

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: P195732

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195732
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 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: 25705 lumens
Efficiency: N/A
Efficacy: 103.2 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

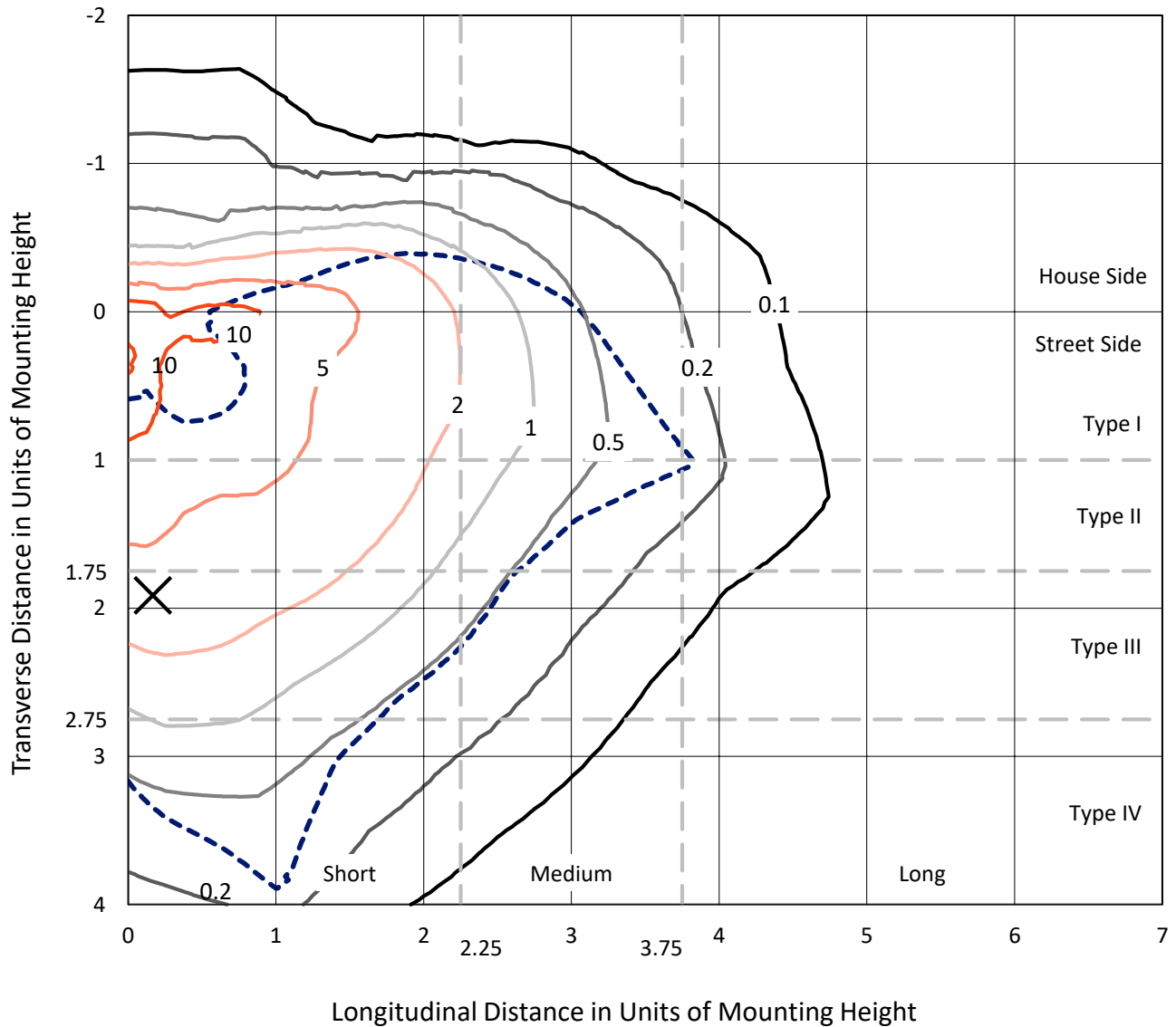


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Iso-Footcandle Lines of Horizontal Illumination

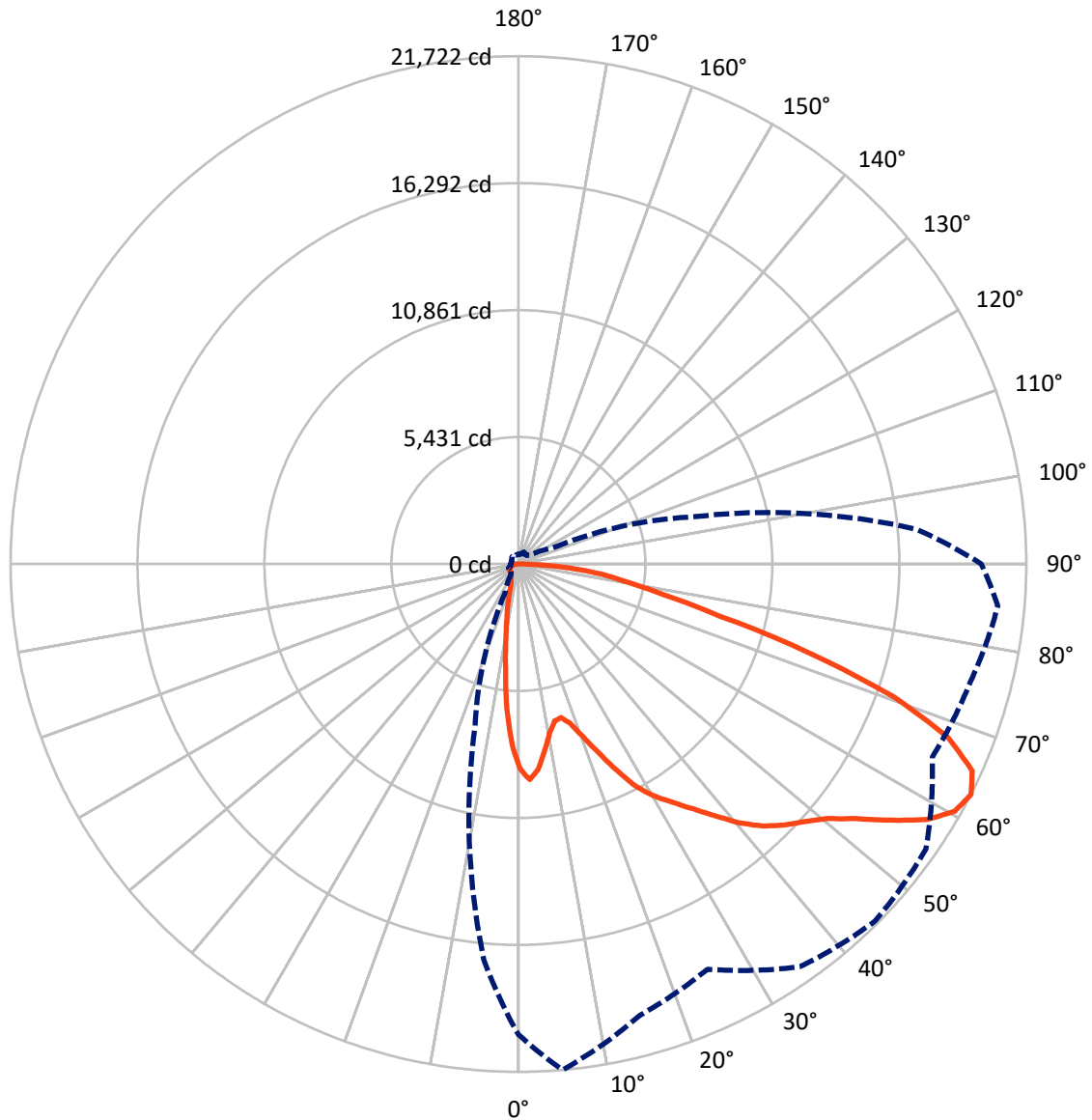
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 16.1 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	4553.7	0.0	4553.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	21151.3	0.0	21151.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	25705.0	0.0	25705.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	637.3	2.5
10°-20°	1164.0	4.5
20°-30°	1674.2	6.5
30°-40°	2564.2	10.0
40°-50°	3748.9	14.6
50°-60°	5454.8	21.2
60°-70°	6320.1	24.6
70°-80°	3294.6	12.8
80°-90°	846.9	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°	25705.0	100.0
0°-180°	25705.0	100.0



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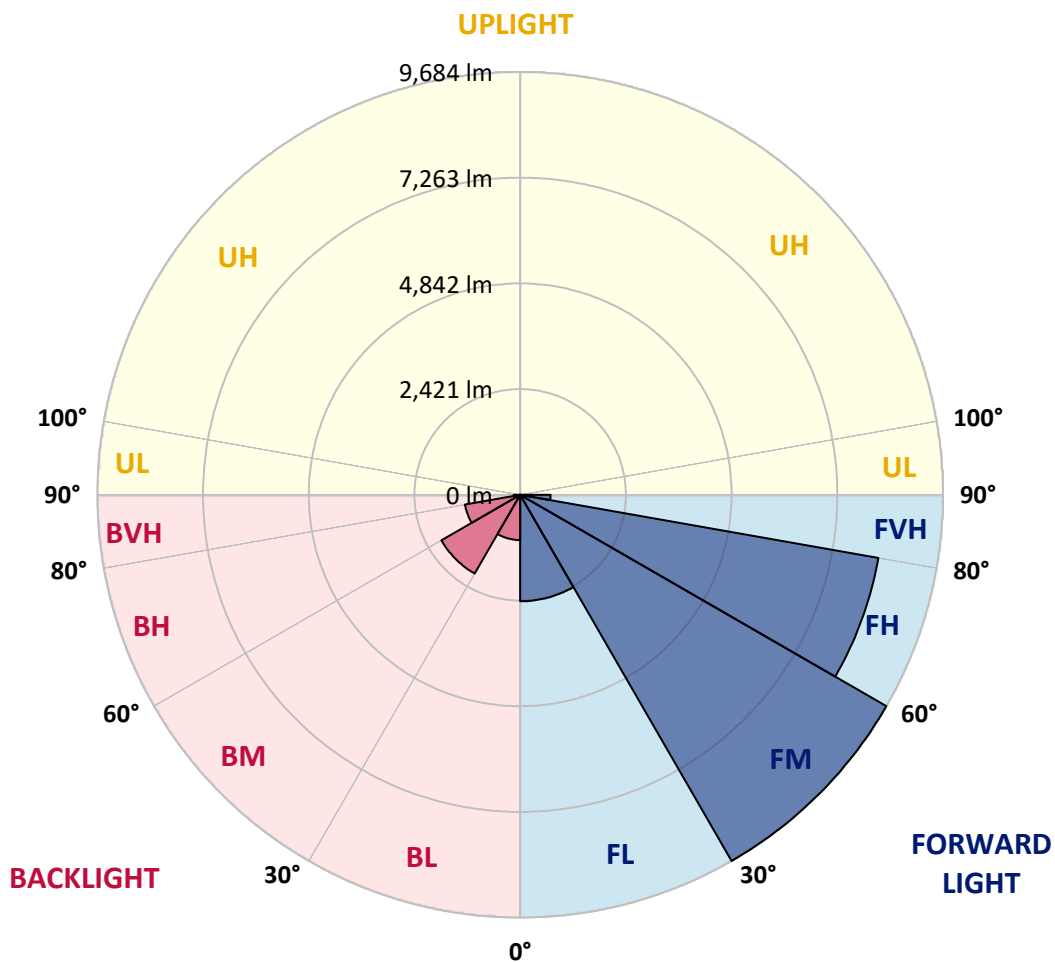
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2439.5	9.5			
FM	(30°-60°)	9684.5	37.7			
FH	(60°-80°)	8330.6	32.4			G4/12000
FVH	(80°-90°)	696.7	2.7			G4/750
BL	(0°-30°)	1036.0	4.0	B3/2500		
BM	(30°-60°)	2083.5	8.1	B2/2500		
BH	(60°-80°)	1284.0	5.0	B3/2500		G3/2500
BVH	(80°-90°)	150.2	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°	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3
2.5°	9046.6	9238.6	9458.5	9745.5	9941.2	10019.5	10084.7	9974.8	9868.5	9669.1	9598.3
5°	8450.2	8819.3	9425.0	10000.9	10507.8	10798.6	10888.0	10684.9	10323.3	9801.5	9525.6
