

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: P197169

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197169  
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-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 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: 10548 lumens  
Efficiency: N/A  
Efficacy: 85.1 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

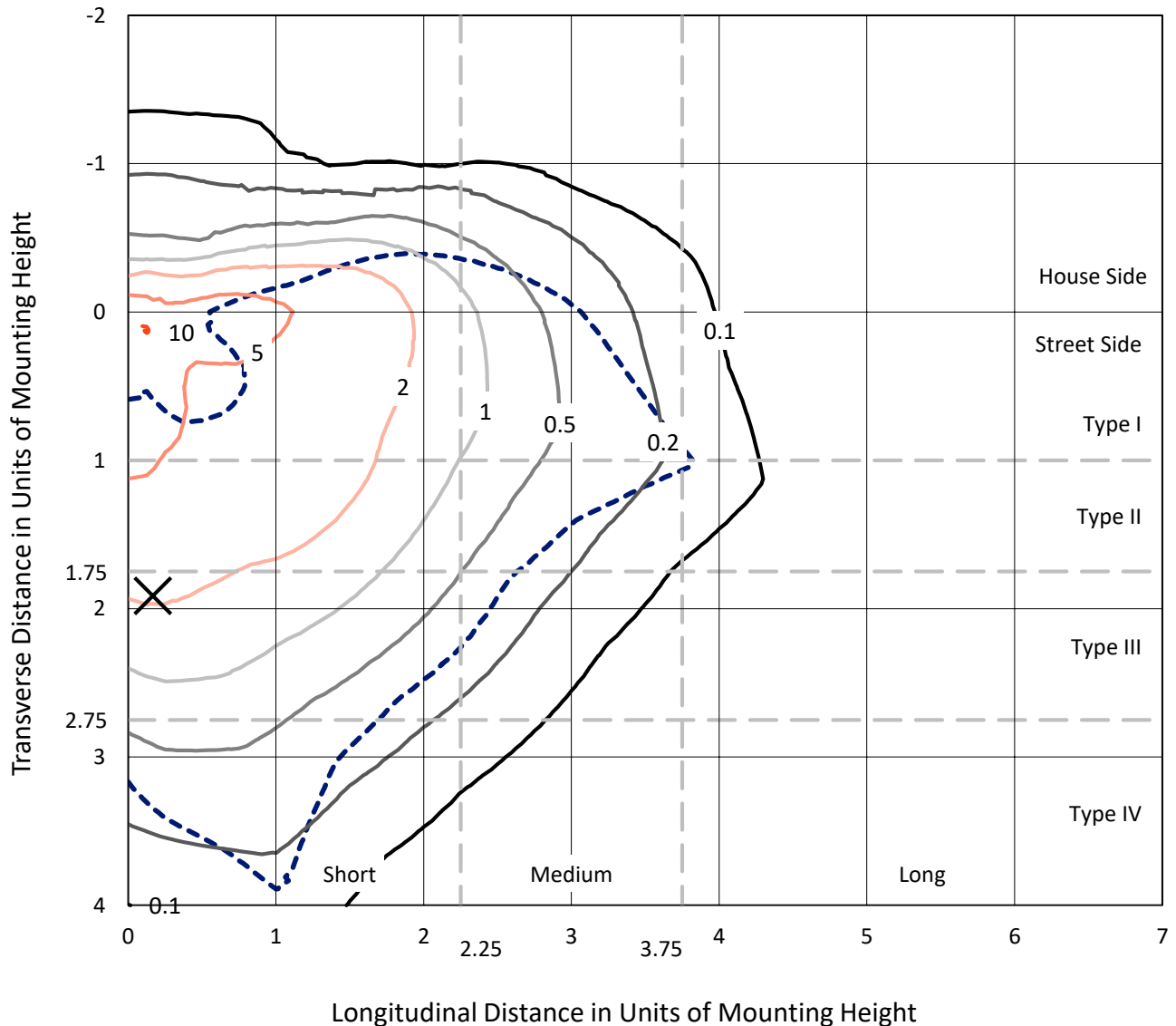
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

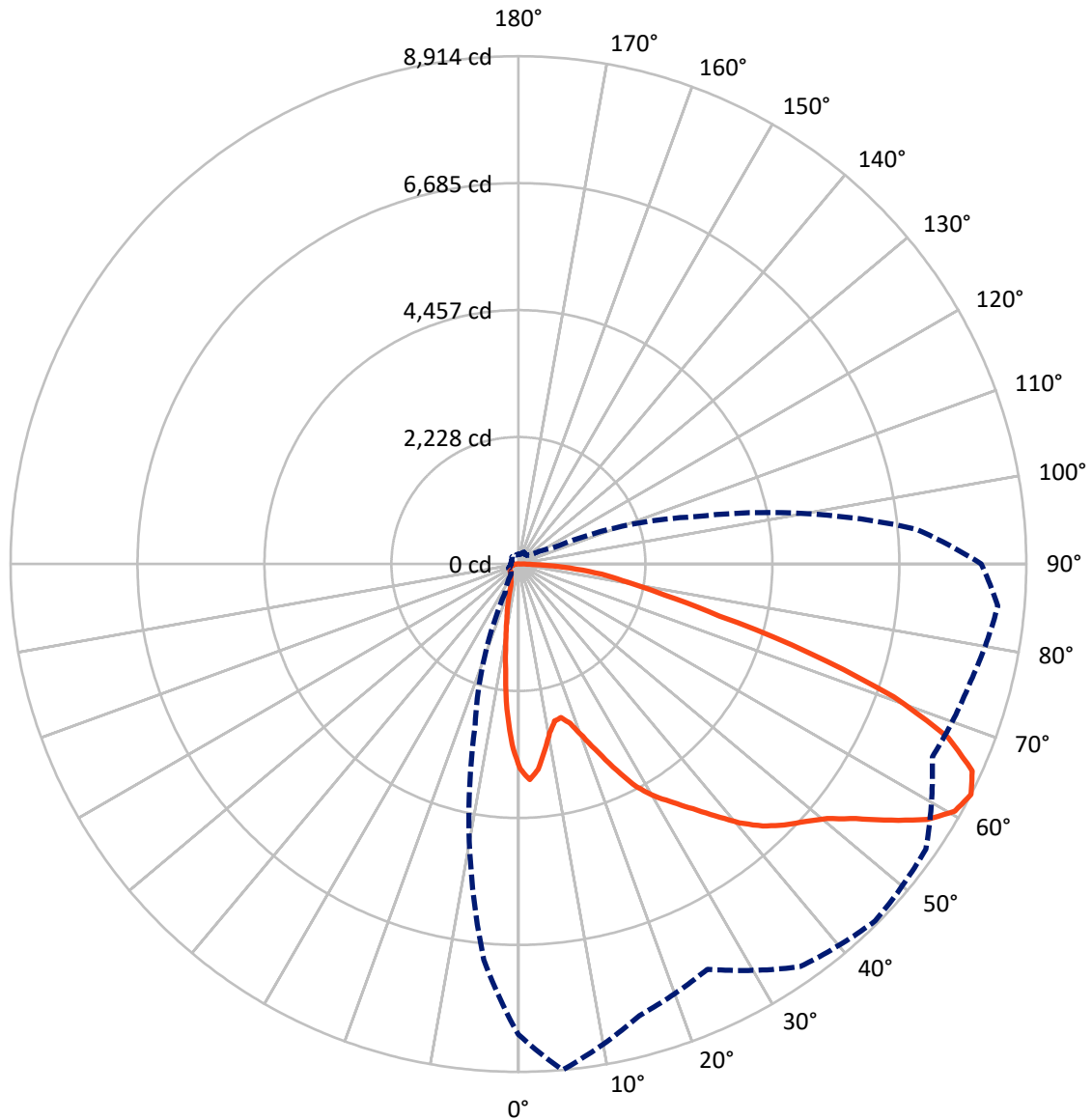
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.3 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	1868.6	0.0	1868.6
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	8679.4	0.0	8679.4
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	10548.0	0.0	10548.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	261.5	2.5
10°-20°	477.7	4.5
20°-30°	687.0	6.5
30°-40°	1052.2	10.0
40°-50°	1538.4	14.6
50°-60°	2238.4	21.2
60°-70°	2593.4	24.6
70°-80°	1351.9	12.8
80°-90°	347.5	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°	10548.0	100.0
0°-180°	10548.0	100.0

**Coefficient of Utilization**



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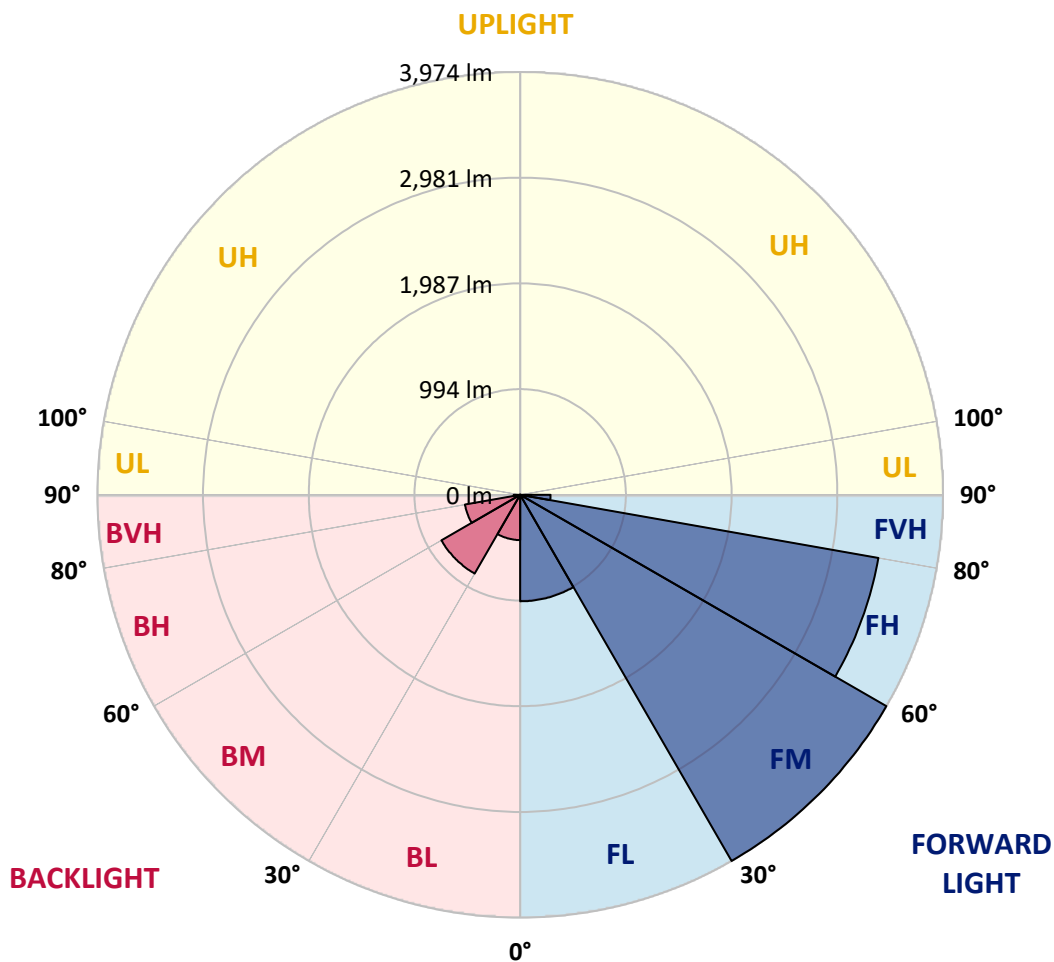
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1001.1	9.5			
FM	(30°-60°)	3974.0	37.7			
FH	(60°-80°)	3418.5	32.4			G2/5000
FVH	(80°-90°)	285.9	2.7			G3/500
BL	(0°-30°)	425.1	4.0	B1/500		
BM	(30°-60°)	854.9	8.1	B1/1000		
BH	(60°-80°)	526.9	5.0	B2/1000		G2/1000
BVH	(80°-90°)	61.6	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°	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0
2.5°	3712.3	3791.0	3881.3	3999.1	4079.4	4111.5	4138.3	4093.1	4049.5	3967.7	3938.6
