

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: P196689

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196689  
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-03-D-UNV-SLL-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 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: 12501.4 lumens  
Efficiency: N/A  
Efficacy: 100.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

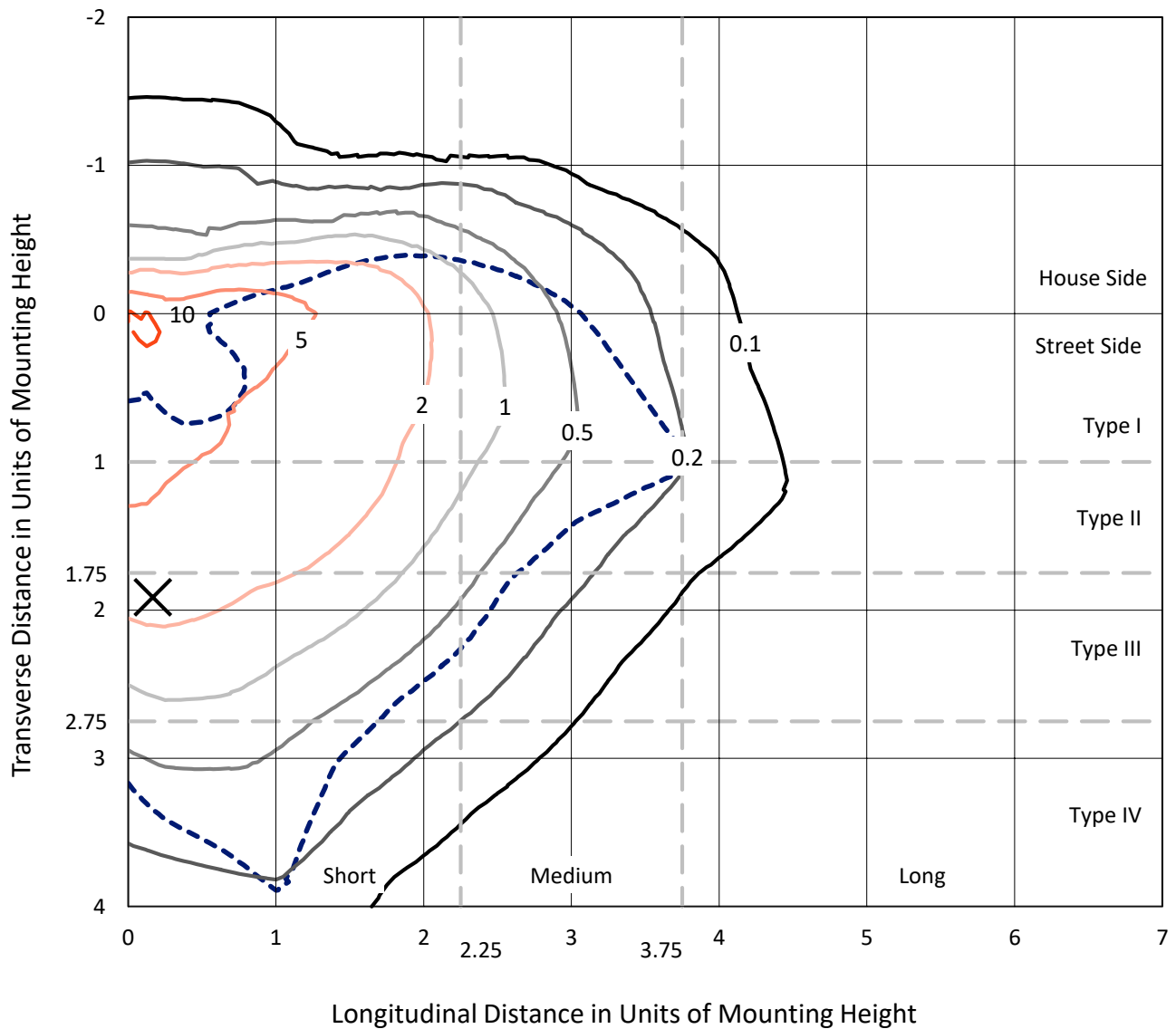
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

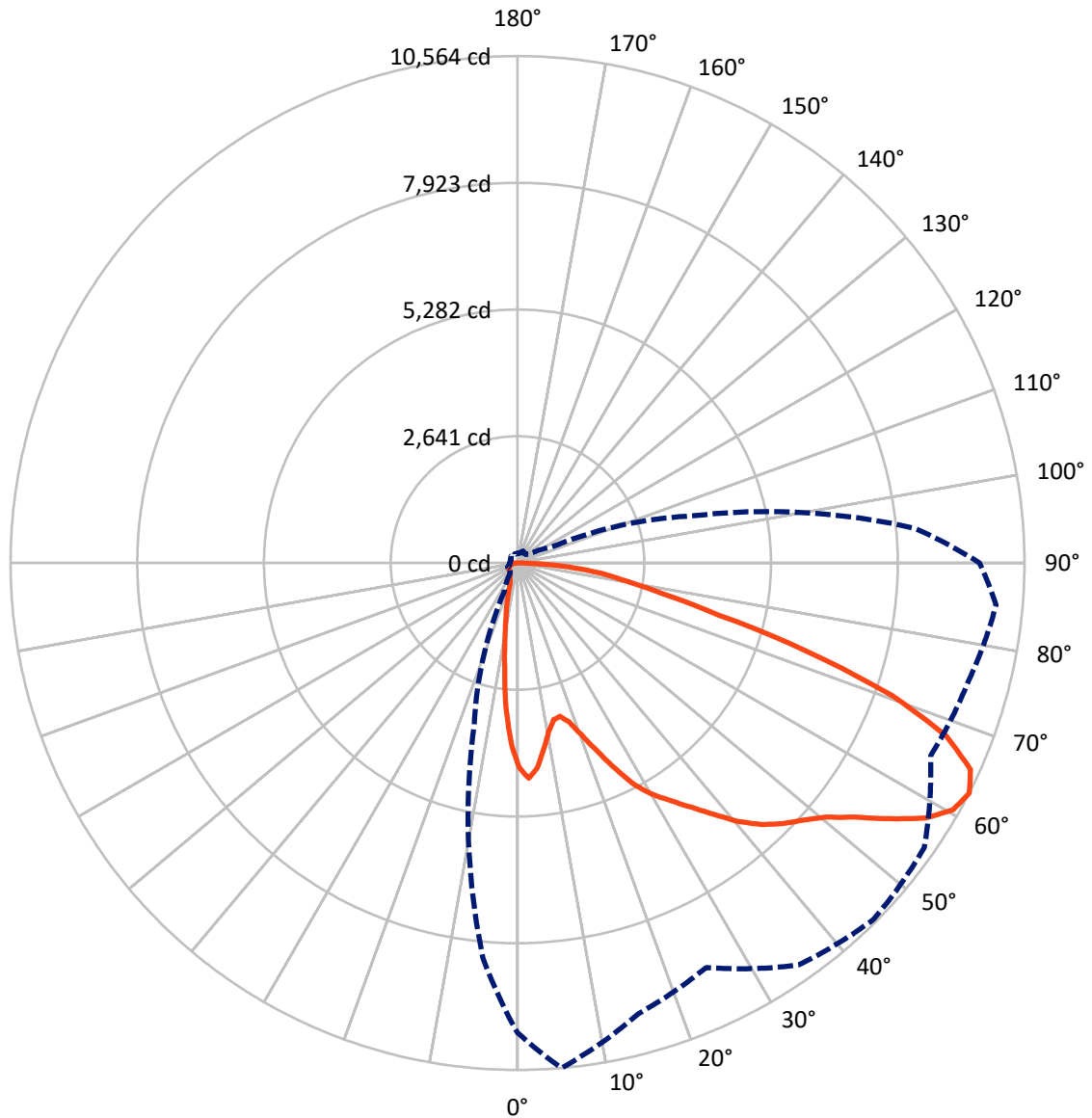
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 12.2 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	2214.7	0.0	2214.7
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	10286.8	0.0	10286.8
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	12501.4	0.0	12501.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	310.0	2.5
10°-20°	566.1	4.5
20°-30°	814.2	6.5
30°-40°	1247.1	10.0
40°-50°	1823.3	14.6
50°-60°	2652.9	21.2
60°-70°	3073.7	24.6
70°-80°	1602.3	12.8
80°-90°	411.9	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°	12501.4	100.0
0°-180°	12501.4	100.0



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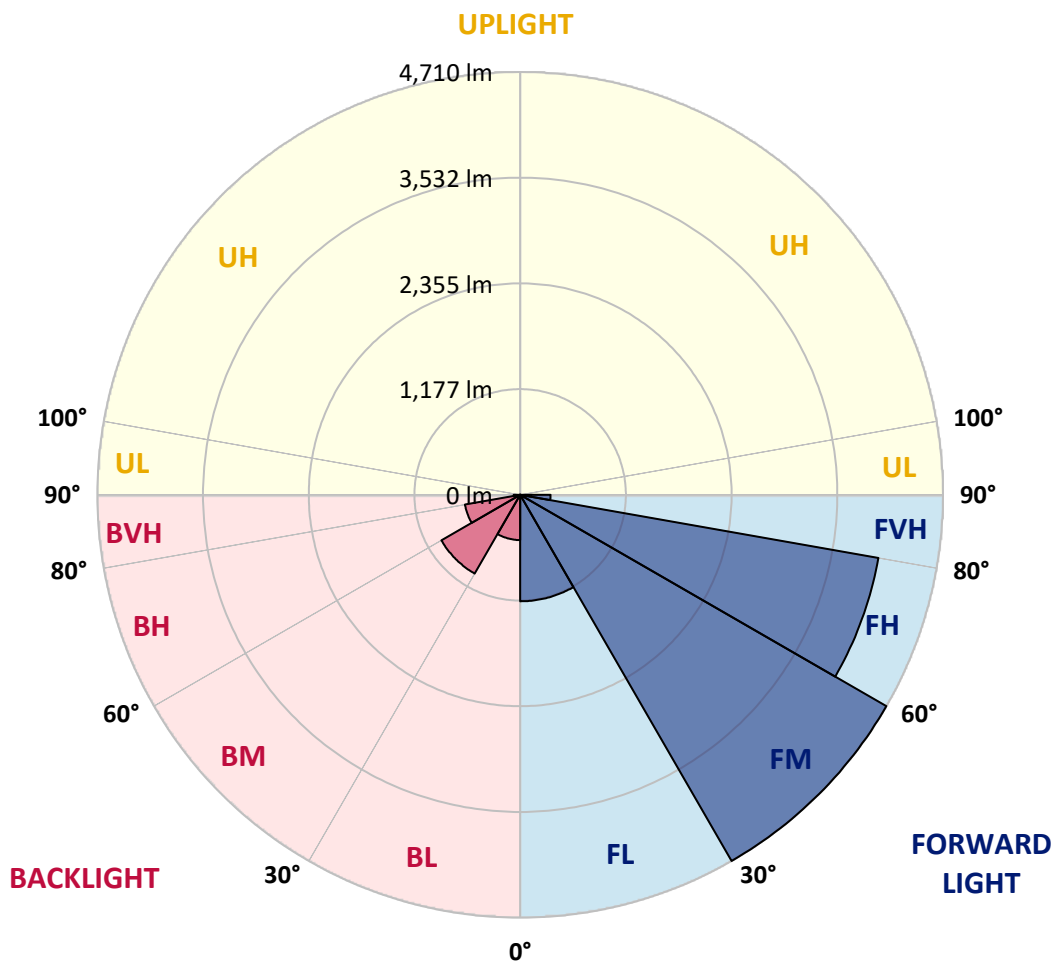
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1186.4	9.5			
FM	(30°-60°)	4710.0	37.7			
FH	(60°-80°)	4051.5	32.4			G2/5000
FVH	(80°-90°)	338.8	2.7			G3/500
BL	(0°-30°)	503.9	4.0	B2/1000		
BM	(30°-60°)	1013.3	8.1	B2/2500		
BH	(60°-80°)	624.5	5.0	B2/1000		G2/1000
BVH	(80°-90°)	73.0	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	4399.8	4493.2	4600.1	4739.6	4834.8	4873.0	4904.6	4851.1	4799.5	4702.5	4668.1
5°	4109.7	4289.2	4583.8	4863.9	5110.4	5251.8	5295.4	5196.5	5020.7	4766.9	4632.7
