

Appendix B1

LED Roadway Lighting Luminaire Specification

B1. Overview

Purpose

This appendix sets out the standard requirements that LED road lighting luminaires must satisfy. It also details the luminaire assessment methodology, covering the optical performance against a group of standard road geometric configurations.

Criteria

The luminaires will be assessed on five main criteria:

1. LED attributes
2. Luminaire optics
3. Driver and electrical properties
4. Luminaire compliance and design features
5. Sustainability

Application fee

The applicant must engage one of the approved assessors to undertake the review on a time charge basis through the assessor's company. A non-refundable deposit will be payable to the assessor's company before any work commences. If the assessor recommends the luminaire for acceptance, any outstanding costs shall be reimbursed before the luminaire is accepted on the list.

Approved assessors are;

- Andy Collins (WSP): 027 237 1181
- Laurie Cook (LDP): 027 510 1273
- John Mckensey (LDP): 021 613 514

B2. Standards referred to

- ANSI/IES LM-79-19: *Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products*. (2019)
- IESNA LM-80-08: *IES Approved Method: Measuring Lumen Maintenance of LED Light Sources*. (2008)
- ANSI/IES TM-21-19: *Technical Memorandum: Projecting Long Term Lumen, Photon and Radiant Flux Maintenance of LED Light Sources*. (2019)
- AS/NZS 1158: *Lighting for roads and public spaces*. (2005-2020).
- IEEE/ANSI C62.41.2 *IEEE Recommended Practice on Characterisation of Surges in Low-Voltage (1000V and less) AC Power Circuits*. (2002)
- BS EN 62471: *Photobiological safety of lamps and lamp systems*. (2008)
- ANSI/IESNA RP-27 Series: *Photobiological Safety and Risk*. (2013)
- *EU Directive 2011/65/EU on the restriction of use of certain hazardous substances in electrical and electronic equipment*
- *EU Commission Delegated Directive (EU) 2015/863 Amending Annex II to Directive 2011/65/U*. (2015)

B3. Roadway luminaire documents

- See Appendix B2 for the assessment checklist
- See Appendix B3 for a summary of the required review materials
- See Appendix B4 for a template of the required covering letters
- See Appendix B5 for the AT luminaire labelling system
- See Appendix B6 for the luminaire label reference chart

Revision Table

Version	Date	Changes
1	11/11/16	Original
2	19/05/17	Replacement for Web
3	13/10/17	Rev table added
4	03/05/18	Minor text amendments. Added references to new appendices B3-B5
5	26/08/18	Title adjusted.
6	04/07/20	Standards references & assessor details updated