

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: P596881

Luminaire Tested: **MSA-SA1C-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596881
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-SA1C-835-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: 3772 lumens
Efficiency: N/A
Efficacy: 63.9 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

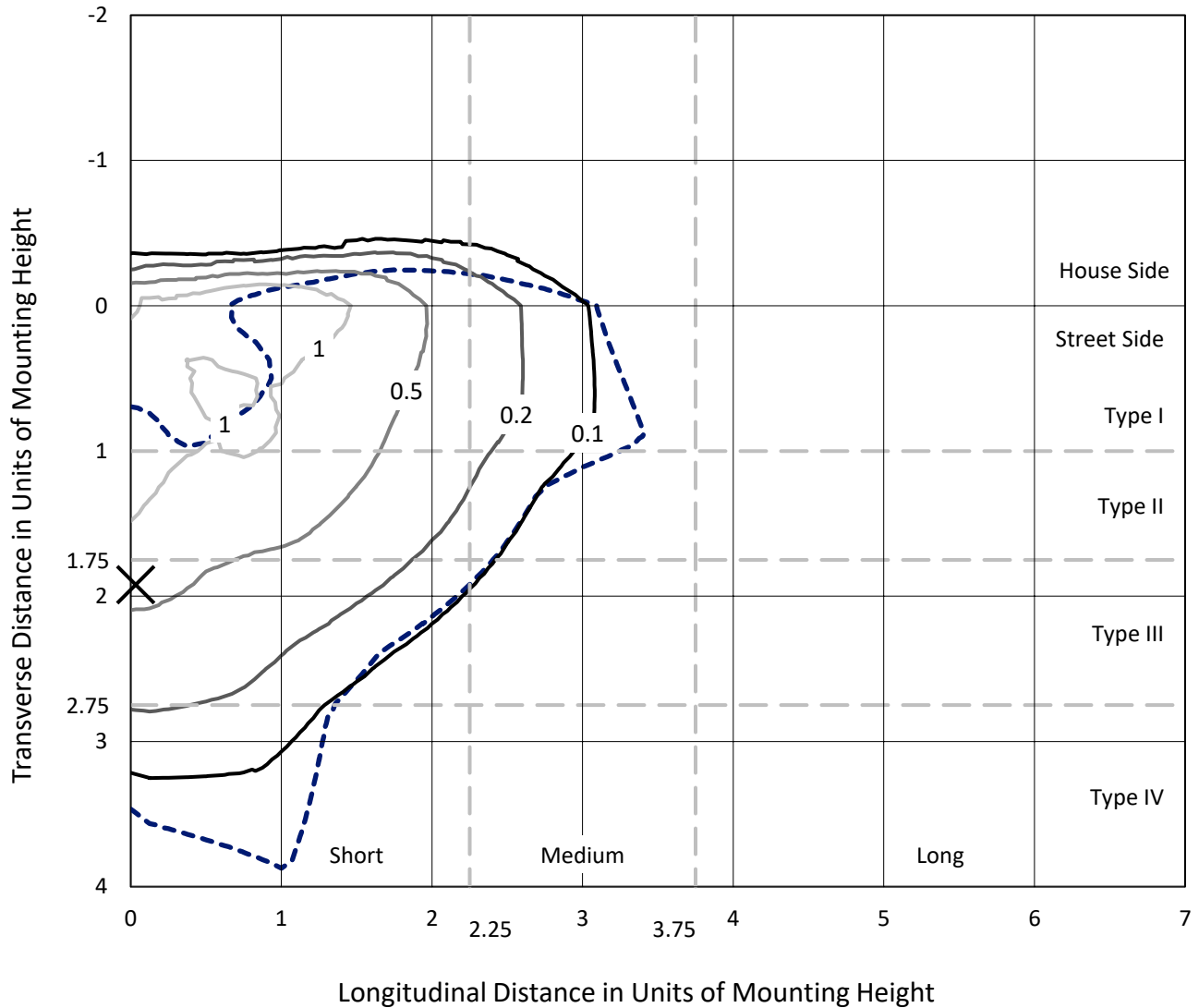
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

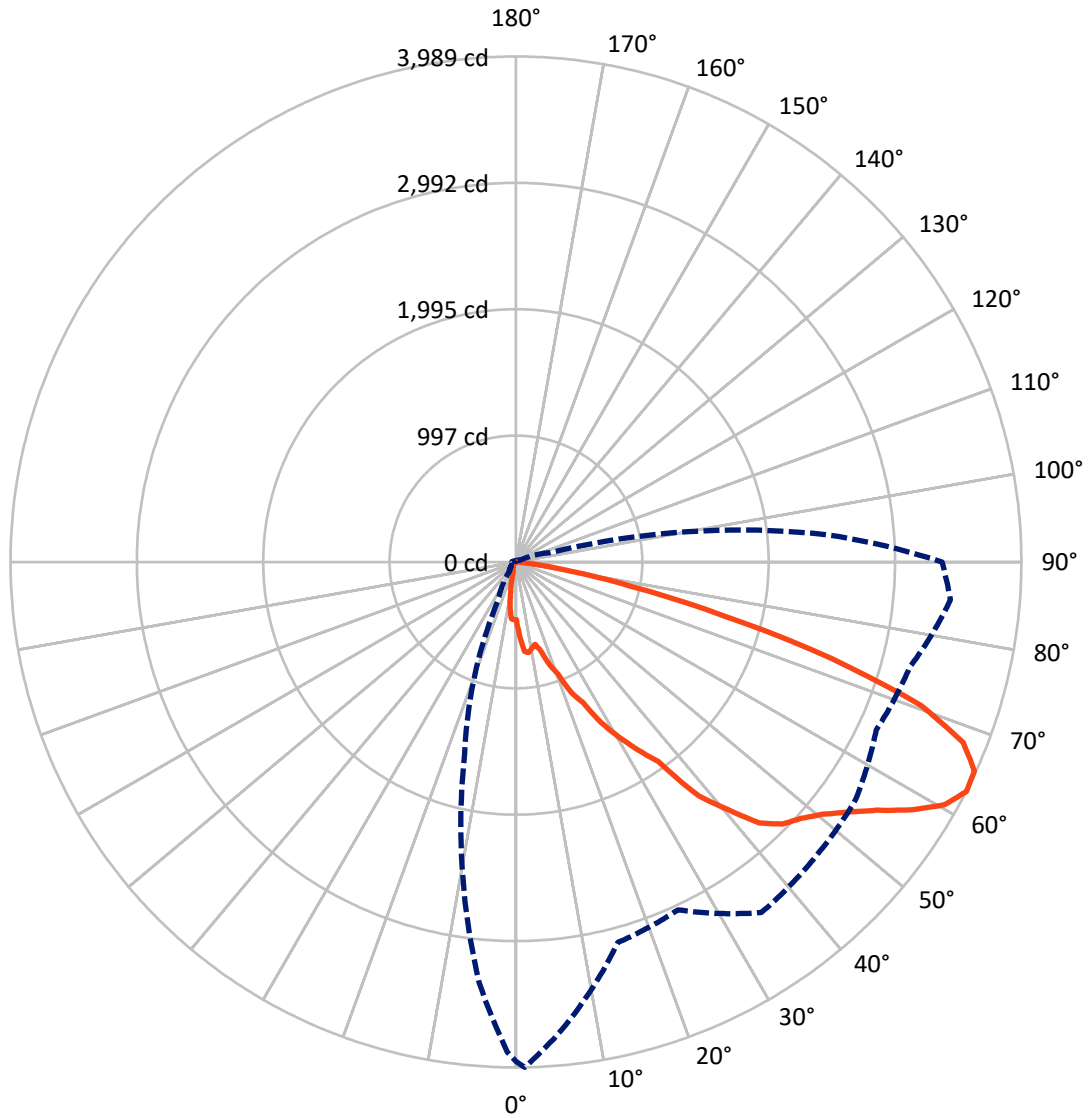
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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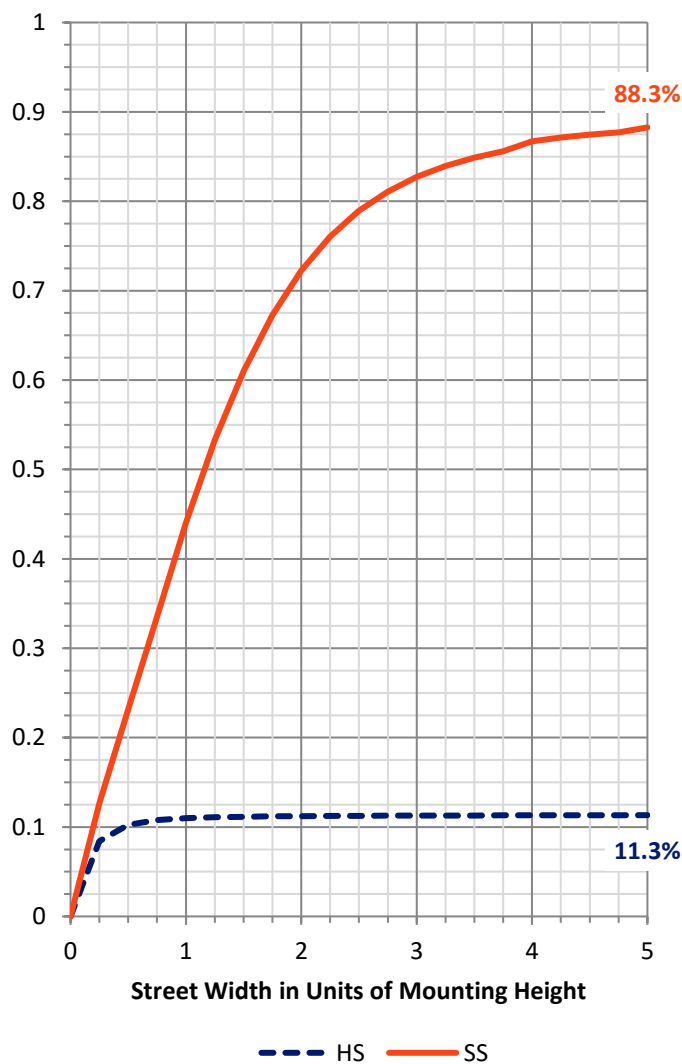
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	431.3	0.0	431.3
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	3340.7	0.0	3340.7
	% Fixture	88.6	0.0	88.6
Total	Lumens	3772.0	0.0	3772.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	1.3
10°-20°	132.6	3.5
20°-30°	214.4	5.7
30°-40°	359.1	9.5
40°-50°	587.1	15.6
50°-60°	869.1	23.0
60°-70°	997.8	26.5
70°-80°	493.4	13.1
80°-90°	67.7	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°	3772.0	100.0
0°-180°	3772.0	100.0

Coefficient of Utilization

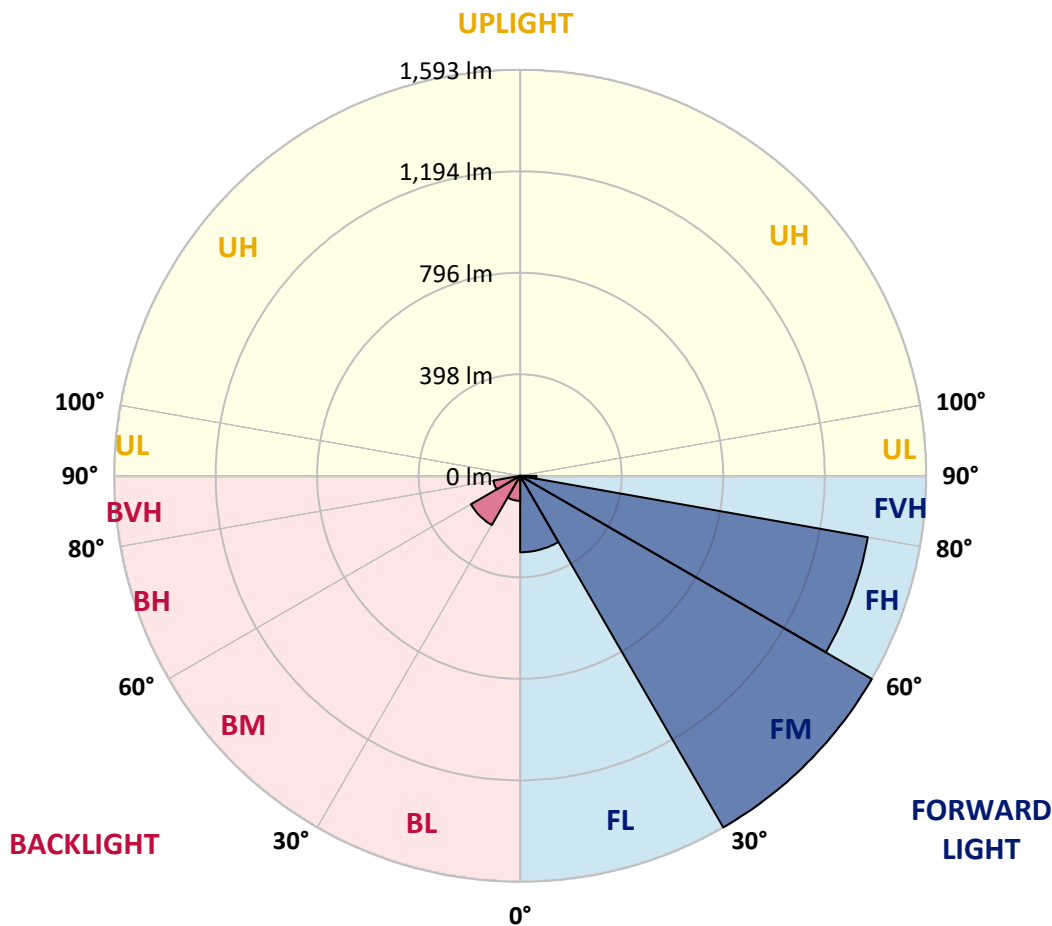


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	299.6	7.9			
FM (30°-60°)	1592.5	42.2			
FH (60°-80°)	1384.6	36.7			G1/1800
FVH (80°-90°)	64.0	1.7			G1/100
BL (0°-30°)	98.1	2.6	B0/110		
