

Tony Allison  
Design Engineer  
Halers Lighting Ltd  
Brooklands House  
Sywell Aerodrome  
Sywell  
Northamptonshire  
NN6 0BT

**bre**

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Our Ref. 10011-127121

Dear Mr Allison

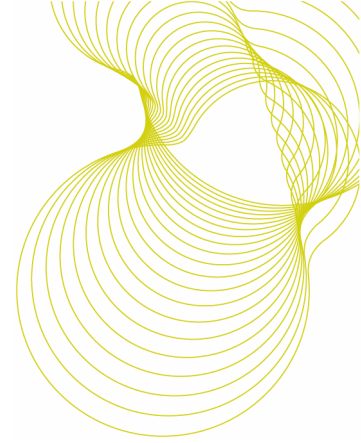
**Robust Details Part E; Appendix F Acoustic Assessment of:  
Halers Lighting Ltd EvoLED (product codes DL/XX/F/XX) Downlights**

**Introduction:**

The EvoLED downlight is manufactured by Halers Lighting Ltd (Halers Lighting Ltd is a subsidiary of Collingwood Lighting). The EvoLED is a second generation version of the Collingwood Lighting FR01011 (CW133) downlight. This letter provides an opinion of the acoustic performance (to Robust Details Part E; Appendix F) of the EvoLED downlight when installed in a Robust Details Part E Appendix F floor. This opinion is based on previous testing by BRE of the acoustic performance of the FR01011 (CW133) to Robust Details Part E Appendix F.

Our assessment is based on:

- The test data contained in BRE test report number 251861 Laboratory airborne and impact sound insulation of Collingwood FR01011 (CW133) (fireLED) downlights in a Robust Details Appendix F floor;
- The information in Appendix F of Robust Details Part E, Resistance to the passage of sound;
- BRE's experience of testing downlights in accordance with the method described in Appendix F of Robust Details Part E, Resistance to the passage of sound.
- Manufacturer's details of the EvoLED and inspection of a sample EvoLED downlight.



The information provided on the FR01011 (CW133) downlight tested at BRE (BRE test report number 251861) is given in Table 1. The single number quantities for sound insulation included in BRE test report number 251861 were derived from measurements conducted in the BRE vertical transmission suite on 3<sup>rd</sup> March 2009 by Mr I West and Ms S King of BRE Acoustics. This data is reproduced in Table 2. Nine downlights were installed in the 17.6 m<sup>2</sup> ceiling of the Robust Details Appendix F floor for the tests.

**Table 1: data supplied for products tested at BRE**

Product reference	Type of downlight	Weight (g)	Required hole diameter (mm)	Can height (mm)
FR01011 (CW133)	Aluminium; fixed	320	60	84

**Table 2: results from BRE test report number 251861 and comparison with the Robust Details criteria**

Downlights installed	BRE UKAS Test number	$R_w + C_{tr}$ (dB)	$L_{n,w}$ (dB)	Test 2 - Test 1 (dB)	Test 3 - Test 4 (dB)
None	L209-025	31		NA	
	L209-026		79		NA
FR01011 (CW133)	L209-027	31		0	
	L209-028		79		0

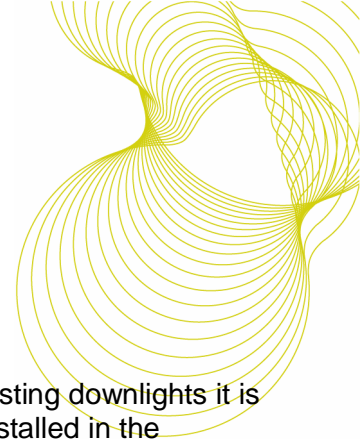
Examination of Table 1 and Table 2 shows that:

- the difference with and without the downlights tested did not alter the single number quantities ( $R_w + C_{tr}$ ) for airborne or impact ( $L_{n,w}$ ) sound insulation of the Robust Details Appendix F floor when installed in its ceiling;

Table 3 shows the properties of the EvoLED downlight which is assessed in this letter including the weight of the downlight, the cut out hole diameter and the downlight can height. Further details are included in Appendix A.