7.5°	7565.0	8051.4	8903.1	9751.1	10478.0	10962.6	10998.0	10595.4	9883.5	9028.0	8580.7
10°	6791.5	7341.3	8327.2	9275.9	10045.6	10541.4	10444.4	9879.7	9020.5	8047.7	7542.6
12.5°	6342.3	6892.1	7896.7	8860.3	9585.3	9773.5	9575.9	9100.7	8286.2	7311.5	6802.7
15°	6247.3	6813.9	7743.9	8556.5	9005.6	8884.5	8688.8	8448.4	7868.7	7071.1	6579.0
17.5°	6534.3	7168.0	7947.0	8392.5	8373.8	8083.1	7919.1	7965.7	7866.9	7332.0	6817.6
20°	7125.1	7874.3	8463.3	8347.7	7870.6	7462.4	7367.4	7732.7	8189.3	7986.2	7421.4
22.5°	7902.3	8755.9	9167.8	8476.3	7607.8	7168.0	7149.3	7719.6	8776.4	8975.8	8288.1
25°	8780.1	9775.4	9877.9	8703.7	7579.9	7141.9	7125.1	7920.9	9482.8	9956.1	9259.1
27.5°	9853.6	10804.2	10470.5	9007.5	7702.9	7218.3	7229.5	8263.9	10218.9	10925.3	10353.1
30°	10662.5	11534.7	10835.8	9305.7	7900.4	7352.5	7380.4	8634.7	10615.9	11598.1	11227.2
32.5°	11419.2	12159.1	11186.2	9600.2	8189.3	7551.9	7648.8	9097.0	11093.0	12175.9	12052.9
35°	12256.0	12858.0	11575.7	9915.1	8603.1	7902.3	8042.1	9536.8	11566.4	12753.6	12871.0
37.5°	13204.7	13657.6	11998.8	10360.6	9199.5	8550.9	8629.2	9986.0	11896.3	13392.9	13748.9
40°	14192.4	14554.0	12461.0	10955.1	10066.1	9426.8	9464.1	10561.9	12155.4	14054.5	14600.6
42.5°	15040.5	15321.9	12925.1	11693.2	11061.3	10319.6	10351.3	11182.5	12403.2	14624.8	15282.7
45°	15718.9	15925.7	13363.1	12470.3	12123.7	11434.1	11426.6	11814.3	12735.0	15105.7	15806.5
47.5°	16350.7	16460.6	13851.4	13227.0	13225.2	12869.2	12602.7	12559.8	13176.7	15510.1	16263.1
50°	17073.8	17114.8	14496.2	13991.2	14570.8	14514.9	14022.8	13506.6	13748.9	15964.9	16742.1
52.5°	18080.2	18082.1	15295.8	14736.7	16056.2	16233.3	15661.1	14578.2	14595.0	16850.2	17569.6
55°	19263.7	19345.7	16337.6	15629.4	17610.6	17912.5	17373.9	15851.2	15810.2	18277.8	18911.5
57.5°	20178.8	20613.1	17550.9	16745.8	19062.4	19455.7	19021.4	17170.7	17303.0	19750.1	20018.5
60°	20436.0	21451.7	18760.5	17998.2	20290.6	20881.4	20439.7	18596.5	18764.2	20706.2	20337.2
62.5°	20128.5	21722.0	19992.4	19120.2	21019.4	21585.9	21269.1	19530.2	19955.2	20583.2	19798.6
65°	19217.1	21330.6	21062.2	19597.3	20600.0	20801.3	20717.4	19578.7	20601.9	19420.3	18309.5
67.5°	17088.7	19821.0	20585.1	18577.8	18641.2	18425.0	18315.1	18248.0	19875.0	17543.5	15961.1
70°	13898.0	17030.9	18309.5	15547.4	15077.7	14869.0	14507.4	15402.0	17864.0	14947.3	13135.7
72.5°	10705.4	13029.5	15018.1	11786.3	10809.7	10880.6	10470.5	11777.0	14798.2	11555.2	10028.8
75°	7602.2	8884.5	11987.6	8468.9	7175.4	7171.7	7140.0	8476.3	11676.4	8293.7	7337.6
77.5°	5479.4	6396.4	9391.4	5667.7	5091.8	5157.0	5052.6	5760.8	9102.5	5965.9	5436.6
80°	4370.5	4735.8	6070.2	3779.7	3790.9	3943.7	3921.3	3940.0	5988.2	4320.2	4064.8
82.5°	3140.4	3595.2	4640.7	2896.3	2506.7	2668.9	2700.6	2922.4	4225.1	3054.7	2680.1
85°	1610.3	2191.8	4269.8	2508.6	1567.4	1299.0	1494.7	2305.5	3669.7	1830.2	1306.5
87.5°	313.1	607.6	3129.2	1394.1	704.5	356.0	587.1	976.6	2134.0	331.7	162.1
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°	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3
2.5°	9477.2	9238.6	9015.0	8783.8	8604.9	8386.9	8172.5	7986.2	7805.4	7686.1	7723.4
5°	9246.1	8664.6	8142.7	7658.1	7374.9	7033.8	6730.0	6474.7	6277.1	6150.4	6226.8
7.5°	8193.0	7406.5	6718.8	6079.5	5677.0	5235.3	4881.2	4631.4	4478.6	4392.9	4517.7
10°	7115.8	6232.4	5460.8	4795.4	4398.4	4023.8	3703.3	3438.6	3233.6	3136.7	3187.0
12.5°	6344.2	5362.0	4553.1	4105.8	3764.8	3429.3	3097.6	2788.2	2527.2	2408.0	2383.7
15°	6055.3	4894.2	4068.6	3569.1	3229.9	2864.6	2506.7	2175.0	1927.1	1824.6	1802.2
17.5°	6182.1	4793.6	3781.5	3190.7	2698.7	2255.1	1852.6	1539.5	1356.8	1299.0	1304.6
