

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: P270612

Luminaire Tested: **NAV-AF-05-D-UNV-SLL-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270612  
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-05-D-UNV-SLL-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 1200mA 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: 25311.4 lumens  
Efficiency: N/A  
Efficacy: 79.1 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): 320  
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

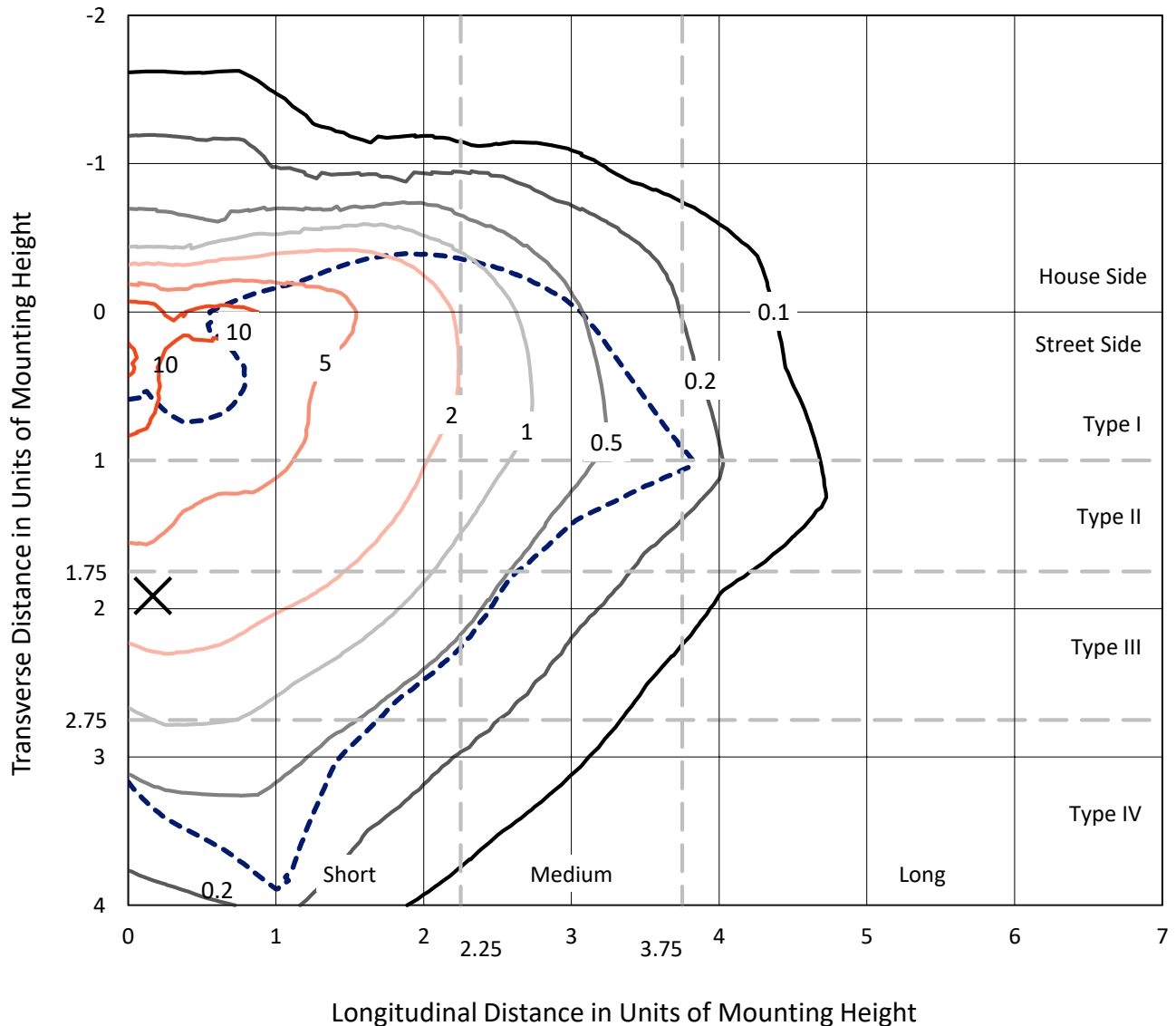


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### Iso-Footcandle Lines of Horizontal Illumination

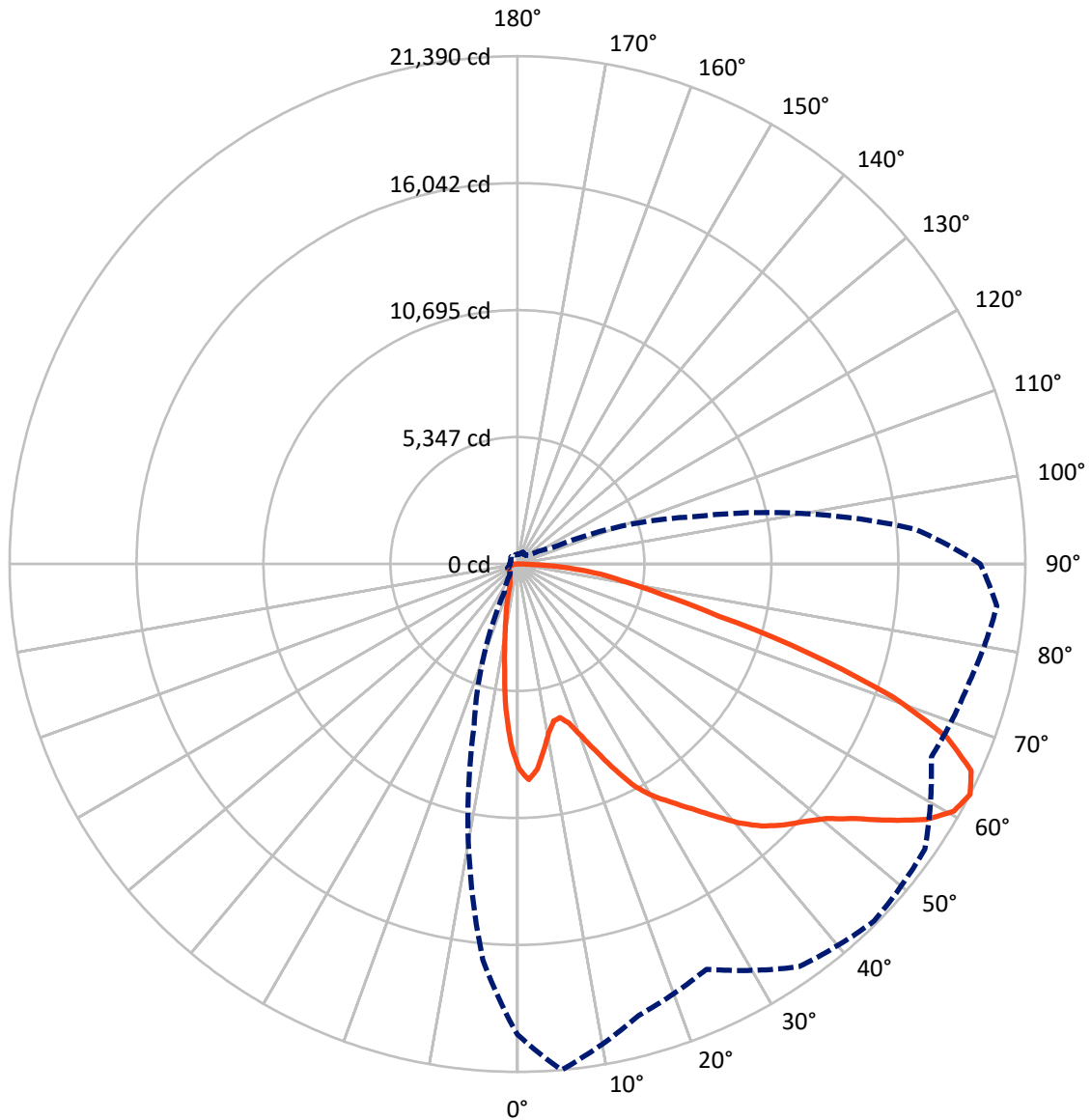
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.8 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
<b>House Side</b>	Lumens	4484.0	0.0	4484.0
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	20827.5	0.0	20827.5
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	25311.4	0.0	25311.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	627.5	2.5
10°-20°	1146.2	4.5
20°-30°	1648.6	6.5
30°-40°	2525.0	10.0
40°-50°	3691.5	14.6
50°-60°	5371.3	21.2
60°-70°	6223.3	24.6
70°-80°	3244.1	12.8
80°-90°	833.9	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°	25311.4	100.0
0°-180°	25311.4	100.0



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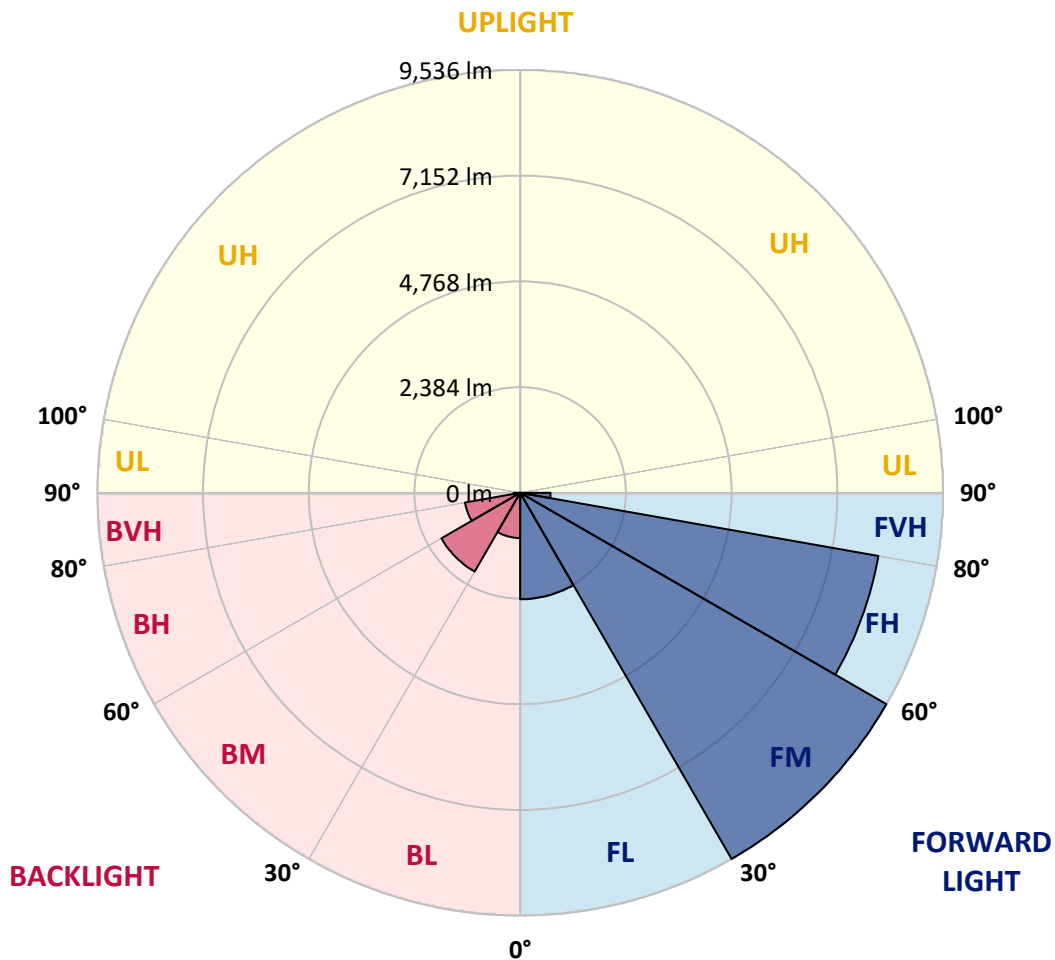
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2402.2	9.5			
FM	(30°-60°)	9536.2	37.7			
FH	(60°-80°)	8203.1	32.4			G4/12000
FVH	(80°-90°)	686.0	2.7			G4/750
BL	(0°-30°)	1020.2	4.0	B3/2500		
BM	(30°-60°)	2051.6	8.1	B2/2500		
BH	(60°-80°)	1264.3	5.0	B3/2500		G3/2500
BVH	(80°-90°)	147.9	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°	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2
