

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: P597013

Luminaire Tested: **MSA-SA3A-835-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597013
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-835-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 7054 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

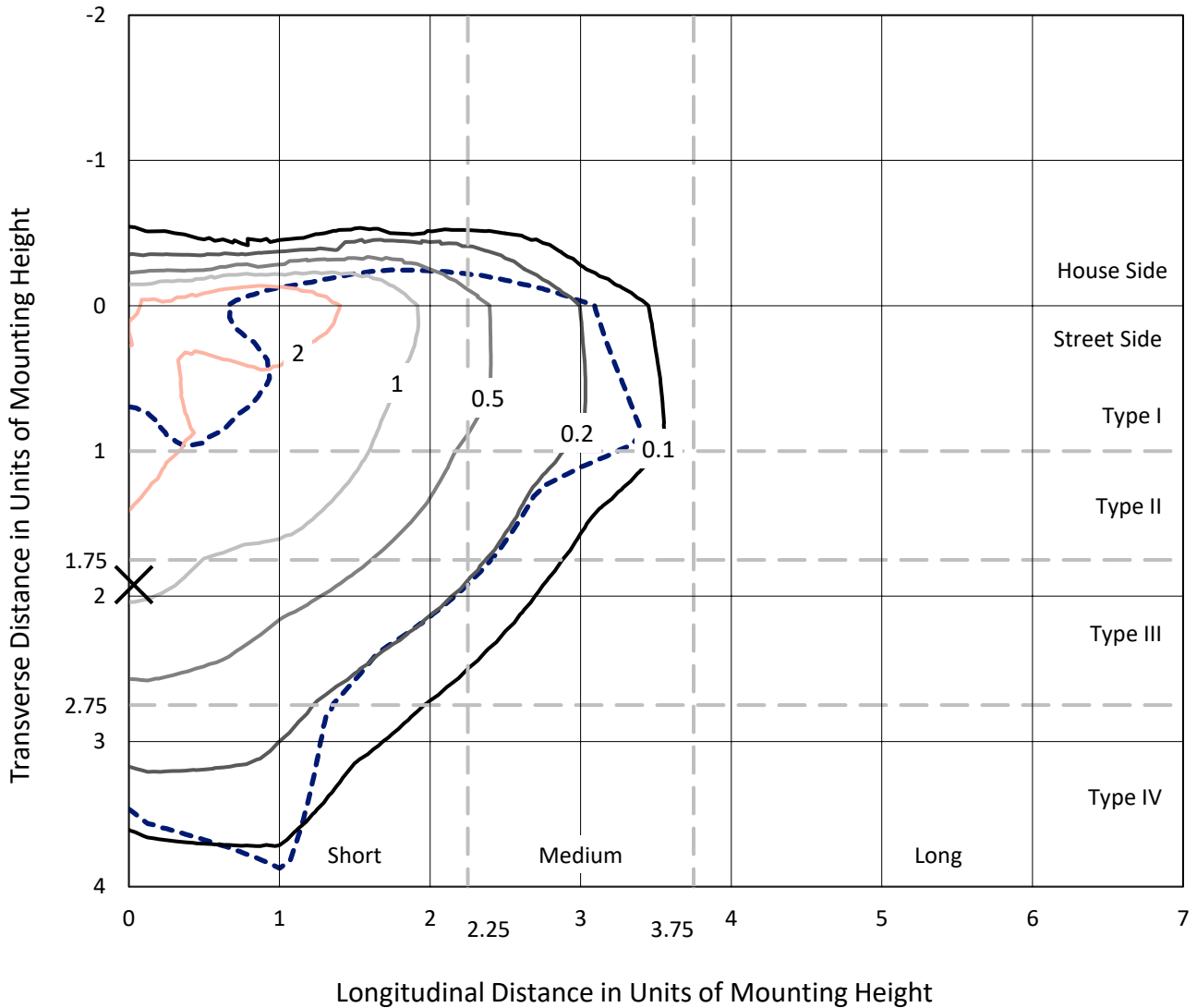
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

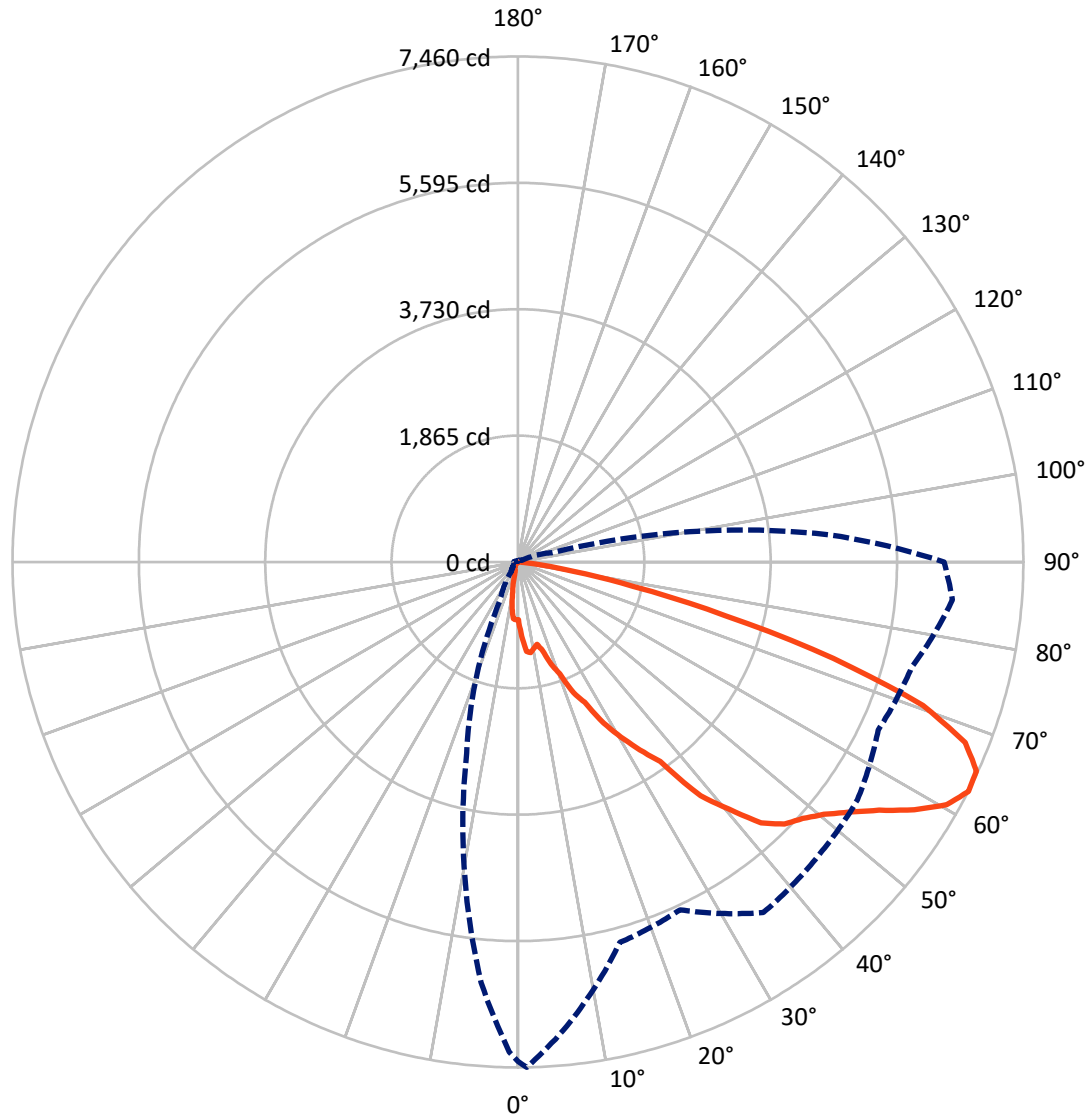
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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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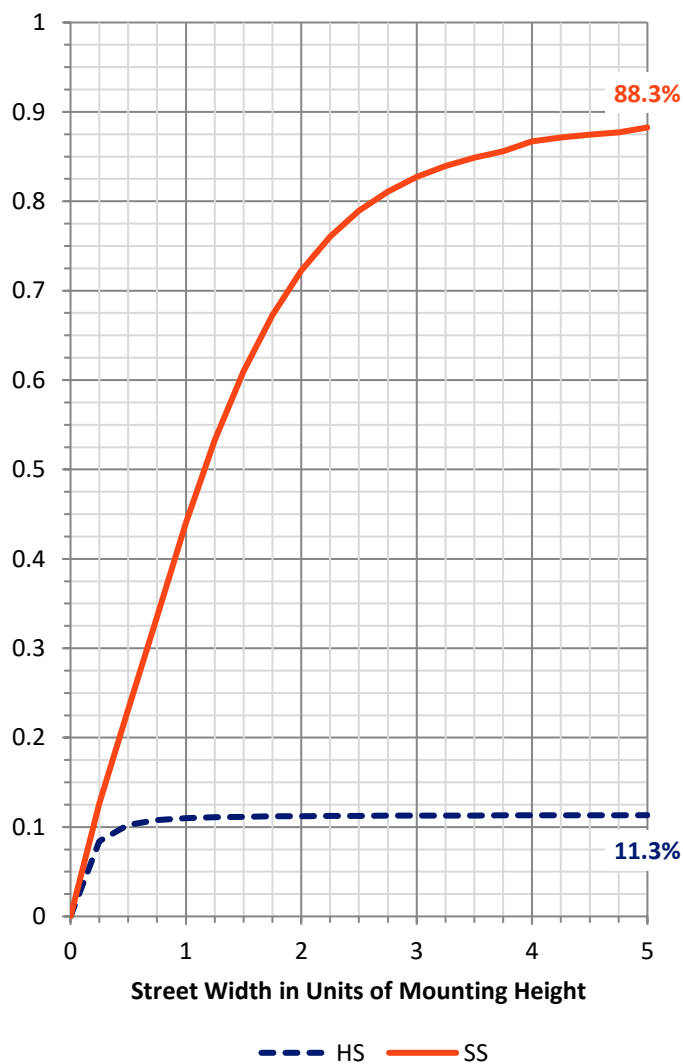
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	806.7	0.0	806.7
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	6247.3	0.0	6247.3
	% Fixture	88.6	0.0	88.6
Total	Lumens	7054.0	0.0	7054.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	1.3
10°-20°	248.0	3.5
20°-30°	400.9	5.7
30°-40°	671.5	9.5
40°-50°	1098.0	15.6
50°-60°	1625.3	23.0
60°-70°	1866.0	26.5
70°-80°	922.7	13.1
80°-90°	126.7	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°	7054.0	100.0
0°-180°	7054.0	100.0

Coefficient of Utilization



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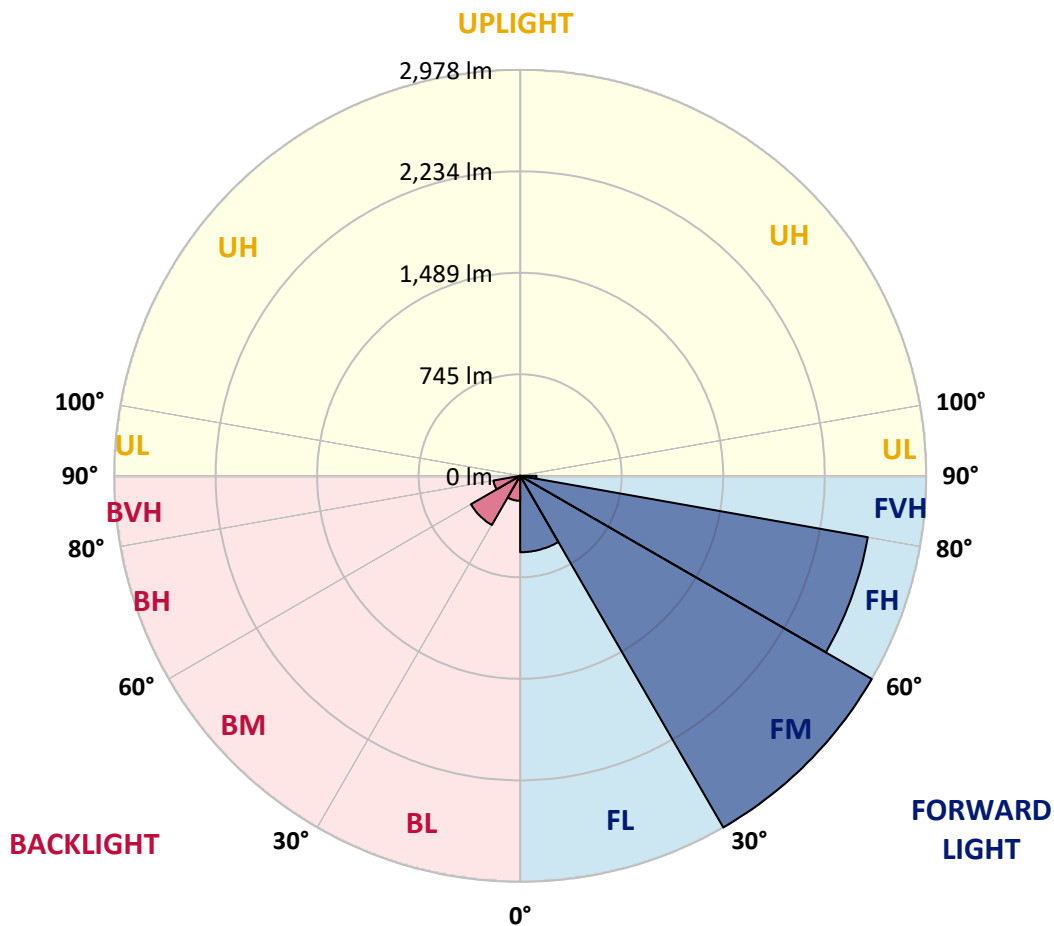
CATALOG NUMBER: MSA-SA3A-835-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	560.3	7.9			
FM (30°-60°)	2978.2	42.2			
FH (60°-80°)	2589.3	36.7			G2/5000
FVH (80°-90°)	119.6	1.7			G2/225
BL (0°-30°)	183.5	2.6	B1/500		
BM (30°-60°)	416.7	5.9	B1/1000		
BH (60°-80°)	199.5	2.8	B1/500		G1/500
BVH (80°-90°)	7.0	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°	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8
2.5°	1095.8	1101.0	1076.5	1073.3	1016.2	1087.3	1089.3	1097.8	1045.5	944.2	1085.7
5°	1311.2	1325.7	1306.8	1390.8	1414.9	1466.8	1371.5	1456.7	1420.6	1430.6	1451.1
7.5°	1337.0	1351.8	1391.6	1532.3	1662.2	1629.6	1619.1	1651.3	1648.5	1574.1	1611.1
10°	1283.5	1296.0	1362.3	1618.3	1675.0	1821.3	1857.1	1783.1	1753.0	1590.2	1519.0
12.5°	1225.2	1246.1	1330.5	1637.6	1807.7	1955.6	2073.4	1968.1	1868.0	1694.7	1629.6
15°	1337.0	1348.6	1481.3	1677.8	1826.6	1928.7	2025.1	1990.2	1974.9	1850.3	1629.6
17.5°	1556.0	1583.4	1679.4	1776.3	1893.7	1955.2	1932.3	1921.4	1882.4	2078.2	1849.9
20°	1712.0	1763.0	1888.9	1930.7	1837.4	1894.9	1880.8	1871.2	1840.6	2204.8	2103.1
22.5°	2049.7	2096.7	2099.1	2114.0	1896.9	1805.3	1781.9	1784.8	1923.4	2242.6	2418.3
25°	2279.6	2295.7	2422.7	2316.6	2059.3	1832.6	1743.8	1783.5	1983.3	2514.3	2714.5
27.5°	2655.8	2694.0	2773.2	2413.8	2156.6	1815.3	1673.8	1818.5	2140.9	2604.4	3043.7
30°	2962.5	2999.1	3126.5	2546.9	2241.0	1900.9	1704.0	1888.9	2239.0	2789.7	3339.6
32.5°	3211.3	3305.8	3450.5	2752.3	2237.8	1999.4	1857.9	1865.5	2359.6	3029.7	3632.2
35°	3529.3	3617.3	3719.0	2893.8	2384.1	2031.2	1903.3	2094.7	2538.9	3280.5	4026.1
37.5°	4246.0	4379.1	4178.1	3250.3	2554.5	2318.2	2082.6	2235.8	2726.6	3536.5	4567.6
40°	4683.4	4795.5	4601.4	3432.4	2849.6	2462.9	2402.6	2481.0	2910.3	3668.8	4975.6
42.5°	5114.3	5262.2	4937.8	3706.6	3129.7	2871.3	2706.5	2769.6	3176.0	3988.0	5434.7
45°	5426.2	5517.9	5010.6	3850.1	3514.8	3336.8	3227.0	3133.0	3546.6	4193.0	5730.9
47.5°	5583.0	5656.1	5154.1	3895.5	3744.0	3829.2	4069.6	3873.0	3874.6	4341.3	5890.5
50°	5800.0	5851.1	5234.5	3949.8	3992.8	4596.5	4717.9	4299.5	4249.2	4490.0	5916.6
52.5°	6105.1	6130.1	5390.4	4092.9	4365.4	5197.5	5241.3	5072.1	4624.3	4766.6	5974.5
55°	6510.7	6466.9	5669.0	4393.5	4754.1	5637.6	5696.3	5548.8	5095.8	5042.7	6153.8
57.5°	6948.1	6897.8	6081.8	4817.2	5175.8	5974.1	6009.1	6020.7	5408.9	5287.1	6458.5
60°	7261.6	7270.9	6601.6	5303.2	5437.9	6296.1	6226.1	6120.0	5724.9	5645.3	6606.8
62.5°	7371.3	7460.2	7006.4	5812.5	5663.8	6316.2	6207.6	6118.0	5866.4	6014.7	6436.8
65°	7281.7	7436.9	7100.4	6259.9	5800.4	6064.1	5951.2	5893.7	5861.9	6165.4	6060.5
67.5°	6925.6	7119.7	6831.1	6263.9	5303.6	5163.3	5296.8	5478.9	5373.6	6040.4	5533.5
70°	6127.7	6340.3	6206.0	5896.5	4418.1	4062.3	4209.4	4484.8	4410.4	5372.3	4758.1
72.5°	4597.3	4870.7	4897.2	5090.6	3507.2	3057.4	3078.7	3071.1	3199.3	4332.0	3713.0
75°	2953.3	3165.9	3453.3	4107.7	2664.3	2232.1	2027.9	1978.1	2217.3	3385.0	2658.2
77.5°	1714.4	1739.7	1872.4	3099.2	1908.2	1608.3	1469.2	1540.4	1624.0	2362.4	1761.8
80°	820.0	832.9	887.6	1594.6	1325.7	1392.0	1284.7	1364.7	1115.1	1357.9	999.7
82.5°	260.1	262.9	272.1	783.4	823.2	922.1	590.9	792.3	689.4	820.8	665.7
85°	43.4	74.0	91.2	226.3	464.7	311.1	128.2	282.6	384.7	517.7	302.3
87.5°	0.0	0.0	0.0	4.0	37.8	17.7	2.8	16.1	59.1	115.4	13.7
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°	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8
2.5°	1126.7	1154.5	1049.9	956.3	980.0	961.1	932.6	883.9	771.4	854.2	848.6
5°	1449.9	1398.5	1257.0	1191.0	1110.6	988.0	973.2	879.1	837.7	844.5	838.5
7.5°	1562.5	1470.4	1345.4	1146.8	958.3	781.4	727.2	665.7	653.2	679.7	697.0
10°	1474.0	1376.3	1267.0	1020.2	875.1	747.3	613.4	527.4	480.8	475.1	480.0
12.5°	1514.6	1409.3	1184.2	995.3	843.7	728.0	578.4	448.6	347.3	354.9	334.8
15°	1542.8	1421.8	1164.5	943.0	779.0	624.3	444.2	314.3	231.5	207.4	192.9
17.5°	1708.0	1535.1	1139.6	882.7	688.6	486.0	279.0	182.1	155.2	146.7	139.9
20°	1920.2	1674.6	1139.2	819.2	555.1	303.9	174.1	131.8	125.4	130.2	125.0
22.5°	2167.0	1860.3	1199.9	740.0	398.4	191.7	135.5	117.0	110.5	114.6	115.0
25°	2415.4	2138.9	1249.3	664.9	277.4	147.1	120.6	107.7	100.5	104.1	102.1
27.5°	2864.0	2369.6	1238.1	568.8	204.2	129.4	112.1	100.9	90.0	95.7	95.3
30°	3157.5	2776.8	1281.9	434.1	162.0	113.4	104.5	92.1	80.4	86.8	86.4
32.5°	3508.4	2951.7	1329.3	333.2	134.7	107.3	94.1	82.0	75.2	79.2	78.4
35°	3902.7	3297.4	1242.1	277.4	117.0	96.9	83.2	74.0	67.9	69.9	69.9
37.5°	4599.4	3586.4	1189.8	225.9	108.9	87.6	78.0	66.7	63.1	63.1	65.1
40°	4994.9	4027.8	1033.9	178.9	111.3	80.8	72.8	61.1	56.3	55.9	57.9
42.5°	5509.4	4282.2	936.2	144.7	100.9	78.8	66.7	55.5	49.8	49.4	51.5
45°	5814.5	4424.5	798.7	113.8	90.4	91.6	61.9	51.1	42.6	41.0	44.6
47.5°	6007.1	4613.0	720.7	90.4	78.8	91.2	60.3	44.2	35.8	33.8	37.0
50°	6104.7	4706.3	705.5	77.6	68.3	81.6	69.1	37.0	30.5	27.7	30.5
52.5°	6206.4	4857.8	711.1	71.6	60.3	65.5	65.5	31.8	26.9	23.7	25.7
55°	6411.8	5081.7	698.6	67.9	55.5	49.8	42.2	28.1	24.5	20.9	22.9
57.5°	6664.3	5242.5	698.6	64.7	51.5	42.6	33.8	26.1	22.5	18.1	19.7
60°	6616.4	5073.3	664.1	61.5	48.2	39.8	30.5	24.1	20.9	16.5	17.7
62.5°	6288.0	4613.0	537.8	56.7	45.4	37.8	27.7	22.9	19.7	14.5	15.7
65°	5902.1	4124.2	373.8	51.5	42.2	34.2	24.9	21.7	18.1	12.9	13.7
67.5°	5437.5	3541.8	207.4	46.2	39.0	29.7	22.9	21.3	17.3	11.7	12.5
70°	4631.1	2673.9	111.3	42.2	36.6	27.3	21.7	21.3	17.3	11.3	11.7
72.5°	3476.6	1683.9	65.1	38.6	33.4	25.3	20.5	21.7	16.9	10.9	10.9
75°	2365.6	1022.2	46.6	33.0	29.7	21.3	19.7	20.9	17.3	10.9	10.0
77.5°	1608.3	718.3	38.2	29.7	26.9	18.9	20.1	20.9	17.3	8.8	6.8
80°	1004.1	370.6	28.9	23.7	23.3	16.5	20.1	18.1	11.3	2.0	0.0
82.5°	702.2	137.9	16.9	18.1	18.1	11.7	15.7	12.9	6.4	0.0	0.0
85°	294.6	23.7	9.2	12.9	11.3	6.8	12.5	9.6	4.0	0.0	0.0
87.5°	5.2	0.0	3.6	7.6	8.0	4.0	6.4	4.0	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8
2.5°	875.1	836.9	756.5	795.1	791.1	808.8	810.4	769.4	857.8	912.5	920.5
5°	839.3	813.6	809.2	787.1	781.4	814.0	796.3	795.1	837.7	900.0	900.4
7.5°	697.4	677.7	687.0	661.2	594.9	598.9	605.0	630.3	666.9	707.9	722.7
10°	478.7	529.8	492.4	489.2	482.4	461.1	444.2	457.4	504.9	542.7	556.7
12.5°	341.7	349.7	372.6	364.2	375.8	357.8	350.9	392.3	438.6	477.1	504.9
15°	199.8	213.4	227.1	256.1	267.7	264.1	285.0	319.6	357.0	374.6	408.8
17.5°	140.7	141.9	144.7	176.1	196.6	204.6	217.1	243.2	258.5	266.5	280.6
20°	123.0	119.4	114.6	132.2	151.5	161.6	158.0	178.5	190.9	199.0	209.0
22.5°	111.3	105.3	102.5	108.5	123.4	132.2	133.9	145.9	164.8	170.4	173.7
25°	100.5	96.5	94.5	97.7	105.7	114.2	115.8	131.4	148.3	150.7	157.2
27.5°	93.3	85.6	86.4	88.8	92.5	102.9	106.1	115.0	139.5	142.3	144.3
30°	85.6	77.6	80.0	82.4	80.8	93.7	98.5	108.5	132.2	136.7	139.1
32.5°	78.0	72.0	71.6	74.0	76.8	83.6	94.1	105.7	127.4	133.5	139.5
35°	69.5	64.7	65.5	65.9	69.5	78.4	86.0	92.1	106.9	110.1	112.1
37.5°	63.5	59.5	58.7	62.7	66.3	73.2	76.0	78.8	98.5	105.7	106.1
40°	56.3	53.9	53.9	56.7	64.7	63.9	67.5	76.4	95.3	102.9	103.7
42.5°	51.1	47.8	48.6	51.5	57.1	53.1	60.3	73.2	94.1	101.7	101.3
45°	43.0	42.2	43.8	46.2	48.6	45.0	56.3	69.9	90.0	100.1	97.3
47.5°	35.8	35.8	37.8	40.2	39.0	40.2	51.1	65.5	87.6	96.9	94.9
50°	29.3	29.7	31.8	35.8	32.2	35.4	45.8	61.1	83.6	93.7	92.1
52.5°	24.9	25.3	26.5	29.3	27.7	32.2	42.2	56.7	79.6	88.0	87.2
55°	21.7	22.5	22.5	24.1	24.9	30.1	38.2	52.3	73.6	82.8	81.2
57.5°	19.3	20.1	19.7	20.9	21.7	26.5	34.2	47.4	67.5	75.2	72.8
60°	17.3	18.1	17.7	19.3	18.9	22.9	29.7	42.2	61.1	67.1	65.1
62.5°	15.3	16.1	16.1	16.9	17.3	19.3	25.7	37.4	54.7	59.5	57.9
65°	13.7	14.5	14.9	14.5	15.3	16.5	21.7	33.8	47.4	52.3	49.8
67.5°	12.5	13.3	14.1	12.5	13.3	13.7	18.5	30.1	41.8	45.8	43.8
70°	12.1	12.5	12.5	10.9	10.5	10.9	16.1	25.7	36.6	40.6	37.8
72.5°	11.3	11.7	11.3	8.8	7.6	8.4	13.7	21.7	31.0	34.2	31.8
75°	10.5	10.9	10.5	7.2	4.8	6.0	11.3	18.9	26.5	28.1	26.9
77.5°	8.8	9.6	9.6	5.2	1.6	3.6	8.4	15.3	22.1	22.1	22.5
80°	0.8	2.4	4.0	2.8	0.0	0.4	2.8	8.0	14.1	13.7	14.9
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	4.8	3.6	4.0
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°	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8	849.8
2.5°	901.6	889.2	904.8	952.7	933.4	937.0	924.1	1003.3	1093.0	1095.8
5°	901.2	890.0	913.3	911.3	966.3	1026.2	1084.1	1177.8	1310.4	1311.2
7.5°	715.9	782.6	799.9	794.7	865.4	947.8	1037.1	1216.4	1325.3	1337.0
10°	645.6	674.5	709.9	722.7	752.1	830.5	931.4	1134.4	1256.6	1283.5
12.5°	559.5	652.0	699.0	790.3	807.2	818.4	977.6	1154.1	1228.4	1225.2
15°	463.5	543.9	618.2	729.6	775.4	893.6	1019.0	1250.1	1294.3	1337.0
17.5°	328.0	388.7	502.9	619.8	759.7	888.4	1133.2	1421.8	1505.4	1556.0
20°	219.5	248.8	352.1	506.9	684.2	812.0	1179.8	1576.9	1668.2	1712.0
22.5°	178.1	192.1	245.6	371.4	584.5	808.4	1198.7	1746.2	1991.4	2049.7
25°	156.8	166.4	195.0	274.9	485.2	792.3	1303.2	1936.7	2232.5	2279.6
27.5°	137.1	151.5	172.8	226.7	416.0	781.0	1356.3	2256.7	2609.6	2655.8
30°	131.0	148.7	169.2	206.6	367.8	737.6	1440.7	2545.3	2880.1	2962.5
32.5°	141.5	147.5	157.6	189.3	330.4	691.8	1589.0	2890.2	3104.0	3211.3
35°	112.1	123.0	140.7	173.7	314.7	689.4	1673.0	3112.1	3463.0	3529.3
37.5°	109.7	119.8	142.7	169.2	333.6	707.9	1797.6	3566.7	4110.2	4246.0
40°	106.5	119.4	141.1	167.2	333.6	726.0	1877.2	3930.5	4545.5	4683.4
42.5°	105.3	121.8	140.7	175.7	323.2	736.0	1997.4	4293.5	5005.3	5114.3
45°	104.5	124.2	141.9	185.7	320.8	769.0	2065.3	4469.9	5301.2	5426.2
47.5°	102.5	124.2	158.4	179.7	307.5	765.8	2153.4	4731.6	5477.7	5583.0
50°	100.9	125.0	179.3	168.4	309.5	746.1	2272.7	4977.2	5724.9	5800.0
52.5°	97.3	127.8	176.1	152.7	303.5	744.0	2450.8	5326.5	6050.1	6105.1
55°	89.2	124.2	159.2	133.5	282.2	721.1	2686.8	5780.7	6501.1	6510.7
57.5°	82.0	115.4	133.1	122.6	236.4	724.0	2890.2	6198.8	6903.1	6948.1
60°	74.8	119.8	103.3	114.2	195.8	672.5	2988.7	6358.8	7195.7	7261.6
62.5°	67.9	110.5	88.0	104.9	174.5	624.7	2920.3	6230.2	7233.1	7371.3
65°	60.3	76.8	74.4	94.1	176.5	557.5	2692.0	5853.5	7091.2	7281.7
67.5°	51.9	60.3	65.5	81.2	188.9	500.1	2300.5	5248.9	6709.7	6925.6
70°	45.4	54.3	57.1	71.1	196.6	462.3	1815.3	4410.0	5928.3	6127.7
72.5°	37.8	50.2	51.1	62.3	189.3	424.9	1293.5	3165.9	4501.7	4597.3
75°	32.6	41.8	46.2	52.3	159.2	317.2	712.7	1959.6	2846.4	2953.3
77.5°	29.3	31.8	35.0	36.2	67.5	165.2	245.2	1208.3	1593.8	1714.4
80°	22.5	24.9	24.1	24.9	37.0	57.1	93.3	566.4	752.9	820.0
82.5°	7.2	12.1	13.3	11.3	24.1	28.1	26.9	195.8	244.8	260.1
85°	1.6	4.4	2.0	0.0	8.0	14.5	2.0	29.7	58.7	43.4
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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