

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: P270303

Luminaire Tested: **NAV-AF-01-D-UNV-T2R-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270303  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)  
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-T2R-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4493.2 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

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

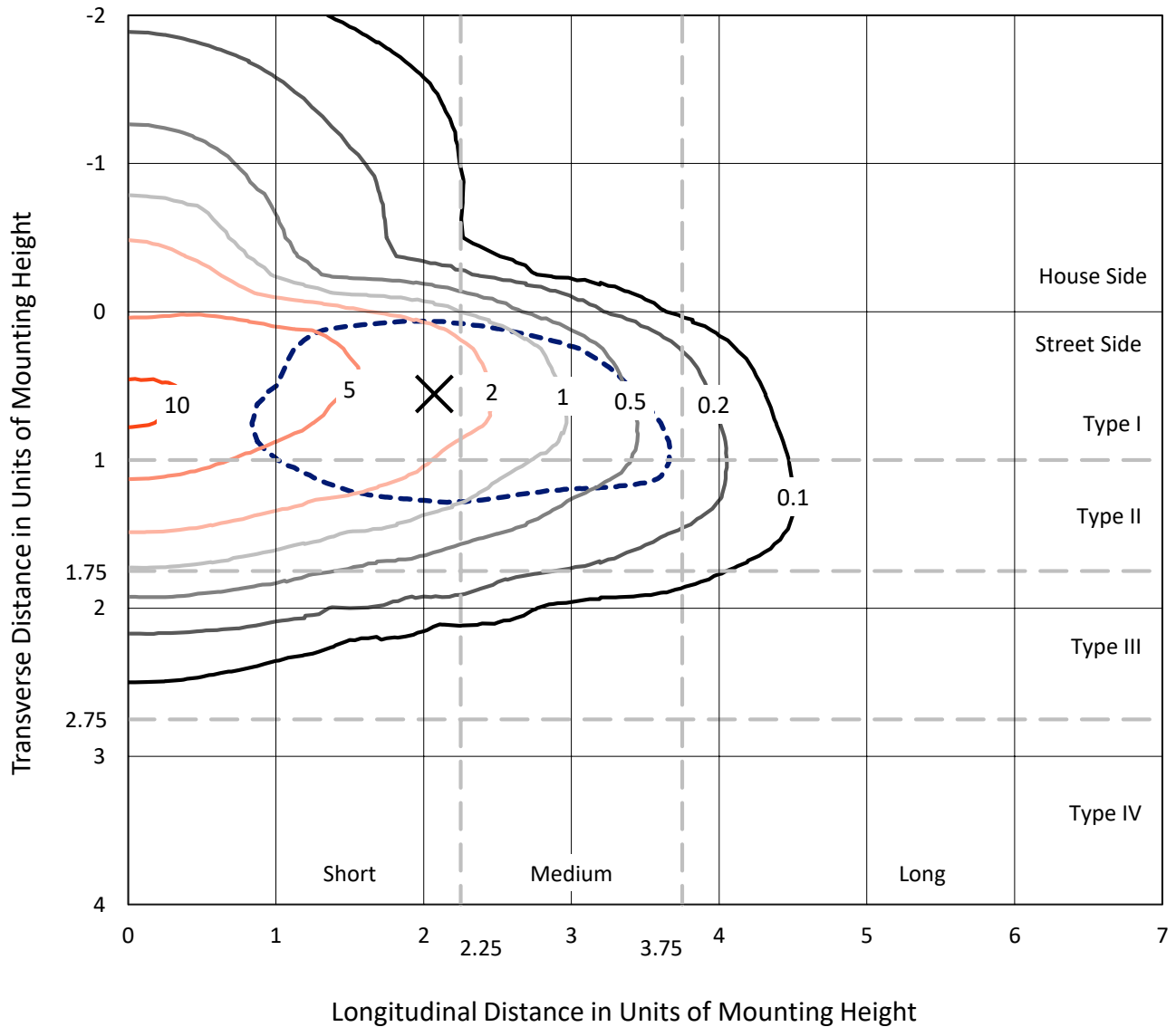


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### Iso-Footcandle Lines of Horizontal Illumination

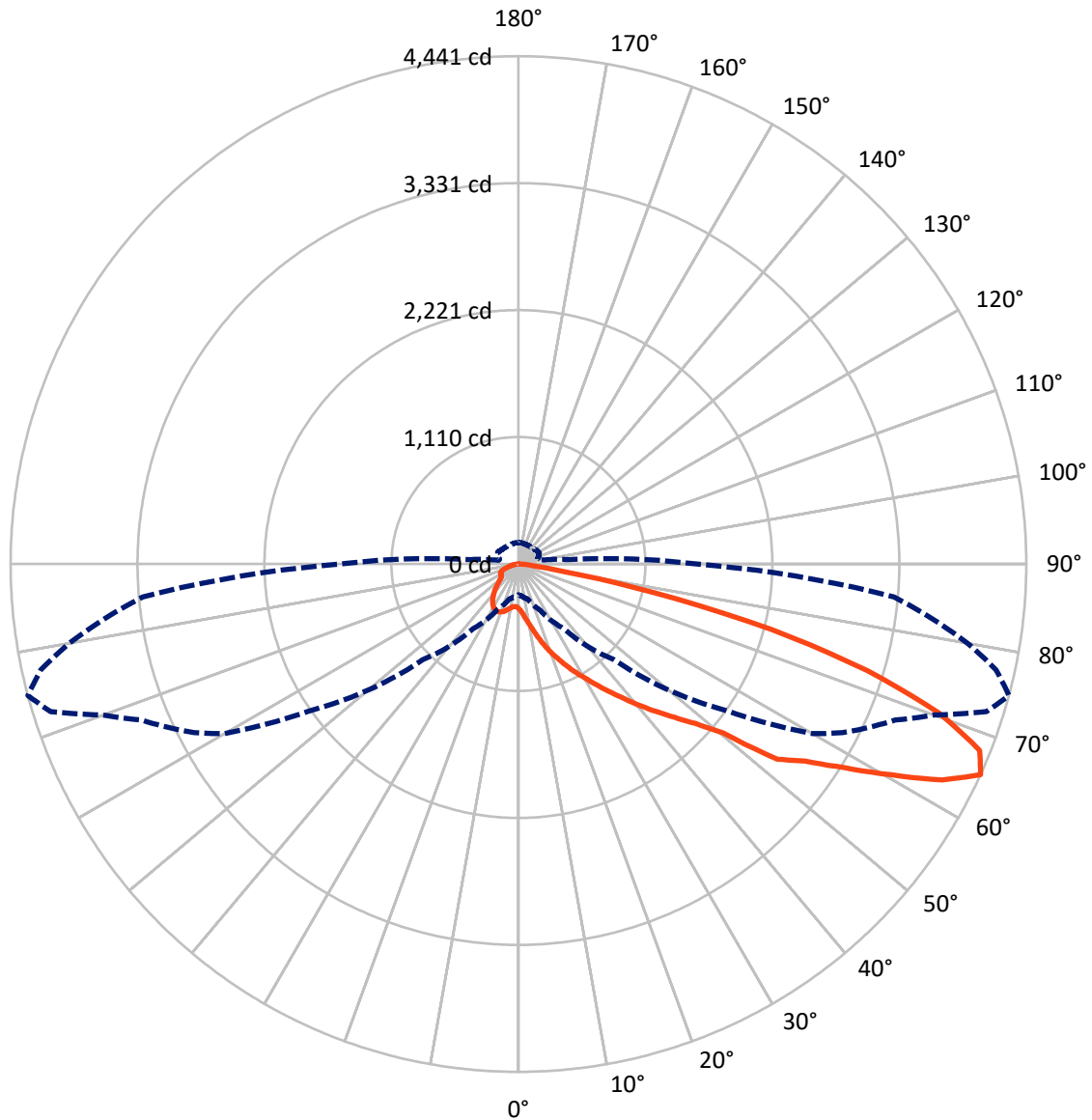
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	675.2	0.0	675.2
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	3818.1	0.0	3818.1
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	4493.2	0.0	4493.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	1.0
10°-20°	175.5	3.9
20°-30°	354.3	7.9
30°-40°	601.7	13.4
40°-50°	839.2	18.7
50°-60°	1028.5	22.9
60°-70°	967.7	21.5
70°-80°	424.3	9.4
80°-90°	56.1	1.2
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°	4493.2	100.0
0°-180°	4493.2	100.0



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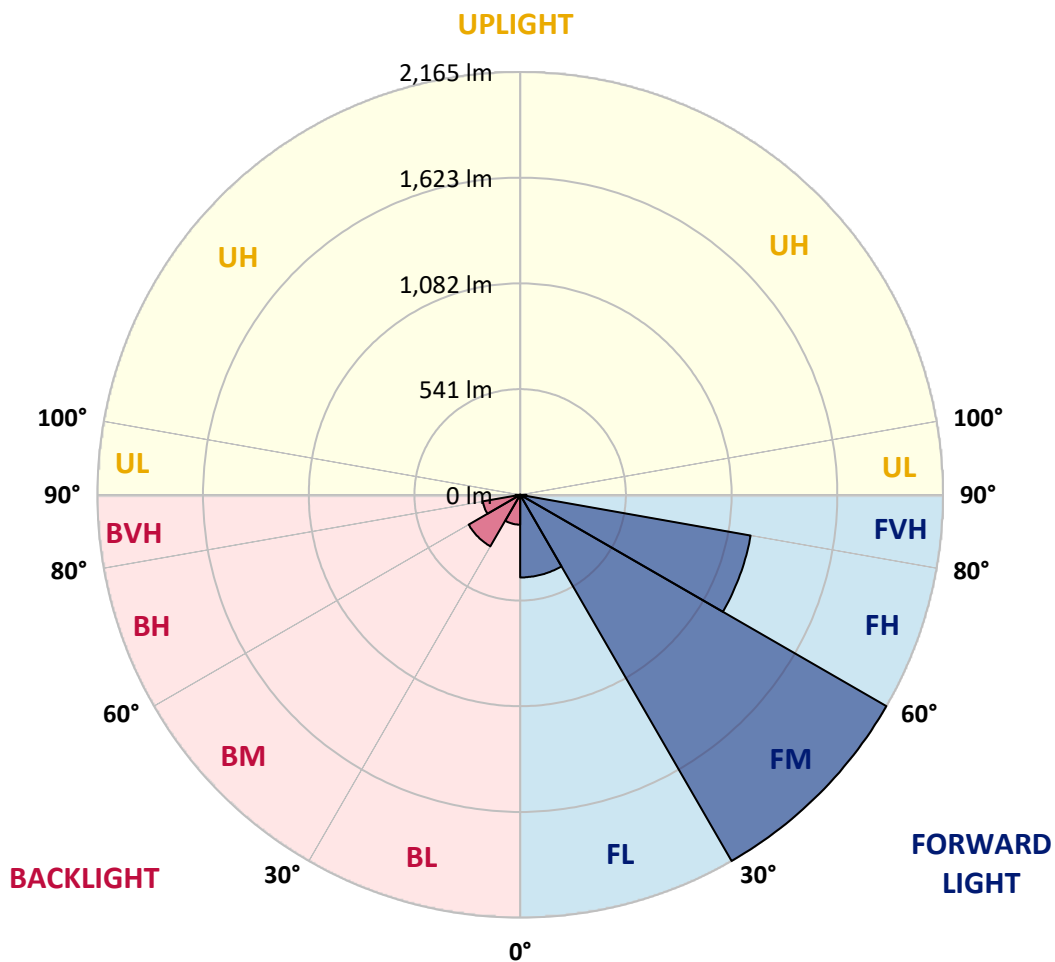
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	422.9	9.4			
FM (30°-60°)	2164.6	48.2			
FH (60°-80°)	1197.9	26.7			G1/1800
FVH (80°-90°)	32.5	0.7			G1/100
BL (0°-30°)	152.8	3.4	B1/500		
BM (30°-60°)	304.7	6.8	B1/1000		
BH (60°-80°)	194.1	4.3	B1/500		G1/500
BVH (80°-90°)	23.6	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3
