

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: P596970

Luminaire Tested: **MSA-SA2C-835-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596970
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-SA2C-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: 8712 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

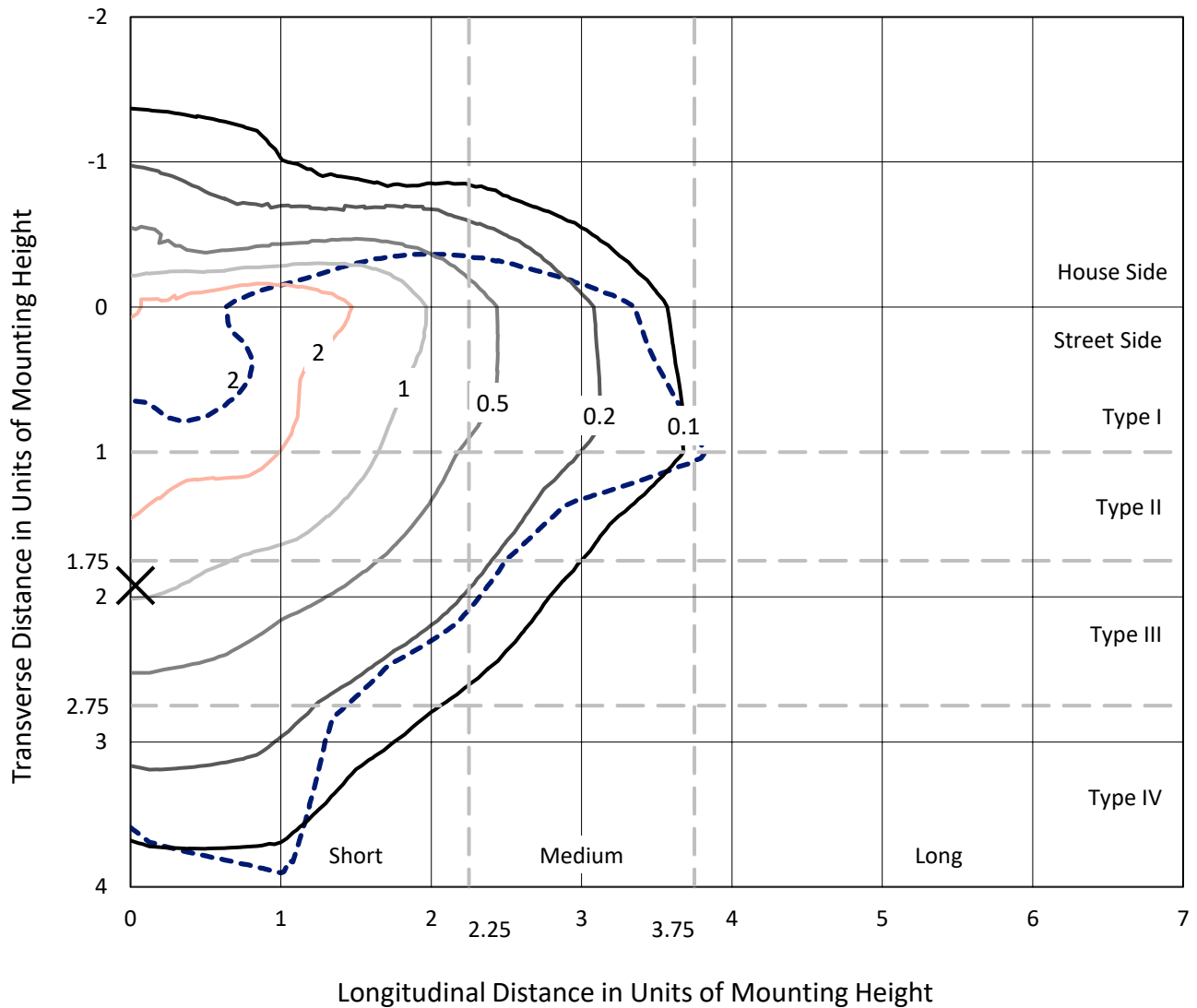
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

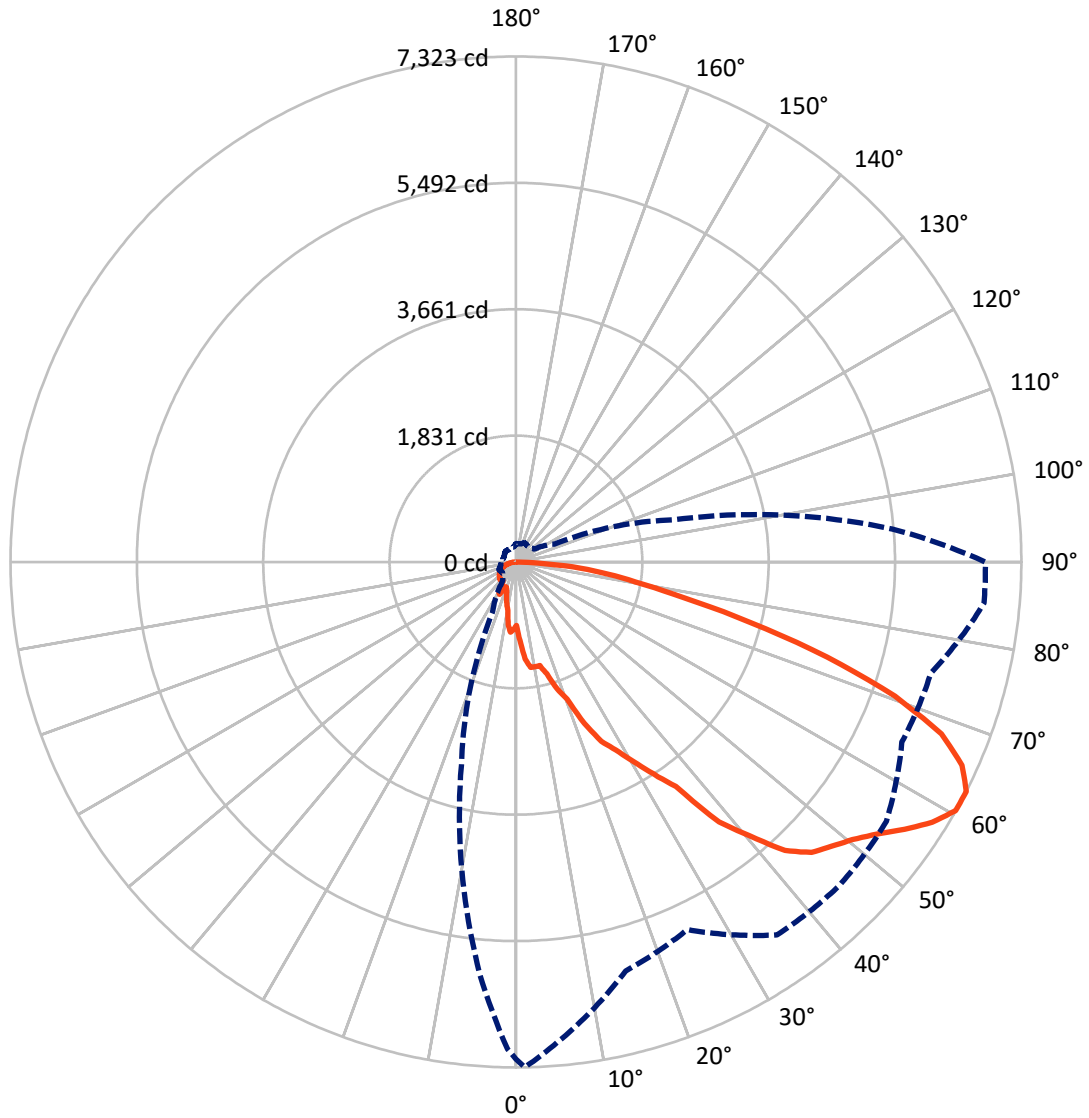
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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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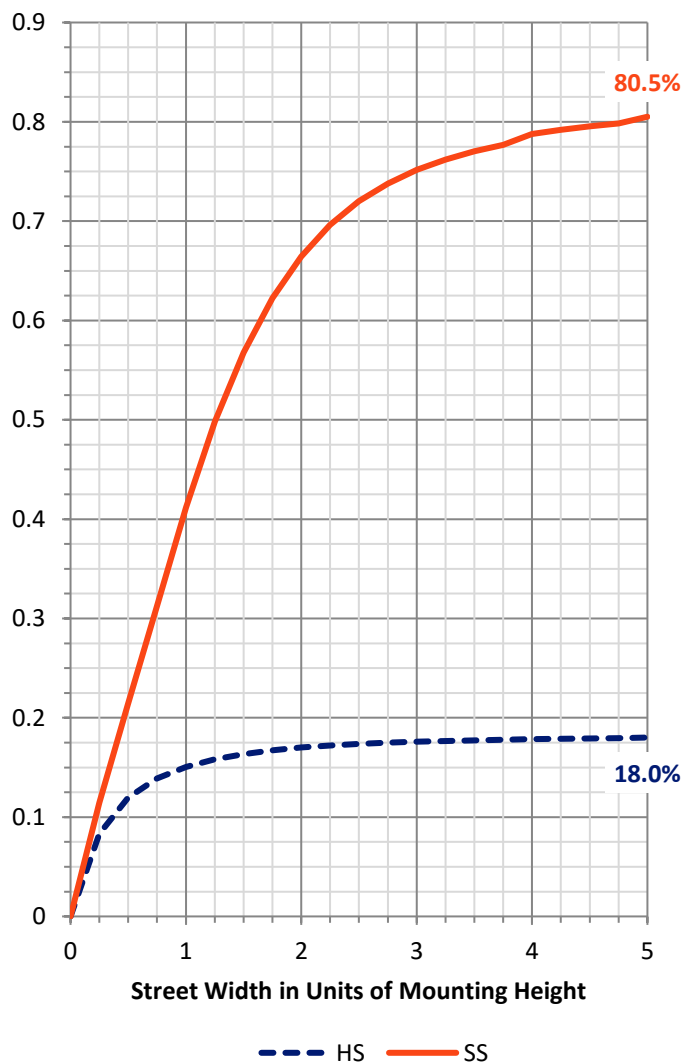
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1586.4	0.0	1586.4
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	7125.6	0.0	7125.6
	% Fixture	81.8	0.0	81.8
Total	Lumens	8712.0	0.0	8712.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	1.2
10°-20°	306.0	3.5
20°-30°	540.3	6.2
30°-40°	841.6	9.7
40°-50°	1385.7	15.9
50°-60°	1977.8	22.7
60°-70°	2097.2	24.1
70°-80°	1158.4	13.3
80°-90°	299.6	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°	8712.0	100.0
0°-180°	8712.0	100.0

Coefficient of Utilization



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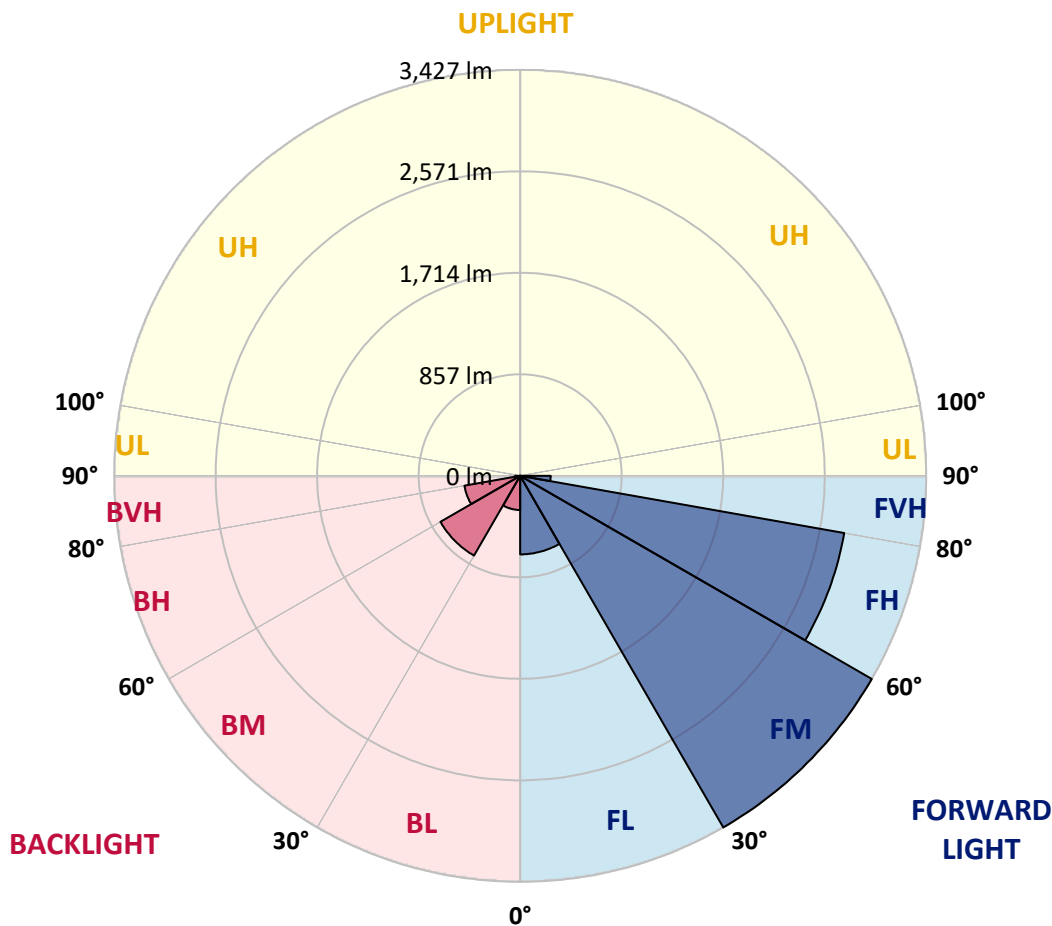
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	663.1	7.6			
FM (30°-60°)	3427.4	39.3			
FH (60°-80°)	2777.7	31.9			G2/5000
FVH (80°-90°)	257.4	3.0			G3/500
BL (0°-30°)	288.5	3.3	B1/500		
BM (30°-60°)	777.7	8.9	B1/1000		
BH (60°-80°)	477.9	5.5	B1/500		G1/500
