

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: P676197

Luminaire Tested: **CCW-SA-1B-840-U-T1**

Issue Date: 04/25/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P676197  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1B-840-U-T1  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @450mA w/  
T1 distribution lens  
Light Source: (16) 4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

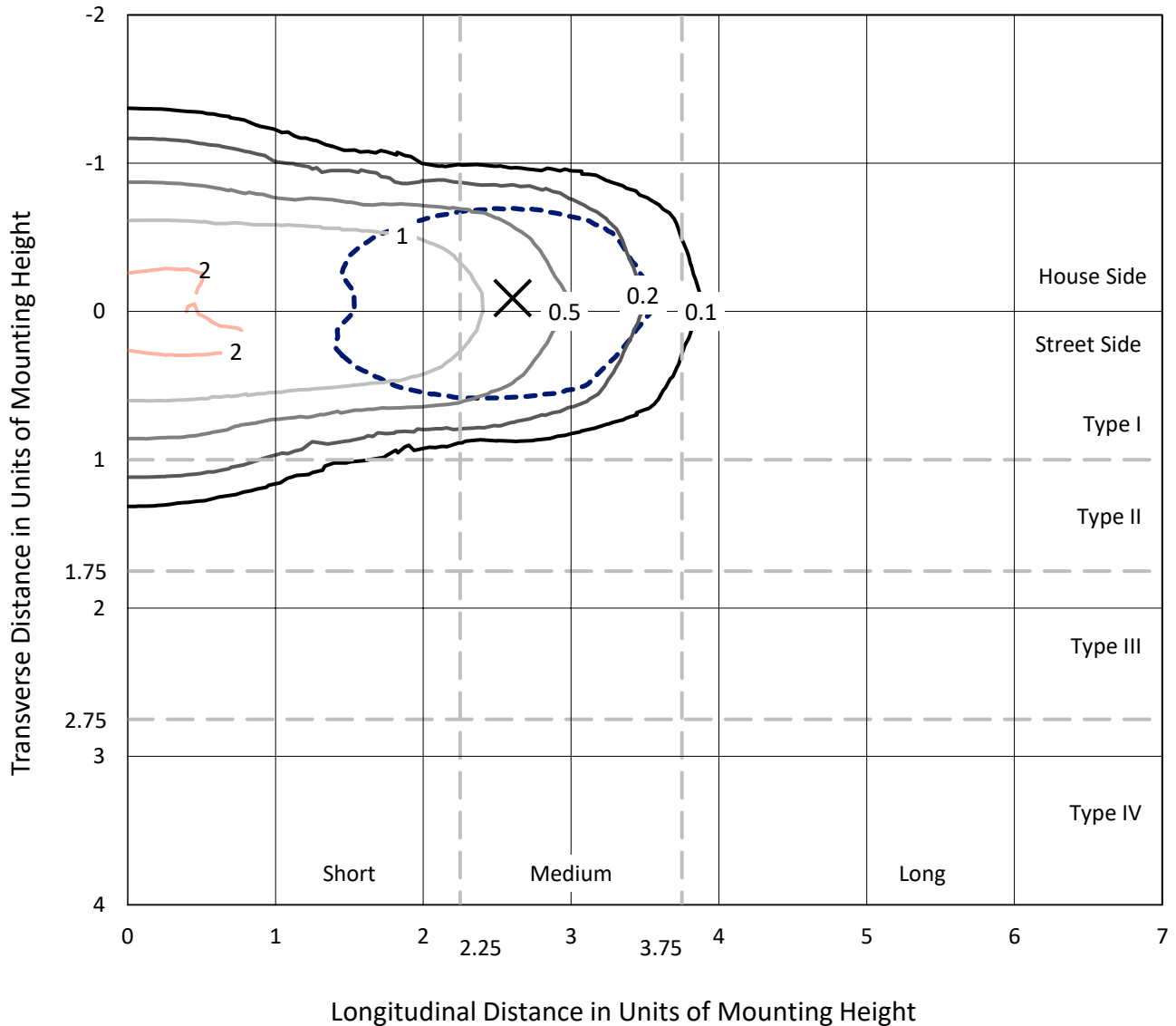
Lumens per Lamp: N/A  
Luminaire Lumens: 2867.3 lumens  
Efficiency: N/A  
Efficacy: 119.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B2 - U0 - G2

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

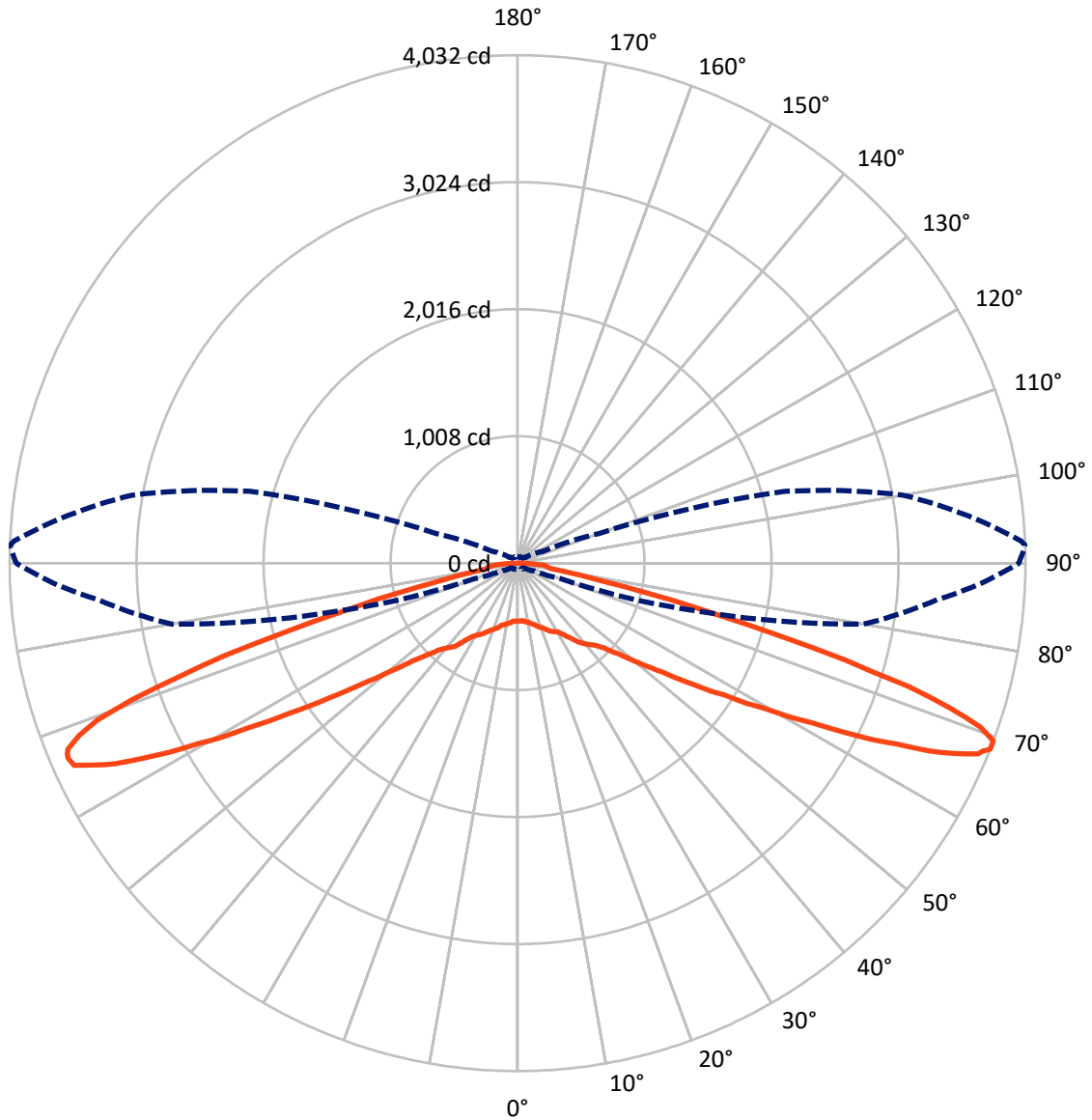
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.2 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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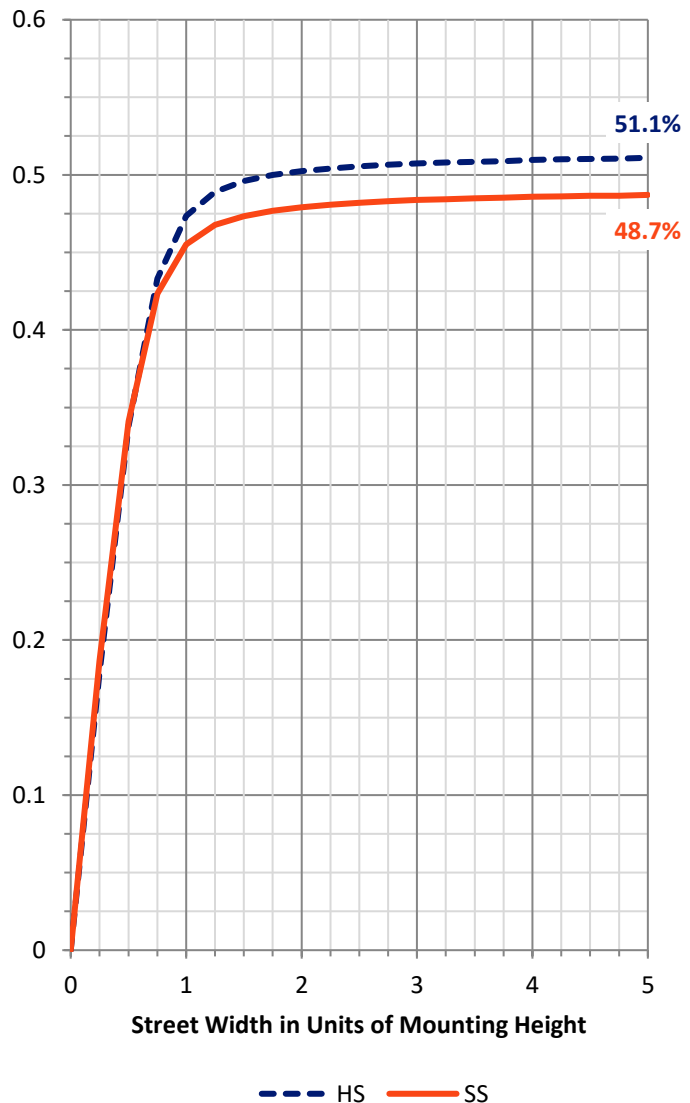
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1476.6	0.0	1476.6
	% Fixture	51.5	0.0	51.5
<b>Street Side</b>	Lumens	1390.7	0.0	1390.7
	% Fixture	48.5	0.0	48.5
<b>Total</b>	Lumens	2867.3	0.0	2867.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.9	1.6
10°-20°	148.7	5.2
20°-30°	253.8	8.9
30°-40°	354.4	12.4
40°-50°	450.9	15.7
50°-60°	570.1	19.9
60°-70°	703.0	24.5
70°-80°	307.1	10.7
80°-90°	33.3	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°	2867.3	100.0
0°-180°	2867.3	100.0



