



Ref. Certif. No.

DE 2-026739

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	LED Flood Light
Name and address of the applicant	ATC MIDDLE EAST FZCO Jebel Ali JAFZA 18&19 BCW Dubai, United Arab Emirates
Name and address of the manufacturer	Foshan Aidike trading CO., LTD Floor 5th, No. 9 Nanmian Road, Junan Town, Shunde district Foshan City, Guangdong Province, P.R. China
Name and address of the factory	Foshan Aidike trading CO., LTD Floor 5th, No. 9 Nanmian Road, Junan Town, Shunde district Foshan City, Guangdong Province, P.R. China
Ratings and principal characteristics	AC 176-265V; 50/60Hz; ta:50°C; Class I; IP65; For other ratings, see the test report.
Trademark (if any)	Rafeed
Customer's Testing Facility (CTF) Stage used	N/A
Model / Type Ref.	RFE-0273A; RFE-0272A; RFE-0271A; RFE-0270A; RFE-0269A; RFE-0268A; RFE-0267A; RFE-0266A; RFE-0342A; RFE-0265A; RFE-0264A; RFE-0263A; RFE-0262A; RFE-0261A; RFE-0260A
Additional information (if necessary may also be reported on page 2)	-see also test report ref no. 50330769 001.
A sample of the product was tested and found to be in conformity with	IEC 60598-2-5:2015 IEC 60598-1:2014
As shown in the Test Report Ref. No. which forms part of this Certificate	50330769 001

This CB Test Certificate is issued by the National Certification Body



TÜV Rheinland LGA Products GmbH  
Tillystraße 2 · 90431 Nürnberg, Germany  
Phone + 49 221 806-1371  
Fax + 49 221 806-3935  
Mail: cert-validity@de.tuv.com  
Web: www.tuv.com



Date: 16.01.2020

Signature: Dipl.-Ing. Univ. S. O. Steinke

**ATC MIDDLE EAST FZCO**

Date : 2020-01-16  
Our ref. : awa ZD  
Your ref. : 0168147257

Jebel Ali JAFZA 18&19 BCW Dubai, United Arab Emirates

**Ref : CB Certificate Germany**

Type of Equipment: LED Flood Light  
Model Designation: See Certificate  
Certificate No. : DE 2-026739  
Report No. : 50330769 001

Dear Ladies and Gentlemen,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products though our extensive range of technical services. Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body

Dipl.-Ing. Univ. S. O. Steinke

Enclosure

证书的详细资料请登陆[www.tuvdotcom.com](http://www.tuvdotcom.com)查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



Test Report issued under the responsibility of:



**TEST REPORT  
IEC 60598-2-5  
Luminaires  
Part 2: Particular requirements  
Section 5: Floodlights**

**Report Number** .....: 50330769 001  
**Date of issue**.....: 13-01-2020  
**Total number of pages** .....: 37 page

**Name of Testing Laboratory preparing the Report**.....: TÜV Rheinland (Shenzhen) Co., Ltd.

**Applicant's name** .....: **ATC MIDDLE EAST FZCO**  
**Address** .....: Jebel Ali JAFZA 18&19 BCW Dubai, United Arab Emirates

**Test specification:**

**Standard**.....: IEC 60598-2-5:2015 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\_5F  
**Test Report Form(s) Originator** ....: Intertek Semko AB  
**Master TRF**.....: Dated 2018-04-06

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

**General disclaimer:**

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

<b>Test item description</b> ..... :	LED Flood Light	
<b>Trade Mark</b> ..... :	Rafeed	
<b>Manufacturer</b> .....	Foshan Aidike trading co., LTD Floor 5th, No. 9 Nanmian Road, Junan Town, Shunde district, Foshan City, Guangdong Province, P.R. China	
<b>Model/Type reference</b> .....	RFE-0273A, RFE-0272A, RFE-0271A, RFE-0270A, RFE-0269A, RFE-0268A, RFE-0267A, RFE-0266A, RFE-0342A, RFE-0265A, RFE-0264A, RFE-0263A, RFE-0262A, RFE-0261A, RFE-0260A	
<b>Ratings</b> .....	176-265VAC, 50/60Hz, ta: 50°C, IP65, Class I (details see "general product information")	
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>		
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	TÜV Rheinland (Shenzhen) Co., Ltd.
	<b>Testing location/ address</b> ..... :	1F East & 2-4F, Cybio Technology Building No. 1, No. 16 Kejibei 2nd Road, Hi-tech Industry Park North, Nanshan District 518057, Shenzhen, China
	<b>Tested by (name, function, signature)</b> ..... :	Wayne Wang
	<b>Approved by (name, function, signature)</b> ... :	Jack Li
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	
	<b>Testing location/ address</b> ..... :	N/A
	<b>Tested by (name, function, signature)</b> ..... :	N/A
	<b>Approved by (name, function, signature)</b> ... :	N/A
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	
	<b>Testing location/ address</b> ..... :	N/A
	<b>Tested by (name + signature)</b> .....	N/A
	<b>Witnessed by (name, function, signature) . :</b>	N/A
	<b>Approved by (name, function, signature)</b> ... :	N/A
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	
	<b>Testing location/ address</b> ..... :	N/A
	<b>Tested by (name, function, signature)</b> ..... :	N/A
	<b>Witnessed by (name, function, signature) . :</b>	N/A
	<b>Approved by (name, function, signature)</b> ... :	N/A
	<b>Supervised by (name, function, signature) :</b>	N/A

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

Attachment 1: Tests according to IEC 62031:2018 (7 page)

Attachment 2: Photobiological safety of lamps and lamp systems were according to standard IEC TR 62778:2014.(1 page)

Attachment 3: photo document.(5 page)

**Summary of testing:****Tests performed (name of test and test clause):**

Clause(s)	Test(s)
IEC 60598-1:2014+A1:2017	
3.4	Rubbing test
4.12.1	Screw torque test
4.12.5	Torque test on screw gland
4.13.1	Impact test
4.13.3	Straight unjointed test finger
4.14.1	Test for mechanical suspensions
5.2.10.3	Pull and torque test on cord anchorage
7.2.3	Earth resistance test
8.2.5	Protection against electric shock test
8.2.6	Covers reliably secured
8.2.7	Capacitor discharge
9.2	Tests for ingress of dust, solid objects and moisture
9.3.1	Humidity test
10.2.1	Insulation resistance test
10.2.2	Electric strength test
10.3	Touch current test and protective conductor current test
12.3.1	Endurance test
12.4	Thermal test (normal operation)
13.2	Ball pressure test
13.3.1	Needle-flame test
13.3.2	Glow-wire test
IEC 60598-2-5:2015	
5.6.5	Static load test
5.6.8	Glass cover shattering and high impact resistant glass

Full test were performed on RFE-0273A, Partial tests were performed on other models.

**Testing location:**

TÜV Rheinland (Shenzhen) Co., Ltd.

1F East & 2-4F, Cybio Technology Building No. 1,  
No. 16 Kejibei 2nd Road, Hi-tech Industry Park  
North, Nanshan District 518057, Shenzhen, China

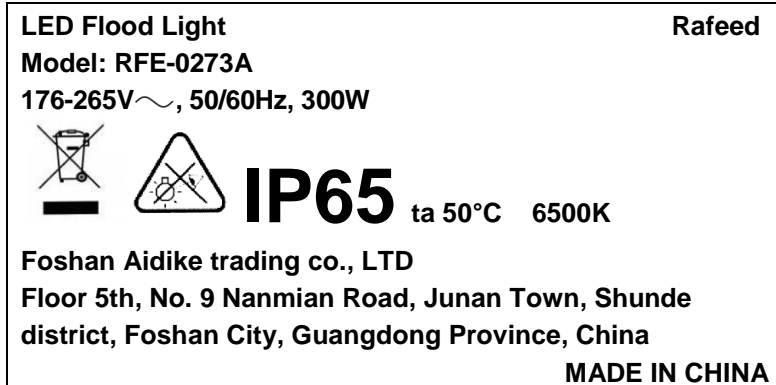
**Summary of compliance with National Differences:****List of countries addressed**

N/A

The product fulfils the requirements of \_\_\_\_\_ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)

**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.



Note: above labels are only representative, other model labels are the same design, except model name and rating correspondingly.

