

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: P596617

Luminaire Tested: **MSA-SA2C-827-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596617
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-SA2C-827-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: 6615 lumens
Efficiency: N/A
Efficacy: 58.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

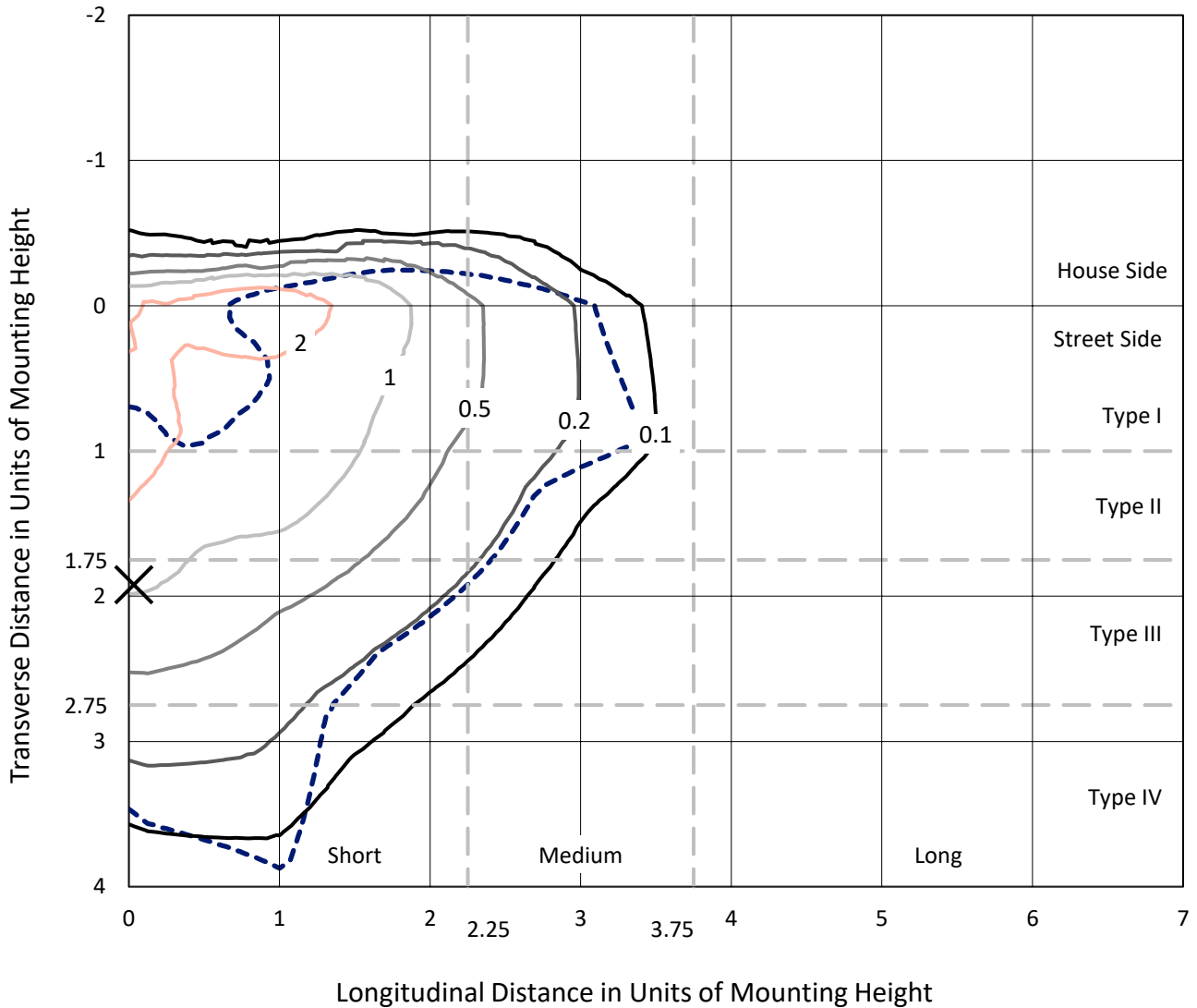
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

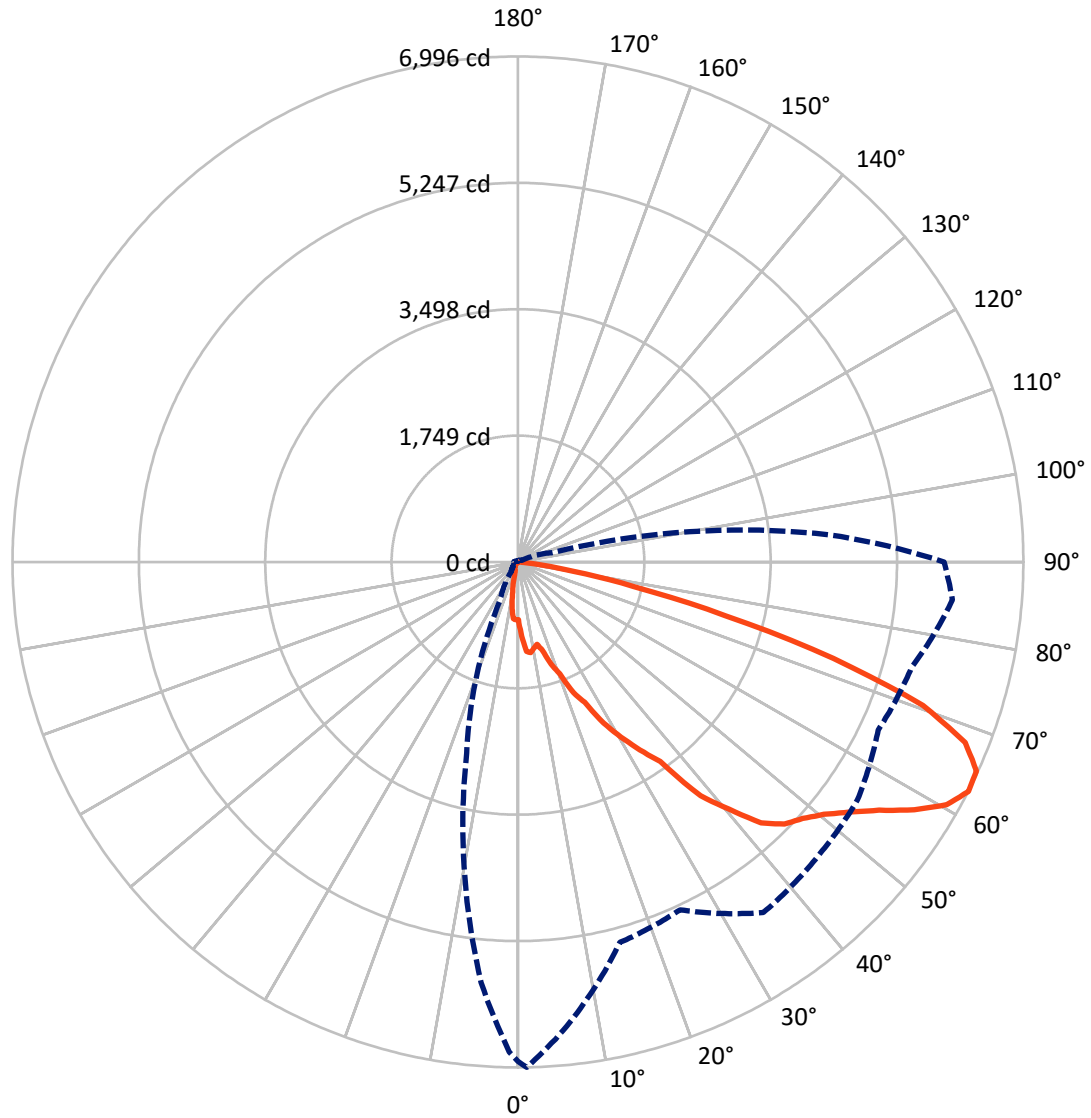
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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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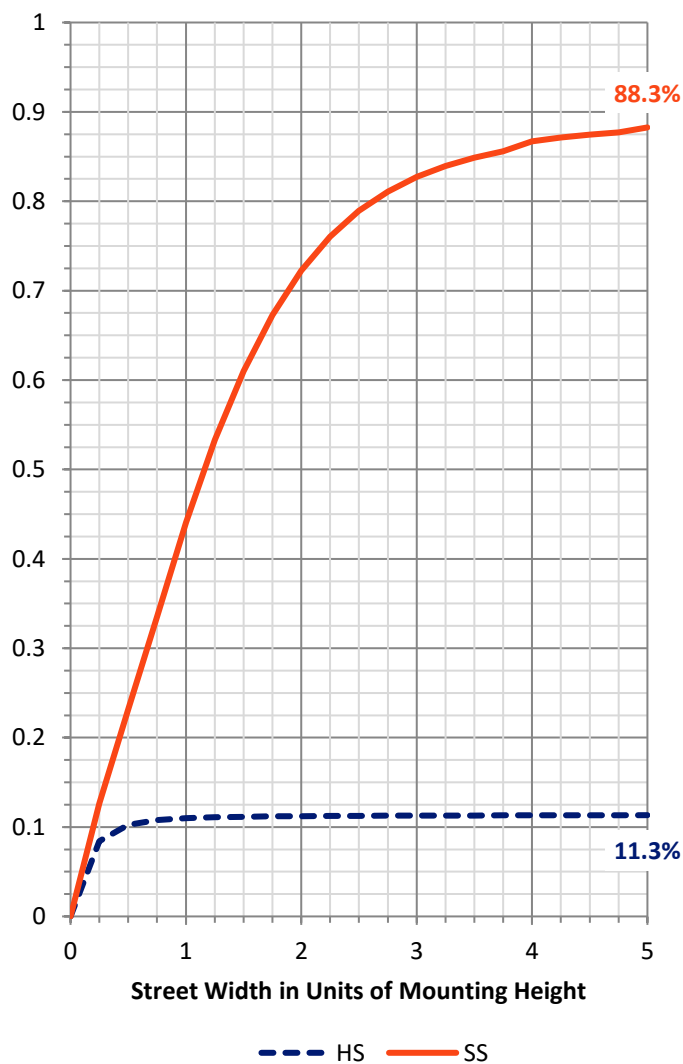
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	756.5	0.0	756.5
	% Fixture	11.4	0.0	11.4
Street Side	Lumens	5858.5	0.0	5858.5
	% Fixture	88.6	0.0	88.6
Total	Lumens	6615.0	0.0	6615.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	1.3
10°-20°	232.6	3.5
20°-30°	375.9	5.7
30°-40°	629.7	9.5
40°-50°	1029.7	15.6
50°-60°	1524.2	23.0
60°-70°	1749.9	26.5
70°-80°	865.3	13.1
80°-90°	118.8	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°	6615.0	100.0
0°-180°	6615.0	100.0

Coefficient of Utilization



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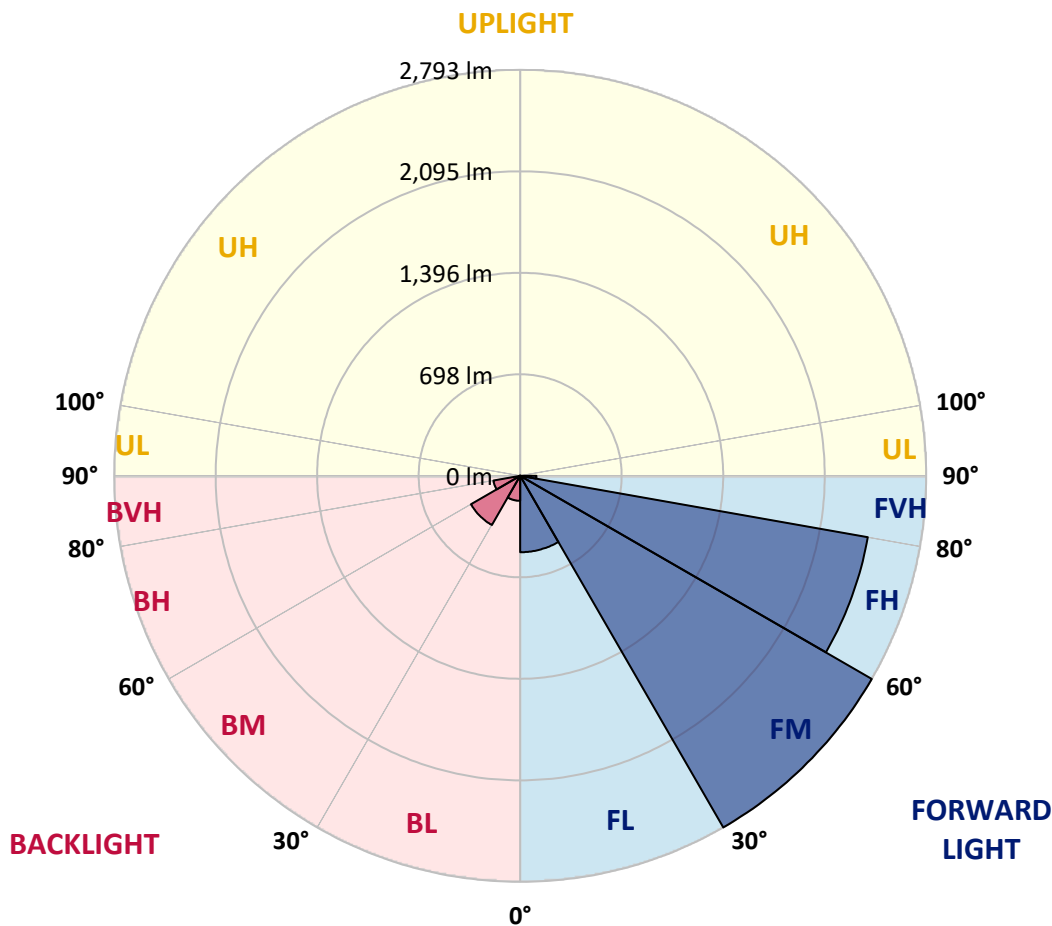
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	525.4	7.9			
FM (30°-60°)	2792.8	42.2			
FH (60°-80°)	2428.1	36.7			G2/5000
