



IS 10322 (Part 5/Sec 1) : 2012

LUMINAIRES PART 5 PARTICULAR REQUIREMENTS

Section 1 Fixed General Purpose Luminaires

Fixed General Purpose Luminaires are **permanently installed lighting fixtures** designed to provide consistent and energy-efficient lighting in indoor and outdoor spaces like homes, offices, warehouses, parking areas, and other commercial and industrial settings. Their primary role is to enhance visibility, safety, and functionality, making them an indispensable part of modern lighting solutions.

Consumers expect **luminaires** to be **safe, durable, and efficient**, offering consistent performance without **flickering** or **overheating**. Key concerns include protection from **electric shocks, fire hazards, and faulty wiring**, along with resistance to **dust, moisture, and heat**. They also value **ease of installation, low maintenance, and energy-efficient performance** with optimal light output.

This Indian Standard addresses these expectations through comprehensive requirements. **Robust construction** ensures mechanical strength and safety, while specific criteria for **creepage distances and clearances** reduce the risk of **short circuits or electric shocks**, especially in high-voltage conditions. The standard mandates provisions for **earthing**, ensuring electrical faults are safely dissipated.

Durable terminals and internal/external wiring systems are required to maintain secure connections during operation. The luminaires are tested for **protection against electric shock**, ensuring that live parts remain inaccessible. Rigorous endurance and thermal tests verify the luminaire's ability to function safely under continuous operation without overheating, while resistance to dust and moisture is assessed to ensure reliability in varying environmental conditions, with specific requirements for **ingress protection (IP ratings)**, making them ideal for outdoor use.

Electrical safety is further verified through tests for **insulation resistance and electric strength**, ensuring resilience under high-voltage conditions. Requirements for **resistance to heat, fire, and tracking** minimize fire hazards, enhancing product safety. Additionally, **photometric tests** ensure optimal **light output and uniform distribution**, catering to consumer demands for **bright and consistent lighting**.

By addressing these aspects, **IS 10322 (Part 5/Sec 1): 2012** guarantees that fixed general-purpose luminaires meet consumer expectations for **safety, efficiency, and durability**, offering reliable lighting solutions for various applications.