valid until: June 30, 2028

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DEVICE

SIGNIFY
CR350B LED60S/940 PSD 30/120
Report No. SI 2306-1432

DUPLICATE

Statement of
Qualification
Single product
Particle Emission

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Statement of Qualification · Single product

Customer

Signify Hungary Kft.
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Component tested

Category: Cleanroom Facilities

Subcategory: Lighting Systems

Product name: 912401483375 CR350B LED60S/940 PSD W30L120
(manufacturing date: week 16/2023; color: white; size: 30 cm x 120 cm;
material number: 912401483375; serial number: 76500100001)

Random sampling of particle emissions (airborne) at representative sites

Standards/Guidelines: ISO 14644-1, -14
The norms stated generally refer to the version valid at the time of the tests.

Test devices: Optical particle counter:
LasAir II 110 and LasAir III 110 with measuring ranges ≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm, ≥ 1.0 µm and ≥ 5.0 µm

Test environment parameters:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1): ISO 1
- Airflow velocity: 0.45 m/s
- Airflow pattern: vertical laminar flow
- Temperature: 22 °C ± 0.5 °C
- Relative humidity: 45 % ± 5 %

Test procedure parameters: The lighting system was subjected to stress as follows:

- Structure-borne noise: approx. 50 Hz
- Oscillation velocity (Ø): v = 3.5760 mm/s
- Oscillation acceleration (Ø): a = 1.1924 m/s²
- Deflection of the system (Ø): s = 0.1265 mm

Test result / Classification

When operated under the specified test conditions, the luminaire 912401483375 CR350B LED60S/940 PSD W30L120 is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Class according to ISO 14644-1:

Test parameter(s)	Air Cleanlines Class
Structure-borne noise = approx. 50 Hz	1
Overall result	

It should be noted that cleanrooms of class 1 to 5 according to ISO 14644-1 have a higher filter occupancy, which may restrict the use of panel lighting systems. Cleanrooms with a horizontal displacement flow form an exception to this.
The test result may be affected by the surrounding ceiling system, in particular the material pairing between lights and ceiling frames, as well as other mounting accessories. Particle emission behavior should be reassessed in each assembly situation.

Please note: Transport damages, incorrect installation, aging behavior, corrosion etc. can influence the test result.

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

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on behalf of
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under **www.tested-device.com**.