FVH (80°-90°)	112.2	1.7			G2/225
BL (0°-30°)	172.1	2.6	B1/500		
BM (30°-60°)	390.7	5.9	B1/1000		
BH (60°-80°)	187.0	2.8	B1/500		G1/500
BVH (80°-90°)	6.6	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°	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9
2.5°	1027.6	1032.5	1009.5	1006.5	952.9	1019.7	1021.5	1029.5	980.5	885.5	1018.2
5°	1229.6	1243.2	1225.5	1304.3	1326.9	1375.5	1286.2	1366.1	1332.2	1341.6	1360.8
7.5°	1253.8	1267.7	1305.0	1437.0	1558.7	1528.2	1518.4	1548.5	1545.9	1476.2	1510.8
10°	1203.6	1215.3	1277.5	1517.6	1570.8	1708.0	1741.5	1672.2	1643.9	1491.2	1424.5
12.5°	1149.0	1168.6	1247.7	1535.7	1695.2	1833.9	1944.3	1845.6	1751.7	1589.2	1528.2
15°	1253.8	1264.7	1389.1	1573.4	1712.9	1808.6	1899.1	1866.3	1852.0	1735.1	1528.2
17.5°	1459.2	1484.8	1574.9	1665.8	1775.8	1833.5	1812.0	1801.8	1765.3	1948.9	1734.7
20°	1605.5	1653.3	1771.3	1810.5	1723.1	1777.0	1763.8	1754.7	1726.1	2067.6	1972.2
22.5°	1922.1	1966.2	1968.5	1982.4	1778.9	1692.9	1671.0	1673.7	1803.7	2103.0	2267.8
25°	2137.7	2152.8	2271.9	2172.4	1931.1	1718.5	1635.2	1672.5	1859.9	2357.9	2545.6
27.5°	2490.5	2526.4	2600.6	2263.6	2022.4	1702.3	1569.6	1705.3	2007.7	2442.3	2854.3
30°	2778.2	2812.5	2932.0	2388.4	2101.5	1782.6	1597.9	1771.3	2099.6	2616.1	3131.7
32.5°	3011.5	3100.1	3235.8	2581.0	2098.5	1875.0	1742.3	1749.4	2212.7	2841.1	3406.2
35°	3309.7	3392.2	3487.6	2713.7	2235.7	1904.8	1784.9	1964.3	2380.8	3076.3	3775.6
37.5°	3981.8	4106.5	3918.1	3048.1	2395.5	2173.9	1953.0	2096.6	2556.9	3316.4	4283.3
