

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: P270689

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270689
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-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 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: 27641.4 lumens
Efficiency: N/A
Efficacy: 83.0 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

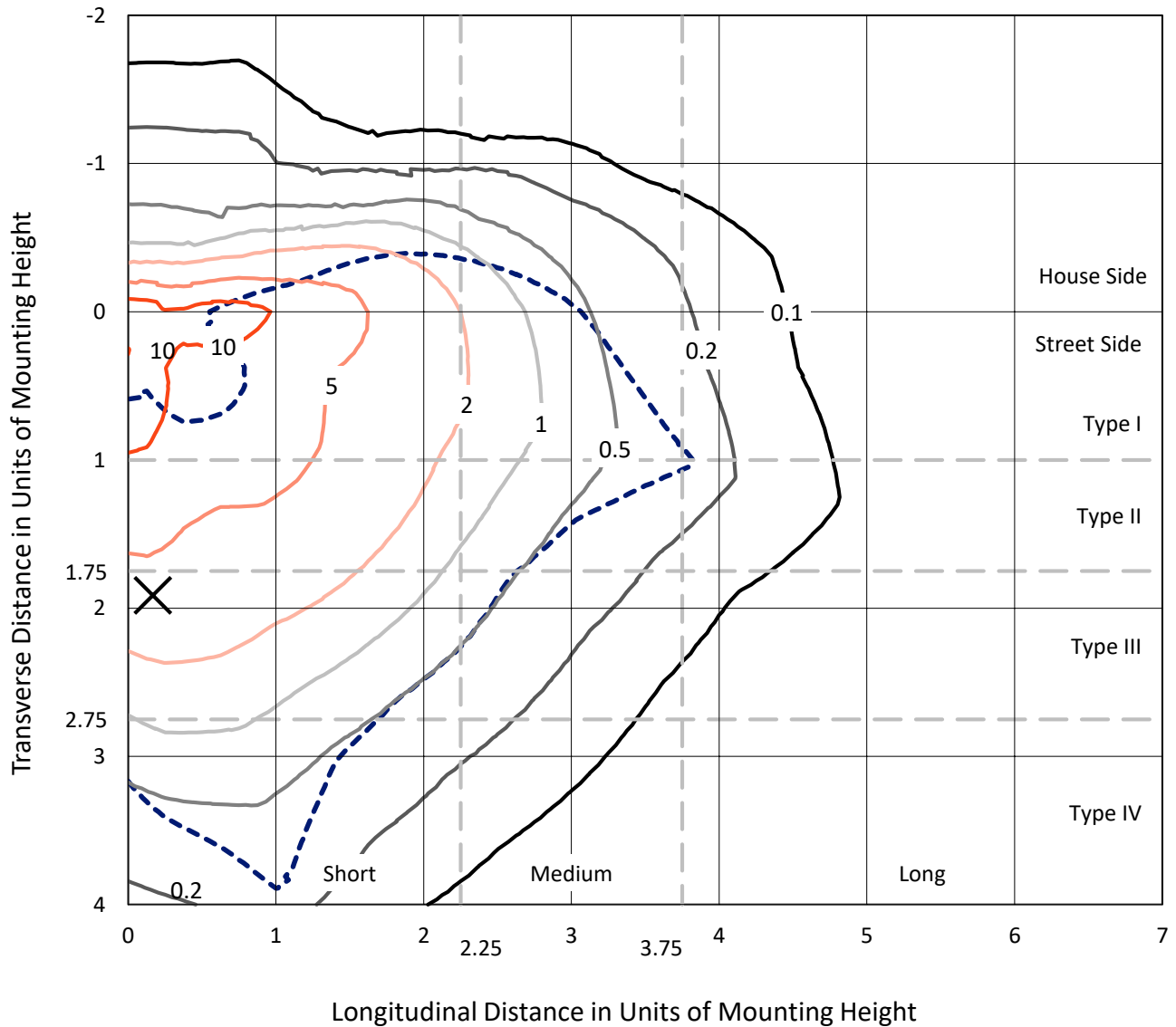
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270689
 CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

