

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: P596113

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

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596113  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-25)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-AMB-U-SLR  
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH  
AND SPILL LIGHT ELIMINATOR RIGHT OPTICS.  
Light Source: (64) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2234.1 lumens  
Efficiency: N/A  
Efficacy: 28.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

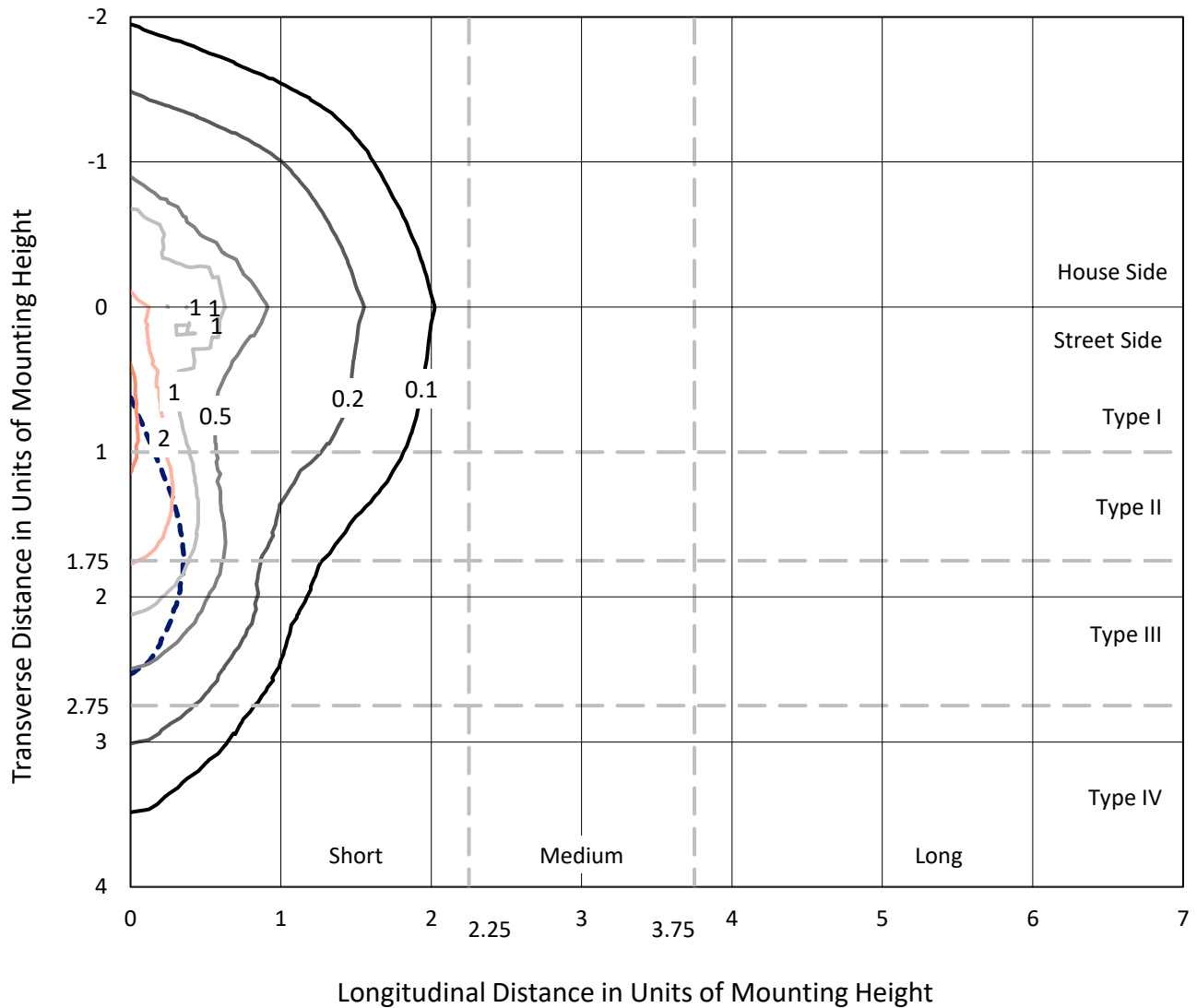
Input Watts (W): 79  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

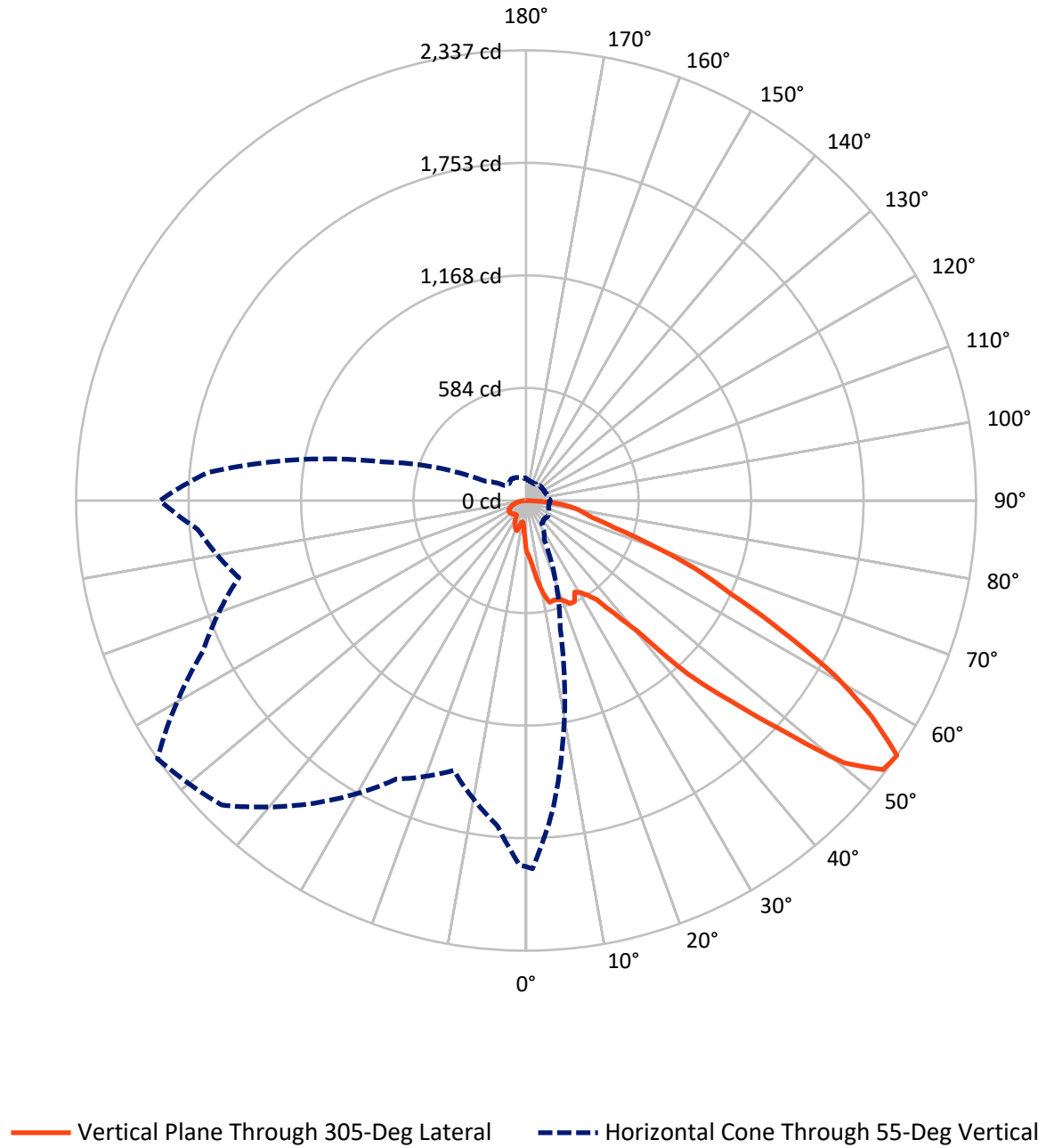
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



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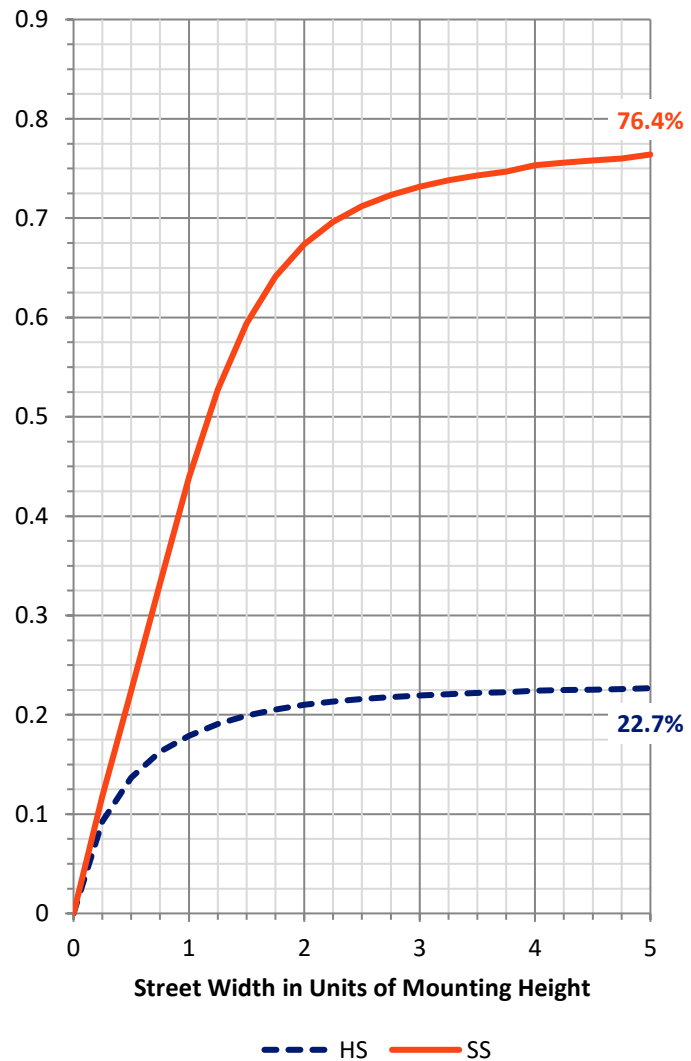
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	511.8	0.0	511.8
	% Fixture	22.9	0.0	22.9
<b>Street Side</b>	Lumens	1722.3	0.0	1722.3
	% Fixture	77.1	0.0	77.1
<b>Total</b>	Lumens	2234.1	0.0	2234.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.8	1.1
10°-20°	74.3	3.3
20°-30°	171.1	7.7
30°-40°	233.4	10.4
40°-50°	415.7	18.6
50°-60°	585.2	26.2
60°-70°	463.5	20.7
70°-80°	212.5	9.5
80°-90°	53.7	2.4
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°	2234.1	100.0
0°-180°	2234.1	100.0

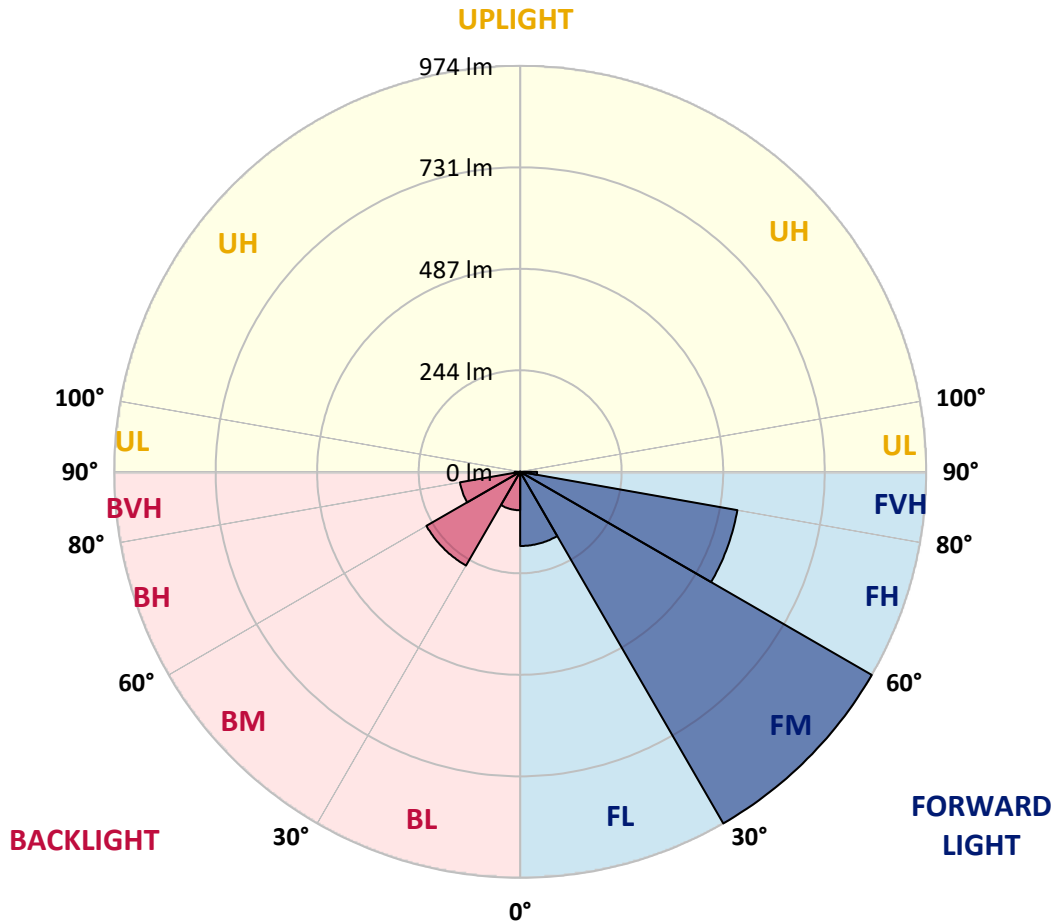


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	178.0	8.0			
