

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: P197163

Luminaire Tested: **NAV-AF-03-D-UNV-SLL-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197163
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-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 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: 8601 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

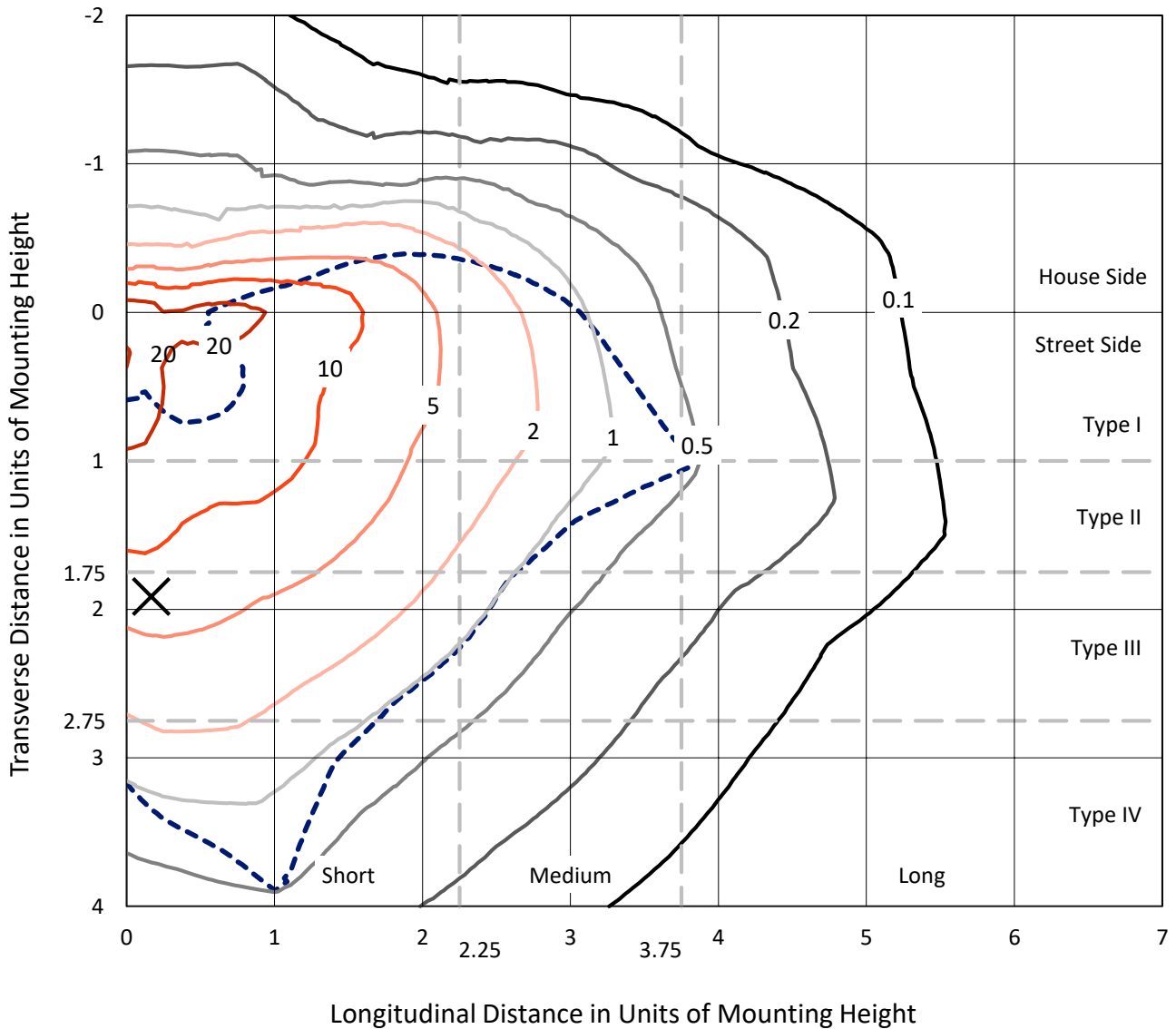
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197163
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

