

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: P677471

Luminaire Tested: **CCW-SA-1B-830-U-SLR-HSS**

Issue Date: 04/25/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P677471  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1B-830-U-SLR-HSS  
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @450mA w/  
SLR 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: 1972.1 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

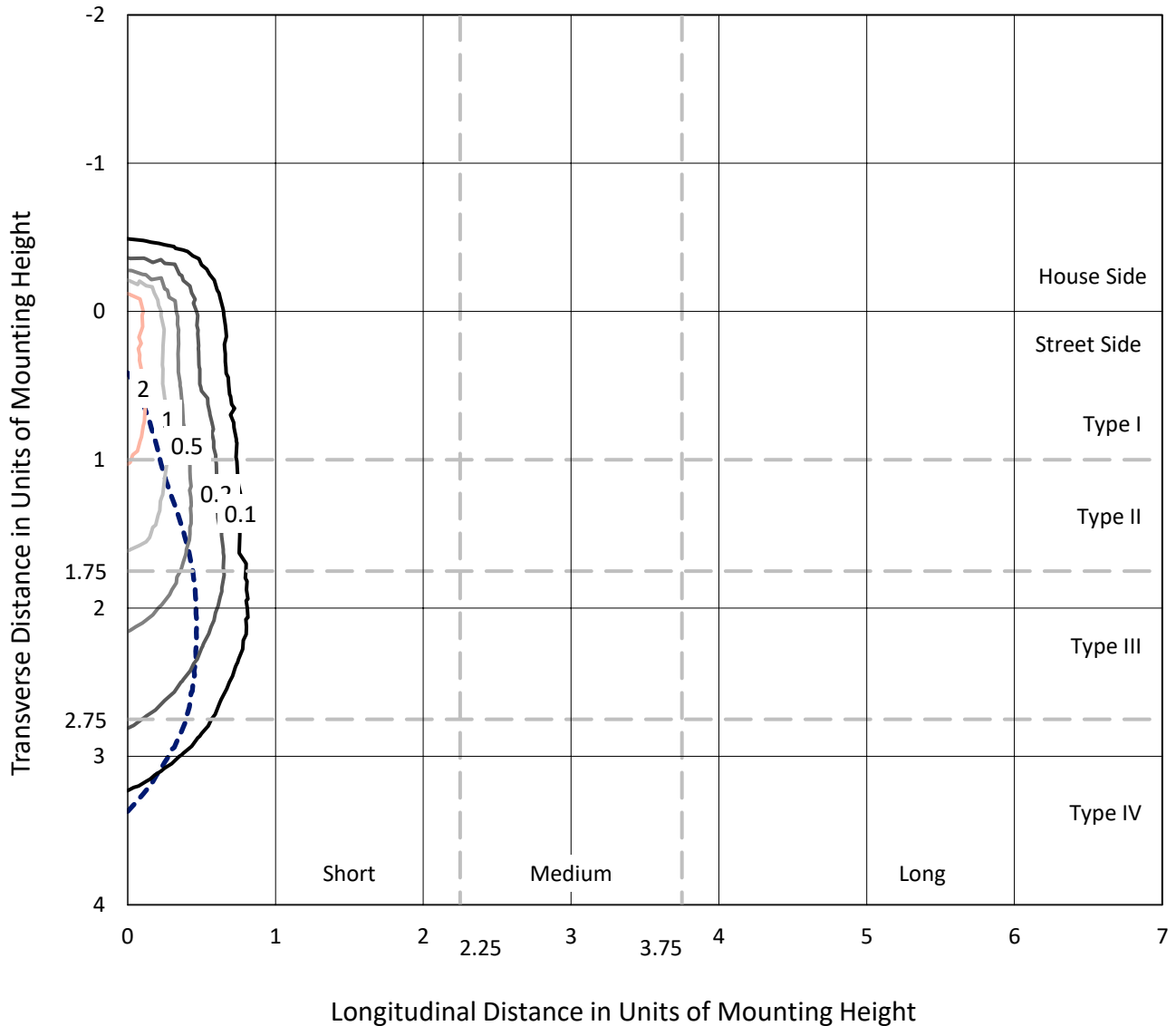
Input Watts (W): 24  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

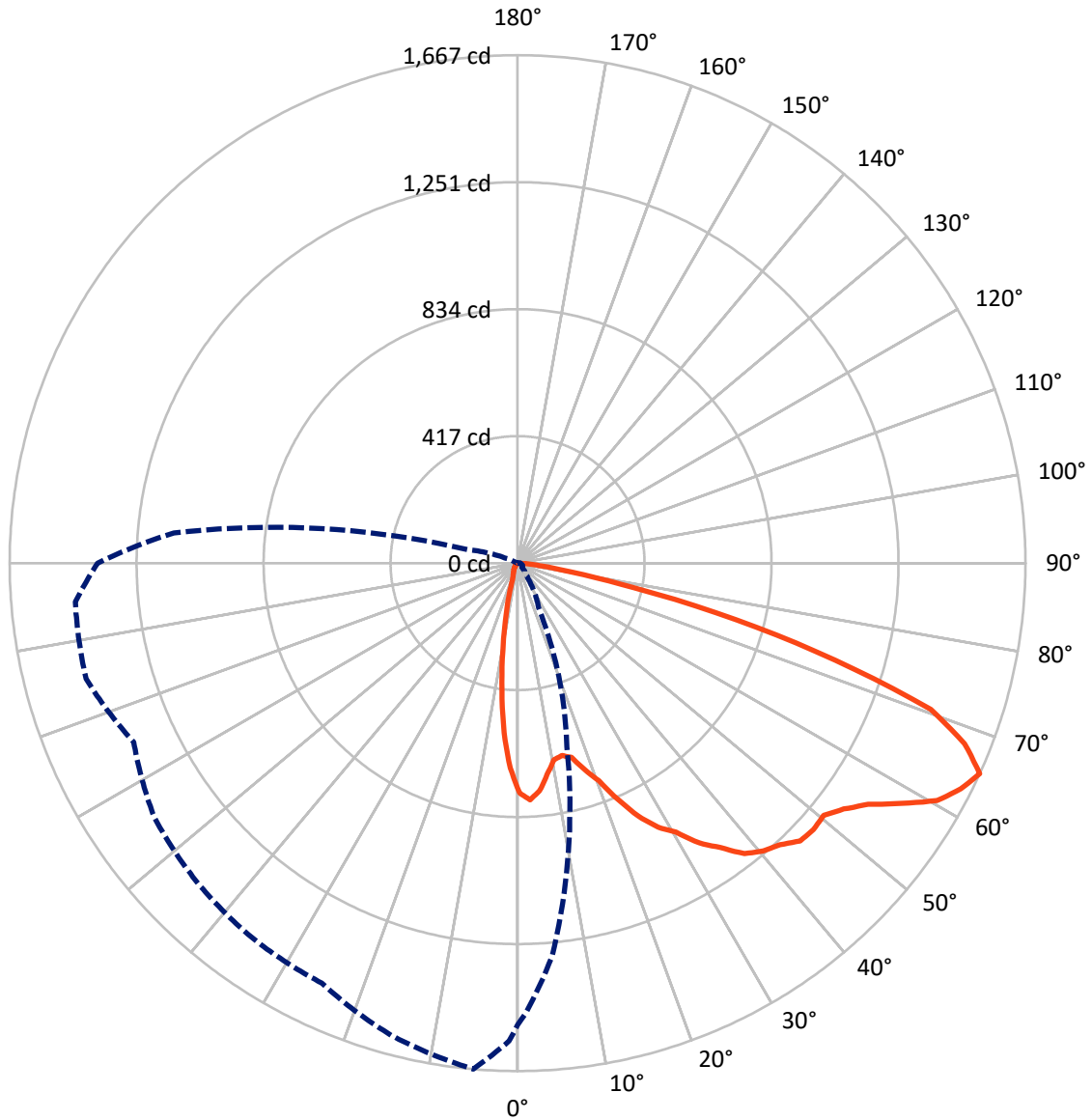
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - N/A

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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
<b>House Side</b>	Lumens	256.1	0.0	256.1
	% Fixture	13.0	0.0	13.0
<b>Street Side</b>	Lumens	1716.0	0.0	1716.0
	% Fixture	87.0	0.0	87.0
<b>Total</b>	Lumens	1972.1	0.0	1972.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.1	2.9
10°-20°	110.6	5.6
20°-30°	154.0	7.8
30°-40°	218.8	11.1
40°-50°	303.5	15.4
50°-60°	413.5	21.0
60°-70°	454.6	23.1
70°-80°	223.4	11.3
80°-90°	36.5	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°	1972.1	100.0
0°-180°	1972.1	100.0



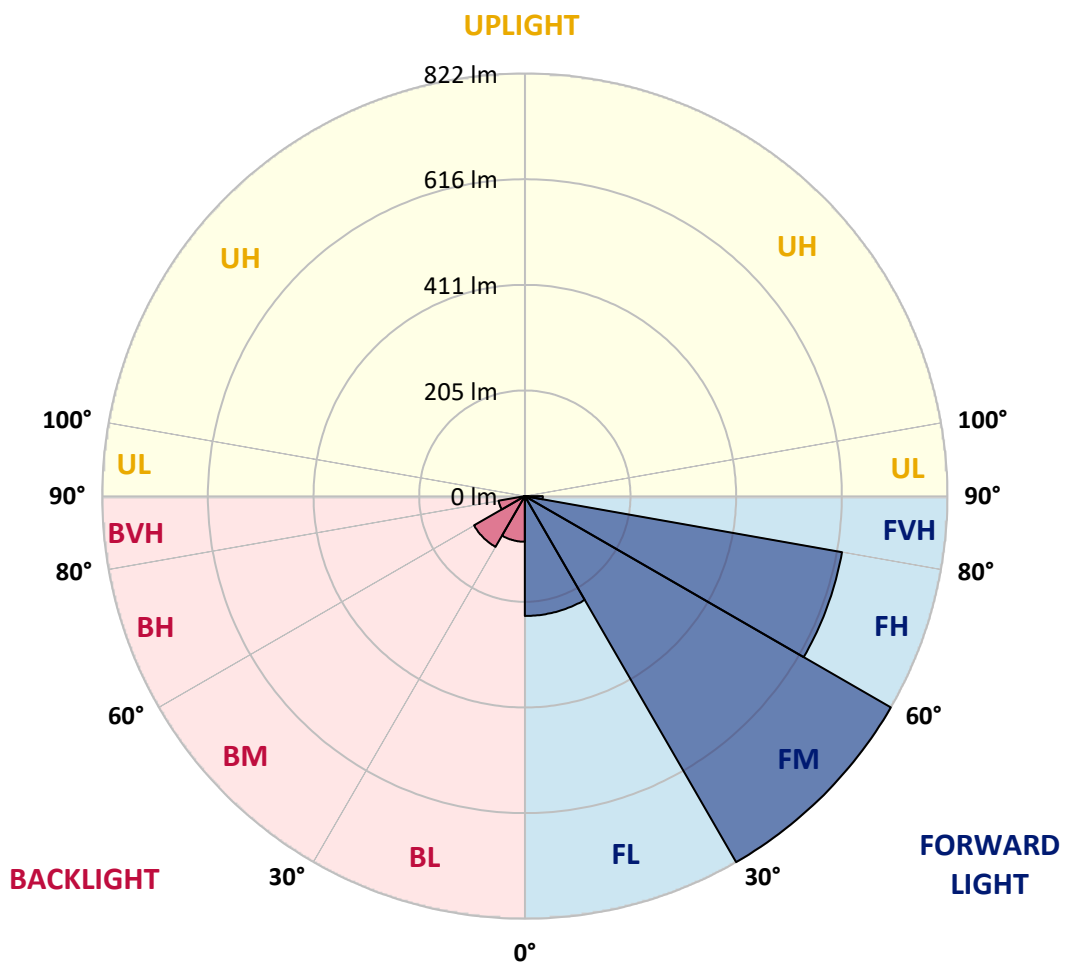
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	233.1	11.8			
FM (30°-60°)	821.8	41.7			
FH (60°-80°)	626.3	31.8			G0/660
FVH (80°-90°)	34.8	1.8			G1/100
BL (0°-30°)	88.7	4.5	B0/110		
BM (30°-60°)	114.0	5.8	B0/220		
BH (60°-80°)	51.7	2.6	B0/110		G0/110
BVH (80°-90°)	1.6	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9
2.5°	769.3	778.4	769.9	740.1	734.8	720.4	698.6	697.0	674.2	676.8	664.6
5°	723.1	732.1	714.1	674.7	638.0	608.8	591.2	559.9	553.0	537.5	537.5
7.5°	675.8	675.2	644.4	611.4	556.7	503.0	478.5	433.3	406.7	392.4	378.6
10°	636.4	627.9	608.8	540.7	481.2	425.3	395.0	365.3	337.6	313.7	289.8
12.5°	608.8	614.1	583.8	509.9	432.8	394.0	361.5	330.2	297.2	270.1	243.5
15°	623.1	614.6	579.0	503.0	424.8	371.6	328.6	290.3	253.6	218.0	197.8
17.5°	667.8	646.0	604.0	503.0	408.3	337.6	285.5	240.3	201.0	169.1	144.1
20°	727.9	702.9	657.7	521.6	396.1	312.6	241.4	184.5	143.6	113.8	94.6
22.5°	789.6	769.9	701.8	529.0	381.8	279.1	190.3	133.5	95.7	76.6	67.0
25°	863.5	835.8	761.4	558.8	360.5	246.7	149.9	93.0	71.2	61.1	55.3
27.5°	922.5	917.7	817.2	576.9	344.5	220.1	118.6	73.9	59.0	51.6	47.9
30°	996.9	970.9	885.3	613.0	326.5	189.8	98.9	66.5	54.2	46.3	43.6
32.5°	1041.6	1029.3	920.9	633.2	306.3	164.8	85.1	58.5	49.4	43.6	40.9
35°	1106.4	1082.0	971.9	646.0	295.6	150.5	76.6	53.2	41.5	35.6	32.4
37.5°	1178.7	1169.7	1033.1	645.5	280.2	142.0	70.7	49.4	39.3	33.0	29.2
40°	1252.7	1216.0	1070.3	660.4	272.2	135.6	66.5	47.3	37.2	31.4	26.6
42.5°	1307.9	1265.9	1113.3	655.0	262.7	124.4	64.9	44.1	35.6	28.7	24.5
45°	1322.8	1307.9	1152.2	653.4	255.7	115.4	62.2	43.6	34.6	27.1	22.9
47.5°	1351.5	1341.4	1200.0	656.1	250.4	108.5	55.8	44.7	33.0	25.5	21.8
50°	1364.3	1346.2	1238.8	662.5	238.2	100.0	50.0	46.8	32.4	25.0	20.7
52.5°	1416.9	1401.0	1292.0	680.6	228.1	88.8	44.1	44.7	33.5	23.4	19.7
55°	1468.5	1450.4	1373.9	722.0	213.7	79.8	37.7	39.3	31.9	21.3	17.5