2.5°	8908.1	9097.1	9313.6	9596.4	9789.0	9866.2	9930.4	9822.1	9717.4	9521.0	9451.3
5°	8320.9	8684.3	9280.7	9847.8	10346.9	10633.1	10721.4	10521.3	10165.2	9651.4	9379.7
7.5°	7449.1	7928.1	8766.7	9601.9	10317.6	10794.8	10829.5	10433.2	9732.1	8889.7	8449.3
10°	6687.5	7228.9	8199.6	9133.8	9891.7	10379.9	10284.5	9728.5	8882.4	7924.5	7427.0
12.5°	6245.2	6786.6	7775.8	8724.6	9438.5	9623.8	9429.2	8961.3	8159.3	7199.6	6698.5
15°	6151.7	6709.5	7625.4	8425.5	8867.8	8748.5	8555.7	8319.1	7748.3	6962.9	6478.2
17.5°	6434.3	7058.3	7825.3	8264.0	8245.6	7959.3	7797.7	7843.7	7746.4	7219.7	6713.3
20°	7016.0	7753.8	8333.7	8219.9	7750.0	7348.1	7254.6	7614.4	8063.9	7863.9	7307.8
22.5°	7781.3	8621.8	9027.3	8346.5	7491.3	7058.3	7039.8	7601.5	8642.1	8838.3	8161.2
25°	8645.6	9625.7	9726.6	8570.4	7463.7	7032.6	7016.0	7799.7	9337.5	9803.7	9117.3
27.5°	9702.8	10638.7	10310.2	8869.5	7584.8	7107.7	7118.8	8137.3	10062.5	10758.0	10194.7
30°	10499.2	11358.1	10669.9	9163.3	7779.4	7239.9	7267.5	8502.5	10453.3	11420.5	11055.4
32.5°	11244.4	11972.9	11014.9	9453.1	8063.9	7436.3	7531.7	8957.7	10923.2	11989.5	11868.2
35°	12068.4	12661.2	11398.6	9763.3	8471.3	7781.3	7919.0	9390.8	11389.3	12558.3	12673.9
37.5°	13002.4	13448.4	11815.0	10202.0	9058.6	8420.0	8497.1	9833.0	11714.2	13187.8	13538.4
40°	13975.1	14331.2	12270.2	10787.3	9912.0	9282.5	9319.1	10400.1	11969.2	13839.4	14377.1
42.5°	14810.1	15087.3	12727.1	11514.1	10891.9	10161.5	10192.8	11011.2	12213.4	14400.9	15048.8
45°	15478.2	15681.9	13158.5	12279.4	11938.0	11259.0	11251.7	11633.4	12540.0	14874.3	15564.5
47.5°	16100.3	16208.6	13639.2	13024.4	13022.6	12672.1	12409.7	12367.4	12974.9	15272.7	16014.1
50°	16812.4	16852.7	14274.2	13776.9	14347.6	14292.7	13808.1	13299.8	13538.4	15720.3	16485.8
