

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: P401619

Luminaire Tested: **ENV-SA1E-727-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401619
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-SA1E-727-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 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: 4423 lumens
Efficiency: N/A
Efficacy: 77.3 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

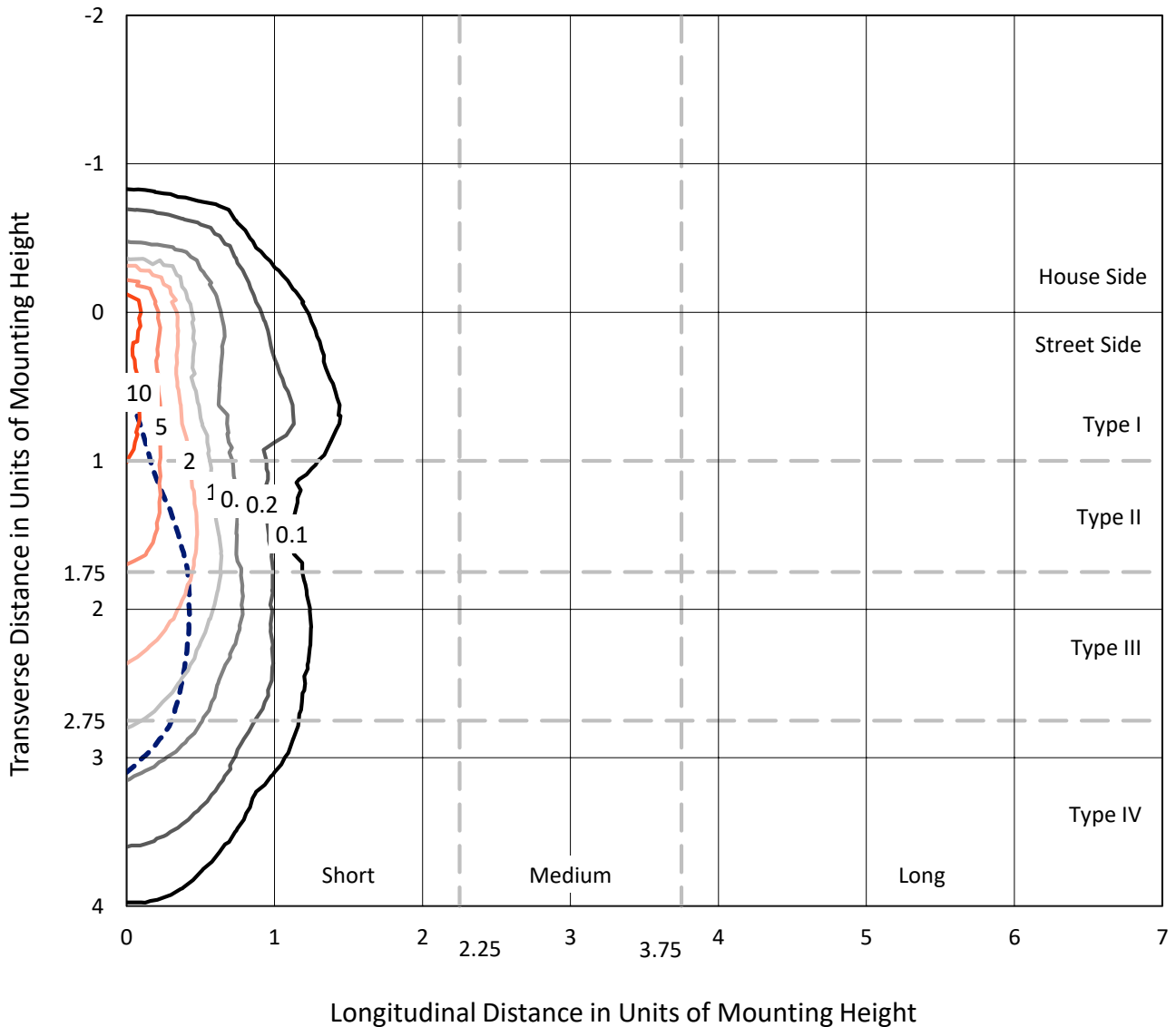


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Iso-Footcandle Lines of Horizontal Illumination

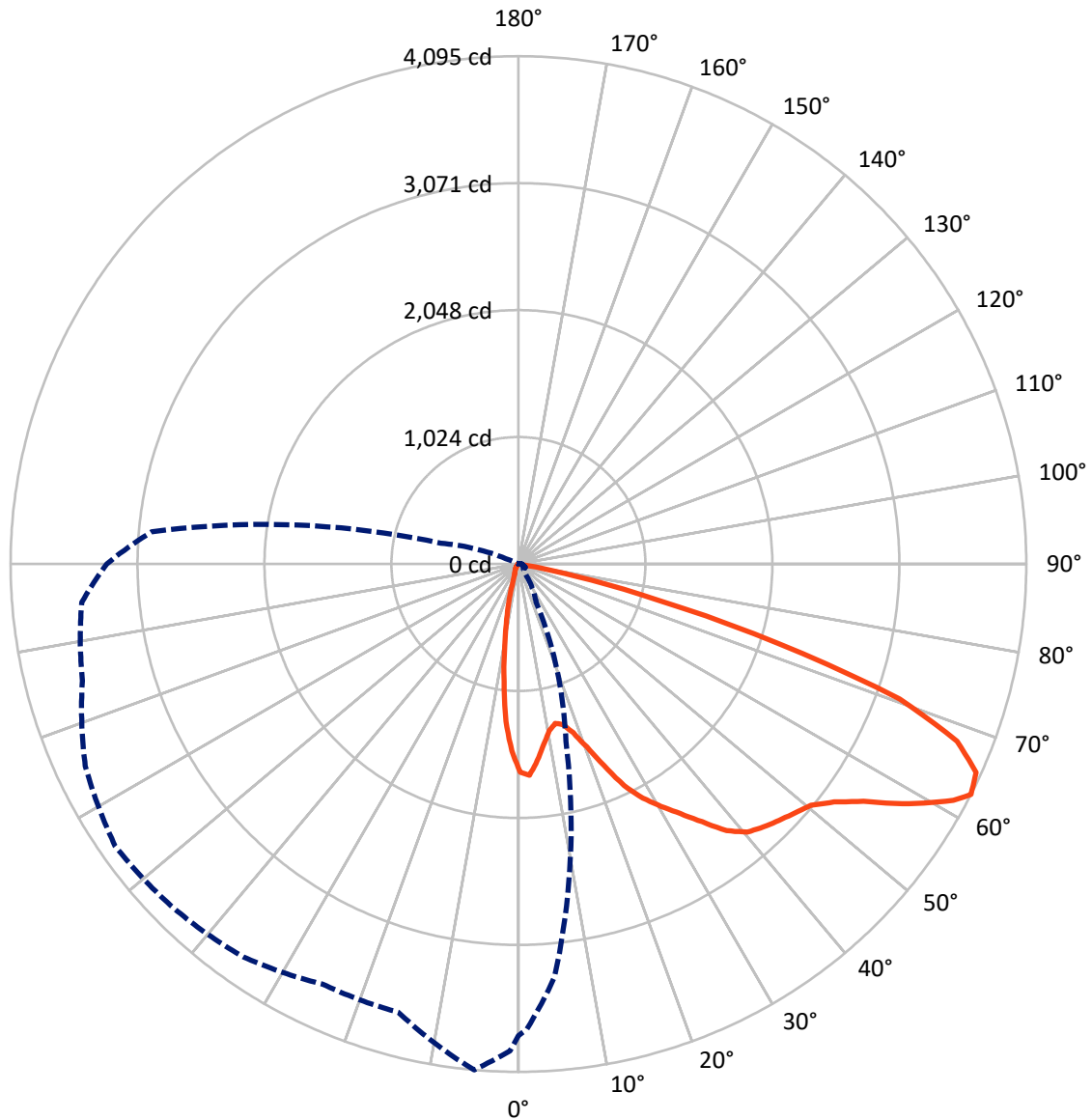
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.8 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	622.2	0.0	622.2
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	3800.8	0.0	3800.8
	% Fixture	85.9	0.0	85.9
Total	Lumens	4423.0	0.0	4423.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.8	2.8
10°-20°	239.1	5.4
20°-30°	332.8	7.5
30°-40°	481.2	10.9
40°-50°	690.0	15.6
50°-60°	1001.1	22.6
60°-70°	1083.1	24.5
70°-80°	437.4	9.9
80°-90°	32.4	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°	4423.0	100.0
0°-180°	4423.0	100.0

Coefficient of Utilization



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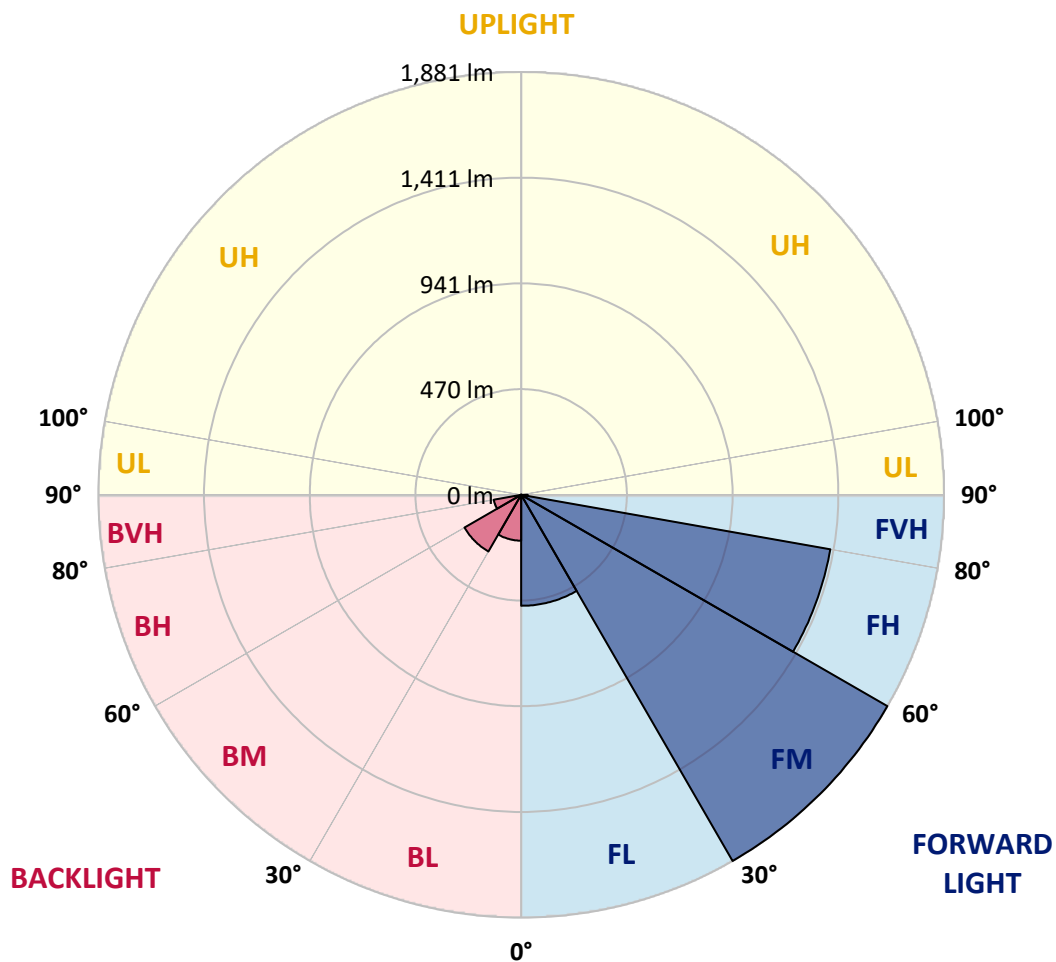
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	493.8	11.2			
FM	(30°-60°)	1881.2	42.5			
FH	(60°-80°)	1396.8	31.6			G1/1800
FVH	(80°-90°)	29.1	0.7			G1/100
BL	(0°-30°)	204.0	4.6	B1/500		
BM	(30°-60°)	291.1	6.6	B1/1000		
BH	(60°-80°)	123.7	2.8	B1/500		G1/500
BVH	(80°-90°)	3.3	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°	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7
