

Lumen maintenance report

LED information

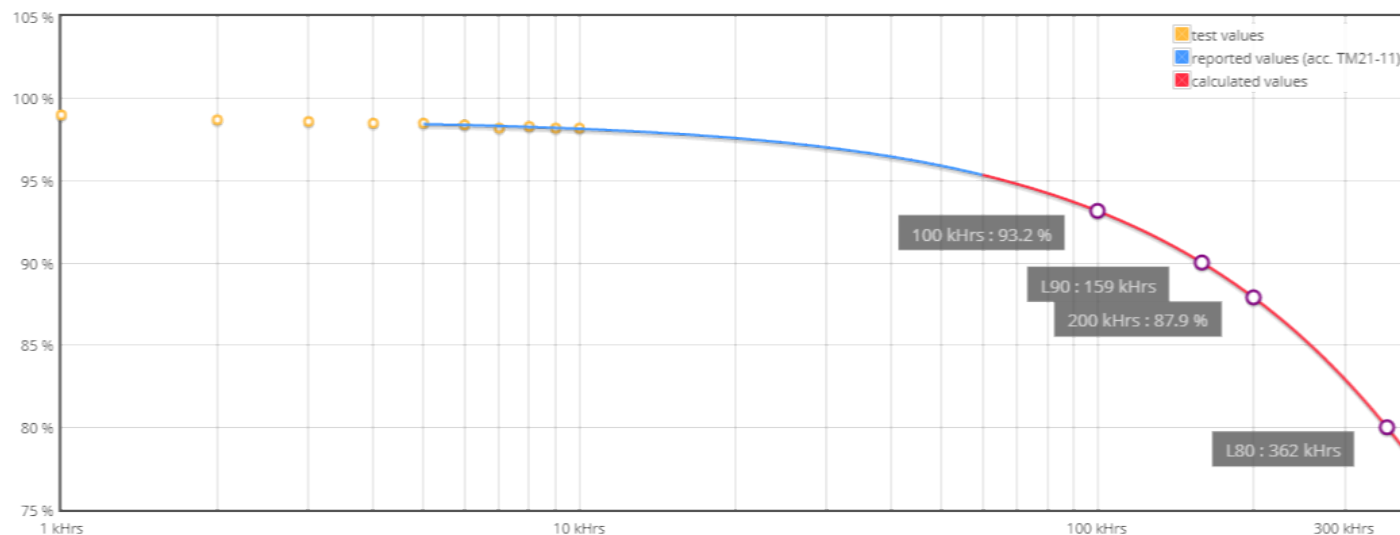
LED type	LH351C
LED current	1000 mA
Ts	55°C
Description	SLED-19-031

Projection data

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

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

Projection graphic



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

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

Laboratory Service PHYSICAL TEST REPORT



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

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

Sample n°: P-E15329

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

Remarks:

Test request n°: P-D15613

Folder n°: P-F14083

TEST CONDITIONS:

Operator: EMC - ULg

Test Summary

EN 55015 & EN 61547 Standards

Emission

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

Immunity

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

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

EMC Auxiliaries: Varistor

CONCLUSIONS:

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

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

Duplicate to: Mr M. Thijs

LAB 16/09/2015

L. Maghe

//P-15CR613

LED Flux measurement

FORM-L-41 ED1 REV 2

Date : **16-01-19**

Operator : **FCE**

Filename : **2019_53.xml**



226 - TEST

NBN EN ISO/IEC 17025 : 2005

LEDs

Trademark : **Samsung**

Entry number : **39R004-3**

Type : **LH351C**

Power (Catalogue) : **0,00** W

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

Flux : **0** lm/LED

Part number : **Unknown**

Color or CCT (Theoretical) : **NW**

Number of LEDs : **6**

Lenses

Trademark : **None**

Type : **None**

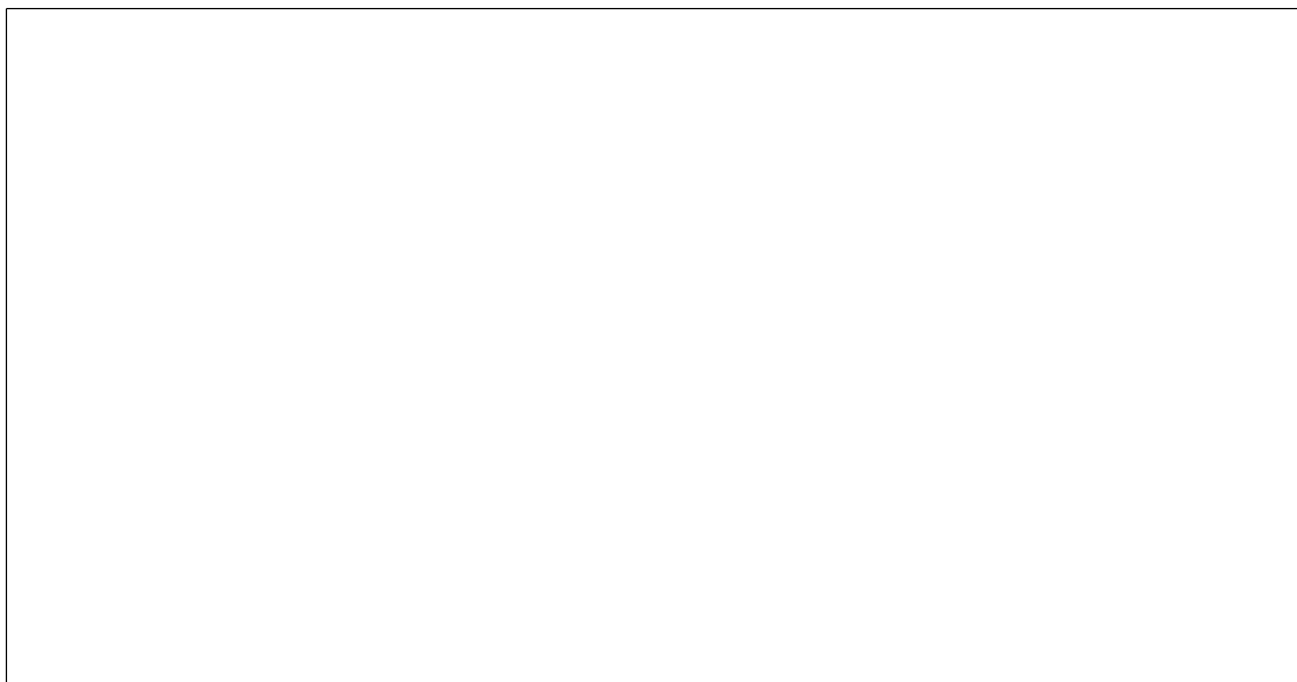
Power & Print

Type : **DELTA SM400-AR-4**

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

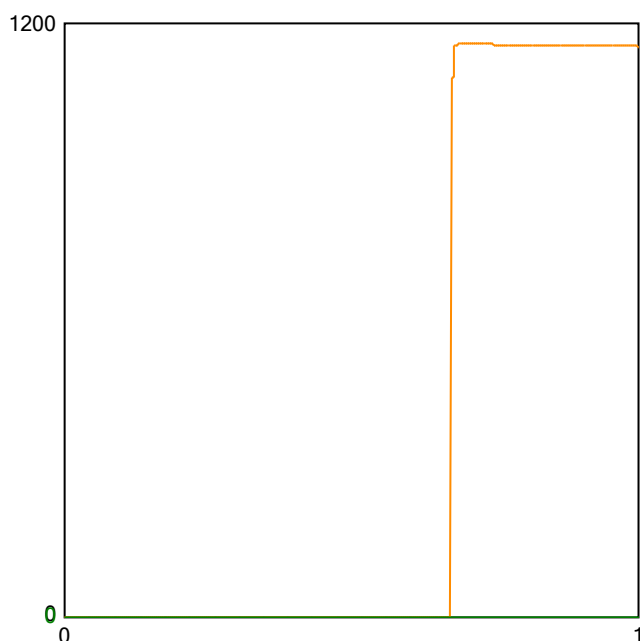
Active ☐

Picture



Sphere photometric measurement

Maximum flux : **1161** lumens



Operating condition

Position in sphere :



Ambient sphere T ° : **24,6**

Electrical measurement

● Secondary electrical measurement

Voltage : **16,80** V

Current : **0,350** A

Power : **5,87** Watt

→ LEDs light efficiency at 25° :

197,6 lm/W

193,5 lm/Led

● Primary electrical measurement

Voltage : **N/A** V

Current : **N/A** A

Power : **N/A** Watt

Cos φ : **N/A**

→ Driver losses : **N/A** %

→ LEDS & Driver light efficiency :

N/A lm/W

Description :

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

Comment :

FORM-L-41 ED1 REV 2



226 - TEST

Approved by :

LED 2019/53 2/3



226 - TEST

NBN EN ISO/IEC 17025 : 2005

Colorimetry

[illegible]

Lumen maintenance report

LED information

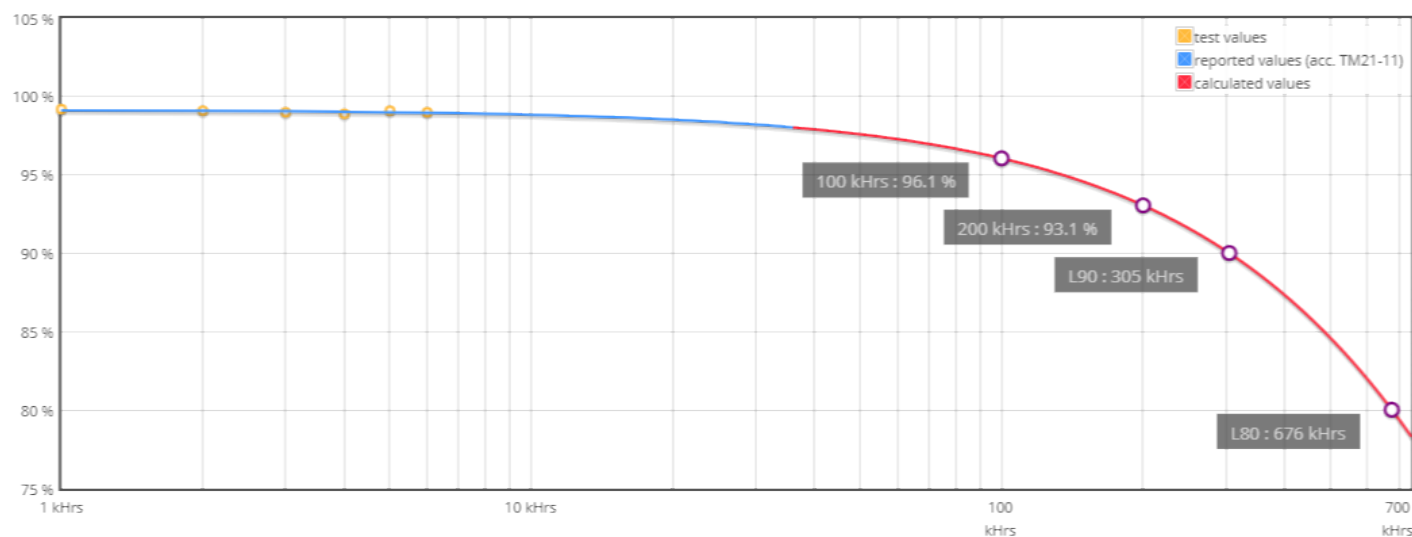
LED type	LH351C
LED current	700 mA
Ts	55°C
Description	SLED-18-015

Projection data

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

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

Projection graphic



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

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

LICENCE

No. 21158 - Issue No 2

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

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



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

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

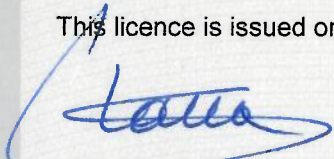
SGS CEBEC hereby declares that the above-mentioned product has been certified on the basis of:

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

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

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

This licence is issued on: 23/04/2019


ir. C. Lana,
Certification Manager

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



SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

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

TESTS

Test requirements

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

Test results

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

Remarks

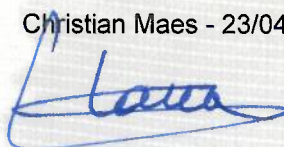
This certificate is based on test reports Nos. TGM-VA EE 36464 SFT-1 and P1533-I.

Conclusion

The examination proved that all certification requirements were met.

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

Certification Manager :

 2019-04-23

FACTORY LOCATION(S)

Schreder TOV
Vul. Mykulynetska 46B
46000 TERNOPIL
Ukraine

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

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

Schröder Iluminação S.A.
Rua da Fraternidade Operária, n° 3
2795-491 CARNAXIDE, OEIRAS
Portugal

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

Schröder Hungary Plc.
Tópart 2
2084 PILISSZENTIVAN
Hungary

Laboratory Service PHYSICAL TEST REPORT



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

Subject: SKIDO 6 led's

Sample n°: P-E15365

Test purpose: Electrical measurements @ 1.05A and 700mA

Remarks:

Test request n°: P-D15545

Folder n°: P-F14083

TEST CONDITIONS:

Operator: CLOSSET Frédéric

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

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

Power Supply:
Elgar Tw 3500-4
Supply voltage: 230 V 50 Hz

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

CONCLUSIONS:

@ 1.05A:
- Efficiency: 81 %
- PF: 0.96
- THD: 12.7%

@ 700 mA
- Efficiency: 83%
- PF: 0.97
- THD: 13.2%

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

//P-15CR545

A handwritten signature in blue ink, appearing to read "Maghe", is written over a faint yellow rectangular stamp.

Laboratory Service PHYSICAL TEST REPORT



R-Tech

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

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

Sample n°: P-E13088

From: HUS

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

Remarks:

Test request n°: P-D13182

Folder n°: P-F13034

TEST CONDITIONS:

Operator: BOMBIL Patrick

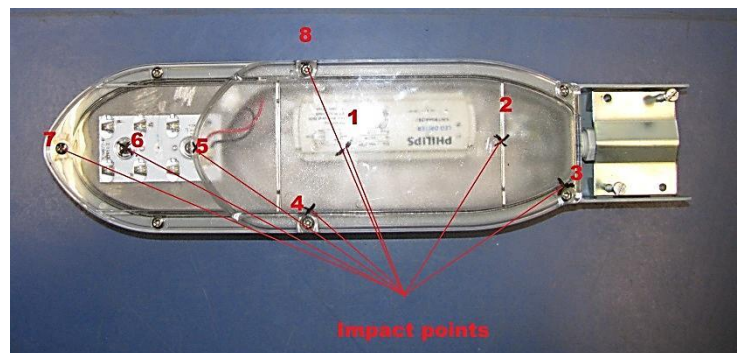
I.S. Skido with PC protector

Info material not received

At pendulum hammer

5+3 impact points distributed on protector surface

One impact on each point



Test

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

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

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

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

Result

OK, nothing to indicate

OK, nothing to indicate

OK, nothing to indicate

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

CONCLUSIONS:

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

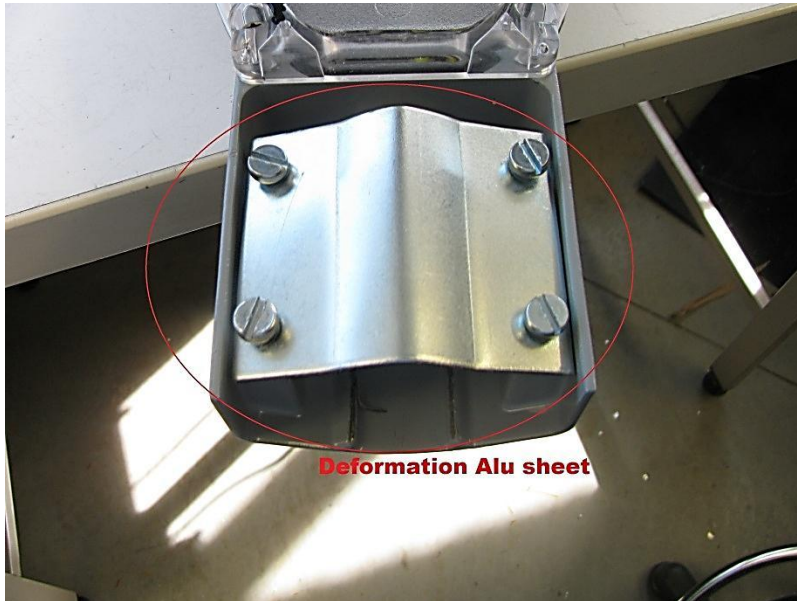
Duplicate to: MM C. Horvath, C. Marville, Y. Borlez

LAB 19/04/2013

J.P. Harchies

P-13E182

I.S. SKIDO (hand made by HUS)



Laboratory Service PHYSICAL TEST REPORT



R-Tech

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

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

Sample n°: P-E13112

From: INK

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

Remarks:

Test request n°: P-D13207

Folder n°: P-F13045

TEST CONDITIONS:

Operator: BOMBIL Patrick

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

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

CONCLUSIONS:

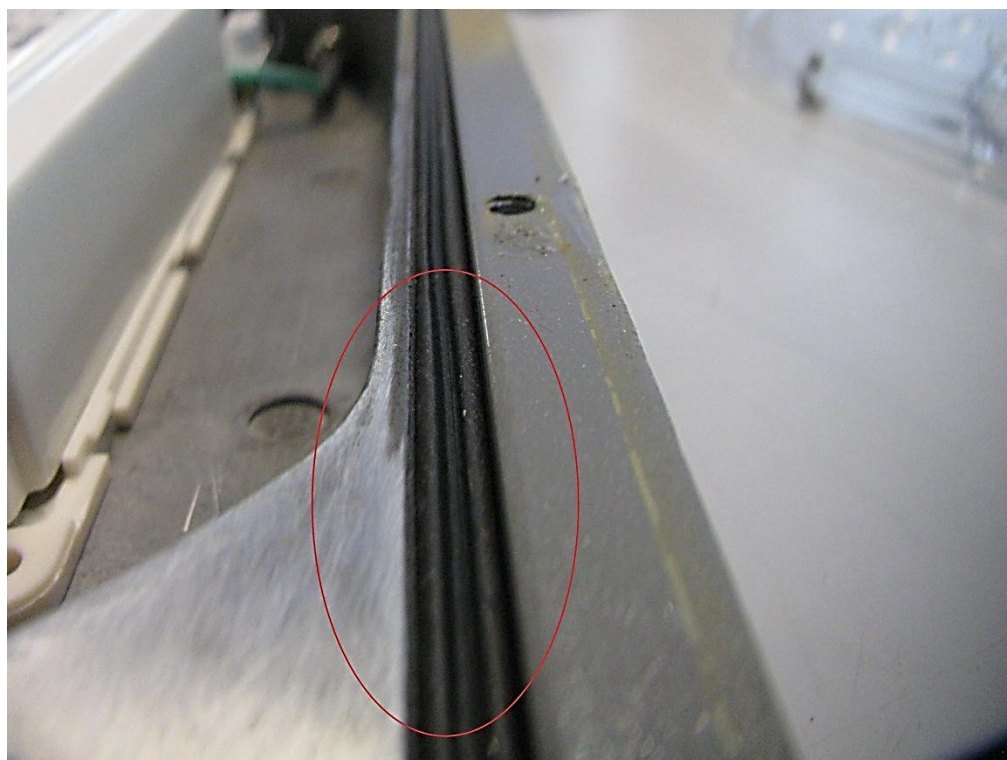
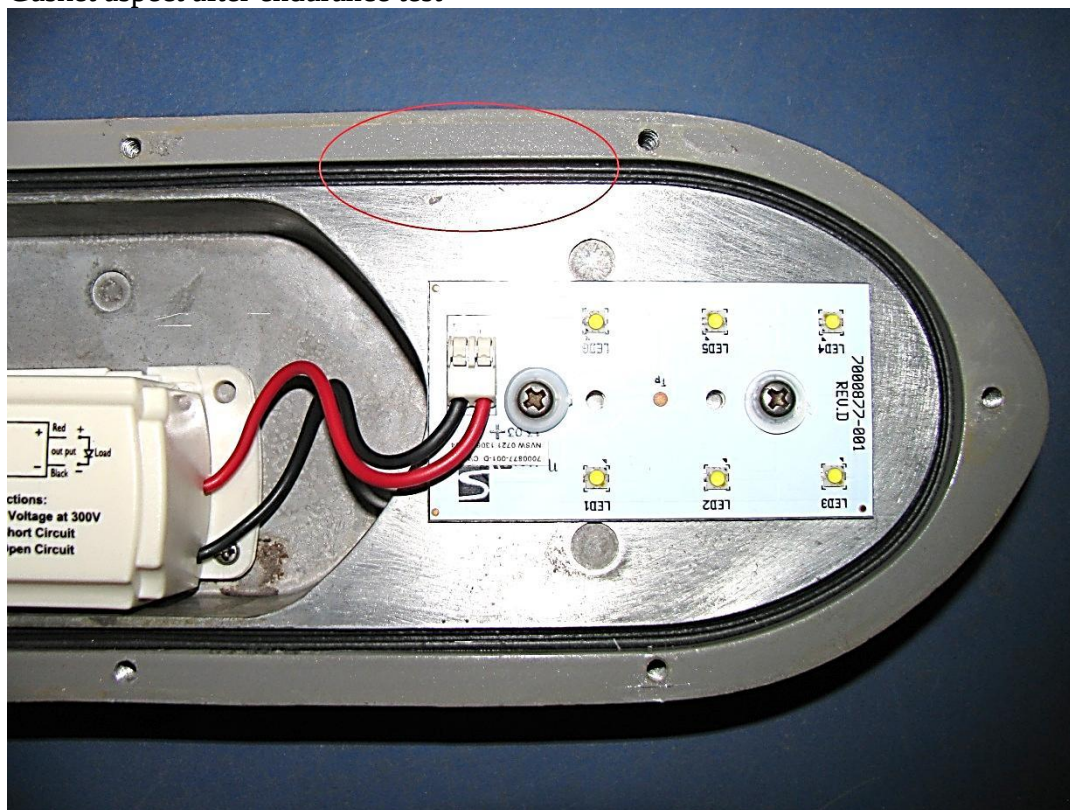
SKIDO 6 led's @ 700 mA satisfies the IP65 test following IEC/EN 60598-1 Standard

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

P-13E207

Serial 0 SKIDO 6 led's Nichia @ 700 mA

Gasket aspect after endurance test



Laboratory Service PHYSICAL TEST REPORT



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

Subject: SKIDO 6 led's

Sample n°: P-E15365

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

Remarks:

Test request n°: P-D15544

Folder n°: P-F14083

TEST CONDITIONS:

Operator: CLOSSET Frédéric

Load: 6 led's

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

Test 700mA: Mean Well PLD-16-700

Tc 70 °C

Measurement device:

Yokogawa TX10: thermal measurement

Yokogawa WT 210: primary EM

Fluke 87: secondary and led's EM

Junction Temperature measurement method

Junction temperature measurement by base temperature measurement and electrical measurement.

