

**Title:**

Fire Resistance Test In  
Accordance With BS EN 1365-2:  
2014, On A Loadbearing Timber  
Floor Construction Protected By  
A Plasterboard Ceiling And  
Incorporating 12 Down Lighters.

**Date of Test:**

14th January 2021

**Issue 1:**

24th March 2021

**WF Report No.**

436747B/R



**Prepared for:**

**JCC Lighting Products.**

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0249

**This test report is additional  
to that issued as WF Test  
Report No. 436747 and dated  
17th February 2021. The  
original test report remains  
valid and is not replaced by  
this additional test report.**

# Test Specimen

## Summary of Tested Specimen

The timber floor had overall nominal dimensions of 4297 mm long by 3000 mm wide by 255 mm deep. The floor comprised 220 mm high TFSi-Joists at 600 mm centres. The unexposed face of the floor comprised nominally 22 mm thick tongue and groove P5 particle board. The floor assembly was protected on its underside by a single layer of 12.5 mm thick 'Gyproc Wallboard', through fixed to the joists with screws.

The ceiling incorporated twelve downlighter light fittings. The lights are referenced as follows:

Test Ref.	Model Ref.
A	Not the subject of this report.
B	Not the subject of this report.
C	Not the subject of this report.
D	Not the subject of this report.
E	Not the subject of this report.
F	Not the subject of this report.
G	V50 JC1001 WH
H	V50 TILT JC1002 BN
I	V50 TILT JC1002 WH
J	V50 JC1001 CH
K	V50 TILT JC1002 CH
L	V50 JC1001 BN

The floor supported a uniformly distributed load of 1.07 kN/m<sup>2</sup>. This load was provided by the test sponsor as to represent the expected working load for the floor construction in practice.

*Detailed drawings of the test specimen(s) and a comprehensive description of the test construction based on a detailed survey of the specimen(s) and information supplied by the sponsor of the test are included in the Test Specimen and Schedule of Components sections of this report.*

## Performance Criteria and Test Results

<b>Loadbearing Capacity</b>	<p>This is the time in completed minutes for which the test specimen continues to maintain its ability to support the test load during the test. Support of the test load is determined by both the amount and the rate of Deflection. The limiting deflection and the limiting rate of deflection for the specimen, as specified by the Standard, are calculated as:</p>												
	<table border="1"> <thead> <tr> <th>Criteria</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td><i>L: Clear span - in mm</i></td> <td>4100</td> </tr> <tr> <td><i>d: Depth of structural section - in mm</i></td> <td>220</td> </tr> <tr> <td><b>Limiting deflection (<math>L^2/400d</math>) - in mm</b></td> <td>191.0</td> </tr> <tr> <td><b>Limiting rate of deflection (<math>L^2/9000d</math>) - in mm/min</b></td> <td>8.5</td> </tr> <tr> <td><b>Measured deflection <math>1.5 \times (L^2/400d)</math> - in mm</b></td> <td>286.5</td> </tr> </tbody> </table>	Criteria	Value	<i>L: Clear span - in mm</i>	4100	<i>d: Depth of structural section - in mm</i>	220	<b>Limiting deflection (<math>L^2/400d</math>) - in mm</b>	191.0	<b>Limiting rate of deflection (<math>L^2/9000d</math>) - in mm/min</b>	8.5	<b>Measured deflection <math>1.5 \times (L^2/400d)</math> - in mm</b>	286.5
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<b>Measured deflection <math>1.5 \times (L^2/400d)</math> - in mm</b>	286.5												
	<p>Failure to support the load is deemed to have occurred when a '<b>Measured Deflection</b>' greater than or equal to '<b>1.5 x Limiting Deflection</b>' is observed</p>												
	<p><b>Or</b></p>												
	<p>Both the '<b>Limiting rate of deflection</b>' and '<b>Limiting deflection</b>' are exceeded.</p>												
	<p>The criterion was satisfied for <b>36 minutes</b> after which time the test was discontinued.</p>												
<b>Integrity</b>	<p>It is required that the specimen retains its separating function, without:</p> <ul style="list-style-type: none"> <li>▪ causing ignition of a cotton pad when applied</li> <li>▪ permitting the penetration of a gap gauge as specified in BS EN 1363-1: 2020</li> <li>▪ sustained flaming on the unexposed surface</li> <li>▪ subsequent failure of loadbearing capacity</li> </ul>												
	<p><b>These requirements were satisfied for the periods shown below:</b></p>												
<b>Sustained flaming</b>	36 minutes*												
<b>Gap gauge</b>	36 minutes*    No failure*												
<b>Cotton pad</b>	36 minutes*												
<b>Insulation</b>	<p>It is required that the mean temperature rise of the unexposed surface shall not be greater than 140°C and that the maximum temperature rise shall not be greater than 180°C. Insulation failure also occurs simultaneously with integrity failure.</p> <p><b>These requirements were satisfied for the period shown below:</b></p>												
<b>Specimen</b>	36 minutes*    No failure*												
	<p>*The test was discontinued after a period of 36 minutes whilst maintaining integrity, insulation and load bearing criteria.</p>												
<b>Date of Test</b>	14th January 2021												

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## Signatories

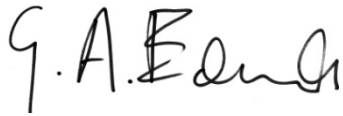
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\* For and on behalf of **Warringtonfire**.

Report Issued: 24th March 2021

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## Revision History

Issue No:	Re-issue Date:
Revised By:	Approved By:
Reason for Revision:	

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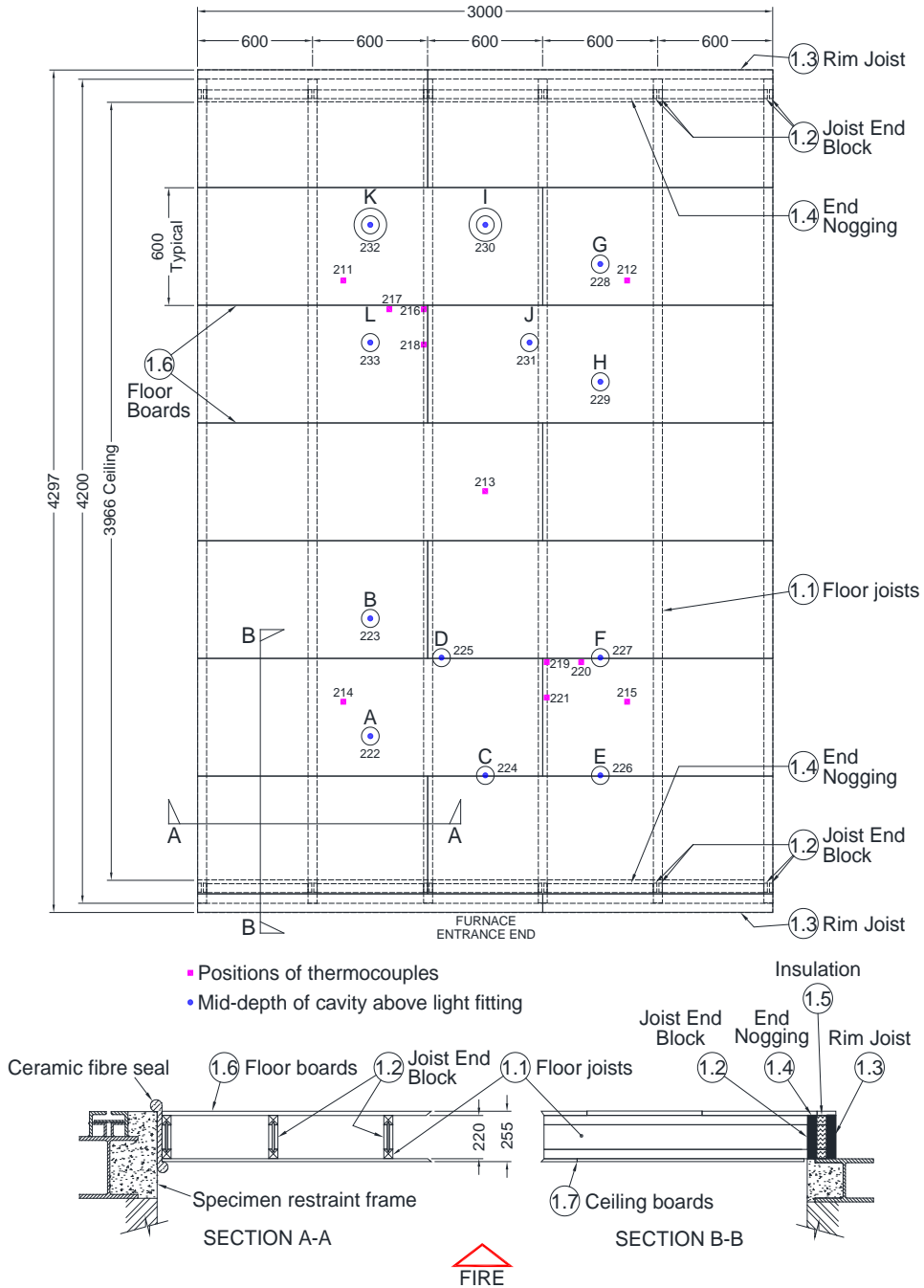
# Test Conditions

