

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: P368193

Luminaire Tested: **MSA-SA4A-727-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368193  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-727-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9458 lumens  
Efficiency: N/A  
Efficacy: 73.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

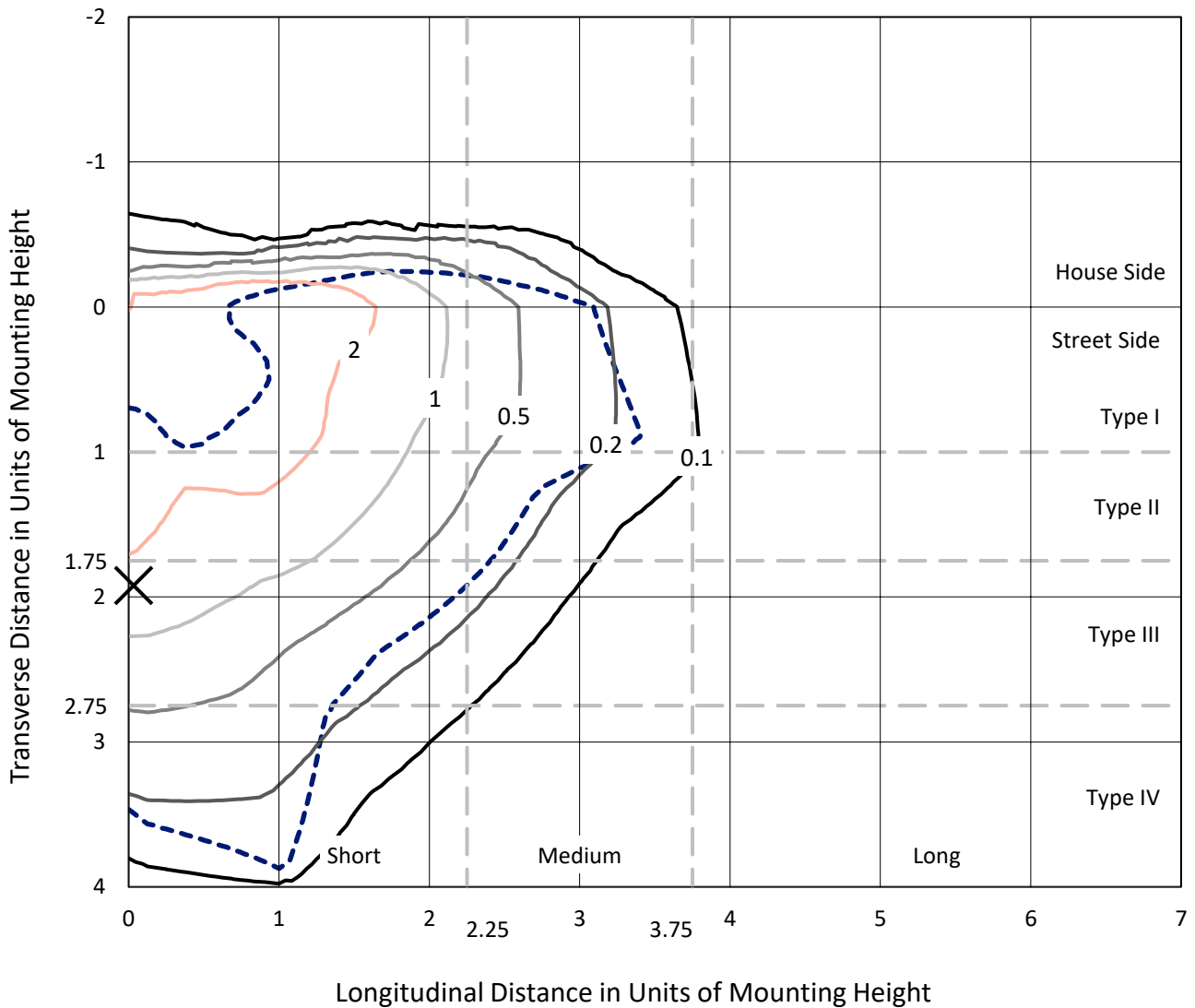
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

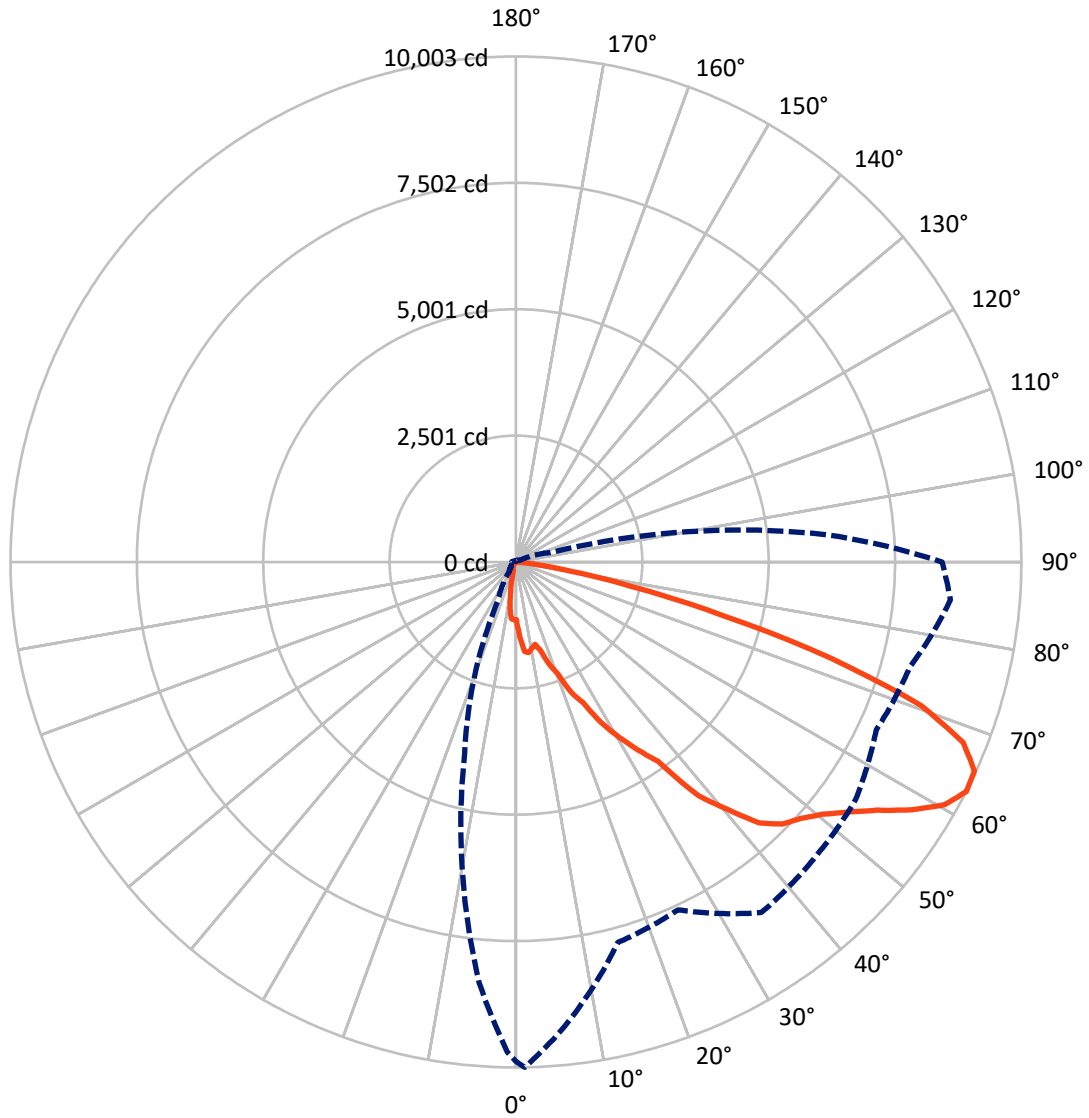
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 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	1081.6	0.0	1081.6
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	8376.4	0.0	8376.4
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	9458.0	0.0	9458.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.3	1.3
10°-20°	332.5	3.5
20°-30°	537.5	5.7
30°-40°	900.3	9.5
40°-50°	1472.2	15.6
50°-60°	2179.2	23.0
60°-70°	2501.9	26.5
70°-80°	1237.2	13.1
80°-90°	169.8	1.8
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°	9458.0	100.0
0°-180°	9458.0	100.0

**Coefficient of Utilization**



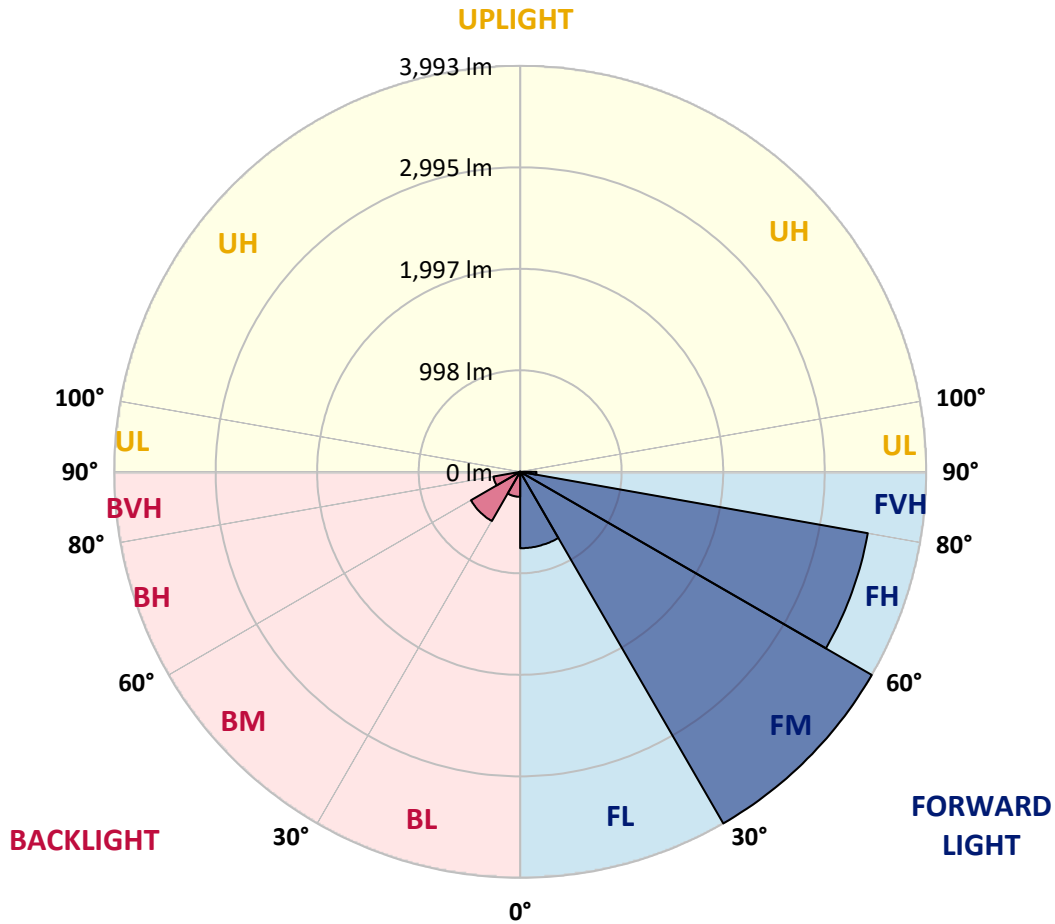
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	751.2	7.9			
FM (30°-60°)	3993.1	42.2			
FH (60°-80°)	3471.7	36.7			G2/5000
FVH (80°-90°)	160.4	1.7			G2/225
BL (0°-30°)	246.1	2.6	B1/500		
BM (30°-60°)	558.6	5.9	B1/1000		
BH (60°-80°)	267.4	2.8	B1/500		G1/500
BVH (80°-90°)	9.4	0.1			G0/10
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°	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4
2.5°	1469.2	1476.2	1443.3	1439.0	1362.5	1457.9	1460.6	1471.9	1401.8	1266.0	1455.7
