

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: P366961

Luminaire Tested: **MSA-SA1C-760-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366961  
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-SA1C-760-U-SLL-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

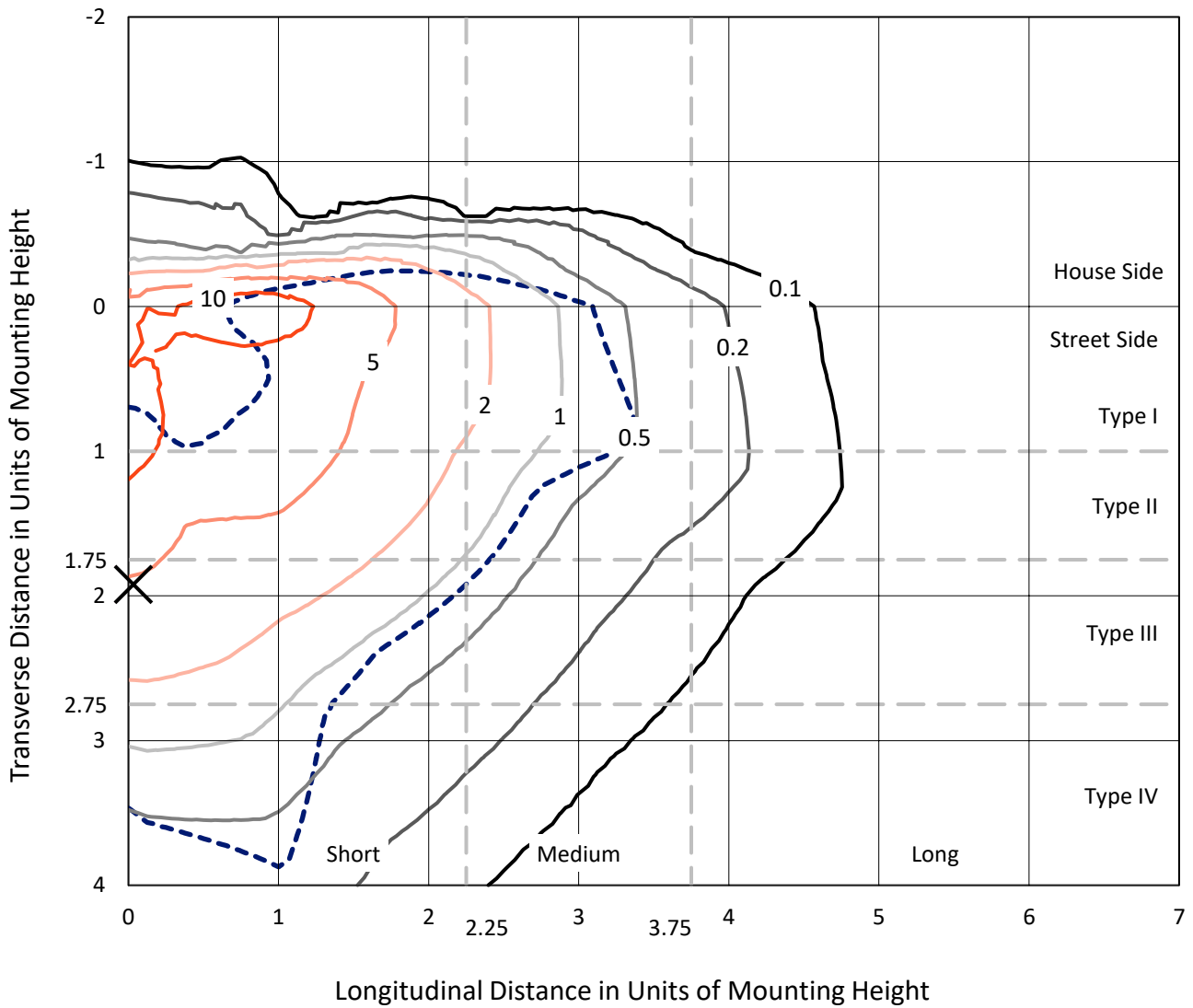
Lumens per Lamp: N/A  
Luminaire Lumens: 4575 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

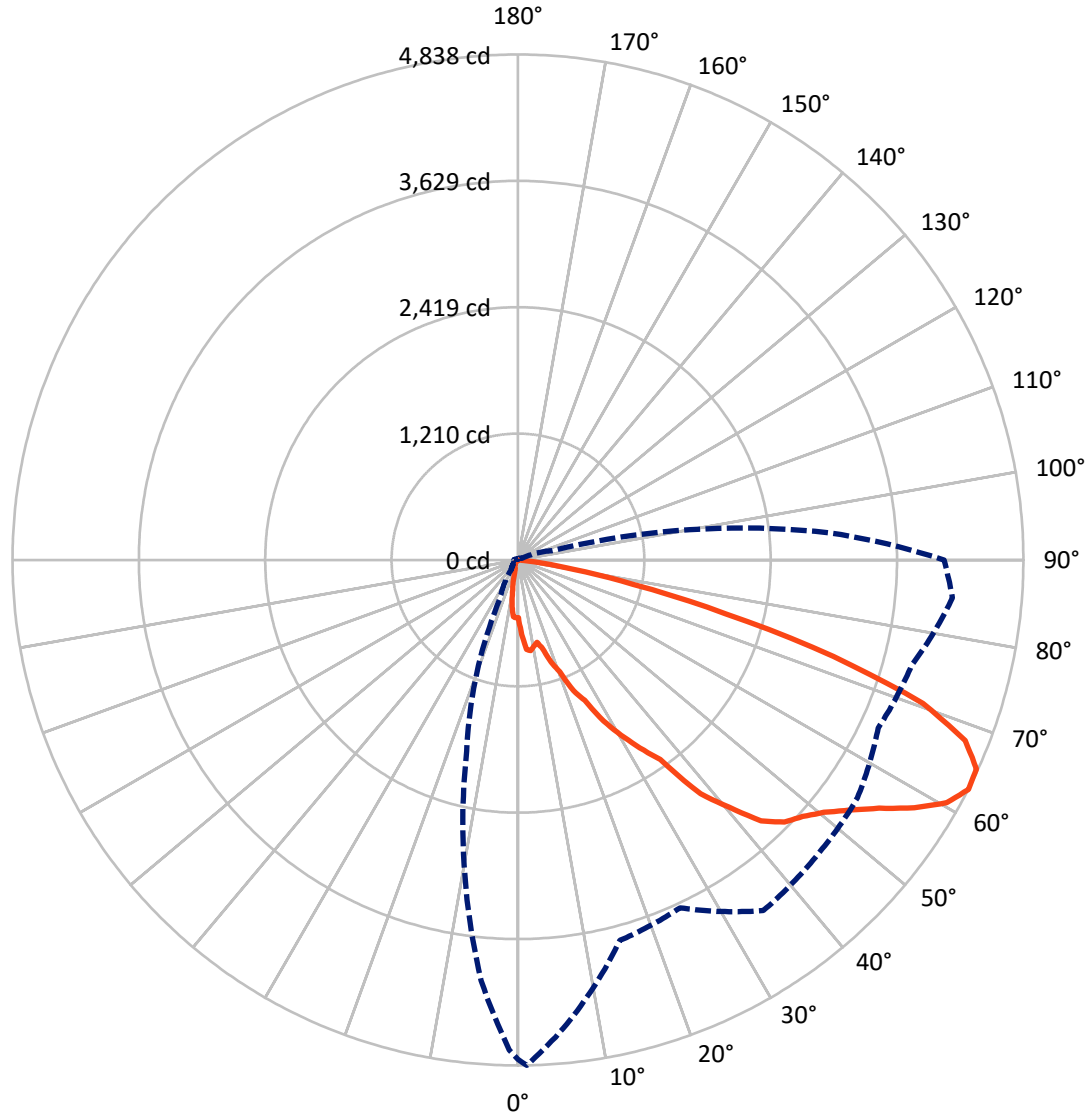
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.7 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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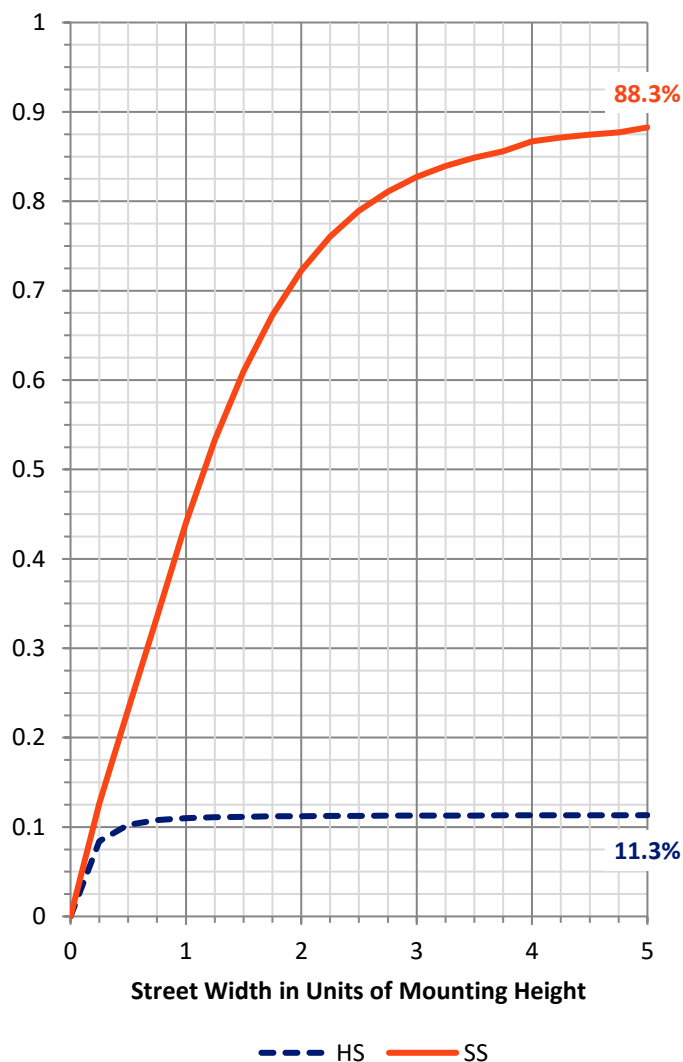
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	523.2	0.0	523.2
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	4051.8	0.0	4051.8
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	4575.0	0.0	4575.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.6	1.3
10°-20°	160.8	3.5
20°-30°	260.0	5.7
30°-40°	435.5	9.5
40°-50°	712.1	15.6
50°-60°	1054.1	23.0
60°-70°	1210.2	26.5
70°-80°	598.5	13.1
80°-90°	82.2	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°	4575.0	100.0
0°-180°	4575.0	100.0

**Coefficient of Utilization**



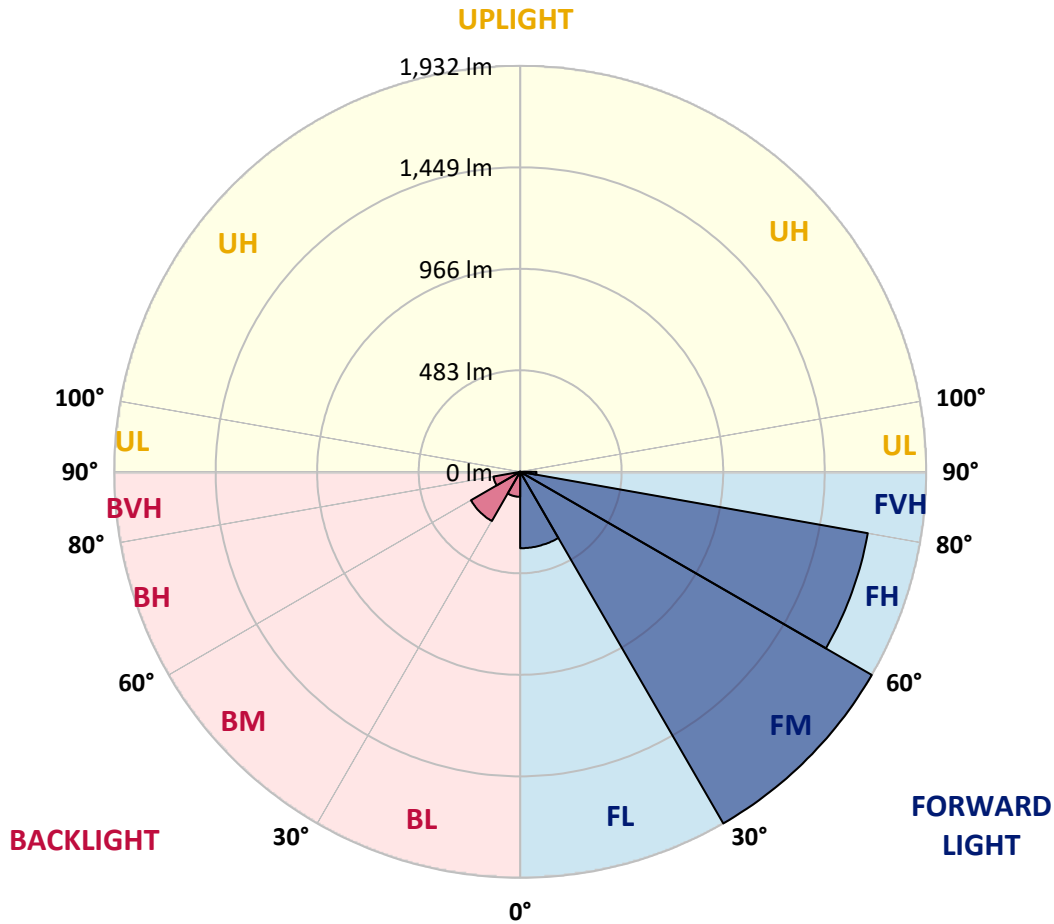
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	363.4	7.9			
FM (30°-60°)	1931.5	42.2			
FH (60°-80°)	1679.3	36.7			G1/1800
FVH (80°-90°)	77.6	1.7			G1/100
BL (0°-30°)	119.0	2.6	B1/500		
BM (30°-60°)	270.2	5.9	B1/1000		
BH (60°-80°)	129.4	2.8	B1/500		G1/500
BVH (80°-90°)	4.6	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°	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1
2.5°	710.7	714.1	698.2	696.1	659.1	705.2	706.5	712.0	678.1	612.4	704.2
5°	850.4	859.8	847.6	902.0	917.7	951.3	889.5	944.8	921.3	927.9	941.1
7.5°	867.1	876.8	902.6	993.8	1078.0	1056.9	1050.1	1071.0	1069.2	1020.9	1044.9
10°	832.4	840.5	883.5	1049.6	1086.4	1181.3	1204.5	1156.5	1136.9	1031.4	985.2
12.5°	794.6	808.2	862.9	1062.1	1172.4	1268.3	1344.7	1276.4	1211.5	1099.1	1056.9
15°	867.1	874.7	960.7	1088.2	1184.6	1250.9	1313.4	1290.8	1280.8	1200.0	1056.9
17.5°	1009.2	1026.9	1089.2	1152.1	1228.2	1268.1	1253.2	1246.2	1220.9	1347.8	1199.8
20°	1110.3	1143.5	1225.1	1252.2	1191.7	1229.0	1219.8	1213.6	1193.8	1430.0	1364.0
22.5°	1329.3	1359.8	1361.4	1371.1	1230.3	1170.8	1155.7	1157.5	1247.5	1454.5	1568.4
25°	1478.5	1488.9	1571.3	1502.4	1335.6	1188.6	1130.9	1156.8	1286.3	1630.7	1760.5
27.5°	1722.5	1747.3	1798.6	1565.5	1398.7	1177.3	1085.6	1179.4	1388.5	1689.1	1974.1
30°	1921.4	1945.1	2027.8	1651.8	1453.4	1232.9	1105.1	1225.1	1452.1	1809.3	2165.9
32.5°	2082.8	2144.0	2237.9	1785.1	1451.3	1296.8	1205.0	1209.9	1530.3	1964.9	2355.7
35°	2289.0	2346.1	2412.1	1876.8	1546.2	1317.3	1234.4	1358.5	1646.6	2127.6	2611.2
37.5°	2753.8	2840.1	2709.8	2108.1	1656.8	1503.5	1350.7	1450.0	1768.4	2293.7	2962.4
40°	3037.5	3110.2	2984.3	2226.2	1848.1	1597.3	1558.2	1609.1	1887.5	2379.5	3227.0
42.5°	3317.0	3412.9	3202.5	2404.0	2029.9	1862.2	1755.3	1796.3	2059.8	2586.5	3524.7
45°	3519.3	3578.7	3249.7	2497.0	2279.6	2164.1	2092.9	2031.9	2300.2	2719.4	3716.9
47.5°	3620.9	3668.4	3342.8	2526.5	2428.2	2483.5	2639.4	2511.9	2512.9	2815.6	3820.4
50°	3761.7	3794.8	3394.9	2561.7	2589.6	2981.2	3059.9	2788.5	2755.9	2912.1	3837.3
52.5°	3959.6	3975.8	3496.1	2654.5	2831.3	3370.9	3399.3	3289.6	2999.2	3091.4	3874.9
55°	4222.7	4194.2	3676.7	2849.5	3083.4	3656.4	3694.5	3598.8	3305.0	3270.6	3991.1
57.5°	4506.3	4473.7	3944.5	3124.3	3356.8	3874.6	3897.3	3904.9	3508.1	3429.1	4188.8
60°	4709.7	4715.6	4281.6	3439.5	3526.8	4083.4	4038.1	3969.2	3713.0	3661.4	4285.0
62.5°	4780.8	4838.4	4544.1	3769.8	3673.3	4096.5	4026.1	3967.9	3804.7	3900.9	4174.7
65°	4722.7	4823.3	4605.1	4060.0	3762.0	3933.0	3859.7	3822.5	3801.9	3998.7	3930.7
67.5°	4491.7	4617.6	4430.4	4062.6	3439.8	3348.8	3435.3	3553.4	3485.1	3917.6	3588.9
70°	3974.2	4112.1	4025.0	3824.3	2865.4	2634.7	2730.1	2908.7	2860.5	3484.3	3086.0
72.5°	2981.7	3159.0	3176.2	3301.6	2274.7	1982.9	1996.7	1991.8	2075.0	2809.6	2408.1
75°	1915.4	2053.3	2239.7	2664.2	1728.0	1447.7	1315.3	1282.9	1438.1	2195.4	1724.0
77.5°	1111.9	1128.3	1214.4	2010.0	1237.6	1043.1	952.9	999.0	1053.3	1532.2	1142.7
80°	531.8	540.2	575.6	1034.2	859.8	902.8	833.2	885.1	723.2	880.7	648.4
82.5°	168.7	170.5	176.5	508.1	533.9	598.1	383.2	513.9	447.1	532.4	431.7
85°	28.2	48.0	59.2	146.8	301.4	201.8	83.2	183.3	249.5	335.8	196.1
87.5°	0.0	0.0	0.0	2.6	24.5	11.5	1.8	10.4	38.3	74.8	8.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1
2.5°	730.8	748.7	681.0	620.2	635.6	623.3	604.8	573.3	500.3	554.0	550.3
5°	940.4	907.0	815.2	772.5	720.3	640.8	631.2	570.2	543.3	547.7	543.8
7.5°	1013.4	953.7	872.6	743.8	621.5	506.8	471.6	431.7	423.6	440.9	452.1
10°	956.0	892.7	821.7	661.7	567.6	484.7	397.8	342.0	311.8	308.2	311.3
12.5°	982.3	914.0	768.0	645.5	547.2	472.1	375.2	290.9	225.2	230.2	217.2
15°	1000.6	922.1	755.3	611.6	505.2	404.9	288.1	203.9	150.2	134.5	125.1
17.5°	1107.7	995.6	739.1	572.5	446.6	315.2	180.9	118.1	100.6	95.2	90.7
20°	1245.4	1086.1	738.8	531.3	360.0	197.1	112.9	85.5	81.3	84.5	81.1
22.5°	1405.5	1206.5	778.2	480.0	258.4	124.4	87.9	75.9	71.7	74.3	74.6
25°	1566.6	1387.2	810.3	431.2	179.9	95.4	78.2	69.9	65.2	67.5	66.2
27.5°	1857.5	1536.9	803.0	368.9	132.4	83.9	72.7	65.4	58.4	62.0	61.8
30°	2047.8	1801.0	831.4	281.6	105.1	73.5	67.8	59.7	52.1	56.3	56.1
32.5°	2275.4	1914.4	862.2	216.1	87.3	69.6	61.0	53.2	48.8	51.4	50.8
35°	2531.2	2138.6	805.6	179.9	75.9	62.8	54.0	48.0	44.1	45.4	45.4
37.5°	2983.0	2326.0	771.7	146.5	70.7	56.8	50.6	43.3	40.9	40.9	42.2
40°	3239.5	2612.3	670.5	116.0	72.2	52.4	47.2	39.6	36.5	36.2	37.5
42.5°	3573.2	2777.3	607.2	93.9	65.4	51.1	43.3	36.0	32.3	32.1	33.4
45°	3771.1	2869.6	518.0	73.8	58.7	59.4	40.1	33.1	27.6	26.6	28.9
47.5°	3896.0	2991.9	467.4	58.7	51.1	59.2	39.1	28.7	23.2	21.9	24.0
50°	3959.3	3052.3	457.5	50.3	44.3	52.9	44.8	24.0	19.8	18.0	19.8
52.5°	4025.3	3150.6	461.2	46.4	39.1	42.5	42.5	20.6	17.5	15.4	16.7
55°	4158.5	3295.8	453.1	44.1	36.0	32.3	27.4	18.2	15.9	13.6	14.9
57.5°	4322.2	3400.1	453.1	42.0	33.4	27.6	21.9	16.9	14.6	11.7	12.8
60°	4291.2	3290.4	430.7	39.9	31.3	25.8	19.8	15.6	13.6	10.7	11.5
62.5°	4078.2	2991.9	348.8	36.8	29.5	24.5	18.0	14.9	12.8	9.4	10.2
65°	3827.9	2674.8	242.5	33.4	27.4	22.2	16.2	14.1	11.7	8.3	8.9
67.5°	3526.6	2297.1	134.5	30.0	25.3	19.3	14.9	13.8	11.2	7.6	8.1
70°	3003.6	1734.2	72.2	27.4	23.7	17.7	14.1	13.8	11.2	7.3	7.6
72.5°	2254.8	1092.1	42.2	25.0	21.6	16.4	13.3	14.1	10.9	7.0	7.0
75°	1534.3	663.0	30.2	21.4	19.3	13.8	12.8	13.6	11.2	7.0	6.5
77.5°	1043.1	465.9	24.8	19.3	17.5	12.3	13.0	13.6	11.2	5.7	4.4
80°	651.2	240.4	18.8	15.4	15.1	10.7	13.0	11.7	7.3	1.3	0.0
82.5°	455.5	89.4	10.9	11.7	11.7	7.6	10.2	8.3	4.2	0.0	0.0
85°	191.1	15.4	6.0	8.3	7.3	4.4	8.1	6.3	2.6	0.0	0.0
87.5°	3.4	0.0	2.3	5.0	5.2	2.6	4.2	2.6	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°	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1
2.5°	567.6	542.8	490.6	515.7	513.1	524.5	525.6	499.0	556.3	591.8	597.0
5°	544.4	527.7	524.8	510.5	506.8	527.9	516.5	515.7	543.3	583.7	584.0
7.5°	452.3	439.5	445.5	428.9	385.8	388.5	392.4	408.8	432.5	459.1	468.7
10°	310.5	343.6	319.4	317.3	312.8	299.0	288.1	296.7	327.4	352.0	361.1
12.5°	221.6	226.8	241.7	236.2	243.8	232.0	227.6	254.4	284.4	309.5	327.4
15°	129.6	138.4	147.3	166.1	173.6	171.3	184.8	207.3	231.5	243.0	265.1
17.5°	91.2	92.0	93.9	114.2	127.5	132.7	140.8	157.7	167.6	172.8	182.0
20°	79.8	77.4	74.3	85.8	98.3	104.8	102.5	115.8	123.8	129.0	135.6
22.5°	72.2	68.3	66.5	70.4	80.0	85.8	86.8	94.6	106.9	110.5	112.6
25°	65.2	62.6	61.3	63.4	68.6	74.0	75.1	85.3	96.2	97.8	101.9
27.5°	60.5	55.5	56.1	57.6	60.0	66.7	68.8	74.6	90.5	92.3	93.6
30°	55.5	50.3	51.9	53.4	52.4	60.7	63.9	70.4	85.8	88.6	90.2
32.5°	50.6	46.7	46.4	48.0	49.8	54.2	61.0	68.6	82.6	86.6	90.5
35°	45.1	42.0	42.5	42.8	45.1	50.8	55.8	59.7	69.3	71.4	72.7
37.5°	41.2	38.6	38.1	40.7	43.0	47.4	49.3	51.1	63.9	68.6	68.8
40°	36.5	34.9	34.9	36.8	42.0	41.5	43.8	49.5	61.8	66.7	67.3
42.5°	33.1	31.0	31.5	33.4	37.0	34.4	39.1	47.4	61.0	66.0	65.7
45°	27.9	27.4	28.4	30.0	31.5	29.2	36.5	45.4	58.4	64.9	63.1
47.5°	23.2	23.2	24.5	26.1	25.3	26.1	33.1	42.5	56.8	62.8	61.5
50°	19.0	19.3	20.6	23.2	20.9	22.9	29.7	39.6	54.2	60.7	59.7
52.5°	16.2	16.4	17.2	19.0	18.0	20.9	27.4	36.8	51.6	57.1	56.6
55°	14.1	14.6	14.6	15.6	16.2	19.6	24.8	33.9	47.7	53.7	52.7
57.5°	12.5	13.0	12.8	13.6	14.1	17.2	22.2	30.8	43.8	48.8	47.2
60°	11.2	11.7	11.5	12.5	12.3	14.9	19.3	27.4	39.6	43.5	42.2
62.5°	9.9	10.4	10.4	10.9	11.2	12.5	16.7	24.2	35.5	38.6	37.5
65°	8.9	9.4	9.6	9.4	9.9	10.7	14.1	21.9	30.8	33.9	32.3
