

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: P596969

Luminaire Tested: **MSA-SA2C-835-U-SLL-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596969  
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-SA2C-835-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: 7419 lumens  
Efficiency: N/A  
Efficacy: 65.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

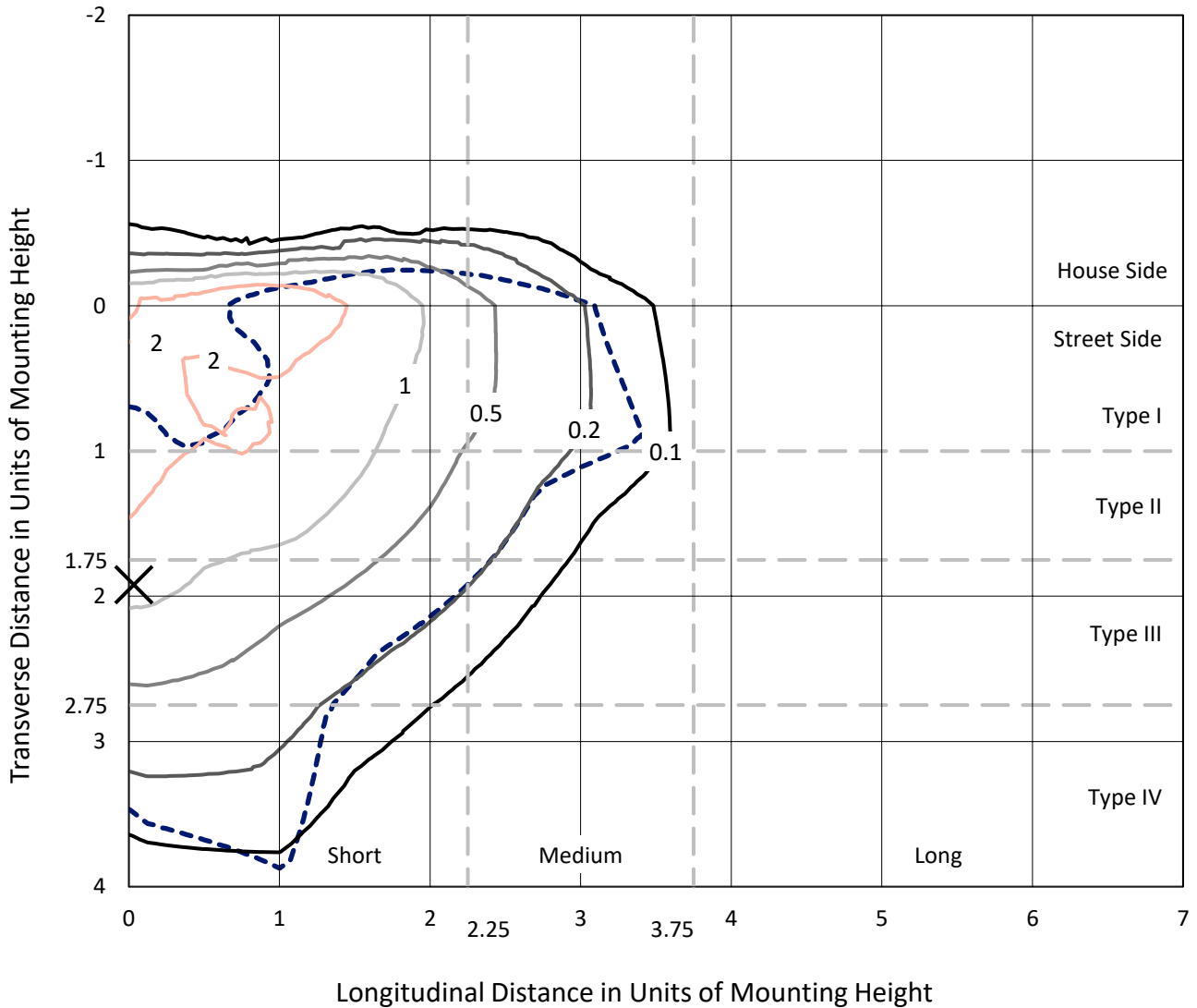
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

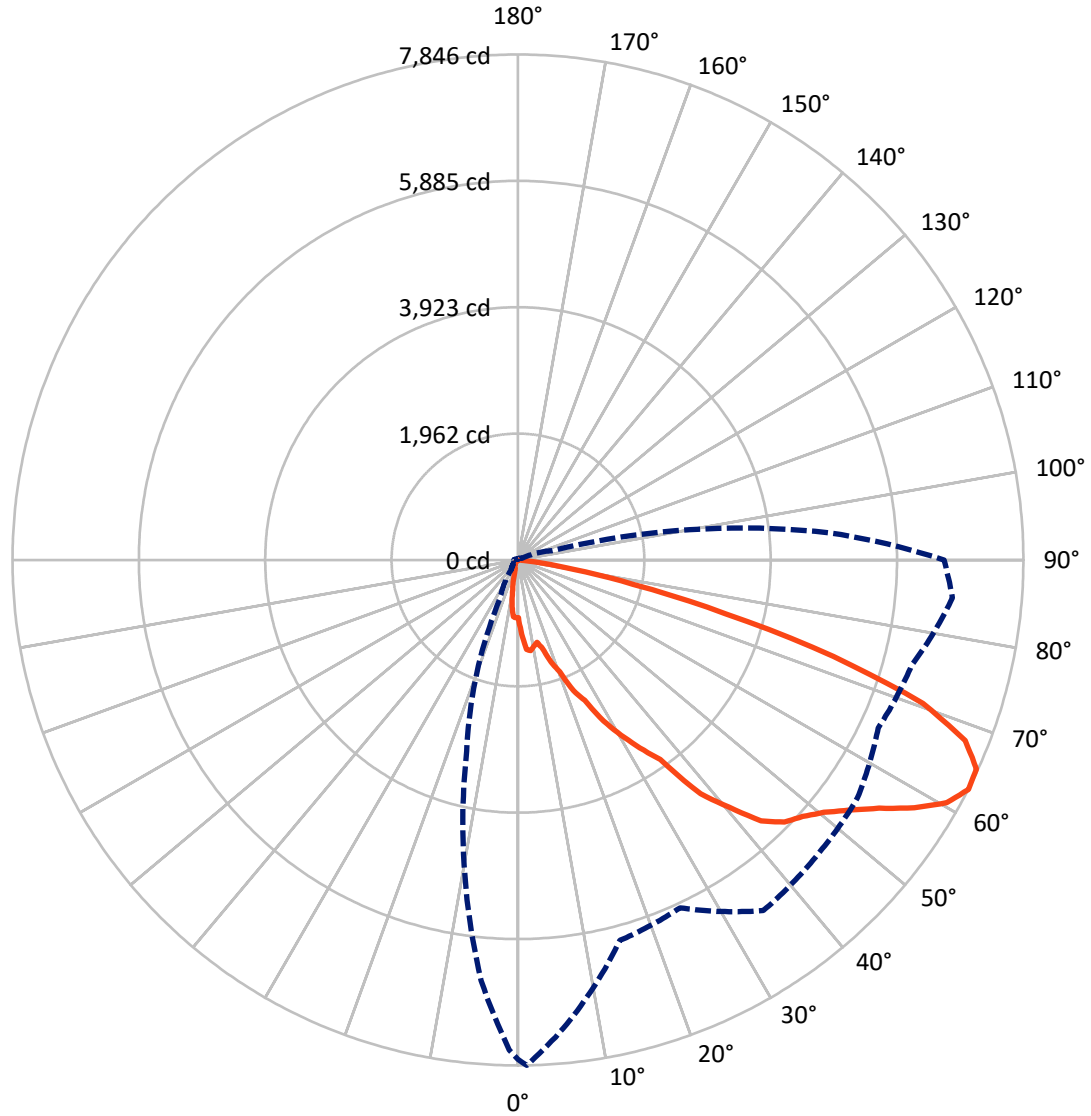
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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	848.4	0.0	848.4
	% Fixture	11.4	0.0	11.4
<b>Street Side</b>	Lumens	6570.6	0.0	6570.6
	% Fixture	88.6	0.0	88.6
<b>Total</b>	Lumens	7419.0	0.0	7419.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.9	1.3
10°-20°	260.8	3.5
20°-30°	421.6	5.7
30°-40°	706.2	9.5
40°-50°	1154.8	15.6
50°-60°	1709.4	23.0
60°-70°	1962.5	26.5
70°-80°	970.5	13.1
80°-90°	133.2	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°	7419.0	100.0
0°-180°	7419.0	100.0

**Coefficient of Utilization**



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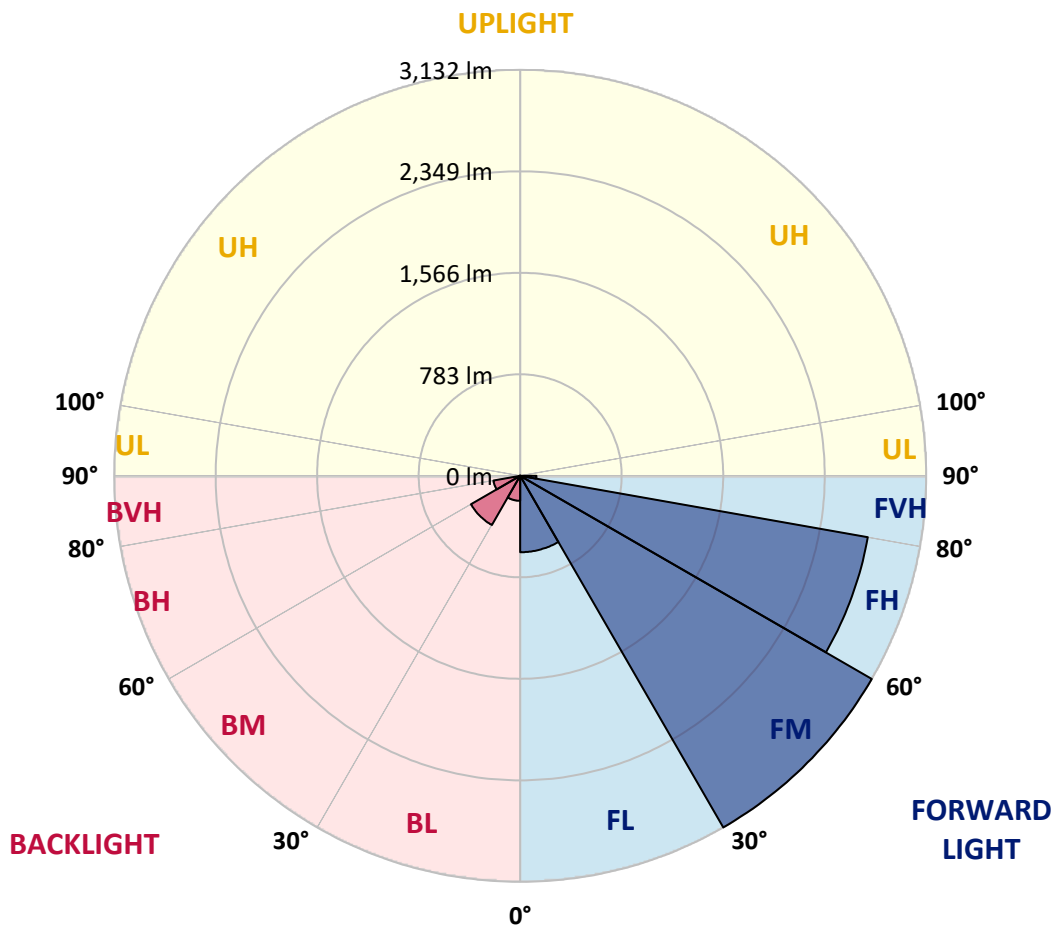
CATALOG NUMBER: MSA-SA2C-835-U-SLL-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	589.3	7.9			
FM (30°-60°)	3132.2	42.2			
FH (60°-80°)	2723.2	36.7			G2/5000
FVH (80°-90°)	125.8	1.7			G2/225
BL (0°-30°)	193.0	2.6	B1/500		
BM (30°-60°)	438.2	5.9	B1/1000		
BH (60°-80°)	209.8	2.8	B1/500		G1/500
BVH (80°-90°)	7.4	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°	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7
