

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: P303114

Luminaire Tested: **CTW-F-5050-20L830-UNV-STD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P303114
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-5050-20L830-UNV-STD-4
Description: CORELITE CONTINUA LINEAR WALL LED LUMINAIRE
50% UPLIGHT, 50% DOWNLIGHT, 2000 LUMEN PACKAGE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

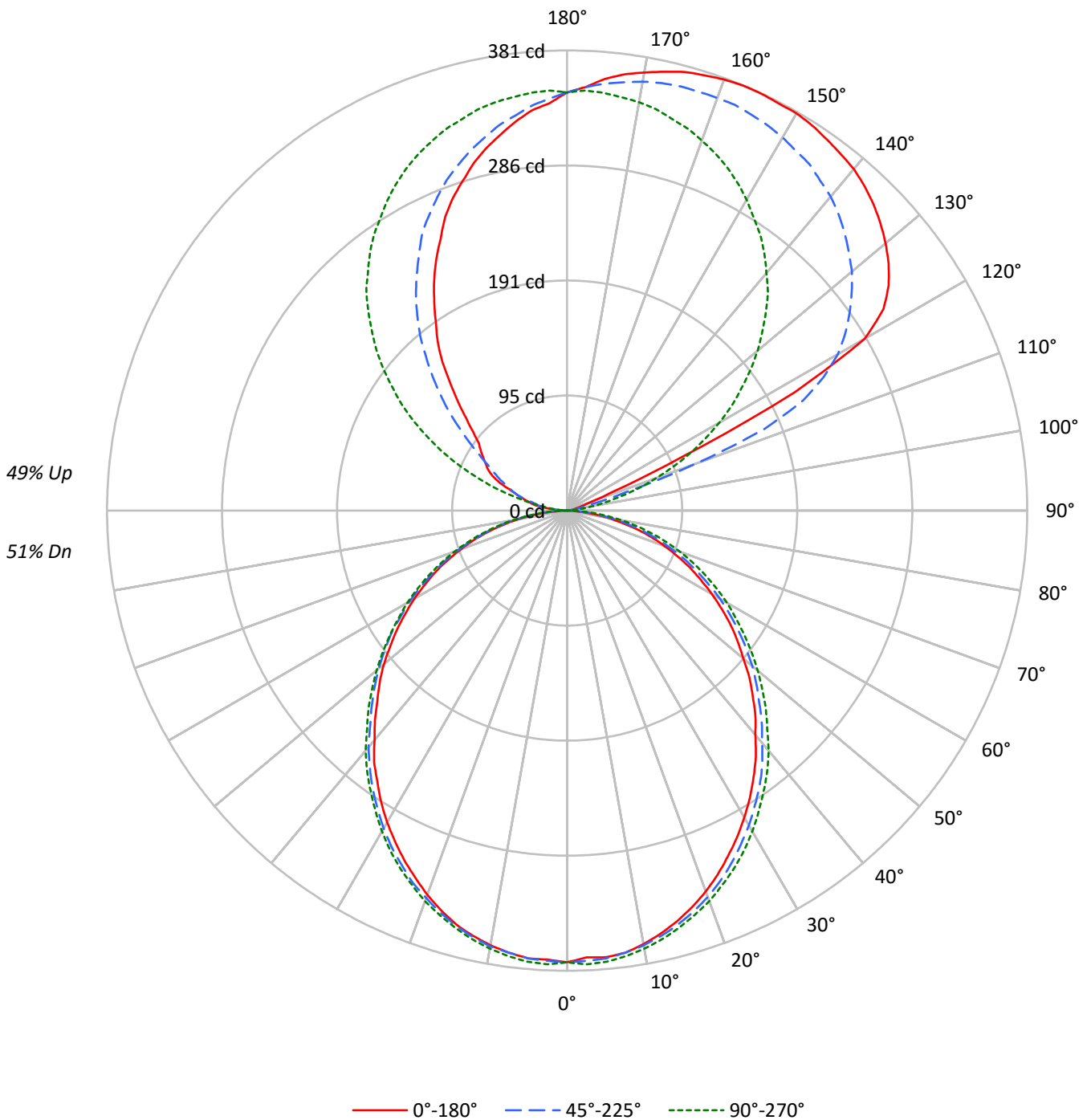
Lumens per Lamp: N/A
Luminaire Lumens: 1969.0 lumens
Efficiency: N/A
Efficacy: 115.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.31
Luminous Opening: Rectangular (W 4' x L: 0.12' x H: 0')
CIE Type: General Diffuse

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°	8051	8051	8051
5°	8022	8104	8041
10°	7966	8051	7988
15°	7843	7972	7908
20°	7688	7885	7755
25°	7492	7765	7582
30°	7291	7624	7410
35°	7075	7456	7201
40°	6809	7295	6972
45°	6616	7085	6762
50°	6377	6893	6635
55°	6208	6711	6459
60°	5963	6583	6295
65°	5731	6418	6123
70°	5388	6231	5873
75°	4957	5997	5598
80°	4178	5604	5009
85°	2371	4989	3804



