

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: P401745

Luminaire Tested: **ENT-SA1E-827-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401745
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: ENT-SA1E-827-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1050mA 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: 3888 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 57.2
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

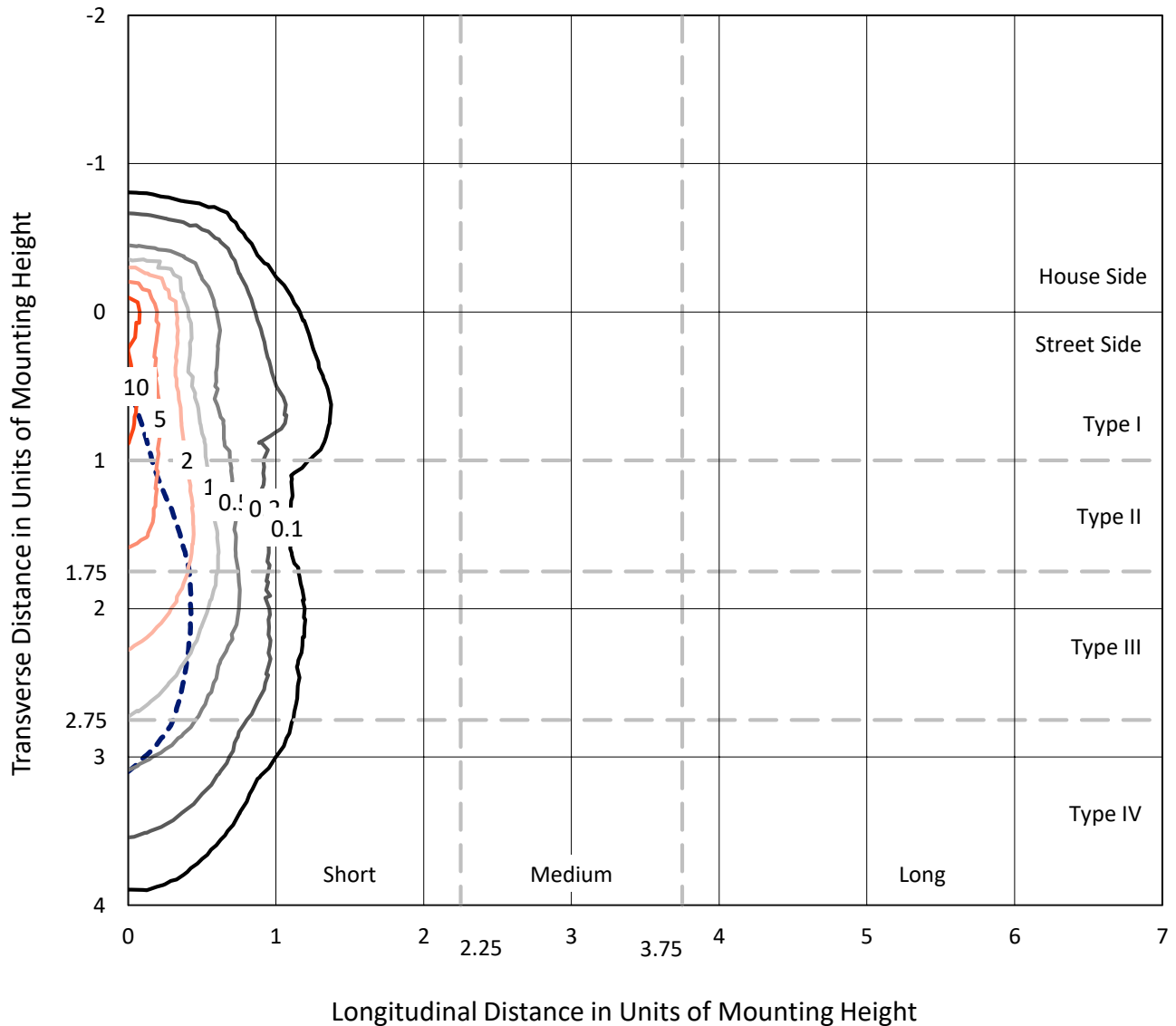


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Iso-Footcandle Lines of Horizontal Illumination

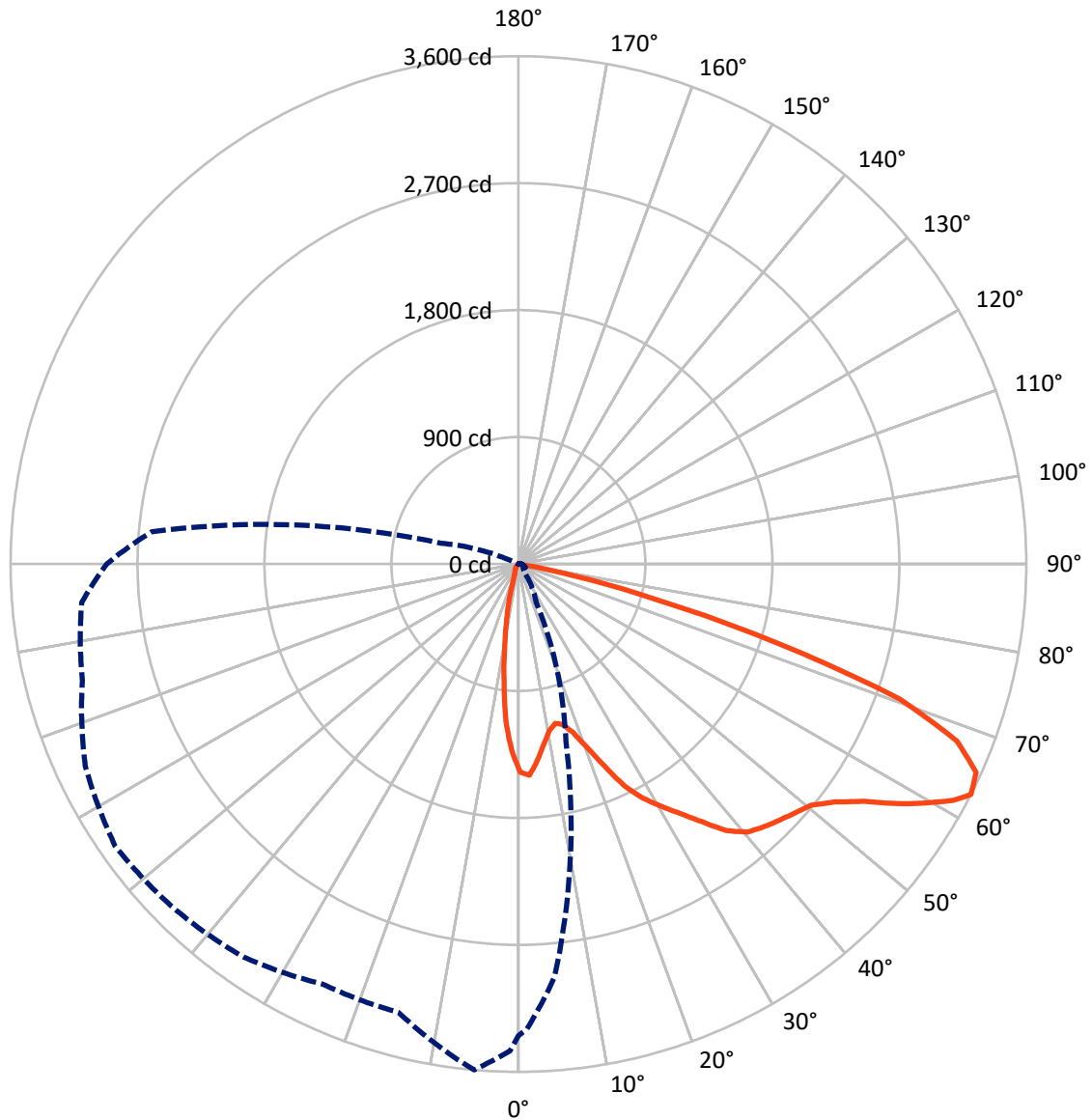
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.7 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	546.9	0.0	546.9
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	3341.1	0.0	3341.1
	% Fixture	85.9	0.0	85.9
Total	Lumens	3888.0	0.0	3888.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.6	2.8
10°-20°	210.2	5.4
20°-30°	292.5	7.5
30°-40°	423.0	10.9
40°-50°	606.6	15.6
50°-60°	880.0	22.6
60°-70°	952.1	24.5
70°-80°	384.5	9.9
80°-90°	28.5	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°	3888.0	100.0
0°-180°	3888.0	100.0



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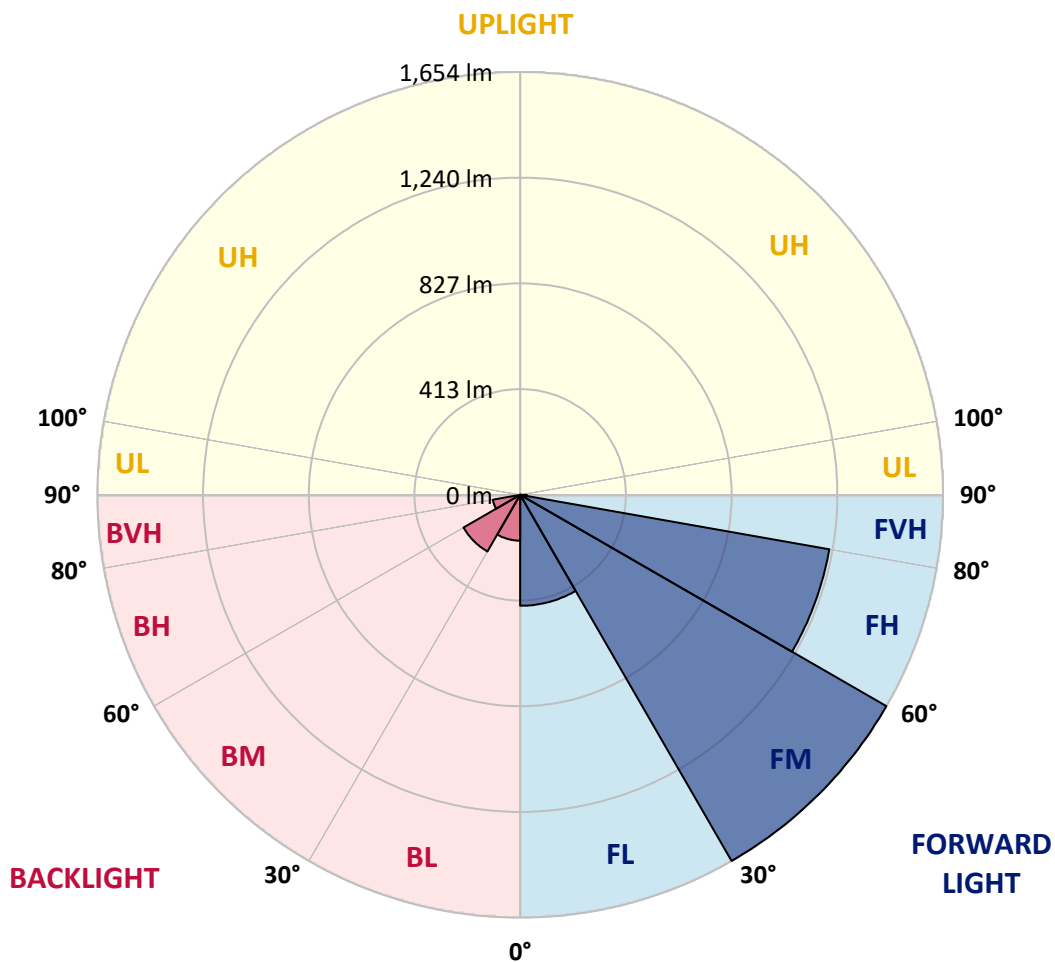
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	434.0	11.2			
FM	(30°-60°)	1653.7	42.5			
FH	(60°-80°)	1227.8	31.6			G1/1800
FVH	(80°-90°)	25.6	0.7			G1/100
BL	(0°-30°)	179.3	4.6	B1/500		
BM	(30°-60°)	255.9	6.6	B1/1000		
BH	(60°-80°)	108.8	2.8	B0/110		G0/110
BVH	(80°-90°)	2.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8