40°	4391.9	4497.1	4315.0	3218.8	2672.2	2309.6	2253.1	2326.6	2729.2	3440.5	4665.9
42.5°	4796.0	4934.7	4630.5	3475.9	2935.0	2692.6	2538.0	2597.2	2978.3	3739.8	5096.4
45°	5088.5	5174.5	4698.7	3610.5	3296.1	3129.1	3026.2	2938.0	3325.9	3932.0	5374.2
47.5°	5235.5	5304.1	4833.3	3653.1	3511.0	3590.9	3816.3	3632.0	3633.5	4071.1	5523.9
50°	5439.1	5487.0	4908.7	3704.0	3744.3	4310.5	4424.3	4031.9	3984.8	4210.6	5548.4
52.5°	5725.2	5748.6	5055.0	3838.2	4093.7	4874.0	4915.1	4756.4	4336.5	4469.9	5602.7
55°	6105.5	6064.5	5316.2	4120.1	4458.2	5286.8	5341.8	5203.5	4778.7	4728.9	5770.8
57.5°	6515.7	6468.5	5703.3	4517.4	4853.7	5602.3	5635.1	5646.0	5072.3	4958.1	6056.5
60°	6809.7	6818.4	6190.7	4973.2	5099.4	5904.2	5838.7	5739.1	5368.6	5294.0	6195.6
62.5°	6912.6	6995.9	6570.3	5450.8	5311.3	5923.1	5821.3	5737.3	5501.3	5640.4	6036.2
65°	6828.5	6974.0	6658.5	5870.3	5439.5	5686.7	5580.8	5526.9	5497.1	5781.7	5683.3
67.5°	6494.6	6676.6	6406.0	5874.1	4973.5	4842.0	4967.1	5137.9	5039.1	5664.5	5189.2
70°	5746.3	5945.7	5819.8	5529.6	4143.1	3809.5	3947.5	4205.7	4135.9	5038.0	4462.0
72.5°	4311.2	4567.6	4592.4	4773.8	3288.9	2867.1	2887.1	2879.9	3000.2	4062.4	3481.9
75°	2769.5	2968.9	3238.4	3852.1	2498.5	2093.2	1901.7	1855.0	2079.3	3174.3	2492.8
77.5°	1607.7	1631.5	1755.9	2906.3	1789.4	1508.2	1377.8	1444.5	1522.9	2215.4	1652.2
80°	769.0	781.1	832.3	1495.4	1243.2	1305.4	1204.7	1279.8	1045.7	1273.4	937.5
82.5°	243.9	246.5	255.2	734.7	772.0	864.7	554.1	743.0	646.5	769.7	624.2