52.5°	17803.4	17805.2	15061.6	14511.0	15810.3	15984.7	15421.4	14355.0	14371.5	16592.1	17300.5
55°	18968.8	19049.5	16087.4	15390.1	17340.9	17638.2	17107.9	15608.5	15568.0	17997.9	18622.0
57.5°	19869.8	20297.5	17282.2	16489.4	18770.5	19157.9	18730.2	16907.8	17038.2	19447.8	19712.0
60°	20123.1	21123.3	18473.3	17722.7	19979.9	20561.8	20126.7	18311.8	18476.9	20389.2	20025.8
62.5°	19820.4	21389.5	19686.4	18827.4	20697.5	21255.4	20943.4	19231.2	19649.6	20268.1	19495.5
65°	18922.8	21004.0	20739.8	19297.3	20284.5	20482.9	20400.1	19279.0	20286.5	19122.8	18029.2
67.5°	16827.1	19517.5	20270.0	18293.4	18355.7	18142.9	18034.6	17968.5	19570.7	17274.9	15716.7
70°	13685.1	16770.2	18029.2	15309.4	14846.8	14641.4	14285.2	15166.3	17590.5	14718.4	12934.5
72.5°	10541.5	12830.0	14788.2	11605.9	10644.2	10713.9	10310.2	11596.7	14571.5	11378.3	9875.2
75°	7485.8	8748.5	11804.1	8339.1	7065.6	7061.8	7030.8	8346.5	11497.5	8166.8	7225.2
77.5°	5395.5	6298.5	9247.6	5580.9	5013.8	5077.9	4975.3	5672.6	8963.2	5874.6	5353.3
80°	4303.6	4663.3	5977.3	3721.8	3732.8	3883.4	3861.3	3879.6	5896.6	4254.1	4002.6
82.5°	3092.3	3540.1	4569.7	2851.8	2468.4	2628.0	2659.3	2877.6	4160.4	3008.0	2639.0
85°	1585.6	2158.2	4204.4	2470.2	1543.4	1279.1	1471.9	2270.1	3613.5	1802.2	1286.6
87.5°	308.3	598.4	3081.4	1372.7	693.8	350.5	578.1	961.6	2101.3	326.7	159.7
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2
2.5°	9332.0	9097.1	8877.0	8649.4	8473.2	8258.5	8047.3	7863.9	7685.9	7568.4	7605.1
5°	9104.5	8531.9	8018.0	7540.9	7262.0	6926.1	6626.9	6375.5	6181.0	6056.3	6131.4
7.5°	8067.6	7293.1	6615.9	5986.5	5590.1	5155.2	4806.4	4560.5	4410.0	4325.6	4448.5
10°	7006.8	6137.0	5377.2	4722.0	4331.1	3962.2	3646.6	3386.0	3184.1	3088.6	3138.1
12.5°	6247.1	5279.9	4483.4	4043.0	3707.1	3376.8	3050.1	2745.5	2488.6	2371.0	2347.2
