

CENTRE OF TESTING SERVICE INTERNATIONAL

OPERATE ACCORDING TO ISO/IEC 17025

LVD TEST REPORT

TEST REPORT NUMBER : CGZ3180309-00599-L





CTS (Ningbo) Testing Service Technology Co., Ltd. Fl.1 & 8 West, Bldg. B, No. 66, Qingyi Rd., Hi-Tech Zone, Ningbo, Zhejiang, China



CTS

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CTS

1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification (only telecommunication products).

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5. The test report may only be reproduced or published in full.

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1.2 Tester

Tested by:		
29 March 2018	Kate Zhang	Karte
Date	Name	Signature
Reviewed by: 29 March 2018	Rock Weng	Ruck Ner
Date	Name	Signature
Approved by: 29 March 2018	Jun Yang	In fory
Date	Name	Signature
		TESTING SALE

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1.3 Testing laboratory

1.3.1 Location

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1.3.2 Test location, where different from CTS:

Name:	./.
Street:	./.
Town:	./.
Country:	./.
Telephone:	./.
Fax:	./.
Teletex:	./.

1.4 Client details

1.4.1 Details of applicant

: Shenzhen Aglare Lighting Co., Ltd.
: Factory 4, Supply and Marketing Cooperative Park Guanlan Avenue,
: Guanlan Town Longhua New District, Shenzhen City, Guangdong,
: China
: +86- 755-88868631
: +86- 755-27659398
: ./.
: Cheng Jun
:./.





1.4.2 Details of manufacturer

Name	: Shenzhen Aglare Lighting Co., Ltd.
Street	: Factory 4, Supply and Marketing Cooperative Park Guanlan Avenue,
Town	: Guanlan Town Longhua New District, Shenzhen City, Guangdong,
Country	: China
Telephone	: +86- 755-88868631
Fax	: +86- 755-27659398
Teletex	: ./.
Contact	: Cheng Jun
Telephone	:./.

1.4.3 Details of factory	
Name	: Shenzhen Aglare Lighting Co., Ltd.
Street	: Factory 4, Supply and Marketing Cooperative Park
	Guanlan Avenue,
Town	: Guanlan Town Longhua New District, Shenzhen City,
	Guangdong,
Country	: China

1.4.4 Dates of application

Date of receipt of application	: 13 March 2018
Date of receipt of test item	: 13 March 2018
Date of test	: 13 March – 29 March 2018

1.5 Test item Description

1.5.1 Description of test item

Type of product	: RGB led floodlight
Model/Type reference	: AT247
Serial number	:



1.5.2 Test item particulars

Test item	RGB led floodlight	
Trade Mark	Aglare	
Protection Class	⊠ Class I; □ Class II; □ Class III.	
Rated Voltage(Range):	220-240V~	
Rated Frequency	□ 50Hz; □ 60Hz; ⊠50/60Hz; □ DC; □ Other:	
Rated Wattage	500 W	
IP Number	□ IP20; □ IP24; ⊠ IP65; □Other:	
Supply Connection	 □ Type X; □ Type Y; □ Type Z; □ Pins; □ Appliance inlet; □ Terminals; ⊠connecting leads (tails); □ Adaptors; □ connectors; □ Other: 	
Lamp(s) type		
	🗆 Discharge lamps; 🗖 Metal halide lamps;	
	☐ High-pressure sodium vapour lamps;	
	□ Single-capped fluorescent lamps ;	
	Double-capped fluorescent lamps;	
	□ Self-ballasted lamps; ⊠ Other: LED lamp	
Luminaire Mobility		
	Recessed Luminaire; Track-mounted Luminaires;	
	Semi-luminaires; Other:	
Mass of Equipment	12.8 kg.	
Instructions language	🛛 English; 🗖 French; 🗍 Other:	
Mounting condition:	☑ Luminaires suitable for direct mounting on normally flammable	
	surfaces;	
Ambient Temperature	t _a : 25 [°] C	

(all informations was provided by the applicant or detected at the sample) Please see also attachment

1.6 **Test standards**

EN 60598-1: 2015

Luminaires — Part 1: General requirements and tests (IEC 60598-1:2014)

EN 60598-2-5: 2015

Luminaires-Part 2: Particular requirements-section 5: Floodlights (IEC 60598-2-5:2015)

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2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

2.2 Test environment

Temperature:	18 25 [°] C
Relative humidity content:	20 75 %
Air pressure:	86 103 kPa
Details of power supply:	220-240 V, AC
Other parameters:	





2.3 Conformity verification - Summary of inspection

Clause	Clause Summary of inspection		Test result		
		N.A.	Pass	Fail	
3	Marking		\square		
4	Construction		\square		
5	External and internal wiring		\boxtimes		
7	Provisions for earthing		\boxtimes		
8	Protection against electric shock		\boxtimes		
9	Resistance to dust, solid objects and moisture		\boxtimes		
10	Insulation resistance and electric strength, touch				
	current and protective conductor current		\square		
11	Creepage distances and clearances		\square		
12	Endurance tests and thermal tests		\square		
13	Resistance to heat, fire and tracking		\boxtimes		
14	Screw terminals				
15	Screwless terminals and electrical connections				
Annexes			\square		

Test case verdicts

- N.A.: Test case does not apply to the test object
- Pass: Test item does meet the requirement
- Fail: Test item does not meet the requirement





3 Test results basic standard(s)

3.1 Particulars: test item vs. Test requirements

IEC 60598-2-5 and / or EN 60598-2-5 Part 2: Particular requirements Section five–Floodlights				
Possible test case verdicts:				
- test case does not apply to the test object N(N/A)				
- test object does meet the requirement	- test object does meet the requirement P(Pass)			
- test object does not meet the requirement	F(Fail)			
Test specification:				
Standard:	 ☐ IEC 60598-2-5: 2015 used in conjunction with IEC 60598-1: 2014 ☑ EN 60598-2-5: 2015 used in conjunction with EN 60598-1: 2015 			
Test procedure:	LVD DOC approval.			
Non-standard test method:	N/A			
Test Report Form No	IEC60598_2_5D			
Test Report Form(s) Originator:	Centre of Testing Service			
Master TRF	Dated Aug 2015			
Copyright blank test report	Centre of Testing Service			