85°	40.7	69.4	85.6	212.2	435.8	291.8	120.2	265.0	360.7	485.5	283.5
87.5°	0.0	0.0	0.0	3.8	35.4	16.6	2.6	15.1	55.4	108.2	12.8
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°	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9
2.5°	1056.6	1082.6	984.6	896.8	919.0	901.3	874.5	828.9	723.4	801.0	795.8
5°	1359.7	1311.4	1178.7	1116.9	1041.5	926.6	912.6	824.4	785.6	792.0	786.3
7.5°	1465.2	1378.9	1261.7	1075.5	898.7	732.8	681.9	624.2	612.6	637.4	653.6
10°	1382.3	1290.7	1188.2	956.7	820.6	700.8	575.2	494.6	450.8	445.6	450.1
12.5°	1420.4	1321.6	1110.5	933.3	791.2	682.7	542.4	420.7	325.7	332.9	314.0
15°	1446.8	1333.3	1092.0	884.3	730.5	585.4	416.5	294.8	217.1	194.5	180.9
17.5°	1601.7	1439.6	1068.7	827.8	645.7	455.7	261.6	170.8	145.5	137.6	131.2
20°	1800.7	1570.4	1068.3	768.2	520.6	285.0	163.2	123.6	117.6	122.1	117.2
22.5°	2032.2	1744.5	1125.2	694.0	373.6	179.8	127.0	109.7	103.7	107.4	107.8
25°	2265.1	2005.8	1171.6	623.5	260.1	138.0	113.1	101.0	94.2	97.6	95.7
27.5°	2685.8	2222.1	1161.0	533.4	191.5	121.4	105.2	94.6	84.4	89.7	89.3
30°	2961.0	2604.0	1202.1	407.1	151.9	106.3	98.0	86.3	75.4	81.4	81.0
32.5°	3290.1	2768.0	1246.6	312.5	126.3	100.6	88.2	76.9	70.5	74.3	73.5
35°	3659.9	3092.2	1164.8	260.1	109.7	90.8	78.0	69.4	63.7	65.6	65.6
37.5°	4313.1	3363.2	1115.8	211.8	102.2	82.2	73.1	62.6	59.2	59.2	61.1
40°	4684.0	3777.1	969.5	167.7	104.4	75.8	68.2	57.3	52.8	52.4	54.3
42.5°	5166.5	4015.7	877.9	135.7	94.6	73.9	62.6	52.0	46.7	46.4	48.3
