

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: P401440

Luminaire Tested: **ENV-SA1D-727-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401440
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-SA1D-727-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4175 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 43.1
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

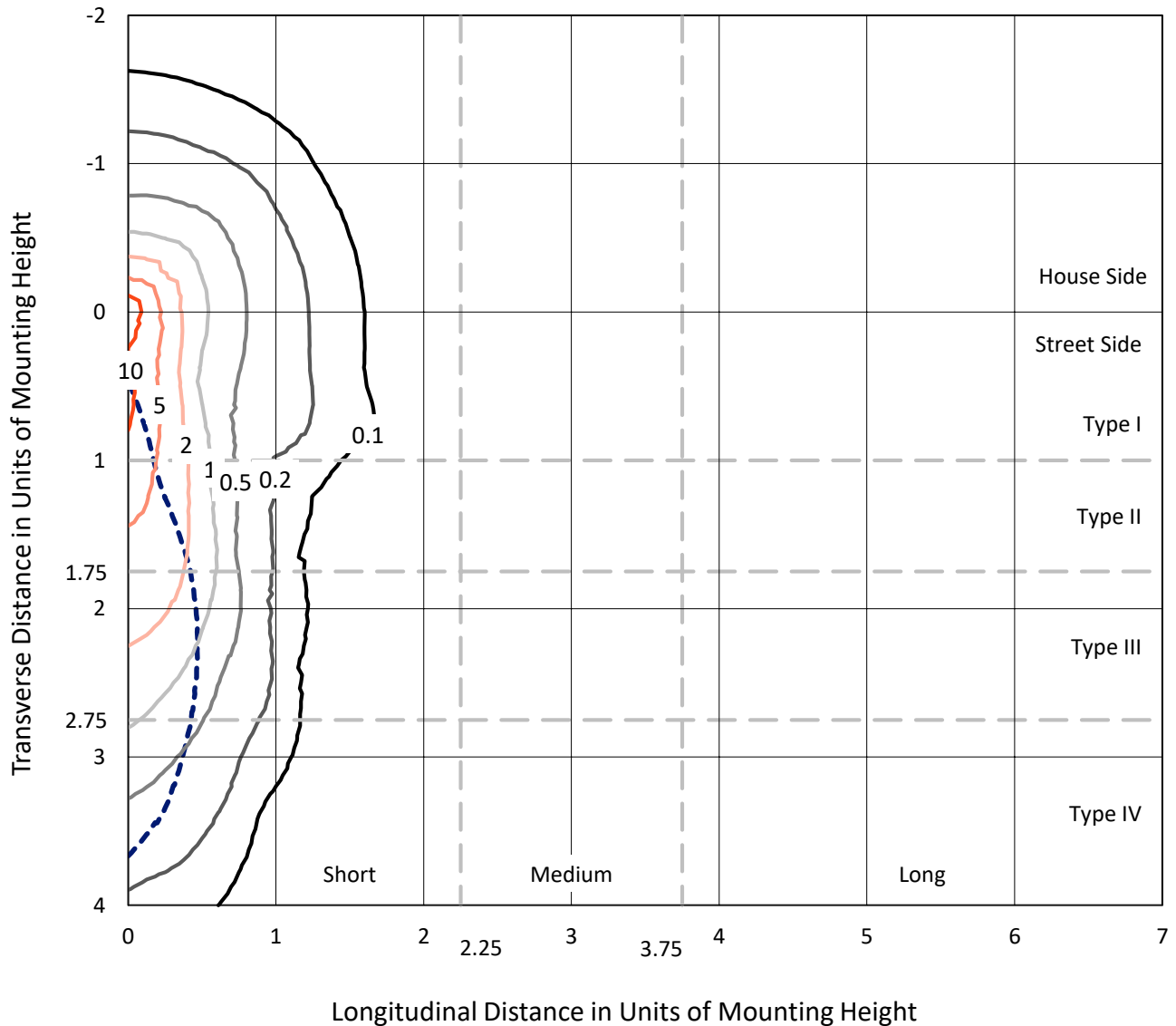


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

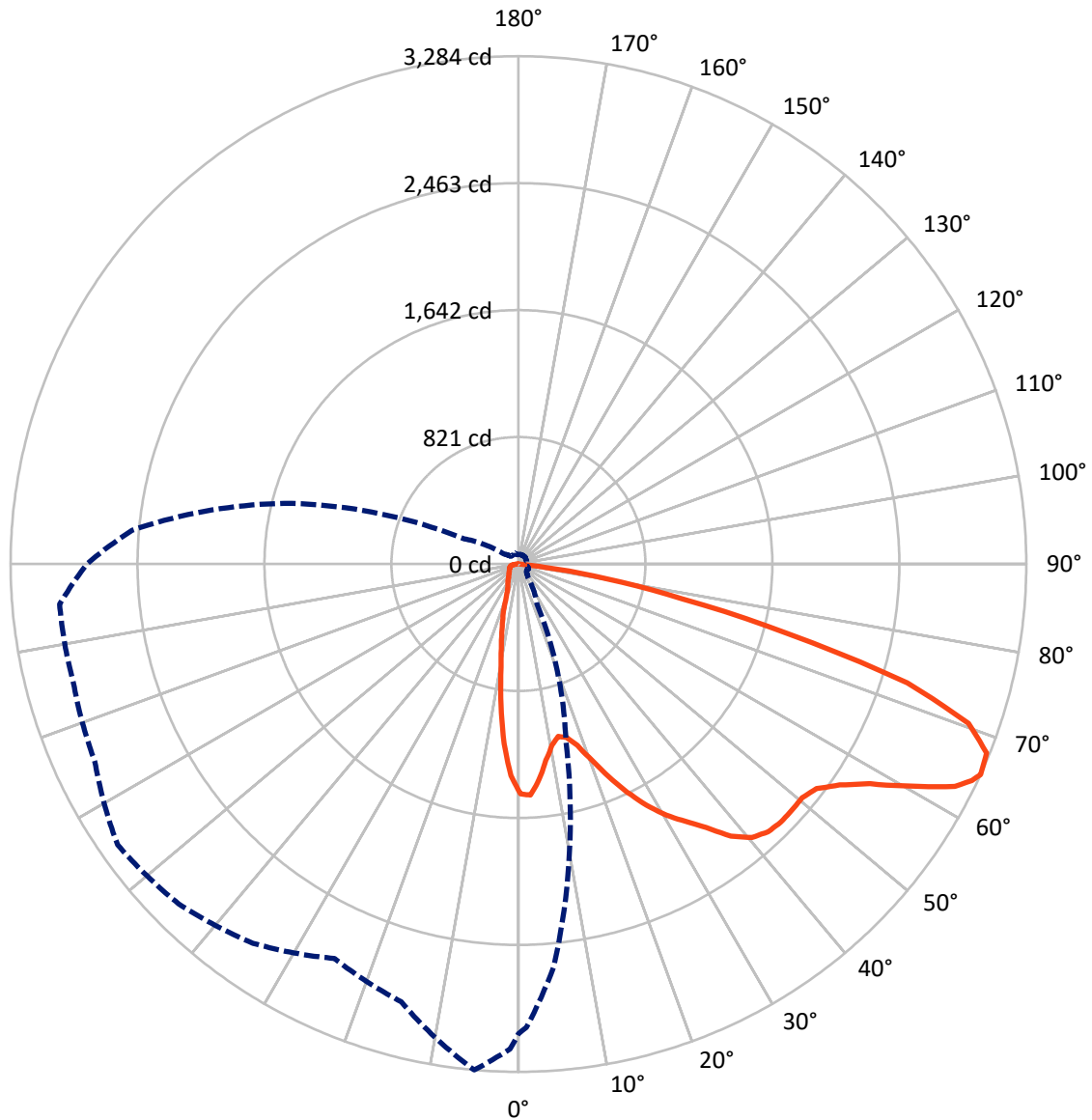


Based on 10 foot mounting height. Maximum calculated value = 14.9 fc
 Type IV - Short - Non-Cutoff

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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	856.6	0.0	856.6
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	3318.4	0.0	3318.4
	% Fixture	79.5	0.0	79.5
Total	Lumens	4175.0	0.0	4175.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.3	2.7
10°-20°	225.7	5.4
20°-30°	313.0	7.5
30°-40°	437.6	10.5
40°-50°	595.4	14.3
50°-60°	814.2	19.5
60°-70°	995.5	23.8
70°-80°	601.0	14.4
80°-90°	79.3	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°	4175.0	100.0
0°-180°	4175.0	100.0



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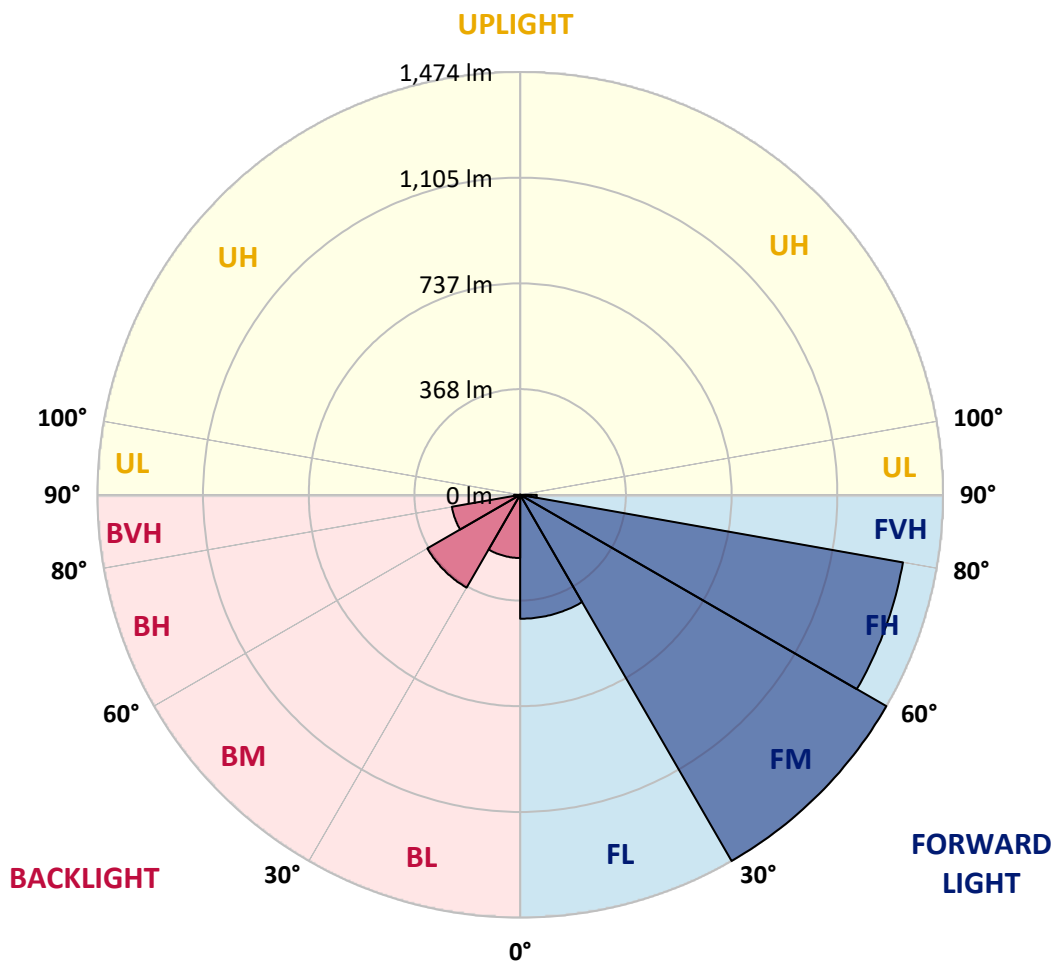
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	432.0	10.3			
FM	(30°-60°)	1473.7	35.3			
FH	(60°-80°)	1354.8	32.4			G1/1800
FVH	(80°-90°)	57.9	1.4			G1/100
BL	(0°-30°)	220.1	5.3	B1/500		
BM	(30°-60°)	373.4	8.9	B1/1000		
BH	(60°-80°)	241.8	5.8	B1/500		G1/500
BVH	(80°-90°)	21.3	0.5			G1/100
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°	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7
2.5°	1482.2	1478.0	1467.5	1439.6	1409.6	1374.0	1367.7	1329.3	1333.5	1322.3	1325.1
