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## Measurement of phosphorescence according to DIN 67510 - 1992 (1 appendix)

### Identification

Object	One sample marked 325 Re-light MarkV (yellow coating on white painted hard foam).
Object state	Upon arrival the object had no visual damages. During phosphorescence, a slight variation in luminance over the surface was noted.
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/m<sup>2</sup>, 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 <sup>2</sup> )		Decay time (min)
	10 min	60 min	
325 Re-light MarkV	288	39,5	4930

### SP Swedish National Testing and Research Institute

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**Measuring uncertainty**

The measuring uncertainty is  $\pm 10\%$  of the measured luminance values, or at least  $\pm 0,1$  mcd/m<sup>2</sup>. 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.

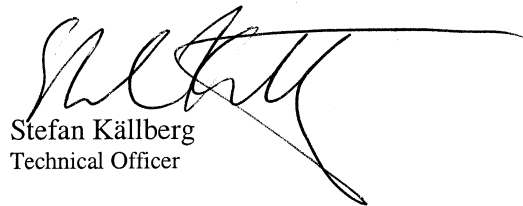
**Equipment**

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**  
**Measurement Technology, MTK**



Gösta Werner  
Technical Manager



Stefan Källberg  
Technical Officer

**Appendix**

Measured luminance, table and diagram



Appendix 1

**Measured luminance**

Table: 325 Re-light MARkV

Time (min)	Measured luminance (mcd/m <sup>2</sup> )	Time (min)	Measured luminance (mcd/m <sup>2</sup> )
5	592	65	36,1
10	288	70	33,1
15	187	75	30,5
20	137	80	28,3
25	107	85	26,4
30	87,4	90	24,7
35	73,6	95	23,2
40	63,1	100	21,9
45	55,4	105	20,7
50	49,1	110	19,6
55	45,5	115	18,6
60	39,5	120	17,7

Diagram: 325 Re-light MarkV