5°	1758.1	1777.5	1752.2	1864.8	1897.1	1966.7	1838.9	1953.2	1904.7	1918.2	1945.7
7.5°	1792.6	1812.5	1865.9	2054.5	2228.6	2185.0	2170.9	2214.1	2210.3	2110.6	2160.2
10°	1720.9	1737.6	1826.5	2169.9	2245.9	2442.0	2490.0	2390.8	2350.4	2132.1	2036.7
12.5°	1642.8	1670.8	1784.0	2195.7	2423.7	2622.1	2780.0	2638.8	2504.6	2272.3	2185.0
15°	1792.6	1808.2	1986.1	2249.6	2449.0	2585.9	2715.3	2668.4	2647.9	2480.8	2185.0
17.5°	2086.3	2123.0	2251.8	2381.7	2539.1	2621.5	2590.8	2576.2	2524.0	2786.4	2480.3
20°	2295.4	2363.9	2532.6	2588.6	2463.6	2540.7	2521.8	2508.9	2467.9	2956.2	2819.9
22.5°	2748.2	2811.2	2814.5	2834.4	2543.4	2420.5	2389.2	2393.0	2578.9	3006.9	3242.4
25°	3056.5	3078.0	3248.3	3106.0	2761.1	2457.1	2338.0	2391.4	2659.2	3371.2	3639.6
27.5°	3560.9	3612.1	3718.3	3236.5	2891.5	2434.0	2244.2	2438.3	2870.5	3491.9	4081.0
30°	3972.2	4021.2	4192.1	3414.9	3004.7	2548.8	2284.7	2532.6	3002.0	3740.4	4477.7
32.5°	4305.8	4432.4	4626.5	3690.3	3000.4	2680.8	2491.1	2501.3	3163.7	4062.2	4870.1
35°	4732.1	4850.1	4986.5	3880.0	3196.6	2723.4	2552.0	2808.5	3404.1	4398.5	5398.3
37.5°	5693.1	5871.5	5602.0	4358.1	3425.1	3108.2	2792.4	2997.7	3655.8	4741.8	6124.2
40°	6279.5	6429.8	6169.5	4602.2	3820.7	3302.2	3221.4	3326.5	3902.1	4919.1	6671.3
42.5°	6857.2	7055.6	6620.6	4969.8	4196.4	3849.8	3628.8	3713.5	4258.3	5347.1	7286.8
45°	7275.5	7398.3	6718.2	5162.2	4712.7	4473.9	4326.8	4200.7	4755.3	5621.9	7684.0
47.5°	7485.7	7583.7	6910.6	5223.1	5019.9	5134.2	5456.5	5192.9	5195.1	5820.8	7898.0
50°	7776.7	7845.1	7018.4	5295.9	5353.5	6163.0	6325.8	5764.7	5697.4	6020.2	7933.0
52.5°	8185.8	8219.2	7227.5	5487.7	5853.1	6968.8	7027.5	6800.6	6200.2	6391.0	8010.6
55°	8729.6	8670.8	7601.0	5890.9	6374.3	7559.0	7637.6	7439.8	6832.4	6761.3	8251.0
