

Test Report

Applicant: Yuyao Four Star Lamps Co.,Ltd.

Product: Garden LAMP

Brand Name: N/A

Model No: 7701, Other models see the appendix 3 model list

Prepared by: Most Technology Service Co., Limited

The safety testing has been performed on the submitted samples and found in compliance with the council LVD directive 2014/35/EU.

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TEST REPORT

EN 60598-1: 2008+A11:2009 Luminaires - Part 1: General requirements and tests

EN 60598-2-1: 1989 Luminaires - Part 2: Particular requirements –

Section 1: Fixed general purpose luminaires

Report Reference No. : MTS/ZNC/A15040195-1

Complied by (+signature).....: Eric Zheng



Eric Zheng

Approved by (+signature).....: Jack Cheng

Jack Cheng

Date of issue.....: March 9, 2016

Testing Laboratory : **Most Technology Service Co., Limited**

Address.....: No. 5, 2nd Langshan Road, North District, Hi-tech Industry Park, Nanshan, Shenzhen, Guangdong, China

Applicant's name..... : Yuyao Four Star Lamps Co.,Ltd.

Address.....: CN6,Far East Industrial Park Yuyao ,Zhejiang P.R.China

Test specification:

Standard: EN 60598-2-1:1989 used in conjunction with EN 60598-1:2015 (Eighth Edition)

Test procedure.....: LVD

Non-standard test method.....: N/A

Test item description : Garden LAMP

Trade Mark: N/A

Manufacturer.....: Yuyao Four Star Lamps Co.,Ltd.

Address: CN6,Far East Industrial Park Yuyao ,Zhejiang P.R.China

Model/Type reference.....: 7701, Other models see the appendix 3 model list

Ratings.....: AC 220-240V, 50/60Hz, 40W

Test item particulars	
Classification of installation and use	Fixed
Supply Connection	N/A
Protection Class	Class I
Degree of protection against ingress of dust and liquid:	IP33
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.....	2015-04-03
Date (s) of performance of tests	2015-04-03 to 2015-04-15
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF. Throughout this report a comma is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1 The manufacturer / importer have to ensure the appliance conforms to EMC Directive 2004/108/EC and its amendments.	
General product information:	
Remark 1:	
-The Garden LAMP are used for outdoor, and filament lamp used. -All the models are the same except the model name, Use 7701 does all tests. -This report bases on report No. MTS/ZNC/A15040195-1, while adds several models. And all these models are the same with the former serial model, in additional to the appearance. Copy of marking plate (representative)	
Garden LAMP Model: 7701 Rating: AC 220-240V, 50/60Hz, 40W   Yuyao Four Star Lamps Co.,Ltd	

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

1.2 (0)	GENERAL TEST REQUIREMENTS		P
1.2 (0.1)	Information for luminaire design considered	Standard Yes ☒ No ☐	—
1.2 (0.3)	More sections applicable	Yes ☒ No ☐	—

1.4 (2)	CLASSIFICATION		—
1.4 (2.2)	Type of protection	Class I	—
1.4 (2.3)	Degree of protection (Requirement: Ordinary)	IP33	—
1.4 (2.4)	Luminaire only suitable for non-combustible surfaces	Yes ☐ No ☒	—
	Luminaire suitable for normally flammable surfaces	Yes ☒ No ☐	—
	Luminaire suitable to be covered by insulating material	Yes ☒ No ☐	—
1.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—

1.5 (3)	MARKING		P
1.5 (3.2)	Mandatory markings	See the label	P
	Position of the marking		P
	Format of symbols/text		P
1.5 (3.3)	Additional information		P
	Language of instructions	English	P
1.5 (3.3.1)	Combination luminaires		N/A
1.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
1.5 (3.3.3)	Operating temperature		N/A
1.5 (3.3.4)	Symbol or warning notice		N/A
1.5 (3.3.5)	Wiring diagram		N/A
1.5 (3.3.6)	Special conditions		N/A
1.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.5 (3.3.8)	Limitation for semi-luminaires		N/A
1.5 (3.3.9)	Power factor and supply current		P
1.5 (3.3.10)	Suitability for use indoors		P
1.5 (3.3.11)	Luminaires with remote control		N/A
1.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.5 (3.3.13)	Specifications of protective shields	See the manual	P