7.5°	3679.2	3915.8	4330.0	4742.4	5095.9	5331.6	5348.8	5153.0	4806.8	4390.7	4173.1
10°	3303.0	3570.4	4049.9	4511.2	4885.6	5126.7	5079.6	4804.9	4387.1	3913.8	3668.3
12.5°	3084.5	3352.0	3840.5	4309.0	4661.8	4753.4	4657.1	4426.1	4029.9	3555.9	3308.5
15°	3038.3	3313.9	3766.1	4161.3	4379.8	4320.8	4225.7	4108.8	3827.0	3438.9	3199.6
17.5°	3178.0	3486.1	3864.9	4081.6	4072.5	3931.1	3851.4	3874.0	3826.0	3565.9	3315.7
20°	3465.2	3829.6	4116.1	4059.8	3827.8	3629.3	3583.0	3760.7	3982.8	3884.0	3609.4
22.5°	3843.2	4258.4	4458.7	4122.4	3700.1	3486.1	3477.0	3754.3	4268.3	4365.4	4030.9
25°	4270.2	4754.2	4804.0	4233.0	3686.4	3473.4	3465.2	3852.3	4611.9	4842.2	4503.1
27.5°	4792.2	5254.5	5092.2	4380.8	3746.3	3510.6	3516.0	4019.1	4969.8	5313.4	5035.2
30°	5185.7	5609.8	5269.9	4525.7	3842.3	3575.8	3589.3	4199.5	5162.9	5640.6	5460.2
32.5°	5553.6	5913.4	5440.3	4668.9	3982.8	3672.9	3720.0	4424.2	5395.0	5921.7	5861.9
35°	5960.6	6253.4	5629.8	4822.1	4184.1	3843.2	3911.2	4638.2	5625.2	6202.6	6259.8
37.5°	6422.0	6642.3	5835.5	5038.8	4474.0	4158.6	4196.7	4856.6	5785.8	6513.5	6686.6
40°	6902.4	7078.3	6060.3	5327.9	4895.6	4584.6	4602.8	5136.8	5911.7	6835.4	7100.9
42.5°	7314.8	7451.7	6286.0	5686.8	5379.6	5018.9	5034.2	5438.5	6032.2	7112.7	7432.7
45°	7644.8	7745.4	6499.1	6064.9	5896.2	5560.9	5557.3	5745.8	6193.6	7346.6	7687.4
47.5°	7952.0	8005.5	6736.5	6432.8	6432.0	6258.8	6129.2	6108.3	6408.4	7543.3	7909.4
50°	8303.7	8323.7	7050.2	6804.4	7086.4	7059.2	6820.0	6568.8	6686.6	7764.4	8142.3
52.5°	8793.1	8794.1	7439.0	7167.1	7808.9	7895.0	7616.7	7090.1	7098.1	8195.0	8544.8
55°	9368.8	9408.7	7945.7	7601.2	8564.8	8711.6	8449.7	7709.2	7689.1	8889.3	9197.5
57.5°	9813.7	10025.0	8535.8	8144.1	9270.8	9462.2	9251.0	8350.9	8415.2	9605.3	9735.9