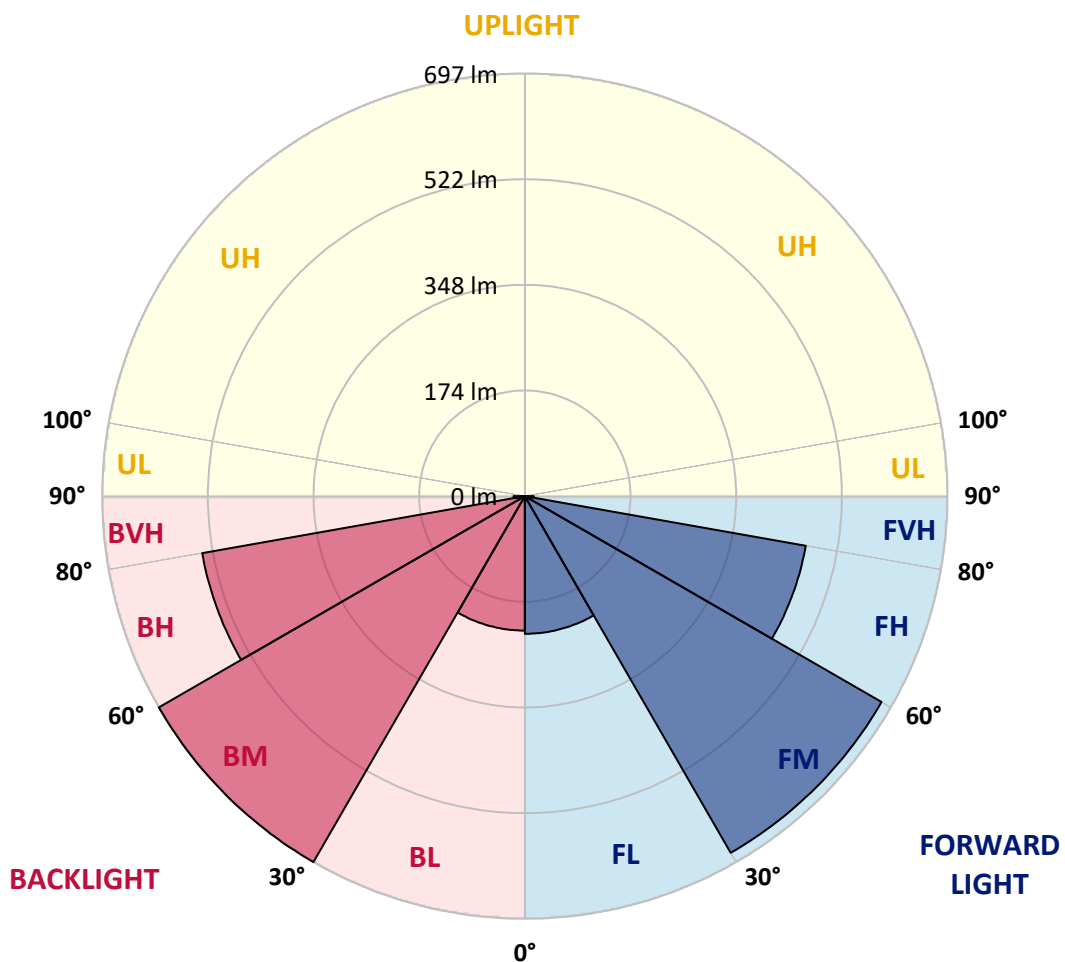
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	226.9	7.9			
FM (30°-60°)	678.8	23.7			
FH (60°-80°)	470.2	16.4			G0/660
FVH (80°-90°)	14.8	0.5			G1/100
BL (0°-30°)	221.6	7.7	B1/500		
BM (30°-60°)	696.5	24.3	B1/1000		
BH (60°-80°)	540.0	18.8	B2/1000		G2/1000
BVH (80°-90°)	18.5	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	468.2	467.7	469.3	470.3	465.5	467.1	466.0	465.0	461.2	459.6	456.4
5°	481.1	482.7	488.1	483.3	485.4	482.7	474.1	476.8	472.0	470.9	467.7
7.5°	503.7	500.5	508.0	502.6	504.3	498.9	495.1	490.3	489.2	481.7	482.2
10°	508.6	515.0	518.2	517.2	518.2	520.9	513.9	506.4	496.2	494.0	486.5
12.5°	505.3	511.2	519.9	526.9	531.7	532.8	530.1	528.5	524.2	511.8	511.2
15°	502.1	497.8	503.2	527.4	543.5	554.3	558.1	548.9	550.0	533.9	527.4
17.5°	480.6	474.1	495.1	518.8	538.7	562.4	580.7	578.0	578.0	565.1	555.9
20°	452.1	462.8	473.6	503.7	540.3	575.8	610.8	609.2	602.7	599.0	579.1
22.5°	427.8	432.7	452.6	484.3	530.1	579.6	621.0	650.6	635.6	620.5	608.7
25°	411.2	406.8	432.1	465.0	520.4	573.1	640.4	671.1	679.2	667.9	645.3
27.5°	387.5	387.5	407.4	438.6	489.2	569.9	659.2	706.1	717.9	701.2	668.4
30°	360.6	363.8	381.0	416.5	466.0	546.2	666.8	746.4	756.1	741.6	707.7
32.5°	339.6	339.6	359.0	396.6	449.9	535.5	661.9	786.2	804.5	793.8	758.8
35°	317.0	315.4	329.4	370.8	424.1	514.5	660.3	818.0	858.9	859.4	822.8
