

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: P270383

Luminaire Tested: **NAV-AF-02-D-UNV-T2R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270383
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)
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-T2R-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8959.9 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 85
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

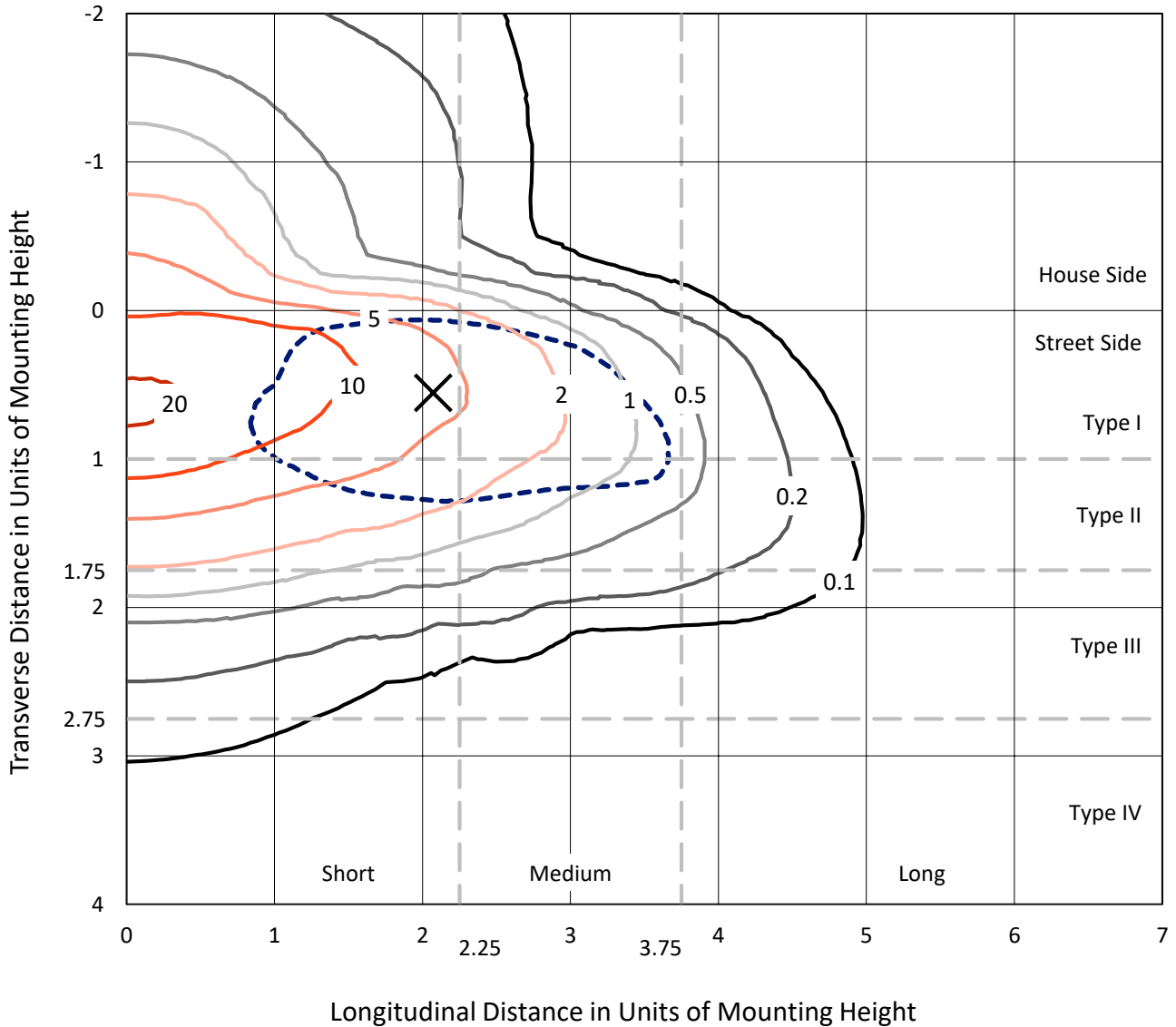


REPORT NUMBER: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

Iso-Footcandle Lines of Horizontal Illumination

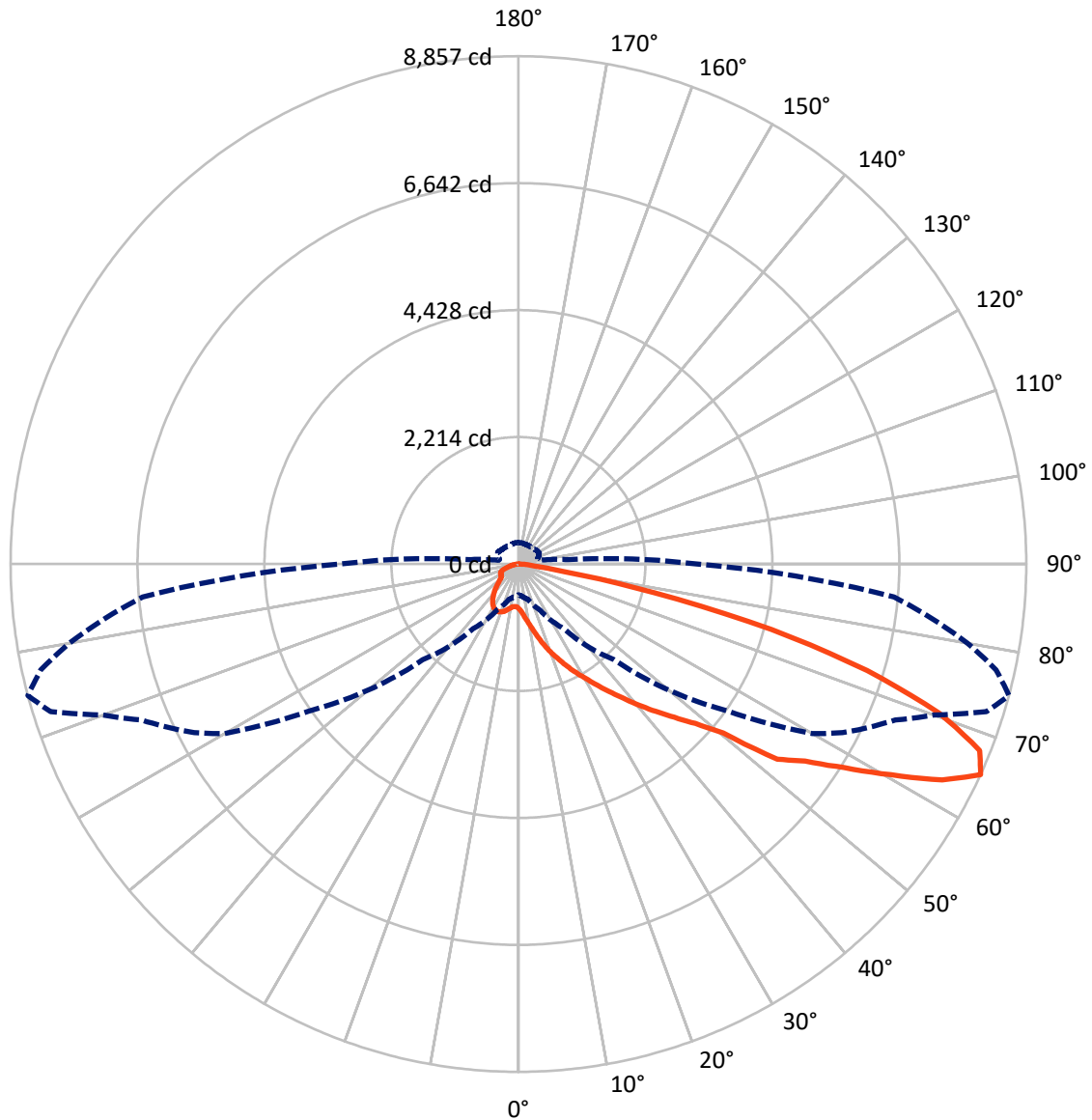
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.3 fc
 Type II - Short - Semi-Cutoff

