

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: P400864

Luminaire Tested: **ENT-SA1-830-U-SLR-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400864
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-9)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-830-U-SLR-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND SPILL
LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 542 lumens
Efficiency: N/A
Efficacy: 41.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-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

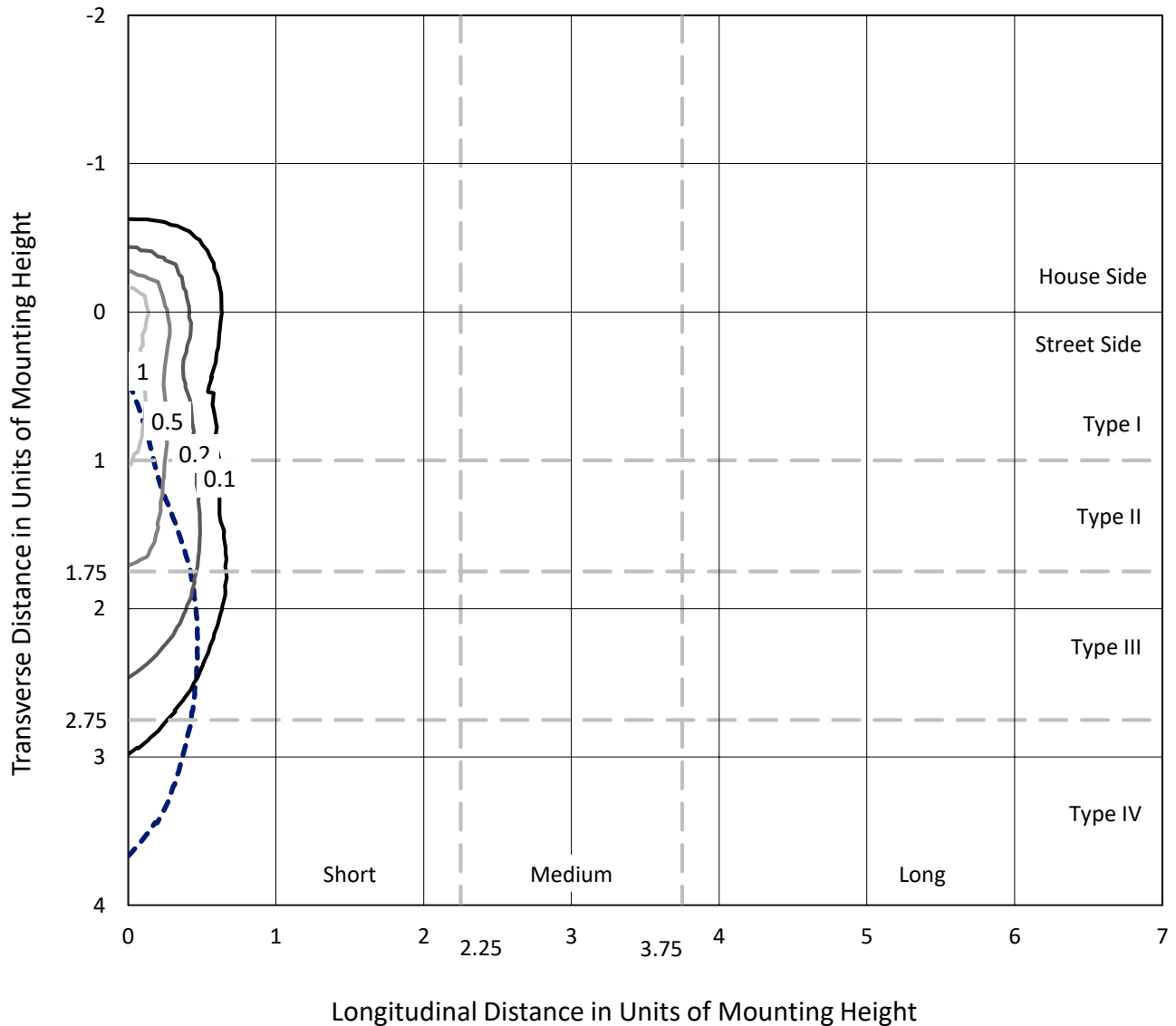


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

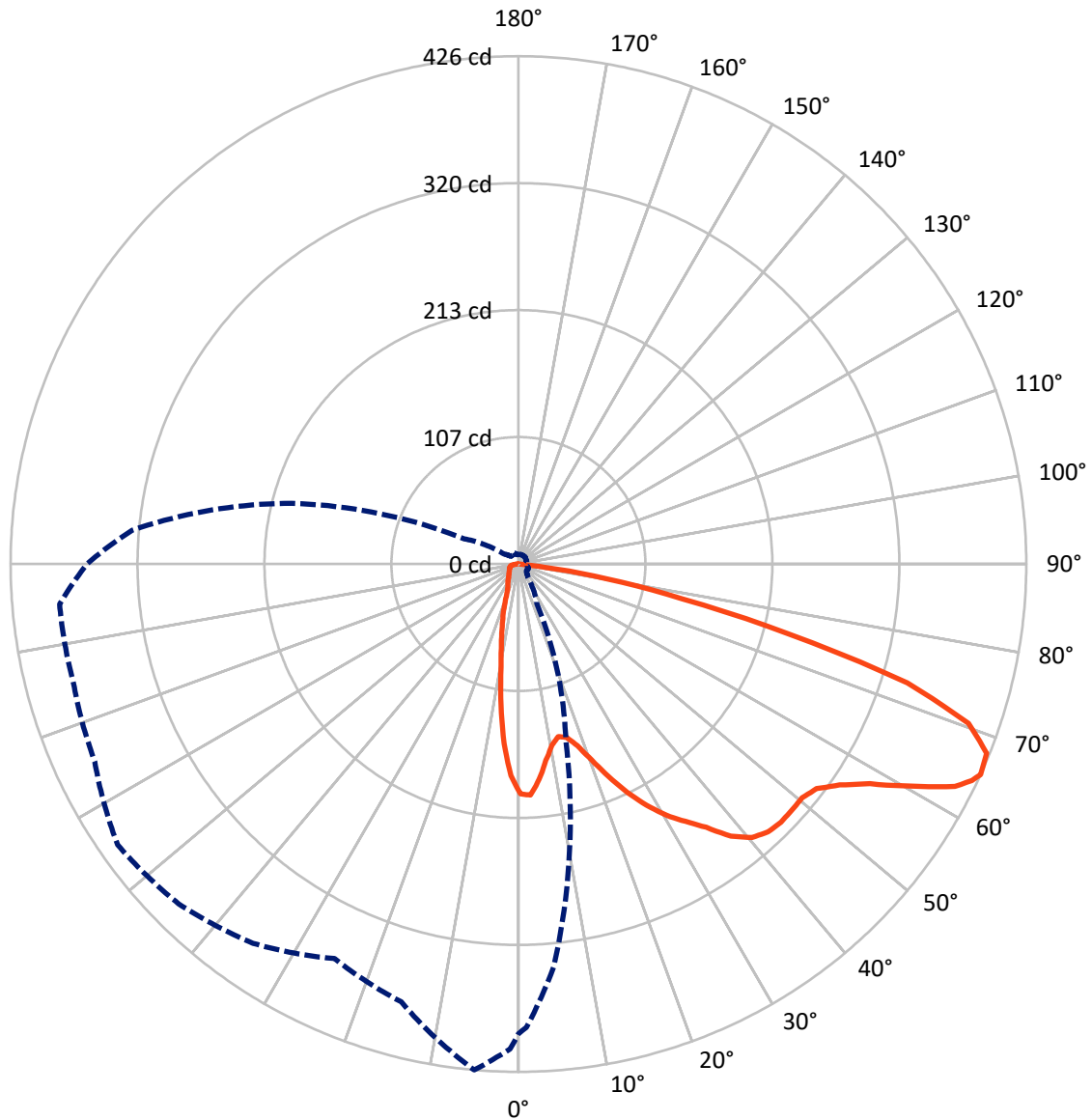


Based on 10 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	111.2	0.0	111.2
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	430.8	0.0	430.8
	% Fixture	79.5	0.0	79.5
Total	Lumens	542.0	0.0	542.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.7	2.7
10°-20°	29.3	5.4
20°-30°	40.6	7.5
30°-40°	56.8	10.5
40°-50°	77.3	14.3
50°-60°	105.7	19.5
60°-70°	129.2	23.8
70°-80°	78.0	14.4
80°-90°	10.3	1.9
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°	542.0	100.0
0°-180°	542.0	100.0



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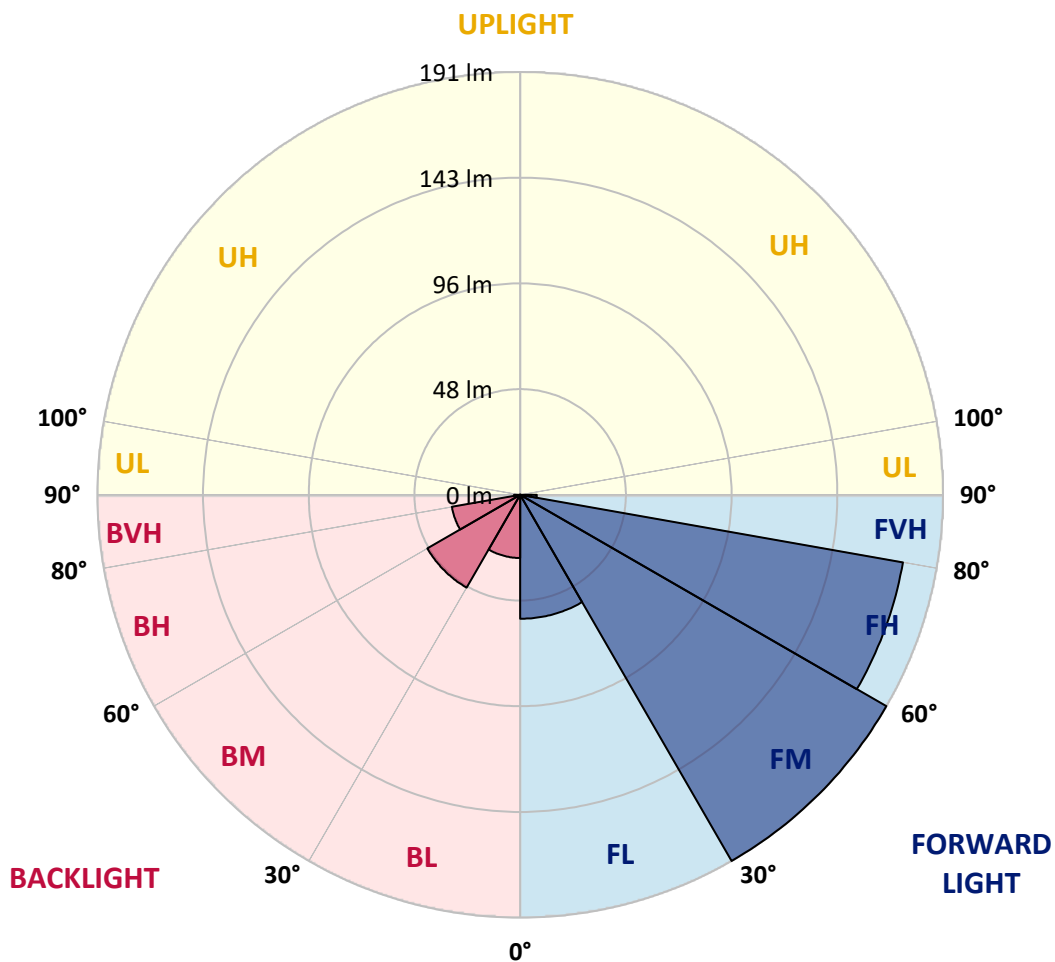
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	56.1	10.3			
FM	(30°-60°)	191.3	35.3			
FH	(60°-80°)	175.9	32.4			G0/660
FVH	(80°-90°)	7.5	1.4			G0/10
BL	(0°-30°)	28.6	5.3	B0/110		
BM	(30°-60°)	48.5	8.9	B0/220		
BH	(60°-80°)	31.4	5.8	B0/110		G0/110
