

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: P196219

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196219  
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-01-D-UNV-SLL-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6055.9 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

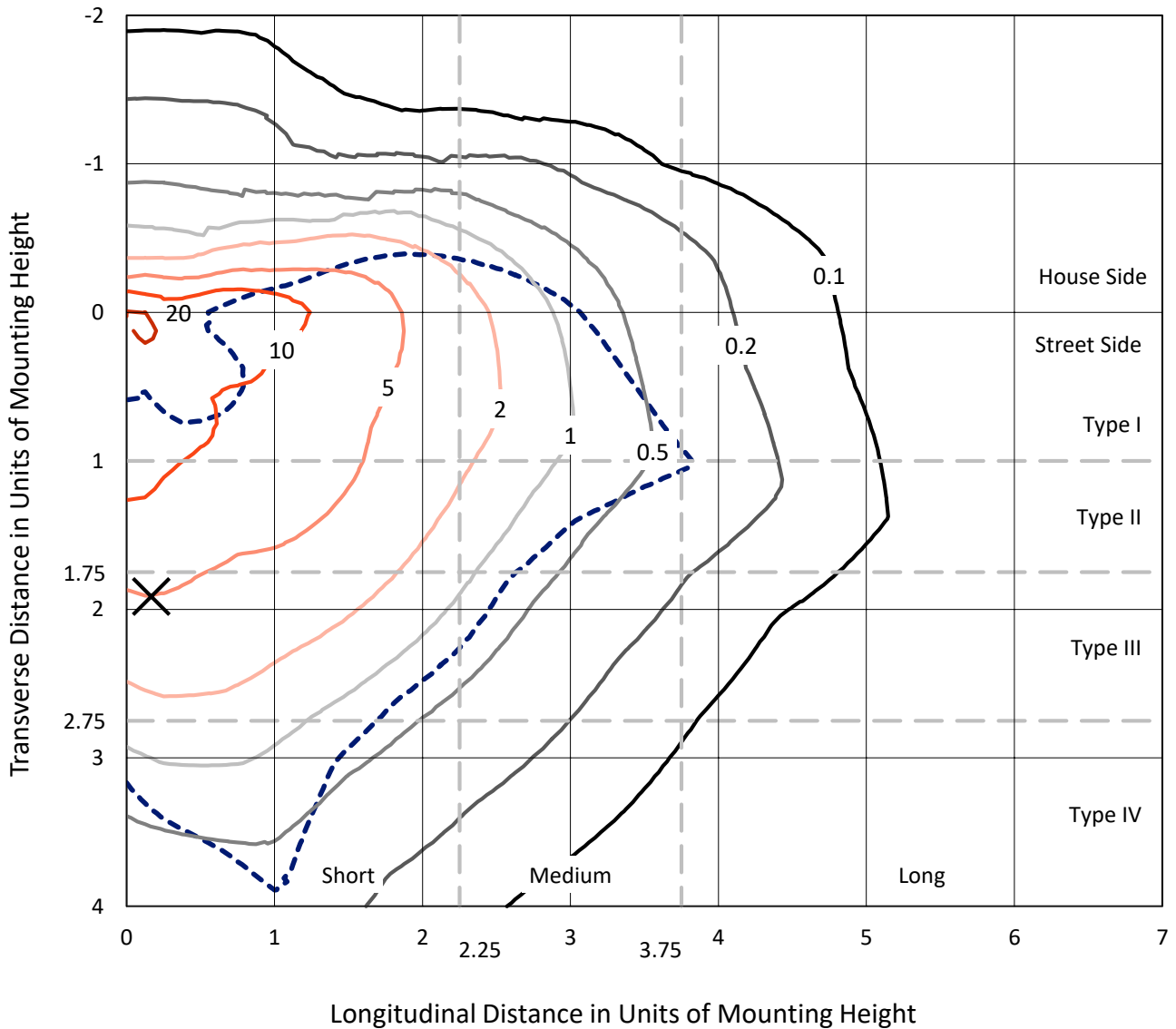
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

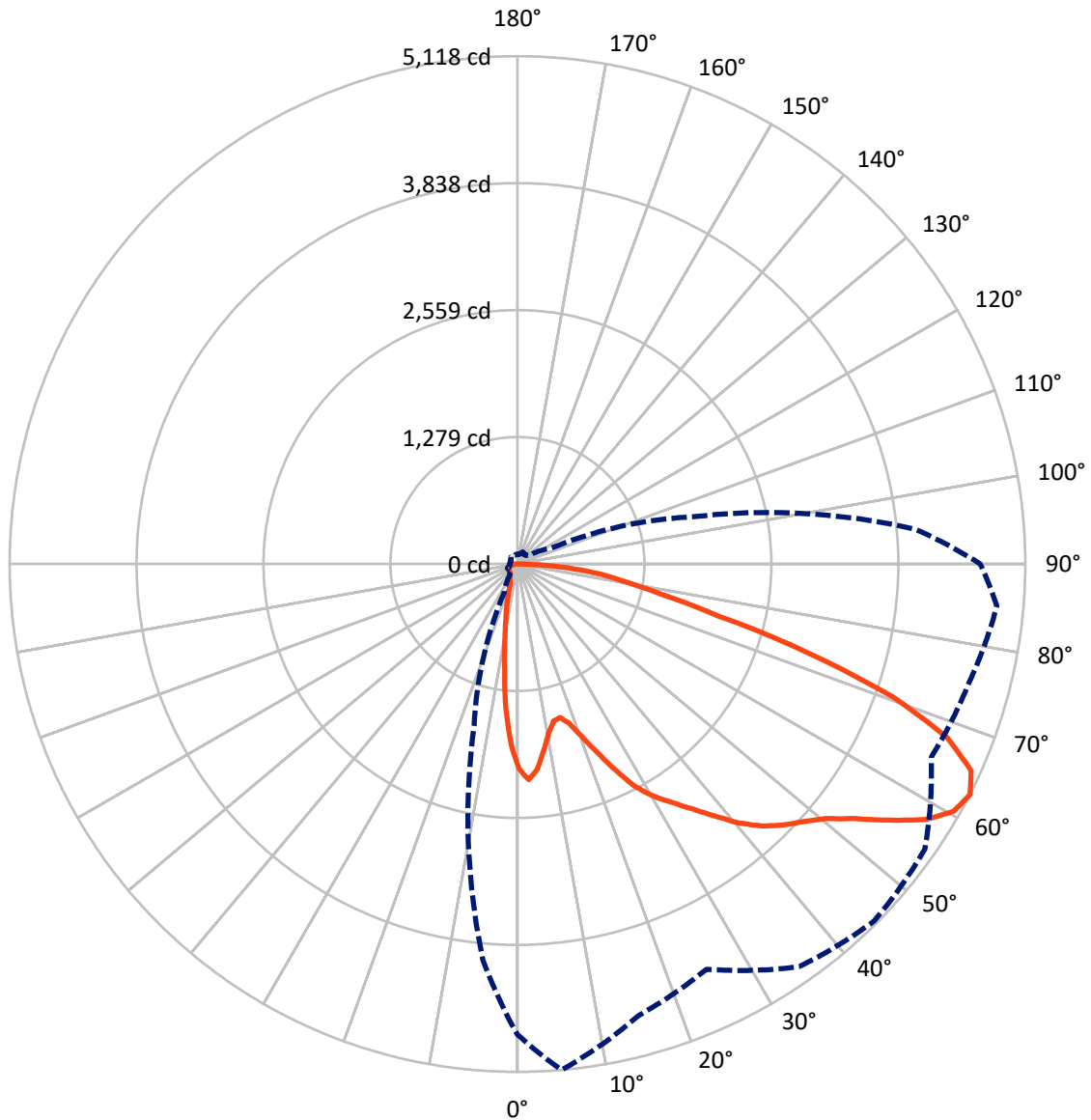
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.7 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1072.8	0.0	1072.8
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	4983.1	0.0	4983.1
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	6055.9	0.0	6055.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.1	2.5
10°-20°	274.2	4.5
20°-30°	394.4	6.5
30°-40°	604.1	10.0
40°-50°	883.2	14.6
50°-60°	1285.1	21.2
60°-70°	1489.0	24.6
70°-80°	776.2	12.8
80°-90°	199.5	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°	6055.9	100.0
0°-180°	6055.9	100.0



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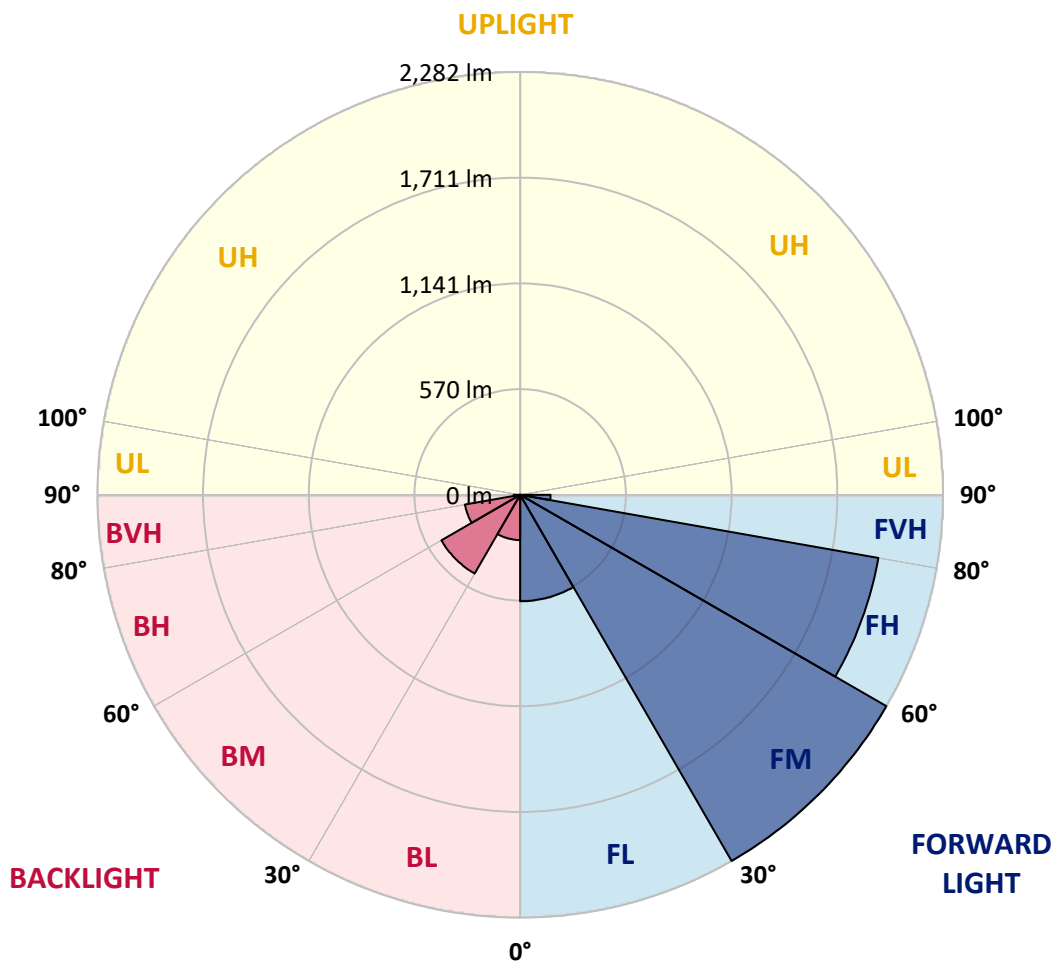
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	574.7	9.5			
FM	(30°-60°)	2281.6	37.7			
FH	(60°-80°)	1962.6	32.4			G2/5000
FVH	(80°-90°)	164.1	2.7			G2/225
BL	(0°-30°)	244.1	4.0	B1/500		
BM	(30°-60°)	490.8	8.1	B1/1000		
BH	(60°-80°)	302.5	5.0	B1/500		G1/500
BVH	(80°-90°)	35.4	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	2131.3	2176.5	2228.3	2296.0	2342.0	2360.5	2375.9	2349.9	2325.0	2278.0	2261.2
5°	1990.8	2077.7	2220.4	2356.2	2475.5	2544.1	2565.2	2517.3	2432.1	2309.1	2244.1
