

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: P596111

Luminaire Tested: **MSA-SA4A-AMB-U-SLL**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-23)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-SLL
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR LEFT OPTICS.
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2261.1 lumens
Efficiency: N/A
Efficacy: 28.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

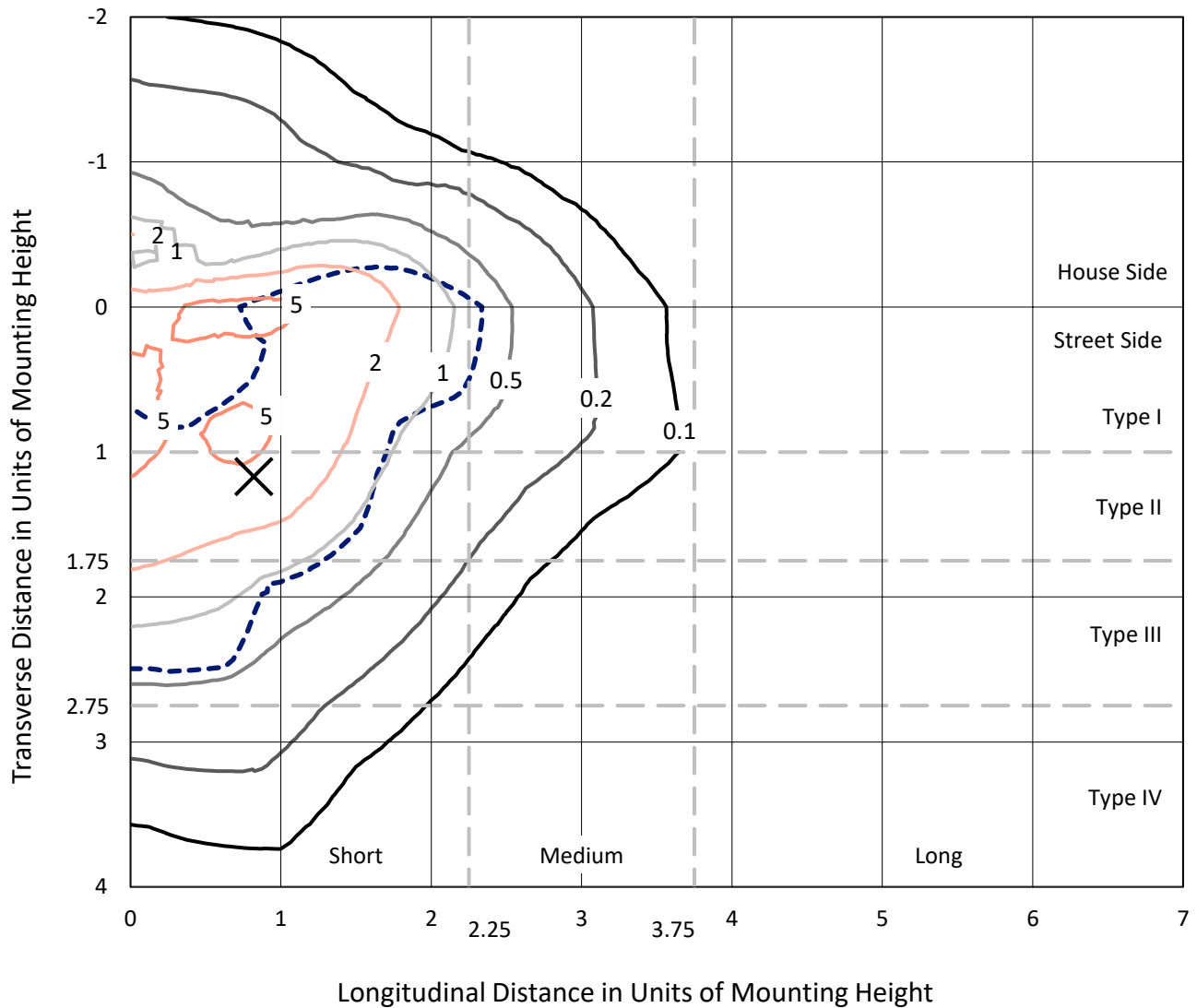
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

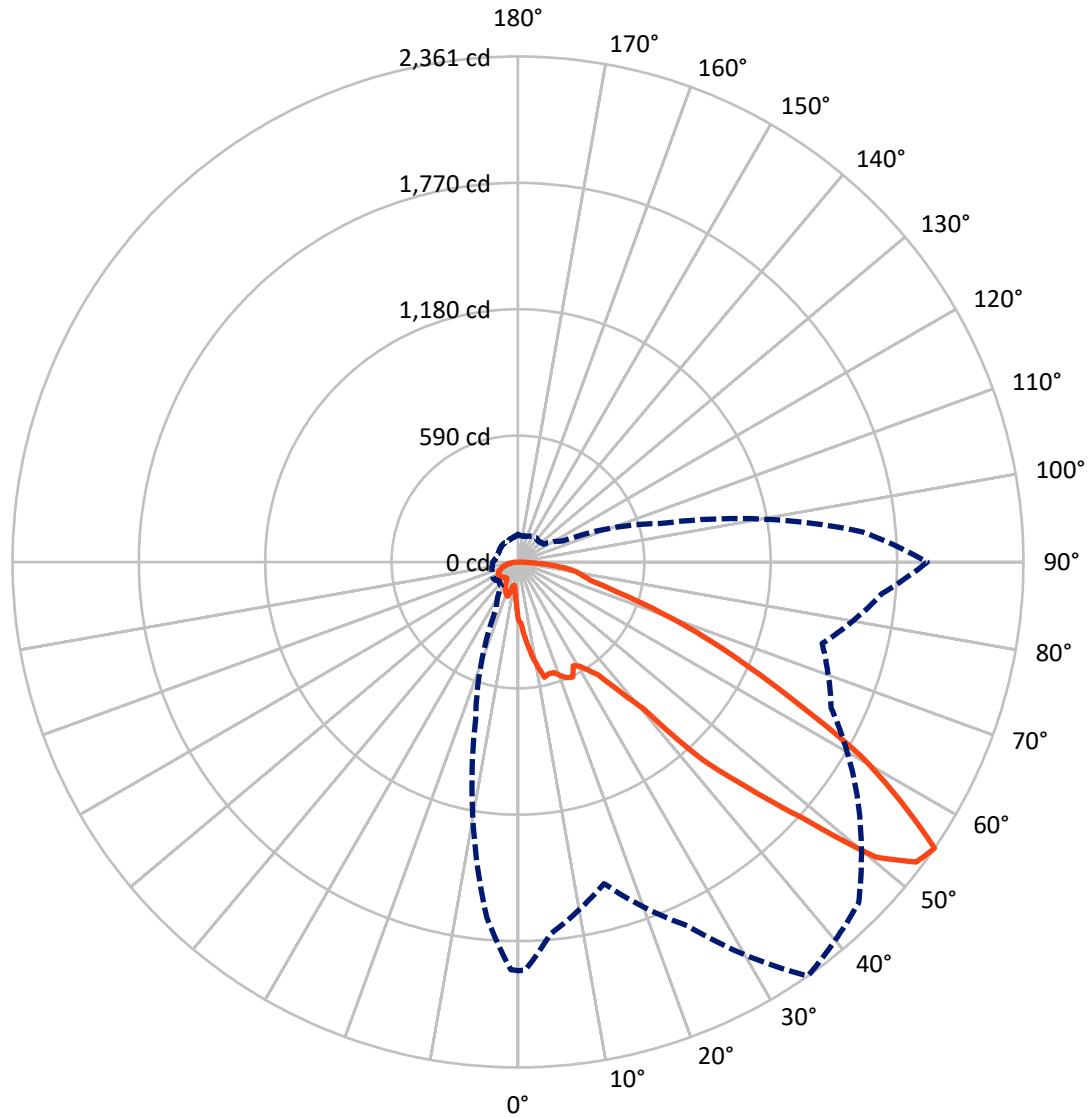
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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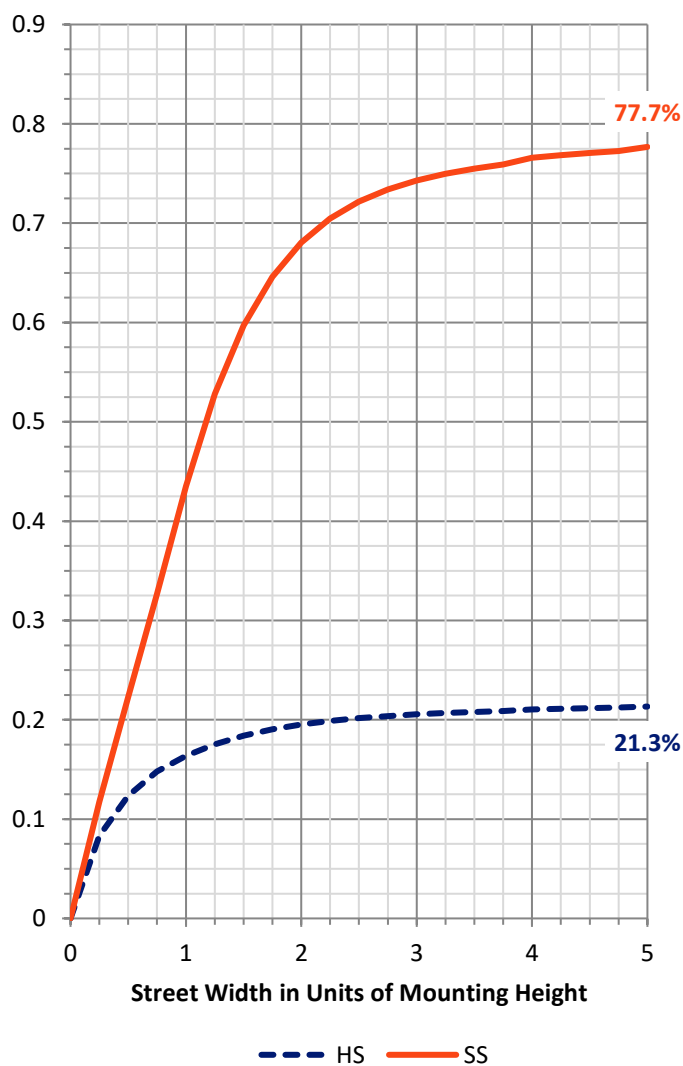
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	488.0	0.0	488.0
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	1773.1	0.0	1773.1
	% Fixture	78.4	0.0	78.4
Total	Lumens	2261.1	0.0	2261.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.2	1.1
10°-20°	75.4	3.3
20°-30°	173.7	7.7
30°-40°	236.1	10.4
40°-50°	420.2	18.6
50°-60°	590.0	26.1
60°-70°	467.4	20.7
70°-80°	216.3	9.6
80°-90°	56.7	2.5
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°	2261.1	100.0
0°-180°	2261.1	100.0

Coefficient of Utilization



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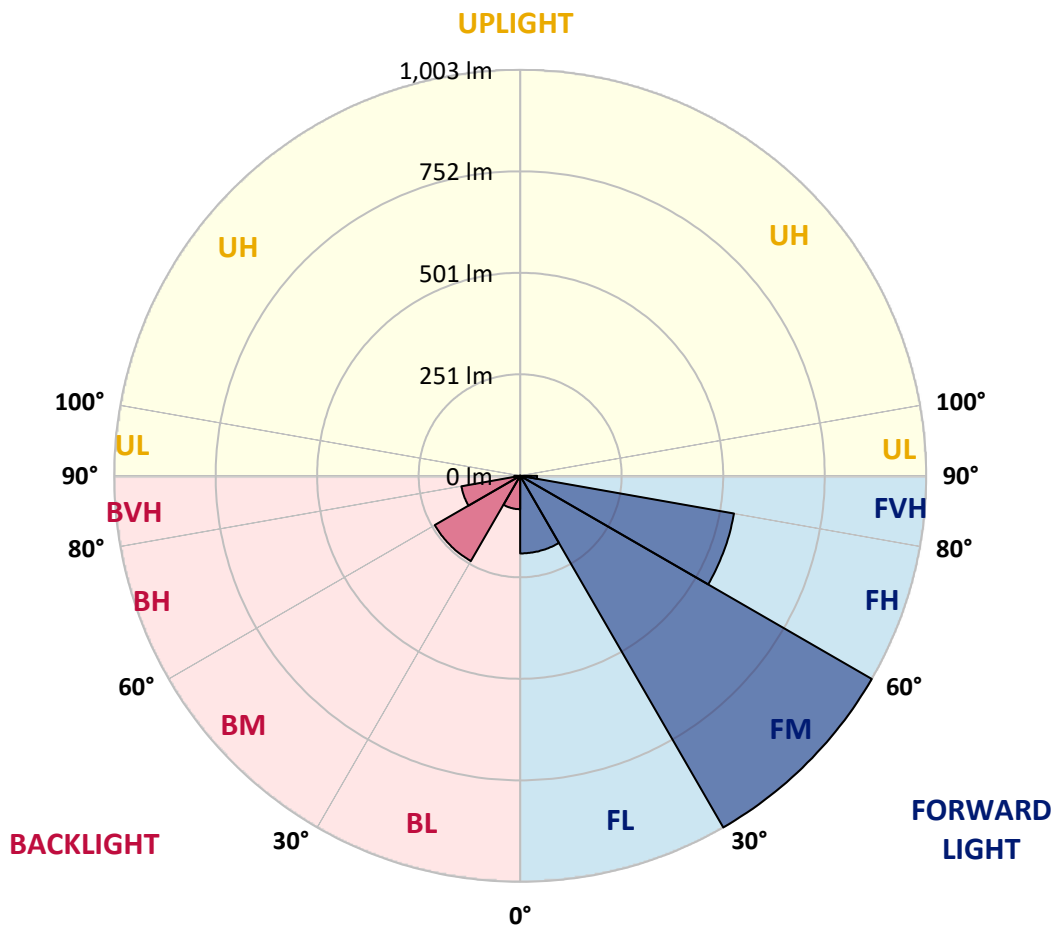
CATALOG NUMBER: MSA-SA4A-AMB-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	191.7	8.5			
FM (30°-60°)	1002.9	44.4			
