

Summary of public review comments on BSR E1.41, Recommendations for the Measurement of Entertainment Luminaires Utilizing Solid State Light Sources with Resolutions

Referenced document: BSR E1.41, Recommendations for the Measurement of Entertainment Luminaires Utilizing Solid State Light Sources (document Photo/2021-5005r2)

ANSI Public review period: 29 October through 13 December 2021

Question: What is your opinion of BSR E1.41, Recommendations for the Measurement of Entertainment Luminaires Utilizing Solid State Light Sources. Is it good, is it good but could be better, is it unacceptable?

Response: One person responded. Wendy Luedtke, representing ETC, found BSR E1.41 unacceptable. Her comments with her proposed resolutions are below, along with the working group's response.

The working group responses were approved at the Photometric Working Group's 22 September 2022 meeting.

Comment #	Section	Comment	Commenter's proposed resolution	Working Group response
1	1	Although the scope states: "This standard defines photometric data that may be presented on documents purporting to accurately describe the photometric performance of these luminaires when producing both white and colored light," the standard focuses primarily on white light, only requiring reporting chromaticities for the colored emitters.	Revise language to say that "This standard defines photometric data that may be presented on documents purporting to accurately describe the photometric performance of these luminaires when producing white light. It also defines photometric data that may be presented for colored emitters utilized in these luminaires" AND earlier in paragraph, revise the sentence reading "The introduction of solid state narrow band emitters, particularly LEDs, has posed a problem for the industry in characterizing luminaires utilizing such emitters" to instead clarify it is referring to "colored" emitters whether direct/ narrow band or PC. Suggested revision for that sentence: "The introduction of solid state narrow band and phosphor converted colored (non-white) emitters has posed a problem for the industry in characterizing luminaires utilizing such emitters."	Revise Clause 1. See BSR E1.41, document number Photo/2021-5005r3.

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2	3	Language requiring testing to be done at highest lumen output needs to be adjusted to allow manufacturers to choose the settings they would like to measure and report. This concern is somewhat addressed in section 4, but this section was inadvertently not updated to match.	Suggest revising language to say that "then the complete settings at which the test was carried out shall be reported. This shall include onboard fixture settings and, if applicable, lighting controller settings." Ensure consistency with final wording in section 4.	Clause 3 has been revised to remove the highest output requirement. The settings are required to be reported, but not "the <i>complete</i> settings." We leave it to the user of E1.41 to determine what settings are relevant and omit the rest.
3	3.1.1	"...the tolerance if available shall be reported" is too vague as to be actionable. Is the standard attempting to request the tolerance of the measurement device (meter) or the manufacturing tolerance of the luminaire?	Photometrics committee to determine the specific goal and clarify please.	Clause 3.1.1 has been revised to specify the "luminaire tolerance."
4	3.1.3	The 15min wait to reach stability is clear and simple, which is useful, however it may not be long enough for all luminaires to reach stability.	Consider rewording to something like "until three measurements are taken with less than 1% deviation" and include the requirement to report the amount of time that passed until such stable point was reached. Track changes through section 4 as well.	Clause 3.1.3 has been revised to remove the maximum output reference and simply require the luminaire to be operated at the settings at which the test will be done for 15 minutes. One percent stability may never be achieved.

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5	3.2.1	The reference to "The lumen output as specified in ANSI E1.9 - 2007 (R2012) Clause 3.1.6" seems incorrect. The cited clause simply states that the "total lumen output shall be reported and labeled." It does not specify the method of measurement, for example whether lumens shall be measured in an integrating sphere or by other means such as specified in section 2.19 of E1.9.	Photometrics Working Group to determine whether the intended reference is section 2.19 of E1.9-2007 (2012) or whether additional clarification needs to be added.	Make no change. The clause is satisfactory as written.
6	3.2.6	The current wording does not seem to allow for clear reporting for luminaires with multiple modulation frequencies.	Suggest revising language to say "The modulation frequency in Hz of the luminaire when measured at 100% output lumens and 50% output lumens shall be reported. For luminaires with multiple modulation frequencies available, the modulation frequency settings for the reported measurements shall also be reported."	Make no change. The text is sufficiently clear on what is to be reported.
7	4	Language requiring test conditions in section 4 dictates that emitter levels be reported. This is not always possible or meaningful, as users may operate in a calibrated or other mode where emitter levels are not apparent or accessible.	Suggest revising language to say that "then the complete settings at which the test was carried out shall be reported. This shall include onboard fixture settings and, if applicable, lighting controller settings.", and remove/delete the requirement to include emitter settings. For example, RGB levels may not correspond to the red, green, and blue emitters but rather to the RGB color space used in a calibrated mode. I believe it is also better to remove "control" because it might confuse some users for example if operating via onboard settings vs a separate controller. Ensure consistency with final wording in section 3.	Clause 4 has been revised to remove the requirement that the levels for each emitter shall be reported. It now simply requires that the settings for the test be reported, including on-board luminaire settings and lighting controller settings, if applicable.