

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: P270451

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270451
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-03-D-UNV-SLL-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 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: 11230.1 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

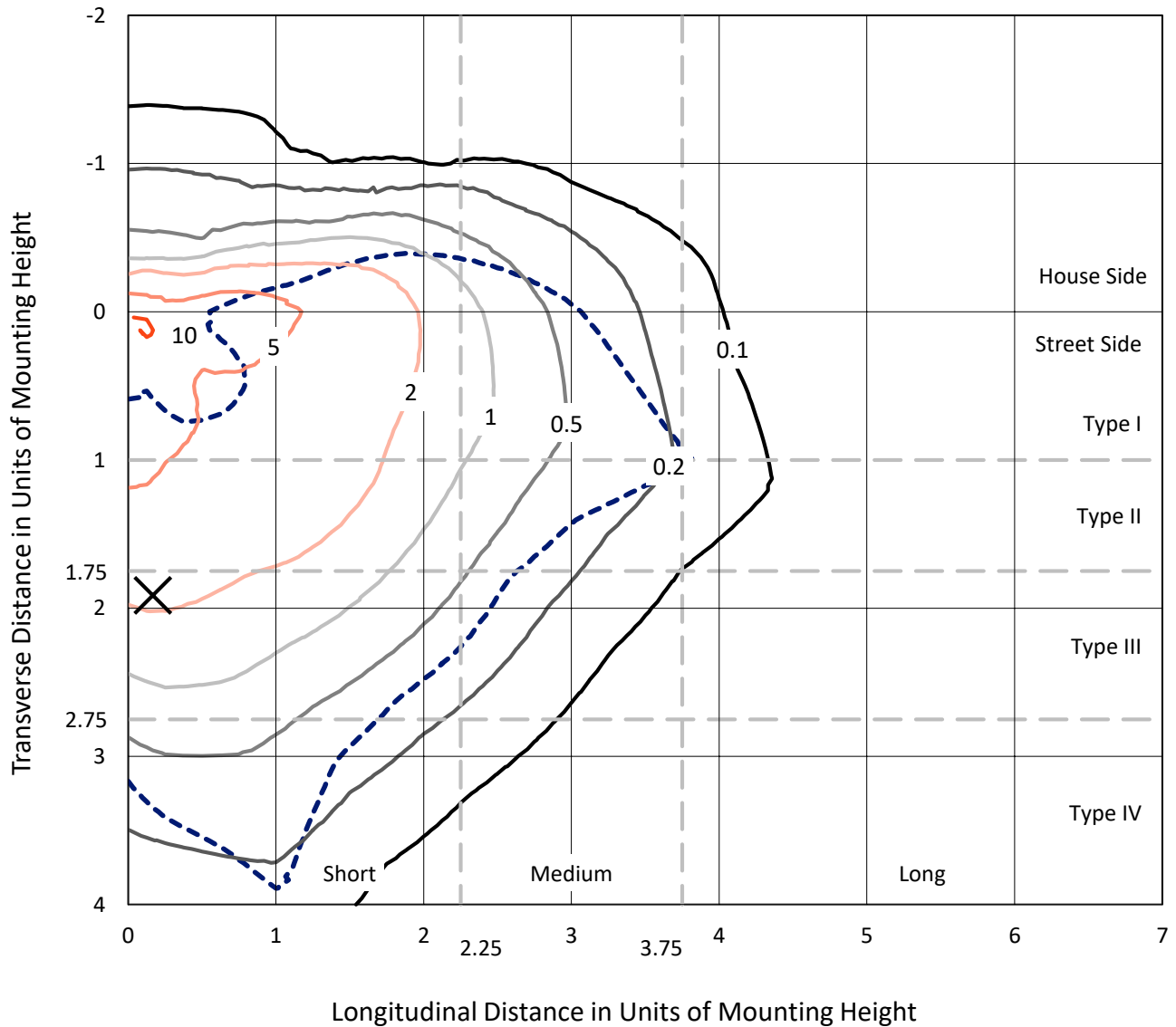
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270451
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

Iso-Footcandle Lines of Horizontal Illumination

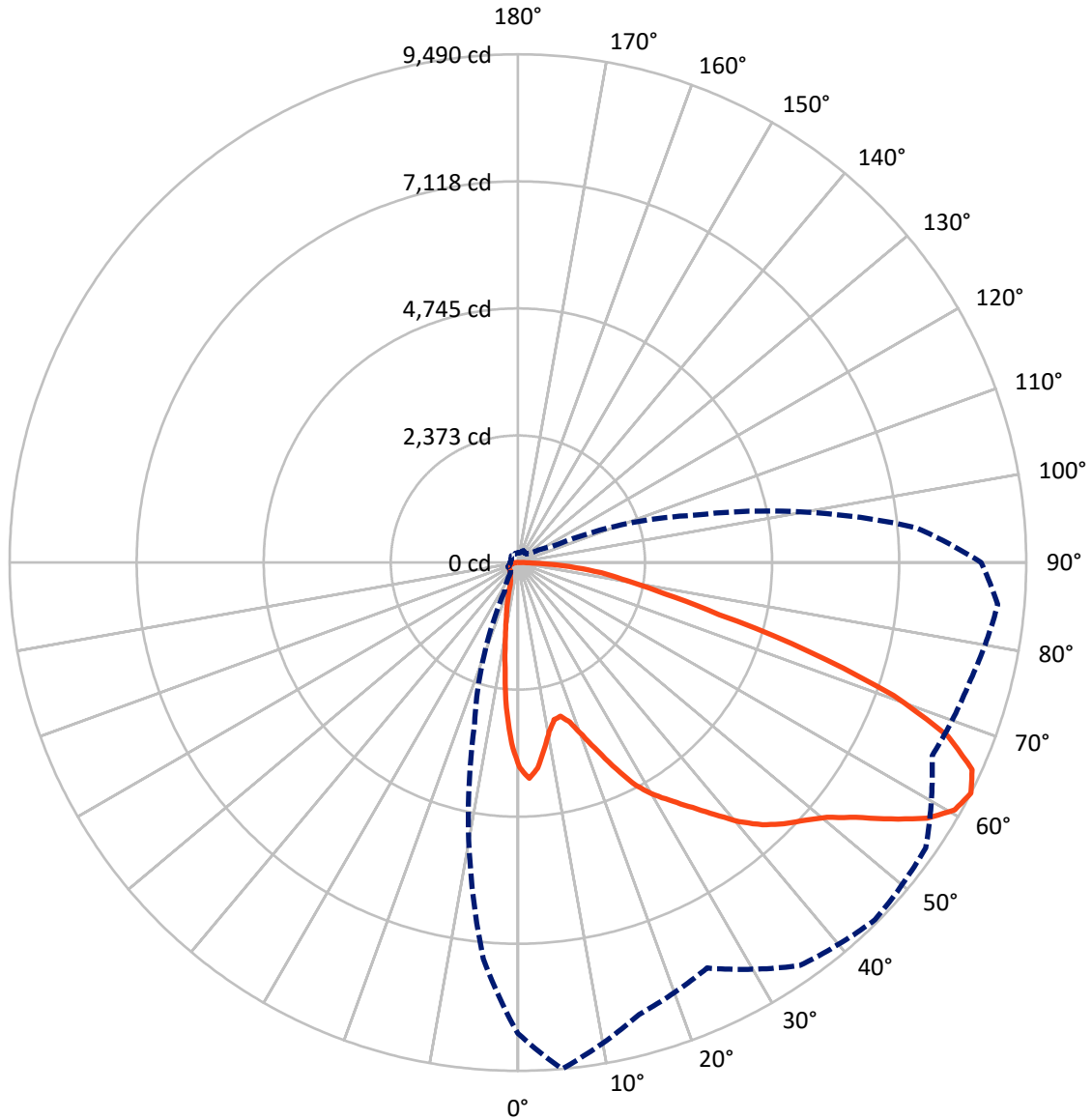
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270451
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270451

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1989.4	0.0	1989.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	9240.7	0.0	9240.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	11230.1	0.0	11230.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.4	2.5
10°-20°	508.6	4.5
20°-30°	731.4	6.5
30°-40°	1120.3	10.0
40°-50°	1637.9	14.6
50°-60°	2383.1	21.2
60°-70°	2761.1	24.6
70°-80°	1439.3	12.8
80°-90°	370.0	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°	11230.1	100.0
0°-180°	11230.1	100.0

Coefficient of Utilization



REPORT NUMBER: P270451

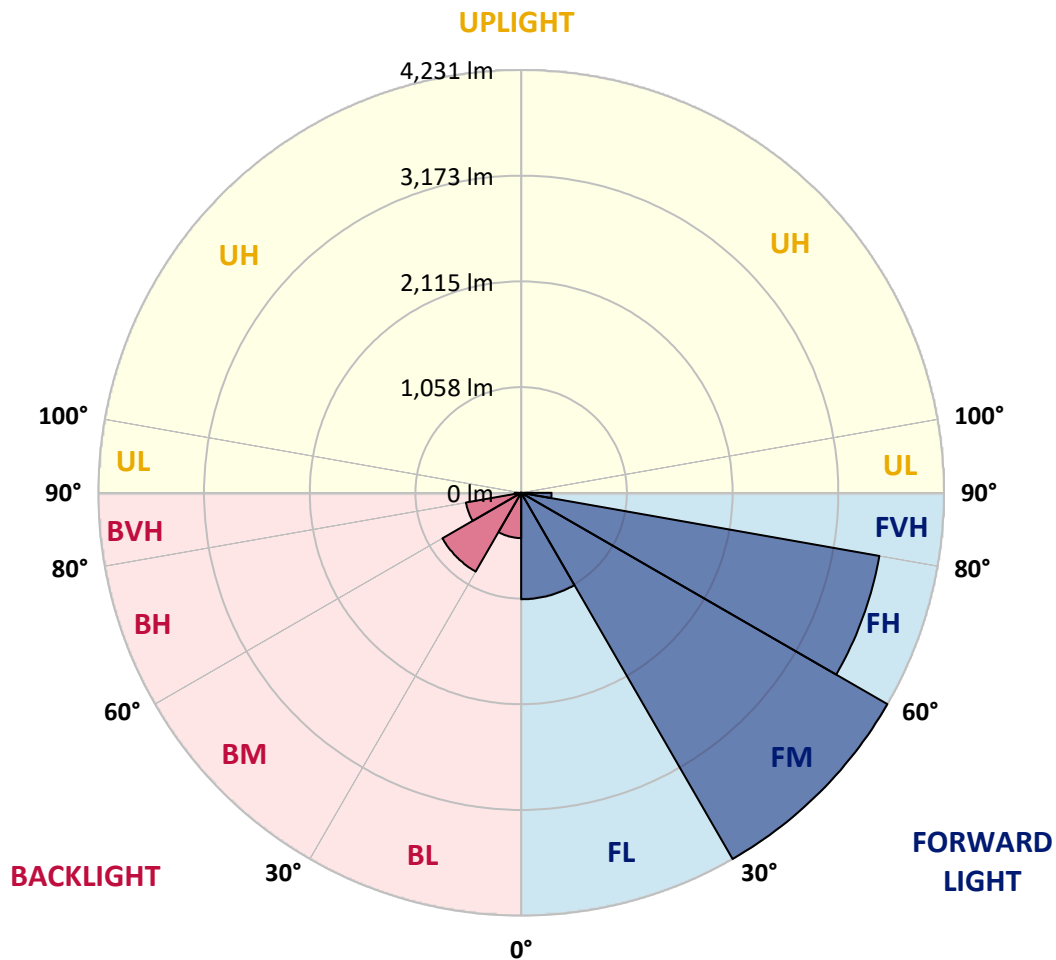
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1065.8	9.5			
FM	(30°-60°)	4231.0	37.7			
FH	(60°-80°)	3639.5	32.4			G2/5000
FVH	(80°-90°)	304.4	2.7			G3/500
BL	(0°-30°)	452.6	4.0	B1/500		
BM	(30°-60°)	910.2	8.1	B1/1000		
BH	(60°-80°)	561.0	5.0	B2/1000		G2/1000
BVH	(80°-90°)	65.6	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: P270451