5°	1353.7	1348.1	1319.5	1263.7	1187.6	1143.6	1109.4	1089.1	1072.4	1064.0	1074.5
7.5°	1228.8	1221.1	1186.9	1088.4	1004.0	934.1	878.3	844.1	810.6	784.0	771.5
10°	1127.5	1124.7	1079.4	968.3	862.2	777.1	740.7	704.4	675.8	638.1	607.4
12.5°	1076.6	1068.2	1014.4	885.3	781.9	729.6	695.4	649.3	610.2	564.1	524.3
15°	1078.7	1068.9	1001.9	866.4	754.0	690.5	638.1	583.0	525.7	478.9	438.4
17.5°	1138.7	1131.7	1050.0	883.9	730.3	642.3	560.6	489.4	426.6	367.9	331.6
20°	1239.9	1229.5	1116.4	904.8	700.3	587.2	476.1	378.4	310.7	259.0	230.4
22.5°	1371.9	1352.3	1210.6	930.6	670.2	524.3	384.7	275.8	215.7	189.9	182.2
25°	1512.9	1497.5	1324.4	963.5	638.1	455.9	284.8	200.4	179.4	169.0	163.4
27.5°	1642.8	1617.6	1446.6	999.8	595.5	387.5	216.4	172.4	158.5	153.6	150.1
30°	1735.6	1714.0	1531.1	1041.7	558.5	316.3	185.0	156.4	145.2	137.5	136.1
32.5°	1824.3	1793.6	1592.5	1061.2	527.8	277.9	171.0	145.2	134.7	127.1	124.3
35°	1929.0	1898.3	1663.0	1064.0	504.8	261.8	157.8	136.8	125.7	118.7	115.2
37.5°	2052.6	2010.7	1742.6	1066.1	481.7	255.5	146.6	129.9	118.7	111.0	108.2
40°	2169.9	2137.8	1824.3	1062.6	466.4	246.4	139.6	122.2	111.7	104.7	101.2
42.5°	2258.5	2224.3	1894.1	1052.1	457.3	231.1	142.4	116.6	106.8	99.1	94.9
45°	2303.9	2273.2	1957.6	1042.4	452.4	217.8	139.6	114.5	103.3	94.3	90.1
47.5°	2338.1	2308.1	2022.6	1038.2	444.0	208.1	128.5	122.2	99.8	89.4	85.2
50°	2393.3	2367.5	2110.5	1061.9	430.8	201.8	118.0	130.6	98.4	85.2	80.3
52.5°	2492.4	2475.7	2255.7	1117.1	416.8	191.3	107.5	125.0	99.8	82.4	76.8
55°	2677.4	2667.0	2455.4	1189.7	403.5	178.0	96.3	113.1	99.1	77.5	73.3
57.5°	2877.1	2874.3	2697.7	1253.2	384.0	155.7	89.4	95.6	94.3	73.3	68.4
60°	3011.2	3002.1	2809.4	1288.8	358.9	128.5	83.8	81.0	96.3	69.1	63.5