2.5°	1481.0	1474.8	1461.0	1430.9	1387.9	1360.2	1342.5	1319.4	1295.5	1287.9	1272.5
5°	1351.7	1341.7	1322.5	1247.1	1179.4	1111.7	1063.2	1017.1	1001.7	970.9	989.4
7.5°	1227.1	1222.5	1177.8	1080.1	972.4	885.5	830.1	762.4	742.4	710.9	685.5
10°	1129.4	1125.5	1071.7	944.0	827.8	755.5	711.6	667.8	623.9	579.3	543.9
12.5°	1080.1	1071.7	1009.4	871.6	763.9	703.9	657.8	599.3	552.4	492.4	449.3
15°	1087.8	1080.1	1008.6	860.1	733.2	650.1	581.6	512.4	446.2	387.0	344.7
17.5°	1149.4	1146.3	1059.4	870.1	696.2	586.2	494.7	401.6	323.1	259.3	223.1
20°	1269.4	1260.2	1134.0	891.6	657.8	512.4	387.0	272.3	206.9	163.1	147.7
22.5°	1417.9	1397.1	1251.7	923.2	620.8	433.1	280.0	183.1	147.7	130.8	120.0
25°	1592.5	1593.3	1397.9	965.5	583.9	359.3	196.2	145.4	124.6	112.3	103.1
27.5°	1734.1	1723.3	1529.4	1007.8	543.9	294.7	164.6	126.9	109.2	96.2	90.8
30°	1838.7	1822.5	1616.4	1037.1	492.4	249.3	147.7	120.8	103.1	88.5	81.5
32.5°	1946.4	1926.4	1694.8	1053.2	461.6	227.7	130.8	105.4	92.3	86.2	76.9
35°	2072.6	2054.9	1781.8	1051.7	445.4	215.4	118.5	95.4	78.5	68.5	62.3
37.5°	2213.4	2177.2	1871.8	1044.7	433.9	209.3	107.7	88.5	73.1	62.3	54.6
40°	2334.1	2298.0	1954.9	1035.5	426.2	203.1	101.6	83.9	69.2	57.7	50.0
42.5°	2428.8	2394.1	2032.6	1024.0	422.4	190.0	104.6	80.8	66.2	54.6	46.2
45°	2510.3	2474.9	2124.9	1022.4	420.8	180.8	103.1	80.0	64.6	50.8	43.1
47.5°	2604.9	2586.5	2246.4	1047.8	414.7	173.9	94.6	86.2	63.9	49.2	40.8
50°	2745.0	2728.8	2405.7	1123.2	405.4	166.9	86.2	94.6	63.9	47.7	38.5
52.5°	2941.1	2922.7	2656.5	1221.7	397.0	159.3	77.7	91.5	64.6	45.4	36.9
55°	3144.2	3141.2	2893.4	1326.3	389.3	142.3	68.5	82.3	63.1	42.3	34.6
57.5°	3303.5	3301.2	3071.2	1397.1	374.7	114.6	62.3	68.5	58.5	38.5	31.5