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Clause	Requirement + Test	Result - Remark	Verdict
1.5 (3.3.14)	Symbol for nature of supply		P
1.5 (3.3.15)	Rated current of socket outlet		N/A
1.5 (3.3.16)	Rough service luminaire		N/A
1.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.5 (3.3.19)	Generate a protective conductor current greater than 10mA and intended for permanent connection		N/A
1.5 (3.3.20)	Wall mounted and adjustable luminaires not intended to be mounted within arms reach		N/A
1.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P

1.6 (4)	CONSTRUCTION		P
1.6 (4.2)	Components replaceable without difficulty		P
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	Lampholders		P
1.6 (4.4.1)	Integral lampholder		P
1.6 (4.4.2)	Wiring connection		P
1.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.6 (4.4.4)	Positioning		P
	- pressure test (N)		N/A
	- bending test (Nm)	E27, 2.0Nm	P
1.6 (4.4.5)	Peak pulse voltage		N/A
1.6 (4.4.6)	Centre contact		N/A
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.6 (4.4.8)	Lamp connectors		P
1.6 (4.4.9)	Caps and bases correctly used		P
1.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.7)	Terminals and supply connections		P
1.6 (4.7.1)	Contact to metal parts		P
1.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
1.6 (4.7.3)	Terminals for supply conductors		P
1.6 (4.7.3.1)	Welded connections:		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 15.8.2		N/A
	- electrical test according to 15.9		N/A
	- heat test according to 15.9.2.3 and 15.9.2.4		N/A
1.6 (4.7.4)	Terminals other than supply connection		N/A
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.6 (4.8)	Switches:		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with 61058-1 for electronic switches		N/A
1.6 (4.9)	Insulating lining and sleeves		--
1.6 (4.9.1)	Retainment		N/A
	Method of fixing		N/A
1.6 (4.9.2)	Insulated linings and sleeves		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C)		N/A
1.6 (4.10)	Insulation of Class II luminaires		N/A
1.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
1.6 (4.10.2)	Assembly gaps:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- not coincidental		N/A
	- no straight access with test probe		N/A
1.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
1.6 (4.11)	Electrical connections		P
1.6 (4.11.1)	Contact pressure		P
1.6 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread-cutting screws		N/A
	- at least two self-tapping screws		N/A
1.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
1.6 (4.11.4)	Material of current-carrying parts		P
1.6 (4.11.5)	No contact to wood		P
1.6 (4.11.6)	Electro-mechanical contact systems		N/A
1.6 (4.12)	Mechanical connections and glands		P
1.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part	0.6Nm, Metal enclosure	P
	Torque test: torque (Nm); part		N/A
	Torque test: torque (Nm); part		N/A
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.6 (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
1.6 (4.12.5)	Screwed glands; force (N)		N/A
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)		N/A
	- other parts; energy (Nm)	0.35Nm	P

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Clause	Requirement + Test	Result - Remark	Verdict
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
1.6 (4.13.2)	Metal parts enclosing live parts		N/A
1.6 (4.13.3)	Straight test finger	30N	P
1.6 (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
1.6 (4.13.6)	Tumbling barrel		N/A
1.6 (4.14)	Suspensions and adjusting devices		P
1.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
1.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		N/A
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
1.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles	150 times	P
	- strands broken		N/A
	- electric strength test afterwards		N/A
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.14.5)	Guide pulleys		N/A
1.6 (4.14.6)	Strain on socket-outlets		N/A
1.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C		N/A
	- spacing $\geq$ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
1.6 (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
1.6 (4.16)	Luminaires marked with F-symbol		N/A
	No lamp control gear		N/A
1.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.6 (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
1.6 (4.16.3)	"F" curve measured		N/A
1.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
1.6 (4.18)	Resistance to corrosion:		N/A
1.6 (4.18.1)	- rust-resistance		N/A
1.6 (4.18.2)	- season cracking in copper		N/A
1.6 (4.18.3)	- corrosion of aluminium		N/A
1.6 (4.19)	Ignitors compatible with ballast		N/A
1.6 (4.20)	Rough service vibration		N/A
1.6 (4.21)	Protective shield:		N/A
1.6 (4.21.1)	Shield fitted		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.6 (4.21.3)	No direct path		N/A
1.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment		N/A
1.6 (4.22)	Attachments to lamps		N/A
1.6 (4.23)	Semi-luminaires comply Class II		N/A
1.6 (4.24)	UV radiation, metal halide lamps		N/A
1.6 (4.25)	No sharp point or edges		P
1.6 (4.26)	Short-circuit protection:		N/A
1.6 (4.26.1)	Uninsulated accessible SELV parts		N/A
1.6 (4.26.2)	Short-circuit test		N/A
1.6 (4.26.3)	Test chain according to Figure 29		N/A
1.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A

