

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: INVUE

Report Number: P596596

Luminaire Tested: **MSA-SA2B-827-U-SLL**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596596  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-827-U-SLL  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

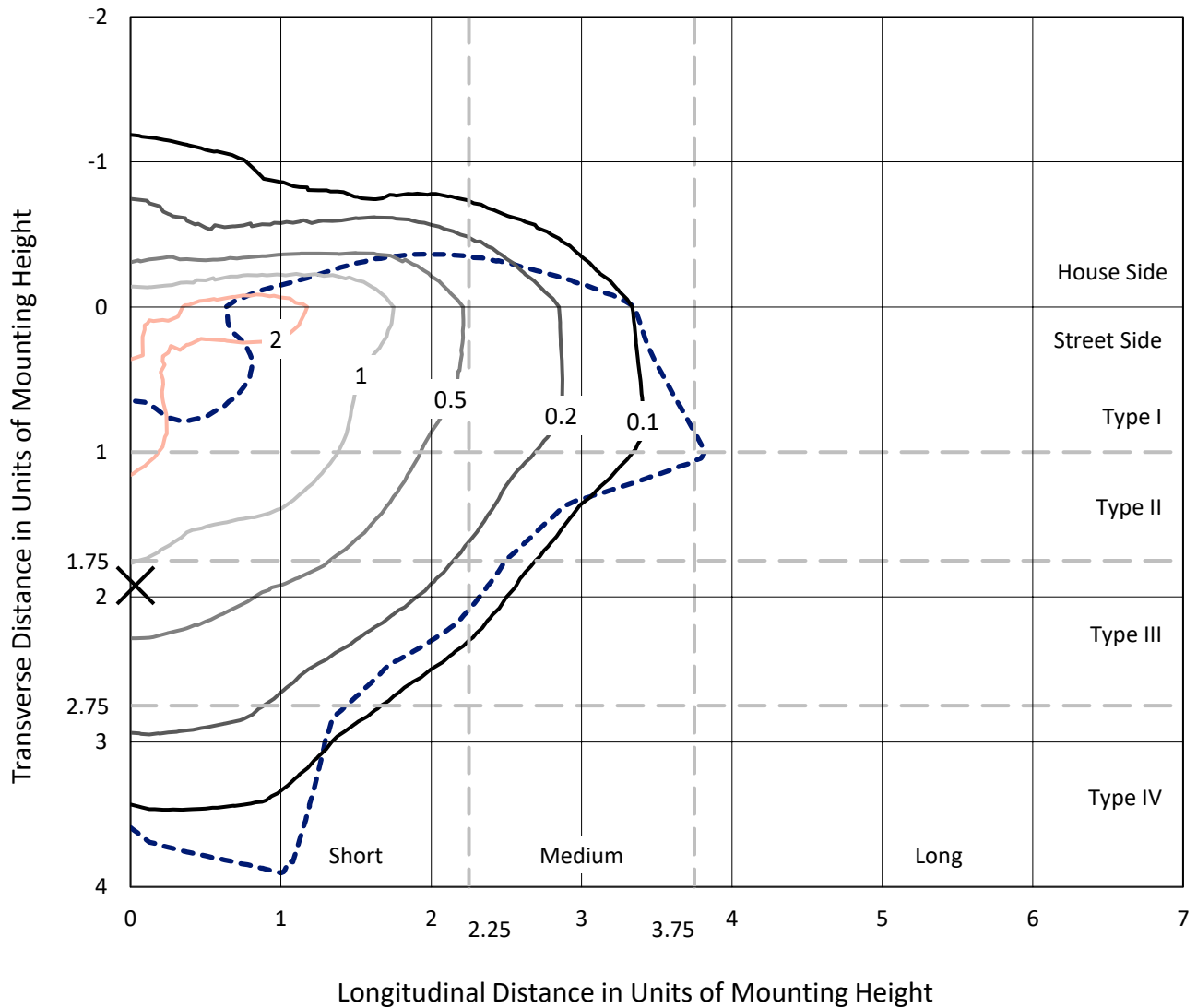
Lumens per Lamp: N/A  
Luminaire Lumens: 6273 lumens  
Efficiency: N/A  
Efficacy: 73.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

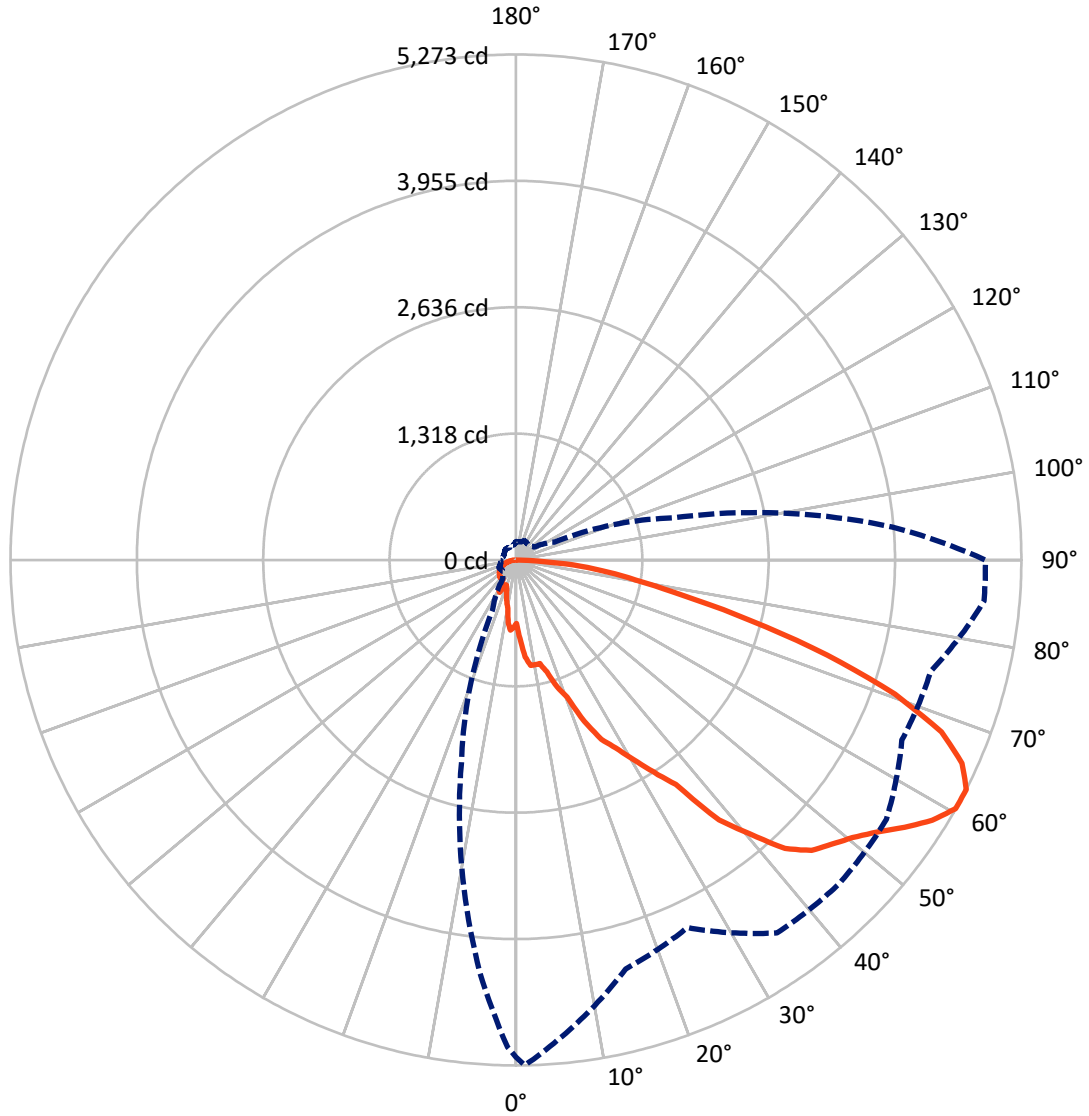
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical



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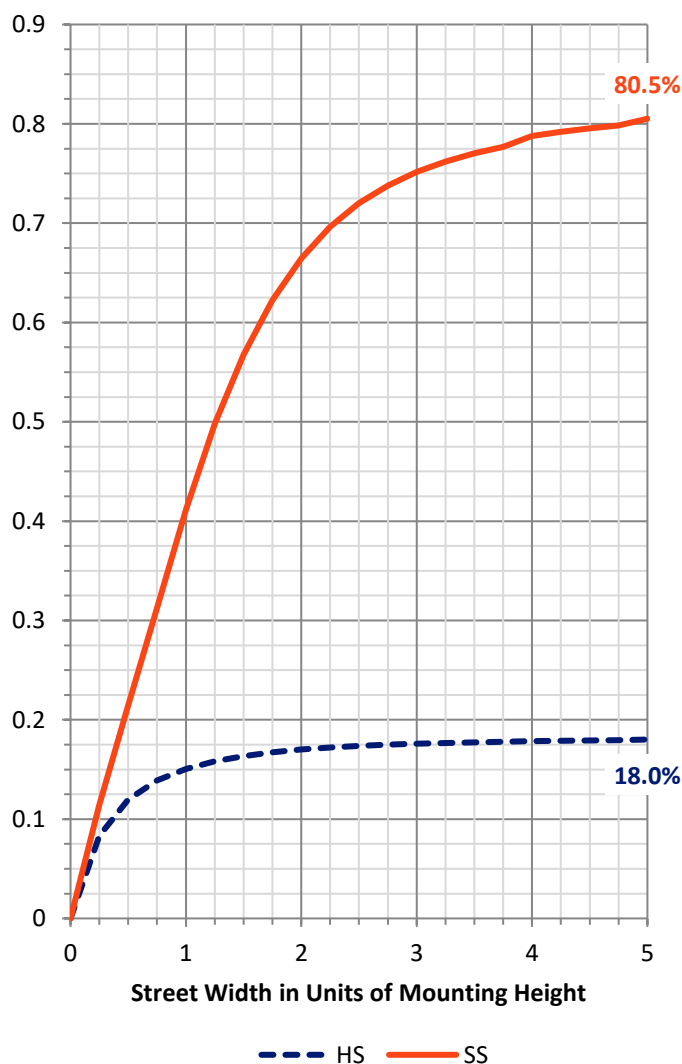
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1142.3	0.0	1142.3
	% Fixture	18.2	0.0	18.2
<b>Street Side</b>	Lumens	5130.7	0.0	5130.7
	% Fixture	81.8	0.0	81.8
<b>Total</b>	Lumens	6273.0	0.0	6273.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.8	1.2
10°-20°	220.4	3.5
20°-30°	389.0	6.2
30°-40°	606.0	9.7
40°-50°	997.8	15.9
50°-60°	1424.1	22.7
60°-70°	1510.1	24.1
70°-80°	834.1	13.3
80°-90°	215.7	3.4
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°	6273.0	100.0
0°-180°	6273.0	100.0

**Coefficient of Utilization**



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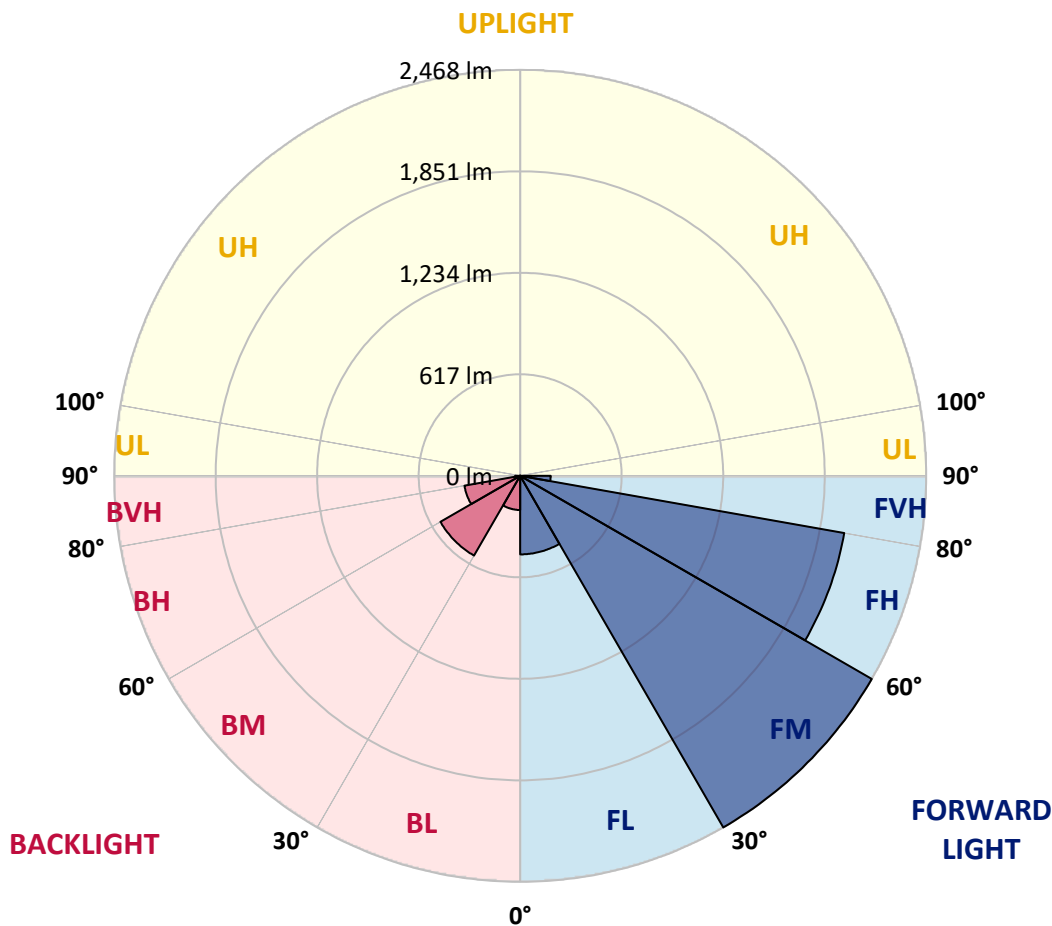
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	477.5	7.6			
FM (30°-60°)	2467.9	39.3			
FH (60°-80°)	2000.1	31.9			G2/5000
FVH (80°-90°)	185.3	3.0			G2/225
BL (0°-30°)	207.7	3.3	B1/500		
