

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: CORELITE

Report Number: P303115

Luminaire Tested: **CTW-F-5050-20L840-UNV-STD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P303115  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-181-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: CORELITE  
Catalog Number: CTW-F-5050-20L840-UNV-STD-4  
Description: CORELITE CONTINUA LINEAR WALL LED LUMINAIRE  
50% UPLIGHT, 50% DOWNLIGHT, 2000 LUMEN PACKAGE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

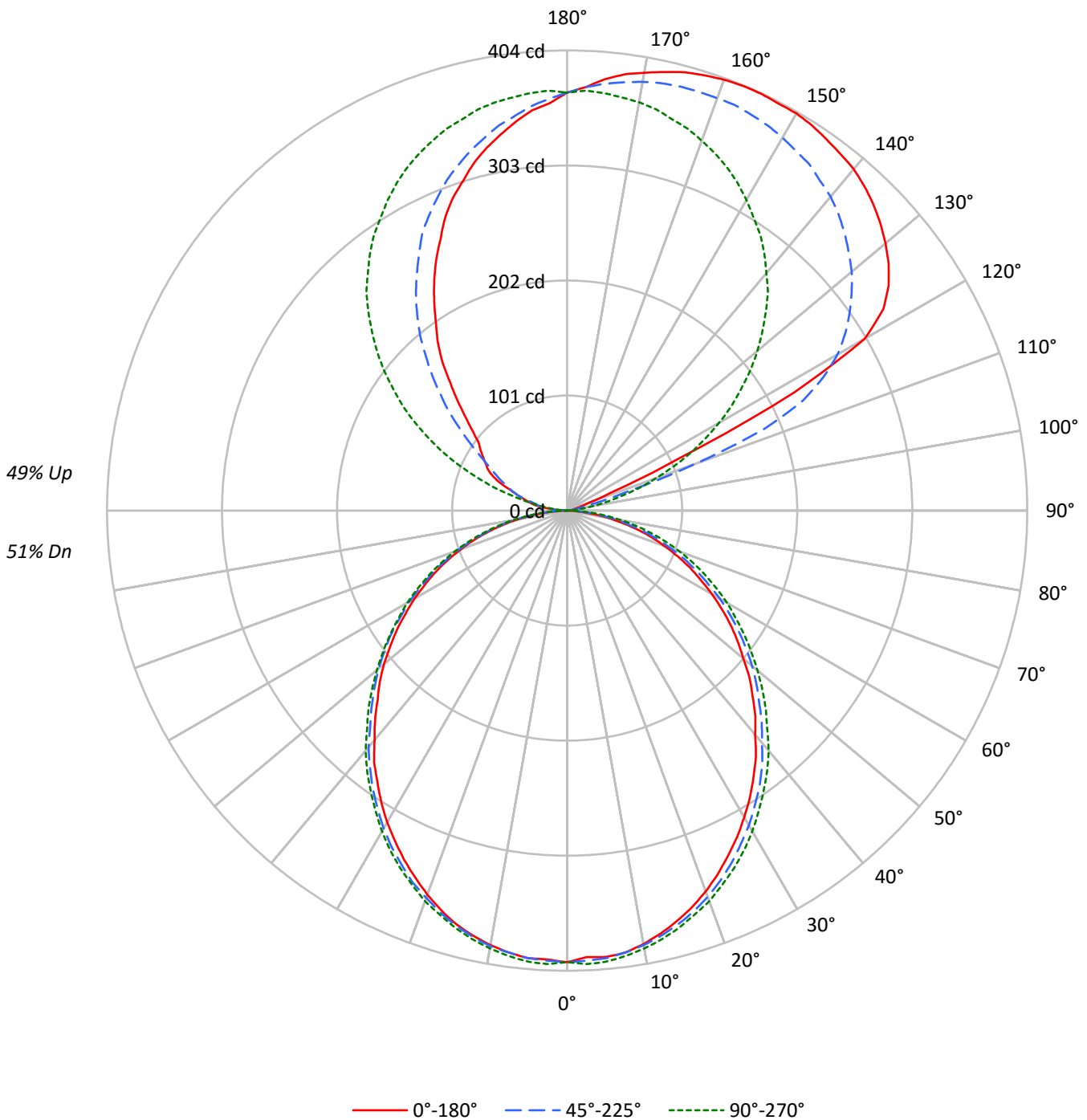
Lumens per Lamp: N/A  
Luminaire Lumens: 2087.2 lumens  
Efficiency: N/A  
Efficacy: 122.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.31  
Luminous Opening: Rectangular (W 4' x L: 0.12' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 17.1  
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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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20			
RC	80				70				50				30				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	107	107	107	107	99	99	99	99	84	84	84		70	70	70		57	57	57	51
1	98	93	89	86	90	86	83	80	73	71	68		61	59	58		50	49	48	42
2	89	81	75	70	82	75	70	65	64	60	57		54	51	48		44	42	40	35
3	81	72	64	58	75	66	60	55	56	51	47		47	44	41		39	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40		42	38	35		35	32	29	26
5	68	56	48	42	63	52	45	40	45	39	35		38	33	30		31	28	25	22
6	63	50	42	36	58	47	40	34	40	35	30		34	30	26		28	25	22	19
7	58	46	38	32	53	42	35	30	37	31	27		31	27	23		26	22	20	17
8	54	41	34	28	50	39	32	27	33	28	24		28	24	21		24	20	18	15
9	50	38	30	25	46	35	28	24	31	25	21		26	22	19		22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19		24	20	17		20	17	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	8536	8536	8536
5°	8501	8590	8523
10°	8444	8534	8466
15°	8313	8451	8382
20°	8149	8360	8220
25°	7941	8231	8038
30°	7728	8081	7855
35°	7500	7903	7635
40°	7217	7734	7391
45°	7011	7511	7167
50°	6759	7304	7033
55°	6579	7116	6846
60°	6321	6979	6669
65°	6077	6800	6490
70°	5709	6609	6225
75°	5257	6355	5931
80°	4426	5938	5306
85°	2519	5286	4026



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	1.8
10°-20°	106.0	5.1
20°-30°	157.0	7.5
30°-40°	184.0	8.8
40°-50°	185.1	8.9
50°-60°	165.1	7.9
60°-70°	126.7	6.1
70°-80°	75.4	3.6
80°-90°	20.4	1.0
90°-100°	9.7	0.5
100°-110°	43.3	2.1
110°-120°	123.4	5.9
120°-130°	181.8	8.7
130°-140°	196.1	9.4
140°-150°	186.7	8.9
150°-160°	153.6	7.4
160°-170°	100.5	4.8
170°-180°	34.8	1.7
0°-30°	300.3	14.4
0°-40°	484.4	23.2
0°-60°	834.6	40.0
0°-90°	1057.1	50.6
90°-120°	176.4	8.5
90°-150°	741.1	35.5
90°-180°	1030.0	49.3
0°-180°	2087.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	396	396	396	396	396	
5°	393	394	398	394	394	37
15°	373	376	379	377	376	105
25°	334	341	346	344	338	154
35°	285	295	301	298	290	178
45°	230	238	247	243	235	178
55°	175	184	190	189	182	156
65°	119	125	134	130	127	118
75°	63	68	76	73	71	67
85°	10	14	21	19	16	14
90°	1	1	0	1	2	1
95°	2	2	7	13	12	2
105°	10	26	49	37	40	12
115°	108	228	119	65	72	132
125°	344	303	186	105	93	305
135°	380	344	247	167	136	294
145°	398	371	296	231	201	249
155°	404	383	332	286	263	187
165°	398	385	356	327	316	113
175°	380	376	368	357	353	37
180°	367	367	367	367	367	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5
2.5°	392.4	392.4	393.4	394.4	395.5	395.5	396.5	396.5	396.5	396.5	395.5
5°	393.4	392.4	393.4	393.4	393.4	393.4	394.4	395.5	395.5	395.5	394.4
7.5°	391.4	390.4	391.4	391.4	390.4	390.4	391.4	392.4	392.4	392.4	391.4
10°	386.3	385.3	386.3	386.3	386.3	386.3	387.3	387.3	388.3	388.3	387.3
12.5°	380.2	380.2	380.2	381.2	380.2	381.2	381.2	382.2	383.2	383.2	382.2
15°	373.0	373.0	374.1	375.1	374.1	375.1	375.1	376.1	376.1	377.1	376.1
17.5°	364.9	364.9	365.9	366.9	366.9	366.9	367.9	367.9	369.0	369.0	369.0
20°	355.7	355.7	355.7	357.8	357.8	357.8	357.8	358.8	360.8	360.8	360.8
22.5°	345.5	345.5	345.5	347.6	347.6	347.6	347.6	348.6	350.6	351.6	351.6
25°	334.3	334.3	334.3	336.3	336.3	336.3	336.3	338.4	340.4	340.4	341.4
27.5°	323.1	323.1	324.1	325.1	325.1	325.1	326.2	327.2	329.2	330.2	330.2
30°	310.9	310.9	310.9	312.9	312.9	313.9	313.9	316.0	317.0	319.0	319.0
32.5°	298.6	298.6	299.7	300.7	300.7	300.7	301.7	303.7	304.8	305.8	306.8
35°	285.4	285.4	286.4	287.4	288.4	288.4	288.4	290.5	291.5	293.5	294.6
37.5°	272.1	272.1	273.2	274.2	275.2	275.2	275.2	277.2	278.3	280.3	281.3
40°	256.8	256.8	256.8	258.9	258.9	259.9	259.9	260.9	263.0	265.0	266.0
42.5°	244.6	243.6	243.6	244.6	245.6	246.7	246.7	247.7	249.7	251.8	252.8
45°	230.3	230.3	230.3	231.4	232.4	232.4	233.4	234.4	235.4	238.5	238.5
47.5°	217.1	216.1	216.1	218.1	218.1	219.1	219.1	220.2	222.2	224.2	225.3
50°	201.8	202.8	202.8	203.8	204.9	204.9	205.9	205.9	207.9	210.0	212.0
52.5°	188.6	188.6	188.6	189.6	190.6	191.6	191.6	192.6	193.7	195.7	197.7
55°	175.3	175.3	175.3	176.3	176.3	177.3	177.3	178.4	179.4	181.4	183.5
57.5°	161.0	161.0	161.0	162.1	163.1	163.1	164.1	164.1	165.1	167.2	169.2
60°	146.8	146.8	146.8	147.8	148.8	148.8	149.8	149.8	150.8	152.9	154.9
62.5°	132.5	133.5	132.5	133.5	134.5	134.5	135.6	135.6	137.6	137.6	139.6
65°	119.3	119.3	119.3	119.3	120.3	120.3	120.3	122.3	122.3	124.3	125.4
67.5°	105.0	105.0	105.0	105.0	106.0	107.0	107.0	108.0	109.1	109.1	111.1
70°	90.7	91.7	91.7	90.7	91.7	92.8	92.8	93.8	94.8	94.8	96.8
72.5°	77.5	77.5	77.5	77.5	77.5	78.5	79.5	79.5	80.5	81.5	82.6
75°	63.2	63.2	64.2	63.2	63.2	64.2	65.2	66.3	66.3	67.3	68.3
77.5°	48.9	49.9	49.9	49.9	51.0	51.0	51.0	52.0	53.0	53.0	54.0
80°	35.7	36.7	36.7	36.7	37.7	36.7	37.7	38.7	38.7	39.8	40.8
82.5°	22.4	22.4	23.4	23.4	23.4	23.4	24.5	25.5	25.5	25.5	27.5
85°	10.2	10.2	11.2	11.2	11.2	11.2	12.2	12.2	13.3	13.3	14.3
87.5°	1.0	1.0	1.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	3.1
90°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
92.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
95°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
97.5°	3.1	3.1	3.1	3.1	3.1	3.1	4.1	4.1	4.1	4.1	5.1
100°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	6.1	6.1	7.1	8.2
102.5°	7.1	7.1	7.1	7.1	8.2	8.2	8.2	9.2	9.2	11.2	13.3
105°	10.2	10.2	10.2	11.2	11.2	11.2	12.2	13.3	15.3	19.4	25.5
107.5°	14.3	15.3	15.3	15.3	17.3	17.3	19.4	22.4	27.5	39.8	56.1
110°	22.4	23.4	23.4	25.5	29.6	31.6	35.7	46.9	63.2	88.7	119.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	43.8	45.9	47.9	54.0	65.2	73.4	84.6	111.1	140.7	174.3	187.5
115°	108.0	109.1	118.2	130.5	155.9	170.2	183.5	206.9	225.3	229.3	228.3
117.5°	225.3	230.3	235.4	243.6	254.8	259.9	266.0	271.1	267.0	261.9	253.8
120°	301.7	299.7	301.7	302.7	301.7	301.7	300.7	296.6	289.5	282.3	274.2
122.5°	329.2	328.2	327.2	326.2	322.1	321.1	319.0	312.9	305.8	297.6	289.5
125°	344.5	343.5	341.4	339.4	336.3	334.3	332.3	326.2	319.0	310.9	302.7
127.5°	355.7	354.7	352.7	350.6	347.6	345.5	342.5	337.4	330.2	323.1	314.9
130°	364.9	363.9	361.8	360.8	356.7	355.7	352.7	346.5	340.4	334.3	326.2
132.5°	373.0	372.0	370.0	369.0	365.9	363.9	361.8	355.7	348.6	342.5	335.3
135°	380.2	379.2	378.1	377.1	374.1	372.0	369.0	363.9	357.8	351.6	344.5
137.5°	386.3	385.3	384.3	382.2	380.2	378.1	375.1	370.0	365.9	359.8	352.7
140°	391.4	390.4	388.3	387.3	385.3	383.2	381.2	377.1	372.0	366.9	359.8
142.5°	394.4	394.4	392.4	392.4	389.3	387.3	385.3	381.2	378.1	373.0	364.9
145°	397.5	397.5	396.5	395.5	393.4	391.4	389.3	386.3	382.2	378.1	371.0
147.5°	400.6	399.5	399.5	398.5	396.5	394.4	393.4	390.4	386.3	382.2	374.1
150°	402.6	401.6	401.6	400.6	398.5	396.5	395.5	393.4	389.3	385.3	378.1
152.5°	402.6	402.6	403.6	401.6	399.5	398.5	397.5	394.4	392.4	387.3	381.2
155°	403.6	403.6	403.6	402.6	399.5	398.5	397.5	395.5	393.4	389.3	383.2
157.5°	403.6	403.6	403.6	402.6	399.5	398.5	397.5	396.5	394.4	390.4	385.3
160°	402.6	402.6	402.6	402.6	400.6	398.5	397.5	396.5	394.4	390.4	385.3
162.5°	400.6	400.6	400.6	400.6	398.5	397.5	396.5	395.5	394.4	389.3	385.3
165°	398.5	398.5	398.5	397.5	395.5	395.5	394.4	393.4	392.4	388.3	385.3
167.5°	394.4	394.4	394.4	393.4	391.4	391.4	391.4	390.4	389.3	386.3	384.3
170°	390.4	390.4	390.4	389.3	388.3	388.3	388.3	387.3	387.3	384.3	382.2
172.5°	386.3	386.3	386.3	385.3	383.2	383.2	383.2	384.3	383.2	381.2	379.2
175°	380.2	379.2	379.2	379.2	379.2	378.1	379.2	379.2	379.2	377.1	376.1
177.5°	372.0	372.0	372.0	373.0	373.0	373.0	373.0	374.1	374.1	373.0	372.0
