AS/NZS 1158.6:2004

Australian/New Zealand Standard™

Lighting for roads and public spaces

Part 6: Luminaires

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee LG-002, Lighting for roads and public spaces. It was approved on behalf of the Council of Standards Australia on 4 August 2004 and on behalf of the Council of Standards New Zealand on 27 August 2004.
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The following are represented on Committee LG-002:

Astronomical Society of Australia
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Australian Local Government Association
Energy Supply Association of Australia
IES: The Lighting Society
Ingenium
Institute of Public Works Engineering Australia
Land Transport Safety Authority New Zealand
Main Roads Department, Queensland
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Part 6: Luminaires

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee LG-002, *Lighting for Roads and Public Spaces*, to supersede AS 3771—1998, *Road lighting luminaires with integral control gear* and NZS 6705.2.3:1986, *Particular requirements*, Section 3 *Luminaires for road and street lighting*. (The New Zealand Standard will remain available.)

This Standard forms part of the AS/NZS 1158 series, which covers lighting schemes for the generality of roads and outdoor public areas. The series title has recently been changed from 'Road Lighting' to reflect an expansion in the scope of the series.

The AS/NZS 1158 series is currently being revised and, when that process is complete, it will consist of the following:

AS/NZS		
1158	Lighting for road and public spaces	
1158.0	Part 0:	Introduction
1158.1.1	Part 1.1:	Vehicular traffic (Category V) lighting—Performance and installation design requirements
1158.1.3	Part 1.3:	Vehicular traffic (Category V) lighting—Guide to design, installation, operation and maintenance
1158.2	Part 2:	Computer procedures for the calculation of light technical parameters for Category V and Category P lighting
1158.3.1	Part 3.1:	Pedestrian area (Category P) lighting—Performance and installation design requirements
1158.6	Part 6:	Luminaires (this Standard)
AS		
1158.4	Part 4:	Supplementary lighting at pedestrian crossings.

NOTE: Until the revision of this series is complete, some of the above Standards might have, as a main title, 'SAA Public Lighting Code' or 'Road lighting'.

The objective of this Standard is to set out requirements for the design, construction, performance and testing of road lighting luminaires, to ensure their suitability for the operating and environmental conditions to which they will be subjected in service.

Road lighting luminaires must withstand, and be capable of operating under, adverse conditions including the effects of salt spray, industrially contaminated atmospheres, fog, smoke, dust storms, snow, ultraviolet radiation, driving rain, wind and traffic-induced vibration.

The requirements of this Standard have been formulated on the basis that luminaires will have a service life of at least 20 years. These requirements specify the use of materials recognized at the time of writing as effective for the application. This is not intended to discourage the introduction of new technology, but new materials and methods of construction will be considered for future inclusion only after evidence of satisfactory long-term performance is provided. Similarly, consideration will be given to the inclusion of lamp types and ratings other than those provided for in the Standard when their suitability for the application has been satisfactorily demonstrated.

The significant technical changes that have been made in this Standard include the following:

(a) Expansion of scope to include—

  (i) other than traditional 'road lighting' luminaires; and

  (ii) luminaires with remote control gear.

(b) Updating all references to A, B and C category lighting to categories V and P lighting as applicable.

(c) Upgrading of references and the incorporation of AS/NZS 60598.1:2003 as the primary reference for many test performance criteria applicable to safety aspects.

(d) More complete coverage of decorative style luminaires used in P Category lighting schemes.

(e) The introduction of a vibration test.

(f) Updating of capacitor requirements, including for suppression of electromagnetic interference generation.

(g) Addition of dimensional information on standard mountings for top-entry luminaires.

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.

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S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE

This Standard applies to all luminaires, with or without integral control gear, which are intended for use in Category V lighting schemes in accordance with AS/NZS 1158.1.1 and in Category P schemes in accordance with AS/NZS 1158.3.1.

The requirements set out are, in general, based on engineering practices, construction materials and components that have, by long time experience in in-field application, been shown to realise the target service life of the luminaire.

However instances can arise where departure from the aforesaid requirements may be justified, particularly in the case of those relating to materials. Where this is so it is referred to in the relevant text of the Standard, e.g. Clauses 2.4.1 and 2.5.2.1. However it must be noted that such departures can reduce the target life and this reduction can be significant.

The range of lamp types and wattages utilized in the luminaires has not been specified because of the great range involved and because the lamp itself is not a determinant of the target service life of the luminaire. There is long-term experience of the reliability of many of the lamps and, importantly in the context of this Standard, of the associated control gear but limited experience in the application of some lamp/control gear combinations in Category V and P lighting schemes, e.g. fluorescent lamps and electronic ballasts.

NOTE: Guidance on some alternative materials for lamps and control gear is given in Appendix A.

1.2 APPLICATION

Until three years after the publication of this Standard, both AS 3771:1998 *Road lighting luminaires with integral control gear* and NZS 6705.2.3:1986 *Particular requirements*, Section 3 *Luminaires for road and street lighting* will remain available publications and it is anticipated that, in most cases, compliance with this Standard or AS 3771, or NZS 6705.2.3 will be accepted by purchasers.

However, during this period, some luminaire purchasers might choose to accept compliance with the 1998 document on most matters while requiring compliance with certain specific tests in this document.

Reference is made in a number of places in this Standard to AS/NZS 60598.1:2003. Where any conflict arises between AS/NZS 60598.1:2003 and this Standard, the requirements of this Standard shall apply.

1.3 REFERENCED DOCUMENTS

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