Iso-Footcandle Lines of Horizontal Illumination

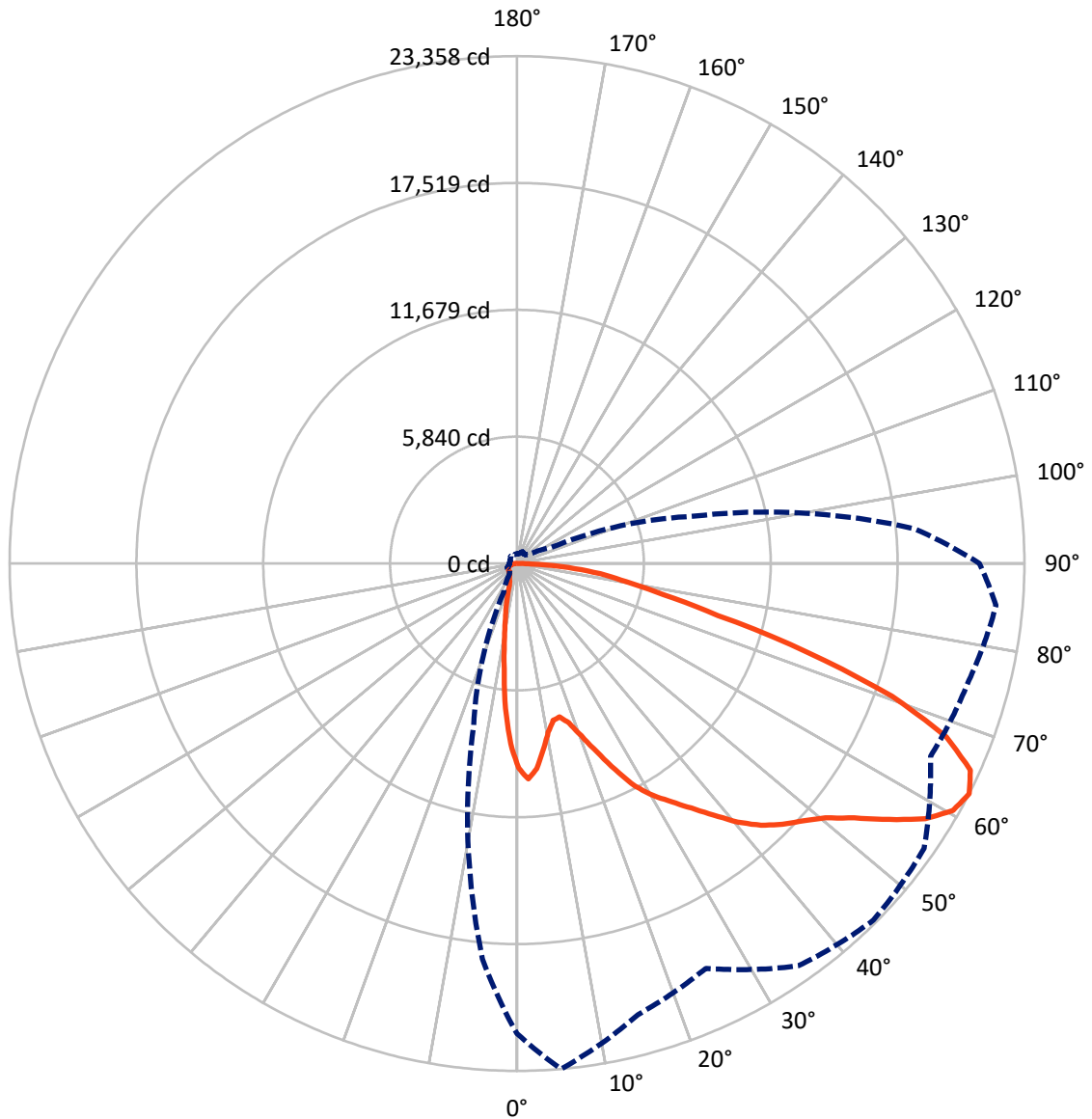
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17.3 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270689
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270689

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4896.7	0.0	4896.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	22744.7	0.0	22744.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	27641.4	0.0	27641.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	685.3	2.5
10°-20°	1251.7	4.5
20°-30°	1800.3	6.5
30°-40°	2757.4	10.0
40°-50°	4031.4	14.6
50°-60°	5865.7	21.2
60°-70°	6796.2	24.6
70°-80°	3542.7	12.8
80°-90°	910.7	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°	27641.4	100.0
0°-180°	27641.4	100.0



