

SGS

LICENCE

No. 21235 replaces No.21213

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) : AXIA GEN 3.1 (AXG3S1), AXIA GEN 3.2 (AXG3S2), AXIA GEN 3.3 (AXG3S3)

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: 25/04/2019

ir. C. Lana,
Certification Manager

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This certificate is only valid combined with the publication on the following web address: www.sgs.com/ee



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



SPECIFICATION OF THE CERTIFIED PRODUCT

Product data

Product	:	road, square and street lighting
Trade name(s)	:	SCHREDER
Type(s)/Model(s)	:	AXIA GEN 3.1 (AXG3S1), AXIA GEN 3.2 (AXG3S2), AXIA GEN 3.3 (AXG3S3)
description	:	Street lighting luminaire
rated voltage (Un)	:	220-240 V
nature of supply	:	ac
rated frequency	:	50-60 Hz
class	:	class I
degree of protection	:	IP66
resistance to impact (IK)	:	IK09

Product data - type AXIA GEN 3.1 (AXG3S1)

rated ambient temperature (ta)	:	35°C (indoor), 45°C (outdoor use)
rated current (In)	:	max. 870 mA
rated power	:	max. 44 W
lamp(s)	:	8-16 Leds OSLO

Product data - type AXIA GEN 3.2 (AXG3S2)

rated ambient temperature (ta)	:	35°C (indoor), 45°C (outdoor use)
rated current (In)	:	max. 1000 mA
rated power	:	max. 78 W
lamp(s)	:	24-32 Leds OSLO

Product data - type AXIA GEN 3.3 (AXG3S3)

rated ambient temperature (ta)	:	30°C (indoor), 40°C (outdoor use)
rated current (In)	:	max. 880 mA
rated power	:	max. 172 W
lamp(s)	:	48-64 Leds OSLO

TESTS

Test requirements

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

Test results

The test results are laid down in certification file ref. 630159/05.

Remarks

This certificate is based on test report No. P1573-77-lb.

Conclusion

The examination proved that all certification requirements were met.

Reviewed by, project leader : Christian Maes - 25/04/2019

Certification Manager

[Signature] 2019-04-25

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

Socolec 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



Signature



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.....	P1573-77-lb
Date of issue.....	2019-04-25
Total number of pages.....	45+2
Name of Testing Laboratory preparing the Report.....	SGS Belgium division SGS CEBC
Applicant's name.....	R-Tech sa
Address.....	Rue de Mons, n°3 4000 Liège.
Test specification:	
Standard.....	IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017
Test procedure.....	CB Scheme
Non-standard test method.....	N/A
Test Report Form No.	IEC60598_2_3L
Test Report Form(s) Originator	Intertek Semko AB
Master TRF.....	Dated 2018-03-09
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Test item description.....	Street lighting Luminaire
Trade Mark.....	SCHREDER
Manufacturer.....	SCHREDER
Model/Type reference.....	AXIA GEN 3.1; AXIA GEN 3.2; AXIA GEN 3.3
Ratings.....	220-240V, 50-60Hz, C11, IP66, IK09, IK10, IK10 LED, Version with 8, 16, 24, 32, 48, 64 Leds, Max 172W Led: Max 1000mA
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):	
☐ CB Testing Laboratory:	
Testing location/ address.....	
Tested by (name, function, signature)	
Approved by (name, function, signature)....	
☐ Testing procedure: CTF Stage 1:	
Testing location/ address.....	
Tested by (name, function, signature)	
Approved by (name, function, signature)....	
☐ Testing procedure: CTF Stage 2:	
Testing location/ address.....	
Tested by (name + signature)	
Witnessed by (name, function, signature) ..	
Approved by (name, function, signature)....	
☐ Testing procedure: CTF Stage 3:	
☐ Testing procedure: CTF Stage 4:	
Testing location/ address.....	R-Tech
Tested by (name, function, signature)	Ghysens Gilles
Witnessed by (name, function, signature) ..	Christian Maes
Approved by (name, function, signature)....	Cheuvart Geoffrey
Supervised by (name, function, signature) :	

List of Attachments (including a total number of pages in each attachment):

EU deviations
Pictures
Instructions

Summary of testing:

Tests performed (name of test and clause):

IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017

Testing location:

R-tech sa
Rue de Mons, 3
B-4000 LIEGE
Belgium.

Summary of compliance with National Differences:

List of countries addressed

☒ The product fulfils the requirements of

IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017
EN 60598-2-3:2003 + A1:2011 used in conjunction with EN 60598-1:2015

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.



Official Name :

AXIA GEN 3.1
AXIA GEN 3.2
AXIA GEN 3.3

Label Name:

AXG3S1
AXG3S2
AXG3S3



TRF No IEC60598_2_3L



Test item particulars.....	
Classification of installation and use..... Class I	
Supply Connection Connector	
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: August 2018	
Date (s) of performance of tests: August 2018– April 2019	
General remarks:	
"(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.	
Clause numbers between brackets refer to clauses in IEC 60598-1	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1	
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) :	
Comatelec S.A. Z.I., F-18400 SAINT FLORENT S/CHER, France	Schröder Hungary Plc. Tópart 2, 2084 PILISSZENTIVÁN, Hungary
Schröder Iluminação S.A. Apartado, 132 2790-076 CARNAXIDE, Portugal	Socolec S.A. Av. de Roanne, 66 Polígono Industrial "EL HENARES" 19180 MARCHAMALO (GUADALAJARA) Spain
Schröder TOV вулиця Миколаївська 46Б 46000 ТЕСЛОПІК, Ukraine	Schröder (China) Lighting Industrial Co., Ltd No.40 Xinye 2 Street, Tianjin Economic Technological Development Zone West Zone, 300462 Tianjin City, P.R.China, China



General product information:

Rating:

MODEL	LED Count	Current (mA)	Max Power (W)	INDOOR ta (°C)	OUTDOOR ta (°C)
AXIA 3.1	8	0 < I ≤ 870	23	35	45
	16	0 < I ≤ 870	44	35	45
AXIA 3.2	24	0 < I ≤ 1000	76	35	45
	32	0 < I ≤ 800	78	35	45
AXIA 3.3	48	0 < I ≤ 800	115	30	40
	64	0 < I ≤ 880	172	30	40

Color Temperature can be :
NW neutral white
WW warm white

Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		
3.2 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s: (see Annex 1)	—
3.2 (0.5)	Components		—
3.2 (0.7)	Information for luminaire design in light sources standards		—
3.2 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard		N/A

3.4 (2)	CLASSIFICATION OF LUMINAIRES		
3.4 (2.2)	Type of protection	Class I	
3.4 (2.3)	Degree of protection	IP66	—
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		
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 (3.3.5)	Wiring diagram		N/A
3.5 (3.3.6)	Special conditions		P
3.5 (3.3.7)	Warning halide lamp luminaire – warning		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	IEC 60598-2-3		
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		P
3.5 (3.3.10)	Suitability for use indoors		N/A
3.5 (3.3.11)	Luminaires with remote control		P
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		N/A
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
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		P
3.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		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		
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		N/A
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		P

Clause	Requirement + Test	Result - Remark	Verdict
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		N/A
3.6 (4)	CONSTRUCTION		P
3.6 (4.2)	Components replaceable without difficulty		P
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 60051 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
	Secured 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



Clause	Requirement + Test	Result - Remark	Verdict
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		N/A
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)	Retention		N/A
	Method of fixing		N/A
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

Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.10.2)	Assembly gaps: - not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retention of insulation: - fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
3.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		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: - self-tapping screws		N/A
	- thread-cutting screws		P
3.6 (4.11.3)	Screw locking: - spring washer		N/A
	- 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		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....		N/A
	Torque test: torque (Nm); part.....		N/A
	Torque test: torque (Nm); part.....		N/A
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
3.6 (4.12.4)	Locked connections: - fixed arms; torque (Nm).....	2.5Nm	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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	P
	- other parts; energy (Nm).....	0.7	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		N/A
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		N/A
3.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2.5 Nm		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Mass (kg) of semi-luminaire		N/A
	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
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		N/A
	- 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		N/A
	No lamp control gear	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		N/A
	- external		N/A
	- internal		N/A
	- temperature marked lamp control gear		N/A



Clause	Requirement + Test	Result - Remark	Verdict
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		
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
3.6 (4.21.2)	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.3)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.4)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
3.6 (4.21.4)	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)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778		—
	Luminaires with $E_{h\nu}$:		P
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2	RG01@44cm (OSLON)	P
	- marking and instruction according 3.2.23		P
	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

Clause	Requirement + Test	Result - Remark	Verdict
	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
	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
	In protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:		P
	Minimum live 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	IEC 61347-2-13	P

Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	Used SELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV 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
	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		N/A
	- test according 7.2.3		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- 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		
	Comply with IEC 61643-11	CB	P
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6.1 (-)	At least IP X3 or X5 respectively, IP	IP66	P
	Column-integrated luminaires:		N/A
	- parts below 2.5 m, IP		N/A
	- parts above 2.5 m, IP		N/A
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		P
3.6.3.1 (-)	Static load test		P
	- drag coefficient	0.5	P
	- loaded area (m ²)	0.76	P
	- used load (N)	62.9	P
	- measured deformation (cm/m)	0	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	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	IK09, IK10, IK10	P
	c) protected by any means to retain glass fragments		N/A
	For luminaire luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
	Protection by the use of glass that fractures into small pieces		N/A
	number of particles is more than 40		N/A
	Protection by the use of high impact resistant glass		P

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Clause	Requirement + Test	Result - Remark	Verdict
3.6.5.2.1 (-)	Glass covers have high mechanical strength Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample		P
3.6.5.2.2 (-)	Glass covers not break into large pieces - test according 3.6.5.1, number of particles is more than 20	PC	N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire - provides adequate space - means for attachment - means for attachment of metal corrosion-resistant Compliance with ISO standard or other		N/A
3.6.7 (-)	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 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\bar{U}_{out}$ and f_{out} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
IEC 60598-2-3			
	- Control gear marked with U_e	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
PROVISION FOR EARTHING			
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance $< 0.5 \Omega$		P
	Self-tapping screws used		P
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		NA
	Protective earthing of the luminaire not via built-in control gear		P
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
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		NA
3.8 (7.2.5)	Earth terminal integral part of connector socket		P
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
3.8 (7.2.9)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.10)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
	Attachment prevented from rotation		N/A
SCREW TERMINALS			
3.9 (14)	Separately approved; component list	(see Annex 1)	P

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Clause	Requirement + Test	Result - Remark	Verdict
IEC 60598-2-3			
	Part of the luminaire	(see Annex 3)	N/A
SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS			
3.9 (15)	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 4)	N/A
EXTERNAL AND INTERNAL WIRING			
3.10 (5)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection	Connector	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		P
3.10 (5.2.2)	Type of cable	H07RN-F (provided)	P
	Nominal cross-sectional area (mm ²)	1.5mm ²	P
	Cables equal to IEC 60227 or IEC 60245		P
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
3.10 (5.2.6)	Cable entries:		
	- 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.		N/A
	- insulating material or lining		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	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:		N/A
	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N)		N/A
	- torque test: torque (Nm)		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
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		P
	Wire ends tinned; no cold flow		P
3.10 (5.2.14)	Wires plus same protection		P
	Pass luminaire plug		N/A
	No safe compatibility		N/A
	Appliance inlets (IEC 60320)		N/A
	Insulation couplers (IEC 61535)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	- not delivered/ mounting instruction		P
	- factory assembled		P
	- 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		
	Cross-sectional area (mm ²)	1.5mm ²	P
	Insulation thickness (mm)	0.6mm	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		N/A
	Cross-sectional area (mm ²)		N/A
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		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
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 timed		P
	Wire ends timed: no cold flow		P
3.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N)	60N	P
	- torque test: torque (Nm)	0.25Nm	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		N/A
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	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 on only accessible under lamp or starter replacement		N/A
	Protection of any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	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
	- voltage under load (V)		N/A
	- no-load voltage (V)		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V)		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0.5 µF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0.1 µF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0.1 µF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

Clause	Requirement + Test	Result - Remark	Verdict
IEC 60598-2-3			
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 (12.2)	Selection of lamps and ballasts		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
3.12 (12.3)	Endurance test		P
	a) mounting-position	Side-Entry	—
	b) test temperature (°C)	45°C	—
	c) total duration (h)	240H	—
	d) supply voltage (V)	240V	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A)	N/A	—
	e) luminaire ceases to operate	N/A	—
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		N/A
	- no cracks, deformation etc.		N/A
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	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) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
	- temperature sensing control		N/A
	- case of abnormal conditions		—

Clause	Requirement + Test	Result - Remark	Verdict
IEC 60598-2-3			
	- 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 Test 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 Test Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—

Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.7.2)	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	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):		—
	Bail-pressure test:	See Test 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

Clause	Requirement + Test	Result - Remark	Verdict
3.13 (9)	RESISTANCE TO DUST 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:		P
	- classification according to IP	IP66	—
	- mounting position during test	Side-Entry	—
	- fixing screws tightened; torque (Nm)	Installation Notice	—
	- tests according to clauses	9.2.2 & 9.2.7	—
	electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no fog 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) no water entry on luminaires without drain holes – no water		P
	e) no water entry on luminaires with drain holes – no hazardous		N/A
	f) no water in watertight or pressure watertight luminaire		P
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A

Clause	Requirement + Test	Result - Remark	Verdict
IEC 60598-2-3			
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
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		N/A
	- 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		N/A
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Test voltage (V)		P
	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	1480V	P
	- between live parts and mounting surface		N/A
	- 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		N/A
3.14 (10.3)	Touch current or protective conductor current (mA)	<0,5	P

Clause	Requirement + Test	Result - Remark	Verdict
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)	Needle-flame test (650°C)	See Test Table 3.15 (13.3.2)	P
3.15 (13.4)	Positive tracking test (IEC 60112)	See Test Table 3.15 (13.4)	N/A

TABLE I: Creepage distances and clearances		P				
Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						
Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						
Insulation type **	Measured clearance	Required	Measured creepage			
		clearance		*Table		
Distance 1: B	>2	1.5	11.1.B	>3.3	2.5	11.1.A

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IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
Working voltage (V)				250		—
PTI				< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)				N/A		—
Supplementary information: Primary circuit						
Distance 2:	B	>2	1.5	11.1.B	>3.3	2.5
Working voltage (V)				250		11.1.A
PTI				< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)				N/A		—
Supplementary information: Secondary circuit						
Distance 3:	N/A	N/A	N/A	N/A	N/A	N/A
Working voltage (V)				N/A		—
PTI				< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)				N/A		—
Supplementary information: N/A						

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

3.7 (11.2)	TABLE II: Creepage distances and clearances					N/A
	Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages					
	Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2					
Distances	Insulation type **	Measured clearance	Required clearance	Measured creepage	Required creepage	*Table
Distance 1:						
Working voltage (V)				250		—
Frequency if applicable (kHz)						—
PTI				< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)						—
Supplementary information:						
Distance 2:						
Working voltage (V)						—
Frequency if applicable (kHz)						—
PTI				< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)						—
Supplementary information:						

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IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
Distance 3:			
Working voltage (V)			—
Frequency if applicable (kHz)			—
PTI		< 600 ☐ ≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)			—
Supplementary information:			

