

	<b>SURFACE VEHICLE STANDARD</b>	<b>SAE</b>	<b>J222 MAR2013</b>
		Issued 1970-12 Revised 2013-03	
		Superseding J222 DEC2006	
<b>Front Position Lamp</b>			

#### RATIONALE

SAE Technical review corrected various references

Title was changed to move towards harmonization with other parts of the world. This was decided at the 2012 Fall meeting in Charlotte, NC and confirmed in the December TF meeting to change the name to "Front Position Lamp"

Changed all occurrences of the term "parking" to "front position"

Changed Scope to match Title

Added J1889 to reference section as it is now part of the document

Added definition of 'Front Position lamp'

Changed definition of "Parking Lamp" to align with new title

Renumbered section 5.1.1 and added addition of J1889 for LED lamps

Made small clarification to 6.1.5.2

Added - 7.1.5. Front Position lamps may be activated along with the activation of a DRL

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## 1. SCOPE

This SAE Standard provides test procedures, requirements, and guidelines for a Front Position lamp.

## 2. REFERENCES

## 2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

## 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J567	Light Source Retention System
SAE J575	Test Methods and Equipment for Lighting Devices for Use on Vehicles Less than 2032 mm in Overall Width
SAE J576	Plastic Material or 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
SAE J1889	L.E.D. Signal and Marking Lighting Devices

## 2.1.2 European Community/United Nations Publication

Available from: [www.itu.ch/itudoc/un/editrans/wp29.html](http://www.itu.ch/itudoc/un/editrans/wp29.html).

ECE R7-01 Amend 4 as of September 2012 Uniform Provisions Concerning the Approval of Front and Rear Position (Side) Lamps, Stop-Lamps and End-Outline Marker Lamps for Motor Vehicles (Except Motor Cycles) and Their Trailers

## 2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

### 2.2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J592 Sidemarker Lamps for Use on Road Vehicles Less than 2032 mm in Overall Width

SAE J585 Tail Lamps (Rear Position Lamps) for Use on Motor Vehicles Less Than 2032 mm in Overall Width

SAE J586 Stop Lamps for Use on Motor Vehicles Less Than 2032 mm in Overall Width

SAE J588 Turn Signal Lamps for Use on Motor Vehicles Less Than 2032 mm in Overall Width

SAE J594 Reflex Reflectors

SAE J1957 Center High Mounted Stop Lamp Standard for Vehicles Less than 2032 mm Overall Width

SAE J2261 Stop Lamps and Front- and Rear- Turn Signal Lamps for Use on Motor Vehicles 2032 mm or More in Overall Width

### 2.2.2 Federal Publication

Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, <http://www.access.gpo.gov/nara/cfr-table-search.html#page1>.

Federal Motor Vehicle Standard 49CFR Part 571.108

## 3. DEFINITIONS

### 3.1 Front Position Lamp

Whether separate or in combination with other lamps, a front position lamp is located on both the front left and right of the vehicle which show to the front and are intended to mark the vehicle when parked. In addition, these front lamps serve as a reserve front position indicating system in the event of headlamp failure.

## 4. LIGHTING IDENTIFICATION CODE

The Front Position lamp may be identified by the code "P" in accordance with SAE J759.

## 5. TESTS

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

5.1.1 Vibration Test

5.1.2 Moisture Test

5.1.3 Dust Test

5.1.4 Corrosion Test

5.1.5 Photometry Test

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 parallel to the axis of reference of the lamp as mounted on the vehicle.

5.1.5.2 The test methods and procedures of SAE J1889 shall also be applied if LED light sources are present in the lamp.

5.1.6 Warpage Test for Devices with Plastic Components

5.2 Color Test

SAE J578 is a part of this report.

