

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: P401023

Luminaire Tested: **ENT-SA1A-827-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401023
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-827-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1511 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-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

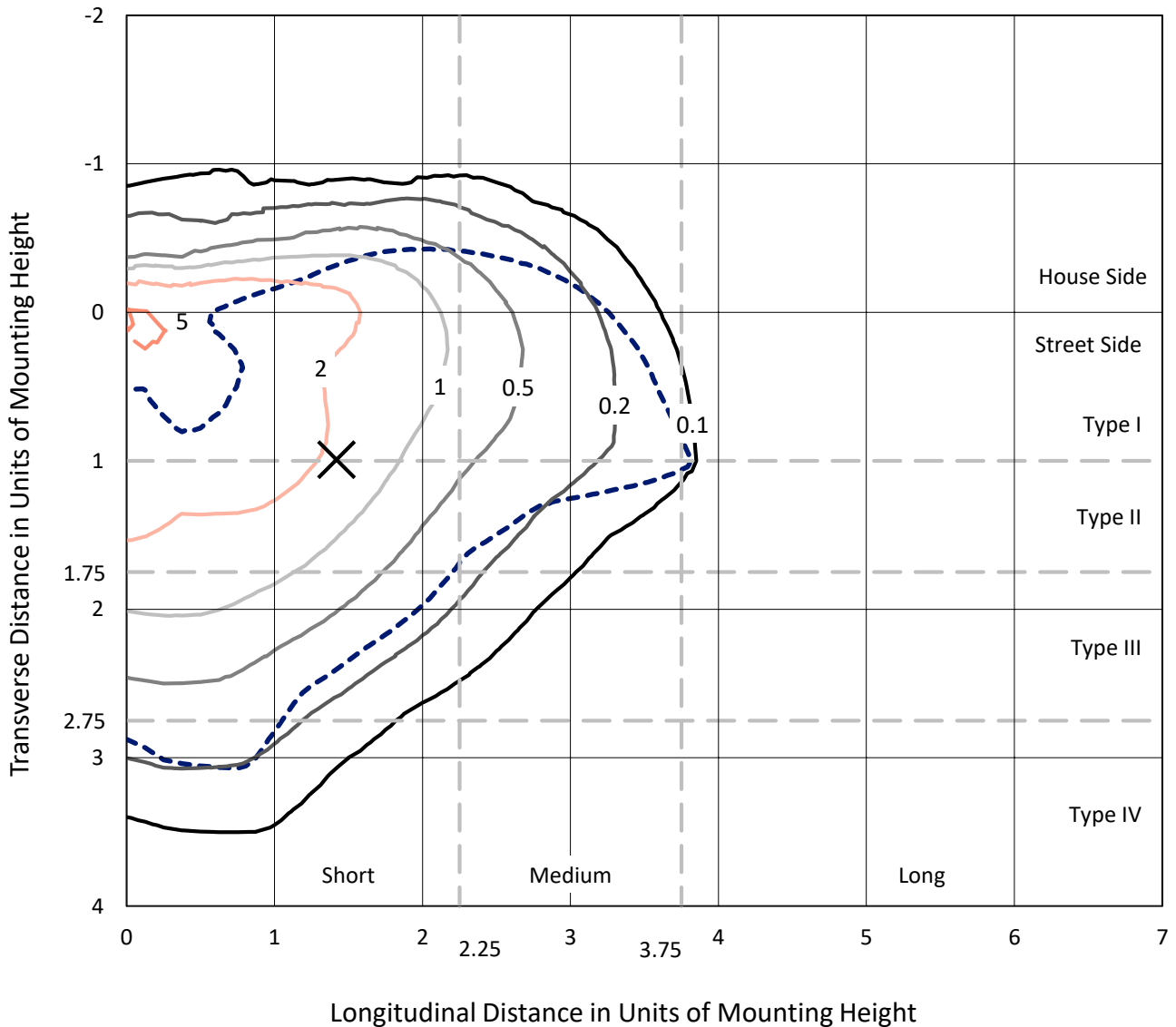


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

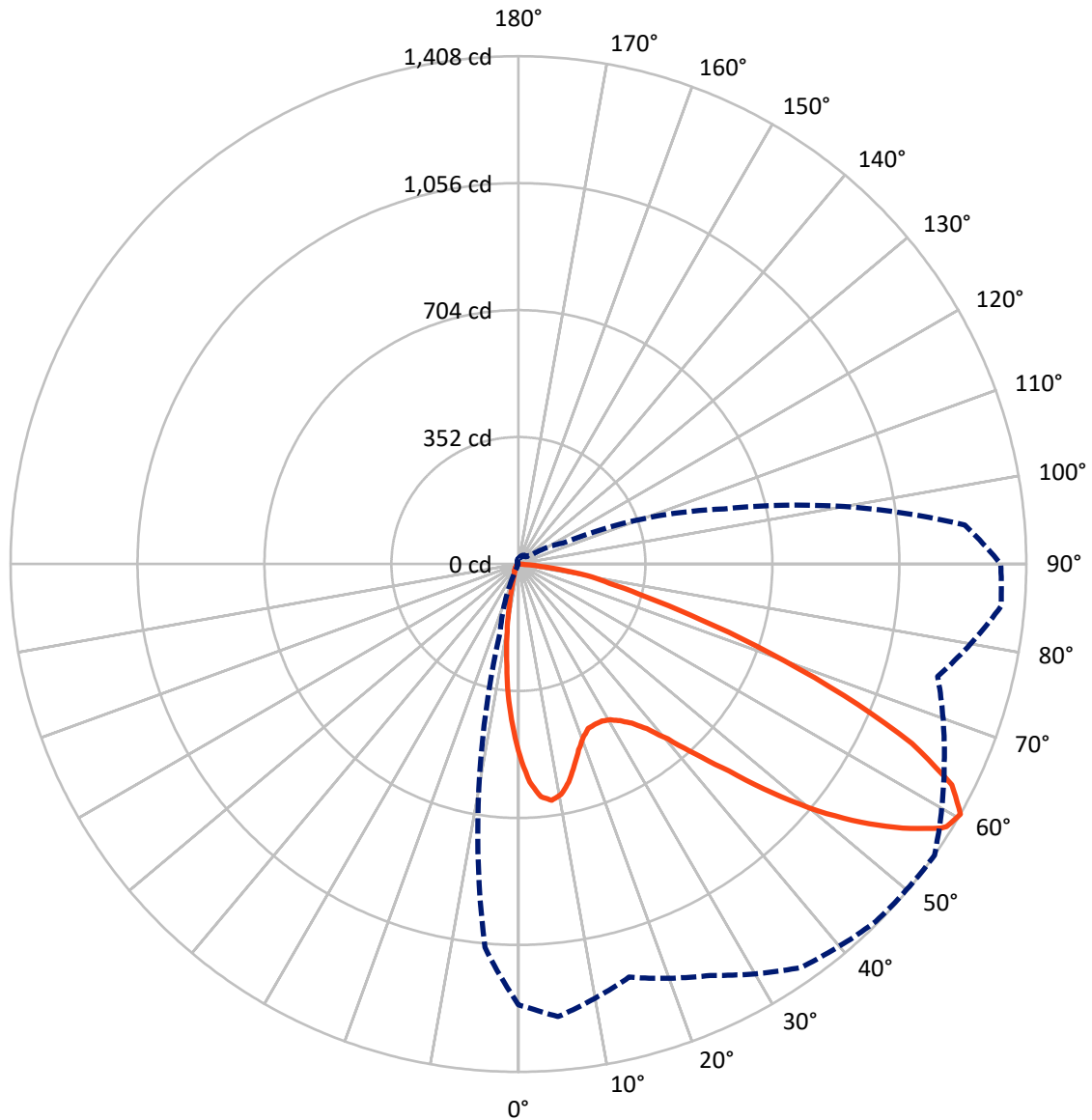


Based on 10 foot mounting height. Maximum calculated value = 6.3 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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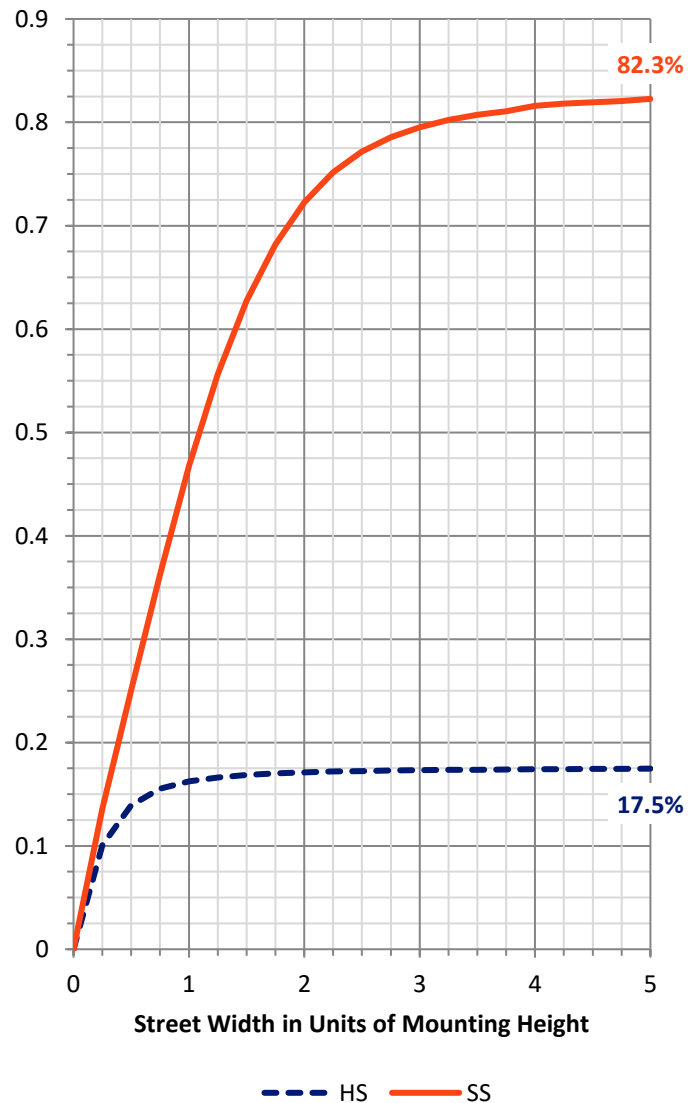
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	267.6	0.0	267.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	1243.4	0.0	1243.4
	% Fixture	82.3	0.0	82.3
Total	Lumens	1511.0	0.0	1511.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.1	2.7
10°-20°	76.4	5.1
20°-30°	108.9	7.2
30°-40°	159.8	10.6
40°-50°	235.6	15.6
50°-60°	349.0	23.1
60°-70°	372.0	24.6
70°-80°	154.3	10.2
80°-90°	14.8	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°	1511.0	100.0
0°-180°	1511.0	100.0



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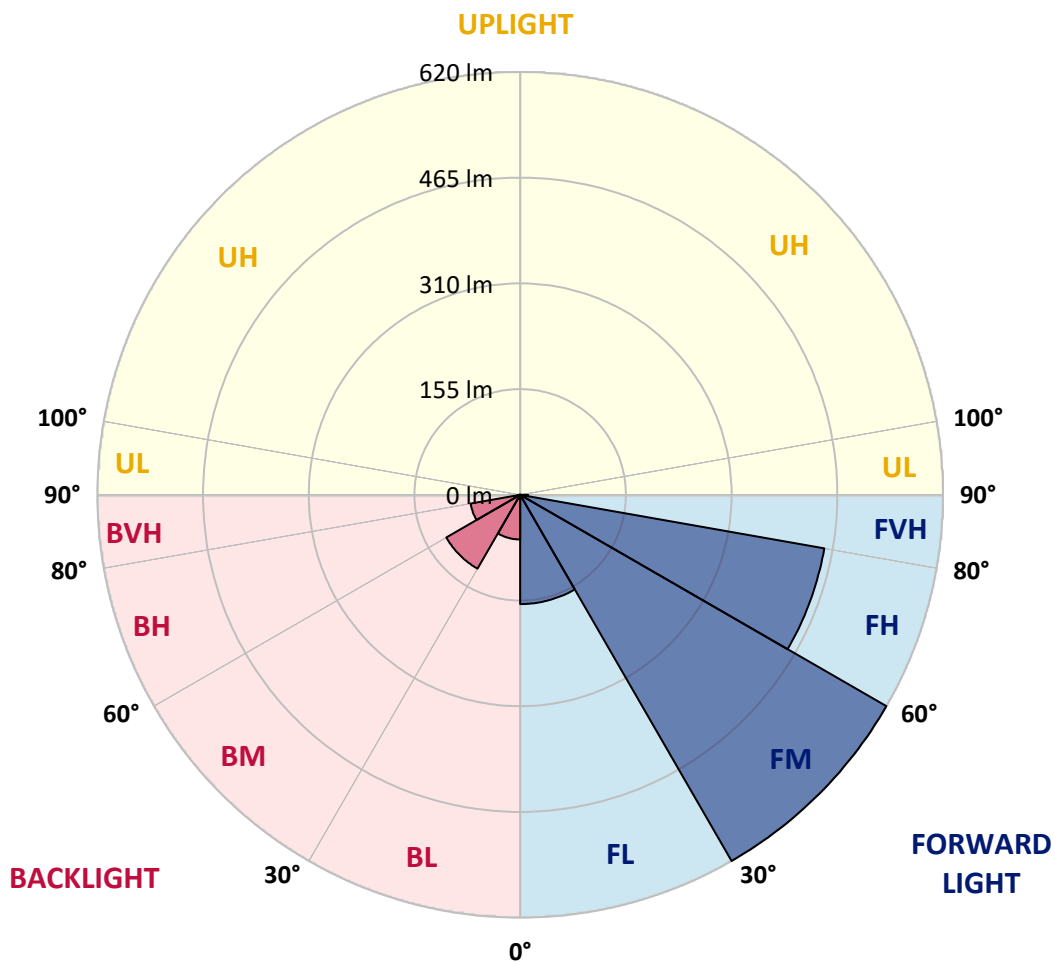
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	160.0	10.6			
FM	(30°-60°)	619.5	41.0			
FH	(60°-80°)	452.5	29.9			G0/660
FVH	(80°-90°)	11.4	0.8			G1/100
BL	(0°-30°)	65.4	4.3	B0/110		
BM	(30°-60°)	124.9	8.3	B0/220		
BH	(60°-80°)	73.8	4.9	B0/110		G0/110
BVH	(80°-90°)	3.5	0.2			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6
2.5°	557.3	556.5	564.5	581.0	591.3	597.6	598.7	605.3	598.7	595.3	583.0
5°	541.0	540.8	556.2	592.5	622.2	644.5	655.3	647.9	636.5	613.9	586.5
7.5°	495.9	495.9	525.0	573.6	623.3	661.9	675.0	661.3	634.2	588.7	539.6
10°	459.1	462.5	490.5	548.5	603.6	645.9	660.5	649.9	614.5	555.6	497.9
12.5°	437.1	439.1	470.2	528.5	579.9	614.2	623.0	619.9	594.2	530.2	469.1
15°	439.1	441.9	477.6	525.3	558.8	572.5	575.6	579.6	569.0	519.9	459.6
17.5°	470.5	472.5	508.5	539.3	537.9	533.6	534.8	541.3	553.9	528.5	478.8
20°	520.8	525.9	562.2	562.8	527.0	507.1	501.9	512.8	546.8	551.0	519.6
22.5°	585.3	587.3	624.2	602.2	528.2	488.8	482.8	495.1	549.0	587.6	576.2
25°	660.2	667.3	687.3	653.3	544.8	486.2	482.2	492.5	557.3	626.5	634.5
27.5°	710.7	716.4	735.6	688.2	559.6	487.6	480.2	492.8	567.3	663.0	696.7
30°	755.9	759.9	767.0	706.4	576.5	494.8	482.8	500.8	572.8	670.7	737.0
32.5°	798.4	803.3	799.0	728.4	595.0	508.2	487.6	517.6	584.5	686.2	772.1
35°	853.3	853.6	839.0	750.4	616.2	524.2	501.9	541.6	607.3	710.2	809.9
37.5°	918.4	919.0	882.1	773.0	640.2	551.0	535.6	578.8	640.5	737.9	863.8
40°	975.3	977.5	928.7	799.0	669.6	603.3	601.9	637.6	683.0	774.7	921.8
