CGS TEST HİZMETLERİ TEKNİK KONTROL
VE
BELGELENDİRME ANONİM ŞİRKETİ
Oruçreis Mahallesi Tekstilkent Caddesi
Tekstilkent
A21 10/I 102 Esenler İstanbul/TURKİYE

Deney Raporu
Test Report

Test
TS EN ISO/IEC 17025
AB-1316-T

AB-1316-T
LVD-196-08
02-19

Müşterinin adı /adresi: *Customer name/address*	***HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş./Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / Istanbul / Turkey***
***İstek Numarası* :** Order no.	***09112018ebb2***
Numunenin Adı ve Tarifi : Name and identity of test item	***P01004085 PD60S-RGB 3Ch DMX Direct View Pixel Dot ; Dış Mekan Aydınlatma Armatürü /*** Outdoor Luminaires
Numunenin Kabul tarihi : The date of receipt of test item	***2018-11-10***
Açıklamalar : Remarks	***DGC'ye TS EN 60598-2-3 Standardı uyarınca Güvenlik Deneyleri yapılmıştır.*** Safety tests have been applied to EUT according to TS EN 60598-2-3.
Deneyin yapıldığı tarih : Date of Test	***2019-01-02 to 2019-02-05***
Raporun Sayfa Sayısı: Number of pages of the Report	**39 sayfa /** pages

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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür/Kaşe Seal	***Tarih*** Date	***Deney Sorumlusu*** Person in change of test	***Onaylayan*** Approval
	2019-02-13	***Timur GÜSER***	***Timur GÜSER***

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TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number. .....:	**LVD-196-08**
Date of issue .....:	**2019-02-13**
Total number of pages .....:	**39 pages**
Name of Testing Laboratory preparing the Report.....:	**CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME A.Ş.**
Applicant's name.....:	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Address .....:	Gullubaglar Mah. Kahramanlar Cad. No:3-1 34906 Pendik / Istanbul / Turkey
Test specification:	
Standard.....:	IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017 EN 60598-2-3:2003/AC:2005 used in conjunction with EN 60598-1:2015
Test procedure .....:	Type Test
Non-standard test method .....:	N/A
Test Report Form No.....:	F510_09
Test Report Form(s) Originator ....:	Intertek Semko AB
Master TRF.....:	Dated 2018-03-09

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Test item description ..... :	OUTDOOR LUMINAIRES
Trade Mark ..... :	hera entertainment & architecture lighting
Manufacturer ..... :	HERA EĞLENCE VE MİMARİ AYDINLATMA SİSTEMLERİ A.Ş.
Model/Type reference ..... :	P01004085 PD60S-RGB 3Ch DMX Direct View Pixel Dot
Ratings ..... :	12-48V d.c. ; 0,09A max. ; 4,3W max.

List of Attachments (including a total number of pages in each attachment):

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
3.5 (3.4) Durability test 3.6 (4.12) Screw torque test *3.6 (4.13.1) Impact test *3.6.5.2.1 Glass cover test 3.12(12.3) Endurance test 3.12 (12.4) Thermal test (Normal operation) 3.13 (9.2) Dust and water test 3.13 (9.3) Humidity test 3.14 (10.2.1) Insulation resistance test 3.14 (10.2.2) Electric strength test * Non-accredited tests	CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ Oruçreis Mahallesi Tekstilkent Caddesi Tekstilkent A21 10/I 102 Esenler İstanbul/TURKİYE

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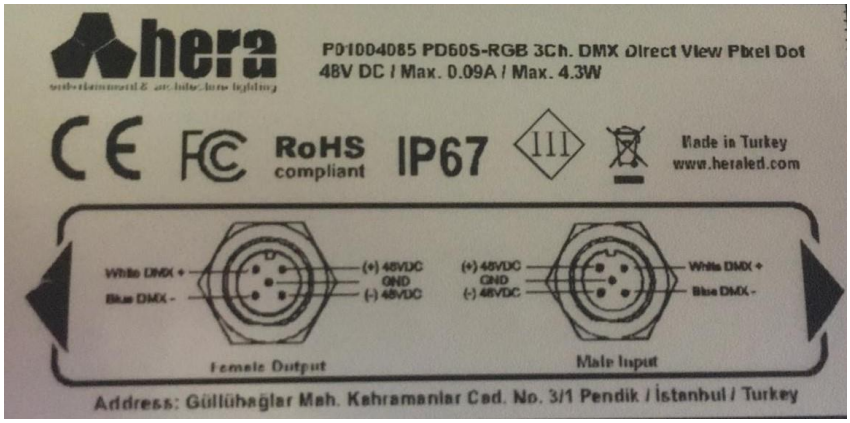

