

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: P597101

Luminaire Tested: **MSA-SA4A-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597101
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-SA4A-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: 9323 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

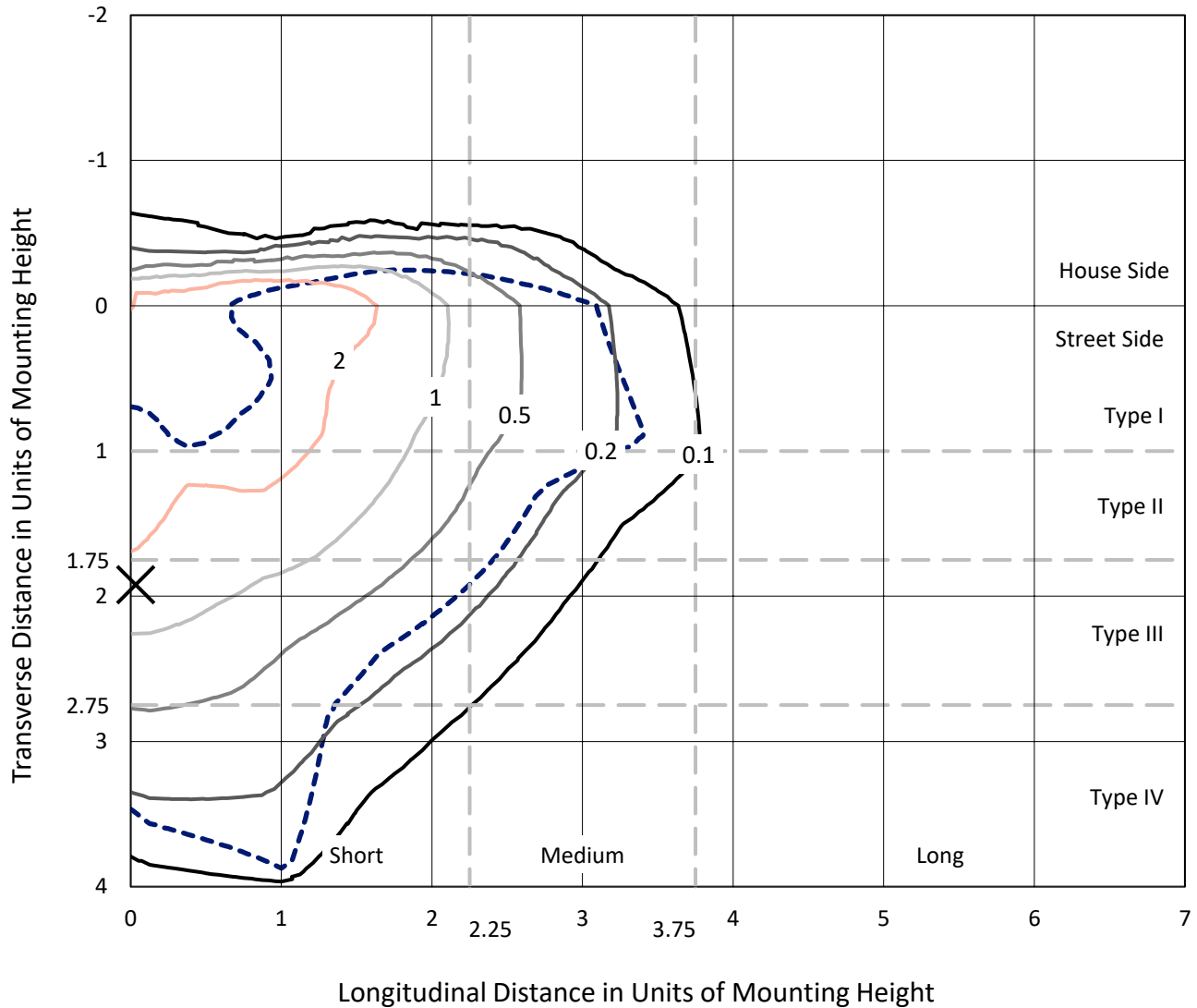
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

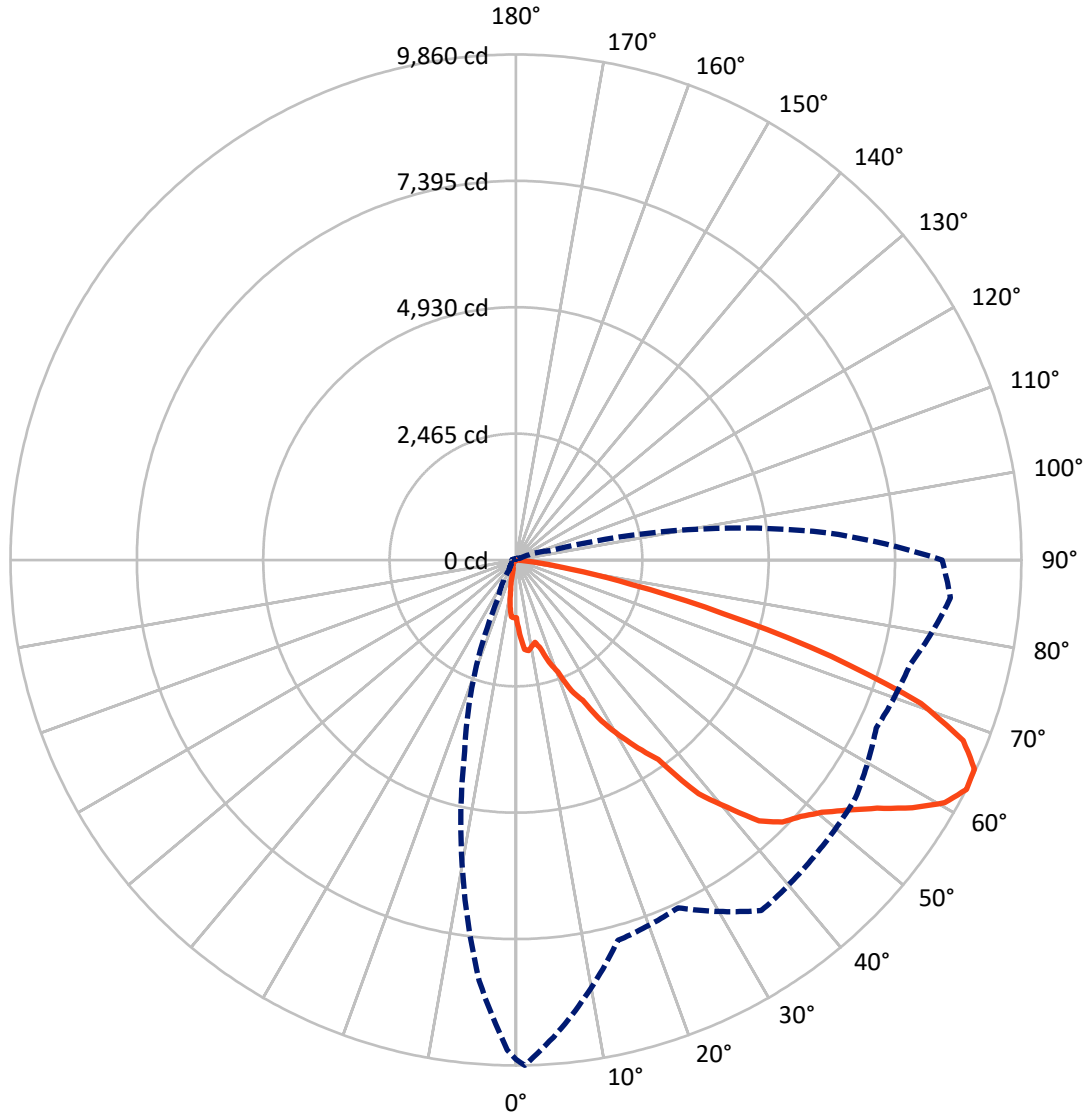
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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
House Side	Lumens	1066.1	0.0	1066.1
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	8256.9	0.0	8256.9
	% Fixture	88.6	0.0	88.6
Total	Lumens	9323.0	0.0	9323.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.5	1.3
10°-20°	327.8	3.5
20°-30°	529.8	5.7
30°-40°	887.5	9.5
40°-50°	1451.2	15.6
50°-60°	2148.1	23.0
60°-70°	2466.2	26.5
70°-80°	1219.5	13.1
80°-90°	167.4	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°	9323.0	100.0
0°-180°	9323.0	100.0

Coefficient of Utilization



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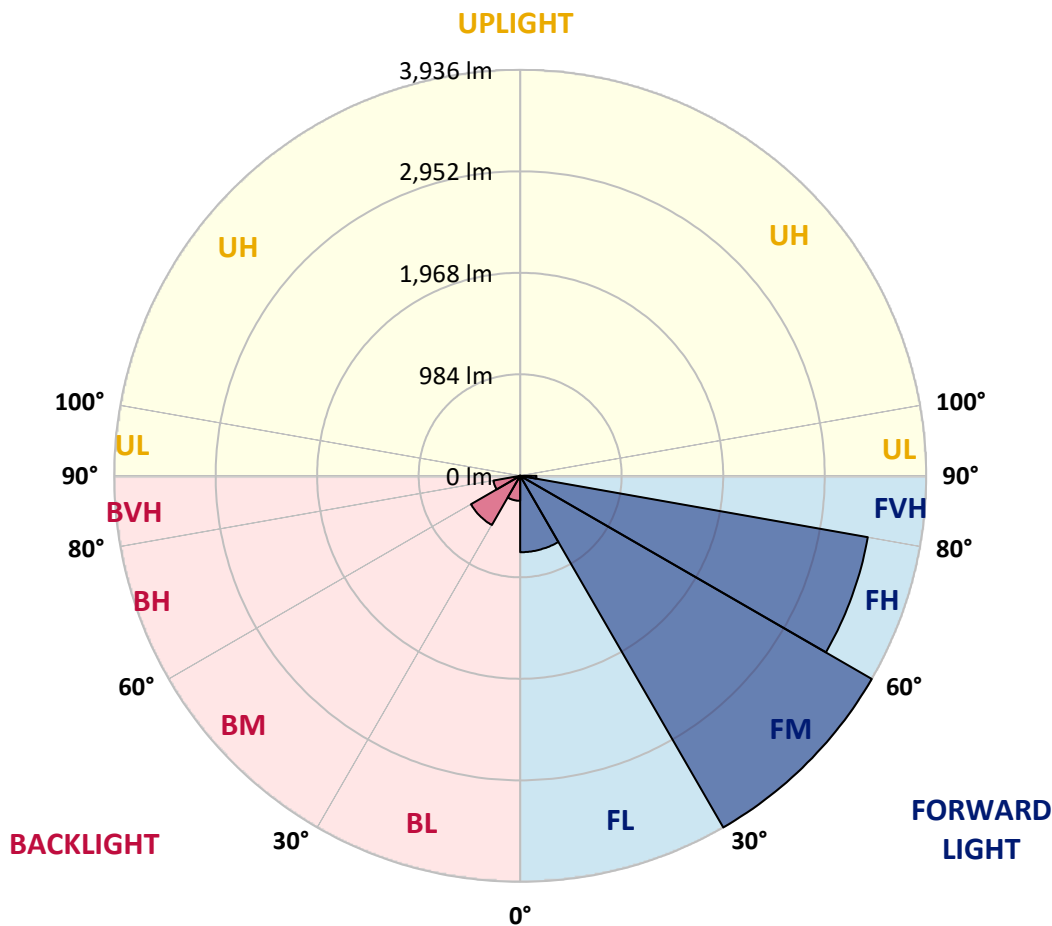
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	740.5	7.9			
FM (30°-60°)	3936.1	42.2			
FH (60°-80°)	3422.1	36.7			G2/5000
FVH (80°-90°)	158.1	1.7			G2/225
BL (0°-30°)	242.6	2.6	B1/500		
BM (30°-60°)	550.7	5.9	B1/1000		
BH (60°-80°)	263.6	2.8	B1/500		G1/500
BVH (80°-90°)	9.3	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°	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1
2.5°	1448.2	1455.1	1422.7	1418.5	1343.1	1437.1	1439.7	1450.9	1381.8	1248.0	1435.0
