

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: P197162

Luminaire Tested: **NAV-AF-02-D-UNV-SLL-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197162  
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-02-D-UNV-SLL-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 615mA 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: 5784 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

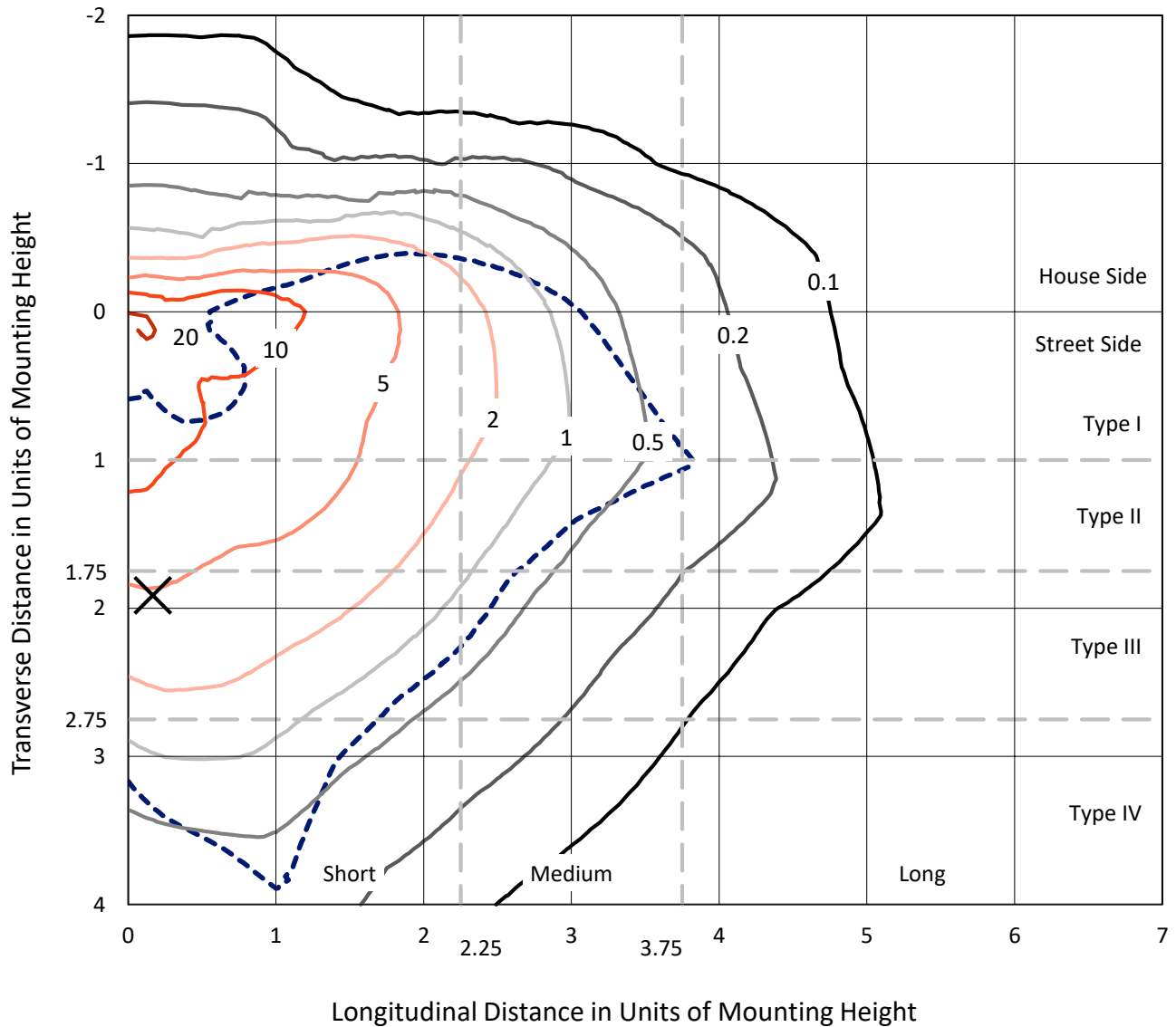
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P197162  
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

