

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: P367401

Luminaire Tested: **MSA-SA2C-727-U-SLL-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367401
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-727-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7526 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

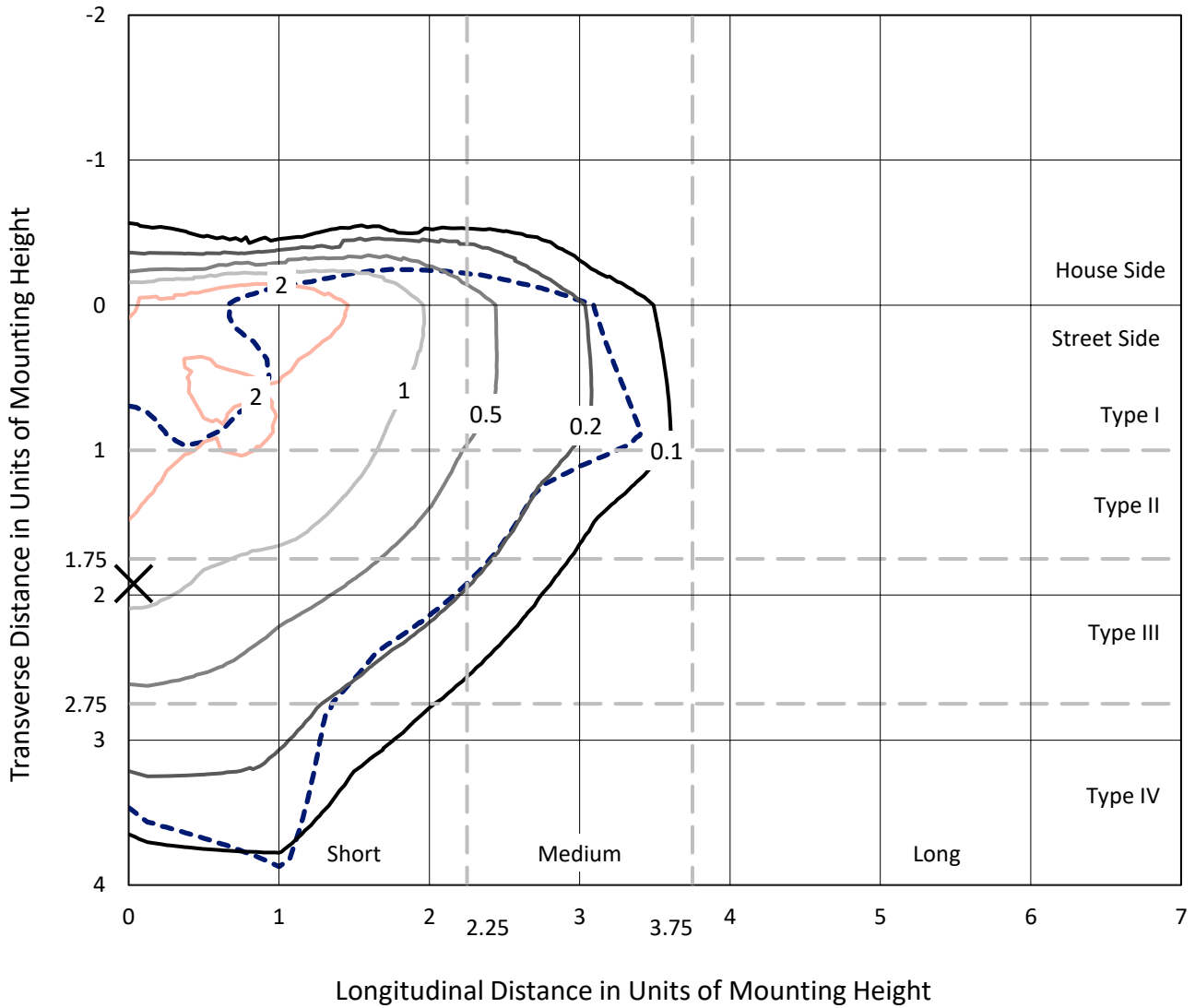
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

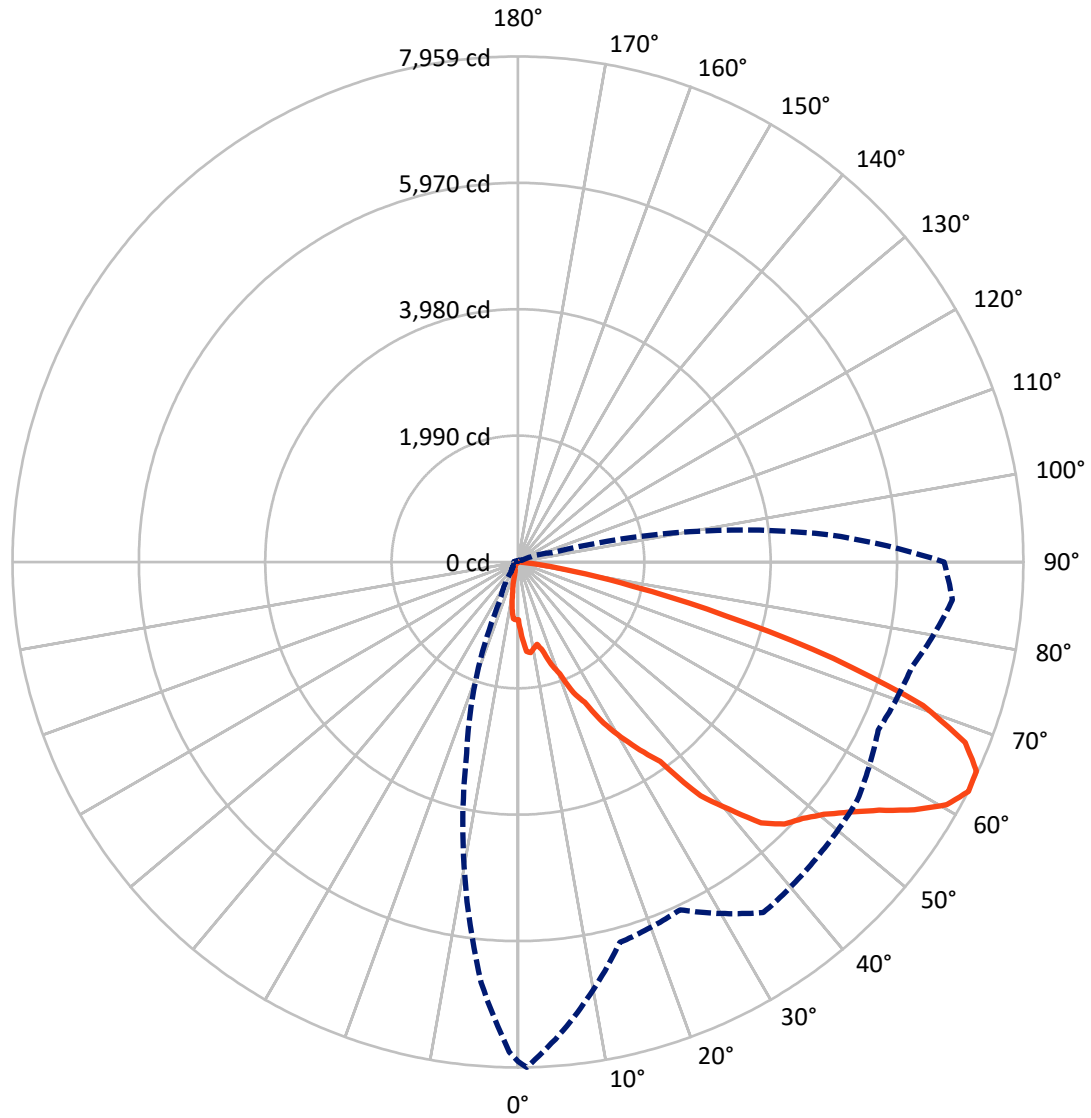
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 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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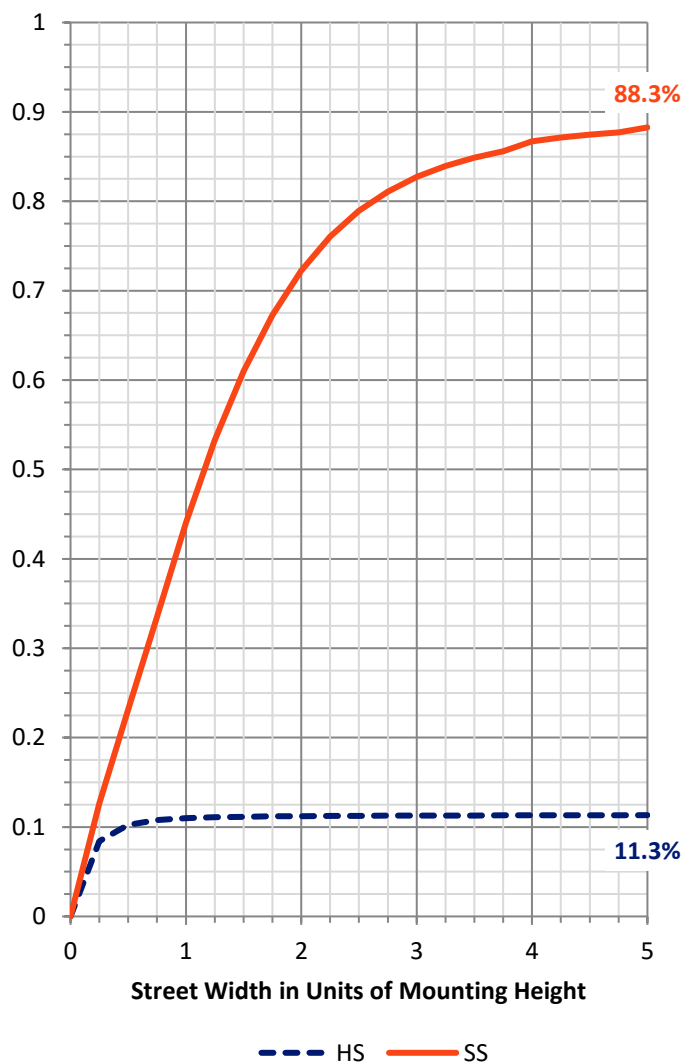
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	860.6	0.0	860.6
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	6665.4	0.0	6665.4
	% Fixture	88.6	0.0	88.6
Total	Lumens	7526.0	0.0	7526.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	1.3
10°-20°	264.6	3.5
20°-30°	427.7	5.7
30°-40°	716.4	9.5
40°-50°	1171.5	15.6
50°-60°	1734.1	23.0
60°-70°	1990.8	26.5
70°-80°	984.5	13.1
80°-90°	135.1	1.8
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°	7526.0	100.0
0°-180°	7526.0	100.0

Coefficient of Utilization

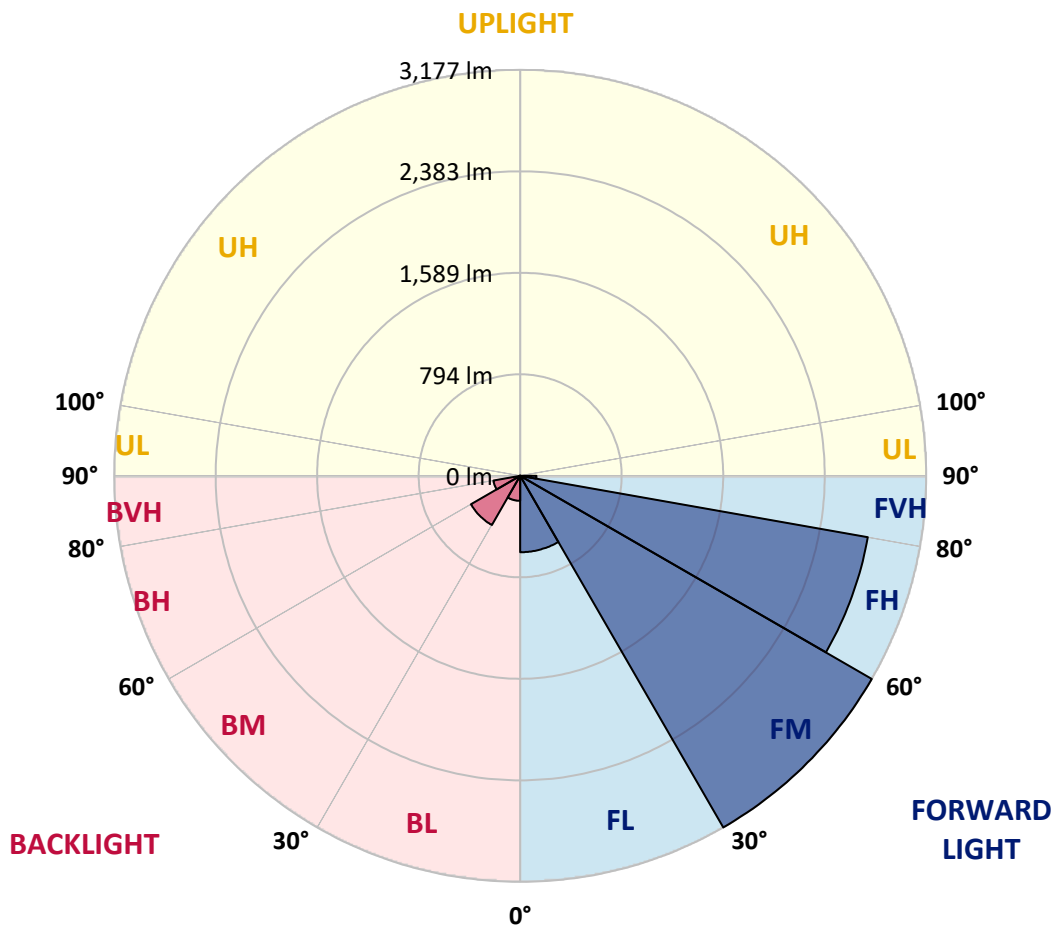


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	597.8	7.9			
FM (30°-60°)	3177.4	42.2			
FH (60°-80°)	2762.5	36.7			G2/5000
FVH (80°-90°)	127.7	1.7			G2/225
BL (0°-30°)	195.8	2.6	B1/500		
