

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: P270531

Luminaire Tested: **NAV-AF-04-D-UNV-SLL-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270531  
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-04-D-UNV-SLL-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 800mA 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: 15125.6 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

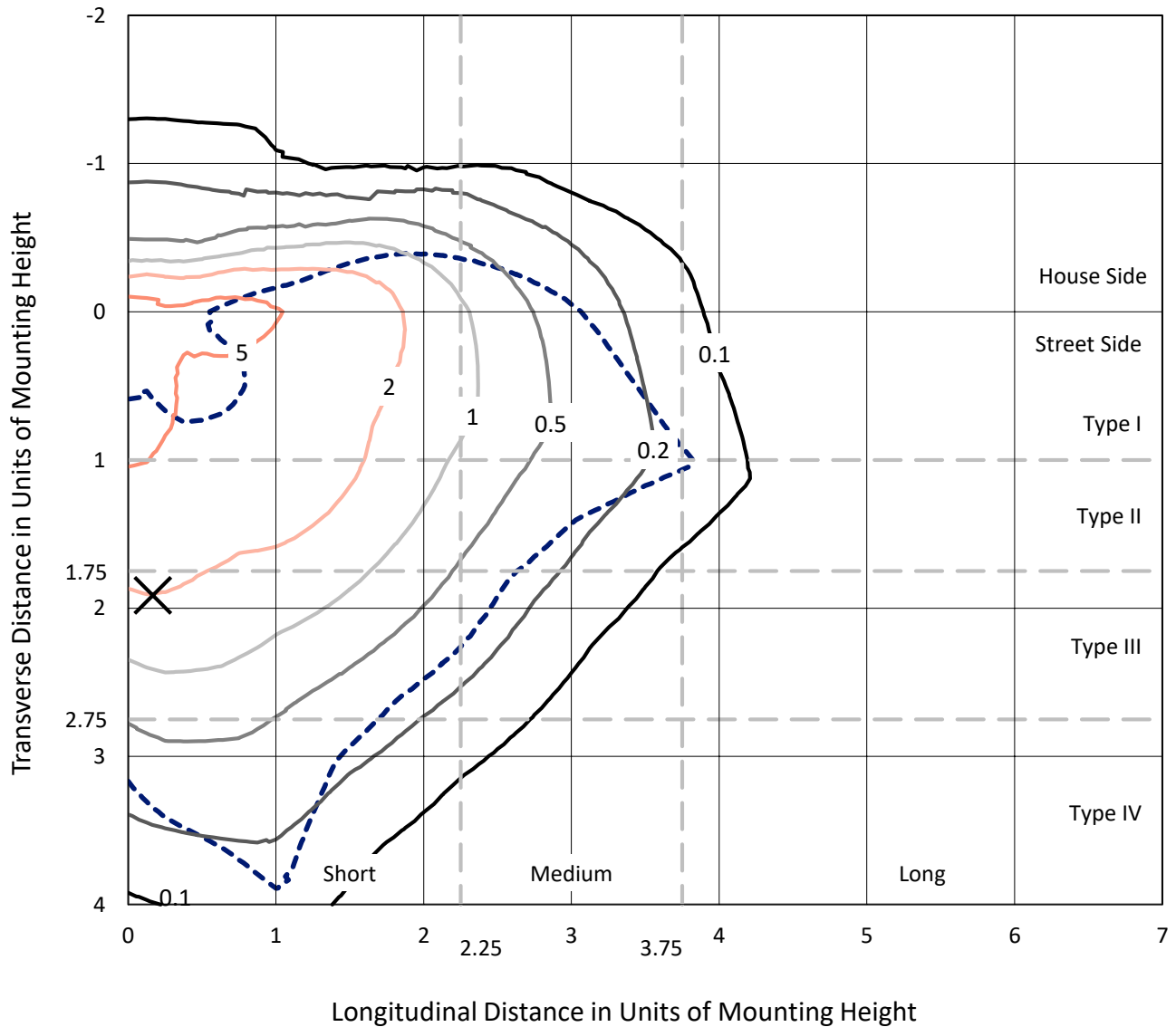
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P270531  
 CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

