

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: P401041

Luminaire Tested: **ENV-SA1A-830-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401041
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: ENV-SA1A-830-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 1633 lumens
Efficiency: N/A
Efficacy: 81.2 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

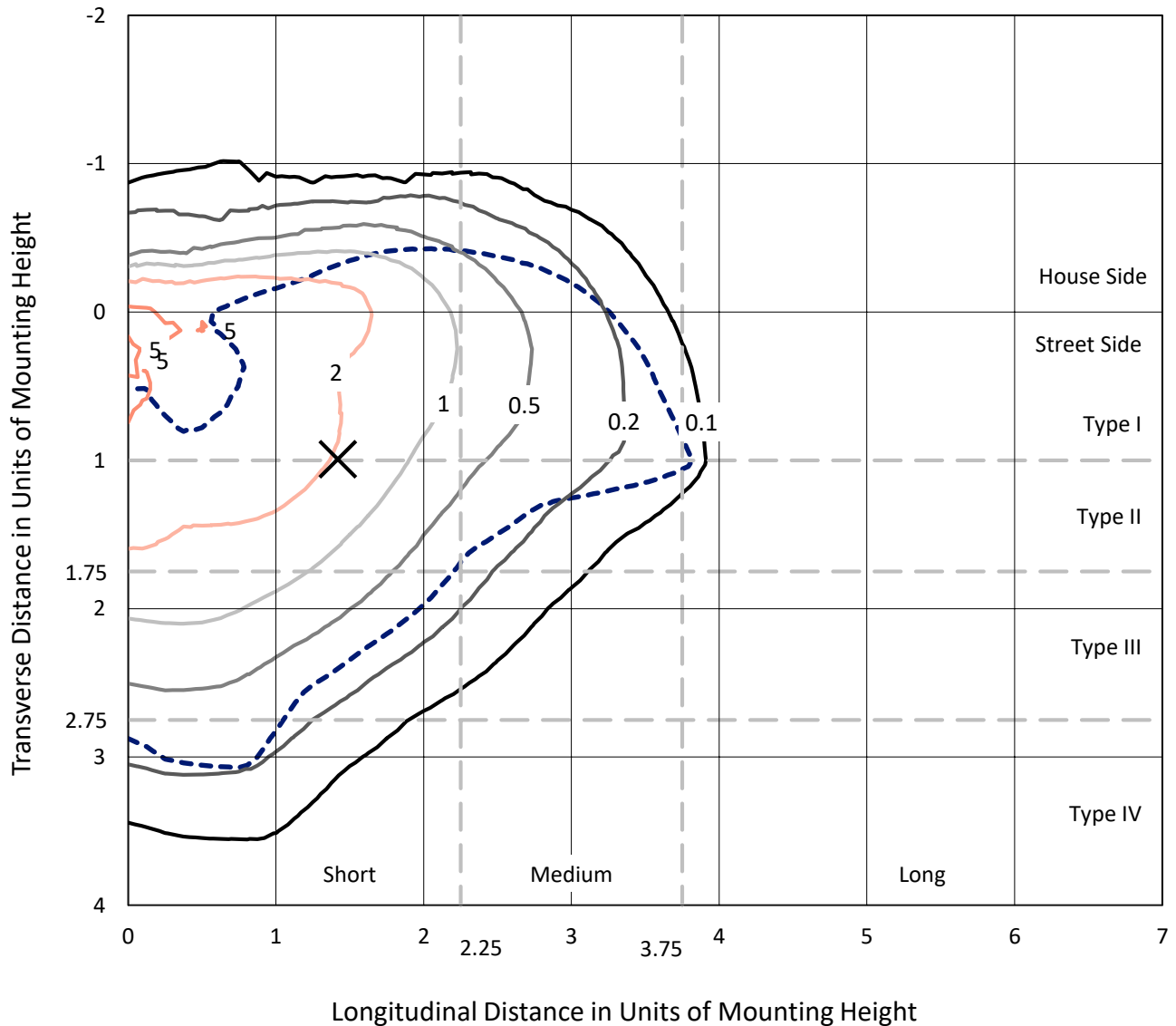
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

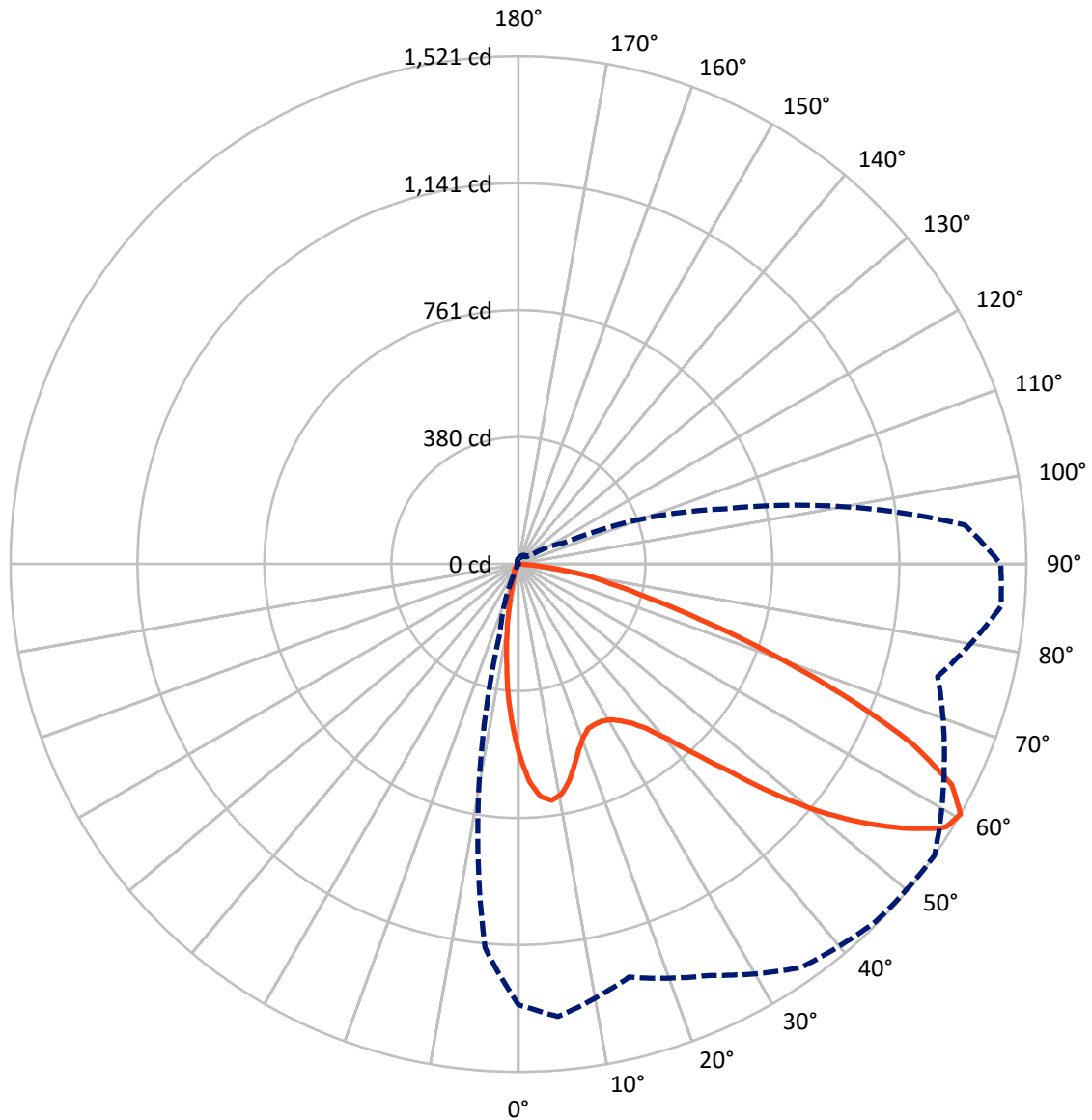
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.8 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	289.2	0.0	289.2
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	1343.8	0.0	1343.8
	% Fixture	82.3	0.0	82.3
Total	Lumens	1633.0	0.0	1633.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	2.7
10°-20°	82.5	5.1
20°-30°	117.7	7.2
30°-40°	172.7	10.6
40°-50°	254.6	15.6
50°-60°	377.2	23.1
60°-70°	402.0	24.6
70°-80°	166.7	10.2
80°-90°	16.0	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°	1633.0	100.0
0°-180°	1633.0	100.0



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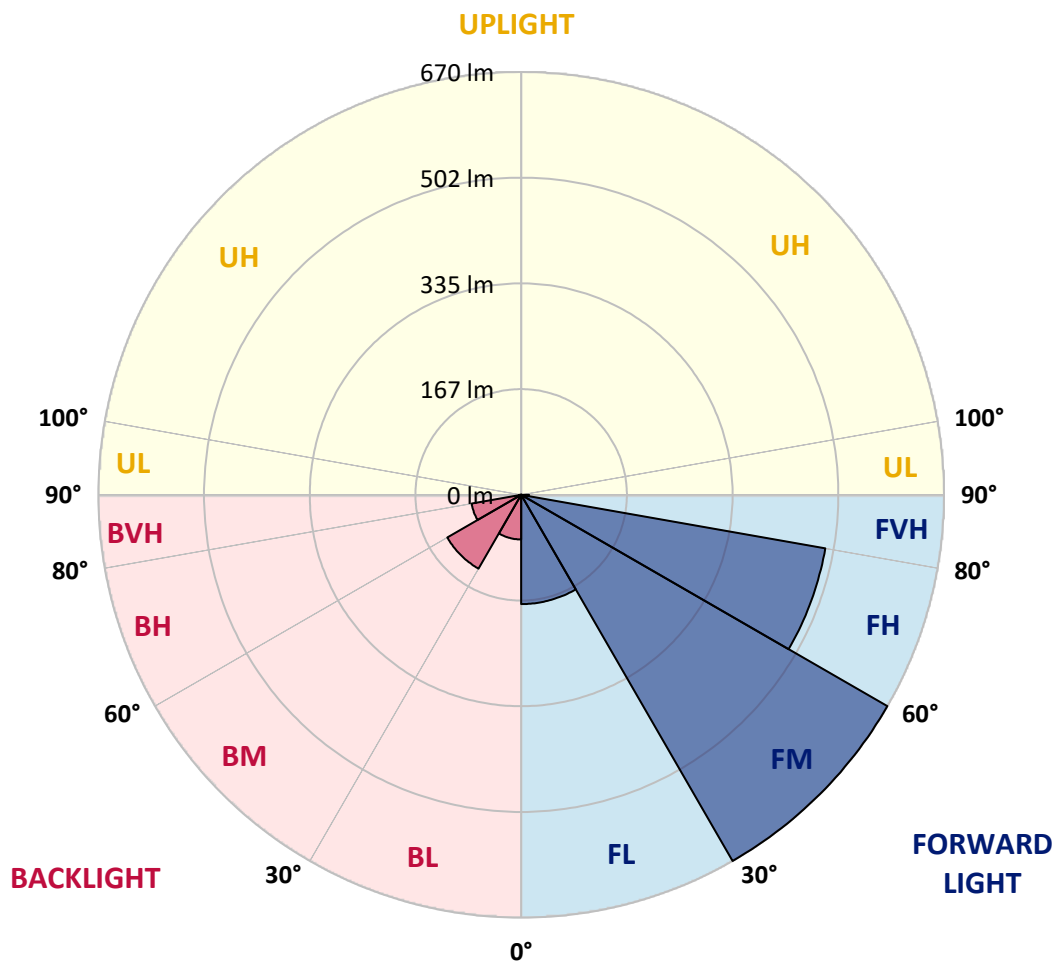
CATALOG NUMBER: ENV-SA1A-830-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	173.0	10.6			
FM (30°-60°)	669.5	41.0			
FH (60°-80°)	489.0	29.9			G0/660
FVH (80°-90°)	12.3	0.8			G1/100
BL (0°-30°)	70.7	4.3	B0/110		
BM (30°-60°)	135.0	8.3	B0/220		
BH (60°-80°)	79.7	4.9	B0/110		G0/110
BVH (80°-90°)	3.8	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°	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7
