

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: P596043

Luminaire Tested: **MSA-SA1A-AMB-U-SLR-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-26)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-AMB-U-SLR-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 521 lumens
Efficiency: N/A
Efficacy: 25.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

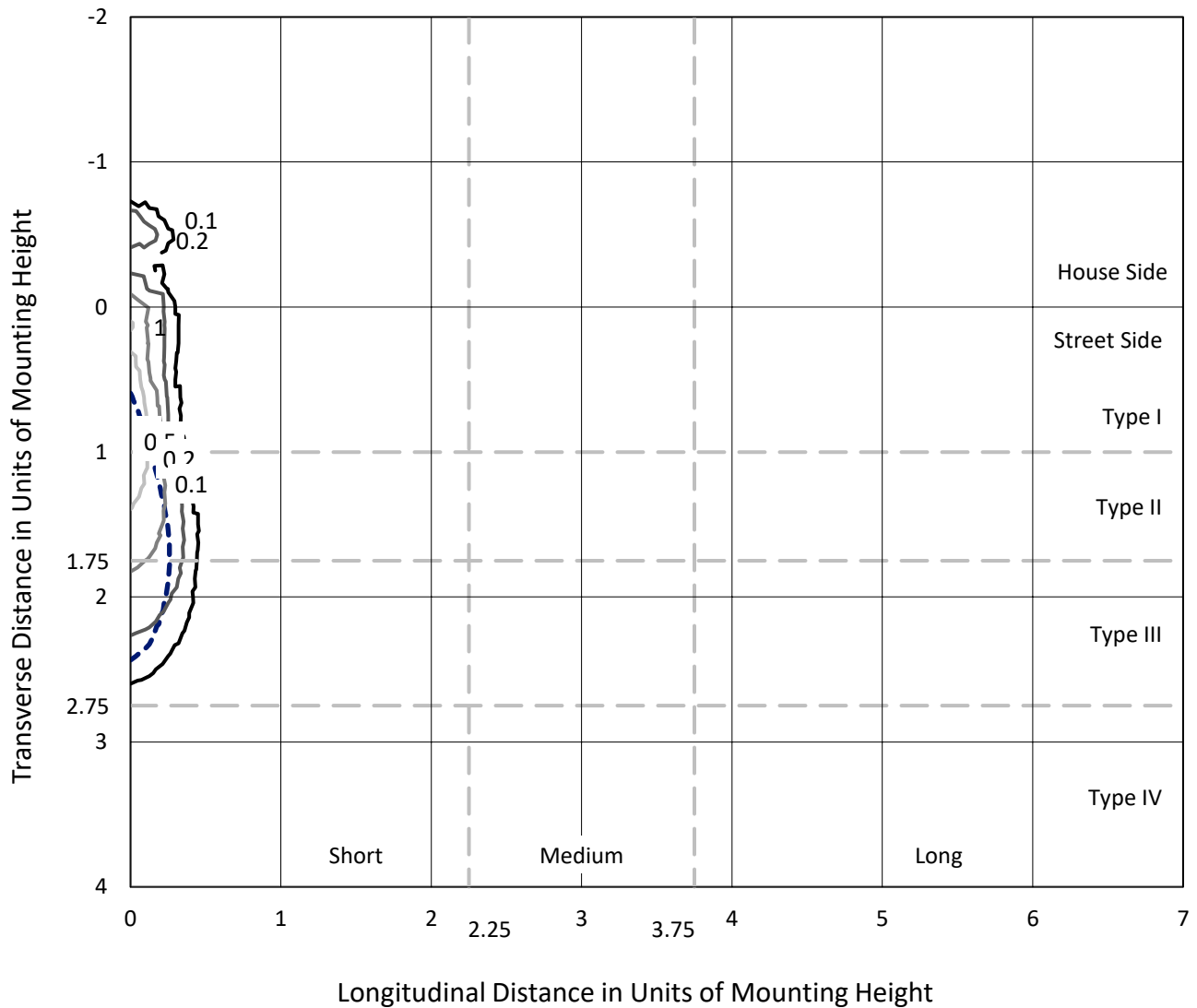
Input Watts (W): 20.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

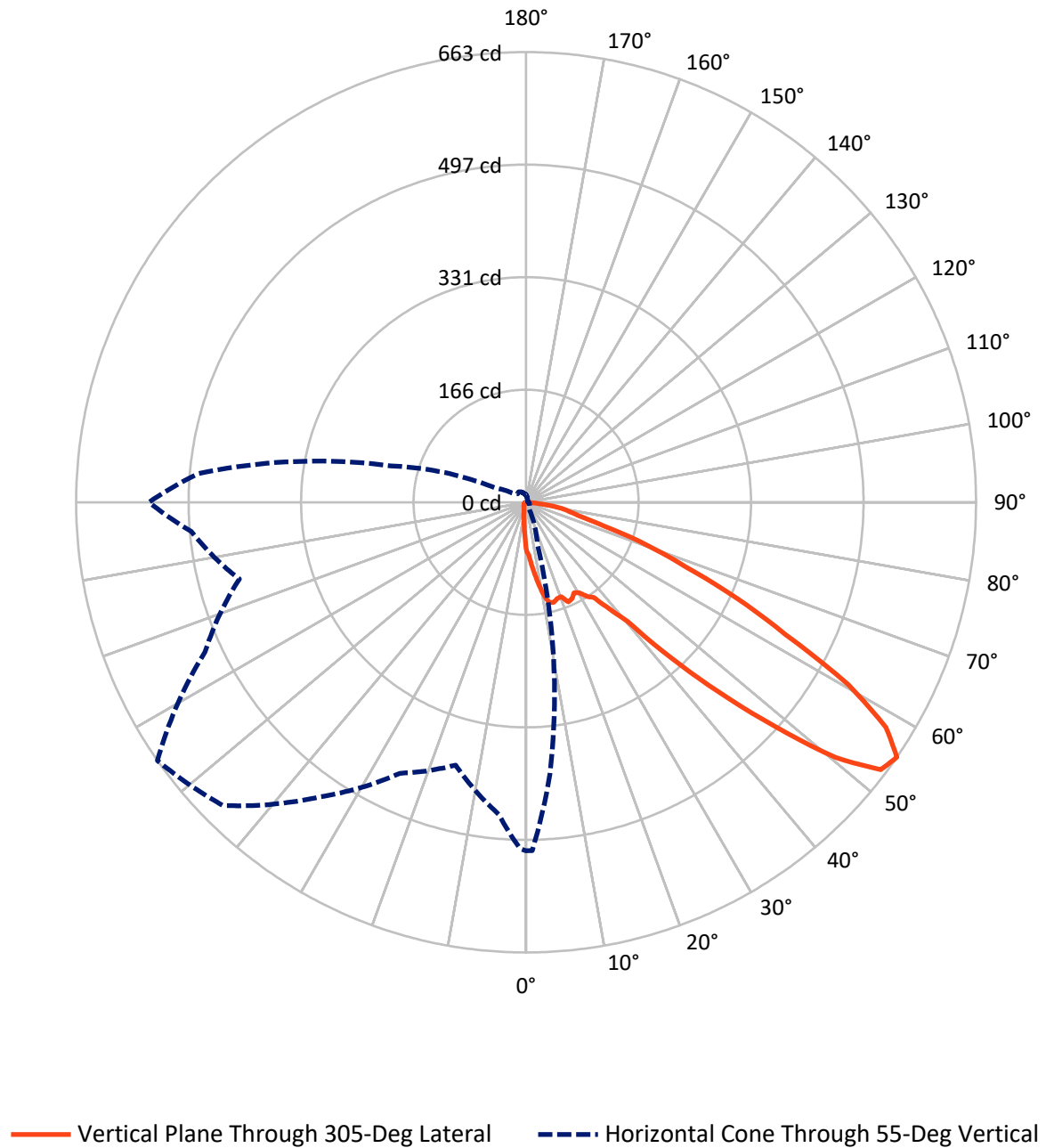
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.7 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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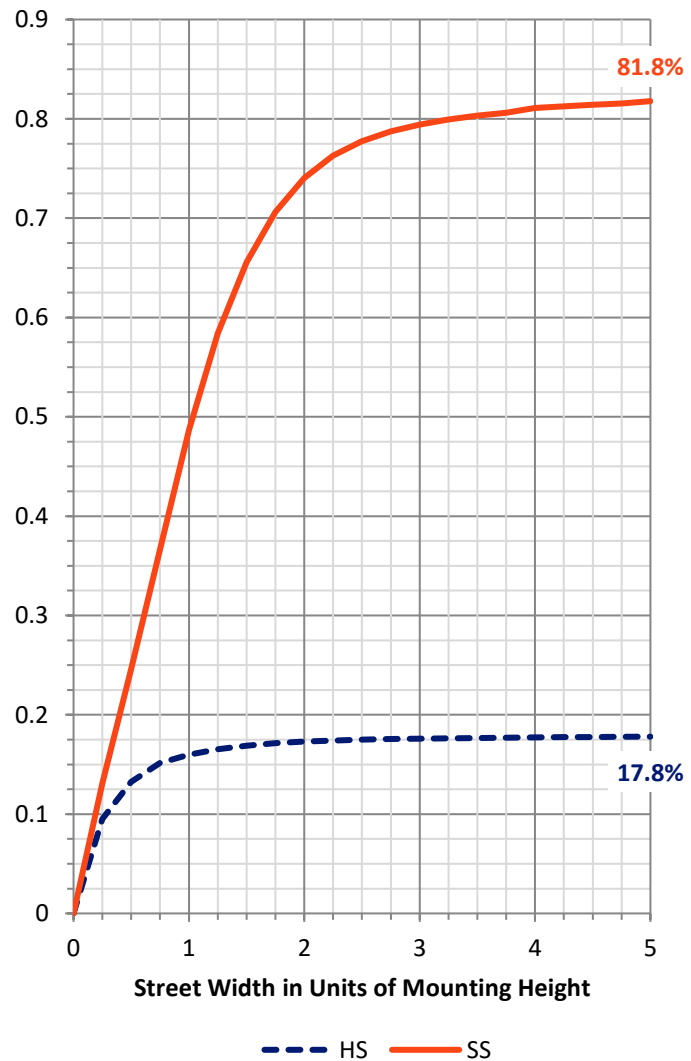
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	93.5	0.0	93.5
	% Fixture	17.9	0.0	17.9
Street Side	Lumens	427.5	0.0	427.5
	% Fixture	82.1	0.0	82.1
Total	Lumens	521.0	0.0	521.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.4	1.2
10°-20°	16.8	3.2
20°-30°	37.1	7.1
30°-40°	56.0	10.7
40°-50°	101.1	19.4
50°-60°	145.7	28.0
60°-70°	113.0	21.7
70°-80°	39.7	7.6
80°-90°	5.2	1.0
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°	521.0	100.0
0°-180°	521.0	100.0



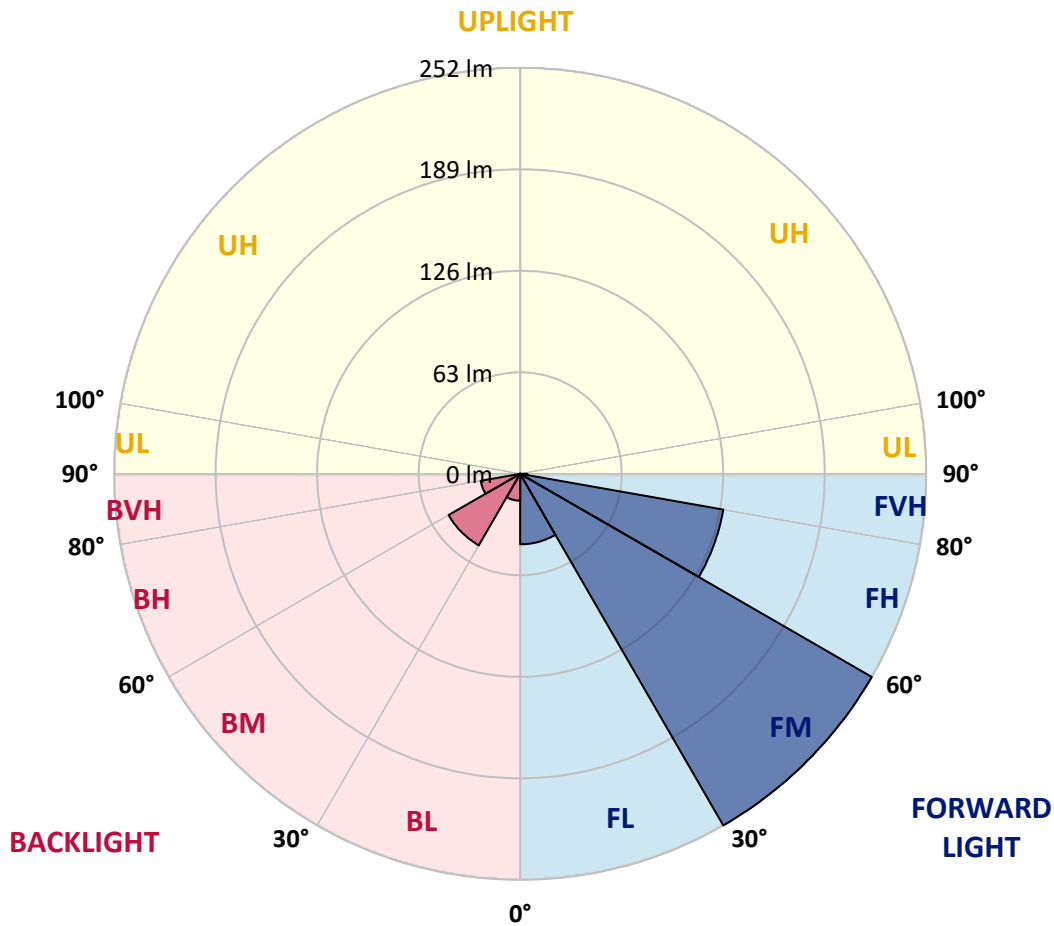