BM (30°-60°)	222.8	5.9	B1/1000		
BH (60°-80°)	106.7	2.8	B0/110		G0/110
BVH (80°-90°)	3.8	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°	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4
2.5°	585.9	588.7	575.6	573.9	543.4	581.4	582.5	587.0	559.1	504.9	580.6
5°	701.2	708.9	698.8	743.7	756.6	784.3	733.4	779.0	759.6	765.0	776.0
7.5°	714.9	722.9	744.1	819.4	888.8	871.4	865.8	883.0	881.5	841.7	861.5
10°	686.3	693.0	728.5	865.4	895.7	973.9	993.1	953.5	937.4	850.3	812.3
12.5°	655.2	666.3	711.5	875.7	966.6	1045.7	1108.7	1052.4	998.9	906.2	871.4
15°	714.9	721.1	792.1	897.2	976.7	1031.3	1082.9	1064.2	1056.0	989.4	871.4
17.5°	832.1	846.7	898.0	949.9	1012.6	1045.5	1033.3	1027.4	1006.6	1111.3	989.2
20°	915.5	942.8	1010.0	1032.4	982.5	1013.3	1005.7	1000.6	984.2	1179.0	1124.6
22.5°	1096.0	1121.2	1122.5	1130.4	1014.3	965.3	952.9	954.4	1028.5	1199.2	1293.1
25°	1219.0	1227.6	1295.5	1238.7	1101.2	979.9	932.4	953.7	1060.5	1344.5	1451.5
27.5°	1420.2	1440.6	1482.9	1290.8	1153.2	970.7	895.0	972.4	1144.8	1392.6	1627.6
30°	1584.2	1603.7	1671.9	1361.9	1198.3	1016.5	911.2	1010.0	1197.3	1491.7	1785.8
32.5°	1717.2	1767.7	1845.1	1471.7	1196.6	1069.1	993.5	997.6	1261.7	1620.1	1942.3
35°	1887.2	1934.3	1988.7	1547.4	1274.9	1086.1	1017.8	1120.1	1357.6	1754.2	2152.9
37.5°	2270.5	2341.6	2234.2	1738.1	1366.0	1239.6	1113.6	1195.5	1458.0	1891.1	2442.4