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.3	1.8
10°-20°	100.0	5.1
20°-30°	148.1	7.5
30°-40°	173.6	8.8
40°-50°	174.7	8.9
50°-60°	155.8	7.9
60°-70°	119.5	6.1
70°-80°	71.1	3.6
80°-90°	19.3	1.0
90°-100°	9.2	0.5
100°-110°	40.9	2.1
110°-120°	116.4	5.9
120°-130°	171.5	8.7
130°-140°	185.0	9.4
140°-150°	176.1	8.9
150°-160°	144.9	7.4
160°-170°	94.8	4.8
170°-180°	32.9	1.7
0°-30°	283.3	14.4
0°-40°	457.0	23.2
0°-60°	787.4	40.0
0°-90°	997.2	50.6
90°-120°	166.5	8.5
90°-150°	699.1	35.5
90°-180°	972.0	49.4
0°-180°	1969.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	374	374	374	374	374	
5°	371	372	375	372	372	35
15°	352	355	358	356	355	99
25°	315	322	327	324	319	145
35°	269	278	284	281	274	168
45°	217	225	233	229	222	168
55°	165	173	179	178	172	148
65°	112	118	126	123	120	111
75°	60	64	72	69	67	63
85°	10	14	20	18	15	13
90°	1	1	0	1	2	1
95°	2	2	7	12	12	2
105°	10	24	46	35	38	11
115°	102	215	112	62	68	124
125°	325	286	176	99	88	288
135°	359	325	233	158	128	277
145°	375	350	279	218	189	235
155°	381	362	314	270	248	176
165°	376	364	336	309	298	106
175°	359	355	347	336	333	35
180°	346	346	346	346	346	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
2.5°	370.2	370.2	371.2	372.1	373.1	373.1	374.0	374.0	374.0	374.0	373.1
5°	371.2	370.2	371.2	371.2	371.2	371.2	372.1	373.1	373.1	373.1	372.1
7.5°	369.2	368.3	369.2	369.2	368.3	368.3	369.2	370.2	370.2	370.2	369.2
10°	364.4	363.5	364.4	364.4	364.4	364.4	365.4	365.4	366.3	366.3	365.4
12.5°	358.7	358.7	358.7	359.6	358.7	359.6	359.6	360.6	361.5	361.5	360.6
15°	351.9	351.9	352.9	353.8	352.9	353.8	353.8	354.8	354.8	355.8	354.8
17.5°	344.2	344.2	345.2	346.2	346.2	346.2	347.1	347.1	348.1	348.1	348.1
20°	335.6	335.6	335.6	337.5	337.5	337.5	337.5	338.5	340.4	340.4	340.4
22.5°	326.0	326.0	326.0	327.9	327.9	327.9	327.9	328.8	330.8	331.7	331.7
25°	315.4	315.4	315.4	317.3	317.3	317.3	317.3	319.2	321.2	321.2	322.1
27.5°	304.8	304.8	305.8	306.7	306.7	306.7	307.7	308.7	310.6	311.5	311.5
30°	293.3	293.3	293.3	295.2	295.2	296.2	296.2	298.1	299.0	301.0	301.0
32.5°	281.7	281.7	282.7	283.7	283.7	283.7	284.6	286.5	287.5	288.5	289.4
35°	269.2	269.2	270.2	271.2	272.1	272.1	272.1	274.0	275.0	276.9	277.9
37.5°	256.7	256.7	257.7	258.7	259.6	259.6	259.6	261.5	262.5	264.4	265.4
40°	242.3	242.3	242.3	244.2	244.2	245.2	245.2	246.2	248.1	250.0	251.0
42.5°	230.8	229.8	229.8	230.8	231.7	232.7	232.7	233.7	235.6	237.5	238.5
45°	217.3	217.3	217.3	218.3	219.2	219.2	220.2	221.2	222.1	225.0	225.0
47.5°	204.8	203.8	203.8	205.8	205.8	206.7	206.7	207.7	209.6	211.5	212.5
50°	190.4	191.3	191.3	192.3	193.3	193.3	194.2	194.2	196.2	198.1	200.0
52.5°	177.9	177.9	177.9	178.8	179.8	180.8	180.8	181.7	182.7	184.6	186.5
55°	165.4	165.4	165.4	166.3	166.3	167.3	167.3	168.3	169.2	171.2	173.1
57.5°	151.9	151.9	151.9	152.9	153.8	153.8	154.8	154.8	155.8	157.7	159.6
60°	138.5	138.5	138.5	139.4	140.4	140.4	141.3	141.3	142.3	144.2	146.2
62.5°	125.0	126.0	125.0	126.0	126.9	126.9	127.9	127.9	129.8	129.8	131.7
65°	112.5	112.5	112.5	112.5	113.5	113.5	113.5	115.4	115.4	117.3	118.3
