

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: P367269

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

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367269
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-SA2B-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: 6077 lumens
Efficiency: N/A
Efficacy: 71.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

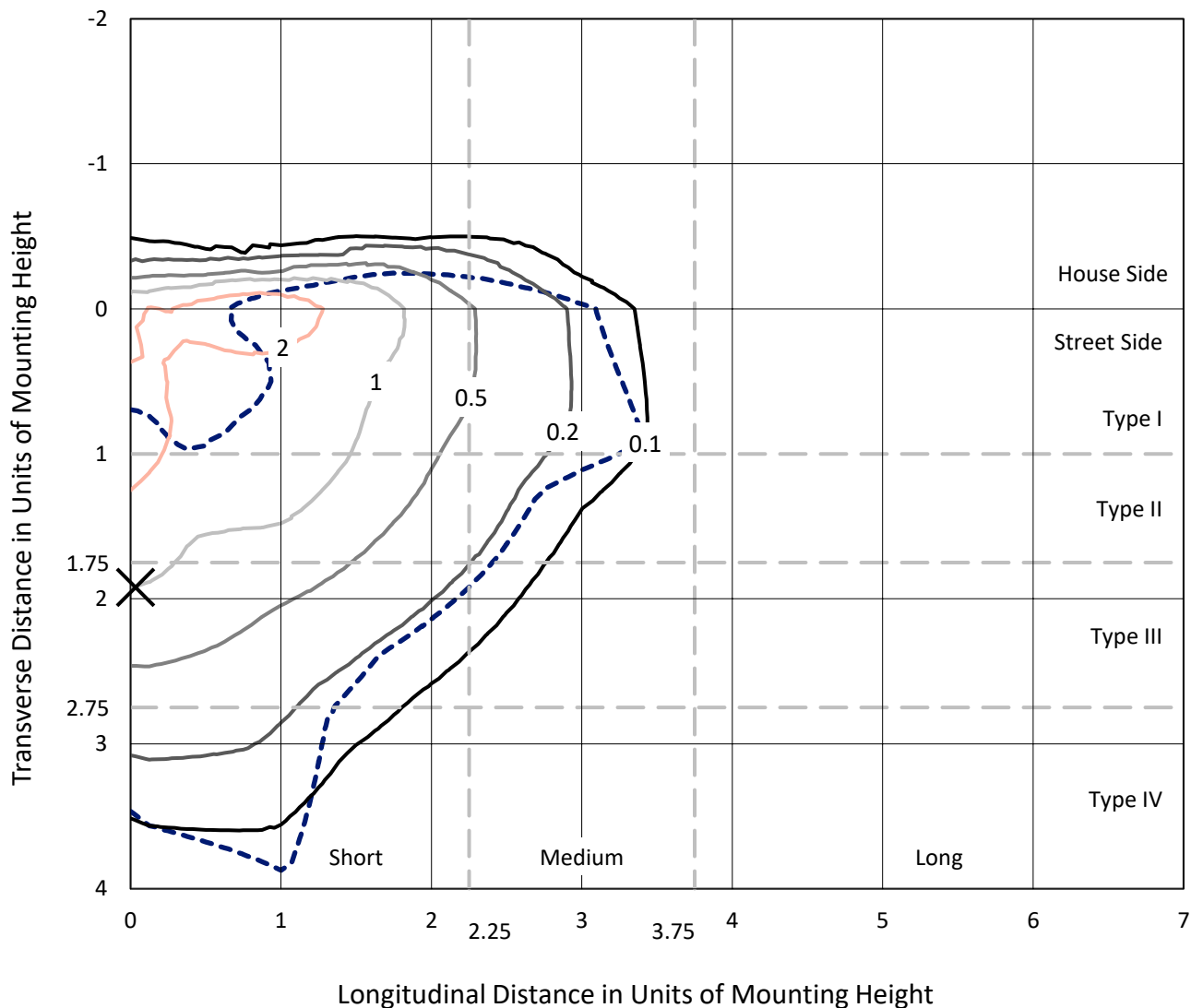
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

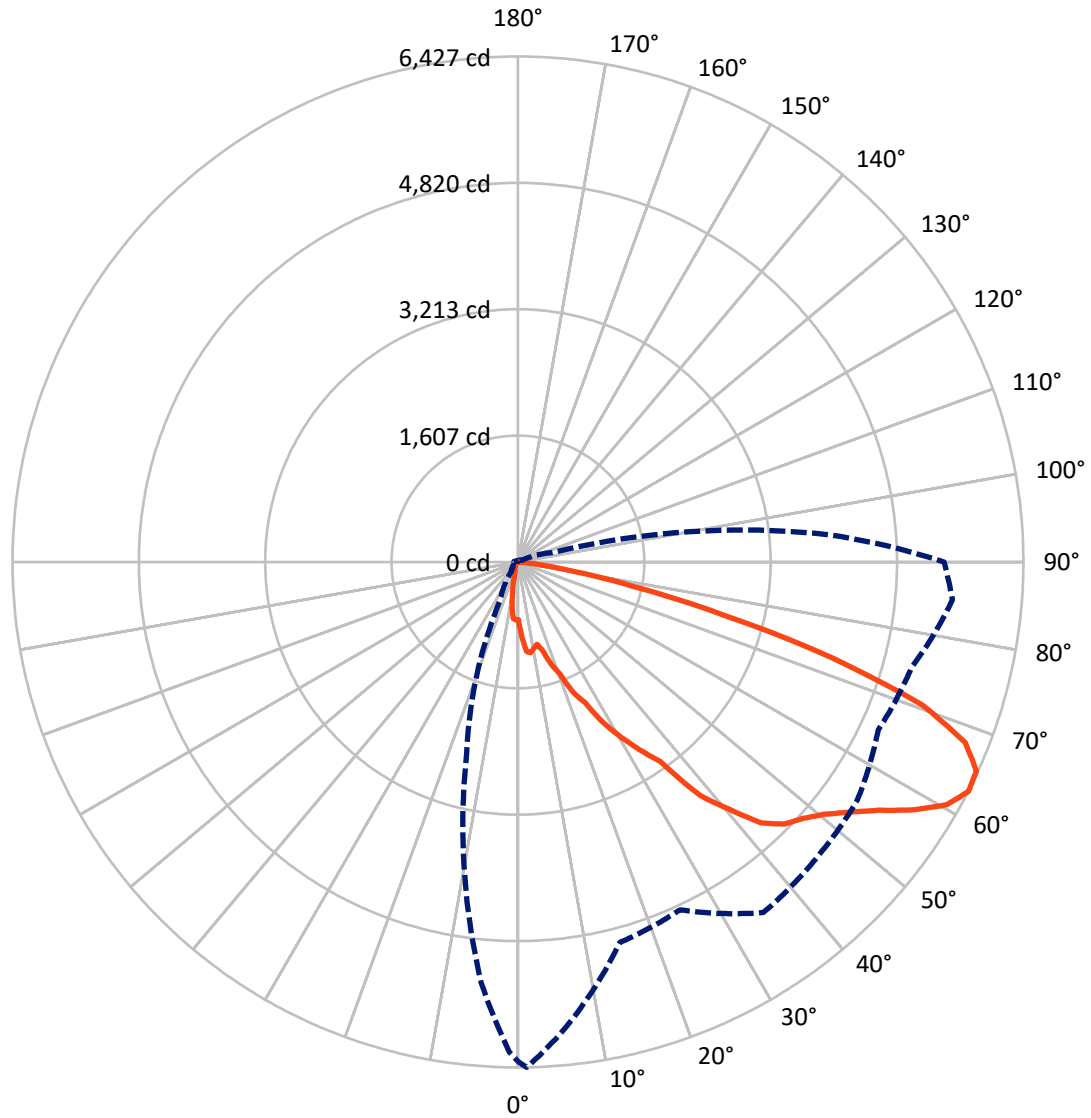
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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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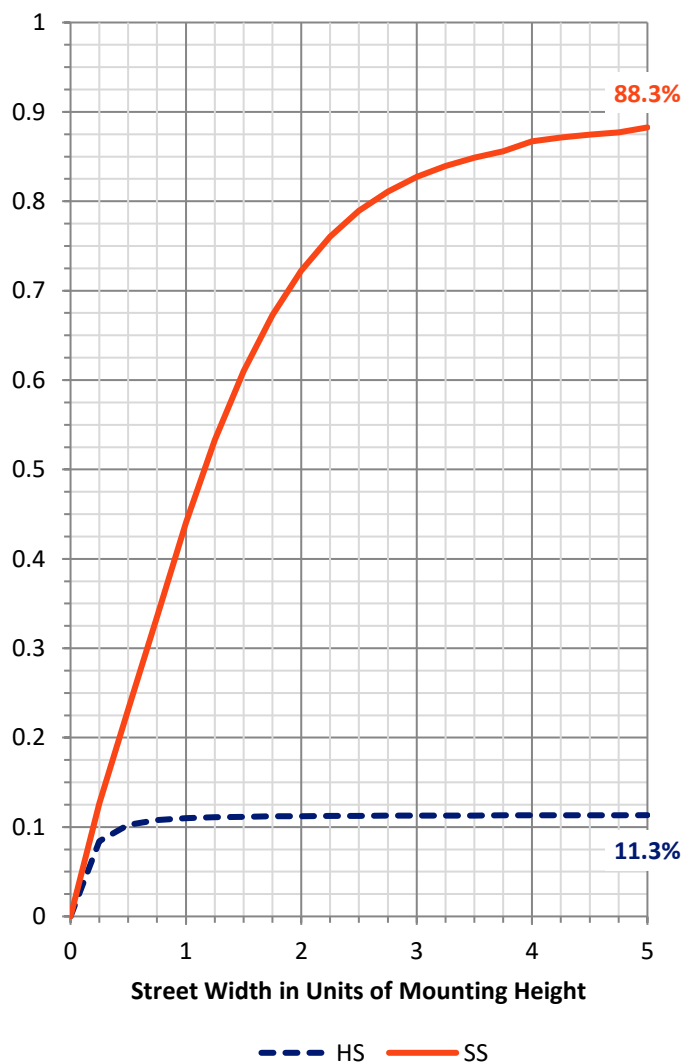
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	694.9	0.0	694.9
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	5382.1	0.0	5382.1
	% Fixture	88.6	0.0	88.6
Total	Lumens	6077.0	0.0	6077.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.3
10°-20°	213.6	3.5
20°-30°	345.4	5.7
30°-40°	578.5	9.5
40°-50°	945.9	15.6
50°-60°	1400.2	23.0
60°-70°	1607.5	26.5
70°-80°	794.9	13.1
80°-90°	109.1	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°	6077.0	100.0
0°-180°	6077.0	100.0

Coefficient of Utilization

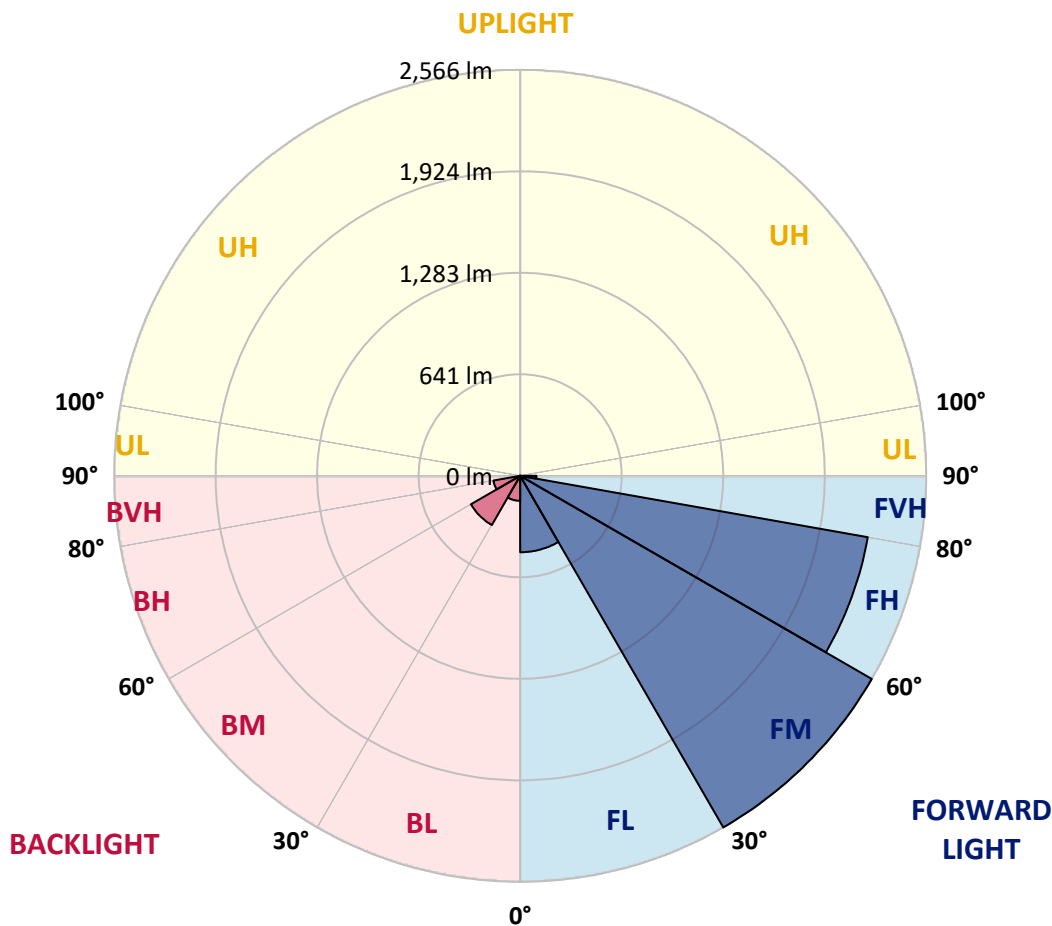


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	482.7	7.9			
FM (30°-60°)	2565.7	42.2			
FH (60°-80°)	2230.6	36.7			G2/5000
FVH (80°-90°)	103.1	1.7			G2/225