REPORT NUMBER: P270689

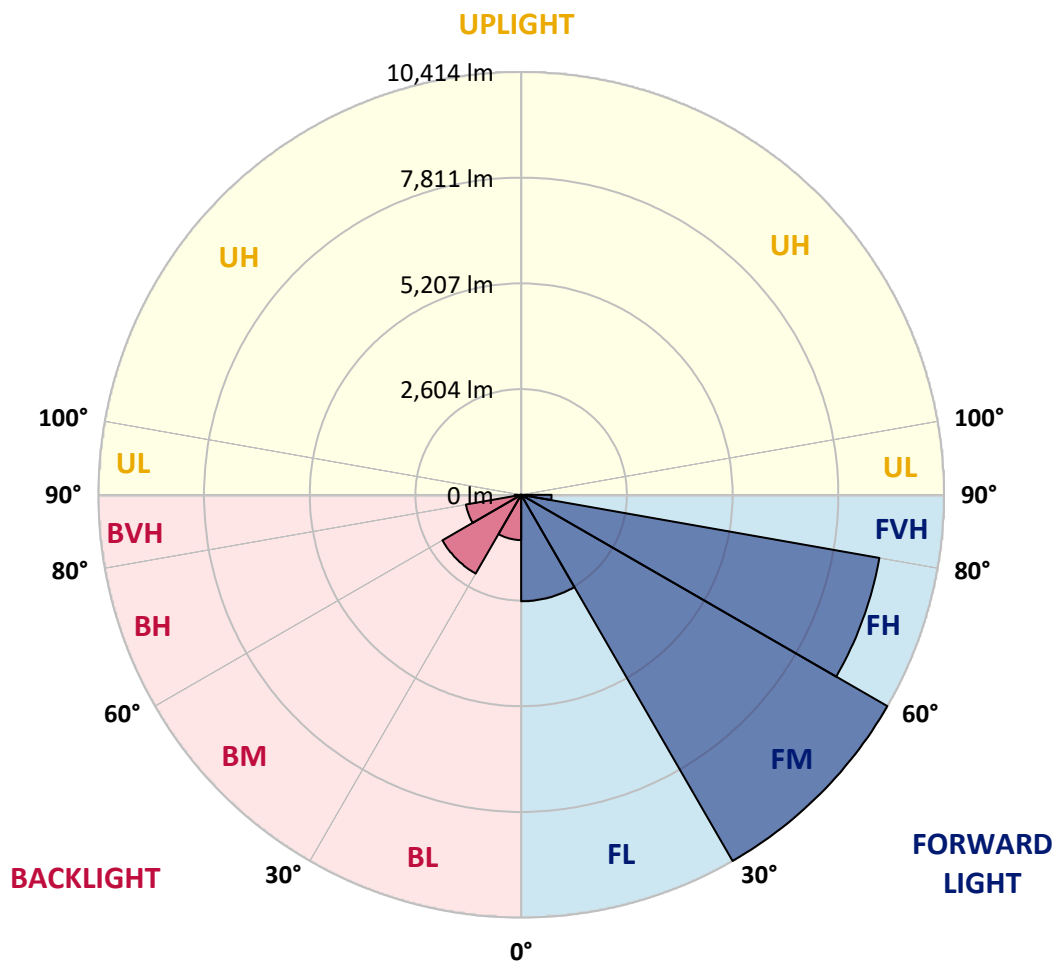
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2623.3	9.5			
FM	(30°-60°)	10414.0	37.7			
FH	(60°-80°)	8958.2	32.4			G4/12000
FVH	(80°-90°)	749.2	2.7			G4/750
BL	(0°-30°)	1114.1	4.0	B3/2500		
BM	(30°-60°)	2240.4	8.1	B2/2500		
BH	(60°-80°)	1380.7	5.0	B3/2500		G3/2500
BVH	(80°-90°)	161.5	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: P270689

