LOW VOLTAGE DIRECTIVE TEST REPORT

For

LED Wash Light

Model: PHN005, PHN007, PHN009, PHN012, PHN013, PHN014, PHN016, PHN018, PHN020, PHN021, PHN023, PHN026, PHN027, PHN029, PHN031, PHN032, PHN035, PHN036, PHN037, PHN040, PHN042, PHN043, PHN046, PHN053, PHN054, PHN055, PHN056, PHN057, PHN060, PHN061, PHN062, PHN063, PHN064, PHN065, PHN066, PHN067, PHN069, PHN072, PHN073, PHN074, PHN075, PHN076, PHN077, PHN078, PHN080, PHN081, PHN082, PHN083, PHN084, PHN085, PHN086, PHN087, PHN088, PHN089, PHN090, PHN091, PHN092, PHH028, PHH009, PHH013.

Brand Name: PHOENIXLIGHTING

Report No.: ENC1901280GZ78L1

Date of Issue: Jul. 23, 2018

Prepared For

Guangdong Phoenix Lighting Co., Ltd.

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TEST REPORT
EN 60598-2-17
Luminaires - Part 2: Particular requirements - Section Seventeen - Luminaires for stage lighting, television and film studios (outdoor and indoor)

Report reference No. ..... :	ENC1901280GZ78L1
Tested by ..... :	Samliu
Review by (+ Signature). ..... :	Yemig
Approved by (+ signature) ..... :	Ray zhou
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Testing laboratory

Name ..... :	East Notice Certification Service Co., Ltd.
Address ..... :	1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town, Tianhe District, Guangzhou City, China
Testing location ..... :	Same as above

Application

Name..... :	Guangdong Phoenix Lighting Co., Ltd.
Address ..... :	No.38 Yagang South Road, Shijing Town, Guangzhou, Guangdong, China.

Manufacturer

Name..... :	Guangdong Phoenix Lighting Co., Ltd.
Address ..... :	No.38 Yagang South Road, Shijing Town, Guangzhou, Guangdong, China.

Test specification

Standard ..... :	EN 60598-2-17:1989+A2:1991, EN 60598-1:2015, EN 62493:2015, EN 62471:2008.
Test procedure ..... :	LVD
Procedure deviation ..... :	N/A
Non-standard test method ..... :	N/A

Test Report Form/blank test report

Test Report Form No. ..... :	ENC60598-2-17A2
TRF originator. ..... :	ENC

Test item

Description ..... :	LED Wash Light
Brand name ..... :	PHOENIXLIGHTING
Model and/or type reference ..... :	PHN076
Series models..... :	PHN005, PHN007, PHN009, PHN012, PHN013, PHN014, PHN016, PHN018, PHN020, PHN021, PHN023, PHN026, PHN027, PHN029, PHN031, PHN032, PHN035, PHN036, PHN037, PHN040, PHN042, PHN043, PHN046, PHN053, PHN054, PHN055, PHN056, PHN057, PHN060, PHN061, PHN062, PHN063, PHN064, PHN065, PHN066, PHN067,

	PHN069, PHN072, PHN073, PHN074, PHN075, PHN076, PHN077, PHN078, PHN080, PHN081, PHN082, PHN083, PHN084, PHN085, PHN086, PHN087, PHN088, PHN089, PHN090, PHN091, PHN092, PHH028, PHH009, PHH013.
Rating(s) ..... :	90-240V~, 50/60Hz, 300W

Test case verdicts

Test case does not apply to the test object…...: N(/A)

Test item does meet the requirement ……...: P(ass)

Test item does not meet the requirement……..: F(ail)

Testing

Date of receipt of test item ……..……..…..: Jul. 13, 2018

Date(s) of performance of test ……..……..: Jul. 13, 2018 – Jul. 23, 2018

General remarks

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

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

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

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

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

When determining the test result, measurement uncertainty has been considered.

Note:

This report shall not be altered, increase and deleted.

The results relate only to the items tested.

This report shall not be published as advertisement without the approval of ENC.

This report shall not be copied partly without the written approval of ENC.

Should any objections to the test reports occurred, should submit it to the company within ten days since the issuing of the report, Fail to accept.

Special description:

1. All tests are basic on model PHN076.
2. All models have same electrical structure as PHN076, except for the different appearance and power.
3. Specified maximum ambient temperature is 40℃.

Summary of testing

All tests were found satisfactory in accordance with EN 60598-2-17:1989+A2:1991, EN 60598-1:2015, EN 62493:2015.

The products complied with the requirements of Exempt group LED Product according to EN 62471:2008.

