

Submitted by the Task Force on Substitutes/Retrofits (TF S/R)

Informal document GRE-84-03  
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agenda item 5)

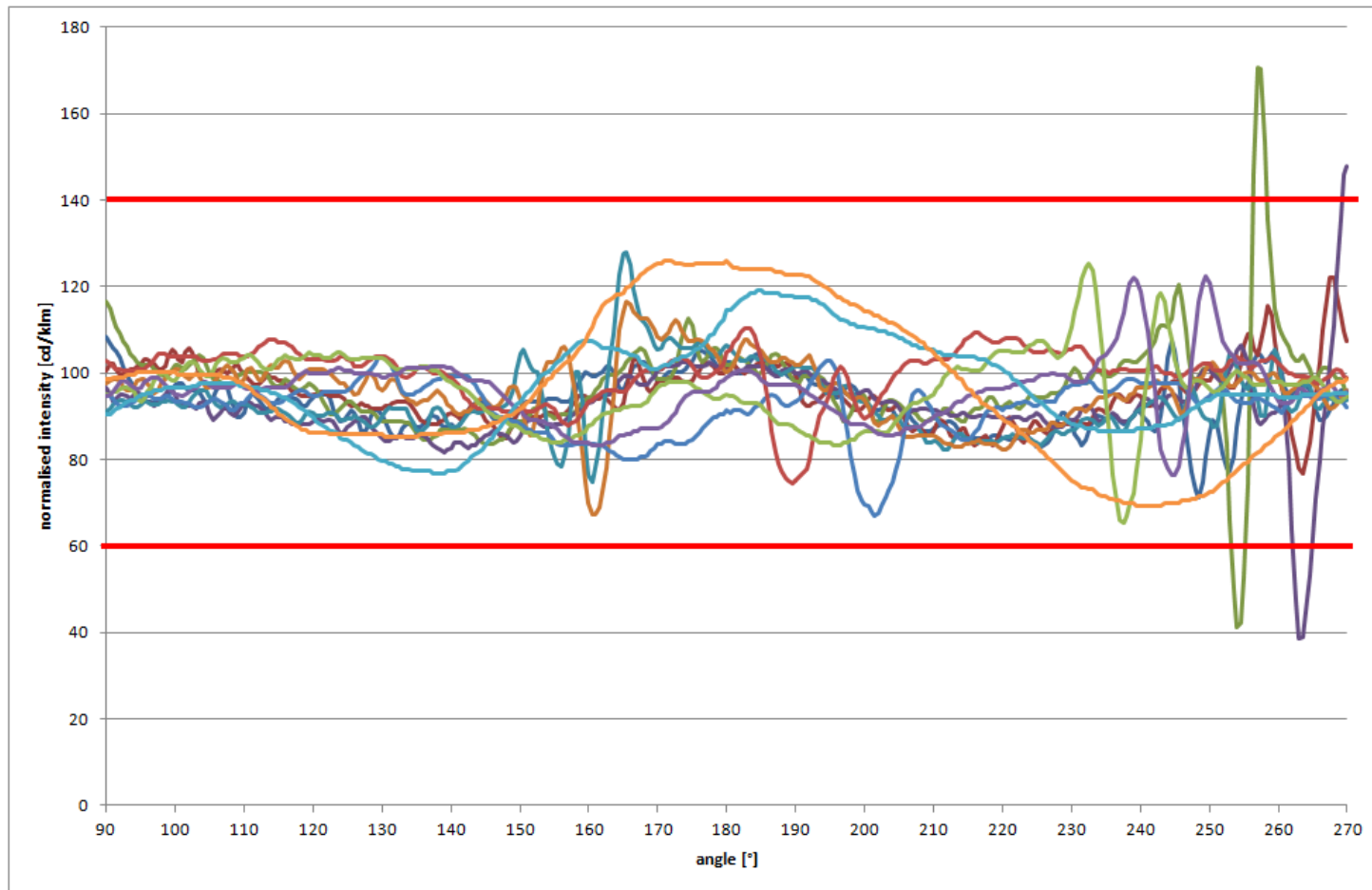
**LEDr Light Sources  
Equivalence Report for C5W**  
In support of document GRE/2021/3

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# Checklist for Equivalence of Parameters LEDr C5W (12V)

<u>Parameters</u>	<u>Check</u>
3.1. Parameters with the same values	
3.1.1. Cap	✓
3.1.2. Maximum lamp outline dimensions	✓
3.1.3. Electrical connector	<i>n/a</i>
3.1.4. Test voltage	✓
3.1.5. Objective luminous flux	✓
3.1.6. Colour of emitted light	✓
3.1.7. Light centre length	✓
3.1.8. Distortion free zone	✓
3.2. Parameters with similar values	
3.2.1. Normalized luminous intensity distribution	<i>see page 3</i> ✓
3.2.2. Size and position of the light-emitting-area	<i>see page 4</i> ✓
3.2.3. Homogeneity of the light-emitting-area	<i>see page 4</i> ✓
3.2.4. Contrast of the light emitting area	<i>n/a</i>
3.3. Parameters with different values	
3.3.1. Electrical power consumption	<i>2.0 W max (HE) / 2.5 W min</i> ✓
3.3.2. Dependency of the luminous flux on the applied voltage (range)	✓
3.3.3. Dependency of the luminous flux on elevated ambient temperatures	✓
3.3.4. Cap temperature	<i>75°C max, see page 5</i> ✓
3.3.5. The spectral content	<i>n/a</i>
3.4. Additional parameters	
3.4.1. Thermal run-up behaviour	✓
3.4.2.1 PWM operation to stabilize the applied voltage	✓
3.4.2.2 PWM operation to dim light sources	<i>n/a</i>
3.4.3 Polarity	✓
Requirements regarding failure detection	
4.1 Failure detection	<i>150 mA min</i> ✓
4.2 Failure behaviour	<i>below 10 mA (12V)</i> ✓

