



TEST REPORT

BS EN 60598-2-1 & BS EN 60598-2-1

Part 1:General requirement and testsPart 2: Particular requirements:Section one Fixed general purpose luminaire

Report reference No .	CTG2411260888D_SR116AY
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Date of issue	Nov 25, 2024
Testing laboratory	Shenzhen CTG Testing Co.,Ltd.
Address	3/F.,Yongxing Plastic Plant,No.11,Waihuan Road,Shiyan Street,Bao'an District,Shenzhen,Guangdong,China
Testing location	See above
Applicant's name	Red Sky Lighting LLC
Address	9370 Pittsburgh Ave, Rancho Cucamonga, CA 91730, United States
Test specification:	
Standard	BS EN 60598-2-1:2021+A11:2022 BS EN 60598-2-1:2021
Test procedure	UKCA-LVD
Non-standard test method	N/A
Test item particulars:	LED LIGHT
Model Number	BLX-15L-100-277-57K-HAR-120-X1-CG-GRY-SYK-M20
Trademark	RSL
Additional model	BLK-7L-100-277-aa-bb-cc-dd-ee-ff-gg-hh-ii;BLK-15L-100-277-aa-bb-cc-dd-ee-ff-gg-hh-ii;BLK-20L-100-277-aa-bb-cc-dd-ee-ff-gg-hh-ii;BLK-25L-100-277-aa-bb-cc-dd-ee-ff-gg-hh-ii;BLK-30L-100-277-aa-bb-cc-dd-ee-ff-gg-hh-ii 【Suffix "aa" may be 57K,4K,3K;"bb" may be Blank,HAR,XXX (Each "X"stands any one from A to Z);"cc" may be 30,60,90,120;"dd" may be X1;"ee" may be CG,DG(DG only available for 7L and 15L) ;"ff" may be GRY, BLK, WHT, BRZ; "gg" may be SYK,AYK;"hh" may be Blank,EM01,EM02(EM only available for 7L and 15L);"ii" may be M20,M25;】
Model differences	The BLX-15L-100-277-57K-HAR-120-X1-CG-GRY-SYK-M20 is a test model and differs from other models only in appearance, it can represent other models
Ratings	AC 230V,50hz.
Manufacturer	Red Sky Lighting LLC
Address	9370 Pittsburgh Ave, Rancho Cucamonga, CA 91730, United States

Possible test case verdicts:

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

Test object does meet the requirement : P(ass)

Test object does not meet the requirement : F(ail)

Testing:

Date of receipt of test item : Nov.18,2024

Date(s) of performance of tests : Nov.18,2024 To Nov.25,2024

General remarks:

This 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 object 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 point is used as the decimal separator.

