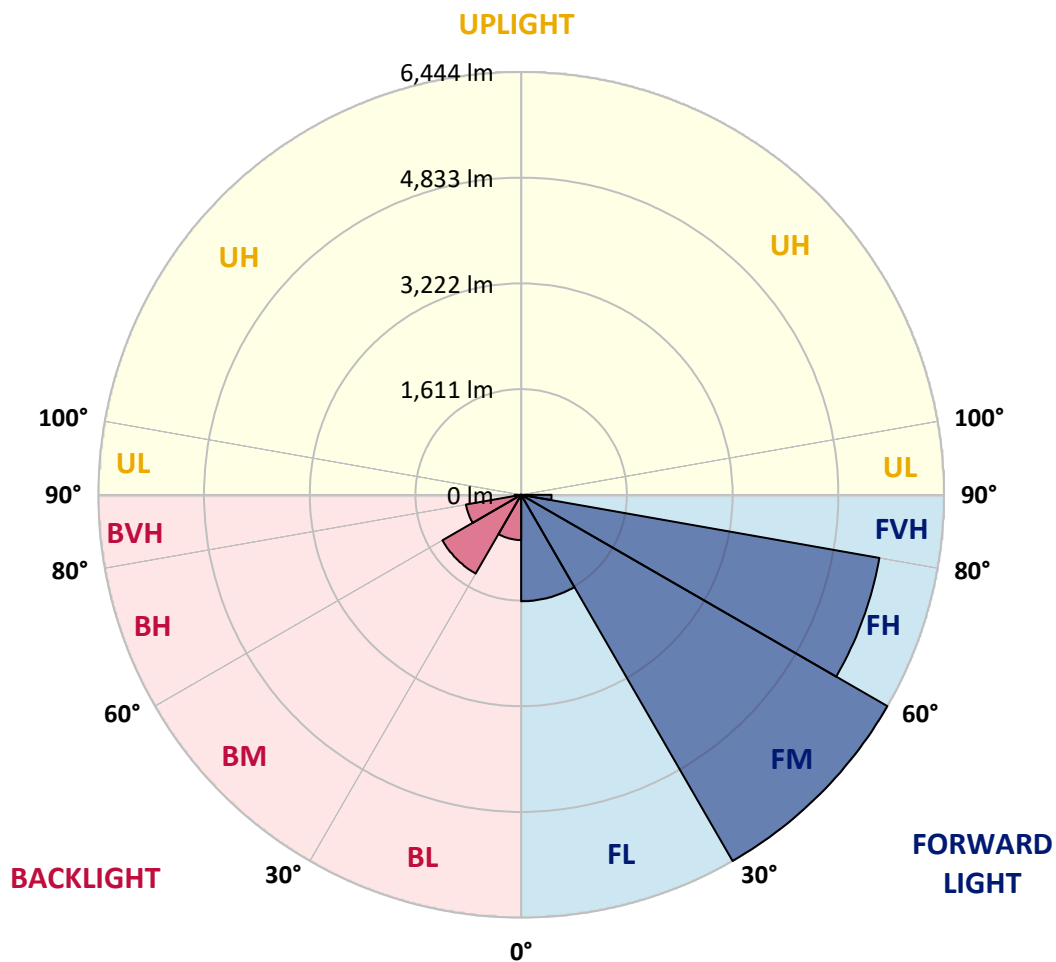
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1623.3	9.5			
FM	(30°-60°)	6444.4	37.7			
FH	(60°-80°)	5543.5	32.4			G3/7500
FVH	(80°-90°)	463.6	2.7			G3/500
BL	(0°-30°)	689.4	4.0	B2/1000		
BM	(30°-60°)	1386.4	8.1	B2/2500		
BH	(60°-80°)	854.4	5.0	B2/1000		G2/1000
BVH	(80°-90°)	99.9	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: P197166
 CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4
2.5°	6019.9	6147.7	6294.0	6485.0	6615.2	6667.3	6710.7	6637.6	6566.9	6434.2	6387.0
5°	5623.1	5868.6	6271.7	6654.9	6992.3	7185.7	7245.3	7110.1	6869.5	6522.2	6338.7
7.5°	5034.0	5357.7	5924.5	6488.7	6972.4	7294.9	7318.4	7050.6	6576.8	6007.5	5709.9
10°	4519.3	4885.2	5541.2	6172.5	6684.7	7014.6	6950.1	6574.3	6002.6	5355.2	5019.1
12.5°	4220.4	4586.3	5254.7	5895.9	6378.4	6503.6	6372.2	6055.9	5513.9	4865.3	4526.7
15°	4157.2	4534.2	5153.0	5693.8	5992.7	5912.0	5781.8	5621.8	5236.1	4705.3	4377.9
17.5°	4348.2	4769.8	5288.2	5584.6	5572.2	5378.8	5269.6	5300.6	5234.9	4879.0	4536.7
20°	4741.3	5239.9	5631.8	5554.9	5237.4	4965.8	4902.5	5145.6	5449.5	5314.3	4938.5
22.5°	5258.5	5826.5	6100.6	5640.4	5062.5	4769.8	4757.4	5136.9	5840.1	5972.8	5515.2
25°	5842.6	6504.9	6573.1	5791.7	5043.9	4752.5	4741.3	5270.9	6310.2	6625.2	6161.3
27.5°	6557.0	7189.5	6967.5	5993.9	5125.8	4803.3	4810.7	5499.1	6800.0	7270.1	6889.3
30°	7095.2	7675.6	7210.5	6192.3	5257.2	4892.6	4911.2	5745.9	7064.2	7717.8	7471.0
32.5°	7598.7	8091.1	7443.7	6388.3	5449.5	5025.3	5089.8	6053.4	7381.7	8102.2	8020.4
35°	8155.6	8556.2	7702.9	6597.9	5724.8	5258.5	5351.5	6346.1	7696.7	8486.7	8564.8
37.5°	8786.8	9088.2	7984.4	6894.3	6121.6	5690.1	5742.1	6645.0	7916.2	8912.1	9149.0
40°	9444.1	9684.7	8292.0	7289.9	6698.3	6272.9	6297.8	7028.2	8088.6	9352.4	9715.8
42.5°	10008.4	10195.7	8600.8	7781.0	7360.6	6867.0	6888.1	7441.2	8253.6	9731.9	10169.7
45°	10459.9	10597.5	8892.3	8298.2	8067.5	7608.6	7603.7	7861.6	8474.3	10051.8	10518.2
47.5°	10880.3	10953.5	9217.2	8801.7	8800.5	8563.6	8386.3	8357.7	8768.2	10321.0	10822.0
50°	11361.5	11388.8	9646.3	9310.2	9695.9	9658.7	9331.3	8987.8	9149.0	10623.6	11140.7
52.5°	12031.2	12032.5	10178.3	9806.3	10684.4	10802.2	10421.4	9700.9	9712.0	11212.7	11691.4