### Iso-Footcandle Lines of Horizontal Illumination

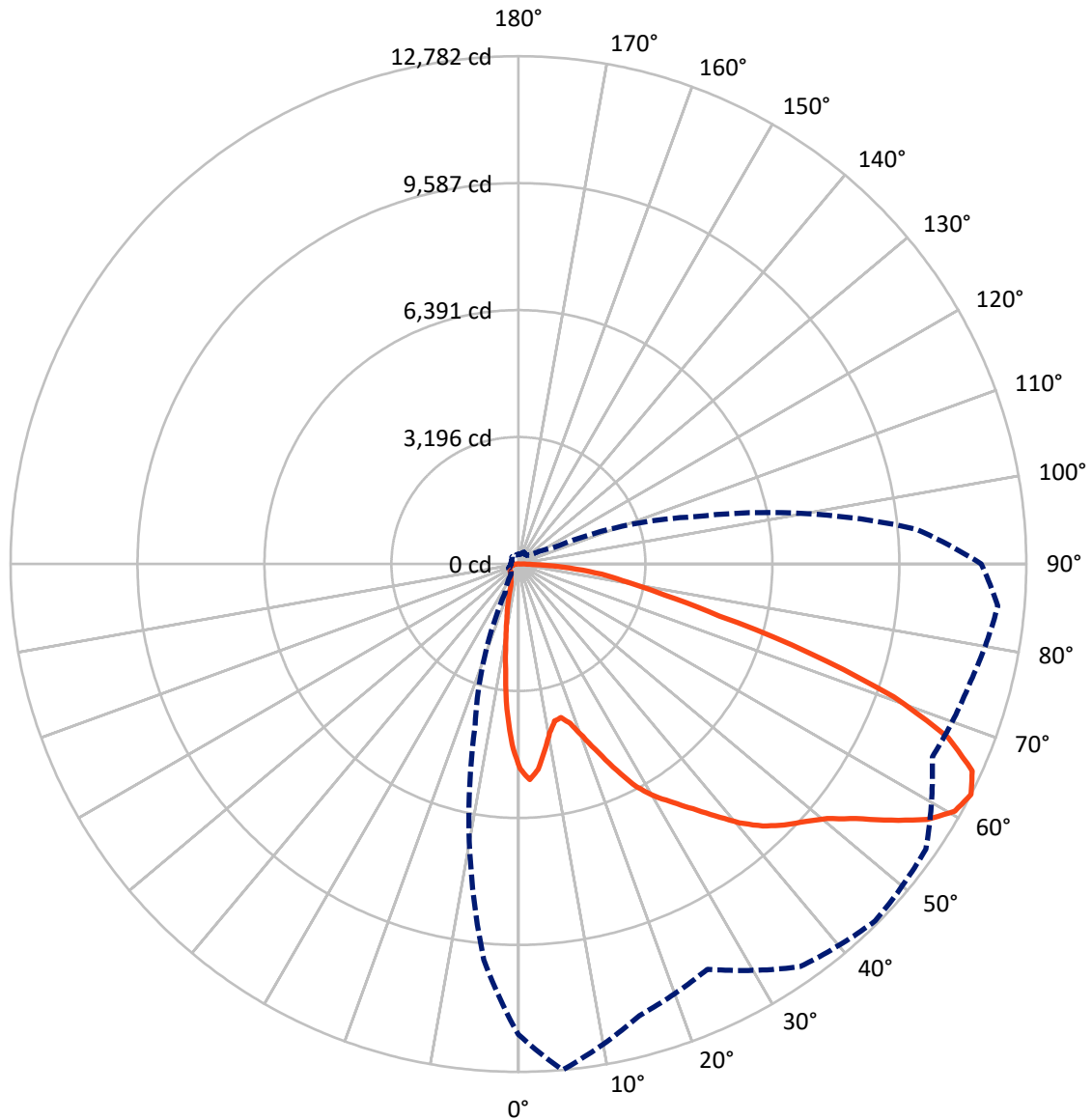
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270531  
CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270531

CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2679.5	0.0	2679.5
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	12446.1	0.0	12446.1
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	15125.6	0.0	15125.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	375.0	2.5
10°-20°	685.0	4.5
20°-30°	985.2	6.5
30°-40°	1508.9	10.0
40°-50°	2206.0	14.6
50°-60°	3209.8	21.2
60°-70°	3718.9	24.6
70°-80°	1938.6	12.8
80°-90°	498.3	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°	15125.6	100.0
0°-180°	15125.6	100.0