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

TABLE: Ball Pressure Test of Thermoplastics			
3.15 (13.2.1)	Allowed impression diameter (mm)		N/A
	 : 2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Supplementary information:			

TABLE: Needle-flame test (IEC 60695-11-5)			
3.15 (13.3.1)	Object/ Part No./ Material	Duration of application of test flame (ta): (s)	Ignition of specified layer Yes/No
Supplementary information:			



TABLE: Glow-wire test (IEC 60695-2-11)			
3.15 (13.3.2)	Glow wire temperature		P
	 : 650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)
Supplementary information:			

TRF No IEC60598_2_3L

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
Cover PC	Gabrimat	No	Os
Supplementary information:			

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

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Clause	Requirement + Test	Result - Remark	Verdict			
IEC 60598-2-3						
ANNEX 1 TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Description:						
Drivers	A	LG	PISE-A040X	40W 0.2-0.6A 220-240V 50-60Hz Tc=80°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	LG	PISE-A040Y	40W 0.3-1.0A 220-240V 50-60Hz Tc=80°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	LG	PISE-A075X	75W 0.2-0.6A 220-240V 50-60Hz Tc=80°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	LG	PISE-A075Y	75W 0.3-1.0A 220-240V 50-60Hz Tc=80°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	LG	PISE-A110X	110W 0.2-0.7A 220-240Vac 50/60Hz Tc=80°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	LG	PISE-A110Y	110W 0.3-1A 220-240Vac 50/60Hz Tc=80°C	IEC 61347-2-13	CB
Driver	A	LG	PISE-A165X	165W 0.2-0.7A 220-240Vac 50/60Hz Tc=80°C ta = -40 to 55°C	IEC 61347-2-13	ENEC
Driver	A	LG	PISE-A165Y	165W 0.3-1.0A 220-240Vac 50/60Hz Tc=80°C ta = -40 to 55°C	IEC 61347-2-13	ENEC
Drivers	A	PHILIPS	Xi SR 22W 0.3-1.0A SNEMP 230V C133 sXt	22W 50-60Hz 0.3-1.05A 220-240V Tc=85°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	PHILIPS	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	40W 50-60Hz 0.2-0.7A 220-240V Tc=85°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	PHILIPS	Xi SR 40W 0.3-1.0A SNEMP 230V C133 sXt	40W 50-60Hz 0.2-1.05A 220-240V Tc=85°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	PHILIPS	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	40W 50-60Hz 0.2-0.7A 220-240V Tc=85°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	PHILIPS	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	75W 50-60Hz 0.2-0.7A 220-240V Tc=85°C Ta = -40 to 55°C	IEC 61347-2-13	CB
Drivers	A	PHILIPS	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	150W 50-60Hz 0.2-0.7A 220-240V Tc=90°C	IEC 61347-2-13	ENEC

TRF No. IEC60598_2_3L

IEC 60598-2-3						
Clause	Requirement + Test		Result - Remark		Verdict	
Drivers	A	PHILIPS	Xi SR 150W 0.3-1.0A SNEMP 230V S240 sXt	150W 50-60Hz 0.3-1.05A 220-240V Tc=90°C	IEC 61347-2-13 ENEC	
Drivers	A	PHILIPS	Xi FP 165W 0.3-1A SNLDAE 230V C170 sXt	165W 50-60Hz 0.3-1.05A 220-240V Tc=90°C	IEC 61347-2-13 CB	
Drivers	A	PHILIPS	Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	165W 50-60Hz 0.2-0.7A 220-240V Tc=90°C	IEC 61347-2-13 CB	
Driver	A	OSRAM	OT 20170-240/1A0 1D1MLT2 G2 CE	20W 220-240Vac 0.2-1.05A 50/60Hz Tc=75°C	IEC 61347-2-13 CB	
Driver	A	OSRAM	OT 40170-240/1A0 1D1MLT2 G2 CE	40 W - 0.2-1.05A 220-240 V 50/60 Hz, Tc80°C	IEC 61347-2-13 CB	
Driver	A	OSRAM	OT 75170-240/1A0 4D1MLT2 G2 CE	75 W - 0.2-1.05A 220-240 V 50/60 Hz, Tc85°C	IEC 61347-2-13 CB	
Drivers	A	OSRAM	OT 165170-240/1A0 4D1MLT2 G2 E	165W 50-60Hz 170-240V 0.35-1.05A Tc=85°C	IEC 61347-2-13 CB	
Driver	A	OSRAM	OT 110170-240/1A0 4D1MLT2 G2 CE	110 W - 0.2-1.05A 220-240 V 50/60 Hz, Tc85°C	IEC 61347-2-13 CB	
Description:						
Surge protection Device	A	Vossloh	SP3230/10Ki	Uc 305Vac Uoc 10kV Up L-N < 1.5kV, L-PE < 1.8 kV, N-PE < 1.8 kV IL 16A Isc 1kA T 80°C	IEC 61643-11 DEKRA	
Description:						
Dongle	A	LG	TWBU-C302D	Dongle for Bluetooth	EN 60950-1 CoC	
Control Device	A	Owlet	LuCo P7/P7 CM	110-277V 50/60 Hz Tmax = 75°C	IEC/EN 61347 CB / UL	
Control Device	A	Owlet	Shorting Cap	SCIP 66	IEC/EN 61347 COC	
Connection Device	A	TE Connectivity	TE NEMA Socket 7-pin	Power contacts: 5A 110-277V Dimming contacts: 0.10A 10V	IEC 61347-1 IEC 61347-2-11 COC	
Connection Device	A	COLOSIO/Schröder	NEMA Socket M400C	Power contacts: 5A 240V Dimming contacts: 0.10A 10V	EN 60598-1 & 2-3 COC	
Control Device	A	Philips	City Touch LLC725X LLC7240	120-240V 50/60Hz Combobox Ta = 60°C Powerbox Tc = 80°C	IEC/EN 61347 CB	
Description:						
Terminal	A	ADELS	900 Series	0.5-4mm² 450V T85°C	EN 60998-1&2-2 VDE / UL	
Description:						
Leds Module	A	Schröder	AXIA G3: Led = OSLOX 8, 16, 24, 32 leds @ 1000mA	ts = 110°C	IEC 60598 / IEC 62031 Tested in appliance	

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

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: Thermal tests of Section 12									
	Type reference	AXIA GEN 3.1							—
	Lamp used	16 leds @870mA							—
	Lamp control gear used	LG 40W							—
	Mounting position of luminaire	Horizontal							—
	Supply wattage (W)	44.8							—
	Supply current (A)	0.197A							—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45							—
	- abnormal operating mode								—
1.12 (12.4)	- test 1: rated voltage	230V							—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current								—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage								—
	Through wiring or looping-in wiring loaded by a current of A during the test								—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current								—
Temperature measurements (°C)									
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal			
		test 1	test 2	test 3	limit	test 4	test 4	limit	
Converter Tc	45	87			80+10				
Supply wiring	45	55			90+10				
Led Module (ts)	45	90			110+10				
Terminal	45	55			110+10				
SPD	45	57			80+10				
Supplementary information: Temperature correction of 10°C as suitable for outdoor installation									

TRF No. IEC60598_2_3L



TRF-NotIEC60598_2_3L

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

TABLE: Thermal tests of Section 12			
Type reference	AXIA GEN 3.2		—
Lamp used	32 leds @800mA		—
Lamp control gear used	LG 75W		—
Mounting position of luminaire	Horizontal		—
Supply wattage (W)	79.4		—
Supply current (A)	0.348A		—
Temperatures in test 1 - 4 below are corrected for ta (°C)	45		—
- abnormal operating mode			—
1.12 (12.4)	- test 1: rated voltage	230V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage		—
	Through wiring or looping-in wiring loaded by a current of A during the test		—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		—