Marking on the appliance:

LED Wash Light
Model: PHN076
Rated Voltage: 90-240V~, 50/60Hz
Rated Power: 300W
CE RoHS
Guangdong Phoenix Lighting Co., Ltd.
MADE IN CHINA

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.1 (0)	**SCOPE**		--
17.1 (0.2)	More sections applicable ..... :	Yes☒ No☐	P
17.4 (2)	**CLASSIFICATION**		--
17.4 (2.2)	Type of protection ..... :	Class I	--
17.4 (2.3)	Degree of protection ..... :	IP20	--
17.4 (2.4)	Portable and handheld luminaries ..... :	No	--
	Fixed luminaire suitable for normally flammable surfaces ..... :	No	--
	Fixed luminaire suitable for noncombustible materials only ..... :	Yes	--
17.4 (2.5)	Luminaire for normal use ..... :	Yes	--
	Luminaire for rough service ..... :	No	--
17.5 (3)	**MARKING**		--
17.5 (3.2)	Mandatory markings		P
17.5 (-)	Additional marking 17.5.1 to 17.5.7	See below.	P
	Position of the marking	Affixed on enclosure.	P
	Format of symbols/text	Symbols>5mm; letter>2mm	P
17.5(3.2.1)	Mark of origin / Trade mark	Guangdong Phoenix Lighting Co., Ltd.	P
17.5(3.2.2)	Rated voltage	90-240V	P
17.5(3.2.3)	Rated maximum ambient temperature t_a		N
17.5(3.2.4)	Symbol for Class II luminaires	Class I	N
17.5(3.2.5)	Symbol for Class III luminaires		N
17.5(3.2.6)	Marking with IP numbers	IP20	N
17.5(3.6.7)	Model number or type reference	PHN076	P
17.5(3.2.8)	Rated wattage or the type of lamp	300W	P
17.5(3.2.9)	The symbol for suitability or non-suitability for direct mounting on normally flammable surfaces		N
17.5(3.2.10)	Information concerning special lamps		N
17.5(3.2.11)	Symbol for lamps of similar shape to “cool beam”		N

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.5(3.2.12)	Terminations clearly marked or otherwise identified to give a clear indication as to which termination should be connected to the live side of the supply. Earthing terminations is clearly indicated by the symbol shown in IEC 60417	Compliance.	P
17.5(3.2.13)	Symbol for minimum distance from lighted objects		N
17.5(3.2.14)	Symbol for rough service luminaries	Ordinary luminaire.	N
17.5(3.2.15)	Symbol for use with bowl mirror lamps	Not applicable.	N
17.5(3.2.16)	Marking for luminaires incorporating a glass protective shield		N
17.5(3.2.17)	The maximum number of luminaries that provided for looping-in connection to the mains supply		N
17.5(3.2.18)	A warning symbol or notice for luminaries with ignitors		N
17.5(3.2.19)	Symbol for luminaires which are designed for use with self-shielded tungsten halogen lamps		N
17.5(3.2.20)	The adjustment not obvious, need to be identify.		P
17.5(3.2.21)	Symbol for luminaires not suitable for covering with thermally insulated material		N
17.5(3.2.22)	Symbol for luminaires with internal replaceable fuses		P
17.5 (3.3)	Additional information	See below.	P
	Language of instructions	Additional	P
17.5 (3.3.1)	Combination luminaire(IPX)	IP20	N
17.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
17.5 (3.3.3)	Operating temperature		N
17.5 (3.3.4)	Warning notice	See marking plate	P
17.5 (3.3.5)	Wiring diagram		N
17.5 (3.3.6)	Special conditions		N
17.5 (3.3.7)	Metal halide lamp		N
17.5 (3.3.8)	Limitation for semi-luminaires		N
17.5 (3.3.9)	Power factor and supply current		N
17.5(3.3.10)	Suitability for use indoors		N
17.5(3.3.11)	Luminaires with remote control		N
17.5(3.3.12)	Clip-mounted luminaire-warning		N
17.5(3.3.13)	Specifications of all protective		N
17.5(3.3.14)	Symbol for nature of supply	~	P
17.5(3.3.15)	The rated current		N

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.5(3.3.16)	The information about rough service		N
17.5(3.3.17)	Attachments of type	Type X attachment	P
17.5(3.3.18)	Non-ordinary luminaires with PVC cable		N
17.5(3.3.19)	For luminaires protective conductor current greater than 10 mA, clearly stated in the manufacturers' instructions.		N
17.5(3.3.20)	Wall mounted and adjustable luminaires provided with information to advise their correct installation.	Account on user's manual.	N
17.5 (3.4)	Test of marking See below		P
	Test with water 15s	15S	P
	Test with hexane 15s	15S	P
	Legible after test Still legible	No any curling.	P
	Label attached Still attached	No any curling.	P

17.6 (4)	**CONSTRUCTION**		**--**
17.6.1 (-)	Lamp replacement		P
17.6.2 (-)	Explosion risk	No explosion risk.	N
17.6.3 (-)	Protective shield	Compliance.	P
17.6.4 (-)	Hanger (stirrup)		P
17.6.5 (-)	Removable accessories	No such device	N
17.6.6 (-)	Secondary suspension		N
17.6.7 (-)	Handles		N
17.6 (4.2)	Components replaceable without difficulty		P
17.6 (4.3)	Wireways smooth and free from sharp edges		P
17.6 (4.4)	Lampholders	LED Lamp.	N
17.6 (4.4.1)	Integral lampholder		N
17.6 (4.4.2)	Wiring connection		N
17.6 (4.4.3)	Lampholder for end-to-end mounting		N
17.6 (4.4.4)	Positioning		N
	Pressure test (N) ..... :		N
	After test the lampholder comply with relevant standard sheets and show no damage		N
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
	Bending test(N) ..... :		N
	After test the lampholder have not moved from its position and show no permanent deformation		N
17.6 (4.4.5)	Peak pulse voltage		N
17.6 (4.4.6)	Centre contact		N
17.6 (4.4.7)	Rough service luminaires		N
17.6 (4.4.8)	Lamp connectors		N
17.6 (4.4.9)	Caps and bases correctly used		N
17.6 (4.5)	Starter holders	No starter	N
	Starter holder in luminaires other than Class II		N
	Starter holder Class II construction		N
17.6 (4.6)	Terminal blocks		N
	Tails		N
	Unsecured blocks		N
17.6 (4.7)	Terminals and supply connections		N
17.6 (4.7.1)	Contact to metal parts		N
17.6 (4.7.2)	Location stranded wires		N
	8 mm test live conductor		N
	8 mm test earth conductor		N
17.6 (4.7.3)	Terminals for supply cord		N
	Welded connections:		--
	- stranded or solid conductor		N
	- spot welding		N
	- welding between wires		N
	- Type Z attachment		N
	- mechanical test according to 15.8.2		N
	- electrical test according to 15.9		N
	- heat test according to 15.9.2.3 and 15.9.2.4		N
17.6 (4.7.4)	Terminals other than supply connection		N
17.6 (4.7.5)	Heat-resistant wiring/sleeves		N
17.6 (4.7.6)	Multi-pole plug		N
17.6 (4.8)	Switches:		--
	- adequate rating		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	- adequate fixing		N
	- polarized supply		N
	- compliance with 61058-1 for electronic switches		N
17.6 (4.9)	Insulating lining and sleeves		P
17.6 (4.9.1)	Retainment		P
	Method of fixing :		P
17.6 (4.9.2)	Insulated linings and sleeves		P
	Resistant to a temperature >20°C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		P
	b) Ageing test. Temperature (°C) ..... :		N
17.6 (4.10)	Double and reinforced insulation		--
17.6(4.10.1)	No contact metal-basic insulation	Class I luminaire	N
	Safe installation fixed luminaires		N
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
17.6(4.10.2)	Assembly joints:		N
	- not coincidental		N
	- no straight access		N
	- degree of protection		N
17.6(4.10.3)	Retainment of insulation:		N
	- fixed		N
	- unable to be replaced; luminaire inoperative		N
	- sleeves retained in position		N
	- lining in lampholder		N
17.6 (4.11)	Electrical connections		P
17.6(4.11.1)	Contact pressure		P
17.6(4.11.2)	Screws:		P
	- spaced threaded screws		P
	- thread-cutting screws		N
	- earth continuity		P
17.6(4.11.3)	Screw locking:		P
	- spring washer		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	- rivets		N
17.6(4.11.4)	Material of current-carrying parts	Cu	P
17.6(4.11.5)	No contact to wood	No wood.	P
17.6(4.11.6)	Electro-mechanical contact systems	No such system.	N
17.6 (4.12)	Mechanical connections and glands		--
17.6(4.12.1)	Mechanical stress		P
	Not made of soft metal		P
	Screws of insulating material		N
	Torque test : torque (N·m) ; part ..... :	0,7Nm; enclosure	P
	Torque test : torque (N·m) ; part ..... :	0,7Nm; screw of PCB.	P
17.6(4.12.2)	Screw diameter up to 3 mm	No such terminal.	N
17.6(4.12.4)	Locked connections:		--
	- fixed arms; torque (N·m) ..... :		N
	- lampholder; torque (N·m) ..... :		N
	- push-button switches; torque (N·m):		P
17.6(4.12.5)	Screwed glands; force (N) ..... :		N
17.6 (4.13)	Mechanical strength		P
17.6(4.13.1)	Impact tests:		P
	- fragile parts ; energy (N·m) ..... :	Lens; 0,2Nm	P
	- other parts; energy (N·m) ..... :	Body 0,35Nm	P
	1) live parts	Inaccessible.	P
	2) linings		P
	3) protection		P
	4) covers		N
17.6(4.13.3)	Straight test finger	30N	P
17.6(4.13.4)	Rough service luminaires		N
	a) fixed		N
	b) hand-held		N
	c) delivered with a stand		N
	d) for temporary installations and suitable for mounting on a stand		N
17.6(4.13.6)	Tumbling barrel		N
17.6 (4.14)	Suspensions and adjusting devices		P

