

CAIET DE SARCINI
privind organizarea si desfășurarea procedurii ce are ca obiect:

LUCRĂRI DE MODERNIZARE SI EFICIENTIZARE A SISTEMULUI DE ILUMINAT PUBLIC
s. Cușmirca r-ul Șoldănești

1. OBIECTUL CERERII DE OFERTE

Procedura aplicata pentru atribuirea contractului de achiziție publica este “**Licitație descisă**” si se desfășoara în conformitate cu actele normative în vigoare.

2.ORGANIZATORUL PROCEDURII:

Denumirea autorității contractante : Primaria s. Cușmirca r-ul Șoldănești

Adresa: s. Cușmirca r-ul Șoldănești

Nr. Telefon:

3.CONDIȚII DE PARTICIPARE LA CONCURS:

3.1 Ofertantul va prezenta oferta tehnica si oferta financiara pentru: Furnizare si montaj, de aparate de iluminat echipate cu surse LED – pentru reabilitarea si modernizarea sistemului de iluminat public
Cerințe: eficienta energetica si corespunderea normelor de iluminat si standardelor în vigoare.

4. OBIECTUL CONTRACTULUI

4.1 Modernizarea eficientizarea sistemului de iluminat public stradal se va face prin achiziționarea și montarea a 190 aparate de iluminat echipate cu surse LED pe stâlpi existenți (sau nou montați după caz), împărțite pe clase ale sistemului de iluminat conform descrierii de mai jos:

- Situația 1 - clasă de iluminat M6: aparate de iluminat de tipul 1

și cuprinde furnizarea corpurilor de iluminat, consoalelor, cleme de conexiune, cablu de alimentare,etcetera în conformitate cu specificațiile tehnice, precum și montajul acestora pe stâlpii LEAI-0.4kV și LEC-0.4kV.

Aparatele de iluminat vor fi echipate cu surse LED, iar puterea lor se va alege de către fiecare ofertant în urma efectuării calculelor lumino tehnice pentru fiecare situație martor prezentată si detaliata în prezenta documentație, însa se va tine cont de următoarele:

- Pentru iluminarea străzilor încadrate in categoria M6, Situația 1 conform descrierii de mai jos, puterea instalata va fi de maxim 30W;

Configurația si cerințele pentru situație este descrisa mai jos:

Situația 1 : drum local

clasă de iluminat M6: SKIDO 5122 6 LED 1050mA 23W 369203

- Montaj : unilateral
- Distanța între stâlpi : 35 m
- Lățime carosabil : 5 m
- Retrageră stâlp : 1 m
- Înălțime montaj aparat de iluminat : 7,5 m
- Lungime braț : 0,5 m
- Unghi înclinare : 15°
- Factor de mentinere : 0.85

Parametrii minim solicitați pentru situația 1-clasă sistemului de iluminat M6

Situația 1			
Parametrii minimi solicitați		Parametrii oferați	
Clasa de iluminat	M6	Clasa de iluminat	M6
Luminanță medie Lave cd/m ²	0.3	Luminanță medie Lave cd/m ²	0,31
Uniformitate generală U ₀	0.35	Uniformitate generală U ₀	0,56
Uniformitate longitudinală U ₁	0.4	Uniformitate longitudinală U ₁	0,45
Creștere prag Ti	20	Creștere prag Ti	17

Cantitățile de lucrări și utilaj necesare sunt prezentate detaliat în Lista cantităților de lucrări anexată.

Toate lucrările se vor executa în conformitate cu instrucțiunile specifice fiecărei categorii elaborate, cu respectarea prevederilor din normele și legile în vigoare la data execuției.

5. CERINȚE TEHNICE SI DE CALITATE

5.1 Parametrii tehnici minimi impusi pentru aparate de iluminat cu LED, folosite pentru iluminatul exterior al zonelor carosabile și pietonale.

SKIDO 5122 6 LEDS 1050mA NW 23 W 369203



Denumire indicator	Parametrii minimi solicitați	Parametrii oferați de furnizor
Puterea nominală	<30W	23W
Tensiune de alimentare	230V/50Hz	230 / 50Hz
Temperatura de culoare	4000-5000K	4000K
Gradul de protecție a compartimentului optic	min IP 65 (cu certificat de atestare)	IP 65 (cu certificat de atestare)
Gradul de protecție a compartimentului aparat electrotehnic	min IP 65 (cu certificat de atestare)	IP 65 (cu certificat de atestare)
Rezistența la impact a întregului aparat de iluminat	IK08	IK08
Carcasa	din aluminiu sau alt aliaj metalic rezistent la coroziune	din aluminiu turnat sub presiune
Curba fotometrică	trebuie să asigure îndeplinirea parametrilor ceruți de clasa de iluminat	Stradala 5122
Durata de viață	minim 50000 ore	Tq=25°C @ 100.000 ore
Flux luminos	Asigura pe durata de viață a minim 70% din fluxul luminos inițial	L70 - 70%

Randament luminos	Minim 0,75	85%
Bloc electronic	compatibil cu tipul sursei de lumină utilizată	Bloc electronic, compatibil cu tipul sursei de lumină utilizată
Factor de putere	Minim 0,9	0.92
Protecția împotriva electrocutării	Clasa 1;2	Clasa 1
Protecție la descărcări atmosferice	Minim 4kV	10kV
Funcționare la temperaturi	între -20 și +40 grade Celsius	Ta 50
Garantie	Min 60 luni	60 Luni

5.2 Brațe de prindere

Cerințe tehnice minime impuse pentru brațe și coliere de prindere aparate de iluminat stradal

- Material: țevă de oțel protejată de corozie, având diametru minim $\varnothing 32\text{mm}$
- Dimensiuni: în funcție de geometria străzii, lungimea minimă a brațului pe orizontală 500mm; lungimea maximă nu va depăși $\frac{1}{4}$ din înălțimea de montaj
- Unghiuri de înclinare: în funcție de soluția aleasă dar nu mai mari de 15° față de planul orizontal
- Prinderea concolelor pe stâlpi se va face în brățări pereche cu șuruburi

5.3 Componente electrotehnice

Pentru montaj de utilizat numai materiale si utilaje certificate conform legislatiei in vigoare. Se admite înlocuirea materialelor si componentelor electrotehnice preconizate în specificația proiectului tehnic cu analogice.

5.4 Documente care să ateste respectarea condițiilor tehnice

5.4.1 Corpuri de iluminat

- Prospect tehnic/fisa de catalog aparat de iluminat in limba romana
- Certificat/Licența de la un organism de certificare teif independent acreditat in domeniul produselor electrice
- Declarații de conformitate CE producător, din care sa rezulte caracteristicile tehnice solicitate și conformitatea cu standardele EN60598
- Declarații de calitate producător
- Certificat de garanție
- Raport de încercări IP pentru fiecare tip de aparat de iluminat, emis de un organism recunoscut. Se va face dovada acreditarii laboratoarelor care a emis raportul.
- Teste IK pentru fiecare tip de aparat de iluminat, emis de un organism recunoscut. Se va face dovada acreditarii laboratoarelor care a emis raportul.
- Teste EMC pentru fiecare tip de aparat de iluminat, emis de un organism recunoscut. Se va face dovada acreditarii laboratoarelor care a emis raportul.
- Test termic pentru fiecare tip de aparat de iluminat, emis de un organism recunoscut. Se va face dovada acreditarii laboratoarelor care a emis raportul.
- Raport de încercare/testare fotometrica fiecare tip de aparat de iluminat, emis de un organism recunoscut. Se va face dovada acreditarii laboratoarelor care a emis raportul.
- Pentru verificarea calculelor luminotehnice de prezentat originalul fisierilor electronice in format „.ldt” sau „.ies”,confirmate prin rapoarte fotometrice emis de un laborator cu dovada acreditarii.

Produsele și componentele oferite trebuie să fie marcate corespunzător documentațiilor prezentate.

6. PREZENTARE OFERTĂ TEHNICĂ :

6.1 Se va prezenta pentru fiecare tip de echipament solicitat în caietul de sarcini la punctele **5.1, fișe tehnice semnate și stampilate**, care să conțină o coloană cu cerințele caietului de sarcini și o coloană cu caracteristicile echipamentelor oferite. Caracteristicile echipamentelor oferite trebuie să îndeplinească întocmai sau să fie superioare celor solicitate. Declarațiile ofertanților vor fi dovedite prin prezentarea de certificate de conformitate sau alte documente avizate din care să reiasă cele declarate.

6.2 Prezentarea calculelor luminotehnice și descrierea programelor luminotehnice utilizate, pentru configurațiile de cai de circulație martor – situația 1 din prezenta documentație.

Descrierea soluțiilor tehnice propuse și a parametrilor luminotehnici obținuți pe fiecare tip de stradă (clasă de iluminat) în urma reabilitării sistemului de iluminat, menționându-se aspectele calitative și cantitative.

Dacă un parametru luminotehnic al unei situații nu este îndeplinit oferta va fi descalificată din punct de vedere tehnic.

7. Garanții solicitate:

- lucrări de construcții montaj: 2 ani;
- aparate de iluminat: 5 ani;

Prezentul Caiet de sarcini este parte integrantă din documentația de atribuire la achiziție publică.

Client:
Primaria Cusmirca

Proiectant:
Compania Electrica SA

Adresă proiect:
MD-7218, MOLDOVA,
Șoldănești, s.Cușmirca, r-nul
Șoldănești s. Cușmirca

Data:
16.04.2019

027252236, 068681905
alexcoada@mail.ru

Iluminat public s. Cusmirca

Instalarea sistemului de iluminat public din s. Cușmirca r-nul Șoldănești

Cuprins

Iluminat public s. Cusmirca

Iluminat public s. Cusmirca

Schröder - SKIDO / 5122 / 6 LEDs 1050mA CW / 369203 (1x6 LEDs 1050mA CW).....3

Situatia 1: Alternativă 1

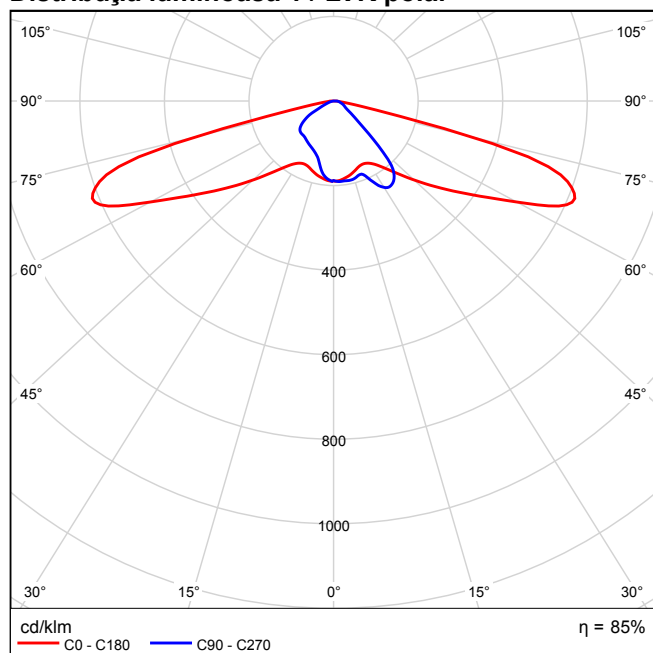
Rezultatele planificării.....4

Situatia 1: Alternativă 1 / Situatie 1 (M6)

Izolării..... 5

Schröder SKIDO / 5122 / 6 LEDs 1050mA CW / 369203 1x6 LEDs 1050mA CW

Randament luminos: 85.10%
 Fluxul luminos al lămpii: 2385 lm
 Flux luminos corpuri de iluminat: 2030 lm
 Putere: 23.0 W
 Eficiența luminoasă: 88.2 lm/W

Distribuția luminoasă 1 / LVK polar**CONCEPT**

Luminaire specifically designed for LEDs

Recommended installation height: between 3m and 6mm
 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 @ T_q=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

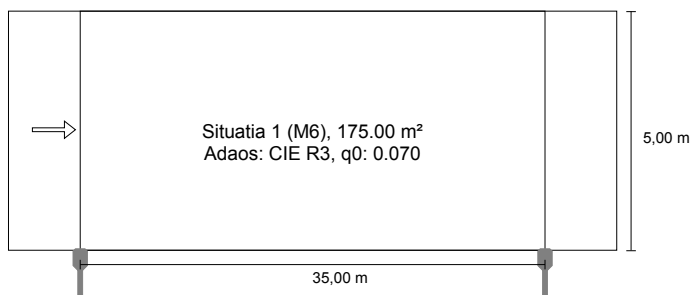
- CE
- ENEC
- LM79-80
- ROHS
- All measurements in ISO17025 accredited laboratory

OPTIONS

- Other RAL or AKZO colours

Situatia 1 până la EN 13201:2015

Schröder SKIDO / 5122 / 6 LEDs 1050mA CW / 369203



Rezultate pentru câmpurile de evaluare
Factorul de menținere: 0.85

Situatia 1 (M6)

Lm [cd/m²] ≥ 0.30	Uo ≥ 0.35	UI ≥ 0.40	TI [%] ≤ 20	EIR ≥ 0.30
✓ 0.31	✓ 0.56	✓ 0.45	✓ 17	✓ 0.42

Rezultate pentru indicatorii de eficiență energetică

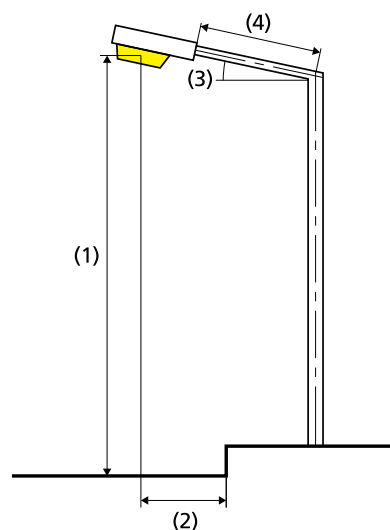
Indicatorul densității de putere (Dp)

0.038 W/lxm²

Densitatea consumului de energie

Aranjament: SKIDO / 5122 / 6 LEDs 1050mA CW / 369203
(92.0 kWh/an)

0.5 kWh/m² an



Lampă: 1x6 LEDs 1050mA CW
Flux luminos (corp de iluminat): 2029.62 lm
Flux luminos (lampă): 2385.00 lm
Ore de lucru
4000 h: 100.0 %, 23.0 W
W/km: 667.0
Aranjament: Pe o parte Jos
Distanță stâlp: 35.000 m
Înclinare consolă (3): 15.0°
Lungime consolă (4): 0.500 m
Înălțimea deasupra planului util (1): 7.500 m
Ieșirea în consolă a punctului de lumină (2): -0.222 m

ULR: 0.01
ULOR: 0.00

Valori maxime ale intensității luminoase

peste 70° 1032 cd/klm *
peste 80° 626 cd/klm *
peste 90° 38.6 cd/klm *

Clasă intensitate luminoasă: /

Orice direcție ce formează unghiul dat cu verticala în jos a corpurilor de iluminat instalate pentru utilizare.

* Luminous intensity values in [cd/klm] for calculating luminous intensity class refer to the output flux of the luminaire, according EN 13201:2015.

Aranjamentul respectă clasa cu indici de orbire D.0

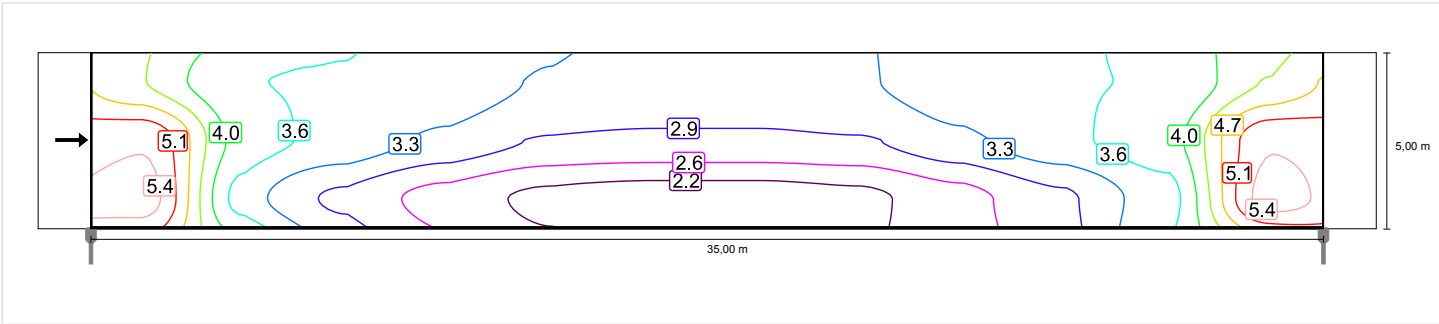
Situatia 1: Alternativă 1 / Situatie 1 (M6) / Izoliii

Situatia 1 (M6)

Factorul de menținere: 0.85
Raster: 12 x 3 Puncte

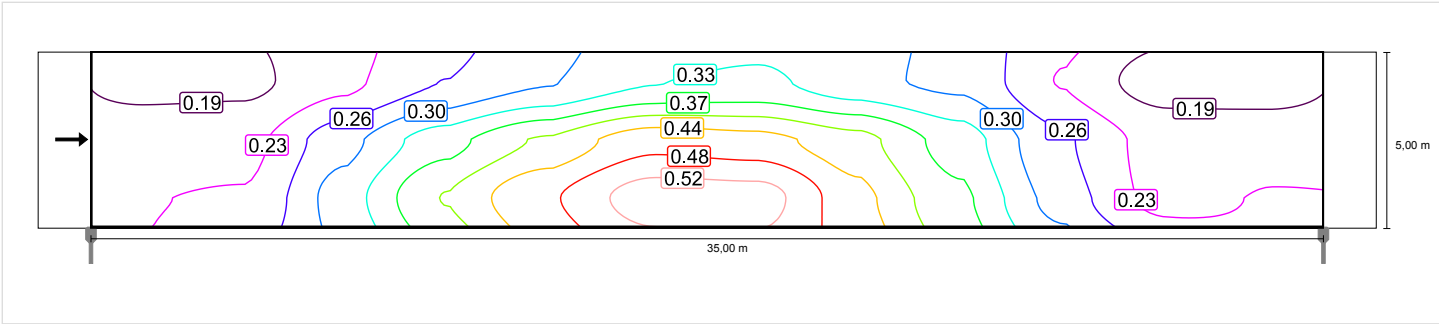
Lm [cd/m²] ≥ 0.30	Uo ≥ 0.35	UI ≥ 0.40	TI [%] ≤ 20	EIR ≥ 0.30
✓ 0.31	✓ 0.56	✓ 0.45	✓ 17	✓ 0.42

Iluminare orizontală

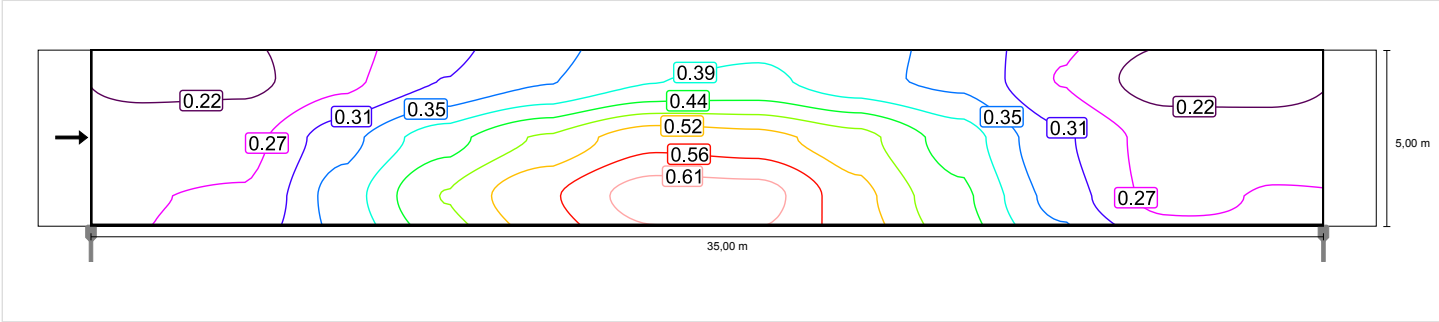


Observator 1

Densitate a luminii cu carosabil uscat



Densitate a luminii cu lampă nouă



ETICS-CoA-002-2018



European Testing Inspection and Certification System

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



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,

Nicole MEURÉE-VANLAETHEM

Issue date : 2016-05-19

Validity date : 2021-05-27

Original version of this certificate is in French.

OVE Austrian Electrotechnical Association
1010 Wien, Eschenbachgasse 9, Austria
ZVR: 327279890 | DVR: 1055887 | www.ove.at

OVE Testing & Certification
1190 Wien, Kahlenberger Str. 2A, Austria
T +43 1 370 58 06 | F +43 1 370 58 06-199



ENEC Certification Body registered under ID # 11.

Validity of ENEC Licences can be checked at www.enec.com

LICENCE

to use the European Mark



Licence No. **80145-007**

Date of issue: Wien, 2016 02 26

OVE the Austrian Electrotechnical Association as signatory to the **"Agreement on the use of a commonly agreed Mark of Conformity for certain electrical equipment complying with European Standards"** hereby grants the right to label the products mentioned hereunder and listed in the Annex with the Mark(s) shown above to the following company

Licenceholder: **Schröder SA**
Rue de Lusambo 67
1190 Brussels
Belgium

Product: **Luminaires for road and street lighting**

Trade Mark: 

Series/Type: **Series SKIDO**

Basis for this given right is the conformity of the products with the requirements of the relevant Standard(s) as listed in the Annex and the fulfilment of articles 8 and 9 of the ENEC-Agreement by the manufacturer. This licence refers to the tested specimen and to all products manufactured strictly identical to the submitted one.

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification.

Austrian Electrotechnical Association
Head of Testing & Certification

Digitally signed by W. Martin
Email=w.martin@ove.at

Dipl.-Ing. W. Martin



OVE Testing & Certification

Accredited by the Federal Ministry of Science, Research and Economy as Certification Body for products within the scope as given in the official decree and published under www.en.bmfwf.gv.at/accreditation



<i>Hersteller</i> <i>Manufacturer</i>	Tungsram-Schröder Világítási Berendezések Zrt Tópart 2. 2084 Pilisszentiván Hungary
<i>Fertigungsstätte(n)</i> <i>Factory location(s)</i>	TOV Schröder Mukylunetska 46B 46005 Ternopil Ukraine
<i>Typenbezeichnung</i> <i>Type reference</i>	Series SKIDO SKID 6L_700mA CW SKID 6L_1050mA CW
<i>Prüfbericht</i> <i>Test Report</i>	TGM-VA EE 36464 ECS
<i>Nationale Bestimmung(en)</i> <i>National Standard(s)</i>	ÖVE/ÖNORM EN 60598-1:2015-11-01 ÖVE/ÖNORM EN 60598-2-3:2012-01-01
<i>Europannorm(en)</i> <i>European Standard(s)</i>	EN 60598-1:2015 EN 60598-2-3:2003 + A1:2011
<i>Ersatz für Zertifikat</i> <i>Superseded licence</i>	--
<i>Anmerkung(en)</i> <i>Remark(s)</i>	--

<i>Nennspannung</i> <i>Rated voltage</i>	AC 100-240 V 50/60 Hz
<i>Anzahl und Leistung der Lampen</i> <i>Rated wattage and number of lamps</i>	1 x 17/23 W
<i>Lampentyp(en)</i> <i>Lamp identification</i>	LED Modules
<i>Schutzgrad</i> <i>Degree of protection</i>	IP 65; IK 08
<i>Netzanschluß</i> <i>Supply connection</i>	Screw terminals
<i>Befestigungsfläche</i> <i>Supporting surface</i>	Normally flammable surface
<i>Schutzklasse</i> <i>Class of protection</i>	Cl. I
<i>Beschreibung des Aufbaus</i> <i>Description of construction</i>	Luminaires for road and street lighting made of aluminium for installation on a pipe or on a mast arm, with LED module and LED driver. Protector made of polycarbonate.
<i>Zusatzinformation</i> <i>Additional information</i>	LED-Modules tested according to EN 62471:2008 and found within limits of risk group 2 (moderate risk). Distance d = 200mm: RG2 Distance d ≥ 1,27m: RG1 Distance d = 2m (500 Lux): RG0

<i>Bauteil Component</i>	<i>Code Code</i>	<i>Hersteller Manufacturer</i>	<i>Typenbezeichnung Type Reference</i>	<i>Konformitätszeichen Mark(s) of conformity</i>
LED Converter	B	Mean Well Enterprises	PLD-25-1050	ENEC 17
	B	Mean Well Enterprises	PLD-16-700	ENEC 17
Fuse holder	B	Adels-Contact	503 SI	VDE
Fuse	A	Littelfuse	.800; 250V; T 800mA	VDE
Varistor	A	Littelfuse	V275LA40AP (P275L40)	VDE
Terminals	A	Adels-Contact	500...; 450V; 0,75-2,5mm ²	VDE
LED-Module	C	Zollner	00-16-725 (Nichia 219C CW)	TGM-VA EE 36464 SFT-2
Wiring	A	Helukabel	H05VV-F 3G1,5mm ²	VDE

- A The component is replaceable with another one, also certified, with equivalent characteristics.
 B The component is replaceable if authorised by the test house.
 C Integrated component tested together with the appliance.
 D Alternative component.

Type list

Type	Input current at 230V 50Hz [A]	Luminaire max. power [W]	LED Current [mA]
SKIDO SKID 6L_700mA CW	0,07	15	700
SKIDO SKID 6L_1050mA CW	0,10	23	1050

SUPERVISED MANUFACTURER'S TESTING

Report nr. CEBEC-002B

SGS Belgium NV

Division SGS CEBEC

Business Riverside Park
Bld Internationalelaan, 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


ir. C. Lana,
Certification Manager



SGS Belgium NV

Division SGS CEBEC Bld Internationalelaan, 55 Build. D B-1070 Bruxelles/Brussel tel. +32 (0) 556 00 20 fax: +32 (0) 556 00 36 www.cebex.sgs.com
Siège Social/Maatschappelijke Zetel: SGS House Noorderlaan 87 B-2030 Antwerpen

Member of the SGS Group (Société Générale de Surveillance)

RPM/RPR Anvers/Antwerpen TVA/BTW BE 404.882.750 Dexia 550-3560000-93

A U T O R I Z A R E

Către: **PRIMARIA CUSMIRCA R-NUL SOLDANESTI**

Noi, **SCHRÉDER ROMANIA S.R.L.**, cu sediul în Cluj - Napoca, str. Corneliu Coposu, nr. 167A, înregistrată la Registrul Comerțului cu nr. J12 / 1759 / 1998, în calitate de producători de aparate de iluminat public de tipul:

- Aparat de iluminat Schröder, tip **SKIDO 5122 6 LED 1050mA CW 23W**

autorizăm prin prezenta pe furnizorul **COMELEC LUX S.R.L.**, să livreze produsele mai sus menționate.

Prin prezenta garantăm calitatea și performanțele produselor oferite și autorizăm pe **COMELEC LUX S.R.L.**, să asigure pentru produsele respective îndeplinirea obligațiilor care decurg din contractul de furnizare, referitoare la serviciile de instalare și punere în funcțiune, de întreținere și de asistență tehnică.

Data completării: 22.04.2018

Producător
SCHRÉDER ROMANIA S.R.L.
Director Comercial,

Ovidiu GROZA



Schröder Romania S.R.L.

RO, Cluj-Napoca, 400228 | Str. Corneliu Coposu, Nr. 167A
T + 40 364.560.670 | F + 40 364.560.671

info.romania@schreder.com | www.schreder.com

CIF RO11210601 | RC J12/1759/1998

IBAN RO77FTSB6448000037001RON, BNP PARIBAS | Capital social 133.150 RON

Certificat MI



Membru în



Membru fondator



CERTIFICAT DE GARANȚIE

Nr. 077/ 22.04.2019

Producător/ Furnizor: **SCHRÉDER ROMANIA S.R.L.**Beneficiar: **Primaria Cusmirca R-nul Soldanesti**Data livrării: pe perioada de valabilitate a: **“Realizarea sistemului de iluminat stradal din Cusmirca R-nul Soldanesti”**

Termen de garanție:

- Aparat de iluminat Schröder, tip **SKIDO 5122 6 LED 1050mA CW 23W**

Condiții de asigurare a garanției:

- **Se asigură garanție** pentru orice defecțiune a produsului generată de vicii ascunse care nu au putut fi detectate la momentul recepției de către Beneficiar.
- **Nu se asigură garanție** pentru viciile aparente după data recepției de către Beneficiar.
- Utilizarea necorespunzătoare a produsului și orice intervenție asupra sa **duce la pierderea garanției**.
- **Nu se asigură garanție** pentru materialele consumabile (varistori, fuzibili).
- **Nu se asigură garanție** dacă acest certificat nu este însoțit de originalul sau copia facturii de achiziție.

La livrare se predau Beneficiarului instrucțiuni de instalare, de punere în funcțiune, utilizare, întreținere, manipulare, depozitare și transport.

SCHRÉDER ROMANIA S.R.L.