FM (30°-60°)	974.4	43.6			
FH (60°-80°)	529.3	23.7			G0/660
FVH (80°-90°)	40.6	1.8			G1/100
BL (0°-30°)	92.2	4.1	B0/110		
BM (30°-60°)	259.9	11.6	B1/1000		
BH (60°-80°)	146.7	6.6	B1/500		G1/500
BVH (80°-90°)	13.1	0.6			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
2.5°	325.0	331.0	297.0	331.0	281.0	272.0	275.0	272.0	245.0	255.0	221.0
5°	397.9	397.9	357.0	335.0	297.0	251.0	221.0	214.0	210.0	221.0	209.0
7.5°	380.9	385.9	339.0	306.0	250.0	209.0	187.0	176.0	182.0	193.0	192.0
10°	330.0	334.0	313.0	262.0	222.0	210.0	193.0	174.0	159.0	158.0	147.0
12.5°	319.0	319.0	295.0	259.0	227.0	206.0	186.0	163.0	144.0	133.0	125.0
15°	337.0	339.0	314.0	265.0	224.0	189.0	163.0	142.0	125.0	110.0	105.0
17.5°	395.9	399.9	364.9	277.0	207.0	172.0	148.0	126.0	105.0	97.0	99.0
20°	553.9	566.9	470.9	291.0	191.0	155.0	130.0	109.0	99.0	99.0	108.0
22.5°	736.9	757.9	608.9	319.0	193.0	149.0	127.0	113.0	109.0	113.0	135.0
25°	800.9	817.9	665.9	348.0	228.0	190.0	177.0	173.0	169.0	171.0	208.0
27.5°	800.9	818.9	673.9	325.0	223.0	194.0	194.0	226.0	264.0	279.0	326.0
30°	869.9	884.9	746.9	291.0	155.0	123.0	124.0	128.0	139.0	171.0	249.0
32.5°	969.9	989.9	792.9	306.0	144.0	111.0	102.0	96.0	97.0	103.0	128.0
35°	1042.9	1056.9	882.9	316.0	155.0	114.0	102.0	99.0	96.0	101.0	113.0
37.5°	1185.8	1206.8	936.9	336.0	170.0	117.0	105.0	101.0	99.0	105.0	115.0
40°	1302.8	1332.8	1005.9	355.0	186.0	122.0	109.0	105.0	105.0	109.0	119.0
42.5°	1449.8	1472.8	1134.8	396.9	199.0	127.0	114.0	112.0	111.0	114.0	120.0
