

Submission: 7 September 2014

With relation to the Activity energy savings.

http://www.sa.gov.au/data/assets/pdf_file/0019/114319/REES-Consultation-Paper-2014-A542706.pdf

How was the L2C Savings factor calculated, does it compare a ventilated fitting with a fitting that is not ventilated with a downlight barrier?

http://www.aprbuildingservices.com.au/Files_ESHM/ESHousingManualCh08.pdf

Considering that downlight is in a spare or infrequently used room, may only be turned on very limitedly, having a room contributing to air leakage and insulation inconsistency would hamper the efficiency of a home considerably for heating and cooling more frequently, is that taken into consideration in your savings factor? An air tight Building envelope, improves the effectiveness of insulation, and heating/cooling can sometime be left on all the time while also impacting the whole house, not just 1 room in the case of lighting.

I have included some calculations on energy savings for draught proofing recessed lighting and insulation recessed lighting. We are working closely with some of the biggest lighting manufacturers to create combination downlight fittings/covers.

Our cover is the only one on the market that can allow the luminaire to be covered, while the barrier represents an R-value in its own right, it also allows the control gear to be elevated away from being smothered with insulation. Allowing for an install for energy efficiency that complies with AS3000.

The other thing to consider with fittings that can be submerged with insulation and is another good reason for putting a barrier and expanding the building envelope over downlights, is that wild life always looks for a warm spot in a roof. If they find warm insulation they will compress and move insulation in these area which could become a safety hazard which combined with their waste could also create a warranty issue.

While the luminaire is being replaced with an LED, which has an LED driver or built in control gear or a GU10, it could be a good move to provide more encouragement to draught proof and insulation the ceiling which is an extremely important part of the home for energy efficiency. GU10 50W Halogen produces a lot less heat than a MR16 50W Halogen Globe. We have testing of our Loft Mitt downlight cover complying to AS/NZS 5110 with a GU10 50W Globe. Low voltage is less efficient, and produces considerably more heat.

Read the doc file provided for an explanation of the different combinations, and information on energy efficiency calculations depending on air leakage. Efficiency Matrix, also conducts air leakage testing, so we could provide some results to you on the air leakage performance of a few different fittings. Let us know if this would be of interest, and we shall provide you this information once we have conducted it.

Let me know if you guys need more information.

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Cheers.

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