67.5°	99.0	99.0	99.0	99.0	100.0	101.0	101.0	101.9	102.9	102.9	104.8
70°	85.6	86.5	86.5	85.6	86.5	87.5	87.5	88.5	89.4	89.4	91.3
72.5°	73.1	73.1	73.1	73.1	73.1	74.0	75.0	75.0	76.0	76.9	77.9
75°	59.6	59.6	60.6	59.6	59.6	60.6	61.5	62.5	62.5	63.5	64.4
77.5°	46.2	47.1	47.1	47.1	48.1	48.1	48.1	49.0	50.0	50.0	51.0
80°	33.7	34.6	34.6	34.6	35.6	34.6	35.6	36.5	36.5	37.5	38.5
82.5°	21.2	21.2	22.1	22.1	22.1	22.1	23.1	24.0	24.0	24.0	26.0
85°	9.6	9.6	10.6	10.6	10.6	10.6	11.5	11.5	12.5	12.5	13.5
87.5°	1.0	1.0	1.0	1.0	1.9	1.0	1.9	1.9	1.9	1.9	2.9
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°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
97.5°	2.9	2.9	2.9	2.9	2.9	2.9	3.8	3.8	3.8	3.8	4.8
100°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	5.8	5.8	6.7	7.7
102.5°	6.7	6.7	6.7	6.7	7.7	7.7	7.7	8.7	8.7	10.6	12.5
105°	9.6	9.6	9.6	10.6	10.6	10.6	11.5	12.5	14.4	18.3	24.0
107.5°	13.5	14.4	14.4	14.4	16.3	16.3	18.3	21.2	26.0	37.5	52.9
110°	21.2	22.1	22.1	24.0	27.9	29.8	33.7	44.2	59.6	83.7	112.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	41.3	43.3	45.2	51.0	61.5	69.2	79.8	104.8	132.7	164.4	176.9
115°	101.9	102.9	111.5	123.1	147.1	160.6	173.1	195.2	212.5	216.3	215.4
117.5°	212.5	217.3	222.1	229.8	240.4	245.2	251.0	255.8	251.9	247.1	239.4
120°	284.6	282.7	284.6	285.6	284.6	284.6	283.7	279.8	273.1	266.3	258.7
122.5°	310.6	309.6	308.7	307.7	303.8	302.9	301.0	295.2	288.5	280.8	273.1
125°	325.0	324.0	322.1	320.2	317.3	315.4	313.5	307.7	301.0	293.3	285.6
127.5°	335.6	334.6	332.7	330.8	327.9	326.0	323.1	318.3	311.5	304.8	297.1
130°	344.2	343.3	341.3	340.4	336.5	335.6	332.7	326.9	321.2	315.4	307.7
132.5°	351.9	351.0	349.0	348.1	345.2	343.3	341.3	335.6	328.8	323.1	316.3
135°	358.7	357.7	356.7	355.8	352.9	351.0	348.1	343.3	337.5	331.7	325.0
137.5°	364.4	363.5	362.5	360.6	358.7	356.7	353.8	349.0	345.2	339.4	332.7
140°	369.2	368.3	366.3	365.4	363.5	361.5	359.6	355.8	351.0	346.2	339.4
142.5°	372.1	372.1	370.2	370.2	367.3	365.4	363.5	359.6	356.7	351.9	344.2
145°	375.0	375.0	374.0	373.1	371.2	369.2	367.3	364.4	360.6	356.7	350.0
147.5°	377.9	376.9	376.9	376.0	374.0	372.1	371.2	368.3	364.4	360.6	352.9
150°	379.8	378.8	378.8	377.9	376.0	374.0	373.1	371.2	367.3	363.5	356.7
152.5°	379.8	379.8	380.8	378.8	376.9	376.0	375.0	372.1	370.2	365.4	359.6
155°	380.8	380.8	380.8	379.8	376.9	376.0	375.0	373.1	371.2	367.3	361.5
157.5°	380.8	380.8	380.8	379.8	376.9	376.0	375.0	374.0	372.1	368.3	363.5
160°	379.8	379.8	379.8	379.8	377.9	376.0	375.0	374.0	372.1	368.3	363.5
162.5°	377.9	377.9	377.9	377.9	376.0	375.0	374.0	373.1	372.1	367.3	363.5
165°	376.0	376.0	376.0	375.0	373.1	373.1	372.1	371.2	370.2	366.3	363.5
167.5°	372.1	372.1	372.1	371.2	369.2	369.2	369.2	368.3	367.3	364.4	362.5
170°	368.3	368.3	368.3	367.3	366.3	366.3	366.3	365.4	365.4	362.5	360.6
172.5°	364.4	364.4	364.4	363.5	361.5	361.5	361.5	362.5	361.5	359.6	357.7
175°	358.7	357.7	357.7	357.7	357.7	356.7	357.7	357.7	357.7	355.8	354.8
177.5°	351.0	351.0	351.0	351.9	351.9	351.9	351.9	352.9	352.9	351.9	351.0