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<b>Standard</b>	<p>BS EN 1365-2: 2014, 'Fire resistance tests for loadbearing elements – Part 2: Floors and Roofs'</p> <p>The purpose of the test was to evaluate the performance of a timber floor construction protected by a ceiling of known fire resistance, when incorporating down lighter light fitting assemblies.</p>
<b>Sampling</b>	<p><b>Warringtonfire</b> was not involved in the sampling or selection of the tested specimen or any of the components.</p> <p>The results obtained during the test only apply to the test samples as received and tested by <b>Warringtonfire</b>.</p>
<b>Installation</b>	<p>Representatives of <b>Staircraft Group Ltd.</b> assembled the floor construction and installed the downlighters between the 7th and 13th January 2021</p>
<b>Conditioning</b>	<p>The specimen's storage, construction, and test preparation took place in the test laboratory over a total, combined time of 7 days. Throughout this period of time both the temperature and the humidity of the laboratory were measured and recorded as being within a range of from 5.5°C to 19°C and 45% to 67.5% respectively.</p>
<b>Instruction to Test</b>	<p>The test was conducted on the 14th January 2021 at the request of <b>JCC Lighting Products</b>, the test sponsor.</p>
<b>Ambient Temperature</b>	<p>The ambient air temperature in the vicinity of the test construction was 13°C at the start of the test with a maximum variation of +/-1°C during the test.</p>
<b>Furnace</b>	<p>The furnace was controlled so that its mean temperature complied with the requirements of BS EN 1363-1: 2020 Clause 5.1 using eight plate thermometers, distributed over a plane 100 mm from the underside of the test assembly.</p>
<b>Thermocouples</b>	<p>Thermocouples were provided to monitor the unexposed surface of the specimen. The output of all instrumentation was recorded at no less than one-minute intervals. The locations and reference numbers of the various unexposed surface and internal thermocouples are shown in Figure 1.</p>
<b>Application of the load</b>	<p>The full test load was applied via dead load, uniformly distributed over the test Specimen 60 minutes before the commencement of the test.</p>
<b>Loadbearing Capacity Criteria</b>	<p>A linear deflection transducer was provided at the approximate centre on the unexposed surface of the specimen to record its vertical deflection.</p>
<b>Furnace Pressure</b>	<p>After the first five minutes of testing and for the remainder of the test, the furnace atmospheric pressure was controlled so that it complied with the requirements of BS EN 1363-1: 2020, clause 5.2.1 The calculated pressure differential relative to the laboratory atmosphere 100 mm below the soffit of the specimen was 18 (± 5) Pa between 5 and 10 minutes and 18 (± 3) Pa thereafter.</p>

# Test Assembly

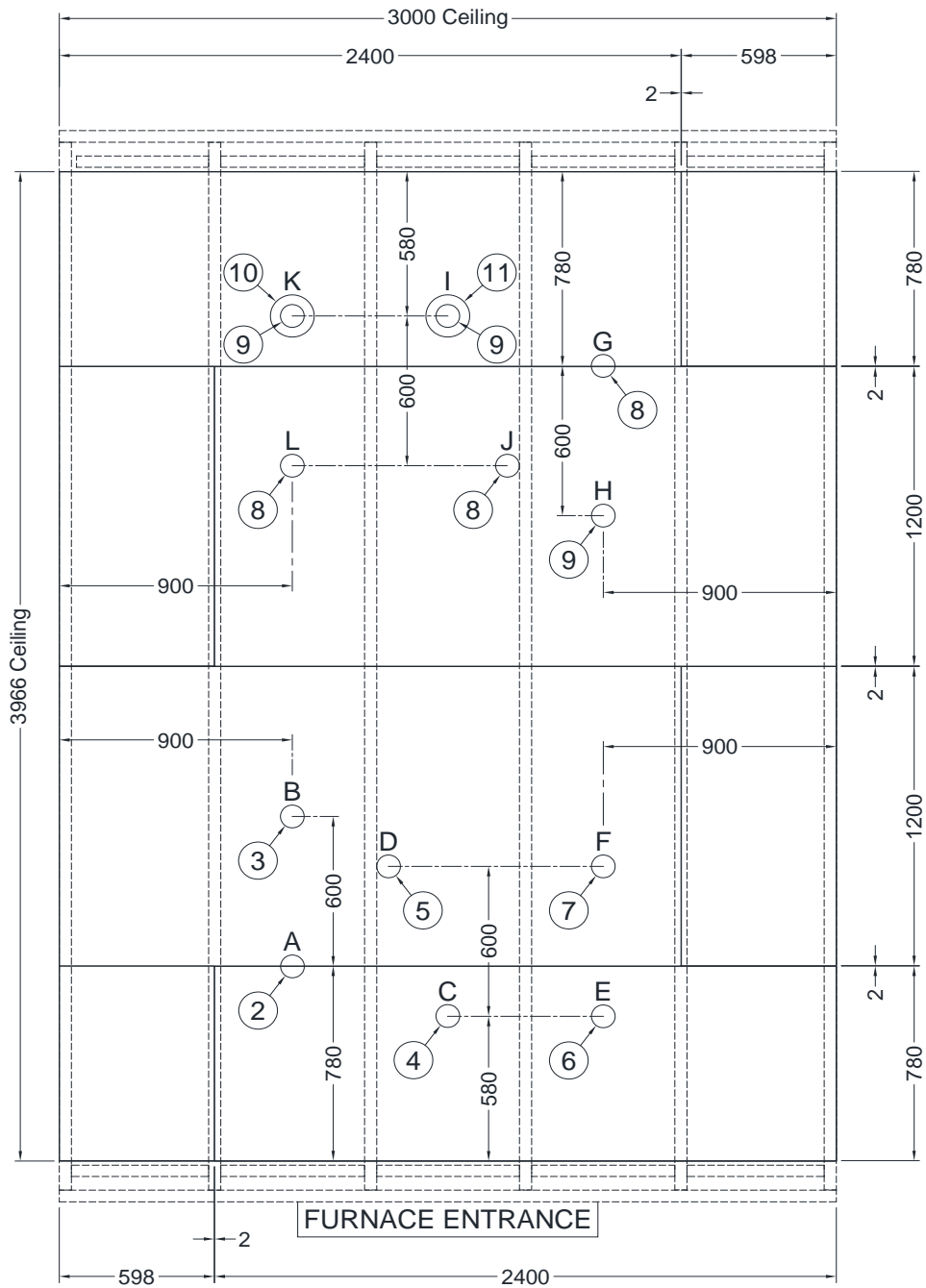
**Figure 1- Plan View of Test Specimen**



