

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: P196687

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196687  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 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: 4216.3 lumens  
Efficiency: N/A  
Efficacy: 95.8 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

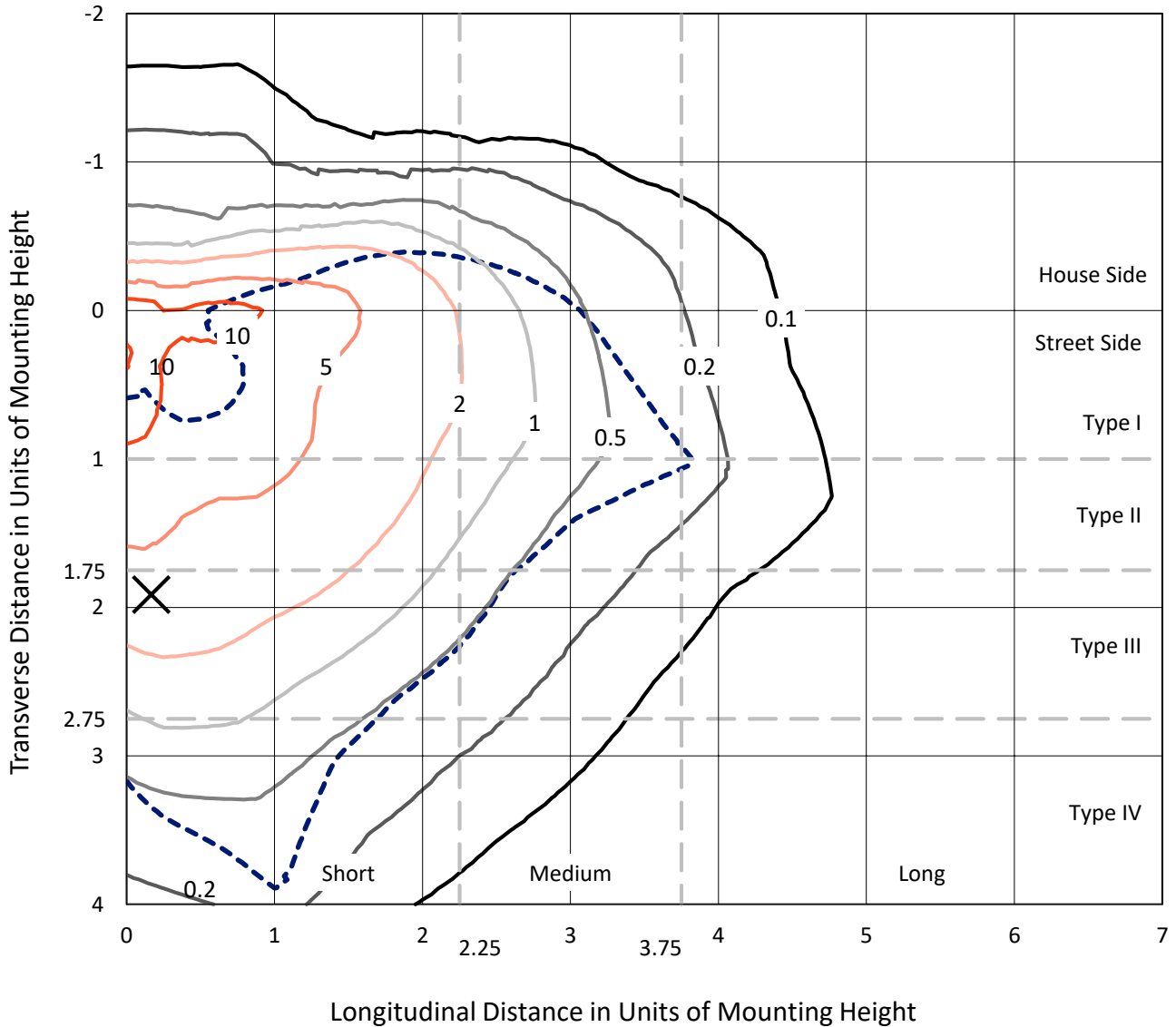
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

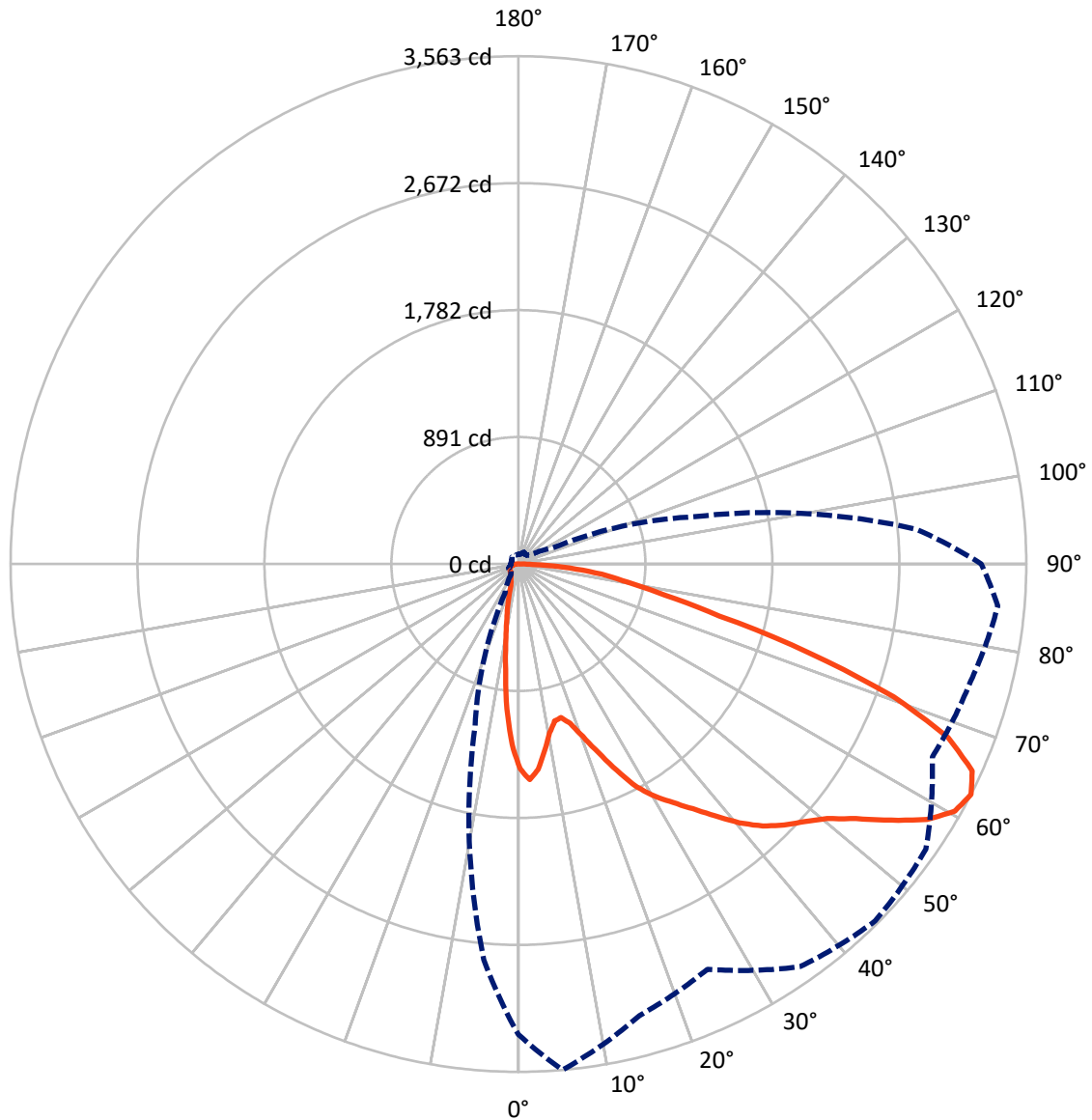
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.5 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	746.9	0.0	746.9
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	3469.4	0.0	3469.4
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	4216.3	0.0	4216.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.5	2.5
10°-20°	190.9	4.5
20°-30°	274.6	6.5
30°-40°	420.6	10.0
40°-50°	614.9	14.6
50°-60°	894.7	21.2
60°-70°	1036.7	24.6
70°-80°	540.4	12.8
80°-90°	138.9	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°	4216.3	100.0
0°-180°	4216.3	100.0



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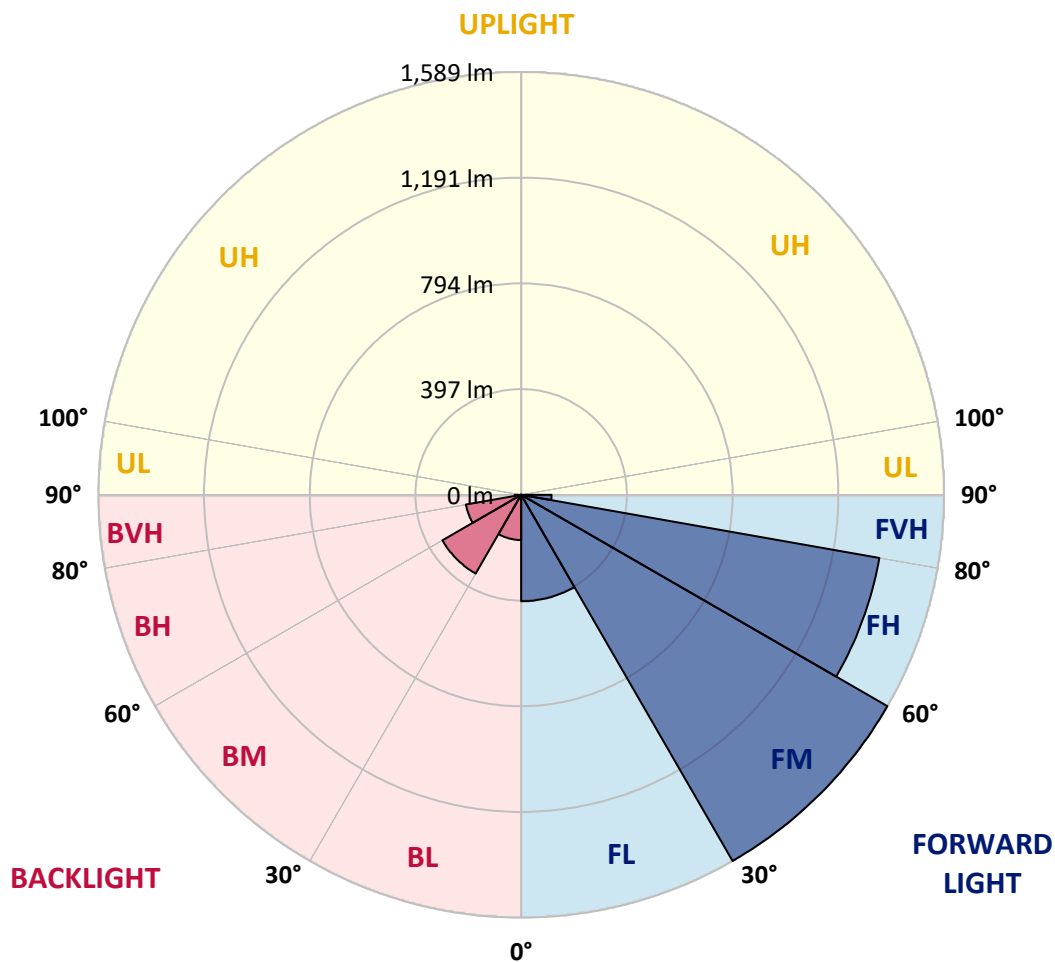
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	400.1	9.5			
FM	(30°-60°)	1588.5	37.7			
FH	(60°-80°)	1366.4	32.4			G1/1800
FVH	(80°-90°)	114.3	2.7			G2/225
BL	(0°-30°)	169.9	4.0	B1/500		
BM	(30°-60°)	341.7	8.1	B1/1000		
BH	(60°-80°)	210.6	5.0	B1/500		G1/500
BVH	(80°-90°)	24.6	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1483.8	1515.4	1551.5	1598.6	1630.5	1643.5	1654.1	1636.1	1618.6	1586.0	1574.4