BVH	(80°-90°)	2.8	0.5			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°	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9
2.5°	192.4	191.9	190.5	186.9	183.0	178.4	177.6	172.6	173.1	171.7	172.0
5°	175.7	175.0	171.3	164.0	154.2	148.5	144.0	141.4	139.2	138.1	139.5
7.5°	159.5	158.5	154.1	141.3	130.3	121.3	114.0	109.6	105.2	101.8	100.2
10°	146.4	146.0	140.1	125.7	111.9	100.9	96.2	91.5	87.7	82.8	78.9
12.5°	139.8	138.7	131.7	114.9	101.5	94.7	90.3	84.3	79.2	73.2	68.1
15°	140.0	138.8	130.1	112.5	97.9	89.6	82.8	75.7	68.2	62.2	56.9
17.5°	147.8	146.9	136.3	114.7	94.8	83.4	72.8	63.5	55.4	47.8	43.1
20°	161.0	159.6	144.9	117.5	90.9	76.2	61.8	49.1	40.3	33.6	29.9
22.5°	178.1	175.6	157.2	120.8	87.0	68.1	49.9	35.8	28.0	24.7	23.7
25°	196.4	194.4	171.9	125.1	82.8	59.2	37.0	26.0	23.3	21.9	21.2
27.5°	213.3	210.0	187.8	129.8	77.3	50.3	28.1	22.4	20.6	19.9	19.5
30°	225.3	222.5	198.8	135.2	72.5	41.1	24.0	20.3	18.9	17.9	17.7
32.5°	236.8	232.8	206.7	137.8	68.5	36.1	22.2	18.9	17.5	16.5	16.1
35°	250.4	246.4	215.9	138.1	65.5	34.0	20.5	17.8	16.3	15.4	15.0
37.5°	266.5	261.0	226.2	138.4	62.5	33.2	19.0	16.9	15.4	14.4	14.0
40°	281.7	277.5	236.8	137.9	60.5	32.0	18.1	15.9	14.5	13.6	13.1
42.5°	293.2	288.8	245.9	136.6	59.4	30.0	18.5	15.1	13.9	12.9	12.3
45°	299.1	295.1	254.1	135.3	58.7	28.3	18.1	14.9	13.4	12.2	11.7
47.5°	303.5	299.6	262.6	134.8	57.6	27.0	16.7	15.9	13.0	11.6	11.1
50°	310.7	307.3	274.0	137.9	55.9	26.2	15.3	16.9	12.8	11.1	10.4
52.5°	323.6	321.4	292.8	145.0	54.1	24.8	14.0	16.2	13.0	10.7	10.0
55°	347.6	346.2	318.8	154.4	52.4	23.1	12.5	14.7	12.9	10.1	9.5
