



Test Report issued under the responsibility of:



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

Report Number..... : CN24TXT1 001

Date of issue..... : 2024-06-28

Total number of pages 47

Name of Testing Laboratory preparing the Report Waltek Testing Group (Foshan) Co., Ltd.

Applicant's name SHANGHAI CET ELECTRIC CO., LTD

Address..... RM916, #20 8633 NONG, ZHONGCHUN ROAD, MINHANG DISTRICT, 201101 Shanghai P.R. China

Test specification:

Standard IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1:2011 used in conjunction with IEC 60598-1:2020

Test procedure CB Scheme

Non-standard test method N/A

TRF template used..... IECEE OD-2020-F1:2021, Ed.1.4

Test Report Form No. IEC60598_2_3M

Test Report Form(s) Originator Intertek Semko AB

Master TRF 2021-11-11

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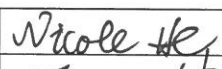
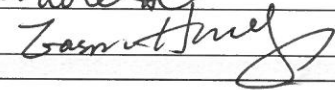
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General disclaimer:

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Test item description..... :	LED Street Light	
Trade Mark(s) :	SHCET	
Manufacturer :	Same as Applicant	
Model/Type reference :	See model list on page 6	
Ratings :	100-240VAC; 50/60Hz, IP66, Class I, ta 40°C, details see model list on page 6	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/> CB Testing Laboratory:	Waltek Testing Group (Foshan) Co., Ltd.	
Testing location/ address..... :	No. 13-19, 2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan, Guangdong, China	
Tested by (name, function, signature)..... :	Nicole He	
Approved by (name, function, signature).... :	Eason Huang	
<input type="checkbox"/> Testing procedure: CTF Stage 1:		
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature).... :		
<input type="checkbox"/> Testing procedure: CTF Stage 2:		
Testing location/ address..... :		
Tested by (name + signature) :		
Witnessed by (name, function, signature) .. :		
Approved by (name, function, signature).... :		
<input type="checkbox"/> Testing procedure: CTF Stage 3:		
<input type="checkbox"/> Testing procedure: CTF Stage 4:		
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) .. :		
Approved by (name, function, signature).... :		
Supervised by (name, function, signature) :		

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

1. The complete report consists of 47 pages.
2. Attachment 1: Other national requirements of SASO, totally 1 page;
3. Attachment 2: The requirements of IEC 62031:2018, totally 3 pages;
4. Attachment 3: Acceptance test for LED module according to IEC/TR 62778:2014, totally 2 page;
5. Attachment 4: EMF Assessment according to IEC 62493:2015, totally 1 page;
6. Attachment 5: Other national requirements of EU, totally 2 page;
7. Attachment 6: Photo documentation, totally 17 pages.

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

1. Unless other specified, full tests were performed on the models CET-136-60W, CET-136-100W, CET-136-150W, CET-136-240W, CET-136-320W.
2. Construction check was performed on all models.

Testing location:**Waltek Testing Group (Foshan) Co., Ltd.**

No. 13-19, 2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan, Guangdong, China

Summary of compliance with National Differences (List of countries addressed):

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.

LED Street Light
 Model:CET-136-240W
 100-240V~, 50/60Hz 240W
 Ta:40℃ **IP66**
 Made in China
 SHANGHAI CET ELECTRIC CO., LTD
 RM916, #20 8633NONG, ZHONGCHUN ROAD,
 MINHANG DISTRICT, SHANGHAI CITY, CHINA



On the enclosure of product

Note

1. The height of letters and numerals was not less than 2mm.
 2. The height of the other graphical symbols was not less than 5mm.
- 
3. The height of symbol "■" was not less than 7mm.
 4. This is a representative label, the others are identical to it except model name and wattage.

Test item particulars.....:	
Classification of installation and use.....: Class I; for outdoor used	
Supply Connection Connecting leads (tails)	
Possible test case verdicts: - test case does not apply to the test object..... : N/A - test object does meet the requirement..... : P (Pass) - test object does not meet the requirement..... : F (Fail)	
Testing.....:	
Date of receipt of test item 2024-04-29	
Date (s) of performance of tests 2024-04-29 to 2024-06-28	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....: Same as Applicant	
General product information and other remarks: 1. All of the products are Class I street light with an approved independent SELV LED driver, for outdoor use. 2. All models are with the same construction, except the LED quantity, weight, dimension, LED driver and wattage. 3. 100-240V~, 50/60Hz, Class I, ta: 40°C; IP66. Mounting height (Max.): 8-15m. Details see the following model list.	

Model list

Item	Model	Rating	Rated power	Driver model	LED quantity (pcs)	Dimension of product (mm) (L * W * H)	Weight (kg)	Projected area (m ²)
1	CET-136-50W	100-240V~, 50/60Hz, IP66	50W	EUM-075S210 SV	72	588*210*110 mm	3	0.12
2	CET-136-60W	100-240V~, 50/60Hz, IP66	60W	EUM-075S210 SV	72	588*210*110 mm	3.2	0.12
3	CET-136-90W	100-240V~, 50/60Hz, IP66	90W	EUM-100S280 SV	144	600*258*110 mm	3.7	0.15
4	CET-136-100W	100-240V~, 50/60Hz, IP66	100W	EUM-100S280 SV	144	600*258*110 mm	3.9	0.15
5	CET-136-150W	100-240V~, 50/60Hz, IP66	150W	EUM-150S420 SV	240	700*258*110 mm	5.2	0.18
6	CET-136-200W	100-240V~, 50/60Hz, IP66	200W	EUM-240S670 SV	240	705*308*110 mm	6.1	0.22
7	CET-136-240W	100-240V~, 50/60Hz, IP66	240W	EUM-240S670 SV	320	705*308*110 mm	6.3	0.22
8	CET-136-300W	100-240V~, 50/60Hz, IP66	300W	EUM-320S760 SV	384	788*335*115 mm	7.5	0.26
9	CET-136-320W	100-240V~, 50/60Hz, IP66	320W	EUM-320S760 SV	384	788*335*115 mm	7.7	0.26

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		P
3.2 (0.3)	More sections applicable..... :	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Section/s:	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	Information for luminaire design in light sources standards		—
3.2 (0.7.2)	Light source safety standard	IEC 62031; IEC/TR 62778	—
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION OF LUMINAIRES		P
3.4 (2.2)	Type of protection	Class I	P
3.4 (2.3)	Degree of protection..... :	IP66	P
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
3.4 (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"/>	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	b) on a mast arm	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	c) on a post top	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	d) on span or suspension wires	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	e) on a wall	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

3.5 (3)	MARKING		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions	English	P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz	50/60 Hz	P
3.5 (3.3.3)	Operating temperature		N/A
3.5 (3.3.5)	Wiring diagram		N/A
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		N/A
3.5 (3.3.10)	Suitability for use indoors	For outdoor use	N/A
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
3.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non-user replaceable light sources	P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		P
3.5 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
3.5 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
3.5 (3.4)	Test with water	15s with water, and then	P
	Test with hexane	15s with petroleum hexane	P
	Legible after test	No legible and curling	P
	Label attached	No easily removable	P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude	See manual	P
	b) Weight	See manual	P
	c) Overall dimensions	See manual	P
	d) Maximum projected area if applicable	See manual	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws	See manual	P
	i) Maximum mounting height	See manual	P

3.6 (4)	CONSTRUCTION		P
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	Lampholders		N/A
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7)	Terminals and supply connections		N/A
3.6 (4.7.1)	Contact to metal parts		N/A
3.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
3.6 (4.7.3)	Terminals for supply conductors		N/A
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		N/A
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
3.6 (4.9)	Insulating lining and sleeves		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing :		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) :		N/A
3.6 (4.10)	Double or reinforced insulation		N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Capacitors and switches		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retention 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
3.6 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
3.6 (4.11)	Electrical connections and current-carrying parts		P
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	Screws and connections (mechanical) and glands		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	Screw fixed lamp cover: 1.2 Nm	P
	Torque test: torque (Nm); part..... :	Screw fixed LED driver: 1.2 Nm	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part..... :	Screw fixed metal bracket: 1.2 Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)		N/A
	- lampholder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm		N/A
3.6 (4.12.5)	Screwed glands; force (Nm)..... :	Metal gland, 6.25 Nm	P
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	--	N/A
	- other parts; energy (Nm)..... :	Metal enclosure & lamp cover: 0.7 Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		P
3.6 (4.13.3)	Straight test finger	With a force of 30 N	P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	Suspensions, fixings and means of adjusting		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	Max. 4 x 7.253 kg for CET-136-320W	P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
3.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles.....	150 cycles	P
	- strands broken	No broken	P
	- electric strength test afterwards		P
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	Flammable materials		P
	- glow-wire test 650°C	See Test Table 3.15 (13.3.2)	P
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- spacing 10 mm		N/A
3.6 (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
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
3.6 (4.18)	Resistance to corrosion		P
3.6 (4.18.1)	- rust-resistance		P
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Ignitors compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	Protective shield		N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	Photobiological hazards		P
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
3.6 (4.26)	Short-circuit protection		N/A
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Supply source ES1 PSE		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (4.30)	Luminaires with non-user replaceable light source		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	At least one fixing means requiring use of tool		N/A
3.6 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
3.6 (4.31.1)	SELV or PELV circuits		P
	Used SELV/PELV source		P
	Voltage \leq ELV		P
	Insulating of SELV/PELV circuits from LV supply		P
	Insulating of SELV/PELV circuits from other non SELV/PELV circuits		N/A
	Insulating of SELV/PELV circuits from FELV		N/A
	Insulating of SELV/PELV circuits from other SELV/PELV circuits		N/A
	SELV/PELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage \leq ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	Overvoltage protective devices		P
	Comply with IEC 61643-11		P
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6 (4.33)	Luminaire powered via information technology communication cabling		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
3.6 (4.34)	Electromagnetic fields (EMF)		P
	No harmful electromagnetic fields		P
3.6 (4.35)	Protection against moving fan blades		N/A
	Test with a standard test finger		N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	Blades rounded with radius ≥ 0.5 mm and:		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	-input power of fan ≤ 2 W at rated voltage		N/A
3.6 (4.36)	Track-mounted luminaires		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP	IP66	P
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP		N/A
	- parts above 2,5 m. IP		N/A
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P
	- drag coefficient.....	1.2	P
	- loaded area (m ²).....	Max.0.215 m ² for CET-136-320W	P
	- used load (N).....	Max. 427.29N for CET-136-320W	P
	- measured deformation (cm/m)	<2 cm/m	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength		P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample		P
3.6.5.2.2 (-)	Glass covers not break into large pieces		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- test according 3.6.5.1, number of particles is more than 20	82	P
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm)		N/A
	- cable path from the slot to the connection compartment (mm)		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
3.7 (11.2)	Creepage distances and clearances..... :	See Table 3.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7)	PROVISION FOR EARTHING		P
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω :	0.24 Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Protective earth makes contact first		N/A
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
3.8 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.		P
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
3.8 (7.2.5)	Protective earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Protective earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the protective earth terminal		P
3.8 (7.2.8)	Material of protective earth terminal		P
	Contact surface bare metal		P
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Protective earthing core coloured green-yellow		P
	Length of earth conductor		P
3.8 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A
3.9 (14)	SCREW TERMINALS		P
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A
3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Part of the luminaire	(see Annex 4)	N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection	Connecting leads (tails)	P
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment	No external wiring	N/A
3.10 (5.2.2)	Type of cable	See annex 1	N/A
	Nominal cross-sectional area (mm ²)	See annex 1	N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) : 60N		P
	- torque test: torque (Nm) : 0.25Nm		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.10.4)	Luminaire with/designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV ≤ 25 V RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV ≤ 12 V RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage ≤ 12 V RMS/30V DC		N/A
	Pull test of 30N		N/A
3.10 (5.2.11)	External wiring passing into luminaire		N/A
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	No unsafe compatibility		N/A
3.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Appliance inlet or connector systems (IEC 61984)		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	Internal wiring		P
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)		N/A
	- temperatures	(see Annex 2)	N/A
	Green-yellow for protective earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)..... :	See annex 1	P
	Insulation thickness	0.5	P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Cross-sectional area (mm ²)..... :	See annex 1	P
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV/PELV current-carrying parts		P
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (5.3.2)	Sharp edges etc.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
3.10 (5.3.3)	Insulating bushings:		P
	- suitable fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- cables with protective sheath		P
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		P
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
3.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N):	60	P
	- torque test: torque (Nm):	0.25	P

3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
3.11 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC 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
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC voltage (V) :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V).....:		N/A
	One pole insulated if required		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection	Max.8.0V	P
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

3.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
3.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 3.13		—
3.12 (12.2)	Selection of lamps and ballasts		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
3.12 (12.3)	Endurance test:		P
	a) mounting-position	Normal use	—
	b) test temperature (°C)	50	—
	c) total duration (h)	240	—
	d) supply voltage (V)	1.1 x 240 = 264V	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)		—
3.12 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		N/A
	- voltage under normal operation (V).....:		—
	- voltage under abnormal operation (V).....:		—
	e) luminaire ceases to operate		—
	f) luminaire with constant light output function		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un		—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W	No temperature sensing control	—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link.....	Yes <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):		—
	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		P
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		P

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Clause	Requirement + Test	Result - Remark	Verdict

3.13 (9)	RESISTANCE TO DUST AND MOISTURE		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP66	—
	- mounting position during test..... :	Normal use	—
	- fixing screws tightened; torque (Nm) :	2/3 torque of clause 4.12.1	—
	- tests according to clauses..... :	Clause 9.2.2 & 9.2.7	—
	- electric strength test afterwards	Details see clause 10.2.2	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, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof 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		P
	g) no damage of protective shield or glass envelope		P
3.13 (9.3)	Humidity test 48 h	25 °C, 93% R.H	P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø :	Covered by metal foil	—
	Insulation resistance (MΩ) :	Details see below	—
	SELV/PELV:		P
	- between current-carrying parts of different polarity :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts and mounting surface..... :	> 100 MΩ	P
	- between current-carrying parts and metal parts of the luminaire..... :	> 100 MΩ	P
	- 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/PELV:		P
	- between live parts of different polarity :	Approved LED driver	P
	- between live parts and mounting surface :	> 100 MΩ	P
	- between live parts and metal parts :	> 100 MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :	> 100 MΩ	P
	- Insulation bushings as described in Section 5 :		N/A
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp	No ignitor	N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V) :	See below	P
	SELV/PELV:		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :	500 V	P
	- between current-carrying parts and metal parts of the luminaire..... :	500 V	P
	- 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/PELV:		P
	- between live parts of different polarity :	Approved LED driver	P
	- between live parts and mounting surface :	1480 V	P
	- between live parts and metal parts :	1480 V	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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..... :	1480 V	P
	- Insulation bushings as described in Section 5 :		N/A
3.14 (10.3)	Touch current (mA)..... :		N/A
	Protective conductor current (mA)..... :	0.44mA	P

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

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	3.0	1.5	11.1.B	3.0	2.5	11.1.A
Working voltage (V)					240Vac		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					N/A		—
Supplementary information: between opposite polarity of live parts							
Distance 2:	B	3.0	1.5	11.1.B	3.0	2.5	11.1.A
Working voltage (V)					240Vac		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					N/A		—
Supplementary information: between live parts and earth metal parts							
Distance 3:	S	3.0	1.5	11.1.B	3.0	2.5	11.1.A
Working voltage (V)					240Vac		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					N/A		—
Supplementary information: between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts							

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

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE II: Creepage distances and clearances							N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	Insulation type **	Measured clearance	Required		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.

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Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) :		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic cover for LED	See annex 1	75	1.45	
Supplementary information:				

3.15 (13.3.1)	TABLE: Needle-flame test				P
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
Terminal block	See annex 1	10	No	0	P
Supplementary information:					

3.15 (13.3.2)		TABLE: Resistance to heat and fire - Glow wire tests					P
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (°C)					Verdict
		650		750		850	
		te	ti	te	ti		
Plastic cover for LED	See annex 1	0	0	--	--	--	P
White Plastic	See annex 1	0	0	--	--	--	P
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :							No
Supplementary information:							

3.15 (13.4)	TABLE: Proof tracking test				P
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Terminal block	See annex 1	50 drops	50 drops	50 drops	P
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Power cord	B	Zhongshan Zhineng Cable Technology Co., Ltd.	H05RN-F	3G1.0mm ²	EN 50525-2-21	VDE 40055659	
Terminal block	B	Shenzhen Hongyu Electrical Co., Ltd.	HYT-230	450VAC; 0.75-1.5mm ² ; T110	EN 60998-2-1 EN 60998-1	VDE 40016433	
LED driver for CET-136-50W, CET-136-60W	B	INVENTRONICS(HANGZHOU),INC .	EUM-075S210SV	I/P:100-240V~, 50/60Hz, 0.92A MAX., 98W MAX. O/P:18-54Vd.c., 2.1A MAX., 75W MAX. Tc:90°C, ta:55°C SELV Independent	IEC 61347-1 IEC 61347-2-13	NL-87886	
LED driver for CET-136-90W, CET-136-100W	B	INVENTRONICS(HANGZHOU),INC .	EUM-100S280SV	I/P:100-240V~, 50/60Hz, 1.22A MAX., 132W MAX. O/P:17-54Vd.c., 2.8A MAX., 96W MAX. Tc:90°C, ta:50°C SELV Independent	IEC 61347-1 IEC 61347-2-13	NL-87810	
LED driver for CET-136-150W	B	INVENTRONICS(HANGZHOU),INC .	EUM-150S420SV	I/P:100-240V~, 50/60Hz, 1.76A MAX., 180W MAX. O/P:18-54Vd.c., 4.2A MAX., 150W MAX. Tc:90°C, ta:45°C SELV Independent	IEC 61347-1 IEC 61347-2-13	NL-87810	

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for CET-136-200W, CET-136-240W	B	INVENTRONICS(HANGZHOU),INC .	EUM-240S670SV	I/P:100-240V~, 50/60Hz, 2.7A MAX., 280W MAX. O/P:18-57Vd.c., 6.7A MAX., 240W MAX. Tc:90°C, ta:55°C SELV Independent	IEC 61347-1 IEC 61347-2-13	NL-101096
LED driver for CET-136-300W CET-136-320W	B	INVENTRONICS (HONGZHOU), INC.	EUM-320S760SV	I/P:100-240V~, 50/60Hz, 3.7A MAX., 370W MAX. O/P:21-60Vd.c., 7.6A MAX., 320W MAX. Tc:90°C, ta:55°C SELV Independent	IEC 61347-1 IEC 61347-2-13	DE 2-029598-M3
Internal wire	B	Zhongshan Zhineng Cable Technology Co., Ltd.	H05RN-F	2x1.0mm ²	EN 50525-2-21	VDE 40055659
Alternative	D	Guangdong Rifeng Electrical Cable Co., Ltd.	H05RN-F	2x1.0mm ²	EN 50525-2-21	VDE 40015999
Alternative	D	QIFURUI	1015	16AWG, 105°C, 600V	--	UL E211048
Surge protector	B	Guangdong ZP Lightning Protection Technology Co., Ltd.	ZP-LSP10-PR	Un:100-277V, 50/60Hz MCOV/Uc:320VAC Imax:10kA In:5kA Up:1.2kV Uoc:10kV IP67, ta:-40 to 85°C	IEC 61643-11	TUV R 50538341
LED	C	XUYU OPTOELECTRONICS(SHENZHEN)CO.,LTD	3030	If: 150mA, Vf: 5.8-6.0V 4000-4500K	IEC/TR 62778	Tested with appliance

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED board	C	WING SHING ELECTRONIC & PCB LTD	YS-4	V-0; AI	--	UL E190407
Plastic lamp cover	C	FOSHAN NANHAI POLMA ENGINEERING PLASTICS CO LTD	PC-1025	PC; V-0	--	UL E241821
Glass cover	C	Zhongshan Yinteng Glass Products Co., Ltd	YT-6	Thickness: 4.0mm Temperature: -50°C~300°C IK08	--	Tested with appliance
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component License available upon request						

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

ANNEX 2	TABLE: Thermal tests of Section 12	P
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ANNEX 2-1	Type reference	CET-136-320W	—
	Lamp used.....	Integral LED module	—
	Lamp control gear used.....	EUM-320S760SV	—
	Mounting position of luminaire	Normal use	—
	Supply wattage (W)	See below	—
	Supply current (A)	See below	—
	Temperatures in test 1 - 4 below are corrected for t_a (°C)	40.0	—
	- abnormal operating mode	a: SC one LED b: OC one LED	—
1.12 (12.4)	- test 1: rated voltage	1) 100 V; 3.61A; 326.8W 2) 240 V; 1.38A; 325.5W	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1.06 x 100 V = 106 V 3.18A; 320W 1.06 x 240 V = 254.4 V 1.279A; 317W	—
	- 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	a: 264V, 1.134A, 290.5W b: 264V, 1.263A, 324.9W	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal					Cl. 12.5 – abnormal	
		test 1		test 2	test 2	test 3	limit	test 4
		1)	2)	106 V	254.4 V			limit
Supply cord	40.0	--		60.0	55.5	--	90	--
Supply cord (pressed)	40.0	--		62.0	54.0	--	75	--
Terminal block	40.0	--		64.2	60.5	--	110	--
Input wire of LED driver	40.0	--		85.9	75.2	--	90	--
T _c point of LED driver	40.0	84.8	83.6	--	--	--	90	--
Output wire of LED driver	40.0	--		88.5	81.5	--	90	--