BM (30°-60°)	560.0	8.9	B1/1000		
BH (60°-80°)	344.1	5.5	B1/500		G1/500
BVH (80°-90°)	30.4	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5
2.5°	813.4	820.4	806.1	789.9	723.3	787.5	768.3	803.9	792.4	715.1	856.6
5°	1005.2	1017.9	1003.9	1052.3	1055.4	1067.9	952.5	1024.3	999.4	993.0	1064.5
7.5°	1097.7	1110.8	1146.4	1232.6	1299.8	1238.9	1171.7	1156.8	1137.3	1086.4	1129.7
10°	1103.5	1110.8	1158.6	1341.2	1373.8	1417.0	1373.5	1270.9	1228.6	1118.1	1085.2
12.5°	1086.1	1109.0	1170.8	1393.3	1490.1	1537.3	1547.9	1433.8	1330.0	1203.9	1187.2
15°	1202.7	1210.9	1299.5	1430.4	1497.1	1537.0	1571.7	1501.3	1468.8	1368.9	1234.7
17.5°	1369.8	1392.7	1465.1	1513.5	1558.6	1566.2	1537.6	1510.2	1458.4	1591.8	1449.0
20°	1483.1	1527.2	1616.1	1625.2	1530.6	1547.3	1543.4	1545.2	1515.7	1762.2	1683.7
22.5°	1782.6	1830.4	1842.6	1789.6	1611.2	1534.8	1550.1	1594.2	1710.5	1921.7	2010.6
25°	2053.8	2072.4	2183.5	2047.2	1762.8	1596.3	1571.4	1685.5	1875.2	2190.2	2253.5
27.5°	2195.4	2219.4	2293.4	1996.6	1781.7	1517.2	1458.7	1632.5	1825.8	2063.9	2341.8
30°	2376.5	2414.9	2515.6	2047.2	1838.6	1568.9	1439.6	1605.8	1819.5	2146.7	2528.7
32.5°	2563.1	2637.7	2712.6	2225.2	1830.7	1648.1	1562.2	1575.6	1877.3	2320.2	2722.3
35°	2810.3	2876.1	2940.6	2328.1	1990.2	1714.1	1628.9	1770.7	2025.8	2521.4	2992.3
37.5°	3338.8	3442.9	3272.7	2621.0	2163.7	2011.8	1858.1	1942.1	2182.9	2689.2	3433.4
40°	3675.4	3753.7	3589.3	2820.4	2469.4	2212.4	2187.2	2194.2	2399.4	2832.8	3730.2
42.5°	4010.0	4115.9	3854.4	3094.0	2838.9	2626.7	2496.5	2487.6	2641.7	3091.0	4067.8