42.5°	1024.7	1031.2	971.5	820.7	711.3	683.6	687.0	719.6	734.7	805.6	957.8
45°	1074.7	1074.4	1006.7	842.4	781.0	787.0	819.6	818.1	793.3	822.1	986.1
47.5°	1105.8	1104.4	1028.1	877.8	875.0	932.4	967.0	948.1	858.1	839.8	1021.5
50°	1117.8	1117.2	1045.0	923.0	970.7	1064.1	1113.5	1075.8	937.5	869.6	1063.8
52.5°	1151.8	1148.9	1083.8	974.4	1057.2	1190.9	1231.8	1189.8	1016.7	923.0	1112.9
55°	1204.9	1205.8	1150.6	1034.7	1126.7	1280.3	1330.3	1292.9	1097.5	996.4	1180.4
57.5°	1240.6	1243.2	1224.6	1101.8	1200.9	1342.9	1391.5	1380.9	1205.2	1084.1	1259.5
58°	1244.1	1246.1	1236.3	1114.7	1212.1	1350.0	1399.7	1392.3	1228.9	1112.1	1278.3
60°	1222.1	1228.1	1259.2	1185.5	1258.1	1365.2	1401.2	1407.7	1302.3	1202.9	1342.9
62.5°	1162.4	1164.4	1220.9	1264.9	1289.5	1327.8	1331.2	1348.3	1332.6	1309.5	1400.6
65°	1089.2	1089.2	1150.4	1268.6	1208.1	1201.8	1181.8	1198.9	1244.3	1376.3	1396.6
67.5°	962.1	963.0	1041.0	1130.1	1001.5	979.8	967.0	973.3	1070.1	1320.6	1318.9
70°	777.6	777.0	857.3	915.0	743.3	724.7	740.2	738.2	869.3	1173.5	1151.5
72.5°	549.9	554.8	637.3	706.7	504.8	435.1	503.1	529.3	653.9	989.2	891.0
75°	309.7	316.2	383.6	491.1	318.5	294.2	329.1	366.5	472.8	787.6	598.5
77.5°	155.4	158.0	196.5	236.2	193.1	224.2	222.2	258.0	324.2	531.3	342.2
80°	89.7	94.8	108.0	122.0	108.0	142.3	165.1	194.3	199.7	274.8	190.8
82.5°	36.0	40.3	50.6	57.4	44.8	42.3	28.9	90.8	120.3	132.8	73.1
