



ETICS *European Testing Inspection and Certification System*

ETICS-CoA-002-2018

CERTIFICATE OF ACCEPTANCE

SGS Belgium N.V. - Division SGS CEBEC

Bld. Internationalelaan, 55/D, Brussels Belgium

has been assessed and determined to fully comply with the requirements of EN-ISO/IEC 17065, PD ECS 050 and the Rules of Procedure relevant to the European Schemes for which the responsible CB is member.

SGS Belgium N.V. – Division SGS CEBEC

is therefore entitled to operate as Certification Body within the European Schemes ENEC, ENEC+, CCA, CCA EMC, HAR and KMK for the Scope (Product Category(ies) and Standard(s)) as listed in the relevant part of the ETICS Web Site at

www.etics.org

This certificate remains valid until 15th January 2021, at which time it will be reissued by the ETICS Secretary General upon successful completion of the normally scheduled 3-year Reassessment Programme administered by the ETICS.

Brussels, 15 January 2018

Giancarlo Zappa, Secretary General





Signatory to EA, ILAC and IAF
Multilateral Agreements

Organisme belge d'Accréditation
Belgische Accreditatie-instelling
Belgian Accreditation Body

Annexe au certificat d'accréditation
Bijlage bij accreditatie-certificaat
Annex to the accreditation certificate
Beilage zur Akkreditierungszertifikat

226-TEST

NBN EN ISO/IEC 17025:2005

Version/Versie/Version/Fassung	7
Date d'émission / Uitgiftedatum / Issue date / Ausgabedatum:	2016-05-19
Date limite de validité / Geldigheidsdatum / Validity date / Gültigkeitsdatum:	2021-05-27

Nicole Meurée-Vanlaethem

La Présidente du Bureau d'Accréditation
Voorzitter van het Accreditatiebureau
Chair of the Accreditation Board
Vorsitzende des Akkreditierungsbüro

L'accréditation est délivrée à/ De accreditatie werd uitgereikt aan/
The accreditation is granted to/ Die akkreditierung wurde erteilt für:

LABORATOIRE DE PHOTOMETRIE DE R-TECH
Rue de Mons, 3
4000 LIEGE



Secrétariat :
Service public fédéral Economie,
P.M.E., Classes moyennes et Energie
Direction générale de la Qualité et de la Sécurité
Division Qualité et Innovation
Bd du Roi Albert II 16
1000 Bruxelles
Website : <http://economie.fgov.be>
Numéro d'entreprise : 0314.595.348

Accréditation BELAC Accreditation

Internet: <http://belac.fgov.be>
E-mail: Belac@economie.fgov.be

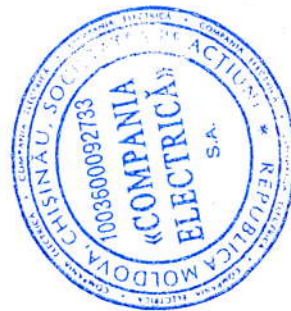
Secretariaat:
Federale Overheidsdienst Economie,
K.M.O., Middenstand en Energie
Algemene Directie Kwaliteit en Veiligheid
Afdeling Kwaliteit en Innovatie
Koning Albert II-jaan 16
1000 Brussel
Website: <http://economie.fgov.be>
Ondernemingsnummer: 0314.595.348

.be

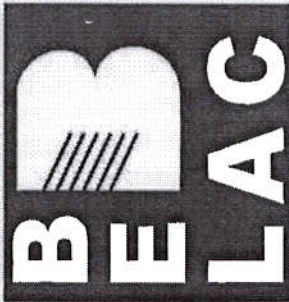
Code essai <i>Test Code</i>	Echantillons <i>Samples</i>	Caractéristique mesurée Gamme de mesure <i>Measurement Measurement range</i>	Description méthode d'essai Equipement <i>Testing Methodology Description Equipment</i>
PTP-01	Lampes à incandescence ou à décharge pour luminaires. <i>Incandescent or high intensity discharge lamp for luminaires.</i>	Flux lumineux exprimé en lumen (lm) <i>Luminous flux in lumen (lm)</i>	Mesure du flux lumineux en sphère d'Ulbricht selon la norme de référence EN 13032-1§ 6.1.2. Pour toutes lampes sauf les LED (Solid State Lighting) <i>Luminous flux measurement with Ulbricht's sphere according to EN 13032 § 6.1.2 Standard for all light sources except LED (Solid State Lighting)</i>
PTP-01	Sources lumineuses de type LED pour luminaires. <i>Led light source for luminaires.</i>	Flux lumineux exprimé en lumen (lm) <i>Luminous flux in lumen (lm)</i>	Mesure du flux lumineux en sphère d'Ulbricht selon la norme de référence EN 13032-1§ 6.1.2 et IES LM79-08. Pour LEDs (Solid State Lighting) <i>Luminous flux measurement with Ulbricht's sphere according to EN 13032 § 6.1.2 and IES LM79-08 Standard. For LED (Solid State Lighting)</i>
PTP-02	Luminaires pour lampes à incandescence ou à décharge <i>Luminaires for incandescent, HID lamp</i>	Distribution des intensités lumineuses exprimées en candela (cd) <i>Light distribution in candela (cd)</i>	Relevé photométrique au goniophotomètre selon la norme de référence EN 13032-1 et CIE 121-1996 Pour toutes lampes sauf les LED (Solid State Lighting) <i>Light distribution measurement with goni according to EN 13032-1 and CIE 121-1996 Standard for all light sources except LED (Solid State Lighting)</i>
PTP-02	Luminaires à sources lumineuses de type LED pour luminaires. <i>Luminaires for LED light sources.</i>	Distribution des intensités lumineuses exprimées en candela (cd) <i>Light distribution in candela (cd)</i>	Relevé photométrique au goniophotomètre selon la norme de référence EN 13032-1, CIE 121-1996 et IES LM79-08 Pour les LED (Solid State Lighting) <i>Light distribution measurement with goni according to EN 13032-1, CIE 121-1996 and IES LM79-08 Standard for LED (Solid State Lighting)</i>



Code essai Test Code	Echantillons Samples	Caractéristique mesurée Gamme de mesure Measurement range	Description méthode d'essai Equipment Testing Methodology Description Equipment
PTP-09	Lampes à incandescence ou à décharge pour luminaires ou luminaires associés. <i>Incandescent or high intensity discharge lamp for luminaires or associated luminaires.</i>	Données colorimétriques : IRC, T° de couleur, coordonnées trichromatiques, données spectrales (domaine du visible) <i>Colorimetric values, CRI, CCT, tristimulus values, spectrum (visible range)</i>	Relevé colorimétrique en sphère via spectromètre selon la norme de référence EN 13032-1 et CIE 13.3, 15, 63, 121-1996 S014 (1,2 et 3) Pour équipements lumineux sauf ceux incluant des LED (Solid State Lighting) <i>Colorimetric measurement with spectrometric sphere to EN 13032-1 and CIE 13.3, 15, 63, 121-1996 S014 (1,2 et 3) Standard for all light equipment except LED (Solid State Lighting)</i>
PTP-09	Sources lumineuses de type LED pour luminaires ou luminaires associés. <i>Led light source for luminaires or associated luminaires.</i>	Données colorimétriques : IRC, T° de couleur, coordonnées trichromatiques, données spectrales (domaine du visible) <i>Colorimetric values, CRI, CCT, tristimulus values, spectrum (visible range)</i>	Relevé colorimétrique en sphère et spectromètre selon la norme de référence EN 13032-1 et CIE 13.3, 15, 63, 121-1996 S014 (1,2 et 3) et IES LM79-08 pour équipements lumineux à LED (Solid State Lighting) <i>Colorimetric measurement with spectrometric sphere according to EN 13032-1 et CIE 13.3, 15, 63, 121-1996 S014 (1,2 et 3) and IES LM79-08 Standard. For LED light equipment (Solid State Lighting)</i>



Chibici



Organisme belge d'Accréditation
 Belgische Accreditatieinstelling
 Belgische Akkreditierungsstelle
 Belgian Accreditation Body

Signatory to EA, ILAC and IAF
 Multilateral Agreements

Accreditation Certificate No. 226-TEST

In compliance with the provisions of the Royal Decree of 31 January 2006 setting up BELAC, the Accreditation Board hereby declares, that the test laboratory

LABORATOIRE DE PHOTOMETRIE DE R-TECH
Rue de Mons, 3
4000 LIEGE - Belgium

has the competence to perform the tests as described in the annex which is an integral part of the present certificate, in accordance with the requirements of the standard NBN EN ISO/IEC 17025:2005. The present accreditation is the subject of regular surveillance in order to confirm the compliance with the accreditation conditions.

The Chair of the Accreditation Board BELAC,

Issue date : 2016-05-19

Validity date : 2021-05-27

Original version of this certificate is in French.



Mons
 .be

Nicole MEURÉE-VANLAETHEM

SUPERVISED MANUFACTURER'S TESTING

Report nr. CEBEC-002B

SGS Belgium NV

Division SGS CEBEC

Business Riverside Park
Bld Internationalaalaan, 55 Build. D
B-1070 Brussels - Belgium

Acting as national Certification Body participation in the Certification Bodies Scheme (CB Scheme) and the European Certification System (ECS) has recognized the following laboratory as

SMT laboratory nr. CEBEC-002

Operating in the framework of the IECEE CB-scheme and ECS certification system (CCA and ENEC).

Approved laboratory, name and address:

Service Laboratoire
R-TECH S.A.
Rue de Mons, 3
BE-4000 LIEGE

Manufacturing factories:

European Factories
Belonging to the
Schröder Group G.I.E.

Products covered by the contract:

<u>Category</u>	<u>Standards</u>	<u>Products</u>
LITE	IEC/EN 60598-1 IEC/EN 60598-2-1 IEC/EN 60598-2-3 IEC/EN 60598-2-5 IEC/EN 60598-2-13	Luminaires Fixed general purpose luminaires Luminaires for road and street lighting Floodlights Ground recessed luminaires



Brussels, 2013-02-01

C. Lana
ir. C. Lana,
Certification Manager



BUREAU VERITAS
Certification



TUNGSRAM-SCHRÉDER ZRT.