7.5°	1782.3	1896.9	2097.5	2297.2	2468.5	2582.6	2591.0	2496.2	2328.4	2126.9	2021.6
10°	1600.0	1729.5	1961.8	2185.3	2366.7	2483.4	2460.6	2327.6	2125.2	1895.9	1777.0
12.5°	1494.2	1623.7	1860.4	2087.4	2258.2	2302.6	2256.0	2144.0	1952.2	1722.5	1602.7
15°	1471.8	1605.3	1824.4	2015.8	2121.6	2093.1	2047.0	1990.4	1853.8	1665.9	1550.0
17.5°	1539.4	1688.7	1872.2	1977.2	1972.8	1904.3	1865.7	1876.6	1853.4	1727.4	1606.1
20°	1678.7	1855.1	1993.8	1966.6	1854.2	1758.0	1735.7	1821.8	1929.3	1881.5	1748.4
22.5°	1861.7	2062.8	2159.9	1996.9	1792.3	1688.7	1684.3	1818.7	2067.7	2114.6	1952.6
25°	2068.5	2303.0	2327.1	2050.5	1785.8	1682.5	1678.7	1866.1	2234.0	2345.6	2181.3
27.5°	2321.4	2545.4	2466.7	2122.1	1814.7	1700.6	1703.2	1946.9	2407.5	2573.9	2439.1
30°	2512.0	2717.5	2552.9	2192.4	1861.3	1732.2	1738.8	2034.2	2501.0	2732.4	2645.0
32.5°	2690.3	2864.6	2635.3	2261.7	1929.3	1779.1	1802.0	2143.2	2613.4	2868.6	2839.5
35°	2887.4	3029.3	2727.2	2335.9	2026.8	1861.7	1894.6	2246.8	2724.9	3004.6	3032.3
37.5°	3110.9	3217.6	2826.8	2440.9	2167.3	2014.5	2032.9	2352.6	2802.7	3155.3	3239.1
40°	3343.6	3428.8	2935.7	2580.9	2371.5	2220.9	2229.6	2488.3	2863.6	3311.1	3439.8
42.5°	3543.4	3609.7	3045.0	2754.8	2606.0	2431.2	2438.7	2634.5	2922.1	3445.5	3600.5
45°	3703.2	3752.0	3148.2	2937.9	2856.3	2693.7	2692.0	2783.3	3000.2	3558.7	3723.8
47.5°	3852.0	3878.0	3263.2	3116.2	3115.7	3031.8	2969.1	2959.0	3104.3	3654.1	3831.5
50°	4022.4	4032.1	3415.2	3296.2	3432.7	3419.6	3303.6	3182.0	3239.1	3761.2	3944.3
52.5°	4259.6	4260.0	3603.5	3471.8	3782.7	3824.4	3689.6	3434.5	3438.4	3969.8	4139.3
55°	4538.3	4557.7	3849.0	3682.1	4148.9	4220.0	4093.1	3734.4	3724.8	4306.1	4455.4
57.5°	4754.0	4856.3	4134.9	3945.1	4491.0	4583.5	4481.2	4045.3	4076.5	4653.0	4716.2
60°	4814.5	5053.9	4419.8	4240.2	4780.2	4919.5	4815.4	4381.2	4420.7	4878.2	4791.3
62.5°	4742.1	5117.5	4710.1	4504.6	4952.0	5085.5	5010.8	4601.1	4701.3	4849.2	4664.3
65°	4527.4	5025.3	4962.0	4617.0	4853.2	4900.7	4880.8	4612.6	4853.6	4575.2	4313.6
67.5°	4025.9	4669.7	4849.7	4376.8	4391.7	4340.8	4314.9	4299.1	4682.4	4133.1	3760.3
70°	3274.3	4012.3	4313.6	3662.8	3552.2	3503.0	3417.8	3628.6	4208.6	3521.4	3094.6
72.5°	2522.1	3069.7	3538.1	2776.8	2546.6	2563.4	2466.7	2774.5	3486.3	2722.3	2362.7
75°	1791.0	2093.1	2824.2	1995.2	1690.4	1689.6	1682.1	1996.9	2750.8	1953.9	1728.7
77.5°	1290.9	1506.9	2212.5	1335.3	1199.6	1215.0	1190.3	1357.3	2144.5	1405.5	1280.8
80°	1029.6	1115.7	1430.1	890.5	893.1	929.1	923.8	928.2	1410.8	1017.8	957.7
82.5°	739.9	847.0	1093.3	682.3	590.5	628.8	636.3	688.4	995.4	719.6	631.4
85°	379.4	516.4	1006.0	591.0	369.3	306.1	352.1	543.2	864.6	431.2	307.8
87.5°	73.8	143.1	737.2	328.5	165.9	83.9	138.3	230.1	502.8	78.2	38.2
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°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	2232.7	2176.5	2123.9	2069.4	2027.3	1975.8	1925.4	1881.5	1838.9	1810.8	1819.5
5°	2178.3	2041.3	1918.3	1804.2	1737.5	1657.1	1585.6	1525.3	1478.9	1449.0	1467.0
7.5°	1930.2	1744.9	1582.9	1432.3	1337.4	1233.4	1150.0	1091.1	1055.1	1034.9	1064.4
10°	1676.4	1468.2	1286.5	1129.7	1036.2	948.0	872.5	810.1	761.8	739.0	750.8
12.5°	1494.6	1263.2	1072.7	967.3	886.9	807.9	729.8	656.8	595.4	567.3	561.6
15°	1426.6	1153.1	958.5	840.9	761.0	674.8	590.5	512.4	454.0	429.8	424.6
17.5°	1456.5	1129.3	890.9	751.7	635.8	531.3	436.5	362.6	319.7	306.1	307.4
20°	1561.3	1138.1	836.5	659.9	516.8	393.0	298.1	247.2	228.7	225.7	229.2
22.5°	1705.4	1174.1	797.0	580.9	411.8	285.8	221.8	197.6	192.7	192.3	195.8
25°	1895.5	1244.3	770.6	510.7	325.4	226.6	193.2	179.6	175.6	176.6	180.0
27.5°	2119.5	1333.5	753.5	450.1	267.4	201.9	180.4	168.6	164.7	165.5	168.2
30°	2324.0	1411.7	728.0	404.4	240.2	193.2	173.4	161.6	156.3	156.3	158.0
32.5°	2507.2	1479.3	698.2	370.1	215.1	173.4	157.2	148.0	144.0	145.4	146.2
35°	2669.6	1514.8	674.8	350.0	195.0	159.8	143.6	133.9	128.7	129.5	130.8
37.5°	2829.5	1528.5	659.5	339.0	180.4	151.5	136.6	128.7	123.0	122.0	121.6
40°	2981.4	1525.3	645.0	335.9	170.8	145.4	132.2	125.1	119.5	118.2	117.6
42.5°	3112.6	1515.3	631.4	327.5	164.2	141.0	128.7	122.5	116.8	115.1	114.2
45°	3232.5	1509.2	616.4	312.2	167.8	139.2	126.8	120.3	115.1	112.8	112.0
47.5°	3365.6	1531.1	599.8	295.5	166.8	139.6	126.8	119.5	114.2	112.0	111.1
50°	3524.1	1605.3	579.2	272.7	159.0	149.2	126.4	118.2	113.2	112.0	110.2
52.5°	3748.0	1725.6	550.7	243.3	152.8	159.4	126.0	115.9	112.0	109.8	107.6
55°	4055.0	1845.9	513.7	212.1	143.1	152.3	126.8	113.2	108.8	106.7	104.0
57.5°	4306.5	1937.3	467.2	186.2	134.3	144.0	125.6	110.2	105.4	103.2	101.0
60°	4290.3	1946.1	422.8	169.5	129.1	129.5	128.7	108.0	102.3	100.6	98.8
62.5°	4024.6	1837.5	381.6	161.1	125.1	118.2	131.2	105.4	99.2	97.5	96.2
65°	3582.5	1585.1	359.6	161.1	121.6	112.0	114.6	101.9	96.2	94.4	93.5
67.5°	3021.8	1273.8	339.0	164.7	116.8	107.6	104.0	98.3	93.1	91.3	90.4
70°	2421.9	1002.4	324.5	162.9	112.4	102.7	98.3	93.5	88.3	87.8	87.0
72.5°	1899.9	805.3	317.9	162.9	105.8	97.1	92.7	89.1	83.9	83.5	82.1
75°	1522.3	604.7	290.7	159.8	99.2	89.6	85.6	82.6	77.2	77.7	76.8
77.5°	1179.0	427.7	242.8	144.0	90.9	81.2	78.2	76.0	69.8	70.3	70.3
80°	922.1	278.3	188.3	119.5	81.2	71.6	69.4	67.6	61.1	61.9	61.9
82.5°	631.9	165.5	136.6	96.2	69.8	61.1	60.6	58.0	50.9	51.4	52.3
85°	345.1	108.8	90.9	71.1	54.9	49.6	48.7	47.5	40.8	40.8	41.2
87.5°	63.6	58.4	53.6	47.0	36.9	35.6	34.3	35.6	30.7	29.9	29.9
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°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	1799.0	1768.6	1747.5	1729.1	1684.8	1687.9	1694.0	1702.8	1675.1	1689.6	1707.6
5°	1449.0	1423.9	1405.0	1375.7	1313.8	1291.8	1277.8	1271.6	1230.3	1239.1	1258.4
7.5°	1068.3	1067.9	1061.3	1028.4	953.7	908.5	878.6	869.4	843.9	853.6	883.0
10°	752.2	760.1	757.0	727.5	660.8	628.3	621.7	640.2	640.6	659.5	710.0
12.5°	543.6	539.2	535.2	511.1	461.0	455.7	470.7	496.1	502.3	522.5	575.2
15°	405.7	395.2	393.0	374.1	341.2	346.0	357.0	370.1	370.6	384.6	428.1
17.5°	304.3	304.3	307.8	295.5	271.8	269.5	263.9	260.3	255.1	260.9	284.5
20°	236.2	247.2	255.9	249.0	227.4	216.9	205.9	198.9	195.0	195.4	202.4
22.5°	202.4	211.2	222.6	219.1	201.1	187.5	180.4	175.6	172.6	172.6	176.6
25°	185.3	191.0	201.5	199.8	184.4	173.4	167.8	162.9	159.4	159.0	162.9
27.5°	171.7	175.2	182.2	181.4	165.5	158.6	155.0	151.9	149.8	149.2	153.2
30°	159.4	161.1	164.7	163.4	151.5	144.4	143.1	141.8	140.6	141.0	146.7
32.5°	148.4	149.8	151.9	150.2	138.7	132.6	130.4	128.7	127.4	128.7	135.2
35°	136.2	140.0	142.7	141.8	129.5	122.0	117.2	112.8	111.1	112.4	119.9
37.5°	125.6	132.2	135.6	134.8	122.0	113.2	107.1	106.3	106.3	108.0	115.5
40°	121.6	126.4	129.5	128.2	115.5	106.7	103.2	101.9	102.3	104.0	112.0
42.5°	118.2	122.5	123.4	120.7	108.0	102.3	100.1	98.3	99.2	101.5	109.4
45°	115.1	118.6	118.2	114.2	101.9	97.9	97.9	96.6	97.1	98.8	107.1
47.5°	112.8	114.6	113.8	109.8	97.5	94.4	95.7	95.7	96.6	97.9	106.3
50°	109.4	110.7	109.8	106.3	94.0	91.3	92.7	94.4	95.2	96.6	104.0
52.5°	105.8	106.7	106.3	102.7	90.4	88.7	88.7	90.4	92.2	94.0	100.6
55°	102.3	103.2	103.6	101.0	87.8	86.0	85.6	85.6	87.4	90.0	97.1
57.5°	99.6	99.6	100.6	98.8	85.2	83.0	80.8	81.2	83.5	85.6	92.7
60°	96.6	97.1	98.3	96.6	81.6	78.2	76.4	78.6	79.5	81.6	89.1
62.5°	94.0	94.0	94.8	93.5	78.6	75.1	73.8	76.0	76.0	78.2	85.6
65°	91.8	91.3	91.3	90.9	75.5	72.0	71.1	72.0	72.4	74.7	82.1
67.5°	90.0	87.8	87.8	88.7	72.4	68.9	68.5	68.5	68.9	71.6	78.2
70°	86.0	84.3	83.9	87.0	69.4	65.0	65.0	64.1	65.0	66.3	73.3
72.5°	81.6	80.3	79.9	84.3	66.3	60.6	59.7	59.2	59.7	61.1	67.6
75°	76.0	75.1	76.0	82.6	63.2	55.8	54.4	54.0	54.0	54.4	61.5
77.5°	69.4	68.5	75.1	76.8	61.5	50.0	48.7	47.9	47.0	47.0	54.9
80°	61.5	61.1	72.4	65.0	58.8	43.9	41.7	40.4	39.5	39.1	47.0
82.5°	53.6	52.7	61.9	50.9	48.7	36.0	32.9	30.3	28.9	28.9	36.0
85°	43.9	43.5	48.7	37.3	33.9	26.4	22.0	19.7	18.0	18.0	23.2
87.5°	32.0	31.2	30.3	22.4	17.1	11.9	8.4	7.9	7.1	6.5	9.6
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	1734.4	1770.8	1839.8	1896.4	1971.9	2032.5	2101.4	2131.3
5°	1293.9	1351.5	1456.9	1546.9	1671.6	1787.1	1918.7	1990.8
7.5°	928.2	1013.4	1093.3	1205.8	1361.5	1516.6	1686.9	1782.3
10°	767.9	846.1	914.6	994.5	1114.8	1289.1	1492.5	1600.0
12.5°	636.3	720.6	793.0	878.6	979.6	1137.2	1369.0	1494.2
15°	487.8	579.6	666.6	769.7	893.5	1073.6	1332.2	1471.8
17.5°	334.1	432.5	539.6	665.6	815.0	1046.8	1367.3	1539.4
