

- Requested by** Idman Oy  
Airfield Lighting  
Kisällintie 9  
01730 VANTAA
- Order** 25.05.2001 Toivo Ruoho
- Handled by** Senior Research Scientist Tapani Timonen, 09-4566410
- Samples** One touchdown zone light IDM 4661 1x105 W. Colourless prism was assembled in the light unit. The lamp with markings SLi 0021499, 105 W 6,6 A was assembled in the light unit. The sample was delivered by Idman Oy.
- Object** Measurement of luminous intensity distribution according to ICAO International Standards and recommended Practices, Aerodromes, Annex 14 to the Convention on International Civil Aviation, Volume I, Aerodrome Design and Operations, Third edition, July 1999.

#### Procedure of the measurements and results

Procedure of the measurements and results are presented in page 2.

Espoo, 21.06.2001

VTT AUTOMATION  
Safety Engineering  
Laboratory of Lighting Technology

Senior Research Scientist



Tapani Timonen

Group Manager



Hannu Hossi

**Distribution** Idman Oy 2 pc  
VTT/AUT/Arkisto

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All test results in this report relate only to the samples tested.

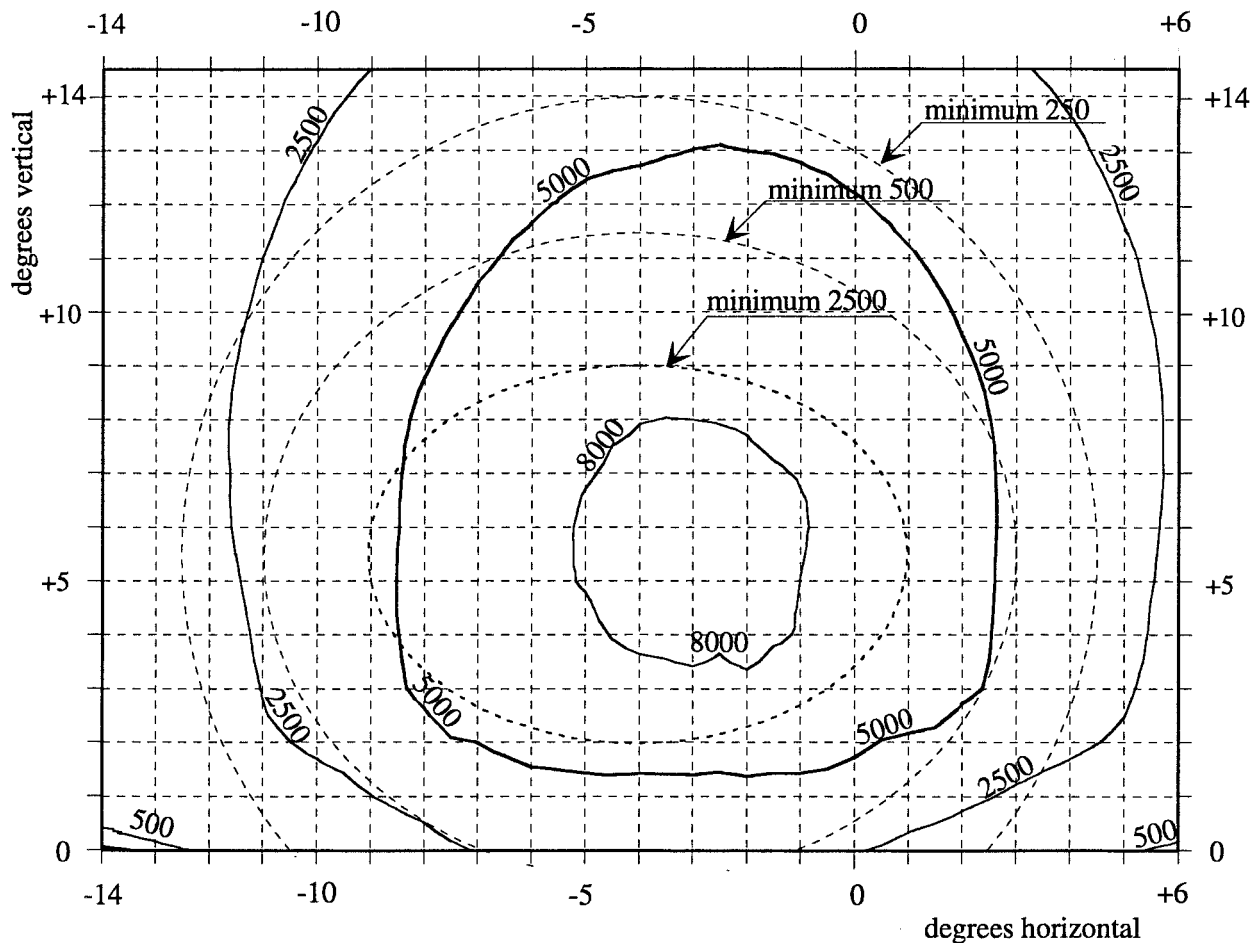
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**Procedure of the measurements and results**

