

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: P596705

Luminaire Tested: **MSA-SA3C-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596705
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-SA3C-827-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: 9763 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

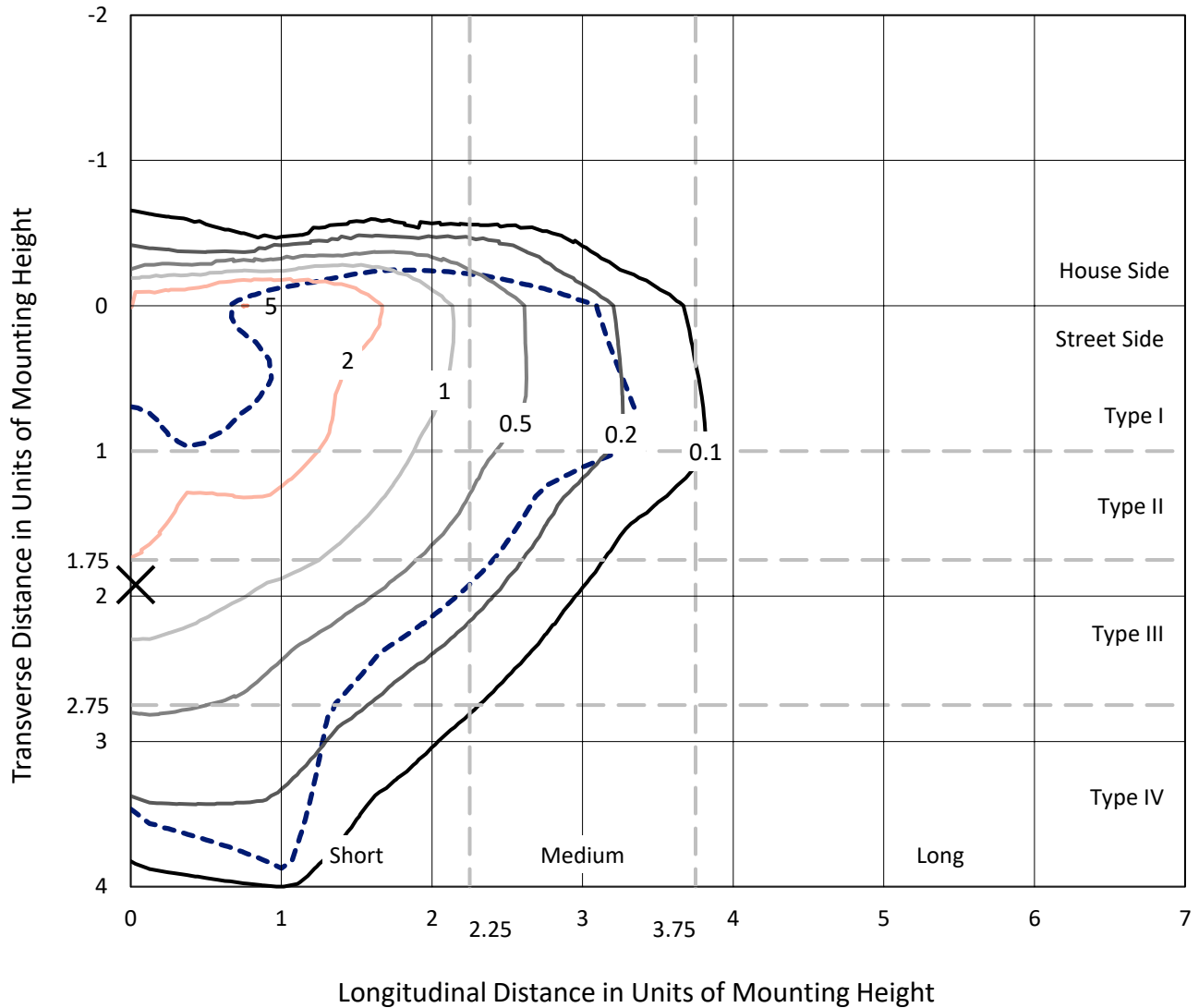
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

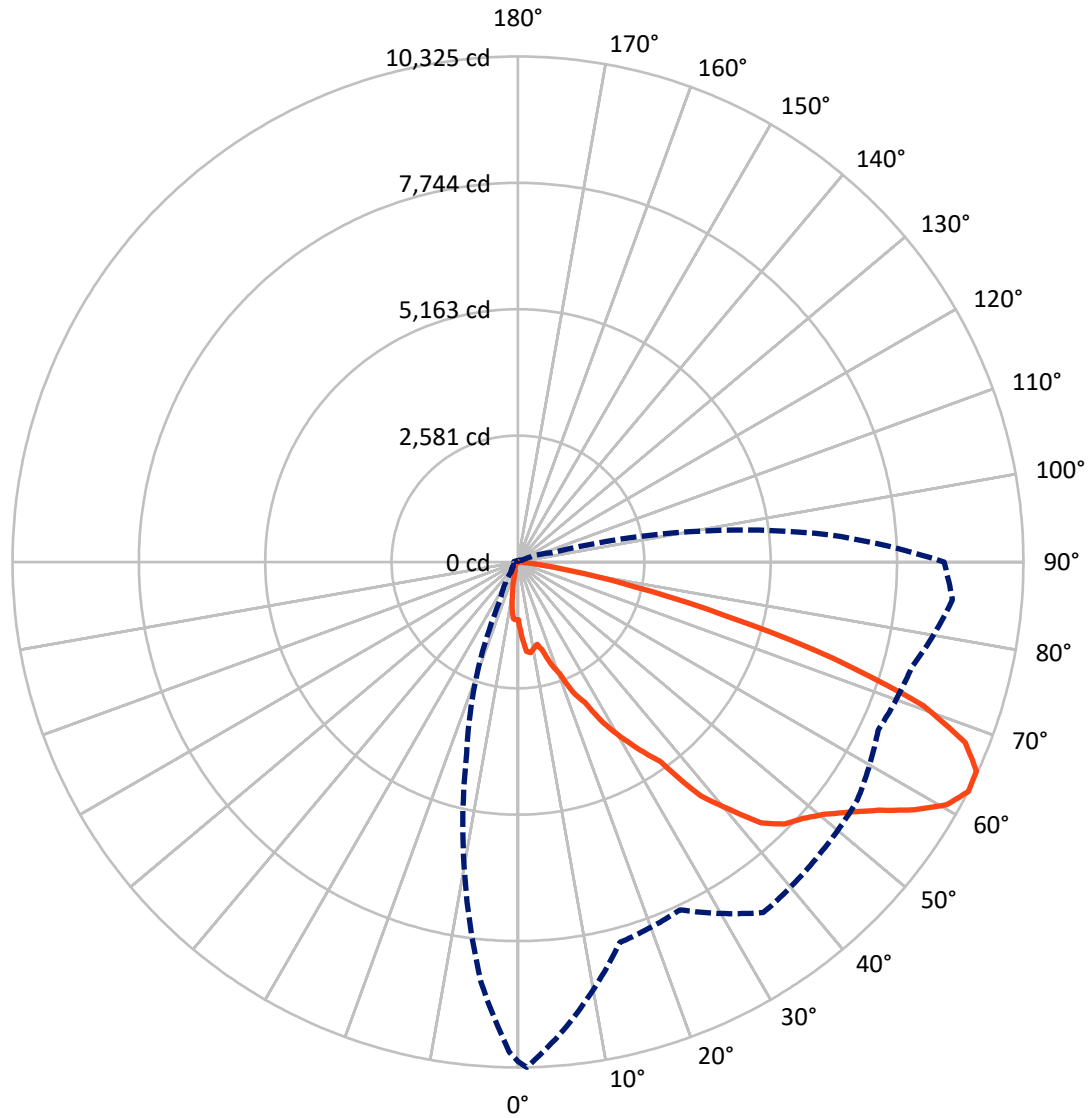
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 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	1116.4	0.0	1116.4
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	8646.6	0.0	8646.6
	% Fixture	88.6	0.0	88.6
Total	Lumens	9763.0	0.0	9763.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	1.3
10°-20°	343.2	3.5
20°-30°	554.8	5.7
30°-40°	929.4	9.5
40°-50°	1519.7	15.6
50°-60°	2249.5	23.0
60°-70°	2582.6	26.5
70°-80°	1277.1	13.1
80°-90°	175.3	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°	9763.0	100.0
0°-180°	9763.0	100.0

Coefficient of Utilization

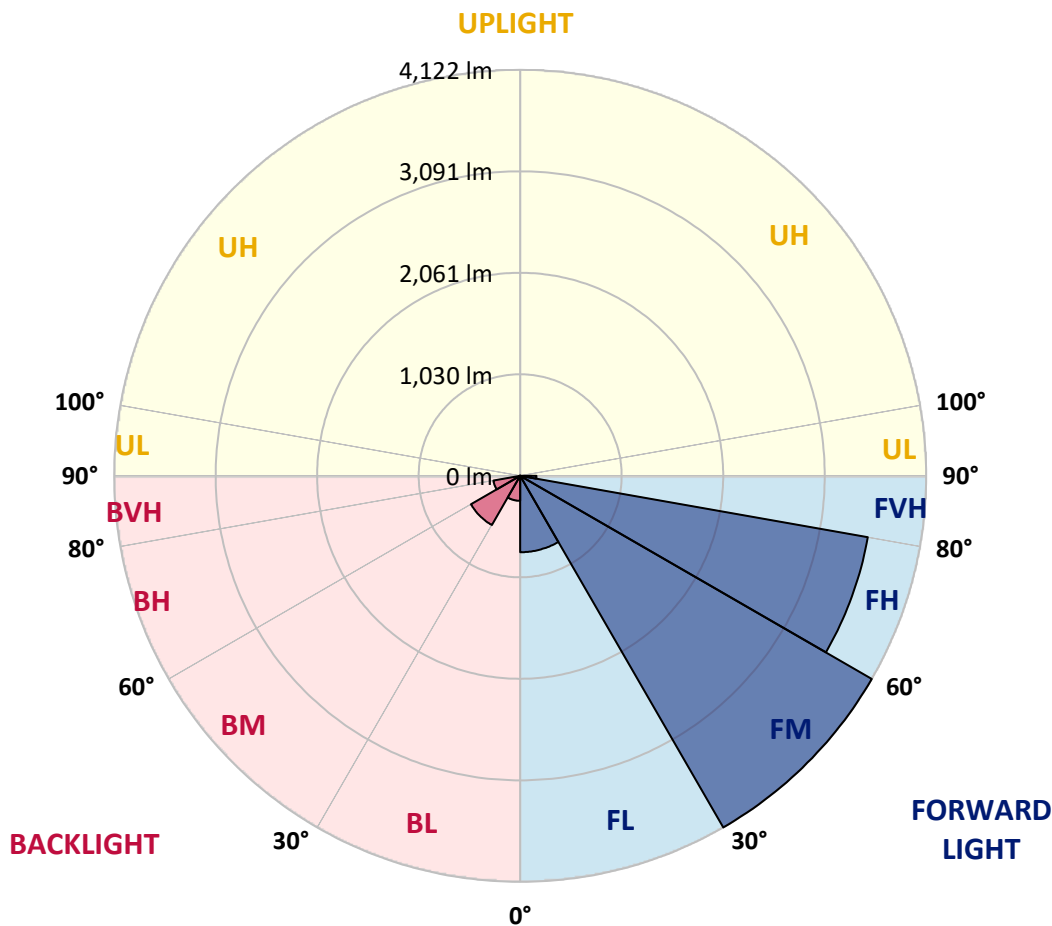


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	775.5	7.9			
FM (30°-60°)	4121.9	42.2			
FH (60°-80°)	3583.6	36.7			G2/5000
FVH (80°-90°)	165.6	1.7			G2/225
BL (0°-30°)	254.0	2.6	B1/500		
BM (30°-60°)	576.7	5.9	B1/1000		
BH (60°-80°)	276.0	2.8	B1/500		G1/500
BVH (80°-90°)	9.7	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°	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1
2.5°	1516.6	1523.8	1489.9	1485.4	1406.4	1504.9	1507.7	1519.4	1447.0	1306.9	1502.7
5°	1814.8	1834.8	1808.7	1924.9	1958.3	2030.1	1898.2	2016.2	1966.1	1980.0	2008.4
7.5°	1850.4	1871.0	1926.1	2120.8	2300.5	2255.4	2241.0	2285.5	2281.6	2178.6	2229.8
10°	1776.4	1793.7	1885.4	2239.8	2318.3	2520.8	2570.3	2467.9	2426.2	2200.9	2102.4
12.5°	1695.7	1724.7	1841.5	2266.5	2501.9	2706.6	2869.6	2723.9	2585.3	2345.5	2255.4
15°	1850.4	1866.5	2050.1	2322.2	2528.0	2669.3	2802.9	2754.5	2733.3	2560.8	2255.4
17.5°	2153.6	2191.4	2324.4	2458.5	2620.9	2706.1	2674.3	2659.3	2605.4	2876.3	2560.3
20°	2369.5	2440.1	2614.3	2672.1	2543.0	2622.6	2603.1	2589.8	2547.5	3051.5	2910.8
22.5°	2836.8	2901.9	2905.2	2925.8	2625.4	2498.5	2466.3	2470.2	2662.1	3103.8	3347.0
25°	3155.0	3177.3	3353.1	3206.2	2850.1	2536.4	2413.4	2468.5	2745.0	3479.9	3757.0
27.5°	3675.8	3728.6	3838.2	3340.8	2984.8	2512.4	2316.6	2516.9	2963.1	3604.5	4212.6
30°	4100.3	4150.9	4327.2	3525.0	3101.6	2630.9	2358.3	2614.3	3098.8	3861.0	4622.1
32.5°	4444.6	4575.4	4775.7	3809.3	3097.2	2767.3	2571.4	2582.0	3265.7	4193.2	5027.1
35°	4884.7	5006.5	5147.3	4005.1	3299.7	2811.2	2634.3	2899.1	3513.9	4540.3	5572.3
37.5°	5876.7	6060.8	5782.6	4498.6	3535.6	3208.4	2882.4	3094.4	3773.7	4894.7	6321.7
40°	6482.0	6637.2	6368.5	4750.6	3943.9	3408.7	3325.3	3433.8	4027.9	5077.7	6886.4
42.5°	7078.4	7283.1	6834.1	5130.0	4331.7	3974.0	3745.9	3833.2	4395.7	5519.5	7521.8
45°	7510.1	7636.9	6934.8	5328.7	4864.7	4618.2	4466.3	4336.1	4908.6	5803.2	7931.8
47.5°	7727.1	7828.3	7133.4	5391.5	5181.8	5299.7	5632.4	5360.4	5362.6	6008.5	8152.7
50°	8027.5	8098.1	7244.7	5466.6	5526.2	6361.8	6529.8	5950.6	5881.1	6214.4	8188.8
52.5°	8449.7	8484.2	7460.6	5664.7	6041.9	7193.5	7254.2	7019.9	6400.2	6597.1	8268.9
55°	9011.1	8950.5	7846.1	6080.8	6579.9	7802.7	7883.9	7679.8	7052.8	6979.3	8517.1
57.5°	9616.4	9546.9	8417.5	6667.2	7163.5	8268.4	8316.8	8332.9	7486.2	7317.6	8938.8
