

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: P400845

Luminaire Tested: **ENV-SA1-827-U-SLR-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400845
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1-827-U-SLR-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 427 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

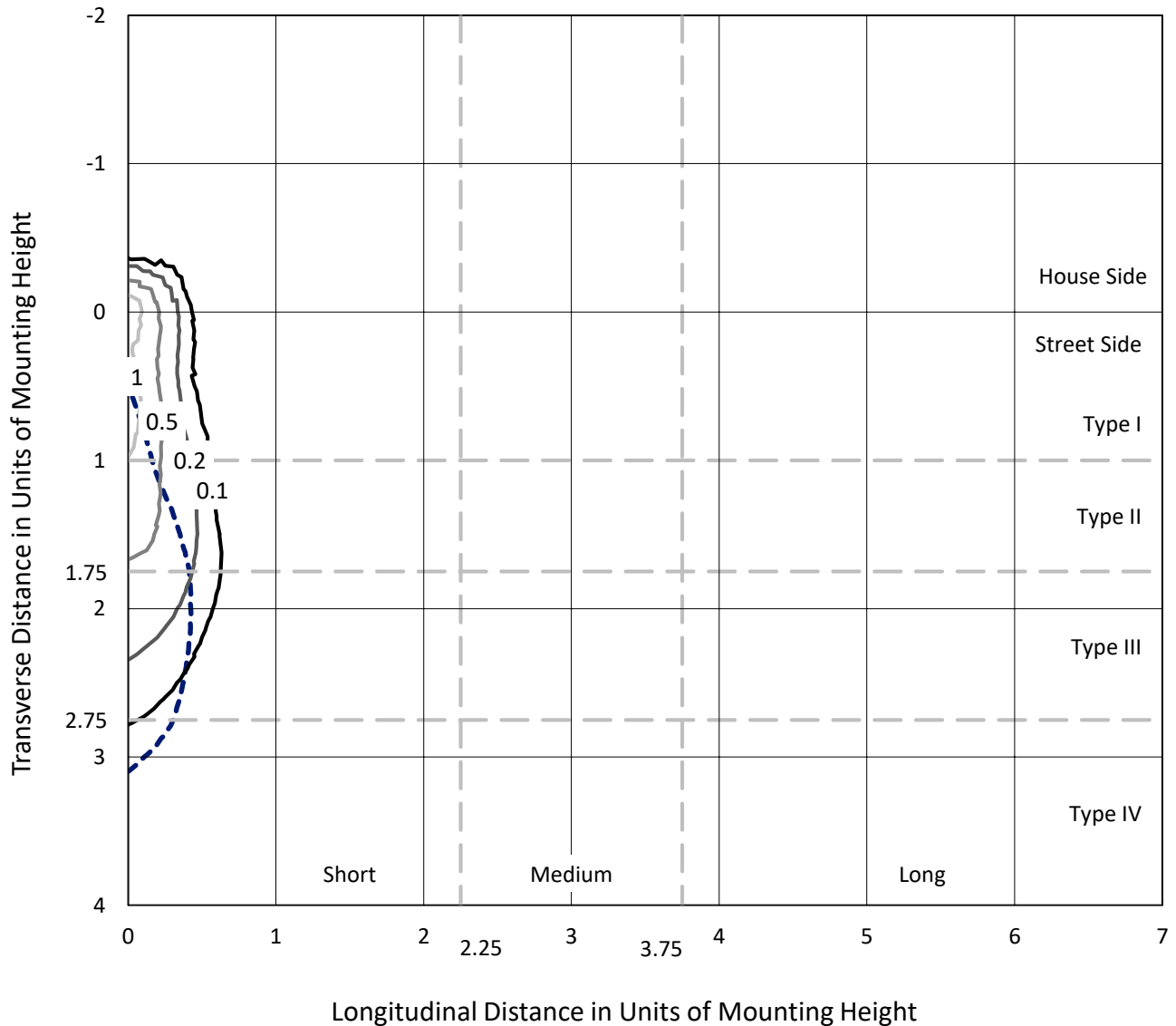
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

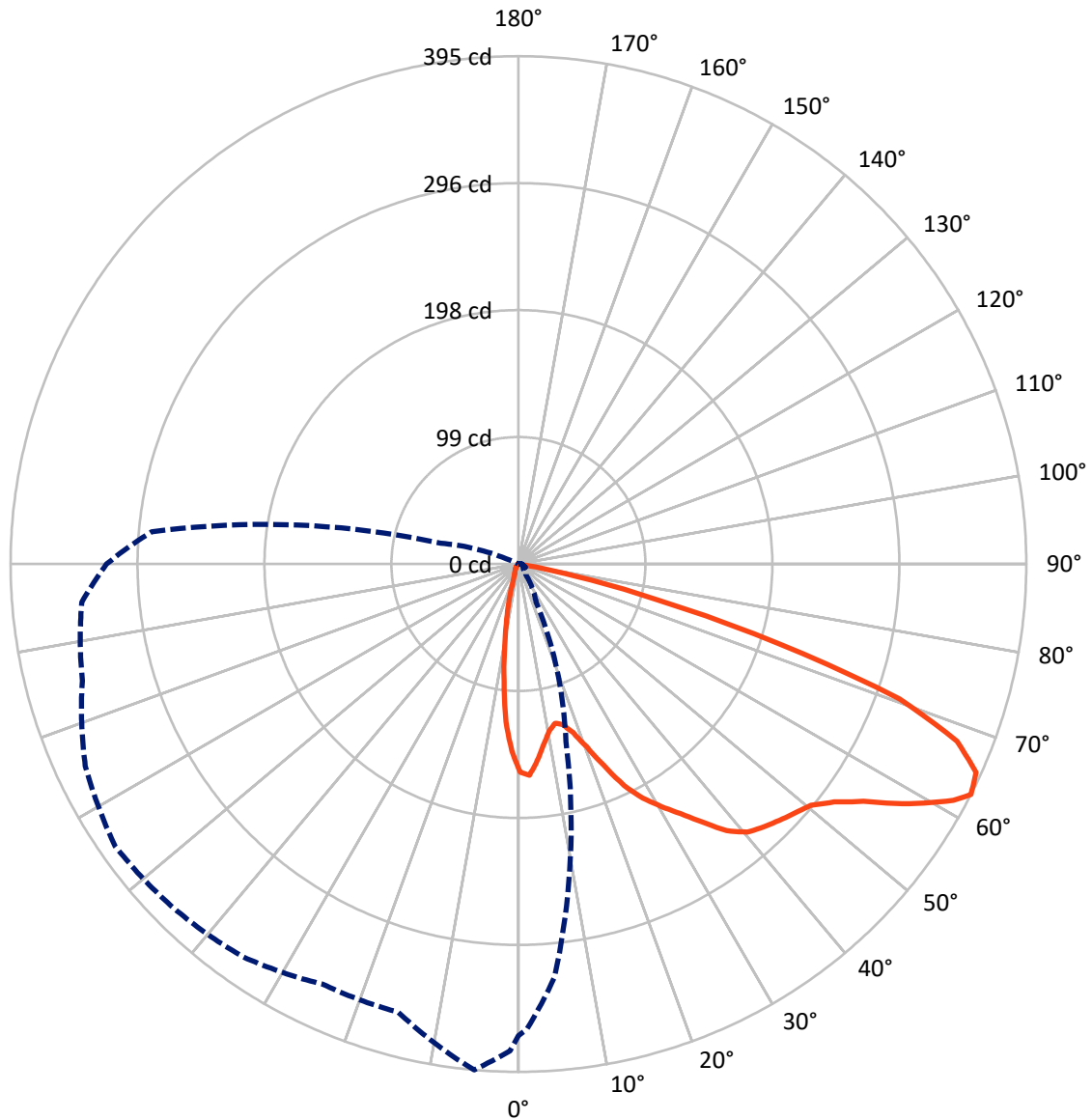
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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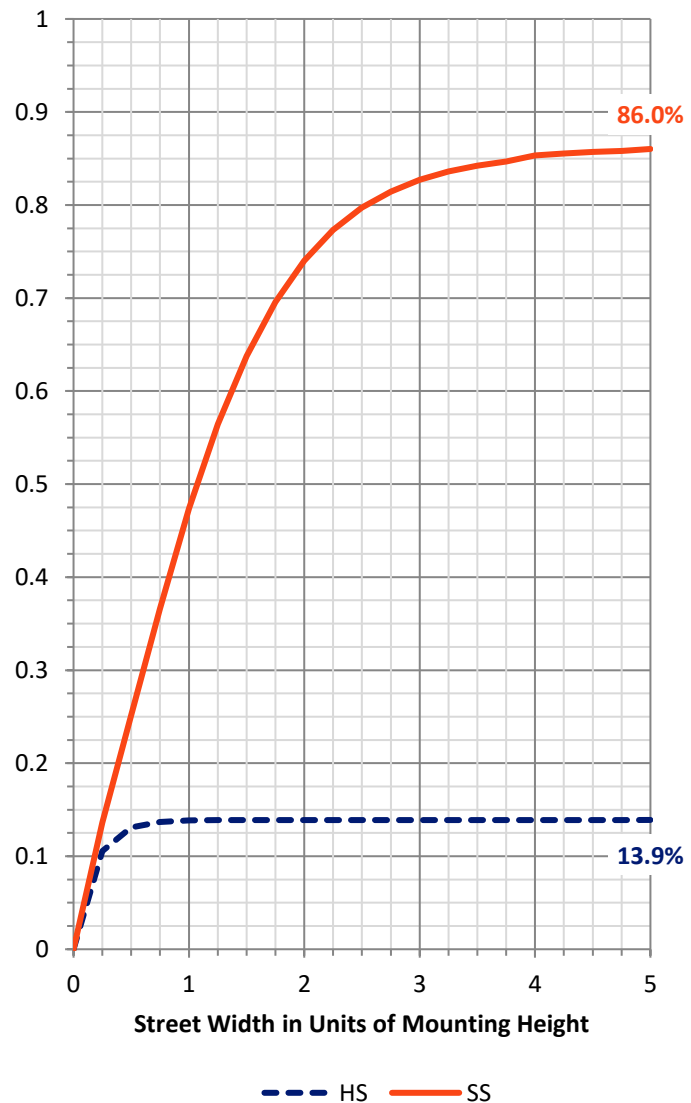
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	60.1	0.0	60.1
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	366.9	0.0	366.9
	% Fixture	85.9	0.0	85.9
Total	Lumens	427.0	0.0	427.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.1	2.8
10°-20°	23.1	5.4
20°-30°	32.1	7.5
30°-40°	46.5	10.9
40°-50°	66.6	15.6
50°-60°	96.6	22.6
60°-70°	104.6	24.5
70°-80°	42.2	9.9
80°-90°	3.1	0.7
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°	427.0	100.0
0°-180°	427.0	100.0



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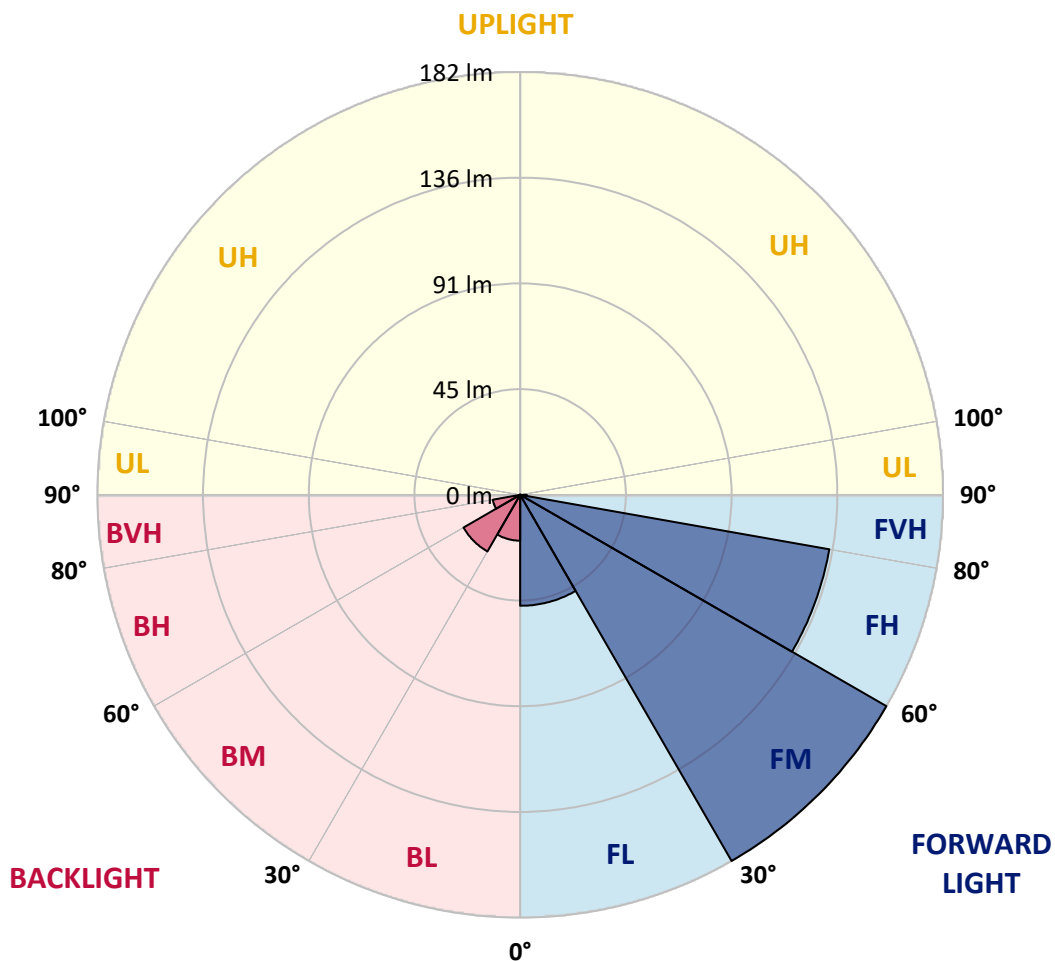
CATALOG NUMBER: ENV-SA1-827-U-SLR-HSS-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	47.7	11.2			
FM	(30°-60°)	181.6	42.5			
FH	(60°-80°)	134.8	31.6			G0/660
FVH	(80°-90°)	2.8	0.7			G0/10
BL	(0°-30°)	19.7	4.6	B0/110		
BM	(30°-60°)	28.1	6.6	B0/220		
