

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: P270694

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270694
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-06-D-UNV-SLR-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 615mA 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: 18212.4 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 193
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

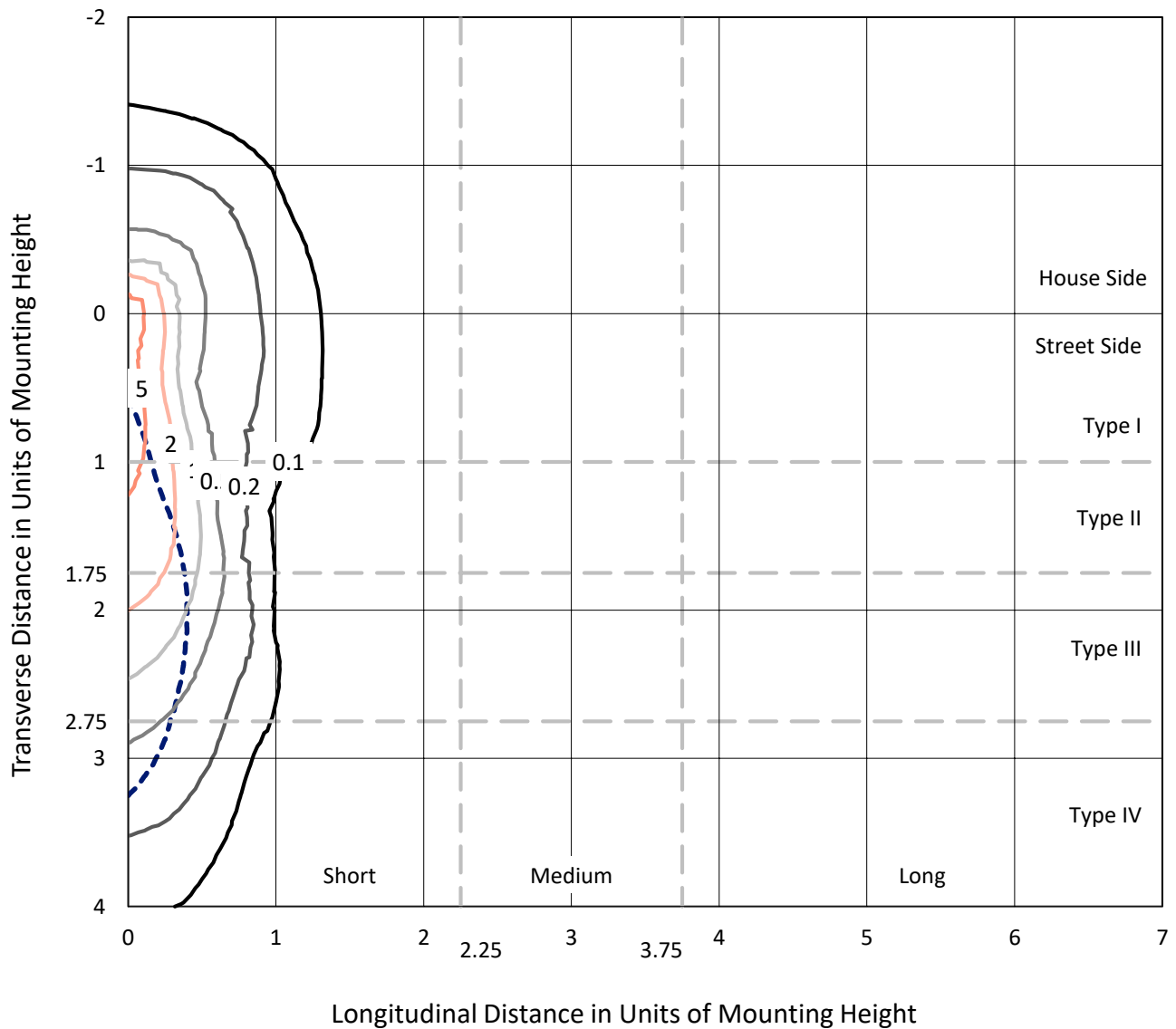


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

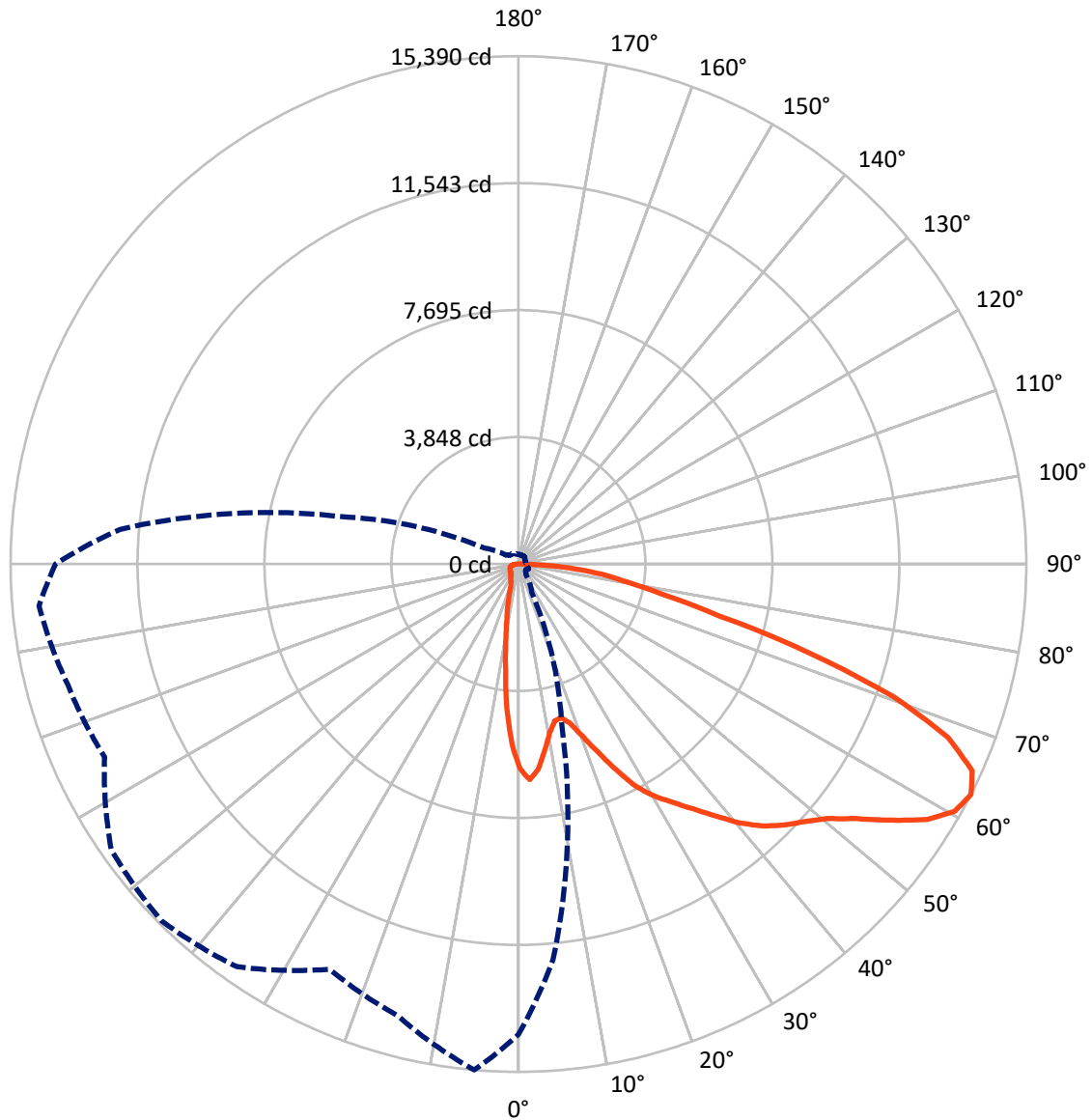


Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
 Type IV - Short - Non-Cutoff

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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	3226.3	0.0	3226.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	14986.0	0.0	14986.0
	% Fixture	82.3	0.0	82.3
Total	Lumens	18212.4	0.0	18212.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.5	2.5
10°-20°	824.7	4.5
20°-30°	1186.2	6.5
30°-40°	1816.8	10.0
40°-50°	2656.2	14.6
50°-60°	3864.8	21.2
60°-70°	4477.9	24.6
70°-80°	2334.2	12.8
80°-90°	600.0	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°	18212.4	100.0
0°-180°	18212.4	100.0

Coefficient of Utilization



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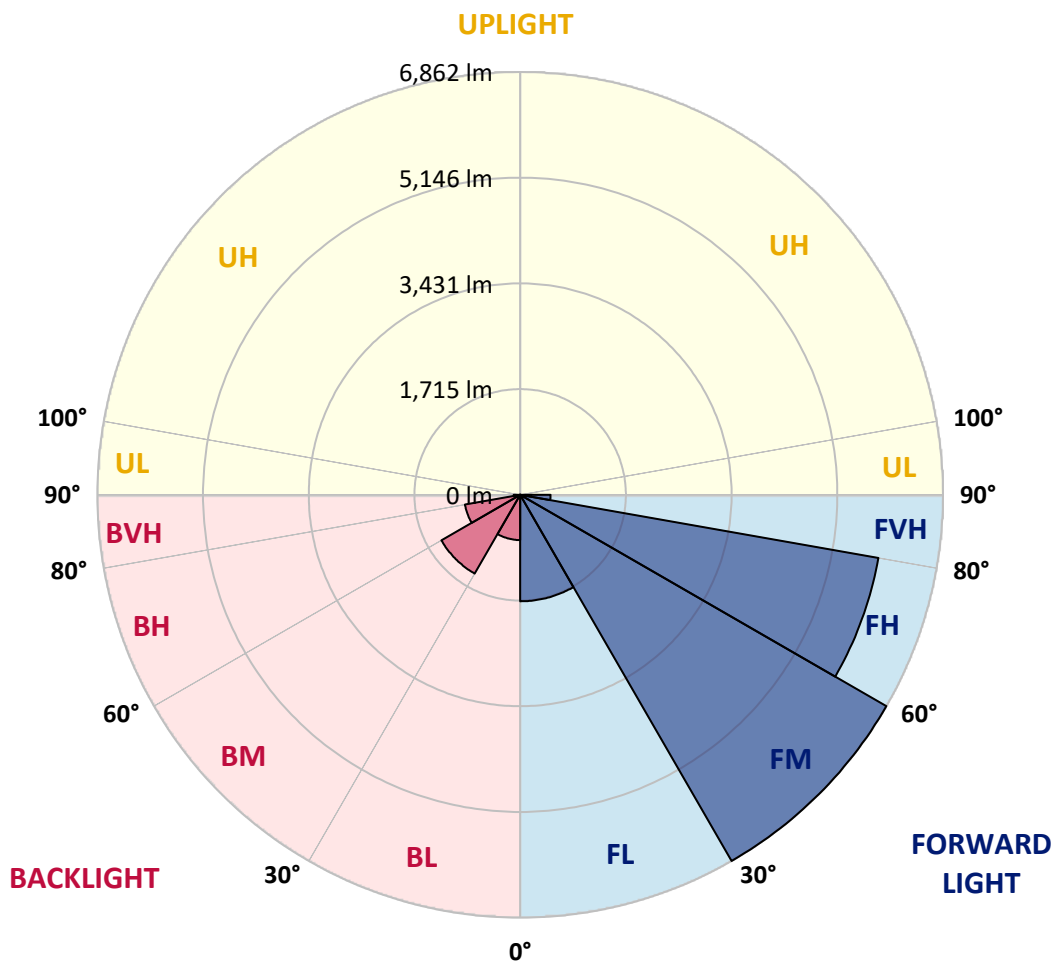
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1728.4	9.5			
FM	(30°-60°)	6861.6	37.7			
FH	(60°-80°)	5902.4	32.4			G3/7500
FVH	(80°-90°)	493.6	2.7			G3/500
BL	(0°-30°)	734.0	4.0	B2/1000		
BM	(30°-60°)	1476.2	8.1	B2/2500		
BH	(60°-80°)	909.7	5.0	B2/1000		G2/1000
BVH	(80°-90°)	106.4	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9
2.5°	6409.6	6319.8	6112.5	5930.3	5703.2	5532.9	5325.5	5216.0	5135.4	5081.3	5037.6
5°	5987.2	5770.5	5374.4	5027.2	4652.1	4381.5	4064.6	3891.5	3784.5	3726.3	3699.9
7.5°	5359.8	5073.4	4561.0	4094.8	3626.1	3288.1	3047.7	2791.6	2655.5	2567.0	2538.0
10°	4812.0	4488.3	3876.9	3352.7	2990.8	2750.6	2544.5	2309.5	2135.2	1983.4	1926.7
12.5°	4493.6	4117.3	3420.0	2946.0	2642.4	2384.8	2166.9	1913.4	1729.9	1571.3	1510.6
15°	4426.3	4006.4	3228.6	2687.2	2314.8	2004.5	1743.0	1467.0	1287.5	1156.7	1114.4
17.5°	4629.7	4112.0	3148.1	2450.8	2001.9	1622.9	1300.7	1004.9	855.6	784.4	767.2
20°	5048.3	4344.5	3109.8	2238.2	1698.2	1249.3	899.3	682.7	608.7	587.6	586.4
22.5°	5598.9	4722.1	3152.1	2063.9	1412.9	921.8	658.9	561.3	530.9	519.0	519.0
25°	6220.9	5233.2	3264.3	1930.5	1162.0	717.0	567.8	515.0	489.8	478.0	479.3
27.5°	6981.4	5855.1	3417.4	1807.7	982.4	628.5	530.9	486.0	460.8	449.0	450.3
30°	7554.6	6389.9	3549.6	1695.6	890.0	592.9	511.0	468.7	441.1	423.9	422.6
32.5°	8090.7	6861.3	3656.5	1615.0	837.2	529.6	462.2	430.5	406.8	386.9	382.9
35°	8683.6	7304.9	3706.6	1612.3	802.8	478.0	422.6	384.2	360.5	338.0	334.1
37.5°	9355.7	7847.8	3748.8	1628.2	784.4	445.0	404.1	367.0	347.3	324.8	319.5
40°	10055.5	8378.5	3781.9	1641.4	781.7	422.6	389.5	356.5	336.8	313.0	307.7
42.5°	10656.4	8848.7	3826.8	1636.2	763.2	418.6	380.3	347.3	328.8	305.1	298.4
45°	11137.0	9222.3	3896.8	1634.7	735.5	427.9	377.6	344.7	322.2	297.1	291.8
47.5°	11584.7	9643.6	4044.7	1629.4	705.1	425.2	392.2	342.1	319.5	294.5	290.5
50°	12097.0	10210.0	4297.0	1589.9	662.9	406.8	418.6	339.4	313.0	290.5	286.6
52.5°	12810.1	11039.4	4670.6	1518.6	604.7	386.9	422.6	338.0	302.4	282.5	277.2
55°	13648.6	11928.1	5073.4	1415.5	528.3	352.6	401.5	332.7	291.8	270.7	262.8
57.5°	14297.0	12584.3	5354.5	1267.7	452.9	332.7	357.9	320.9	278.7	257.5	250.8
60°	14479.2	12613.3	5404.8	1090.7	414.7	319.5	307.7	349.9	268.1	245.5	238.9
62.5°	14261.3	12036.3	5077.3	966.5	401.5	306.3	279.9	334.1	257.5	235.0	228.4
65°	13615.6	11061.8	4344.5	948.2	414.7	294.5	265.4	266.7	246.9	224.4	217.8
67.5°	12107.5	9627.8	3422.7	960.0	430.5	282.5	254.8	243.0	235.0	215.2	207.2
70°	9847.0	7751.3	2696.4	981.0	445.0	266.7	241.6	227.1	220.5	199.5	195.4
72.5°	7584.8	6203.6	2127.4	966.5	459.6	250.8	223.1	211.3	203.3	183.6	179.7
75°	5386.2	4929.4	1563.5	829.2	421.2	228.4	201.9	191.5	185.0	163.8	162.5
77.5°	3882.3	3692.2	1088.0	623.2	332.7	200.7	178.3	169.1	165.1	141.4	141.4
80°	3096.5	2810.0	651.0	406.8	243.0	166.4	149.2	145.3	141.4	117.5	118.8
82.5°	2225.0	1949.1	415.9	253.5	178.3	126.8	116.2	115.0	108.2	87.1	87.1
85°	1140.8	995.6	266.7	170.4	125.5	81.8	76.5	73.9	70.0	54.2	54.2
87.5°	221.8	305.1	148.0	83.3	60.7	29.0	29.0	25.2	29.0	19.9	21.1
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°	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9
2.5°	5120.9	5094.5	5076.0	5066.7	5200.1	5255.5	5319.0	5410.0	5472.1	5445.7	5530.2
5°	3824.2	3842.6	3884.9	3950.9	4137.1	4225.5	4282.4	4357.6	4411.8	4357.6	4447.4
7.5°	2614.5	2642.4	2732.0	2868.1	3092.5	3191.7	3211.4	3212.8	3200.9	3112.4	3173.2
10°	1925.2	1869.8	1889.7	1987.3	2188.0	2276.6	2285.7	2262.0	2258.0	2222.3	2291.0
12.5°	1492.2	1415.5	1370.6	1386.5	1537.1	1609.8	1621.6	1634.7	1689.0	1706.2	1790.6
15°	1113.2	1073.6	1040.5	1026.0	1125.0	1181.8	1188.5	1220.2	1276.9	1292.8	1365.5
17.5°	783.1	793.7	810.8	817.4	888.8	925.7	915.2	915.2	924.4	920.4	961.4
20°	598.2	619.3	652.3	684.0	748.6	769.8	743.4	710.4	689.3	678.7	688.0
22.5°	528.3	542.8	563.9	604.7	658.9	669.4	635.1	608.7	589.0	578.4	579.6
25°	489.8	504.4	521.6	554.7	600.8	606.0	574.5	557.3	541.4	530.9	528.3
27.5°	456.9	466.1	476.7	497.8	545.5	548.0	526.9	516.3	505.7	497.8	495.1
30°	426.5	430.5	434.4	455.6	491.3	495.1	484.6	479.3	475.4	470.2	470.2
32.5°	386.9	392.2	398.8	417.3	451.6	456.9	450.3	446.3	439.7	437.0	433.2
35°	339.4	352.6	367.0	389.5	426.5	429.2	421.2	409.4	393.5	389.5	386.9
37.5°	319.5	322.2	340.6	367.0	405.3	408.0	397.5	377.6	365.8	367.0	369.7
40°	306.3	310.4	320.9	347.3	385.6	389.5	380.3	365.8	353.9	355.2	359.2
42.5°	295.8	301.1	307.7	324.8	363.2	371.1	368.5	355.2	343.3	345.9	351.2
45°	290.5	294.5	294.5	306.3	343.3	355.2	356.5	345.9	336.8	339.4	345.9
47.5°	287.8	287.8	284.0	293.1	330.1	342.1	344.7	339.4	334.1	336.8	343.3
50°	284.0	278.7	274.6	282.5	319.5	330.1	332.7	328.8	331.5	336.8	340.6
52.5°	272.0	266.7	266.7	272.0	308.9	319.5	320.9	318.2	323.5	330.1	336.8
55°	257.5	257.5	258.8	264.1	303.6	311.6	310.4	307.7	313.0	320.9	327.5
57.5°	244.2	243.0	249.5	256.1	297.1	302.4	299.8	299.8	303.6	310.4	316.9
60°	236.3	229.7	235.0	245.5	290.5	295.8	291.8	290.5	297.1	302.4	307.7
62.5°	228.4	221.8	225.8	236.3	281.3	285.2	282.5	282.5	289.2	293.1	298.4
65°	216.5	213.9	216.5	227.1	273.4	274.6	274.6	276.0	281.3	284.0	289.2
67.5°	206.0	206.0	207.2	217.8	266.7	264.1	264.1	270.7	272.0	274.6	279.9
70°	192.7	195.4	195.4	208.6	261.4	252.2	253.5	258.8	261.4	264.1	265.4
72.5°	178.3	179.7	182.3	199.5	253.5	240.3	241.6	245.5	246.9	250.8	252.2
75°	162.5	163.8	167.8	190.1	248.2	228.4	225.8	228.4	231.0	233.6	232.4
77.5°	143.9	146.6	150.6	185.0	231.0	225.8	206.0	208.6	211.3	211.3	209.9
80°	121.5	125.5	132.1	177.0	195.4	217.8	183.6	185.0	186.2	186.2	183.6
82.5°	91.1	99.1	108.2	146.6	153.3	186.2	158.5	161.1	157.2	154.5	153.3
85°	59.4	66.0	79.2	101.7	112.3	146.6	130.8	132.1	124.1	122.8	122.8
87.5°	23.7	25.2	35.7	51.6	67.4	91.1	93.8	96.4	89.8	89.8	92.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9
2.5°	5658.3	5790.4	5942.2	6096.7	6223.5	6387.2	6545.7	6714.7	6800.6	6850.7	6992.0
5°	4587.4	4768.4	4983.5	5225.3	5425.9	5769.3	6138.9	6551.0	6749.1	6944.4	7314.2
7.5°	3281.4	3458.4	3709.3	4022.3	4307.5	4760.4	5247.7	5804.8	6079.5	6396.6	7002.6
10°	2436.4	2623.8	2851.0	3116.4	3397.6	3869.0	4415.7	5041.6	5344.0	5701.9	6391.3
12.5°	1975.5	2194.6	2429.7	2667.3	2909.0	3226.0	3799.0	4494.9	4819.8	5180.3	5871.0
15°	1541.0	1776.0	2029.6	2288.4	2528.8	2882.7	3467.5	4290.2	4661.3	5009.9	5575.2
17.5°	1090.7	1312.6	1597.7	1912.1	2260.7	2679.3	3396.3	4380.0	4830.4	5194.8	5573.9
20°	743.4	896.6	1181.8	1554.2	1984.6	2515.6	3422.7	4695.7	5258.1	5658.3	5802.2
22.5°	594.1	666.8	859.7	1238.7	1747.1	2396.7	3531.0	5128.9	5872.2	6359.6	6218.2
25°	540.2	581.1	681.4	978.4	1535.7	2317.4	3742.2	5700.6	6560.2	7054.1	6718.7
27.5°	507.1	542.8	607.4	804.3	1353.4	2266.0	4010.4	6374.1	7335.3	7740.8	7240.2
30°	486.0	521.6	581.1	722.2	1216.1	2189.3	4245.4	6989.4	7954.6	8217.4	7521.5
32.5°	445.0	472.8	521.6	647.0	1113.2	2099.6	4448.8	7540.1	8539.6	8626.9	7859.6
35°	402.7	431.7	480.7	586.4	1052.5	2029.6	4555.8	8028.6	9119.4	9036.1	8195.0
37.5°	386.9	410.6	455.6	542.8	1019.4	1983.4	4596.6	8509.3	9741.3	9489.1	8428.6
40°	376.3	397.5	437.0	513.7	1010.1	1939.8	4587.4	8966.2	10344.7	9957.8	8612.3
42.5°	368.5	386.9	423.9	493.9	985.1	1898.8	4557.0	9361.0	10828.0	10361.9	8787.8
45°	361.7	381.6	418.6	504.4	938.9	1854.0	4538.5	9721.5	11199.1	10702.5	9022.9
47.5°	359.2	381.6	419.9	501.9	888.8	1803.7	4604.5	10121.7	11522.6	10989.1	9335.8
50°	355.2	380.3	449.0	478.0	820.1	1741.8	4827.8	10598.3	11861.9	11311.4	9741.3
52.5°	348.6	378.9	479.3	459.6	731.6	1655.8	5189.6	11271.8	12448.4	11938.6	10340.7
