



ANSI C136.52-2021

*American National Standard
for Roadway and Area Lighting Equipment—
Metering Performance Requirements for LED Drivers
with Integral Energy Measurement*

Secretariat:

National Electrical Manufacturers Association

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American National Standards Institute, Inc.

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Foreword

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

Acuity Brands	Kauffman Consulting, LLC
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JEA	Xcel Energy

Introduction

The method of billing customers for lighting based on hours of darkness is incompatible with new technologies such as dimming, adaptive lighting, and remote control of lighting. In order to fully utilize these technologies, it is useful to measure and report the actual energy used at each luminaire.

This Standard is intended to address that need at the LED driver level. This Standard does not address the communication of the data captured or the hardware necessary to communicate the data from the point of measurement.

1 Scope

This Standard establishes acceptable metering performance criteria for LED drivers with built-in (integral to the driver) energy consumption measurement functionality for use in outdoor luminaire applications. It describes two metering device performance levels for roadway and area lighting applications: 2% Accuracy Class and 5% Accuracy Class.

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 C12.20 *American National Standard for Electricity Meters—0.2 and 0.5 Accuracy Classes*

ANSI C82.16 *American National Standard for Light-Emitting Diode Drivers—Methods of Measurement*

ANSI C82.77-5 *American National Standard for Lighting Equipment—Voltage Surge Requirements*

ANSI C136.48 *American National Standard for Roadway and Area Lighting Equipment—Wireless Networked Lighting Controllers*

ANSI C137.0 *American National Standard for Lighting Systems—Lighting Systems Terms and Definitions*

IES TM-23 *Lighting Control Protocols*

UL 8750 *Light Emitting Diode (LED) Equipment for Use in Lighting Products*

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 C12.1 *American National Standard for Electric Meters—Code for Electricity Metering*

ANSI/IEEE PC62.41.1 *Guide on the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits*

ANSI/IEEE PC62.41.2 *Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits*

ANSI/IEEE C63.4 *Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz*