

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: P270614

Luminaire Tested: **NAV-AF-05-D-UNV-SLR-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270614
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-05-D-UNV-SLR-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 15202.2 lumens
Efficiency: N/A
Efficacy: 93.8 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): 162
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

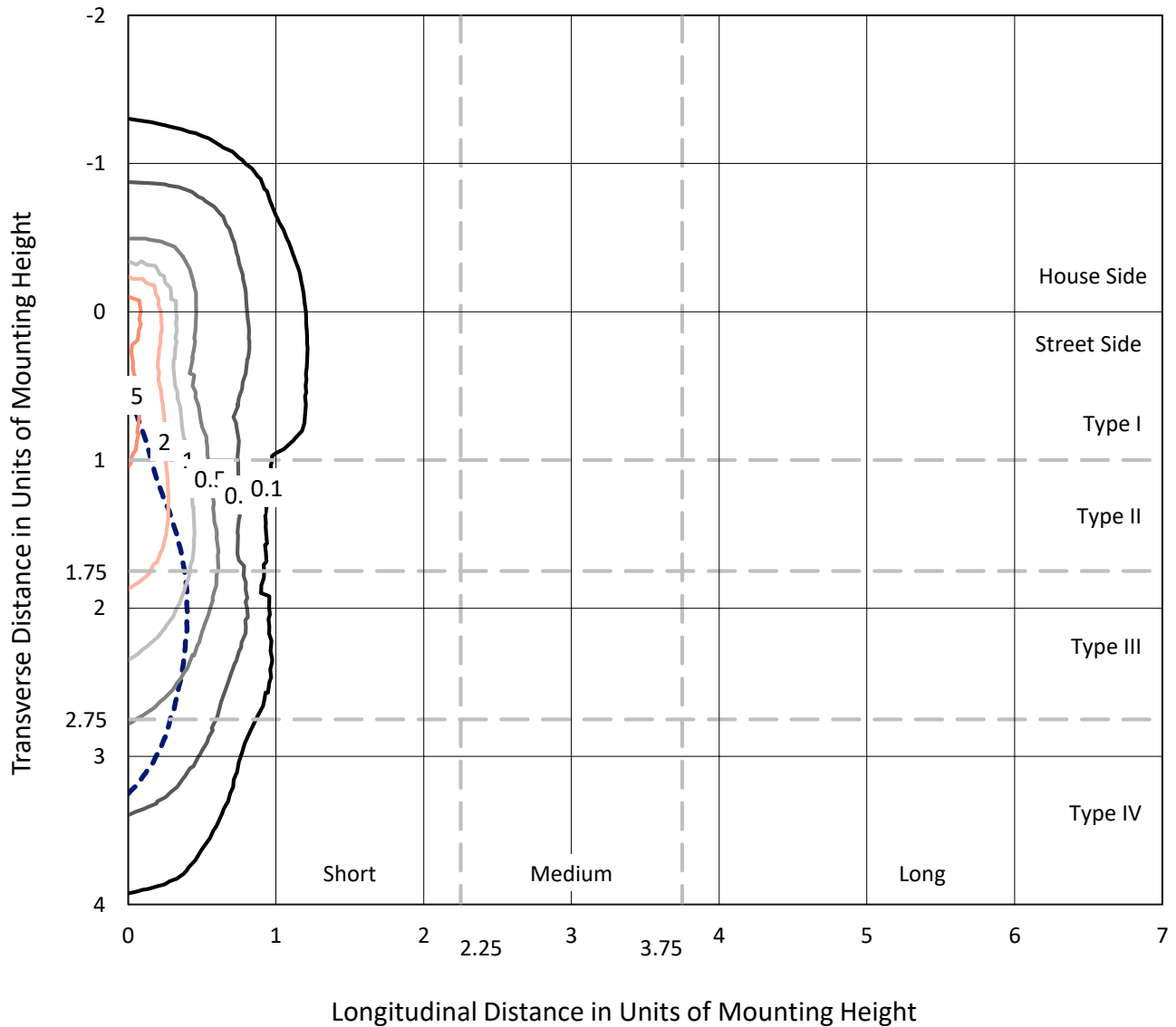


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

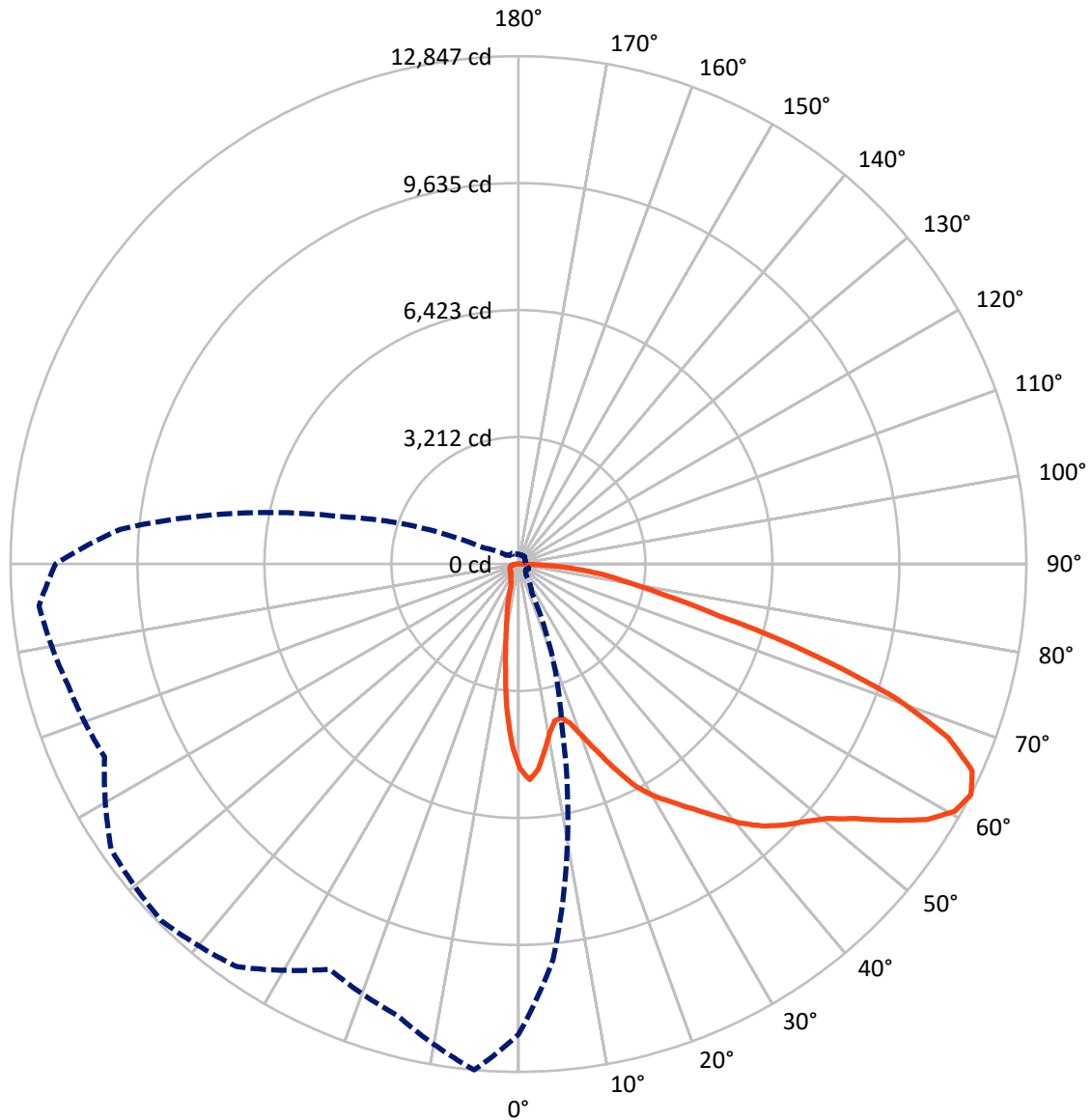


Based on 25 foot mounting height. Maximum calculated value = 8.3 fc
 Type IV - Short - Non-Cutoff

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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	2693.1	0.0	2693.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	12509.1	0.0	12509.1
	% Fixture	82.3	0.0	82.3
Total	Lumens	15202.2	0.0	15202.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.9	2.5
10°-20°	688.4	4.5
20°-30°	990.1	6.5
30°-40°	1516.5	10.0
40°-50°	2217.2	14.6
50°-60°	3226.0	21.2
60°-70°	3737.7	24.6
70°-80°	1948.4	12.8
80°-90°	500.9	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°	15202.2	100.0
0°-180°	15202.2	100.0



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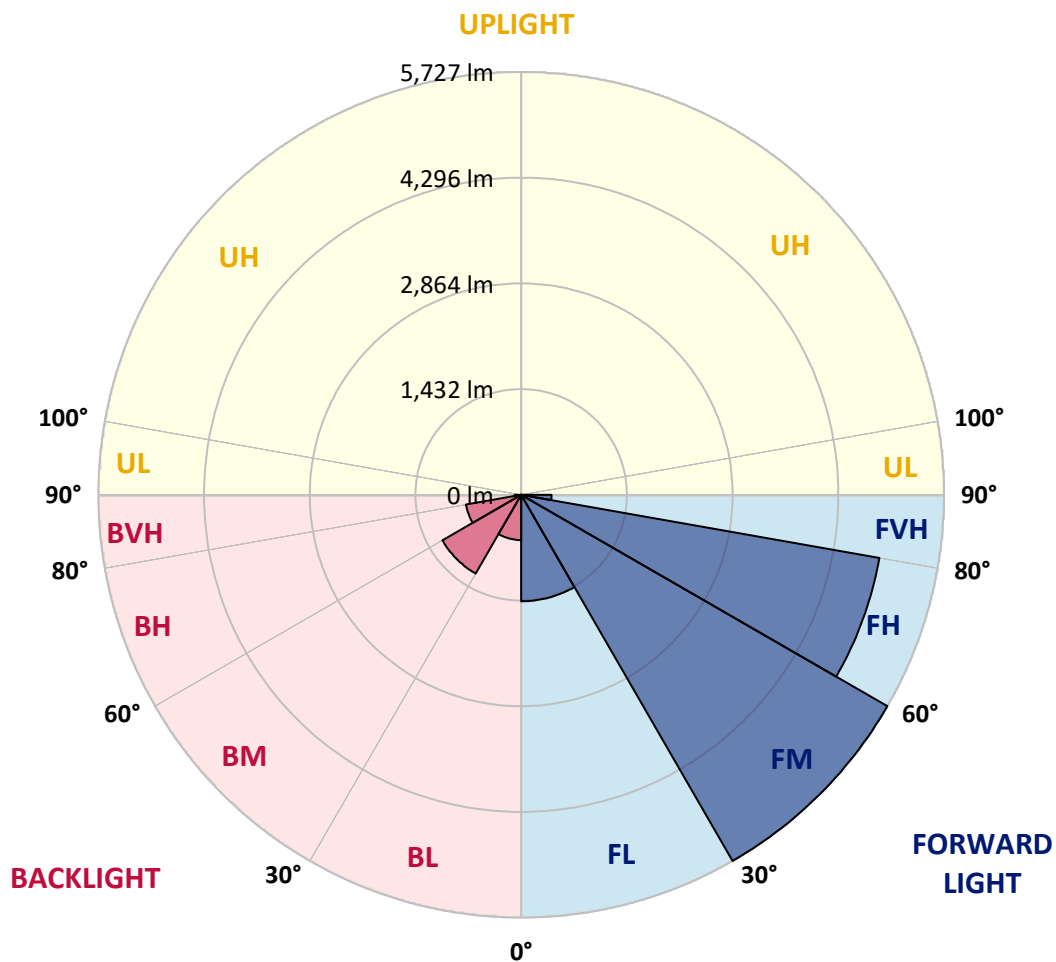
CATALOG NUMBER: NAV-AF-05-D-UNV-SLR-7027-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1442.8	9.5			
FM (30°-60°)	5727.5	37.7			
FH (60°-80°)	4926.8	32.4			G2/5000
FVH (80°-90°)	412.0	2.7			G3/500
BL (0°-30°)	612.7	4.0	B2/1000		
BM (30°-60°)	1232.2	8.1	B2/2500		
BH (60°-80°)	759.4	5.0	B2/1000		G2/1000
BVH (80°-90°)	88.8	0.6			G1/100
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°	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7
