





SHENZHEN BETOP ELECTRONICS CO., LTD.

IEC REPORT

Prepared For :	SHENZHEN BETOP ELECTRONICS CO., LTD. Building D-C, Yisong Ecological Science and Technology Park, Jiejiabao Road No.9, ShiYan Town, Shenzhen, P.R.C.518108
Product Name:	HIGH BAY LIGHT
Trade Name:	
Model :	BT-TH75W-ND
Prepared By :	Shenzhen BST Technology Co., Ltd. Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China
Test Date:	Sep. 19, 2014 –Oct. 14, 2014
Date of Report :	Oct. 16, 2014
Report No.:	BST14100309Y-1SR-2

**TEST REPORT****IEC 60598-2-1****Luminaires****Part 2: Particular requirements****Section One – Fixed general purpose luminaires**

Testing Laboratory Name	Shenzhen BST Technology Co., Ltd.
Address	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China
Testing location	Shenzhen BST Technology Co., Ltd.
Applicant's Name	SHENZHEN BETOP ELECTRONICS CO., LTD.
Address	Building D-C, Yisong Ecological Science and Technology Park, Jiejiabao Road No.9, ShiYan Town, Shenzhen, P.R.C.518108
Manufacturer	SHENZHEN BETOP ELECTRONICS CO., LTD.
Address	Building D-C, Yisong Ecological Science and Technology Park, Jiejiabao Road No.9, ShiYan Town, Shenzhen, P.R.C.518108
Test specification	
Standard	IEC 60598-2-1:1979+A1:1987
	IEC 60598-1:2008
Procedure deviation	N/A
Non-standard test method	N/A
Test item description	HIGH BAY LIGHT
Trade Name	
Model and/or type reference	BT-TH75W-ND
Rating(s)	100V~, 50/60Hz, 0.8A, PF>0.95, 75W
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)



General remarks:

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

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

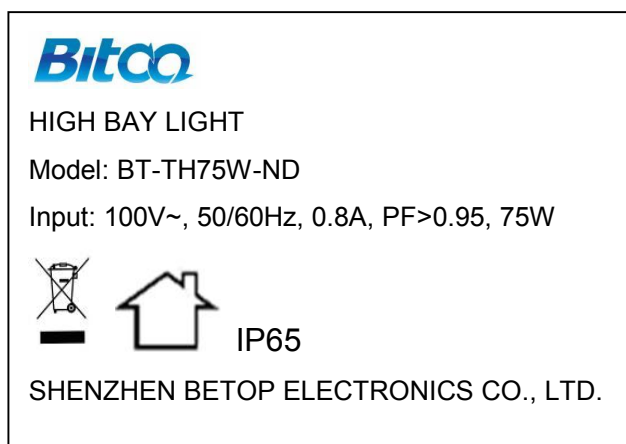
"(see Annex #)" refers to an annex appended to the report.

Clause numbers between brackets refer to clauses in IEC 60598-1

General product information:

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Copy of marking plate:



Prepared by :

Shine Gong

Engineer

Reviewer :

CS Chan

Supervisor

Approved & Authorized Signer :

Christina

Christina / Manager



IEC 60598-2-1			
Cl.	Requirement – Test	Result	Verdict

0	SCOPE		P
0.1	More sections applicable	Yes [√] No []	—

2	CLASSIFICATION		P
2.2	Type of protection.....	Class I	—
2.3	Degree of protection	IP65	—
2.4	Luminaire only suitable for non-combustible materials	No	—
	Luminaire suitable for normally flammable surfaces.....	Yes	—
	Luminaire suitable to be covered by insulating material	No	—
2.5	Luminaire for normal use	Yes	—
	Luminaire for rough service	No	—

3	MARKING		P
3.2	Marking on luminaires		P
	Position of the marking		P
	Format of symbols/text		P
3.3	Additional information		P
	Language of instructions	English	P
3.3.1	Combination luminaires		N
3.3.2	Nominal frequency in Hz	50/60Hz	P
3.3.3	Operating temperature		P
3.3.4	Symbol or warning notice		P
3.3.5	Wiring diagram		P
3.3.6	Special conditions		N
3.3.7	Metal halid lamp luminaire – warning	Not metal halide lamp	N
3.3.8	Limitation for semi-luminaires	Not semi-luminaires	N
3.3.9	Power factor and supply current	current is 0.8A, PF>0.95,	P
3.3.10	Suitability for use indoors		P
3.3.11	Luminaires with remote control	No remote control	N
3.3.12	Clip-mounted luminaire – warning		N
3.3.13	Specifications of protective shields	No protective shields	N