5°	1733.0	1752.1	1727.2	1838.2	1870.1	1938.6	1812.7	1925.3	1877.5	1890.8	1917.9
7.5°	1767.0	1786.7	1839.3	2025.2	2196.8	2153.8	2140.0	2182.5	2178.7	2080.5	2129.3
10°	1696.3	1712.8	1800.5	2138.9	2213.8	2407.2	2454.5	2356.7	2316.9	2101.7	2007.7
12.5°	1619.3	1646.9	1758.5	2164.4	2389.1	2584.6	2740.3	2601.1	2468.8	2239.8	2153.8
15°	1767.0	1782.4	1957.7	2217.5	2414.1	2549.0	2676.5	2630.3	2610.1	2445.4	2153.8
17.5°	2056.5	2092.7	2219.6	2347.7	2502.8	2584.1	2553.8	2539.5	2487.9	2746.7	2444.9
20°	2262.7	2330.2	2496.4	2551.7	2428.4	2504.4	2485.8	2473.1	2432.7	2914.0	2779.6
22.5°	2708.9	2771.1	2774.3	2793.9	2507.1	2385.9	2355.1	2358.8	2542.1	2964.0	3196.1
25°	3012.8	3034.1	3202.0	3061.7	2721.7	2422.1	2304.6	2357.2	2621.3	3323.1	3587.7
27.5°	3510.1	3560.6	3665.2	3190.3	2850.3	2399.2	2212.2	2403.5	2829.5	3442.1	4022.8
30°	3915.5	3963.8	4132.2	3366.1	2961.8	2512.4	2252.1	2496.4	2959.2	3687.0	4413.8
32.5°	4244.3	4369.2	4560.4	3637.6	2957.6	2642.5	2455.5	2465.6	3118.6	4004.2	4800.6
35°	4664.6	4780.9	4915.3	3824.6	3151.0	2684.5	2515.6	2768.4	3355.5	4335.7	5321.2
37.5°	5611.8	5787.7	5522.0	4295.8	3376.2	3063.8	2752.5	2954.9	3603.6	4674.1	6036.8
40°	6189.8	6338.1	6081.4	4536.5	3766.2	3255.1	3175.4	3279.0	3846.4	4848.9	6576.1
42.5°	6759.3	6954.9	6526.1	4898.8	4136.5	3794.9	3577.0	3660.5	4197.6	5270.7	7182.8
45°	7171.6	7292.7	6622.3	5088.5	4645.4	4410.1	4265.0	4140.7	4687.4	5541.7	7574.3
47.5°	7378.8	7475.5	6811.9	5148.5	4948.2	5060.9	5378.6	5118.8	5120.9	5737.7	7785.2
50°	7665.7	7733.2	6918.2	5220.3	5277.1	6075.1	6235.5	5682.5	5616.1	5934.3	7819.8
52.5°	8068.9	8101.9	7124.3	5409.4	5769.6	6869.3	6927.2	6703.6	6111.7	6299.8	7896.3
55°	8605.0	8547.1	7492.5	5806.8	6283.3	7451.1	7528.6	7333.7	6734.9	6664.8	8133.2
57.5°	9183.0	9116.6	8038.1	6366.7	6840.6	7895.7	7942.0	7957.4	7148.8	6987.8	8535.9
60°	9597.4	9609.6	8725.0	7009.0	7187.0	8321.3	8228.8	8088.6	7566.3	7461.2	8732.0
62.5°	9742.4	9859.8	9260.0	7682.2	7485.6	8347.8	8204.4	8085.9	7753.4	7949.4	8507.2
65°	9624.0	9829.0	9384.4	8273.5	7666.2	8014.7	7865.5	7789.5	7747.5	8148.6	8010.0
67.5°	9153.3	9409.9	9028.4	8278.8	7009.6	6824.2	7000.5	7241.2	7102.0	7983.4	7313.5
70°	8098.7	8379.7	8202.3	7793.2	5839.2	5369.0	5563.5	5927.4	5829.1	7100.4	6288.6
72.5°	6076.1	6437.4	6472.5	6728.0	4635.3	4040.8	4069.0	4058.9	4228.4	5725.5	4907.3
75°	3903.2	4184.3	4564.1	5429.0	3521.3	2950.1	2680.3	2614.4	2930.5	4473.8	3513.3
77.5°	2265.9	2299.3	2474.7	4096.1	2521.9	2125.6	1941.8	2035.8	2146.3	3122.3	2328.6
80°	1083.8	1100.8	1173.0	2107.5	1752.1	1839.8	1697.9	1803.7	1473.7	1794.6	1321.3
82.5°	343.7	347.5	359.7	1035.4	1088.0	1218.7	781.0	1047.1	911.1	1084.9	879.8
85°	57.4	97.8	120.6	299.1	614.1	411.2	169.5	373.5	508.4	684.3	399.5
87.5°	0.0	0.0	0.0	5.3	49.9	23.4	3.7	21.3	78.1	152.5	18.1
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°	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1
2.5°	1489.1	1525.8	1387.7	1263.9	1295.2	1270.3	1232.5	1168.3	1019.5	1128.9	1121.5
5°	1916.3	1848.3	1661.3	1574.2	1467.9	1305.9	1286.2	1161.9	1107.2	1116.2	1108.2
7.5°	2065.0	1943.4	1778.2	1515.7	1266.5	1032.8	961.1	879.8	863.3	898.4	921.2
10°	1948.2	1819.1	1674.6	1348.4	1156.6	987.6	810.7	697.0	635.4	628.0	634.3
12.5°	2001.8	1862.6	1565.1	1315.4	1115.1	962.1	764.5	592.9	459.0	469.1	442.5
15°	2039.0	1879.1	1539.1	1246.4	1029.6	825.1	587.1	415.5	306.0	274.1	255.0
17.5°	2257.4	2028.9	1506.2	1166.7	910.1	642.3	368.7	240.7	205.1	193.9	184.9