### Iso-Footcandle Lines of Horizontal Illumination

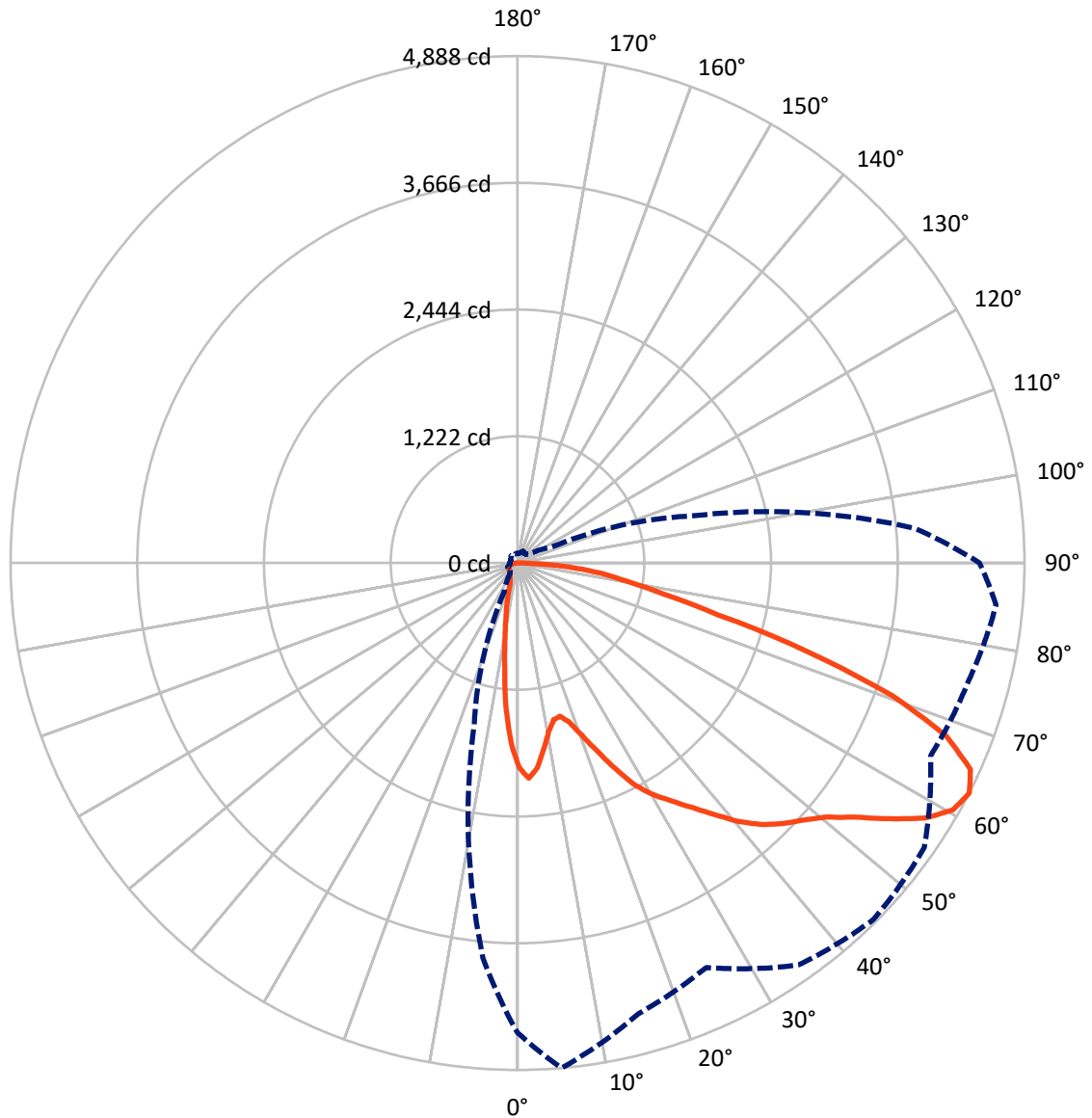
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.6 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197162  
CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P197162

CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1024.6	0.0	1024.6
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	4759.4	0.0	4759.4
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	5784.0	0.0	5784.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.4	2.5
10°-20°	261.9	4.5
20°-30°	376.7	6.5
30°-40°	577.0	10.0
40°-50°	843.6	14.6
50°-60°	1227.4	21.2
60°-70°	1422.1	24.6
70°-80°	741.3	12.8
80°-90°	190.6	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°	5784.0	100.0
0°-180°	5784.0	100.0



REPORT NUMBER: P197162

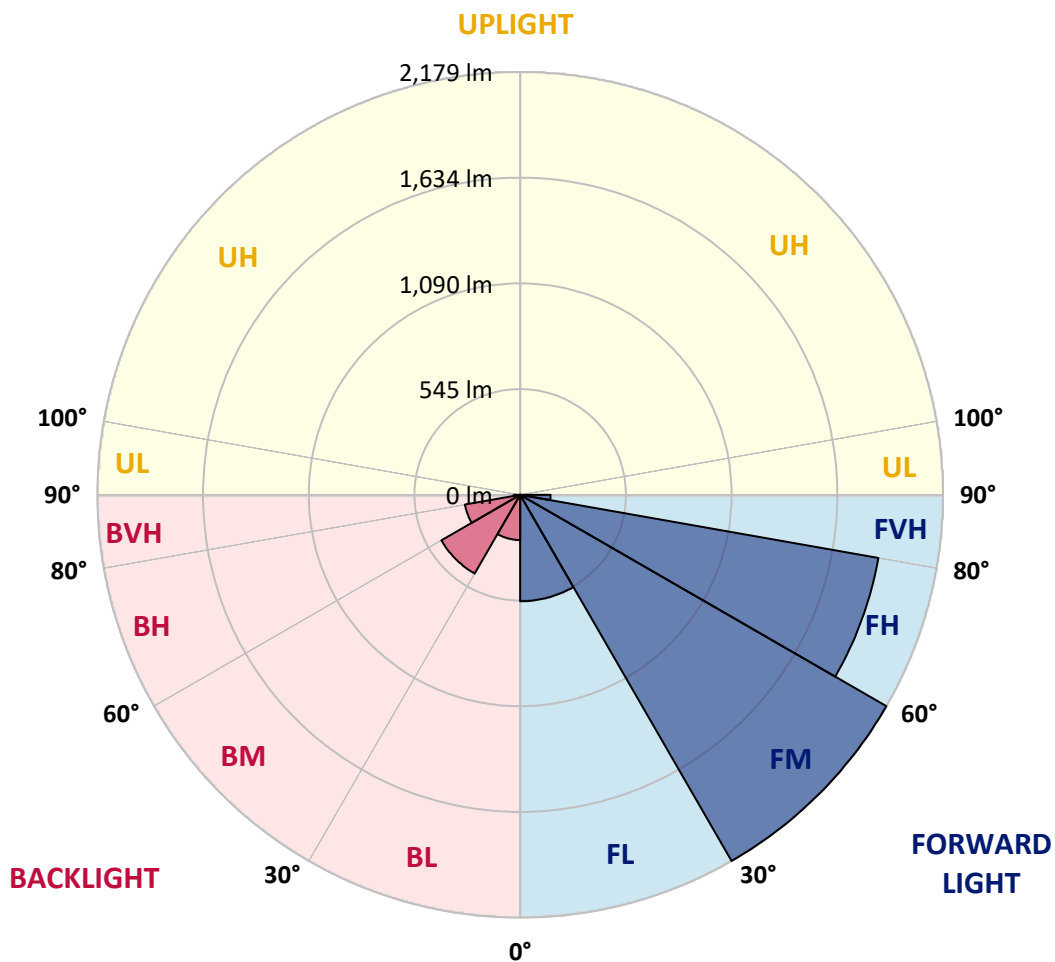
CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	548.9	9.5			
FM	(30°-60°)	2179.1	37.7			
FH	(60°-80°)	1874.5	32.4			G2/5000
FVH	(80°-90°)	156.8	2.7			G2/225
BL	(0°-30°)	233.1	4.0	B1/500		
BM	(30°-60°)	468.8	8.1	B1/1000		
BH	(60°-80°)	288.9	5.0	B1/500		G1/500
BVH	(80°-90°)	33.8	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