BL (0°-30°)	158.1	2.6	B1/500		
BM (30°-60°)	358.9	5.9	B1/1000		
BH (60°-80°)	171.8	2.8	B1/500		G1/500
BVH (80°-90°)	6.0	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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	944.0	948.5	927.4	924.6	875.4	936.7	938.5	945.7	900.7	813.5	935.3
5°	1129.6	1142.1	1125.8	1198.2	1219.0	1263.6	1181.6	1255.0	1223.8	1232.5	1250.1
7.5°	1151.8	1164.6	1198.9	1320.1	1431.9	1403.9	1394.9	1422.6	1420.2	1356.1	1388.0
10°	1105.7	1116.5	1173.6	1394.2	1443.0	1569.1	1599.9	1536.2	1510.2	1370.0	1308.7
12.5°	1055.5	1073.5	1146.2	1410.8	1557.3	1684.7	1786.2	1695.5	1609.2	1460.0	1403.9
15°	1151.8	1161.8	1276.1	1445.4	1573.6	1661.5	1744.6	1714.5	1701.4	1594.0	1403.9
17.5°	1340.5	1364.1	1446.8	1530.3	1631.4	1684.4	1664.7	1655.3	1621.7	1790.4	1593.7
20°	1474.9	1518.9	1627.3	1663.3	1582.9	1632.4	1620.3	1612.0	1585.7	1899.4	1811.8
22.5°	1765.8	1806.3	1808.4	1821.2	1634.2	1555.2	1535.1	1537.6	1657.0	1932.0	2083.3
25°	1963.9	1977.7	2087.1	1995.7	1774.1	1578.8	1502.2	1536.5	1708.6	2166.1	2338.5
27.5°	2288.0	2320.9	2389.1	2079.5	1857.9	1563.9	1442.0	1566.6	1844.4	2243.7	2622.2
30°	2552.2	2583.7	2693.5	2194.1	1930.6	1637.6	1468.0	1627.3	1928.9	2403.3	2877.0
32.5°	2766.6	2847.9	2972.6	2371.1	1927.8	1722.5	1600.6	1607.2	2032.8	2610.0	3129.1
35°	3040.5	3116.3	3203.9	2493.0	2053.9	1749.8	1639.7	1804.6	2187.2	2826.1	3468.5
37.5°	3657.9	3772.6	3599.4	2800.2	2200.7	1997.1	1794.2	1926.1	2348.9	3046.7	3935.0
