

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: P197172

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197172
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 20975 lumens
Efficiency: N/A
Efficacy: 84.2 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

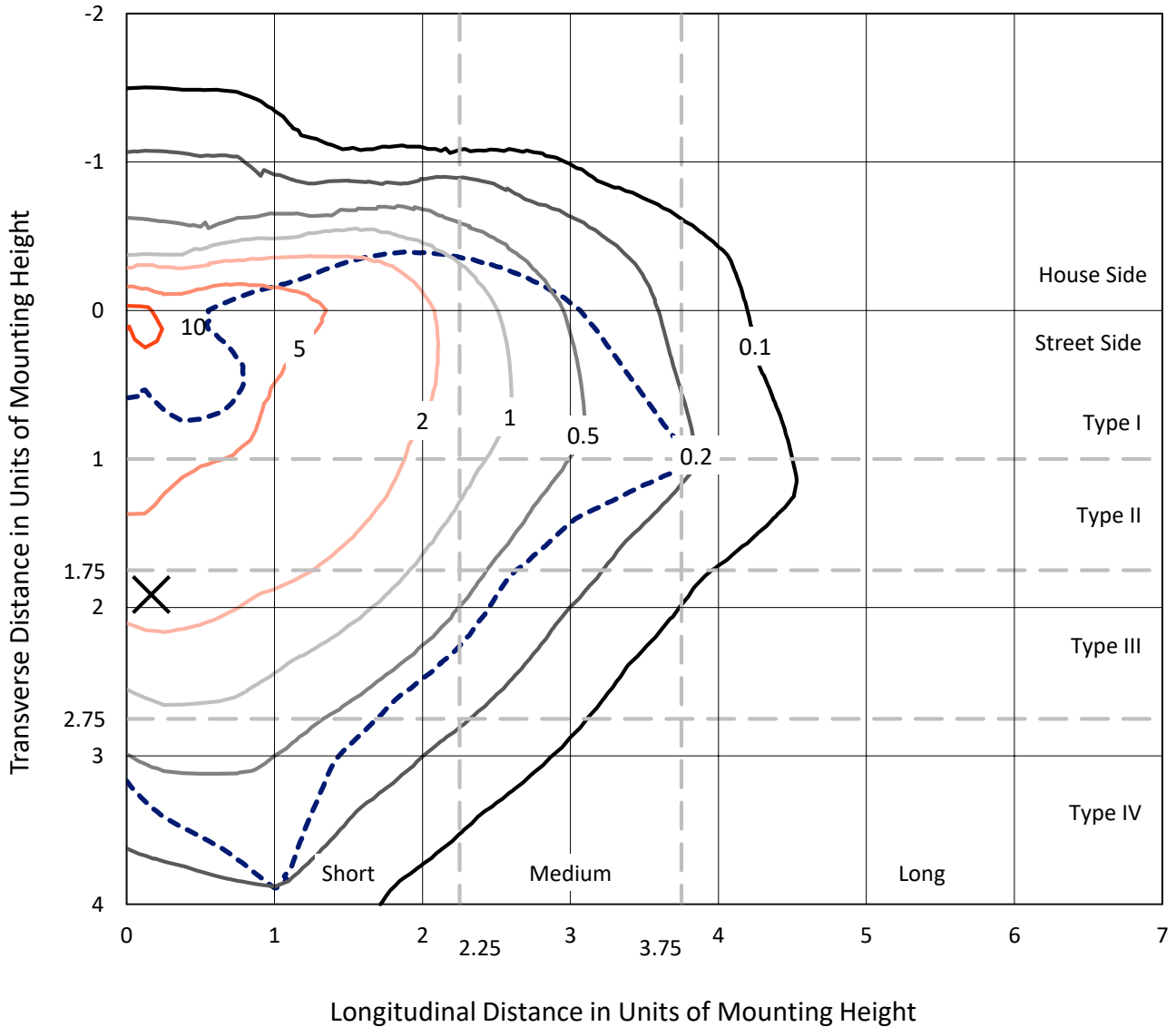
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

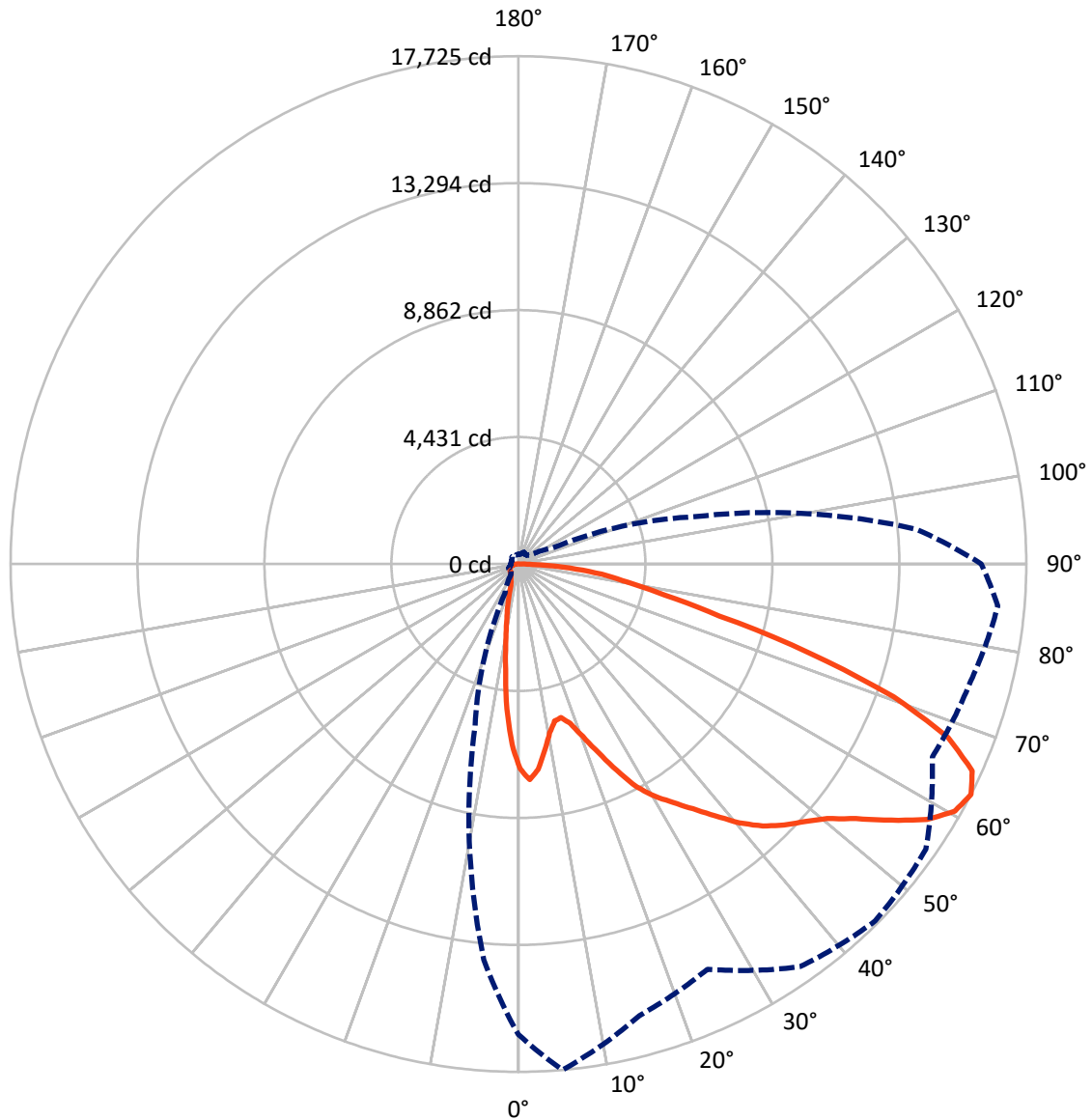
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.1 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	3715.7	0.0	3715.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17259.2	0.0	17259.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	20975.0	0.0	20975.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	520.0	2.5
10°-20°	949.8	4.5
20°-30°	1366.1	6.5
30°-40°	2092.4	10.0
40°-50°	3059.1	14.6
50°-60°	4451.0	21.2
60°-70°	5157.1	24.6
70°-80°	2688.3	12.8
80°-90°	691.0	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°	20975.0	100.0
0°-180°	20975.0	100.0

Coefficient of Utilization



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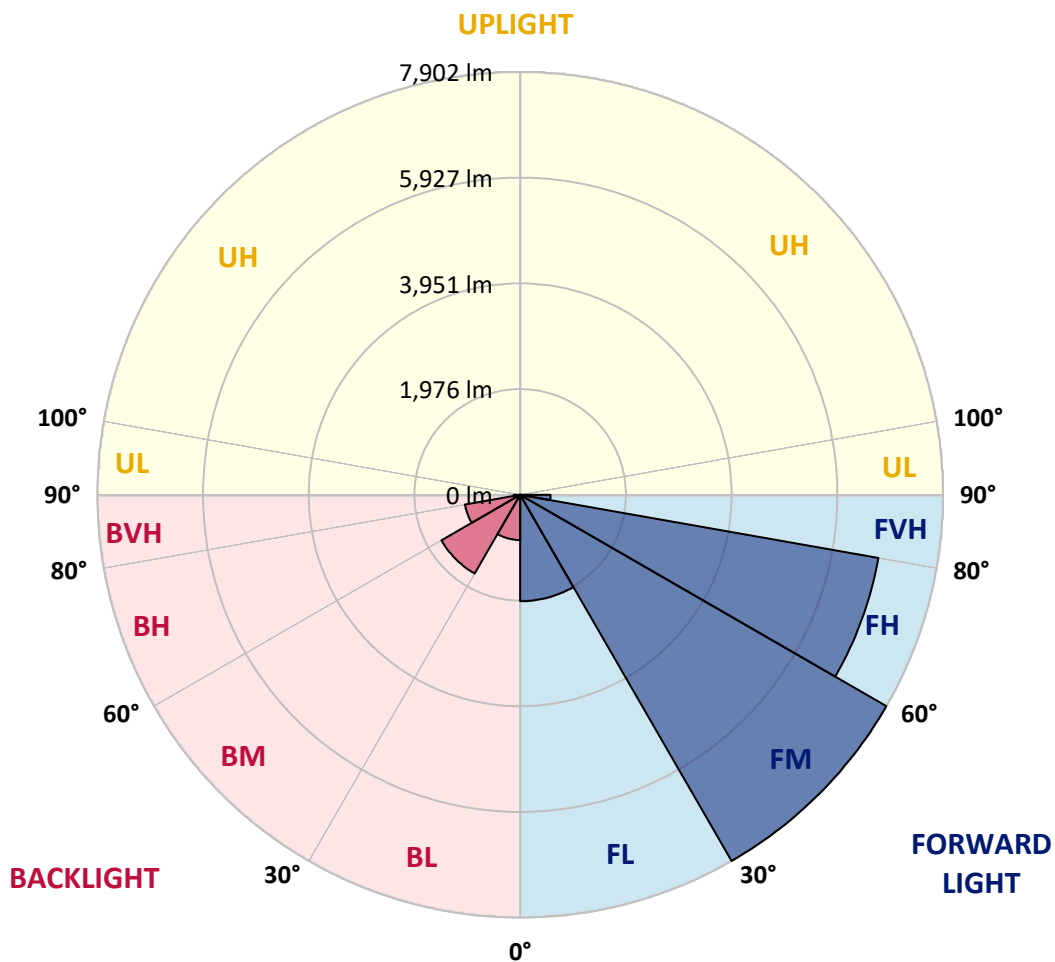
CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1990.6	9.5			
FM	(30°-60°)	7902.4	37.7			
FH	(60°-80°)	6797.7	32.4			G3/7500
FVH	(80°-90°)	568.5	2.7			G4/750
BL	(0°-30°)	845.4	4.0	B2/1000		
BM	(30°-60°)	1700.1	8.1	B2/2500		
BH	(60°-80°)	1047.7	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	7382.0	7538.6	7718.1	7952.3	8111.9	8175.8	8229.0	8139.3	8052.6	7889.9	7832.1
5°	6895.3	7196.4	7690.7	8160.6	8574.3	8811.5	8884.5	8718.7	8423.7	7997.9	7772.8
7.5°	6172.9	6569.9	7264.9	7956.8	8549.9	8945.3	8974.2	8645.7	8064.8	7366.7	7001.8
10°	5541.8	5990.4	6794.9	7569.0	8197.1	8601.6	8522.6	8061.8	7360.7	6566.8	6154.7