**Table 3: data supplied for products for which an opinion is required**

Product reference	Weight (g)	Required hole diameter (mm)	Can height (mm)
EvoLED DL/XX/F/XX	290	60	84



### **Assessment of EvoLED downlights**

From the data in the BRE test report 251861 and BRE's experience of testing downlights it is our opinion that the acoustic performance of the EvoLED downlights if installed in the Robust Details Limited Appendix F floor would be similar to the acoustic performance of the previously tested FR01011 (CW133) downlights.

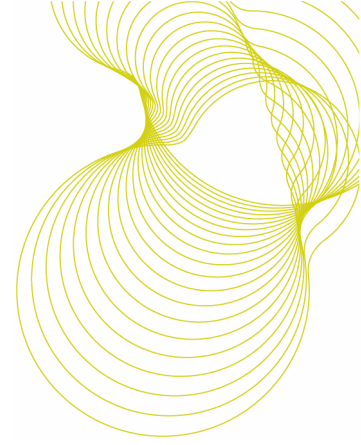
**Therefore, BRE's opinion, based on our experience of acoustic testing of downlights and based on assessment of the differences between the EvoLED and the previously tested FR01011(CW133) downlights, is that the Halers Lighting Ltd EvoLED downlights would pass the Appendix F of Robust details Part E test (Resistance to the passage of sound).**

Notes: The test method for the determination of the influence of the acoustic performance of Robust Details timber separating floors due to the presence of downlights (recessed lighting) is specified in Appendix F of Robust details Part E, Resistance to the passage of sound. The testing required is specified in F.3 of Appendix F and the performance required is specified in F.4 of Appendix F.

Yours sincerely, for and on behalf of BRE

Ian West  
Acoustics Laboratory Manager  
Building Technology Group  
BRE  
Telephone: +44 (0)1923 664208  
E-mail: [westi@bre.co.uk](mailto:westi@bre.co.uk)

Dr Paul Blackmore  
Associate Director  
Building Technology Group  
BRE

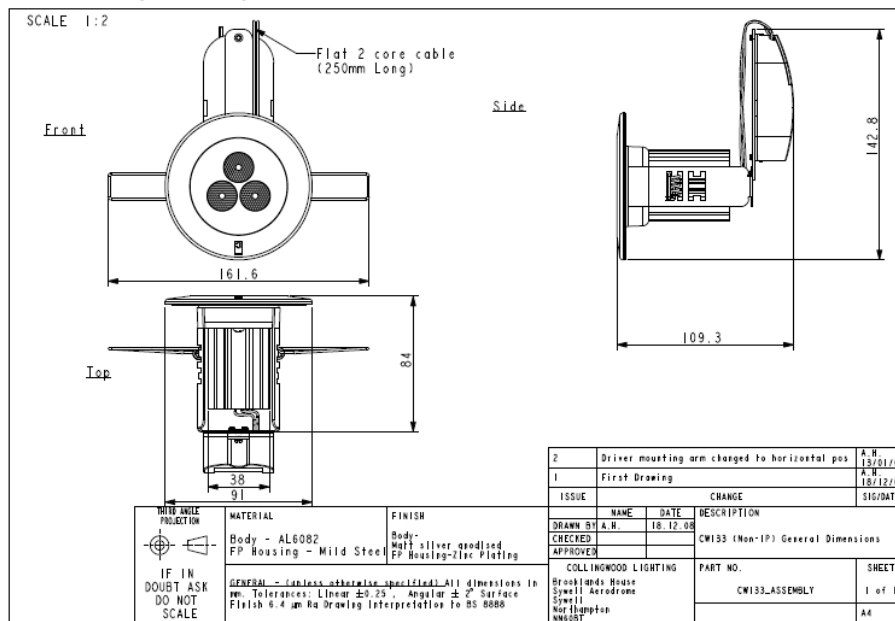


## Appendix A

The product information provided for this assessment is shown in Table 4.

**Table 4: product information provided to BRE (tested at BRE)**

### FR01011 (CW133)



### EvoLED (not tested at BRE)

