

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: P366895

Luminaire Tested: **MSA-SA1C-730-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366895  
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-730-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: 4167 lumens  
Efficiency: N/A  
Efficacy: 70.6 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

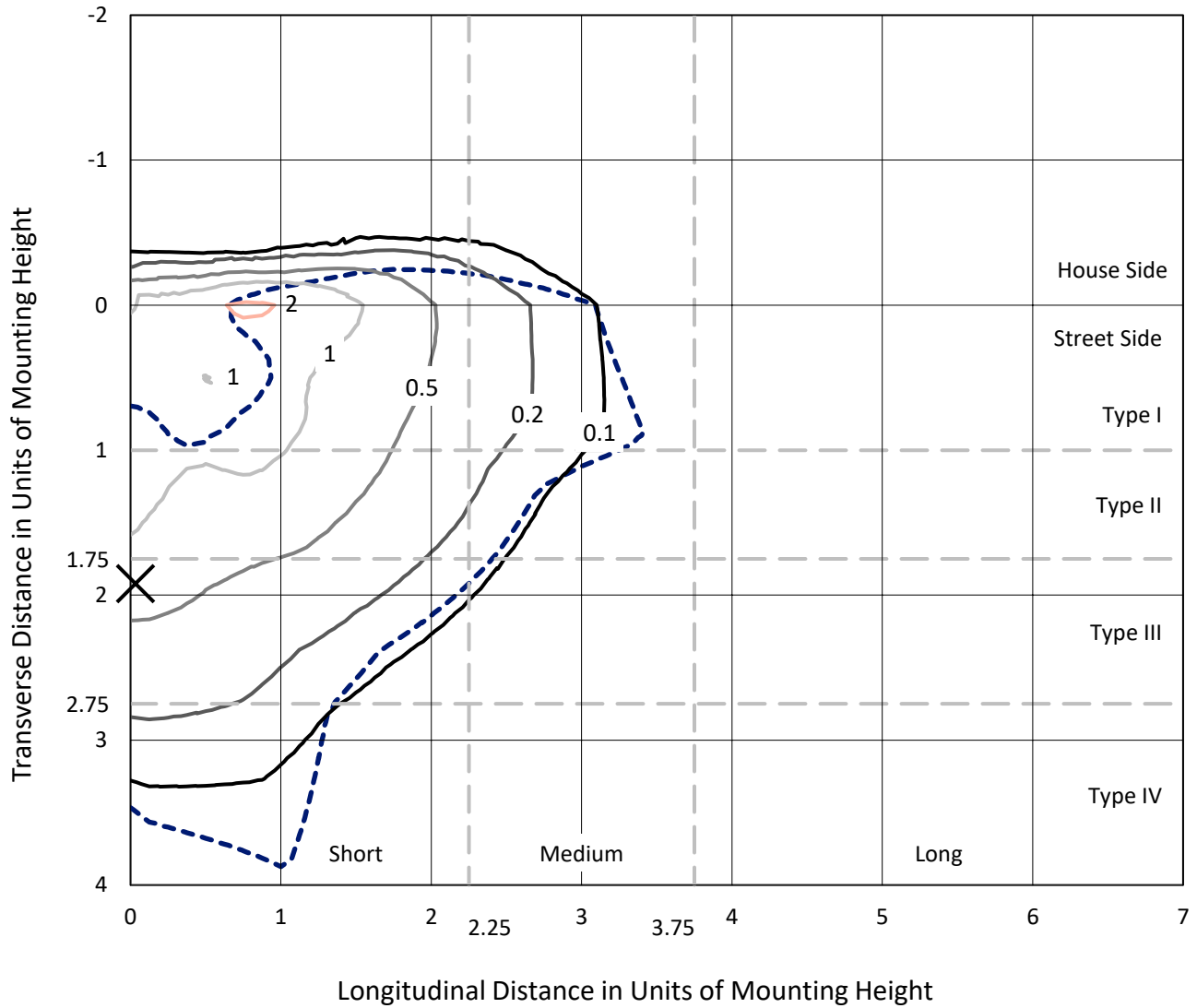
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

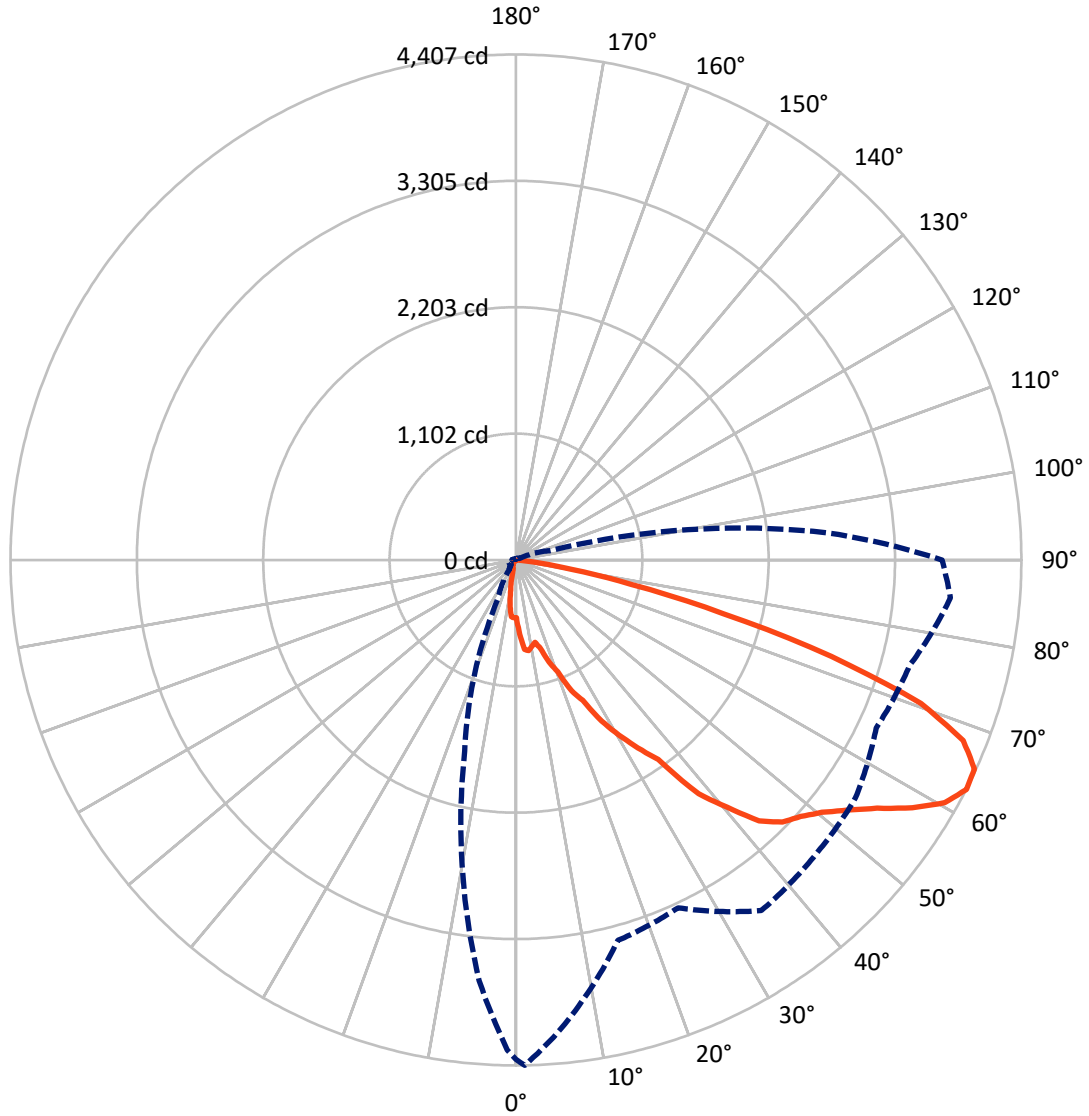
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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	476.5	0.0	476.5
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	3690.5	0.0	3690.5
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	4167.0	0.0	4167.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.1	1.3
10°-20°	146.5	3.5
20°-30°	236.8	5.7
30°-40°	396.7	9.5
40°-50°	648.6	15.6
50°-60°	960.1	23.0
60°-70°	1102.3	26.5
70°-80°	545.1	13.1
80°-90°	74.8	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°	4167.0	100.0
0°-180°	4167.0	100.0

**Coefficient of Utilization**



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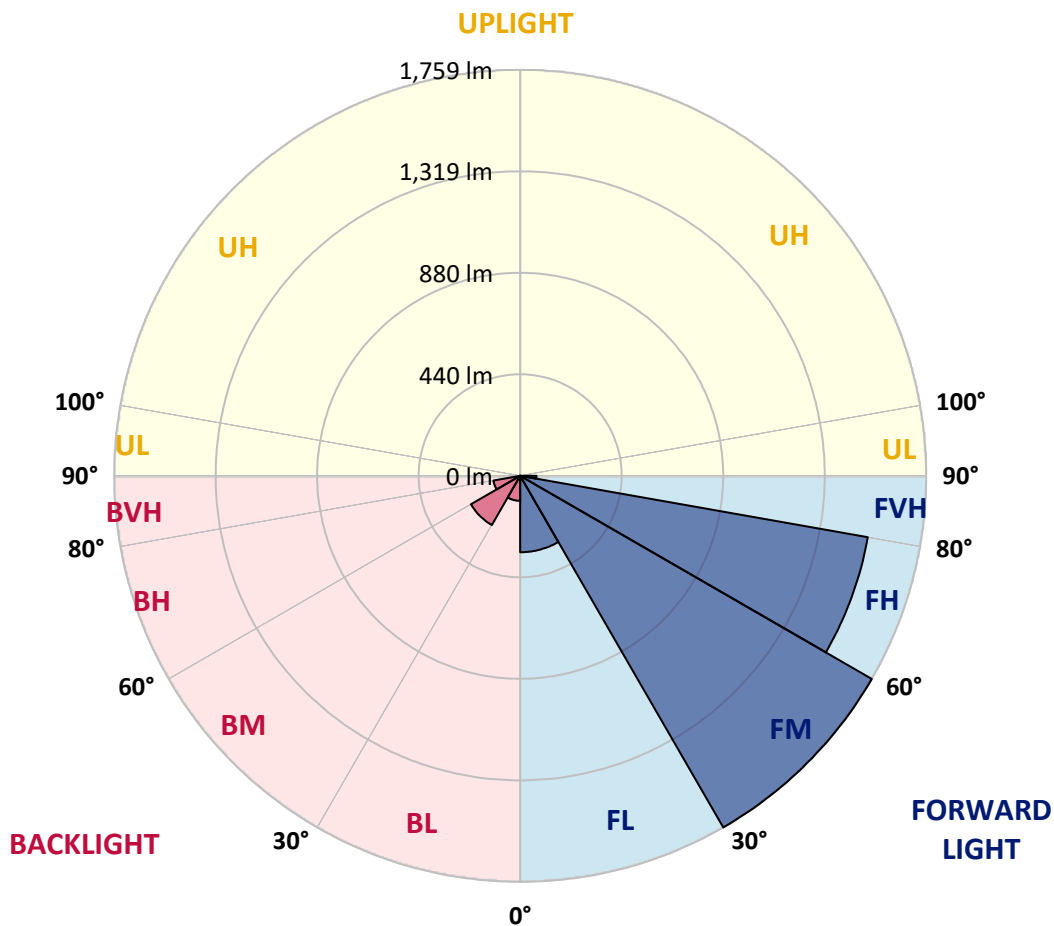
CATALOG NUMBER: MSA-SA1C-730-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	331.0	7.9			
FM (30°-60°)	1759.3	42.2			
FH (60°-80°)	1529.6	36.7			G1/1800
FVH (80°-90°)	70.7	1.7			G1/100
BL (0°-30°)	108.4	2.6	B0/110		
BM (30°-60°)	246.1	5.9	B1/1000		
BH (60°-80°)	117.8	2.8	B1/500		G1/500
BVH (80°-90°)	4.1	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°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
