# Auxiliary Driving Lamps—SAE J581a

SAE Standard
Approved March 1979



THIS IS A PREPRINT WHICH IS SUBJECT TO REVISIONS AND CORRECTIONS. THE FINAL VERSION WILL APPEAR IN THE 1980 EDITION OF THE SAE HANDBOOK.

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LAND SEA AIR SPACE

PREPRINT

# AUXILIARY DRIVING LAMPS—SAE J581a

**SAE Standard**

Report of Lighting Committee approved March 1979. This report was last reviewed and appeared in the 1971 Handbook. Since the 1971 Handbook, it was deleted and is now being reinstated with revisions in the 1980 Handbook. Rationale statement available.

*1. Scope*—This SAE Standard is an Engineering Design Standard for auxiliary driving lamps and may also be supplemented by a Service Performance Standard.

*2. Definition*—An auxiliary driving lamp is a lighting device mounted to provide illumination forward of the vehicle and supplements the upper beam of a standard headlamp system. It is not intended for use alone or with the lower beam of a standard headlamp system.

*3. Laboratory Requirements*

3.1 The following Sections from SAE J575f are a part of this standard:

3.1.1 Section 2—Samples for Tests.

3.1.2 Section 2.2—Bulbs.

3.1.3 Section 3—Laboratory Facilities.

3.1.4 Section 4.1—Vibration Test.

3.1.5 Section 4.2—Moisture Test.

3.1.6 Section 4.3—Dust Test.

3.1.7 Section 4.4—Corrosion Test.

3.1.8 Section 4.6—Photometry.

3.1.9 Section 4.7—Out of Focus Tests on Unsealed Units.

3.1.10 Section 4.8—Warpage Test on Devices with Plastic Components.

3.2 Sealed beam units when tested separately need comply only with Section, 2, Section 3, Section 4.6, and Section 4.8 of SAE J575f.

3.3 **Plastic Materials**—Plastic materials used in optical parts shall comply with the requirements set forth in SAE J576d.

3.4 **Color Test**—The color of the light shall be white as defined in SAE J578c.

3.5 **Photometric Requirements**

3.5.1 Photometric tests shall be made at a distance of at least 18.3 m from the photometer to the lamp.

3.5.2 Photometric tests shall be made with the filament at the design position. For unsealed units, tests shall also be made at the out-of-focus positions listed in Section 4.7 of SAE J575f.

3.5.3 Lamp Aim for the Photometric Test—A lamp or sealed beam unit which is designed to be aimed mechanically shall be centered on the photometric axis with the aiming planes normal to that axis. A lamp or sealed unit not designed to be aimed mechanically shall be photoelectrically aimed so that the test points in Fig. 1 designated by the squares have equal intensity and those designated by the triangles have equal intensity (this will center the high intensity zone about the H-V axis).

3.5.4 The lamp shall be designed to conform with the photometric requirements shown in Table 1 for the design filament position and the required out-of-focus filament positions. An aiming tolerance of ± 1/4 deg shall be allowed at each test point.

*4. Installation Recommendations*

4.1 The following requirements and test procedures apply to the device as used on the vehicle, and are not a part of the laboratory test requirements and procedures.

4.2 **Lamp Aim on the Vehicle**—Lamp aim adjustments and inspection should be with mechanical aimers if possible. The correct mechanical aim is 0-0, Ref. SAE J599d and SAE J602c.

4.2.1 If the vehicle mounting or lamp design precludes mechanical aiming, the lamp shall be aimed photometrically (Ref. Section 3.5.3) or visually aimed. The correct visual aim is with the high intensity zone of the beam symmetrical about the H-V axis of the lamp on an aiming screen at 7.6 m (25 ft).

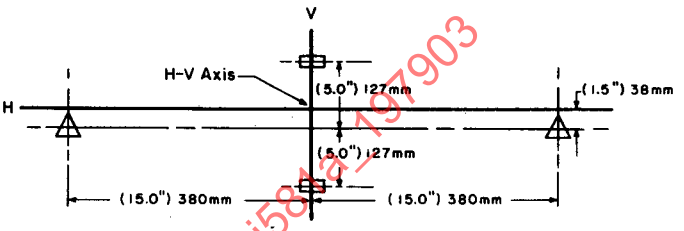


FIG. 1—TEST POINTS ON SCREEN AT 7.6 M

**TABLE 1**

**Photometric Requirements**

| Position Deg | Candela, CD |
|---|---|
| 2U—3R and 3L | 2000 Min |
| 1U—3R and 3L | 5000 Min |
| H-V | 25 000 Min and 50 000 Max |
| H—3R and 3L | 10 000 Min |
| 1D—6R and 6L | 3700 Min |
| 2D—6R and 6L | 2000 Min |
| 4D-V | 5000 Max |