

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: P676174

Luminaire Tested: **CCW-SA-1A-830-U-T1**

Issue Date: 04/25/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P676174  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1A-830-U-T1  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @350mA w/  
T1 distribution lens  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

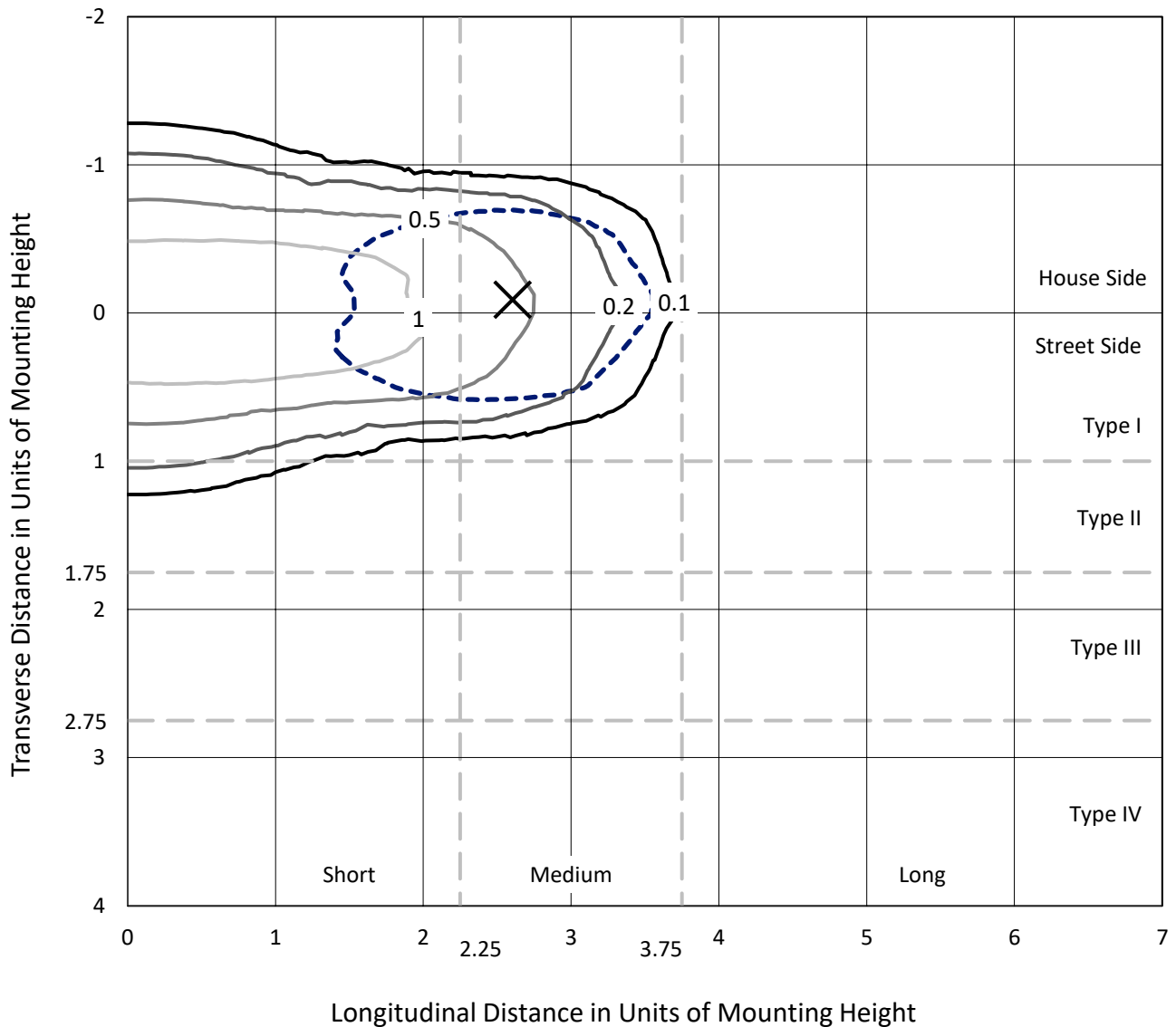
Lumens per Lamp: N/A  
Luminaire Lumens: 2116.9 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 18  
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

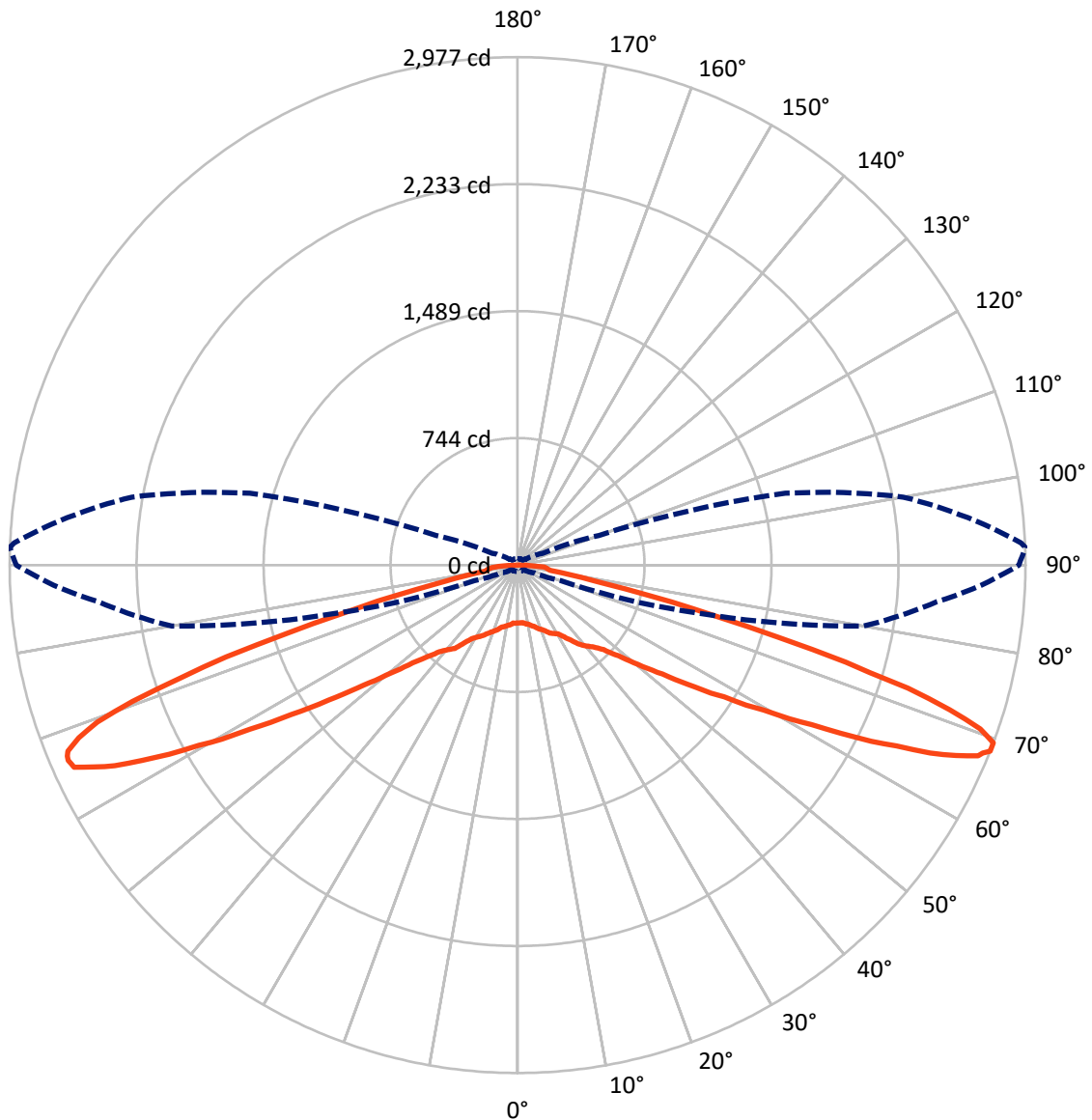
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.6 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 92-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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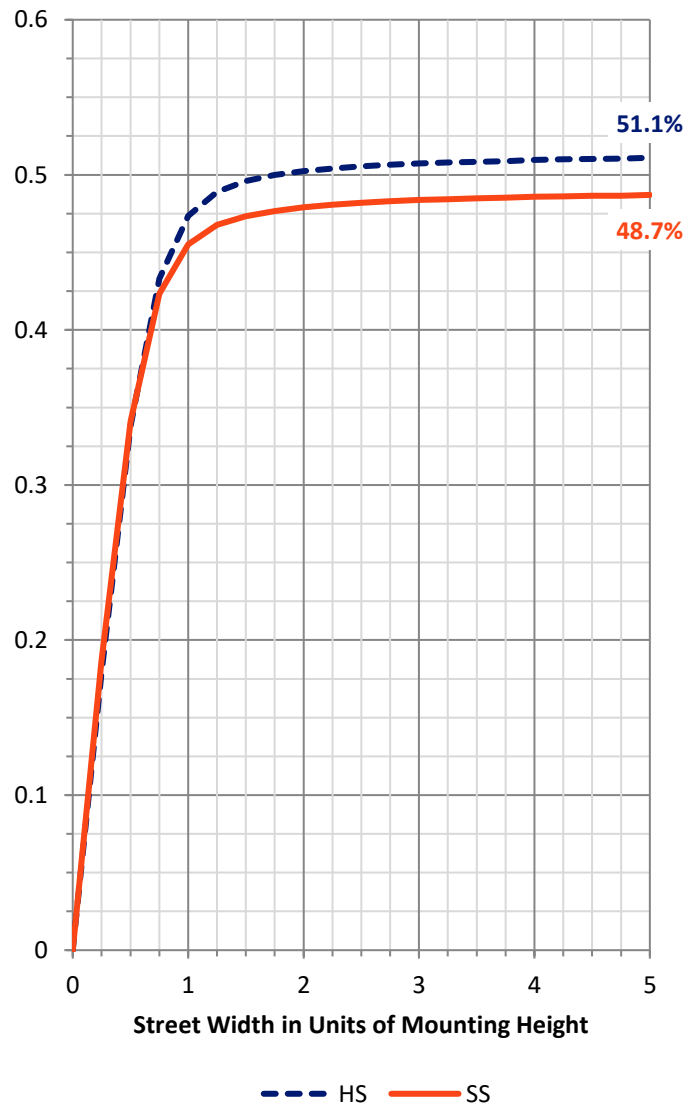
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1090.2	0.0	1090.2
	% Fixture	51.5	0.0	51.5
<b>Street Side</b>	Lumens	1026.7	0.0	1026.7
	% Fixture	48.5	0.0	48.5
<b>Total</b>	Lumens	2116.9	0.0	2116.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	1.6
10°-20°	109.8	5.2
20°-30°	187.4	8.9
30°-40°	261.7	12.4
40°-50°	332.9	15.7
50°-60°	420.9	19.9
60°-70°	519.0	24.5
70°-80°	226.7	10.7
80°-90°	24.6	1.2
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°	2116.9	100.0
0°-180°	2116.9	100.0



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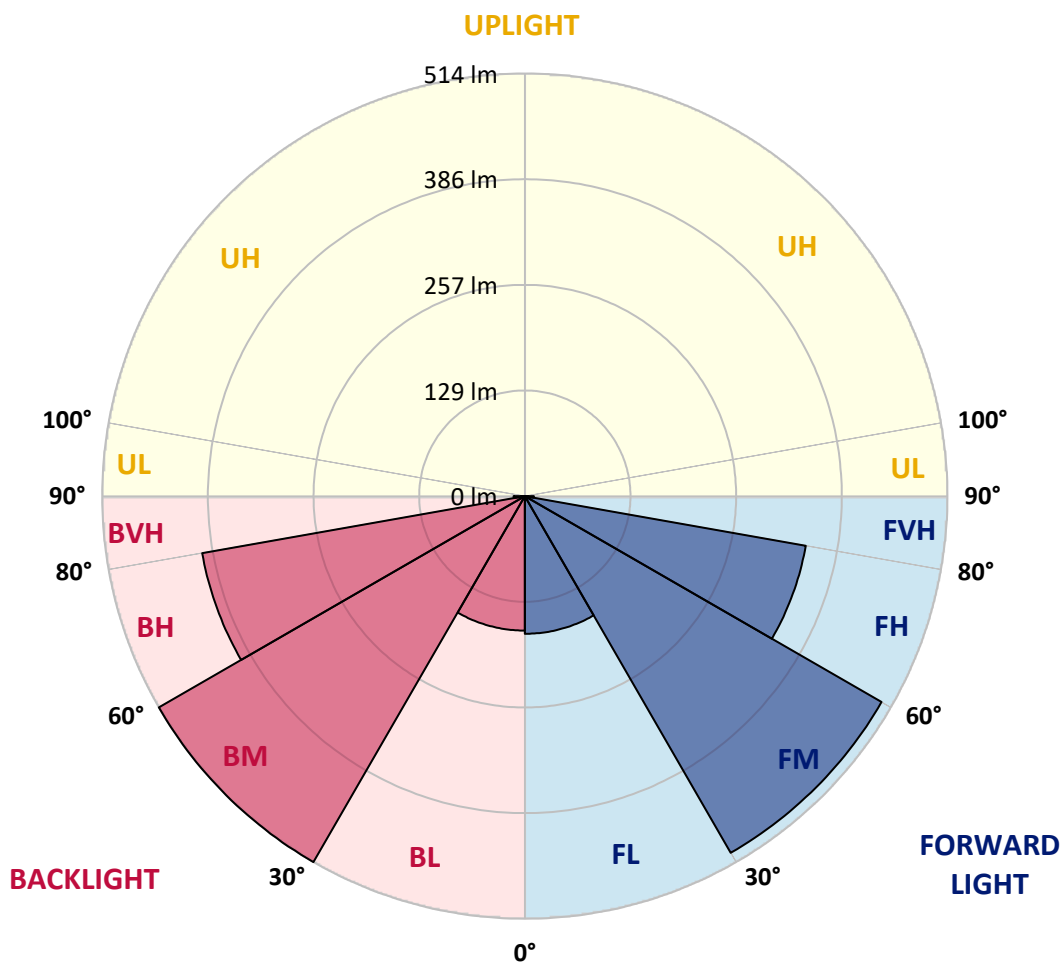
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	167.5	7.9			
FM (30°-60°)	501.2	23.7			
FH (60°-80°)	347.1	16.4			G0/660
FVH (80°-90°)	10.9	0.5			G1/100
BL (0°-30°)	163.6	7.7	B1/500		
BM (30°-60°)	514.2	24.3	B1/1000		
BH (60°-80°)	398.6	18.8	B1/500		G1/500
BVH (80°-90°)	13.7	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5
2.5°	345.7	345.3	346.5	347.2	343.7	344.9	344.1	343.3	340.5	339.3	336.9
5°	355.2	356.4	360.4	356.8	358.4	356.4	350.0	352.0	348.4	347.6	345.3
7.5°	371.9	369.5	375.1	371.1	372.3	368.3	365.5	361.9	361.2	355.6	356.0
10°	375.5	380.2	382.6	381.8	382.6	384.6	379.4	373.9	366.3	364.7	359.2
12.5°	373.1	377.4	383.8	389.0	392.5	393.3	391.3	390.2	387.0	377.8	377.4
15°	370.7	367.5	371.5	389.4	401.3	409.2	412.0	405.3	406.0	394.1	389.4
17.5°	354.8	350.0	365.5	383.0	397.7	415.2	428.7	426.7	426.7	417.2	410.4
20°	333.7	341.7	349.6	371.9	398.9	425.1	450.9	449.8	445.0	442.2	427.5
22.5°	315.9	319.4	334.1	357.6	391.3	427.9	458.5	480.3	469.2	458.1	449.4
25°	303.5	300.4	319.0	343.3	384.2	423.1	472.8	495.4	501.4	493.1	476.4
27.5°	286.1	286.1	300.8	323.8	361.2	420.7	486.7	521.3	530.0	517.7	493.5
30°	266.2	268.6	281.3	307.5	344.1	403.3	492.3	551.1	558.2	547.5	522.5
32.5°	250.7	250.7	265.0	292.8	332.1	395.3	488.7	580.5	594.0	586.0	560.2
35°	234.0	232.8	243.2	273.7	313.1	379.8	487.5	603.9	634.1	634.5	607.5
