

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: P195285

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195285
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-SLR-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17550 lumens
Efficiency: N/A
Efficacy: 91.9 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): 191
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

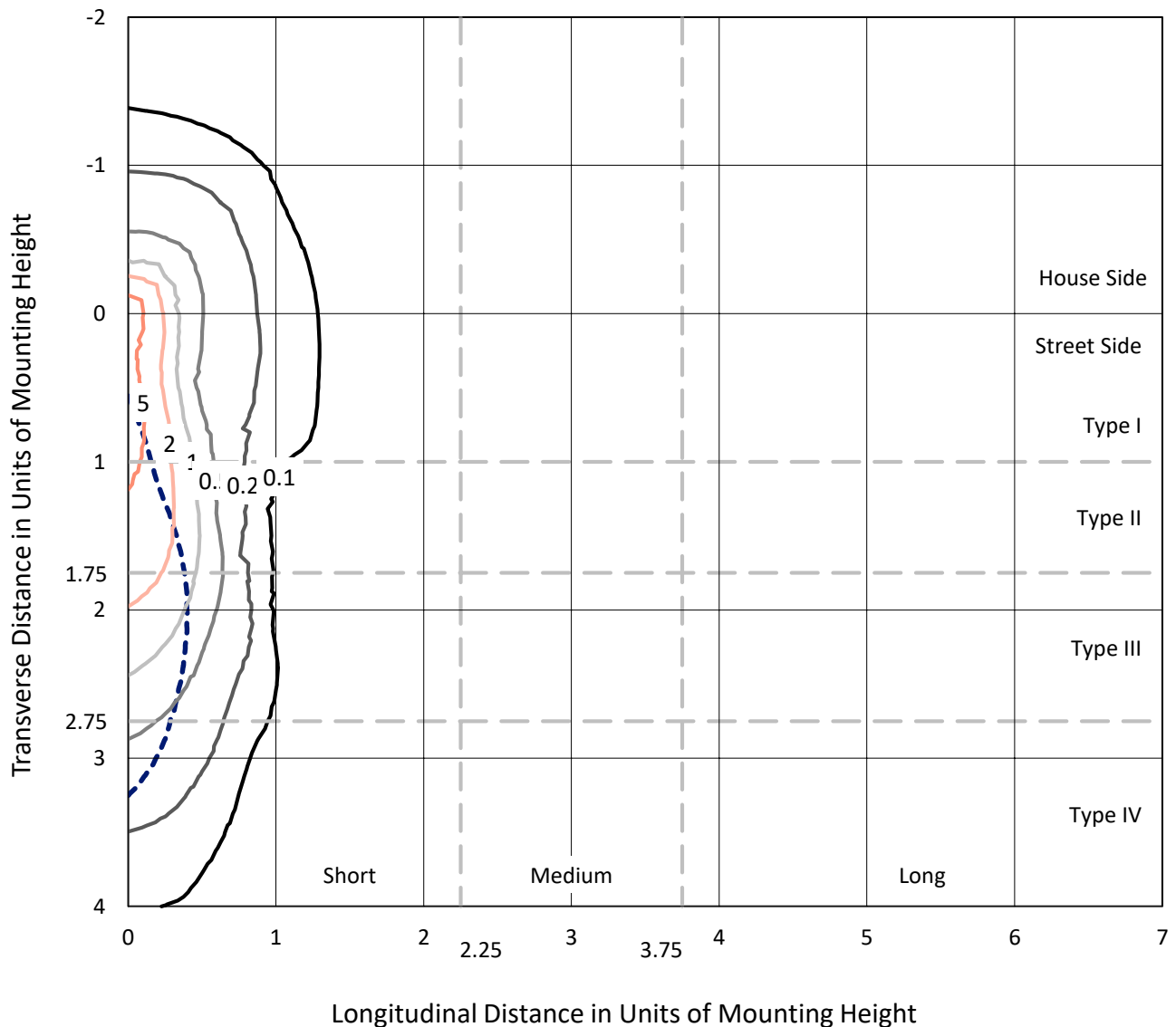


REPORT NUMBER: P195285

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

Iso-Footcandle Lines of Horizontal Illumination

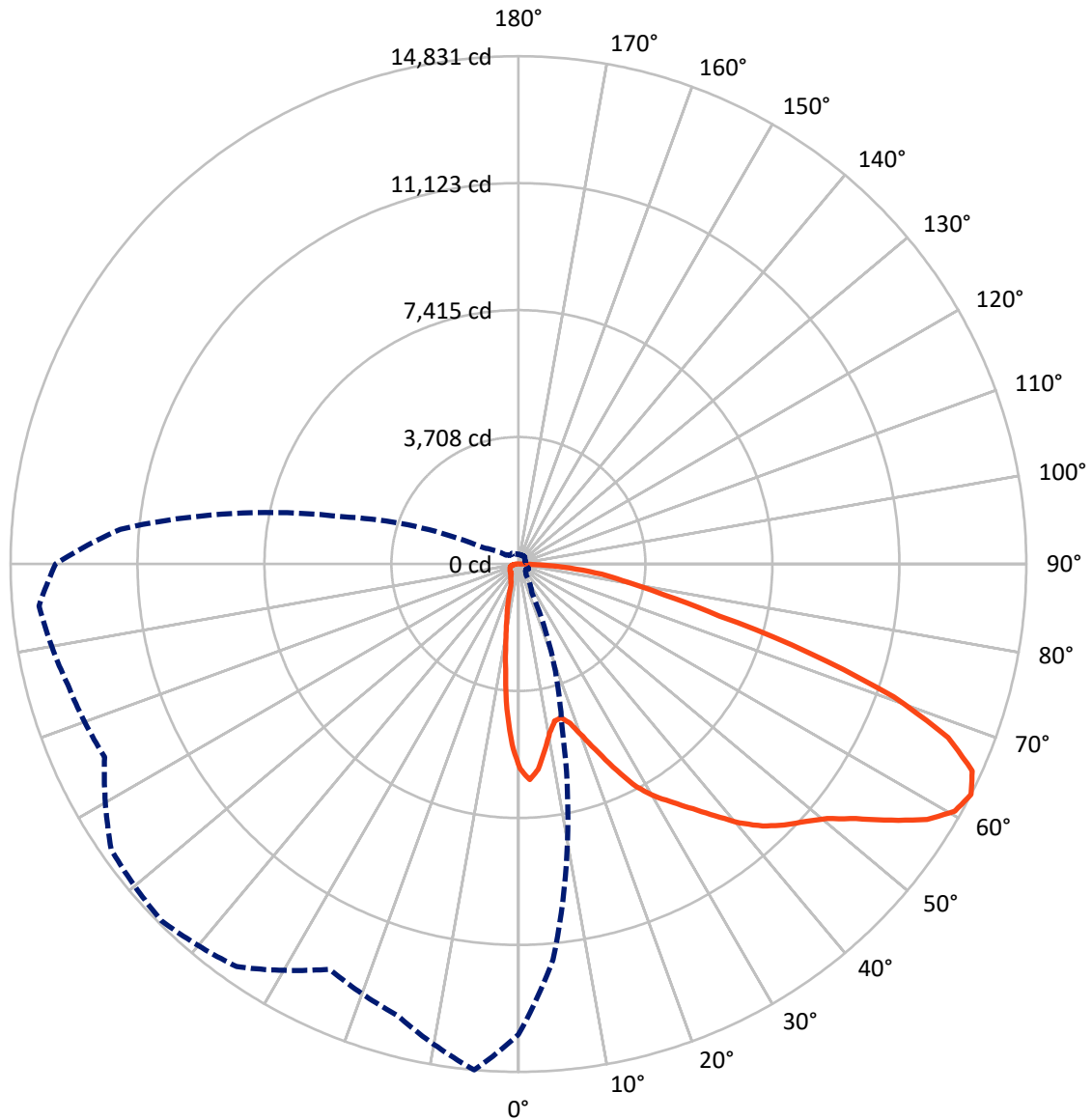
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195285
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P195285

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3109.0	0.0	3109.0
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	14441.0	0.0	14441.0
	% Fixture	82.3	0.0	82.3
Total	Lumens	17550.0	0.0	17550.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	435.1	2.5
10°-20°	794.7	4.5
20°-30°	1143.1	6.5
30°-40°	1750.7	10.0
40°-50°	2559.6	14.6
50°-60°	3724.2	21.2
60°-70°	4315.0	24.6
70°-80°	2249.3	12.8
80°-90°	578.2	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°	17550.0	100.0
0°-180°	17550.0	100.0