57.5°	373.5	373.1	350.2	162.7	49.8	20.2	11.6	12.4	12.2	9.5	8.9
60°	390.9	389.7	364.7	167.3	46.6	16.7	10.9	10.5	12.5	9.0	8.2
62.5°	396.9	393.0	360.4	165.6	41.7	14.4	10.1	9.6	11.6	8.4	7.6
64°	396.5	390.8	349.0	159.1	38.5	14.0	9.6	9.0	10.2	8.1	7.3
65°	394.4	389.0	339.6	154.0	36.8	14.0	9.3	8.7	9.3	7.9	7.2
67.5°	381.1	374.0	307.4	130.4	32.4	14.1	8.7	8.0	7.8	7.3	6.7
70°	350.8	341.4	263.3	102.6	30.0	14.2	8.0	7.3	7.0	6.6	6.2
72.5°	281.7	269.2	209.5	73.3	27.6	14.0	7.3	6.6	6.3	6.0	5.5
75°	188.9	175.2	154.4	48.3	22.6	12.5	6.3	5.7	5.6	5.3	4.9
77.5°	106.5	100.8	91.2	26.6	15.6	8.6	5.0	4.6	4.7	4.5	4.2
80°	55.6	53.0	48.8	12.9	7.5	4.2	3.2	3.2	3.6	3.6	3.4
82.5°	19.7	19.8	19.1	2.9	1.5	1.3	1.1	1.5	2.1	2.5	2.5
85°	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6
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°	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9
2.5°	168.9	169.5	170.9	170.7	172.1	171.5	173.4	174.4	174.9	177.7	179.1
5°	138.4	138.6	143.7	144.8	147.6	146.1	149.5	148.2	150.9	151.3	155.8
7.5°	101.7	102.1	104.6	110.6	116.5	118.9	119.9	121.5	120.2	119.7	120.4
10°	77.3	77.6	77.9	82.1	87.3	92.4	92.4	92.5	90.3	88.0	87.6
12.5°	66.1	64.4	61.6	61.7	65.3	67.8	69.7	67.7	67.3	68.4	69.6
15°	54.4	52.7	50.8	48.7	48.8	50.5	51.5	51.4	53.2	54.0	56.5
17.5°	42.2	39.8	39.9	38.6	36.9	38.0	38.2	39.9	42.2	43.3	43.8
20°	28.4	28.4	29.1	30.6	29.8	30.5	30.6	31.9	33.0	32.4	33.0
22.5°	23.5	23.4	23.7	24.7	25.5	26.1	26.3	26.2	25.1	24.7	25.6
25°	21.3	21.2	21.3	21.8	22.7	23.6	23.2	22.7	21.4	21.3	21.5
27.5°	19.5	19.6	19.8	20.1	20.7	21.7	21.3	20.2	19.6	19.4	19.4
30°	17.9	17.9	18.3	18.7	19.3	20.2	19.6	18.7	18.0	17.9	17.8
32.5°	16.4	16.7	16.9	17.3	17.9	18.8	18.2	17.4	16.8	16.4	16.1
35°	14.9	15.0	15.6	16.1	16.6	17.3	16.9	16.2	15.6	14.8	14.4
37.5°	14.0	14.0	14.2	15.0	15.4	16.0	15.8	15.1	14.1	13.5	13.4
40°	13.1	13.1	13.2	13.7	14.3	15.0	14.6	13.6	13.0	12.7	12.6
42.5°	12.3	12.3	12.4	12.4	13.2	14.3	13.4	12.4	12.1	12.0	11.9
45°	11.6	11.6	11.6	11.5	12.0	13.3	12.3	11.5	11.3	11.3	11.2
47.5°	11.1	11.0	10.9	10.7	11.0	12.1	11.2	10.8	10.7	10.8	10.7
50°	10.3	10.2	10.2	10.1	10.2	10.7	10.5	10.1	10.2	10.2	10.2
52.5°	9.7	9.6	9.5	9.4	9.6	10.0	10.0	9.6	9.6	9.7	9.8
55°	9.3	9.2	9.1	9.1	9.2	9.6	9.5	9.2	9.2	9.4	9.5
57.5°	8.8	8.6	8.6	8.5	8.7	9.2	9.2	8.9	8.9	9.0	9.2
60°	8.2	8.2	8.1	8.2	8.3	8.9	8.8	8.6	8.5	8.8	8.8
62.5°	7.6	7.6	7.6	7.8	7.9	8.5	8.4	8.3	8.3	8.4	8.3
64°	7.3	7.3	7.3	7.4	7.6	8.2	8.2	8.2	8.2	8.2	8.1
65°	7.1	7.1	7.3	7.3	7.4	8.1	8.0	8.1	8.2	8.1	7.9
67.5°	6.6	6.6	6.9	6.9	7.0	7.7	7.6	7.8	8.0	7.8	7.6
70°	6.1	6.2	6.4	6.3	6.5	7.3	7.1	7.4	7.8	7.5	7.3
72.5°	5.5	5.6	6.0	5.8	5.9	6.9	6.5	6.9	7.4	7.3	7.1
75°	5.0	5.1	5.3	5.3	5.4	6.3	6.0	6.3	6.9	6.9	6.8
77.5°	4.3	4.4	4.6	4.5	4.9	5.7	5.3	5.6	6.1	6.4	6.3
80°	3.4	3.7	3.8	3.9	4.3	4.9	4.6	4.7	5.2	5.4	5.5
82.5°	2.4	2.8	3.0	3.1	3.6	3.8	3.9	3.8	4.1	4.4	4.2
85°	0.7	0.9	1.7	2.2	2.7	2.7	3.2	3.0	3.2	2.8	2.4
87.5°	0.0	0.0	0.0	0.6	1.6	1.6	2.3	2.1	2.2	1.6	1.5
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°	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9
2.5°	179.4	180.9	184.4	188.3	190.5	195.2	198.1	201.2	204.3	204.9	205.9
5°	156.7	158.5	162.4	167.8	173.1	179.4	186.6	194.3	202.8	206.5	210.0
7.5°	122.1	122.4	128.0	137.7	142.4	151.3	161.6	173.5	186.6	193.4	200.7
10°	90.2	93.9	98.1	106.1	118.0	128.2	141.0	154.9	168.6	178.5	186.0
12.5°	70.9	75.6	82.5	91.4	100.3	110.0	124.8	139.7	156.5	165.4	174.7
15°	58.4	64.4	73.3	82.7	91.0	99.6	112.8	131.0	152.5	161.6	169.9
17.5°	46.2	52.8	62.4	72.2	82.2	92.7	107.9	130.5	156.8	167.3	175.8
20°	35.4	40.6	48.7	58.6	70.2	84.7	104.1	134.0	169.4	182.5	188.2
22.5°	26.3	29.3	35.6	46.0	59.7	77.5	100.3	138.9	185.0	200.4	204.7
25°	21.8	22.6	25.5	34.4	48.7	69.4	97.4	145.2	200.6	217.9	221.0
27.5°	19.6	20.0	21.4	24.7	38.1	62.8	93.6	152.5	217.0	235.2	234.9
30°	17.7	17.8	18.6	20.9	30.9	56.9	89.2	160.7	231.6	247.6	246.8
32.5°	16.0	16.0	17.0	18.9	26.4	51.6	83.8	166.6	244.3	257.8	255.1
35°	14.4	14.7	15.7	17.5	23.4	45.6	78.9	168.8	255.1	270.0	262.6
37.5°	13.3	13.7	14.7	16.4	20.8	41.1	74.8	171.3	268.6	284.8	270.9
40°	12.6	12.9	13.8	15.2	18.9	37.4	70.3	173.0	281.9	300.5	279.7
42.5°	11.9	12.1	13.1	14.4	17.9	33.1	66.1	174.0	295.7	314.2	287.0
45°	11.2	11.6	12.5	13.8	18.0	29.2	62.5	173.7	304.1	324.1	292.8
47.5°	10.8	11.1	12.1	13.8	17.5	26.9	59.5	172.4	310.2	330.5	295.4
50°	10.3	10.7	11.9	15.2	16.6	26.3	57.3	172.2	316.7	331.8	295.4
52.5°	9.9	10.5	12.0	15.3	15.2	26.0	55.5	177.0	325.6	334.0	298.0
55°	9.6	10.2	12.3	14.1	13.3	25.1	54.4	183.6	340.5	346.0	311.2
57.5°	9.2	9.7	12.1	13.2	11.9	23.0	53.5	190.0	360.2	368.2	337.6
60°	8.8	9.3	11.8	11.3	10.8	19.6	52.9	195.2	367.5	382.5	366.0
62.5°	8.3	9.0	12.9	9.9	10.0	16.3	51.9	200.3	352.0	379.0	384.2
