

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: P270291

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270291  
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-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 800mA 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: 3787.5 lumens  
Efficiency: N/A  
Efficacy: 86.1 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): 44  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

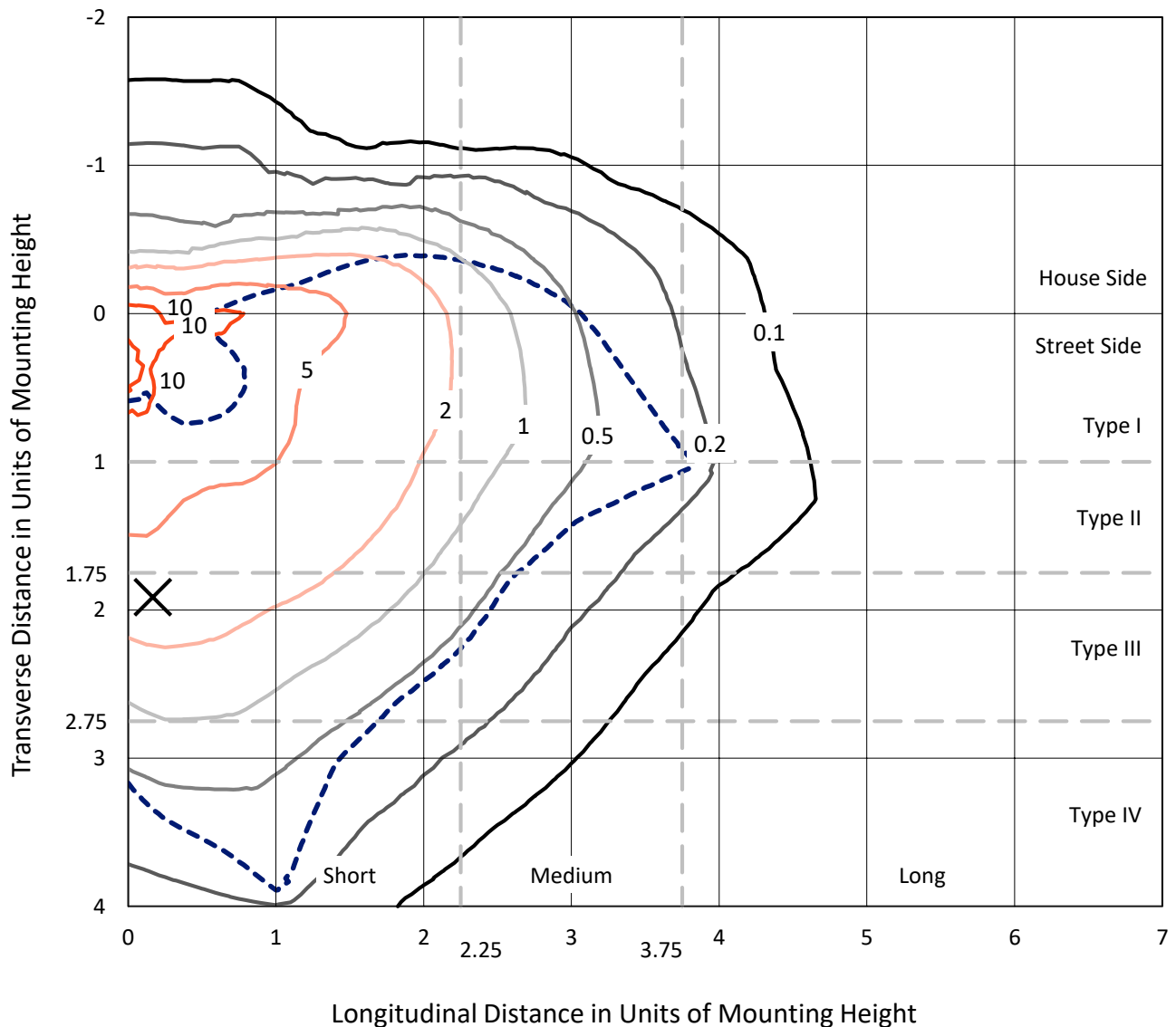


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### Iso-Footcandle Lines of Horizontal Illumination

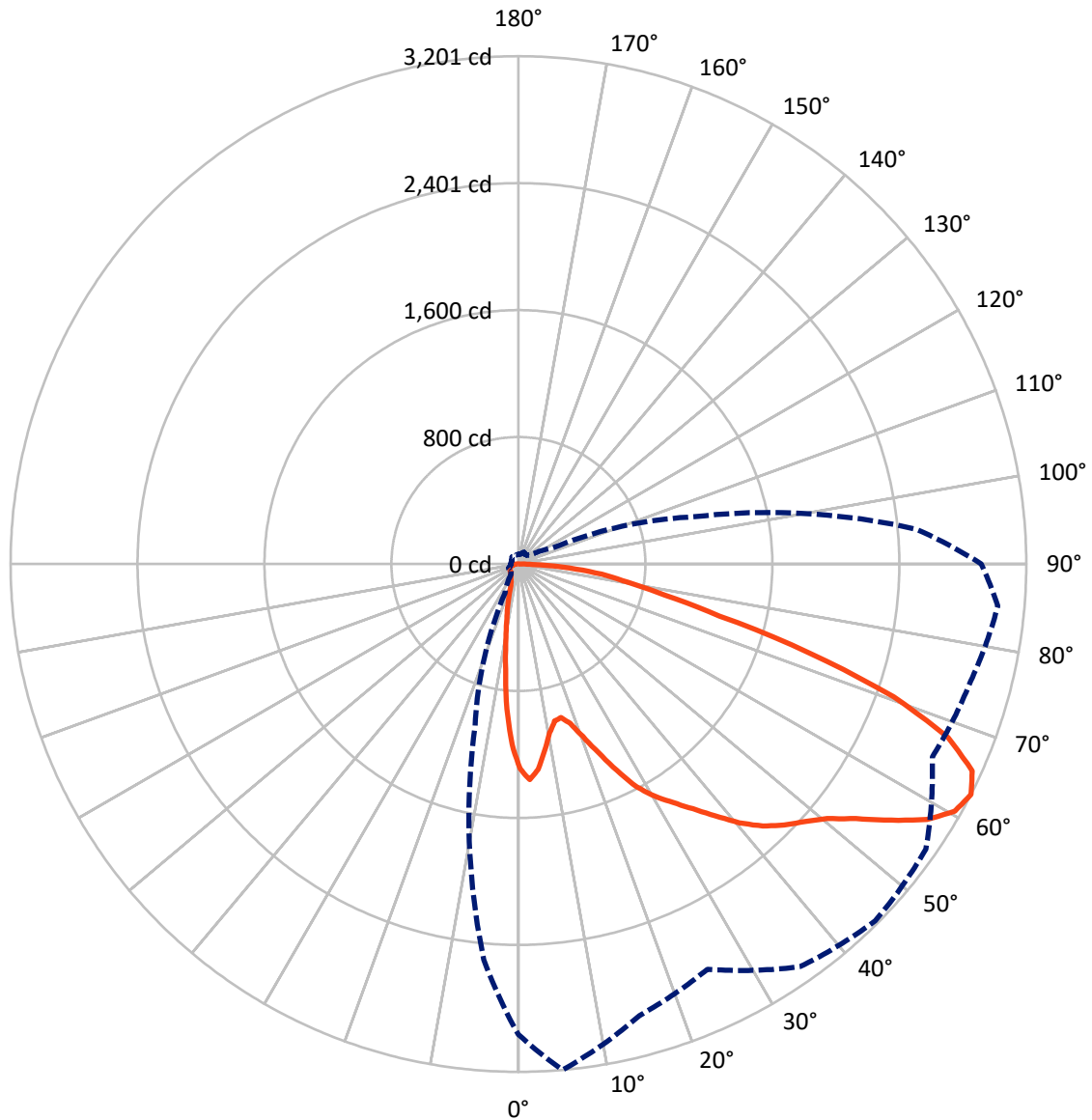
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.8 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	671.0	0.0	671.0
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	3116.6	0.0	3116.6
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	3787.5	0.0	3787.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	2.5
10°-20°	171.5	4.5
20°-30°	246.7	6.5
30°-40°	377.8	10.0
40°-50°	552.4	14.6
50°-60°	803.7	21.2
60°-70°	931.2	24.6
70°-80°	485.4	12.8
80°-90°	124.8	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°	3787.5	100.0
0°-180°	3787.5	100.0



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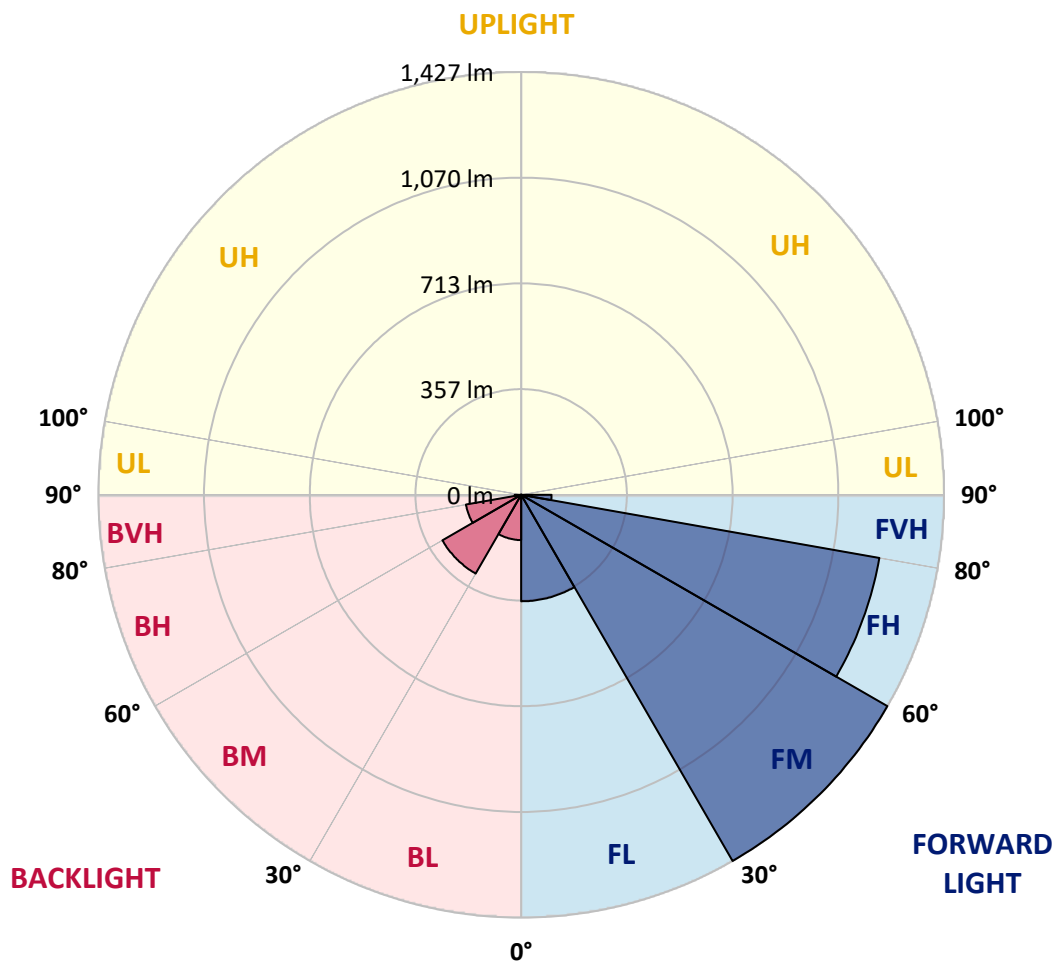
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	359.5	9.5			
FM	(30°-60°)	1427.0	37.7			
FH	(60°-80°)	1227.5	32.4			G1/1800
FVH	(80°-90°)	102.7	2.7			G2/225
BL	(0°-30°)	152.7	4.0	B1/500		
BM	(30°-60°)	307.0	8.1	B1/1000		
BH	(60°-80°)	189.2	5.0	B1/500		G1/500
BVH	(80°-90°)	22.1	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°	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1332.9	1361.3	1393.7	1436.0	1464.7	1476.4	1485.9	1469.7	1454.0	1424.7	1414.3
5°	1245.1	1299.5	1388.7	1473.6	1548.3	1591.1	1604.4	1574.4	1521.1	1444.2	1403.5
7.5°	1114.6	1186.3	1311.9	1436.7	1543.8	1615.3	1620.5	1561.3	1456.3	1330.2	1264.4
10°	1000.7	1081.6	1226.9	1366.9	1480.1	1553.2	1538.9	1455.8	1329.1	1185.9	1111.4
12.5°	934.5	1015.5	1163.6	1305.5	1412.3	1440.2	1411.0	1341.0	1220.9	1077.2	1002.4
15°	920.6	1003.9	1141.0	1260.9	1326.9	1309.1	1280.3	1244.8	1159.4	1041.9	969.5
17.5°	962.9	1056.1	1171.0	1236.5	1233.8	1191.1	1166.9	1173.7	1159.2	1080.3	1004.6
20°	1049.8	1160.3	1247.0	1230.0	1159.7	1099.5	1085.5	1139.4	1206.7	1176.7	1093.5
22.5°	1164.4	1290.1	1350.8	1249.0	1120.9	1056.1	1053.4	1137.4	1293.2	1322.6	1221.2
25°	1293.6	1440.3	1455.4	1282.5	1116.9	1052.4	1049.8	1167.1	1397.3	1467.0	1364.3
27.5°	1451.9	1591.9	1542.7	1327.2	1135.0	1063.7	1065.2	1217.7	1505.6	1609.9	1525.5
30°	1571.0	1699.7	1596.6	1371.2	1164.2	1083.4	1087.5	1272.3	1564.2	1708.9	1654.3
32.5°	1682.5	1791.6	1648.2	1414.6	1206.7	1112.7	1127.1	1340.5	1634.6	1794.1	1775.9
35°	1806.0	1894.5	1705.6	1461.0	1267.6	1164.4	1185.0	1405.2	1704.3	1879.3	1896.5
37.5°	1945.6	2012.5	1768.0	1526.6	1355.5	1260.0	1271.6	1471.5	1753.0	1973.3	2025.9
40°	2091.3	2144.4	1836.0	1614.3	1483.2	1389.0	1394.4	1556.3	1791.0	2071.0	2151.4
42.5°	2216.2	2257.6	1904.4	1722.9	1629.9	1520.6	1525.2	1647.8	1827.6	2154.9	2251.8
45°	2316.1	2346.6	1969.1	1837.5	1786.4	1684.9	1683.7	1740.7	1876.5	2225.8	2329.0
47.5°	2409.3	2425.5	2040.9	1949.0	1948.7	1896.2	1856.9	1850.7	1941.5	2285.4	2396.3
