

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: P195747

Luminaire Tested: **NAV-AF-03-D-UNV-SLR-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195747  
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-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 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: 10541 lumens  
Efficiency: N/A  
Efficacy: 109.8 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): 96  
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

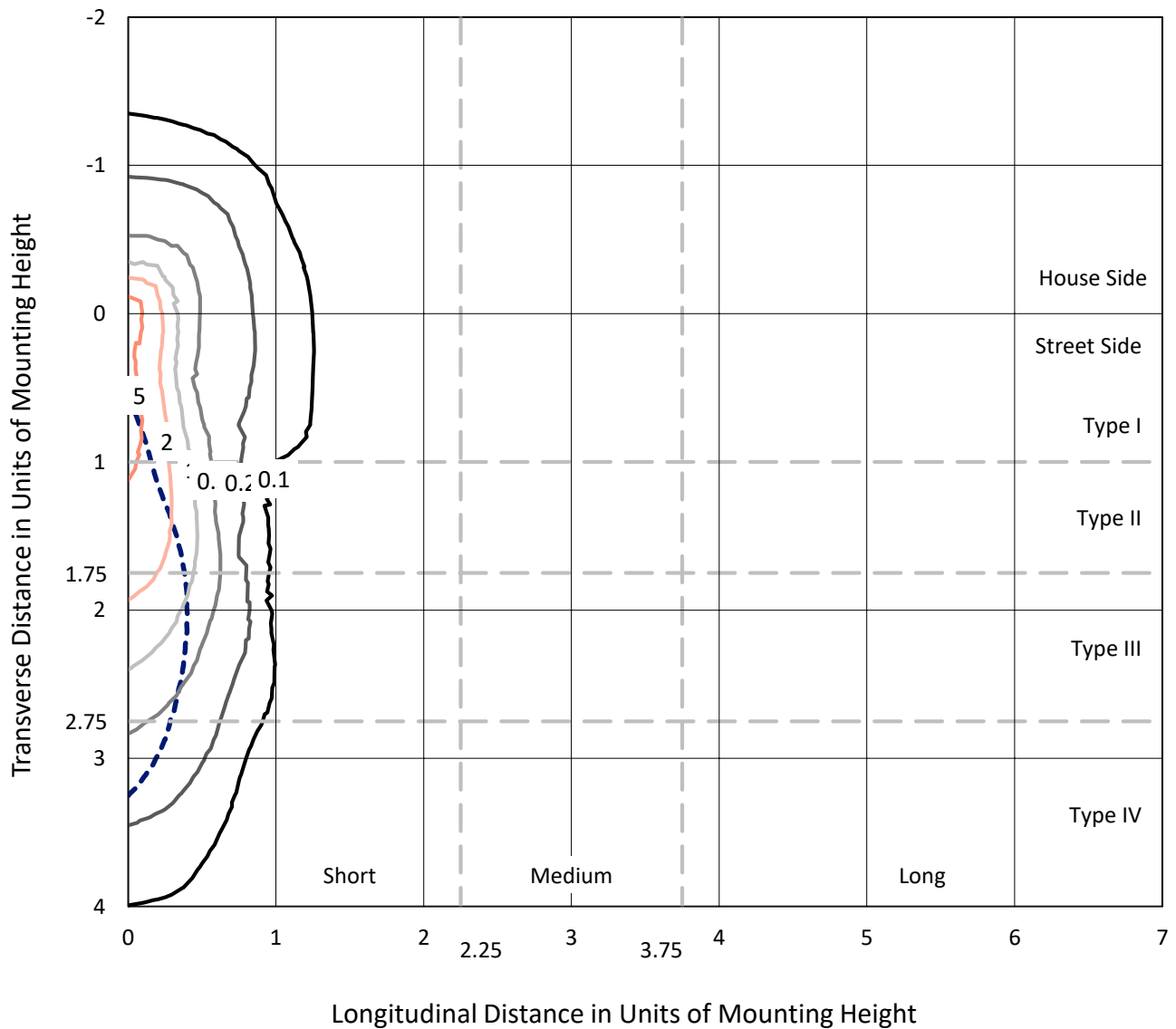


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### Iso-Footcandle Lines of Horizontal Illumination

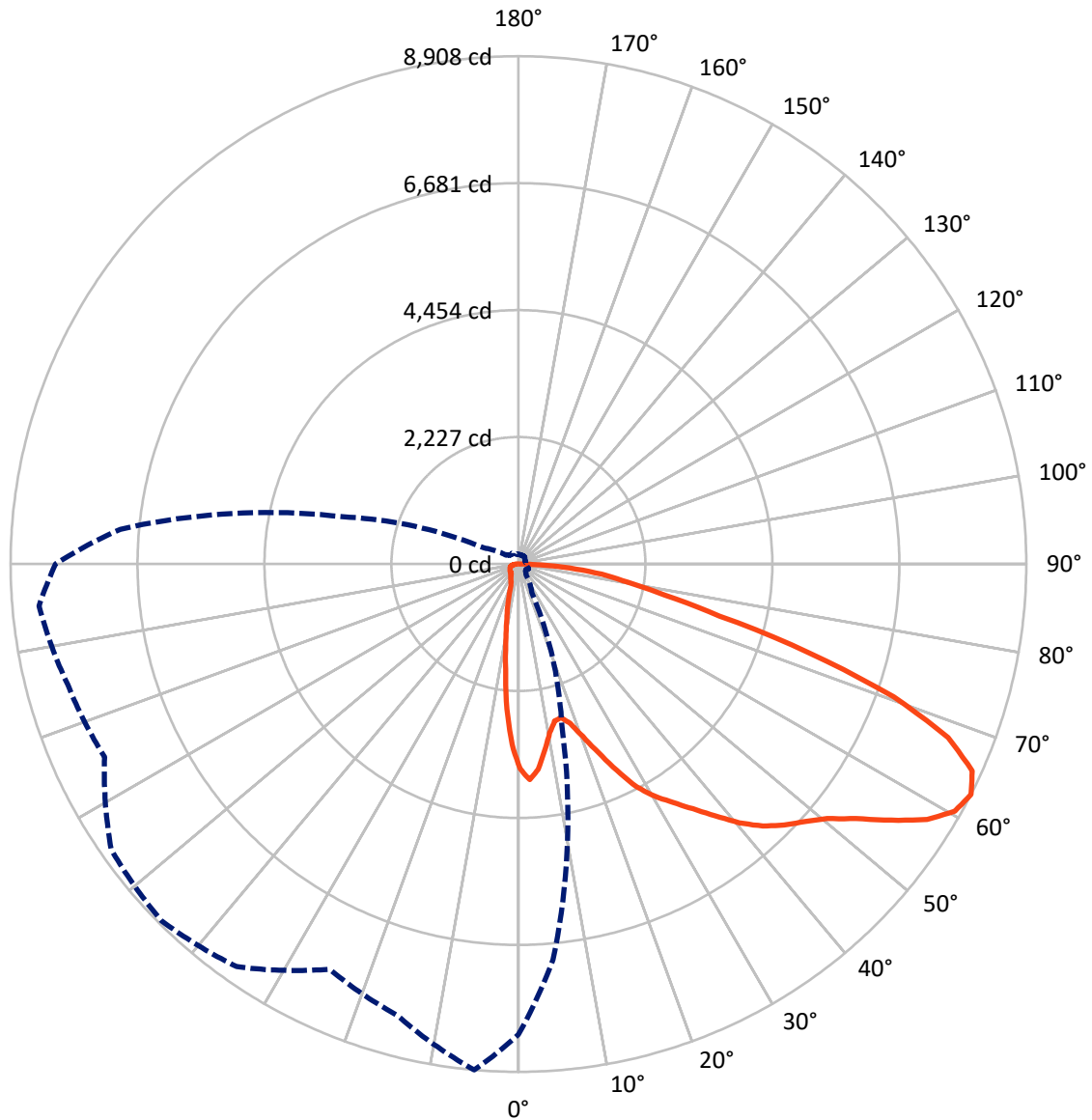
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 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
<b>House Side</b>	Lumens	1867.4	0.0	1867.4
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	8673.7	0.0	8673.7
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	10541.0	0.0	10541.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	261.3	2.5
10°-20°	477.3	4.5
20°-30°	686.6	6.5
30°-40°	1051.5	10.0
40°-50°	1537.4	14.6
50°-60°	2236.9	21.2
60°-70°	2591.7	24.6
70°-80°	1351.0	12.8
80°-90°	347.3	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°	10541.0	100.0
0°-180°	10541.0	100.0



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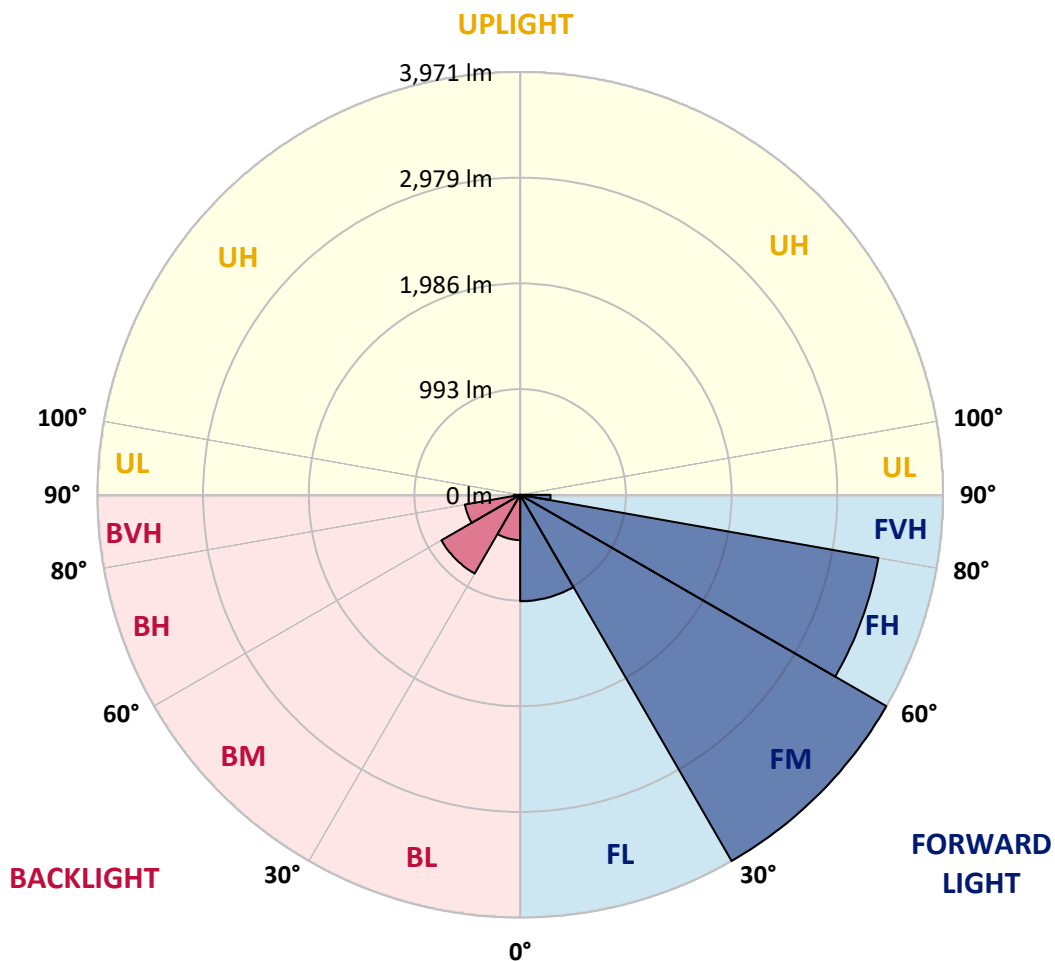
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1000.4	9.5			
FM	(30°-60°)	3971.4	37.7			
FH	(60°-80°)	3416.2	32.4			G2/5000
FVH	(80°-90°)	285.7	2.7			G3/500
BL	(0°-30°)	424.9	4.0	B1/500		
BM	(30°-60°)	854.4	8.1	B1/1000		
BH	(60°-80°)	526.5	5.0	B2/1000		G2/1000
BVH	(80°-90°)	61.6	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°	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6