57.5°	9316.0	9248.6	8154.5	6458.9	6939.7	8010.1	8057.0	8072.6	7252.3	7089.0	8659.5
60°	9736.4	9748.8	8851.4	7110.5	7291.1	8441.8	8348.0	8205.7	7675.9	7569.2	8858.4
62.5°	9883.5	10002.6	9394.1	7793.4	7594.0	8468.7	8323.2	8203.0	7865.6	8064.5	8630.4
65°	9763.3	9971.4	9520.2	8393.3	7777.2	8130.8	7979.3	7902.3	7859.7	8266.6	8125.9
67.5°	9285.8	9546.1	9159.1	8398.7	7111.1	6923.0	7101.9	7346.1	7204.9	8099.0	7419.4
70°	8216.0	8501.1	8321.0	7906.0	5923.7	5446.8	5644.0	6013.2	5913.5	7203.2	6379.7
72.5°	6164.1	6530.6	6566.2	6825.4	4702.5	4099.4	4127.9	4117.7	4289.6	5808.4	4978.4
75°	3959.8	4244.9	4630.2	5507.7	3572.2	2992.9	2719.1	2652.2	2972.9	4538.6	3564.2
77.5°	2298.7	2332.6	2510.5	4155.4	2558.5	2156.4	1969.9	2065.3	2177.4	3167.5	2362.3
80°	1099.5	1116.7	1190.0	2138.1	1777.5	1866.4	1722.5	1829.8	1495.1	1820.6	1340.4
82.5°	348.7	352.5	364.9	1050.4	1103.8	1236.4	792.3	1062.3	924.3	1100.6	892.5
85°	58.2	99.2	122.3	303.4	623.0	417.2	171.9	378.9	515.8	694.2	405.3
87.5°	0.0	0.0	0.0	5.4	50.7	23.7	3.8	21.6	79.2	154.7	18.3
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°	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4
2.5°	1510.7	1547.9	1407.8	1282.2	1314.0	1288.7	1250.4	1185.2	1034.3	1145.3	1137.8
5°	1944.0	1875.1	1685.3	1596.9	1489.2	1324.8	1304.8	1178.7	1123.2	1132.4	1124.3
7.5°	2094.9	1971.5	1803.9	1537.7	1284.9	1047.7	975.0	892.5	875.8	911.4	934.6
10°	1976.4	1845.4	1698.8	1367.9	1173.3	1001.9	822.5	707.1	644.6	637.1	643.5
12.5°	2030.8	1889.6	1587.8	1334.5	1131.3	976.1	775.6	601.5	465.7	475.9	449.0
15°	2068.5	1906.3	1561.4	1264.4	1044.5	837.0	595.6	421.5	310.4	278.1	258.7
17.5°	2290.1	2058.3	1528.0	1183.6	923.2	651.6	374.0	244.2	208.0	196.7	187.6
20°	2574.6	2245.3	1527.4	1098.4	744.3	407.5	233.4	176.8	168.2	174.6	167.6
22.5°	2905.5	2494.3	1608.8	992.2	534.1	257.1	181.6	156.8	148.2	153.6	154.1
25°	3238.6	2867.8	1675.1	891.4	371.9	197.3	161.7	144.4	134.7	139.6	136.9
27.5°	3840.1	3177.2	1660.0	762.6	273.8	173.5	150.4	135.3	120.7	128.3	127.7
30°	4233.6	3723.2	1718.8	582.1	217.2	152.0	140.1	123.4	107.8	116.4	115.9
32.5°	4704.1	3957.6	1782.4	446.8	180.6	143.9	126.1	109.9	100.8	106.2	105.1
35°	5232.8	4421.1	1665.4	371.9	156.8	129.9	111.6	99.2	91.1	93.8	93.8
37.5°	6166.8	4808.6	1595.3	302.9	146.1	117.5	104.6	89.5	84.6	84.6	87.3
40°	6697.2	5400.4	1386.2	239.8	149.3	108.3	97.6	81.9	75.5	74.9	77.6
42.5°	7387.0	5741.6	1255.2	194.0	135.3	105.6	89.5	74.4	66.8	66.3	69.0
45°	7796.1	5932.4	1070.9	152.5	121.3	122.9	83.0	68.4	57.1	55.0	59.8
47.5°	8054.3	6185.1	966.4	121.3	105.6	122.3	80.8	59.3	48.0	45.3	49.6
50°	8185.2	6310.2	945.9	104.0	91.6	109.4	92.7	49.6	41.0	37.2	41.0
52.5°	8321.6	6513.4	953.4	95.9	80.8	87.9	87.9	42.6	36.1	31.8	34.5
55°	8597.0	6813.6	936.7	91.1	74.4	66.8	56.6	37.7	32.9	28.0	30.7
57.5°	8935.5	7029.2	936.7	86.8	69.0	57.1	45.3	35.0	30.2	24.3	26.4
60°	8871.3	6802.3	890.4	82.5	64.7	53.4	41.0	32.3	28.0	22.1	23.7
62.5°	8431.0	6185.1	721.1	76.0	60.9	50.7	37.2	30.7	26.4	19.4	21.0
65°	7913.6	5529.8	501.2	69.0	56.6	45.8	33.4	29.1	24.3	17.2	18.3
67.5°	7290.6	4748.8	278.1	62.0	52.3	39.9	30.7	28.6	23.2	15.6	16.7
70°	6209.4	3585.2	149.3	56.6	49.0	36.6	29.1	28.6	23.2	15.1	15.6
72.5°	4661.5	2257.7	87.3	51.7	44.7	34.0	27.5	29.1	22.6	14.6	14.6
75°	3171.8	1370.6	62.5	44.2	39.9	28.6	26.4	28.0	23.2	14.6	13.5
77.5°	2156.4	963.1	51.2	39.9	36.1	25.3	26.9	28.0	23.2	11.9	9.2
80°	1346.3	496.9	38.8	31.8	31.3	22.1	26.9	24.3	15.1	2.7	0.0
82.5°	941.6	184.9	22.6	24.3	24.3	15.6	21.0	17.2	8.6	0.0	0.0
85°	395.1	31.8	12.4	17.2	15.1	9.2	16.7	12.9	5.4	0.0	0.0
87.5°	7.0	0.0	4.9	10.2	10.8	5.4	8.6	5.4	0.0	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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4
2.5°	1173.3	1122.1	1014.3	1066.1	1060.7	1084.4	1086.5	1031.6	1150.1	1223.4	1234.2
5°	1125.4	1090.9	1084.9	1055.3	1047.7	1091.4	1067.7	1066.1	1123.2	1206.7	1207.3
7.5°	935.1	908.7	921.1	886.6	797.7	803.1	811.1	845.1	894.1	949.1	969.1
10°	641.9	710.4	660.2	655.9	646.8	618.2	595.6	613.3	676.9	727.6	746.5
12.5°	458.1	468.9	499.6	488.3	503.9	479.7	470.5	526.0	588.0	639.7	676.9
15°	267.9	286.2	304.5	343.3	358.9	354.1	382.1	428.5	478.6	502.3	548.1
17.5°	188.6	190.3	194.0	236.1	263.6	274.3	291.0	326.1	346.6	357.3	376.2
20°	164.9	160.1	153.6	177.3	203.2	216.7	211.8	239.3	256.0	266.8	280.3
22.5°	149.3	141.2	137.4	145.5	165.5	177.3	179.5	195.6	221.0	228.5	232.8
25°	134.7	129.4	126.7	131.0	141.7	153.1	155.2	176.2	198.9	202.1	210.7
27.5°	125.0	114.8	115.9	119.1	124.0	138.0	142.3	154.1	187.0	190.8	193.5
30°	114.8	104.0	107.3	110.5	108.3	125.6	132.0	145.5	177.3	183.2	186.5
32.5°	104.6	96.5	95.9	99.2	102.9	112.1	126.1	141.7	170.9	178.9	187.0
35°	93.2	86.8	87.9	88.4	93.2	105.1	115.3	123.4	143.4	147.7	150.4
37.5°	85.2	79.8	78.7	84.1	88.9	98.1	101.9	105.6	132.0	141.7	142.3
40°	75.5	72.2	72.2	76.0	86.8	85.7	90.5	102.4	127.7	138.0	139.1
42.5°	68.4	64.1	65.2	69.0	76.5	71.1	80.8	98.1	126.1	136.4	135.8
45°	57.7	56.6	58.7	62.0	65.2	60.4	75.5	93.8	120.7	134.2	130.4
47.5°	48.0	48.0	50.7	53.9	52.3	53.9	68.4	87.9	117.5	129.9	127.2
50°	39.3	39.9	42.6	48.0	43.1	47.4	61.4	81.9	112.1	125.6	123.4
52.5°	33.4	34.0	35.6	39.3	37.2	43.1	56.6	76.0	106.7	118.0	117.0
55°	29.1	30.2	30.2	32.3	33.4	40.4	51.2	70.1	98.6	111.0	108.9
57.5°	25.9	26.9	26.4	28.0	29.1	35.6	45.8	63.6	90.5	100.8	97.6
60°	23.2	24.3	23.7	25.9	25.3	30.7	39.9	56.6	81.9	90.0	87.3
62.5°	20.5	21.6	21.6	22.6	23.2	25.9	34.5	50.1	73.3	79.8	77.6
65°	18.3	19.4	19.9	19.4	20.5	22.1	29.1	45.3	63.6	70.1	66.8
67.5°	16.7	17.8	18.9	16.7	17.8	18.3	24.8	40.4	56.1	61.4	58.7
70°	16.2	16.7	16.7	14.6	14.0	14.6	21.6	34.5	49.0	54.4	50.7
72.5°	15.1	15.6	15.1	11.9	10.2	11.3	18.3	29.1	41.5	45.8	42.6
75°	14.0	14.6	14.0	9.7	6.5	8.1	15.1	25.3	35.6	37.7	36.1
77.5°	11.9	12.9	12.9	7.0	2.2	4.9	11.3	20.5	29.6	29.6	30.2
80°	1.1	3.2	5.4	3.8	0.0	0.5	3.8	10.8	18.9	18.3	19.9
82.5°	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	6.5	4.9	5.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4
2.5°	1208.9	1192.2	1213.2	1277.3	1251.5	1256.3	1239.1	1345.3	1465.4	1469.2
5°	1208.4	1193.3	1224.5	1221.8	1295.7	1376.0	1453.6	1579.2	1757.0	1758.1
7.5°	959.9	1049.4	1072.5	1065.5	1160.4	1270.9	1390.5	1630.9	1777.0	1792.6
10°	865.6	904.4	951.8	969.1	1008.4	1113.5	1248.8	1521.0	1684.8	1720.9
12.5°	750.2	874.2	937.3	1059.6	1082.2	1097.3	1310.8	1547.4	1647.1	1642.8
15°	621.4	729.2	828.9	978.2	1039.7	1198.1	1366.3	1676.2	1735.5	1792.6
17.5°	439.8	521.2	674.2	831.1	1018.6	1191.1	1519.3	1906.3	2018.4	2086.3
20°	294.3	333.6	472.1	679.6	917.3	1088.7	1581.9	2114.4	2236.7	2295.4
22.5°	238.8	257.6	329.3	498.0	783.7	1083.9	1607.2	2341.3	2670.0	2748.2
25°	210.2	223.1	261.4	368.7	650.5	1062.3	1747.3	2596.7	2993.4	3056.5
27.5°	183.8	203.2	231.8	304.0	557.8	1047.2	1818.5	3025.7	3498.9	3560.9
