

**From:** [Rick Steele](#)  
**To:** [Ray Burger](#)  
**Cc:** [Stephen Frank](#)  
**Subject:** Brightness follow up  
**Date:** Friday, July 21, 2023 10:55:15 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)

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Ray,

As promised.....over the last few days we have spoken with two of our Digital Billboard vendors. Specifically, Daktronics and Formetco. I am going to send you some excerpts from those conversations that I believe are germane to the brightness concerns. In summary, we believe that we are safe agreeing to a night-time brightness level of 150-225 Nits.

If you would like, we also have the option of viewing one of our current signs, at night, and Daktronics will remotely adjust the brightness level, which will allow us to compare and see with our own eyes. Also, one important quality of these signs, which we didn't discuss, is the directional nature of the LED's and the louvers that control the light direction (diagram below). In fact, the panels are designed to control light spillage and direct the LED's to the viewing audience.

#### History of illuminance levels

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Why was 0.3 (300) Footcandles chosen as the limit? The 0.3 footcandle maximum illuminance level was carefully derived from a report completed by a former president of the IESNA. The recommended technique is based on accepted IESNA practice for "light trespass." The Outdoor Advertising Association of America (OAAA) commissioned Dr. Ian Lewin, in 2008 a principal at Lighting Sciences, Inc., Scottsdale, AZ, to recommend criteria for brightness levels on digital billboards. The standards are designed to minimize the risk of glare or unreasonable driver distraction.

#### **Rick Steele**

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The display is made up of many modules which we have designed to direct the light toward the intended audience. This side profile shows that we shade the LED pixel with a louver blade angled downward since our intended audience is typically viewing from a distance below the display.



The BLD factory ship level brightness is 7,500 nits with a nighttime setting of 3%, this equates to 225 nits which is lower than the stated 280 nits. I verified settings by looking at the control system for two of your current displays, if we were to use 4% then we would be slightly over at 300 nits so 3% is the best way to meet the standard. A setting of 2% which is 150 nits would provide a decrease that should be effective at a site that is outside of city limits such as a highway where there is more traffic lights than city street lighting.

If you were to demonstrate the difference in settings, you could schedule a time with our service coordinators to have someone available to demonstrate the difference between 3% and 2% as viewed at night after the sun has set. I'd suggest scheduling a prior viewing independent of your city meeting so you can see it for yourself first and determine if this is a direction that brings the compromise you mentioned.

Please feel free to let me know if you have any questions or would like to have a call to discuss.

Best regards,

*Lori Sieler*

Product Manager

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