Iso-Footcandle Lines of Horizontal Illumination

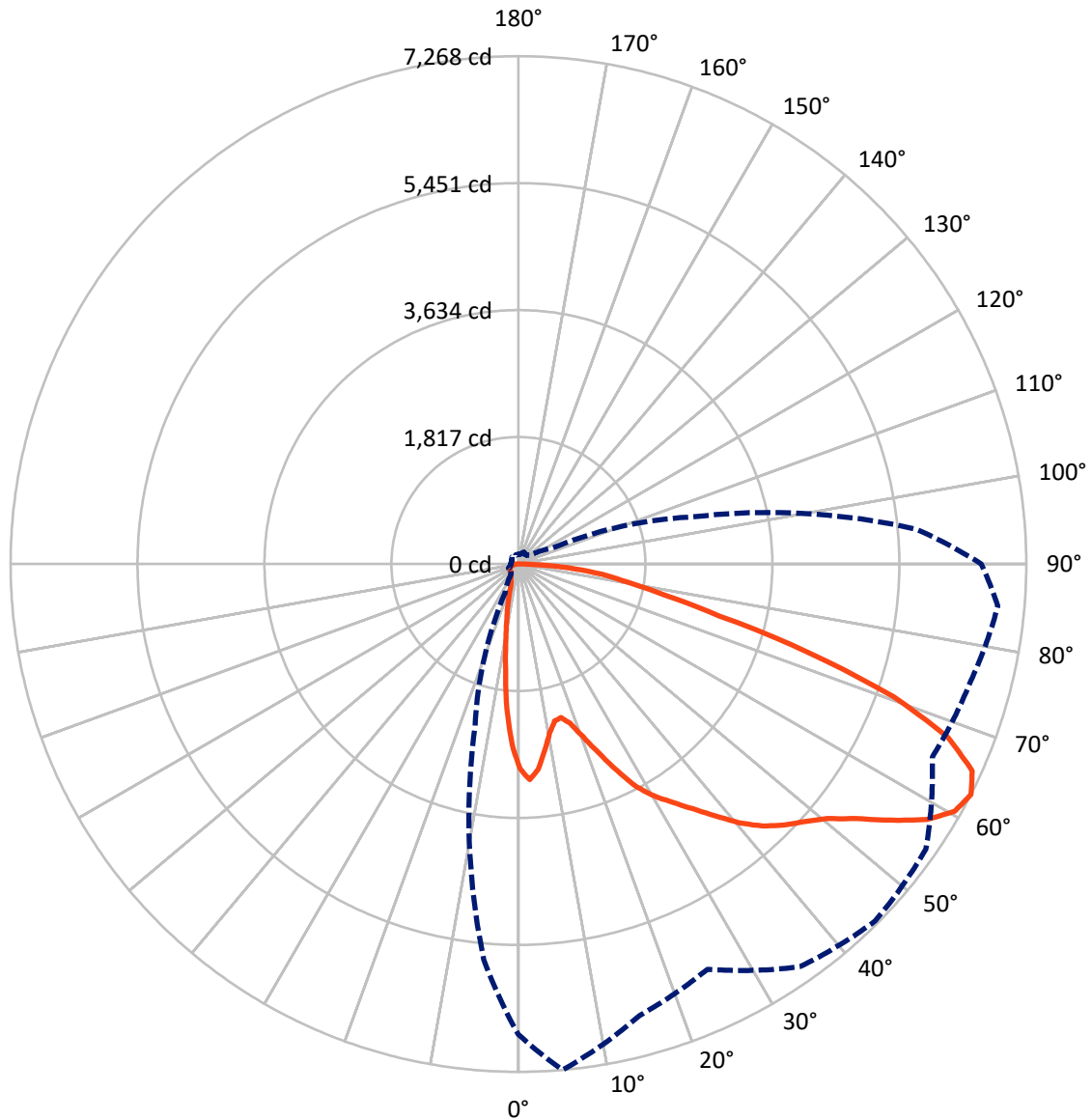
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 33.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197163
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197163

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1523.7	0.0	1523.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	7077.3	0.0	7077.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	8601.0	0.0	8601.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.2	2.5
10°-20°	389.5	4.5
20°-30°	560.2	6.5
30°-40°	858.0	10.0
40°-50°	1254.4	14.6
50°-60°	1825.2	21.2
60°-70°	2114.7	24.6
70°-80°	1102.4	12.8
80°-90°	283.4	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°	8601.0	100.0
0°-180°	8601.0	100.0



