

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: P596926

Luminaire Tested: **MSA-SA2A-835-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596926
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-SA2A-835-U-SLL
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5613 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

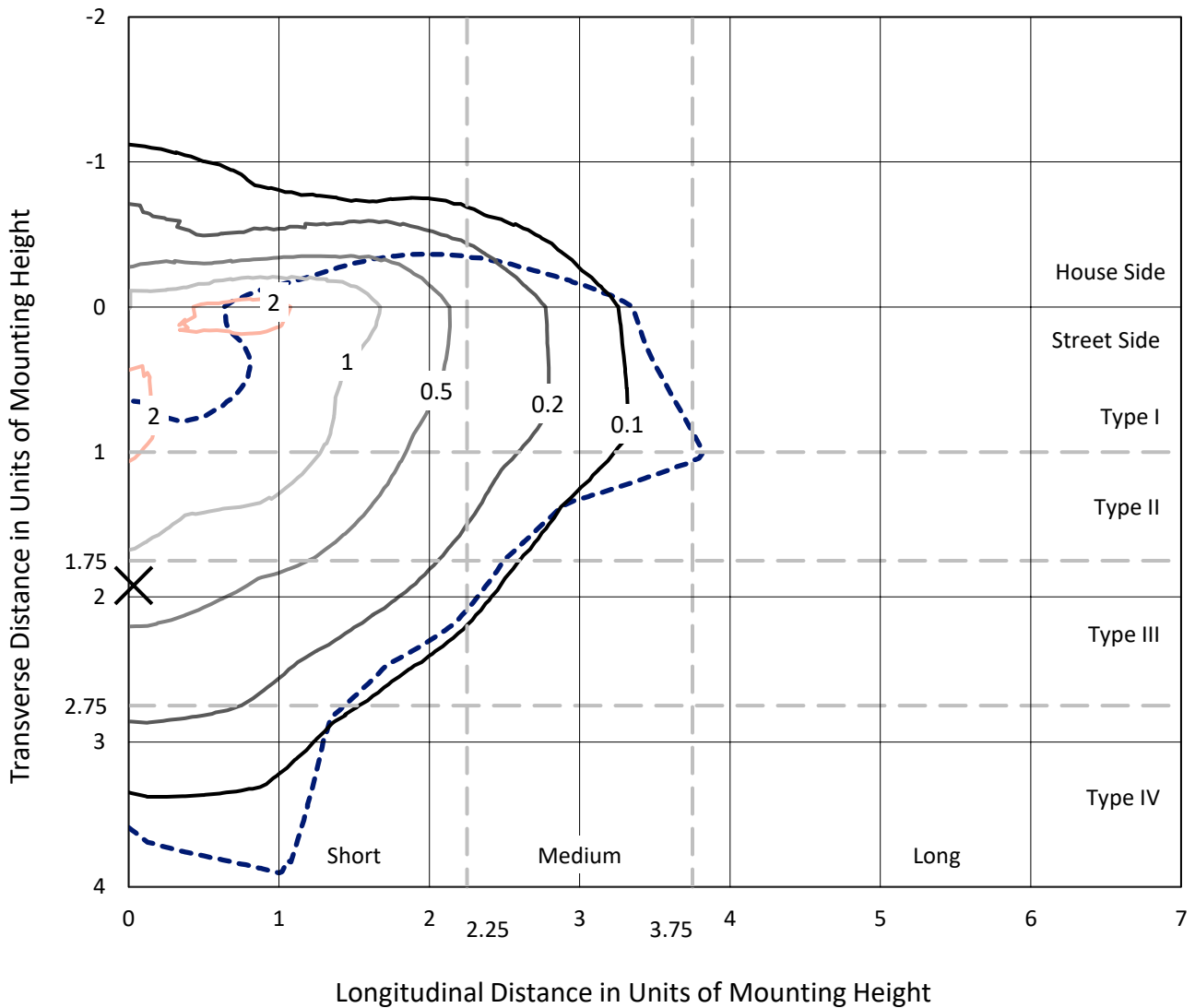
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

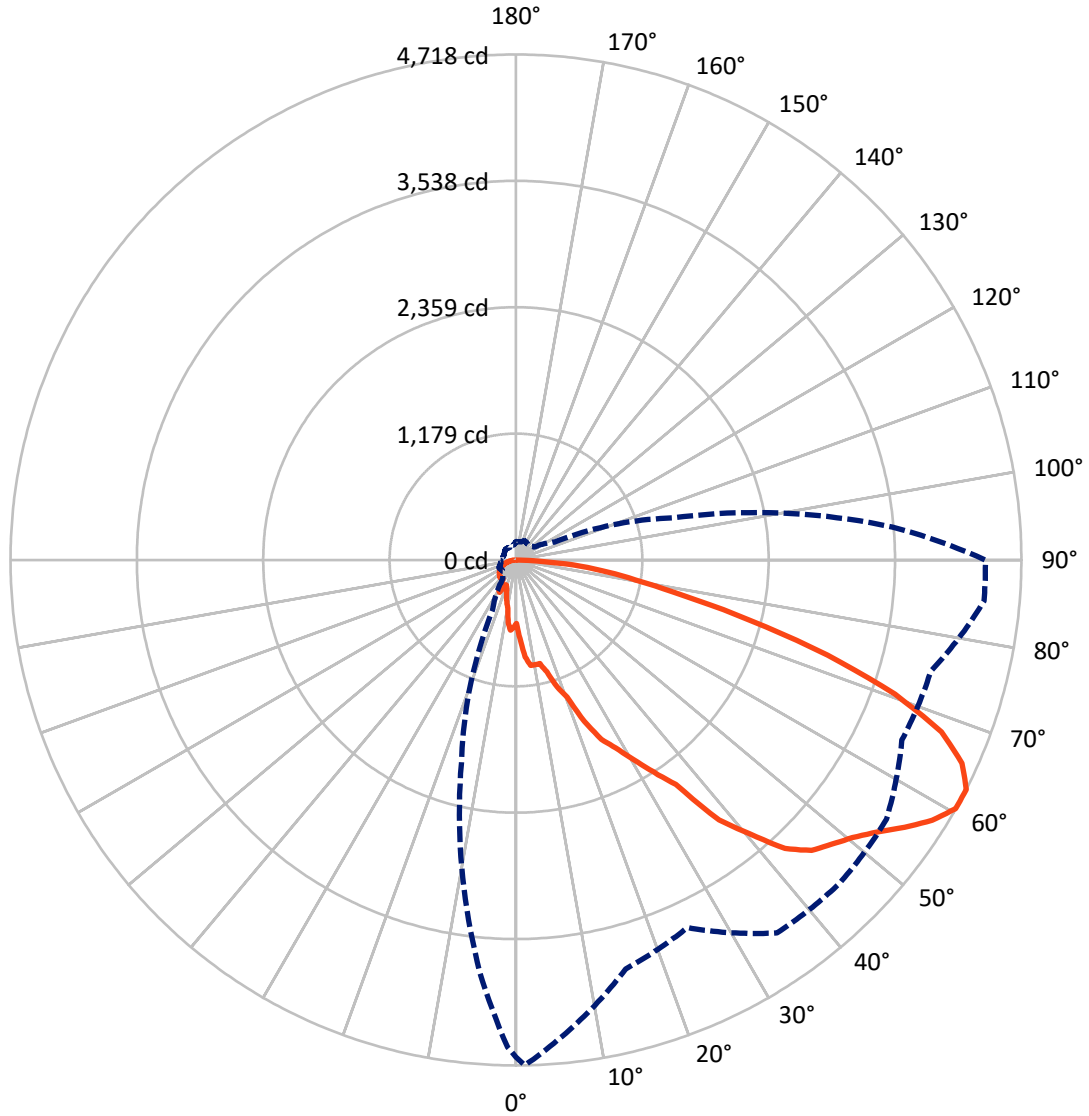
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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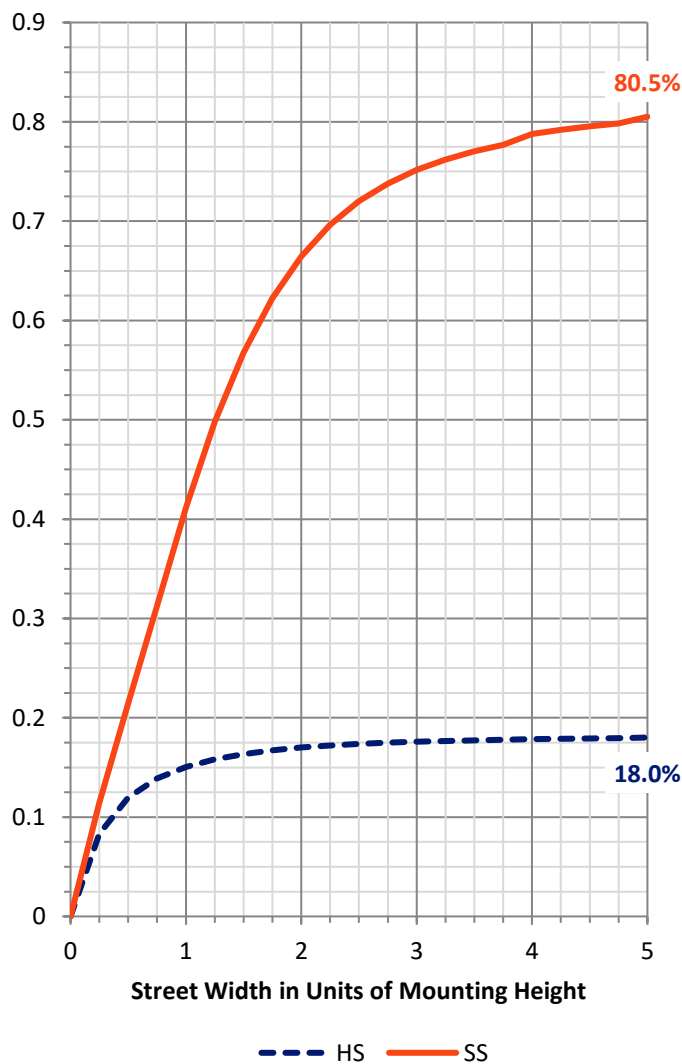
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1022.1	0.0	1022.1
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	4590.9	0.0	4590.9
	% Fixture	81.8	0.0	81.8
Total	Lumens	5613.0	0.0	5613.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	1.2
10°-20°	197.2	3.5
20°-30°	348.1	6.2
30°-40°	542.2	9.7
40°-50°	892.8	15.9
50°-60°	1274.3	22.7
60°-70°	1351.2	24.1
70°-80°	746.4	13.3
80°-90°	193.0	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°	5613.0	100.0
0°-180°	5613.0	100.0

Coefficient of Utilization

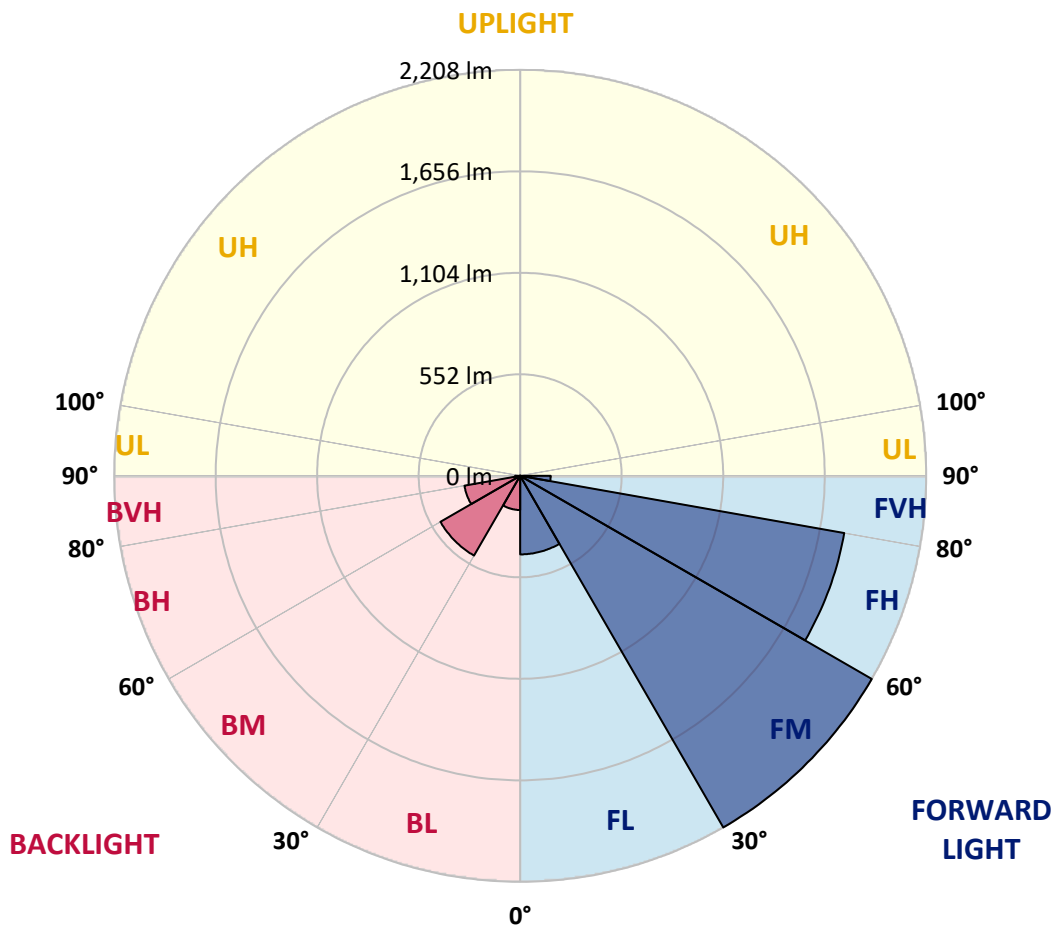


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	427.2	7.6			
FM (30°-60°)	2208.2	39.3			
FH (60°-80°)	1789.7	31.9			G1/1800
FVH (80°-90°)	165.8	3.0			G2/225
BL (0°-30°)	185.9	3.3	B1/500		
BM (30°-60°)	501.1	8.9	B1/1000		
BH (60°-80°)	307.9	5.5	B1/500		G1/500