60°	9938.9	10432.9	9124.0	8753.3	9868.2	10155.5	9940.7	9044.3	9125.9	10070.3	9890.9
62.5°	9789.3	10564.4	9723.2	9298.9	10222.7	10498.1	10344.1	9498.4	9705.1	10010.6	9628.9
65°	9346.1	10373.9	10243.5	9531.0	10018.6	10116.6	10075.8	9522.0	10019.6	9444.9	8904.6
67.5°	8311.1	9639.8	10011.4	9035.2	9066.0	8960.9	8907.4	8874.8	9666.0	8532.2	7762.6
70°	6759.3	8282.8	8904.6	7561.4	7332.9	7231.5	7055.6	7490.7	8688.1	7269.4	6388.5
72.5°	5206.5	6336.8	7304.0	5732.2	5257.2	5291.7	5092.2	5727.7	7197.0	5619.9	4877.5
75°	3697.4	4320.8	5830.1	4118.7	3489.7	3487.9	3472.5	4122.4	5678.8	4033.6	3568.6
77.5°	2664.9	3110.8	4567.5	2756.4	2476.4	2508.0	2457.3	2801.7	4426.9	2901.5	2644.1
80°	2125.5	2303.1	2952.1	1838.2	1843.6	1917.9	1907.1	1916.2	2912.3	2101.0	1976.9
82.5°	1527.3	1748.4	2257.0	1408.6	1219.2	1298.0	1313.4	1421.3	2054.8	1485.6	1303.5
85°	783.2	1066.0	2076.6	1220.0	762.3	631.7	726.9	1121.2	1784.7	890.1	635.5
87.5°	152.3	295.5	1521.9	678.0	342.6	173.1	285.5	474.9	1037.9	161.3	78.8
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°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	4609.1	4493.2	4384.3	4271.9	4184.9	4078.8	3974.7	3884.0	3796.1	3738.1	3756.3
5°	4496.8	4213.9	3960.1	3724.4	3586.7	3420.8	3273.1	3148.9	3052.8	2991.2	3028.3
7.5°	3984.5	3602.2	3267.6	2956.8	2761.0	2546.2	2373.8	2252.5	2178.1	2136.4	2197.2
10°	3460.7	3031.1	2655.8	2332.2	2139.2	1957.0	1801.0	1672.3	1572.7	1525.5	1550.0
12.5°	3085.5	2607.8	2214.3	1996.8	1830.9	1667.9	1506.4	1356.0	1229.0	1171.1	1159.4
15°	2945.0	2380.2	1978.6	1735.8	1570.8	1393.2	1219.2	1057.7	937.2	887.4	876.5
17.5°	3006.6	2331.3	1839.2	1551.8	1312.5	1096.8	901.0	748.8	659.9	631.7	634.5
