

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: P401205

Luminaire Tested: **ENV-SA1B-827-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401205
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-SA1B-827-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE 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: 1895 lumens
Efficiency: N/A
Efficacy: 74.6 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 - G1

Input Watts (W): 25.4
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

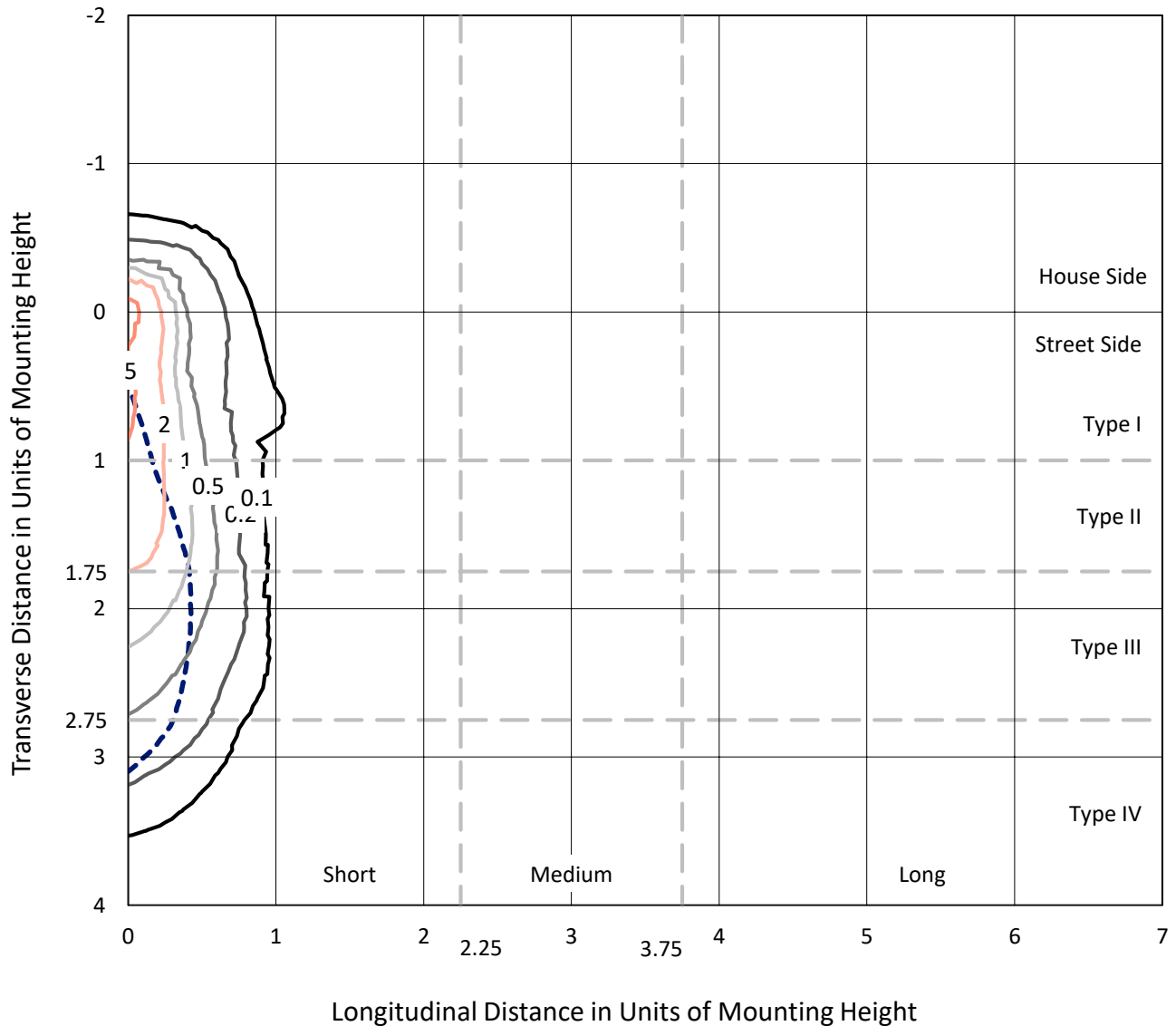


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Iso-Footcandle Lines of Horizontal Illumination

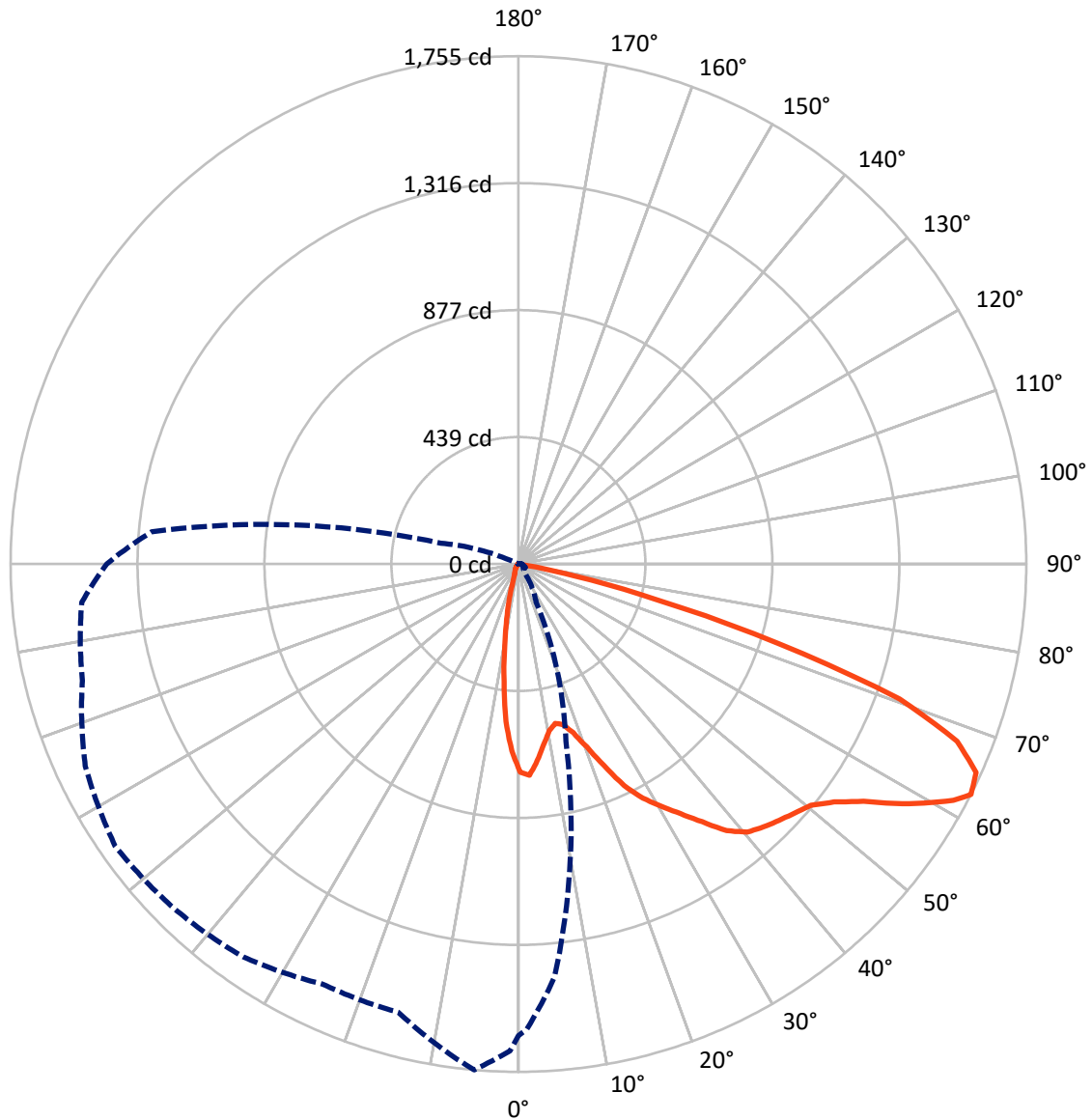
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 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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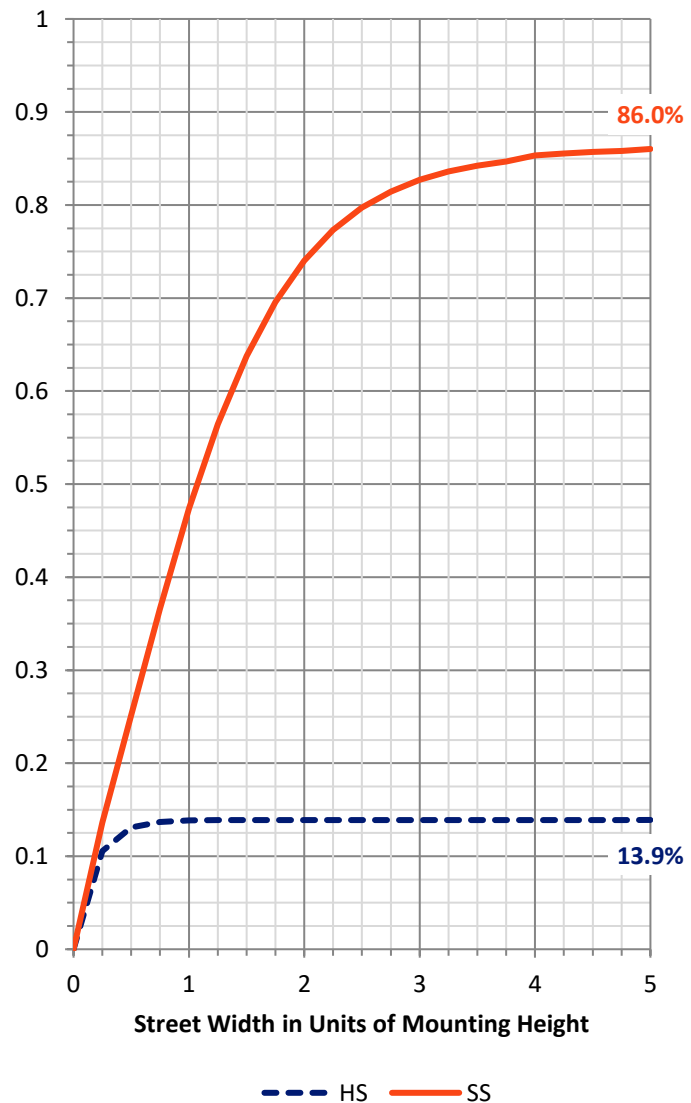
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	266.5	0.0	266.5
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	1628.4	0.0	1628.4
	% Fixture	85.9	0.0	85.9
Total	Lumens	1895.0	0.0	1895.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	2.8
10°-20°	102.5	5.4
20°-30°	142.6	7.5
30°-40°	206.2	10.9
40°-50°	295.6	15.6
50°-60°	428.9	22.6
60°-70°	464.0	24.5
70°-80°	187.4	9.9
80°-90°	13.9	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°	1895.0	100.0
0°-180°	1895.0	100.0



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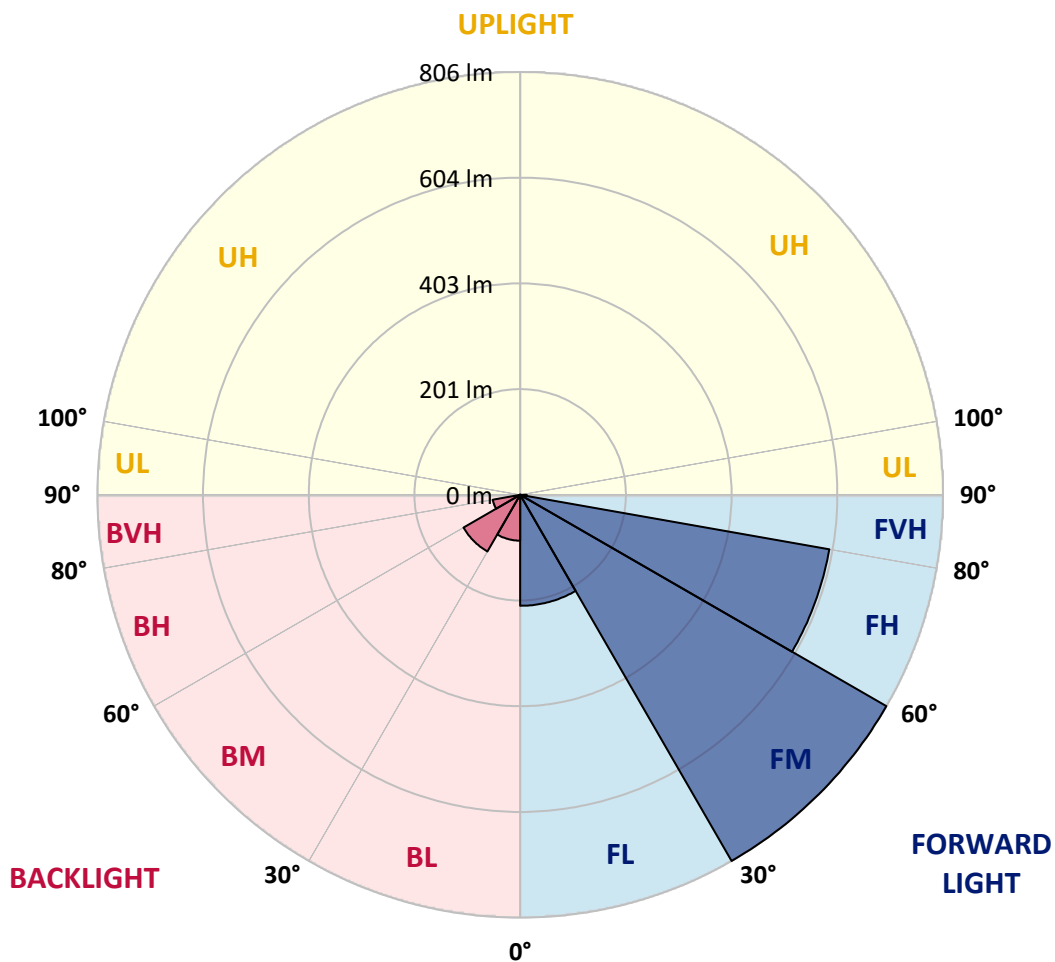
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	211.5	11.2			
FM (30°-60°)	806.0	42.5			
FH (60°-80°)	598.4	31.6			G0/660