50°	2515.8	2521.8	2136.0	2061.5	2146.9	2138.8	2066.2	1990.1	2025.9	2352.3	2466.8
52.5°	2664.1	2664.4	2253.8	2171.5	2365.9	2391.8	2307.6	2148.0	2150.5	2482.8	2588.8
55°	2838.5	2850.5	2407.3	2303.0	2594.8	2639.3	2560.0	2335.7	2329.6	2693.2	2786.5
57.5°	2973.3	3037.3	2586.1	2467.5	2808.8	2866.8	2802.7	2530.0	2549.5	2910.1	2949.7
60°	3011.2	3160.9	2764.3	2651.9	2989.7	3076.9	3011.7	2740.1	2764.9	3051.1	2996.7
62.5°	2965.8	3200.7	2945.8	2817.3	3097.1	3180.5	3133.9	2877.7	2940.3	3032.9	2917.2
65°	2831.5	3143.0	3103.5	2887.6	3035.4	3064.9	3052.6	2884.8	3035.6	2861.6	2697.8
67.5°	2517.9	2920.6	3033.1	2737.3	2746.7	2714.9	2698.7	2688.7	2928.6	2585.0	2351.9
70°	2047.9	2509.4	2697.8	2290.9	2221.7	2190.8	2137.5	2269.5	2632.3	2202.5	1935.5
72.5°	1577.5	1919.9	2212.9	1736.7	1592.8	1603.2	1542.7	1735.3	2180.5	1702.6	1477.7
75°	1120.1	1309.1	1766.3	1247.8	1057.2	1056.8	1052.0	1249.0	1720.4	1222.1	1081.2
77.5°	807.3	942.5	1383.7	835.2	750.3	759.8	744.4	848.9	1341.2	879.0	801.1
80°	643.9	697.9	894.4	556.9	558.6	581.2	577.8	580.6	882.3	636.5	598.9
82.5°	462.7	529.7	683.8	426.8	369.4	393.3	397.9	430.6	622.5	450.1	394.9
85°	237.2	322.9	629.2	369.7	231.0	191.3	220.3	339.6	540.7	269.8	192.4
87.5°	46.2	89.6	461.1	205.4	103.8	52.5	86.4	143.9	314.4	48.9	23.9
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1396.4	1361.3	1328.4	1294.3	1267.9	1235.8	1204.2	1176.7	1150.1	1132.6	1138.1
5°	1362.4	1276.8	1199.7	1128.5	1086.7	1036.5	991.6	954.0	925.0	906.2	917.4
7.5°	1207.2	1091.4	990.0	895.8	836.5	771.5	719.3	682.4	660.0	647.3	665.6
10°	1048.5	918.2	804.6	706.5	648.0	592.9	545.7	506.6	476.5	462.2	469.6