45°	1582.8	1616.8	1233.8	435.9	207.0	127.0	123.0	118.0	117.0	118.0	120.0
47.5°	1712.8	1732.8	1355.8	501.9	213.0	131.0	126.0	123.0	121.0	120.0	121.0
50°	1793.8	1796.8	1471.8	570.9	211.0	135.0	130.0	131.0	126.0	121.0	122.0
52.5°	1843.7	1846.7	1562.8	629.9	218.0	140.0	134.0	137.0	127.0	120.0	121.0
55°	1899.7	1911.7	1606.8	684.9	225.0	143.0	134.0	139.0	130.0	121.0	121.0
57.5°	1875.7	1889.7	1587.8	703.9	231.0	149.0	134.0	141.0	132.0	122.0	120.0
60°	1732.8	1747.8	1490.8	696.9	233.0	154.0	133.0	133.0	132.0	120.0	118.0
62.5°	1511.8	1544.8	1275.8	632.9	219.0	151.0	129.0	129.0	126.0	115.0	113.0
65°	1274.8	1293.8	1080.9	529.9	204.0	138.0	121.0	122.0	117.0	109.0	107.0
67.5°	1041.9	1058.9	871.9	424.9	190.0	128.0	111.0	115.0	110.0	103.0	100.0
70°	779.9	807.9	645.9	327.0	167.0	114.0	102.0	103.0	100.0	94.0	90.0
72.5°	562.9	581.9	452.9	257.0	148.0	99.0	88.0	91.0	88.0	84.0	80.0
75°	417.9	425.9	352.0	191.0	119.0	86.0	76.0	80.0	79.0	75.0	71.0
77.5°	335.0	350.0	281.0	131.0	97.0	74.0	65.0	68.0	66.0	62.0	55.0
80°	250.0	261.0	220.0	94.0	71.0	58.0	52.0	55.0	53.0	47.0	41.0
82.5°	167.0	163.0	161.0	64.0	49.0	42.0	37.0	39.0	40.0	35.0	27.0
85°	59.0	53.0	57.0	35.0	29.0	25.0	19.0	23.0	21.0	19.0	15.0
87.5°	9.0	7.0	6.0	8.0	9.0	6.0	6.0	7.0	7.0	6.0	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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
2.5°	263.0	258.0	224.0	198.0	190.0	185.0	169.0	167.0	198.0	200.0	247.0
5°	233.0	219.0	211.0	186.0	143.0	128.0	133.0	162.0	191.0	205.0	233.0
