

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: P677333

Luminaire Tested: **CCW-SA-2B-830-U-SLL-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P677333
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-2B-830-U-SLL-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @450mA w/
SLL distribution lens and House Side Shield
Light Source: (32) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

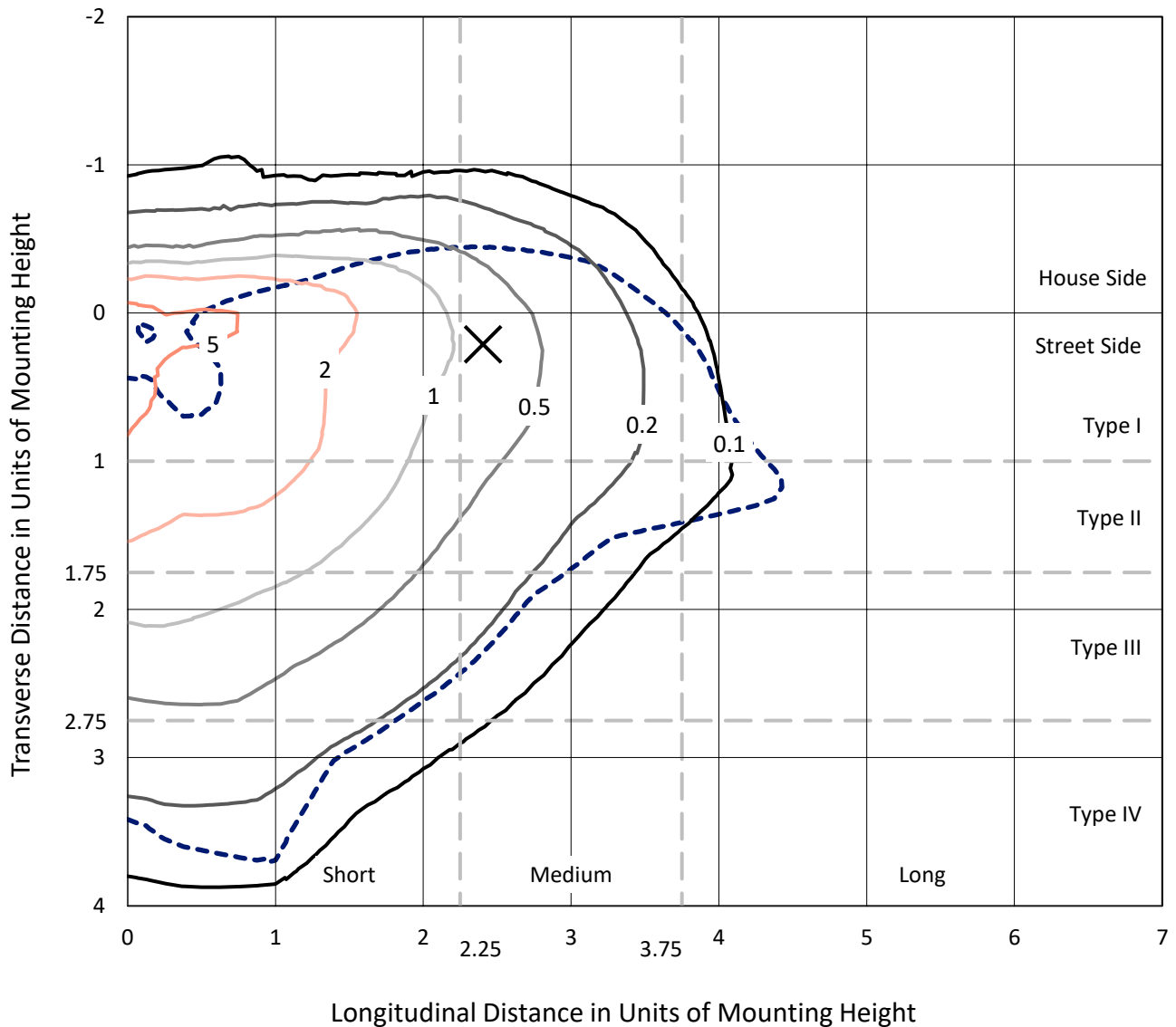
Lumens per Lamp: N/A
Luminaire Lumens: 3981.5 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

Input Watts (W): 46
Input Voltage (V): 120
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

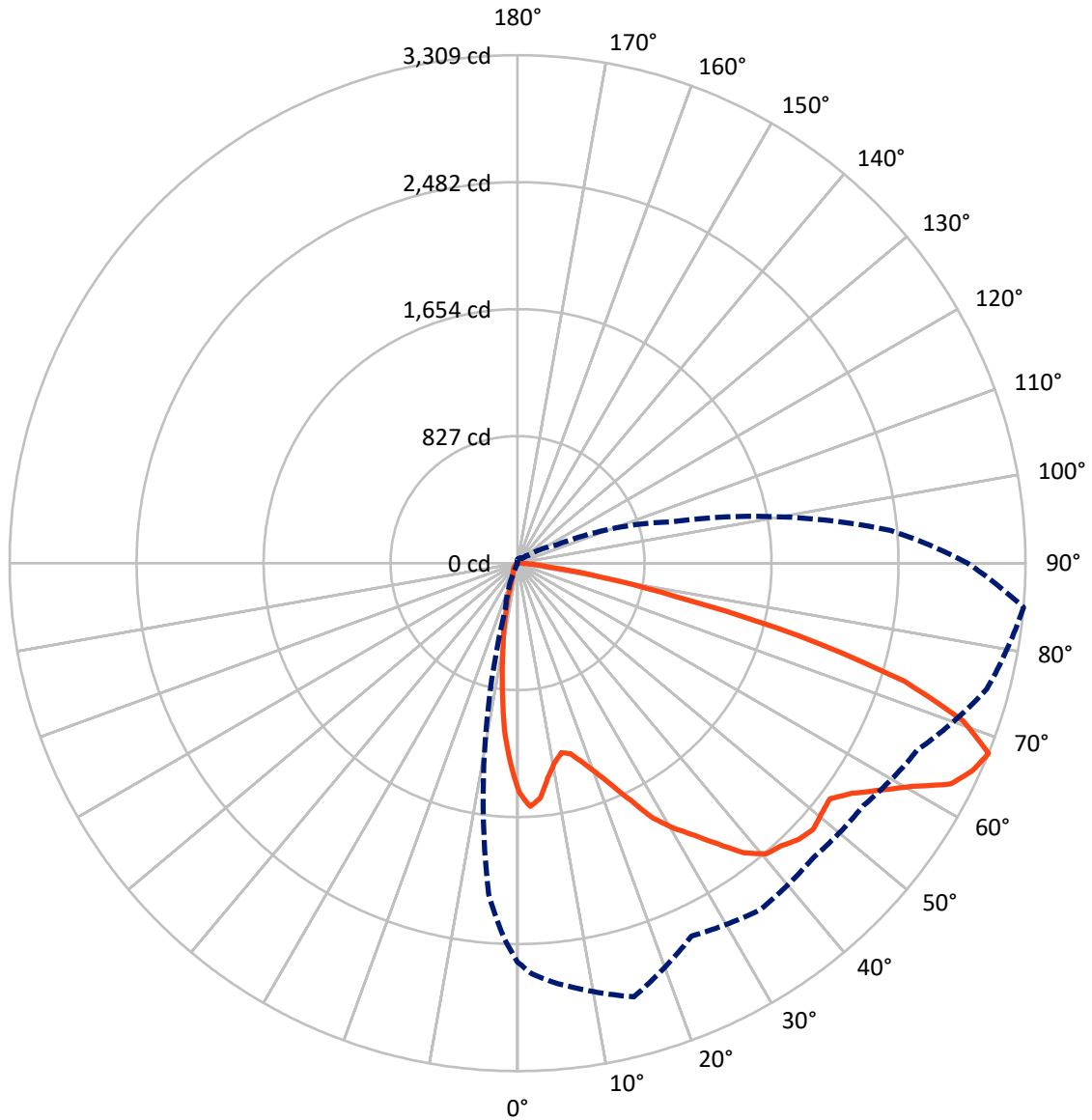
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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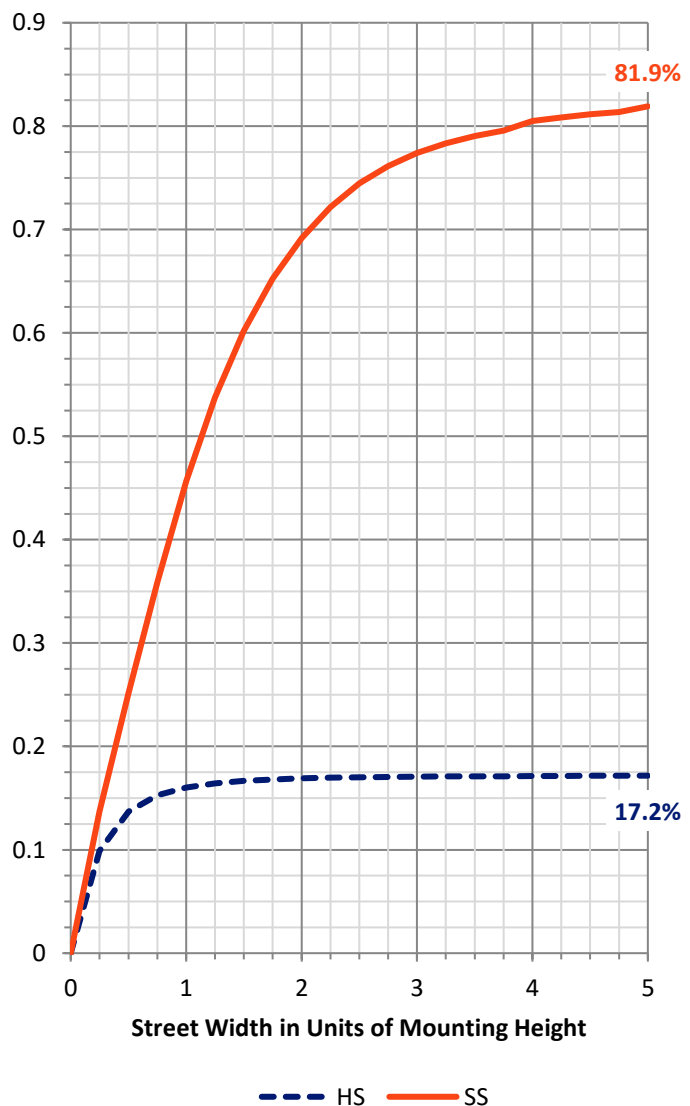
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	691.3	0.0	691.3
	% Fixture	17.4	0.0	17.4
Street Side	Lumens	3290.2	0.0	3290.2
	% Fixture	82.6	0.0	82.6
Total	Lumens	3981.5	0.0	3981.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.7	2.9
10°-20°	223.0	5.6
20°-30°	308.6	7.8
30°-40°	436.2	11.0
40°-50°	593.8	14.9
50°-60°	786.5	19.8
60°-70°	913.2	22.9
70°-80°	517.1	13.0
80°-90°	89.4	2.2
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°	3981.5	100.0
0°-180°	3981.5	100.0



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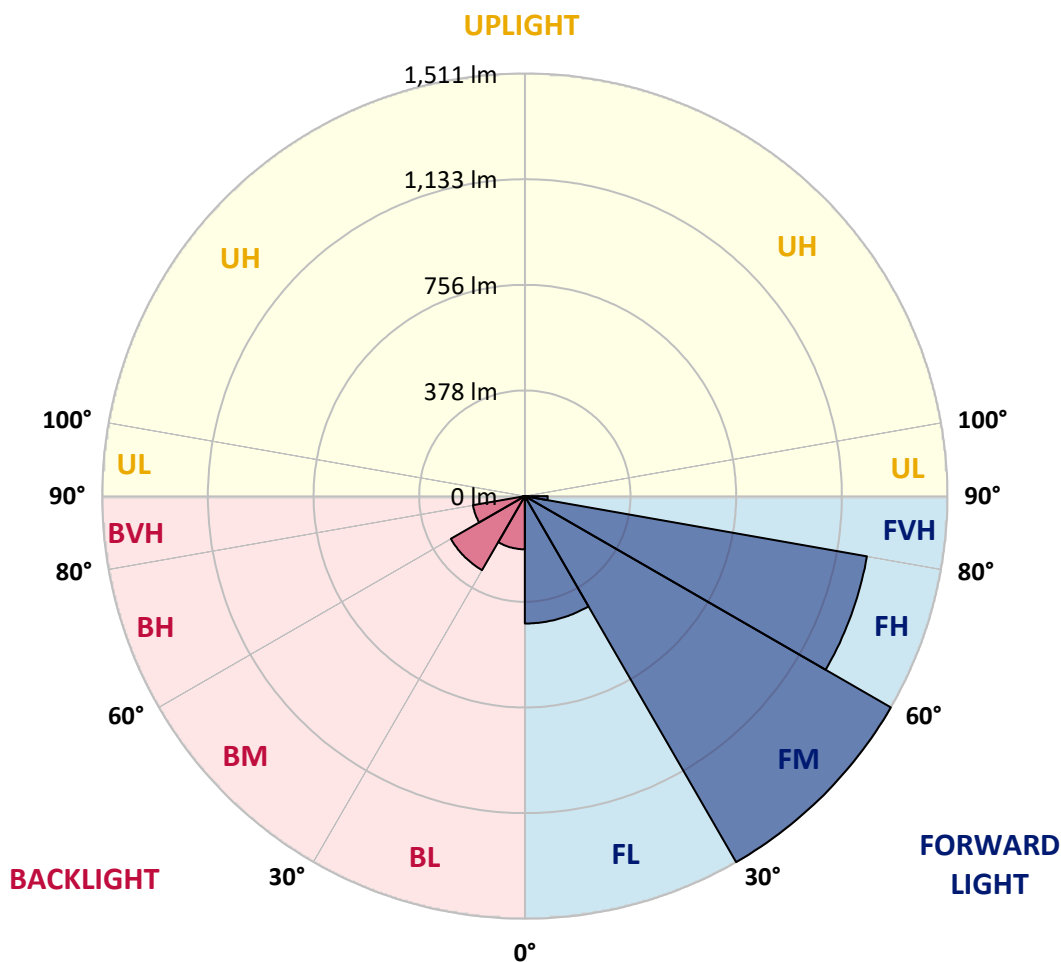
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	455.3	11.4			