37.5°	210.2	214.9	228.1	252.3	298.0	364.7	483.9	632.1	686.1	695.3	676.6
40°	194.3	196.3	208.2	234.8	274.5	346.8	478.8	655.2	720.7	752.1	726.3
42.5°	171.2	174.0	183.2	216.1	251.9	321.4	456.1	671.4	770.0	805.7	783.9
45°	147.0	148.6	162.1	189.1	227.7	291.2	431.9	697.7	817.7	890.8	878.0
47.5°	118.0	118.8	130.3	158.5	198.7	261.0	394.5	696.5	856.2	975.8	1011.5
50°	92.2	94.2	102.9	125.9	163.7	224.1	351.2	686.9	904.7	1072.7	1143.1
52.5°	73.5	73.9	79.5	97.7	126.3	187.1	304.7	656.7	950.4	1167.7	1304.4
55°	60.8	60.8	64.0	75.1	96.9	142.2	250.3	606.7	955.9	1272.6	1480.4
56°	58.4	57.6	60.4	69.9	87.4	128.3	224.9	572.9	963.9	1321.0	1568.6
57°	55.2	55.6	57.2	64.0	78.7	113.6	196.7	539.9	958.3	1360.8	1633.7
58°	53.6	52.8	56.0	60.4	69.5	100.9	177.2	501.0	949.6	1393.4	1728.7
59°	51.3	50.9	52.8	56.8	64.8	89.8	153.4	458.9	932.5	1435.5	1799.4
60°	50.5	50.1	50.9	54.0	59.6	78.7	135.1	409.6	886.8	1478.8	1887.2
61°	48.1	48.5	50.1	52.0	56.4	70.7	121.6	359.2	857.0	1515.3	1984.2
62°	48.5	47.7	48.5	50.1	53.2	65.2	106.5	309.5	803.8	1556.7	2056.9
63°	46.1	45.7	46.9	48.9	50.5	58.8	93.0	267.4	743.4	1566.2	2118.4
64°	45.3	44.9	45.3	48.1	48.5	55.2	82.2	228.5	656.0	1582.5	2197.5
65°	43.3	43.3	44.1	45.3	46.9	52.0	73.5	198.3	568.9	1539.6	2221.7
66°	41.7	42.1	42.1	44.1	45.3	48.5	67.5	168.5	485.5	1471.2	2245.2
67°	40.5	40.5	40.9	42.5	43.7	45.7	60.8	145.8	409.6	1389.8	2209.0
