

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: P197206

Luminaire Tested: **NAV-AF-04-D-UNV-SLR-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197206
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-04-D-UNV-SLR-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 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: 19289 lumens
Efficiency: N/A
Efficacy: 74.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

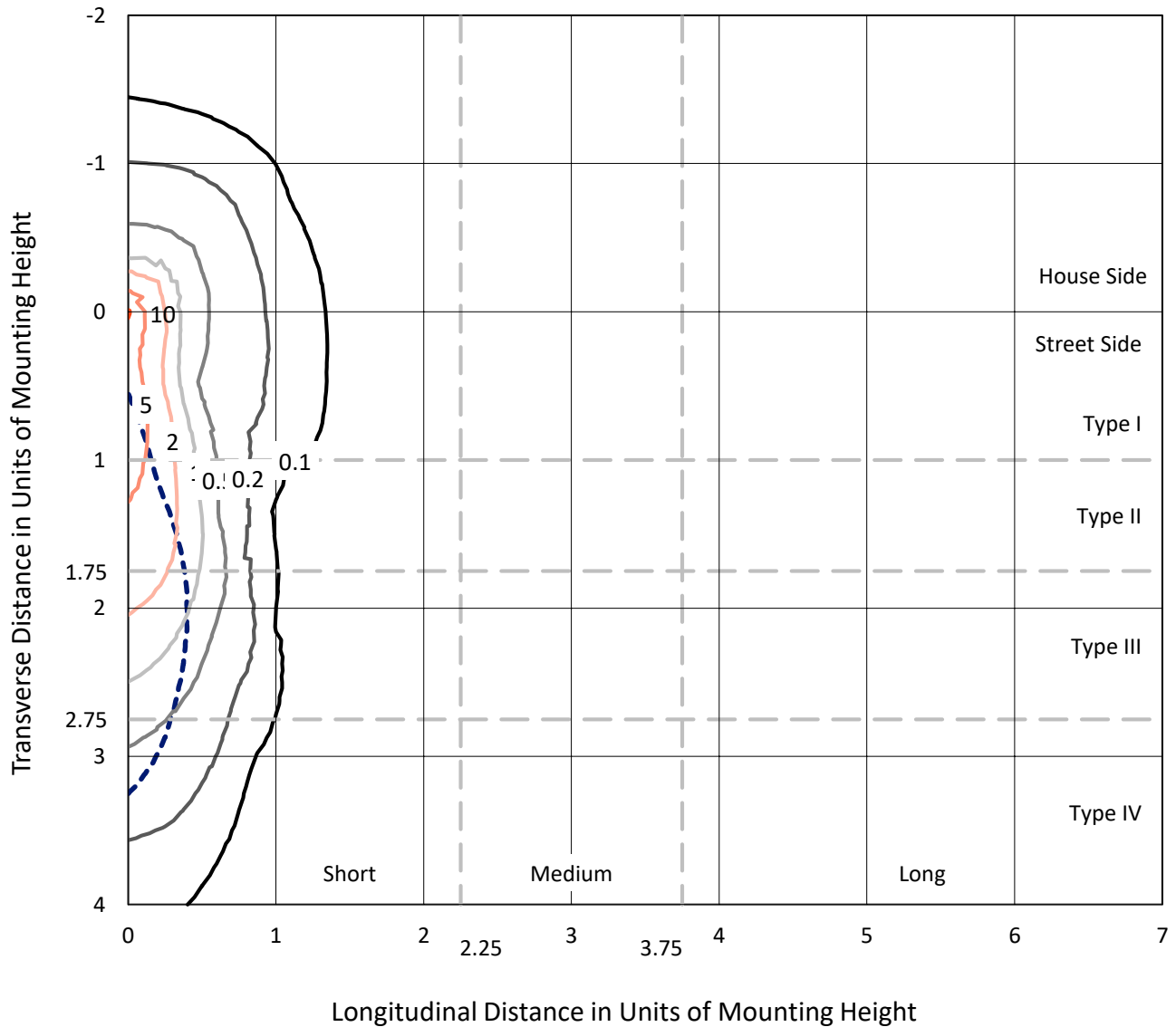
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

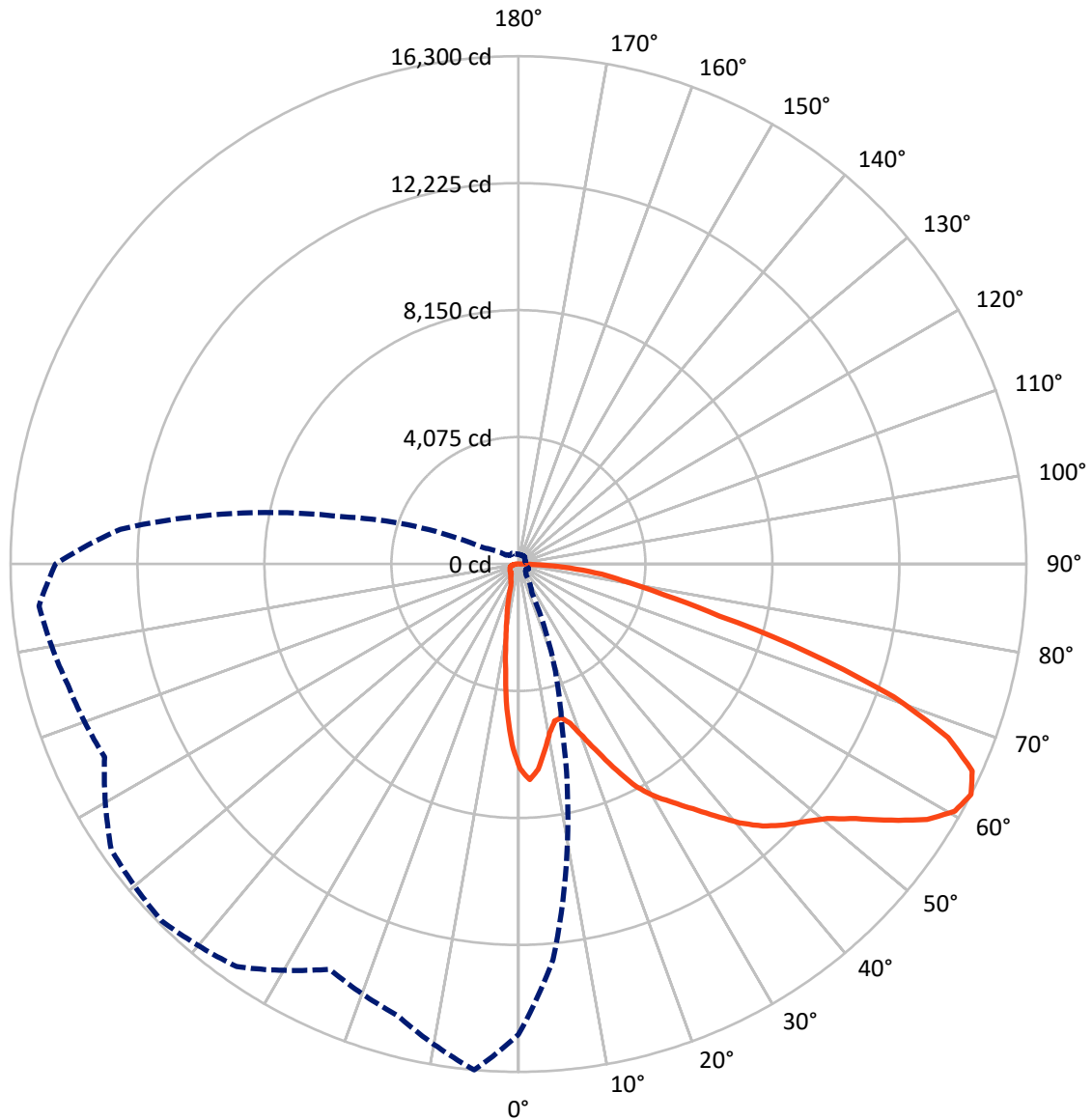
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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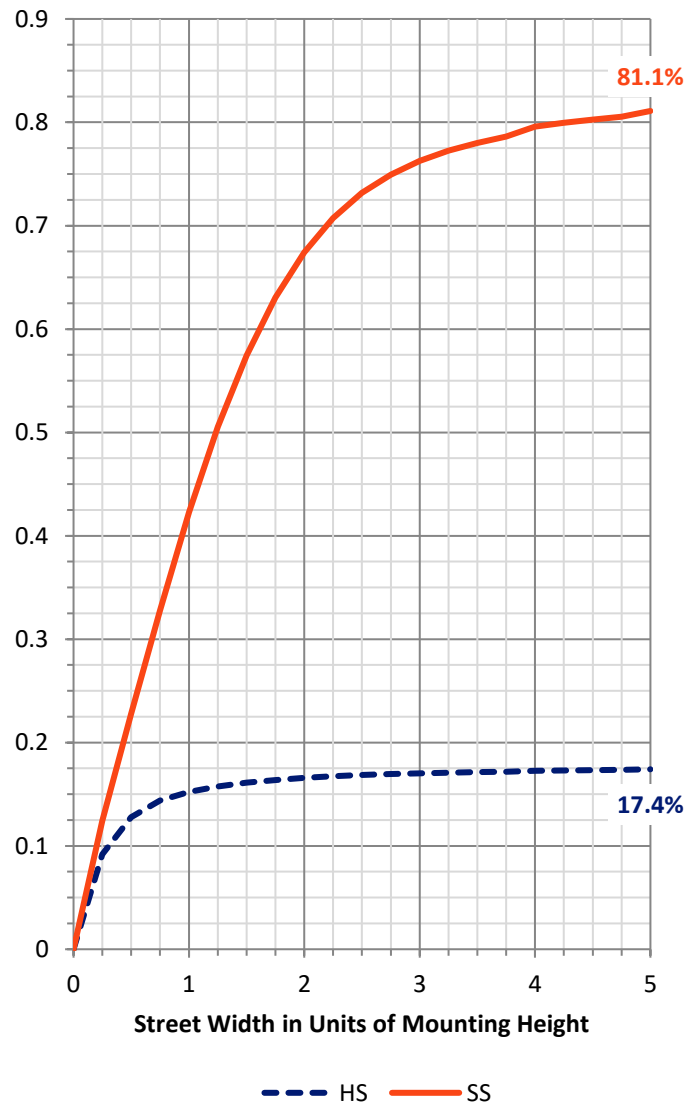
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3417.1	0.0	3417.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	15871.9	0.0	15871.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	19289.0	0.0	19289.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	478.2	2.5
10°-20°	873.5	4.5
20°-30°	1256.3	6.5
30°-40°	1924.2	10.0
40°-50°	2813.2	14.6
50°-60°	4093.3	21.2
60°-70°	4742.6	24.6
70°-80°	2472.2	12.8
80°-90°	635.5	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°	19289.0	100.0
0°-180°	19289.0	100.0



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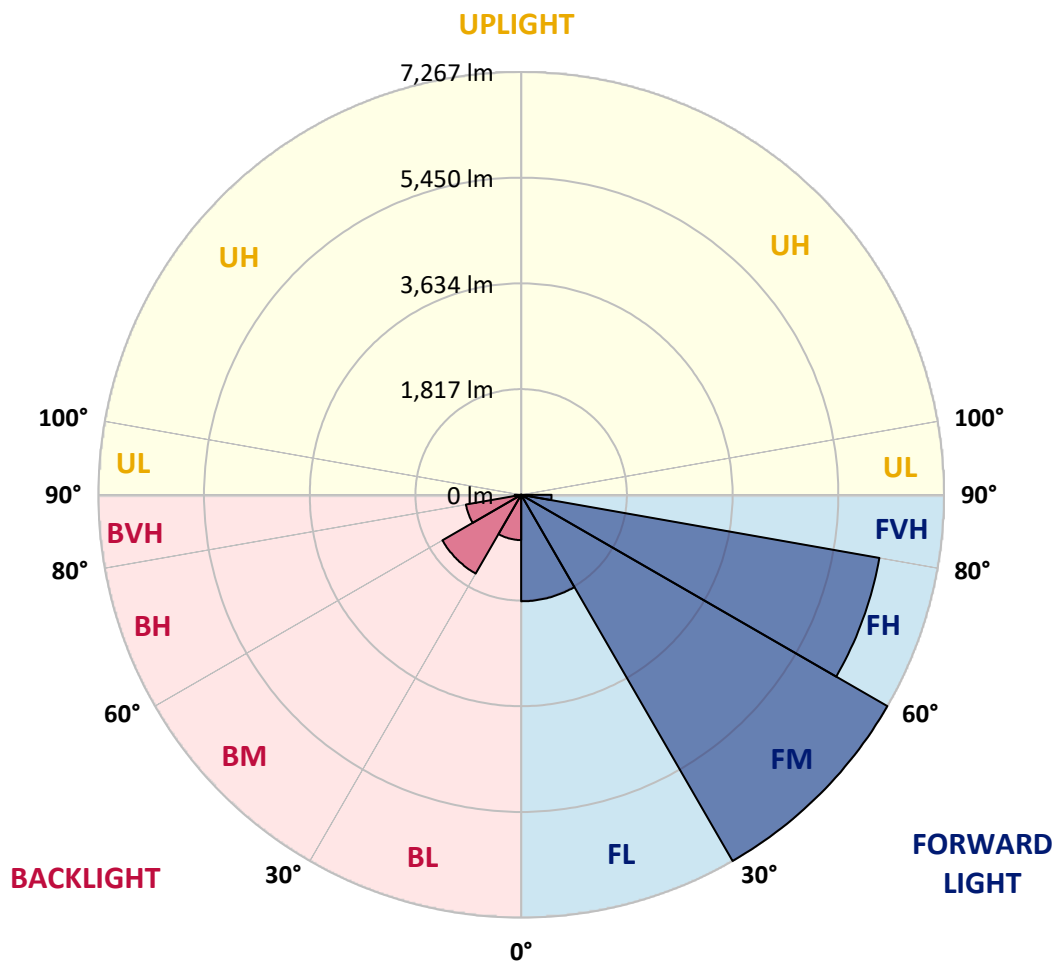
CATALOG NUMBER: NAV-AF-04-D-UNV-SLR-8030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1830.6	9.5			
FM	(30°-60°)	7267.2	37.7			
FH	(60°-80°)	6251.3	32.4			G3/7500
FVH	(80°-90°)	522.8	2.7			G4/750
