

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: P597123

Luminaire Tested: **MSA-SA4B-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597123
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-SA4B-835-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 11684 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

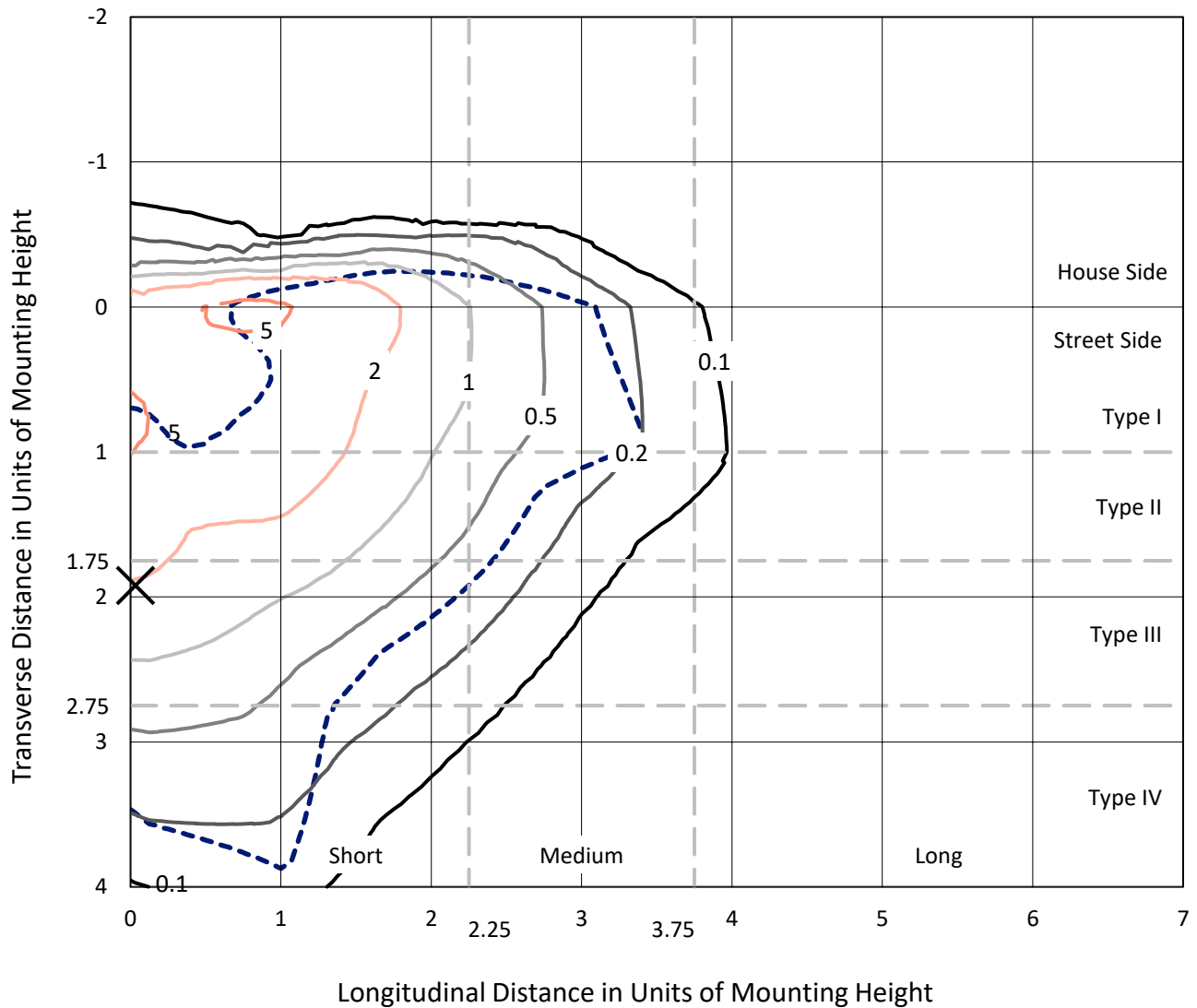
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

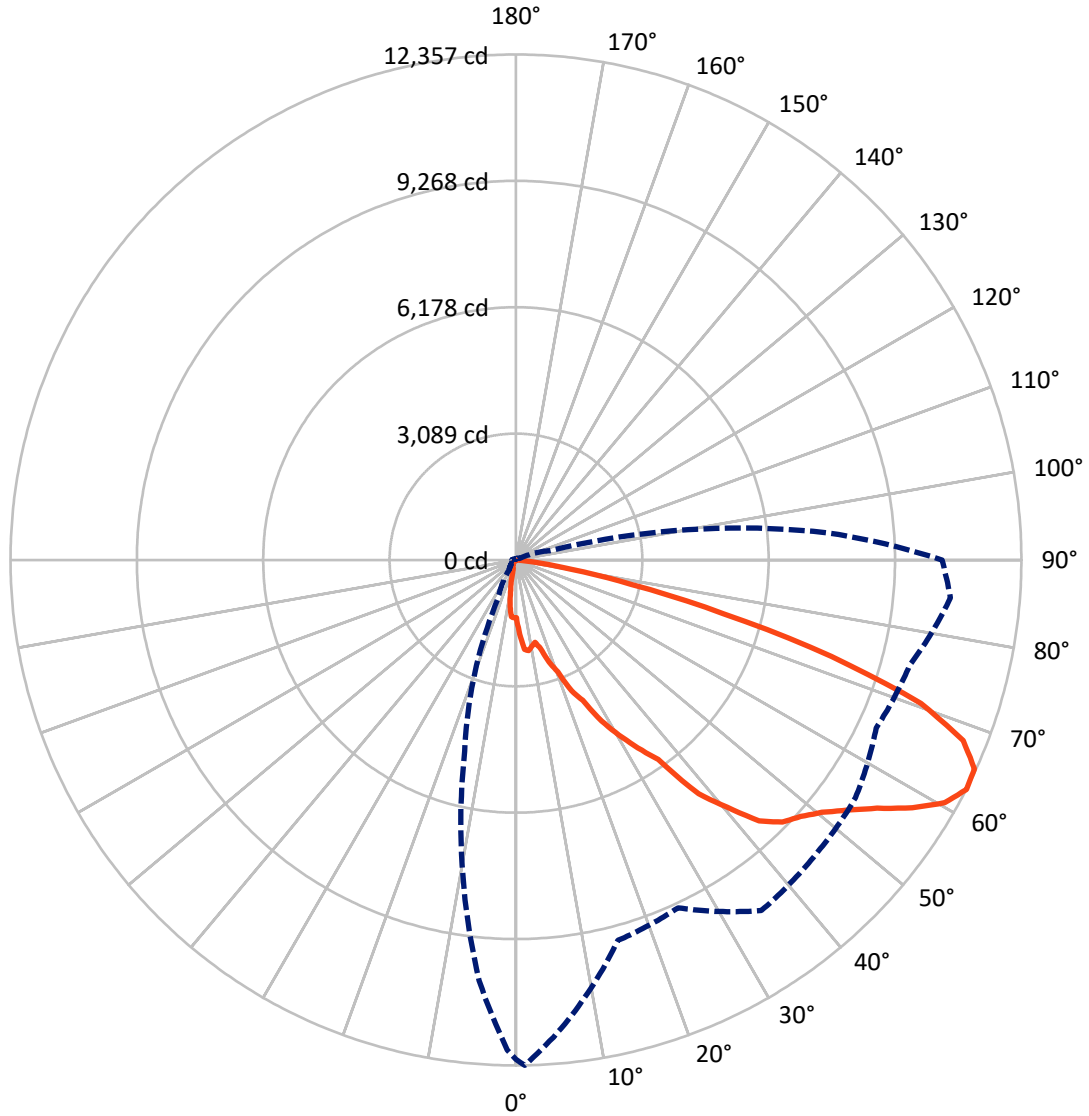
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 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
House Side	Lumens	1336.1	0.0	1336.1
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	10347.9	0.0	10347.9
	% Fixture	88.6	0.0	88.6
Total	Lumens	11684.0	0.0	11684.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.3	1.3
10°-20°	410.8	3.5
20°-30°	664.0	5.7
30°-40°	1112.2	9.5
40°-50°	1818.7	15.6
50°-60°	2692.1	23.0
60°-70°	3090.8	26.5
70°-80°	1528.4	13.1
80°-90°	209.8	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°	11684.0	100.0
0°-180°	11684.0	100.0

Coefficient of Utilization



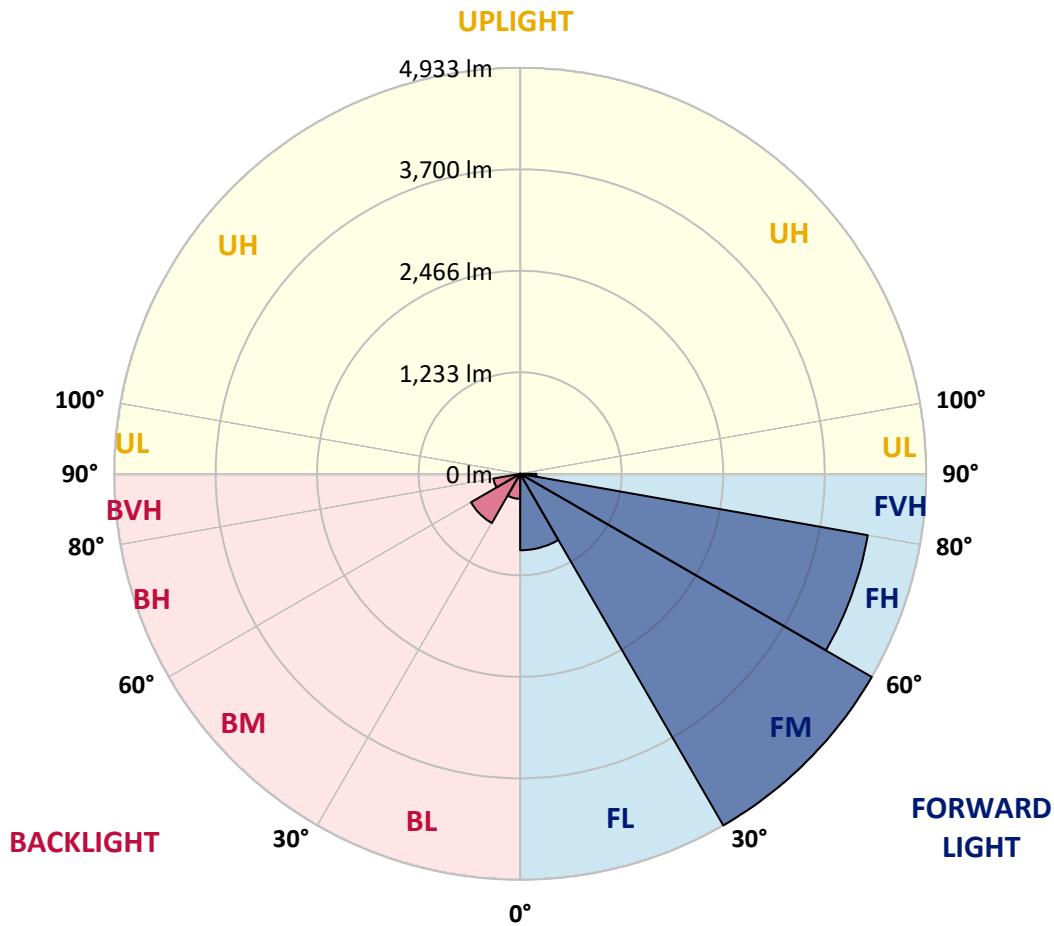
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	928.0	7.9			
FM (30°-60°)	4932.9	42.2			
FH (60°-80°)	4288.8	36.7			G2/5000
FVH (80°-90°)	198.2	1.7			G2/225
BL (0°-30°)	304.0	2.6	B1/500		
BM (30°-60°)	690.1	5.9	B1/1000		
BH (60°-80°)	330.4	2.8	B1/500		G1/500
BVH (80°-90°)	11.6	0.1			G1/100
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°	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5
2.5°	1815.0	1823.7	1783.0	1777.7	1683.2	1801.0	1804.3	1818.3	1731.8	1564.0	1798.4
5°	2171.9	2195.8	2164.6	2303.7	2343.7	2429.5	2271.7	2412.9	2353.0	2369.6	2403.6
