

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: P596595

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

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596595  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)  
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-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS  
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

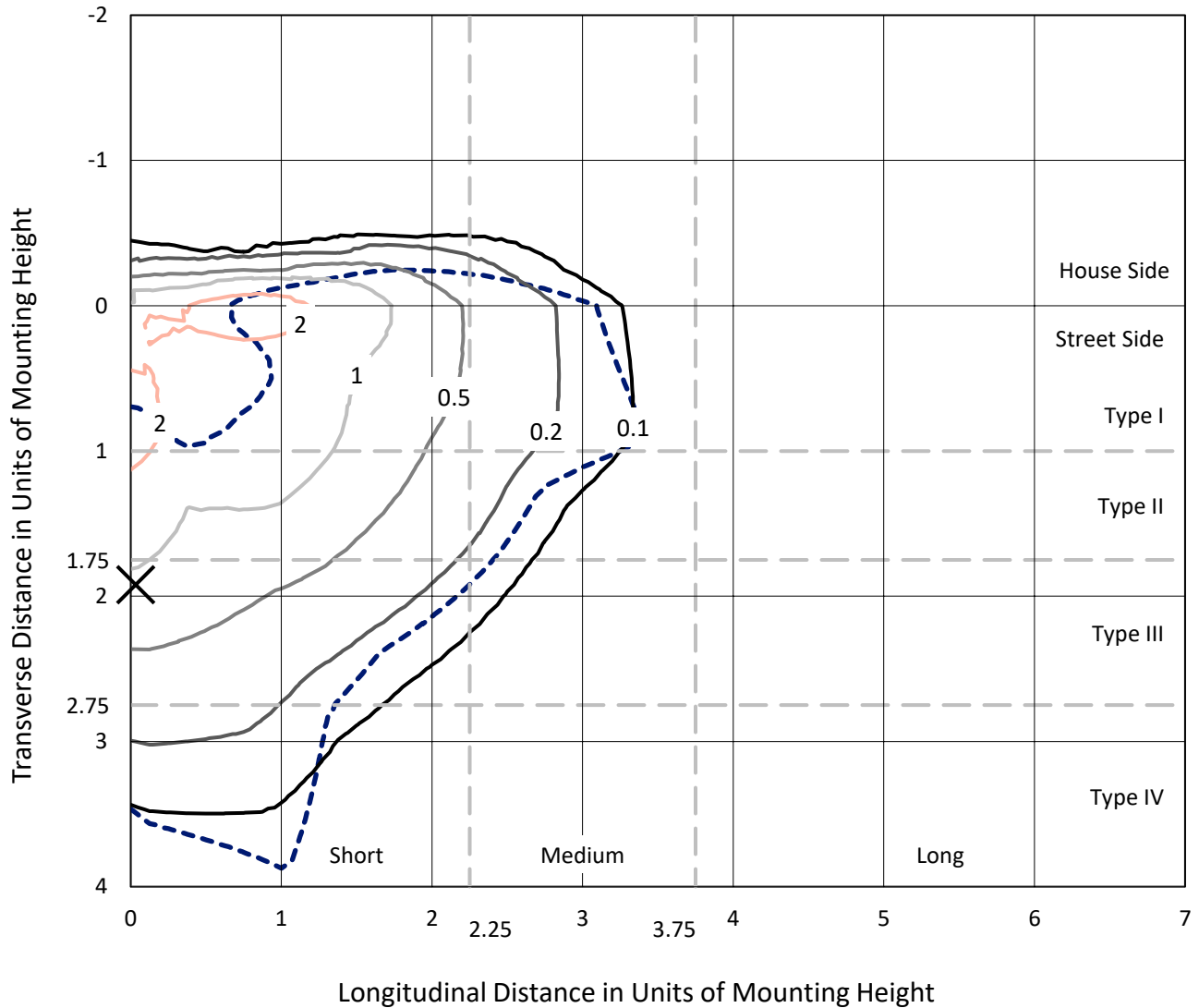
Lumens per Lamp: N/A  
Luminaire Lumens: 5342 lumens  
Efficiency: N/A  
Efficacy: 62.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

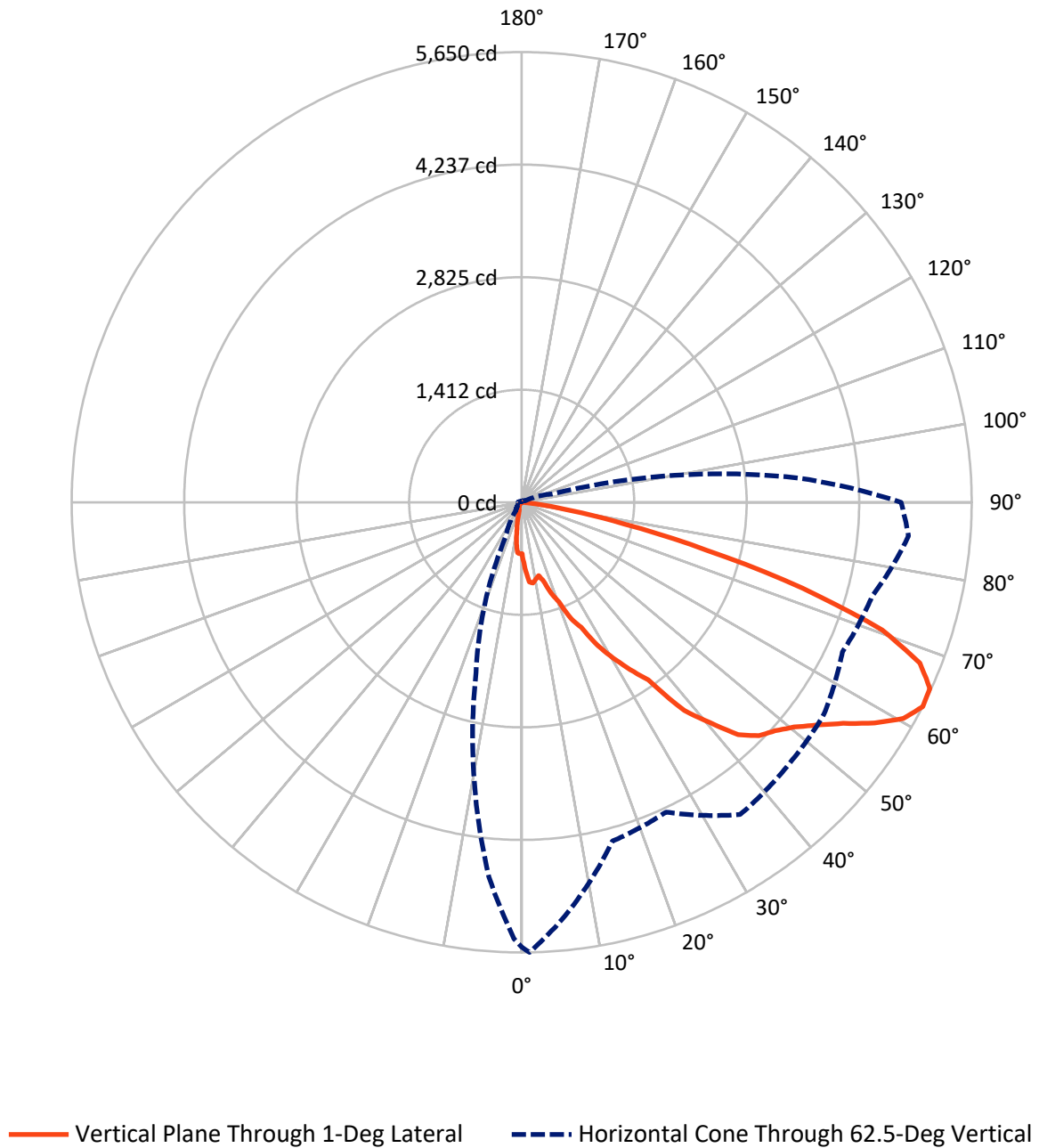
✕ Max cd  
 - - - 1/2 Max cd



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



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	610.9	0.0	610.9
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	4731.1	0.0	4731.1
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	5342.0	0.0	5342.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	1.3
10°-20°	187.8	3.5
20°-30°	303.6	5.7
30°-40°	508.5	9.5
40°-50°	831.5	15.6
50°-60°	1230.9	23.0
60°-70°	1413.1	26.5
70°-80°	698.8	13.1
80°-90°	95.9	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°	5342.0	100.0
0°-180°	5342.0	100.0

**Coefficient of Utilization**



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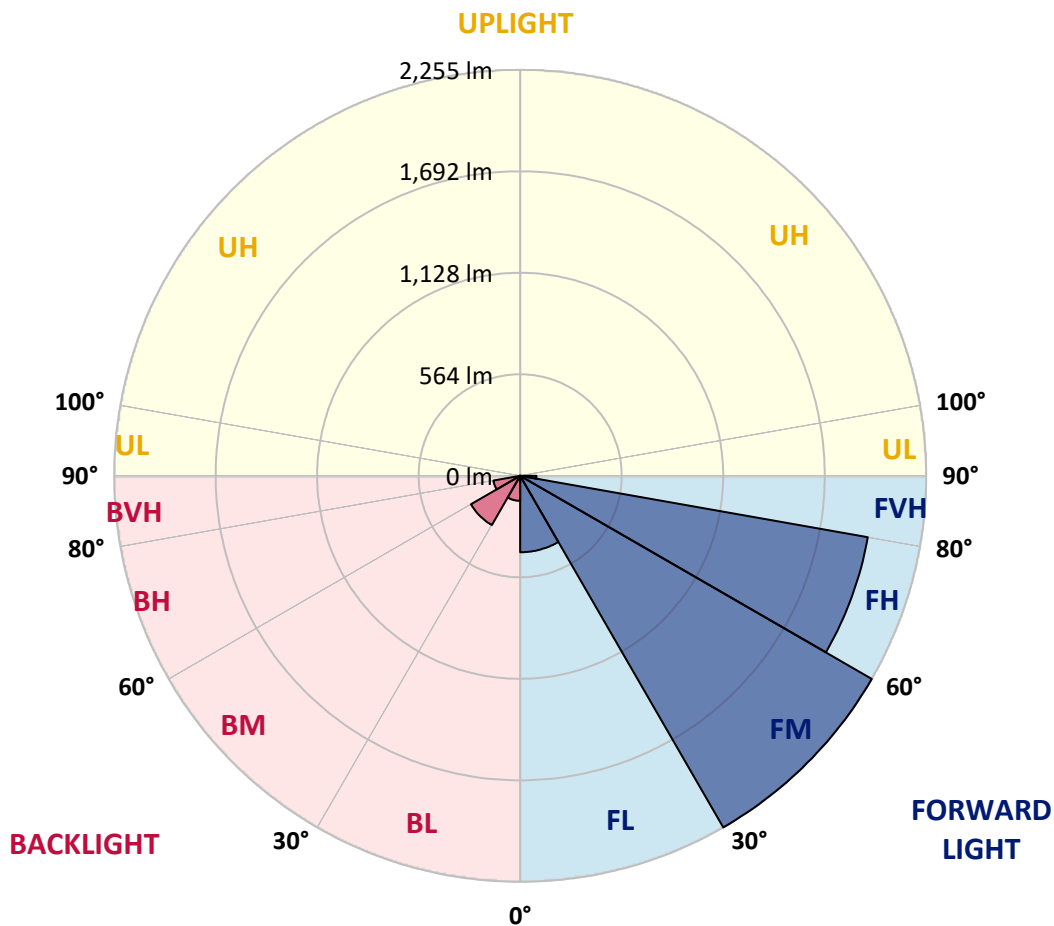
CATALOG NUMBER: MSA-SA2B-827-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	424.3	7.9			
FM (30°-60°)	2255.4	42.2			
FH (60°-80°)	1960.8	36.7			G2/5000
FVH (80°-90°)	90.6	1.7			G1/100
BL (0°-30°)	139.0	2.6	B1/500		
BM (30°-60°)	315.5	5.9	B1/1000		
BH (60°-80°)	151.0	2.8	B1/500		G1/500