180°	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
2.5°	372.1	373.1	372.1	372.1	372.1	372.1	372.1	373.1	375.0	376.0	375.0
5°	371.2	372.1	371.2	371.2	371.2	371.2	371.2	372.1	374.0	375.0	374.0
7.5°	368.3	369.2	368.3	368.3	368.3	368.3	368.3	369.2	372.1	372.1	372.1
10°	364.4	365.4	364.4	364.4	364.4	365.4	365.4	366.3	368.3	368.3	368.3
12.5°	359.6	360.6	359.6	359.6	360.6	360.6	359.6	361.5	363.5	363.5	363.5
15°	353.8	354.8	353.8	353.8	353.8	354.8	354.8	355.8	357.7	357.7	357.7
17.5°	346.2	347.1	347.1	347.1	348.1	348.1	348.1	349.0	351.0	351.0	351.0
20°	339.4	339.4	339.4	339.4	339.4	340.4	340.4	342.3	344.2	344.2	344.2
22.5°	330.8	330.8	331.7	330.8	331.7	332.7	331.7	333.7	335.6	335.6	335.6
25°	321.2	322.1	322.1	322.1	322.1	323.1	323.1	325.0	326.0	326.9	326.9
27.5°	311.5	311.5	312.5	312.5	312.5	313.5	313.5	315.4	317.3	317.3	317.3
30°	301.0	301.0	301.9	302.9	301.9	302.9	302.9	304.8	305.8	306.7	306.7
32.5°	289.4	289.4	291.3	291.3	291.3	292.3	292.3	293.3	295.2	295.2	296.2
35°	277.9	277.9	279.8	279.8	279.8	280.8	280.8	281.7	283.7	283.7	284.6
37.5°	265.4	266.3	267.3	268.3	267.3	268.3	268.3	270.2	271.2	272.1	272.1
40°	252.9	252.9	253.8	254.8	254.8	255.8	256.7	257.7	259.6	259.6	259.6
42.5°	238.5	239.4	240.4	241.3	241.3	242.3	243.3	243.3	244.2	245.2	245.2
45°	226.0	226.9	226.9	228.8	229.8	229.8	229.8	230.8	231.7	232.7	232.7
47.5°	213.5	214.4	215.4	217.3	216.3	216.3	217.3	217.3	218.3	219.2	220.2
50°	200.0	201.0	201.9	202.9	202.9	203.8	203.8	204.8	205.8	205.8	206.7
52.5°	186.5	187.5	189.4	189.4	190.4	190.4	191.3	191.3	192.3	192.3	193.3
55°	173.1	174.0	176.0	176.9	176.9	177.9	177.9	178.8	178.8	178.8	179.8
57.5°	159.6	160.6	162.5	163.5	163.5	164.4	164.4	165.4	165.4	165.4	166.3
60°	146.2	147.1	149.0	150.0	150.0	151.0	151.0	151.9	151.9	152.9	152.9
62.5°	133.7	133.7	135.6	136.5	136.5	136.5	137.5	138.5	138.5	139.4	140.4
65°	119.2	120.2	122.1	123.1	122.1	123.1	124.0	125.0	125.0	126.0	126.0
67.5°	105.8	106.7	108.7	108.7	108.7	109.6	110.6	111.5	111.5	112.5	112.5
70°	92.3	92.3	94.2	95.2	95.2	96.2	97.1	98.1	98.1	99.0	99.0
72.5°	77.9	78.8	80.8	81.7	82.7	82.7	83.7	83.7	85.6	85.6	85.6
75°	65.4	65.4	67.3	68.3	69.2	69.2	70.2	70.2	71.2	72.1	72.1
77.5°	51.9	52.9	53.8	54.8	55.8	55.8	56.7	56.7	57.7	58.7	58.7
80°	39.4	39.4	41.3	41.3	42.3	42.3	43.3	44.2	45.2	45.2	45.2
82.5°	26.0	26.9	28.8	28.8	29.8	29.8	30.8	30.8	31.7	31.7	32.7
85°	14.4	15.4	16.3	16.3	17.3	17.3	18.3	19.2	19.2	20.2	20.2
87.5°	2.9	4.8	4.8	5.8	5.8	6.7	6.7	7.7	8.7	8.7	8.7
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	1.9	1.9	1.9	2.9	2.9	2.9	2.9	3.8
95°	2.9	2.9	3.8	4.8	5.8	6.7	8.7	9.6	8.7	6.7	6.7
97.5°	4.8	6.7	8.7	12.5	14.4	16.3	19.2	18.3	16.3	13.5	12.5
100°	9.6	13.5	18.3	26.0	29.8	32.7	33.7	31.7	26.9	22.1	20.2
102.5°	17.3	26.0	37.5	50.0	52.9	53.8	51.9	47.1	40.4	33.7	28.8
105°	35.6	53.8	70.2	79.8	80.8	78.8	74.0	64.4	55.8	46.2	40.4
107.5°	76.9	101.0	110.6	111.5	108.7	103.8	94.2	83.7	73.1	62.5	53.8
110°	136.5	147.1	145.2	136.5	131.7	126.9	114.4	102.9	90.4	77.9	69.2



