

Issued 1979-03
Revised 1998-06

Superseding J581 JAN95

Submitted for recognition as an American National Standard

Auxiliary High Beam Lamps

Foreword—This Document has also changed to comply with the new SAE Technical Standards Board format. The title of this Document has changed. Definitions has changed to Section 3. All other Section numbers have changed.

1. **Scope**—This SAE Standard provides test procedures, performance requirements and guidelines for auxiliary driving lamps.

2. References

2.1 **Applicable Publications**—The following publications form a part of this specification to the extent specified herein. Unless otherwise specified, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J575—Tests for Motor Vehicle Lighting Devices and Components

SAE J576—Plastic Materials for Use in Optical Parts Such as Lenses and Reflectors of Motor Vehicle Lighting Devices

SAE J578—Color Specification

SAE J599—Lighting Inspection Code

SAE J759—Lighting Identification Code

3. Definition

3.1 **Auxiliary Driving Lamp**—A lighting device mounted to provide illumination forward of the vehicle and intended to supplement 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.

4. **Lighting Identification Code**—The auxiliary driving lamps may be identified by the code "Y," in accordance with SAE J759.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

QUESTIONS REGARDING THIS DOCUMENT: (724) 772-8512 FAX: (724) 776-0243
TO PLACE A DOCUMENT ORDER; (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS <http://www.sae.org>

5. Tests

5.1 **SAE J575**—The following test procedures in SAE J575 are a part of this report with the modifications indicated:

5.1.1 VIBRATION TEST

5.1.2 MOISTURE TEST

5.1.3 DUST TEST—(Dust test shall not be required for sealed units.)

5.1.4 CORROSION TEST

5.1.5 WARPAGE TEST—(Devices produced from plastic components.)

5.1.6 A PHOTOMETRIC TEST

5.1.6.1 The photometric tests for bulb replaceable units shall be made at a distance of at least 18.3 m (60 ft) from the photometer to the lamp.

5.1.6.2 *Lamp Aim*—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 Figure 1 designated by the squares have equal intensity and those designated by triangles have equal intensity.

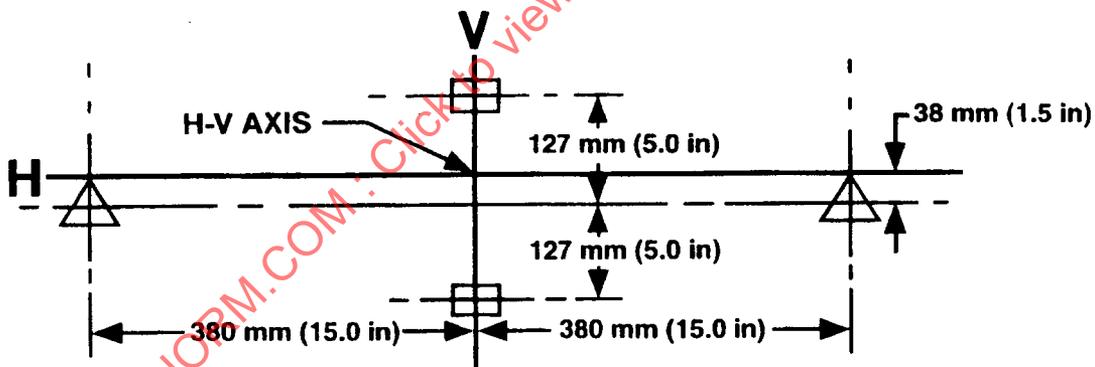


FIGURE 1—TEST POINTS ON A SCREEN AT 7.6 m

5.2 **Color Test**—SAE J578 is a part of this report.

6. Requirements

6.1 Performance Requirements

6.1.1 SAE J575—A device when tested in accordance with the test procedures in Section 5, shall meet the following requirements in SAE J575, with the modifications indicated:

6.1.1.1 *Vibration*

6.1.1.2 *Moisture*

6.1.1.3 *Dust*

6.1.1.4 *Corrosion*

6.1.1.5 *Warpage Test on Devices with Plastic Components*

6.1.1.6 *Photometry*—The lamp under test shall meet the photometric requirements contained in Table 1.

TABLE 1—PHOTOMETRIC REQUIREMENTS

Test Point Degrees ⁽¹⁾	Candela, cd
2U—3R and 3L	1600 min
1U—3R and 3L	4000 min
H—V	20 000 min and 60 000 max
H—3R and 3L	8000 min
1D—6R and 6L	2960 min
2D—6R and 6L	1600 min
4D—V	6000 max

1. A tolerance of $\pm 1/4$ degree in location may be allowed at any test point.

6.2 **Color**—The color of the emitted light shall be white as defined in SAE J578.

6.3 **Plastic Materials**—The plastic materials used in optical parts shall meet the requirements in SAE J576.

7. Guidelines

7.1 The photometric design guidelines for auxiliary driving lamps, when tested in accordance with 5.1.6 of this document, are contained in Table 2.

TABLE 2—PHOTOMETRIC DESIGN GUIDELINES

Test Point Degrees ⁽¹⁾	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

1. A tolerance of $\pm 1/4$ degree in location may be allowed at any test point.

7.2 These guidelines apply to the device as used on the vehicle and are not a part of the laboratory test procedures and requirements.

7.3 **Lamp Aim**—The lamp aim adjustments on the vehicle should be with mechanical aimers, if possible. Set the mechanical aim to 0-0, reference SAE J599.

7.4 **Other Aiming Procedures**—If the vehicle mounting or lamp design precludes mechanical aiming, the lamp shall be aimed photometrically (see 5.1.6.2), or visually aimed. The correct visual aim is with the high intensity zone of the beam symmetric about and 38 mm (1.5 in) below the H-V axis of the lamp on an aiming screen at 7.6 m (25 ft).

8. **Notes**

8.1 **Marginal Indicia**—The change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

PREPARED BY THE SAE ROAD ILLUMINATION DEVICES STANDARDS COMMITTEE

SAENORM.COM : Click to view the full PDF of J581 - 199806