40°	4034.7	4131.3	3964.1	2957.0	2454.9	2121.8	2069.8	2137.3	2507.2	3160.7	4286.5
42.5°	4405.9	4533.4	4253.9	3193.2	2696.3	2473.6	2331.6	2386.0	2736.1	3435.6	4681.9
45°	4674.7	4753.6	4316.6	3316.8	3028.0	2874.6	2780.1	2699.0	3055.4	3612.2	4937.2
47.5°	4809.7	4872.7	4440.2	3356.0	3225.4	3298.8	3505.9	3336.6	3338.0	3740.0	5074.6
50°	4996.7	5040.7	4509.5	3402.7	3439.8	3959.9	4064.5	3704.0	3660.7	3868.1	5097.1
52.5°	5259.6	5281.0	4643.8	3526.0	3760.8	4477.6	4515.4	4369.6	3983.8	4106.4	5147.0
55°	5609.0	5571.2	4883.8	3785.0	4095.7	4856.8	4907.4	4780.3	4390.0	4344.3	5301.5
57.5°	5985.7	5942.5	5239.5	4150.0	4458.9	5146.7	5176.8	5186.8	4659.8	4554.8	5564.0
60°	6255.9	6263.8	5687.2	4568.7	4684.7	5424.1	5363.8	5272.4	4932.0	4863.4	5691.7
62.5°	6350.4	6426.9	6036.0	5007.5	4879.3	5441.4	5347.9	5270.6	5053.9	5181.6	5545.3
65°	6273.2	6406.8	6117.0	5392.9	4997.1	5224.2	5126.9	5077.4	5050.1	5311.5	5221.1
67.5°	5966.4	6133.6	5885.0	5396.3	4569.0	4448.2	4563.2	4720.0	4629.3	5203.8	4767.1
70°	5279.0	5462.1	5346.5	5079.8	3806.2	3499.7	3626.4	3863.6	3799.6	4628.3	4099.1
72.5°	3960.6	4196.1	4218.9	4385.5	3021.4	2633.9	2652.3	2645.7	2756.2	3732.0	3198.7
75°	2544.2	2727.4	2975.0	3538.8	2295.3	1923.0	1747.1	1704.1	1910.2	2916.2	2290.1
77.5°	1477.0	1498.8	1613.1	2670.0	1643.9	1385.5	1265.7	1327.0	1399.0	2035.2	1517.8
80°	706.4	717.5	764.6	1373.8	1142.1	1199.2	1106.8	1175.7	960.6	1169.8	861.2
82.5°	224.1	226.5	234.4	674.9	709.2	794.4	509.1	682.6	593.9	707.1	573.5
85°	37.4	63.7	78.6	195.0	400.3	268.0	110.5	243.4	331.4	446.0	260.4
87.5°	0.0	0.0	0.0	3.5	32.6	15.2	2.4	13.9	50.9	99.4	11.8
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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	970.7	994.6	904.5	823.8	844.3	828.0	803.4	761.5	664.5	735.9	731.0
5°	1249.1	1204.8	1082.9	1026.1	956.8	851.2	838.4	757.4	721.7	727.6	722.4
7.5°	1346.1	1266.8	1159.1	988.0	825.6	673.2	626.5	573.5	562.7	585.6	600.5
10°	1269.9	1185.7	1091.5	878.9	753.9	643.8	528.4	454.3	414.2	409.3	413.5
12.5°	1304.8	1214.1	1020.2	857.4	726.9	627.1	498.3	386.5	299.2	305.8	288.5
15°	1329.1	1224.9	1003.2	812.4	671.1	537.8	382.7	270.8	199.5	178.7	166.2
17.5°	1471.4	1322.5	981.8	760.5	593.2	418.7	240.3	156.9	133.7	126.4	120.5
20°	1654.3	1442.7	981.4	705.8	478.2	261.8	149.9	113.6	108.0	112.2	107.7
22.5°	1866.9	1602.7	1033.7	637.5	343.2	165.2	116.7	100.8	95.2	98.7	99.0
25°	2080.9	1842.6	1076.3	572.8	238.9	126.7	103.9	92.8	86.6	89.7	88.0
27.5°	2467.4	2041.4	1066.6	490.0	175.9	111.5	96.6	86.9	77.6	82.4	82.1
30°	2720.2	2392.2	1104.3	374.0	139.6	97.7	90.0	79.3	69.3	74.8	74.5
32.5°	3022.5	2542.9	1145.2	287.1	116.0	92.5	81.0	70.6	64.8	68.2	67.5
35°	3362.2	2840.7	1070.1	238.9	100.8	83.5	71.7	63.7	58.5	60.3	60.3
37.5°	3962.3	3089.7	1025.0	194.6	93.8	75.5	67.2	57.5	54.4	54.4	56.1
40°	4303.1	3469.9	890.7	154.1	95.9	69.6	62.7	52.6	48.5	48.1	49.9
42.5°	4746.3	3689.1	806.5	124.7	86.9	67.9	57.5	47.8	42.9	42.6	44.3
45°	5009.2	3811.7	688.1	98.0	77.9	79.0	53.3	44.0	36.7	35.3	38.4
47.5°	5175.1	3974.1	620.9	77.9	67.9	78.6	51.9	38.1	30.8	29.1	31.9
50°	5259.2	4054.4	607.8	66.8	58.9	70.3	59.6	31.9	26.3	23.9	26.3
52.5°	5346.8	4185.0	612.6	61.6	51.9	56.4	56.4	27.4	23.2	20.4	22.2
55°	5523.8	4377.9	601.9	58.5	47.8	42.9	36.4	24.2	21.1	18.0	19.7
57.5°	5741.3	4516.4	601.9	55.8	44.3	36.7	29.1	22.5	19.4	15.6	17.0
60°	5700.1	4370.6	572.1	53.0	41.6	34.3	26.3	20.8	18.0	14.2	15.2
62.5°	5417.1	3974.1	463.3	48.8	39.1	32.6	23.9	19.7	17.0	12.5	13.5
65°	5084.7	3553.0	322.1	44.3	36.4	29.4	21.5	18.7	15.6	11.1	11.8
67.5°	4684.4	3051.2	178.7	39.8	33.6	25.6	19.7	18.4	14.9	10.0	10.7
70°	3989.7	2303.6	95.9	36.4	31.5	23.5	18.7	18.4	14.9	9.7	10.0
72.5°	2995.1	1450.6	56.1	33.2	28.7	21.8	17.7	18.7	14.5	9.4	9.4
75°	2038.0	880.6	40.2	28.4	25.6	18.4	17.0	18.0	14.9	9.4	8.7
77.5°	1385.5	618.8	32.9	25.6	23.2	16.3	17.3	18.0	14.9	7.6	5.9
80°	865.1	319.3	24.9	20.4	20.1	14.2	17.3	15.6	9.7	1.7	0.0
82.5°	605.0	118.8	14.5	15.6	15.6	10.0	13.5	11.1	5.5	0.0	0.0
85°	253.8	20.4	8.0	11.1	9.7	5.9	10.7	8.3	3.5	0.0	0.0
87.5°	4.5	0.0	3.1	6.6	6.9	3.5	5.5	3.5	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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	753.9	721.0	651.7	685.0	681.5	696.7	698.1	662.8	739.0	786.1	793.0
5°	723.1	700.9	697.1	678.0	673.2	701.3	686.0	685.0	721.7	775.4	775.7
7.5°	600.8	583.9	591.8	569.7	512.5	516.0	521.2	543.0	574.5	609.8	622.6
10°	412.4	456.4	424.2	421.4	415.6	397.2	382.7	394.1	434.9	467.5	479.6
12.5°	294.4	301.3	321.0	313.7	323.8	308.2	302.3	338.0	377.8	411.1	434.9
15°	172.1	183.9	195.7	220.6	230.6	227.5	245.5	275.3	307.5	322.7	352.2
17.5°	121.2	122.2	124.7	151.7	169.3	176.3	187.0	209.5	222.7	229.6	241.7
20°	106.0	102.9	98.7	113.9	130.6	139.2	136.1	153.8	164.5	171.4	180.1
22.5°	95.9	90.7	88.3	93.5	106.3	113.9	115.3	125.7	142.0	146.8	149.6
25°	86.6	83.1	81.4	84.2	91.1	98.3	99.7	113.2	127.8	129.9	135.4
27.5°	80.3	73.8	74.5	76.5	79.6	88.7	91.4	99.0	120.2	122.6	124.3
30°	73.8	66.8	68.9	71.0	69.6	80.7	84.8	93.5	113.9	117.7	119.8
32.5°	67.2	62.0	61.6	63.7	66.1	72.0	81.0	91.1	109.8	115.0	120.2
35°	59.9	55.8	56.4	56.8	59.9	67.5	74.1	79.3	92.1	94.9	96.6
37.5°	54.7	51.3	50.6	54.0	57.1	63.0	65.5	67.9	84.8	91.1	91.4
40°	48.5	46.4	46.4	48.8	55.8	55.1	58.2	65.8	82.1	88.7	89.3
42.5°	44.0	41.2	41.9	44.3	49.2	45.7	51.9	63.0	81.0	87.6	87.3
45°	37.1	36.4	37.7	39.8	41.9	38.8	48.5	60.3	77.6	86.2	83.8
47.5°	30.8	30.8	32.6	34.6	33.6	34.6	44.0	56.4	75.5	83.5	81.7
50°	25.3	25.6	27.4	30.8	27.7	30.5	39.5	52.6	72.0	80.7	79.3
52.5°	21.5	21.8	22.9	25.3	23.9	27.7	36.4	48.8	68.6	75.8	75.1
55°	18.7	19.4	19.4	20.8	21.5	26.0	32.9	45.0	63.4	71.3	70.0
57.5°	16.6	17.3	17.0	18.0	18.7	22.9	29.4	40.9	58.2	64.8	62.7
60°	14.9	15.6	15.2	16.6	16.3	19.7	25.6	36.4	52.6	57.8	56.1
62.5°	13.2	13.9	13.9	14.5	14.9	16.6	22.2	32.2	47.1	51.3	49.9
65°	11.8	12.5	12.8	12.5	13.2	14.2	18.7	29.1	40.9	45.0	42.9
67.5°	10.7	11.4	12.1	10.7	11.4	11.8	15.9	26.0	36.0	39.5	37.7
70°	10.4	10.7	10.7	9.4	9.0	9.4	13.9	22.2	31.5	35.0	32.6
72.5°	9.7	10.0	9.7	7.6	6.6	7.3	11.8	18.7	26.7	29.4	27.4
75°	9.0	9.4	9.0	6.2	4.2	5.2	9.7	16.3	22.9	24.2	23.2
77.5°	7.6	8.3	8.3	4.5	1.4	3.1	7.3	13.2	19.0	19.0	19.4
80°	0.7	2.1	3.5	2.4	0.0	0.3	2.4	6.9	12.1	11.8	12.8
82.5°	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	4.2	3.1	3.5
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°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	776.7	766.0	779.5	820.7	804.1	807.2	796.1	864.4	941.6	944.0
5°	776.4	766.7	786.8	785.1	832.5	884.1	934.0	1014.7	1128.9	1129.6
7.5°	616.8	674.2	689.1	684.6	745.6	816.6	893.4	1047.9	1141.7	1151.8
10°	556.2	581.1	611.6	622.6	647.9	715.4	802.4	977.3	1082.5	1105.7
12.5°	482.0	561.7	602.2	680.8	695.4	705.1	842.2	994.2	1058.3	1055.5
15°	399.3	468.5	532.6	628.5	668.0	769.8	877.9	1077.0	1115.1	1151.8
17.5°	282.6	334.9	433.2	534.0	654.5	765.3	976.2	1224.9	1296.9	1340.5
20°	189.1	214.4	303.4	436.7	589.4	699.5	1016.4	1358.5	1437.1	1474.9
22.5°	153.4	165.5	211.6	320.0	503.5	696.4	1032.7	1504.3	1715.6	1765.8
25°	135.1	143.4	168.0	236.9	418.0	682.6	1122.7	1668.5	1923.3	1963.9
27.5°	118.1	130.6	148.9	195.3	358.4	672.9	1168.4	1944.1	2248.2	2288.0
30°	112.9	128.1	145.8	178.0	316.9	635.5	1241.1	2192.8	2481.2	2552.2
32.5°	121.9	127.1	135.7	163.1	284.7	596.0	1368.9	2489.9	2674.1	2766.6
