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Capability of testing the ageing behaviour of incandescent lamps

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Abstract content
 (Max 300 words)

The ageing behaviour, with respect to Correlated Colour Temperature (CCT), illuminance and voltage changes across a tungsten halogen lamp were measured and analysed. The lamp was current controlled at ± 6.3 A. Data was collected for 0-25 hours and 240-330 hours of operation. The lamp was simply run continuously, hence the seasoning period for the lamp is included in the data.

During the 0-25 hours of operation, the voltage increased by 0.2%, the current decreased by 0.3%, the illuminance decreased by 6.6% and the CCT increased by 14 K. For the operating time of 240-330 hours, the voltage increased by 0.9%, the current stabilised to 0.2% and the illuminance increased to 3.7%. The CCT was measured up to 130 hours, and had decreased by 43 K from the start of the test.

From these results, it was concluded that in terms of CCT this particular lamp is not stable and should be operated for a period of ± 60 hours for a maximum change in CCT of 18 K. The illuminance measurements however, show that the lamp stabilises at longer operating times.

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