12.5°	5175.3	5623.9	6443.6	7229.9	7821.5	7975.1	7813.9	7426.1	6761.5	5966.1	5550.9
15°	5097.7	5560.0	6318.9	6982.0	7348.5	7249.6	7090.0	6893.8	6420.8	5769.9	5368.4
17.5°	5331.9	5849.0	6484.7	6848.2	6832.9	6595.7	6461.9	6499.9	6419.3	5982.8	5563.1
20°	5814.0	6425.4	6905.9	6811.7	6422.3	6089.3	6011.7	6309.8	6682.4	6516.6	6055.8
22.5°	6448.2	7144.7	7480.8	6916.6	6207.9	5849.0	5833.8	6299.1	7161.4	7324.2	6763.0
25°	7164.5	7976.6	8060.2	7102.1	6185.1	5827.7	5814.0	6463.4	7737.8	8124.1	7555.3
27.5°	8040.5	8816.1	8543.8	7350.0	6285.5	5890.1	5899.2	6743.2	8338.5	8914.9	8448.0
30°	8700.5	9412.2	8841.9	7593.3	6446.7	5999.6	6022.4	7045.9	8662.5	9463.9	9161.3
32.5°	9317.9	9921.7	9127.8	7833.6	6682.4	6162.3	6241.4	7423.0	9051.8	9935.4	9835.0
35°	10000.8	10492.0	9445.7	8090.6	7020.0	6448.2	6562.2	7781.9	9438.1	10406.8	10502.6
37.5°	10774.9	11144.4	9790.9	8454.1	7506.7	6977.4	7041.3	8148.4	9707.3	10928.5	11218.9
40°	11580.9	11875.9	10168.1	8939.3	8213.8	7692.2	7722.6	8618.4	9918.6	11468.3	11913.9
42.5°	12272.8	12502.5	10546.7	9541.5	9025.9	8420.7	8446.5	9124.8	10120.9	11933.7	12470.5
45°	12826.4	12995.2	10904.1	10175.7	9892.8	9330.1	9324.0	9640.3	10391.6	12326.1	12897.9
47.5°	13342.0	13431.7	11302.6	10793.1	10791.6	10501.1	10283.6	10248.7	10752.0	12656.1	13270.5
50°	13932.0	13965.5	11828.8	11416.6	11889.6	11844.0	11442.5	11021.2	11218.9	13027.2	13661.3
52.5°	14753.3	14754.8	12481.2	12025.0	13101.7	13246.2	12779.3	11895.7	11909.4	13749.5	14336.6
55°	15719.0	15785.9	13331.3	12753.4	14370.0	14616.4	14176.9	12934.4	12900.9	14914.5	15431.5
57.5°	16465.7	16820.0	14321.4	13664.4	15554.7	15875.6	15521.3	14011.1	14119.1	16115.9	16334.9
60°	16675.6	17504.4	15308.4	14686.4	16556.9	17039.0	16678.6	15174.5	15311.4	16896.1	16595.0
