



Outdoor Advertising Association of America

## Digital Billboard Lighting Measurement

### How to Measure Nits (Candelas/Square Meter) in the Field– Without Sign Company Knowledge

#### Overview and basic notes on luminance meters

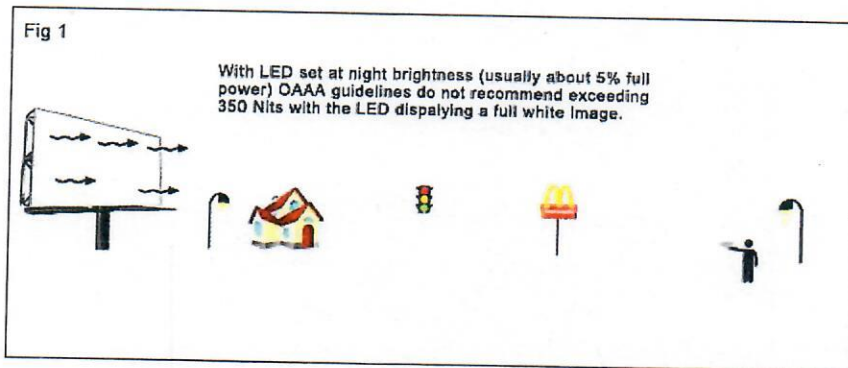
After a digital billboard is installed, there will be instances where it is desired to evaluate the nighttime billboard illumination to ensure that it does not exceed the brightness levels recommend by the OAAA. This procedure is extremely simple and requires only a luminance meter also known as a Nit gun.

The luminance meter (Nit gun) measures candelas per square meter from the source of any light. Most Nit guns come with a measurement area that appears as a circle in the field of vision of the meter. When taking readings, be sure that the subject you are measuring fills the entire circle (measurement area).

Most luminance meters are expensive pieces of scientific equipment. There are multiple ways to use the meter to record data. It is important that you set the meter to read absolute luminance measures vs. percentages of some stored values or previous peak readings. Some luminance meters will provide measurements in foot lamberts as well as candelas/square meter. Be sure your meter is set to measure in candelas/square meter.

#### Steps

1. Measuring Nits does not vary based on the size of the display. All displays can be measured in the same manner. The critical step with Nit measurements is to position yourself in the best possible location prior to taking your readings.
2. The person taking measurements should be as close to directly in front of the digital display as practical. Even slight variations off center will impact your readings. The variations in height are as impactful as variations in side to side alignment.



3. Each meter comes with a measurement area represented by a circle inside the view finder. This circle needs to be positioned so it falls entirely within the area of the digital billboard that you want to measure.
4. Take the measurement by pulling the Nit gun trigger. A reading will take place in about 0.8 seconds. The readings will continue to change as long as the trigger is held.
5. If the reading is below the maximum allowed, everything is okay. If the reading is higher than the maximum limit, the digital billboard is operating too brightly. The OAAA recommends that night time Nit readings not exceed 350 Nits.