40°	2504.3	2564.3	2460.5	1835.4	1523.8	1317.0	1284.7	1326.7	1556.2	1961.8	2660.6
42.5°	2734.8	2813.9	2640.4	1982.0	1673.6	1535.4	1447.2	1481.0	1698.3	2132.5	2906.1
45°	2901.6	2950.6	2679.3	2058.8	1879.5	1784.3	1725.6	1675.3	1896.5	2242.1	3064.5
47.5°	2985.4	3024.5	2756.0	2083.1	2002.0	2047.6	2176.1	2071.0	2071.9	2321.4	3149.8
50°	3101.5	3128.8	2799.0	2112.1	2135.1	2457.9	2522.8	2299.1	2272.2	2401.0	3163.8
52.5°	3264.6	3277.9	2882.4	2188.6	2334.3	2779.3	2802.7	2712.2	2472.7	2548.8	3194.8
55°	3481.5	3458.1	3031.4	2349.4	2542.2	3014.6	3046.0	2967.1	2724.9	2696.5	3290.6
57.5°	3715.4	3688.5	3252.1	2575.9	2767.7	3194.5	3213.2	3219.5	2892.3	2827.2	3453.6
60°	3883.0	3888.0	3530.1	2835.8	2907.8	3366.7	3329.3	3272.6	3061.3	3018.7	3532.9
62.5°	3941.7	3989.2	3746.5	3108.1	3028.6	3377.5	3319.4	3271.5	3136.9	3216.3	3441.9
65°	3893.8	3976.7	3796.8	3347.4	3101.7	3242.7	3182.3	3151.6	3134.6	3296.9	3240.8
67.5°	3703.3	3807.1	3652.8	3349.5	2836.0	2761.0	2832.4	2929.7	2873.4	3230.0	2959.0
70°	3276.7	3390.4	3318.6	3153.1	2362.5	2172.3	2250.9	2398.2	2358.4	2872.8	2544.3
72.5°	2458.3	2604.5	2618.7	2722.1	1875.4	1634.9	1646.3	1642.2	1710.8	2316.5	1985.5
75°	1579.2	1692.9	1846.6	2196.5	1424.7	1193.6	1084.4	1057.8	1185.6	1810.1	1421.4
77.5°	916.7	930.3	1001.2	1657.2	1020.4	860.0	785.6	823.7	868.4	1263.2	942.1
80°	438.5	445.4	474.6	852.7	708.9	744.4	687.0	729.7	596.3	726.1	534.6
82.5°	139.1	140.6	145.5	418.9	440.2	493.1	316.0	423.7	368.6	438.9	356.0