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Cl.	Requirement – Test	Result	Verdict
3.3.14	Symbol for nature of supply	~	P
3.3.15	Rated current of socket outlet	No socket outlet used	N
3.3.16	Rough service luminaire	Ordinary luminaire	N
3.3.17	Mounting instruction for type Y, type Z and some type X attachments	Y	P
3.3.18	Non-ordinary luminaires with PVC cable	Ordinary luminaire	N
3.3.19	Protective conductor current in instruction if applicable		N
3.3.20	Provided with information if not intended to be mounted within arms reach		P
3.3.101	Terminal block is not supplied with luminaire		P
3.4	Test with water	15s with water	P
	Test with hexane	15s with hexane	P
	Legible after test	The marking is legible	P
	Label attached	The marking not be easily removable and shows no curling	P

4	CONSTRUCTION		P
4.2	Components replaceable without difficulty		N
4.3	Wireways smooth and free from sharp edges		P
4.4	Lampholders		N
4.4.1	Integral lampholder		N
4.4.2	Wiring connection		N
4.4.3	Lampholder for end-to-end mounting		N
4.4.4	Positioning		N
4.4.5	Peak pulse voltage		N
4.4.6	Centre contact		N
4.4.7	Rough service luminaires	Ordinary luminaires	N
4.4.8	Lamp connectors	No lamp connector provided	N
4.4.9	Caps and bases correctly used		N
4.5	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
4.6	Terminal blocks		N
	Tails		N



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Cl.	Requirement – Test	Result	Verdict
	Unsecured blocks		N
4.7	Terminals and supply connections		P
4.7.1	Contact to metal parts		P
4.7.2	Test 8 mm live conductor		N
	Test 8 mm earth conductor		N
4.7.3	Terminals for supply conductors		P
4.7.4	Terminals other than supply connection		N
4.7.5	Heat-resistant wiring/sleeves		N
4.7.6	Multi-pole plug		N
4.8	Switches:		N
	- adequate rating	No switches used	N
	- adequate fixing		N
	- polarized supply		N
4.9	Insulating lining and sleeves		P
4.9.1	Retainment		P
	Method of fixing..... :		N
4.9.2	Insulated linings and sleeves		P
	a) & c) Insulation resistance and electric strength		P
	b) Ageing test. Temperature (°C) :		P
4.10	Insulation of Class II luminaires		N
4.10.1	No contact, mounting surface - accessible metal parts - wiring of basic insulation	Class I equipment	N
	Safe installation fixed luminaires		N
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
4.10.2	Assembly gaps:		N
	- not coincidental		N
	- no straight access with test probe		N
4.10.3	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		N
	- sleeves retained in position		P
	- lining in lampholder		N
4.11	Electrical connections		P



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Cl.	Requirement – Test	Result	Verdict
4.11.1	Contact pressure	Not transmitted through insulating material	P
4.11.2	Screws:		P
	- self-tapping screws	No self-tapping screws	P
	- thread-cutting screws		P
	- at least two self-tapping screws		P
4.11.3	Screw locking:		N
	- spring washer		N
	- rivets		N
4.11.4	Material of current-carrying parts		P
4.11.5	No contact to wood	No wood material in the luminaire	P
4.11.6	Electro-mechanical contact systems	No such systems	N
4.12	Mechanical connections and glands		P
4.12.1	Screws not made of soft metal		P
	Screws of insulating material		N
	Torque test: torque (Nm); part		N
	Torque test: torque (Nm); part		N
	Torque test: torque (Nm); part		N
4.12.2	Screws with diameter < 3 mm screwed into metal		N
4.12.4	Locked connections:		P
	- fixed arms; torque (Nm)	2.5Nm	P
	- lampholder; torque (Nm)		N
	- push-button switches; torque 0,8 Nm		N
4.12.5	Screwed glands; force (N)	No screwed gland	N
4.13	Mechanical strength		P
4.13.1	Impact tests:		P
	- fragile parts; energy (Nm).....	0.2 Nm	P
	- other parts; energy (Nm)	0.35 Nm	P
	1) live parts	Not access	P
	2) linings		P
	3) protection	Continue to afford the degree of protection against ingress of dust, solid objects and moisture	P
	4) covers	No break	P