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	43.7	8.4			
FM (30°-60°)	251.6	48.3			
FH (60°-80°)	127.8	24.5			G0/660
FVH (80°-90°)	4.4	0.9			G0/10
BL (0°-30°)	16.7	3.2	B0/110		
BM (30°-60°)	51.2	9.8	B0/220		
BH (60°-80°)	24.8	4.8	B0/110		G0/110
BVH (80°-90°)	0.8	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-G0

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	92.1	94.8	84.3	93.0	79.8	77.4	82.8	77.7	67.5	70.5	59.7
5°	112.8	114.0	102.3	94.8	83.4	71.7	62.4	59.4	57.9	58.5	54.9
7.5°	109.2	110.7	98.4	86.4	68.1	55.8	48.6	46.2	45.9	46.2	46.5
10°	92.1	93.3	82.8	71.7	58.8	53.1	47.4	40.8	36.0	32.1	29.1
12.5°	87.9	88.2	80.4	69.6	58.2	50.7	41.4	32.4	24.6	19.2	16.8
15°	90.3	89.4	82.5	69.3	56.1	42.3	30.0	20.7	15.9	12.6	11.4
17.5°	103.2	103.2	95.1	70.2	49.5	32.4	20.4	15.3	11.1	9.9	9.9
20°	136.9	137.2	116.1	68.1	41.1	23.4	15.3	11.4	9.6	9.0	9.0
22.5°	181.0	183.4	148.6	68.4	32.4	17.7	12.0	9.9	8.7	8.4	8.4
25°	214.0	213.1	166.0	67.8	26.4	13.8	10.5	9.0	8.4	8.1	8.1
27.5°	208.6	213.1	168.7	64.5	22.5	12.0	9.6	8.4	7.8	7.2	7.5
30°	247.6	246.1	207.4	65.7	19.5	10.5	8.7	8.1	7.5	6.9	6.9
32.5°	277.0	280.3	222.4	64.8	15.9	9.6	8.4	7.5	6.9	6.6	6.6
35°	304.3	305.8	249.4	60.9	14.7	9.3	7.8	7.2	6.6	6.0	6.0
37.5°	346.3	348.1	262.3	58.2	13.8	9.0	7.8	6.9	6.3	5.7	5.7