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3952.4	4036.3	4132.3	4257.6	4343.1	4377.4	4405.8	4357.8	4311.4	4224.3	4193.4
5°	3691.8	3853.0	4117.7	4369.3	4590.7	4717.7	4756.9	4668.0	4510.1	4282.1	4161.6
7.5°	3305.0	3517.6	3889.7	4260.1	4577.7	4789.4	4804.9	4629.0	4318.0	3944.2	3748.7
10°	2967.1	3207.3	3638.0	4052.4	4388.8	4605.3	4563.0	4316.3	3941.0	3515.8	3295.3
12.5°	2770.8	3011.1	3449.9	3870.8	4187.7	4270.0	4183.5	3976.0	3620.1	3194.3	2972.0
15°	2729.3	2976.9	3383.1	3738.1	3934.4	3881.4	3796.0	3691.0	3437.8	3089.2	2874.2
17.5°	2854.8	3131.6	3471.9	3666.5	3658.3	3531.3	3459.7	3480.0	3436.9	3203.3	2978.5
20°	3112.8	3440.1	3697.5	3646.9	3438.5	3260.2	3218.6	3378.3	3577.8	3489.0	3242.3
22.5°	3452.4	3825.3	4005.3	3703.2	3323.8	3131.6	3123.4	3372.5	3834.2	3921.5	3621.0
25°	3835.9	4270.7	4315.5	3802.5	3311.5	3120.2	3112.8	3460.5	4142.9	4349.8	4045.2
27.5°	4304.9	4720.1	4574.3	3935.3	3365.3	3153.6	3158.4	3610.4	4464.4	4773.1	4523.1
30°	4658.3	5039.3	4734.0	4065.5	3451.6	3212.2	3224.3	3772.4	4637.9	5067.0	4904.9
32.5°	4988.8	5312.0	4887.0	4194.1	3577.8	3299.4	3341.7	3974.3	4846.4	5319.5	5265.8
35°	5354.4	5617.5	5057.3	4331.7	3758.6	3452.4	3513.5	4166.5	5053.1	5571.8	5623.2
37.5°	5768.9	5966.8	5242.1	4526.4	4019.0	3735.7	3769.9	4362.7	5197.4	5851.1	6006.6
40°	6200.5	6358.5	5444.0	4786.1	4397.7	4118.4	4134.7	4614.4	5310.5	6140.3	6378.8
42.5°	6570.9	6693.9	5646.7	5108.5	4832.5	4508.5	4522.2	4885.4	5418.8	6389.4	6676.8
45°	6867.4	6957.7	5838.2	5448.1	5296.6	4995.4	4992.2	5161.5	5563.7	6599.5	6905.6
47.5°	7143.3	7191.4	6051.4	5778.6	5777.9	5622.3	5505.9	5487.1	5756.7	6776.2	7105.1
50°	7459.3	7477.2	6333.2	6112.4	6365.7	6341.3	6126.4	5900.8	6006.6	6974.8	7314.3
52.5°	7898.9	7899.8	6682.5	6438.2	7014.8	7092.1	6842.1	6369.1	6376.3	7361.6	7675.8