BM (30°-60°)	444.5	5.9	B1/1000		
BH (60°-80°)	212.8	2.8	B1/500		G1/500
BVH (80°-90°)	7.5	0.1			G0/10
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°	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6
2.5°	1169.1	1174.7	1148.5	1145.1	1084.2	1160.1	1162.2	1171.2	1115.5	1007.4	1158.4
5°	1399.0	1414.4	1394.3	1483.9	1509.6	1564.9	1463.3	1554.2	1515.6	1526.3	1548.2
7.5°	1426.4	1442.3	1484.7	1634.8	1773.4	1738.6	1727.5	1761.8	1758.8	1679.4	1718.9
10°	1369.4	1382.7	1453.4	1726.6	1787.1	1943.2	1981.4	1902.5	1870.3	1696.6	1620.7
12.5°	1307.2	1329.5	1419.6	1747.2	1928.6	2086.4	2212.1	2099.7	1993.0	1808.1	1738.6
15°	1426.4	1438.9	1580.4	1790.1	1948.8	2057.7	2160.6	2123.3	2107.0	1974.1	1738.6
17.5°	1660.1	1689.3	1791.8	1895.2	2020.4	2086.0	2061.6	2050.0	2008.4	2217.2	1973.7
20°	1826.5	1881.0	2015.3	2059.9	1960.4	2021.7	2006.7	1996.4	1963.8	2352.3	2243.8
22.5°	2186.8	2237.0	2239.5	2255.4	2023.8	1926.0	1901.2	1904.2	2052.1	2392.7	2580.1
25°	2432.1	2449.3	2584.8	2471.6	2197.1	1955.2	1860.4	1902.9	2116.0	2682.6	2896.1
27.5°	2833.5	2874.3	2958.8	2575.4	2300.9	1936.8	1785.8	1940.2	2284.2	2778.6	3247.4
30°	3160.8	3199.8	3335.7	2717.3	2390.9	2028.1	1818.0	2015.3	2388.8	2976.3	3563.0
32.5°	3426.2	3527.0	3681.4	2936.5	2387.5	2133.2	1982.2	1990.4	2517.5	3232.4	3875.3
35°	3765.5	3859.4	3967.9	3087.4	2543.6	2167.1	2030.7	2234.8	2708.7	3500.0	4295.5
37.5°	4530.1	4672.1	4457.7	3467.8	2725.5	2473.3	2222.0	2385.4	2909.0	3773.2	4873.2