2084 Pilisszentiván, Tópart 2., Hungary

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

Design, manufacturing, sales of lighting fittings, their supporting structures and street furnitures

Original cycle start date	27 June 2015		
Expiry date of previous cycle	26 June 2018		
Certification / Recertification Audit date:	9 June 2018		
Certification / Recertification cycle start date:	27 June 2018		
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	26 June 2021		
Certificate No. HU003979	Version 1	Revision date:	26 June 2018

Certification body address: 5th Floor, 65 Prescott Street, London E1 6HG, United Kingdom
Local office: Budafoki út 56., H-1117 Budapest, Hungary

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call: +36 1 802 8900

Page 1 of 1



BUREAU VERITAS
Certification



Certification

Awarded to

TUNGSRAM-Schröder Zrt.

H-2048 Pilisszentiván, Tópart 2.
Hungary

Bureau Veritas certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below:

Standard

OHSAS 18001:2007

Scope of supply

Design, manufacturing, sales of lighting fittings, their supporting structures and street furnitures

Original Approval Date: 22nd July 2015

Certification cycle start Date: 22nd July 2018

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: 21st July 2021

To check this certificate validity please call: + 36 1 802 6900

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.

Version 1, Revision/Date: 12th July 2018

Certificate Number: CZE-180109



MANAGING OFFICE: BUREAU VERITAS CERTIFICATION, spol. s r.o., Okružní 5, 200 02 Tušimice, Czech Republic
ISSUING OFFICE ADDRESS: BUREAU VERITAS CERTIFICATION, spol. s r.o., Okružní 5, 200 02 Tušimice, Czech Republic



SGS

TESTARE SUPERVIZATĂ DE PRODUCĂTOR

Raport nr. CEBEC-002B

SGS Belgia NV

Divizia SGS CEBEC

Business Riverside Park
Bld Internationaalelaan, 55 Build. D
B-1070 Brussels - Belgium

Activând ca și Organism National de Certificare participare la Sistemul de Organisme de Certificare (CB Scheme) și Sistemul de certificare European (ECS), se recunoaște următorul laborator ca

SMT laboratory nr.CEBEC-002

operând în conformitate cu prescripțiile de certificare IEC/EN CB și sistemul de certificare ECS (CCA și ENEC).

Laborator aprobat, nume și adresă:

**Service laboratoire
R-TECH S.A.
Rue de Mons, 3
B-4000 LIEGE**

Fabricile producătorului:

**Fabrici Europene
aparținând
Schreder Group G.I.E.**

Produse menționate în contract:

Categorie	Standarde	Produse
LITE	IEC/EN 60598-1	Aparate de iluminat
	IEC/EN 60598-2-1	Aparate de iluminat de uz general
	IEC/EN 60598-2-3	Aparate de iluminat stradal
	IEC/EN 60598-2-5	Proiectoare
	IEC/EN 60598-2-5	Aparate de iluminat încastrate în sol

Brussels, 2013-02-01

SGS Belgium NV
CEBEC



ir. C. Lana,
Director de Certificare

C. Lana

BUREAU VERITAS
Certification



Schreder TOV

46B, Mykulynetska Str., Ternopil, 46005, Ukraine

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015


Scope of certification

Manufacturing and sales of lighting equipment.

Original cycle start date:	05 November 2010
Expiry date of previous cycle:	04 November 2019
Certification / Recertification Audit date:	20 September 2019
Certification / Recertification cycle start date:	05 November 2019

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **04 November 2022**

Certificate No. **UA229416** Version: **0** Revision date: **30 September 2019**



Olena Svrydenko
Signed on behalf of BVCH SAS UK Branch



Certification body address: 5th Floor, 66 Prescott Street, London E1 8HG, United Kingdom
Local office: 5th floor, 28, Simon Petlyura St., Kyiv, 01032, UKRAINE

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation
To check this certificate validity please call: +380 44 354 16 00



BUREAU VERITAS
Certification



TUNGSRAM-SCHRÉDER ZRT.

2084 Pilisszentiván, Tópart 2., Magyarország

A Bureau Veritas Certification Holding SAS – UK Branch tanúsítja, hogy a fenti szervezet irányítási rendszerét értékelte és az alább feltüntetett irányítási rendszer szabvány követelményeinek megfelelőnek találta

ISO 14001:2015

A tanúsított rendszer alkalmazási területe

Lámpatestek, tartószerkezetek és utcabútorok tervezése, gyártása és értékesítése

Erőforrás regisztráció dátuma	2015. június 27.	
Előző ciklus lejárati ideje	2018. június 26.	
Tanúsító / Újratanúsító audit időpontja	2018. június 9.	
Tanúsítási ciklus kezdete	2018. június 27.	
Az irányítási rendszer folyamatos megfelelő működése mellett ez a tanúsítvány érvényes	2021. június 26.	
Tanúsítvány száma: HU003981	Verzió: 1	dátum: 2018. június 26

Nikola Zolt

Tanúsító szervezet címe: 5th Floor, 66 Prescott Street, London E1 6HG, United Kingdom
Kiadóroda: Bureau Veritas Magyarország Kft., Budafoki út 56., Budapest H-1117, Magyarország

Amennyiben további információra lenne szüksége a tanúsítvány alkalmazási területét, illetve érvényességét illetően a tanúsító szervezetnél további információhoz juthat. A tanúsítvány érvényességét a következő telefonszámon ellenőrizheti: +36 1 802 6900

1/1



Mou



Certificate of Registration

This certificate has been awarded to

TOV SCHREDER

46005, Ukraine, Ternopil, Mykulynetska str., 46b

in recognition of the organization's Environmental Management System which complies with

ISO 14001:2015

The scope of activities covered by this certificate is defined below

Manufacture and Sale of Luminaires



Certificate Number:
203368/B/0001/UK/En

Date of Issue: (Original)
06 September 2019

Date of Issue:
06 September 2019

Issue No:

Expiry Date:

05 September 2022

Issued by:

On behalf of the Schemes Manager





Certificate of Registration

This certificate has been awarded to

TOV SCHREDER

46005, Ukraine, Ternopil, Mykulynetska str., 46b

in recognition of the organization's Health and Safety Management System which complies with

OHSAS 18001:2007

The scope of activities covered by this certificate is defined below

Manufacture and Sale of Luminaires



Certificate Number:

203368/B/0001/UK/En

Date of Issue: (Original)

06 September 2019

Date of Issue:

06 September 2019

Issue No:

1

Expiry Date:

12 March 2021

Issued by:

On behalf of the Schemes Manager



Schröder

Experts in lightability™

F_8.2.4 DC-CE-02

DECLARATIE DE CONFORMITATE - CE

Noi, SCHRÉDER ROMANIA S.R.L., cu sediul în Cluj - Napoca, str. Corneliu Coposu nr. 167a, Jud. Cluj, România, înregistrată la Registrul Comerțului cu nr. J12/1759/1998, membră a SCHRÉDER GROUP GIE, în calitate de producători de aparate de iluminat marca SCHRÉDER

Declarăm pe propria răspundere că aparatul de iluminat: **SKIDO LED**

Echipare:

6 LED-uri de Mare Putere (High Power LED) monocromatic

Caracteristici principale:

Balast: Electronic

Etanșeitate compartiment optic: IP 65

Etanșeitate compartiment aparataj: IP 65

Tensiune nominală: 230 V – 50 Hz

Clasa electrică: I

Tipul laboratorului de testare: SMT (Supervised Manufacturer's Testing)

este produs în conformitate cu următoarele standarde:

CEI EN 60598-1 – 2005/05 (CEI 34-21 VIII ed.)

CEI EN 60598-2-1 – 1997/10 (CEI 34-23 II ed.)

CEI EN 60598-2-3 – 2003/10 (CEI 34-33 II ed.)

De asemenea acesta este în conformitate și cu standardele:

CEI EN 55015 – 2008/04 (CEI 110-2 VI ed.)

CEI EN 61000-3-2 – 2007/04 (CEI 110-31 IV ed.)

CEI EN 61000-3-3/A1 – 2002/05 (CEI 110-28;V1)

CEI EN 61000-3-3 – 1997/06 (CEI 110-28 I ed.)

CEI EN 61547 – 1996/07 (CEI 34-75)

CEI EN 61547/A1 – 2001/08 (CEI 34-75;V1)

Data aplicării marcajului CE: 14

Produsul este realizat în conformitate cu directivele 2006/95/CE – Joasă Tensiune, 2002/95/CE - RoHS și 2002/96/CE – DEEE.

SCHRÉDER ROMANIA S.R.L.
Director Comercial,
Ovidiu GROZA



Eliberat,
Aprilie 2019, Cluj-Napoca



Lumen maintenance report

LED information

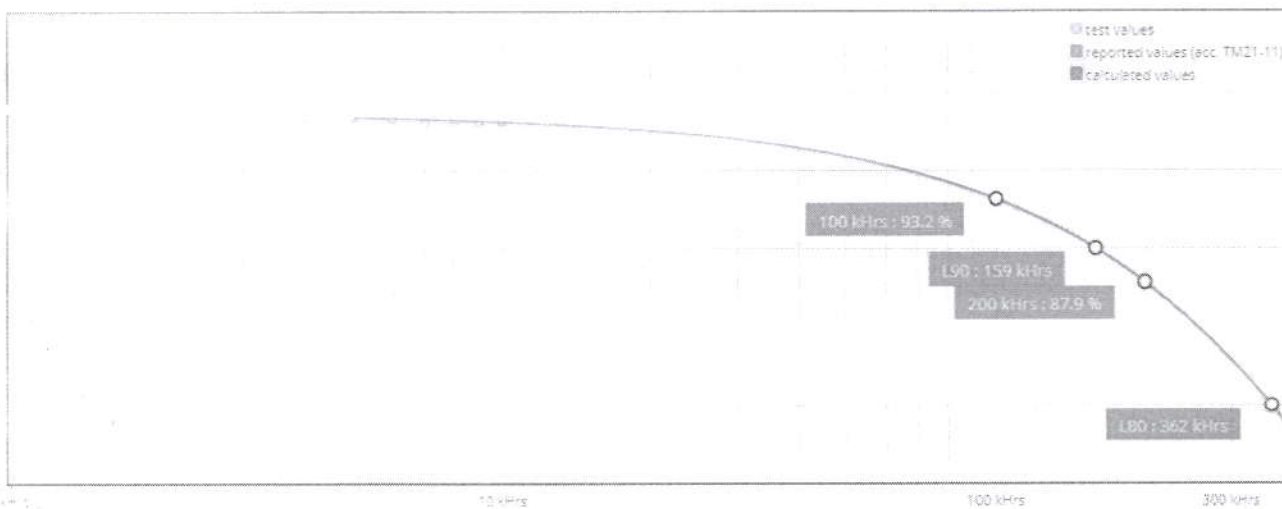
LED type LH351C
LED current 1000 mA
Ts 55°C
Description SLED-19-031

Projection data

Test duration 10000 hrs α 5.811E-007
Time used for projection 5000 to 10000hrs β 0.987

L (%)	Time (kHrs)
80.0	362
87.9	200
90.0	159
93.2	100

Projection graphic



LxB50 results according to LM-80 and TM-21-11 procedures and norms.