55°	8416.0	8451.9	7137.7	6828.2	7693.8	7825.7	7590.4	6925.2	6907.2	7985.3	8262.2
57.5°	8815.7	9005.5	7667.8	7315.9	8328.0	8499.9	8310.2	7501.7	7559.4	8628.5	8745.8
60°	8928.2	9371.9	8196.1	7863.1	8864.7	9122.7	8929.8	8124.5	8197.8	9046.2	8885.0
62.5°	8793.8	9490.1	8734.4	8353.2	9183.1	9430.5	9292.2	8532.5	8718.1	8992.6	8649.7
65°	8395.6	9318.9	9201.8	8561.7	8999.8	9087.8	9051.1	8553.7	9000.7	8484.4	7999.0
67.5°	7465.9	8659.5	8993.3	8116.4	8144.0	8049.6	8001.6	7972.3	8683.0	7664.5	6973.2
70°	6071.9	7440.5	7999.0	6792.4	6587.2	6496.1	6338.1	6728.9	7804.6	6530.1	5738.8
72.5°	4677.0	5692.4	6561.2	5149.3	4722.6	4753.6	4574.3	5145.2	6465.1	5048.4	4381.5
75°	3321.4	3881.4	5237.2	3699.8	3134.8	3133.2	3119.4	3703.2	5101.3	3623.4	3205.7
77.5°	2393.9	2794.4	4103.0	2476.1	2224.6	2252.9	2207.4	2516.8	3976.7	2606.4	2375.2
80°	1909.3	2068.9	2651.9	1651.3	1656.1	1722.9	1713.2	1721.3	2616.1	1887.3	1775.9
82.5°	1372.0	1570.6	2027.5	1265.4	1095.2	1166.0	1179.8	1276.8	1845.8	1334.5	1170.9
85°	703.6	957.6	1865.4	1095.9	684.8	567.5	653.0	1007.2	1603.2	799.6	570.9
87.5°	136.8	265.4	1367.1	609.1	307.8	155.5	256.5	426.6	932.4	144.9	70.8
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: P270451

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	4140.4	4036.3	3938.4	3837.5	3759.3	3664.0	3570.5	3489.0	3410.1	3358.0	3374.3
5°	4039.5	3785.4	3557.4	3345.6	3222.0	3072.9	2940.2	2828.7	2742.3	2687.0	2720.3
7.5°	3579.3	3235.9	2935.3	2656.1	2480.2	2287.3	2132.4	2023.4	1956.6	1919.1	1973.8
10°	3108.8	2722.9	2385.7	2095.0	1921.7	1758.0	1617.8	1502.2	1412.8	1370.4	1392.4
12.5°	2771.7	2342.6	1989.1	1793.7	1644.7	1498.3	1353.2	1218.1	1104.0	1052.0	1041.5
15°	2645.5	2138.1	1777.4	1559.3	1411.1	1251.5	1095.2	950.1	841.9	797.2	787.4