2.5°	490.3	484.5	485.1	477.1	465.3	452.4	441.8	436.1	431.4	429.8	421.9
5°	641.1	633.9	631.4	613.2	585.6	553.0	520.7	508.3	497.9	491.6	476.2
7.5°	764.5	761.0	757.5	740.7	713.4	671.8	619.7	601.1	584.0	565.2	546.4
10°	848.7	847.2	845.8	834.0	811.4	775.1	719.2	698.9	677.4	653.4	629.2
12.5°	912.0	912.0	913.2	903.5	889.9	861.8	810.9	792.0	770.3	745.1	717.4
15°	954.7	955.8	961.8	964.7	957.6	939.5	894.9	878.5	857.8	832.9	805.5
17.5°	982.9	985.4	994.2	1003.5	1012.7	1006.5	973.3	957.9	939.3	916.5	890.7
20°	1048.7	1045.8	1046.2	1043.3	1056.8	1061.5	1043.3	1030.4	1015.5	994.8	971.2
22.5°	1186.8	1181.5	1167.3	1131.7	1115.3	1113.5	1102.8	1095.9	1084.4	1071.3	1048.0
25°	1367.0	1360.7	1332.8	1273.9	1225.4	1180.6	1160.5	1156.2	1148.8	1139.9	1123.1
27.5°	1553.0	1546.2	1510.4	1436.0	1372.6	1282.1	1219.7	1214.0	1207.1	1203.4	1195.4
30°	1716.8	1709.4	1674.1	1598.8	1522.1	1414.0	1299.4	1279.4	1267.7	1268.9	1264.3
32.5°	1860.5	1853.9	1814.4	1737.6	1659.9	1555.0	1403.0	1371.7	1345.4	1335.7	1339.2
35°	1981.1	1975.2	1932.0	1854.6	1776.2	1689.1	1536.1	1489.2	1446.4	1419.4	1416.3
37.5°	2052.0	2048.6	2018.3	1952.6	1874.9	1810.8	1685.3	1633.3	1570.1	1530.9	1513.9
40°	2048.0	2051.8	2046.6	2016.9	1956.6	1909.9	1840.7	1789.3	1727.6	1669.3	1634.5
42.5°	1989.7	1994.9	2018.0	2033.5	2017.1	1988.8	1976.6	1938.3	1882.8	1821.0	1772.7
45°	1909.6	1914.3	1944.2	1999.9	2046.6	2054.7	2095.4	2076.3	2029.5	1976.8	1923.7
47.5°	1787.1	1795.9	1830.7	1919.4	2030.3	2107.5	2195.2	2204.1	2177.0	2133.5	2083.8
50°	1609.6	1621.4	1670.2	1796.3	1968.5	2161.9	2343.6	2377.4	2366.4	2322.4	2272.2