2.5°	1684.7	1677.7	1662.0	1627.9	1578.8	1547.3	1527.2	1500.9	1473.8	1465.1	1447.6
5°	1537.7	1526.3	1504.4	1418.7	1341.7	1264.6	1209.5	1157.0	1139.5	1104.5	1125.5
7.5°	1395.9	1390.7	1339.9	1228.8	1106.2	1007.3	944.3	867.3	844.6	808.7	779.8
10°	1284.8	1280.4	1219.1	1073.9	941.7	859.4	809.5	759.7	709.8	659.0	618.8
12.5°	1228.8	1219.1	1148.2	991.6	869.1	800.8	748.3	681.8	628.4	560.1	511.1
15°	1237.5	1228.8	1147.4	978.5	834.1	739.5	661.6	582.9	507.6	440.2	392.1
17.5°	1307.5	1304.0	1205.1	989.8	792.0	666.9	562.7	456.8	367.6	294.9	253.8
20°	1444.1	1433.6	1290.0	1014.3	748.3	582.9	440.2	309.8	235.4	185.5	168.0
22.5°	1613.0	1589.3	1423.9	1050.2	706.3	492.7	318.6	208.3	168.0	148.8	136.5
25°	1811.6	1812.5	1590.2	1098.4	664.3	408.7	223.2	165.4	141.8	127.8	117.3
27.5°	1972.7	1960.4	1739.9	1146.5	618.8	335.2	187.3	144.4	124.3	109.4	103.3
30°	2091.7	2073.3	1838.8	1179.8	560.1	283.6	168.0	137.4	117.3	100.6	92.8
32.5°	2214.2	2191.5	1928.0	1198.1	525.1	259.1	148.8	119.9	105.0	98.0	87.5
35°	2357.8	2337.6	2026.9	1196.4	506.7	245.1	134.8	108.5	89.3	77.9	70.9
37.5°	2517.9	2476.8	2129.3	1188.5	493.6	238.1	122.5	100.6	83.1	70.9	62.1
40°	2655.3	2614.2	2223.9	1178.0	484.9	231.0	115.5	95.4	78.8	65.6	56.9
42.5°	2763.0	2723.6	2312.2	1164.9	480.5	216.2	119.0	91.9	75.3	62.1	52.5
45°	2855.7	2815.5	2417.3	1163.1	478.7	205.7	117.3	91.0	73.5	57.8	49.0
47.5°	2963.4	2942.4	2555.6	1192.0	471.7	197.8	107.6	98.0	72.6	56.0	46.4
50°	3122.7	3104.3	2736.7	1277.8	461.2	189.9	98.0	107.6	72.6	54.3	43.8
52.5°	3345.8	3324.8	3022.0	1389.8	451.6	181.2	88.4	104.1	73.5	51.6	42.0
55°	3576.9	3573.4	3291.6	1508.8	442.8	161.9	77.9	93.6	71.8	48.1	39.4
