

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: P676321

Luminaire Tested: **CCW-SA-1D-830-U-T2-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P676321
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-1D-830-U-T2-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @800mA w/
T2 distribution lens and House Side Shield
Light Source: (16) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

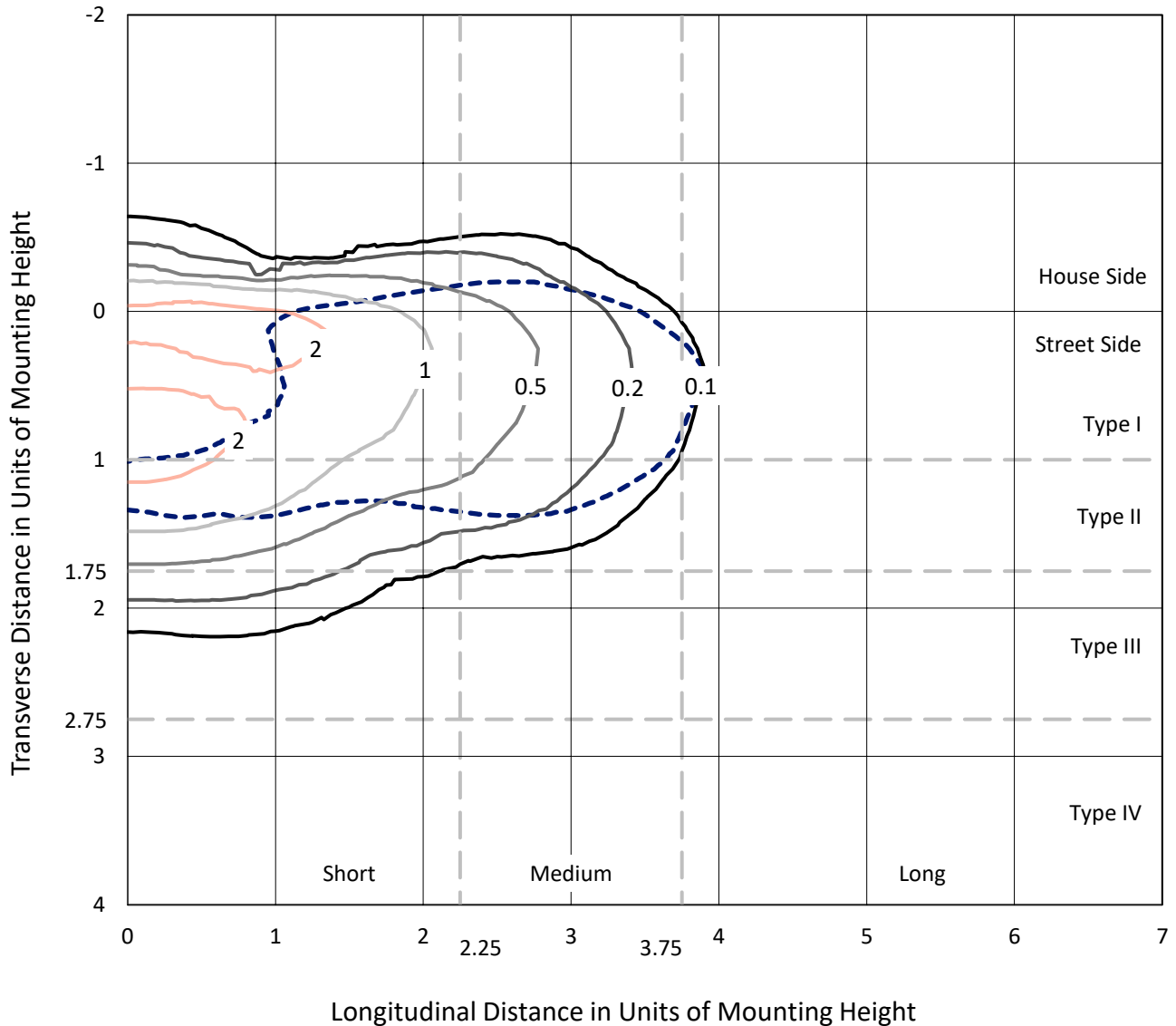
Lumens per Lamp: N/A
Luminaire Lumens: 3421.2 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

Input Watts (W): 44
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

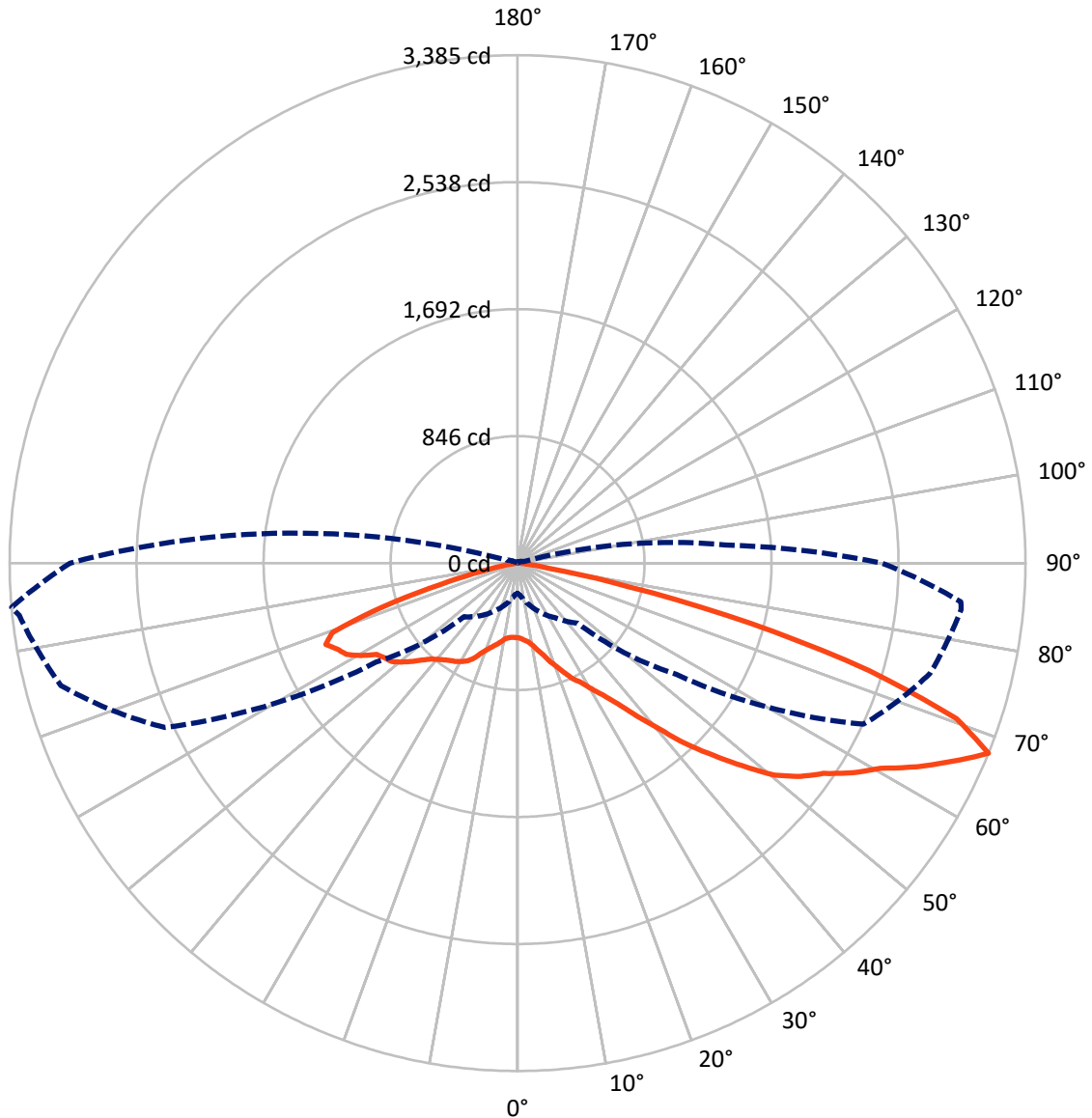
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.6 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 275-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	486.0	0.0	486.0
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	2935.2	0.0	2935.2
	% Fixture	85.8	0.0	85.8
Total	Lumens	3421.2	0.0	3421.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	1.3
10°-20°	122.0	3.6
20°-30°	202.6	5.9
30°-40°	348.5	10.2
40°-50°	626.3	18.3
50°-60°	891.6	26.1
60°-70°	812.9	23.8
70°-80°	346.1	10.1
80°-90°	25.8	0.8
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°	3421.2	100.0
0°-180°	3421.2	100.0



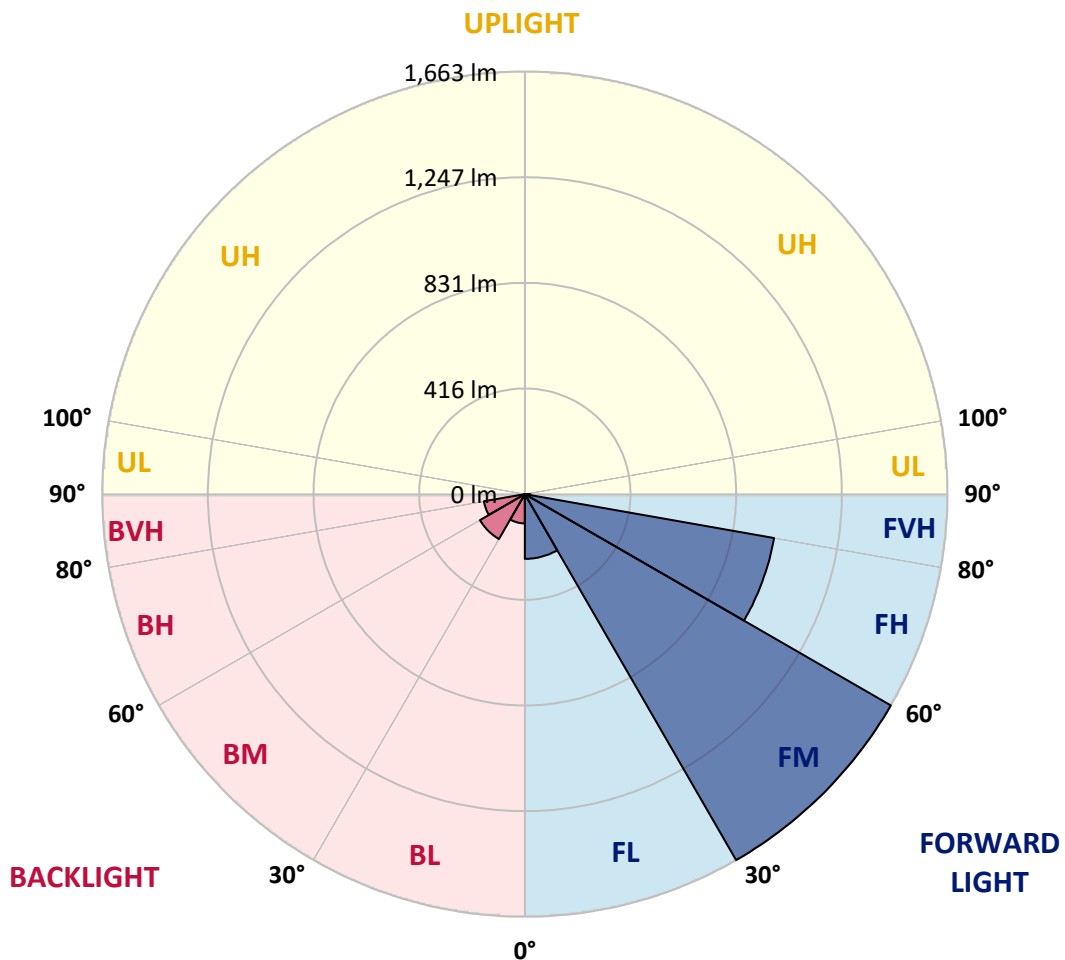
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	254.9	7.4			
FM (30°-60°)	1662.7	48.6			
FH (60°-80°)	995.7	29.1			G1/1800
FVH (80°-90°)	21.9	0.6			G1/100
BL (0°-30°)	115.1	3.4	B1/500		
BM (30°-60°)	203.8	6.0	B0/220		
BH (60°-80°)	163.3	4.8	B1/500		G1/500
BVH (80°-90°)	3.9	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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	84°	85°