52.5°	1427.8	1439.4	1504.7	1638.7	1869.2	2184.0	2489.7	2576.0	2638.3	2683.7	2692.6
55°	1238.6	1251.7	1323.2	1477.5	1736.5	2155.8	2593.9	2692.0	2755.2	2802.6	2821.8
57.5°	1025.1	1039.9	1109.0	1265.2	1548.9	2041.9	2710.0	2849.0	2942.9	3016.1	3057.3
60°	780.1	798.7	870.4	1027.7	1302.5	1824.2	2761.7	2967.3	3116.8	3226.5	3291.7
62.5°	494.4	513.3	588.0	751.3	1022.1	1526.7	2615.4	2915.3	3170.2	3332.6	3452.0
65°	269.9	278.1	319.5	442.4	689.2	1184.5	2244.3	2598.0	2965.2	3195.5	3378.9
67.5°	202.4	203.6	207.8	237.8	367.0	799.9	1754.7	2078.6	2486.5	2782.6	3001.9
70°	177.2	177.2	177.8	178.0	199.2	433.3	1188.7	1487.0	1860.7	2160.3	2432.8
72.5°	158.9	157.3	156.7	153.3	156.0	222.2	647.0	915.0	1230.3	1566.4	1820.4
75°	137.3	136.9	136.9	133.5	135.3	156.3	280.7	439.0	683.4	996.4	1246.6
77.5°	118.7	116.6	116.9	115.0	120.4	119.7	133.2	180.9	297.6	523.4	731.0
80°	97.7	96.3	97.1	96.1	104.7	88.7	89.7	110.6	147.9	229.5	323.6
82.5°	72.4	72.9	78.3	77.8	88.0	59.7	65.8	82.6	99.4	114.4	124.3
85°	42.3	43.2	56.4	59.2	64.6	31.4	40.3	49.1	55.4	61.4	64.0
87.5°	4.6	6.0	31.4	32.2	28.8	9.4	16.3	20.7	22.0	23.4	20.7
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3
2.5°	419.2	415.6	411.7	409.3	405.3	401.9	395.7	390.5	384.7	380.7	379.1
5°	468.5	459.7	450.2	443.4	434.8	427.4	413.0	396.0	390.5	379.1	376.2
7.5°	532.5	516.5	500.4	487.3	472.5	460.2	436.1	405.3	401.4	382.9	379.1
10°	607.8	584.3	560.5	540.2	518.5	499.6	464.2	420.8	416.5	393.0	389.1
12.5°	691.8	663.2	632.5	602.3	576.5	549.9	501.7	444.8	438.0	410.2	404.7
15°	778.3	747.5	712.0	675.4	643.7	608.5	547.6	476.2	463.6	431.0	423.6