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5
2.5°	9728.1	9934.5	10171.1	10479.6	10690.2	10774.4	10844.5	10726.2	10611.9	10397.5	10321.3
5°	9086.9	9483.6	10134.9	10754.2	11299.4	11612.1	11708.2	11489.9	11101.1	10539.9	10243.3
7.5°	8134.8	8658.0	9573.9	10485.7	11267.4	11788.4	11826.5	11393.7	10627.9	9708.2	9227.1
10°	7303.1	7894.3	8954.6	9974.7	10802.4	11335.5	11231.2	10624.1	9700.1	8653.9	8110.7
12.5°	6820.1	7411.3	8491.6	9527.8	10307.3	10509.8	10297.4	9786.2	8910.5	7862.2	7315.2
15°	6718.0	7327.1	8327.3	9201.1	9684.1	9553.8	9343.4	9084.7	8461.6	7603.8	7074.6
17.5°	7026.5	7707.9	8545.7	9024.7	9004.7	8692.0	8515.7	8565.8	8459.5	7884.3	7331.2
20°	7661.9	8467.6	9100.9	8976.7	8463.6	8024.6	7922.4	8315.3	8806.3	8587.7	7980.5
22.5°	8497.5	9415.6	9858.4	9114.9	8181.0	7707.9	7688.0	8301.1	9437.6	9652.0	8912.4
25°	9441.5	10511.7	10622.0	9359.4	8151.0	7679.9	7661.9	8517.6	10197.1	10706.2	9956.6
27.5°	10596.0	11618.0	11259.4	9686.1	8283.1	7762.1	7774.1	8886.5	10988.7	11748.4	11133.1
30°	11465.7	12403.6	11652.2	10006.7	8495.6	7906.4	7936.4	9285.2	11415.7	12471.9	12073.0
32.5°	12279.4	13075.1	12028.9	10323.4	8806.3	8120.8	8225.1	9782.3	11928.8	13093.2	12960.8
35°	13179.4	13826.6	12447.9	10662.2	9251.1	8497.5	8648.0	10255.2	12437.8	13714.5	13840.6
37.5°	14199.4	14686.4	12902.7	11141.0	9892.5	9195.1	9279.2	10738.2	12792.6	14401.8	14784.7
40°	15261.7	15650.5	13399.7	11780.5	10824.4	10137.1	10177.1	11357.5	13071.1	15113.4	15700.5
42.5°	16173.5	16476.2	13898.8	12574.0	11894.6	11097.0	11131.1	12024.9	13337.7	15726.5	16434.0
45°	16903.0	17125.5	14369.7	13409.8	13037.0	12295.6	12287.5	12704.3	13694.4	16243.6	16997.2
47.5°	17582.4	17700.7	14894.8	14223.5	14221.4	13838.7	13552.1	13505.9	14169.3	16678.6	17488.3
50°	18360.1	18404.1	15588.3	15045.2	15668.4	15608.3	15079.3	14524.1	14784.7	17167.6	18003.3
52.5°	19442.2	19444.4	16448.1	15846.8	17265.8	17456.1	16840.9	15676.5	15694.5	18119.5	18893.2
55°	20714.9	20803.0	17568.4	16806.7	18937.2	19261.8	18682.7	17045.2	17001.2	19654.7	20336.1
57.5°	21699.0	22165.9	18873.1	18007.3	20498.5	20921.3	20454.3	18464.2	18606.6	21238.0	21526.7
60°	21975.5	23067.8	20173.7	19354.2	21819.2	22454.6	21979.5	19997.3	20177.8	22266.2	21869.2
62.5°	21644.8	23358.4	21498.5	20560.5	22602.9	23212.2	22871.3	21001.6	21458.4	22133.9	21290.1
65°	20664.8	22937.5	22649.0	21073.7	22151.9	22368.3	22278.1	21053.7	22153.9	20883.3	19688.8
67.5°	18376.1	21314.2	22135.9	19977.3	20045.6	19813.0	19694.8	19622.7	21372.3	18865.0	17163.6
70°	14944.9	18313.9	19688.8	16718.6	16213.6	15989.1	15600.3	16562.3	19209.8	16073.4	14125.3
72.5°	11511.9	14011.0	16149.5	12674.2	11624.1	11700.2	11259.4	12664.2	15912.9	12425.7	10784.3
75°	8174.9	9553.8	12890.7	9106.8	7716.0	7711.9	7678.0	9114.9	12556.0	8918.6	7890.4
77.5°	5892.3	6878.2	10098.9	6094.6	5475.3	5545.4	5433.3	6194.8	9788.3	6415.2	5846.1
80°	4699.8	5092.5	6527.5	4064.4	4076.5	4240.8	4216.7	4236.8	6439.3	4645.7	4371.1
82.5°	3377.0	3866.0	4990.4	3114.5	2695.5	2869.9	2904.0	3142.5	4543.4	3284.8	2881.9
85°	1731.7	2357.0	4591.4	2697.6	1685.5	1397.0	1607.3	2479.1	3946.2	1968.0	1404.9
87.5°	336.8	653.3	3365.1	1499.1	757.6	382.8	631.2	1050.2	2294.8	356.7	174.5
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: P270689