FM (30°-60°)	1511.0	38.0			
FH (60°-80°)	1242.0	31.2			G1/1800
FVH (80°-90°)	81.8	2.1			G1/100
BL (0°-30°)	190.1	4.8	B1/500		
BM (30°-60°)	305.5	7.7	B1/1000		
BH (60°-80°)	188.3	4.7	B1/500		G1/500
BVH (80°-90°)	7.5	0.2			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0
2.5°	1555.5	1588.5	1589.5	1604.4	1619.3	1619.3	1654.4	1645.9	1615.0	1609.7	1587.4
5°	1567.2	1578.9	1587.4	1662.9	1726.7	1720.3	1739.4	1726.7	1667.1	1590.6	1538.5
7.5°	1466.2	1478.9	1513.0	1641.6	1727.7	1756.5	1792.6	1712.9	1650.1	1511.9	1412.0
10°	1332.2	1356.7	1419.4	1566.1	1672.5	1763.9	1763.9	1700.1	1578.9	1443.9	1321.6
12.5°	1257.8	1306.7	1340.7	1489.6	1627.8	1690.5	1688.4	1654.4	1575.7	1405.6	1267.4
15°	1270.6	1284.4	1356.7	1472.6	1564.0	1560.8	1599.1	1588.5	1533.2	1439.6	1287.6
17.5°	1329.0	1350.3	1413.0	1472.6	1516.2	1503.4	1502.3	1553.4	1556.6	1497.0	1363.1
20°	1424.7	1487.5	1517.2	1535.3	1482.1	1427.9	1421.5	1492.8	1548.1	1570.4	1453.4
22.5°	1577.8	1619.3	1679.9	1587.4	1449.2	1381.1	1368.4	1447.1	1558.7	1657.6	1570.4
25°	1727.7	1759.6	1818.1	1699.0	1486.4	1371.6	1349.2	1417.3	1599.1	1778.8	1711.8
27.5°	1886.2	1913.8	1920.2	1780.9	1506.6	1352.4	1325.8	1417.3	1633.1	1842.6	1880.8
30°	1982.9	2015.9	2022.3	1853.2	1539.6	1368.4	1355.6	1423.7	1656.5	1896.8	2002.1
32.5°	2091.4	2099.9	2094.6	1866.0	1575.7	1415.2	1362.0	1466.2	1683.1	1961.7	2112.6
35°	2221.1	2236.0	2181.7	1924.4	1656.5	1444.9	1425.8	1518.3	1728.8	1991.4	2246.6
37.5°	2320.0	2366.7	2244.5	1946.8	1672.5	1507.7	1510.8	1626.7	1760.7	2027.6	2394.4