17.5°	2700.8	2094.2	1652.2	1394.0	1179.0	985.3	809.4	672.7	592.8	567.5	570.0
20°	2895.4	2110.5	1551.2	1223.9	958.3	728.7	552.8	458.5	424.2	418.5	425.1
22.5°	3162.6	2177.3	1477.8	1077.2	763.7	530.1	411.2	366.4	357.4	356.6	363.2
25°	3515.1	2307.6	1429.1	947.0	603.3	420.1	358.2	333.0	325.6	327.3	333.8
27.5°	3930.4	2472.9	1397.3	834.5	495.9	374.6	334.7	312.7	305.3	307.0	311.8
30°	4309.8	2617.8	1350.1	749.9	445.4	358.2	321.7	299.7	289.9	289.9	293.1
32.5°	4649.3	2743.2	1294.6	686.5	398.9	321.7	291.5	274.4	267.1	269.5	271.2
35°	4950.6	2809.1	1251.5	648.9	361.5	296.4	266.3	248.3	238.6	240.1	242.6
37.5°	5247.0	2834.4	1223.0	628.6	334.7	280.9	253.2	238.6	228.0	226.4	225.6
40°	5528.7	2828.7	1196.2	622.9	316.7	269.5	245.1	232.0	221.5	219.0	218.2
42.5°	5772.1	2810.0	1170.9	607.4	304.5	261.3	238.6	227.2	216.6	213.3	211.7
45°	5994.5	2798.6	1143.3	578.9	311.1	258.2	235.4	223.0	213.3	209.2	207.6
47.5°	6241.2	2839.3	1112.2	548.0	309.5	258.9	235.4	221.5	211.7	207.6	206.0
50°	6535.1	2976.9	1074.0	505.7	294.7	276.9	234.5	219.0	210.1	207.6	204.4
52.5°	6950.4	3200.0	1021.1	451.0	283.3	295.5	233.6	215.0	207.6	203.6	199.6
55°	7519.5	3423.1	952.7	393.3	265.4	282.5	235.4	210.1	201.8	197.8	193.0
57.5°	7986.1	3592.4	866.3	345.3	249.2	267.1	232.9	204.4	195.4	191.3	187.2
60°	7956.0	3608.8	784.1	314.2	239.4	240.1	238.6	200.3	189.7	186.5	183.3
62.5°	7463.4	3407.6	707.5	298.9	232.0	219.0	243.5	195.4	184.1	180.7	178.4
65°	6643.4	2939.4	666.8	298.9	225.6	207.6	212.4	189.0	178.4	175.1	173.5
67.5°	5603.5	2362.2	628.6	305.3	216.6	199.6	193.0	182.4	172.7	169.4	167.8
70°	4491.3	1859.0	601.8	302.1	208.4	190.5	182.4	173.5	163.8	162.9	161.2
72.5°	3523.2	1493.3	589.5	302.1	196.2	179.9	171.8	165.3	155.5	154.7	152.3