Copy of marking plate**The artwork below may be only a draft.**

LED LIGHT

Model:BLX-15L-100-277-57K-HAR-120-X1-CG-GRY-SYK-M20

Rating:AC230,50Hz



Red Sky Lighting LLC

9370 Pittsburgh Ave, Rancho Cucamonga, CA 91730, United States

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.2(0)	GENERAL TEST REQUIREMENTS		P
1.2(0.3)	More sections applicable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Section/s	
1.2(0.5)	Components	(see Annex 1)	—
1.2 (0.7)	Information for luminaire design in light sources standards		
1.2 (0.7.2)	Light source safety standard ..--		—
	Luminaire design in the light source safety standard		N
1.4(2)	CLASSIFICATION OF LUMINAIRES		P
1.4 (2.2)	Type of protection	Class II	P
1.4 (2.3)	Degree of protection.....	IPX0	
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1.4 (2.5)	Luminaire for normal use .	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service .	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
1.5(3)	MARKING		P
1.5(3.2)	Mandatory markings		P
	Position of the marking	On the enclosure	P
	Format of symbols/text	Symbols>5mm Text>2mm	P
1.5(3.3)	Additional information	User manual provided	P
	Language of instructions	English	P
1.5(3.3.1)	Combination luminaires	Not combination luminaire	N
1.5(3.3.2)	Nominal frequency in Hz	50Hz	P
1.5(3.3.3)	Operating temperature		N
1.5(3.3.5)	Wiring diagram		N
1.5(3.3.6)	Special conditions		N
1.5(3.3.7)	Metal halide lamp luminaire -warning		N
1.5(3.3.8)	Limitation for semi-luminaires		N
1.5(3.3.9)	Power factor and supply current		P
1.5(3.3.10)	Suitability for use indoors	Used indoors	P
1.5(3.3.11)	Luminaires with remote control	No remote control	N
1.5(3.3.12)	Clip-mounted luminaire-warning		N
1.5(3.3.13)	Specifications of protective shields		N
1.5(3.3.14)	Symbol for nature of supply		P
1.5(3.3.15)	Rated current of socket outlet	Not provided socket outlet	N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.5(3.3.16)	Rough service luminaire		N
1.5(3.3.17)	Mounting instruction for type Y,type Z and some type X attachments	Type X	P
1.5(3.3.18)	Non-ordinary luminaires with PVC cable		N
1.5(3.3.19)	Protective conductor current in instruction if applicable		N
1.5(3.3.20)	Provided with information if not intended to be mounted within arm's reach		N
1.5(3.3.21)	Non replaceable and non-user replaceable light sources information provided		N
1.5(3.3.22)	Controllable luminaires, classification of insulation provided		N
1.5(3.3.23)	Luminaire without control gear provided with necessary information for selection of appropriate component		N
1.5(3.3.24)	If not supplied with terminal block, information on the packaging		N
1.5(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 caving	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
1.6 (4.4.4)	Positioning		P
	-pressure test(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
	-bending test (N)----		—
	After test the lampholder have not moved from its position and show no permanent deformation		P
1.6 (4.4.5)	Peak pulse voltage		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.6 (4.4.6)	Centre contact		N
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N
1.6 (4.4.8)	Lamp connectors		N
1.6 (4.4.9)	Caps and bases correctly used		N
1.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		P
1.6(4.5)	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
1.6 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		N
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 method and material		N
	-stranded or solid conductor		N
	-spot welding		N
	-welding between wires		N
	-Type Z attachment		N
	-mechanical test according to 15.6.2		N
	-electrical test according to 15.6.3		N
	-heat test according to 15.6.3.2.3 and 15.6.3.2.4		N
1.6 (4.7.4)	Terminals other than supply connection		N
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N
1.6 (4.7.6)	Multi-pole plug		N
	-test at 30 N		N
1.6 (4.8)	Switches		N
	-adequate rating		N
	-adequate fixing		N
	-polarized supply		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-compliance with IEC 61058-1 for electronic switches		N
1.6(4.9)	Insulating lining and sleeves		P
1.6 (4.9.1)	Retainment		P
	Method of fixing...		
1.6 (4.9.2)	Insulatedlinings and sleeves:		P
	Resistant to a temperature>20°C to the wire temperature or		P
	a)&c)In sulation resistance and electric strength		P
	b)Ageing test.Temperature(°C)		N
1.6 (4.10)	Double or reinforced insulation		P
1.6 (4.10.1)	No contact,mounting surface-accessible metal parts -wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors and switches		N
	Interference suppression capacitors according to IEC 60384-14		N
1.6 (4.10.2)	Assembly gaps		P
	-not coincidental		P
	-no straight access with test probe		P
1.6 (4.10.3)	Retainment ofinsulation:		P
	-fixed		P
	-unable to be replaced;luminaire inoperative		P
	-sleeves retained in position		P
	-lining in lampholder		N
1.6 (4.10.4)	Protective impedance device		N
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N
	Y1 or Y2 capacitors comply with IEC 60384-14		N
	Resistors comply with test(a)in 14.1 of IEC 60065		N
1.6 (4.11)	Electrical connections and current-carrying parts		P
1.6 (4.11.1)	Contact pressure		P
1.6 (4.11.2)	Screws:		P
	-self-tapping screws		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-thread-cutting screws		N
1.6 (4.11.3)	Screw locking:		P
	-spring washer		P
	-rivets		N
1.6 (4.11.4)	Material of current-carrying parts	>50% Copper	P
1.6 (4.11.5)	No contact to wood or mounting surface	No wood	P
1.6 (4.11.6)	Electro-mechanical contact systems	No such systems	N
1.6(4.12)	Screws and connections (mechanical) and glands		P
1.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N
	Torque test: torque (Nm); part.	0.50 Nm	P
	Torque test: torque (Nm); part.		N
	Torque test: torque (Nm); part.		N
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
1.6(4.12.4)	Locked connections:		P
	-fixed arms; torque (Nm).		N
	-lampholder; torque (Nm)	1.1 Nm	P
	-push-button switches; torque 0,8 Nm		N
1.6 (4.12.5)	Screwed glands; force (Nm)		N
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	-fragile parts; energy (Nm)	0.22 Nm	P
	-other parts; energy (Nm)...	0.35 Nm	P
	1) live parts		P
	2) linings	Continue to afford the degree of protection against ingress of dust, solid objects and moisture	N
	3) protection	No break	P
	4) covers		P
1.6 (4.13.2)	Metal parts have adequate mechanical strength		P
1.6 (4.13.3)	Straight test finger	30 N	P
1.6 (4.13.4)	Rough service luminaires		N
	-IP54 or higher		N
	a) fixed		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	b)hand-held		N
	c)delivered with a stand		N
	d)for temporary installations and suitable for mounting on a stand		N
1.6 (4.13.6)	Tumbling barrel		N
1.6 (4.14)	Suspensions,fixings and means of adjusting		P
1.6 (4.14.1)	Mechanical load		P
	A)fourtimes the weight	4M	P
	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
	Fixed luminaire or independent control gear without fixing devices		N
1.6(4.14.2)	Load to flexible cables		N
	Mass (kg)		—
	Stress in conductors (N/mm ²).		N
	Mass (kg)of semi-luminaire ..		N
	Bending moment (Nm)of semi-luminaire		N
1.6 (4.14.3)	Adjusting devices:		N
	-flexing test,number ofcycles.		N
	-strands broken...		N
	-electric strength test afterwards		N
1.6 (4.14.4)	Telescopic tubes:cords not fixed to tube;no strain on conductors		N
1.6 (4.14.5)	Guide pulleys		N
1.6 (4.14.6)	Strain on socket-outlets		N
1.6 (4.15)	Flammable materials		N
	-glow-wire test 650°C...	See Test Table 1.15(13.3.2)	N
	-spacing ≥30 mm		N
	-screen withstandingtest of13.3.1		N
	-Screen dimensions		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-no fiercely burning material		N
	-thermal protection		N
	-electronic circuits exempted		N
1.6 (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
1.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear...	(compliance with Section 12)	P
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N
1.6 (4.16.1)	Lamp control gear spacing:		N
	-spacing 35 mm		N
	-spacing 10 mm		N
1.6 (4.16.2)	Thermal protection:		N
	-in lamp control gear		N
	-external		N
	-fixed position		N
	-temperature marked lamp control gear		N
1.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N
1.6 (4.17)	Drain holes		N
	Clearance at least 5 mm	Not protection against water	N
1.6 (4.18)	Resistance to corrosion		P
1.6 (4.18.1)	-rust-resistance	Not protection against water	P
1.6 (4.18.2)	-season cracking in copper		P
1.6 (4.18.3)	-corrosion of aluminium		N
1.6 (4.19)	Igniters compatible with ballast		N
1.6 (4.20)	Rough service vibration	Ordinary service luminaire	N
1.6 (4.21)	Protective shield		N
1.6 (4.21.1)	Shield fitted tungsten halogen lamps or metal halide lamps		N
	Shield of glass tungsten halogen lamps		N
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
1.6 (4.21.3)	No direct path		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment.	See Test Table 1.15(13.3.2)	N
1.6 (4.22)	Attachments to lamps not cause overheating or damage	No attachments	N
1.6 (4.23)	Semi-luminaires comply Class III		N
1.6 (4.24)	Photobiological hazards		N
1.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N
1.6 (4.24.2)	Retinal blue light hazard		N
	Class of risk group assessed according to IEC/TR 62778..		—
	Luminaires with Eth		N
	a)Fixed luminaires		N
	-distance xm, borderline between RG1 and RG2		N
	-marking and instruction according 3.2.23		N
	b)Portable and handheld luminaires		N
	-marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N
	Portable luminaires for childr BS EN 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N
1.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
1.6 (4.26)	Short-circuit protection		N
1.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N
