

T e s t R e p o r t

Report No : L11911 Amd1
Client: : Tenmat Limited
Ashburton Road West
Trafford Park
Manchester
M17 1RU
Description : Fire Hood
Manufacturer : Tenmat Limited
Type/Model : 410mm recessed luminaire rear cover FF135
355mm recessed luminaire rear cover FF130
Lamp Type : Refer to report
Condition on Receipt : Good
Test Specification : Thermal and flammability test with reference to
UL1598 and IEC 60598-1
Date Tested : 31/05/11
Conclusion : Please see results section of this report
Date Issued : 05/10/11

Signed: G.RICHARDS
Position: Quality Manager



Approved: S.W.POOLE
Position: Laboratory Manager

These Test Results relate only to the unit tested. This Report and following report may not be reproduced except in full without the written approval of the Testing Laboratory.

Registered Office: Stafford Park 7 Telford Shropshire TF3 3BQ England
Tel: +44 (0) 1952 290907 **Fax:** +44 (0) 1952 290908 **Email:** lab@lightingassociation.com
Web: www.lightingassociation.com
Web www.lalab.co.uk

Registered in England No: 2925465 VAT Reg No GB 991 2972 79

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Introduction

The Lighting Association Laboratories were commissioned by Tenmat Limited to conduct thermals tests to the clients own specification with reference to UL 1598 clause 11, 13.4.8, 14.7 & 15.4 on 2 recessed luminaire fire hoods. The testing is to be undertaken using a readily available recessed luminaire supplied by the client. Each fire hood is to be tested using 2 lamps supplied by the client.

The amendment to this report is for the inclusion of additional thermal test results for an alternative lamp type and the removal of lamp types deemed not suitable for use within this product due to operation of the luminaire internal thermal protection during testing.

Product Details

The Fire Hoods

The 2 fire hoods supplied are manufactured from similar material but differ in size and shape.

The fire hoods are intended to be positioned over the rear of a recessed downlight to prevent the spread of fire through a building. The products submitted are intended for use in domestic and commercial premises.

No installation instructions have been supplied with the covers

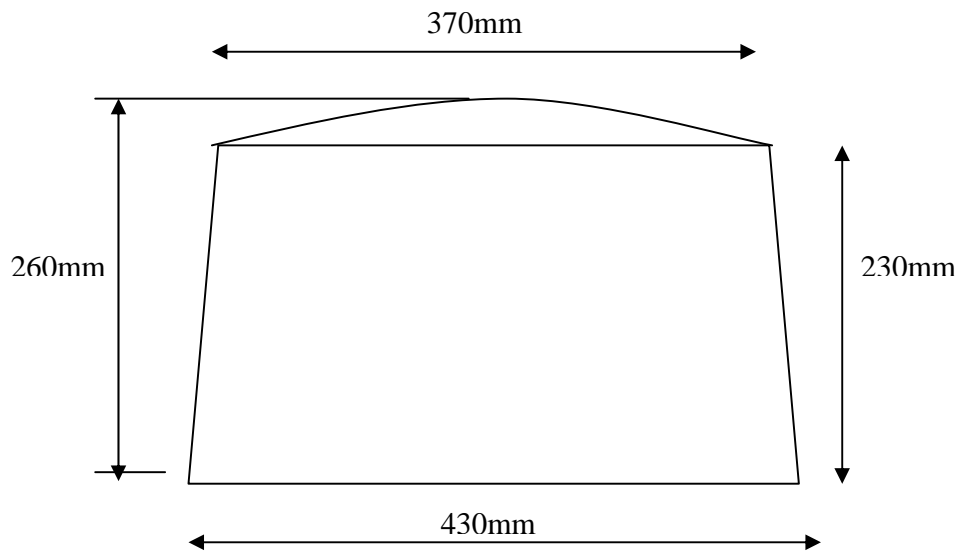
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Product reference FF135 is a circular cover with a domed top section.



