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Originalul documentului prezentat adaugator.

FORM-L-01 ED 3 REV 9

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RTECH-PHOTOMETRY LABORATORY

Testreport : Measurement of luminous intensity distribution related to the standard
NBN-EN 13032-1; NBN-EN 13032-4; CIE 121-1996; CIE S 025/E; IES LM-79-08 and procedures PT-P-01
and PT-P-02
rue de Mons, 3 B-4000 LIEGE - Tel : 04/224.71.40 - Fax : 04/224.25.90
Measurement for Schröder group.

LED

Origin Schröder Magyarország Zrt.	Production Schröder Magyarország Zrt.	Luminaire IZYLUM LT 2	Inclination 0°	Request # FD42328
Source				
Type LED	BIN LVL2 I03	Trademark Seoul	Reference 5050	# LEDs 72
Reflector 5439				
Master	Reflector Schröder Led assembly Medium Assembled 0,0°			No 5439
Protector Refractor Lens				
Light Exhauster	Plastic Lum. shape-related White			
Protector	Glass Extra Clear Flat Smooth			
Lens	Vossloh-Schwabe 5439			
Laboratory observation				
IZYLUM LT 2 with 72 SEOUL 5050 bin I03 (NW740) Used flux for efficiency matrix calculation = 16121 lm - CCT = 3866 K - CRI = 71,97 measured @600mA/25°C (see sphere test report 2022/550 + 2022/551 on appendix).				
Purpose DOC	Sample date 14/11/2022		Sample # 42R372	
Observation				
DOC IZYLUM LT 2 with lenses 5439 - glass extra clear + Light exhauster				
Flux coefficient multiplicator (only for efficiency matrix): From 600 to 200 mA : 0,350 From 600 to 350 mA : 0,604 From 600 to 500 mA : 0,846 From 600 to 700 mA : 1,147 From 600 to 850 mA : 1,353				
Fixture powered with driver Signify XiFP 75W 0,2-0,7A SNLDAE 230V C133 SxT for matrix @200/350/500mA Fixture powered with driver Signify XiFP 110W 0,3-1,05A SNLDAE 230V C133 SxT for matrix @600/700mA Fixture powered with driver Signify XiFP 165W 0,3-1,05A SNLDAE 230V C170 SxT for matrix @850mA				
Notes				
The publication of this report in another form than the original one is not allowed without agreement of the laboratory. This report concerns type tests on one or a series of specimens. All information but the measurements results are provided by the customer.				

Asked by RCA	Measured by CLD	Approved by RLABO	Appendix 1	   226-TEST NBN EN ISO/IEC 17025 :2017	54353
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LUMINOUS INTENSITY DIAGRAM

Origin Schröder Magyarország Zrt.		Production Schröder Magyarország Zrt.		Luminaire IZYLUM LT 2		Inclination 0°	Request # FD42328
Source	Type LED	BIN LVL2 I03	Trademark Seoul	Reference 5050	# LEDs 72	Reflector 5439	
Reflector	Schröder Led assembly Medium Assembled 0,0°					No	5439
Matrices	543536 Φ 0-90° = 16690lm - 90-180° = 0lm					Absolute measurement	
Protector Refractor Lens	Light Exhauster Plastic Lum. shape-related White - IZYLUM LT 2 Protector Glass Extra Clear Flat Smooth - IZYLUM LT 2 Lens 72 x Vossloh-Schwabe 5439						
Observation	Matrix in total flux @700mA Electrical measurement on LED (#1): Voltage = 131,56 V Current = 0,700 A Power = 92,11 W Electrical measurement on driver (#1): Voltage = 230,00 V Current = 0,443 A Power = 100,60 W PF = 0,987 Total luminaire power = 100,60 W : Lm/Watt = 165,91 lm/W Driver #1 : OTHER Driver -						
Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t*	Measurement date	↕
25 - 155	7613	35	S	5403	25,3°	29/11/2022	
90	7097	16	D				
270	5403	0	G				
							54353

LUMINOUS INTENSITY DIAGRAM

Origin Schröder Magyarország Zrt.		Production Schröder Magyarország Zrt.		Luminaire IZYLUM LT 2		Inclination 0°		Request # FD42328	
Source	Type LED	BIN LVL2 I03	Trademark Seoul	Reference 5050	# LEDs 72	Reflector 5439			
Reflector	Schröder Led assembly Medium Assembled 0,0°					No	5439		
Matrices	543537 Φ 0-90° = 19688lm - 90-180° = 0lm					Absolute measurement			
Protector Refractor Lens	Light Exhauster Plastic Lum. shape-related White - IZYLUM LT 2 Protector Glass Extra Clear Flat Smooth - IZYLUM LT 2 Lens 72 x Vossloh-Schwabe 5439								
Observation	Matrix in total flux @850mA Electrical measurement on LED (#1): Voltage = 132,96 V Current = 0,850 A Power = 112,97 W Electrical measurement on driver (#1): Voltage = 230,00 V Current = 0,548 A Power = 123,73 W PF = 0,981 Total luminaire power = 123,73 W : Lm/Watt = 159,12 lm/W Driver #1 : OTHER Driver -								
Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t*	Measurement date	↕		
25 - 155	8981	35	S	6374	25,3°	29/11/2022			
90	8372	16	D						
270	6374	0	G						

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INFORMATION

Measurement fulfill Standards:

NBN-EN 13032-1
NBN-EN 13032-4
NBN-EN 17025:2017
CIE 121-1996
LM79-08
CIE S 025

Measurement quantities measured:

Light distribution in relative or absolute photometry
Led alone cold lumen package
Led CCT and CRI
Power consumption of the fitting
Lm/watt

Electrical measurement, if not specified:

Primary values are AC with 50Hz frequency
Secondary values on SSL are DC

CCT, CRI and chromaticity coordinates: are measured in Ulbricht sphere.
If specified Main test report refer to sphere extra test report.

Light distribution are measured on gonio. If not otherwise specified, measurement is done at 50 Hz

Number of hours operated prior to measurement: if not otherwise specified, 0 hours (no aging).

Stabilization time: If not otherwise specified, a minimal stabilization time of 0.5 hour is applied; and measurement will start when it exists no more variation above 0.5% in 15 minutes

Total operating time of the product including stabilization:
45 minutes have to be added by measurement.
Minimal operating time is 75 minutes

Luminous intensity distribution: available on electronic file with
.mat format (internal Schröder format)
.ldt format (European standard)
.IES format (American standard)

Statement of uncertainties (K=2, 95% of confidence level):
Uncertainties calculated based on a typical Schröder fitting and PCBA

Intensity measurement: +/- 3.5%
Angle: +/- 0.5°
Flux: +/- 2.5%
Electrical DC
Power: +/- 0.15%
Voltage: +/- 0.10%
Current: +/- 0.20%
Electrical AC
Power: +/- 0.20%
Voltage: +/- 0.10%
Current: +/- 0.15%
Temperature: +/- 0.65%

ISP2000	JETI	
CCT:	+/- 5%	+/-7.5%
CRI:	+/- 2%	+/-2.75%
x/y:	+/- 2%	+/-4.6%

Im/Watt: +/-3.4%

Measuring instruments in use:

Gonio 1

Type C with Moving mirror

Manufacturer: LMT Lichtmesstechnik GmbH Berlin, Helmholtzstrasse 9 10587 Berlin, Germany

Type: GO-DS 2000

Calibration: traceable to PTB (Physikalisch-Technische Bundesanstalt D-Braunschweig) and METAS (Federal Institute of Metrology, CH-Bern)

Photometric test distance: By default 10 meter, on request 30 meter.

Gonio 2

Type C

Manufacturer: Technoteam Bildverarbeitung, Werner-von-Siemens-Strasse 5 98693 Ilmenau, Germany

Calibration: traceable to BIPM (Bureau International des Poids et Mesures F-Sèvres)

Photometric test distance: Near Field

Sphere n*1

4p geometry

Manufacturer: LMT Lichtmesstechnik GmbH, Helmholtzstrasse 9 10587 Berlin, Germany

Type: UL2000 + U1000 V-Lambda photometer

Calibration: traceable to BIPM (Bureau International des Poids et Mesures F-Sèvres)

Sphere n*2

4p geometry

Manufacturer: Instrument Systems GmbH, Neumarkter Str. 83, 81673 Muenchen, Germany

Type ISP2000 + Spectroradiometer CAS120 and CAS140

Calibration: traceable to NIST

Colorimetric portable spectroradiometer

Manufacturer: JETI Technische Instrumente GmbH, Tatzendpromenade 2 07745 Jena

Type: SPECBOS 1201

Calibration: traceable to NIST

Multimeters

Manufacturer: Agilent

Type: 34401A

Calibration: traceable to BIPM (Bureau International des Poids et Mesures F-Sèvres)

Wattmeters

Manufacturer: Yokogawa

Type: WT210 and WT310

Calibration: traceable to BIPM (Bureau International des Poids et Mesures F-Sèvres)

Thermometers

Amarell Precision

Type: Liquid in glass N63833

Calibration: traceable to LBT (Laboratoire Belge de Thermométrie)

————— End of test report —————