40°	4996.7	5116.4	4909.3	3662.1	3040.2	2627.7	2563.3	2647.0	3105.0	3914.3	5308.5
42.5°	5456.5	5614.3	5268.2	3954.6	3339.2	3063.4	2887.6	2954.9	3388.5	4254.8	5798.3
45°	5789.3	5887.1	5345.8	4107.7	3750.0	3560.0	3443.0	3342.6	3783.9	4473.5	6114.4
47.5°	5956.6	6034.6	5498.9	4156.2	3994.5	4085.4	4341.9	4132.1	4133.9	4631.8	6284.6
50°	6188.1	6242.6	5584.7	4214.1	4259.9	4904.1	5033.6	4587.2	4533.6	4790.5	6312.5
52.5°	6513.6	6540.2	5751.1	4366.7	4657.5	5545.3	5592.0	5411.5	4933.7	5085.5	6374.3
55°	6946.4	6899.6	6048.3	4687.5	5072.2	6014.9	6077.5	5920.1	5436.8	5380.2	6565.5
57.5°	7413.0	7359.4	6488.8	5139.6	5522.1	6373.8	6411.2	6423.6	5770.9	5640.9	6890.6
60°	7747.5	7757.4	7043.3	5658.1	5801.7	6717.4	6642.7	6529.5	6107.9	6023.0	7048.9
62.5°	7864.6	7959.4	7475.2	6201.4	6042.8	6738.8	6623.0	6527.4	6258.9	6417.2	6867.5
65°	7768.9	7934.5	7575.5	6678.8	6188.6	6469.9	6349.4	6288.1	6254.2	6578.0	6466.0
67.5°	7389.0	7596.1	7288.2	6683.1	5658.5	5508.8	5651.2	5845.5	5733.1	6444.6	5903.8
70°	6537.7	6764.5	6621.3	6291.1	4713.7	4334.1	4491.1	4784.9	4705.5	5731.8	5076.5
72.5°	4905.0	5196.6	5224.9	5431.2	3741.9	3262.0	3284.7	3276.6	3413.4	4621.9	3961.5
75°	3150.9	3377.8	3684.4	4382.6	2842.5	2381.5	2163.6	2110.5	2365.6	3611.5	2836.1
77.5°	1829.1	1856.1	1997.7	3306.6	2035.8	1715.9	1567.5	1643.4	1732.6	2520.5	1879.7
80°	874.9	888.6	946.9	1701.3	1414.4	1485.2	1370.7	1456.0	1189.7	1448.7	1066.6
82.5°	277.5	280.5	290.3	835.9	878.3	983.8	630.4	845.3	735.5	875.7	710.2
