

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: P596573

Luminaire Tested: **MSA-SA2A-827-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596573  
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-SA2A-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**

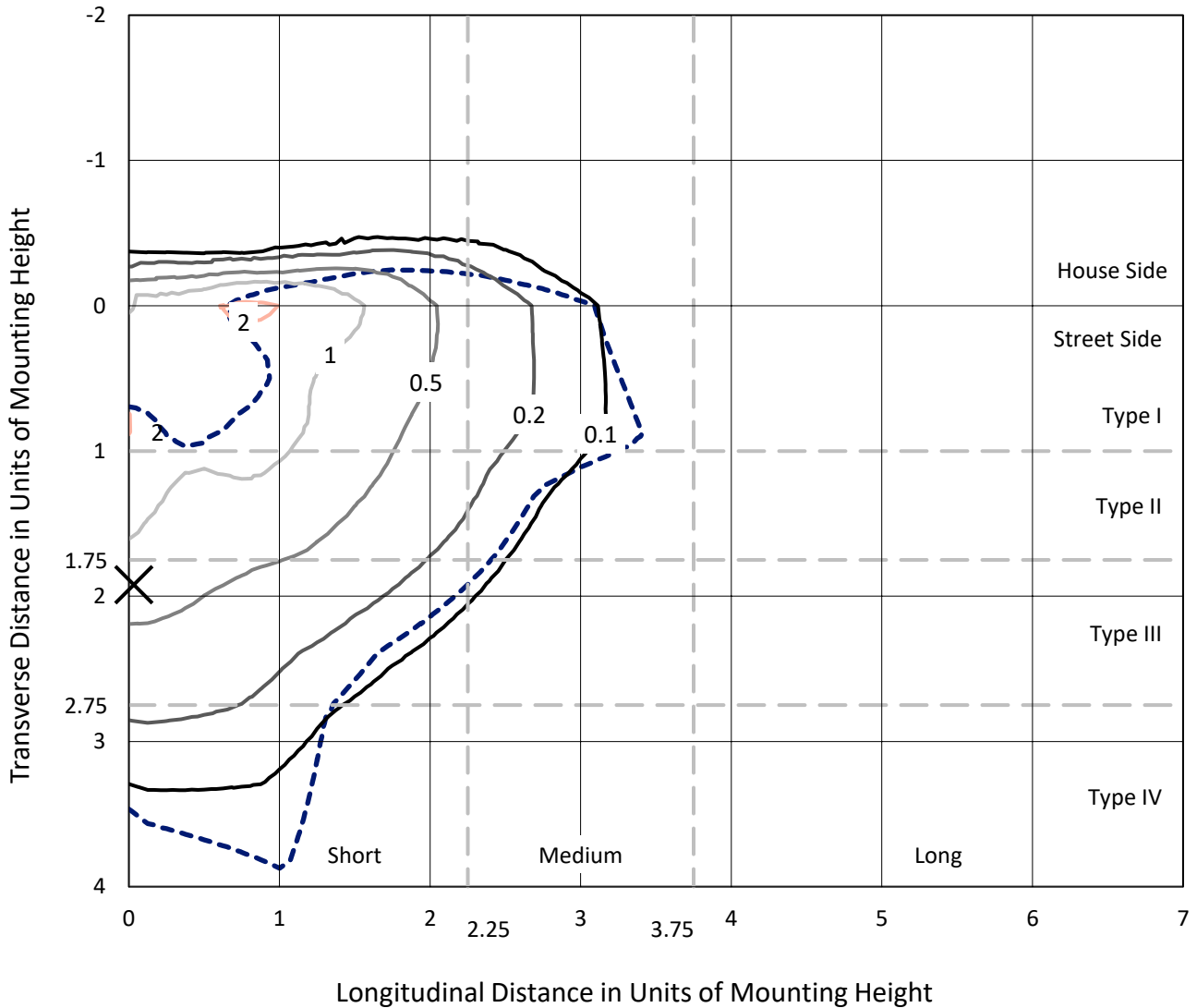
Lumens per Lamp: N/A  
Luminaire Lumens: 4262 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

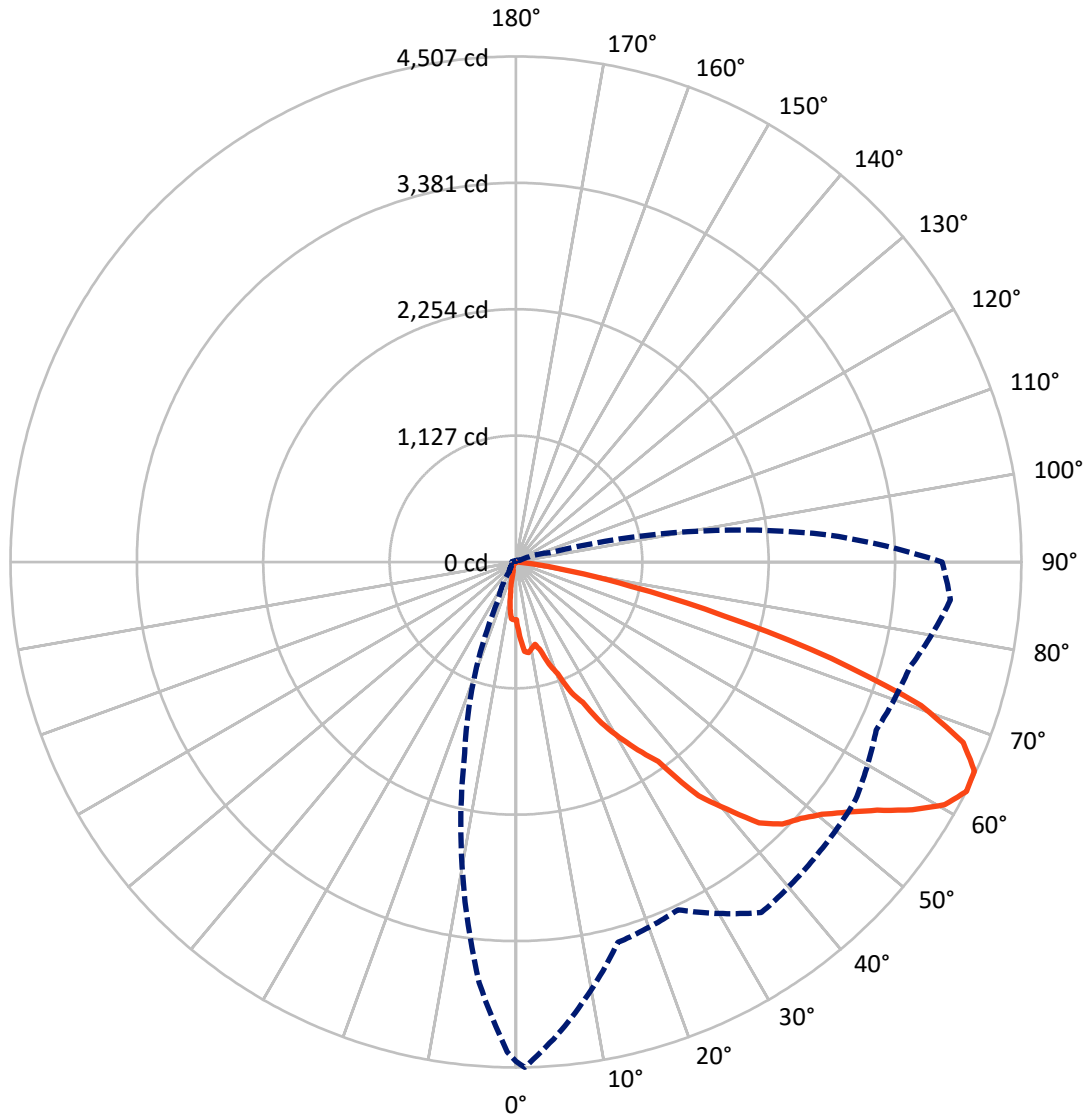
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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	487.4	0.0	487.4
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	3774.6	0.0	3774.6
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	4262.0	0.0	4262.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.4	1.3
10°-20°	149.8	3.5
20°-30°	242.2	5.7
30°-40°	405.7	9.5
40°-50°	663.4	15.6
50°-60°	982.0	23.0
60°-70°	1127.4	26.5
70°-80°	557.5	13.1
80°-90°	76.5	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°	4262.0	100.0
0°-180°	4262.0	100.0

**Coefficient of Utilization**

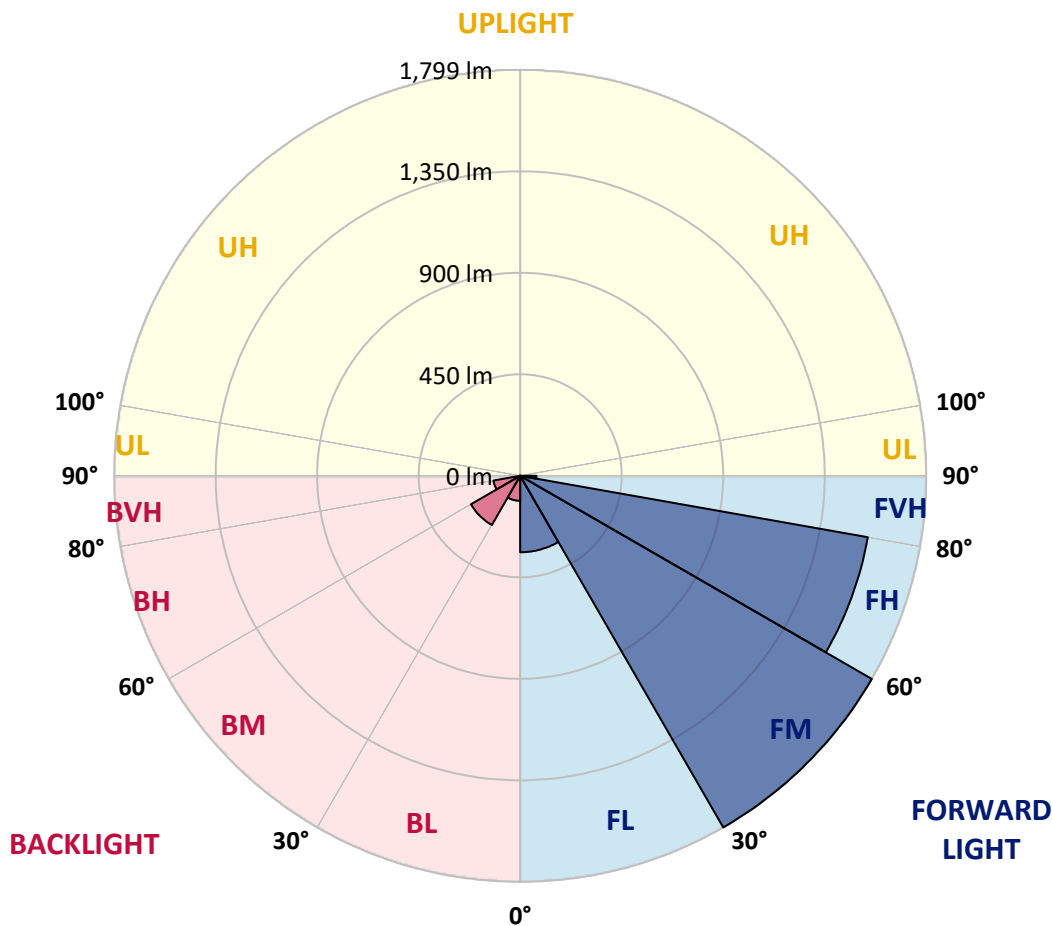


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	338.5	7.9			
FM (30°-60°)	1799.4	42.2			
FH (60°-80°)	1564.4	36.7			G1/1800
FVH (80°-90°)	72.3	1.7			G1/100
BL (0°-30°)	110.9	2.6	B1/500		
BM (30°-60°)	251.7	5.9	B1/1000		
BH (60°-80°)	120.5	2.8	B1/500		G1/500
BVH (80°-90°)	4.2	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-G1**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4
2.5°	662.1	665.2	650.4	648.5	614.0	657.0	658.2	663.3	631.7	570.5	656.0
5°	792.2	801.0	789.6	840.3	854.9	886.2	828.7	880.2	858.3	864.4	876.8
7.5°	807.8	816.8	840.8	925.8	1004.3	984.6	978.3	997.7	996.0	951.1	973.4
10°	775.5	783.0	823.1	977.8	1012.0	1100.4	1122.1	1077.4	1059.2	960.8	917.8
12.5°	740.3	752.9	803.9	989.5	1092.2	1181.6	1252.7	1189.1	1128.6	1023.9	984.6
15°	807.8	814.8	895.0	1013.7	1103.6	1165.3	1223.6	1202.4	1193.2	1117.9	984.6
17.5°	940.1	956.7	1014.7	1073.2	1144.2	1181.3	1167.5	1160.9	1137.4	1255.6	1117.7
20°	1034.4	1065.2	1141.2	1166.5	1110.2	1144.9	1136.4	1130.6	1112.1	1332.1	1270.7
22.5°	1238.4	1266.8	1268.3	1277.3	1146.1	1090.7	1076.6	1078.3	1162.1	1355.0	1461.1
25°	1377.3	1387.0	1463.8	1399.7	1244.2	1107.2	1053.6	1077.6	1198.3	1519.1	1640.1
27.5°	1604.6	1627.7	1675.6	1458.4	1303.0	1096.8	1011.3	1098.7	1293.5	1573.6	1839.0
30°	1789.9	1812.0	1889.0	1538.8	1354.0	1148.5	1029.5	1141.2	1352.8	1685.5	2017.8
32.5°	1940.3	1997.4	2084.8	1662.9	1352.1	1208.0	1122.5	1127.2	1425.6	1830.5	2194.6
35°	2132.4	2185.6	2247.0	1748.4	1440.5	1227.2	1150.0	1265.6	1534.0	1982.1	2432.6
37.5°	2565.4	2645.8	2524.4	1963.8	1543.4	1400.6	1258.3	1350.8	1647.4	2136.8	2759.7
40°	2829.7	2897.4	2780.1	2073.9	1721.7	1488.1	1451.6	1499.0	1758.4	2216.7	3006.2
42.5°	3090.0	3179.4	2983.4	2239.5	1891.0	1734.8	1635.2	1673.4	1918.9	2409.5	3283.6
45°	3278.5	3333.9	3027.4	2326.2	2123.7	2016.1	1949.8	1892.9	2142.8	2533.4	3462.6
47.5°	3373.2	3417.4	3114.1	2353.6	2262.1	2313.6	2458.8	2340.0	2341.0	2623.0	3559.0
50°	3504.4	3535.2	3162.6	2386.4	2412.4	2777.2	2850.6	2597.7	2567.4	2712.9	3574.8
52.5°	3688.7	3703.8	3256.9	2472.9	2637.6	3140.3	3166.8	3064.5	2794.0	2879.9	3609.8
