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RE-TURN AS
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Measurement of phosphorescence according to DIN 67510 - 1992 (1 appendix)

Identification

Object One sample marked 650 Re-light EG-75 (yellow coating on white painted hard foam).
Object state Upon arrival the object had no visual damages.
Arrival date Dec 06, 2005
Location Borås
Date Jan 10, 2006

Measurement methods and procedures

The sample was exposed during a time of 5 minutes at 1000 lux from a 150 W xenon lamp filtered to D65. The illuminance at the measuring plane was measured with a luxmeter, Hagner, Model S2. After 5 minutes the xenon lamp was turned off and a luminance meter, Photo Research, Model 1980A, connected to a PC-computer, was recording the luminance during two hours. The entrance angle for the luminance meter was 1° which corresponds to a measuring surface of Ø 45 mm on the sample.

In accordance with section 4.5 in DIN 67510 part 1, a logarithmic extrapolation of the results was made in order to determine the time when the luminance is 0,3 mcd/m², the decay time.

Measurement conditions

Room temperature (23 ± 2) °C
Relative humidity (45 ± 5) %

Results

The results only refer to the object specified in this document.

Compilation of the results:

Sample	Luminance (mcd/m ²)		Decay time (min)
	10 min	60 min	
650 Re-light EG-75	434	59,5	7060

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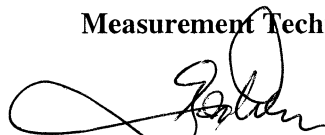
Measuring uncertainty

The measuring uncertainty is $\pm 5\%$ of the measured luminance values, or at least $\pm 0,1$ mcd/m². The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty has been determined in accordance with EA Publication EA-4/02 (formerly EAL-R2). The long term stability of the calibrated object is not included in the reported expanded uncertainty of measurement.

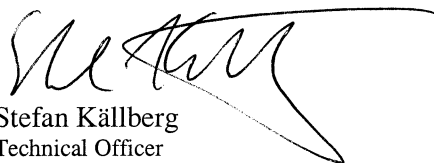
Equipment

Xenon-lamp with D65-filter, SP inv.no 502959
Luminance meter Pritchard PR 1980, SP inv.no 500721
Luxmeter Hagner S2, SP inv.no 500305

SP Swedish National Testing and Research Institute
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Gösta Werner
Technical Manager



Stefan Källberg
Technical Officer

Appendix

Measured luminance, table and diagram



Appendix 1

Measured luminance

Table: 650 Re-light EG-75

Time (min)	Measured luminance (mcd/m ²)	Time (min)	Measured luminance (mcd/m ²)
5	887	65	54,3
10	434	70	49,9
15	281	75	45,8
20	206	80	42,4
25	161	85	39,5
30	131	90	37,0
35	111	95	34,7
40	95,1	100	32,6
45	83,1	105	30,8
50	73,6	110	29,1
55	66,0	115	27,6
60	59,5	120	26,3

Diagram: 650 Re-light EG-75