FH (60°-80°)	536.4	23.7			G0/660
FVH (80°-90°)	42.0	1.9			G1/100
BL (0°-30°)	82.5	3.6	B0/110		
BM (30°-60°)	243.4	10.8	B1/1000		
BH (60°-80°)	147.4	6.5	B1/500		G1/500
BVH (80°-90°)	14.7	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	376.9	376.9	364.9	332.9	304.9	288.9	298.9	292.9	262.9	280.9	294.9
5°	447.9	434.9	431.9	427.9	387.9	356.9	315.9	307.9	330.9	404.9	363.9
7.5°	444.9	439.9	433.9	479.9	463.9	424.9	392.9	398.9	433.9	428.9	388.9
10°	414.9	407.9	415.9	449.9	467.9	489.9	506.9	460.9	437.9	427.9	359.9
12.5°	377.9	372.9	397.9	482.9	521.9	551.9	557.9	525.9	465.9	410.9	358.9
15°	431.9	423.9	452.9	497.9	533.9	541.9	551.9	531.9	493.9	450.9	380.9
17.5°	520.9	513.9	537.9	557.9	557.9	542.9	537.9	541.9	521.9	529.9	488.9
20°	679.9	642.9	687.9	627.9	566.9	566.9	558.9	566.9	587.9	690.9	646.9
22.5°	977.8	976.8	980.8	786.8	660.9	586.9	580.9	612.9	729.8	893.8	883.8
25°	1096.8	1080.8	1133.8	955.8	714.8	594.9	572.9	619.9	877.8	1021.8	976.8
27.5°	945.8	940.8	959.8	828.8	684.9	548.9	496.9	554.9	768.8	834.8	897.8
30°	941.8	933.8	960.8	776.8	668.9	563.9	495.9	567.9	685.9	778.8	942.8
32.5°	1056.8	1042.8	1020.8	845.8	686.9	601.9	535.9	555.9	702.8	852.8	1012.8
35°	1135.8	1127.8	1098.8	908.8	756.8	648.9	585.9	628.9	754.8	910.8	1084.8
37.5°	1305.7	1309.7	1227.7	1003.8	834.8	756.8	720.8	757.8	858.8	981.8	1218.7
40°	1444.7	1456.7	1335.7	1124.8	992.8	898.8	918.8	915.8	964.8	1059.8	1364.7
42.5°	1599.7	1595.7	1495.7	1263.7	1177.7	1260.7	1168.7	1080.8	1122.8	1143.8	1473.7