LxBy results derived from LxB50 according to IEC 62717 Annex C.



Laboratory Service PHYSICAL TEST REPORT



R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schröder Group

Subject: SKIDO 6 led's @ 1,05 A - class I protection

Sample n°: P-E15329

Test purpose: EMC tests according to EN 55015 & EN 61547 Standards

Remarks:

Test request n°: P-D15613

Folder n°: P-F14083

TEST CONDITIONS:

Operator: EMC - ULg

Test Summary

EN 55015 & EN 61547 Standards

Emission

Standard	Limit / Level	Result	
		PASS	FAIL
EN 55015 Conducted Emission 9kHz- 30 MHz		X	
EN 55015 Annex B 30 MHz – 300 MHz		X	

Immunity

Standard	Limit / Level	Result	
		PASS	FAIL
EN 61000-4-5	0.5 to 4 kV M.D. & M.C. Criteria B required	X	

Driver: Mean-Well PLD-25-1050 @ 1050mA

EMC Auxiliaries: Varistor

CONCLUSIONS:

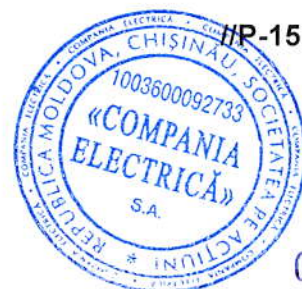
SKIDO 6 led's driven @ 1.05A by Mean Well PLD-25-1050 driver complies with the CISPR/EN 55015 and EN 61547 Standards.

Remark: Surge protection tested OK up to 4 KV for both Common and Differential modes (Max ULg facilities)

Duplicate to: Mr M. Thijs

LAB 16/09/2015

L. Maghe



LED Flux measurement

FORM-L-41 ED1 REV 2

Date : 16-01-19

Operator : FCE

Filename : 2019_53.xml



226 - TEST

NBN EN ISO/IEC 17025 : 2005

LEDs

Trademark : Samsung

Entry number : 39R004-3

Type : LH351C

Power (Catalogue) : 0,00 W

BIN Description : 40-70M-4-TB-RB

Flux : 0 lm/LED

Part number : Unknown

Color or CCT (Theoretical) : NW

Number of LEDs : 6

Lenses

Trademark : None

Type : None

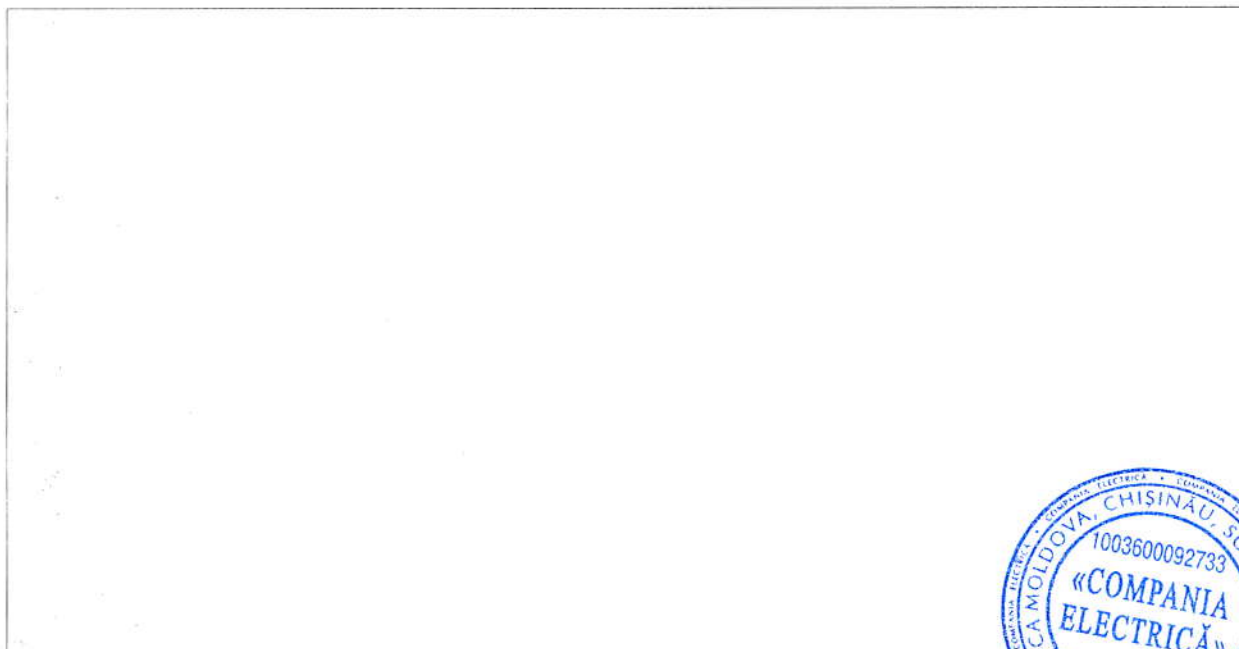
Power & Print

Type : DELTA SM400-AR-4

Print description : 00-71-626 A - Voltana 0

Active

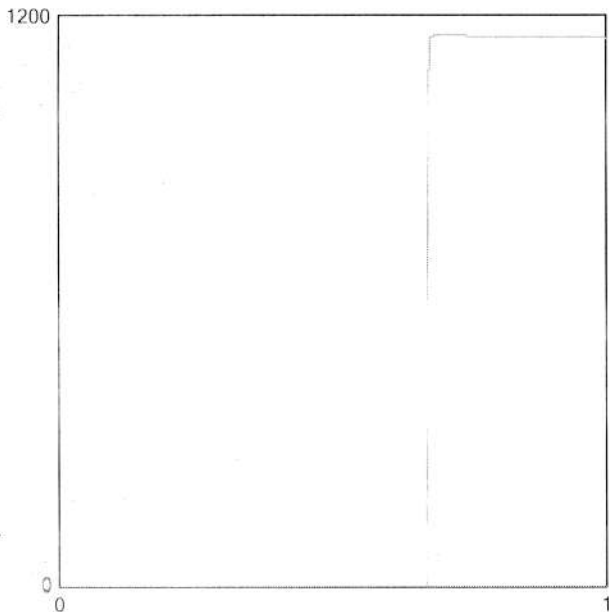
Picture



Albeni

Sphere photometric measurement

Maximum flux : lumens



Operating condition

Position in sphere :

Ambient sphere T ° : 24,6

Electrical measurement

● Secondary electrical measurement

Voltage : 16,80 V

Current : 0,350 A

Power : 5,87 Watt

→ LEDs light efficiency at 25° :

197,6 lm/W

193,5 lm/Led

● Primary electrical measurement

Voltage : N/A V

Current : N/A A

Power : N/A Watt

Cos φ : N/A

→ Driver losses : N/A %

→ LEDS & Driver light efficiency :

N/A lm/W

Description :

Flux @25°/350mA - pcb Voltana 0 - 6 Samsung LH351C - pcb N°3

Comment :

FORM-L-41 ED1 REV 2



226 - TEST

Approved by :

Lumen maintenance report

LED information

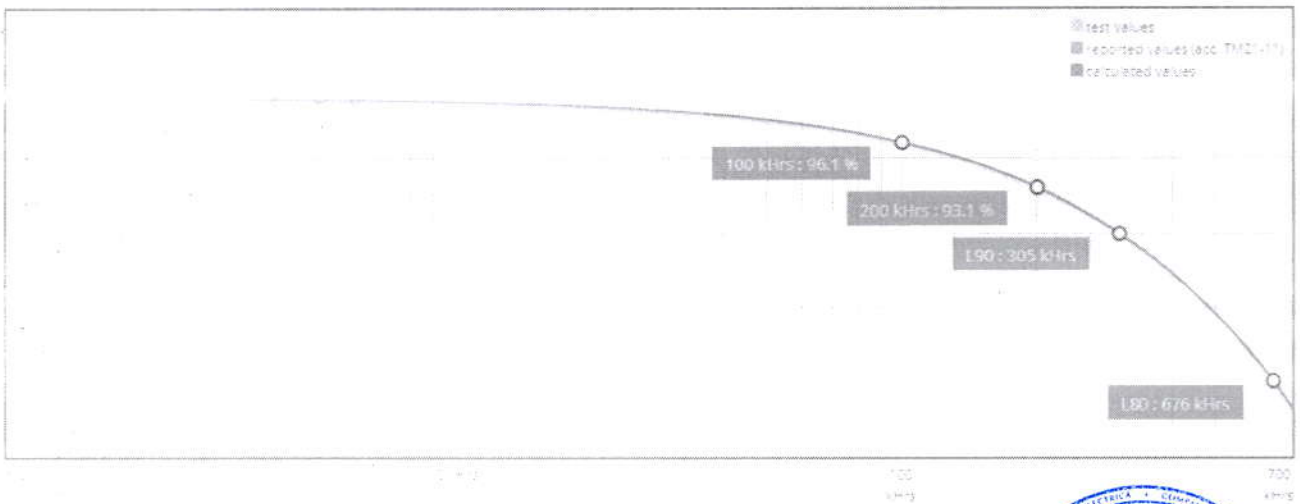
LED type LH351C
 LED current 700 mA
 Ts 55°C
 Description SLED-18-015

Projection data

Test duration 6000 hrs α 3.172E-007
 Time used for projection 1000 to 6000hrs β 0.992

L (%)	Time (kHrs)
80.0	677
90.0	305
93.1	200
96.1	100

Projection graphic



LxB50 results according to LM-80 and TM-21-11 procedures and norms.

