

Lamp measurement report - 7 Oct 2012
Led armatuur EcoUnlimitLed_EUL
by
Hato Lighting Solutions



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Summary measurement data

parameter	initially	after endurance (10.000 hours)	remarks
Color Temperature	3914 K	3953 K	Neutral white
Luminous Intensity I _v	113 Cd	112 Cd	
Beam Angle	360 deg	360 deg	
Power P	14.2 W	13.6 W	
Power Factor	0.93	0.93	Test has been done with a PS that has been delivered with the lamp.
Luminous Flux	683 lm	668 lm	
Luminous Efficacy	48 lm/W	49 lm/W	
CRI _{Ra}	80	80	
Coordinates Chromaticity Diagram	x=0.3870 and y=0.3899	x=0.3849 and y=0.3879	
Messprotocol (PDF)	<img class="alignnone size-full wp-image-854" title="olino-pdf"		

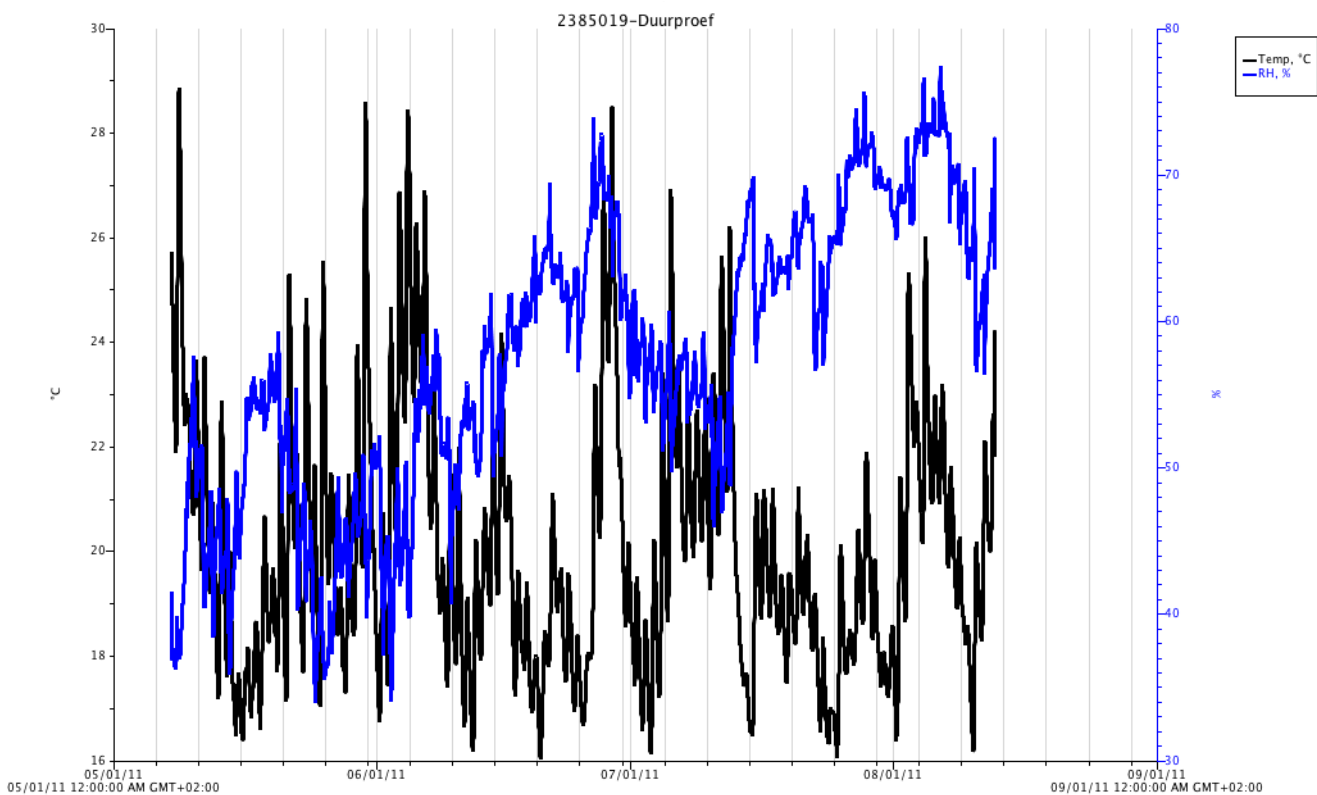


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Test duration and test environment