5°	3467.5	3619.0	3867.5	4103.8	4311.9	4431.2	4467.9	4384.5	4236.1	4022.0	3908.8
7.5°	3104.3	3303.9	3653.4	4001.4	4299.6	4498.5	4513.0	4347.8	4055.7	3704.6	3521.1
10°	2786.9	3012.5	3417.1	3806.3	4122.2	4325.6	4285.9	4054.1	3701.6	3302.3	3095.1
12.5°	2602.6	2828.2	3240.4	3635.8	3933.3	4010.5	3929.5	3734.4	3400.2	3000.3	2791.5
15°	2563.6	2796.1	3177.7	3511.1	3695.4	3645.7	3565.4	3466.8	3228.9	2901.6	2699.7
17.5°	2681.3	2941.4	3261.0	3443.8	3436.2	3316.9	3249.6	3268.7	3228.2	3008.7	2797.6
20°	2923.8	3231.2	3472.9	3425.5	3229.7	3062.2	3023.2	3173.1	3360.5	3277.1	3045.4
22.5°	3242.7	3593.0	3762.0	3478.2	3121.9	2941.4	2933.7	3167.7	3601.4	3683.2	3401.0
25°	3602.9	4011.3	4053.4	3571.6	3110.4	2930.7	2923.8	3250.3	3891.2	4085.5	3799.5
27.5°	4043.4	4433.5	4296.6	3696.2	3160.9	2962.0	2966.6	3391.1	4193.3	4483.2	4248.4
30°	4375.3	4733.3	4446.5	3818.6	3241.9	3017.1	3028.6	3543.3	4356.2	4759.3	4607.1
32.5°	4685.8	4989.5	4590.2	3939.4	3360.5	3098.9	3138.7	3732.9	4552.0	4996.3	4945.9
35°	5029.2	5276.3	4750.1	4068.7	3530.3	3242.7	3300.1	3913.4	4746.3	5233.4	5281.6
37.5°	5418.5	5604.4	4923.7	4251.4	3775.0	3508.8	3541.0	4097.7	4881.6	5495.8	5641.8
40°	5823.8	5972.2	5113.4	4495.4	4130.6	3868.3	3883.6	4334.0	4987.9	5767.3	5991.3
42.5°	6171.8	6287.3	5303.8	4798.3	4539.0	4234.6	4247.6	4588.7	5089.7	6001.3	6271.2
45°	6450.2	6535.1	5483.5	5117.2	4974.9	4692.0	4688.9	4848.0	5225.8	6198.6	6486.1
47.5°	6709.5	6754.6	5683.9	5427.7	5426.9	5280.8	5171.5	5153.9	5407.0	6364.5	6673.5
50°	7006.2	7023.0	5948.5	5741.2	5979.1	5956.2	5754.2	5542.4	5641.8	6551.2	6870.1
52.5°	7419.2	7420.0	6276.6	6047.2	6588.6	6661.3	6426.5	5982.2	5989.0	6914.4	7209.6
55°	7904.8	7938.5	6704.1	6413.5	7226.5	7350.4	7129.3	6504.5	6487.7	7500.3	7760.3