IEC 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
4.13.3	Straight test finger	Can't touch with live part with 30N	P
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
4.13.6	Tumbling barrel		N
4.14	Suspensions and adjusting devices		P
4.14.1	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm).....:		N
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N
	metal rod. Diameter (mm)		N
4.14.2	Load to flexible cables		N
	Mass (kg)		N
	Stress in conductors (N/mm ²)		N
	Semi-luminaires – mass (kg)		N
	Semi-luminaires – bending moment (Nm).....:		N
4.14.3	Adjusting devices:		N
	- flexing test; number of cycles		N
	- strands broken		N
	- electric strength test afterwards		N
4.14.4	Telescopic tubes: cords not fixed to tube; no strain on conductors	No telescopic tubes	N
4.14.5	Guide pulleys	No guide pulleys	N
4.14.6	Strain on socket-outlets	No socket-outlet	N
4.15	Flammable materials:		P
	- glow-wire test 650 °C		P
	- spacing ≥ 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N



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Cl.	Requirement – Test	Result	Verdict
	- no fiercely burning material		P
	- thermal protection		N
	- electronic circuits exempted		N
4.15.2	Luminaires made of thermoplastic material with lamp control gear		N
	a) construction		N
	b) temperature sensing control		N
	c) surface temperature		N
4.16	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	P
4.16.1	Electronic lamp control gear		N
	Lamp control gear spacing:		N
	- spacing 35 mm		N
	- spacing 10 mm		N
4.16.2	Thermal protection:		N
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
4.16.3	The test of 12.6.	(see 12.6)	N
4.17	Drain holes	Ordinary luminaire	N
	Clearance at least 5 mm		N
4.18	Resistance to corrosion:		P
4.18.1	- rust-resistance	Ordinary luminaire	N
4.18.2	- season cracking in copper		P
4.18.3	- corrosion of aluminium		N
4.19	Ignitors compatible with ballast	No ignitors	N
4.20	Rough service vibration	Ordinary luminaire	N
4.21	Protective shield:		N
4.21.1	Shield fitted		N
4.21.2	Particles from a shattering lamp not impair safety		N
4.21.3	No direct path		N
4.21.4	Impact test on shield		N
	Glow-wire test on lamp compartment		N
4.22	Attachments to lamps	No attachments	N
4.23	Semi-luminaires comply class II		N



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Cl.	Requirement – Test	Result	Verdict
4.24	UV radiation	Class I LED light used	N
4.25	No sharp point or edges	No sharp points or edges	P
4.26	Short-circuit protection:		P
4.26.1	Uninsulated accessible SELV parts		P
4.26.2	Short-circuit test		P
4.26.3	Test chain according to Figure 29		P

11	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V).....:	100V~	—
	Voltage form	Sinusoidal [√] Non-sinusoidal []	—
	PTI	< 600 [√] ≥ 600 []	—
	Rated pulse voltage (kV)		—
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)	Cr >2.5m m, Cl>1.5mm	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm)	Cr >5.0mm, Cl>3.0mm	P
	(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
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)	Cr >5.0mm, Cl>3.0mm	P

7	PROVISION FOR EARTHING		P
7.2.1 + 7.2.3	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	0.02	P
	Self-tapping screws used		P
	Thread-forming screws		P
	Connector earthing first		N
7.2.2 + 7.2.3	Earth continuity in joints etc.		P



