

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: P401475

Luminaire Tested: **ENV-SA1D-735-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401475
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-SA1D-735-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 800mA 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: 3988 lumens
Efficiency: N/A
Efficacy: 92.5 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): 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

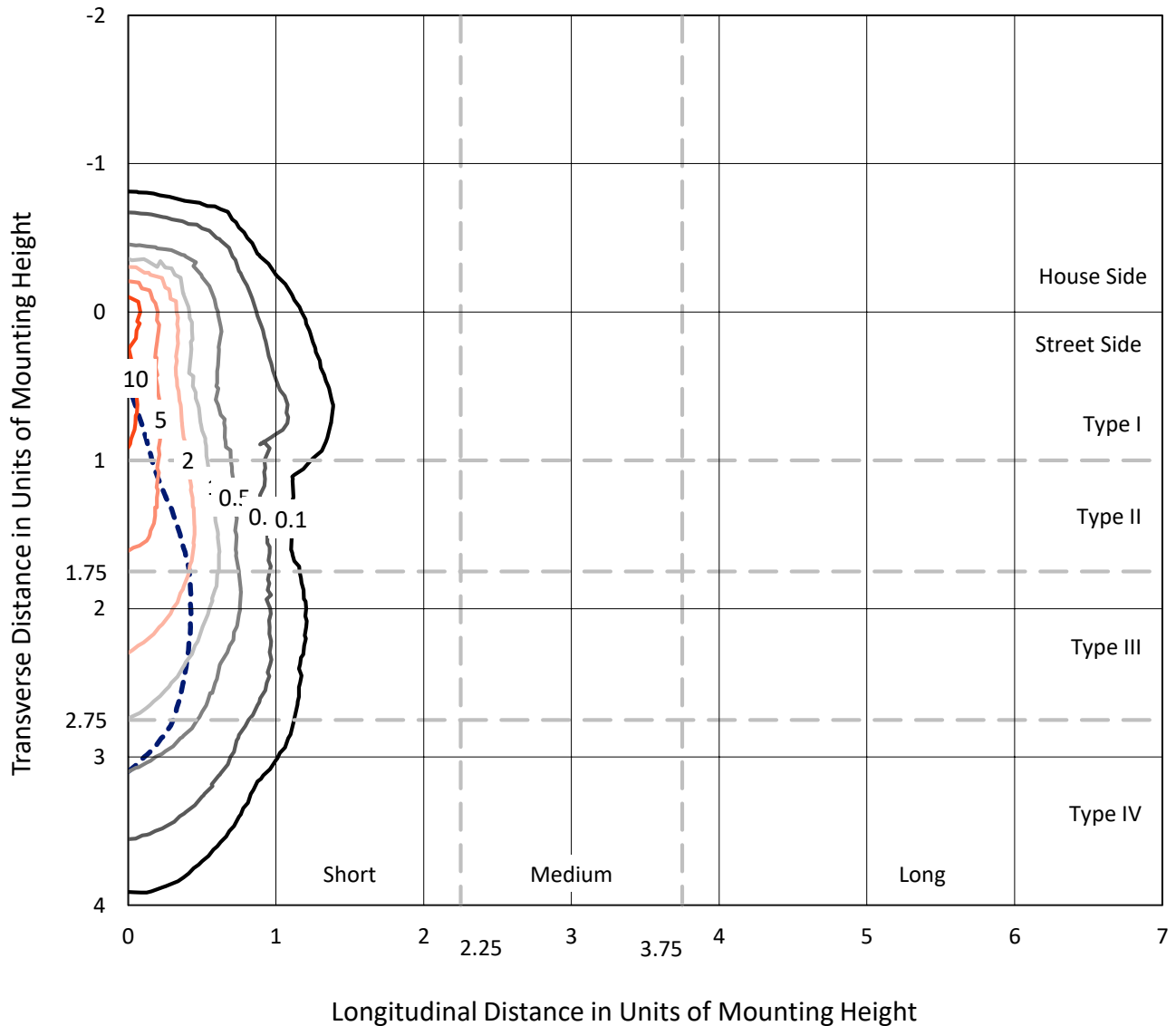


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

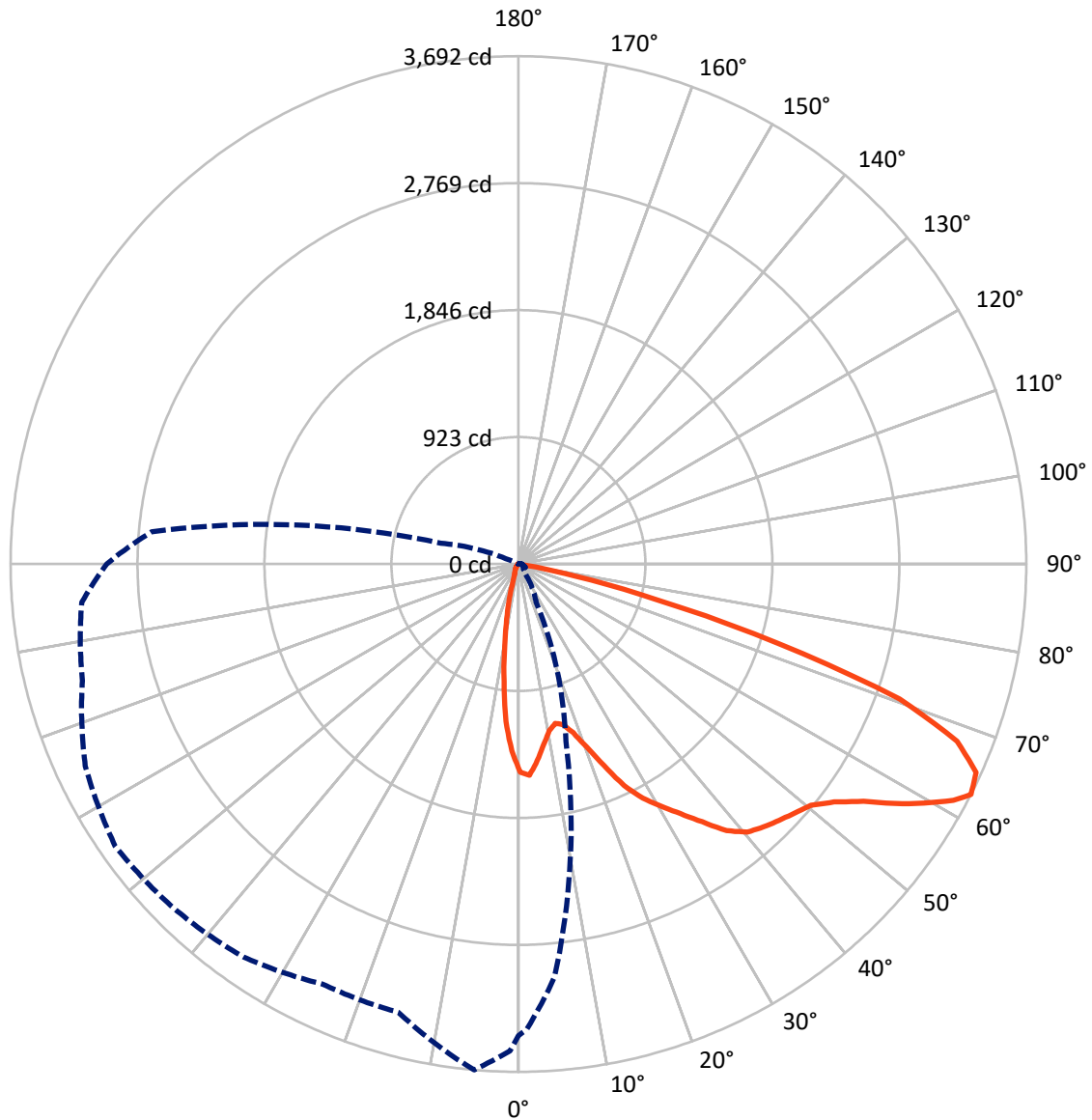


Based on 10 foot mounting height. Maximum calculated value = 15.1 fc
 Type IV - Short - Semi-Cutoff

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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	561.0	0.0	561.0
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	3427.0	0.0	3427.0
	% Fixture	85.9	0.0	85.9
Total	Lumens	3988.0	0.0	3988.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	2.8
10°-20°	215.6	5.4
20°-30°	300.0	7.5
30°-40°	433.9	10.9
40°-50°	622.2	15.6
50°-60°	902.6	22.6
60°-70°	976.6	24.5
70°-80°	394.4	9.9
80°-90°	29.2	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°	3988.0	100.0
0°-180°	3988.0	100.0



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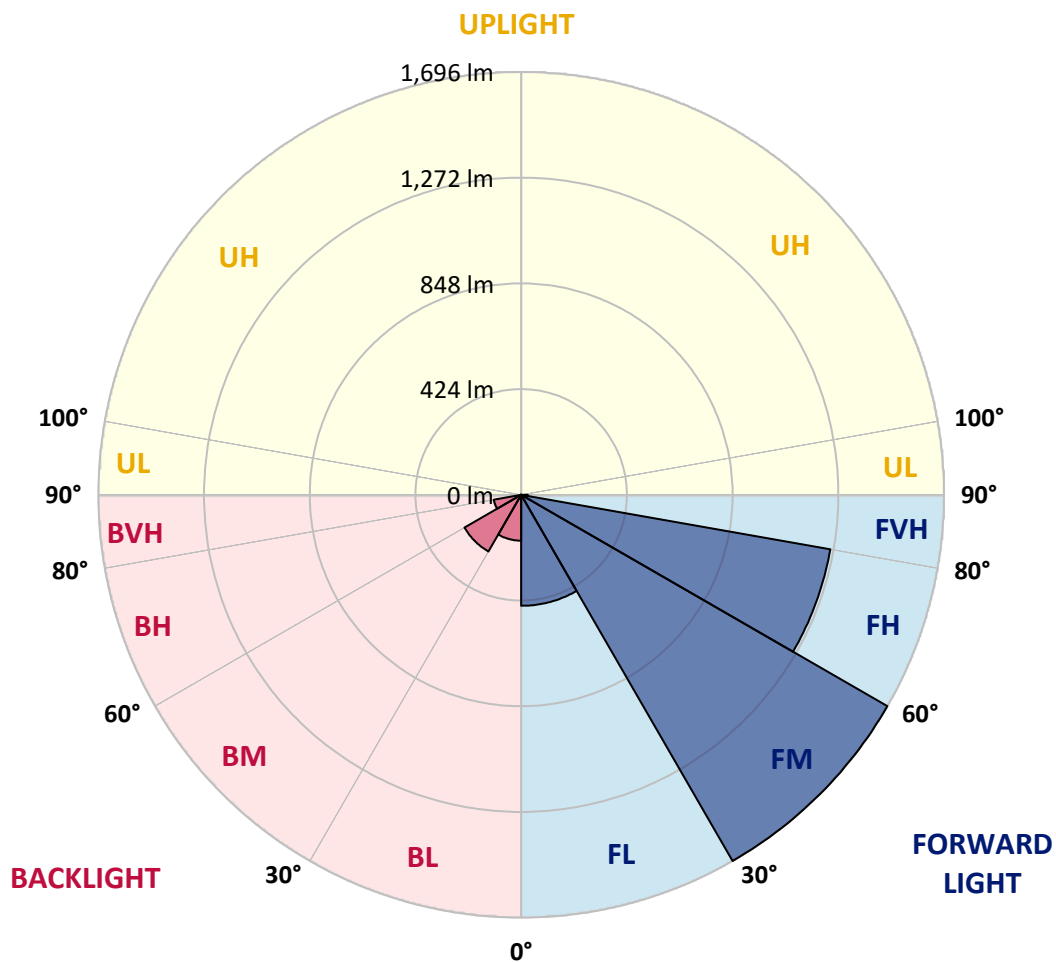
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	445.2	11.2			
FM	(30°-60°)	1696.2	42.5			
FH	(60°-80°)	1259.4	31.6			G1/1800
FVH	(80°-90°)	26.2	0.7			G1/100
BL	(0°-30°)	183.9	4.6	B1/500		
BM	(30°-60°)	262.5	6.6	B1/1000		
BH	(60°-80°)	111.6	2.8	B1/500		G1/500