IEC 60598-2-3								
Clause	Requirement + Test				Result - Remark			Verdict
Wire of SPD (hottest)	40.0	--	66.5	63.0	--	90	--	--
Enclosure of SPD	40.0	--	63.1	60.5	--	85	--	--
Lead wire to LED	40.0	--	87.5	85.1	--	90	--	--
LED board	40.0	--	112.6	106.5	--	Ref.	--	--
Plastic cover for LED	40.0	--	115.3	112.2	--	Ref.	--	--
Lamp cover (glass)	40.0	--	95.0	89.8	--	Ref.	--	--
Mounting surface	40.0	--	46.1	45.7	--	90	58.0	130
Illuminated surface (0.1m)	40.0	--	78.9	77.7	--	90	79.1	130
Supplementary information: --								

ANNEX 2-2	Type reference	CET-136-240W	—					
	Lamp used.....	Integral LED module	—					
	Lamp control gear used.....	EUM-240S670SV	—					
	Mounting position of luminaire	Normal use	—					
	Supply wattage (W)	See below	—					
	Supply current (A)	See below	—					
	Temperatures in test 1 - 4 below are corrected for ta (°C)	40.0	—					
	- abnormal operating mode	a: SC one LED b: OC one LED	—					
1.12 (12.4)	- test 1: rated voltage	1) 100 V; 2.543A; 253.8W 2) 240 V; 1.022A; 241.1W	—					
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1.06 x 100 V = 106 V 2.499A; 251.7W 1.06 x 240 V = 254.4 V 0.954A; 237W	—					
	- 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	a: 264V, 0.84A, 214.1W b: 264V, 0.938A, 241.5W	—					
Temperature measurements (°C)								
Part	Ambient	Cl. 12.4 – normal					Cl. 12.5 – abnormal	
		test 1	test 2	test 2	test 3	limit	test 4	limit

IEC 60598-2-3									
Clause	Requirement + Test				Result - Remark			Verdict	
		1)	2)	106 V	254.4 V				
Supply cord	40.0	--		53.9	55.5	--	90	--	--
Supply cord (pressed)	40.0	--		55.2	57.0	--	75	--	--
Terminal block	40.0	--		58.1	59.9	--	110	--	--
Input wire of LED driver	40.0	--		84.7	76.4	--	90	--	--
Tc point of LED driver	40.0	87.6	84.5	--	--	--	90	--	--
Output wire of LED driver	40.0	--		86.8	82.4	--	90	--	--
Wire of SPD (hottest)	40.0	--		58.8	61.4	--	90	--	--
Enclosure of SPD	40.0	--		55.3	58.8	--	85	--	--
Lead wire to LED	40.0	--		85.6	85.0	--	90	--	--
LED board	40.0	--		100.6	100.4	--	Ref.	--	--
Plastic cover for LED	40.0	--		107.7	107.5	--	Ref.	--	--
Lamp cover (glass)	40.0	--		90.1	89.0	--	Ref.	--	--
Mounting surface	40.0	--		43.7	45.4	--	90	--	--
Illuminated surface (0.1m)	40.0	--		76.8	80.5	--	90	--	--
Supplementary information: --									

ANNEX 2-3	Type reference	CET-136-150W	—
	Lamp used.....	Integral LED module	—
	Lamp control gear used.....	EUM-150S420SV	—
	Mounting position of luminaire	Normal use	—
	Supply wattage (W)	See below	—
	Supply current (A)	See below	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	40.0	—
	- abnormal operating mode	a: SC one LED b: OC one LED	—
1.12 (12.4)	- test 1: rated voltage	1) 100 V; 1.587A; 158.4W 2) 240 V; 0.64A; 153.1W	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1.06 x 100 V = 106 V 1.517A; 152.8W 1.06 x 240 V = 254.4 V 0.597A; 151.1W	—

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Clause	Requirement + Test				Result - Remark			Verdict	
	- 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 :				a: 264V, 0.522A, 136.8W b: 264V, 0.582A, 152.7W			—	
Temperature measurements (°C)									
Part	Ambient	Cl. 12.4 – normal					Cl. 12.5 – abnormal		
		test 1		test 2 106 V	test 2 254.4 V	test 3	limit	test 4	limit
		1)	2)						
Supply cord	40.0	--		54.6	53.2	--	90	--	--
Supply cord (pressed)	40.0	--		56.1	54.5	--	75	--	--
Terminal block	40.0	--		60.5	60.6	--	110	--	--
Input wire of LED driver	40.0	--		84.9	82.0	--	90	--	--
Tc point of LED driver	40.0	84.0	85.4	--	--	--	90	--	--
Output wire of LED driver	40.0	--		84.3	82.9	--	90	--	--
Wire of SPD (hottest)	40.0	--		60.6	60.3	--	90	--	--
Enclosure of SPD	40.0	--		58.2	57.9	--	85	--	--
Lead wire to LED	40.0	--		75.1	74.7	--	90	--	--
LED board	40.0	--		88.7	88.8	--	Ref.	--	--
Plastic cover for LED	40.0	--		93.5	94.4	--	Ref.	--	--
Lamp cover (glass)	40.0	--		83.3	84.4	--	Ref.	--	--
Mounting surface	40.0	--		44.9	44.4	--	90	--	--
Illuminated surface (0.1m)	40.0	--		71.0	72.5	--	90	--	--
Supplementary information: --									

ANNEX 2-4	Type reference	CET-136-100W	—
	Lamp used.....	Integral LED module	—
	Lamp control gear used.....	EUM-100S280SV	—
	Mounting position of luminaire	Normal use	—
	Supply wattage (W)	See below	—
	Supply current (A)	See below	—

IEC 60598-2-3									
Clause	Requirement + Test				Result - Remark			Verdict	
	Temperatures in test 1 - 4 below are corrected for ta (°C) :				40.0			—	
	- abnormal operating mode :				a: SC one LED b: OC one LED			—	
1.12 (12.4)	- test 1: rated voltage :				1) 100 V; 1.057A; 105.2W 2) 240 V; 0.424A; 100.5W			—	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current :				1.06 x 100 V = 106 V 1.042A; 104.9W 1.06 x 240 V = 254.4 V 0.399A; 99.6W			—	
	- 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 :				a: 264V, 0.339A, 86.7W b: 264V, 0.39A, 100.7W			—	
Temperature measurements (°C)									
Part	Ambient	Cl. 12.4 – normal					Cl. 12.5 – abnormal		
		test 1		test 2 106 V	test 2 254.4 V	test 3	limit	test 4	limit
		1)	2)						
Supply cord	40.0	--		55.8	52.3	--	90	--	--
Supply cord (pressed)	40.0	--		54.2	53.5	--	75	--	--
Terminal block	40.0	--		63.0	59.0	--	110	--	--
Input wire of LED driver	40.0	--		81.6	72.4	--	90	--	--
Tc point of LED driver	40.0	85.5	80.9	--	--	--	90	--	--
Output wire of LED driver	40.0	--		82.2	74.3	--	90	--	--
Wire of SPD (hottest)	40.0	--		61.8	58.3	--	90	--	--
Enclosure of SPD	40.0	--		59.9	56.7	--	85	--	--
Lead wire to LED	40.0	--		75.3	74.4	--	90	--	--
LED board	40.0	--		84.6	83.8	--	Ref.	--	--
Plastic cover for LED	40.0	--		93.3	93.2	--	Ref.	--	--
Lamp cover (glass)	40.0	--		79.6	79.8	--	Ref.	--	--
Mounting surface	40.0	--		44.4	44.1	--	90	--	--
Illuminated surface (0.1m)	40.0	--		59.1	59.1	--	90	--	--
Supplementary information: --									

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

ANNEX 2-5	Type reference	CET-136-60W	—
	Lamp used.....	Integral LED module	—
	Lamp control gear used.....	EUM-075S210SV	—
	Mounting position of luminaire	Normal use	—
	Supply wattage (W)	See below	—
	Supply current (A)	See below	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	40.0	—
	- abnormal operating mode	a: SC one LED b: OC one LED	—
1.12 (12.4)	- test 1: rated voltage	1) 100 V; 0.631A; 62.8W 2) 240 V; 0.257A; 60.6W	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1.06 x 100 V = 106 V 0.565A; 60.3W 1.06 x 240 V = 254.4 V 0.238A; 58.7W	—
	- 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	a: 264V, 0.206A, 51.7W b: 264V, 0.238A, 60.8W	—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal					Cl. 12.5 – abnormal	
		test 1		test 2	test 2	test 3	limit	test 4
		1)	2)	106 V	254.4 V			limit
Supply cord	40.0	--		50.4	47.8	--	90	--
Supply cord (pressed)	40.0	--		51.6	48.6	--	75	--
Terminal block	40.0	--		55.9	53.2	--	110	--
Input wire of LED driver	40.0	--		73.2	67.2	--	90	--
Tc point of LED driver	40.0	80.3	72.9	--	--	--	90	--
Output wire of LED driver	40.0	--		72.9	65.6	--	90	--
Wire of SPD (hottest)	40.0	--		58.0	53.1	--	90	--
Enclosure of SPD	40.0	--		56.3	51.4	--	85	--

IEC 60598-2-3								
Clause	Requirement + Test				Result - Remark			Verdict
Lead wire to LED	40.0	--	65.2	64.3	--	90	--	--
LED board	40.0	--	77.2	76.5	--	Ref.	--	--
Plastic cover for LED	40.0	--	85.4	84.8	--	Ref.	--	--
Lamp cover (glass)	40.0	--	72.5	72.0	--	Ref.	--	--
Mounting surface	40.0	--	42.5	41.9	--	90	42.6	130
Illuminated surface (0.1m)	40.0	--	50.6	50.2	--	90	51.5	130
Supplementary information: --								

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



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

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

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

IEC 60598-2-3										
Clause	Requirement + Test					Result - Remark				Verdict
	Terminal size and rating									N/A
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
(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests									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									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

---End of Report---

IEC 60598-2-3_Attachment 1			
Clause	Requirement + Test	Result - Remark	Verdict
	Checking of deviation requirements for Saudi Arabia.		P
1	MAINS VOLTAGE 127 or 220 V or 380V	100-240VAC	P
2	MAINS FREQUENCY 60 Hz	50/60Hz	P
3	INSTRUCTION MANUAL Language of instruction manual according to applicable IEC/SASO standard. (i.e. Manuals will be in the official language of the country where the product is intended to be sold -Arabic)	English and Arabic	P
4	PLUGS Plugs fitted to the supply cords shall have a configuration in accordance with SASO standard 2203/2003 or 2204/2003 (Refer to CD-479 for more information)		N/A
5	COUNTRY OF ORIGIN All appliances shall be marked with Country of Origin (MoCI Royal Decree No. M/5, CD-444R3)	Made in China	P
6	CLASSIFICATION MARK For all class I construction equipment. Earthing symbol should be near to earthing connection and on non removable part. For all class II construction appliances, marked  . For class III construction appliances, marked  , in particular luminaires operating at less than 42.4V ac peak and 42.4 V dc.		P

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

	LED modules for general lighting – Safety specifications IEC 62031:2018		P
--	--	--	----------

