NEMA Standards Publication 77-2017

Temporal Light Artifacts: Test Methods and Guidance for Acceptance Criteria

Published by:

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

www.nema.org

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Foreword

A NEMA working group formed by a compilation of the Lighting, Lighting Controls, and Luminaire Sections has prepared this standard, *Temporal Light Artifacts: Test Methods and Guidance for Acceptance Criteria*. This standard provides measurement methods for metrics that address temporal light artifacts (TLA) for light sources, as well as measurement methods for leading-edge phase cut dimmers. It provides initial broad guidelines for limits on these metrics.

Inquiries, comments, and proposed or recommended revisions should be submitted to:

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Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development.

At the time the standard was approved, the Lighting Controls, Light Source and Luminaire sections were composed of the following members:

Acuity Brands, Inc.
Appleton Group
Atlas Lighting Products, Inc.
Coleman Cable LLC
Cree, Inc.
Current, powered by GE
Dialight
Eaton Lighting Solutions
EiKO Global, LLC
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Venture Lighting International
Westinghouse Lighting

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1 General

1.1 Scope

The purpose of the standard is to recommend a method of quantifying the visibility of temporal light artifacts (TLA) and to recommend initial, broad application-dependent limits on TLA.

The photometric recommendations and measurement methods are applicable to any lighting equipment (e.g., luminaires, light engines, self-ballasted lamps, drivers, and sensors) with any control system. Specific recommendations and measurement methods for controls are only included for phase-cut dimming.

The standard applies to visibility of TLA to human observers in applications with limited speeds of motion, such as an office environment. It does not address interference with optical equipment such as cameras and bar-code scanners. It does not address the potential for adverse stroboscopic effect in high-speed environments, such as machine shops. It does not address the phantom array effect.