2.5°	5350.2	5275.2	5102.3	4950.1	4760.6	4618.4	4445.4	4353.8	4286.6	4241.3	4205.1
5°	4997.5	4816.8	4486.1	4196.3	3883.3	3657.2	3392.7	3248.4	3159.0	3110.6	3088.5
7.5°	4474.0	4234.8	3807.1	3418.1	3026.7	2744.6	2544.0	2330.2	2216.6	2142.7	2118.6
10°	4016.5	3746.6	3236.1	2798.6	2496.6	2296.0	2124.0	1927.9	1782.2	1655.5	1608.1
12.5°	3751.0	3436.7	2854.9	2459.1	2205.6	1990.6	1808.7	1597.1	1443.9	1311.6	1261.0
15°	3694.6	3344.2	2694.9	2243.1	1932.3	1673.3	1455.0	1224.6	1074.7	965.6	930.3
17.5°	3864.5	3432.3	2627.7	2045.8	1670.9	1354.6	1085.7	838.7	714.2	654.8	640.4
20°	4213.9	3626.4	2595.7	1868.3	1417.4	1042.8	750.7	569.9	508.1	490.6	489.3
22.5°	4673.5	3941.7	2631.0	1722.8	1179.4	769.4	550.0	468.5	443.1	433.3	433.3
25°	5192.7	4368.2	2724.6	1611.5	970.0	598.5	473.9	429.8	408.9	398.9	400.1
27.5°	5827.6	4887.3	2852.6	1509.0	820.1	524.7	443.1	405.7	384.7	374.8	375.9
30°	6305.9	5333.7	2962.8	1415.3	742.9	494.8	426.5	391.3	368.1	353.8	352.8
32.5°	6753.4	5727.2	3052.1	1348.0	698.8	442.0	385.8	359.3	339.5	322.9	319.6
35°	7248.3	6097.5	3094.0	1345.8	670.1	398.9	352.8	320.8	300.9	282.2	278.8
37.5°	7809.3	6550.6	3129.2	1359.0	654.8	371.4	337.3	306.4	290.0	271.2	266.7
40°	8393.6	6993.8	3156.9	1370.0	652.4	352.8	325.1	297.6	281.1	261.2	256.8
42.5°	8895.0	7386.1	3194.4	1365.7	637.1	349.4	317.5	290.0	274.4	254.6	249.1
45°	9296.3	7698.0	3252.8	1364.5	613.9	357.2	315.2	287.6	269.0	248.0	243.6
47.5°	9670.0	8049.6	3376.2	1360.2	588.6	354.9	327.3	285.5	266.7	245.7	242.5
50°	10097.6	8522.5	3586.8	1327.1	553.4	339.5	349.4	283.2	261.2	242.5	239.2
52.5°	10692.9	9214.8	3898.6	1267.6	504.8	322.9	352.8	282.2	252.5	235.9	231.5
55°	11392.8	9956.5	4234.8	1181.6	440.9	294.4	335.1	277.8	243.6	226.0	219.4