BVH	(80°-90°)	3.0	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°	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7
2.5°	1519.0	1512.7	1498.5	1467.8	1423.6	1395.2	1377.0	1353.3	1328.9	1321.0	1305.2
5°	1386.5	1376.2	1356.5	1279.2	1209.7	1140.3	1090.6	1043.2	1027.4	995.9	1014.8
7.5°	1258.6	1253.9	1208.1	1107.9	997.4	908.3	851.5	782.0	761.5	729.1	703.1
10°	1158.4	1154.5	1099.2	968.2	849.1	774.9	729.9	685.0	640.0	594.2	557.9
12.5°	1107.9	1099.2	1035.3	894.1	783.6	722.0	674.7	614.7	566.6	505.0	460.8
15°	1115.8	1107.9	1034.5	882.2	752.0	666.8	596.6	525.5	457.7	396.9	353.5
17.5°	1178.9	1175.8	1086.6	892.5	714.1	601.3	507.4	411.9	331.4	265.9	228.8
20°	1302.0	1292.6	1163.2	914.6	674.7	525.5	396.9	279.3	212.3	167.3	151.5
22.5°	1454.3	1433.0	1283.9	946.9	636.8	444.3	287.2	187.8	151.5	134.1	123.1
25°	1633.5	1634.3	1433.8	990.3	598.9	368.5	201.2	149.1	127.8	115.2	105.7
27.5°	1778.7	1767.6	1568.8	1033.7	557.9	302.2	168.9	130.2	112.1	98.6	93.1
30°	1886.0	1869.4	1657.9	1063.7	505.0	255.7	151.5	123.9	105.7	90.7	83.6
32.5°	1996.5	1975.9	1738.4	1080.3	473.5	233.6	134.1	108.1	94.7	88.4	78.9
35°	2125.9	2107.7	1827.6	1078.7	456.9	221.0	121.5	97.9	80.5	70.2	63.9
37.5°	2270.3	2233.2	1919.9	1071.6	445.1	214.6	110.5	90.7	75.0	63.9	56.0
40°	2394.2	2357.1	2005.1	1062.1	437.2	208.3	104.2	86.0	71.0	59.2	51.3
42.5°	2491.2	2455.7	2084.8	1050.3	433.2	194.9	107.3	82.9	67.9	56.0	47.3
45°	2574.9	2538.6	2179.5	1048.7	431.6	185.4	105.7	82.1	66.3	52.1	44.2
47.5°	2671.9	2653.0	2304.2	1074.8	425.3	178.3	97.1	88.4	65.5	50.5	41.8
50°	2815.6	2799.0	2467.6	1152.1	415.9	171.2	88.4	97.1	65.5	48.9	39.5
52.5°	3016.8	2997.8	2724.8	1253.1	407.2	163.3	79.7	93.9	66.3	46.6	37.9
55°	3225.1	3222.0	2967.9	1360.4	399.3	146.0	70.2	84.4	64.7	43.4	35.5
57.5°	3388.5	3386.1	3150.1	1433.0	384.3	117.6	63.9	70.2	60.0	39.5	32.4
60°	3455.5	3435.8	3169.9	1433.0	349.6	97.1	58.4	55.2	60.8	35.5	28.4
61°	3455.5	3430.3	3134.4	1411.7	332.2	92.3	55.2	51.3	62.3	33.9	26.8
62.5°	3428.7	3386.9	3012.8	1335.2	304.6	92.3	50.5	45.8	56.8	32.4	24.5
65°	3309.5	3240.9	2728.0	1160.8	276.2	94.7	43.4	38.7	41.0	27.6	21.3
67.5°	3015.2	2937.9	2358.7	918.5	253.3	100.2	36.3	33.9	31.6	24.5	18.9
70°	2484.1	2418.6	1924.6	688.1	235.2	101.8	31.6	28.4	26.8	21.3	16.6
72.5°	1587.7	1479.6	1201.8	466.4	188.6	88.4	26.0	26.8	24.5	17.4	13.4
75°	767.0	797.0	699.2	235.2	127.0	57.6	20.5	22.1	19.7	15.8	11.8
77.5°	343.3	337.0	333.8	60.0	32.4	19.7	12.6	15.0	15.8	14.2	10.3
80°	35.5	48.1	28.4	18.1	11.8	8.7	7.1	7.9	9.5	10.3	5.5
82.5°	1.6	0.8	0.8	2.4	2.4	1.6	0.0	0.0	1.6	1.6	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°	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7
2.5°	1291.0	1312.3	1302.8	1300.5	1313.1	1306.8	1325.7	1326.5	1340.7	1359.6	1371.5
5°	1014.8	998.2	1031.4	1053.5	1081.1	1072.4	1105.5	1101.6	1119.8	1149.7	1137.9
7.5°	704.7	707.0	724.4	744.1	818.3	833.3	844.4	853.0	852.2	859.3	872.0
10°	539.0	525.5	513.7	541.3	570.5	602.9	607.6	619.5	587.1	600.5	606.8
12.5°	441.1	425.3	399.3	385.1	392.2	411.1	419.0	426.1	407.2	408.0	422.2
15°	334.6	313.3	303.0	284.1	277.0	275.4	279.3	269.1	266.7	258.0	263.6
17.5°	217.8	211.5	206.0	202.0	196.5	194.9	180.7	156.2	142.0	138.9	138.9
20°	145.2	140.5	140.5	148.4	146.0	139.7	120.7	100.2	90.0	86.8	88.4
22.5°	119.2	116.0	111.3	111.3	114.4	109.7	92.3	77.3	70.2	70.2	70.2
25°	103.4	101.8	97.1	92.3	93.9	90.0	75.0	65.5	60.8	60.0	60.8