20°	3223.2	2349.4	1726.8	1362.4	1066.8	811.2	615.4	510.4	472.2	465.9	473.2
22.5°	3520.6	2423.8	1645.1	1199.2	850.2	590.1	457.8	407.9	397.9	397.0	404.3
25°	3913.0	2568.8	1590.9	1054.2	671.6	467.7	398.8	370.7	362.5	364.4	371.6
27.5°	4375.3	2752.8	1555.5	929.0	552.0	417.0	372.6	348.1	339.9	341.8	347.1
30°	4797.7	2914.2	1502.9	834.8	495.8	398.8	358.1	333.6	322.7	322.7	326.3
32.5°	5175.6	3053.7	1441.2	764.2	444.1	358.1	324.5	305.5	297.3	300.0	301.9
35°	5511.0	3127.1	1393.2	722.4	402.4	330.0	296.4	276.4	265.6	267.3	270.1
37.5°	5841.0	3155.3	1361.5	699.8	372.6	312.7	281.9	265.6	253.8	252.0	251.1
40°	6154.6	3148.9	1331.6	693.4	352.6	300.0	272.8	258.3	246.6	243.8	242.9
42.5°	6425.6	3128.1	1303.5	676.2	339.0	290.9	265.6	252.9	241.1	237.5	235.7
45°	6673.1	3115.4	1272.7	644.4	346.3	287.4	262.0	248.3	237.5	232.9	231.1
47.5°	6947.7	3160.7	1238.1	610.0	344.5	288.2	262.0	246.6	235.7	231.1	229.3
50°	7274.9	3313.9	1195.6	562.9	328.1	308.2	261.0	243.8	233.9	231.1	227.5
52.5°	7737.2	3562.3	1136.7	502.1	315.4	329.0	260.1	239.3	231.1	226.6	222.2
55°	8370.8	3810.6	1060.5	437.8	295.5	314.5	262.0	233.9	224.7	220.2	214.8
57.5°	8890.2	3999.1	964.4	384.4	277.4	297.3	259.3	227.5	217.5	213.0	208.4
60°	8856.7	4017.3	872.9	349.8	266.5	267.3	265.6	223.0	211.2	207.6	204.0
62.5°	8308.3	3793.4	787.6	332.7	258.3	243.8	271.1	217.5	204.9	201.2	198.6
65°	7395.5	3272.2	742.3	332.7	251.1	231.1	236.5	210.4	198.6	194.9	193.1
67.5°	6237.9	2629.6	699.8	339.9	241.1	222.2	214.8	203.0	192.2	188.6	186.8
70°	4999.8	2069.4	669.9	336.3	232.0	212.1	203.0	193.1	182.3	181.3	179.5
72.5°	3922.1	1662.4	656.2	336.3	218.4	200.3	191.2	184.0	173.1	172.2	169.5
75°	3142.6	1248.2	600.1	330.0	204.9	184.8	176.8	170.5	159.5	160.4	158.7