37.5°	284.7	291.1	308.9	341.7	403.6	494.0	655.5	856.2	929.4	941.8	916.5
40°	263.2	265.8	282.0	318.1	371.9	469.8	648.5	887.4	976.2	1018.7	983.8
42.5°	231.9	235.7	248.1	292.8	341.2	435.4	617.8	909.5	1042.9	1091.4	1061.8
45°	199.1	201.3	219.6	256.2	308.4	394.5	585.0	945.0	1107.5	1206.5	1189.3
47.5°	159.8	160.9	176.5	214.7	269.1	353.6	534.4	943.4	1159.7	1321.7	1370.1
50°	124.9	127.5	139.4	170.6	221.7	303.5	475.7	930.5	1225.4	1453.0	1548.3
52.5°	99.6	100.1	107.6	132.4	171.1	253.5	412.8	889.6	1287.3	1581.6	1766.8
55°	82.3	82.3	86.6	101.7	131.3	192.7	339.0	821.8	1294.8	1723.7	2005.2
56°	79.1	78.0	81.8	94.7	118.4	173.8	304.6	776.0	1305.6	1789.4	2124.6
57°	74.8	75.3	77.5	86.6	106.6	153.9	266.4	731.4	1298.0	1843.2	2212.9
58°	72.7	71.6	75.9	81.8	94.2	136.7	240.0	678.6	1286.2	1887.3	2341.5
59°	69.4	68.9	71.6	77.0	87.7	121.6	207.7	621.6	1263.1	1944.4	2437.3
60°	68.3	67.8	68.9	73.2	80.7	106.6	183.0	554.8	1201.2	2003.0	2556.2
61°	65.1	65.7	67.8	70.5	76.4	95.8	164.7	486.5	1160.8	2052.5	2687.6
62°	65.7	64.6	65.7	67.8	72.1	88.3	144.2	419.2	1088.7	2108.5	2786.0
63°	62.4	61.9	63.5	66.2	68.3	79.6	125.9	362.2	1006.9	2121.4	2869.5
64°	61.3	60.8	61.3	65.1	65.7	74.8	111.4	309.4	888.5	2143.5	2976.5
65°	58.7	58.7	59.7	61.3	63.5	70.5	99.6	268.5	770.6	2085.4	3009.4
66°	56.5	57.0	57.0	59.7	61.3	65.7	91.5	228.2	657.6	1992.8	3041.1
67°	54.9	54.9	55.4	57.6	59.2	61.9	82.3	197.5	554.8	1882.5	2992.2
67.5°	53.8	54.4	54.4	56.5	58.1	61.9	78.6	187.3	496.2	1761.4	2955.6