62.5°	3057.2	3027.2	2775.9	1275.5	321.2	111.0	77.5	74.0	89.4	64.9	58.6
64°	3054.4	3010.5	2688.6	1225.3	296.7	107.5	74.0	69.1	78.9	62.1	56.6
65°	3038.4	2996.5	2616.0	1186.2	283.5	107.5	71.9	67.0	71.9	60.7	55.2
67.5°	2935.8	2880.6	2368.2	1004.6	249.2	108.9	67.0	61.4	60.0	55.9	51.7
70°	2701.9	2630.0	2028.2	790.3	231.1	109.6	61.4	55.9	53.8	51.0	47.5
72.5°	2169.9	2073.5	1614.1	564.8	212.2	107.5	55.9	51.0	48.9	46.1	42.6
75°	1455.0	1349.5	1189.7	372.1	173.8	96.3	48.2	44.0	43.3	40.5	37.7
77.5°	820.3	776.4	702.3	204.6	120.1	66.3	38.4	35.6	36.3	34.9	32.1
80°	428.7	408.4	375.6	99.1	57.9	32.1	24.4	24.4	27.9	27.9	26.5
82.5°	151.5	152.2	147.3	22.3	11.9	9.8	8.4	11.9	16.1	19.5	19.5
85°	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	4.9
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°	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7
2.5°	1301.4	1305.6	1316.7	1314.6	1325.8	1320.9	1335.6	1343.3	1347.4	1369.1	1379.6
5°	1066.1	1067.5	1107.3	1115.7	1136.6	1125.4	1151.3	1141.5	1162.4	1165.2	1200.1
7.5°	783.3	786.1	805.7	851.8	897.1	916.0	923.7	935.5	925.8	922.3	927.2
10°	595.5	597.6	599.7	632.5	672.3	712.1	712.1	712.8	695.4	677.9	674.4
12.5°	509.0	495.7	474.7	475.4	503.4	522.2	536.9	521.5	518.7	527.1	536.2
15°	418.9	405.6	391.7	374.9	375.6	388.9	396.6	395.9	409.8	416.1	435.0
17.5°	325.3	306.5	307.2	297.4	284.2	292.5	294.6	307.2	325.3	333.7	337.2
20°	218.5	218.5	224.1	236.0	229.7	235.3	236.0	245.8	254.1	249.2	254.1
22.5°	180.8	180.1	182.2	189.9	196.2	201.1	202.5	201.8	193.4	189.9	196.9
25°	164.1	163.4	164.1	168.3	175.2	181.5	178.7	174.5	164.8	164.1	165.5
27.5°	150.1	150.8	152.2	155.0	159.2	166.9	164.1	155.7	150.8	149.4	149.4
30°	138.2	138.2	141.0	143.8	148.7	155.7	150.8	143.8	138.9	137.5	136.8
32.5°	126.4	128.5	130.6	133.3	137.5	144.5	140.3	134.0	129.2	126.4	124.3