57.5°	8280.3	8458.5	7202.0	6871.6	7822.2	7983.6	7805.4	7046.0	7100.3	8104.4	8214.6
60°	8385.9	8802.7	7698.3	7385.5	8326.2	8568.7	8387.4	7631.0	7699.9	8496.8	8345.3
62.5°	8259.7	8913.6	8203.9	7845.9	8625.3	8857.8	8727.7	8014.2	8188.6	8446.3	8124.3
65°	7885.7	8753.0	8642.8	8041.7	8453.2	8535.8	8501.4	8034.1	8453.9	7969.1	7513.3
67.5°	7012.3	8133.5	8447.1	7623.4	7649.4	7560.7	7515.6	7488.0	8155.7	7198.9	6549.6
70°	5703.0	6988.6	7513.3	6379.8	6187.1	6101.5	5953.1	6320.2	7330.5	6133.6	5390.2
72.5°	4392.9	5346.6	6162.6	4836.5	4435.8	4464.8	4296.6	4832.7	6072.4	4741.7	4115.3
75°	3119.6	3645.7	4919.1	3475.2	2944.4	2942.9	2929.9	3478.2	4791.4	3403.3	3011.0
77.5°	2248.5	2624.7	3853.8	2325.7	2089.4	2116.2	2073.3	2364.0	3735.2	2448.1	2230.9
80°	1793.4	1943.3	2490.9	1551.0	1555.6	1618.3	1609.1	1616.8	2457.3	1772.8	1668.0
82.5°	1288.7	1475.3	1904.3	1188.5	1028.6	1095.2	1108.2	1199.2	1733.8	1253.5	1099.8
85°	660.8	899.4	1752.1	1029.4	643.2	533.1	613.4	946.0	1505.9	751.0	536.1
87.5°	128.5	249.3	1284.1	572.1	289.1	146.1	240.9	400.7	875.7	136.1	66.5
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°	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0
2.5°	3888.9	3791.0	3699.3	3604.4	3531.0	3441.5	3353.6	3277.1	3202.9	3154.0	3169.3
5°	3794.1	3555.5	3341.3	3142.5	3026.3	2886.3	2761.6	2656.9	2575.8	2523.8	2555.1
7.5°	3362.0	3039.3	2757.1	2494.7	2329.5	2148.3	2003.0	1900.5	1837.8	1802.6	1853.8
10°	2920.0	2557.4	2240.8	1967.8	1804.9	1651.2	1519.6	1411.0	1326.9	1287.1	1307.8
12.5°	2603.3	2200.3	1868.4	1684.8	1544.9	1407.2	1271.1	1144.1	1037.0	988.1	978.2
15°	2484.8	2008.3	1669.5	1464.6	1325.4	1175.5	1028.6	892.5	790.8	748.7	739.5
17.5°	2536.8	1967.0	1551.8	1309.3	1107.4	925.4	760.2	631.7	556.8	533.1	535.4