General remarks:

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

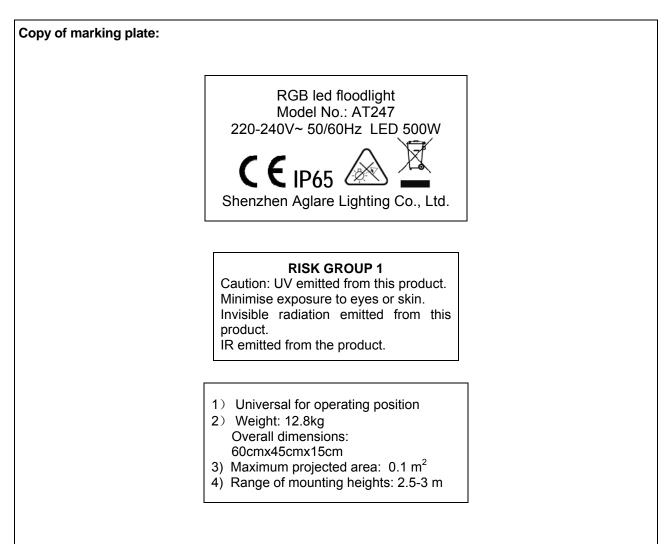
Throughout this report a comma is used as the decimal separator.

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

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Remark:

The artwork above may be only a draft, the minimum requirements required by safety standard. For the final production, the additional markings which do not give rise to misunderstanding may be added.



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General requirements and results 3.2

IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

5.2 (0)	GENERAL TEST REQUIREMENTS		Р
5.2 (0.3)	Information for luminaire design considered	Standard	—
		Yes 🖾 No 🗌	
5.2 (0.1)	More sections applicable	Yes 🗌 No 🖂	—

5.4 (2)	CLASSIFICATION		Р
5.4 (2.2)	Type of protection:	Class I	
5.4 (2.3)	Degree of protection:	IP65	
5.4 (2.4)	Luminaires suitable for direct mounting on normally flammable surfaces	Yes 🛛 No 🗌	
5.4 (2.5)	Luminaire for normal use:	Yes 🛛 No 🗌	
	Luminaire for rough service	Yes 🗌 No 🖾	

5.5 (3)	MARKING		Р
5.5 ()	The provisions of Section 3 of IEC 60598-1 apply. In addition, the following information shall be provided in the instruction leaflet supplied with the luminaire, if applicable:		Р
	a) operating position, if not universal		Р
	b) weight and overall dimensions of the floodlight		Р
	c) maximum projected area of the floodlight		Р
	d) limitation of use indoors and/or outdoor	Outdoor use	Р
	e) maximum mounting height if \leq 5 m, relevant to the selected method for protection against the falling of glass particles and the number of fixing devices		Р
5.5 (3.2)	Mandatory markings		Р
	Position of the marking		Р
	Format of symbols/text	Text=2mm, symbol=5mm	Р
5.5 (3.3)	Additional information		Р
	Language of instructions	English	Р
5.5 (3.3.1)	Combination luminaires		N
5.5 (3.3.2)	Nominal frequency in Hz	50/60 Hz	Р
5.5 (3.3.3)	Operating temperature		N
5.5 (3.3.4)	Symbol or warning notice		N

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IEC 60598-2-5 and / or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict	
5.5 (3.3.5)	Wiring diagram		Ν	
5.5 (3.3.6)	Special conditions		Ν	
5.5 (3.3.7)	Metal halide lamp luminaire – warning		N	
5.5 (3.3.8)	Limitation for semi-luminaires		Ν	
5.5 (3.3.9)	Power factor and supply current		Ν	
5.5 (3.3.10)	Suitability for use indoors		Ν	
5.5 (3.3.11)	Luminaires with remote control		N	
5.5 (3.3.12)	Clip-mounted luminaire – warning		Ν	
5.5 (3.3.13)	Specifications of protective shields		Ν	
5.5 (3.3.14)	Symbol for nature of supply	~	Р	
5.5 (3.3.15)	Rated current of socket outlet		Ν	
5.5 (3.3.16)	Rough service luminaire		N	
5.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y attachments	Р	
5.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N	
5.5 (3.3.19)	For luminaires which generate a protective conductor current greater than 10 mA and intended for permanent connection		Ν	
5.5 (3.3.20)	Wall mounted and adjustable luminaires not intended to be mounted within arms reach		N	
5.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		Р	
	Cautionary symbol		Р	
5.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N	
5.5 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package (EN)		Р	
5.5 (3.4)	Test with water	Rubbing with water for 15s	Р	
	Test with hexane	Rubbing with petroleum for 15s	Р	
	Legible after test	Still legible	Р	
	Label attached	No curling	Р	

5.6 (4)	CONSTRUCTION		Р
5.6.1 (-)	Floodlights for use outdoors shall have protection against the ingress of moisture at least equivalent to IPX3.	IP 65	Р

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IEC 60598-2-5 and / or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict	
5.6.2 (-)	Lampholder brackets and lamp supports where	No such parts	N	
	used shall withstand normal usage throughout the life of the floodlight.			
5.6.3 (-)	When provision is made for alternative sizes of lamps or light centre positions, the adjusting means shall be positive and firmly retained in the selected position.		N	
5.6.4 (-)	Refractors, reflectors or any other light controlling components shall be so marked or constructed that they can be fitted or replaced only in the correct relationship to the light source.		N	
5.6.5 (-)	The means for attaching the floodlight to its support shall be appropriate to the weight of the floodlight.		Р	
	For floodlights for use above ground level outdoors, the connection shall withstand wind speeds of 150 km/h on the projected surface of the floodlight assembly without undue deflection.		Р	
5.6.6 (-)	Where means for angular adjustment are provided, there shall be provision for positive locking after any such adjustments have been effected.		Р	
5.6.7 (-)	Floodlights for use outdoors shall be resistant to the vibrations which may occur during normal use.		Р	
5.6.8 (-)	In order to reduce the risk of injury caused by breaking glass, the following requirements, in relation to the intended mounting height of the luminaire, are applicable.		P	
5.6.8.1(-)	Protection by the use of glass that fractures into small pieces		Р	
5.6.8.2(-)	Protection by the use of high impact resistant glass		Р	
5.6.8.2.1(-)	Glass covers shall have high mechanical strength.		Р	
5.6.8.2.2(-)	Glass covers shall not break into large pieces.		Р	
5.6 (4.2)	Components replaceable without difficulty		P	
5.6 (4.3)	Wireways smooth and free from sharp edges		Р	
5.6 (4.4)	Lampholders	1	Р	
5.6 (4.4.1)	Integral lampholder		N	
5.6 (4.4.2)	Wiring connection		N	
5.6 (4.4.3)	Lampholder for end-to-end mounting		N	
5.6 (4.4.4)	Positioning		N	
	- pressure test (N)		N	
	After test the lampholder comply with relevant standard sheets and show no damage		N	

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Clause	Requirement - Test	Result	Verdict
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N
	- bending test (Nm):		N
	After test the lampholder have not moved from its position and show no permanent deformation		N
5.6 (4.4.5)	Peak pulse voltage		N
5.6 (4.4.6)	Centre contact		N
5.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N
5.6 (4.4.8)	Lamp connectors	LED Lamp	Р
5.6 (4.4.9)	Caps and bases correctly used		N
5.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N
5.6 (4.5)	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
5.6 (4.6)	Terminal blocks		N
	Tails		N
	Unsecured blocks		N
5.6 (4.7)	Terminals and supply connections		Р
5.6 (4.7.1)	Contact to metal parts		Р
5.6 (4.7.2)	Test 8 mm live conductor		N
	Test 8 mm earth conductor		N
5.6 (4.7.3)	Terminals for supply conductors		Р
5.6 (4.7.3.1)	Welded connections:	- F	N
	- stranded or solid conductor		N
	- spot welding		N
	- welding between wires		N
	- Type Z attachment		N
	- mechanical test according to 15.8.2		N
	- electrical test according to 15.9		N
	- heat test according to 15.9.2.3 and 15.9.2.4		N
5.6 (4.7.4)	Terminals other than supply connection		Р
5.6 (4.7.5)	Heat-resistant wiring/sleeves		N
5.6 (4.7.6)	Multi-pole plug		N
	- test at 30 N		N

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IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

5.6 (4.8)	Switches:		Ν
	- adequate rating		Ν
	- adequate fixing		Ν
	- polarized supply		Ν
	- compliance with IEC 61058-1 for electronic switches		Ν
5.6 (4.9)	Insulating lining and sleeves		Р
5.6 (4.9.1)	Retainment		Р
	Method of fixing:	Reliably retained in position	Р
5.6 (4.9.2)	Insulated linings and sleeves		Ν
	Resistant to a temperature > 20 °C to the wire temperature or		Ν
	a) & c) Insulation resistance and electric strength		Ν
	b) Ageing test. Temperature (°C):		Ν
5.6 (4.10)	Insulation of Class II luminaires		Ν
5.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		Ν
	Safe installation fixed luminaires		Ν
	Capacitors and switches		Ν
	Interference suppression capacitors according to IEC 60384-14		Ν
5.6 (4.10.2)	Assembly gaps:		Ν
	- not coincidental		Ν
	- no straight access with test probe		Ν
5.6 (4.10.3)	Retainment of insulation:		Ν
	- fixed		Ν
	- unable to be replaced; luminaire inoperative		Ν
	- sleeves retained in position		Ν
	- lining in lampholder		Ν
5.6 (4.11)	Electrical connections		Р
5.6 (4.11.1)	Contact pressure		Р
5.6 (4.11.2)	Screws:		Ν
	- self-tapping screws		Ν
	- thread-cutting screws		Ν
5.6 (4.11.3)	Screw locking:		Ν
	- spring washer		Ν

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Clause	Requirement - Test	Result	Verdict
Clause	requirement - rest	Result	Verdict
	- rivets		N
5.6 (4.11.4)	Material of current-carrying parts		Р
5.6 (4.11.5)	No contact to wood		Р
5.6 (4.11.6)	Electro-mechanical contact systems		N
5.6 (4.12)	Mechanical connections and glands		Р
5.6 (4.12.1)	Screws not made of soft metal		Р
	Screws of insulating material		N
	Torque test: torque (Nm); part:		Ν
	Torque test: torque (Nm); part:		Ν
	Torque test: torque (Nm); part:		Ν
5.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		Ν
5.6 (4.12.4)	Locked connections:		Ν
	- fixed arms; torque (Nm)		Ν
	- lampholder; torque (Nm)	LED lamp	Ν
	- push-button switches; torque 0,8 Nm		N
5.6 (4.12.5)	Screwed glands; torque (Nm):	6,25Nm	Р
5.6 (4.13)	Mechanical strength		Р
5.6 (4.13.1)	Impact tests:	1	Р
	- fragile parts; energy (Nm)		Р
	- other parts; energy (Nm)	Other parts, 0,7Nm	Р
	1) live parts		Р
	2) linings		N
	3) protection		P
	4) covers		P
5.6 (4.13.3)	Straight test finger		P
5.6 (4.13.4)	Rough service luminaires		N
	- IP54 or higher		N
	a) fixed		N
	b) hand-held		N
	c) delivered with a stand		<u>N</u>
	d) for temporary installations and suitable for mounting on a stand		N
5.6 (4.13.6)	Tumbling barrel		Ν
5.6 (4.14)	Suspensions and adjusting devices		Р
5.6 (4.14.1)	Mechanical load:		Р
(-)	A) Four times the weight	4 X 12,8 kg = 51,2 kg	Р

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IEC 60598-2-5 and / or EN 60598-2-5