55°	340.6	381.6	458.2	430.5	637.7	1544.9	5551.3	12194.8	13399.1	12950.1	11201.8
57.5°	331.5	377.6	433.2	404.1	560.0	1404.9	5826.0	12951.5	14183.3	13993.3	12259.4
60°	324.8	386.9	389.5	388.2	509.7	1271.6	5852.4	12902.5	14409.3	14670.7	13294.7
62.5°	316.9	394.9	355.2	376.3	484.6	1147.6	5526.3	12103.7	14027.7	14583.5	14138.6
65°	306.3	344.7	336.8	365.8	484.6	1081.5	4766.9	10773.9	12972.6	13759.6	14596.6
67.5°	295.8	313.0	323.5	351.2	495.1	1019.4	3830.7	9087.7	11308.8	12429.8	14081.7
70°	281.3	295.8	308.9	338.0	489.8	975.9	3014.7	7283.8	9306.8	10590.4	12656.8
72.5°	268.1	278.7	291.8	318.2	489.8	956.1	2421.8	5713.8	7105.6	8187.1	10484.7
75°	248.2	257.5	269.4	298.4	480.7	874.2	1818.3	4578.1	5198.9	5876.3	8272.9
77.5°	228.4	235.0	244.2	273.4	433.2	730.2	1286.2	3545.5	3851.9	4227.0	6449.3
80°	203.3	208.6	215.2	244.2	359.2	566.6	837.2	2773.1	2880.0	3061.0	4242.8
82.5°	174.4	182.3	183.6	209.9	289.2	410.6	497.8	1900.2	1898.8	2164.2	2993.5
85°	142.7	146.6	149.2	165.1	213.9	273.4	327.5	1037.9	925.7	1296.8	2600.1
87.5°	107.0	102.9	107.0	110.9	141.4	161.1	175.6	191.5	115.0	235.0	1511.9
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9	6208.9
2.5°	7067.2	7145.2	7098.9	7043.5	6904.8	6701.4	6545.7	6409.6
5°	7570.3	7714.4	7651.0	7445.0	7085.8	6677.7	6248.6	5987.2
7.5°	7507.0	7792.3	7767.1	7423.9	6908.9	6308.0	5704.5	5359.8
10°	7000.0	7400.1	7468.7	7117.5	6572.1	5900.0	5201.5	4812.0
12.5°	6447.9	6784.7	6924.7	6791.2	6277.6	5595.0	4883.1	4493.6
15°	5985.8	6156.2	6294.9	6380.7	6062.4	5486.7	4827.8	4426.3
17.5°	5643.8	5610.8	5727.0	5932.9	5946.2	5630.5	5078.6	4629.7
20°	5478.8	5220.0	5287.2	5576.5	5914.5	5996.4	5579.2	5048.3
22.5°	5469.5	5065.5	5078.6	5390.3	6005.6	6495.6	6203.6	5598.9