2.5°	3709.8	3657.8	3537.8	3432.4	3300.9	3202.3	3082.3	3018.9	2972.3	2940.9	2915.7
5°	3465.2	3339.9	3110.6	2909.6	2692.6	2535.9	2352.4	2252.3	2190.4	2156.8	2141.5
7.5°	3102.2	2936.4	2639.8	2370.0	2098.7	1903.1	1764.0	1615.7	1537.0	1485.8	1468.9
10°	2785.0	2597.8	2243.9	1940.5	1731.1	1592.0	1472.8	1336.7	1235.8	1147.9	1115.1
12.5°	2600.8	2383.0	1979.5	1705.1	1529.3	1380.3	1254.2	1107.4	1001.2	909.5	874.3
15°	2561.9	2318.8	1868.7	1555.3	1339.8	1160.2	1008.8	849.1	745.2	669.5	645.1
17.5°	2679.6	2380.0	1822.0	1418.5	1158.6	939.3	752.8	581.6	495.3	454.0	444.0
20°	2921.8	2514.5	1799.9	1295.5	982.9	723.0	520.5	395.1	352.3	340.1	339.3
22.5°	3240.5	2733.1	1824.3	1194.6	817.8	533.5	381.4	324.8	307.2	300.4	300.4
25°	3600.5	3028.8	1889.3	1117.4	672.6	415.0	328.6	298.1	283.5	276.7	277.4
27.5°	4040.7	3388.8	1978.0	1046.3	568.6	363.8	307.2	281.3	266.7	259.9	260.6
30°	4372.4	3698.3	2054.4	981.3	515.1	343.2	295.8	271.3	255.3	245.3	244.6
32.5°	4682.7	3971.2	2116.3	934.7	484.6	306.5	267.5	249.2	235.4	223.9	221.6
35°	5025.9	4228.0	2145.3	933.2	464.7	276.7	244.6	222.4	208.6	195.7	193.4
37.5°	5414.9	4542.1	2169.8	942.4	454.0	257.6	233.9	212.5	201.0	188.0	185.0
40°	5820.0	4849.3	2188.9	950.0	452.5	244.6	225.5	206.4	194.9	181.1	178.1
42.5°	6167.7	5121.4	2214.9	946.9	441.8	242.3	220.1	201.0	190.3	176.5	172.7
45°	6445.9	5337.7	2255.4	946.2	425.7	247.6	218.6	199.5	186.5	172.0	168.9
47.5°	6705.0	5581.5	2341.0	943.1	408.1	246.1	227.0	197.9	185.0	170.4	168.1
50°	7001.6	5909.4	2487.0	920.2	383.7	235.4	242.3	196.4	181.1	168.1	165.8
52.5°	7414.3	6389.4	2703.3	878.9	350.0	223.9	244.6	195.7	175.0	163.6	160.5
55°	7899.6	6903.7	2936.4	819.3	305.7	204.1	232.3	192.6	168.9	156.7	152.1
