

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: P195246

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195246
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-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 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: 20962 lumens
Efficiency: N/A
Efficacy: 108.6 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): 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

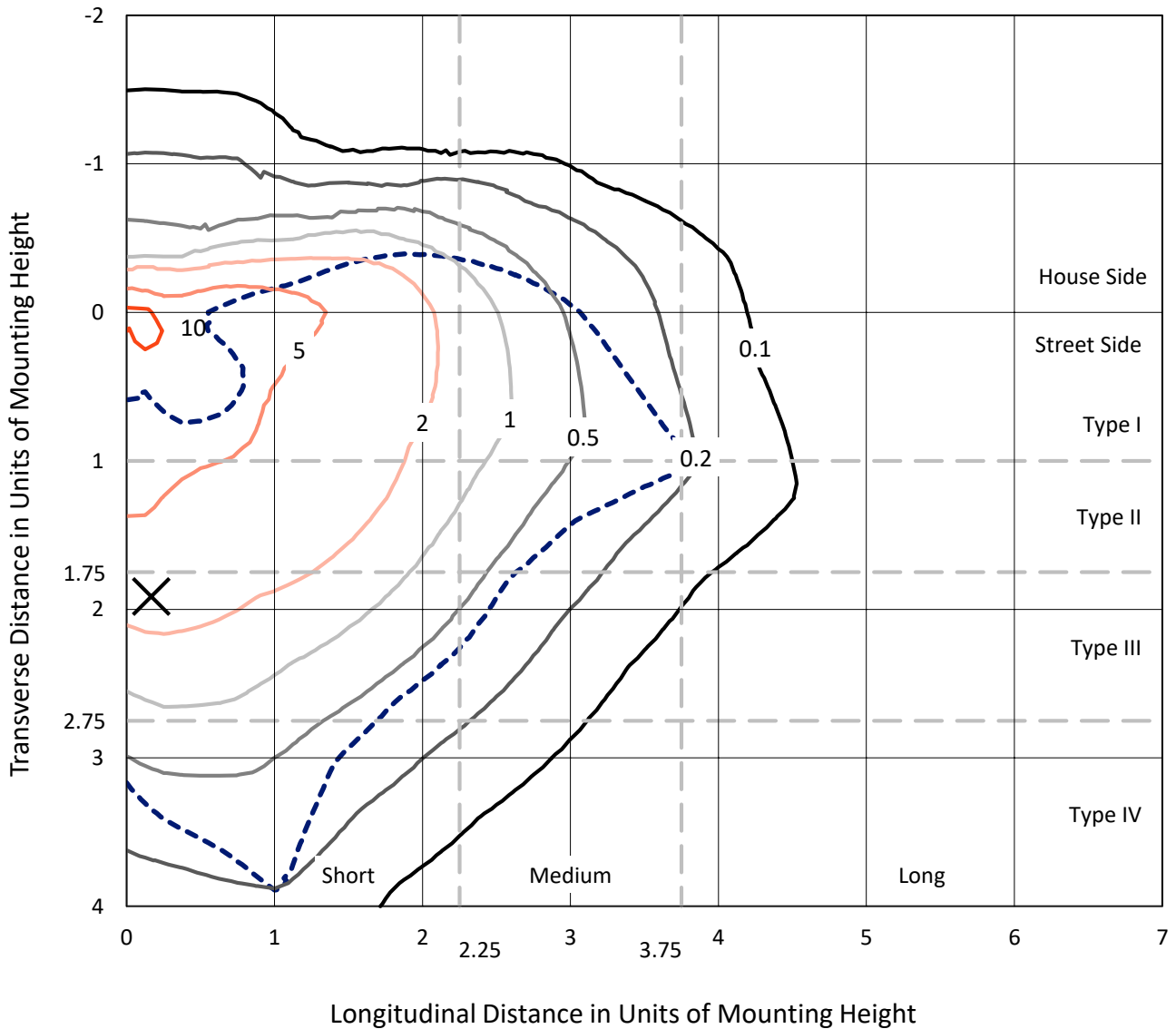


REPORT NUMBER: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

Iso-Footcandle Lines of Horizontal Illumination

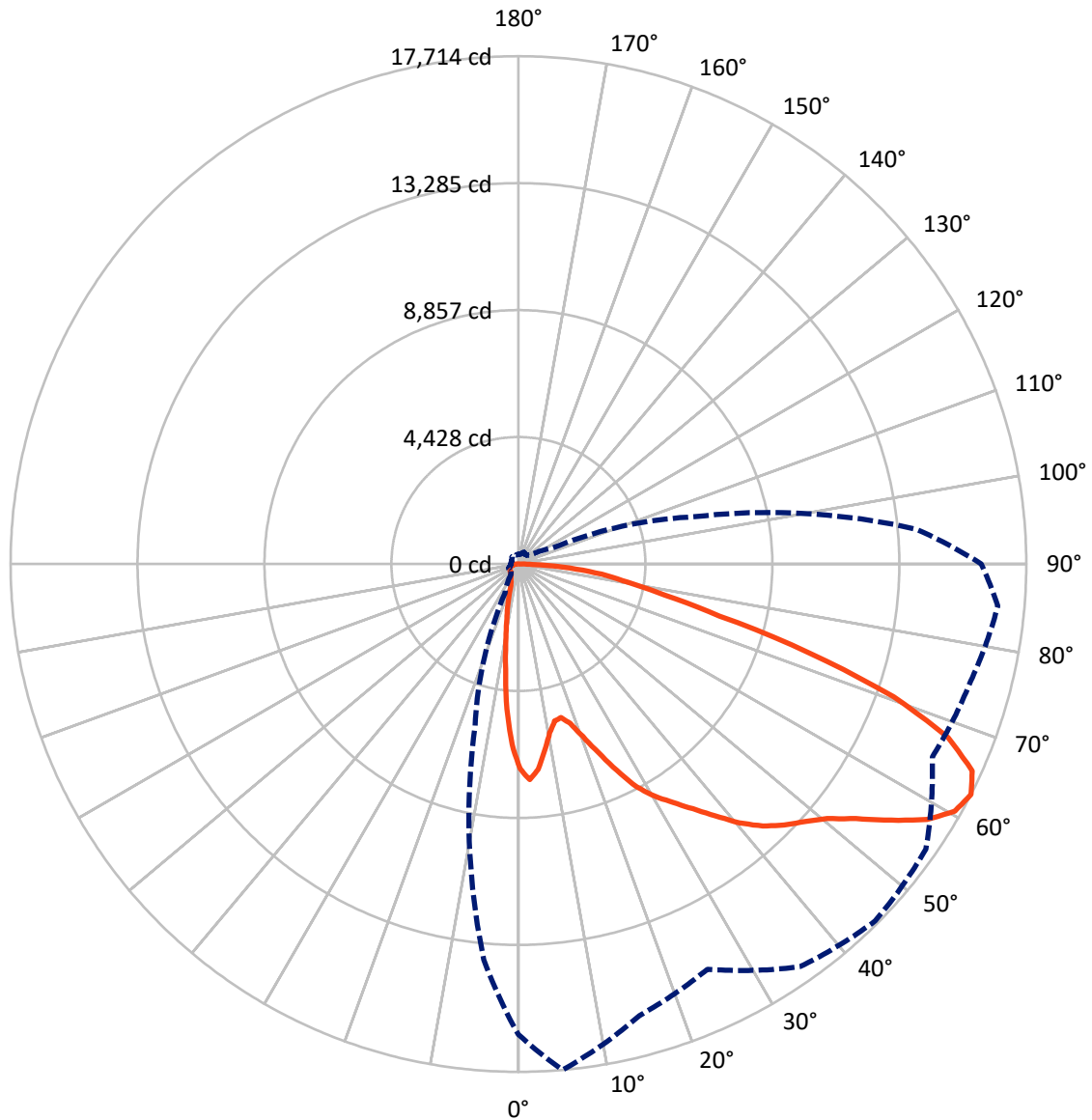
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.1 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195246
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3713.4	0.0	3713.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17248.6	0.0	17248.6
	% Fixture	82.3	0.0	82.3
Total	Lumens	20962.0	0.0	20962.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.7	2.5
10°-20°	949.3	4.5
20°-30°	1365.3	6.5
30°-40°	2091.1	10.0
40°-50°	3057.2	14.6
50°-60°	4448.3	21.2
60°-70°	5153.9	24.6
70°-80°	2686.7	12.8
80°-90°	690.6	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°	20962.0	100.0
0°-180°	20962.0	100.0



REPORT NUMBER: P195246

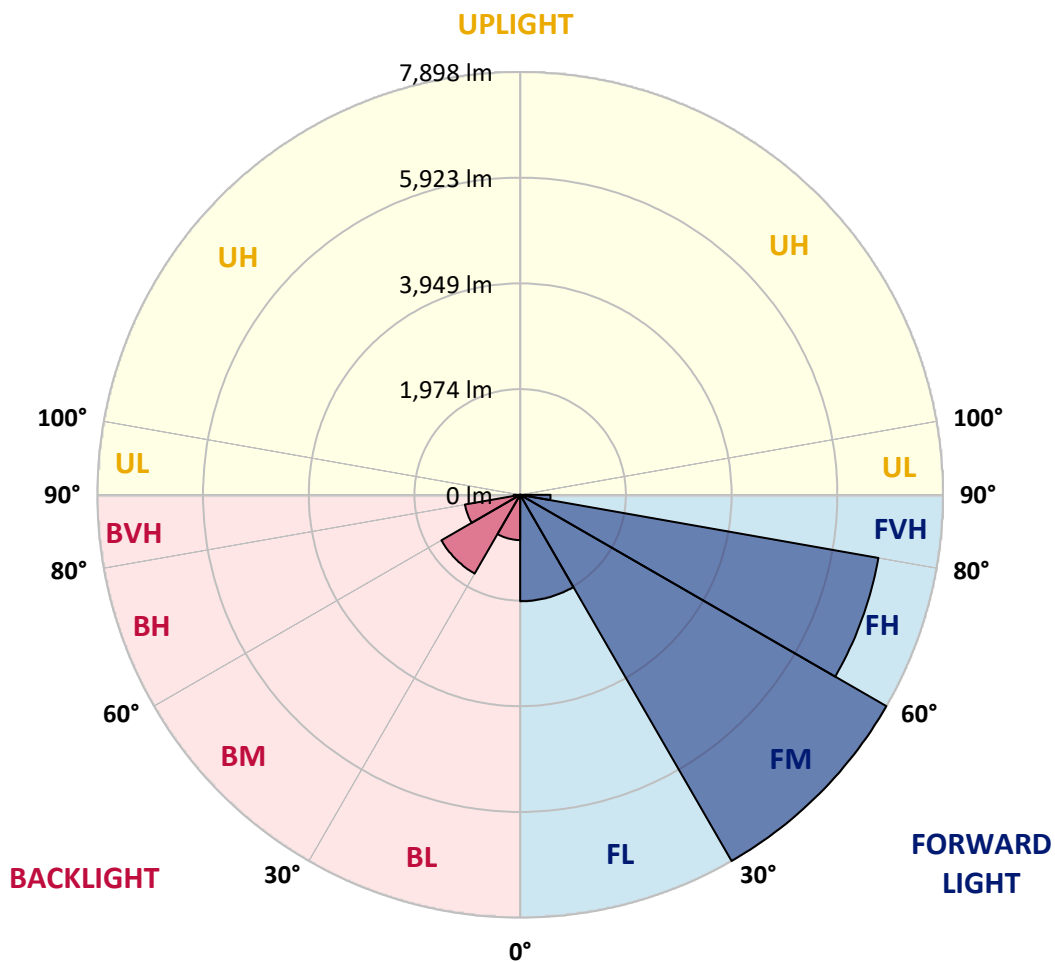
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1989.4	9.5			
FM	(30°-60°)	7897.5	37.7			
FH	(60°-80°)	6793.5	32.4			G3/7500
FVH	(80°-90°)	568.2	2.7			G4/750
BL	(0°-30°)	844.9	4.0	B2/1000		
BM	(30°-60°)	1699.0	8.1	B2/2500		
BH	(60°-80°)	1047.1	5.0	B3/2500		G3/2500
BVH	(80°-90°)	122.5	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: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	7377.4	7533.9	7713.3	7947.3	8106.9	8170.7	8223.9	8134.3	8047.6	7885.0	7827.3
5°	6891.0	7192.0	7685.9	8155.5	8568.9	8806.0	8879.0	8713.3	8418.5	7992.9	7768.0
7.5°	6169.1	6565.8	7260.4	7951.9	8544.6	8939.8	8968.7	8640.4	8059.8	7362.2	6997.4
10°	5538.4	5986.7	6790.7	7564.3	8192.0	8596.3	8517.3	8056.8	7356.1	6562.7	6150.9
12.5°	5172.1	5620.4	6439.6	7225.4	7816.6	7970.1	7809.0	7421.5	6757.3	5962.4	5547.5
15°	5094.6	5556.6	6315.0	6977.7	7343.9	7245.2	7085.6	6889.5	6416.8	5766.3	5365.1
17.5°	5328.6	5845.4	6480.7	6843.9	6828.7	6591.6	6457.9	6495.9	6415.3	5979.1	5559.6
20°	5810.4	6421.4	6901.7	6807.4	6418.4	6085.5	6008.0	6305.9	6678.2	6512.6	6052.1
22.5°	6444.2	7140.3	7476.2	6912.3	6204.1	5845.4	5830.2	6295.2	7157.0	7319.6	6758.8
25°	7160.0	7971.6	8055.2	7097.7	6181.3	5824.1	5810.4	6459.4	7733.0	8119.1	7550.6
27.5°	8035.5	8810.6	8538.6	7345.5	6281.6	5886.4	5895.5	6739.0	8333.4	8909.4	8442.8
30°	8695.1	9406.4	8836.4	7588.6	6442.7	5995.8	6018.6	7041.5	8657.1	9458.1	9155.6
32.5°	9312.2	9915.5	9122.2	7828.8	6678.2	6158.5	6237.5	7418.4	9046.2	9929.2	9828.9
35°	9994.6	10485.5	9439.8	8085.6	7015.7	6444.2	6558.2	7777.1	9432.2	10400.4	10496.1
37.5°	10768.2	11137.5	9784.8	8448.9	7502.0	6973.1	7036.9	8143.4	9701.2	10921.7	11212.0
40°	11573.7	11868.6	10161.8	8933.7	8208.7	7687.4	7717.8	8613.0	9912.5	11461.2	11906.6
42.5°	12265.2	12494.7	10540.2	9535.6	9020.3	8415.4	8441.3	9119.1	10114.6	11926.3	12462.8
45°	12818.5	12987.2	10897.4	10169.4	9886.7	9324.3	9318.2	9634.4	10385.2	12318.4	12889.9
47.5°	13333.7	13423.4	11295.6	10786.4	10784.9	10494.6	10277.3	10242.3	10745.4	12648.2	13262.3
50°	13923.4	13956.8	11821.4	11409.6	11882.2	11836.6	11435.4	11014.4	11212.0	13019.1	13652.9
52.5°	14744.1	14745.6	12473.5	12017.5	13093.6	13237.9	12771.4	11888.3	11902.0	13741.0	14327.7
55°	15709.2	15776.1	13323.1	12745.5	14361.1	14607.3	14168.1	12926.4	12892.9	14905.2	15422.0
57.5°	16455.5	16809.6	14312.5	13655.9	15545.1	15865.8	15511.7	14002.4	14110.3	16105.9	16324.8
60°	16665.2	17493.5	15298.9	14677.3	16546.7	17028.5	16668.3	15165.1	15301.9	16885.6	16584.7
62.5°	16414.4	17713.9	16303.5	15592.2	17140.9	17603.0	17344.6	15926.6	16273.1	16785.3	16145.4
65°	15671.2	17394.8	17175.9	15981.3	16799.0	16963.1	16894.7	15966.1	16800.5	15836.9	14931.1
67.5°	13935.6	16163.7	16786.8	15149.9	15201.6	15025.3	14935.6	14880.9	16207.7	14306.4	13016.0
70°	11333.6	13888.4	14931.1	12678.6	12295.6	12125.4	11830.6	12560.1	14567.8	12189.2	10711.9
72.5°	8730.1	10625.3	12247.0	9611.6	8815.2	8872.9	8538.6	9604.0	12067.7	9423.1	8178.3
75°	6199.5	7245.2	9775.7	6906.2	5851.4	5848.4	5822.6	6912.3	9521.9	6763.4	5983.7
77.5°	4468.4	5216.1	7658.6	4621.9	4152.2	4205.4	4120.3	4697.9	7423.0	4865.1	4433.4
80°	3564.1	3862.0	4950.2	3082.3	3091.4	3216.0	3197.8	3213.0	4883.3	3523.0	3314.8
82.5°	2561.0	2931.8	3784.4	2361.9	2044.2	2176.4	2202.3	2383.1	3445.5	2491.0	2185.6
85°	1313.2	1787.4	3482.0	2045.7	1278.2	1059.3	1218.9	1880.1	2992.6	1492.5	1065.4
87.5°	255.3	495.5	2551.8	1136.9	574.5	290.3	478.8	796.4	1740.2	270.5	132.2
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: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	7728.5	7533.9	7351.5	7163.1	7017.2	6839.4	6664.6	6512.6	6365.2	6267.9	6298.3
5°	7540.0	7065.8	6640.3	6245.1	6014.1	5735.9	5488.2	5280.0	5118.9	5015.5	5077.8
7.5°	6681.3	6039.9	5479.1	4957.8	4629.5	4269.3	3980.5	3776.8	3652.2	3582.3	3684.1
10°	5802.8	5082.4	4453.2	3910.6	3586.9	3281.4	3020.0	2804.1	2637.0	2557.9	2599.0
12.5°	5173.6	4372.6	3713.0	3348.2	3070.1	2796.5	2526.0	2273.7	2060.9	1963.7	1943.9
15°	4938.0	3991.1	3317.8	2910.5	2633.9	2336.0	2044.2	1773.7	1571.5	1487.9	1469.7
17.5°	5041.4	3909.1	3083.8	2602.0	2200.8	1839.0	1510.7	1255.4	1106.5	1059.3	1063.9
20°	5404.6	3939.5	2895.3	2284.3	1788.9	1360.3	1032.0	855.7	791.8	781.2	793.4
22.5°	5903.1	4064.1	2758.5	2010.8	1425.6	989.4	767.5	683.9	667.2	665.7	677.9
25°	6561.2	4307.3	2667.3	1767.6	1126.2	784.2	668.7	621.6	607.9	611.0	623.1
27.5°	7336.3	4615.8	2608.1	1557.9	925.6	699.1	624.7	583.6	569.9	573.0	582.1
30°	8044.6	4886.3	2519.9	1399.8	831.4	668.7	600.3	559.3	541.1	541.1	547.1
32.5°	8678.4	5120.4	2416.6	1281.2	744.7	600.3	544.1	512.2	498.5	503.1	506.1
35°	9240.7	5243.5	2336.0	1211.3	674.8	553.2	497.0	463.6	445.3	448.4	452.9
37.5°	9794.0	5290.6	2282.8	1173.3	624.7	524.4	472.7	445.3	425.6	422.5	421.0
40°	10319.8	5280.0	2232.7	1162.7	591.2	503.1	457.5	433.2	413.4	408.8	407.3
42.5°	10774.3	5245.0	2185.6	1133.8	568.4	487.9	445.3	424.0	404.3	398.2	395.2
45°	11189.2	5223.7	2133.9	1080.6	580.6	481.8	439.2	416.4	398.2	390.6	387.6
47.5°	11649.7	5299.7	2076.1	1022.9	577.5	483.3	439.2	413.4	395.2	387.6	384.5
50°	12198.4	5556.6	2004.7	943.8	550.2	516.8	437.7	408.8	392.1	387.6	381.5
52.5°	12973.5	5973.0	1905.9	842.0	528.9	551.7	436.2	401.2	387.6	380.0	372.4
55°	14035.9	6389.5	1778.2	734.1	495.5	527.4	439.2	392.1	376.9	369.3	360.2
57.5°	14906.7	6705.6	1617.1	644.4	465.1	498.5	434.7	381.5	364.8	357.2	349.6
60°	14850.5	6736.0	1463.6	586.7	446.8	448.4	445.3	373.9	354.1	348.0	342.0
62.5°	13931.0	6360.6	1320.8	557.8	433.2	408.8	454.4	364.8	343.5	337.4	332.8
65°	12400.5	5486.7	1244.8	557.8	421.0	387.6	396.7	352.6	332.8	326.8	323.7
67.5°	10459.6	4409.1	1173.3	569.9	404.3	372.4	360.2	340.4	322.2	316.1	313.1
70°	8383.5	3469.8	1123.2	563.9	389.1	355.6	340.4	323.7	305.5	304.0	300.9
72.5°	6576.4	2787.4	1100.4	563.9	366.3	335.9	320.7	308.5	290.3	288.8	284.2