30°	175.7	199.4	226.9	277.0	493.2	989.0	1931.6	3412.7	3861.7	3972.2
32.5°	189.7	197.8	211.3	253.9	443.0	927.6	2130.5	3875.1	4161.9	4305.8
35°	150.4	164.9	188.6	232.8	422.0	924.3	2243.2	4172.7	4643.2	4732.1
37.5°	147.1	160.6	191.3	226.9	447.3	949.1	2410.2	4782.2	5510.9	5693.1
40°	142.8	160.1	189.2	224.2	447.3	973.4	2517.0	5270.0	6094.6	6279.5
42.5°	141.2	163.3	188.6	235.5	433.3	986.8	2678.1	5756.7	6711.2	6857.2
45°	140.1	166.5	190.3	249.0	430.1	1031.0	2769.2	5993.3	7107.8	7275.5
47.5°	137.4	166.5	212.4	240.9	412.3	1026.7	2887.2	6344.1	7344.4	7485.7
50°	135.3	167.6	240.4	225.8	415.0	1000.3	3047.3	6673.4	7675.9	7776.7
52.5°	130.4	171.4	236.1	204.8	406.9	997.6	3286.1	7141.8	8111.9	8185.8
55°	119.6	166.5	213.4	178.9	378.4	966.9	3602.4	7750.8	8716.6	8729.6
57.5°	109.9	154.7	178.4	164.4	316.9	970.7	3875.1	8311.3	9255.6	9316.0
60°	100.2	160.6	138.5	153.1	262.5	901.7	4007.2	8525.9	9648.0	9736.4
62.5°	91.1	148.2	118.0	140.7	233.9	837.5	3915.6	8353.4	9698.1	9883.5
65°	80.8	102.9	99.7	126.1	236.6	747.5	3609.4	7848.4	9507.8	9763.3
67.5°	69.5	80.8	87.9	108.9	253.3	670.5	3084.5	7037.8	8996.4	9285.8
70°	60.9	72.8	76.5	95.4	263.6	619.8	2434.0	5913.0	7948.6	8216.0
72.5°	50.7	67.4	68.4	83.5	253.9	569.7	1734.4	4244.9	6035.8	6164.1
75°	43.7	56.1	62.0	70.1	213.4	425.2	955.6	2627.4	3816.4	3959.8
77.5°	39.3	42.6	46.9	48.5	90.5	221.5	328.8	1620.1	2137.0	2298.7
80°	30.2	33.4	32.3	33.4	49.6	76.5	125.0	759.4	1009.5	1099.5
82.5°	9.7	16.2	17.8	15.1	32.3	37.7	36.1	262.5	328.2	348.7
85°	2.2	5.9	2.7	0.0	10.8	19.4	2.7	39.9	78.7	58.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

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