77.5°	2433.8	882.9	501.3	297.3	187.6	167.7	161.3	156.8	144.1	145.0	145.0
80°	1903.6	574.7	388.9	246.6	167.7	147.7	143.2	139.7	125.9	127.9	127.9
82.5°	1304.3	341.8	281.9	198.6	144.1	125.9	125.1	119.6	105.1	106.1	107.8
85°	712.5	224.7	187.6	146.9	113.3	102.3	100.6	97.9	84.3	84.3	85.2
87.5°	131.4	120.5	110.6	97.0	76.2	73.4	70.7	73.4	63.5	61.6	61.6
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°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	3713.6	3651.1	3607.5	3569.5	3477.9	3484.3	3497.0	3515.1	3457.9	3487.9	3525.0
5°	2991.2	2939.5	2900.5	2839.8	2712.1	2666.7	2637.7	2625.0	2539.8	2557.9	2597.7
7.5°	2205.3	2204.5	2190.8	2122.8	1968.8	1875.4	1813.7	1794.7	1742.1	1762.2	1822.8
10°	1552.7	1569.0	1562.6	1502.0	1364.2	1297.1	1283.5	1321.6	1322.5	1361.5	1465.7
12.5°	1122.2	1113.2	1104.9	1055.1	951.7	940.8	971.7	1024.3	1037.0	1078.6	1187.4
15°	837.6	815.7	811.2	772.3	704.2	714.2	737.0	764.2	765.1	794.0	883.8
17.5°	628.1	628.1	635.5	610.0	561.0	556.5	544.7	537.5	526.6	538.4	587.4
20°	487.7	510.4	528.5	513.9	469.5	447.8	425.1	410.6	402.4	403.3	417.8
22.5°	417.8	436.0	459.6	452.4	415.1	387.0	372.6	362.5	356.1	356.1	364.4
25°	382.5	394.3	416.1	412.5	380.7	358.1	346.3	336.3	329.0	328.1	336.3
27.5°	354.4	361.6	376.2	374.3	341.8	327.2	320.0	313.6	309.1	308.2	316.3
30°	329.0	332.7	339.9	337.2	312.7	298.2	295.5	292.9	290.1	290.9	302.7
32.5°	306.4	309.1	313.6	310.0	286.5	273.7	269.3	265.6	262.9	265.6	279.1
35°	281.1	289.1	294.6	292.9	267.3	252.0	242.0	232.9	229.3	232.0	247.5
37.5°	259.3	272.8	280.0	278.3	252.0	233.9	221.1	219.4	219.4	223.0	238.4
40°	251.1	261.0	267.3	264.6	238.4	220.2	213.0	210.4	211.2	214.8	231.1
42.5°	243.8	252.9	254.7	249.2	223.0	211.2	206.7	203.0	204.9	209.3	225.7