40°	2506.0	2427.3	2350.8	2023.3	1733.1	1614.0	1597.0	1738.4	1868.1	2051.0	2491.1
42.5°	2608.1	2566.6	2392.3	2030.8	1826.6	1760.7	1765.0	1864.9	1924.4	2116.9	2517.7
45°	2633.6	2590.0	2448.6	2036.1	1919.1	1934.0	2007.4	2026.5	2007.4	2160.5	2567.7
47.5°	2698.5	2603.8	2442.2	2107.3	2069.0	2126.5	2220.0	2261.5	2120.1	2144.5	2591.1
50°	2685.7	2631.5	2428.4	2137.1	2251.9	2404.0	2466.7	2449.7	2245.5	2111.6	2565.6
52.5°	2632.6	2574.1	2470.9	2217.9	2423.1	2607.0	2694.2	2651.7	2357.2	2186.0	2548.6
55°	2710.2	2665.5	2526.2	2327.4	2551.7	2785.7	2847.3	2815.4	2494.3	2255.1	2645.3
57.5°	2794.2	2784.6	2676.1	2456.1	2703.8	2969.6	2969.6	2930.3	2613.4	2355.0	2788.8
60°	2915.4	2936.6	2786.7	2541.1	2755.9	2959.0	3113.1	3067.4	2733.6	2530.5	2951.5
62.5°	2876.0	2944.1	2929.2	2724.0	2815.4	3011.1	3095.1	3129.1	2882.4	2744.2	3168.4
65°	2749.5	2821.8	2928.1	2844.1	2770.8	2884.5	2927.1	3030.2	2956.8	2945.1	3257.7
67.5°	2598.5	2677.2	2743.1	2924.9	2680.4	2755.9	2718.7	2751.6	2876.0	3165.2	3308.8
70°	2268.9	2344.4	2448.6	2745.3	2441.2	2373.1	2363.6	2347.6	2541.1	3086.5	3077.0
72.5°	1866.0	1901.1	2073.3	2231.7	1806.4	1793.7	1808.6	1790.5	2014.8	2794.2	2635.7
75°	1397.1	1432.2	1530.0	1713.9	1230.2	1156.8	1241.8	1325.8	1538.5	2169.0	1893.6
77.5°	1050.5	1095.1	1156.8	1282.3	902.7	787.9	799.5	879.3	1112.1	1737.3	1061.1
80°	681.5	676.2	795.3	882.5	679.4	700.7	670.9	729.4	805.9	929.3	542.2
82.5°	393.4	398.7	448.7	506.1	473.1	541.2	390.2	651.8	575.2	378.5	202.0
