

TEST REPORT

APPLICATION FOR LVD

On Behalf of

Blue Carbon Technology Inc.

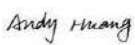
Prepared For:	Blue Carbon Technology Inc.
Address:	No.C1 Technology Innovation Center, High-Tech Zone, Rizhao, Shandong Province, China
Product Name:	Solar Street Light
Trademark:	N/A
Model:	BCT-OLK3.0-B (Series models please see the next page.)
Prepared By:	Shenzhen STONG Testing Technology Service Co., Ltd.
Address:	Room 201, Building 1, Anxu Business Park, No. 35-1, Xiangyin Road, Nanlian Community, Longgang Street, Longgang District, Shenzhen
Test Date:	Oct. 25, 2023 - Nov. 03, 2023
Date of Report:	Nov. 03, 2023
Report No.:	R202310251004S01

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**Series Models:**

BCT-OLJ,BCT-OLMJ,BCT-OLJS,BCT-OLJP,BCT-OLC-A,BCT-OLC-B,BCT-OLC-C,BCT-OTL-A,
BCT-OTL-B,BCT-OTL-C,BCT-OPP-A,BCT-OPP-B-,BCT-OPP-B,BCT-OPP-C,BCT-OPP-D,
BCT-OPP-E,BCT-OLB2.0-A,BCT-OLB2.0-B,BCT-OLB2.0-C,BCT-OPP2.0-A,BCT-OPP2.0-B,
BCT-OPP2.0-B-,BCT-OPP2.0-C,BCT-OPP2.0-D,BCT-OPP2.0-E,BCT-OPP2.0-AO,
BCT-OPP2.0-BO,BCT-OPP2.0-CO,BCT-OPP2.0-DO,BCT-OPP2.0-EO,BCT-OPP2.0-FO,
BCT-OLC2.0-A,BCT-OLC2.0-B,BCT-OLC2.0-C,BCT-OLC2.0-D,BCT-OLC2.0-AP,BCT-OLC2.0-
BP,BCT-OLC2.0-CP,BCT-OLK1.0,BCT-OLK1.0-M,BCT-OLK2.0-A,BCT-OLK2.0-B,BCT-OLK2.0-C,
BCT-OLK3.0-A,BCT-OLK3.0-B,BCT-OST1.0,BCT-OST2.0-A,BCT-OST2.0-B,BCT-OLF-80W,
BCT-OLF-100W-A,BCT-OLF-100W-B,BCT-OLF-100W-PA,BCT-OLF-100W-PB,BCT-OLF-60W,
BCT-OLF-120W,BCT-OLJ2.0-A,BCT-OLJ2.0-B,BCT-OLJ2.0-C,BCT-SLC1.0-A,BCT-SLC1.0-B,
BCT-SLC1.0-C,BCT-SLG1.0-A,BCT-SLG1.0-B,BCT-SLG1.0-C,BCT-SLG1.0-D,BCT-OLS1.0-A,
BCT-OLS1.0-B,BCT-OLS1.0-C,LD-S100W,BCT-OLJ1.0,BCT-OLC1.0,BCT-OLC1.0P,BCT-
OLK2.0,BCT-OLK2.0P,BCT-OLK3.0,BCT-OLK3.0P,BCT-OLF-100W,BCT-OLJ2.0,
BCT-OLJ2.0P,BCT-OLF-25W-A,BCT-OLF-25W-B,BCT-OLF-15W-B,BCT-OLG3.0,BCT-OLA1.0S,
BCT-OLP1.0,BCT-OLG1.0,BCT-OLG1.0S,BCT-OLL1.0,BCT-SLL1.0,BCT-SCL1.0,BCT-OLF1.0S,
BCT-OLF3.0,BCT-OLF-15W-A,BCT-OLF-140W,BCT-SLG2.0-A,BCT-SLG2.0-B,BCT-SLG2.0-C,BCT-
OLF-15W,BCT-OLF-25W

TEST REPORT EN IEC 60598-1:2021 Luminaires— Part 1: General requirements and tests EN60598-2-3:2003/A1:2011 Part 2: Particular requirements— Luminaires for road and street lighting	
Report Number.	R202310251004S01
Compiled by (+ signature)	Andy Huang 
Approved by (+ signature)	Xu Peng 
Date of issue	Nov. 03, 2023
Testing Laboratory	Shenzhen STONG Testing Technology Service Co., Ltd.
Address	Room 201, Building 1, Anxu Business Park, No. 35-1, Xiangyin Road, Nanlian Community, Longgang Street, Longgang District, Shenzhen
Testing location	(Same as above)
Applicant's name	Blue Carbon Technology Inc.
Address	No.C1 Technology Innovation Center, High-Tech Zone, Rizhao, Shandong Province, China
Test specification: Standard EN IEC 60598-1:2021 EN 60598-2-3:2003/A1:2011 Test procedure Test Report Non-standard test method N/A	
Test Report Form No.: IEC60598_2_3E Test Report Form(s) Originator.....: Intertek Semko AB Master TRF	
2016-04 This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of STONG.	
Test item description Solar Street Light Trade Mark N/A Manufacturer Blue Carbon Technology Inc. Address No.C1 Technology Innovation Center, High-Tech Zone, Rizhao, Shandong Province, China Model/Type reference BCT-OLK3.0-B Model difference All models are the same as BCT-OLK3.0-B except model name and power size. Ratings Input: 5V $\overline{\text{---}}$, 180W By LiFePO4 Battery: 3.2V/200($\pm$ 5)Ah	

Particulars: test item vs. test requirements

Appliance mobility-----: Fixed appliance
Operating condition-----: Continuous operation
Class of appliance-----: Class III
Protection against ingress of water-----: IP66

Conditions:

Unless otherwise specified, the ambient temperature and humidity is: (25±5)°C, (50-60)%RH.