Intensity measurements were made by illumination measurement at a distance of 10 m. The photocell was  $V(\lambda)$  corrected LMT no. 1286241. The diameter of the light sensitive area of the photocell was 30 mm.

During the measurement of luminous intensity distribution the supply current was DC 6,6 A ( $\pm 0,1\%$ ). The estimated uncertainty of the luminous intensity measurement was  $\pm 3\%$ . The measured isocandela diagrams are shown in figure 1. In the figure the ellipses are those expressed as the minimum requirements for the lights in figure 2.5 in appendix 2 of the above mentioned ICAO Publication. The intensity measurement was made in horizontal and vertical steps of  $0,5^\circ$ . The positive vertical direction is upwards and the positive horizontal direction is to the right from the direction when seen behind the lighting fitting.

**Figure 1. Isocandela diagram for touchdown zone light IDM 4661 1x105 W –White**  
 Measurements according to ICAO Aerodromes, Annex 14, 1999, Appendix 2, Figure 2.5. MAIN BEAM: Average 7439 cd, minimum 4483 cd, maximum 8772 cd, ratio of the maximum and minimum 1.96.





**Requested by** Idman Oy  
Airfield Lighting  
Kisällintie 6  
01730 VANTAA

**Order** 09.03.2004 / Antti Tukia

**Handled by** Tapani Timonen

**Samples** One touchdown zone light IDM 4661 C TDZ TOE 0 1x48 W. Colourless prism was assembled in the light unit. The lamp Philips 6109, 48 W 6.6 A min 23 kcd was assembled in the light unit. The sample was delivered by Idman Oy.

**Object** Measurement of luminous intensity distribution according to ICAO International Standards and recommended Practices, Aerodromes, Annex 14 to the Convention on International Civil Aviation, Volume I, Aerodrome Design and Operations, Third edition, July 1999.

#### Procedure of the testing and results

Procedure of the measurements and results are presented in page 2.

Espoo, 15.03.2004

Tapani Timonen, Senior Research Scientist

Jaakko Ketomäki, Research Scientist

**Distribution** Idman Oy  
Helsinki University of Technology / Lighting Laboratory

## Procedure of the measurements and results

Intensity measurements were made by illumination measurement at a distance of 10 m. The photocell was  $V(\lambda)$  corrected LMT no. 1286241. The diameter of the light sensitive area of the photocell was 30 mm.

During the measurement of luminous intensity distribution the supply current was DC 6.6 A ( $\pm 0,1\%$ ). The estimated uncertainty of the luminous intensity measurement was  $\pm 3\%$ . The measured isocandela diagrams are shown in figure 1. In the figure the ellipses are those expressed as the minimum requirements for the lights in figure 2.5 in appendix 2 of the above mentioned ICAO Publication. The intensity measurement was made in horizontal and vertical steps of  $0.5^\circ$ . The positive vertical direction is upwards and the positive horizontal direction is to the right from the direction when seen behind the lighting fitting.

**Figure 1. Isocandela diagram for touchdown zone light IDM 4661 C TDZ TOE 0 1x48 W -White.**

Measurements according to ICAO Aerodromes, Annex 14, 1999, Appendix 2, Figure 2.5.

MAIN BEAM: Average 7307 cd, minimum 4548 cd, maximum 10471 cd, ratio of the maximum and minimum 2.30.

