

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: P676179

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

Issue Date: 04/25/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P676179  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1F-830-U-T1  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @1200mA w/  
T1 distribution lens  
Light Source: (16) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

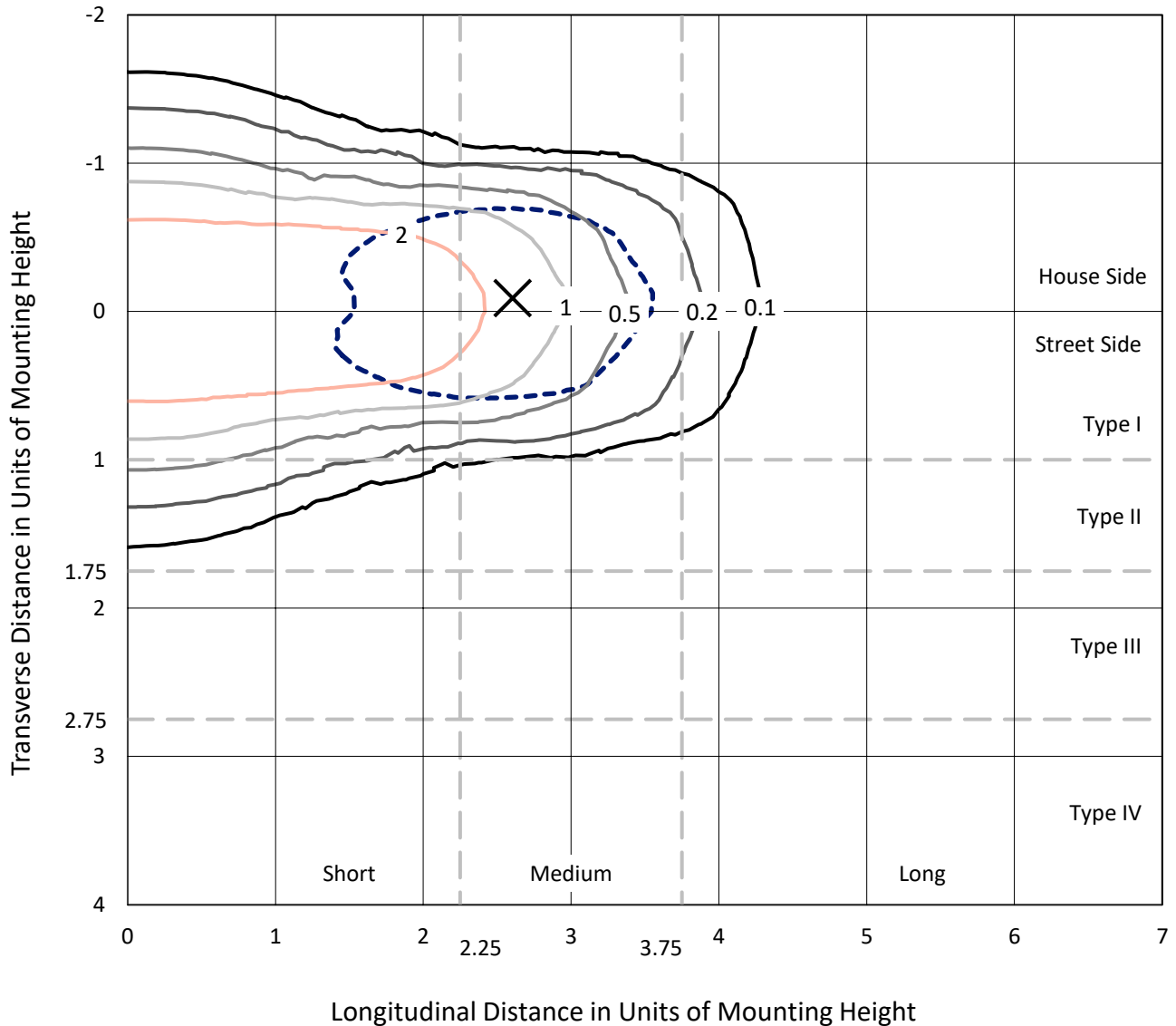
Lumens per Lamp: N/A  
Luminaire Lumens: 5801.5 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B3 - U0 - G3

Input Watts (W): 67  
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

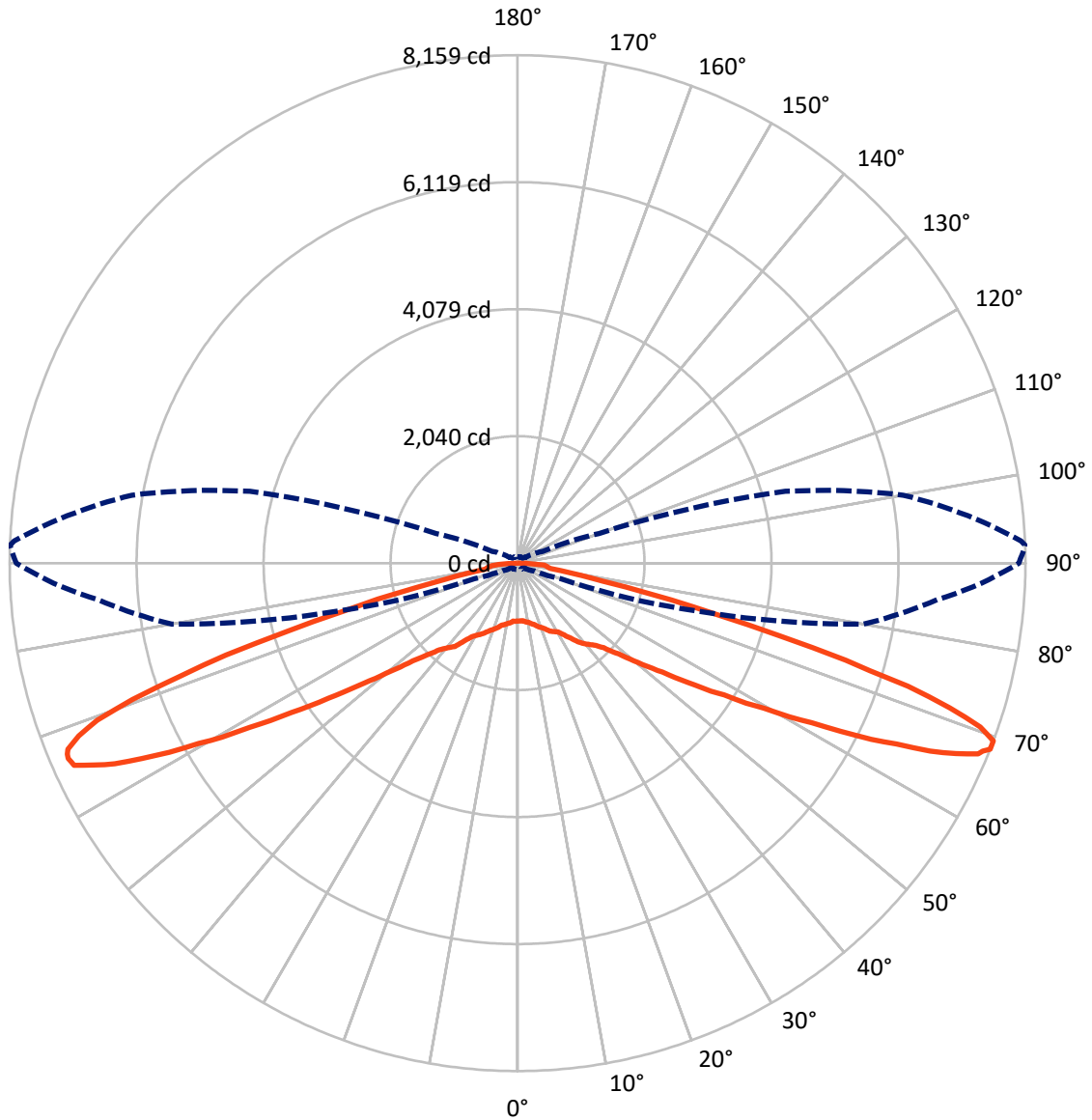
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.5 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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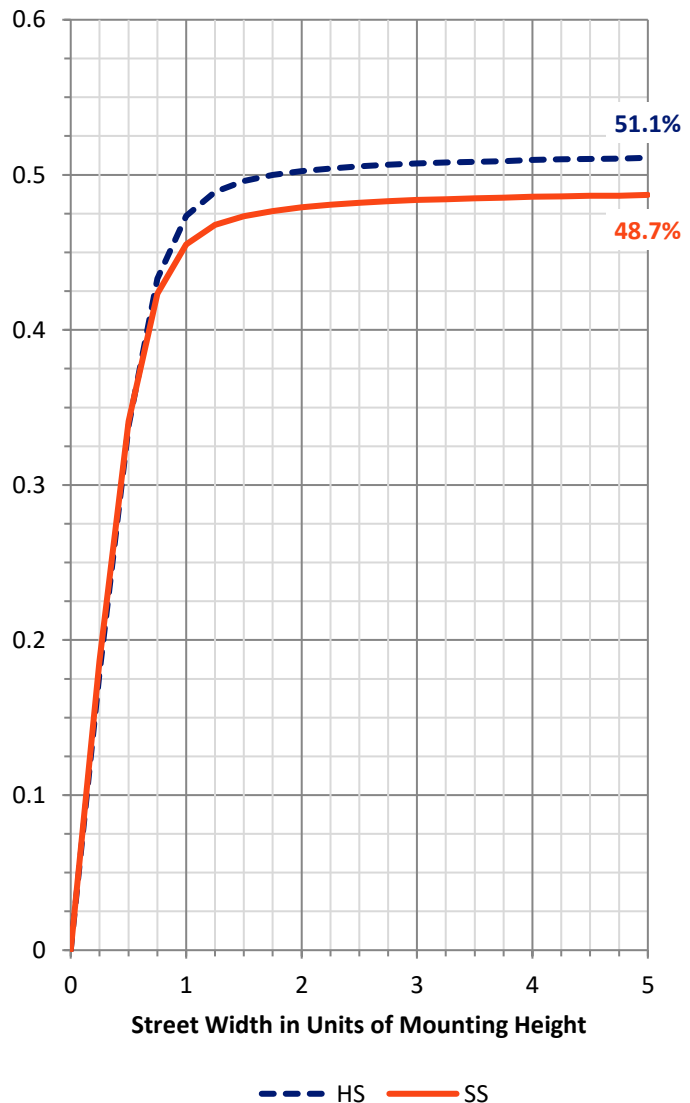
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2987.7	0.0	2987.7
	% Fixture	51.5	0.0	51.5
<b>Street Side</b>	Lumens	2813.8	0.0	2813.8
	% Fixture	48.5	0.0	48.5
<b>Total</b>	Lumens	5801.5	0.0	5801.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.9	1.6
10°-20°	300.9	5.2
20°-30°	513.6	8.9
30°-40°	717.1	12.4
40°-50°	912.2	15.7
50°-60°	1153.4	19.9
60°-70°	1422.5	24.5
70°-80°	621.4	10.7
80°-90°	67.4	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°	5801.5	100.0
0°-180°	5801.5	100.0



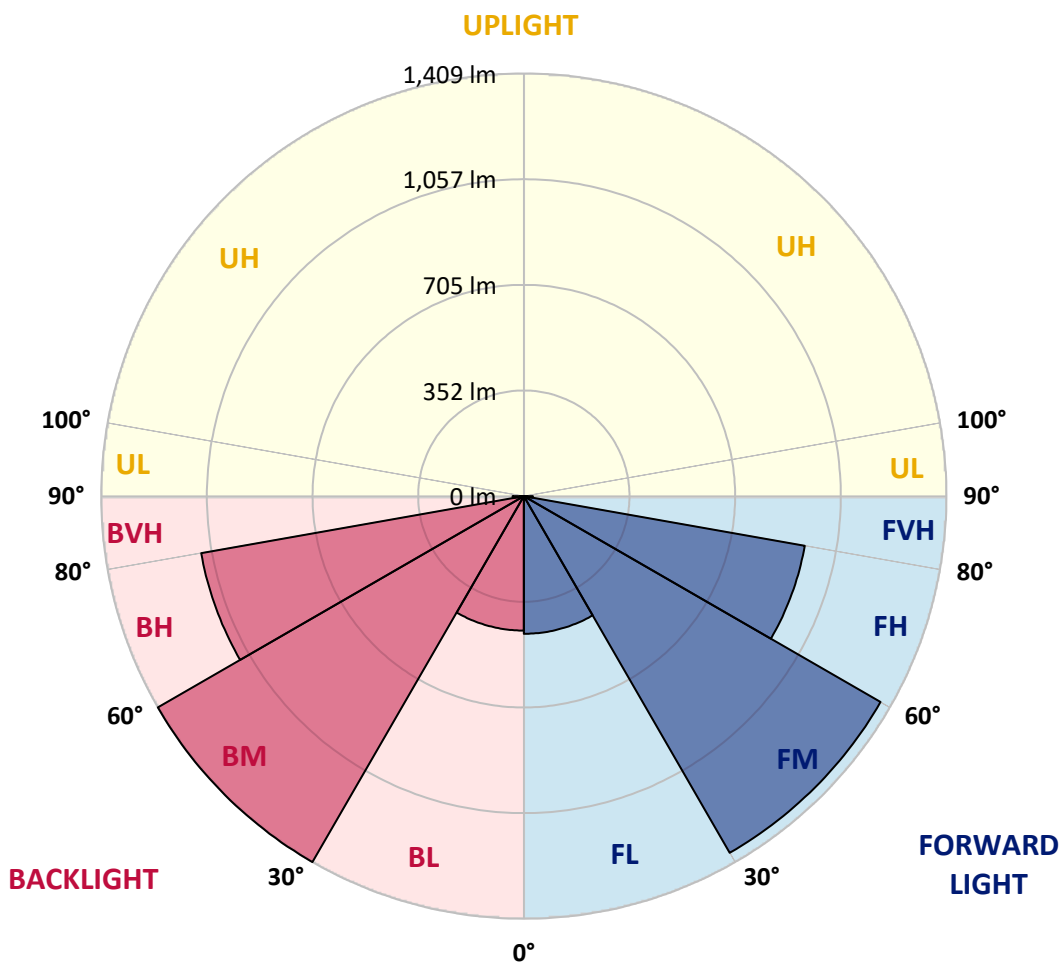
