

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: P367423

Luminaire Tested: **MSA-SA2C-730-U-SLL-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367423  
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-SA2C-730-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: 8195 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

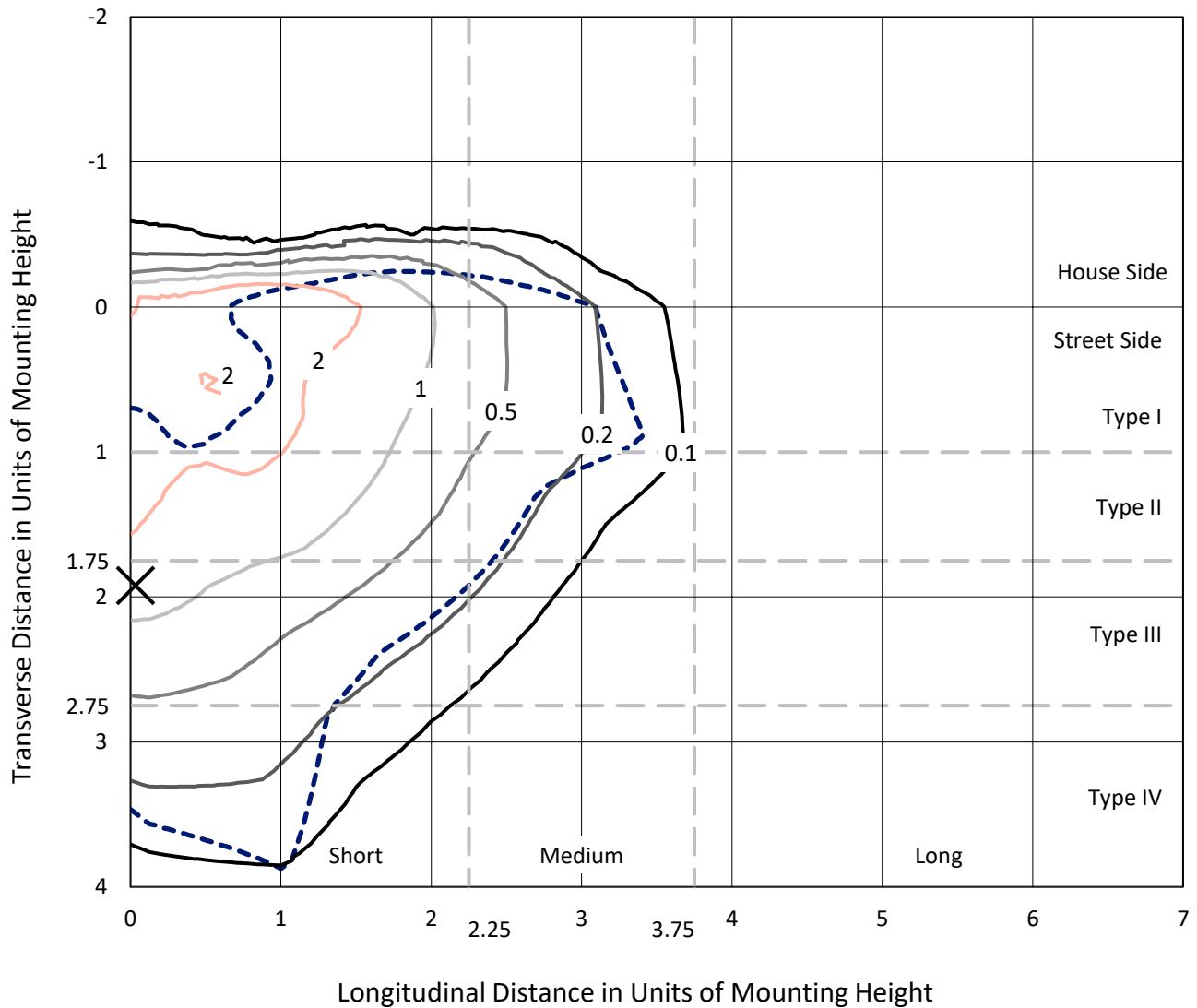
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

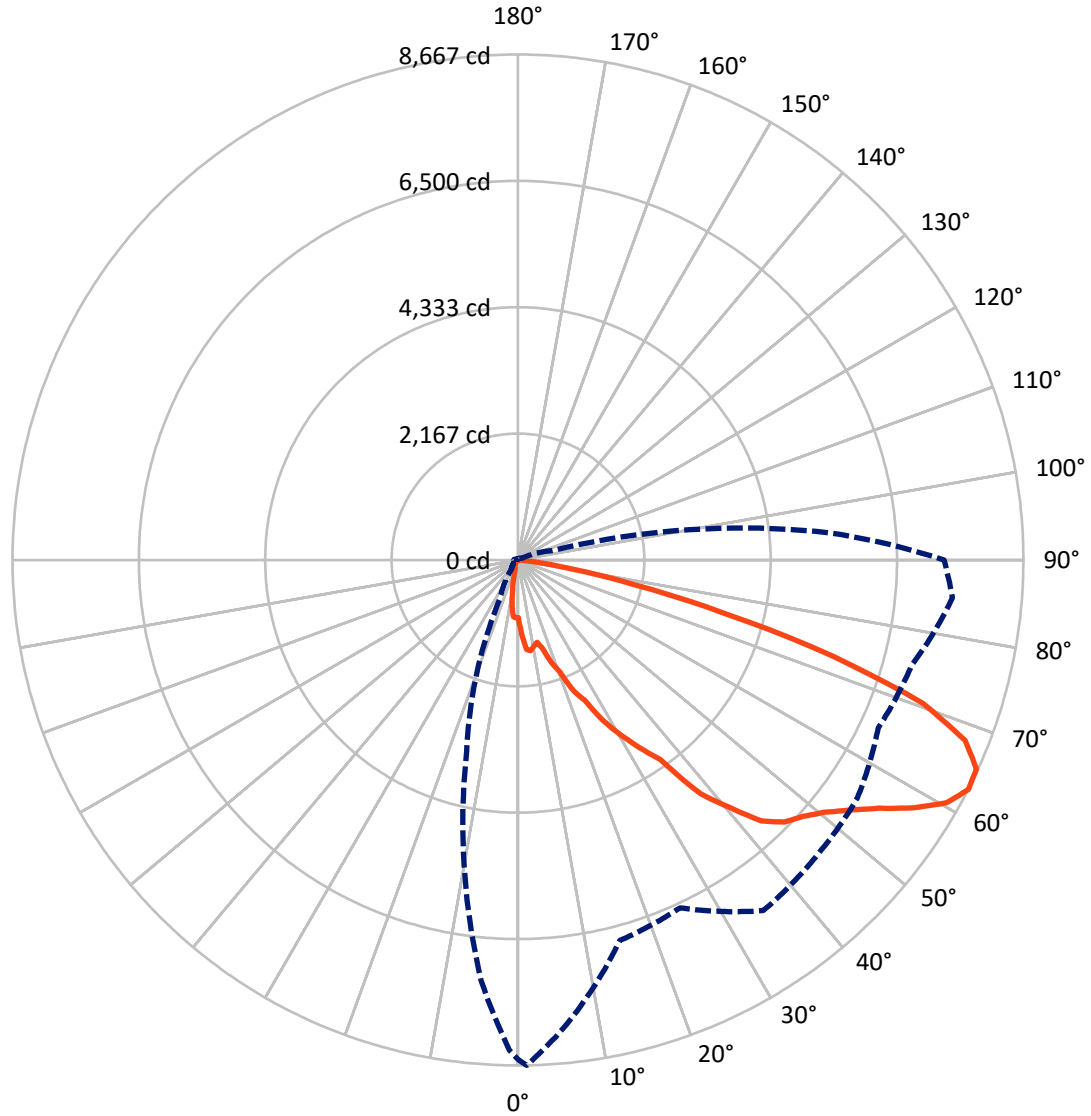
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 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	937.1	0.0	937.1
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	7257.9	0.0	7257.9
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	8195.0	0.0	8195.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.3	1.3
10°-20°	288.1	3.5
20°-30°	465.7	5.7
30°-40°	780.1	9.5
40°-50°	1275.6	15.6
50°-60°	1888.2	23.0
60°-70°	2167.8	26.5
70°-80°	1072.0	13.1
80°-90°	147.2	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°	8195.0	100.0
0°-180°	8195.0	100.0

**Coefficient of Utilization**



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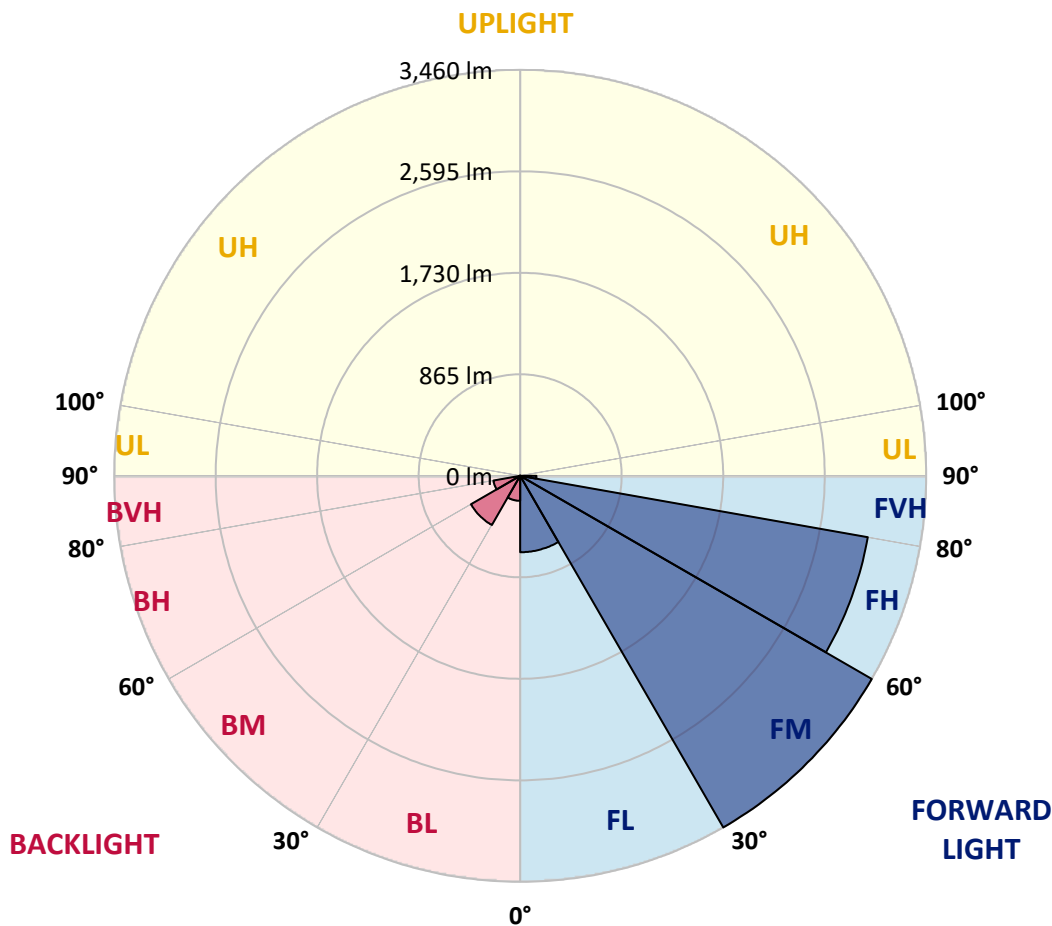
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	650.9	7.9			
FM (30°-60°)	3459.9	42.2			
FH (60°-80°)	3008.1	36.7			G2/5000
FVH (80°-90°)	139.0	1.7			G2/225
BL (0°-30°)	213.2	2.6	B1/500		
BM (30°-60°)	484.0	5.9	B1/1000		
BH (60°-80°)	231.7	2.8	B1/500		G1/500
BVH (80°-90°)	8.2	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2
2.5°	1273.0	1279.1	1250.6	1246.9	1180.6	1263.2	1265.5	1275.4	1214.6	1097.0	1261.3
5°	1523.3	1540.1	1518.2	1615.8	1643.8	1704.1	1593.4	1692.4	1650.3	1662.0	1685.8
7.5°	1553.2	1570.5	1616.7	1780.2	1931.0	1893.2	1881.0	1918.4	1915.1	1828.7	1871.7
10°	1491.1	1505.6	1582.6	1880.1	1946.0	2115.9	2157.5	2071.6	2036.5	1847.4	1764.8
12.5°	1423.4	1447.7	1545.7	1902.5	2100.1	2271.9	2408.7	2286.4	2170.1	1968.8	1893.2
15°	1553.2	1566.8	1720.9	1949.2	2122.0	2240.6	2352.7	2312.1	2294.3	2149.6	1893.2
17.5°	1807.7	1839.5	1951.1	2063.6	2200.0	2271.4	2244.8	2232.2	2186.9	2414.3	2149.1
20°	1988.9	2048.2	2194.4	2243.0	2134.6	2201.4	2185.1	2173.8	2138.4	2561.4	2443.3
22.5°	2381.2	2435.8	2438.6	2455.9	2203.7	2097.3	2070.2	2073.4	2234.6	2605.3	2809.4
25°	2648.3	2667.0	2814.6	2691.3	2392.4	2129.0	2025.8	2072.0	2304.1	2921.0	3153.6
27.5°	3085.4	3129.8	3221.8	2804.3	2505.4	2108.9	1944.6	2112.7	2487.2	3025.6	3536.1
30°	3441.7	3484.2	3632.3	2958.9	2603.5	2208.4	1979.6	2194.4	2601.1	3240.9	3879.8
32.5°	3730.8	3840.5	4008.7	3197.5	2599.7	2322.8	2158.4	2167.3	2741.2	3519.7	4219.7
35°	4100.2	4202.5	4320.6	3361.9	2769.7	2359.7	2211.2	2433.5	2949.5	3811.1	4677.4
37.5°	4932.8	5087.4	4853.9	3776.1	2967.7	2693.1	2419.5	2597.4	3167.6	4108.6	5306.4
40°	5440.9	5571.2	5345.6	3987.6	3310.5	2861.3	2791.2	2882.3	3381.0	4262.2	5780.4
42.5°	5941.5	6113.4	5736.5	4306.1	3636.0	3335.7	3144.3	3217.6	3689.7	4633.0	6313.7
45°	6303.9	6410.4	5821.0	4472.8	4083.4	3876.5	3749.0	3639.7	4120.3	4871.2	6657.9
47.5°	6486.0	6571.0	5987.8	4525.6	4349.6	4448.6	4727.8	4499.5	4501.3	5043.5	6843.3
50°	6738.2	6797.5	6081.2	4588.7	4638.6	5340.0	5481.1	4994.9	4936.6	5216.3	6873.6
52.5°	7092.7	7121.6	6262.4	4754.9	5071.5	6038.2	6089.1	5892.5	5372.3	5537.6	6940.9
55°	7563.9	7513.0	6586.0	5104.2	5523.1	6549.5	6617.7	6446.3	5920.0	5858.4	7149.2
