

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: P596618

Luminaire Tested: **MSA-SA2C-827-U-SLL**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596618
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-827-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: 7768 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

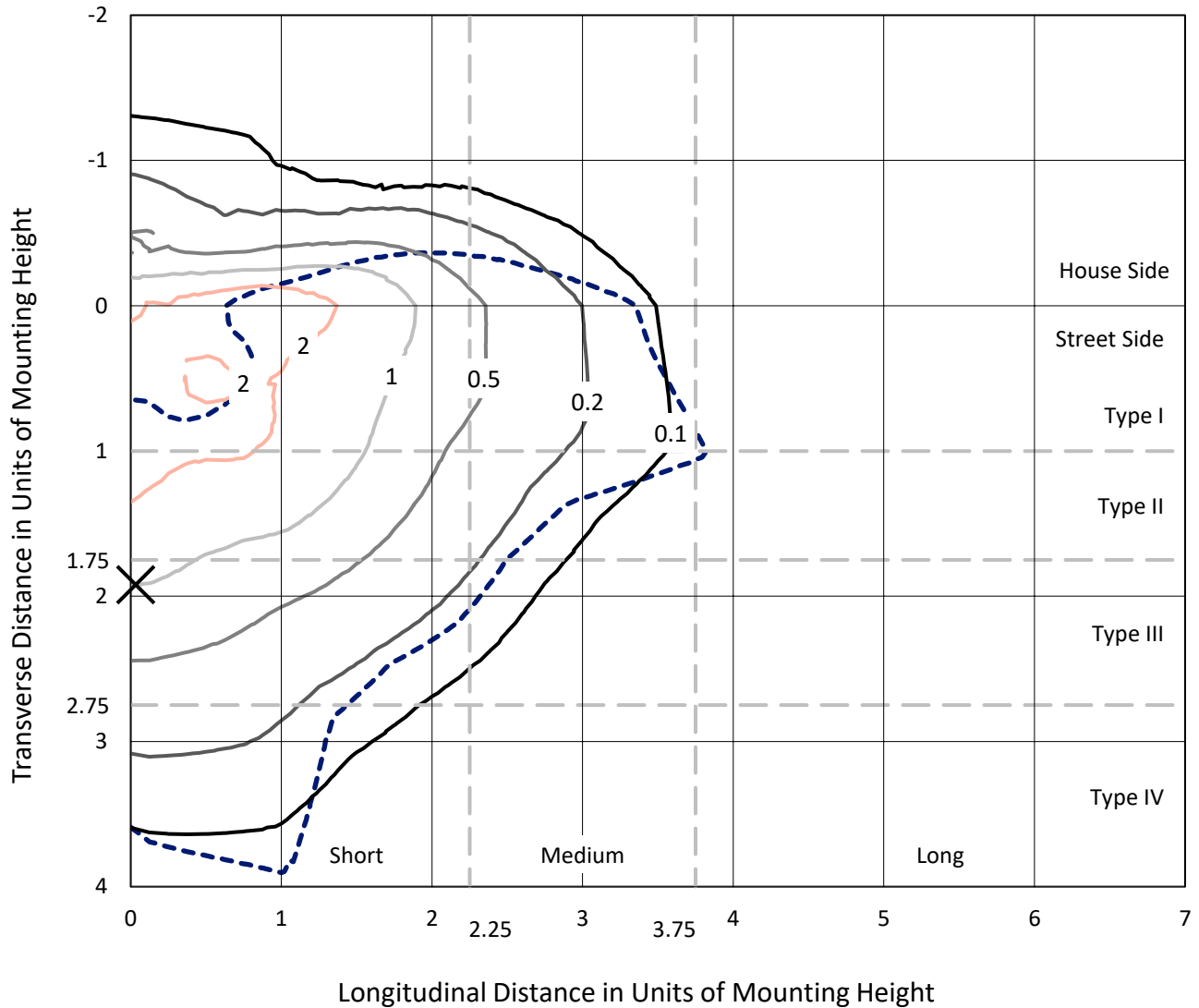
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

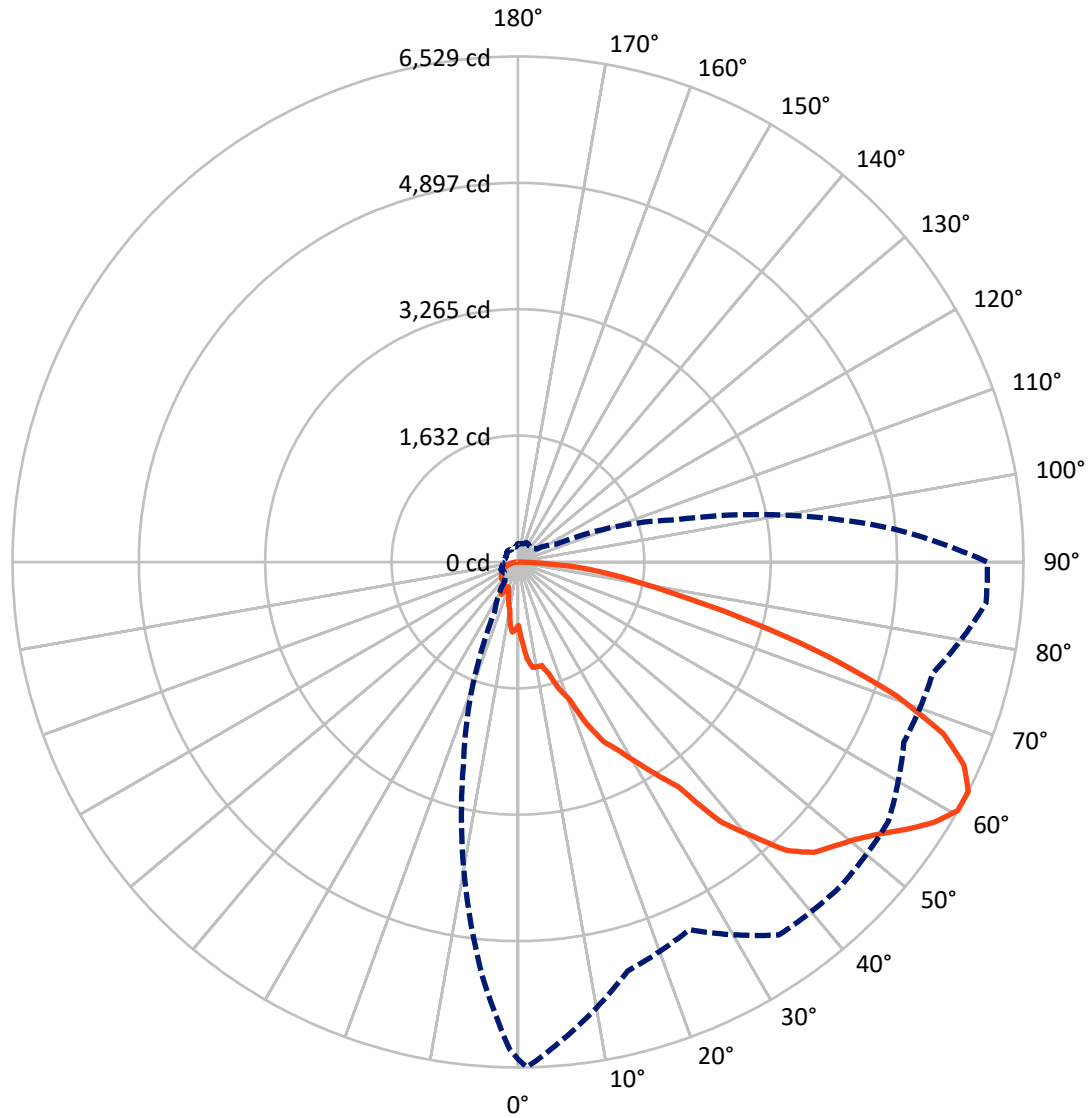
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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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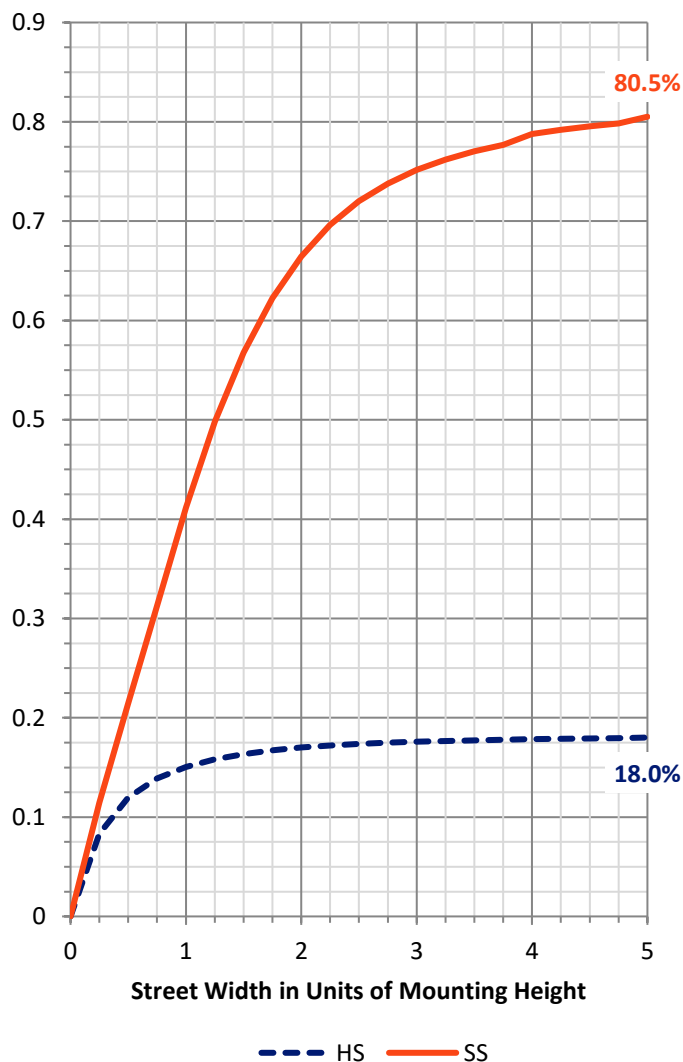
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1414.5	0.0	1414.5
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	6353.5	0.0	6353.5
	% Fixture	81.8	0.0	81.8
Total	Lumens	7768.0	0.0	7768.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.9	1.2
10°-20°	272.9	3.5
20°-30°	481.7	6.2
30°-40°	750.4	9.7
40°-50°	1235.6	15.9
50°-60°	1763.5	22.7
60°-70°	1870.0	24.1
70°-80°	1032.9	13.3
80°-90°	267.2	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°	7768.0	100.0
0°-180°	7768.0	100.0

Coefficient of Utilization



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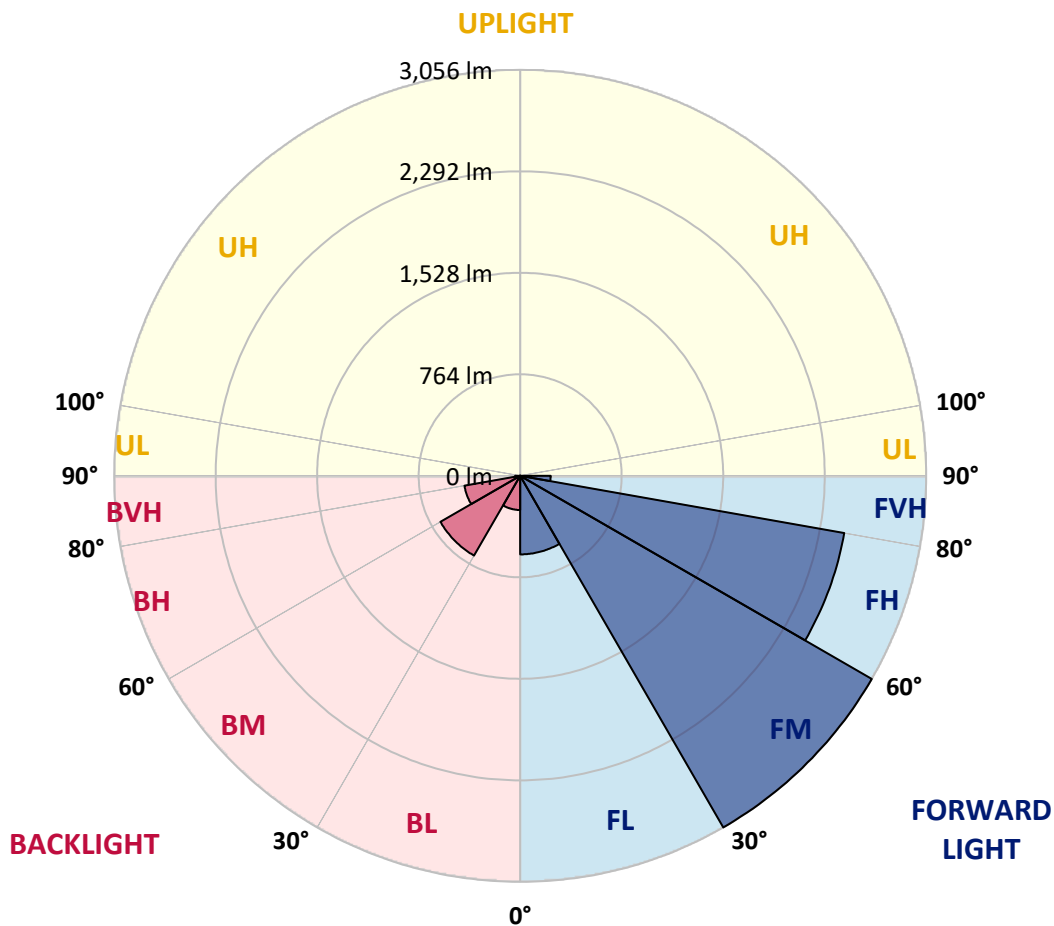
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	591.3	7.6			
FM (30°-60°)	3056.0	39.3			
FH (60°-80°)	2476.7	31.9			G2/5000
FVH (80°-90°)	229.5	3.0			G3/500
BL (0°-30°)	257.3	3.3	B1/500		
BM (30°-60°)	693.4	8.9	B1/1000		