17.5°	863.8	830.4	793.3	752.3	715.2	673.1	597.5	511.3	489.7	451.6	442.1
20°	946.5	912.4	873.2	833.2	786.9	738.9	648.2	545.9	512.8	468.7	456.5
22.5°	1021.6	992.4	953.3	907.3	860.3	806.4	700.0	580.6	533.1	481.9	466.2
25°	1100.8	1074.2	1035.2	991.0	936.5	876.3	753.5	613.5	549.4	489.0	469.6
27.5°	1180.8	1157.9	1121.4	1074.7	1016.2	949.6	807.8	643.7	562.5	491.4	467.8
30°	1266.3	1248.6	1214.8	1162.8	1103.6	1029.8	867.0	673.4	570.9	488.1	460.2
32.5°	1347.2	1346.6	1316.6	1262.6	1198.8	1117.6	929.2	703.5	575.2	479.3	446.7
35°	1431.2	1442.9	1420.3	1368.8	1301.7	1211.6	998.1	735.4	575.4	463.6	429.3
37.5°	1526.7	1547.5	1537.4	1488.6	1418.1	1318.8	1079.0	771.5	573.7	441.8	403.9
40°	1635.3	1663.9	1663.7	1622.3	1546.9	1438.9	1173.0	811.8	569.6	414.7	373.9
42.5°	1759.6	1793.6	1803.1	1762.5	1686.2	1570.1	1280.9	856.1	563.3	387.9	342.2
45°	1901.9	1932.0	1949.7	1912.0	1835.3	1713.0	1404.6	906.4	555.7	353.4	305.9
47.5°	2054.3	2089.2	2115.8	2083.4	2001.8	1875.9	1551.3	971.2	552.7	313.9	266.6
50°	2243.2	2279.3	2336.8	2322.2	2277.3	2176.1	1861.4	1124.5	554.0	276.4	233.7
52.5°	2712.1	2794.6	2867.2	2835.0	2728.3	2554.8	2113.5	1209.7	529.9	245.9	210.9
55°	2853.6	2947.2	3054.4	3041.0	2938.6	2763.7	2312.6	1280.9	506.9	223.5	196.1
57.5°	3101.0	3211.7	3361.5	3358.7	3233.1	3036.1	2569.2	1366.1	496.9	210.7	188.6
60°	3363.2	3504.1	3711.0	3743.3	3607.0	3402.1	2872.2	1470.6	498.2	203.6	184.3
62.5°	3554.7	3761.4	4062.3	4159.0	3998.3	3772.5	3186.5	1575.3	489.7	195.2	179.2
65°	3566.5	3864.0	4290.9	4441.3	4278.6	3988.6	3297.4	1554.6	438.3	184.2	170.9
67.5°	3280.6	3668.1	4186.9	4351.8	4185.6	3855.3	3103.0	1359.1	356.2	164.6	156.7