55°	12818.7	12873.3	10871.6	10400.3	11718.7	11919.6	11561.2	10547.9	10520.6	12162.7	12584.3
57.5°	13427.7	13716.6	11679.0	11143.2	12684.8	12946.5	12657.5	11426.0	11514.0	13142.4	13321.0
60°	13598.8	14274.7	12483.9	11976.6	13502.1	13895.2	13601.3	12374.7	12486.4	13778.7	13533.1
62.5°	13394.2	14454.6	13303.7	12723.2	13987.0	14364.0	14153.2	12996.1	13278.9	13696.8	13174.7
65°	12787.7	14194.1	14015.5	13040.7	13708.0	13841.9	13786.1	13028.3	13709.2	12922.9	12183.8
67.5°	11371.4	13189.6	13698.0	12362.3	12404.5	12260.6	12187.5	12142.8	13225.5	11674.0	10621.1
70°	9248.2	11333.0	12183.8	10345.8	10033.2	9894.3	9653.7	10249.0	11887.3	9946.4	8741.0
72.5°	7123.7	8670.3	9993.6	7843.0	7193.2	7240.3	6967.5	7836.8	9847.2	7689.3	6673.5
75°	5058.8	5912.0	7977.0	5635.5	4774.8	4772.3	4751.2	5640.4	7769.9	5518.9	4882.7
77.5°	3646.2	4256.4	6249.4	3771.5	3388.2	3431.6	3362.2	3833.5	6057.2	3969.9	3617.7
80°	2908.3	3151.4	4039.3	2515.1	2522.6	2624.3	2609.4	2621.8	3984.8	2874.8	2704.9
82.5°	2089.7	2392.4	3088.1	1927.3	1668.1	1776.0	1797.1	1944.6	2811.5	2032.7	1783.4
85°	1071.5	1458.5	2841.3	1669.3	1043.0	864.4	994.6	1534.1	2442.0	1217.9	869.4
87.5°	208.4	404.3	2082.3	927.7	468.8	236.9	390.7	649.9	1420.0	220.8	107.9
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: P197166
 CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4
2.5°	6306.4	6147.7	5998.9	5845.1	5726.0	5580.9	5438.3	5314.3	5194.0	5114.6	5139.4
5°	6152.6	5765.7	5418.4	5096.0	4907.5	4680.5	4478.4	4308.5	4177.0	4092.7	4143.5
7.5°	5451.9	4928.6	4470.9	4045.5	3777.7	3483.7	3248.1	3081.9	2980.2	2923.2	3006.3
10°	4735.1	4147.2	3633.8	3191.0	2926.9	2677.6	2464.3	2288.2	2151.8	2087.3	2120.7
12.5°	4221.7	3568.1	3029.8	2732.2	2505.2	2282.0	2061.2	1855.3	1681.7	1602.3	1586.2
15°	4029.4	3256.8	2707.4	2375.0	2149.3	1906.2	1668.1	1447.3	1282.4	1214.2	1199.3
17.5°	4113.8	3189.8	2516.4	2123.2	1795.8	1500.6	1232.8	1024.4	902.9	864.4	868.1
20°	4410.2	3214.6	2362.6	1864.0	1459.7	1110.0	842.1	698.2	646.1	637.5	647.4
22.5°	4816.9	3316.3	2251.0	1640.8	1163.3	807.4	626.3	558.1	544.4	543.2	553.1
25°	5354.0	3514.7	2176.6	1442.4	919.0	639.9	545.7	507.2	496.1	498.6	508.5
27.5°	5986.5	3766.5	2128.2	1271.2	755.3	570.5	509.7	476.2	465.1	467.6	475.0