BL	(0°-30°)	777.4	4.0	B2/1000		
BM	(30°-60°)	1563.4	8.1	B2/2500		
BH	(60°-80°)	963.5	5.0	B2/1000		G2/1000
BVH	(80°-90°)	112.7	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0
2.5°	6788.6	6693.5	6473.9	6280.9	6040.4	5859.9	5640.4	5524.3	5439.0	5381.6	5335.5
5°	6341.0	6111.7	5692.1	5324.3	4927.1	4640.4	4304.8	4121.5	4008.3	3946.7	3918.8
7.5°	5676.7	5373.2	4830.6	4336.9	3840.4	3482.4	3227.9	2956.5	2812.5	2718.8	2688.0
10°	5096.3	4753.7	4106.2	3550.9	3167.7	2913.2	2695.0	2446.1	2261.5	2100.6	2040.5
12.5°	4759.3	4360.7	3622.3	3120.2	2798.5	2525.8	2295.0	2026.5	1832.1	1664.3	1599.9
15°	4688.0	4243.2	3419.5	2846.1	2451.7	2123.0	1846.1	1553.8	1363.6	1225.1	1180.4
17.5°	4903.3	4355.1	3334.2	2595.7	2120.2	1718.8	1377.6	1064.3	906.3	830.7	812.6
20°	5346.7	4601.2	3293.6	2370.6	1798.5	1323.0	952.4	723.1	644.7	622.4	621.0
22.5°	5929.9	5001.2	3338.4	2185.9	1496.5	976.2	697.9	594.4	562.2	549.6	549.6
25°	6588.6	5542.5	3457.2	2044.7	1230.7	759.4	601.4	545.4	518.9	506.3	507.7
27.5°	7394.2	6201.2	3619.5	1914.6	1040.5	665.7	562.2	514.7	488.1	475.5	476.9
30°	8001.1	6767.6	3759.3	1795.7	942.6	628.0	541.2	496.5	467.1	448.9	447.5
32.5°	8568.9	7266.9	3872.6	1710.4	886.7	560.8	489.5	455.9	430.8	409.8	405.6
35°	9196.9	7736.8	3925.7	1707.6	850.3	506.3	447.5	407.0	381.8	358.0	353.8
37.5°	9908.8	8311.6	3970.5	1724.4	830.7	471.3	428.0	388.8	367.8	344.0	338.5
40°	10650.0	8873.8	4005.5	1738.4	827.9	447.5	412.6	377.6	356.6	331.5	325.9
42.5°	11286.3	9371.7	4053.0	1732.8	808.4	443.3	402.8	367.8	348.2	323.1	316.1
45°	11795.4	9767.5	4127.1	1731.4	779.0	453.1	400.0	365.0	341.2	314.7	309.1
47.5°	12269.5	10213.6	4283.8	1725.8	746.8	450.3	415.4	362.2	338.5	311.9	307.7
50°	12812.2	10813.6	4550.9	1683.9	702.1	430.8	443.3	359.4	331.5	307.7	303.5
52.5°	13567.4	11691.9	4946.7	1608.3	640.5	409.8	447.5	358.0	320.3	299.3	293.7
55°	14455.5	12633.1	5373.2	1499.3	559.4	373.4	425.2	352.4	309.1	286.7	278.3
57.5°	15142.2	13328.2	5671.1	1342.6	479.7	352.4	379.0	339.8	295.1	272.7	265.7
60°	15335.2	13359.0	5724.3	1155.2	439.1	338.5	325.9	370.6	283.9	260.1	253.1
62.5°	15104.4	12747.8	5377.4	1023.7	425.2	324.5	296.5	353.8	272.7	248.9	241.9
65°	14420.5	11715.7	4601.2	1004.2	439.1	311.9	281.1	282.5	261.5	237.8	230.8
67.5°	12823.3	10196.9	3625.1	1016.7	455.9	299.3	269.9	257.3	248.9	228.0	219.6
70°	10429.0	8209.5	2855.8	1039.1	471.3	282.5	255.9	240.6	233.6	211.2	207.0
72.5°	8033.3	6570.4	2253.1	1023.7	486.7	265.7	236.4	223.8	215.4	194.4	190.2
75°	5704.7	5220.8	1655.9	878.3	446.1	241.9	214.0	202.8	195.8	173.4	172.0
77.5°	4111.8	3910.4	1152.4	660.1	352.4	212.6	188.8	179.0	174.8	149.6	149.6
80°	3279.6	2976.1	689.5	430.8	257.3	176.2	158.0	153.8	149.6	124.5	125.9
82.5°	2356.6	2064.3	440.5	268.5	188.8	134.3	123.1	121.7	114.7	92.3	92.3
85°	1208.4	1054.5	282.5	180.4	132.9	86.7	81.1	78.3	74.1	57.3	57.3
87.5°	235.0	323.1	156.6	88.1	64.3	30.8	30.8	26.6	30.8	21.0	22.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0
2.5°	5423.6	5395.6	5376.0	5366.3	5507.5	5566.2	5633.4	5729.9	5795.6	5767.6	5857.1
5°	4050.2	4069.8	4114.5	4184.5	4381.7	4475.4	4535.5	4615.2	4672.6	4615.2	4710.3