85°	221.2	230.7	276.4	350.9	296.6	198.8	162.7	323.2	361.5	155.2	97.8
87.5°	22.3	19.1	37.2	132.9	80.8	33.0	48.9	77.6	87.2	58.5	28.7
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°	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0
2.5°	1555.5	1555.5	1528.9	1484.3	1466.2	1434.3	1390.7	1404.5	1389.6	1335.4	1321.6
5°	1491.7	1440.7	1385.4	1317.3	1278.0	1197.2	1171.7	1126.0	1133.4	1087.7	1089.8
7.5°	1358.8	1318.4	1224.8	1135.5	1057.9	987.7	888.9	851.6	815.5	797.4	818.7
10°	1281.2	1205.7	1078.1	961.2	858.0	795.3	729.4	678.3	631.6	596.5	589.0
12.5°	1224.8	1157.9	1003.7	861.2	780.4	729.4	668.8	598.6	552.9	492.3	474.2
15°	1207.8	1126.0	963.3	821.9	743.2	659.2	590.1	521.0	461.4	397.6	375.3
17.5°	1266.3	1171.7	962.2	790.0	679.4	589.0	493.3	415.7	355.1	296.6	282.8
20°	1365.2	1220.6	993.1	770.8	618.8	497.6	389.1	311.5	243.5	205.2	195.6
22.5°	1477.9	1303.5	996.2	719.8	558.2	406.2	283.9	205.2	166.9	148.9	143.5
25°	1616.1	1436.4	1034.5	678.3	487.0	308.3	202.0	157.4	135.0	124.4	122.3
27.5°	1729.9	1528.9	1076.0	634.7	416.8	228.6	158.4	128.7	117.0	106.3	105.3
30°	1847.9	1635.2	1087.7	608.2	356.2	188.2	136.1	113.8	101.0	95.7	94.6
32.5°	1951.0	1751.1	1124.9	564.6	298.8	165.9	123.3	102.1	93.6	85.1	84.0
35°	2083.9	1818.1	1143.0	541.2	277.5	149.9	112.7	93.6	80.8	75.5	73.4
37.5°	2226.4	1883.0	1154.7	523.1	259.4	140.3	106.3	88.2	76.6	69.1	67.0
40°	2359.3	1974.4	1137.7	500.8	245.6	128.7	102.1	81.9	71.2	63.8	60.6
42.5°	2461.4	2063.7	1132.3	479.5	230.7	124.4	96.8	78.7	67.0	58.5	57.4
