



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.29/GRE/2004/6
16 January 2004

ENGLISH
Original: ENGLISH
ENGLISH AND FRENCH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Lighting and Light-Signalling (GRE)
(Fifty-second session, 30 March – 2 April 2004,
agenda item 14.2.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 112

(Headlamps emitting an asymmetrical passing beam)

Transmitted by the expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the expert from GTB and identifies the amendments required to Regulation No. 112 to incorporate the revised proposal for a Worldwide Harmonized Passing Beam. As there is a close relationship with the proposed Worldwide Harmonized Driving Beam, the proposed amendments include the text already under study in GRE as contained in TRANS/WP.29/GRE/2003/35. Where applicable, the text contained in the amendments 1 and 2 to Regulation No. 112 are also included. The added text is marked in bold characters and the deleted text is strikethrough.

Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

A. PROPOSAL

Paragraph 4.2.2.3., amend to read:

"4.2.2.3. on headlamps meeting the requirements of this Regulation in respect of the passing beam only, the letters "C" for Class A headlamp or "HC" for Class B headlamp **or "HWC" for Class C headlamp;**"

Paragraph 4.2.2.5., amend to read:

"4.2.2.5. on headlamps meeting the requirements of this Regulation in respect of both the passing beam and the driving beam, the letters "CR" for Class A headlamp or "HCR" for Class B headlamp **or "HWCR" for Class C headlamp;**

Paragraph 5.9.2., amend to read:

"5.9.2. in the case of failure the illumination above the line H-H shall not exceed the values of a passing beam according to paragraph 6.2.5.; in addition, on headlamps designed to provide a passing and/or a driving beam to become a bend lighting, a minimum illumination of at least 5 lux shall be fulfilled in test point 25 V (VV line, D 75 cm) **for class A and class B headlamps and 2.0 deg. D, V for class C headlamps;**"

Paragraph 6.2.1., amend to read:

"6.2.1. The passing beam must produce a sufficiently sharp "cut-off" **left of the vertical line running through 1.0 deg left for right hand traffic (right of the vertical line running through 1.0 deg right for left hand traffic)** to permit a satisfactory adjustment with its aid. The "cut-off" must be a horizontal straight line on the side opposite to the direction of the traffic for which the headlamp is intended. ~~on the other side, it must not extend beyond either the broken line HV H₁ H₄ formed by a straight line HV H₁ making a 45° angle with the horizontal and the straight line H₁ H₄, 25 cm above the straight line hh, or the straight line HV H₂, inclined at an angle of 15° above the horizontal (see annex 3). A cut off extending beyond both line HV H₂ and line H₂ H₄ and resulting from a combination of the two above possibilities shall in no circumstances be permitted.~~"

Insert new paragraphs 6.2.1.1. and 6.2.1.2., to read:

"6.2.1.1. **For Class A or Class B headlamp: On the other side, it must not extend beyond either the broken line HV H₁ H₄ formed by a straight line HV H₁ making a 45 degree angle with the horizontal and the straight line H₁ H₄, 25 cm above the straight line hh, or the straight line HV H₂, inclined at an angle of 15 degrees above the horizontal (see annex 3). A cut-off extending beyond both line HV H₂ and line H₂ H₄ and resulting from a combination of the two above possibilities shall in no circumstances be permitted. These requirements apply to right-hand traffic; for left hand traffic the points to the left and to the right are transposed.**

6.2.1.2. **For Class C headlamp: On the other side, it must not extend above or to the left of the line connecting the points W₀, W₁, W₂, W₃ positioned as follows (see annex 3): W₀: 1.0 degree Left - H**

W₁: 1.5 degree R-1.5 degree U
W₂: 6.0 degree R-1.5 degree U
W₃: 8.0 degree R-2.0 degree U

These requirements apply to right-hand traffic; for left hand traffic the points to the left and to the right are transposed."