<b>Test item particulars</b> .....: Floodlights	
<b>Classification of installation and use</b> .....: LED Flood Light for indoor and outdoor use	
<b>Supply Connection</b> .....: Supply cord .....:	
<b>Possible test case verdicts:</b> - 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)	
<b>Testing</b> .....:	
<b>Date of receipt of test item</b> ..... : 16-12-2019	
<b>Date (s) of performance of tests</b> ..... : 16-12-2019 to 31-12-2019	
<b>General remarks:</b>	
"(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 <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.	
Clause numbers between brackets refer to clauses in IEC 60598-1	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 02:</b>	
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 .....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies)</b> ..... : Same as manufacturer	

**General product information:**

Product: LED Flood Light

Rating: 176-265VAC, 50/60Hz, ta: 50°C, IP65, Class I, and suitable for direct mounting on normally flammable surfaces, suitable for indoor and outdoor use.

1. All models have similar construction, but different size and power.
2. The products equipped with non replaceable LED module and connected to the main supply via approved supply cords
3. All models use same type LED chip with CCT 2700K-6500K.
4. This CB report is for IECEE registration only.


**Model list:**

Model name	Input current (A)	Power (W)	Dimension (LxWxH)/ Weight	Max. project area (m <sup>2</sup> )	Maximum mounting height(m)
RFE-0273A	1,7	300	W473xL335xH45m m/4,96kg	0,16	20
RFE-0272A					
RFE-0271A	1,14	200	W408xL280xH40m m/3,45kg	0,114	20
RFE-0270A					
RFE-0269A	0,85	150	W338xL232xH38m m/2,43kg	0,078	20
RFE-0268A					
RFE-0267A	0,57	100	W297xL242xH32m m/1,55kg	0,071	15
RFE-0266A					
RFE-0342A	0,28	50	W230xL195xH30m m/0,82kg	0,045	15
RFE-0265A					
RFE-0264A					
RFE-0263A	0,17	30	W185xL158xH25m m/0,48kg	0,03	10
RFE-0262A					
RFE-0261A	0,06	10	W127xL120xH23m m/0,25kg	0,016	8
RFE-0260A					



IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
<b>5.4 (0+2)</b>	<b>CLASSIFICATION OF LUMINAIRES</b>		<b>P</b>
<b>5.4 (0)</b>	<b>General requirements and tests</b>		—
5.4 (0.3)	More sections applicable..... :	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Section/s:	—
5.4 (0.5)	Components	(see Annex 1)	—
5.4 (0.7)	Information for luminaire design in light sources standards		—
5.4 (0.7.2)	Light source safety standard .....	IEC 62031	—
	Luminaire design in the light source safety standard		—
<b>5.4 (2)</b>	<b>Classification of luminaires</b>		—
5.4 (2.2)	Type of protection .....	Class I	<b>P</b>
5.4 (2.3)	Degree of protection..... :	IP65	—
5.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
5.4 (2.5)	Luminaire for normal use .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

<b>5.5 (3)</b>	<b>MARKING</b>		<b>P</b>
5.5 (3.2)	Mandatory markings		<b>P</b>
	Position of the marking		<b>P</b>
	Format of symbols/text		<b>P</b>
5.5 (3.3)	Additional information		<b>P</b>
	Language of instructions	English	<b>P</b>
5.5 (3.3.1)	Combination luminaires		N/A
5.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	<b>P</b>
5.5 (3.3.3)	Operating temperature		N/A
5.5 (3.3.5)	Wiring diagram		N/A
5.5 (3.3.6)	Special conditions		N/A
5.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
5.5 (3.3.8)	Limitation for semi-luminaires		N/A
5.5 (3.3.9)	Power factor and supply current		N/A
5.5 (3.3.10)	Suitability for use indoors		<b>P</b>
5.5 (3.3.11)	Luminaires with remote control		N/A
5.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
5.5 (3.3.13)	Specifications of protective shields		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.5 (3.3.14)	Symbol for nature of supply		P
5.5 (3.3.15)	Rated current of socket outlet		N/A
5.5 (3.3.16)	Rough service luminaire		N/A
5.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Z	P
5.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
5.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
5.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
5.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided	Non replaceable light sources	P
5.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
5.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
5.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
5.5 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test		P
	Label attached		P
5.5 (-)	Additional information if applicable		P
	a) Operation position		N/A
	b) Weight and dimensions		P
	c) Maximum protected area		P
	d) Limitation of use indoors and/or outdoor		P
	e) Maximum mounting height if $\leq 5$ m		N/A

<b>5.6 (4)</b>	<b>CONSTRUCTION</b>		P
5.6 (4.2)	Components replaceable without difficulty		N/A
5.6 (4.3)	Wireways smooth and free from sharp edges		P
<b>5.6 (4.4)</b>	<b>Lampholders</b>		<b>N/A</b>
5.6 (4.4.1)	Integral lampholder		N/A
5.6 (4.4.2)	Wiring connection		N/A
5.6 (4.4.3)	Lampholder for end-to-end mounting		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (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
5.6 (4.4.5)	Peak pulse voltage		N/A
5.6 (4.4.6)	Centre contact		N/A
5.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
5.6 (4.4.8)	Lamp connectors		N/A
5.6 (4.4.9)	Caps and bases correctly used		N/A
5.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
<b>5.6 (4.5)</b>	<b>Starter holders</b>		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
<b>5.6 (4.6)</b>	<b>Terminal blocks</b>		N/A
	Tails		N/A
	Unsecured blocks		N/A
<b>5.6 (4.7)</b>	<b>Terminals and supply connections</b>		<b>N/A</b>
5.6 (4.7.1)	Contact to metal parts		N/A
5.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
5.6 (4.7.3)	Terminals for supply conductors		N/A
5.6 (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

<b>IEC 60598-2-5</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
5.6 (4.7.4)	Terminals other than supply connection		N/A
5.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
5.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
<b>5.6 (4.8)</b>	<b>Switches</b>		<b>N/A</b>
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
<b>5.6 (4.9)</b>	<b>Insulating lining and sleeves</b>		<b>N/A</b>
5.6 (4.9.1)	Retainment		N/A
	Method of fixing .....		N/A
5.6 (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
<b>5.6 (4.10)</b>	<b>Double or reinforced insulation</b>		<b>N/A</b>
5.6 (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
5.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
5.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
5.6 (4.10.4)	Protective impedance device		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	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
<b>5.6 (4.11)</b>	<b>Electrical connections and current-carrying parts</b>		<b>P</b>
5.6 (4.11.1)	Contact pressure		P
5.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
5.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
5.6 (4.11.4)	Material of current-carrying parts		P
5.6 (4.11.5)	No contact to wood or mounting surface		P
5.6 (4.11.6)	Electro-mechanical contact systems		N/A
<b>5.6 (4.12)</b>	<b>Screws and connections (mechanical) and glands</b>		<b>P</b>
5.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	Fixed earth wire: 0,6Nm	P
	Torque test: torque (Nm); part..... :	Fixed LED PCB: 0,6Nm	P
	Torque test: torque (Nm); part..... :		N/A
5.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
5.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) .....		N/A
	- lampholder; torque (Nm) .....		N/A
	- push-button switches; torque 0,8 Nm .....		N/A
5.6 (4.12.5)	Screwed glands; force (Nm)..... :	Metal gland: 6,25Nm	P
<b>5.6 (4.13)</b>	<b>Mechanical strength</b>		<b>P</b>
5.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) .....		N/A
	- other parts; energy (Nm)..... :	Metal enclosure and glass cover: 0,7Nm	P
	1) live parts		P
	2) linings		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	3) protection		P
	4) covers		P
5.6 (4.13.2)	Metal parts have adequate mechanical strength		P
5.6 (4.13.3)	Straight test finger		P
5.6 (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
5.6 (4.13.6)	Tumbling barrel		N/A
<b>5.6 (4.14)</b>	<b>Suspensions, fixings and means of adjusting</b>		<b>P</b>
5.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	For model RFE-0273A: 4x4,96Kg=19,84Kg	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :	For model RFE-0273A: 16,62 (4,96Kg $\times$ 10N/kg $\times$ 0,335m)	P
	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
5.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) .....		—
	Stress in conductors (N/mm <sup>2</sup> ) .....		N/A
	Mass (kg) of semi-luminaire .....		N/A
	Bending moment (Nm) of semi-luminaire .....		N/A
5.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles..... :	45 cycles	P
	- strands broken .....	No broken	P
	- electric strength test afterwards		P
5.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (4.14.5)	Guide pulleys		N/A
5.6 (4.14.6)	Strain on socket-outlets		N/A
<b>5.6 (4.15)</b>	<b>Flammable materials</b>		<b>N/A</b>
	- glow-wire test 650°C .....	See Test Table 5.15 (13.3.2)	N/A
	- spacing $\geq 30$ 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
5.6 (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
<b>5.6 (4.16)</b>	<b>Luminaires for mounting on normally flammable surfaces</b>		<b>N/A</b>
	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
5.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm	Electronic controlgear is exempted from this requirement	N/A
	- spacing 10 mm		N/A
5.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
5.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
<b>5.6 (4.17)</b>	<b>Drain holes</b>		<b>N/A</b>
	Clearance at least 5 mm		N/A
<b>5.6 (4.18)</b>	<b>Resistance to corrosion</b>		<b>P</b>
5.6 (4.18.1)	- rust-resistance		N/A
5.6 (4.18.2)	- season cracking in copper		N/A
5.6 (4.18.3)	- corrosion of aluminium		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6 (4.19)	Igniters compatible with ballast		N/A
5.6 (4.20)	Rough service vibration		N/A
<b>5.6 (4.21)</b>	<b>Protective shield</b>		<b>N/A</b>
5.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
5.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
5.6 (4.21.3)	No direct path		N/A
5.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 5.15 (13.3.2)	N/A
5.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
5.6 (4.23)	Semi-luminaires comply Class II		N/A
<b>5.6 (4.24)</b>	<b>Photobiological hazards</b>		<b>P</b>
5.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
5.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 .....	RG1	—
	Luminaires with $E_{thr}$ :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 .. :		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
<b>5.6 (4.25)</b>	<b>Mechanical hazard</b>		<b>P</b>
	No sharp point or edges		P
<b>5.6 (4.26)</b>	<b>Short-circuit protection</b>		<b>N/A</b>
5.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
5.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Test sample not exceed values of Table 12.1 and 12.2		N/A
<b>5.6 (4.27)</b>	<b>Terminal blocks with integrated screwless earthing contacts</b>		<b>N/A</b>
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 $\Omega$		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 $\Omega$		N/A
	Voltage drop test, resistance < 0,05 $\Omega$		N/A
<b>5.6 (4.28)</b>	<b>Fixing of thermal sensing control</b>		<b>N/A</b>
	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
<b>5.6 (4.29)</b>	<b>Luminaires with non-replaceable light source</b>		<b>P</b>
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		P
<b>5.6 (4.30)</b>	<b>Luminaires with non-user replaceable light source</b>		<b>N/A</b>
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
<b>5.6 (4.31)</b>	<b>Insulation between circuits</b>		<b>P</b>
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
5.6 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage $\leq$ ELV		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
5.6 (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
5.6 (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
	- 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
<b>5.6 (4.32)</b>	<b>Overvoltage protective devices</b>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
5.6.1 (-)	At least IPX3 if for outdoor use		P
5.6.2 (-)	Lampholder brackets and lamp supports		N/A
5.6.3 (-)	Adjusting means		P
5.6.4 (-)	Controlling components		N/A
5.6.5 (-)	Fixing device		P
	Wind force test	For model RFE-0273A: Test Force: 380,3N, 0,1°; no failure (0,473x0,335x2,4 KN/m <sup>2</sup> )	P
5.6.6 (-)	Locking of angular adjustment		P
5.6.7 (-)	Vibration resistance		P
5.6.8 (-)	Requirement on glass cover if mounting height > 5 m		P
	Method of protection .....	Protection by the use of glass that fractures into small pieces	—

<b>5.7 (11)</b>	<b>CREEPAGE DISTANCES AND CLEARANCES</b>		<b>P</b>
5.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
5.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 5.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and $f_{U_{OUT}}$ according IEC 61347-1, clause 7.1, item w	See Test Table 5.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 5.7 (11.2) II	N/A
5.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 5.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $U_P$	See Test Table 5.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 5.7 (11.2) II	N/A

<b>5.8 (7)</b>	<b>PROVISION FOR EARTHING</b>	<b>P</b>
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Clause	Requirement + Test	Result - Remark	Verdict
5.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω..... :	For model RFE-0273A: Max 0,08 Ω< 0,5 Ω	P
	Self-tapping screws used		N/A
	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		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
5.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
5.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
5.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
5.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
5.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
5.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
5.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
5.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P

<b>5.9 (14)</b>	<b>SCREW TERMINALS</b>		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A

<b>5.9 (15)</b>	<b>SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS</b>		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	Part of the luminaire .....	(see Annex 4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
<b>5.10 (5)</b>	<b>EXTERNAL AND INTERNAL WIRING</b>		<b>P</b>
<b>5.10 (5.2)</b>	<b>Supply connection and external wiring</b>		<b>P</b>
5.10 (5.2.1)	Means of connection .....	Supply cord	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV $\leq 25$ V a.c./60 V d.c. or protected from outdoor environment		N/A
5.10 (5.2.2)	Type of cable .....	H05RN-F	P
	Nominal cross-sectional area (mm <sup>2</sup> ) .....	3x1,0mm <sup>2</sup>	P
	Cables equal to IEC 60227 or IEC 60245		P
5.10 (5.2.3)	Type of attachment, X, Y or Z	Type Z	P
5.10 (5.2.5)	Type Z not connected to screws		P
5.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
5.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
5.10 (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
5.10 (5.2.9)	Locking of screwed bushings		N/A
5.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		N/A
5.10 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
5.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
5.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) ..... : 60		P
	- torque test: torque (Nm) ..... : 0,25		P
	- displacement $\leq 2$ mm	Max 0,3mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
5.10 (5.2.11)	External wiring passing into luminaire		P
5.10 (5.2.12)	Looping-in terminals		N/A
5.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
5.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
5.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
5.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
5.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
<b>5.10 (5.3)</b>	<b>Internal wiring</b>		<b>P</b>
5.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) .....		N/A
	- temperatures .....	(see Annex 2)	N/A
	Green-yellow for earth only		P
5.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm <sup>2</sup> ).....	See Annex 1	P
	Insulation thickness (mm) .....	Approved cord	P
	Extra insulation added where necessary		N/A
5.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm <sup>2</sup> ).....	See Annex 1	N/A
5.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
5.10 (5.3.1.4)	Conductors without insulation		N/A
5.10 (5.3.1.5)	SELV current-carrying parts		N/A
5.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
5.10 (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°		P
5.10 (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
5.10 (5.3.4)	Joints and junctions effectively insulated		N/A
5.10 (5.3.5)	Strain on internal wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.10 (5.3.6)	Wire carriers		N/A
5.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
<b>5.10 (5.4)</b>	<b>Test to determine suitability of conductors having a reduced cross-sectional area</b>		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

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



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Clause	Requirement + Test	Result - Remark	Verdict
5.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
5.11 (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
5.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
5.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
5.11 (8.2.6)	Covers reliably secured		P
5.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 $\mu$ F not exceed 50 V 1 min after disconnection	4V	P
	Portable luminaire with capacitor > 0,1 $\mu$ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 $\mu$ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

<b>5.12 (12)</b>	<b>ENDURANCE TEST AND THERMAL TEST</b>		<b>P</b>
5.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 5.13		—
<b>5.12 (12.2)</b>	<b>Selection of lamps and ballasts</b>		<b>—</b>
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
<b>5.12 (12.3)</b>	<b>Endurance test</b>		<b>P</b>
	a) mounting-position ..... :	Normal use mounting	—
	b) test temperature (°C) ..... :	60	—
	c) total duration (h) ..... :	240	—