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.6(4.14.1)	Mechanical load:		P
	A) four times the weight	4x	P
	B) torque 2,5 N·m		P
	C) bracket arm; force (N) ..... :		N
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve; thickness (mm) ..... :		N
	metal rod; diameter (mm) ..... :		N
17.6(4.14.2)	Load to flexible cables:		N
	- mass (kg) ..... :		N
	- stress in conductors (N/mm²) ..... :		N
	- semi-luminaires; mass (kg) ..... :		N
	- semi-luminaires ; bending moment (N·m) :		N
17.6(4.14.3)	Adjusting devices:		--
	- rotating test; number of cycles ..... :	150 cycles	P
	- strands broken		P
	- high voltage test and insulation resistance Test		P
17.6(4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
17.6(4.14.5)	Guide pulleys		P
17.6(4.14.6)	Strain on socket-outlets		N
17.6 (4.15)	Flammable materials:		N
	- glow-wire test 650℃		N
	- spacing≥30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		N
	- thermal protection		N
	- electronic circuits exempted		N
17.6(4.15.2)	Luminaires made of thermoplastic material		N
	a) construction		N
	b) temperature sensing control		N
	c) surface temperature		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
17.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N
	No lamp control gear		N
17.6(4.16.1)	Lamp control gear spacing:		N
	- spacing 35 mm		N
	- spacing 10 mm		N
17.6(4.16.2)	Thermal protection:		N
	- in ballast or transformer		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
17.6(4.16.3)	Design to satisfy the test of 12.6	(see 12.6)	N
17.6 (4.17)	Drain holes		N
	Clearance at least 5 mm		N
17.6 (4.18)	Resistance to corrosion:		--
17.6(4.18.1)	- rust-resistance		N
17.6(4.18.2)	- season cracking in copper		N
17.6(4.18.3)	- corrosion of aluminium		N
17.6 (4.19)	Ignitors compatible with ballast		N
17.6 (4.20)	Rough service vibration ..... :	No such requirement	N
17.6 (4.21)	Protective shield		N
17.6(4.21.1)	Appropriate symbol		N
	Shield fitted		N
17.6(4.21.2)	Particles from a shattering lamp not impair safety		N
17.6(4.21.3)	- no direct path		N
17.6(4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
17.6 (4.22)	Attachments to lamps		N
17.6 (4.23)	Semi-luminaires comply with Class II		N
17.6 (4.24)	UV radiation, metal halide lamps	No UV radiation	N
17.6 (4.25)	No sharp point or edges		P
17.6 (4.26)	Short-circuit protection		P
17.6(4.26.1)	- uninsulated accessible SELV parts		P

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.6(4.26.2)	Short-circuit test		P
17.6(4.26.3)	Test chain		P
17.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N

17.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		**--**
	Class of protection ..... :	Class I	--
	Working voltage (V) ..... :	90-240V	--
	Voltage form ..... :	Sinusoidal	--
	PTI ..... :	< 600	--
	Impulse withstand category	Category II	--
	Rated pulse voltage (Kv) ..... :		--
	(1) Live parts of different polarity: cr (mm); cl (mm)	Cr > 2,5 mm; Cl >1,5 mm	P
	(2) Live parts and accessible parts: cr (mm); cl (mm)	Cr > 2,5 mm; Cl >1,5 mm	P
	(3) Parts becoming live: cr (mm); cl (mm) ... :		N
	(4) Outer surface of cable: cr (mm); cl (mm) :		N
	(5) Live parts of switches: cr(mm); cl(mm) .. :		N
	(6) Live parts and supporting surface: cr (mm); cl (mm)	Cr > 2,5 mm; Cl >1,5 mm	P

17.8 (7)	**PROVISION FOR EARTHING**		**--**
17.8(7.2.1+7.2.3)	Metal parts	Dependable earthing.	P
	Accessible metal parts		P
	Metal parts and supporting surface		P
	Resistance < 0.5Ω	0,035 Ω	P
	Two spaced threaded screws used		N
	Thread-forming screws		N
	Connector earthing first		P
17.8(7.2.2+7.2.3)	Earth continuity	Compliance.	P
17.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
	Adequate locking		P
	Loosening of clamping means		P
17.8 (7.2.5)	Connector socket		P
17.8 (7.2.6)	Position of the earth terminal		P
17.8 (7.2.7)	Corrosion of the earth terminal		P
17.8 (7.2.8)	Material of earth terminal	Cu	P
	Contact surface bare metal		P
17.8 (7.2.10)	Class II luminaire for looping-in		N
17.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor	More than L/N.	P

17.9 (14)	**SCREW TERMINALS**		**--**
	Separately approved; component list		N
	Part of the luminaire	(See Annex 3)	N

17.9 (15)	**SCREWLESS TERMINALS**		**--**
	Separately approved; component list		N
17.9 (-)	Part of the luminaire (restriction)	(See Annex 4)	N

17.10 (5)	**EXTERNAL AND INTERNAL WIRING**		**--**
17.10 (5.2)	Supply connection and external wiring		P
17.10(5.2.1)	Means of connection :		P
17.10(5.2.2)	Type of cable :	53(RVV)	P
17.10.1 (-)	Nominal cross-sectional area(mm^2) :	3x0.75 mm^2	P
17.10(5.2.3)	Replacement of non- detachable cable and cords.	Type X attachment.	P
17.10 (5.2.5)	Non-screw connection of type Z.		N
17.10 (5.2.6)	Cable entries		--
	- suitable for introduction		N
	- adequate degree of protection		N
17.10 (5.2.7)	Cable entries through rigid material have rounded edges		N
17.10 (5.2.8)	Insulating bushings:		--
	- suitably fixed		N

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
	- material in bushings		N
	- tubes or guard made of insulating material		N
17.10 (5.2.9)	Locking of bushings		N
17.10(5.2.10)	Cord anchorage:		--
	- covering protected from abrasion		N
	- clear how to be effective		N
	- no mechanical or thermal stress		N
	- no tying of cables into knots etc.		N
	- insulating material or lining		N
17.10(5.2.10.1)	Cord anchorages of type X attachment		P
	a) at least one part fixed		P
	b) types of cable		P
	c) no damaging of the cable		P
	d) whole cable can be mounted		P
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		P
	Glands not used as anchorage		N
	Labyrinth type anchorages		N
17.10(5.2.10.2)	Type Y and Z attachments have adequate cord anchorages	Type X attachment	N
17.10(5.2.10.3)	Tests:		N
	- impossible to push cable; unsafe		N
	- pull test: 25 times; pull (N)		N
	- torque test: torque (Nm)		N
	- displacement<2 mm		N
	- no movement of conductors		N
	- no damage of cable or cord		N
17.10(5.2.11)	External wiring passing into luminaire		N
17.10(5.2.12)	Looping-in terminals		N
17.10(5.2.13)	Wire ends not tinned		N
	Wire ends tinned		N

EN 60598-2-17			
Clause	**Requirement - Test**	**Result**	**Verdict**
17.10(5.2.14)	Plug against electric shock protection		P
	Class III luminaire plug	No this plug	N
17.10(5.2.16)	Appliance inlets (IEC 320)		P
	Appliance couplers of class II type		N
17.10(5.2.17)	Inter-connecting cables not made of standardized insulated and sheathed cables		N
17.10(5.2.18)	Portable luminaires with socket outlet		N
17.10.2 (-)	Plugs and sockets		N
17.10 (5.3)	Internal wiring		P
17.10 (5.3.1)	Internal wiring of suitable size and type	VW-1	P
	Through wiring		--
	- not delivered/ mounting instruction		N
	- factory assembled		N
	- socket outlet loaded (A) ..... :		N
	- temperatures ..... :		N
	Green-yellow for earth only	Green/yellow	P
17.10(5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)		P
	Insulation thickness	>0.6mm^2	P
	Extra insulation added where necessary		N
17.10(5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		--
	Adequate cross-sectional area and insulation thickness		N
17.10(5.3.1.3)	Double or reinforced insulation for class II		N
17.10(5.3.1.4)	Conduct without insulation		N
17.10(5.3.1.5)	SELV current-carrying parts		N
17.10(5.3.1.6)	Insulation thickness other than PVC or rubber		N
17.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N
	Joints, raising/lowering devices		N
	Telescopic tubes etc.		N
	No twisting over 360°		P
17.10 (5.3.3)	Openings		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	Bushings not removable		N
	Cables with protective sheath		N
17.10 (5.3.4)	Joints and junctions:		P
	- easily accessible		P
	- effectively insulated		P
17.10 (5.3.5)	Strain on internal wiring No such wiring		N
17.10 (5.3.6)	Wire carriers		N
17.10 (5.3.7)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		P

17.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		**--**
17.11(8.2.1+8.2.5)	Live parts are not accessible		P
	Protection in any position		P
	Insulation lacquer not reliable		P
	Double-ended tungsten filament lamp		N
	Double-ended high pressure discharge lamp		N
	Ø 50 mm probe according to Figure 1 in IEC 61032 for wall-mounted luminaires		N
17.11 (8.2.2)	Portable luminaire		--
	a)Class II luminaire:		N
	-basic insulated metal parts not accessible during starter or lamp replacement		N
	-basic insulation not accessible other than during starter or lamp replacement		N
	-glass protective shields not used as supplementary insulation		N
	- glass protective shields not used as supplementary insulation		N
	b).Class I luminaire with BC lampholder		N
	c). Class III luminaires with exposed SELVS:		N
	Ordinary luminaire:		N
	- touch current ..... :		N
	- no-load voltage ..... :		N
	Other than ordinary luminaire:		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	- nominal voltage ..... :		N
17.11 (8.2.4)	Portable luminaire:		N
	- protection independent of supporting surface		N
	- terminal block completely covered		N
17.11(8.2.5)	Compliance with the standard test finger or relevant probe		N
17.11 (8.2.6)	Covers have adequate strength	(see 4.13)	P
	Covers reliably secured		N
17.11 (8.2.7)	Discharging of capacitors 0,5 *Uf*		N
	Plug connected luminaire with capacitor		N
	Other plug connected luminarie with capacitor		N
	Discharge device on or within capacitor		N
	Discharge device mounted separately		N

17.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		**--**
17.12 (12.3)	Endurance test:		P
	- mounting-position ..... :	(see Annex 2)	P
	- test temperature (℃) ..... :	25℃	P
	- total duration (h) ..... :	168h	P
	- supply voltage: Un factor; calculated voltage (V)	1,10×240 V	P
	- lamp used ..... :		P
17.12(12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- marking legible		P
	- no cracks, deformation etc.		P
17.12 (12.4)	Thermal test (normal operation)		P
17.12.1 (-)	Exterior surface temperature		N
17.12 (12.5)	Thermal test (abnormal operation)		N
17.12 (12.6)	Thermal test (failed ballast or transformer condition):		--
17.12(12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		N
	- case of abnormal conditions ..... :		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	- electronic ballast		N
	- measured winding temperature (℃): at1,1 Un		N
	- measured mounting surface temperature (℃): at 1,1 Un ..... :		N
	- calculated mounting surface temperature(℃)		N
	- track-mounted luminaires		N
17.12(12.6.2)	Temperature sensing control		--
	- case of abnormal conditions ..... :		N
	- thermal links:		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured mounting surface temperature (°C) :		N
	- track-mounted luminaires		N
17.12 (12.7)	Thermal test (failed ballast or transformer in plastic luminaires):		--
17.12(12.7.1)	Test for luminaires without temperature sensing controls:		N
17.12(12.7.1.1)	Test for luminaires incorporating ballast(s) of fluorescent lamps with a lamp load ≤70 W		N
	Test method 12.7.1.1 or Annex V ..... :		N
	Test according to 12.7.1.1:		N
	- case of abnormal conditions ..... :		N
	- Ballast failure at supply voltage(V) ..... :		N
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
	Test according to Annex V:		N
	-case of abnormal conditions		N
	-measured winding temperature(℃): at 1.1Un.:		N
	-measured temperature of fixing point/exposed part(°C): at 1.1Un ..... :		N
	-calculated temperature of fixing /esposed part(°C):		N
	Ball-pressure test:		N
	-part tested; temperature(°C): ..... :		N
	-part tested; temperature(°C): ..... :		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
17.12(12.7.1.2)	Test for luminaires incorporating discharge lamps, fluorescent lamps (>70 W),transformer of power >10 VA		N
	- case of abnormal conditions ..... :		N
12.7.1	-measured winding temperature(℃) at1.1Un		N
	- measured mounting surface temperature (℃) at 1,1 Un ..... :		N
	- calculated mounting surface temperature (℃)		N
	Ball-pressure test:		N
	-part tested; temperature(℃): ..... :		N
17.12(12.7.1.3)	Test for luminaires with inherently short-circuit proof transformer of power ≤10 VA		N
	-case of abnormal conditions		N
	-components retained in place after the test		N
	-test with standard test finger after the test		N
17.12(12.7.2)	Temperature sensing control:		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured temperature of fixing point/ exposed part (℃) ..... :		N
	Ball-pressure test:		N
	-part tested; temperature(°C): ..... :		N

17.13 (9)	**RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE**		**--**
17.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		--
	- classification according to IP ..... :	IP20	--
	- mounting position during test ..... :		--
	- fixing screws tightened; torque (Nm) ..... :		--
	- tests according to clauses ..... :		--
	- electric strength		--
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		N
	c) no trace of water on live parts		N
	d) no accumulation of water in waterproof luminaire		N

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Clause	**Requirement - Test**	**Result**	**Verdict**
	e) no water in watertight luminaire		N
	f) no contact with live parts		N
	g) no trace of water on any part of a lamp		N
	h) no damage		N
17.13 (9.3)	Humidity test	30℃, 95%RH, 48h	P

17.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		**--**
17.14(10.2.1)	Insulation resistance test:		--
	Class of protection ..... :	Class I	--
	Insulation resistance (MΩ):		--
	SELV:		--
	- between current-carrying parts of different polarity ..... :		N
	- between current-carrying parts and mounting surface ..... :		N
	- between current-carrying parts and metal parts of the luminaire ..... :		N
	Other than SELV:		--
	- between live parts of different polarity ..... :	>2 MΩ	P
	- between live parts and mounting surface ..... :	>2 MΩ	P
	- between live parts and metal parts ..... :	>2 MΩ	P
	- between live parts of different polarity through action of a switch ..... :		N
17.14(10.2.2)	Electric strength test:		--
	Class of protection ..... :	Class I	--
	Luminaires with ignitors after 24 h test		--
	Luminaires with manual ignitors	Compliance.	--
	Test voltage (V):		--
	SELV:		--
	- between current carrying parts of different polarity		N
	- between current carrying parts and mounting surface		N
	- between carrying parts and metal parts of the luminaire		N
	Other than SELV:		--
	- between live parts of different polarity ..... :	1480 V	P

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Clause	**Requirement - Test**	**Result**	**Verdict**
	- between live parts and mounting surface ..... :	1480 V	P
	- between live parts and metal parts ..... :	1480 V	P
	- between live parts of different polarity through action of a switch ..... :		N
17.14(10.3.1)	Touch current (mA) ..... :	0,044mA	P

17.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		--
17.15(13.2.1)	Ball-pressure test:		--
	- part tested; temperature (℃) ..... :-	Terminal: 125℃; 0,5mm	P
17.15(13.3.1)	Needle flame test (10 s):		--
	- part tested ..... :	Terminal	P
17.15(13.3.2)	Glow-wire test (650 ℃):		--
	- part tested ..... :	PCB	P
17.15(13.4.1)	Tracking test: part tested ..... :		N

ANNEX EMF			
	The tested product also complies to the requirements of EN 62493:2015		**P**
	Measuring distance:	50 cm	--
	Operating conditions:	230V~, 50Hz	
	Applied limit:	F<0,85	--
	Measuring result:	F_{max}=0,06	P

	ANNEX 1: COMPONENTS			**P**
Object/part No.	Manufacturer/trade mark	Type/model	Technical data	Mark(s) of conformity
Power cord	AOMEG	53(RVV)	3x0.75mm^2	VDE
Plug	AOMEG	AM-026	10A, 250V~	VDE
Power supply	TAIFENG	TF-G300W1224	Input: 90-240V~ 47/60Hz; Output: +12V 10A; +24V 1.5A	CE
PCB	Various	PHN076	V0, 130℃	UL
Inside wiring	Various	VW-1	600V,105℃	UL
LED	Various	PHN076	Exempt group	CE
1) an asterisk indicates a mark which assures the agreed level of surveillance				

	ANNEX 2: Temperature measurements, thermal tests of Section 12.4		P
	Type reference ..... :	PHN076	--
	Lamp used ..... :	LED	--
	Ballast used ..... :		
	Mounting position of luminaire ..... :	Normal mounting	--
	Supply wattage (W) ..... :	308,7	--
	Supply current (A) ..... :	1,475	--
	Calculated power factor ..... :	0,872	--
	Table: measured temperatures corrected for Ta = 25℃:		--
	- abnormal operating mode ..... :		--
	- test 2: 1.06 times rated voltage ..... :	1,06×240V	--

Temperature (℃) of part	Testing temperature (℃)	Limit (℃)
Power cord	27,7	75
Inside wiring	35,2	105
Terminal	30,0	90
Enclosure	28,1	85
Power supply	42,8	130
PCB	39,5	105
Mounting bracket	27,1	90
Ambient	26,9	--

	ANNEX 3: screw terminals (part of the luminaire)		N
(14)	**SCREW TERMINALS**		N
(14.2)	Type of terminal ..... :		N
	Rated current (A) ..... :		N
(14.3.2.1)	One or more conductors		N
(14.3.2.2)	Special preparation		N
	Cross-sectional area (mm²) ..... :		N
(14.3.3)	Conductor space (mm) ..... :		N
(14.4)	Mechanical tests		N
(14.4.1)	Minimum distance		N
(14.4.2)	Cannot slip out		N
(14.4.3)	Special preparation		N
(14.4.4)	Nominal diameter of thread (metric ISO thread) .		N
	External wiring		N

	No soft metal		N
(14.4.5)	Corrosion		N
(14.4.6)	Nominal diameter of thread (mm) ..... :		N
	Torque (Nm) ..... :		N
(14.4.7)	Between metal surfaces N		N
	Lug terminal N		N
	Mantle terminal N		N
	Pull test; pull (N) ..... :		N

	ANNEX 4: screwless terminals (part of the luminaire)		N
(15)	**SCREWLESS TERMINALS** N		N
(15.2)	Type of terminal ..... :	No such terminals	N
	Rated current (A) ..... :		N
(15.3.1)	Material		N
(15.3.2)	Clamping		N
(15.3.3)	Stop		N
(15.3.4)	Unprepared conductors		N
(15.3.5)	Pressure on insulating material		N
(15.3.6)	Clear connection method		N
(15.3.7)	Clamping independently		N
(15.3.8)	Fixed in position		N
(15.3.10)	Conductor size		N
	Type of conductor		N
(15.5.1)	Terminals internal wiring		N
(15.5.1.1)	Pull test spring-type terminals (4 N, 4samples)		N
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N
	Insertion force not exceeding 50 N		N
(15.5.2)	Permanent connections: pull-off test (20 N)		N
(15.6)	Electrical tests		N
	Voltage drop (mV) after 1 h (4 samples) ..... :		N
	Voltage drop of two inseparable joints		N
	Number of cycles ..... :		N
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples) ..... :		N
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples) ..... :		N

	After ageing, voltage drop (mV) after 10th alt. 25th										N
	cycle (4 samples) ..... :										N
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) ..... :										N
(15.7)	Terminals external wiring										N
	Terminal size and rating										N
(15.8.1)	Pull test spring-type terminals (4 samples); pull (N)										N
	Pull test pin or tab terminals (4 samples); pull (N)										N
(15.9)	Contact resistance test										N
	Voltage drop (mV) after 1 h										--
terminal	1	2	3	4	5	6	7	8	9	10	--
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	N
	Voltage drop of two inseparable joints										N
	Voltage drop after 10th alt. 25th cycle										N
	Max. allowed voltage drop (mV) .:										--
terminal	1	2	3	4	5	6	7	8	9	10	--
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	N
	Voltage drop after 50th alt. 100th cycle										N
	Max. allowed voltage drop (mV)..:										--
terminal	1	2	3	4	5	6	7	8	9	10	--
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	N
	Continued ageing: voltage drop after 50th alt. 100th cycle										N
	Max. allowed voltage drop (mV) .:										--
terminal	1	2	3	4	5	6	7	8	9	10	--
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--	N

	ANNEX 5: National Differences for (country name) or Group Differences		N
	CENELEC COMMON MODIFICATIONS (EN)		N
17.5 (3)	MARKING		N
17.5(3.3.101)	Adequate warning on the package		N

17.10 (5)	EXTERNAL AND INTERNAL WIRING		N
17.10 (5.2.1)	Connecting leads		N
	- without a means for connection to the supply		N
	- terminal block specified		N
	- relevant information provided		N
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		N
	Cables not lighter than the types in this clause		N

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

	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N
(13.3)	DK: Needle flame test during 30 s		N
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N
(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

----- End of Report -----