62.5°	16424.6	17724.9	16313.6	15601.9	17151.6	17613.9	17355.4	15936.4	16283.2	16795.7	16155.4
65°	15681.0	17405.5	17186.5	15991.2	16809.4	16973.6	16905.2	15976.0	16810.9	15846.7	14940.3
67.5°	13944.2	16173.7	16797.2	15159.3	15211.0	15034.6	14944.9	14890.1	16217.8	14315.3	13024.1
70°	11340.6	13897.1	14940.3	12686.5	12303.3	12132.9	11837.9	12567.9	14576.9	12196.8	10718.6
72.5°	8735.5	10631.9	12254.6	9617.5	8820.6	8878.4	8543.8	9609.9	12075.1	9429.0	8183.4
75°	6203.3	7249.6	9781.8	6910.5	5855.1	5852.0	5826.2	6916.6	9527.8	6767.6	5987.4
77.5°	4471.1	5219.4	7663.3	4624.7	4154.8	4208.0	4122.9	4700.8	7427.6	4868.1	4436.2
80°	3566.3	3864.3	4953.2	3084.2	3093.3	3218.0	3199.8	3215.0	4886.3	3525.2	3316.9
82.5°	2562.5	2933.6	3786.8	2363.3	2045.5	2177.8	2203.6	2384.6	3447.7	2492.6	2186.9
85°	1314.0	1788.5	3484.1	2047.0	1279.0	1060.0	1219.7	1881.2	2994.5	1493.4	1066.1
87.5°	255.5	495.8	2553.4	1137.6	574.9	290.5	479.1	796.9	1741.3	270.7	132.3
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°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	7733.3	7538.6	7356.1	7167.5	7021.5	6843.6	6668.7	6516.6	6369.1	6271.8	6302.2
5°	7544.7	7070.2	6644.4	6249.0	6017.8	5739.5	5491.6	5283.3	5122.0	5018.6	5081.0
7.5°	6685.4	6043.7	5482.5	4960.8	4632.4	4271.9	3983.0	3779.2	3654.5	3584.5	3686.4
10°	5806.4	5085.6	4455.9	3913.0	3589.1	3283.4	3021.8	2805.9	2638.6	2559.5	2600.6
12.5°	5176.8	4375.3	3715.3	3350.3	3072.0	2798.3	2527.6	2275.1	2062.2	1964.9	1945.1
15°	4941.1	3993.6	3319.9	2912.3	2635.5	2337.5	2045.5	1774.8	1572.5	1488.9	1470.6
17.5°	5044.5	3911.5	3085.7	2603.6	2202.1	1840.2	1511.7	1256.2	1107.1	1060.0	1064.6
20°	5408.0	3941.9	2897.1	2285.8	1790.0	1361.1	1032.6	856.2	792.3	781.7	793.9