45°	4259.6	4322.0	3945.4	3324.8	3235.3	3077.9	2980.2	2825.2	2960.1	3269.7	4276.6
47.5°	4378.3	4429.2	4091.9	3459.0	3492.2	3500.4	3676.7	3412.4	3238.3	3390.5	4386.2
50°	4526.6	4550.6	4178.0	3577.1	3736.3	4097.3	4139.7	3691.9	3509.2	3522.3	4451.1
52.5°	4703.7	4713.8	4303.7	3713.5	3983.2	4490.0	4424.6	4165.5	3767.1	3763.1	4573.1
55°	4926.6	4920.5	4461.4	3897.0	4159.4	4723.5	4673.9	4485.2	4048.0	3962.5	4763.1
57.5°	5124.7	5121.1	4670.6	4066.0	4307.7	4843.5	4858.1	4808.1	4239.2	4105.3	4968.9
60°	5221.8	5268.4	4908.6	4250.8	4317.1	4897.6	4903.1	4823.7	4452.9	4288.5	5023.7
62.5°	5184.1	5272.7	5025.5	4417.0	4230.4	4749.7	4772.5	4717.7	4443.2	4480.9	4901.3
65°	5012.4	5114.7	4924.1	4505.6	4177.1	4501.9	4507.7	4369.2	4304.0	4608.5	4614.5
67.5°	4690.3	4786.2	4601.5	4364.3	3812.4	3834.0	3963.1	3974.4	3879.4	4512.3	4211.8
70°	4126.6	4194.2	4078.5	4015.5	3186.6	3059.9	3200.0	3259.9	3303.1	4164.9	3728.4
72.5°	3266.9	3397.5	3415.8	3456.9	2565.6	2354.6	2458.4	2369.5	2651.1	3544.8	3046.2
75°	2417.0	2527.2	2645.6	2874.8	2022.2	1762.8	1750.0	1704.7	1967.7	2850.8	2259.3
77.5°	1708.0	1778.4	1869.4	2296.5	1526.0	1357.7	1365.6	1319.6	1421.0	2154.6	1560.7
80°	1224.3	1261.2	1303.5	1512.9	1125.7	1171.4	1172.6	1129.1	1056.6	1463.3	1041.7
82.5°	872.4	901.1	949.5	997.9	839.3	960.1	959.2	956.5	837.7	989.0	651.7
85°	485.8	524.2	608.2	781.7	606.1	686.4	603.6	664.8	614.9	658.4	330.0
87.5°	34.1	30.4	136.1	453.0	282.8	206.7	108.4	214.6	275.2	344.0	46.0
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5