The cover dimensions are as shown in the diagram below:



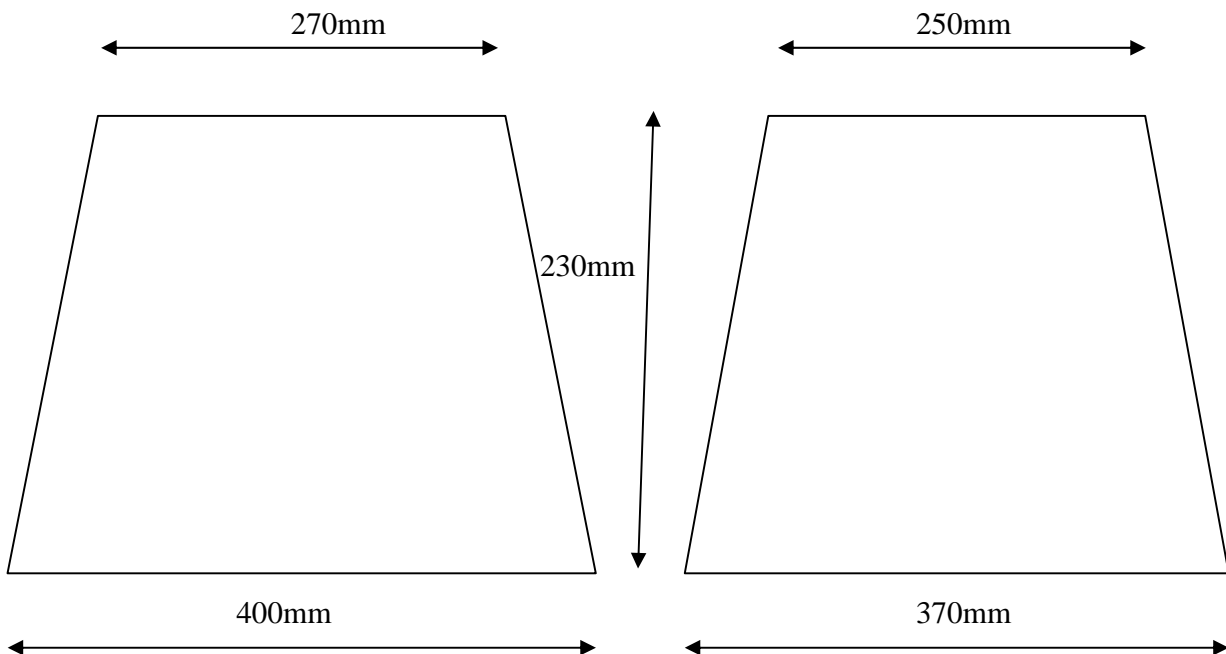
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Product reference FF130 is an oval cover with a flat top section.



The cover dimensions are as shown in the diagram below:



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The Luminaire

Luminaire supplied is a Halo H7T thermally protected recessed luminaire. Whilst no data has been supplied regarding the thermal protection it is believed to operate when the internal luminaire temperature is in excess of 90°C



Lamps supplied for testing

The client has supplied 2 lamps for evaluation of the product. The lamp types are:

Ecosmart 475 110 CFLi lamp

Philips 90 PAR38/HAL/FL 120V PAR lamp

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Ecosmart CFLi Lamps 475 110



Philips PAR lamp 90PAR38/HAL/FL 120V



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Test specification

Thermal Test

The luminaire was installed to simulate mounting in a suspended ceiling. For the purposes of testing the mounting surface used to simulate the ceiling was 12 mm thick porous wood fibre board. The fire hood was placed over the top of the luminaire so as to position the luminaire centrally within the fire hood. The edges of the fire hood were sealed down onto the false ceiling

The fire hood was covered in 100mm thickness of insulation to simulate the insulation material used in a ceiling cavity

The testing was conducted in a draught proof enclosure as detailed in UL1598 The luminaire was fitted with each of the lamps in turn and operated at rated lamp rated voltage (120V).

The luminaire was allowed to reach thermal stability – i.e temperature change <1°C per hour. Once thermal stability was reached the temperature was recorded.

Temperature limits in the results section below are referenced to table 12.2 of UL1598 or are specific limits specified by the client

Flammability Tests

Glow wire and Needle Flame tests were carried out on the each of the fire hoods in accordance with section 13 of IEC 60598.

