



ANSI C136.13-2014

---

American National  
Standard for Roadway  
and Area Lighting  
Equipment - Metal  
Brackets for Wood  
Poles





**ANSI C136.13-2014**  
Revision of ANSI C136.13-2004 (R2009)

**American National Standard**  
*for Roadway and Area Lighting Equipment—  
Metal Brackets for Wood Poles*

Secretariat:

**National Electrical Manufacturers Association**

Approved June 27, 2014

Published September 5, 2014

**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 and establishes rules 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 guideline.

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, and 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**

© Copyright 2014 by 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.>

Currently in preview, click buy full version

## TABLE OF CONTENTS

FOREWORD.....	vi
1 SCOPE.....	1
2 NORMATIVE REFERENCES.....	1
3 INFORMATIVE REFERENCES.....	1
4 TERMINOLOGY.....	1
5 DESCRIPTION.....	1
5.1 Bracket Description.....	3
5.2 Bracket Marking.....	3
6 CLASSIFICATION.....	3
7 LENGTHS AND RISES.....	4
7.1 Nominal Horizontal Length.....	4
7.2 Design Length and Manufacturing Tolerance.....	4
7.3 Rise.....	4
7.4 Rise Tolerance.....	4
8 LUMINAIRE ATTACHMENT END.....	4
9 ATTACHING FASTENERS.....	5
10 WIRING.....	5
11 CORROSION PROTECTION.....	6
12 GROUNDING.....	6
13 LOAD-SUPPORTING ABILITY.....	6
13.1 Position of the Longitudinal Axis of the Luminaire.....	6
13.2 Horizontal Force on the Bracket.....	6
13.3 Vertical Load.....	6
13.4 Horizontal Load.....	6
13.5 Application of Vertical and Horizontal Loads.....	6
14 TESTS.....	7
14.1 Mounting.....	7
14.2 Evaluating Vertical Strength and Stiffness Characteristics.....	7
14.3 Evaluating Horizontal Strength and Stiffness Characteristics.....	7
14.4 Test Data.....	7

## FOREWORD

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

Alabama Power Company	Kauffman Consulting, LLC
American Electric Lighting	LED Roadway Lighting Ltd.
Caltrans	LITES
Ceravision	LUXIM Corp.
City of Kansas City, Missouri	Mississippi Power
City of Los Angeles, Bureau of Street Lighting	National Grid
Cree, Inc.	OSRAM SYLVANIA Inc.
Duke Energy	Philips HADCO
Duke Energy Florida	Philips Lumec
Eaton's Cooper Lighting	PNNL-Battelle
Edison Electric Institute	ROAM/DTL
EPRI	SELC Lighting
EYE Lighting International of N.A., Inc.	Sensus Metering
Florida Power & Light Company	Shakespeare Composite Structures
FP Outdoor Lighting Controls	Silver Spring Networks
FRE Composites (2005) Inc.	Sollux Consulting
GE Lighting Systems	South Carolina Electric & Gas
Georgia Power Company	SouthConn Technologies, Inc.
Gulf Power Company	Stresscrete/King Luminaire
Hapco Aluminum Pole Products	TE Connectivity
Holophane An Acuity Brands Company	Utility Metals Division of Fabricated Metals, LLC
Hubbell Lighting, Inc.	Valmont Industries, Inc.
Inovus Solar	Vanias Engineering and Consultants
Intelligent Illuminations Inc.	Xcel Energy
Intertek USA, Inc.	
JEA	

## 1 SCOPE

This standard covers metal pipe, tubing, and structural brackets for wood poles designed to support luminaires of generally spherical, ellipsoidal, or rectangular shapes used in roadway and area lighting.

## 2 NORMATIVE REFERENCES

This standard incorporates by undated 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).

ASTM A123/A123M-12 *Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.*

ASTM A153/A153M-09 *Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.*

*Note:* ASTM publications are available from the American Society for Testing and Materials, 100 Bar Harbor Drive, West Conshohocken, PA 19428-2959 [www.standards.ieee.org](http://www.standards.ieee.org).

## 3 INFORMATIVE REFERENCES

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

ANSI C136.3-2005 (R2009) *American National Standard for Roadway Lighting Equipment—Luminaire Attachments.*

*Note:* ANSI 136 Standards are available from Techstreet, 3916 Ranchero Dr., Ann Arbor, MI, 48108 USA  
Phone: (800) 699-9277  
International: (734) 780-8000  
E-mail: [techstreet.service@thomsonreuters.com](mailto:techstreet.service@thomsonreuters.com)  
[www.techstreet.com/publishers/127](http://www.techstreet.com/publishers/127)

## 4 TERMINOLOGY

The terms used in this standard shall have the meanings illustrated in **Figure 1**.