12.5°	934.7	790.1	670.9	605.0	554.8	505.2	456.3	410.9	372.3	354.8	351.2
15°	892.2	721.1	599.4	525.9	475.9	422.1	369.4	320.4	284.0	268.9	265.5
17.5°	910.9	706.2	557.2	470.2	397.6	332.4	272.9	226.8	200.0	191.3	192.2
20°	976.5	711.7	523.2	412.7	323.2	245.7	186.5	154.6	143.1	141.2	143.4
22.5°	1066.6	734.4	498.4	363.4	257.6	178.8	138.7	123.5	120.6	120.4	122.4
25°	1185.6	778.2	481.9	319.3	203.5	141.8	120.8	112.3	109.9	110.4	112.6
27.5°	1325.5	833.9	471.3	281.4	167.3	126.3	112.8	105.5	102.9	103.6	105.2
30°	1453.5	882.9	455.4	253.0	150.1	120.8	108.4	101.1	97.7	97.7	98.9
32.5°	1568.0	925.2	436.7	231.6	134.6	108.4	98.4	92.5	90.1	90.9	91.4
35°	1669.7	947.4	422.1	218.8	121.9	99.9	89.8	83.7	80.5	80.9	81.8
37.5°	1769.7	955.9	412.5	212.0	112.8	94.7	85.3	80.5	76.8	76.4	76.0
40°	1864.6	954.0	403.3	210.1	106.8	90.9	82.6	78.2	74.6	73.9	73.7
42.5°	1946.7	947.7	394.9	204.9	102.6	88.2	80.5	76.6	73.0	72.0	71.3
45°	2021.7	943.8	385.6	195.2	104.9	87.0	79.4	75.3	72.0	70.5	70.0
47.5°	2105.0	957.7	375.1	184.8	104.4	87.3	79.4	74.6	71.3	70.0	69.4
50°	2204.1	1003.9	362.2	170.6	99.4	93.3	79.1	73.9	70.8	70.0	68.9
52.5°	2344.1	1079.3	344.4	152.2	95.6	99.7	78.8	72.6	70.0	68.6	67.4
55°	2536.1	1154.5	321.4	132.6	89.6	95.3	79.4	70.8	68.1	66.7	65.0
57.5°	2693.5	1211.6	292.2	116.4	84.0	90.1	78.5	68.9	65.9	64.6	63.2
60°	2683.2	1217.2	264.5	106.0	80.8	80.9	80.5	67.6	64.0	62.9	61.9
62.5°	2517.1	1149.3	238.6	100.8	78.2	73.9	82.1	65.9	62.1	60.9	60.1
65°	2240.6	991.4	224.9	100.8	76.0	70.0	71.7	63.7	60.1	59.1	58.5
67.5°	1889.9	796.6	212.0	102.9	73.0	67.4	65.0	61.5	58.2	57.1	56.6