70°	2732.4	3182.2	3720.7	3904.6	3767.0	3433.0	2700.6	1085.6	266.1	138.9	135.3
72.5°	2111.5	2531.1	3020.1	3190.2	3085.0	2791.3	2130.1	791.1	190.1	112.6	109.8
75°	1509.5	1866.8	2221.8	2286.6	2182.9	1913.1	1382.0	494.2	133.2	92.3	88.4
77.5°	934.6	1167.1	1294.5	1211.0	1078.8	896.7	562.5	244.1	88.7	75.2	71.1
80°	414.7	486.8	454.5	405.0	319.8	262.9	171.8	108.3	57.1	58.0	55.8
82.5°	139.4	147.5	143.5	142.7	128.6	112.6	72.9	46.9	32.0	37.2	36.3
85°	68.0	71.1	71.4	74.0	64.3	50.0	19.8	18.5	13.7	20.0	20.9
87.5°	20.7	20.9	18.9	20.7	16.6	11.4	3.8	5.1	2.5	4.9	4.9
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):**

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3	389.3
2.5°	375.9	374.8	372.7	370.5	369.9	367.0	366.1	364.7	363.9	362.5	361.3
5°	372.4	370.5	368.1	365.6	365.6	361.6	360.0	358.2	358.2	355.5	354.4
7.5°	375.9	373.2	370.7	368.5	369.4	364.7	363.1	361.3	360.9	358.5	357.3
10°	385.6	382.9	379.9	377.6	376.7	373.1	371.0	368.5	366.7	365.0	363.4
12.5°	400.5	397.1	393.0	388.2	386.2	382.9	379.9	376.5	372.4	370.7	368.1
15°	418.3	412.4	407.0	401.1	395.7	392.5	388.2	382.8	377.3	375.0	371.5
17.5°	432.8	426.8	419.0	412.0	402.3	399.6	393.5	387.0	378.1	377.3	372.2
20°	445.0	435.9	426.4	417.9	403.0	401.6	394.1	386.5	373.9	373.9	367.5
22.5°	451.8	439.4	428.2	416.8	398.2	397.1	388.4	379.4	363.9	364.4	356.7
25°	453.0	438.0	423.9	410.2	388.7	386.7	375.9	365.9	349.0	347.9	339.9
27.5°	448.4	430.7	414.5	397.9	374.8	370.5	358.5	346.4	329.9	327.1	318.4
30°	438.0	417.1	398.8	379.7	355.3	348.5	335.8	323.6	306.7	303.0	295.0
32.5°	421.0	397.3	377.0	357.9	330.9	322.4	309.8	297.6	281.3	278.5	271.0