1.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N
	Test chain not melt through		N
	Test sample not exceed values of Table 12.1 and 12.2		N
1.6(4.27)	Terminal blocks with integrated screwless earthing contacts		N
	Test according Annex V		N
	Pull test of terminal fixing (20 N)		N
	After test, resistance < 0,050		N
	Pull test of mechanical connection (50 N)		N
	After test, resistance < 0,05 Ω		N
	Voltage drop test, resistance < 0,05 Ω		N
1.6 (4.28)	Fixing of thermal sensing control		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	Not plug-in or easily replaceable type		N
	Reliably kept in position		N
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N
	Not outside the luminaire enclosure		N
	Test of adhesive fixing:		N
	Max.temperature on adhesive material(°C).....		—
	100 cydes between t min and t max		N
	Temperature sensing control still in position		N
1.6 (4.29)	Luminaires with non-replaceable light source		N
	Not possible to replace light source		N
	Live part not accessible after parts have been opened by hand or tools		N
1.6 (4.30)	Luminaires with non-user replaceable light source		N
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:		N
	Minimum two fixing means		N
1.6 (4.31)	Insulation between circuits		N
	Circuits insulated from LV supply fulfil requirements according 4.31.1-4.31.3		N
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1-4.31.3		N
1.6 (4.31.1)	SELV circuits		N
	Used SELV source		N
	Voltage ≤ ELV		N
	Insulating of SELV circuits from LV supply		N
	Insulating of SELV circuits from other non SELV circuits		N
	Insulating of SELV circuits from FELV		N
	Insulating of SELV circuits from other SELV circuits		N
	SELV circuits insulated from accessible parts according Table X.1		N
	Plugs not able to enter socket-outlets of other voltage systems		N
	Socket outlets does not admit plugs of other voltage systems		N
	Plugs and socket-outlets does not have protective conductor contact		N
1.6 (4.31.2)	FELV circuits		N
	Used FELV source		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	Voltage≤ELV		N
	Insulating of FELV circuits from LV supply		N
	FELV circuits insulated from accessible parts according Table X.1		N
	Plugs not able to enter socket-outlets of other voltage systems		N
	Socket outlets does not admit plugs of other voltage systems		N
	Socket-outlets does not have protective conductor contact		N
1.6 (4.31.3)	Other circuits		N
	Other circuits insulated from accessible parts according Table X.1		N
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N
	-conductive parts are connected together		N
	-test according 7.2.3		N
	-conductive part not cause an electric shock in case of an insulation fault		N
	-equipotential bonding in master/slave applications		N
	-master luminaire provided with terminal for accessible conductive parts of slave luminaires		N
	-slave luminaire constructed as class I		N
1.6 (4.32)	Overvoltage protective devices		N
	Comply with IEC 61643-11		N
	External to controlgear and connected to earth:		N
	-only in fixed luminaires		N
	-only connected to protective earth		N
1.7(11)	CREEPAGE DISTANCES AND CLEARANCES		P
1.7(11.2.1)	Impulse withstand category (Normal category II)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	--
	Category II according Annex U		N
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N
1.7(11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7(11.2)I	P
	Creepage distances for frequency over 30 kHz:		N
	-Controlgear marked with U _{or} and fu _{or} according IEC 61347-1, clause 7.1, item w	See Test Table 1.7(11.2)II	N
	-Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7(11.2)II	N
1.7(11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7(11.2)I	P
	Clearances distances for frequency over 30 kHz:		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-Controlgear marked with Up	See Test Table 1.7(11.2)II	N
	-Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7(11.2)II	N
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<0,50	0.022 Ω	P
	Self-tapping screws used		N
	Thread-forming screws		P
	Thread-forming screw used in a groove		N
	Earth makes contact first		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
	Protective earthing of the luminaire not via built-in control gear		N
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
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
1.8(7.2.5)	Earth terminal integral part of connector socket		N
1.8(7.2.6)	Earth terminal adjacent to mains terminals		P
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
	Double or reinforced insulation to functional earth		N
1.8(7.2.11)	Earthing core coloured green-yellow		N
	Length of earth conductor		N
1.9(14)	SCREW 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
	Separately approved; component list.	(see Annex 1)	N
	Part of the luminaire..	(see Annex 4)	N
1.10(5)	EXTERNAL AND INTERNAL WIRING		P

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection....	Terminal blocks	P
	Outdoor luminaire has not PVC insulated external wiring if not class II or SELV ≤ 25V a.c./60 Vd.c or protected from outdoor environment		N
1.10 (5.2.2)	Type of cable. ...	-	N
	Nominal cross-sectional area(mm ²)		N
	Cables equal to IEC 60227 or IEC 60245		N
1.10(5.2.3)	Type of attachment,X,Y or Z	Type X	P
1.10 (5.2.5)	Type Z not connected to screws		N
1.10 (5.2.6)	Cable entries s:		N
	-suitable for introduction		N
	-adequate degree of protection		N
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		N
1.10 (5.2.8)	Insulating bushings		N
	-suitably fixed		N
	-material in bushings		N
	-material not likely to deteriorate		N
	-tubes or guards made of insulating material		N
1.10 (5.2.9)	Locking of screwed bushings		N
1.10 (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
1.10 (5.2.10.1)	Cord anchorage for 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		P

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	f)metal screw not directly on cable		P
	g)replacement without special tool		P
	Glands not used as anchorage		N
	Labyrinth type anchorages		N
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N
1.10 (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
	-function independent of electrical connection		N
1.10 (5.2.11)	External wiring passing into luminaire		N
1.10 (5.2.12)	Looping-in terminals		N
1.10 (5.2.13)	Wire ends not tinned		N
	Wire ends tinned:no cold flow		N
1.10 (5.2.14)	Mains plug same protection		N
	Class II luminaire plug		N
	No unsafe compatibility		N
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N
	Installation couplers (IEC 61535)		N
	Other appliance inlet or connector according relevant IEC standard		N
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N
1.10 (5.2.18)	Used plug in accordance with		N
	-IEC 60083		N
	-other standard		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.10 (5.3)	Internal wiring		P
1.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N
	-not delivered/mounting instruction		N
	-factory assembled		N
	-socket outlet loaded (A).. ...		N
	-temperatures.....	(see Annex 2)	N
	Green-yellow for earth only		N
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area(mm²)..	>0.5 mm²	P
	Insulation thickness(mm)		N
	Extra insulation added where necessary		N
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N
	Cross-sectional area(mm²)		N
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N
1.10 (5.3.1.4)	Conductors without insulation		N
1.10 (5.3.1.5)	SELV current-carrying parts		N
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		P
1.10 (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 moving parts used	N
	Joints, raising/lowering devices	No such devices	N
	Telescopic tubes etc.	No telescopic tubes etc.	N
	No twisting over 360°		P
1.10(5.3.3)	Insulating bushings:		P
	-suitable fixed		P
	-material in bushings		P
	-material not likely to deteriorate		P
	-cables with protective sheath		P