180°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5
2.5°	394.4	395.5	394.4	394.4	394.4	394.4	394.4	395.5	397.5	398.5	397.5
5°	393.4	394.4	393.4	393.4	393.4	393.4	393.4	394.4	396.5	397.5	396.5
7.5°	390.4	391.4	390.4	390.4	390.4	390.4	390.4	391.4	394.4	394.4	394.4
10°	386.3	387.3	386.3	386.3	386.3	387.3	387.3	388.3	390.4	390.4	390.4
12.5°	381.2	382.2	381.2	381.2	382.2	382.2	381.2	383.2	385.3	385.3	385.3
15°	375.1	376.1	375.1	375.1	375.1	376.1	376.1	377.1	379.2	379.2	379.2
17.5°	366.9	367.9	367.9	367.9	369.0	369.0	369.0	370.0	372.0	372.0	372.0
20°	359.8	359.8	359.8	359.8	359.8	360.8	360.8	362.8	364.9	364.9	364.9
22.5°	350.6	350.6	351.6	350.6	351.6	352.7	351.6	353.7	355.7	355.7	355.7
25°	340.4	341.4	341.4	341.4	341.4	342.5	342.5	344.5	345.5	346.5	346.5
27.5°	330.2	330.2	331.3	331.3	331.3	332.3	332.3	334.3	336.3	336.3	336.3
30°	319.0	319.0	320.0	321.1	320.0	321.1	321.1	323.1	324.1	325.1	325.1
32.5°	306.8	306.8	308.8	308.8	308.8	309.8	309.8	310.9	312.9	312.9	313.9
35°	294.6	294.6	296.6	296.6	296.6	297.6	297.6	298.6	300.7	300.7	301.7
37.5°	281.3	282.3	283.3	284.4	283.3	284.4	284.4	286.4	287.4	288.4	288.4
40°	268.1	268.1	269.1	270.1	270.1	271.1	272.1	273.2	275.2	275.2	275.2
42.5°	252.8	253.8	254.8	255.8	255.8	256.8	257.9	257.9	258.9	259.9	259.9
45°	239.5	240.5	240.5	242.6	243.6	243.6	243.6	244.6	245.6	246.7	246.7
47.5°	226.3	227.3	228.3	230.3	229.3	229.3	230.3	230.3	231.4	232.4	233.4
50°	212.0	213.0	214.0	215.1	215.1	216.1	216.1	217.1	218.1	218.1	219.1
52.5°	197.7	198.8	200.8	200.8	201.8	201.8	202.8	202.8	203.8	203.8	204.9
55°	183.5	184.5	186.5	187.5	187.5	188.6	188.6	189.6	189.6	189.6	190.6
57.5°	169.2	170.2	172.3	173.3	173.3	174.3	174.3	175.3	175.3	175.3	176.3
60°	154.9	155.9	158.0	159.0	159.0	160.0	160.0	161.0	161.0	162.1	162.1
62.5°	141.7	141.7	143.7	144.7	144.7	144.7	145.8	146.8	146.8	147.8	148.8
65°	126.4	127.4	129.4	130.5	129.4	130.5	131.5	132.5	132.5	133.5	133.5
67.5°	112.1	113.1	115.2	115.2	115.2	116.2	117.2	118.2	118.2	119.3	119.3
70°	97.8	97.8	99.9	100.9	100.9	101.9	102.9	104.0	104.0	105.0	105.0
72.5°	82.6	83.6	85.6	86.6	87.7	87.7	88.7	88.7	90.7	90.7	90.7
75°	69.3	69.3	71.3	72.4	73.4	73.4	74.4	74.4	75.4	76.4	76.4
77.5°	55.0	56.1	57.1	58.1	59.1	59.1	60.1	60.1	61.2	62.2	62.2
80°	41.8	41.8	43.8	43.8	44.8	44.8	45.9	46.9	47.9	47.9	47.9
82.5°	27.5	28.5	30.6	30.6	31.6	31.6	32.6	32.6	33.6	33.6	34.7
85°	15.3	16.3	17.3	17.3	18.3	18.3	19.4	20.4	20.4	21.4	21.4
87.5°	3.1	5.1	5.1	6.1	6.1	7.1	7.1	8.2	9.2	9.2	9.2
90°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	0.0	1.0
92.5°	1.0	1.0	1.0	2.0	2.0	2.0	3.1	3.1	3.1	3.1	4.1
95°	3.1	3.1	4.1	5.1	6.1	7.1	9.2	10.2	9.2	7.1	7.1
97.5°	5.1	7.1	9.2	13.3	15.3	17.3	20.4	19.4	17.3	14.3	13.3
100°	10.2	14.3	19.4	27.5	31.6	34.7	35.7	33.6	28.5	23.4	21.4
102.5°	18.3	27.5	39.8	53.0	56.1	57.1	55.0	49.9	42.8	35.7	30.6
105°	37.7	57.1	74.4	84.6	85.6	83.6	78.5	68.3	59.1	48.9	42.8
107.5°	81.5	107.0	117.2	118.2	115.2	110.1	99.9	88.7	77.5	66.3	57.1
110°	144.7	155.9	153.9	144.7	139.6	134.5	121.3	109.1	95.8	82.6	73.4





