AS/NZS 1158.4:2024

Australian/New Zealand Standard™

Lighting for roads and public spaces

Part 4: Lighting of pedestrian crossings

AS/NZS 1158.4:2024

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 Standards Australia's Standards Development and Accreditation Committee on 05 December 2024 and by the New Zealand Standards Approval Board on 11 December 2024.

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Australian/New Zealand Standard™

Lighting for roads and public spaces

Part 4: Lighting of pedestrian crossings

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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/NZS 1158.4:2015.

The objective of this document is to specify performance requirements of supplementary lighting for pedestrian crossings in order to enhance the visibility and safety of pedestrians using pedestrian (zebra) crossings.

A list of all parts in the AS/NZS 1158 series can be found in the Standards Australia and Standards New Zealand online catalogues.

The major changes in this edition are as follows:

(a) The lighting requirements for Australia and New Zealand have been harmonized through adoption of New Zealand's calculation methods.

(b) Revision of maintenance factors.

(c) Calculation grid has been defined for horizontal illuminance.

(d) Energy performance assessment and reporting methods changed to align with AS/NZS 1158.3.1.

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

Contents

Introduction

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

The function of the supplementary lighting at pedestrian crossings is to illuminate the crossing, the immediate surrounds, and any pedestrians at or on the crossing, so that the crossing and pedestrians are highly conspicuous to approaching road users. Horizontal illuminance on the road surface (to the levels specified) is used to draw attention to the presence of the pedestrian crossing markings. Vertical illuminance at a crossing helps make any pedestrians using the crossing visible to approaching road users by making them appear in positive contrast to the background. Vertical illuminance becomes particularly important when the road surface beyond the pedestrian crossing is too dark to highlight pedestrians by silhouette. The lighting design will, by necessity, involve 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 good quality lighting reduces night-time accidents. Refer to CIE 093 for a technical report on the analysis of lighting and accident studies.

Australian/New Zealand Standard

Lighting for roads and public spaces

Part 4: Lighting of pedestrian crossings

Section 1 Scope and general

1.1 Scope

This document specifies performance requirements for the lighting of pedestrian crossings. This document applies to non-signallized crossings only (see also Clause 4.2.3).

The requirements apply to pedestrian crossings located on roads with both one way and two-way traffic. For roads with two-way traffic, the requirements for each half of the crossing (from kerb to the carriageway centre) are considered separately according to the direction of traffic flow. For one-way roads, the requirements apply from kerb to kerb in the particular direction of traffic flow.

All pedestrian crossings may have country-specific traffic control devices (e.g. signs and markings) and the details of these fall outside the scope of this document.

1.2 Application

Subject to the requirements of applicable laws, the choice of whether to install supplementary lighting at a pedestrian crossing in conformance to this document and, if so relevant, which lighting sub-category is appropriate, rests with the client (usually the road controlling authority). Where provided, supplementary lighting shall not fall below the light technical parameters (LTPs) for the specified pedestrian lighting subcategory. Supplementary lighting shall operate at all times when road lighting is energized.

Supplementary lighting shall not be used to determine conformance to applicable light technical parameters for other road elements, such as LATMs, and roundabouts. Conformance to the pedestrian crossing and road elements shall be assessed independently.

NOTE For category P roads, the applicable pedestrian crossing lighting subcategory may be changed during the hours of operation, depending on the pedestrian volume.

1.3 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1742, *Manual of uniform traffic control devices (series)*

AS 1743, *Road signs — Specifications*

AS/NZS 4282, *Control of the obtrusive effects of outdoor lighting*

AS/NZS 1158.0, *Lighting for roads and public spaces, Part 0: Introduction*

AS/NZS 1158.1.1, *Lighting for roads and public spaces, Part 1.1: Vehicular Traffic (Category V) lighting — Performance and design requirements*

AS/NZS 1158.2, *Lighting for roads and public spaces, Part 2: Computer procedures for the calculation of light technical parameters for Category V and Category P lighting*

AS/NZS 1158.3.1, *Lighting for roads and public spaces, Part 3.1: Pedestrian area (Category P) lighting — Performance and design requirements*