Director Comercial

Ovidiu GROZA



Eliberat,

Aprilie 2019, Cluj-Napoca

DECLARATIE DE CALITATE

Nr. 077/22.04.2019

Producător/Furnizor: SCHRÉDER ROMANIA S.R.L.
Beneficiar: **Primaria Cusmirca R-nul Soldanesti**

În conformitate cu prevederile legale privind calitatea produselor livrate, SCHRÉDER ROMANIA S.R.L. declară pe propria răspundere că produsele care vor fi livrate în cadrul: ***“Realizarea sistemului de iluminat stradal din Cusmirca R-nul Soldanesti”*** în concordanță cu Declarația de conformitate nr. 077/22.04.2019, îndeplinesc condițiile de calitate prevăzute în documentația tehnică cu care vor fi livrate produsele.

SCHRÉDER ROMANIA S.R.L.
Director Comercial,

Eliberat,
Aprilie 2019, Cluj-Napoca

Ovidiu GROZA



Schröder Romania S.R.L.

RO, Cluj-Napoca, 400228 | Str. Corneliu Coposu, Nr. 167A
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CIF RO11210601 | RC J12/1759/1998

IBAN RO77FTSB6448000037001RON, BNP PARIBAS | Capital social 133.150 RON

Certificat MI



Membru în



Membru fondator



DECLARAȚIE DE CONFORMITATE

Nr. 077/22.04.2019

Noi, SCHRÉDER ROMANIA S.R.L., cu sediul în Cluj - Napoca, str. Corneliu Coposu, nr. 167A, înregistrată la Registrul Comerțului cu nr. J12/1759/1998, asigurăm, garantăm și declarăm pe propria răspundere, conform prevederilor legale aflate în vigoare privind regimul produselor care pot pune în pericol viața, sănătatea, securitatea muncii și protecția mediului, că următoarele produse:

- Aparat de iluminat Schröder, tip **SKIDO 5122 6 LED 1050mA CW 23W**

care vor fi livrate în cadrul contractului **“Realizarea sistemului de iluminat stradal din Cusmirca R-nul Soldanesti”**, nu pun în pericol viața, sănătatea, securitatea muncii și nu produc un impact negativ asupra mediului, în situația în care sunt instalate și utilizate conform destinației.

SCHRÉDER ROMANIA S.R.L.
Director Comercial,

Ovidiu GROZA

**Schröder Romania S.R.L.**

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Certificat MI

Membru în

Membru fondator



DECLARATION OF CONFORMITY

No.: RSL010

On behalf of **SCHREDER TOV**, Mikylinetska str. 46B, 46005, Ternopil, Ukraine

I declare that following product: **SKIDO**

tightness level: IP65

nominal voltage=230V, 50Hz

electrical insulation class: I

are in conformity with the following requirements for CE marking in line with:

Reference n°	Title
2004/108/CE	E.M.C. Directive
2002/95/EC	RoHS Directive
2006/95/EC	Low Voltage directive
2003/108/EC	WEEE Directive
2002/96/EC	
2009/125/EC	Eco-design Directive
Reg. 305/2011 EU	Conditions for construction products

All standards and technical specifications referenced here below have been met in addition of all IEC standards for the same references.

Normative references for this declaration:

Reference n°	Title
EN 60598-1	Luminaires-General requirements and tests
EN 60598-2-3	Luminaires for road and street lighting
CISPR 15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-x	Limits for harmonic current emissions
EN 61000-4-x	Electromagnetic compatibility (EMC)
EN 61547	Equipment for general lighting purpose, immunity requirements
EN 62031	LED modules for general lighting-Safety specifications
EN 62471	Photobiological safety of lamps and lamp systems

The EUT described above has been tested by as with the listed standards and found in compliance with the Council EMC Directive 2004/108/EC and LVD Directive 2006/95/EC.

General Manager TOV Schreder



Petrenko

Schröder TOV

Mikulinetska str. 46B | 46005 Ternopil - UKRAINE | T +380 352 521611, 250613 | F +380 352 250613

info@schreder.com.ua | www.schreder.com

BENEFICIARY ACCOUNT: 26009292356 | SWIFT: AVALUAKTER I

Raiffeisen Bank Aval JSC, Kiev, Ukraine For: Ternopil Regional Directorate, Ukraine, Ternopil, str. Josypa Slipogo, 8

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 2016
Certification / Recertification Audit date:	27 October 2016
Certification / Recertification cycle start date:	05 November 2016
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 04 November 2019	

Certificate No. UA228313/1

Version: 1 Revision date: 20 July 2018

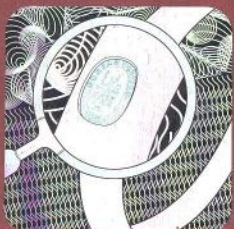

Olena Svyrydenko
Signed on behalf of BVCH SAS UK Branch

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**



0008





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:

71541/A/0001/UK/En

Date of Issue: (Original)

12 September 2018

Date of Issue:

12 September 2018

Issue No:

1

Expiry Date:

11 September 2019

Виданий:

Від імені керуючого





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:

71541/B/0001/UK/En

Date of Issue: (Original)

12 September 2018

Date of Issue:

12 September 2018

Issue No:

1

Expiry Date:

11 September 2019

Issued by:

On behalf of the Schemes Manager



0043



RTECH-PHOTOMETRY LABORATORY

Testreport : Measurement of luminous intensity distribution related to the standard
NBN-EN 13032-1; CIE 121-1996; 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.

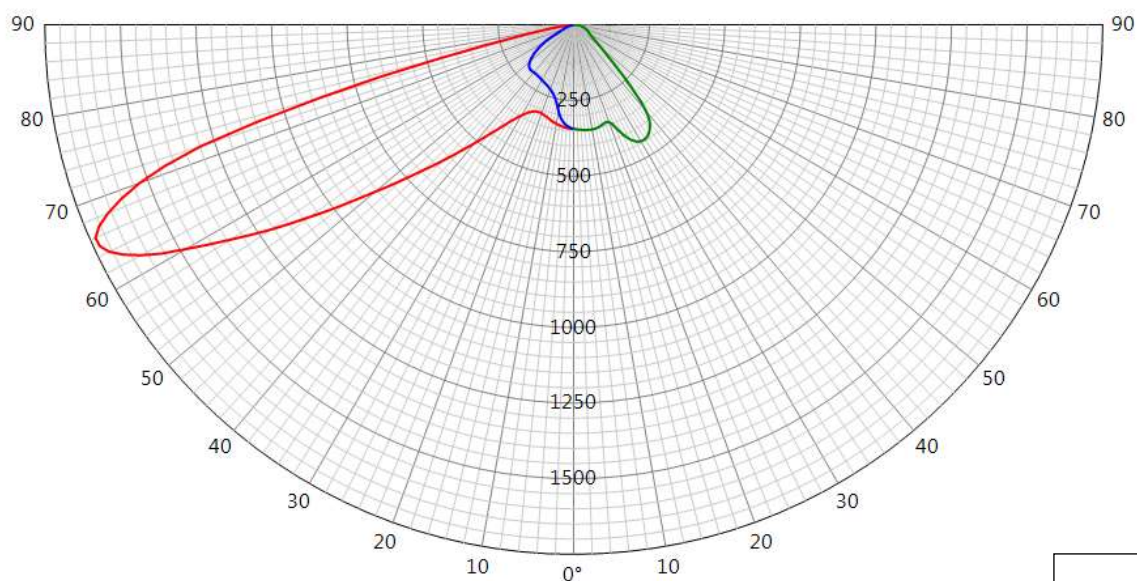
LED

Origin Tungsram-Schröder Plc. Hungary		Production Tungsram-Schröder Plc. Hungary		Luminaire SKIDO		Request # FD35100	
Type LED	BIN SM575D320R70	Source Trademark Nichia	Reference NVSW219CT	# LEDs 6	Reflector 5122		
Master		Reflector				No 5122	
Protector Refractor Lens Protector PC Lum. shape-related Smooth Lens Schröder 5122 PC							
Laboratory observation SKIDO V2 with 6 NICHIA NVSW219CT. Used flux for efficiency matrix calculation = 1010 lm - CCT = 5400 K - CRI = 75.45 (see sphere test report 2015/1103 on appendix).							
Purpose DOC				Sample date 16/07/2015		Sample # 35R194	
Observation DOC SKIDO V2 with Nichia NVSW219CT. Matrix 1 : fixture powered with driver MEAN WELL PLD-16-700B (Uout: 16-24VDC Iout: 700mA) NOTE: this driver delivers 716mA. Matrix 2 : fixture powered with driver MEAN WELL PLD-25-1050 (Uout: 16-24VDC Iout: 1050mA) NOTE: this driver delivers 1096mA. Matrix 3 : DC Power supply for efficiency @350mA							
Asked by LMA		Measured by CL		Approved by LMA		Appendix 1	
 226-TEST NBN EN ISO/IEC 17025 : 2005						36920	

LUMINOUS INTENSITY DIAGRAM

Origin Tungsram-Schröder Plc. Hungary		Production Tungsram-Schröder Plc. Hungary		Luminaire SKIDO		Request # FD35100
Source	Type LED	BIN SM575D320R70	Trademark Nichia	Reference NVSW219CT	# LEDs 6	Reflector 5122
Reflector	Keselec Schreder Pvt. Ltd India Led assembly Road lighting Assembled 0.0°					No 5122
Matrices	369201 Φ 0-90° = 1542lm - 90-99° = 0lm					Absolute measurement
Protector Refractor Lens	Protector PC Lum. shape-related Smooth - SKIDO Lens 6 x Schreder 5122 PC					
Observation	Matrix in total flux @700mA I led measured : 716 mA Light losses due to thermal stabilization : 1,9 % Electrical measurement on LED (#1): Voltage = 17.46 V Current = 0.716 A Power = 12.27 W Electrical measurement on driver (#1): Voltage = 230.00 V Current = 0.065 A Power = 14.50 W PF = 0.959 Total luminaire power = 14.50 W : Lm/Watt = 106.37 lm/W Driver #1 : See observations for driver details - PCB Réf.: 7000877-001-Rev.D					

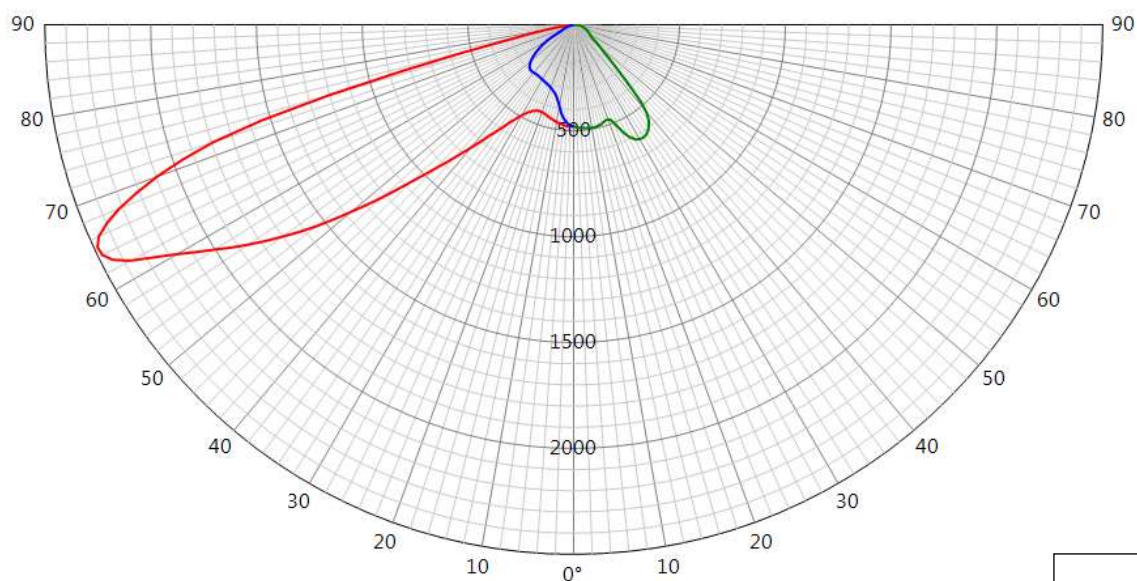
Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	
10 - 170	1733	66	G				
90	445	31	D	342	25.0°	23/07/2015	
270	343	1	G				

**36920**

LUMINOUS INTENSITY DIAGRAM

Origin Tungsram-Schröder Plc. Hungary		Production Tungsram-Schröder Plc. Hungary		Luminaire SKIDO		Request # FD35100
Source	Type LED	BIN SM575D320R70	Trademark Nichia	Reference NVSW219CT	# LEDs 6	Reflector 5122
Reflector	Keselec Schreder Pvt. Ltd India Led assembly Road lighting Assembled 0.0°					No 5122
Matrices	369202 Φ 0-90° = 2137lm - 90-99° = 0lm					Absolute measurement
Protector Refractor Lens	Protector PC Lum. shape-related Smooth - SKIDO Lens 6 x Schreder 5122 PC					
Observation	Matrix in total flux @1000mA I led measured : 1096 mA Light losses due to thermal stabilization : 2,7 % Electrical measurement on LED (#1): Voltage = 17.91 V Current = 1.096 A Power = 19.14 W Electrical measurement on driver (#1): Voltage = 230.00 V Current = 0.104 A Power = 22.86 W PF = 0.953 Total luminaire power = 22.86 W : Lm/Watt = 93.46 lm/W Driver #1 : See observations for driver details - PCB Réf.: 7000877-001-Rev.D					

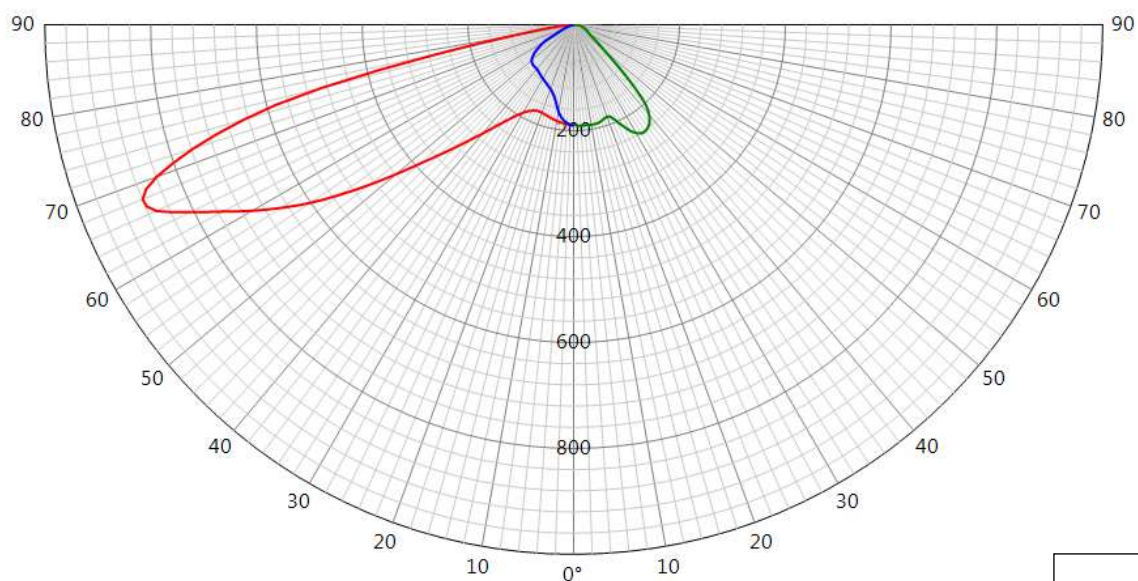
Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	
15 - 165	2485	65	G				
90	624	31	D	479	25.0°	23/07/2015	
270	479	1	G				