TEST NUMBER: P303115

CATALOG NUMBER: CTW-F-5050-20L840-UNV-STD-4

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	192.6	189.6	180.4	168.2	162.1	155.9	142.7	129.4	113.1	100.9	90.7
115°	223.2	214.0	201.8	188.6	182.4	176.3	163.1	147.8	132.5	119.3	108.0
117.5°	244.6	233.4	221.2	207.9	200.8	194.7	180.4	165.1	150.8	136.6	126.4
120°	261.9	249.7	237.5	224.2	219.1	212.0	197.7	182.4	167.2	153.9	143.7
122.5°	278.3	266.0	252.8	241.6	234.4	228.3	213.0	198.8	184.5	171.2	161.0
125°	293.5	281.3	268.1	255.8	249.7	242.6	227.3	214.0	199.8	186.5	177.3
127.5°	304.8	294.6	283.3	271.1	264.0	256.8	241.6	228.3	215.1	202.8	192.6
130°	316.0	305.8	295.6	284.4	278.3	269.1	255.8	241.6	229.3	218.1	208.9
132.5°	325.1	317.0	305.8	295.6	288.4	281.3	268.1	254.8	243.6	232.4	223.2
135°	335.3	326.2	316.0	305.8	299.7	293.5	281.3	268.1	257.9	246.7	237.5
137.5°	343.5	334.3	325.1	314.9	308.8	302.7	292.5	280.3	270.1	260.9	250.7
140°	350.6	341.4	333.3	323.1	317.0	311.9	301.7	291.5	283.3	272.1	264.0
142.5°	356.7	347.6	340.4	330.2	324.1	320.0	310.9	300.7	293.5	284.4	277.2
145°	361.8	353.7	346.5	337.4	332.3	328.2	319.0	310.9	303.7	295.6	288.4
147.5°	367.9	358.8	352.7	343.5	339.4	335.3	327.2	319.0	312.9	304.8	298.6
150°	372.0	364.9	358.8	349.6	345.5	341.4	334.3	328.2	322.1	314.9	308.8
152.5°	375.1	369.0	362.8	354.7	351.6	348.6	341.4	335.3	330.2	324.1	318.0
155°	378.1	372.0	367.9	359.8	356.7	353.7	347.6	342.5	337.4	332.3	326.2
157.5°	380.2	375.1	371.0	363.9	361.8	358.8	353.7	348.6	344.5	339.4	334.3
160°	381.2	377.1	373.0	366.9	364.9	362.8	357.8	353.7	350.6	345.5	341.4
162.5°	381.2	378.1	374.1	369.0	366.9	364.9	361.8	357.8	355.7	351.6	347.6
165°	381.2	379.2	375.1	371.0	369.0	367.9	364.9	361.8	359.8	355.7	352.7
167.5°	380.2	378.1	375.1	372.0	371.0	369.0	366.9	363.9	362.8	360.8	356.7
170°	379.2	378.1	375.1	373.0	372.0	371.0	369.0	366.9	365.9	363.9	360.8
172.5°	377.1	377.1	375.1	373.0	372.0	371.0	369.0	367.9	367.9	365.9	363.9
175°	375.1	374.1	373.0	371.0	370.0	370.0	369.0	367.9	369.0	367.9	366.9
177.5°	370.0	371.0	369.0	369.0	367.9	367.9	367.9	367.9	369.0	369.0	367.9
180°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9