BVH (80°-90°)	5.3	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°	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5
2.5°	829.8	833.8	815.2	812.8	769.6	823.4	825.0	831.4	791.8	715.1	822.2
5°	993.0	1004.0	989.6	1053.3	1071.5	1110.8	1038.7	1103.2	1075.8	1083.4	1098.9
7.5°	1012.5	1023.7	1053.9	1160.4	1258.7	1234.1	1226.2	1250.5	1248.4	1192.1	1220.1
10°	972.0	981.4	1031.7	1225.6	1268.5	1379.3	1406.4	1350.4	1327.5	1204.3	1150.4
12.5°	927.9	943.7	1007.6	1240.2	1368.9	1481.0	1570.2	1490.4	1414.6	1283.4	1234.1
15°	1012.5	1021.3	1121.8	1270.6	1383.3	1460.6	1533.6	1507.1	1495.6	1401.2	1234.1
17.5°	1178.4	1199.1	1271.8	1345.2	1434.1	1480.7	1463.3	1455.1	1425.6	1573.8	1400.9
20°	1296.5	1335.2	1430.4	1462.1	1391.5	1435.0	1424.3	1417.0	1393.9	1669.7	1592.7
22.5°	1552.2	1587.8	1589.6	1600.9	1436.5	1367.1	1349.5	1351.6	1456.6	1698.3	1831.3
25°	1726.3	1738.5	1834.7	1754.3	1559.5	1387.8	1320.5	1350.7	1502.0	1904.1	2055.7
27.5°	2011.3	2040.2	2100.1	1828.0	1633.2	1374.7	1267.6	1377.2	1621.3	1972.3	2305.0
30°	2243.5	2271.2	2367.7	1928.8	1697.1	1439.6	1290.4	1430.4	1695.6	2112.6	2529.1
32.5°	2432.0	2503.5	2613.1	2084.3	1694.7	1514.2	1407.0	1412.8	1786.9	2294.4	2750.7
35°	2672.7	2739.4	2816.4	2191.5	1805.5	1538.2	1441.4	1586.3	1922.7	2484.3	3049.0
37.5°	3215.5	3316.3	3164.1	2461.5	1934.5	1755.6	1577.2	1693.1	2064.8	2678.2	3459.0
40°	3546.7	3631.6	3484.6	2599.4	2158.0	1865.1	1819.5	1878.8	2204.0	2778.4	3768.0
42.5°	3873.0	3985.1	3739.4	2807.0	2370.2	2174.4	2049.6	2097.4	2405.2	3020.1	4115.7
45°	4109.3	4178.7	3794.5	2915.7	2661.8	2526.9	2443.8	2372.6	2685.8	3175.3	4340.0
47.5°	4228.0	4283.4	3903.2	2950.1	2835.3	2899.8	3081.9	2933.0	2934.2	3287.7	4460.9