LxB_y results derived from LxB50 according to IEC 62717 Annex C.



Adm.

SGS

LICENCE

No. 21158 - Issue No 2

Issued to:
Applicant:
R-Tech
Rue de Mons, 3
4000 LIEGE
Belgium

Licensee:
Schreder S.A.
Rue de Lusambo, 67
1190 BRUXELLES
Belgium



Product : road, square and street lighting
Trade name(s) : SCHREDER
Type(s)/model(s) : SKIDO

The product and any acceptable variation thereto is specified in the annex to this licence and the documents therein referred to.

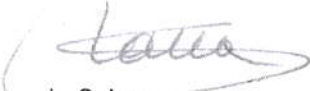
SGS CEBEC hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard specified in annex
- an inspection of the production location
- a certification agreement with the number 1173

SGS CEBEC hereby grants the right to use the CEBEC certification mark

The ENEC/CEBEC certification mark may be applied to the product as specified in this licence for the duration of the ENEC/CEBEC certification agreement and under the conditions of the ENEC/CEBEC certification agreement.

This licence is issued on: 23/04/2019


ir. C. Lana,
Certification Manager



© Only integral publication of this certificate, including the annex, is allowed
This certificate is only valid combined with the publication on the following web address: www.sgs.com/ee



SGS Belgium NV-Division SGS CEBEC
Business Riverside Park
Bld Internationalelaan 55 Build. D
B-1070 Brussels
Tel.+32(0)2 556 00 20 Fax.+32(0)2 556 00 36

This certificate is issued by the company under its General Conditions for Certification Services accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitations of liability defined therein and in the Test Report herein mentioned which findings are reflected in this Certificate. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product : road, square and street lighting
 Trade name(s) : SCHREDER
 Type(s)/Model(s) : SKIDO
 description : Street lighting luminaire
 rated voltage (Un) : 220-240 V
 nature of supply : AC
 rated frequency : 50-60 Hz
 rated power : max 24 W
 temperature limit (t max) : Ta 40°C (indoor), Ta 50°C (outdoor)
 class : class I
 degree of protection : IP65
 mechanical load : IK08
 rated current (In) : max. 1000 mA
 lamp(s) : LED Nichia 219C, LG G4TOP, SAMSUNG LH351C

TESTS

Test requirements

EN 60598-1:2015 + A1:2018
 EN 60598-2-3:2003 + A1:2011

Test results

The test results are laid down in certification file 630020/02.

Remarks

This certificate is based on test reports Nos. TGM-VA EE 36464 SFT-1 and P1533-I.



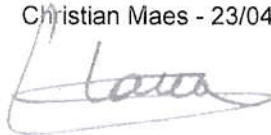
Albin

Conclusion

The examination proved that all certification requirements were met.

Reviewed by, project leader : Christian Maes - 23/04/2019

Certification Manager :

 2019-04-23





FACTORY LOCATION(S)

Schreder TOV
 Vul. Mykulynetska 46B
 46000 TERNOPIIL
 Ukraine

Schreder (China) Lighting Industrial Co., Ltd
 No.40 Xinye 2 Street, Tianjin Economic Technological Development Zone West Zone,
 300462 Tianjin City, P.R.China
 China

Socelec S.A.
 Av. de Roanne, 66
 Poligono Industrial "EL HENARES"
 19180 MARCHAMALO (GUADALAJARA)
 Spain

Schröder Iluminação S.A.
 Rua da Fraternidade Operária, nº 3
 2795-491 CARNAXIDE, OEIRAS
 Portugal

Comatelec S.A.
 Z.I.
 18400 SAINT FLORENT S/CHER
 France

Schröder Hungary Plc.
 Tópart 2
 2084 PILISSZENTIVAN
 Hungary



Laboratory Service PHYSICAL TEST REPORT



R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schröder Group

Subject: SKIDO 6 led's

Sample n°: P-E15365

Test purpose: Electrical measurements @ 1.05A and 700mA

Remarks:

Test request n°: P-D15545

Folder n°: P-F14083

TEST CONDITIONS:

Operator: CLOSSET Frédéric

Driver: 1.05A: Mean Well PLD-25-1050
700mA: Mean Well PLD-16-700

Load: 6 Led's CW 5700K
Typical Vf: @ 1.05 A: 3,00 V
@ 700 mA: 2,91 V

Power Supply:

Elgar Tw 3500-4

Supply voltage: 230 V 50 Hz

Measurement device:

Fluke Norma 4000 (HF Powermeter, User 10, filter OFF)

CONCLUSIONS:

@ 1.05A:

- Efficiency: 81 %
- PF: 0.96
- THD: 12.7%

@ 700 mA

- Efficiency: 83%
- PF: 0.97
- THD: 13.2%

Duplicate to: Mr M. Thijs
LAB 20/07/2015
L. Maghe



IP-15CR545

Page 1 of 1

Laboratory Service PHYSICAL TEST REPORT



R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schröder Group

Subject: I.S. SKIDO (hand mounted by HUS)

Sample n°: P-E13088

From: HUS

Test purpose: Mechanical impact resistance test following IEC/EN 62262 Standard

Remarks:

Test request n°: P-D13182

Folder n°: P-F13034

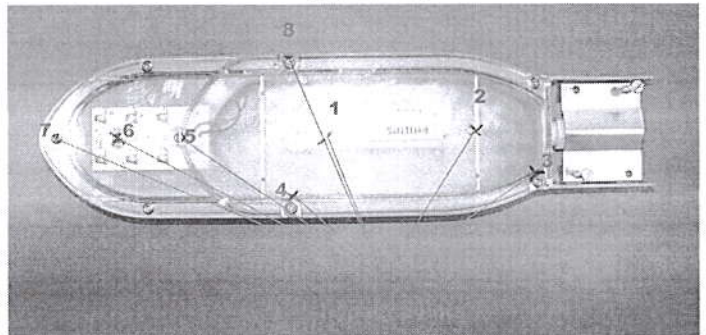
TEST CONDITIONS:

Operator: BOMBIL Patrick

I.S. Skido with PC protector
Info material not received

At pendulum hammer

5+3 impact points distributed on protector surface
One impact on each point



Test

IK05 : Impact energy: 0,7 joules
Hammer weight: 0,2 kg
Height of fall: 35 cm

Result

OK, nothing to indicate

IK06 : Impact energy: 1 joule
Hammer weight: 0,5 kg
Height of fall: 22 cm

OK, nothing to indicate

IK07 : Impact energy: 2 joule
Hammer weight: 0,5 kg
Height of fall: 40 cm

OK, nothing to indicate

IK08 : Impact energy: 5 joules
Hammer weight: 1,7 kg
Height of fall: 29,4 cm

OK for the protector, but a deformation of the alu sheet clamp allows the release of the fitting.
See pictures here after.

CONCLUSIONS:

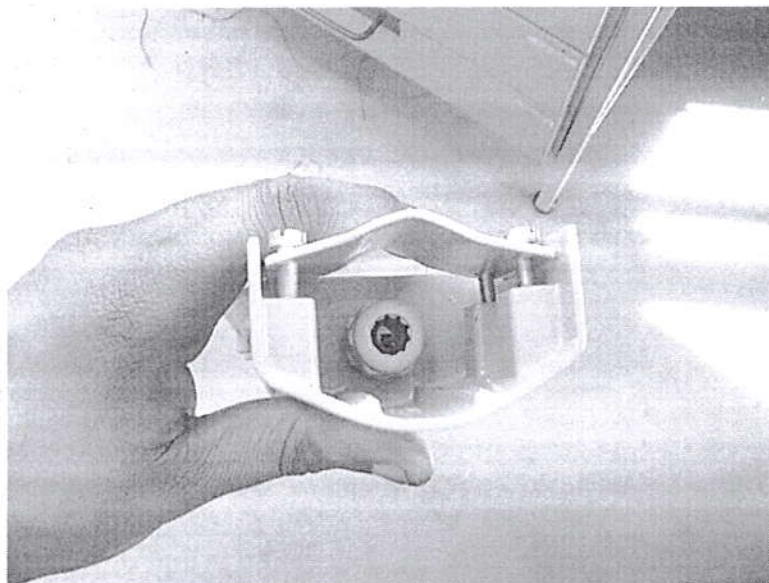
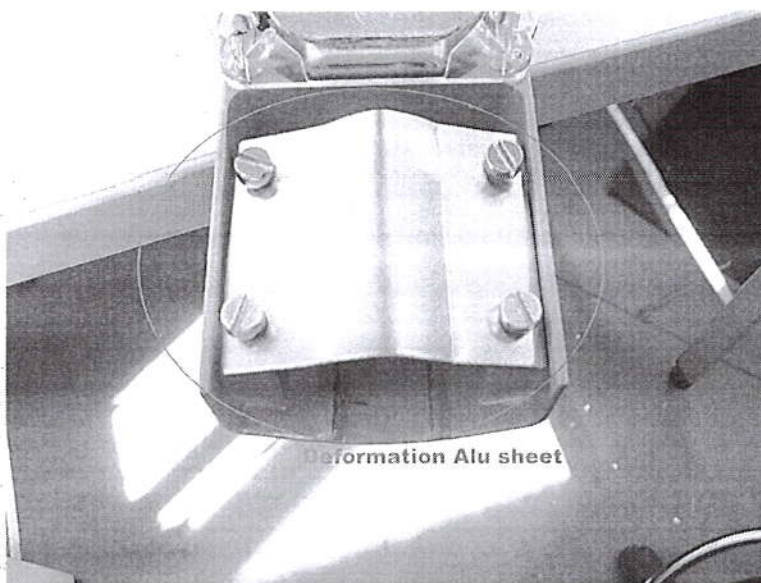
SKIDO satisfies the IK07 test in accordance with IEC/EN 62262 Standard.