40°	373.9	377.8	286.0	53.7	12.3	9.3	7.8	6.9	6.0	5.4	5.1
42.5°	417.2	420.8	309.4	52.2	10.8	8.4	7.5	6.6	5.7	5.1	4.8
45°	447.8	447.2	331.0	51.6	9.9	8.1	8.1	6.3	5.7	4.8	4.2
47.5°	463.7	470.0	350.2	53.4	9.3	7.8	8.1	6.3	5.1	4.5	3.9
50°	474.2	477.2	372.1	57.0	8.7	7.5	7.8	6.6	5.1	4.5	3.9
52.5°	491.0	490.7	391.6	63.3	8.7	7.5	7.2	6.9	5.4	4.5	3.9
55°	513.2	513.2	401.8	64.2	9.0	7.5	6.9	6.3	5.4	4.5	3.6
57.5°	509.9	515.0	403.6	60.3	9.0	7.5	6.9	6.3	5.4	4.2	3.3
60°	476.0	479.0	376.6	51.3	8.7	7.2	6.3	6.0	5.1	3.9	3.0
62.5°	421.7	418.7	326.2	39.0	8.1	6.6	6.0	5.4	4.5	3.6	2.7
65°	340.3	353.2	266.8	27.0	7.2	6.0	5.4	4.8	4.2	3.3	2.4
67.5°	261.4	274.3	196.3	18.0	6.3	5.7	5.1	4.5	3.9	3.0	2.1
70°	181.0	182.5	127.5	11.4	6.0	5.7	5.1	4.2	3.6	3.0	2.1
72.5°	123.9	123.9	75.0	8.4	5.4	4.8	4.2	3.6	3.3	2.7	2.1
75°	81.6	86.1	49.5	6.3	4.8	4.2	3.3	3.6	3.6	3.0	2.4
77.5°	59.1	62.4	37.2	5.1	4.5	3.9	3.0	3.6	3.3	2.7	1.8
80°	41.4	43.8	21.0	3.6	3.3	3.0	2.7	2.7	2.4	2.1	1.2
82.5°	24.0	26.7	9.3	2.1	2.4	2.1	1.2	2.1	2.1	1.8	0.9
85°	5.1	6.6	2.1	1.5	1.8	1.5	0.9	1.5	1.8	1.5	0.9
87.5°	0.6	0.9	0.9	1.2	1.5	1.2	1.2	1.8	1.8	1.5	1.2
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°	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	69.9	72.3	60.3	50.7	48.3	46.5	43.5	42.3	51.0	51.3	63.9
5°	60.6	58.2	53.7	45.9	35.1	29.4	31.5	38.1	45.3	47.4	55.5
7.5°	46.2	40.5	37.8	33.9	26.4	18.9	19.2	26.7	33.3	36.0	40.5
10°	27.9	26.7	24.6	22.5	20.1	18.0	15.9	16.5	21.3	25.5	29.1
12.5°	15.9	15.6	15.3	15.6	15.0	14.7	13.8	14.1	17.1	19.2	21.6
15°	11.1	10.8	11.1	11.1	11.7	12.0	12.6	12.3	13.8	14.7	15.6
17.5°	9.3	9.0	9.3	9.3	9.9	10.8	11.1	11.4	12.0	13.5	14.1
20°	8.7	8.7	8.4	8.1	9.0	9.6	10.2	11.1	15.0	16.2	16.2
22.5°	8.4	8.1	7.8	7.5	8.1	8.7	9.3	14.4	22.8	25.2	22.2
25°	8.1	7.8	7.5	7.2	7.5	8.1	9.0	20.4	29.7	37.5	33.9
27.5°	7.5	7.2	6.9	6.9	6.9	7.5	9.0	22.2	36.0	53.1	58.2
30°	6.9	6.9	6.3	6.3	6.6	6.6	8.1	18.6	36.6	60.9	73.5
32.5°	6.6	6.3	5.7	5.7	6.0	6.3	7.2	10.2	19.2	30.6	35.7
35°	6.0	5.7	5.4	5.4	5.4	5.7	6.6	7.5	10.2	14.1	13.8
37.5°	5.7	5.4	5.1	4.8	5.1	5.4	6.0	7.2	8.7	11.7	13.2
40°	5.1	4.8	4.8	4.5	4.8	5.4	5.7	6.9	8.1	11.4	13.2
42.5°	4.5	4.5	4.2	4.2	4.5	4.8	5.1	6.3	7.8	11.1	13.2
45°	4.2	4.2	3.9	3.9	3.9	4.5	4.5	5.7	7.5	11.1	12.9
47.5°	3.9	3.9	3.6	3.6	3.9	4.2	4.5	5.4	7.2	10.8	12.9
50°	3.6	3.6	3.3	3.3	3.6	3.9	4.2	5.1	6.9	10.5	12.6
52.5°	3.6	3.3	3.0	3.0	3.3	3.6	4.2	4.8	6.6	9.9	11.7
55°	3.3	3.3	3.0	2.7	3.0	3.6	3.9	4.8	6.6	9.3	11.1
57.5°	3.0	3.0	2.7	2.7	3.0	3.3	3.6	4.2	6.0	9.0	10.5
60°	2.7	2.7	2.4	2.4	2.7	3.0	3.3	3.9	5.7	8.4	9.9
62.5°	2.1	2.4	2.4	2.1	2.4	2.7	3.0	3.6	5.4	7.8	9.0
65°	1.8	2.1	2.1	2.1	2.1	2.4	2.7	3.3	4.8	7.2	8.1