50°	4392.4	4431.0	3964.1	2991.2	3023.7	3481.0	3572.9	3256.0	3218.0	3400.3	4480.7
52.5°	4623.4	4642.3	4082.2	3099.5	3305.9	3936.1	3969.2	3841.1	3502.0	3609.7	4524.5
55°	4930.6	4897.4	4293.1	3327.2	3600.3	4269.4	4313.8	4202.1	3859.0	3818.9	4660.3
57.5°	5261.8	5223.7	4605.8	3648.1	3919.6	4524.2	4550.7	4559.5	4096.2	4003.9	4891.0
60°	5499.2	5506.2	4999.4	4016.1	4118.1	4768.0	4715.1	4634.7	4335.5	4275.2	5003.3
62.5°	5582.3	5649.6	5305.9	4401.8	4289.2	4783.2	4701.1	4633.2	4442.6	4554.9	4874.6
65°	5514.4	5631.9	5377.2	4740.6	4392.7	4592.4	4506.8	4463.3	4439.3	4669.1	4589.6
67.5°	5244.7	5391.8	5173.2	4743.7	4016.4	3910.2	4011.3	4149.2	4069.4	4574.4	4190.6
70°	4640.5	4801.5	4699.8	4465.4	3345.8	3076.4	3187.8	3396.3	3340.0	4068.5	3603.3
72.5°	3481.6	3688.6	3708.7	3855.1	2656.0	2315.4	2331.5	2325.7	2422.8	3280.7	2811.9
75°	2236.5	2397.6	2615.2	3110.8	2017.7	1690.4	1535.8	1498.0	1679.1	2563.5	2013.1
77.5°	1298.3	1317.5	1418.0	2347.0	1445.0	1218.0	1112.6	1166.5	1229.8	1789.0	1334.2
80°	621.0	630.7	672.1	1207.6	1004.0	1054.2	972.9	1033.5	844.4	1028.3	757.1
82.5°	197.0	199.1	206.1	593.3	623.4	698.3	447.5	600.0	522.1	621.6	504.1
85°	32.9	56.0	69.1	171.4	351.9	235.6	97.1	214.0	291.3	392.1	228.9
87.5°	0.0	0.0	0.0	3.0	28.6	13.4	2.1	12.2	44.7	87.4	10.4
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°	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5
2.5°	853.3	874.3	795.1	724.2	742.2	727.9	706.2	669.4	584.2	646.9	642.6
5°	1098.0	1059.1	951.9	902.0	841.1	748.2	737.0	665.8	634.4	639.6	635.0
7.5°	1183.3	1113.5	1018.9	868.5	725.7	591.8	550.7	504.1	494.7	514.8	527.9
10°	1116.3	1042.3	959.5	772.6	662.7	565.9	464.5	399.4	364.1	359.8	363.5