20°	2719.6	1982.3	1456.9	1149.5	900.2	684.5	519.3	430.6	398.5	393.1	399.2
22.5°	2970.4	2045.0	1388.1	1011.8	717.4	497.9	386.2	344.2	335.7	335.0	341.1
25°	3301.6	2167.4	1342.2	889.4	566.7	394.6	336.5	312.8	305.9	307.4	313.6
27.5°	3691.6	2322.7	1312.4	783.9	465.8	351.8	314.3	293.7	286.8	288.3	292.9
30°	4048.0	2458.8	1268.0	704.4	418.3	336.5	302.1	281.4	272.3	272.3	275.3
32.5°	4366.9	2576.6	1216.0	644.7	374.7	302.1	273.8	257.7	250.8	253.1	254.7
35°	4649.9	2638.5	1175.5	609.5	339.6	278.4	250.1	233.3	224.1	225.6	227.9
37.5°	4928.3	2662.2	1148.7	590.4	314.3	263.9	237.8	224.1	214.1	212.6	211.8
40°	5192.9	2656.9	1123.5	585.1	297.5	253.1	230.2	218.0	208.0	205.7	205.0
42.5°	5421.6	2639.3	1099.8	570.5	286.0	245.5	224.1	213.4	203.4	200.4	198.8
45°	5630.4	2628.6	1073.8	543.8	292.1	242.4	221.0	209.6	200.4	196.5	195.0
47.5°	5862.1	2666.8	1044.7	514.7	290.6	243.2	221.0	208.0	198.8	195.0	193.5
50°	6138.2	2796.1	1008.8	474.9	276.9	260.0	220.3	205.7	197.3	195.0	192.0
52.5°	6528.2	3005.6	959.0	423.7	266.1	277.6	219.5	201.9	195.0	191.2	187.4
55°	7062.8	3215.2	894.8	369.4	249.3	265.4	221.0	197.3	189.7	185.8	181.3
57.5°	7501.0	3374.2	813.7	324.3	234.0	250.8	218.7	192.0	183.5	179.7	175.9
60°	7472.7	3389.5	736.5	295.2	224.8	225.6	224.1	188.1	178.2	175.1	172.1
62.5°	7010.0	3200.6	664.6	280.7	218.0	205.7	228.7	183.5	172.8	169.8	167.5
65°	6239.9	2760.9	626.4	280.7	211.8	195.0	199.6	177.4	167.5	164.4	162.9
67.5°	5263.3	2218.6	590.4	286.8	203.4	187.4	181.3	171.3	162.1	159.1	157.5
70°	4218.6	1746.0	565.2	283.7	195.8	179.0	171.3	162.9	153.7	153.0	151.4
72.5°	3309.2	1402.6	553.7	283.7	184.3	169.0	161.4	155.3	146.1	145.3	143.0
75°	2651.5	1053.1	506.3	278.4	172.8	156.0	149.1	143.8	134.6	135.4	133.8
77.5°	2053.5	744.9	422.9	250.8	158.3	141.5	136.1	132.3	121.6	122.4	122.4