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	459.1	7.9			
FM	(30°-60°)	1373.5	23.7			
FH	(60°-80°)	951.3	16.4			G1/1800
FVH	(80°-90°)	29.9	0.5			G1/100
BL	(0°-30°)	448.3	7.7	B1/500		
BM	(30°-60°)	1409.3	24.3	B2/2500		
BH	(60°-80°)	1092.5	18.8	B3/2500		G3/2500
BVH	(80°-90°)	37.5	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7
2.5°	947.3	946.2	949.5	951.7	941.9	945.1	942.9	940.8	933.1	929.9	923.3
5°	973.4	976.7	987.6	977.8	982.1	976.7	959.3	964.7	954.9	952.7	946.2
7.5°	1019.2	1012.6	1027.9	1017.0	1020.2	1009.4	1001.7	991.9	989.8	974.5	975.6
10°	1029.0	1042.0	1048.6	1046.4	1048.6	1054.0	1039.8	1024.6	1003.9	999.6	984.3
12.5°	1022.4	1034.4	1051.8	1066.0	1075.8	1078.0	1072.5	1069.2	1060.5	1035.5	1034.4
15°	1015.9	1007.2	1018.1	1067.1	1099.7	1121.5	1129.1	1110.6	1112.8	1080.1	1067.1
17.5°	972.3	959.3	1001.7	1049.6	1089.9	1137.8	1174.9	1169.4	1169.4	1143.3	1124.8
20°	914.6	936.4	958.2	1019.2	1093.2	1165.1	1235.8	1232.6	1219.5	1211.9	1171.6
22.5°	865.6	875.4	915.7	980.0	1072.5	1172.7	1256.5	1316.4	1285.9	1255.4	1231.5
25°	831.9	823.2	874.3	940.8	1052.9	1159.6	1295.7	1357.8	1374.1	1351.3	1305.5
27.5°	784.0	784.0	824.3	887.4	989.8	1153.1	1333.8	1428.6	1452.5	1418.8	1352.3
30°	729.5	736.1	770.9	842.8	942.9	1105.2	1349.1	1510.2	1529.8	1500.4	1431.8
32.5°	687.1	687.1	726.3	802.5	910.3	1083.4	1339.3	1590.8	1627.8	1606.0	1535.3
35°	641.3	638.1	666.4	750.2	858.0	1040.9	1336.0	1655.0	1737.8	1738.9	1664.8
37.5°	576.0	589.1	625.0	691.4	816.6	999.6	1326.2	1732.4	1880.4	1905.5	1854.3