12.5°	1147.0	1067.3	896.8	753.7	639.0	551.3	438.1	339.7	263.0	268.8	253.6
15°	1168.3	1076.7	881.9	714.2	590.0	472.8	336.4	238.1	175.3	157.1	146.1
17.5°	1293.5	1162.6	863.0	668.5	521.5	368.0	211.3	137.9	117.5	111.1	105.9
20°	1454.2	1268.2	862.7	620.4	420.4	230.1	131.8	99.8	95.0	98.6	94.7
22.5°	1641.1	1408.8	908.7	560.4	301.7	145.2	102.6	88.6	83.7	86.8	87.1
25°	1829.2	1619.8	946.1	503.5	210.0	111.4	91.3	81.6	76.1	78.8	77.3
27.5°	2168.9	1794.5	937.6	430.7	154.6	98.0	84.9	76.4	68.2	72.5	72.1
30°	2391.2	2102.9	970.8	328.8	122.7	85.8	79.1	69.7	60.9	65.8	65.4
32.5°	2656.9	2235.3	1006.7	252.4	102.0	81.3	71.2	62.1	56.9	60.0	59.4
35°	2955.5	2497.1	940.6	210.0	88.6	73.4	63.0	56.0	51.4	53.0	53.0
37.5°	3483.1	2716.0	901.1	171.1	82.5	66.4	59.1	50.5	47.8	47.8	49.3
40°	3782.6	3050.2	783.0	135.5	84.3	61.2	55.1	46.3	42.6	42.3	43.8
42.5°	4172.3	3242.9	709.0	109.6	76.4	59.7	50.5	42.0	37.7	37.4	39.0
45°	4403.3	3350.7	604.9	86.1	68.5	69.4	46.9	38.7	32.3	31.1	33.8
47.5°	4549.2	3493.4	545.8	68.5	59.7	69.1	45.7	33.5	27.1	25.6	28.0
50°	4623.1	3564.1	534.2	58.8	51.8	61.8	52.4	28.0	23.1	21.0	23.1
52.5°	4700.1	3678.8	538.5	54.2	45.7	49.6	49.6	24.0	20.4	18.0	19.5
55°	4855.7	3848.4	529.1	51.4	42.0	37.7	32.0	21.3	18.6	15.8	17.4
57.5°	5046.9	3970.2	529.1	49.0	39.0	32.3	25.6	19.8	17.0	13.7	14.9
60°	5010.6	3842.0	502.9	46.6	36.5	30.1	23.1	18.3	15.8	12.5	13.4
62.5°	4761.9	3493.4	407.3	42.9	34.4	28.6	21.0	17.4	14.9	11.0	11.9
65°	4469.7	3123.3	283.1	39.0	32.0	25.9	18.9	16.4	13.7	9.7	10.4
67.5°	4117.8	2682.2	157.1	35.0	29.5	22.5	17.4	16.1	13.1	8.8	9.4
70°	3507.1	2025.0	84.3	32.0	27.7	20.7	16.4	16.1	13.1	8.5	8.8
72.5°	2632.9	1275.2	49.3	29.2	25.3	19.2	15.5	16.4	12.8	8.2	8.2