22.5°	5906.8	4066.6	2760.2	2012.0	1426.5	990.0	768.0	684.4	667.6	666.1	678.3
25°	6565.3	4309.9	2669.0	1768.7	1126.9	784.7	669.2	622.0	608.3	611.4	623.5
27.5°	7340.9	4618.7	2609.7	1558.8	926.2	699.6	625.0	584.0	570.3	573.3	582.5
30°	8049.6	4889.4	2521.5	1400.7	831.9	669.2	600.7	559.7	541.4	541.4	547.5
32.5°	8683.8	5123.6	2418.1	1282.0	745.2	600.7	544.4	512.5	498.8	503.4	506.4
35°	9246.5	5246.8	2337.5	1212.1	675.2	553.6	497.3	463.8	445.6	448.6	453.2
37.5°	9800.0	5293.9	2284.2	1174.1	625.0	524.7	473.0	445.6	425.8	422.8	421.3
40°	10326.2	5283.3	2234.1	1163.4	591.6	503.4	457.8	433.4	413.7	409.1	407.6
42.5°	10780.9	5248.3	2186.9	1134.5	568.8	488.2	445.6	424.3	404.5	398.4	395.4
45°	11196.1	5227.0	2135.2	1081.3	580.9	482.1	439.5	416.7	398.4	390.8	387.8
47.5°	11656.9	5303.0	2077.4	1023.5	577.9	483.6	439.5	413.7	395.4	387.8	384.8
50°	12205.9	5560.0	2005.9	944.4	550.5	517.1	438.0	409.1	392.4	387.8	381.7
52.5°	12981.5	5976.7	1907.1	842.5	529.2	552.0	436.5	401.5	387.8	380.2	372.6
55°	14044.6	6393.4	1779.3	734.5	495.8	527.7	439.5	392.4	377.2	369.6	360.4
57.5°	14916.0	6709.8	1618.1	644.8	465.4	498.8	434.9	381.7	365.0	357.4	349.8
60°	14859.7	6740.2	1464.5	587.0	447.1	448.6	445.6	374.1	354.3	348.3	342.2
62.5°	13939.6	6364.5	1321.6	558.1	433.4	409.1	454.7	365.0	343.7	337.6	333.1
65°	12408.2	5490.1	1245.5	558.1	421.3	387.8	396.9	352.8	333.1	327.0	323.9
67.5°	10466.1	4411.8	1174.1	570.3	404.5	372.6	360.4	340.7	322.4	316.3	313.3
70°	8388.7	3472.0	1123.9	564.2	389.3	355.9	340.7	323.9	305.7	304.2	301.1
72.5°	6580.5	2789.1	1101.1	564.2	366.5	336.1	320.9	308.7	290.5	289.0	284.4
75°	5272.6	2094.1	1006.8	553.6	343.7	310.2	296.6	285.9	267.7	269.2	266.1
77.5°	4083.3	1481.3	841.0	498.8	314.8	281.3	270.7	263.1	241.8	243.3	243.3