Clause	Requirement - Test	Result	Verdict
	B) torque 2,5 Nm		Р
	C) bracket arm; bending moment (Nm)		Ν
	D) load track-mounted luminaires		Ν
	E) clip-mounted luminaires, glass-shelve. Thickness (mm):		Ν
	metal rod. diameter (mm)		N
5.6 (4.14.2)	Load to flexible cables		N
	Mass (kg)		N
	Stress in conductors (N/mm ²)		N
	Mass (kg) of semi-luminaire:		N
	Bending moment (Nm) of semi-luminaire		N
5.6 (4.14.3a)	Adjusting devices:		Р
	- flexing test; number of cycles	Moving arms; 150 cycles	Р
	- strands broken		Р
	- electric strength test afterwards		Р
5.6 (4.14.3b)	Luminaires with a means of adjustment intended to be installed within arms reach, shall allow the operation of its intended function without impairing the stability of the luminaire or causing deformation of any part of the construction, nor cause injury due to temperatures above those specified in Table 12.1.	Out of arms reach	N
5.6 (4.14.3c)	For luminaires intended to be mounted within arms reach, the space surrounding any means of adjustment, except the light beam aperture, up to 5 cm away from the means of adjustment in any direction, shall comply with the temperature limits for the means of adjustment, as specified in Table 12.1.		N
5.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
5.6 (4.14.5)	Guide pulleys		N
5.6 (4.14.6)	Strain on socket-outlets		N
5.6 (4.15)	Flammable materials:		Р
	- glow-wire test 650 °C		N
	- spacing ≥ 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		Р

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IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

	- thermal protection		Ν
	- electronic circuits exempted		Ν
5.6 (4.15.2)	Luminaires made of thermoplastic material with lam	o control gear	Ν
	a) construction		Ν
	b) temperature sensing control		Ν
	c) surface temperature		Ν
5.6 (4.16)	Luminaires for mounting on normally flammable surf	aces	Р
	No lamp control gear	(compliance with Section 12)	Ν
5.6 (4.16.1)	Lamp control gear spacing:		Ν
	- spacing 35 mm		Ν
	- spacing 10 mm		Ν
5.6 (4.16.2)	Thermal protection:		Ν
	- in lamp control gear		Ν
	- external		Ν
	- fixed position		Ν
	- temperature marked lamp control gear		Ν
5.6 (4.16.3)	be so designed that it satisfies the test of 12.6	(see 12.6)	Ν
5.6 (4.17)	Drain holes		Ν
	Clearance at least 5 mm		Ν
5.6 (4.18)	Resistance to corrosion:		Р
5.6 (4.18.1)	- rust-resistance		Р
5.6 (4.18.2)	- season cracking in copper		Ν
5.6 (4.18.3)	- corrosion of aluminium		Ν
5.6 (4.19)	Ignitors compatible with ballast		Ν
5.6 (4.20)	Rough service vibration		Ν
5.6 (4.21)	Protective shield:		Ν
5.6 (4.21.1)	Shield fitted		Ν
	Shield of glass if tungsten halogen lamps		Ν
5.6 (4.21.2)	Particles from a shattering lamp not impair safety		Ν
5.6 (4.21.3)	No direct path		Ν
5.6 (4.21.4)	Impact test on shield		Ν
	Glow-wire test on lamp compartment		Ν
5.6 (4.22)	Attachments to lamps		Ν
5.6 (4.23)	Semi-luminaires comply Class II		Ν
5.6 (4.24)	UV radiation, metal halide lamps		Ν

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	IEC 60598-2-5 and / or EN 605		
Clause	Requirement - Test	Result	Verdict
		1	1
5.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N
5.6 (4.24.2)	Retinal blue light hazard		Р
	Luminaires with Ethr :		Р
	a) Fixed luminaires		Р
	- distance x m, borderline between RG1 and RG2	•	Р
	- marking and instruction according 3.2.23		Р
	b) Portable and handheld luminaires		N
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N
	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
5.6 (4.25)	Mechanical hazard		Р
	No sharp point or edges		Р
5.6 (4.26)	Short-circuit protection:		N
5.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N
5.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N
	Test chain not melt through		N
	Test sample not exceed values of Table 12.1 and 12.2		N
5.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N
	Test according Annex V		N
	Pull test of terminal fixing (20 N)		N
	After test, resistance < 0,05 Ω		N
	Pull test of mechanical connection (50 N)		N
	After test, resistance < 0,05 Ω		N
	Voltage drop test, resistance < 0,05 Ω		N
5.6 (4.28)	Fixing of thermal sensing control		N
	Not plug-in or easily replaceable type		N
	Reliably kept in position		N
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N
	Not outside the luminaire enclosure		N
	Test of adhesive fixing:		N

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Clause	Requirement - Test	Result	Verdict

	Max. temperature on adhesive material (°C):	Ν
	100 cycles between t min and t max	Ν
	Temperature sensing control still in position	Ν
5.6 (4.29)	Luminaires with non-replaceable light source	Р
	Not possible to replace light source	Р
	Live part not accessible after parts have been opened by hand or tools	N
5.6 (4.30)	Luminaires with non-user replaceable light source	Ν
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:	N
	Minimum two fixing means	Ν
5.6 (4.31)	Insulation between circuits	Ν
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	N
	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
5.6 (4.31.1)	SELV circuits	Ν
	Used SELV source	Ν
	Voltage ≤ ELV	Ν
	Insulating of SELV circuits from LV supply	Ν
	Insulating of SELV circuits from other non SELV circuits	N
	Insulating of SELV circuits from FELV	Ν
	Insulating of SELV circuits from other SELV circuits	Ν
	SELV circuits insulated from accessible parts according Table X.1	N
	Plugs not able to enter socket-outlets of other voltage systems	N
	Socket outlets does not admit plugs of other voltage systems	N
	Plugs and socket-outlets does not have protective conductor contact	N
5.6 (4.31.2)	FELV circuits	Ν
	Used FELV source	N
	Voltage ≤ ELV	N
	Insulating of FELV circuits from LV supply	N

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IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