TEST NUMBER: P303114

CATALOG NUMBER: CTW-F-5050-20L830-UNV-STD-4

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	181.7	178.8	170.2	158.7	152.9	147.1	134.6	122.1	106.7	95.2	85.6
115°	210.6	201.9	190.4	177.9	172.1	166.3	153.8	139.4	125.0	112.5	101.9
117.5°	230.8	220.2	208.7	196.2	189.4	183.7	170.2	155.8	142.3	128.8	119.2
120°	247.1	235.6	224.0	211.5	206.7	200.0	186.5	172.1	157.7	145.2	135.6
122.5°	262.5	251.0	238.5	227.9	221.2	215.4	201.0	187.5	174.0	161.5	151.9
125°	276.9	265.4	252.9	241.3	235.6	228.8	214.4	201.9	188.5	176.0	167.3
127.5°	287.5	277.9	267.3	255.8	249.0	242.3	227.9	215.4	202.9	191.3	181.7
130°	298.1	288.5	278.8	268.3	262.5	253.8	241.3	227.9	216.3	205.8	197.1
132.5°	306.7	299.0	288.5	278.8	272.1	265.4	252.9	240.4	229.8	219.2	210.6
135°	316.3	307.7	298.1	288.5	282.7	276.9	265.4	252.9	243.3	232.7	224.0
137.5°	324.0	315.4	306.7	297.1	291.3	285.6	276.0	264.4	254.8	246.2	236.5
140°	330.8	322.1	314.4	304.8	299.0	294.2	284.6	275.0	267.3	256.7	249.0
142.5°	336.5	327.9	321.2	311.5	305.8	301.9	293.3	283.7	276.9	268.3	261.5
145°	341.3	333.7	326.9	318.3	313.5	309.6	301.0	293.3	286.5	278.8	272.1
147.5°	347.1	338.5	332.7	324.0	320.2	316.3	308.7	301.0	295.2	287.5	281.7
150°	351.0	344.2	338.5	329.8	326.0	322.1	315.4	309.6	303.8	297.1	291.3
152.5°	353.8	348.1	342.3	334.6	331.7	328.8	322.1	316.3	311.5	305.8	300.0
155°	356.7	351.0	347.1	339.4	336.5	333.7	327.9	323.1	318.3	313.5	307.7
157.5°	358.7	353.8	350.0	343.3	341.3	338.5	333.7	328.8	325.0	320.2	315.4
160°	359.6	355.8	351.9	346.2	344.2	342.3	337.5	333.7	330.8	326.0	322.1
162.5°	359.6	356.7	352.9	348.1	346.2	344.2	341.3	337.5	335.6	331.7	327.9
165°	359.6	357.7	353.8	350.0	348.1	347.1	344.2	341.3	339.4	335.6	332.7
167.5°	358.7	356.7	353.8	351.0	350.0	348.1	346.2	343.3	342.3	340.4	336.5
170°	357.7	356.7	353.8	351.9	351.0	350.0	348.1	346.2	345.2	343.3	340.4
172.5°	355.8	355.8	353.8	351.9	351.0	350.0	348.1	347.1	347.1	345.2	343.3
175°	353.8	352.9	351.9	350.0	349.0	349.0	348.1	347.1	348.1	347.1	346.2
177.5°	349.0	350.0	348.1	348.1	347.1	347.1	347.1	347.1	348.1	348.1	347.1
180°	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2



TEST NUMBER: P303114

CATALOG NUMBER: CTW-F-5050-20L830-UNV-STD-4

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
2.5°	375.0	374.0	373.1	373.1	373.1	371.2	371.2	372.1	373.1	375.0	373.1
5°	374.0	373.1	372.1	372.1	372.1	370.2	370.2	371.2	372.1	374.0	372.1
7.5°	371.2	371.2	369.2	369.2	369.2	367.3	367.3	368.3	369.2	371.2	369.2
10°	368.3	367.3	365.4	365.4	365.4	364.4	363.5	364.4	366.3	367.3	365.4
12.5°	363.5	362.5	361.5	360.6	360.6	358.7	358.7	359.6	361.5	362.5	361.5
15°	357.7	356.7	355.8	354.8	354.8	353.8	352.9	353.8	355.8	356.7	354.8
17.5°	351.0	350.0	349.0	348.1	348.1	347.1	346.2	347.1	349.0	349.0	348.1
20°	343.3	342.3	341.3	341.3	341.3	339.4	339.4	339.4	341.3	341.3	339.4
22.5°	335.6	334.6	332.7	332.7	332.7	331.7	330.8	331.7	333.7	331.7	330.8
25°	326.9	325.0	324.0	324.0	323.1	321.2	322.1	322.1	324.0	323.1	321.2
27.5°	317.3	316.3	315.4	314.4	313.5	312.5	312.5	312.5	314.4	312.5	311.5
30°	306.7	305.8	304.8	303.8	303.8	301.9	301.9	302.9	303.8	301.9	301.0
32.5°	295.2	294.2	293.3	293.3	292.3	291.3	291.3	291.3	292.3	290.4	289.4
35°	284.6	282.7	281.7	281.7	280.8	279.8	279.8	280.8	280.8	278.8	277.9
37.5°	272.1	271.2	270.2	269.2	269.2	268.3	268.3	268.3	268.3	266.3	265.4
40°	260.6	258.7	257.7	256.7	256.7	256.7	256.7	256.7	255.8	253.8	251.9
42.5°	245.2	244.2	243.3	243.3	242.3	242.3	242.3	242.3	241.3	240.4	239.4
45°	232.7	231.7	230.8	229.8	230.8	230.8	229.8	229.8	228.8	227.9	226.9
47.5°	220.2	219.2	218.3	217.3	218.3	218.3	217.3	217.3	216.3	216.3	214.4
50°	206.7	205.8	204.8	204.8	205.8	204.8	204.8	203.8	203.8	202.9	201.0
52.5°	194.2	193.3	191.3	191.3	192.3	192.3	191.3	190.4	190.4	190.4	188.5
55°	180.8	179.8	178.8	178.8	179.8	178.8	177.9	176.9	177.9	176.9	175.0
57.5°	167.3	166.3	165.4	165.4	166.3	165.4	164.4	164.4	163.5	163.5	162.5
60°	153.8	152.9	151.9	152.9	152.9	151.9	151.0	151.0	151.0	149.0	149.0
62.5°	140.4	138.5	138.5	138.5	139.4	138.5	137.5	137.5	136.5	135.6	135.6
65°	126.0	125.0	126.0	125.0	125.0	125.0	124.0	124.0	123.1	122.1	122.1
67.5°	112.5	111.5	112.5	111.5	111.5	111.5	111.5	110.6	109.6	109.6	108.7
70°	99.0	98.1	99.0	98.1	98.1	98.1	98.1	97.1	96.2	95.2	95.2
72.5°	85.6	84.6	84.6	84.6	84.6	84.6	83.7	83.7	82.7	82.7	82.7
75°	72.1	71.2	71.2	71.2	71.2	70.2	70.2	70.2	69.2	69.2	69.2
77.5°	58.7	57.7	58.7	58.7	57.7	57.7	57.7	57.7	56.7	55.8	55.8
80°	45.2	45.2	45.2	45.2	45.2	45.2	44.2	44.2	44.2	43.3	43.3
82.5°	32.7	32.7	32.7	32.7	31.7	31.7	31.7	31.7	30.8	29.8	29.8
85°	20.2	20.2	20.2	20.2	19.2	20.2	19.2	18.3	18.3	17.3	16.3
87.5°	9.6	9.6	8.7	7.7	7.7	7.7	6.7	7.7	6.7	5.8	5.8
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°	4.8	5.8	6.7	6.7	6.7	5.8	5.8	5.8	5.8	5.8	4.8
95°	7.7	9.6	10.6	11.5	12.5	13.5	13.5	13.5	12.5	12.5	12.5
97.5°	12.5	13.5	14.4	14.4	15.4	16.3	18.3	19.2	20.2	21.2	20.2
100°	19.2	18.3	20.2	20.2	20.2	20.2	21.2	22.1	24.0	25.0	26.0
102.5°	26.9	25.0	25.0	26.0	26.0	26.9	26.9	26.9	27.9	28.8	29.8
105°	36.5	33.7	32.7	31.7	31.7	32.7	34.6	34.6	34.6	34.6	34.6
107.5°	48.1	44.2	40.4	39.4	38.5	39.4	40.4	42.3	43.3	43.3	42.3
110°	61.5	55.8	51.0	49.0	47.1	46.2	47.1	47.1	49.0	51.0	51.9



