

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: P196681

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196681
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-01-D-UNV-SLL-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3438.4 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

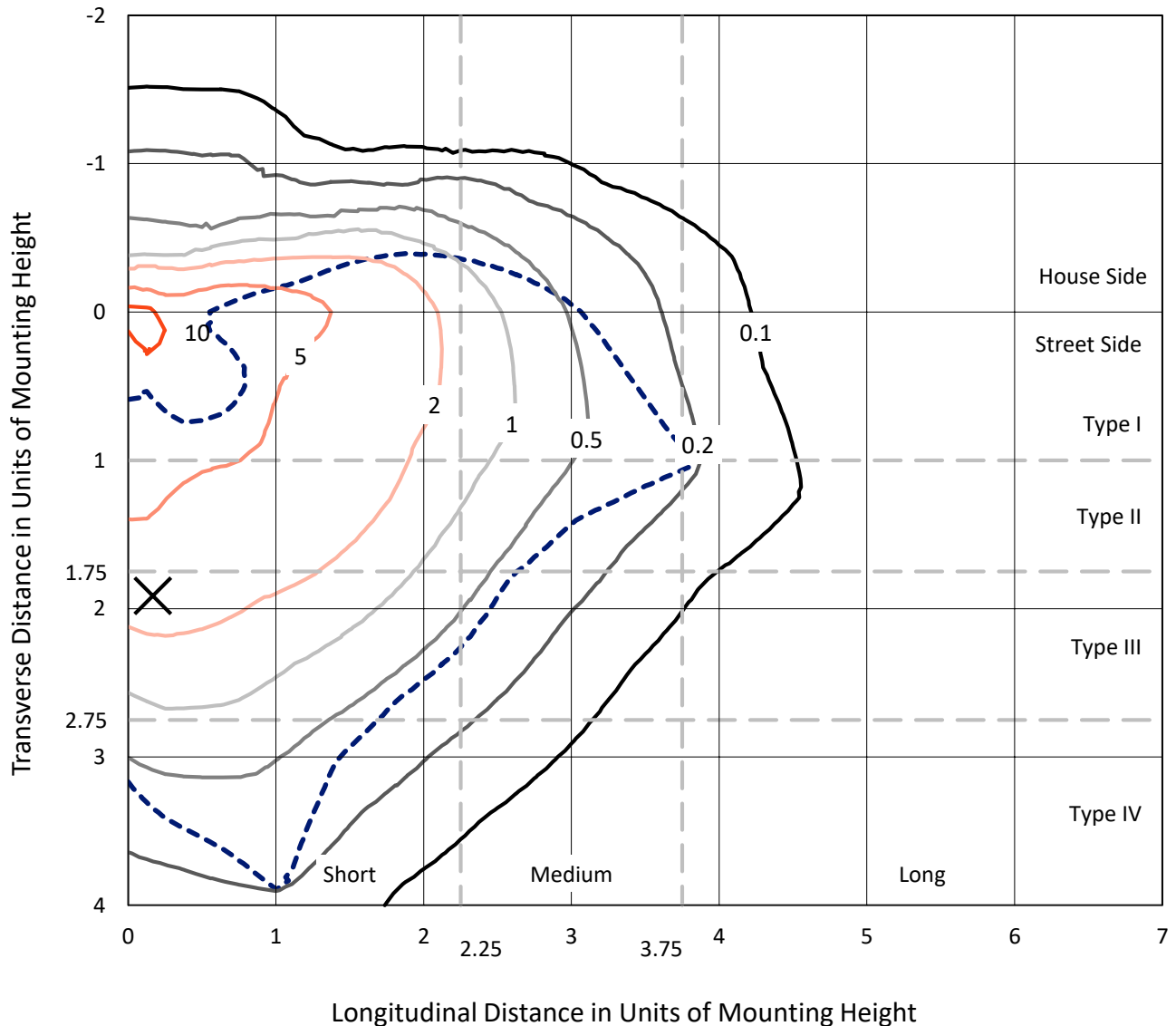
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196681
 CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

Iso-Footcandle Lines of Horizontal Illumination

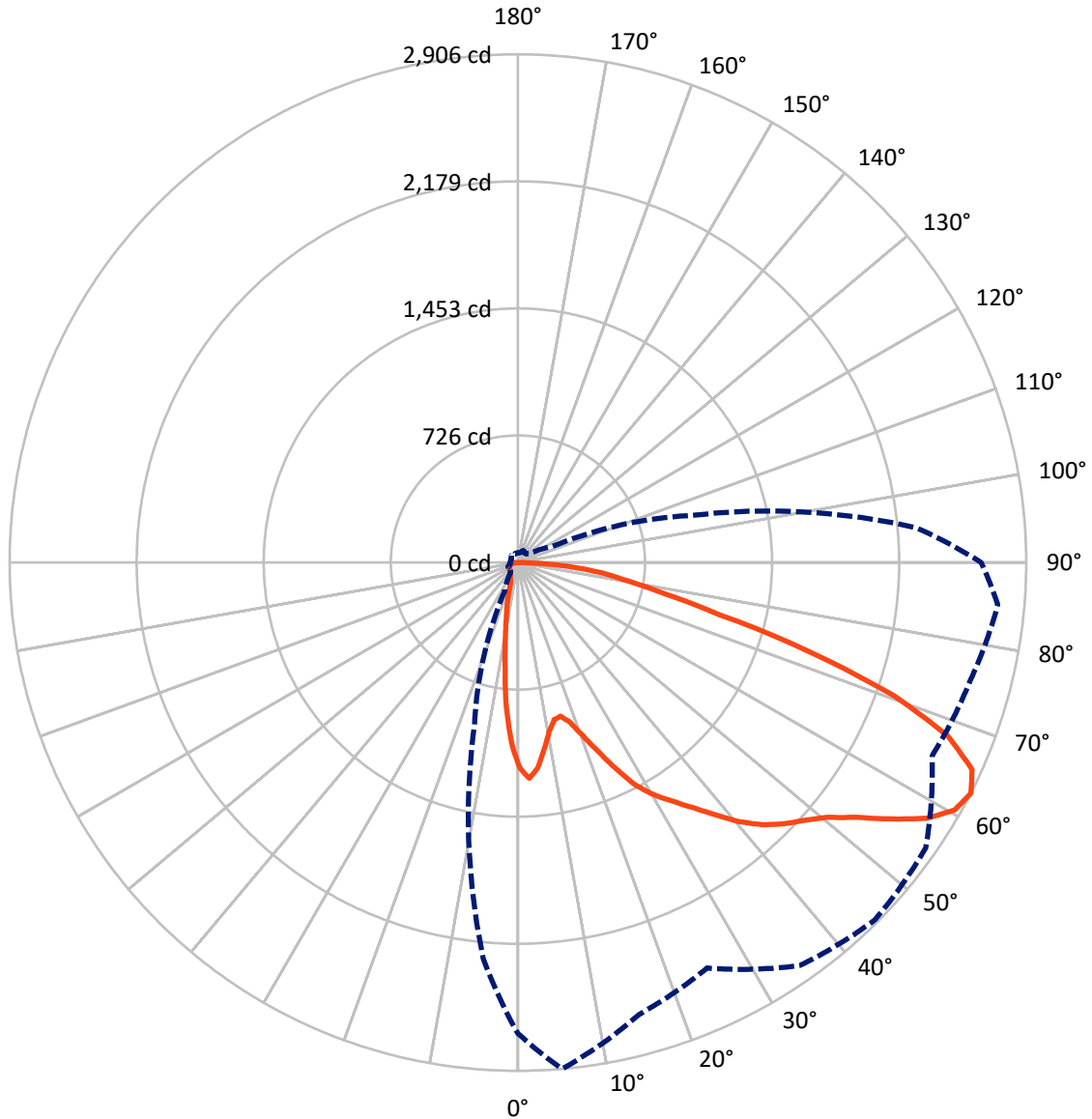
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.5 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196681
CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196681

CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	609.1	0.0	609.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	2829.3	0.0	2829.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	3438.4	0.0	3438.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	2.5
10°-20°	155.7	4.5
20°-30°	223.9	6.5
30°-40°	343.0	10.0
40°-50°	501.5	14.6
50°-60°	729.6	21.2
60°-70°	845.4	24.6
70°-80°	440.7	12.8
80°-90°	113.3	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°	3438.4	100.0
0°-180°	3438.4	100.0



