



CHEVY LIGHT CO., LTD.

CE LVD REPORT

Prepared For :	CHEVY LIGHT CO., LTD. 6/F, No.A, Runfeng Industrial Garden, Dongcai Industrial Zone, Gushu, Xixiang Town, Bao'an District, Shenzhen 518102, P.R. China
Product Name:	LED GROW LIGHTS
Model :	CL-GLU50RB, CL-GLU90RB, CL-GLR90RB, CL-GLR120RB, CL-GLR300RB, CL-GLR600RB
Prepared By :	Shenzhen BST Technology Co., Ltd. 3F, Weames Technology Building, No. 10 Kefa Road, Science Park, Nanshan District, Shenzhen, Guangdong, China
Test Date:	Feb. 16-17, 2009
Date of Report :	Feb. 18, 2009
Report No.:	BTRL0902132204



TEST REPORT EN60598-1&EN 60 598-2-4 Luminaires Part 2: Particular requirements Section Four – Portable general purpose luminaires	
Testing Laboratory Name	Shenzhen BST Technology Co.,Ltd.
Address	3F,Weames Technology Building,No. 10 Kefa Road, Science Park,Nanshan District,Shenzhen,Guangdong,China
Testing location	Shenzhen BST Technology Co.,Ltd.
Applicant's Name	CHEVY LIGHT CO., LTD.
Address	6/F, No.A, Runfeng Industrial Garden, Dongcai Industrial Zone, Gushu, Xixiang Town, Bao'an District, Shenzhen 518102, P.R. China
Manufacturer	CHEVY LIGHT CO., LTD.
Address	6/F, No.A, Runfeng Industrial Garden, Dongcai Industrial Zone, Gushu, Xixiang Town, Bao'an District, Shenzhen 518102, P.R. China
Test specification	
Standard	EN60598-1:2004/A1:2006 EN60598-2-4:1999
Procedure deviation	N/A
Non-standard test method	N/A
Test item description	LED GROW LIGHTS
Trademark	--
Model and/or type reference	CL-GLU50RB
Rating(s)	230V~ 50W 50Hz
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 60 598-1 (EN 60 598-1)

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

Copy of marking plate and summary of test results:

Product name: LED GROW LIGHTS
Model no. : CL-GLU50RB
230V~ 50W 50Hz



CHEVY LIGHT CO., LTD.




Name and address of the testing laboratory : Shenzhen BST Technology Co.,Ltd.

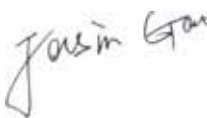
3F,Weames Technology Building,No. 10 Kefa Road,

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Test by :  Feb.18,2009
Signature Date

Doo Huang / Technician
Name and Title

Reported by :  Feb.18,2009
Signature Date

Jasin Gao / Project Engineer
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Approved by :  Feb.18,2009
Signature Date

Christina/ Manager
Name and Title



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict

4.1 (0)	SCOPE		P
4.1 (0.1)	More sections applicable	Yes [] No []	—

4.4 (2)	CLASSIFICATION		P
4.4 (2.2)	Type of protection	Class	—
4.4 (2.3)	Degree of protection	IPX0	—
4.4 (2.4)	Portable or handheld luminaire	Portable luminaire	—
	Fixed luminaire suitable for normally flammable surfaces	Yes	—
	Fixed luminaire suitable for non-combustible materials only	No	—
4.4 (2.5)	Luminaire for normal use	Yes	—
	Luminaire for rough service	No	—

4.5 (3)	MARKING		P
4.5 (3.2)	Mandatory markings		P
	Position of the marking	On the enclosure	P
	Format of symbols/text	CL-GLU50RB	P
4.5 (3.3)	Additional information		P
	Language of instructions	English	P
4.5 (3.3.1)	Combination luminaires		N
4.5 (3.3.2)	Nominal frequency in Hz	50 Hz	P
4.5 (3.3.3)	Operating temperature		N
4.5 (3.3.4)	Symbol or warning notice		P
4.5 (3.3.5)	Wiring diagram		N
4.5 (3.3.6)	Special conditions		N
4.5 (3.3.7)	Metal halid lamp luminaire – warning		N
4.5 (3.3.8)	Limitation for semi-luminaires		N
4.5 (3.3.9)	Power factor and supply current		N



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.5 (3.3.10)	Suitability for use indoors		N
4.5 (3.3.11)	Luminaires with remote control		N
4.5 (3.3.12)	Clip-mounted luminaire - warning		N
4.5 (3.3.13)	Specifications of protective shields		N
4.5 (3.3.14)	Symbol for nature of supply	~	P
4.5 (3.3.15)	Rated current of socket outlet		N
4.5 (3.3.16)	Rough service luminaire		N
4.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type X	P
4.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N
4.5 (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

4.6 (4)	CONSTRUCTION		P
4.6.1 (-)	Insulation not damaged when placing on support		P
4.6.2 (-)	Wiring fixed, to avoid rubbing		P
4.6.3 (-)	Stability 6°	Not overturn	P
	Stability 15°	Not overturn	P
4.6.4 (-)	Candlestick luminaires with switch		N
4.6.5 (-)	E5 lampholders		N
4.6 (4.2)	Components replaceable without difficulty		P
4.6 (4.3)	Wireways smooth and free from sharp edges		P



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.4)	Lampholders		--
4.6 (4.4.1)	Integral lampholder		N
4.6 (4.4.2)	Wiring connection		N
4.6 (4.4.3)	Lampholder for end-to-end mounting		N
4.6 (4.4.4)	Positioning		N
4.6 (4.4.5)	Peak pulse voltage		N
4.6 (4.4.6)	Centre contact		N
4.6 (4.4.7)	Rough service luminaires	Ordinary luminaires	N
4.6 (4.4.8)	Lamp connectors		N
4.6 (4.5)	Starter holders		--
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
4.6 (4.6)	Terminal blocks		--
	Tails		P
	Unsecured blocks		P
4.6 (4.7)	Terminals and supply connections		--
4.6 (4.7.1)	Contact to metal parts		P
4.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
4.6 (4.7.3)	Terminals for supply conductors		P
4.6 (4.7.4)	Terminals other than supply connection		N
4.6 (4.7.5)	Heat-resistant wiring/sleeves		N
4.6 (4.7.6)	Multi-pole plug		N
4.6 (4.8)	Switches:		--
	- adequate rating		N
	- adequate fixing		N
	- polarized supply		N
4.6 (4.9)	Insulating lining and sleeves		--
4.6 (4.9.1)	Retainment		N
	Method of fixing..... :		N



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.9.2)	Insulated linings and sleeves		--
	a) & c) Insulation resistance and electric strength		N
	b) Ageing test. Temperature (°C)		N
4.6 (4.10)	Insulation of Class II luminaires		--
4.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
4.6 (4.10.2)	Assembly gaps:		P
	- not coincidental		P
	- no straight access with test probe		P
4.6 (4.10.3)	Retainment of insulation:		--
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		N
	- lining in lampholder		N
4.6 (4.11)	Electrical connections		--
4.6 (4.11.1)	Contact pressure	Not transmitted through insulating materials	P
4.6 (4.11.2)	Screws:		--
	- self-tapping screws		P
	- thread-cutting screws		N
	- at least two self-tapping screws		P
4.6 (4.11.3)	Screw locking:		--
	- spring washer		N
	- rivets		N



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.11.4)	Material of current-carrying parts		P
4.6 (4.11.5)	No contact to wood		P
4.6 (4.11.6)	Electro-mechanical contact systems		N
4.6 (4.12)	Mechanical connections and glands		--
4.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N
	Torque test: torque (Nm); part : 1.2Nm		P
	Torque test: torque (Nm); part :		N
	Torque test: torque (Nm); part :		N
4.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N
4.6 (4.12.4)	Locked connections:		--
	- fixed arms; torque (Nm) :		N
	- lampholder; torque (Nm)..... :		N
	- push-button switches; torque (Nm) :		N
4.6 (4.12.5)	Screwed glands; force (N) :		N
4.6 (4.13)	Mechanical strength		--
4.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) :		N
	- other parts; energy (Nm) : Enclosure: 0.5 Nm		P
	1) live parts		P
	2) linings		N
	3) protection		P
	4) covers		P
4.6 (4.13.3)	Straight test finger		N



