

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: P367270

Luminaire Tested: **MSA-SA2B-727-U-SLL**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367270
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-24)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-727-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: 7136 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

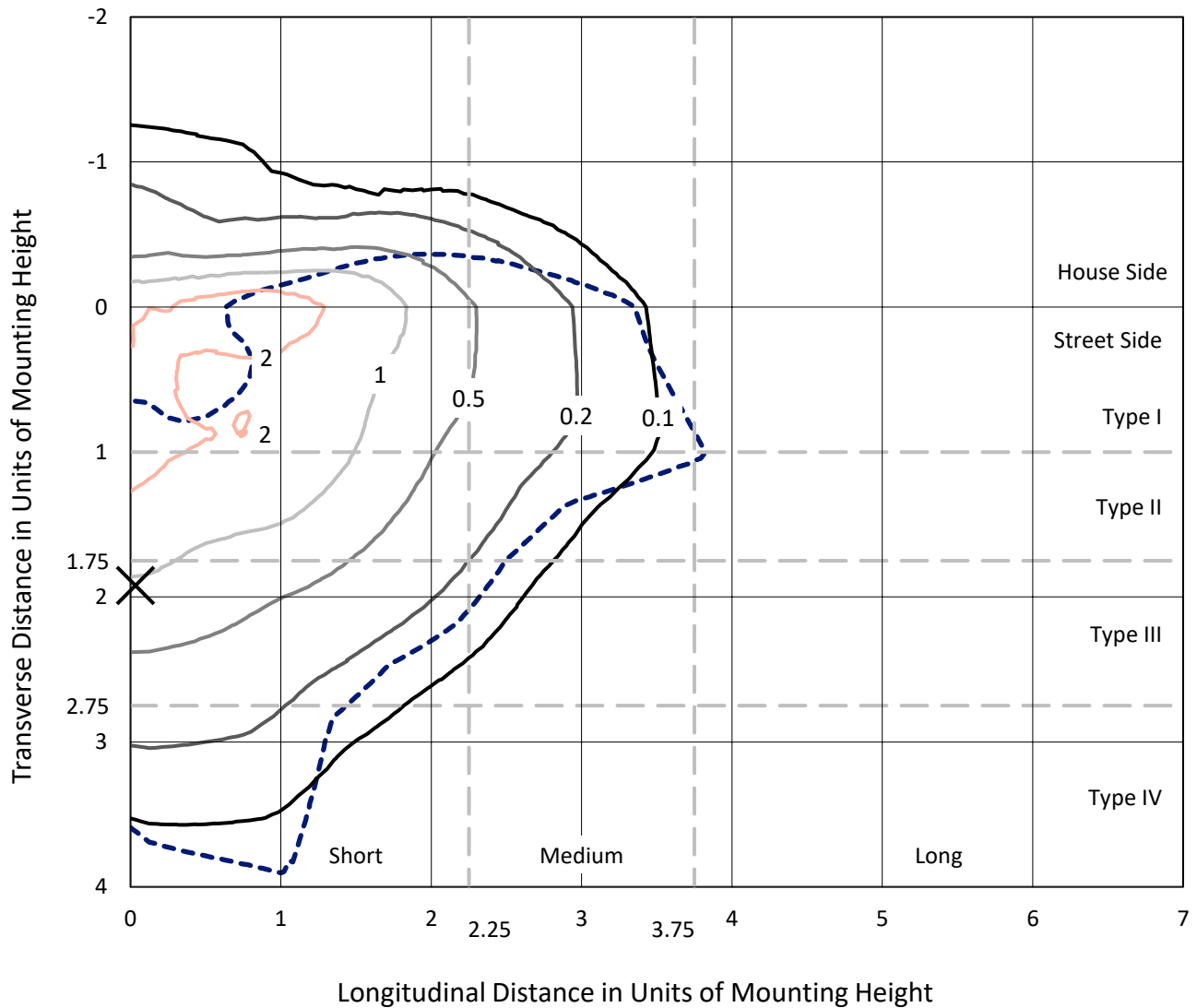
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

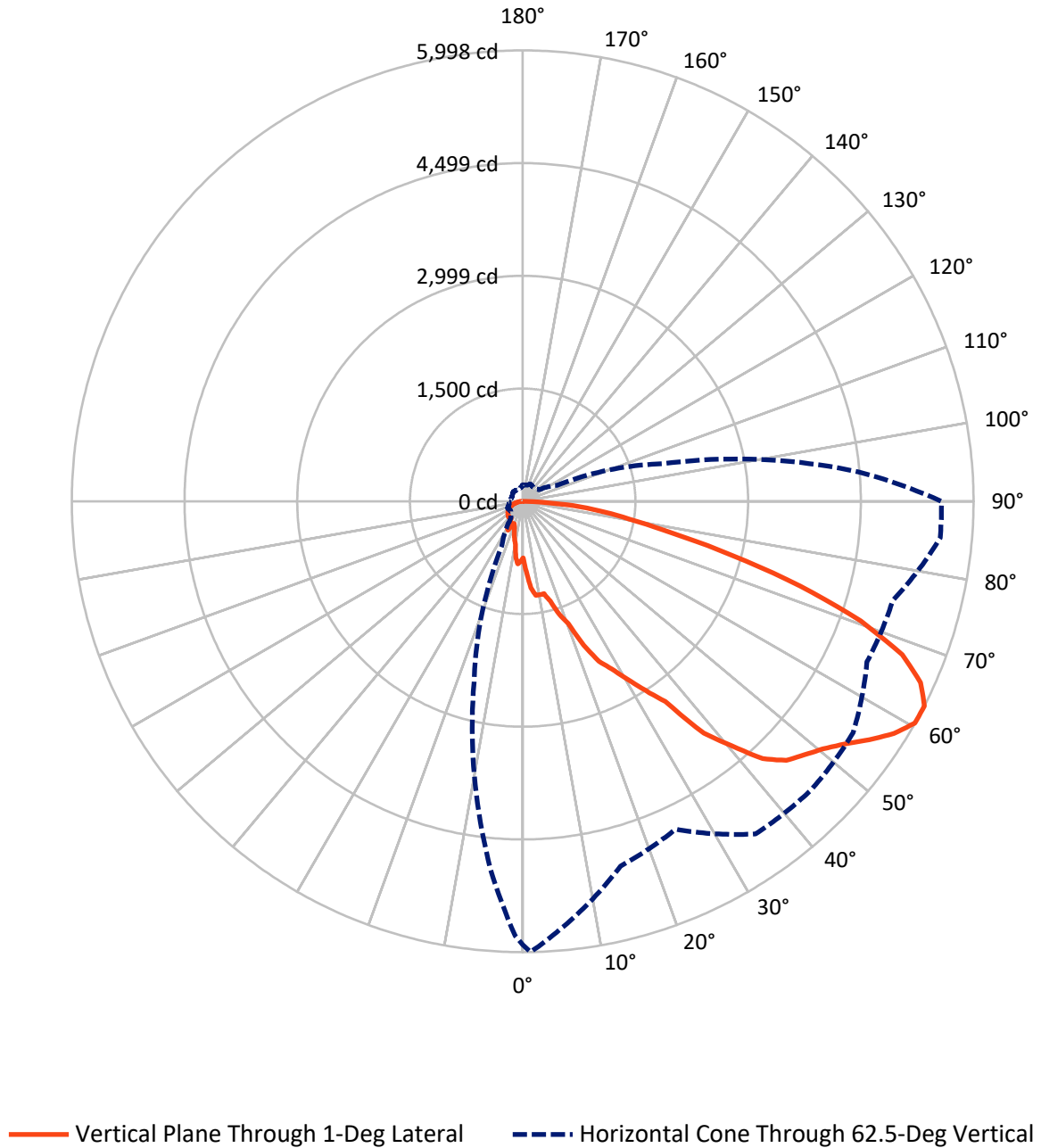
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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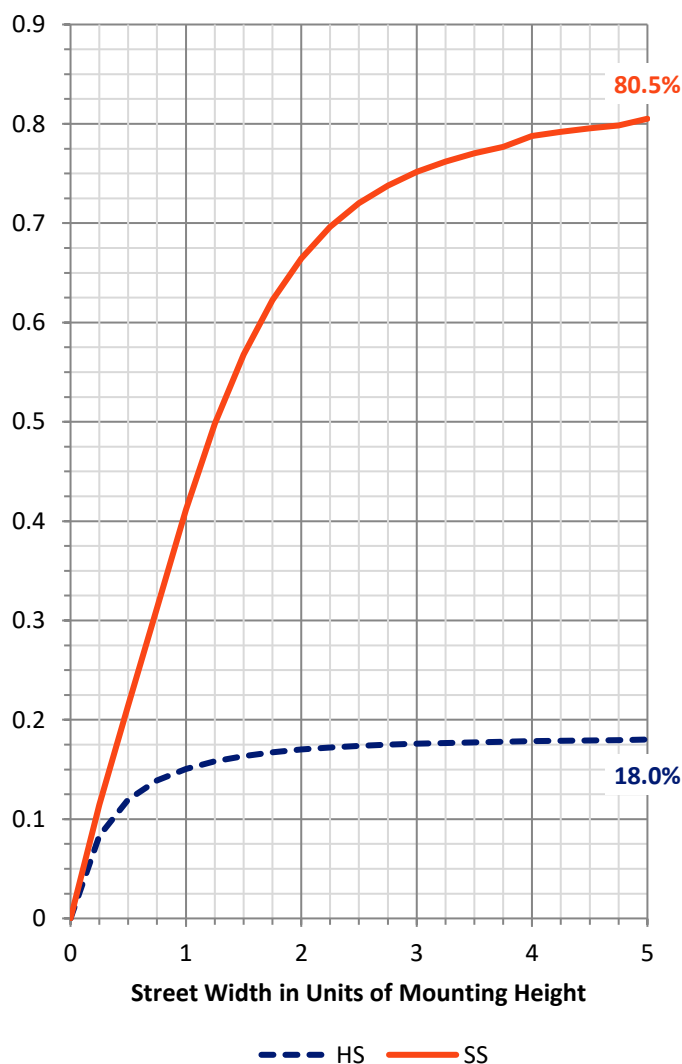
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1299.4	0.0	1299.4
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	5836.6	0.0	5836.6
	% Fixture	81.8	0.0	81.8
Total	Lumens	7136.0	0.0	7136.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	1.2
10°-20°	250.7	3.5
20°-30°	442.6	6.2
30°-40°	689.3	9.7
40°-50°	1135.0	15.9
50°-60°	1620.0	22.7
60°-70°	1717.9	24.1
70°-80°	948.9	13.3
80°-90°	245.4	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°	7136.0	100.0
0°-180°	7136.0	100.0

Coefficient of Utilization



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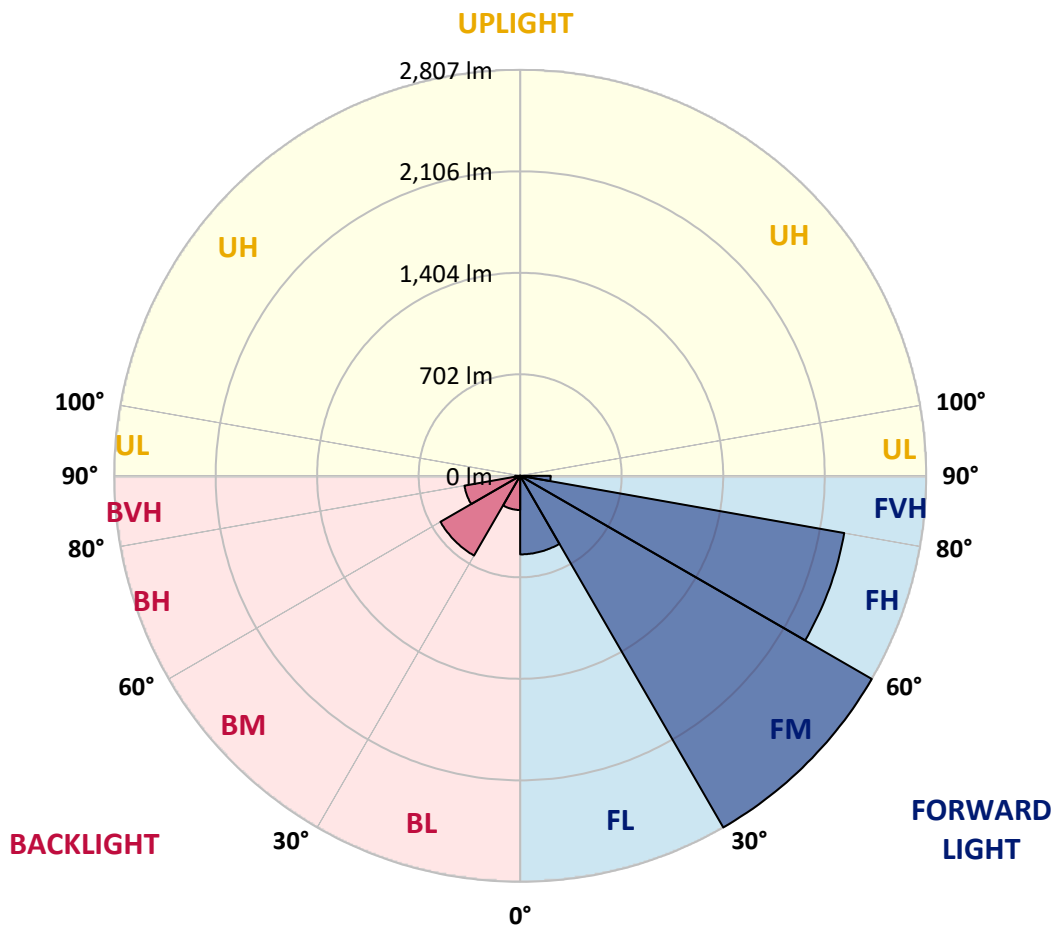
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	543.2	7.6			
FM (30°-60°)	2807.4	39.3			
FH (60°-80°)	2275.2	31.9			G2/5000
FVH (80°-90°)	210.8	3.0			G2/225
BL (0°-30°)	236.3	3.3	B1/500		
BM (30°-60°)	637.0	8.9	B1/1000		