7.5°	2214.5	2239.1	2305.0	2538.1	2753.1	2699.2	2681.9	2735.2	2730.5	2607.3	2668.6
10°	2125.9	2146.6	2256.4	2680.6	2774.4	3016.8	3076.0	2953.5	2903.6	2633.9	2516.1
12.5°	2029.4	2064.0	2203.8	2712.5	2994.2	3239.2	3434.3	3259.8	3094.0	2807.1	2699.2
15°	2214.5	2233.8	2453.5	2779.1	3025.4	3194.6	3354.4	3296.4	3271.1	3064.7	2699.2
17.5°	2577.4	2622.6	2781.8	2942.2	3136.6	3238.5	3200.6	3182.6	3118.0	3442.2	3064.1
20°	2835.7	2920.2	3128.6	3197.9	3043.4	3138.6	3115.3	3099.4	3048.7	3652.0	3483.5
22.5°	3395.0	3472.9	3476.9	3501.5	3142.0	2990.2	2951.5	2956.2	3185.9	3714.6	4005.5
25°	3775.8	3802.4	4012.8	3837.1	3411.0	3035.4	2888.3	2954.2	3285.1	4164.6	4496.2
27.5°	4399.0	4462.3	4593.4	3998.2	3572.1	3006.8	2772.4	3012.1	3546.1	4313.8	5041.5
30°	4907.0	4967.6	5178.7	4218.6	3711.9	3148.6	2822.4	3128.6	3708.6	4620.7	5531.6
32.5°	5319.2	5475.6	5715.3	4558.8	3706.6	3311.7	3077.4	3090.0	3908.3	5018.2	6016.3
35°	5845.8	5991.6	6160.1	4793.2	3948.9	3364.3	3152.6	3469.5	4205.3	5433.7	6668.8
37.5°	7033.0	7253.3	6920.4	5383.8	4231.2	3839.7	3449.6	3703.2	4516.2	5857.8	7565.6
40°	7757.4	7943.1	7621.5	5685.4	4719.9	4079.4	3979.6	4109.4	4820.5	6076.9	8241.4
42.5°	8471.1	8716.1	8178.8	6139.4	5184.0	4755.9	4482.9	4587.4	5260.6	6605.5	9001.8
45°	8987.8	9139.6	8299.3	6377.1	5821.9	5526.9	5345.1	5189.3	5874.5	6945.1	9492.5
47.5°	9247.5	9368.6	8537.0	6452.4	6201.4	6342.5	6740.7	6415.1	6417.8	7190.8	9756.8
50°	9607.0	9691.5	8670.2	6542.3	6613.5	7613.6	7814.6	7121.5	7038.3	7437.1	9800.1
52.5°	10112.3	10153.6	8928.5	6779.3	7230.7	8608.9	8681.5	8401.2	7659.5	7895.2	9896.0
55°	10784.1	10711.6	9389.9	7277.3	7874.6	9338.0	9435.2	9190.9	8440.5	8352.6	10192.9
57.5°	11508.5	11425.3	10073.7	7979.1	8573.0	9895.3	9953.2	9972.5	8959.2	8757.4	10697.6