EN60598-1&EN 60 598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.13.4)	Rough service luminaires		--
	a) fixed	Ordinary luminaire	N
	b) hand-held		N
	c) delivered with a stand		N
	d) for temporary installations and suitable for mounting on a stand		N
4.6 (4.13.6)	Tumbling barrel		N
4.6 (4.14)	Suspensions and adjusting devices		P
4.6 (4.14.1)	Mechanical load:		--
	A) four times the weight		N
	B) torque 2,5 Nm		N
	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
4.6 (4.14.2)	Load to flexible cables		--
	Mass (kg)		N
	Stress in conductors (N/mm ²)		N
	Mass (kg) of semi-luminaire.....		N
	Bending moment (Nm) of semi-luminaire		N
4.6 (4.14.3)	Adjusting devices:		--
	- flexing test; number of cycles		N
	- strands broken		N
	- electric strength test afterwards		N
4.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N



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Cl.	Requirement – Test	Result	Verdict
4.6 (4.14.5)	Guide pulleys		N
4.6 (4.14.6)	Strain on socket-outlets		N
4.6 (4.15)	Flammable materials:		--
	- glow-wire test 650 °C		P
	- spacing \geq 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		P
	- thermal protection		N
	- electronic circuits exempted		N
4.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		--
	a) construction		P
	b) temperature sensing control		N
	c) surface temperature		N
4.6 (4.16)	Luminaires marked with F-symbol		--
	No lamp control gear	(compliance with Section 12)	P
4.6 (4.16.1)	Lamp control gear spacing:		--
	- spacing 35 mm		N
	- spacing 10 mm		P
4.6 (4.16.2)	Thermal protection:		--
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
4.6 (4.16.3)	"F" curve measured	(see 12.6)	P
4.6 (4.17)	Drain holes		N



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Cl.	Requirement – Test	Result	Verdict
	Clearance at least 5 mm		N
4.6 (4.18)	Resistance to corrosion:		--
4.6 (4.18.1)	- rust-resistance		N
4.6 (4.18.2)	- season cracking in copper		N
4.6 (4.18.3)	- corrosion of aluminium		N
4.6 (4.19)	Igniters compatible with ballast		N
4.6 (4.20)	Rough service vibration		N
4.6 (4.21)	Protective shield:		--
4.6 (4.21.1)	Shield fitted		N
4.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
4.6 (4.21.3)	No direct path		N
4.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
4.6 (4.22)	Attachments to lamps		N
4.6 (4.23)	Semi-luminaires comply Class II		N
4.6 (4.24)	UV radiation, metal halide lamps		N
4.6 (4.25)	No sharp point or edges		P
4.6 (4.26)	Short-circuit protection:		--
4.6 (4.26.1)	Uninsulated accessible SELV parts		N
4.6 (4.26.2)	Short-circuit test		N
4.6 (4.26.3)	Test chain according to IEC 61032		N
4.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V)	230V ~	—



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Cl.	Requirement – Test	Result	Verdict
	Voltage form	Sinusoidal	—
	PTI	<600	—
	Rated pulse voltage (kV) :		—
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)..... :		P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm)..... :		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)..... :		P
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)..... :		P

4.8 (7)	PROVISION FOR EARTHING		P
4.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω		P
	Two self-tapping screws used		P
	Thread-forming screws		N
	Connector earthing first		P
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		P
4.8 (7.2.4)	Locking of clamping means		N
	Compliance with 4.7.3		N
4.8 (7.2.5)	Earth terminal integral part of connector socket		N
4.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
4.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
4.8 (7.2.8)	Material of earth terminal		P



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Cl.	Requirement – Test	Result	Verdict
	Contact surface bare metal		P
4.8 (7.2.10)	Class II luminaire for looping-in		N
4.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P

4.9 (14)	SCREW TERMINALS		N
	Separately approved; component list	(see Annex 1)	N
	Part of the luminaire	(see Annex 3)	N

4.9 (15)	SCREWLESS TERMINALS		N
	Separately approved; component list	(see Annex 1)	N
	Part of the luminaire	(see Annex 4)	N

4.10 (5)	EXTERNAL AND INTERNAL WIRING		P
4.10 (5.2)	Supply connection and external wiring		--
4.10 (5.2.1)	Means of connection..... :	Non-detachable flexible cords	P
4.10 (5.2.2)	Type of cable :	H03VV-F	P
	Nominal cross-sectional area (mm ²)..... :	3X0.75 mm ²	P
4.10 (5.2.3)	Type of attachment, X, Y or Z	Type X	P
4.10 (5.2.5)	Type Z not connected to screws		N
4.10 (5.2.6)	Cable entries:		--
	- suitable for introduction		P
	- adequate degree of protection		P
4.10 (5.2.7)	Cable entries through rigid material have rounded edges		P



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Cl.	Requirement – Test	Result	Verdict
4.10 (5.2.8)	Insulating bushings:		--
	- suitably fixed		P
	- material in bushings		P
	- tubes or guards made of insulating material		P
4.10 (5.2.9)	Locking of screwed bushings		N
4.10 (5.2.10)	Cord anchorage:		--
	- 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
4.10 (5.2.10.1)	Cord anchorage for type X attachment:		--
	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
4.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N
4.10 (5.2.10.3)	Tests:		--
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)		P
	- torque test: torque (Nm)	0.15Nm	P



	- displacement ≤ 2 mm	1mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
4.10 (5.2.11)	External wiring passing into luminaire		N
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Cl.	Requirement – Test	Result	Verdict
4.10 (5.2.12)	Looping-in terminals		N
4.10 (5.2.13)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N
4.10 (5.2.14)	Mains plug same protection		P
	Class III luminaire plug		N
4.10 (5.2.16)	Appliance inlets (IEC 60320)		N
	Appliance couplers of class II type		N
4.10 (5.3)	Internal wiring		--
4.10 (5.3.1)	Cross-sectional area (mm ²).....:	0.75 mm ²	P
	Insulation thickness		P
	Temperature resistant		P
	Sleeves suitable for hot spots		P
	Green-yellow for earth only		P
	Through wiring		--
	- cross-sectional area (mm ²)..... :		N
	- not delivered/ mounting instruction		N
	- factory assembled		N
	- socket outlet loaded (A)..... :		N
	- temperatures..... :	(see Annex 2)	N
4.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		P



	Joints, raising/lowering devices		N
	Telescopic tubes etc.		N
	No twisting over 360°		P
4.10 (5.3.3)	Openings		N
	Bushings not removable		N
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Cl.	Requirement – Test	Result	Verdict
	Bushings in sharp openings		N
	Cables with protective sheath		N
4.10 (5.3.4)	Joints and junctions effectively insulated		P
4.10 (5.3.5)	Strain on internal wiring		P
4.10 (5.3.6)	Wire carriers		N
4.10 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		P

4.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
4.11.1 (-)	Luminaires with BC cap		N
4.11 (8.2.1)	Live parts not accessible		P
	Protection in any position		P
	Double-ended tungsten filament lamp		N
	Insulation lacquer not reliable		N
	Double-ended high pressure discharge lamp		N
4.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		P
4.11 (8.2.3)	Class II luminaire:		--
	- 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
4.11 (8.2.4)	Portable luminaire:		--
	- protection independent of supporting surface		P
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Cl.	Requirement – Test	Result	Verdict
	- terminal block completely covered		P
4.11 (8.2.6)	Covers reliably secured		P
4.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		P
	Portable plug connected luminaire with capacitor		P
	Other plug connected luminaire with capacitor		N
	Discharge device on or within capacitor		P
	Discharge device mounted separately		N

4.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
4.12 (12.3)	Endurance test:		P
	- mounting-position	(see Annex 2)	—
	- test temperature (°C)	35°C	—
	- total duration (h).....	168h	—
	- supply voltage: Un factor; calculated voltage (V)	253V	—
	- lamp used	LED lamp	—
4.12 (12.3.2)	After endurance test:		--
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- marking legible		P
	- no cracks, deformation etc.		P
4.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P