20°	2537.9	2213.3	1505.6	1082.7	733.7	401.6	230.0	174.3	165.8	172.1	165.2
22.5°	2864.1	2458.7	1585.8	978.1	526.5	253.4	179.0	154.6	146.1	151.4	151.9
25°	3192.4	2826.9	1651.2	878.7	366.6	194.4	159.4	142.4	132.8	137.6	134.9
27.5°	3785.3	3131.8	1636.3	751.7	269.9	171.1	148.2	133.3	119.0	126.4	125.9
30°	4173.1	3670.0	1694.2	573.8	214.1	149.8	138.1	121.7	106.3	114.8	114.2
32.5°	4636.9	3901.1	1756.9	440.4	178.0	141.8	124.3	108.4	99.3	104.7	103.6
35°	5158.1	4358.0	1641.6	366.6	154.6	128.0	110.0	97.8	89.8	92.4	92.4
37.5°	6078.8	4740.0	1572.6	298.6	144.0	115.8	103.1	88.2	83.4	83.4	86.1
40°	6601.6	5323.3	1366.4	236.4	147.2	106.8	96.2	80.8	74.4	73.8	76.5
42.5°	7281.6	5659.6	1237.3	191.3	133.3	104.1	88.2	73.3	65.9	65.3	68.0
45°	7684.8	5847.7	1055.6	150.3	119.5	121.1	81.8	67.5	56.3	54.2	59.0
47.5°	7939.3	6096.9	952.6	119.5	104.1	120.6	79.7	58.4	47.3	44.6	48.9
50°	8068.4	6220.1	932.4	102.5	90.3	107.8	91.4	48.9	40.4	36.7	40.4
52.5°	8202.8	6420.4	939.8	94.6	79.7	86.6	86.6	42.0	35.6	31.3	34.0
55°	8474.3	6716.3	923.3	89.8	73.3	65.9	55.8	37.2	32.4	27.6	30.3
57.5°	8807.9	6928.8	923.3	85.5	68.0	56.3	44.6	34.5	29.8	23.9	26.0
60°	8744.7	6705.2	877.7	81.3	63.8	52.6	40.4	31.9	27.6	21.8	23.4
62.5°	8310.7	6096.9	710.8	74.9	60.0	49.9	36.7	30.3	26.0	19.1	20.7
65°	7800.6	5450.8	494.1	68.0	55.8	45.2	32.9	28.7	23.9	17.0	18.1
67.5°	7186.5	4681.0	274.1	61.1	51.5	39.3	30.3	28.2	22.8	15.4	16.5
70°	6120.8	3534.0	147.2	55.8	48.3	36.1	28.7	28.2	22.8	14.9	15.4
72.5°	4595.0	2225.5	86.1	51.0	44.1	33.5	27.1	28.7	22.3	14.3	14.3
75°	3126.5	1351.0	61.6	43.6	39.3	28.2	26.0	27.6	22.8	14.3	13.3
77.5°	2125.6	949.4	50.5	39.3	35.6	25.0	26.6	27.6	22.8	11.7	9.0
80°	1327.1	489.8	38.3	31.3	30.8	21.8	26.6	23.9	14.9	2.7	0.0
82.5°	928.1	182.2	22.3	23.9	23.9	15.4	20.7	17.0	8.5	0.0	0.0
85°	389.4	31.3	12.2	17.0	14.9	9.0	16.5	12.8	5.3	0.0	0.0
87.5°	6.9	0.0	4.8	10.1	10.6	5.3	8.5	5.3	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°	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1
2.5°	1156.6	1106.1	999.9	1050.9	1045.5	1068.9	1071.0	1016.9	1133.7	1206.0	1216.6
5°	1109.3	1075.3	1069.4	1040.2	1032.8	1075.8	1052.4	1050.9	1107.2	1189.5	1190.0
7.5°	921.8	895.7	907.9	873.9	786.3	791.6	799.6	833.0	881.4	935.6	955.2
10°	632.7	700.2	650.8	646.6	637.5	609.4	587.1	604.6	667.3	717.2	735.8
12.5°	451.6	462.2	492.5	481.3	496.7	472.8	463.8	518.5	579.6	630.6	667.3
15°	264.0	282.1	300.2	338.4	353.8	349.0	376.7	422.4	471.8	495.1	540.3
17.5°	185.9	187.5	191.3	232.7	259.8	270.4	286.9	321.4	341.6	352.2	370.8
20°	162.6	157.8	151.4	174.8	200.3	213.6	208.8	235.9	252.4	263.0	276.3
22.5°	147.2	139.2	135.5	143.4	163.1	174.8	176.9	192.9	217.8	225.3	229.5
25°	132.8	127.5	124.8	129.1	139.7	150.9	153.0	173.7	196.0	199.2	207.7
27.5°	123.3	113.2	114.2	117.4	122.2	136.0	140.3	151.9	184.4	188.1	190.7
30°	113.2	102.5	105.7	108.9	106.8	123.8	130.2	143.4	174.8	180.6	183.8
32.5°	103.1	95.1	94.6	97.8	101.5	110.5	124.3	139.7	168.4	176.4	184.4
35°	91.9	85.5	86.6	87.1	91.9	103.6	113.7	121.7	141.3	145.6	148.2
37.5°	83.9	78.6	77.6	82.9	87.7	96.7	100.4	104.1	130.2	139.7	140.3
40°	74.4	71.2	71.2	74.9	85.5	84.5	89.3	100.9	125.9	136.0	137.1
42.5°	67.5	63.2	64.3	68.0	75.4	70.1	79.7	96.7	124.3	134.4	133.9
45°	56.8	55.8	57.9	61.1	64.3	59.5	74.4	92.4	119.0	132.3	128.6
47.5°	47.3	47.3	49.9	53.1	51.5	53.1	67.5	86.6	115.8	128.0	125.4
50°	38.8	39.3	42.0	47.3	42.5	46.8	60.6	80.8	110.5	123.8	121.7