5°	1386.1	1446.6	1545.9	1640.4	1723.6	1771.2	1786.0	1752.6	1693.3	1607.7	1562.4
7.5°	1240.8	1320.6	1460.4	1599.4	1718.6	1798.2	1804.0	1738.0	1621.2	1480.8	1407.5
10°	1114.0	1204.1	1365.8	1521.6	1647.7	1729.0	1713.1	1620.6	1479.6	1320.1	1237.2
12.5°	1040.3	1130.5	1295.3	1453.3	1572.2	1603.2	1570.7	1492.8	1359.1	1199.2	1115.9
15°	1024.8	1117.6	1270.2	1403.6	1477.1	1457.3	1425.2	1385.7	1290.7	1159.9	1079.2
17.5°	1071.9	1175.7	1303.6	1376.5	1373.5	1325.9	1299.0	1306.6	1290.4	1202.6	1118.3
20°	1168.7	1291.6	1388.2	1369.2	1291.0	1224.0	1208.4	1268.4	1343.3	1309.9	1217.3
22.5°	1296.2	1436.2	1503.7	1390.4	1247.8	1175.7	1172.7	1266.2	1439.6	1472.3	1359.5
25°	1440.1	1603.4	1620.2	1427.7	1243.3	1171.5	1168.7	1299.2	1555.5	1633.1	1518.7
27.5°	1616.3	1772.1	1717.4	1477.5	1263.5	1184.1	1185.8	1355.5	1676.1	1792.1	1698.2
30°	1748.9	1892.1	1777.3	1526.4	1296.0	1206.0	1210.6	1416.3	1741.3	1902.4	1841.6
32.5°	1873.0	1994.4	1834.8	1574.7	1343.3	1238.7	1254.7	1492.2	1819.6	1997.2	1977.0
35°	2010.4	2109.0	1898.7	1626.4	1411.1	1296.2	1319.1	1564.3	1897.2	2092.0	2111.2
37.5°	2165.9	2240.3	1968.1	1699.4	1509.0	1402.6	1415.5	1638.1	1951.4	2196.7	2255.2
40°	2328.0	2387.2	2043.9	1797.0	1651.1	1546.2	1552.3	1732.5	1993.8	2305.4	2394.9
42.5°	2467.1	2513.2	2120.0	1918.0	1814.4	1692.7	1697.9	1834.3	2034.5	2398.9	2506.7
45°	2578.3	2612.3	2192.0	2045.5	1988.6	1875.6	1874.3	1937.8	2088.9	2477.8	2592.7
47.5°	2682.0	2700.1	2272.0	2169.6	2169.3	2110.9	2067.1	2060.2	2161.3	2544.1	2667.6
50°	2800.6	2807.3	2377.8	2294.9	2390.0	2380.9	2300.1	2215.4	2255.2	2618.6	2746.1
52.5°	2965.7	2966.0	2508.9	2417.3	2633.7	2662.6	2568.8	2391.2	2394.0	2763.9	2881.9