60°	10050.3	10063.1	9136.8	7339.8	7526.2	8714.0	8617.2	8470.3	7923.4	7813.3	9144.1
62.5°	10202.2	10325.2	9697.1	8044.7	7838.9	8741.8	8591.6	8467.5	8119.3	8324.6	8908.7
65°	10078.2	10292.9	9827.2	8663.9	8028.0	8393.0	8236.7	8157.1	8113.2	8533.2	8388.0
67.5°	9585.2	9854.0	9454.5	8669.5	7340.4	7146.2	7330.9	7583.0	7437.2	8360.2	7658.6
70°	8480.9	8775.2	8589.4	8161.0	6114.8	5622.4	5826.0	6207.1	6104.2	7435.5	6585.4
72.5°	6362.9	6741.2	6777.9	7045.5	4854.1	4231.5	4261.0	4250.5	4427.9	5995.7	5138.9
75°	4087.5	4381.8	4779.5	5685.3	3687.4	3089.4	2806.8	2737.8	3068.8	4685.0	3679.1
77.5°	2372.8	2407.9	2591.4	4289.4	2641.0	2225.9	2033.4	2131.9	2247.6	3269.6	2438.5
80°	1134.9	1152.7	1228.4	2207.0	1834.8	1926.6	1778.1	1888.8	1543.3	1879.3	1383.6
82.5°	360.0	363.8	376.6	1084.3	1139.4	1276.3	817.8	1096.6	954.1	1136.1	921.3
85°	60.1	102.4	126.3	313.2	643.1	430.6	177.5	391.1	532.4	716.6	418.4
87.5°	0.0	0.0	0.0	5.6	52.3	24.5	3.9	22.3	81.8	159.7	18.9
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°	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1
2.5°	1559.4	1597.8	1453.2	1323.5	1356.4	1330.2	1290.7	1223.4	1067.6	1182.2	1174.4
5°	2006.7	1935.5	1739.7	1648.4	1537.2	1367.5	1346.9	1216.7	1159.4	1168.9	1160.5
7.5°	2162.5	2035.1	1862.1	1587.2	1326.3	1081.5	1006.4	921.3	904.1	940.8	964.7
10°	2040.1	1904.9	1753.6	1412.0	1211.2	1034.2	849.0	729.9	665.4	657.6	664.3
12.5°	2096.3	1950.5	1639.0	1377.5	1167.8	1007.5	800.6	620.9	480.7	491.3	463.4
15°	2135.2	1967.8	1611.7	1305.2	1078.2	864.0	614.8	435.1	320.5	287.1	267.0
17.5°	2363.9	2124.7	1577.2	1221.7	953.0	672.6	386.1	252.0	214.7	203.1	193.6