0°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	515.4	520.3	520.3	518.7	513.8	510.5	508.9	505.6	502.4	502.4	504.0
5°	520.3	515.4	522.0	513.8	513.8	513.8	520.3	517.1	515.4	507.3	507.3
7.5°	520.3	515.4	515.4	520.3	515.4	518.7	526.9	523.6	530.1	515.4	518.7
10°	505.6	504.0	507.3	513.8	515.4	522.0	530.1	546.4	548.1	538.3	536.6
12.5°	476.3	474.7	486.1	489.3	508.9	525.2	549.7	562.7	577.4	572.5	562.7
15°	455.1	458.3	466.5	479.6	497.5	526.9	554.6	583.9	610.0	603.5	600.3
17.5°	463.2	461.6	463.2	471.4	494.2	523.6	570.9	605.1	642.7	642.7	645.9
20°	487.7	492.6	491.0	486.1	497.5	522.0	570.9	631.2	693.2	688.3	688.3
22.5°	530.1	531.7	522.0	518.7	517.1	531.7	580.7	663.9	735.6	745.4	742.2
25°	574.2	575.8	572.5	562.7	549.7	553.0	598.6	690.0	794.4	810.7	807.4
27.5°	647.6	645.9	637.8	626.4	606.8	592.1	626.4	709.5	840.0	867.8	859.6
30°	721.0	716.1	704.6	690.0	672.0	644.3	660.6	747.1	897.1	923.2	905.3
32.5°	810.7	800.9	804.1	781.3	743.8	699.8	696.5	781.3	942.8	980.3	965.6
35°	924.8	913.4	897.1	875.9	840.0	781.3	763.4	836.8	1019.5	1047.2	1047.2
37.5°	1074.9	1086.3	1066.8	978.7	939.5	884.1	846.6	893.9	1086.3	1153.2	1136.9
40°	1228.2	1238.0	1202.1	1136.9	1052.1	983.6	960.7	986.8	1187.5	1267.4	1236.4
42.5°	1352.2	1365.3	1352.2	1267.4	1200.5	1112.4	1071.7	1096.1	1318.0	1414.2	1373.4
45°	1482.7	1495.7	1481.1	1425.6	1360.4	1309.8	1207.0	1238.0	1455.0	1598.5	1552.8
47.5°	1580.6	1596.9	1570.8	1559.4	1507.2	1499.0	1324.5	1358.7	1598.5	1784.5	1727.4
50°	1603.4	1621.3	1644.2	1657.2	1639.3	1658.9	1482.7	1512.1	1748.6	1955.7	1900.3
52.5°	1549.6	1567.5	1618.1	1678.4	1761.6	1820.3	1642.5	1667.0	1905.2	2097.6	2068.3
55°	1391.4	1407.7	1510.4	1592.0	1791.0	1887.2	1795.9	1898.6	2017.7	2246.1	2174.3
57.5°	1125.5	1145.1	1280.4	1406.0	1693.1	1849.7	1887.2	2091.1	2203.7	2355.3	2272.2
60°	799.3	810.7	928.1	1149.9	1422.3	1662.1	1869.3	2234.6	2350.5	2502.1	2458.1
62.5°	460.0	469.8	592.1	800.9	1073.3	1388.1	1789.3	2370.0	2508.7	2663.6	2639.2
65°	305.0	308.3	391.5	505.6	698.1	1022.7	1587.1	2490.7	2665.3	2792.5	2764.8
67.5°	200.6	218.6	283.8	362.1	446.9	566.0	1293.5	2541.3	2844.7	2971.9	2965.4
70°	143.5	150.1	203.9	278.9	336.0	318.1	756.8	2184.1	2836.5	3020.8	2967.0
72.5°	84.8	91.3	135.4	208.8	264.2	202.3	354.0	1544.7	2350.5	2410.8	2396.1
75°	62.0	62.0	83.2	150.1	192.5	145.2	166.4	977.0	1561.0	1694.7	1693.1
77.5°	44.0	45.7	57.1	89.7	148.4	106.0	91.3	543.2	853.1	933.0	889.0
80°	26.1	27.7	39.1	53.8	107.7	76.7	60.4	247.9	327.9	331.1	314.8
82.5°	19.6	19.6	26.1	37.5	75.0	52.2	37.5	94.6	106.0	96.2	81.6
85°	11.4	9.8	19.6	27.7	44.0	29.4	26.1	44.0	48.9	35.9	32.6
87.5°	3.3	3.3	8.2	9.8	19.6	16.3	11.4	16.3	22.8	13.0	9.8
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°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	500.8	495.9	487.7	484.4	473.0	468.1	464.9	456.7	458.3	453.5	453.5
5°	495.9	495.9	479.6	461.6	443.7	432.2	419.2	402.9	402.9	396.4	398.0
7.5°	513.8	500.8	479.6	446.9	417.6	391.5	380.1	363.7	354.0	349.1	349.1
10°	525.2	512.2	476.3	437.1	399.6	367.0	342.5	319.7	306.7	306.7	305.0
12.5°	556.2	536.6	489.3	435.5	380.1	331.1	293.6	267.5	249.6	236.5	239.8
15°	582.3	561.1	495.9	422.5	345.8	277.3	231.6	182.7	158.2	145.2	140.3
17.5°	623.1	583.9	510.5	399.6	293.6	216.9	150.1	109.3	99.5	97.9	97.9
20°	657.3	611.7	512.2	355.6	241.4	138.6	96.2	89.7	84.8	83.2	81.6