TEST NUMBER: P303114

CATALOG NUMBER: CTW-F-5050-20L830-UNV-STD-4

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	76.9	68.3	61.5	60.6	57.7	54.8	53.8	53.8	54.8	55.8	57.7
115°	91.3	82.7	75.0	72.1	69.2	64.4	62.5	60.6	61.5	61.5	63.5
117.5°	108.7	98.1	89.4	85.6	81.7	76.0	71.2	69.2	68.3	68.3	68.3
120°	125.0	115.4	103.8	100.0	96.2	89.4	83.7	78.8	76.0	74.0	74.0
122.5°	140.4	130.8	120.2	115.4	110.6	103.8	97.1	90.4	86.5	82.7	80.8
125°	156.7	147.1	135.6	131.7	126.0	118.3	111.5	104.8	99.0	94.2	90.4
127.5°	172.1	162.5	151.0	146.2	142.3	134.6	126.0	119.2	112.5	107.7	101.9
130°	186.5	176.9	166.3	161.5	157.7	150.0	141.3	134.6	127.9	122.1	115.4
132.5°	201.0	191.3	181.7	176.9	172.1	165.4	156.7	150.0	142.3	136.5	131.7
135°	214.4	204.8	196.2	191.3	187.5	179.8	172.1	165.4	157.7	151.9	147.1
137.5°	227.9	218.3	209.6	204.8	201.0	194.2	187.5	180.8	173.1	167.3	161.5
140°	239.4	230.8	222.1	218.3	214.4	207.7	201.9	196.2	189.4	182.7	176.9
142.5°	251.9	243.3	235.6	230.8	226.9	220.2	214.4	209.6	203.8	197.1	192.3
145°	264.4	254.8	248.1	242.3	239.4	232.7	226.9	223.1	218.3	212.5	207.7
147.5°	274.0	266.3	260.6	256.7	251.9	245.2	239.4	235.6	231.7	226.0	222.1
150°	283.7	276.9	270.2	268.3	264.4	258.7	253.8	249.0	245.2	239.4	235.6
152.5°	294.2	286.5	281.7	277.9	275.0	269.2	264.4	261.5	259.6	252.9	250.0
155°	302.9	296.2	290.4	287.5	285.6	279.8	275.0	273.1	270.2	266.3	262.5
157.5°	310.6	304.8	299.0	296.2	295.2	289.4	285.6	282.7	280.8	277.9	274.0
160°	317.3	312.5	306.7	304.8	302.9	298.1	294.2	292.3	291.3	288.5	285.6
162.5°	324.0	319.2	314.4	312.5	310.6	306.7	302.9	301.0	300.0	298.1	295.2
165°	328.8	325.0	321.2	319.2	318.3	313.5	310.6	309.6	308.7	307.7	304.8
167.5°	334.6	330.8	326.9	326.0	324.0	321.2	318.3	317.3	316.3	316.3	313.5
170°	338.5	335.6	332.7	331.7	330.8	326.9	325.0	324.0	324.0	324.0	321.2
172.5°	342.3	340.4	336.5	336.5	335.6	332.7	330.8	330.8	329.8	330.8	327.9
175°	345.2	343.3	340.4	340.4	339.4	337.5	335.6	335.6	336.5	337.5	334.6
177.5°	347.1	345.2	343.3	343.3	342.3	341.3	339.4	340.4	341.3	342.3	340.4
180°	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2



