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**Photometric measurements on one LED
luminaire.**

Arnhem, 11 November 2016
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DEKRA Certification B.V. - Photometry

By order of VEKO Lightsystems International B, 1740 AD Schagen, Nederland

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A handwritten signature in black ink, appearing to read 'Noij', with a large, sweeping underline.A handwritten signature in blue ink, appearing to read 'G.C. Muda', with a large, sweeping underline.

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SUMMARY

The luminous flux, luminous efficacy and power of one Product, marked Veko, type Magnus, Justin, Roland is measured in a goniophotometer according to the LM79-08 standard 'Electrical and photometric measurements of solid-state lighting products'. In addition the power factor was measured. It appeared to be not possible to stabilize the tested sample according to LM79-08 that requires a variation in luminous intensity and electrical power of less than 0.5% measured over a time interval of 30 minutes. The measured variation in luminous intensity and electrical power over a time interval of 30 minutes was 0.8%.

1 APPLICATION FOR TESTING

On 11 November 2016, VEKO Lightsystems International B, 1740 AD Schagen, Nederland, submitted one sample, marked Veko, type Magnus, Justin, Roland.

The applicant desired a determination of the luminous flux, luminous efficacy and power at an AC voltage of 240V in accordance to the IES LM79-08 standard.

All tests have been performed at Dekra test location Leuven (also known as KU Leuven), Technologicampus Gent, Gebroeders De Smetstraat 1, B-9000 Gent in Belgium.

Also see the pictures in Annex 1 of this report.

2 EXAMINATION

An AC voltage of 240V with a frequency of 50Hz was applied to the luminaire. It appeared to be not possible to stabilize the tested sample according to LM79-08 that requires a variation in luminous intensity and electrical power of less than 0.5% measured over a time interval of 30 minutes. The measured variation in luminous intensity and electrical power over a time interval of 30 minutes was 0.8%.

The luminous flux is calculated by means of an integration of the luminous intensity distribution measured with a calibrated Goniophotometer Rigo-801-2000, location KU Leuven in Gent, Belgium. The measurements were performed in a theta-angle ranging from 50° till 310° and phi-angle from 0° to 180° (both with steps of 2°), in a top down position. The electrical quantities were measured by means of a calibrated (Yokogawa WT3000) power meter.

The ambient temperature during measurements was $25 \pm 1^\circ\text{C}$.

3 RESULTS OF EXAMINATION

The photometric results of the measured Product are shown in the tables below. The measurements were performed at an AC voltage of 240V with a frequency of 50Hz.

Veko, type
Magnus, Justin,
Roland

Luminous Flux and Efficacy

	Value	
Total luminous flux	9099	lm
Total consumed power	50.3	Watt
Luminous Efficacy	180.9	lm/Watt
Stabilisation time	76	minutes
Preburn time	7	minutes

Electric parameters

	Value	
Applied voltage	240.09	V
Consumed Power	50.3	Watt
Power Factor	0.97	-

Pictures of tested sample



Figure 1: Testobject