55°	3159.8	3173.2	2679.8	2563.7	2888.6	2938.1	2849.8	2600.1	2593.3	2998.1	3102.0
57.5°	3309.9	3381.1	2878.9	2746.8	3126.8	3191.3	3120.0	2816.4	2838.1	3239.5	3283.6
60°	3352.1	3518.7	3077.2	2952.1	3328.2	3425.2	3352.6	3050.3	3077.9	3396.5	3335.9
62.5°	3301.6	3563.0	3279.3	3136.2	3447.7	3540.6	3488.7	3203.5	3273.2	3376.2	3247.5
65°	3152.1	3498.8	3454.8	3214.5	3379.0	3411.9	3398.2	3211.4	3379.3	3185.5	3003.2
67.5°	2803.0	3251.2	3376.5	3047.2	3057.6	3022.2	3004.2	2993.1	3260.1	2877.6	2618.1
70°	2279.7	2793.5	3003.2	2550.2	2473.2	2438.8	2379.5	2526.4	2930.3	2451.8	2154.6
72.5°	1756.1	2137.2	2463.4	1933.3	1773.1	1784.7	1717.4	1931.7	2427.3	1895.3	1645.0
75°	1246.9	1457.3	1966.3	1389.1	1176.9	1176.4	1171.1	1390.4	1915.2	1360.4	1203.6
77.5°	898.7	1049.2	1540.4	929.7	835.2	845.8	828.7	945.0	1493.0	978.5	891.8
80°	716.8	776.9	995.7	619.9	621.8	647.0	643.2	646.3	982.2	708.6	666.7
82.5°	515.1	589.7	761.2	475.1	411.2	437.8	442.9	479.3	693.0	501.1	439.6
85°	264.1	359.5	700.4	411.5	257.1	213.0	245.2	378.1	601.9	300.3	214.2
87.5°	51.4	99.7	513.3	228.7	115.6	58.4	96.2	160.2	350.0	54.4	26.6
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°	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1554.5	1515.4	1478.8	1440.8	1411.4	1375.7	1340.5	1309.9	1280.3	1260.8	1266.9
5°	1516.6	1421.3	1335.5	1256.2	1209.7	1153.8	1103.9	1062.0	1029.7	1008.8	1021.3
7.5°	1343.9	1214.9	1102.1	997.2	931.2	858.8	800.7	759.7	734.7	720.6	741.0
10°	1167.2	1022.2	895.7	786.5	721.4	660.0	607.5	564.0	530.4	514.5	522.8
12.5°	1040.5	879.5	746.8	673.5	617.6	562.4	508.0	457.4	414.5	395.0	391.0