BH	(60°-80°)	11.9	2.8	B0/110		G0/110
BVH	(80°-90°)	0.3	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-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
2.5°	162.6	162.0	160.4	157.2	152.4	149.4	147.4	144.9	142.3	141.4	139.7
5°	148.5	147.4	145.2	137.0	129.5	122.1	116.8	111.7	110.0	106.6	108.7
7.5°	134.8	134.3	129.4	118.6	106.8	97.2	91.2	83.7	81.5	78.1	75.3
10°	124.0	123.6	117.7	103.7	90.9	83.0	78.2	73.3	68.5	63.6	59.7
12.5°	118.6	117.7	110.9	95.7	83.9	77.3	72.2	65.8	60.7	54.1	49.3
15°	119.5	118.6	110.8	94.5	80.5	71.4	63.9	56.3	49.0	42.5	37.9
17.5°	126.2	125.9	116.3	95.6	76.5	64.4	54.3	44.1	35.5	28.5	24.5
20°	139.4	138.4	124.5	97.9	72.2	56.3	42.5	29.9	22.7	17.9	16.2
22.5°	155.7	153.4	137.5	101.4	68.2	47.6	30.8	20.1	16.2	14.4	13.2
25°	174.9	175.0	153.5	106.0	64.1	39.5	21.5	16.0	13.7	12.3	11.3
27.5°	190.4	189.3	168.0	110.7	59.7	32.4	18.1	13.9	12.0	10.6	10.0
30°	201.9	200.2	177.5	113.9	54.1	27.4	16.2	13.3	11.3	9.7	9.0
32.5°	213.8	211.6	186.1	115.7	50.7	25.0	14.4	11.6	10.1	9.5	8.4
35°	227.6	225.7	195.7	115.5	48.9	23.7	13.0	10.5	8.6	7.5	6.8
37.5°	243.1	239.1	205.6	114.7	47.7	23.0	11.8	9.7	8.0	6.8	6.0
40°	256.3	252.4	214.7	113.7	46.8	22.3	11.2	9.2	7.6	6.3	5.5
42.5°	266.7	262.9	223.2	112.5	46.4	20.9	11.5	8.9	7.3	6.0	5.1
45°	275.7	271.8	233.4	112.3	46.2	19.9	11.3	8.8	7.1	5.6	4.7
47.5°	286.1	284.1	246.7	115.1	45.5	19.1	10.4	9.5	7.0	5.4	4.5
50°	301.5	299.7	264.2	123.4	44.5	18.3	9.5	10.4	7.0	5.2	4.2