60°	12027.9	12043.2	10934.6	8784.0	9007.1	10428.6	10312.8	10137.0	9482.5	9350.7	10943.3
62.5°	12209.6	12356.8	11605.1	9627.6	9381.3	10461.9	10282.1	10133.6	9716.8	9962.5	10661.6
65°	12061.2	12318.2	11760.9	10368.7	9607.7	10044.4	9857.3	9762.1	9709.5	10212.2	10038.4
67.5°	11471.3	11792.8	11314.8	10375.3	8784.7	8552.3	8773.4	9075.0	8900.6	10005.1	9165.6
70°	10149.6	10501.8	10279.5	9766.8	7317.9	6728.7	6972.4	7428.5	7305.3	8898.6	7881.2
72.5°	7614.9	8067.6	8111.6	8431.8	5809.2	5064.2	5099.4	5086.8	5299.2	7175.4	6150.1
75°	4891.7	5243.9	5720.0	6803.9	4413.0	3697.3	3359.0	3276.5	3672.6	5606.8	4403.0
77.5°	2839.7	2881.6	3101.3	5133.4	3160.6	2663.9	2433.5	2551.4	2689.9	3913.0	2918.3
80°	1358.3	1379.6	1470.1	2641.3	2195.8	2305.7	2127.9	2260.4	1847.0	2249.1	1655.9
82.5°	430.8	435.4	450.8	1297.7	1363.6	1527.4	978.7	1312.3	1141.9	1359.6	1102.6
85°	71.9	122.5	151.1	374.9	769.7	515.3	212.4	468.1	637.2	857.6	500.7
87.5°	0.0	0.0	0.0	6.7	62.6	29.3	4.7	26.6	97.9	191.1	22.6
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°	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5
2.5°	1866.3	1912.2	1739.1	1584.0	1623.2	1592.0	1544.7	1464.1	1277.7	1414.8	1405.5
5°	2401.6	2316.4	2082.0	1972.8	1839.6	1636.6	1611.9	1456.1	1387.6	1398.9	1388.9
7.5°	2588.0	2435.5	2228.5	1899.6	1587.3	1294.3	1204.5	1102.6	1081.9	1125.9	1154.5
10°	2441.5	2279.7	2098.6	1689.8	1449.5	1237.7	1016.0	873.5	796.3	787.0	795.0
12.5°	2508.8	2334.3	1961.5	1648.5	1397.5	1205.8	958.1	743.0	575.3	587.9	554.6
15°	2555.4	2355.0	1928.9	1562.0	1290.3	1034.0	735.7	520.7	383.5	343.6	319.6
17.5°	2829.0	2542.7	1887.6	1462.1	1140.5	805.0	462.1	301.6	257.0	243.0	231.7
