

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: P366763

Luminaire Tested: **MSA-SA1B-730-U-SLL-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366763
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-SA1B-730-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 3364 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

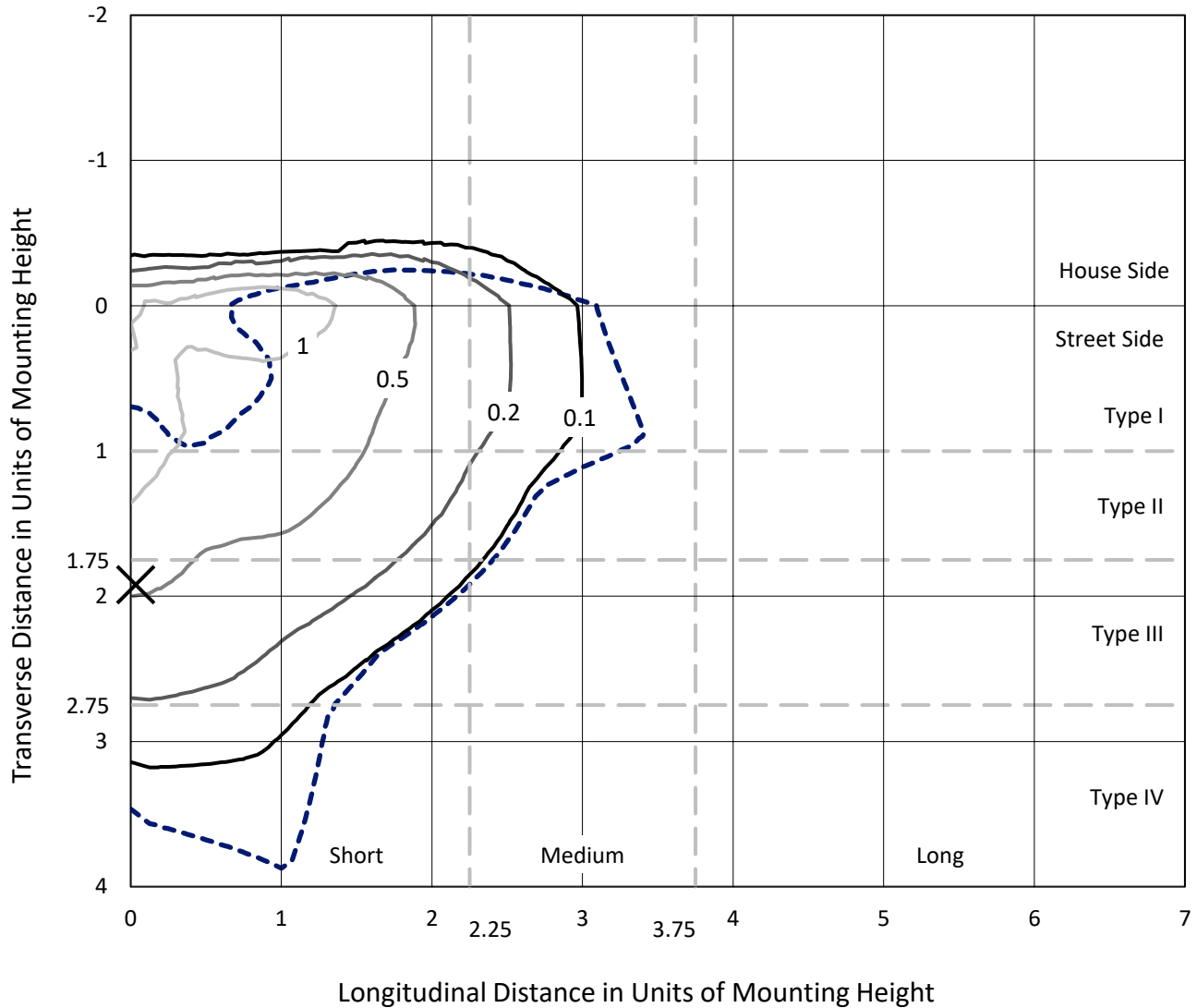
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

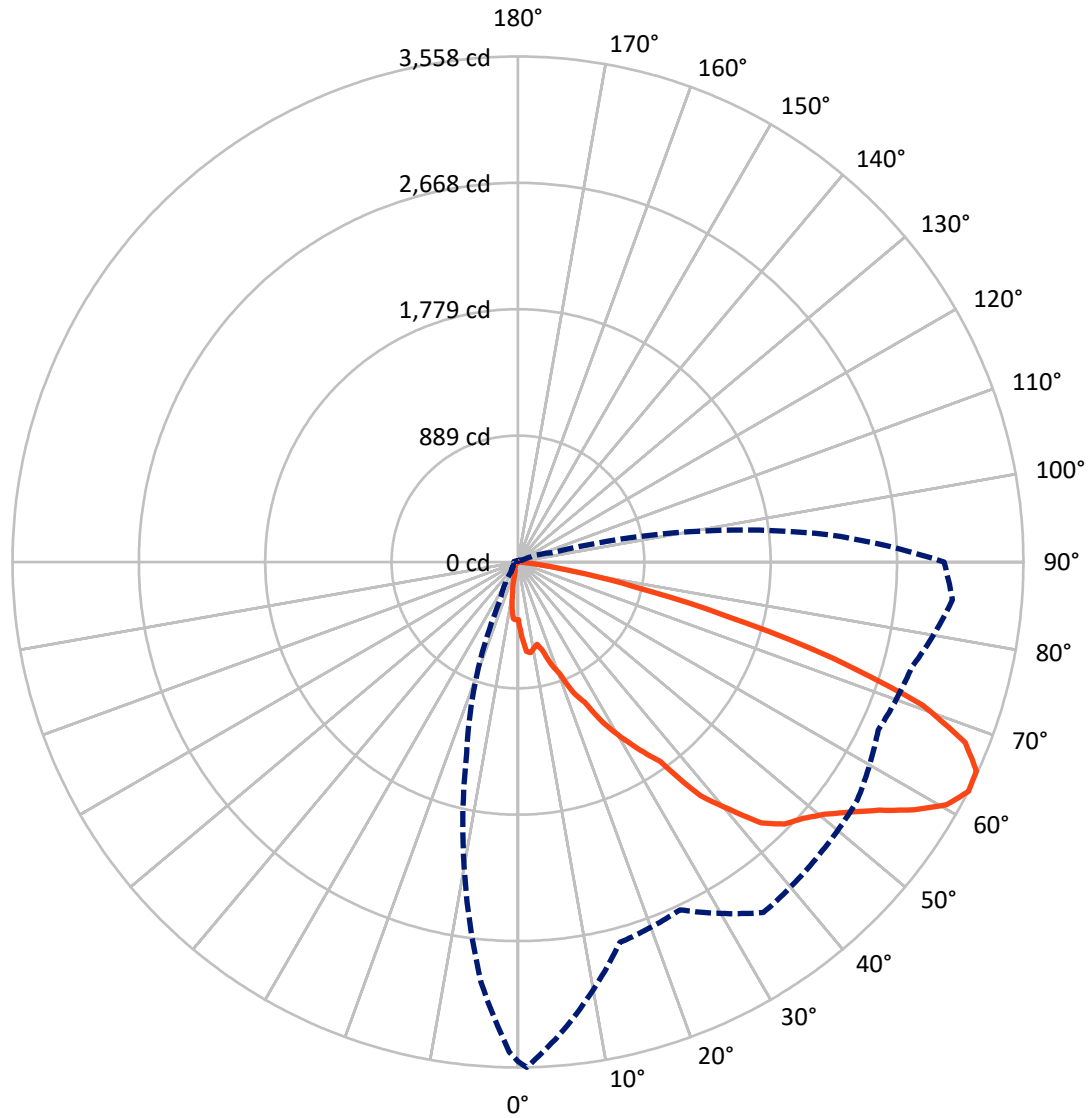
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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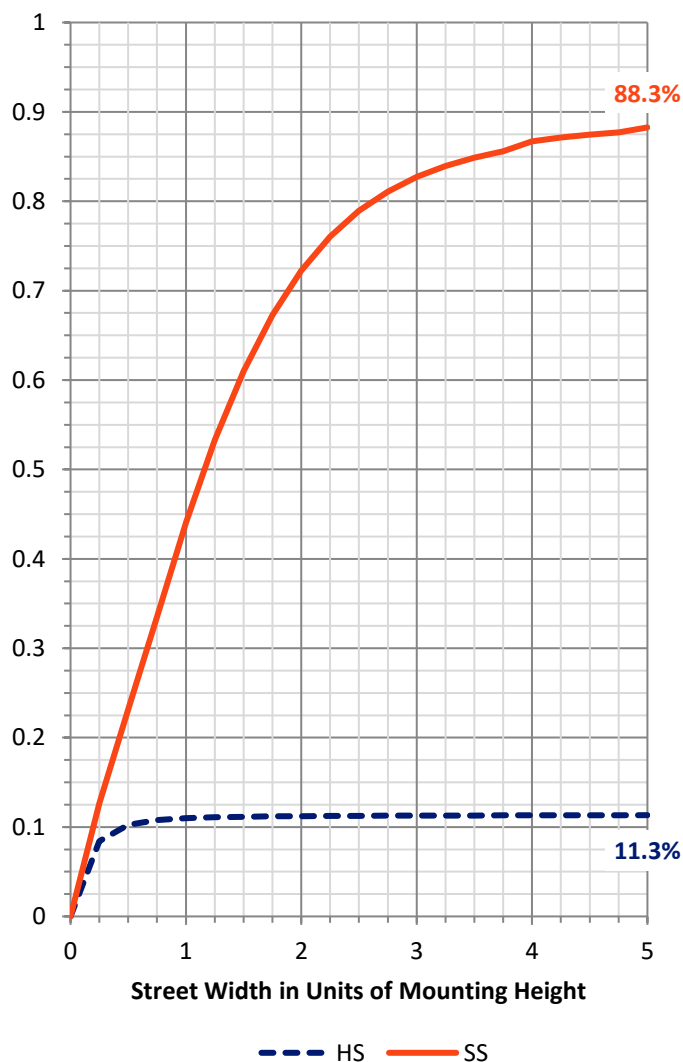
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	384.7	0.0	384.7
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	2979.3	0.0	2979.3
	% Fixture	88.6	0.0	88.6
Total	Lumens	3364.0	0.0	3364.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	1.3
10°-20°	118.3	3.5
20°-30°	191.2	5.7
30°-40°	320.2	9.5
40°-50°	523.6	15.6
50°-60°	775.1	23.0
60°-70°	889.9	26.5
70°-80°	440.0	13.1
80°-90°	60.4	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°	3364.0	100.0
0°-180°	3364.0	100.0

Coefficient of Utilization



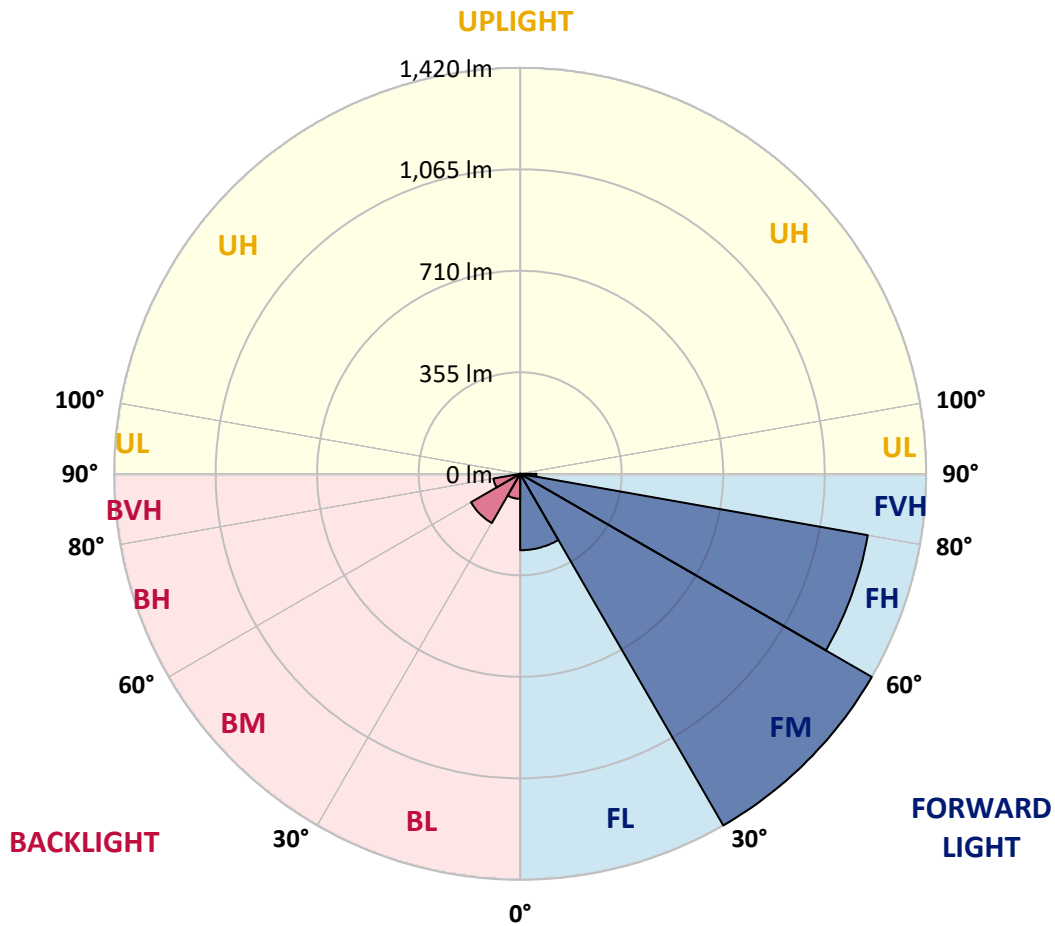
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	267.2	7.9			
FM (30°-60°)	1420.3	42.2			
FH (60°-80°)	1234.8	36.7			G1/1800
FVH (80°-90°)	57.1	1.7			G1/100
BL (0°-30°)	87.5	2.6	B0/110		