	FELV circuits insulated from accessible parts according Table X.1	N
	Plugs not able to enter socket-outlets of other voltage systems	N
	Socket outlets does not admit plugs of other voltage systems	N
	Socket-outlets does not have protective conductor contact	N
5.6 (4.31.3)	Other circuits	N
	Other circuits insulated from accessible parts according Table X.1	N
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:	ct N
	- conductive parts are connected together	N
	- test according 7.2.3 of above	N
	- conductive part not cause an electric shock in case of an insulation fault	N
	- equipotential bonding in master/slave applications	N
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires	N
	- slave luminaire constructed as class I	N
5.6 (4.32)	Overvoltage protective devices	N
	Comply with IEC 61643-11	N
	External to control gear and connected to earth:	N
	- only in fixed luminaires	N
	- only connected to protective earth	N

5.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		Р
	Working voltage (V)	240V~	
	Voltage form	Sinusoidal 🖂	
		Non-sinusoidal 🗌	
	PTI	< 600 🖾 🛛 <u>></u> 600 🗌	
	Rated pulse voltage (kV)		
	Impulse withstand category (Normal category II) (Category III Annex U)	Category II 🛛 Category III	
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)	Cr>3,5mm,Cl>2,5mm (limit:Cr/Cl:2,5/1,5mm)	Р

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IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

	Cr>3,5mm,Cl>2,5mm (limit:Cr/Cl:2,5/1,5mm)	Р
(3) Parts becoming live due to breakdown of basic insulation and metal parts:		Ν
cr (mm); cl (mm):		
(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm)		Ν
(5) Not used		
	Cr>3,5mm,Cl>2,5mm (limit:Cr/Cl:2,5/1,5mm)	Р

5.8 (7)	PROVISION FOR EARTHING		Р
5.8 (7.2.1 + 7.2.3)	Accessible metal parts		Р
	Metal parts in contact with supporting surface		Р
	Resistance < 0,5 Ω	0,041Ω	Р
	Two self-tapping screws used		N
	Thread-forming screws		N
	Thread-forming screw used in a grove		N
	Earth makes contact first		Р
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
	Protective earthing of the luminaire not via built-in control gear		N
5.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N
5.8 (7.2.4)	Locking of clamping means		Р
	Compliance with 4.7.3		Р
	For terminal blocks with integrated screwless earthing contacts, the additional tests of Annex V are to be applied		N
5.8 (7.2.5)	Earth terminal integral part of connector socket		Р
5.8 (7.2.6)	Earth terminal adjacent to mains terminals		Р
5.8 (7.2.7)	Electrolytic corrosion of the earth terminal		Р
5.8 (7.2.8)	Material of earth terminal		Р
	Contact surface bare metal		Р
5.8 (7.2.10)	Class II luminaire for looping-in		N
	Double or reinforced insulation to functional earth		N

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IEC 60598-2-5 and / or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict	

5.8 (7.2.11)	Earthing core coloured green-yellow	Р
	Length of earth conductor	Р

5.9 (14)	SCREW TERMINALS		Ν
	Separately approved; component list	(see Annex 1)	Ν
	Part of the luminaire	(see Annex 3)	Ν

5.9 (15)	9 (15) SCREWLESS TERMINALS		Ν
	Separately approved; component list	(see Annex 1)	Ν
	Part of the luminaire	(see Annex 4)	N
(-)	Springtype screwless terminals of the Type b shall not be used		N

5.10 (5)	EXTERNAL AND INTERNAL WIRING		Р
5.10 (5.2)	Supply connection and external wiring		Р
5.10 (5.2.1)	Means of connection:	Connecting leads	Р
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N
	Connecting leads (EN)		Р
	- without a means for connection to the supply		Р
	- terminal block specified		Р
	- relevant information provided		Р
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		Р
5.10 (5.2.2)	Type of cable:	H05RN-F	Р
	Nominal cross-sectional area (mm ²):	3X1,0 mm ²	Р
	Cables equal to IEC 60227 or IEC 60245		Ν
	Cables equal to EN 50525 (EN)		Р
	Replace table 5.1 – Supply cord		Ν
5.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y attachment	Р
5.10 (5.2.5)	Type Z not connected to screws		Ν
5.10 (5.2.6)	Cable entries:		Р
	- suitable for introduction		Р
	- adequate degree of protection		Р
5.10 (5.2.7)	Cable entries through rigid material have rounded edges		Р

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Clause	Deguinement Test	Deput	Vordiat
Clause	Requirement - Test	Result	Verdict
5.10 (5.2.8)	Insulating bushings:		N
	- suitably fixed		N
	- material in bushings		N
	- material not likely to deteriorate		N
	- tubes or guards made of insulating material		N
5.10 (5.2.9)	Locking of screwed bushings		N
5.10 (5.2.10)	Cord anchorage:		Р
	- covering protected from abrasion		Р
	- clear how to be effective		Р
	- no mechanical or thermal stress		Р
	- no tying of cables into knots etc.		Р
	- insulating material or lining		Р
5.10 (5.2.10.1)	Cord anchorage for type X attachment:		N
	a) at least one part fixed		N
	b) types of cable		N
	c) no damaging of the cable		N
	d) whole cable can be mounted		N
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		N
	Glands not used as anchorage		N
	Labyrinth type anchorages		N
5.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y attachment	Р
5.10 (5.2.10.3)	Tests:		Р
	- impossible to push cable; unsafe		Р
	- pull test: 25 times; pull (N):	60N	Р
	- torque test: torque (Nm):	0,25Nm	Р
	- displacement $\leq 2 \text{ mm}$		Р
	- no movement of conductors		Р
	- no damage of cable or cord		Р
5.10 (5.2.11)	External wiring passing into luminaire		Р
5.10 (5.2.12)	Looping-in terminals		N
5.10 (5.2.13)	Wire ends not tinned		Р