55°	3933.8	3907.3	3425.2	2654.6	2872.4	3406.2	3441.7	3352.6	3078.9	3046.8	3718.1
57.5°	4198.0	4167.6	3674.6	2910.5	3127.2	3609.5	3630.7	3637.7	3268.1	3194.5	3902.2
60°	4387.4	4393.0	3988.6	3204.2	3285.5	3804.1	3761.8	3697.7	3458.9	3410.9	3991.8
62.5°	4453.7	4507.4	4233.2	3511.9	3422.0	3816.2	3750.6	3696.5	3544.4	3634.1	3889.1
65°	4399.6	4493.3	4290.0	3782.2	3504.6	3663.9	3595.7	3561.0	3541.8	3725.1	3661.7
67.5°	4184.4	4301.7	4127.3	3784.6	3204.4	3119.7	3200.3	3310.3	3246.7	3649.6	3343.3
70°	3702.3	3830.8	3749.7	3562.7	2669.4	2454.4	2543.3	2709.7	2664.8	3246.0	2874.8
72.5°	2777.7	2942.9	2958.9	3075.7	2119.0	1847.3	1860.1	1855.5	1933.0	2617.4	2243.4
75°	1784.4	1912.8	2086.5	2481.9	1609.7	1348.7	1225.3	1195.2	1339.7	2045.2	1606.1
77.5°	1035.8	1051.1	1131.3	1872.5	1152.9	971.7	887.7	930.7	981.2	1427.3	1064.5
80°	495.5	503.2	536.3	963.5	801.0	841.1	776.2	824.5	673.7	820.4	604.0
82.5°	157.1	158.8	164.4	473.4	497.4	557.1	357.0	478.7	416.5	495.9	402.2
85°	26.2	44.7	55.1	136.7	280.8	188.0	77.5	170.7	232.4	312.8	182.6
87.5°	0.0	0.0	0.0	2.4	22.8	10.7	1.7	9.7	35.7	69.7	8.3
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°	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4
2.5°	680.8	697.5	634.4	577.8	592.1	580.7	563.5	534.1	466.1	516.1	512.7
5°	876.0	844.9	759.5	719.6	671.0	597.0	588.0	531.2	506.1	510.3	506.6
7.5°	944.0	888.4	812.9	692.9	579.0	472.1	439.4	402.2	394.7	410.7	421.1
10°	890.6	831.6	765.5	616.4	528.7	451.5	370.6	318.6	290.5	287.1	290.0
12.5°	915.1	851.5	715.5	601.3	509.8	439.8	349.5	271.0	209.8	214.5	202.3
15°	932.1	859.0	703.6	569.8	470.7	377.2	268.4	189.9	139.9	125.3	116.6