2.5°	602.3	601.4	610.0	628.0	639.1	645.9	647.1	654.2	647.1	643.4	630.1
5°	584.7	584.4	601.1	640.3	672.4	696.5	708.2	700.2	687.8	663.5	633.8
7.5°	535.9	535.9	567.4	619.9	673.6	715.3	729.5	714.7	685.4	636.3	583.2
10°	496.1	499.8	530.1	592.8	652.3	698.0	713.8	702.4	664.1	600.5	538.1
12.5°	472.4	474.5	508.2	571.1	626.7	663.8	673.3	669.9	642.2	573.0	506.9
15°	474.5	477.6	516.2	567.7	603.9	618.7	622.1	626.4	615.0	561.9	496.7
17.5°	508.5	510.6	549.5	582.9	581.3	576.7	577.9	585.0	598.6	571.1	517.4
20°	562.8	568.4	607.6	608.2	569.6	548.0	542.4	554.2	590.9	595.5	561.6
22.5°	632.6	634.7	674.6	650.8	570.8	528.2	521.7	535.0	593.4	635.1	622.7
25°	713.5	721.2	742.8	706.1	588.7	525.5	521.1	532.2	602.3	677.0	685.7
27.5°	768.1	774.3	795.0	743.7	604.8	527.0	519.0	532.6	613.1	716.6	753.0
30°	816.9	821.2	828.9	763.5	623.0	534.7	521.7	541.2	619.0	724.9	796.5
32.5°	862.9	868.1	863.5	787.3	643.1	549.2	527.0	559.4	631.7	741.6	834.5
35°	922.2	922.5	906.7	811.0	665.9	566.5	542.4	585.3	656.4	767.5	875.2
37.5°	992.6	993.2	953.3	835.4	691.9	595.5	578.9	625.5	692.2	797.4	933.6
40°	1054.0	1056.5	1003.7	863.5	723.7	652.0	650.5	689.1	738.2	837.3	996.3
42.5°	1107.4	1114.5	1050.0	887.0	768.7	738.8	742.5	777.7	794.0	870.6	1035.2
45°	1161.4	1161.1	1088.0	910.4	844.1	850.5	885.7	884.2	857.3	888.5	1065.7
47.5°	1195.1	1193.5	1111.1	948.7	945.6	1007.7	1045.0	1024.7	927.4	907.7	1104.0
50°	1208.0	1207.4	1129.3	997.5	1049.1	1150.0	1203.4	1162.7	1013.2	939.8	1149.7
52.5°	1244.8	1241.7	1171.3	1053.1	1142.6	1287.1	1331.2	1285.8	1098.8	997.5	1202.8