20°	6627.5	4830.8	3550.4	2801.2	2193.6	1668.1	1265.5	1049.3	971.0	958.0	972.9
22.5°	7238.8	4983.7	3382.7	2465.7	1748.2	1213.3	941.2	838.7	818.2	816.3	831.2
25°	8045.8	5281.9	3270.9	2167.5	1381.0	961.7	820.0	762.3	745.5	749.2	764.1
27.5°	8996.3	5660.2	3198.2	1910.3	1135.0	857.3	766.0	715.7	698.9	702.6	713.8
30°	9864.8	5992.0	3090.1	1716.5	1019.5	820.0	736.2	685.9	663.5	663.5	670.9
32.5°	10642.0	6279.0	2963.4	1571.1	913.2	736.2	667.2	628.1	611.3	616.9	620.6
35°	11331.6	6429.9	2864.6	1485.4	827.5	678.4	609.4	568.4	546.1	549.8	555.4
37.5°	12010.0	6487.7	2799.4	1438.8	766.0	643.0	579.6	546.1	521.8	518.1	516.3
40°	12654.9	6474.7	2737.8	1425.8	725.0	616.9	561.0	531.2	506.9	501.3	499.5
42.5°	13212.1	6431.8	2680.1	1390.4	697.0	598.3	546.1	520.0	495.8	488.3	484.6
45°	13720.9	6405.7	2616.7	1325.1	712.0	590.8	538.6	510.7	488.3	479.0	475.3
47.5°	14285.6	6498.9	2545.9	1254.3	708.2	592.7	538.6	506.9	484.6	475.3	471.5
50°	14958.4	6813.9	2458.3	1157.4	674.7	633.7	536.8	501.3	480.8	475.3	467.8
52.5°	15909.0	7324.5	2337.1	1032.5	648.6	676.5	534.9	492.0	475.3	465.9	456.6
55°	17211.7	7835.2	2180.6	900.2	607.6	646.7	538.6	480.8	462.2	452.9	441.7
57.5°	18279.6	8222.9	1983.0	790.2	570.3	611.3	533.0	467.8	447.3	438.0	428.7
60°	18210.7	8260.1	1794.8	719.4	547.9	549.8	546.1	458.5	434.3	426.8	419.3
62.5°	17083.1	7799.8	1619.6	684.0	531.2	501.3	557.3	447.3	421.2	413.8	408.2
65°	15206.3	6728.1	1526.4	684.0	516.3	475.3	486.4	432.4	408.2	400.7	397.0
67.5°	12826.3	5406.7	1438.8	698.9	495.8	456.6	441.7	417.5	395.1	387.7	383.9
70°	10280.4	4254.9	1377.3	691.5	477.1	436.1	417.5	397.0	374.6	372.7	369.0
72.5°	8064.4	3418.1	1349.4	691.5	449.2	411.9	393.3	378.3	356.0	354.1	348.5
75°	6461.6	2566.4	1233.8	678.4	421.2	380.2	363.4	350.4	328.0	329.9	326.2