67.5°	39.7	40.1	40.1	41.7	42.9	45.7	58.0	138.3	366.3	1300.4	2182.0
68°	38.5	38.9	38.9	40.5	41.7	44.1	56.0	126.3	337.7	1242.4	2132.0
69°	37.7	37.3	37.3	38.9	40.5	42.1	52.0	110.5	268.6	1080.3	2058.8
70°	35.4	35.4	36.2	37.3	38.5	40.1	48.1	97.3	227.3	894.3	1870.5
71°	34.2	33.8	34.2	35.4	36.6	38.5	44.1	86.2	185.9	742.6	1685.4
72°	31.8	32.6	32.6	33.8	35.0	36.2	41.3	75.1	156.1	593.6	1481.6
72.5°	31.4	31.4	31.8	33.0	33.8	35.8	39.7	71.9	142.6	523.3	1396.1
73°	30.2	30.2	30.6	31.8	32.6	34.6	38.5	64.8	129.9	465.6	1236.4
74°	29.0	28.6	28.6	30.2	30.6	32.6	36.2	57.2	108.9	350.8	992.5
75°	27.0	27.0	27.4	28.2	28.6	30.2	33.4	50.9	91.8	272.2	776.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
77.5°	22.2	22.6	23.0	23.8	23.8	25.0	27.4	35.4	56.0	137.9	356.4
80°	16.3	17.1	18.3	19.5	19.1	19.1	21.5	25.4	33.4	62.0	136.7
82.5°	13.1	13.9	12.7	14.3	14.3	13.5	15.5	18.7	22.6	30.6	48.9
85°	8.7	9.1	7.5	8.7	8.3	8.3	10.3	11.1	13.9	17.1	24.2
87.5°	4.0	4.0	3.2	3.6	3.6	3.6	5.2	4.0	6.0	8.3	14.3
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):**

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
0°	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5	338.5
2.5°	339.3	340.9	340.9	339.3	338.1	339.3	338.5	336.5	338.5	339.3	339.7
5°	344.1	340.9	342.5	338.9	341.3	340.9	340.1	342.1	342.5	342.5	345.3
7.5°	349.2	353.2	348.0	348.4	349.6	344.9	346.5	347.2	345.7	348.8	351.2
10°	358.4	360.0	358.4	352.4	356.4	353.2	352.0	355.6	354.8	355.6	359.2
12.5°	366.7	369.5	365.1	364.7	362.7	360.0	361.5	361.2	366.7	367.5	371.9
15°	383.8	376.6	375.1	374.7	373.9	372.7	373.5	373.9	381.0	382.2	392.5
17.5°	398.5	397.3	388.6	391.7	391.7	387.0	385.0	391.7	397.3	403.3	410.4
20°	413.6	412.4	402.9	403.3	399.7	404.1	401.7	408.0	417.6	419.6	425.9
22.5°	431.5	426.3	419.6	420.4	421.5	418.4	416.8	425.5	435.1	440.6	441.0
25°	459.7	446.6	441.0	441.8	440.2	437.8	439.0	450.1	454.9	466.8	464.5
27.5°	474.8	467.2	463.3	454.1	454.5	450.9	455.7	472.4	481.9	491.1	472.8
30°	493.1	488.3	470.8	467.6	467.2	465.6	474.4	495.8	510.1	515.3	489.1
32.5°	528.8	509.7	505.4	502.6	496.2	498.2	502.6	530.8	553.4	552.3	504.2
35°	569.7	556.6	544.3	541.9	541.1	535.6	543.1	576.1	593.6	588.4	509.7
37.5°	635.3	615.4	598.7	589.6	588.0	584.0	601.9	628.1	650.8	630.5	514.1
40°	667.5	645.2	629.7	624.2	625.4	630.9	648.4	688.5	698.5	661.1	517.7
42.5°	713.6	689.3	658.7	656.0	652.4	655.2	688.9	743.0	751.3	702.4	504.2
45°	795.4	758.9	723.5	707.6	708.4	715.9	768.4	827.6	812.1	731.0	482.7
47.5°	898.7	845.1	816.5	795.0	805.3	797.0	880.4	927.7	874.9	767.2	456.5
50°	1054.1	979.0	940.0	914.2	918.6	925.7	1010.4	1050.5	944.4	784.7	416.4
52.5°	1249.9	1153.4	1096.2	1061.6	1064.8	1080.3	1189.5	1177.2	1023.9	799.4	362.7
55°	1484.3	1385.0	1274.2	1259.9	1256.3	1293.2	1413.6	1309.9	1095.4	775.9	307.1
56°	1608.3	1502.6	1387.4	1358.0	1349.3	1375.1	1516.5	1376.3	1120.0	749.7	280.5
57°	1713.6	1612.7	1486.3	1436.3	1447.4	1495.9	1618.6	1438.7	1142.7	722.7	255.5
58°	1858.2	1743.0	1609.5	1571.4	1561.4	1600.0	1728.7	1501.4	1150.2	694.9	232.4
59°	2002.4	1864.2	1743.8	1674.3	1677.0	1747.4	1837.1	1576.1	1161.7	659.5	203.0
60°	2112.1	2042.6	1881.6	1829.6	1822.4	1924.2	1945.2	1626.2	1174.0	611.9	182.4
61°	2267.4	2176.8	2027.1	1959.9	1979.4	2060.8	2062.0	1689.0	1155.8	551.5	156.9
62°	2379.1	2355.2	2197.9	2133.9	2128.0	2236.0	2183.6	1744.2	1139.9	494.3	138.7
63°	2509.8	2509.8	2366.4	2316.3	2319.1	2404.5	2236.4	1799.4	1121.6	431.1	122.0
64°	2577.7	2663.2	2530.8	2460.5	2478.8	2552.7	2330.6	1835.6	1065.2	367.1	107.3
65°	2636.5	2764.9	2691.4	2658.8	2631.0	2674.7	2412.1	1869.3	979.0	312.3	95.4
66°	2686.2	2860.6	2836.4	2801.4	2798.6	2788.7	2427.9	1868.1	890.0	263.8	83.4
67°	2661.2	2862.6	2906.7	2921.4	2917.0	2812.1	2400.1	1825.6	775.9	222.9	74.3
67.5°	2638.5	2846.3	2948.8	2940.5	2958.7	2832.0	2404.9	1773.6	694.9	201.8	69.9
68°	2618.7	2824.5	2965.9	2976.6	2967.5	2834.4	2378.7	1732.3	639.7	189.5	66.0
69°	2468.1	2720.8	2938.5	2977.0	2953.6	2743.4	2295.2	1624.6	508.2	161.7	60.8
70°	2317.1	2586.5	2805.4	2876.1	2847.1	2567.4	2190.0	1453.4	419.2	138.3	54.8
71°	2108.1	2337.0	2628.2	2670.7	2635.7	2367.2	1972.2	1272.6	326.2	117.2	48.9
72°	1824.4	2018.7	2296.8	2399.7	2348.1	2079.1	1752.1	1051.7	264.2	98.5	44.5
72.5°	1683.8	1882.8	2151.0	2159.4	2169.3	1954.0	1658.8	923.7	230.4	91.4	43.3