85°	23.2	39.6	48.8	121.0	248.5	166.4	68.6	151.1	205.7	276.9	161.6
87.5°	0.0	0.0	0.0	2.1	20.2	9.5	1.5	8.6	31.6	61.7	7.3
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°	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4
2.5°	602.5	617.3	561.4	511.4	524.0	513.9	498.7	472.7	412.5	456.8	453.8
5°	775.3	747.8	672.1	636.9	593.9	528.3	520.4	470.1	447.9	451.6	448.4
7.5°	835.5	786.3	719.4	613.2	512.4	417.9	388.8	356.0	349.3	363.5	372.7
10°	788.2	736.0	677.5	545.5	467.9	399.6	328.0	282.0	257.1	254.1	256.6
12.5°	809.9	753.6	633.2	532.2	451.2	389.3	309.3	239.9	185.7	189.8	179.1
15°	825.0	760.3	622.7	504.3	416.6	333.8	237.5	168.1	123.8	110.9	103.2
17.5°	913.3	820.9	609.4	472.0	368.2	259.9	149.2	97.4	83.0	78.5	74.8
20°	1026.8	895.5	609.2	438.1	296.8	162.5	93.1	70.5	67.1	69.6	66.8
22.5°	1158.8	994.8	641.6	395.7	213.0	102.5	72.4	62.5	59.1	61.3	61.5
25°	1291.6	1143.7	668.1	355.5	148.3	78.7	64.5	57.6	53.7	55.7	54.6
27.5°	1531.5	1267.1	662.0	304.1	109.2	69.2	60.0	54.0	48.1	51.2	50.9
30°	1688.4	1484.9	685.5	232.1	86.6	60.6	55.9	49.2	43.0	46.4	46.2
32.5°	1876.1	1578.4	710.8	178.2	72.0	57.4	50.3	43.8	40.2	42.3	41.9
35°	2086.9	1763.2	664.2	148.3	62.5	51.8	44.5	39.6	36.3	37.4	37.4
37.5°	2459.4	1917.8	636.2	120.8	58.3	46.9	41.7	35.7	33.7	33.7	34.8
40°	2670.9	2153.8	552.8	95.7	59.5	43.2	38.9	32.7	30.1	29.9	31.0
42.5°	2946.1	2289.8	500.6	77.4	54.0	42.1	35.7	29.7	26.7	26.4	27.5
45°	3109.2	2365.9	427.1	60.8	48.4	49.0	33.1	27.3	22.8	21.9	23.9
47.5°	3212.2	2466.7	385.4	48.4	42.1	48.8	32.2	23.6	19.1	18.1	19.8
50°	3264.4	2516.6	377.2	41.5	36.5	43.6	37.0	19.8	16.3	14.8	16.3
52.5°	3318.8	2597.6	380.2	38.3	32.2	35.0	35.0	17.0	14.4	12.7	13.8
55°	3428.6	2717.4	373.6	36.3	29.7	26.7	22.6	15.0	13.1	11.2	12.3
57.5°	3563.6	2803.3	373.6	34.6	27.5	22.8	18.1	14.0	12.0	9.7	10.5
60°	3538.0	2712.8	355.1	32.9	25.8	21.3	16.3	12.9	11.2	8.8	9.5
62.5°	3362.4	2466.7	287.6	30.3	24.3	20.2	14.8	12.3	10.5	7.7	8.4
65°	3156.1	2205.4	199.9	27.5	22.6	18.3	13.3	11.6	9.7	6.9	7.3
67.5°	2907.6	1893.9	110.9	24.7	20.8	15.9	12.3	11.4	9.2	6.2	6.7
70°	2476.4	1429.8	59.5	22.6	19.6	14.6	11.6	11.4	9.2	6.0	6.2
72.5°	1859.1	900.4	34.8	20.6	17.8	13.5	11.0	11.6	9.0	5.8	5.8
75°	1265.0	546.6	24.9	17.6	15.9	11.4	10.5	11.2	9.2	5.8	5.4
77.5°	860.0	384.1	20.4	15.9	14.4	10.1	10.7	11.2	9.2	4.7	3.7
80°	536.9	198.2	15.5	12.7	12.5	8.8	10.7	9.7	6.0	1.1	0.0
82.5°	375.5	73.7	9.0	9.7	9.7	6.2	8.4	6.9	3.4	0.0	0.0
85°	157.6	12.7	4.9	6.9	6.0	3.7	6.7	5.2	2.1	0.0	0.0
87.5°	2.8	0.0	1.9	4.1	4.3	2.1	3.4	2.1	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°	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4
2.5°	467.9	447.5	404.5	425.2	423.0	432.5	433.3	411.4	458.7	487.9	492.2
5°	448.8	435.1	432.7	420.9	417.9	435.3	425.8	425.2	447.9	481.3	481.5
7.5°	372.9	362.4	367.3	353.6	318.1	320.3	323.5	337.0	356.6	378.5	386.5