60°	3368.9	3349.6	3090.4	1397.1	340.8	94.6	56.9	53.9	59.2	34.6	27.7
61°	3368.9	3344.3	3055.8	1376.3	323.9	90.0	53.9	50.0	60.8	33.1	26.2
62.5°	3342.7	3302.0	2937.3	1301.7	297.0	90.0	49.2	44.6	55.4	31.5	23.8
65°	3226.6	3159.6	2659.6	1131.7	269.3	92.3	42.3	37.7	40.0	26.9	20.8
67.5°	2939.6	2864.2	2299.5	895.5	247.0	97.7	35.4	33.1	30.8	23.8	18.5
70°	2421.8	2358.0	1876.4	670.9	229.3	99.2	30.8	27.7	26.2	20.8	16.2
72.5°	1547.9	1442.5	1171.7	454.7	183.9	86.2	25.4	26.2	23.8	16.9	13.1
75°	747.8	777.0	681.6	229.3	123.9	56.2	20.0	21.5	19.2	15.4	11.5
77.5°	334.7	328.5	325.4	58.5	31.5	19.2	12.3	14.6	15.4	13.8	10.0
80°	34.6	46.9	27.7	17.7	11.5	8.5	6.9	7.7	9.2	10.0	5.4
82.5°	1.5	0.8	0.8	2.3	2.3	1.5	0.0	0.0	1.5	1.5	0.8
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°	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8
2.5°	1258.6	1279.4	1270.2	1267.9	1280.2	1274.0	1292.5	1293.2	1307.1	1325.6	1337.1
5°	989.4	973.2	1005.5	1027.1	1054.0	1045.5	1077.8	1074.0	1091.7	1120.9	1109.4
7.5°	687.0	689.3	706.2	725.5	797.8	812.4	823.2	831.6	830.9	837.8	850.1
10°	525.5	512.4	500.8	527.8	556.2	587.8	592.4	603.9	572.4	585.5	591.6
12.5°	430.1	414.7	389.3	375.4	382.4	400.8	408.5	415.4	397.0	397.7	411.6
15°	326.2	305.4	295.4	277.0	270.0	268.5	272.3	262.3	260.0	251.6	257.0
17.5°	212.3	206.2	200.8	196.9	191.6	190.0	176.2	152.3	138.5	135.4	135.4
20°	141.6	136.9	136.9	144.6	142.3	136.2	117.7	97.7	87.7	84.6	86.2
22.5°	116.2	113.1	108.5	108.5	111.6	106.9	90.0	75.4	68.5	68.5	68.5
25°	100.8	99.2	94.6	90.0	91.5	87.7	73.1	63.9	59.2	58.5	59.2
27.5°	88.5	87.7	82.3	77.7	77.7	74.6	63.1	54.6	51.5	50.0	50.8
