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 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.
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.
CONTENTS

1. Introduction............................................................................................................................................ 1
2. Scope.................................................................................................................................................... 1
3. Normative References .......................................................................................................................... 1
4. Definitions.............................................................................................................................................. 2
6. Parking Lot Connected Lighting System............................................................................................... 5
7.2. Risk Management Framework Steps ................................................................................................ 9
8.1. Access Control ................................................................................................................................ 14
8.2. Awareness and Training ................................................................................................................. 15
8.3. Audit and Accountability .................................................................................................................. 15
8.4. Security Assessment and Authorization .......................................................................................... 15
8.5. Configuration Management ............................................................................................................. 16
8.6. Contingency Planning ..................................................................................................................... 16
8.7. Identification and Authentication ....................................................................................................... 17
8.8. Incident Response .......................................................................................................................... 17
8.9. Maintenance .................................................................................................................................... 18
8.10. Media Protection ............................................................................................................................ 18
8.11. Physical and Environmental Protection .......................................................................................... 18
8.12. Planning ....................................................................................................................................... 19
8.13. Personnel Security ........................................................................................................................ 19
8.14. Risk Assessment ............................................................................................................................ 19
8.15. Systems and Services Acquisition ................................................................................................. 20
8.16. Systems and Communication Protection ....................................................................................... 21
8.17. System and Information Integrity ................................................................................................. 21
8.18. Program Management ................................................................................................................... 21
9. Parking Lot Lighting System Cybersecurity Integration ...................................................................... 22
Foreword

At the time this Standard was approved the ANSI C137 committee was composed of the following members:

Acuity Brands, Inc.
American Lighting Association
Atlas Lighting Products, Inc.
Cree, Inc.
CSA Group
Digital Lumens
DimOnOff Inc
DLC
Duke Energy
Duke Energy Progress
Eaton Lighting Solutions
Energy Focus, Inc.
ERP Power
EYE Lighting International of N.A., Inc.
Florida Power & Light Company
GE Lighting
Georgia Power
Gulf Power Company
Hubbell Control Solutions
IALD
Illuminating Engineering Society
Intermatic Incorporated
Intertek
Lambda 530 Consulting, LLC
Lawrence Berkeley National Laboratory
LED Roadway Lighting Ltd.
Legrand, North America
Leidos Engineering, LLC
Leviton Lighting & Energy Solutions
Lighting Science Group Corporation
Lumispec Consulting
Lutron Electronics Company, Inc.
MaxLite
OSRAM SYLVANIA Inc.
Pacific Northwest National Laboratory
RAB Lighting Inc.
Sacramento Municipal Utility District
Schneider Electric
Signify
Silver Spring Networks
TE Connectivity
Telematics Wireless
Telensa
Underwriters Laboratories Inc.
Universal Lighting Technologies
Parking Lot Cybersecurity

1. Introduction

Many commercial organizations operate a parking lot which is incidental to their core business operations. Typically this type of organization does not have an IT department developing its property tools; they tend to be fully dependent on off-the-shelf solutions and third-party providers. Cybersecurity risk of harm may involve at least two main scenarios: unauthorized access to the organization network and data, and unauthorized access to customers or others visiting the organization (either in person or remotely). This document addresses a recommended cybersecurity practice for the parking lot lighting systems setup. It is recognized that this type of environment has the need to share IT resources with other tasks and functions, to use off-the-shelf solutions, and to outsource IT services. Cybersecurity protection and mitigation measurements can be shared with other activities and functions.

2. Scope

The intent of this document is to provide cybersecurity requirements for Lighting Systems used in parking lots with public access. This Standard provides specifications for the protection of signals and data to, from and within the lighting system, potentially including those that may initiate, control or monitor non-lighting functions. This Standard is not intended to address parking lots with enhanced security requirements, such as critical infrastructure sectors. This Standard does not apply to safety-related cybersecurity.