22.5°	704.6	647.6	505.6	305.0	172.9	93.0	81.6	75.0	71.8	66.9	66.9
25°	753.6	694.9	492.6	257.7	106.0	79.9	71.8	65.2	58.7	55.5	57.1
27.5°	805.8	730.7	455.1	200.6	81.6	70.1	58.7	53.8	50.6	48.9	48.9
30°	848.2	753.6	399.6	133.8	73.4	62.0	52.2	47.3	44.0	42.4	42.4
32.5°	879.2	773.2	337.6	89.7	66.9	55.5	47.3	42.4	39.1	37.5	37.5
35°	931.4	787.8	280.6	76.7	60.4	48.9	40.8	37.5	34.3	34.3	34.3
37.5°	1011.3	807.4	223.5	70.1	55.5	44.0	39.1	34.3	32.6	31.0	31.0
40°	1081.4	831.9	159.9	63.6	50.6	40.8	34.3	31.0	29.4	27.7	27.7
42.5°	1182.6	859.6	104.4	57.1	45.7	37.5	31.0	27.7	26.1	24.5	24.5
45°	1311.4	905.3	81.6	50.6	40.8	34.3	29.4	26.1	22.8	22.8	21.2
47.5°	1448.4	960.7	73.4	47.3	37.5	31.0	26.1	22.8	21.2	19.6	19.6
50°	1575.7	1014.6	68.5	44.0	34.3	29.4	24.5	21.2	17.9	16.3	16.3
52.5°	1689.8	1065.1	65.2	40.8	32.6	26.1	21.2	17.9	16.3	14.7	14.7
55°	1750.2	1088.0	63.6	39.1	29.4	24.5	19.6	16.3	14.7	13.0	13.0
57.5°	1844.8	1117.3	62.0	37.5	27.7	21.2	17.9	14.7	13.0	11.4	11.4
60°	1998.1	1213.6	60.4	35.9	26.1	21.2	16.3	13.0	9.8	8.2	8.2
62.5°	2125.4	1293.5	53.8	31.0	22.8	17.9	13.0	9.8	6.5	4.9	4.9
65°	2270.5	1331.0	47.3	27.7	19.6	14.7	9.8	6.5	4.9	1.6	1.6
67.5°	2428.7	1388.1	39.1	24.5	17.9	11.4	8.2	4.9	1.6	0.0	0.0
70°	2345.6	1316.3	32.6	21.2	16.3	9.8	6.5	3.3	0.0	0.0	0.0
72.5°	1838.3	942.8	26.1	19.6	14.7	9.8	6.5	1.6	0.0	0.0	0.0
75°	1228.2	533.4	22.8	16.3	11.4	8.2	4.9	1.6	0.0	0.0	0.0
77.5°	667.1	239.8	19.6	14.7	9.8	6.5	4.9	1.6	0.0	0.0	0.0
80°	216.9	94.6	16.3	13.0	9.8	6.5	4.9	1.6	0.0	0.0	0.0
82.5°	58.7	29.4	16.3	13.0	9.8	6.5	4.9	1.6	0.0	0.0	0.0
85°	24.5	19.6	16.3	13.0	9.8	6.5	4.9	1.6	0.0	0.0	0.0
