SOCIETY OF AUTOMOTIVE ENGINEERS, INC. • TWO PENNSYLVANIA PLAZA • NEW YORK, NEW YORK 10001

LAND SEA AIR SPACE

TECHNICAL REPORT J579b

SEALED BEAM HEADLAMP UNITS FOR MOTOR VEHICLES—SAE J579b

SAE Standard

Report of Lighting Division approved January 1940 and last revised by Lighting Committee April 1973.

1. Scope—This standard applies to design evaluation of mechanically aimable sealed beam headlamp units for two-beam systems. For service performance requirements and evaluations, see SAE J32.

2. Definitions

2.1 Sealed Beam Unit—An integral and indivisible hermetically sealed optical assembly with the name "Sealed Beam" molded in the lens.

2.2 Upper Beam—A beam intended primarily for distant illumination and for use when not meeting or following other vehicles.

2.3 Lower Beam—A beam intended to illuminate the road ahead of the vehicle when meeting or following another vehicle.

2.4 7 in (178 mm) Sealed Beam System—A system employing two 7 in (178 mm) Type 2 sealed beam units.

2.5 7 in (178 mm) Type 2 Sealed Beam Unit—A 7 in (178 mm) diameter unit providing an upper and a lower beam.

2.6 5¾ in (146 mm) Sealed Beam System—A system employing four 5¾ in (146 mm) sealed beam units: two Type 1 and two Type 2.

2.7 5¾ in (146 mm) Type 1 Sealed Beam Unit—A 5¾ in (146 mm) diameter unit having a single filament and used in a four-lamp system to provide the principal portion of the upper beam.

2.8 5¾ in (146 mm) Type 2 Sealed Beam Unit—A 5¾ in (146 mm) diameter unit having two filaments and used in a four-lamp system to provide the lower beam and a secondary portion of the upper beam.

2.9 Mechanically Aimable Sealed Beam Unit—A unit having three pads on the face of the lens, forming a mechanical aiming plane used to adjust and inspect the aim of the unit when installed on the vehicle.

2.10 Aiming Plane—A plane through the three aiming pads on the face of the lens.

2.11 Mechanical Axis—A line perpendicular to the aiming plane through the center of the circle formed by the three aiming pads on the face of the lens.

3. Laboratory Requirements

3.1 Test Voltage—In conducting tests to this standard, the sealed beam unit shall be operated at 6.4 or 12.8 V for 6 and 12 V electrical systems.

3.2 The following sections from SAE J575 are a part of this standard:

3.2.1 Section B—Samples for Test.

3.2.2 Section D—Laboratory Facilities.

3.2.3 Section J—Photometry. The angular relation between test points for the upper and lower beams is as shown in Fig. 3.

3.3 Color Test—The color of the light from a sealed beam unit shall be white, as defined in SAE J578.

3.4 Beam Pattern Location

3.4.1 BEAM LOCATION—The aiming plane of the sealed beam unit shall be placed parallel to the aiming screen at 25 ft (7.6 m) with the mechanical axis on the H-V axis.

3.4.1.1 *5¾ in (146 mm) Type 1 Sealed Beam Unit*—The beam shall be photoelectrically aimed so that 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 area about the H-V axis.)

3.4.1.1.1 The mechanical axis shall not deviate from the H-V axis more than ± 0.3 deg vertically or ± 0.6 deg horizontally.

3.4.1.2 *5¾ in (146 mm) Type 2 and 7 in (178 mm) Type 2 Sealed Beam Units*—The low beam shall be photoelectrically aimed so that the intensity at the test point designated by the triangle in Fig. 2 is 20%

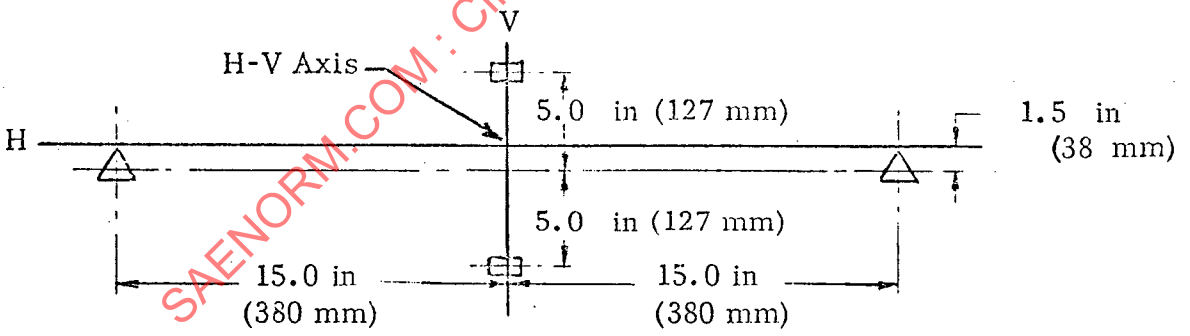

FIG. 1—TEST POINTS ON SCREEN AT 25 FT (7.6 m)

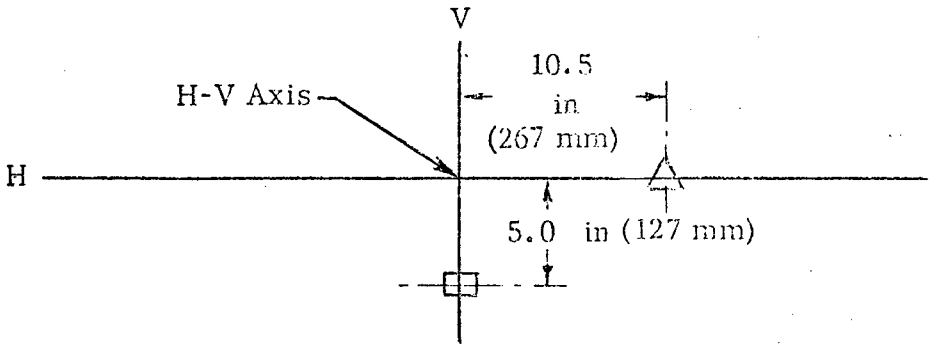

FIG. 2—TEST POINTS ON SCREEN AT 25 FT (7.6 m)