57.5°	8071.9	8013.6	7065.6	5596.4	6013.0	6940.4	6981.0	6994.6	6283.8	6142.3	7503.1
60°	8436.2	8446.9	7669.4	6161.0	6317.5	7314.5	7233.2	7109.9	6650.9	6558.4	7675.5
62.5°	8563.7	8666.9	8139.7	6752.7	6579.9	7337.8	7211.7	7107.6	6815.3	6987.6	7477.9
65°	8459.5	8639.8	8248.9	7272.5	6738.7	7045.0	6913.8	6847.0	6810.1	7162.7	7040.8
67.5°	8045.8	8271.3	7936.0	7277.1	6161.5	5998.5	6153.5	6365.1	6242.7	7017.5	6428.6
70°	7118.8	7365.8	7209.9	6850.3	5132.7	4719.4	4890.3	5210.2	5123.8	6241.3	5527.8
72.5°	5341.0	5658.5	5689.4	5914.0	4074.5	3551.9	3576.7	3567.8	3716.8	5032.8	4313.6
75°	3431.0	3678.0	4011.9	4772.2	3095.2	2593.2	2356.0	2298.1	2575.9	3932.5	3088.2
77.5°	1991.7	2021.1	2175.2	3600.5	2216.8	1868.4	1706.9	1789.5	1886.6	2744.5	2046.8
80°	952.7	967.6	1031.1	1852.6	1540.1	1617.2	1492.5	1585.4	1295.4	1577.5	1161.4
82.5°	302.1	305.4	316.2	910.2	956.4	1071.3	686.5	920.4	800.9	953.6	773.3
85°	50.4	85.9	106.0	262.9	539.8	361.5	149.0	328.3	446.9	601.5	351.2
87.5°	0.0	0.0	0.0	4.7	43.9	20.5	3.3	18.7	68.6	134.0	15.9
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°	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2
2.5°	1309.0	1341.2	1219.8	1111.0	1138.5	1116.6	1083.4	1026.9	896.2	992.4	985.8
5°	1684.4	1624.7	1460.3	1383.7	1290.3	1147.9	1130.6	1021.3	973.2	981.1	974.1
7.5°	1815.2	1708.3	1563.0	1332.3	1113.3	907.8	844.8	773.3	758.9	789.7	809.8
10°	1712.5	1599.0	1472.0	1185.2	1016.6	868.1	712.6	612.7	558.5	552.0	557.6
12.5°	1759.6	1637.3	1375.8	1156.3	980.2	845.7	672.0	521.2	403.5	412.4	389.0
15°	1792.3	1651.7	1352.9	1095.6	905.0	725.2	516.0	365.2	269.0	241.0	224.2
17.5°	1984.2	1783.4	1323.9	1025.5	800.0	564.6	324.1	211.5	180.3	170.5	162.5