BVH (80°-90°)	27.2	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°	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9
2.5°	727.8	734.1	721.3	706.8	647.2	704.7	687.5	719.4	709.0	639.8	766.5
5°	899.4	910.8	898.3	941.6	944.3	955.5	852.3	916.6	894.2	888.5	952.5
7.5°	982.2	993.9	1025.8	1102.9	1163.1	1108.6	1048.4	1035.1	1017.6	972.1	1010.8
10°	987.4	993.9	1036.7	1200.1	1229.3	1267.9	1229.0	1137.2	1099.3	1000.5	971.0
12.5°	971.9	992.3	1047.6	1246.7	1333.3	1375.5	1385.1	1282.9	1190.0	1077.3	1062.3
15°	1076.2	1083.5	1162.8	1279.9	1339.6	1375.3	1406.3	1343.4	1314.2	1224.9	1104.8
17.5°	1225.7	1246.1	1311.0	1354.3	1394.6	1401.4	1375.8	1351.3	1305.0	1424.3	1296.5
20°	1327.0	1366.5	1446.1	1454.2	1369.5	1384.5	1381.0	1382.6	1356.2	1576.8	1506.5
22.5°	1595.1	1637.8	1648.7	1601.3	1441.7	1373.3	1387.0	1426.5	1530.5	1719.5	1799.1
25°	1837.8	1854.4	1953.8	1831.8	1577.4	1428.4	1406.0	1508.2	1677.9	1959.8	2016.4
27.5°	1964.4	1985.9	2052.1	1786.6	1594.2	1357.5	1305.3	1460.8	1633.7	1846.7	2095.4
30°	2126.5	2160.8	2251.0	1831.8	1645.2	1403.9	1288.1	1436.8	1628.0	1920.8	2262.7
32.5°	2293.5	2360.2	2427.2	1991.1	1638.1	1474.7	1397.9	1409.8	1679.8	2076.1	2435.9
35°	2514.6	2573.5	2631.2	2083.2	1780.8	1533.8	1457.5	1584.4	1812.7	2256.1	2677.5
37.5°	2987.5	3080.6	2928.4	2345.2	1936.1	1800.2	1662.6	1737.8	1953.2	2406.2	3072.2
40°	3288.7	3358.7	3211.7	2523.6	2209.6	1979.7	1957.1	1963.3	2146.9	2534.8	3337.8
42.5°	3588.1	3682.9	3448.9	2768.5	2540.2	2350.4	2233.8	2225.9	2363.7	2765.8	3639.8
45°	3811.4	3867.3	3530.3	2975.0	2894.9	2754.1	2666.6	2528.0	2648.6	2925.7	3826.7