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	IEC 60598-2-5 and / or EN 605	98-2-5	
Clause	Requirement - Test	Result	Verdict
	Wire ends tinned: no cold flow	1	N
E 40 (E 0 44)			
5.10 (5.2.14)	Mains plug same protection		N
	Class III luminaire plug		N
	No unsafe compatibility		N
5.10 (5.2.16)			<u>N</u>
	Installation couplers (IEC 61535)		N
	Other appliance inlet or connector according relevant IEC standard		N
5.10 (5.2.17)	Non standardized interconnecting cables properly assembled		N
5.10 (5.2.18)	Used plug in accordance with:		N
	- IEC 60083		N
	- other standard		N
5.10 (5.3)	Internal wiring		Р
5.10 (5.3.1)	Internal wiring of suitable size and type		Р
	Through wiring		Ν
	- not delivered/ mounting instruction		N
	- factory assembled		N
	- socket outlet loaded (A)		Ν
	- temperatures:	(see Annex 2)	N
	Green-yellow for earth only		Р
5.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		Р
<u>, </u>	Cross-sectional area (mm ²)	0,5 mm ²	Р
	Insulation thickness		Р
	Extra insulation added where necessary		N
5.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal	current-limiting device	Р
· · ·	Adequate cross-sectional area and insulation thickness		Р
5.10 (5.3.1.3)	Double or reinforced insulation for class II		N
5.10 (5.3.1.4)	Conductors without insulation		N
5.10 (5.3.1.5)	SELV current-carrying parts		N
5.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N

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	IEC 60598-2-5 and / or EN 60598-2-5		
Clause	Requirement - Test	Result	Verdict
5.10 (5.3.2)	Sharp edges etc.		Р
	No moving parts of switches etc.		N
	Joints, raising/lowering devices		Р
	Telescopic tubes etc.		N
	No twisting over 360°		P

	relescopic lubes etc.	IN
	No twisting over 360°	Р
5.10 (5.3.3)	Insulating bushings:	 N
	- suitable fixed	N
	- material in bushings	Ν
	- material not likely to deteriorate	Ν
	- cables with protective sheath	Ν
5.10 (5.3.4)	Joints and junctions effectively insulated	N
5.10 (5.3.5)	Strain on internal wiring	N
5.10 (5.3.6)	Wire carriers	Ν
5.10 (5.3.7)	Wire ends not tinned	Ν
	Wire ends tinned: no cold flow	Р

5.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK	Р
5.11 (8.2.1)	Live parts not accessible	Р
	Basic insulated parts not used on the outer surface without appropriate protection	Р
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	Ρ
	Basic insulated parts not accessible with \emptyset 50 mm probe from outside, other types of luminaires	N
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements	Ρ
	Basic insulation only accessible under lamp or starter replacement	Р
	Protection in any position	Р
	Double-ended tungsten filament lamp	Ν
	Insulation lacquer not reliable	Ν
	Double-ended high pressure discharge lamp	Ν
	Relevant warning according to 3.2.18 fitted to the luminaire	Ν
5.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position	N

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IEC 60598-2-5 and / or EN 60598-2-5			
Clause	Requirement - Test	Result	Verdict

5.11 (8.2.3a)	For protection against electric shock:	N
	- basic insulated metal parts not accessible during starter or lamp replacement	Ν
	- basic insulation not accessible other than during starter or lamp replacement	N
	- glass protective shields not used as supplementary insulation	N
5.11 (8.2.3b)	Class I luminaire with BC lampholder	N
5.11 (8.2.3c)	SELV circuits with exposed current carrying parts:	N
	Ordinary luminaire:	N
	- touch current:	N
	- no-load voltage	N
	Other than ordinary luminaire:	N
	- nominal voltage	N
5.11 (8.2.4)	Portable luminaire have protection independent of supporting surface	N
5.11 (8.2.5)	Compliance with the standard test finger or relevant probe	Р
5.11 (8.2.6)	Covers reliably secured	Р
5.11 (8.2.7)	Discharging of capacitors \ge 0,5 μ F	N
	Portable plug connected luminaire with capacitor	N
	Other plug connected luminaire with capacitor	N
	Discharge device on or within capacitor	N
	Discharge device mounted separately	N

5.12 (12)	ENDURANCE TEST AND THERMAL TEST		Р
5.12.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 4.13		Р
5.12 (12.3)	Endurance test:		Р
	- mounting-position:	As in normal used	_
	- test temperature (°C):	35°C	
	- total duration (h):	240h	—
	- supply voltage: Un factor; calculated voltage (V)	264V	
	- lamp used:	See data sheet	—
5.12 (12.3.2)	After endurance test:		Р
	- no part unserviceable		Р

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IEC 60598-2-5 and / or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict	

	- luminaire not unsafe		Р
	- no damage to track system		Ν
	- marking legible		Р
	- no cracks, deformation etc.		Р
5.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	Р
5.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring (EN)		Р
5.12.1 (-)	Temperature reduction		Р
5.12.2 (-)	Glass covers shall be used within the thermal limits declared by the glass manufacturer.		Р
5.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	Р
5.12 (12.6)	Thermal test (failed lamp control gear condition):		Ν
5.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		
	- electronic lamp control gear		Ν
	- measured winding temperature (°C): at 1,1 Un		
	- measured mounting surface temperature (°C) at 1,1 Un		N
	- calculated mounting surface temperature (°C)		N
	- track-mounted luminaires		N
5.12 (12.6.2)	Temperature sensing control	·	N
	- case of abnormal conditions		
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured mounting surface temperature (°C) :		N
	- track-mounted luminaires		N
5.12 (12.7)	Thermal test (failed lamp control gear in plastic lumi	naires):	Ν
1.12 (12.7.1)	Luminaire without temperature sensing control		N
5.12 (12.7.1.1)	Test for luminaires incorporating fluorescent lamps \leq 70 W		N
5.12 (12.7.1.1)	Luminaire with fluorescent lamp \leq 70W		N
	Test method 12.7.1.1 or Annex W		