57.5°	3758.1	3755.4	3493.8	1589.3	426.2	130.4	70.9	77.9	66.5	43.8	35.9
60°	3832.5	3810.6	3515.6	1589.3	387.7	107.6	64.8	61.3	67.4	39.4	31.5
61°	3832.5	3804.4	3476.2	1565.7	368.5	102.4	61.3	56.9	69.1	37.6	29.8
62.5°	3802.7	3756.3	3341.5	1480.8	337.8	102.4	56.0	50.8	63.0	35.9	27.1
65°	3670.5	3594.4	3025.5	1287.4	306.3	105.0	48.1	42.9	45.5	30.6	23.6
67.5°	3344.1	3258.3	2615.9	1018.7	280.9	111.1	40.3	37.6	35.0	27.1	21.0
70°	2755.1	2682.5	2134.6	763.2	260.8	112.9	35.0	31.5	29.8	23.6	18.4
72.5°	1760.9	1641.0	1332.9	517.2	209.2	98.0	28.9	29.8	27.1	19.3	14.9
75°	850.7	883.9	775.4	260.8	140.9	63.9	22.8	24.5	21.9	17.5	13.1
77.5°	380.7	373.7	370.2	66.5	35.9	21.9	14.0	16.6	17.5	15.8	11.4
80°	39.4	53.4	31.5	20.1	13.1	9.6	7.9	8.8	10.5	11.4	6.1
82.5°	1.8	0.9	0.9	2.6	2.6	1.8	0.0	0.0	1.8	1.8	0.9
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°	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7
2.5°	1431.8	1455.4	1444.9	1442.3	1456.3	1449.3	1470.3	1471.2	1486.9	1507.9	1521.1
5°	1125.5	1107.1	1143.9	1168.4	1199.0	1189.4	1226.1	1221.8	1241.9	1275.1	1262.0
7.5°	781.5	784.2	803.4	825.3	907.6	924.2	936.5	946.1	945.2	953.1	967.1
10°	597.8	582.9	569.7	600.4	632.8	668.6	673.9	687.0	651.1	666.0	673.0
12.5°	489.2	471.7	442.8	427.1	435.0	456.0	464.7	472.6	451.6	452.5	468.2
15°	371.1	347.4	336.1	315.1	307.2	305.4	309.8	298.4	295.8	286.2	292.3
17.5°	241.6	234.6	228.4	224.0	217.9	216.2	200.4	173.3	157.5	154.0	154.0
20°	161.0	155.8	155.8	164.5	161.9	154.9	133.9	111.1	99.8	96.3	98.0
22.5°	132.2	128.7	123.4	123.4	126.9	121.7	102.4	85.8	77.9	77.9	77.9
25°	114.6	112.9	107.6	102.4	104.1	99.8	83.1	72.6	67.4	66.5	67.4
27.5°	100.6	99.8	93.6	88.4	88.4	84.9	71.8	62.1	58.6	56.9	57.8