10°	256.0	283.3	263.3	261.6	257.9	246.5	237.5	244.6	270.0	290.2	297.7
12.5°	182.7	187.0	199.3	194.7	201.0	191.3	187.6	209.8	234.5	255.1	270.0
15°	106.8	114.1	121.4	136.9	143.2	141.2	152.4	170.9	190.9	200.3	218.6
17.5°	75.2	75.9	77.4	94.1	105.1	109.4	116.1	130.0	138.2	142.5	150.0
20°	65.8	63.8	61.3	70.7	81.0	86.4	84.5	95.4	102.1	106.4	111.8
22.5°	59.5	56.3	54.8	58.0	66.0	70.7	71.6	78.0	88.1	91.1	92.9
25°	53.7	51.6	50.5	52.2	56.5	61.0	61.9	70.3	79.3	80.6	84.0
27.5°	49.9	45.8	46.2	47.5	49.4	55.0	56.7	61.5	74.6	76.1	77.2
30°	45.8	41.5	42.8	44.1	43.2	50.1	52.7	58.0	70.7	73.1	74.4
32.5°	41.7	38.5	38.3	39.6	41.1	44.7	50.3	56.5	68.1	71.4	74.6
35°	37.2	34.6	35.0	35.3	37.2	41.9	46.0	49.2	57.2	58.9	60.0
37.5°	34.0	31.8	31.4	33.5	35.5	39.1	40.6	42.1	52.7	56.5	56.7
40°	30.1	28.8	28.8	30.3	34.6	34.2	36.1	40.8	50.9	55.0	55.5
42.5°	27.3	25.6	26.0	27.5	30.5	28.4	32.2	39.1	50.3	54.4	54.2
45°	23.0	22.6	23.4	24.7	26.0	24.1	30.1	37.4	48.1	53.5	52.0
47.5°	19.1	19.1	20.2	21.5	20.8	21.5	27.3	35.0	46.9	51.8	50.7
50°	15.7	15.9	17.0	19.1	17.2	18.9	24.5	32.7	44.7	50.1	49.2
52.5°	13.3	13.5	14.2	15.7	14.8	17.2	22.6	30.3	42.6	47.1	46.6
55°	11.6	12.0	12.0	12.9	13.3	16.1	20.4	27.9	39.3	44.3	43.4
57.5°	10.3	10.7	10.5	11.2	11.6	14.2	18.3	25.4	36.1	40.2	38.9
60°	9.2	9.7	9.5	10.3	10.1	12.3	15.9	22.6	32.7	35.9	34.8
62.5°	8.2	8.6	8.6	9.0	9.2	10.3	13.8	20.0	29.2	31.8	31.0