17.5°	1032.0	927.5	688.5	533.3	416.0	293.6	168.6	110.0	93.7	88.6	84.5
20°	1160.2	1011.8	688.3	495.0	335.4	183.6	105.2	79.7	75.8	78.7	75.5
22.5°	1309.3	1124.0	725.0	447.1	240.7	115.8	81.8	70.7	66.8	69.2	69.5
25°	1459.4	1292.3	754.8	401.7	167.6	88.9	72.9	65.1	60.7	62.9	61.7
27.5°	1730.4	1431.7	748.0	343.7	123.4	78.2	67.8	61.0	54.4	57.8	57.6
30°	1907.7	1677.7	774.5	262.3	97.9	68.5	63.1	55.6	48.6	52.5	52.2
32.5°	2119.8	1783.4	803.2	201.3	81.4	64.8	56.8	49.5	45.4	47.8	47.4
35°	2358.0	1992.3	750.5	167.6	70.7	58.5	50.3	44.7	41.0	42.3	42.3
37.5°	2778.9	2166.9	718.9	136.5	65.8	52.9	47.1	40.3	38.1	38.1	39.3
40°	3017.9	2433.6	624.7	108.1	67.3	48.8	44.0	36.9	34.0	33.8	35.0
42.5°	3328.8	2587.3	565.6	87.4	61.0	47.6	40.3	33.5	30.1	29.9	31.1
45°	3513.1	2673.3	482.6	68.7	54.6	55.4	37.4	30.8	25.7	24.8	27.0
47.5°	3629.4	2787.2	435.5	54.6	47.6	55.1	36.4	26.7	21.6	20.4	22.3
50°	3688.5	2843.5	426.2	46.9	41.3	49.3	41.8	22.3	18.5	16.8	18.5
52.5°	3749.9	2935.1	429.6	43.2	36.4	39.6	39.6	19.2	16.3	14.3	15.5
55°	3874.0	3070.4	422.1	41.0	33.5	30.1	25.5	17.0	14.8	12.6	13.8
57.5°	4026.5	3167.5	422.1	39.1	31.1	25.7	20.4	15.8	13.6	10.9	11.9
60°	3997.6	3065.3	401.2	37.2	29.1	24.0	18.5	14.6	12.6	10.0	10.7
62.5°	3799.2	2787.2	325.0	34.2	27.4	22.8	16.8	13.8	11.9	8.7	9.5
65°	3566.1	2491.8	225.9	31.1	25.5	20.6	15.1	13.1	10.9	7.8	8.3
67.5°	3285.3	2139.9	125.3	27.9	23.6	18.0	13.8	12.9	10.4	7.0	7.5
70°	2798.1	1615.6	67.3	25.5	22.1	16.5	13.1	12.9	10.4	6.8	7.0
72.5°	2100.6	1017.4	39.3	23.3	20.2	15.3	12.4	13.1	10.2	6.6	6.6
75°	1429.3	617.6	28.2	19.9	18.0	12.9	11.9	12.6	10.4	6.6	6.1
77.5°	971.7	434.0	23.1	18.0	16.3	11.4	12.1	12.6	10.4	5.3	4.1
80°	606.7	223.9	17.5	14.3	14.1	10.0	12.1	10.9	6.8	1.2	0.0
82.5°	424.3	83.3	10.2	10.9	10.9	7.0	9.5	7.8	3.9	0.0	0.0
85°	178.0	14.3	5.6	7.8	6.8	4.1	7.5	5.8	2.4	0.0	0.0
87.5°	3.2	0.0	2.2	4.6	4.9	2.4	3.9	2.4	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°	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4
2.5°	528.7	505.7	457.1	480.4	478.0	488.7	489.6	464.9	518.3	551.3	556.2
5°	507.1	491.6	488.9	475.5	472.1	491.8	481.1	480.4	506.1	543.8	544.0
7.5°	421.4	409.5	415.1	399.5	359.4	361.9	365.5	380.8	402.9	427.7	436.7
10°	289.3	320.1	297.5	295.6	291.4	278.6	268.4	276.4	305.0	327.9	336.4
12.5°	206.4	211.3	225.1	220.0	227.1	216.2	212.0	237.0	265.0	288.3	305.0
15°	120.7	129.0	137.2	154.7	161.8	159.6	172.2	193.1	215.7	226.4	247.0
17.5°	85.0	85.7	87.4	106.4	118.8	123.6	131.1	146.9	156.2	161.0	169.5
20°	74.3	72.1	69.2	79.9	91.6	97.6	95.4	107.8	115.4	120.2	126.3
22.5°	67.3	63.6	61.9	65.6	74.6	79.9	80.9	88.2	99.6	103.0	104.9
25°	60.7	58.3	57.1	59.0	63.9	69.0	69.9	79.4	89.6	91.1	95.0
27.5°	56.3	51.7	52.2	53.7	55.9	62.2	64.1	69.5	84.3	86.0	87.2
30°	51.7	46.9	48.3	49.8	48.8	56.6	59.5	65.6	79.9	82.6	84.0
32.5°	47.1	43.5	43.2	44.7	46.4	50.5	56.8	63.9	77.0	80.6	84.3
35°	42.0	39.1	39.6	39.8	42.0	47.4	52.0	55.6	64.6	66.5	67.8
37.5°	38.4	35.9	35.5	37.9	40.1	44.2	45.9	47.6	59.5	63.9	64.1
40°	34.0	32.5	32.5	34.2	39.1	38.6	40.8	46.1	57.6	62.2	62.7
42.5°	30.8	28.9	29.4	31.1	34.5	32.1	36.4	44.2	56.8	61.4	61.2
45°	26.0	25.5	26.5	27.9	29.4	27.2	34.0	42.3	54.4	60.5	58.8
47.5°	21.6	21.6	22.8	24.3	23.6	24.3	30.8	39.6	52.9	58.5	57.3