BM (30°-60°)	198.7	5.9	B0/220		
BH (60°-80°)	95.1	2.8	B0/110		G0/110
BVH (80°-90°)	3.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2
2.5°	522.6	525.1	513.4	511.8	484.6	518.5	519.5	523.5	498.6	450.3	517.8
5°	625.3	632.2	623.2	663.3	674.8	699.5	654.1	694.7	677.5	682.3	692.0
7.5°	637.6	644.7	663.7	730.7	792.7	777.1	772.2	787.5	786.1	750.7	768.3
10°	612.1	618.0	649.7	771.8	798.8	868.6	885.6	850.4	836.0	758.4	724.4
12.5°	584.3	594.3	634.5	781.0	862.1	932.6	988.8	938.5	890.8	808.2	777.1
15°	637.6	643.1	706.4	800.1	871.1	919.8	965.8	949.1	941.8	882.4	777.1
17.5°	742.1	755.1	800.9	847.1	903.1	932.4	921.5	916.3	897.7	991.1	882.2
20°	816.4	840.8	900.8	920.7	876.2	903.7	897.0	892.4	877.8	1051.5	1003.0
22.5°	977.5	999.9	1001.0	1008.1	904.6	860.9	849.8	851.1	917.3	1069.5	1153.2
25°	1087.1	1094.8	1155.4	1104.8	982.1	873.9	831.6	850.6	945.8	1199.1	1294.5
27.5°	1266.5	1284.8	1322.5	1151.1	1028.5	865.7	798.2	867.2	1021.0	1242.0	1451.5
30°	1412.8	1430.3	1491.0	1214.6	1068.7	906.5	812.6	900.8	1067.8	1330.4	1592.6
32.5°	1531.5	1576.5	1645.5	1312.6	1067.2	953.5	886.0	889.7	1125.3	1444.8	1732.2
35°	1683.1	1725.1	1773.6	1380.0	1137.0	968.6	907.7	998.9	1210.8	1564.4	1920.0
37.5°	2024.9	2088.3	1992.5	1550.1	1218.2	1105.5	993.2	1066.2	1300.3	1686.6	2178.3
40°	2233.5	2286.9	2194.4	1636.9	1358.9	1174.5	1145.8	1183.2	1387.9	1749.6	2372.8
42.5°	2439.0	2509.5	2354.8	1767.6	1492.6	1369.3	1290.7	1320.8	1514.6	1901.8	2591.7
45°	2587.7	2631.4	2389.5	1836.1	1676.2	1591.3	1538.9	1494.1	1691.3	1999.6	2733.0
47.5°	2662.5	2697.4	2457.9	1857.7	1785.5	1826.1	1940.7	1847.0	1847.8	2070.3	2809.1
50°	2766.0	2790.3	2496.3	1883.6	1904.1	2192.1	2249.9	2050.4	2026.4	2141.3	2821.6
52.5°	2911.5	2923.4	2570.7	1951.9	2081.8	2478.6	2499.5	2418.8	2205.3	2273.1	2849.2
55°	3104.9	3084.0	2703.5	2095.2	2267.2	2688.6	2716.5	2646.2	2430.1	2404.8	2934.7
57.5°	3313.5	3289.5	2900.4	2297.3	2468.3	2849.0	2865.7	2871.2	2579.5	2521.4	3080.0
60°	3463.0	3467.4	3148.2	2529.1	2593.3	3002.6	2969.2	2918.6	2730.2	2692.2	3150.7
62.5°	3515.3	3557.7	3341.3	2771.9	2701.0	3012.1	2960.4	2917.6	2797.6	2868.4	3069.6
65°	3472.6	3546.6	3386.1	2985.3	2766.2	2891.9	2838.1	2810.7	2795.5	2940.3	2890.2
67.5°	3302.7	3395.3	3257.7	2987.2	2529.3	2462.3	2526.0	2612.8	2562.6	2880.6	2638.9
70°	2922.2	3023.6	2959.6	2812.0	2106.9	1937.3	2007.5	2138.8	2103.3	2562.0	2269.1
72.5°	2192.4	2322.8	2335.4	2427.7	1672.6	1458.0	1468.2	1464.6	1525.7	2065.9	1770.7
75°	1408.4	1509.8	1646.9	1959.0	1270.6	1064.5	967.1	943.3	1057.4	1614.3	1267.7
77.5°	817.6	829.7	892.9	1478.0	910.0	767.0	700.7	734.6	774.5	1126.6	840.2
80°	391.1	397.2	423.3	760.5	632.2	663.8	612.7	650.8	531.8	647.6	476.8
82.5°	124.0	125.4	129.8	373.6	392.6	439.8	281.8	377.8	328.8	391.4	317.5
85°	20.7	35.3	43.5	107.9	221.6	148.4	61.2	134.8	183.5	246.9	144.2