2.5°	647.3	650.4	635.9	634.0	600.3	642.3	643.5	648.5	617.6	557.8	641.4
5°	774.6	783.1	772.0	821.6	835.8	866.5	810.2	860.5	839.2	845.1	857.2
7.5°	789.8	798.6	822.1	905.2	981.9	962.6	956.5	975.5	973.8	929.9	951.7
10°	758.2	765.6	804.7	956.0	989.5	1075.9	1097.0	1053.4	1035.5	939.4	897.3
12.5°	723.8	736.1	786.0	967.4	1067.8	1155.2	1224.8	1162.6	1103.5	1001.1	962.6
15°	789.8	796.7	875.0	991.1	1079.0	1139.3	1196.3	1175.6	1166.6	1093.0	962.6
17.5°	919.2	935.3	992.1	1049.3	1118.7	1155.0	1141.5	1135.0	1112.0	1227.6	1092.8
20°	1011.3	1041.5	1115.8	1140.5	1085.4	1119.4	1111.1	1105.4	1087.3	1302.4	1242.4
22.5°	1210.8	1238.6	1240.0	1248.8	1120.6	1066.4	1052.6	1054.3	1136.2	1324.8	1428.5
25°	1346.6	1356.1	1431.1	1368.5	1216.5	1082.6	1030.1	1053.6	1171.6	1485.3	1603.5
27.5°	1568.9	1591.4	1638.2	1425.9	1274.0	1072.4	988.8	1074.3	1264.7	1538.5	1798.0
30°	1750.1	1771.7	1846.9	1504.5	1323.8	1122.9	1006.6	1115.8	1322.6	1647.9	1972.8
32.5°	1897.0	1952.8	2038.3	1625.9	1321.9	1181.1	1097.5	1102.0	1393.9	1789.7	2145.7
35°	2084.9	2136.9	2196.9	1709.4	1408.4	1199.9	1124.4	1237.4	1499.8	1937.9	2378.4
37.5°	2508.2	2586.8	2468.1	1920.1	1509.0	1369.4	1230.3	1320.7	1610.7	2089.1	2698.2
40°	2766.6	2832.8	2718.2	2027.6	1683.3	1454.9	1419.3	1465.6	1719.2	2167.3	2939.2
42.5°	3021.2	3108.5	2916.9	2189.6	1848.8	1696.1	1598.8	1636.1	1876.1	2355.8	3210.4
45°	3205.4	3259.6	2959.9	2274.4	2076.3	1971.1	1906.3	1850.7	2095.1	2476.9	3385.4
47.5°	3298.0	3341.2	3044.7	2301.2	2211.7	2262.0	2404.0	2287.9	2288.8	2564.5	3479.7
50°	3426.3	3456.4	3092.2	2333.2	2358.7	2715.3	2787.0	2539.8	2510.1	2652.4	3495.1
