

Roads

Master Specification

RD-EL-S2 Supply of Luminaries

Document Information

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| 1 | Initial issue (formerly R51). Major update on Luminaire Requirements; added list of Hold Points including response time; updated referencing. | 02/07/19 |
| 2 | Formatting for publishing | 19/09/19 |
| 3 | General document review and update; Added additional luminaire specifications | August 2021 |

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RD-EL-S2 Supply of Luminaries

1 General

- 1.1 The luminaire shall comply with the following:
- a) AS/NZS 1158 Lighting for roads and public spaces.
 - b) SA/SNZ TS 1158.6 Lighting for roads and public spaces Luminaires – Performance.
 - c) AS/NZS 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules).
 - d) AS/NZS 60598.1 Luminaires - General requirements and tests.
 - e) AS/NZS 60598.2 Luminaires - Particular requirements.
- 1.2 Where this Part specifies a higher standard than that required by the above Australian Standards, the requirements of this Part will take precedence.
- 1.3 The submission of the luminaire photometric report, .cie and .ies files as evidence of compliance shall constitute a **Hold Point**.
- 1.4 The submission of an isolux plot for the luminaire mounted at a height of 12 m, showing luminaire position, all dimensions, 7.5 lux and 3.5 lux levels, shall constitute a **Hold Point**.

2 Luminaire Requirements

- 2.1 The luminaire shall, unless otherwise stated:
- a) be LED (Light Emitting Diode) type;
 - b) be Aeroscreen (full cut-off) type;
 - c) be included in the AEMO table for unmetered lighting, refer to Australian Energy Market Operator (AEMO) approved load tables for unmetered connection point.
https://www.aemo.com.au/-/media/Files/Electricity/NEM/Retail_and_Metering/Metering-Procedures/NEM-Load-Tables-For-Unmetered-Connection-Points.pdf. The submission of the evidence of AEMO load table shall constitute to a **Hold Point**;
 - d) be fitted with a 7-pin NEMA socket preferably on the underside of the luminaire;
 - e) be capable of 0-10 V and Dali 2 dimming and have all necessary components fitted;
 - f) have an efficacy of greater than 120 lm/W;
 - g) have a CCT of 4000K (3000K Optional);
 - h) have a control gear/wiring chamber which is accessible without the use of tools and resistant to damage or access by birds, e.g. cockatoos;
 - i) have a secure attachment point in the control gear/wiring chamber to attach the strain wire which supports the cable in the pole;
 - j) have an Ingress Protection Rating of IP65 or higher for the optical chamber;
 - k) have an Impact Rating of IK06 or higher;
 - l) retain at least 90% of initial lumen level after 100,000 hours of operation;
 - m) be light-grey in colour;
 - n) have different optic distributions available to suit varying road geometries;
 - o) have shields or optical devices available to reduce back-spill;
 - p) have a 10 year and 10 year on-pole warranty available (includes all costs associated with the removal and replacement of the luminaire, materials, equipment, labour etc.).
 - q) at a minimum, have a stepped, adjustable upcast angle between 5° and -20° with increments of 5°; and

- r) be fitted with a bubble level, mounted in the wiring chamber, in a parallel plane to the visor, for assisting with levelling the luminaire.
- 2.2 The submission of a written statement of compliance (in the format of check list) against the above requirements in Clause 2.1 and 2.1q) shall constitute a **Hold Point**.

3 Hold Points

- 3.1 The following is a summary of Hold Points for the documents referenced in this Part:

| Document Ref. | Hold Point | Response Time |
|---------------|--|-----------------|
| 1.3 | Submission of Photometric Report, .cie and .ies files from NATA accredited or similar testing facility | 10 Working Days |
| 1.4 | Submission of luminaire isolux plot for mounting height of 12 metre showing 7.5 and 3.75 lux levels | 10 Working Days |
| 2.1c) | Evidence of luminaire inclusion in the AEMO load table for unmetered loads | 5 Working Days |
| 2.2 | Submission of written statement of compliance (in the format of check list) against the requirements in Clause 2.1 and 2.2 | 10 Working Days |