57.5°	8274.8	7283.6	3099.1	733.7	262.1	192.6	207.1	185.7	161.3	149.0	145.2
60°	8380.3	7300.4	3128.2	631.3	240.0	185.0	178.1	202.5	155.1	142.2	138.3
62.5°	8254.2	6966.4	2938.7	559.5	232.3	177.3	162.0	193.4	149.0	136.0	132.2
65°	7880.5	6402.4	2514.5	548.8	240.0	170.4	153.6	154.4	142.9	129.9	126.1
67.5°	7007.7	5572.4	1981.0	555.6	249.2	163.6	147.5	140.6	136.0	124.6	120.0
70°	5699.2	4486.3	1560.7	567.9	257.6	154.4	139.9	131.5	127.6	115.4	113.1
72.5°	4390.0	3590.6	1231.3	559.5	266.0	145.2	129.2	122.3	117.7	106.2	103.9
75°	3117.5	2853.1	904.9	480.0	243.8	132.2	116.9	110.8	107.0	94.8	94.0
77.5°	2247.0	2136.9	629.8	360.7	192.6	116.2	103.2	97.8	95.5	81.8	81.8
80°	1792.2	1626.4	376.8	235.4	140.6	96.3	86.4	84.1	81.8	68.0	68.8
82.5°	1287.8	1128.1	240.7	146.7	103.2	73.4	67.3	66.5	62.7	50.4	50.4
85°	660.3	576.3	154.4	98.6	72.6	47.4	44.3	42.8	40.5	31.3	31.3
87.5°	128.4	176.5	85.6	48.1	35.2	16.8	16.8	14.5	16.8	11.5	12.2
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6
2.5°	2963.9	2948.6	2937.9	2932.5	3009.7	3041.8	3078.5	3131.2	3167.2	3151.9	3200.8
5°	2213.4	2224.1	2248.5	2286.7	2394.5	2445.7	2478.6	2522.1	2553.5	2522.1	2574.1
7.5°	1513.3	1529.3	1581.3	1660.0	1789.9	1847.3	1858.7	1859.5	1852.6	1801.4	1836.6
10°	1114.3	1082.2	1093.7	1150.2	1266.4	1317.6	1323.0	1309.2	1306.9	1286.3	1326.0
12.5°	863.6	819.3	793.3	802.5	889.6	931.7	938.5	946.2	977.5	987.4	1036.4
15°	644.3	621.4	602.3	593.8	651.2	684.0	687.9	706.2	739.1	748.2	790.3
17.5°	453.2	459.3	469.3	473.1	514.4	535.8	529.6	529.6	535.0	532.7	556.4
20°	346.2	358.4	377.6	395.9	433.3	445.6	430.3	411.2	399.0	392.8	398.2
22.5°	305.7	314.1	326.3	350.0	381.4	387.5	367.6	352.3	340.9	334.8	335.5
25°	283.5	292.0	301.9	321.0	347.7	350.8	332.5	322.5	313.4	307.2	305.7
