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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

#### Sixty-fifth session

Geneva, 28–31 March 2011

Item 11 of the provisional agenda

#### Regulation No. 104 (Retro-reflective markings)

### Proposal for Corrigendum 1 to Revision 1

#### Submitted by the expert from the European Association of Automotive Suppliers\*

The text reproduced below was prepared by the expert from the European Association of Automotive Suppliers (CLEPA) to correct an error transferred to Regulation No. 104 during its consolidation. It is based on Informal document No. GRE-64-40-Rev.1, distributed during the sixty-fourth session of the Working Party on Lighting and Light-Signalling (GRE). 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

Annex 7, paragraph 1, correct to read:

"When illuminated with a CIE Standard illuminant A and measured as recommended by CIE publication No. 54, 1982, the coefficient of retro-reflection R' in candelas per m<sup>2</sup> per lux (cd/m<sup>2</sup>/lux) of the retro-reflective areas in new condition shall be at least as indicated in table 1 for yellow, **white and red materials**. ~~and white materials and at least as indicated in table 2 for red materials.~~"

Annex 7, table 1, correct to read:

"Table 1

**Minimum values for the Coefficient of Retro-reflection R' [cd.m<sup>-2</sup>.lx<sup>-1</sup>]**

Observation angle $\alpha$ [°]	Entrance Angle $\beta$ [°]					
	$\beta_1$	0	<b>0</b>	0	0	0
$\alpha=0.33(20')$	$\beta_2$	5	<b>20</b>	30	40	60
	Colour					
Yellow		300	--	130	75	10
White		450	--	200	95	16
Red		120	<b>60</b>	<b>30</b>	<b>10</b>	--

## II. Justification

The photometric specifications for retro-reflective markings of red colour have been introduced with Supplement 1 to Regulation No. 104. The retro-reflective requirements had been copied from existing requirements in Regulation No. 69 for red materials. Photometric specifications were given for the entrance angle 5°, 20°, 30° and 40°. This is not consistent with entrance angles for white and yellow materials in Regulation No. 104. During the consolidation of various supplements in Rev. 1 of Regulation No. 104, the photometric specifications have not been correctly transferred.