20°	3180.6	2773.8	1886.9	1356.9	919.5	503.4	288.3	218.4	207.7	215.7	207.1
22.5°	3589.4	3081.4	1987.4	1225.8	659.8	317.6	224.4	193.8	183.1	189.8	190.4
25°	4000.9	3542.8	2069.3	1101.3	459.4	243.7	199.7	178.4	166.5	172.4	169.1
27.5°	4743.9	3925.0	2050.7	942.1	338.2	214.4	185.8	167.1	149.1	158.5	157.8
30°	5229.9	4599.4	2123.3	719.1	268.3	187.8	173.1	152.5	133.2	143.8	143.1
32.5°	5811.2	4889.1	2201.8	552.0	223.0	177.8	155.8	135.8	124.5	131.2	129.8
35°	6464.4	5461.7	2057.4	459.4	193.8	160.5	137.8	122.5	112.5	115.9	115.9
37.5°	7618.2	5940.4	1970.8	374.2	180.4	145.1	129.2	110.5	104.5	104.5	107.9
40°	8273.4	6671.4	1712.5	296.3	184.4	133.8	120.5	101.2	93.2	92.5	95.9
42.5°	9125.6	7092.9	1550.7	239.7	167.1	130.5	110.5	91.9	82.6	81.9	85.2
45°	9631.0	7328.6	1323.0	188.4	149.8	151.8	102.5	84.6	70.6	67.9	73.9
47.5°	9949.9	7640.9	1193.8	149.8	130.5	151.1	99.9	73.2	59.3	55.9	61.3
50°	10111.7	7795.3	1168.5	128.5	113.2	135.2	114.5	61.3	50.6	45.9	50.6
52.5°	10280.1	8046.3	1177.8	118.5	99.9	108.5	108.5	52.6	44.6	39.3	42.6
55°	10620.4	8417.2	1157.2	112.5	91.9	82.6	69.9	46.6	40.6	34.6	38.0
57.5°	11038.5	8683.5	1157.2	107.2	85.2	70.6	55.9	43.3	37.3	30.0	32.6
60°	10959.3	8403.2	1099.9	101.9	79.9	65.9	50.6	39.9	34.6	27.3	29.3
62.5°	10415.3	7640.9	890.9	93.9	75.2	62.6	45.9	38.0	32.6	24.0	26.0
65°	9776.1	6831.2	619.2	85.2	69.9	56.6	41.3	36.0	30.0	21.3	22.6
67.5°	9006.4	5866.5	343.6	76.6	64.6	49.3	38.0	35.3	28.6	19.3	20.6
70°	7670.8	4429.0	184.4	69.9	60.6	45.3	36.0	35.3	28.6	18.6	19.3
72.5°	5758.6	2789.1	107.9	63.9	55.3	41.9	34.0	36.0	28.0	18.0	18.0
75°	3918.3	1693.2	77.2	54.6	49.3	35.3	32.6	34.6	28.6	18.0	16.6
77.5°	2663.9	1189.8	63.3	49.3	44.6	31.3	33.3	34.6	28.6	14.6	11.3
80°	1663.2	613.9	47.9	39.3	38.6	27.3	33.3	30.0	18.6	3.3	0.0