27.5°	264.4	269.8	275.9	288.1	315.6	317.2	304.9	298.8	292.7	288.1	286.6
30°	246.9	249.2	251.4	263.7	284.3	286.6	280.5	277.4	275.1	272.1	272.1
32.5°	223.9	227.0	230.8	241.5	261.4	264.4	260.6	258.3	254.5	253.0	250.7
35°	196.4	204.1	212.5	225.5	246.9	248.4	243.8	236.9	227.8	225.5	223.9
37.5°	185.0	186.5	197.2	212.5	234.6	236.2	230.0	218.6	211.7	212.5	214.0
40°	177.3	179.6	185.7	201.0	223.2	225.5	220.1	211.7	204.8	205.6	207.9
42.5°	171.2	174.3	178.1	188.0	210.2	214.8	213.2	205.6	198.7	200.2	203.3
45°	168.1	170.4	170.4	177.3	198.7	205.6	206.4	200.2	194.9	196.4	200.2
47.5°	166.6	166.6	164.3	169.7	191.1	197.9	199.5	196.4	193.4	194.9	198.7
50°	164.3	161.3	159.0	163.6	185.0	191.1	192.6	190.3	191.8	194.9	197.2
52.5°	157.4	154.4	154.4	157.4	178.8	185.0	185.7	184.2	187.2	191.1	194.9
55°	149.0	149.0	149.8	152.9	175.8	180.4	179.6	178.1	181.1	185.7	189.5
57.5°	141.4	140.6	144.4	148.3	172.0	175.0	173.5	173.5	175.8	179.6	183.4
60°	136.8	133.0	136.0	142.2	168.1	171.2	168.9	168.1	172.0	175.0	178.1
62.5°	132.2	128.4	130.7	136.8	162.8	165.1	163.6	163.6	167.4	169.7	172.7
65°	125.3	123.8	125.3	131.5	158.2	159.0	159.0	159.7	162.8	164.3	167.4
67.5°	119.2	119.2	120.0	126.1	154.4	152.9	152.9	156.7	157.4	159.0	162.0
70°	111.6	113.1	113.1	120.8	151.3	146.0	146.7	149.8	151.3	152.9	153.6
72.5°	103.2	103.9	105.5	115.4	146.7	139.1	139.9	142.2	142.9	145.2	146.0
75°	94.0	94.8	97.1	110.1	143.7	132.2	130.7	132.2	133.7	135.3	134.5
77.5°	83.3	84.8	87.1	107.0	133.7	130.7	119.2	120.8	122.3	122.3	121.5
80°	70.3	72.6	76.4	102.4	113.1	126.1	106.2	107.0	107.8	107.8	106.2
82.5°	52.7	57.3	62.7	84.8	88.7	107.8	91.7	93.2	90.9	89.4	88.7
85°	34.4	38.2	45.9	58.8	65.0	84.8	75.7	76.4	71.8	71.1	71.1
87.5°	13.8	14.5	20.6	29.8	39.0	52.7	54.3	55.8	52.0	52.0	53.5