1.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V)	240V~	—
	Voltage form	Sinusoidal ☒ Non-sinusoidal ☐	—
	PTI	< 600 ☒ > 600 ☐	—
	Rated pulse voltage (kV)	2.5KV	—
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)	Cr :3.9 mm; cl:3.9mm	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm)	Cr: 5.4 mm; cl: 5.4mm	P
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm):		N/A
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm)		N/A
	(5) Not used		—
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)		N/A

1.8 (7)	PROVISION FOR EARTHING		P
1.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	0.1 Ω	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Two self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		P
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		P
1.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
1.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
1.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
1.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		N/A
1.9(14)	TERMINALS		P
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	P
1.9(15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 4)	N/A
1.10 (5)	EXTERNAL AND INTERNAL WIRING		P
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection..... :	Supply cords	P
1.10 (5.2.2)	Type of cable :		P
	Nominal cross-sectional area (mm²)..... :	0.75mm²	P
	Cables equal to IEC 60227 or IEC 60245		N/A
1.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
1.10 (5.2.5)	Type Z not connected to screws		P
1.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- tubes or guards made of insulating material		N/A
1.10 (5.2.9)	Locking of screwed bushings		N/A
1.10 (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
1.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
1.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) : 60N		P
	- torque test: torque (Nm) : 0.15Nm		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
1.10 (5.2.11)	External wiring passing into luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.2.12)	Looping-in terminals		N/A
1.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
1.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Appliance couplers of class II type		N/A
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
1.10 (5.3)	Internal wiring		P
1.10 (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 :		N/A
	Green-yellow for earth only		P
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²) :		N/A
	Insulation thickness		N/A
	Extra insulation added where necessary		N/A
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Adequate cross-sectional area and insulation thickness		N/A
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
1.10 (5.3.1.4)	Conductors without insulation		N/A
1.10 (5.3.1.5)	SELV current-carrying parts		N/A
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
1.10 (5.3.2)	Sharp edges etc.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		P
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
1.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
1.10 (5.3.4)	Joints and junctions effectively insulated		N/A
1.10 (5.3.5)	Strain on internal wiring		N/A
1.10 (5.3.6)	Wire carriers		N/A
1.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A

1.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
1.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	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
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.11 (8.2.3)	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
	Class I luminaire with BC lampholder		N/A
1.11 (8.2.4)	Portable luminaire:		N/A
	- protection independent of supporting surface		N/A
	- terminal block completely covered		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		P
1.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$	No such capacitor used	N/A
	Portable plug connected luminaire with capacitor		N/A
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A

1.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
1.12 (12.3)	Endurance test:		N/A
	- mounting-position	As in normal use	—
	- test temperature (°C).....	35°C	—
	- total duration (h)	240h	—
	- supply voltage: Un factor; calculated voltage (V):	252.5V	—
	- lamp used.....	Filament lamp	—
1.12 (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
1.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.12 (12.5)	Thermal test (abnormal operation)		N/A
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
1.12 (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
1.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
1.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
1.12 (12.7.1)	Luminaire without temperature sensing control		N/A
1.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex V..... :		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V) :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex V:		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:		N/A
	- part tested; temperature (°C) :		N/A
	- part tested; temperature (°C) :		N/A
1.12 (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:		N/A
	- part tested; temperature (°C) :		N/A
	- part tested; temperature (°C) :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.12 (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
1.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	No	—
	- manual reset cut-out	No	—
	- auto reset cut-out	No	—
	- case of abnormal conditions		—
	- highest measured temperature of fixing point/exposed part (°C):		—
	Ball-pressure test:		N/A
	- part tested; temperature (°C)		N/A
	- part tested; temperature (°C)		N/A

1.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IPX4	—
	- mounting position during test		—
	- fixing screws tightened; torque (Nm).....	0.34Nm	—
	- tests according to clauses	Clause 9.2	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		N/A
	c) no trace of water on current-carrying parts or where it could become a hazard		N/A
	d) i) For luminaires without drain holes – no water entry		N/A
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A
	e) no water in watertight luminaire		N/A
	f) no contact with live parts (IP 2X)		N/A
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
	f) no contact with live parts (IP3X and IP4X)		N/A
1.13 (9.3)	Humidity test 48 h	25°C; 93%RH,	P

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
1.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ)		—
	SELV:		N/A
	- between current-carrying parts of different polarity.		N/A
	- between current-carrying parts and mounting surface		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	Other than SELV:		P
	- between live parts of different polarity.....	>100MΩ	P
	- between live parts and mounting surface.....	>100MΩ	P
	- between live parts and metal parts.....	>100MΩ	P
	- between live parts of different polarity through action of a switch		N/A
1.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V):		N/A
	SELV:		N/A
	- between current-carrying parts of different polarity.		N/A
	- between current-carrying parts and mounting surface		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	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		N/A
1.14 (10.3)	Leakage current (mA)	0.05mA	P

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Clause	Requirement + Test	Result - Remark	Verdict
1.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		N/A
1.15 (13.2.1)	Ball-pressure test:		N/A
	- part tested; temperature (°C)		N/A
	- part tested; temperature (°C)		N/A
1.15 (13.3.1)	Needle flame test (10 s):		N/A
	- part tested		N/A
	- part tested		N/A
1.15 (13.3.2)	Glow-wire test (650°C):		N/A
	- part tested		N/A
	- part tested		N/A
1.15 (13.4.1)	Tracking test: part tested		N/A

ANNEX 1: components				P
object/part No.	manufacturer/ trademark	type/model	technical data	mark(s) of conformity (With License No.)
Power cord	Zhongshan Guzhen Jinma Lighting Electrical Accessories Factory	H05VV-F	3x0.75mm ²	VDE: 40029647
Lampholder	Zhongshan City Henglan Town Xinda Electrical Factory	XD-1027	E27,250V,4A, 250°C	CE: CEZM10014
Earth wire	NEXANS	N2GFAF	0.75 mm ² , 300V	VDE40003201

ANNEX 2: temperature measurements, thermal tests of Section 12	P
--	---

Type reference	7701	—
Lamp used	Filament lamp	—
Lamp control gear used.....	--	—
Mounting position of luminaire.....	As in normal use.	—
Supply wattage (W)	37.8W	—
Supply current (A).....	0.18A	—
Calculated power factor.....	--	—
Table: measured temperatures corrected for ta = 25 °C:		P
- abnormal operating mode		—
- test 1: rated voltage.....		—
- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....	252.5V	—

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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					—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage					—
	Through wiring or looping-in wiring loaded by a current of A during the test					—
temperature (°C) of part		Clause 12.4 – normal			Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4
					limit	
Power cord		--	28.2	--	105	--
Cover enclosure		--	36.9	--	--	--
Plastic enclosure		--	38.8	--	90	--
Lampholder		--	112.5	--	250	--
Ambient		--	25.4	--		--

	ANNEX 3: screw terminals (part of the luminaire)	N/A
--	---	-----

(14)	SCREW TERMINALS	—
(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 (mm²)	N/A
(14.3.3)	Conductor space (mm)	N/A
(14.4)	Mechanical tests	N/A
(14.4.1)	Minimum distance	N/A
(14.4.2)	Cannot slip out	N/A
(14.4.3)	Special preparation	N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) . :	N/A
	External wiring	N/A
	No soft metal	N/A
(14.4.5)	Corrosion	N/A
(14.4.6)	Nominal diameter of thread (mm)..... :	N/A
	Torque (Nm)	N/A
(14.4.7)	Between metal surfaces	N/A
	Lug terminal	N/A
	Mantle terminal	N/A
	Pull test; pull (N)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
(14.4.8)	Without undue damage		N/A
	ANNEX 4: screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		—
(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
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)..... :		N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)..... :		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.2)	Permanent connections: pull-off test (20 N)		N/A
(15.6)	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
(15.7)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.8.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)..... :		N/A
	Pull test pin or tab terminals (4 samples); pull (N)..... :		N/A

EN 60598-2-1										
Clause	Requirement + Test					Result - Remark				Verdict
(15.9)	Contact resistance test									N/A
	Voltage drop (mV) after 1 h									N/A
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	—	—	—	—	—	—	—	—	—	—
	Voltage drop of two inseparable joints					—				—
	Voltage drop after 10th alt. 25th cycle									—
	Max. allowed voltage drop (mV)					--				—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	—	—	—	—	—	—	—	—	—	—
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	—	—	—	—	—	—	—	—	—	—
	Continued ageing: voltage drop after 10th alt. 25th cycle									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)	—	—	—	—	—	—	—	—	—	—

	ANNEX 5: National Differences for (country name) or Group Differences	N/A
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	CENELEC COMMON MODIFICATIONS (EN)	—
1.5 (3)	MARKING	—
1.5 (3.3.101)	Adequate warning on the package	N/A
1.10 (5)	EXTERNAL AND INTERNAL WIRING	—
1.10 (5.2.1)	Connecting leads	N/A
	- without a means for connection to the supply	N/A
	- terminal block specified	N/A
	- relevant information provided	N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1	N/A
1.10 (5.2.2)	Cables equal to HD21 S2 or HD22 S2	N/A

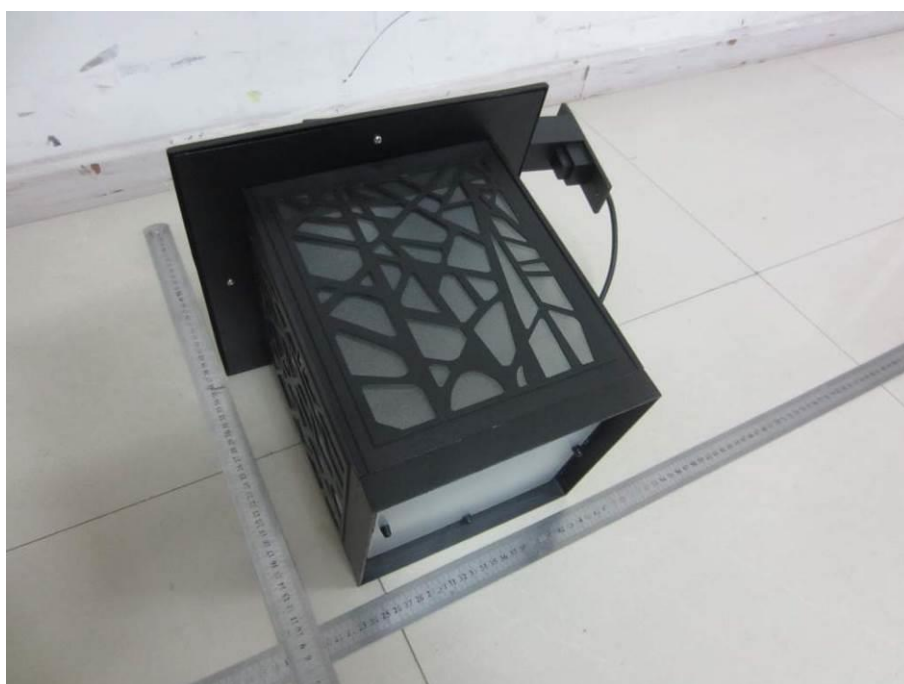
EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		—
(3.3)	DK: power supply cord with label		N/A
	IT: warning label on Class 0 luminaire		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, SE, GB: type of plug		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		—
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
(13.3)	DK: Needle flame test during 30 s		N/A
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N/A
(13.3.2)	FR: Glow-wire test 850°C alt. 750°C for luminaires in premises open to public or 960°C for luminaires in emergency exits		N/A

Appendix 1

External views of 'Garden LAMP'
Model: 7701



Appendix 2

Internal views of 'Garden LAMP'

Model: 7701



Appendix 3

Model list

3101, 3102, 3105, H6208, H6209, H6216, H5006, H5008, 5201, 5202, 5203, 5204, 5205, H6916, H6918, H6908, H6912, 8201, 8203, 8204, 8206, 8208, 5503, 5603, 5703, 5703A, 5803, 5803A, 6503, 6507, 6603, 6607, 6703, 6707, 6703A, 6707A, 6803, 6807, 6807A, 6803A, 7503, 7603, 7703, 7703A, 7803, 7803A, 7803A, 8503, 8507, 8603, 8607, 8703, 8707, 8703A, 8707A, 8803, 8807, 8803A, 8807A, 141001, 141002, 141003, 141005, 141006, 141007, 141001A, 141002A, 141003A, 141005A, 141006A, 141007A, 141201, 141202, 141206, 141201A, 141202A, 141203A, 141205A, 141203, 141205, 141206A, 141101, 141102, 141103, 141105, 141106, 141107, 141121, 141122, 141123, 141124, 141125, 141126, 141127, 141101A, 141102A, 141103A, 141105A, 141106A, 141107A, 141121A, 141122A, 141123A, 141124A, 141125A, 141126A, 141127A, 141301, 141302, 141303, 141305, 141306, 141321, 141322, 141323, 141324, 141301A, 141302A, 141303A, 141305A, 141306A, 141321A, 141322A, 141323A, 141324A, 142001, 142002, 142003, 142005, 142006, 142007, 142001A, 142002A, 142003A, 142005A, 142006A, 142007A, 142201, 142202, 142203, 142205, 142206, 142201A, 142202A, 142203A, 142205A, 142206A, 142101, 142102, 142103, 142105, 142106, 142107, 142121, 142122, 142123, 142124, 142125, 142126, 142127, 142101A, 142102A, 142103A, 142105A, 142106A, 142107A, 142121A, 142122A, 142123A, 142124A, 142124A, 142125A, 142126A, 142127A, 142301, 142302, 142303, 142305, 142306, 142321, 142322, 142323, 142324, 142301A, 142302A, 142303A, 142305A, 142306A, 142321A, 142322A, 142323A, 142324A, 143001, 143002, 143003, 143005, 143006, 143007, 143001A, 143002A, 143003A, 143005A, 143006A, 143007A, 143201, 143202, 143205, 143206, 143201A, 143202A, 143205A, 143206A, 143101, 143102, 143103, 143105, 143106, 143107, 143121, 143122, 143123, 143124, 143125, 143126, 143127, 143101A, 143102A, 143103A, 143105A, 143106A, 143107A, 143121A, 143122A, 143123A, 143124A, 143125A, 143126A, 143127A, 143301, 143302, 143303, 143305, 143306, 143321, 143322, 143323, 143324, 143301A, 143302A, 143303A, 143305A, 143306A, 143321A, 143322A, 143323A, 143324A, 144001, 144002, 144003, 144005, 144006, 144007, 144201, 144202, 144203, 144205, 144206, 144101, 144102, 144103, 144105, 144106, 144107, 144121, 144122, 144123, 144124, 144125, 144126, 144127, 144301, 144302, 144303, 144305, 144306, 144321, 144322, 144323, 144324, 145101, 145102, 145103, 145104, 145105, 145106, 145107, 145121, 145122, 145123, 145124, 145125, 145126, 145127, 145101A, 145102A, 145103A, 145104A, 145105A, 145106A, 145107A, 145121A, 145122A, 145123A, 145124A, 145125A, 145126A, 145127A, 146101, 146102, 146103, 146104, 146105, 146106, 146107, 146121, 146122, 146123, 146124, 146125, 146126, 146127, 146101A, 146102A, 146103A, 146104A, 146105A, 146106A, 146107A, 146121A, 146122A, 146123A, 146124A, 146125A, 146126A, 146127A, 147101, 147102, 147103, 147104, 147105, 147106, 147107, 147121, 147122, 147123, 147124, 147125, 147126, 147127, 147101A, 147102A, 147103A, 147104A, 147105A, 147106A, 147107A, 147121A, 147122A, 147123A, 147124A, 147125A, 147126A, 147127A, 148101, 148102, 148103, 148104, 148105, 148106, 148107, 148121, 148122, 148123, 148124, 148125, 148126, 148127, 148101A, 148102A, 148103A, 148104A, 148105A, 148106A, 148107A, 148121A, 148122A, 148123A, 148124A, 148125A, 148126A, 148127A, 143203, 143203A, 1501, 1501A, 1504, 1504A, 1505, 1505A, 1506, 1506A

---End of report---