REPORT NUMBER: P196681

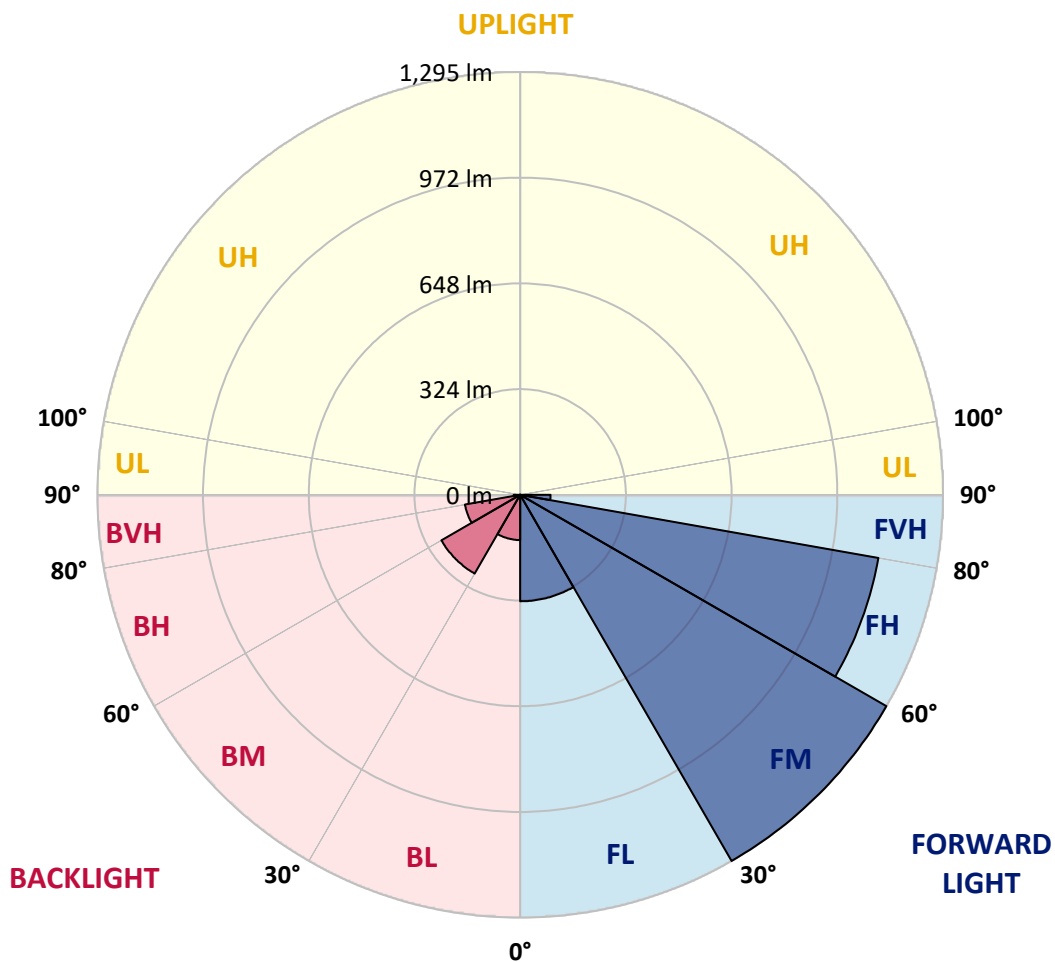
CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	326.3	9.5			
FM	(30°-60°)	1295.4	37.7			
FH	(60°-80°)	1114.3	32.4			G1/1800
FVH	(80°-90°)	93.2	2.7			G1/100
BL	(0°-30°)	138.6	4.0	B1/500		
BM	(30°-60°)	278.7	8.1	B1/1000		
BH	(60°-80°)	171.8	5.0	B1/500		G1/500
BVH	(80°-90°)	20.1	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-G1

Type IV Short





REPORT NUMBER: P196681
 CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3
2.5°	1210.1	1235.8	1265.2	1303.6	1329.8	1340.3	1349.1	1334.3	1320.1	1293.4	1283.9
5°	1130.3	1179.7	1260.8	1337.8	1405.5	1444.4	1456.4	1429.2	1380.9	1311.1	1274.2
7.5°	1012.0	1077.0	1190.9	1304.3	1401.6	1466.4	1471.1	1417.3	1322.0	1207.7	1147.8
10°	908.5	982.0	1113.9	1240.7	1343.8	1410.1	1397.1	1321.6	1206.7	1076.5	1008.9
12.5°	848.4	921.9	1056.3	1185.1	1282.1	1307.3	1280.9	1217.3	1108.4	978.0	909.9
15°	835.7	911.4	1035.9	1144.5	1204.6	1188.4	1162.2	1130.1	1052.6	945.8	880.1
17.5°	874.1	958.9	1063.0	1122.6	1120.1	1081.2	1059.3	1065.5	1052.2	980.7	912.0
20°	953.1	1053.3	1132.0	1116.6	1052.8	998.2	985.5	1034.3	1095.5	1068.2	992.7
22.5°	1057.1	1171.3	1226.3	1133.8	1017.6	958.9	956.3	1032.6	1174.0	1200.6	1108.7
25°	1174.4	1307.7	1321.3	1164.2	1013.9	955.4	953.1	1059.5	1268.5	1331.8	1238.6
27.5°	1318.1	1445.2	1400.6	1204.9	1030.4	965.6	967.1	1105.3	1367.0	1461.5	1384.9
30°	1426.3	1543.0	1449.5	1244.8	1056.7	983.5	987.2	1155.0	1420.1	1551.4	1501.8
32.5°	1527.5	1626.5	1496.3	1284.2	1095.5	1010.2	1023.1	1216.8	1483.8	1628.7	1612.2
35°	1639.4	1720.0	1548.4	1326.3	1150.8	1057.1	1075.7	1275.7	1547.1	1706.0	1721.7
37.5°	1766.2	1827.0	1605.0	1385.9	1230.6	1143.8	1154.3	1335.8	1591.3	1791.6	1839.1
40°	1898.4	1946.8	1666.9	1465.3	1346.5	1261.0	1266.0	1412.8	1626.0	1880.1	1953.0
42.5°	2011.9	2049.4	1728.9	1564.1	1479.6	1380.4	1384.7	1495.8	1659.1	1956.3	2044.2
45°	2102.5	2130.2	1787.5	1668.1	1621.7	1529.4	1528.4	1580.3	1703.5	2020.6	2114.2
47.5°	2187.2	2201.8	1852.8	1769.4	1769.0	1721.4	1685.8	1680.1	1762.6	2074.8	2175.4
50°	2283.8	2289.3	1939.1	1871.5	1949.0	1941.5	1875.8	1806.7	1839.1	2135.5	2239.5
52.5°	2418.5	2418.7	2046.0	1971.2	2147.7	2171.4	2094.8	1950.1	1952.3	2253.9	2350.1
55°	2576.8	2587.7	2185.4	2090.6	2355.6	2396.0	2324.0	2120.2	2114.8	2444.9	2529.7
57.5°	2699.1	2757.2	2347.7	2240.0	2549.9	2602.4	2544.3	2296.8	2314.5	2641.9	2677.7
60°	2733.5	2869.4	2509.4	2407.5	2714.1	2793.2	2734.1	2487.5	2510.0	2769.7	2720.3
62.5°	2692.4	2905.6	2674.2	2557.5	2811.6	2887.4	2845.0	2612.4	2669.3	2753.4	2648.3
65°	2570.6	2853.3	2817.4	2621.4	2755.5	2782.5	2771.3	2619.0	2755.7	2597.7	2449.1
67.5°	2285.8	2651.2	2753.6	2485.0	2493.6	2464.6	2449.9	2441.0	2658.5	2346.7	2135.0
70°	1859.0	2278.2	2449.1	2079.6	2016.8	1988.9	1940.6	2060.2	2389.5	1999.5	1757.1
72.5°	1432.0	1742.9	2008.8	1576.6	1445.9	1455.5	1400.6	1575.3	1979.4	1545.7	1341.4
75°	1016.8	1188.4	1603.5	1132.8	959.9	959.3	955.0	1133.8	1561.9	1109.4	981.4
77.5°	732.9	855.6	1256.3	758.1	681.1	689.9	675.9	770.6	1217.5	798.0	727.2
80°	584.6	633.4	812.1	505.6	507.1	527.5	524.6	527.0	801.0	577.9	543.7
82.5°	420.1	480.8	620.8	387.5	335.3	356.9	361.2	390.9	565.2	408.6	358.5
85°	215.3	293.2	571.1	335.5	209.7	173.7	200.0	308.4	490.9	244.8	174.9
87.5°	41.8	81.3	418.6	186.5	94.2	47.6	78.5	130.7	285.5	44.4	21.8
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: P196681

CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3
2.5°	1267.7	1235.8	1205.9	1175.0	1151.0	1121.9	1093.1	1068.2	1044.1	1028.1	1033.1
5°	1236.9	1159.0	1089.2	1024.5	986.5	940.8	900.2	866.1	839.6	822.7	832.9
7.5°	1096.0	990.8	898.7	813.2	759.4	700.3	653.0	619.5	599.1	587.6	604.3
10°	951.8	833.6	730.5	641.5	588.4	538.2	495.4	460.0	432.5	419.5	426.3
12.5°	848.6	717.3	609.0	549.2	503.5	458.7	414.3	372.9	338.0	322.1	318.8
15°	809.9	654.7	544.2	477.5	432.0	383.2	335.3	290.9	257.8	244.0	241.0
17.5°	827.0	641.3	505.9	426.7	361.0	301.7	247.8	206.0	181.5	173.7	174.5
20°	886.5	646.2	474.9	374.6	293.5	223.1	169.3	140.4	129.9	128.2	130.1
22.5°	968.2	666.6	452.5	329.9	233.9	162.2	125.8	112.2	109.5	109.2	111.2
25°	1076.2	706.5	437.5	290.0	184.7	128.6	109.7	101.9	99.8	100.2	102.2
27.5°	1203.4	757.1	427.7	255.5	151.9	114.7	102.4	95.7	93.5	94.0	95.5
30°	1319.6	801.5	413.3	229.6	136.3	109.7	98.5	91.8	88.7	88.7	89.7
32.5°	1423.5	839.8	396.4	210.3	122.2	98.5	89.3	84.0	81.7	82.5	83.0
35°	1515.8	860.1	383.2	198.8	110.7	90.8	81.5	76.1	73.1	73.5	74.3
37.5°	1606.5	867.8	374.4	192.6	102.4	86.0	77.6	73.1	69.8	69.3	69.1
40°	1692.8	866.1	366.2	190.7	97.0	82.5	75.1	71.0	67.8	67.0	66.8
42.5°	1767.3	860.3	358.5	186.0	93.2	80.0	73.1	69.6	66.3	65.3	64.8
45°	1835.3	856.8	350.0	177.2	95.3	79.0	72.0	68.3	65.3	64.0	63.6
47.5°	1911.0	869.2	340.6	167.8	94.7	79.3	72.0	67.8	64.8	63.6	63.1
50°	2000.9	911.4	328.9	154.8	90.2	84.7	71.8	67.0	64.4	63.6	62.6
52.5°	2128.1	979.7	312.6	138.1	86.8	90.4	71.6	65.8	63.6	62.3	61.0
55°	2302.3	1048.1	291.7	120.4	81.3	86.6	72.0	64.4	61.8	60.5	59.1
57.5°	2445.1	1099.9	265.3	105.7	76.3	81.7	71.3	62.6	59.9	58.6	57.4
60°	2435.9	1104.9	240.1	96.2	73.3	73.5	73.1	61.3	58.1	57.2	56.0
62.5°	2285.0	1043.3	216.7	91.4	71.0	67.0	74.6	59.9	56.4	55.4	54.6
65°	2034.1	900.0	204.2	91.4	69.1	63.6	65.1	57.8	54.6	53.6	53.1
67.5°	1715.7	723.2	192.6	93.5	66.3	61.0	59.1	55.8	52.9	51.9	51.4
70°	1375.1	569.1	184.2	92.6	63.8	58.4	55.8	53.1	50.1	49.8	49.3
72.5°	1078.7	457.2	180.5	92.6	60.1	55.0	52.6	50.6	47.6	47.4	46.7
75°	864.4	343.3	165.1	90.8	56.4	50.8	48.6	46.9	43.9	44.1	43.6
77.5°	669.3	242.8	137.8	81.7	51.6	46.1	44.4	43.1	39.7	39.9	39.9
80°	523.6	158.1	107.0	67.8	46.1	40.7	39.5	38.4	34.6	35.2	35.2
82.5°	358.7	94.0	77.6	54.6	39.7	34.6	34.4	32.9	29.0	29.2	29.7
85°	195.9	61.8	51.6	40.4	31.1	28.2	27.7	26.9	23.2	23.2	23.4
87.5°	36.2	33.1	30.4	26.7	21.0	20.2	19.4	20.2	17.5	16.9	16.9
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: P196681

CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3
2.5°	1021.3	1004.2	992.2	981.7	956.6	958.3	961.8	966.8	951.1	959.3	969.5
5°	822.7	808.5	797.8	781.1	745.9	733.4	725.5	721.9	698.5	703.5	714.4
7.5°	606.5	606.3	602.6	583.9	541.5	515.8	498.9	493.7	479.2	484.7	501.4
10°	427.1	431.6	429.8	413.1	375.2	356.7	353.0	363.5	363.8	374.4	403.1
12.5°	308.6	306.2	303.8	290.2	261.7	258.7	267.2	281.7	285.1	296.6	326.5
15°	230.3	224.4	223.1	212.4	193.7	196.4	202.6	210.3	210.5	218.4	243.1
17.5°	172.7	172.7	174.9	167.8	154.3	153.1	149.8	147.8	144.9	148.0	161.6
20°	134.2	140.4	145.4	141.4	129.2	123.1	116.9	113.0	110.7	110.9	114.9
22.5°	114.9	119.9	126.4	124.4	114.1	106.4	102.4	99.8	98.0	98.0	100.2
25°	105.2	108.5	114.4	113.4	104.7	98.5	95.3	92.6	90.4	90.2	92.6
27.5°	97.5	99.4	103.5	102.9	94.0	90.0	88.0	86.2	85.0	84.7	87.0
30°	90.4	91.4	93.5	92.8	86.0	82.1	81.3	80.6	79.8	80.0	83.2
32.5°	84.2	85.0	86.2	85.2	78.7	75.3	74.1	73.1	72.3	73.1	76.8
35°	77.2	79.5	81.1	80.6	73.5	69.3	66.5	64.0	63.1	63.8	68.1
37.5°	71.3	75.1	77.0	76.5	69.3	64.4	60.8	60.3	60.3	61.3	65.5
40°	69.1	71.8	73.5	72.7	65.5	60.5	58.6	57.8	58.1	59.1	63.6
42.5°	67.0	69.6	70.0	68.5	61.3	58.1	56.9	55.8	56.4	57.6	62.1
45°	65.3	67.3	67.0	64.8	57.8	55.6	55.6	54.8	55.0	56.0	60.8
47.5°	64.0	65.1	64.6	62.3	55.4	53.6	54.3	54.3	54.8	55.6	60.3
50°	62.1	62.9	62.3	60.3	53.3	51.9	52.6	53.6	54.1	54.8	59.1
52.5°	60.1	60.5	60.3	58.4	51.4	50.4	50.4	51.4	52.3	53.3	57.2
55°	58.1	58.6	58.8	57.4	49.8	48.8	48.6	48.6	49.6	51.2	55.0
57.5°	56.6	56.6	57.2	56.0	48.4	47.1	45.9	46.1	47.4	48.6	52.6
60°	54.8	55.0	55.8	54.8	46.3	44.4	43.3	44.6	45.2	46.3	50.6
62.5°	53.3	53.3	53.9	53.1	44.6	42.6	41.8	43.1	43.1	44.4	48.6
65°	52.1	51.9	51.9	51.6	42.8	40.9	40.4	40.9	41.1	42.4	46.7
67.5°	51.2	49.8	49.8	50.4	41.1	39.2	38.9	38.9	39.2	40.7	44.4
70°	48.8	47.8	47.6	49.3	39.5	36.9	36.9	36.4	36.9	37.7	41.6
72.5°	46.3	45.7	45.4	47.8	37.7	34.4	33.9	33.7	33.9	34.6	38.4
75°	43.1	42.6	43.1	46.9	35.9	31.6	30.9	30.7	30.7	30.9	34.9
77.5°	39.5	38.9	42.6	43.6	34.9	28.4	27.7	27.2	26.7	26.7	31.1
80°	34.9	34.6	41.1	36.9	33.5	24.9	23.7	23.0	22.4	22.2	26.7
82.5°	30.4	29.9	35.2	29.0	27.7	20.4	18.7	17.2	16.5	16.5	20.4
85°	24.9	24.7	27.7	21.2	19.2	15.0	12.4	11.3	10.3	10.3	13.2
87.5°	18.2	17.7	17.2	12.7	9.8	6.8	4.7	4.5	4.1	3.8	5.5
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: P196681

CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7030-600

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3	1172.3
2.5°	984.8	1005.4	1044.5	1076.8	1119.6	1154.0	1193.1	1210.1
5°	734.7	767.3	827.2	878.3	949.1	1014.7	1089.5	1130.3
7.5°	527.0	575.4	620.8	684.6	773.1	861.1	957.7	1012.0
10°	436.1	480.4	519.3	564.7	632.9	731.9	847.5	908.5
12.5°	361.2	409.0	450.2	498.9	556.2	645.7	777.3	848.4
15°	277.0	329.1	378.5	437.0	507.3	609.5	756.4	835.7
17.5°	189.7	245.7	306.4	377.9	462.7	594.4	776.3	874.1
20°	128.9	169.8	235.9	320.5	422.7	587.2	820.2	953.1
22.5°	106.0	124.4	174.0	266.7	389.6	595.1	891.5	1057.1
25°	97.2	107.2	135.4	219.4	364.5	616.2	988.0	1174.4
27.5°	91.8	100.2	118.6	185.5	341.3	645.1	1105.3	1318.1
30°	88.5	96.4	112.0	168.0	320.1	670.1	1206.3	1426.3
32.5°	81.3	87.3	100.0	158.1	305.0	690.3	1295.4	1527.5
35°	72.5	79.8	90.2	151.6	304.4	699.8	1379.2	1639.4
37.5°	69.3	76.3	84.0	148.0	307.3	707.8	1481.5	1766.2
40°	67.3	73.5	79.8	147.6	309.9	714.0	1581.8	1898.4
42.5°	65.5	71.8	79.0	144.1	308.8	722.4	1670.6	2011.9
45°	65.1	71.3	80.8	138.9	308.6	735.7	1741.1	2102.5
47.5°	64.6	74.1	80.3	133.1	307.7	763.6	1820.7	2187.2
50°	64.0	79.0	76.8	125.1	300.1	811.2	1927.6	2283.8
52.5°	63.8	79.8	73.1	114.1	286.7	881.8	2084.1	2418.5
55°	62.9	75.8	66.5	99.8	267.2	957.7	2252.0	2576.8
57.5°	60.5	67.5	62.9	85.5	239.3	1010.8	2375.9	2699.1
60°	66.1	58.1	60.3	78.2	206.0	1020.4	2381.3	2733.5
62.5°	63.1	52.9	57.8	75.8	182.5	958.5	2272.4	2692.4
65°	50.4	50.1	55.6	78.2	178.9	820.2	2088.4	2570.6
67.5°	45.9	48.1	53.3	81.3	181.3	646.2	1817.6	2285.8
70°	42.8	45.7	50.4	84.0	185.2	509.0	1463.4	1859.0
72.5°	39.9	42.2	47.4	86.8	182.5	401.6	1171.3	1432.0
75°	36.2	38.1	43.1	79.5	156.6	295.2	930.7	1016.8
77.5°	31.9	33.7	37.9	62.9	117.7	205.4	697.1	732.9
80°	27.5	28.2	31.3	45.9	76.8	122.9	530.6	584.6
82.5°	21.8	22.0	23.9	33.7	47.8	78.5	367.9	420.1
85°	13.9	14.4	15.4	23.7	32.1	50.4	187.9	215.3
87.5°	4.7	5.5	5.5	11.5	15.8	28.0	57.6	41.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)