STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**

**METHODS OF SAMPLING AND TESTING RETROREFLECTIVE MATERIALS AND DEVICES FOR ROAD TRAFFIC CONTROL PURPOSES**

PART 3—RAISED PAVEMENT MARKERS (RETROREFLECTIVE AND NON-RETROREFLECTIVE)

# AS 2445.3.3 LUMINANCE FACTOR OF TYPE B AND TYPE A/B MARKERS

**1 SCOPE.** This standard sets out the method for determining the luminance factor of Type B and Type A/B raised pavement markers.

**2 REFERENCED DOCUMENT.** The following standard is referred to in this standard:

AS 2445 Methods of Sampling and Testing Retroreflective Materials and Devices for Road Traffic Control Purposes
2445.3.1—Sampling and Conditioning of Samples

**3 APPARATUS.**

**3.1 Reflectometer.** A reflectometer having a light source, photoelectric receptor and a comparison plate.

**3.2 Components.**

(a) A light source, approximating CIE Standard Illuminant C or D65, which shall be stable. A circular aperture that subtends $8 \pm 3$ minutes of arc at the marker shall be used. The illuminance shall be uniform within a total tolerance of 10 percent over the marker.

(b) A photoelectric receptor which shall either—

(i) have the relative spectral response of the CIE Standard Colorimetric Observer and a linear response to increasing illumination over the whole range likely to be encountered when testing to the requirements of this standard; or

(ii) be calibrated using standard photometric procedures and correction factors applied where necessary for departures from correct spectral and linear response.

The receptor shall have a circular aperture subtending $5 \pm 2$ minutes of arc at the marker's position.

The comparison plate may either be a magnesium oxide surface or a suitable permanent calibrated surface.

**4 TEST SAMPLE.** Thirty markers, selected in accordance with AS 2445.3.1, shall be tested.

**5 PROCEDURE.** The procedure shall be as follows:

(a) Arrange the light source and receptor in relation to the marker as indicated in Fig. 1(a). Record the reading $R_m$ of the receptor.

(b) Substitute the comparison plate for the marker as indicated in Fig. 1(b). Record the reading $R_c$ of the receptor.

NOTE: The area viewed by the receptor will not, in general, be circular; the minor axis of the area subtended at the marker is not to be greater than 10 mm.

Any area of specular reflector must be masked with a small piece of matt black material.

**6 CALCULATION.** The luminance factor shall be calculated using the following formula:

$$L_m = \frac{R_m}{R_c} L_c$$

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