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	IEC 60598-2-5 and / or EN 605	98-2-5	
Clause	Requirement - Test	Result	Verdict
	Test according to 12.7.1.1:		Ν
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		
	- Components retained in place after the test		N
	- Test with standard test finger after the test		Ν
	Test according to Annex W:		Ν
	- 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:		N
5.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		
	- 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		N
5.12 (12.7.1.3)	Test for luminaires with short circuit proof transformers ≦10 VA		N
5.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N
	- case of abnormal conditions:		
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
5.12 (12.7.2)	Luminaire with temperature sensing control		N
	- thermal link:	Yes 🗌 No 🖂	
	- manual reset cut-out:	Yes 🗌 No 🖂	
	- auto reset cut-out:	Yes 🗌 No 🖂	
	- case of abnormal conditions		N
	- highest measured temperature of fixing point/ exposed part (°C):		N
	Ball-pressure test:		N

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IEC 60598-2-5 and / or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict	

5.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND N	IOISTURE	Р
5.13 (-)	If IP > IP 20 the order of tests as specified in clause	2.12	Р
5.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP:	IP 65	
	- mounting position during test:	As normal use	
	- fixing screws tightened; torque (Nm):		
	- tests according to clauses:	Cl. 9.2.2 & 9.2.6 of EN60598-1	
	- electric strength test afterwards		Р
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		Р
	 c) no trace of water on current-carrying parts or where it could become a hazard 		Р
	d) i) For luminaires without drain holes – no water entry		Р
	d) ii) For luminaires with drain holes – no hazardous water entry		N
	e) no water in watertight luminaire		N
	f) no contact with live parts (IP 2X)		N
	f) no entry into enclosure (IP 3X and IP 4X)		N
	f) no contact with live parts (IP 3X and IP 4X)		N
	g) no trace of water on any part of a lamp		Р
	h) no damage		Р
5.13 (9.3)	Humidity test 48 h	25°C, 93%RH	Р

5.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH Insulation resistance test	
5.14 (10.2.1)		
	Cable or cord covered by metal foil or replaced by a metal rod of mm \varnothing	
	Insulation resistance (MΩ)	
	SELV:	N
	- between current-carrying parts of different polarity	N
	- between current-carrying parts and mounting surface	N

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IEC 60598-2-5 and / or EN 60598-2-5



Clause	Requirement - Test	Result	Verdict
	- between current-carrying parts and metal parts of the luminaire		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N
	- insulating bushings as described in Section 5 :		Ν
	Other than SELV:		Р
	- between live parts of different polarity	>50 MΩ	Р
	- between live parts and mounting surface:	>50 MΩ	Р
	- between live parts and metal parts	>50 MΩ	Р
	- between live parts of different polarity through action of a switch		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	>50 MΩ	Р
	- insulating bushings as described in Section 5 :		N
5.14 (10.2.2)	Electric strength test		Р
	Dummy lamp		Ν
	Luminaires with ignitors after 24 h test		Ν
	Luminaires with manual ignitors		Ν
	Test voltage (V):		Р
	SELV:		N
	- between current-carrying parts of different polarity		N
	- between current-carrying parts and mounting surface		N
	- between current-carrying parts and metal parts of the luminaire		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N
	- insulating bushings as described in Section 5:		N
	Other than SELV:		Р
	- between live parts of different polarity	1480V/MIN	Р
	- between live parts and mounting surface:	1480V/MIN	Р
	- between live parts and metal parts	1480V/MIN	Р
	- between live parts of different polarity through action of a switch		N

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IEC 60598-2-5 and / or EN 60598-2-5					
Clause	Clause Requirement - Test Result Verdic				

	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	1480V/MIN	Р
	- insulating bushings as described in Section 5 :		Ν
5.14 (10.3.1)	Touch current or protective conductor current and electric burn (mA)	Touch current: 0,161 mA	Р

5.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		
5.15 (13.2.1)	Ball-pressure test:		Р
	- part tested; temperature (°C):	Remote controller cover; 75 °C; 0.7mm	Р
	- part tested; temperature (°C):	Waterproof connector; 125 ℃; 0.9mm	Р
5.15 (13.3.1)	Needle flame test (10 s):		Ν
	- part tested:		Ν
	- part tested:		Ν
5.15 (13.3.2)	Glow-wire test (650°C):		Р
	- part tested:	Remote controller cover	Р
	- part tested:	Waterproof connector	Р
5.15 (13.4.1)	Tracking test: part tested:		Ν





Annex as stated in the standards 3.3

IEC 60598-2-5 and/or EN 60598-2-5				
Clause	Requirement - Test		Result	Verdict

W	ANNEX W, Alternative thermal test for thermoplastic luminaires	Ν
W.1	Thermal test in regard to fault conditions in lamp controlgear or electronic devices without temperature sensing controls in thermoplastic luminaires for fluorescent lamps ≤ 70W	
	Thermal test (failed lamp control gear in plastic luminaires):	N
	Through wiring or looping-in wiring loaded by a current of (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	N
	- calculated temperature of fixing point/ exposed part (°C):	N

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

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	Ν
(4 & 5)	FR: Shuttered socket-outlets 10/16A	Ν
	 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: 	Ζ
	- 850°C for luminaires in stairways and horizontal travel paths	Ν
	- 650°C for indoor luminaires	Ν
	GB: Requirements according to United Kingdom Building Regulation	Ν

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3.4 **Tables**

	IEC 60598-2-5 and/or EN 60598-2-5					
Clause	Requirement - Test	Result	Verdict			
	ANNEX 1: components P					

ANNEX 1: components

object/part No.	code	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
External wire	В	Guangdong Rifeng Electrical Cable Co., Ltd.	H05RN-F	3 X 1,0mm ²		VDE 40015999
Remote controller	В	Shenzhen Aglare Lighting Co., Ltd.	FGDK-Z3	220-240V 50/60Hz		CE
Wire	В	Guangdong Rifeng Electrical Cable Co., Ltd.	H03VV-F	2 X 0,5mm ²		VDE 40043895
LED Driver	В	MEAN WELL	ELG-240-36A	INPUT: 100- 240V 50/60Hz OUTPUT: 36V 6.66A Max. 239.76W SELV IP65 Tc:90℃		ENEC 18
Waterproof connector	В	ТОР	LD-200/3T	450V 33A, IP68 T85, 0.5-4mm ²		CE
Closed-end terminal	С	Heavy Power Co., Ltd.	CE5			UL E113650 Tested with appliance
LED module	В	Various	YJLED30B	36V 25W		CE

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 60598-2-5 and/or EN 60598-2-5					
Clause	Requirement - Test	Result	Verdict		

ANNEX 2: temperature measurements, thermal tests of Section 12

Ρ

<u> </u>		
Type reference	AT247	
Lamp used:	LED 500W	
Lamp control gear used	ELG-240-36A	_
Mounting position of luminaire:	As in normal used	
Supply wattage (W)	490,9W	
Supply current (A)	1,957A	
Calculated power factor:	0,983	
Table: measured temperatures corrected for ta = 25	°C:	Р
- abnormal operating mode	Short-circuit the LED lamp	
- test 1: rated voltage:	240V	
- test 2: 1,06 times rated voltage or 1,05 times rated wattage:	254,4V (1,06 times rated voltage)	
- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage		_
- test 4: 1,1 times rated voltage or 1,05 times rated wattage:	264V(1,1 times rated voltage)	
Through wiring or looping-in wiring loaded by a current of A during the test		

temperature (°C) of part		Clause 12	2.4 – norm	al	Clause 12	.5 – abnormal
	test 1	test 2	test 3	limit	test 4	limit
External wire		26,3		90		
Internal wire		48,2		90		
LED Driver Tc	59,2			90		
Remote controller surface		47,2		For cl. 13		
Waterproof connector surface		40,6		For cl. 13		
Mounting surface		38,4		90	39,6	130

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	IEC 60598-2-5 and/or EN 60598-2-5				
Clause	Requirement - Test		Result	Verdict	

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

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	IEC 60598-2-5 and/or EN 60598-2-5				
Clause	Requirement - Test	Result	Verdict		

ANNEX 4: screwless terminals (part of the luminaire)

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

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	IEC	C 60598-2-5 and/or EN 60598-2-5	
Clause	Requirement - Test	Result	Verdict
		· · · · ·	

Pull test pin or tab terminals (4 samples);	 Ν
pull (N):	

(15.6.3.1)	TABL	E: Contact resistance test										
	Voltag	je d	lrop (mV) after 1	h							
terminal		1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)												
Volt		oltage drop of two inseparable joints									Ν	
Volta		/oltage drop after 10th alt. 25th cycle									Ν	
	Max. allowed voltage drop (mV):											
terminal	terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	voltage drop (mV)											
		Vol	ltage dro	p after 5	0th alt. 1	00th cyc	le					Ν
		Ма	x. allowe	ed voltag	e drop (r	nV)	: -					
terminal			1	2	3	4	5	6	7	8	9	10
voltage drop	voltage drop (mV)											
		Co	ntinued a	ageing: v	oltage di	rop after	10th alt.	25th cyc	le			Ν
		Ma	x. allowe	ed voltag	e drop (r	nV)	: -					—
terminal		1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)												
		Co	ntinued a	ageing: v	oltage di	rop after	50th alt.	100th cy	cle			Ν
	Max. allowed voltage drop (mV)											
terminal			1	2	3	4	5	6	7	8	9	10
voltage drop (mV)												

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Manufacturer/ Approval holder Declaration

The following identical model(s):

AT240, AT241, AT242, AT243, AT244, AT245, AT246, AF103, AF104, AF106, AF107, AF108, AF402, AF403, AF405, AF406, AF407, AF408, **MFR-400**

belong to the tested device:

Product description: **RGB led floodlight** Model name: **AT247**

No additional models were tested.

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Attachments

\boxtimes	Photo document					
	BOM					
	CDF (critical data form)					
	Copies of certificates of certified components					
	Instruction manual					
	Circuit diagram					
	Explosion block					
	Other if necessary					

-----end of report-----



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Attachment

Page 1 of 5

Type Designation: Report Number:

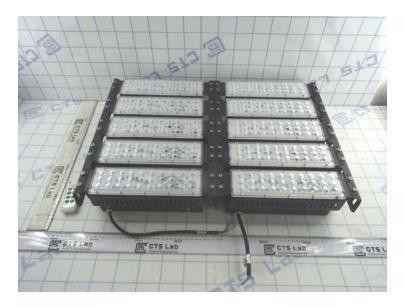


Figure 1 (External view – front)



Figure 2 (External view – rear)





Attachment

Page 2 of 5

Type Designation: Report Number:





Figure 3 (Internal construction 1)

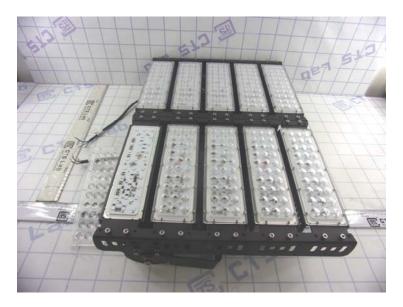


Figure 4 (Internal construction 2)



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Type Designation: Report Number: Page 3 of 5

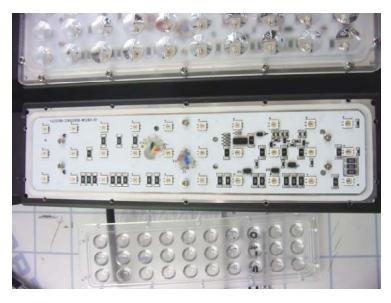


Figure 5 (LED module)



Figure 6 (LED Driver)



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Figure 7 (Cord anchorage)

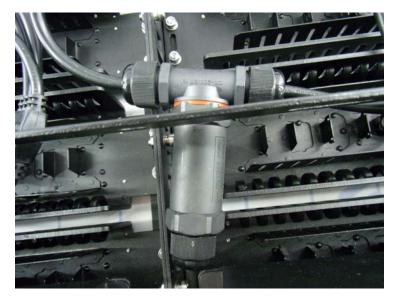


Figure 8 (Waterproof connector)







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Type Designation: Report Number: Page 5 of 5



Figure 9 (Remote controller)



Figure 10 (Remote control)