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Test item particulars.....:	OUTDOOR LUMINAIRES
Classification of installation and use.....:	Class III, Fixed connection for outdoor use
Supply Connection.....:	Type Z attachment, connection with socket
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2018-11-10
Date (s) of performance of tests.....:	2019-01-02 to 2019-02-02

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

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

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

General product information:

Product is a fixed outdoor luminaire with RGB LED module. Provided with sockets for DC supply connection. Input voltage: 48V DC, Input current: 0.09A (Max.), Input power:4,3W (Max.) AC to DC constant voltage driver is not provided with the product

The other sub models is ATTACHMENT-1.

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	**GENERAL TEST REQUIREMENTS**		P
3.2 (0.3)	More sections applicable..... :	Yes ☐ No ☒ Section/s:	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	**Information for luminaire design in light sources standards**		—
3.2 (0.7.2)	Light source safety standard ..... :		—
	Luminaire design in the light source safety standard		N/A
3.4 (2)	**CLASSIFICATION OF LUMINAIRES**		P
3.4 (2.2)	Type of protection ..... :	Class III	P
3.4 (2.3)	Degree of protection..... :	IP67	—
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☐ No ☒	—
3.4 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☐ No ☒	—
	b) on a mast arm	Yes ☐ No ☒	—
	c) on a post top	Yes ☐ No ☒	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	e) on a wall	Yes ☒ No ☐	—
3.5 (3)	**MARKING**		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking	Enclosure	P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions	English	P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz	D.c. voltage	N/A
3.5 (3.3.3)	Operating temperature	-40°C to 50°C	P
3.5 (3.3.5)	Wiring diagram		P
3.5 (3.3.6)	Special conditions		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.7)	Metal halide lamp luminaire – warning	LED	N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current	0,09Max.	P
3.5 (3.3.10)	Suitability for use indoors	Outdoors	N/A
3.5 (3.3.11)	Luminaires with remote control	No remote control	N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply	DC is voltage	N/A
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire	No rough service luminaire	N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Z	P
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm’s reach		N/A
3.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		N/A
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
3.5 (3.4)	Test with water	Applied	P
	Test with hexane	Applied	P
	Legible after test	Inspected	P
	Label attached	Inspected	P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		N/A
	c) Overall dimensions		P
	d) Maximum projected area if applicable		N/A
	e) Cross-sectional area of wires if applicable		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		N/A
3.6 (4)	**CONSTRUCTION**		P
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	**Lampholders**		**N/A**
3.6 (4.4.1)	Integral lampholder	LED module	N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II	No starter holders	N/A
	Starter holder class II construction		N/A
3.6 (4.6)	**Terminal blocks**		N/A
	Tails		N/A
	Unsecured blocks		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7)	**Terminals and supply connections**		N/A
3.6 (4.7.1)	Contact to metal parts		N/A
3.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
3.6 (4.7.3)	Terminals for supply conductors		N/A
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		N/A
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (4.8)	**Switches**		**N/A**
	- adequate rating	No switch	N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
3.6 (4.9)	**Insulating lining and sleeves**		**N/A**
3.6 (4.9.1)	Retainment		N/A
	Method of fixing ..... :		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
3.6 (4.10)	**Double or reinforced insulation**		**N/A**
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
3.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
3.6 (4.11)	**Electrical connections and current-carrying parts**		P
3.6 (4.11.1)	Contact pressure		N/A
3.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	**Screws and connections (mechanical) and glands**		**P**
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	---	N/A
	Torque test: torque (Nm); part..... :	2.9mm, 0.5Nm	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part..... :	---	N/A
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
3.6 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
3.6 (4.13)	**Mechanical strength**		**P**
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) ..... :	0,5Nm	P
	- other parts; energy (Nm)..... :	0,7Nm	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		P
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	**Suspensions, fixings and means of adjusting**		**N/A**
3.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ..... :		N/A
	Metal rod. diameter (mm) ..... :		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
3.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	**Flammable materials**		N/A
	- glow-wire test 650°C ..... :	See Test Table 3.15 (13.3.2)	N/A
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction	No lamp control gear	N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	**Luminaires for mounting on normally flammable surfaces**		N/A
	No lamp control gear..... :	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm	No drain holes	N/A
3.6 (4.18)	**Resistance to corrosion**		N/A
3.6 (4.18.1)	- rust-resistance		N/A
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		N/A
3.6 (4.19)	Ignitors compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	**Protective shield**		N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	**Photobiological hazards**		N/A
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		N/A
	Class of risk group assessed according to IEC/TR 62778 ..... :		—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 .. :		N/A
	- marking and instruction according 3.2.23		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
3.6 (4.26)	**Short-circuit protection**		N/A
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	**Fixing of thermal sensing control**		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) ..... :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	**Luminaires with non-replaceable light source**		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.30)	**Luminaires with non-user replaceable light source**		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
3.6 (4.31)	**Insulation between circuits**		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	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/A
3.6 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	**Overvoltage protective devices**		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP .....:		N/A
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP .....:		N/A
	- parts above 2,5 m. IP .....:		N/A
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		N/A
3.6.3.1 (-)	Static load test		N/A
	- drag coefficient.....:		N/A
	- loaded area (m²).....:		N/A
	- used load (N).....:		N/A
	- measured deformation (cm/m) .....:		N/A
	- no rotation		N/A
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		N/A
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		N/A
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....:		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		N/A
3.6.5.2.1 (-)	Glass covers have high mechanical strength		P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample	See test report LVD-196-06 (IK09, 10J)	P
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20 .....:		N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other .....:		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm).....:		N/A
	- cable path from the slot to the connection compartment (mm) .....:		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		N/A
3.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☐ Category III ☐	—
	Category III according Annex U		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	N/A
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and $f_{U_{OUT}}$ according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	N/A
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A

