

ANSI C136.25-2013

American National
Standard for Roadway
and Area Lighting
Equipment - Ingress
Protection (Resistance
to Dust, Solid Objects,
and Moisture) for
Luminaire Enclosures





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American National Standard

*For Roadway and Area Lighting Equipment—
Ingress Protection (Resistance to Dust, Solid Objects, and
Moisture) for Luminaire Enclosures*

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FOREWORD

At the time this standard was approved, the ANSI C136 committee was composed of the following members:

Alabama Power Company	Lites
American Electric Lighting	Los Angeles City Bureau of Street Lighting
Caltrans	National Grid
Ceravision	OSRAM Sylvania
City of Kansas City, Missouri	Philips Hadco
Duke Energy	Philips Lumec
Duke Energy - Florida	PNNL
Eaton Cooper Lighting	ROAM/DTL
Edison Electric Institute	SELC
EPRI	Shakespeare Composite Structures
EYE Lighting	South Carolina Electric & Gas
Florida Power and Light	SouthConn Technologies, Inc.
FRE Composites (2005) Inc.	StressCrete Group
GE Lighting Solutions	Sunrise Technologies, Inc., FP OLC
Georgia Power Company	TE Connectivity
Gulf Power Company	Toshiba
Hapco	Utility Metals Division of Fabricated Metals, LLC
Holophane, An Acuity Brands Company	Valmont Industries, Inc.
Hubbell Lighting, Inc.	Vamas Engineering and Consultants
Inovus Solar	Xcel Energy
Kauffman Consulting, LLC	
LED Roadway Lighting	

1 SCOPE

This standard details the requirements for ingress protection of luminaires in roadway and area lighting equipment, installed for their intended use and specified by end user. While these requirements are suitable for most types of lighting equipment, it should not be assumed that all the listed degrees of protection are applicable to a particular type of equipment. The manufacturer of the equipment should be consulted to determine the degrees of protection available.

The adoption of this standard should promote uniform methods of describing the protection provided by the lighting equipment (luminaire) enclosure.

NOTE—The bases for this standard are the documents IEC 60529, *Degrees of protection provided by enclosures (IP Code)*; and IEC 60598-1, *Luminaires – Part 1: General requirements and tests*, Section 9, Resistance to dust, solid objects and moisture. Tables 1, 2, and 3, in particular, are based on IEC 60529.

The types of protection covered by this standard are as follows:

- a) Protection of persons against contact with, or approach to, energized electrical components inside the light fixture (luminaire) enclosure, and protection of the equipment against ingress of solid foreign bodies; and
- b) Protection of equipment inside an enclosure against harmful ingress of water, solid foreign objects, or dust

It should be noted that the IP rating of a luminaire has no bearing on its Dirt Depreciation characteristics. Testing is performed on new luminaires and is not an indicator of the life or reliability of the luminaire during its service life. Some components, such as seals and gaskets, deteriorate over time with exposure to heat and the environment and should be evaluated separately.

2 INFORMATIVE REFERENCES

This standard is intended to be used in conjunction with the following publications. The latest edition of the publication applies (including amendments).

IEC 60529, Edition 2.1, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1, Edition 7, *Luminaires – Part 1: General requirements and tests*, Section 9, Resistance to dust, solid objects and moisture.

3 DEFINITIONS

Degrees of protection: The extent of protection provided by a lighting fixture (luminaire) enclosure against ingress of foreign objects or water, verified by standardized test methods.

Direct contact: Contact of persons with energized components.

Enclosure: A part that provides protection of equipment against external effects and direct contact.

Hazardous live part: A part that, when energized, presents a danger to human touch.

Hazardous part: A part that presents a danger to human touch.

IP code: A coding system to indicate the degree of protection afforded by a lighting fixture (luminaire) enclosure against ingress of foreign objects or water.