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Clause	Requirement + Test	Result - Remark	Verdict
	d) supply voltage (V) .....	291,5	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) .....	--	—
	e) luminaire ceases to operate	--	—
5.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
<b>5.12 (12.4)</b>	<b>Thermal test (normal operation)</b>	(see Annex 2)	P
<b>5.12 (12.5)</b>	<b>Thermal test (abnormal operation)</b>	(see Annex 2)	N/A
<b>5.12 (12.6)</b>	<b>Thermal test (failed lamp control gear condition):</b>		<b>N/A</b>
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		N/A
	- measured winding temperature (°C): at 1,1 Un .....		—
	- measured mounting surface temperature (°C) at 1,1 Un .....		N/A
	- calculated mounting surface temperature (°C) .....		N/A
	- track-mounted luminaires		N/A
5.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions .....		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) .....		N/A
	- track-mounted luminaires		N/A
<b>5.12 (12.7)</b>	<b>Thermal test (failed lamp control gear in plastic luminaires):</b>		<b>N/A</b>
5.12 (12.7.1)	Luminaire without temperature sensing control		N/A
5.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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 5.15 (13.2.1)	N/A
5.12 (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 5.15 (13.2.1)	N/A
5.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions .....		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
5.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link .....	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out .....	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out .....	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions .....		—
	- highest measured temperature of fixing point/ exposed part (°C): .....		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ball-pressure test: .....	See Test Table 5.15 (13.2.1)	N/A
5.12.1 (-)	Reduction 10 °C of measured temperatures if for outdoor use		—
5.12.2 (-)	Glass covers used within the thermal limits		P
<b>5.13 (9)</b>	<b>RESISTANCE TO DUST AND MOISTURE</b>		P
5.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 5.12		P
5.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP .....	IP65	—
	- mounting position during test .....	Normal use mounting	—
	- fixing screws tightened; torque (Nm) .....	Metal gland: 4,2Nm	—
	- tests according to clauses.....	Clause 9.2.2 and 9.2.6	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	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		P
5.13 (9.3)	Humidity test 48 h	25,0°C, 93%RH	P
<b>5.14 (10)</b>	<b>INSULATION RESISTANCE AND ELECTRIC STRENGTH</b>		P
5.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....	Cord covered by metal foil	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulation resistance (MΩ) .....	See below	—
	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 .....	100MΩ > 2MΩ	P
	- between live parts and mounting surface .....	100MΩ > 2MΩ	P
	- between live parts and metal parts .....	100MΩ > 2MΩ	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..... :	100MΩ > 2MΩ	P
	- Insulation bushings as described in Section 5 .....		N/A
5.14 (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
	Test voltage (V) .....	See below	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

<b>IEC 60598-2-5</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts of different polarity .....	1530V	P
	- between live parts and mounting surface .....	1530V	P
	- between live parts and metal parts .....	1530V	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 .....	1530V	P
	- Insulation bushings as described in Section 5 .....		N/A
5.14 (10.3)	Touch current or protective conductor current (mA):	Protective conductor current: For model RFE-0273A: Max 0,3mA<3,5mA	P

<b>5.15 (13)</b>	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		P
5.15 (13.2.1)	Ball-pressure test .....	See Test Table 5.15 (13.2.1)	N/A
5.15 (13.3.1)	Needle-flame test (10 s) .....	See Test Table 5.15 (13.3.1)	N/A
5.15 (13.3.2)	Glow-wire test (650°C) .....	See Test Table 5.15 (13.3.2)	P
5.15 (13.4)	Proof tracking test (IEC 60112) .....	See Test Table 5.15 (13.4)	N/A

IEC 60598-2-5							
Clause	Requirement + Test				Result - Remark		Verdict
<b>5.7 (11.2)</b>	<b>TABLE I: Creepage distances and clearances</b>						<b>P</b>
	<b>Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages</b>						<b>P</b>
	<b>Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*</b>						<b>P</b>
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	3,0	1,5	11.1B	3,0	2,7	11.1A
Working voltage (V) .....					265V		—
PTI .....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage or $U_P$ if applicable (kV) .....					50Hz		—
Supplementary information: between different polarity of L/N							
Distance 2:	B	2,9	1,5	11.1B	2,9	2,7	11.1A
Working voltage (V) .....					265V		—
PTI .....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage or $U_P$ if applicable (kV) .....					50Hz		—
Supplementary information: between two ends of fuse							
Distance 3:	B	5,0	1,5	11.1B	5,0	2,7	11.1A
Working voltage (V) .....					265V		—
PTI .....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage or $U_P$ if applicable (kV) .....					50Hz		—
Supplementary information: between live parts to earthing terminal/metal enclosure							

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

IEC 60598-2-5							
Clause	Requirement + Test				Result - Remark		Verdict
5.7 (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		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:							
Working voltage (V) .....							—
Frequency if applicable (kHz) .....							—
PTI .....					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
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 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....							—
Supplementary information:							
Distance 3:							
Working voltage (V) .....							—
Frequency if applicable (kHz) .....							—
PTI .....					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....							—
Supplementary information:							

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



IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

5.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm) .....		2	—	
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
--	--	--	--	
Supplementary information:				

5.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
--	--	--	--	--	N/A
Supplementary information:					

5.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				P
Glow wire temperature .....		650°C		—	
Object/ Part No./ Material	Manufacturer/ trademark		Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Reflector	See Annex 1		No	0	P
Supplementary information:					

5.15 (13.4)	TABLE: Proof tracking test (IEC 60112)				N/A
Test voltage PTI .....		175 V		—	
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
--	--	--	--	--	--
Supplementary information:					

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1)</sup>	
Supply cord	B	Ningbo Dabu Electric Appliance Co.,Ltd.	H05RN-F	300/500V, 3X1,0mm <sup>2</sup>	EN 50525-2-21	VDE 40030691	
-Alt	D	Chau's Electrical Co., Ltd.	H05RN-F	300/500V, 3X1,0mm <sup>2</sup>	EN 50525-2-21	VDE 40016331	
-Alt	D	Dong Guan Recheer Electric Wire &Cable CO.,LTD	H05RN-F	300/500V, 3X1,0mm <sup>2</sup>	EN 50525-2-21	VDE 40015173	
-Alt	D	Ningbo Xuanshi Electronics Co., Ltd.	H05RN-F	300/500V, 3X1,0mm <sup>2</sup>	EN 50525-2-21	VDE 40017772	
-Alt	D	GuangDong RiFeng Electrical Cable Co.,Ltd.	H05RN-F	300/500V, 3X1,0mm <sup>2</sup>	EN 50525-2-21	VDE 40015999	
Glass cover	C	CIH Solar Pty Limited	--	Max.300°C; Min.-35°C; Δt: 200°C	IEC 60598-1 IEC 60598-2-5	Tested with appliance	
Reflector	C	TEIJIN LIMITED RESIN AND PLASTIC	L-1250U(#)(f1) L-1250V(#)(f1) L-1250Z(#)(f1)	V-2; 125°C	IEC 60598-1 IEC 60598-2-5	UL E50075 Tested with appliance	
Fuse	B	XC Electronics (Shen Zhen)Corp. Ltd	5TE	300V, 3,15A	IEC 60127-1 IEC 60127-3	VDE 40036821	
Varistor	B	Hongzhi Electronics CO.,Ltd.	10D471K	470V, 125°C	EN 61051-1; EN 61051-2; EN 61051-2-2	VDE 40037512	
LED PCB	B	LEUCHTEK ELECTRONICS (ZHEJIANG) CO LTD	PAL-1S	V-0, 130°C	IEC 60598-1 IEC 60598-2-5	UL E199273 Test with appliance	
-Alt	C	ZHEJIANG DEJIA ELECTRONIC TECHNOLOGY CO LTD	DJ-A11 , DJ-AF-1.0, DJ-AF-1.5, DJ-AF-2.0, DJ-AF-2.5, DJ-AF-3.0, DJ-AF-4.0, DJ-AF-8.0, DJ-AF-12.	V-0, 130°C	IEC 60598-1 IEC 60598-2-5	UL E344718 Test with appliance	
LED	C	Yushan county YaHon optoelectronic technology co.LTD.	2835	If=60mA, Vf=16-20VDC CCT. 2700K-6500K	IEC TR 62778	Test with appliance	