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5
2.5°	10191.1	9934.5	9694.1	9445.6	9253.3	9018.8	8788.2	8587.7	8393.5	8265.1	8305.2
5°	9942.6	9317.3	8756.1	8235.0	7930.4	7563.6	7236.9	6962.5	6750.0	6613.7	6695.8
7.5°	8810.2	7964.6	7225.0	6537.5	6104.6	5629.7	5248.8	4980.4	4816.0	4723.7	4858.0
10°	7651.9	6701.9	5872.2	5156.7	4729.8	4327.0	3982.2	3697.7	3477.2	3373.0	3427.2
12.5°	6822.2	5766.0	4896.1	4415.2	4048.4	3687.6	3330.8	2998.3	2717.6	2589.4	2563.4
15°	6511.5	5262.9	4375.0	3838.0	3473.1	3080.4	2695.5	2338.8	2072.3	1962.1	1938.1
17.5°	6647.7	5154.7	4066.4	3431.0	2902.1	2425.1	1992.1	1655.4	1459.0	1397.0	1403.0
20°	7126.8	5194.8	3817.8	3012.2	2358.9	1793.7	1360.8	1128.4	1044.2	1030.1	1046.2
22.5°	7784.2	5359.1	3637.5	2651.4	1880.0	1304.7	1012.1	901.9	879.8	877.9	893.9
25°	8651.9	5679.8	3517.4	2330.8	1485.1	1034.2	881.9	819.8	801.6	805.7	821.7
27.5°	9674.0	6086.6	3439.2	2054.2	1220.5	921.9	823.7	769.6	751.5	755.6	767.6
30°	10607.9	6443.4	3322.9	1845.8	1096.3	881.9	791.6	737.5	713.4	713.4	721.5
32.5°	11443.7	6752.0	3186.6	1689.5	982.0	791.6	717.4	675.3	657.4	663.4	667.4
35°	12185.2	6914.3	3080.4	1597.2	889.9	729.6	655.4	611.2	587.2	591.3	597.3
37.5°	12914.8	6976.4	3010.2	1547.2	823.7	691.4	623.3	587.2	561.3	557.2	555.2
40°	13608.2	6962.5	2944.0	1533.1	779.5	663.4	603.2	571.2	545.1	539.2	537.0
42.5°	14207.5	6916.3	2881.9	1495.0	749.5	643.4	587.2	559.1	533.1	525.1	521.0
45°	14754.7	6888.3	2813.9	1424.9	765.5	635.3	579.1	549.1	525.1	515.1	511.0
47.5°	15361.8	6988.5	2737.7	1348.7	761.6	637.3	579.1	545.1	521.0	511.0	507.1
50°	16085.3	7327.1	2643.5	1244.6	725.6	681.5	577.3	539.2	517.1	511.0	503.1
52.5°	17107.4	7876.2	2513.2	1110.2	697.4	727.4	575.2	529.1	511.0	501.1	491.1
55°	18508.4	8425.5	2344.8	968.1	653.3	695.5	579.1	517.1	497.0	487.1	474.9
57.5°	19656.7	8842.3	2132.4	849.7	613.3	657.4	573.2	503.1	481.0	471.0	461.0
60°	19582.6	8882.4	1930.0	773.6	589.2	591.3	587.2	493.0	466.9	458.9	450.9
62.5°	18370.1	8387.4	1741.6	735.5	571.2	539.2	599.2	481.0	452.9	444.9	438.9
65°	16351.8	7234.9	1641.5	735.5	555.2	511.0	523.2	465.0	438.9	430.8	426.9
67.5°	13792.5	5814.0	1547.2	751.5	533.1	491.1	474.9	449.0	424.9	416.9	412.9
70°	11054.9	4575.4	1481.0	743.5	513.0	468.9	449.0	426.9	402.8	400.9	396.8
72.5°	8672.0	3675.7	1451.0	743.5	483.0	443.0	422.9	406.8	382.8	380.8	374.8
75°	6948.4	2759.8	1326.7	729.6	452.9	408.9	390.9	376.7	352.8	354.7	350.7
77.5°	5381.1	1952.0	1108.2	657.4	414.8	370.8	356.7	346.7	318.7	320.6	320.6
80°	4208.6	1270.7	859.8	545.1	370.8	326.7	316.7	308.7	278.6	282.5	282.5
82.5°	2884.0	755.6	623.3	438.9	318.7	278.6	276.6	264.6	232.5	234.5	238.5
85°	1575.3	497.0	414.8	324.6	250.4	226.5	222.5	216.4	186.4	186.4	188.4
87.5°	290.6	266.5	244.5	214.4	168.3	162.4	156.3	162.4	140.2	136.4	136.4
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: P270689