75°	1791.5	774.1	35.3	25.0	22.5	16.1	14.9	15.8	13.1	8.2	7.6
77.5°	1218.0	544.0	28.9	22.5	20.4	14.3	15.2	15.8	13.1	6.7	5.2
80°	760.4	280.7	21.9	18.0	17.7	12.5	15.2	13.7	8.5	1.5	0.0
82.5°	531.8	104.4	12.8	13.7	13.7	8.8	11.9	9.7	4.9	0.0	0.0
85°	223.1	18.0	7.0	9.7	8.5	5.2	9.4	7.3	3.0	0.0	0.0
87.5°	4.0	0.0	2.7	5.8	6.1	3.0	4.9	3.0	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):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5
2.5°	662.7	633.8	572.9	602.1	599.1	612.5	613.7	582.6	649.6	691.0	697.1
5°	635.6	616.1	612.8	596.0	591.8	616.4	603.0	602.1	634.4	681.6	681.9
7.5°	528.2	513.2	520.2	500.8	450.5	453.6	458.1	477.3	505.0	536.1	547.3
10°	362.6	401.2	372.9	370.5	365.3	349.2	336.4	346.4	382.3	411.0	421.6
12.5°	258.8	264.8	282.2	275.8	284.6	270.9	265.8	297.1	332.1	361.3	382.3
15°	151.3	161.6	172.0	193.9	202.7	200.0	215.8	242.0	270.3	283.7	309.6
17.5°	106.5	107.5	109.6	133.3	148.9	154.9	164.4	184.2	195.7	201.8	212.5
20°	93.2	90.4	86.8	100.2	114.8	122.4	119.6	135.2	144.6	150.7	158.3
22.5°	84.3	79.8	77.6	82.2	93.5	100.2	101.4	110.5	124.8	129.1	131.5
25°	76.1	73.1	71.5	74.0	80.1	86.5	87.7	99.5	112.3	114.2	119.0
27.5°	70.6	64.8	65.4	67.3	70.0	77.9	80.4	87.1	105.6	107.8	109.3
30°	64.8	58.8	60.6	62.4	61.2	70.9	74.6	82.2	100.2	103.5	105.3
32.5°	59.1	54.5	54.2	56.0	58.1	63.3	71.2	80.1	96.5	101.1	105.6
35°	52.7	49.0	49.6	49.9	52.7	59.4	65.1	69.7	81.0	83.4	84.9
37.5°	48.1	45.1	44.4	47.5	50.2	55.4	57.5	59.7	74.6	80.1	80.4
40°	42.6	40.8	40.8	42.9	49.0	48.4	51.1	57.8	72.1	77.9	78.5
42.5°	38.7	36.2	36.8	39.0	43.2	40.2	45.7	55.4	71.2	77.0	76.7
45°	32.6	32.0	33.2	35.0	36.8	34.1	42.6	53.0	68.2	75.8	73.7