52.5°	323.0	321.0	291.7	134.2	43.6	17.5	8.5	10.1	7.1	5.0	4.1
55°	345.3	345.0	317.8	145.7	42.8	15.6	7.5	9.0	6.9	4.6	3.8
57.5°	362.8	362.6	337.3	153.4	41.1	12.6	6.8	7.5	6.4	4.2	3.5
60°	370.0	367.9	339.4	153.4	37.4	10.4	6.3	5.9	6.5	3.8	3.0
61°	370.0	367.3	335.6	151.2	35.6	9.9	5.9	5.5	6.7	3.6	2.9
62.5°	367.1	362.6	322.6	143.0	32.6	9.9	5.4	4.9	6.1	3.5	2.6
65°	354.4	347.0	292.1	124.3	29.6	10.1	4.6	4.1	4.4	3.0	2.3
67.5°	322.8	314.6	252.5	98.3	27.1	10.7	3.9	3.6	3.4	2.6	2.0
70°	266.0	259.0	206.1	73.7	25.2	10.9	3.4	3.0	2.9	2.3	1.8
72.5°	170.0	158.4	128.7	49.9	20.2	9.5	2.8	2.9	2.6	1.9	1.4
75°	82.1	85.3	74.9	25.2	13.6	6.2	2.2	2.4	2.1	1.7	1.3
77.5°	36.8	36.1	35.7	6.4	3.5	2.1	1.4	1.6	1.7	1.5	1.1
80°	3.8	5.2	3.0	1.9	1.3	0.9	0.8	0.8	1.0	1.1	0.6
82.5°	0.2	0.1	0.1	0.3	0.3	0.2	0.0	0.0	0.2	0.2	0.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
2.5°	138.2	140.5	139.5	139.2	140.6	139.9	141.9	142.0	143.6	145.6	146.8
5°	108.7	106.9	110.4	112.8	115.8	114.8	118.4	117.9	119.9	123.1	121.8
7.5°	75.5	75.7	77.6	79.7	87.6	89.2	90.4	91.3	91.3	92.0	93.4
10°	57.7	56.3	55.0	58.0	61.1	64.6	65.1	66.3	62.9	64.3	65.0
12.5°	47.2	45.5	42.8	41.2	42.0	44.0	44.9	45.6	43.6	43.7	45.2
15°	35.8	33.5	32.4	30.4	29.7	29.5	29.9	28.8	28.6	27.6	28.2
17.5°	23.3	22.6	22.1	21.6	21.0	20.9	19.3	16.7	15.2	14.9	14.9
20°	15.5	15.0	15.0	15.9	15.6	15.0	12.9	10.7	9.6	9.3	9.5
22.5°	12.8	12.4	11.9	11.9	12.3	11.7	9.9	8.3	7.5	7.5	7.5
25°	11.1	10.9	10.4	9.9	10.1	9.6	8.0	7.0	6.5	6.4	6.5