55°	1302.2	1303.1	1243.6	1118.2	1217.6	1383.7	1437.7	1397.3	1186.1	1076.8	1275.7
57.5°	1340.8	1343.6	1323.5	1190.8	1297.9	1451.3	1503.8	1492.4	1302.5	1171.6	1361.2
58°	1344.5	1346.7	1336.2	1204.7	1309.9	1459.0	1512.8	1504.7	1328.1	1201.9	1381.6
60°	1320.7	1327.2	1360.9	1281.2	1359.6	1475.4	1514.3	1521.4	1407.5	1300.0	1451.3
62.5°	1256.2	1258.4	1319.5	1367.0	1393.6	1435.0	1438.7	1457.2	1440.2	1415.2	1513.7
65°	1177.2	1177.2	1243.2	1371.1	1305.6	1298.8	1277.2	1295.7	1344.8	1487.4	1509.4
67.5°	1039.8	1040.7	1125.0	1221.3	1082.4	1058.9	1045.0	1051.8	1156.5	1427.2	1425.4
70°	840.4	839.7	926.5	988.9	803.3	783.2	799.9	797.7	939.5	1268.2	1244.5
72.5°	594.3	599.5	688.8	763.8	545.5	470.2	543.7	572.1	706.7	1069.1	962.9
75°	334.7	341.8	414.6	530.7	344.2	318.0	355.7	396.1	510.9	851.2	646.8
77.5°	167.9	170.7	212.4	255.3	208.7	242.4	240.2	278.8	350.4	574.2	369.9
80°	96.9	102.5	116.7	131.8	116.7	153.7	178.4	209.9	215.8	297.0	206.2
82.5°	38.9	43.5	54.6	62.1	48.5	45.7	31.2	98.2	130.0	143.6	79.0
85°	0.0	0.0	0.3	0.6	0.9	0.9	1.5	17.3	31.8	7.1	13.0
87.5°	0.0	0.0	0.3	0.3	0.6	0.9	1.2	2.2	2.8	3.4	11.7
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°	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7
2.5°	625.2	621.8	610.4	593.1	582.3	565.6	558.8	543.1	535.0	521.7	521.7
5°	619.0	605.1	576.4	539.0	512.5	484.7	475.7	457.2	443.9	428.2	421.7
7.5°	562.8	543.4	498.6	455.1	412.8	384.7	356.9	338.1	320.1	307.2	309.0
10°	511.3	483.5	434.4	379.1	335.3	305.9	280.9	259.0	240.5	222.3	219.5
12.5°	477.6	445.8	387.1	327.9	295.1	273.5	250.4	226.3	203.5	183.4	175.4