12 (14)	FAULT CONDITIONS		P
- (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)	N/A
- (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)	N/A
- (14.3)	Short-circuit or interruption of semiconductor devices	(see appended table)	P
- (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 $\geq 1 \text{ M}\Omega$	>20 M Ω	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		—
12.2	Overpower condition		P
	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

IEC 60598-2-3_Attachment 2			
Clause	Requirement + Test		Verdict
Clause 13.2 overpower condition	Position: Appliance positioned on the test corner. Duration: until stable Operation: increased to 150% the rated power, LED module withstands overpower condition > 15min.		
CET-136-320W	Thermocouple point	Measured temperature (°C)	Limited
	LED board	137	Ref.
	Mounting surface (flammable surface)	47.9	130
Observation: 49.6V; 9.11A; 452.12W; no fire, smoke or flammable gas is produced.			
Clause 13.2 overpower condition	Position: Appliance positioned on the test corner. Duration: until stable Operation: increased to 150% the rated power, LED module withstands overpower condition > 15min.		
CET-136-240W	Thermocouple point	Measured temperature (°C)	Limited
	LED board	129.0	Ref.
	Mounting surface (flammable surface)	47.2	130
Observation: 48.4V; 6.87A; 332.51W; no fire, smoke or flammable gas is produced.			
Clause 13.2 overpower condition	Position: Appliance positioned on the test corner. Duration: until stable Operation: increased to 150% the rated power, LED module withstands overpower condition > 15min.		
CET-136-150W	Thermocouple point	Measured temperature (°C)	Limited
	LED board	112.2	Ref.
	Mounting surface (flammable surface)	45.6	130
Observation: 48.8V; 4.26A; 207.94W; no fire, smoke or flammable gas is produced.			
Clause 13.2 overpower condition	Position: Appliance positioned on the test corner. Duration: until stable Operation: increased to 150% the rated power, LED module withstands overpower condition > 15min.		
CET-136-100W	Thermocouple point	Measured temperature (°C)	Limited
	LED board	103.7	Ref.
	Mounting surface (flammable surface)	44.6	130
Observation: 34.7V; 3.71A; 136.19W; no fire, smoke or flammable gas is produced.			
Clause 13.2 overpower condition	Position: Appliance positioned on the test corner. Duration: until stable Operation: increased to 150% the rated power, LED module withstands overpower condition > 15min.		
CET-136-60W	Thermocouple point	Measured temperature (°C)	Limited
	LED board	94.3	Ref.

IEC 60598-2-3_Attachment 2			
Clause	Requirement + Test	Result - Remark	Verdict
	Mounting surface (flammable surface)	43.9	130
Observation: 37.5V; 2.11A; 79.24W; no fire, smoke or flammable gas is produced.			

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

	Blue light hazard to light sources and luminaires of IEC/TR 62778:2014		P
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Conditions

1. Tests performed on CET-136-60W, CET-136-100W, CET-136-150W, CET-136-240W, CET-136-320W, supplied by 240VAC.
2. Ambient temperature: 25±1°C, Humidity: 45±10%
3. Measurement distance: 20cm
4. Classification group: **RG1 unlimited**

Model: CET-136-60W

Symbol	Units	Results
Lb (11mrad)	W•m-2•sr-1	1.375e+003
Lb (100mrad)	W•m-2•sr-1	--
L (11mrad)	cd•m-2	2.298e+006
Ethr	lx	34757
dmin	m	0.2

Model: CET-136-100W

Symbol	Units	Results
Lb (11mrad)	W•m-2•sr-1	1.243e+003
Lb (100mrad)	W•m-2•sr-1	--
L (11mrad)	cd•m-2	2.246e+006
Ethr	lx	52225
dmin	m	0.2

Model: CET-136-150W

Symbol	Units	Results
Lb (11mrad)	W•m-2•sr-1	1.168e+003
Lb (100mrad)	W•m-2•sr-1	--
L (11mrad)	cd•m-2	2.185e+006
Ethr	lx	76051
dmin	m	0.2

Model: CET-136-240W

Symbol	Units	Results
Lb (11mrad)	W•m-2•sr-1	1.263e+003
Lb (100mrad)	W•m-2•sr-1	--
L (11mrad)	cd•m-2	2.271e+006
Ethr	lx	98560
dmin	m	0.2

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

Model: CET-136-320W		
Symbol	Units	Results
Lb (11mrad)	W•m-2•sr-1	1.754e+003
Lb (100mrad)	W•m-2•sr-1	--
L (11mrad)	cd•m-2	2.877e+006
Ethr	lx	105374
dmin	m	0.2

IEC 60598-2-3_Attachment 4			
Clause	Requirement + Test	Result - Remark	Verdict

EMF Assessment according to IEC 62493:2015	P
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Procedure	Products are applications with	If No	If yes
a)	Non-electronic control gear?	<input checked="" type="checkbox"/> see Procedure b)	<input type="checkbox"/> Pass
b)	Incandescent-lamp technology or halogen?	<input checked="" type="checkbox"/> see Procedure c)	<input type="checkbox"/> see Procedure h)
c)	LED light-source technology?	<input type="checkbox"/> see Procedure d)	<input checked="" type="checkbox"/> see Procedure h)
d)	OLED light-source technology?	<input checked="" type="checkbox"/> see Procedure e)	<input type="checkbox"/> see Procedure h)
e)	High-pressure discharge lamp technology?	<input checked="" type="checkbox"/> see Procedure f)	<input type="checkbox"/> see Procedure h)
f)	Low-pressure discharge lamp technologies with an exposure distance larger than or equal to 50cm (Distance for Hand lights, table lightings and Self-ballasted lamps is less than 50cm)	<input checked="" type="checkbox"/> see Procedure g)	<input type="checkbox"/> see Procedure h)
g)	Independent auxiliary?	<input checked="" type="checkbox"/> see Procedure i)	<input type="checkbox"/> see Procedure h)
h)	Non-wireless technology (exclude infra-red)?	<input type="checkbox"/> see Procedure i)	<input checked="" type="checkbox"/> Pass
i)	Additional test is performed and result is Pass Test Report with No.:	<input checked="" type="checkbox"/> see Procedure b)	<input type="checkbox"/> Pass

IEC 60598-2-3_Attachment 5			
Clause	Requirement + Test	Result - Remark	Verdict

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES to EN 60598-2-3:2003 + A1:2011

P

ATTACHMENT TO TEST REPORT			
IEC 60598-2-3			
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES			
LUMINAIRES			
PART 2: PARTICULAR REQUIREMENTS			
SECTION 3: LUMINAIRES FOR ROAD AND STREET LIGHTING			
Differences according to.....:		EN 60598-2-3:2003 + A1:2011 used in conjunction with EN IEC 60598-1:2021 + A11:2022	
TRF template used		IECEE OD-2020-F2:2020, Ed. 1.1	
Attachment Form No.....:		EU_GD_IEC60598_2_3M	
Attachment Originator		UL(Demko)	
Master Attachment		2022-05-24	
Copyright © 2022 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	CENELEC COMMON MODIFICATIONS (EN)		--
3.5 (3)	MARKING		P
3.5 (3.2.12)	Note 4 deleted		--
3.6 (4)	CONSTRUCTION		P
4.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V		N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2.2)	Cables equal to EN 50525 (all parts)		N/A
	Paragraph 2 deleted		N/A
	Replace table 5.1 – Supply cord		P
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		P
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		P
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(5.2.1)	CY, DK, FI, UK: type of plug		N/A

IEC 60598-2-3_Attachment 5			
Clause	Requirement + Test	Result - Remark	Verdict
(5.2.18)	DK: socket-outlets		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		P
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings <i>(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)</i> Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	UK: Requirements according to United Kingdom Building Regulation		P

Attachment 6

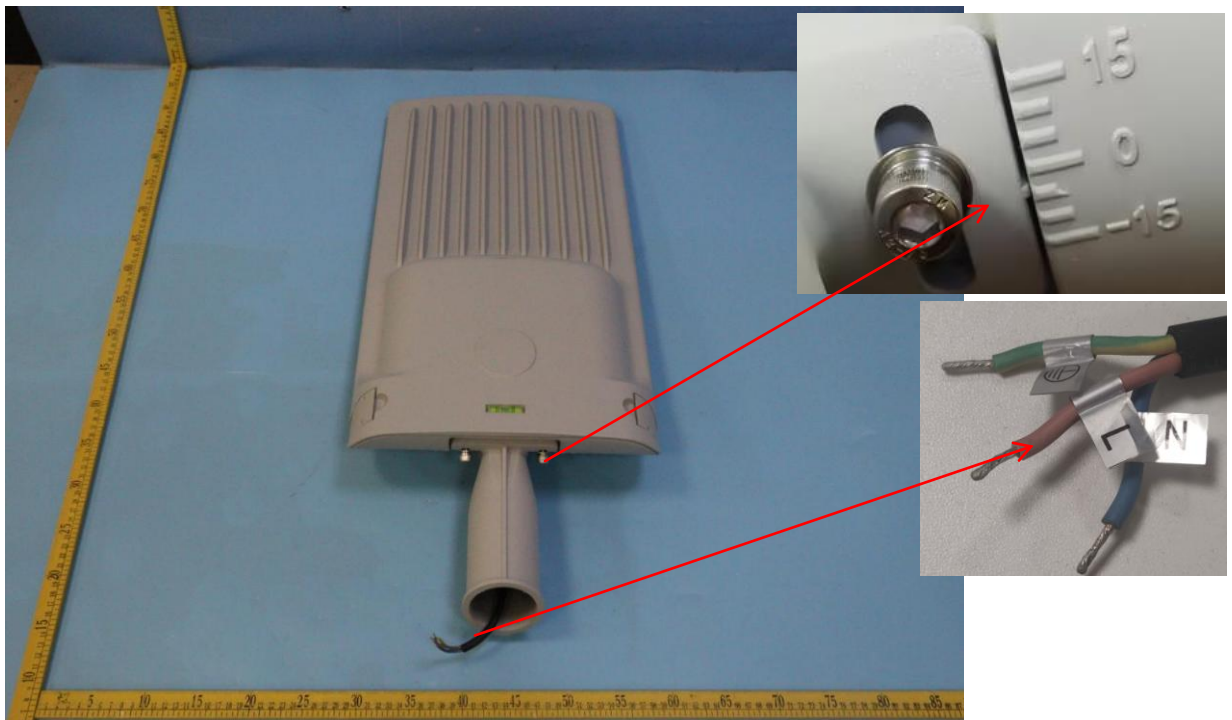
Report Number: CN24TXT1 001

Model: See model list in test report

Model: CET-136-320W



Picture 1



Picture 2

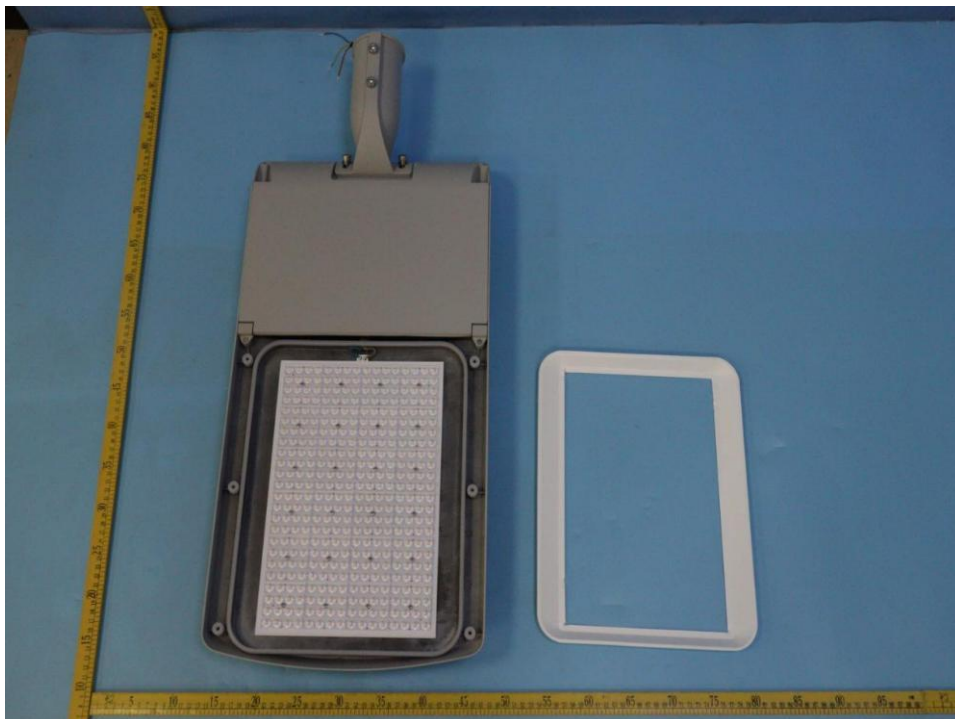
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 3

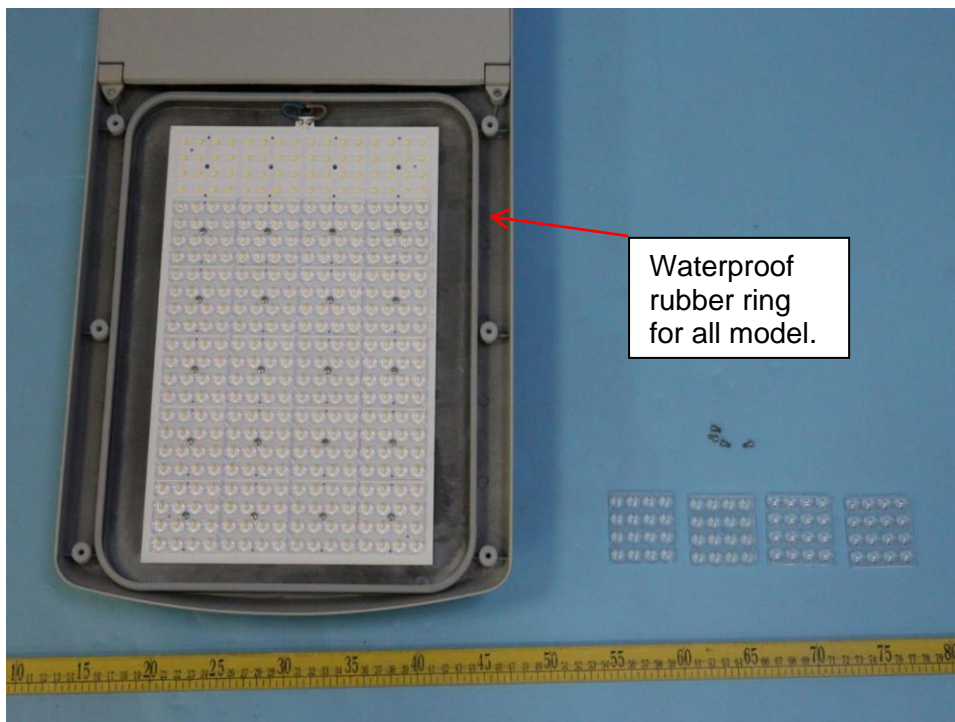


Picture 4

Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 5

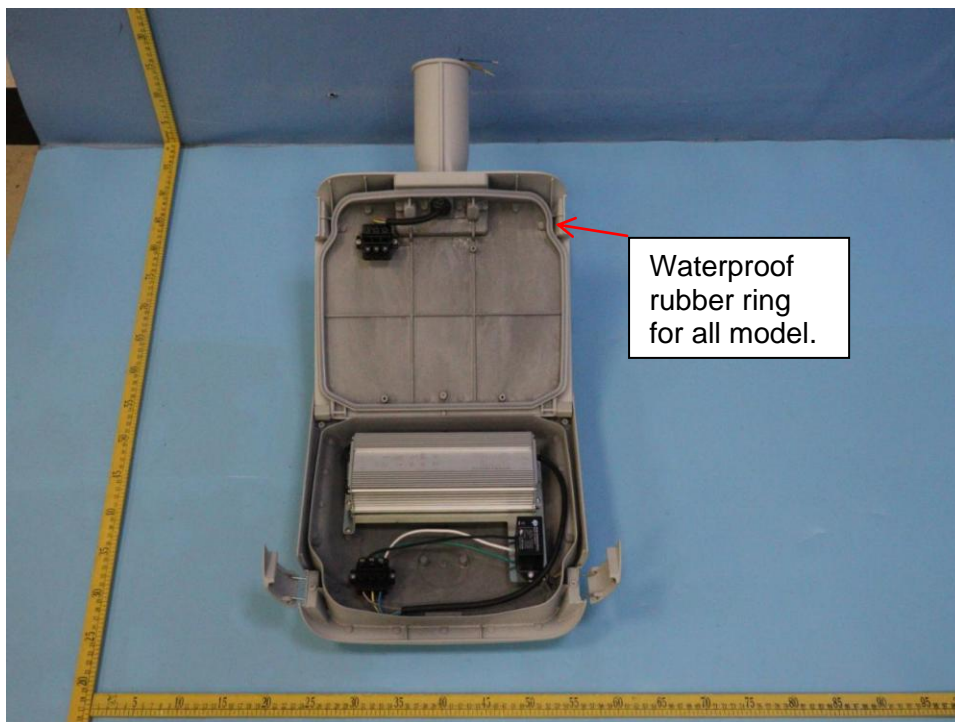


Picture 6

Attachment 6

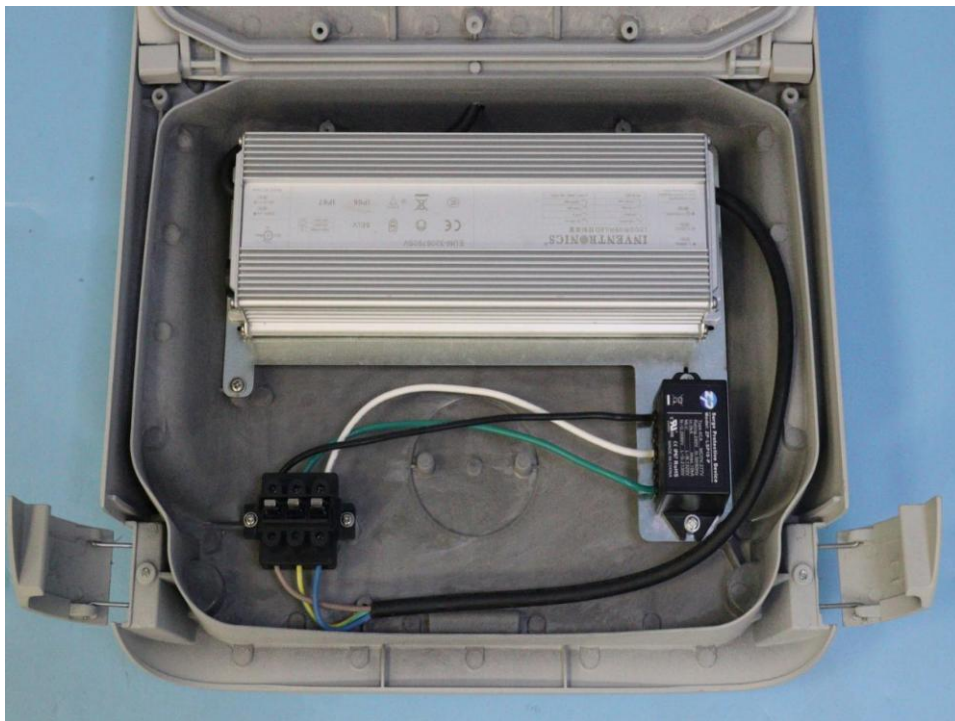
Report Number: CN24TXT1 001

Model: See model list in test report



Waterproof
rubber ring
for all model.

Picture 7

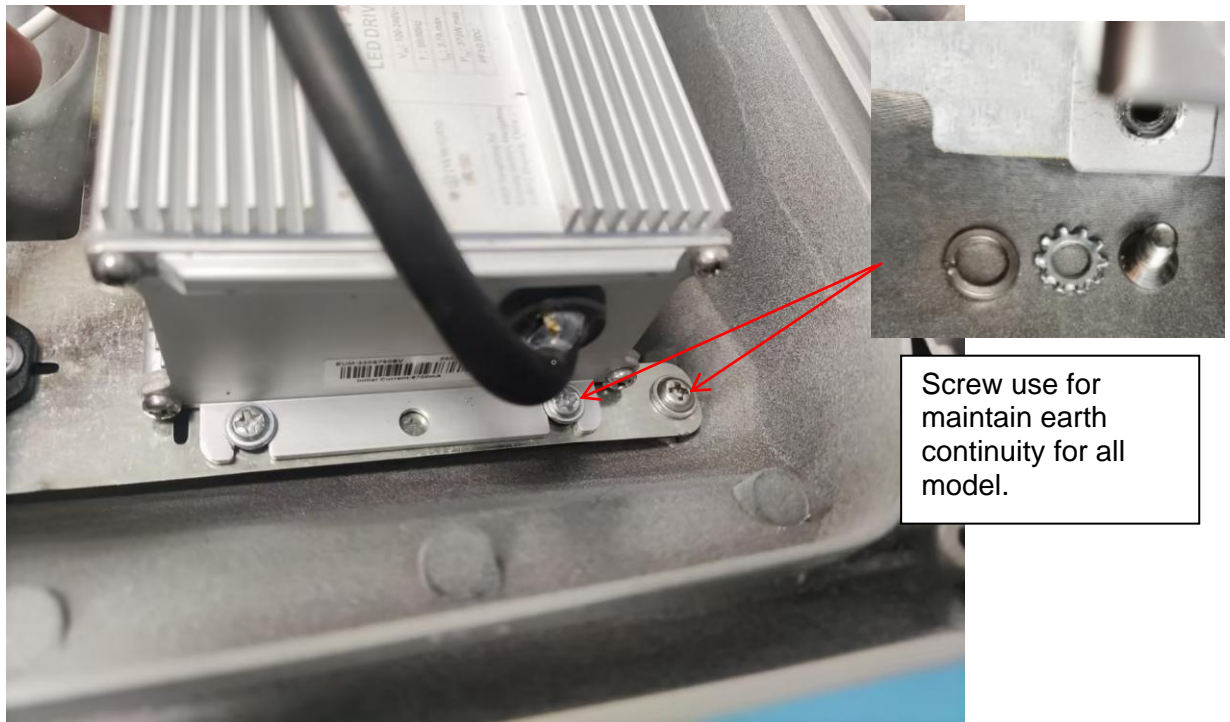


Picture 8

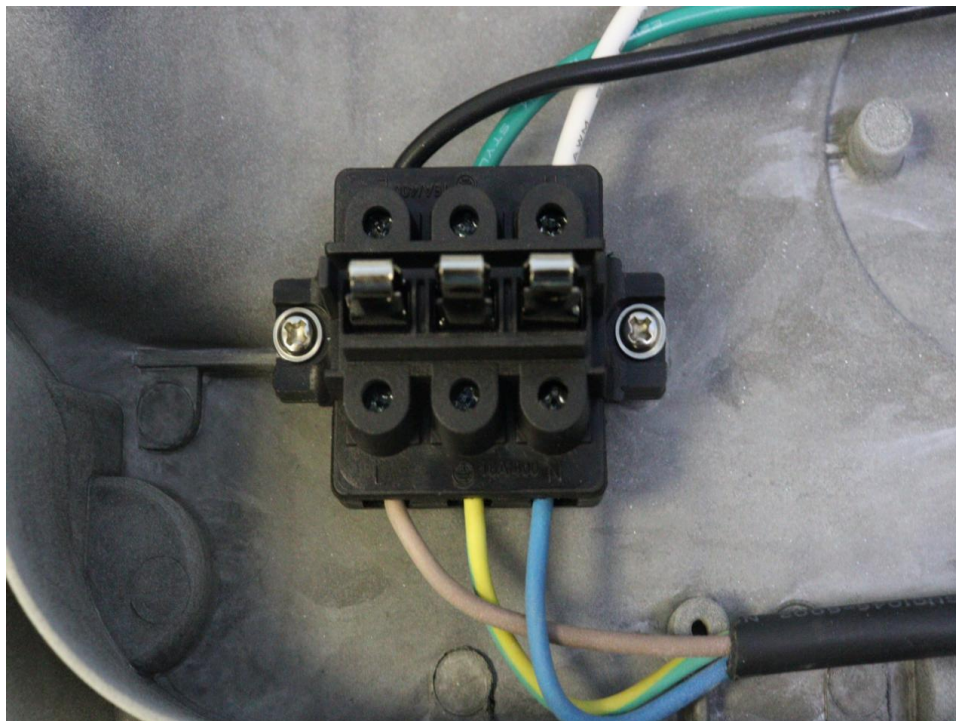
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 9



Picture 10

Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 11



Picture 12

Attachment 6

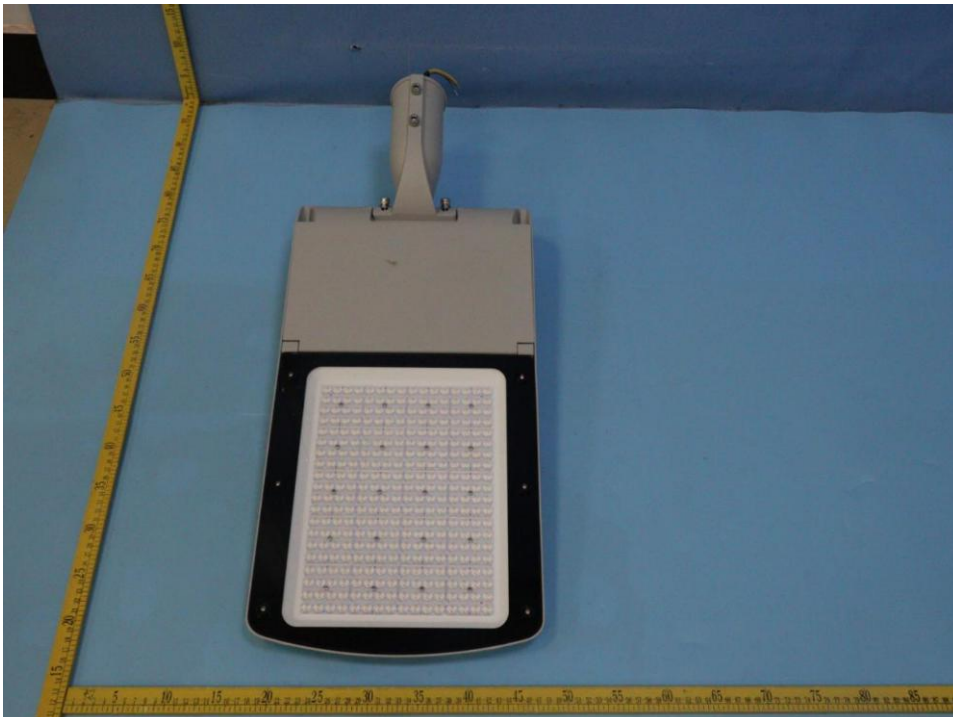
Report Number: CN24TXT1 001

Model: See model list in test report



Picture 13

Model: CET-136-240W



Picture 14

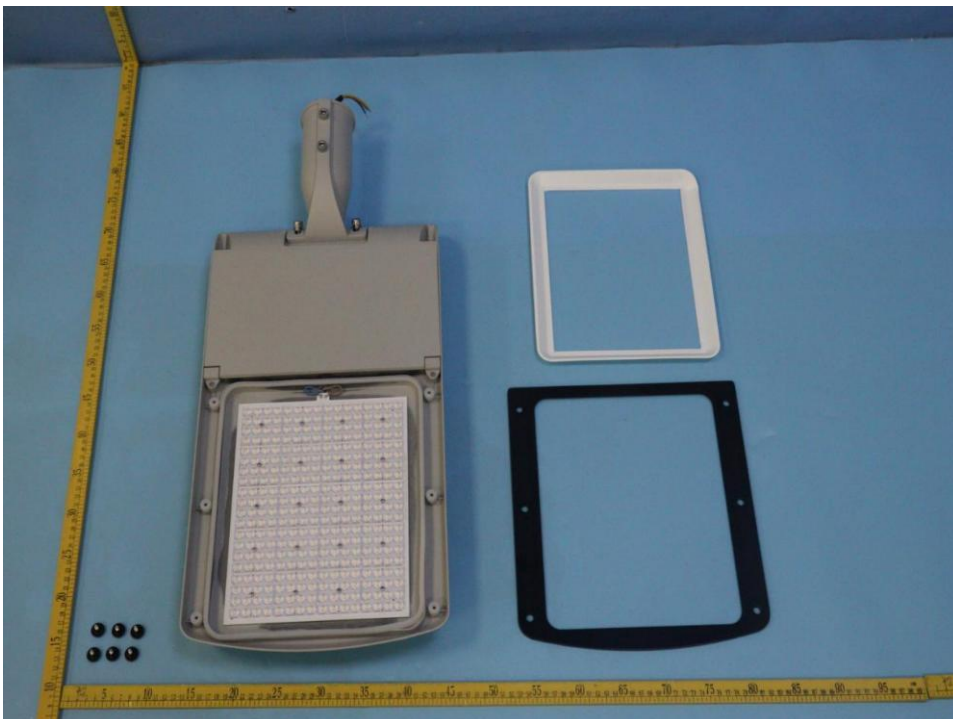
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 15

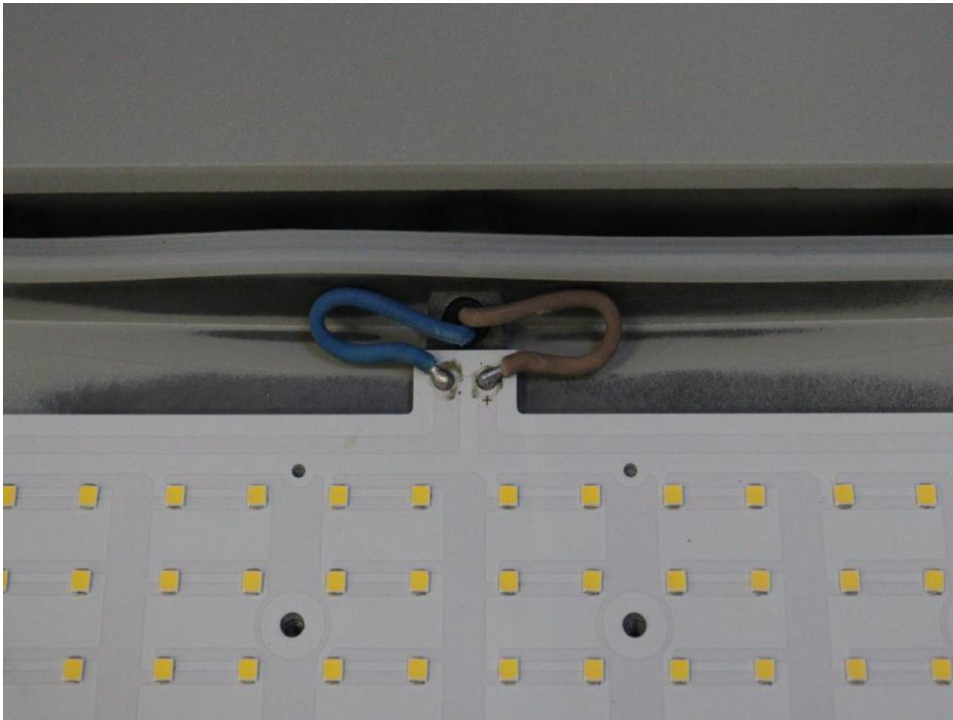


Picture 16

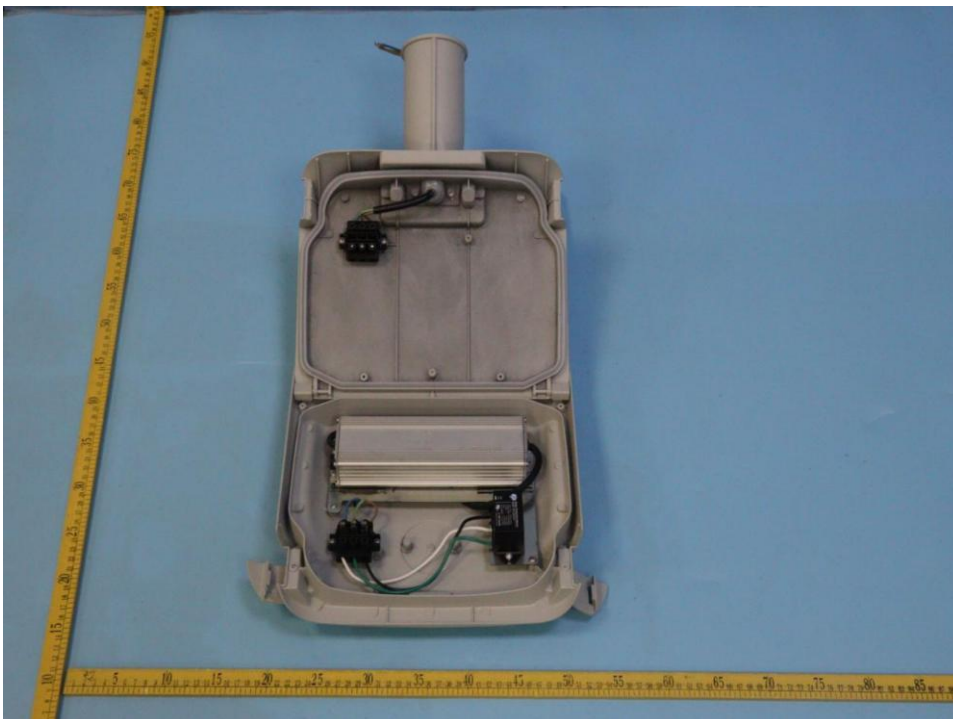
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 17



Picture 18

Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 19

Model: CET-136-150W



Picture 20

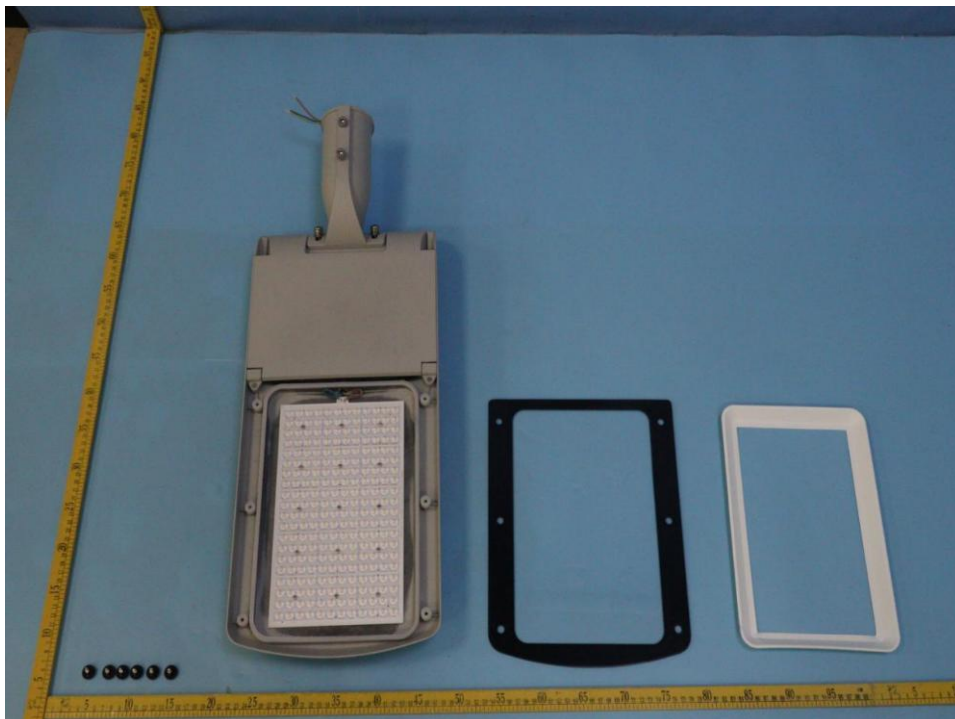
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report