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Cl.	Requirement – Test	Result	Verdict
7.2.4	Locking of clamping means		P
	Compliance with 4.7.3		P
7.2.5	Earth terminal integral part of connector socket		N
7.2.6	Earth terminal adjacent to mains terminals		P
7.2.7	Electrolytic corrosion of the earth terminal		P
7.2.8	Material of earth terminal		P
	Contact surface bare metal		P
7.2.10	Class II luminaire for looping-in		N
7.2.11	Earthing core coloured green-yellow		P
	Length of earth conductor		P
14	SCREW TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N
15	SCREWLESS TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N
5	EXTERNAL AND INTERNAL WIRING		P
5.2	Supply connection and external wiring		P
5.2.1	Means of connection	Wire leader	P
5.2.2	Type of cable.....		P
	Nominal cross-sectional area (mm ²)	3*0.824 mm ²	P
5.2.3	Type of attachment, X, Y or Z	Type Y	P
5.2.5	Type Z not connected to screws		N
5.2.6	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
5.2.7	Cable entries through rigid material have rounded edges		P
5.2.8	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- tubes or guards made of insulating material		P



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Cl.	Requirement – Test	Result	Verdict
5.2.9	Locking of screwed bushings		P
5.2.10	Cord anchorage:		N
	- 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
5.2.10.1	Cord anchorage for type X attachment:		N
	a at least one part fixed		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
	Labyrinth type anchorages		N
5.2.10.2	Adequate cord anchorage for type Y and type Z attachment	Y	P
5.2.10.3	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N).....: 60N		P
	- torque test: torque (Nm): 0.25Nm		P
	- displacement ≤ 2 mm	0.3mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
5.2.11	External wiring passing into luminaire		P
5.2.12	Looping-in terminals		N
5.2.13	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N
5.2.14	Mains plug same protection	No mains plug supplied	N
	Class III luminaire plug		N
5.2.16	Appliance inlets (IEC 60320)	No appliance inlet	N
	Appliance couplers of class II type		N



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Cl.	Requirement – Test	Result	Verdict
5.2.17	No standardized interconnecting cables properly assembled		N
5.2.18	Used plug in accordance with		N
	-IEC 60083		N
	-Other standard		N
5.3	Internal wiring		P
5.3.1	Internal wiring of suitable size and type		P
	Through wiring		P
	- not delivered/ mounting instruction		N
	- factory assembled		P
	- socket outlet loaded (A).....:		N
	- temperatures.....:		P
	Green-yellow for earth only		P
5.3.1.1	Internal wiring connected directly to fixed wiring		N
	Cross-sectional area (mm ²)		N
	Insulation thickness		N
	Extra insulation added where necessary		N
5.3.1.2	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
5.3.1.3	Double or reinforced insulation for class II		N
5.3.1.4	Conductors without insulation	No such conductors	N
5.3.1.5	SELV current-carrying parts		P
5.3.1.6	Insulation thickness other than PVC or rubber		N
5.3.2	Sharp edges etc.	Inner wire can't touch the sharp edges , rivets and similar components	P
	No moving parts of switches etc.	No such part	N
	Joints, raising/lowering devices		N
	Telescopic tubes etc.	No such device	N
	No twisting over 360°		P
5.3.3	Openings		N
	Bushings not removable		N
	Bushings in sharp openings		N
	Cables with protective sheath		N
5.3.4	Joints and junctions effectively insulated		P



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Cl.	Requirement – Test	Result	Verdict
5.3.5	Strain on internal wiring		P
5.3.6	Wire carriers		N
5.3.7	Wire ends may be tinned		N
	Wire ends tinned: no cold flow		N

8	PROTECTION AGAINST ELECTRIC SHOCK		P
8.2.1	Live parts not accessible	No access of live part in normal use	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
	Insulation lacquer not reliable	No insulation lacquer	N
	Double-ended high pressure discharge lamp		N
8.2.2	Portable luminaire adjusted in most unfavourable position		N
8.2.3	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
	Class I luminaire with BC lampholder		N
8.2.4	Portable luminaire:		N
	- protection independent of supporting surface		N
	- terminal block completely covered		N
8.2.5	Compliance with the standard test finger or relevant probe		P
8.2.6	Covers reliably secured		P
8.2.7	Discharging of capacitors $\geq 0,5 \mu\text{F}$		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