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°	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6
2.5°	3274.9	3351.4	3439.3	3528.7	3602.0	3696.8	3788.5	3886.4	3936.0	3965.1	4046.9
5°	2655.1	2759.8	2884.4	3024.2	3140.4	3339.1	3553.1	3791.6	3906.2	4019.3	4233.3
7.5°	1899.2	2001.6	2146.9	2328.0	2493.1	2755.2	3037.2	3359.8	3518.7	3702.2	4053.0
10°	1410.1	1518.6	1650.1	1803.7	1966.5	2239.3	2555.7	2918.0	3093.0	3300.2	3699.1
12.5°	1143.4	1270.2	1406.3	1543.8	1683.7	1867.1	2198.8	2601.6	2789.6	2998.3	3398.0
15°	891.9	1028.0	1174.7	1324.5	1463.6	1668.4	2007.0	2483.1	2697.9	2899.7	3226.8
17.5°	631.3	759.7	924.8	1106.7	1308.4	1550.7	1965.7	2535.1	2795.7	3006.7	3226.0
20°	430.3	518.9	684.0	899.6	1148.7	1456.0	1981.0	2717.8	3043.4	3274.9	3358.2
22.5°	343.9	386.0	497.5	716.9	1011.1	1387.2	2043.7	2968.5	3398.7	3680.8	3599.0
25°	312.6	336.3	394.4	566.3	888.9	1341.3	2166.0	3299.4	3796.9	4082.8	3888.6
27.5°	293.5	314.1	351.6	465.4	783.4	1311.5	2321.1	3689.2	4245.6	4480.2	4190.5
30°	281.3	301.9	336.3	418.1	703.9	1267.2	2457.2	4045.3	4604.0	4756.1	4353.3
32.5°	257.6	273.6	301.9	374.5	644.3	1215.2	2574.9	4364.0	4942.6	4993.0	4549.0
35°	233.1	249.9	278.2	339.3	609.1	1174.7	2636.8	4646.8	5278.1	5230.0	4743.1
37.5°	223.9	237.7	263.7	314.1	590.0	1147.9	2660.5	4925.0	5638.1	5492.1	4878.4
40°	217.8	230.0	253.0	297.3	584.7	1122.7	2655.1	5189.5	5987.4	5763.4	4984.6
42.5°	213.2	223.9	245.3	285.8	570.2	1099.0	2637.5	5418.0	6267.1	5997.3	5086.3
45°	209.4	220.9	242.3	292.0	543.4	1073.0	2626.8	5626.6	6481.8	6194.5	5222.3
47.5°	207.9	220.9	243.0	290.4	514.4	1044.0	2665.0	5858.2	6669.1	6360.3	5403.4
50°	205.6	220.1	259.9	276.7	474.6	1008.1	2794.2	6134.1	6865.5	6546.8	5638.1