7.5°	198.0	174.0	170.0	148.0	119.0	99.0	103.0	134.0	157.0	177.0	190.0
10°	145.0	132.0	126.0	113.0	113.0	108.0	105.0	117.0	135.0	148.0	154.0
12.5°	121.0	118.0	112.0	112.0	117.0	130.0	132.0	134.0	130.0	130.0	133.0
15°	102.0	106.0	109.0	122.0	145.0	159.0	163.0	149.0	138.0	121.0	117.0
17.5°	97.0	103.0	129.0	153.0	164.0	169.0	168.0	156.0	146.0	132.0	118.0
20°	116.0	119.0	140.0	151.0	158.0	147.0	141.0	153.0	151.0	144.0	131.0
22.5°	141.0	148.0	174.0	166.0	150.0	120.0	118.0	153.0	173.0	172.0	155.0
25°	208.0	216.0	202.0	184.0	136.0	99.0	101.0	156.0	192.0	221.0	205.0
27.5°	311.0	296.0	250.0	200.0	129.0	94.0	99.0	152.0	211.0	279.0	300.0
30°	271.0	273.0	218.0	167.0	114.0	91.0	93.0	133.0	199.0	297.0	330.0
32.5°	141.0	134.0	135.0	114.0	93.0	89.0	89.0	101.0	131.0	173.0	179.0
35°	115.0	114.0	104.0	96.0	91.0	88.0	89.0	93.0	103.0	117.0	119.0
37.5°	120.0	115.0	104.0	95.0	91.0	90.0	89.0	94.0	100.0	112.0	119.0
40°	122.0	116.0	105.0	96.0	92.0	92.0	92.0	94.0	99.0	112.0	120.0
42.5°	124.0	117.0	106.0	98.0	95.0	96.0	96.0	96.0	100.0	112.0	122.0
45°	125.0	117.0	108.0	101.0	98.0	101.0	99.0	99.0	101.0	111.0	122.0
47.5°	125.0	118.0	110.0	103.0	100.0	104.0	102.0	101.0	101.0	111.0	123.0
50°	126.0	119.0	111.0	105.0	103.0	105.0	103.0	100.0	102.0	111.0	122.0
52.5°	126.0	119.0	112.0	107.0	104.0	104.0	102.0	99.0	101.0	108.0	118.0
55°	126.0	118.0	112.0	107.0	105.0	105.0	100.0	97.0	100.0	106.0	116.0
57.5°	126.0	119.0	110.0	105.0	105.0	103.0	98.0	95.0	97.0	104.0	114.0