27.5°	9.7	9.6	9.0	8.5	8.5	8.2	6.9	6.0	5.7	5.5	5.6
30°	8.8	8.6	7.9	7.5	7.4	7.1	5.9	5.2	4.9	4.8	4.8
32.5°	8.1	7.8	7.2	6.8	6.5	6.0	5.2	4.5	4.1	4.1	4.1
35°	6.5	6.5	6.3	6.0	5.7	4.9	4.3	3.7	3.4	3.3	3.3
37.5°	5.7	5.3	4.9	5.0	4.8	4.1	3.5	3.0	2.7	2.6	2.6
40°	5.2	4.7	4.1	3.9	4.0	3.6	3.0	2.3	1.9	2.0	1.9
42.5°	4.6	4.3	3.6	3.0	3.0	3.0	2.3	1.6	1.4	1.4	1.4
45°	4.3	4.0	3.2	2.5	2.1	2.4	1.8	1.1	0.8	0.8	0.8
47.5°	4.1	3.7	2.9	2.1	1.5	1.6	1.3	0.7	0.5	0.3	0.4
50°	3.9	3.5	2.6	1.7	1.1	0.9	0.8	0.3	0.1	0.1	0.0
52.5°	3.6	3.3	2.4	1.4	0.8	0.6	0.4	0.1	0.0	0.0	0.0
55°	3.5	3.0	2.1	1.3	0.7	0.3	0.1	0.0	0.0	0.0	0.0
57.5°	3.1	2.8	1.9	1.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0
60°	2.8	2.5	1.6	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0
61°	2.6	2.4	1.5	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	2.5	2.2	1.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
65°	2.1	1.9	1.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	1.9	1.7	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	1.6	1.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	1.4	1.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.2	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
2.5°	148.0	151.0	153.8	157.3	159.3	164.6	168.4	171.6	174.1	174.6	176.7
5°	125.2	129.4	132.1	139.5	143.6	152.5	159.4	167.5	174.7	178.7	182.3
7.5°	94.3	96.3	101.0	108.4	118.2	125.9	137.5	147.7	160.8	168.0	174.7
10°	66.6	68.4	75.3	83.1	92.0	104.9	119.0	132.4	145.7	154.9	162.8