FVH (80°-90°)	12.5	0.7			G1/100
BL (0°-30°)	87.4	4.6	B0/110		
BM (30°-60°)	124.7	6.6	B0/220		
BH (60°-80°)	53.0	2.8	B0/110		G0/110
BVH (80°-90°)	1.4	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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8
2.5°	721.8	718.8	712.1	697.4	676.4	662.9	654.3	643.1	631.4	627.7	620.2
5°	658.8	653.9	644.6	607.8	574.8	541.8	518.2	495.7	488.2	473.2	482.2
7.5°	598.1	595.8	574.1	526.5	474.0	431.6	404.6	371.6	361.8	346.5	334.1
10°	550.5	548.6	522.3	460.1	403.5	368.2	346.8	325.5	304.1	282.4	265.1
12.5°	526.5	522.3	492.0	424.8	372.3	343.1	320.6	292.1	269.2	240.0	219.0
15°	530.2	526.5	491.6	419.2	357.3	316.8	283.5	249.7	217.5	188.6	168.0
17.5°	560.2	558.7	516.3	424.1	339.3	285.7	241.1	195.7	157.5	126.4	108.7
20°	618.7	614.2	552.7	434.6	320.6	249.7	188.6	132.7	100.9	79.5	72.0
22.5°	691.1	680.9	610.1	450.0	302.6	211.1	136.5	89.2	72.0	63.7	58.5
25°	776.2	776.6	681.3	470.6	284.6	175.1	95.6	70.9	60.7	54.7	50.2
27.5°	845.2	839.9	745.4	491.2	265.1	143.6	80.2	61.9	53.2	46.9	44.2
30°	896.2	888.3	787.8	505.5	240.0	121.5	72.0	58.9	50.2	43.1	39.7
32.5°	948.7	938.9	826.1	513.3	225.0	111.0	63.7	51.4	45.0	42.0	37.5
35°	1010.2	1001.5	868.4	512.6	217.1	105.0	57.7	46.5	38.2	33.4	30.4
37.5°	1078.8	1061.2	912.3	509.2	211.5	102.0	52.5	43.1	35.6	30.4	26.6
40°	1137.7	1120.0	952.8	504.7	207.7	99.0	49.5	40.9	33.7	28.1	24.4
42.5°	1183.8	1166.9	990.7	499.1	205.9	92.6	51.0	39.4	32.2	26.6	22.5
45°	1223.5	1206.3	1035.7	498.3	205.1	88.1	50.2	39.0	31.5	24.7	21.0
47.5°	1269.6	1260.6	1094.9	510.7	202.1	84.7	46.1	42.0	31.1	24.0	19.9
50°	1337.9	1330.0	1172.5	547.5	197.6	81.4	42.0	46.1	31.1	23.2	18.7
52.5°	1433.5	1424.5	1294.8	595.4	193.5	77.6	37.9	44.6	31.5	22.1	18.0
55°	1532.5	1531.0	1410.3	646.4	189.7	69.4	33.4	40.1	30.7	20.6	16.9
57.5°	1610.1	1609.0	1496.9	680.9	182.6	55.9	30.4	33.4	28.5	18.7	15.4
60°	1642.0	1632.6	1506.2	680.9	166.1	46.1	27.7	26.2	28.9	16.9	13.5
61°	1642.0	1630.0	1489.4	670.8	157.9	43.9	26.2	24.4	29.6	16.1	12.7
62.5°	1629.2	1609.4	1431.6	634.4	144.7	43.9	24.0	21.7	27.0	15.4	11.6
65°	1572.6	1540.0	1296.3	551.6	131.2	45.0	20.6	18.4	19.5	13.1	10.1
67.5°	1432.8	1396.0	1120.8	436.5	120.4	47.6	17.2	16.1	15.0	11.6	9.0
70°	1180.4	1149.3	914.5	327.0	111.7	48.4	15.0	13.5	12.7	10.1	7.9
72.5°	754.4	703.1	571.1	221.6	89.6	42.0	12.4	12.7	11.6	8.2	6.4
75°	364.5	378.7	332.2	111.7	60.4	27.4	9.7	10.5	9.4	7.5	5.6
77.5°	163.1	160.1	158.6	28.5	15.4	9.4	6.0	7.1	7.5	6.7	4.9
80°	16.9	22.9	13.5	8.6	5.6	4.1	3.4	3.7	4.5	4.9	2.6
82.5°	0.7	0.4	0.4	1.1	1.1	0.7	0.0	0.0	0.7	0.7	0.4
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°	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8
2.5°	613.4	623.6	619.1	617.9	623.9	620.9	629.9	630.3	637.1	646.1	651.7
5°	482.2	474.3	490.1	500.6	513.7	509.6	525.3	523.5	532.1	546.3	540.7
7.5°	334.8	336.0	344.2	353.6	388.8	396.0	401.2	405.3	405.0	408.3	414.3
10°	256.1	249.7	244.1	257.2	271.1	286.5	288.7	294.3	279.0	285.4	288.4
12.5°	209.6	202.1	189.7	183.0	186.4	195.4	199.1	202.5	193.5	193.9	200.6
15°	159.0	148.9	144.0	135.0	131.6	130.9	132.7	127.9	126.7	122.6	125.2
17.5°	103.5	100.5	97.9	96.0	93.4	92.6	85.9	74.2	67.5	66.0	66.0
20°	69.0	66.7	66.7	70.5	69.4	66.4	57.4	47.6	42.7	41.2	42.0
22.5°	56.6	55.1	52.9	52.9	54.4	52.1	43.9	36.7	33.4	33.4	33.4