45°	237.5	244.7	243.8	235.7	210.4	202.1	202.1	199.4	200.3	204.0	221.1
47.5°	232.9	236.5	234.8	226.6	201.2	194.9	197.6	197.6	199.4	202.1	219.4
50°	225.7	228.5	226.6	219.4	193.9	188.6	191.2	194.9	196.6	199.4	214.8
52.5°	218.4	220.2	219.4	212.1	186.8	183.1	183.1	186.8	190.3	193.9	207.6
55°	211.2	213.0	213.9	208.4	181.3	177.6	176.8	176.8	180.4	185.8	200.3
57.5°	205.7	205.7	207.6	204.0	175.8	171.3	166.7	167.7	172.2	176.8	191.2
60°	199.4	200.3	203.0	199.4	168.6	161.3	157.8	162.2	164.1	168.6	184.0
62.5°	193.9	193.9	195.8	193.1	162.2	155.0	152.3	156.8	156.8	161.3	176.8
65°	189.4	188.6	188.6	187.6	155.9	148.7	146.9	148.7	149.5	154.0	169.5
67.5°	185.8	181.3	181.3	183.1	149.5	142.2	141.4	141.4	142.2	147.7	161.3
70°	177.6	174.0	173.1	179.5	143.2	134.2	134.2	132.3	134.2	136.9	151.4
72.5°	168.6	165.8	165.0	174.0	136.9	125.1	123.3	122.4	123.3	125.9	139.7
75°	156.8	155.0	156.8	170.5	130.6	115.2	112.4	111.5	111.5	112.4	126.8
77.5°	143.2	141.4	155.0	158.7	126.8	103.4	100.6	98.8	97.0	97.0	113.3
80°	126.8	125.9	149.5	134.2	121.5	90.6	86.1	83.4	81.6	80.7	97.0
82.5°	110.6	108.8	127.9	105.1	100.6	74.3	68.0	62.5	59.9	59.9	74.3
85°	90.6	89.7	100.6	77.0	69.8	54.4	45.4	40.8	37.1	37.1	48.1
87.5°	66.2	64.4	62.5	46.2	35.4	24.5	17.3	16.3	14.5	13.5	20.0
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-03-D-UNV-SLL-7030-800

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9	4261.9
2.5°	3580.3	3655.6	3797.9	3914.9	4070.8	4195.8	4338.1	4399.8
5°	2671.2	2789.9	3007.5	3193.3	3450.7	3689.1	3961.0	4109.7
7.5°	1916.2	2092.0	2257.0	2489.0	2810.8	3130.9	3482.4	3679.2
10°	1585.4	1746.7	1888.1	2053.1	2301.4	2661.2	3080.9	3303.0
12.5°	1313.4	1487.4	1637.0	1813.7	2022.3	2347.7	2826.2	3084.5
15°	1007.1	1196.5	1375.9	1588.9	1844.6	2216.3	2750.0	3038.3