73°	1550.3	1745.4	1977.4	2006.8	1964.7	1743.0	1519.3	826.0	210.6	83.4	41.7
74°	1256.3	1367.5	1559.8	1588.4	1551.5	1421.2	1241.6	633.3	167.7	71.9	38.1
75°	988.5	1049.7	1223.7	1206.2	1151.0	1105.3	962.7	483.9	135.9	63.2	35.4



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**CANDELA DISTRIBUTION (continued):**

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
77.5°	444.2	481.1	510.1	510.1	513.3	489.9	443.8	222.1	83.8	45.7	29.0
80°	169.3	189.5	195.9	196.3	199.1	206.2	191.9	109.3	49.7	32.6	23.4
82.5°	122.8	171.6	184.7	175.2	176.0	158.9	73.5	48.5	31.4	22.6	17.1
85°	111.2	149.4	158.1	156.9	157.3	147.0	43.3	23.8	18.3	14.3	11.9
87.5°	54.0	52.8	56.0	63.2	61.6	79.9	36.6	11.9	7.9	6.0	6.0
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):**

	135°	145°	155°	165°	175°	180°
0°	338.5	338.5	338.5	338.5	338.5	338.5
2.5°	336.5	336.1	341.7	336.1	339.3	336.9
5°	340.5	342.1	343.3	345.7	340.1	345.7
7.5°	352.4	354.0	354.4	356.4	354.0	353.6
10°	361.5	365.5	367.9	360.0	364.7	364.3
12.5°	379.4	375.5	375.1	373.5	369.1	367.5
15°	392.1	386.2	382.6	376.3	371.1	369.1
17.5°	410.0	398.5	383.8	370.7	361.5	354.4
20°	421.1	400.5	371.1	355.6	341.7	344.9
22.5°	428.3	398.5	359.6	339.7	325.8	329.8
25°	430.7	388.6	351.6	327.0	313.5	310.7
27.5°	423.9	377.0	336.1	308.3	296.4	298.8
30°	420.7	360.4	321.8	294.4	278.5	280.9
32.5°	412.4	343.3	302.7	274.9	263.4	259.4
35°	400.5	329.0	284.5	258.2	244.3	241.2