27.5°	90.7	90.0	84.4	79.7	79.7	76.5	64.7	56.0	52.9	51.3	52.1
30°	82.1	80.5	74.2	70.2	69.4	66.3	55.2	48.9	45.8	45.0	45.0
32.5°	75.8	72.6	67.1	63.1	60.8	56.0	48.1	41.8	38.7	37.9	37.9
35°	60.8	60.8	58.4	56.0	52.9	45.8	40.2	34.7	31.6	30.8	30.8
37.5°	52.9	49.7	45.8	46.6	45.0	38.7	33.1	27.6	25.3	24.5	24.5
40°	48.1	44.2	38.7	36.3	37.1	33.9	27.6	21.3	18.1	18.9	18.1
42.5°	43.4	40.2	33.9	28.4	27.6	28.4	21.3	15.0	12.6	12.6	12.6
45°	40.2	37.1	30.0	23.7	19.7	22.1	16.6	10.3	7.9	7.9	7.9
47.5°	37.9	34.7	26.8	19.7	14.2	15.0	11.8	6.3	4.7	3.2	3.9
50°	36.3	32.4	24.5	15.8	10.3	8.7	7.9	3.2	0.8	0.8	0.0
52.5°	33.9	30.8	22.1	13.4	7.9	5.5	3.9	0.8	0.0	0.0	0.0
55°	32.4	28.4	19.7	11.8	6.3	3.2	0.8	0.0	0.0	0.0	0.0
57.5°	29.2	26.0	17.4	9.5	4.7	1.6	0.0	0.0	0.0	0.0	0.0
60°	26.0	23.7	15.0	7.1	3.2	0.0	0.0	0.0	0.0	0.0	0.0
61°	24.5	22.1	14.2	6.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	22.9	20.5	12.6	4.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0
65°	19.7	17.4	11.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	17.4	15.8	9.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	15.0	13.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	12.6	11.8	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	11.0	9.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	8.7	7.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.7	3.9	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°	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7
2.5°	1382.5	1410.1	1436.2	1469.3	1487.5	1537.2	1572.7	1602.7	1626.4	1631.1	1650.0
5°	1169.5	1208.1	1233.4	1302.8	1341.5	1424.4	1488.3	1564.0	1631.9	1669.0	1702.9