52.5°	201.8	219.3	277.4	266.0	423.4	958.4	3003.6	6523.9	7204.9	6909.8	5985.1
55°	197.2	220.9	265.2	249.2	369.1	894.2	3213.0	7058.1	7755.1	7495.3	6483.4
57.5°	191.8	218.6	250.7	233.9	324.1	813.2	3372.0	7496.0	8209.1	8099.1	7095.6
60°	188.0	223.9	225.5	224.7	295.0	736.0	3387.3	7467.8	8339.8	8491.1	7694.8
62.5°	183.4	228.5	205.6	217.8	280.5	664.2	3198.5	7005.4	8118.9	8440.7	8183.1
65°	177.3	199.5	194.9	211.7	280.5	625.9	2759.0	6235.7	7508.3	7963.8	8448.3
67.5°	171.2	181.1	187.2	203.3	286.6	590.0	2217.2	5259.8	6545.3	7194.2	8150.3
70°	162.8	171.2	178.8	195.7	283.5	564.8	1744.8	4215.8	5386.6	6129.5	7325.6
72.5°	155.1	161.3	168.9	184.2	283.5	553.3	1401.7	3307.0	4112.6	4738.5	6068.4
75°	143.7	149.0	155.9	172.7	278.2	506.0	1052.4	2649.8	3009.0	3401.0	4788.2
77.5°	132.2	136.0	141.4	158.2	250.7	422.6	744.4	2052.1	2229.4	2446.5	3732.7
80°	117.7	120.8	124.6	141.4	207.9	327.9	484.6	1605.0	1666.9	1771.6	2455.6
82.5°	100.9	105.5	106.2	121.5	167.4	237.7	288.1	1099.8	1099.0	1252.7	1732.6
85°	82.5	84.8	86.4	95.5	123.8	158.2	189.5	600.7	535.8	750.5	1504.9
87.5°	61.9	59.6	61.9	64.2	81.8	93.2	101.6	110.8	66.5	136.0	875.1
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°	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6	3593.6
2.5°	4090.4	4135.5	4108.8	4076.7	3996.4	3878.7	3788.5	3709.8
5°	4381.6	4464.9	4428.2	4309.0	4101.1	3865.0	3616.6	3465.2
7.5°	4344.9	4510.0	4495.5	4296.8	3998.7	3651.0	3301.7	3102.2
10°	4051.4	4283.0	4322.8	4119.5	3803.8	3414.8	3010.5	2785.0
12.5°	3732.0	3926.9	4007.9	3930.7	3633.4	3238.2	2826.3	2600.8
15°	3464.5	3563.1	3643.3	3693.0	3508.8	3175.6	2794.2	2561.9
17.5°	3266.5	3247.4	3314.7	3433.9	3441.5	3258.9	2939.4	2679.6
20°	3171.0	3021.2	3060.2	3227.5	3423.2	3470.6	3229.1	2921.8