TEST NUMBER: P303115

CATALOG NUMBER: CTW-F-5050-20L840-UNV-STD-4

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5
2.5°	397.5	396.5	395.5	395.5	395.5	393.4	393.4	394.4	395.5	397.5	395.5
5°	396.5	395.5	394.4	394.4	394.4	392.4	392.4	393.4	394.4	396.5	394.4
7.5°	393.4	393.4	391.4	391.4	391.4	389.3	389.3	390.4	391.4	393.4	391.4
10°	390.4	389.3	387.3	387.3	387.3	386.3	385.3	386.3	388.3	389.3	387.3
12.5°	385.3	384.3	383.2	382.2	382.2	380.2	380.2	381.2	383.2	384.3	383.2
15°	379.2	378.1	377.1	376.1	376.1	375.1	374.1	375.1	377.1	378.1	376.1
17.5°	372.0	371.0	370.0	369.0	369.0	367.9	366.9	367.9	370.0	370.0	369.0
20°	363.9	362.8	361.8	361.8	361.8	359.8	359.8	359.8	361.8	361.8	359.8
22.5°	355.7	354.7	352.7	352.7	352.7	351.6	350.6	351.6	353.7	351.6	350.6
25°	346.5	344.5	343.5	343.5	342.5	340.4	341.4	341.4	343.5	342.5	340.4
27.5°	336.3	335.3	334.3	333.3	332.3	331.3	331.3	331.3	333.3	331.3	330.2
30°	325.1	324.1	323.1	322.1	322.1	320.0	320.0	321.1	322.1	320.0	319.0
32.5°	312.9	311.9	310.9	310.9	309.8	308.8	308.8	308.8	309.8	307.8	306.8
35°	301.7	299.7	298.6	298.6	297.6	296.6	296.6	297.6	297.6	295.6	294.6
37.5°	288.4	287.4	286.4	285.4	285.4	284.4	284.4	284.4	284.4	282.3	281.3
40°	276.2	274.2	273.2	272.1	272.1	272.1	272.1	272.1	271.1	269.1	267.0
42.5°	259.9	258.9	257.9	257.9	256.8	256.8	256.8	256.8	255.8	254.8	253.8
45°	246.7	245.6	244.6	243.6	244.6	244.6	243.6	243.6	242.6	241.6	240.5
47.5°	233.4	232.4	231.4	230.3	231.4	231.4	230.3	230.3	229.3	229.3	227.3
50°	219.1	218.1	217.1	217.1	218.1	217.1	217.1	216.1	216.1	215.1	213.0
52.5°	205.9	204.9	202.8	202.8	203.8	203.8	202.8	201.8	201.8	201.8	199.8
55°	191.6	190.6	189.6	189.6	190.6	189.6	188.6	187.5	188.6	187.5	185.5
57.5°	177.3	176.3	175.3	175.3	176.3	175.3	174.3	174.3	173.3	173.3	172.3
60°	163.1	162.1	161.0	162.1	162.1	161.0	160.0	160.0	160.0	158.0	158.0
62.5°	148.8	146.8	146.8	146.8	147.8	146.8	145.8	145.8	144.7	143.7	143.7
65°	133.5	132.5	133.5	132.5	132.5	132.5	131.5	131.5	130.5	129.4	129.4
67.5°	119.3	118.2	119.3	118.2	118.2	118.2	118.2	117.2	116.2	116.2	115.2
70°	105.0	104.0	105.0	104.0	104.0	104.0	104.0	102.9	101.9	100.9	100.9
72.5°	90.7	89.7	89.7	89.7	89.7	89.7	88.7	88.7	87.7	87.7	87.7
75°	76.4	75.4	75.4	75.4	75.4	74.4	74.4	74.4	73.4	73.4	73.4
77.5°	62.2	61.2	62.2	62.2	61.2	61.2	61.2	61.2	60.1	59.1	59.1
80°	47.9	47.9	47.9	47.9	47.9	47.9	46.9	46.9	46.9	45.9	45.9
82.5°	34.7	34.7	34.7	34.7	33.6	33.6	33.6	33.6	32.6	31.6	31.6
85°	21.4	21.4	21.4	21.4	20.4	21.4	20.4	19.4	19.4	18.3	17.3
87.5°	10.2	10.2	9.2	8.2	8.2	8.2	7.1	8.2	7.1	6.1	6.1
90°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
92.5°	5.1	6.1	7.1	7.1	7.1	6.1	6.1	6.1	6.1	6.1	5.1
95°	8.2	10.2	11.2	12.2	13.3	14.3	14.3	14.3	13.3	13.3	13.3
97.5°	13.3	14.3	15.3	15.3	16.3	17.3	19.4	20.4	21.4	22.4	21.4
100°	20.4	19.4	21.4	21.4	21.4	21.4	22.4	23.4	25.5	26.5	27.5
102.5°	28.5	26.5	26.5	27.5	27.5	28.5	28.5	28.5	29.6	30.6	31.6
105°	38.7	35.7	34.7	33.6	33.6	34.7	36.7	36.7	36.7	36.7	36.7
107.5°	51.0	46.9	42.8	41.8	40.8	41.8	42.8	44.8	45.9	45.9	44.8
110°	65.2	59.1	54.0	52.0	49.9	48.9	49.9	49.9	52.0	54.0	55.0