75°	5269.3	2092.8	1006.1	553.2	343.5	310.1	296.4	285.7	267.5	269.0	266.0
77.5°	4080.8	1480.3	840.5	498.5	314.6	281.2	270.5	262.9	241.7	243.2	243.2
80°	3191.7	963.6	652.0	413.4	281.2	247.7	240.1	234.1	211.3	214.3	214.3
82.5°	2187.1	573.0	472.7	332.8	241.7	211.3	209.7	200.6	176.3	177.8	180.9
85°	1194.6	376.9	314.6	246.2	190.0	171.7	168.7	164.1	141.3	141.3	142.9
87.5°	220.4	202.1	185.4	162.6	127.7	123.1	118.5	123.1	106.4	103.4	103.4
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: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	6226.9	6122.0	6049.0	5985.2	5831.7	5842.3	5863.6	5894.0	5798.3	5848.4	5910.7
5°	5015.5	4928.9	4863.5	4761.7	4547.4	4471.4	4422.8	4401.5	4258.6	4289.0	4355.9
7.5°	3697.8	3696.3	3673.5	3559.5	3301.1	3144.6	3041.2	3009.3	2921.2	2954.6	3056.4
10°	2603.5	2630.9	2620.2	2518.4	2287.4	2174.9	2152.1	2216.0	2217.5	2282.8	2457.6
12.5°	1881.6	1866.4	1852.7	1769.1	1595.8	1577.6	1629.3	1717.4	1738.7	1808.6	1991.0
15°	1404.3	1367.9	1360.3	1294.9	1180.9	1197.6	1235.6	1281.2	1282.8	1331.4	1481.9
17.5°	1053.3	1053.3	1065.4	1022.9	940.8	933.2	913.4	901.3	883.0	902.8	984.9
20°	817.7	855.7	886.1	861.8	787.3	750.8	712.8	688.5	674.8	676.3	700.7
22.5°	700.7	731.1	770.6	758.4	696.1	649.0	624.7	607.9	597.3	597.3	611.0
25°	641.4	661.1	697.6	691.5	638.3	600.3	580.6	563.9	551.7	550.2	563.9
27.5°	594.3	606.4	630.7	627.7	573.0	548.7	536.5	525.9	518.3	516.8	530.4
30°	551.7	557.8	569.9	565.4	524.4	500.0	495.5	490.9	486.4	487.9	507.6
32.5°	513.7	518.3	525.9	519.8	480.3	459.0	451.4	445.3	440.8	445.3	468.1
35°	471.2	484.8	494.0	490.9	448.4	422.5	405.8	390.6	384.5	389.1	414.9
37.5°	434.7	457.5	469.6	466.6	422.5	392.1	370.8	367.8	367.8	373.9	399.7
40°	421.0	437.7	448.4	443.8	399.7	369.3	357.2	352.6	354.1	360.2	387.6
42.5°	408.8	424.0	427.1	418.0	373.9	354.1	346.5	340.4	343.5	351.1	378.4
