

THE RELIABILITY OF THE ILLUMINATED EYE CHART (MODEL NO. 16500)

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ABSTRACT

Aims: The purpose of this study is to compare the measurement of visual acuity between the Illuminated Eye Chart and the gold standard logMAR chart in different groups of reduced acuity.

Methodology: Forty-five eyes for each group; mildly reduced VA (>6/6 to 6/9), moderately reduced VA (>6/9 to 6/12) and severely reduced VA (\geq 6/18) were selected in this study and visual acuity of all participants were measured using the Illuminated Eye Chart and logMAR chart in a same visit.

Results: Bland-Altman analysis reported low agreement of visual acuity measurement between Illuminated Eye chart and logMAR chart in all groups. Mean difference revealed -0.019 logMAR units (95% CI: -0.091 to 0.053) between these two charts. Intraclass correlation (ICC) for the Illuminated Eye chart is 0.986.

Conclusion: Our results suggest that the Illuminated Eye chart cannot be used reliably as acuity assessment, and interchangeably with the gold standard logMAR chart.

Keywords: reliability, visual acuity, illuminated Eye chart, logMAR chart