TEST NUMBER: P303115

CATALOG NUMBER: CTW-F-5050-20L840-UNV-STD-4

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	81.5	72.4	65.2	64.2	61.2	58.1	57.1	57.1	58.1	59.1	61.2
115°	96.8	87.7	79.5	76.4	73.4	68.3	66.3	64.2	65.2	65.2	67.3
117.5°	115.2	104.0	94.8	90.7	86.6	80.5	75.4	73.4	72.4	72.4	72.4
120°	132.5	122.3	110.1	106.0	101.9	94.8	88.7	83.6	80.5	78.5	78.5
122.5°	148.8	138.6	127.4	122.3	117.2	110.1	102.9	95.8	91.7	87.7	85.6
125°	166.1	155.9	143.7	139.6	133.5	125.4	118.2	111.1	105.0	99.9	95.8
127.5°	182.4	172.3	160.0	154.9	150.8	142.7	133.5	126.4	119.3	114.2	108.0
130°	197.7	187.5	176.3	171.2	167.2	159.0	149.8	142.7	135.6	129.4	122.3
132.5°	213.0	202.8	192.6	187.5	182.4	175.3	166.1	159.0	150.8	144.7	139.6
135°	227.3	217.1	207.9	202.8	198.8	190.6	182.4	175.3	167.2	161.0	155.9
137.5°	241.6	231.4	222.2	217.1	213.0	205.9	198.8	191.6	183.5	177.3	171.2
140°	253.8	244.6	235.4	231.4	227.3	220.2	214.0	207.9	200.8	193.7	187.5
142.5°	267.0	257.9	249.7	244.6	240.5	233.4	227.3	222.2	216.1	208.9	203.8
145°	280.3	270.1	263.0	256.8	253.8	246.7	240.5	236.5	231.4	225.3	220.2
147.5°	290.5	282.3	276.2	272.1	267.0	259.9	253.8	249.7	245.6	239.5	235.4
150°	300.7	293.5	286.4	284.4	280.3	274.2	269.1	264.0	259.9	253.8	249.7
152.5°	311.9	303.7	298.6	294.6	291.5	285.4	280.3	277.2	275.2	268.1	265.0
155°	321.1	313.9	307.8	304.8	302.7	296.6	291.5	289.5	286.4	282.3	278.3
157.5°	329.2	323.1	317.0	313.9	312.9	306.8	302.7	299.7	297.6	294.6	290.5
160°	336.3	331.3	325.1	323.1	321.1	316.0	311.9	309.8	308.8	305.8	302.7
162.5°	343.5	338.4	333.3	331.3	329.2	325.1	321.1	319.0	318.0	316.0	312.9
165°	348.6	344.5	340.4	338.4	337.4	332.3	329.2	328.2	327.2	326.2	323.1
167.5°	354.7	350.6	346.5	345.5	343.5	340.4	337.4	336.3	335.3	335.3	332.3
170°	358.8	355.7	352.7	351.6	350.6	346.5	344.5	343.5	343.5	343.5	340.4
172.5°	362.8	360.8	356.7	356.7	355.7	352.7	350.6	350.6	349.6	350.6	347.6
175°	365.9	363.9	360.8	360.8	359.8	357.8	355.7	355.7	356.7	357.8	354.7
177.5°	367.9	365.9	363.9	363.9	362.8	361.8	359.8	360.8	361.8	362.8	360.8
180°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9