15°	463.4	428.8	363.4	307.5	277.5	249.8	222.9	193.3	167.0	142.9	136.5
17.5°	478.8	437.5	361.2	293.9	252.2	217.3	180.0	147.6	116.7	99.4	94.2
20°	520.8	467.1	368.3	280.3	224.1	179.1	133.4	96.6	79.3	68.8	65.5
22.5°	581.6	516.2	380.4	267.0	195.7	133.4	92.0	69.8	59.6	54.0	52.5
25°	647.7	579.5	402.6	255.9	167.3	99.1	68.2	57.1	50.9	46.9	45.4
27.5°	722.1	642.2	429.7	247.6	141.1	79.3	58.7	50.3	45.4	42.6	41.4
30°	768.7	687.2	450.4	232.8	123.2	72.2	55.9	47.5	42.3	40.1	39.2
32.5°	811.6	722.7	470.2	215.8	109.6	63.9	54.3	50.0	43.8	39.5	37.7
35°	858.9	759.2	479.8	205.6	100.6	55.6	44.8	38.9	35.5	34.9	34.0
37.5°	929.3	802.4	485.9	200.1	95.1	50.6	41.7	35.2	31.2	27.5	25.9
40°	996.0	847.1	489.0	194.8	92.3	47.5	39.8	33.3	29.0	25.6	24.1
42.5°	1048.1	887.9	490.9	191.1	87.4	45.7	38.3	32.1	27.5	24.1	22.5
45°	1090.7	935.1	489.3	189.9	83.4	46.9	37.7	31.2	26.2	22.8	21.3
47.5°	1132.4	986.4	495.2	188.3	79.3	45.1	38.0	30.9	25.3	21.9	20.4
50°	1187.1	1048.4	516.5	184.0	76.6	42.3	41.1	31.2	25.0	21.3	20.1
52.5°	1257.8	1134.3	555.1	179.4	73.2	39.8	42.9	31.2	24.4	20.7	19.1
55°	1343.6	1230.6	597.7	172.6	67.3	36.7	41.1	31.2	23.8	20.4	18.5
57.5°	1413.7	1316.4	631.3	164.6	56.5	33.0	37.7	29.9	22.2	19.1	17.6
58°	1419.8	1326.3	636.0	162.4	55.3	32.4	36.7	29.6	21.6	18.8	17.3
60°	1444.8	1342.3	637.8	150.7	46.0	30.9	31.8	28.7	20.4	17.6	16.4
62.5°	1436.2	1289.2	598.6	130.0	41.1	28.1	26.6	29.3	18.8	16.1	14.8
65°	1393.3	1184.9	524.5	116.4	41.4	25.0	22.8	25.6	17.3	14.5	13.3
67.5°	1291.1	1026.5	426.0	109.0	43.2	22.2	19.8	19.1	15.4	13.0	12.0
70°	1101.2	841.3	322.9	102.5	45.7	19.8	18.2	17.0	14.2	12.0	10.8
