

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: P596882

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

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596882
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
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
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4429 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

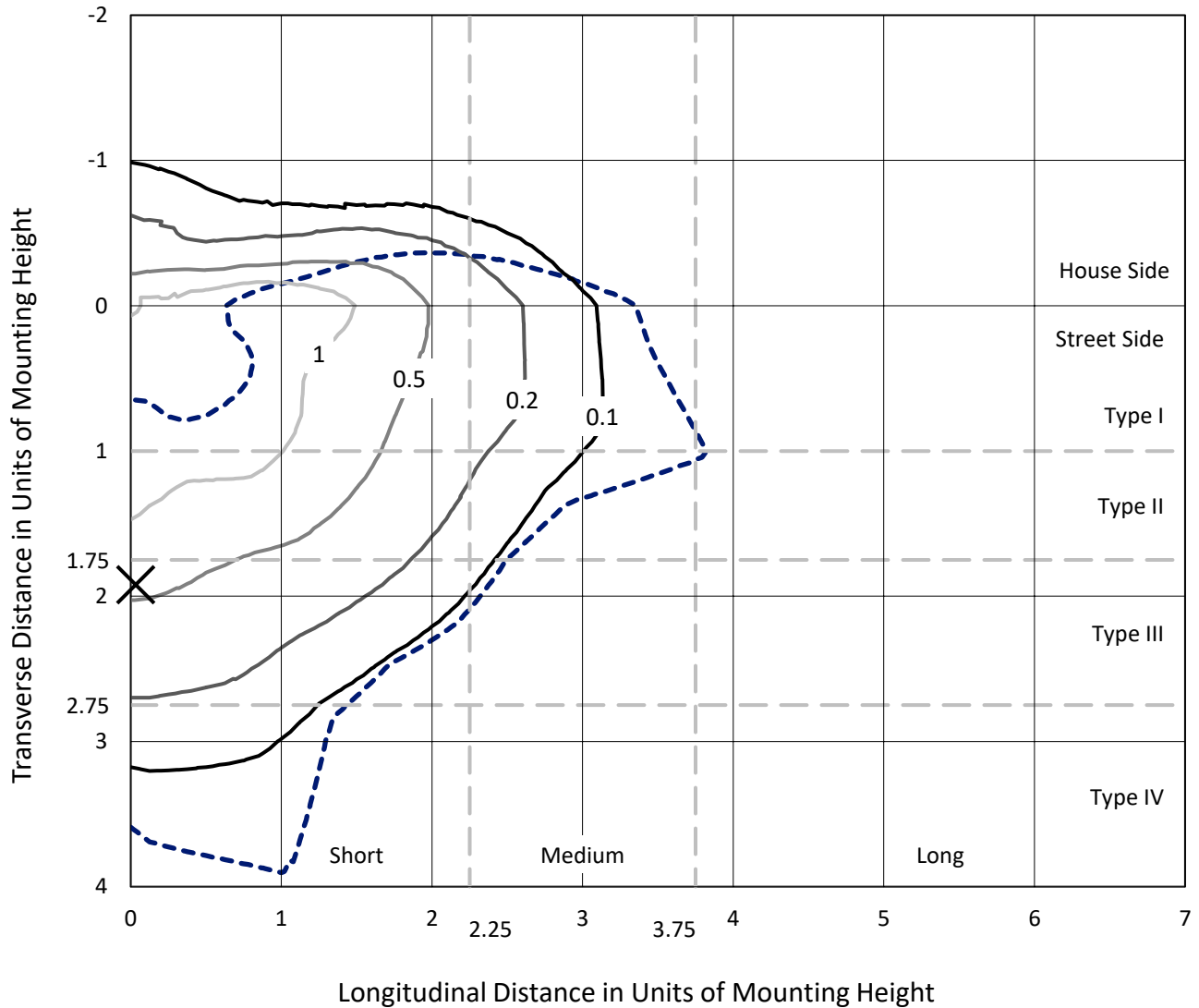
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

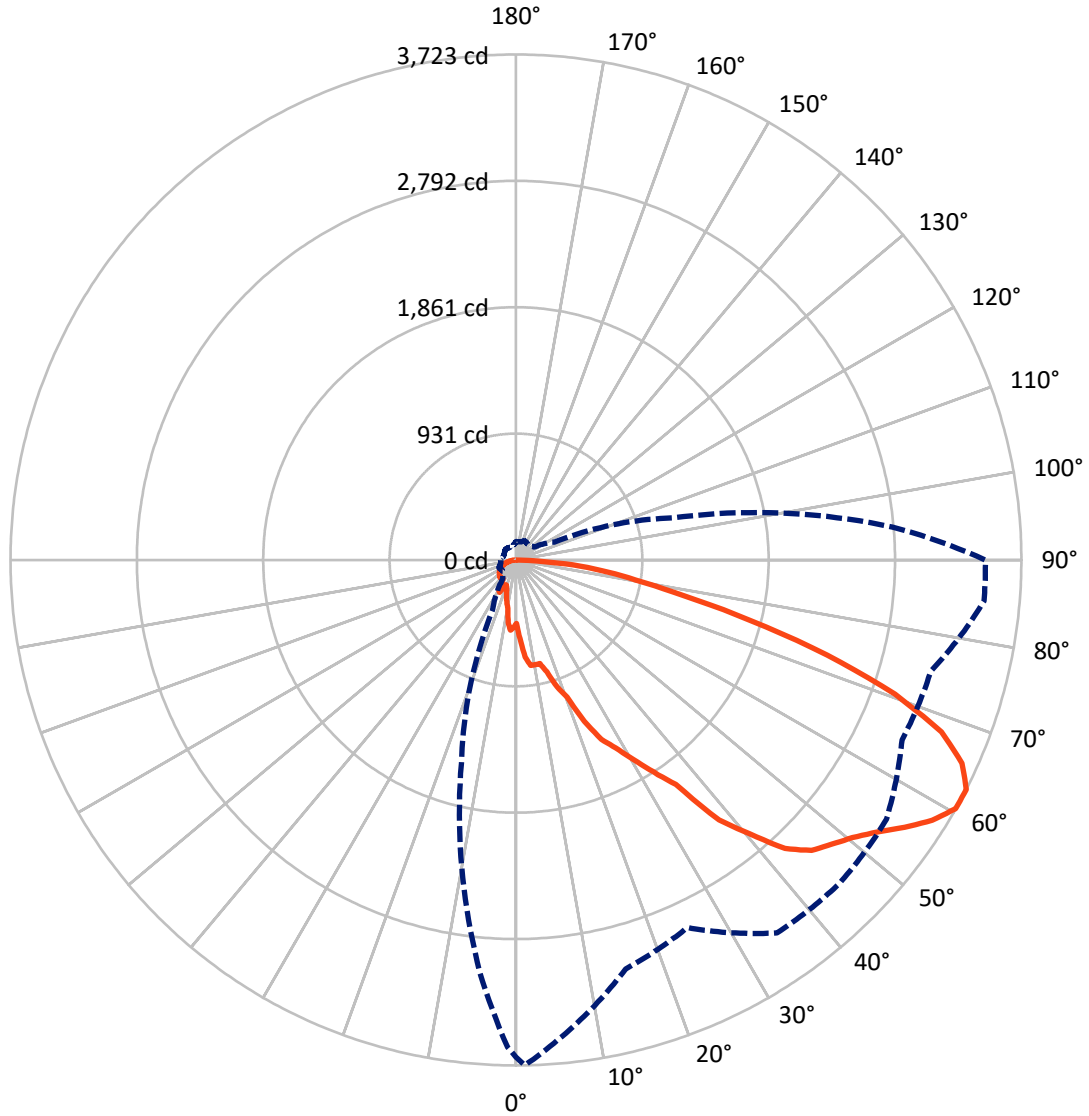
✕ Max cd
 - - - 1/2 Max cd



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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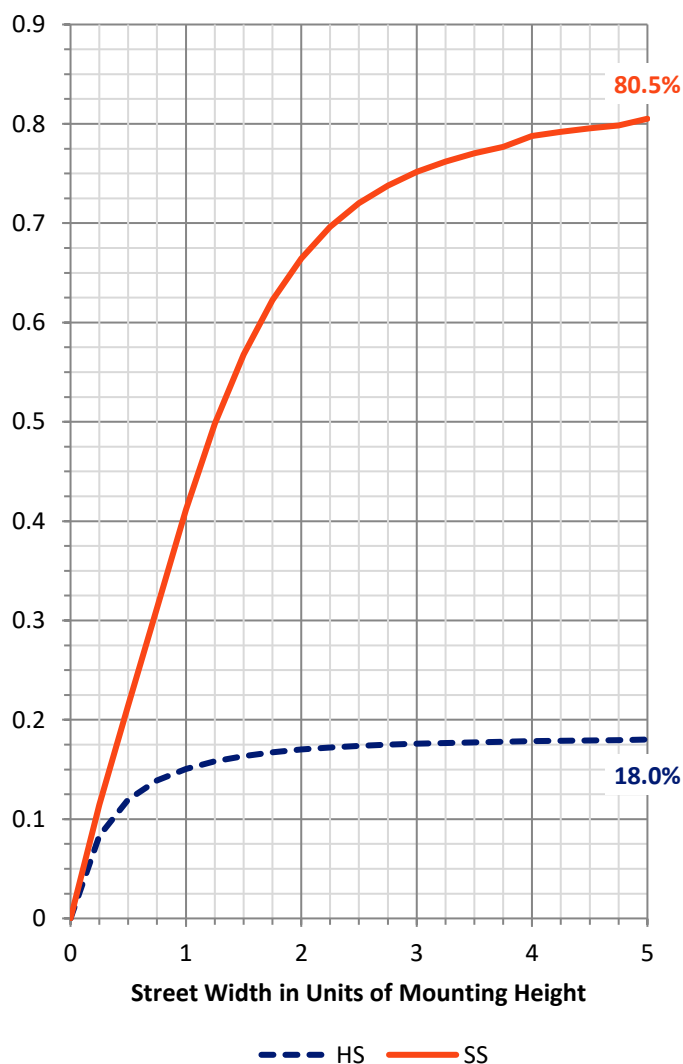
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	806.5	0.0	806.5
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	3622.5	0.0	3622.5
	% Fixture	81.8	0.0	81.8
Total	Lumens	4429.0	0.0	4429.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.5	1.2
10°-20°	155.6	3.5
20°-30°	274.7	6.2
30°-40°	427.8	9.7
40°-50°	704.5	15.9
50°-60°	1005.5	22.7
60°-70°	1066.2	24.1
70°-80°	588.9	13.3
80°-90°	152.3	3.4
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°	4429.0	100.0
0°-180°	4429.0	100.0

Coefficient of Utilization



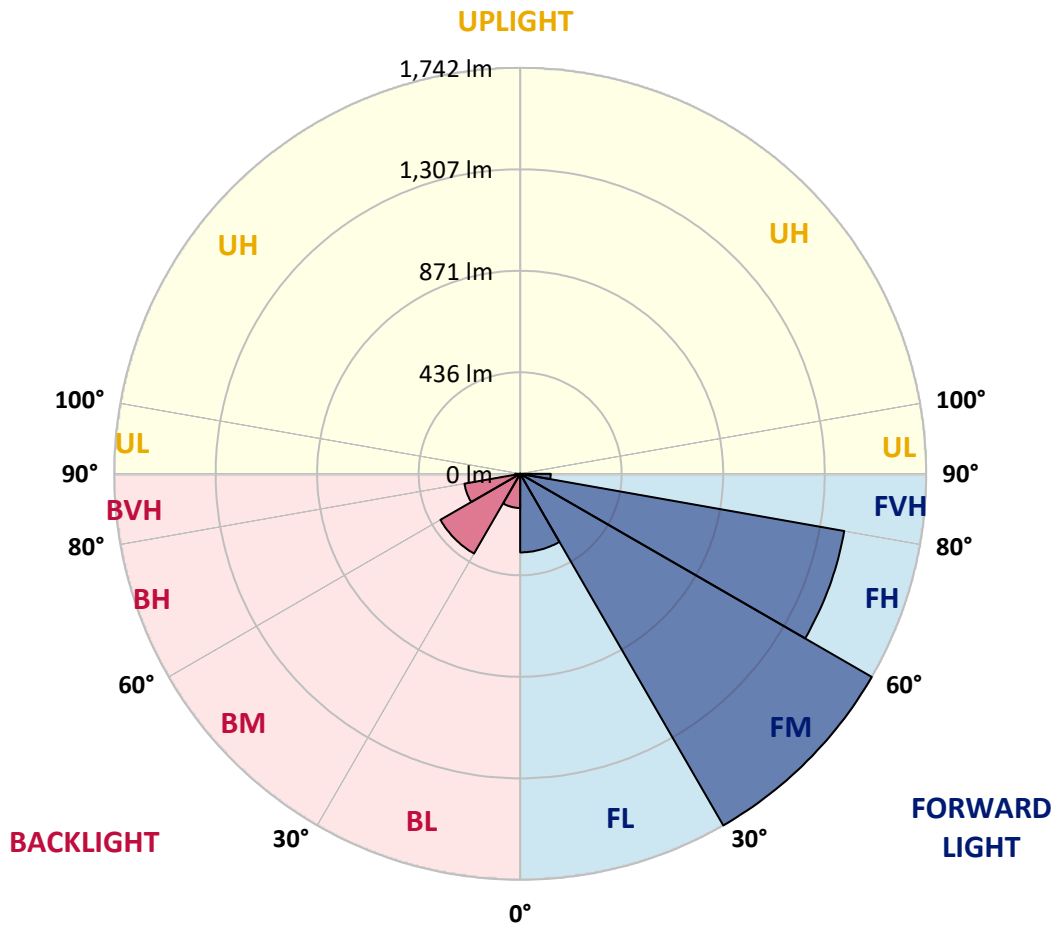
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	337.1	7.6			
FM (30°-60°)	1742.4	39.3			
FH (60°-80°)	1412.1	31.9			G1/1800
FVH (80°-90°)	130.8	3.0			G2/225
BL (0°-30°)	146.7	3.3	B1/500		
BM (30°-60°)	395.4	8.9	B1/1000		
