

Federal Aviation Agency

See 38A



AC NO: AC 20 - 38

AIRCRAFT

EFFECTIVE :

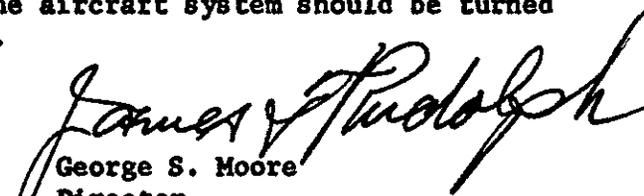
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SUBJECT : MEASUREMENT OF CABIN INTERIOR EMERGENCY ILLUMINATION

1. **PURPOSE.** This circular outlines an acceptable method for measuring the cabin interior emergency illumination on applicable airplanes.
 2. **REGULATIONS AFFECTED.** FAR 25.811(f)(2) and FAR 121.310(c)(2).
 3. **BACKGROUND.** The referenced regulations require in part, that the average cabin interior emergency illumination, when measured at 40-inch intervals at seat arm rest height on the center line of the main passenger aisle, be at least 0.05 foot candles.
 4. **ACCEPTABLE METHOD FOR MEASURING THE ILLUMINATION.** Illumination readings may be taken by using a color-corrected, photoelectric, brightness meter viewing a diffuse surface of known reflectance such as a magnesium carbonate or white blotter target placed at the desired location and/or by using a color corrected, cosine corrected, photoelectric, illumination meter placed at the desired location. Care should be taken to see that the illuminated surface is not shadowed by any person or any object. Prior to implementing the test, the cabin interior should be in its normal operating configuration and then made dark. A positive way to make the cabin interior dark is to cover each window with opaque paper so as to exclude all traces of airport or hangar light. Readings should be taken at 40-inch intervals along the aisle at seat arm rest height after the emergency lights have been actuated. The readings should include the fuselage area inhabited by passengers, but exclude cockpit, cargo, and lavatory areas. The source of electrical power should be that provided for the operation of the cabin interior emergency lighting system.
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If the aircraft electrical system is used to maintain the emergency system in a charged condition, the aircraft system should be turned off prior to taking the readings.


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