67.5°	1.8	2.1	1.8	1.8	1.8	2.1	2.4	3.0	4.5	6.6	7.2
70°	1.5	1.8	1.8	1.8	1.8	1.8	2.1	2.7	4.2	6.3	6.6
72.5°	1.5	1.8	1.8	1.8	1.5	1.5	1.8	2.4	3.6	5.7	6.0
75°	1.8	2.1	2.1	2.1	1.2	1.2	1.5	2.4	3.3	4.8	4.8
77.5°	0.9	1.5	1.5	1.5	1.2	0.6	1.2	2.1	3.3	4.2	3.9
80°	0.3	0.9	1.2	1.2	0.9	0.3	0.9	1.5	2.4	3.0	3.0
82.5°	0.3	0.9	1.2	0.9	0.6	0.0	0.3	0.9	1.2	2.1	1.8
85°	0.3	0.9	0.9	0.9	0.3	0.0	0.3	0.6	0.6	1.2	0.9
87.5°	0.3	0.9	0.9	0.9	0.6	0.0	0.3	0.3	0.6	0.3	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°	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	63.9	63.6	62.4	65.7	69.9	68.1	70.2	76.5	78.0	99.0	97.2
5°	55.5	60.0	58.2	55.2	55.5	59.4	74.1	89.4	91.5	112.5	111.0
7.5°	40.2	43.2	45.3	47.1	46.8	50.4	69.0	88.8	98.7	113.7	111.9
10°	29.7	34.8	37.5	42.3	48.3	50.7	58.5	78.3	92.1	103.5	106.8
12.5°	21.6	25.8	32.1	37.8	45.9	52.5	59.4	75.9	85.8	91.8	102.3
15°	16.5	18.9	22.5	29.4	38.7	47.1	58.2	75.6	94.8	105.0	114.0
17.5°	14.7	16.2	17.4	21.0	30.3	43.8	60.0	79.8	115.8	128.4	138.7
20°	15.6	15.9	16.8	19.8	25.5	38.4	53.1	93.9	139.6	155.8	172.0
22.5°	18.6	17.1	18.3	21.3	26.1	38.4	59.1	116.1	198.1	231.1	240.4
25°	30.0	21.6	24.9	33.0	40.8	51.0	70.8	136.6	243.4	285.4	303.4
27.5°	53.7	58.8	61.8	65.4	60.6	61.8	67.2	117.9	222.4	260.2	266.8