REPORT NUMBER: P197163

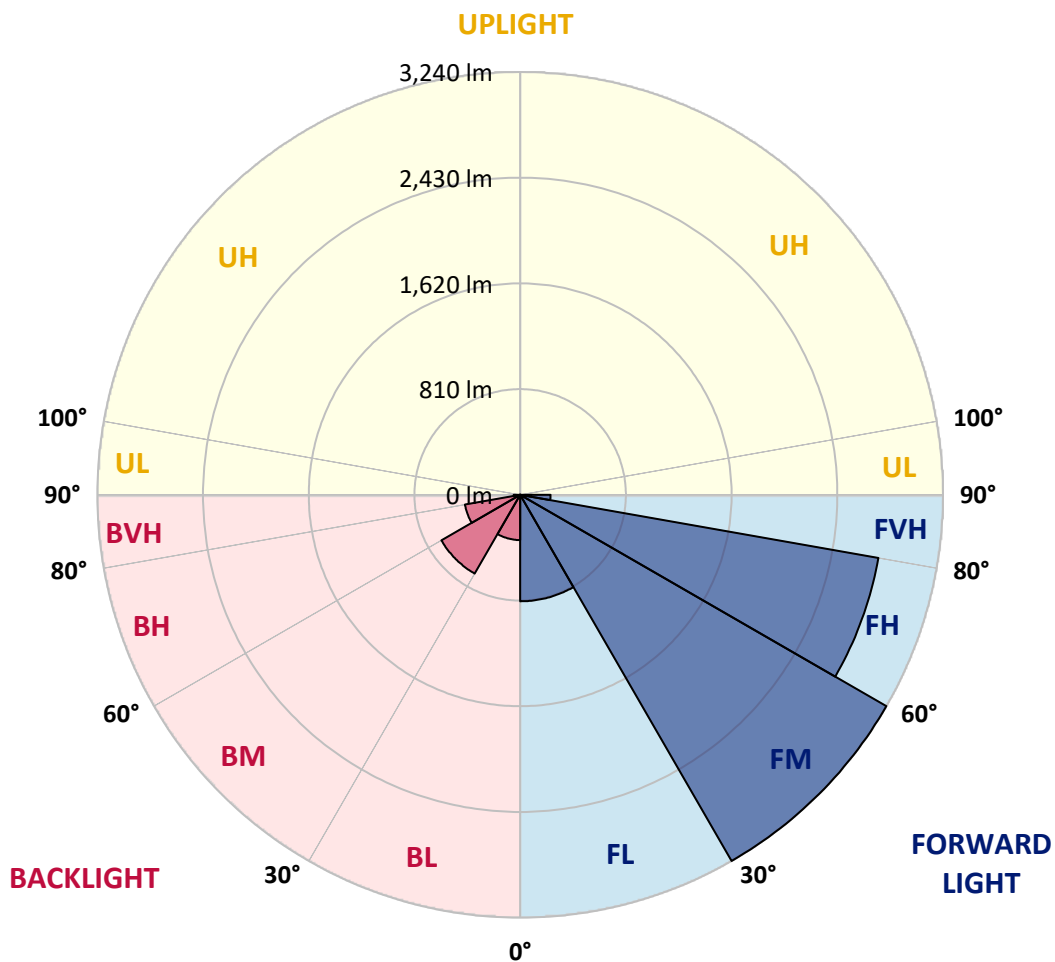
CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	816.3	9.5			
FM (30°-60°)	3240.5	37.7			
FH (60°-80°)	2787.5	32.4			G2/5000
FVH (80°-90°)	233.1	2.7			G3/500
BL (0°-30°)	346.7	4.0	B1/500		
BM (30°-60°)	697.1	8.1	B1/1000		
BH (60°-80°)	429.6	5.0	B1/500		G1/500
BVH (80°-90°)	50.2	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-G3