45°	1736.6	1748.6	1558.7	1344.7	1364.7	1501.7	1466.7	1303.7	1241.7	1229.7	1523.7
47.5°	1799.6	1797.6	1623.7	1404.7	1555.7	1783.6	1810.6	1548.7	1384.7	1303.7	1581.7
50°	1835.6	1834.6	1663.6	1453.7	1705.6	2166.5	2089.6	1684.6	1444.7	1367.7	1620.7
52.5°	1876.6	1869.6	1697.6	1512.7	1833.6	2328.5	2268.5	1866.6	1533.7	1409.7	1661.6
55°	1908.6	1907.6	1743.6	1554.7	1874.6	2360.5	2250.5	1937.6	1613.7	1470.7	1705.6
57.5°	1896.6	1885.6	1746.6	1575.7	1736.6	2107.5	2056.6	1841.6	1581.7	1463.7	1693.6
60°	1821.6	1809.6	1727.6	1568.7	1530.7	1840.6	1721.6	1537.7	1401.7	1422.7	1624.7
62.5°	1674.6	1660.6	1614.7	1478.7	1279.7	1485.7	1418.7	1252.7	1179.7	1364.7	1499.7
65°	1473.7	1438.7	1431.7	1371.7	1152.8	1189.7	1182.7	1016.8	971.8	1262.7	1319.7
67.5°	1235.7	1223.7	1242.7	1250.7	992.8	942.8	898.8	817.8	811.8	1090.8	1105.8
70°	964.8	944.8	1020.8	1069.8	778.8	706.8	631.9	577.9	649.9	956.8	900.8
72.5°	662.9	664.9	747.8	882.8	596.9	495.9	428.9	406.9	496.9	767.8	643.9
75°	452.9	441.9	532.9	684.9	420.9	355.9	322.9	313.9	386.9	615.9	467.9
77.5°	355.9	346.9	381.9	457.9	317.9	309.9	292.9	274.9	301.9	465.9	366.9
80°	286.9	288.9	290.9	305.9	245.9	274.9	258.9	241.9	243.9	308.9	243.9
82.5°	207.0	203.0	225.0	235.9	179.0	213.0	210.0	203.0	191.0	219.0	163.0
85°	97.0	95.0	140.0	213.0	125.0	126.0	119.0	108.0	121.0	159.0	73.0
87.5°	4.0	3.0	5.0	34.0	18.0	15.0	10.0	20.0	19.0	21.0	10.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	339.9	298.9	333.9	292.9	270.9	279.9	279.9	254.9	252.9	227.0	269.9