87.5°	0.0	0.0	0.0	1.9	18.0	8.4	1.3	7.7	28.2	55.0	6.5
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°	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2
2.5°	537.3	550.6	500.7	456.0	467.4	458.3	444.7	421.5	367.9	407.4	404.7
5°	691.5	666.9	599.4	568.0	529.7	471.2	464.1	419.2	399.5	402.8	399.9
7.5°	745.1	701.2	641.6	546.9	457.0	372.7	346.8	317.5	311.5	324.2	332.4
10°	703.0	656.4	604.2	486.5	417.3	356.4	292.5	251.5	229.3	226.6	228.9
12.5°	722.3	672.1	564.7	474.6	402.4	347.2	275.9	213.9	165.6	169.3	159.7
15°	735.7	678.0	555.3	449.7	371.5	297.7	211.8	149.9	110.4	98.9	92.0
17.5°	814.5	732.1	543.5	421.0	328.4	231.8	133.0	86.8	74.0	70.0	66.7
20°	915.7	798.6	543.3	390.7	264.7	144.9	83.0	62.9	59.8	62.1	59.6
22.5°	1033.4	887.2	572.2	352.9	190.0	91.4	64.6	55.8	52.7	54.6	54.8
25°	1151.9	1020.0	595.8	317.1	132.3	70.2	57.5	51.4	47.9	49.6	48.7
27.5°	1365.8	1130.1	590.4	271.3	97.4	61.7	53.5	48.1	42.9	45.6	45.4
30°	1505.8	1324.2	611.3	207.0	77.3	54.1	49.8	43.9	38.3	41.4	41.2
32.5°	1673.1	1407.6	633.9	158.9	64.2	51.2	44.9	39.1	35.8	37.8	37.4
35°	1861.2	1572.5	592.3	132.3	55.8	46.2	39.7	35.3	32.4	33.4	33.4
37.5°	2193.4	1710.3	567.4	107.7	51.9	41.8	37.2	31.8	30.1	30.1	31.1
40°	2382.0	1920.8	493.0	85.3	53.1	38.5	34.7	29.1	26.8	26.6	27.6
42.5°	2627.4	2042.1	446.5	69.0	48.1	37.6	31.8	26.5	23.8	23.6	24.5
45°	2772.9	2110.0	380.9	54.3	43.1	43.7	29.5	24.3	20.3	19.6	21.3