45°	398.2	410.4	408.8	395.2	352.6	338.9	338.9	334.4	335.9	342.0	370.8
47.5°	390.6	396.7	393.6	380.0	337.4	326.8	331.3	331.3	334.4	338.9	367.8
50°	378.4	383.0	380.0	367.8	325.2	316.1	320.7	326.8	329.8	334.4	360.2
52.5°	366.3	369.3	367.8	355.6	313.1	307.0	307.0	313.1	319.2	325.2	348.0
55°	354.1	357.2	358.7	349.6	304.0	297.9	296.4	296.4	302.5	311.6	335.9
57.5°	345.0	345.0	348.0	342.0	294.9	287.3	279.7	281.2	288.8	296.4	320.7
60°	334.4	335.9	340.4	334.4	282.7	270.5	264.5	272.1	275.1	282.7	308.5
62.5°	325.2	325.2	328.3	323.7	272.1	259.9	255.3	262.9	262.9	270.5	296.4
65°	317.6	316.1	316.1	314.6	261.4	249.3	246.2	249.3	250.8	258.4	284.2
67.5°	311.6	304.0	304.0	307.0	250.8	238.6	237.1	237.1	238.6	247.7	270.5
70°	297.9	291.8	290.3	300.9	240.1	224.9	224.9	221.9	224.9	229.5	253.8
72.5°	282.7	278.1	276.6	291.8	229.5	209.7	206.7	205.2	206.7	211.3	234.1
75°	262.9	259.9	262.9	285.7	218.9	193.0	188.5	186.9	186.9	188.5	212.8
77.5°	240.1	237.1	259.9	266.0	212.8	173.3	168.7	165.7	162.6	162.6	190.0
80°	212.8	211.3	250.8	224.9	203.7	152.0	144.4	139.8	136.8	135.3	162.6
82.5°	185.4	182.4	214.3	176.3	168.7	124.6	114.0	104.9	100.3	100.3	124.6
85°	152.0	150.5	168.7	129.2	117.0	91.2	76.0	68.4	62.3	62.3	80.6
87.5°	110.9	107.9	104.9	77.5	59.3	41.0	28.9	27.4	24.3	22.8	33.4
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: P195246

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7060-600

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	6003.4	6129.6	6368.2	6564.3	6825.7	7035.4	7274.0	7377.4
5°	4479.0	4678.1	5042.9	5354.5	5786.1	6185.8	6641.8	6891.0
7.5°	3213.0	3507.8	3784.4	4173.5	4713.1	5249.6	5839.3	6169.1
10°	2658.2	2928.8	3165.9	3442.5	3858.9	4462.3	5166.0	5538.4
12.5°	2202.3	2494.1	2744.9	3041.2	3390.8	3936.4	4738.9	5172.1
15°	1688.6	2006.2	2307.1	2664.3	3092.9	3716.0	4611.2	5094.6
17.5°	1156.6	1497.1	1867.9	2304.1	2820.9	3623.3	4732.8	5328.6
20°	785.8	1035.0	1437.8	1954.5	2576.2	3579.3	5000.3	5810.4
22.5°	645.9	758.4	1060.9	1626.2	2375.5	3627.9	5435.0	6444.2
25°	592.7	653.5	825.3	1337.5	2222.0	3757.1	6023.2	7160.0
27.5°	559.3	611.0	723.5	1130.8	2080.7	3933.4	6739.0	8035.5
30°	539.5	588.2	682.4	1024.4	1951.5	4085.4	7354.6	8695.1
32.5°	495.5	531.9	609.5	963.6	1858.8	4208.5	7897.2	9312.2
35°	442.3	486.4	550.2	924.1	1855.7	4266.2	8407.8	9994.6
37.5°	422.5	465.1	512.2	902.8	1874.0	4314.9	9032.5	10768.2
40°	410.4	448.4	486.4	899.8	1889.2	4352.9	9643.5	11573.7
42.5°	399.7	437.7	481.8	878.5	1883.1	4404.5	10184.6	12265.2
45°	396.7	434.7	492.4	846.6	1881.6	4485.1	10614.7	12818.5
47.5°	393.6	451.4	489.4	811.6	1875.5	4655.3	11099.5	13333.7
50°	390.6	481.8	468.1	763.0	1829.9	4945.6	11751.5	13923.4
52.5°	389.1	486.4	445.3	696.1	1747.8	5375.7	12706.0	14744.1
55°	383.0	462.0	405.8	607.9	1629.3	5839.3	13728.9	15709.2
57.5°	369.3	411.9	383.0	521.3	1459.1	6163.0	14484.2	16455.5
60°	402.8	354.1	367.8	477.2	1255.4	6220.8	14517.7	16665.2
62.5°	384.5	322.2	352.6	462.0	1112.5	5843.8	13853.5	16414.4
65°	307.0	305.5	338.9	477.2	1091.3	5000.3	12731.8	15671.2
67.5°	279.7	293.3	325.2	495.5	1104.9	3939.5	11081.3	13935.6
70°	261.4	278.1	307.0	512.2	1129.3	3103.5	8921.6	11333.6
72.5°	243.2	256.9	288.8	528.9	1112.5	2448.5	7140.3	8730.1
75°	220.4	232.5	262.9	484.8	954.5	1799.5	5673.6	6199.5
77.5°	194.5	205.2	231.0	383.0	717.4	1252.4	4249.5	4468.4
80°	167.2	171.7	191.5	279.7	468.1	749.3	3234.3	3564.1
82.5°	132.2	133.7	145.9	205.2	291.8	478.8	2243.3	2561.0
85°	85.1	88.2	94.2	144.4	196.1	307.0	1146.0	1313.2
87.5°	28.9	33.4	33.4	69.9	95.8	170.2	351.1	255.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)