67.5°	8.1	8.6	9.1	8.1	8.6	8.9	12.0	19.6	27.1	29.7	28.4
70°	7.8	8.1	8.1	7.0	6.8	7.0	10.4	16.7	23.7	26.3	24.5
72.5°	7.3	7.6	7.3	5.7	5.0	5.5	8.9	14.1	20.1	22.2	20.6
75°	6.8	7.0	6.8	4.7	3.1	3.9	7.3	12.3	17.2	18.2	17.5
77.5°	5.7	6.3	6.3	3.4	1.0	2.3	5.5	9.9	14.3	14.3	14.6
80°	0.5	1.6	2.6	1.8	0.0	0.3	1.8	5.2	9.1	8.9	9.6
82.5°	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.1	2.3	2.6
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°	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1	551.1
2.5°	584.8	576.7	586.8	617.9	605.4	607.7	599.4	650.7	708.9	710.7
5°	584.5	577.2	592.3	591.0	626.7	665.6	703.1	763.9	849.9	850.4
7.5°	464.3	507.6	518.8	515.4	561.3	614.7	672.6	788.9	859.5	867.1
10°	418.7	437.5	460.4	468.7	487.8	538.6	604.1	735.7	815.0	832.4
12.5°	362.9	422.9	453.4	512.5	523.5	530.8	634.0	748.5	796.7	794.6
15°	300.6	352.7	401.0	473.2	502.9	579.5	660.9	810.8	839.5	867.1
17.5°	212.7	252.1	326.1	402.0	492.7	576.2	734.9	922.1	976.3	1009.2
20°	142.3	161.4	228.4	328.8	443.7	526.6	765.2	1022.7	1081.9	1110.3
22.5°	115.5	124.6	159.3	240.9	379.1	524.3	777.4	1132.5	1291.5	1329.3
25°	101.7	107.9	126.4	178.3	314.7	513.9	845.2	1256.1	1448.0	1478.5
27.5°	88.9	98.3	112.1	147.0	269.8	506.6	879.6	1463.6	1692.5	1722.5
30°	85.0	96.5	109.8	134.0	238.5	478.4	934.4	1650.8	1868.0	1921.4
32.5°	91.8	95.7	102.2	122.8	214.3	448.7	1030.6	1874.5	2013.2	2082.8
35°	72.7	79.8	91.2	112.6	204.1	447.1	1085.1	2018.4	2246.0	2289.0