Do not scale. All dimensions are in mm

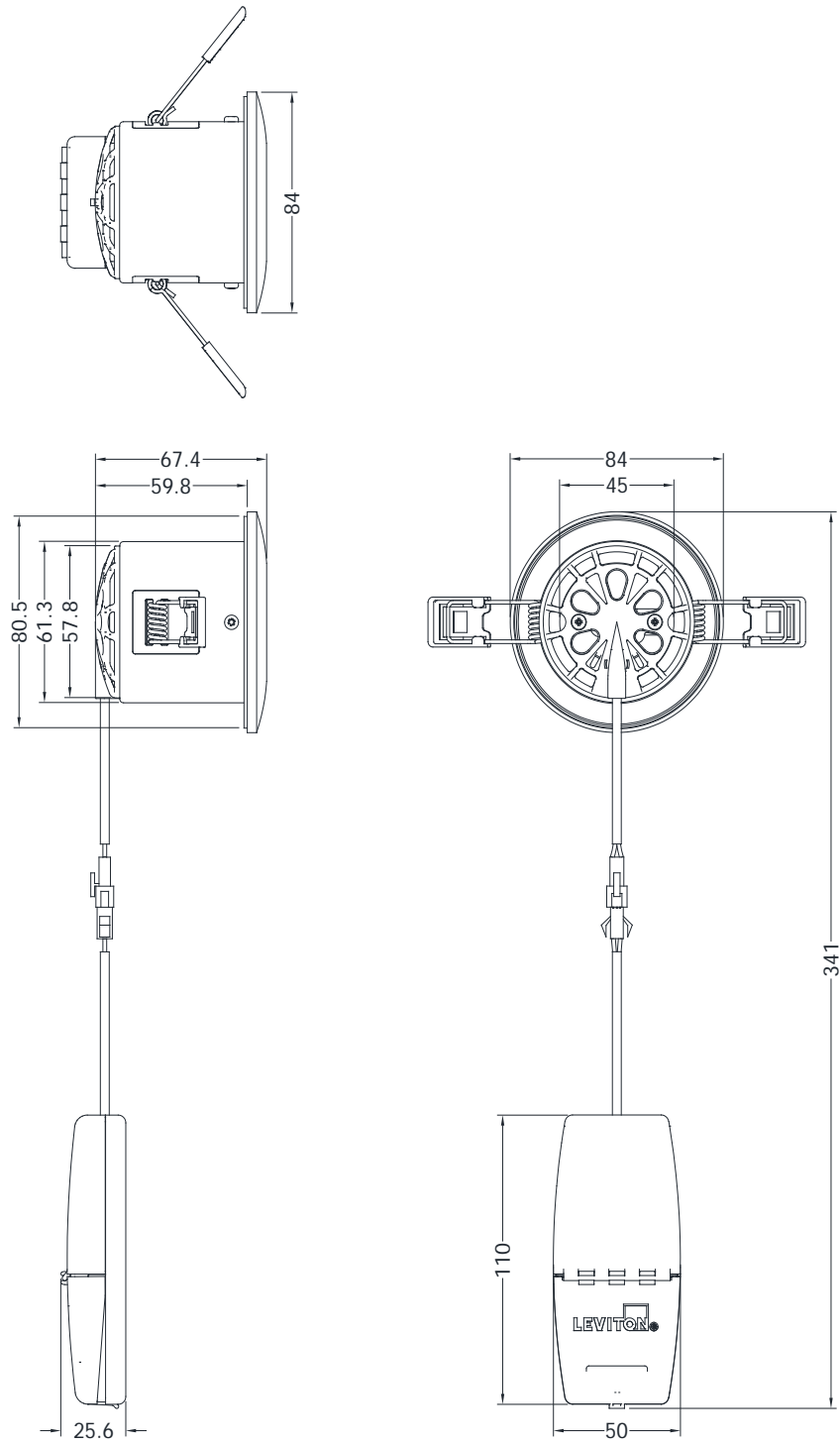


**Figure 2 – Details of Downlighter Positions**



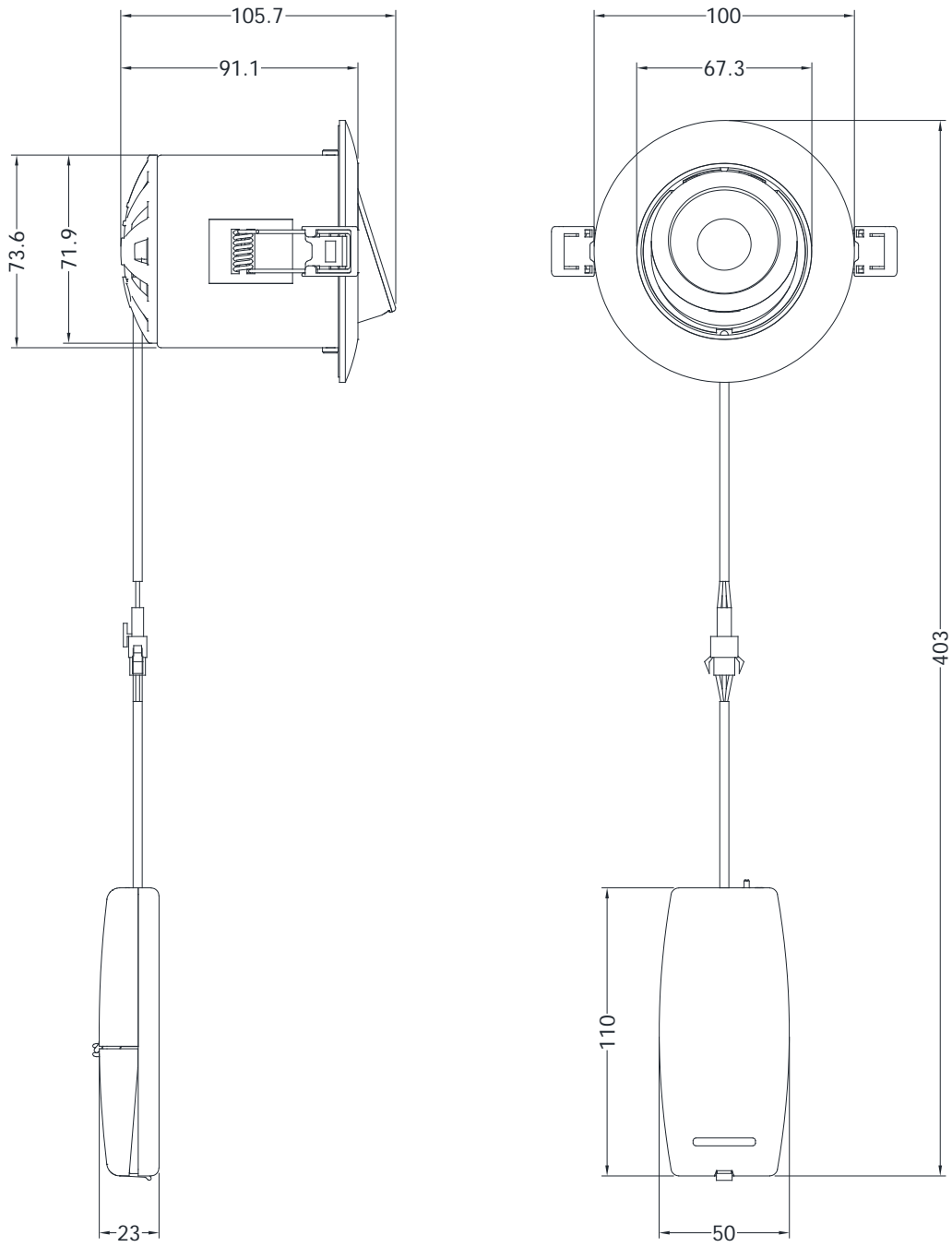
Do not scale. All dimensions are in mm

**Figure 9 – Details of Downlighter Specimens G, J & L**



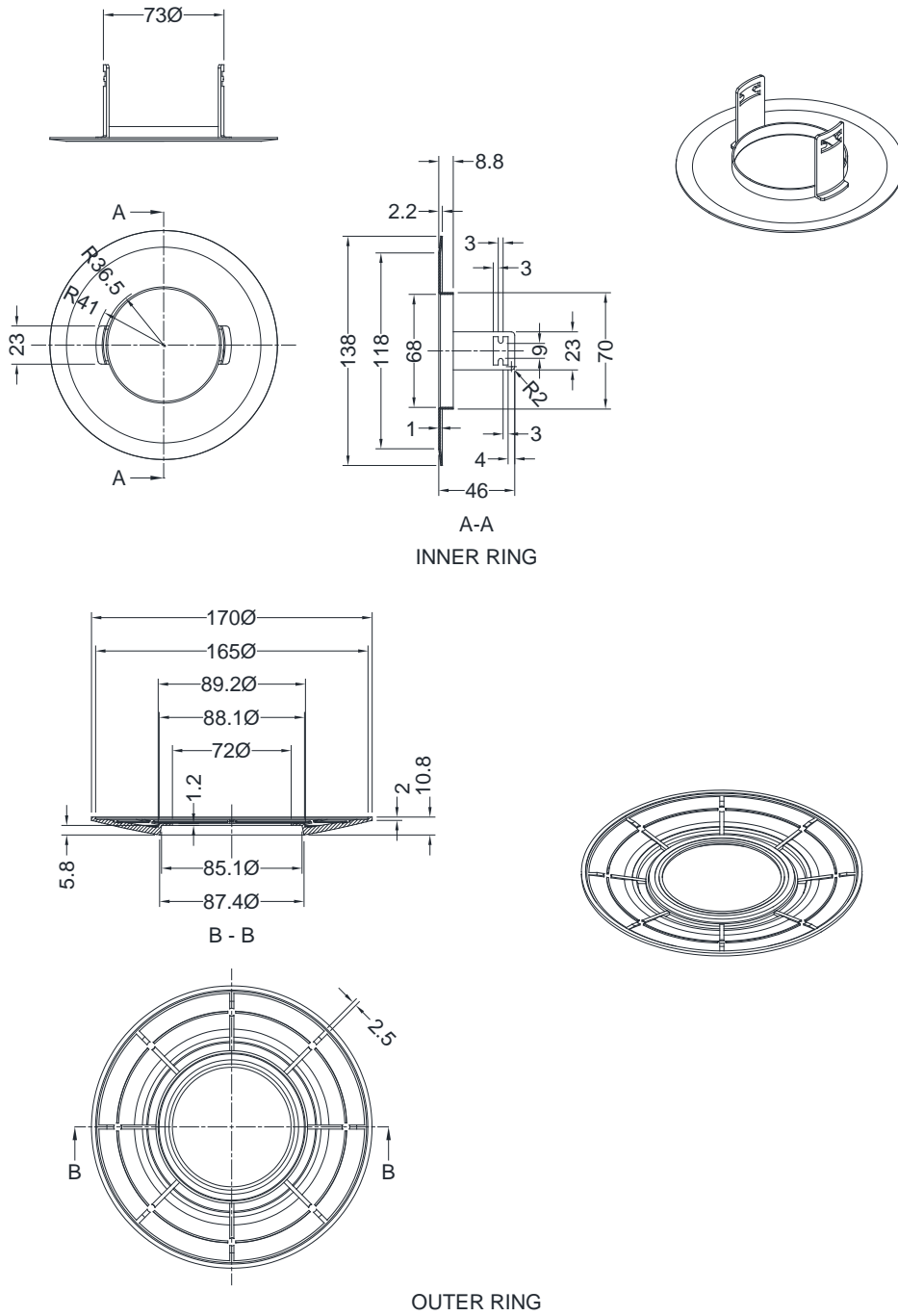
Do not scale. All dimensions are in mm