80°	1606.1	484.9	328.1	208.0	141.5	124.7	120.8	117.8	106.3	107.8	107.8
82.5°	1100.5	288.3	237.8	167.5	121.6	106.3	105.5	101.0	88.7	89.5	91.0
85°	601.1	189.7	158.3	123.9	95.6	86.4	84.9	82.6	71.1	71.1	71.9
87.5°	110.9	101.7	93.3	81.8	64.2	61.9	59.7	61.9	53.5	52.0	52.0
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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**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0
2.5°	3133.3	3080.6	3043.8	3011.7	2934.5	2939.8	2950.5	2965.8	2917.7	2942.9	2974.3
5°	2523.8	2480.2	2447.3	2396.1	2288.2	2250.0	2225.5	2214.8	2142.9	2158.2	2191.9
7.5°	1860.7	1860.0	1848.5	1791.1	1661.1	1582.3	1530.3	1514.3	1469.9	1486.7	1538.0
10°	1310.1	1323.8	1318.5	1267.3	1151.0	1094.4	1082.9	1115.1	1115.8	1148.7	1236.7
12.5°	946.8	939.2	932.3	890.2	803.0	793.8	819.9	864.2	874.9	910.1	1001.9
15°	706.7	688.3	684.5	651.6	594.2	602.7	621.8	644.7	645.5	670.0	745.7
17.5°	530.0	530.0	536.1	514.7	473.4	469.6	459.6	453.5	444.3	454.3	495.6
20°	411.5	430.6	445.9	433.6	396.2	377.8	358.7	346.4	339.6	340.3	352.6
22.5°	352.6	367.9	387.7	381.6	350.3	326.6	314.3	305.9	300.6	300.6	307.4
25°	322.7	332.7	351.0	348.0	321.2	302.1	292.1	283.7	277.6	276.9	283.7
27.5°	299.0	305.1	317.4	315.9	288.3	276.1	270.0	264.6	260.8	260.0	266.9
30°	277.6	280.7	286.8	284.5	263.9	251.6	249.3	247.0	244.7	245.5	255.4
32.5°	258.5	260.8	264.6	261.6	241.7	231.0	227.1	224.1	221.8	224.1	235.6
35°	237.1	244.0	248.6	247.0	225.6	212.6	204.2	196.5	193.5	195.8	208.8
37.5°	218.7	230.2	236.3	234.8	212.6	197.3	186.6	185.1	185.1	188.1	201.1
40°	211.8	220.3	225.6	223.3	201.1	185.8	179.7	177.4	178.2	181.3	195.0
42.5°	205.7	213.4	214.9	210.3	188.1	178.2	174.4	171.3	172.8	176.7	190.4