82.5°	1163.2	228.4	28.0	30.0	30.0	19.3	26.0	21.3	10.7	0.0	0.0
85°	488.0	39.3	15.3	21.3	18.6	11.3	20.6	16.0	6.7	0.0	0.0
87.5°	8.7	0.0	6.0	12.7	13.3	6.7	10.7	6.7	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°	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5
2.5°	1449.5	1386.2	1253.1	1317.0	1310.3	1339.6	1342.3	1274.4	1420.8	1511.4	1524.7
5°	1390.2	1347.6	1340.3	1303.7	1294.3	1348.3	1319.0	1317.0	1387.6	1490.8	1491.4
7.5°	1155.2	1122.6	1137.9	1095.3	985.4	992.1	1002.0	1044.0	1104.6	1172.5	1197.1
10°	793.0	877.5	815.6	810.3	799.0	763.7	735.7	757.7	836.3	898.8	922.1
12.5°	565.9	579.3	617.2	603.2	622.5	592.6	581.3	649.8	726.4	790.3	836.3
15°	330.9	353.5	376.2	424.1	443.4	437.4	472.1	529.3	591.2	620.5	677.1
17.5°	233.0	235.0	239.7	291.6	325.6	338.9	359.5	402.8	428.1	441.4	464.7
20°	203.7	197.7	189.8	219.1	251.0	267.7	261.7	295.6	316.3	329.6	346.2
22.5°	184.4	174.4	169.8	179.8	204.4	219.1	221.7	241.7	273.0	282.3	287.6
25°	166.5	159.8	156.5	161.8	175.1	189.1	191.8	217.7	245.7	249.7	260.3
27.5°	154.5	141.8	143.1	147.1	153.1	170.4	175.8	190.4	231.0	235.7	239.0
30°	141.8	128.5	132.5	136.5	133.8	155.1	163.1	179.8	219.1	226.4	230.4
32.5°	129.2	119.2	118.5	122.5	127.2	138.5	155.8	175.1	211.1	221.0	231.0
35°	115.2	107.2	108.5	109.2	115.2	129.8	142.5	152.5	177.1	182.4	185.8
37.5°	105.2	98.5	97.2	103.9	109.9	121.2	125.8	130.5	163.1	175.1	175.8
40°	93.2	89.2	89.2	93.9	107.2	105.9	111.9	126.5	157.8	170.4	171.8
42.5°	84.6	79.2	80.6	85.2	94.5	87.9	99.9	121.2	155.8	168.5	167.8
45°	71.2	69.9	72.6	76.6	80.6	74.6	93.2	115.9	149.1	165.8	161.1
47.5°	59.3	59.3	62.6	66.6	64.6	66.6	84.6	108.5	145.1	160.5	157.1
50°	48.6	49.3	52.6	59.3	53.3	58.6	75.9	101.2	138.5	155.1	152.5