52.5°	3606.5	3621.2	3184.3	2417.8	2578.8	3070.3	3096.2	2996.2	2731.7	2815.8	3529.3
55°	3846.1	3820.2	3348.8	2595.4	2808.4	3330.3	3365.0	3277.8	3010.2	2978.9	3635.2
57.5°	4104.4	4074.7	3592.7	2845.7	3057.5	3529.1	3549.7	3556.6	3195.2	3123.3	3815.2
60°	4289.6	4295.1	3899.7	3132.8	3212.3	3719.3	3678.0	3615.3	3381.8	3334.8	3902.8
62.5°	4354.5	4406.9	4138.9	3433.6	3345.8	3731.1	3667.0	3614.1	3465.4	3553.1	3802.4
65°	4301.5	4393.2	4194.4	3697.9	3426.5	3582.3	3515.5	3481.6	3462.8	3642.1	3580.1
67.5°	4091.1	4205.8	4035.3	3700.3	3133.0	3050.1	3129.0	3236.5	3174.3	3568.3	3268.8
70°	3619.8	3745.4	3666.1	3483.2	2609.9	2399.7	2486.6	2649.3	2605.4	3173.6	2810.8
72.5°	2715.8	2877.3	2892.9	3007.1	2071.8	1806.1	1818.7	1814.2	1889.9	2559.1	2193.4
75°	1744.6	1870.2	2040.0	2426.6	1573.9	1318.6	1198.0	1168.5	1309.8	1999.6	1570.3
77.5°	1012.7	1027.7	1106.1	1830.8	1127.2	950.1	867.9	909.9	959.3	1395.5	1040.8
80°	484.4	492.0	524.3	942.0	783.1	822.3	758.9	806.2	658.7	802.1	590.6
82.5°	153.6	155.3	160.8	462.8	486.3	544.7	349.1	468.0	407.2	484.9	393.2
85°	25.6	43.7	53.9	133.7	274.5	183.8	75.7	166.9	227.2	305.8	178.6
87.5°	0.0	0.0	0.0	2.4	22.3	10.4	1.7	9.5	34.9	68.1	8.1
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°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
2.5°	665.6	682.0	620.2	564.9	578.9	567.8	550.9	522.2	455.7	504.6	501.3
5°	856.5	826.1	742.5	703.6	656.1	583.7	574.9	519.3	494.9	498.9	495.3
7.5°	923.0	868.6	794.8	677.5	566.1	461.6	429.6	393.2	385.9	401.5	411.7
10°	870.8	813.0	748.5	602.7	516.9	441.4	362.4	311.5	284.0	280.7	283.5
12.5°	894.7	832.5	699.5	587.9	498.4	430.0	341.7	265.0	205.2	209.7	197.8
15°	911.4	839.9	687.9	557.1	460.2	368.8	262.4	185.7	136.8	122.5	114.0
17.5°	1009.0	906.8	673.2	521.5	406.8	287.1	164.8	107.6	91.7	86.7	82.6
20°	1134.3	989.2	673.0	483.9	327.9	179.5	102.8	77.9	74.1	76.9	73.8
22.5°	1280.1	1098.9	708.8	437.2	235.3	113.3	80.0	69.1	65.3	67.7	67.9
25°	1426.9	1263.5	738.0	392.8	163.8	86.9	71.2	63.6	59.4	61.5	60.3
27.5°	1691.9	1399.8	731.4	336.0	120.6	76.5	66.3	59.6	53.2	56.5	56.3
30°	1865.2	1640.3	757.2	256.5	95.7	67.0	61.7	54.4	47.5	51.3	51.1
32.5°	2072.5	1743.6	785.3	196.9	79.5	63.4	55.6	48.4	44.4	46.8	46.3
35°	2305.5	1947.9	733.7	163.8	69.1	57.2	49.2	43.7	40.1	41.3	41.3
37.5°	2717.0	2118.6	702.9	133.5	64.4	51.8	46.1	39.4	37.3	37.3	38.5
40°	2950.6	2379.3	610.7	105.7	65.8	47.7	43.0	36.1	33.2	33.0	34.2
42.5°	3254.6	2529.6	553.0	85.5	59.6	46.5	39.4	32.8	29.4	29.2	30.4
45°	3434.8	2613.7	471.8	67.2	53.4	54.1	36.6	30.2	25.2	24.2	26.4
47.5°	3548.5	2725.0	425.8	53.4	46.5	53.9	35.6	26.1	21.1	19.9	21.8
50°	3606.2	2780.1	416.7	45.8	40.4	48.2	40.8	21.8	18.0	16.4	18.0
52.5°	3666.3	2869.7	420.1	42.3	35.6	38.7	38.7	18.8	15.9	14.0	15.2
55°	3787.7	3001.9	412.7	40.1	32.8	29.4	24.9	16.6	14.5	12.3	13.5
57.5°	3936.8	3096.9	412.7	38.2	30.4	25.2	19.9	15.4	13.3	10.7	11.6
60°	3908.5	2996.9	392.3	36.3	28.5	23.5	18.0	14.2	12.3	9.7	10.4
62.5°	3714.5	2725.0	317.7	33.5	26.8	22.3	16.4	13.5	11.6	8.5	9.3
65°	3486.6	2436.3	220.8	30.4	24.9	20.2	14.7	12.8	10.7	7.6	8.1
67.5°	3212.1	2092.2	122.5	27.3	23.0	17.6	13.5	12.6	10.2	6.9	7.4
70°	2735.7	1579.6	65.8	24.9	21.6	16.1	12.8	12.6	10.2	6.6	6.9
72.5°	2053.8	994.7	38.5	22.8	19.7	15.0	12.1	12.8	10.0	6.4	6.4