20°	227.0	299.0	415.4	564.7	744.2	1034.0	1444.6	1678.7
22.5°	186.6	219.1	306.5	469.8	686.3	1048.1	1570.1	1861.7
25°	171.2	188.8	238.4	386.4	641.9	1085.5	1740.0	2068.5
27.5°	161.6	176.6	209.0	326.6	601.1	1136.4	1946.9	2321.4
30°	155.9	169.9	197.1	295.9	563.7	1180.3	2124.8	2512.0
32.5°	143.1	153.6	176.0	278.3	536.9	1215.8	2281.5	2690.3
35°	127.8	140.6	159.0	267.0	536.1	1232.6	2429.0	2887.4
37.5°	122.0	134.3	148.0	260.9	541.3	1246.6	2609.4	3110.9
40°	118.6	129.5	140.6	259.9	545.7	1257.5	2786.0	3343.6
42.5°	115.5	126.4	139.2	253.8	544.0	1272.4	2942.3	3543.4
45°	114.6	125.6	142.3	244.6	543.6	1295.8	3066.6	3703.2
47.5°	113.8	130.4	141.4	234.5	541.9	1344.9	3206.6	3852.0
50°	112.8	139.2	135.2	220.4	528.7	1428.8	3395.0	4022.4
52.5°	112.4	140.6	128.7	201.1	504.9	1553.0	3670.8	4259.6
55°	110.7	133.5	117.2	175.6	470.7	1686.9	3966.2	4538.3
57.5°	106.7	119.0	110.7	150.6	421.6	1780.4	4184.5	4754.0
60°	116.3	102.3	106.3	137.9	362.6	1797.1	4194.1	4814.5
62.5°	111.1	93.1	101.9	133.5	321.4	1688.3	4002.2	4742.1
65°	88.7	88.3	97.9	137.9	315.3	1444.6	3678.2	4527.4
67.5°	80.8	84.7	94.0	143.1	319.3	1138.1	3201.3	4025.9
70°	75.5	80.3	88.7	148.0	326.2	896.6	2577.4	3274.3
72.5°	70.3	74.2	83.5	152.8	321.4	707.4	2062.8	2522.1
75°	63.6	67.2	76.0	140.0	275.8	519.9	1639.1	1791.0
77.5°	56.2	59.2	66.7	110.7	207.2	361.8	1227.6	1290.9
80°	48.3	49.6	55.3	80.8	135.2	216.5	934.4	1029.6
82.5°	38.2	38.7	42.1	59.2	84.3	138.3	648.0	739.9
85°	24.6	25.5	27.2	41.7	56.7	88.7	331.0	379.4
87.5°	8.4	9.6	9.6	20.2	27.6	49.2	101.5	73.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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