

Lamp measurement report – 13 Sept 2010

Endurance test IPLED SMD60CM-8W-PW

by
IPLED

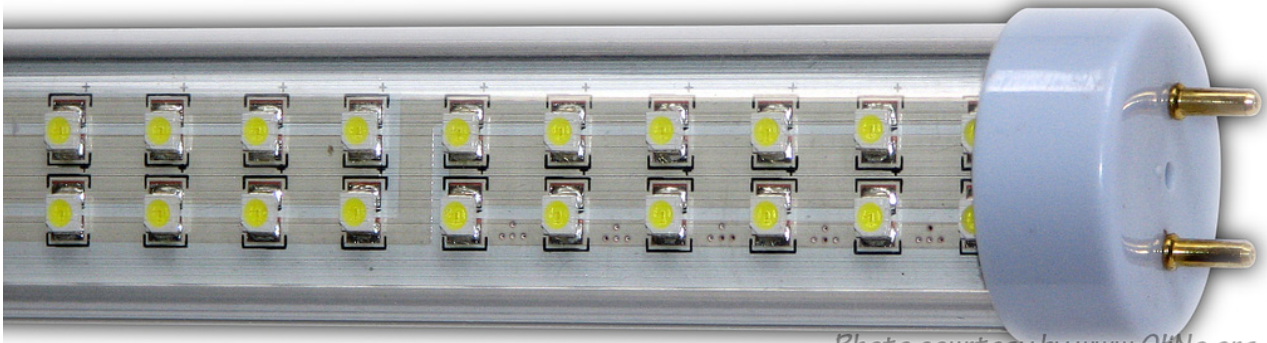


Photo courtesy by www.OliNo.org

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Summary measurement data

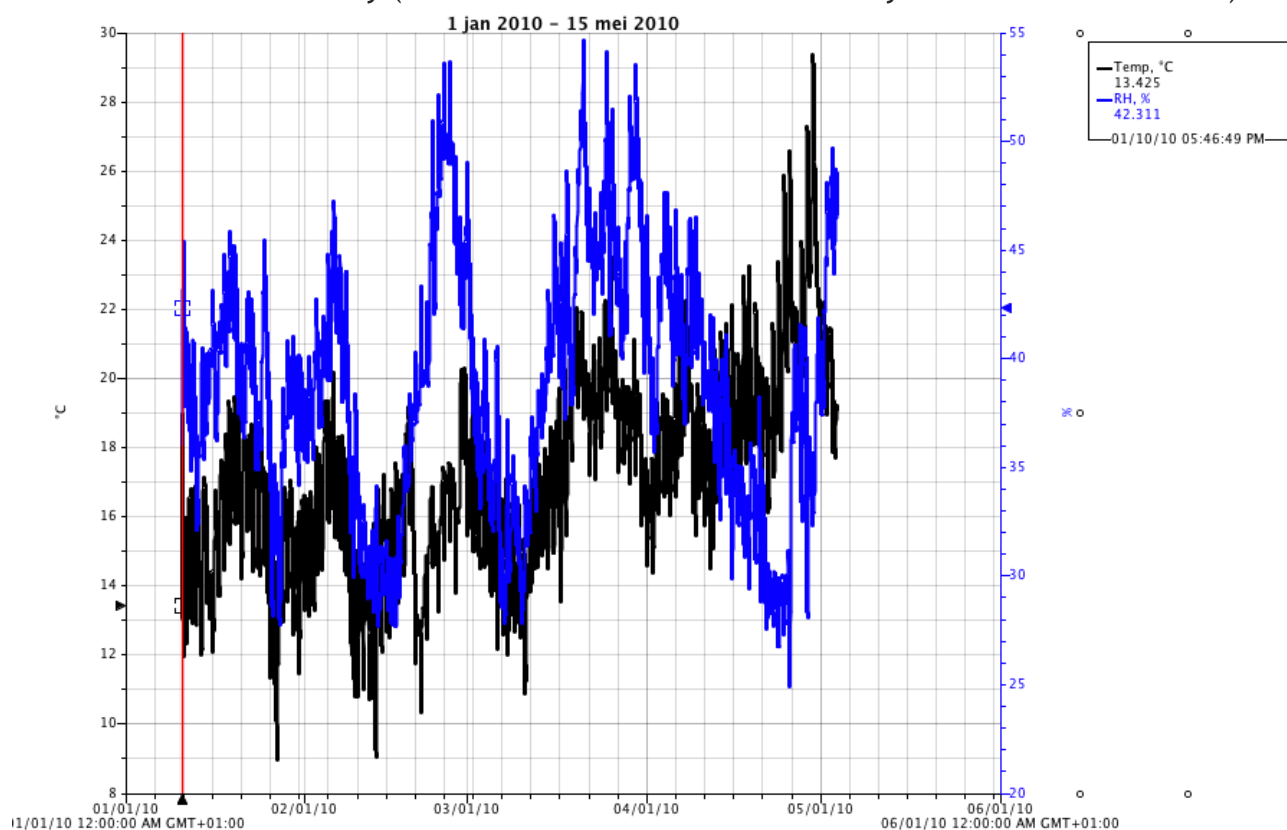
parameter	initially	after endurance	remarks
Color Temperature	5954 K	5842 K	Cold white
Luminous Intensity I_v	242 Cd	223 Cd	Went up at beginning and then down
Beam Angle	121 deg	121 deg	No variation.
Power P	7.7 W	7.6 W	Almost no variation
Power Factor	0.86	0.86	No variation.
Luminous Flux	740 lm	690 lm	
Luminous Efficacy	96 lm/W	91 lm/W	
CRI_Ra	72	70	
Coordinates Chromaticity Diagram	x=0.3222 and y=0.3458	x=0.3243 and y=0.3537	



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Test duration and test environment

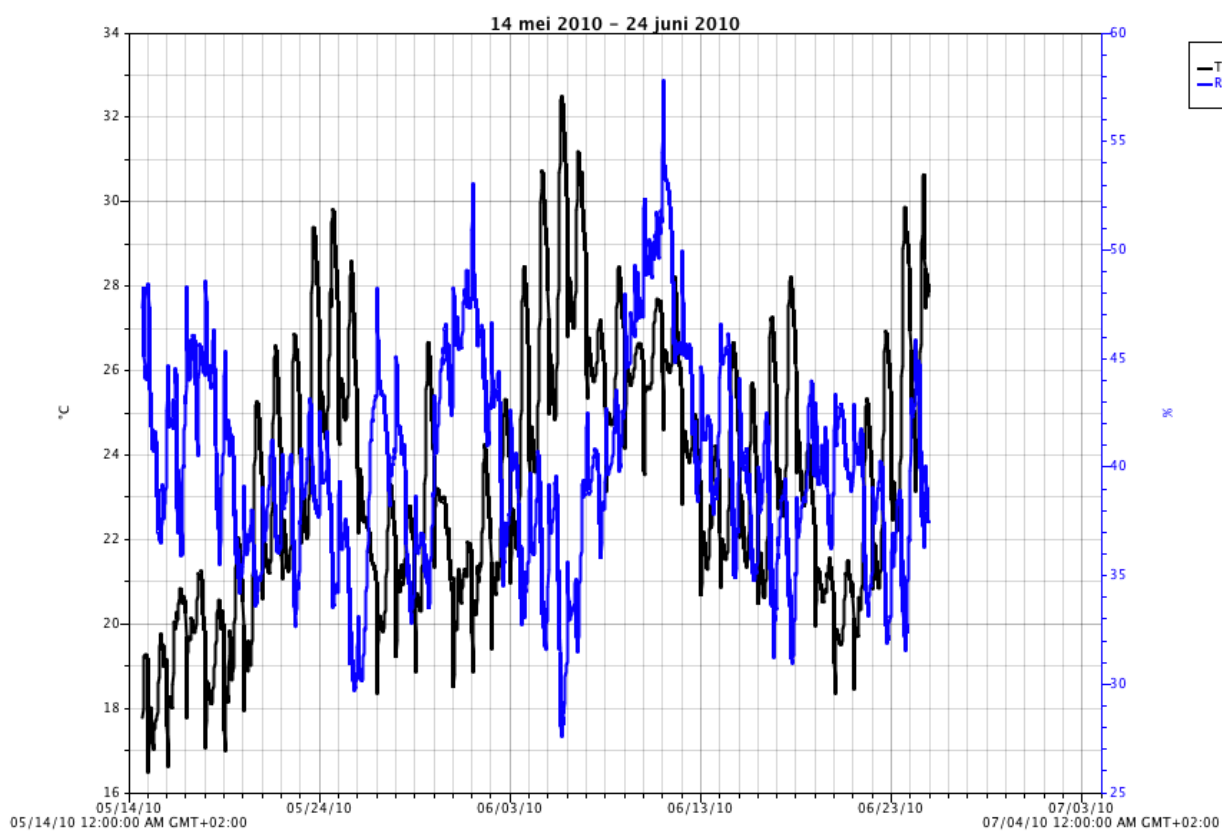
The lamp went into endurance test on 9 Oct 2009 and the test lasted until 23 June 2010. During this period of time the lamp has seen the following ambient temperature and ambient relative humidity (T and RH measurements were only started from Jan 2010).



Period 10 Jan 2010 - 3 May 2010



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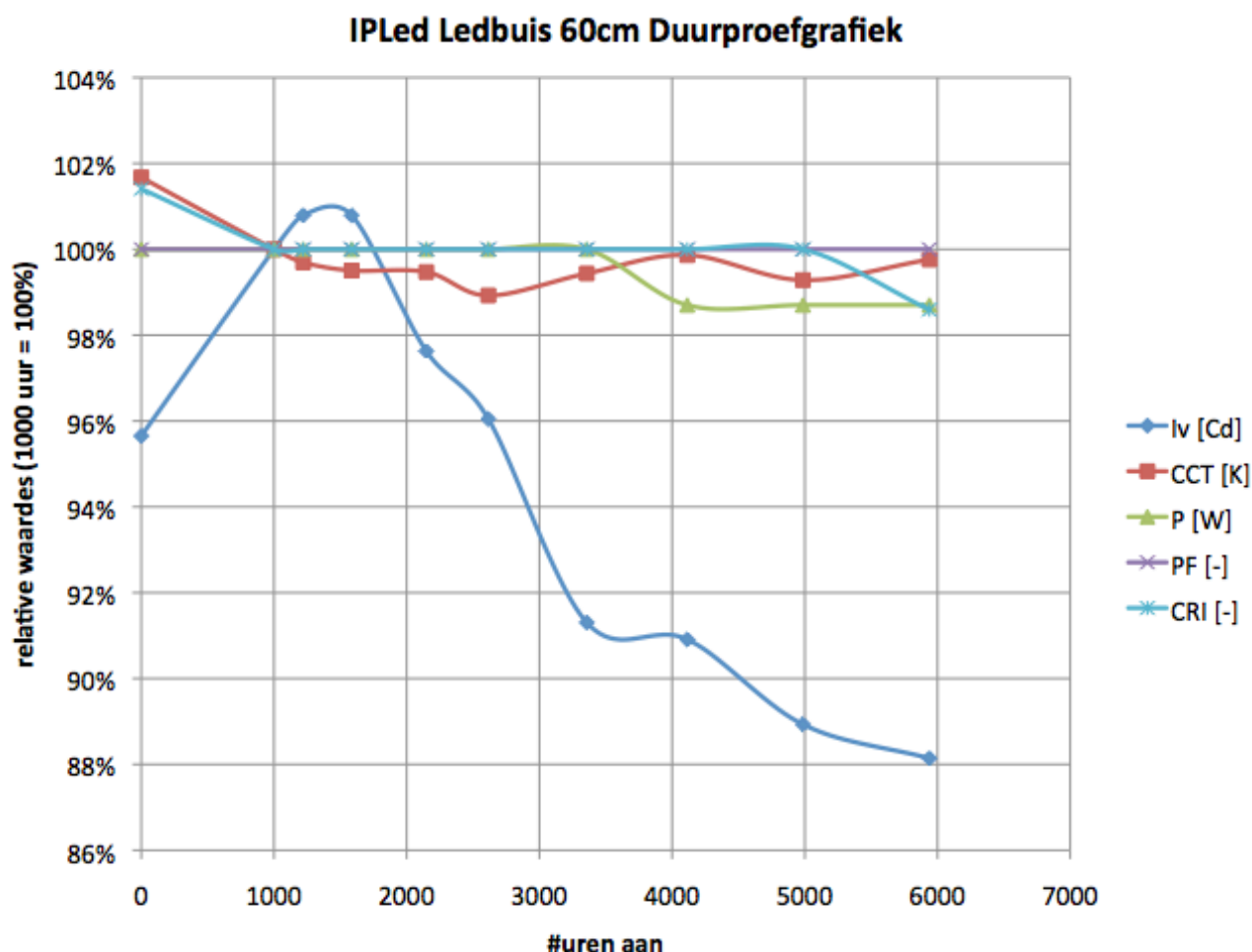


Period 14 May 2010 - 24 June 2010

The ambient temperature close to the lamp varied between 9 - 33 deg C and the relative humidity between 25 - 58 %.

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Variation of lamp parameters



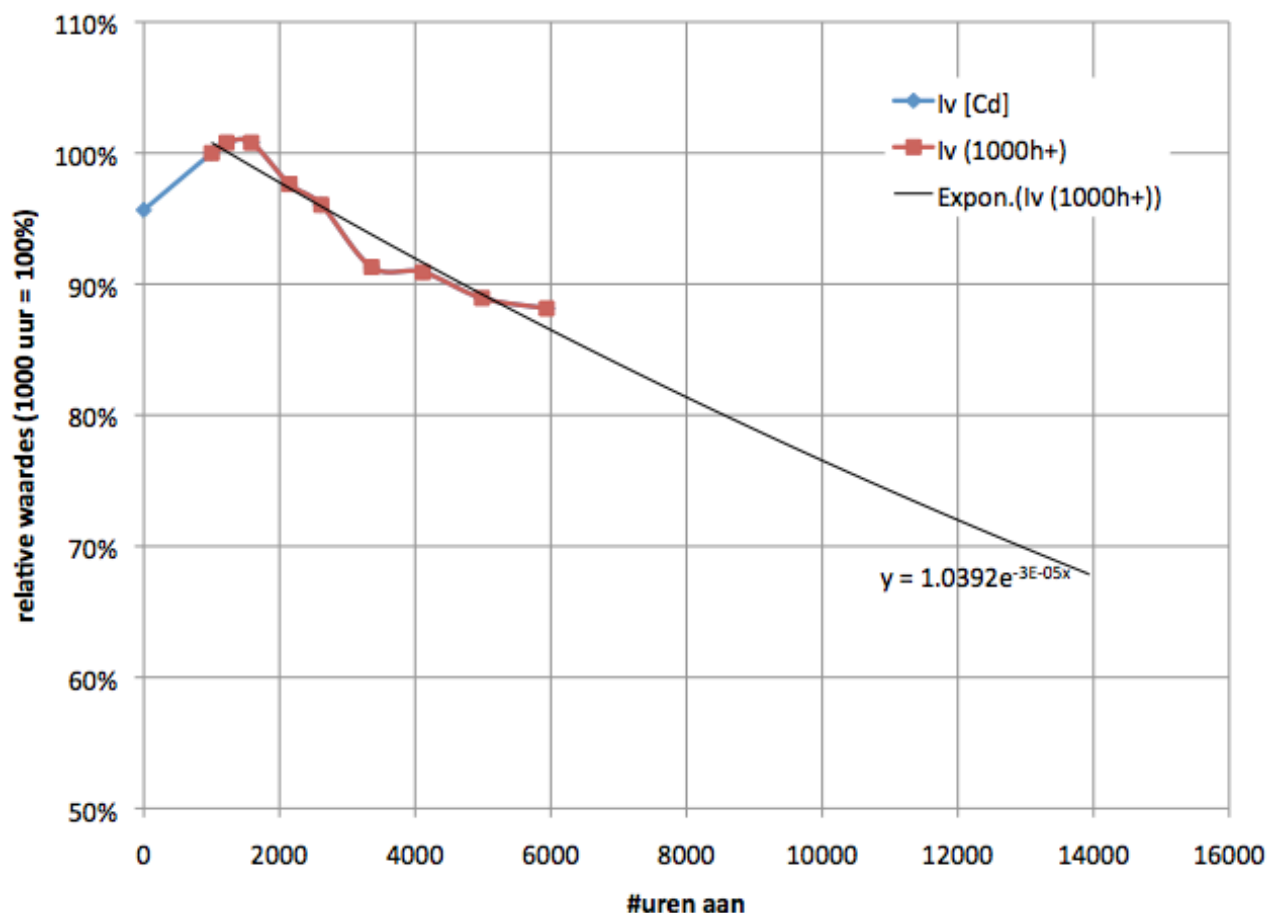
The variation of the lamp parameters during the endurance test.

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. This has been checked, see also the initial table.

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IPLed Ledbuis 60cm extrapolatie lichtsterkte



Extrapolation of the illuminance.

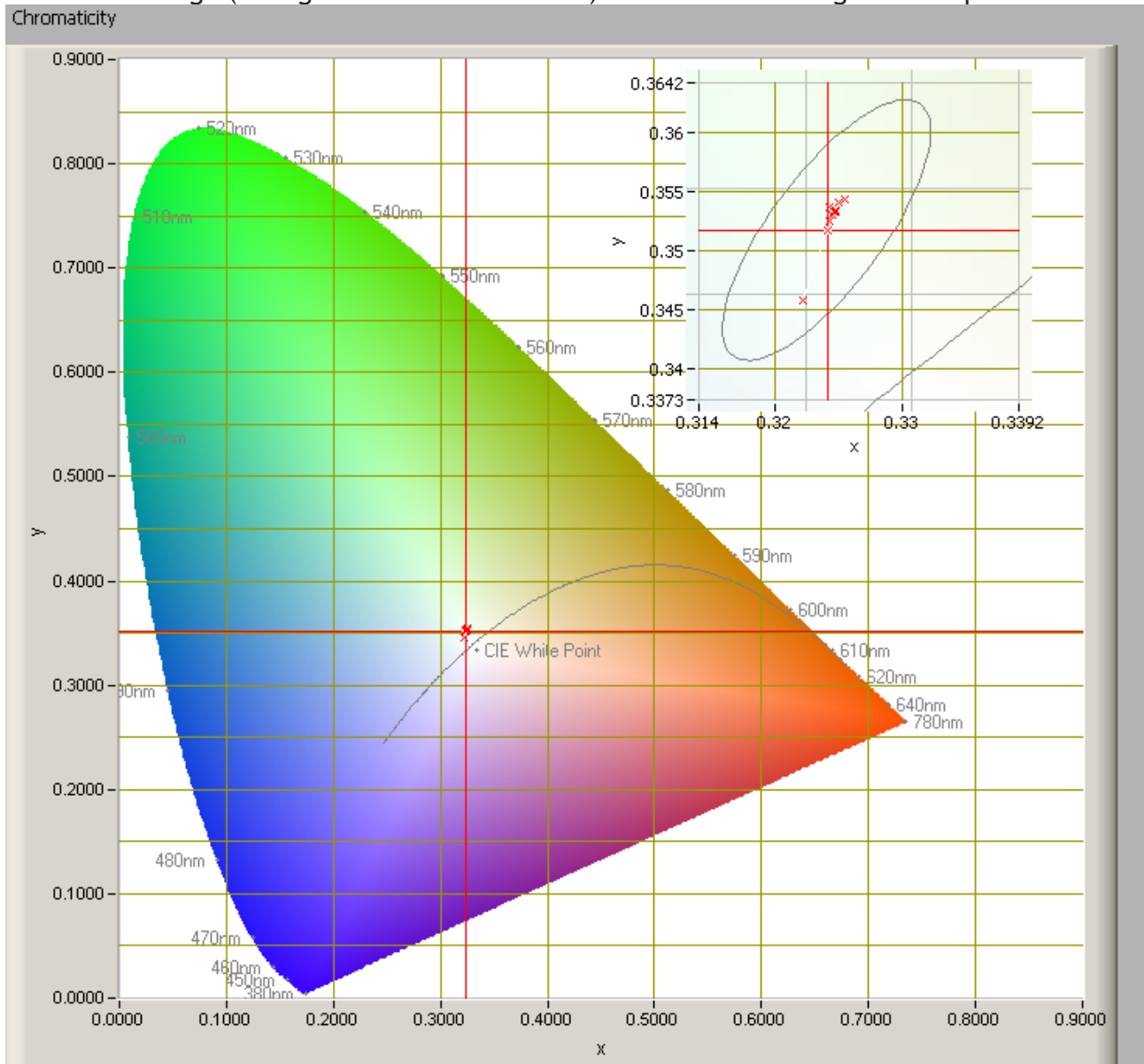
See the explanation on the OLiNo site for more explanation and the link to the ASSIST document for the method of extrapolation.

The result is 13,000 hours before the L70 is reached.

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Color change

The color change (change in color coordinates) is measured during the test period.



Change in color coordinates during the endurance test.

The color coordinates indicated with the red cross-hairs are the coordinates after 1000 burn hours. These are taken as reference. All measured color coordinates fall well within the 4 step Mac Adams ellipse.



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