Paragraph 6.2.2.3., amend to read (including the amendment of footnote 9/):

"6.2.2.3. the "elbow" of the "cut-off" is **positioned** on line vv. 9/

9/ If the beam does not have a cut-off with a clear "elbow", the lateral adjustment shall be effected in the manner which best satisfies the requirements for illumination at points: ~~75 R and 50 R for right hand traffic and for points 75 L and 50 L for left hand traffic.~~

- a) **For Class A or Class B headlamp: 75 R and 50 R for right-hand traffic and for points 75 L and 50 L for left-hand traffic;**
- b) **For Class C headlamp: test point number 1 and test point number 5. "**

Paragraph 6.2.4., amend to read:

"6.2.4. Where a headlamp so aimed does not meet the requirements set out in paragraphs 6.2.5. to 6.2.7. and 6.3., its alignment may be changed, provided that the axis of the beam is not displaced laterally by more than 1 degree (= 44 cm) **for Class A or Class B headlamp and 0.5 degrees for Class C headlamp** to the right or left 11/. To facilitate alignment by means of the "cut-off", the headlamp may be partially occulted in order to sharpen the "cut-off". "

After paragraph 6.2.5., insert a new paragraph 6.2.5.1. before the table, to read:

"6.2.5.1. **For Class A or Class B headlamp:**

(followed by the table of paragraph 6.2.5.)"

Insert new paragraphs 6.2.5.2. and 6.2.5.3., to read:

"6.2.5.2. For Class C headlamp - Right Hand Traffic:

TEST POINT	Position (Degrees)		Candelas Rated luminous flux		
	Vertical	Horizontal	min	max	
1	0.60D	1.3R	10,000		
2	0.86D	0	4,500		
3	0.86D	3.5L	1,800	9,350	
4	0.50U	1.50L		320	
5	0.50D	4.0R	5,000		
6	2.00D	15L&15R	1,000		
7	4.00D	20L&20R	300		
8	0.50U	0		625	
9	0.50U	2R	600		
10	1.00U	2R		1,800	
Line11	4.00D	4Lto4R		8,750	See Note (ii)
Line12	2.00D	9Lto9R	1,250		
Line13	7.00U	10Lto10R		190	See Note (iii)
Line14	10.00U	10Lto10R		95	
Line15	10U to 60U	0		95	
16	4.00U	8.0L	64		See Note (iv)
17	4.00U	0	64		
18	4.00U	8.0R	64		
19	2.00U	4.0L	135		
20	2.00U	0	135		
21	2.00U	4.0R	135		
22	0	8.0L	64		
23	0	4.0L	135		
Line 24	1.5U/6R-1.5U/1.5R			625	
Line 25	0/1L-0/4L			440	
If streaks or spots are observed in zones 1 or 2 or 3 then that area shall be scanned in accordance with the table below.					
Zone1 (Right)	0.5U/V-4U/V-4U/8R-2U/8R-1.5U/6R-1.5U/1.5R-0.5U/V			625.00	
Zone1(Left)	1U/8L-4U/8L-4U/V-0.5U/V-0/1L-0/4L-1U/8L			440.00	
Zone2	>4Uto<10U	10Lto10R		190.00	See Note (v)
Zone3	10Uto60U	10Lto10R		95.00	See Note (v)

- Note (i). “D” means under the HH line.
“U” means above the HH line.
“R” means right of the VV line.
“L” means left of the VV line.
- Note (ii). Not greater than 35% of Max. Intensity and in any case not greater than 13,700 cd.
- Note (iii). Narrow spots or stripes with not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by an angle of 10°.
- Note (iv). During measurement of these points, the front position lamp approved to Regulation No. 7-if combined, grouped, or reciprocally incorporated-with the dipped beam function-shall be switched on
- Note (v). Narrow spots or stripes of not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by a minimum angle of 10°.

6.2.5.3. For Class C headlamp - Left Hand Traffic:

TEST @ POINT	Position (Degrees)		Candelas @ Rated luminous flux		
	Vertical	Horizontal	min	max	
1	0.60D	1.3L	10,000		
2	0.86D	0	4,500		
3	0.86D	3.5R	1,800	9,350	
4	0.50U	1.50R		320	
5	0.50D	4.0L	5,000		
6	2.00D	15L&15R	1,000		
7	4.00D	20L&20R	300		
8	0.50U	0		625	
9	0.50U	2L	600		
10	1.00U	2L		1,800	
Line11	4.00D	4Lto4R		8,750	See Note (ii)
Line12	2.00D	9Lto9R	1,250		
Line13	7.00U	10Lto10R		190	See Note (iii)
Line14	10.00U	10Lto10R		95	
Line15	10U to 60U	0		95	
16	4.00U	8.0R	64		See Note (iv)
17	4.00U	0	64		
18	4.00U	8.0L	64		
19	2.00U	4.0R	135		
20	2.00U	0	135		
21	2.00U	4.0L	135		
22	0	8.0R	64		
23	0	4.0R	135		
Line 24	1.5U/6R-1.5U/1.5R			625	
Line 25	0/1L-0/4L			440	
If streaks or spots are observed in zones 1 or 2 or 3 then that area shall be scanned in accordance with the table below.					
Zone1 (Left)	0.5U/V-4U/V-4U/8L-2U/8L-1.5U/6L-1.5U/1.5L-0.5U/V			625.00	
Zone1(Right)	1U/8R-4U/8R-4U/V-0.5U/V-0/1R-0/4R-1U/8R			440.00	
Zone2	>4Uto<10U	10Lto10R		190.00	See Note (v)
Zone3	10Uto60U	10Lto10R		95.00	See Note (v)

Note (i). “D” means under the HH line.
“U” means above the HH line.
“R” means right of the VV line
“L” means left of the VV line.

Note (ii). Not greater than 35 per cent of Maximum Intensity and in any case not greater than 13700 cd

Note (iii). Narrow spots or stripes with not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by an angle of 10°.

Note (iv). During measurement of these points, the front position lamp approved to Regulation No. 7-if combined, grouped, or reciprocally incorporated-with the dipped beam function-shall be switched on.

Note (v). Narrow spots or stripes of not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by a minimum angle of 10°. Paragraphs 6.2.6. and 2.6.7., amend to read:

"6.2.6. There shall be no lateral variations detrimental to good visibility in any of the zones I, II, III and IV **for Class A or Class B headlamp and in any of the zones 1, 2, and 3 for Class C headlamp.**

6.2.7. **For Class A or Class B headlamps** the illumination values in zones "A" and "B" as shown in figure C in annex 3 shall be checked by the measurement of the photometric values of points 1 to 8 on this figure; these values shall lie within the following limits:

$$\begin{aligned}1 + 2 + 3 &> 0.3 \text{ lux, and} \\4 + 5 + 6 &> 0.6 \text{ lux, and} \\0.7 \text{ lux} &> 7 > 0.1 \text{ lux and} \\0.7 \text{ lux} &> 8 > 0.2 \text{ lux}''\end{aligned}$$

Paragraph 6.3.2.1., amend to read:

"6.3.2.1. The point of intersection (HV) of lines hh and vv shall be situated within the isolux 80 per cent of maximum illumination. This maximum value (E_M) shall not be less than 32 lux for Class A headlamps, 48 lux for Class B headlamps **and 50 lux for Class C headlamps.** The maximum value shall in no circumstances exceed 240 lux; in addition, in the case of a combined passing and driving headlamp, this maximum value shall not be more than 16 times the illumination measured for the passing beam at point 75 R (or 75 L) **for Class A or Class B headlamps and at the test point No. 1 for Class C headlamps.**"

Paragraph 6.4.3., amend to read:

"6.4.3. additional tests are made after the reflector has been moved vertically $\pm 2^\circ$ or at least into the maximum position, if less than 2° , from its initial position by means of the headlamps adjusting device. Having re-aimed the headlamp as a whole (by means of the goniometer for example) in the corresponding opposite direction the light output in the following directions shall be controlled and lie within the required limits:
passing beam: points HV and 75 R (75 L respectively) **for Class A or Class B headlamps and at the test point No.1 for Class C headlamps;** driving beam: I_M and point HV (percentage of I_M)."

Annex 1,

item 9, amend to read:

"9. Brief description:

Category as described by the relevant marking: 3/

Number and category(ies) of filament lamp(s):

Position lamp contributing to Class C Passing Beam Y/N: 2/"

Footnote 3/, amend to read:

"3/ Indicate the appropriate marking selected from the list below:

C	C	C	R	CR	CR	CR
	→	↔			→	↔
C PL	C PL	C PL	R PL	CR PL	CR PL	CR PL
	→	↔			→	↔
C/R	C/R	C/R	C/	C/	C/	
	→	↔		→	↔	
C/R PL	C/R PL	C/R PL	C/PL	C/PL	C/PL	
	→	↔		→	↔	
HC	HC	HC	HR	HCR	HCR	HCR
	→	↔			→	↔
HC PL	HC PL	HC PL	HR PL	HCR PL	HCR PL	HCR PL
	→	↔			→	↔
HC/R	HC/R	HC/R	HC/	HC/	HC/	
	→	↔		→	↔	
HC/R PL	HC/R PL	HC/R PL	HC/PL	HC/PL	HC/PL	
	→	↔		→	↔	
HWCR	HWCR	HWCR	HWC PL	HWC PL	HWC PL	HWR PL
	→	↔		→	↔	
HWCR PL	HWCR PL	HWCR PL	HWC/R	HWC/R	HWC/R	HWC/
	→			→	↔	
HWC/	HWC/	HWC/R PL	HWC/R PL	HWC/R PL	HWC/PL	HWC/PL
→	↔		→	↔	↔	→
HWC/PL	HWR	HWR PL				

[Note: the additional markings are contained inside the box]

Annex 3,

Figure A, amend the title to read:

**"A Class A & Class B headlamps for right - hand traffic
(dimension in mm with screen at 25 m distance)"**

Figure B, amend the title to read:

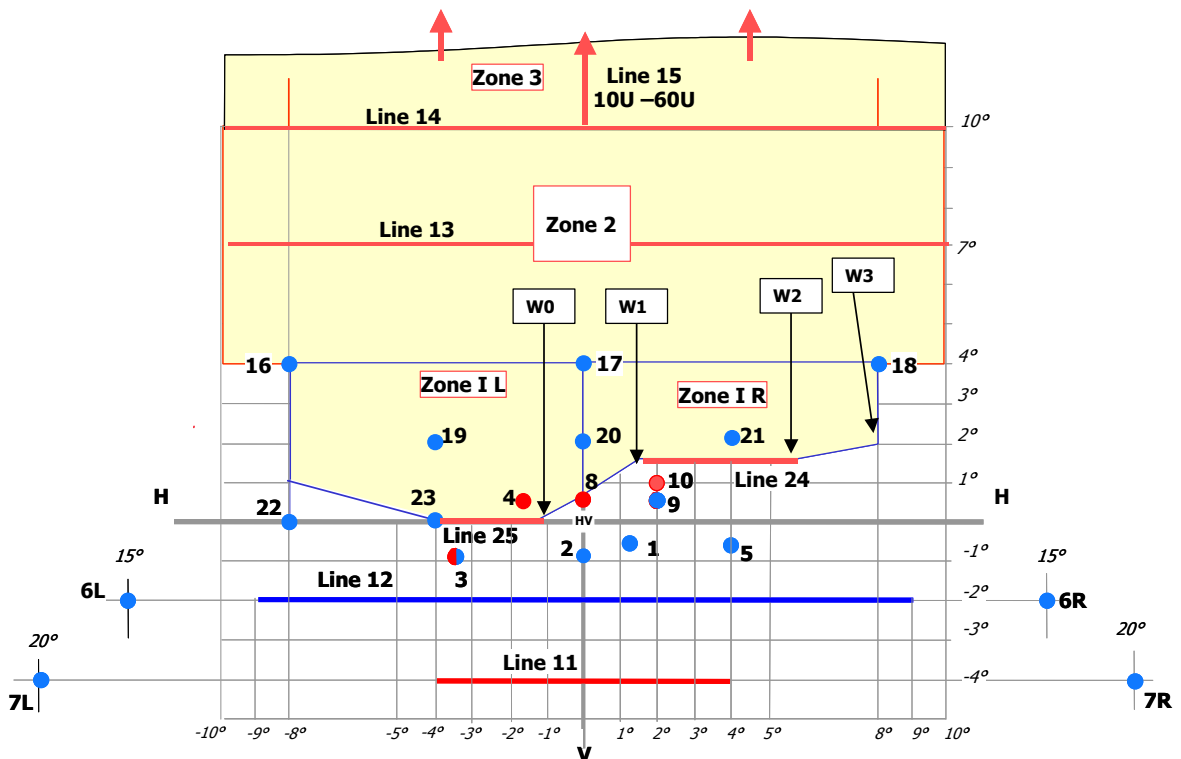
**"B Class A & Class B headlamps for left - hand traffic
(dimension in mm with screen at 25 m distance)"**

Figure C, insert the title to read:

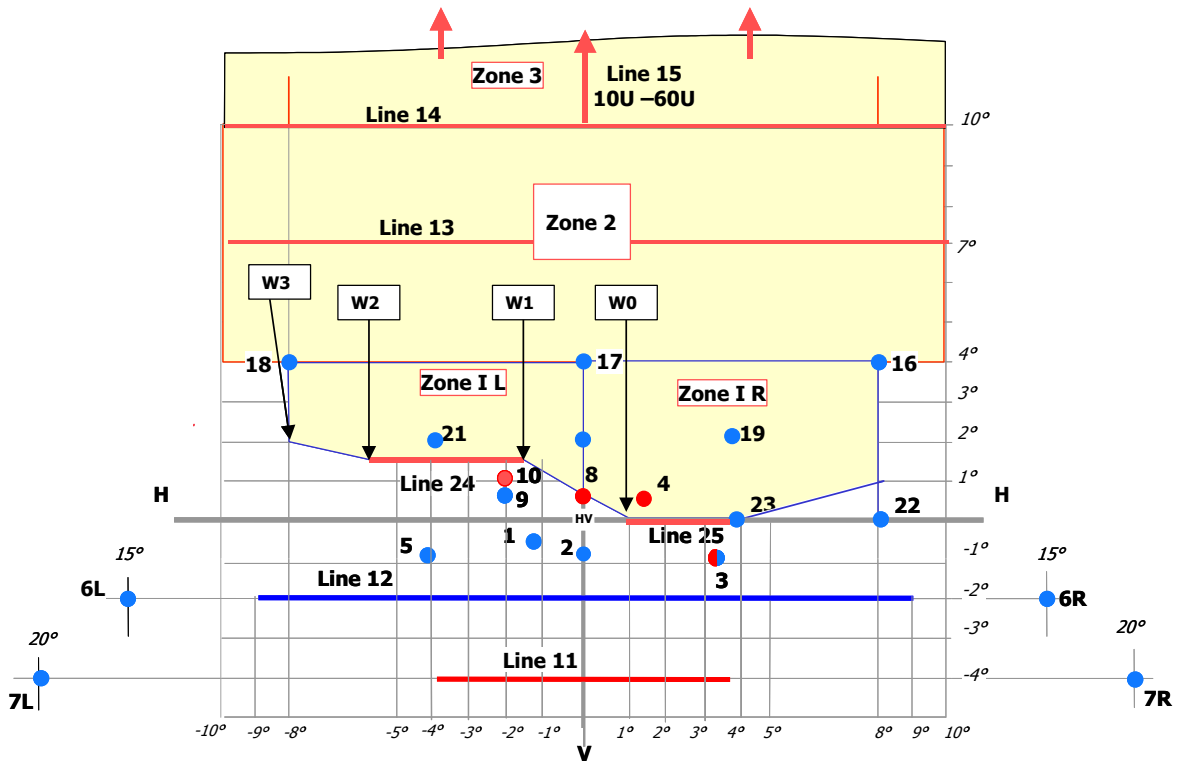
"C Class A & Class B headlamps"

Insert new figures D and E, to read:

"D Class C headlamp for right-hand traffic



E Class C headlamp for left-hand traffic



Annex 4,

The tests on completed headlamps paragraph, amend to read:

"TESTS ON COMPLETE HEADLAMPS

Once the photometric values have been measured according to the prescriptions of this Regulation, in the point for E_{max} for driving beam and **for passing beam:**

in points HV, 50 R, B 50 L **for Class A&B headlamps for passing beam** (or HV, 50 L, B 50 R for headlamps designed for left-hand traffic) **and in points 8, 2 and 4 for Class C Headlamps,** a complete headlamp sample shall be tested for stability of photometric performance in operation. "Complete headlamp" shall be understood to mean the complete lamp itself including those surrounding body parts and lamps which could influence its thermal dissipation.

Paragraph 1.1.2.2., amend to read:

"1.1.2.2. Photometric test

To comply with the requirements of this Regulation, the photometric values shall be verified in the following points:

Passing beam:

50 R - B 50 L - HV for **class A&B** headlamps designed for right-hand traffic,
50 L - B 50 R - HV for **class A&B** headlamps designed for left-hand traffic.
points 8, 2 and 4 for Class C Headlamps,

Driving beam: Point of E_{\max} "

Paragraph 1.2.1.2., amend to read:

"1.2.1.2. Application of the test mixture to the headlamp

The test mixture shall be uniformly applied to the entire light-emitting surface of the headlamp and then left to dry. This procedure shall be repeated until the illumination value has dropped to 15-20 per cent of the values measured for each following point under the conditions described in this annex:

Point of E_{\max} in passing beam/driving beam and in driving beam only,

50 R and 50 V 5/ for a **class A&B** passing lamp only, designed for right-hand traffic,

50 L and 50 V 5/ for a **class A&B** passing lamp only, designed for left-hand traffic.

Point 2 for class C passing beam only.

5/ Point 50 V is situated 375 mm below HV on the vertical line v-v on the screen at 25 m distance."

Paragraph 2.1., amend to read:

"2.1. Test

The test shall be carried out in a dry and still atmosphere at an ambient temperature of $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

Using a mass production filament lamp, which has been aged for at least one hour the headlamp shall be operated on passing beam without being dismantled from or readjusted in relation to its test fixture. (For the purpose of this test, the voltage shall be adjusted as specified in paragraph 1.1.1.2.). The position of the cut-off line in its horizontal part (**for class A&B headlamps** between vv and the vertical line passing through point B 50 L for right-hand traffic or B 50 R for left-hand traffic **and for class C headlamps between HV and the vertical line passing through point 4**) shall be verified 3 minutes (r_3) and 60 minutes (r_{60}) respectively after operation."

Annex 5,

Paragraph 1.2.1., amend to read:

"1.2.1. no measured value deviates unfavourably by more than 20 per cent from the value prescribed in this Regulation. **In the case of class A&B headlamps,**for values B 50 L (or R) and zone III, the maximum unfavourable deviation may be respectively:

B 50 L (or R):	0.2 lx equivalent 20 per cent
	0.3 lx equivalent 30 per cent
Zone III	0.3 lx equivalent 20 per cent
	0.45 lx equivalent 30 per cent

In the case of Class C headlamps, for values at test points 4 and zones 1L and 1R, the maximum unfavourable deviation may be respectively:

Test Point 4	125 cd equivalent 20 per cent
	185 cd equivalent 30 per cent
Zones 1L and 1R	185 cd equivalent 20 per cent
	280 cd equivalent 30 per cent"

Paragraph 1.2.2.1., amend to read:

"1.2.2.1. for the **class A&B** passing beam, the values prescribed in this Regulation are met at HV (with a tolerance of + 0.2 lx) and related to that aiming at least one point of each area delimited on the measuring screen (at 25 m) by a circle 15 cm in radius around points B 50 L (or R) 1/(with a tolerance of + 0.1 lx), 75 R (or L), 50 V, 25 R, 25 L, and in the entire area of zone IV which is not more than 22.5 cm above line 25 R and 25 L; **and for class C passing beam, the values prescribed in this Regulation are met at point 8 (with a tolerance of + 125 cd.) and related to that aiming at least one point of each area delimited by a circle 0.35 deg. in radius around point 4(with a tolerance of + 65 cd),points 1, 4, 6 and 7 and along line 11."**

Paragraph 2.4., footnote 4/, amend to read:

"4/ HL and HR: points "hh" located at 1.125 m to the left and to the right of point HV respectively in the case of a **class A or B headlamp and at 3 degrees to the right and left of HV in the case of a class C headlamp.** beam, and to points B 50 L (or R), HV, 50 V, 75 R (or L) and 25 L (or R) in the case of ~~the~~ **a class A or B** passing beam (see figure in annex 3) **and to points 4, 8, 2, 1, 6L and 6R."**

Annex 6,

Paragraph 2.1.2.1., amend to read:

"2.1.2.1. Method

Photometric measurements shall be carried out on the samples before and after the test.

These measurements shall be made using a standard (étalon) lamp, at the following points:

B 50 L and 50 R for the passing beam of a **class A or B** passing lamp or a passing/driving lamp (B 50 R and 50 L in the case of headlamps intended for left-hand traffic) **and for a class C passing beam points 4 and 1;**

E_{\max} route for the driving beam of a driving lamp or a passing/driving lamp."

Annex 7,

Paragraph 1.2.1., amend to read:

"1.2.1. no measured value deviates unfavourably by more than 20 per cent from the value prescribed in this Regulation. **In the case of class A and B headlamps, for** values B 50 L (or R) 1/ and zone III, the maximum unfavourable deviation may be respectively:

B 50 L (or R):	0.2 lx equivalent 20 per cent
	0.3 lx equivalent 30 per cent
Zone III	0.3 lx equivalent 20 per cent
	0.45 lx equivalent 30 per cent

In the case of Class C headlamps, for values at test points 4 and zones 1L and 1R, the maximum unfavourable deviation may be respectively:

Test Point 4	125 cd equivalent 20 per cent
	185 cd equivalent 30 per cent
Zones 1L and 1R	185 cd equivalent 20 per cent
	280 cd equivalent 30 per cent

1/ Letters in brackets refer to headlamps intended for left-hand traffic."

Paragraph 1.2.2.1., amend to read:

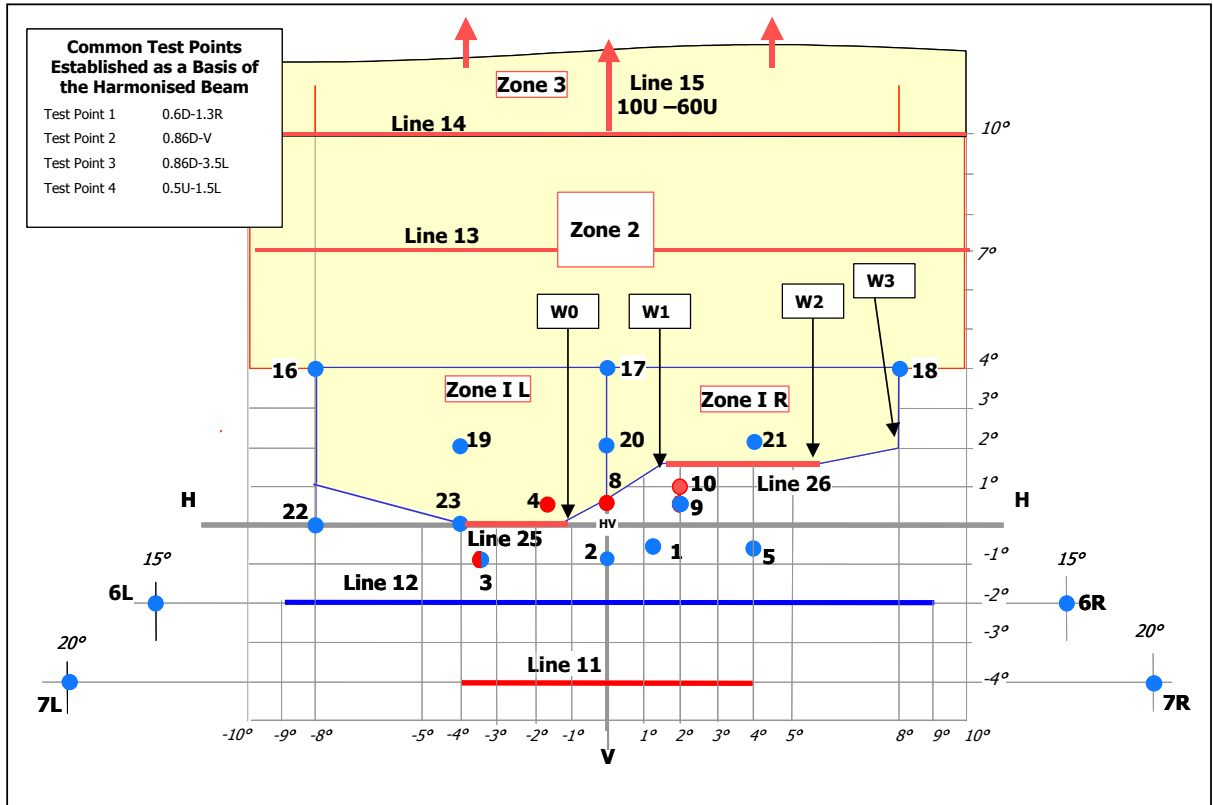
"1.2.2.1. **for the class A and B passing beam, the values prescribed in this Regulation are met at HV (with a tolerance of + 0.2 lx) and related to that aiming at least one point of each area delimited on the measuring screen (at 25 m) by a circle 15 cm in radius around points B 50 L (or R) 1/ (with a tolerance of + 0.1 lx), 75 R (or L), 50 V, 25 R, 25 L, and in the entire area of zone IV which is not more than 22.5 cm above line 25 R and 25 L; and for class C passing beam, the values prescribed in this Regulation are met at point 8 (with a tolerance of + 125 cd.) and related to that aiming at least one point of each area delimited by a circle 0.35 deg. in radius around point 4 (with a tolerance of + 65 cd), points 1,4,6&7 and along line 11."**

Paragraph 1.2.3., the reference to footnote 1/ and footnote 1/ renumber as footnote 2/.

B. JUSTIFICATION

Major Changes from first proposal to GRE (TRANS/WP.29/GRE/1999/18)

1. In the spirit of harmonization, it has been decided to specify luminous intensity values (cd) and to adopt the angular coordinate system to define test point positions.
2. The positions of the four common test points established as the basis for harmonization of the passing beam have been maintained as contained in TRANS/WP.29/GRE/R.210/Rev1/Add.1 of 25 July 1995.
3. The value at test point 1 has been increased from 7500 cd (12.0Lux) to 10,000 cd (16 Lux) to provide increased illumination along the nearside kerb and to harmonise with USA practice
4. The “Glare Zone” has been split into Zone 1L and Zone 1R. The existing ECE glare values of 440 cd (0.7 Lux) have been maintained in the Zone 1L and the maximum value in Zone 1R has been increased to 625 cd (1.0 lux) to allow improved beam performance along the nearside kerb whilst maintaining acceptable glare control.
5. Control around the HV point has been maintained by the introduction of point 8 and lines 24 and 25.
6. Points 9 and 10 have been added to provide sufficient illumination of road signs and to control glare in rear view mirrors.
7. Zones 1, 2 and 3 are to be scanned only if streaks or spots are clearly visible.
8. The extent of zone 3 has been limited to 60 deg up to allow more efficient headlamp designs to be produced with improvements in the road surface illumination because of the need for reduced shielding of the filament.



TEST POINT @	Position (Degrees)		Candelas @ Rated luminous flux		
	Vertical	Horizontal	min	max	
1	0.60D	1.3R	10,000		
2	0.86D	0	4,500		
3	0.86D	3.5L	1,800	9,350	
4	0.50U	1.50L		320	
5	0.50D	4.0R	5,000		
6	2.00D	15L&15R	1,000		
7	4.00D	20L&20R	300		
8	0.50U	0		625	
9	0.50U	2R	600		
10	1.00U	2R		1,800	
Line11	4.00D	4Lto4R		8,750	See Note (ii)
Line12	2.00D	9Lto9R	1,250		
Line13	7.00U	10Lto10R		190	See Note (iii)
Line14	10.00U	10Lto10R		95	
Line15	10U to 60U	0		95	
16	4.00U	8.0L	64		See Note (iv)
17	4.00U	0	64		
18	4.00U	8.0R	64		
19	2.00U	4.0L	135		
20	2.00U	0	135		
21	2.00U	4.0R	135		
22	0	8.0L	64		
23	0	4.0L	135		
Line 24	1.5U/6R-1.5U/1.5R			625	
Line 25	0/1L-0/4L			440	
If streaks or spots are observed in zones 1 or 2 or 3 then that area shall be scanned in accordance with the table below.					
Zone1 (Right)	0.5U/V-4U/V-4U/8R-2U/8R-1.5U/6R-1.5U/1.5R-0.5U/V			625.00	
Zone1(Left)	1U/8L-4U/8L-4U/V-0.5U/V-0/1L-0/4L-1U/8L			440.00	
Zone2	>4Uto<10U	10Lto10R		190.00	See Note (v)
Zone3	10Uto60U	10Lto10R		95.00	See Note (v)

Note (i). “D” means under the HH line.“U” means above the HH line. “R” means right of the VV line.“L” means left of the VV line.

Note (ii). Not greater than 35% of Max. Intensity and in any case not greater than 13700 cd

Note (iii). Narrow spots or stripes with not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1° . If multiple spots or stripes are present they shall be separated by an angle of 10 Degrees

Note (iv). During measurement of these points, the front position lamp approved to ECE R7-if combined, grouped, or reciprocally incorporated-with the dipped beam function-shall be switched on

Note (v). Narrow spots or stripes of not more than 750 cd are allowed, if not extending beyond either a conical angle of 2° aperture or a width of 1° . If multiple spots or stripes are present they shall be separated by a minimum angle of 10° .