17.5°	689.8	892.8	1114.0	1374.2	1682.3	2160.9	2822.6	3178.0
20°	468.6	617.4	857.4	1165.7	1536.4	2134.6	2982.1	3465.2
22.5°	385.2	452.4	632.7	969.9	1416.8	2163.7	3241.4	3843.2
25°	353.5	389.7	492.2	797.7	1325.2	2240.7	3592.1	4270.2
27.5°	333.6	364.4	431.5	674.3	1240.8	2345.8	4019.1	4792.2
30°	321.8	350.8	407.0	611.0	1163.8	2436.5	4386.2	5185.7
32.5°	295.5	317.3	363.5	574.7	1108.6	2509.9	4709.7	5553.6
35°	263.8	290.1	328.1	551.1	1106.7	2544.3	5014.4	5960.6
37.5°	252.0	277.4	305.5	538.4	1117.6	2573.4	5386.8	6422.0
40°	244.7	267.3	290.1	536.6	1126.7	2596.0	5751.2	6902.4
42.5°	238.4	261.0	287.4	523.9	1123.0	2626.8	6073.9	7314.8
45°	236.5	259.3	293.7	504.9	1122.2	2674.8	6330.5	7644.8
47.5°	234.8	269.3	291.8	484.0	1118.5	2776.4	6619.6	7952.0
50°	232.9	287.4	279.1	455.1	1091.3	2949.5	7008.4	8303.7
52.5°	232.0	290.1	265.6	415.1	1042.4	3206.0	7577.6	8793.1
55°	228.5	275.6	242.0	362.5	971.7	3482.4	8187.7	9368.8
57.5°	220.2	245.7	228.5	311.0	870.1	3675.6	8638.1	9813.7
60°	240.2	211.2	219.4	284.6	748.8	3710.0	8658.1	9938.9
62.5°	229.3	192.2	210.4	275.6	663.5	3485.2	8262.0	9789.3
65°	183.1	182.3	202.1	284.6	650.8	2982.1	7593.1	9346.1
67.5°	166.7	175.0	193.9	295.5	659.0	2349.4	6608.8	8311.1
70°	155.9	165.8	183.1	305.5	673.5	1851.0	5320.7	6759.3
72.5°	145.0	153.2	172.2	315.4	663.5	1460.2	4258.4	5206.5
75°	131.4	138.6	156.8	289.1	569.2	1073.3	3383.6	3697.4
77.5°	116.1	122.4	137.7	228.5	427.9	746.9	2534.4	2664.9
80°	99.8	102.3	114.1	166.7	279.1	446.9	1928.9	2125.5
82.5°	78.8	79.8	87.0	122.4	174.0	285.5	1337.9	1527.3
85°	50.8	52.6	56.2	86.1	116.9	183.1	683.4	783.2
87.5°	17.3	20.0	20.0	41.7	57.2	101.5	209.3	152.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)