Coefficient of Utilization



REPORT NUMBER: P195285

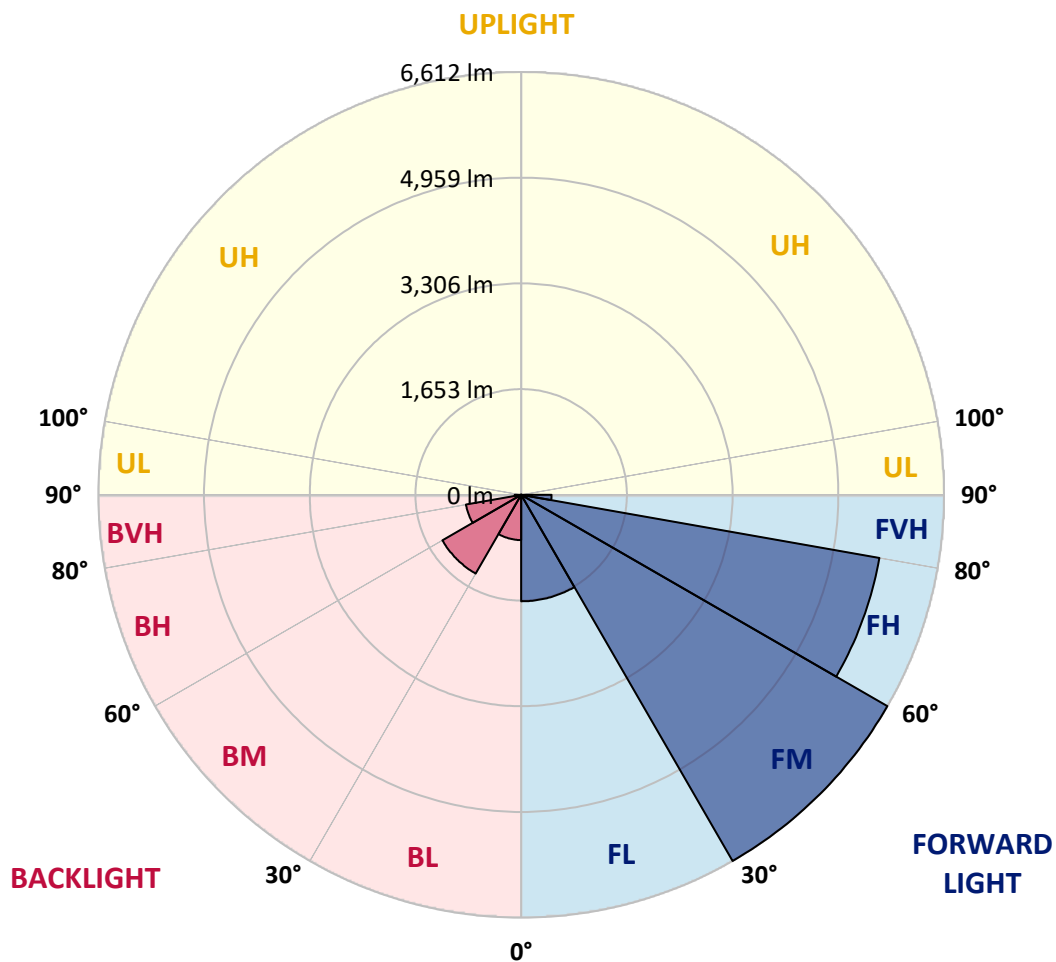
CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1665.6	9.5			
FM	(30°-60°)	6612.0	37.7			
FH	(60°-80°)	5687.7	32.4			G3/7500
FVH	(80°-90°)	475.7	2.7			G3/500
BL	(0°-30°)	707.4	4.0	B2/1000		
BM	(30°-60°)	1422.5	8.1	B2/2500		
BH	(60°-80°)	876.6	5.0	B2/1000		G2/1000
BVH	(80°-90°)	102.5	0.6			G2/225
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





