

Rear Cornering Lamp -SAE J1373 JUN82

SAE Recommended Practice
Approved June 1982

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Report of the Lighting Committee, approved June 1982. Rationale statement available.

1. **Scope**—This SAE Technical Report provides test procedures, design requirements, performance requirements, and installation requirements for rear cornering lamps for use on vehicles less than 9.1 m in overall length.

2. **Definition**—A rear cornering lamp is a supplemental lamp that will illuminate an area to the side and rearward of the vehicle to provide light when backing out of winding driveways, multiple lane parking lots, etc.

3. **Test Procedures**—The test procedures described in the sections of SAE J575 JUN80 listed below are a part of this recommended practice.

- Section 2.1 Lighting Devices
- Section 2.2 Bulbs
- Section 2.3 Test Fixture
- Section 3 Laboratory Facilities
- Section 4.1 Vibration Test
- Section 4.2 Moisture Test
- Section 4.3 Dust Test
- Section 4.4 Corrosion Test
- Section 4.5 Color Test

3.1 **Section 4.6 Photometry**—Photometric tests shall be made with the photometer at a distance of at least 3 m from the lamp. The H-V axis shall be taken as the horizontal line through the light source and perpendicular to the longitudinal axis of the vehicle. Accurate rated bulbs shall be used for photometry.

3.2 **Section 4.8 Warpage Test**—The warpage test shall be made on rear cornering lamps for the same cycle times as listed for a backup lamp.

3.3 **Test Sequence**—The individual tests need not be performed in any particular sequence. The completion of tests may be expedited by performing the tests simultaneously on separately mounted samples.

3.4 Lamps designed for use in both 6 V and 12 V systems shall be tested with 12 V bulbs.

4. **Design Requirements and General Requirements**

4.1 Plastic materials used in optical parts shall comply with SAE J576 JUN81.

4.2 The photometric design requirements are shown in Table 1. A single lamp mounted on a test stand to simulate mounting on the vehicle shall meet the photometric design requirements (test points shown are for a lamp mounted on the left side of the vehicle—right hand angles should be substituted for left angles for a lamp mounted on the right side of the vehicle).

5. **Performance Requirements**

5.1 **Vibration**—Upon completion of the test, the sample device shall be examined. Any device showing rotation, displacement, cracking, or rupture of parts (except bulb(s) and sealed beam unit internal components) which would result in failure of any other tests contained in Section 5 of this recommended practice, shall constitute a failure. Cracking or rupture of parts of the device affecting its mounting shall also constitute a failure.

TABLE 1—PHOTOMETRIC DESIGN REQUIREMENTS

Test Points	Intensity (cd)
H and above	500 max
2-1/2 D—30 L	40 min
2-1/2 D—45 L	80 min
2-1/2 D—60 L	40 min

TABLE 2—PHOTOMETRIC SERVICE PERFORMANCE REQUIREMENTS

Test Points	Intensity (cd)
H and above	600 max
2-1/2 D—30 L	30 min
2-1/2 D—45 L	60 min
2-1/2 D—60 L	30 min

5.2 **Moisture**—The moisture accumulation shall be less than 2 cc.
 5.3 **Dust**—The unit shall be considered to have met the requirements of this test if no dust is found on the interior surfaces, or if the maximum candle-power output is within 10% as compared with the condition after the unit is cleaned inside and out.

5.4 **Corrosion**—There shall be no evidence of corrosion which would result in failure to comply with any of the other requirements in Section 5.

5.5 **Color**—The color of the light from a rear cornering lamp shall be white as measured by the method and meeting the requirements of 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, quantitatively, it does not exceed 20% of the total device output at all specified test points; the lamp shall also meet the photometric requirements of this recommended practice with white light alone and the lamp shall meet the color requirements with the total output measured, including the incidental light.

5.6 **Photometry**—The photometric service performance requirements are shown in Table 2. A single lamp mounted on a test stand to simulate mounting on the vehicle shall meet the photometric service performance requirements (test points shown are for a lamp mounted on the left side of the vehicle—right hand angles should be substituted for left angles for a lamp mounted on the right side of the vehicle).

5.7 **Warpage**—This is a requirement only for devices with plastic components. Upon completion of the test, there shall be no evidence of warpage which would result in failure to meet any of the requirements in Section 5 of this recommended practice.

6. **Installation Requirements**—These requirements apply to the device as used on the vehicle and are not part of the design requirements, performance requirements, or test procedures.

6.1 The rear cornering lamp shall be illuminated only when the ignition switch is energized and reverse gear is engaged.

6.2 The rear cornering lamp should be mounted on each side, near or on the rear of the vehicle. This lamp may be combined with other lamps on the vehicle providing each function of the combined lamp meets its respective requirements.

7. **Lamp Identification Code**—Rear cornering lamps meeting the design requirements of Section 4 and the performance requirements of Section 5 of this recommended practice may be identified with the code K2 in accordance with the principles outlined in SAE J759 JAN75 "Lighting Identification Code."

APPENDIX

As a matter of information, attention is called to SAE J567 for requirements and gages to be used in socket design.