72.5°	811.0	623.0	234.9	96.0	44.5	17.6	17.0	15.4	13.0	10.8	10.2
75°	506.0	361.8	160.8	78.4	39.8	15.4	15.7	14.5	11.7	10.2	9.3
77.5°	295.5	254.1	79.3	58.3	27.5	13.6	13.9	13.3	12.0	9.6	9.0
80°	176.9	158.1	34.0	25.0	15.1	12.0	11.7	12.3	11.4	9.0	8.3
82.5°	76.6	68.5	16.4	13.9	12.3	10.5	10.2	10.5	9.9	7.4	7.1
85°	4.3	11.4	7.7	10.2	9.3	7.7	7.7	8.0	7.1	5.9	5.9
87.5°	4.0	8.6	4.9	6.2	6.8	5.9	6.2	6.2	5.9	5.2	4.9
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7
2.5°	514.6	511.3	501.1	497.4	481.3	485.3	486.6	485.0	485.6	486.9	491.5
5°	426.4	420.8	407.5	398.9	394.2	391.2	376.6	377.0	379.1	370.8	381.6
7.5°	302.9	309.0	310.3	302.2	297.3	286.8	273.5	266.1	253.5	260.6	262.1
10°	216.7	213.6	219.5	216.7	209.0	205.0	190.8	189.6	188.3	187.4	196.4
12.5°	165.2	155.9	149.1	150.7	144.8	134.9	132.4	132.8	134.0	134.0	136.5
15°	130.9	116.7	105.9	99.4	100.3	90.5	87.7	78.4	77.2	74.4	75.0
17.5°	91.7	85.8	79.3	71.9	68.8	59.9	49.1	44.1	40.4	41.1	42.9
20°	63.3	60.8	59.0	55.3	52.2	41.7	34.9	32.7	32.4	33.0	33.7
22.5°	50.9	48.5	46.6	45.4	41.4	33.7	29.9	28.4	28.4	28.4	28.7
25°	43.8	41.4	38.9	38.9	35.2	29.3	26.6	25.3	25.0	24.7	25.3
27.5°	40.8	37.4	34.9	33.3	30.6	25.9	23.5	22.2	21.9	21.9	22.2
30°	37.7	34.3	31.8	29.6	26.6	23.2	20.7	19.8	19.1	19.1	19.4
32.5°	35.8	32.4	29.3	26.6	23.2	20.4	18.2	17.0	16.4	16.7	17.0
35°	31.8	29.0	26.2	23.5	20.4	17.9	15.7	14.5	14.2	14.2	14.5
37.5°	25.0	22.8	22.2	20.7	17.9	15.4	13.3	12.0	11.7	11.7	12.0
40°	22.5	19.8	18.5	17.9	16.4	13.3	10.8	9.6	9.6	9.3	9.9
42.5°	20.7	17.9	15.7	15.1	14.2	11.4	8.6	7.7	7.4	7.4	7.7
45°	19.4	16.4	13.6	12.0	12.0	9.3	7.1	5.9	5.6	5.6	5.9