80°	3193.7	964.2	652.4	413.7	281.3	247.9	240.3	234.2	211.4	214.4	214.4
82.5°	2188.4	573.3	473.0	333.1	241.8	211.4	209.9	200.7	176.4	177.9	181.0
85°	1195.3	377.2	314.8	246.4	190.1	171.9	168.8	164.2	141.4	141.4	143.0
87.5°	220.5	202.3	185.5	162.7	127.7	123.2	118.6	123.2	106.5	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



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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	6230.7	6125.8	6052.8	5988.9	5835.3	5846.0	5867.2	5897.7	5801.8	5852.0	5914.4
5°	5018.6	4932.0	4866.6	4764.7	4550.2	4474.2	4425.5	4404.2	4261.3	4291.7	4358.6
7.5°	3700.1	3698.6	3675.8	3561.7	3303.2	3146.5	3043.1	3011.2	2923.0	2956.4	3058.3
10°	2605.1	2632.5	2621.9	2520.0	2288.8	2176.3	2153.5	2217.3	2218.8	2284.2	2459.1
12.5°	1882.7	1867.5	1853.9	1770.2	1596.8	1578.6	1630.3	1718.5	1739.8	1809.8	1992.2
15°	1405.2	1368.7	1361.1	1295.7	1181.7	1198.4	1236.4	1282.0	1283.6	1332.2	1482.8
17.5°	1053.9	1053.9	1066.1	1023.5	941.4	933.8	914.0	901.8	883.6	903.4	985.5
20°	818.2	856.2	886.6	862.3	787.8	751.3	713.3	688.9	675.2	676.8	701.1
22.5°	701.1	731.5	771.0	758.9	696.5	649.4	625.0	608.3	597.7	597.7	611.4
25°	641.8	661.5	698.0	692.0	638.7	600.7	580.9	564.2	552.0	550.5	564.2
27.5°	594.6	606.8	631.1	628.1	573.3	549.0	536.8	526.2	518.6	517.1	530.8
30°	552.0	558.1	570.3	565.7	524.7	500.3	495.8	491.2	486.7	488.2	507.9
32.5°	514.0	518.6	526.2	520.1	480.6	459.3	451.7	445.6	441.0	445.6	468.4
35°	471.4	485.1	494.3	491.2	448.6	422.8	406.1	390.8	384.8	389.3	415.2
37.5°	434.9	457.8	469.9	466.9	422.8	392.4	371.1	368.0	368.0	374.1	400.0
40°	421.3	438.0	448.6	444.1	400.0	369.6	357.4	352.8	354.3	360.4	387.8
42.5°	409.1	424.3	427.3	418.2	374.1	354.3	346.7	340.7	343.7	351.3	378.7