37.5°	71.2	77.7	92.6	109.8	216.4	459.1	1165.9	2313.2	2665.7	2753.8
40°	69.1	77.4	91.5	108.5	216.4	470.8	1217.5	2549.2	2948.1	3037.5
42.5°	68.3	79.0	91.2	113.9	209.6	477.4	1295.4	2784.6	3246.3	3317.0
45°	67.8	80.6	92.0	120.4	208.0	498.7	1339.5	2899.0	3438.2	3519.3
47.5°	66.5	80.6	102.7	116.5	199.4	496.6	1396.6	3068.8	3552.6	3620.9
50°	65.4	81.1	116.3	109.2	200.7	483.9	1474.0	3228.1	3713.0	3761.7
52.5°	63.1	82.9	114.2	99.1	196.8	482.6	1589.5	3454.6	3923.9	3959.6
55°	57.9	80.6	103.2	86.6	183.0	467.7	1742.6	3749.2	4216.4	4222.7
57.5°	53.2	74.8	86.3	79.5	153.3	469.5	1874.5	4020.3	4477.1	4506.3
60°	48.5	77.7	67.0	74.0	127.0	436.2	1938.3	4124.1	4666.9	4709.7
62.5°	44.1	71.7	57.1	68.0	113.1	405.1	1894.0	4040.7	4691.1	4780.8
65°	39.1	49.8	48.2	61.0	114.4	361.6	1745.9	3796.4	4599.1	4722.7
67.5°	33.6	39.1	42.5	52.7	122.5	324.3	1492.0	3404.3	4351.7	4491.7
70°	29.5	35.2	37.0	46.1	127.5	299.8	1177.3	2860.2	3844.9	3974.2
72.5°	24.5	32.6	33.1	40.4	122.8	275.6	839.0	2053.3	2919.6	2981.7
75°	21.1	27.1	30.0	33.9	103.2	205.7	462.2	1270.9	1846.1	1915.4
77.5°	19.0	20.6	22.7	23.5	43.8	107.2	159.0	783.7	1033.7	1111.9
80°	14.6	16.2	15.6	16.2	24.0	37.0	60.5	367.3	488.3	531.8
82.5°	4.7	7.8	8.6	7.3	15.6	18.2	17.5	127.0	158.8	168.7
85°	1.0	2.9	1.3	0.0	5.2	9.4	1.3	19.3	38.1	28.2
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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