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Working Party on Lighting and Light-Signalling

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Item 7 (b) of the provisional agenda

Device UN Regulations:

UN Regulation No. 149 (Road Illumination Devices)

Proposal for a Supplement to the 01 series of amendments to UN Regulation No. 149

**Submitted by the experts from the International Automotive Lighting
and Light-Signalling Expert Group ***

The text reproduced below was prepared by the experts from the International Automotive Lighting and Light-Signalling Expert Group (GTB) with the aim to improve the accuracy of the instrumental aiming method. The proposed modifications to the current text of the UN Regulations are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Annex 6, paragraph 2.2., amend to read:

“2.2. Measurement of the quality of the "cut-off"

To determine the minimum sharpness, measurements shall be performed by vertically scanning through the horizontal part of the "cut-off" in angular steps of **0.05° or smaller** at either a measurement distance of:

- (a) 10 m with a detector having a diameter of approximately 10 mm; or
- (b) 25 m with a detector having a diameter of approximately 30 mm.

The measuring distance at which the test was carried out shall be recorded in item 9. of the communication form (see Annex 1 to this Regulation).

To determine the maximum sharpness and linearity, measurements shall be performed by vertically scanning through the horizontal part of the "cut-off" in angular steps of **0.05° or smaller**, exclusively at a measurement distance of 25 m and with a detector having a diameter of approximately 30 mm.

The "cut-off" quality shall be considered acceptable if the requirements of paragraphs 2.2.1. to 2.2.3. comply with at least one set of measurements.”

II. Justification

1. The current text requires measurement with a step size of 0.05° when assessing the quality of the cut-off, or when performing instrumental aiming.
2. By explicitly allowing higher angular resolution, i.e. steps of 0.05° or smaller, it is possible to improve the measurement accuracy of the cut-off position. Therefore, a smaller step size is beneficial to get comparable measurement results from different laboratories.