BVH (80°-90°)	42.3	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7
2.5°	1129.6	1139.4	1119.5	1097.1	1004.5	1093.7	1067.1	1116.5	1100.5	993.1	1189.7
5°	1396.0	1413.7	1394.3	1461.5	1465.7	1483.1	1322.8	1422.6	1387.9	1379.1	1478.4
7.5°	1524.5	1542.7	1592.1	1711.8	1805.2	1720.7	1627.2	1606.5	1579.5	1508.9	1568.9
10°	1532.5	1542.7	1609.0	1862.7	1907.9	1968.0	1907.5	1765.1	1706.3	1552.8	1507.2
12.5°	1508.4	1540.1	1626.0	1935.0	2069.4	2135.0	2149.8	1991.2	1847.1	1672.0	1648.8
15°	1670.4	1681.8	1804.8	1986.6	2079.2	2134.5	2182.7	2085.1	2039.8	1901.2	1714.7
17.5°	1902.4	1934.2	2034.8	2102.0	2164.6	2175.1	2135.4	2097.3	2025.5	2210.6	2012.4
20°	2059.7	2121.0	2244.5	2257.2	2125.7	2148.9	2143.4	2146.0	2105.0	2447.4	2338.3
22.5°	2475.7	2542.1	2559.0	2485.4	2237.7	2131.6	2152.7	2214.0	2375.5	2668.9	2792.4
25°	2852.4	2878.2	3032.5	2843.1	2448.2	2217.0	2182.3	2340.9	2604.2	3041.8	3129.7
27.5°	3049.0	3082.4	3185.1	2772.9	2474.5	2107.1	2025.9	2267.3	2535.8	2866.4	3252.3
30°	3300.5	3353.8	3493.7	2843.1	2553.5	2178.9	1999.3	2230.1	2526.9	2981.3	3511.9
32.5°	3559.7	3663.3	3767.3	3090.4	2542.5	2288.9	2169.6	2188.2	2607.2	3222.3	3780.8
35°	3903.0	3994.3	4083.9	3233.3	2764.0	2380.6	2262.2	2459.2	2813.5	3501.8	4155.8
37.5°	4636.9	4781.5	4545.2	3640.0	3005.0	2794.1	2580.6	2697.3	3031.7	3734.7	4768.4
40°	5104.5	5213.1	4984.8	3916.9	3429.5	3072.7	3037.6	3047.3	3332.2	3934.3	5180.6
42.5°	5569.1	5716.2	5353.1	4297.0	3942.7	3648.1	3467.1	3454.8	3668.8	4292.8	5649.4
45°	5915.8	6002.4	5479.5	4617.5	4493.2	4274.6	4138.9	3923.7	4111.0	4540.9	5939.4
47.5°	6080.7	6151.3	5682.8	4803.9	4850.0	4861.4	5106.2	4739.2	4497.4	4708.8	6091.6
50°	6286.5	6319.9	5802.5	4967.9	5189.0	5690.4	5749.2	5127.3	4873.7	4891.8	6181.7
52.5°	6532.6	6546.5	5977.1	5157.3	5531.9	6235.8	6144.9	5785.1	5231.7	5226.2	6351.2
55°	6842.1	6833.6	6196.1	5412.3	5776.7	6560.1	6491.2	6229.0	5621.9	5503.2	6615.0
57.5°	7117.3	7112.2	6486.5	5646.9	5982.6	6726.6	6746.9	6677.6	5887.4	5701.4	6900.8
60°	7252.1	7316.8	6817.1	5903.5	5995.7	6801.9	6809.5	6699.2	6184.2	5955.9	6976.9
62.5°	7199.7	7322.7	6979.5	6134.3	5875.2	6596.4	6628.1	6552.0	6170.7	6223.1	6807.0
65°	6961.3	7103.3	6838.7	6257.4	5801.2	6252.3	6260.3	6068.0	5977.5	6400.3	6408.7
67.5°	6514.0	6647.2	6390.5	6061.2	5294.7	5324.7	5504.0	5519.6	5387.7	6266.7	5849.4
70°	5731.0	5824.9	5664.2	5576.7	4425.5	4249.6	4444.1	4527.4	4587.4	5784.3	5178.0
72.5°	4537.1	4718.5	4743.9	4800.9	3563.1	3270.1	3414.3	3290.8	3681.9	4923.1	4230.6
75°	3356.8	3509.8	3674.3	3992.6	2808.4	2448.2	2430.5	2367.5	2732.8	3959.2	3137.8
77.5°	2372.1	2469.8	2596.2	3189.4	2119.3	1885.5	1896.5	1832.7	1973.5	2992.3	2167.5
80°	1700.4	1751.5	1810.3	2101.1	1563.4	1626.8	1628.5	1568.0	1467.4	2032.2	1446.7
82.5°	1211.6	1251.4	1318.6	1385.8	1165.6	1333.4	1332.1	1328.3	1163.5	1373.6	905.1
85°	674.7	728.0	844.7	1085.7	841.7	953.3	838.3	923.3	854.0	914.4	458.3
87.5°	47.3	42.3	189.0	629.1	392.8	287.1	150.5	298.1	382.2	477.7	63.8
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°	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7
2.5°	1230.3	1245.0	1187.1	1100.0	1123.7	1097.9	1065.4	1014.6	910.2	974.9	975.3
5°	1477.6	1421.3	1376.1	1333.4	1261.5	1152.9	1138.5	1051.4	1002.4	1028.2	1024.4
7.5°	1554.9	1475.0	1407.0	1254.3	1121.2	952.5	901.8	850.2	828.6	891.2	916.1
10°	1470.0	1386.7	1319.9	1134.3	1043.8	938.5	799.0	727.6	685.3	701.8	711.5
12.5°	1538.4	1453.5	1243.4	1139.8	990.5	926.3	804.1	699.3	636.7	651.9	633.7
15°	1604.4	1489.8	1279.7	1073.4	952.5	859.5	760.6	652.3	578.8	552.6	538.6
17.5°	1845.4	1655.1	1275.5	1036.2	897.5	790.6	671.4	553.0	503.9	476.9	453.6
20°	2139.2	1874.1	1298.3	997.7	839.2	704.3	574.5	464.6	430.4	412.6	406.3
22.5°	2488.8	2154.8	1429.0	992.2	784.2	641.3	521.3	452.8	414.3	394.9	386.8
25°	2766.6	2445.3	1525.3	1029.4	781.3	589.3	489.1	503.1	485.3	491.3	444.3
27.5°	3036.3	2524.3	1471.2	1012.9	702.6	497.2	481.5	510.7	525.9	530.6	528.9
30°	3264.2	2858.3	1483.1	919.9	593.6	405.0	368.7	383.0	424.9	491.3	503.9
32.5°	3597.7	3018.1	1584.1	863.7	530.6	362.3	321.7	316.2	326.0	350.1	370.8
35°	3988.0	3385.9	1612.4	848.9	487.0	343.3	315.0	302.3	307.4	325.5	329.8
37.5°	4715.5	3654.0	1717.3	830.7	471.0	331.9	309.9	305.2	316.2	331.0	339.5
40°	5116.7	4135.9	1722.4	815.1	450.2	327.2	313.3	311.2	317.9	338.2	343.3
42.5°	5651.5	4410.7	1801.8	796.9	443.1	333.6	320.0	319.2	325.1	336.9	346.2
45°	5977.5	4594.6	1806.1	786.3	441.4	361.5	328.9	326.0	324.7	331.9	340.3
47.5°	6187.6	4859.7	1857.6	774.5	451.5	368.7	339.5	326.8	322.6	325.5	331.9
50°	6386.7	5071.5	1955.3	772.8	462.1	361.5	358.1	326.4	317.9	316.7	321.3
52.5°	6631.1	5419.9	2075.8	788.9	459.5	350.9	372.0	324.7	309.5	306.5	311.2
