

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: P401026

Luminaire Tested: **ENV-SA1A-827-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401026
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: ENV-SA1A-827-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1777 lumens
Efficiency: N/A
Efficacy: 88.4 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 - G1

Input Watts (W): 20.1
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

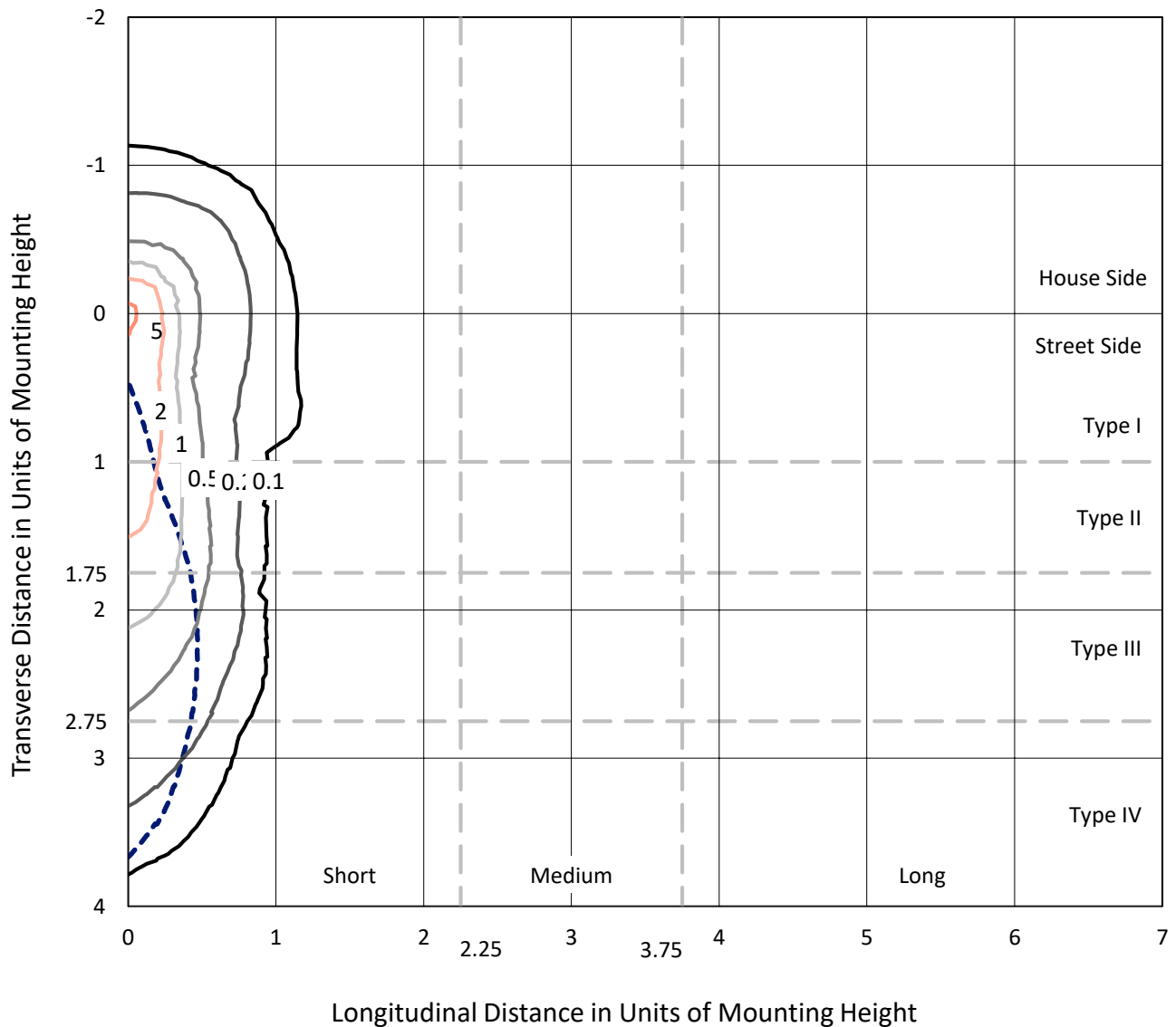


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

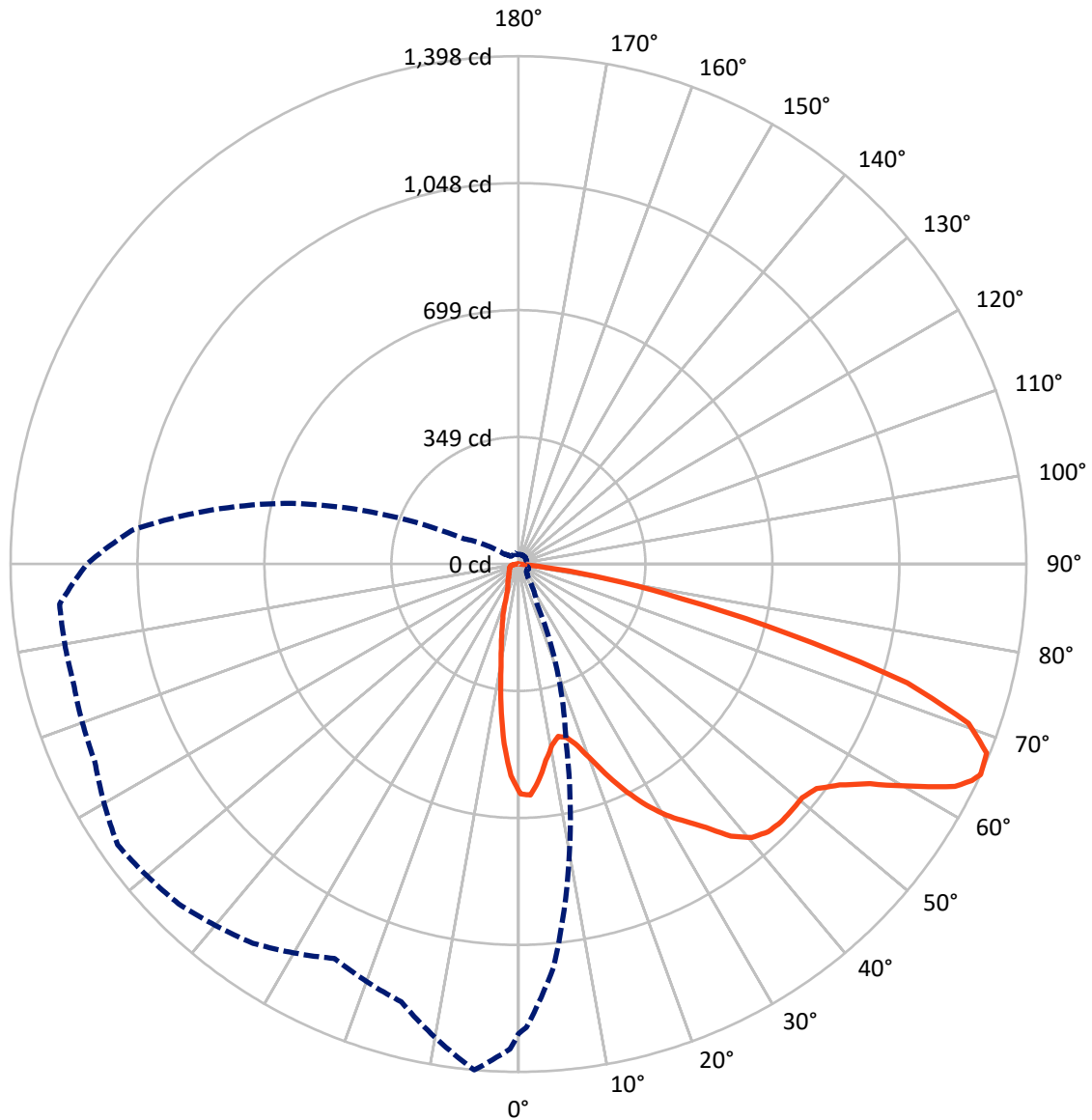


Based on 10 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Non-Cutoff

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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	364.6	0.0	364.6
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	1412.4	0.0	1412.4
	% Fixture	79.5	0.0	79.5
Total	Lumens	1777.0	0.0	1777.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	2.7
10°-20°	96.1	5.4
20°-30°	133.2	7.5
30°-40°	186.2	10.5
40°-50°	253.4	14.3
50°-60°	346.5	19.5
60°-70°	423.7	23.8
70°-80°	255.8	14.4
80°-90°	33.7	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°	1777.0	100.0
0°-180°	1777.0	100.0



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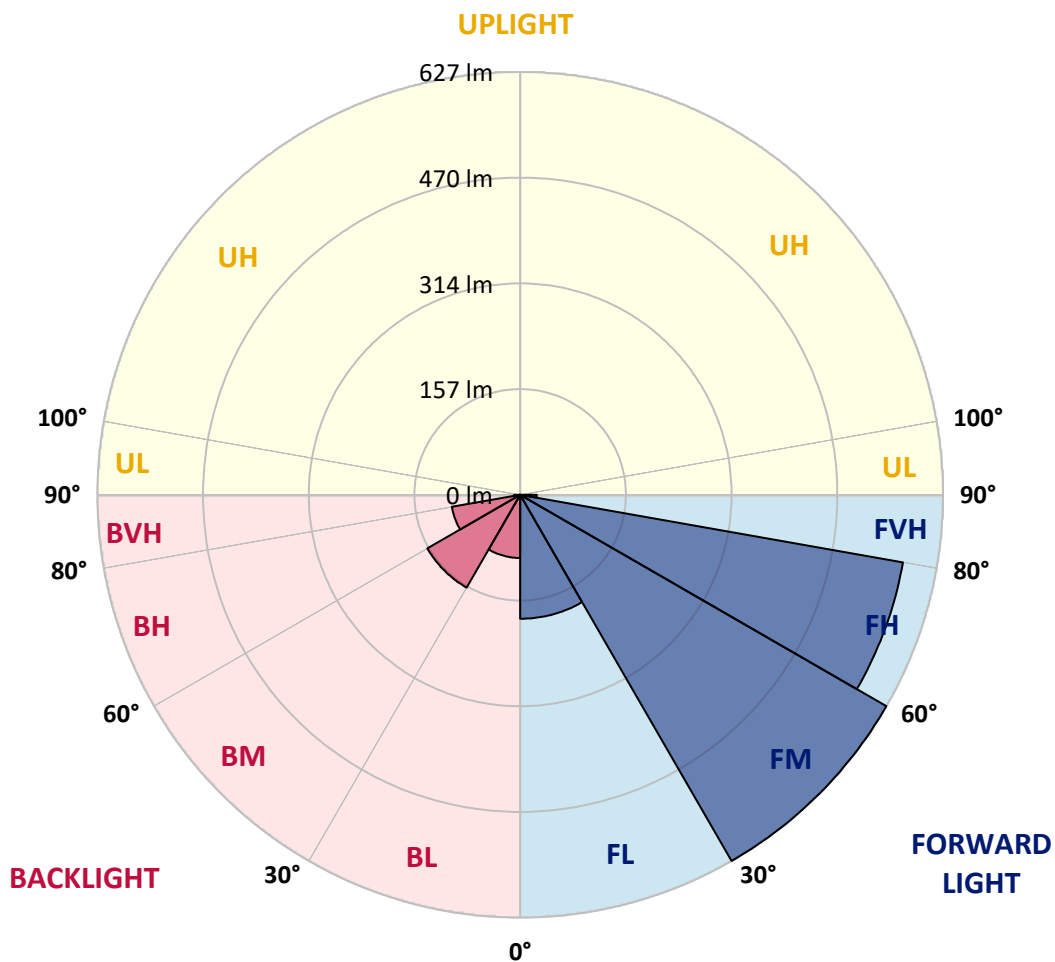
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	183.9	10.3			
FM	(30°-60°)	627.3	35.3			
FH	(60°-80°)	576.6	32.4			G0/660
FVH	(80°-90°)	24.7	1.4			G1/100
BL	(0°-30°)	93.7	5.3	B0/110		
BM	(30°-60°)	158.9	8.9	B0/220		
BH	(60°-80°)	102.9	5.8	B0/110		G0/110