52.5°	41.3	41.9	43.9	48.6	45.9	53.3	69.9	93.9	131.8	145.8	144.5
55°	36.0	37.3	37.3	39.9	41.3	49.9	63.3	86.6	121.8	137.2	134.5
57.5°	32.0	33.3	32.6	34.6	36.0	43.9	56.6	78.6	111.9	124.5	120.5
60°	28.6	30.0	29.3	32.0	31.3	38.0	49.3	69.9	101.2	111.2	107.9
62.5°	25.3	26.6	26.6	28.0	28.6	32.0	42.6	61.9	90.6	98.5	95.9
65°	22.6	24.0	24.6	24.0	25.3	27.3	36.0	55.9	78.6	86.6	82.6
67.5°	20.6	22.0	23.3	20.6	22.0	22.6	30.6	49.9	69.2	75.9	72.6
70°	20.0	20.6	20.6	18.0	17.3	18.0	26.6	42.6	60.6	67.2	62.6
72.5°	18.6	19.3	18.6	14.6	12.7	14.0	22.6	36.0	51.3	56.6	52.6
75°	17.3	18.0	17.3	12.0	8.0	10.0	18.6	31.3	43.9	46.6	44.6
77.5°	14.6	16.0	16.0	8.7	2.7	6.0	14.0	25.3	36.6	36.6	37.3
80°	1.3	4.0	6.7	4.7	0.0	0.7	4.7	13.3	23.3	22.6	24.6
82.5°	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	8.0	6.0	6.7
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°	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5	1407.5
2.5°	1493.4	1472.8	1498.7	1578.0	1546.0	1552.0	1530.7	1661.9	1810.3	1815.0
5°	1492.7	1474.1	1512.7	1509.4	1600.6	1699.8	1795.7	1950.8	2170.5	2171.9
7.5°	1185.8	1296.3	1325.0	1316.3	1433.5	1570.0	1717.8	2014.7	2195.2	2214.5
10°	1069.3	1117.2	1175.8	1197.1	1245.7	1375.6	1542.7	1878.9	2081.3	2125.9
12.5°	926.8	1079.9	1157.8	1309.0	1336.9	1355.6	1619.3	1911.5	2034.7	2029.4
15°	767.7	900.8	1024.0	1208.4	1284.3	1480.1	1687.8	2070.7	2143.9	2214.5
17.5°	543.3	643.8	832.9	1026.7	1258.4	1471.4	1876.9	2355.0	2493.5	2577.4
20°	363.5	412.1	583.3	839.6	1133.2	1344.9	1954.2	2612.0	2763.1	2835.7
22.5°	295.0	318.3	406.8	615.2	968.1	1338.9	1985.4	2892.3	3298.4	3395.0
25°	259.7	275.6	322.9	455.4	803.6	1312.3	2158.6	3207.9	3697.9	3775.8
27.5°	227.0	251.0	286.3	375.5	689.1	1293.7	2246.4	3737.9	4322.4	4399.0