64°	8.1	8.7	12.0	9.2	9.5	14.9	50.9	200.6	338.3	370.9	387.6
65°	7.9	8.4	11.1	8.9	9.2	14.5	50.0	196.8	325.5	362.2	386.6
67.5°	7.6	8.0	8.6	8.2	8.5	13.9	43.9	180.0	298.1	339.8	371.2
70°	7.3	7.5	7.6	7.5	8.0	13.4	37.1	156.2	268.2	316.3	347.0
72.5°	6.9	6.9	6.9	6.8	7.3	12.8	33.4	126.2	231.8	285.5	317.0
75°	6.6	6.3	6.3	6.1	6.7	12.4	30.1	94.7	179.1	237.8	265.7
77.5°	6.1	5.8	5.5	5.3	6.0	11.1	25.1	66.9	132.1	173.0	205.0
80°	5.3	5.1	4.7	4.4	5.0	8.7	19.0	41.3	96.6	116.8	134.5
82.5°	4.3	4.2	3.8	3.4	3.6	6.3	13.0	21.0	64.4	63.4	75.1
85°	2.6	3.3	2.8	2.3	2.4	3.6	5.3	6.7	19.8	11.9	18.4
87.5°	1.5	2.1	1.7	1.2	0.9	1.6	1.5	1.4	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°	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9	192.9
2.5°	208.3	209.5	210.1	207.7	205.2	202.9	198.6	194.2	192.0	192.4
5°	216.8	218.8	219.3	215.9	208.7	201.4	190.8	181.6	176.1	175.7
7.5°	213.5	220.1	221.1	217.4	207.2	193.5	179.1	166.3	160.8	159.5
10°	201.9	211.9	215.2	213.9	203.9	188.2	170.8	154.5	149.0	146.4
12.5°	190.1	200.5	202.5	203.7	197.7	184.4	165.2	148.6	141.9	139.8
15°	182.3	189.4	190.0	191.1	189.9	182.6	167.8	151.0	143.0	140.0
17.5°	181.2	178.6	176.9	179.4	180.9	182.7	174.4	160.2	151.6	147.8
20°	181.4	173.5	168.6	168.4	175.0	185.1	187.8	175.6	164.5	161.0
22.5°	188.0	170.8	162.6	161.6	169.7	189.1	201.5	193.9	182.8	178.1
25°	197.9	169.1	158.3	158.6	166.7	191.7	213.2	212.2	202.5	196.4
27.5°	207.4	171.8	157.8	158.5	167.7	193.4	222.9	229.4	218.5	213.3
30°	215.0	177.9	159.4	160.1	170.8	195.8	227.7	244.7	231.6	225.3
32.5°	221.6	183.6	161.9	162.3	175.7	199.1	232.2	257.6	244.3	236.8
35°	227.6	188.5	165.6	167.1	181.9	203.9	236.8	271.5	259.8	250.4
37.5°	232.8	194.5	172.9	175.5	191.1	210.9	242.8	289.9	277.1	266.5
40°	235.8	199.9	183.8	187.6	202.9	220.0	250.4	301.9	293.7	281.7
42.5°	238.1	207.2	201.3	208.2	221.3	228.5	254.1	307.3	303.4	293.2
45°	239.3	221.7	227.6	234.0	242.1	237.8	252.1	309.1	307.9	299.1
47.5°	244.6	243.5	258.0	266.9	266.5	251.9	248.2	308.9	310.8	303.5
50°	255.5	269.0	289.3	298.0	294.7	265.0	247.5	308.6	316.6	310.7
52.5°	268.5	294.5	323.1	326.7	319.7	278.3	253.0	313.3	327.5	323.6
55°	285.5	318.4	349.7	350.8	340.9	291.3	264.6	327.2	347.8	347.6
57.5°	309.2	339.9	372.0	370.5	356.5	309.2	283.2	347.9	370.3	373.5
60°	335.1	362.5	390.0	389.2	374.2	329.9	308.9	378.7	390.1	390.9
62.5°	359.8	383.6	407.4	403.5	386.6	351.3	344.4	411.3	403.0	396.9
64°	376.0	390.6	411.8	405.7	389.6	361.5	364.9	421.9	406.6	396.5
65°	386.6	392.4	410.8	403.4	388.6	365.4	380.4	426.3	407.2	394.4
67.5°	405.9	382.5	383.8	377.9	364.7	361.8	405.8	423.9	400.2	381.1
70°	400.5	342.7	324.0	320.3	304.4	320.8	402.6	400.9	374.1	350.8
72.5°	354.8	275.2	248.3	245.0	223.0	243.1	347.4	341.4	301.0	281.7
75°	292.4	208.6	177.4	180.2	163.4	182.0	276.3	233.9	200.4	188.9
77.5°	227.0	147.4	122.5	119.2	115.8	117.8	190.0	140.5	117.1	106.5
80°	144.7	92.6	91.9	84.0	81.3	68.5	97.6	74.8	58.8	55.6
82.5°	76.9	53.4	60.6	48.6	39.1	28.1	33.1	22.2	18.8	19.7
85°	21.0	11.1	3.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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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