Landolt C

The **Landolt C**, also known as a **Landolt ring**, **Landolt broken ring**, or **Japanese vision test**, is an <u>optotype</u>: a standardized symbol used for testing vision. It was developed by the Swiss-born ophthalmologist Edmund Landolt.

The Landolt C consists of a ring that has a gap, thus looking similar to the letter C. The gap can be at various positions (usually left, right, bottom, top and the 45° positions in between) and the task of the tested person is to decide on which side the gap is. The size of the C and its gap are reduced until the subject makes a specified rate of errors. The minimum perceivable angle of the gap is taken as measure of the visual acuity. It is generally practised in the laboratory. [1]

The stroke width is $\frac{1}{5}$ of the diameter, and the gap width is the same. This is identical to the letter C from a <u>Snellen chart</u>. The Landolt C is the standard optotype for acuity measurement in most European countries. It was standardized, together with measurement procedures, by the German DIN, as DIN 58220 (now EN ISO 8596).

Although accepted as a 'gold standard', this optotype has its own inherent problems, possibly due to higher brain function where the gap will appear closed near the limit of resolution, especially when the gap is at the 6 o'clock position. This is not due to the structure of the cornea or lens, nor is it due to astigmatic errors. $\frac{[3]}{4}$



Landolt C optotypes in various sizes and orientations



Golovin-Sivtsev Table

See also

- Edmund Landolt
- Visual acuity
- E chart
- Golovin-Sivtsev table

References

- 1. "eye, human."Encyclopædia Britannica. 2008. <u>Encyclopædia Britannica 2006 Ultimate</u> Reference Suite DVD
- Danilova MV, Bondarko VM (2007). "Foveal contour interactions and crowding effects at the resolution limit of the visual system" (http://www.journalofvision.org/7/2/25/article.aspx). J Vis. 7 (2): 25.1–18. doi:10.1167/7.2.25 (https://doi.org/10.1167%2F7.2.25). PMC 2652120 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2652120). PMID 18217840 (https://pubmed.ncbi.nlm.nih.gov/18217840).
- 3. The visual resolution of Landolt-C optotypes in human subjects depends on their orientation: the 'gap-down' effect Michael Schraufa, Claudia Sternb Neuroscience Letters 2001
- 4. The Effects of Optical Defocus on the Legibility of the Tumbling-E and Landolt-C REICH, LEWIS N. OD, PhD, FAAO; EKABUTR, MICHELE Optometry & Vision Science:June 2002

Retrieved from "https://en.wikipedia.org/w/index.php?title=Landolt_C&oldid=963848884"

This page was last edited on 22 June 2020, at 04:32 (UTC).

Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.