Duplicate to: MM C. Horvath, C. Marville, Y. Borlez
LAB 19/04/2013
J.P. Harchies



P-13E182

I.S. SKIDO (hand made by HUS)



Laboratory Service PHYSICAL TEST REPORT



R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schröder Group

Subject: Serial 0 SKIDO 6 led's Nichia @ 700 mA

Sample n°: P-F13112

From: INK

Test purpose: Tightness test IP65 following IEC/EN 60598-1 Standard

Remarks:

Test request n°: P-D13207

Folder n°: P-F13045

TEST CONDITIONS:

Operator: BOMBIL Patrick

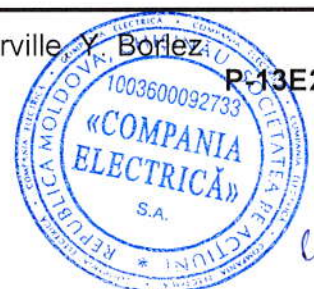
Test	Result
IP6X : -Luminaire switched ON until stable T° -Talcum n suspension (blowing ON) -After 1', luminaire OFF -Talcum for 3 hours	OK
IPX5 : - Luminaire switched ON until stable T° - Luminaire switched OFF and immediately sprayed with water jet - Hose Φ 6,3 mm - Water pressure: 300 gr/cm ² - Spraying distance: 3 m - Test duration: 15 minutes	OK

Remark: Silicone gasket remains strongly marked even after a long time the protector removed.

CONCLUSIONS:

SKIDO 6 led's @ 700 mA satisfies the IP65 test following IEC/EN 60598-1 Standard

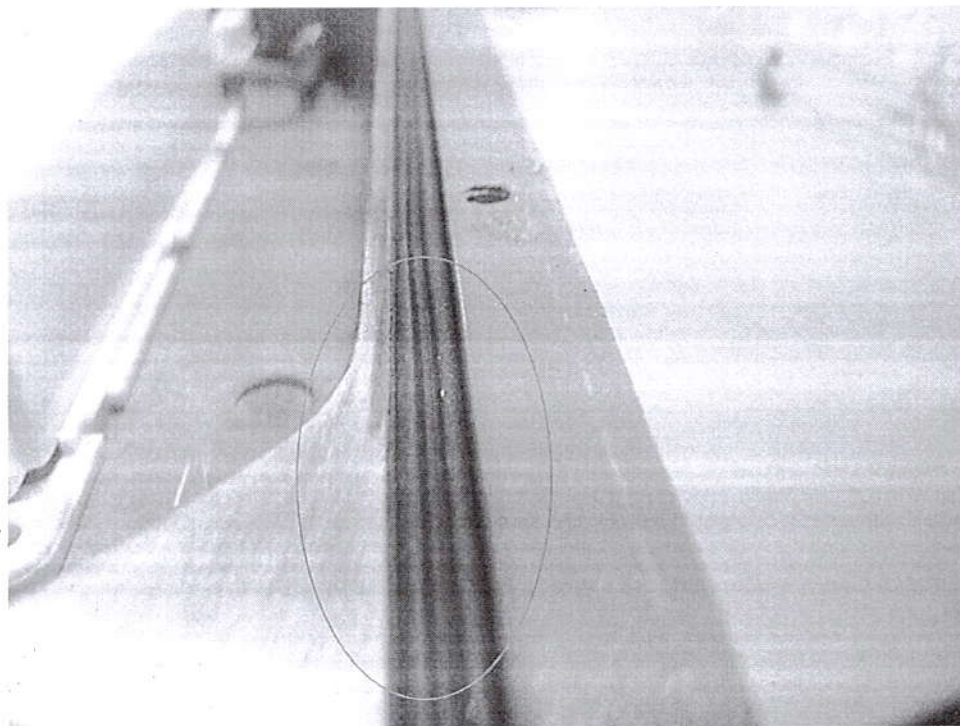
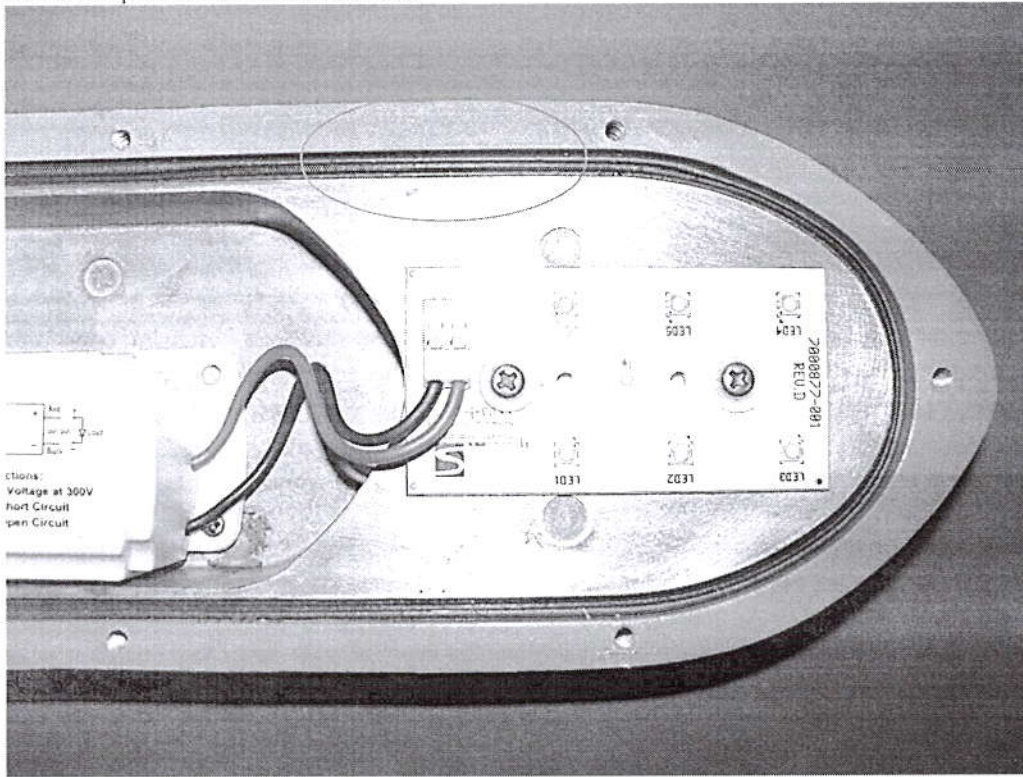
Duplicate to: MM C. Faujdar, P. Shah, S. Pujari, C. Horvath, C. Marville
LAB 14/05/2013
J.P. Harchies



R-13E207

Serial 0 SKIDO 6 led's Nichia @ 700 mA

Gasket aspect after endurance test



Laboratory Service PHYSICAL TEST REPORT



R-Tech
Rue de Mons 3 – B-4000 Liège – Belgium
Tel.: +32 4 224 71 40 – Fax: +32 4 224 25 90
Member of Schröder Group

Subject: SKIDO 6 led's

Sample n°: P-E15365

Test purpose: Thermal test evaluation @ 1.05A and 700mA following IEC/EN 60598-1 Std

Remarks:

Test request n°: P-D15544

Folder n°: P-F14083

TEST CONDITIONS:

Operator: CLOSSET Frédéric

Load: 6 led's

Driver: Test 1A: Mean Well PLD-25-1050

Test 700mA: Mean Well PLD-16-700

Tc 70 °C

Measurement device:

Yokogawa TX10: thermal measurement

Yokogawa WT 210: primary EM

Fluke 87: secondary and led's EM

Junction Temperature measurement method

Junction temperature measurement by base temperature measurement and electrical measurement.

$$T^{\circ}_j = T^{\circ}_b + R_{jb} \times P_{led}$$

CONCLUSIONS:

@ 1.05A: Ta (IEC): 35 °C

Tq (IEC): 25 °C

@ 700 mA: Ta (CEI): 50 °C

Tq (CEI): 40 °C

Tq given for driver full load

T° given without wind effect to comply with IEC 62722-2-1



Duplicate to: Mr M. Thijs

LAB 01/07/2015

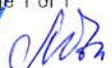
L. Maghe



TEST REPORT SUMMARY

Report Reference No.....	TGM-VA EE 36464 ECS
Date of issue.....	2016-01-21
Tested by (name + signature).....	Ing. J. Noori 
Witnessed by (name + signature).....	
Approved by (name + signature).....	Mag. Thomas THUN 
Supervised by (name + signature).....	
Testing Laboratory.....	Staatliche Versuchsanstalt – TGM / Elektrotechnik und Elektronik
Address.....	A-1200 Wien, Wexstrasse 19-23
Testing procedure.....	<input checked="" type="checkbox"/> ENEC/CCA-TL <input type="checkbox"/> IEC/IEC-CBTL <input type="checkbox"/> TMP <input type="checkbox"/> WMT <input type="checkbox"/> SMT
Testing location.....	As above
Address.....	
Applicant.....	Schröder SA
Address.....	1190 Brussels , Belgium , Rue de Lusambo 67
Manufacturer.....	Tungsrám-Schröder Világítási Berendezések Zrt Tópart 2
Address.....	2084 Pilisszentivan HUNGARY
Product.....	Luminaire for road and street lighting
Model/Type reference.....	SKIDO
Trademark.....	Schröder SA
Ratings.....	100-240V, 50/60Hz, Cl.I, IP65, IK08, Ta 50°C
Certification Scheme.....	<input checked="" type="checkbox"/> ENEC <input type="checkbox"/> CCA <input type="checkbox"/> Other: _____
Standard(s).....	EN 60598-2-3: 2003+A1:2011 used in conjunction with EN 60598-1:2015
<input type="checkbox"/> The text of the a.m. European Standard was approved by CENELEC under the Unique Acceptance Procedure and is identical with the corresponding IEC Publication. <input checked="" type="checkbox"/> The text of the a.m. European Standard was approved by CENELEC with agreed common modifications and is <u>not</u> identical with the corresponding IEC Publication.	
This EN test report consists of the following parts:	
<input checked="" type="checkbox"/> IEC TRF No. IEC60598_2_3J.....	Report Reference No..... TGM-VA EE 36464 SFT-1
<input checked="" type="checkbox"/> CENELEC-Addendum Form No. EU_GD_ IEC60598_2_3J.....	Report Reference No. or Annex No...: See Test Report TGM-VA EE 36464 SFT-1
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This ECS document together with the test report is only valid if signed by an approved ENEC or CCA Testing Laboratory and accompanied by the associated ENEC Licence or CCA Notification of Test Results, issued by a Certification Body member of ECS.	