45°	200.4	206.5	205.7	198.8	177.4	170.5	170.5	168.3	169.0	172.1	186.6
47.5°	196.5	199.6	198.1	191.2	169.8	164.4	166.7	166.7	168.3	170.5	185.1
50°	190.4	192.7	191.2	185.1	163.7	159.1	161.4	164.4	166.0	168.3	181.3
52.5°	184.3	185.8	185.1	179.0	157.5	154.5	154.5	157.5	160.6	163.7	175.1
55°	178.2	179.7	180.5	175.9	153.0	149.9	149.1	149.1	152.2	156.8	169.0
57.5°	173.6	173.6	175.1	172.1	148.4	144.5	140.7	141.5	145.3	149.1	161.4
60°	168.3	169.0	171.3	168.3	142.3	136.1	133.1	136.9	138.4	142.3	155.3
62.5°	163.7	163.7	165.2	162.9	136.9	130.8	128.5	132.3	132.3	136.1	149.1
65°	159.8	159.1	159.1	158.3	131.5	125.4	123.9	125.4	126.2	130.0	143.0
67.5°	156.8	153.0	153.0	154.5	126.2	120.1	119.3	119.3	120.1	124.7	136.1
70°	149.9	146.8	146.1	151.4	120.8	113.2	113.2	111.7	113.2	115.5	127.7
72.5°	142.3	140.0	139.2	146.8	115.5	105.5	104.0	103.2	104.0	106.3	117.8
75°	132.3	130.8	132.3	143.8	110.1	97.1	94.8	94.1	94.1	94.8	107.1
77.5°	120.8	119.3	130.8	133.8	107.1	87.2	84.9	83.4	81.8	81.8	95.6
80°	107.1	106.3	126.2	113.2	102.5	76.5	72.7	70.4	68.8	68.1	81.8
82.5°	93.3	91.8	107.8	88.7	84.9	62.7	57.4	52.8	50.5	50.5	62.7
85°	76.5	75.7	84.9	65.0	58.9	45.9	38.2	34.4	31.4	31.4	40.5
87.5°	55.8	54.3	52.8	39.0	29.8	20.6	14.5	13.8	12.2	11.5	16.8
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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CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-800

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0	3596.0
2.5°	3020.9	3084.4	3204.5	3303.1	3434.7	3540.2	3660.3	3712.3
5°	2253.8	2354.0	2537.6	2694.3	2911.5	3112.7	3342.1	3467.5
7.5°	1616.8	1765.1	1904.3	2100.1	2371.6	2641.6	2938.3	3104.3
10°	1337.6	1473.7	1593.0	1732.2	1941.8	2245.4	2599.5	2786.9
12.5°	1108.2	1255.0	1381.2	1530.3	1706.2	1980.8	2384.6	2602.6