**Figure 10 – Details of Downlighter Specimens H, I & K**



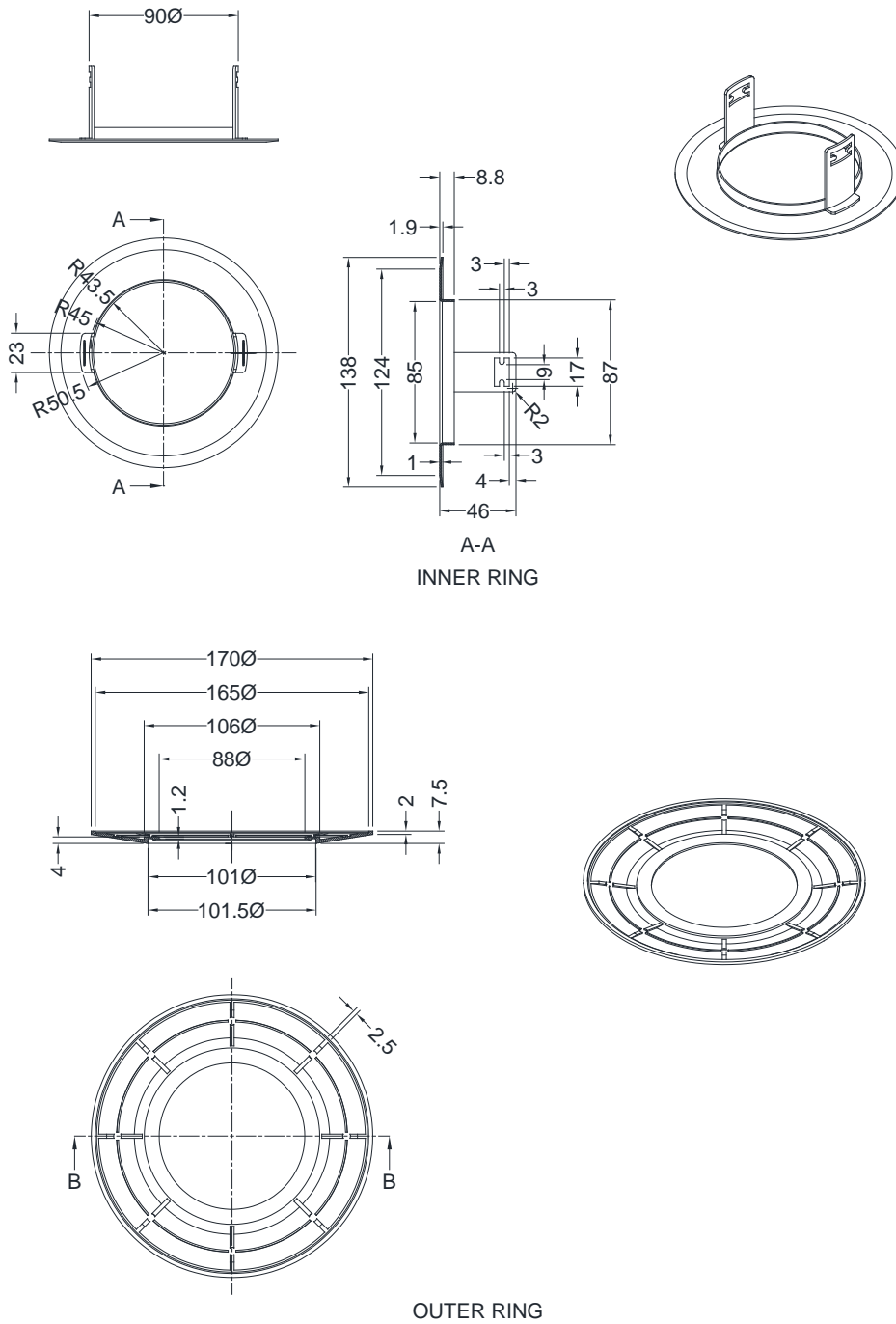
Do not scale. All dimensions are in mm

**Figure 11 – Details of Converter fitted to Specimen K**



Do not scale. All dimensions are in mm

**Figure 12 – Details of Converter fitted to Specimen I**



Do not scale. All dimensions are in mm

# Schedule of Components

(Refer to Figures 1 to 12

(All other details are as stated by the sponsor)

