



ANSI C82.77-2-2020

American National
Standard for Lighting
Equipment —
Electrostatic Discharges



Currently in preview. click buy full version

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900 • Rosslyn, VA 22209
www.NEMA.org

Currently in preview, click buy full version





ANSI C82.77-2-2020

*American National Standard for Lighting Equipment—
Electrostatic Discharges*

Secretariat:

National Electrical Manufacturers Association

Approved: January 10, 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.

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, expressed 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 The American National Standards Institute, Inc. (ANSI) that the requirements for due process, consensus, and other criteria for approval have been met by the Standards developer. An American National Standard implies a consensus of those substantially concerned with its scope and provisions. 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 much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The existence of an American National Standard does not in any respect preclude anyone, whether s/he has approved the Standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the Standards. It is intended as a guide to aid the manufacturer, the consumer, and the general public.

The American National Standards Institute, Inc., does not develop Standards and will in 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, Inc. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on this title page.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute, Inc., 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, Inc.

Published by

National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

© 2020 National Electrical Manufacturers Association

All rights, 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, without prior written permission of the publisher.

Printed in the United States of America

Foreword (This Foreword is not part of ANSI C82.77-2-2020.)
This is a new Standard and not a revision of a previous Standard.

Suggestions for improvement of this Standard are welcome. They should be submitted to:

Secretary, ASC C82
National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

This Standard was developed and approved for submittal to ANSI by Accredited Standards Committee C82. Approval of this Standard is not meant to imply that all Accredited Standards Committee Members voted to approve it.

CONTENTS

1. Introduction..... 1

2. Deviations to Normative References 1

3. Deviations.....

4. Add to Clause 1 Scope the following details about the application to lighting equipment and power sources this lighting equipment is operated on. 1

5. Add the following to Clause 8.1.2 Climatic Conditions 1

6. Add the following to Clause 8.3 for Testing Details Specific to LED Luminaires and Subcomponents Such as Drivers and Controls. 2

7. Setup for Air Discharge ESD Tests..... 2

8. Procedure for Air Discharge ESD Tests 2

9. Test Locations 3

10. Setup for Contact Discharge ESD Tests..... 3

11. Procedure for Contact Discharge ESD Tests (Operating & Non-Operating)..... 4

12. Test Locations 6

13. Current Leakage and Hipot Tests 6

14. Replace the test result letter classification in clause 9 with the following:..... 6

15. Add the following details and example test report tables to Clause 10. 7

16. Results Format for Air Discharge ESD Tests 8

17. Results Format for Contact Discharge ESD Tests..... 9