85°	46.3	78.9	97.4	241.5	495.8	331.9	136.8	301.5	410.4	552.4	322.5
87.5°	0.0	0.0	0.0	4.3	40.3	18.9	3.0	17.2	63.0	123.1	14.6
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°	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6
2.5°	1202.1	1231.7	1120.2	1020.3	1045.6	1025.4	995.0	943.1	823.0	911.3	905.3
5°	1546.9	1492.0	1341.1	1270.7	1185.0	1054.2	1038.3	937.9	893.8	901.1	894.6
7.5°	1667.0	1568.8	1435.4	1223.6	1022.4	833.7	775.8	710.2	696.9	725.2	743.7
10°	1572.7	1468.4	1351.8	1088.5	933.6	797.3	654.5	562.7	512.9	506.9	512.1
12.5°	1616.0	1503.6	1263.4	1061.9	900.2	776.7	617.1	478.6	370.5	378.7	357.2
15°	1646.0	1516.9	1242.4	1006.1	831.1	666.0	473.9	335.4	247.0	221.3	205.9
17.5°	1822.3	1637.8	1215.8	941.8	734.7	518.5	297.6	194.3	165.5	156.5	149.2
20°	2048.7	1786.7	1215.4	874.0	592.3	324.2	185.7	140.7	133.8	139.0	133.4
22.5°	2312.0	1984.8	1280.2	789.5	425.0	204.6	144.5	124.8	117.9	122.2	122.7
25°	2577.1	2282.0	1332.9	709.3	295.9	157.0	128.7	114.9	107.2	111.1	108.9
27.5°	3055.7	2528.2	1320.9	606.8	217.9	138.1	119.7	107.6	96.1	102.1	101.6
30°	3368.8	2962.6	1367.7	463.2	172.8	120.9	111.5	98.2	85.8	92.6	92.2
32.5°	3743.2	3149.2	1418.3	355.5	143.7	114.5	100.4	87.5	80.2	84.5	83.6
35°	4163.9	3518.0	1325.2	295.9	124.8	103.4	88.8	78.9	72.5	74.6	74.6
37.5°	4907.1	3826.4	1269.4	241.0	116.2	93.5	83.2	71.2	67.3	67.3	69.5
40°	5329.1	4297.3	1103.0	190.8	118.8	86.2	77.6	65.2	60.0	59.6	61.8