<u>Item</u>	<u>Description</u>
<b>1. Timber Floor</b>	
<b>1.1 Engineered Joist</b>	
Manufacturer	: Staircraft Group Ltd
Reference	: TFSi-Joist
Material	
i. top & bottom flange	: European whitewood
ii. joist web	: Oriented Strand Board, OSB
Densities	
i. top & bottom flange	: 402.6 kg/m <sup>3</sup> , measured
ii. joist web	: 676.2 kg/m <sup>3</sup> , measured
Overall sizes	
i. assembled joist	: 47.5 mm wide x 220 mm deep x 4200 mm long
ii. top & bottom flange	: 47.5 mm wide x 47.9 mm thick
iii. web	: 157 mm x 11.3 mm thick
Fixing methods	
i. joist web	: Fitted between the top & bottom flange and bonded via a profiled finger joint
ii. assembled joist	: Laid across the furnace at 600 mm centres, please see Figure 1 for layout
Adhesive	
i. manufacturer	: Henkel AG & Co.
ii. type	: Single component Polyurethane, PU
iii. reference	: Type 1 adhesive to EN 15425:2008
iv. application method	: Machine controlled spray application
<b>1.2. Joist End Blocks</b>	
Material	: European whitewood
Density	: 448.5 kg/m <sup>3</sup> , measured
Overall size	: 47 mm wide x 19.1 mm thick x 124 mm long
Fixing method	: Fitted between the top & bottom flanges and bonded and nailed on each side at each end of every joist
Adhesive	
i. manufacturer	: Egger (UK) Limited
ii. type	: Single part, moisture curing polyurethane, PU, adhesive
iii. reference	: EGGER D4 Joint & Joist Adhesive
iv. application method	: Nozzle
Fixings	
i. type	: Drywall screws
ii. material	: Steel
iii. overall size	: 42 mm long x 3.5 mm diameter
iv. quantity	: 2 off per end block

<u>Item</u>	<u>Description</u>
<b>1. Timber Floor (Continued)</b>	
<b>1.3. Ceiling Rim Joist</b>	
i. material	: Spruce Laminated veneer lumber (LVL)
ii. overall size	: 48 mm wide x 220 mm deep x 2960 long
iii. fixing method	: Fitted to the ends of the engineered joists, item 1.1, and fixed with 100 mm long x 3.2 mm diameter ring shank fired nails. Please see Figure 1 for positions
<b>1.4. Ceiling End Noggings (Section of Rim-Joist)</b>	
i. material	: Spruce Laminated veneer lumber (LVL)
ii. cross section	: 48 mm wide x 220 mm deep
iii. fixing method	: Fitted between the engineered joists, item 1.1, and fixed with 100 mm long x 3.2 mm diameter ring shank fired nails. Please see Figure 1 for positions
<b>1.5. Insulation</b>	
Manufacturer	: Rockwool
Reference	: ProRox SL 920 UK
Material	: Stone wool based insulation batts
Density	: 45 kg/m <sup>3</sup> , uncompressed
Thickness	: 50 mm
Fixing method	: Fitted into the gaps formed by the rim joists and the end noggings, item 1.3 & 1.4 respectively
<b>1.6. Floor Boards</b>	
i. material	: Flooring grade tongue and groove chipboards
ii. thickness	: 22 mm
iii. density	: 660.9 kg/m <sup>3</sup> , measured
iv. fixing method	: Fitted in a single layer and bonded with Egger D4 glue to the top chords of each joist and rim joists as well as in the tongue and groove of adjoining boards. Also, fixed with 65 mm long x 3.35 mm diameter ring shank nails to floor joists at 600 mm centres and around the perimeter
<b>1.7. Ceiling Boards</b>	
Manufacturer	: British Gypsum
Reference	: Gyproc Wallboard
Material	: Type A gypsum complete with strong paper liners
Thickness	: 1 off layer 12.5 mm thick
Density	: 668.7 kg/m <sup>3</sup> , measured
Fixing method	The boards were screw fixed to the soffit of the joists with all joints staggered and skimmed with British Gypsum jointing compound
i. manufacturer	: British Gypsum
ii. overall size	: 42 mm long x 3.5 mm diameter drywall screws
iii. centres	: 230 mm centres along joints and 230 mm to the perimeter of the ceiling

**Item****Description****2. Specimen A**

Not the subject of this report.

**3. Specimen B**

Not the subject of this report.

**4. Specimen C**

Not the subject of this report.

**5. Specimen D**

Not the subject of this report.

**6. Specimen E**

Not the subject of this report.

**7. Specimen F**

Not the subject of this report.



<b><u>Item</u></b>	<b><u>Description</u></b>
<b>8. Specimens G, J &amp; L</b>	
Manufacturer	: JCC Lighting
References	
i. specimen G	: V50 JC1001 WH
ii. specimen J	: V50 JC1001 CH
iii. specimen L	: V50 JC1001 BN
Overall dimensions and construction	: See Figure 9 for details
Luminaire Details	
i. body materials	: Steel, Heat Sink of extruded aluminium, Lens of Polycarbonate, Rim of Die cast aluminium
ii. diffuser material	: PMMA
iii. diffuser rating	: 650°C
iv. chipset	: SUNPU 2828
v. weight	: 0.29Kg
vi. input voltage	: 230-240V
vii. input frequency	: 50-60Hz
viii. inrush current	: ≤5A 2.2μS
ix. running current	: 175mA
x. electrical class	: II
xi. lamp type	: LED
xii. dimmable	: Yes
xiii. MacAdam steps	: 5
xiv. lumen depreciation	: L70 @ 51,000hrs
xv. LED driver manufacturer	: JCC Lighting
xvi. IP rating	: IP65
xvii. operating temperature	: -5 °C to 25 °C
xviii. correlated colour temperature	: 3000K & 4000k
xix. colour rendering index	: Ra80
xx. forward voltage	: 36V DC
xxi. total power	: 7W
xxii. power factor	: 0.9
xxiii. intumescent	: 80 mm x diameter x 1 mm thick graphite based intumescent
xxiv. sealing ring	: 10 mm x wide x 1 mm thick silicone rubber based seal
xxv. cut out size	: 70 mm
<b>9. Specimens H I &amp; K</b>	
Manufacturer	: JCC Lighting
References	
i. specimen H	: V50 Tilt JC1002 BN
ii. specimen I	: V50 Tilt JC1002 WH
iii. specimen K	: V50 Tilt JC1002 CH
Overall dimensions and construction	: See Figure 10 for details
Luminaire Details	
i. body materials	: Steel, Heat Sink of extruded aluminium, Lens of Polycarbonate, Rim of Die cast aluminium
ii. diffuser material	: PMMA
iii. diffuser rating	: 650°C
iv. chipset	: SUNPU 2828
v. weight	: 0.46Kg
vi. input voltage	: 230-240V
vii. input frequency	: 50-60Hz
viii. inrush current	: ≤5A 2.2μS

<u>Item</u>	<u>Description</u>
<b>9. Specimens H I &amp; L</b>	
Luminaire Details	
ix. running current	: 175mA
x. electrical class	: II
xi. lamp type	: LED
xii. dimmable	: Yes
xiii. MacAdam steps	: 5
xiv. lumen depreciation	: L70 @ 51,000hrs
xv. LED driver manufacturer	: JCC Lighting
xvi. IP rating	: IP65
xvii. operating temperature	: -5 °C to 25 °C
xviii. correlated colour temperature	: 3000K & 4000k
xix. colour rendering index	: Ra80
xx. forward voltage	: 36V DC
xxi. total power	: 7W
xxii. power factor	: 0.9
xxiii. intumescent	: 92 mm x diameter x 1 mm thick graphite based intumescent (top of can)
xxiv. sealing ring	: 10 mm x wide x 1 mm thick silicone rubber based seal
xxv. cut out size	: 85 mm
<b>10. Converter Plate</b>	
Manufacturer	: JCC Lighting
Reference	: JC1003 BN
Materials	
i. inner ring	: Steel
ii. outer ring	: Steel
Overall sizes	: See Figure 11 for details
Fitting methods	
i. inner ring	: Snap fitted into existing aperture in ceiling
ii. outer ring	: Slip fitted over new lighting unit, specimen K item 8, and retained when unit is fitted into inner ring
<b>11. Converter Plate</b>	
Manufacturer	: JCC Lighting
Reference	: JC1004 BN
Materials	
i. inner ring	: Steel
ii. outer ring	: Steel
Overall sizes	: See Figure 12 for details
Fitting methods	
i. inner ring	: Snap fitted into existing aperture in ceiling
ii. outer ring	: Slip fitted over new lighting unit, specimen L item 9, and retained when unit is fitted into inner ring