75°	2823.0	1121.3	539.1	296.4	184.1	166.0	158.8	153.2	143.3	144.1	142.6
77.5°	2186.3	793.1	450.3	267.1	168.5	150.6	144.9	140.9	129.4	130.3	130.3
80°	1710.0	516.3	349.4	221.5	150.6	132.7	128.6	125.5	113.1	114.9	114.9
82.5°	1171.7	307.0	253.2	178.4	129.4	113.1	112.4	107.4	94.4	95.3	96.8
85°	640.0	201.8	168.5	132.0	101.8	91.9	90.4	87.9	75.7	75.7	76.5
87.5°	118.0	108.2	99.4	87.1	68.5	65.9	63.5	65.9	57.0	55.3	55.3
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: P270451

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3335.9	3279.8	3240.6	3206.5	3124.2	3130.0	3141.4	3157.6	3106.2	3133.2	3166.5
5°	2687.0	2640.6	2605.5	2551.0	2436.3	2395.5	2369.5	2358.1	2281.5	2297.8	2333.5
7.5°	1981.0	1980.3	1968.0	1906.9	1768.6	1684.7	1629.3	1612.2	1564.9	1583.0	1637.4
10°	1394.8	1409.4	1403.7	1349.3	1225.5	1165.2	1153.0	1187.2	1188.0	1223.0	1316.6
12.5°	1008.1	1000.0	992.5	947.8	854.9	845.1	872.9	920.1	931.5	968.9	1066.6
15°	752.4	732.7	728.7	693.8	632.6	641.6	662.1	686.5	687.3	713.3	793.9
17.5°	564.2	564.2	570.9	548.0	503.9	499.9	489.3	482.8	473.0	483.6	527.7
20°	438.1	458.5	474.8	461.6	421.8	402.3	381.9	368.8	361.5	362.3	375.3
22.5°	375.3	391.7	412.9	406.4	372.9	347.6	334.7	325.6	319.9	319.9	327.3
25°	343.6	354.2	373.8	370.6	342.0	321.7	311.1	302.1	295.5	294.7	302.1
27.5°	318.4	324.8	337.9	336.2	307.0	293.9	287.5	281.7	277.7	276.9	284.1
30°	295.5	298.9	305.3	302.9	280.9	267.9	265.4	263.1	260.6	261.3	271.9
32.5°	275.2	277.7	281.7	278.5	257.4	245.9	241.9	238.6	236.2	238.6	250.7
35°	252.5	259.7	264.6	263.1	240.1	226.4	217.4	209.2	206.0	208.4	222.3
37.5°	232.9	245.1	251.5	250.0	226.4	210.1	198.6	197.1	197.1	200.3	214.2
40°	225.6	234.5	240.1	237.7	214.2	197.8	191.3	189.0	189.7	193.0	207.6
42.5°	219.0	227.2	228.8	223.9	200.3	189.7	185.7	182.4	184.1	188.0	202.7