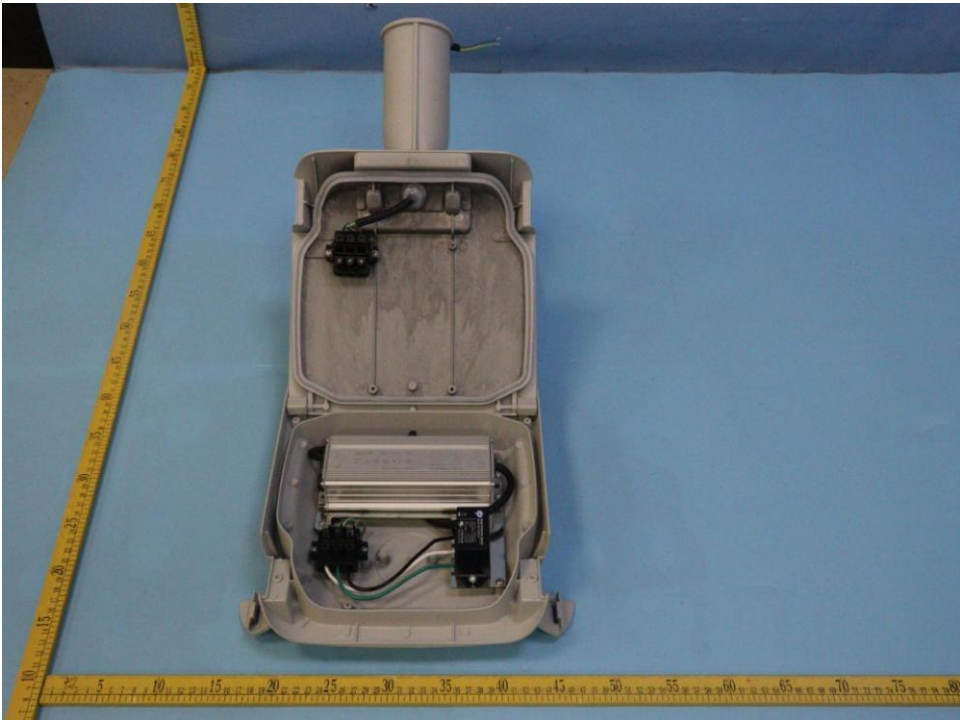


Picture 21

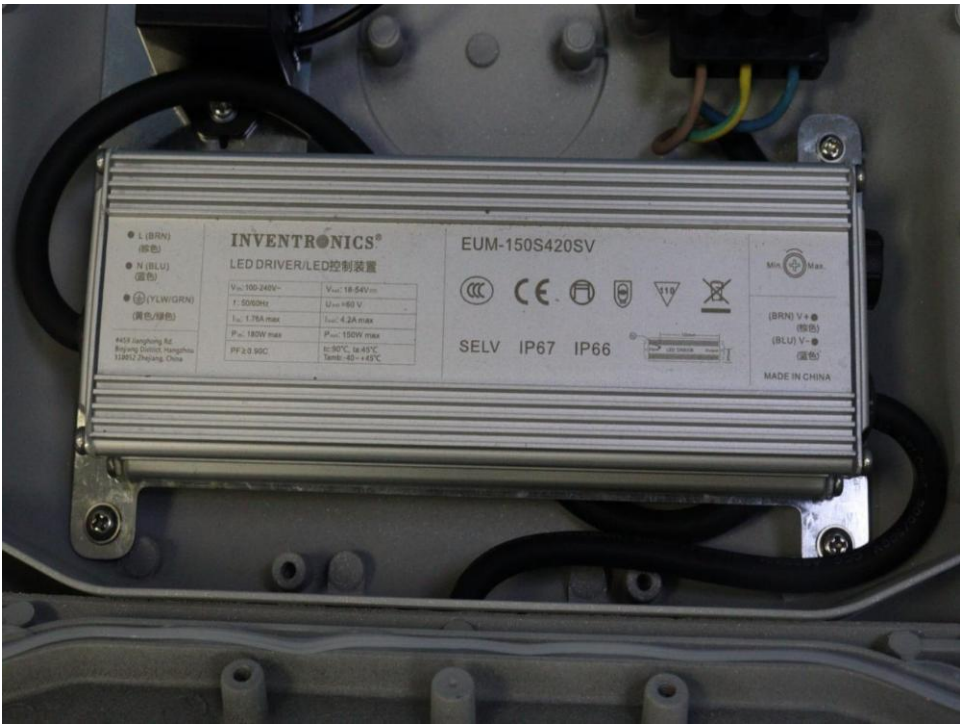


Picture 22

Attachment 6
Report Number: CN24TXT1 001
Model: See model list in test report



Picture 23



Picture 24

Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report

Model: CET-136-100W



Picture 25

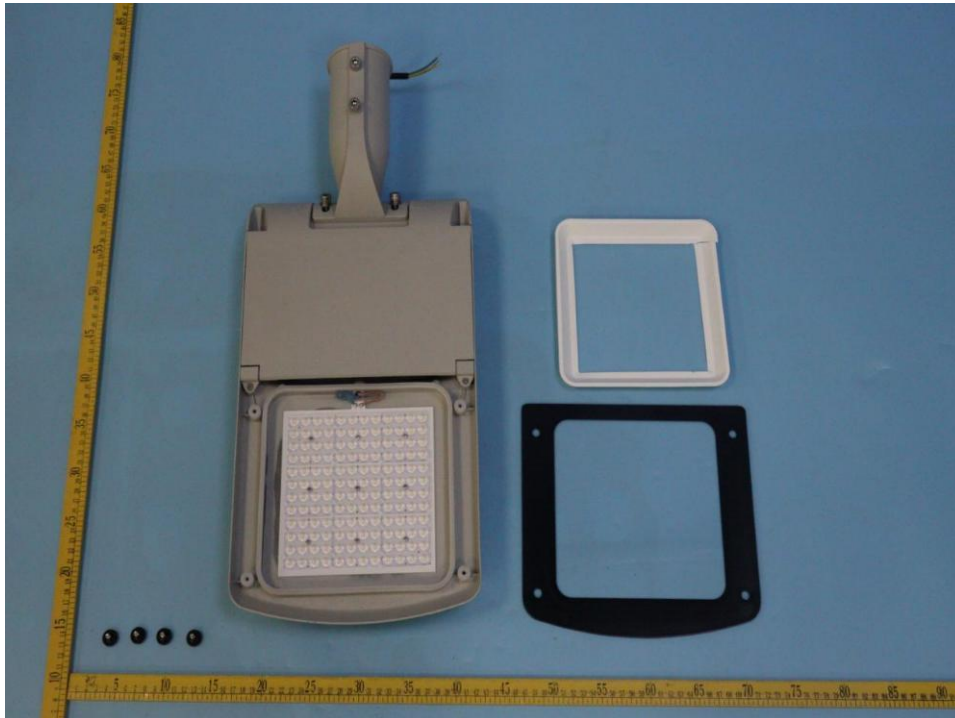


Picture 26

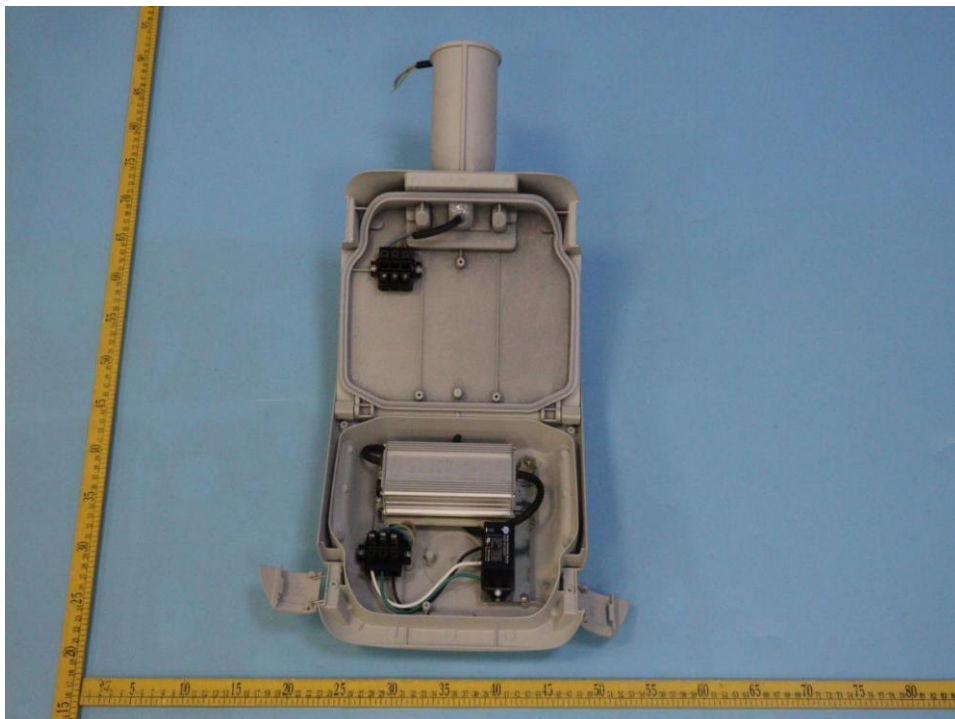
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report

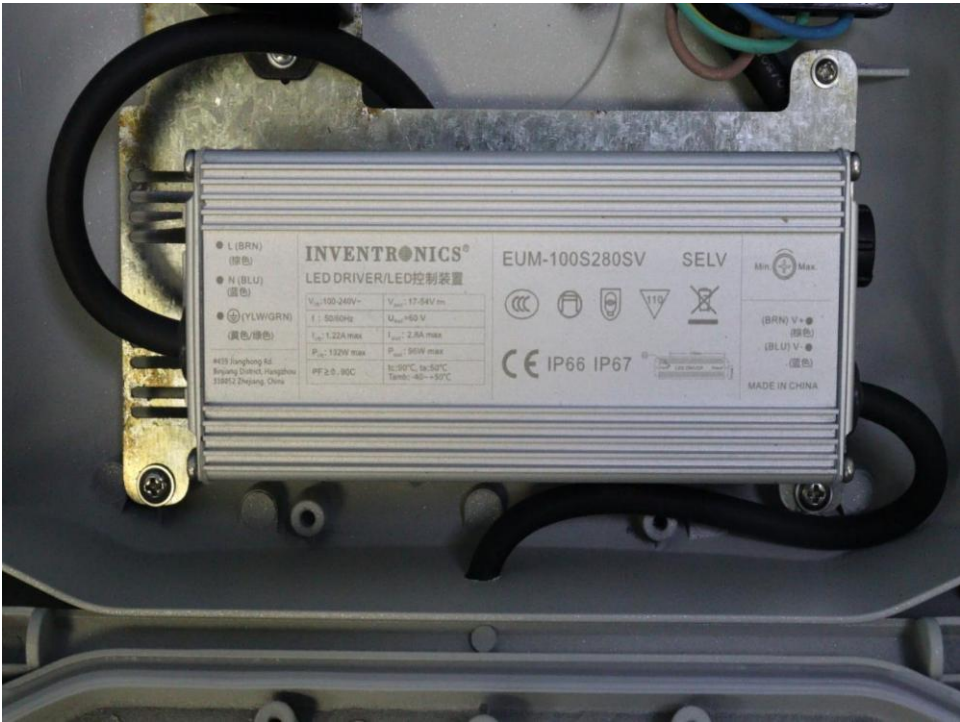


Picture 27



Picture 28

Attachment 6
Report Number: CN24TXT1 001
Model: See model list in test report



Picture 29

Model: CET-136-60W



Picture 30

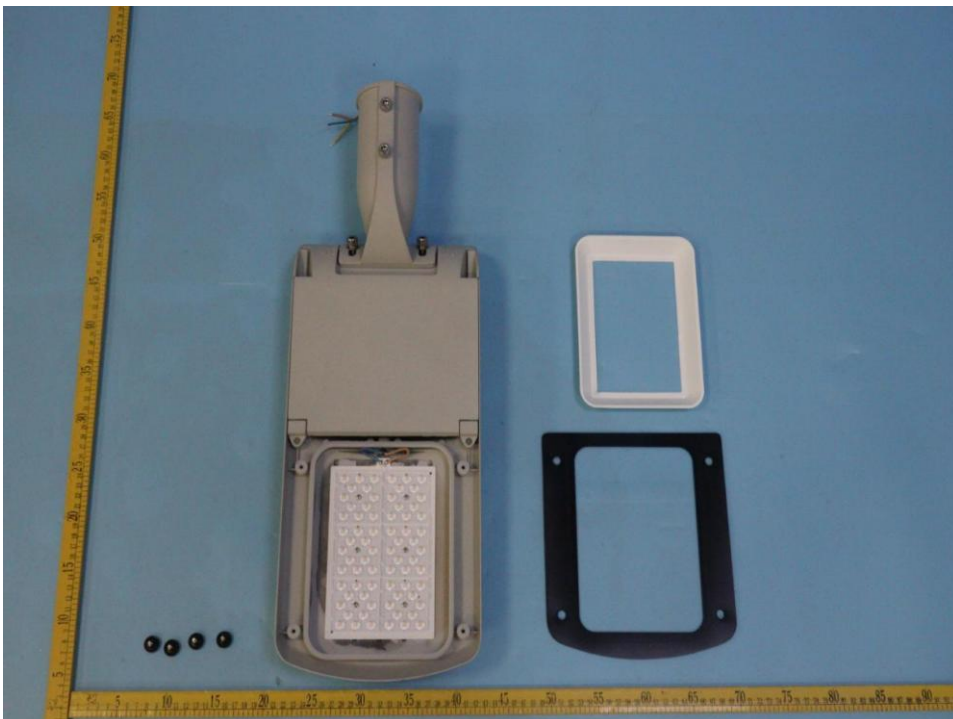
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 31

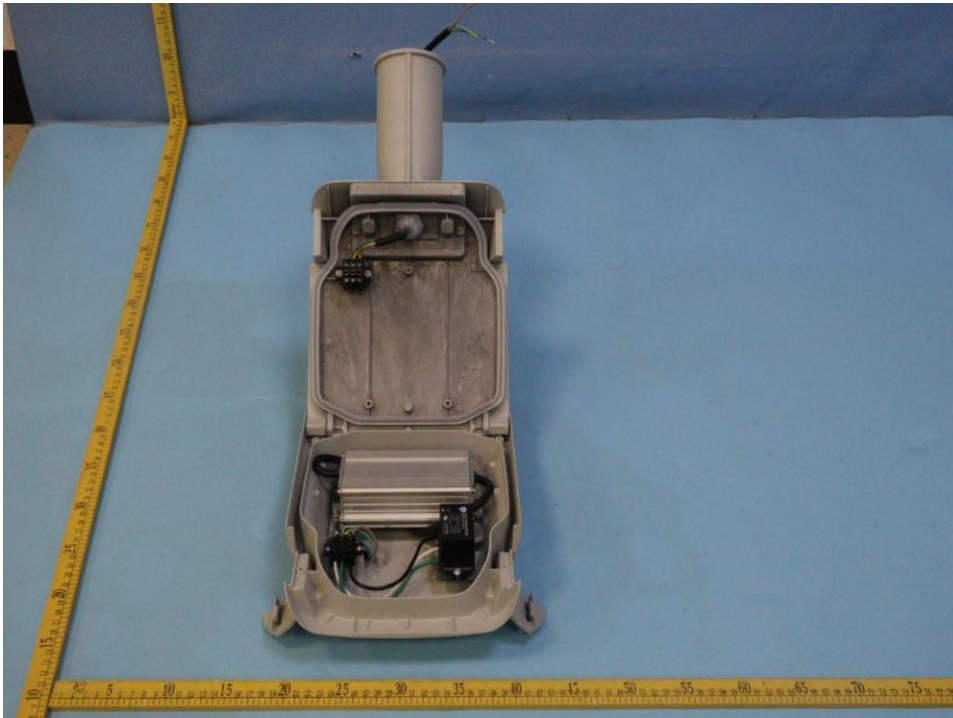


Picture 32

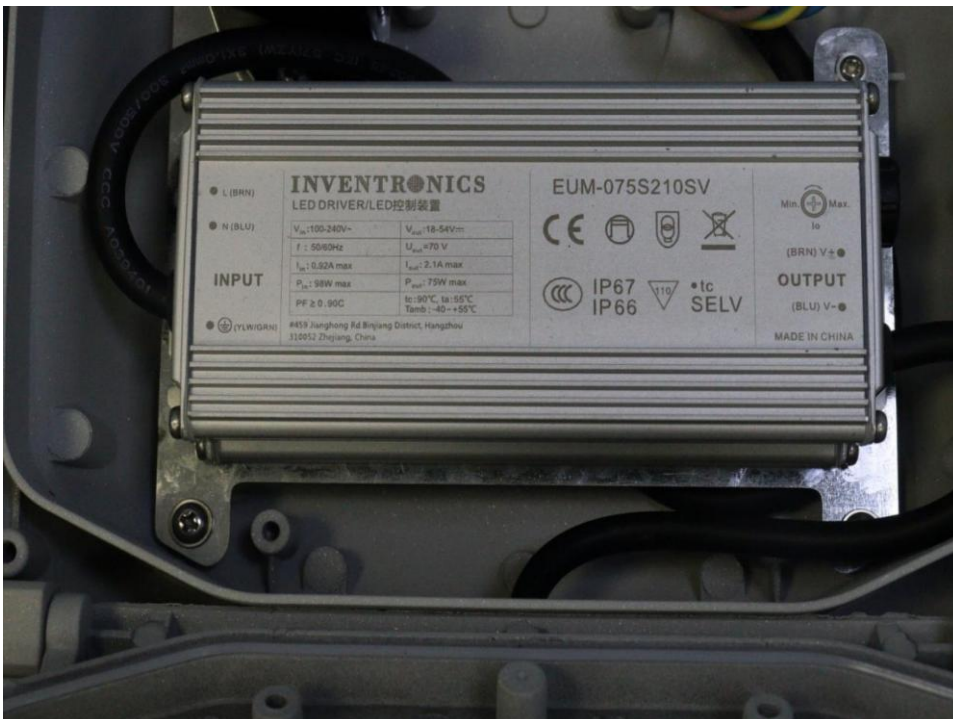
Attachment 6

Report Number: CN24TXT1 001

Model: See model list in test report



Picture 33



Picture 34

--- End of photo documentation ---