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

<sup>1)</sup> 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 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12						P
	Type reference .....	RFE-0273A					—
	Lamp used.....	LED module					—
	Lamp control gear used.....	--					—
	Mounting position of luminaire .....	Normal use mounting					—
	Supply wattage (W) .....	301,5					—
	Supply current (A) .....	1,035					—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....	50					—
	- abnormal operating mode .....	--					—
1.12 (12.4)	- test 1: rated voltage .....	--					—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....	291,5V					—
	- 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	limit
Supply cord	50,0	--	59,8	--	90	--	--
Varistor	50,0	--	93,5	--	125	--	--
Glass cover	50,0	--	82,1	--	300	--	--
LED PCB	50,0	--	85,3	--	Ref.	--	--
Metal enclosure	50,0	--	75,3	--	Ref.	--	--
Mounting surface	50,0	--	55,6	--	90	--	--
Lighting surface (10cm)	50,0	--	54,8	--	90	--	--
Supplementary information:							

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ANNEX 3</b>	<b>Screw terminals (part of the luminaire)</b>		N/A
<b>(14)</b>	<b>SCREW TERMINALS</b>		N/A
(14.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm <sup>2</sup> )..... :		—
(14.3.3)	Conductor space (mm)..... :		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) ..... :		N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) ..... :		N/A
	Torque (Nm) ..... :		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N) ..... :		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ANNEX 4</b>	<b>Screwless terminals (part of the luminaire)</b>		N/A
<b>(15)</b>	<b>SCREWLESS TERMINALS</b>		N/A
(15.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)..... :		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A

IEC 60598-2-5												
Clause	Requirement + Test										Result - Remark	Verdict
15.6.2	Mechanical tests											N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....											N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....											N/A
(15.6.3)	Electrical tests											N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1											N/A
<b>(15.6.3.1)</b> <b>(15.6.3.2)</b>	<b>TABLE: Contact resistance test / Heating tests</b>											N/A
	Voltage drop (mV) after 1 h											—
terminal	1	2	3	4	5	6	7	8	9	10		
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)												
Supplementary information:												

<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
<b>4</b>	<b>GENERAL REQUIREMENTS</b>		<b>P</b>
4.2	Classification		<b>P</b>
	Built-in module .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	Independent module.....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	Integral module .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
4.6	Independent modules comply with requirements in IEC 60598-1:2014/AMD1:2017		N/A
4.8	Modules with integrated controlgear providing SELV comply with requirements according to IEC 61347-1:2015/AMD1:2017 clause L.5 to L.11.	(see Annex 1)	N/A
<b>8 (9)</b>	<b>EARTHING</b>		<b>P</b>
<b>- (9.1)</b>	<b>Provisions for protective earthing</b>		<b>P</b>
	Terminal complying with clause 8		<b>P</b>
	Locked against loosening and not possible to loosen by hand		<b>P</b>
	Not possible to loosen clamping means unintentionally on screwless terminals		N/A
	Earthing via means of fixing		<b>P</b>
	Earthing terminal only used for the earthing of the control gear	Integral LED module	N/A
	All parts of material minimizing the danger of electrolytic corrosion		<b>P</b>
	Made of brass or equivalent material		<b>P</b>
	Contact surface bare metal		<b>P</b>
	Test according 7.2.3 of IEC 60598-1		N/A
<b>- (9.2)</b>	<b>Provision for functional earthing</b>		<b>N/A</b>
	Comply with clause 8 and 9.1		N/A
	Functional earth insulated from live parts by double or reinforced insulation		N/A
<b>- (9.3)</b>	<b>Lamp controlgear with conductors for protective earthing by tracks on printed circuit board</b>		<b>P</b>
	Test with a current of 25 A between earthing terminal and each of the accessible metal parts; measured resistance ( $\Omega$ ) at $\geq 10$ A according 7.2.3 of IEC 60598-1: $< 0,5 \Omega$ .....	Max. $0,08 \Omega$	<b>P</b>
<b>- (9.4)</b>	<b>Earthing of built-in lamp controlgear</b>		<b>N/A</b>
	Earth by means of fixing to earthed metal of luminaire in compliance of 7.2 of IEC 60598-1		N/A



<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	Earthing terminal only for earthing the built-in controlgear		N/A
<b>- (9.5)</b>	<b>Earthing via independent controlgear</b>		<b>N/A</b>
- (9.5.1)	Earth connection to other equipment		N/A
	Looping or through connection, conductor min. 1,5 mm <sup>2</sup> and of copper or equivalent		N/A
	Protective earthing wires in line with 5.3.1.1 and clause 7		N/A
- (9.5.2)	Earthing of the lamp compartments powered via the independent lamp controlgear		N/A
	Test with a current of 25 A between input and output earth terminals; measured resistance ( $\Omega$ ) between earthing terminal and each of the accessible metal parts at $\geq 10$ A according 7.2.3 of IEC 60598-1: < 0,5 $\Omega$ .....		N/A
	Output earthing terminal marked as in 7.1 t) of IEC 61347-1		N/A
<b>9 (10)</b>	<b>PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS</b>		<b>P</b>
- (10.1)	Controlgear protected against accidental contact with live parts	Protected by luminaire enclosure	P
- (A2)	Voltage measured with 50 k $\Omega$	(see Annex A)	N/A
- (A3)	Voltage > 35 V peak or > 60 V d.c. or protective impedance device	(see Annex A)	N/A
- (10.1)	Lacquer or enamel not used for protection or insulation		N/A
	Adequate mechanical strength on parts providing protection		N/A
- (10.2)	Capacitors > 0,5 $\mu$ F: voltage after 1 min (V): < 50 V .....		N/A
- (10.3)	Controlgear providing SELV		N/A
	Accessible conductive parts are insulated from live parts by double or reinforced insulation in SELV controlgear		N/A
	No connection between output circuit and the body or protective earthing circuit		N/A
	No possibility of connection between output circuit and the body or protective earthing circuit through other conductive parts		N/A
	SELV outputs separated from earth by at least basic insulation		N/A
	ELV conductive parts insulated as live parts		N/A
	Tests according Annex L of IEC 61347-1		N/A

<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
- (10.4)	Accessible conductive parts in SELV circuits		N/A
	Output voltage under load $\leq 25$ V r.m.s. or $\leq 60$ V d.c.		N/A
	If output voltage $> 25$ V r.m.s. or $> 60$ V d.c.; No load output $\leq 35$ V peak or $\leq 60$ V d.c and touch current does not exceed 0,7 mA (peak) or 2 mA d.c. .... :		N/A
	One conductive part is insulated if output voltage or current exceeding the values above and withstand test voltage 500 V		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
<b>10 (11)</b>	<b>MOISTURE RESISTANCE AND INSULATION</b>		<b>P</b>
	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (M $\Omega$ ):		P
	For basic insulation $\geq 2$ M $\Omega$ ..... :	100 M $\Omega$	P
	For double or reinforced insulation $\geq 4$ M $\Omega$ ..... :		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A
<b>11 (12)</b>	<b>ELECTRIC STRENGTH</b>		<b>P</b>
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		N/A
	Working voltage $\leq 50$ V, test voltage 500 V		N/A
	Working voltage $> 50$ V $\leq 1000$ V, test voltage (V):		P
	Basic insulation, 2U + 1000 V	1530V	P
	Supplementary insulation, 2U + 1000 V		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A

<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
<b>12 (14)</b>	<b>FAULT CONDITIONS</b>		<b>P</b>
- (14.1)	When operated under fault conditions the controlgear:		P
	- does not emit flames or molten material		P
	- does not produce flammable gases		P
	- protection against accidental contact not impaired		P
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	P
- (14.2)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (after any reduction in 14.2 - 14.5)	(see appended table)	P
- (14.3)	Short-circuit or interruption of semiconductor devices	(see appended table)	N/A
- (14.4)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A
- (14.5)	Short-circuit across electrolytic capacitors	(see appended table)	N/A
	Short-circuit or interruption of SPDs	(see appended table)	N/A
- (14.6)	After the tests has been carried out on three samples:		P
	The insulation resistance $\geq 1 \text{ M}\Omega$ .....	> 100 $\text{M}\Omega$	P
	No flammable gases		P
	No accessible parts have become live		P
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		P
- (14.7)	Relevant fault condition tests with high-power a.c. supply and in turn to a d.c. supply		—
<b>12.2</b>	<b>Overpower condition</b>		<b>P</b>
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		P
<b>14 (15)</b>	<b>CONSTRUCTION</b>		<b>P</b>
- (15.1)	<b>Wood, cotton, silk, paper and similar fibrous material</b>		<b>P</b>
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P