47.5°	3917.7	3963.2	3661.4	3095.1	3124.8	3132.1	3289.8	3053.4	2897.6	3033.8	3924.7
50°	4050.3	4071.8	3738.4	3200.8	3343.2	3666.3	3704.1	3303.4	3140.0	3151.7	3982.8
52.5°	4208.8	4217.8	3850.9	3322.8	3564.1	4017.6	3959.1	3727.3	3370.7	3367.2	4092.0
55°	4408.2	4402.8	3992.0	3487.0	3721.8	4226.5	4182.1	4013.3	3622.1	3545.6	4262.0
57.5°	4585.5	4582.3	4179.2	3638.2	3854.5	4333.9	4346.9	4302.3	3793.2	3673.3	4446.1
60°	4672.4	4714.1	4392.2	3803.5	3862.9	4382.3	4387.3	4316.2	3984.4	3837.3	4495.1
62.5°	4638.7	4717.9	4496.7	3952.3	3785.3	4250.0	4270.4	4221.4	3975.7	4009.5	4385.6
65°	4485.0	4576.6	4406.0	4031.5	3737.6	4028.3	4033.4	3909.5	3851.2	4123.6	4129.0
67.5°	4196.9	4282.7	4117.3	3905.1	3411.3	3430.6	3546.1	3556.2	3471.2	4037.5	3768.7
70°	3692.4	3752.9	3649.4	3593.0	2851.3	2738.0	2863.3	2916.9	2955.6	3726.7	3336.1
72.5°	2923.2	3040.1	3056.4	3093.2	2295.6	2106.9	2199.8	2120.2	2372.2	3171.9	2725.7
75°	2162.7	2261.3	2367.3	2572.4	1809.4	1577.4	1565.9	1525.3	1760.7	2550.9	2021.6
77.5°	1528.3	1591.3	1672.7	2054.8	1365.4	1214.8	1221.9	1180.8	1271.5	1927.9	1396.5
80°	1095.5	1128.5	1166.3	1353.7	1007.3	1048.1	1049.2	1010.3	945.4	1309.3	932.1
82.5°	780.6	806.2	849.6	892.9	751.0	859.1	858.3	855.8	749.6	885.0	583.2
85°	434.7	469.0	544.2	699.5	542.3	614.2	540.1	594.9	550.2	589.2	295.3
87.5°	30.5	27.2	121.8	405.3	253.0	184.9	97.0	192.0	246.2	307.8	41.1
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°	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9
2.5°	792.6	802.2	764.8	708.7	724.0	707.4	686.4	653.7	586.4	628.1	628.4
5°	952.0	915.7	886.6	859.1	812.8	742.8	733.5	677.4	645.8	662.4	660.0
7.5°	1001.8	950.3	906.5	808.2	722.4	613.7	581.0	547.8	533.9	574.2	590.3
10°	947.1	893.4	850.4	730.8	672.5	604.7	514.8	468.8	441.5	452.2	458.4
12.5°	991.2	936.4	801.1	734.3	638.2	596.8	518.1	450.5	410.2	420.0	408.3
15°	1033.7	959.9	824.5	691.6	613.7	553.8	490.0	420.3	372.9	356.0	347.0
17.5°	1188.9	1066.4	821.8	667.6	578.3	509.4	432.5	356.3	324.7	307.2	292.3
20°	1378.3	1207.5	836.5	642.8	540.7	453.8	370.2	299.3	277.3	265.8	261.8
22.5°	1603.5	1388.3	920.6	639.3	505.3	413.2	335.8	291.7	266.9	254.4	249.2
25°	1782.5	1575.5	982.8	663.2	503.4	379.7	315.1	324.1	312.7	316.5	286.3
27.5°	1956.2	1626.4	947.9	652.6	452.7	320.3	310.2	329.0	338.8	341.8	340.7
30°	2103.1	1841.6	955.5	592.7	382.4	260.9	237.5	246.8	273.7	316.5	324.7
32.5°	2318.0	1944.5	1020.6	556.5	341.8	233.4	207.3	203.7	210.0	225.5	238.9
35°	2569.4	2181.5	1038.9	546.9	313.8	221.2	202.9	194.8	198.0	209.7	212.5
37.5°	3038.1	2354.2	1106.4	535.2	303.4	213.8	199.7	196.7	203.7	213.3	218.7
40°	3296.6	2664.7	1109.7	525.2	290.1	210.8	201.8	200.5	204.8	217.9	221.2
42.5°	3641.2	2841.8	1160.9	513.4	285.5	214.9	206.2	205.6	209.5	217.1	223.1
45°	3851.2	2960.2	1163.6	506.6	284.4	232.9	211.9	210.0	209.2	213.8	219.3
47.5°	3986.6	3131.0	1196.8	499.0	290.9	237.5	218.7	210.6	207.8	209.7	213.8
50°	4114.9	3267.5	1259.8	497.9	297.7	232.9	230.7	210.3	204.8	204.0	207.0
52.5°	4272.3	3491.9	1337.4	508.3	296.1	226.1	239.7	209.2	199.4	197.5	200.5
55°	4501.4	3732.4	1419.9	499.5	279.2	213.0	231.0	208.4	193.7	190.1	192.8
57.5°	4649.8	3870.3	1512.3	492.2	253.6	203.2	223.1	208.9	194.2	186.3	187.9
60°	4600.5	3796.2	1548.5	447.3	229.3	195.6	204.3	204.6	189.3	182.0	183.3
62.5°	4382.6	3527.9	1514.7	395.0	211.4	184.7	184.9	196.4	175.1	170.0	172.1
65°	4078.1	3194.2	1378.0	360.9	202.9	173.2	168.9	172.4	156.1	152.3	156.6
67.5°	3704.4	2782.9	1174.5	325.0	199.9	157.7	152.5	151.2	140.8	136.5	140.8
70°	3235.6	2330.2	938.9	299.6	188.5	140.8	136.7	135.4	126.7	123.4	127.2
72.5°	2600.7	1819.5	724.5	280.3	176.0	125.3	121.8	120.1	112.8	108.1	112.8
75°	1849.7	1390.5	538.2	250.6	158.3	109.5	105.4	103.2	96.4	92.1	96.2
77.5°	1314.5	1043.8	375.9	207.3	130.5	92.6	90.2	86.6	80.6	75.4	79.5
80°	971.9	745.8	242.4	159.9	99.7	74.1	72.7	70.3	64.6	58.3	61.3
82.5°	639.8	537.7	138.9	108.4	72.5	53.4	54.5	52.8	47.4	40.9	42.5
85°	286.5	318.4	73.8	59.7	47.1	32.1	35.1	34.0	30.0	23.7	24.2
87.5°	27.5	53.7	22.6	21.8	17.4	10.1	12.5	10.6	9.0	5.7	4.4
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°	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9
2.5°	637.9	599.5	561.1	584.5	585.1	591.3	592.2	569.0	587.5	601.7	616.4
5°	648.0	622.9	624.3	601.7	589.4	605.2	602.0	595.7	606.9	622.4	641.2
7.5°	575.0	558.7	555.9	534.1	481.3	469.6	479.4	483.5	498.5	522.4	542.6
10°	448.9	481.3	444.8	436.4	422.5	395.2	379.4	377.5	409.4	428.7	445.6
12.5°	404.5	396.3	392.0	368.8	368.8	339.9	330.7	339.1	388.1	402.0	423.8
15°	344.6	338.6	318.4	307.0	301.5	289.8	299.6	307.8	353.6	354.6	377.5
17.5°	286.0	282.5	263.4	261.2	255.8	250.6	259.6	279.2	304.0	299.6	310.2
20°	255.8	243.5	226.1	232.3	226.6	222.5	218.7	246.5	263.9	269.7	275.9
22.5°	248.1	225.8	215.5	209.7	210.0	203.5	204.3	227.4	253.9	257.4	253.6
25°	283.5	243.8	210.3	193.7	187.4	185.2	191.5	211.9	243.8	251.4	254.4
27.5°	331.8	264.8	216.5	188.2	175.7	176.8	185.8	199.9	237.5	251.1	254.7
30°	318.4	249.0	216.8	184.1	168.6	174.3	177.6	191.2	232.6	253.0	270.7
32.5°	245.7	223.9	218.2	187.4	181.1	172.1	176.8	189.8	218.2	231.0	231.8
35°	208.1	191.5	187.7	180.0	171.3	167.5	172.7	184.1	202.7	210.6	209.5
37.5°	206.5	188.2	173.2	170.0	166.4	165.3	168.3	179.0	197.7	211.6	208.6
40°	209.2	186.6	171.3	165.6	167.0	162.1	165.1	178.1	198.6	211.6	208.9
42.5°	205.9	184.7	168.9	164.5	165.9	159.1	162.6	176.2	196.4	211.9	206.7
45°	199.4	180.3	167.5	160.2	166.4	156.3	160.7	171.3	189.8	206.7	200.7
47.5°	192.8	175.1	161.8	157.2	163.4	153.6	155.5	164.8	183.3	199.9	194.8
50°	185.8	168.6	157.2	155.8	160.2	153.1	150.1	157.7	175.4	192.0	187.7
52.5°	178.1	163.2	153.9	153.4	157.4	149.5	145.2	151.2	167.0	183.6	180.0
55°	170.8	157.2	149.8	151.2	155.8	146.5	141.1	144.9	158.0	174.3	169.4
57.5°	163.4	150.4	144.4	148.2	151.7	142.7	135.9	138.1	148.7	164.8	159.1
60°	156.9	144.4	138.4	143.0	146.3	137.0	129.1	130.5	140.0	154.4	149.3
62.5°	148.4	137.8	129.9	135.9	138.4	129.4	120.9	122.6	130.2	143.8	140.0
65°	136.5	129.7	122.3	126.4	129.7	120.4	112.5	114.4	120.1	132.9	130.2
67.5°	126.1	119.6	114.7	117.9	118.5	111.4	104.3	105.4	110.0	122.0	119.0
70°	114.7	108.4	104.6	107.0	106.8	100.8	95.3	95.6	99.4	110.3	106.2
72.5°	102.1	96.2	94.2	95.6	94.5	89.1	83.9	85.8	88.3	96.4	93.2
75°	88.8	83.3	82.3	83.6	82.0	76.8	72.2	74.1	76.3	83.1	79.0
77.5°	74.9	70.0	70.3	70.5	68.4	64.8	60.2	62.1	63.5	68.1	64.0
80°	59.7	55.8	56.9	56.9	54.5	52.0	47.7	48.2	49.0	50.7	47.7
82.5°	43.6	43.6	43.6	43.9	38.7	39.5	35.7	35.4	34.6	34.3	32.4
85°	25.9	27.0	27.5	28.3	21.0	24.5	21.2	20.4	18.8	17.2	16.6
87.5°	5.7	7.4	7.4	7.1	0.0	2.7	1.4	2.2	0.5	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°	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9
2.5°	599.5	583.2	613.7	640.9	636.6	652.4	615.6	670.1	727.8	727.8
5°	636.3	622.4	630.3	646.1	658.1	713.1	758.9	804.3	898.3	899.4
7.5°	536.6	566.6	573.6	569.0	620.5	691.3	766.8	896.4	975.9	982.2
10°	501.7	515.3	536.9	548.8	569.8	639.6	733.3	887.1	971.6	987.4
12.5°	454.6	505.0	537.7	604.7	621.3	635.2	784.2	917.4	975.7	971.9
15°	403.1	441.3	488.4	562.5	604.7	710.9	814.4	1014.3	1047.3	1076.2
17.5°	321.4	349.5	412.1	496.6	601.1	698.9	889.1	1134.2	1195.8	1225.7
20°	264.5	264.8	327.4	439.4	553.2	648.8	917.4	1233.6	1311.8	1327.0
22.5°	250.0	237.5	270.5	361.5	500.4	678.5	974.6	1393.5	1556.7	1595.1
25°	242.1	226.9	247.6	319.0	462.5	694.0	1089.8	1613.3	1822.8	1837.8
27.5°	245.4	252.5	259.0	284.4	414.6	664.9	1063.1	1711.6	1936.1	1964.4
30°	267.5	278.9	263.9	272.7	375.1	622.7	1110.8	1871.3	2078.8	2126.5
32.5°	222.5	218.2	216.8	235.9	335.6	584.5	1210.7	2096.0	2233.5	2293.5
35°	200.7	193.9	196.7	218.5	316.2	579.1	1266.8	2282.0	2477.9	2514.6
37.5°	199.9	192.0	195.6	211.9	323.0	588.9	1356.7	2580.5	2908.8	2987.5
40°	198.0	193.7	195.6	207.8	316.0	594.3	1408.5	2831.4	3208.9	3288.7
42.5°	197.7	195.6	197.5	211.1	308.6	596.8	1480.1	3058.0	3525.2	3588.1
45°	196.9	199.1	199.1	213.8	305.3	613.1	1522.3	3169.2	3733.8	3811.4
47.5°	193.1	199.7	210.3	213.0	292.0	605.5	1582.0	3337.8	3844.7	3917.7
50°	188.2	198.8	224.4	207.6	289.8	587.0	1651.7	3471.5	3986.8	4050.3
52.5°	181.7	197.5	221.2	196.9	286.0	583.7	1749.5	3645.3	4152.7	4208.8
55°	172.4	192.6	211.1	186.3	276.7	573.4	1899.0	3860.7	4369.8	4408.2
57.5°	164.0	185.2	196.4	180.3	254.7	575.5	2003.1	4036.4	4552.0	4585.5
60°	156.3	184.4	175.4	174.1	232.1	546.4	2036.9	4034.5	4619.9	4672.4
62.5°	148.2	174.1	160.7	165.6	212.2	516.4	1965.2	3861.6	4546.6	4638.7
65°	137.6	149.3	148.4	159.6	212.7	467.7	1801.0	3556.5	4363.8	4485.0
67.5°	125.0	132.1	136.7	149.8	219.5	429.8	1536.8	3189.6	4052.8	4196.9
70°	112.2	119.3	124.5	137.0	225.8	412.4	1223.3	2674.2	3546.1	3692.4
72.5°	99.1	106.5	110.6	121.5	217.4	375.1	905.4	2080.7	2846.4	2923.2
75°	85.5	92.6	95.9	106.0	188.8	310.2	625.1	1576.0	2084.8	2162.7
77.5°	71.6	79.3	80.4	88.5	144.1	237.2	400.7	1208.8	1476.3	1528.3
80°	57.2	64.8	64.8	69.2	101.3	163.2	240.0	911.9	1075.1	1095.5
82.5°	41.1	49.3	48.8	49.0	70.0	101.1	138.9	683.4	776.8	780.6
85°	24.2	30.0	29.7	27.2	41.4	54.5	75.2	424.4	433.6	434.7
87.5°	4.6	7.1	6.3	2.7	11.4	16.1	21.8	78.7	31.3	30.5
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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