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 R-Tech	Production Schröder TOV	Luminaire SKIDO	Inclination 0°	Request # FD39062
Type LED	BIN 40-70M-4-TB-RB	Trademark Samsung	Reference LH351C	# LEDs 6
Master	Reflector Schröder TOV-Ukraine Led assembly Road lighting Assembled 0,0°			No 5122
Protector Refractor Lens				
Protector	integrated lenses			
Lens	Schröder 5122 PC			
Laboratory observation				
SKIDO fitted with 6 Samsung LH351C Used flux for efficient matrix calculation, measured in sphere @350mA / 25°C: 1161 lm - CCT= 3872K - CRI= 72,29 (see sphere test report 2019/53 on appendix)				
Purpose	DOC	Sample date 08-01-2019	Sample # 39R004	
Observation				
DOC Skido with optic 5122				
Flux coefficient multiplicator (only for efficiency matrix): From 350 to 700 mA : 1,842 From 350 to 1050 mA : 2,562				
Fixture powered with DC power supply from the lab for matrix @350mA Fixture powered wit driver MeanWell PLD-16-700B for matrix @700mA Fixture powered wit driver MeanWell PLD-25-1050 for matrix @1050mA				
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.				



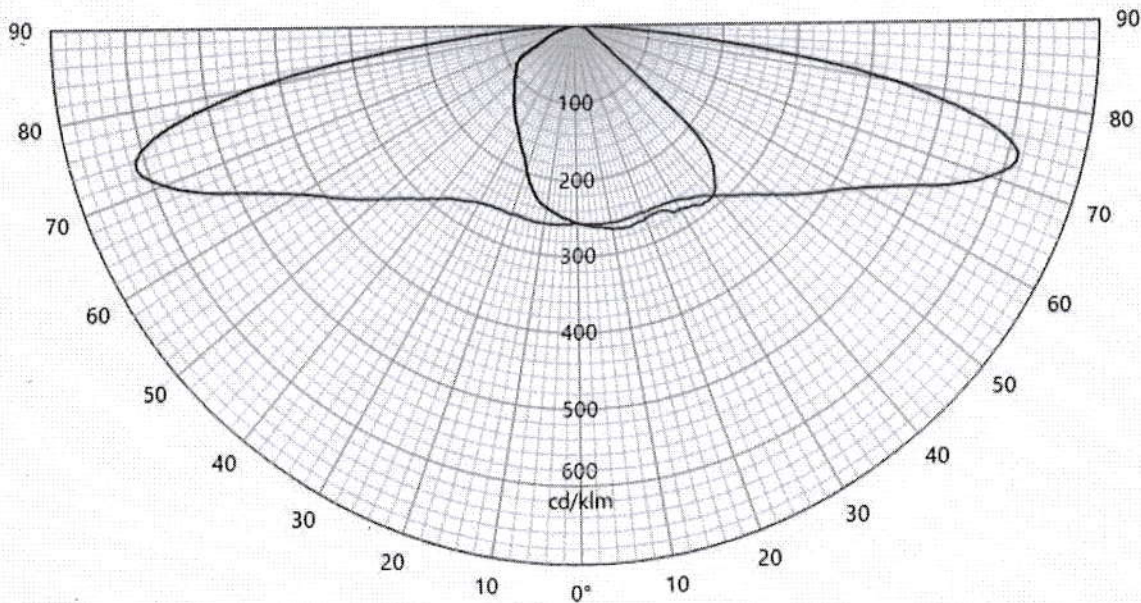
Handwritten signature

Asked by GGS	Measured by CLD	Approved by RLABO	Appendix 1	  226-TEST NBN EN ISO/IEC 17025 : 2005	42935
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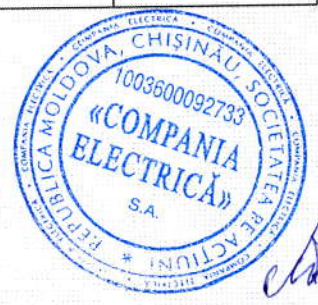
LUMINOUS INTENSITY DIAGRAM

Origin R-Tech	Production Schröder TOV	Luminaire SKIDO	Inclination 0°	Request # FD39062		
Source	Type LED	BIN 40-70M-4-TB-RB	Trademark Samsung	Reference LH351C	# LEDs 6	Reflector 5122
Reflector	Schröder TOV-Ukraine Led assembly Road lighting Assembled 0,0°			No	5122	
Matrices	429351	Φ 0-90° = 1033lm - 90-180° = 1lm		Absolute measurement		
Protector Refractor Lens	Protector integrated lenses Lens 6 x Schröder 5122 PC					
Observation	in total flux @350mA Electrical measurement on LED (#1): Voltage = 17,24 V Current = 0,350 A Power = 6,03 W Driver #1 : See observations for driver details - PCB 00-71-626 A					

Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	↕
10 - 170	613	73	S	255	24,9°	25-03-2019	
90	288	38	D				
270	255	0	G				



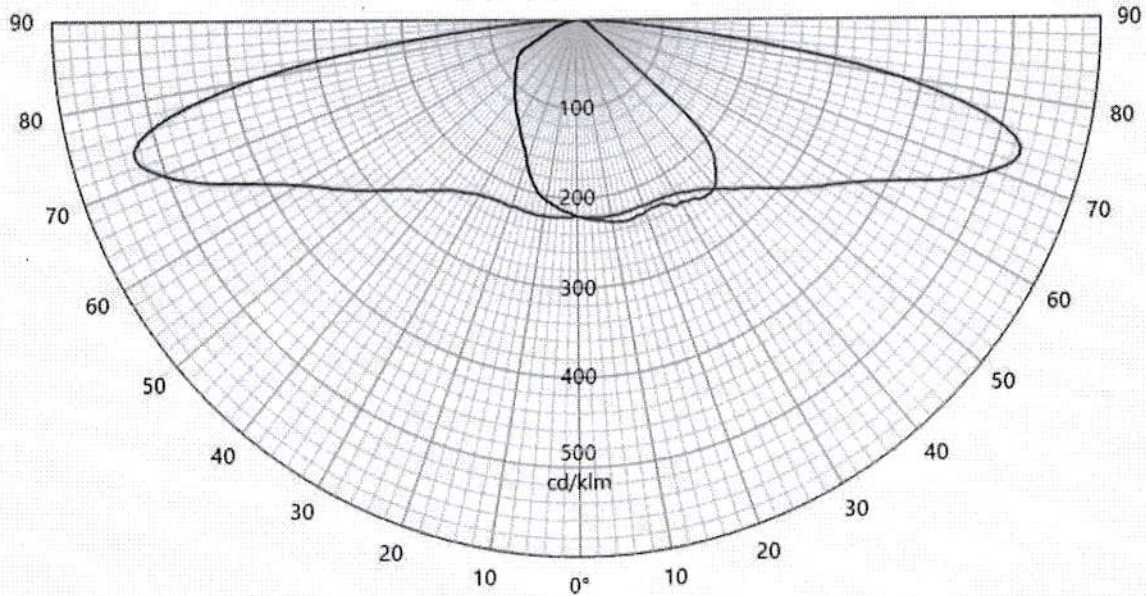
42935



LUMINOUS INTENSITY DIAGRAM

Origin R-Tech	Production Schröder TOV	Luminaire SKIDO	Inclination 0°	Request # FD39062		
Source	Type LED	BIN 40-70M-4-TB-RB	Trademark Samsung	Reference LH351C	# LEDs 6	Reflector 5122
Reflector	Schröder TOV-Ukraine Led assembly Road lighting Assembled 0,0°			No	5122	
Matrices	429352	η 0-90° = 89,0% - 90-180° = 0,1%		Relative measurement		
Protector Refractor Lens	Protector integrated lenses Lens 6 x Schröder 5122 PC					
Observation	in efficiency @350mA . Electrical measurement on LED (#1): Voltage = 17,24 V Current = 0,350 A Power = 6,03 W Driver #1 : See observations for driver details - PCB 00-71-626 A					

Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	↕
10 - 170	528	73	S	220	24,9°	25-03-2019	
90	248	38	D				
270	220	0	G				