45°	5452.7	4149.1	749.0	106.7	84.8	85.9	58.1	47.9	40.0	38.4	41.8
47.5°	5633.2	4325.9	675.9	84.8	73.9	85.6	56.5	41.5	33.5	31.7	34.7
50°	5724.8	4413.4	661.6	72.8	64.1	76.5	64.8	34.7	28.6	26.0	28.6
52.5°	5820.2	4555.5	666.8	67.1	56.5	61.4	61.4	29.8	25.3	22.2	24.1
55°	6012.8	4765.5	655.1	63.7	52.0	46.7	39.6	26.4	23.0	19.6	21.5
57.5°	6249.5	4916.2	655.1	60.7	48.3	40.0	31.7	24.5	21.1	17.0	18.5
60°	6204.7	4757.5	622.7	57.7	45.2	37.3	28.6	22.6	19.6	15.5	16.6
62.5°	5896.7	4325.9	504.4	53.2	42.6	35.4	26.0	21.5	18.5	13.6	14.7
65°	5534.8	3867.6	350.6	48.3	39.6	32.0	23.4	20.4	17.0	12.1	12.8
67.5°	5099.1	3321.4	194.5	43.3	36.6	27.9	21.5	20.0	16.2	10.9	11.7
70°	4342.9	2507.5	104.4	39.6	34.3	25.6	20.4	20.0	16.2	10.6	10.9
72.5°	3260.3	1579.1	61.1	36.2	31.3	23.7	19.2	20.4	15.8	10.2	10.2
75°	2218.4	958.6	43.7	30.9	27.9	20.0	18.5	19.6	16.2	10.2	9.4
77.5°	1508.2	673.6	35.8	27.9	25.3	17.7	18.8	19.6	16.2	8.3	6.4
80°	941.6	347.6	27.1	22.2	21.9	15.5	18.8	17.0	10.6	1.9	0.0
82.5°	658.5	129.3	15.8	17.0	17.0	10.9	14.7	12.1	6.0	0.0	0.0
85°	276.3	22.2	8.7	12.1	10.6	6.4	11.7	9.0	3.8	0.0	0.0
87.5°	4.9	0.0	3.4	7.2	7.5	3.8	6.0	3.8	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°	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9
2.5°	820.6	784.8	709.4	745.6	741.8	758.4	759.9	721.5	804.4	855.7	863.2
5°	787.1	763.0	758.8	738.1	732.8	763.3	746.7	745.6	785.6	844.0	844.4
7.5°	654.0	635.5	644.2	620.1	557.9	561.7	567.3	591.1	625.4	663.8	677.8