70°	1514.8	626.9	202.9	101.9	70.2	64.3	61.5	58.5	55.2	54.9	54.3
72.5°	1188.3	503.6	198.9	101.9	66.1	60.6	57.9	55.8	52.5	52.2	51.4
75°	952.2	378.1	181.7	99.9	62.1	56.1	53.5	51.7	48.2	48.6	48.1
77.5°	737.4	267.4	151.9	90.1	56.9	50.8	48.9	47.5	43.7	43.9	43.9
80°	576.7	174.1	117.8	74.6	50.8	44.7	43.4	42.3	38.2	38.7	38.7
82.5°	395.2	103.6	85.3	60.1	43.7	38.2	37.9	36.2	31.9	32.1	32.7
85°	215.9	68.1	56.9	44.5	34.3	31.0	30.5	29.6	25.5	25.5	25.8
87.5°	39.9	36.6	33.4	29.4	23.0	22.3	21.4	22.3	19.3	18.7	18.7
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°	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1125.0	1106.2	1093.0	1081.4	1053.7	1055.6	1059.6	1065.0	1047.7	1056.8	1067.9
5°	906.2	890.6	878.8	860.3	821.7	807.9	799.1	795.3	769.5	775.0	787.0
7.5°	668.1	667.9	663.8	643.1	596.5	568.2	549.6	543.7	527.8	533.9	552.3
10°	470.4	475.4	473.4	455.0	413.3	393.0	388.8	400.4	400.6	412.5	444.0
12.5°	340.0	337.3	334.8	319.6	288.4	285.0	294.4	310.4	314.1	326.9	359.7
15°	253.7	247.2	245.7	234.0	213.3	216.4	223.3	231.6	231.8	240.6	267.8
17.5°	190.4	190.4	192.4	184.8	170.0	168.6	165.1	162.9	159.5	163.1	178.0
20°	147.7	154.6	160.1	155.6	142.2	135.6	128.7	124.3	121.9	122.2	126.7
22.5°	126.7	132.1	139.2	137.0	125.8	117.3	112.8	109.9	107.9	107.9	110.4
25°	115.9	119.5	126.0	125.0	115.3	108.4	104.9	101.9	99.7	99.4	101.9
27.5°	107.3	109.6	113.9	113.5	103.6	99.2	96.9	95.0	93.7	93.3	95.8
30°	99.7	100.8	102.9	102.1	94.7	90.4	89.6	88.8	87.9	88.2	91.7
32.5°	92.9	93.7	95.0	94.0	86.7	83.0	81.6	80.5	79.6	80.5	84.6
35°	85.1	87.7	89.2	88.8	80.9	76.4	73.3	70.5	69.4	70.2	75.0
37.5°	78.5	82.6	84.9	84.4	76.4	70.8	67.1	66.5	66.5	67.6	72.3