25°	49.1	48.4	46.1	43.9	44.6	42.7	35.6	31.1	28.9	28.5	28.9
27.5°	43.1	42.7	40.1	37.9	37.9	36.4	30.7	26.6	25.1	24.4	24.7
30°	39.0	38.2	35.2	33.4	33.0	31.5	26.2	23.2	21.7	21.4	21.4
32.5°	36.0	34.5	31.9	30.0	28.9	26.6	22.9	19.9	18.4	18.0	18.0
35°	28.9	28.9	27.7	26.6	25.1	21.7	19.1	16.5	15.0	14.6	14.6
37.5°	25.1	23.6	21.7	22.1	21.4	18.4	15.7	13.1	12.0	11.6	11.6
40°	22.9	21.0	18.4	17.2	17.6	16.1	13.1	10.1	8.6	9.0	8.6
42.5°	20.6	19.1	16.1	13.5	13.1	13.5	10.1	7.1	6.0	6.0	6.0
45°	19.1	17.6	14.2	11.2	9.4	10.5	7.9	4.9	3.7	3.7	3.7
47.5°	18.0	16.5	12.7	9.4	6.7	7.1	5.6	3.0	2.2	1.5	1.9
50°	17.2	15.4	11.6	7.5	4.9	4.1	3.7	1.5	0.4	0.4	0.0
52.5°	16.1	14.6	10.5	6.4	3.7	2.6	1.9	0.4	0.0	0.0	0.0
55°	15.4	13.5	9.4	5.6	3.0	1.5	0.4	0.0	0.0	0.0	0.0
57.5°	13.9	12.4	8.2	4.5	2.2	0.7	0.0	0.0	0.0	0.0	0.0
60°	12.4	11.2	7.1	3.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0
61°	11.6	10.5	6.7	3.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	10.9	9.7	6.0	2.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	9.4	8.2	5.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	8.2	7.5	4.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	7.1	6.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	6.0	5.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.2	4.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.1	3.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.2	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.4	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°	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8
2.5°	656.9	670.1	682.4	698.2	706.8	730.4	747.3	761.6	772.8	775.1	784.1
5°	555.7	574.1	586.1	619.1	637.4	676.8	707.2	743.2	775.4	793.1	809.2
7.5°	418.5	427.5	448.1	481.1	524.6	558.7	610.1	655.4	713.6	745.4	775.4
10°	295.5	303.7	334.1	368.6	408.3	465.7	528.0	587.6	646.4	687.3	722.6
12.5°	207.7	234.7	264.7	308.6	347.6	389.6	456.0	525.7	599.2	638.2	676.4
15°	136.5	160.5	202.1	257.2	306.0	346.8	408.7	490.5	583.8	627.3	663.7
17.5°	67.5	85.1	121.9	181.1	246.0	310.5	385.1	484.1	603.7	652.8	686.9
20°	42.4	47.6	61.1	102.4	177.0	272.2	367.5	496.8	657.7	712.1	734.2
22.5°	34.1	35.6	40.9	54.4	108.0	225.0	352.1	514.1	716.9	783.3	806.2
25°	29.2	30.4	33.4	40.1	62.6	168.7	333.3	544.5	785.9	866.2	871.8
27.5°	25.1	26.2	28.9	34.1	44.6	113.6	306.3	580.1	868.4	938.9	935.2
30°	21.4	22.9	25.5	29.2	35.2	76.9	256.1	616.1	929.2	985.8	979.8
32.5°	18.4	19.5	21.7	25.1	29.2	52.9	192.4	639.7	979.8	1030.0	1016.9
35°	15.0	16.1	18.0	21.0	23.6	37.5	145.5	640.4	1031.9	1084.8	1051.8
37.5°	12.0	12.7	14.6	17.2	19.5	29.2	106.9	628.1	1096.4	1156.0	1091.5
40°	9.0	10.1	12.0	14.2	16.5	24.7	79.9	598.1	1159.4	1227.3	1139.5
42.5°	6.0	7.5	9.4	11.6	15.7	19.9	56.2	548.2	1210.4	1290.6	1186.4
45°	3.7	4.9	7.1	9.7	16.1	15.7	37.5	488.6	1246.8	1339.0	1218.3
47.5°	1.9	3.0	5.2	9.4	14.2	11.6	23.2	431.6	1279.8	1367.1	1232.9
50°	0.4	1.1	3.7	11.6	12.0	8.6	15.4	396.0	1297.0	1360.0	1231.4
52.5°	0.0	0.0	2.6	11.2	8.6	6.7	12.0	390.7	1324.0	1369.4	1257.3
55°	0.0	0.0	1.1	4.9	4.9	5.6	10.5	383.6	1372.0	1425.3	1335.3
57.5°	0.0	0.0	0.0	2.2	3.0	4.5	9.7	364.8	1422.6	1484.5	1430.1
60°	0.0	0.0	0.0	1.1	1.9	3.7	8.6	322.1	1376.1	1484.9	1508.9
61°	0.0	0.0	0.0	1.1	1.5	3.4	7.9	307.1	1334.5	1460.9	1518.6