Temperature measurements (°C)					
Part	Ambient	Cl. 12.4 – normal			Cl. 12.5 – abnormal
		test 1	test 2	test 3	test 4
Converter Tc	45	89		80+10	limit
Supply wiring	45	55		90+10	
Led Module (ts)	45	93		110+10	
Terminal	45	55		110+10	
SPD	45	66		80+10	

Supplementary information: Temperature correction of 10°C as suitable for outdoor installation



TRF No. IEC60598_2_3L

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

TABLE: Thermal tests of Section 12			
Type reference	AXIA GEN 3.3		—
Lamp used	64 leds @880mA		—
Lamp control gear used	OT 165W		—
Mounting position of luminaire	Horizontal		—
Supply wattage (W)	171.1W		—
Supply current (A)	0.750A		—
Temperatures in test 1 - 4 below are corrected for ta (°C)	40		—
- abnormal operating mode			—
1.12 (12.4)	- test 1: rated voltage	230V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage		—
	Through wiring or looping-in wiring loaded by a current of A during the test		—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		—

Temperature measurements (°C)					
Part	Ambient	Cl. 12.4 – normal			Cl. 12.5 – abnormal
		test 1	test 2	test 3	test 4
Converter Tc	40	91		85+10	limit
Supply wiring	40	55		90+10	
Led Module (ts)	40	103		110+10	
Terminal	40	55		110+10	
SPD	40	60		80+10	

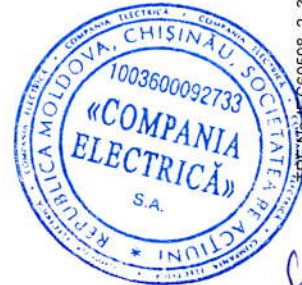
Supplementary information: Temperature correction of 10°C as suitable for outdoor installation

TRF No. IEC60598_2_3L

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

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



TRF No. IEC60598_2_3L

C007

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

ANNEX 4	Screwless terminals (part of the luminaire)		NA
(15)	SCREWLESS TERMINALS		NA
(15.2)	Type of terminal.....		—
	Rated current (A)		—
(15.3.1)	Material		NA
(15.3.2)	Clamping		NA
(15.3.3)	Stop		NA
(15.3.4)	Unprepared conductors		NA
(15.3.5)	Pressure on insulating material		NA
(15.3.6)	Clear connection method		NA
(15.3.7)	Clamping independently		NA
(15.3.8)	Fixed in position		NA
(15.3.10)	Conductor size		NA
	Type of conductor		NA
(15.5)	Terminals and connections for internal wiring		NA
(15.5.1)	Mechanical tests		NA
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		NA
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		NA
	Insertion force not exceeding 50 N		NA
(15.5.1.2)	Permanent connections: pull-off test (20 N)		NA
(15.5.2)	Electrical tests		NA
	Voltage drop (mV) after 1 h (4 samples)		NA
	Voltage drop of two inseparable joints		NA
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....		NA
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....		NA
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		NA
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		NA
(15.6)	Terminals and connections for external wiring		NA
(15.6.1)	Conductors		NA

TRF No. IEC60598_2_3L

AXIA 3.1

5294

Optic 5294

Protector Integrated lenses

Source 16 Osram OSLOM SQUARE GIANT

Matrix 435812



Characteristics

Length (mm)	513	Width (mm)	191	Height (mm)	130	Weight (kg)	3.5	IP 66	IK 10	Electrical class*	IEU	CXS (m²)	0.032
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Features

Engineered for performance, designed for the customer experience

- Maximised savings in energy and maintenance costs
- ProFlex™ photometric engines offering high efficiency lighting, comfort and safety
- 3 sizes to provide the most accurate solutions for numerous road and urban applications
- Easy installation: pre-cabled and equipped with universal fixation adapted for side-entry and post-top mounting
- Adjustable inclination for optimised photometry and uniformity
- Connected-ready

Types of application

- Square and park
- Bridges
- Large area
- Roundabout
- Car park

- Road and highway
- Residential road
- Bike path

Information for 1000 lm matrix

Efficacy (%)	90.3	G Class (EN 13201-2)	G3	Aperture 90-270°	X - X
DLOR (%)	90.3	G* (EN 13201 2016)	G*3	I 70-80-90-95 (cd)	531 - 36 - X - X
ULOR (%)	0.0	Imax (cd)	575	CIE flux code N 145	37.4 - 74.3 - 98.0 -
ULR (%)	0.0	Aperture 0-180°	X - X	(%)	100.0 - 90.3



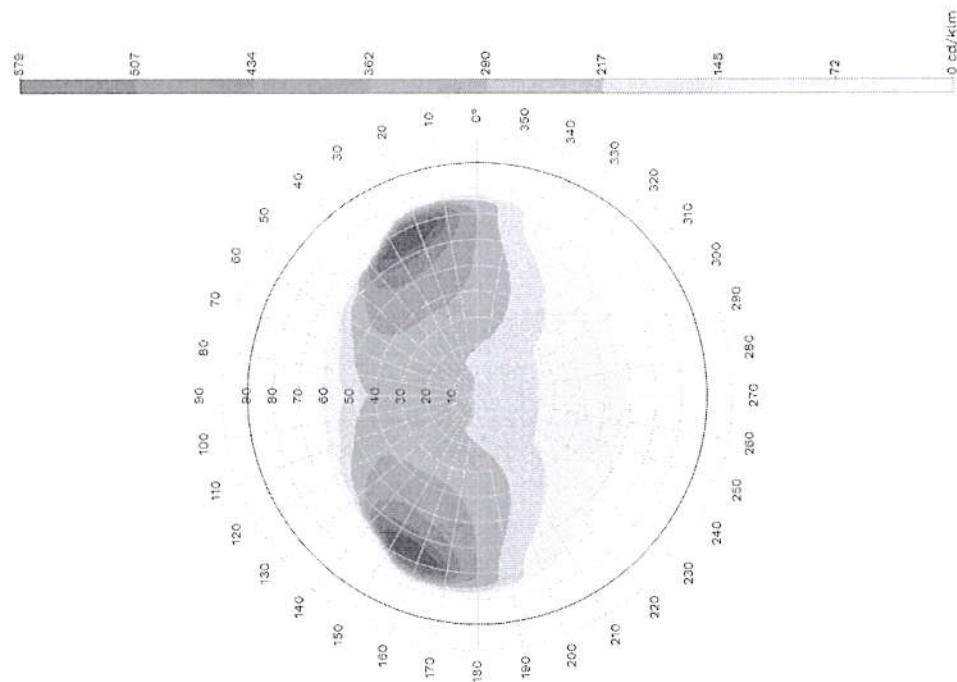
Summary

Axia 3 is a robust yet compact luminaire designed with a focus on miniaturization and superior efficiency. Composed of high-pressure die-cast aluminium, stainless steel as composite materials, Axia 3 is available in three sizes. Thanks to its reduced weight, this road luminaire is easy to handle during installation. The Axia 3.1, which can be fitted with up to 16 LEDs, is perfectly suited to low-height applications, whereas Axia 3.2 and 3.3, with up to 32 or 64 LEDs, are ideal for lighting urban and large roads, car parkways and avenues. The Axia 3 range is equipped with Profiles* photometric aligners, providing the highest efficiency thanks to their ability to maximise the lumen output and to provide very extensive light distributions.