15°	5962.6	4819.2	4006.4	3514.3	3180.4	2820.7	2468.4	2141.6	1897.6	1796.7	1774.6
17.5°	6087.5	4720.1	3723.7	3141.9	2657.4	2220.6	1824.2	1515.9	1336.0	1279.1	1284.7
20°	6525.9	4756.9	3496.1	2758.3	2160.1	1642.6	1246.0	1033.2	956.2	943.3	958.0
22.5°	7128.1	4907.4	3330.9	2427.9	1721.4	1194.7	926.8	825.8	805.7	803.9	818.4
25°	7922.6	5200.9	3220.9	2134.4	1359.9	947.0	807.4	750.7	734.0	737.8	752.4
27.5°	8858.5	5573.5	3149.2	1881.1	1117.6	844.1	754.2	704.7	688.2	691.9	702.8
30°	9713.8	5900.2	3042.7	1690.3	1003.9	807.4	724.9	675.3	653.3	653.3	660.7
32.5°	10479.1	6182.9	2918.0	1547.2	899.3	724.9	657.0	618.5	602.0	607.4	611.1
35°	11158.0	6331.4	2820.7	1462.7	814.9	668.0	600.1	559.7	537.7	541.4	546.9
37.5°	11826.0	6388.3	2756.4	1416.7	754.2	633.1	570.8	537.7	513.9	510.1	508.4
40°	12461.1	6375.5	2696.0	1404.0	714.0	607.4	552.4	523.1	499.2	493.7	491.8
42.5°	13009.9	6333.3	2639.0	1369.0	686.3	589.1	537.7	512.0	488.1	480.9	477.2
45°	13510.9	6307.5	2576.7	1304.9	701.0	581.7	530.4	502.8	480.9	471.6	467.9
47.5°	14066.9	6399.3	2506.9	1235.1	697.4	583.5	530.4	499.2	477.2	467.9	464.3
50°	14729.4	6709.5	2420.7	1139.7	664.3	624.0	528.6	493.7	473.4	467.9	460.7
52.5°	15665.4	7212.4	2301.4	1016.7	638.6	666.3	526.6	484.5	467.9	458.9	449.6
55°	16948.2	7715.3	2147.2	886.4	598.4	636.8	530.4	473.4	455.1	446.0	435.0
57.5°	17999.8	8097.0	1952.6	778.1	561.6	602.0	524.9	460.7	440.4	431.2	422.2
60°	17931.8	8133.7	1767.3	708.5	539.5	541.4	537.7	451.5	427.7	420.2	413.0
62.5°	16821.5	7680.4	1594.9	673.5	523.1	493.7	548.8	440.4	414.7	407.4	401.9
65°	14973.5	6625.1	1503.0	673.5	508.4	467.9	478.9	425.7	401.9	394.5	390.9
67.5°	12629.9	5324.0	1416.7	688.2	488.1	449.6	435.0	411.1	389.1	381.7	378.0
70°	10123.0	4189.8	1356.3	680.8	469.9	429.4	411.1	390.9	368.8	367.0	363.4
72.5°	7940.9	3365.8	1328.8	680.8	442.2	405.6	387.2	372.5	350.5	348.7	343.2
75°	6362.6	2527.1	1214.9	668.0	414.7	374.4	357.9	344.9	323.0	324.8	321.1
77.5°	4927.6	1787.4	1014.8	602.0	380.0	339.5	326.7	317.6	291.8	293.7	293.7
80°	3854.0	1163.6	787.4	499.2	339.5	299.1	290.0	282.6	255.1	258.7	258.7
82.5°	2640.8	691.9	570.8	401.9	291.8	255.1	253.2	242.3	212.9	214.8	218.4
85°	1442.5	455.1	380.0	297.2	229.3	207.4	203.7	198.2	170.7	170.7	172.6
87.5°	266.1	244.1	223.9	196.4	154.1	148.7	143.1	148.7	128.5	124.8	124.8
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2
2.5°	7518.9	7392.2	7304.2	7227.0	7041.8	7054.6	7080.3	7116.9	7001.3	7061.8	7137.2
5°	6056.3	5951.6	5872.7	5749.7	5491.0	5399.3	5340.5	5314.8	5142.3	5179.0	5259.8
7.5°	4465.0	4463.1	4435.7	4298.1	3986.0	3797.0	3672.2	3633.7	3527.3	3567.7	3690.5
10°	3143.7	3176.8	3163.9	3040.9	2762.0	2626.1	2598.6	2675.7	2677.6	2756.4	2967.6
12.5°	2272.1	2253.7	2237.0	2136.2	1927.0	1904.9	1967.4	2073.7	2099.5	2183.9	2404.1
15°	1695.7	1651.8	1642.6	1563.6	1426.0	1446.1	1492.1	1547.2	1548.9	1607.6	1789.3
17.5°	1271.8	1271.8	1286.6	1235.1	1135.9	1126.8	1102.9	1088.2	1066.3	1090.2	1189.3
20°	987.3	1033.2	1069.9	1040.5	950.6	906.6	860.8	831.3	814.9	816.6	846.1
22.5°	846.1	882.8	930.5	915.7	840.5	783.6	754.2	734.0	721.2	721.2	737.8
25°	774.5	798.4	842.4	835.1	770.7	724.9	701.0	680.8	666.3	664.3	680.8
27.5°	717.6	732.3	761.7	757.9	691.9	662.5	647.9	635.0	625.8	624.0	640.5
30°	666.3	673.5	688.2	682.7	633.1	603.8	598.4	592.8	587.2	589.1	613.0
32.5°	620.3	625.8	635.0	627.6	579.9	554.3	545.0	537.7	532.2	537.7	565.3
35°	568.9	585.4	596.5	592.8	541.4	510.1	489.9	471.6	464.3	469.9	501.1
37.5°	524.9	552.4	567.1	563.3	510.1	473.4	447.7	444.1	444.1	451.5	482.7
40°	508.4	528.6	541.4	535.8	482.7	446.0	431.2	425.7	427.7	435.0	467.9
42.5°	493.7	512.0	515.6	504.7	451.5	427.7	418.4	411.1	414.7	423.9	457.0