47.5°	27.1	27.1	28.6	30.4	29.5	30.4	38.7	49.6	66.4	73.4	71.8
50°	22.2	22.5	24.0	27.1	24.4	26.8	34.7	46.3	63.3	70.9	69.7
52.5°	18.9	19.2	20.1	22.2	21.0	24.4	32.0	42.9	60.3	66.7	66.1
55°	16.4	17.0	17.0	18.3	18.9	22.8	28.9	39.6	55.7	62.7	61.5
57.5°	14.6	15.2	14.9	15.8	16.4	20.1	25.9	35.9	51.1	56.9	55.1
60°	13.1	13.7	13.4	14.6	14.3	17.4	22.5	32.0	46.3	50.8	49.3
62.5°	11.6	12.2	12.2	12.8	13.1	14.6	19.5	28.3	41.4	45.1	43.8
65°	10.4	11.0	11.3	11.0	11.6	12.5	16.4	25.6	35.9	39.6	37.7
67.5°	9.4	10.0	10.7	9.4	10.0	10.4	14.0	22.8	31.7	34.7	33.2
70°	9.1	9.4	9.4	8.2	7.9	8.2	12.2	19.5	27.7	30.7	28.6
72.5°	8.5	8.8	8.5	6.7	5.8	6.4	10.4	16.4	23.4	25.9	24.0
75°	7.9	8.2	7.9	5.5	3.7	4.6	8.5	14.3	20.1	21.3	20.4
77.5°	6.7	7.3	7.3	4.0	1.2	2.7	6.4	11.6	16.7	16.7	17.0
80°	0.6	1.8	3.0	2.1	0.0	0.3	2.1	6.1	10.7	10.4	11.3
82.5°	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.7	2.7	3.0
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°	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5	643.5
2.5°	682.8	673.4	685.2	721.5	706.8	709.6	699.8	759.8	827.7	829.8
5°	682.5	674.0	691.6	690.1	731.8	777.2	821.0	891.9	992.4	993.0
7.5°	542.2	592.7	605.8	601.8	655.4	717.8	785.4	921.2	1003.7	1012.5
10°	488.9	510.8	537.6	547.3	569.6	628.9	705.3	859.1	951.6	972.0
12.5°	423.7	493.8	529.4	598.5	611.3	619.8	740.3	874.0	930.3	927.9
15°	351.0	411.9	468.2	552.5	587.2	676.7	771.7	946.7	980.2	1012.5
17.5°	248.4	294.4	380.8	469.4	575.3	672.8	858.1	1076.7	1140.0	1178.4
20°	166.2	188.4	266.7	383.9	518.1	614.9	893.5	1194.2	1263.3	1296.5
22.5°	134.9	145.5	186.0	281.3	442.6	612.2	907.8	1322.4	1508.1	1552.2
25°	118.7	126.0	147.6	208.2	367.4	600.0	986.9	1466.7	1690.7	1726.3