7.5°	880.7	899.6	943.0	1012.4	1104.0	1175.8	1283.9	1379.4	1501.7	1568.8	1631.9
10°	621.8	639.2	703.1	775.7	859.3	980.1	1111.1	1236.5	1360.4	1446.4	1520.6
12.5°	437.2	494.0	557.1	649.4	731.5	819.9	959.6	1106.3	1261.0	1343.1	1423.6
15°	287.2	337.7	425.3	541.3	643.9	729.9	860.1	1032.2	1228.7	1320.2	1396.7
17.5°	142.0	179.1	256.5	381.1	517.7	653.4	810.4	1018.7	1270.5	1373.8	1445.7
20°	89.2	100.2	128.6	215.4	372.5	572.9	773.3	1045.6	1384.1	1498.5	1545.1
22.5°	71.8	75.0	86.0	114.4	227.3	473.5	741.0	1081.9	1508.8	1648.5	1696.6
25°	61.6	63.9	70.2	84.4	131.8	355.1	701.5	1145.8	1654.0	1822.9	1834.7
27.5°	52.9	55.2	60.8	71.8	93.9	239.1	644.7	1220.8	1827.6	1975.9	1968.1
30°	45.0	48.1	53.7	61.6	74.2	161.8	539.0	1296.5	1955.4	2074.6	2062.0
32.5°	38.7	41.0	45.8	52.9	61.6	111.3	404.8	1346.2	2062.0	2167.7	2140.1
35°	31.6	33.9	37.9	44.2	49.7	78.9	306.2	1347.8	2171.6	2282.9	2213.5
37.5°	25.3	26.8	30.8	36.3	41.0	61.6	224.9	1321.8	2307.4	2432.8	2297.1
40°	18.9	21.3	25.3	30.0	34.7	52.1	168.1	1258.6	2439.9	2582.8	2398.1
42.5°	12.6	15.8	19.7	24.5	33.1	41.8	118.4	1153.7	2547.3	2716.1	2496.8
45°	7.9	10.3	15.0	20.5	33.9	33.1	78.9	1028.2	2623.8	2817.9	2563.8
47.5°	3.9	6.3	11.0	19.7	30.0	24.5	48.9	908.3	2693.2	2877.1	2594.6
50°	0.8	2.4	7.9	24.5	25.3	18.1	32.4	833.3	2729.5	2862.1	2591.5
52.5°	0.0	0.0	5.5	23.7	18.1	14.2	25.3	822.3	2786.4	2881.8	2645.9
55°	0.0	0.0	2.4	10.3	10.3	11.8	22.1	807.3	2887.4	2999.4	2810.0
57.5°	0.0	0.0	0.0	4.7	6.3	9.5	20.5	767.8	2993.9	3124.1	3009.7
60°	0.0	0.0	0.0	2.4	3.9	7.9	18.1	677.8	2896.0	3124.9	3175.4
61°	0.0	0.0	0.0	2.4	3.2	7.1	16.6	646.3	2808.5	3074.4	3195.9
62.5°	0.0	0.0	0.0	0.8	2.4	5.5	14.2	583.9	2677.5	2993.1	3186.4