10°	449.0	496.8	461.8	458.8	452.3	432.4	416.5	429.0	473.5	508.9	522.1
12.5°	320.4	328.0	349.4	341.5	352.5	335.5	329.1	367.9	411.3	447.4	473.5
15°	187.3	200.2	213.0	240.1	251.1	247.7	267.3	299.7	334.7	351.3	383.4
17.5°	131.9	133.1	135.7	165.1	184.3	191.9	203.6	228.1	242.4	249.9	263.1
20°	115.3	112.0	107.4	124.0	142.1	151.5	148.1	167.4	179.1	186.6	196.0
22.5°	104.4	98.8	96.1	101.8	115.7	124.0	125.5	136.8	154.6	159.8	162.8
25°	94.2	90.5	88.6	91.6	99.1	107.1	108.6	123.3	139.1	141.4	147.4
27.5°	87.5	80.3	81.0	83.3	86.7	96.5	99.5	107.8	130.8	133.4	135.3
30°	80.3	72.8	75.0	77.3	75.8	87.8	92.4	101.8	124.0	128.2	130.4
32.5°	73.1	67.5	67.1	69.4	72.0	78.4	88.2	99.1	119.5	125.1	130.8
35°	65.2	60.7	61.4	61.8	65.2	73.5	80.7	86.3	100.3	103.3	105.2
37.5°	59.6	55.8	55.0	58.8	62.2	68.6	71.2	73.9	92.4	99.1	99.5
40°	52.8	50.5	50.5	53.2	60.7	59.9	63.3	71.6	89.3	96.5	97.3
42.5°	47.9	44.9	45.6	48.3	53.5	49.8	56.5	68.6	88.2	95.4	95.0
45°	40.3	39.6	41.1	43.3	45.6	42.2	52.8	65.6	84.4	93.9	91.2
47.5°	33.5	33.5	35.4	37.7	36.6	37.7	47.9	61.4	82.2	90.8	89.0
50°	27.5	27.9	29.8	33.5	30.2	33.2	43.0	57.3	78.4	87.8	86.3
52.5°	23.4	23.7	24.9	27.5	26.0	30.2	39.6	53.2	74.6	82.6	81.8
55°	20.4	21.1	21.1	22.6	23.4	28.3	35.8	49.0	69.0	77.7	76.1
57.5°	18.1	18.8	18.5	19.6	20.4	24.9	32.0	44.5	63.3	70.5	68.2
60°	16.2	17.0	16.6	18.1	17.7	21.5	27.9	39.6	57.3	63.0	61.1
62.5°	14.3	15.1	15.1	15.8	16.2	18.1	24.1	35.1	51.3	55.8	54.3
65°	12.8	13.6	13.9	13.6	14.3	15.5	20.4	31.7	44.5	49.0	46.7
67.5°	11.7	12.4	13.2	11.7	12.4	12.8	17.3	28.3	39.2	43.0	41.1
70°	11.3	11.7	11.7	10.2	9.8	10.2	15.1	24.1	34.3	38.1	35.4
72.5°	10.6	10.9	10.6	8.3	7.2	7.9	12.8	20.4	29.0	32.0	29.8
75°	9.8	10.2	9.8	6.8	4.5	5.7	10.6	17.7	24.9	26.4	25.3
77.5°	8.3	9.0	9.0	4.9	1.5	3.4	7.9	14.3	20.7	20.7	21.1
80°	0.8	2.3	3.8	2.6	0.0	0.4	2.6	7.5	13.2	12.8	13.9
82.5°	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	4.5	3.4	3.8
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°	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9	796.9
2.5°	845.5	833.8	848.5	893.4	875.3	878.7	866.6	940.9	1024.9	1027.6
5°	845.1	834.6	856.4	854.6	906.2	962.4	1016.6	1104.5	1228.9	1229.6
7.5°	671.4	733.9	750.1	745.2	811.6	888.9	972.5	1140.7	1242.8	1253.8
10°	605.4	632.5	665.7	677.8	705.3	778.8	873.4	1063.8	1178.4	1203.6
12.5°	524.7	611.4	655.5	741.1	756.9	767.5	916.8	1082.2	1152.0	1149.0
15°	434.6	510.0	579.8	684.2	727.1	838.0	955.6	1172.3	1213.8	1253.8
17.5°	307.6	364.5	471.6	581.3	712.4	833.1	1062.6	1333.3	1411.7	1459.2
20°	205.8	233.3	330.2	475.3	641.6	761.4	1106.4	1478.8	1564.4	1605.5
22.5°	167.0	180.2	230.3	348.3	548.1	758.1	1124.1	1637.5	1867.4	1922.1
25°	147.0	156.1	182.8	257.8	455.0	743.0	1222.1	1816.2	2093.6	2137.7
27.5°	128.5	142.1	162.1	212.6	390.1	732.4	1271.8	2116.2	2447.2	2490.5
30°	122.9	139.5	158.7	193.8	344.9	691.7	1351.0	2386.9	2700.9	2778.2
32.5°	132.7	138.3	147.8	177.5	309.9	648.7	1490.1	2710.3	2910.8	3011.5