BH (60°-80°)	391.5	5.5	B1/500		G1/500
BVH (80°-90°)	34.6	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°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	925.3	933.2	917.0	898.6	822.8	895.8	874.0	914.5	901.4	813.4	974.5
5°	1143.4	1158.0	1142.1	1197.1	1200.6	1214.8	1083.5	1165.3	1136.9	1129.6	1211.0
7.5°	1248.7	1263.6	1304.1	1402.1	1478.7	1409.4	1332.9	1315.9	1293.7	1235.9	1285.1
10°	1255.3	1263.6	1318.0	1525.7	1562.8	1612.0	1562.5	1445.8	1397.6	1271.9	1234.5
12.5°	1235.6	1261.5	1331.8	1585.0	1695.1	1748.8	1760.9	1631.0	1512.9	1369.6	1350.5
15°	1368.2	1377.5	1478.3	1627.2	1703.0	1748.4	1787.9	1707.9	1670.8	1557.3	1404.5
17.5°	1558.3	1584.3	1666.7	1721.7	1773.0	1781.7	1749.1	1717.9	1659.1	1810.7	1648.3
20°	1687.1	1737.3	1838.4	1848.8	1741.1	1760.2	1755.7	1757.8	1724.2	2004.7	1915.3
22.5°	2027.9	2082.2	2096.1	2035.8	1832.9	1746.0	1763.3	1813.5	1945.8	2186.1	2287.2
25°	2336.4	2357.5	2483.9	2328.8	2005.4	1815.9	1787.5	1917.4	2133.1	2491.5	2563.6
27.5°	2497.4	2524.8	2608.9	2271.3	2026.8	1725.9	1659.4	1857.1	2077.0	2347.8	2664.0
30°	2703.5	2747.1	2861.7	2328.8	2091.6	1784.8	1637.6	1826.7	2069.8	2442.0	2876.6
32.5°	2915.7	3000.6	3085.8	2531.4	2082.6	1874.8	1777.2	1792.4	2135.6	2639.4	3096.9
35°	3196.9	3271.7	3345.1	2648.4	2264.0	1949.9	1853.0	2014.4	2304.5	2868.3	3404.0
37.5°	3798.1	3916.5	3722.9	2981.5	2461.4	2288.6	2113.7	2209.3	2483.2	3059.1	3905.8
40°	4181.1	4270.1	4083.1	3208.4	2809.1	2516.8	2488.1	2496.0	2729.4	3222.6	4243.4
42.5°	4561.7	4682.2	4384.7	3519.7	3229.5	2988.1	2839.9	2829.9	3005.1	3516.2	4627.4