65°	7.3	7.7	8.0	7.7	8.2	8.8	11.6	18.1	25.4	27.9	26.7
67.5°	6.7	7.1	7.5	6.7	7.1	7.3	9.9	16.1	22.4	24.5	23.4
70°	6.4	6.7	6.7	5.8	5.6	5.8	8.6	13.8	19.6	21.7	20.2
72.5°	6.0	6.2	6.0	4.7	4.1	4.5	7.3	11.6	16.6	18.3	17.0
75°	5.6	5.8	5.6	3.9	2.6	3.2	6.0	10.1	14.2	15.0	14.4
77.5°	4.7	5.2	5.2	2.8	0.9	1.9	4.5	8.2	11.8	11.8	12.0
80°	0.4	1.3	2.1	1.5	0.0	0.2	1.5	4.3	7.5	7.3	8.0
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.6	1.9	2.1
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°	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4	454.4
2.5°	482.1	475.5	483.8	509.4	499.1	501.0	494.2	536.5	584.4	585.9
5°	481.9	475.9	488.4	487.3	516.7	548.8	579.7	629.8	700.7	701.2
7.5°	382.8	418.5	427.7	425.0	462.8	506.8	554.6	650.4	708.7	714.9
10°	345.2	360.7	379.6	386.5	402.2	444.1	498.0	606.6	671.9	686.3
12.5°	299.2	348.6	373.8	422.6	431.6	437.6	522.8	617.1	656.9	655.2
15°	247.8	290.8	330.6	390.1	414.6	477.8	544.9	668.5	692.1	714.9
17.5°	175.4	207.9	268.9	331.4	406.2	475.0	605.9	760.3	805.0	832.1
20°	117.4	133.1	188.3	271.0	365.8	434.2	630.9	843.2	892.0	915.5
22.5°	95.2	102.7	131.3	198.6	312.5	432.3	641.0	933.7	1064.8	1096.0
25°	83.8	89.0	104.2	147.0	259.4	423.7	696.9	1035.6	1193.8	1219.0
27.5°	73.3	81.0	92.4	121.2	222.5	417.6	725.2	1206.7	1395.4	1420.2
30°	70.1	79.5	90.5	110.5	196.7	394.4	770.4	1361.0	1540.1	1584.2
32.5°	75.7	78.9	84.3	101.2	176.7	369.9	849.7	1545.5	1659.8	1717.2