85°	0.0	0.0	0.3	0.6	0.9	0.9	1.4	16.0	29.4	6.6	12.0
87.5°	0.0	0.0	0.3	0.3	0.6	0.9	1.1	2.0	2.6	3.1	10.9
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°	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6
2.5°	578.5	575.3	564.8	548.8	538.8	523.3	517.0	502.5	495.1	482.8	482.8
5°	572.8	559.9	533.3	498.8	474.2	448.5	440.2	423.1	410.8	396.2	390.2
7.5°	520.8	502.8	461.3	421.1	381.9	355.9	330.2	312.8	296.2	284.2	285.9
10°	473.1	447.3	401.9	350.8	310.2	283.1	260.0	239.7	222.5	205.7	203.1
12.5°	441.9	412.5	358.2	303.4	273.1	253.1	231.7	209.4	188.3	169.7	162.3
15°	428.8	396.8	336.2	284.5	256.8	231.1	206.2	178.8	154.5	132.3	126.3
17.5°	443.1	404.8	334.2	272.0	233.4	201.1	166.5	136.5	108.0	92.0	87.1
20°	481.9	432.2	340.8	259.4	207.4	165.7	123.4	89.4	73.4	63.7	60.6
22.5°	538.2	477.6	351.9	247.1	181.1	123.4	85.1	64.6	55.1	50.0	48.6
25°	599.3	536.2	372.5	236.8	154.8	91.7	63.1	52.8	47.1	43.4	42.0
27.5°	668.2	594.2	397.6	229.1	130.5	73.4	54.3	46.6	42.0	39.4	38.3
30°	711.3	635.9	416.8	215.4	114.0	66.8	51.7	44.0	39.1	37.1	36.3
32.5°	751.0	668.7	435.1	199.7	101.4	59.1	50.3	46.3	40.6	36.6	34.9
35°	794.7	702.4	443.9	190.3	93.1	51.4	41.4	36.0	32.9	32.3	31.4
37.5°	859.8	742.4	449.6	185.1	88.0	46.8	38.6	32.6	28.9	25.4	24.0
40°	921.5	783.9	452.5	180.3	85.4	44.0	36.9	30.9	26.9	23.7	22.3
42.5°	969.8	821.6	454.2	176.8	80.8	42.3	35.4	29.7	25.4	22.3	20.9