**Coefficient of Utilization**



REPORT NUMBER: P270531

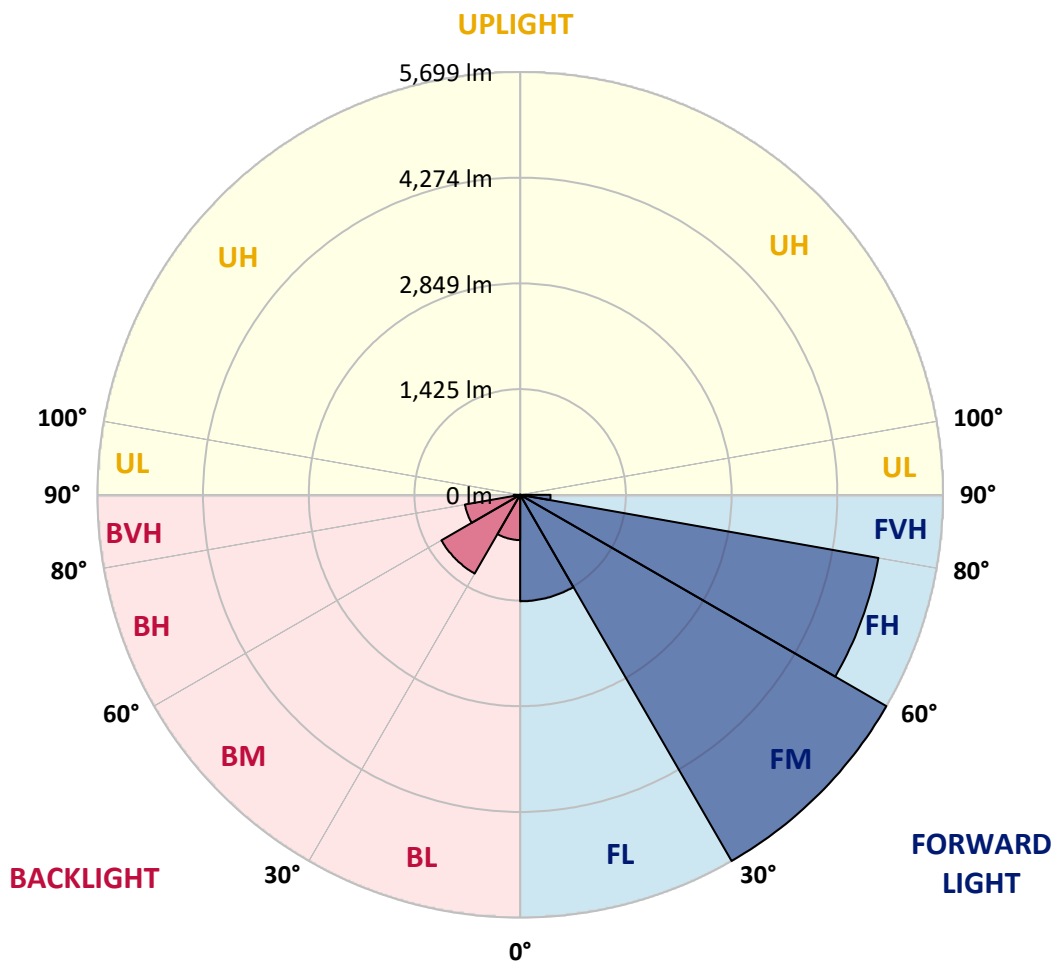
CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1435.5	9.5			
FM (30°-60°)	5698.6	37.7			
FH (60°-80°)	4902.0	32.4			G2/5000
FVH (80°-90°)	410.0	2.7			G3/500
BL (0°-30°)	609.6	4.0	B2/1000		
BM (30°-60°)	1226.0	8.1	B2/2500		
BH (60°-80°)	755.5	5.0	B2/1000		G2/1000
BVH (80°-90°)	88.4	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: P270531

CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6
2.5°	5323.4	5436.3	5565.7	5734.6	5849.8	5895.8	5934.2	5869.4	5807.0	5689.7	5648.0
5°	4972.4	5189.5	5546.0	5884.8	6183.2	6354.3	6406.8	6287.2	6074.6	5767.5	5605.2
7.5°	4451.5	4737.8	5238.8	5737.8	6165.5	6450.6	6471.6	6234.6	5815.7	5312.3	5049.2
10°	3996.3	4319.9	4900.1	5458.2	5911.1	6202.8	6145.8	5813.6	5307.9	4735.4	4438.3
12.5°	3732.0	4055.6	4646.7	5213.7	5640.3	5750.9	5634.8	5355.2	4875.9	4302.3	4002.8
15°	3676.1	4009.4	4556.7	5034.9	5299.2	5227.9	5112.8	4971.3	4630.3	4160.8	3871.2
17.5°	3844.9	4217.8	4676.2	4938.4	4927.5	4756.3	4659.8	4687.3	4629.1	4314.4	4011.7
20°	4192.6	4633.5	4980.1	4912.0	4631.3	4391.2	4335.2	4550.2	4818.9	4699.4	4367.0
22.5°	4649.9	5152.1	5394.6	4987.7	4476.7	4217.8	4206.9	4542.5	5164.3	5281.7	4877.0
25°	5166.5	5752.1	5812.5	5121.5	4460.3	4202.5	4192.6	4660.9	5579.9	5858.4	5448.3
27.5°	5798.2	6357.5	6161.1	5300.3	4532.6	4247.5	4254.1	4862.7	6013.2	6428.8	6092.0
30°	6274.1	6787.5	6376.1	5475.8	4648.9	4326.4	4342.9	5081.0	6246.8	6824.8	6606.5
32.5°	6719.4	7154.8	6582.3	5649.0	4818.9	4443.7	4500.8	5352.9	6527.4	7164.6	7092.3
35°	7211.9	7566.1	6811.5	5834.4	5062.3	4649.9	4732.2	5611.7	6806.1	7504.6	7573.7
37.5°	7770.0	8036.5	7060.5	6096.4	5413.2	5031.5	5077.7	5876.1	7000.1	7880.8	8090.2
40°	8351.3	8564.0	7332.4	6446.3	5923.2	5547.0	5569.0	6215.0	7152.6	8270.2	8591.4
42.5°	8850.2	9015.8	7605.5	6880.6	6508.8	6072.4	6091.0	6580.2	7298.5	8605.8	8992.8
45°	9249.5	9371.2	7863.3	7338.0	7134.0	6728.1	6723.9	6952.0	7493.8	8888.6	9301.1
47.5°	9621.2	9686.0	8150.6	7783.2	7782.0	7572.6	7415.8	7390.5	7753.6	9126.6	9569.7
50°	10046.7	10070.9	8530.0	8232.8	8574.0	8540.9	8251.6	7947.7	8090.2	9394.3	9851.5
52.5°	10638.9	10640.1	9000.5	8671.5	9448.0	9552.1	9215.4	8578.3	8588.2	9915.1	10338.5
55°	11335.4	11383.6	9613.5	9196.8	10362.6	10540.3	10223.3	9327.3	9303.1	10755.1	11128.1
57.5°	11873.8	12129.4	10327.5	9853.8	11217.0	11448.3	11192.8	10103.7	10181.6	11621.6	11779.6
60°	12025.3	12622.9	11039.2	10590.7	11939.6	12287.2	12027.3	10942.8	11041.4	12184.3	11967.0
62.5°	11844.2	12782.0	11764.2	11250.9	12368.5	12701.9	12515.4	11492.1	11742.3	12111.8	11650.1
65°	11308.0	12551.6	12393.6	11531.6	12121.6	12240.1	12190.8	11520.8	12122.7	11427.5	10773.8
67.5°	10055.4	11663.2	12112.9	10931.7	10969.1	10841.9	10777.1	10737.7	11695.0	10323.1	9392.0
70°	8178.0	10021.5	10773.8	9148.6	8872.2	8749.4	8536.7	9063.0	10511.7	8795.5	7729.5
72.5°	6299.4	7666.9	8837.0	6935.5	6360.8	6402.5	6161.1	6930.0	8707.7	6799.5	5901.2
75°	4473.4	5227.9	7053.9	4983.3	4222.3	4220.1	4201.5	4987.7	6870.7	4880.2	4317.7
77.5°	3224.2	3763.8	5526.3	3335.0	2996.1	3034.6	2973.1	3389.8	5356.2	3510.4	3199.0
80°	2571.8	2786.7	3571.9	2224.1	2230.6	2320.6	2307.4	2318.3	3523.6	2542.2	2391.8
82.5°	1848.0	2115.5	2730.8	1704.3	1475.0	1570.4	1589.1	1719.6	2486.1	1797.5	1577.1
85°	947.5	1289.6	2512.5	1476.2	922.3	764.4	879.5	1356.6	2159.3	1077.0	768.8
87.5°	184.2	357.5	1841.3	820.3	414.6	209.5	345.5	574.6	1255.7	195.2	95.4
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: P270531  
 CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6
2.5°	5576.7	5436.3	5304.8	5168.7	5063.3	4935.1	4808.9	4699.4	4592.9	4522.7	4544.6
5°	5440.7	5098.5	4791.4	4506.3	4339.6	4138.9	3960.2	3809.9	3693.7	3619.1	3664.0
7.5°	4821.1	4358.2	3953.6	3577.4	3340.4	3080.6	2872.2	2725.3	2635.4	2585.0	2658.4
10°	4187.2	3667.3	3213.2	2821.8	2588.1	2367.8	2179.1	2023.4	1902.8	1845.7	1875.3
12.5°	3733.1	3155.1	2679.3	2416.0	2215.3	2018.0	1822.8	1640.7	1487.1	1416.9	1402.7
15°	3563.1	2879.8	2394.1	2100.1	1900.5	1685.6	1475.0	1279.8	1134.0	1073.7	1060.4
17.5°	3637.6	2820.7	2225.2	1877.5	1588.1	1326.9	1090.2	905.9	798.5	764.4	767.7
20°	3899.8	2842.5	2089.2	1648.3	1290.9	981.6	744.7	617.5	571.4	563.6	572.5
22.5°	4259.6	2932.5	1990.5	1450.9	1028.6	714.0	553.9	493.4	481.4	480.4	489.1
25°	4734.3	3108.0	1924.7	1275.5	812.6	565.9	482.5	448.6	438.7	440.9	449.6
27.5°	5293.7	3330.6	1881.9	1124.0	667.9	504.5	450.7	421.1	411.2	413.5	420.0
30°	5804.8	3525.8	1818.3	1010.1	599.9	482.5	433.3	403.6	390.5	390.5	394.9
32.5°	6262.1	3694.8	1743.7	924.5	537.4	433.3	392.6	369.7	359.7	363.1	365.3
35°	6667.8	3783.7	1685.6	874.1	486.9	399.1	358.7	334.4	321.4	323.5	326.9
37.5°	7067.1	3817.5	1647.2	846.7	450.7	378.4	341.0	321.4	307.1	304.9	303.7
40°	7446.5	3809.9	1611.0	838.9	426.6	363.1	330.0	312.6	298.2	295.1	293.9
42.5°	7774.4	3784.6	1577.1	818.1	410.2	352.0	321.4	306.0	291.7	287.4	285.1
45°	8073.7	3769.3	1539.8	779.8	418.9	347.6	316.9	300.6	287.4	281.9	279.6
47.5°	8406.1	3824.2	1498.1	738.0	416.8	348.7	316.9	298.2	285.1	279.6	277.4
50°	8802.0	4009.4	1446.5	681.0	397.1	372.8	315.8	295.1	283.0	279.6	275.3
52.5°	9361.2	4310.0	1375.2	607.6	381.6	398.0	314.8	289.6	279.6	274.2	268.8
55°	10127.9	4610.6	1283.0	529.7	357.5	380.5	316.9	283.0	271.9	266.4	259.9
57.5°	10756.3	4838.6	1166.9	465.1	335.5	359.7	313.7	275.3	263.3	257.8	252.2
60°	10715.7	4860.5	1056.0	423.3	322.4	323.5	321.4	269.9	255.5	251.2	246.8
62.5°	10052.3	4589.6	953.0	402.5	312.6	295.1	327.9	263.3	247.8	243.5	240.1
65°	8947.8	3959.0	898.1	402.5	303.7	279.6	286.2	254.4	240.1	235.7	233.6
67.5°	7547.4	3181.4	846.7	411.2	291.7	268.8	259.9	245.6	232.5	228.1	226.0
70°	6049.4	2503.8	810.5	406.8	280.7	256.6	245.6	233.6	220.4	219.4	217.1
72.5°	4745.3	2011.3	794.0	406.8	264.3	242.4	231.5	222.6	209.5	208.3	205.1
75°	3802.3	1510.1	726.0	399.1	247.8	223.7	213.8	206.3	193.0	194.2	191.9
77.5°	2944.6	1068.2	606.4	359.7	227.0	202.8	195.2	189.7	174.5	175.4	175.4
80°	2303.1	695.3	470.5	298.2	202.8	178.8	173.3	168.9	152.4	154.7	154.7
82.5°	1578.1	413.5	341.0	240.1	174.5	152.4	151.4	144.7	127.2	128.3	130.6
85°	862.1	271.9	227.0	177.7	137.1	124.0	121.7	118.4	102.0	102.0	103.0
87.5°	159.0	145.9	133.8	117.4	92.2	88.8	85.6	88.8	76.7	74.6	74.6
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: P270531

CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6
2.5°	4493.1	4417.4	4364.9	4318.7	4208.0	4215.7	4230.9	4252.9	4183.9	4220.1	4265.1
5°	3619.1	3556.6	3509.4	3435.8	3281.2	3226.4	3191.4	3176.0	3072.9	3094.8	3143.1
7.5°	2668.2	2667.2	2650.7	2568.4	2381.9	2269.1	2194.5	2171.5	2107.9	2131.9	2205.3
10°	1878.6	1898.4	1890.8	1817.2	1650.5	1569.3	1552.9	1599.0	1600.2	1647.2	1773.3
12.5°	1357.7	1346.6	1336.9	1276.5	1151.4	1138.3	1175.6	1239.2	1254.7	1305.1	1436.7
15°	1013.4	987.0	981.6	934.3	852.1	864.2	891.6	924.5	925.7	960.6	1069.3
17.5°	760.0	760.0	768.8	738.0	678.8	673.4	659.0	650.4	637.2	651.5	710.6
20°	589.9	617.5	639.4	621.8	568.1	541.8	514.4	496.9	486.9	488.0	505.6
22.5°	505.6	527.6	556.1	547.2	502.3	468.2	450.7	438.7	430.9	430.9	440.9
25°	462.7	477.1	503.4	499.0	460.7	433.3	418.9	406.8	398.0	397.1	406.8
27.5°	428.9	437.6	455.1	452.9	413.5	396.0	387.1	379.4	374.0	372.8	382.8
30°	398.0	402.5	411.2	408.0	378.4	360.8	357.5	354.2	351.0	352.0	366.2
32.5°	370.7	374.0	379.4	375.0	346.6	331.1	325.7	321.4	318.0	321.4	337.9
35°	340.0	349.8	356.4	354.2	323.5	304.9	292.8	281.9	277.4	280.7	299.3
37.5°	313.7	330.0	338.9	336.7	304.9	283.0	267.5	265.4	265.4	269.9	288.4
40°	303.7	315.8	323.5	320.2	288.4	266.4	257.8	254.4	255.5	259.9	279.6
42.5°	295.1	306.0	308.2	301.7	269.9	255.5	250.1	245.6	247.8	253.3	273.1
45°	287.4	296.1	295.1	285.1	254.4	244.6	244.6	241.3	242.4	246.8	267.5
47.5°	281.9	286.2	284.0	274.2	243.5	235.7	239.0	239.0	241.3	244.6	265.4
50°	273.1	276.4	274.2	265.4	234.6	228.1	231.5	235.7	238.1	241.3	259.9
52.5°	264.3	266.4	265.4	256.6	226.0	221.5	221.5	226.0	230.2	234.6	251.2
55°	255.5	257.8	258.8	252.2	219.4	215.0	213.8	213.8	218.3	224.8	242.4
57.5°	248.9	248.9	251.2	246.8	212.8	207.2	201.8	202.8	208.3	213.8	231.5
60°	241.3	242.4	245.6	241.3	203.9	195.2	190.8	196.3	198.4	203.9	222.6
62.5°	234.6	234.6	237.0	233.6	196.3	187.6	184.2	189.7	189.7	195.2	213.8
65°	229.2	228.1	228.1	227.0	188.6	179.9	177.7	179.9	181.0	186.5	205.1
67.5°	224.8	219.4	219.4	221.5	181.0	172.1	171.0	171.0	172.1	178.8	195.2
70°	215.0	210.6	209.5	217.1	173.3	162.4	162.4	160.1	162.4	165.6	183.2
72.5°	203.9	200.7	199.7	210.6	165.6	151.4	149.2	148.0	149.2	152.4	168.9
75°	189.7	187.6	189.7	206.3	157.9	139.2	136.1	134.8	134.8	136.1	153.5
77.5°	173.3	171.0	187.6	191.9	153.5	125.0	121.7	119.6	117.4	117.4	137.1
80°	153.5	152.4	181.0	162.4	147.0	109.7	104.3	100.9	98.8	97.6	117.4
82.5°	133.8	131.6	154.7	127.2	121.7	89.9	82.3	75.6	72.4	72.4	89.9
85°	109.7	108.5	121.7	93.2	84.4	65.8	54.8	49.3	44.9	44.9	58.1
87.5°	80.0	77.9	75.6	56.0	42.8	29.6	20.8	19.8	17.5	16.4	24.2
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: P270531

CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-800

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6	5156.6
2.5°	4331.8	4423.0	4595.1	4736.7	4925.1	5076.5	5248.7	5323.4
5°	3231.9	3375.7	3638.9	3863.6	4175.1	4463.5	4792.5	4972.4
7.5°	2318.3	2531.2	2730.8	3011.5	3400.9	3788.0	4213.5	4451.5
10°	1918.2	2113.4	2284.4	2484.1	2784.4	3219.9	3727.6	3996.3
12.5°	1589.1	1799.7	1980.7	2194.5	2446.8	2840.4	3419.5	3732.0
15°	1218.5	1447.6	1664.7	1922.6	2231.7	2681.4	3327.3	3676.1
17.5°	834.5	1080.2	1347.8	1662.6	2035.5	2614.4	3415.0	3844.9
20°	567.0	746.9	1037.5	1410.2	1859.0	2582.6	3608.1	4192.6
22.5°	466.1	547.2	765.4	1173.5	1714.1	2617.8	3921.7	4649.9
25°	427.8	471.6	595.4	965.0	1603.4	2711.1	4346.2	5166.5
27.5°	403.6	440.9	522.0	815.9	1501.3	2838.3	4862.7	5798.2
30°	389.3	424.4	492.5	739.1	1408.2	2947.9	5306.8	6274.1
32.5°	357.5	383.8	439.8	695.3	1341.3	3036.7	5698.4	6719.4
35°	319.2	351.0	397.1	666.8	1339.1	3078.4	6066.9	7211.9
37.5°	304.9	335.5	369.7	651.5	1352.2	3113.4	6517.7	7770.0
40°	296.1	323.5	351.0	649.3	1363.2	3141.0	6958.5	8351.3
42.5°	288.4	315.8	347.6	633.8	1358.7	3178.3	7348.9	8850.2
45°	286.2	313.7	355.3	610.8	1357.7	3236.4	7659.3	9249.5
47.5°	284.0	325.7	353.2	585.6	1353.2	3359.1	8009.1	9621.2
50°	281.9	347.6	337.9	550.5	1320.4	3568.6	8479.6	10046.7
52.5°	280.7	351.0	321.4	502.3	1261.2	3879.1	9168.3	10638.9
55°	276.4	333.5	292.8	438.7	1175.6	4213.5	9906.4	11335.4
57.5°	266.4	297.2	276.4	376.2	1052.9	4447.1	10451.4	11873.8
60°	290.6	255.5	265.4	344.4	905.9	4488.7	10475.6	12025.3
62.5°	277.4	232.5	254.4	333.5	802.7	4216.7	9996.2	11844.2
65°	221.5	220.4	244.6	344.4	787.5	3608.1	9187.0	11308.0
67.5°	201.8	211.7	234.6	357.5	797.2	2842.5	7996.0	10055.4
70°	188.6	200.7	221.5	369.7	814.9	2239.5	6437.6	8178.0
72.5°	175.4	185.3	208.3	381.6	802.7	1766.7	5152.1	6299.4
75°	159.0	167.9	189.7	349.8	688.7	1298.5	4093.9	4473.4
77.5°	140.3	148.0	166.6	276.4	517.7	903.7	3066.4	3224.2
80°	120.6	124.0	138.2	201.8	337.9	540.7	2333.7	2571.8
82.5°	95.4	96.5	105.3	148.0	210.6	345.5	1618.7	1848.0
85°	61.4	63.6	68.0	104.3	141.5	221.5	826.9	947.5
87.5°	20.8	24.2	24.2	50.5	69.1	122.8	253.3	184.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)