30°	91.0	89.3	82.3	77.9	77.0	73.5	61.3	54.3	50.8	49.9	49.9
32.5°	84.0	80.5	74.4	70.0	67.4	62.1	53.4	46.4	42.9	42.0	42.0
35°	67.4	67.4	64.8	62.1	58.6	50.8	44.6	38.5	35.0	34.1	34.1
37.5°	58.6	55.1	50.8	51.6	49.9	42.9	36.8	30.6	28.0	27.1	27.1
40°	53.4	49.0	42.9	40.3	41.1	37.6	30.6	23.6	20.1	21.0	20.1
42.5°	48.1	44.6	37.6	31.5	30.6	31.5	23.6	16.6	14.0	14.0	14.0
45°	44.6	41.1	33.3	26.3	21.9	24.5	18.4	11.4	8.8	8.8	8.8
47.5°	42.0	38.5	29.8	21.9	15.8	16.6	13.1	7.0	5.3	3.5	4.4
50°	40.3	35.9	27.1	17.5	11.4	9.6	8.8	3.5	0.9	0.9	0.0
52.5°	37.6	34.1	24.5	14.9	8.8	6.1	4.4	0.9	0.0	0.0	0.0
55°	35.9	31.5	21.9	13.1	7.0	3.5	0.9	0.0	0.0	0.0	0.0
57.5°	32.4	28.9	19.3	10.5	5.3	1.8	0.0	0.0	0.0	0.0	0.0
60°	28.9	26.3	16.6	7.9	3.5	0.0	0.0	0.0	0.0	0.0	0.0
61°	27.1	24.5	15.8	7.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	25.4	22.8	14.0	5.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0
65°	21.9	19.3	12.3	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	19.3	17.5	10.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	16.6	14.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	14.0	13.1	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	12.3	10.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	9.6	8.8	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	5.3	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.9	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°	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7
2.5°	1533.3	1564.0	1592.8	1629.6	1649.7	1704.9	1744.3	1777.5	1803.8	1809.0	1830.0
5°	1297.0	1339.9	1367.9	1444.9	1487.8	1579.7	1650.6	1734.6	1809.9	1851.0	1888.7
7.5°	976.7	997.7	1045.9	1122.9	1224.4	1304.0	1423.9	1529.8	1665.5	1739.9	1809.9