45°	480.9	495.5	493.7	477.2	425.7	409.3	409.3	403.8	405.6	413.0	447.7
47.5°	471.6	478.9	475.4	458.9	407.4	394.5	400.0	400.0	403.8	409.3	444.1
50°	457.0	462.4	458.9	444.1	392.6	381.7	387.2	394.5	398.3	403.8	435.0
52.5°	442.2	446.0	444.1	429.4	378.0	370.7	370.7	378.0	385.5	392.6	420.2
55°	427.7	431.2	433.2	422.2	367.0	359.7	357.9	357.9	365.3	376.2	405.6
57.5°	416.6	416.6	420.2	413.0	356.0	346.8	337.8	339.5	348.7	357.9	387.2
60°	403.8	405.6	411.1	403.8	341.4	326.7	319.3	328.5	332.2	341.4	372.5
62.5°	392.6	392.6	396.4	390.9	328.5	313.8	308.3	317.6	317.6	326.7	357.9
65°	383.5	381.7	381.7	380.0	315.7	301.0	297.2	301.0	302.8	312.0	343.2
67.5°	376.2	367.0	367.0	370.7	302.8	288.1	286.3	286.3	288.1	299.1	326.7
70°	359.7	352.3	350.5	363.4	290.0	271.6	271.6	268.0	271.6	277.0	306.5
72.5°	341.4	335.8	334.0	352.3	277.0	253.2	249.5	247.8	249.5	255.1	282.6
75°	317.6	313.8	317.6	344.9	264.3	233.1	227.6	225.7	225.7	227.6	256.9
77.5°	290.0	286.3	313.8	321.1	256.9	209.2	203.7	200.1	196.4	196.4	229.3
80°	256.9	255.1	302.8	271.6	246.0	183.6	174.4	168.8	165.2	163.3	196.4
82.5°	223.9	220.3	258.7	212.9	203.7	150.5	137.6	126.7	121.1	121.1	150.5
85°	183.6	181.6	203.7	155.9	141.4	110.1	91.7	82.6	75.3	75.3	97.2
87.5°	133.9	130.3	126.7	93.7	71.5	49.5	34.9	33.1	29.4	27.5	40.3
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: P270612

CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7027-1200

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2	8629.2
2.5°	7249.1	7401.4	7689.5	7926.3	8241.9	8495.2	8783.4	8908.1
5°	5408.3	5648.8	6089.3	6465.5	6986.7	7469.2	8019.9	8320.9
7.5°	3879.6	4235.7	4569.7	5039.5	5691.0	6338.8	7050.8	7449.1
10°	3209.7	3536.4	3822.7	4156.7	4659.6	5388.2	6237.9	6687.5
12.5°	2659.3	3011.6	3314.3	3672.2	4094.4	4753.2	5722.3	6245.2