65°	0.0	0.0	0.0	0.0	0.8	3.2	11.0	471.9	2458.9	2788.7	3077.5
67.5°	0.0	0.0	0.0	0.0	0.0	0.8	7.1	332.2	2144.8	2557.5	2844.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.2	192.5	1728.2	2165.3	2436.8
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	87.6	1121.3	1672.1	1922.3
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.1	690.5	1208.1	1436.2
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	467.9	804.1	966.7
80°	0.0	1.6	0.8	0.0	0.0	0.0	0.0	6.3	288.0	501.9	545.3
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	149.1	354.3	361.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.3	75.0
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7	1512.7
2.5°	1667.4	1672.1	1675.3	1669.8	1635.8	1616.9	1579.0	1537.2	1523.0	1519.0
5°	1764.5	1791.3	1786.6	1750.3	1691.1	1618.5	1528.5	1435.4	1399.9	1386.5
7.5°	1745.5	1815.8	1829.2	1791.3	1691.1	1564.0	1433.8	1323.3	1272.1	1258.6
10°	1649.2	1737.6	1780.2	1768.4	1674.5	1527.7	1367.5	1231.8	1175.8	1158.4
12.5°	1556.1	1641.4	1668.2	1677.7	1626.4	1499.3	1334.4	1188.4	1130.0	1107.9
15°	1493.8	1546.7	1545.1	1562.4	1558.5	1488.3	1355.7	1210.5	1145.0	1115.8
17.5°	1473.3	1457.5	1437.0	1451.2	1478.8	1491.4	1425.1	1289.4	1212.9	1178.9
20°	1485.9	1408.6	1363.6	1362.8	1421.2	1517.5	1526.9	1419.6	1347.8	1302.0
22.5°	1550.6	1384.1	1314.7	1316.2	1388.1	1556.1	1644.5	1590.1	1511.2	1454.3
25°	1646.1	1388.8	1295.7	1305.2	1384.9	1590.1	1771.6	1784.2	1683.2	1633.5
27.5°	1743.2	1429.9	1296.5	1306.8	1398.3	1608.2	1844.2	1927.0	1840.2	1778.7
30°	1811.0	1480.4	1310.7	1321.8	1419.6	1622.4	1871.8	2044.6	1954.6	1886.0
32.5°	1874.9	1532.5	1333.6	1344.7	1462.2	1651.6	1923.9	2163.0	2064.3	1996.5