52.5°	32.9	33.5	35.1	38.8	36.7	42.5	55.8	74.9	105.2	116.3	115.3
55°	28.7	29.8	29.8	31.9	32.9	39.8	50.5	69.1	97.2	109.4	107.3
57.5°	25.5	26.6	26.0	27.6	28.7	35.1	45.2	62.7	89.3	99.3	96.2
60°	22.8	23.9	23.4	25.5	25.0	30.3	39.3	55.8	80.8	88.7	86.1
62.5°	20.2	21.3	21.3	22.3	22.8	25.5	34.0	49.4	72.3	78.6	76.5
65°	18.1	19.1	19.7	19.1	20.2	21.8	28.7	44.6	62.7	69.1	65.9
67.5°	16.5	17.5	18.6	16.5	17.5	18.1	24.4	39.8	55.3	60.6	57.9
70°	15.9	16.5	16.5	14.3	13.8	14.3	21.3	34.0	48.3	53.7	49.9
72.5°	14.9	15.4	14.9	11.7	10.1	11.2	18.1	28.7	40.9	45.2	42.0
75°	13.8	14.3	13.8	9.6	6.4	8.0	14.9	25.0	35.1	37.2	35.6
77.5°	11.7	12.8	12.8	6.9	2.1	4.8	11.2	20.2	29.2	29.2	29.8
80°	1.1	3.2	5.3	3.7	0.0	0.5	3.7	10.6	18.6	18.1	19.7
82.5°	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	6.4	4.8	5.3
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°	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1	1123.1
2.5°	1191.6	1175.2	1195.9	1259.1	1233.6	1238.4	1221.4	1326.0	1444.5	1448.2
5°	1191.1	1176.2	1207.0	1204.4	1277.2	1356.3	1432.8	1556.6	1731.9	1733.0
7.5°	946.2	1034.4	1057.2	1050.3	1143.8	1252.7	1370.7	1607.6	1751.6	1767.0
10°	853.2	891.5	938.2	955.2	994.0	1097.6	1231.0	1499.2	1660.8	1696.3
12.5°	739.5	861.7	923.9	1044.5	1066.8	1081.7	1292.0	1525.3	1623.6	1619.3
15°	612.6	718.8	817.1	964.3	1024.8	1181.0	1346.8	1652.2	1710.7	1767.0
17.5°	433.5	513.7	664.6	819.2	1004.1	1174.1	1497.7	1879.1	1989.6	2056.5
20°	290.1	328.9	465.4	669.9	904.2	1073.2	1559.3	2084.2	2204.8	2262.7
22.5°	235.4	253.9	324.6	490.9	772.5	1068.4	1584.2	2307.8	2631.9	2708.9
25°	207.2	219.9	257.7	363.4	641.2	1047.1	1722.4	2559.7	2950.7	3012.8