62.5°	0.0	0.0	0.0	0.4	1.1	2.6	6.7	277.5	1272.3	1422.3	1514.1
65°	0.0	0.0	0.0	0.0	0.4	1.5	5.2	224.2	1168.4	1325.1	1462.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.4	3.4	157.9	1019.2	1215.3	1351.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	91.5	821.2	1028.9	1157.9
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.7	41.6	532.8	794.6	913.4
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	328.1	574.1	682.4
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	222.4	382.1	459.3
80°	0.0	0.7	0.4	0.0	0.0	0.0	0.0	3.0	136.9	238.5	259.1
82.5°	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	70.9	168.4	171.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.6	35.6
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8	718.8
2.5°	792.3	794.6	796.1	793.4	777.3	768.3	750.3	730.4	723.7	721.8
5°	838.4	851.2	848.9	831.7	803.6	769.1	726.3	682.1	665.2	658.8
7.5°	829.4	862.8	869.2	851.2	803.6	743.2	681.3	628.8	604.4	598.1
10°	783.7	825.7	845.9	840.3	795.7	725.9	649.8	585.3	558.7	550.5
12.5°	739.4	779.9	792.7	797.2	772.8	712.4	634.1	564.7	537.0	526.5
15°	709.8	734.9	734.2	742.4	740.6	707.2	644.2	575.2	544.1	530.2
17.5°	700.1	692.6	682.8	689.6	702.7	708.7	677.2	612.7	576.3	560.2
20°	706.1	669.3	647.9	647.6	675.3	721.1	725.6	674.6	640.4	618.7
22.5°	736.8	657.7	624.7	625.4	659.6	739.4	781.4	755.6	718.1	691.1
25°	782.2	659.9	615.7	620.2	658.1	755.6	841.8	847.8	799.8	776.2
27.5°	828.3	679.4	616.1	620.9	664.4	764.2	876.3	915.7	874.4	845.2
30°	860.6	703.4	622.8	628.1	674.6	770.9	889.4	971.5	928.8	896.2
32.5°	890.9	728.2	633.7	638.9	694.8	784.8	914.2	1027.8	980.9	948.7
35°	920.5	752.6	653.9	663.3	727.4	809.9	939.3	1093.8	1054.8	1010.2
37.5°	946.0	779.6	688.8	708.7	771.7	848.6	973.4	1168.8	1128.7	1078.8
40°	967.4	811.4	760.8	782.9	839.2	889.4	1011.3	1217.9	1191.3	1137.7
42.5°	984.7	867.7	863.9	895.0	934.4	936.3	1022.2	1241.5	1231.4	1183.8
45°	1013.5	968.5	999.3	1050.3	1047.7	992.5	1019.2	1263.3	1264.0	1223.5
47.5°	1060.8	1094.9	1183.8	1218.3	1200.6	1069.4	1022.2	1284.6	1301.5	1269.6
50°	1128.3	1238.1	1354.4	1400.1	1348.8	1146.7	1048.8	1310.1	1361.1	1337.9
52.5°	1186.0	1346.5	1511.9	1552.7	1482.6	1229.1	1111.0	1365.3	1441.0	1433.5
55°	1268.5	1439.9	1624.0	1655.5	1599.2	1322.5	1194.6	1446.3	1528.7	1532.5
57.5°	1352.9	1524.2	1697.1	1729.0	1686.2	1438.8	1313.5	1562.5	1611.2	1610.1
60°	1446.6	1603.0	1730.1	1747.7	1723.4	1555.0	1441.4	1669.0	1667.9	1642.0
61°	1500.2	1628.1	1727.9	1733.1	1709.5	1589.1	1507.4	1709.9	1676.1	1642.0
62.5°	1559.5	1651.0	1700.1	1682.5	1657.0	1601.1	1603.0	1754.5	1681.7	1629.2
65°	1619.5	1593.6	1572.2	1487.9	1463.9	1490.9	1683.6	1737.6	1647.6	1572.6
67.5°	1516.7	1365.6	1319.5	1234.8	1139.9	1250.1	1607.1	1634.5	1532.5	1432.8
70°	1239.6	1003.4	948.7	945.7	877.4	998.5	1417.4	1397.5	1271.9	1180.4
72.5°	971.5	684.7	610.1	627.3	613.8	744.3	1159.4	937.8	815.6	754.4
75°	761.6	486.7	420.0	417.0	402.3	507.0	848.9	494.2	408.0	364.5
77.5°	502.5	350.6	349.5	322.8	311.6	274.9	381.0	198.0	161.6	163.1
80°	289.5	214.9	252.0	199.9	200.2	161.2	154.1	28.9	23.2	16.9
82.5°	166.1	103.1	78.0	30.7	64.5	64.5	12.4	0.4	0.4	0.7
85°	16.1	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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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