25°	5612.2	5048.3	5060.2	5370.4	6166.8	6998.6	6926.0	6220.9
27.5°	5855.1	5122.1	5114.3	5457.7	6382.0	7418.6	7654.8	6981.4
30°	6117.8	5229.2	5209.4	5597.6	6593.2	7677.4	8172.5	7554.6
32.5°	6445.2	5419.4	5350.7	5802.2	6801.8	7925.6	8614.8	8090.7
35°	6757.1	5697.9	5598.9	6095.4	7025.0	8201.5	9110.2	8683.6
37.5°	7075.2	6113.9	6058.3	6517.9	7340.6	8501.3	9676.6	9355.7
40°	7483.2	6705.5	6679.1	7132.1	7761.9	8828.8	10311.7	10055.5
42.5°	7923.1	7334.0	7311.6	7837.2	8284.8	9157.6	10855.7	10656.4
45°	8370.5	8096.0	8101.3	8589.9	8835.4	9468.0	11283.6	11137.0
47.5°	8898.8	8929.2	9117.9	9370.2	9371.6	9814.0	11662.5	11584.7
50°	9569.6	9935.4	10283.9	10323.6	9912.9	10270.9	12126.1	12097.0
52.5°	10328.9	11096.1	11501.4	11376.0	10441.1	10837.3	12811.4	12810.1
55°	11230.8	12309.7	12691.3	12477.4	11073.6	11575.4	13706.7	13648.6
57.5°	12165.7	13476.9	13784.6	13505.9	11864.6	12435.1	14604.6	14297.0
60°	13175.9	14481.8	14794.8	14376.2	12752.0	13292.1	15198.9	14479.2
62.5°	13837.4	15069.4	15294.0	14892.6	13546.9	14165.0	15390.3	14261.3
65°	13871.7	14678.7	14738.0	14595.4	13885.0	14923.0	15113.1	13615.6
67.5°	12928.9	12976.5	13054.3	13207.6	13162.7	14584.8	14043.5	12107.5
70°	10912.6	10278.8	10535.0	10682.9	11015.6	12972.6	12066.7	9847.0
72.5°	8344.1	7418.6	7709.1	7658.9	8350.9	10640.6	9231.5	7584.8
75°	6005.6	5058.9	5081.3	5083.9	6000.3	8493.5	6294.9	5386.2
77.5°	4081.7	3579.8	3653.8	3607.7	4015.7	6653.9	4531.9	3882.3
80°	2791.6	2778.3	2794.2	2685.9	2677.9	4300.8	3355.3	3096.5
82.5°	2070.6	1913.4	1890.9	1776.0	2052.1	3288.1	2547.2	2225.0
85°	1633.5	1059.0	920.4	1110.6	1777.3	3025.2	1552.9	1140.8
87.5°	692.0	415.9	252.2	499.2	987.7	2217.0	430.5	221.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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