57.5°	1539.2	1509.5	1428.6	739.0	201.0	67.5	33.5	32.4	29.8	19.1	15.4
60°	1549.9	1562.1	1420.7	728.4	187.7	59.5	29.2	25.0	31.9	17.0	13.3
62.5°	1585.5	1534.4	1383.4	704.0	178.1	54.8	26.1	20.7	27.6	14.9	11.2
65°	1516.9	1479.1	1296.2	625.3	165.9	55.3	22.9	17.0	17.5	12.2	9.0
67.5°	1416.4	1386.6	1151.6	539.7	153.7	54.2	20.2	14.9	13.3	10.6	8.0
70°	1243.1	1178.7	978.3	438.1	135.6	50.5	17.0	13.3	11.2	8.5	5.8
72.5°	904.4	878.3	701.8	338.7	121.8	45.7	16.0	11.2	9.6	6.4	4.8
75°	608.8	565.7	442.9	222.2	97.8	39.9	13.3	10.1	7.4	4.8	3.7
77.5°	321.7	304.1	251.0	105.8	54.2	18.6	7.4	5.8	4.3	3.7	2.1
80°	139.3	123.9	108.5	43.1	19.1	8.5	4.8	3.2	2.7	2.1	1.1
82.5°	71.2	68.1	56.4	18.6	11.2	6.4	2.7	2.1	1.6	1.1	0.5
85°	35.1	36.2	29.8	5.8	6.4	3.7	0.5	0.5	0.0	0.0	0.0
87.5°	2.7	2.7	2.1	1.1	1.6	0.5	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°	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9
2.5°	659.8	667.3	654.5	662.5	658.8	660.4	661.9	657.7	658.8	673.6	674.2
5°	528.5	542.9	537.5	545.0	557.7	551.4	557.2	556.1	557.2	559.3	568.9
7.5°	377.0	372.7	382.8	402.5	425.3	439.2	432.3	428.5	426.4	421.1	427.5
10°	284.5	282.3	279.7	285.5	300.4	315.8	324.3	310.0	302.0	291.9	288.2
12.5°	236.1	222.8	215.3	206.3	210.5	224.4	224.9	211.1	198.3	193.0	198.9
15°	186.1	177.1	163.8	151.0	144.6	155.3	146.2	132.9	116.4	114.3	113.8
17.5°	132.9	127.6	118.0	112.7	105.3	102.6	93.0	72.8	61.1	58.0	59.0
20°	90.4	86.1	85.6	80.8	77.6	75.5	60.1	46.8	43.1	43.6	44.1
22.5°	67.0	64.9	62.2	61.7	59.0	56.4	44.1	39.3	36.7	36.7	38.3
25°	54.8	53.7	51.0	50.0	48.9	45.2	37.2	33.5	32.4	31.4	33.0
27.5°	46.8	46.3	44.7	43.1	42.0	38.3	32.4	29.2	28.2	28.2	28.2
30°	42.0	42.0	39.9	36.7	36.7	32.4	27.6	25.5	24.5	24.5	23.9
32.5°	39.3	38.3	35.6	33.5	31.9	27.6	24.5	22.3	20.7	20.7	21.3
35°	31.9	31.9	31.4	29.8	27.6	23.4	20.7	18.6	17.5	17.0	17.5
37.5°	28.2	26.6	24.5	25.0	23.9	20.2	17.5	16.0	14.4	14.4	14.4
40°	25.5	23.9	21.8	20.2	19.7	18.1	15.4	12.8	11.2	10.6	10.6
42.5°	22.9	21.8	18.6	16.0	15.4	15.4	11.7	9.6	8.0	8.0	8.0
45°	21.3	19.7	17.0	13.8	11.2	11.7	9.6	6.9	5.8	5.3	5.3
47.5°	20.2	18.6	14.9	11.7	8.5	8.5	6.9	4.8	3.7	3.2	3.2
50°	18.6	17.0	13.3	9.6	6.4	5.3	4.3	2.7	1.6	1.1	1.1
52.5°	17.5	16.0	11.7	8.0	5.3	3.7	2.7	0.5	0.0	0.0	0.0
55°	16.0	13.8	10.1	6.4	4.3	2.1	0.5	0.0	0.0	0.0	0.0
57.5°	13.8	12.2	8.0	4.8	2.7	0.5	0.0	0.0	0.0	0.0	0.0
60°	11.7	10.1	6.4	3.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	9.6	8.5	4.8	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	8.0	6.4	3.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	6.9	5.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	5.3	3.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	3.7	2.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	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°	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9
2.5°	676.3	692.3	707.1	711.4	723.1	755.5	755.5	770.9	798.6	808.7	810.8
5°	570.5	587.5	590.7	623.7	639.1	672.1	693.8	746.0	777.3	797.0	809.2
7.5°	433.9	439.7	451.9	482.8	513.1	553.0	594.4	660.9	716.2	738.5	780.0
10°	298.3	315.8	342.4	370.1	417.4	461.5	515.2	577.9	646.0	673.6	709.3
12.5°	201.0	225.4	268.0	307.3	350.9	395.6	446.6	530.6	607.7	646.0	681.6
15°	117.5	147.3	184.0	247.8	305.7	355.7	406.7	491.8	585.4	634.8	678.4
17.5°	59.5	68.6	98.9	154.2	230.8	312.6	388.7	497.1	602.4	663.0	699.2
20°	44.7	47.3	55.8	81.9	157.9	258.4	371.6	505.1	649.7	723.6	743.3
22.5°	38.8	40.9	44.7	53.2	88.8	197.8	347.7	524.8	714.1	783.7	825.2
25°	33.0	35.1	38.3	43.6	56.9	134.5	318.5	545.5	771.5	859.2	898.0
27.5°	28.7	30.3	33.5	37.7	46.3	85.6	268.0	573.2	859.2	950.7	960.8
30°	24.5	26.1	28.7	33.5	39.3	60.6	196.7	576.9	907.6	990.5	1018.7
32.5°	21.3	21.8	25.0	29.2	33.0	47.9	138.2	580.6	943.2	1042.1	1048.0
35°	17.5	18.6	21.8	24.5	28.7	37.7	104.7	562.0	989.5	1095.3	1093.7
37.5°	14.4	16.0	18.1	20.2	23.4	31.9	83.5	527.4	1047.4	1177.7	1127.7
40°	11.2	12.8	14.9	17.5	19.7	28.7	62.7	475.3	1108.0	1218.1	1164.9
42.5°	8.0	9.0	11.2	13.8	17.5	23.9	45.2	413.7	1132.0	1265.4	1209.6
45°	5.8	6.9	8.5	11.7	18.1	19.1	31.4	357.3	1157.5	1286.1	1199.5
47.5°	3.2	4.3	6.4	10.1	16.0	14.4	22.3	306.8	1186.7	1304.8	1207.5
50°	1.1	1.6	3.7	10.6	12.8	11.2	17.5	279.7	1215.4	1308.5	1223.4
52.5°	0.0	0.0	2.1	11.2	9.6	8.5	15.4	269.0	1208.0	1320.2	1213.3
55°	0.0	0.0	0.5	4.8	5.3	6.4	12.8	268.5	1260.6	1323.9	1268.6
57.5°	0.0	0.0	0.0	1.6	3.2	5.3	11.2	251.5	1294.1	1416.4	1343.0
60°	0.0	0.0	0.0	0.5	2.1	3.7	8.5	236.6	1328.1	1457.9	1422.8
62.5°	0.0	0.0	0.0	0.0	0.5	1.6	5.8	213.7	1259.6	1454.7	1499.9
65°	0.0	0.0	0.0	0.0	0.0	0.0	3.7	169.1	1133.0	1378.7	1457.3
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.1	117.0	992.1	1283.0	1379.2
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.7	800.7	1125.0	1169.7
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	571.6	893.2	959.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	353.6	652.9	734.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	229.2	494.5	557.7
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	122.3	310.0	360.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.2	188.2	216.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	114.3	130.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5	23.4
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):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9	753.9
2.5°	811.9	827.3	833.2	824.1	825.2	806.6	803.9	777.9	767.2	769.3
5°	849.1	871.4	883.7	873.6	850.7	815.1	782.6	751.8	732.7	723.1
7.5°	840.6	865.6	881.0	890.6	864.5	807.1	757.7	699.7	675.2	675.8
10°	793.8	845.9	877.3	865.1	852.8	795.4	718.8	656.1	634.3	636.4
12.5°	756.1	814.0	832.6	842.2	817.2	771.5	719.9	648.1	623.7	608.8
15°	732.7	775.7	776.8	791.7	781.6	781.6	731.1	660.9	639.6	623.1
17.5°	732.7	742.2	741.2	746.5	763.5	783.7	759.2	712.5	670.5	667.8
20°	749.1	719.4	712.5	714.6	728.9	789.0	821.5	763.0	736.4	727.9
22.5°	787.4	722.0	680.0	672.6	716.7	788.5	861.3	842.7	796.5	789.6
25°	840.1	717.2	671.5	661.9	695.4	807.6	916.1	919.8	877.8	863.5
27.5°	890.0	738.5	670.5	668.3	712.5	803.4	953.8	981.5	934.2	922.5
30°	907.1	759.8	690.1	661.9	718.8	818.8	952.8	1025.1	994.3	996.9
32.5°	927.3	781.0	692.3	681.1	746.0	843.8	983.1	1095.3	1072.9	1041.6
35°	957.0	809.8	712.5	702.4	765.1	866.1	989.5	1146.8	1143.1	1106.4
37.5°	982.6	837.9	754.5	756.1	823.6	902.3	1017.6	1210.1	1203.7	1178.7
40°	1000.6	877.3	819.9	824.1	874.6	942.7	1067.6	1242.0	1289.3	1252.7
42.5°	1003.3	912.4	894.8	928.9	976.2	1005.4	1087.8	1263.8	1331.9	1307.9
45°	1013.4	968.2	1017.1	1042.1	1080.9	1060.7	1086.8	1301.0	1335.1	1322.8
47.5°	1052.7	1069.8	1131.4	1207.5	1221.3	1154.8	1112.3	1306.9	1353.1	1351.5
50°	1093.7	1178.7	1265.4	1315.9	1333.5	1219.7	1136.2	1302.1	1377.1	1364.3
52.5°	1139.4	1273.4	1398.3	1460.5	1451.0	1291.5	1163.3	1340.9	1421.2	1416.9
55°	1168.1	1315.9	1483.9	1570.6	1563.2	1371.7	1249.5	1396.7	1479.1	1468.5
57.5°	1244.1	1385.0	1569.0	1609.4	1629.1	1477.0	1309.5	1488.2	1527.5	1539.2
60°	1306.9	1430.2	1591.3	1649.8	1656.7	1539.8	1414.8	1582.3	1589.2	1549.9
62.5°	1398.9	1447.8	1544.0	1596.7	1632.3	1575.4	1509.5	1632.8	1588.1	1585.5
65°	1466.4	1390.4	1455.8	1485.0	1507.9	1521.2	1604.6	1667.4	1568.5	1516.9
67.5°	1428.6	1281.9	1269.7	1271.3	1278.2	1358.5	1572.7	1582.8	1458.9	1416.4
70°	1257.4	1051.7	1035.2	1048.0	1013.4	1110.2	1443.5	1438.7	1287.2	1243.1
72.5°	1017.1	766.7	738.5	756.1	764.0	866.6	1214.4	1091.0	939.0	904.4
75°	808.2	562.0	474.3	516.8	543.9	631.1	948.5	741.2	655.6	608.8
77.5°	634.8	425.3	369.0	352.0	377.0	458.8	690.1	389.2	343.5	321.7
80°	402.5	312.6	339.2	314.8	325.4	327.5	359.4	177.1	140.9	139.3
82.5°	242.4	213.7	254.1	139.8	254.7	227.6	149.4	80.3	71.2	71.2
85°	171.7	132.4	87.7	56.9	113.2	124.9	58.0	41.5	36.2	35.1
87.5°	86.1	40.9	19.7	12.8	14.4	23.4	6.9	3.2	3.2	2.7
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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