BH (60°-80°)	243.0	5.5	B1/500		G1/500
BVH (80°-90°)	21.5	0.5			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°	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0
2.5°	574.3	579.2	569.1	557.7	510.7	556.0	542.5	567.6	559.5	504.9	604.8
5°	709.7	718.7	708.8	743.0	745.1	754.0	672.5	723.2	705.6	701.1	751.6
7.5°	775.0	784.3	809.4	870.2	917.7	874.7	827.2	816.7	803.0	767.1	797.6
10°	779.1	784.3	818.0	947.0	970.0	1000.5	969.7	897.3	867.4	789.4	766.2
12.5°	766.9	783.0	826.6	983.7	1052.1	1085.4	1092.9	1012.3	939.0	850.0	838.2
15°	849.2	855.0	917.5	1009.9	1057.0	1085.2	1109.7	1060.0	1037.0	966.5	871.7
17.5°	967.2	983.3	1034.4	1068.6	1100.4	1105.8	1085.6	1066.2	1029.7	1123.8	1023.0
20°	1047.1	1078.3	1141.0	1147.5	1080.6	1092.5	1089.7	1091.0	1070.1	1244.2	1188.8
22.5°	1258.6	1292.3	1300.9	1263.5	1137.6	1083.7	1094.4	1125.6	1207.7	1356.8	1419.6
25°	1450.1	1463.2	1541.7	1445.4	1244.6	1127.1	1109.4	1190.0	1323.9	1546.4	1591.1
27.5°	1550.0	1567.0	1619.3	1409.7	1258.0	1071.2	1029.9	1152.6	1289.1	1457.2	1653.4
30°	1677.9	1705.0	1776.1	1445.4	1298.2	1107.7	1016.4	1133.7	1284.6	1515.7	1785.4
32.5°	1809.7	1862.3	1915.2	1571.1	1292.6	1163.6	1103.0	1112.5	1325.4	1638.2	1922.1
35°	1984.2	2030.6	2076.2	1643.8	1405.2	1210.2	1150.1	1250.2	1430.3	1780.2	2112.7
37.5°	2357.3	2430.8	2310.7	1850.5	1527.7	1420.4	1311.9	1371.2	1541.2	1898.7	2424.1
40°	2595.0	2650.2	2534.2	1991.3	1743.5	1562.1	1544.2	1549.2	1694.0	2000.1	2633.7
42.5°	2831.2	2906.0	2721.4	2184.5	2004.4	1854.6	1762.6	1756.4	1865.1	2182.4	2872.1