35°	1937.3	1583.8	1376.2	1395.9	1530.9	1704.5	1976.7	2301.8	2219.8	2125.9
37.5°	1990.9	1640.6	1449.6	1491.4	1624.0	1785.8	2048.5	2459.7	2375.2	2270.3
40°	2035.9	1707.6	1601.1	1647.7	1766.0	1871.8	2128.2	2563.0	2507.0	2394.2
42.5°	2072.2	1826.0	1818.1	1883.6	1966.5	1970.4	2151.1	2612.8	2591.5	2491.2
45°	2133.0	2038.3	2103.0	2210.3	2204.8	2088.8	2144.8	2658.5	2660.1	2574.9
47.5°	2232.4	2304.2	2491.2	2563.8	2526.7	2250.6	2151.1	2703.5	2739.0	2671.9
50°	2374.4	2605.7	2850.3	2946.6	2838.4	2413.1	2207.2	2757.2	2864.5	2815.6
52.5°	2496.0	2833.7	3181.7	3267.7	3120.2	2586.7	2338.1	2873.2	3032.6	3016.8
55°	2669.6	3030.2	3417.7	3483.9	3365.6	2783.2	2514.1	3043.6	3217.2	3225.1
57.5°	2847.1	3207.7	3571.5	3638.6	3548.6	3027.8	2764.3	3288.2	3390.8	3388.5
60°	3044.4	3373.5	3641.0	3678.1	3626.8	3272.5	3033.4	3512.3	3510.0	3455.5
61°	3157.2	3426.3	3636.2	3647.3	3597.6	3344.3	3172.2	3598.4	3527.3	3455.5
62.5°	3281.9	3474.5	3577.8	3540.8	3487.1	3369.5	3373.5	3692.3	3539.2	3428.7
65°	3408.2	3353.7	3308.8	3131.2	3080.7	3137.5	3543.1	3656.8	3467.4	3309.5
67.5°	3192.0	2874.0	2776.9	2598.6	2398.9	2630.9	3382.1	3439.7	3225.1	3015.2
70°	2608.8	2111.7	1996.5	1990.1	1846.5	2101.4	2982.9	2941.0	2676.7	2484.1
72.5°	2044.6	1440.9	1283.9	1320.2	1291.8	1566.4	2439.9	1973.6	1716.3	1587.7
75°	1602.7	1024.3	883.8	877.5	846.7	1066.9	1786.6	1040.1	858.6	767.0
77.5°	1057.4	737.8	735.5	679.4	655.8	578.4	801.7	416.7	340.1	343.3
80°	609.2	452.2	530.3	420.6	421.4	339.3	324.3	60.8	48.9	35.5
82.5°	349.6	217.0	164.1	64.7	135.7	135.7	26.0	0.8	0.8	1.6
85°	33.9	10.3	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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