REPORT NUMBER: P270383
CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1346.4	0.0	1346.4
	% Fixture	15.0	0.0	15.0
Street Side	Lumens	7613.6	0.0	7613.6
	% Fixture	85.0	0.0	85.0
Total	Lumens	8959.9	0.0	8959.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	1.0
10°-20°	350.1	3.9
20°-30°	706.5	7.9
30°-40°	1199.8	13.4
40°-50°	1673.4	18.7
50°-60°	2050.9	22.9
60°-70°	1929.6	21.5
70°-80°	846.1	9.4
80°-90°	112.0	1.2
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°	8959.9	100.0
0°-180°	8959.9	100.0

Coefficient of Utilization



REPORT NUMBER: P270383

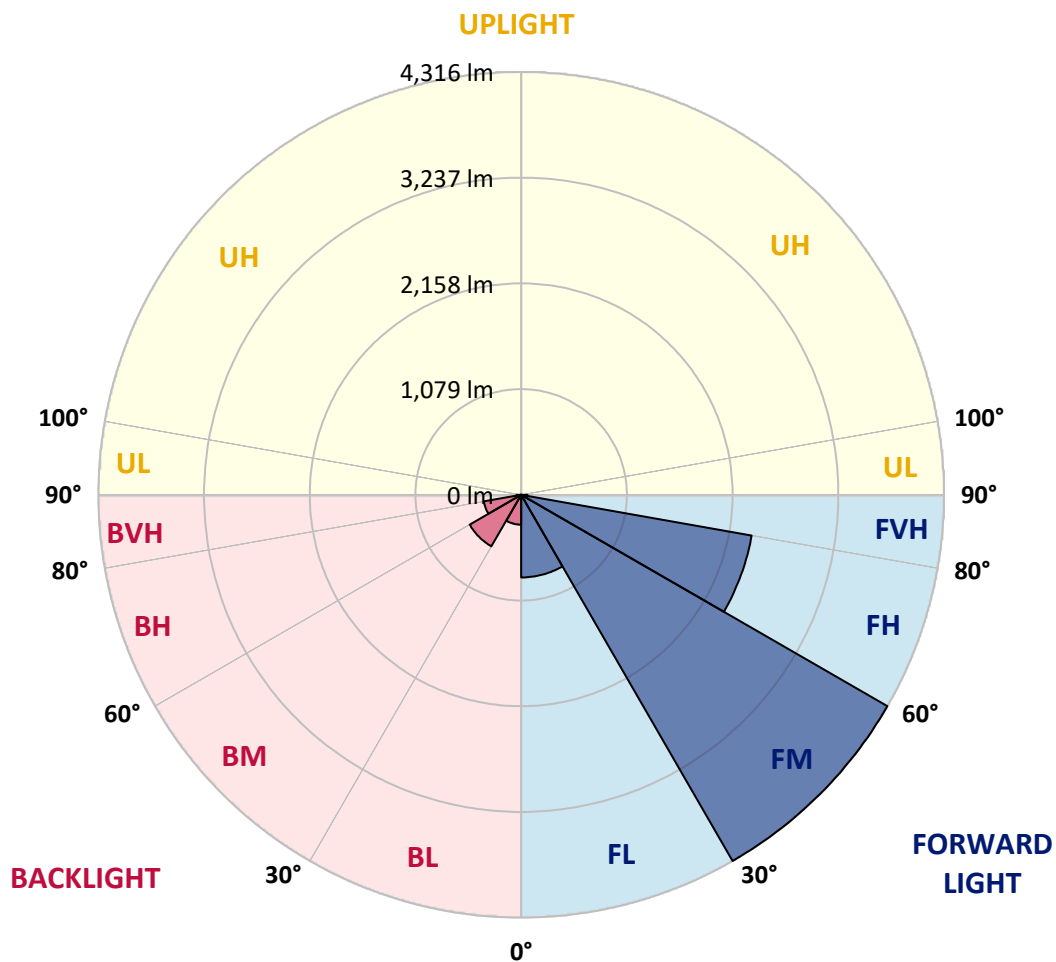
CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	843.4	9.4			
FM (30°-60°)	4316.5	48.2			
FH (60°-80°)	2388.8	26.7			G2/5000
FVH (80°-90°)	64.9	0.7			G1/100
BL (0°-30°)	304.8	3.4	B1/500		
BM (30°-60°)	607.6	6.8	B1/1000		
BH (60°-80°)	387.0	4.3	B1/500		G1/500
BVH (80°-90°)	47.1	0.5			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 II Short