40°	532.4	537.9	570.6	643.5	752.4	950.6	1312.1	1795.5	1975.2	2061.2	1990.4
42.5°	469.3	476.9	502.0	592.3	690.3	880.9	1250.0	1840.2	2110.2	2208.2	2148.3
45°	402.9	407.2	444.2	518.3	623.9	798.1	1183.6	1912.0	2240.8	2441.2	2406.4
47.5°	323.4	325.6	357.1	434.4	544.4	715.4	1081.2	1908.7	2346.5	2674.2	2772.2
50°	252.6	258.1	282.0	345.2	448.6	614.1	962.5	1882.6	2479.3	2939.9	3132.6
52.5°	201.4	202.5	217.8	267.9	346.3	512.8	835.1	1799.9	2604.5	3200.1	3574.7
55°	166.6	166.6	175.3	205.8	265.7	389.8	686.0	1662.7	2619.8	3487.6	4057.0
56°	160.1	157.9	165.5	191.6	239.5	351.7	616.3	1570.1	2641.5	3620.4	4298.8
57°	151.3	152.4	156.8	175.3	215.6	311.4	539.0	1479.7	2626.3	3729.3	4477.3
58°	147.0	144.8	153.5	165.5	190.5	276.6	485.6	1373.0	2602.3	3818.6	4737.6
59°	140.5	139.4	144.8	155.7	177.5	246.1	420.3	1257.6	2555.5	3934.0	4931.4
60°	138.3	137.2	139.4	148.1	163.3	215.6	370.2	1122.6	2430.3	4052.7	5172.0
61°	131.8	132.8	137.2	142.6	154.6	193.8	333.2	984.3	2348.6	4152.9	5437.7
62°	132.8	130.7	132.8	137.2	145.9	178.6	291.8	848.2	2202.7	4266.1	5637.0
63°	126.3	125.2	128.5	133.9	138.3	161.1	254.8	732.8	2037.2	4292.2	5805.7
64°	124.1	123.0	124.1	131.8	132.8	151.3	225.4	626.1	1797.7	4336.9	6022.4
65°	118.7	118.7	120.9	124.1	128.5	142.6	201.4	543.3	1559.2	4219.3	6088.8
66°	114.3	115.4	115.4	120.9	124.1	132.8	185.1	461.7	1330.6	4032.0	6153.1
67°	111.1	111.1	112.2	116.5	119.8	125.2	166.6	399.6	1122.6	3808.8	6054.0
67.5°	108.9	110.0	110.0	114.3	117.6	125.2	159.0	378.9	1003.9	3563.8	5979.9
68°	105.6	106.7	106.7	111.1	114.3	120.9	153.5	346.3	925.5	3404.8	5842.8
69°	103.4	102.4	102.4	106.7	111.1	115.4	142.6	302.7	736.1	2960.6	5642.4
70°	96.9	96.9	99.1	102.4	105.6	110.0	131.8	266.8	622.8	2451.0	5126.3
71°	93.6	92.6	93.6	96.9	100.2	105.6	120.9	236.3	509.6	2035.1	4618.9
72°	87.1	89.3	89.3	92.6	95.8	99.1	113.2	205.8	427.9	1626.7	4060.3
72.5°	86.0	86.0	87.1	90.4	92.6	98.0	108.9	197.1	390.9	1434.0	3826.2
73°	82.8	82.8	83.8	87.1	89.3	94.7	105.6	177.5	356.1	1276.1	3388.5
74°	79.5	78.4	78.4	82.8	83.8	89.3	99.1	156.8	298.3	961.5	2719.9
75°	74.0	74.0	75.1	77.3	78.4	82.8	91.5	139.4	251.5	745.9	2127.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
77.5°	61.0	62.1	63.2	65.3	65.3	68.6	75.1	96.9	153.5	377.8	976.7
80°	44.6	46.8	50.1	53.4	52.3	52.3	58.8	69.7	91.5	169.9	374.6
82.5°	35.9	38.1	34.8	39.2	39.2	37.0	42.5	51.2	62.1	83.8	133.9
85°	24.0	25.0	20.7	24.0	22.9	22.9	28.3	30.5	38.1	46.8	66.4
87.5°	10.9	10.9	8.7	9.8	9.8	9.8	14.2	10.9	16.3	22.9	39.2
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°	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7	927.7
2.5°	929.9	934.2	934.2	929.9	926.6	929.9	927.7	922.3	927.7	929.9	931.0
5°	942.9	934.2	938.6	928.8	935.3	934.2	932.1	937.5	938.6	938.6	946.2
7.5°	957.1	968.0	953.8	954.9	958.2	945.1	949.5	951.7	947.3	956.0	962.5
10°	982.1	986.5	982.1	965.8	976.7	968.0	964.7	974.5	972.3	974.5	984.3
12.5°	1005.0	1012.6	1000.6	999.6	994.1	986.5	990.9	989.8	1005.0	1007.2	1019.2