# Test Observations

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Time		All observations are from the exposed face unless noted otherwise.
mins	secs	
-60	00	<b>Load applied.</b>
00	00	<b>The test commences.</b>
04	00	The paper face of the plasterboard is glowing/burning away.
07	00	The jointing compound is beginning to burn and fall away.
10	30	Heavy flaming from light fitting I.
12	00	Flaming at light fittings L and H, cover plates distorting.
13	30	The plasterboard ceiling is glowing red.
15	00	The long edges of the plasterboard are beginning to ripple.
18	30	All light fittings are flaming or have fallen from the ceiling.
19	00	The ceiling boards begin to sag with flaming through the board gaps at joist position. The gap between long edges is around 10mm.
21	00	Flaming through board joints increases.
27	00	The ceiling boards continue to sag.
29	00	The gaps between ceiling boards now around 20mm.
31	30	Heavy flaming at all ceiling gaps.
36	00	<b>Test discontinued for safety reasons as deflection rate rapidly rises.</b>

# Test Photographs

The exposed face of the floor assembly prior to test



The unexposed face of the floor assembly prior to test



The unexposed face of the floor assembly after 15 minutes of testing



The unexposed face of the floor assembly after 30 minutes of testing



# Temperature, Pressure and Deflection Data

Mean Furnace Temperature, Together With The Temperature/Time Relationship Specified In The Standard BS EN 1363-1: 2020

Time Mins	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	34
1	349	314
2	445	525
3	502	526
4	544	549
5	576	568
6	603	607
7	626	619
8	646	641
9	663	663
10	678	697
11	693	689
12	706	710
13	717	720
14	728	729
15	739	736
16	748	748
17	757	758
18	766	766
19	774	774
20	781	781
21	789	788
22	796	795
23	802	800
24	809	808
25	815	815
26	820	821
27	826	827
28	832	832
29	837	837
30	842	842
31	847	848
32	852	855
33	856	862
34	860	868
35	865	873
36	869	878

**Individual Temperatures And Mean Recorded On The Unexposed Surface Of The Specimen**

Time Mins	T/C Number 211 Deg. C	T/C Number 212 Deg. C	T/C Number 213 Deg. C	T/C Number 214 Deg. C	T/C Number 215 Deg. C	Mean Temp Deg. C
0	17	17	18	17	17	17
1	17	17	18	17	17	17
2	17	17	18	17	17	17
3	17	17	18	17	17	17
4	17	17	18	17	17	17
5	17	17	18	17	17	17
6	17	17	18	17	17	17
7	17	18	18	18	17	18
8	18	18	19	18	18	18
9	18	19	19	19	*	19
10	19	19	20	20	19	19
11	20	20	21	21	20	20
12	21	21	22	22	21	21
13	22	22	22	23	22	22
14	23	23	23	24	23	23
15	24	24	24	25	24	24
16	25	25	25	26	25	25
17	26	26	26	27	26	26
18	27	27	27	28	27	27
19	28	28	28	29	28	28
20	29	29	29	30	29	29
21	30	31	31	31	30	31
22	32	32	32	32	32	32
23	33	34	34	34	34	34
24	35	36	37	35	36	36
25	37	38	40	38	39	38
26	39	41	43	40	42	41
27	42	43	47	43	46	44
28	45	46	50	46	50	47
29	47	49	54	50	54	51
30	50	52	57	53	58	54
31	53	55	60	57	61	57
32	56	58	64	60	64	60
33	59	61	67	64	67	64
34	62	64	70	67	69	66
35	65	66	73	70	71	69
36	68	69	76	72	73	72

\*Thermocouple malfunction

**Individual Temperatures Recorded On The Unexposed Surface Of The Specimen Adjacent to Joints**

Time Mins	T/C Number 216 Deg. C	T/C Number 217 Deg. C	T/C Number 218 Deg. C	T/C Number 219 Deg. C	T/C Number 220 Deg. C	T/C Number 221 Deg. C
0	13	17	16	16	17	17
1	13	17	16	17	17	17
2	13	17	16	17	17	18
3	13	17	16	17	17	18
4	13	17	16	17	17	18
5	13	17	16	17	17	18
6	13	17	16	17	17	18
7	13	18	16	17	17	18
8	12	18	16	17	18	18
9	26	19	17	18	19	18
10	26	19	17	19	19	18
11	26	20	18	20	20	19
12	26	21	18	21	21	19
13	27	22	19	22	22	19
14	27	23	19	23	23	20
15	28	24	20	24	24	20
16	28	25	21	25	25	21
17	28	26	21	26	26	22
18	29	27	22	27	27	22
19	29	28	23	28	28	23
20	29	29	23	29	30	23
21	30	30	24	30	31	24
22	30	32	25	31	33	25
23	30	33	26	33	36	25
24	31	35	27	35	38	26
25	31	37	28	37	42	27
26	32	39	28	39	44	28
27	33	41	29	42	48	29
28	35	44	30	45	51	30
29	36	47	32	48	54	31
30	37	50	33	51	57	32
31	38	53	34	54	60	34
32	40	57	36	57	63	35
33	42	60	37	60	65	37
34	45	64	39	63	68	39
35	47	67	41	65	70	40
36	48	71	43	68	72	42



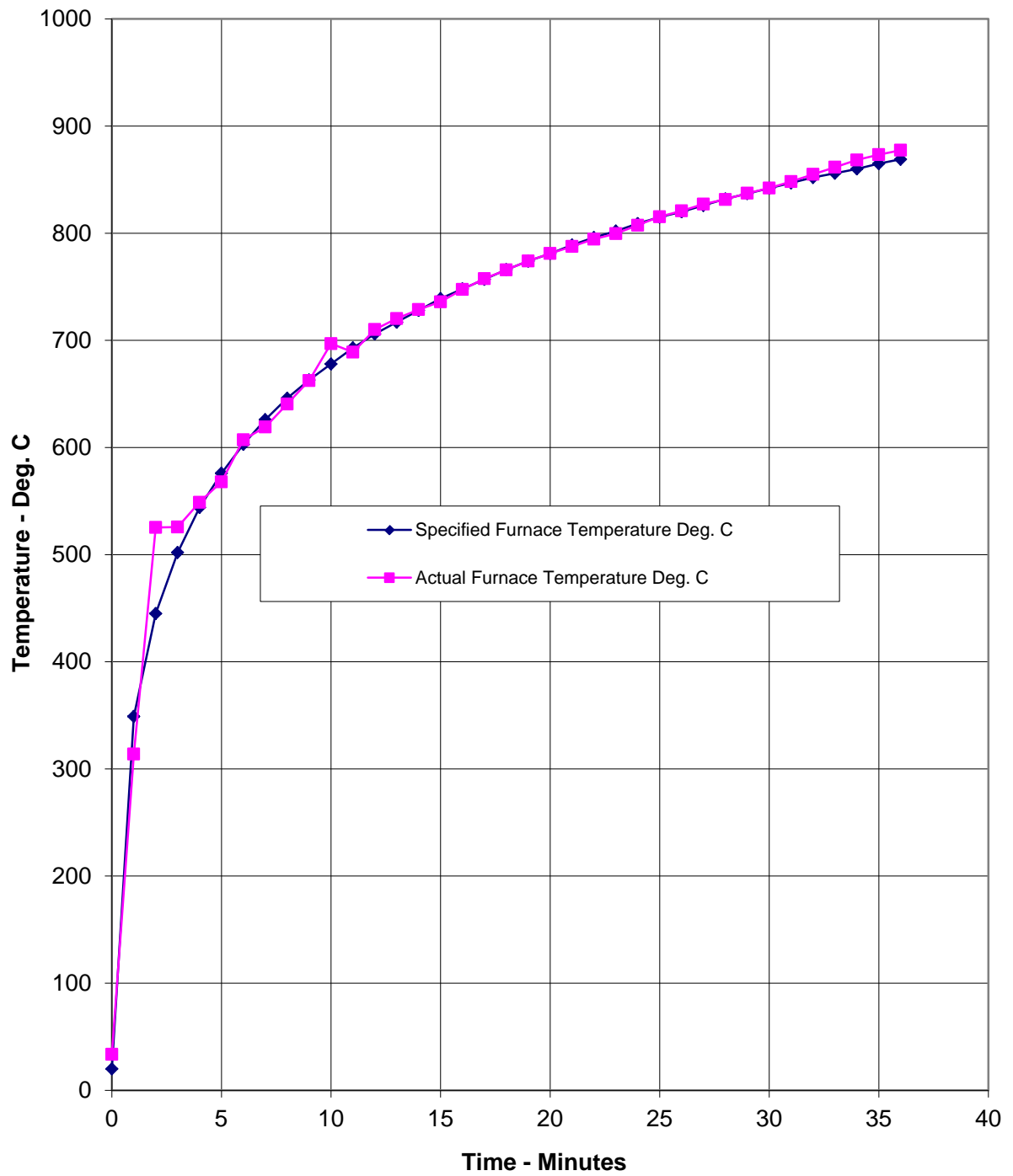
**Individual Temperatures Recorded At Mid-Height Of The Cavity Coincidental With The Light Fittings (continued)**