TEST NUMBER: P303115

CATALOG NUMBER: CTW-F-5050-20L840-UNV-STD-4

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	396.5	396.5	396.5	396.5	396.5	396.5	396.5	396.5
2.5°	397.5	396.5	395.5	395.5	394.4	394.4	394.4	394.4
5°	395.5	394.4	394.4	393.4	393.4	393.4	394.4	394.4
7.5°	393.4	391.4	391.4	390.4	390.4	390.4	391.4	391.4
10°	388.3	388.3	387.3	386.3	386.3	386.3	386.3	387.3
12.5°	383.2	382.2	382.2	380.2	380.2	381.2	381.2	382.2
15°	377.1	376.1	375.1	375.1	375.1	375.1	375.1	376.1
17.5°	370.0	369.0	367.9	366.9	366.9	367.9	367.9	367.9
20°	360.8	358.8	358.8	357.8	357.8	357.8	358.8	358.8
22.5°	350.6	348.6	348.6	347.6	347.6	348.6	348.6	348.6
25°	340.4	339.4	338.4	337.4	337.4	337.4	338.4	338.4
27.5°	330.2	328.2	328.2	327.2	327.2	327.2	327.2	327.2
30°	319.0	317.0	316.0	316.0	314.9	314.9	316.0	316.0
32.5°	305.8	304.8	303.7	303.7	302.7	303.7	303.7	303.7
35°	293.5	291.5	291.5	291.5	290.5	291.5	290.5	290.5
37.5°	281.3	278.3	278.3	278.3	278.3	278.3	278.3	278.3
40°	266.0	264.0	264.0	263.0	263.0	263.0	263.0	263.0
42.5°	252.8	250.7	250.7	249.7	249.7	249.7	249.7	249.7
45°	239.5	237.5	237.5	237.5	236.5	236.5	236.5	235.4
47.5°	225.3	224.2	224.2	223.2	223.2	223.2	223.2	223.2
50°	212.0	211.0	211.0	210.0	211.0	210.0	210.0	210.0
52.5°	197.7	197.7	196.7	196.7	196.7	195.7	195.7	195.7
55°	184.5	183.5	183.5	182.4	183.5	182.4	182.4	182.4
57.5°	170.2	170.2	170.2	169.2	169.2	168.2	168.2	168.2
60°	155.9	155.9	155.9	154.9	155.9	154.9	154.9	154.9
62.5°	142.7	142.7	141.7	141.7	141.7	140.7	140.7	140.7
65°	128.4	127.4	127.4	128.4	127.4	127.4	127.4	127.4
67.5°	115.2	115.2	114.2	114.2	114.2	113.1	113.1	113.1
70°	100.9	100.9	99.9	99.9	99.9	98.9	99.9	98.9
72.5°	86.6	86.6	85.6	86.6	85.6	84.6	85.6	85.6
75°	72.4	72.4	72.4	72.4	72.4	71.3	71.3	71.3
77.5°	59.1	59.1	58.1	58.1	58.1	58.1	58.1	57.1
80°	44.8	44.8	43.8	43.8	43.8	43.8	43.8	42.8
82.5°	31.6	30.6	30.6	30.6	30.6	29.6	29.6	29.6
85°	17.3	17.3	17.3	17.3	16.3	17.3	16.3	16.3
87.5°	6.1	6.1	6.1	5.1	5.1	6.1	6.1	5.1
90°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
92.5°	5.1	5.1	5.1	4.1	4.1	4.1	4.1	4.1
95°	13.3	13.3	13.3	12.2	12.2	13.3	12.2	12.2
97.5°	21.4	21.4	21.4	21.4	20.4	21.4	20.4	20.4
100°	27.5	28.5	28.5	28.5	28.5	28.5	28.5	29.6
102.5°	32.6	32.6	32.6	32.6	33.6	33.6	33.6	33.6
105°	37.7	37.7	37.7	38.7	38.7	39.8	39.8	39.8
107.5°	44.8	44.8	44.8	44.8	45.9	45.9	45.9	45.9
110°	55.0	55.0	54.0	54.0	53.0	53.0	53.0	53.0



TEST NUMBER: P303115

CATALOG NUMBER: CTW-F-5050-20L840-UNV-STD-4

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	63.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2
115°	68.3	70.3	70.3	71.3	71.3	72.4	72.4	72.4
117.5°	73.4	75.4	75.4	76.4	76.4	77.5	78.5	78.5
120°	79.5	80.5	80.5	81.5	81.5	82.6	82.6	82.6
122.5°	85.6	85.6	85.6	86.6	86.6	86.6	87.7	87.7
125°	93.8	92.8	92.8	91.7	91.7	91.7	91.7	92.8
127.5°	105.0	101.9	100.9	100.9	99.9	98.9	98.9	97.8
130°	117.2	115.2	113.1	112.1	110.1	109.1	108.0	108.0
132.5°	133.5	129.4	127.4	125.4	123.3	121.3	121.3	120.3
135°	150.8	145.8	144.7	141.7	139.6	137.6	135.6	135.6
137.5°	166.1	162.1	161.0	159.0	157.0	153.9	153.9	151.9
140°	182.4	178.4	176.3	174.3	172.3	170.2	170.2	170.2
142.5°	198.8	194.7	192.6	190.6	188.6	186.5	185.5	186.5
145°	215.1	211.0	208.9	206.9	204.9	202.8	201.8	200.8
147.5°	230.3	226.3	224.2	223.2	221.2	219.1	218.1	217.1
150°	245.6	241.6	240.5	238.5	236.5	234.4	233.4	233.4
152.5°	259.9	256.8	254.8	252.8	251.8	249.7	248.7	248.7
155°	275.2	272.1	270.1	269.1	267.0	265.0	265.0	263.0
157.5°	288.4	285.4	283.3	282.3	280.3	279.3	279.3	279.3
160°	300.7	297.6	296.6	294.6	292.5	292.5	292.5	292.5
162.5°	311.9	309.8	308.8	306.8	304.8	304.8	304.8	303.7
165°	322.1	320.0	319.0	317.0	316.0	316.0	316.0	316.0
167.5°	332.3	329.2	328.2	327.2	326.2	326.2	326.2	326.2
170°	340.4	338.4	337.4	336.3	335.3	335.3	335.3	335.3
172.5°	348.6	347.6	346.5	344.5	344.5	344.5	345.5	344.5
175°	355.7	354.7	353.7	352.7	351.6	352.7	352.7	352.7
177.5°	361.8	360.8	360.8	359.8	358.8	357.8	358.8	357.8
180°	366.9	366.9	366.9	366.9	366.9	366.9	366.9	366.9

(END OF REPORT)