The lamp went into endurance test on 26 April 2011 and the test continues. The summary table gives the results after 10.000 hours. The graphs below give the results up to 11.500 hours (Sept 2012).

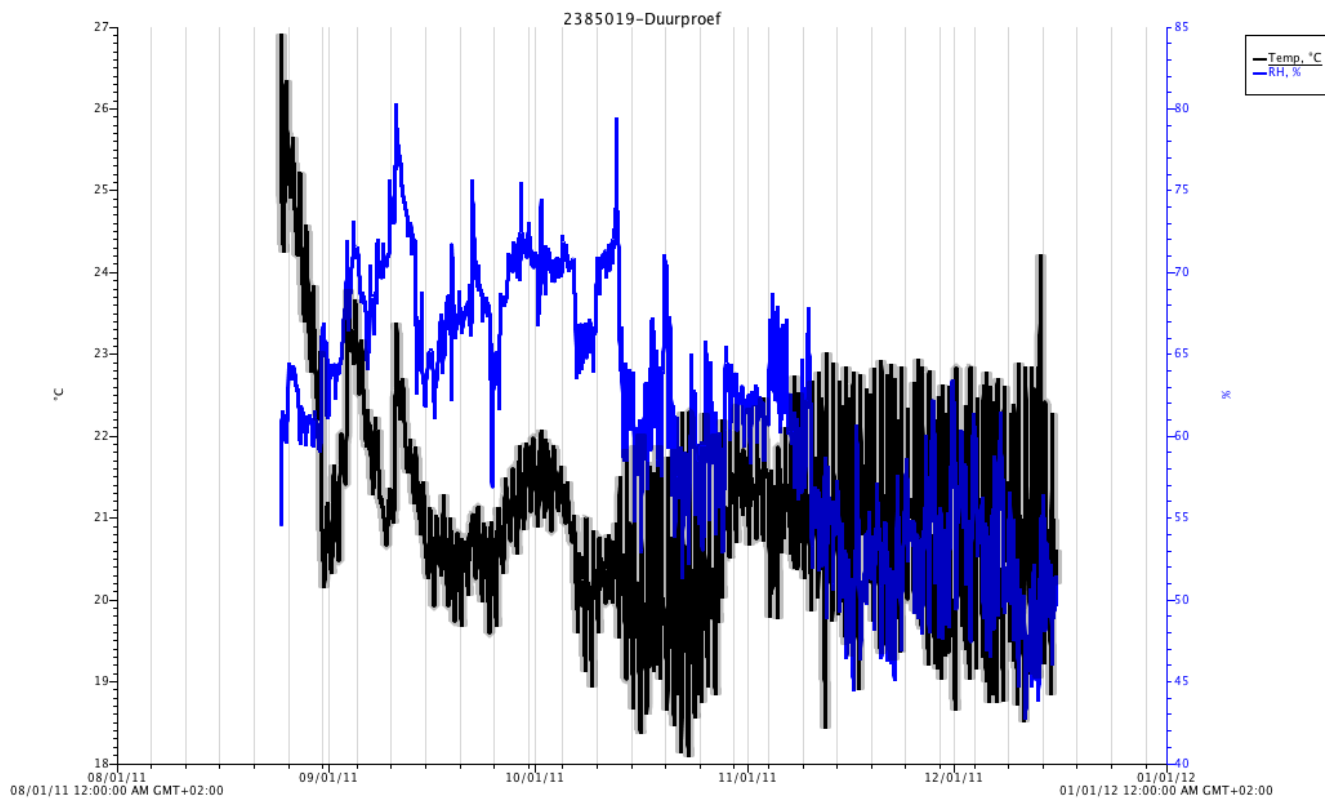
During this period of time the lamp has seen the following ambient temperature and ambient relative humidity.