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

CONCLUSIONS:

@ 1,05A: Ta (IEC): 35 °C
Tq (IEC): 25 °C

@ 700 mA: Ta (CEI): 50 °C
Tq (CEI): 40 °C

Tq given for driver full load

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

Duplicate to: Mr M. Thijs

LAB 01/07/2015

L. Maghe

A handwritten signature in blue ink, appearing to read "L. Maghe", with a stylized flourish at the end.

//P-15CR544

SKIDO

5122

Optic	5122
Protector	Integrated lenses
Source	6 Samsung LH351C
Matrix	429352



Characteristics

							
395	101	54	1.2	IP 65	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

The efficient LED alternative to low-power fluorescent lighting

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

Types of application

- Square and park
- Residential road
- Urban road

Information for 1000 lm matrix

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

Photometrical characteristics

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

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

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

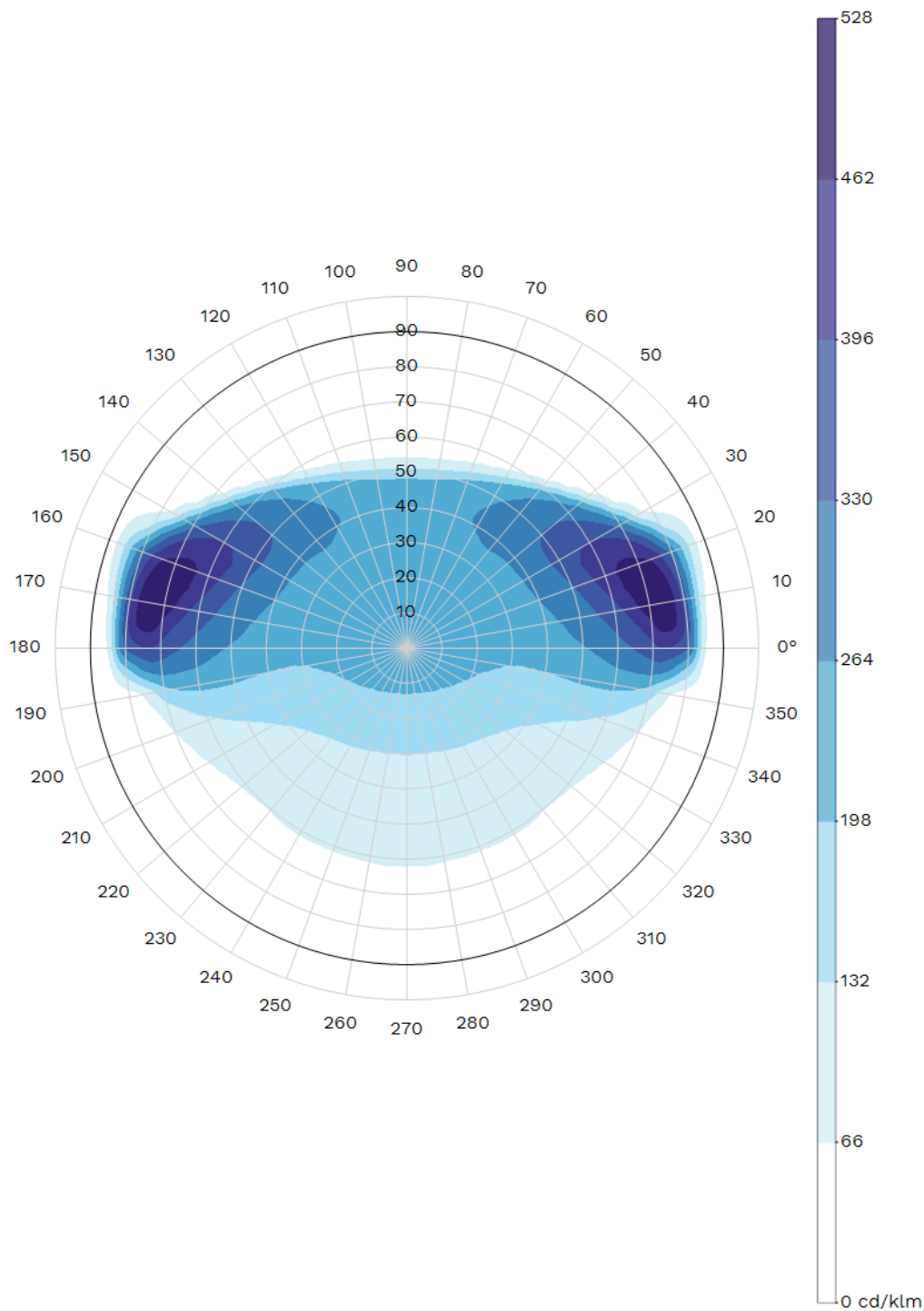
- Class I
- Input voltage: 230V - 50Hz
- Power factor > 90% at full load
- Surge protection: 4kV minimum, optional 10kV & 15kV

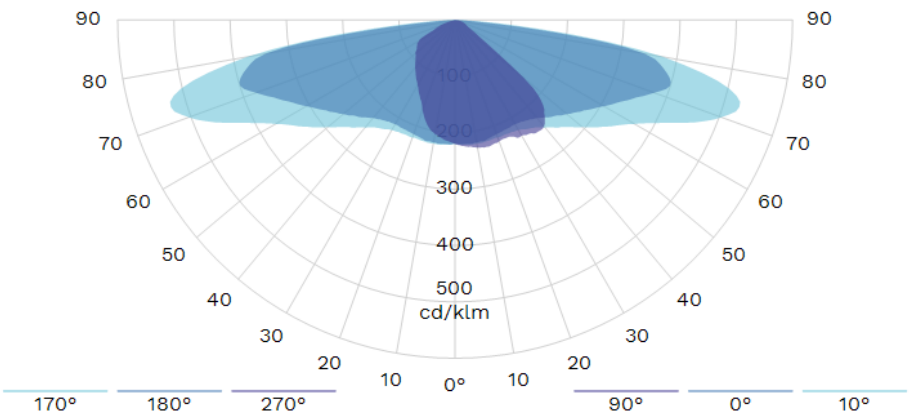
STANDARDS & CERTIFICATIONS

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

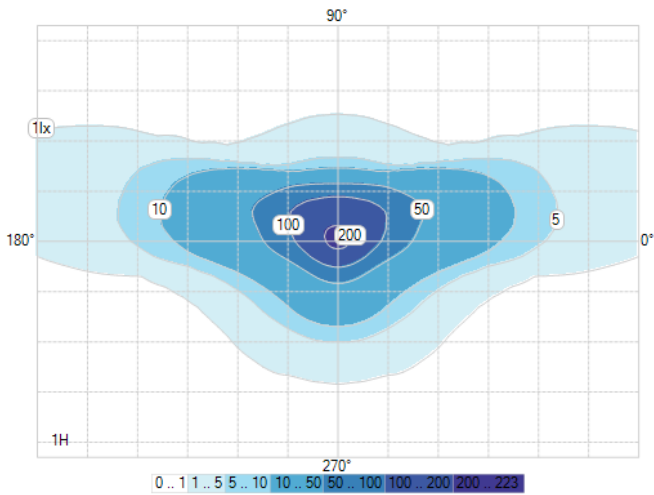
OPTIONS

- Other RAL or AKZO colours

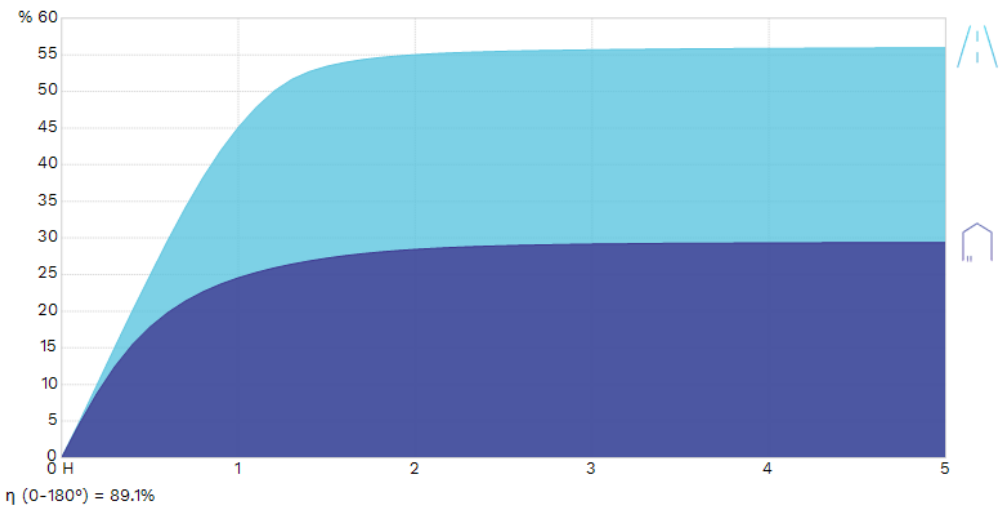




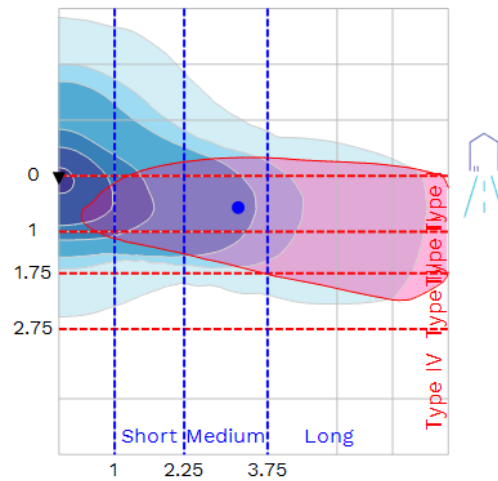
Isolux



K-Curve

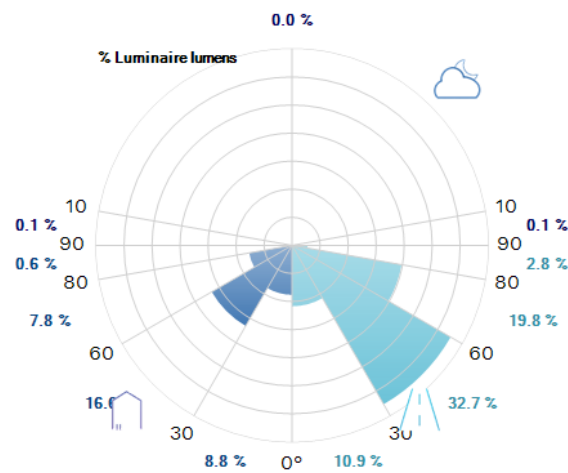


IES Roadway Classification / Nema Classification

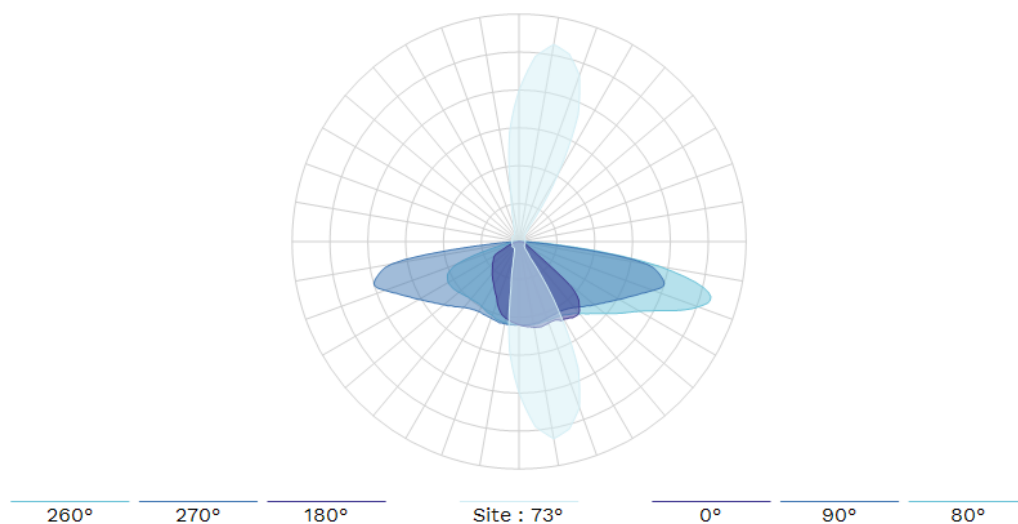


III - Medium

Luminaire classification system (LCS)



Intensity diagram in max Cone and in CPlane



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<http://www.schreder.com>

DECLARATIE DE CONFORMITATE - CE

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

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

Echipare:

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

Caracteristici principale:

Balast: Electronic

Etanșeitate compartiment optic: IP 65

Etanșeitate compartiment aparataj: IP 65

Tensiune nominală: 230 V – 50 Hz

Clasa electrică: I

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

este produs în conformitate cu următoarele standarde:

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

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

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

De asemenea acesta este în conformitate și cu standardele:

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

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

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

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

CEI EN 61547 – 1996/07 (CEI 34-75)

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

Data aplicării marcatului CE: 14

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

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

Eliberat,
Aprilie 2019, Cluj-Napoca