35°	96.6	106.0	121.2	149.6	271.2	593.9	1441.3	2681.0	2983.3	3040.5
37.5°	94.5	103.2	122.9	145.8	287.4	609.8	1548.6	3072.7	3540.9	3657.9
40°	91.8	102.9	121.6	144.1	287.4	625.4	1617.2	3386.1	3915.9	4034.7
42.5°	90.7	104.9	121.2	151.3	278.4	634.1	1720.8	3698.8	4312.1	4405.9
45°	90.0	107.0	122.2	160.0	276.3	662.5	1779.3	3850.8	4567.0	4674.7
47.5°	88.3	107.0	136.4	154.8	264.9	659.7	1855.1	4076.3	4719.0	4809.7
50°	86.9	107.7	154.4	145.1	266.6	642.7	1958.0	4287.9	4932.0	4996.7
52.5°	83.8	110.1	151.7	131.6	261.5	641.0	2111.4	4588.8	5212.1	5259.6
55°	76.9	107.0	137.1	115.0	243.1	621.3	2314.6	4980.1	5600.7	5609.0
57.5°	70.6	99.4	114.6	105.6	203.6	623.7	2489.9	5340.2	5947.0	5985.7
60°	64.4	103.2	89.0	98.3	168.6	579.4	2574.7	5478.1	6199.1	6255.9
62.5°	58.5	95.2	75.8	90.4	150.3	538.1	2515.8	5367.3	6231.3	6350.4
65°	51.9	66.1	64.1	81.0	152.0	480.3	2319.2	5042.8	6109.0	6273.2
67.5°	44.7	51.9	56.4	70.0	162.8	430.8	1981.9	4521.9	5780.4	5966.4
70°	39.1	46.8	49.2	61.3	169.3	398.2	1563.9	3799.2	5107.2	5279.0
72.5°	32.6	43.3	44.0	53.7	163.1	366.0	1114.4	2727.4	3878.2	3960.6
75°	28.1	36.0	39.8	45.0	137.1	273.2	614.0	1688.2	2452.1	2544.2
77.5°	25.3	27.4	30.1	31.2	58.2	142.3	211.2	1041.0	1373.1	1477.0
80°	19.4	21.5	20.8	21.5	31.9	49.2	80.3	487.9	648.6	706.4
82.5°	6.2	10.4	11.4	9.7	20.8	24.2	23.2	168.6	210.9	224.1
85°	1.4	3.8	1.7	0.0	6.9	12.5	1.7	25.6	50.6	37.4
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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