77.5°	5004.2	1815.3	1030.7	611.3	385.8	344.8	331.7	322.4	296.3	298.2	298.2
80°	3913.9	1181.6	799.5	506.9	344.8	303.8	294.5	287.0	259.1	262.8	262.8
82.5°	2681.9	702.6	579.6	408.2	296.3	259.1	257.2	246.0	216.2	218.1	221.8
85°	1464.9	462.2	385.8	301.9	233.0	210.6	206.9	201.3	173.3	173.3	175.2
87.5°	270.2	247.9	227.4	199.4	156.6	151.0	145.4	151.0	130.5	126.7	126.7
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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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3
2.5°	7635.8	7507.2	7417.7	7339.4	7151.2	7164.3	7190.3	7227.6	7110.2	7171.7	7248.1
5°	6150.4	6044.1	5964.0	5839.1	5576.3	5483.1	5423.5	5397.4	5222.2	5259.5	5341.5
7.5°	4534.5	4532.6	4504.7	4364.9	4048.1	3856.1	3729.4	3690.2	3582.1	3623.1	3748.0
10°	3192.6	3226.1	3213.1	3088.2	2804.9	2667.0	2639.1	2717.3	2719.2	2799.4	3013.7
12.5°	2307.3	2288.7	2271.9	2169.4	1956.9	1934.6	1997.9	2106.0	2132.1	2217.9	2441.5
15°	1722.1	1677.4	1668.1	1587.9	1448.1	1468.6	1515.2	1571.1	1573.0	1632.6	1817.2
17.5°	1291.6	1291.6	1306.5	1254.3	1153.7	1144.3	1120.1	1105.2	1082.8	1107.1	1207.7
20°	1002.7	1049.3	1086.6	1056.7	965.4	920.7	874.1	844.3	827.5	829.4	859.2
22.5°	859.2	896.5	944.9	930.0	853.6	795.8	766.0	745.5	732.5	732.5	749.2
25°	786.5	810.7	855.5	848.0	782.8	736.2	712.0	691.5	676.5	674.7	691.5
27.5°	728.7	743.6	773.5	769.7	702.6	672.8	657.9	644.9	635.5	633.7	650.4
30°	676.5	684.0	698.9	693.3	643.0	613.2	607.6	602.0	596.4	598.3	622.5
32.5°	629.9	635.5	644.9	637.4	588.9	562.9	553.5	546.1	540.5	546.1	574.0
35°	577.8	594.5	605.7	602.0	549.8	518.1	497.6	479.0	471.5	477.1	508.8
37.5°	533.0	561.0	575.9	572.2	518.1	480.8	454.8	451.0	451.0	458.5	490.2
40°	516.3	536.8	549.8	544.2	490.2	452.9	438.0	432.4	434.3	441.7	475.3
