AS/NZS 1680.1:2006

Australian/New Zealand Standard™

Interior and workplace lighting

Part 1: General principles and recommendations

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee LG-001, Interior and Workplace Lighting. It was approved on behalf of the Council of Standards Australia on 22 December 2005 and on behalf of the Council of Standards New Zealand on 13 January 2006.
This Standard was published on 21 February 2006.

The following are represented on Committee LG-001:

Association of Consulting Engineers Australia
Australian Building Codes Board
Australian Electrical and Electronic Manufacturers Association
Department of Commerce (NSW)
Energy Efficiency and Conservation Authority of New Zealand
IES: The Lighting Society
Engineers Australia
Institution of Professional Engineers New Zealand
Ministry of Economic Development (New Zealand)
Property Council of Australia
The University of Sydney

Additional Interests:

Photometric testing laboratories

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 Standards may also be withdrawn.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.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. 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 04312.

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Interior and workplace lighting

Part 1: General principles and recommendations

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee LG-001, Interior and Workplace Lighting to supersede AS 1680.1—1990, *Interior lighting.*

This Standard forms Part 1 of the AS/NZS 1680 series, which covers lighting of interiors and workplaces. The series title has recently been changed from 'Interior lighting' to reflect an expansion in the scope of the series.

The AS(/NZS) 1680 series currently consists of the following:

AS(/NZS)		
1680	Interior and workplace lighting	
1680.0	Part 0:	Safe movement
1680.1	Part 1:	General principles and recommendations (this Standard)
1680.2.1	Part 2.1:	Circulation spaces and other general areas
1680.2.2	Part 2.2:	Office and screen-based tasks
1680.2.3	Part 2.3:	Educational and training facilities
1680.2.4	Part 2.4:	Industrial tasks and processes
1680.2.5	Part 2.5:	Hospital and medical tasks
1680.3	Part 3:	Measurement, calculation and presentation of photometric data
1680.4	Part 4:	Maintenance of electric lighting systems

NOTE: Until the revision of this series is complete, some of the above Standards might have, as a main title, 'Interior lighting'.

The significant changes that have been made in this Standard in relation to the previous publication include the following:

- A substantial editorial revision, including a re-organized presentation of many of the concepts explained.
- A significant expansion of the section on Glare (Section 8), including the addition of the CIE unified glare rating (UGR) system and further details on the (existing) luminance limiting approach.
- Addition of information in Section 9, including daylight values for New Zealand.
- Major modifications to Section 12 due to the addition of AS/NZS 1680.4 to the series.

Specific information in this Standard, including various figures and tables, has been reproduced from a number of the reference documents listed in Appendix F, and from the CIBSE Code for Interior Lighting in particular. Grateful acknowledgement is made of this assistance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out general principles and recommendations for the lighting of interiors of buildings for performance and comfort. It applies primarily to interiors in which specific visual tasks are undertaken and takes into account both electric lighting and daylight. The recommendations have the object of producing a visual environment in which essential task details are made easy to see and adverse factors which may cause visual discomfort are either excluded or appropriately controlled.

Recommendations for the lighting of particular interiors or activities are provided in the Standards which comprise AS(/NZS) 1680.2. Refer also to AS/NZS 1680.0 for basic requirements for safe movement.

The Standard does not deal with lighting for the purposes of decoration, display, entertainment or sport.

NOTE: Attention is drawn to the AS(/NZS) 2293 series of Standards which set out requirements for the lighting necessary to alleviate panic and to permit safe evacuation of the building occupants should this be required in the event of loss of the normal lighting.

1.2 OBJECTIVE

The objective of this Standard is to provide the reader with a comprehensive explanation of the factors relevant to interior lighting and with recommendations and guidance in dealing with these factors. The intent of this guidance is to facilitate the creation of visual environments that exclude or, at least, control visual fatigue and thereby promote efficiency and wellbeing in the illuminated space.

This Standard does not specify precise types and arrangements of lighting equipment necessary to meet the recommendations and it is anticipated that the technical knowledge and experience of a qualified lighting designer/engineer will normally be required to apply this Standard and create the most suitable lighting scheme for any particular interior space.

Although the principles explained in this document are applicable to all aspects of interior lighting, this Standard is specifically intended for task-oriented and general movement lighting rather than specialized areas such as mood lighting, display lighting or theatrical lighting.

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix A.

NOTE: A number of additional documents that are considered useful sources of information are listed in Appendix B.