45°	3007.5	3051.5	2785.7	2347.4	2284.2	2173.1	2104.1	1994.7	2089.9	2308.5	3019.5
47.5°	3091.3	3127.2	2889.0	2442.2	2465.6	2471.4	2595.9	2409.3	2286.4	2393.8	3096.9
50°	3195.9	3212.9	2949.9	2525.6	2638.0	2892.9	2922.8	2606.6	2477.7	2486.9	3142.6
52.5°	3321.0	3328.1	3038.6	2621.9	2812.3	3170.2	3123.9	2941.0	2659.7	2656.9	3228.8
55°	3478.4	3474.1	3150.0	2751.5	2936.7	3335.0	3300.0	3166.7	2858.1	2797.7	3362.9
57.5°	3618.3	3615.7	3297.6	2870.8	3041.4	3419.7	3430.0	3394.8	2993.1	2898.5	3508.2
60°	3686.8	3719.7	3465.7	3001.2	3048.1	3457.9	3461.8	3405.7	3143.9	3027.9	3546.9
62.5°	3660.2	3722.7	3548.2	3118.6	2986.8	3353.5	3369.6	3330.9	3137.1	3163.7	3460.5
65°	3539.0	3611.2	3476.6	3181.1	2949.2	3178.5	3182.6	3084.8	3038.8	3253.8	3258.1
67.5°	3311.6	3379.3	3248.8	3081.4	2691.7	2707.0	2798.1	2806.1	2739.0	3185.8	2973.7
70°	2913.5	2961.2	2879.6	2835.1	2249.8	2160.4	2259.3	2301.6	2332.2	2940.6	2632.4
72.5°	2306.6	2398.8	2411.7	2440.7	1811.4	1662.5	1735.7	1673.0	1871.8	2502.8	2150.8
75°	1706.5	1784.3	1867.9	2029.8	1427.8	1244.6	1235.6	1203.6	1389.3	2012.8	1595.2
77.5°	1205.9	1255.6	1319.9	1621.4	1077.4	958.6	964.2	931.7	1003.3	1521.2	1101.9
80°	864.4	890.4	920.3	1068.2	794.8	827.0	827.9	797.2	746.0	1033.1	735.5
82.5°	616.0	636.2	670.4	704.5	592.6	677.9	677.2	675.3	591.5	698.3	460.2
85°	343.0	370.1	429.4	551.9	427.9	484.7	426.2	469.4	434.1	464.9	233.0
87.5°	24.1	21.5	96.1	319.8	199.7	145.9	76.5	151.5	194.3	242.9	32.5
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°	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0
2.5°	625.4	633.0	603.5	559.2	571.3	558.2	541.6	515.8	462.7	495.6	495.8
5°	751.2	722.6	699.6	677.9	641.3	586.1	578.8	534.5	509.6	522.7	520.8
7.5°	790.5	749.9	715.3	637.7	570.0	484.2	458.4	432.2	421.3	453.1	465.7
10°	747.3	705.0	671.0	576.6	530.7	477.1	406.2	369.9	348.4	356.8	361.7
12.5°	782.1	738.9	632.1	579.4	503.6	470.9	408.8	355.5	323.7	331.4	322.2
15°	815.6	757.4	650.6	545.7	484.2	436.9	386.7	331.6	294.2	280.9	273.8
17.5°	938.2	841.4	648.4	526.8	456.3	401.9	341.3	281.1	256.2	242.4	230.6
20°	1087.5	952.8	660.0	507.2	426.6	358.1	292.1	236.2	218.8	209.8	206.5
22.5°	1265.3	1095.5	726.4	504.4	398.7	326.0	265.0	230.2	210.6	200.7	196.7
25°	1406.5	1243.1	775.5	523.3	397.2	299.6	248.7	255.8	246.7	249.7	225.9
27.5°	1543.6	1283.3	747.9	515.0	357.2	252.8	244.8	259.6	267.4	269.7	268.9
30°	1659.4	1453.1	754.0	467.7	301.8	205.9	187.4	194.7	216.0	249.7	256.2
32.5°	1829.0	1534.4	805.3	439.1	269.7	184.2	163.6	160.8	165.7	178.0	188.5
35°	2027.4	1721.3	819.7	431.6	247.6	174.5	160.1	153.7	156.3	165.5	167.6
37.5°	2397.3	1857.6	873.0	422.3	239.4	168.7	157.5	155.2	160.8	168.3	172.6
40°	2601.2	2102.6	875.6	414.4	228.9	166.4	159.3	158.2	161.6	171.9	174.5
42.5°	2873.1	2242.3	916.0	405.1	225.2	169.6	162.7	162.3	165.3	171.3	176.0
45°	3038.8	2335.8	918.2	399.8	224.4	183.8	167.2	165.7	165.1	168.7	173.0
47.5°	3145.7	2470.6	944.4	393.7	229.5	187.4	172.6	166.1	164.0	165.5	168.7
50°	3246.9	2578.2	994.0	392.9	234.9	183.8	182.0	165.9	161.6	161.0	163.3