42.5°	501.3	520.0	523.7	512.5	458.5	434.3	424.9	417.5	421.2	430.5	464.1
45°	488.3	503.2	501.3	484.6	432.4	415.6	415.6	410.0	411.9	419.3	454.8
47.5°	479.0	486.4	482.7	465.9	413.8	400.7	406.3	406.3	410.0	415.6	451.0
50°	464.1	469.7	465.9	451.0	398.8	387.7	393.3	400.7	404.4	410.0	441.7
52.5°	449.2	452.9	451.0	436.1	383.9	376.5	376.5	383.9	391.4	398.8	426.8
55°	434.3	438.0	439.8	428.7	372.7	365.3	363.4	363.4	370.9	382.1	411.9
57.5°	423.1	423.1	426.8	419.3	361.6	352.2	342.9	344.8	354.1	363.4	393.3
60°	410.0	411.9	417.5	410.0	346.7	331.7	324.3	333.6	337.3	346.7	378.3
62.5°	398.8	398.8	402.6	397.0	333.6	318.7	313.1	322.4	322.4	331.7	363.4
65°	389.5	387.7	387.7	385.8	320.6	305.7	301.9	305.7	307.5	316.8	348.5
67.5°	382.1	372.7	372.7	376.5	307.5	292.6	290.7	290.7	292.6	303.8	331.7
70°	365.3	357.8	356.0	369.0	294.5	275.8	275.8	272.1	275.8	281.4	311.2
72.5°	346.7	341.1	339.2	357.8	281.4	257.2	253.5	251.6	253.5	259.1	287.0
75°	322.4	318.7	322.4	350.4	268.4	236.7	231.1	229.2	229.2	231.1	260.9
77.5°	294.5	290.7	318.7	326.2	260.9	212.5	206.9	203.1	199.4	199.4	233.0
80°	260.9	259.1	307.5	275.8	249.7	186.4	177.1	171.5	167.7	165.9	199.4
82.5°	227.4	223.6	262.8	216.2	206.9	152.8	139.8	128.6	123.0	123.0	152.8
85°	186.4	184.5	206.9	158.4	143.5	111.8	93.2	83.9	76.4	76.4	98.8
87.5°	136.1	132.3	128.6	95.1	72.7	50.3	35.4	33.5	29.8	28.0	41.0
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-7050-800

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3	8763.3
2.5°	7361.8	7516.5	7809.1	8049.5	8370.1	8627.3	8919.9	9046.6
5°	5492.5	5736.6	6183.9	6566.0	7095.3	7585.5	8144.6	8450.2
7.5°	3940.0	4301.5	4640.7	5117.9	5779.5	6437.4	7160.5	7565.0
10°	3259.7	3591.4	3882.2	4221.4	4732.1	5472.0	6334.9	6791.5
12.5°	2700.6	3058.4	3365.9	3729.4	4158.0	4827.1	5811.2	6342.3
15°	2070.6	2460.1	2829.2	3267.2	3792.7	4556.9	5654.6	6247.3