12	ENDURANCE TEST AND THERMAL TEST	P
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Cl.	Requirement – Test	Result	Verdict
12.3	Endurance test:		P
	- mounting-position.....:	Normal position	—
	- test temperature (°C).....:	35°C	—
	- total duration (h).....:	168h	—
	- supply voltage: Un factor; calculated voltage (V).....:	100x1.1=110V	—
	- lamp used	LED	—
12.3.2	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- marking legible	Marking still legible and shows no curling	P
	- no cracks, deformation etc.		P
12.4	Thermal test (normal operation)	(see Annex 2)	P
12.5	Thermal test (abnormal operation)	(see Annex 2)	P
12.6	Thermal test (failed lamp control gear condition):		N
12.6.1	- case of abnormal conditions.....:		—
	- electronic lamp control gear		N
	- measured winding temperature (°C) at 1,1 Un.:		—
	- measured mounting surface temperature (°C) at 1,1 Un		N
	- calculated mounting surface temperature (°C).:		N
	- track-mounted luminaires		N
12.6.2	Temperature sensing control		N
	- case of abnormal conditions.....:		—
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured mounting surface temperature (°C) :		N
	- track-mounted luminaires		N
12.7	Thermal test (failed lamp control gear in plastic luminaires:		N
	- case of abnormal conditions.....:		—
12.7.1	- measured winding temperature (°C) at 1,1 Un.:		—



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Cl.	Requirement – Test	Result	Verdict
	- measured temperature of fixing point/ exposed part (°C) at 1,1 Un		N
	- calculated temperature of fixing point/ exposed part (°C)		N
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 (°C)		N

9	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
9.2	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP65	—
	- mounting position during test.....		—
	- fixing screws tightened; torque (Nm)		—
	- tests according to clauses.....		—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		N
	c) no trace of water on current-carrying parts or where it could become a hazard		N
	d) i For luminaires without drain holes – no water entry		N
	d) ii For luminaires with drain holes – no hazardous water entry		N
	e) no water in watertight luminaire		N
	f) no contact with live parts (IP 2X)		P
	f) no entry into enclosure (IP 3X and IP 4X)		P
	f) no contact with live parts (IP 3X and IP 4X)		P
9.3	Humidity test 48 h	R.H.:95% T:25°C	P
10	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
10.2.1	Insulation resistance test		P
	Insulation resistance (MΩ):		--



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Cl.	Requirement – Test	Result	Verdict
	SELV:		N
	- 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:		P
	- between live parts of different polarity	>2MΩ	P
	- between live parts and mounting surface.....	>2MΩ	P
	- between live parts and enclosure.....	>2MΩ	P
	- between live parts of different polarity through action of a switch.....	No switch	N
10.2.2	Electric strength test		P
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N
	Test voltage (V):		P
	SELV:		N
	- 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:		P
	- between live parts of different polarity	1200V	P
	- between live parts and mounting surface.....	1200V	P
	- between live parts and enclosure.....	1200V	P
	- between live parts of different polarity through action of a switch.....		N
10.3.1	Leakage current (mA).....	0.31mA < 0.5mA	P
13	RESISTANCE TO HEAT, FIRE AND TRACKING		P
13.2.1	Ball-pressure test:		P
	- part tested; temperature (°C).....	Plastic enclosure, 75°C, 1.43mm Limit:2mm	P



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Cl.	Requirement – Test	Result	Verdict
	- part tested; temperature (°C).....:	PCB 130°C, 1.23mm Limit:2mm	P
	- part tested; temperature (°C).....:		N
13.3.1	Needle flame test (10s):		P
	- part tested		N
	- part tested		N
13.3.2	Glow wire test (650°C):		P
	- part tested	PCB	P
13.4.1	Tracking test: part tested		N

	COMMON MODIFICATIONS		N
(3.3.101 + 5.2.1)	For luminaires connected by tails, information about terminal block		N
(5.2.2)	Cables equal to HD 21 S2 or HD 22 S2		N
(5.2.15)	Colour code low voltage		N

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS		N
(2.2)	Class 0 not accepted		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
(4.5.1)	FR: socket-outlets		N
(5.2.1)	DK, FI, SE, GB: type of plug		N

ZC	ANNEX ZC, NATIONAL DEVIATIONS		N
(13.3)	DK: Needle flame test or glow-wire test 750°C for luminaires in access routes		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 and workers		N

	ANNEX 1: components					P
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s of conformity	
PCB	Various	Various	94V-0, 130°C	UL 94	UL	



IEC 60598-2-1						
Cl.	Requirement – Test			Result		Verdict
Enclosure	Various	Various	V-0, 105°C	UL 94	UL	
Internal wire	Various	Various	600V, 105°C	--	UL	
Power cord	SJTW	Various	105°C, 3*0. 0.824mm ²	IEC	VDE	
LED driver	MEAN WELL	HBG-100-48A	Input: 100-240VAC, 50/60Hz, 1.1A, output: max. +49VDC, 2.0A	EN61347-2-13	CE	
	ANNEX 2: temperature measurements, thermal tests of Section 12					P
	Type reference			See page 2		—
	Lamp used			LED		—
	Lamp control gear used			Electrical control gear		—
	Mounting position of luminaire			Normal position		—
	Supply wattage (W)			75W		—
	Supply current (A)			--		—
	Calculated power factor			0.995		—
	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.....			100V x1.06=106V		—
	- 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.....			--		—
temperature (°C) of part		clause 12.4 - normal			clause 12.5 - abnormal	
		test 1	test 2	test 3	limits	test 4
						limit
Lamp Surface		--	63.4	--	Ref.	
Power cord		--	39.6	--	105	
Internal wire		--	44.3	--	105	
LED driver surface		--	55.1	--	85	
Enclosure		--	33.5	--	90	
Ambient		--	25.4	--	--	
	ANNEX 3: screw terminals (part of the luminaire)					N
(14)	SCREW TERMINALS					N
(14.2)	Type of terminal					—
	Rated current (A).....					—
(14.3.2.1)	One or more conductors					N



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Cl.	Requirement – Test	Result	Verdict
(14.3.2.2)	Special preparation		N
(14.3.2.3)	Terminal size		N
	Cross-sectional area (mm ²)		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
	Lug terminal		N
	Mantle terminal		N
	Pull test; pull (N).....:		N
(14.4.8)	Without undue damage		N
ANNEX 4: SCREWLESS TERMINALS (PART OF THE LUMINAIRE)			
(15)	SCREWLESS TERMINALS		N
(15.2)	Type of terminal		—
	Rated current (A).....:		—
(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



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Cl.	Requirement – Test	Result	Verdict
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		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.....		—
	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 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		N



IEC 60598-2-1										
Cl.	Requirement – Test					Result				Verdict
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										



ANNEX A:

Photo-documentation

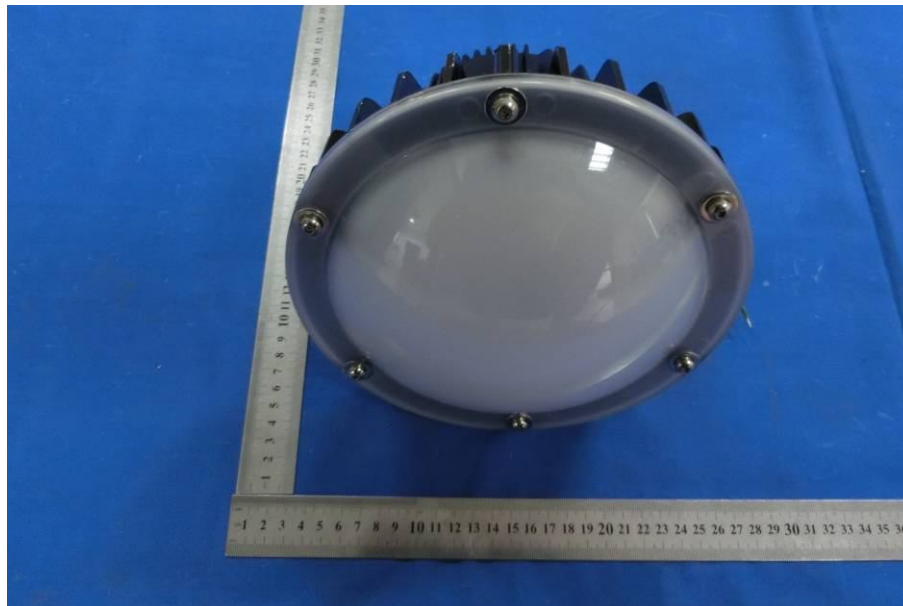


Photo 1 General Appearance of the EUT



Photo 2 General Appearance of the EUT



Photo 3 General Appearance of the EUT



Photo 4 Internal view of the EUT



Photo 5 LED Driver Label view of the EUT