35°	398.8	372.2	350.7	330.4	303.5	294.7	282.6	271.8	256.9	255.8	250.6
37.5°	370.7	343.1	320.2	300.8	275.3	270.7	258.4	250.4	238.1	239.3	236.7
40°	339.0	310.8	289.0	271.8	249.8	245.9	238.4	232.4	221.8	224.9	225.2
42.5°	307.0	278.7	259.0	243.5	224.7	222.2	216.9	213.4	205.5	211.8	214.3
45°	270.7	244.3	227.5	215.9	201.8	201.8	199.2	199.0	193.6	202.4	205.0
47.5°	235.5	215.0	203.2	196.1	186.4	190.9	190.1	192.3	188.4	197.4	199.9
50°	208.9	194.7	187.4	184.2	177.2	184.3	186.0	189.3	185.8	193.9	195.6
52.5°	192.1	182.6	178.7	177.8	173.0	181.7	184.6	187.4	183.6	190.9	190.7
55°	182.6	176.3	174.9	176.6	173.0	181.5	184.3	186.4	183.0	188.0	187.7
57.5°	179.2	175.8	176.6	179.2	176.6	183.9	185.2	187.4	184.2	186.4	187.4
60°	178.9	178.9	182.4	185.8	184.2	189.3	190.1	189.8	186.7	186.9	187.4
62.5°	177.2	181.5	187.2	192.6	192.1	198.3	199.0	195.2	192.6	189.8	189.0
65°	171.8	178.9	187.2	194.7	195.8	205.5	206.7	202.9	201.2	196.4	192.6
67.5°	159.8	168.9	178.7	187.7	189.8	202.9	205.5	207.0	207.8	204.6	199.9
70°	139.4	148.8	158.9	169.5	172.4	186.9	192.3	199.0	204.1	208.6	207.0
72.5°	113.5	122.1	130.7	140.3	144.6	159.8	166.9	178.4	186.4	198.0	202.9
75°	90.0	95.2	100.3	106.3	109.8	124.7	133.5	147.2	158.1	174.5	185.2
77.5°	70.8	73.4	76.0	78.6	79.9	88.4	95.5	109.1	121.8	142.3	158.3
80°	54.5	56.1	56.4	57.1	56.7	60.5	63.2	71.4	82.4	102.6	121.5
82.5°	35.2	36.3	36.9	38.3	35.5	40.7	42.3	43.2	48.9	63.7	77.2
85°	19.8	20.0	20.3	20.9	16.9	22.0	22.3	20.9	20.3	26.3	29.7
87.5°	4.9	4.6	4.9	4.9	1.9	4.6	4.6	3.1	2.2	4.3	3.5
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):**