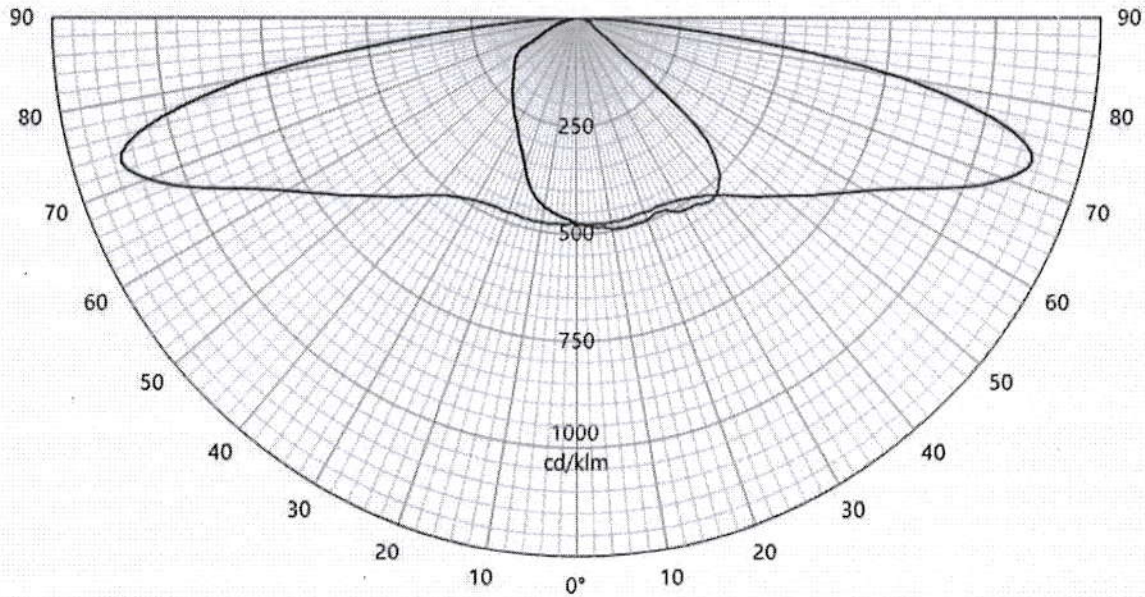
42935



LUMINOUS INTENSITY DIAGRAM

Origin R-Tech	Production Schröder TOV	Luminaire SKIDO	Inclination 0°	Request # FD39062		
Source	Type LED	BIN 40-70M-4-TB-RB	Trademark Samsung	Reference LH351C	# LEDs 6	Reflector 5122
Reflector	Schröder TOV-Ukraine Led assembly Road lighting Assembled 0,0°			No	5122	
Matrices	429353	Φ 0-90° = 1904lm - 90-180° = 2lm		Absolute measurement		
Protector Refractor Lens	Protector integrated lenses Lens 6 x Schröder 5122 PC					
Observation	in total flux @700mA. Electrical measurement on LED (#1): Voltage = 18,20 V Current = 0,701 A Power = 12,76 W Electrical measurement on driver (#1): Voltage = 230,00 V Current = 0,068 A Power = 15,21 W PF = 0,971 Total luminaire power = 15,21 W : Lm/Watt = 125,35 lm/W Driver #1 : See observations for driver details - PCB 00-71-626 A					

Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	↕
10 - 170	1134	73	S	473	24,9°	25-03-2019	
90	531	38	D				
270	473	0	G				



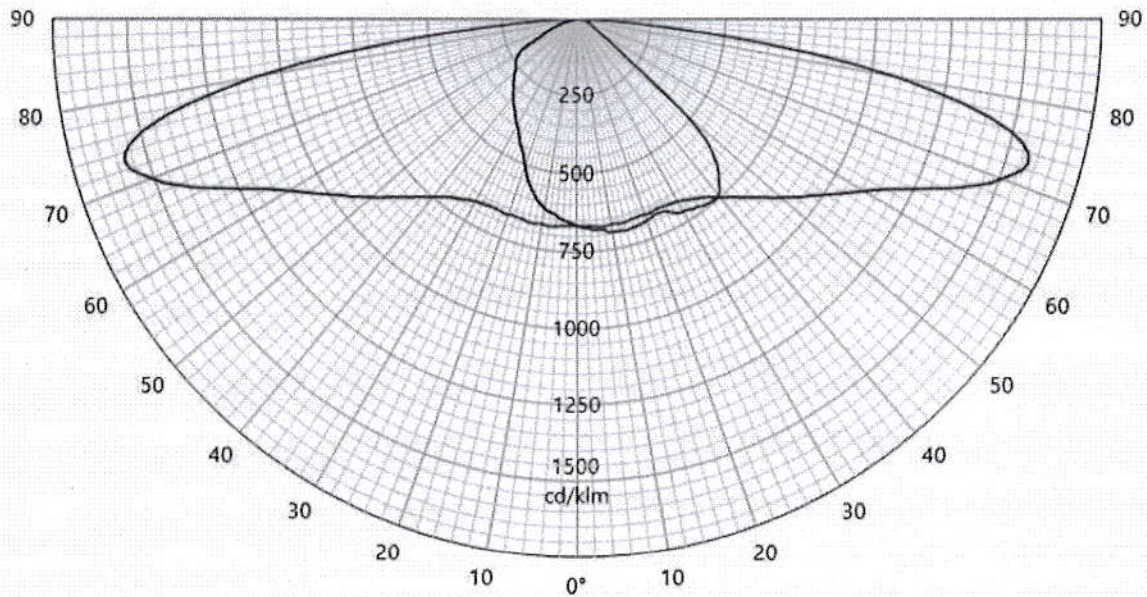
42935



LUMINOUS INTENSITY DIAGRAM

Origin R-Tech		Production Schröder TOV		Luminaire SKIDO		Inclination 0°		Request # FD39062	
Source	Type LED	BIN 40-70M-4-TB-RB	Trademark Samsung	Reference LH351C	# LEDs 6	Reflector 5122			
Reflector	Schröder TOV-Ukraine Led assembly Road lighting Assembled 0,0°					No	5122		
Matrices	429354		Φ 0-90° = 2648lm - 90-180° = 3lm			Absolute measurement			
Protector Refractor Lens	Protector integrated lenses Lens 6 x Schröder 5122 PC								
Observation	in total flux @1050mA. Electrical measurement on LED (#1): Voltage = 18,97 V Current = 1,061 A Power = 20,22 W Electrical measurement on driver (#1): Voltage = 230,00 V Current = 0,108 A Power = 24,14 W PF = 0,975 Total luminaire power = 24,14 W : Lm/Watt = 109,81 lm/W Driver #1 : See observations for driver details - PCB 00-71-626 A								

Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	↕
10 - 170	1575	73	S	664	24,9°	25-03-2019	
90	743	39	D				
270	664	0	G				



42935



CONFORMITY STATEMENT

Measurement fulfil Standards:

NBN-EN 13032-1
 NBN-EN 13032-4
 NBN-EN 17025:2005
 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%
 Angle: +/- 0.5°
 Flux: +/- 2.5%
 Electrical DC
 Power: +/- 0.25%
 Voltage: +/- 0.15%
 Current: +/- 0.15%
 Electrical AC
 Power: +/- 0.15%
 Voltage: +/- 0.3%
 Current: +/- 0.3%
 Temperature: +/- 0.65%



Signature

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

lm/Watt: +/-3.5%

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

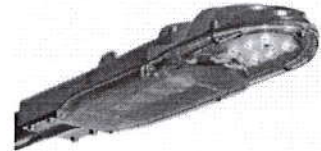
Calibration: traceable to LBT (Laboratoire Belge de Thermométrie)











SKIDO

5122

Optic	5122
Protector	Integrated lenses
Source	6 Samsung LH351C
Matrix	429352



Characteristics

							
395	101	54	1.2	IP 65	IK 08	IEU	0.033
Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Tightness level*	Impact resistance*	Electrical class*	CxS (m ²)

* According to IEC-EN60598 and IEC-EN62262

Features

The efficient LED alternative to low-power fluorescent lighting

- Compact and versatile
- Maximised savings in energy and maintenance costs
- Integrated lenses for performing photometry
- ThermiX® for long lasting performance
- Wide operating temperatures from -20° up to 50°C
- Wide operating voltage range: 198-264V
- Easy to install
- Surge protection 10kV (optional)

Types of application

- Square and park
- Residential road
- Urban road

Information for 1000 lm matrix

Efficacy (%)	89.1	G Class (EN 13201-2)	Unclassified	I 70-80-90-95 (cd)	509 - 384 - 7 - 4
DLOR (%)	89.0	G* (EN 13201 2015)	Unclassified	CIE flux code N 1→5 (%)	35.8 - 69.0 - 92.2 - 99.9 - 89.1
ULOR (%)	0.1	Imax (cd)	528	Gradient 90°	32cd
ULR (%)	0.1	Aperture 0-180°	51 - 51	Gradient 270°	9cd
Incl ULR 4%	-40/32°	Aperture 90-270°	X - X		



Photometrical characteristics

LED count	Colour code	Current (mA)	Luminaire power (W)	Source flux (lm)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Peak (cd)	BUG Rating	Voltage (V)
Ambient temp = 25°									
6	NW 740	700	15	2100	1871	125	1110	B1 U1 G1	230
6	NW 740	1050	23	2921	2603	113	1543	B1 U1 G1	230

Tolerance on flux +- 7% - Tolerance on power +- 5%



15/04/2020

Summary

CONCEPT

Luminaire specifically designed for LEDs

Recommended installation height: between 3.00 and 6.00m

For optimal heat dissipation, the driver and LED engine are in separate compartments and juxtaposed in a horizontal section

HOUSING & FINISH

- Housing in high-pressure, die-cast aluminium, polyester powder coated
- Protector in UV resistant polycarbonate
- Colour: RAL grey 7037

INSTALLATION

- Lateral fixation with stainless steel clamp diameter 32-42mm, tightened with 4 stainless steel screws M8
- Supplied with out-going cable (0.3m length 3G1² or 3G1.5²) for easy installation

OPTICAL UNIT

- Flatbed PCB with acrylic lens overlay principle
- CRI > 70
- ULOR: 0%

LED lumen depreciation

- Lifetime residual flux @ Tq=25°C @ 50.000 hrs: 700mA: 90%

ELECTRICAL

- Class I
- Input voltage: 230V - 50Hz
- Power factor > 90% at full load
- Surge protection: 4kV minimum, optional 10kV & 15kV

