AS/NZS 1680.2.3:2008

Australian/New Zealand Standard™

Interior and workplace lighting

Part 2.3: Specific applications—Educational and training facilities

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 26 February 2008 and on behalf of the Council of Standards New Zealand on 11 March 2008.
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The following are represented on Committee LG-001:

Association of Consulting Engineers Australia
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Energy Efficiency & Conservation Authority of New Zealand
Engineers Australia
IES: The Lighting Society
Institution of Professional Engineers New Zealand
Ministry of Economic Development, New Zealand
NSW Department of Commerce
Property Council of Australia
The University of Sydney

Additional Interests:

Photometric Testing Laboratories

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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.

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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 1680.2.3—1994, *Interior lighting—Educational and training facilities*.

The objective of this Standard is to provide those involved with the lighting of educational and training facilities, whether knowledgeable in lighting design or not, with understanding of the various aspects involved in creating strong visual conditions by the choice of lighting appropriate to the task and relevant surface colours and finishes. However precise lighting arrangements are not specific and it is envisaged that creating a design to provide such conditions will typically require the knowledge and expertise of a qualified lighting designer.

This Standard forms Part 2.3 of the AS/NZS 1680 series, which covers lighting of interiors and work places. It is intended to be read in conjunction with the general recommendations and requirements of AS/NZS 1680.1, and the structures of the two Standards are closely aligned to facilitate this. It is also noted that, in many cases, parts of various other Standards in the AS/NZS 1680 series will also be applicable, depending on the nature of the building and the visual tasks involved.

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
1680.2.1	Part 2.1: Specific applications—Circulation spaces and other general areas
1680.2.2	Part 2.2: Specific applications—Office and screen-based tasks
1680.2.3	Part 2.3: Specific applications—Educational and training facilities (this Standard)
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) Updating of recommendations in relation to lighting for the vision impaired.

(b) Upgrading of advice on various types of projection tasks.

(c) Significant revision of the information provided in relation to theatre and stage lighting.

(d) Alteration of the recommended maximum glare index from 16 to 19 in all applicable areas (Appendix D).

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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FOREWORD

The aim of this Standard is to create a visual environment in which essential task details are made easy to see and adverse features which may cause visual fatigue are either excluded or appropriately controlled. The Committee is of the view that the greatest scope for achieving this lies with improvements in lighting quality rather than in the provision of higher illuminances.

While the provision of sufficient illuminance on the task is necessary in many instances task visibility depends more on the way in which the light is applied. Furthermore, the creation of the comfortable visual conditions required in order to maintain efficiency throughout the whole work period depends less on the quantity of light than on factors such as the distribution of light throughout the workplace; the use of suitable finishes on the walls, ceiling and equipment; the choice of luminaries with adequate glare control; and the elimination of unwanted reflections.

This is not a code to be followed rigidly, allowing no room for individual choice. It is a Standard that indicates paths to be followed and gives reasons for the advisability of following them. In some cases, it mentions limits within which lighting systems should be kept. Within these limits designers and engineers have great latitude in creating energy efficient and pleasing lighting designs.

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Part 2.3: Specific applications—Educational and training facilities

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out recommendations for the creation of good seeing conditions in educational and training facilities by means of appropriate lighting and interior colour treatment. This Standard contains material that adds to or amends the recommendations in AS/NZS 1680.1:2006 and is intended to be read in conjunction with that Standard and with any applicable specific recommendations in other Standards in the AS/NZS 1680.2 series.

The use of this Standard without reference to AS/NZS 1680.1:2006 is a misapplication of the Standard.

1.2 APPLICATION

If any recommendation in this Standard differs from the general recommendations of AS/NZS 1680.1, the recommendation in this Standard should prevail apart from departures from the illuminance recommendations in this Standard where it should be in accordance with the clauses specifically addressing this matter in Section 3 of AS/NZS 1680.1:2006.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS
1680 Interior and workplace lighting
1680.1 Part 1: General principles and recommendations
1680.2.1 Part 2.1: Specific applications—Circulation spaces and other general areas
1680.2.2 Part 2.2: Specific applications—Office and screen-based tasks

AS
2293 Emergency escape lighting and exit signs for buildings
2293.1 Part 1: System design, installation and operation

2560 Guide to sports lighting
2560.2.2 Part 2.2: Lighting of multipurpose indoor sports centres

1.4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS/NZS 1680.1:2006 and those below apply.

1.4.1 Educational and training facilities

An interior space or building complex comprising many such spaces, which provides facilities for structured learning or training programs for applications that may range from pre-school to tertiary levels.

NOTE: Throughout this Standard, educational and training facilities are referred to as ‘educational facilities’.