47.5°	2864.7	2199.9	343.7	43.1	37.6	43.5	28.8	21.1	17.1	16.1	17.6
50°	2911.3	2244.4	336.4	37.0	32.6	38.9	33.0	17.6	14.6	13.2	14.6
52.5°	2959.8	2316.7	339.1	34.1	28.8	31.2	31.2	15.1	12.8	11.3	12.3
55°	3057.8	2423.4	333.2	32.4	26.5	23.8	20.1	13.4	11.7	10.0	10.9
57.5°	3178.1	2500.1	333.2	30.9	24.5	20.3	16.1	12.5	10.7	8.6	9.4
60°	3155.3	2419.4	316.7	29.3	23.0	19.0	14.6	11.5	10.0	7.9	8.4
62.5°	2998.7	2199.9	256.5	27.0	21.7	18.0	13.2	10.9	9.4	6.9	7.5
65°	2814.7	1966.8	178.3	24.5	20.1	16.3	11.9	10.4	8.6	6.1	6.5
67.5°	2593.1	1689.0	98.9	22.0	18.6	14.2	10.9	10.2	8.2	5.6	5.9
70°	2208.5	1275.2	53.1	20.1	17.4	13.0	10.4	10.2	8.2	5.4	5.6
72.5°	1658.0	803.0	31.1	18.4	15.9	12.1	9.8	10.4	8.1	5.2	5.2
75°	1128.1	487.5	22.2	15.7	14.2	10.2	9.4	10.0	8.2	5.2	4.8
77.5°	767.0	342.6	18.2	14.2	12.8	9.0	9.6	10.0	8.2	4.2	3.3
80°	478.9	176.7	13.8	11.3	11.1	7.9	9.6	8.6	5.4	1.0	0.0
82.5°	334.9	65.8	8.1	8.6	8.6	5.6	7.5	6.1	3.1	0.0	0.0
85°	140.5	11.3	4.4	6.1	5.4	3.3	5.9	4.6	1.9	0.0	0.0
87.5°	2.5	0.0	1.7	3.6	3.8	1.9	3.1	1.9	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°	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2
2.5°	417.3	399.1	360.8	379.2	377.3	385.7	386.5	366.9	409.1	435.2	439.0
5°	400.3	388.0	385.9	375.3	372.7	388.2	379.8	379.2	399.5	429.2	429.4
7.5°	332.6	323.2	327.6	315.3	283.7	285.6	288.5	300.6	318.0	337.6	344.7