30°	6564.4	3987.3	2056.3	1142.2	678.4	545.7	489.9	456.4	441.5	441.5	446.5
32.5°	7081.6	4178.2	1971.9	1045.5	607.7	489.9	444.0	417.9	406.8	410.5	413.0
35°	7540.4	4278.7	1906.2	988.4	550.7	451.4	405.5	378.3	363.4	365.9	369.6
37.5°	7991.9	4317.1	1862.8	957.4	509.7	427.9	385.7	363.4	347.3	344.8	343.5
40°	8421.0	4308.5	1821.9	948.8	482.4	410.5	373.3	353.5	337.3	333.6	332.4
42.5°	8791.8	4279.9	1783.4	925.2	463.8	398.1	363.4	346.0	329.9	324.9	322.5
45°	9130.4	4262.6	1741.2	881.8	473.8	393.1	358.4	339.8	324.9	318.7	316.3
47.5°	9506.2	4324.6	1694.1	834.7	471.3	394.4	358.4	337.3	322.5	316.3	313.8
50°	9953.9	4534.2	1635.8	770.2	449.0	421.7	357.2	333.6	320.0	316.3	311.3
52.5°	10586.4	4874.0	1555.2	687.1	431.6	450.2	355.9	327.4	316.3	310.1	303.8
55°	11453.3	5213.8	1451.0	599.0	404.3	430.4	358.4	320.0	307.6	301.4	293.9
57.5°	12163.9	5471.8	1319.6	525.8	379.5	406.8	354.7	311.3	297.6	291.4	285.2
60°	12118.0	5496.6	1194.3	478.7	364.6	365.9	363.4	305.1	289.0	284.0	279.0
62.5°	11367.7	5190.3	1077.7	455.2	353.5	333.6	370.8	297.6	280.3	275.3	271.6
65°	10118.8	4477.1	1015.7	455.2	343.5	316.3	323.7	287.7	271.6	266.6	264.2
67.5°	8535.1	3597.8	957.4	465.1	329.9	303.8	293.9	277.8	262.9	258.0	255.5
70°	6841.0	2831.4	916.5	460.1	317.5	290.2	277.8	264.2	249.3	248.0	245.6
72.5°	5366.4	2274.5	897.9	460.1	298.9	274.1	261.7	251.8	236.9	235.6	231.9
75°	4299.8	1707.8	821.0	451.4	280.3	253.0	241.8	233.2	218.3	219.5	217.0
77.5°	3329.9	1208.0	685.8	406.8	256.7	229.4	220.8	214.6	197.2	198.4	198.4
80°	2604.4	786.3	532.0	337.3	229.4	202.2	196.0	191.0	172.4	174.9	174.9
82.5°	1784.7	467.6	385.7	271.6	197.2	172.4	171.1	163.7	143.9	145.1	147.6
85°	974.8	307.6	256.7	200.9	155.0	140.1	137.7	133.9	115.3	115.3	116.6
87.5°	179.8	164.9	151.3	132.7	104.2	100.5	96.7	100.5	86.8	84.3	84.3
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: P197166

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4
2.5°	5081.1	4995.5	4936.0	4883.9	4758.7	4767.3	4784.7	4809.5	4731.4	4772.3	4823.2
5°	4092.7	4022.0	3968.7	3885.6	3710.7	3648.7	3609.0	3591.6	3475.0	3499.9	3554.4
7.5°	3017.4	3016.2	2997.6	2904.6	2693.7	2566.0	2481.6	2455.6	2383.7	2411.0	2494.0
10°	2124.5	2146.8	2138.1	2055.0	1866.5	1774.7	1756.1	1808.2	1809.5	1862.8	2005.4