15°	993.2	802.7	667.3	585.4	529.8	469.9	411.2	356.7	316.1	299.3	295.6
17.5°	1014.0	786.2	620.3	523.4	442.6	370.0	303.8	252.5	222.6	213.0	214.0
20°	1087.1	792.3	582.4	459.4	359.8	273.5	207.6	172.1	159.3	157.2	159.6
22.5°	1187.3	817.5	554.8	404.5	286.8	199.0	154.4	137.5	134.2	134.0	136.3
25°	1319.8	866.3	536.5	355.5	226.5	157.8	134.5	125.0	122.3	122.9	125.3
27.5°	1475.6	928.3	524.6	313.3	186.2	140.6	125.6	117.4	114.6	115.3	117.1
30°	1618.1	982.9	506.9	281.6	167.1	134.5	120.7	112.5	108.8	108.8	110.1
32.5°	1745.5	1029.9	486.1	257.8	149.8	120.7	109.5	103.0	100.3	101.2	101.8
35°	1858.7	1054.7	469.9	243.6	135.7	111.2	100.0	93.2	89.6	90.1	91.1
37.5°	1970.0	1064.1	459.2	236.0	125.6	105.4	95.0	89.6	85.5	85.0	84.6
40°	2075.7	1062.0	449.0	233.9	118.9	101.2	92.0	87.1	83.1	82.3	82.0
42.5°	2167.1	1055.0	439.6	228.1	114.2	98.2	89.6	85.3	81.3	80.1	79.4
45°	2250.6	1050.7	429.2	217.3	116.8	96.9	88.4	83.8	80.1	78.5	77.9
47.5°	2343.3	1066.1	417.6	205.7	116.2	97.2	88.4	83.1	79.4	77.9	77.3
50°	2453.6	1117.6	403.2	189.9	110.7	103.9	88.1	82.3	78.8	77.9	76.7
52.5°	2609.5	1201.5	383.4	169.4	106.4	111.0	87.7	80.8	77.9	76.4	75.0
55°	2823.2	1285.2	357.8	147.6	99.7	106.1	88.4	78.8	75.8	74.3	72.4
57.5°	2998.4	1348.8	325.3	129.6	93.5	100.3	87.4	76.7	73.4	71.9	70.4
60°	2987.0	1355.0	294.4	118.0	89.9	90.1	89.6	75.2	71.2	70.0	68.9
62.5°	2802.1	1279.4	265.6	112.2	87.1	82.3	91.4	73.4	69.1	67.8	66.9
65°	2494.3	1103.6	250.4	112.2	84.6	77.9	79.8	70.9	66.9	65.8	65.1
67.5°	2103.9	886.8	236.0	114.6	81.3	75.0	72.4	68.5	64.8	63.6	63.0
70°	1686.3	697.9	225.9	113.4	78.2	71.6	68.5	65.1	61.4	61.1	60.5
72.5°	1322.8	560.6	221.4	113.4	73.6	67.5	64.5	62.1	58.4	58.1	57.2
75°	1060.0	420.9	202.3	111.2	69.1	62.4	59.6	57.5	53.7	54.1	53.5
77.5°	820.9	297.7	169.1	100.3	63.3	56.6	54.4	52.9	48.6	48.9	48.9
80°	642.0	193.8	131.1	83.1	56.6	49.8	48.3	47.1	42.5	43.1	43.1
82.5°	439.9	115.3	95.0	66.9	48.6	42.5	42.2	40.3	35.5	35.7	36.4
85°	240.3	75.8	63.3	49.5	38.2	34.5	34.0	33.0	28.4	28.4	28.7
87.5°	44.4	40.7	37.2	32.7	25.6	24.8	23.8	24.8	21.5	20.8	20.8
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1252.4	1231.4	1216.7	1203.8	1173.0	1175.1	1179.5	1185.6	1166.3	1176.4	1188.8
5°	1008.8	991.4	978.3	957.7	914.7	899.4	889.6	885.3	856.6	862.7	876.1
7.5°	743.7	743.5	738.9	715.9	664.0	632.5	611.8	605.3	587.6	594.3	614.8
10°	523.7	529.2	527.0	506.5	460.1	437.5	432.8	445.7	446.0	459.2	494.3
12.5°	378.5	375.5	372.7	355.8	321.0	317.3	327.7	345.5	349.7	363.9	400.4
15°	282.4	275.2	273.5	260.5	237.5	240.9	248.6	257.8	258.0	267.8	298.1
17.5°	211.9	211.9	214.2	205.7	189.2	187.7	183.8	181.3	177.6	181.6	198.1
20°	164.4	172.1	178.2	173.2	158.3	151.0	143.3	138.4	135.7	136.0	141.0
22.5°	141.0	147.1	155.0	152.5	140.0	130.6	125.6	122.3	120.1	120.1	122.9
25°	129.0	133.0	140.3	139.1	128.4	120.7	116.8	113.4	111.0	110.7	113.4
27.5°	119.5	122.0	126.8	126.3	115.3	110.4	107.9	105.8	104.3	103.9	106.6
30°	111.0	112.2	114.6	113.7	105.4	100.6	99.7	98.8	97.8	98.2	102.1
32.5°	103.4	104.3	105.8	104.6	96.5	92.4	90.8	89.6	88.6	89.6	94.2
35°	94.7	97.6	99.3	98.8	90.1	85.0	81.6	78.5	77.3	78.2	83.5
37.5°	87.4	92.0	94.5	93.9	85.0	78.8	74.7	74.0	74.0	75.2	80.5