87.5°	9.8	6.5	6.5	8.2	6.5	4.9	3.3	1.6	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°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	455.1	458.3	460.0	460.0	468.1	476.3	486.1	494.2	494.2	499.1	504.0
5°	399.6	402.9	407.8	422.5	438.8	456.7	474.7	487.7	505.6	513.8	518.7
7.5°	354.0	357.2	370.3	384.9	407.8	438.8	469.8	499.1	517.1	525.2	531.7
10°	306.7	311.5	326.2	352.3	381.7	419.2	455.1	505.6	535.0	551.3	557.8
12.5°	238.1	251.2	270.8	298.5	336.0	393.1	460.0	512.2	562.7	582.3	595.4
15°	150.1	161.5	192.5	236.5	287.1	354.0	446.9	522.0	592.1	611.7	632.9
17.5°	96.2	97.9	107.7	155.0	220.2	305.0	427.4	536.6	624.7	652.5	685.1
20°	81.6	84.8	86.4	93.0	146.8	251.2	386.6	554.6	663.9	701.4	732.4
22.5°	68.5	70.1	73.4	78.3	88.1	182.7	331.1	554.6	698.1	753.6	789.5
25°	55.5	58.7	62.0	66.9	76.7	114.2	274.0	544.8	738.9	807.4	853.1
27.5°	48.9	48.9	52.2	57.1	65.2	79.9	216.9	515.4	769.9	840.0	900.4
30°	42.4	44.0	45.7	50.6	58.7	70.1	150.1	468.1	802.5	903.6	972.2
32.5°	37.5	37.5	40.8	44.0	52.2	63.6	96.2	396.4	844.9	952.6	1048.8
35°	34.3	34.3	35.9	39.1	47.3	57.1	75.0	336.0	895.5	1045.6	1151.6
37.5°	31.0	31.0	32.6	35.9	42.4	50.6	68.5	288.7	947.7	1138.5	1293.5
40°	27.7	27.7	29.4	32.6	37.5	45.7	62.0	233.3	1012.9	1275.5	1448.4
42.5°	24.5	24.5	26.1	29.4	34.3	40.8	53.8	174.5	1099.4	1424.0	1649.1
45°	21.2	21.2	22.8	26.1	29.4	37.5	48.9	133.8	1194.0	1588.7	1825.2
47.5°	17.9	19.6	21.2	24.5	27.7	34.3	44.0	117.4	1287.0	1763.2	2021.0
50°	16.3	16.3	17.9	21.2	26.1	31.0	40.8	115.8	1381.6	1897.0	2221.6
52.5°	14.7	14.7	16.3	19.6	24.5	29.4	39.1	119.1	1459.9	2021.0	2361.9
55°	13.0	13.0	14.7	16.3	21.2	27.7	35.9	122.3	1515.3	2146.6	2474.4
57.5°	11.4	11.4	13.0	16.3	19.6	24.5	32.6	125.6	1605.0	2270.5	2637.5
60°	8.2	8.2	11.4	14.7	17.9	21.2	31.0	128.9	1748.6	2441.8	2776.2
62.5°	4.9	4.9	6.5	11.4	14.7	19.6	27.7	122.3	1882.3	2662.0	2988.2
65°	1.6	3.3	4.9	6.5	11.4	16.3	22.8	110.9	1994.9	2882.2	3184.0
67.5°	0.0	0.0	1.6	4.9	9.8	13.0	19.6	81.6	2012.8	2981.7	3384.6
70°	0.0	0.0	1.6	4.9	8.2	13.0	17.9	45.7	1714.3	2663.6	3102.4
72.5°	0.0	0.0	0.0	3.3	8.2	11.4	16.3	34.3	1264.1	2007.9	2451.6
75°	0.0	0.0	0.0	1.6	6.5	9.8	14.7	26.1	768.3	1339.2	1600.1
77.5°	0.0	0.0	0.0	1.6	4.9	9.8	14.7	22.8	270.8	637.8	751.9
80°	0.0	0.0	0.0	3.3	6.5	9.8	13.0	19.6	65.2	159.9	215.3
82.5°	0.0	0.0	0.0	1.6	4.9	8.2	11.4	16.3	26.1	47.3	75.0
85°	0.0	0.0	0.0	1.6	3.3	8.2	11.4	14.7	17.9	22.8	32.6
87.5°	0.0	0.0	0.0	0.0	1.6	3.3	4.9	6.5	6.5	6.5	11.4
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):

	276°	285°	295°	305°	315°	325°	335°	345°	355°	360°
0°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	502.4	508.9	512.2	518.7	522.0	520.3	518.7	523.6	520.3	515.4
5°	520.3	520.3	525.2	526.9	526.9	522.0	525.2	523.6	520.3	520.3
7.5°	539.9	548.1	548.1	538.3	536.6	533.4	533.4	520.3	515.4	520.3
10°	559.5	566.0	567.6	556.2	541.5	535.0	526.9	510.5	502.4	505.6
12.5°	600.3	600.3	582.3	569.3	549.7	526.9	507.3	484.4	473.0	476.3
15°	629.6	636.1	611.7	582.3	548.1	505.6	484.4	466.5	460.0	455.1
17.5°	686.7	673.7	634.5	592.1	543.2	499.1	484.4	468.1	463.2	463.2
20°	735.6	729.1	670.4	593.7	541.5	512.2	502.4	494.2	492.6	487.7
22.5°	802.5	773.2	698.1	611.7	559.5	533.4	530.1	538.3	533.4	530.1
25°	853.1	828.6	719.3	637.8	587.2	579.1	583.9	592.1	579.1	574.2
27.5°	921.6	875.9	760.1	672.0	624.7	632.9	649.2	650.8	642.7	647.6
30°	985.2	936.3	791.1	711.2	688.3	696.5	721.0	738.9	727.5	721.0