12.5°	1535.4	1523.0	1511.8	1443.6	1302.2	1287.3	1329.5	1401.4	1418.8	1475.8	1624.7
15°	1145.9	1116.2	1110.0	1056.7	963.6	977.3	1008.3	1045.5	1046.7	1086.4	1209.2
17.5°	859.5	859.5	869.4	834.7	767.7	761.5	745.4	735.4	720.6	736.7	803.7
20°	667.2	698.2	723.0	703.2	642.4	612.7	581.7	561.8	550.7	551.9	571.7
22.5°	571.7	596.5	628.8	618.9	568.0	529.6	509.7	496.1	487.4	487.4	498.6
25°	523.4	539.5	569.3	564.3	520.9	489.9	473.8	460.1	450.2	449.0	460.1
27.5°	484.9	494.8	514.7	512.2	467.6	447.7	437.8	429.1	422.9	421.7	432.8
30°	450.2	455.2	465.1	461.4	427.9	408.0	404.3	400.6	396.9	398.1	414.2
32.5°	419.2	422.9	429.1	424.1	391.9	374.5	368.3	363.4	359.7	363.4	382.0
35°	384.5	395.6	403.1	400.6	365.9	344.8	331.1	318.7	313.8	317.5	338.6
37.5°	354.7	373.3	383.2	380.7	344.8	320.0	302.6	300.1	300.1	305.1	326.2
40°	343.5	357.2	365.9	362.1	326.2	301.4	291.4	287.7	289.0	293.9	316.3
42.5°	333.6	346.0	348.5	341.1	305.1	289.0	282.8	277.8	280.3	286.5	308.8
45°	324.9	334.9	333.6	322.5	287.7	276.6	276.6	272.8	274.1	279.0	302.6
47.5°	318.7	323.7	321.2	310.1	275.3	266.6	270.4	270.4	272.8	276.6	300.1
50°	308.8	312.5	310.1	300.1	265.4	258.0	261.7	266.6	269.1	272.8	293.9
52.5°	298.9	301.4	300.1	290.2	255.5	250.5	250.5	255.5	260.4	265.4	284.0
55°	289.0	291.4	292.7	285.2	248.0	243.1	241.8	241.8	246.8	254.2	274.1
57.5°	281.5	281.5	284.0	279.0	240.6	234.4	228.2	229.4	235.6	241.8	261.7
60°	272.8	274.1	277.8	272.8	230.7	220.8	215.8	222.0	224.5	230.7	251.8
62.5°	265.4	265.4	267.9	264.2	222.0	212.1	208.4	214.6	214.6	220.8	241.8
65°	259.2	258.0	258.0	256.7	213.3	203.4	200.9	203.4	204.6	210.8	231.9
67.5°	254.2	248.0	248.0	250.5	204.6	194.7	193.5	193.5	194.7	202.2	220.8
70°	243.1	238.1	236.9	245.6	196.0	183.6	183.6	181.1	183.6	187.3	207.1
72.5°	230.7	227.0	225.7	238.1	187.3	171.1	168.7	167.4	168.7	172.4	191.0
75°	214.6	212.1	214.6	233.2	178.6	157.5	153.8	152.5	152.5	153.8	173.6
77.5°	196.0	193.5	212.1	217.0	173.6	141.4	137.7	135.2	132.7	132.7	155.0
80°	173.6	172.4	204.6	183.6	166.2	124.0	117.8	114.1	111.6	110.4	132.7
82.5°	151.3	148.8	174.9	143.9	137.7	101.7	93.0	85.6	81.9	81.9	101.7
85°	124.0	122.8	137.7	105.4	95.5	74.4	62.0	55.8	50.8	50.8	65.7
87.5°	90.5	88.1	85.6	63.3	48.4	33.5	23.6	22.3	19.8	18.6	27.3
