



Fraunhofer

**TESTED[®]
DEVICE**

BUCK d.o.o.
CLEAN ROOM 4 14/840 DL-CG
Report No. BU 1106-561

DUPLICATE

Statement of
Qualification

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Customer: BUCK d.o.o.
Milorada Jovanovica 9
11147 Belgrade
Serbia

Test results:
(according to ISO 14644-1)

The luminaire CLEAN ROOM 414/840 DL-CG is suitable for use in clean-rooms fulfilling the Air Cleanliness Class 2.

Component tested:

Category: Cleanroom Facilities
Subcategory: Lighting Systems
Type: Luminaire CLEAN ROOM 414/840 DL-CG

Random check measurements of particle emission (airborne) at representative points

Test procedure: According to VDI 2083 Part 9.1

Measuring instruments being used: Optical Particle Counter:
Model LasAir II 110 manufactured by PMS with measuring channels of $\geq 0.1 \mu\text{m}$, $\geq 0.2 \mu\text{m}$, $\geq 0.3 \mu\text{m}$, $\geq 0.5 \mu\text{m}$, $\geq 1.0 \mu\text{m}$ and $\geq 5.0 \mu\text{m}$

Test parameters of the test environment:

- Cleanroom of Air Cleanliness Class:ISO Class 1
.....(according to ISO 14644-1)
- Air flow velocity:0.45 m/s
- Air flow guidance:vertical unidirectional air flow from ceiling to floor
- Temperature:22 °C \pm 0.5 °C (71.6 °F \pm 0.9 °F)
- Relative humidity: 45 % \pm 5 %

Test parameters of the test execution:

The luminaire was stressed as follows:

- Impact sound: between approx. 5 Hz and 50 Hz
- Average oscillation velocity: $v = 0.800 \text{ mm/s}$
- Average oscillation acceleration: $a = 0.276 \text{ m/s}^2$
- Average oscillation of the system: $s = 0.00300 \text{ mm}$

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The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

The validity of this certificate applies only to the mentioned product in this particular condition for a duration of 5 years.
Further information: www.tested-device.com.


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Place, Date


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