7.5°	2769.1	2798.5	2893.6	3037.7	3275.4	3380.3	3401.3	3402.7	3390.1	3296.4	3360.7
10°	2039.1	1980.4	2001.3	2104.8	2317.4	2411.1	2420.9	2395.7	2391.5	2353.8	2426.5
12.5°	1580.4	1499.3	1451.7	1468.5	1627.9	1704.8	1717.4	1731.4	1788.8	1806.9	1896.4
15°	1179.0	1137.0	1102.1	1086.7	1191.6	1251.7	1258.7	1292.3	1352.4	1369.2	1446.1
17.5°	829.3	840.5	858.7	865.7	941.2	980.4	969.2	969.2	979.0	974.8	1018.1
20°	633.5	655.9	690.9	724.5	793.0	815.4	787.4	752.4	730.0	718.9	728.6
22.5°	559.4	574.8	597.2	640.5	697.9	709.1	672.7	644.7	623.8	612.6	614.0
25°	518.9	534.2	552.4	587.4	636.3	641.9	608.4	590.2	573.4	562.2	559.4
27.5°	483.9	493.7	504.9	527.3	577.6	580.4	558.0	546.8	535.6	527.3	524.5
30°	451.7	455.9	460.1	482.5	520.3	524.5	513.3	507.7	503.5	497.9	497.9
32.5°	409.8	415.4	422.4	441.9	478.3	483.9	476.9	472.7	465.7	462.9	458.7
35°	359.4	373.4	388.8	412.6	451.7	454.5	446.1	433.6	416.8	412.6	409.8
37.5°	338.5	341.2	360.8	388.8	429.4	432.2	421.0	400.0	387.4	388.8	391.6
40°	324.5	328.7	339.8	367.8	408.4	412.6	402.8	387.4	374.8	376.2	380.4
42.5°	313.3	318.9	325.9	344.0	384.6	393.0	390.2	376.2	363.6	366.4	372.0
45°	307.7	311.9	311.9	324.5	363.6	376.2	377.6	366.4	356.6	359.4	366.4
47.5°	304.9	304.9	300.7	310.5	349.6	362.2	365.0	359.4	353.8	356.6	363.6
50°	300.7	295.1	290.9	299.3	338.5	349.6	352.4	348.2	351.0	356.6	360.8
52.5°	288.1	282.5	282.5	288.1	327.3	338.5	339.8	337.1	342.6	349.6	356.6
55°	272.7	272.7	274.1	279.7	321.7	330.1	328.7	325.9	331.5	339.8	346.8
57.5°	258.7	257.3	264.3	271.3	314.7	320.3	317.5	317.5	321.7	328.7	335.7