15°	849.7	1009.5	1160.9	1340.7	1556.3	1869.9	2320.4	2563.6
17.5°	582.0	753.3	939.9	1159.4	1419.4	1823.2	2381.5	2681.3
20°	395.4	520.8	723.5	983.5	1296.3	1801.1	2516.1	2923.8
22.5°	325.0	381.6	533.8	818.3	1195.4	1825.5	2734.9	3242.7
25°	298.3	328.9	415.3	673.0	1118.1	1890.6	3030.8	3602.9
27.5°	281.4	307.4	364.0	569.0	1047.0	1979.3	3391.1	4043.4
30°	271.5	296.0	343.4	515.5	982.0	2055.7	3700.8	4375.3
32.5°	249.3	267.7	306.7	484.9	935.3	2117.7	3973.8	4685.8
35°	222.6	244.7	276.9	465.0	933.8	2146.8	4230.8	5029.2
37.5°	212.6	234.0	257.7	454.3	943.0	2171.2	4545.1	5418.5
40°	206.5	225.6	244.7	452.8	950.6	2190.3	4852.6	5823.8
42.5°	201.1	220.3	242.4	442.0	947.6	2216.3	5124.8	6171.8
45°	199.6	218.7	247.8	426.0	946.8	2256.9	5341.3	6450.2
47.5°	198.1	227.1	246.3	408.4	943.7	2342.5	5585.2	6709.5
50°	196.5	242.4	235.6	383.9	920.8	2488.6	5913.3	7006.2
52.5°	195.8	244.7	224.1	350.3	879.5	2705.0	6393.6	7419.2
55°	192.7	232.5	204.2	305.9	819.9	2938.3	6908.3	7904.8
57.5°	185.8	207.3	192.7	262.3	734.2	3101.2	7288.4	8280.3
60°	202.7	178.2	185.1	240.1	631.7	3130.3	7305.2	8385.9
62.5°	193.5	162.1	177.4	232.5	559.8	2940.6	6971.0	8259.7
65°	154.5	153.7	170.5	240.1	549.1	2516.1	6406.6	7885.7
67.5°	140.7	147.6	163.7	249.3	556.0	1982.3	5576.1	7012.3
70°	131.5	140.0	154.5	257.7	568.2	1561.7	4489.3	5703.0
72.5°	122.4	129.2	145.3	266.1	559.8	1232.1	3593.0	4392.9
75°	110.9	117.0	132.3	244.0	480.3	905.5	2854.9	3119.6
77.5°	97.9	103.2	116.2	192.7	361.0	630.2	2138.3	2248.5
80°	84.1	86.4	96.4	140.7	235.6	377.0	1627.5	1793.4
82.5°	66.5	67.3	73.4	103.2	146.8	240.9	1128.8	1288.7
85°	42.8	44.4	47.4	72.7	98.7	154.5	576.6	660.8
87.5°	14.5	16.8	16.8	35.2	48.2	85.7	176.7	128.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)