15°	2039.0	2422.5	2785.9	3217.1	3734.7	4487.2	5568.1	6151.7
17.5°	1396.5	1807.7	2255.5	2782.2	3406.2	4375.1	5714.8	6434.3
20°	948.8	1249.8	1736.2	2360.0	3110.7	4321.9	6037.9	7016.0
22.5°	780.0	915.7	1281.0	1963.7	2868.5	4380.7	6562.7	7781.3
25°	715.7	789.2	996.5	1615.1	2683.1	4536.6	7272.9	8645.6
27.5°	675.3	737.8	873.5	1365.5	2512.4	4749.5	8137.3	9702.8
30°	651.5	710.2	824.0	1237.0	2356.4	4933.0	8880.6	10499.2
32.5°	598.4	642.3	735.9	1163.6	2244.4	5081.7	9535.8	11244.4
35°	534.0	587.2	664.3	1115.9	2240.8	5151.4	10152.5	12068.4
37.5°	510.1	561.6	618.5	1090.2	2262.8	5210.2	10906.7	13002.4
40°	495.5	541.4	587.2	1086.4	2281.2	5256.1	11644.4	13975.1
42.5°	482.7	528.6	581.7	1060.8	2273.8	5318.4	12297.7	14810.1
45°	478.9	524.9	594.6	1022.2	2272.1	5415.7	12817.1	15478.2
47.5°	475.4	545.0	590.9	980.1	2264.6	5621.2	13402.5	16100.3
50°	471.6	581.7	565.3	921.3	2209.7	5971.8	14189.8	16812.4
52.5°	469.9	587.2	537.7	840.5	2110.5	6491.2	15342.4	17803.4
55°	462.4	557.8	489.9	734.0	1967.4	7050.8	16577.5	18968.8
57.5°	446.0	497.3	462.4	629.5	1761.8	7441.7	17489.6	19869.8
60°	486.3	427.7	444.1	576.3	1515.9	7511.5	17530.0	20123.1
62.5°	464.3	389.1	425.7	557.8	1343.3	7056.4	16728.0	19820.4
65°	370.7	368.8	409.3	576.3	1317.6	6037.9	15373.6	18922.8
67.5°	337.8	354.2	392.6	598.4	1334.3	4756.9	13380.6	16827.1
70°	315.7	335.8	370.7	618.5	1363.5	3747.5	10772.7	13685.1
72.5°	293.7	310.2	348.7	638.6	1343.3	2956.5	8621.8	10541.5
75°	266.1	280.8	317.6	585.4	1152.5	2172.9	6850.8	7485.8
77.5°	234.8	247.8	279.0	462.4	866.2	1512.1	5131.3	5395.5
80°	201.8	207.4	231.3	337.8	565.3	904.8	3905.3	4303.6
82.5°	159.7	161.4	176.2	247.8	352.3	578.1	2708.7	3092.3
85°	102.8	106.4	113.7	174.4	236.8	370.7	1383.7	1585.6
87.5°	34.9	40.3	40.3	84.4	115.6	205.5	423.9	308.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)