4.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N
4.12 (-)	Test overturned position (overturns = 15°)		P
4.12 (12.6)	Thermal test (failed lamp control gear condition):		--
4.12 (12.6.1)	- case of abnormal conditions..... :		—
	- electronic lamp control gear		N
	- measured winding temperature (°C): at 1,1 Un :		—
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Cl.	Requirement – Test	Result	Verdict
	- measured mounting surface temperature (°C): at 1,1 Un		N
	- calculated mounting surface temperature (°C). :		N
	- track-mounted luminaires		N
4.12 (12.6.2)	Temperature sensing control		--
	- 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
4.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		--
	- case of abnormal conditions		—
4.12 (12.7.1)	- measured winding temperature (°C): at 1,1 Un :		—
	- measured temperature of fixing point/ exposed part (°C): at 1,1 Un..... :		N
	- calculated temperature of fixing point/ exposed part (°C)		N
4.12 (12.7.2)	Temperature sensing control		--
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N



	- measured temperature of fixing point/ exposed part (°C):		N
--	--	--	---

4.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
4.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		--
	- classification according to IP	IP X0	—
	- mounting position during test.....		—
	- fixing screws tightened; torque (Nm).....		—

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Cl.	Requirement – Test	Result	Verdict
	- tests according to clauses		—
	- electric strength test afterwards		N
	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)		N
	f) no entry into enclosure (IP 3X and IP 4X)		N
4.13 (9.3)	Humidity test 48 h	93% R.H. T:25	P

4.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
4.14 (10.2.1)	Insulation resistance test		--
	Insulation resistance (MΩ):		--
	SELV:		N
	- between current-carrying parts of different polarity		N
	- between current-carrying parts and mounting surface		N



	- between current-carrying parts and enclosure of the luminaire		N
	Other than SELV:		--
	- between live parts of different polarity		P
	- between live parts and mounting surface		P
	- between live parts and metal parts.....		P
	- between live parts of different polarity through action of a switch		N
4.14 (10.2.2)	Electric strength test		--
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N
	Test voltage (V):		--
	SELV:		--
	- between current-carrying parts of different polarity		N
	- between current-carrying parts and mounting surface		N
	- between current-carrying parts and enclosure of the luminaire		N
	Other than SELV:		--
	- between live parts of different polarity	1460V	P
	- between live parts and mounting surface	3670V	P
	- between live parts and metal parts.....	1460V	P
	- between live parts of different polarity through action of a switch		N
4.14 (10.3.1)	Leakage current (mA)	0.1mA	P
4.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
4.15 (13.2.1)	Ball-pressure test:		--
	- part tested; temperature (°C).....	PCB	P
	- part tested; temperature (°C).....	Terminal block	P



4.15 (13.3.1)	Needle flame test (10 s):		--
	- part tested..... :	PCB	P
	- part tested..... :	Terminal block	P
4.15 (13.3.2)	Glow-wire test (650°C):		--
	- part tested..... :	PCB	P
	- part tested..... :		N
4.15 (13.4.1)	Tracking test: part tested		P

	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
4.4 (2.2)	PL: class 0 and class I not permitted on portable luminaires		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					N
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity

ANNEX 2: TEMPERATURE MEASUREMENTS, THERMAL TESTS OF SECTION 12				P		
Type reference.....	:	CL-GLU50RB		—		
Lamp used	:	LED lamp		—		
Lamp control gear used	:	---		—		
Mounting position of luminaire	:	Normal		—		
Supply wattage (W).....	:	50W		—		
Supply current (A).....	:	--		—		
Calculated power factor	:	0.942		—		
Table: measured temperatures corrected for ta = 25 °C:				--		
- abnormal operating mode.....	:			—		
- test 1: rated voltage	:			—		
- test 2: 1,06 times rated voltage or 1,05 times rated wattage	:	243.8V		—		
- 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
Lead wire		41.3		80		
Enclosure		31.9		70		
L1		65.3		115		
C1		55.6		105		
T1 winding		78.9		115		
Ambient		25.0				



	ANNEX 3: SCREW TERMINALS (PART OF THE LUMINAIRE)	N
(14)	SCREW TERMINALS	--
(14.2)	Type of terminal	—
	Rated current (A)	—
(14.3.2.1)	One or more conductors	N
(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	--
(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)	N
(15)	SCREWLESS TERMINALS	--
(15.2)	Type of terminal	N
	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
(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	--
	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									
	Voltage drop (mV) after 1 h									
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	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



Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
Inside of the EUT