45°	213.3	219.8	219.0	211.7	189.0	181.5	181.5	179.1	179.9	183.3	198.6
47.5°	209.2	212.4	210.9	203.6	180.7	175.1	177.5	177.5	179.1	181.5	197.1
50°	202.7	205.3	203.6	197.1	174.2	169.4	171.8	175.1	176.6	179.1	193.0
52.5°	196.2	197.8	197.1	190.5	167.8	164.5	164.5	167.8	170.9	174.2	186.5
55°	189.7	191.3	192.1	187.2	162.9	159.5	158.8	158.8	162.1	166.9	179.9
57.5°	184.8	184.8	186.5	183.3	157.9	153.9	149.7	150.6	154.7	158.8	171.8
60°	179.1	179.9	182.4	179.1	151.5	144.9	141.8	145.7	147.4	151.5	165.3
62.5°	174.2	174.2	175.9	173.5	145.7	139.2	136.8	140.9	140.9	144.9	158.8
65°	170.1	169.4	169.4	168.5	140.0	133.6	132.0	133.6	134.3	138.3	152.3
67.5°	166.9	162.9	162.9	164.5	134.3	127.7	127.0	127.0	127.7	132.7	144.9
70°	159.5	156.3	155.5	161.2	128.6	120.6	120.6	118.8	120.6	123.0	136.0
72.5°	151.5	148.9	148.2	156.3	123.0	112.4	110.8	110.0	110.8	113.1	125.5
75°	140.9	139.2	140.9	153.2	117.3	103.5	101.0	100.2	100.2	101.0	113.9
77.5°	128.6	127.0	139.2	142.6	113.9	92.9	90.4	88.8	87.1	87.1	101.8
80°	113.9	113.1	134.3	120.6	109.1	81.4	77.3	74.9	73.3	72.5	87.1
82.5°	99.4	97.7	114.9	94.4	90.4	66.7	61.1	56.1	53.8	53.8	66.7
85°	81.4	80.6	90.4	69.2	62.7	48.9	40.8	36.7	33.3	33.3	43.2
87.5°	59.5	57.9	56.1	41.5	31.8	22.0	15.5	14.6	13.0	12.1	18.0
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: P270451

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-7027-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5	3828.5
2.5°	3216.2	3283.8	3411.7	3516.8	3656.8	3769.1	3896.9	3952.4
5°	2399.6	2506.2	2701.7	2868.6	3099.8	3313.9	3558.2	3691.8
7.5°	1721.3	1879.3	2027.5	2235.9	2525.0	2812.5	3128.3	3305.0
10°	1424.2	1569.1	1696.1	1844.3	2067.4	2390.6	2767.6	2967.1
12.5°	1179.8	1336.1	1470.5	1629.3	1816.6	2109.0	2538.8	2770.8
