

AS 1680.2.0—1990

Australian Standard[®]

Interior lighting

**Part 2.0: Recommendations for
specific tasks and interiors**

This Australian Standard was prepared by Committee LG/1, Interior Lighting. It was approved on behalf of the Council of Standards Australia on 11 July 1990 and published on 12 November 1990.

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Australian Electrical and Electronic Manufacturers Association
Australian Optometrical Association
Building Owners and Managers Association of Australia
Confederation of Australian Industry
Department of Administrative Services—Australian Construction Services
Electricity Supply Association of Australia
Illuminating Engineering Societies of Australia
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PREFACE

This Standard has been prepared by the Standards Australia Committee on Interior Lighting to provide quantitative recommendations with respect to illuminance and glare control for specific tasks and interiors. These recommendations are intended for use in conjunction with the general recommendations of AS 1680.1*, and will apply until progressively superseded by the issue of more comprehensive recommendations in the AS 1680.2 series. It is anticipated that the AS 1680.2 series will, when complete, comprise separate Standards covering recommendations for the following:

- (a) Circulation spaces and other general areas.
- (b) Offices.
- (c) Screen based tasks.
- (d) Educational facilities.
- (e) Industrial buildings and processes.
- (f) Hospitals and medical premises.

Users of this Standard are advised to check with Standards Australia to determine which parts of the AS 1680.2 series have been published so as to be aware of the recommendations in this Standard that are, as a consequence, superseded. When the AS 1680.2 series is sufficiently developed this Standard will be withdrawn.

The illuminance recommendations in this Standard are based on Appendix A of AS 1680—1976, *Interior lighting and the visual environment*, with illuminance values expressed in terms of the scale of maintenance illuminance adopted in AS 1680.1 (see Appendix D of AS 1680.1). The recommended values of maximum glare index have been largely drawn from the CIBS Code for Interior Lighting.†

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*AS 1680.1 Interior lighting—Part 1: General principles and recommendations.

†CIBS Code for Interior Lighting, Chartered Institution of Building Services Engineers, London, 1984.

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STANDARDS AUSTRALIA

Australian Standard
Interior lighting

Part 2.0: Recommendations for specific tasks and interiors

1 SCOPE This Standard sets out certain quantitative recommendations for the lighting of specific tasks and interiors, in particular, recommendations for maintenance illuminance and maximum glare index. It is intended for use in conjunction with the general recommendations of AS 1680.1.

2 APPLICATION The lighting system should comply with the general recommendations of AS 1680.1 and with the applicable recommendations of this Standard. The recommendations given in this Standard will apply until such time as they are superseded by relevant recommendations issued in the AS 1680.2 series.

NOTE: Separate Standards covering the lighting of specific tasks and interiors will progressively be issued to form the AS 1680.2 series (see Preface).

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard.

AS

1680 Interior lighting

1680.1 Part 1: General principles and recommendations

1765 Artificial lighting for clinical observation

2502 The lighting of operating rooms

CIBSE*

TM 10 The calculation of glare indices

4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 1680.1 apply.

5 GENERAL CONSIDERATIONS The purpose of this Standard is to provide quantitative recommendations for two lighting parameters which are variables depending on the task or interior for which the lighting system is installed; these are the maintenance illuminance (see Clause 6) and maximum glare index (see Clause 7). It is emphasized that compliance with these recommendations alone will not necessarily ensure the provision of satisfactory visual conditions. Attention should be given to all the applicable recommendations in AS 1680.1 in addition to the quantitative recommendations in this Standard.

Brief reference is also made, by way of notes, to characteristics of the tasks or interiors which may be significant and which should be specifically considered in conjunction with the recommendations of AS 1680.1. The notes included are as follows:

CR Colour rendering important (see Section 7 of AS 1680.1)

LL Local lighting necessary or desirable (see recommendations relevant to the use of local lighting in Sections 3 and 10 of AS 1680.1)

UR Unwanted reflections possible (see Section 5 of AS 1680.1)

6 MAINTENANCE ILLUMINANCE See AS 1680.1 for the definition of maintenance illuminance. The recommended values of maintenance illuminance for particular tasks or interiors are given in Column 2 of Tables 1 to 4. The values given are effectively a minimum value of the average illuminance over the task or throughout the interior which should apply at any time during the life of the lighting system. For design purposes, it will be necessary to select an initial illuminance which is significantly greater than the recommended maintenance illuminance to allow for the progressive loss of light which will occur over time (see Section 12 and Appendix D of AS 1680.1).

For some entries in the tables no recommended maintenance illuminance is given and the qualification 'special' is quoted. For these tasks or interiors, satisfactory visual conditions will primarily depend on factors other than the illuminance provided, e.g. some inspection tasks require a contrasting background or specific directional qualities.

7 MAXIMUM GLARE INDEX Section 8 of AS 1680.1 provides two alternative systems for the control of discomfort glare from electric lighting, viz.

(a) *A luminaire selection system* This system involves the selection of luminaires based on the luminance of the light emitting parts at specified angles or, for some luminaires, in terms of the cut-off angles provided.

* Chartered Institution of Building Services Engineers, London.