40°	76.0	79.1	80.9	80.2	72.3	66.7	64.6	63.7	64.0	65.0	70.0
42.5°	73.9	76.6	77.2	75.5	67.6	64.0	62.6	61.5	62.1	63.4	68.5
45°	72.0	74.1	73.9	71.3	63.7	61.3	61.3	60.5	60.6	61.9	67.1
47.5°	70.5	71.7	71.1	68.6	60.9	59.1	59.8	59.8	60.5	61.3	66.5
50°	68.5	69.2	68.6	66.5	58.7	57.1	57.9	59.1	59.6	60.5	65.0
52.5°	66.1	66.7	66.5	64.3	56.6	55.4	55.4	56.6	57.8	58.7	62.9
55°	64.0	64.6	64.8	63.2	54.9	53.8	53.5	53.5	54.6	56.4	60.6
57.5°	62.3	62.3	62.9	61.9	53.3	51.9	50.6	50.8	52.2	53.5	57.9
60°	60.5	60.6	61.5	60.5	51.1	48.9	47.8	49.1	49.6	51.1	55.8
62.5°	58.7	58.7	59.3	58.5	49.1	46.9	46.2	47.5	47.5	48.9	53.5
65°	57.4	57.1	57.1	56.9	47.3	45.0	44.5	45.0	45.4	46.7	51.4
67.5°	56.4	54.9	54.9	55.4	45.4	43.1	42.8	42.8	43.1	44.7	48.9
70°	53.8	52.7	52.5	54.3	43.4	40.7	40.7	40.2	40.7	41.4	45.9
72.5°	51.1	50.2	49.9	52.7	41.4	37.9	37.4	37.1	37.4	38.2	42.3
75°	47.5	46.9	47.5	51.7	39.5	34.9	34.0	33.7	33.7	34.0	38.4
77.5°	43.4	42.8	46.9	48.1	38.4	31.4	30.5	30.0	29.4	29.4	34.3
80°	38.4	38.2	45.4	40.7	36.8	27.5	26.1	25.2	24.8	24.4	29.4
82.5°	33.4	33.0	38.7	31.9	30.5	22.5	20.7	19.0	18.1	18.1	22.5
85°	27.5	27.2	30.5	23.4	21.1	16.4	13.7	12.3	11.3	11.3	14.6
87.5°	20.0	19.6	19.0	14.1	10.7	7.5	5.2	4.9	4.4	4.1	6.1
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°	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1084.8	1107.5	1150.6	1186.0	1233.4	1271.2	1314.3	1332.9
5°	809.4	845.2	911.2	967.5	1045.4	1117.8	1200.0	1245.1
7.5°	580.6	633.8	683.8	754.0	851.7	948.5	1055.1	1114.6
10°	480.4	529.2	572.0	621.9	697.3	806.3	933.3	1000.7
12.5°	397.9	450.6	496.0	549.6	612.6	711.3	856.3	934.5
15°	305.2	362.5	416.9	481.4	558.8	671.5	833.2	920.6