45°	1009.2	865.3	452.8	175.7	77.1	43.4	34.9	28.9	24.3	21.1	19.7
47.5°	1047.8	912.7	458.2	174.3	73.4	41.7	35.1	28.6	23.4	20.3	18.9
50°	1098.4	970.1	477.9	170.3	70.8	39.1	38.0	28.9	23.1	19.7	18.6
52.5°	1163.8	1049.5	513.6	166.0	67.7	36.9	39.7	28.9	22.6	19.1	17.7
55°	1243.2	1138.6	553.0	159.7	62.3	34.0	38.0	28.9	22.0	18.9	17.1
57.5°	1308.0	1218.1	584.2	152.3	52.3	30.6	34.9	27.7	20.6	17.7	16.3
58°	1313.8	1227.2	588.5	150.3	51.1	30.0	34.0	27.4	20.0	17.4	16.0
60°	1336.9	1242.1	590.2	139.4	42.6	28.6	29.4	26.6	18.9	16.3	15.1
62.5°	1328.9	1192.9	553.9	120.3	38.0	26.0	24.6	27.1	17.4	14.9	13.7
65°	1289.2	1096.4	485.3	107.7	38.3	23.1	21.1	23.7	16.0	13.4	12.3
67.5°	1194.6	949.8	394.2	100.8	40.0	20.6	18.3	17.7	14.3	12.0	11.1
70°	1019.0	778.4	298.8	94.8	42.3	18.3	16.9	15.7	13.1	11.1	10.0
72.5°	750.4	576.5	217.4	88.8	41.1	16.3	15.7	14.3	12.0	10.0	9.4
75°	468.2	334.8	148.8	72.6	36.9	14.3	14.6	13.4	10.9	9.4	8.6
77.5°	273.4	235.1	73.4	54.0	25.4	12.6	12.9	12.3	11.1	8.9	8.3
80°	163.7	146.3	31.4	23.1	14.0	11.1	10.9	11.4	10.6	8.3	7.7
82.5°	70.8	63.4	15.1	12.9	11.4	9.7	9.4	9.7	9.1	6.9	6.6
85°	4.0	10.6	7.1	9.4	8.6	7.1	7.1	7.4	6.6	5.4	5.4
87.5°	3.7	8.0	4.6	5.7	6.3	5.4	5.7	5.7	5.4	4.9	4.6
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°	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6
2.5°	476.2	473.1	463.6	460.2	445.3	449.1	450.2	448.8	449.3	450.5	454.8
5°	394.5	389.4	377.1	369.1	364.8	361.9	348.5	348.8	350.8	343.1	353.1
7.5°	280.2	285.9	287.1	279.7	275.1	265.4	253.1	246.2	234.5	241.1	242.5
10°	200.5	197.7	203.1	200.5	193.4	189.7	176.5	175.4	174.3	173.4	181.7
12.5°	152.8	144.3	138.0	139.4	134.0	124.8	122.5	122.8	124.0	124.0	126.3
15°	121.1	108.0	98.0	92.0	92.8	83.7	81.1	72.6	71.4	68.8	69.4
17.5°	84.8	79.4	73.4	66.6	63.7	55.4	45.4	40.8	37.4	38.0	39.7
20°	58.6	56.3	54.6	51.1	48.3	38.6	32.3	30.3	30.0	30.6	31.1
22.5°	47.1	44.8	43.1	42.0	38.3	31.1	27.7	26.3	26.3	26.3	26.6
25°	40.6	38.3	36.0	36.0	32.6	27.1	24.6	23.4	23.1	22.9	23.4
27.5°	37.7	34.6	32.3	30.9	28.3	24.0	21.7	20.6	20.3	20.3	20.6
30°	34.9	31.7	29.4	27.4	24.6	21.4	19.1	18.3	17.7	17.7	18.0
32.5°	33.1	30.0	27.1	24.6	21.4	18.9	16.9	15.7	15.1	15.4	15.7
35°	29.4	26.9	24.3	21.7	18.9	16.6	14.6	13.4	13.1	13.1	13.4
37.5°	23.1	21.1	20.6	19.1	16.6	14.3	12.3	11.1	10.9	10.9	11.1
40°	20.9	18.3	17.1	16.6	15.1	12.3	10.0	8.9	8.9	8.6	9.1
42.5°	19.1	16.6	14.6	14.0	13.1	10.6	8.0	7.1	6.9	6.9	7.1
45°	18.0	15.1	12.6	11.1	11.1	8.6	6.6	5.4	5.1	5.1	5.4
47.5°	17.4	14.3	11.1	9.1	8.9	7.1	5.1	4.0	3.7	3.7	3.7
50°	16.9	13.1	10.0	7.7	6.9	6.0	4.0	3.1	2.9	2.9	2.9
52.5°	16.0	12.6	9.1	6.9	5.4	4.6	3.1	2.3	2.0	1.7	2.0
55°	15.4	11.7	8.9	6.3	4.6	3.4	2.3	1.7	1.4	1.4	1.4
57.5°	14.6	10.9	8.0	6.0	4.3	2.6	1.7	1.1	0.9	0.9	1.1
58°	14.3	10.9	7.7	5.7	4.0	2.6	1.7	1.1	0.9	0.9	1.1
60°	13.4	10.0	7.4	5.1	3.7	2.3	1.4	0.9	0.6	0.6	0.9
62.5°	12.6	9.1	6.6	4.6	3.1	2.0	1.1	0.6	0.3	0.3	0.3
65°	11.1	8.3	5.7	4.3	2.6	1.4	0.9	0.3	0.0	0.0	0.0
67.5°	10.0	7.7	5.1	3.7	2.3	1.1	0.6	0.0	0.0	0.0	0.0
70°	9.1	7.1	4.6	3.1	2.0	0.9	0.3	0.0	0.0	0.0	0.0
72.5°	8.6	6.6	4.3	2.9	1.4	0.9	0.3	0.0	0.0	0.0	0.0
75°	8.3	6.3	4.3	2.6	1.4	0.9	0.6	0.3	0.0	0.0	0.3
77.5°	8.0	6.3	4.3	2.6	1.7	0.9	0.9	0.6	0.6	0.3	0.9
80°	7.4	5.7	3.7	2.3	1.4	1.1	0.9	0.6	0.0	0.0	0.0
82.5°	6.3	4.6	3.1	2.3	1.4	0.9	0.3	0.0	0.0	0.0	0.0
85°	5.1	3.7	2.6	1.4	0.9	0.3	0.0	0.0	0.0	0.0	0.0
87.5°	4.6	2.9	2.0	1.1	0.6	0.3	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°	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6	533.6
2.5°	458.5	471.6	477.1	495.3	503.3	519.9	534.2	546.5	552.5	557.3
5°	355.6	368.2	381.6	408.8	432.2	457.3	488.8	521.3	530.8	541.0
7.5°	248.2	266.8	289.4	313.7	347.1	385.1	430.2	470.5	490.8	495.9
10°	192.8	214.8	238.8	262.8	290.5	331.1	376.5	428.5	450.2	459.1
12.5°	144.8	174.3	202.8	231.1	255.1	290.2	339.7	401.6	425.6	437.1
15°	87.1	120.3	155.4	193.4	226.8	268.0	323.7	395.9	426.2	439.1
17.5°	43.4	59.4	91.7	148.8	198.2	249.4	323.4	416.5	453.9	470.5
20°	32.3	36.6	48.8	92.8	164.8	234.0	326.8	451.6	506.8	520.8
22.5°	27.7	30.9	35.1	54.3	123.4	219.7	338.8	498.2	566.8	585.3
25°	24.3	26.9	30.3	37.4	84.6	202.8	361.4	563.9	634.7	660.2
27.5°	21.4	23.7	26.6	31.4	56.6	171.1	374.2	619.0	689.6	710.7
30°	18.9	20.6	23.4	26.9	41.7	132.3	386.2	667.6	739.3	755.9