37.5°	385.8	311.1	268.6	236.8	224.5	222.1
40°	363.9	289.6	245.5	218.1	203.8	203.4
42.5°	344.9	269.0	224.1	195.9	181.6	182.4
45°	320.6	241.2	199.4	175.2	160.9	161.7
47.5°	289.6	215.3	176.0	149.0	137.1	136.3
50°	253.1	185.9	147.4	124.4	114.4	112.4
52.5°	218.1	156.1	120.8	100.1	91.8	91.0
55°	174.0	121.6	94.2	78.7	72.3	72.7
56°	158.1	112.0	85.8	71.9	67.1	67.1
57°	143.0	99.3	77.9	66.4	62.0	62.0
58°	126.3	87.4	70.7	60.0	58.0	56.4
59°	114.8	79.5	64.0	56.8	53.6	53.2
60°	101.3	71.5	59.6	53.2	50.9	50.5
61°	89.8	64.4	54.8	49.7	48.9	48.9
62°	80.3	59.6	50.9	48.1	47.7	46.5
63°	71.9	54.8	48.9	45.7	44.5	45.7
64°	64.4	50.5	47.3	44.9	43.3	44.1
65°	58.4	48.5	45.3	43.7	42.1	42.5
66°	54.4	45.3	43.7	41.7	40.9	41.3
67°	49.3	43.7	42.1	40.1	39.7	40.1
67.5°	47.7	42.5	41.3	39.3	38.9	39.3
68°	46.5	41.7	40.9	38.9	38.5	38.1
69°	43.3	40.1	38.9	38.1	37.3	36.9
70°	40.5	38.5	37.7	36.6	35.8	35.4
71°	38.9	36.6	36.2	35.0	34.2	33.8
72°	36.9	35.4	34.6	33.0	32.6	33.0
72.5°	36.6	34.6	34.2	32.6	32.2	32.2
73°	35.4	33.0	33.4	31.8	31.0	31.8
74°	33.0	32.2	31.4	30.2	29.8	29.8
75°	31.0	30.2	29.4	28.6	28.6	28.6



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**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
77.5°	26.2	25.8	26.2	24.6	24.2	23.8
80°	21.1	21.1	21.5	20.3	19.5	19.1
82.5°	15.9	16.3	17.1	15.9	15.1	14.3
85°	10.3	10.7	10.7	9.5	11.1	10.3
87.5°	5.2	5.6	5.2	4.8	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)