50°	17.7	18.0	19.2	21.6	19.4	21.4	27.7	36.9	50.5	56.6	55.6
52.5°	15.1	15.3	16.0	17.7	16.8	19.4	25.5	34.2	48.1	53.2	52.7
55°	13.1	13.6	13.6	14.6	15.1	18.2	23.1	31.6	44.4	50.0	49.1
57.5°	11.7	12.1	11.9	12.6	13.1	16.0	20.6	28.7	40.8	45.4	44.0
60°	10.4	10.9	10.7	11.7	11.4	13.8	18.0	25.5	36.9	40.6	39.3
62.5°	9.2	9.7	9.7	10.2	10.4	11.7	15.5	22.6	33.0	35.9	35.0
65°	8.3	8.7	9.0	8.7	9.2	10.0	13.1	20.4	28.7	31.6	30.1
67.5°	7.5	8.0	8.5	7.5	8.0	8.3	11.2	18.2	25.3	27.7	26.5
70°	7.3	7.5	7.5	6.6	6.3	6.6	9.7	15.5	22.1	24.5	22.8
72.5°	6.8	7.0	6.8	5.3	4.6	5.1	8.3	13.1	18.7	20.6	19.2
75°	6.3	6.6	6.3	4.4	2.9	3.6	6.8	11.4	16.0	17.0	16.3
77.5°	5.3	5.8	5.8	3.2	1.0	2.2	5.1	9.2	13.4	13.4	13.6
80°	0.5	1.5	2.4	1.7	0.0	0.2	1.7	4.9	8.5	8.3	9.0
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.9	2.2	2.4
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°	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4
2.5°	544.8	537.2	546.7	575.6	563.9	566.1	558.4	606.2	660.4	662.1
5°	544.5	537.7	551.8	550.6	583.9	620.0	655.0	711.6	791.8	792.2
7.5°	432.6	472.9	483.3	480.2	522.9	572.7	626.6	734.9	800.7	807.8
10°	390.0	407.5	428.9	436.7	454.4	501.8	562.7	685.4	759.2	775.5
12.5°	338.1	393.9	422.4	477.5	487.7	494.5	590.7	697.3	742.2	740.3
15°	280.0	328.6	373.5	440.8	468.5	539.9	615.7	755.3	782.0	807.8
17.5°	198.2	234.9	303.8	374.5	459.0	536.7	684.6	859.0	909.5	940.1
20°	132.6	150.3	212.8	306.3	413.4	490.6	712.8	952.8	1007.9	1034.4
22.5°	107.6	116.1	148.4	224.4	353.1	488.4	724.2	1055.0	1203.2	1238.4
25°	94.7	100.5	117.8	166.1	293.1	478.7	787.4	1170.1	1348.9	1377.3
27.5°	82.8	91.6	104.4	137.0	251.4	471.9	819.4	1363.5	1576.7	1604.6