57.5°	11934.0	10504.3	4469.5	1058.2	378.0	277.8	298.6	267.9	232.7	215.0	209.5
60°	12086.1	10528.6	4511.5	910.4	346.0	266.7	256.8	292.0	223.8	205.1	199.6
62.5°	11904.2	10047.0	4238.2	806.9	335.1	255.7	233.6	278.8	215.0	196.2	190.7
65°	11365.1	9233.5	3626.4	791.3	346.0	245.7	221.5	222.7	206.2	187.3	181.8
67.5°	10106.4	8036.3	2857.0	801.3	359.3	235.9	212.7	202.7	196.2	179.8	173.1
70°	8219.4	6470.1	2250.8	819.0	371.4	222.7	201.7	189.6	184.1	166.5	163.1
72.5°	6331.3	5178.3	1775.7	806.9	383.5	209.5	186.3	176.3	169.7	153.3	149.8
75°	4496.0	4114.6	1305.1	692.2	351.5	190.7	168.6	159.8	154.2	136.7	135.6
77.5°	3240.5	3081.8	908.2	520.3	277.8	167.5	148.8	141.0	137.8	117.9	117.9
80°	2584.8	2345.6	543.5	339.5	202.7	138.9	124.5	121.2	117.9	98.2	99.3
82.5°	1857.2	1626.9	347.3	211.6	148.8	105.8	96.9	95.8	90.4	72.8	72.8
85°	952.4	831.1	222.7	142.2	104.7	68.4	63.9	61.8	58.4	45.2	45.2
87.5°	185.2	254.6	123.4	69.4	50.8	24.3	24.3	20.9	24.3	16.4	17.6
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°	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7
2.5°	4274.4	4252.4	4236.9	4229.3	4340.6	4387.0	4439.9	4515.9	4567.7	4545.7	4616.2
5°	3192.0	3207.5	3242.8	3297.9	3453.4	3527.1	3574.5	3637.3	3682.6	3637.3	3712.3
7.5°	2182.4	2205.6	2280.5	2394.1	2581.4	2664.2	2680.6	2681.7	2671.7	2598.0	2648.7
10°	1607.1	1560.7	1577.3	1658.9	1826.4	1900.3	1908.0	1888.1	1884.9	1855.1	1912.4
12.5°	1245.5	1181.6	1144.1	1157.3	1283.0	1343.7	1353.6	1364.5	1409.8	1424.2	1494.6
15°	929.1	896.1	868.7	856.4	939.1	986.5	992.0	1018.5	1065.8	1079.1	1139.7
17.5°	653.6	662.4	676.8	682.4	741.8	772.6	763.9	763.9	771.6	768.3	802.5
20°	499.3	517.0	544.6	571.0	625.0	642.6	620.5	593.1	575.4	566.6	574.2
22.5°	440.9	453.0	470.6	504.8	550.0	558.8	530.2	508.1	491.6	482.7	483.8