75°	1397.4	603.9	27.5	19.5	17.6	12.6	11.6	12.3	10.2	6.4	5.9
77.5°	950.1	424.3	22.6	17.6	15.9	11.2	11.9	12.3	10.2	5.2	4.0
80°	593.2	218.9	17.1	14.0	13.8	9.7	11.9	10.7	6.6	1.2	0.0
82.5°	414.8	81.4	10.0	10.7	10.7	6.9	9.3	7.6	3.8	0.0	0.0
85°	174.1	14.0	5.5	7.6	6.6	4.0	7.4	5.7	2.4	0.0	0.0
87.5°	3.1	0.0	2.1	4.5	4.7	2.4	3.8	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°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
2.5°	516.9	494.4	446.9	469.7	467.3	477.8	478.7	454.5	506.7	539.0	543.8
5°	495.8	480.6	478.0	464.9	461.6	480.8	470.4	469.7	494.9	531.7	531.9
7.5°	412.0	400.4	405.8	390.6	351.4	353.8	357.4	372.3	393.9	418.2	426.9
10°	282.8	313.0	290.9	289.0	284.9	272.4	262.4	270.2	298.2	320.6	328.9
12.5°	201.8	206.6	220.1	215.1	222.0	211.3	207.3	231.8	259.1	281.9	298.2
15°	118.0	126.1	134.2	151.3	158.1	156.0	168.4	188.8	210.9	221.3	241.5
17.5°	83.1	83.8	85.5	104.0	116.1	120.9	128.2	143.7	152.7	157.4	165.7
20°	72.7	70.5	67.7	78.1	89.5	95.5	93.3	105.4	112.8	117.5	123.5
22.5°	65.8	62.2	60.6	64.1	72.9	78.1	79.1	86.2	97.4	100.7	102.6
25°	59.4	57.0	55.8	57.7	62.5	67.4	68.4	77.6	87.6	89.0	92.8
27.5°	55.1	50.6	51.1	52.5	54.6	60.8	62.7	67.9	82.4	84.1	85.2
30°	50.6	45.8	47.3	48.7	47.7	55.3	58.2	64.1	78.1	80.7	82.2
32.5°	46.1	42.5	42.3	43.7	45.4	49.4	55.6	62.5	75.3	78.8	82.4
35°	41.1	38.2	38.7	38.9	41.1	46.3	50.8	54.4	63.2	65.1	66.3
37.5°	37.5	35.1	34.7	37.0	39.2	43.2	44.9	46.5	58.2	62.5	62.7
40°	33.2	31.8	31.8	33.5	38.2	37.8	39.9	45.1	56.3	60.8	61.3
42.5°	30.2	28.3	28.7	30.4	33.7	31.3	35.6	43.2	55.6	60.1	59.8
45°	25.4	24.9	25.9	27.3	28.7	26.6	33.2	41.3	53.2	59.1	57.5
47.5°	21.1	21.1	22.3	23.7	23.0	23.7	30.2	38.7	51.8	57.2	56.0