60°	250.3	243.3	248.9	260.1	307.7	313.3	309.1	307.7	314.7	320.3	325.9
62.5°	241.9	235.0	239.2	250.3	297.9	302.1	299.3	299.3	306.3	310.5	316.1
65°	229.4	226.6	229.4	240.6	289.5	290.9	290.9	292.3	297.9	300.7	306.3
67.5°	218.2	218.2	219.6	230.8	282.5	279.7	279.7	286.7	288.1	290.9	296.5
70°	204.2	207.0	207.0	221.0	276.9	267.1	268.5	274.1	276.9	279.7	281.1
72.5°	188.8	190.2	193.0	211.2	268.5	254.5	255.9	260.1	261.5	265.7	267.1
75°	172.0	173.4	177.6	201.4	262.9	241.9	239.2	241.9	244.7	247.5	246.1
77.5°	152.4	155.2	159.4	195.8	244.7	239.2	218.2	221.0	223.8	223.8	222.4
80°	128.7	132.9	139.9	187.4	207.0	230.8	194.4	195.8	197.2	197.2	194.4
82.5°	96.5	104.9	114.7	155.2	162.2	197.2	167.8	170.6	166.4	163.6	162.2
85°	62.9	69.9	83.9	107.7	118.9	155.2	138.5	139.9	131.5	130.1	130.1
87.5°	25.2	26.6	37.8	54.5	71.3	96.5	99.3	102.1	95.1	95.1	97.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0
2.5°	5992.8	6132.7	6293.5	6457.1	6591.4	6764.8	6932.6	7111.7	7202.6	7255.7	7405.3
5°	4858.6	5050.2	5278.1	5534.1	5746.7	6110.3	6501.9	6938.2	7148.0	7355.0	7746.6
7.5°	3475.4	3662.8	3928.5	4260.0	4562.1	5041.8	5557.9	6148.0	6438.9	6774.6	7416.5
10°	2580.3	2778.9	3019.5	3300.6	3598.5	4097.8	4676.8	5339.7	5660.0	6039.0	6769.0
12.5°	2092.2	2324.4	2573.3	2825.1	3081.0	3416.7	4023.6	4760.7	5104.7	5486.5	6218.0
15°	1632.1	1881.1	2149.6	2423.7	2678.2	3053.0	3672.6	4543.9	4936.9	5306.1	5904.7
17.5°	1155.2	1390.2	1692.3	2025.1	2394.3	2837.7	3597.1	4639.0	5115.9	5501.9	5903.3