20°	2230.8	1945.5	1323.5	951.7	644.9	353.0	202.2	153.2	145.7	151.3	145.2
22.5°	2517.5	2161.2	1394.0	859.7	462.8	222.8	157.4	135.9	128.4	133.1	133.6
25°	2806.1	2484.9	1451.4	772.4	322.2	170.9	140.1	125.2	116.7	121.0	118.6
27.5°	3327.3	2752.9	1438.3	660.8	237.2	150.4	130.3	117.2	104.6	111.1	110.7
30°	3668.2	3226.0	1489.2	504.4	188.2	131.7	121.4	106.9	93.4	100.9	100.4
32.5°	4075.9	3429.1	1544.3	387.1	156.4	124.7	109.3	95.3	87.3	92.0	91.1
35°	4534.0	3830.7	1443.0	322.2	135.9	112.5	96.7	85.9	78.9	81.3	81.3
37.5°	5343.3	4166.5	1382.3	262.4	126.6	101.8	90.6	77.5	73.3	73.3	75.7
40°	5802.8	4679.3	1201.1	207.8	129.4	93.9	84.5	71.0	65.4	64.9	67.2
42.5°	6400.6	4974.9	1087.6	168.1	117.2	91.5	77.5	64.4	57.9	57.4	59.8
45°	6755.0	5140.2	927.9	132.2	105.1	106.5	71.9	59.3	49.5	47.6	51.8
47.5°	6978.7	5359.2	837.3	105.1	91.5	106.0	70.0	51.4	41.6	39.2	43.0
50°	7092.2	5467.5	819.6	90.1	79.4	94.8	80.3	43.0	35.5	32.2	35.5
52.5°	7210.3	5643.6	826.1	83.1	70.0	76.1	76.1	36.9	31.3	27.6	29.9
55°	7449.0	5903.7	811.6	78.9	64.4	57.9	49.0	32.7	28.5	24.3	26.6
57.5°	7742.2	6090.5	811.6	75.2	59.8	49.5	39.2	30.4	26.2	21.0	22.9
60°	7686.7	5893.9	771.5	71.4	56.0	46.2	35.5	28.0	24.3	19.1	20.5
62.5°	7305.1	5359.2	624.8	65.8	52.8	43.9	32.2	26.6	22.9	16.8	18.2
65°	6856.8	4791.3	434.3	59.8	49.0	39.7	29.0	25.2	21.0	14.9	15.9
67.5°	6317.0	4114.7	241.0	53.7	45.3	34.6	26.6	24.8	20.1	13.5	14.5
70°	5380.2	3106.4	129.4	49.0	42.5	31.8	25.2	24.8	20.1	13.1	13.5
72.5°	4039.0	1956.2	75.7	44.8	38.8	29.4	23.8	25.2	19.6	12.6	12.6
75°	2748.2	1187.6	54.2	38.3	34.6	24.8	22.9	24.3	20.1	12.6	11.7
77.5°	1868.4	834.5	44.4	34.6	31.3	21.9	23.3	24.3	20.1	10.3	7.9