35°	114.5	115.9	120.1	124.3	127.8	133.3	130.6	125.0	120.1	113.8	111.0
37.5°	107.5	107.5	109.6	115.9	118.7	122.9	121.5	116.6	108.9	104.0	103.3
40°	101.2	101.2	101.9	105.4	110.3	115.2	112.4	104.7	99.8	97.7	97.0
42.5°	94.9	94.9	95.6	95.6	101.9	110.3	103.3	95.6	93.6	92.2	91.5
45°	89.4	89.4	89.4	88.7	92.2	102.6	94.9	88.7	87.3	87.3	86.6
47.5°	85.2	84.5	83.8	82.4	84.5	92.9	86.6	83.1	82.4	83.1	82.4
50°	79.6	78.9	78.2	77.5	78.9	82.4	81.0	77.5	78.2	78.2	78.9
52.5°	74.7	74.0	73.3	72.6	74.0	76.8	76.8	74.0	74.0	74.7	75.4
55°	71.9	70.5	69.8	69.8	70.5	74.0	73.3	71.2	71.2	72.6	73.3
57.5°	67.7	66.3	66.3	65.6	67.0	71.2	70.5	68.4	68.4	69.1	70.5
60°	63.5	62.8	62.1	63.5	64.2	68.4	67.7	66.3	65.6	67.7	67.7
62.5°	58.6	58.6	58.6	60.0	60.7	65.6	64.9	64.2	64.2	64.9	64.2
64°	55.9	55.9	56.6	57.2	58.6	62.8	62.8	62.8	62.8	62.8	62.1
65°	54.5	54.5	55.9	56.6	57.2	62.1	61.4	62.1	62.8	62.1	60.7
67.5°	51.0	51.0	53.1	53.1	53.8	59.3	58.6	60.0	61.4	60.0	58.6
70°	46.8	47.5	49.6	48.9	50.3	56.6	54.5	57.2	60.0	57.9	56.6
72.5°	42.6	43.3	46.1	44.7	45.4	53.1	50.3	53.1	57.2	55.9	54.5
75°	38.4	39.1	41.2	40.5	41.9	48.9	46.1	48.9	53.1	53.1	52.4
77.5°	32.8	34.2	35.6	34.9	37.7	44.0	41.2	43.3	46.8	49.6	48.2
80°	26.5	28.6	29.3	30.0	32.8	37.7	35.6	36.3	39.8	41.9	42.6
82.5°	18.2	21.6	23.0	23.7	27.9	29.3	30.0	29.3	31.4	34.2	32.1
85°	5.6	7.0	13.3	16.8	20.9	20.9	24.4	23.0	24.4	21.6	18.2
87.5°	0.0	0.0	0.0	4.9	12.6	12.6	17.5	16.1	16.8	12.6	11.2
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°	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7
2.5°	1381.7	1393.5	1420.1	1450.8	1467.5	1503.8	1526.2	1549.9	1573.6	1578.5	1586.2
5°	1207.1	1221.1	1251.1	1292.3	1333.5	1381.7	1437.5	1496.9	1562.5	1590.4	1617.6