20°	787.4	949.6	1251.7	1646.1	2102.0	2664.2	3625.1	4973.3	5569.0	5992.8	6145.2
22.5°	629.3	706.3	910.5	1311.8	1850.3	2538.4	3739.7	5432.0	6219.4	6735.4	6585.8
25°	572.0	615.4	721.7	1036.3	1626.5	2454.5	3963.5	6037.6	6948.0	7471.1	7115.8
27.5°	537.0	574.8	643.3	851.7	1433.5	2399.9	4247.4	6750.8	7769.0	8198.3	7668.3
30°	514.7	552.4	615.4	765.0	1288.1	2318.8	4496.4	7402.6	8424.9	8703.2	7966.2
32.5°	471.3	500.7	552.4	685.3	1179.0	2223.7	4711.7	7985.7	9044.5	9136.8	8324.2
35°	426.6	457.3	509.1	621.0	1114.6	2149.6	4825.0	8503.2	9658.4	9570.3	8679.4
37.5°	409.8	435.0	482.5	574.8	1079.7	2100.6	4868.4	9012.3	10317.1	10050.0	8927.0
40°	398.6	421.0	462.9	544.0	1069.9	2054.5	4858.6	9496.2	10956.3	10546.5	9121.4
42.5°	390.2	409.8	448.9	523.1	1043.3	2011.1	4826.4	9914.4	11468.1	10974.5	9307.4
45°	383.2	404.2	443.3	534.2	994.4	1963.6	4806.8	10296.2	11861.1	11335.3	9556.3
47.5°	380.4	404.2	444.7	531.5	941.2	1910.4	4876.8	10719.9	12203.8	11638.8	9887.8
50°	376.2	402.8	475.5	506.3	868.5	1844.7	5113.1	11224.8	12563.2	11980.0	10317.1
52.5°	369.2	401.4	507.7	486.7	774.8	1753.8	5496.3	11938.1	13184.2	12644.3	10952.1
55°	360.8	404.2	485.3	455.9	675.5	1636.3	5879.5	12915.7	14191.1	13715.6	11863.9
57.5°	351.0	400.0	458.7	428.0	593.0	1488.1	6170.4	13717.0	15021.9	14820.5	12984.2
60°	344.0	409.8	412.6	411.2	539.8	1346.8	6198.4	13665.3	15261.0	15537.9	14080.6
62.5°	335.7	418.2	376.2	398.6	513.3	1215.3	5853.0	12819.2	14856.8	15445.6	14974.3
65°	324.5	365.0	356.6	387.4	513.3	1145.4	5048.8	11410.8	13739.4	14572.9	15459.6