25°	408.9	421.0	435.4	462.9	501.6	505.9	479.4	465.1	451.8	443.1	440.9
27.5°	381.4	389.1	397.9	415.6	455.3	457.4	439.8	430.9	422.2	415.6	413.3
30°	356.0	359.3	362.6	380.3	410.0	413.3	404.5	400.1	396.8	392.4	392.4
32.5°	322.9	327.3	332.9	348.4	377.0	381.4	375.9	372.5	367.0	364.8	361.6
35°	283.2	294.4	306.4	325.1	356.0	358.2	351.5	341.6	328.5	325.1	322.9
37.5°	266.7	269.0	284.4	306.4	338.4	340.5	331.7	315.2	305.3	306.4	308.6
40°	255.7	259.0	267.9	290.0	321.9	325.1	317.5	305.3	295.5	296.5	299.9
42.5°	246.9	251.3	256.8	271.2	303.1	309.7	307.5	296.5	286.6	288.7	293.1
45°	242.5	245.7	245.7	255.7	286.6	296.5	297.6	288.7	281.1	283.2	288.7
47.5°	240.2	240.2	237.1	244.7	275.6	285.5	287.6	283.2	278.8	281.1	286.6
50°	237.1	232.7	229.2	235.9	266.7	275.6	277.8	274.4	276.7	281.1	284.4
52.5°	227.0	222.7	222.7	227.0	258.0	266.7	267.9	265.7	270.0	275.6	281.1
55°	215.0	215.0	216.0	220.4	253.5	260.1	259.0	256.8	261.2	267.9	273.4
57.5°	203.9	202.7	208.3	213.8	248.0	252.5	250.2	250.2	253.5	259.0	264.6
60°	197.3	191.8	196.2	205.1	242.5	246.9	243.6	242.5	248.0	252.5	256.8
62.5°	190.7	185.2	188.5	197.3	234.7	238.1	235.9	235.9	241.4	244.7	249.1
65°	180.7	178.6	180.7	189.6	228.2	229.2	229.2	230.3	234.7	237.1	241.4
67.5°	171.9	171.9	173.1	181.8	222.7	220.4	220.4	226.0	227.0	229.2	233.6
70°	160.9	163.1	163.1	174.1	218.3	210.6	211.6	216.0	218.3	220.4	221.5
72.5°	148.8	149.8	152.2	166.5	211.6	200.6	201.7	205.1	206.2	209.5	210.6
75°	135.6	136.7	140.0	158.7	207.1	190.7	188.5	190.7	192.9	195.1	194.0
77.5°	120.2	122.3	125.7	154.2	192.9	188.5	171.9	174.1	176.3	176.3	175.3
80°	101.4	104.7	110.2	147.7	163.1	181.8	153.3	154.2	155.3	155.3	153.3
82.5°	76.0	82.6	90.4	122.3	127.9	155.3	132.3	134.4	131.2	128.9	127.9
85°	49.5	55.2	66.1	84.9	93.8	122.3	109.1	110.2	103.7	102.4	102.4
87.5°	19.9	20.9	29.7	42.9	56.2	76.0	78.2	80.5	75.0	75.0	77.2
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°	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7
2.5°	4723.1	4833.3	4960.1	5089.1	5194.9	5331.5	5463.9	5604.9	5676.5	5718.4	5836.4
5°	3829.1	3980.2	4159.8	4361.5	4529.1	4815.6	5124.3	5468.3	5633.5	5796.7	6105.3
7.5°	2739.0	2886.8	3096.2	3357.4	3595.5	3973.6	4380.2	4845.5	5074.7	5339.3	5845.2
10°	2033.7	2190.2	2379.7	2601.3	2836.0	3229.5	3685.8	4208.3	4460.8	4759.5	5334.9
12.5°	1649.0	1832.0	2028.2	2226.4	2428.2	2692.8	3171.1	3752.0	4023.1	4324.1	4900.6
15°	1286.4	1482.6	1694.2	1910.2	2110.7	2406.2	2894.5	3581.2	3890.9	4181.9	4653.7
17.5°	910.4	1095.7	1333.8	1596.1	1887.0	2236.4	2835.0	3656.1	4032.0	4336.2	4652.5
20°	620.5	748.4	986.5	1297.3	1656.7	2099.8	2857.0	3919.6	4389.1	4723.1	4843.2
22.5°	496.0	556.6	717.6	1033.9	1458.3	2000.5	2947.3	4281.1	4901.6	5308.4	5190.4
25°	450.8	484.9	568.7	816.7	1281.9	1934.4	3123.8	4758.3	5475.9	5888.2	5608.2
27.5°	423.2	453.0	507.1	671.3	1129.8	1891.4	3347.5	5320.5	6122.9	6461.2	6043.5
30°	405.7	435.4	484.9	602.9	1015.2	1827.5	3543.8	5834.1	6639.9	6859.2	6278.3
32.5°	371.4	394.5	435.4	540.2	929.1	1752.6	3713.5	6293.7	7128.2	7201.0	6560.5
35°	336.1	360.4	401.3	489.3	878.5	1694.2	3802.7	6701.6	7612.1	7542.6	6840.6
37.5°	322.9	342.9	380.3	453.0	851.0	1655.5	3836.9	7102.8	8131.2	7920.6	7035.5
40°	314.1	331.7	364.8	428.9	843.1	1619.1	3829.1	7484.1	8635.0	8311.9	7188.7
42.5°	307.5	322.9	353.8	412.2	822.3	1585.0	3803.9	7813.7	9038.3	8649.3	7335.4
45°	302.0	318.5	349.4	421.0	783.7	1547.5	3788.4	8114.7	9348.1	8933.6	7531.6
47.5°	299.9	318.5	350.5	418.9	741.8	1505.6	3843.5	8448.6	9618.2	9172.9	7792.8
50°	296.5	317.5	374.8	398.9	684.5	1453.8	4029.7	8846.6	9901.4	9441.7	8131.2
52.5°	291.1	316.4	400.1	383.5	610.7	1382.2	4331.7	9408.7	10390.8	9965.3	8631.6
55°	284.4	318.5	382.5	359.3	532.3	1289.6	4633.7	10179.1	11184.3	10809.7	9350.3
57.5°	276.7	315.2	361.6	337.3	467.4	1172.7	4863.1	10810.7	11839.1	11680.4	10233.2
60°	271.2	322.9	325.1	324.1	425.4	1061.4	4885.2	10770.0	12027.6	12245.9	11097.3
62.5°	264.6	329.6	296.5	314.1	404.5	957.9	4612.8	10103.1	11709.0	12173.1	11801.7
65°	255.7	287.6	281.1	305.3	404.5	902.7	3979.1	8993.1	10828.3	11485.3	12184.2
67.5°	246.9	261.2	270.0	293.1	413.3	851.0	3197.5	7585.6	9439.6	10375.3	11754.2
70°	234.7	246.9	258.0	282.2	408.9	814.6	2516.4	6080.0	7768.5	8840.0	10565.0
72.5°	223.8	232.7	243.6	265.7	408.9	798.1	2021.5	4769.5	5931.1	6833.9	8751.7
75°	207.1	215.0	224.8	249.1	401.3	729.7	1517.7	3821.5	4339.5	4904.9	6905.5
77.5°	190.7	196.2	203.9	228.2	361.6	609.5	1073.6	2959.5	3215.3	3528.3	5383.4
80°	169.7	174.1	179.8	203.9	299.9	472.9	698.8	2314.8	2404.0	2555.0	3541.5
82.5°	145.4	152.2	153.3	175.3	241.4	342.9	415.6	1586.0	1585.0	1806.6	2498.7
85°	119.0	122.3	124.5	137.8	178.6	228.2	273.4	866.3	772.6	1082.4	2170.3
87.5°	89.3	86.0	89.3	92.5	117.9	134.4	146.7	159.8	95.8	196.2	1262.1
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7	5182.7
2.5°	5899.2	5964.1	5925.6	5879.3	5763.5	5593.8	5463.9	5350.2
5°	6319.1	6439.3	6386.4	6214.5	5914.6	5574.1	5215.7	4997.5
7.5°	6266.2	6504.3	6483.3	6196.8	5766.8	5265.3	4761.6	4474.0
10°	5842.9	6176.9	6234.2	5941.1	5485.8	4924.8	4341.7	4016.5
12.5°	5382.3	5663.4	5780.1	5668.8	5240.1	4670.2	4076.1	3751.0
15°	4996.5	5138.7	5254.4	5326.1	5060.4	4579.7	4029.7	3694.6
17.5°	4710.9	4683.5	4780.4	4952.4	4963.3	4699.9	4239.2	3864.5
20°	4573.2	4357.1	4413.4	4654.7	4936.9	5005.3	4657.0	4213.9
22.5°	4565.5	4228.2	4239.2	4499.3	5013.0	5421.9	5178.3	4673.5