5.3 Materials

SAE J576 is part of this document for optical components

## 6. PERFORMANCE 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 Vibration

6.1.2 Moisture

Per SAE J575 Moisture

6.1.3 Dust

Per SAE J575 Dust

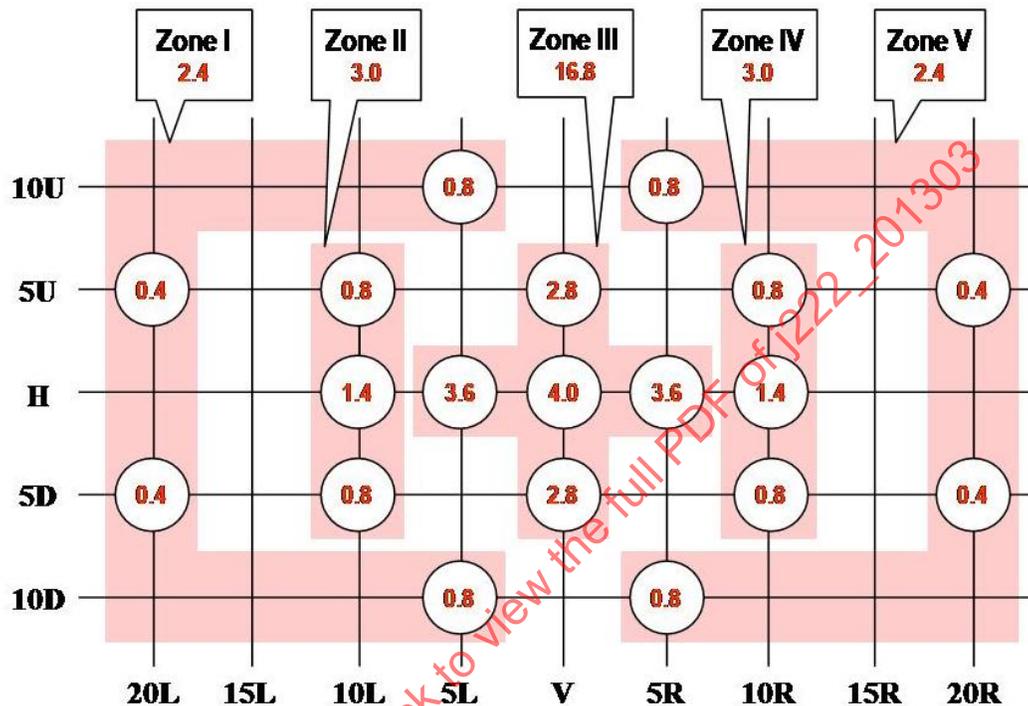
6.1.4 Corrosion

Per SAE J575 Corrosion

## 6.1.5 Photometry

6.1.5.1 The lamp shall be designed to conform to the zone total photometric requirements of Figure 1 and its footnotes. The summation of the luminous intensity measurements at the test points in a zone shall be at least the value shown.

6.1.5.2 Shall meet the requirements of SAE J1889 if LED Light sources are utilized



**FIGURE 1-PHOTOMETRIC REQUIREMENTS**  
Minimum Luminous Intensity (cd)

1. The maximum luminous intensity is 125 cd on or above horizontal and 250 cd below horizontal.
2. The Measured value at each test point shall not be less than 60% of the required minimum value for that individual test point location.
3. The sum of the luminous intensity measurements at each test point within a zone shall not be less than the zone total shown. The luminous intensity measurements at each discrete test point shown within the corresponding zone are the values used to calculate the specified zone total.
4. The listed maximum shall not be exceeded over any area larger than that generated by a 0.5 degree radius within the solid angle defined by the test points.
5. Ratio requirements of 6.1.5.2 apply.

FIGURE 1 - PHOTOMETRIC REQUIREMENTS

6.1.5.3 When a front position lamp is combined with the turn signal lamp, the turn signal lamp shall not be less than three times the luminous intensity of the parking lamp at any test point on or above horizontal; except that at H-V, H-5L, H-5R, and 5U-V, the (turn signal) lamp shall not be less than five times the corresponding luminous intensity of the front position lamp

## 6.1.6 Warpage

Per SAE J575 Warpage

## 6.2 Color

The color of the light from a front position lamp shall be white or yellow as specified in SAE J578.

## 6.3 Materials Requirements

Plastic materials used in optical parts shall meet the requirements of SAE J576.

## 6.4 Design Requirements

6.4.1 If a turn signal lamp is optically combined with the parking lamp and a two-filament replaceable bulb is used, the bulb shall have an indexing base and the socket shall be designed so that bulbs with nonindexing bases cannot be used. Removable sockets shall have an indexing feature so that they cannot be reinserted into lamp housings in random positions, unless the lamp will perform its intended function with random light source orientation.

## 6.5 Installation Requirements

Front Position lamps shall meet the following requirements as installed on the vehicle.

6.5.1 Each front position lamp shall be designed to comply with all photometric requirements of Figure 1 with all vehicular obstructions considered.

6.5.2 Each front position lamp shall be designed to comply with one of the following visibility requirements:

6.5.2.1 Each lamp must provide a minimum of  $13 \text{ cm}^2$  of unobstructed projected area when the light emitting surface area of the lens, excluding reflex reflector area, is projected parallel to a horizontal plane in any direction from 45 degrees outboard to 45 degrees inboard of the vehicle longitudinal axis, and parallel to a longitudinal, vertical plane in any direction from 15 degrees above to 15 degrees below the horizontal (see Figure 2).

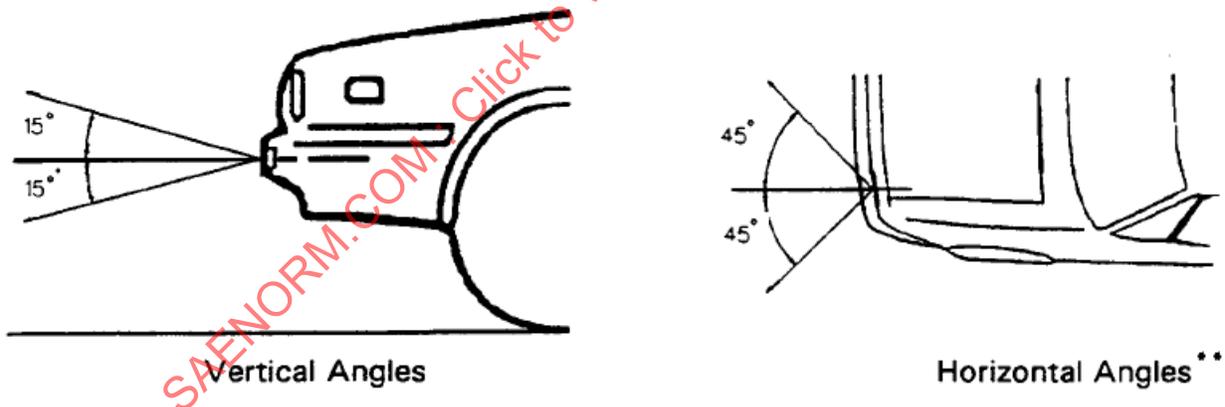


FIGURE 2 - GEOMETRIC VISIBILITY - DESIGN METHOD

6.5.2.2 Each lamp must provide a luminous intensity not less than 0.05 cd throughout the photometric pattern defined by the corner points specified in Figure 3: