

AS 1158.4—1987

Australian Standard[®]

SAA PUBLIC LIGHTING CODE

**Part 4—SUPPLEMENTARY
LIGHTING AT
PEDESTRIAN CROSSINGS**

This Australian Standard was prepared by Committee LG/2, Street Lighting. It was approved on behalf of the Council of the Standards Association of Australia on 16 March 1987 and published on 4 May 1987.

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Australian Council of Local Government Engineers Associations
Australian Electrical and Electronic Manufacturers Association
Australian National Committee on Illumination
Australian Road Research Board
Department of Housing Construction
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Australian Standard[®]

**THE LIGHTING OF URBAN ROADS
AND OTHER PUBLIC
THOROUGHFARES**

**Known as the
SAA PUBLIC LIGHTING CODE**

**Part 4
SUPPLEMENTARY
LIGHTING AT PEDESTRIAN
CROSSINGS**

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PREFACE

This Standard was prepared by the Association's Committee on Street Lighting to supersede AS 1158, Part 5–1974. It forms Part 4 (designated AS 1158.4) of the new series of Standards that comprise the SAA Public Lighting Code.*

One objective of AS 1158.1 is to ensure visibility of pedestrians for vehicle drivers anywhere along a road. Nevertheless, supplementary lighting may be required at some pedestrian crossing locations of which the following are examples:

- (a) On or near crests. From a driver's viewpoint the background beyond the pedestrian may comprise dark sky, dark-surfaced fences or buildings, and/or a confused pattern of lights. Disability glare due to the headlights of approaching vehicles will be much greater than on level or uniform-grade roads.
- (b) At curves. The background beyond the pedestrian may comprise a confusing pattern of lights and roadside structures.
- (c) In locations where experience indicates that drivers may have special difficulty in seeing pedestrians using the crossing.

Supplementary lighting can be beneficial at most pedestrian crossings in wet weather when the direct illumination of pedestrians by supplementary lighting can compensate for the reduced effectiveness of normal road lighting when the road surface is wet.

The requirements of this Standard assume the existence of road lighting to at least Category A3 in AS 1158.1. Where the pedestrian crossing is located on a road which is unlit or lit only to Category B in AS 1158.1, upgrading of the road lighting in the vicinity of the crossing will be necessary.

This Standard differs from AS 1158, Part 5–1974, in that the requirements are specified solely in terms of the desired photometric performance. However, guidance on the design and installation of floodlighting systems is provided in an appendix.

* AS 1158.1	SAA Public Lighting Code Part 1—Performance and Installation Design Requirements
AS 1158.2	SAA Public Lighting Code Part 2—Computer Procedures for the Calculation of Light Technical Parameters for Category A Lighting
AS 1158.3	SAA Public Lighting Code Part 3—Guide to Design, Installation and Maintenance (in course of preparation)
AS 1158.4	SAA Public Lighting Code Part 4—Supplementary Lighting at Pedestrian Crossings (this Standard).

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

THE LIGHTING OF URBAN ROADS AND OTHER PUBLIC THOROUGHFARES

PART 4—SUPPLEMENTARY LIGHTING AT PEDESTRIAN CROSSINGS

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies performance requirements for the floodlighting of pedestrian (zebra) crossings as defined in Clause 1.3.1. The requirements may also be applied to other forms of pedestrian crossings, e.g. signalised crossings, where the lighting of such crossings is specifically desired.

The requirements of this Standard are based on the existence of road lighting in the vicinity of the crossing to at least Category A3 in AS 1158.1 (see Clause 2.2 herein).

The requirements generally assume that the pedestrian crossing is located on a road with two-way traffic; however, unless otherwise stated, they also apply to pedestrian crossings on one-way roads. For roads with two-way traffic the requirements for each half of the crossing (from kerb to the road 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.

NOTE: Appendix A provides guidance on the design and installation of floodlighting systems to satisfy the requirements of this Standard.

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

AS 1742	Manual of Uniform Traffic Control Devices
AS 1743	Road Signs
AS 1158.1	SAA Public Lighting Code Part 1— Performance and Installation Design Requirements

CIE Publication No 43 Photometry of Floodlights.

1.3 DEFINITIONS. For the purpose of this Standard, the definitions given in AS 1158.1 and the following apply. (Some of the terms defined below are illustrated in Fig. 2.1.)

1.3.1 Pedestrian (zebra) crossing—a portion of carriageway marked by a series of longitudinal bars placed parallel with the road centre-line and near each end of which is erected, to face approaching drivers, a ‘walking legs’ sign.

NOTE: For details of the road markings and ‘walking legs’ sign see the relevant requirements of AS 1742 and AS 1743.

1.3.2 Crossing zone—a space bounded by the extremities of the pedestrian crossing along and across the carriageway, up to a height of 1.5 m, and extending —

- (a) *For two-way undivided roads*—from the nearside kerb or pavement edge to the carriageway centreline (in each direction).
- (b) *For one-way undivided roads*—from kerb to kerb or pavement edge to pavement edge.
- (c) *For divided roads*—from the kerb or pavement edge to the median.

NOTE: On roads with two-way traffic each half of the pedestrian crossing is treated separately for the purpose of lighting design.

1.3.3 Crossing width—the horizontal distance, measured parallel to the centreline of the road, between the extremities of the marked crossing.

1.3.4 Vertical plane illuminance—the illuminance provided in the direction of traffic flow on a vertical surface at right angles to the road axis and within the crossing zone.

1.3.5 Beam spread (in a particular plane)—the angular subtense of the floodlight beam in a specified plane containing the axis of the beam.

1.3.6 Beam axis—the line through the centre of the floodlight in the mean direction of the beam. The beam axis normally coincides with the direction of maximum intensity.

1.3.7 Aiming angle—the angle, in the vertical plane parallel to the road centre, between the beam axis and the downward vertical axis through the centre of the floodlight.

1.3.8 Aiming point—a specified point on the carriageway at which the floodlight(s) must be aimed in order to achieve compliance with the requirements of Section 2.