STANDARDS & CERTIFICATIONS

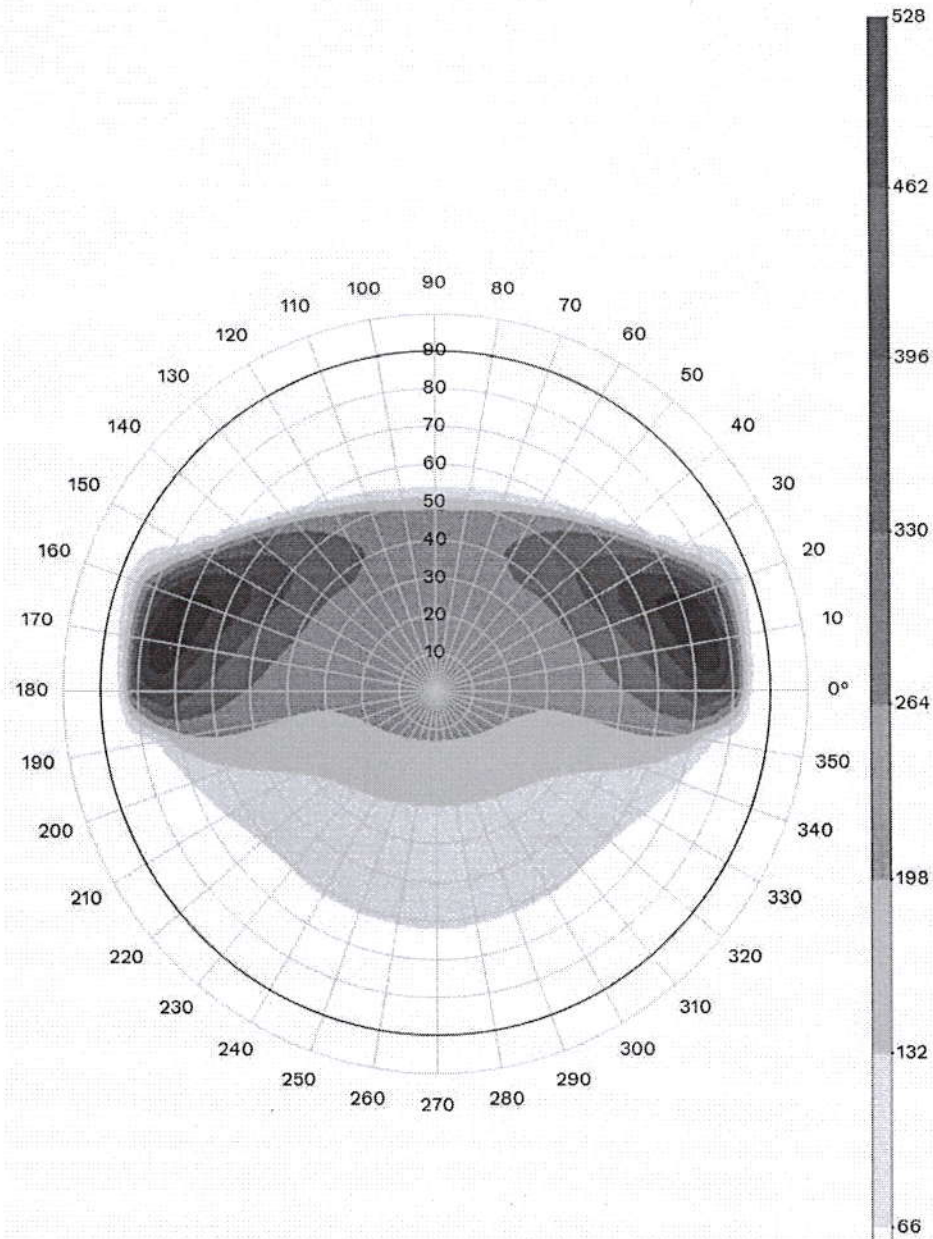
- CE
- ENEC
- LM79-80
- ROHS
- All measurements in ISO17025 accredited laboratory

OPTIONS

- Other RAL or AKZO colours

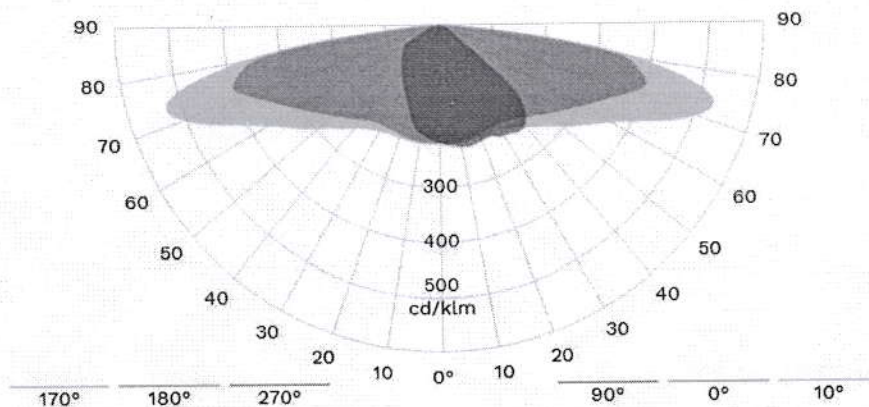


A handwritten signature in blue ink, appearing to be 'A. B.', located to the right of the circular stamp.

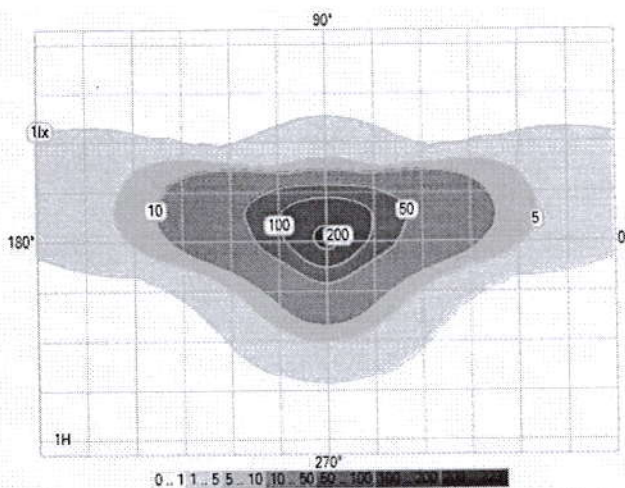


15/04/2020

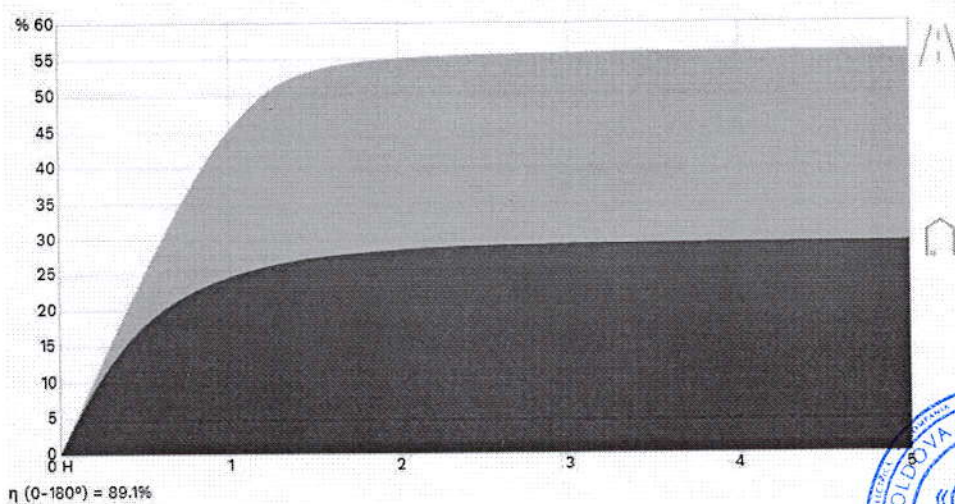
Polar/Cartesian diagram



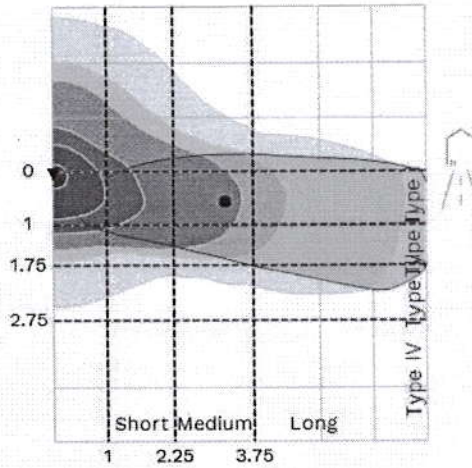
Isolux



K-Curve

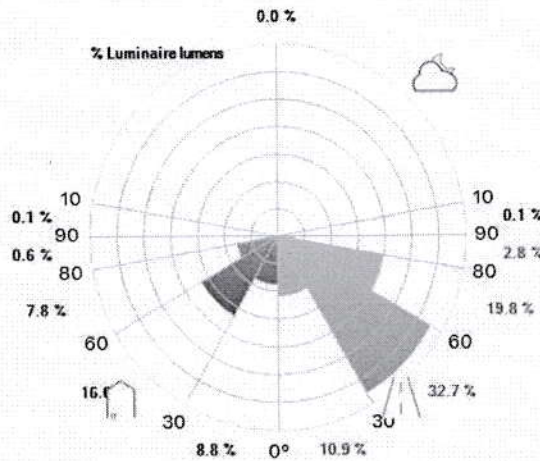


IES Roadway Classification / Nema Classification

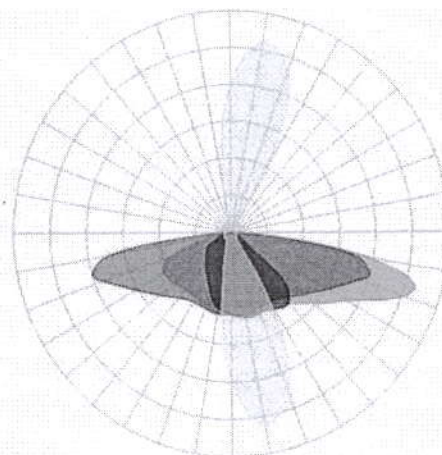


III - Medium

Luminaire classification system (LCS)



Intensity diagram in max Cone and in CPlane



260° 270° 180° Site : 73° 0° 90° 80°

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