<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
<b>- (15.2)</b>	<b>Printed circuits</b>		<b>N/A</b>
	Printed circuits used as internal connections complies with clause 14		N/A
<b>15 (16)</b>	<b>CREEPAGE DISTANCES AND CLEARANCES</b>		<b>P</b>
<b>- (16.1)</b>	<b>General</b>		<b>P</b>
	Creepage distances and clearances according to 16.2 and 16.3		P
	Controlgears providing SELV comply with additional requirements in Annex L		N/A
	Insulating lining of metallic enclosures		N/A
	Controlgear protected against pollution comply with Annex P		N/A
<b>- (16.2)</b>	<b>Creepage distances</b>		<b>P</b>
- (16.2.2)	Minimum creepage distances for working voltages		P
	Creepage distances according to Table 7	(see appended table)	P
- (16.2.3)	Creepage distances for working voltages with frequencies above 30 kHz		N/A
	Creepage distances according to Table 8	(see appended table)	N/A
<b>- (16.3)</b>	<b>Clearances</b>		<b>P</b>
- (16.3.2)	Clearances for working voltages		P
	Clearances distances according to Table 9	(see appended table)	P
- (16.3.3)	Clearances for ignition voltages and working voltages with higher frequencies		N/A
	Clearances distances for basic or supplementary insulation according to Table 10		N/A
	Clearances distances for reinforced insulation according to Table 11		N/A
<b>16 (17)</b>	<b>SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS</b>		<b>P</b>
	Screws, current-carrying parts and connections in compliance with IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		—
<b>(4.11)</b>	<b>Electrical connections</b>		<b>P</b>
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A

<b>ATTACHMENT 1: Tests according to IEC 62031:2018</b>			
Clause	Requirement + Test	Result - Remark	Verdict
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
<b>(4.12)</b>	<b>Mechanical connections and glands</b>		<b>P</b>
(4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....: :	Fixed LED PCB: 0,6Nm	P
	Torque test: torque (Nm); part.....: :		N/A
	Torque test: torque (Nm); part.....: :		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) .....		N/A
	- lampholder; torque (Nm) .....		N/A
	- push-button switches; torque 0,8 Nm .....		N/A
(4.12.5)	Screwed glands; force (Nm).....: :		N/A
<b>17 (18)</b>	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		<b>N/A</b>
- (18.1)	Ball-pressure test .....	See Test Table 17 (18.1)	N/A
- (18.2)	Test of printed boards .....	See Test Table 17 (18.2)	N/A
- (18.3)	Glow-wire test (650°C) .....	See Test Table 17 (18.3)	N/A
- (18.4)	Needle-flame test (10 s) .....	See Test Table 17 (18.4)	N/A
- (18.5)	Proof tracking test .....	See Test Table 17 (18.5)	N/A
<b>22</b>	<b>PHOTOBIOLOGICAL SAFETY</b>		<b>P</b>
<b>22.1</b>	<b>UV radiation</b>		<b>N/A</b>
	Luminous radiation not exceed 2mW/klm		N/A
<b>22.2</b>	<b>Blue light hazard</b>		<b>P</b>
	Assessed according to IEC TR 62778	RG1	P
<b>22.3</b>	<b>Infrared radiation</b>		<b>N/A</b>
	Requirements for infrared radiation when required		N/A
<b>A</b>	<b>ANNEX A - TESTS</b>		<b>P</b>
	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable		P

ATTACHMENT 1: Tests according to IEC 62031:2018			
Clause	Requirement + Test	Result - Remark	Verdict

12 (14)	TABLE: tests of fault conditions	N/A
Part	Simulated fault	Hazard
BD1	Short circuit: Test result: Fuse open, no flame, no flammable gas, no molten parts, 0W, 0A	No
MOV1	Open circuit: Test result: The normal work	No
MOV1	Short circuit: Test result: Fuse open, no flame, no flammable gas, no molten parts, 0W, 0A	No
U1(2/5)	Work as normal: Test result: unit shut down immediately, no damage, recoverable, 0W, 0A	No
U1(1/4)	Work as normal: Test result: unit shut down immediately, no damage, recoverable, 0W, 0A	No
Output	Short circuit: Test result: unit shut down immediately, no damage, recoverable, 0,5W, 0,04A	No

15 (16)	TABLE: clearance and creepage distance measurements (mm)				N/A		
Applicable part of IEC 61347-1 Table 7 – 11*							
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:							
Working voltage (V) .....							—
Frequency if applicable (kHz) .....							—
PTI.....					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....							—
Pulse voltage if applicable (kV) .....							—
Supplementary information: Refer to 5.7(11.2) on page 29.							

**ATTACHMENT 2: Photobiological safety of lamps and lamp systems were according to standard IEC TR 62778:2014**

	<b>Measurement performed on:</b>		<input type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input checked="" type="checkbox"/> Luminaire		
	<b>Model number .....</b>	RFE-0273A			
	<b>Test voltage (V) .....</b>	265			—
	<b>Test current (mA).....</b>	--			—
	<b>Test frequency (Hz) .....</b>	50			—
	<b>Ambient, t (°C) .....</b>	25,0			—
	<b>Measurement distance.....</b>	<input checked="" type="checkbox"/> 20 cm <input type="checkbox"/> ... cm			—
	<b>Source size .....</b>	<input checked="" type="checkbox"/> Non-small <input type="checkbox"/> Small : .... mm			—
	<b>Field of view .....</b>	<input type="checkbox"/> 100 mrad <input checked="" type="checkbox"/> 11 mrad <input type="checkbox"/> 1,7 mrad (for small sources)			—
Item	Symb ol	Units	Result	Remark	
Correlated colour temperature	CCT	K	--	--	
x/y colour coordinates	--	--	--	--	
Blue light hazard radiance	L <sub>B</sub>	W/(m <sup>2</sup> •sr <sup>1</sup> )	6425	RG1	
Blue light hazard irradiance	E <sub>B</sub>	W/m <sup>2</sup>	--	--	
Luminance	L	cd/m <sup>2</sup>	2,938e+006	--	
Illuminance	E	lx	--	--	

ATTACHMENT 3: Photo document

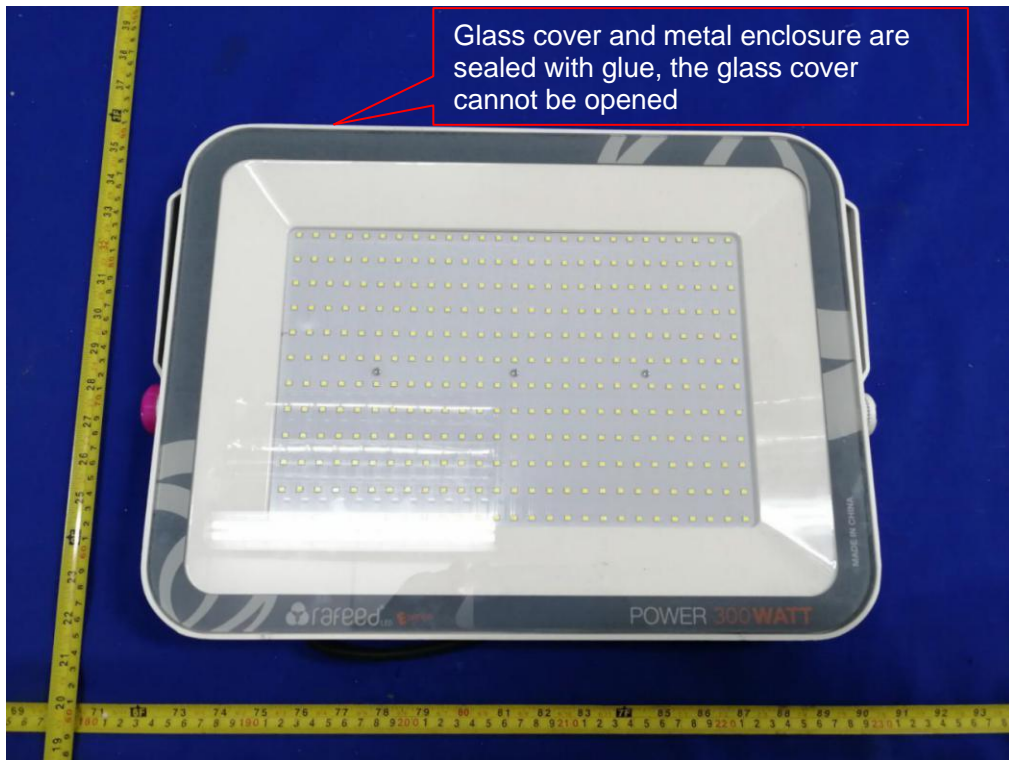


Figure 1: Overview of model RFE-0273A

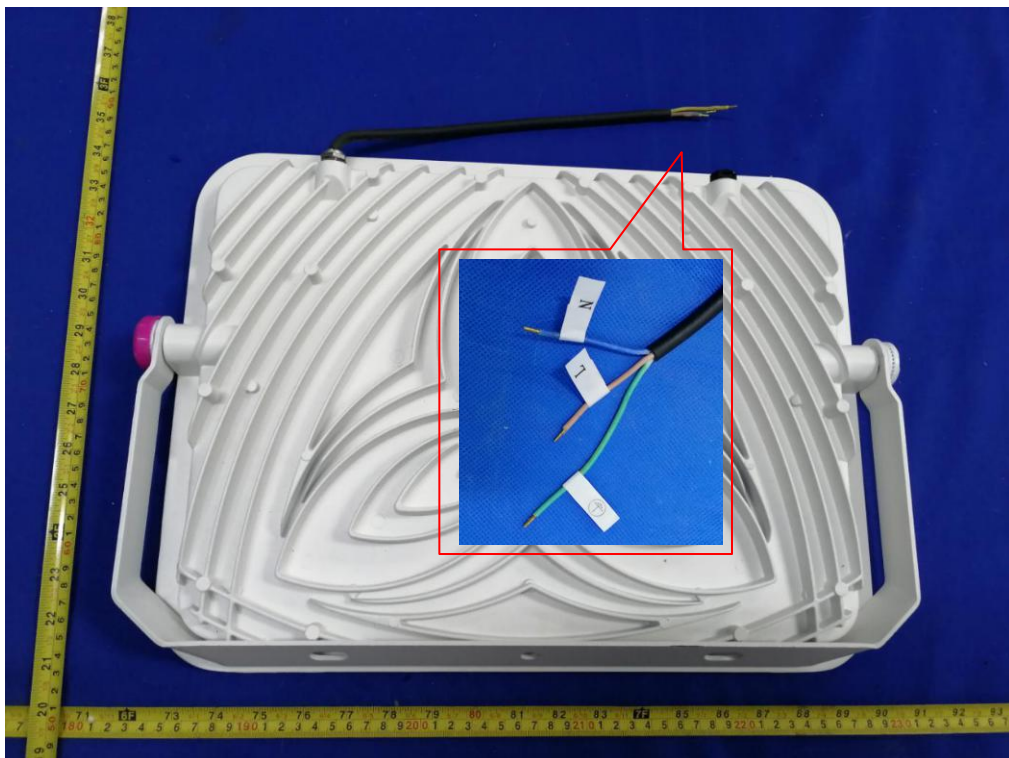


Figure 2: Overview of model RFE-0273A



**ATTACHMENT 3: Photo document**

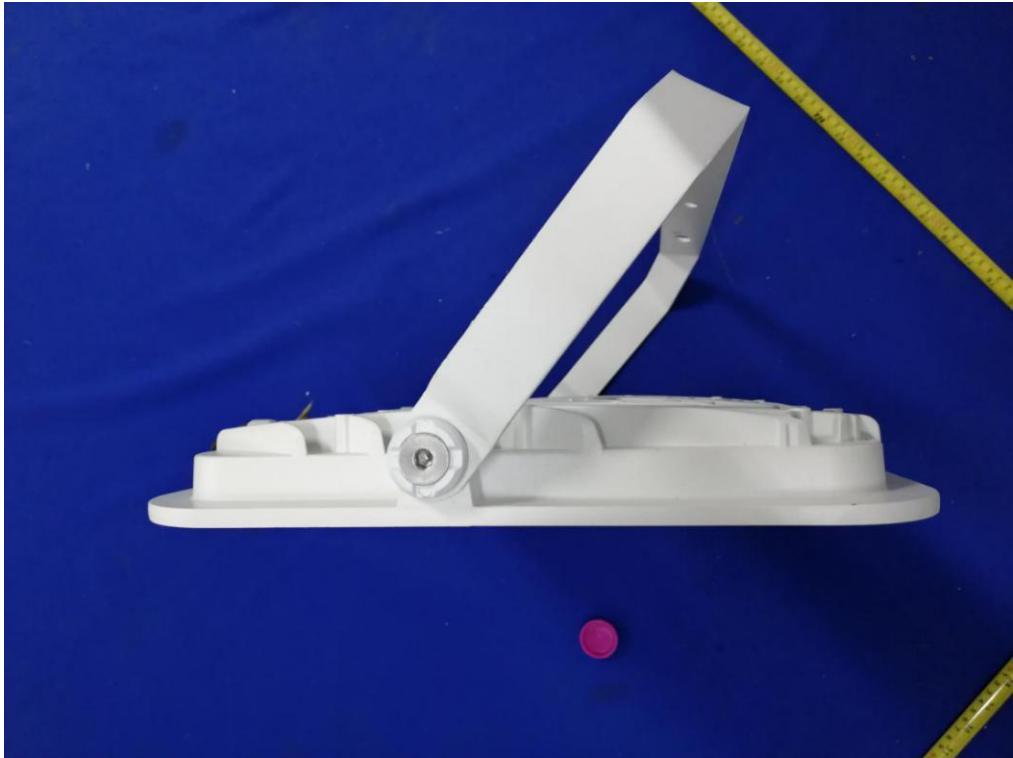


Figure 3: Mounting bracket of model RFE-0273A



Figure 4: Metal gland

ATTACHMENT 3: Photo document

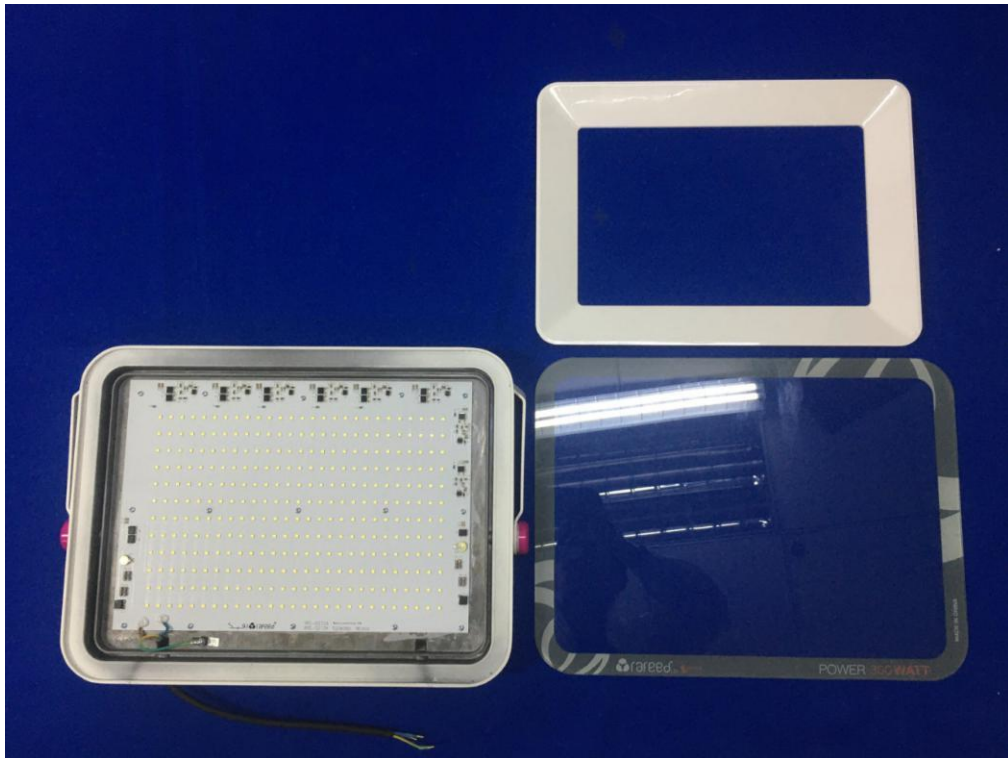


Figure 5: Internal view of model RFE-0273A

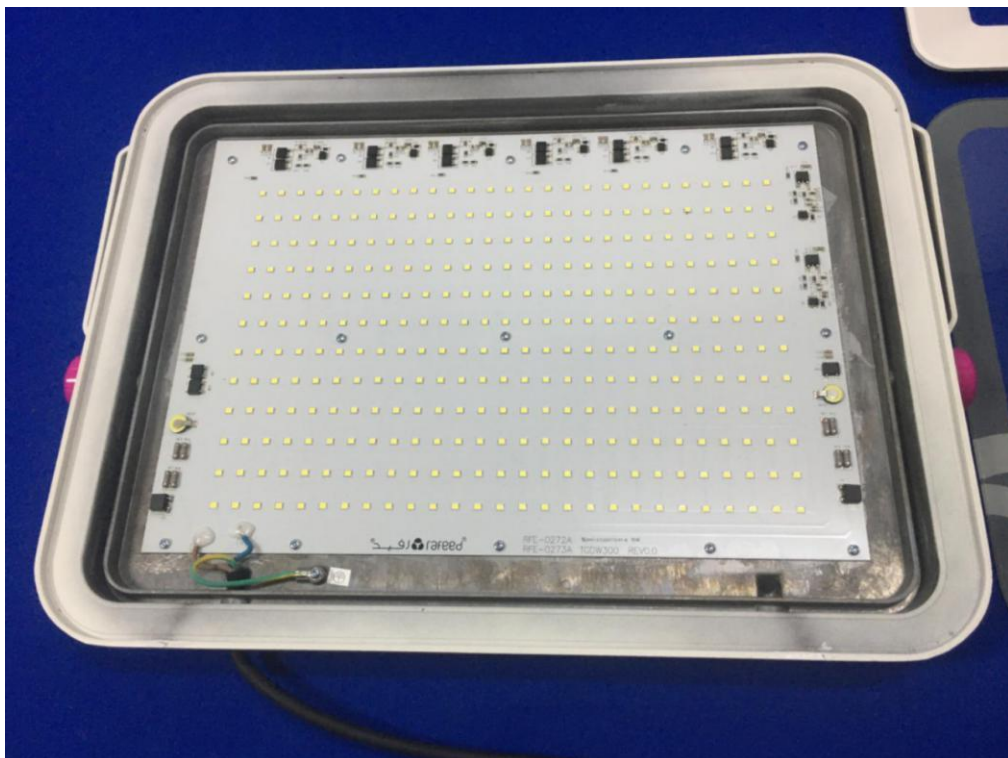


Figure 6: LED module

**ATTACHMENT 3: Photo document**



Figure 7: Internal view of model RFE-0273A

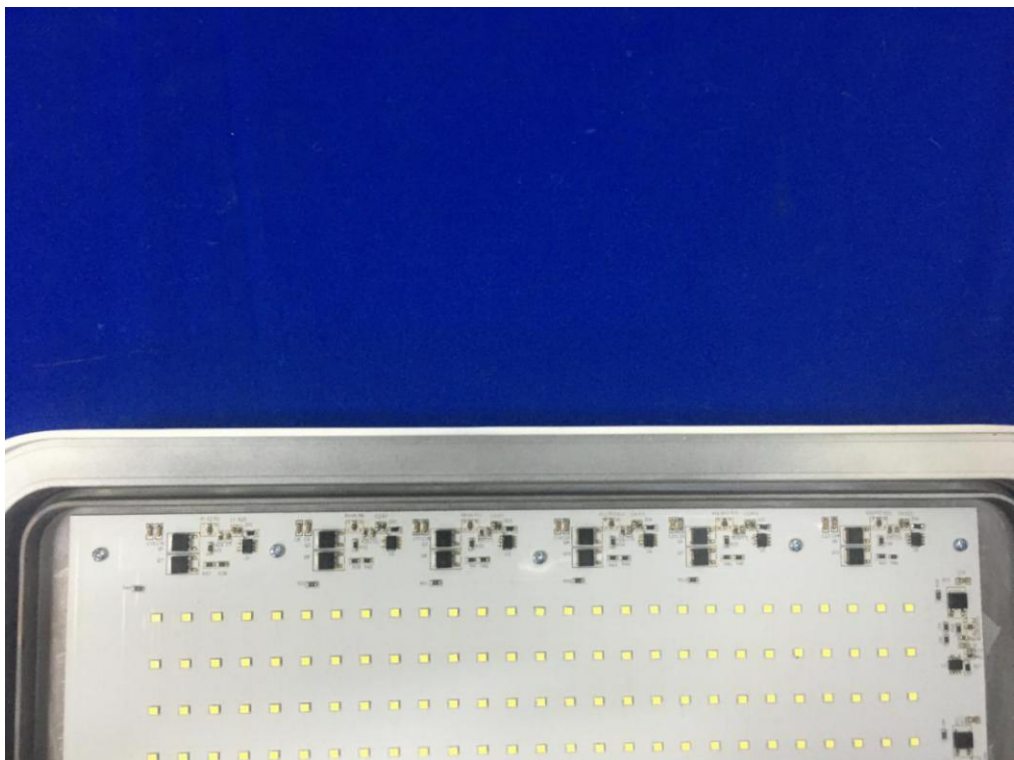


Figure 8: Internal view of model RFE-0273A

**ATTACHMENT 3: Photo document**

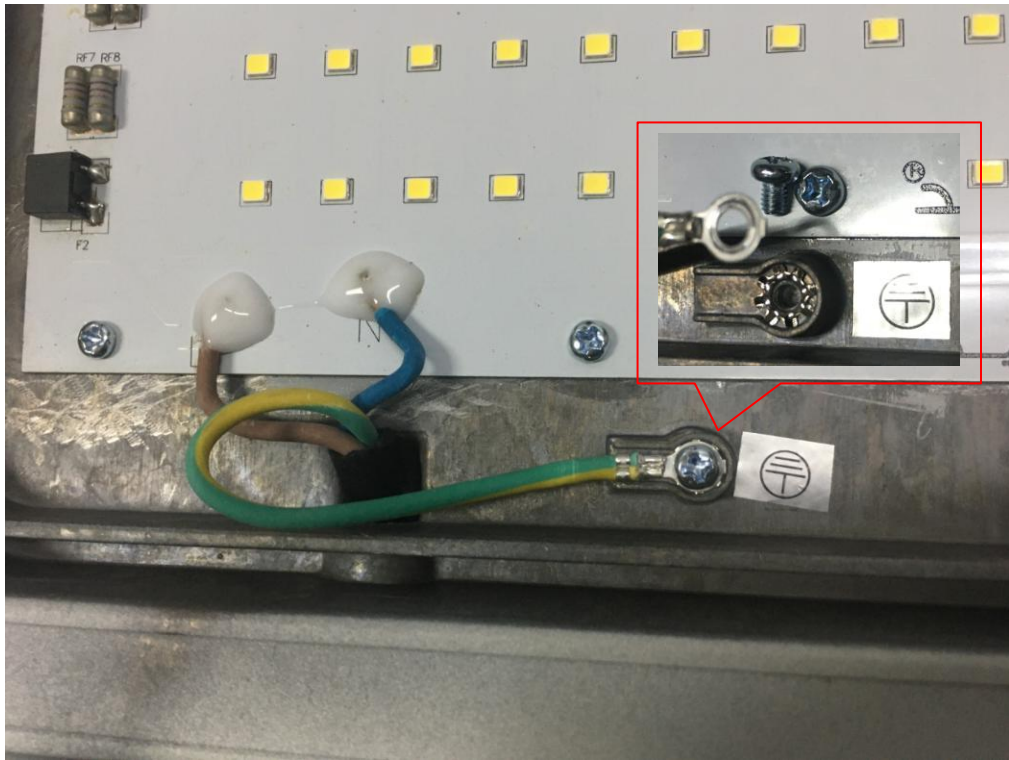


Figure 9: Earth wire

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