42.5°	5878.1	4568.7	998.8	154.4	107.6	84.1	71.2	59.2	53.2	52.8	54.9
45°	6203.6	4720.6	852.2	121.4	96.5	97.8	66.0	54.5	45.5	43.7	47.6
47.5°	6409.0	4921.7	769.0	96.5	84.1	97.4	64.3	47.2	38.2	36.0	39.5
50°	6513.2	5021.2	752.7	82.8	72.9	87.1	73.8	39.5	32.6	29.6	32.6
52.5°	6621.7	5182.9	758.7	76.3	64.3	69.9	69.9	33.9	28.7	25.3	27.4
55°	6840.9	5421.8	745.4	72.5	59.2	53.2	45.0	30.0	26.2	22.3	24.4
57.5°	7110.2	5593.3	745.4	69.0	54.9	45.5	36.0	27.9	24.0	19.3	21.0
60°	7059.2	5412.7	708.5	65.6	51.5	42.5	32.6	25.7	22.3	17.6	18.9
62.5°	6708.8	4921.7	573.8	60.5	48.5	40.3	29.6	24.4	21.0	15.4	16.7
65°	6297.1	4400.2	398.8	54.9	45.0	36.5	26.6	23.2	19.3	13.7	14.6
67.5°	5801.3	3778.8	221.3	49.3	41.6	31.7	24.4	22.7	18.4	12.4	13.3
70°	4941.0	2852.8	118.8	45.0	39.0	29.2	23.2	22.7	18.4	12.0	12.4
72.5°	3709.3	1796.5	69.5	41.2	35.6	27.0	21.9	23.2	18.0	11.6	11.6
75°	2523.9	1090.6	49.7	35.2	31.7	22.7	21.0	22.3	18.4	11.6	10.7
77.5°	1715.9	766.4	40.7	31.7	28.7	20.2	21.4	22.3	18.4	9.4	7.3
80°	1071.3	395.4	30.9	25.3	24.9	17.6	21.4	19.3	12.0	2.1	0.0
82.5°	749.2	147.1	18.0	19.3	19.3	12.4	16.7	13.7	6.9	0.0	0.0
85°	314.4	25.3	9.9	13.7	12.0	7.3	13.3	10.3	4.3	0.0	0.0
87.5°	5.6	0.0	3.9	8.1	8.6	4.3	6.9	4.3	0.0	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6
2.5°	933.6	892.9	807.1	848.3	844.0	862.9	864.6	820.9	915.2	973.5	982.1
5°	895.5	868.0	863.3	839.7	833.7	868.5	849.6	848.3	893.8	960.2	960.7
7.5°	744.1	723.1	732.9	705.5	634.7	639.0	645.4	672.5	711.5	755.2	771.1
10°	510.8	565.2	525.4	521.9	514.6	491.9	473.9	488.1	538.7	579.0	594.0
12.5°	364.5	373.1	397.6	388.6	401.0	381.7	374.4	418.6	467.9	509.1	538.7
15°	213.1	227.7	242.3	273.2	285.6	281.8	304.1	341.0	380.8	399.7	436.2
17.5°	150.1	151.4	154.4	187.8	209.7	218.3	231.6	259.5	275.8	284.3	299.3
20°	131.2	127.4	122.2	141.1	161.7	172.4	168.5	190.4	203.7	212.3	223.0
22.5°	118.8	112.4	109.4	115.8	131.7	141.1	142.8	155.7	175.8	181.8	185.3
25°	107.2	102.9	100.8	104.2	112.8	121.8	123.5	140.2	158.3	160.8	167.7
27.5°	99.5	91.3	92.2	94.8	98.6	109.8	113.2	122.7	148.8	151.8	154.0
30°	91.3	82.8	85.3	87.9	86.2	99.9	105.1	115.8	141.1	145.8	148.4
32.5°	83.2	76.8	76.3	78.9	81.9	89.2	100.4	112.8	136.0	142.4	148.8
35°	74.2	69.0	69.9	70.3	74.2	83.6	91.8	98.2	114.1	117.5	119.7
37.5°	67.8	63.5	62.6	66.9	70.8	78.1	81.1	84.1	105.1	112.8	113.2
40°	60.0	57.5	57.5	60.5	69.0	68.2	72.0	81.5	101.6	109.8	110.6
42.5°	54.5	51.0	51.9	54.9	60.9	56.6	64.3	78.1	100.4	108.5	108.1
45°	45.9	45.0	46.7	49.3	51.9	48.0	60.0	74.6	96.1	106.8	103.8
47.5°	38.2	38.2	40.3	42.9	41.6	42.9	54.5	69.9	93.5	103.4	101.2
50°	31.3	31.7	33.9	38.2	34.3	37.7	48.9	65.2	89.2	99.9	98.2
52.5°	26.6	27.0	28.3	31.3	29.6	34.3	45.0	60.5	84.9	93.9	93.1
55°	23.2	24.0	24.0	25.7	26.6	32.2	40.7	55.8	78.5	88.3	86.6
57.5°	20.6	21.4	21.0	22.3	23.2	28.3	36.5	50.6	72.0	80.2	77.6
60°	18.4	19.3	18.9	20.6	20.2	24.4	31.7	45.0	65.2	71.6	69.5
62.5°	16.3	17.2	17.2	18.0	18.4	20.6	27.4	39.9	58.3	63.5	61.8
65°	14.6	15.4	15.9	15.4	16.3	17.6	23.2	36.0	50.6	55.8	53.2
67.5°	13.3	14.2	15.0	13.3	14.2	14.6	19.7	32.2	44.6	48.9	46.7
70°	12.9	13.3	13.3	11.6	11.2	11.6	17.2	27.4	39.0	43.3	40.3
72.5°	12.0	12.4	12.0	9.4	8.1	9.0	14.6	23.2	33.0	36.5	33.9
75°	11.2	11.6	11.2	7.7	5.1	6.4	12.0	20.2	28.3	30.0	28.7
77.5°	9.4	10.3	10.3	5.6	1.7	3.9	9.0	16.3	23.6	23.6	24.0
80°	0.9	2.6	4.3	3.0	0.0	0.4	3.0	8.6	15.0	14.6	15.9
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	5.1	3.9	4.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6	906.6
2.5°	962.0	948.7	965.4	1016.4	995.8	999.7	986.0	1070.5	1166.1	1169.1
5°	961.5	949.5	974.4	972.2	1031.0	1094.9	1156.7	1256.6	1398.1	1399.0
7.5°	763.8	835.0	853.4	847.9	923.4	1011.3	1106.5	1297.8	1414.0	1426.4
10°	688.8	719.6	757.4	771.1	802.4	886.0	993.7	1210.3	1340.6	1369.4
12.5°	597.0	695.6	745.8	843.2	861.2	873.2	1043.0	1231.3	1310.6	1307.2
15°	494.5	580.3	659.6	778.4	827.3	953.4	1087.2	1333.8	1381.0	1426.4
17.5°	350.0	414.7	536.5	661.3	810.6	947.8	1209.0	1516.9	1606.1	1660.1
20°	234.2	265.5	375.7	540.8	729.9	866.3	1258.7	1682.4	1779.8	1826.5
22.5°	190.0	205.0	262.0	396.3	623.6	862.5	1278.9	1863.0	2124.6	2186.8
25°	167.3	177.6	208.0	293.3	517.6	845.3	1390.4	2066.3	2381.9	2432.1
27.5°	146.2	161.7	184.4	241.9	443.9	833.3	1447.0	2407.7	2784.2	2833.5
30°	139.8	158.7	180.6	220.4	392.4	787.0	1537.1	2715.6	3072.8	3160.8
32.5°	151.0	157.4	168.1	202.0	352.5	738.1	1695.3	3083.6	3311.7	3426.2
35°	119.7	131.2	150.1	185.3	335.8	735.5	1784.9	3320.3	3694.7	3765.5
37.5°	117.1	127.8	152.2	180.6	356.0	755.2	1917.9	3805.3	4385.2	4530.1
40°	113.7	127.4	150.5	178.4	356.0	774.5	2002.8	4193.5	4849.6	4996.7
42.5°	112.4	129.9	150.1	187.4	344.8	785.3	2131.0	4580.7	5340.3	5456.5
45°	111.5	132.5	151.4	198.1	342.2	820.4	2203.5	4769.0	5655.9	5789.3
47.5°	109.4	132.5	169.0	191.7	328.1	817.0	2297.4	5048.2	5844.2	5956.6
50°	107.6	133.4	191.3	179.7	330.2	796.0	2424.8	5310.2	6107.9	6188.1
52.5°	103.8	136.4	187.8	163.0	323.8	793.8	2614.8	5682.9	6454.9	6513.6
55°	95.2	132.5	169.8	142.4	301.1	769.4	2866.6	6167.6	6936.1	6946.4
57.5°	87.5	123.1	142.0	130.8	252.2	772.4	3083.6	6613.6	7365.0	7413.0
60°	79.8	127.8	110.2	121.8	208.9	717.5	3188.6	6784.3	7677.2	7747.5
62.5°	72.5	117.9	93.9	111.9	186.1	666.5	3115.7	6647.0	7717.1	7864.6
65°	64.3	81.9	79.3	100.4	188.3	594.8	2872.1	6245.2	7565.7	7768.9
67.5°	55.3	64.3	69.9	86.6	201.6	533.5	2454.4	5600.2	7158.7	7389.0
70°	48.5	57.9	60.9	75.9	209.7	493.2	1936.8	4705.1	6324.9	6537.7
72.5°	40.3	53.6	54.5	66.5	202.0	453.3	1380.1	3377.8	4802.9	4905.0
75°	34.7	44.6	49.3	55.8	169.8	338.4	760.4	2090.7	3036.8	3150.9
77.5°	31.3	33.9	37.3	38.6	72.0	176.3	261.6	1289.2	1700.5	1829.1
80°	24.0	26.6	25.7	26.6	39.5	60.9	99.5	604.3	803.3	874.9
82.5°	7.7	12.9	14.2	12.0	25.7	30.0	28.7	208.9	261.2	277.5
85°	1.7	4.7	2.1	0.0	8.6	15.4	2.1	31.7	62.6	46.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

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