45°	398.4	410.6	409.1	395.4	352.8	339.1	339.1	334.6	336.1	342.2	371.1
47.5°	390.8	396.9	393.9	380.2	337.6	327.0	331.5	331.5	334.6	339.1	368.0
50°	378.7	383.2	380.2	368.0	325.5	316.3	320.9	327.0	330.0	334.6	360.4
52.5°	366.5	369.6	368.0	355.9	313.3	307.2	307.2	313.3	319.4	325.5	348.3
55°	354.3	357.4	358.9	349.8	304.2	298.1	296.6	296.6	302.6	311.8	336.1
57.5°	345.2	345.2	348.3	342.2	295.0	287.4	279.8	281.3	289.0	296.6	320.9
60°	334.6	336.1	340.7	334.6	282.9	270.7	264.6	272.2	275.3	282.9	308.7
62.5°	325.5	325.5	328.5	323.9	272.2	260.1	255.5	263.1	263.1	270.7	296.6
65°	317.8	316.3	316.3	314.8	261.6	249.4	246.4	249.4	250.9	258.5	284.4
67.5°	311.8	304.2	304.2	307.2	250.9	238.8	237.2	237.2	238.8	247.9	270.7
70°	298.1	292.0	290.5	301.1	240.3	225.1	225.1	222.0	225.1	229.6	254.0
72.5°	282.9	278.3	276.8	292.0	229.6	209.9	206.8	205.3	206.8	211.4	234.2
75°	263.1	260.1	263.1	285.9	219.0	193.1	188.6	187.1	187.1	188.6	212.9
77.5°	240.3	237.2	260.1	266.1	212.9	173.4	168.8	165.8	162.7	162.7	190.1
80°	212.9	211.4	250.9	225.1	203.8	152.1	144.5	139.9	136.9	135.4	162.7
82.5°	185.5	182.5	214.4	176.4	168.8	124.7	114.1	104.9	100.4	100.4	124.7
85°	152.1	150.6	168.8	129.3	117.1	91.2	76.0	68.4	62.4	62.4	80.6
87.5°	111.0	108.0	104.9	77.6	59.3	41.1	28.9	27.4	24.3	22.8	33.5
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-8030-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8	7150.8
2.5°	6007.2	6133.4	6372.1	6568.3	6829.9	7039.8	7278.5	7382.0
5°	4481.8	4681.0	5046.0	5357.8	5789.7	6189.7	6645.9	6895.3
7.5°	3215.0	3510.0	3786.8	4176.1	4716.0	5252.8	5842.9	6172.9
10°	2659.9	2930.6	3167.8	3444.6	3861.3	4465.1	5169.2	5541.8
12.5°	2203.6	2495.6	2746.6	3043.1	3392.9	3938.9	4741.9	5175.3
15°	1689.6	2007.5	2308.6	2666.0	3094.8	3718.4	4614.1	5097.7