BH (60°-80°)	426.2	5.5	B1/500		G1/500
BVH (80°-90°)	37.7	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°	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1
2.5°	1007.2	1015.9	998.2	978.2	895.7	975.2	951.4	995.5	981.2	885.5	1060.8
5°	1244.7	1260.5	1243.2	1303.1	1306.9	1322.4	1179.5	1268.5	1237.6	1229.6	1318.2
7.5°	1359.3	1375.5	1419.6	1526.3	1609.6	1534.2	1450.9	1432.4	1408.3	1345.4	1398.9
10°	1366.5	1375.5	1434.7	1660.9	1701.2	1754.7	1700.8	1573.8	1521.4	1384.6	1343.9
12.5°	1345.0	1373.3	1449.8	1725.3	1845.2	1903.6	1916.8	1775.5	1646.9	1490.9	1470.1
15°	1489.4	1499.5	1609.2	1771.3	1853.9	1903.3	1946.2	1859.2	1818.8	1695.2	1528.9
17.5°	1696.3	1724.6	1814.3	1874.2	1930.0	1939.4	1904.0	1870.1	1806.0	1971.1	1794.3
20°	1836.5	1891.2	2001.3	2012.6	1895.3	1916.1	1911.2	1913.4	1876.9	2182.2	2084.9
22.5°	2207.5	2266.6	2281.7	2216.1	1995.2	1900.6	1919.5	1974.1	2118.1	2379.7	2489.8
25°	2543.3	2566.3	2703.9	2535.0	2183.0	1976.8	1945.9	2087.2	2322.1	2712.2	2790.6
27.5°	2718.6	2748.4	2840.0	2472.5	2206.3	1878.8	1806.4	2021.6	2261.0	2555.8	2899.9
30°	2942.9	2990.4	3115.2	2535.0	2276.8	1942.8	1782.6	1988.4	2253.1	2658.3	3131.4
32.5°	3174.0	3266.3	3359.1	2755.6	2267.0	2040.8	1934.5	1951.1	2324.7	2873.2	3371.1
35°	3480.1	3561.5	3641.4	2883.0	2464.5	2122.6	2017.1	2192.8	2508.6	3122.3	3705.5
37.5°	4134.5	4263.4	4052.7	3245.6	2679.4	2491.3	2300.9	2405.0	2703.2	3330.0	4251.7
40°	4551.4	4648.3	4444.7	3492.5	3057.9	2739.7	2708.4	2717.1	2971.2	3508.0	4619.2
42.5°	4965.7	5096.8	4773.0	3831.4	3515.5	3252.8	3091.4	3080.5	3271.2	3827.6	5037.3
