



Airport Engineering Division

AAS-100

Presented to: Illumination Engineering Society (IES)
By: AAS-100 Team
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Guidance Documents

- DOT Issued a Memo on Review and Clearance of Guidance Documents.
- Advisory Circulars
 - Performance Specifications
 - Guidance Documents to avoid using mandatory language.
 - The guidance to be written in plain English
 - We will continue to gain acceptance and we stand by “must” language for performance type guidance.



AC 150/5345-43J, Specification for Obstruction Lighting Equipment





U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Specification for Obstruction
Lighting Equipment

Date: Draft
Initiated By: AAS-100

AC No: 150/5345-43J
Change:

1 **Purpose.**

This advisory circular (AC) contains the Federal Aviation Administration (FAA) specification for obstruction lighting equipment.

2 **Effective Date.**

Effective 12 months after the date of this circular, only that equipment qualified per this specification will be listed in [AC 150/5345-53, Airport Lighting Equipment Certification Program](#). No re-testing will be required for existing equipment where test standards are unchanged from the previous version of this AC.

3 **Cancellation.**

This AC cancels AC 150/5345-43H, *Specification for Obstruction Lighting Equipment*, dated September 28, 2016.

4 **Application.**

The Federal Aviation Administration recommends the guidance and specifications in this advisory circular for obstruction lighting equipment. In general, use of this AC is not mandatory. However, the use of the specifications in this AC is mandatory for lighting or projects funded under the Airport Improvement Program (AIP) or with revenue from the Passenger Facility Charges (PFC) program. All lighting designs contained in this AC are acceptable to the Administrator to meet the lighting requirements under Title 14 § 139.311, *Marking, Signs and Lighting*.



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AC 150/5345-43J

- *Published March 13th, 2019*
- Adds infrared specifications for Aviation Obstruction Light Compatibility with Night Vision Goggles (NVGs) per Engineering Brief 98 to allow infrared emitters to be included in LED obstruction lighting fixtures.
- The specifications for the IR emitters support the operational requirement for LED-lit obstruction lights to be visible to operators in AC 7460-1 “Obstruction Marking and Lighting”.



Monitoring

Optional Monitoring:

1. If the IR emitter fails, the visible light is de-energized, and an alarm signal must be generated to provide an indication of the failure, (coupled).

OR

2. If the IR emitter fails, the visible light remains energized. The IR emitter is independently monitored in accordance with the monitoring requirements for FLASH/FAIL status of L-864, L-810 and L-885 visible light units. An alarm signal must be generated to provide an indication of the failure, (de-coupled).

Infrared Specifications for red LED Obstruction Lights

IR Wavelength (nominal)	Applicability	IR Vertical Beam Width	IR Radiant Intensity
800-900 nm	L-810 (L)	$\geq 10^\circ$ ¹	Minimum: 4 mW/sr
	L-864 (L) and L-885 (L)	$\geq 3^\circ$	Minimum: 246 mW/sr

Draft Advisory Circulars

- AC 150/5345-5C – Circuit Selector Switch (Legal Review)
- AC 150/5345-3H - L-821 Panels (Signature pending)



EB 83A – In Pavement Light Fixture Bolts

- Engineering Brief 83A was published December 26, 2018
- Developed clamping force requirement, based on modern commercial aircraft.
- Torque applied based on torque/tension relationship developed for the airports' bolting system used tested in a bolt tension calibrator.

Precision Path Indicator Approach Systems

Advisory Circular 150/5345-28

Major revision include:

Section 3.2.1.7 Photometric Requirements

“...c. Alternatively, for PAPI systems that use incandescent light sources, the red light color may also be per the aviation red chromaticity coordinate requirements found in FAA [Engineering Brief #67](#). (This difference shall be identified on the device and noted in the manufacturer’s operation manual).”

Section 3.2.2 Light Unit Construction *“...The light unit must prevent dew or frost/ice from accumulating on its lens surfaces. This may be accomplished by thermostatically activated heating or intrinsic heat management (such as incandescent lamps)...”*

Section 3.2.3.1 Adjusting Hardware*

“Any adjusting hardware must be vibration resistant and prevent movement of the optical system.

PAPI should be capable of modifying the horizontal light beam coverage of the PAPI for obstacle avoidance in the approach area and light signal obstructions. This can be accomplished using baffles, sometimes called blanking devices.”

*See Engineering Brief #95 for additional guidance



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Questions?