7.5°	940.4	943.2	985.8	1060.5	1096.8	1165.2	1244.8	1336.3	1437.5	1489.9	1545.7
10°	694.7	723.3	755.4	817.5	909.0	987.9	1086.3	1193.2	1298.6	1374.7	1432.6
12.5°	546.0	582.3	635.3	703.7	772.9	847.6	961.4	1075.9	1205.7	1274.1	1345.4
15°	449.6	495.7	564.8	636.7	701.0	767.3	868.5	1008.8	1175.0	1244.8	1308.3
17.5°	356.1	407.0	481.0	556.4	633.2	714.2	831.5	1005.3	1207.8	1288.8	1354.4
20°	273.0	312.8	374.9	451.0	541.1	652.1	802.2	1031.9	1304.9	1406.1	1449.4
22.5°	202.5	225.5	274.4	354.0	460.1	596.9	772.9	1069.6	1424.9	1543.6	1576.4
25°	167.6	173.8	196.2	265.3	374.9	534.8	750.5	1118.4	1545.0	1678.4	1702.1
27.5°	150.8	154.3	164.8	190.6	293.2	483.8	721.2	1175.0	1671.4	1811.7	1809.6
30°	136.1	136.8	143.1	161.3	238.1	438.4	687.0	1237.8	1783.8	1907.4	1901.1
32.5°	122.9	122.9	131.3	145.2	203.2	397.3	645.8	1283.2	1881.5	1985.6	1965.3
35°	111.0	113.1	120.8	134.7	180.1	351.2	607.4	1300.0	1965.3	2079.8	2022.6
37.5°	102.6	105.4	113.1	126.4	160.6	317.0	576.0	1319.5	2068.6	2193.6	2086.8
40°	97.0	99.1	106.1	117.3	145.2	288.3	541.8	1332.8	2171.3	2315.1	2154.5
42.5°	91.5	93.6	100.5	111.0	138.2	254.8	509.0	1340.5	2278.1	2420.5	2211.1
45°	86.6	89.4	96.3	106.1	138.9	224.8	481.7	1337.7	2342.3	2496.6	2255.1
47.5°	83.1	85.9	93.6	106.1	134.7	207.4	458.7	1327.9	2389.8	2546.2	2275.3
50°	79.6	82.4	91.5	117.3	127.8	202.5	441.2	1326.5	2439.4	2556.0	2275.3
52.5°	76.1	81.0	92.2	118.0	117.3	200.4	427.3	1363.5	2507.8	2572.7	2295.5
55°	74.0	78.2	94.9	108.9	102.6	193.4	418.9	1414.5	2623.0	2664.9	2397.5
57.5°	71.2	74.7	93.6	101.9	91.5	177.3	411.9	1463.3	2774.5	2835.9	2600.6
60°	67.7	71.9	90.8	87.3	83.1	150.8	407.7	1503.8	2831.0	2946.2	2819.2
62.5°	64.2	69.1	99.1	76.1	76.8	125.7	400.0	1542.9	2711.6	2919.7	2959.5
64°	62.1	67.0	92.2	71.2	73.3	114.5	392.4	1545.0	2606.2	2856.9	2986.0