The glow wire test was conducted at a temperature of 650°C

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Thermal Test Results

Product reference FF135

Ecosmart 475 110 CFLi lamp

Test Voltage 120V

Test Current 0.339A

Test wattage 22.2W

Position	Recorded result	Referenced to 25°C ambient	Temperature limit*
Ambient	25.9	25.0	--
Insulation 10mm from Lampholder	73.5	72.6	150°C
Internal wiring internal fitting	63.4	62.5	150°C
Top of luminaire	61.9	61	Reference Only
Internal wiring	47.6	46.7	150°C
On fitting between luminaire & box	44.5	43.6	Reference Only
On fitting opposite side luminaire	43.8	42.9	Reference Only
Inside top of hood	54.2	53.3	90°C
90mm from base Left side inside hood	48	47.1	90°C
180mm from base Left side inside hood	52.1	51.2	90°C
90mm from base Right side inside hood	48.8	47.9	90°C
180mm from base right side inside hood	49.4	48.5	90°C
Lamp Cap	69.2	68.3	Reference Only

RESULT – PASS

All temperatures recorded were within the specified limits

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Philips 90 PAR38/HAL/FL 120V PAR lamp

Test Voltage 120V

Test Current 0.743A

Test wattage 90.5W

Position	Recorded result	Referenced to 25°C ambient	Temperature limit*
Ambient	27.1	25	--
Insulation 10mm from Lampholder	88.6	86.5	150°C
Internal wiring internal fitting	73.7	71.8	150°C
Top of luminaire	66.8	64.7	Reference Only
Internal wiring	53.1	51.0	150°C
On fitting between luminaire & box	48.8	46.7	Reference Only
On fitting opposite side luminaire	50.1	48.0	Reference Only
Inside top of hood	56.6	54.5	90°C
90mm from base Left side inside hood	53.3	51.2	90°C
180mm from base Left side inside hood	54.2	52.1	90°C
90mm from base Right side inside hood	54.0	51.9	90°C
180mm from base right side inside hood	56.2	54.1	90°C
Lamp Cap	126.1	124.0	Reference Only

RESULT – PASS

All temperatures recorded were within the specified limits

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Product reference FF130

Ecosmart 475 110 CFLi lamp

Test Voltage 120V

Test Current 0.351A

Test wattage 24.8W

Position	Recorded result	Referenced to 25°C ambient	Temperature limit*
Ambient	26.8	25.0	--
Insulation 10mm from Lampholder	69.1	67.3	150°C
Internal wiring internal fitting	61.1	59.3	150°C
Top of luminaire	59.2	57.4	Reference Only
Internal wiring	45	43.2	150°C
On fitting between luminaire & box	43.1	41.3	Reference Only
On fitting opposite side luminaire	43.8	42	Reference Only
Inside top of hood	48.9	47.1	90°C
90mm from base Left side inside hood	47.1	45.3	90°C
180mm from base Left side inside hood	41.9	39.1	90°C
90mm from base Right side inside hood	46	44.2	90°C
180mm from base right side inside hood	46	44.2	90°C
Lamp Cap	67.1	65.3	Reference Only

RESULT – PASS

All temperatures recorded were within the specified limits

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Philips 90 PAR38/HAL/FL 120V PAR lamp

Test Voltage 120V

Test Current 0.732A

Test wattage 90.4W

Position	Recorded result	Referenced to 25°C ambient	Temperature limit*
Ambient	27.5	25.0	--
Insulation 10mm from Lampholder	92.4	89.9	150°C
Internal wiring internal fitting	77.4	74.9	150°C
Top of luminaire	71.2	68.7	Reference Only
Internal wiring	56.1	53.6	150°C
On fitting between luminaire & box	50.6	48.1	Reference Only
On fitting opposite side luminaire	54.0	51.5	Reference Only
Inside top of hood	61.3	58.8	90°C
90mm from base Left side inside hood	54.6	52.1	90°C
180mm from base Left side inside hood	61.4	58.9	90°C
90mm from base Right side inside hood	57.6	55.1	90°C
180mm from base right side inside hood	56.6	54.1	90°C
Lamp Cap	130.5	128.0	Reference only

RESULT – PASS

All temperatures recorded were within the specified limits

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Flammability Test Results

Product reference FF135

650°C Glow Wire Test **Pass**

Needle Flame Test **Pass**

Product reference FF130

650°C Glow Wire Test **Pass**

Needle Flame Test **Pass**

End