15°	904.7	1074.8	1236.0	1427.3	1657.0	1990.9	2470.3	2729.3
17.5°	619.7	802.0	1000.7	1234.5	1511.2	1941.1	2535.6	2854.8
20°	420.9	554.6	770.2	1047.2	1380.2	1917.5	2678.8	3112.8
22.5°	346.0	406.4	568.4	871.3	1272.7	1943.7	2911.8	3452.4
25°	317.6	350.1	442.1	716.6	1190.4	2012.8	3226.8	3835.9
27.5°	299.7	327.3	387.6	605.7	1114.6	2107.2	3610.4	4304.9
30°	289.1	315.1	365.6	548.9	1045.4	2188.7	3940.1	4658.3
32.5°	265.4	285.0	326.5	516.3	995.9	2254.7	4230.7	4988.8
35°	237.0	260.6	294.7	495.1	994.2	2285.6	4504.5	5354.4
37.5°	226.4	249.2	274.4	483.6	1003.9	2311.7	4839.0	5768.9
40°	219.8	240.1	260.6	482.0	1012.1	2332.0	5166.3	6200.5
42.5°	214.2	234.5	258.2	470.6	1008.8	2359.7	5456.2	6570.9
45°	212.4	232.9	263.8	453.6	1008.1	2402.8	5686.7	6867.4
47.5°	210.9	241.9	262.1	434.8	1004.8	2494.1	5946.4	7143.3
50°	209.2	258.2	250.7	408.8	980.3	2649.6	6295.7	7459.3
52.5°	208.4	260.6	238.6	372.9	936.4	2880.0	6807.0	7898.9
55°	205.3	247.6	217.4	325.6	872.9	3128.3	7355.1	8416.0
57.5°	197.8	220.7	205.3	279.4	781.6	3301.8	7759.6	8815.7
60°	215.8	189.7	197.1	255.7	672.7	3332.7	7777.6	8928.2
62.5°	206.0	172.7	189.0	247.6	596.0	3130.8	7421.8	8793.8
65°	164.5	163.8	181.5	255.7	584.6	2678.8	6820.9	8395.6
67.5°	149.7	157.2	174.2	265.4	592.0	2110.5	5936.7	7465.9
70°	140.0	148.9	164.5	274.4	605.0	1662.8	4779.6	6071.9
72.5°	130.3	137.6	154.7	283.3	596.0	1311.7	3825.3	4677.0
75°	118.0	124.5	140.9	259.7	511.3	964.2	3039.5	3321.4
77.5°	104.3	110.0	123.7	205.3	384.4	670.9	2276.7	2393.9
80°	89.7	91.9	102.5	149.7	250.7	401.5	1732.7	1909.3
82.5°	70.8	71.7	78.2	110.0	156.3	256.5	1201.8	1372.0
85°	45.6	47.3	50.5	77.3	105.0	164.5	613.9	703.6
87.5°	15.5	18.0	18.0	37.5	51.4	91.2	188.0	136.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)