65°	60.7	64.9	85.9	68.4	70.5	111.7	385.4	1515.7	2507.1	2789.8	2978.3
67.5°	58.6	61.4	66.3	63.5	65.6	106.8	337.9	1386.5	2296.2	2617.4	2859.0
70°	55.9	57.9	58.6	57.9	61.4	103.3	285.5	1202.9	2065.9	2436.6	2673.2
72.5°	53.1	53.1	53.1	52.4	56.6	98.4	256.9	971.8	1785.2	2199.2	2442.2
75°	51.0	48.9	48.2	46.8	51.7	95.6	231.8	729.6	1379.6	1832.0	2046.3
77.5°	46.8	44.7	42.6	41.2	46.1	85.2	193.4	515.2	1017.2	1332.8	1579.2
80°	40.5	39.1	36.3	34.2	38.4	67.0	146.6	318.4	744.2	899.9	1036.1
82.5°	32.8	32.1	29.3	26.5	27.9	48.2	99.8	162.0	496.4	488.7	578.8
85°	20.2	25.1	21.6	17.5	18.9	27.9	40.5	51.7	152.2	91.5	141.7
87.5°	11.9	16.1	13.3	9.1	7.0	12.6	11.2	10.5	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°	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7	1485.7
2.5°	1604.4	1613.4	1618.3	1600.2	1580.6	1563.2	1529.7	1496.2	1478.7	1482.2
5°	1670.0	1685.4	1689.5	1663.0	1607.9	1551.3	1469.6	1399.1	1356.5	1353.7
7.5°	1644.9	1695.1	1703.5	1674.9	1596.0	1490.6	1379.6	1281.1	1238.5	1228.8
10°	1555.5	1632.3	1657.4	1647.7	1570.9	1450.1	1315.3	1190.4	1147.8	1127.5
12.5°	1464.0	1544.3	1559.7	1569.5	1522.7	1420.8	1272.7	1144.3	1093.3	1076.6
15°	1404.0	1459.2	1463.3	1472.4	1462.6	1406.8	1292.3	1163.1	1101.7	1078.7
17.5°	1395.6	1376.1	1362.8	1381.7	1393.5	1407.5	1343.3	1233.6	1168.0	1138.7
20°	1397.0	1336.3	1298.6	1297.2	1348.1	1425.6	1446.6	1352.3	1267.2	1239.9
22.5°	1448.0	1315.3	1252.5	1244.8	1307.0	1456.4	1552.0	1493.4	1408.2	1371.9
25°	1524.1	1302.8	1219.7	1221.8	1283.9	1476.6	1642.1	1634.4	1559.7	1512.9
27.5°	1597.4	1323.7	1215.5	1221.1	1291.6	1489.9	1716.8	1767.0	1683.3	1642.8
30°	1656.0	1370.5	1228.1	1232.9	1315.3	1508.0	1753.8	1885.0	1783.8	1735.6
32.5°	1707.0	1414.5	1246.9	1250.4	1353.0	1533.9	1788.7	1984.2	1881.5	1824.3
35°	1753.1	1452.2	1275.5	1287.4	1401.2	1570.9	1824.3	2091.7	2000.9	1929.0
37.5°	1793.6	1498.2	1332.1	1351.6	1471.7	1624.6	1870.4	2233.4	2134.3	2052.6
40°	1816.6	1539.4	1415.9	1445.2	1563.2	1694.4	1929.0	2325.6	2262.0	2169.9
42.5°	1834.1	1596.0	1550.6	1603.7	1704.9	1760.1	1956.9	2366.8	2337.4	2258.5
45°	1843.1	1707.7	1753.1	1802.6	1864.8	1832.0	1941.6	2380.7	2371.6	2303.9
47.5°	1884.3	1876.0	1987.7	2056.1	2052.6	1940.2	1912.3	2379.3	2394.0	2338.1
50°	1968.1	2072.1	2228.5	2295.5	2269.7	2041.4	1906.7	2377.2	2438.7	2393.3
52.5°	2067.9	2268.3	2488.9	2516.9	2462.4	2144.0	1948.6	2413.5	2522.4	2492.4
55°	2199.2	2452.6	2693.5	2702.6	2625.8	2243.9	2037.9	2520.4	2678.8	2677.4
57.5°	2382.1	2618.1	2865.2	2854.1	2745.9	2382.1	2181.7	2680.2	2852.7	2877.1
60°	2581.1	2792.6	3004.2	2997.9	2882.7	2541.3	2379.3	2916.9	3004.9	3011.2
62.5°	2771.7	2954.6	3138.2	3108.2	2978.3	2706.1	2653.0	3168.2	3104.0	3057.2
64°	2896.0	3009.1	3172.4	3125.0	3001.4	2785.0	2810.8	3249.9	3131.9	3054.4
65°	2978.3	3022.3	3164.8	3107.5	2993.7	2814.3	2930.2	3284.1	3136.8	3038.4
67.5°	3126.4	2946.2	2956.7	2911.3	2809.4	2787.0	3125.7	3265.3	3083.1	2935.8
70°	3085.2	2639.7	2495.9	2467.3	2345.1	2470.8	3101.2	3088.0	2881.3	2701.9
72.5°	2733.3	2119.6	1913.0	1887.1	1717.5	1872.5	2676.0	2630.0	2318.6	2169.9
75°	2252.3	1606.5	1366.3	1387.9	1258.8	1401.9	2128.7	1801.9	1543.6	1455.0
77.5°	1748.2	1135.2	943.9	918.1	892.2	907.6	1463.3	1082.1	902.0	820.3
80°	1114.3	713.5	707.9	647.2	626.2	527.8	751.9	576.0	453.1	428.7
82.5°	592.0	411.2	467.1	374.2	300.9	216.4	254.8	171.0	144.5	151.5
85°	162.0	85.2	23.7	0.0	0.0	0.0	0.0	0.7	0.7	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	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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