3.8 (7)	**PROVISION FOR EARTHING**		N/A
3.8 (7.2.1 + 7.2.3)	Accessible metal parts	The product is class III	N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
3.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
3.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
3.8.1 (-)	Attachment prevented from rotation		N/A
3.9 (14)	**SCREW TERMINALS**		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A
3.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		N/A
	Separately approved; component list..... :	(see Annex 1)	N/A
	Part of the luminaire ..... :	(see Annex 4)	N/A
3.10 (5)	**EXTERNAL AND INTERNAL WIRING**		P
3.10 (5.2)	**Supply connection and external wiring**		**P**
3.10 (5.2.1)	Means of connection ..... :	socket	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable ..... :	Class III, U ≤ 60V	P
	Nominal cross-sectional area (mm²) ..... :		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Z	P
3.10 (5.2.5)	Type Z not connected to screws		P
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection	Waterproof connection	P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed	Class III	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion	No cord anchorage	N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed	No cord anchorage	N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
3.10 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe	No cable	N/A
	- pull test: 25 times; pull (N) ..... :		N/A
	- torque test: torque (Nm) ..... :		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
3.10 (5.2.11)	External wiring passing into luminaire		

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection	No plug	N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)	No plug	N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083	No plug	N/A
	- other standard		N/A
3.10 (5.3)	**Internal wiring**		**P**
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		P
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	N/A
	Green-yellow for earth only		N/A
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm²)..... :		N/A
	Insulation thickness (mm) ..... :		N/A
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV current-carrying parts		P
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		N/A
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		N/A
	- pull test: 25 times; pull (N) .....:		N/A
	- torque test: torque (Nm) .....:		N/A

3.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		P
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement	Class III	N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
3.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :	Other than ordinary luminaire, IP67	N/A
	- no-load voltage (V)..... :		N/A
	- touch current if applicable (mA) ..... :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		P
	- nominal voltage (V) ..... :	48Vd.c.	N/A
	Class III luminaire only for connection to SELV		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.4)	Portable luminaire has protection independent of supporting surface	No portable luminaire	N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
3.11 (8.2.6)	Covers reliably secured		N/A
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

3.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		P
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (12.2)	**Selection of lamps and ballasts**		**—**
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
3.12 (12.3)	**Endurance test**		**P**
	a) mounting-position ..... :	Positioned as in normal use	—
	b) test temperature (°C) ..... :	60°C, t_a=50°C	—
	c) total duration (h) ..... :	240h	—
	d) supply voltage (V) ..... :	48x1,1=52,8V.d.c	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) ..... :		—
	e) luminaire ceases to operate		—
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	N/A
3.12 (12.6)	**Thermal test (failed lamp control gear condition):**		**N/A**
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W ..... :		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions ..... :		—
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Test Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Test Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—
	Ball-pressure test: ..... :	See Test Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		N/A
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

3.13 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP67	—
	- mounting position during test ..... :	Normal used	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- fixing screws tightened; torque (Nm) ..... :	---	—
	- tests according to clauses..... :	9.2.1, 9.2.2, 9.2.8	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		N/A
	c.2) For luminaires with drain holes – no hazardous water entry		P
	d) no water in watertight or pressure watertight luminaire		P
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
3.13 (9.3)	Humidity test 48 h	25C, 93%Rh, 48h	P
3.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :	Covered by metal foil	—
	Insulation resistance (MΩ) ..... :	1MΩ	—
	SELV		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Other than SELV		N/A
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :		N/A
	- between live parts and metal parts ..... :		N/A
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V) ..... :		N/A
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :	No breakdown, 500V	P
	- between current-carrying parts and metal parts of the luminaire..... :		P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
	Other than SELV		N/A
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :		N/A
	- between live parts and metal parts ..... :		N/A
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
3.14 (10.3)	Touch current or protective conductor current (mA).:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		N/A
3.15 (13.2.1)	Ball-pressure test .....:	See Test Table 3.15 (13.2.1)	N/A
3.15 (13.3.1)	Needle-flame test (10 s) .....:	See Test Table 3.15 (13.3.1)	N/A
3.15 (13.3.2)	Glow-wire test (650°C) .....:	See Test Table 3.15 (13.3.2)	N/A
3.15 (13.4)	Proof tracking test (IEC 60112) .....:	See Test Table 3.15 (13.4)	N/A

3.7 (11.2)	**TABLE I: Creepage distances and clearances**						**N/A**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						N/A
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						N/A
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:							
Working voltage (V) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:							—
Supplementary information:							
Distance 2:							
Working voltage (V) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:							—
Supplementary information:							
Distance 3:							
Working voltage (V) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

3.7 (11.2)	**TABLE II: Creepage distances and clearances**	N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages		

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Clause	Requirement + Test	Result - Remark	Verdict

Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2							
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							
Distance 2:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							
Distance 3:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:					< 600 ☐ ≥ 600 ☐		—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

3.15 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**		N/A
Allowed impression diameter (mm) ..... :		2	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
---	---	---	---
Supplementary information:			

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Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				N/A
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
---	---	---	---	---	---
Supplementary information:					

3.15 (13.3.2)	**TABLE: Glow-wire test (IEC 60695-2-11)**			N/A
Glow wire temperature ..... :	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
---	---	---	---	---
Supplementary information:				

3.15 (13.4)	**TABLE: Proof tracking test (IEC 60112)**				**N/A**
Test voltage PTI ..... :	175 V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
---	---	---	---	---	---
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Description:						
LED PCB	C	Baskı Devre San. ve Tic. A.Ş.	BK.364.97R1	V-0	UL 796	UL, E201793
LED	C	Nichia	NVSL219B	700mA, Tc:85 °C 2200K	IEC 62471 N	Nichia, SQETB1505 1 301L
Socket connector	C	Shenzen Lilutong Electronic Tech.	LLT-M12	60V AC 50/60Hz 300W	UL 1977	UL, E470166
Description:						
Description:						

Supplementary information:

[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

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 if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference ..... :	P01004085	—
	Lamp used..... :	LED module	—
	Lamp control gear used..... :	No control gear used	—
	Mounting position of luminaire ..... :	As in normal use	—
	Supply wattage (W) ..... :		—
	Supply current (A) ..... :		—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	50°C	—
	- abnormal operating mode ..... :		—
1.12 (12.4)	- test 1: rated voltage ..... :		—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	52,8V d.c.	—
	- 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 voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :		—

Temperature measurements (°C)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Cable	50,5°C		54,3°C		75°C		
Connector	50,5°C		55,1°C		75°C		
Plastic enclosure	50,5°C		58,2°C		75°C		
LED surface	50,5°C		60,4°C		75°C		