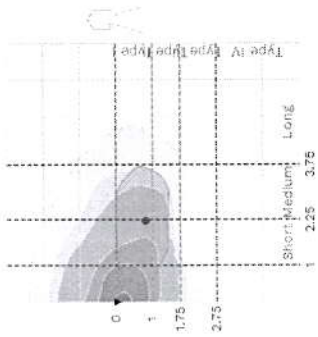
Axia 3 comes pre-cabled, hence there is no need to open the luminaire. The complete range is available with an integrated universal fixation part adapted for post-top and side-entry mounting on various supports (Ø32mm with adapter, Ø42-48mm, Ø60mm and Ø76mm). The inclination angle can be adjusted on-site for both post-top (-5°/+15°) and side-entry (-10°/+10°) configurations to optimise lighting, reduce power consumption and control light pollution.

This highly efficient, cost-effective and connected-ready luminaire, offers towns and cities the ideal solution to improve lighting levels, increase safety, generate energy savings and reduce their ecological footprint. Axia 3 is the ideal tool to provide another 25 years of efficiency, sustainability and safety.

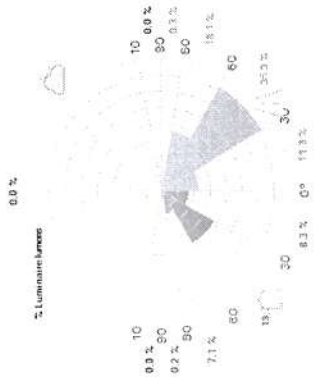
Hypergon view



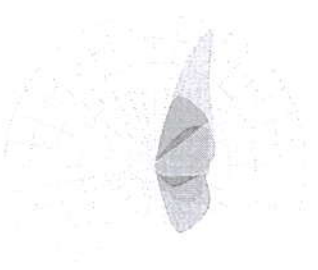
02/10/2019
IES Roadway Classification / Nema Classification



II - Short
Luminaire classification system (LCS)

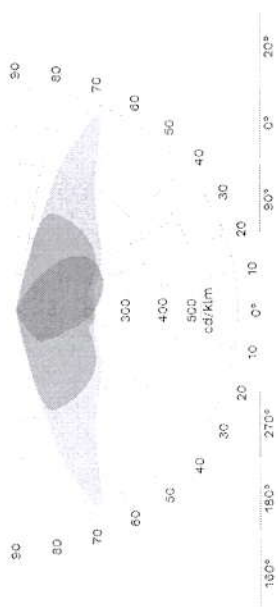


Intensity diagram in max Cone and in CPlane

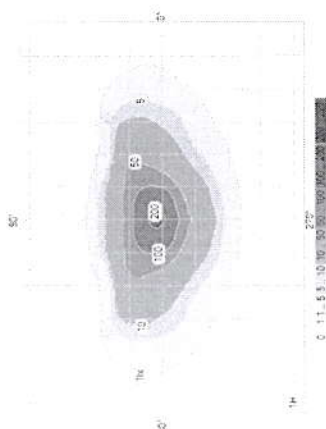


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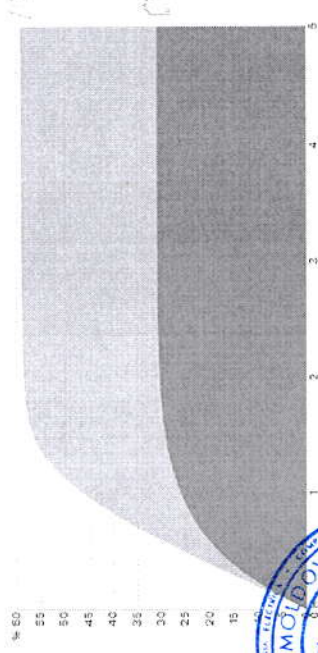
02/10/2019
Polar/Curtian diagram



Isolux



K-Curve



AXIA 3.1 - 5284 - 16 Osram OSLOM SQUARE GIANT - Integrated lenses - 435812

Laboratory
Test report

FORM L 54 Edition 01 - Revision 00 - Date: 14/06/2018



R-Tech
RSC - RSC S.A. - Bucuresti
Tel: +374 232 71 00 - Fax: +374 232 71 00
Member of Schneider Group

Electrical measurements

General information

Subject: AXIA 3.2 - 32 led's OSOLON SQUARE GIANT - LG 75W driver - 800 mA

Asked by: THIJS Marcel

Created on: 25/03/2019

Validated on: 28/03/2019

Test number: D190252

Sample(s): E190199

Folder: P-F18071

Test conditions

Luminaire: AXIA 3.2

Number of LED: 32

LED: Osram OSOLON SQUARE GIANT

Driver: LG 75W 300-1000mA Prog Modular EU / 00-36-981

Driver current (mA): 800

SPD: VS SP3/230/10K/i

Measurements devices:

Norma 4000 (electrical measurements) E116

Power supply:

APT 320XAC (E108) set on 230V 50Hz

Conclusion

Informative

Conclusion:

PF: 0.99

Efficiency: 91.4%

THD: 5.2%
The report is valid only for the sample tested. It is not allowed to use the report for other form than the original one is not allowed without agreement of the laboratory. This report concerns type tests on one or a series of specimen.

THD: 5.2%
The report is valid only for the sample tested. It is not allowed to use the report for other form than the original one is not allowed without agreement of the laboratory. This report concerns type tests on one or a series of specimen.

Duplicate to: THIJS Marcel, GALLOPPA Sandro, DETAILLE
Ludovic, MULS Sophie, BOS Peter

LAB: 02/04/2019

D190252

1/2



Measurements

Test(s)

Name	Description	Result
Test @ 800mA		Informative

Test @ 800mA

Annex(es)

Harmonic current emissions (IEC 61000-3-2, Class C, > 25W)

AXIA 3.2 - 32 OSOLON SQUARE GIANT - LG 75W - 800mA

Date: 25-03-19

Operator

FCT

Norms AQ number

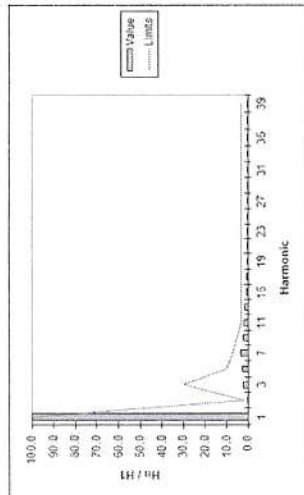
E116

Power Factor

0.9923

0.9942

Harmonics	THD (%)	Limit (%)
1	100.0	100.0
2	0.1	2.0
3	2.1	25.0
4	0.1	2.0
5	2.8	10.0
6	0.1	2.0
7	3.8	7.0
8	0.1	2.0
9	2.3	5.0
10	0.1	2.0
11	1.5	3.0
12	0.1	2.0
13	1.4	3.0
14	0.1	2.0
15	0.8	3.0
16	0.1	2.0
17	0.5	3.0
18	0.1	2.0
19	0.4	3.0
20	0.1	2.0
21	0.2	3.0
22	0.1	2.0
23	0.1	3.0
24	0.1	3.0
25	0.4	3.0
26	0.1	3.0
27	0.2	3.0
28	0.1	3.0
29	0.1	3.0
30	0.1	3.0
31	0.1	3.0
32	0.1	3.0
33	0.1	3.0
34	0.1	3.0
35	0.1	3.0
36	0.1	3.0
37	0.1	3.0
38	0.2	3.0
39	0.1	3.0
40	0.1	3.0



Input		output 1	
U rms	229.9 V	U rms	91.1 V
I rms	0.348 A	I rms	0.758 A
P rms	79.4 W	P rms	72.6 W
S	80.1 VA		
Q	-5.9 VAR		
PF	0.9923		
U avg	0.348 A	U avg	91.1 V
I rms	0.9542	I rms	0.758 A
P rms	91.4%	P rms	72.6 W
THD	5.2%		