68°	52.2	52.7	52.7	54.9	56.5	59.7	75.9	171.1	457.4	1682.8	2887.8
69°	51.1	50.6	50.6	52.7	54.9	57.0	70.5	149.6	363.8	1463.2	2788.7
70°	47.9	47.9	49.0	50.6	52.2	54.4	65.1	131.8	307.8	1211.4	2533.6
71°	46.3	45.7	46.3	47.9	49.5	52.2	59.7	116.8	251.9	1005.8	2282.9
72°	43.1	44.1	44.1	45.7	47.4	49.0	56.0	101.7	211.5	804.0	2006.8
72.5°	42.5	42.5	43.1	44.7	45.7	48.4	53.8	97.4	193.2	708.8	1891.1
73°	40.9	40.9	41.4	43.1	44.1	46.8	52.2	87.7	176.0	630.7	1674.7
74°	39.3	38.7	38.7	40.9	41.4	44.1	49.0	77.5	147.5	475.2	1344.3
75°	36.6	36.6	37.1	38.2	38.7	40.9	45.2	68.9	124.3	368.6	1051.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
77.5°	30.1	30.7	31.2	32.3	32.3	33.9	37.1	47.9	75.9	186.7	482.7
80°	22.1	23.1	24.8	26.4	25.8	25.8	29.1	34.4	45.2	84.0	185.1
82.5°	17.8	18.8	17.2	19.4	19.4	18.3	21.0	25.3	30.7	41.4	66.2
85°	11.8	12.4	10.2	11.8	11.3	11.3	14.0	15.1	18.8	23.1	32.8
87.5°	5.4	5.4	4.3	4.8	4.8	4.8	7.0	5.4	8.1	11.3	19.4
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):**

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
0°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	459.6	461.7	461.7	459.6	458.0	459.6	458.5	455.8	458.5	459.6	460.1
5°	466.0	461.7	463.9	459.0	462.3	461.7	460.7	463.4	463.9	463.9	467.7
7.5°	473.0	478.4	471.4	472.0	473.6	467.1	469.3	470.3	468.2	472.5	475.7
10°	485.4	487.6	485.4	477.3	482.7	478.4	476.8	481.7	480.6	481.7	486.5