45°	4845.6	4916.6	4488.2	3782.2	3680.3	3501.3	3390.2	3213.9	3367.3	3719.5	4865.0
47.5°	4980.7	5038.5	4654.8	3934.9	3972.6	3982.0	4182.5	3881.9	3683.8	3857.0	4989.7
50°	5149.3	5176.7	4752.8	4069.2	4250.3	4661.0	4709.2	4199.8	3992.0	4006.9	5063.4
52.5°	5350.8	5362.3	4895.8	4224.4	4531.2	5107.7	5033.3	4738.6	4285.3	4280.8	5202.3
55°	5604.3	5597.4	5075.2	4433.2	4731.7	5373.4	5316.9	5102.2	4604.9	4507.6	5418.4
57.5°	5829.8	5825.6	5313.1	4625.4	4900.3	5509.8	5526.4	5469.6	4822.4	4670.0	5652.5
60°	5940.2	5993.2	5583.9	4835.6	4911.1	5571.4	5577.7	5487.3	5065.5	4878.5	5714.8
62.5°	5897.3	5998.1	5716.9	5024.6	4812.4	5403.1	5429.1	5366.8	5054.4	5097.4	5575.6
65°	5702.0	5818.3	5601.6	5125.4	4751.8	5121.3	5127.8	4970.3	4896.2	5242.5	5249.4
67.5°	5335.6	5444.7	5234.5	4964.7	4336.9	4361.5	4508.3	4521.1	4413.1	5133.0	4791.2
70°	4694.3	4771.2	4639.6	4567.9	3624.9	3480.9	3640.2	3708.4	3757.6	4737.9	4241.3
72.5°	3716.4	3864.9	3885.7	3932.4	2918.5	2678.5	2796.6	2695.5	3015.8	4032.5	3465.3
75°	2749.5	2874.9	3009.6	3270.3	2300.4	2005.4	1990.8	1939.2	2238.4	3243.0	2570.2
77.5°	1943.0	2023.0	2126.6	2612.4	1735.9	1544.4	1553.4	1501.2	1616.5	2451.0	1775.4
80°	1392.8	1434.7	1482.8	1721.1	1280.6	1332.5	1333.9	1284.4	1202.0	1664.6	1185.0
82.5°	992.5	1025.0	1080.1	1135.1	954.7	1092.2	1091.2	1088.0	953.0	1125.1	741.4
85°	552.7	596.3	691.9	889.3	689.5	780.9	686.7	756.3	699.5	749.0	375.4
87.5°	38.8	34.6	154.8	515.3	321.7	235.1	123.3	244.1	313.0	391.3	52.3
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°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	1007.7	1019.8	972.4	901.0	920.4	899.3	872.6	831.1	745.6	798.5	798.9
5°	1210.3	1164.2	1127.2	1092.2	1033.3	944.3	932.6	861.2	821.0	842.2	839.1
7.5°	1273.6	1208.2	1152.4	1027.4	918.4	780.2	738.6	696.4	678.7	730.0	750.4
10°	1204.0	1135.8	1081.1	929.1	855.0	768.8	654.5	596.0	561.3	574.8	582.8
12.5°	1260.1	1190.5	1018.4	933.6	811.4	758.7	658.6	572.8	521.5	534.0	519.1
15°	1314.2	1220.3	1048.2	879.2	780.2	704.0	623.0	534.3	474.1	452.6	441.2
17.5°	1511.5	1355.7	1044.8	848.8	735.2	647.6	549.9	452.9	412.8	390.6	371.6
20°	1752.2	1535.1	1063.5	817.2	687.4	576.9	470.6	380.6	352.5	338.0	332.8
22.5°	2038.6	1765.0	1170.5	812.7	642.4	525.3	427.0	370.9	339.4	323.4	316.9
25°	2266.1	2002.9	1249.4	843.2	639.9	482.7	400.7	412.1	397.5	402.4	363.9
27.5°	2487.0	2067.7	1205.1	829.7	575.5	407.2	394.4	418.3	430.8	434.6	433.2
30°	2673.7	2341.3	1214.8	753.5	486.2	331.7	302.0	313.7	348.0	402.4	412.8
32.5°	2946.9	2472.2	1297.5	707.5	434.6	296.8	263.5	259.0	267.0	286.7	303.7
35°	3266.5	2773.4	1320.7	695.3	398.9	281.2	258.0	247.6	251.8	266.6	270.1
37.5°	3862.5	2993.0	1406.6	680.5	385.8	271.8	253.8	250.0	259.0	271.1	278.1
40°	4191.1	3387.7	1410.8	667.6	368.8	268.0	256.6	254.9	260.4	277.0	281.2
42.5°	4629.2	3612.8	1475.9	652.8	362.9	273.2	262.1	261.4	266.3	276.0	283.6
45°	4896.2	3763.5	1479.3	644.1	361.5	296.1	269.4	267.0	265.9	271.8	278.8
47.5°	5068.3	3980.6	1521.6	634.4	369.8	302.0	278.1	267.7	264.2	266.6	271.8
50°	5231.4	4154.1	1601.6	633.0	378.5	296.1	293.3	267.3	260.4	259.4	263.2
52.5°	5431.5	4439.4	1700.3	646.2	376.4	287.4	304.7	265.9	253.5	251.1	254.9
55°	5722.8	4745.2	1805.2	635.1	354.9	270.8	293.7	264.9	246.2	241.7	245.2
57.5°	5911.5	4920.4	1922.6	625.7	322.4	258.3	283.6	265.6	246.9	236.9	238.9
60°	5848.8	4826.2	1968.6	568.6	291.6	248.6	259.7	260.1	240.7	231.3	233.1
62.5°	5571.8	4485.1	1925.7	502.1	268.7	234.8	235.1	249.7	222.7	216.1	218.9
65°	5184.6	4060.9	1751.9	458.8	258.0	220.2	214.7	219.2	198.4	193.6	199.1
67.5°	4709.5	3538.0	1493.2	413.1	254.2	200.5	193.9	192.2	179.0	173.5	179.0
70°	4113.6	2962.5	1193.7	380.9	239.6	179.0	173.8	172.1	161.0	156.9	161.7
72.5°	3306.4	2313.2	921.1	356.3	223.7	159.3	154.8	152.7	143.4	137.5	143.4
75°	2351.6	1767.8	684.3	318.6	201.2	139.2	134.0	131.2	122.6	117.0	122.2
77.5°	1671.2	1327.0	477.9	263.5	165.9	117.7	114.6	110.1	102.5	95.9	101.1
80°	1235.6	948.1	308.2	203.3	126.7	94.2	92.5	89.3	82.1	74.1	77.9
82.5°	813.4	683.6	176.6	137.8	92.1	67.9	69.3	67.2	60.3	51.9	54.0
85°	364.3	404.8	93.8	75.8	59.9	40.9	44.7	43.3	38.1	30.1	30.8
87.5°	35.0	68.2	28.7	27.7	22.2	12.8	15.9	13.5	11.4	7.3	5.5
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	811.0	762.2	713.4	743.1	743.8	751.8	752.8	723.4	746.9	765.0	783.6
5°	823.8	792.0	793.7	765.0	749.4	769.5	765.3	757.3	771.5	791.3	815.2
7.5°	731.0	710.2	706.8	679.1	611.9	597.0	609.5	614.7	633.7	664.2	689.8
10°	570.7	611.9	565.5	554.8	537.1	502.5	482.4	480.0	520.5	545.1	566.5
12.5°	514.2	503.8	498.3	468.9	468.9	432.2	420.4	431.1	493.5	511.1	538.8
15°	438.1	430.4	404.8	390.3	383.3	368.5	380.9	391.3	449.5	450.9	480.0
17.5°	363.6	359.1	334.9	332.1	325.2	318.6	330.0	354.9	386.5	380.9	394.4
20°	325.2	309.6	287.4	295.4	288.1	282.9	278.1	313.4	335.6	342.8	350.8
22.5°	315.5	287.1	273.9	266.6	267.0	258.7	259.7	289.2	322.7	327.2	322.4
25°	360.5	309.9	267.3	246.2	238.2	235.5	243.4	269.4	309.9	319.6	323.4
27.5°	421.8	336.6	275.3	239.3	223.4	224.7	236.2	254.2	302.0	319.3	323.8
30°	404.8	316.5	275.6	234.1	214.4	221.6	225.8	243.1	295.7	321.7	344.2
32.5°	312.4	284.6	277.4	238.2	230.3	218.9	224.7	241.4	277.4	293.7	294.7
35°	264.6	243.4	238.6	228.9	217.8	213.0	219.5	234.1	257.6	267.7	266.3
37.5°	262.5	239.3	220.2	216.1	211.6	210.2	214.0	227.5	251.4	269.1	265.3
40°	265.9	237.2	217.8	210.5	212.3	206.0	209.9	226.5	252.4	269.1	265.6
42.5°	261.8	234.8	214.7	209.2	210.9	202.2	206.7	224.0	249.7	269.4	262.8
45°	253.5	229.2	213.0	203.6	211.6	198.8	204.3	217.8	241.4	262.8	255.2
47.5°	245.2	222.7	205.7	199.8	207.8	195.3	197.7	209.5	233.1	254.2	247.6
50°	236.2	214.4	199.8	198.1	203.6	194.6	190.8	200.5	223.0	244.1	238.6
52.5°	226.5	207.4	195.7	195.0	200.2	190.1	184.6	192.2	212.3	233.4	228.9
55°	217.1	199.8	190.5	192.2	198.1	186.3	179.4	184.2	200.8	221.6	215.4
57.5°	207.8	191.2	183.5	188.4	192.9	181.5	172.8	175.6	189.1	209.5	202.2
60°	199.5	183.5	175.9	181.8	186.0	174.2	164.1	165.9	178.0	196.3	189.8
62.5°	188.7	175.2	165.2	172.8	175.9	164.5	153.8	155.8	165.5	182.8	178.0
65°	173.5	164.8	155.5	160.7	164.8	153.1	143.0	145.4	152.7	169.0	165.5
67.5°	160.3	152.0	145.8	149.9	150.6	141.6	132.6	134.0	139.9	155.1	151.3
70°	145.8	137.8	133.0	136.1	135.7	128.1	121.2	121.5	126.4	140.2	135.1
72.5°	129.9	122.2	119.8	121.5	120.2	113.2	106.7	109.1	112.2	122.6	118.4
75°	112.9	106.0	104.6	106.3	104.2	97.7	91.8	94.2	97.0	105.6	100.4
77.5°	95.2	89.0	89.3	89.7	86.9	82.4	76.5	79.0	80.7	86.6	81.4
80°	75.8	71.0	72.4	72.4	69.3	66.1	60.6	61.3	62.3	64.4	60.6
82.5°	55.4	55.4	55.4	55.8	49.2	50.2	45.4	45.0	44.0	43.6	41.2
85°	32.9	34.3	35.0	36.0	26.7	31.2	27.0	26.0	23.9	21.8	21.1
87.5°	7.3	9.3	9.3	9.0	0.0	3.5	1.7	2.8	0.7	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°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	762.2	741.4	780.2	814.8	809.3	829.4	782.6	851.9	925.3	925.3
5°	808.9	791.3	801.3	821.4	836.6	906.6	964.8	1022.6	1142.1	1143.4
7.5°	682.2	720.3	729.3	723.4	788.8	878.9	974.8	1139.6	1240.8	1248.7
10°	637.9	655.2	682.5	697.8	724.4	813.1	932.2	1127.9	1235.2	1255.3
12.5°	578.0	642.0	683.6	768.8	789.9	807.5	997.0	1166.3	1240.4	1235.6
15°	512.5	561.0	620.9	715.1	768.8	903.8	1035.4	1289.6	1331.5	1368.2
17.5°	408.6	444.3	523.9	631.3	764.3	888.6	1130.3	1441.9	1520.2	1558.3
20°	336.2	336.6	416.2	558.6	703.3	824.9	1166.3	1568.3	1667.7	1687.1
22.5°	317.9	302.0	343.9	459.5	636.1	862.6	1239.0	1771.6	1979.0	2027.9
25°	307.9	288.5	314.8	405.5	588.0	882.3	1385.5	2051.1	2317.4	2336.4
27.5°	312.0	321.0	329.3	361.5	527.1	845.3	1351.6	2176.1	2461.4	2497.4
30°	340.1	354.6	335.6	346.6	476.8	791.6	1412.2	2379.0	2642.9	2703.5
32.5°	282.9	277.4	275.6	299.9	426.6	743.1	1539.3	2664.7	2839.6	2915.7
35°	255.2	246.6	250.0	277.7	402.0	736.2	1610.6	2901.2	3150.2	3196.9
37.5°	254.2	244.1	248.6	269.4	410.7	748.7	1724.9	3280.7	3698.0	3798.1
40°	251.8	246.2	248.6	264.2	401.7	755.6	1790.7	3599.7	4079.6	4181.1
42.5°	251.4	248.6	251.1	268.4	392.3	758.7	1881.7	3887.8	4481.7	4561.7
45°	250.4	253.1	253.1	271.8	388.2	779.5	1935.4	4029.1	4746.9	4845.6
47.5°	245.5	253.8	267.3	270.8	371.2	769.8	2011.2	4243.4	4887.9	4980.7
50°	239.3	252.8	285.3	263.9	368.5	746.3	2099.9	4413.4	5068.6	5149.3
52.5°	231.0	251.1	281.2	250.4	363.6	742.1	2224.2	4634.4	5279.5	5350.8
55°	219.2	244.8	268.4	236.9	351.8	728.9	2414.3	4908.3	5555.5	5604.3
57.5°	208.5	235.5	249.7	229.2	323.8	731.7	2546.6	5131.6	5787.2	5829.8
60°	198.8	234.4	223.0	221.3	295.0	694.7	2589.5	5129.2	5873.4	5940.2
62.5°	188.4	221.3	204.3	210.5	269.8	656.6	2498.5	4909.3	5780.2	5897.3
65°	174.9	189.8	188.7	202.9	270.5	594.6	2289.7	4521.5	5547.9	5702.0
67.5°	158.9	167.9	173.8	190.5	279.1	546.4	1953.8	4055.0	5152.4	5335.6
70°	142.7	151.7	158.3	174.2	287.1	524.3	1555.2	3399.9	4508.3	4694.3
72.5°	126.0	135.4	140.6	154.4	276.3	476.8	1151.1	2645.3	3618.7	3716.4
75°	108.7	117.7	121.9	134.7	240.0	394.4	794.7	2003.6	2650.5	2749.5
77.5°	91.1	100.8	102.2	112.5	183.2	301.6	509.4	1536.8	1876.9	1943.0
80°	72.7	82.4	82.4	88.0	128.8	207.4	305.1	1159.4	1366.8	1392.8
82.5°	52.3	62.7	62.0	62.3	89.0	128.5	176.6	868.8	987.6	992.5
85°	30.8	38.1	37.7	34.6	52.6	69.3	95.6	539.5	551.3	552.7
87.5°	5.9	9.0	8.0	3.5	14.5	20.4	27.7	100.1	39.8	38.8
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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