REPORT NUMBER: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	977.5	966.1	967.3	951.3	927.9	902.3	881.1	869.7	860.0	857.3	841.4
5°	1278.5	1264.3	1259.2	1222.7	1167.8	1102.8	1038.5	1013.5	992.9	980.4	949.6
7.5°	1524.8	1517.2	1510.5	1476.9	1422.6	1339.5	1235.8	1198.7	1164.6	1126.8	1089.9
10°	1692.2	1689.4	1686.6	1663.2	1618.1	1545.9	1434.1	1393.6	1351.0	1303.0	1254.6
12.5°	1818.9	1818.9	1821.1	1801.7	1774.4	1718.5	1617.0	1579.4	1536.1	1485.9	1430.7
15°	1903.8	1906.1	1918.1	1923.7	1909.4	1873.5	1784.7	1751.5	1710.6	1661.0	1606.2
17.5°	1960.2	1964.8	1982.4	2001.2	2019.5	2007.0	1940.8	1910.1	1873.0	1827.4	1776.0
20°	2091.3	2085.5	2086.1	2080.5	2107.2	2116.9	2080.5	2054.9	2025.1	1983.5	1936.8
22.5°	2366.6	2355.7	2327.9	2256.6	2224.2	2220.7	2199.1	2185.3	2162.5	2136.3	2089.5
25°	2725.6	2713.2	2657.8	2540.4	2443.5	2354.1	2314.2	2305.6	2290.8	2273.2	2239.5
27.5°	3096.7	3083.1	3011.7	2863.6	2737.0	2556.3	2432.2	2420.8	2407.1	2399.6	2383.7
30°	3423.4	3408.4	3338.5	3187.9	3035.3	2819.7	2591.3	2551.2	2527.9	2530.2	2521.1
32.5°	3710.1	3697.0	3618.4	3464.9	3310.0	3100.7	2797.5	2735.3	2683.0	2663.6	2670.4
35°	3950.6	3938.6	3852.6	3698.1	3541.8	3368.0	3063.1	2969.6	2884.2	2830.6	2824.4
37.5°	4092.0	4085.1	4024.6	3893.7	3738.6	3610.8	3360.6	3257.0	3131.0	3052.9	3018.7
40°	4084.0	4091.4	4081.1	4021.8	3901.6	3808.6	3670.7	3568.2	3445.0	3328.7	3259.2
42.5°	3967.8	3978.0	4024.0	4054.9	4022.4	3965.9	3941.5	3865.0	3754.6	3631.4	3535.1
45°	3808.1	3817.2	3877.1	3988.3	4081.1	4097.1	4178.6	4140.4	4047.0	3942.0	3836.0
47.5°	3563.5	3581.3	3650.8	3827.5	4048.7	4202.5	4377.5	4395.1	4341.0	4254.5	4155.2
50°	3209.6	3233.0	3330.5	3581.8	3925.6	4310.8	4673.3	4740.5	4718.9	4631.1	4530.8
52.5°	2847.1	2870.4	3000.3	3267.8	3727.2	4355.3	4964.7	5136.8	5261.1	5351.7	5369.3
55°	2469.8	2496.0	2638.5	2946.4	3462.6	4298.8	5172.6	5368.1	5494.2	5588.7	5627.0
57.5°	2044.0	2073.6	2211.5	2522.8	3088.7	4071.9	5404.1	5681.2	5868.5	6014.5	6096.5
60°	1555.4	1592.5	1735.6	2049.2	2597.4	3637.6	5507.1	5917.0	6215.2	6434.0	6563.9
62.5°	986.1	1023.7	1172.5	1498.0	2038.3	3044.3	5215.4	5813.3	6321.7	6645.5	6883.7
65°	538.1	554.7	637.3	882.3	1374.2	2362.1	4475.5	5180.6	5913.1	6371.9	6737.8
67.5°	403.6	405.9	414.4	474.2	731.8	1594.9	3499.2	4145.0	4958.4	5548.8	5986.0
70°	353.5	353.5	354.6	355.1	397.3	864.1	2370.5	2965.0	3710.5	4308.0	4851.1
72.5°	316.9	313.5	312.3	305.6	311.3	442.9	1290.4	1824.5	2453.2	3123.5	3630.3
75°	273.7	273.1	273.1	266.2	269.6	311.8	559.7	875.5	1362.9	1987.1	2485.7
77.5°	236.6	232.5	233.1	229.2	239.9	238.8	265.5	360.8	593.4	1043.7	1457.5
80°	194.9	192.1	193.9	191.5	208.6	176.6	179.0	220.5	294.6	457.6	645.3
82.5°	144.2	145.3	156.1	155.0	175.6	119.1	131.2	164.7	198.3	228.0	247.9
85°	84.4	86.1	112.3	117.9	128.7	62.7	80.4	98.1	110.6	122.6	127.6
87.5°	9.2	11.9	62.7	64.4	57.6	18.9	32.5	41.1	43.8	46.7	41.1
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: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	836.2	828.7	820.8	816.2	808.2	801.4	788.8	778.7	767.2	759.2	755.8
5°	934.1	916.5	897.8	884.0	867.0	852.1	823.7	789.4	778.7	755.8	750.2
7.5°	1061.8	1029.9	998.0	971.8	942.2	917.7	869.7	808.2	800.3	763.7	755.8
10°	1211.9	1165.0	1117.8	1077.2	1033.9	996.3	925.7	839.0	830.5	783.7	775.7
12.5°	1379.3	1322.3	1261.4	1200.9	1149.7	1096.7	1000.4	886.8	873.2	817.9	807.0
15°	1552.1	1490.5	1419.9	1346.9	1283.6	1213.5	1092.1	949.6	924.5	859.6	844.8
17.5°	1722.5	1655.8	1581.7	1500.2	1426.1	1342.2	1191.3	1019.7	976.4	900.6	881.7
20°	1887.2	1819.3	1741.4	1661.5	1569.2	1473.4	1292.8	1088.7	1022.6	934.7	910.3
22.5°	2037.1	1979.0	1901.0	1809.1	1715.7	1608.0	1395.8	1157.6	1063.1	960.9	929.7
25°	2195.0	2142.0	2064.6	1976.1	1867.2	1747.7	1502.4	1223.2	1095.6	975.3	936.6
27.5°	2354.5	2309.1	2236.2	2143.1	2026.2	1893.4	1610.8	1283.6	1121.8	979.8	933.1
30°	2525.0	2489.7	2422.5	2318.7	2200.7	2053.6	1728.8	1342.8	1138.2	973.6	917.7
32.5°	2686.3	2685.3	2625.3	2517.6	2390.5	2228.7	1853.1	1402.8	1146.9	955.8	890.8
35°	2853.9	2877.4	2832.3	2729.7	2595.7	2416.3	1990.5	1466.7	1147.3	924.5	856.2
37.5°	3044.3	3085.9	3065.9	2968.4	2827.8	2629.9	2151.7	1538.3	1144.0	881.1	805.4
40°	3260.8	3317.9	3317.4	3235.2	3084.8	2869.4	2339.2	1618.7	1135.9	827.1	745.6
42.5°	3508.9	3576.7	3595.5	3514.6	3362.4	3131.0	2554.2	1707.0	1123.4	773.5	682.3
45°	3792.7	3852.6	3887.9	3812.6	3660.0	3416.0	2800.9	1807.4	1108.1	704.5	609.9
47.5°	4096.5	4166.1	4219.1	4154.7	3991.6	3740.8	3093.4	1936.8	1102.4	625.8	531.7
50°	4473.3	4545.1	4659.7	4630.7	4541.1	4339.4	3711.7	2242.3	1104.6	551.2	466.2
52.5°	5408.1	5572.7	5717.5	5653.2	5440.6	5094.6	4214.5	2412.2	1056.8	490.1	420.6
55°	5690.3	5877.2	6090.9	6064.1	5860.1	5511.2	4611.8	2554.2	1010.7	445.6	391.0
57.5°	6183.8	6404.3	6703.1	6697.4	6447.1	6054.4	5123.0	2724.0	990.7	420.0	376.2
60°	6706.4	6987.5	7400.1	7464.6	7192.6	6784.0	5727.2	2932.5	993.4	405.9	367.6
62.5°	7088.3	7500.5	8100.6	8293.3	7972.9	7522.6	6354.3	3141.3	976.4	389.2	357.3
65°	7111.7	7705.1	8556.6	8856.5	8532.1	7953.7	6575.5	3100.2	873.8	367.0	340.8
67.5°	6541.7	7314.7	8349.1	8678.0	8346.3	7688.1	6187.7	2710.2	710.2	328.3	312.3
70°	5448.5	6345.6	7419.6	7786.0	7511.8	6845.5	5385.2	2164.8	530.7	276.9	269.6
72.5°	4210.4	5047.2	6022.4	6361.6	6152.0	5566.0	4247.5	1577.8	379.1	224.5	218.8
75°	3010.1	3722.5	4430.5	4559.8	4352.9	3814.9	2755.9	985.5	265.5	184.2	176.1
77.5°	1863.9	2327.2	2581.5	2415.1	2151.1	1788.0	1121.8	486.8	176.6	149.8	141.9
80°	827.1	970.7	906.3	807.7	637.8	524.4	342.6	216.0	113.9	115.7	111.1
82.5°	278.1	294.1	286.1	284.5	256.5	224.5	145.3	93.5	63.8	74.1	72.5
