



ANSI C136.32-2020

---

American National  
Standard for Roadway  
and Area Lighting  
Equipment— Enclosed  
Setback Luminaires and  
Directional Floodlights



**National Electrical Manufacturers Association**  
**1300 North 17th Street, Suite 900 • Rosslyn, VA 22209**  
**[www.NEMA.org](http://www.NEMA.org)**





**ANSI C136.32-2020**  
Revision of ANSI C136.32-2012

*American National Standard for  
Roadway and Area Lighting Equipment—  
Enclosed Setback Luminaires and Directional Floodlights*

Secretariat:

**National Electrical Manufacturers Association**

Approved January 6, 2020

**American National Standards Institute, Inc.**

## NOTICE AND DISCLAIMER

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

American National Standards Institute (ANSI) Standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus Standards development process. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While NEMA administers the process to promote fairness in the development of consensus, it does not write the document and it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments contained in its Standards and guideline publications.

NEMA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. NEMA disclaims and makes no guaranty or warranty, express or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. NEMA does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this standard or guide.

In publishing and making this document available, NEMA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is NEMA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other Standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

NEMA has no power, nor does it undertake to police or enforce compliance with the contents of this document. NEMA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety-related information in this document shall not be attributable to NEMA and is solely the responsibility of the certifier or maker of the statement.

# AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires verification by ANSI. ANSI states that the requirements for due process, consensus, and other criteria for approval have been met by the Standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means significantly more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether they have approved the Standards or not, from: manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the Standards.

The American National Standards Institute does not develop Standards, and will under no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by

**National Electrical Manufacturers Association**  
**1300 North 17th Street, Rosslyn, VA 22209**

© 2020 National Electrical Manufacturers Association

All rights reserved including translation into other languages, reserved under the Universal Copyright Convention, the Berne Convention for the Protection of Literary and Artistic Works, and the International and Pan American Copyright Conventions.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, and without the prior written permission of the publisher.

Printed in the United States of America.

**<This page intentionally left blank.>**

## CONTENTS

Foreword .....	iv
1 Scope .....	1
2 Normative References .....	1
3 Mounting Provisions .....	2
4 Supply Connections .....	3
4.1 Terminal Blocks .....	3
4.2 Supply Leads and Cords .....	3
5 Wiring .....	3
6 Latching and Hinging .....	3
7 Voltage Classification .....	3
8 Socket / Optical Assembly Electrical Connector .....	4
8.1 Sockets .....	4
8.2 Induction Light Sources .....	4
8.3 Solid State Lighting Systems .....	4
9 Refractor, Lens, or Lens Frame Replacement .....	4
10 Optical Assembly .....	4
11 General Electrical Requirements .....	4
11.1 Basic Insulation Test (BIL) .....	4
11.2 Surge Test Waveforms .....	5
12 Starter .....	5
13 Barriers .....	5
14 Photocontrol Receptacle .....	5
15 Materials, Protective Coatings, and Temperature Design .....	5
16 Labeling .....	5
16.1 Internal .....	5
16.2 External .....	6
17 Grounding .....	6
18 Weight and Effective Projected Area .....	6
19 Light Distribution .....	6

## Foreword

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

Acuity Brands, Inc.	Legrand, North America
Alabama Power Company	Leotek Electronics USA Corp
Atlas Lighting Products, Inc.	Light Smart
California Lighting Technology Center	Littlefuse, Inc.
University of California, Davis	Lumispec Consulting
CIMCON Lighting	Mississippi Power
City of Kansas City, Missouri	National Grid
City of Los Angeles, Bureau of Street Lighting	OSRAM SYLVANIA Inc.
Cree, Inc.	Pacific Northwest National Laboratory
Dominion Energy	Phoenix Lighting
Duke Energy	PSEG Power
Duke Energy Progress	Radian Research
Eaton Lighting Solutions	Ripley Lighting Controls LLC
EPRI	ROAM/DTL
Excellence Opto, Inc.	SELC Ireland Limited
EYE Lighting International of N.A., Inc.	Signify North America Corporation
Florida Power and Light Company	South Carolina Electric & Gas
Gateway International 360	StressCrete/King Luminaire Sunrise Technologies, Inc.
GE Current, a Daintree Company	TE Connectivity
Georgia Power Company	TECO
Graeme Lister Consulting	Telematics Wireless
Greenstar Products, Inc.	Telensa
Hancock Consulting	Utility Metals Division of Fabricated Metals, LLC
Hapco Aluminum Pole Products	Valmont Composite Structures
Howard Lighting	Valmont Industries, Inc.
Hubbell Lighting, Inc.	Vandal Shields
Intelligent Illuminations Inc.	Wathour Engineering Company, Inc.
Intermatic Incorporated	Westire Technology Limited
Intertek	Xcel Energy
Itron, Inc.	
JEA	
Kauffman Consulting, LLC	
LED Roadway Lighting	

## 1 Scope

This Standard covers dimensional, maintenance, and electrical features that permit the interchange of similar style enclosed luminaires having the same light distribution classification or type used in roadway or area lighting equipment. Luminaires covered by this Standard are generally yoke, trunnion, or tenon mounted. They are traditionally called floodlights or setback luminaires.

## 2 Normative References

This Standard incorporates, by reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed below. For undated references, the latest edition of the publication referred to applies (including amendments).

*ANSI C78.40 American National Standard Electric Lamps—Specifications for Mercury Lamps*

*ANSI C78.42 American National Standard for Electric Lamps—High-Pressure Sodium (HPS) Lamps*

*ANSI C82.4 American National Standard for Lamp Ballasts—Ballasts for High-intensity Discharge and Low-Pressure (LPS) Sodium Lamps (Multiple-Supply Type)*

*ANSI C136.2 American National Standard for Roadway and Area Lighting Equipment—Dielectric Withstand and Electrical Transient Immunity Requirements*

*ANSI C136.3 American National Standard for Roadway and Area Lighting Equipment—Luminaire Attachments*

*ANSI C136.10 American National Standard for Roadway and Area Lighting Equipment—Locking-type Photocontrol Devices and Mating Receptacle—Physical and Electrical Interchangeability and Testing*

*ANSI C136.11 American National Standard for Roadway and Area Lighting Equipment—Multiple Sockets*

*ANSI C136.13 American National Standard for Roadway and Area Lighting Equipment—Metal Brackets for Wood Poles*

*ANSI C136.15 American National Standard for Roadway and Area Lighting Equipment—Luminaire Field Identification*

*ANSI C136.21 American National Standard for Roadway and Area Lighting Equipment—Vertical Tenons Used with Post-Top-Mounted Luminaires*

*ANSI C136.22 American National Standard for Roadway and Area Lighting Equipment—Internal Labeling of Luminaires*

*ANSI C136.37 American National Standard for Roadway and Area Lighting Equipment—Solid State Lighting Sources Used in Roadway and Area Lighting*

*ANSI C136.38 American National Standard for Roadway and Area Lighting Equipment—Induction Lighting*

*ANSI C136.49 American National Standard for Roadway and Area Lighting Equipment—Plasma Lighting*