REPORT NUMBER: P195285

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1
2.5°	6176.6	6090.0	5890.3	5714.7	5495.8	5331.6	5131.9	5026.2	4948.6	4896.5	4854.5
5°	5769.4	5560.7	5178.9	4844.3	4482.9	4222.0	3916.7	3750.0	3646.9	3590.9	3565.5
7.5°	5164.9	4888.8	4395.1	3945.9	3494.2	3168.4	2936.9	2690.0	2558.9	2473.7	2445.7
10°	4636.9	4325.1	3736.0	3230.8	2882.1	2650.6	2452.0	2225.5	2057.6	1911.2	1856.5
12.5°	4330.2	3967.6	3295.7	2838.9	2546.2	2298.1	2088.1	1843.8	1666.9	1514.2	1455.7
15°	4265.3	3860.7	3111.2	2589.5	2230.6	1931.6	1679.7	1413.7	1240.7	1114.7	1074.0
17.5°	4461.3	3962.5	3033.6	2361.7	1929.1	1563.9	1253.4	968.3	824.6	755.8	739.3
20°	4864.6	4186.4	2996.7	2156.8	1636.4	1203.8	866.6	657.9	586.6	566.2	565.0
22.5°	5395.3	4550.3	3037.4	1988.9	1361.5	888.2	635.0	540.8	511.5	500.1	500.1
25°	5994.6	5042.8	3145.5	1860.3	1119.8	691.0	547.2	496.3	472.1	460.6	461.9
27.5°	6727.5	5642.1	3293.1	1742.0	946.7	605.7	511.5	468.3	444.1	432.6	433.9
30°	7279.8	6157.5	3420.4	1633.8	857.6	571.3	492.4	451.7	425.0	408.5	407.2
32.5°	7796.4	6611.7	3523.5	1556.2	806.7	510.3	445.4	414.8	391.9	372.8	369.0
35°	8367.7	7039.3	3571.8	1553.7	773.7	460.6	407.2	370.3	347.4	325.8	321.9
37.5°	9015.4	7562.3	3612.5	1569.0	755.8	428.8	389.4	353.7	334.7	313.0	307.9
40°	9689.8	8073.8	3644.3	1581.7	753.3	407.2	375.4	343.6	324.5	301.6	296.5
42.5°	10268.8	8526.8	3687.6	1576.6	735.5	403.4	366.5	334.7	316.8	293.9	287.6
45°	10732.0	8886.9	3755.1	1575.3	708.8	412.3	363.9	332.1	310.5	286.3	281.2
47.5°	11163.4	9292.8	3897.6	1570.2	679.5	409.7	377.9	329.6	307.9	283.8	279.9
50°	11657.1	9838.7	4140.6	1532.1	638.8	391.9	403.4	327.0	301.6	279.9	276.1
52.5°	12344.2	10637.8	4500.7	1463.3	582.8	372.8	407.2	325.8	291.4	272.3	267.2
55°	13152.2	11494.2	4888.8	1364.1	509.0	339.7	386.8	320.7	281.2	260.9	253.2
57.5°	13777.0	12126.6	5159.9	1221.6	436.5	320.7	344.8	309.2	268.5	248.1	241.8
60°	13952.6	12154.6	5208.2	1051.1	399.6	307.9	296.5	337.2	258.3	236.7	230.3
62.5°	13742.7	11598.5	4892.6	931.4	386.8	295.2	269.8	321.9	248.1	226.5	220.1
65°	13120.4	10659.5	4186.4	913.6	399.6	283.8	255.8	257.0	238.0	216.3	210.0
67.5°	11667.3	9277.6	3298.2	925.1	414.8	272.3	245.6	234.1	226.5	207.4	199.8
70°	9488.8	7469.4	2598.4	945.4	428.8	257.0	232.9	218.9	212.5	192.1	188.3
72.5°	7309.1	5978.1	2049.9	931.4	442.8	241.8	215.0	203.6	196.0	176.9	173.1
75°	5190.4	4750.1	1506.6	799.1	405.9	220.1	194.7	184.5	178.1	157.8	156.5
77.5°	3741.1	3557.8	1048.5	600.6	320.7	193.4	171.8	162.9	159.1	136.2	136.2
80°	2983.9	2707.8	627.3	391.9	234.1	160.3	143.8	140.0	136.2	113.2	114.5
82.5°	2144.1	1878.2	400.8	244.3	171.8	122.2	112.0	110.7	104.3	84.0	84.0
85°	1099.4	959.4	257.0	164.1	120.9	78.9	73.8	71.3	67.4	52.2	52.2
87.5°	213.8	293.9	142.5	80.2	58.5	28.0	28.0	24.2	28.0	19.1	20.4
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: P195285
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1
2.5°	4934.6	4909.2	4891.4	4882.5	5011.0	5064.4	5125.5	5213.3	5273.1	5247.7	5329.1
5°	3685.1	3702.9	3743.6	3807.2	3986.6	4071.9	4126.6	4199.1	4251.3	4199.1	4285.7
7.5°	2519.5	2546.2	2632.7	2763.8	2980.1	3075.6	3094.6	3095.9	3084.5	2999.2	3057.7
10°	1855.3	1801.8	1820.9	1915.1	2108.5	2193.7	2202.6	2179.7	2175.9	2141.6	2207.7
12.5°	1437.9	1364.1	1320.8	1336.1	1481.2	1551.1	1562.6	1575.3	1627.5	1644.0	1725.5
15°	1072.7	1034.5	1002.7	988.7	1084.1	1138.9	1145.2	1175.8	1230.5	1245.7	1315.7
17.5°	754.6	764.8	781.3	787.7	856.4	892.0	881.8	881.8	890.7	886.9	926.4
20°	576.4	596.8	628.6	659.1	721.5	741.8	716.4	684.6	664.2	654.0	663.0
22.5°	509.0	523.0	543.3	582.8	635.0	645.1	612.1	586.6	567.5	557.3	558.6
25°	472.1	486.1	502.6	534.4	579.0	584.1	553.5	537.0	521.7	511.5	509.0
27.5°	440.3	449.2	459.4	479.7	525.5	528.1	507.7	497.5	487.4	479.7	477.2
30°	411.0	414.8	418.6	439.0	473.4	477.2	467.0	461.9	458.1	453.0	453.0
32.5°	372.8	377.9	384.3	402.1	435.2	440.3	433.9	430.1	423.7	421.2	417.4
35°	327.0	339.7	353.7	375.4	411.0	413.6	405.9	394.5	379.2	375.4	372.8
37.5°	307.9	310.5	328.3	353.7	390.6	393.2	383.0	363.9	352.5	353.7	356.3
40°	295.2	299.0	309.2	334.7	371.6	375.4	366.5	352.5	341.0	342.3	346.1
42.5°	285.0	290.1	296.5	313.0	349.9	357.6	355.0	342.3	330.8	333.4	338.5
45°	279.9	283.8	283.8	295.2	330.8	342.3	343.6	333.4	324.5	327.0	333.4
47.5°	277.4	277.4	273.6	282.5	318.1	329.6	332.1	327.0	321.9	324.5	330.8
50°	273.6	268.5	264.7	272.3	307.9	318.1	320.7	316.8	319.4	324.5	328.3
52.5°	262.1	257.0	257.0	262.1	297.8	307.9	309.2	306.7	311.8	318.1	324.5
55°	248.1	248.1	249.4	254.5	292.7	300.3	299.0	296.5	301.6	309.2	315.6
57.5°	235.4	234.1	240.5	246.9	286.3	291.4	288.9	288.9	292.7	299.0	305.4
60°	227.8	221.4	226.5	236.7	279.9	285.0	281.2	279.9	286.3	291.4	296.5
62.5°	220.1	213.8	217.6	227.8	271.0	274.9	272.3	272.3	278.7	282.5	287.6
65°	208.7	206.1	208.7	218.9	263.4	264.7	264.7	265.9	271.0	273.6	278.7
67.5°	198.5	198.5	199.8	210.0	257.0	254.5	254.5	260.9	262.1	264.7	269.8
70°	185.8	188.3	188.3	201.0	251.9	243.0	244.3	249.4	251.9	254.5	255.8
72.5°	171.8	173.1	175.6	192.1	244.3	231.6	232.9	236.7	238.0	241.8	243.0
75°	156.5	157.8	161.6	183.2	239.2	220.1	217.6	220.1	222.7	225.2	224.0
77.5°	138.7	141.2	145.1	178.1	222.7	217.6	198.5	201.0	203.6	203.6	202.3
80°	117.1	120.9	127.2	170.5	188.3	210.0	176.9	178.1	179.4	179.4	176.9
82.5°	87.8	95.4	104.3	141.2	147.6	179.4	152.7	155.2	151.4	148.9	147.6
85°	57.3	63.6	76.3	98.0	108.2	141.2	126.0	127.2	119.6	118.3	118.3
87.5°	22.9	24.2	34.4	49.6	64.9	87.8	90.3	92.9	86.5	86.5	89.1
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: P195285
 CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1
2.5°	5452.5	5579.8	5726.1	5875.0	5997.1	6154.9	6307.6	6470.5	6553.2	6601.6	6737.7
5°	4420.6	4594.9	4802.3	5035.2	5228.6	5559.4	5915.7	6312.7	6503.6	6691.9	7048.2
7.5°	3162.1	3332.6	3574.4	3875.9	4150.8	4587.2	5056.8	5593.8	5858.4	6163.8	6747.9
10°	2347.7	2528.4	2747.3	3003.0	3274.1	3728.3	4255.1	4858.3	5149.7	5494.5	6158.7
12.5°	1903.6	2114.8	2341.3	2570.4	2803.2	3108.6	3660.9	4331.5	4644.5	4991.9	5657.4
15°	1485.0	1711.5	1955.8	2205.2	2436.8	2777.8	3341.5	4134.2	4491.8	4827.7	5372.4
17.5°	1051.1	1264.8	1539.7	1842.5	2178.5	2581.8	3272.8	4220.8	4654.7	5005.9	5371.1
20°	716.4	864.0	1138.9	1497.7	1912.5	2424.1	3298.2	4524.9	5067.0	5452.5	5591.2
22.5°	572.6	642.6	828.4	1193.6	1683.5	2309.5	3402.6	4942.3	5658.7	6128.2	5992.1
25°	520.4	559.9	656.6	942.9	1479.9	2233.2	3606.2	5493.2	6321.6	6797.5	6474.3
27.5°	488.6	523.0	585.3	774.9	1304.3	2183.6	3864.5	6142.2	7068.6	7459.2	6976.9
30°	468.3	502.6	559.9	696.0	1171.9	2109.8	4091.0	6735.2	7665.3	7918.6	7248.0
32.5°	428.8	455.5	502.6	623.5	1072.7	2023.2	4286.9	7265.8	8229.1	8313.0	7573.7
35°	388.1	416.1	463.2	565.0	1014.2	1955.8	4390.0	7736.6	8787.7	8707.5	7896.9
37.5°	372.8	395.7	439.0	523.0	982.3	1911.2	4429.5	8199.8	9387.0	9144.0	8122.2
40°	362.7	383.0	421.2	495.0	973.4	1869.3	4420.6	8640.1	9968.5	9595.7	8299.0
42.5°	355.0	372.8	408.5	475.9	949.3	1829.8	4391.3	9020.5	10434.2	9985.1	8468.3
45°	348.7	367.7	403.4	486.1	904.7	1786.5	4373.5	9367.9	10791.8	10313.4	8694.8
47.5°	346.1	367.7	404.6	483.5	856.4	1738.2	4437.1	9753.5	11103.6	10589.5	8996.3
50°	342.3	366.5	432.6	460.6	790.2	1678.4	4652.1	10212.8	11430.6	10900.0	9387.0
52.5°	335.9	365.2	461.9	442.8	704.9	1595.7	5000.8	10861.8	11995.6	11504.4	9964.7
55°	328.3	367.7	441.5	414.8	614.6	1488.8	5349.5	11751.2	12911.7	12479.1	10794.3
57.5°	319.4	363.9	417.4	389.4	539.5	1353.9	5614.1	12480.4	13667.6	13484.3	11813.6
60°	313.0	372.8	375.4	374.1	491.2	1225.4	5639.6	12433.3	13885.2	14137.1	12811.2
62.5°	305.4	380.5	342.3	362.7	467.0	1105.8	5325.3	11663.4	13517.4	14053.1	13624.3
65°	295.2	332.1	324.5	352.5	467.0	1042.2	4593.6	10382.1	12500.7	13259.1	14065.9
67.5°	285.0	301.6	311.8	338.5	477.2	982.3	3691.4	8757.1	10897.4	11977.7	13569.6
70°	271.0	285.0	297.8	325.8	472.1	940.4	2905.0	7018.9	8968.4	10205.2	12196.6
72.5°	258.3	268.5	281.2	306.7	472.1	921.3	2333.7	5506.0	6847.2	7889.3	10103.4
75°	239.2	248.1	259.6	287.6	463.2	842.4	1752.2	4411.6	5009.7	5662.5	7972.0
77.5°	220.1	226.5	235.4	263.4	417.4	703.7	1239.4	3416.6	3711.8	4073.2	6214.7
80°	196.0	201.0	207.4	235.4	346.1	545.9	806.7	2672.2	2775.3	2949.6	4088.4
82.5°	168.0	175.6	176.9	202.3	278.7	395.7	479.7	1831.1	1829.8	2085.6	2884.7
85°	137.4	141.2	143.8	159.1	206.1	263.4	315.6	1000.2	892.0	1249.6	2505.5
87.5°	103.1	99.3	103.1	106.9	136.2	155.2	169.2	184.5	110.7	226.5	1457.0
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: P195285

CATALOG NUMBER: NAV-AF-03-D-UNV-SLR-7060-1200

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1	5983.1
2.5°	6810.2	6885.3	6840.8	6787.3	6653.7	6457.8	6307.6	6176.6
5°	7295.1	7433.8	7372.7	7174.2	6828.1	6434.9	6021.3	5769.4
7.5°	7234.0	7508.8	7484.7	7153.8	6657.6	6078.6	5497.1	5164.9
10°	6745.4	7130.9	7197.1	6858.6	6333.1	5685.4	5012.3	4636.9
12.5°	6213.5	6537.9	6672.8	6544.3	6049.3	5391.4	4705.6	4330.2
15°	5768.1	5932.2	6065.9	6148.6	5841.9	5287.1	4652.1	4265.3
17.5°	5438.5	5406.7	5518.7	5717.2	5729.9	5425.8	4893.9	4461.3
20°	5279.5	5030.1	5095.0	5373.6	5699.4	5778.3	5376.2	4864.6
22.5°	5270.6	4881.2	4893.9	5194.2	5787.2	6259.3	5978.1	5395.3
25°	5408.0	4864.6	4876.1	5175.1	5942.4	6744.1	6674.1	5994.6
27.5°	5642.1	4935.9	4928.3	5259.1	6149.8	7148.7	7376.5	6727.5
30°	5895.3	5039.0	5019.9	5394.0	6353.4	7398.1	7875.3	7279.8
32.5°	6210.9	5222.2	5156.0	5591.2	6554.5	7637.4	8301.6	7796.4
35°	6511.2	5490.7	5395.3	5873.7	6769.5	7903.3	8778.8	8367.7
37.5°	6817.9	5891.5	5838.1	6280.9	7073.6	8192.1	9324.6	9015.4
40°	7211.1	6461.6	6436.1	6872.6	7479.6	8507.7	9936.7	9689.8
42.5°	7634.8	7067.3	7045.7	7552.1	7983.5	8824.6	10461.0	10268.8
45°	8066.2	7801.5	7806.6	8277.4	8514.1	9123.6	10873.2	10732.0
47.5°	8575.2	8604.4	8786.4	9029.4	9030.7	9457.0	11238.4	11163.4
50°	9221.6	9574.0	9910.0	9948.2	9552.4	9897.3	11685.1	11657.1
52.5°	9953.2	10692.5	11083.2	10962.3	10061.4	10443.1	12345.5	12344.2
55°	10822.3	11861.9	12229.7	12023.6	10670.9	11154.5	13208.2	13152.2
57.5°	11723.2	12986.8	13283.3	13014.8	11433.1	11982.8	14073.5	13777.0
60°	12696.7	13955.2	14256.7	13853.4	12288.2	12808.7	14646.1	13952.6
62.5°	13334.2	14521.4	14737.7	14350.9	13054.2	13649.8	14830.6	13742.7
65°	13367.3	14144.8	14202.0	14064.6	13380.0	14380.2	14563.4	13120.4
67.5°	12458.7	12504.5	12579.6	12727.2	12684.0	14054.4	13532.7	11667.3
70°	10515.7	9904.9	10151.7	10294.3	10614.9	12500.7	11627.8	9488.8
72.5°	8040.7	7148.7	7428.7	7380.3	8047.1	10253.5	8895.8	7309.1
75°	5787.2	4874.8	4896.5	4899.0	5782.1	8184.5	6065.9	5190.4
77.5°	3933.2	3449.7	3520.9	3476.4	3869.6	6412.0	4367.1	3741.1
80°	2690.0	2677.3	2692.5	2588.2	2580.6	4144.4	3233.3	2983.9
82.5°	1995.2	1843.8	1822.2	1711.5	1977.4	3168.4	2454.6	2144.1
85°	1574.0	1020.5	886.9	1070.1	1712.7	2915.2	1496.4	1099.4
87.5°	666.8	400.8	243.0	481.0	951.8	2136.5	414.8	213.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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