85°	135.6	141.9	142.6	147.6	128.3	99.7	39.3	37.0	27.4	40.0	41.6
87.5°	41.1	41.6	37.5	41.1	33.1	22.7	7.4	10.3	5.1	9.7	9.7
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: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	749.5	747.3	743.3	738.6	737.6	731.8	730.1	727.3	725.7	722.7	720.5
5°	742.7	738.6	734.2	729.1	729.1	721.0	717.7	714.2	714.2	709.0	706.7
7.5°	749.5	744.4	739.2	734.8	736.4	727.3	723.9	720.5	719.9	714.8	712.4
10°	768.9	763.7	757.5	753.0	751.3	743.8	739.8	734.8	731.3	727.8	724.5
12.5°	798.6	791.8	783.7	774.0	770.0	763.7	757.5	750.7	742.7	739.2	734.2
15°	833.8	822.5	811.7	799.8	788.8	782.7	774.0	763.2	752.4	747.7	741.0
17.5°	862.9	851.0	835.7	821.4	801.9	796.8	784.8	771.7	754.0	752.4	742.1
20°	887.4	869.2	850.4	833.3	803.7	800.7	785.9	770.7	745.6	745.6	732.9
22.5°	901.2	876.0	853.8	831.0	794.0	791.8	774.6	756.4	725.7	726.6	711.4
25°	903.4	873.2	845.2	817.9	775.1	771.1	749.5	729.7	695.9	693.8	677.7
27.5°	894.4	859.0	826.5	793.5	747.3	738.6	714.8	690.8	657.7	652.1	634.9
30°	873.2	831.7	795.1	756.9	708.6	694.7	669.7	645.3	611.6	604.2	588.2
32.5°	839.6	792.2	751.8	713.7	660.1	642.9	617.9	593.4	560.9	555.2	540.3
35°	795.1	742.1	699.4	658.8	605.3	587.6	563.7	542.0	512.5	510.1	499.8
37.5°	739.2	684.0	638.3	599.6	549.0	539.8	515.3	499.3	474.8	477.1	472.0
40°	676.1	619.7	576.3	542.0	498.2	490.1	475.4	463.3	442.3	448.6	449.2
42.5°	612.1	555.7	516.4	485.7	448.1	442.9	432.7	425.7	409.8	422.4	427.6
45°	539.8	487.3	453.7	430.4	402.4	402.4	397.3	396.7	385.9	403.6	408.6
47.5°	469.6	428.6	405.2	391.0	371.5	380.7	379.1	383.5	375.6	393.8	398.4
50°	416.6	388.2	374.0	367.0	353.5	367.6	371.1	377.4	370.6	386.5	389.9
52.5°	383.0	364.3	356.3	354.6	344.8	362.6	368.2	374.0	365.9	380.7	380.3
55°	364.3	351.6	348.8	352.2	344.8	361.9	367.6	371.5	364.8	375.0	374.5
57.5°	357.3	350.6	352.2	357.3	352.2	366.5	369.4	374.0	367.0	371.5	374.0
60°	356.7	356.7	363.6	370.6	367.0	377.4	379.1	378.5	372.2	372.7	374.0
62.5°	353.5	361.9	373.3	384.1	383.0	395.6	396.7	389.2	384.1	378.5	376.7
65°	342.6	356.7	373.3	388.2	390.5	409.8	412.1	404.6	401.3	391.7	384.1
67.5°	318.5	336.9	356.3	374.5	378.5	404.6	409.8	412.7	414.4	408.1	398.4
70°	278.1	297.0	316.9	338.0	343.7	372.7	383.5	396.7	407.0	416.1	412.7
72.5°	226.4	243.4	260.5	279.8	288.4	318.5	332.9	355.6	371.5	395.1	404.6
75°	179.5	189.8	200.1	212.0	218.8	248.6	266.2	293.6	315.2	347.7	369.4
77.5°	141.4	146.6	151.6	156.8	159.5	176.1	190.4	217.7	242.8	283.9	315.8
80°	108.9	111.7	112.3	113.9	112.8	120.8	125.9	142.6	164.2	204.6	242.3
82.5°	70.1	72.5	73.5	76.4	70.6	80.9	84.4	86.1	97.5	127.1	153.9
85°	39.3	40.0	40.5	41.6	33.6	43.8	44.5	41.6	40.5	52.5	59.3
87.5°	9.7	9.2	9.7	9.7	4.0	9.2	9.2	6.3	4.5	8.5	6.8
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: P270383

CATALOG NUMBER: NAV-AF-02-D-UNV-T2R-7027-800

CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
0°	776.3	776.3	776.3	776.3	776.3	776.3
2.5°	715.3	714.2	714.8	711.8	710.7	711.4
5°	703.9	701.7	701.7	700.0	697.7	697.7
7.5°	709.0	704.5	702.8	699.4	695.9	696.5
10°	717.0	709.0	703.4	698.3	694.2	694.2
12.5°	722.1	708.0	699.4	692.6	688.0	688.0
15°	723.3	701.7	689.1	681.8	677.1	677.1
17.5°	716.5	689.1	673.2	663.5	658.4	659.4
20°	699.4	665.7	646.9	636.7	631.6	632.0
22.5°	672.7	633.8	612.1	600.2	595.0	595.0
25°	636.1	593.9	570.6	560.9	556.3	556.3
27.5°	594.5	551.2	530.7	523.3	520.4	520.4
30°	547.7	511.9	497.0	491.9	487.3	487.3
32.5°	508.4	482.7	477.7	470.8	458.9	458.2
35°	477.1	474.2	470.3	449.7	432.7	430.4
37.5°	460.0	477.1	451.9	416.6	403.0	402.4
40°	450.9	466.8	423.6	406.5	404.6	404.6
42.5°	429.2	440.6	421.8	412.1	412.1	412.7
45°	406.5	416.1	425.7	417.3	420.0	420.6
47.5°	390.5	409.8	425.7	418.4	424.1	427.6
50°	375.6	404.1	417.3	417.3	423.6	424.1
52.5°	372.2	396.2	409.3	415.6	416.1	413.2
55°	372.7	389.9	403.0	411.0	407.6	407.6
57.5°	372.2	386.5	397.9	400.7	402.4	402.4
60°	372.7	381.9	391.0	389.9	395.6	395.6
62.5°	374.5	375.6	380.3	379.1	387.6	387.6
65°	378.5	367.6	364.8	365.9	376.2	375.6
67.5°	385.9	356.7	347.7	348.3	363.1	360.8
70°	396.7	342.0	328.3	324.8	350.0	345.9
72.5°	400.1	324.8	303.3	299.9	314.6	303.3
75°	384.1	311.3	276.5	265.0	258.8	255.4
77.5°	342.6	302.6	248.6	224.5	214.9	212.5
80°	283.9	285.0	212.0	183.6	213.2	212.5
82.5°	214.3	246.2	169.9	159.0	154.5	128.7
85°	103.8	185.2	130.6	109.5	65.5	62.2
87.5°	9.2	77.6	75.3	49.0	22.2	21.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)