17.5°	1157.3	1498.0	1869.1	2305.5	2822.6	3625.6	4735.8	5331.9
20°	786.3	1035.7	1438.7	1955.7	2577.8	3581.5	5003.4	5814.0
22.5°	646.3	758.9	1061.5	1627.3	2377.0	3630.1	5438.4	6448.2
25°	593.1	653.9	825.8	1338.3	2223.4	3759.4	6026.9	7164.5
27.5°	559.7	611.4	723.9	1131.5	2082.0	3935.8	6743.2	8040.5
30°	539.9	588.5	682.8	1025.0	1952.7	4087.9	7359.1	8700.5
32.5°	495.8	532.3	609.8	964.2	1859.9	4211.1	7902.1	9317.9
35°	442.6	486.7	550.5	924.6	1856.9	4268.9	8413.1	10000.8
37.5°	422.8	465.4	512.5	903.4	1875.1	4317.5	9038.1	10774.9
40°	410.6	448.6	486.7	900.3	1890.4	4355.6	9649.5	11580.9
42.5°	400.0	438.0	482.1	879.0	1884.3	4407.3	10190.9	12272.8
45°	396.9	434.9	492.7	847.1	1882.7	4487.9	10621.3	12826.4
47.5°	393.9	451.7	489.7	812.1	1876.7	4658.2	11106.4	13342.0
50°	390.8	482.1	468.4	763.4	1831.0	4948.7	11758.8	13932.0
52.5°	389.3	486.7	445.6	696.5	1748.9	5379.1	12713.9	14753.3
55°	383.2	462.3	406.1	608.3	1630.3	5842.9	13737.4	15719.0
57.5°	369.6	412.1	383.2	521.6	1460.0	6166.8	14493.2	16465.7
60°	403.0	354.3	368.0	477.5	1256.2	6224.6	14526.7	16675.6
62.5°	384.8	322.4	352.8	462.3	1113.2	5847.5	13862.1	16424.6
65°	307.2	305.7	339.1	477.5	1091.9	5003.4	12739.7	15681.0
67.5°	279.8	293.5	325.5	495.8	1105.6	3941.9	11088.1	13944.2
70°	261.6	278.3	307.2	512.5	1130.0	3105.5	8927.1	11340.6
72.5°	243.3	257.0	289.0	529.2	1113.2	2450.0	7144.7	8735.5
75°	220.5	232.7	263.1	485.1	955.1	1800.6	5677.1	6203.3
77.5°	194.7	205.3	231.2	383.2	717.8	1253.1	4252.2	4471.1
80°	167.3	171.9	191.6	279.8	468.4	749.8	3236.3	3566.3
82.5°	132.3	133.8	146.0	205.3	292.0	479.1	2244.7	2562.5
85°	85.2	88.2	94.3	144.5	196.2	307.2	1146.7	1314.0
87.5°	28.9	33.5	33.5	70.0	95.8	170.3	351.3	255.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)