32.5°	1076.5	1001.5	853.1	776.4	768.3	789.5	817.2	828.6	813.9	810.7
35°	1172.8	1076.5	916.7	849.8	864.5	893.9	918.3	937.9	915.1	924.8
37.5°	1322.8	1197.2	1024.3	965.6	972.2	983.6	1029.2	1083.1	1094.5	1074.9
40°	1479.4	1327.7	1123.8	1078.2	1092.9	1123.8	1177.7	1228.2	1254.3	1228.2
42.5°	1660.5	1453.3	1277.2	1223.3	1238.0	1282.1	1353.8	1394.6	1391.4	1352.2
45°	1884.0	1627.9	1420.7	1353.8	1407.7	1446.8	1518.6	1523.5	1492.5	1482.7
47.5°	2055.2	1774.7	1575.7	1533.3	1606.7	1608.3	1624.6	1626.2	1592.0	1580.6
50°	2244.4	1944.3	1748.6	1686.6	1810.6	1753.5	1709.4	1680.1	1627.9	1603.4
52.5°	2430.4	2065.0	1908.4	1844.8	1973.7	1822.0	1742.0	1652.3	1575.7	1549.6
55°	2529.9	2264.0	2141.7	1993.2	2009.5	1841.5	1640.9	1528.4	1397.9	1391.4
57.5°	2647.3	2397.8	2339.0	2094.4	1949.2	1704.5	1430.5	1282.1	1141.8	1125.5
60°	2786.0	2609.8	2547.8	2078.1	1735.5	1432.1	1133.6	942.8	810.7	799.3
62.5°	2940.9	2861.0	2676.7	1918.2	1378.3	1008.0	748.7	588.8	466.5	460.0
65°	3185.6	3071.4	2745.2	1614.8	911.8	645.9	497.5	381.7	308.3	305.0
67.5°	3338.9	3151.3	2591.9	1151.6	505.6	427.4	349.1	277.3	213.7	200.6
70°	3122.0	2892.0	2050.3	659.0	293.6	324.6	269.1	185.9	146.8	143.5
72.5°	2494.0	2146.6	1379.9	309.9	182.7	254.5	195.7	125.6	88.1	84.8
75°	1701.3	1350.6	866.1	143.5	128.9	185.9	143.5	73.4	62.0	62.0
77.5°	760.1	688.3	443.7	88.1	96.2	141.9	83.2	50.6	45.7	44.0
80°	231.6	243.0	181.1	60.4	71.8	107.7	50.6	34.3	27.7	26.1
82.5°	78.3	91.3	81.6	35.9	48.9	76.7	34.3	22.8	19.6	19.6
85°	37.5	45.7	40.8	22.8	26.1	37.5	27.7	17.9	11.4	11.4
87.5°	14.7	21.2	14.7	9.8	14.7	19.6	11.4	8.2	3.3	3.3
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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