30°	80.0	78.5	72.3	68.5	67.7	64.6	53.9	47.7	44.6	43.9	43.9
32.5°	73.9	70.8	65.4	61.5	59.2	54.6	46.9	40.8	37.7	36.9	36.9
35°	59.2	59.2	56.9	54.6	51.5	44.6	39.2	33.9	30.8	30.0	30.0
37.5°	51.5	48.5	44.6	45.4	43.9	37.7	32.3	26.9	24.6	23.8	23.8
40°	46.9	43.1	37.7	35.4	36.2	33.1	26.9	20.8	17.7	18.5	17.7
42.5°	42.3	39.2	33.1	27.7	26.9	27.7	20.8	14.6	12.3	12.3	12.3
45°	39.2	36.2	29.2	23.1	19.2	21.5	16.2	10.0	7.7	7.7	7.7
47.5°	36.9	33.9	26.2	19.2	13.8	14.6	11.5	6.2	4.6	3.1	3.8
50°	35.4	31.5	23.8	15.4	10.0	8.5	7.7	3.1	0.8	0.8	0.0
52.5°	33.1	30.0	21.5	13.1	7.7	5.4	3.8	0.8	0.0	0.0	0.0
55°	31.5	27.7	19.2	11.5	6.2	3.1	0.8	0.0	0.0	0.0	0.0
57.5°	28.5	25.4	16.9	9.2	4.6	1.5	0.0	0.0	0.0	0.0	0.0
60°	25.4	23.1	14.6	6.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0
61°	23.8	21.5	13.8	6.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	22.3	20.0	12.3	4.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
65°	19.2	16.9	10.8	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	16.9	15.4	9.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	14.6	13.1	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	12.3	11.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.8	9.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	8.5	7.7	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.8	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°	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8
2.5°	1347.9	1374.8	1400.2	1432.5	1450.2	1498.6	1533.3	1562.5	1585.6	1590.2	1608.7
5°	1140.1	1177.8	1202.5	1270.2	1307.9	1388.6	1451.0	1524.8	1591.0	1627.1	1660.2
7.5°	858.6	877.0	919.3	987.0	1076.3	1146.3	1251.7	1344.8	1464.0	1529.4	1591.0