2.5°	1152.5	1158.0	1132.2	1128.8	1068.8	1143.6	1145.7	1154.6	1099.6	993.1	1141.9
5°	1379.1	1394.3	1374.4	1462.8	1488.2	1542.7	1442.5	1532.1	1494.1	1504.6	1526.2
7.5°	1406.1	1421.8	1463.6	1611.6	1748.2	1713.9	1702.9	1736.7	1733.8	1655.6	1694.5
10°	1349.9	1363.0	1432.8	1702.1	1761.7	1915.6	1953.2	1875.4	1843.7	1672.5	1597.7
12.5°	1288.6	1310.6	1399.4	1722.4	1901.2	2056.8	2180.7	2069.9	1964.6	1782.4	1713.9
15°	1406.1	1418.4	1557.9	1764.6	1921.1	2028.5	2129.9	2093.1	2077.1	1946.0	1713.9
17.5°	1636.5	1665.3	1766.3	1868.2	1991.7	2056.4	2032.3	2020.8	1979.8	2185.7	1945.6
20°	1800.6	1854.3	1986.6	2030.6	1932.5	1992.9	1978.1	1968.0	1935.9	2318.9	2211.9
22.5°	2155.7	2205.2	2207.7	2223.4	1995.1	1898.7	1874.1	1877.1	2023.0	2358.6	2543.4
25°	2397.5	2414.4	2548.0	2436.4	2165.9	1927.4	1834.0	1875.8	2086.0	2644.4	2855.0
27.5°	2793.2	2833.4	2916.7	2538.7	2268.2	1909.2	1760.4	1912.6	2251.7	2739.1	3201.2
30°	3115.8	3154.3	3288.3	2678.7	2356.9	1999.3	1792.1	1986.6	2354.8	2934.0	3512.4
32.5°	3377.5	3476.9	3629.1	2894.7	2353.6	2102.9	1954.0	1962.1	2481.7	3186.4	3820.2
35°	3711.9	3804.5	3911.5	3043.5	2507.5	2136.3	2001.8	2203.1	2670.2	3450.2	4234.5
37.5°	4465.7	4605.7	4394.3	3418.5	2686.7	2438.1	2190.4	2351.5	2867.7	3719.5	4803.9
40°	4925.7	5043.7	4839.5	3610.0	2997.0	2590.3	2526.9	2609.3	3060.9	3858.6	5233.1
42.5°	5378.9	5534.5	5193.3	3898.4	3291.7	3019.9	2846.5	2912.9	3340.3	4194.3	5715.9
45°	5707.0	5803.4	5269.8	4049.3	3696.7	3509.4	3394.0	3295.1	3730.1	4409.9	6027.4
47.5°	5871.9	5948.8	5420.8	4097.1	3937.7	4027.3	4280.1	4073.4	4075.1	4565.9	6195.3
50°	6100.2	6153.9	5505.3	4154.1	4199.4	4834.4	4962.1	4522.0	4469.1	4722.3	6222.8
52.5°	6421.0	6447.3	5669.4	4304.7	4591.3	5466.4	5512.5	5334.5	4863.6	5013.2	6283.6
55°	6847.6	6801.5	5962.3	4620.9	5000.1	5929.4	5991.1	5835.9	5359.5	5303.7	6472.2
57.5°	7307.6	7254.7	6396.5	5066.5	5443.6	6283.2	6320.0	6332.3	5688.8	5560.7	6792.7
60°	7637.4	7647.1	6943.2	5577.6	5719.2	6621.9	6548.3	6436.7	6021.1	5937.4	6948.7
62.5°	7752.8	7846.2	7368.9	6113.3	5956.8	6643.0	6528.8	6434.6	6169.9	6325.9	6769.8
65°	7658.5	7821.7	7467.8	6583.8	6100.6	6377.9	6259.1	6198.7	6165.3	6484.5	6374.1
67.5°	7283.9	7488.1	7184.6	6588.0	5578.0	5430.5	5570.9	5762.4	5651.6	6353.0	5819.9
70°	6444.7	6668.4	6527.2	6201.6	4646.7	4272.5	4427.3	4716.9	4638.6	5650.3	5004.3
72.5°	4835.2	5122.7	5150.6	5354.0	3688.7	3215.6	3238.0	3230.0	3364.8	4556.2	3905.1
75°	3106.1	3329.7	3632.0	4320.3	2802.1	2347.6	2132.9	2080.5	2332.0	3560.2	2795.8
77.5°	1803.1	1829.8	1969.3	3259.6	2006.9	1691.5	1545.2	1620.1	1708.0	2484.6	1853.0
80°	862.5	876.0	933.5	1677.1	1394.3	1464.1	1351.2	1435.3	1172.8	1428.1	1051.4
82.5°	273.5	276.5	286.2	824.0	865.8	969.8	621.5	833.3	725.1	863.3	700.1
85°	45.7	77.8	96.0	238.0	488.7	327.2	134.9	297.2	404.6	544.5	317.9
87.5°	0.0	0.0	0.0	4.2	39.7	18.6	3.0	16.9	62.1	121.3	14.4
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°	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7
2.5°	1185.0	1214.2	1104.3	1005.8	1030.7	1010.8	980.8	929.7	811.3	898.4	892.5
5°	1524.9	1470.8	1322.0	1252.7	1168.1	1039.2	1023.5	924.6	881.1	888.2	881.9
7.5°	1643.3	1546.5	1415.0	1206.2	1007.9	821.9	764.8	700.1	687.0	714.9	733.1
10°	1550.3	1447.6	1332.6	1073.0	920.4	785.9	645.1	554.7	505.6	499.7	504.8
12.5°	1593.0	1482.2	1245.5	1046.8	887.4	765.6	608.4	471.8	365.3	373.3	352.2
15°	1622.6	1495.3	1224.8	991.8	819.3	656.6	467.2	330.6	243.5	218.1	202.9
17.5°	1796.4	1614.6	1198.6	928.4	724.2	511.1	293.4	191.5	163.2	154.3	147.1
20°	2019.6	1761.3	1198.1	861.6	583.8	319.6	183.1	138.7	131.9	137.0	131.5
22.5°	2279.2	1956.6	1262.0	778.3	419.0	201.7	142.5	123.0	116.3	120.5	120.9
25°	2540.4	2249.6	1314.0	699.3	291.7	154.7	126.8	113.3	105.7	109.5	107.4
27.5°	3012.2	2492.2	1302.1	598.2	214.8	136.1	118.0	106.1	94.7	100.6	100.2
30°	3320.9	2920.5	1348.2	456.6	170.4	119.2	109.9	96.8	84.6	91.3	90.9
32.5°	3689.9	3104.4	1398.1	350.5	141.6	112.9	98.9	86.2	79.1	83.3	82.4
35°	4104.7	3468.0	1306.4	291.7	123.0	101.9	87.5	77.8	71.4	73.6	73.6
37.5°	4837.3	3772.0	1251.4	237.6	114.6	92.2	82.0	70.2	66.4	66.4	68.5
40°	5253.3	4236.2	1087.4	188.1	117.1	85.0	76.5	64.3	59.2	58.8	60.9
42.5°	5794.5	4503.8	984.6	152.2	106.1	82.9	70.2	58.3	52.4	52.0	54.1
45°	6115.4	4653.4	840.0	119.6	95.1	96.4	65.1	53.7	44.8	43.1	46.9
47.5°	6317.9	4851.7	758.0	95.1	82.9	96.0	63.4	46.5	37.6	35.5	38.9
50°	6420.6	4949.8	742.0	81.6	71.9	85.8	72.7	38.9	32.1	29.2	32.1
52.5°	6527.6	5109.2	747.9	75.3	63.4	68.9	68.9	33.4	28.3	24.9	27.1
55°	6743.6	5344.7	734.8	71.4	58.3	52.4	44.4	29.6	25.8	22.0	24.1
57.5°	7009.1	5513.8	734.8	68.1	54.1	44.8	35.5	27.5	23.7	19.0	20.7
60°	6958.8	5335.8	698.4	64.7	50.7	41.9	32.1	25.4	22.0	17.3	18.6
62.5°	6613.4	4851.7	565.7	59.6	47.8	39.7	29.2	24.1	20.7	15.2	16.5
65°	6207.5	4337.6	393.2	54.1	44.4	35.9	26.2	22.8	19.0	13.5	14.4
67.5°	5718.8	3725.0	218.1	48.6	41.0	31.3	24.1	22.4	18.2	12.3	13.1
70°	4870.7	2812.3	117.1	44.4	38.5	28.7	22.8	22.4	18.2	11.8	12.3
72.5°	3656.5	1771.0	68.5	40.6	35.1	26.6	21.6	22.8	17.8	11.4	11.4
75°	2488.0	1075.1	49.0	34.7	31.3	22.4	20.7	22.0	18.2	11.4	10.6
77.5°	1691.5	755.5	40.2	31.3	28.3	19.9	21.1	22.0	18.2	9.3	7.2
80°	1056.1	389.8	30.4	24.9	24.5	17.3	21.1	19.0	11.8	2.1	0.0
82.5°	738.6	145.0	17.8	19.0	19.0	12.3	16.5	13.5	6.8	0.0	0.0
85°	309.9	24.9	9.7	13.5	11.8	7.2	13.1	10.1	4.2	0.0	0.0
87.5°	5.5	0.0	3.8	8.0	8.5	4.2	6.8	4.2	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°	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7
2.5°	920.4	880.2	795.7	836.2	832.0	850.6	852.3	809.2	902.2	959.7	968.1
5°	882.7	855.7	851.0	827.8	821.9	856.1	837.5	836.2	881.1	946.6	947.0
7.5°	733.5	712.8	722.5	695.5	625.7	629.9	636.3	662.9	701.4	744.5	760.1
10°	503.5	557.2	517.9	514.5	507.3	484.9	467.2	481.1	531.0	570.7	585.5
12.5°	359.4	367.8	391.9	383.0	395.3	376.3	369.1	412.6	461.2	501.8	531.0
15°	210.1	224.5	238.9	269.3	281.6	277.8	299.7	336.1	375.4	394.0	430.0
17.5°	148.0	149.2	152.2	185.2	206.7	215.2	228.3	255.8	271.8	280.3	295.1
20°	129.4	125.6	120.5	139.1	159.4	170.0	166.1	187.7	200.8	209.3	219.8
22.5°	117.1	110.8	107.8	114.1	129.8	139.1	140.8	153.5	173.3	179.3	182.6
25°	105.7	101.5	99.4	102.7	111.2	120.1	121.8	138.2	156.0	158.5	165.3
27.5°	98.1	90.1	90.9	93.4	97.2	108.2	111.6	120.9	146.7	149.7	151.8
30°	90.1	81.6	84.1	86.7	85.0	98.5	103.6	114.1	139.1	143.7	146.3
32.5°	82.0	75.7	75.3	77.8	80.7	87.9	98.9	111.2	134.0	140.4	146.7
35°	73.1	68.1	68.9	69.3	73.1	82.4	90.5	96.8	112.5	115.8	118.0
37.5°	66.8	62.6	61.7	66.0	69.8	76.9	79.9	82.9	103.6	111.2	111.6
40°	59.2	56.7	56.7	59.6	68.1	67.2	71.0	80.3	100.2	108.2	109.1
42.5°	53.7	50.3	51.2	54.1	60.0	55.8	63.4	76.9	98.9	107.0	106.5
45°	45.2	44.4	46.1	48.6	51.2	47.4	59.2	73.6	94.7	105.3	102.3
47.5°	37.6	37.6	39.7	42.3	41.0	42.3	53.7	68.9	92.2	101.9	99.8
50°	30.9	31.3	33.4	37.6	33.8	37.2	48.2	64.3	87.9	98.5	96.8
52.5°	26.2	26.6	27.9	30.9	29.2	33.8	44.4	59.6	83.7	92.6	91.7
55°	22.8	23.7	23.7	25.4	26.2	31.7	40.2	55.0	77.4	87.1	85.4
57.5°	20.3	21.1	20.7	22.0	22.8	27.9	35.9	49.9	71.0	79.1	76.5
60°	18.2	19.0	18.6	20.3	19.9	24.1	31.3	44.4	64.3	70.6	68.5
62.5°	16.1	16.9	16.9	17.8	18.2	20.3	27.1	39.3	57.5	62.6	60.9
65°	14.4	15.2	15.6	15.2	16.1	17.3	22.8	35.5	49.9	55.0	52.4
67.5°	13.1	14.0	14.8	13.1	14.0	14.4	19.4	31.7	44.0	48.2	46.1
70°	12.7	13.1	13.1	11.4	11.0	11.4	16.9	27.1	38.5	42.7	39.7
72.5°	11.8	12.3	11.8	9.3	8.0	8.9	14.4	22.8	32.6	35.9	33.4
75°	11.0	11.4	11.0	7.6	5.1	6.3	11.8	19.9	27.9	29.6	28.3
77.5°	9.3	10.1	10.1	5.5	1.7	3.8	8.9	16.1	23.3	23.3	23.7
80°	0.8	2.5	4.2	3.0	0.0	0.4	3.0	8.5	14.8	14.4	15.6
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	5.1	3.8	4.2
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°	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7	893.7
2.5°	948.3	935.2	951.7	1002.0	981.7	985.5	972.0	1055.2	1149.5	1152.5
5°	947.9	936.0	960.5	958.4	1016.3	1079.3	1140.2	1238.7	1378.2	1379.1
7.5°	753.0	823.1	841.3	835.8	910.2	996.9	1090.7	1279.3	1393.9	1406.1
10°	679.0	709.4	746.6	760.1	791.0	873.4	979.6	1193.1	1321.6	1349.9
12.5°	588.5	685.7	735.2	831.2	848.9	860.8	1028.2	1213.8	1292.0	1288.6
15°	487.5	572.0	650.2	767.3	815.5	939.8	1071.7	1314.8	1361.3	1406.1
17.5°	345.0	408.8	528.9	651.9	799.0	934.3	1191.8	1495.3	1583.3	1636.5
20°	230.8	261.7	370.3	533.1	719.6	854.0	1240.8	1658.5	1754.5	1800.6
22.5°	187.3	202.1	258.3	390.6	614.7	850.2	1260.7	1836.5	2094.4	2155.7
25°	164.9	175.0	205.0	289.2	510.3	833.3	1370.6	2036.9	2348.1	2397.5
27.5°	144.2	159.4	181.8	238.4	437.6	821.4	1426.4	2373.4	2744.6	2793.2
30°	137.8	156.4	178.0	217.3	386.8	775.8	1515.2	2677.0	3029.2	3115.8
32.5°	148.8	155.2	165.7	199.1	347.5	727.6	1671.2	3039.7	3264.6	3377.5
35°	118.0	129.4	148.0	182.6	331.0	725.1	1759.6	3273.1	3642.2	3711.9
37.5°	115.4	126.0	150.1	178.0	350.9	744.5	1890.6	3751.2	4322.8	4465.7
40°	112.0	125.6	148.4	175.9	350.9	763.5	1974.3	4133.9	4780.7	4925.7
42.5°	110.8	128.1	148.0	184.8	339.9	774.1	2100.7	4515.6	5264.3	5378.9
45°	109.9	130.6	149.2	195.3	337.4	808.8	2172.2	4701.2	5575.5	5707.0
47.5°	107.8	130.6	166.6	189.0	323.4	805.4	2264.8	4976.4	5761.1	5871.9
50°	106.1	131.5	188.6	177.1	325.5	784.7	2390.3	5234.7	6021.1	6100.2
52.5°	102.3	134.4	185.2	160.7	319.2	782.5	2577.6	5602.1	6363.1	6421.0
55°	93.9	130.6	167.4	140.4	296.8	758.5	2825.8	6079.9	6837.5	6847.6
57.5°	86.2	121.3	139.9	128.9	248.6	761.4	3039.7	6519.5	7260.2	7307.6
60°	78.6	126.0	108.7	120.1	205.9	707.3	3143.3	6687.8	7568.0	7637.4
62.5°	71.4	116.3	92.6	110.3	183.5	657.0	3071.4	6552.5	7607.3	7752.8
65°	63.4	80.7	78.2	98.9	185.6	586.4	2831.3	6156.4	7458.1	7658.5
67.5°	54.5	63.4	68.9	85.4	198.7	525.9	2419.5	5520.5	7056.9	7283.9
70°	47.8	57.1	60.0	74.8	206.7	486.2	1909.2	4638.2	6235.0	6444.7
72.5°	39.7	52.8	53.7	65.5	199.1	446.9	1360.5	3329.7	4734.6	4835.2
75°	34.2	44.0	48.6	55.0	167.4	333.6	749.6	2061.0	2993.6	3106.1
77.5°	30.9	33.4	36.8	38.0	71.0	173.8	257.9	1270.8	1676.3	1803.1
80°	23.7	26.2	25.4	26.2	38.9	60.0	98.1	595.7	791.8	862.5
82.5°	7.6	12.7	14.0	11.8	25.4	29.6	28.3	205.9	257.5	273.5
85°	1.7	4.7	2.1	0.0	8.5	15.2	2.1	31.3	61.7	45.7
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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