80°	1166.5	430.6	33.6	27.6	27.1	19.1	23.3	21.0	13.1	2.3	0.0
82.5°	815.8	160.2	19.6	21.0	21.0	13.5	18.2	14.9	7.5	0.0	0.0
85°	342.3	27.6	10.7	14.9	13.1	7.9	14.5	11.2	4.7	0.0	0.0
87.5°	6.1	0.0	4.2	8.9	9.3	4.7	7.5	4.7	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°	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2
2.5°	1016.6	972.3	878.9	923.7	919.0	939.6	941.5	893.8	996.6	1060.1	1069.4
5°	975.1	945.2	940.1	914.4	907.8	945.7	925.1	923.7	973.2	1045.6	1046.1
7.5°	810.2	787.3	798.1	768.2	691.1	695.8	702.8	732.2	774.7	822.4	839.6
10°	556.2	615.5	572.1	568.3	560.4	535.6	516.0	531.4	586.5	630.4	646.8
12.5°	396.9	406.3	432.9	423.1	436.6	415.6	407.7	455.8	509.5	554.3	586.5
15°	232.1	248.0	263.8	297.5	311.0	306.8	331.1	371.3	414.7	435.2	474.9
17.5°	163.4	164.8	168.1	204.5	228.4	237.7	252.2	282.5	300.3	309.6	326.0
20°	142.9	138.7	133.1	153.6	176.1	187.7	183.5	207.3	221.8	231.2	242.8
22.5°	129.4	122.4	119.1	126.1	143.4	153.6	155.5	169.5	191.5	198.0	201.7
25°	116.7	112.1	109.7	113.5	122.8	132.6	134.5	152.7	172.3	175.1	182.6
27.5°	108.3	99.5	100.4	103.2	107.4	119.5	123.3	133.6	162.0	165.3	167.6
30°	99.5	90.1	92.9	95.7	93.9	108.8	114.4	126.1	153.6	158.8	161.6
32.5°	90.6	83.6	83.1	85.9	89.2	97.1	109.3	122.8	148.0	155.0	162.0
35°	80.8	75.2	76.1	76.6	80.8	91.1	99.9	106.9	124.2	128.0	130.3
37.5°	73.8	69.1	68.2	72.9	77.1	85.0	88.3	91.5	114.4	122.8	123.3
40°	65.4	62.6	62.6	65.8	75.2	74.3	78.5	88.7	110.7	119.5	120.5
42.5°	59.3	55.6	56.5	59.8	66.3	61.6	70.0	85.0	109.3	118.1	117.7
45°	50.0	49.0	50.9	53.7	56.5	52.3	65.4	81.3	104.6	116.3	113.0
47.5°	41.6	41.6	43.9	46.7	45.3	46.7	59.3	76.1	101.8	112.5	110.2
50°	34.1	34.6	36.9	41.6	37.4	41.1	53.2	71.0	97.1	108.8	106.9