Time Mins	T/C Number 228 Deg. C	T/C Number 229 Deg. C	T/C Number 230 Deg. C	T/C Number 231 Deg. C	T/C Number 232 Deg. C	T/C Number 233 Deg. C
0	18	18	18	18	18	18
1	19	19	21	18	18	19
2	53	48	48	47	47	52
3	60	58	57	60	58	63
4	65	63	60	64	63	66
5	66	66	63	67	65	69
6	70	68	66	84	69	71
7	72	77	69	99	72	78
8	76	88	74	104	76	91
9	93	97	77	111	80	99
10	101	101	85	117	94	106
11	104	107	98	119	101	107
12	107	110	102	122	103	117
13	112	113	107	124	107	117
14	118	125	115	133	113	123
15	134	136	127	142	125	133
16	166	163	154	163	150	156
17	193	189	179	185	174	187
18	217	208	202	205	193	203
19	236	222	219	208	211	223
20	248	239	231	215	227	236
21	256	247	248	230	235	250
22	264	255	251	248	241	260
23	272	271	260	256	249	275
24	281	279	268	266	258	286
25	291	290	275	276	265	297
26	297	299	283	286	271	308
27	307	306	291	292	276	325
28	315	321	298	303	286	329
29	320	333	309	312	294	341
30	331	343	317	321	300	348
31	340	351	324	333	305	357
32	349	371	334	342	317	368
33	360	381	346	353	325	378
34	373	402	362	355	335	389
35	387	418	376	371	348	401
36	400	424	383	392	365	420

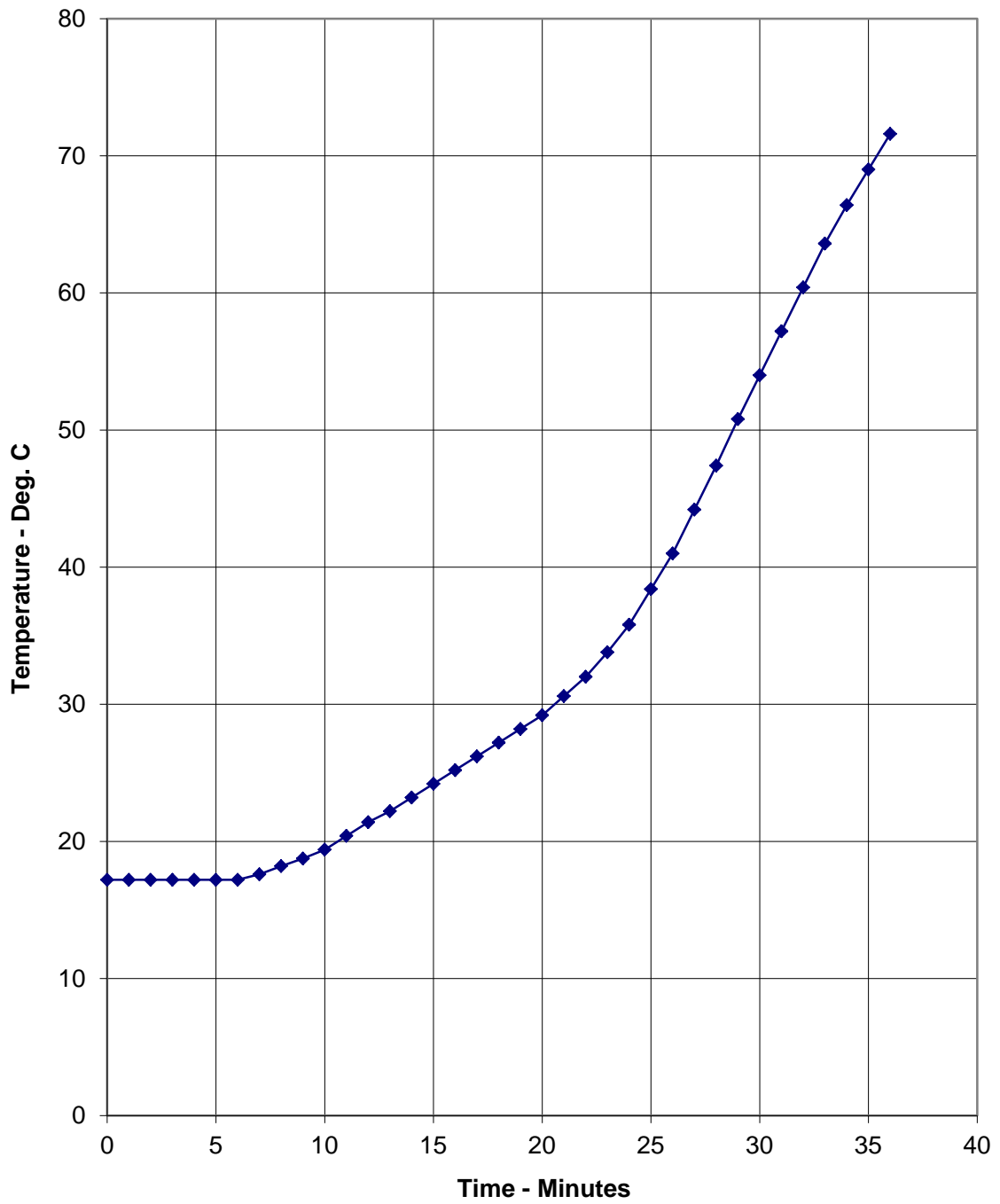
**Central Vertical Deflection Of The Specimen**

Time Mins	Central Vertical Deflection mm	Rate Of Deflection mm/min
0	0.0	0.0
1	0.6	0.7
2	0.7	0.1
3	0.7	0.0
4	0.7	0.0
5	0.7	0.0
6	0.8	0.2
7	1.0	0.2
8	1.1	0.1
9	1.3	0.2
10	1.4	0.1
11	1.5	0.1
12	1.6	0.1
13	1.8	0.1
14	1.8	0.1
15	2.0	0.2
16	2.1	0.2
17	2.3	0.2
18	2.5	0.2
19	2.7	0.2
20	2.9	0.2
21	3.2	0.3
22	3.5	0.3
23	4.1	0.6
24	4.6	0.5
25	5.1	0.6
26	5.7	0.5
27	6.3	0.7
28	7.3	0.9
29	8.0	0.7
30	9.1	1.2
31	10.6	1.4
32	12.6	2.0
33	15.0	2.4
34	19.0	4.0
35	26.7	7.7
36	41.0	14.3

