

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: P196692

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196692
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 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: 24860.9 lumens
Efficiency: N/A
Efficacy: 99.8 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): 249
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

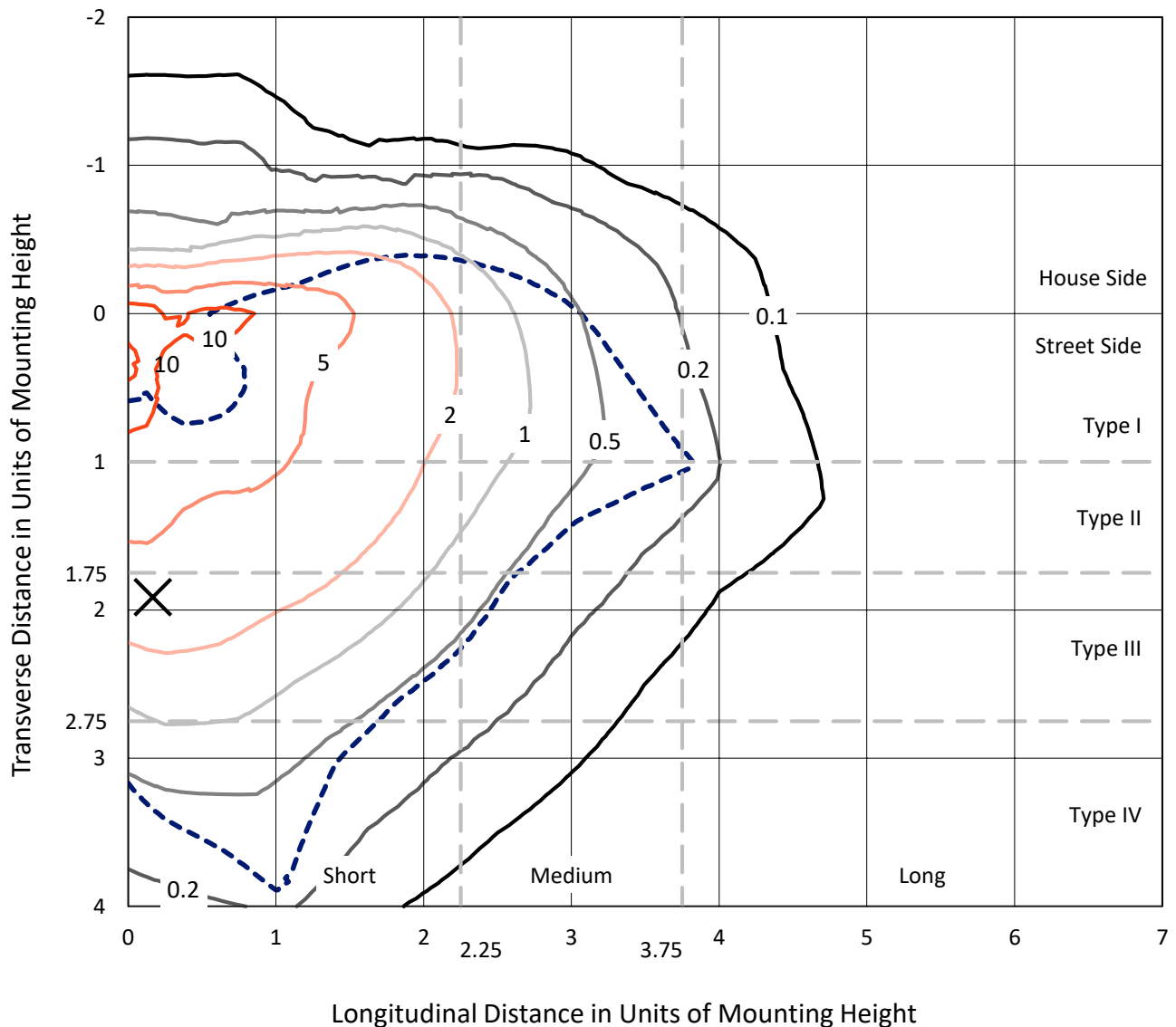


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Iso-Footcandle Lines of Horizontal Illumination

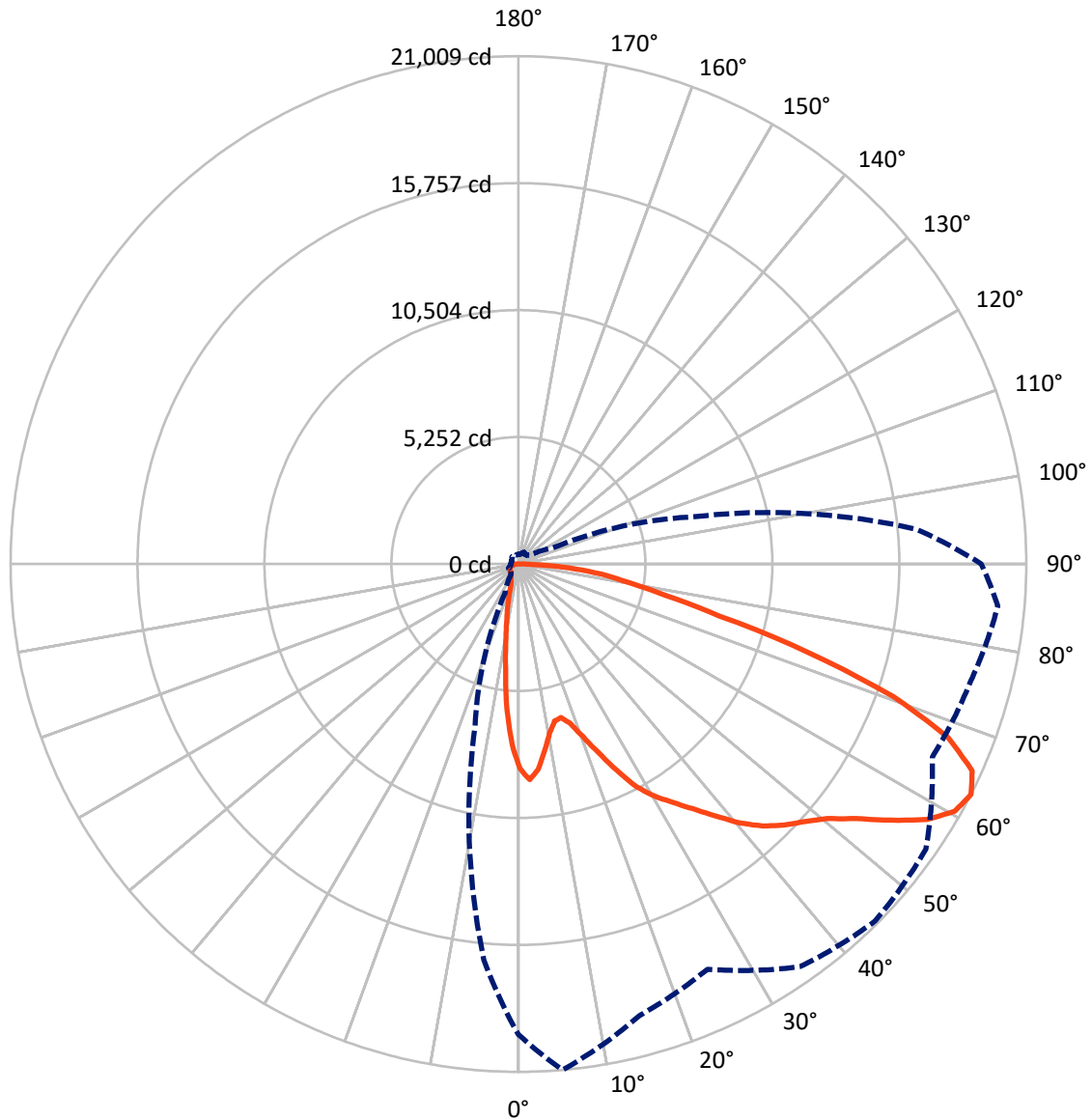
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4404.1	0.0	4404.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	20456.7	0.0	20456.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	24860.9	0.0	24860.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	616.4	2.5
10°-20°	1125.8	4.5
20°-30°	1619.2	6.5
30°-40°	2480.0	10.0
40°-50°	3625.8	14.6
50°-60°	5275.6	21.2
60°-70°	6112.5	24.6
70°-80°	3186.4	12.8
80°-90°	819.1	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°	24860.9	100.0
0°-180°	24860.9	100.0



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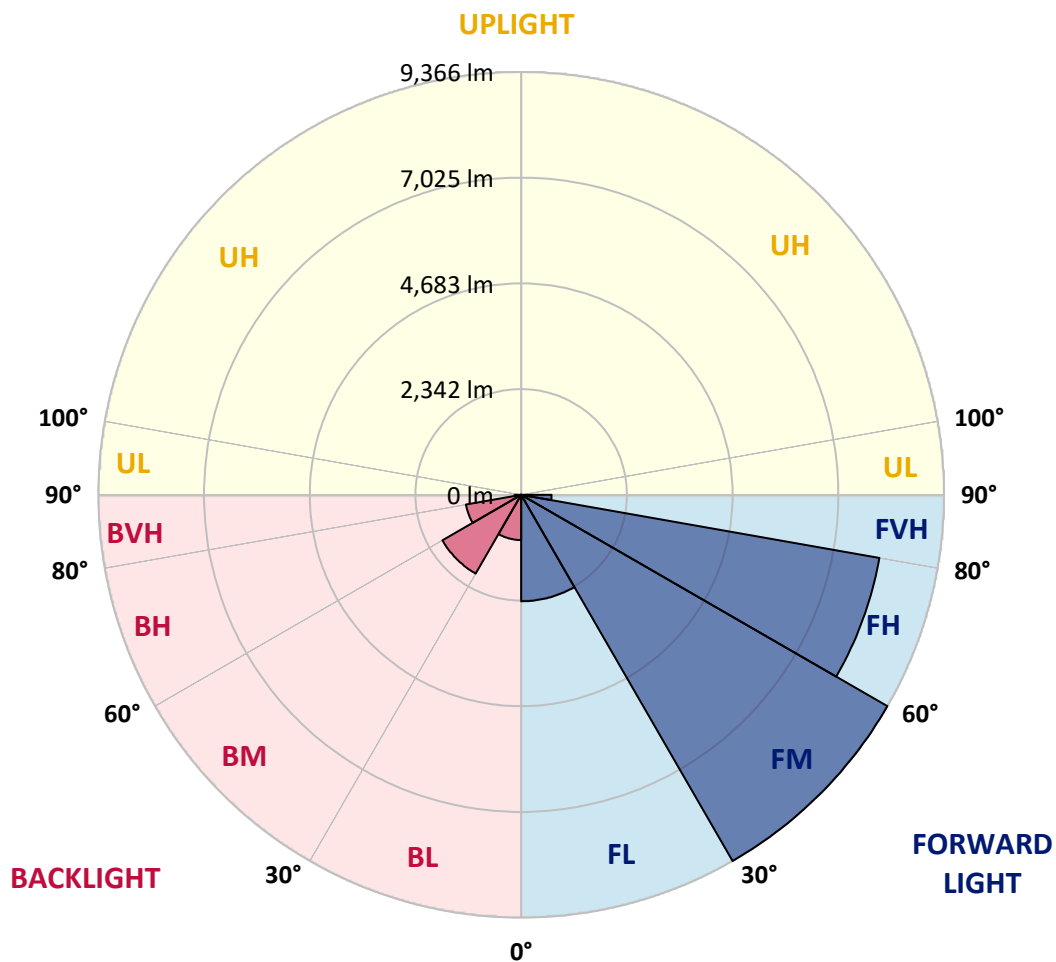
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2359.4	9.5			
FM	(30°-60°)	9366.4	37.7			
FH	(60°-80°)	8057.1	32.4			G4/12000
FVH	(80°-90°)	673.8	2.7			G4/750
BL	(0°-30°)	1002.0	4.0	B3/2500		
BM	(30°-60°)	2015.1	8.1	B2/2500		
BH	(60°-80°)	1241.8	5.0	B3/2500		G3/2500
BVH	(80°-90°)	145.2	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6
2.5°	8749.6	8935.2	9147.9	9425.5	9614.9	9690.4	9753.6	9647.3	9544.5	9351.6	9283.1
5°	8172.7	8529.7	9115.5	9672.4	10162.8	10444.0	10530.4	10334.0	9984.3	9479.6	9212.8
7.5°	7316.5	7787.0	8610.7	9430.9	10133.9	10602.5	10636.8	10247.4	9558.9	8731.6	8298.9
10°	6568.4	7100.2	8053.7	8971.3	9715.7	10195.2	10101.4	9555.3	8724.4	7783.4	7294.9
12.5°	6134.1	6665.8	7637.3	8569.3	9270.4	9452.6	9261.5	8801.8	8014.0	7071.4	6579.3
15°	6042.1	6590.1	7489.6	8275.6	8709.9	8592.7	8403.4	8171.0	7610.4	6838.9	6362.9
17.5°	6319.7	6932.6	7686.1	8116.9	8098.9	7817.6	7659.0	7704.1	7608.5	7091.3	6593.7
20°	6891.1	7615.7	8185.3	8073.6	7612.1	7217.3	7125.5	7478.8	7920.4	7723.9	7177.7
22.5°	7642.8	8468.3	8866.7	8197.9	7357.9	6932.6	6914.6	7466.1	8488.2	8681.0	8016.0
25°	8491.7	9454.3	9553.5	8417.9	7331.0	6907.4	6891.1	7660.8	9171.3	9629.2	8955.0
27.5°	9530.0	10449.3	10126.7	8711.7	7450.0	6981.2	6992.0	7992.5	9883.4	10566.5	10013.2
30°	10312.3	11155.9	10480.0	9000.1	7640.9	7111.0	7138.1	8351.2	10267.3	11217.2	10858.5
32.5°	11044.2	11759.8	10818.9	9284.9	7920.4	7303.9	7397.6	8798.2	10728.7	11776.0	11657.1
35°	11853.5	12435.8	11195.6	9589.5	8320.5	7642.8	7777.9	9223.6	11186.6	12334.9	12448.4
37.5°	12771.0	13209.0	11604.8	10020.3	8897.3	8270.1	8345.8	9658.1	11505.6	12953.1	13297.4
40°	13726.4	14076.1	12051.9	10595.3	9735.5	9117.2	9153.3	10214.9	11756.2	13593.0	14121.1
42.5°	14546.6	14818.8	12500.7	11309.2	10698.1	9980.8	10011.3	10815.2	11995.9	14144.6	14780.8
45°	15202.7	15402.8	12924.3	12060.8	11725.6	11058.5	11051.3	11426.4	12316.8	14609.6	15287.3
47.5°	15813.7	15920.0	13396.5	12792.6	12790.9	12446.6	12188.9	12147.3	12744.0	15000.7	15729.0
50°	16513.1	16552.8	14020.1	13531.6	14092.3	14038.1	13562.4	13063.0	13297.4	15440.6	16192.2
52.5°	17486.5	17488.2	14793.4	14252.8	15528.9	15700.1	15146.7	14099.5	14115.7	16296.8	16992.5
55°	18631.1	18710.4	15801.1	15116.1	17032.2	17324.2	16803.3	15330.6	15291.0	17677.5	18290.4
57.5°	19516.1	19936.1	16974.5	16195.8	18436.4	18816.7	18396.7	16606.9	16734.8	19101.6	19361.1
60°	19764.9	20747.2	18144.3	17407.1	19624.3	20195.7	19768.5	17985.8	18148.0	20026.2	19669.4
62.5°	19467.5	21008.7	19335.8	18492.3	20329.1	20877.0	20570.7	18888.8	19299.9	19907.2	19148.4
65°	18586.0	20630.2	20370.6	18953.8	19923.5	20118.2	20037.0	18935.7	19925.3	18782.5	17708.2
67.5°	16527.5	19170.1	19909.1	17967.8	18029.1	17819.9	17713.5	17648.7	19222.3	16967.3	15437.0
70°	13441.6	16471.6	17708.2	15036.8	14582.7	14380.7	14031.0	14896.2	17277.3	14456.4	12704.3
72.5°	10353.9	12601.6	14524.9	11399.2	10454.8	10523.2	10126.7	11390.3	14312.2	11175.8	9699.5
75°	7352.6	8592.7	11593.9	8190.7	6939.8	6936.3	6905.5	8197.9	11292.9	8021.3	7096.6
77.5°	5299.5	6186.4	9083.0	5481.5	4924.6	4987.6	4886.7	5571.6	8803.7	5770.0	5258.0
80°	4226.9	4580.2	5870.9	3655.6	3666.4	3814.1	3792.5	3810.5	5791.7	4178.3	3931.3
82.5°	3037.3	3477.0	4488.4	2801.2	2424.5	2581.2	2611.9	2826.4	4086.4	2954.4	2592.0
85°	1557.4	2119.7	4129.7	2426.2	1516.0	1256.4	1445.6	2229.8	3549.2	1770.1	1263.6
87.5°	302.8	587.6	3026.5	1348.3	681.3	344.2	567.8	944.5	2063.9	320.9	156.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6
2.5°	9166.0	8935.2	8718.9	8495.4	8322.4	8111.4	7904.2	7723.9	7549.0	7433.7	7469.7
5°	8942.5	8380.0	7875.3	7406.6	7132.7	6802.8	6509.0	6262.0	6071.0	5948.4	6022.3
7.5°	7924.0	7163.2	6498.2	5879.9	5490.5	5063.3	4720.9	4479.3	4331.5	4248.5	4369.4
10°	6882.1	6027.8	5281.5	4637.9	4254.0	3891.7	3581.6	3325.8	3127.4	3033.7	3082.3
12.5°	6135.9	5185.9	4403.5	3971.0	3641.2	3316.7	2995.8	2696.6	2444.2	2328.9	2305.5
15°	5856.6	4733.4	3935.0	3451.8	3123.8	2770.5	2424.5	2103.6	1863.9	1764.6	1743.0
17.5°	5979.0	4636.1	3657.4	3085.9	2610.1	2181.1	1791.8	1488.8	1312.2	1256.4	1261.7