45°	2518.8	2124.3	1095.1	462.5	219.0	126.5	94.6	74.4	63.8	56.4	52.1
47.5°	2505.0	2171.1	1104.7	457.2	203.1	118.0	93.6	71.2	58.5	52.1	48.9
50°	2581.5	2265.7	1088.7	440.2	191.4	106.3	102.1	71.2	57.4	50.0	46.8
52.5°	2594.3	2351.9	1122.8	409.3	173.3	97.8	101.0	70.2	55.3	47.8	43.6
55°	2700.6	2451.8	1188.7	392.3	158.4	85.1	92.5	68.0	50.0	43.6	41.5
57.5°	2845.2	2659.1	1231.2	376.4	138.2	74.4	77.6	67.0	45.7	40.4	37.2
60°	2984.5	2742.1	1234.4	347.7	119.1	67.0	60.6	67.0	42.5	36.1	33.0
62.5°	3088.7	2742.1	1213.1	323.2	104.2	59.5	53.2	63.8	38.3	31.9	29.8
65°	3032.3	2668.7	1157.9	303.0	94.6	52.1	45.7	48.9	34.0	27.6	25.5
67.5°	2931.3	2440.1	1035.6	278.6	93.6	45.7	39.3	36.1	29.8	24.5	22.3
70°	2769.7	2131.8	862.3	250.9	91.4	41.5	35.1	30.8	26.6	21.3	19.1
72.5°	2231.7	1760.7	708.1	235.0	89.3	36.1	29.8	26.6	22.3	18.1	15.9
75°	1545.9	1124.9	545.4	201.0	87.2	33.0	27.6	23.4	19.1	14.9	13.8
77.5°	927.1	751.7	351.9	151.0	57.4	26.6	23.4	18.1	15.9	12.8	11.7
80°	433.8	355.1	142.5	58.5	27.6	19.1	15.9	13.8	12.8	10.6	9.6
82.5°	170.1	149.9	69.1	34.0	22.3	14.9	12.8	11.7	10.6	8.5	7.4
85°	91.4	80.8	33.0	23.4	15.9	10.6	10.6	9.6	8.5	7.4	6.4
87.5°	20.2	14.9	13.8	13.8	11.7	8.5	8.5	7.4	6.4	5.3	4.3
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°	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0
2.5°	1314.1	1330.1	1304.6	1320.5	1298.2	1315.2	1317.3	1301.4	1305.6	1326.9	1336.5
5°	1119.6	1108.9	1085.6	1078.1	1079.2	1065.4	1070.7	1078.1	1089.8	1096.2	1115.3
7.5°	807.0	831.4	830.4	848.5	849.5	847.4	832.5	800.6	811.2	802.7	813.4
10°	577.3	588.0	608.2	619.9	641.1	629.4	595.4	582.6	576.3	575.2	585.8
12.5°	461.4	435.9	433.8	438.0	448.7	434.9	417.8	403.0	410.4	425.3	437.0
15°	357.2	336.0	308.3	304.1	306.2	299.8	281.8	262.6	267.9	282.8	291.3
17.5°	274.3	249.9	230.7	218.0	213.7	191.4	164.8	148.9	144.6	143.5	151.0
20°	185.0	180.7	177.6	161.6	161.6	129.7	107.4	95.7	95.7	97.8	98.9
22.5°	138.2	132.9	134.0	130.8	122.3	96.8	85.1	81.9	81.9	84.0	84.0
25°	120.1	112.7	110.6	109.5	101.0	82.9	74.4	71.2	71.2	73.4	73.4
27.5°	102.1	99.9	96.8	92.5	85.1	71.2	65.9	62.7	63.8	64.9	63.8
30°	93.6	88.2	84.0	84.0	75.5	63.8	59.5	57.4	55.3	57.4	58.5
32.5°	82.9	79.7	77.6	74.4	64.9	56.4	52.1	50.0	48.9	48.9	50.0
35°	71.2	71.2	69.1	64.9	56.4	51.0	45.7	43.6	42.5	43.6	43.6
37.5°	63.8	60.6	61.7	57.4	50.0	44.7	39.3	37.2	37.2	36.1	37.2
40°	59.5	54.2	51.0	48.9	44.7	38.3	34.0	31.9	30.8	30.8	30.8
42.5°	53.2	48.9	42.5	41.5	40.4	33.0	27.6	26.6	25.5	24.5	24.5
45°	50.0	43.6	38.3	33.0	33.0	27.6	23.4	21.3	20.2	19.1	20.2
47.5°	45.7	39.3	33.0	27.6	26.6	22.3	18.1	15.9	14.9	14.9	14.9
50°	43.6	35.1	28.7	23.4	20.2	18.1	13.8	11.7	10.6	10.6	10.6
52.5°	40.4	33.0	25.5	20.2	15.9	13.8	10.6	8.5	7.4	7.4	7.4
55°	36.1	29.8	22.3	17.0	13.8	10.6	7.4	5.3	4.3	4.3	4.3
57.5°	34.0	26.6	19.1	14.9	10.6	7.4	4.3	3.2	3.2	2.1	3.2
60°	30.8	23.4	15.9	11.7	8.5	5.3	3.2	1.1	1.1	1.1	1.1
62.5°	26.6	20.2	13.8	9.6	6.4	3.2	1.1	0.0	0.0	0.0	0.0
65°	22.3	15.9	10.6	7.4	4.3	1.1	0.0	0.0	0.0	0.0	0.0
67.5°	19.1	13.8	8.5	5.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0
70°	17.0	11.7	6.4	4.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	13.8	9.6	5.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	11.7	7.4	3.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	9.6	5.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	7.4	4.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	6.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	4.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.2	1.1	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°	358°	360°
0°	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0	1497.0
2.5°	1350.3	1343.9	1375.8	1427.9	1454.5	1506.6	1519.4	1552.3	1543.8	1555.5
5°	1117.5	1130.2	1177.0	1253.5	1281.2	1356.7	1427.9	1499.2	1544.9	1567.2
7.5°	829.3	871.8	929.3	999.4	1070.7	1169.6	1290.8	1373.7	1418.3	1466.2
10°	617.7	663.5	729.4	798.5	914.4	1025.0	1146.2	1249.3	1287.6	1332.2
12.5°	485.9	557.1	633.7	708.1	777.2	882.5	1032.4	1182.3	1223.8	1257.8
15°	338.1	425.3	534.8	631.6	728.3	819.7	975.0	1156.8	1213.1	1270.6
17.5°	187.1	256.2	381.7	517.8	660.3	800.6	994.1	1203.6	1288.6	1329.0
20°	108.4	136.1	225.4	387.0	575.2	759.1	1003.7	1291.8	1404.5	1424.7
22.5°	89.3	98.9	127.6	242.4	471.0	732.6	1052.6	1415.2	1530.0	1577.8
25°	76.6	84.0	98.9	145.7	356.2	676.2	1083.4	1569.3	1675.6	1727.7
27.5°	68.0	75.5	87.2	107.4	242.4	598.6	1134.5	1708.6	1814.9	1886.2
30°	59.5	65.9	77.6	91.4	168.0	511.4	1178.1	1810.7	1960.6	1982.9
32.5°	53.2	58.5	67.0	78.7	124.4	388.1	1213.1	1915.9	2042.5	2091.4
35°	45.7	52.1	57.4	67.0	94.6	292.4	1191.9	1997.8	2162.6	2221.1
37.5°	40.4	44.7	50.0	56.4	79.7	228.6	1148.3	2095.6	2265.7	2320.0
40°	34.0	37.2	43.6	50.0	72.3	176.5	1098.3	2213.6	2410.3	2506.0
42.5°	28.7	31.9	36.1	46.8	59.5	130.8	997.3	2305.1	2527.3	2608.1
45°	22.3	26.6	33.0	46.8	47.8	96.8	893.1	2373.1	2593.2	2633.6
47.5°	17.0	21.3	31.9	40.4	38.3	67.0	769.8	2450.7	2661.3	2698.5
50°	12.8	17.0	36.1	35.1	31.9	51.0	692.2	2505.0	2665.5	2685.7
52.5°	8.5	12.8	29.8	26.6	26.6	44.7	670.9	2502.8	2676.1	2632.6
55°	6.4	9.6	17.0	19.1	23.4	39.3	651.8	2582.6	2679.3	2710.2
57.5°	4.3	7.4	11.7	14.9	20.2	34.0	612.4	2678.3	2778.2	2794.2
60°	2.1	5.3	8.5	11.7	17.0	29.8	557.1	2748.4	2898.4	2915.4
62.5°	1.1	3.2	6.4	9.6	13.8	23.4	499.7	2636.8	2846.3	2876.0
65°	0.0	2.1	4.3	6.4	8.5	17.0	406.2	2380.6	2640.0	2749.5
67.5°	0.0	0.0	2.1	4.3	5.3	12.8	306.2	2165.8	2449.7	2598.5
70°	0.0	0.0	1.1	1.1	3.2	9.6	195.6	1793.7	2187.1	2268.9
72.5°	0.0	0.0	0.0	0.0	1.1	6.4	113.8	1332.2	1713.9	1866.0
75°	0.0	0.0	0.0	0.0	0.0	5.3	57.4	857.0	1192.9	1397.1
77.5°	0.0	0.0	0.0	0.0	0.0	4.3	30.8	552.9	879.3	1050.5
80°	0.0	0.0	0.0	0.0	0.0	1.1	18.1	321.1	562.4	681.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	7.4	157.4	336.0	393.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	2.1	84.0	168.0	221.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	11.7	22.3
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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