20°	2657.7	2317.7	1576.7	1133.8	768.3	420.6	240.9	182.5	173.6	180.3	173.0
22.5°	2999.2	2574.8	1660.7	1024.2	551.3	265.4	187.5	161.9	153.0	158.6	159.1
25°	3343.1	2960.3	1729.1	920.2	383.9	203.6	166.9	149.1	139.1	144.1	141.3
27.5°	3963.9	3279.6	1713.5	787.2	282.6	179.1	155.2	139.6	124.6	132.4	131.9
30°	4370.1	3843.2	1774.2	600.9	224.2	156.9	144.6	127.4	111.3	120.2	119.6
32.5°	4855.8	4085.2	1839.8	461.2	186.4	148.5	130.2	113.5	104.0	109.6	108.5
35°	5401.5	4563.7	1719.1	383.9	161.9	134.1	115.2	102.4	94.0	96.8	96.8
37.5°	6365.7	4963.7	1646.8	312.7	150.8	121.3	107.9	92.4	87.3	87.3	90.1
40°	6913.1	5574.6	1430.9	247.6	154.1	111.8	100.7	84.6	77.9	77.3	80.1
42.5°	7625.2	5926.7	1295.7	200.3	139.6	109.0	92.4	76.8	69.0	68.4	71.2
45°	8047.5	6123.7	1105.5	157.4	125.2	126.8	85.7	70.7	59.0	56.7	61.8
47.5°	8314.0	6384.6	997.5	125.2	109.0	126.3	83.5	61.2	49.5	46.7	51.2
50°	8449.2	6513.7	976.4	107.4	94.6	112.9	95.7	51.2	42.3	38.4	42.3
52.5°	8589.9	6723.4	984.2	99.0	83.5	90.7	90.7	44.0	37.3	32.8	35.6
55°	8874.2	7033.3	966.9	94.0	76.8	69.0	58.4	38.9	33.9	28.9	31.7
57.5°	9223.6	7255.8	966.9	89.6	71.2	59.0	46.7	36.2	31.2	25.0	27.3
60°	9157.4	7021.6	919.1	85.1	66.8	55.1	42.3	33.4	28.9	22.8	24.5
62.5°	8702.9	6384.6	744.4	78.4	62.9	52.3	38.4	31.7	27.3	20.0	21.7
65°	8168.8	5708.1	517.4	71.2	58.4	47.3	34.5	30.0	25.0	17.8	18.9
67.5°	7525.7	4901.9	287.1	64.0	54.0	41.2	31.7	29.5	23.9	16.1	17.2
70°	6409.6	3700.8	154.1	58.4	50.6	37.8	30.0	29.5	23.9	15.6	16.1
72.5°	4811.8	2330.5	90.1	53.4	46.2	35.0	28.4	30.0	23.4	15.0	15.0
75°	3274.1	1414.8	64.5	45.6	41.2	29.5	27.3	28.9	23.9	15.0	13.9
77.5°	2225.9	994.2	52.9	41.2	37.3	26.1	27.8	28.9	23.9	12.2	9.5
80°	1389.7	512.9	40.1	32.8	32.3	22.8	27.8	25.0	15.6	2.8	0.0
82.5°	971.9	190.8	23.4	25.0	25.0	16.1	21.7	17.8	8.9	0.0	0.0
85°	407.8	32.8	12.8	17.8	15.6	9.5	17.2	13.4	5.6	0.0	0.0
87.5°	7.2	0.0	5.0	10.6	11.1	5.6	8.9	5.6	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°	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1
2.5°	1211.2	1158.3	1047.0	1100.4	1094.9	1119.4	1121.6	1064.8	1187.2	1262.9	1274.0
5°	1161.6	1126.0	1119.9	1089.3	1081.5	1126.6	1102.1	1100.4	1159.4	1245.7	1246.2
7.5°	965.3	938.0	950.8	915.2	823.4	829.0	837.3	872.3	923.0	979.7	1000.3
10°	662.6	733.3	681.5	677.1	667.6	638.1	614.8	633.1	698.8	751.1	770.5
12.5°	472.9	484.0	515.7	504.0	520.2	495.1	485.7	543.0	607.0	660.4	698.8
15°	276.5	295.4	314.3	354.4	370.5	365.5	394.4	442.3	494.0	518.5	565.8
17.5°	194.7	196.4	200.3	243.7	272.1	283.2	300.4	336.6	357.7	368.9	388.3
20°	170.2	165.2	158.6	183.0	209.7	223.7	218.6	247.0	264.3	275.4	289.3
22.5°	154.1	145.8	141.9	150.2	170.8	183.0	185.3	202.0	228.1	235.9	240.3
25°	139.1	133.5	130.7	135.2	146.3	158.0	160.2	181.9	205.3	208.6	217.5
27.5°	129.1	118.5	119.6	123.0	128.0	142.4	146.9	159.1	193.1	196.9	199.7
30°	118.5	107.4	110.7	114.1	111.8	129.6	136.3	150.2	183.0	189.2	192.5
32.5°	107.9	99.6	99.0	102.4	106.3	115.7	130.2	146.3	176.4	184.7	193.1
35°	96.2	89.6	90.7	91.2	96.2	108.5	119.1	127.4	148.0	152.4	155.2
37.5°	87.9	82.3	81.2	86.8	91.8	101.3	105.1	109.0	136.3	146.3	146.9
40°	77.9	74.6	74.6	78.4	89.6	88.5	93.5	105.7	131.9	142.4	143.5
42.5°	70.7	66.2	67.3	71.2	79.0	73.4	83.5	101.3	130.2	140.8	140.2
45°	59.5	58.4	60.6	64.0	67.3	62.3	77.9	96.8	124.6	138.5	134.6
47.5°	49.5	49.5	52.3	55.6	54.0	55.6	70.7	90.7	121.3	134.1	131.3
50°	40.6	41.2	44.0	49.5	44.5	49.0	63.4	84.6	115.7	129.6	127.4
52.5°	34.5	35.0	36.7	40.6	38.4	44.5	58.4	78.4	110.2	121.8	120.7
55°	30.0	31.2	31.2	33.4	34.5	41.7	52.9	72.3	101.8	114.6	112.4
57.5°	26.7	27.8	27.3	28.9	30.0	36.7	47.3	65.6	93.5	104.0	100.7
60°	23.9	25.0	24.5	26.7	26.1	31.7	41.2	58.4	84.6	92.9	90.1
62.5°	21.1	22.3	22.3	23.4	23.9	26.7	35.6	51.7	75.7	82.3	80.1
65°	18.9	20.0	20.6	20.0	21.1	22.8	30.0	46.7	65.6	72.3	69.0
67.5°	17.2	18.4	19.5	17.2	18.4	18.9	25.6	41.7	57.9	63.4	60.6
70°	16.7	17.2	17.2	15.0	14.5	15.0	22.3	35.6	50.6	56.2	52.3
72.5°	15.6	16.1	15.6	12.2	10.6	11.7	18.9	30.0	42.8	47.3	44.0
75°	14.5	15.0	14.5	10.0	6.7	8.3	15.6	26.1	36.7	38.9	37.3
77.5°	12.2	13.4	13.4	7.2	2.2	5.0	11.7	21.1	30.6	30.6	31.2
80°	1.1	3.3	5.6	3.9	0.0	0.6	3.9	11.1	19.5	18.9	20.6
82.5°	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	6.7	5.0	5.6
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°	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1	1176.1
2.5°	1247.9	1230.6	1252.3	1318.5	1291.8	1296.8	1279.0	1388.6	1512.7	1516.6
5°	1247.3	1231.7	1264.0	1261.2	1337.4	1420.3	1500.5	1630.1	1813.7	1814.8
7.5°	990.8	1083.2	1107.1	1099.9	1197.8	1311.9	1435.4	1683.5	1834.3	1850.4
10°	893.5	933.5	982.5	1000.3	1040.9	1149.4	1289.0	1570.0	1739.1	1776.4
12.5°	774.4	902.4	967.5	1093.8	1117.1	1132.7	1353.0	1597.3	1700.2	1695.7
15°	641.5	752.7	855.7	1009.8	1073.2	1236.8	1410.3	1730.2	1791.4	1850.4
17.5°	454.0	538.0	696.0	857.9	1051.5	1229.5	1568.3	1967.8	2083.5	2153.6
20°	303.8	344.4	487.4	701.5	946.9	1123.8	1632.9	2182.5	2308.8	2369.5
22.5°	246.5	265.9	339.9	514.1	808.9	1118.8	1659.0	2416.8	2756.1	2836.8
25°	217.0	230.3	269.8	380.5	671.5	1096.6	1803.7	2680.5	3089.9	3155.0
27.5°	189.7	209.7	239.2	313.8	575.8	1081.0	1877.1	3123.3	3611.8	3675.8