55°	6986.6	5793.2	2203.9	775.4	433.3	330.6	358.5	323.4	300.6	295.1	299.3
57.5°	7217.0	6007.1	2347.2	763.9	393.6	315.4	346.2	324.3	301.4	289.2	291.7
60°	7140.5	5892.1	2403.4	694.2	356.0	303.5	317.1	317.5	293.8	282.4	284.5
62.5°	6802.3	5475.7	2351.0	613.0	328.1	286.6	287.1	304.8	271.8	263.8	267.2
65°	6329.7	4957.8	2138.8	560.2	315.0	268.9	262.1	267.6	242.2	236.3	243.1
67.5°	5749.6	4319.4	1823.0	504.4	310.3	244.8	236.7	234.6	218.6	211.8	218.6
70°	5022.0	3616.8	1457.3	465.0	292.6	218.6	212.2	210.1	196.6	191.5	197.4
72.5°	4036.6	2824.1	1124.6	435.0	273.1	194.5	189.0	186.4	175.0	167.8	175.0
75°	2871.0	2158.2	835.4	388.9	245.6	170.0	163.6	160.2	149.7	142.9	149.2
77.5°	2040.3	1620.0	583.4	321.7	202.5	143.7	139.9	134.4	125.1	117.1	123.4
80°	1508.4	1157.5	376.3	248.2	154.7	115.0	112.9	109.1	100.2	90.5	95.1
82.5°	993.1	834.5	215.6	168.3	112.5	82.9	84.6	82.0	73.6	63.4	66.0
85°	444.8	494.2	114.6	92.6	73.1	49.9	54.5	52.8	46.5	36.8	37.6
87.5°	42.7	83.3	35.1	33.8	27.1	15.6	19.4	16.5	14.0	8.9	6.8
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°	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7
2.5°	990.1	930.5	870.9	907.3	908.1	917.8	919.1	883.2	911.9	933.9	956.7
5°	1005.8	966.9	969.0	933.9	914.9	939.4	934.3	924.6	941.9	966.0	995.2
7.5°	892.5	867.1	862.9	829.0	747.0	728.8	744.1	750.4	773.7	810.9	842.2
10°	696.7	747.0	690.4	677.3	655.7	613.4	588.9	586.0	635.4	665.4	691.6
12.5°	627.8	615.1	608.4	572.4	572.4	527.6	513.2	526.3	602.4	624.0	657.8
15°	534.8	525.5	494.2	476.5	468.0	449.8	465.0	477.7	548.8	550.4	586.0
17.5°	443.9	438.4	408.8	405.4	397.0	388.9	402.9	433.3	471.8	465.0	481.5
20°	397.0	378.0	350.9	360.6	351.7	345.4	339.5	382.6	409.7	418.5	428.3
22.5°	385.1	350.5	334.4	325.5	326.0	315.8	317.1	353.0	394.0	399.5	393.6
25°	440.1	378.4	326.4	300.6	290.9	287.5	297.2	328.9	378.4	390.2	394.9
27.5°	514.9	410.9	336.1	292.1	272.7	274.4	288.3	310.3	368.7	389.8	395.3
30°	494.2	386.4	336.5	285.8	261.7	270.6	275.6	296.8	361.0	392.8	420.2
32.5°	381.3	347.5	338.6	290.9	281.1	267.2	274.4	294.7	338.6	358.5	359.8
35°	323.0	297.2	291.3	279.4	265.9	260.0	268.0	285.8	314.5	326.8	325.1
37.5°	320.5	292.1	268.9	263.8	258.3	256.6	261.3	277.8	306.9	328.5	323.8
40°	324.7	289.6	265.9	257.0	259.2	251.5	256.2	276.5	308.2	328.5	324.3
42.5°	319.6	286.6	262.1	255.4	257.5	246.9	252.4	273.5	304.8	328.9	320.9
45°	309.5	279.9	260.0	248.6	258.3	242.7	249.4	265.9	294.7	320.9	311.6
47.5°	299.3	271.8	251.1	243.9	253.7	238.4	241.4	255.8	284.5	310.3	302.3
50°	288.3	261.7	243.9	241.8	248.6	237.6	232.9	244.8	272.3	298.1	291.3
52.5°	276.5	253.2	238.9	238.0	244.4	232.1	225.3	234.6	259.2	284.9	279.4
55°	265.1	243.9	232.5	234.6	241.8	227.4	219.0	224.9	245.2	270.6	263.0
57.5°	253.7	233.4	224.1	230.0	235.5	221.5	211.0	214.3	230.8	255.8	246.9
60°	243.5	224.1	214.8	222.0	227.0	212.7	200.4	202.5	217.3	239.7	231.7
62.5°	230.4	213.9	201.7	211.0	214.8	200.8	187.7	190.2	202.1	223.2	217.3
65°	211.8	201.2	189.8	196.2	201.2	186.9	174.6	177.6	186.4	206.3	202.1
67.5°	195.7	185.6	178.0	183.1	183.9	172.9	161.9	163.6	170.8	189.4	184.7
70°	178.0	168.3	162.3	166.1	165.7	156.4	148.0	148.4	154.3	171.2	164.9
72.5°	158.5	149.2	146.3	148.4	146.7	138.2	130.2	133.2	137.0	149.7	144.6
75°	137.8	129.4	127.7	129.8	127.3	119.2	112.0	115.0	118.4	128.9	122.6
77.5°	116.3	108.7	109.1	109.5	106.1	100.6	93.4	96.4	98.5	105.7	99.4
80°	92.6	86.7	88.4	88.4	84.6	80.7	74.0	74.8	76.1	78.6	74.0
82.5°	67.6	67.6	67.6	68.1	60.0	61.3	55.4	55.0	53.7	53.3	50.3
85°	40.2	41.9	42.7	44.0	32.6	38.0	33.0	31.7	29.2	26.6	25.8
87.5°	8.9	11.4	11.4	11.0	0.0	4.2	2.1	3.4	0.8	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°	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7	918.7
2.5°	930.5	905.1	952.5	994.8	988.0	1012.5	955.5	1040.0	1129.6	1129.6
5°	987.6	966.0	978.3	1002.8	1021.4	1106.8	1177.8	1248.4	1394.3	1396.0
7.5°	832.9	879.4	890.3	883.2	963.1	1073.0	1190.1	1391.3	1514.8	1524.5
10°	778.7	799.9	833.3	851.9	884.4	992.7	1138.1	1377.0	1508.0	1532.5
12.5°	705.6	783.8	834.5	938.5	964.3	985.9	1217.1	1423.9	1514.3	1508.4
15°	625.7	684.9	758.0	873.0	938.5	1103.4	1264.1	1574.4	1625.5	1670.4
17.5°	498.9	542.4	639.6	770.7	933.0	1084.8	1379.9	1760.4	1855.9	1902.4
20°	410.5	410.9	508.2	681.9	858.6	1007.0	1423.9	1914.7	2036.0	2059.7
22.5°	388.1	368.7	419.8	561.0	776.6	1053.1	1512.7	2162.9	2416.1	2475.7
25°	375.8	352.2	384.3	495.1	717.9	1077.2	1691.5	2504.0	2829.2	2852.4
27.5°	380.9	391.9	402.1	441.4	643.5	1032.0	1650.1	2656.7	3005.0	3049.0
30°	415.2	432.9	409.7	423.2	582.1	966.4	1724.0	2904.4	3226.6	3300.5
32.5°	345.4	338.6	336.5	366.1	520.8	907.3	1879.2	3253.2	3466.7	3559.7
35°	311.6	301.0	305.2	339.1	490.8	898.8	1966.3	3541.9	3845.9	3903.0
37.5°	310.3	298.1	303.5	328.9	501.4	914.0	2105.8	4005.3	4514.7	4636.9
40°	307.4	300.6	303.5	322.6	490.4	922.5	2186.1	4394.7	4980.6	5104.5
42.5°	306.9	303.5	306.5	327.6	479.0	926.3	2297.3	4746.4	5471.4	5569.1
45°	305.7	309.0	309.0	331.9	473.9	951.6	2362.8	4918.9	5795.3	5915.8
47.5°	299.7	309.9	326.4	330.6	453.2	939.8	2455.4	5180.6	5967.3	6080.7
50°	292.1	308.6	348.4	322.1	449.8	911.1	2563.7	5388.2	6188.0	6286.5
52.5°	282.0	306.5	343.3	305.7	443.9	906.0	2715.4	5657.9	6445.5	6532.6
55°	267.6	298.9	327.6	289.2	429.5	889.9	2947.5	5992.3	6782.4	6842.1
57.5°	254.5	287.5	304.8	279.9	395.3	893.3	3109.0	6265.0	7065.3	7117.3
60°	242.7	286.2	272.3	270.1	360.2	848.1	3161.4	6262.0	7170.5	7252.1
62.5°	230.0	270.1	249.4	257.0	329.3	801.6	3050.3	5993.6	7056.8	7199.7
65°	213.5	231.7	230.4	247.7	330.2	725.9	2795.3	5520.1	6773.1	6961.3
67.5°	194.0	205.0	212.2	232.5	340.7	667.1	2385.2	4950.6	6290.3	6514.0
70°	174.2	185.2	193.2	212.7	350.5	640.1	1898.6	4150.7	5504.0	5731.0
72.5°	153.9	165.3	171.6	188.6	337.4	582.1	1405.3	3229.5	4417.9	4537.1
75°	132.7	143.7	148.8	164.5	293.0	481.5	970.2	2446.1	3235.9	3356.8
77.5°	111.2	123.0	124.7	137.4	223.6	368.2	621.9	1876.2	2291.4	2372.1
80°	88.8	100.6	100.6	107.4	157.3	253.2	372.5	1415.4	1668.7	1700.4
82.5°	63.8	76.5	75.7	76.1	108.7	156.8	215.6	1060.7	1205.7	1211.6
85°	37.6	46.5	46.1	42.3	64.3	84.6	116.7	658.7	673.0	674.7
87.5°	7.2	11.0	9.7	4.2	17.8	24.9	33.8	122.2	48.6	47.3
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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