17.5°	208.9	270.5	337.6	416.4	509.7	654.7	855.1	962.9
20°	142.0	186.9	259.8	353.2	465.5	646.7	903.4	1049.8
22.5°	116.7	137.0	191.7	293.8	429.2	655.6	982.0	1164.4
25°	107.1	118.0	149.1	241.6	401.5	678.8	1088.2	1293.6
27.5°	101.1	110.4	130.8	204.4	375.9	710.6	1217.7	1451.9
30°	97.5	106.3	123.2	185.1	352.7	738.1	1328.9	1571.0
32.5°	89.6	96.1	110.1	174.1	335.8	760.4	1426.9	1682.5
35°	79.9	87.9	99.4	166.9	335.2	770.8	1519.2	1806.0
37.5°	76.4	84.0	92.5	163.1	338.7	779.5	1632.0	1945.6
40°	74.1	80.9	87.9	162.6	341.4	786.5	1742.4	2091.3
42.5°	72.3	79.1	87.0	158.7	340.3	795.9	1840.2	2216.2
45°	71.7	78.5	89.0	152.9	340.0	810.5	1917.9	2316.1
47.5°	71.1	81.6	88.5	146.7	338.9	841.2	2005.6	2409.3
50°	70.5	87.0	84.6	137.9	330.7	893.6	2123.4	2515.8
52.5°	70.2	87.9	80.5	125.8	315.8	971.2	2295.8	2664.1
55°	69.2	83.5	73.3	109.9	294.4	1055.1	2480.6	2838.5
57.5°	66.7	74.4	69.2	94.2	263.7	1113.5	2617.1	2973.3
60°	72.8	64.0	66.5	86.2	226.8	1124.0	2623.1	3011.2
62.5°	69.4	58.2	63.7	83.5	201.0	1055.9	2503.1	2965.8
65°	55.4	55.2	61.3	86.2	197.2	903.4	2300.5	2831.5
67.5°	50.6	53.0	58.7	89.6	199.7	711.7	2002.2	2517.9
70°	47.3	50.2	55.4	92.5	204.1	560.7	1612.0	2047.9
72.5°	43.9	46.4	52.2	95.6	201.0	442.4	1290.1	1577.5
75°	39.9	42.0	47.5	87.7	172.5	325.1	1025.1	1120.1
77.5°	35.2	37.1	41.7	69.2	129.6	226.4	767.8	807.3
80°	30.3	31.0	34.7	50.6	84.6	135.4	584.3	643.9
82.5°	23.9	24.2	26.4	37.1	52.7	86.4	405.3	462.7
85°	15.5	15.9	17.0	26.1	35.5	55.4	207.1	237.2
87.5°	5.2	6.1	6.1	12.7	17.2	30.7	63.4	46.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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