15°	1051.8	1032.2	1027.9	1026.8	1024.6	1021.3	1023.5	1024.6	1044.2	1047.5	1075.8
17.5°	1092.1	1088.8	1064.9	1073.6	1073.6	1060.5	1055.1	1073.6	1088.8	1105.2	1124.8
20°	1133.5	1130.2	1104.1	1105.2	1095.4	1107.4	1100.8	1118.2	1144.4	1149.8	1167.2
22.5°	1182.5	1168.3	1149.8	1152.0	1155.3	1146.6	1142.2	1166.2	1192.3	1207.5	1208.6
25°	1259.8	1223.9	1208.6	1210.8	1206.4	1199.9	1203.2	1233.7	1246.7	1279.4	1272.9
27.5°	1301.2	1280.5	1269.6	1244.6	1245.6	1235.8	1248.9	1294.6	1320.8	1345.8	1295.7
30°	1351.3	1338.2	1290.3	1281.6	1280.5	1276.1	1300.1	1358.9	1398.1	1412.2	1340.4
32.5°	1449.3	1397.0	1385.0	1377.4	1360.0	1365.4	1377.4	1454.7	1516.8	1513.5	1381.7
35°	1561.4	1525.5	1491.7	1485.2	1483.0	1467.8	1488.5	1578.8	1626.7	1612.6	1397.0
37.5°	1741.1	1686.6	1640.9	1615.8	1611.5	1600.6	1649.6	1721.5	1783.5	1728.0	1409.0
40°	1829.3	1768.3	1725.8	1710.6	1713.8	1729.1	1777.0	1887.0	1914.2	1811.8	1418.8
42.5°	1955.6	1889.1	1805.3	1797.7	1787.9	1795.5	1888.1	2036.1	2059.0	1925.1	1381.7
45°	2179.9	2079.7	1982.8	1939.2	1941.4	1962.1	2105.8	2268.1	2225.6	2003.5	1322.9
47.5°	2463.0	2316.0	2237.6	2178.8	2207.1	2184.2	2412.9	2542.5	2397.6	2102.6	1251.1
50°	2888.7	2682.9	2576.2	2505.4	2517.4	2537.0	2768.9	2878.9	2588.2	2150.5	1141.1
52.5°	3425.5	3160.9	3004.1	2909.4	2918.1	2960.6	3260.0	3226.3	2806.0	2190.8	994.1
55°	4067.9	3795.7	3491.9	3452.7	3442.9	3544.2	3874.1	3589.9	3001.9	2126.5	841.7
56°	4407.7	4118.0	3802.3	3721.7	3697.7	3768.5	4156.1	3771.8	3069.5	2054.7	768.7