60°	123.0	115.0	107.0	102.0	103.0	101.0	95.0	91.0	93.0	101.0	111.0
62.5°	118.0	111.0	103.0	98.0	99.0	97.0	90.0	86.0	89.0	96.0	106.0
65°	111.0	105.0	98.0	92.0	93.0	90.0	85.0	81.0	84.0	91.0	99.0
67.5°	103.0	99.0	91.0	86.0	86.0	82.0	78.0	75.0	78.0	85.0	94.0
70°	94.0	90.0	83.0	79.0	79.0	74.0	70.0	69.0	72.0	78.0	85.0
72.5°	83.0	81.0	75.0	70.0	70.0	65.0	63.0	62.0	64.0	70.0	75.0
75°	73.0	72.0	68.0	63.0	62.0	57.0	55.0	55.0	57.0	63.0	66.0
77.5°	57.0	58.0	55.0	53.0	52.0	48.0	47.0	48.0	50.0	55.0	54.0
80°	41.0	44.0	44.0	42.0	42.0	38.0	39.0	39.0	40.0	41.0	41.0
82.5°	27.0	31.0	31.0	30.0	30.0	25.0	27.0	28.0	29.0	28.0	26.0
85°	14.0	16.0	19.0	17.0	17.0	12.0	16.0	17.0	17.0	15.0	12.0
87.5°	2.0	4.0	5.0	4.0	3.0	0.0	3.0	4.0	5.0	5.0	2.0
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°	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
2.5°	251.0	255.0	249.0	266.0	276.0	260.0	263.0	296.0	295.0	364.9	360.0
5°	230.0	249.0	237.0	228.0	228.0	243.0	283.0	344.0	354.0	425.9	420.9
7.5°	193.0	196.0	200.0	203.0	198.0	215.0	281.0	351.0	386.9	437.9	435.9
10°	163.0	167.0	177.0	191.0	209.0	218.0	244.0	317.0	363.9	405.9	416.9
12.5°	134.0	149.0	165.0	183.0	210.0	233.0	256.0	314.0	343.0	367.9	404.9
15°	117.0	124.0	133.0	156.0	190.0	216.0	255.0	312.0	383.9	417.9	445.9
17.5°	115.0	119.0	121.0	132.0	162.0	205.0	262.0	336.0	467.9	496.9	529.9
20°	121.0	117.0	118.0	129.0	147.0	191.0	252.0	408.9	595.9	632.9	667.9
22.5°	138.0	125.0	125.0	135.0	165.0	207.0	284.0	533.9	817.9	962.9	971.9
25°	189.0	151.0	164.0	201.0	232.0	265.0	322.0	559.9	931.9	1065.9	1127.8
27.5°	299.0	318.0	315.0	315.0	282.0	267.0	288.0	455.9	806.9	933.9	959.9
30°	352.0	330.0	289.0	228.0	191.0	191.0	206.0	430.9	841.9	925.9	937.9
32.5°	179.0	159.0	134.0	131.0	132.0	150.0	188.0	454.9	955.9	1016.9	1009.9
35°	120.0	113.0	112.0	115.0	123.0	145.0	195.0	466.9	1048.9	1119.8	1080.9
37.5°	119.0	114.0	110.0	114.0	120.0	145.0	203.0	475.9	1201.8	1309.8	1195.8
40°	121.0	117.0	113.0	114.0	118.0	142.0	218.0	497.9	1331.8	1451.8	1329.8
42.5°	123.0	121.0	117.0	117.0	117.0	139.0	224.0	531.9	1431.8	1602.8	1465.8
45°	123.0	125.0	123.0	120.0	119.0	135.0	230.0	563.9	1500.8	1734.8	1535.8
47.5°	124.0	129.0	128.0	126.0	121.0	131.0	229.0	628.9	1575.8	1787.8	1606.8
50°	124.0	130.0	131.0	131.0	122.0	132.0	223.0	687.9	1636.8	1840.7	1629.8
52.5°	120.0	127.0	131.0	134.0	124.0	132.0	229.0	726.9	1647.8	1872.7	1680.8
55°	116.0	124.0	131.0	135.0	124.0	135.0	239.0	772.9	1660.8	1901.7	1711.8
57.5°	115.0	124.0	132.0	134.0	125.0	142.0	252.0	787.9	1600.8	1875.7	1728.8
60°	113.0	123.0	132.0	129.0	124.0	149.0	254.0	769.9	1442.8	1778.8	1697.8
62.5°	110.0	119.0	129.0	122.0	120.0	151.0	254.0	711.9	1281.8	1625.8	1600.8
65°	103.0	112.0	118.0	115.0	114.0	145.0	244.0	587.9	1074.9	1421.8	1409.8
67.5°	97.0	105.0	110.0	107.0	106.0	137.0	230.0	466.9	834.9	1167.8	1224.8
70°	87.0	96.0	101.0	100.0	97.0	125.0	212.0	363.9	607.9	893.9	1009.9
72.5°	77.0	86.0	90.0	88.0	87.0	109.0	180.0	278.0	410.9	628.9	762.9
75°	67.0	76.0	80.0	76.0	73.0	87.0	140.0	194.0	317.0	436.9	528.9
77.5°	56.0	66.0	70.0	64.0	60.0	70.0	99.0	140.0	278.0	343.0	371.9
80°	43.0	51.0	57.0	51.0	47.0	53.0	71.0	93.0	218.0	276.0	282.0
82.5°	27.0	34.0	39.0	36.0	33.0	37.0	43.0	59.0	149.0	208.0	218.0
85°	16.0	20.0	21.0	20.0	15.0	22.0	25.0	33.0	77.0	100.0	138.0
87.5°	5.0	6.0	6.0	4.0	1.0	3.0	4.0	6.0	3.0	1.0	3.0
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°	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
2.5°	334.0	299.0	287.0	290.0	293.0	269.0	275.0	294.0	337.0	325.0
5°	418.9	381.9	335.0	311.0	310.0	330.0	405.9	362.9	402.9	397.9
7.5°	470.9	455.9	413.9	390.9	384.9	428.9	426.9	383.9	392.9	380.9
10°	444.9	459.9	488.9	492.9	449.9	425.9	420.9	354.0	345.0	330.0
12.5°	482.9	501.9	542.9	567.9	517.9	458.9	409.9	356.0	333.0	319.0
15°	489.9	525.9	536.9	545.9	522.9	490.9	443.9	376.9	354.0	337.0
17.5°	548.9	550.9	540.9	531.9	535.9	517.9	530.9	478.9	420.9	395.9
20°	619.9	555.9	552.9	548.9	554.9	579.9	680.9	634.9	620.9	553.9
22.5°	771.9	650.9	579.9	572.9	610.9	723.9	883.9	851.9	780.9	736.9
25°	933.9	704.9	582.9	567.9	614.9	865.9	1008.9	964.9	878.9	800.9
27.5°	813.9	670.9	538.9	490.9	554.9	767.9	827.9	891.9	877.9	800.9
30°	768.9	661.9	552.9	488.9	561.9	677.9	766.9	934.9	874.9	869.9
32.5°	832.9	682.9	584.9	524.9	547.9	697.9	835.9	1010.9	1016.9	969.9
35°	896.9	744.9	630.9	578.9	635.9	746.9	906.9	1073.9	1080.9	1042.9
37.5°	1007.9	830.9	739.9	709.9	755.9	859.9	974.9	1208.8	1242.8	1185.8
40°	1120.8	986.9	888.9	912.9	881.9	957.9	1046.9	1343.8	1385.8	1302.8
42.5°	1253.8	1162.8	1230.8	1130.8	1071.9	1106.8	1137.8	1461.8	1527.8	1449.8
45°	1329.8	1337.8	1475.8	1492.8	1276.8	1214.8	1203.8	1524.8	1665.8	1582.8
47.5°	1392.8	1553.8	1771.8	1779.8	1535.8	1379.8	1286.8	1594.8	1742.8	1712.8
50°	1439.8	1682.8	2140.7	2088.7	1666.8	1429.8	1353.8	1623.8	1788.8	1793.8
52.5°	1501.8	1811.7	2321.7	2232.7	1823.7	1508.8	1401.8	1658.8	1845.7	1843.7
55°	1544.8	1850.7	2336.7	2235.7	1917.7	1595.8	1450.8	1695.8	1893.7	1899.7
57.5°	1566.8	1749.8	2117.7	2019.7	1843.7	1554.8	1456.8	1696.8	1874.7	1875.7
60°	1559.8	1537.8	1841.7	1728.8	1558.8	1397.8	1408.8	1624.8	1759.8	1732.8
62.5°	1475.8	1284.8	1483.8	1412.8	1237.8	1192.8	1358.8	1497.8	1600.8	1511.8
65°	1374.8	1145.8	1170.8	1165.8	1013.9	968.9	1264.8	1305.8	1365.8	1274.8
67.5°	1240.8	983.9	953.9	877.9	806.9	811.9	1083.9	1100.8	1121.8	1041.9
70°	1055.9	775.9	691.9	617.9	574.9	643.9	948.9	879.9	886.9	779.9
72.5°	853.9	586.9	479.9	423.9	404.9	499.9	772.9	655.9	654.9	562.9
75°	679.9	414.9	356.0	317.0	312.0	373.9	607.9	476.9	469.9	417.9
77.5°	474.9	305.0	307.0	287.0	268.0	296.0	443.9	350.0	361.9	335.0
80°	299.0	236.0	268.0	255.0	241.0	238.0	306.0	247.0	265.0	250.0
82.5°	231.0	177.0	207.0	205.0	196.0	190.0	215.0	162.0	168.0	167.0
85°	207.0	119.0	128.0	103.0	109.0	114.0	158.0	74.0	57.0	59.0
87.5°	17.0	13.0	11.0	6.0	14.0	17.0	21.0	5.0	6.0	9.0
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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