**36920**

LUMINOUS INTENSITY DIAGRAM

Origin Tungsram-Schröder Plc. Hungary		Production Tungsram-Schröder Plc. Hungary		Luminaire SKIDO		Request # FD35100
Source	Type LED	BIN SM575D320R70	Trademark Nichia	Reference NVSW219CT	# LEDs 6	Reflector 5122
Reflector	Keselec Schreder Pvt. Ltd India Led assembly Road lighting Assembled 0.0°					No 5122
Matrices	369203 η 0-90° = 85.1% - 90-99° = 0.0%					Relative measurement
Protector Refractor Lens	Protector PC Lum. shape-related Smooth - SKIDO Lens 6 x Schreder 5122 PC					
Observation	Matrix in efficiency @350mA. Electrical measurement on LED (#1) : Voltage = 16.86 V Current = 0.350 A Power = 5.90 W Driver #1 : See observations for driver details - PCB Réf.: 7000877-001-Rev.D					

Plane	I Peak	Peak position	Index	I zero	Laboratory ambient t°	Measurement date	
15 - 165	879	68	G				
90	242	33	D	188	25.0°	26/08/2015	
270	190	1	G				



36920

Measurement fulfil Standards:

- NBN-EN 13032-1
- NBN-EN 17025:2005
- CIE 121-1996
- LM79-08

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 measurment, If not specified:

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

CCT, CRI and chromaticity coordinates: are Measured on sphere.
if specified Main test report refer to sphere extra test report.

Light distribution : are measured on gonio.

Number of hours operated prior to measurement: If no other specified, 0 hours (no aging)

Stabilization time: If no other specified, a minimal stabilization time of 1 hour is applied.

Total operating time of the product including stabilization:

45 minutes have to be added by measurement.

Minimal operating time is 105 minutes

Luminous intensity distribution: available on electronic file with

.mat format (internal schreder format)

.ldt format (European standard)

.IES format (American standard)

Statement of uncertainties (K=2 95% of confidence level):

Intensity measurement: +/- 3%

Angle: +/- 0.5°

Flux: +/- 2.5%

Electrical DC

Power: +/- 0.25%

Voltage: +/- 0.1%

Current: +/- 0.2%

Electrical AC

Power: +/- 0.1%

36920

Voltage: +/- 0.1%
Current: +/- 0.4%
Temperature: +/- 1.5%
CCT: +/- 5%
CRI: +/- 2%
x/y: +/- 2%

Measuring instruments in use:

Gonio

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)

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

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

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

Thermometers

Voltcraft K101 (Sphere IS2000)

LMT U1000 (Sphere LMT)

Gossen digem f96x48 CK/EK (gonio)

Calibration: traceable to PTB (Physikalisch-Technische Bundesanstalt)

36920

SKIDO

5122

Optic	5122
Protector	Deep shape PC
Source	6 Nichia NVSW219CT
Matrix	369203



Characteristics

							
395	101	54	1.2		IK 08	I EU	0.033
Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Tightness level*	Impact resistance*	Electrical class*	CxS (m²)

* According to IEC-EN60598 and IEC-EN62262

Features

Effective and economical LED lighting solution

- 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)

Information for 1000 lm matrix

Efficacy (%)	85.1	G Class (EN 13201-2)	G1	Aperture 90-270°	X - X
DLOR (%)	85.1	G* (EN 13201 2015)	G*1	I 70-80-90-95 (cd)	843 - 165 - X - X
ULOR (%)	0.0	Imax (cd)	879	CIE flux code N 1→5 (%)	32.2 - 68.0 - 95.7 - 100.0 - 85.1
ULR (%)	0.0	Aperture 0-180°	58 - 58		

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	CW 754	700	15	1754	1492	99	1541	B1 U0 G1	230
6	CW 754	1050	23	2385	2029	88	2096	B1 U0 G1	230

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

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 @ T_q=25°C @ 50.000 hrs: 700mA: 90%

ELECTRICAL

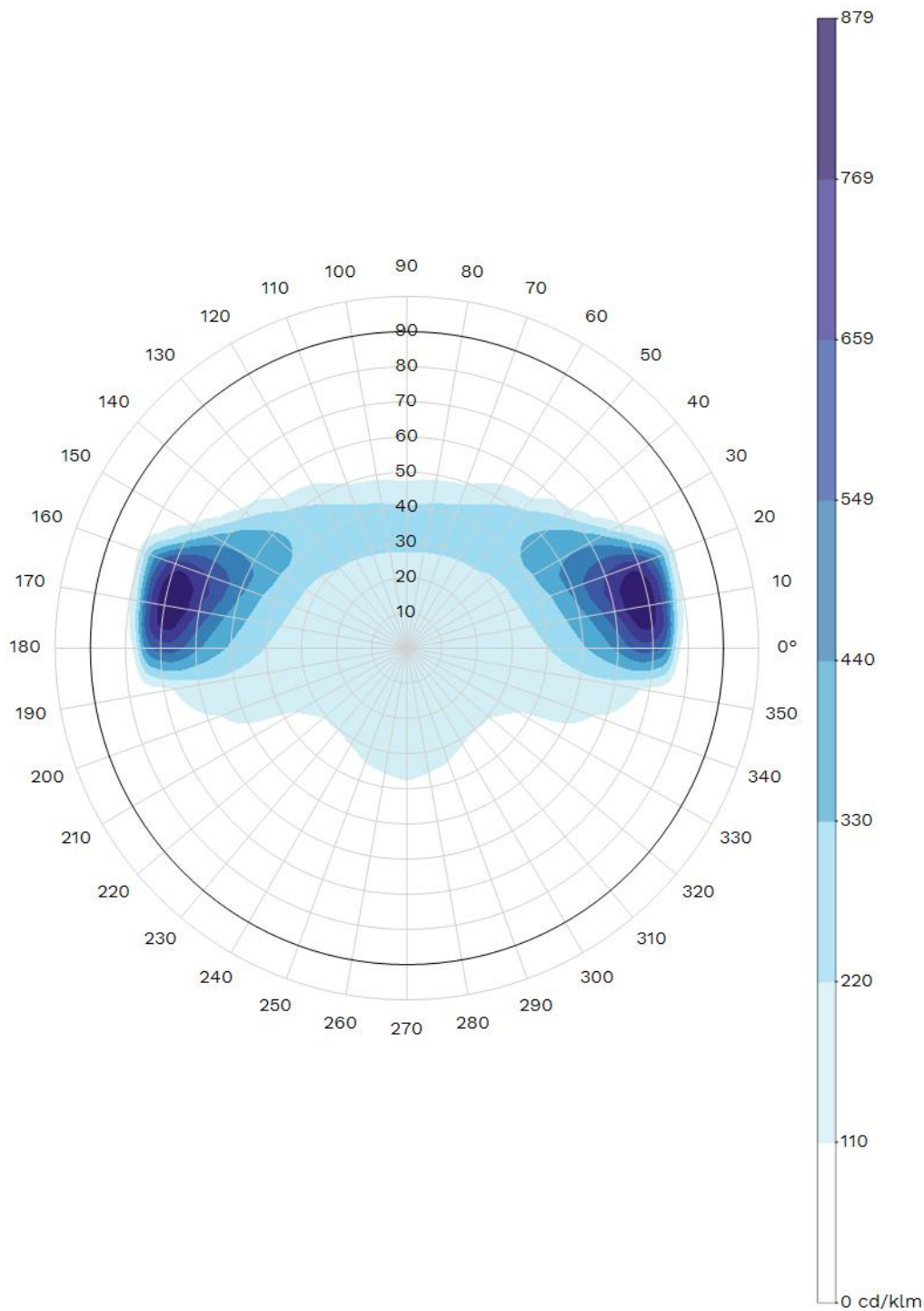
- Class I
- Input voltage: 230V - 50Hz
- Power factor > 90% at full load
- Surge protection: 4kV minimum, optional 10kV & 15kV

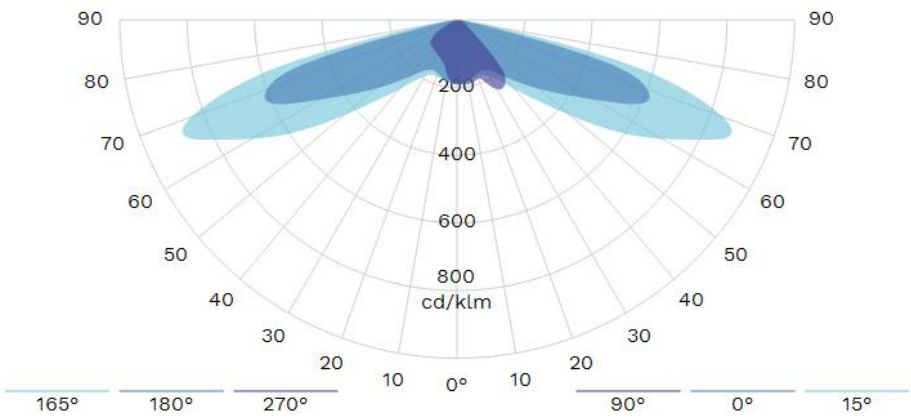
STANDARDS & CERTIFICATIONS

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

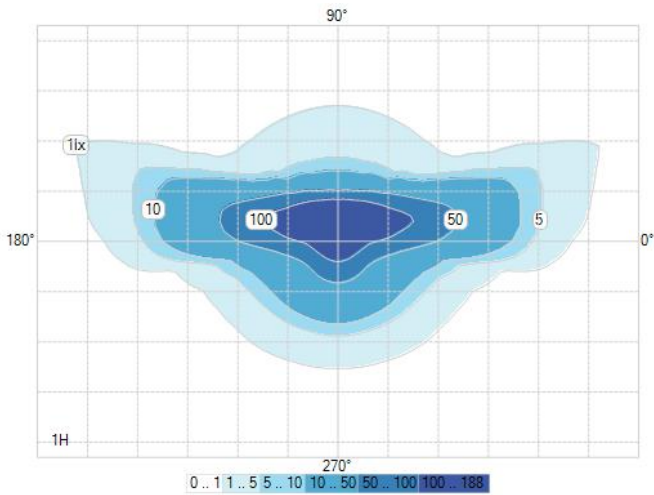
OPTIONS

- Other RAL or AKZO colours

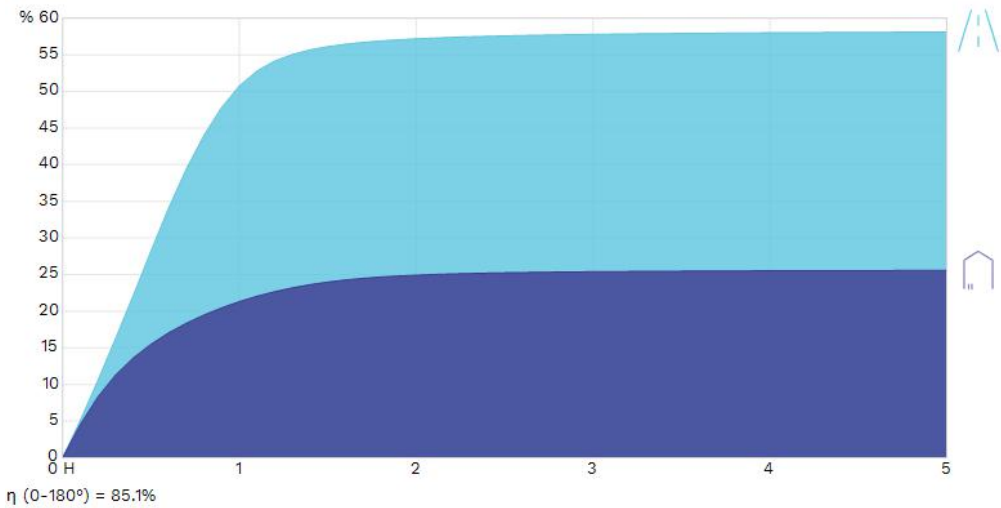




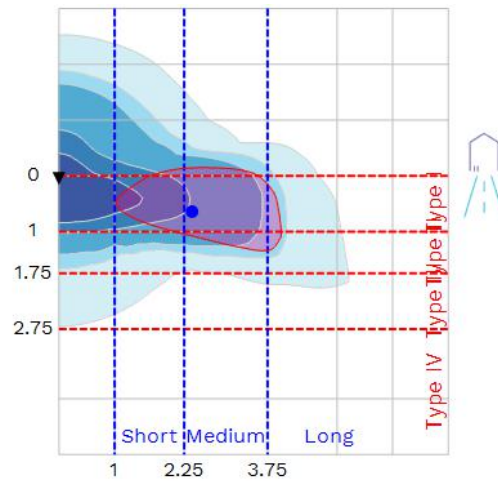
Isolux



K-Curve

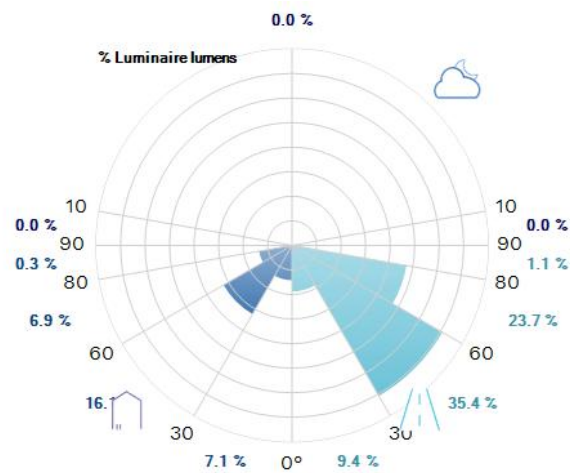


IES Roadway Classification / Nema Classification

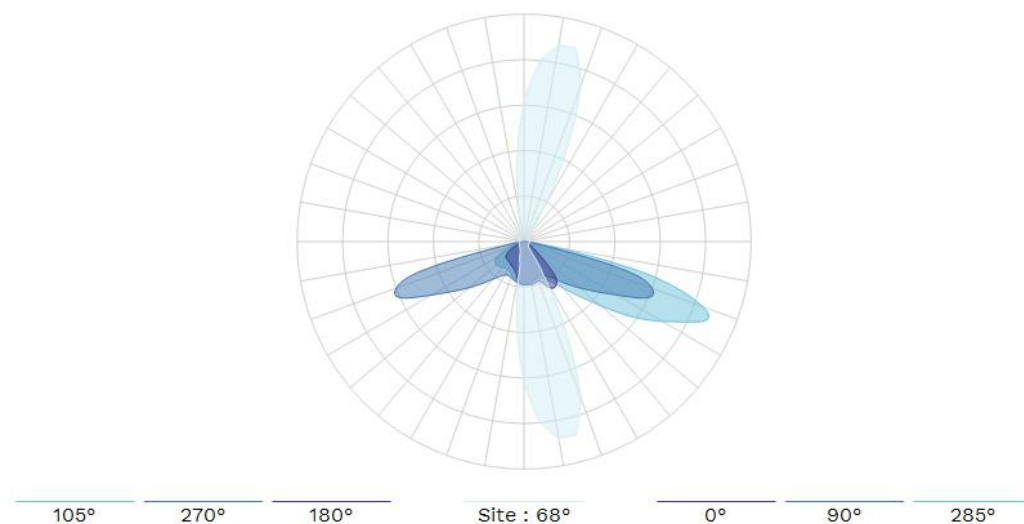


II - Medium

Luminaire classification system (LCS)