27.5°	103.8	114.8	130.9	171.7	315.1	591.5	1027.1	1709.0	1976.3	2011.3
30°	99.2	112.6	128.2	156.5	278.5	558.6	1091.0	1927.5	2181.1	2243.5
32.5°	107.2	111.7	119.3	143.4	250.2	523.9	1203.3	2188.7	2350.7	2432.0
35°	84.9	93.2	106.5	131.5	238.4	522.1	1267.0	2356.8	2622.5	2672.7
37.5°	83.1	90.7	108.1	128.2	252.7	536.1	1361.3	2701.1	3112.6	3215.5
40°	80.7	90.4	106.8	126.6	252.7	549.8	1421.6	2976.6	3442.3	3546.7
42.5°	79.8	92.2	106.5	133.0	244.7	557.4	1512.6	3251.4	3790.6	3873.0
45°	79.1	94.1	107.5	140.6	242.9	582.3	1564.1	3385.1	4014.6	4109.3
47.5°	77.6	94.1	119.9	136.1	232.9	579.9	1630.7	3583.2	4148.2	4228.0
50°	76.4	94.7	135.8	127.5	234.4	565.0	1721.2	3769.2	4335.5	4392.4
52.5°	73.7	96.8	133.3	115.7	229.8	563.5	1856.0	4033.8	4581.7	4623.4
55°	67.6	94.1	120.5	101.1	213.7	546.1	2034.7	4377.8	4923.3	4930.6
57.5°	62.1	87.4	100.8	92.8	179.0	548.2	2188.7	4694.4	5227.7	5261.8
60°	56.6	90.7	78.2	86.5	148.2	509.3	2263.3	4815.5	5449.3	5499.2
62.5°	51.4	83.7	66.7	79.5	132.1	473.1	2211.6	4718.1	5477.6	5582.3
65°	45.7	58.1	56.3	71.2	133.6	422.2	2038.7	4432.9	5370.2	5514.4
67.5°	39.3	45.7	49.6	61.5	143.1	378.7	1742.2	3975.0	5081.3	5244.7
70°	34.4	41.1	43.2	53.9	148.9	350.1	1374.7	3339.7	4489.5	4640.5
72.5°	28.6	38.1	38.7	47.2	143.4	321.8	979.6	2397.6	3409.1	3481.6
75°	24.7	31.7	35.0	39.6	120.5	240.2	539.7	1484.0	2155.5	2236.5
77.5°	22.2	24.0	26.5	27.4	51.1	125.1	185.7	915.1	1207.0	1298.3
80°	17.0	18.9	18.3	18.9	28.0	43.2	70.6	428.9	570.2	621.0
82.5°	5.5	9.1	10.0	8.5	18.3	21.3	20.4	148.2	185.4	197.0
85°	1.2	3.3	1.5	0.0	6.1	11.0	1.5	22.5	44.4	32.9
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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