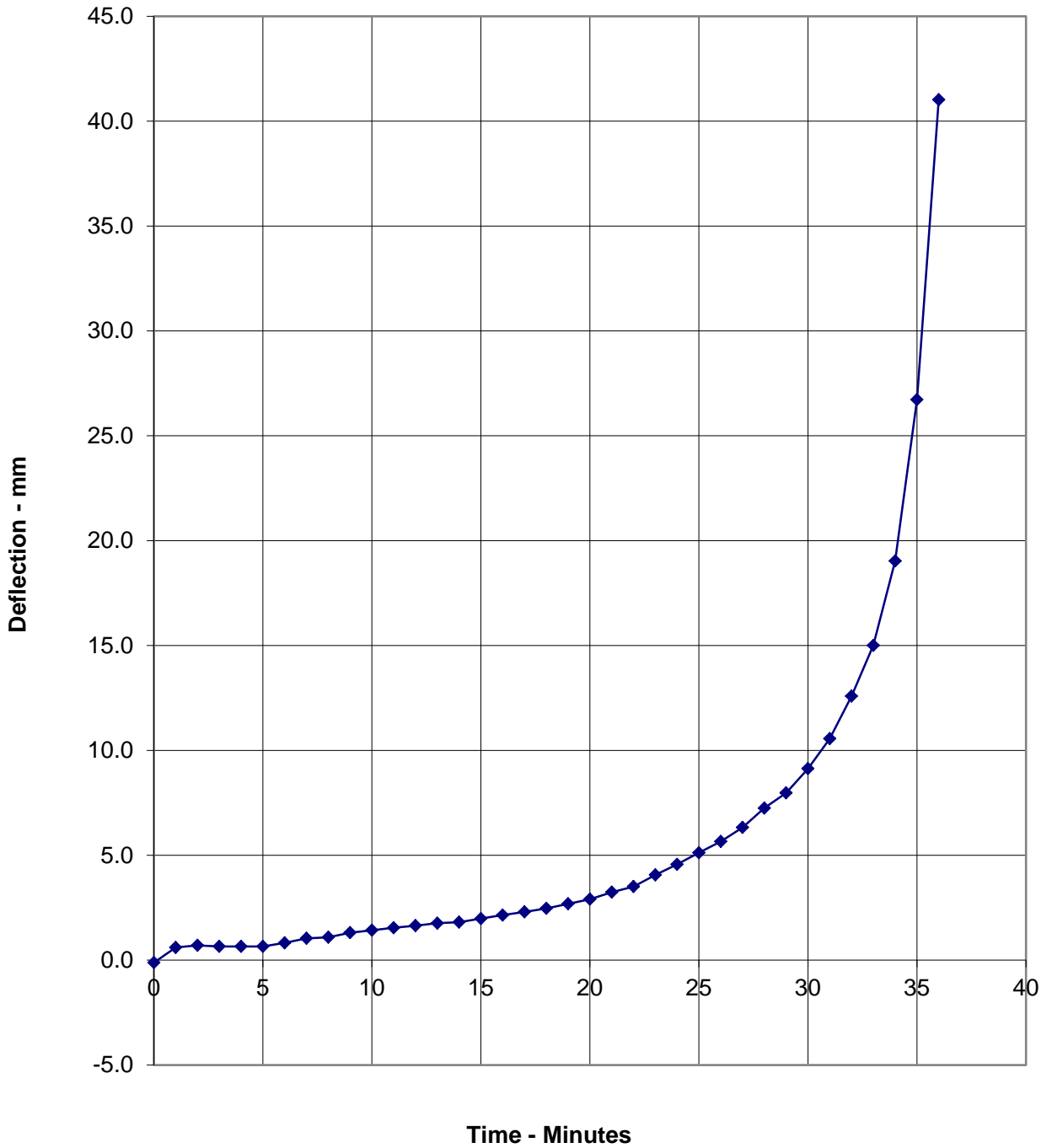
**Graph Showing Mean Furnace Temperature, Together With The Temperature/Time Relationship Specified In The Standard**



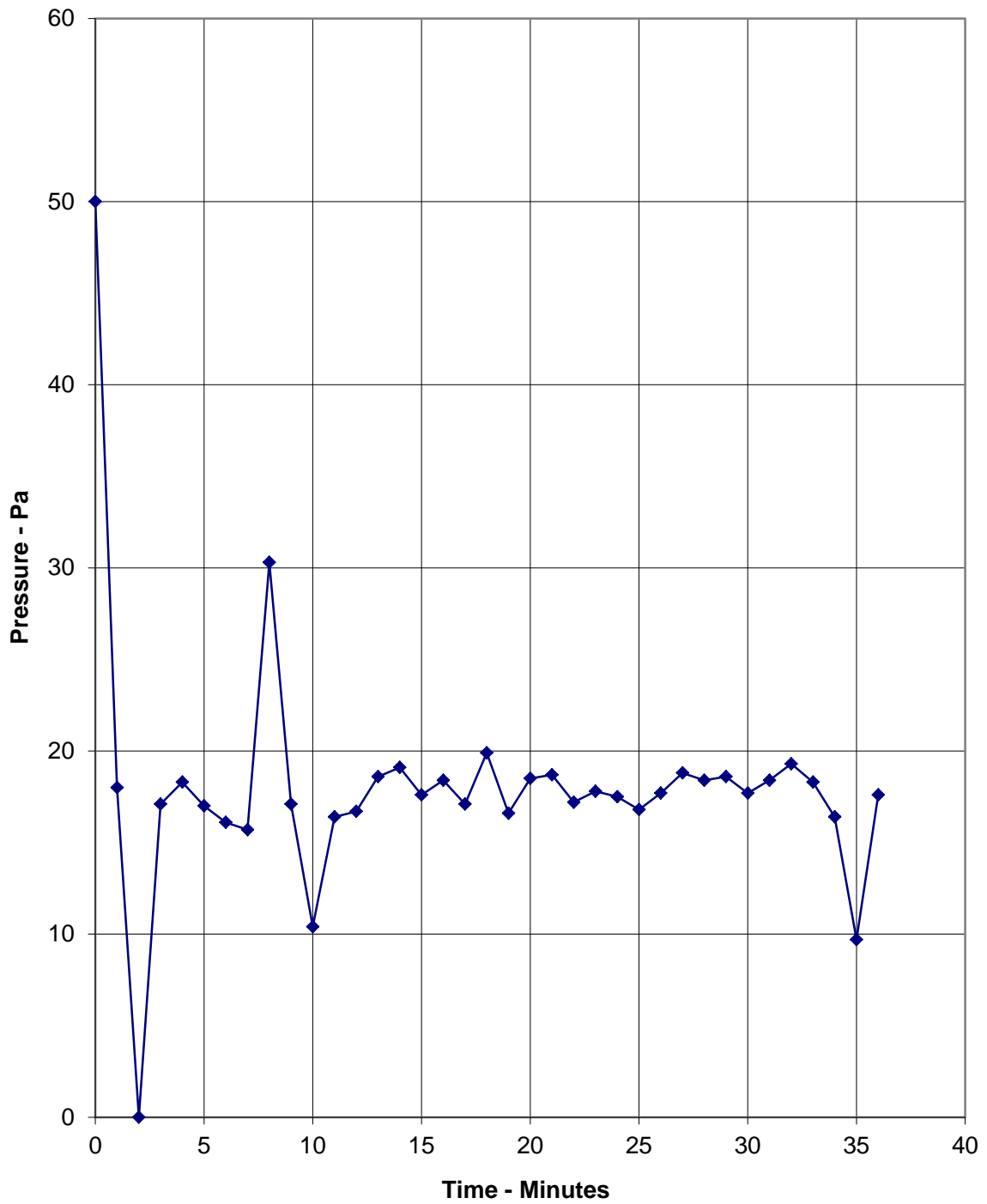
Graph Showing Mean Temperature Recorded On The Unexposed Surface Of The Specimen



Graph Showing The Recorded Vertical Deflection Of The Specimen



Graph Showing Recorded Furnace Pressure 100 mm Below The Underside Of The Specimen



# On-going Implications

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## Limitations

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein were tested following the procedure outlined in BS EN 1363-1: 2020, and where appropriate BS EN 1363-2: 1999. Any significant deviation with respect to size, constructional details, loads, stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report. Annex A of BS EN 1363-1: 2020, provides guidance information on the application of fire resistance tests and the interpretation of test data.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

This test report is additional to that issued as WF Test Report No. 436747 and dated 14th January 2021. The original test report remains valid and is not replaced by this additional test report. The products referred to in the original report and this additional test report has not been re-tested, this report does not involve technical change or technical review of the original test report.

## EGOLF

Certain aspects of some fire test specifications are open to different interpretations. EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed