The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE RECOMMENDED PRACTICE

Submitted for recognition as an American National Standard

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(R) REAR CORNERING LAMPS FOR USE ON MOTOR VEHICLES LESS THAN 9.1 m IN OVERALL LENGTH

***Foreword*—**This Document has not changed other than to put it into the new SAE Technical Standards Board Format.

***1. Scope*—**This SAE Recommended Practice provides test procedures, requirements, and guidelines for rear cornering lamps for use on vehicles less than 9.1 m in overall length.

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 J567—Lamp Bulb Retention System
SAE J575—Test Methods and Equipment for Lighting Devices and Components for Use on Vehicles Less Than 2032 mm in Overall Width
SAE J576—Plastic Materials for Use in Optical Parts Such as Lenses and Reflex Reflectors of Motor Vehicle Lighting Devices
SAE J578—Color Specification
SAE J759—Lighting Identification Code

3. Definitions

3.1 Rear Cornering Lamps—Supplemental lamps used to provide illumination to an area to the side and rearward of the vehicle when it is backing up.

3.2 Incidental Light—Light emitted from a lamp that is projected from other than the intended light emitting surface. Incidental light is typically a color other than that of the intended lighting function.

***4. Lighting Identification Code*—**Rear cornering lamps may be identified by the code K2 in accordance with SAE J759.

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5. Tests

5.1 SAE J575 is a part of this document. The following tests are applicable with the modifications as indicated:

5.1.1 VIBRATION TEST

5.1.2 MOISTURE TEST

5.1.3 DUST EXPOSURE TEST

5.1.4 CORROSION TEST

5.1.5 PHOTOMETRY TEST—In addition to the test procedure in SAE J575, the following shall apply:

5.1.5.1 Photometric measurements shall be made with the light source of the lamp at least 3 m from the photometer. The H-V axis shall be taken as the horizontal line through the light source and perpendicular to the longitudinal axis of the vehicle.

5.1.6 WARPAGE TEST ON DEVICES WITH PLASTIC COMPONENTS

5.2 Color Test—SAE J578 is part of this document.

5.3 Plastic Optical Materials Test—SAE J576 is part of this document.

6. Requirements

6.1 A device, when tested in accordance with the test procedures specified in Section 5, shall meet the following requirements:

6.1.1 VIBRATION—Per SAE J575

6.1.2 MOISTURE—Per SAE J575

6.1.3 DUST EXPOSURE—Per SAE J575

6.1.4 CORROSION—Per SAE J575

6.1.5 PHOTOMETRY—Per SAE J575

6.1.5.1 The lamp under test shall meet the performance requirements contained in Table 1. Test points shown are for a lamp mounted on the left side of the vehicle. Right-hand angles should be substituted for left-hand angles for a lamp mounted on the right side of the vehicle.

TABLE 1—PHOTOMETRIC REQUIREMENTS

Test Position Degrees	Luminous Intensity Candela (cd)
2-1/2 D - 30 L	30 min
2-1/2 D - 45 L	60 min
2-1/2 D - 60 L	30 min
Horizontal and Above	600 max

6.1.5.2 If the lamp has portions of its lens which project nonwhite light, that light shall be excluded from measurements made to determine compliance with 6.1.5.1. The lamp shall meet the photometric requirements of this document with white light alone.

6.1.6 WARPAGE—Per SAE J575 (for devices with plastic components).

6.2 Color—The color of the light from a rear cornering lamp shall be white as specified in SAE J578. The lamp may project incidental red, yellow, or white light through reflectors or lenses that are adjacent, close to, or a part of the lamp assembly. If a lamp has portions of its lens which project nonwhite light, that light shall be regarded as incidental if, when only the nonwhite light is measured at each test point specified in Table 1, the sum of such measurements does not exceed 20% of the sum of the test point measurements of the total light output (white plus nonwhite).

6.3 Material Requirements—Plastic materials used in optical parts shall meet the requirements of SAE J576.

7. Guidelines

7.1 Photometric Design Guidelines—The photometric design guidelines for rear cornering lamps, when tested in accordance with 5.1.5 of this document are contained in Table 2. Test points shown are for a lamp mounted on the left side of the vehicle. Right-hand angles should be substituted for left-hand angles for a lamp mounted on the right side of the vehicle.

TABLE 2—PHOTOMETRIC DESIGN GUIDELINES

Test Position Degrees	Luminous Intensity Candela (cd)
2-1/2 D - 30 L	40 min
2-1/2 D - 45 L	80 min
2-1/2 D - 60 L	40 min
Horizontal and Above	500 max

7.2 Installation Guidelines—The following guidelines apply to rear cornering lamps as used on the vehicle and shall not be considered part of the requirements:

7.2.1 Rear cornering lamps should be mounted on each side, near or at the rear of the vehicle. These lamps may be combined with other lamps on the vehicle provided each function of the combined lamp meets its respective requirements.

7.2.2 Performance of the lamps may deteriorate significantly as a result of dirt, grime, and/or snow accumulation on their optical surfaces. Installation of lamps on vehicles should be considered to minimize the effects of these factors.

7.2.3 Where it is expected that lamps must perform in extremely severe environments, such as in off-highway, mining, fuel haulage, or where it is expected that they will be totally immersed in water, the user should specify lamps specifically designed for such use.

7.3 Mechanization Guidelines—The following guidelines apply to rear cornering lamps as used on the vehicle and shall not be considered part of the requirements:

7.3.1 The rear-cornering lamp should be illuminated only when the ignition switch is energized and reverse gear is engaged.

7.3.2 The luminous intensity of the light source will vary with applied voltage. The electrical wiring in the vehicle should be adequate to supply design voltage to the lamp filament.

7.4 For requirements and gages to be used in socket designs, refer to SAE J567.

8. Notes

8.1 Marginal Indicia—The change bar (l) 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.

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