30°	81.0	80.1	69.6	54.0	44.1	39.3	46.5	107.1	232.6	258.7	268.6
32.5°	39.9	29.1	21.0	19.8	20.7	27.9	39.0	113.4	264.7	283.9	288.4
35°	14.4	14.4	15.0	16.5	19.2	26.4	40.8	116.1	292.0	313.6	308.2
37.5°	13.8	14.1	14.7	16.5	19.2	27.0	43.2	120.9	336.4	371.5	342.4
40°	13.8	14.7	15.0	16.5	18.9	26.4	47.4	126.0	368.2	414.5	382.0
42.5°	13.8	15.0	15.6	16.8	18.9	25.2	49.2	133.2	405.1	449.9	416.6
45°	13.8	15.6	16.5	17.7	18.9	23.7	50.7	143.2	421.4	493.4	433.4
47.5°	14.1	16.2	17.4	18.6	19.2	22.2	50.7	161.2	446.6	511.4	451.7
50°	13.8	16.2	17.4	19.2	18.6	21.6	47.7	175.6	465.8	527.9	464.0
52.5°	12.6	15.0	16.5	18.9	18.3	21.3	47.7	189.4	477.5	539.3	475.1
55°	11.7	13.8	16.8	18.9	17.4	21.0	49.2	206.8	484.7	555.5	494.9
57.5°	11.4	13.5	16.5	18.3	16.8	21.0	52.5	213.7	476.3	561.5	511.1
60°	10.8	13.2	16.8	16.5	16.2	22.5	53.7	210.7	441.2	543.5	511.4
62.5°	9.9	12.0	16.2	15.0	15.6	22.5	54.0	196.6	385.9	494.9	485.9
65°	8.7	10.5	13.5	13.8	14.1	21.6	51.9	167.5	329.8	428.0	435.2
67.5°	7.8	9.3	11.4	12.3	12.3	20.4	48.6	132.9	253.3	364.9	377.8
70°	6.9	8.1	9.9	10.5	10.8	18.0	44.1	97.5	178.0	264.7	302.2
72.5°	6.0	6.9	8.4	8.7	8.4	15.0	34.5	68.1	101.1	174.1	207.4
75°	5.1	6.0	6.6	6.6	6.0	9.9	23.1	40.2	67.8	99.3	121.8
77.5°	4.5	5.1	5.4	5.1	4.8	6.6	12.3	19.5	48.3	60.9	71.7
80°	3.6	4.2	4.2	3.6	3.3	4.5	5.7	8.4	24.0	31.2	34.5