20°	6409.8	4672.2	3433.8	2709.2	2121.6	1613.3	1223.9	1014.8	939.1	926.5	940.9
22.5°	7001.2	4820.0	3271.7	2384.8	1690.8	1173.5	910.2	811.1	791.4	789.5	803.9
25°	7781.6	5108.4	3163.5	2096.3	1335.7	930.2	793.1	737.3	721.0	724.6	739.0
27.5°	8700.9	5474.3	3093.1	1847.6	1097.7	829.2	740.9	692.1	676.0	679.6	690.4
30°	9540.8	5795.2	2988.6	1660.2	985.9	793.1	712.1	663.3	641.7	641.7	648.9
32.5°	10292.6	6072.7	2866.1	1519.6	883.3	712.1	645.2	607.5	591.2	596.7	600.3
35°	10959.5	6218.8	2770.5	1436.6	800.4	656.1	589.5	549.8	528.2	531.8	537.1
37.5°	11615.6	6274.6	2707.5	1391.5	740.9	621.9	560.6	528.2	504.7	501.1	499.4
40°	12239.2	6262.0	2647.9	1379.0	701.2	596.7	542.6	513.7	490.2	484.9	483.0
42.5°	12778.2	6220.5	2592.0	1344.7	674.1	578.6	528.2	502.9	479.4	472.2	468.6
45°	13270.3	6195.3	2530.8	1281.6	688.6	571.4	520.9	493.9	472.2	463.3	459.7
47.5°	13816.5	6285.4	2462.2	1213.1	684.9	573.2	520.9	490.2	468.6	459.7	456.0
50°	14467.2	6590.1	2377.6	1119.4	652.5	612.8	519.1	484.9	465.0	459.7	452.5
52.5°	15386.6	7084.1	2260.3	998.6	627.2	654.4	517.4	475.9	459.7	450.5	441.6
55°	16646.5	7577.9	2108.9	870.6	587.6	625.5	520.9	465.0	447.0	438.0	427.2
57.5°	17679.4	7952.9	1917.9	764.3	551.5	591.2	515.4	452.5	432.5	423.6	414.6
60°	17612.7	7988.8	1735.8	695.8	529.9	531.8	528.2	443.4	420.0	412.8	405.6
62.5°	16522.0	7543.7	1566.4	661.6	513.7	484.9	538.9	432.5	407.4	400.2	394.8
65°	14707.0	6507.2	1476.3	661.6	499.4	459.7	470.5	418.3	394.8	387.6	383.9
67.5°	12405.1	5229.1	1391.5	676.0	479.4	441.6	427.2	403.8	382.2	375.0	371.4
70°	9942.8	4115.2	1332.1	668.7	461.4	421.7	403.8	383.9	362.3	360.5	356.9
72.5°	7799.6	3305.8	1305.0	668.7	434.5	398.4	380.3	365.9	344.2	342.5	337.1
75°	6249.4	2482.2	1193.3	656.1	407.4	367.7	351.5	338.9	317.3	319.0	315.4