2019-03-28 16:04:55 410102_00000_0000

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2/2

Clause	Requirement + Test	Result - Remark	Verdict
	Terminal size and rating		NA
15.6.2	Mechanical tests		NA
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		NA
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		NA
(15.6.3)	Electrical tests		NA
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		NA
TABLE: Contact resistance test / Heating tests			
(15.6.3.1)	terminal	1 2 3 4 5 6 7 8 9	10
(15.6.3.2)	voltage drop (mV)		
	Voltage drop of two inseparable joints		
	Voltage drop after 10th alt. 25th cycle		
	Max. allowed voltage drop (mV)		
terminal	1 2 3 4 5 6 7 8 9	10	
voltage drop (mV)			
	Voltage drop after 50th alt. 100th cycle		
	Max. allowed voltage drop (mV)		
terminal	1 2 3 4 5 6 7 8 9	10	
voltage drop (mV)			
	Continued ageing: voltage drop after 10th alt. 25th cycle		
	Max. allowed voltage drop (mV)		
terminal	1 2 3 4 5 6 7 8 9	10	
voltage drop (mV)			
	Continued ageing: voltage drop after 50th alt. 100th cycle		
	Max. allowed voltage drop (mV)		
terminal	1 2 3 4 5 6 7 8 9	10	
voltage drop (mV)			



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

Installation Notice

Schröder

AXIA GEN 3
3.1 - 3.2 - 3.3

Installation Instructions

	AXIA 3.1	AXIA 3.2	AXIA 3.3
A (mm)	512	505	550
B (mm)	191	191	277
C (mm)	130	130	130
Weight (kg)	4.345	1.80	1.80
Cable (mm²)	TBD	TBD	TBD

AXIA 3.1

AXIA 3.2

www.schröder.com

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

4.1 The lamp shall be marked with the following information: 4.1.1 The manufacturer's name or trade name. 4.1.2 The model number. 4.1.3 The rated voltage. 4.1.4 The rated power. 4.1.5 The rated frequency. 4.1.6 The rated luminous flux. 4.1.7 The rated life. 4.1.8 The rated ambient temperature. 4.1.9 The rated humidity. 4.1.10 The rated altitude. 4.1.11 The rated vibration. 4.1.12 The rated shock. 4.1.13 The rated impact. 4.1.14 The rated corrosion. 4.1.15 The rated salt crystallization. 4.1.16 The rated salt deposition. 4.1.17 The rated salt efflorescence. 4.1.18 The rated salt crystallization and salt deposition. 4.1.19 The rated salt crystallization and salt efflorescence. 4.1.20 The rated salt crystallization, salt deposition and salt efflorescence.	4.2 The lamp shall be marked with the following information: 4.2.1 The manufacturer's name or trade name. 4.2.2 The model number. 4.2.3 The rated voltage. 4.2.4 The rated power. 4.2.5 The rated frequency. 4.2.6 The rated luminous flux. 4.2.7 The rated life. 4.2.8 The rated ambient temperature. 4.2.9 The rated humidity. 4.2.10 The rated altitude. 4.2.11 The rated vibration. 4.2.12 The rated shock. 4.2.13 The rated impact. 4.2.14 The rated corrosion. 4.2.15 The rated salt crystallization. 4.2.16 The rated salt deposition. 4.2.17 The rated salt efflorescence. 4.2.18 The rated salt crystallization and salt deposition. 4.2.19 The rated salt crystallization and salt efflorescence. 4.2.20 The rated salt crystallization, salt deposition and salt efflorescence.	4.3 The lamp shall be marked with the following information: 4.3.1 The manufacturer's name or trade name. 4.3.2 The model number. 4.3.3 The rated voltage. 4.3.4 The rated power. 4.3.5 The rated frequency. 4.3.6 The rated luminous flux. 4.3.7 The rated life. 4.3.8 The rated ambient temperature. 4.3.9 The rated humidity. 4.3.10 The rated altitude. 4.3.11 The rated vibration. 4.3.12 The rated shock. 4.3.13 The rated impact. 4.3.14 The rated corrosion. 4.3.15 The rated salt crystallization. 4.3.16 The rated salt deposition. 4.3.17 The rated salt efflorescence. 4.3.18 The rated salt crystallization and salt deposition. 4.3.19 The rated salt crystallization and salt efflorescence. 4.3.20 The rated salt crystallization, salt deposition and salt efflorescence.	4.4 The lamp shall be marked with the following information: 4.4.1 The manufacturer's name or trade name. 4.4.2 The model number. 4.4.3 The rated voltage. 4.4.4 The rated power. 4.4.5 The rated frequency. 4.4.6 The rated luminous flux. 4.4.7 The rated life. 4.4.8 The rated ambient temperature. 4.4.9 The rated humidity. 4.4.10 The rated altitude. 4.4.11 The rated vibration. 4.4.12 The rated shock. 4.4.13 The rated impact. 4.4.14 The rated corrosion. 4.4.15 The rated salt crystallization. 4.4.16 The rated salt deposition. 4.4.17 The rated salt efflorescence. 4.4.18 The rated salt crystallization and salt deposition. 4.4.19 The rated salt crystallization and salt efflorescence. 4.4.20 The rated salt crystallization, salt deposition and salt efflorescence.
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3/5

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10-2018

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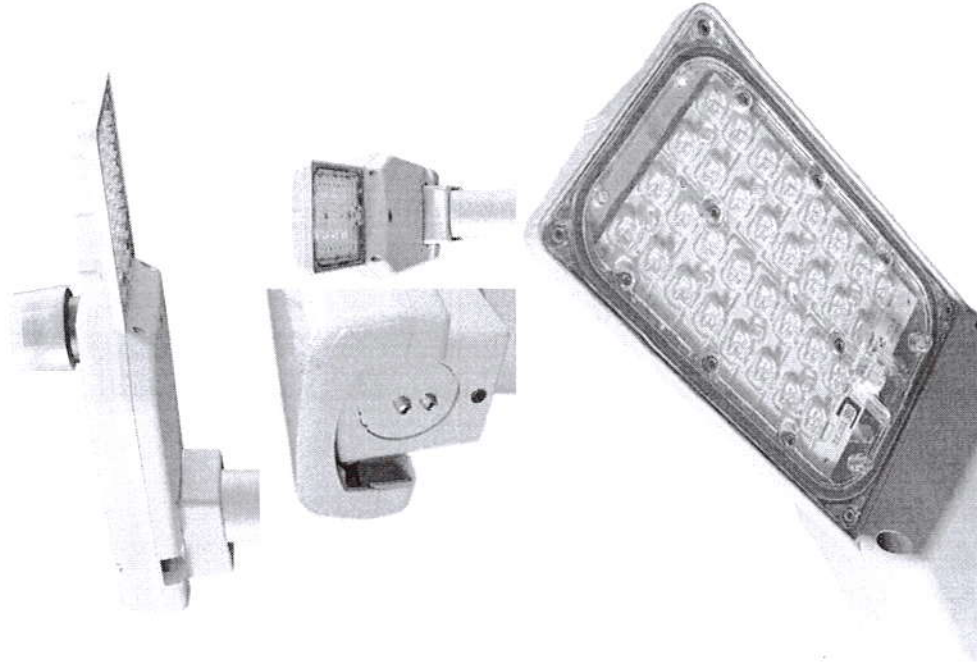
«COMPANIA ELECTRICĂ» S.A.

TRF No. IEC60598_2_3L

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

Pictures

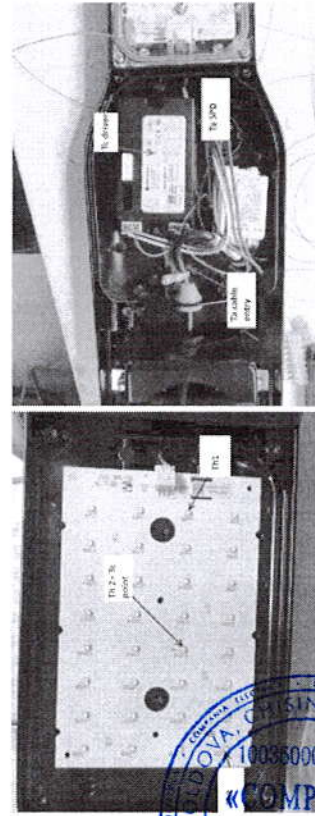
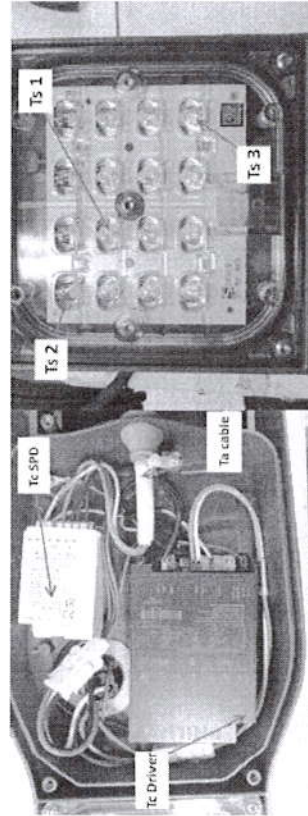


TRF No. IEC60598_2_3L

Clause	Requirement - Test	Result - Remark	Verdict
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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_3K			
Annex Form Originator : IMQ S.p.A.			
Master Annex Form : 2016-12			
Copyright © 2016 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			



Clause	Requirement - Test	Result - Remark	Verdict
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3.5 (3)	MARKING		
3.5 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package		N/A

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

3.10 (5)	EXTERNAL AND INTERNAL WIRING		
3.10 (5.2.1)	Connecting leads		N/A
	- 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		
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		N/A

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

IEC60598_2_3K - ATTACHMENT

Clause	Requirement – Test	Result - Remark	Verdict
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(5.2.1)	CY, DK, FI, GB: type of plug		N/A
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ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		
(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:		
	- 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



cedr

5294

AVIA 31

Optic 5784
 Protector Integrated lenses
 Source 16 OSRAM OSOLON SQUARE GIANI
 Matrix 435812

H90
FLEX

Characteristics

512	191	730	3.6	IP 66	IK 10	I EU	0.032
Length (mm)	Width (mm)	Height (mm)	Weight (kg)	Tightness level*	Impact resistance*	Electrical class*	CdK (m ²)

* According to IEC-EN50050 and IEC-EN62203

Features

Engineered for performance, designed for the customer experience

- Maximized savings in energy and maintenance costs
- Proflex® photometric engines offering high efficiency, lighting, comfort and safety
- 3 sizes to provide the most accurate solutions for numerous road and urban applications
- Easy installation: pre-cabled and equipped with universal fixation adapted for side-entry and post-top mounting
- Adjustable inclination for optimised photometry and uniformity
- Connected-ready

Types of application

- Square and park
- Bridge
- Large area
- Roundabout
- Car park

- Road and highway
- Residential road
- Bike path

Information for 1000 lm matrix

Efficacy (%)	90.3	G Class (EN 13201-2)	G3	Aperture 90-270°	X - X
DLOR (%)	90.3	G* (EN 13201-2015)	G*3	I 70-80-90-95 (cd)	S31 - 36 - X - X
ULOR (%)	0.0	Imax (cd)	579	CIE flux code N 1+5	37.4 - 74.3 - 98.0 -
ULR (%)	0.0	Aperture 0-180°	X - X	(%)	100.0 - 90.3

LED count	Colour code	Current (mA)	Luminaire power (W)	Ambient temp = 25°			Peak (cd)	BUG Rating	Voltage (V)
				Source flux (lm)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)			
16	WW 730	2670	11	1620	1462	133	83.6	B1 L0 G2	230
16	WW 730	3000	16	2361	2132	133	136.7	B1 L0 G1	230
16	WW 730	4592	23	3691	3261	140	209.6	B1 L0 G1	230
16	WW 730	5000	23	3723	3367	131	216.9	B1 L0 G1	230
16	WW 730	6000	31	4361	3937	127	262.5	B1 L0 G1	230
16	WW 730	7000	35	4653	4472	124	296.8	B1 L0 G1	230
16	WW 730	8700	44	5664	5285	120	338.6	B1 L0 G1	230
16	NW 740	2700	11	1734	1558	142	100.4	B1 L0 G1	230
16	NW 740	3160	16	2528	2262	143	146.4	B1 L0 G1	230
16	NW 740	4860	23	3856	3481	139	223.3	B1 L0 G1	230
16	NW 740	5800	25	3992	3664	139	237	B1 L0 G1	230
16	NW 740	6000	31	4664	4274	136	270.3	B1 L0 G1	230
16	NW 740	7000	38	5303	4798	133	307.1	B1 L0 G1	230
16	NW 740	8700	44	6278	5688	129	363.5	B1 L0 G1	230

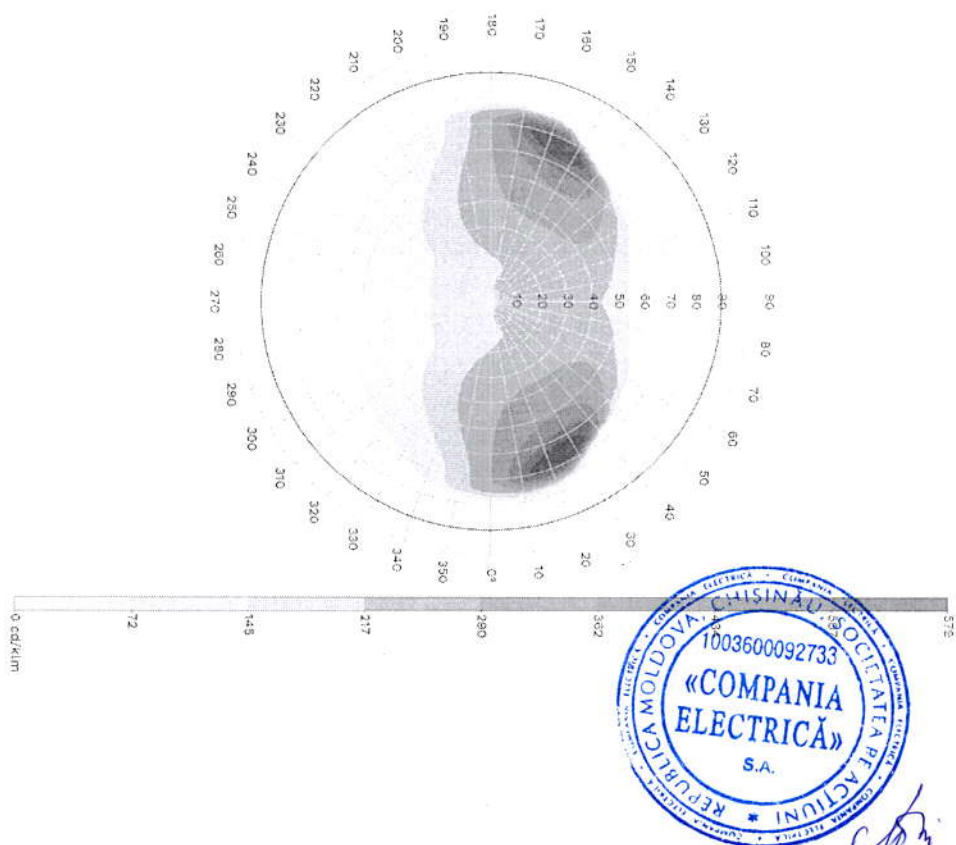
Tolerance of the luminous flux: ±5% according to IEC 62203

