REPORT

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Measurement of phosphorescence according to DIN 67510 - 1992

(1 appendix)

Identification

Object	One sample marked 440 Re-light EG-55 (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/m^2, 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) 10 min	60 min	Decay time (min)
440 Re-light EG-55	128	18,9	2910

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Measuring uncertainty

The measuring uncertainty is ±5 % of the measured luminance values, or at least ±0,1 mcd/m^2. 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

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Gösta Werner
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Appendix
Measured luminance, table and diagram

Appendix 1

Measured luminance

Table: 440 Re-light EG-55

Time (min)	Measured luminance (mcd/m^2)	Time (min)	Measured luminance (mcd/m^2)
5	255	65	17,3
10	128	70	15,9
15	84,1	75	14,7
20	62,2	80	13,7
25	49,2	85	12,8
30	40,4	90	12,0
35	34,1	95	11,2
40	29,5	100	10,6
45	25,9	105	10,1
50	23,2	110	9,6
55	20,9	115	9,1
60	18,9	120	8,6

Diagram: 440 Re-light EG-55