Intensity diagram in max Cone and in CPlane



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<http://www.schreder.com>

SKIDO



CARACTERISTICI

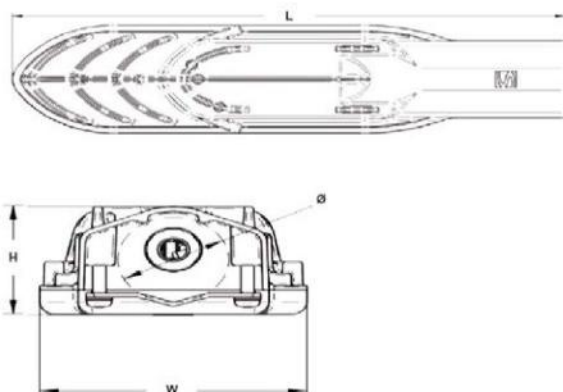
Soluție de iluminat cu LED, eficientă și economică

- Compact și versatil
- Maximizarea economiilor la energie și întreținere
- Lentile integrate, pentru distribuție luminoasă performantă
- ThermiX®, pentru performanță pe termen lung
- Funcționează la temperaturi de la -20° și până la 50°C
- Funcționează la voltaj între: 198-264V
- Ușor de instalat
- Protecție la supratensiuni de 10 kV (opțional)

TIPURI DE APLICAȚII

- căi de circulație urbane și străzi
- străzi rezidențiale
- piețe și zone pietonale
- poduri
- parcuri
- parcuri
- piste de biciclete
- hale industriale

SCHIȚĂ DIMENSIUNI



DIMENSIUNI ȘI CARACTERISTICI

	SKIDO1 (SKIDO)
Lungime (mm)	395
Lățime (mm)	101
Înălțime (mm)	54
Greutate (kg)**	1
Nivel de etanșeitate*	IP65
Rezistența la impact*	IK08
Clasa electrică*	Clasa I EU
Rezistența aerodinamică (CxS)	0,033 m ²

* Conform normelor IEC-EN60598 și IEC-EN62262

** Greutate medie. Greutatea maximă este +/- 10% , dar, pentru greutatea exactă, în funcție de configurație, vă rugăm să ne contactați.

REZUMAT

CONCEPT

Aparat de iluminat special proiectat pentru funcționarea cu LEDuri

Înălțime de instalare recomandată: între 3 și 6 metri

Pentru disiparea optimă a căldurii, balastul electronic și modulul LED sunt în compartimente separate și sunt alaturate într-o secțiune orizontală

CARCASĂ ȘI FINISAJE

- Carcasa este fabricată din aluminiu turnat sub presiune, vopsit în câmp electrostatic
- Difuzor din policarbonat rezistent la raze UV
- Culoare: gri 7037 din paletarul RAL

INSTALARE

- Fixare laterală cu clemă din oțel inoxidabil, diametru 32042mm, strâns cu 4 șuruburi M8, din oțel inoxidabil
- Livrat cu cablu de ieșire (lungime 0.3m 3G1² sau 3G1.5²), pentru instalare ușoară

UNITATE OPTICĂ

- modul optic LED PCI (placă de circuite integrate), prevăzut cu lentile acrilice și care realizează distribuția luminoasă prin multiplicare
- CRI > 70
- ULOR: 0%

Deprecierea fluxului luminos al LEDurilor

- Flux rezidual pe viață @ Tq=25°C @100000 ore:1000mA: 90%

ELECTRIC

- Clasa I
- Tensiunea de intrare: 230V - 50Hz
- Factorul de putere > 90%, la sarcină maximă
- Protecție la supratensiuni de 4kV minim, opțional 10kV, 10kA

STANDARDE ȘI CERTIFICĂRI

- CE
- ENEC
- LM79-80
- ROHS
- toate măsurările s-au realizat în laborator acreditat ISO17025

OPȚIUNI

- alte culori din paletarele RAL sau AKZO

CONCEPT**1. Thermix® pentru performanță pe termen lung**

Managementul termic al LEDurilor este un aspect crucial pentru ca aparatul de iluminat să fie mai fiabil. Pentru maximizarea eficacității și menținerea fluxului în timp, numeroși parametri au fost optimizați:

- compartimentarea termică între LEDuri și accesoriile electrice
- conductibilitatea termică directă, prin reducerea căii dintre sursa de căldură și exterior
- structură îmbunătățită a suprafeței externe, care realizează schimbul termic

Lumen maintenance report

LED information

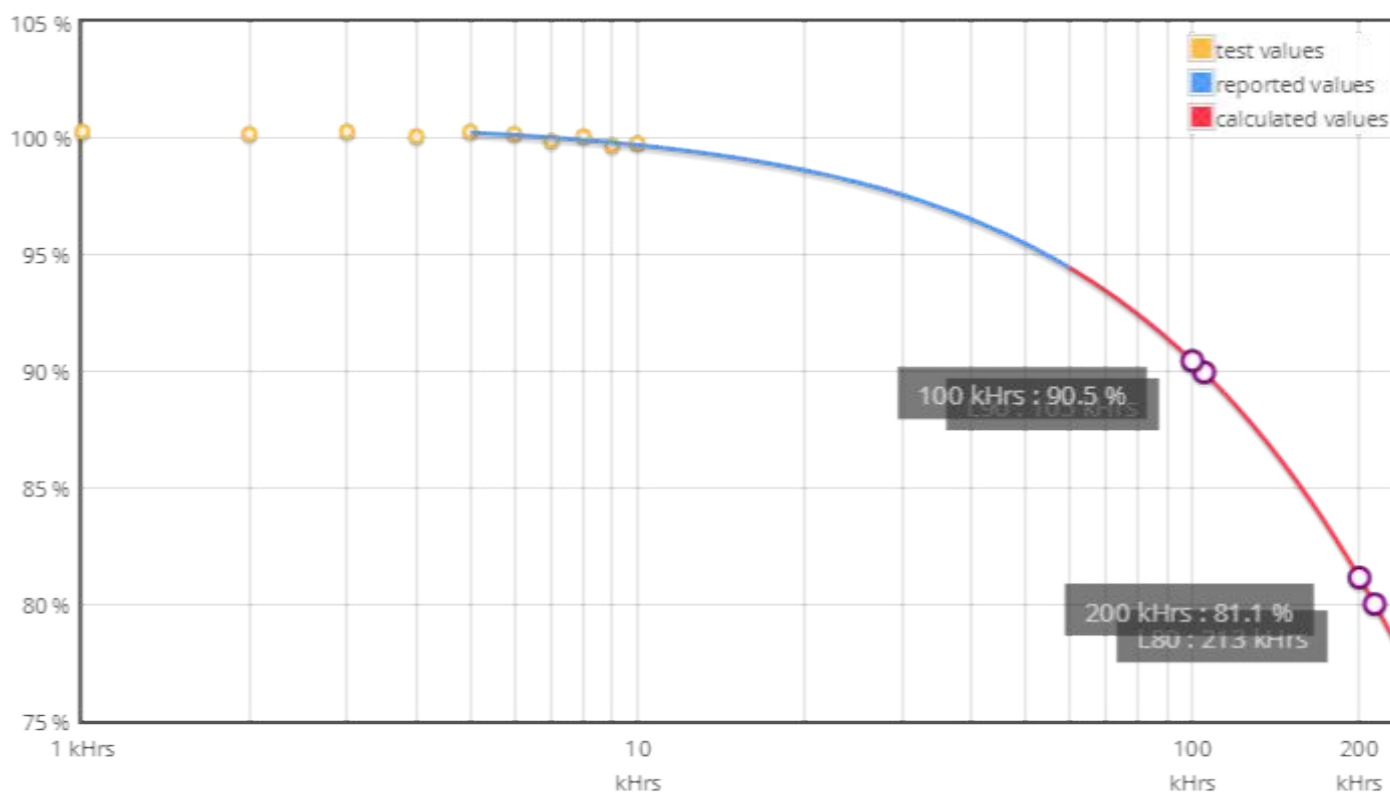
LED type	NVSL219CT
LED current	700 mA
Ts	55°C
Description	SQETMOJ75401

Projection data

Test duration	10000 hrs	α	1.086E-006
Time used for projection	5000 to 10000hrs	β	1.008

L (%)	Time (kHrs)
80.0	213
81.1	200
90.0	104
90.5	100

Projection graphic



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

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



Test Report issued under the responsibility of:



TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number.: TGM-VA EE 36464 SFT-1

Date of issue: 2016-01-21

Total number of pages..... 40

Name of Testing Laboratory
preparing the Report.....: Staatliche Versuchsanstalt – TGM
Elektrotechnik und Elektronik

Applicant's name.....: Schröder SA

Address Rue de Lusambo 67, 1190 Brussels , Belgium

Test specification:

Standard.....: IEC 60598-2-3:2002 (Third Edition) + A1:2011 used in conjunction
with IEC 60598-1:2014 (Eighth Edition)

Test procedure CB Scheme , ENEC

Non-standard test method.....: N/A

Test Report Form No.....: IEC60598_2_3J

Test Report Form(s) Originator.....: Intertek Semko AB

Master TRF.....: 2014-09

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**This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory
and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.**

General disclaimer:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description	Luminaire for road and street lighting		
Trade Mark			
Manufacturer	Tungsram-Schreder ZRT Topart 2, 2084 Pilisszentivan-Hungary		
Model/Type reference	SKIDO		
Ratings	100-240V, 50/60Hz, Cl.I, IP65, IK08, Ta 50°C		
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	CB Testing Laboratory:	Staatliche Versuchsanstalt – TGM Elektrotechnik und Elektronik 	
Testing location/ address		A-1200 Wien, Wexstrasse 19-23	
☐	Associated CB Testing Laboratory:		
Testing location/ address			
Tested by (name, function, signature)		Ing. Jahangir NOORI	
Approved by (name, function, signature) ..		Mag. Thomas THUN	
☐	Testing procedure: TMP/CTF Stage 1:		
Testing location/ address			
Tested by (name, function, signature)			
Approved by (name, function, signature) ..			
☐	Testing procedure: WMT/CTF Stage 2:		
Testing location/ address			
Tested by (name + signature)			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
☐	Testing procedure: SMT/CTF Stage 3 or 4:		
Testing location/ address			
Tested by (name, function, signature)			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment): EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES see pages 35-36 /40	
Summary of testing: Full test performed on type SKIDO representing also for the other types pictures see pages 37-40	
Tests performed (name of test and test clause): all clause	Testing location: Staatliche Versuchsanstalt – TGM Elektrotechnik und Elektronik A-1200 Wien, Wexstrasse 19-23
Summary of compliance with National Differences: List of countries addressed EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES see pages 35-36 /40 ☒ The product fulfils the requirements of EN 60598-1:2015 and EN 60598-2-3: 2003+A1:2011	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

SKIDO
 SKID01400-CW002D2-5122AS-PC03-V02D00S4-CCSC-0000-L1-N0-0S
 SKID|BL|1050mA|CW|NAR5122|WOPro|WOPro|H32-42|No OC 10|No Dim|
 No CLO|230V 50Hz|CL|EU|No PhC|No Se|No Dis|Eq Wa P|Fus|SPD|Wa TS|
 No LSV|No To TC05_H07RN_F_3G1.5
 Ra: 7001T
 LED 23W Ta=50°C
 100-240V 50/60Hz IP65/IP65(OPT) IK08
 013788/3
 E16021/24
 JAN 16


 MADE IN UGANDA
 EU contact: Schneider-ATECH
 Rue de la Gare 3 - 4000 Lange
 Belgium






Test item particulars.....:	
Classification of installation and use.....: Cl.I	
Supply Connection.....: screw terminal	
Possible test case verdicts:	
- test case does not apply to the test object..... : N/A	
- test object does meet the requirement..... : P (Pass)	
- test object does not meet the requirement..... : F (Fail)	
Testing.....:	
Date of receipt of test item : 2015-09-14	
Date (s) of performance of tests : cw-41-51/2015	
General remarks:	
Distance d = 200mm: RG2, •Distance d ≥ 1,27m: RG1, •Distance d = „500Lux“ ≈ 2m: RG0	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a ☒ comma / ☐ point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60598-2:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... : Schreder TOV Vul.Mykulynetska 468, 46000 Ternopil UKRAINE	
General product information: Luminaires for road and street lighting for installation on a pipe or on a mast arm. Body aluminium, protector Polycarbonate. LED Module and LED Driver. Means of connection: screw terminal Power ratings ±5% The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 1,27 m is not expected.	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.2 (0)	GENERAL TEST REQUIREMENTS		P
3.2 (0.1)	Information for luminaire design considered	Standard Yes ☒ No ☐	—
3.2 (0.3)	More sections applicable.....	Yes ☐ No ☒	—

3.4 (2)	CLASSIFICATION		P
3.4 (2.2)	Type of protection	Class I	—
3.4 (2.3)	Degree of protection.....	IP 65	—
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	—
3.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☒ No ☐	—
	b) on a mast arm	Yes ☒ No ☒	—
	c) on a post top	Yes ☐ No ☒	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	e) on a wall	Yes ☐ No ☒	—

3.5 (3)	MARKING		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions		P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz		P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.4)	Symbol or warning notice		P
3.5 (3.3.5)	Wiring diagram		P
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.10)	Suitability for use indoors		N/A
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		N/A
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	X	P
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
3.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		P
	Cautionary symbol		P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		P
	e) Cross-sectional area of wires if applicable		P
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		N/A
	i) Maximum mounting height		P
3.6 (4)	CONSTRUCTION		P
3.6 (4.2)	Components replaceable without difficulty		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	Lampholders	LED-MODULE	N/A
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		P
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	Terminals and supply connections		P
3.6 (4.7.1)	Contact to metal parts		P
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		N/A
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.8.2		N/A
	- electrical test according to 15.9		N/A
	- heat test according to 15.9.2.3 and 15.9.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
3.6 (4.9)	Insulating lining and sleeves		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing		—
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C)		N/A
3.6 (4.10)	Double or reinforced insulation		N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
3.6 (4.11)	Electrical connections and current-carrying parts		P
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		P
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		N/A
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	Screws and connections (mechanical) and glands		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	1,8 Nm housing	P
	Torque test: torque (Nm); part..... :	0,5 Nm terminal	P
	Torque test: torque (Nm); part..... :	1,2 Nm earth terminal	P
	Torque test: torque (Nm); part..... :	0,5 Nm LED-Driver	P
	Torque test: torque (Nm); part..... :	1,2 Nm LED-Module	P
	Torque test: torque (Nm); part..... :	1,2 Nm housing	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)		N/A
	- lampholder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm		N/A
3.6 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	0,5 Nm	P
	- other parts; energy (Nm)..... :	0,7 Nm	P

IEC 60598-2-3			
Clause	Requirement + Test		Verdict
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	Suspensions, fixings and means of adjusting		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	1,378kg + 4x1,378=6,890kg	P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		—
	Bending moment (Nm) of semi-luminaire		N/A
3.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	Flammable materials		P
	- glow-wire test 650°C	See Test Table 3.15 (13.3.2)	P
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	N/A
3.6 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		P
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		P
	- in lamp control gear		P
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
3.6 (4.18)	Resistance to corrosion		P
3.6 (4.18.1)	- rust-resistance		P
3.6 (4.18.2)	- season cracking in copper		P
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Igniters compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	Protective shield		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	Photobiological hazards		P
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)	See Test Report MA 39-VFA 2016-0209.01/B2	P
3.6 (4.24.2)	Retinal blue light hazard RG0 with minimum distance "500Lux" 2,0m		P
	Luminaires with E_{thr} :		P
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2	For RG2 distance 0,2m For RG1 minimum distance 1,27m	P
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
3.6 (4.26)	Short-circuit protection		N/A
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material ($^{\circ}\text{C}$) :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (4.30)	Luminaires with non-user replaceable light source		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		P
	Minimum two fixing means		P
3.6 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
3.6 (4.31.1)	SELV circuits		P
	Used SELV source		P
	Voltage $\leq$ ELV		P
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		P
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	SELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		P
	- test according 7.2.3 of above		P
	- conductive part not cause an electric shock in case of an insulation fault		P
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.6.1 (-)	At least IP X3 or X5 respectively. IP	IP65	P
	Column-integrated luminaires:		P
	- parts below 2,5 m. IP		N/A
	- parts above 2,5 m. IP	IP65	P
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		N/A
3.6.3.1 (-)	Static load test		P
	- drag coefficient.....	1,225kg/m ³	P
	- loaded area (m ²).....	0,0398m ²	P
	- used load (N).....	59,237N	P
	- measured deformation (cm/m)	0,9cm/m	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		N/A
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		N/A
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength	protector Polycarbonate	P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample	IK08	P
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20		N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6.7 (-)	Compliance with ISO standard or other		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm)		N/A
	- cable path from the slot to the connection compartment (mm)		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
3.7 (11.2)	Creepage distances and clearances	See Table 3.7 (11.2)	P
	Working voltage (V)	100-240V	—
	Rated pulse voltage (kV)	2,5 kV	—
	Voltage form	Sinusoidal ☒ Non-sinusoidal ☐	—
	PTI	< 600 ☒ ≥ 600 ☐	—
	Impulse withstand category (Normal category II) (Category III Annex U)	Category II ☒ Category III ☐	—

3.8 (7)	PROVISION FOR EARTHING		P
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	< 0,3 Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
3.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
3.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		N/A
3.8.1 (-)	Attachment prevented from rotation		N/A

3.9 (14)	SCREW TERMINALS		P
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A

3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 4)	N/A

3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection	screw terminal	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable..... :		N/A
	Nominal cross-sectional area (mm ²)		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
3.10 (5.2.5)	Type Z not connected to screws		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		P
	a) at least one part fixed		P
	b) types of cable		P
	c) no damaging of the cable		P
	d) whole cable can be mounted		P
	e) no touching of clamping screws		P
	f) metal screw not directly on cable		P
	g) replacement without special tool		P
	Glands not used as anchorage		P
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) : 80N		P
	- torque test: torque (Nm) : 0,35 Nm		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.11)	External wiring passing into luminaire		N/A
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	Internal wiring		P
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)		N/A
	- temperatures : (see Annex 2)		P
	Green-yellow for earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²)..... : 0,75mm ² and 1,5mm ²		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulation thickness		P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV current-carrying parts		P
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		N/A
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N):	80 N	P
	- torque test: torque (Nm).....:	0,35 Nm	P
3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement	LED-Module	P
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
3.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- touch current		N/A
	- no-load voltage.....		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
3.11 (8.2.6)	Covers reliably secured		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N/A
	Portable plug connected luminaire with capacitor		N/A
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A
3.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (12.3)	Endurance test:		P
	- mounting-position..... :	Acc. to mounting instruction	—
	- test temperature (°C) :	50°C	—
	- total duration (h) :	240h	—
	- supply voltage: Un factor; calculated voltage (V).... :	1,1 Un 264V	—
	- lamp used..... :	00-16-725 (Nichia 219C CW)	—
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) :		—
	- case of abnormal conditions :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un :		—
	- measured mounting surface temperature (°C) at 1,1 Un..... :		N/A
	- calculated mounting surface temperature (°C) :		N/A
	- track-mounted luminaires		N/A

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Clause	Requirement + Test		Verdict
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	Yes ☐ No ☐	—
	- manual reset cut-out	Yes ☐ No ☐	—
	- auto reset cut-out	Yes ☐ No ☐	—
	- case of abnormal conditions		—
	- highest measured temperature of fixing point/ exposed part (°C):		—
	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		N/A
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

3.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		—
	- classification according to IP	IP65	—
	- mounting position during test	Acc. to mounting instruction	—
	- fixing screws tightened; torque (Nm)	-	—
	- tests according to clauses	9.2.2 and 9.2.6	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		N/A
	d) i) For luminaires without drain holes – no water entry		P
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A
	e) no water in watertight luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	f) no contact with live parts (IP 2X)		N/A
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
	f) no contact with live parts (IP3X and IP4X)		N/A
	g) no trace of water on part of lamp requiring protection from splashing water		N/A
	h) no damage of protective shield or glass envelope		P
3.13 (9.3)	Humidity test 48 h		P
3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ)		—
	SELV		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		P
	- between live parts of different polarity	>2,6 MΩ	P
	- between live parts and mounting surface	>2,6 MΩ	P
	- between live parts and metal parts	>2,6 MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :	>2,6 MΩ	P
	- Insulation bushings as described in Section 5	>2,6 MΩ	P
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Luminaires with manual ignitors		N/A
	Test voltage (V)		N/A
	SELV		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		P
	Other than SELV		P
	- between live parts of different polarity	1480V	P
	- between live parts and mounting surface	1480V	P
	- between live parts and metal parts	1480V	P
	- between live parts of different polarity through action of a switch		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	1480V	P
	- Insulation bushings as described in Section 5	1480V	P
3.14 (10.3)	Touch current or protective conductor current (mA) :	0,212mA	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
3.15 (13.2.1)	Ball-pressure test	See Test Table 3.15 (13.2.1)	N/A
3.15 (13.3.1)	Needle-flame test (10 s)	See Test Table 3.15 (13.3.1)	N/A
3.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 3.15 (13.3.2)	P
3.15 (13.4)	Proof tracking test (IEC 60112)	See Test Table 3.15 (13.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLES: Creepage distances and clearances						P	
Table 11.1	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							
RMS working voltage (V) not exceeding		50	150	250	500	750	1000	
Creepage distances								
Required basic insulation, PTI ≥ 600		0,6	0,8	1,5	3	4	5,5	
Measured				>3,25				
Required basic insulation, PTI < 600		1,2	1,6	2,5	5	8	10	
Measured								
Required supplementary insulation PTI ≥ 600		-	0,8	1,5	3	4	5,5	
Measured								
Required supplementary insulation PTI < 600		-	1,6	2,5	5	8	10	
Measured								
Required reinforced insulation		-	3,2	5	6	8	11	
Measured								
Clearances								
Required basic insulation		0,2	0,8	1,5	3	4	5,5	
Measured				>1,95				
Required supplementary insulation		-	0,8	1,5	3	4	5,5	
Measured								
Required reinforced insulation		-	1,6	3	6	8	11	
Measured								
Table 11.2	Minimum distances (mm) for non-sinusoidal pulse voltages						N/A	
Rated pulse voltage (peak kV)		2,0	2,5	3,0	4,0	5,0	6,0	8,0
Required clearances		1,0	1,5	2	3	4	5,5	8
Measured								
Rated pulse voltage (peak kV)		10	12	15	20	25	30	40
Required clearances		11	14	18	25	33	40	60
Measured								
Rated pulse voltage (peak kV)		50	60	80	100	-	-	-
Required clearances		75	90	130	170	-	-	-
Measured								

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Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics				N/A
Allowed impression diameter (mm) :					—
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:					

3.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:					

3.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				P
Glow wire temperature :				650°C	—
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
protector polycarbonate	schreder	4 s	No	0	P
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No)..... :					yes
Supplementary information:					

3.15 (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI :				175 V	—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Internal wiring	A	Helukabel	H05VV-F	3x1,5 mm ²	EN 50525	VDE
Varistor	A	Littelfuse	V275LA40AP (P275L40)	275V AC, 369V DC tc 85°C	IEC 60950	VDE (116895)
Fuse-	A	Littelfuse	.800	T 800mA , 250V	IEC/EN 60127	VDE
Terminal	A	Adels-Contact	500..	450V 0,75-2,5mm ² T100°C	IEC/EN 60998	VDE
LED converter	B	Mean Well Enterprises Co. Ltd	PLD-25-1050	90-295 VAC 127-417V DC 25,2W tc:70°C Vout:35V	IEC/ EN 61347-2-13	ENEC 17
LED converter	B	Mean Well Enterprises Co. Ltd	PLD-16-700	90-295 VAC 127-417V DC 16,8W tc:70°C Vout:35V	IEC/ EN 61347-2-13	ENEC 17
Fuse-holder for miniature cartridge fuse	B	Adels-Contact	503 SI	400V 1,0-2,5mm ² T100°C	IEC/EN 60127	VDE
LED-Module	C	Zollner Elektronik AG	Nichia 219C CW 00-16-725	Max 1050mA 19,2V	IEC/EN 62031	TGM VA EE 36464 SFT-2
LED	C	Nichia	NVSW219 CT	1050mA RG 2 at 500lux RG0	IEC/EN 62471 IEC /TR 62778	See Test Report MA 39-VFA 2016-0209.01/B2

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P				
	Type reference :	SKIDO	—				
	Lamp used..... :	00-16-725 (Nichia 219C CW)	—				
	Lamp control gear used..... :	PLD-25-1050	—				
	Mounting position of luminaire :	mast arm mounting	—				
	Supply wattage (W) :	22,3W	—				
	Supply current (A) :	0,105A	—				
	Calculated power factor..... :	0,92	—				
	Table: measured temperatures corrected for ta = 50 °C:		P				
	- abnormal operating mode :	--	—				
	- test 1: rated voltage..... :	240 V	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage :	1,06Un (254,4V)	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage :	--	—				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage :	--	—				
	Through wiring or looping-in wiring loaded by a current of A during the test :	--	—				
Temperature measurements, (°C)							
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
LED Driver tc	50°C	65°C	N/A	N/A	70°C	N/A	N/A
Internal wiring	50°C	N/A	61°C	N/A	90°C	N/A	N/A
Internal wiring by LED-Module	50°C	N/A	62°C	N/A	90°C	N/A	N/A
external wiring	50°C	N/A	59°C	N/A	75°C	N/A	N/A
screw terminal	50°C	N/A	59°C	N/A	90°C	N/A	N/A
connector by LED Module	50°C	N/A	61°C	N/A	80°C	N/A	N/A
Supplementary information:							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²)..... :		—
(14.3.3)	Conductor space (mm)..... :		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread)..... :	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm)		N/A
	Torque (Nm)		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)..... :		N/A
(14.4.8)	Without undue damage		N/A

ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A
	Pull test pin or tab terminals (4 samples); pull (N)		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

(15.6.3.1)	TABLE: Contact resistance test										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Voltage drop of two inseparable joints										N/A
	Voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Voltage drop after 50th alt. 100th cycle										N/A
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Continued ageing: voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Continued ageing: voltage drop after 50th alt. 100th cycle										N/A
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
										N/A	
Supplementary information:											

+

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-3 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according to: EN 60598-2-3:2003 + A1:2011 used in conjunction with EN 60598-1:2015			
Annex Form No. : EU_GD_IEC60598_2_3J Annex Form Originator : OVE Master Annex Form : 2015-02			
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	CENELEC COMMON MODIFICATIONS (EN)	
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3.5 (3)	MARKING		P
3.5 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package		P

3.6 (4)	CONSTRUCTION		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A

3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2.1)	Connecting leads		P
	- without a means for connection to the supply		N/A
	- terminal block specified		N/A
	- relevant information provided		N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		N/A
3.10 (5.2.2)	Cables equal to EN 50525		N/A
	Replace table 5.1 – Supply cord		N/A

3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		P
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique; Section VIII; Article GH 48, Eclairage) Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

Type List

Type	Input current at 230V 50Hz [A]	Luminaire max. power [W]	LED Current [mA]
SKIDO SKID 6L_700mA CW	0,07	15	700
SKIDO SKID 6L_1050mA CW	0,10	23	1050

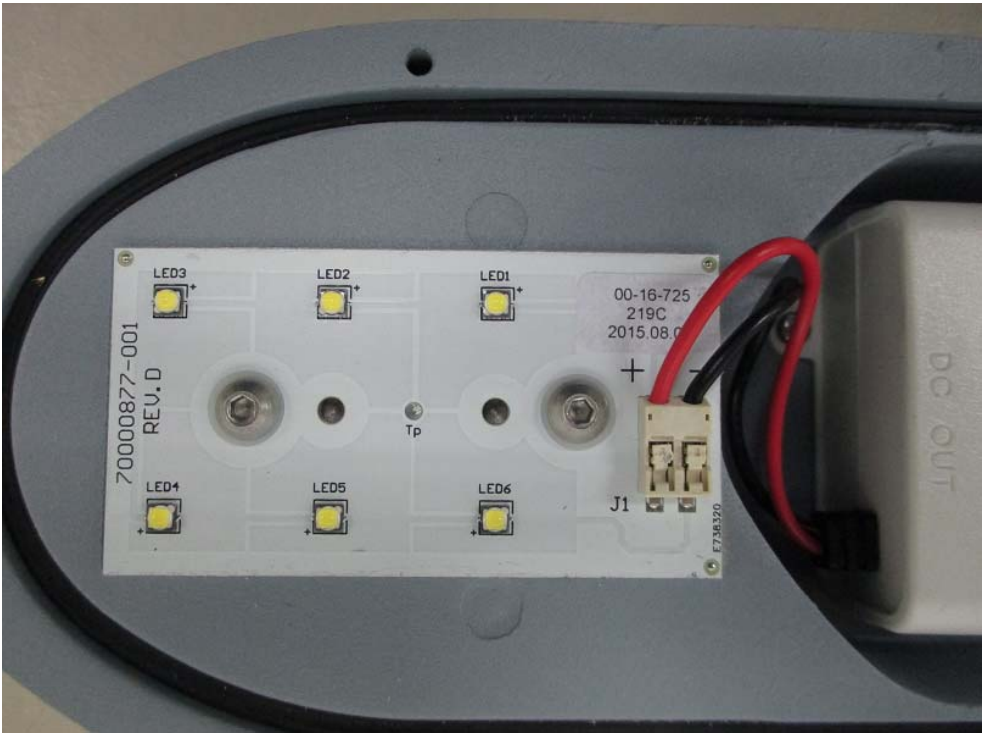
IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



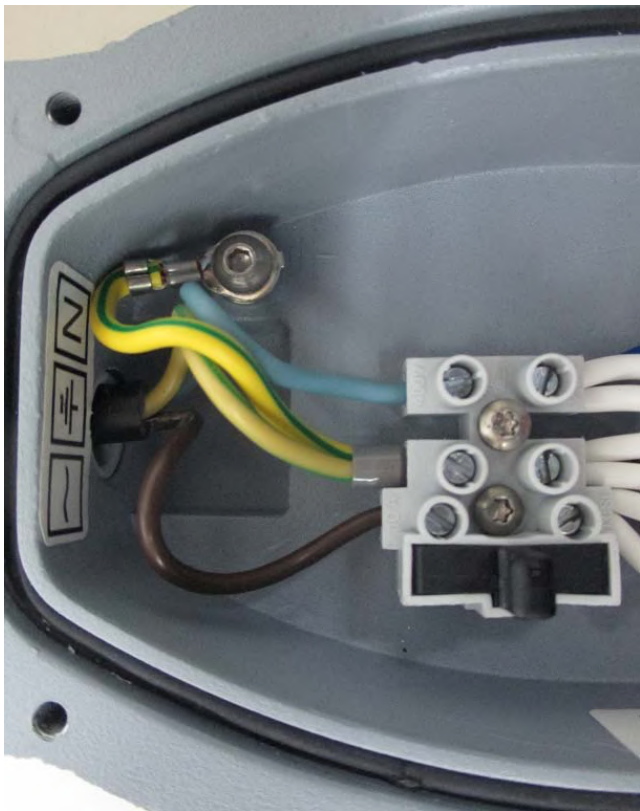
IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



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

//P-15CR613

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.

$$T_j = T_b + R_{jb} \times P_{led}$$

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

//P-15CR544

SKIDO



ALTERNATIVA LED EFICIENTA PENTRU ILUMINATUL CU LAMPI FLUORESCENTE DE PUTERE MICA

APARATUL DE ILUMINAT SKIDO A FOST CONCEPT PENTRU A OFERI O SOLUTIE DE ILUMINAT EXTERIOR CU LED-URI, COMPACTA SI ECONOMICA CU SCOPUL DE A INLOCUI APARATELE ECHIPATE CU LAMPI FLUORESCENTE DE 36W

Datorita unei puteri nominale de 15W si unei performante fotometrice excelente, SKIDO este un instrument foarte eficient pentru iluminatul strazilor rezidentiale, parcurilor, zonelor pietonale precum si pentru asigurarea iluminatului de supraveghere necesar hanelor industriale sau spatiilor adiacente campusurilor de birouri.

Fiind o solutie extrem de eficienta, SKIDO reduce timpul de amortizare la mai putin de 3 ani.

Datorita designului bine conceput si materialelor de calitate, SKIDO ofera o durata de viata mult mai lunga comparativ cu solutiile de iluminat fluorescente sau compact fluorescente.



CARACTERISTICI

Inaltime de montaj	3 la 6m
Flux luminos	1300lm
Temperatura de culoare	Alb rece (5700K)
Consum	15W
Etanseitate compartiment optic	IP 65 (*)
Etanseitate compartiment aparataj	IP 65 (*)
Rezistentă la impact	IK 07 (**)
Tensiune nominală	230V - 50Hz
Clasa de izolație electrică	I (*)
Masa	1,3 kg
MATERIALE	
Carcasa	Aluminiu
Difuzor	Polycarbonat
Culoare	RAL 7037 gri

>> AVANTAJE CHEIE

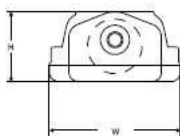
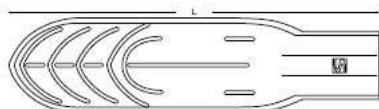
- Compact și versatil
- Economii maximizate pentru costurile cu energia și mentenanță
- Lentile integrate pentru fotometrie performantă
- Plajă largă pentru temperaturile de operare de la -20° la 50° C.
- Instalare ușoară: livrabil precablat (cablu 0.3m)
- Gama largă a tensiunii de alimentare: 140-280V
- Materiale durabile și reciclabile
- Protecție la descărcări atmosferice 10kV

DIMENSIUNI

MONTAJ

Montaj lateral de la Ø 32mm la Ø 42mm
Fixare cu 4 suruburi M8

L	395mm
H	54mm
W	101mm
Ø	32 la 42mm



APLICATII PRINCIPALE



STRADA REZIDENTIALA – PARCARE MASINI –

ZONA PIETONALA – PARCURI



FUNCTIONAL

DECORATIVE

ARCHITECTURAL

OTHER APPLICATIONS

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	☒ ENEC/CCA-TL ☐ IECEE-CBTL ☐ TMP ☐ WMT ☐ SMT
Testing location	As above
Address	
Applicant	Schröder SA
Address	1190 Brussels , Belgium , Rue de Lusambo 67
Manufacturer	Tungsrām-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	☒ ENEC ☐ CCA ☐ Other: _____
Standard(s)	EN 60598-2-3: 2003+A1:2011 used in conjunction with EN 60598-1:2015
☐ 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. ☒ 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:	
☒ IEC TRF No. IEC60598_2_3J...	Report Reference No.....: TGM-VA EE 36464 SFT-1
☒ 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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CERTIFICAT DE CONFORMITATE

Nr. de înregistrare

OCpr - 001 13 C019224-19

Data emiterii

25 ianuarie 2019

Valabil până la

25 ianuarie 2020

ORGANISMUL DE CERTIFICARE

ORGANISMUL DE CERTIFICARE PRODUSE (OCP) din cadrul Î.S. "Centrul de Metrologie Aplicată și Certificare" (Î.S. CMAC). Adresa juridică: șos. Muncești, 162a, MD 2002, mun. Chișinău; Adresa fizică: str. E. Coca, 28, MD 2064, mun. Chișinău; tel.: 022 719279, 022 750463; fax: 022 745489.

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL, CĂ PRODUSELE IDENTIFICATE ASTFEL:
DENUMIREA / DESCRIEREA

Cabluri și conductoare electrice modele conform anexei
Contract de livrare: Nr.12/247 din 01.07.2013.

Codul NCM
8544

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN:

Documente normative indicate în anexa

PRODUCĂTOR

ЗАО Завод Южкabelь, Ucraina

Codul țării
UA

SOLICITANT

"CEGOLTAR" SRL, str. Nufêrilor, 25, mun. Chișinău, str. Nufêrilor, 25, mun. Chisinau

Codul IDNO
1003600017268

CERTIFICATUL ESTE ELIBERAT ÎN BAZA

Raport de evaluare final Nr. 0076-RE din 25.01.2019, eliberat de OCP din cadrul Î.S. CMAC, str. E. Coca, 28, mun. Chișinău, MD 2064, certificat de acreditare Nr. OCpr - 001 din 10.09.2018; Raport de încercări Nr. 7894/02/19 din 23.01.2019, eliberat de LÎ CERTIFICARE SRL, MD 2001, mun. Chișinău, bl. Gagarin 2, certificat de acreditare Nr. LÎ - 076.

INFORMAȚIE SUPLIMENTARĂ:

Schema de certificare 2. Supravegherea se va efectua una dată pe an de către OCP din cadrul Î.S. CMAC. Certificatul este valabil doar în cazul asigurării cu informație în limba de stat a fiecărei unități de produs conform legislației în vigoare. Acord Nr. 5768/2019 din 25.01.2019. Dosar Nr. 1619.



Conducătorul organismului de
certificare



Melnic L.

ANEXA

LA CERTIFICATUL DE CONFORMITATE

Fila File

1 1

Nr. OCpr - 001 13 C019224-19

din 25 ianuarie 2019

**Lista produselor concrete
asupra cărora se extinde acțiunea certificatului de conformitate**

Nr.	Denumirea produsului	DN
1	Cablu electric tip: АПвЭП, АПвЭВ, АПвЭВнгв, АПвЭгП, АПвЭгаП, ПвЭП, ПвЭВ, ПвЭВнгд, ПвЭгП, ПвЭВнг, ПвЭгаП, АПвПг, N2XS(Y), N2XS(F)2Y, N2XS(FL)2Y, N2XS(F)H, NA2XS(Y), NA2XS(F)2Y, NA2XS(FL)2Y, NA2XS(F)H	GOST 18410-73 p.5.4 GOST 12.2.007.14-88
2	Conductoare electrice tip: ПВС, ПВСм, ПВСнг, ШВВП	GOST 7399-97 GOST 12.2.007.14-88
3	Conductoare electrice tip: ПУНП, ПВ1, ПВ2, ПВ3, ППВ, АПВ, АППВ, ВВП, ВПП, РПШэк, ПНП, АПНП, ПВВП	GOST 6323-79 p. 5.2, 5.3 GOST 12.2.007.14-88
4	Conductoare electrice cu fibre optice tip: ОП, ОПТ, ОКПБ ОБгП, ОБП, ОЦАрПб ОЦКП, ОКТБг-М, ОКАД-ММ, ОАрП, ОЦПС, ОЦПТ, ОПТ	SMSR EN 41003:2010 GOST 12.2.007.14-88
5	Conductoare electrice tip : А, АС	GOST 839-80 p.5.2, 5.3
6	Cablu electric tip: ААБл, ААБлГ, ААБ2л, ЦААБл, ЦААБлГ, ЦААБ2л, АСБл, ААШв, СБ, СБл, СБГ, ААШв, ААШнг, АСБ, АСБ2л, СБ	GOST 18410-73 p.5.4 GOST 12.2.007.14-88
7	Cablu electric tip: КВВГ, КВВГнг, КВБ6Шв, КВБ6Шнг, АКВБ6Шв, АКВВГ, АКВВГнг, АКВВГЭнг, АВК, КВВГЭ, КВВГЭнг, КВВГнгд-FR, КВВГЭнгд-FR, КВБВнгд-FR, КПВВГнгд-FR, КПВВГЭнгд-FR, КПВБВнгд-FR, КВП6Шнг, КВБ6Шнг, АКВБ6Шнг, АКВП6Шнг	GOST 1508-78 p.5.1, 5.2 GOST 12.2.007.14-88
8	Conductor electric tip: СИП1, СИП1А, СИП2, СИП2А, СИП3, СИП4, СИП5 conform ТУ 16-705.500-2006	GOST 12.2.007.14-88 GOST R 52373-2005 GOST 31946-2012 p.5.2.7
9	Cablu electric tip: АВВГ, АВВГнг, АВВК, ВВГ, ВВГнг, ВВГнг-ПБ, ВВГ-П, АВБ6Шв, АВБ6Швнг, ВБ6Шв, ВБ6Шнг, АПвБ6Шв, АПвБ6Шнгд, АПвБ6Шл, ПвБ6Шв, ПвБ6Шнг, ПвБ6Шл, АВВГнг-LS, ВВГнг-LS, ВВГнгд-LS, ВВГнгд-FR, NYM-J, NYM-O, NYU, ВВГнг-FR LS, ВВГнгд-FR, ВВГЭнгд-FR, ВБВнгд-FR, ПвВГнгд-FR, ПвВГЭнгд-FR, ПвБВнгд-FR,	GOST 16442-80 p.1.2-1.4, 2.2.1-2.2.10, 2.3.1, 2.3.2, 2.3.5, 6.1-6.4 GOST 12.2.007.14-88
10	Conductor electric tip: ПММ, ПМТ, ПБ, АПБ, ПБД, АМ, ПЭТВ, ПЭЭИ1, ММ, МТ, ШММ, МФ-85, МФ-100, ПСДКТ, ПСДКТ-п, ПЭЭИД	GOST 2584-86 p.5.2, 5.4



Conducătorul organismului de certificare



Melnic L.

Anexa nu este valabilă în lipsa certificatului de conformitate!



CERTIFICAT DE CONFORMITATE

DE EXPERTIZĂ TEHNICĂ ȘI VERIFICARI

Centrul de Știință și Expertiză Tehnică "MOLDTESTENERGO"
MD 2071, mun. Chișinău, str. Alba Iulia, 190/1, of. 8, tel. 74-92-29

Nr. de înregistrare CȘET MTE 26 11A 279-16

Data eliberării: 28 octombrie 2016 Valabil până la: 27 octombrie 2019

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL, CĂ PRODUSELE IDENTIFICATE ASTFEL:
DENUMIREA /DESCRIEREA

Înterupătoare automate VA 47-29, VA 47-29M, VA47-29N la curenți nominali
până la 63A și caracteristicile de declanșare B, C, D, numărul de poli de la unu până
la patru și accesorii pentru ele mărcii comerciale "IEK" (ИЭК):
- declanșator de minimă/ maximă tensiune RM 47 și RMM47,
- declanșator independent RN 47, sonerie ZD47.

Codul NM MD
8536 20 100

Producere în serie

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN:
Securitate SM EN 60898-1:2003/AC:2016

PRODUCĂTOR:

ZHEJIANG CHUANGQI ELECTRIC CO., LTD. NO.18 SHAHONG ROAD,
BEIBAIXIANG, YUEQING, 325603, CHINA

Codul țării
CN

SOLICITANT:

SRL "IEK TRADE", mun. Chișinău, str. Maria Dragan 21
tel. 47-90-65, fax 47-90-66

Codul CUIIO
40201104

CERTIFICATUL ESTE ELIBERAT ÎN BAZA:

Certificate de conformitate al EAC № TC RU C-CN.ME77.B.00584 cu valabilitate de la 19.07.2013
până la 19.07.2018, eliberat de OC SRL « Centrul de certificare, standartizare, sisteme de
management produselelor electrotehnice », 141400, FR, Regiunea Moscovei, or. Himki,
Str. Leningradscaia 29

Rapoartul de încercări nr № 53H6EM/TC din 20.06.2013., eliberat de ИЦ ООО "Элмаш" (POCC
RU .0001.21MI04, până la 13.05.2020).

Proces-verbal de examinare nr. 189/016 din 25.10.2016

INFORMAȚIE SUPLIMENTARĂ:

Evaluarea periodică inter pares a produselor va fi efectuată de CȘET „Moldtestenergo” o dată pe an

Directorul CȘET "MOLDTESTENERGO"

D.ș.t.
I.ș.



M. Guraevschi

*Copiile prezentului certificat MTE se legalizează în modul stabilit
de Centrul de Știință și Expertiză Tehnică "MOLDTESTENERGO"*



CERTIFICAT DE CONFORMITATE

EXPERTIZA TEHNICĂ ȘI VERIFICARE

Centrul de Știință și Expertiză Tehnică "MOLDTESTENERGO"
MD 2071, mun. Chișinău, str. Alba Iulia, 190/1, of. 8, tel. 74-92-29

Nr. de înregistrare CȘET MTE 26 16C 501-18

Data eliberării: 28 martie 2018

Valabil până la: 27 martie 2021

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL, CĂ PRODUSELE IDENTIFICATE ASTFEL:
DENUMIREA /DESCRIEREA

**Tablouri și panouri electrice de joasă tensiune pentru uz casnic și industrial
conform anexei**

Codul NM MD
8537 10 990
8538 10 000

Contract de livrare nr. 2b35417 din 14.06.2017

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN:

Securitate SM SR EN 61439-1:2013, SM EN 61439-4:2014, SM SR EN 62208:2013.

PRODUCĂTOR:

ООО «ЭЛЕКТРОФФ ИНЖИНИРИНГ» 117545, г.Москва, 1-й Дорожный
проезд, дом 4, стр.1

ООО «ИЭК МЕТАЛЛ-ПЛАСТ», РФ, 301030, Тульская обл., г.Ясногорск,
ул. П.Добрынина, д1-Б

Codul țării
RU

SOLICITANT:

**SRL "IEK TRADE", mun. Chișinău, str. Maria Dragan 21
tel. 47-90-65, fax 47-90-66**

Codul CUIP
40201104

CERTIFICATUL ESTE ELIBERAT ÎN BAZA:

Certificatului de conformitate FR nr. TC RU C-RU.ME79.B.00295 cu valabilitate de la 01.10.2015 până la 30.09.2020, № TC RU C-RU.ME79.H.00197 cu valabilitate de la 02.02.2017 până la 01.02.2020, № TC RU C-RU.ME79.H.00281 cu valabilitate de la 13.08.2015 până la 12.08.2020, № TC RU C-RU.ME79.H.00196 cu valabilitate de la 19.05.2016 până la 18.05.2019, eliberate de OC a utilajului electric АНОЦСЭ «ЭЛЕКТРОПРИВОД». 115230, or. Moscova, șos. de Varșovia, 42 cam.7143. Nr. de înregistrare TC RU.0001.11ME79 din 19.05.2011.
Certificatului de conformitate FR nr. РОСС RU.MO10.H01175 cu valabilitate de la 11.01.2018 până la 10.01.2021, eliberat OC ООО «ЦЕНТР-СТАНДАРТ» 119119, РФ, г.Москва, Ленинский проспект, дом 42, кор.1-2-3, эт.1, помещ.1. Регистрационный № RA.RU.11MO10.

Actului de identificare nr. 259/018 din 16.02.2018.

INFORMAȚIE SUPLIMENTARĂ:

Evaluarea periodică inter pares a produselor va fi efectuată de CȘET „Moldtestenergo” o dată pe an

Directorul CȘET "MOLDTESTENERGO"

D.ș.t.
I.ș.



M. Guraevski

*Copiile prezentului certificat de conformitate se MTE legalizează în modul stabilit
de Centrul de știință și expertiză Tehnică "MOLDTESTENERGO"*



ÎS „CENTRUL TEHNIC PENTRU SECURITATE INDUSTRIALĂ
ȘI CERTIFICARE“ (CTSIC)

CERTIFICAT DE CONFORMITATE

Nr. de înregistrare **OCP_{GSP} MD 015 13C 45477 - 18**

Data emiterii **10 iulie 2018** Valabil pînă la **10 iulie 2019**

ORGANISMUL DE CERTIFICARE A PRODUSELOR CU GRAD SPORIT DE PERICOL
din cadrul IS "Centrul Tehnic pentru Securitate Industrială și Certificare"
certificat de acreditare OCpr - 015 MD-2004, or.Chîșinău, str.S.Lazo,48,
tel.: 208152, tel./fax : 022 208184

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL CĂ PRODUSELE IDENTIFICATE ASTFEL:
DENUMIREA/DESCRIEREA Armătură pentru liniile electrice
marca comercială "FEMAN" - conform anexei (1 poziție);

Codul NC MD
7616

livrarea conform contractului Nr.S1204/18 din 12.04.2018;

tipurile - conform anexei;

termenul de valabilitate - 36 luni de la data fabricării;

păstrarea - depozitul firmei (or.Chîșinău, str.Petricani 21).

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN

GOST 13276-79 p.1.1.1-1.1.3, 1.1.5, 1.1.7,
1.1.8, 1.2, 1.3, 1.7, 1.9, 5.1-5.3.

PRODUCĂTOR "FEMAN d.o.o", Serbia

Codul țării
RS

CLIENT "CEGOLTAR" SRL

Codul IDNO
1003600017268

MD, mun.Chîșinău, str.Nuferilor, 25

tel.: 022 27-35-82

CERTIFICATUL ESTE ELIBERAT ÎN BAZA

Raportului de încercări Nr.7584/02/18 din 05.07.2018,

L1 "CERTIFICARE" SRL, certif. de acreditare Nr.L1-076

Raportului de identificare a produselor Nr.10/0455 din 02.07.2018.

Raportului de evaluare Nr.10/127-ev din 10.07.2018.

INFORMAȚIE SUPLIMENTARĂ Este stabilită 1 supraveghere cu identificarea de către
OC PGSP (10) a fiecărui lot de produse importate

Schema de tip 2.

Certificatul este valabil numai în prezența anexei la certificatul dat.

Produsele date se comercializează numai în prezența informației în limba de stat.



Conducătorul organismului
de certificare

N. Manolov N. Manolov

Expert

S. Melnic

S. Melnic

În atenția antreprenorilor și organelor de control!
Copiile certificatului de conformitate se legalizează în modul stabilit de
Organismul de Certificare a Produselor cu Grad Sporit de Pericol

Seria C nr. 004148

Anexă

din **10.07.2018**

Nr.	Tipurile produsului
1	Armatură pentru linii aeriene, m.c. FEMAN: - clemă - ancoră tip: PA, CA, CS, AC, L; - clemă de ramificare tip: PC, P, CDF; - cleme conexiuni tip FIDOS; - adapter pentru cleme conjunctive tip: F1, F2, F4, F5, NF, E14/D0I , K27/DII; - cleme conjunctive tip: MJPT, MJPB, CPTAU, BIC; - console de susținere tip: SF, PS, CS, FZN, RA, ES; - bandă de montare tip F; - clame tip A19, A20; - instrument tip FZT; - role frecătoare tip FR.

Seria C nr. 001710



Conducătorul organismului
de certificare

Expert

N. Manolov

S. Melnic

Anexa nu este valabilă în lipsa certificatului de conformitate



СЕРТИФИКАТ

НАУЧНО – ТЕХНИЧЕСКОЙ ЭКСПЕРТИЗЫ И ИСПЫТАНИЙ

Научный Экспертно-Технический Центр "MOLDTESTENERGO"

МД 2071, г. Кишинев, ул. Алба Юлия, 190/1, оф. 8, т. 74-92-29

Регистрационный номер **CSET MTE 26 11A 286-16**

Дата выдачи: 28 октября 2016 Действителен по: 27 октября 2019

НАСТОЯЩИМ ДОКУМЕНТОМ УДОСТОВЕРЯЕТСЯ, ЧТО ПРОДУКЦИЯ, ИДЕНТИФИЦИРОВАННАЯ КАК:
НАИМЕНОВАНИЕ / ОПИСАНИЕ

Контакты малогабаритные серии **КМИ, КМИп** (в защитной оболочке и без) не реверсивные на номинальные токи от 9 до 95 А.
Контакты электромагнитные серии **КТИ** (реверсивные и не реверсивные) на номинальные токи от 115 до 630 А,
Электромеханические ручные пускатели типа **ВКИ-211, ВКИ-216, ВКИ-230**.
Контакты типа **КТ, КТП**.
Пускатели ручные серии **ПРК32**, дополнительные устройства к **ПРК32 (АК, ДК)**,
Контакты модульные **КМ** торговой марки "IEK" (ИЭК)
Миниконтакт **МКИ**
Серийный выпуск

Код NM MD
8536

СООТВЕТСТВУЕТ ОБЯЗАТЕЛЬНЫМ ТРЕБОВАНИЯМ, УСТАНОВЛЕННЫМ В:
Безопасности **SM SR EN 60947-4-1:2014**
ИЗГОТОВИТЕЛЬ:

„Chac Tehnology Co., LTD”, „Tengen Group Co.,ltd”; „Zhejiang Chint Electrics Co., ltd”, China

Код страны
CN

ЗАЯВИТЕЛЬ:

SRL "IEK Moldova",

мун. Кишинэу, ул. Петриканская, 31, тел. 47-90-65, факс 47-90-66

Код СУПО
40201104

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ:

Сертификатов соответствия ТС : №ТС RU C-CN.AE44.B.00495, №ТС RU C-CN.AE44.B.00540 сроком действия с 27.12.2013 по 26.12.2018 и с 20.02.2014 по 19.02.2019 соответственно, выданных ОС «ТЕСТ-С.Петербург», 190103, ул Курляндская, д.1 и №ТС RU C-CN.ME77.B.00861 сроком действия с 18.10.2013 по 18.10.2018, выданного ОС ООО « Центр по сертификации, стандартизации и систем качества электро-машиностроительной продукции », 141400, РФ, Московская область, г.Химки, ул. Ленинградская, д.29

Протоколов испытаний № FSS2013/01/01/279-01, № FSS2013/01/01/279-02, № FSS2013/01/01/279-03, № FSS2013/01/01/279-04 от 23.12.2013 и № FSS2013/01/01/088-01-№ FSS2013/01/01/088-03 от 28.03.2014, выданных ИЛ ФБУ ТЕСТ-С.Петербург (РОСС RU.0001.21ME01)
Акта обследования № 189/016 от 25.10.2016 г

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ:

Периодическая экспертная оценка продукции будет осуществляться НЭТЦ "Moldtestenergo" один раз в год.

Директор НЭТЦ "MOLDTESTENERGO"

Д.Т.Н.

М.П.



М. Гураевский

Копии настоящего сертификата МТЕ прилагаются в соответствии с правилами
Научного Экспертно-технического центра "MOLDTESTENERGO"



СЕРТИФИКАТ

НАУЧНО – ТЕХНИЧЕСКОЙ ЭКСПЕРТИЗЫ И ИСПЫТАНИЙ

Научный Экспертно-Технический Центр "MOLDTESTENERGO"

МД 2071, г. Кишинев, ул. Алба Юлия, 190/1, оф. 8, т. 74-92-29

Регистрационный номер **CSET MTE 26 11A 289-16**

Дата выдачи: 28 октября 2016 Действителен по: 27 октября 2019

НАСТОЯЩИМ ДОКУМЕНТОМ УДОСТОВЕРЯЕТСЯ, ЧТО ПРОДУКЦИЯ, ИДЕНТИФИЦИРОВАННАЯ КАК:
НАИМЕНОВАНИЕ / ОПИСАНИЕ

Выключатели электрические с выдержкой времени (таймеры)
электронно-механические типа ТЭМ181, электронные типа ТЭ15 и Т047,
торговой марки "IEK" (ИЭК)
Серийный выпуск

Код NM MD
8536 50 900

СООТВЕТСТВУЕТ ОБЯЗАТЕЛЬНЫМ ТРЕБОВАНИЯМ, УСТАНОВЛЕННЫМ В:
Безопасности SM SR EN 60669-2-3:2010

ИЗГОТОВИТЕЛЬ:

„Chac Tehnology Co., Ltd”, China
“ Wenzhou Giant Electrical Appliances Co, Ltd”, China

Код страны
CN

ЗАЯВИТЕЛЬ:

SRL "IEK Moldova",
мун. Кишинэу, ул. Петриканская, 31, тел. 47-90-65, факс 47-90-66

Код СУНО
40201104

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ:

Сертификатов соответствия ТС: - № TC RU C-CN.ME79.B.00065 и № TC RU C-CN.ME77.B.01549 сроком действия с 14.02.2014 по 14.02.2019 и с 04.06.2014 по 03.06.2019 соответственно, выданных **ОС АНО «Центр сертификации электрооборудования «Электронпривод»**, 115230, г. Москва, Варшавское шоссе, д.42, к.7143 (№РОСС RU.0001.11ME79) и **ОС ООО «Центр по сертификации, стандартизации и систем качества электро-машиностроительной продукции»**, 141400, РФ, Московская область, г.Химки, ул. Ленинградская, д.29 (№РОСС RU.0001.11ME77)
Протоколов испытаний : - № 051LAB01/14 и № 051EM-LAB01/14 от 10.02, выданных **ИЛ ООО «Инвестиционная корпорация»** (РОСС RU.0001.21ME64), 141300, Сергиев Посад, Московское шоссе, д.25.
- № FSS2014/01/03/116-01 от 04.06.2011, выданного ИЛ ФБУ ТЕСТ-С.Петербург (РОСС RU.0001.21ME01), 190103, ул Курляндская, д.1
Акта обследования № 189/016 от 25.10.2016 г

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ:

Периодическая экспертная оценка продукции будет осуществляться НЭТЦ „Moldtestenergo” один раз в год.

Директор НЭТЦ "MOLDTESTENERGO"

Д.Т.Н.
м.п.



М. Гураевский

Копии настоящего сертификата MTE легализуются в соответствии с правилами
Научного Экспертно-технического центра "MOLDTESTENERGO"