BVH	(80°-90°)	9.1	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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3
2.5°	630.9	629.1	624.6	612.7	600.0	584.8	582.1	565.8	567.6	562.8	564.0
5°	576.2	573.8	561.6	537.9	505.5	486.7	472.2	463.6	456.4	452.9	457.3
7.5°	523.0	519.7	505.2	463.3	427.3	397.6	373.8	359.3	345.0	333.7	328.4
10°	479.9	478.7	459.4	412.2	367.0	330.7	315.3	299.8	287.6	271.6	258.5
12.5°	458.2	454.6	431.8	376.8	332.8	310.5	296.0	276.4	259.7	240.1	223.2
15°	459.1	454.9	426.4	368.8	320.9	293.9	271.6	248.1	223.8	203.8	186.6
17.5°	484.7	481.7	446.9	376.2	310.8	273.4	238.6	208.3	181.6	156.6	141.1
20°	527.7	523.3	475.2	385.1	298.0	249.9	202.7	161.1	132.2	110.2	98.1
22.5°	583.9	575.6	515.3	396.1	285.3	223.2	163.7	117.4	91.8	80.8	77.6
25°	643.9	637.4	563.7	410.1	271.6	194.0	121.2	85.3	76.4	71.9	69.5
27.5°	699.2	688.5	615.7	425.5	253.5	164.9	92.1	73.4	67.5	65.4	63.9
30°	738.7	729.5	651.7	443.4	237.7	134.6	78.7	66.6	61.8	58.5	57.9
32.5°	776.5	763.4	677.8	451.7	224.7	118.3	72.8	61.8	57.4	54.1	52.9
35°	821.0	808.0	707.8	452.9	214.8	111.4	67.2	58.2	53.5	50.5	49.0
37.5°	873.6	855.8	741.7	453.8	205.0	108.8	62.4	55.3	50.5	47.2	46.1
40°	923.6	909.9	776.5	452.3	198.5	104.9	59.4	52.0	47.5	44.6	43.1
42.5°	961.3	946.7	806.2	447.8	194.6	98.4	60.6	49.6	45.5	42.2	40.4
45°	980.6	967.5	833.2	443.7	192.6	92.7	59.4	48.7	44.0	40.1	38.3
47.5°	995.2	982.4	860.9	441.9	189.0	88.6	54.7	52.0	42.5	38.0	36.3
50°	1018.7	1007.7	898.3	452.0	183.3	85.9	50.2	55.6	41.9	36.3	34.2
52.5°	1060.8	1053.7	960.1	475.5	177.4	81.4	45.8	53.2	42.5	35.1	32.7
55°	1139.6	1135.1	1045.1	506.4	171.8	75.8	41.0	48.1	42.2	33.0	31.2
57.5°	1224.6	1223.4	1148.2	533.4	163.4	66.3	38.0	40.7	40.1	31.2	29.1