2.5°	885.8	896.5	854.8	792.1	809.1	790.6	767.1	730.6	655.4	702.0	702.3
5°	1063.9	1023.4	990.9	960.1	908.4	830.1	819.8	757.1	721.8	740.3	737.6
7.5°	1119.6	1062.1	1013.1	903.2	807.3	685.8	649.3	612.2	596.6	641.7	659.7
10°	1058.4	998.5	950.4	816.7	751.6	675.8	575.3	523.9	493.4	505.3	512.3
12.5°	1107.7	1046.6	895.3	820.7	713.2	667.0	579.0	503.5	458.4	469.4	456.3
15°	1155.2	1072.7	921.4	772.9	685.8	618.9	547.6	469.7	416.7	397.9	387.8
17.5°	1328.7	1191.8	918.4	746.1	646.3	569.2	483.4	398.2	362.9	343.4	326.6
20°	1540.3	1349.4	934.8	718.4	604.3	507.1	413.7	334.5	309.9	297.1	292.5
22.5°	1792.1	1551.6	1028.9	714.4	564.7	461.8	375.3	326.0	298.3	284.3	278.5
25°	1992.1	1760.7	1098.3	741.2	562.5	424.3	352.2	362.2	349.5	353.7	319.9
27.5°	2186.3	1817.6	1059.3	729.4	505.9	358.0	346.7	367.7	378.7	382.0	380.8
30°	2350.3	2058.1	1067.9	662.4	427.4	291.6	265.4	275.8	305.9	353.7	362.9
32.5°	2590.5	2173.2	1140.6	621.9	382.0	260.9	231.7	227.7	234.7	252.1	267.0
35°	2871.5	2438.0	1161.0	611.3	350.7	247.2	226.8	217.7	221.3	234.4	237.4
37.5°	3395.4	2631.0	1236.5	598.2	339.1	239.0	223.1	219.8	227.7	238.4	244.4
40°	3684.3	2978.0	1240.2	586.9	324.2	235.6	225.6	224.0	228.9	243.5	247.2
42.5°	4069.3	3175.9	1297.4	573.8	319.0	240.2	230.4	229.8	234.1	242.6	249.3
45°	4304.0	3308.3	1300.4	566.2	317.8	260.3	236.8	234.7	233.8	239.0	245.0
47.5°	4455.3	3499.2	1337.6	557.7	325.1	265.4	244.4	235.3	232.3	234.4	239.0
50°	4598.7	3651.7	1407.9	556.5	332.7	260.3	257.8	235.0	228.9	228.0	231.4
52.5°	4774.7	3902.5	1494.6	568.0	330.9	252.7	267.9	233.8	222.8	220.7	224.0