77.5°	4839.8	1755.7	996.8	591.2	373.1	333.5	320.9	311.8	286.6	288.5	288.5
80°	3785.3	1142.9	773.3	490.2	333.5	293.8	284.8	277.6	250.5	254.1	254.1
82.5°	2593.9	679.6	560.6	394.8	286.6	250.5	248.8	237.9	209.1	210.9	214.4
85°	1416.8	447.0	373.1	292.0	225.3	203.7	200.1	194.7	167.6	167.6	169.5
87.5°	261.3	239.8	219.9	192.9	151.5	146.0	140.6	146.0	126.2	122.6	122.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6
2.5°	7385.1	7260.6	7174.1	7098.5	6916.3	6929.0	6954.3	6990.3	6876.7	6936.3	7010.1
5°	5948.4	5845.7	5768.2	5647.4	5393.2	5303.1	5245.4	5220.2	5050.7	5086.8	5166.1
7.5°	4385.5	4383.8	4356.7	4221.6	3915.1	3729.4	3606.8	3569.1	3464.5	3504.2	3624.9
10°	3087.7	3120.2	3107.6	2986.8	2712.8	2579.4	2552.4	2628.1	2629.9	2707.5	2914.7
12.5°	2231.5	2213.5	2197.3	2098.3	1892.7	1871.1	1932.4	2036.9	2062.2	2145.0	2361.3
15°	1665.5	1622.3	1613.3	1535.7	1400.6	1420.4	1465.5	1519.6	1521.3	1579.1	1757.4
17.5°	1249.2	1249.2	1263.6	1213.1	1115.7	1106.8	1083.3	1068.9	1047.2	1070.7	1168.1
20°	969.7	1014.8	1050.8	1022.0	933.7	890.5	845.3	816.6	800.4	802.2	831.0
22.5°	831.0	867.0	913.9	899.4	825.6	769.7	740.9	721.0	708.4	708.4	724.6
25°	760.7	784.2	827.4	820.2	757.0	712.1	688.6	668.7	654.4	652.5	668.7
27.5°	704.8	719.3	748.1	744.5	679.6	650.7	636.3	623.7	614.7	612.8	629.2
30°	654.4	661.6	676.0	670.6	621.9	593.1	587.6	582.3	576.8	578.6	602.0
32.5°	609.2	614.7	623.7	616.4	569.6	544.3	535.4	528.2	522.7	528.2	555.1
35°	558.8	575.0	585.8	582.3	531.8	501.1	481.3	463.3	456.0	461.4	492.1
37.5°	515.4	542.6	557.0	553.4	501.1	465.0	439.8	436.2	436.2	443.4	474.0
40°	499.4	519.1	531.8	526.3	474.0	438.0	423.6	418.3	420.0	427.2	459.7
42.5°	484.9	502.9	506.5	495.7	443.4	420.0	411.1	403.8	407.4	416.4	448.8
45°	472.2	486.6	484.9	468.6	418.3	402.0	402.0	396.6	398.4	405.6	439.8
47.5°	463.3	470.5	466.9	450.5	400.2	387.6	393.0	393.0	396.6	402.0	436.2
50°	448.8	454.2	450.5	436.2	385.8	375.0	380.3	387.6	391.1	396.6	427.2
52.5°	434.5	438.0	436.2	421.7	371.4	364.2	364.2	371.4	378.6	385.8	412.8
55°	420.0	423.6	425.3	414.6	360.5	353.4	351.5	351.5	358.7	369.6	398.4
57.5°	409.1	409.1	412.8	405.6	349.7	340.7	331.7	333.5	342.5	351.5	380.3
60°	396.6	398.4	403.8	396.6	335.3	320.9	313.7	322.7	326.2	335.3	365.9
62.5°	385.8	385.8	389.4	383.9	322.7	308.2	302.8	311.8	311.8	320.9	351.5
65°	376.7	375.0	375.0	373.1	310.1	295.6	292.0	295.6	297.4	306.5	337.1
67.5°	369.6	360.5	360.5	364.2	297.4	283.0	281.3	281.3	283.0	293.8	320.9
70°	353.4	346.2	344.2	356.9	284.8	266.8	266.8	263.2	266.8	272.2	301.0
72.5°	335.3	329.9	328.1	346.2	272.2	248.8	245.2	243.3	245.2	250.5	277.6
75°	311.8	308.2	311.8	338.9	259.6	228.9	223.6	221.7	221.7	223.6	252.4
77.5°	284.8	281.3	308.2	315.4	252.4	205.5	200.1	196.4	192.9	192.9	225.3
80°	252.4	250.5	297.4	266.8	241.6	180.3	171.2	165.8	162.2	160.4	192.9
82.5°	219.9	216.4	254.1	209.1	200.1	147.8	135.2	124.3	119.0	119.0	147.8
85°	180.3	178.4	200.1	153.2	138.8	108.1	90.1	81.1	73.9	73.9	95.5
87.5°	131.5	128.0	124.3	91.9	70.3	48.6	34.2	32.4	28.9	27.0	39.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-7030-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6	8475.6
2.5°	7120.1	7269.7	7552.6	7785.2	8095.2	8344.0	8627.0	8749.6
5°	5312.0	5548.1	5980.9	6350.3	6862.2	7336.3	7877.1	8172.7
7.5°	3810.5	4160.3	4488.4	4949.8	5589.7	6226.0	6925.4	7316.5
10°	3152.6	3473.5	3754.7	4082.8	4576.7	5292.3	6126.8	6568.4
12.5°	2611.9	2957.9	3255.4	3606.8	4021.5	4668.5	5620.3	6134.1
15°	2002.6	2379.3	2736.3	3159.9	3668.2	4407.2	5468.9	6042.1
17.5°	1371.8	1775.5	2215.3	2732.7	3345.5	4297.2	5613.0	6319.7
20°	931.9	1227.5	1705.2	2318.1	3055.3	4244.9	5930.4	6891.1
22.5°	766.1	899.4	1258.2	1928.8	2817.4	4302.6	6445.9	7642.8
25°	703.0	775.0	978.8	1586.2	2635.4	4455.9	7143.5	8491.7
27.5°	663.3	724.6	858.0	1341.0	2467.7	4665.0	7992.5	9530.0
30°	639.9	697.6	809.4	1215.0	2314.4	4845.2	8722.5	10312.3
32.5°	587.6	630.9	722.9	1142.9	2204.6	4991.3	9366.0	11044.2
35°	524.6	576.8	652.5	1096.0	2200.9	5059.7	9971.6	11853.5
37.5°	501.1	551.5	607.5	1070.7	2222.6	5117.3	10712.6	12771.0
40°	486.6	531.8	576.8	1067.1	2240.6	5162.5	11437.1	13726.4
42.5°	474.0	519.1	571.4	1041.9	2233.4	5223.8	12078.8	14546.6
45°	470.5	515.4	584.0	1004.0	2231.5	5319.3	12589.0	15202.7
47.5°	466.9	535.4	580.3	962.6	2224.3	5521.2	13164.0	15813.7
50°	463.3	571.4	555.1	904.8	2170.2	5865.5	13937.2	16513.1
52.5°	461.4	576.8	528.2	825.6	2072.9	6375.6	15069.2	17486.5
55°	454.2	547.9	481.3	721.0	1932.4	6925.4	16282.4	18631.1
57.5°	438.0	488.5	454.2	618.3	1730.4	7309.3	17178.3	19516.1
60°	477.7	420.0	436.2	566.0	1488.8	7377.8	17217.9	19764.9
62.5°	456.0	382.2	418.3	547.9	1319.5	6930.8	16430.2	19467.5
65°	364.2	362.3	402.0	566.0	1294.1	5930.4	15099.9	18586.0
67.5°	331.7	347.9	385.8	587.6	1310.4	4672.2	13142.4	16527.5
70°	310.1	329.9	364.2	607.5	1339.3	3680.8	10580.8	13441.6
72.5°	288.5	304.7	342.5	627.2	1319.5	2903.9	8468.3	10353.9
75°	261.3	275.8	311.8	575.0	1132.0	2134.2	6728.8	7352.6
77.5°	230.7	243.3	274.0	454.2	850.8	1485.3	5039.9	5299.5
80°	198.3	203.7	227.2	331.7	555.1	888.6	3835.8	4226.9
82.5°	156.8	158.7	173.0	243.3	346.2	567.8	2660.6	3037.3
85°	100.9	104.6	111.8	171.2	232.5	364.2	1359.0	1557.4
87.5°	34.2	39.7	39.7	82.9	113.5	201.9	416.4	302.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)