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.10 (5.3.4)	Joints and junctions effectively insulated		P
1.10 (5.3.5)	Strain on internal wiring		P
1.10 (5.3.6)	Wire carriers		N
1.10 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned:no cold fow		N
1.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N
	Under test the temperature ofthe luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N
	No damage to luminaire wiring after test		N
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
	Basic insulated parts not accessible with standard test finger on portable,setttable and adjustable luminaires		N
	Basicinsulated parts not accessible with 050 mm probe from outside,other types ofluminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N
	Basic insulation only accessible under lamp or starter replacement		P
	Protection in any position		P
	Double-ended tungsten filament lamp		N
	Insulation lacquer not reliable		P
	Double-ended high-pressure discharge lamp		N
	Relevant warning according to 3.2.18 fittedto the luminaire		N
1.11(8.2.2)	Portable luminaire adjusted in mostunfavourable position		N
1.11 (8.2.3.a)	Class II luminaire:		N
	-basic insulated metal parts not accessible during starter or lamp replacement		N
	-basicinsulation not accessible other than during starter or lamp replacement		N
	-glass protective shields not used as supplementary insulation		N
1.11	BC lampholder of metal in class I luminaires shall be earthed		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
(8.2.3.b)			
1.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N
	Ordinary luminaire:		N
	-voltage under load (V)		N
	-no-load voltage (V)--		N
	-touch current if applicable(mA)....		N
	One conductive part insulated if required		N
	Other than ordinary luminaire:		N
	-nominal voltage (V).....		N
	Class III luminaire only for connection to SELV		N
	Class III luminaire not provided with means for protective earthing		N
1.11(8.2.4)	Portable luminaire has protection independent of supporting surface		N
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)	Luminaire other than below with capacitor >0,5μF not exceed 50 V1 min after disconnection		N
	Portable luminaire with capacitor >0,1μF (0.25) not exceed 34 V1 s after disconnection		N
	Other luminaires with capacitor >0,1μF (0.25) with plug and track adaptors not exceed 60 V5 s after disconnection		N
1.12(12)	ENDURANCE TEST AND THERMAL TEST		P
1.12(12.1)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 1.13		
1.12(12.2)	Selection of lamps and ballasts		
	Lamp used according Annex B	(Lamp used see Annex 2)	
	Control gear if separate and not supplied	(Control gear used see Annex 2)	
1.12(12.3)	Endurance test		P
	a) mounting-position..-	As in normal use	
	b) test temperature (°C)	35°C	
	c) total duration (h)-...	-	
	d) supply voltage (V)...		
	d) if not equipped with control gear, constant voltage/current (V) or (A).		
	e) luminaire ceases to operate		
1.12 (12.3.2)	After endurance test:		P

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-no part unserviceable		P
	-luminaire not unsafe		P
	-no damage to track system	No track system	N
	-marking legible	Marking still legible and shows no curing	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)	(see Annex 2)	N
1.12(12.6)	Thermal test (failed lamp control gear condition):		N
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
	-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
1.12 (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
1.12(12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N
1.12 (12.7.1)	Luminaire without temperature sensing control		N
1.12 (12.7.1.1)	Luminaire with fluorescent lamp≤70W		N
	Test method 12.7.1.1 or Annex W		
	Test according to 12.7.1.1:		N
	-case of abnormal conditions.....		
	-Ballast failure at supply voltage (V).....		

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-Components retained in place after the test		N
	-Test with standard test finger after the test		N
	Test according to Annex W:		N
	-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...	See Test Table 1.15(13.2.1)	N
1.12 (12.7.1.2)	Luminaire with discharge lamp,fluorescent lamp>70W,transformer>10 VA		N
	-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	See Test Table 1.15(13.2.1)	N
1.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤10 VA		N
	-case of abnormal conditions....		
	-Components retained in place after the test		N
	-Test with standard test finger after the test		N
1.12 (12.7.2)	Luminaire with temperature sensing control		N
	-thermal link .	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	-manual reset cut-out...	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	-auto reset cut-out..	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	-case of abnormal conditions..		—
	-highest measured temperature of fixing point/ exposed part(°C):		
	Ball-pressure test..	See Test Table 1.15(13.2.1)	N
1.13(9)	RESISTANCE TO DUST AND MOISTURE		P
1.13()	If IP>IP 20 the order of tests as specified in clause 1.12		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	-classification according to IP.	IP20	—
	-mounting position during test	Normal mounting	—
	-fixing screws tightened; torque (Nm) --		
	-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 on insulation where it could become a hazard		N
	c.1) For luminaires without drain holes - no water entry		N
	c.2) For luminaires with drain holes - no hazardous water entry		N
	d) no water in watertight or pressure watertight luminaire		N
	e) no contact with live parts (IP 2X)		P
	e) no entry into enclosure (IP 3X and IP 4X)		N
	e) no contact with live parts through drain holes and ventilation slots (IP 3X and IP 4X)		N
	f) no trace of water on part of lamp requiring protection from splashing water		N
	g) no damage of protective shield or glass envelope		P
1.13 (9.3)	Humidity test 48 h	93%RH, 25°C	P
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 Ω ..		—
	Insulation resistance (M Ω).	$\geq 2 \text{ M } \Omega$	—
	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
	-between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.		N

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
	-Insulation bushings as described in Section 5...		N
	Other than SELV		P
	-between live parts of different polarity	>100 MΩ	P
	-between live parts and mounting surface	>100 MΩ	P
	-between live parts and metal parts..	>100 MΩ	P
	-between live parts of different polarity through action of a switch..		N
	-between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.		N
	-Insulation bushings as described in Section 5....		N
1.14 (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
	-between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts...		N
	-Insulation bushings as described in Section 5...		N
	Other than SELV		P
	-between live parts of different polarity	1480V,no broken	P
	-between live parts and mounting surface_.	1480V,no broken	P
	-between live parts and metal parts....	1480V,no broken	P
	-between live parts of different polarity through action of a switch.		N
	-between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..		N
	-Insulation bushings as described in Section 5...		N
1.14(10.3)	Touch current or protective conductor current (mA).	0.013mA	P
1.15(13)	RESISTANCE TO HEAT,FIRE AND TRACKING		P

BS EN 60598-2-1&BS EN 60598-2-1			
Clause	Requirement +Test	Result-Remark	Verdict
1.15 (13.2.1)	Ball-pressure test..	See Test Table 1.15(13.2.1)	P
1.15 (13.3.1)	Needle-flame test(10 s)..	See Test Table 1.15(13.3.1)	P
1.15 (13.3.2)	Glow-wire test (650°C).....	See Test Table 1.15(13.3.2)	N
1.15(13.4)	Proof tracking test (IEC 60112)-	See Test Table 1.15(13.4)	N



1.7(11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm)for a.c.up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A *,11.1.B*and 11.2*						P
	Insulation type*	Measured clearance	Required		Measure d creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	>1.5	1.5	11.1	>2.5	2.5	11.1
Working voltage (V).....					230V~		—
PT..					<600 ☒ ≥600 □		
Pulse voltage or Up ifapplicable (kV)...							
Supplementary information:							
Distance 2:	R	>3.0	3.0	11.1	>5.0	5.0	11.1
Working voltage (V)-.....					230V~		
PT ..					<600 ☒ ≥600 □		
Pulse voltage or Up ifapplicable (kV)...					-		
Supplementary information:							
Distance 3:							
Working voltage (V).....					-		
PT..					<600 □ ≥600 □		—
Pulse voltage or Up ifapplicable (kV)..					—		
Supplementary information:							

1.7(11.2)	TABLE II: Creepage distances and clearances						N
Minimum distances (mm)for a.c.higher than 30 kHz sinusoidal voltages							
Applicable part of IEC 61347-1 Table 7 and 8*or IEC 60664-4 Table 1 and 2							
Distances	Insulation type**	Measure d clearance	Required		Measure d creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	-	-					
Working voltage (V)							
Frequency if applicable(kHz) ...					-		
PT..					<600□ ≥600 □		
Peak value of the working voltage Uout if applicable (kV)-.....							
Supplementary information:							
Distance 2:		-					-
Working voltage (V).....					-		

Frequency if applicable (kHz).-		
PTL..	<600□ ≥600 □	
Peak value of the working voltage Uout if applicable (kV)---	-	
Supplementary information:		
Distance 3:	-	-
Working voltage (V)-.....	—	
Frequency if applicable(kHz)	-	
PT..	<600□ ≥600 □	-
Peak value of the working voltage Uout if applicable (kV)-----	-	—
Supplementary information:		

1.15 (13.2.1)	TABLE:Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)..... :		≤2		
Object/Part No./Material	Manufacturerl trademark	Test temperature(C)	Impression diameter (mm)	
Terminal blocks		125°C	0.95mm	
Lampholder housing	--	125°C	1.05mm	
Supplementary information:				

1.15 (13.3.1)	TABLE:Needle-flame test (IEC60695-11-5)				P
Object/Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta);(s)	Ignition of specified layer Yes/No	Duration of burning(tb) (s)	Verdict
Terminal blocks	-	10	No	2.0	P
Lampholder housing	-	10	No	3.0	P
Supplementary information:					

