AS/NZS 1158.4:2015

Australian/New Zealand Standard™

Lighting for roads and public spaces

Part 4: Lighting of pedestrian crossings

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 20 April 2015 and on behalf of the Council of Standards New Zealand on 16 April 2015.
This Standard was published on 6 May 2015.

The following are represented on Committee LG-002:

Astronomical Society of Australia
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Australian Local Government Association
Centre for Pavement Engineering Education
CIE Australia
Department of Transport and Main Roads, Qld
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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.

This Standard was issued in draft form for comment as DR AS/NZS 1158.4:2014.

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Originated in Australia as AS 1158.5—1978.
Originated in New Zealand as AS/NZS 1158.4:2009.
Third edition 2015.

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.

ISBN 978 1 76035 042 0

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/NZS 1158.4:2009.

The objective of this Standard is to specify performance requirements for designers of pedestrian crossings and manufacturers of luminaires in order to enhance the visibility and safety of pedestrians.

The purpose of the pedestrian crossing is to time separate pedestrians and vehicular traffic by assigning priority to pedestrians using the crossings. The existence of a pedestrian on the crossing imposes a legal requirement on vehicular traffic to give way to the pedestrian. Therefore, during the hours of darkness, the safe operation of a pedestrian crossing is dependent upon the driver being able to see both a pedestrian on or about to use the crossing, and the signs and markings associated with the crossing, in time for the vehicle to be stopped, if necessary, to give way to the pedestrian.

The function of lighting at pedestrian crossings is to illuminate the crossing, the immediate verge, and any pedestrian at or on the crossing, so that the crossing and pedestrian are highly conspicuous to approaching vehicular traffic. The lighting design will, by necessity, involve relatively higher values of both horizontal and vertical illuminance over the design area than that of the general roadway lighting scheme in the vicinity. Accident studies have shown that specifically lighting pedestrian crossings can significantly reduce the night accidents associated with them.

NOTE: See CIE 093, *Road lighting as an accident countermeasure*, for a technical report on the analysis of lighting and accident studies.

Considering the safety benefits for pedestrians, it would be preferable that lighting be provided at all crossings on Category V and P roads unless there are specific reasons not to install lighting. Nevertheless, whether a particular crossing, normally not controlled by traffic signals and generally of the type known and marked as a zebra crossing, will or will not be lit, will be determined by the road controlling authority.

In Australia, there will be instances where the pedestrian crossing is located on the threshold of an intersection or within the intersection itself, in which case special treatment of the installation may be warranted.

The following Standards have been issued in the AS/NZS 1158 series:

AS/NZS		
1158	Lighting for roads and public spaces	
1158.0	Part 0:	Introduction
1158.1.1	Part 1.1:	Vehicular traffic (Category V) lighting—Performance and design requirements
1158.1.2	Part 1.2:	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 design requirements
1158.4	Part 4:	Lighting of pedestrian crossings (this Standard)
1158.5	Part 5:	Tunnels and underpasses
1158.6	Part 6:	Luminaires

A number of significant changes have been made to the previous edition of this Standard as follows:

(i) The maximum permissible glare control at 90 degrees as specified in Table 3.2 (column 3) has been increased from 0 cd to 250 cd for PX1 and PX2 subcategories and to 170 cd for subcategory PX3.

(ii) Provisions have been added for pedestrian crossings at intersections and where left-hand turning movements bring vehicles directly onto a pedestrian crossing.

(iii) Provisions have been added for unsignalized pedestrian crossings over left and right turn slip lanes at otherwise signalized intersections.

In New Zealand, the principal difference is that provision has been made for a safety assessment to determine whether pedestrian crossing luminaires are needed where the existing street lighting already meets the light technical parameters for pedestrian crossing lighting.

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.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.