10°	606.2	623.2	685.5	756.2	837.8	955.5	1083.2	1205.5	1326.3	1410.2	1482.5
12.5°	426.2	481.6	543.1	633.2	713.2	799.3	935.5	1078.6	1229.4	1309.4	1387.9
15°	280.0	329.3	414.7	527.8	627.8	711.6	838.6	1006.3	1197.8	1287.1	1361.7
17.5°	138.5	174.6	250.0	371.6	504.7	637.0	790.1	993.2	1238.6	1339.4	1409.4
20°	86.9	97.7	125.4	210.0	363.1	558.5	753.9	1019.4	1349.4	1461.0	1506.3
22.5°	70.0	73.1	83.9	111.6	221.6	461.6	722.4	1054.7	1471.0	1607.1	1654.1
25°	60.0	62.3	68.5	82.3	128.5	346.2	683.9	1117.1	1612.5	1777.1	1788.7
27.5°	51.5	53.9	59.2	70.0	91.5	233.1	628.5	1190.1	1781.8	1926.4	1918.7
30°	43.9	46.9	52.3	60.0	72.3	157.7	525.5	1264.0	1906.4	2022.6	2010.3
32.5°	37.7	40.0	44.6	51.5	60.0	108.5	394.7	1312.5	2010.3	2113.3	2086.4
35°	30.8	33.1	36.9	43.1	48.5	76.9	298.5	1314.0	2117.2	2225.7	2158.0
37.5°	24.6	26.2	30.0	35.4	40.0	60.0	219.3	1288.6	2249.5	2371.8	2239.5
40°	18.5	20.8	24.6	29.2	33.9	50.8	163.9	1227.1	2378.8	2518.0	2338.0
42.5°	12.3	15.4	19.2	23.8	32.3	40.8	115.4	1124.8	2483.4	2648.0	2434.2
45°	7.7	10.0	14.6	20.0	33.1	32.3	76.9	1002.4	2558.0	2747.3	2499.5
47.5°	3.8	6.2	10.8	19.2	29.2	23.8	47.7	885.5	2625.7	2805.0	2529.5
50°	0.8	2.3	7.7	23.8	24.6	17.7	31.5	812.4	2661.1	2790.3	2526.5
52.5°	0.0	0.0	5.4	23.1	17.7	13.8	24.6	801.6	2716.5	2809.6	2579.6
55°	0.0	0.0	2.3	10.0	10.0	11.5	21.5	787.0	2815.0	2924.2	2739.6
57.5°	0.0	0.0	0.0	4.6	6.2	9.2	20.0	748.6	2918.8	3045.8	2934.2
60°	0.0	0.0	0.0	2.3	3.8	7.7	17.7	660.9	2823.4	3046.5	3095.8
61°	0.0	0.0	0.0	2.3	3.1	6.9	16.2	630.1	2738.0	2997.3	3115.8
62.5°	0.0	0.0	0.0	0.8	2.3	5.4	13.8	569.3	2610.3	2918.1	3106.5
65°	0.0	0.0	0.0	0.0	0.8	3.1	10.8	460.1	2397.2	2718.8	3000.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.8	6.9	323.9	2091.0	2493.4	2773.4
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.1	187.7	1684.8	2111.0	2375.7
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	85.4	1093.2	1630.2	1874.1
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.2	673.2	1177.8	1400.2
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	456.2	783.9	942.4
80°	0.0	1.5	0.8	0.0	0.0	0.0	0.0	6.2	280.8	489.3	531.6
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	145.4	345.4	352.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.8	73.1
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8	1474.8
2.5°	1625.6	1630.2	1633.3	1627.9	1594.8	1576.4	1539.4	1498.6	1484.8	1481.0
5°	1720.2	1746.4	1741.8	1706.4	1648.7	1577.9	1490.2	1399.4	1364.8	1351.7
7.5°	1701.8	1770.2	1783.3	1746.4	1648.7	1524.8	1397.9	1290.2	1240.2	1227.1
10°	1607.9	1694.1	1735.6	1724.1	1632.5	1489.4	1333.2	1200.9	1146.3	1129.4
12.5°	1517.1	1600.2	1626.4	1635.6	1585.6	1461.7	1300.9	1158.6	1101.7	1080.1
15°	1456.3	1507.9	1506.3	1523.3	1519.4	1451.0	1321.7	1180.1	1116.3	1087.8
17.5°	1436.3	1420.9	1400.9	1414.8	1441.7	1454.0	1389.4	1257.1	1182.5	1149.4
20°	1448.6	1373.2	1329.4	1328.6	1385.6	1479.4	1488.6	1384.0	1314.0	1269.4
22.5°	1511.7	1349.4	1281.7	1283.2	1353.2	1517.1	1603.3	1550.2	1473.3	1417.9
25°	1604.8	1354.0	1263.2	1272.5	1350.2	1550.2	1727.1	1739.4	1641.0	1592.5
27.5°	1699.4	1394.0	1264.0	1274.0	1363.2	1567.9	1797.9	1878.7	1794.1	1734.1
30°	1765.6	1443.3	1277.9	1288.6	1384.0	1581.7	1824.8	1993.3	1905.6	1838.7
32.5°	1827.9	1494.0	1300.2	1310.9	1425.6	1610.2	1875.6	2108.7	2012.6	1946.4
35°	1888.7	1544.0	1341.7	1360.9	1492.5	1661.7	1927.2	2244.1	2164.1	2072.6
37.5°	1941.0	1599.4	1413.3	1454.0	1583.3	1741.0	1997.2	2398.0	2315.7	2213.4
40°	1984.9	1664.8	1561.0	1606.4	1721.8	1824.8	2074.9	2498.8	2444.2	2334.1
42.5°	2020.3	1780.2	1772.5	1836.4	1917.2	1921.0	2097.2	2547.2	2526.5	2428.8
45°	2079.5	1987.2	2050.3	2154.9	2149.5	2036.4	2091.0	2591.9	2593.4	2510.3
47.5°	2176.4	2246.4	2428.8	2499.5	2463.4	2194.1	2097.2	2635.7	2670.3	2604.9
50°	2314.9	2540.3	2778.8	2872.7	2767.3	2352.6	2151.8	2688.0	2792.7	2745.0
52.5°	2433.4	2762.7	3101.9	3185.8	3041.9	2521.9	2279.5	2801.1	2956.5	2941.1
55°	2602.6	2954.2	3332.0	3396.6	3281.2	2713.4	2451.1	2967.3	3136.5	3144.2
57.5°	2775.7	3127.3	3482.0	3547.4	3459.7	2951.9	2695.0	3205.8	3305.8	3303.5
60°	2968.1	3288.9	3549.7	3585.8	3535.8	3190.4	2957.3	3424.3	3422.0	3368.9
61°	3078.1	3340.4	3545.1	3555.8	3507.4	3260.4	3092.7	3508.1	3438.9	3368.9
62.5°	3199.6	3387.3	3488.1	3452.0	3399.7	3285.0	3288.9	3599.7	3450.4	3342.7
65°	3322.7	3269.6	3225.8	3052.7	3003.5	3058.8	3454.3	3565.1	3380.4	3226.6
67.5°	3111.9	2801.9	2707.3	2533.4	2338.8	2564.9	3297.3	3353.5	3144.2	2939.6
70°	2543.4	2058.7	1946.4	1940.2	1800.2	2048.7	2908.1	2867.3	2609.6	2421.8
72.5°	1993.3	1404.8	1251.7	1287.1	1259.4	1527.1	2378.8	1924.1	1673.3	1547.9
75°	1562.5	998.6	861.6	855.5	825.5	1040.1	1741.8	1014.0	837.0	747.8
77.5°	1030.9	719.3	717.0	662.4	639.3	563.9	781.6	406.2	331.6	334.7
80°	593.9	440.8	517.0	410.1	410.8	330.8	316.2	59.2	47.7	34.6
82.5°	340.8	211.6	160.0	63.1	132.3	132.3	25.4	0.8	0.8	1.5
85°	33.1	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	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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