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5
2.5°	8211.0	8072.7	7976.5	7892.4	7689.9	7704.0	7732.0	7772.0	7645.8	7711.9	7794.1
5°	6613.7	6499.4	6413.3	6279.1	5996.5	5896.2	5832.1	5803.9	5615.7	5655.6	5743.9
7.5°	4876.1	4874.2	4844.0	4693.7	4353.0	4146.5	4010.4	3968.3	3852.0	3896.0	4030.3
10°	3433.1	3469.2	3455.2	3320.9	3016.2	2868.0	2837.8	2922.0	2924.1	3010.2	3240.7
12.5°	2481.2	2461.0	2443.1	2332.8	2104.4	2080.4	2148.4	2264.6	2292.7	2384.9	2625.4
15°	1851.9	1803.7	1793.7	1707.6	1557.2	1579.3	1629.3	1689.5	1691.5	1755.6	1954.1
17.5°	1388.9	1388.9	1404.9	1348.7	1240.6	1230.6	1204.4	1188.5	1164.5	1190.4	1298.7
20°	1078.2	1128.4	1168.4	1136.4	1038.1	990.0	939.9	907.8	889.9	891.8	923.8
22.5°	923.8	964.1	1016.2	1000.1	917.9	855.7	823.7	801.6	787.6	787.6	805.7
25°	845.8	871.9	920.0	911.9	841.7	791.6	765.5	743.5	727.4	725.6	743.5
27.5°	783.6	799.6	831.7	827.7	755.6	723.5	707.4	693.4	683.4	681.5	699.4
30°	727.4	735.5	751.5	745.6	691.4	659.4	653.3	647.4	641.3	643.4	669.3
32.5°	677.4	683.4	693.4	685.4	633.3	605.3	595.2	587.2	581.3	587.2	617.2
35°	621.3	639.4	651.4	647.4	591.3	557.2	535.1	515.1	507.1	513.0	547.2
37.5°	573.2	603.2	619.3	615.2	557.2	517.1	488.9	485.1	485.1	493.0	527.0
40°	555.2	577.3	591.3	585.2	527.0	487.1	471.0	465.0	466.9	474.9	511.0
42.5°	539.2	559.1	563.1	551.1	493.0	466.9	457.0	449.0	452.9	462.9	499.0
45°	525.1	541.0	539.2	521.0	465.0	446.9	446.9	440.9	443.0	450.9	488.9
47.5°	515.1	523.2	519.1	501.1	444.9	430.8	436.8	436.8	440.9	446.9	485.1
50°	499.0	505.0	501.1	485.1	428.9	416.9	422.9	430.8	434.9	440.9	474.9
52.5°	483.0	487.1	485.1	468.9	412.9	404.9	404.9	412.9	420.9	428.9	458.9
55°	466.9	471.0	473.0	461.0	400.9	392.7	390.9	390.9	398.8	410.9	443.0
57.5°	454.9	454.9	458.9	450.9	388.7	378.7	368.8	370.8	380.8	390.9	422.9
60°	440.9	443.0	449.0	440.9	372.7	356.7	348.7	358.8	362.7	372.7	406.8
62.5°	428.9	428.9	433.0	426.9	358.8	342.8	336.8	346.7	346.7	356.7	390.9
65°	418.9	416.9	416.9	414.8	344.7	328.7	324.6	328.7	330.7	340.6	374.8
67.5°	410.9	400.9	400.9	404.9	330.7	314.6	312.6	312.6	314.6	326.7	356.7
70°	392.7	384.8	382.8	396.8	316.7	296.6	296.6	292.6	296.6	302.5	334.7
72.5°	372.7	366.8	364.7	384.8	302.5	276.6	272.5	270.6	272.5	278.6	308.7
75°	346.7	342.8	346.7	376.7	288.5	254.5	248.6	246.6	246.6	248.6	280.6
77.5°	316.7	312.6	342.8	350.7	280.6	228.4	222.5	218.5	214.4	214.4	250.4
80°	280.6	278.6	330.7	296.6	268.6	200.4	190.4	184.4	180.4	178.4	214.4
82.5°	244.5	240.4	282.5	232.5	222.5	164.3	150.2	138.2	132.3	132.3	164.3
85°	200.4	198.4	222.5	170.4	154.2	120.3	100.3	90.2	82.1	82.1	106.2
87.5°	146.3	142.3	138.2	102.1	78.2	54.1	38.1	36.1	32.1	30.1	44.0
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: P270689