12.5°	496.7	500.5	494.6	494.0	491.3	487.6	489.7	489.2	496.7	497.8	503.7
15°	519.9	510.2	508.0	507.5	506.4	504.8	505.9	506.4	516.1	517.7	531.7
17.5°	539.8	538.2	526.3	530.6	530.6	524.2	521.5	530.6	538.2	546.2	555.9
20°	560.2	558.6	545.7	546.2	541.4	547.3	544.1	552.7	565.6	568.3	576.9
22.5°	584.4	577.4	568.3	569.4	571.0	566.7	564.5	576.4	589.3	596.8	597.4
25°	622.6	604.9	597.4	598.4	596.3	593.0	594.7	609.7	616.2	632.3	629.1
27.5°	643.1	632.9	627.5	615.1	615.7	610.8	617.3	639.9	652.8	665.2	640.4
30°	667.9	661.4	637.7	633.4	632.9	630.7	642.6	671.6	691.0	698.0	662.5
32.5°	716.3	690.5	684.5	680.8	672.2	674.8	680.8	719.0	749.7	748.0	682.9
35°	771.7	754.0	737.3	734.0	733.0	725.4	735.7	780.3	804.0	797.0	690.5
37.5°	860.5	833.6	811.0	798.6	796.5	791.1	815.3	850.8	881.5	854.1	696.4
40°	904.1	874.0	853.0	845.4	847.1	854.6	878.3	932.6	946.1	895.5	701.2
42.5°	966.5	933.7	892.3	888.5	883.7	887.4	933.2	1006.4	1017.7	951.5	682.9
45°	1077.4	1027.9	980.0	958.5	959.5	969.8	1040.8	1121.0	1100.0	990.2	653.9
47.5°	1217.3	1144.7	1105.9	1076.9	1090.8	1079.5	1192.6	1256.6	1185.0	1039.2	618.3
50°	1427.7	1326.0	1273.3	1238.3	1244.2	1253.9	1368.5	1422.9	1279.2	1062.9	564.0
52.5°	1693.0	1562.3	1484.8	1438.0	1442.3	1463.2	1611.2	1594.6	1386.8	1082.8	491.3
55°	2010.6	1876.0	1725.9	1706.5	1701.7	1751.7	1914.8	1774.3	1483.7	1051.0	416.0
56°	2178.5	2035.3	1879.2	1839.4	1827.6	1862.6	2054.1	1864.2	1517.1	1015.5	379.9
57°	2321.1	2184.4	2013.2	1945.4	1960.5	2026.2	2192.5	1948.7	1547.7	978.9	346.0
58°	2517.0	2360.9	2180.1	2128.4	2115.0	2167.2	2341.5	2033.7	1558.0	941.2	314.8
59°	2712.3	2525.0	2362.0	2267.8	2271.6	2366.8	2488.4	2134.9	1573.6	893.3	275.0
60°	2860.8	2766.7	2548.7	2478.2	2468.5	2606.3	2634.8	2202.7	1590.3	828.8	247.0
61°	3071.3	2948.6	2745.7	2654.7	2681.1	2791.4	2793.0	2287.7	1565.5	747.0	212.6
62°	3222.5	3190.2	2977.1	2890.4	2882.4	3028.7	2957.7	2362.5	1544.0	669.5	187.8
63°	3399.5	3399.5	3205.3	3137.5	3141.2	3256.9	3029.3	2437.3	1519.2	583.9	165.2
64°	3491.6	3607.3	3428.1	3332.8	3357.6	3457.7	3156.8	2486.3	1442.8	497.3	145.3
65°	3571.2	3745.0	3645.5	3601.3	3563.7	3622.9	3267.2	2532.0	1326.0	423.0	129.2
66°	3638.5	3874.7	3841.9	3794.5	3790.8	3777.3	3288.7	2530.4	1205.5	357.3	113.0
67°	3604.6	3877.4	3937.2	3957.1	3951.2	3809.1	3251.0	2472.8	1051.0	301.9	100.6
67.5°	3573.9	3855.4	3994.2	3982.9	4007.7	3836.0	3257.5	2402.3	941.2	273.4	94.7
68°	3547.0	3825.8	4017.3	4031.9	4019.5	3839.2	3221.9	2346.4	866.4	256.7	89.3
69°	3343.0	3685.3	3980.2	4032.4	4000.7	3716.0	3108.9	2200.5	688.3	219.0	82.3
70°	3138.5	3503.4	3799.9	3895.7	3856.4	3477.6	2966.3	1968.6	567.8	187.3	74.3
71°	2855.5	3165.4	3559.9	3617.5	3570.1	3206.3	2671.4	1723.7	441.8	158.8	66.2
72°	2471.2	2734.4	3111.1	3250.5	3180.5	2816.2	2373.3	1424.5	357.9	133.5	60.3
72.5°	2280.7	2550.3	2913.6	2924.9	2938.3	2646.7	2246.8	1251.2	312.1	123.8	58.7
73°	2099.9	2364.1	2678.4	2718.2	2661.2	2360.9	2057.9	1118.8	285.2	113.0	56.5
74°	1701.7	1852.3	2112.8	2151.6	2101.5	1925.0	1681.7	857.8	227.1	97.4	51.7
75°	1338.9	1421.8	1657.5	1633.8	1559.0	1497.2	1304.0	655.5	184.0	85.6	47.9



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**CANDELA DISTRIBUTION (continued):**

	85°	87.5°	90°	92°	92.5°	95°	100°	105°	110°	115°	125°
77.5°	601.7	651.7	691.0	691.0	695.3	663.5	601.1	300.8	113.6	61.9	39.3
80°	229.3	256.7	265.3	265.8	269.6	279.3	259.9	148.0	67.3	44.1	31.8
82.5°	166.3	232.5	250.2	237.3	238.4	215.3	99.6	65.7	42.5	30.7	23.1
85°	150.7	202.3	214.2	212.6	213.1	199.1	58.7	32.3	24.8	19.4	16.1
87.5°	73.2	71.6	75.9	85.6	83.4	108.2	49.5	16.1	10.8	8.1	8.1
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°	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	455.8	455.3	462.8	455.3	459.6	456.4
5°	461.2	463.4	465.0	468.2	460.7	468.2
7.5°	477.3	479.5	480.0	482.7	479.5	479.0
10°	489.7	495.1	498.3	487.6	494.0	493.5
12.5°	513.9	508.6	508.0	505.9	499.9	497.8
15°	531.2	523.1	518.2	509.6	502.6	499.9
17.5°	555.4	539.8	519.9	502.1	489.7	480.0
20°	570.4	542.5	502.6	481.7	462.8	467.1
22.5°	580.1	539.8	487.0	460.1	441.3	446.7
25°	583.4	526.3	476.3	442.9	424.6	420.8
27.5°	574.2	510.7	455.3	417.6	401.5	404.7
30°	569.9	488.1	435.9	398.8	377.2	380.5
32.5°	558.6	465.0	410.1	372.4	356.8	351.4
35°	542.5	445.6	385.3	349.8	331.0	326.7
37.5°	522.6	421.4	363.8	320.7	304.1	300.8