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		N/A
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread).....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm).....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		N/A
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....:		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....:		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....:		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									N/A
	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									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

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List of test equipment used:

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date	Test Clause
E-001	CE COMPACT TESTER	MI2094	METREL	15.03.2018	15.03.2019	---	---	---
E-039	AC Supply	---	VARSAN	---	---	---	---	---
E-011	Multimeter	UT61B	UNI-T	29.09.2018	29.09.2019	---	---	---
E-004	Climatic Chamber	---	ULMEKA Mekatronik Sistemler	01.10.2018	01.10.2019	---	---	---
E-039	Tested Box (EN 60598-1 şekil G.2)	---	CSK elektronik	16.12.2018	16.12.2019	---	---	---
E-033	Temperature-Humidity Meter	30.3166.02.S2	TFA	28.09.2018	28.09.2019	---	---	---
E-045	Ball mass	---	Teknik Mekatronik	06.12.2017	06.12.2018	---	---	---
E-034	Etüv oven	T12	Hereaus	01.10.2018	01.10.2019	---	---	---
E-003	Datalogger	DL40	CSK elektronik	01.10.2018	01.10.2019	---	---	---

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Clause	Requirement + Test	Result - Remark	Verdict

Photos:

Photo documentation
Product View
Product View

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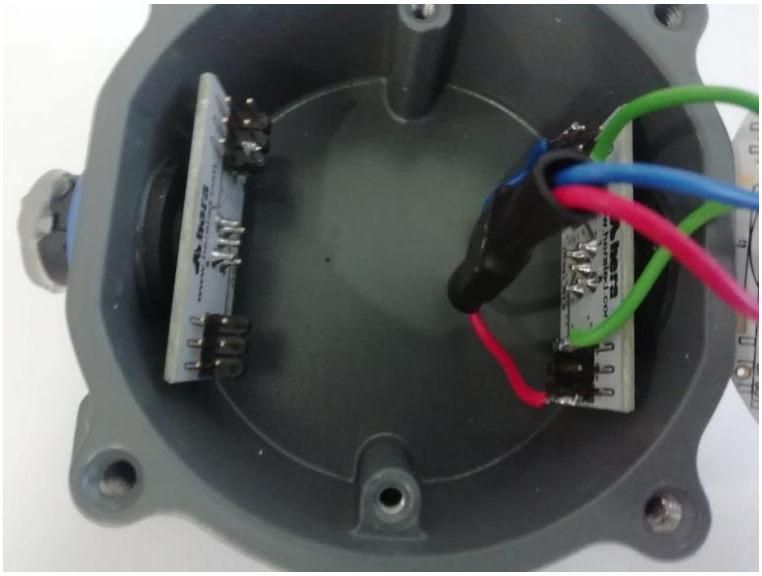
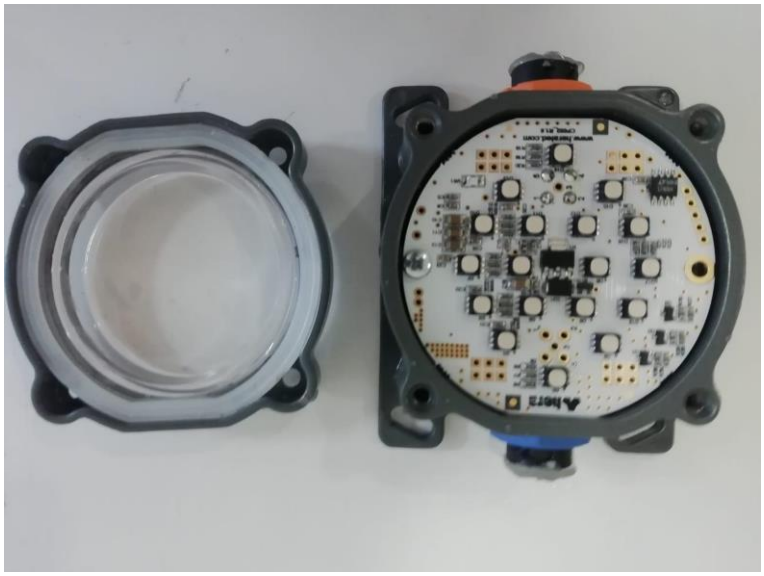
Photo documentation

Product View

Product View