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: P197166
 CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4	5831.4
2.5°	4898.8	5001.7	5196.5	5356.4	5569.8	5740.9	5935.6	6019.9
5°	3654.9	3817.3	4115.0	4369.2	4721.5	5047.6	5419.7	5623.1
7.5°	2621.8	2862.4	3088.1	3405.6	3845.9	4283.7	4764.9	5034.0
10°	2169.1	2389.9	2583.3	2809.1	3148.9	3641.2	4215.5	4519.3
12.5°	1797.1	2035.2	2239.8	2481.6	2766.9	3212.1	3867.0	4220.4
15°	1377.9	1637.1	1882.6	2174.1	2523.8	3032.3	3762.8	4157.2
17.5°	943.8	1221.6	1524.2	1880.1	2301.8	2956.6	3862.0	4348.2
20°	641.2	844.6	1173.2	1594.9	2102.1	2920.7	4080.3	4741.3
22.5°	527.1	618.9	865.7	1327.0	1938.4	2960.4	4435.0	5258.5
25°	483.7	533.3	673.4	1091.4	1813.2	3065.8	4914.9	5842.6
27.5°	456.4	498.6	590.3	922.7	1697.8	3209.6	5499.1	6557.0
30°	440.3	480.0	556.9	835.9	1592.4	3333.7	6001.3	7095.2
32.5°	404.3	434.1	497.3	786.3	1516.8	3434.1	6444.1	7598.7
35°	360.9	396.9	449.0	754.0	1514.3	3481.3	6860.8	8155.6
37.5°	344.8	379.5	417.9	736.7	1529.2	3520.9	7370.5	8786.8
40°	334.9	365.9	396.9	734.2	1541.6	3551.9	7869.1	9444.1
42.5°	326.2	357.2	393.1	716.8	1536.6	3594.1	8310.6	10008.4
45°	323.7	354.7	401.8	690.8	1535.4	3659.8	8661.6	10459.9
47.5°	321.2	368.3	399.3	662.3	1530.4	3798.7	9057.2	10880.3
50°	318.7	393.1	382.0	622.6	1493.2	4035.6	9589.3	11361.5
52.5°	317.5	396.9	363.4	568.0	1426.2	4386.6	10368.1	12031.2
55°	312.5	377.0	331.1	496.1	1329.5	4764.9	11202.8	12818.7
57.5°	301.4	336.1	312.5	425.4	1190.6	5029.0	11819.1	13427.7
60°	328.7	289.0	300.1	389.4	1024.4	5076.2	11846.4	13598.8
62.5°	313.8	262.9	287.7	377.0	907.8	4768.6	11304.5	13394.2
65°	250.5	249.3	276.6	389.4	890.5	4080.3	10389.2	12787.7
67.5°	228.2	239.4	265.4	404.3	901.6	3214.6	9042.3	11371.4
70°	213.3	227.0	250.5	417.9	921.5	2532.5	7280.0	9248.2
72.5°	198.4	209.6	235.6	431.6	907.8	1998.0	5826.5	7123.7
75°	179.8	189.8	214.6	395.6	778.8	1468.4	4629.7	5058.8
77.5°	158.7	167.4	188.5	312.5	585.4	1021.9	3467.6	3646.2
80°	136.4	140.1	156.3	228.2	382.0	611.4	2639.2	2908.3
82.5°	107.9	109.1	119.1	167.4	238.1	390.7	1830.5	2089.7
85°	69.5	71.9	76.9	117.8	160.0	250.5	935.1	1071.5
87.5°	23.6	27.3	27.3	57.0	78.1	138.9	286.5	208.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)