5°	405.9	363.9	336.9	294.9	256.9	225.0	218.0	216.0	227.0	214.0	235.9
7.5°	397.9	345.9	312.9	252.9	215.0	192.0	179.0	184.0	196.0	192.0	197.0
10°	339.9	310.9	264.9	226.0	216.0	195.0	175.0	161.0	160.0	150.0	149.0
12.5°	331.9	300.9	265.9	233.0	208.0	188.0	164.0	146.0	135.0	125.0	123.0
15°	350.9	316.9	268.9	228.0	193.0	167.0	146.0	127.0	112.0	106.0	106.0
17.5°	416.9	371.9	279.9	212.0	172.0	151.0	126.0	108.0	99.0	102.0	100.0
20°	614.9	470.9	296.9	195.0	158.0	133.0	111.0	102.0	101.0	110.0	117.0
22.5°	791.8	607.9	313.9	199.0	154.0	133.0	116.0	115.0	117.0	137.0	144.0
25°	863.8	679.9	355.9	232.0	195.0	181.0	185.0	173.0	174.0	207.0	218.0
27.5°	868.8	673.9	333.9	226.0	195.0	196.0	230.0	266.9	283.9	334.9	317.9
30°	883.8	756.8	296.9	159.0	125.0	122.0	129.0	145.0	167.0	252.9	262.9
32.5°	1017.8	801.8	314.9	147.0	113.0	105.0	99.0	99.0	107.0	133.0	138.0
35°	1084.8	886.8	323.9	159.0	116.0	104.0	101.0	99.0	103.0	115.0	118.0
37.5°	1244.7	946.8	339.9	175.0	121.0	108.0	103.0	102.0	108.0	118.0	122.0
40°	1384.7	1010.8	364.9	191.0	125.0	112.0	108.0	108.0	112.0	122.0	124.0
42.5°	1533.7	1148.8	403.9	204.0	129.0	116.0	114.0	114.0	117.0	123.0	127.0
45°	1660.6	1250.7	449.9	211.0	130.0	126.0	120.0	120.0	120.0	123.0	128.0
47.5°	1765.6	1370.7	515.9	215.0	134.0	130.0	127.0	124.0	123.0	124.0	128.0
50°	1811.6	1491.7	586.9	216.0	138.0	133.0	134.0	128.0	124.0	125.0	130.0
52.5°	1871.6	1574.7	642.9	225.0	142.0	137.0	139.0	130.0	123.0	123.0	129.0