Test case verdicts

- test case does not apply to the test object: N
 - test object does meet the requirement.....: P (Pass)
 - test object does not meet the requirement: F (Fail)

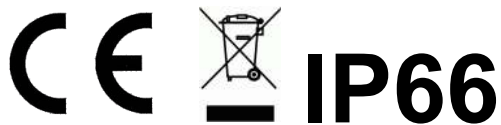
General remarks:

This test report shall not be reproduced except in full without the written approval of the testing laboratory.

1. The test results presented in this report relate only to the item tested.
2. "(see remark #)" refers to a remark appended to the report.
3. "(see appended table)" refers to a table appended to the report.
4. Test performed with models BCT-OLK3.0-B represent all models in the model list.
5. If client has any objection to the testing results, please advise us within 15 working days after publish, otherwise claims will not be accepted.

Artwork of Marking Label

Solar Street Light
Model: BCT-OLK3.0-B
Input: 5V $\overline{=}$, 180W
By LiFePO4 Battery: 3.2V/200($\pm$ 5)Ah



Blue Carbon Technology Inc.
Made In China



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.1 (0)	SCOPE		P
3.1 (0.1)	Luminaires for road, street lighting and other public outdoor lighting appliances	Street lighting	P
	Tunnel lighting	Not used for tunnel lighting	N
	Column-integrated luminaires with a minimum total height above normal ground level of 2.5m	Appliances are not column-integrated luminaires	N
	For use with electrical lighting sources on supply voltage not exceeding 1000V.	Rating: 5V=	P

3.4 (2)	CLASSIFICATION		P
3.4 (2.2)	Type of protection	Class III	—
3.4 (2.3)	Degree of protection	IP66	—
3.4 (2.4)	Portable or handheld luminaire	No, fixed luminaire	—
	Fixed luminaire suitable for normally flammable surfaces	Yes	—
	Fixed luminaire suitable for non-combustible materials only	No	—
3.4 (2.5)	Luminaire for normal use	Yes	—
	Luminaire for rough service	No	—

3.5 (3)	MARKING		P
3.5 (3.2)	Mandatory markings	See below	P
	Position of the marking	Top of metal cover	P
	Format of symbols/text		P
3.5 (3.2.1)	Mark of origin (this may take the form of a trade mark, the manufacturer's identification mark or the name of the responsible vendor).	Blue Carbon Technology Inc.	P
3.5 (3.2.2)	Rated voltage(s) in volts.	5V=	P
3.5 (3.2.3)	The rated maximum ambient temperature t_a , if other than 25 °C	Not specify.	N
3.5 (3.2.4)	Symbol for class II luminaires where applicable	Class III luminaires	N
3.5 (3.2.5)	Symbol for class III luminaires where applicable	Class III luminaires	N

EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.2.6)	Marking (if applicable) with IP numbers for degree of protection against ingress of dust, solid objects and moisture	IP66	P
3.5 (3.2.7)	Maker's model number or type reference.		P
3.5 (3.2.8)	Rated wattage or the designation as indicated on the lamp data sheet of the type or types of lamp for which the luminaire is designed.	See model list	P
3.5 (3.2.9)	Where applicable, the relevant symbol for luminaires not suitable for direct mounting on normally flammable surfaces.	Suitable for direct mounting on normally flammable surfaces	N
3.5 (3.2.10)	Information concerning special lamps, if applicable.	Not connect to special lamps.	N
3.5 (3.2.11)	Symbo, if applicable, for luminaires for lamps of similar shape to "cool beam" lamps	Not applicable.	N
3.5 (3.2.12)	Except for type Z attachments, terminations shall be marked to identify live, neutral and earth	Leads (tails) used for the connection to supply, and manufacturers instructions provided	N
3.5 (3.2.13)	Symbol for minimum distance from lighted objects	Not applicable.	N
3.5 (3.2.14)	Symbol, if applicable, for rough service luminaires.	Normal service luminaires	N
3.5 (3.2.15)	Symbol, if applicable, for luminaires which are designed for use with bowl mirror lamps.	Don't used with mirror lamps.	N
3.5 (3.2.16)	Luminaires incorporating a protective shield	No protective shield.	N
3.5 (3.2.17)	The maximum number of luminaires that may be interconnected or the maximum total current that may be drawn by means of couplers provided for looping-in connection to the mains supply.	Unit can not be looping-in connected to the mains supply.	N
3.5 (3.2.18)	A warning symbol or notice for luminaires with ignitors intended for use with doubleended high pressure discharge lamps and luminaires with double-capped Fa8 tubular lamps	Don't used with doubleended high pressure discharge lamps or tubular lamps.	N
3.5 (3.2.19)	Symbol, for luminaires which are designed to be used only with self-shielded tungsten halogen lamps or self-shielded metal halide lamps.	Don't used with above lamps.	N
3.5 (3.2.20)	Where necessary, the means of adjustment where not obvious, needs to be identify	Luminaire can not be adjusted	N
3.5 (3.2.21)	The relevant symbol for luminaires not suitable for covering with thermally insulated material.	See clause 3.4	N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.2.22)	Symbol, if applicable, for luminaires with internal replaceable fuses.	No replaceable fuse.	N
3.5 (3.3)	Additional information	See below	P
	Language of instructions	English	P
3.5 (3.3.1)	Combination luminaires	Appliances are not combination luminaires	N
3.5 (3.3.2)	Nominal frequency in Hz		N
3.5 (3.3.3)	Operating temperature	Not specify.	N
3.5 (3.3.4)	Symbol or warning notice	See clause 3.4	N
3.5 (3.3.5)	Wiring diagram	See the marking	P
3.5 (3.3.6)	Special conditions	See the mounting instructions	P
3.5 (3.3.7)	Metal halid lamp luminaire – warning	No metal halid lamp luminaire	N
3.5 (3.3.8)	Limitation for semi-luminaires	Appliances are not luminaires.	N
3.5 (3.3.9)	Power factor and supply current	0.92PF	P
3.5 (3.3.10)	Suitability for use indoors	Outdoor use	N
3.5 (3.3.11)	Luminaires with remote control	Can not remote control.	N
3.5 (3.3.12)	Clip-mounted luminaire - warning	Luminaires are not clip-mounted type.	N
3.5 (3.3.13)	Specifications of protective shields	No protective shields.	N
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet	No socket outlet	N
3.5 (3.3.16)	Rough service luminaire	Not used for rough service	N
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	type Y, see mounting instructions	P
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable	Input lead cable suitable for outdoor use.	N
3.5 (3.3.19)	Protective conductor current greater than 10 mA and intended for permanent connection	Protective conductor current less then 10mA.	N
3.5 (3.3.20)	Wall mounted and adjustable luminaires not intended to be mounted within arms reach	Appliances are not wall mounted or adjustable luminaires.	N
3.5 (--)	All relevant information provided on the instruction leaflet		P

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EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (--)	a) design altitude (normal operating position);	Between 4m and 15m	P
3.5 (--)	b) weight including control gear if any;	3.8kg	P
3.5 (--)	c) overall dimensions;	See mounting instructions	P
3.5 (--)	d) if intended for mounting more than 8 m above ground level, the maximum projected area subjected to wind force	Ditto	P
3.5 (--)	e) the range of cross-sectional areas of suspension wires suitable for the luminaire, if applicable;	Not applicable.	N
3.5 (--)	f) suitability for use indoors provided the 10 °C, allowed for the effects of natural air movement, has not been deducted from measured temperature (see 3.12.1);	Outdoor use.	N
3.5 (--)	g) dimensions of the compartment in which the connection box is placed;	No connection box.	N
3.5 (--)	h) the torque setting in newton metres to be applied to any bolts or screws which fix the luminaire to its support.	No mandatory requirements	N
3.5 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test		P
	Label attached		P

3.6 (4)	CONSTRUCTION		P
3.6.1 (--)	At least IP X3	IP66	P
3.6.2 (--)	Suspension on span wires	Luminaires not suspension on span wires.	N
3.6.3 (--)	Fixing device	See below	P
3.6.3.1 (--)	Static load test		P
	- . drag coefficient	1.2	—
	- . loaded area	0.275 m ²	—
	- . used load	560N	—
	-measured deformation	<0.05cm/m	—
	- . no rotation		P
3.6.4 (--)	Adjustable lampholders	No lampholder.	N
3.6.5 (--)	Glass cover	No glass cover	N

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EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	-. means of protection		N
	-. number of particles		N
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
3.6 (4.4.1)	Integral lampholder	No lampholder.	N
3.6 (4.4.2)	Wiring connection		N
3.6 (4.4.3)	Lampholder for end-to-end mounting		N
3.6 (4.4.4)	Positioning		N
3.6 (4.4.5)	Peak pulse voltage		N
3.6 (4.4.6)	Centre contact		N
3.6 (4.4.7)	Rough service luminaires		N
3.6 (4.4.8)	Lamp connectors		N
3.6 (4.5)	Starter holders		N
	Starter holder in luminaires other than class II	No starter holder	N
	Starter holders class II construction		N
3.6 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		N
3.6 (4.7)	Terminals and supply connections		P
3.6 (4.7.1)	Contact to metal parts	Appliance are not portable luminaire	N
3.6 (4.7.2)	Test 8 mm live conductor	No hazard	P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors	Connecting leads, detailed in section 5.	N
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N
3.6 (4.7.6)	Multi-pole plug		N
3.6 (4.8)	Switches:		P
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		N