40°	84.6	88.1	90.1	89.3	80.5	74.3	71.9	70.9	71.2	72.4	77.9
42.5°	82.3	85.3	85.9	84.0	75.2	71.2	69.7	68.5	69.1	70.6	76.2
45°	80.1	82.5	82.3	79.4	70.9	68.2	68.2	67.3	67.5	68.9	74.7
47.5°	78.5	79.8	79.2	76.4	67.8	65.8	66.6	66.6	67.3	68.2	74.0
50°	76.2	77.0	76.4	74.0	65.4	63.6	64.5	65.8	66.3	67.3	72.4
52.5°	73.6	74.3	74.0	71.6	63.0	61.7	61.7	63.0	64.3	65.4	70.0
55°	71.2	71.9	72.1	70.4	61.1	59.9	59.6	59.6	60.8	62.8	67.5
57.5°	69.4	69.4	70.0	68.9	59.3	57.8	56.3	56.6	58.1	59.6	64.5
60°	67.3	67.5	68.5	67.3	56.9	54.4	53.2	54.7	55.2	56.9	62.1
62.5°	65.4	65.4	66.0	65.1	54.7	52.2	51.4	52.9	52.9	54.4	59.6
65°	63.9	63.6	63.6	63.3	52.6	50.1	49.5	50.1	50.5	52.0	57.2
67.5°	62.8	61.1	61.1	61.7	50.5	48.0	47.6	47.6	48.0	49.8	54.4
70°	59.9	58.7	58.4	60.5	48.3	45.3	45.3	44.7	45.3	46.1	51.1
72.5°	56.9	55.9	55.6	58.7	46.1	42.2	41.6	41.3	41.6	42.5	47.1
75°	52.9	52.2	52.9	57.5	44.0	38.8	37.9	37.5	37.5	37.9	42.8
77.5°	48.3	47.6	52.2	53.5	42.8	34.9	34.0	33.4	32.7	32.7	38.2
80°	42.8	42.5	50.5	45.3	41.0	30.6	29.1	28.1	27.6	27.2	32.7
82.5°	37.2	36.7	43.1	35.5	34.0	25.0	23.0	21.1	20.2	20.2	25.0
85°	30.6	30.3	34.0	26.0	23.5	18.3	15.3	13.7	12.6	12.6	16.2
87.5°	22.3	21.8	21.1	15.7	11.9	8.3	5.8	5.5	4.9	4.6	6.8
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1207.6	1232.9	1280.9	1320.3	1373.0	1415.1	1463.1	1483.8
5°	901.0	940.9	1014.4	1077.0	1163.8	1244.3	1335.9	1386.1
7.5°	646.3	705.6	761.2	839.4	948.1	1055.9	1174.5	1240.8
10°	534.8	589.1	636.8	692.3	776.2	897.6	1039.0	1114.0
12.5°	442.9	501.6	552.1	611.8	682.0	791.8	953.2	1040.3
15°	339.7	403.5	464.1	535.9	622.1	747.5	927.5	1024.8
17.5°	232.6	301.1	375.8	463.5	567.4	728.8	951.9	1071.9
