OAAA Recommended Digital Brightness Guidelines

A. OAAA Guidelines: The OAAA recommended brightness criteria for digital billboards is as follows:

- Light produced by a digital billboard should not exceed 0.3 Footcandles over ambient light levels.
- Measurement should be taken utilizing a Footcandle meter from the following distances (perpendicular to the face of the digital billboard):
  - Posters: 150 feet
  - 10'6x36 Bulletins: 200 feet
  - 14x48 Bulletins: 250 feet
  - 20x60 Bulletins: 350 feet

The measurement distances are based on the average minimum viewing distances for each type of billboard.

- Digital billboards must have automatic dimming capability.

B. Basis for the Guidelines. These guidelines are based on recommendations by lighting expert Dr. Ian Lewin, Lighting Sciences Inc. (Scottsdale, AZ), in a March, 2008 report to the OAAA. Dr. Lewin developed brightness criteria to meet the following general guidelines:

- Appropriately Legible Copy. Digital advertising copy is appropriately legible and not overly bright.
- Simplicity. Provide a guideline that can be easily implemented and enforced. Measurement of the ambient light level of the sign on and off is conducted by a footcandle meter. If the difference in measurements is less than 0.3 footcandles, the digital billboard is in compliance.
- Established Guidelines. The criteria are based on established scientific methodology and established industry standards from the Illuminating Engineering Society of North America (IESNA) publication TM-11-00 “light trespass” theory which is an accepted standard in the lighting industry.
- Flexibility. Ensure proper brightness levels in a variety of lighting environments.

C. Additional Issues/Clarification

- **Automatic Dimming Capability.** A digital billboard must be able to automatically adjust as ambient light levels change. An automatic light sensing device (such as photocell or similar technology) should be utilized for adjusting the digital billboard’s brightness. Sunset-sunrise tables and manual methods of controlling brightness are not acceptable as a primary means of controlling brightness.
- **Brightness Measurement Methodology**. The brightness standard requires the use of a Footcandle meter (also known as a “Lux meter”; ~$100-1000). A Footcandle meter measures the amount of light arriving at the meter (illuminance), as opposed to an absolute measurement of the amount of light emanating from a light source or light sources (luminance). A Footcandle is a measure of lumens (light rays) that fall on one square foot area; Lux is the metric equivalent of a Footcandle.

  In contrast, a Candela Meter / NIT Gun (~$3,000) measures the amount of light emanating from a specific light source (luminance). A NIT gun measures candelas (a measure of luminance or brightness) per meter squared (also known as “NITS”), which is a measure of the brightness emanating from a specific light source. It excludes ambient light (which may include light from many sources) from the measurement. Standard NIT levels and/or utilization of a NIT gun are not a part of the OAAA recommended brightness guideline.