10°	689.6	708.9	779.8	860.3	953.1	1087.0	1232.3	1371.4	1508.8	1604.2	1686.5
12.5°	484.9	547.9	617.9	720.3	811.3	909.3	1064.2	1227.0	1398.6	1489.6	1578.8
15°	318.6	374.6	471.7	600.4	714.2	809.5	954.0	1144.7	1362.7	1464.2	1549.1
17.5°	157.5	198.7	284.4	422.7	574.1	724.7	898.8	1129.9	1409.1	1523.7	1603.3
20°	98.9	111.1	142.7	238.9	413.1	635.4	857.7	1159.6	1535.1	1662.0	1713.6
22.5°	79.6	83.1	95.4	126.9	252.1	525.1	821.8	1199.9	1673.4	1828.3	1881.7
25°	68.3	70.9	77.9	93.6	146.2	393.8	778.0	1270.8	1834.4	2021.7	2034.8
27.5°	58.6	61.3	67.4	79.6	104.1	265.2	715.0	1353.9	2026.9	2191.5	2182.7
30°	49.9	53.4	59.5	68.3	82.3	179.4	597.8	1437.9	2168.7	2300.9	2286.9
32.5°	42.9	45.5	50.8	58.6	68.3	123.4	449.0	1493.1	2286.9	2404.1	2373.5
35°	35.0	37.6	42.0	49.0	55.1	87.5	339.6	1494.8	2408.5	2531.9	2454.9
37.5°	28.0	29.8	34.1	40.3	45.5	68.3	249.4	1465.9	2559.1	2698.2	2547.7
40°	21.0	23.6	28.0	33.3	38.5	57.8	186.4	1395.9	2706.1	2864.5	2659.7
42.5°	14.0	17.5	21.9	27.1	36.8	46.4	131.3	1279.5	2825.1	3012.4	2769.1
45°	8.8	11.4	16.6	22.8	37.6	36.8	87.5	1140.4	2910.0	3125.3	2843.5
47.5°	4.4	7.0	12.3	21.9	33.3	27.1	54.3	1007.3	2987.0	3190.9	2877.6
50°	0.9	2.6	8.8	27.1	28.0	20.1	35.9	924.2	3027.3	3174.3	2874.1
52.5°	0.0	0.0	6.1	26.3	20.1	15.8	28.0	911.9	3090.3	3196.2	2934.5
55°	0.0	0.0	2.6	11.4	11.4	13.1	24.5	895.3	3202.3	3326.6	3116.5
57.5°	0.0	0.0	0.0	5.3	7.0	10.5	22.8	851.6	3320.5	3464.9	3338.0
60°	0.0	0.0	0.0	2.6	4.4	8.8	20.1	751.8	3211.9	3465.7	3521.8
61°	0.0	0.0	0.0	2.6	3.5	7.9	18.4	716.8	3114.8	3409.7	3544.5
62.5°	0.0	0.0	0.0	0.9	2.6	6.1	15.8	647.6	2969.5	3319.6	3534.0
65°	0.0	0.0	0.0	0.0	0.9	3.5	12.3	523.4	2727.1	3092.9	3413.2
67.5°	0.0	0.0	0.0	0.0	0.0	0.9	7.9	368.5	2378.8	2836.5	3155.1
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.5	213.5	1916.7	2401.5	2702.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.8	97.1	1243.6	1854.5	2132.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.1	765.8	1339.9	1592.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	519.0	891.8	1072.1
80°	0.0	1.8	0.9	0.0	0.0	0.0	0.0	7.0	319.4	556.6	604.8
82.5°	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	165.4	393.0	400.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.1	83.1
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°	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7	1677.7
2.5°	1849.3	1854.5	1858.0	1851.9	1814.3	1793.3	1751.3	1704.9	1689.1	1684.7
5°	1956.9	1986.7	1981.4	1941.2	1875.5	1795.0	1695.2	1592.0	1552.6	1537.7
7.5°	1935.9	2013.8	2028.7	1986.7	1875.5	1734.6	1590.2	1467.7	1410.8	1395.9
10°	1829.1	1927.2	1974.4	1961.3	1857.1	1694.4	1516.7	1366.2	1304.0	1284.8
12.5°	1725.9	1820.4	1850.1	1860.7	1803.8	1662.9	1479.9	1318.0	1253.3	1228.8
15°	1656.7	1715.4	1713.6	1732.9	1728.5	1650.6	1503.6	1342.5	1269.9	1237.5
17.5°	1634.0	1616.5	1593.7	1609.5	1640.1	1654.1	1580.6	1430.1	1345.2	1307.5
20°	1648.0	1562.2	1512.3	1511.5	1576.2	1683.0	1693.5	1574.5	1494.8	1444.1
22.5°	1719.7	1535.1	1458.1	1459.8	1539.5	1725.9	1823.9	1763.5	1676.0	1613.0
25°	1825.6	1540.3	1437.1	1447.6	1536.0	1763.5	1964.8	1978.8	1866.8	1811.6
27.5°	1933.3	1585.8	1437.9	1449.3	1550.8	1783.6	2045.3	2137.2	2040.9	1972.7
30°	2008.6	1641.9	1453.7	1465.9	1574.5	1799.4	2075.9	2267.6	2167.8	2091.7
32.5°	2079.4	1699.6	1479.1	1491.3	1621.7	1831.8	2133.7	2398.9	2289.5	2214.2
35°	2148.6	1756.5	1526.3	1548.2	1697.9	1890.4	2192.3	2552.9	2461.9	2357.8
37.5°	2208.1	1819.5	1607.7	1654.1	1801.1	1980.6	2272.0	2728.0	2634.3	2517.9
40°	2258.0	1893.9	1775.8	1827.4	1958.7	2075.9	2360.4	2842.6	2780.5	2655.3
42.5°	2298.2	2025.2	2016.4	2089.1	2181.0	2185.3	2385.8	2897.7	2874.1	2763.0
45°	2365.6	2260.6	2332.4	2451.4	2445.3	2316.6	2378.8	2948.5	2950.3	2855.7
47.5°	2475.9	2555.6	2763.0	2843.5	2802.4	2496.0	2385.8	2998.4	3037.8	2963.4
50°	2633.4	2889.9	3161.2	3268.0	3148.1	2676.3	2447.9	3057.9	3176.9	3122.7
52.5°	2768.2	3142.8	3528.8	3624.2	3460.5	2868.9	2593.2	3186.6	3363.3	3345.8
55°	2960.8	3360.7	3790.4	3864.0	3732.7	3086.8	2788.4	3375.6	3568.1	3576.9
57.5°	3157.7	3557.6	3961.1	4035.5	3935.7	3358.1	3065.8	3646.9	3760.7	3758.1
60°	3376.5	3741.4	4038.1	4079.3	4022.4	3629.4	3364.2	3895.5	3892.8	3832.5
61°	3501.6	3800.1	4032.9	4045.1	3990.0	3709.0	3518.3	3990.9	3912.1	3832.5
62.5°	3639.9	3853.5	3968.1	3927.0	3867.5	3737.1	3741.4	4095.0	3925.2	3802.7
65°	3779.9	3719.6	3669.7	3472.7	3416.7	3479.7	3929.6	4055.6	3845.6	3670.5
67.5°	3540.1	3187.4	3079.8	2882.0	2660.6	2917.9	3751.1	3814.9	3576.9	3344.1
70°	2893.4	2342.0	2214.2	2207.2	2047.9	2330.6	3308.2	3261.8	2968.6	2755.1
72.5°	2267.6	1598.1	1423.9	1464.2	1432.7	1737.2	2706.1	2188.8	1903.5	1760.9
75°	1777.5	1136.0	980.2	973.2	939.1	1183.3	1981.4	1153.5	952.2	850.7
77.5°	1172.8	818.3	815.7	753.5	727.3	641.5	889.2	462.1	377.2	380.7
80°	675.6	501.5	588.1	466.5	467.4	376.3	359.7	67.4	54.3	39.4
82.5°	387.7	240.7	182.0	71.8	150.5	150.5	28.9	0.9	0.9	1.8
85°	37.6	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	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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