60°	1281.6	1277.8	1195.8	548.6	152.7	54.7	35.7	34.5	41.0	29.4	27.0
62.5°	1301.2	1288.5	1181.5	542.9	136.7	47.2	33.0	31.5	38.0	27.6	25.0
64°	1300.1	1281.3	1144.3	521.5	126.3	45.8	31.5	29.4	33.6	26.4	24.1
65°	1293.2	1275.4	1113.4	504.9	120.6	45.8	30.6	28.5	30.6	25.9	23.5
67.5°	1249.5	1226.1	1008.0	427.6	106.1	46.4	28.5	26.1	25.6	23.8	22.0
70°	1150.0	1119.4	863.2	336.4	98.4	46.7	26.1	23.8	22.9	21.7	20.2
72.5°	923.6	882.6	687.0	240.4	90.3	45.8	23.8	21.7	20.8	19.6	18.1
75°	619.3	574.4	506.4	158.4	74.0	41.0	20.5	18.7	18.4	17.2	16.0
77.5°	349.2	330.4	298.9	87.1	51.1	28.2	16.3	15.2	15.5	14.9	13.7
80°	182.5	173.8	159.9	42.2	24.7	13.7	10.4	10.4	11.9	11.9	11.3
82.5°	64.5	64.8	62.7	9.5	5.1	4.2	3.6	5.1	6.8	8.3	8.3
85°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.1
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°	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3
2.5°	553.9	555.7	560.4	559.5	564.3	562.2	568.5	571.7	573.5	582.7	587.2
5°	453.8	454.4	471.3	474.9	483.8	479.0	490.0	485.9	494.8	496.0	510.8
7.5°	333.4	334.6	342.9	362.5	381.8	389.9	393.1	398.2	394.0	392.5	394.6
10°	253.5	254.4	255.3	269.2	286.2	303.1	303.1	303.4	296.0	288.5	287.1
12.5°	216.6	211.0	202.1	202.4	214.2	222.3	228.5	222.0	220.8	224.4	228.2
15°	178.3	172.6	166.7	159.6	159.9	165.5	168.8	168.5	174.4	177.1	185.1
17.5°	138.5	130.5	130.7	126.6	120.9	124.5	125.4	130.7	138.5	142.0	143.5
20°	93.0	93.0	95.4	100.4	97.8	100.1	100.4	104.6	108.2	106.1	108.2
22.5°	77.0	76.7	77.6	80.8	83.5	85.6	86.2	85.9	82.3	80.8	83.8
25°	69.8	69.5	69.8	71.6	74.6	77.3	76.1	74.3	70.1	69.8	70.4
27.5°	63.9	64.2	64.8	66.0	67.8	71.0	69.8	66.3	64.2	63.6	63.6
30°	58.8	58.8	60.0	61.2	63.3	66.3	64.2	61.2	59.1	58.5	58.2
32.5°	53.8	54.7	55.6	56.8	58.5	61.5	59.7	57.1	55.0	53.8	52.9
35°	48.7	49.3	51.1	52.9	54.4	56.8	55.6	53.2	51.1	48.4	47.2
37.5°	45.8	45.8	46.7	49.3	50.5	52.3	51.7	49.6	46.4	44.3	44.0
40°	43.1	43.1	43.4	44.9	47.0	49.0	47.8	44.6	42.5	41.6	41.3
42.5°	40.4	40.4	40.7	40.7	43.4	47.0	44.0	40.7	39.8	39.2	38.9
45°	38.0	38.0	38.0	37.7	39.2	43.7	40.4	37.7	37.1	37.1	36.8
47.5°	36.3	36.0	35.7	35.1	36.0	39.5	36.8	35.4	35.1	35.4	35.1
50°	33.9	33.6	33.3	33.0	33.6	35.1	34.5	33.0	33.3	33.3	33.6
52.5°	31.8	31.5	31.2	30.9	31.5	32.7	32.7	31.5	31.5	31.8	32.1
55°	30.6	30.0	29.7	29.7	30.0	31.5	31.2	30.3	30.3	30.9	31.2
57.5°	28.8	28.2	28.2	27.9	28.5	30.3	30.0	29.1	29.1	29.4	30.0
60°	27.0	26.7	26.4	27.0	27.3	29.1	28.8	28.2	27.9	28.8	28.8
62.5°	25.0	25.0	25.0	25.6	25.9	27.9	27.6	27.3	27.3	27.6	27.3
64°	23.8	23.8	24.1	24.4	25.0	26.7	26.7	26.7	26.7	26.7	26.4
65°	23.2	23.2	23.8	24.1	24.4	26.4	26.1	26.4	26.7	26.4	25.9
67.5°	21.7	21.7	22.6	22.6	22.9	25.3	25.0	25.6	26.1	25.6	25.0
70°	19.9	20.2	21.1	20.8	21.4	24.1	23.2	24.4	25.6	24.7	24.1
72.5°	18.1	18.4	19.6	19.0	19.3	22.6	21.4	22.6	24.4	23.8	23.2
75°	16.3	16.6	17.5	17.2	17.8	20.8	19.6	20.8	22.6	22.6	22.3
77.5°	14.0	14.6	15.2	14.9	16.0	18.7	17.5	18.4	19.9	21.1	20.5
80°	11.3	12.2	12.5	12.8	14.0	16.0	15.2	15.5	16.9	17.8	18.1
82.5°	7.7	9.2	9.8	10.1	11.9	12.5	12.8	12.5	13.4	14.6	13.7
85°	2.4	3.0	5.6	7.1	8.9	8.9	10.4	9.8	10.4	9.2	7.7
87.5°	0.0	0.0	0.0	2.1	5.3	5.3	7.4	6.8	7.1	5.3	4.8
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°	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3
2.5°	588.1	593.1	604.4	617.5	624.6	640.1	649.6	659.7	669.8	671.9	675.1
5°	513.8	519.7	532.5	550.0	567.6	588.1	611.8	637.1	665.0	676.9	688.5
7.5°	400.3	401.5	419.6	451.4	466.8	496.0	529.8	568.8	611.8	634.1	657.9
10°	295.7	307.9	321.5	348.0	386.9	420.5	462.4	507.8	552.7	585.1	609.8
12.5°	232.4	247.8	270.4	299.5	329.0	360.7	409.2	457.9	513.2	542.3	572.6
15°	191.4	211.0	240.4	271.0	298.3	326.6	369.7	429.4	500.1	529.8	556.9
17.5°	151.5	173.2	204.7	236.8	269.5	304.0	353.9	427.9	514.1	548.6	576.5
20°	116.2	133.1	159.6	192.0	230.3	277.5	341.4	439.2	555.4	598.5	616.9
22.5°	86.2	96.0	116.8	150.7	195.8	254.1	329.0	455.2	606.5	657.0	671.0
25°	71.3	74.0	83.5	112.9	159.6	227.6	319.4	476.0	657.6	714.4	724.5
27.5°	64.2	65.7	70.1	81.1	124.8	205.9	307.0	500.1	711.4	771.1	770.2
30°	57.9	58.2	60.9	68.6	101.3	186.6	292.4	526.9	759.2	811.8	809.2
32.5°	52.3	52.3	55.9	61.8	86.5	169.1	274.9	546.2	800.8	845.1	836.5
35°	47.2	48.1	51.4	57.4	76.7	149.5	258.5	553.3	836.5	885.2	860.9
37.5°	43.7	44.9	48.1	53.8	68.3	134.9	245.2	561.6	880.5	933.7	888.2
40°	41.3	42.2	45.2	49.9	61.8	122.7	230.6	567.3	924.2	985.4	917.0
42.5°	38.9	39.8	42.8	47.2	58.8	108.5	216.6	570.5	969.6	1030.2	941.1
45°	36.8	38.0	41.0	45.2	59.1	95.7	205.0	569.4	997.0	1062.6	959.8
47.5°	35.4	36.6	39.8	45.2	57.4	88.3	195.2	565.2	1017.2	1083.7	968.4
50°	33.9	35.1	38.9	49.9	54.4	86.2	187.8	564.6	1038.3	1087.9	968.4
52.5°	32.4	34.5	39.2	50.2	49.9	85.3	181.9	580.3	1067.4	1095.0	977.0
55°	31.5	33.3	40.4	46.4	43.7	82.3	178.3	602.0	1116.4	1134.2	1020.4
57.5°	30.3	31.8	39.8	43.4	38.9	75.5	175.3	622.8	1180.9	1207.0	1106.9
60°	28.8	30.6	38.6	37.1	35.4	64.2	173.5	640.1	1205.0	1254.0	1199.9
62.5°	27.3	29.4	42.2	32.4	32.7	53.5	170.3	656.7	1154.2	1242.7	1259.6
64°	26.4	28.5	39.2	30.3	31.2	48.7	167.0	657.6	1109.3	1216.0	1270.9
65°	25.9	27.6	36.6	29.1	30.0	47.5	164.0	645.1	1067.1	1187.4	1267.7
67.5°	25.0	26.1	28.2	27.0	27.9	45.5	143.8	590.2	977.3	1114.0	1216.9
70°	23.8	24.7	25.0	24.7	26.1	44.0	121.5	512.0	879.3	1037.1	1137.8
72.5°	22.6	22.6	22.6	22.3	24.1	41.9	109.4	413.6	759.8	936.0	1039.5
75°	21.7	20.8	20.5	19.9	22.0	40.7	98.7	310.5	587.2	779.7	871.0
77.5°	19.9	19.0	18.1	17.5	19.6	36.3	82.3	219.3	433.0	567.3	672.2
80°	17.2	16.6	15.5	14.6	16.3	28.5	62.4	135.5	316.8	383.0	441.0
82.5°	14.0	13.7	12.5	11.3	11.9	20.5	42.5	68.9	211.3	208.0	246.3
85°	8.6	10.7	9.2	7.4	8.0	11.9	17.2	22.0	64.8	38.9	60.3
87.5°	5.1	6.8	5.6	3.9	3.0	5.3	4.8	4.5	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°	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3	632.3
2.5°	682.9	686.7	688.8	681.1	672.8	665.3	651.1	636.8	629.4	630.9
5°	710.8	717.3	719.1	707.8	684.4	660.3	625.5	595.5	577.4	576.2
7.5°	700.1	721.5	725.1	712.9	679.3	634.4	587.2	545.3	527.2	523.0
10°	662.1	694.8	705.4	701.3	668.6	617.2	559.8	506.7	488.5	479.9
12.5°	623.1	657.3	663.8	668.0	648.1	604.7	541.7	487.0	465.3	458.2
15°	597.6	621.1	622.8	626.7	622.5	598.8	550.0	495.1	468.9	459.1
17.5°	594.0	585.7	580.0	588.1	593.1	599.1	571.7	525.1	497.1	484.7
20°	594.6	568.8	552.7	552.1	573.8	606.8	615.7	575.6	539.3	527.7
22.5°	616.3	559.8	533.1	529.8	556.3	619.9	660.6	635.6	599.4	583.9
25°	648.7	554.5	519.1	520.0	546.5	628.5	698.9	695.6	663.8	643.9
27.5°	679.9	563.4	517.3	519.7	549.7	634.1	730.7	752.1	716.4	699.2
30°	704.9	583.3	522.7	524.8	559.8	641.9	746.5	802.3	759.2	738.7
32.5°	726.5	602.0	530.7	532.2	575.9	652.9	761.3	844.5	800.8	776.5
35°	746.2	618.1	542.9	548.0	596.4	668.6	776.5	890.3	851.6	821.0
37.5°	763.4	637.7	567.0	575.3	626.4	691.5	796.1	950.6	908.4	873.6
40°	773.2	655.2	602.6	615.1	665.3	721.2	821.0	989.8	962.8	923.6
42.5°	780.6	679.3	660.0	682.6	725.7	749.1	832.9	1007.4	994.9	961.3
45°	784.5	726.8	746.2	767.3	793.7	779.7	826.4	1013.3	1009.4	980.6
47.5°	802.0	798.5	846.0	875.1	873.6	825.8	813.9	1012.7	1018.9	995.2
50°	837.7	882.0	948.5	977.0	966.1	868.9	811.5	1011.8	1038.0	1018.7
52.5°	880.2	965.5	1059.4	1071.2	1048.1	912.6	829.4	1027.3	1073.6	1060.8
55°	936.0	1043.9	1146.4	1150.3	1117.6	955.1	867.4	1072.7	1140.2	1139.6
57.5°	1013.9	1114.3	1219.5	1214.8	1168.7	1013.9	928.6	1140.8	1214.2	1224.6
60°	1098.6	1188.6	1278.7	1276.0	1227.0	1081.6	1012.7	1241.5	1279.0	1281.6
62.5°	1179.7	1257.6	1335.7	1322.9	1267.7	1151.8	1129.2	1348.5	1321.2	1301.2
64°	1232.6	1280.7	1350.3	1330.1	1277.5	1185.4	1196.4	1383.3	1333.0	1300.1
65°	1267.7	1286.4	1347.0	1322.6	1274.2	1197.8	1247.2	1397.8	1335.1	1293.2
67.5°	1330.7	1254.0	1258.5	1239.1	1195.8	1186.2	1330.4	1389.8	1312.2	1249.5
70°	1313.1	1123.5	1062.3	1050.2	998.1	1051.6	1320.0	1314.3	1226.4	1150.0
72.5°	1163.4	902.2	814.2	803.2	731.0	797.0	1139.0	1119.4	986.9	923.6
75°	958.6	683.8	581.5	590.7	535.8	596.7	906.0	767.0	657.0	619.3
77.5°	744.1	483.2	401.8	390.8	379.8	386.3	622.8	460.6	383.9	349.2
80°	474.3	303.7	301.3	275.5	266.5	224.7	320.0	245.2	192.9	182.5
82.5°	252.0	175.0	198.8	159.3	128.1	92.1	108.5	72.8	61.5	64.5
85°	68.9	36.3	10.1	0.0	0.0	0.0	0.0	0.3	0.3	0.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

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