35°	60.0	65.8	75.2	92.9	168.3	368.6	894.6	1664.1	1851.8	1887.2
37.5°	58.7	64.1	76.3	90.5	178.4	378.5	961.2	1907.2	2197.8	2270.5
40°	57.0	63.8	75.4	89.4	178.4	388.2	1003.8	2101.8	2430.6	2504.3
42.5°	56.3	65.1	75.2	93.9	172.8	393.6	1068.1	2295.8	2676.5	2734.8
45°	55.9	66.4	75.9	99.3	171.5	411.2	1104.4	2390.2	2834.7	2901.6
47.5°	54.8	66.4	84.7	96.1	164.4	409.5	1151.5	2530.1	2929.1	2985.4
50°	54.0	66.8	95.9	90.1	165.5	398.9	1215.3	2661.5	3061.3	3101.5
52.5°	52.0	68.4	94.1	81.7	162.3	397.9	1310.5	2848.3	3235.2	3264.6
55°	47.7	66.4	85.1	71.4	150.9	385.6	1436.7	3091.2	3476.3	3481.5
57.5°	43.8	61.7	71.1	65.6	126.4	387.1	1545.5	3314.7	3691.3	3715.4
60°	40.0	64.1	55.2	61.0	104.7	359.6	1598.1	3400.2	3847.8	3883.0
62.5°	36.3	59.1	47.1	56.1	93.3	334.0	1561.6	3331.5	3867.8	3941.7
65°	32.2	41.1	39.8	50.3	94.4	298.1	1439.5	3130.1	3791.9	3893.8
67.5°	27.7	32.2	35.0	43.4	101.0	267.4	1230.1	2806.8	3587.9	3703.3
70°	24.3	29.0	30.5	38.0	105.1	247.2	970.7	2358.2	3170.0	3276.7
72.5°	20.2	26.9	27.3	33.3	101.2	227.2	691.7	1692.9	2407.2	2458.3
75°	17.4	22.4	24.7	27.9	85.1	169.6	381.1	1047.9	1522.0	1579.2
77.5°	15.7	17.0	18.7	19.3	36.1	88.3	131.1	646.1	852.3	916.7
80°	12.0	13.3	12.9	13.3	19.8	30.5	49.9	302.9	402.6	438.5
82.5°	3.9	6.4	7.1	6.0	12.9	15.0	14.4	104.7	130.9	139.1
85°	0.9	2.4	1.1	0.0	4.3	7.7	1.1	15.9	31.4	23.2
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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