Type IV Short





REPORT NUMBER: P197163
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	3027.0	3091.3	3164.9	3260.9	3326.4	3352.6	3374.4	3337.6	3302.1	3235.3	3211.6
5°	2827.5	2951.0	3153.6	3346.3	3516.0	3613.2	3643.2	3575.2	3454.2	3279.6	3187.3
7.5°	2531.3	2694.0	2979.0	3262.8	3506.0	3668.1	3680.0	3545.3	3307.0	3020.8	2871.1
10°	2272.5	2456.4	2786.3	3103.7	3361.3	3527.2	3494.8	3305.8	3018.3	2692.8	2523.8
12.5°	2122.2	2306.1	2642.3	2964.7	3207.3	3270.3	3204.1	3045.1	2772.6	2446.5	2276.2
15°	2090.4	2279.9	2591.1	2863.0	3013.3	2972.8	2907.3	2826.9	2632.9	2366.0	2201.4
17.5°	2186.4	2398.4	2659.1	2808.2	2801.9	2704.6	2649.8	2665.3	2632.3	2453.3	2281.2
20°	2384.1	2634.8	2831.8	2793.2	2633.5	2497.0	2465.2	2587.4	2740.2	2672.2	2483.2
22.5°	2644.1	2929.8	3067.6	2836.2	2545.6	2398.4	2392.2	2583.0	2936.6	3003.3	2773.2
25°	2937.9	3270.9	3305.2	2912.3	2536.3	2389.7	2384.1	2650.4	3173.0	3331.4	3098.1
27.5°	3297.1	3615.1	3503.5	3013.9	2577.4	2415.3	2419.0	2765.1	3419.3	3655.6	3464.2
30°	3567.7	3859.6	3625.7	3113.7	2643.5	2460.2	2469.5	2889.2	3552.1	3880.8	3756.7
32.5°	3820.9	4068.5	3743.0	3212.3	2740.2	2526.9	2559.3	3043.9	3711.8	4074.1	4032.9
35°	4100.9	4302.3	3873.3	3317.6	2878.6	2644.1	2690.9	3191.1	3870.2	4267.4	4306.7
37.5°	4418.3	4569.9	4014.9	3466.7	3078.2	2861.2	2887.4	3341.3	3980.6	4481.3	4600.4
40°	4748.9	4869.8	4169.5	3665.6	3368.2	3154.3	3166.7	3534.0	4067.2	4702.7	4885.4
42.5°	5032.6	5126.8	4324.8	3912.6	3701.2	3453.0	3463.6	3741.7	4150.2	4893.5	5113.7
45°	5259.6	5328.8	4471.3	4172.6	4056.6	3825.9	3823.4	3953.1	4261.2	5054.4	5288.9
47.5°	5471.0	5507.8	4634.7	4425.8	4425.2	4306.1	4216.9	4202.6	4409.0	5189.7	5441.7
50°	5713.0	5726.7	4850.5	4681.5	4875.4	4856.7	4692.1	4519.4	4600.4	5341.9	5602.0
52.5°	6049.7	6050.3	5118.0	4930.9	5372.5	5431.7	5240.3	4877.9	4883.6	5638.1	5878.8
55°	6445.7	6473.2	5466.6	5229.7	5892.6	5993.6	5813.4	5303.9	5290.2	6115.8	6327.9
57.5°	6751.9	6897.2	5872.6	5603.2	6378.4	6509.9	6364.6	5745.4	5789.7	6608.5	6698.3
60°	6838.0	7177.8	6277.3	6022.3	6789.3	6987.0	6839.2	6222.5	6278.6	6928.4	6804.9
62.5°	6735.1	7268.3	6689.6	6397.7	7033.2	7222.7	7116.7	6534.9	6677.1	6887.2	6624.7
65°	6430.1	7137.3	7047.5	6557.3	6892.9	6960.2	6932.1	6551.1	6893.5	6498.1	6126.4
67.5°	5718.0	6632.2	6887.9	6216.2	6237.4	6165.1	6128.3	6105.8	6650.3	5870.1	5340.7
70°	4650.3	5698.6	6126.4	5202.2	5045.1	4975.2	4854.2	5153.6	5977.4	5001.4	4395.3
72.5°	3582.1	4359.7	5025.1	3943.8	3617.0	3640.7	3503.5	3940.6	4951.5	3866.4	3355.7
75°	2543.7	2972.8	4011.1	2833.7	2400.9	2399.7	2389.1	2836.2	3907.0	2775.1	2455.2
77.5°	1833.4	2140.3	3142.4	1896.4	1703.7	1725.6	1690.6	1927.6	3045.8	1996.2	1819.1
80°	1462.4	1584.6	2031.1	1264.7	1268.4	1319.6	1312.1	1318.3	2003.7	1445.5	1360.1
82.5°	1050.8	1203.0	1552.8	969.1	838.8	893.0	903.6	977.8	1413.7	1022.1	896.8
85°	538.8	733.4	1428.7	839.4	524.5	434.7	500.1	771.4	1227.9	612.4	437.2
87.5°	104.8	203.3	1047.1	466.5	235.7	119.1	196.4	326.8	714.0	111.0	54.3
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: P197163
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	3171.1	3091.3	3016.4	2939.1	2879.2	2806.3	2734.6	2672.2	2611.7	2571.8	2584.3
5°	3093.8	2899.2	2724.6	2562.4	2467.7	2353.5	2251.9	2166.4	2100.3	2057.9	2083.5
7.5°	2741.4	2478.3	2248.1	2034.2	1899.5	1751.7	1633.3	1549.7	1498.6	1469.9	1511.7
10°	2381.0	2085.4	1827.2	1604.6	1471.7	1346.4	1239.1	1150.6	1082.0	1049.5	1066.4
12.5°	2122.8	1794.1	1523.5	1373.8	1259.7	1147.5	1036.5	932.9	845.6	805.7	797.6
15°	2026.1	1637.6	1361.4	1194.2	1080.7	958.5	838.8	727.8	644.8	610.5	603.0
17.5°	2068.5	1603.9	1265.3	1067.6	903.0	754.6	619.9	515.1	454.0	434.7	436.5
20°	2217.6	1616.4	1188.0	937.3	734.0	558.1	423.4	351.1	324.9	320.5	325.5
22.5°	2422.1	1667.6	1131.9	825.0	585.0	406.0	314.9	280.6	273.8	273.1	278.1
25°	2692.2	1767.3	1094.4	725.3	462.1	321.8	274.4	255.1	249.4	250.7	255.7
27.5°	3010.2	1893.9	1070.1	639.2	379.8	286.9	256.3	239.5	233.9	235.1	238.8
30°	3300.8	2004.9	1034.0	574.4	341.1	274.4	246.3	229.5	222.0	222.0	224.5
32.5°	3560.9	2101.0	991.6	525.7	305.6	246.3	223.3	210.2	204.5	206.4	207.7
35°	3791.6	2151.5	958.5	497.0	276.9	227.0	203.9	190.2	182.7	184.0	185.8
37.5°	4018.6	2170.8	936.7	481.4	256.3	215.1	193.9	182.7	174.6	173.4	172.7
40°	4234.4	2166.4	916.1	477.1	242.6	206.4	187.7	177.7	169.6	167.8	167.1
42.5°	4420.8	2152.1	896.8	465.2	233.2	200.2	182.7	174.0	165.9	163.4	162.1
45°	4591.1	2143.4	875.6	443.4	238.2	197.7	180.2	170.9	163.4	160.3	159.0
47.5°	4780.0	2174.6	851.9	419.7	237.0	198.3	180.2	169.6	162.1	159.0	157.8
50°	5005.2	2279.9	822.6	387.3	225.7	212.0	179.6	167.8	160.9	159.0	156.5
52.5°	5323.2	2450.8	782.0	345.5	217.0	226.4	179.0	164.6	159.0	155.9	152.8
55°	5759.1	2621.7	729.6	301.2	203.3	216.4	180.2	160.9	154.7	151.5	147.8
57.5°	6116.4	2751.4	663.5	264.4	190.8	204.5	178.4	156.5	149.7	146.6	143.4
60°	6093.4	2763.9	600.5	240.7	183.3	184.0	182.7	153.4	145.3	142.8	140.3
62.5°	5716.1	2609.8	541.9	228.9	177.7	167.8	186.5	149.7	140.9	138.4	136.6
65°	5088.1	2251.3	510.7	228.9	172.7	159.0	162.8	144.7	136.6	134.1	132.8
67.5°	4291.7	1809.1	481.4	233.9	165.9	152.8	147.8	139.7	132.2	129.7	128.5
70°	3439.9	1423.7	460.9	231.4	159.6	145.9	139.7	132.8	125.3	124.7	123.5
72.5°	2698.4	1143.7	451.5	231.4	150.3	137.8	131.6	126.6	119.1	118.5	116.6
75°	2162.1	858.7	412.8	227.0	140.9	127.2	121.6	117.2	109.8	110.4	109.1
77.5°	1674.4	607.4	344.9	204.5	129.1	115.4	111.0	107.9	99.2	99.8	99.8
80°	1309.6	395.4	267.5	169.6	115.4	101.6	98.5	96.0	86.7	87.9	87.9
82.5°	897.4	235.1	193.9	136.6	99.2	86.7	86.1	82.3	72.3	73.0	74.2
85°	490.2	154.7	129.1	101.0	78.0	70.5	69.2	67.4	58.0	58.0	58.6
87.5°	90.4	82.9	76.1	66.7	52.4	50.5	48.6	50.5	43.7	42.4	42.4
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: P197163

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2555.0	2511.9	2482.0	2455.8	2392.8	2397.2	2405.9	2418.4	2379.1	2399.7	2425.3
5°	2057.9	2022.4	1995.6	1953.8	1865.9	1834.7	1814.7	1806.0	1747.4	1759.9	1787.3
7.5°	1517.3	1516.6	1507.3	1460.5	1354.5	1290.3	1247.9	1234.8	1198.6	1212.3	1254.1
10°	1068.3	1079.5	1075.1	1033.3	938.5	892.4	883.0	909.2	909.9	936.7	1008.4
12.5°	772.0	765.8	760.2	725.9	654.8	647.3	668.5	704.7	713.4	742.1	816.9
15°	576.2	561.3	558.1	531.3	484.6	491.4	507.0	525.7	526.3	546.3	608.0
17.5°	432.2	432.2	437.2	419.7	386.0	382.9	374.8	369.8	362.3	370.4	404.1
20°	335.5	351.1	363.6	353.6	323.0	308.1	292.5	282.5	276.9	277.5	287.5
22.5°	287.5	300.0	316.2	311.2	285.6	266.3	256.3	249.4	245.1	245.1	250.7
25°	263.2	271.3	286.2	283.7	261.9	246.3	238.2	231.4	226.4	225.7	231.4
27.5°	243.8	248.8	258.8	257.6	235.1	225.1	220.1	215.8	212.7	212.0	217.6
30°	226.4	228.9	233.9	232.0	215.1	205.2	203.3	201.4	199.6	200.2	208.3
32.5°	210.8	212.7	215.8	213.3	197.1	188.3	185.2	182.7	180.8	182.7	192.1
35°	193.3	198.9	202.7	201.4	184.0	173.4	166.5	160.3	157.8	159.6	170.2
37.5°	178.4	187.7	192.7	191.5	173.4	160.9	152.2	150.9	150.9	153.4	164.0
40°	172.7	179.6	184.0	182.1	164.0	151.5	146.6	144.7	145.3	147.8	159.0
42.5°	167.8	174.0	175.2	171.5	153.4	145.3	142.2	139.7	140.9	144.1	155.3
45°	163.4	168.4	167.8	162.1	144.7	139.1	139.1	137.2	137.8	140.3	152.2
47.5°	160.3	162.8	161.5	155.9	138.4	134.1	135.9	135.9	137.2	139.1	150.9
50°	155.3	157.2	155.9	150.9	133.5	129.7	131.6	134.1	135.3	137.2	147.8
52.5°	150.3	151.5	150.9	145.9	128.5	126.0	126.0	128.5	131.0	133.5	142.8
55°	145.3	146.6	147.2	143.4	124.7	122.2	121.6	121.6	124.1	127.8	137.8
57.5°	141.6	141.6	142.8	140.3	121.0	117.9	114.7	115.4	118.5	121.6	131.6
60°	137.2	137.8	139.7	137.2	116.0	111.0	108.5	111.6	112.9	116.0	126.6
62.5°	133.5	133.5	134.7	132.8	111.6	106.6	104.8	107.9	107.9	111.0	121.6
65°	130.3	129.7	129.7	129.1	107.3	102.3	101.0	102.3	102.9	106.0	116.6
67.5°	127.8	124.7	124.7	126.0	102.9	97.9	97.3	97.3	97.9	101.6	111.0
70°	122.2	119.7	119.1	123.5	98.5	92.3	92.3	91.0	92.3	94.2	104.1
72.5°	116.0	114.1	113.5	119.7	94.2	86.1	84.8	84.2	84.8	86.7	96.0
75°	107.9	106.6	107.9	117.2	89.8	79.2	77.3	76.7	76.7	77.3	87.3
77.5°	98.5	97.3	106.6	109.1	87.3	71.1	69.2	68.0	66.7	66.7	78.0
80°	87.3	86.7	102.9	92.3	83.6	62.4	59.2	57.4	56.1	55.5	66.7
82.5°	76.1	74.8	87.9	72.3	69.2	51.1	46.8	43.0	41.2	41.2	51.1
85°	62.4	61.7	69.2	53.0	48.0	37.4	31.2	28.1	25.6	25.6	33.1
87.5°	45.5	44.3	43.0	31.8	24.3	16.8	11.8	11.2	10.0	9.4	13.7
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: P197163

CATALOG NUMBER: NAV-AF-03-D-UNV-SLL-8030-600

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3	2932.3
2.5°	2463.3	2515.1	2613.0	2693.4	2800.7	2886.7	2984.6	3027.0
5°	1837.8	1919.5	2069.2	2197.0	2374.1	2538.1	2725.2	2827.5
7.5°	1318.3	1439.3	1552.8	1712.5	1933.8	2154.0	2395.9	2531.3
10°	1090.7	1201.7	1299.0	1412.5	1583.4	1830.9	2119.7	2272.5
12.5°	903.6	1023.4	1126.3	1247.9	1391.3	1615.2	1944.4	2122.2
15°	692.8	823.2	946.7	1093.2	1269.1	1524.7	1892.1	2090.4
17.5°	474.6	614.3	766.4	945.4	1157.4	1486.7	1941.9	2186.4
20°	322.4	424.7	589.9	802.0	1057.0	1468.6	2051.7	2384.1
22.5°	265.0	311.2	435.3	667.3	974.7	1488.6	2230.1	2644.1
25°	243.2	268.2	338.6	548.8	911.7	1541.6	2471.4	2937.9
27.5°	229.5	250.7	296.8	464.0	853.7	1613.9	2765.1	3297.1
30°	221.4	241.3	280.0	420.3	800.7	1676.3	3017.7	3567.7
32.5°	203.3	218.3	250.1	395.4	762.7	1726.8	3240.3	3820.9
35°	181.5	199.6	225.7	379.2	761.4	1750.5	3449.9	4100.9
37.5°	173.4	190.8	210.2	370.4	768.9	1770.5	3706.2	4418.3
40°	168.4	184.0	199.6	369.2	775.2	1786.0	3956.9	4748.9
42.5°	164.0	179.6	197.7	360.5	772.7	1807.2	4178.9	5032.6
45°	162.8	178.4	202.1	347.4	772.0	1840.3	4355.3	5259.6
47.5°	161.5	185.2	200.8	333.0	769.5	1910.1	4554.3	5471.0
50°	160.3	197.7	192.1	313.1	750.8	2029.3	4821.8	5713.0
52.5°	159.6	199.6	182.7	285.6	717.2	2205.7	5213.4	6049.7
55°	157.2	189.6	166.5	249.4	668.5	2395.9	5633.1	6445.7
57.5°	151.5	169.0	157.2	213.9	598.7	2528.8	5943.1	6751.9
60°	165.3	145.3	150.9	195.8	515.1	2552.5	5956.8	6838.0
62.5°	157.8	132.2	144.7	189.6	456.5	2397.8	5684.3	6735.1
65°	126.0	125.3	139.1	195.8	447.8	2051.7	5224.0	6430.1
67.5°	114.7	120.4	133.5	203.3	453.4	1616.4	4546.8	5718.0
70°	107.3	114.1	126.0	210.2	463.3	1273.4	3660.6	4650.3
72.5°	99.8	105.4	118.5	217.0	456.5	1004.6	2929.8	3582.1
75°	90.4	95.4	107.9	198.9	391.6	738.4	2328.0	2543.7
77.5°	79.8	84.2	94.8	157.2	294.3	513.9	1743.6	1833.4
80°	68.6	70.5	78.6	114.7	192.1	307.4	1327.1	1462.4
82.5°	54.3	54.9	59.9	84.2	119.7	196.4	920.5	1050.8
85°	34.9	36.2	38.7	59.2	80.4	126.0	470.2	538.8
87.5°	11.8	13.7	13.7	28.7	39.3	69.8	144.1	104.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)