20°	158.1	208.1	289.2	393.2	518.2	719.9	1005.7	1168.7
22.5°	129.9	152.5	213.4	327.1	477.8	729.8	1093.2	1296.2
25°	119.2	131.4	166.0	269.0	447.0	755.7	1211.4	1440.1
27.5°	112.5	122.9	145.6	227.5	418.5	791.1	1355.5	1616.3
30°	108.5	118.3	137.2	206.1	392.6	821.7	1479.3	1748.9
32.5°	99.7	107.0	122.6	193.8	373.8	846.5	1588.4	1873.0
35°	88.9	97.8	110.7	185.8	373.2	858.1	1691.2	2010.4
37.5°	85.0	93.5	103.0	181.6	377.0	867.8	1816.8	2165.9
40°	82.5	90.1	97.8	181.0	380.0	875.5	1939.7	2328.0
42.5°	80.5	88.1	96.9	176.7	378.8	886.0	2048.5	2467.1
45°	79.8	87.4	99.1	170.2	378.5	902.2	2135.0	2578.3
47.5°	79.2	90.8	98.5	163.3	377.3	936.4	2232.6	2682.0
50°	78.5	96.9	94.2	153.5	368.1	994.8	2363.8	2800.6
52.5°	78.2	97.8	89.6	140.0	351.6	1081.2	2555.7	2965.7
55°	77.0	93.0	81.6	122.3	327.7	1174.5	2761.4	3159.8
57.5°	74.3	82.8	77.0	104.9	293.5	1239.6	2913.4	3309.9
60°	81.0	71.2	74.0	96.0	252.5	1251.2	2920.1	3352.1
62.5°	77.3	64.8	70.9	93.0	223.8	1175.4	2786.5	3301.6
65°	61.7	61.4	68.2	96.0	219.5	1005.7	2560.9	3152.1
67.5°	56.3	59.0	65.4	99.7	222.3	792.3	2228.9	2803.0
70°	52.6	55.9	61.7	103.0	227.2	624.2	1794.5	2279.7
72.5°	48.9	51.7	58.1	106.4	223.8	492.5	1436.2	1756.1
75°	44.4	46.8	52.9	97.6	192.0	361.9	1141.2	1246.9
77.5°	39.2	41.3	46.4	77.0	144.3	252.0	854.7	898.7
80°	33.7	34.5	38.6	56.3	94.2	150.7	650.5	716.8
82.5°	26.6	26.9	29.4	41.3	58.7	96.2	451.2	515.1
85°	17.2	17.7	18.9	29.1	39.5	61.7	230.5	264.1
87.5°	5.8	6.8	6.8	14.1	19.2	34.2	70.6	51.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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