35°	105.2	115.3	131.9	162.8	295.2	646.5	1568.9	2918.4	3247.5	3309.7
37.5°	102.9	112.3	133.8	158.7	312.9	663.8	1685.7	3344.7	3854.4	3981.8
40°	99.9	112.0	132.3	156.8	312.9	680.8	1760.4	3685.9	4262.6	4391.9
42.5°	98.8	114.2	131.9	164.7	303.1	690.2	1873.1	4026.3	4693.8	4796.0
45°	98.0	116.5	133.1	174.2	300.8	721.1	1936.8	4191.7	4971.3	5088.5
47.5°	96.1	116.5	148.5	168.5	288.4	718.1	2019.3	4437.1	5136.8	5235.5
50°	94.6	117.2	168.1	157.9	290.3	699.6	2131.3	4667.5	5368.6	5439.1
52.5°	91.2	119.9	165.1	143.2	284.6	697.7	2298.3	4995.0	5673.5	5725.2
55°	83.7	116.5	149.3	125.1	264.6	676.3	2519.6	5421.0	6096.5	6105.5
57.5°	76.9	108.2	124.8	115.0	221.6	678.9	2710.3	5813.0	6473.4	6515.7
60°	70.1	112.3	96.9	107.1	183.6	630.6	2802.7	5963.1	6747.9	6809.7
62.5°	63.7	103.7	82.6	98.4	163.6	585.8	2738.6	5842.4	6782.9	6912.6
65°	56.5	72.0	69.7	88.2	165.5	522.8	2524.5	5489.2	6649.9	6828.5
67.5°	48.6	56.5	61.4	76.1	177.2	468.9	2157.3	4922.3	6292.1	6494.6
70°	42.6	50.9	53.5	66.7	184.3	433.5	1702.3	4135.6	5559.3	5746.3
72.5°	35.4	47.1	47.9	58.4	177.5	398.4	1213.0	2968.9	4221.5	4311.2
75°	30.5	39.2	43.3	49.0	149.3	297.4	668.3	1837.7	2669.2	2769.5
77.5°	27.5	29.8	32.8	33.9	63.3	154.9	229.9	1133.1	1494.6	1607.7
80°	21.1	23.4	22.6	23.4	34.7	53.5	87.5	531.1	706.0	769.0
82.5°	6.8	11.3	12.4	10.6	22.6	26.4	25.3	183.6	229.6	243.9
85°	1.5	4.1	1.9	0.0	7.5	13.6	1.9	27.9	55.0	40.7
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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