# Normalised Intensity Distribution C5W (incandescent)



$C_0 / C_{180}$

# Size, Position and Homogeneity of the Light-Emitting-Area C5W

R37: Filament length : **7.5mm min**, **15 mm max**

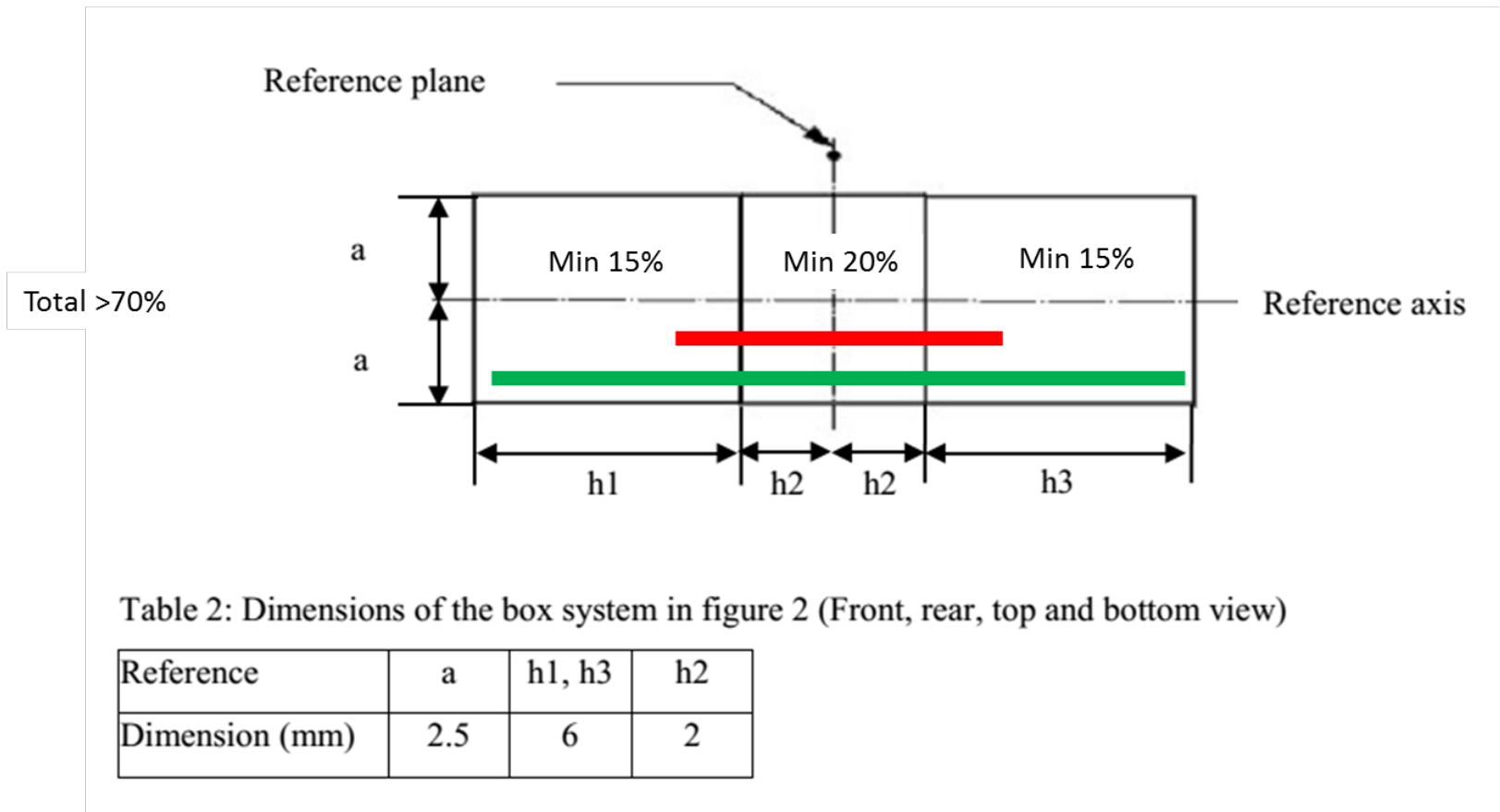
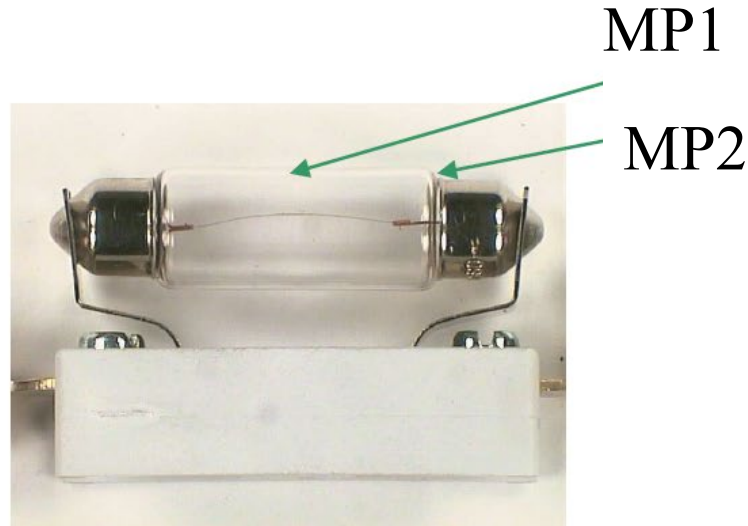


Table 2: Dimensions of the box system in figure 2 (Front, rear, top and bottom view)

Reference	a	h1, h3	h2
Dimension (mm)	2.5	6	2

# Cap temperature (incandescent)



MP1: Free burning 85°C

MP2: Free burning 75°C