12.5°	46.8	52.9	59.7	69.5	78.3	87.8	102.7	118.5	135.0	143.8	152.4
15°	30.8	36.2	45.5	58.0	68.9	78.2	92.1	110.5	131.6	141.4	149.5
17.5°	15.2	19.2	27.5	40.8	55.4	70.0	86.8	109.1	136.0	147.1	154.8
20°	9.5	10.7	13.8	23.1	39.9	61.3	82.8	112.0	148.2	160.4	165.4
22.5°	7.7	8.0	9.2	12.3	24.3	50.7	79.3	115.8	161.5	176.5	181.7
25°	6.6	6.8	7.5	9.0	14.1	38.0	75.1	122.7	177.1	195.2	196.4
27.5°	5.7	5.9	6.5	7.7	10.1	25.6	69.0	130.7	195.7	211.6	210.7
30°	4.8	5.2	5.7	6.6	7.9	17.3	57.7	138.8	209.4	222.1	220.8
32.5°	4.1	4.4	4.9	5.7	6.6	11.9	43.3	144.1	220.8	232.1	229.1
35°	3.4	3.6	4.1	4.7	5.3	8.4	32.8	144.3	232.5	244.4	237.0
37.5°	2.7	2.9	3.3	3.9	4.4	6.6	24.1	141.5	247.1	260.5	246.0
40°	2.0	2.3	2.7	3.2	3.7	5.6	18.0	134.8	261.2	276.5	256.8
42.5°	1.4	1.7	2.1	2.6	3.5	4.5	12.7	123.5	272.7	290.8	267.3
45°	0.8	1.1	1.6	2.2	3.6	3.5	8.4	110.1	280.9	301.7	274.5
47.5°	0.4	0.7	1.2	2.1	3.2	2.6	5.2	97.2	288.4	308.1	277.8
50°	0.1	0.3	0.8	2.6	2.7	1.9	3.5	89.2	292.3	306.5	277.5
52.5°	0.0	0.0	0.6	2.5	1.9	1.5	2.7	88.0	298.3	308.6	283.3
55°	0.0	0.0	0.3	1.1	1.1	1.3	2.4	86.4	309.2	321.2	300.9
57.5°	0.0	0.0	0.0	0.5	0.7	1.0	2.2	82.2	320.6	334.5	322.3
60°	0.0	0.0	0.0	0.3	0.4	0.8	1.9	72.6	310.1	334.6	340.0
61°	0.0	0.0	0.0	0.3	0.3	0.8	1.8	69.2	300.7	329.2	342.2
62.5°	0.0	0.0	0.0	0.1	0.3	0.6	1.5	62.5	286.7	320.5	341.2
65°	0.0	0.0	0.0	0.0	0.1	0.3	1.2	50.5	263.3	298.6	329.5
67.5°	0.0	0.0	0.0	0.0	0.0	0.1	0.8	35.6	229.6	273.8	304.6
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	20.6	185.0	231.8	260.9
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.2	9.4	120.1	179.0	205.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	73.9	129.4	153.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	50.1	86.1	103.5
80°	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.7	30.8	53.7	58.4
82.5°	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	16.0	37.9	38.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	8.0
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°	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
2.5°	178.5	179.0	179.4	178.8	175.2	173.1	169.1	164.6	163.1	162.6
5°	188.9	191.8	191.3	187.4	181.1	173.3	163.7	153.7	149.9	148.5
7.5°	186.9	194.4	195.9	191.8	181.1	167.5	153.5	141.7	136.2	134.8
10°	176.6	186.1	190.6	189.3	179.3	163.6	146.4	131.9	125.9	124.0
12.5°	166.6	175.7	178.6	179.6	174.1	160.5	142.9	127.2	121.0	118.6
15°	159.9	165.6	165.4	167.3	166.9	159.4	145.2	129.6	122.6	119.5
17.5°	157.7	156.1	153.9	155.4	158.3	159.7	152.6	138.1	129.9	126.2
20°	159.1	150.8	146.0	145.9	152.2	162.5	163.5	152.0	144.3	139.4
22.5°	166.0	148.2	140.8	140.9	148.6	166.6	176.1	170.3	161.8	155.7
25°	176.2	148.7	138.7	139.7	148.3	170.3	189.7	191.0	180.2	174.9
27.5°	186.6	153.1	138.8	139.9	149.7	172.2	197.5	206.3	197.0	190.4
30°	193.9	158.5	140.3	141.5	152.0	173.7	200.4	218.9	209.3	201.9
32.5°	200.8	164.1	142.8	144.0	156.6	176.8	206.0	231.6	221.0	213.8
35°	207.4	169.6	147.4	149.5	163.9	182.5	211.7	246.5	237.7	227.6