50°	17.3	17.6	18.8	21.1	19.0	20.9	27.1	36.1	49.4	55.3	54.4
52.5°	14.7	15.0	15.7	17.3	16.4	19.0	24.9	33.5	47.0	52.0	51.5
55°	12.8	13.3	13.3	14.2	14.7	17.8	22.6	30.9	43.5	48.9	48.0
57.5°	11.4	11.9	11.6	12.3	12.8	15.7	20.2	28.0	39.9	44.4	43.0
60°	10.2	10.7	10.4	11.4	11.2	13.5	17.6	24.9	36.1	39.7	38.5
62.5°	9.0	9.5	9.5	10.0	10.2	11.4	15.2	22.1	32.3	35.1	34.2
65°	8.1	8.5	8.8	8.5	9.0	9.7	12.8	19.9	28.0	30.9	29.4
67.5°	7.4	7.8	8.3	7.4	7.8	8.1	10.9	17.8	24.7	27.1	25.9
70°	7.1	7.4	7.4	6.4	6.2	6.4	9.5	15.2	21.6	24.0	22.3
72.5°	6.6	6.9	6.6	5.2	4.5	5.0	8.1	12.8	18.3	20.2	18.8
75°	6.2	6.4	6.2	4.3	2.8	3.6	6.6	11.2	15.7	16.6	15.9
77.5°	5.2	5.7	5.7	3.1	0.9	2.1	5.0	9.0	13.1	13.1	13.3
80°	0.5	1.4	2.4	1.7	0.0	0.2	1.7	4.7	8.3	8.1	8.8
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.8	2.1	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°	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0	502.0
2.5°	532.6	525.3	534.5	562.8	551.4	553.5	545.9	592.7	645.6	647.3
5°	532.4	525.7	539.5	538.3	570.8	606.2	640.4	695.7	774.1	774.6
7.5°	422.9	462.3	472.5	469.5	511.2	559.9	612.6	718.5	782.9	789.8
10°	381.4	398.5	419.3	426.9	444.3	490.6	550.2	670.1	742.3	758.2
12.5°	330.5	385.2	412.9	466.8	476.8	483.5	577.5	681.7	725.7	723.8
15°	273.8	321.3	365.2	431.0	458.1	527.9	602.0	738.5	764.6	789.8
17.5°	193.8	229.6	297.1	366.2	448.8	524.8	669.4	839.9	889.3	919.2
20°	129.7	147.0	208.0	299.4	404.2	479.7	696.9	931.5	985.4	1011.3
22.5°	105.2	113.5	145.1	219.4	345.3	477.5	708.1	1031.5	1176.4	1210.8
25°	92.6	98.3	115.2	162.4	286.6	468.0	769.8	1144.1	1318.8	1346.6