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7027

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5	9423.5
2.5°	7916.5	8082.8	8397.4	8656.0	9000.7	9277.2	9591.9	9728.1
5°	5906.3	6168.8	6649.8	7060.6	7629.8	8156.9	8758.1	9086.9
7.5°	4236.8	4625.6	4990.4	5503.3	6214.8	6922.3	7699.9	8134.8
10°	3505.2	3862.1	4174.7	4539.4	5088.5	5884.2	6812.0	7303.1
12.5°	2904.0	3288.9	3619.5	4010.4	4471.3	5190.8	6249.0	6820.1
15°	2226.5	2645.5	3042.3	3513.4	4078.5	4900.2	6080.5	6718.0
17.5°	1525.1	1974.0	2463.2	3038.2	3719.7	4777.8	6241.0	7026.5
20°	1036.1	1364.9	1896.0	2577.3	3397.0	4719.8	6593.6	7661.9
22.5°	851.8	1000.1	1398.9	2144.4	3132.5	4784.0	7166.9	8497.5
25°	781.6	861.7	1088.2	1763.6	2930.1	4954.2	7942.5	9441.5
27.5°	737.5	805.7	954.0	1491.0	2743.8	5186.8	8886.5	10596.0
30°	711.5	775.5	899.8	1350.8	2573.4	5387.1	9698.1	11465.7
32.5°	653.3	701.4	803.7	1270.7	2451.0	5549.5	10413.6	12279.4
35°	583.2	641.3	725.6	1218.6	2447.1	5625.6	11087.1	13179.4
37.5°	557.2	613.3	675.3	1190.4	2471.1	5689.8	11910.6	14199.4
40°	541.0	591.3	641.3	1186.4	2491.2	5739.9	12716.3	15261.7
42.5°	527.0	577.3	635.3	1158.5	2483.2	5808.0	13429.8	16173.5
45°	523.2	573.2	649.4	1116.4	2481.2	5914.3	13997.0	16903.0
47.5°	519.1	595.2	645.3	1070.2	2473.2	6138.7	14636.4	17582.4
50°	515.1	635.3	617.2	1006.1	2412.9	6521.5	15496.1	18360.1
52.5°	513.0	641.3	587.2	917.9	2304.8	7088.6	16754.6	19442.2
55°	505.0	609.3	535.1	801.6	2148.4	7699.9	18103.5	20714.9
57.5°	487.1	543.1	505.0	687.5	1924.0	8126.8	19099.6	21699.0
60°	531.1	466.9	485.1	629.4	1655.4	8203.1	19143.7	21975.5
62.5°	507.1	424.9	465.0	609.3	1467.0	7706.0	18267.8	21644.8
65°	404.9	402.8	446.9	629.4	1438.9	6593.6	16788.9	20664.8
67.5°	368.8	386.8	428.9	653.3	1457.1	5194.8	14612.3	18376.1
70°	344.7	366.8	404.9	675.3	1489.1	4092.5	11764.4	14944.9
72.5°	320.6	338.8	380.8	697.4	1467.0	3228.7	9415.6	11511.9
75°	290.6	306.6	346.7	639.4	1258.6	2373.0	7481.5	8174.9
77.5°	256.6	270.6	304.6	505.0	945.9	1651.4	5603.5	5892.3
80°	220.4	226.5	252.6	368.8	617.2	988.0	4264.9	4699.8
82.5°	174.5	176.3	192.3	270.6	384.8	631.2	2958.1	3377.0
85°	112.3	116.2	124.2	190.4	258.5	404.9	1511.0	1731.7
87.5°	38.1	44.0	44.0	92.2	126.2	224.4	462.9	336.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)