TEST NUMBER: P303114

CATALOG NUMBER: CTW-F-5050-20L830-UNV-STD-4

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	374.0	374.0	374.0	374.0	374.0	374.0	374.0	374.0
2.5°	375.0	374.0	373.1	373.1	372.1	372.1	372.1	372.1
5°	373.1	372.1	372.1	371.2	371.2	371.2	372.1	372.1
7.5°	371.2	369.2	369.2	368.3	368.3	368.3	369.2	369.2
10°	366.3	366.3	365.4	364.4	364.4	364.4	364.4	365.4
12.5°	361.5	360.6	360.6	358.7	358.7	359.6	359.6	360.6
15°	355.8	354.8	353.8	353.8	353.8	353.8	353.8	354.8
17.5°	349.0	348.1	347.1	346.2	346.2	347.1	347.1	347.1
20°	340.4	338.5	338.5	337.5	337.5	337.5	338.5	338.5
22.5°	330.8	328.8	328.8	327.9	327.9	328.8	328.8	328.8
25°	321.2	320.2	319.2	318.3	318.3	318.3	319.2	319.2
27.5°	311.5	309.6	309.6	308.7	308.7	308.7	308.7	308.7
30°	301.0	299.0	298.1	298.1	297.1	297.1	298.1	298.1
32.5°	288.5	287.5	286.5	286.5	285.6	286.5	286.5	286.5
35°	276.9	275.0	275.0	275.0	274.0	275.0	274.0	274.0
37.5°	265.4	262.5	262.5	262.5	262.5	262.5	262.5	262.5
40°	251.0	249.0	249.0	248.1	248.1	248.1	248.1	248.1
42.5°	238.5	236.5	236.5	235.6	235.6	235.6	235.6	235.6
45°	226.0	224.0	224.0	224.0	223.1	223.1	223.1	222.1
47.5°	212.5	211.5	211.5	210.6	210.6	210.6	210.6	210.6
50°	200.0	199.0	199.0	198.1	199.0	198.1	198.1	198.1
52.5°	186.5	186.5	185.6	185.6	185.6	184.6	184.6	184.6
55°	174.0	173.1	173.1	172.1	173.1	172.1	172.1	172.1
57.5°	160.6	160.6	160.6	159.6	159.6	158.7	158.7	158.7
60°	147.1	147.1	147.1	146.2	147.1	146.2	146.2	146.2
62.5°	134.6	134.6	133.7	133.7	133.7	132.7	132.7	132.7
65°	121.2	120.2	120.2	121.2	120.2	120.2	120.2	120.2
67.5°	108.7	108.7	107.7	107.7	107.7	106.7	106.7	106.7
70°	95.2	95.2	94.2	94.2	94.2	93.3	94.2	93.3
72.5°	81.7	81.7	80.8	81.7	80.8	79.8	80.8	80.8
75°	68.3	68.3	68.3	68.3	68.3	67.3	67.3	67.3
77.5°	55.8	55.8	54.8	54.8	54.8	54.8	54.8	53.8
80°	42.3	42.3	41.3	41.3	41.3	41.3	41.3	40.4
82.5°	29.8	28.8	28.8	28.8	28.8	27.9	27.9	27.9
85°	16.3	16.3	16.3	16.3	15.4	16.3	15.4	15.4
87.5°	5.8	5.8	5.8	4.8	4.8	5.8	5.8	4.8
90°	1.0	1.0	1.9	1.9	1.9	1.9	1.9	1.9
92.5°	4.8	4.8	4.8	3.8	3.8	3.8	3.8	3.8
95°	12.5	12.5	12.5	11.5	11.5	12.5	11.5	11.5
97.5°	20.2	20.2	20.2	20.2	19.2	20.2	19.2	19.2
100°	26.0	26.9	26.9	26.9	26.9	26.9	26.9	27.9
102.5°	30.8	30.8	30.8	30.8	31.7	31.7	31.7	31.7
105°	35.6	35.6	35.6	36.5	36.5	37.5	37.5	37.5
107.5°	42.3	42.3	42.3	42.3	43.3	43.3	43.3	43.3
110°	51.9	51.9	51.0	51.0	50.0	50.0	50.0	50.0



TEST NUMBER: P303114

CATALOG NUMBER: CTW-F-5050-20L830-UNV-STD-4

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	59.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6
115°	64.4	66.3	66.3	67.3	67.3	68.3	68.3	68.3
117.5°	69.2	71.2	71.2	72.1	72.1	73.1	74.0	74.0
120°	75.0	76.0	76.0	76.9	76.9	77.9	77.9	77.9
122.5°	80.8	80.8	80.8	81.7	81.7	81.7	82.7	82.7
125°	88.5	87.5	87.5	86.5	86.5	86.5	86.5	87.5
127.5°	99.0	96.2	95.2	95.2	94.2	93.3	93.3	92.3
130°	110.6	108.7	106.7	105.8	103.8	102.9	101.9	101.9
132.5°	126.0	122.1	120.2	118.3	116.3	114.4	114.4	113.5
135°	142.3	137.5	136.5	133.7	131.7	129.8	127.9	127.9
137.5°	156.7	152.9	151.9	150.0	148.1	145.2	145.2	143.3
140°	172.1	168.3	166.3	164.4	162.5	160.6	160.6	160.6
142.5°	187.5	183.7	181.7	179.8	177.9	176.0	175.0	176.0
145°	202.9	199.0	197.1	195.2	193.3	191.3	190.4	189.4
147.5°	217.3	213.5	211.5	210.6	208.7	206.7	205.8	204.8
150°	231.7	227.9	226.9	225.0	223.1	221.2	220.2	220.2
152.5°	245.2	242.3	240.4	238.5	237.5	235.6	234.6	234.6
155°	259.6	256.7	254.8	253.8	251.9	250.0	250.0	248.1
157.5°	272.1	269.2	267.3	266.3	264.4	263.5	263.5	263.5
160°	283.7	280.8	279.8	277.9	276.0	276.0	276.0	276.0
162.5°	294.2	292.3	291.3	289.4	287.5	287.5	287.5	286.5
165°	303.8	301.9	301.0	299.0	298.1	298.1	298.1	298.1
167.5°	313.5	310.6	309.6	308.7	307.7	307.7	307.7	307.7
170°	321.2	319.2	318.3	317.3	316.3	316.3	316.3	316.3
172.5°	328.8	327.9	326.9	325.0	325.0	325.0	326.0	325.0
175°	335.6	334.6	333.7	332.7	331.7	332.7	332.7	332.7
177.5°	341.3	340.4	340.4	339.4	338.5	337.5	338.5	337.5
180°	346.2	346.2	346.2	346.2	346.2	346.2	346.2	346.2

(END OF REPORT)