52.5°	29.0	29.4	30.8	34.1	32.2	37.4	49.0	65.8	92.5	102.3	101.3
55°	25.2	26.2	26.2	28.0	29.0	35.0	44.4	60.7	85.5	96.2	94.3
57.5°	22.4	23.3	22.9	24.3	25.2	30.8	39.7	55.1	78.5	87.3	84.5
60°	20.1	21.0	20.5	22.4	21.9	26.6	34.6	49.0	71.0	78.0	75.7
62.5°	17.7	18.7	18.7	19.6	20.1	22.4	29.9	43.4	63.5	69.1	67.2
65°	15.9	16.8	17.3	16.8	17.7	19.1	25.2	39.2	55.1	60.7	57.9
67.5°	14.5	15.4	16.3	14.5	15.4	15.9	21.5	35.0	48.6	53.2	50.9
70°	14.0	14.5	14.5	12.6	12.1	12.6	18.7	29.9	42.5	47.2	43.9
72.5°	13.1	13.5	13.1	10.3	8.9	9.8	15.9	25.2	36.0	39.7	36.9
75°	12.1	12.6	12.1	8.4	5.6	7.0	13.1	21.9	30.8	32.7	31.3
77.5°	10.3	11.2	11.2	6.1	1.9	4.2	9.8	17.7	25.7	25.7	26.2
80°	0.9	2.8	4.7	3.3	0.0	0.5	3.3	9.3	16.3	15.9	17.3
82.5°	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	5.6	4.2	4.7
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°	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2	987.2
2.5°	1047.5	1033.0	1051.2	1106.8	1084.4	1088.6	1073.6	1165.6	1269.7	1273.0
5°	1047.0	1033.9	1061.0	1058.7	1122.6	1192.2	1259.5	1368.3	1522.4	1523.3
7.5°	831.7	909.2	929.3	923.2	1005.4	1101.2	1204.8	1413.1	1539.7	1553.2
10°	750.0	783.6	824.7	839.6	873.7	964.8	1082.0	1317.8	1459.8	1491.1
12.5°	650.1	757.5	812.1	918.1	937.7	950.8	1135.7	1340.7	1427.1	1423.4
15°	538.4	631.8	718.2	847.6	900.8	1038.1	1183.8	1452.3	1503.7	1553.2
17.5°	381.1	451.6	584.2	720.1	882.6	1032.1	1316.4	1651.7	1748.9	1807.7
20°	255.0	289.1	409.1	588.9	794.8	943.3	1370.6	1832.0	1938.0	1988.9
22.5°	206.9	223.2	285.3	431.5	679.0	939.1	1392.6	2028.6	2313.5	2381.2
25°	182.1	193.3	226.5	319.4	563.7	920.4	1514.0	2250.0	2593.7	2648.3
27.5°	159.2	176.1	200.8	263.4	483.3	907.4	1575.6	2621.7	3031.7	3085.4
