

IS 10322 (Part 5/Sec 3) : 2012

Today, street lighting commonly uses high-intensity discharge lamps. Low-pressure sodium (LPS) lamps became commonplace after World War II for their low power consumption and long life. Late in the 20th century, high-pressure sodium (HPS) lamps were preferred, taking further the same virtues. This standard IS 10322 (Part 5/Sec 3):2012 specifies requirements for road and street lighting luminaires for use with tungsten filament, tubular fluorescent, LED, LED modules and other discharge lamps on supply voltage not exceeding 1000 V. The document outlines standards for luminaires, focusing on their photometric properties and design requirements. It introduces the Specific Luminaire Index (SLI), calculated using a specific formula, to evaluate glare control and performance.

To indicate the suitability or otherwise for a given application, a 3-way classification system based on

- a) the extent to which the light is thrown up and down a road;
- b) the degree of sideways spread of light across a road; and
- c) the amount of control exercised over the light omitted at high angles is recommended

The document emphasizes the need for accurate photometric data, which must be collected under specific conditions, including temperature and lamp positioning. It also details the requirements for light-controlling components, such as refractors and reflectors, ensuring they are correctly oriented and easy to maintain. Additionally, drag coefficient measurements for luminaires in wind tunnels are discussed to ensure safety and performance. The document also specifies safety requirements such as external and internal wiring, provision for earthing, creepage and clearances, etc.

The Bureau of Indian Standards governs these specifications, aiming to promote quality and safety in lighting installations.