45°	5274.8	5352.0	4885.7	4117.1	4006.3	3811.4	3690.4	3498.5	3665.5	4048.9	5295.9
47.5°	5421.8	5484.7	5067.1	4283.4	4324.5	4334.6	4552.9	4225.7	4010.1	4198.5	5431.6
50°	5605.4	5635.1	5173.7	4429.6	4626.8	5073.8	5126.2	4571.7	4345.6	4361.8	5511.9
52.5°	5824.7	5837.2	5329.4	4598.5	4932.5	5560.1	5479.1	5158.3	4664.8	4659.9	5663.0
55°	6100.7	6093.1	5524.7	4825.8	5150.7	5849.2	5787.8	5554.1	5012.8	4906.9	5898.2
57.5°	6346.1	6341.5	5783.7	5035.0	5334.3	5997.8	6015.9	5954.0	5249.5	5083.6	6153.1
60°	6466.3	6524.0	6078.4	5263.8	5346.0	6064.9	6071.6	5973.3	5514.1	5310.6	6220.9
62.5°	6419.6	6529.3	6223.2	5469.6	5238.6	5881.7	5909.9	5842.1	5502.1	5548.8	6069.4
65°	6207.0	6333.6	6097.7	5579.3	5172.6	5574.8	5582.0	5410.5	5329.8	5706.8	5714.3
67.5°	5808.2	5926.9	5698.1	5404.4	4721.0	4747.8	4907.6	4921.6	4803.9	5587.6	5215.6
70°	5110.0	5193.7	5050.5	4972.4	3946.0	3789.2	3962.6	4036.8	4090.4	5157.5	4617.0
72.5°	4045.5	4207.2	4229.8	4280.7	3177.0	2915.8	3044.3	2934.2	3282.9	4389.7	3772.2
75°	2993.0	3129.5	3276.1	3560.0	2504.1	2183.0	2167.1	2111.0	2436.7	3530.2	2797.8
77.5°	2115.1	2202.2	2314.9	2843.8	1889.7	1681.2	1691.0	1634.1	1759.6	2668.1	1932.7
80°	1516.1	1561.7	1614.1	1873.5	1394.0	1450.5	1452.0	1398.1	1308.4	1812.0	1289.9
82.5°	1080.4	1115.8	1175.7	1235.7	1039.3	1188.9	1187.8	1184.4	1037.4	1224.7	807.1
85°	601.6	649.1	753.2	968.0	750.5	850.0	747.5	823.3	761.5	815.4	408.6
87.5°	42.2	37.7	168.5	560.9	350.2	256.0	134.2	265.8	340.8	426.0	56.9
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°	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1
2.5°	1096.9	1110.1	1058.5	980.8	1002.0	979.0	949.9	904.7	811.6	869.3	869.6
5°	1317.5	1267.3	1227.0	1188.9	1124.8	1028.0	1015.1	937.5	893.8	916.8	913.4
7.5°	1386.4	1315.2	1254.5	1118.4	999.7	849.3	804.0	758.1	738.8	794.6	816.9
10°	1310.7	1236.4	1176.9	1011.4	930.7	836.8	712.4	648.7	611.0	625.7	634.4
12.5°	1371.7	1296.0	1108.6	1016.3	883.2	825.9	717.0	623.5	567.7	581.3	565.1
15°	1430.6	1328.4	1141.0	957.1	849.3	766.4	678.1	581.6	516.1	492.7	480.2
17.5°	1645.4	1475.8	1137.3	923.9	800.3	704.9	598.6	493.1	449.3	425.2	404.5
20°	1907.4	1671.1	1157.6	889.6	748.3	628.0	512.3	414.3	383.7	367.9	362.3
22.5°	2219.1	1921.4	1274.1	884.7	699.3	571.8	464.8	403.7	369.4	352.1	344.9
25°	2466.8	2180.3	1360.1	917.9	696.6	525.5	436.1	448.6	432.7	438.0	396.2
27.5°	2707.3	2250.8	1311.8	903.2	626.5	443.3	429.4	455.4	468.9	473.1	471.6
30°	2910.5	2548.6	1322.4	820.3	529.2	361.1	328.7	341.5	378.8	438.0	449.3
32.5°	3207.9	2691.1	1412.5	770.1	473.1	323.1	286.9	282.0	290.6	312.1	330.6
35°	3555.8	3019.0	1437.7	756.9	434.3	306.1	280.8	269.5	274.0	290.3	294.0
37.5°	4204.6	3258.0	1531.2	740.7	419.9	295.9	276.3	272.2	282.0	295.2	302.7
40°	4562.3	3687.8	1535.7	726.8	401.5	291.8	279.3	277.4	283.5	301.6	306.1
42.5°	5039.2	3932.8	1606.6	710.6	395.1	297.4	285.4	284.6	289.9	300.4	308.7
45°	5329.8	4096.8	1610.4	701.1	393.5	322.3	293.3	290.6	289.5	295.9	303.5
47.5°	5517.1	4333.1	1656.3	690.6	402.6	328.7	302.7	291.4	287.6	290.3	295.9
50°	5694.7	4522.0	1743.4	689.1	412.0	322.3	319.3	291.0	283.5	282.3	286.5
52.5°	5912.6	4832.6	1850.9	703.4	409.8	312.9	331.7	289.5	275.9	273.3	277.4
55°	6229.6	5165.4	1965.1	691.3	386.4	294.8	319.7	288.4	268.0	263.1	266.9
57.5°	6435.0	5356.2	2092.9	681.2	350.9	281.2	308.7	289.1	268.8	257.8	260.1
60°	6366.8	5253.7	2143.0	619.0	317.4	270.7	282.7	283.1	262.0	251.8	253.7
62.5°	6065.2	4882.3	2096.3	546.6	292.5	255.6	256.0	271.8	242.4	235.2	238.2
65°	5643.8	4420.6	1907.0	499.5	280.8	239.7	233.7	238.6	216.0	210.7	216.8
67.5°	5126.6	3851.4	1625.4	449.7	276.7	218.3	211.1	209.2	194.9	188.9	194.9
70°	4477.9	3224.9	1299.4	414.7	260.9	194.9	189.2	187.3	175.3	170.8	176.0
72.5°	3599.2	2518.1	1002.7	387.9	243.5	173.4	168.5	166.2	156.1	149.7	156.1
75°	2559.9	1924.4	744.9	346.8	219.0	151.5	145.9	142.9	133.4	127.4	133.1
77.5°	1819.2	1444.5	520.2	286.9	180.6	128.2	124.8	119.9	111.6	104.4	110.1
80°	1345.0	1032.1	335.5	221.3	138.0	102.5	100.6	97.3	89.3	80.7	84.8
82.5°	885.5	744.1	192.2	150.0	100.3	73.9	75.4	73.1	65.6	56.5	58.8
85°	396.6	440.7	102.2	82.6	65.2	44.5	48.6	47.1	41.5	32.8	33.5
87.5°	38.1	74.3	31.3	30.2	24.1	13.9	17.3	14.7	12.4	7.9	6.0
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°	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1
2.5°	882.8	829.7	776.5	808.9	809.7	818.4	819.5	787.5	813.1	832.7	853.1
5°	896.8	862.1	864.0	832.7	815.7	837.6	833.1	824.4	839.9	861.3	887.4
7.5°	795.8	773.1	769.4	739.2	666.1	649.9	663.4	669.1	689.8	723.0	750.9
10°	621.2	666.1	615.6	603.9	584.7	547.0	525.1	522.5	566.6	593.3	616.7
12.5°	559.8	548.5	542.4	510.4	510.4	470.4	457.6	469.3	537.2	556.4	586.5
15°	476.9	468.6	440.7	424.8	417.3	401.1	414.7	426.0	489.3	490.8	522.5
17.5°	395.8	390.9	364.5	361.5	354.0	346.8	359.2	386.4	420.7	414.7	429.4
20°	354.0	337.0	312.9	321.5	313.6	308.0	302.7	341.1	365.3	373.2	381.9
22.5°	343.4	312.5	298.2	290.3	290.6	281.6	282.7	314.8	351.3	356.2	350.9
25°	392.4	337.4	291.0	268.0	259.3	256.3	265.0	293.3	337.4	347.9	352.1
27.5°	459.1	366.4	299.7	260.5	243.1	244.6	257.1	276.7	328.7	347.6	352.5
30°	440.7	344.5	300.1	254.8	233.3	241.3	245.8	264.6	321.9	350.2	374.7
32.5°	340.0	309.9	301.9	259.3	250.7	238.2	244.6	262.7	301.9	319.7	320.8
35°	288.0	265.0	259.7	249.2	237.1	231.8	239.0	254.8	280.5	291.4	289.9
37.5°	285.7	260.5	239.7	235.2	230.3	228.8	233.0	247.7	273.7	292.9	288.7
40°	289.5	258.2	237.1	229.2	231.1	224.3	228.4	246.5	274.8	292.9	289.1
42.5°	285.0	255.6	233.7	227.7	229.6	220.1	225.0	243.9	271.8	293.3	286.1
45°	275.9	249.5	231.8	221.7	230.3	216.4	222.4	237.1	262.7	286.1	277.8
47.5°	266.9	242.4	223.9	217.5	226.2	212.6	215.2	228.1	253.7	276.7	269.5
50°	257.1	233.3	217.5	215.6	221.7	211.8	207.7	218.3	242.8	265.8	259.7
52.5°	246.5	225.8	213.0	212.2	217.9	206.9	200.9	209.2	231.1	254.1	249.2
55°	236.4	217.5	207.3	209.2	215.6	202.8	195.3	200.5	218.6	241.3	234.5
57.5°	226.2	208.1	199.8	205.1	210.0	197.5	188.1	191.1	205.8	228.1	220.1
60°	217.1	199.8	191.5	197.9	202.4	189.6	178.7	180.6	193.8	213.7	206.6
62.5°	205.4	190.7	179.8	188.1	191.5	179.1	167.4	169.6	180.2	199.0	193.8
65°	188.9	179.4	169.3	174.9	179.4	166.6	155.7	158.3	166.2	184.0	180.2
67.5°	174.5	165.5	158.7	163.2	164.0	154.2	144.4	145.9	152.3	168.9	164.7
70°	158.7	150.0	144.8	148.1	147.8	139.5	131.9	132.3	137.6	152.7	147.0
72.5°	141.4	133.1	130.4	132.3	130.8	123.3	116.1	118.7	122.1	133.4	128.9
75°	122.9	115.3	113.8	115.7	113.5	106.3	99.9	102.5	105.5	115.0	109.3
77.5°	103.7	96.9	97.3	97.6	94.6	89.7	83.3	85.9	87.8	94.2	88.6
80°	82.6	77.3	78.8	78.8	75.4	72.0	66.0	66.7	67.9	70.1	66.0
82.5°	60.3	60.3	60.3	60.7	53.5	54.7	49.4	49.0	47.9	47.5	44.9
85°	35.8	37.3	38.1	39.2	29.0	33.9	29.4	28.3	26.0	23.7	23.0
87.5°	7.9	10.2	10.2	9.8	0.0	3.8	1.9	3.0	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°	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1	819.1
2.5°	829.7	807.1	849.3	887.0	880.9	902.8	851.9	927.3	1007.2	1007.2
5°	880.6	861.3	872.3	894.1	910.7	986.9	1050.2	1113.2	1243.2	1244.7
7.5°	742.6	784.1	793.9	787.5	858.7	956.7	1061.1	1240.6	1350.6	1359.3
10°	694.4	713.2	743.0	759.6	788.6	885.1	1014.8	1227.7	1344.6	1366.5
12.5°	629.1	698.9	744.1	836.8	859.8	879.1	1085.3	1269.6	1350.3	1345.0
15°	557.9	610.7	675.9	778.4	836.8	983.9	1127.1	1403.8	1449.4	1489.4
17.5°	444.8	483.6	570.3	687.2	831.9	967.3	1230.4	1569.6	1654.8	1696.3
20°	366.0	366.4	453.1	608.0	765.6	897.9	1269.6	1707.2	1815.4	1836.5
22.5°	346.0	328.7	374.3	500.2	692.5	939.0	1348.8	1928.5	2154.3	2207.5
25°	335.1	314.0	342.7	441.4	640.1	960.5	1508.2	2232.7	2522.6	2543.3
27.5°	339.6	349.4	358.5	393.5	573.7	920.2	1471.3	2368.8	2679.4	2718.6
30°	370.2	386.0	365.3	377.3	519.1	861.7	1537.2	2589.7	2876.9	2942.9
32.5°	308.0	301.9	300.1	326.4	464.4	808.9	1675.6	2900.7	3091.0	3174.0
35°	277.8	268.4	272.2	302.3	437.6	801.4	1753.2	3158.1	3429.2	3480.1
37.5°	276.7	265.8	270.7	293.3	447.1	815.0	1877.6	3571.3	4025.5	4134.5
40°	274.0	268.0	270.7	287.6	437.3	822.5	1949.2	3918.5	4440.9	4551.4
42.5°	273.7	270.7	273.3	292.1	427.1	825.9	2048.4	4232.1	4878.6	4965.7
45°	272.5	275.6	275.6	295.9	422.6	848.5	2106.8	4385.9	5167.3	5274.8
47.5°	267.3	276.3	291.0	294.8	404.1	838.0	2189.4	4619.2	5320.7	5421.8
50°	260.5	275.2	310.6	287.2	401.1	812.3	2285.9	4804.3	5517.5	5605.4
52.5°	251.4	273.3	306.1	272.5	395.8	807.8	2421.2	5044.8	5747.1	5824.7
55°	238.6	266.5	292.1	257.8	383.0	793.5	2628.1	5343.0	6047.5	6100.7
57.5°	226.9	256.3	271.8	249.5	352.5	796.5	2772.1	5586.1	6299.7	6346.1
60°	216.4	255.2	242.8	240.9	321.2	756.2	2818.9	5583.5	6393.6	6466.3
62.5°	205.1	240.9	222.4	229.2	293.6	714.7	2719.7	5344.1	6292.2	6419.6
65°	190.4	206.6	205.4	220.9	294.4	647.2	2492.4	4921.9	6039.2	6207.0
67.5°	173.0	182.8	189.2	207.3	303.8	594.8	2126.8	4414.2	5608.7	5808.2
70°	155.3	165.1	172.3	189.6	312.5	570.7	1692.9	3701.0	4907.6	5110.0
72.5°	137.2	147.4	153.0	168.1	300.8	519.1	1253.0	2879.6	3939.2	4045.5
75°	118.4	128.2	132.7	146.6	261.2	429.4	865.1	2181.1	2885.2	2993.0
77.5°	99.1	109.7	111.2	122.5	199.4	328.3	554.5	1672.9	2043.1	2115.1
80°	79.2	89.7	89.7	95.7	140.2	225.8	332.1	1262.1	1487.8	1516.1
82.5°	56.9	68.2	67.5	67.9	96.9	139.9	192.2	945.8	1075.1	1080.4
85°	33.5	41.5	41.1	37.7	57.3	75.4	104.0	587.3	600.1	601.6
87.5°	6.4	9.8	8.7	3.8	15.8	22.2	30.2	108.9	43.4	42.2
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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