REPORT NUMBER: P197162

CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9
2.5°	2035.6	2078.8	2128.3	2192.9	2236.9	2254.5	2269.2	2244.5	2220.6	2175.7	2159.8
5°	1901.4	1984.5	2120.8	2250.3	2364.4	2429.8	2450.0	2404.3	2322.9	2205.5	2143.4
7.5°	1702.2	1811.7	2003.3	2194.1	2357.7	2466.7	2474.7	2384.1	2223.9	2031.4	1930.8
10°	1528.2	1651.9	1873.7	2087.2	2260.4	2372.0	2350.2	2223.1	2029.8	1810.8	1697.2
12.5°	1427.1	1550.8	1776.9	1993.7	2156.8	2199.2	2154.7	2047.8	1864.5	1645.2	1530.7
15°	1405.7	1533.2	1742.5	1925.3	2026.4	1999.1	1955.1	1901.0	1770.6	1591.1	1480.4
17.5°	1470.3	1612.9	1788.2	1888.4	1884.2	1818.8	1781.9	1792.4	1770.2	1649.8	1534.1
20°	1603.3	1771.8	1904.4	1878.4	1771.0	1679.2	1657.8	1740.0	1842.7	1797.0	1669.9
22.5°	1778.1	1970.2	2062.9	1907.3	1711.9	1612.9	1608.7	1737.0	1974.8	2019.7	1864.9
25°	1975.7	2199.6	2222.7	1958.5	1705.6	1607.0	1603.3	1782.3	2133.8	2240.3	2083.4
27.5°	2217.2	2431.1	2356.0	2026.8	1733.3	1624.2	1626.7	1859.5	2299.4	2458.4	2329.6
30°	2399.2	2595.5	2438.2	2093.9	1777.7	1654.4	1660.7	1942.9	2388.7	2609.7	2526.3
32.5°	2569.5	2736.0	2517.1	2160.2	1842.7	1699.3	1721.1	2046.9	2496.1	2739.7	2712.1
35°	2757.8	2893.2	2604.7	2231.1	1935.8	1778.1	1809.6	2145.9	2602.6	2869.8	2896.2
37.5°	2971.2	3073.1	2699.9	2331.3	2070.0	1924.1	1941.7	2247.0	2676.8	3013.6	3093.7
40°	3193.5	3274.9	2803.9	2465.1	2265.0	2121.2	2129.6	2376.6	2735.1	3162.5	3285.3
42.5°	3384.3	3447.6	2908.3	2631.1	2489.0	2322.1	2329.2	2516.2	2790.9	3290.8	3438.8
45°	3537.0	3583.5	3006.9	2806.0	2728.0	2572.8	2571.2	2658.4	2865.6	3399.0	3556.7
47.5°	3679.1	3703.9	3116.8	2976.3	2975.9	2895.8	2835.8	2826.1	2965.0	3490.0	3659.4
50°	3841.9	3851.1	3261.9	3148.2	3278.6	3266.1	3155.3	3039.2	3093.7	3592.3	3767.2
52.5°	4068.3	4068.7	3441.8	3316.0	3612.9	3652.7	3524.0	3280.3	3284.1	3791.5	3953.4
55°	4334.6	4353.1	3676.2	3516.8	3962.6	4030.6	3909.4	3566.7	3557.5	4112.8	4255.4
57.5°	4540.5	4638.2	3949.2	3768.0	4289.3	4377.8	4280.1	3863.7	3893.4	4444.1	4504.5
60°	4598.4	4827.0	4221.4	4049.9	4565.7	4698.6	4599.2	4184.5	4222.2	4659.2	4576.2
62.5°	4529.2	4887.8	4498.6	4302.3	4729.7	4857.2	4785.9	4394.6	4490.2	4631.5	4455.0
65°	4324.1	4799.7	4739.3	4409.7	4635.3	4680.6	4661.7	4405.5	4635.7	4369.8	4119.9
67.5°	3845.2	4460.0	4631.9	4180.3	4194.5	4145.9	4121.2	4106.1	4472.2	3947.5	3591.5
70°	3127.2	3832.2	4119.9	3498.4	3392.7	3345.7	3264.4	3465.7	4019.7	3363.4	2955.7
72.5°	2408.9	2931.8	3379.3	2652.1	2432.3	2448.3	2356.0	2650.0	3329.8	2600.1	2256.6
75°	1710.6	1999.1	2697.4	1905.6	1614.6	1613.7	1606.6	1907.3	2627.4	1866.2	1651.1
77.5°	1232.9	1439.3	2113.2	1275.3	1145.7	1160.4	1136.9	1296.3	2048.2	1342.4	1223.3
80°	983.4	1065.6	1365.9	850.5	853.0	887.4	882.4	886.5	1347.4	972.1	914.6
82.5°	706.6	809.0	1044.2	651.7	564.1	600.5	607.7	657.6	950.7	687.3	603.1
85°	362.3	493.2	960.8	564.5	352.7	292.3	336.3	518.8	825.7	411.8	294.0
87.5°	70.5	136.7	704.1	313.7	158.5	80.1	132.1	219.8	480.2	74.6	36.5
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: P197162

CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9
2.5°	2132.5	2078.8	2028.5	1976.5	1936.2	1887.2	1838.9	1797.0	1756.3	1729.5	1737.9
5°	2080.5	1949.7	1832.2	1723.2	1659.4	1582.7	1514.3	1456.9	1412.4	1383.9	1401.1
7.5°	1843.6	1666.6	1511.8	1368.0	1277.4	1178.0	1098.3	1042.1	1007.7	988.5	1016.6
10°	1601.2	1402.4	1228.8	1079.0	989.7	905.4	833.3	773.7	727.6	705.8	717.1
12.5°	1427.5	1206.5	1024.5	923.9	847.1	771.6	697.0	627.4	568.7	541.8	536.4
15°	1362.5	1101.3	915.5	803.1	726.8	644.6	564.1	489.4	433.6	410.6	405.5
17.5°	1391.1	1078.6	850.9	718.0	607.2	507.4	416.9	346.4	305.3	292.3	293.6
20°	1491.3	1087.0	798.9	630.3	493.6	375.3	284.8	236.1	218.5	215.6	218.9
22.5°	1628.8	1121.4	761.2	554.8	393.4	273.0	211.8	188.7	184.1	183.7	187.0
25°	1810.4	1188.5	736.0	487.7	310.8	216.4	184.5	171.5	167.7	168.6	171.9
27.5°	2024.3	1273.6	719.6	429.9	255.4	192.9	172.4	161.0	157.3	158.1	160.6
30°	2219.7	1348.3	695.3	386.2	229.4	184.5	165.7	154.3	149.3	149.3	151.0
32.5°	2394.6	1412.9	666.8	353.5	205.5	165.7	150.1	141.3	137.6	138.8	139.7
35°	2549.8	1446.8	644.6	334.2	186.2	152.7	137.1	127.9	122.9	123.7	125.0
37.5°	2702.4	1459.8	629.9	323.8	172.4	144.7	130.4	122.9	117.4	116.6	116.2
40°	2847.5	1456.9	616.1	320.8	163.1	138.8	126.2	119.5	114.1	112.8	112.4
42.5°	2972.9	1447.2	603.1	312.9	156.8	134.6	122.9	117.0	111.6	109.9	109.0
45°	3087.4	1441.4	588.8	298.2	160.2	132.9	121.2	114.9	109.9	107.8	106.9
47.5°	3214.5	1462.3	572.9	282.2	159.4	133.4	121.2	114.1	109.0	106.9	106.1
50°	3365.9	1533.2	553.1	260.4	151.8	142.6	120.8	112.8	108.2	106.9	105.3
52.5°	3579.7	1648.1	525.9	232.3	145.9	152.2	120.4	110.7	106.9	104.8	102.7
55°	3872.9	1763.0	490.7	202.6	136.7	145.5	121.2	108.2	104.0	101.9	99.4
57.5°	4113.2	1850.3	446.2	177.8	128.3	137.6	119.9	105.3	100.6	98.6	96.5
60°	4097.7	1858.7	403.9	161.9	123.3	123.7	122.9	103.2	97.7	96.0	94.4
62.5°	3844.0	1755.1	364.4	153.9	119.5	112.8	125.4	100.6	94.8	93.1	91.8
65°	3421.6	1513.9	343.5	153.9	116.2	106.9	109.5	97.3	91.8	90.2	89.3
67.5°	2886.1	1216.6	323.8	157.3	111.6	102.7	99.4	93.9	88.9	87.2	86.4
70°	2313.2	957.4	309.9	155.6	107.4	98.1	93.9	89.3	84.3	83.9	83.0
72.5°	1814.6	769.1	303.6	155.6	101.1	92.7	88.5	85.1	80.1	79.7	78.4
75°	1454.0	577.5	277.6	152.7	94.8	85.6	81.8	78.8	73.8	74.2	73.4
77.5°	1126.0	408.5	231.9	137.6	86.8	77.6	74.6	72.6	66.7	67.1	67.1
80°	880.7	265.9	179.9	114.1	77.6	68.4	66.3	64.6	58.3	59.1	59.1
82.5°	603.5	158.1	130.4	91.8	66.7	58.3	57.9	55.4	48.6	49.1	49.9
85°	329.6	104.0	86.8	67.9	52.4	47.4	46.6	45.3	39.0	39.0	39.4
87.5°	60.8	55.8	51.2	44.9	35.2	34.0	32.7	34.0	29.4	28.5	28.5
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: P197162  
 CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9
2.5°	1718.2	1689.2	1669.1	1651.5	1609.1	1612.1	1617.9	1626.3	1599.9	1613.7	1630.9
5°	1383.9	1360.0	1342.0	1313.9	1254.8	1233.8	1220.4	1214.5	1175.1	1183.5	1201.9
7.5°	1020.3	1019.9	1013.6	982.2	910.9	867.7	839.2	830.4	806.0	815.3	843.4
10°	718.4	725.9	723.0	694.9	631.2	600.1	593.8	611.4	611.9	629.9	678.1
12.5°	519.2	515.0	511.2	488.1	440.3	435.3	449.6	473.9	479.8	499.1	549.4
15°	387.5	377.4	375.3	357.3	325.9	330.5	340.9	353.5	353.9	367.4	408.9
17.5°	290.6	290.6	294.0	282.2	259.6	257.5	252.0	248.7	243.7	249.1	271.8
20°	225.6	236.1	244.5	237.8	217.2	207.2	196.7	190.0	186.2	186.6	193.3
22.5°	193.3	201.7	212.6	209.3	192.1	179.1	172.4	167.7	164.8	164.8	168.6
25°	177.0	182.4	192.5	190.8	176.1	165.7	160.2	155.6	152.2	151.8	155.6
27.5°	164.0	167.3	174.0	173.2	158.1	151.4	148.0	145.1	143.0	142.6	146.4
30°	152.2	153.9	157.3	156.0	144.7	138.0	136.7	135.5	134.2	134.6	140.1
32.5°	141.7	143.0	145.1	143.4	132.5	126.6	124.6	122.9	121.6	122.9	129.2
35°	130.0	133.8	136.3	135.5	123.7	116.6	112.0	107.8	106.1	107.4	114.5
37.5°	119.9	126.2	129.6	128.7	116.6	108.2	102.3	101.5	101.5	103.2	110.3
40°	116.2	120.8	123.7	122.5	110.3	101.9	98.6	97.3	97.7	99.4	106.9
42.5°	112.8	117.0	117.8	115.3	103.2	97.7	95.6	93.9	94.8	96.9	104.4
45°	109.9	113.2	112.8	109.0	97.3	93.5	93.5	92.3	92.7	94.4	102.3
47.5°	107.8	109.5	108.6	104.8	93.1	90.2	91.4	91.4	92.3	93.5	101.5
50°	104.4	105.7	104.8	101.5	89.7	87.2	88.5	90.2	91.0	92.3	99.4
52.5°	101.1	101.9	101.5	98.1	86.4	84.7	84.7	86.4	88.1	89.7	96.0
55°	97.7	98.6	99.0	96.5	83.9	82.2	81.8	81.8	83.5	86.0	92.7
57.5°	95.2	95.2	96.0	94.4	81.4	79.3	77.2	77.6	79.7	81.8	88.5
60°	92.3	92.7	93.9	92.3	78.0	74.6	73.0	75.1	75.9	78.0	85.1
62.5°	89.7	89.7	90.6	89.3	75.1	71.7	70.5	72.6	72.6	74.6	81.8
65°	87.6	87.2	87.2	86.8	72.1	68.8	67.9	68.8	69.2	71.3	78.4
67.5°	86.0	83.9	83.9	84.7	69.2	65.8	65.4	65.4	65.8	68.4	74.6
70°	82.2	80.5	80.1	83.0	66.3	62.1	62.1	61.2	62.1	63.3	70.0
72.5°	78.0	76.7	76.3	80.5	63.3	57.9	57.0	56.6	57.0	58.3	64.6
75°	72.6	71.7	72.6	78.8	60.4	53.3	52.0	51.6	51.6	52.0	58.7
77.5°	66.3	65.4	71.7	73.4	58.7	47.8	46.6	45.7	44.9	44.9	52.4
80°	58.7	58.3	69.2	62.1	56.2	41.9	39.8	38.6	37.7	37.3	44.9
82.5°	51.2	50.3	59.1	48.6	46.6	34.4	31.5	28.9	27.7	27.7	34.4
85°	41.9	41.5	46.6	35.6	32.3	25.2	21.0	18.9	17.2	17.2	22.2
87.5°	30.6	29.8	28.9	21.4	16.4	11.3	8.0	7.5	6.7	6.3	9.2
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: P197162

CATALOG NUMBER: NAV-AF-02-D-UNV-SLL-8030-600

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9	1971.9
2.5°	1656.5	1691.3	1757.2	1811.3	1883.4	1941.3	2007.1	2035.6
5°	1235.9	1290.8	1391.5	1477.4	1596.5	1706.8	1832.6	1901.4
7.5°	886.5	967.9	1044.2	1151.6	1300.5	1448.5	1611.2	1702.2
10°	733.5	808.1	873.5	949.9	1064.8	1231.3	1425.4	1528.2
12.5°	607.7	688.2	757.4	839.2	935.6	1086.2	1307.6	1427.1
15°	465.9	553.6	636.6	735.2	853.4	1025.4	1272.4	1405.7
17.5°	319.1	413.1	515.4	635.8	778.4	999.8	1305.9	1470.3
20°	216.8	285.6	396.7	539.3	710.8	987.6	1379.7	1603.3
22.5°	178.2	209.3	292.7	448.7	655.5	1001.0	1499.7	1778.1
25°	163.6	180.3	227.7	369.0	613.1	1036.7	1662.0	1975.7
27.5°	154.3	168.6	199.6	312.0	574.1	1085.3	1859.5	2217.2
30°	148.9	162.3	188.3	282.7	538.5	1127.3	2029.3	2399.2
32.5°	136.7	146.8	168.2	265.9	512.9	1161.2	2179.0	2569.5
35°	122.0	134.2	151.8	255.0	512.1	1177.2	2320.0	2757.8
37.5°	116.6	128.3	141.3	249.1	517.1	1190.6	2492.3	2971.2
40°	113.2	123.7	134.2	248.3	521.3	1201.1	2660.9	3193.5
42.5°	110.3	120.8	132.9	242.4	519.6	1215.3	2810.2	3384.3
45°	109.5	119.9	135.9	233.6	519.2	1237.6	2928.9	3537.0
47.5°	108.6	124.6	135.0	223.9	517.5	1284.5	3062.7	3679.1
50°	107.8	132.9	129.2	210.5	504.9	1364.6	3242.6	3841.9
52.5°	107.4	134.2	122.9	192.1	482.3	1483.3	3505.9	4068.3
55°	105.7	127.5	112.0	167.7	449.6	1611.2	3788.2	4334.6
57.5°	101.9	113.6	105.7	143.8	402.6	1700.5	3996.6	4540.5
60°	111.1	97.7	101.5	131.7	346.4	1716.5	4005.8	4598.4
62.5°	106.1	88.9	97.3	127.5	307.0	1612.5	3822.6	4529.2
65°	84.7	84.3	93.5	131.7	301.1	1379.7	3513.1	4324.1
67.5°	77.2	80.9	89.7	136.7	304.9	1087.0	3057.6	3845.2
70°	72.1	76.7	84.7	141.3	311.6	856.4	2461.7	3127.2
72.5°	67.1	70.9	79.7	145.9	307.0	675.6	1970.2	2408.9
75°	60.8	64.2	72.6	133.8	263.4	496.5	1565.5	1710.6
77.5°	53.7	56.6	63.7	105.7	197.9	345.6	1172.6	1232.9
80°	46.1	47.4	52.8	77.2	129.2	206.7	892.4	983.4
82.5°	36.5	36.9	40.3	56.6	80.5	132.1	619.0	706.6
85°	23.5	24.3	26.0	39.8	54.1	84.7	316.2	362.3
87.5°	8.0	9.2	9.2	19.3	26.4	47.0	96.9	70.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)