82.5°	2.1	2.4	2.7	2.4	1.8	3.0	3.6	3.9	9.3	12.0	12.9
85°	1.5	1.8	1.5	1.2	0.3	1.5	1.8	1.2	0.0	0.0	0.3
87.5°	0.6	0.9	0.6	0.6	0.0	0.0	0.3	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°	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	89.1	81.3	77.7	81.6	80.7	75.3	78.6	80.7	95.4	92.1
5°	113.7	102.9	95.4	87.0	87.0	95.7	114.9	99.0	114.6	112.8
7.5°	126.6	123.9	115.2	117.3	117.3	122.7	123.0	109.8	114.6	109.2
10°	116.4	124.2	136.9	138.4	129.3	125.1	123.0	102.9	96.3	92.1
12.5°	127.8	140.8	151.3	155.8	147.4	132.6	116.7	100.5	92.7	87.9
15°	129.6	144.4	152.8	151.9	146.2	138.1	122.4	102.0	95.4	90.3
17.5°	146.2	151.9	148.9	147.7	147.1	141.4	140.5	126.9	112.2	103.2
20°	163.9	149.2	148.3	143.8	145.0	150.1	174.1	172.6	151.3	136.9
22.5°	197.8	174.7	159.4	157.3	158.2	188.5	236.5	219.4	196.9	181.0
25°	248.8	184.3	157.3	154.0	165.1	211.6	267.4	259.6	232.6	214.0
27.5°	230.5	193.6	150.7	135.7	150.7	209.2	226.9	243.7	232.3	208.6
30°	215.5	185.8	154.6	136.0	155.5	190.3	219.4	259.0	251.2	247.6
32.5°	229.9	189.7	165.1	145.9	151.3	196.9	238.3	285.1	292.3	277.0
35°	252.4	208.9	172.3	157.6	175.0	211.3	263.8	302.2	315.7	304.3
37.5°	281.8	227.2	198.7	180.1	196.0	235.6	282.4	349.6	366.4	346.3
40°	313.3	264.1	230.8	226.3	229.3	259.9	293.8	386.8	397.9	373.9