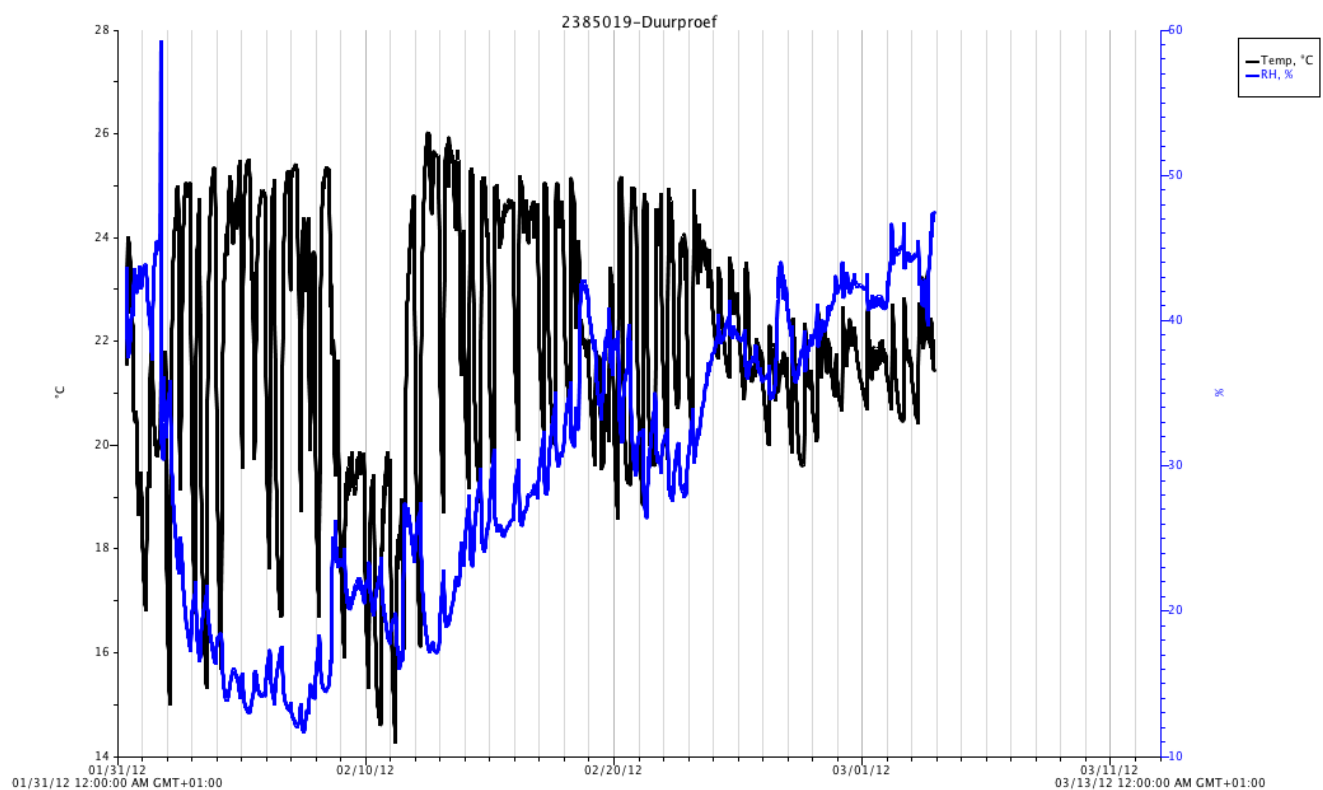
May 2011-August 2011.



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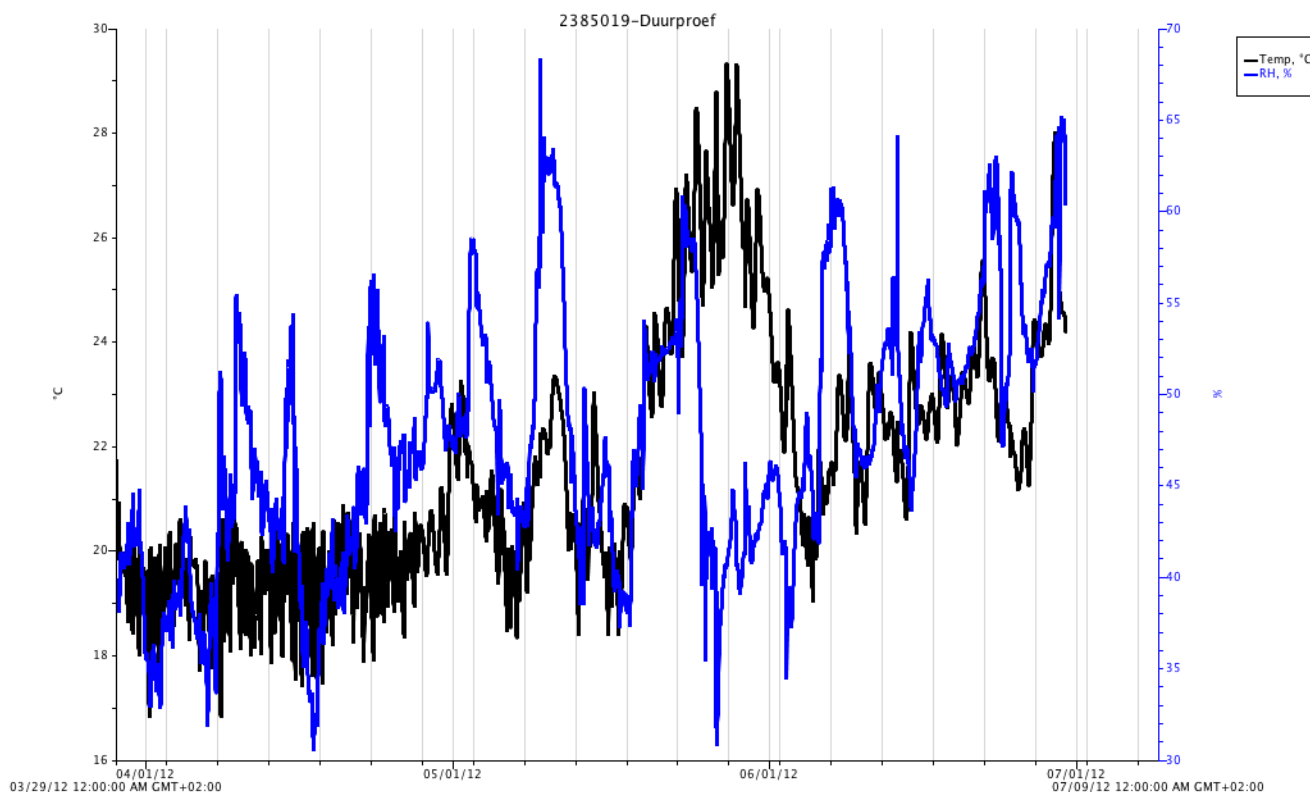
Sept 2011 - Jan 2012.



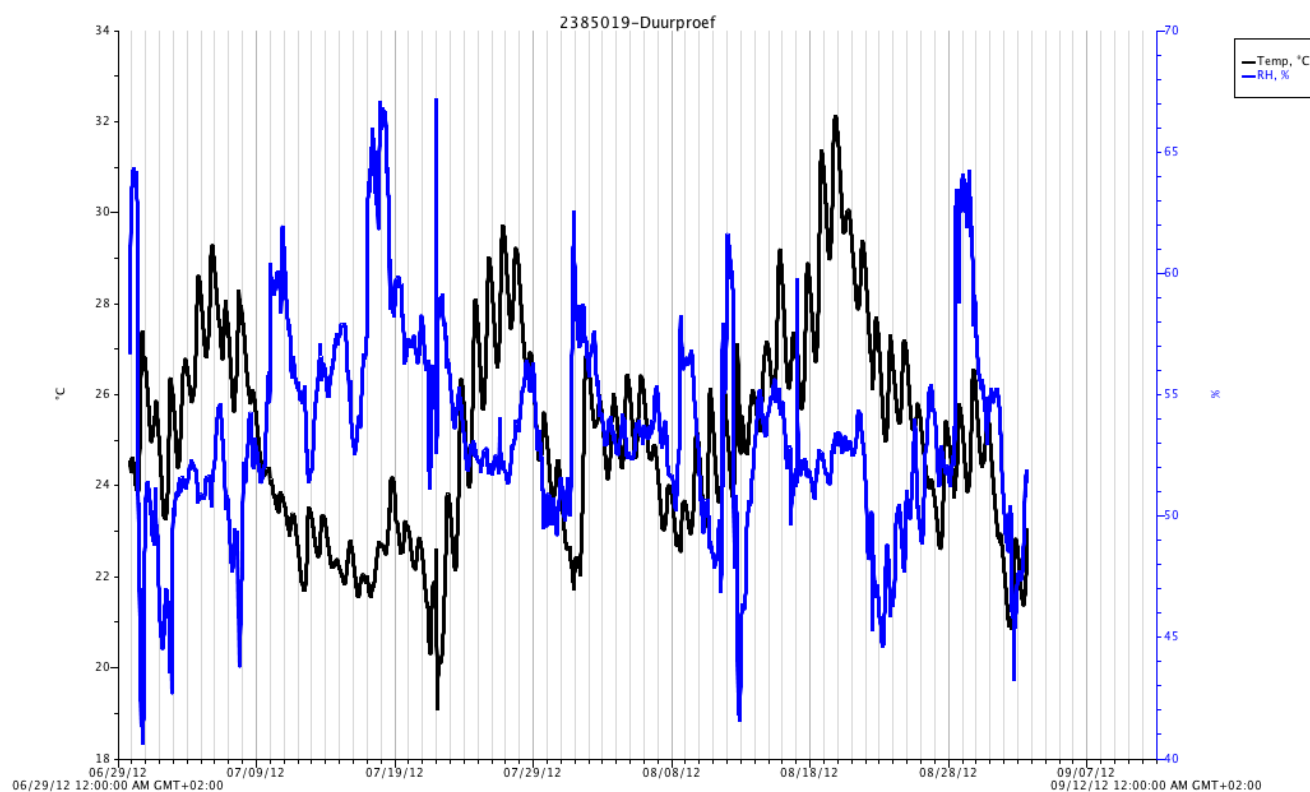
Jan 2012 - Mar 2012.



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April 2012 - July 2012.

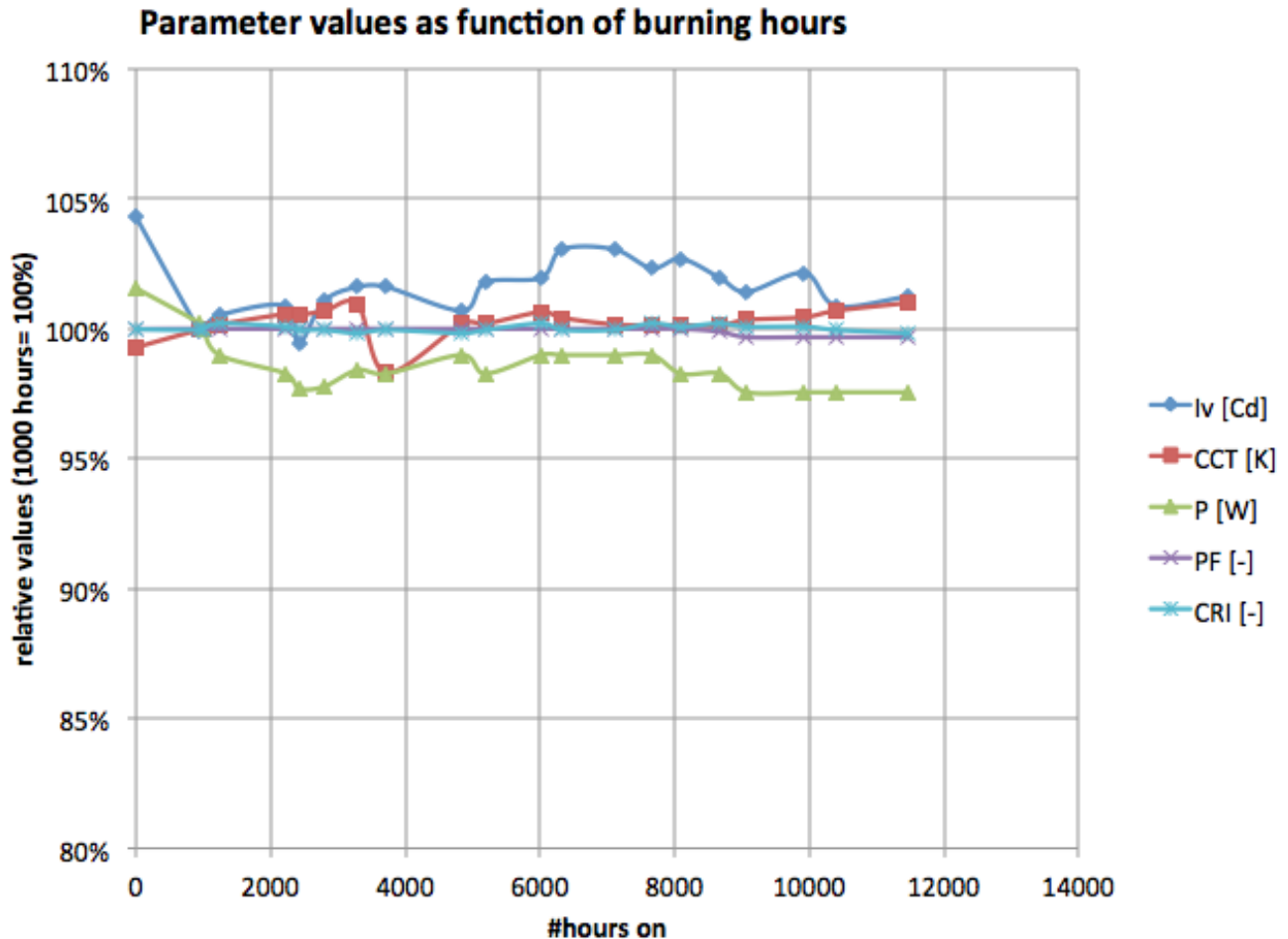


July 2012 - Sept 2012.

The ambient temperature close to the lamp varied between 15-32 deg C and the relative humidity between 15-80 %.

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Variation of lamp parameters



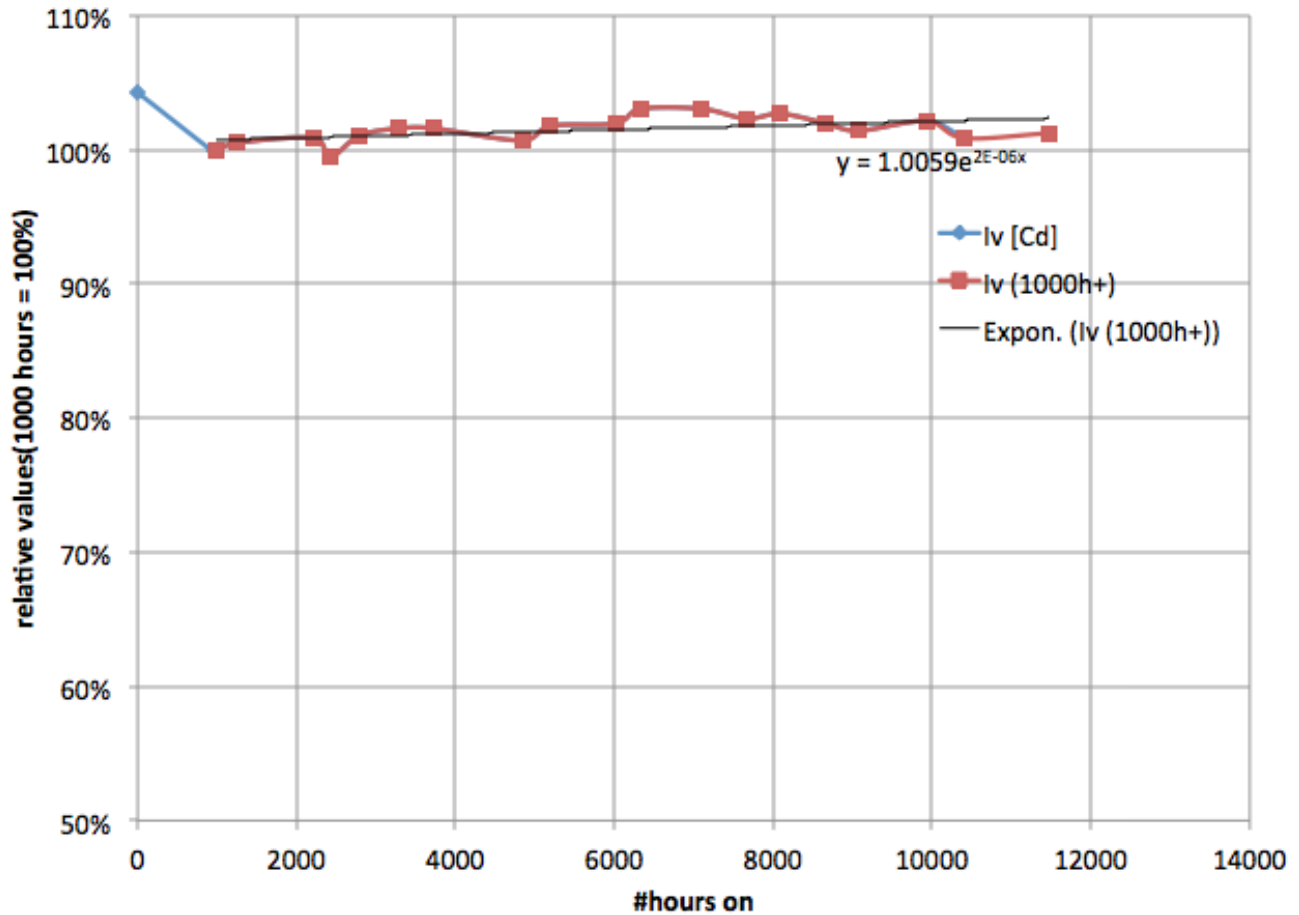
The variation of the lamp parameters during the endurance test.

See the explanation on the OLiNo site for more on the test method.

An extrapolation is done to get to the 70 % illuminance value. The illuminance value straight underneath the lamp is expected to be the good indicator of the total luminous flux. When this illuminance drops with 30 % then the luminous flux is expected to drop as well with 30 %. The assumption is here that the beam angle and the radiation diagram remains the same.

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Luminous intensity as function of burning hours



Extrapolation of the illuminance.

See the explanation on the OLiNo site for more explanation and the link to the ASSIST document for the method of extrapolation.

The result for L70 cannot be determined as the illuminance does not decrease.



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