37.5°	213.2	175.7	155.2	159.7	173.9	191.2	219.3	263.4	254.3	243.1
40°	218.0	182.8	171.4	176.4	189.1	200.4	227.9	274.4	268.4	256.3
42.5°	221.9	195.5	194.7	201.7	210.6	211.0	230.3	279.8	277.5	266.7
45°	228.4	218.2	225.2	236.7	236.1	223.6	229.6	284.7	284.8	275.7
47.5°	239.0	246.7	266.7	274.5	270.5	241.0	230.3	289.5	293.3	286.1
50°	254.2	279.0	305.2	315.5	303.9	258.4	236.3	295.2	306.7	301.5
52.5°	267.2	303.4	340.7	349.9	334.1	277.0	250.3	307.6	324.7	323.0
55°	285.8	324.4	365.9	373.0	360.4	298.0	269.2	325.9	344.5	345.3
57.5°	304.8	343.5	382.4	389.6	380.0	324.2	296.0	352.1	363.1	362.8
60°	326.0	361.2	389.8	393.8	388.3	350.4	324.8	376.1	375.8	370.0
61°	338.1	366.9	389.3	390.5	385.2	358.1	339.7	385.3	377.7	370.0
62.5°	351.4	372.0	383.1	379.1	373.4	360.8	361.2	395.3	378.9	367.1
65°	364.9	359.1	354.3	335.3	329.9	335.9	379.4	391.5	371.3	354.4
67.5°	341.8	307.7	297.3	278.2	256.9	281.7	362.1	368.3	345.3	322.8
70°	279.3	226.1	213.8	213.1	197.7	225.0	319.4	314.9	286.6	266.0
72.5°	218.9	154.3	137.5	141.4	138.3	167.7	261.2	211.3	183.8	170.0
75°	171.6	109.7	94.6	94.0	90.7	114.2	191.3	111.4	91.9	82.1
77.5°	113.2	79.0	78.7	72.7	70.2	61.9	85.8	44.6	36.4	36.8
80°	65.2	48.4	56.8	45.0	45.1	36.3	34.7	6.5	5.2	3.8
82.5°	37.4	23.2	17.6	6.9	14.5	14.5	2.8	0.1	0.1	0.2
85°	3.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
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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