40°	493.0	392.3	332.6	295.4	276.1	275.5
42.5°	467.1	364.3	303.5	265.3	245.9	247.0
45°	434.3	326.7	270.2	237.3	218.0	219.0
47.5°	392.3	291.7	238.4	201.8	185.7	184.6
50°	342.8	251.9	199.7	168.4	155.0	152.3
52.5°	295.4	211.5	163.6	135.6	124.3	123.2
55°	235.7	164.7	127.5	106.6	97.9	98.5
56°	214.2	151.8	116.2	97.4	90.9	90.9
57°	193.7	134.5	105.5	89.9	84.0	84.0
58°	171.1	118.4	95.8	81.3	78.6	76.4
59°	155.5	107.6	86.6	77.0	72.7	72.1
60°	137.2	96.9	80.7	72.1	68.9	68.3
61°	121.6	87.2	74.3	67.3	66.2	66.2
62°	108.7	80.7	68.9	65.1	64.6	63.0
63°	97.4	74.3	66.2	61.9	60.3	61.9
64°	87.2	68.3	64.0	60.8	58.7	59.7
65°	79.1	65.7	61.3	59.2	57.0	57.6
66°	73.7	61.3	59.2	56.5	55.4	56.0
67°	66.7	59.2	57.0	54.4	53.8	54.4
67.5°	64.6	57.6	56.0	53.3	52.7	53.3
68°	63.0	56.5	55.4	52.7	52.2	51.7
69°	58.7	54.4	52.7	51.7	50.6	50.0
70°	54.9	52.2	51.1	49.5	48.4	47.9
71°	52.7	49.5	49.0	47.4	46.3	45.7
72°	50.0	47.9	46.8	44.7	44.1	44.7
72.5°	49.5	46.8	46.3	44.1	43.6	43.6
73°	47.9	44.7	45.2	43.1	42.0	43.1
74°	44.7	43.6	42.5	40.9	40.4	40.4
75°	42.0	40.9	39.8	38.7	38.7	38.7



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**CANDELA DISTRIBUTION (continued):**

	135°	145°	155°	165°	175°	180°
77.5°	35.5	35.0	35.5	33.4	32.8	32.3
80°	28.5	28.5	29.1	27.4	26.4	25.8
82.5°	21.5	22.1	23.1	21.5	20.4	19.4
85°	14.0	14.5	14.5	12.9	15.1	14.0
87.5°	7.0	7.5	7.0	6.5	7.5	7.5
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)