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### Economic Commission for Europe

#### Inland Transport Committee

#### World Forum for Harmonization of Vehicle Regulations

#### Working Party on Lighting and Light-Signalling

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Item 5(f) of the provisional agenda

**Collective amendments - UN Regulations Nos. 48 and 123**

### **Proposal for Collective amendments to Regulations Nos. 48 and 123**

#### **Submitted by the expert from the Working Party "Brussels 1952"\***

The text reproduced below was prepared by the expert from the Working Party "Brussels 1952" (GTB) to introduce into Regulation No. 48 a definition of Gonio(photo)meter and to amend the existing description of the goniometer in Regulation No.123. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## I. Proposal

### Regulation No. 48, Supplement 10 to the 04 series;

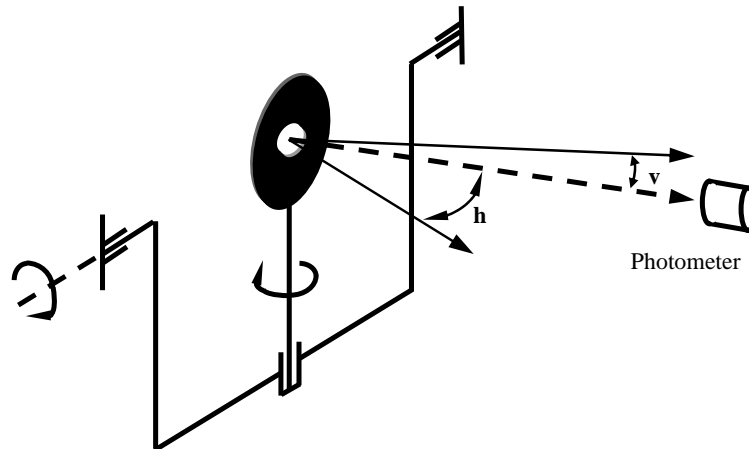
Add a new paragraph 2.34., to read:

"2.34. **Gonio(photo)meter system (If not otherwise specified in a particular Regulation)** means a system used for the photometric measurements specified by the angular coordinates in degrees on a sphere with a vertical polar axis according to CIE publication No. 70, Vienna 1987, i.e. corresponding to a gonio(photo)meter system with a horizontal ("elevation") axis fixed to the ground and a second, moveable ("rotation") axis perpendicular to the fixed horizontal axis (see Annex 14 to this Regulation). Note: The above mentioned CIE publication specifies a procedure to correct the angular coordinates in the case where an alternative gonio(photo)meter system is used."

Add a new Annex 14, to read:

#### "Annex 14

**Gonio(photo)meter system used for the photometric measurements as defined in paragraph 2.34. of this Regulation:**



### Regulation No. 123, Supplement 4 to the 01 series;

Annex 9, paragraphs 1.1. to 1.5., amend to read:

- "1. General provisions
- 1.1. The system or part(s) thereof shall be mounted on a gonio(**photo**)meter system with a fixed horizontal axis and moveable axis perpendicular to the fixed horizontal axis.

- 1.2. The luminous intensity values shall be determined by means of a photoreceptor contained within a square of 65 m side and set up to a distance of at least 25m forward of the centre of reference of each lighting unit perpendicular to the measurement axis from the origin of the gonio(**photo**)meter **system**.
- 1.3. During photometric measurements, stray reflections should be avoided by appropriate masking.
- 1.4. The luminous intensities are measured at a nominal distance of 25 m.
- 1.5. The angular coordinates are specified in degrees on a sphere ~~with a vertical polar axis according to CIE publication No. 70, Vienna 1987, i.e. corresponding to a gonio(**photo**)meter system as defined in Regulation No. 48. with a horizontal ("elevation") axis fixed to the ground and a second, moveable ("rotation") axis perpendicular to the fixed horizontal axis (see diagram 1).~~

Diagram 1....."

## II. Justification

1. It is proposed to introduce the definition of the gonio(photo)meter system into Regulation No.48 to ensure that photometric values measured are consistent with the specified angles and the corresponding photometric values. The type of gonio(photo)meter system chosen can influence the accuracy of the measurements and therefore defining a standard method is necessary.
2. The photometric measurement provisions in Regulation No. 123, Annex 9 are amended according to the new definition in Regulation No. 48.