55°	5030.7	4171.3	1586.9	558.3	312.0	238.0	258.1	232.9	216.4	212.5	215.5
57.5°	5196.6	4325.4	1690.1	550.1	283.4	227.1	249.3	233.5	217.0	208.2	210.0
60°	5141.5	4242.6	1730.6	499.8	256.3	218.6	228.3	228.6	211.6	203.3	204.9
62.5°	4897.9	3942.7	1692.8	441.4	236.2	206.4	206.7	219.5	195.7	190.0	192.4
65°	4557.6	3569.8	1540.0	403.3	226.8	193.6	188.7	192.7	174.4	170.2	175.0
67.5°	4140.0	3110.2	1312.6	363.2	223.4	176.3	170.5	168.9	157.4	152.5	157.4
70°	3616.1	2604.2	1049.3	334.9	210.7	157.4	152.8	151.3	141.6	137.9	142.2
72.5°	2906.5	2033.5	809.7	313.2	196.6	140.0	136.1	134.2	126.0	120.9	126.0
75°	2067.2	1554.0	601.5	280.1	176.9	122.4	117.8	115.4	107.8	102.9	107.5
77.5°	1469.1	1166.5	420.1	231.7	145.8	103.5	100.8	96.8	90.1	84.3	88.9
80°	1086.1	833.5	270.9	178.7	111.4	82.8	81.3	78.5	72.1	65.1	68.5
82.5°	715.1	600.9	155.2	121.2	81.0	59.7	60.9	59.1	53.0	45.7	47.5
85°	320.2	355.9	82.5	66.7	52.7	35.9	39.3	38.1	33.5	26.5	27.1
87.5°	30.7	60.0	25.3	24.4	19.5	11.3	14.0	11.9	10.0	6.4	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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5
2.5°	712.9	670.0	627.1	653.3	653.9	660.9	661.8	635.9	656.6	672.4	688.9
5°	724.2	696.2	697.7	672.4	658.7	676.4	672.7	665.7	678.2	695.6	716.6
7.5°	642.6	624.3	621.3	596.9	537.9	524.8	535.8	540.3	557.1	583.9	606.4
10°	501.7	537.9	497.1	487.7	472.1	441.7	424.0	421.9	457.5	479.1	498.0
12.5°	452.0	442.9	438.0	412.2	412.2	379.9	369.6	379.0	433.8	449.3	473.7
15°	385.1	378.4	355.9	343.1	337.0	323.9	334.9	344.0	395.1	396.3	421.9
17.5°	319.6	315.7	294.4	291.9	285.8	280.1	290.1	312.0	339.7	334.9	346.7
20°	285.8	272.1	252.7	259.7	253.3	248.7	244.4	275.5	295.0	301.4	308.4
22.5°	277.3	252.4	240.8	234.4	234.7	227.4	228.3	254.2	283.7	287.7	283.4
25°	316.9	272.4	235.0	216.4	209.4	207.0	214.0	236.8	272.4	281.0	284.3
27.5°	370.8	295.9	242.0	210.3	196.3	197.6	207.6	223.4	265.4	280.7	284.6
30°	355.9	278.2	242.3	205.8	188.4	194.8	198.5	213.7	260.0	282.8	302.6
32.5°	274.6	250.2	243.8	209.4	202.4	192.4	197.6	212.2	243.8	258.1	259.1
35°	232.6	214.0	209.7	201.2	191.5	187.2	193.0	205.8	226.5	235.3	234.1
37.5°	230.7	210.3	193.6	190.0	186.0	184.8	188.1	200.0	221.0	236.5	233.2
40°	233.8	208.5	191.5	185.1	186.6	181.1	184.5	199.1	221.9	236.5	233.5
42.5°	230.1	206.4	188.7	183.9	185.4	177.8	181.7	197.0	219.5	236.8	231.0
45°	222.8	201.5	187.2	179.0	186.0	174.7	179.6	191.5	212.2	231.0	224.3
47.5°	215.5	195.7	180.8	175.6	182.6	171.7	173.8	184.2	204.9	223.4	217.7
50°	207.6	188.4	175.6	174.1	179.0	171.1	167.7	176.3	196.0	214.6	209.7
52.5°	199.1	182.3	172.0	171.4	175.9	167.1	162.3	168.9	186.6	205.2	201.2
55°	190.9	175.6	167.4	168.9	174.1	163.8	157.7	161.9	176.6	194.8	189.3
57.5°	182.6	168.0	161.3	165.6	169.6	159.5	151.9	154.3	166.2	184.2	177.8
60°	175.3	161.3	154.6	159.8	163.5	153.1	144.3	145.8	156.5	172.6	166.8
62.5°	165.9	154.0	145.2	151.9	154.6	144.6	135.2	137.0	145.5	160.7	156.5
65°	152.5	144.9	136.7	141.2	144.9	134.5	125.7	127.9	134.2	148.6	145.5
67.5°	140.9	133.6	128.2	131.8	132.4	124.5	116.6	117.8	123.0	136.4	133.0
70°	128.2	121.2	116.9	119.6	119.3	112.6	106.5	106.8	111.1	123.3	118.7
72.5°	114.2	107.5	105.3	106.8	105.6	99.5	93.8	95.9	98.6	107.8	104.1
75°	99.2	93.1	91.9	93.5	91.6	85.8	80.7	82.8	85.2	92.8	88.3
77.5°	83.7	78.2	78.5	78.8	76.4	72.4	67.3	69.4	70.9	76.1	71.5
80°	66.7	62.4	63.6	63.6	60.9	58.1	53.3	53.9	54.8	56.6	53.3
82.5°	48.7	48.7	48.7	49.0	43.2	44.1	39.9	39.6	38.7	38.4	36.2
85°	28.9	30.1	30.7	31.7	23.4	27.4	23.7	22.8	21.0	19.2	18.6
87.5°	6.4	8.2	8.2	7.9	0.0	3.0	1.5	2.4	0.6	0.0	0.0
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):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5	661.5
2.5°	670.0	651.7	685.8	716.3	711.4	729.1	688.0	748.8	813.4	813.4
5°	711.1	695.6	704.4	722.1	735.5	796.9	848.1	898.9	1003.9	1005.2
7.5°	599.7	633.2	641.1	635.9	693.4	772.6	856.9	1001.8	1090.7	1097.7
10°	560.7	575.9	600.0	613.4	636.8	714.8	819.5	991.5	1085.8	1103.5
12.5°	508.1	564.4	600.9	675.8	694.4	709.9	876.4	1025.3	1090.4	1086.1
15°	450.5	493.1	545.8	628.6	675.8	794.5	910.2	1133.6	1170.5	1202.7
17.5°	359.2	390.6	460.6	554.9	671.8	781.1	993.6	1267.6	1336.4	1369.8
20°	295.6	295.9	365.9	491.0	618.3	725.1	1025.3	1378.7	1466.0	1483.1
22.5°	279.4	265.4	302.3	404.0	559.2	758.3	1089.2	1557.4	1739.7	1782.6
25°	270.6	253.6	276.7	356.5	516.9	775.6	1217.9	1803.0	2037.1	2053.8
27.5°	274.3	282.2	289.5	317.8	463.3	743.1	1188.1	1912.9	2163.7	2195.4
30°	298.9	311.7	295.0	304.7	419.2	695.9	1241.4	2091.3	2323.3	2376.5
32.5°	248.7	243.8	242.3	263.6	375.0	653.3	1353.1	2342.4	2496.2	2563.1
35°	224.3	216.7	219.8	244.1	353.4	647.2	1415.8	2550.3	2769.2	2810.3
37.5°	223.4	214.6	218.6	236.8	361.0	658.1	1516.3	2884.0	3250.8	3338.8
40°	221.3	216.4	218.6	232.3	353.1	664.2	1574.1	3164.3	3586.2	3675.4
42.5°	221.0	218.6	220.7	235.9	344.9	667.0	1654.2	3417.6	3939.7	4010.0
45°	220.1	222.5	222.5	239.0	341.2	685.2	1701.3	3541.8	4172.8	4259.6
47.5°	215.8	223.1	235.0	238.0	326.3	676.7	1768.0	3730.2	4296.7	4378.3
50°	210.3	222.2	250.8	232.0	323.9	656.0	1845.9	3879.7	4455.6	4526.6
52.5°	203.0	220.7	247.2	220.1	319.6	652.3	1955.2	4073.9	4641.0	4703.7
55°	192.7	215.2	235.9	208.2	309.3	640.8	2122.3	4314.7	4883.6	4926.6
57.5°	183.3	207.0	219.5	201.5	284.6	643.2	2238.6	4511.0	5087.3	5124.7
60°	174.7	206.1	196.0	194.5	259.4	610.6	2276.4	4508.9	5163.1	5221.8
62.5°	165.6	194.5	179.6	185.1	237.1	577.2	2196.3	4315.6	5081.2	5184.1
65°	153.7	166.8	165.9	178.4	237.7	522.7	2012.8	3974.7	4876.9	5012.4
67.5°	139.7	147.6	152.8	167.4	245.4	480.4	1717.5	3564.6	4529.3	4690.3
70°	125.4	133.3	139.1	153.1	252.4	460.9	1367.1	2988.7	3963.1	4126.6
72.5°	110.8	119.0	123.6	135.8	242.9	419.2	1011.9	2325.4	3181.1	3266.9
75°	95.6	103.5	107.2	118.4	211.0	346.7	698.6	1761.3	2329.9	2417.0
77.5°	80.1	88.6	89.8	98.9	161.0	265.1	447.8	1351.0	1649.9	1708.0
80°	63.9	72.4	72.4	77.3	113.2	182.3	268.2	1019.2	1201.5	1224.3
82.5°	46.0	55.1	54.5	54.8	78.2	112.9	155.2	763.8	868.2	872.4
85°	27.1	33.5	33.2	30.4	46.3	60.9	84.0	474.3	484.6	485.8
87.5°	5.2	7.9	7.0	3.0	12.8	18.0	24.4	88.0	35.0	34.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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