55°	1911.6	1614.7	694.9	231.0	146.0	136.0	142.0	133.0	124.0	123.0	129.0
57.5°	1893.6	1602.7	723.8	236.9	153.0	137.0	144.0	134.0	125.0	123.0	129.0
60°	1762.6	1484.7	711.8	238.9	157.0	135.0	137.0	135.0	123.0	121.0	126.0
62.5°	1582.7	1293.7	645.9	224.0	154.0	131.0	131.0	129.0	118.0	117.0	121.0
65°	1340.7	1083.8	536.9	209.0	143.0	124.0	125.0	119.0	112.0	109.0	114.0
67.5°	1098.8	869.8	431.9	195.0	132.0	114.0	117.0	113.0	105.0	102.0	106.0
70°	870.8	678.9	333.9	171.0	118.0	104.0	107.0	103.0	96.0	93.0	97.0
72.5°	619.9	468.9	269.9	151.0	103.0	90.0	95.0	92.0	87.0	82.0	85.0
75°	461.9	348.9	195.0	124.0	89.0	78.0	83.0	82.0	77.0	73.0	76.0
77.5°	360.9	283.9	136.0	99.0	76.0	67.0	70.0	69.0	64.0	58.0	60.0
80°	264.9	225.0	96.0	74.0	61.0	55.0	57.0	55.0	50.0	43.0	44.0
82.5°	179.0	166.0	65.0	51.0	44.0	41.0	42.0	42.0	37.0	30.0	29.0
85°	56.0	64.0	40.0	32.0	27.0	22.0	24.0	26.0	23.0	18.0	17.0
87.5°	9.0	11.0	11.0	11.0	9.0	8.0	10.0	10.0	9.0	7.0	5.0
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°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	248.9	230.0	200.0	199.0	177.0	172.0	170.0	201.0	200.0	251.9	244.9
5°	227.0	211.0	188.0	147.0	126.0	136.0	161.0	196.0	209.0	237.9	237.9
7.5°	186.0	167.0	148.0	121.0	104.0	106.0	138.0	162.0	177.0	194.0	195.0
10°	139.0	130.0	117.0	110.0	111.0	107.0	120.0	137.0	150.0	156.0	160.0
12.5°	120.0	114.0	113.0	117.0	132.0	135.0	137.0	133.0	132.0	136.0	136.0
15°	108.0	112.0	127.0	148.0	161.0	165.0	152.0	140.0	125.0	118.0	120.0