17.5°	1418.3	1835.8	2290.5	2825.4	3459.1	4443.2	5803.7	6534.3
20°	963.6	1269.2	1763.1	2396.8	3159.1	4389.1	6131.7	7125.1
22.5°	792.1	930.0	1300.9	1994.2	2913.0	4448.8	6664.8	7902.3
25°	726.9	801.4	1012.0	1640.1	2724.8	4607.2	7386.0	8780.1
27.5°	685.9	749.2	887.1	1386.6	2551.5	4823.4	8263.9	9853.6
30°	661.6	721.3	836.8	1256.2	2393.1	5009.8	9018.7	10662.5
32.5°	607.6	652.3	747.4	1181.6	2279.4	5160.7	9684.0	11419.2
35°	542.4	596.4	674.7	1133.2	2275.6	5231.5	10310.3	12256.0
37.5°	518.1	570.3	628.1	1107.1	2298.0	5291.2	11076.3	13204.7
40°	503.2	549.8	596.4	1103.3	2316.6	5337.8	11825.5	14192.4
42.5°	490.2	536.8	590.8	1077.2	2309.2	5401.1	12489.0	15040.5
45°	486.4	533.0	603.9	1038.1	2307.3	5499.9	13016.4	15718.9
47.5°	482.7	553.5	600.1	995.2	2299.9	5708.7	13611.0	16350.7
50°	479.0	590.8	574.0	935.6	2244.0	6064.6	14410.5	17073.8
52.5°	477.1	596.4	546.1	853.6	2143.3	6592.1	15580.9	18080.2
55°	469.7	566.6	497.6	745.5	1997.9	7160.5	16835.2	19263.7
57.5°	452.9	505.1	469.7	639.3	1789.2	7557.5	17761.5	20178.8
60°	493.9	434.3	451.0	585.2	1539.5	7628.3	17802.5	20436.0
62.5°	471.5	395.1	432.4	566.6	1364.3	7166.1	16988.1	20128.5
65°	376.5	374.6	415.6	585.2	1338.2	6131.7	15612.6	19217.1
67.5°	342.9	359.7	398.8	607.6	1354.9	4830.8	13588.6	17088.7
70°	320.6	341.1	376.5	628.1	1384.8	3805.8	10940.2	13898.0
72.5°	298.2	315.0	354.1	648.6	1364.3	3002.5	8755.9	10705.4
75°	270.2	285.2	322.4	594.5	1170.4	2206.7	6957.4	7602.2
77.5°	238.6	251.6	283.3	469.7	879.7	1535.7	5211.0	5479.4
80°	205.0	210.6	234.8	342.9	574.0	918.8	3966.1	4370.5
82.5°	162.1	164.0	178.9	251.6	357.8	587.1	2750.9	3140.4
85°	104.4	108.1	115.6	177.1	240.4	376.5	1405.3	1610.3
87.5°	35.4	41.0	41.0	85.7	117.4	208.7	430.5	313.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)