27.5°	181.2	200.3	228.4	299.6	549.9	1032.3	1792.5	2982.5	3449.0	3510.1
30°	173.2	196.6	223.7	273.1	486.1	974.9	1904.1	3364.0	3806.5	3915.5
32.5°	187.0	195.0	208.3	250.2	436.7	914.3	2100.1	3819.8	4102.5	4244.3
35°	148.2	162.6	185.9	229.5	416.0	911.1	2211.1	4113.1	4576.9	4664.6
37.5°	145.0	158.3	188.6	223.7	441.0	935.6	2375.8	4714.0	5432.2	5611.8
40°	140.8	157.8	186.5	221.0	441.0	959.5	2481.0	5194.8	6007.6	6189.8
42.5°	139.2	161.0	185.9	232.2	427.1	972.8	2639.9	5674.5	6615.4	6759.3
45°	138.1	164.2	187.5	245.4	424.0	1016.3	2729.7	5907.7	7006.4	7171.6
47.5°	135.5	164.2	209.3	237.5	406.4	1012.1	2846.0	6253.6	7239.6	7378.8
50°	133.3	165.2	236.9	222.6	409.1	986.0	3003.8	6578.2	7566.3	7665.7
52.5°	128.6	168.9	232.7	201.9	401.1	983.4	3239.2	7039.9	7996.1	8068.9
55°	117.9	164.2	210.4	176.4	373.0	953.1	3551.0	7640.2	8592.2	8605.0
57.5°	108.4	152.5	175.9	162.0	312.4	956.8	3819.8	8192.7	9123.5	9183.0
60°	98.8	158.3	136.5	150.9	258.7	888.8	3950.0	8404.2	9510.3	9597.4
62.5°	89.8	146.1	116.3	138.7	230.6	825.6	3859.7	8234.2	9559.7	9742.4
65°	79.7	101.5	98.3	124.3	233.2	736.9	3557.9	7736.4	9372.1	9624.0
67.5°	68.5	79.7	86.6	107.3	249.7	660.9	3040.5	6937.3	8868.0	9153.3
70°	60.0	71.7	75.4	94.0	259.8	611.0	2399.2	5828.6	7835.2	8098.7
72.5°	49.9	66.4	67.5	82.3	250.2	561.6	1709.6	4184.3	5949.7	6076.1
75°	43.0	55.3	61.1	69.1	210.4	419.2	941.9	2589.9	3761.9	3903.2
77.5°	38.8	42.0	46.2	47.8	89.3	218.4	324.1	1597.0	2106.5	2265.9
80°	29.8	32.9	31.9	32.9	48.9	75.4	123.3	748.6	995.1	1083.8
82.5°	9.6	15.9	17.5	14.9	31.9	37.2	35.6	258.7	323.5	343.7
85°	2.1	5.8	2.7	0.0	10.6	19.1	2.7	39.3	77.6	57.4
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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