17.5°	105.0	132.0	156.0	167.0	175.0	172.0	158.0	150.0	134.0	120.0	118.0
20°	118.0	142.0	155.0	161.0	151.0	144.0	156.0	155.0	147.0	136.0	124.0
22.5°	150.0	175.0	171.0	152.0	121.0	120.0	158.0	177.0	178.0	158.0	140.0
25°	221.0	208.0	188.0	139.0	101.0	104.0	159.0	197.0	228.0	205.0	190.0
27.5°	306.9	254.9	205.0	132.0	96.0	100.0	155.0	216.0	289.9	316.9	310.9
30°	269.9	221.0	171.0	114.0	93.0	94.0	136.0	206.0	296.9	340.9	342.9
32.5°	138.0	135.0	117.0	96.0	91.0	91.0	104.0	135.0	185.0	179.0	182.0
35°	117.0	107.0	99.0	93.0	90.0	91.0	95.0	105.0	119.0	121.0	123.0
37.5°	117.0	107.0	98.0	93.0	92.0	92.0	96.0	102.0	115.0	121.0	122.0
40°	119.0	107.0	99.0	95.0	95.0	94.0	97.0	102.0	115.0	123.0	124.0
42.5°	119.0	109.0	101.0	97.0	98.0	98.0	98.0	103.0	115.0	124.0	125.0
45°	119.0	110.0	104.0	100.0	104.0	102.0	101.0	103.0	114.0	124.0	126.0
47.5°	120.0	112.0	106.0	103.0	106.0	104.0	104.0	103.0	113.0	125.0	127.0
50°	122.0	114.0	107.0	106.0	108.0	106.0	103.0	104.0	113.0	124.0	126.0
52.5°	122.0	115.0	109.0	107.0	107.0	105.0	102.0	103.0	110.0	121.0	123.0
55°	121.0	114.0	109.0	108.0	107.0	103.0	100.0	102.0	108.0	118.0	119.0
57.5°	122.0	113.0	108.0	108.0	107.0	101.0	98.0	99.0	107.0	116.0	117.0
60°	119.0	110.0	105.0	106.0	103.0	98.0	93.0	95.0	103.0	114.0	116.0
62.5°	114.0	106.0	101.0	102.0	100.0	94.0	88.0	91.0	99.0	109.0	112.0
65°	108.0	101.0	95.0	95.0	93.0	87.0	83.0	87.0	94.0	103.0	106.0
67.5°	101.0	94.0	89.0	89.0	85.0	81.0	78.0	81.0	87.0	95.0	99.0
70°	92.0	86.0	81.0	80.0	76.0	73.0	72.0	74.0	81.0	87.0	89.0
72.5°	83.0	79.0	73.0	72.0	68.0	65.0	64.0	66.0	73.0	78.0	80.0
75°	74.0	70.0	66.0	64.0	60.0	58.0	57.0	60.0	66.0	69.0	70.0
77.5°	60.0	58.0	55.0	54.0	51.0	50.0	50.0	52.0	56.0	57.0	59.0
80°	47.0	46.0	45.0	44.0	40.0	41.0	41.0	42.0	44.0	43.0	45.0
82.5°	34.0	34.0	32.0	32.0	28.0	30.0	31.0	31.0	30.0	28.0	30.0
85°	19.0	21.0	20.0	20.0	16.0	20.0	19.0	19.0	18.0	15.0	19.0
87.5°	7.0	7.0	7.0	6.0	2.0	6.0	8.0	8.0	8.0	5.0	9.0
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°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	256.9	252.9	259.9	278.9	265.9	263.9	298.9	294.9	354.9	376.9
5°	253.9	239.9	232.0	233.9	246.9	293.9	353.9	352.9	420.9	447.9
7.5°	198.0	203.0	201.0	202.0	217.0	284.9	351.9	389.9	428.9	444.9
10°	173.0	180.0	193.0	210.0	222.0	249.9	317.9	365.9	397.9	414.9
12.5°	149.0	168.0	185.0	211.0	236.9	256.9	313.9	348.9	370.9	377.9
15°	126.0	136.0	158.0	191.0	220.0	255.9	318.9	389.9	416.9	431.9
17.5°	121.0	123.0	134.0	165.0	209.0	262.9	337.9	469.9	495.9	520.9
20°	120.0	120.0	131.0	149.0	193.0	254.9	421.9	604.9	620.9	679.9
22.5°	127.0	127.0	138.0	168.0	210.0	285.9	526.9	845.8	960.8	977.8
25°	159.0	177.0	204.0	240.9	268.9	330.9	556.9	925.8	1046.8	1096.8
27.5°	310.9	323.9	323.9	285.9	274.9	292.9	463.9	811.8	916.8	945.8
30°	321.9	288.9	241.9	202.0	200.0	212.0	427.9	853.8	916.8	941.8
32.5°	150.0	132.0	130.0	134.0	154.0	191.0	449.9	955.8	1007.8	1056.8
35°	116.0	114.0	117.0	126.0	147.0	197.0	461.9	1058.8	1112.8	1135.8
37.5°	116.0	113.0	116.0	122.0	147.0	205.0	473.9	1207.7	1315.7	1305.7
40°	120.0	116.0	116.0	120.0	144.0	221.0	494.9	1318.7	1450.7	1444.7
42.5°	123.0	120.0	119.0	119.0	141.0	226.0	525.9	1438.7	1596.7	1599.7
45°	128.0	125.0	122.0	121.0	137.0	232.0	557.9	1495.7	1731.6	1736.6
47.5°	132.0	131.0	127.0	124.0	133.0	233.0	623.9	1569.7	1790.6	1799.6
50°	133.0	133.0	134.0	125.0	134.0	225.0	675.9	1626.7	1835.6	1835.6
52.5°	129.0	133.0	136.0	126.0	134.0	231.0	717.8	1652.6	1877.6	1876.6
55°	126.0	133.0	138.0	126.0	137.0	239.9	760.8	1666.6	1904.6	1908.6
57.5°	126.0	135.0	136.0	127.0	144.0	252.9	777.8	1587.7	1866.6	1896.6
60°	125.0	135.0	131.0	126.0	151.0	257.9	758.8	1463.7	1750.6	1821.6
62.5°	121.0	131.0	125.0	123.0	152.0	257.9	696.9	1281.7	1577.7	1674.6
65°	114.0	122.0	118.0	117.0	148.0	245.9	584.9	1063.8	1384.7	1473.7
67.5°	107.0	112.0	111.0	109.0	139.0	234.9	459.9	827.8	1126.8	1235.7
70°	99.0	104.0	103.0	100.0	128.0	215.0	358.9	623.9	847.8	964.8
72.5°	87.0	94.0	92.0	89.0	112.0	179.0	276.9	418.9	583.9	662.9
75°	78.0	82.0	79.0	76.0	91.0	137.0	196.0	319.9	406.9	452.9
77.5°	68.0	72.0	67.0	64.0	73.0	106.0	141.0	281.9	332.9	355.9
80°	54.0	60.0	54.0	50.0	55.0	70.0	95.0	221.0	275.9	286.9
82.5°	38.0	42.0	38.0	35.0	40.0	48.0	61.0	158.0	197.0	207.0
85°	23.0	24.0	21.0	19.0	24.0	28.0	36.0	80.0	94.0	97.0
87.5°	8.0	9.0	8.0	3.0	6.0	7.0	8.0	5.0	5.0	4.0
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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