30°	217.1	246.4	280.3	342.2	609.2	1221.8	2386.3	4215.9	4770.5	4907.0
32.5°	234.4	244.4	261.0	313.6	547.3	1145.9	2632.0	4787.2	5141.4	5319.2
35°	185.8	203.7	233.0	287.6	521.3	1141.9	2771.1	5154.7	5736.0	5845.8
37.5°	181.8	198.4	236.4	280.3	552.6	1172.5	2977.5	5907.7	6807.9	7033.0
40°	176.4	197.7	233.7	277.0	552.6	1202.5	3109.3	6510.3	7529.0	7757.4
42.5°	174.4	201.7	233.0	291.0	535.3	1219.1	3308.4	7111.5	8290.7	8471.1
45°	173.1	205.7	235.0	307.6	531.3	1273.7	3420.9	7403.8	8780.7	8987.8
47.5°	169.8	205.7	262.3	297.6	509.3	1268.4	3566.8	7837.3	9073.0	9247.5
50°	167.1	207.1	297.0	279.0	512.7	1235.7	3764.5	8244.1	9482.5	9607.0
52.5°	161.1	211.7	291.6	253.0	502.7	1232.4	4059.5	8822.7	10021.1	10112.3
55°	147.8	205.7	263.7	221.0	467.4	1194.5	4450.3	9575.0	10768.2	10784.1
57.5°	135.8	191.1	220.4	203.1	391.5	1199.1	4787.2	10267.5	11434.0	11508.5
60°	123.8	198.4	171.1	189.1	324.3	1113.9	4950.3	10532.5	11918.7	12027.9
62.5°	112.5	183.1	145.8	173.8	289.0	1034.7	4837.1	10319.4	11980.6	12209.6
65°	99.9	127.2	123.2	155.8	292.3	923.5	4458.9	9695.5	11745.6	12061.2
67.5°	85.9	99.9	108.5	134.5	312.9	828.3	3810.4	8694.2	11113.7	11471.3
70°	75.2	89.9	94.5	117.8	325.6	765.7	3006.8	7304.6	9819.4	10149.6
72.5°	62.6	83.2	84.6	103.2	313.6	703.8	2142.6	5243.9	7456.4	7614.9
75°	53.9	69.2	76.6	86.6	263.7	525.3	1180.5	3245.8	4714.6	4891.7
77.5°	48.6	52.6	57.9	59.9	111.9	273.6	406.1	2001.4	2639.9	2839.7
80°	37.3	41.3	39.9	41.3	61.3	94.5	154.5	938.1	1247.1	1358.3
82.5°	12.0	20.0	22.0	18.6	39.9	46.6	44.6	324.3	405.5	430.8
85°	2.7	7.3	3.3	0.0	13.3	24.0	3.3	49.3	97.2	71.9
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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