67.5°	313.3	331.5	342.6	372.0	524.5	1079.7	4057.2	9624.9	11977.2	13164.6	14914.2
70°	297.9	313.3	327.3	358.0	518.9	1033.5	3192.9	7714.4	9857.0	11216.4	13405.1
72.5°	283.9	295.1	309.1	337.1	518.9	1012.6	2564.9	6051.5	7525.6	8671.0	11104.5
75°	262.9	272.7	285.3	316.1	509.1	925.8	1925.8	4848.8	5506.1	6223.6	8761.9
77.5°	241.9	248.9	258.7	289.5	458.7	773.4	1362.2	3755.1	4079.6	4476.8	6830.5
80°	215.4	221.0	228.0	258.7	380.4	600.0	886.7	2937.0	3050.2	3241.8	4493.6
82.5°	184.6	193.0	194.4	222.4	306.3	435.0	527.3	2012.5	2011.1	2292.2	3170.5
85°	151.0	155.2	158.0	174.8	226.6	289.5	346.8	1099.3	980.4	1373.4	2753.8
87.5°	113.3	109.1	113.3	117.5	149.6	170.6	186.0	202.8	121.7	248.9	1601.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: NAV-AF-04-D-UNV-SLR-8030-1200

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0	6576.0
2.5°	7485.1	7567.6	7518.6	7459.9	7313.0	7097.7	6932.6	6788.6
5°	8017.9	8170.4	8103.2	7885.1	7504.6	7072.5	6618.0	6341.0
7.5°	7950.8	8252.9	8226.3	7862.7	7317.2	6680.9	6041.8	5676.7
10°	7413.7	7837.5	7910.2	7538.2	6960.6	6248.7	5508.9	5096.3
12.5°	6829.1	7185.8	7334.0	7192.8	6648.7	5925.7	5171.9	4759.3
15°	6339.6	6520.1	6666.9	6757.8	6420.8	5811.0	5113.1	4688.0
17.5°	5977.4	5942.5	6065.5	6283.7	6297.7	5963.4	5378.8	4903.3
20°	5802.6	5528.5	5599.8	5906.1	6264.1	6350.8	5908.9	5346.7
22.5°	5792.8	5364.9	5378.8	5708.9	6360.6	6879.5	6570.4	5929.9
25°	5943.9	5346.7	5359.3	5687.9	6531.3	7412.3	7335.4	6588.6
27.5°	6201.2	5425.0	5416.6	5780.2	6759.2	7857.1	8107.4	7394.2
30°	6479.5	5538.3	5517.3	5928.5	6983.0	8131.2	8655.7	8001.1
32.5°	6826.3	5739.7	5666.9	6145.2	7204.0	8394.1	9124.2	8568.9
35°	7156.4	6034.8	5929.9	6455.7	7440.3	8686.4	9648.6	9196.9
37.5°	7493.5	6475.3	6416.6	6903.3	7774.6	9003.9	10248.6	9908.8
40°	7925.6	7101.9	7073.9	7553.6	8220.7	9350.7	10921.3	10650.0
42.5°	8391.3	7767.6	7743.8	8300.4	8774.5	9699.0	11497.5	11286.3
45°	8865.4	8574.5	8580.1	9097.6	9357.7	10027.6	11950.7	11795.4
47.5°	9424.9	9457.0	9657.0	9924.1	9925.5	10394.1	12352.0	12269.5
50°	10135.3	10522.7	10891.9	10933.9	10499.0	10878.0	12842.9	12812.2
52.5°	10939.5	11752.1	12181.4	12048.5	11058.4	11477.9	13568.8	13567.4
55°	11894.7	13037.3	13441.5	13214.9	11728.3	12259.7	14517.0	14455.5
57.5°	12884.9	14273.6	14599.5	14304.4	12566.0	13170.2	15468.0	15142.2
60°	13954.8	15337.9	15669.4	15226.1	13505.8	14077.9	16097.4	15335.2
62.5°	14655.5	15960.3	16198.1	15772.9	14347.8	15002.3	16300.2	15104.4
65°	14691.8	15546.3	15609.3	15458.2	14705.8	15805.1	16006.5	14420.5
67.5°	13693.2	13743.6	13826.1	13988.3	13940.8	15447.0	14873.6	12823.3
70°	11557.7	10886.3	11157.7	11314.3	11666.7	13739.4	12780.0	10429.0
72.5°	8837.5	7857.1	8164.8	8111.6	8844.5	11269.6	9777.3	8033.3
75°	6360.6	5357.9	5381.6	5384.4	6355.0	8995.5	6666.9	5704.7
77.5°	4322.9	3791.5	3869.8	3820.9	4253.0	7047.3	4799.8	4111.8
80°	2956.5	2942.6	2959.3	2844.7	2836.3	4555.1	3553.7	3279.6
82.5°	2192.9	2026.5	2002.7	1881.1	2173.4	3482.4	2697.8	2356.6
85°	1730.0	1121.6	974.8	1176.2	1882.5	3204.1	1644.7	1208.4
87.5°	732.8	440.5	267.1	528.7	1046.1	2348.2	455.9	235.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)