27.5°	81.0	89.5	102.1	133.9	245.8	461.4	801.2	1333.1	1541.6	1568.9
30°	77.4	87.9	100.0	122.1	217.3	435.7	851.0	1503.6	1701.4	1750.1
32.5°	83.6	87.1	93.1	111.8	195.2	408.7	938.7	1707.3	1833.6	1897.0
35°	66.3	72.7	83.1	102.6	185.9	407.2	988.3	1838.4	2045.7	2084.9
37.5°	64.8	70.8	84.3	100.0	197.1	418.2	1061.9	2106.9	2428.0	2508.2
40°	62.9	70.5	83.3	98.8	197.1	428.8	1108.9	2321.8	2685.2	2766.6
42.5°	62.2	71.9	83.1	103.8	190.9	434.8	1179.9	2536.3	2956.8	3021.2
45°	61.7	73.4	83.8	109.7	189.5	454.3	1220.0	2640.5	3131.6	3205.4
47.5°	60.6	73.4	93.6	106.1	181.7	452.4	1272.1	2795.1	3235.8	3298.0
50°	59.6	73.8	105.9	99.5	182.8	440.7	1342.6	2940.2	3381.8	3426.3
52.5°	57.5	75.5	104.0	90.2	179.3	439.5	1447.8	3146.5	3573.9	3606.5
55°	52.7	73.4	94.0	78.8	166.7	426.0	1587.2	3414.9	3840.4	3846.1
57.5°	48.4	68.1	78.6	72.4	139.6	427.7	1707.3	3661.8	4077.8	4104.4
60°	44.2	70.8	61.0	67.4	115.6	397.3	1765.5	3756.3	4250.7	4289.6
62.5°	40.1	65.3	52.0	62.0	103.1	369.0	1725.1	3680.3	4272.8	4354.5
65°	35.6	45.4	43.9	55.6	104.2	329.4	1590.2	3457.8	4189.0	4301.5
67.5°	30.6	35.6	38.7	48.0	111.6	295.4	1359.0	3100.7	3963.6	4091.1
70°	26.8	32.1	33.7	42.0	116.1	273.1	1072.4	2605.1	3502.0	3619.8
72.5°	22.3	29.7	30.2	36.8	111.8	251.0	764.1	1870.2	2659.3	2715.8
75°	19.2	24.7	27.3	30.9	94.0	187.4	421.0	1157.6	1681.4	1744.6
77.5°	17.3	18.8	20.7	21.4	39.9	97.6	144.8	713.8	941.5	1012.7
80°	13.3	14.7	14.2	14.7	21.8	33.7	55.1	334.6	444.8	484.4
82.5°	4.3	7.1	7.8	6.6	14.2	16.6	15.9	115.6	144.6	153.6
85°	0.9	2.6	1.2	0.0	4.7	8.5	1.2	17.6	34.7	25.6
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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