52.5°	3371.1	2755.3	1055.3	401.1	233.6	178.4	189.1	165.1	157.3	155.8	158.2
55°	3551.9	2945.1	1120.4	394.2	220.3	168.1	182.3	164.4	152.8	150.0	152.2
57.5°	3669.0	3053.9	1193.3	388.4	200.1	160.3	176.0	164.8	153.2	147.0	148.3
60°	3630.1	2995.4	1221.9	352.9	181.0	154.3	161.2	161.4	149.4	143.6	144.6
62.5°	3458.2	2783.7	1195.2	311.6	166.8	145.7	145.9	155.0	138.2	134.1	135.8
65°	3217.9	2520.4	1087.3	284.8	160.1	136.7	133.3	136.0	123.2	120.1	123.6
67.5°	2923.0	2195.9	926.8	256.4	157.8	124.4	120.4	119.3	111.1	107.7	111.1
70°	2553.1	1838.7	740.8	236.4	148.7	111.1	107.9	106.8	99.9	97.4	100.4
72.5°	2052.1	1435.7	571.7	221.2	138.8	98.9	96.1	94.8	89.0	85.3	89.0
75°	1459.6	1097.2	424.7	197.7	124.9	86.4	83.2	81.5	76.1	72.6	75.9
77.5°	1037.2	823.6	296.6	163.6	102.9	73.1	71.1	68.3	63.6	59.5	62.8
80°	766.9	588.5	191.3	126.2	78.7	58.5	57.4	55.5	50.9	46.0	48.4
82.5°	504.9	424.3	109.6	85.5	57.2	42.1	43.0	41.7	37.4	32.2	33.5
85°	226.1	251.2	58.2	47.1	37.2	25.4	27.7	26.9	23.6	18.7	19.1
87.5°	21.7	42.3	17.8	17.2	13.8	8.0	9.9	8.4	7.1	4.5	3.4
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0
2.5°	503.4	473.1	442.7	461.2	461.7	466.6	467.2	449.0	463.6	474.8	486.4
5°	511.3	491.5	492.6	474.8	465.1	477.6	475.0	470.0	478.9	491.1	505.9
7.5°	453.7	440.8	438.7	421.5	379.8	370.5	378.3	381.5	393.3	412.2	428.1
10°	354.2	379.8	351.0	344.3	333.3	311.9	299.4	297.9	323.0	338.3	351.6
12.5°	319.2	312.7	309.3	291.0	291.0	268.2	260.9	267.6	306.3	317.2	334.4
15°	271.9	267.2	251.2	242.2	237.9	228.7	236.4	242.9	279.0	279.8	297.9
17.5°	225.7	222.9	207.8	206.1	201.8	197.7	204.8	220.3	239.9	236.4	244.8
20°	201.8	192.1	178.4	183.3	178.8	175.6	172.6	194.5	208.3	212.8	217.7
22.5°	195.8	178.2	170.0	165.5	165.7	160.5	161.2	179.5	200.3	203.1	200.1
25°	223.7	192.4	165.9	152.8	147.9	146.1	151.1	167.2	192.4	198.4	200.7
27.5°	261.8	208.9	170.9	148.5	138.6	139.5	146.6	157.8	187.4	198.2	201.0
30°	251.2	196.4	171.1	145.3	133.0	137.6	140.1	150.9	183.5	199.7	213.6
32.5°	193.9	176.7	172.2	147.9	142.9	135.8	139.5	149.8	172.2	182.3	182.9
35°	164.2	151.1	148.1	142.1	135.2	132.2	136.3	145.3	159.9	166.1	165.3
37.5°	162.9	148.5	136.7	134.1	131.3	130.5	132.8	141.2	156.0	167.0	164.6
40°	165.1	147.2	135.2	130.7	131.7	127.9	130.2	140.6	156.7	167.0	164.8
42.5°	162.5	145.7	133.3	129.8	130.9	125.5	128.3	139.1	155.0	167.2	163.1
45°	157.3	142.3	132.2	126.4	131.3	123.4	126.8	135.2	149.8	163.1	158.4
47.5°	152.2	138.2	127.7	124.0	129.0	121.2	122.7	130.0	144.6	157.8	153.7
50°	146.6	133.0	124.0	122.9	126.4	120.8	118.4	124.4	138.4	151.5	148.1
52.5°	140.6	128.7	121.4	121.0	124.2	118.0	114.6	119.3	131.7	144.9	142.1
55°	134.8	124.0	118.2	119.3	122.9	115.6	111.3	114.3	124.7	137.6	133.7
57.5°	129.0	118.6	113.9	116.9	119.7	112.6	107.2	109.0	117.3	130.0	125.5
60°	123.8	113.9	109.2	112.8	115.4	108.1	101.9	102.9	110.5	121.9	117.8
62.5°	117.1	108.8	102.5	107.2	109.2	102.1	95.4	96.7	102.7	113.5	110.5
65°	107.7	102.3	96.5	99.7	102.3	95.0	88.8	90.3	94.8	104.9	102.7
67.5°	99.5	94.4	90.5	93.1	93.5	87.9	82.3	83.2	86.8	96.3	93.9
70°	90.5	85.5	82.5	84.5	84.3	79.5	75.2	75.4	78.4	87.0	83.8
72.5°	80.6	75.9	74.4	75.4	74.6	70.3	66.2	67.7	69.6	76.1	73.5
75°	70.1	65.8	64.9	66.0	64.7	60.6	57.0	58.5	60.2	65.6	62.3
77.5°	59.1	55.2	55.5	55.7	53.9	51.2	47.5	49.0	50.1	53.7	50.5
80°	47.1	44.1	44.9	44.9	43.0	41.1	37.6	38.0	38.7	40.0	37.6
82.5°	34.4	34.4	34.4	34.6	30.5	31.2	28.2	27.9	27.3	27.1	25.6
85°	20.4	21.3	21.7	22.4	16.5	19.3	16.8	16.1	14.8	13.5	13.1
87.5°	4.5	5.8	5.8	5.6	0.0	2.1	1.1	1.7	0.4	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°	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0	467.0
2.5°	473.1	460.2	484.2	505.7	502.3	514.7	485.7	528.7	574.3	574.3
5°	502.1	491.1	497.3	509.8	519.3	562.7	598.8	634.7	708.8	709.7
7.5°	423.4	447.0	452.6	449.0	489.6	545.5	605.0	707.3	770.1	775.0
10°	395.9	406.6	423.6	433.1	449.6	504.6	578.6	700.0	766.6	779.1
12.5°	358.7	398.5	424.3	477.1	490.2	501.2	618.8	723.9	769.9	766.9
15°	318.1	348.2	385.4	443.8	477.1	561.0	642.6	800.4	826.4	849.2
17.5°	253.6	275.7	325.2	391.8	474.3	551.5	701.5	895.0	943.5	967.2
20°	208.7	208.9	258.3	346.7	436.5	512.0	723.9	973.4	1035.1	1047.1
22.5°	197.3	187.4	213.4	285.2	394.8	535.4	769.0	1099.6	1228.3	1258.6
25°	191.1	179.0	195.4	251.7	364.9	547.6	859.9	1273.0	1438.3	1450.1
27.5°	193.6	199.2	204.4	224.4	327.1	524.6	838.9	1350.6	1527.7	1550.0
30°	211.1	220.1	208.3	215.1	296.0	491.3	876.5	1476.5	1640.3	1677.9
32.5°	175.6	172.2	171.1	186.1	264.8	461.2	955.3	1653.9	1762.4	1809.7
35°	158.4	153.0	155.2	172.4	249.5	456.9	999.6	1800.6	1955.2	1984.2
37.5°	157.8	151.5	154.3	167.2	254.9	464.7	1070.5	2036.2	2295.2	2357.3
40°	156.3	152.8	154.3	164.0	249.3	469.0	1111.4	2234.2	2532.0	2595.0
42.5°	156.0	154.3	155.8	166.6	243.5	470.9	1167.9	2413.0	2781.6	2831.2
45°	155.4	157.1	157.1	168.7	240.9	483.8	1201.2	2500.7	2946.2	3007.5
47.5°	152.4	157.5	165.9	168.1	230.4	477.8	1248.3	2633.7	3033.7	3091.3
50°	148.5	156.9	177.1	163.8	228.7	463.2	1303.3	2739.2	3145.9	3195.9
52.5°	143.4	155.8	174.5	155.4	225.7	460.6	1380.5	2876.4	3276.8	3321.0
55°	136.0	152.0	166.6	147.0	218.4	452.4	1498.5	3046.4	3448.1	3478.4
57.5°	129.4	146.1	155.0	142.3	201.0	454.1	1580.6	3185.0	3591.8	3618.3
60°	123.4	145.5	138.4	137.3	183.1	431.1	1607.2	3183.5	3645.4	3686.8
62.5°	116.9	137.3	126.8	130.7	167.4	407.5	1550.7	3047.0	3587.5	3660.2
65°	108.5	117.8	117.1	125.9	167.9	369.0	1421.1	2806.3	3443.3	3539.0
67.5°	98.7	104.2	107.9	118.2	173.2	339.2	1212.6	2516.8	3197.9	3311.6
70°	88.5	94.1	98.2	108.1	178.2	325.4	965.2	2110.1	2798.1	2913.5
72.5°	78.2	84.0	87.3	95.9	171.5	296.0	714.4	1641.8	2246.0	2306.6
75°	67.5	73.1	75.7	83.6	148.9	244.8	493.3	1243.6	1645.0	1706.5
77.5°	56.5	62.5	63.4	69.9	113.7	187.2	316.2	953.8	1164.9	1205.9
80°	45.1	51.2	51.2	54.6	80.0	128.7	189.3	719.6	848.3	864.4
82.5°	32.5	38.9	38.5	38.7	55.2	79.7	109.6	539.2	613.0	616.0
85°	19.1	23.6	23.4	21.5	32.7	43.0	59.3	334.9	342.2	343.0
87.5°	3.7	5.6	4.9	2.1	9.0	12.7	17.2	62.1	24.7	24.1
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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