25°	4684.5	4213.9	4223.8	4482.8	5147.5	5841.9	5781.2	5192.7
27.5°	4887.3	4275.7	4268.9	4555.6	5327.0	6192.3	6389.6	5827.6
30°	5106.7	4364.9	4348.3	4672.4	5503.5	6408.4	6821.8	6305.9
32.5°	5379.9	4523.5	4466.3	4843.2	5677.6	6615.7	7191.0	6753.4
35°	5640.2	4756.2	4673.5	5087.9	5863.9	6846.1	7604.3	7248.3
37.5°	5905.7	5103.5	5057.1	5440.7	6127.2	7096.3	8077.2	7809.3
40°	6246.4	5597.2	5575.2	5953.2	6478.9	7369.5	8607.4	8393.6
42.5°	6613.4	6121.8	6103.1	6541.7	6915.4	7643.9	9061.6	8895.0
45°	6987.0	6757.8	6762.3	7170.0	7375.1	7903.1	9418.5	9296.3
47.5°	7427.9	7453.3	7611.0	7821.5	7822.6	8191.9	9734.9	9670.0
50°	7987.9	8293.2	8584.3	8617.4	8274.5	8573.2	10121.8	10097.6
52.5°	8621.8	9262.2	9600.5	9495.8	8715.4	9046.0	10694.0	10692.9
55°	9374.5	10275.1	10593.6	10415.0	9243.4	9662.2	11441.3	11392.8
57.5°	10154.9	11249.5	11506.3	11273.6	9903.6	10379.7	12190.8	11934.0
60°	10998.0	12088.2	12349.4	12000.1	10644.2	11095.1	12686.8	12086.1
62.5°	11550.3	12578.7	12766.2	12431.0	11307.9	11823.8	12846.7	11904.2
65°	11579.1	12252.5	12302.1	12183.1	11590.0	12456.3	12615.1	11365.1
67.5°	10792.0	10831.8	10896.7	11024.5	10987.1	12174.2	11722.3	10106.4
70°	9109.0	8579.8	8793.7	8917.0	9195.0	10828.3	10072.2	8219.4
72.5°	6965.1	6192.3	6434.9	6393.0	6970.6	8881.8	7705.8	6331.3
75°	5013.0	4222.7	4241.3	4243.7	5008.6	7089.7	5254.4	4496.0
77.5°	3407.0	2988.1	3049.8	3011.3	3351.8	5554.2	3782.9	3240.5
80°	2330.2	2319.2	2332.3	2242.0	2235.3	3589.9	2800.7	2584.8
82.5°	1728.2	1597.1	1578.4	1482.6	1712.9	2744.6	2126.2	1857.2
85°	1363.4	884.0	768.3	927.1	1483.6	2525.2	1296.3	952.4
87.5°	577.6	347.3	210.6	416.6	824.5	1850.7	359.3	185.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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