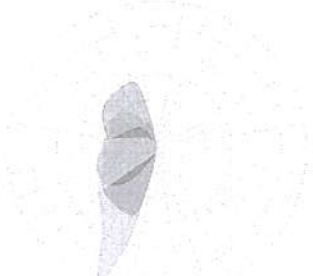
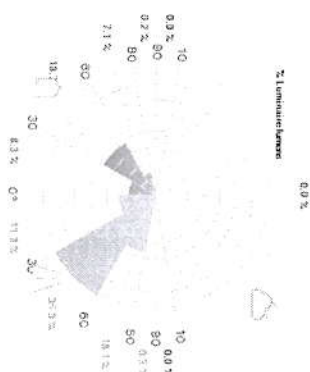
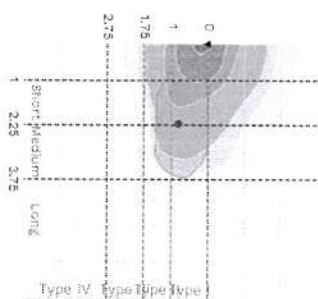
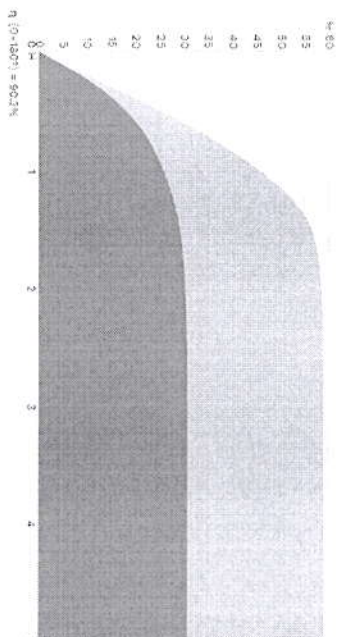
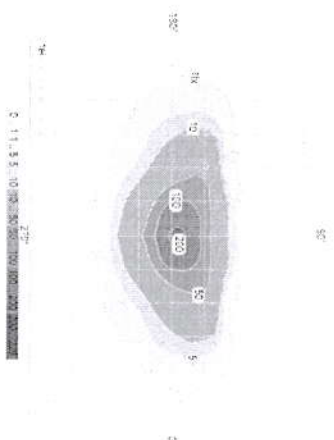
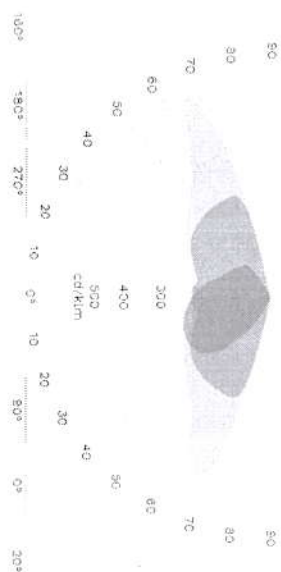


Axia 3 is a robust yet compact luminaire designed with a focus on installation and superior efficiency. Composed of high-pressure die cast aluminium, as well as composite materials, Axia 3 is available in three sizes. Thanks to its reduced weight, this road luminaire is easy to handle during installation. The Axia 3.1, which can be fixed with up to 16 LEDs, is perfectly suited to low-height applications, whereas Axia 3.2 and 3.3, with up to 32 or 64 LEDs, are ideal for lighting urban and large roads, car parks and avenues. The Axia 3 range is equipped with 'ProFave' photometric engines providing the highest efficiency thanks to their ability to maximise the lumen output and to provide very extreme light distributions.

Axia 3 comes pre-assembled, hence there is no need to chase the luminaire. The complete range is available with an integrated universal fixator, part adapted for post-top and side-arm mounting on various supports (Ø32mm with adapter, Ø42-48mm, Ø60mm and Ø76mm). The inclination angle can be adjusted on-site for both post top (5°/45°) and side-arm (1°/9°/45°) configurations to optimise lighting, reduce power consumption and control light pollution.

This highly efficient, cost-effective and connected-ready luminaire, offers towns and cities the ideal solution to improve lighting levels, increase safety, generate energy savings and reduce their ecological footprint. Axia 3 is the ideal tool to provide another 25 years of efficiency, sustainability and safety.





Laboratory Test report



R-Tech
Rue de Namur 3 - B-10500 Louvain-la-Neuve
Tél : +32 4 224 11 40 - Fax : +32 4 224 25 96
Membre du Syndicat Group

FORM L-54 Edition 03 - Revision 00 - Date: 14/06/2018

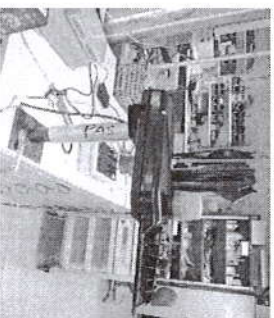
Electrical measurements

General information

Subject : AXIA 3.2 - 32 led's OSLOM SQUARE GIANT - LG 75W driver - 800 mA
Asked by : THIJS Marcel
Created on : 25/03/2019
Validated on : 28/03/2019
Test number : D190252
Sample(s) : E190199
Folder : P-F18071

Test conditions

Luminaire : AXIA 3.2
Number of LED : 32
LED : Osram OSLOM SQUARE GIANT
Driver : LG 75W 300-1000mA Prog Modular EU / 00-36-981
Driver current (mA) : 800
SPD : VS SP3/230/10K/I
Measurements devices :
Norma 4000 (electrical measurements) E116
Power supply :
APT 320XAC (E108) set on 230V 50Hz



Operator: CLOSSET Frédéric

Conclusion

Informative

Conclusion :
PF : 0.99
Efficiency : 91.4%
THD : 6.2%
Harmonics : OK according to IEC 61000-3-2, Class C, > 25 W

Validated by : Duplicate to : THIJS Marcel, GALLOPPA Sandro, DETAILLE
Ludovic, MUUS Sophie, BOS Peter
GHYSENS Gilles **D190252**
LAB : 02/04/2019 **1/2**

[Signature]

The publication of this report in another form than the original one is not allowed without agreement of the laboratory. This report concerns type tests on one or a series of specimens.

Measurements

Test(s)

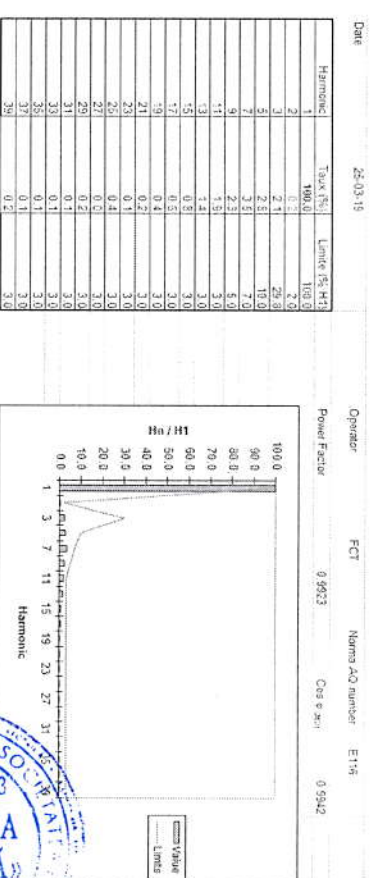
Name	Description	Result
Test @ 800mA		Informative

Test @ 800mA

Annex(es)

Harmonic current emissions (IEC 61000-3-2, Class C, > 25W)
--

AXIA 3.2 - 32 OSLOM SQUARE GIANT - LG 75W - 800mA



Input	Output 1
Line voltage: 230.9 V	91.1 V
Line current: 0.348 A	0.788 A
Power: 70.1 W	72.6 W
PF: 0.9923	
THD: 6.2%	