30°	79.2	89.9	102.2	124.8	222.2	445.7	870.4	1537.8	1740.2	1789.9
32.5°	85.5	89.1	95.2	114.4	199.6	418.0	960.1	1746.2	1875.4	1940.3
35°	67.8	74.3	85.0	104.9	190.2	416.5	1010.8	1880.3	2092.3	2132.4
37.5°	66.3	72.4	86.2	102.2	201.6	427.7	1086.1	2155.0	2483.3	2565.4
40°	64.4	72.1	85.2	101.0	201.6	438.6	1134.2	2374.8	2746.4	2829.7
42.5°	63.6	73.6	85.0	106.1	195.3	444.7	1206.8	2594.1	3024.2	3090.0
45°	63.1	75.0	85.7	112.2	193.8	464.6	1247.9	2700.7	3203.0	3278.5
47.5°	61.9	75.0	95.7	108.6	185.8	462.7	1301.1	2858.8	3309.6	3373.2
50°	61.0	75.5	108.3	101.8	187.0	450.8	1373.2	3007.2	3458.9	3504.4
52.5°	58.8	77.2	106.4	92.3	183.4	449.6	1480.8	3218.3	3655.4	3688.7
55°	53.9	75.0	96.2	80.6	170.5	435.7	1623.3	3492.7	3927.9	3933.8
57.5°	49.5	69.7	80.4	74.1	142.8	437.4	1746.2	3745.3	4170.8	4198.0
60°	45.2	72.4	62.4	69.0	118.3	406.3	1805.7	3842.0	4347.6	4387.4
62.5°	41.0	66.8	53.2	63.4	105.4	377.4	1764.4	3764.2	4370.2	4453.7
65°	36.4	46.4	44.9	56.8	106.6	336.9	1626.5	3536.7	4284.5	4399.6
67.5°	31.3	36.4	39.6	49.1	114.1	302.1	1389.9	3171.4	4054.0	4184.4
70°	27.4	32.8	34.5	43.0	118.8	279.3	1096.8	2664.5	3581.8	3702.3
72.5°	22.8	30.4	30.8	37.6	114.4	256.7	781.6	1912.8	2719.9	2777.7
75°	19.7	25.3	27.9	31.6	96.2	191.6	430.6	1184.0	1719.8	1784.4
77.5°	17.7	19.2	21.1	21.9	40.8	99.8	148.2	730.1	963.0	1035.8
80°	13.6	15.1	14.6	15.1	22.3	34.5	56.3	342.2	454.9	495.5
82.5°	4.4	7.3	8.0	6.8	14.6	17.0	16.3	118.3	147.9	157.1
85°	1.0	2.7	1.2	0.0	4.9	8.7	1.2	18.0	35.5	26.2
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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