57°	4696.2	4419.6	4073.4	3936.2	3966.7	4099.5	4436.0	3942.7	3131.5	1980.6	700.1
58°	5092.5	4776.8	4410.9	4306.4	4279.2	4384.8	4737.6	4114.8	3152.2	1904.4	637.0
59°	5487.8	5108.9	4778.9	4588.4	4596.0	4788.7	5034.8	4319.5	3183.8	1807.5	556.4
60°	5788.3	5597.8	5156.8	5014.1	4994.5	5273.3	5331.0	4456.6	3217.5	1676.8	499.8
61°	6214.0	5965.8	5555.3	5371.3	5424.6	5647.8	5651.1	4628.7	3167.5	1511.3	430.1
62°	6520.0	6454.7	6023.5	5848.2	5831.9	6128.0	5984.3	4780.0	3123.9	1354.5	380.0
63°	6878.2	6878.2	6485.2	6348.0	6355.6	6589.7	6129.1	4931.4	3073.8	1181.4	334.3
64°	7064.4	7298.5	6936.0	6743.2	6793.3	6995.8	6387.2	5030.5	2919.2	1006.1	294.0
65°	7225.6	7577.3	7375.8	7286.6	7210.3	7330.1	6610.4	5123.0	2682.9	855.8	261.3
66°	7361.7	7839.7	7773.3	7677.5	7669.8	7642.6	6653.9	5119.8	2439.0	723.0	228.7
67°	7293.1	7845.1	7966.0	8006.3	7994.3	7706.9	6577.7	5003.2	2126.5	610.8	203.6
67.5°	7231.0	7800.5	8081.4	8058.6	8108.6	7761.3	6590.8	4860.6	1904.4	553.1	191.6
68°	7176.6	7740.6	8128.2	8157.6	8132.6	7767.8	6518.9	4747.4	1753.0	519.4	180.7
69°	6763.9	7456.4	8053.1	8158.7	8094.5	7518.5	6290.3	4452.3	1392.6	443.2	166.6
70°	6350.2	7088.4	7688.3	7882.2	7802.7	7036.1	6001.7	3983.0	1148.7	378.9	150.3
71°	5777.4	6404.6	7202.7	7319.2	7223.4	6487.3	5405.0	3487.6	893.9	321.2	133.9
72°	5000.0	5532.4	6294.6	6576.6	6435.1	5697.9	4801.8	2882.2	724.1	270.0	122.0
72.5°	4614.5	5160.0	5895.0	5917.9	5945.1	5354.9	4545.9	2531.6	631.5	250.4	118.7
73°	4248.7	4783.3	5419.2	5499.8	5384.3	4776.8	4163.7	2263.7	577.1	228.7	114.3
74°	3442.9	3747.8	4274.8	4353.2	4251.9	3894.8	3402.6	1735.6	459.5	197.1	104.5
75°	2709.1	2876.7	3353.6	3305.7	3154.4	3029.2	2638.3	1326.2	372.4	173.1	96.9



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**CANDELA DISTRIBUTION (continued):**

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
77.5°	1217.3	1318.6	1398.1	1398.1	1406.8	1342.5	1216.2	608.7	229.7	125.2	79.5
80°	463.8	519.4	536.8	537.9	545.5	565.1	525.9	299.4	136.1	89.3	64.2
82.5°	336.5	470.4	506.3	480.2	482.4	435.5	201.4	132.8	86.0	62.1	46.8
85°	304.9	409.4	433.4	430.1	431.2	402.9	118.7	65.3	50.1	39.2	32.7
87.5°	148.1	144.8	153.5	173.1	168.8	218.9	100.2	32.7	21.8	16.3	16.3
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):**

	135°	145°	155°	165°	175°	180°
0°	927.7	927.7	927.7	927.7	927.7	927.7
2.5°	922.3	921.2	936.4	921.2	929.9	923.3
5°	933.1	937.5	940.8	947.3	932.1	947.3
7.5°	965.8	970.2	971.3	976.7	970.2	969.1
10°	990.9	1001.7	1008.3	986.5	999.6	998.5
12.5°	1039.8	1029.0	1027.9	1023.5	1011.5	1007.2
15°	1074.7	1058.4	1048.6	1031.1	1017.0	1011.5
17.5°	1123.7	1092.1	1051.8	1015.9	990.9	971.3
20°	1154.2	1097.6	1017.0	974.5	936.4	945.1
22.5°	1173.8	1092.1	985.4	931.0	892.9	903.7
25°	1180.3	1064.9	963.6	896.1	859.1	851.5
27.5°	1161.8	1033.3	921.2	844.9	812.3	818.8
30°	1153.1	987.6	882.0	806.8	763.3	769.8
32.5°	1130.2	940.8	829.7	753.5	721.9	711.0
35°	1097.6	901.6	779.6	707.8	669.6	660.9
37.5°	1057.3	852.6	736.1	649.0	615.2	608.7
40°	997.4	793.8	672.9	597.8	558.6	557.5
42.5°	945.1	737.1	614.1	536.8	497.6	499.8
45°	878.7	660.9	546.6	480.2	441.0	443.2
47.5°	793.8	590.2	482.4	408.3	375.7	373.5
50°	693.6	509.6	404.0	340.8	313.6	308.1
52.5°	597.8	427.9	331.0	274.4	251.5	249.3
55°	476.9	333.2	258.1	215.6	198.2	199.3
56°	433.4	307.1	235.2	197.1	184.0	184.0
57°	392.0	272.2	213.4	181.8	169.9	169.9
58°	346.3	239.5	193.8	164.4	159.0	154.6
59°	314.7	217.8	175.3	155.7	147.0	145.9
60°	277.7	196.0	163.3	145.9	139.4	138.3
61°	246.1	176.4	150.3	136.1	133.9	133.9
62°	219.9	163.3	139.4	131.8	130.7	127.4
63°	197.1	150.3	133.9	125.2	122.0	125.2
64°	176.4	138.3	129.6	123.0	118.7	120.9
65°	160.1	132.8	124.1	119.8	115.4	116.5
66°	149.2	124.1	119.8	114.3	112.2	113.2
67°	135.0	119.8	115.4	110.0	108.9	110.0
67.5°	130.7	116.5	113.2	107.8	106.7	107.8
68°	127.4	114.3	112.2	106.7	105.6	104.5
69°	118.7	110.0	106.7	104.5	102.4	101.3
70°	111.1	105.6	103.4	100.2	98.0	96.9
71°	106.7	100.2	99.1	95.8	93.6	92.6
72°	101.3	96.9	94.7	90.4	89.3	90.4
72.5°	100.2	94.7	93.6	89.3	88.2	88.2
73°	96.9	90.4	91.5	87.1	84.9	87.1
74°	90.4	88.2	86.0	82.8	81.7	81.7
75°	84.9	82.8	80.6	78.4	78.4	78.4



REPORT NUMBER: P676179  
CATALOG NUMBER: CCW-SA-1F-830-U-T1

**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
77.5°	71.9	70.8	71.9	67.5	66.4	65.3
80°	57.7	57.7	58.8	55.5	53.4	52.3
82.5°	43.6	44.6	46.8	43.6	41.4	39.2
85°	28.3	29.4	29.4	26.1	30.5	28.3
87.5°	14.2	15.2	14.2	13.1	15.2	15.2
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)