	135°	145°	155°	165°	175°	180°
0°	389.3	389.3	389.3	389.3	389.3	389.3
2.5°	358.8	358.2	358.5	356.9	356.4	356.7
5°	353.0	351.9	351.9	351.0	349.9	349.9
7.5°	355.5	353.4	352.4	350.7	349.0	349.4
10°	359.6	355.5	352.8	350.2	348.2	348.2
12.5°	362.1	355.0	350.7	347.3	344.9	344.9
15°	362.7	351.9	345.6	341.9	339.6	339.6
17.5°	359.3	345.6	337.6	332.7	330.1	330.8
20°	350.7	333.9	324.4	319.3	316.7	317.0
22.5°	337.4	317.8	307.0	301.0	298.3	298.3
25°	319.0	297.9	286.1	281.3	279.0	279.0
27.5°	298.1	276.4	266.1	262.3	261.0	261.0
30°	274.7	256.6	249.3	246.7	244.3	244.3
32.5°	254.9	242.2	239.6	236.2	230.1	229.7
35°	239.3	237.8	235.9	225.6	216.9	215.9
37.5°	230.7	239.3	226.6	208.9	202.1	201.8
40°	226.2	234.1	212.4	203.7	202.9	202.9
42.5°	215.2	221.0	211.6	206.7	206.7	207.0
45°	203.7	208.6	213.4	209.2	210.7	210.9
47.5°	195.8	205.5	213.4	209.8	212.7	214.3
50°	188.4	202.7	209.2	209.2	212.4	212.7
52.5°	186.7	198.6	205.3	208.3	208.6	207.1
55°	186.9	195.6	202.1	206.2	204.4	204.4
57.5°	186.7	193.9	199.6	201.0	201.8	201.8
60°	186.9	191.5	196.1	195.6	198.3	198.3
62.5°	187.7	188.4	190.7	190.1	194.4	194.4
65°	189.8	184.3	183.0	183.6	188.6	188.4
67.5°	193.6	178.9	174.5	174.6	182.0	180.9
70°	199.0	171.4	164.6	163.0	175.4	173.6
72.5°	200.6	163.0	152.1	150.3	157.8	152.1
75°	192.6	156.0	138.6	132.9	129.7	128.1
77.5°	171.8	151.8	124.7	112.6	107.7	106.5
80°	142.3	142.9	106.3	92.0	106.9	106.5
82.5°	107.4	123.4	85.2	79.8	77.4	64.6
85°	52.0	92.9	65.4	54.8	32.9	31.1
87.5°	4.6	38.8	37.6	24.6	11.1	10.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

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