30°	152.2	172.8	196.6	240.0	427.3	856.9	1673.7	2957.0	3346.0	3441.7
32.5°	164.4	171.4	183.1	220.0	383.9	803.7	1846.0	3357.7	3606.1	3730.8
35°	130.3	142.9	163.4	201.7	365.7	800.9	1943.6	3615.4	4023.1	4100.2
37.5°	127.5	139.2	165.8	196.6	387.6	822.4	2088.4	4143.6	4775.0	4932.8
40°	123.8	138.7	163.9	194.3	387.6	843.4	2180.8	4566.2	5280.7	5440.9
42.5°	122.4	141.5	163.4	204.1	375.5	855.1	2320.5	4987.9	5815.0	5941.5
45°	121.4	144.3	164.8	215.7	372.7	893.4	2399.4	5192.9	6158.7	6303.9
47.5°	119.1	144.3	184.0	208.7	357.2	889.6	2501.7	5497.0	6363.7	6486.0
50°	117.2	145.2	208.3	195.7	359.6	866.7	2640.4	5782.3	6650.9	6738.2
52.5°	113.0	148.5	204.5	177.5	352.6	864.4	2847.2	6188.1	7028.7	7092.7
55°	103.7	144.3	184.9	155.0	327.8	837.8	3121.4	6715.8	7552.6	7563.9
57.5°	95.3	134.0	154.6	142.4	274.6	841.1	3357.7	7201.5	8019.6	8071.9
60°	86.9	139.2	120.0	132.6	227.4	781.3	3472.1	7387.3	8359.6	8436.2
62.5°	78.9	128.4	102.3	121.9	202.7	725.7	3392.7	7237.9	8403.0	8563.7
65°	70.0	89.2	86.4	109.3	205.0	647.7	3127.4	6800.3	8238.2	8459.5
67.5°	60.2	70.0	76.1	94.3	219.5	580.9	2672.6	6098.0	7795.0	8045.8
70°	52.8	63.0	66.3	82.7	228.4	537.0	2108.9	5123.4	6887.2	7118.8
72.5°	43.9	58.4	59.3	72.4	220.0	493.6	1502.8	3678.0	5229.8	5341.0
75°	37.8	48.6	53.7	60.7	184.9	368.5	828.0	2276.6	3306.8	3431.0
77.5°	34.1	36.9	40.6	42.0	78.5	191.9	284.9	1403.8	1851.6	1991.7
80°	26.2	29.0	28.0	29.0	43.0	66.3	108.3	658.0	874.7	952.7
82.5°	8.4	14.0	15.4	13.1	28.0	32.7	31.3	227.4	284.4	302.1
85°	1.9	5.1	2.3	0.0	9.3	16.8	2.3	34.6	68.2	50.4
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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