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EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.9)	Insulating lining and sleeves		N
3.6 (4.9.1)	Retention	No insulating lining and sleeves	N
	Method of fixing		N
3.6 (4.9.2)	Insulated linings and sleeves		N
	a) & c) Insulation resistance and electric strength		N
	b) Ageing test. Temperature (°C).....:		N
3.6 (4.10)	Insulation of Class II luminaires		N
3.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation	Class III luminaire	N
	Safe installation fixed luminaires		N
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
3.6 (4.10.2)	Assembly gaps:		N
	- not coincidental		N
	- no straight access with test probe		N
3.6 (4.10.3)	Retention of insulation:		N
	- fixed		N
	- unable to be replaced; luminaire inoperative		N
	- sleeves retained in position		N
	- lining in lampholder		N
3.6 (4.11)	Electrical connections		P
3.6 (4.11.1)	Contact pressure	Contact pressure transmitted through metallic material	P
3.6 (4.11.2)	Screws:		P
	- self-tapping screws	No self-trapping screw used.	N
	- thread-cutting screws	No thread-cutting screws	N
	- at least two self-tapping screws		N
3.6 (4.11.3)	Screw locking:		P
	- spring washer	Spring washer used.	P
	- rivets	No rivets	N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.11.4)	Material of current-carrying parts	stainless steel	P
3.6 (4.11.5)	No contact to wood		P
3.6 (4.11.6)	Electro-mechanical contact systems	No elector-mechanical contact system	N
3.6 (4.12)	Mechanical connections and glands		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws shall not be of insulating material	Metallic material	P
	Torque test: torque (Nm); part:	1.2 Nm, Screw used to provide earthing continuity	P
	Torque test: torque (Nm); part:	1.2 Nm, Screw used to electrical connection	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal	Diameter=3.8mm and screw into metal.	P
3.6 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm):	Checked by torque test 2.5 Nm	P
	- lampholder; torque (Nm).....:	No lampholder	N
	- push-button switches; torque 0,8 Nm:		P
3.6 (4.12.5)	Screwed glands; force (N):	No screwed glands.	N
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm):	0.5 Nm	—
	- other parts; energy (Nm).....:	0.70 Nm	—
	1) live parts		P
	2) linings	See clause 3.6 (4.9.1)	N
	3) protection	Test performed on enclosure of appliance.	P
	4) covers		P
3.6 (4.13.3)	Straight test finger	Can not touch live parts.	P
3.6 (4.13.4)	Rough service luminaires		N
	a) fixed	Appliances are normal service luminaries.	N
	b) hand-held		N
	c) delivered with a stand		N

EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	d) for temporary installations and suitable for mounting on a stand		N
3.6 (4.13.6)	Tumbling barrel		N
3.6 (4.14)	Suspensions and adjusting devices		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	$3.8 \times 4 = 15.2\text{kg}$, 1 hour	P
	B) torque 2,5 Nm	Units are not this kind of luminaires.	N
	C) bracket arm; bending moment (Nm)....:	Ditto	N
	D) load track-mounted luminaires	Ditto	N
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	Ditto	N
	metal rod. Diameter (mm)		N
3.6 (4.14.2)	Load to flexible cables		N
	Mass (kg)	Luminaires are not suspended by flexible cables or cords	N
	Stress in conductors (N/mm ²)		N
3.6 (4.14.3)	Adjusting devices:		N
	- flexing test; number of cycles	No adjustment device.	N
	- strands broken		N
	- electric strength test afterwards		N
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	No telescopic tube.	N
3.6 (4.14.5)	Guide pulleys	No guide pulleys.	N
3.6 (4.14.6)	Strain on socket-outlets	No socket-outlet.	N
3.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C		P
	- spacing ≥ 30 mm	Parts can withstand the glow-wire test with 650°C	N
	- screen withstanding test of 13.3.1	Ditto	N
	- no fiercely burning material	Ditto	N
	- thermal protection	Ditto	N
	- electronic circuits exempted	Ditto	N
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	a) construction	Approved lamp control gears are independent type, and have a metallic enclosure with no opening	N
	b) temperature sensing control		N
	c) surface temperature		N
3.6 (4.16)	Luminaires marked with F-symbol		P
	No lamp control gear	Lamp control gear used.	N
3.6 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm	Approved lamp control gears which suitable for mount on normally flammable surfaces are independent type, and have a metallic enclosure with no opening.	P
	- spacing 10 mm		N
3.6 (4.16.2)	Thermal protection:		N
	- in lamp control gear	No thermal proection	N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
3.6 (4.16.3)	"F" curve measured	No "F" mark.	N
3.6 (4.17)	Drain holes	No drain holes.	N
	Clearance at least 5 mm		N
3.6 (4.18)	Resistance to corrosion:		P
3.6 (4.18.1)	- rust-resistance	All the screws are made of stainless steel, and other metallic material cover with rust-resistant paint, and pass the test.	P
3.6 (4.18.2)	- season cracking in copper		N
3.6 (4.18.3)	- corrosion of aluminium		N
3.6 (4.19)	Ignitors compatible with ballast	No ignitors.	N
3.6 (4.20)	Rough service vibration	Normal service luminaires	N
3.6 (4.21)	Protective shield:		N
3.6 (4.21.1)	Shield fitted	No shield	N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
3.6 (4.21.3)	No direct path		N
3.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
3.6 (4.22)	Attachments to lamps	No attachments	N
3.6 (4.23)	Semi-luminaires comply class II	Not a semi-luminaire	N
3.6 (4.24)	UV radiation, metal halide lamps	Not designed for tungsten halogen lamps and metal halide lamps	N
3.6 (4.25)	No sharp point or edges		P
3.6 (4.26)	Short-circuit protection:		N
3.6 (4.26.1)	Uninsulated accessible SELV parts	No uninsulated accessible SELV parts	N
3.6 (4.26.2)	Short-circuit test		N
3.6 (4.26.3)	Test chain according to IEC 61032		N

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		p
	Working voltage (V)	5V	—
	Voltage form		—
	PTI	PTI ≥ 600	—
	Rated pulse voltage (kV).....		
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm) :		N
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm).....		N
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm)		N
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm).....		N
	(5) Current-carrying parts of switches and metal parts, after removal of insulation: cr (mm); cl (mm).....		N

3.8 (7)	PROVISION FOR EARTHING	P
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EN 60598-1& EN 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	0.112 Ω	P
	Two self-tapping screws used	No self-tapping screws used.	N
	Thread-forming screws	No thread-forming screws used.	N
	Connector earthing first		P
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N
3.8 (7.2.4)	Locking of clamping means	screw terminals	P
	Compliance with 4.7.3	See clause 4.7.3	P
3.8 (7.2.5)	Earth terminal integral part of connector socket	Independent terminal	N
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P
3.8 (7.2.10)	Class II luminaire for looping-in	Class III luminaires	N
3.8 (7.2.11)	Earthing core coloured green-yellow		P

3.9 (14)	SCREW TERMINALS		P
3.9 (-)	Additional requirements		P
3.9 (14)	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	P

3.9 (15)	SCREWLESS TERMINALS		N
	Separately approved; component list	No screwless terminals	N
	Part of the luminaire		N

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



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.2)	Type of cable	See list of critical components	P
	Nominal cross-sectional area (mm ²)	Ditto	P
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
3.10 (5.2.5)	Type Z not connected to screws	Type Y	N
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction	Cord anchorage provided as a protective device	P
	- adequate degree of protection	comply with IP66	P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N
	- suitably fixed	No insulation bushing.	N
	- material in bushings		N
	- tubes or guards made of insulating material		N
3.10 (5.2.9)	Locking of screwed bushings	No insulation bushing.	N
3.10 (5.2.10)	Cord anchorage:		P
3.10.1 (-)	- additional requirements		P
3.10 (5.2.10)	- 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	Insulation material	P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N
	a) at least one part fixed	Type Y	N
	b) types of cable		N
	c) no damaging of the cable		N
	d) whole cable can be mounted		N
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		N
	Glands not used as anchorage		N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Labyrinth type anchorages		N
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)	80 N, 25times.	P
	- torque test: torque (Nm).....	0.35 Nm	P
	- displacement ≤ 2 mm	<0.1mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
3.10 (5.2.11)	External wiring passing into luminaire	Lead wire comply with the requirements.	P
3.10 (5.2.12)	Looping-in terminals	No loop-in terminals	N
3.10 (5.2.13)	Wire ends not tinned	Not tinned	N
	Wire ends tinned: no cold flow		N
3.10 (5.2.14)	Mains plug same protection	No mains plug.	N
	Class III luminaire plug		N
3.10 (5.2.15)	Not used.		N
3.10 (5.2.16)	Appliance inlets (IEC 60320)	No inlet	N
	Appliance couplers of class II type		N
3.10 (5.3)	Internal wiring		P
3.10 (5.3.1)	Internal wiring of suitable size and type	See list of critical components	P
	Through wiring		N
	- not delivered/ mounting instruction	Not used for through wiring.	N
	- factory assembled		N
	- socket outlet loaded (A)		N
	- temperatures		N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Green-yellow for earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)	See list of critical components	P
	Insulation thickness	Ditto	P
	Extra insulation added where necessary	No extra insulation added.	N
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N
	Adequate cross-sectional area and insulation thickness	No current limiting device.	N
3.10 (5.3.1.)	Double or reinforced insulation for class II	Class III	N
3.10 (5.3.1.)	Conductors without insulation		P
3.10 (5.3.1.)	SELV current-carrying parts	Insulated, comply with clause 10	P
3.10 (5.3.1.)	Insulation thickness other than PVC or rubber	Approved by UL, and comply with the requirements.	P
3.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		P
	Telescopic tubes etc.		P
	No twisting over 360°		P
3.10 (5.3.3)	Openings	No opening	N
	Bushings not removable		N
	Bushings in sharp openings		N
	Cables with protective sheath		N
3.10 (5.3.4)	Joints and junctions effectively insulated	Terminal block provided.	N
3.10 (5.3.5)	Strain on internal wiring	See clause 5.2	P
3.10 (5.3.6)	Wire carriers		N
3.10 (5.3.7)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N
3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P

EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.1)	Live parts not accessible	Protected by earthed enclosure.	P
	Protection in any position		P
	Double-ended tungsten filament lamp	Not for double-ended tungsten filament lamp	N
	Insulation lacquer not reliable	Lacquer not use for insulation function.	P
	Double-ended high pressure discharge lamp	Not for double-ended high pressure discharge lamp	N
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position	Fixed luminaires	N
3.11 (8.2.3)	Class II luminaire:		N
	- basic insulated metal parts not accessible during starter or lamp replacement	Class III luminaire	N
	- basic insulation not accessible other than during starter or lamp replacement		N
	- glass protective shields not used as supplementary insulation		N
	Class I luminaire with BC lampholder		N
3.11 (8.2.4)	Portable luminaire:		N
	- protection independent of supporting surface	Fixed luminaire	N
	- terminal block completely covered		N
3.11 (8.2.6)	Covers reliably secured	Secured by screws.	P
3.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$	No discharging capacitors	N
	Portable plug connected luminaire with capacitor		N
	Other plug connected luminaire with capacitor		N
	Discharge device on or within capacitor		N
	Discharge device mounted separately		N

3.12 (12)	ENDURANCE TEST AND THERMAL TEST		p
3.12 (12.3)	Endurance test:		P
	- mounting-position	Normal flammable surfaces	—
	- test temperature (°C)	See appended table	—



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- total duration (h).....:	240h	—
	- supply voltage: Un factor; calculated voltage (V).....:	See appended table	—
	- lamp used	LED	—
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		P
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)		P
3.12.1 (-)	Temperature reduction		N
3.12 (12.5)	Thermal test (abnormal operation)		P
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N
3.12 (12.6.1)	- case of abnormal conditions	Approved lamp control gear	N
	- electronic lamp control gear		N
	- measured winding temperature (°C): at 1,1 Un		N
	- measured mounting surface temperature (°C): at 1,1 Un		N
	- calculated mounting surface temperature (°C)		N
	- track-mounted luminaires		N
3.12 (12.6.2)	Temperature sensing control		N
	- case of abnormal conditions	No temperature sensing control	N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured mounting surface temperature (°C):		N
	- track-mounted luminaires		N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N
	- case of abnormal conditions	luminaires with a metallic housing	N
3.12.(12.7)	- measured winding temperature (°C) at 1,1 Un		N
	- measured temperature of fixing point/ exposed part (°C): at 1,1 Un		N
	- calculated temperature of fixing point/ exposed part (°C).....		N
3.12 (12.7)	Temperature sensing control		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured temperature of fixing point/ exposed part (°C):		N

3.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP66	—
	- mounting position during test.....	outdoor	—
	- electric strength test afterwards	No breakdown	P
3.13 (9.3)	Humidity test 48 h	28°C, 95%	P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
3.14 (10.2)	Insulation resistance test		P
	Insulation resistance (MΩ):		P
	SELV:		P
	- between current-carrying parts of different polarity	>100M	P
	- between current-carrying parts and mounting surface	>100M	P
	- between current-carrying parts and metal parts of the luminaire	>100M	P
	Other than SELV:		P
	- between live parts of different polarity ...:	See appended table	P



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts and mounting surface :		P
	- between live parts and metal parts		P
	- between live parts of different polarity through action of a switch		P
3.14 (10.2)	Electric strength test		P
	Dummy lamp	No ignitors and lampholders	N
	Luminaires with ignitors after 24 h test	No ignitors	N
	Luminaires with manual ignitors		N
	Test voltage (V):		P
	SELV:		P
	- between current-carrying parts of different polarity	500V	P
	- between current-carrying parts and mounting surface	500V	P
	- between current-carrying parts and metal parts of the luminaire	500V	P
	Other than SELV:		P
	- between live parts of different polarity ..:	1480V	P
	- between live parts and mounting surface :	1480V	P
	- between live parts and metal parts	1480V	P
	- between live parts of different polarity through action of a switch	1480V	P
3.14 (10.3)	Leakage current (mA)	See appended table.	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
3.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C)	Terminals approved with VDE mark and comply with DIN VDE 0627/06 and IEC60695	N
	- part tested; temperature (°C)	Plastic cover, 75°C	P
3.15 (13.3.1)	Needle flame test (10 s):		N



EN 60598-1& EN 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- part tested.....:	PCB approved with UL mark, and comply with UL94	N
	- part tested.....:		N
3.15 (13.3.2)	Glow-wire test (650°C):		P
	- part tested.....:	Plastic cover, 650°C	P
	- part tested.....:		N
3.15 (13.4.1)	Tracking test: part tested		N

Attachment	TABLE: List of Critical Components			P
Part	Manufacturer	Type/model	Technical data	Certified mark
PCB	Various	Various	V-0,105°C Min.	UL
Plastic Enclosure	Various	Various	V-0,85°C Min.	UL
Power Supply Cord	Various	Various	2x1.5mm ²	VDE
Internal Wire	Various	Various	VW-1,300V~ 80°C Min.	UL
Pri. Winding of Transformer	Various	Various	130°C Min.	UL
Sec. Winding of Transformer	Various	Various	130°C Min.	UL
Bobbin of Transformer	Various	Various	V-0,130°C Min.	UL
Power Switch of Convert	Various	Various	3A, 250V~	VDE
Outlet of Convert	Various	Various	15A, 250V~	VDE

4.13	Impact test			P
Test location	Test energy(Nm)	times	Result	
Fragile parts	0.5	3	No damage	
Other parts	0.7	3	No damage	
Remark: 500Vdc for 1 min,				

10.2.1	Insulation resistance		P
Test applied between	Measured (MΩ)	Allowed (MΩ)	
Input to metal enclosure	>100MΩ	2MΩ	
Remark: 500Vdc for 1 min,			

10.2.2	Electric strength tests		P
Test voltage applied between	Test voltage (V)	Breakdown (Yes/No)	
Input to metal enclosure	500V	No	
Remark: A voltage of substantially sine-wave form, having a frequency of 50 Hz are applied for 1 min.			

10.3	Leakage test	P
Test location	test	allow
Input -- metal enclosure	0.46mA	3.5mA

12.4, 12.5	TABLE: Temperature measurements	P
	Supply wattage (W)	95W
	Supply current (A)	1.393A
	Calculated power factor	0.96PF
	Test 1: Rated voltage	DC 5V
	Test 2: 1.06 times rated voltage or 1.05 times rated wattage	1.06 times rated voltage, 5.3Vdc
	Test 3: load on wiring to socket-outlet, 1.06 times voltage 1.05 times rated wattage	—
	Test 4: 1.1 times voltage 1.05 times rated wattage	1.1 times voltage 5.5Vdc

Model:

Attachment	TABLE temperature rise measurements	P
	Test voltage and Frequency(Vac/Hz)	DC5V
	T1(°C)	25.3
Temperature rise dT of part/at:	T(°C)	Limit T(°C)
Input Terminal of Control	63.5	80
PCB Near U6 of Control	61.4	105
Plastic Enclosure Inside of Control	62.1	85
Switch of Control	61.2	85
Input Wire of Convert	63.2	85
Core of Transformer for Convert	72.3	110
Winding of Transformer for Convert	76.9	110
Internal Wire of Convert	66.9	85
Output Wire of Convert	63.5	85
PCB Near Transformer of Convert	65.0	105
Outlet Body of Convert	62.2	85
Switch of Convert	62.5	85
Metal Enclosure for Convert	62.8	90
Input Terminal of Rectifier	68.8	80
EC of Rectifier	85.4	105
Core of Transformer for Rectifier	90.3	110
Winding of Transformer for Rectifier	91.9	110
Plastic Enclosure of Rectifier, Inside	82.1	85
Metal Enclosure of Rectifier, Inside	84.7	90
Ceramic Enclosure of Lamp	83.5	90
Battery Body	60.8	80

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Ambient			25.1		---	
Remark: Tma is 60°C in user's manual.						
Winding temperature rise measurements:						
Insulation class						
Temperature rise dT of winding:	R1(Ω)	R2(Ω)	DT(K)	Required dT(K)	Insulation class	
Remark:						

PHOTOS

Photo 1 of EUT



Photo 2 of EUT

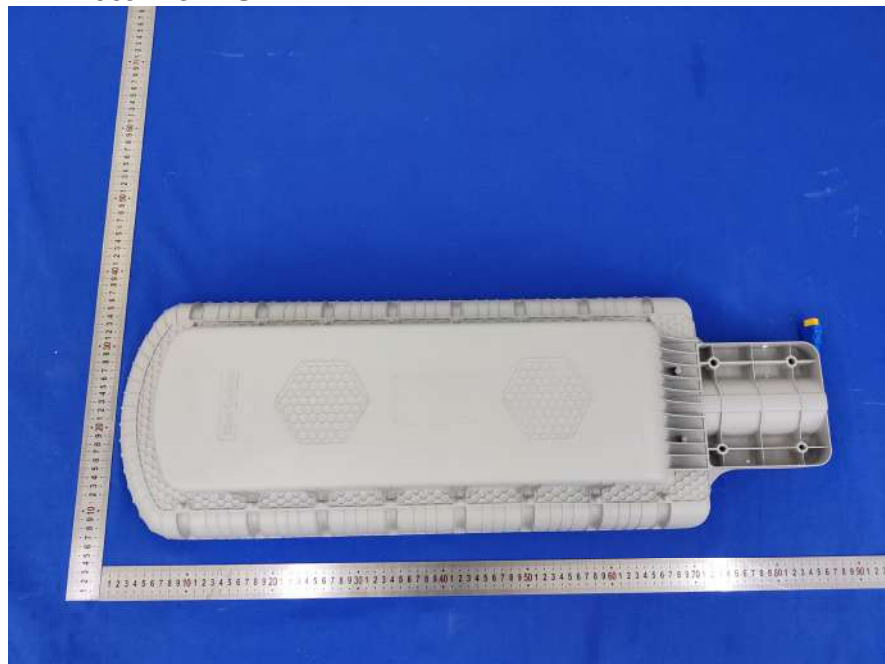


Photo 3 of EUT



Photo 4 of EUT

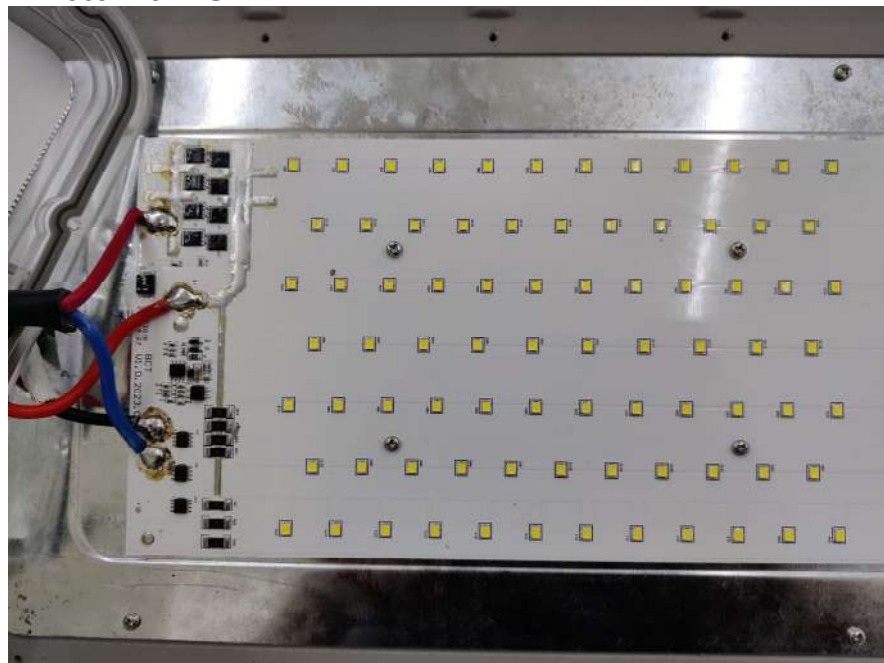


Photo 5 of EUT

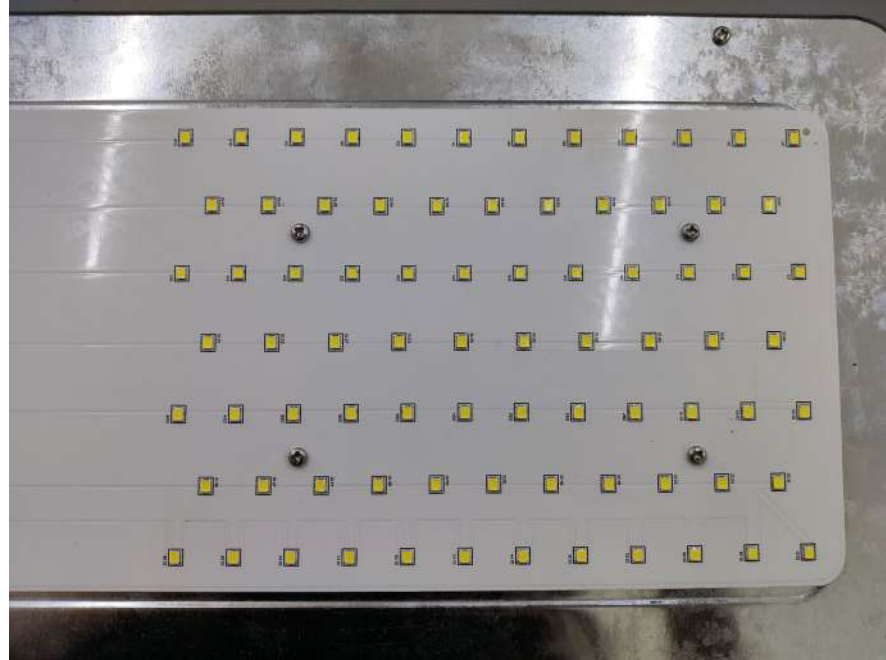


Photo 6 of EUT

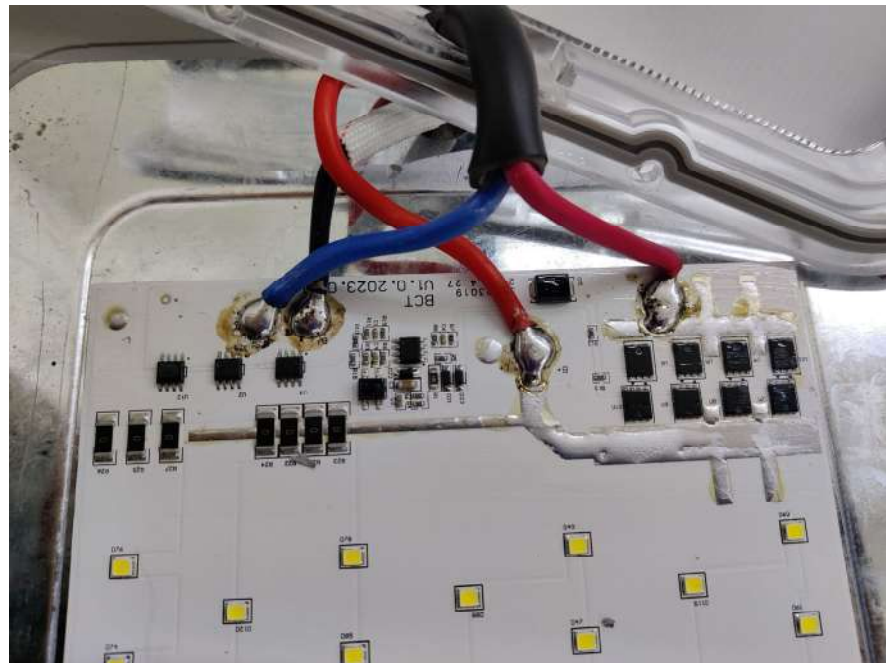


Photo 7 of EUT



END OF REPORT