42.5°	341.5	308.8	313.0	290.5	277.0	292.0	313.6	413.3	440.6	417.2
45°	364.6	361.6	398.8	411.2	349.6	335.5	337.6	426.5	472.7	447.8
47.5°	382.0	422.3	493.4	493.7	428.3	374.8	352.0	439.7	480.5	463.7
50°	395.5	461.9	590.9	573.2	464.9	396.1	366.1	431.9	479.0	474.2
52.5°	413.3	506.0	654.2	627.5	507.2	417.5	374.2	442.7	491.3	491.0
55°	437.3	521.9	662.9	631.4	529.4	440.3	400.6	461.3	510.2	513.2
57.5°	450.2	502.1	625.1	577.7	513.2	429.8	404.5	467.3	513.2	509.9
60°	449.6	452.3	545.6	497.3	448.7	406.1	403.3	447.8	487.7	476.0
62.5°	431.9	379.9	428.9	408.2	370.0	350.5	386.8	412.4	430.7	421.7
65°	410.3	328.9	341.8	332.5	300.1	286.9	346.0	353.5	363.4	340.3
67.5°	371.8	277.3	253.3	249.7	231.4	224.5	278.2	283.6	282.4	261.4
70°	317.5	220.0	189.7	167.2	157.3	154.9	220.9	212.8	210.4	181.0
72.5°	252.4	163.0	120.9	93.6	95.7	109.2	177.7	157.0	145.9	123.9
75°	188.5	104.7	81.3	66.0	67.2	84.0	132.6	108.3	104.7	81.6
77.5°	116.7	74.1	64.8	55.2	59.7	62.7	84.9	71.4	68.4	59.1
80°	60.0	50.1	53.1	42.0	45.3	39.9	49.2	46.5	48.9	41.4
82.5°	24.6	27.9	28.2	16.8	23.4	24.6	32.7	30.3	30.0	24.0
85°	12.3	9.3	7.2	4.8	8.4	9.3	12.3	7.8	9.0	5.1
87.5°	0.0	0.3	0.3	0.3	0.9	0.9	1.8	1.2	0.9	0.6
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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