

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: P270532

Luminaire Tested: **NAV-AF-04-D-UNV-SLL-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270532  
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-04-D-UNV-SLL-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 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: 20536.5 lumens  
Efficiency: N/A  
Efficacy: 79.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G4

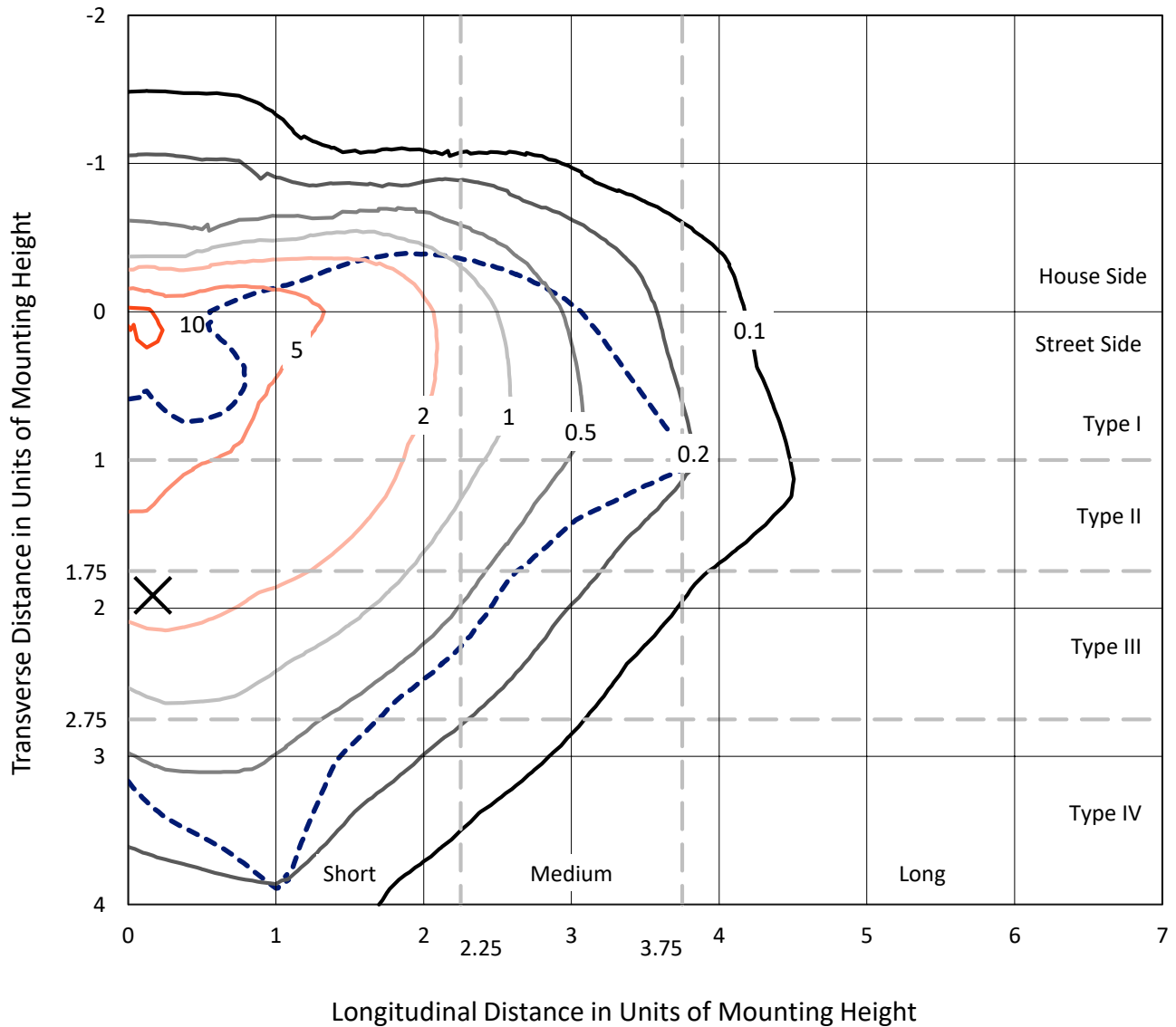
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

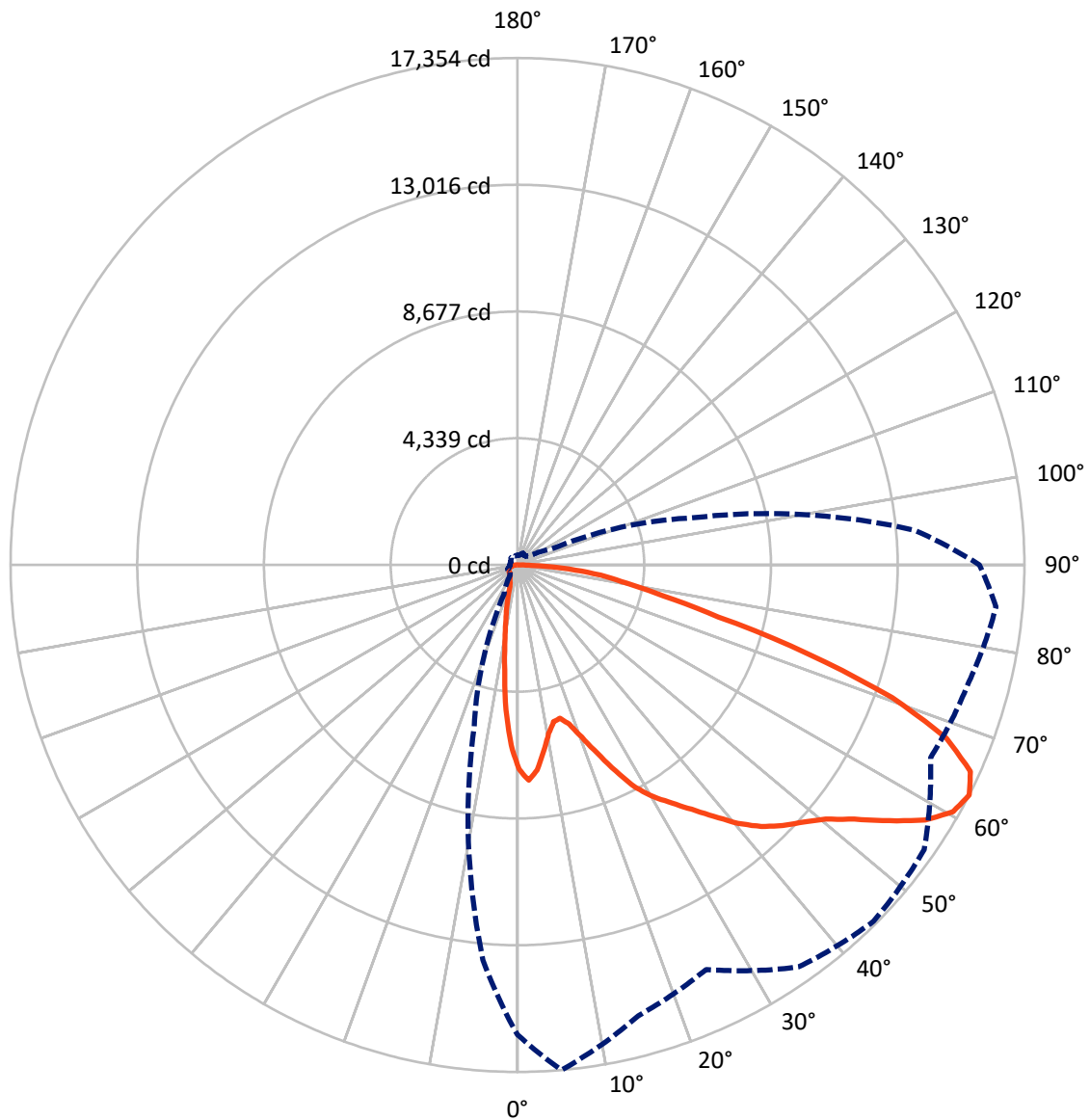


Based on 25 foot mounting height. Maximum calculated value = 12.9 fc  
 Type IV - Short - Non-Cutoff

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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	3638.1	0.0	3638.1
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	16898.5	0.0	16898.5
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	20536.5	0.0	20536.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	509.2	2.5
10°-20°	930.0	4.5
20°-30°	1337.6	6.5
30°-40°	2048.6	10.0
40°-50°	2995.2	14.6
50°-60°	4358.0	21.2
60°-70°	5049.3	24.6
70°-80°	2632.1	12.8
80°-90°	676.6	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°	20536.5	100.0
0°-180°	20536.5	100.0

**Coefficient of Utilization**



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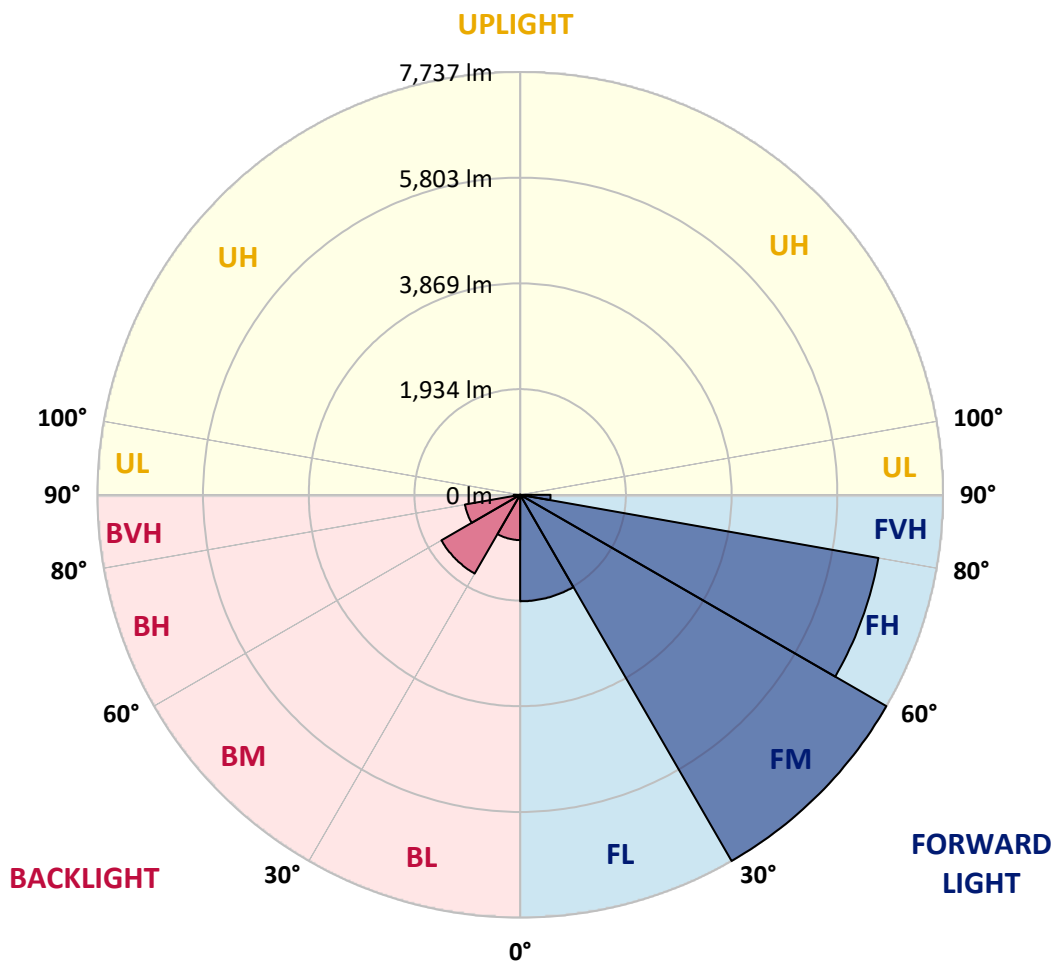
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1949.0	9.5			
FM	(30°-60°)	7737.2	37.7			
FH	(60°-80°)	6655.6	32.4			G3/7500
FVH	(80°-90°)	556.6	2.7			G4/750
BL	(0°-30°)	827.7	4.0	B2/1000		
BM	(30°-60°)	1664.5	8.1	B2/2500		
BH	(60°-80°)	1025.8	5.0	B3/2500		G3/2500
BVH	(80°-90°)	120.0	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°	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3
2.5°	7227.7	7381.1	7556.7	7786.0	7942.4	8004.8	8057.0	7969.1	7884.2	7725.0	7668.4
5°	6751.1	7045.9	7530.0	7990.1	8395.0	8627.3	8698.7	8536.5	8247.6	7830.6	7610.4
7.5°	6043.8	6432.6	7113.0	7790.6	8371.1	8758.4	8786.6	8465.0	7896.2	7212.8	6855.3
10°	5425.9	5865.3	6652.8	7410.7	8025.7	8421.8	8344.4	7893.2	7206.8	6429.4	6026.0
12.5°	5067.1	5506.3	6308.9	7078.7	7658.0	7808.3	7650.5	7270.8	6620.1	5841.4	5434.8
15°	4991.2	5443.8	6186.8	6836.0	7194.9	7098.0	6941.7	6749.7	6286.6	5649.4	5256.3
17.5°	5220.5	5726.8	6349.1	6704.9	6690.0	6457.8	6326.9	6364.0	6285.1	5857.8	5446.9
20°	5692.5	6291.1	6761.6	6669.2	6288.0	5962.1	5886.1	6178.0	6542.6	6380.4	5929.3
22.5°	6313.4	6995.3	7324.4	6772.1	6078.1	5726.8	5711.9	6167.5	7011.7	7171.1	6621.5
25°	7014.8	7809.9	7891.7	6953.7	6055.7	5705.9	5692.5	6328.3	7576.0	7954.3	7397.5
27.5°	7872.3	8631.8	8365.2	7196.3	6154.1	5766.8	5775.8	6602.3	8164.2	8728.6	8271.5
30°	8518.5	9215.4	8657.1	7434.6	6311.9	5874.1	5896.5	6898.5	8481.3	9266.0	8969.8
32.5°	9123.1	9714.4	8937.0	7669.9	6542.6	6033.5	6110.9	7267.8	8862.6	9727.7	9629.4
35°	9791.7	10272.7	9248.2	7921.6	6873.2	6313.4	6425.0	7619.2	9240.8	10189.3	10283.1
37.5°	10549.6	10911.4	9586.3	8277.4	7349.8	6831.6	6894.1	7978.0	9504.3	10700.0	10984.5
40°	11338.8	11627.7	9955.5	8752.4	8042.2	7531.4	7561.2	8438.1	9711.2	11228.6	11664.9
42.5°	12016.3	12241.2	10326.2	9342.1	8837.3	8244.6	8269.9	8934.1	9909.4	11684.3	12209.9
45°	12558.2	12723.6	10676.1	9962.9	9686.0	9135.0	9129.0	9438.9	10174.5	12068.4	12628.3
47.5°	13063.1	13150.8	11066.3	10567.5	10566.0	10281.6	10068.7	10034.3	10527.2	12391.5	12993.1
50°	13640.9	13673.6	11581.5	11178.0	11641.0	11596.4	11203.3	10790.8	10984.5	12754.9	13375.8
52.5°	14444.8	14446.4	12220.3	11773.5	12827.7	12969.2	12512.1	11647.1	11660.4	13462.1	14036.8
55°	15390.4	15455.9	13052.6	12486.8	14069.7	14310.9	13880.5	12663.9	12631.2	14602.7	15109.0
57.5°	16121.5	16468.4	14022.0	13378.7	15229.5	15543.7	15196.7	13718.2	13823.9	15779.0	15993.5
60°	16327.0	17138.5	14988.3	14379.3	16210.9	16682.9	16329.8	14857.2	14991.4	16542.8	16248.1
62.5°	16081.3	17354.4	15972.6	15275.7	16793.0	17245.8	16992.6	15603.3	15942.8	16444.6	15817.7
65°	15353.1	17041.7	16827.3	15656.9	16457.9	16618.9	16551.8	15641.9	16459.5	15515.4	14628.0
67.5°	13652.7	15835.6	16446.1	14842.4	14893.0	14720.3	14632.5	14578.9	15878.8	14016.1	12751.9
70°	11103.5	13606.5	14628.0	12421.4	12046.0	11879.2	11590.4	12305.2	14272.1	11941.8	10494.4
72.5°	8552.9	10409.6	11998.4	9416.5	8636.2	8692.8	8365.2	9409.0	11822.8	9231.8	8012.3
75°	6073.7	7098.0	9577.3	6766.0	5732.7	5729.7	5704.3	6772.1	9328.5	6626.1	5862.2
77.5°	4377.7	5110.3	7503.2	4528.0	4068.0	4120.0	4036.8	4602.6	7272.3	4766.2	4343.5
80°	3491.7	3783.7	4849.7	3019.7	3028.6	3150.7	3132.8	3147.8	4784.2	3451.5	3247.6
82.5°	2509.0	2872.3	3707.7	2313.9	2002.7	2132.2	2157.5	2334.8	3375.7	2440.4	2141.2
85°	1286.6	1751.1	3411.4	2004.2	1252.2	1037.8	1194.1	1842.0	2931.9	1462.3	1043.8
87.5°	250.2	485.4	2500.1	1113.8	562.9	284.5	469.0	780.3	1705.0	265.0	129.5
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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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3
2.5°	7571.6	7381.1	7202.3	7017.6	6874.8	6700.5	6529.3	6380.4	6235.9	6140.6	6170.5
5°	7386.9	6922.3	6505.4	6118.4	5892.1	5619.4	5376.9	5172.8	5015.0	4913.6	4974.8
7.5°	6545.7	5917.3	5367.8	4857.1	4535.5	4182.6	3899.7	3700.2	3578.0	3509.6	3609.4
10°	5685.1	4979.2	4362.8	3831.2	3514.1	3214.8	2958.7	2747.2	2583.4	2506.0	2546.2
12.5°	5068.5	4283.8	3637.6	3280.3	3007.7	2739.8	2474.7	2227.5	2019.1	1923.8	1904.4
15°	4837.8	3910.1	3250.4	2851.4	2580.4	2288.6	2002.7	1737.7	1539.7	1457.7	1439.9
17.5°	4939.1	3829.7	3021.2	2549.2	2156.1	1801.7	1480.0	1229.9	1084.0	1037.8	1042.4
20°	5294.9	3859.5	2836.6	2237.9	1752.6	1332.6	1011.0	838.3	775.7	765.4	777.3
22.5°	5783.3	3981.6	2702.6	1970.0	1396.7	969.4	751.9	670.0	653.6	652.2	664.0
25°	6428.0	4219.9	2613.2	1731.8	1103.4	768.3	655.1	609.1	595.5	598.6	610.5
27.5°	7187.3	4522.1	2555.0	1526.2	906.7	685.0	611.9	571.9	558.3	561.4	570.2
30°	7881.3	4787.2	2468.8	1371.4	814.6	655.1	588.2	548.0	530.1	530.1	536.1
32.5°	8502.2	5016.4	2367.6	1255.2	729.7	588.2	533.1	501.9	488.4	492.9	495.9
35°	9053.2	5137.0	2288.6	1186.8	661.2	541.9	486.9	454.2	436.2	439.2	443.8
37.5°	9595.2	5183.2	2236.5	1149.6	611.9	513.7	463.0	436.2	417.0	413.9	412.4
40°	10110.3	5172.8	2187.4	1139.1	579.2	492.9	448.2	424.4	405.0	400.6	399.0
42.5°	10555.5	5138.6	2141.2	1110.8	556.9	478.0	436.2	415.5	396.1	390.1	387.1
45°	10962.0	5117.7	2090.5	1058.7	568.7	472.0	430.3	408.0	390.1	382.7	379.8
47.5°	11413.2	5192.2	2034.0	1002.1	565.8	473.4	430.3	405.0	387.1	379.8	376.7
50°	11950.8	5443.8	1964.1	924.6	539.1	506.3	428.9	400.6	384.1	379.8	373.8
52.5°	12710.2	5851.7	1867.1	825.0	518.2	540.5	427.4	393.1	379.8	372.3	364.8
55°	13751.0	6259.7	1742.2	719.3	485.4	516.6	430.3	384.1	369.3	361.8	352.9
57.5°	14604.1	6569.5	1584.3	631.4	455.6	488.4	425.8	373.8	357.3	349.9	342.4
60°	14549.0	6599.3	1434.0	574.7	437.7	439.2	436.2	366.2	346.9	340.9	335.0
62.5°	13648.2	6231.5	1294.0	546.4	424.4	400.6	445.2	357.3	336.5	330.5	326.1
65°	12148.8	5375.3	1219.4	546.4	412.4	379.8	388.6	345.5	326.1	320.2	317.1
67.5°	10247.3	4319.6	1149.6	558.3	396.1	364.8	352.9	333.5	315.7	309.7	306.7
70°	8213.4	3399.4	1100.3	552.4	381.2	348.5	333.5	317.1	299.2	297.8	294.9
72.5°	6443.0	2730.8	1078.1	552.4	358.9	329.0	314.1	302.3	284.5	282.8	278.5
75°	5162.4	2050.3	985.7	541.9	336.5	303.7	290.3	279.9	262.0	263.6	260.6
77.5°	3997.9	1450.4	823.4	488.4	308.2	275.5	265.0	257.6	236.8	238.2	238.2
80°	3126.9	943.9	638.8	405.0	275.5	242.7	235.3	229.2	207.0	209.9	209.9
82.5°	2142.6	561.4	463.0	326.1	236.8	207.0	205.5	196.5	172.7	174.2	177.1
85°	1170.3	369.3	308.2	241.3	186.0	168.3	165.3	160.7	138.5	138.5	140.0
87.5°	216.0	198.0	181.6	159.3	125.0	120.6	116.2	120.6	104.3	101.2	101.2
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°	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3
2.5°	6100.5	5997.8	5926.3	5863.6	5713.3	5723.7	5744.7	5774.3	5680.5	5729.7	5790.7
5°	4913.6	4828.8	4764.8	4665.1	4455.1	4380.7	4333.1	4312.1	4172.2	4202.0	4267.5
7.5°	3622.8	3621.2	3598.9	3487.3	3234.1	3080.7	2979.5	2948.2	2861.9	2894.6	2994.4
10°	2550.6	2577.4	2567.0	2467.3	2240.9	2130.8	2108.4	2170.9	2172.6	2236.5	2407.7
12.5°	1843.4	1828.5	1815.0	1733.2	1563.5	1545.7	1596.2	1682.5	1703.5	1771.9	1950.6
15°	1375.8	1340.1	1332.6	1268.6	1156.9	1173.4	1210.6	1255.2	1256.6	1304.3	1451.8
17.5°	1032.0	1032.0	1043.8	1002.1	921.8	914.2	894.9	882.9	865.1	884.6	964.9
20°	801.1	838.3	868.1	844.2	771.4	735.5	698.3	674.4	661.2	662.6	686.5
22.5°	686.5	716.2	754.9	743.0	682.0	635.8	611.9	595.5	585.2	585.2	598.6
25°	628.4	647.7	683.4	677.5	625.4	588.2	568.7	552.4	540.5	539.1	552.4
27.5°	582.2	594.0	617.9	615.0	561.4	537.5	525.6	515.2	507.7	506.3	519.7
30°	540.5	546.4	558.3	554.0	513.7	489.8	485.4	481.0	476.6	478.0	497.3
32.5°	503.3	507.7	515.2	509.2	470.5	449.7	442.2	436.2	431.8	436.2	458.7
35°	461.5	475.1	483.9	481.0	439.2	413.9	397.6	382.7	376.7	381.2	406.6
37.5°	425.8	448.2	460.1	457.1	413.9	384.1	363.4	360.3	360.3	366.2	391.7
40°	412.4	428.9	439.2	434.8	391.7	361.8	349.9	345.5	346.9	352.9	379.8
42.5°	400.6	415.5	418.4	409.4	366.2	346.9	339.5	333.5	336.5	344.1	370.8
45°	390.1	402.0	400.6	387.1	345.5	332.1	332.1	327.6	329.0	335.0	363.4
47.5°	382.7	388.6	385.6	372.3	330.5	320.2	324.6	324.6	327.6	332.1	360.3
50°	370.8	375.2	372.3	360.3	318.7	309.7	314.1	320.2	323.1	327.6	352.9
52.5°	358.9	361.8	360.3	348.5	306.7	300.8	300.8	306.7	312.7	318.7	340.9
55°	346.9	349.9	351.3	342.4	297.8	291.9	290.3	290.3	296.4	305.2	329.0
57.5°	338.0	338.0	340.9	335.0	288.9	281.3	274.0	275.5	282.8	290.3	314.1
60°	327.6	329.0	333.5	327.6	276.9	265.0	259.2	266.5	269.5	276.9	302.3
62.5°	318.7	318.7	321.7	317.1	266.5	254.6	250.2	257.6	257.6	265.0	290.3
65°	311.3	309.7	309.7	308.2	256.0	244.2	241.3	244.2	245.6	253.1	278.5
67.5°	305.2	297.8	297.8	300.8	245.6	233.7	232.3	232.3	233.7	242.7	265.0
70°	291.9	285.9	284.5	294.9	235.3	220.4	220.4	217.4	220.4	224.8	248.7
72.5°	276.9	272.5	271.0	285.9	224.8	205.5	202.5	201.0	202.5	207.0	229.2
75°	257.6	254.6	257.6	279.9	214.4	189.2	184.6	183.2	183.2	184.6	208.4
77.5°	235.3	232.3	254.6	260.6	208.4	169.7	165.3	162.4	159.3	159.3	186.0
80°	208.4	207.0	245.6	220.4	199.6	148.8	141.5	137.0	133.9	132.5	159.3
82.5°	181.6	178.8	209.9	172.7	165.3	122.1	111.7	102.8	98.3	98.3	122.1
85°	148.8	147.4	165.3	126.7	114.7	89.3	74.5	67.1	61.1	61.1	79.0
87.5°	108.7	105.7	102.8	75.9	58.1	40.2	28.2	26.8	23.9	22.4	32.8
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: P270532

CATALOG NUMBER: NAV-AF-04-D-UNV-SLL-7027-1200

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3	7001.3
2.5°	5881.6	6005.2	6239.0	6431.1	6687.2	6892.6	7126.3	7227.7
5°	4388.1	4583.2	4940.5	5245.7	5668.7	6060.2	6507.0	6751.1
7.5°	3147.8	3436.6	3707.7	4088.8	4617.4	5143.1	5720.8	6043.8
10°	2604.2	2869.4	3101.6	3372.5	3780.5	4371.7	5061.1	5425.9
12.5°	2157.5	2443.5	2689.2	2979.5	3322.0	3856.6	4642.7	5067.1
15°	1654.3	1965.5	2260.3	2610.3	3030.2	3640.7	4517.7	4991.2
17.5°	1133.1	1466.7	1829.9	2257.4	2763.5	3549.8	4636.8	5220.5
20°	769.8	1013.9	1408.6	1914.8	2523.9	3506.7	4898.8	5692.5
22.5°	632.9	743.0	1039.2	1593.2	2327.2	3554.2	5324.8	6313.4
25°	580.8	640.3	808.6	1310.3	2177.0	3680.8	5901.0	7014.8
27.5°	548.0	598.6	708.8	1107.8	2038.4	3853.5	6602.3	7872.3
30°	528.7	576.3	668.6	1003.5	1912.0	4002.5	7205.3	8518.5
32.5°	485.4	521.1	597.2	943.9	1821.0	4123.1	7736.9	9123.1
35°	433.3	476.6	539.1	905.3	1818.1	4179.6	8237.2	9791.7
37.5°	413.9	455.6	501.9	884.6	1836.0	4227.2	8849.2	10549.6
40°	402.0	439.2	476.6	881.4	1850.9	4264.6	9447.7	11338.8
42.5°	391.7	428.9	472.0	860.7	1844.8	4315.2	9977.8	12016.3
45°	388.6	425.8	482.4	829.3	1843.4	4394.1	10399.1	12558.2
47.5°	385.6	442.2	479.4	795.1	1837.5	4560.9	10874.3	13063.1
50°	382.7	472.0	458.7	747.5	1792.7	4845.2	11512.9	13640.9
52.5°	381.2	476.6	436.2	682.0	1712.3	5266.7	12448.2	14444.8
55°	375.2	452.7	397.6	595.5	1596.2	5720.8	13450.2	15390.4
57.5°	361.8	403.5	375.2	510.7	1429.5	6037.9	14190.3	16121.5
60°	394.5	346.9	360.3	467.6	1229.9	6094.6	14223.0	16327.0
62.5°	376.7	315.7	345.5	452.7	1090.0	5725.3	13572.3	16081.3
65°	300.8	299.2	332.1	467.6	1069.2	4898.8	12473.4	15353.1
67.5°	274.0	287.4	318.7	485.4	1082.5	3859.5	10856.3	13652.7
70°	256.0	272.5	300.8	501.9	1106.4	3040.6	8740.5	11103.5
72.5°	238.2	251.6	282.8	518.2	1090.0	2398.7	6995.3	8552.9
75°	216.0	227.8	257.6	475.1	935.0	1763.0	5558.4	6073.7
77.5°	190.6	201.0	226.4	375.2	702.8	1226.9	4163.3	4377.7
80°	163.9	168.3	187.7	274.0	458.7	734.0	3168.6	3491.7
82.5°	129.5	131.1	142.9	201.0	285.9	469.0	2197.8	2509.0
85°	83.5	86.3	92.3	141.5	192.1	300.8	1122.7	1286.6
87.5°	28.2	32.8	32.8	68.5	93.9	166.7	344.1	250.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)