

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: P197173

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197173  
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-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA 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: 4403 lumens  
Efficiency: N/A  
Efficacy: 74.6 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

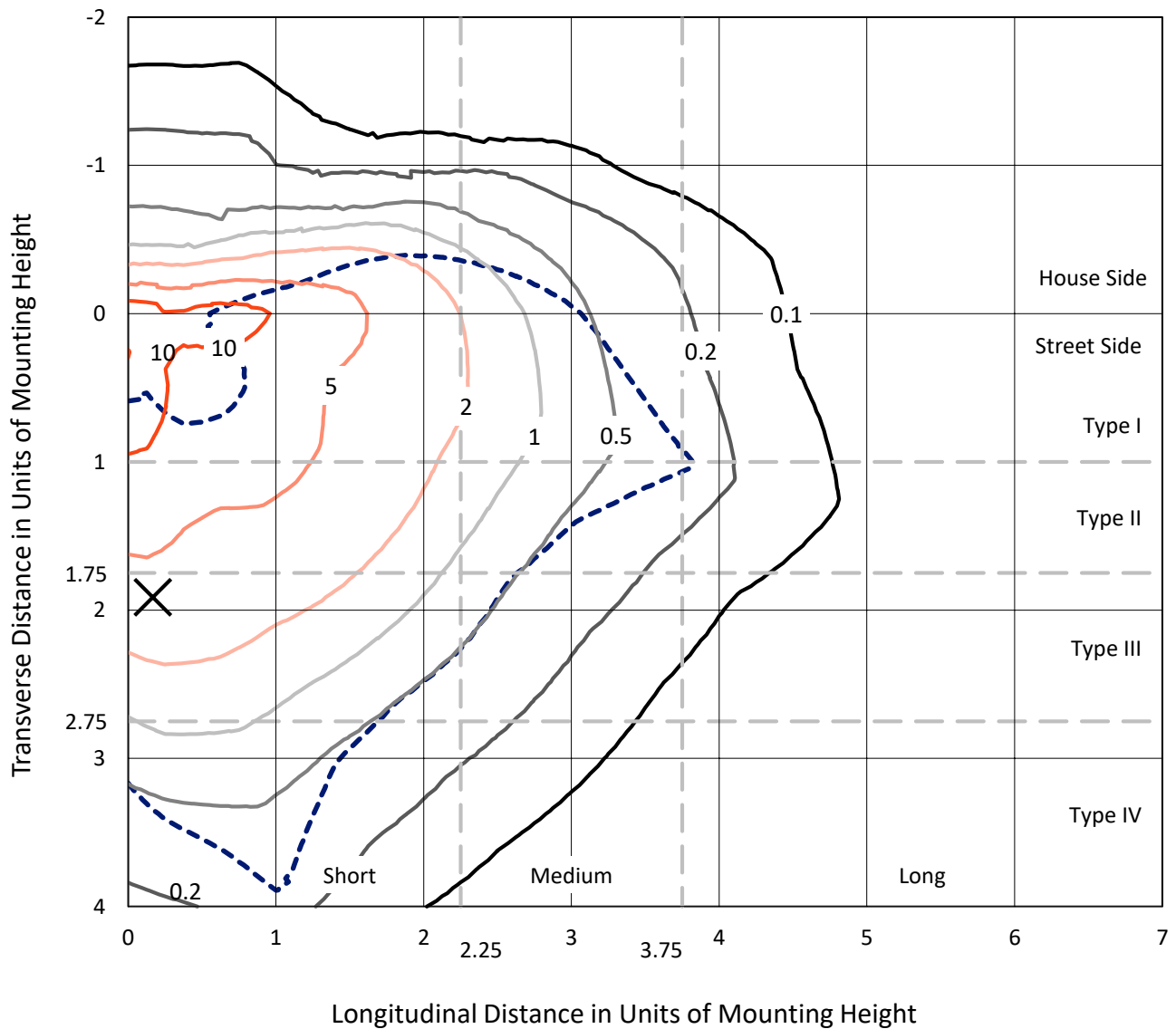
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

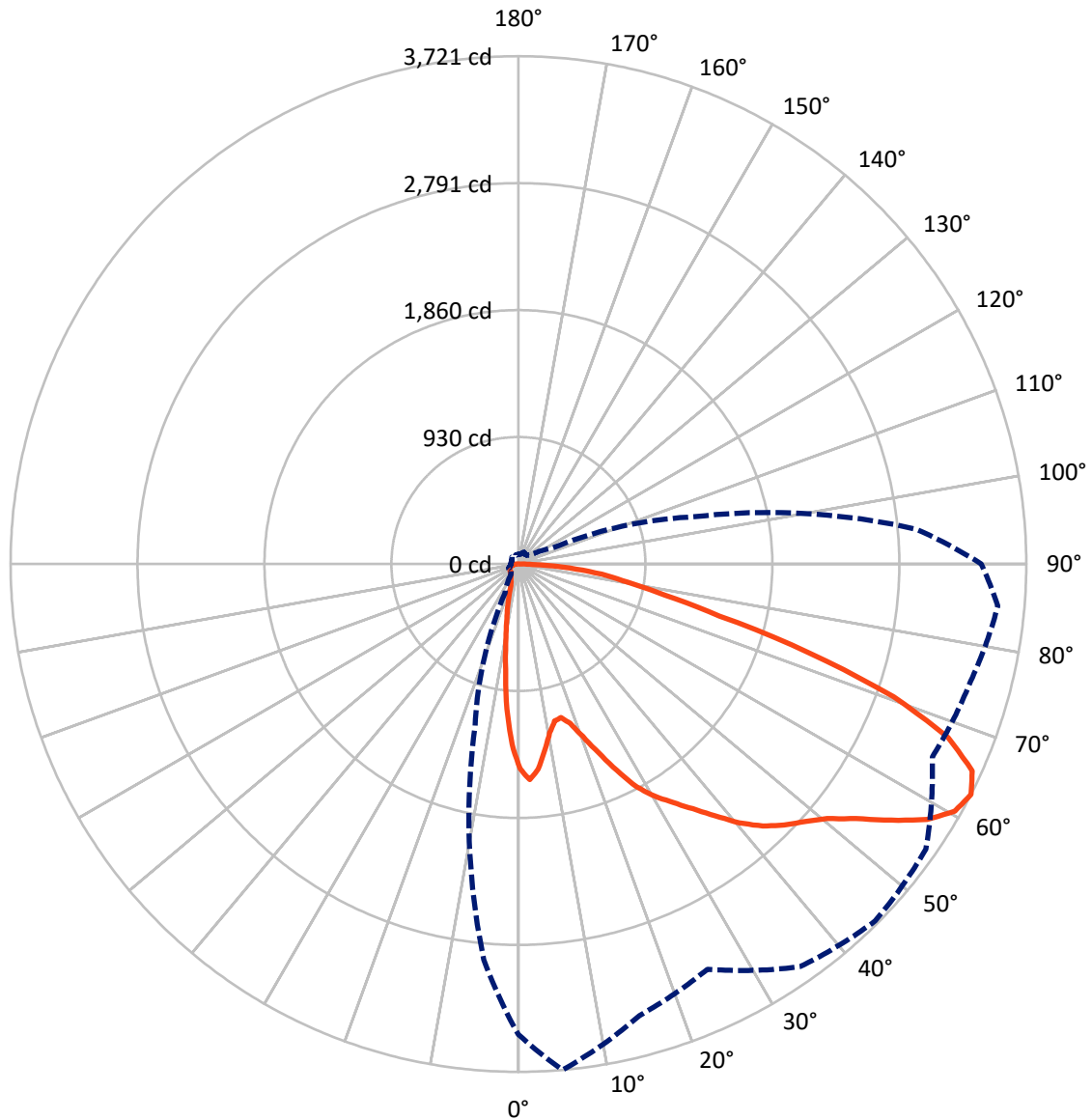
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.2 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	780.0	0.0	780.0
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	3623.0	0.0	3623.0
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	4403.0	0.0	4403.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.2	2.5
10°-20°	199.4	4.5
20°-30°	286.8	6.5
30°-40°	439.2	10.0
40°-50°	642.2	14.6
50°-60°	934.3	21.2
60°-70°	1082.6	24.6
70°-80°	564.3	12.8
80°-90°	145.1	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°	4403.0	100.0
0°-180°	4403.0	100.0



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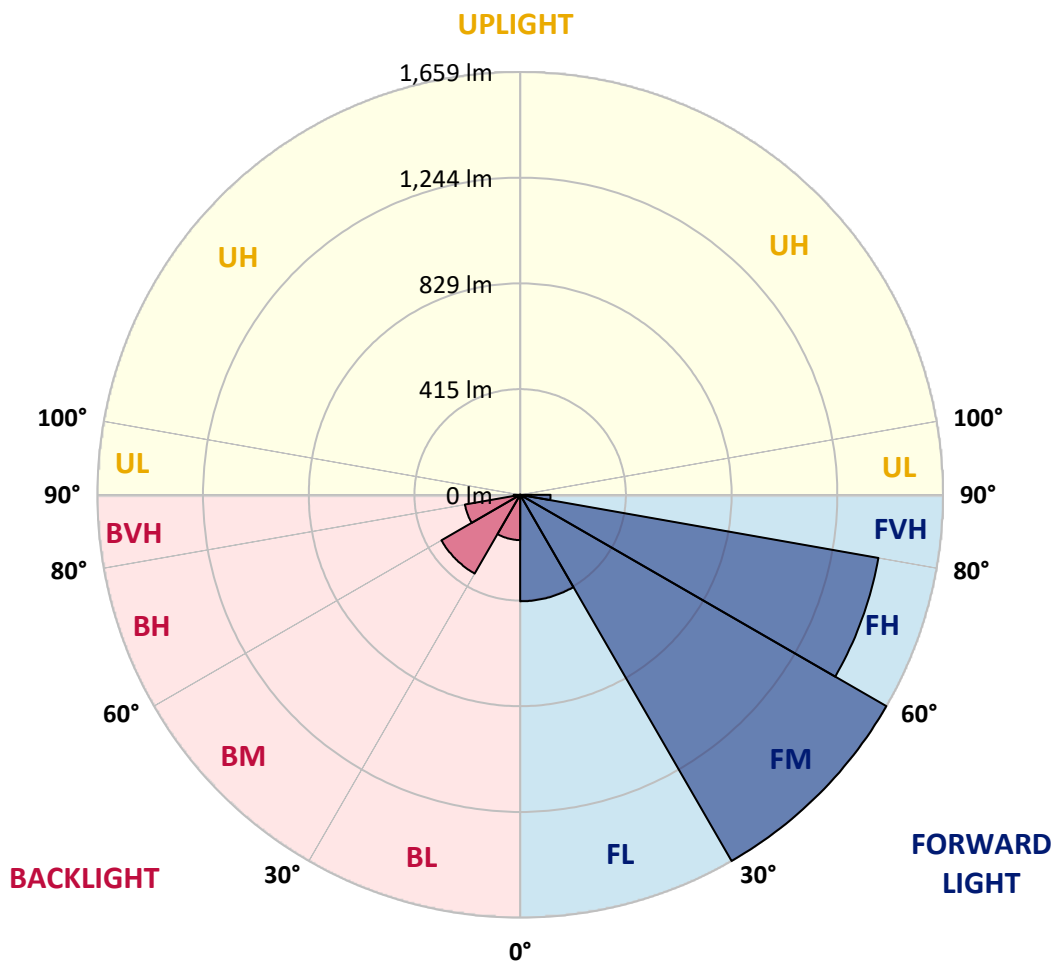
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	417.9	9.5			
FM	(30°-60°)	1658.8	37.7			
FH	(60°-80°)	1427.0	32.4			G1/1800
FVH	(80°-90°)	119.3	2.7			G2/225
BL	(0°-30°)	177.5	4.0	B1/500		
BM	(30°-60°)	356.9	8.1	B1/1000		
BH	(60°-80°)	219.9	5.0	B1/500		G1/500
BVH	(80°-90°)	25.7	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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1549.6	1582.5	1620.1	1669.3	1702.8	1716.2	1727.4	1708.6	1690.4	1656.2	1644.1
5°	1447.4	1510.6	1614.4	1713.0	1799.9	1849.7	1865.0	1830.2	1768.3	1678.9	1631.6
7.5°	1295.8	1379.1	1525.0	1670.3	1794.8	1877.8	1883.8	1814.9	1692.9	1546.4	1469.8
10°	1163.3	1257.5	1426.4	1588.9	1720.7	1805.6	1789.0	1692.3	1545.1	1378.5	1292.0
12.5°	1086.4	1180.6	1352.6	1517.7	1641.9	1674.1	1640.3	1558.9	1419.3	1252.4	1165.2
15°	1070.1	1167.1	1326.4	1465.6	1542.6	1521.8	1488.3	1447.1	1347.8	1211.2	1126.9
17.5°	1119.3	1227.8	1361.2	1437.5	1434.3	1384.5	1356.5	1364.4	1347.5	1255.9	1167.8
20°	1220.5	1348.8	1449.7	1429.9	1348.2	1278.2	1262.0	1324.5	1402.7	1367.9	1271.2
22.5°	1353.6	1499.8	1570.3	1451.9	1303.1	1227.8	1224.6	1322.3	1503.3	1537.5	1419.7
25°	1503.9	1674.4	1692.0	1490.9	1298.4	1223.3	1220.5	1356.8	1624.3	1705.4	1586.0
27.5°	1687.8	1850.6	1793.5	1542.9	1319.4	1236.4	1238.3	1415.5	1750.4	1871.4	1773.4
30°	1826.4	1975.8	1856.1	1594.0	1353.3	1259.4	1264.2	1479.0	1818.4	1986.6	1923.1
32.5°	1956.0	2082.7	1916.1	1644.4	1402.7	1293.6	1310.2	1558.2	1900.1	2085.6	2064.5
35°	2099.3	2202.4	1982.8	1698.4	1473.6	1353.6	1377.5	1633.6	1981.2	2184.6	2204.7
37.5°	2261.8	2339.4	2055.3	1774.7	1575.8	1464.7	1478.1	1710.5	2037.7	2294.1	2355.0
40°	2431.0	2493.0	2134.4	1876.5	1724.2	1614.7	1621.1	1809.1	2082.1	2407.4	2500.9
42.5°	2576.3	2624.5	2213.9	2002.9	1894.7	1767.6	1773.1	1915.4	2124.5	2505.1	2617.8
45°	2692.5	2727.9	2289.0	2136.0	2076.7	1958.5	1957.3	2023.7	2181.4	2587.4	2707.5
47.5°	2800.7	2819.5	2372.6	2265.7	2265.3	2204.4	2158.7	2151.4	2257.0	2656.7	2785.7
50°	2924.6	2931.6	2483.1	2396.5	2495.8	2486.2	2402.0	2313.5	2355.0	2734.6	2867.7
52.5°	3097.0	3097.3	2620.0	2524.2	2750.3	2780.6	2682.6	2497.1	2500.0	2886.3	3009.5
55°	3299.7	3313.7	2798.5	2677.2	3016.5	3068.2	2976.0	2715.1	2708.1	3130.8	3239.3
57.5°	3456.4	3530.8	3006.3	2868.4	3265.2	3332.6	3258.2	2941.2	2963.8	3383.0	3429.0
60°	3500.5	3674.5	3213.5	3082.9	3475.6	3576.8	3501.1	3185.4	3214.1	3546.8	3483.6
62.5°	3447.8	3720.8	3424.5	3275.1	3600.4	3697.4	3643.2	3345.3	3418.1	3525.7	3391.3
65°	3291.7	3653.7	3607.7	3356.8	3528.6	3563.0	3548.7	3353.6	3528.9	3326.5	3136.2
67.5°	2927.1	3395.1	3526.0	3182.2	3193.0	3156.0	3137.2	3125.7	3404.4	3005.0	2734.0
70°	2380.6	2917.2	3136.2	2663.1	2582.7	2546.9	2485.0	2638.2	3059.9	2560.3	2250.0
72.5°	1833.7	2231.8	2572.4	2018.9	1851.6	1863.7	1793.5	2017.3	2534.8	1979.3	1717.8
75°	1302.2	1521.8	2053.4	1450.6	1229.1	1228.4	1223.0	1451.9	2000.0	1420.6	1256.9
77.5°	938.6	1095.6	1608.7	970.8	872.2	883.3	865.5	986.8	1559.2	1021.9	931.2
80°	748.6	811.2	1039.8	647.4	649.3	675.5	671.7	674.9	1025.7	740.0	696.3
82.5°	537.9	615.8	794.9	496.1	429.4	457.2	462.6	500.6	723.7	523.2	459.1
85°	275.8	375.4	731.4	429.7	268.5	222.5	256.0	394.9	628.6	313.5	223.8
87.5°	53.6	104.1	536.0	238.8	120.7	61.0	100.6	167.3	365.5	56.8	27.8
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1623.3	1582.5	1544.2	1504.6	1473.9	1436.6	1399.9	1367.9	1337.0	1316.5	1322.9
5°	1583.8	1484.2	1394.8	1311.8	1263.2	1204.8	1152.8	1109.0	1075.2	1053.5	1066.6
7.5°	1403.4	1268.7	1150.9	1041.4	972.4	896.7	836.1	793.3	767.1	752.5	773.8
10°	1218.9	1067.5	935.4	821.4	753.4	689.2	634.3	589.0	553.9	537.3	545.9
12.5°	1086.7	918.5	779.9	703.3	644.9	587.4	530.6	477.6	432.9	412.5	408.3
15°	1037.2	838.3	696.9	611.3	553.2	490.7	429.4	372.6	330.1	312.5	308.7
17.5°	1058.9	821.1	647.7	546.5	462.3	386.3	317.3	263.7	232.4	222.5	223.5
20°	1135.2	827.5	608.2	479.8	375.7	285.7	216.8	179.7	166.3	164.1	166.6
22.5°	1239.9	853.6	579.4	422.4	299.4	207.8	161.2	143.7	140.1	139.8	142.4
25°	1378.2	904.7	560.3	371.3	236.6	164.7	140.5	130.6	127.7	128.3	130.9
27.5°	1541.0	969.5	547.8	327.2	194.4	146.9	131.2	122.6	119.7	120.4	122.3
30°	1689.7	1026.4	529.3	294.0	174.6	140.5	126.1	117.5	113.6	113.6	114.9
32.5°	1822.9	1075.5	507.6	269.1	156.4	126.1	114.3	107.6	104.7	105.7	106.3
35°	1941.0	1101.4	490.7	254.4	141.7	116.2	104.4	97.4	93.5	94.2	95.1
37.5°	2057.2	1111.3	479.5	246.5	131.2	110.1	99.3	93.5	89.4	88.7	88.4
40°	2167.6	1109.0	469.0	244.2	124.2	105.7	96.1	91.0	86.8	85.9	85.6
42.5°	2263.1	1101.7	459.1	238.2	119.4	102.5	93.5	89.1	84.9	83.6	83.0
45°	2350.3	1097.2	448.2	227.0	121.9	101.2	92.3	87.5	83.6	82.0	81.4
47.5°	2447.0	1113.2	436.1	214.8	121.3	101.5	92.3	86.8	83.0	81.4	80.8
50°	2562.2	1167.1	421.1	198.2	115.6	108.5	91.9	85.9	82.4	81.4	80.1
52.5°	2725.0	1254.6	400.3	176.9	111.1	115.9	91.6	84.3	81.4	79.8	78.2
55°	2948.2	1342.1	373.5	154.2	104.1	110.8	92.3	82.4	79.2	77.6	75.7
57.5°	3131.1	1408.5	339.7	135.4	97.7	104.7	91.3	80.1	76.6	75.0	73.4
60°	3119.3	1414.9	307.4	123.2	93.9	94.2	93.5	78.5	74.4	73.1	71.8
62.5°	2926.2	1336.0	277.4	117.2	91.0	85.9	95.5	76.6	72.1	70.9	69.9
65°	2604.7	1152.5	261.5	117.2	88.4	81.4	83.3	74.1	69.9	68.6	68.0
67.5°	2197.0	926.1	246.5	119.7	84.9	78.2	75.7	71.5	67.7	66.4	65.8
70°	1760.9	728.8	235.9	118.4	81.7	74.7	71.5	68.0	64.2	63.8	63.2
72.5°	1381.4	585.5	231.1	118.4	76.9	70.6	67.4	64.8	61.0	60.7	59.7
75°	1106.8	439.6	211.3	116.2	72.1	65.1	62.3	60.0	56.2	56.5	55.9
77.5°	857.2	310.9	176.5	104.7	66.1	59.1	56.8	55.2	50.8	51.1	51.1
80°	670.4	202.4	137.0	86.8	59.1	52.0	50.4	49.2	44.4	45.0	45.0
82.5°	459.4	120.4	99.3	69.9	50.8	44.4	44.1	42.1	37.0	37.4	38.0
85°	250.9	79.2	66.1	51.7	39.9	36.1	35.4	34.5	29.7	29.7	30.0
87.5°	46.3	42.5	38.9	34.2	26.8	25.9	24.9	25.9	22.3	21.7	21.7
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1307.9	1285.9	1270.6	1257.2	1224.9	1227.2	1231.6	1238.0	1217.9	1228.4	1241.5
5°	1053.5	1035.3	1021.6	1000.2	955.2	939.2	929.0	924.5	894.5	900.9	914.9
7.5°	776.7	776.4	771.6	747.7	693.4	660.5	638.8	632.1	613.6	620.6	642.0
10°	546.9	552.6	550.4	529.0	480.5	456.8	452.0	465.5	465.8	479.5	516.2
12.5°	395.2	392.0	389.2	371.6	335.2	331.4	342.2	360.7	365.2	379.9	418.2
15°	295.0	287.3	285.7	272.0	248.1	251.6	259.5	269.1	269.4	279.7	311.3
17.5°	221.2	221.2	223.8	214.8	197.6	196.0	191.9	189.3	185.5	189.6	206.9
20°	171.8	179.7	186.1	181.0	165.4	157.7	149.7	144.6	141.7	142.1	147.2
22.5°	147.2	153.6	161.9	159.3	146.2	136.3	131.2	127.7	125.5	125.5	128.3
25°	134.7	138.9	146.5	145.3	134.1	126.1	121.9	118.4	115.9	115.6	118.4
27.5°	124.8	127.4	132.5	131.8	120.4	115.2	112.7	110.5	108.9	108.5	111.4
30°	115.9	117.2	119.7	118.8	110.1	105.0	104.1	103.1	102.2	102.5	106.6
32.5°	107.9	108.9	110.5	109.2	100.9	96.4	94.8	93.5	92.6	93.5	98.3
35°	99.0	101.8	103.8	103.1	94.2	88.7	85.2	82.0	80.8	81.7	87.2
37.5°	91.3	96.1	98.6	98.0	88.7	82.4	77.9	77.3	77.3	78.5	84.0
40°	88.4	91.9	94.2	93.2	84.0	77.6	75.0	74.1	74.4	75.7	81.4
42.5°	85.9	89.1	89.7	87.8	78.5	74.4	72.8	71.5	72.1	73.7	79.5
45°	83.6	86.2	85.9	83.0	74.1	71.2	71.2	70.2	70.6	71.8	77.9
47.5°	82.0	83.3	82.7	79.8	70.9	68.6	69.6	69.6	70.2	71.2	77.3
50°	79.5	80.4	79.8	77.3	68.3	66.4	67.4	68.6	69.3	70.2	75.7
52.5°	76.9	77.6	77.3	74.7	65.8	64.5	64.5	65.8	67.0	68.3	73.1
55°	74.4	75.0	75.3	73.4	63.8	62.6	62.3	62.3	63.5	65.4	70.6
57.5°	72.5	72.5	73.1	71.8	61.9	60.3	58.7	59.1	60.7	62.3	67.4
60°	70.2	70.6	71.5	70.2	59.4	56.8	55.5	57.1	57.8	59.4	64.8
62.5°	68.3	68.3	69.0	68.0	57.1	54.6	53.6	55.2	55.2	56.8	62.3
65°	66.7	66.4	66.4	66.1	54.9	52.4	51.7	52.4	52.7	54.3	59.7
67.5°	65.4	63.8	63.8	64.5	52.7	50.1	49.8	49.8	50.1	52.0	56.8
70°	62.6	61.3	61.0	63.2	50.4	47.2	47.2	46.6	47.2	48.2	53.3
72.5°	59.4	58.4	58.1	61.3	48.2	44.1	43.4	43.1	43.4	44.4	49.2
75°	55.2	54.6	55.2	60.0	46.0	40.5	39.6	39.3	39.3	39.6	44.7
77.5°	50.4	49.8	54.6	55.9	44.7	36.4	35.4	34.8	34.2	34.2	39.9
80°	44.7	44.4	52.7	47.2	42.8	31.9	30.3	29.4	28.7	28.4	34.2
82.5°	38.9	38.3	45.0	37.0	35.4	26.2	23.9	22.0	21.1	21.1	26.2
85°	31.9	31.6	35.4	27.1	24.6	19.2	16.0	14.4	13.1	13.1	16.9
87.5°	23.3	22.7	22.0	16.3	12.5	8.6	6.1	5.7	5.1	4.8	7.0
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1261.0	1287.5	1337.6	1378.8	1433.7	1477.8	1527.9	1549.6
5°	940.8	982.6	1059.2	1124.7	1215.3	1299.3	1395.1	1447.4
7.5°	674.9	736.8	794.9	876.6	990.0	1102.7	1226.5	1295.8
10°	558.4	615.2	665.0	723.1	810.6	937.3	1085.1	1163.3
12.5°	462.6	523.9	576.5	638.8	712.2	826.8	995.4	1086.4
15°	354.7	421.4	484.6	559.6	649.7	780.5	968.6	1070.1
17.5°	242.9	314.5	392.3	484.0	592.5	761.1	994.1	1119.3
20°	165.0	217.4	302.0	410.5	541.1	751.8	1050.3	1220.5
22.5°	135.7	159.3	222.8	341.6	499.0	762.0	1141.6	1353.6
25°	124.5	137.3	173.3	280.9	466.7	789.2	1265.2	1503.9
27.5°	117.5	128.3	152.0	237.5	437.0	826.2	1415.5	1687.8
30°	113.3	123.5	143.3	215.2	409.9	858.1	1544.8	1826.4
32.5°	104.1	111.7	128.0	202.4	390.4	884.0	1658.8	1956.0
35°	92.9	102.2	115.6	194.1	389.8	896.1	1766.0	2099.3
37.5°	88.7	97.7	107.6	189.6	393.6	906.3	1897.2	2261.8
40°	86.2	94.2	102.2	189.0	396.8	914.3	2025.6	2431.0
42.5°	84.0	91.9	101.2	184.5	395.5	925.2	2139.2	2576.3
45°	83.3	91.3	103.4	177.8	395.2	942.1	2229.6	2692.5
47.5°	82.7	94.8	102.8	170.5	393.9	977.8	2331.4	2800.7
50°	82.0	101.2	98.3	160.3	384.4	1038.8	2468.4	2924.6
52.5°	81.7	102.2	93.5	146.2	367.1	1129.2	2668.9	3097.0
55°	80.4	97.0	85.2	127.7	342.2	1226.5	2883.7	3299.7
57.5°	77.6	86.5	80.4	109.5	306.5	1294.5	3042.4	3456.4
60°	84.6	74.4	77.3	100.2	263.7	1306.7	3049.4	3500.5
62.5°	80.8	67.7	74.1	97.0	233.7	1227.5	2909.9	3447.8
65°	64.5	64.2	71.2	100.2	229.2	1050.3	2674.3	3291.7
67.5°	58.7	61.6	68.3	104.1	232.1	827.5	2327.6	2927.1
70°	54.9	58.4	64.5	107.6	237.2	651.9	1873.9	2380.6
72.5°	51.1	54.0	60.7	111.1	233.7	514.3	1499.8	1833.7
75°	46.3	48.8	55.2	101.8	200.5	378.0	1191.7	1302.2
77.5°	40.9	43.1	48.5	80.4	150.7	263.1	892.6	938.6
80°	35.1	36.1	40.2	58.7	98.3	157.4	679.3	748.6
82.5°	27.8	28.1	30.6	43.1	61.3	100.6	471.2	537.9
85°	17.9	18.5	19.8	30.3	41.2	64.5	240.7	275.8
87.5°	6.1	7.0	7.0	14.7	20.1	35.8	73.7	53.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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