47.5°	18.8	15.4	12.0	9.9	9.6	7.7	5.6	4.3	4.0	4.0	4.0
50°	18.2	14.2	10.8	8.3	7.4	6.5	4.3	3.4	3.1	3.1	3.1
52.5°	17.3	13.6	9.9	7.4	5.9	4.9	3.4	2.5	2.2	1.9	2.2
55°	16.7	12.7	9.6	6.8	4.9	3.7	2.5	1.9	1.5	1.5	1.5
57.5°	15.7	11.7	8.6	6.5	4.6	2.8	1.9	1.2	0.9	0.9	1.2
58°	15.4	11.7	8.3	6.2	4.3	2.8	1.9	1.2	0.9	0.9	1.2
60°	14.5	10.8	8.0	5.6	4.0	2.5	1.5	0.9	0.6	0.6	0.9
62.5°	13.6	9.9	7.1	4.9	3.4	2.2	1.2	0.6	0.3	0.3	0.3
65°	12.0	9.0	6.2	4.6	2.8	1.5	0.9	0.3	0.0	0.0	0.0
67.5°	10.8	8.3	5.6	4.0	2.5	1.2	0.6	0.0	0.0	0.0	0.0
70°	9.9	7.7	4.9	3.4	2.2	0.9	0.3	0.0	0.0	0.0	0.0
72.5°	9.3	7.1	4.6	3.1	1.5	0.9	0.3	0.0	0.0	0.0	0.0
75°	9.0	6.8	4.6	2.8	1.5	0.9	0.6	0.3	0.0	0.0	0.3
77.5°	8.6	6.8	4.6	2.8	1.9	0.9	0.9	0.6	0.6	0.3	0.9
80°	8.0	6.2	4.0	2.5	1.5	1.2	0.9	0.6	0.0	0.0	0.0
82.5°	6.8	4.9	3.4	2.5	1.5	0.9	0.3	0.0	0.0	0.0	0.0
85°	5.6	4.0	2.8	1.5	0.9	0.3	0.0	0.0	0.0	0.0	0.0
87.5°	4.9	3.1	2.2	1.2	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°	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7	576.7
2.5°	495.5	509.7	515.6	535.3	544.0	561.9	577.3	590.6	597.1	602.3
5°	384.4	397.9	412.5	441.8	467.1	494.3	528.2	563.4	573.6	584.7
7.5°	268.3	288.4	312.7	339.0	375.1	416.2	464.9	508.5	530.4	535.9
10°	208.4	232.2	258.1	284.0	314.0	357.8	406.9	463.1	486.6	496.1
12.5°	156.5	188.3	219.2	249.8	275.7	313.7	367.1	434.1	460.0	472.4
15°	94.2	130.0	167.9	209.0	245.1	289.6	349.8	427.9	460.6	474.5
17.5°	46.9	64.2	99.1	160.8	214.3	269.5	349.5	450.1	490.6	508.5
20°	34.9	39.5	52.8	100.3	178.1	252.8	353.2	488.1	547.7	562.8
22.5°	29.9	33.3	38.0	58.7	133.4	237.4	366.1	538.4	612.5	632.6
25°	26.2	29.0	32.7	40.4	91.4	219.2	390.5	609.4	686.0	713.5
27.5°	23.2	25.6	28.7	34.0	61.1	184.9	404.4	669.0	745.3	768.1
30°	20.4	22.2	25.3	29.0	45.1	142.9	417.4	721.5	799.0	816.9
32.5°	17.9	19.4	21.9	24.7	34.3	108.4	418.0	766.6	845.9	862.9
35°	15.1	17.0	18.8	21.3	27.2	84.6	405.4	811.3	901.5	922.2
37.5°	12.7	14.2	16.4	18.5	24.7	65.5	379.1	863.8	969.1	992.6
40°	10.8	12.3	14.2	16.7	21.9	47.5	337.1	911.4	1032.4	1054.0
42.5°	8.6	10.2	12.3	16.4	18.2	34.3	294.8	957.1	1087.3	1107.4
45°	6.8	8.6	11.4	15.7	15.1	24.1	258.4	997.5	1134.6	1161.4
47.5°	4.9	7.1	11.4	14.2	12.3	17.3	239.9	1036.4	1176.9	1195.1
50°	3.7	5.9	12.3	12.0	10.5	14.8	242.7	1079.6	1196.3	1208.0
52.5°	2.8	4.9	9.6	8.6	9.0	13.0	253.5	1136.7	1236.5	1244.8
55°	2.5	3.7	5.9	6.5	8.0	12.3	250.7	1190.8	1287.7	1302.2
57.5°	2.2	3.1	4.6	5.2	7.1	11.7	234.9	1214.5	1320.7	1340.8
58°	1.9	3.1	4.3	5.2	7.1	11.4	230.9	1208.0	1319.2	1344.5
60°	1.5	2.8	4.0	4.6	6.2	10.2	211.5	1153.1	1285.2	1320.7
62.5°	1.2	1.9	3.1	3.4	4.9	8.3	174.1	1064.2	1212.4	1256.2
65°	0.6	1.2	1.9	2.5	3.4	6.2	123.8	958.9	1134.3	1177.2
67.5°	0.0	0.6	1.2	1.5	2.2	4.6	71.3	813.8	1005.8	1039.8
70°	0.0	0.3	0.6	0.9	1.2	3.1	37.7	597.4	779.2	840.4
72.5°	0.3	0.3	0.3	0.0	0.6	2.5	16.7	354.4	531.3	594.3
75°	0.3	0.3	0.0	0.0	0.0	1.2	7.1	186.8	304.7	334.7
77.5°	1.2	0.6	0.0	0.0	0.0	0.3	3.4	100.6	158.1	167.9
80°	0.3	0.0	0.0	0.0	0.0	0.0	1.2	33.7	94.8	96.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	40.8	38.9
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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