

## Flight Simulation Training Device Qualification Guidance

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### Cockpit Ambient Lighting Requirements

FSTD Guidance Bulletin 09-03

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**Purpose:** This bulletin provides sponsor guidance concerning previous advisory and regulatory material requiring the objective measurement of Flight Simulator Training Device (FSTD) ambient lighting.

**Background:** FSTD qualification standards published prior to the publication of the Part 60 rule in May 2008 required the installation and objective measurement of cockpit ambient lighting for Level D simulators as part of the required daylight scene. This requirement has appeared in numerous advisory circulars as well as in the Part 121 rule under Appendix H (Advanced Simulation). This objective test required that the cockpit ambient lighting be measured from either at an approach plate at the pilot's knee (5 foot-lamberts) or at the pilot's face (2 foot-lamberts) with a spot photometer.

In practice, it was noted by many FSTD users and sponsors that this objective testing requirement has led to the implementation of artificial light sources into qualified FSTDs which introduce unrealistic and distracting effects. As a result of such comments received during the Part 60 rulemaking process<sup>1</sup>, the ambient lighting requirement was removed from the Part 60 (Change 1) rule as well as from Part 121 Appendix H. Furthermore, it is also noted that the international FSTD qualification standards contained in the ICAO 9625 Second Edition and JAR-STD 1A Amendment 3 documents have also removed the requirement for the objective measurement of cockpit ambient lighting as well.

**Evaluation Guidance:** Sponsors of previously qualified FSTDs under Advisory Circulars 120-40 (as amended) and 120-63 standards have implemented the required ambient lighting objective tests as part of the FSTD's FAA approved Master Qualification Test Guide (QTG). In consideration of the updated regulatory requirements in Part 60 and Part 121 which remove the ambient lighting requirement, the National Simulator Program will extend the application of the rule to all currently qualified FSTDs as an alternate means of compliance to each FSTD's original qualification standard.

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<sup>1</sup> 14 CFR Part 60, *Flight Simulation Training Device Initial and Continuing Qualification and Use (Rule Preamble)*, May 9, 2008.

# **AFS-205** FEDERAL AVIATION ADMINISTRATION NATIONAL SIMULATOR PROGRAM

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As of the publication date of this bulletin, FSTD sponsors of all FAA qualified Level D devices are authorized to remove the ambient lighting objective tests from the FAA approved Master QTG in accordance with Part 60, section §60.23. Furthermore, any ambient lighting system installed in an FSTD for compliance with qualification standards prior to 14 CFR Part 60 may be removed at the discretion of the FSTD sponsor providing that a subjectively acceptable daylight scene is maintained<sup>2</sup>. No correspondence with the NSP will be required for this modification, however, an appropriate entry into the revision log of the MQTG must be made with reference to this bulletin.

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<sup>2</sup> 14 CFR Part 60, Appendix A, Table A1A, Section 6.p.