30°	181.4	205.8	234.2	286.0	509.1	1020.9	1993.9	3522.8	3986.2	4100.3
32.5°	195.8	204.2	218.1	262.0	457.3	957.5	2199.2	4000.1	4296.1	4444.6
35°	155.2	170.2	194.7	240.3	435.6	954.1	2315.5	4307.2	4792.9	4884.7
37.5°	151.9	165.8	197.5	234.2	461.8	979.7	2488.0	4936.4	5688.6	5876.7
40°	147.4	165.2	195.3	231.4	461.8	1004.8	2598.1	5439.9	6291.1	6482.0
42.5°	145.8	168.6	194.7	243.1	447.3	1018.7	2764.5	5942.3	6927.6	7078.4
45°	144.6	171.9	196.4	257.0	444.0	1064.3	2858.5	6186.5	7337.1	7510.1
47.5°	141.9	171.9	219.2	248.7	425.6	1059.8	2980.3	6548.7	7581.3	7727.1
50°	139.6	173.0	248.1	233.1	428.4	1032.6	3145.6	6888.6	7923.4	8027.5
52.5°	134.6	176.9	243.7	211.4	420.0	1029.8	3392.0	7372.1	8373.5	8449.7
55°	123.5	171.9	220.3	184.7	390.6	998.1	3718.6	8000.8	8997.7	9011.1
57.5°	113.5	159.7	184.1	169.7	327.1	1002.0	4000.1	8579.4	9554.1	9616.4
60°	103.5	165.8	143.0	158.0	270.9	930.8	4136.4	8800.8	9959.1	10050.3
62.5°	94.0	153.0	121.8	145.2	241.5	864.6	4041.8	8622.8	10010.8	10202.2
65°	83.5	106.3	102.9	130.2	244.2	771.6	3725.8	8101.5	9814.5	10078.2
67.5°	71.8	83.5	90.7	112.4	261.5	692.1	3184.0	7264.7	9286.5	9585.2
70°	62.9	75.1	79.0	98.5	272.1	639.8	2512.4	6103.6	8205.0	8480.9
72.5°	52.3	69.5	70.7	86.2	262.0	588.1	1790.3	4381.8	6230.5	6362.9
75°	45.1	57.9	64.0	72.3	220.3	439.0	986.4	2712.2	3939.5	4087.5
77.5°	40.6	44.0	48.4	50.1	93.5	228.7	339.4	1672.4	2205.9	2372.8
80°	31.2	34.5	33.4	34.5	51.2	79.0	129.1	783.9	1042.0	1134.9
82.5°	10.0	16.7	18.4	15.6	33.4	38.9	37.3	270.9	338.8	360.0
85°	2.2	6.1	2.8	0.0	11.1	20.0	2.8	41.2	81.2	60.1
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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