22.5°	3165.6	2931.8	2939.4	3119.8	3475.9	3759.5	3590.6	3240.5
25°	3248.2	2921.8	2928.7	3108.3	3569.2	4050.7	4008.6	3600.5
27.5°	3388.8	2964.6	2960.1	3158.8	3693.8	4293.7	4430.5	4040.7
30°	3540.9	3026.5	3015.1	3239.8	3816.0	4443.5	4730.1	4372.4
32.5°	3730.4	3136.6	3096.9	3358.2	3936.8	4587.2	4986.2	4682.7
35°	3910.8	3297.9	3240.5	3527.9	4066.0	4746.9	5272.8	5025.9
37.5°	4095.0	3538.6	3506.5	3772.5	4248.6	4920.4	5600.6	5414.9
40°	4331.2	3881.0	3865.7	4127.9	4492.4	5110.0	5968.2	5820.0
42.5°	4585.7	4244.8	4231.8	4536.0	4795.1	5300.3	6283.1	6167.7
45°	4844.8	4685.8	4688.8	4971.6	5113.8	5479.9	6530.8	6445.9
47.5°	5150.5	5168.1	5277.3	5423.3	5424.1	5680.1	6750.1	6705.0
50°	5538.7	5750.4	5952.2	5975.1	5737.4	5944.6	7018.4	7001.6
52.5°	5978.2	6422.2	6656.9	6584.3	6043.1	6272.4	7415.0	7414.3
55°	6500.2	7124.6	7345.5	7221.7	6409.2	6699.7	7933.2	7899.6
57.5°	7041.3	7800.2	7978.3	7817.0	6867.0	7197.2	8452.9	8274.8
60°	7626.0	8381.8	8563.0	8320.7	7380.6	7693.2	8796.8	8380.3
62.5°	8008.9	8721.9	8851.9	8619.5	7840.7	8198.4	8907.7	8254.2
65°	8028.7	8495.7	8530.1	8447.6	8036.4	8637.1	8747.2	7880.5
67.5°	7483.0	7510.6	7555.7	7644.3	7618.3	8441.5	8128.1	7007.7
70°	6316.0	5949.1	6097.4	6183.0	6375.6	7508.3	6984.0	5699.2
72.5°	4829.5	4293.7	4461.9	4432.8	4833.3	6158.6	5343.1	4390.0
75°	3475.9	2928.0	2940.9	2942.5	3472.9	4915.8	3643.3	3117.5
77.5°	2362.4	2072.0	2114.8	2088.0	2324.2	3851.2	2623.0	2247.0
80°	1615.7	1608.0	1617.2	1554.5	1550.0	2489.3	1942.0	1792.2
82.5°	1198.4	1107.4	1094.4	1028.0	1187.7	1903.1	1474.3	1287.8
85°	945.4	613.0	532.7	642.8	1028.7	1751.0	898.8	660.3
87.5°	400.5	240.7	146.0	288.9	571.7	1283.2	249.2	128.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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