32.5°	16.6	18.0	20.3	22.9	31.7	100.3	386.8	709.3	782.7	798.4
35°	14.0	15.7	17.4	19.7	25.1	78.3	375.1	750.7	834.1	853.3
37.5°	11.7	13.1	15.1	17.1	22.9	60.6	350.8	799.3	896.7	918.4
40°	10.0	11.4	13.1	15.4	20.3	44.0	311.9	843.3	955.3	975.3
42.5°	8.0	9.4	11.4	15.1	16.9	31.7	272.8	885.6	1006.1	1024.7
45°	6.3	8.0	10.6	14.6	14.0	22.3	239.1	923.0	1049.8	1074.7
47.5°	4.6	6.6	10.6	13.1	11.4	16.0	222.0	959.0	1088.9	1105.8
50°	3.4	5.4	11.4	11.1	9.7	13.7	224.5	999.0	1106.9	1117.8
52.5°	2.6	4.6	8.9	8.0	8.3	12.0	234.5	1051.8	1144.1	1151.8
55°	2.3	3.4	5.4	6.0	7.4	11.4	232.0	1101.8	1191.5	1204.9
57.5°	2.0	2.9	4.3	4.9	6.6	10.9	217.4	1123.8	1222.1	1240.6
58°	1.7	2.9	4.0	4.9	6.6	10.6	213.7	1117.8	1220.6	1244.1
60°	1.4	2.6	3.7	4.3	5.7	9.4	195.7	1066.9	1189.2	1222.1
62.5°	1.1	1.7	2.9	3.1	4.6	7.7	161.1	984.7	1121.8	1162.4
65°	0.6	1.1	1.7	2.3	3.1	5.7	114.6	887.3	1049.5	1089.2
67.5°	0.0	0.6	1.1	1.4	2.0	4.3	66.0	753.0	930.7	962.1
70°	0.0	0.3	0.6	0.9	1.1	2.9	34.9	552.8	721.0	777.6
72.5°	0.3	0.3	0.3	0.0	0.6	2.3	15.4	327.9	491.6	549.9
75°	0.3	0.3	0.0	0.0	0.0	1.1	6.6	172.8	281.9	309.7
77.5°	1.1	0.6	0.0	0.0	0.0	0.3	3.1	93.1	146.3	155.4
80°	0.3	0.0	0.0	0.0	0.0	0.0	1.1	31.1	87.7	89.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	37.7	36.0
85°	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
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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