

Australian/New Zealand Standard™

Recessed luminaire barriers



AS/NZS 5110:2011

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-041, Lamps and Related Equipment. It was approved on behalf of the Council of Standards Australia on 5 October 2011 and on behalf of the Council of Standards New Zealand on 20 October 2011.
This Standard was published on 4 November 2011.

The following are represented on Committee EL-041:

Australasian Fire and Emergency Service Authorities Council
Australian Industry Group
Certification Interests (New Zealand)
Consumers Federation of Australia
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Energy Efficiency and Conservation Authority of New Zealand
IES: The Lighting Society
Institution of Professional Engineers New Zealand
Lighting Council of Australia
Lighting Council of New Zealand
Ministry of Economic Development (New Zealand)
New Zealand Light Manufacturers and Suppliers

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 5110.

Australian/New Zealand Standard™

Recessed luminaire barriers

First published as AS/NZS 5110:2011.
Reissued incorporating Amendment No.1 (February 2013)

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment.

This Standard incorporates Amendment No. 1 (February 2013). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide requirements to assess the safety of recessed luminaire barriers. Barriers may be an additional means to improve the following:

- (a) The safety of buildings and installations by separation of possibly flammable elements, such as timber joists or ceilings, insulation (bulk, formed or loose fill), debris and the like from recessed luminaires.
- (b) The safety of buildings and installations by separating materials, such as insulation (bulk, formed or loose fill), debris and the like, from the recessed luminaire, and to prevent such materials from impacting on the thermal characteristics of recessed luminaires.
- (c) The thermal performance of recessed luminaires.

This Standard provides classifications, construction and marking requirements, and test procedures for recessed luminaire barriers to achieve uniform compliance criteria for any barrier that may be called up by other Standards, codes, commercial contracts, building specifications, regulatory requirements or the like.

Barriers compliant with this Standard may be suitable barriers to be referenced by other Standards (such as AS/NZS 3000, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*, or AS 3999, *Thermal insulation in dwellings—Bulk insulation—Installation requirements*, or NZS 4246, *Energy efficiency—Installing insulation in residential buildings*, or any specific commercial contract on installation of recessed luminaires, subject to any restrictions or conditions of use, installation or other requirements stated in those Standards or contracts.

If the barrier has electrical components (e.g. a thermal cut out) the tests in this Standard may be used as part of the requirements to show compliance, if appropriate, with AS/NZS 3820, *Essential safety requirements for electrical equipment*.

A1

‘Text deleted’

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 NORMATIVE REFERENCES	5
1.3 DEFINITIONS.....	6
SECTION 2 CLASSIFICATION OF BARRIERS	
2.1 GENERAL.....	9
2.2 DEPTH CLASSIFICATION.....	9
2.3 INGRESS CLASSIFICATION (Australia only)	9
2.4 INGRESS CLASSIFICATION—SIDE INGRESS PROTECTION (New Zealand only)	10
2.5 INSTALLATION CLASSIFICATION	10
2.6 IMPACT CLASSIFICATION.....	10
2.7 INSULATION CLASSIFICATION.....	10
SECTION 3 MARKING	
3.1 GENERAL.....	13
3.2 MARKING ON BARRIERS.....	13
3.3 ADDITIONAL INFORMATION	14
3.4 COMPLIANCE	15
SECTION 4 CONSTRUCTION	
4.1 GENERAL.....	16
4.2 MEANS OF ATTACHMENT.....	16
4.3 PREVENTION OF INGRESS OF FLAMMABLE MATERIALS.....	16
4.4 SCREWS AND CONNECTIONS (MECHANICAL)	16
4.5 ELECTRICAL CONNECTION/COMPONENTS.....	16
SECTION 5 TESTING	
5.1 GENERAL.....	17
5.2 MARKING DURABILITY TEST	17
5.3 PRECONDITIONING	18
5.4 MECHANICAL STRENGTH TEST	18
5.5 INGRESS TEST	20
5.6 THERMAL TEST—NORMAL OPERATION	21
5.7 THERMAL TEST—ABNORMAL OPERATION (Australia only).....	25
5.8 RESISTANCE TO FLAME AND IGNITION	26
5.9 ACCELERATED AGEING TEST.....	27
APPENDICES	
A BIBLIOGRAPHY	28
B DRAUGHT PROOF THERMAL ROOM	29
C 'NOT USED'	

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Recessed luminaire barriers

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE**1.1.1 General**

This Standard specifies the safety requirements for barriers for recessed luminaires to provide adequate separation from combustible building elements, insulation, and/or debris to reduce the fire risk to any surrounding material and to ensure no damage to the recessed luminaire.

Barriers can be collars, covers or complete enclosures intended to ensure combustible materials do not come in contact with hot surfaces.

This Standard specifies requirements for barriers in relation to classification, construction, testing, marking and manufacturer's instructions.

This Standard applies to any barrier intended for application to an existing or new luminaire (see Clause 1.1.3).

The recessed luminaire barrier's effect on building properties such as acoustic characteristics, movement of moisture and thermal 'R' rating is excluded from the scope of this Standard.

1.1.2 In Australia only**A**

This Standard applies to permanent or removable barriers that are incorporated into luminaire fittings.

NOTE: For such fittings, AS/NZS 60598.2.2 provides requirements for the luminaire.

Any luminaire incorporating a permanent or removable recessed luminaire barrier and not marked 'Do Not Cover', apart from meeting the requirements of this Standard, needs to meet the appropriate tests in AS/NZS 60598.2.2.

Recessed luminaires marked as 'Do Not Cover' are excluded from this Standard as they do not include a permanent or removable recessed luminaire barrier.

NOTES:

- 1 'Do Not Cover' luminaires are marked with the IEC symbol shown in Figure 1.
- 2 This does not preclude a luminaire being tested and classified as a 'single combination' barrier.