1.15 (13.3.2)	TABLE:Glow-wire test (IEC 60695-2-11)				N
Glowwire temperature ::			650°C		—
Object/Part No./ Material	Manufacturerl trademark		Ignition of specified layer Yes/No	Duration of burning(tb) (s)	Verdict
-	-				
-			-	-	-
Supplementary information:					

1.15(13.4)	TABLE:Proof tracking test (IEC 60112)				N
Test voltage PTI .				175 V	
Object/Part No./Material	Manufacturerl trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
-	-				
-					
Supplementary information:					

ANNEX 1	TABLE:Critical components information					P
Object /part No	Code	Manufacturer trademark	Type /model	Technical data	Standard	Mark(s)of conformity¹
Lampholder	-	-	-	-	EN 60238	CE
Internal wire	-	Red Sky Lighting LLC	-	-	UL 758	UL
Terminal blocks	—	—	--	-	-	CE
Supplementary information: 1)Provided evidence ensures the agreed level of compliance.See N/A. The codes above have the following meaning: A-The component is replaceable with another one,also certified,with equivalent characteristics B-The component is replaceable ifauthorised by the test house C-Integrated component testedtogether with the appliance D-Alternative component						

ANNEX2:	Temperature measurements,thermal tests of Section 12		P				
	Type reference..	N/A					
	Lamp used.	LED lamp bulb					
	Lamp control gear used.		—				
	Mounting position ofluminaire.	As in normal use					
	Supply wattage (W)...						
	Supply current (A)...						
	Temperatures in test 1-4 below are corrected for ta(°C)	25.0°C					
	-abnormal operating mode...						
1.12(12.4)	-test 1:rated voltage	230Vdc					
	-test 2:1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..	1,06×230V=243.8V					
	-test 3:Load on wiring to socket-outlet,1,06 times voltage or 1,05 times wattage..						
	Through wiring or looping-in wiring loaded by a current of A during the test .						
1.12(12.5)	-test 4:1,1 times rated voltageor 1,05 times rated wattage or 1,1 times constant voltage/current...						
Temperature measurements (°C)							
Part	Ambient	CI.12.4-normal				CI.12.5-abnormal	
		test 1	test2	test3	limit	test 4	limit
Lamp shell			31.7		90		
Lampholder	-		37.2		135	-	-
Internal wire			33.1		150		-
Terminal blocks			33.9		70		-
Mounting surface			29.6		90		
Ambient	-	-	23.0	--		-	-
Supplementary information:							

ANNEX3	Screw terminals(part ofthe luminaire)		P
(14)	SCREWTERMINALS		P
(14.2)	Type ofterminal		
	Rated current (A)		
(14.3.2.1)	One or more conductors		P
(14.3.2.2)	Special preparation		N
(14.3.2.3)	Terminal size		P
	Cross-sectional area (mm ²)-.		
(14.3.3)	Conductor space(mm)		P
(14.4)	Mechanical tests		N
(14.4.1)	Minimum distance		N
(14.4.2)	Cannot slip out		N
(14.4.3)	Specialpreparation		N
(14.4.4)	Nominal diameter of thread (metric ISO thread).	M	N
	External wiring		N
	No soft metal		N
(14.4.5)	Corrosion		P
(14.4.6)	Nominal diameter ofthread (mm).		P
	Torque (Nm)..		P
(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

ANNEX4	Screwless terminals (part of the luminaire)		N
(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)	Terminals and connections for internal wiring		N
(15.5.1)	Mechanical tests		N
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)...		N
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)....		N
	Insertion force not exceeding 50 N		N
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N
(15.5.2)	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
(15.6)	Terminals and connections for external wiring		N
(15.6.1)	Conductors		N
	Terminal size and rating		N
15.6.2	Mechanical tests		N

(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples);pull(N)..		N
(15.6.2.2)	Pull test pin or tab terminals (4 samples) pull(N)..		N
(15.6.3)	Electrical tests		N
	Tests according 15.6.3.1+15.6.3.2 in IEC 60598-1		N

(15.6.3.1) (15.6.3.2)	TABLE:Contact resistance test /Heating tests										N
	Voltage drop(mV)after 1h										
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop(mV)											
	Voltage drop oftwo 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)											
Supplementary information:											

Photo-documentation





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mXYhpfG

*****End of Report*****