10°	228.3	252.7	234.8	233.3	230.0	219.9	211.8	218.2	240.8	258.8	265.5
12.5°	162.9	166.8	177.7	173.7	179.2	170.6	167.4	187.1	209.1	227.5	240.8
15°	95.3	101.8	108.3	122.1	127.7	125.9	135.9	152.4	170.2	178.7	195.0
17.5°	67.1	67.7	69.0	84.0	93.7	97.6	103.5	116.0	123.3	127.1	133.8
20°	58.7	56.9	54.6	63.1	72.3	77.1	75.3	85.1	91.1	94.9	99.7
22.5°	53.1	50.2	48.9	51.8	58.9	63.1	63.8	69.6	78.6	81.3	82.8
25°	47.9	46.0	45.0	46.6	50.4	54.4	55.2	62.7	70.7	71.9	75.0
27.5°	44.5	40.8	41.2	42.4	44.1	49.1	50.6	54.8	66.5	67.9	68.8
30°	40.8	37.0	38.1	39.3	38.5	44.7	47.0	51.8	63.1	65.2	66.3
32.5°	37.2	34.3	34.1	35.3	36.6	39.9	44.9	50.4	60.8	63.6	66.5
35°	33.2	30.9	31.2	31.4	33.2	37.4	41.0	43.9	51.0	52.5	53.5
37.5°	30.3	28.4	28.0	29.9	31.6	34.9	36.2	37.6	47.0	50.4	50.6
40°	26.8	25.7	25.7	27.0	30.9	30.5	32.2	36.4	45.4	49.1	49.5
42.5°	24.3	22.8	23.2	24.5	27.2	25.3	28.8	34.9	44.9	48.5	48.3
45°	20.5	20.1	20.9	22.0	23.2	21.5	26.8	33.4	42.9	47.7	46.4
47.5°	17.1	17.1	18.0	19.2	18.6	19.2	24.3	31.2	41.8	46.2	45.2
50°	14.0	14.2	15.1	17.1	15.3	16.9	21.9	29.1	39.9	44.7	43.9
52.5°	11.9	12.1	12.7	14.0	13.2	15.3	20.1	27.0	38.0	42.0	41.6
55°	10.4	10.7	10.7	11.5	11.9	14.4	18.2	24.9	35.1	39.5	38.7
57.5°	9.2	9.6	9.4	10.0	10.4	12.7	16.3	22.6	32.2	35.8	34.7
60°	8.2	8.6	8.4	9.2	9.0	10.9	14.2	20.1	29.1	32.0	31.1
62.5°	7.3	7.7	7.7	8.1	8.2	9.2	12.3	17.8	26.1	28.4	27.6
65°	6.5	6.9	7.1	6.9	7.3	7.9	10.4	16.1	22.6	24.9	23.8
67.5°	5.9	6.3	6.7	5.9	6.3	6.5	8.8	14.4	19.9	21.9	20.9
70°	5.8	5.9	5.9	5.2	5.0	5.2	7.7	12.3	17.4	19.4	18.0
72.5°	5.4	5.6	5.4	4.2	3.6	4.0	6.5	10.4	14.8	16.3	15.1
75°	5.0	5.2	5.0	3.5	2.3	2.9	5.4	9.0	12.7	13.4	12.8
77.5°	4.2	4.6	4.6	2.5	0.8	1.7	4.0	7.3	10.5	10.5	10.7
80°	0.4	1.2	1.9	1.3	0.0	0.2	1.3	3.8	6.7	6.5	7.1
82.5°	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.3	1.7	1.9
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°	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2	405.2
2.5°	430.0	424.0	431.5	454.3	445.1	446.8	440.7	478.5	521.2	522.6
5°	429.8	424.4	435.5	434.6	460.8	489.4	517.0	561.7	624.9	625.3
7.5°	341.4	373.2	381.5	379.0	412.7	452.0	494.6	580.1	632.0	637.6
10°	307.9	321.7	338.5	344.7	358.7	396.0	444.2	541.0	599.2	612.1
12.5°	266.8	310.9	333.4	376.9	384.9	390.3	466.2	550.4	585.8	584.3
15°	221.0	259.4	294.8	347.9	369.8	426.1	486.0	596.2	617.3	637.6
17.5°	156.4	185.4	239.8	295.6	362.3	423.7	540.4	678.0	717.9	742.1
20°	104.7	118.7	167.9	241.7	326.3	387.2	562.6	752.0	795.5	816.4
22.5°	84.9	91.6	117.1	177.1	278.7	385.5	571.6	832.7	949.7	977.5
25°	74.8	79.4	93.0	131.1	231.4	377.8	621.5	923.6	1064.7	1087.1
27.5°	65.4	72.3	82.4	108.1	198.4	372.5	646.8	1076.2	1244.5	1266.5
30°	62.5	70.9	80.7	98.5	175.4	351.8	687.0	1213.8	1373.5	1412.8
32.5°	67.5	70.4	75.1	90.3	157.6	329.9	757.8	1378.3	1480.3	1531.5
35°	53.5	58.7	67.1	82.8	150.1	328.8	797.8	1484.1	1651.5	1683.1
37.5°	52.3	57.1	68.1	80.7	159.1	337.6	857.3	1700.9	1960.1	2024.9
40°	50.8	56.9	67.3	79.7	159.1	346.2	895.2	1874.4	2167.7	2233.5
42.5°	50.2	58.1	67.1	83.8	154.1	351.0	952.5	2047.5	2387.0	2439.0
45°	49.8	59.2	67.7	88.6	153.0	366.7	984.9	2131.7	2528.1	2587.7
47.5°	48.9	59.2	75.5	85.7	146.6	365.2	1026.9	2256.5	2612.3	2662.5
50°	48.1	59.6	85.5	80.3	147.6	355.8	1083.9	2373.6	2730.2	2766.0
52.5°	46.4	61.0	84.0	72.8	144.7	354.8	1168.8	2540.2	2885.2	2911.5
55°	42.6	59.2	75.9	63.6	134.6	343.9	1281.3	2756.8	3100.3	3104.9
57.5°	39.1	55.0	63.5	58.5	112.7	345.2	1378.3	2956.2	3292.0	3313.5
60°	35.7	57.1	49.3	54.4	93.4	320.7	1425.3	3032.5	3431.6	3463.0
62.5°	32.4	52.7	42.0	50.0	83.2	297.9	1392.7	2971.1	3449.4	3515.3
65°	28.8	36.6	35.5	44.9	84.2	265.9	1283.8	2791.5	3381.7	3472.6
67.5°	24.7	28.8	31.2	38.7	90.1	238.5	1097.1	2503.2	3199.8	3302.7
70°	21.7	25.9	27.2	33.9	93.7	220.5	865.7	2103.1	2827.1	2922.2
72.5°	18.0	24.0	24.3	29.7	90.3	202.6	616.9	1509.8	2146.8	2192.4
75°	15.5	19.9	22.0	24.9	75.9	151.2	339.9	934.5	1357.4	1408.4
77.5°	14.0	15.1	16.7	17.3	32.2	78.8	116.9	576.2	760.1	817.6
80°	10.7	11.9	11.5	11.9	17.6	27.2	44.5	270.1	359.0	391.1
82.5°	3.5	5.8	6.3	5.4	11.5	13.4	12.8	93.4	116.7	124.0
85°	0.8	2.1	1.0	0.0	3.8	6.9	1.0	14.2	28.0	20.7
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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