



Test Laboratuvarları

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DENEY RAPORU

Test Report

AB-0341-T

24-41-R0-
N1-1

02-24

1/57

Müşteri Client	: BSI AYDINLATMA SAN. ve TİC. A.Ş.
Adres Address	: BAŞKENT OSB, 20. CAD. B/3 BLOK NO:4 MALIKÖY, SINCAN, ANKARA / TÜRKİYE
İmalatçı Manufacturer	: BSI AYDINLATMA SAN. ve TİC. A.Ş.
Teklif Numarası Order No	: 24-41-R0
Deney Numunesi Test Sample	: DEKORATİF GÖMME LED AYDINLATMA ARMATÖRÜ (MODEL: iUplight XS)
Marka Trade Mark	: BSI
Deney Metodu Test Method	: IEC 60598-2-2:2023 CMV
Deney Tarihi Date of Test	: 05.01.2024 – 13.02.2024
Toplam Sayfa Sayısı Total Number of Pages	: 57
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The test and / or measurements results, the uncertainties (if required) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür
Seal

Deney Sorumlusu
Person in Charge of Test
Enes Emre ERGUN

Bölüm Müdürü
Department Manager
Ata Gürül ARSLANLI



E. Emre Ergun

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1. Numunelerin Tanımı

Definition of the Samples

Dekoratif Gömme LED Aydınlatma Armatürü

Decorative Recessed LED Luminaire

1.1 iUplight XS

(24-41-R0-N1)

Numune Kabul Tarihi	: 05.01.2024
Receiving Date	
Numune Seri No	: AC89102
Serial No	
Tip	: iUplight XS
Type	
Kutup Sayısı	: L, N, PE
Number of Poles	
Beyan Gerilimi	U _n : 220 – 240 V _{AC}
Rated Voltage	
Beyan Akımı	I _n : P _n : 3 W
Rated Current	
Beyan Frekans	f _n : 50 – 60 Hz
Rated Frequency	
Beyan Koruma Derecesi	IP : 67
Rated Degree of Protection	
Numune Boyutları	mm : Firma Dokümanlarına Bakınız
Dimensions of the Sample	See Documentation of Client
Numune Ağırlığı	kg : 0.46
Weight of the Sample	
Cihaz – Malzeme Listesi	: Kritik Komponent Listesine Bakınız
Device – Component List	See Critical Component List

2. Deney Sonuçları

Test Results

Deney sonuçları, müşteri tarafından laboratuvara teslim edilen ve sadece deneyi yapılan numuneye aittir.
The test results only belong to the tested sample(s) delivered to the laboratory by client.

Numune	Uygulanan Deney	Sonuç
Sample	Applied Test	Result
Dekoratif Gömme LED Aydınlatma Armatürü (Model: iUplight XS)	IEC 60598-2-2:2023 CMV	Olumlu
Decorative Recessed LED Luminaire (Model: iUplight XS)		Passed

3. Çevre Şartları

Environmental Conditions

3.1 Ortam Sıcaklığı	: (15 – 30) °C
Ambient Temperature	
3.2 Ortam Nemi	: (45 – 60) %Rh
Ambient Moisture	

Deney Metodundan Sapma, Ekleme ve

4. Çıkarmalar	: Deneyler; standart deney metoduna göre uygulanmıştır.
Deviations, Additions & Cutbacks from the Test Method	Tests were made according to the clauses of the relevant standards.

Şartnamelere Uygunluk

5. (Gerekli Hallerde)	: -
Conformity to Specifications (If Necessary)	

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6. **Dağıtım Bilgileri**
Distribution Information : BSI AYDINLATMA SAN. ve TIC. A.Ş.

7. **Açıklama**
Explanation : -

8. **Ölçüm Belirsizliği**
Uncertainty of Measurement : -



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Luminaires Safety Tests
Recessed luminaires and recessed air-handling luminaires

9. Deney Uygulamaları:

Test Applications

TEST REPORT IEC 60598-2-2 Luminaires Part 2: Particular requirements: Section Two – Recessed luminaires and recessed air-handling luminaires	
Test specification:	
Standard	IEC 60598-2-2:2023 used in conjunction with IEC 60598-1:2020
Test procedure	Type Test
Non-standard test method	N/A
TRF template used : IEC 60598-2-2:2023, Ed.1.5	
Test Report Form No. : IEC60598_2_2H	
Test Report Form(s) Originator : Intertek Semko AB	
Master TRF : Dated 2023-02-21	
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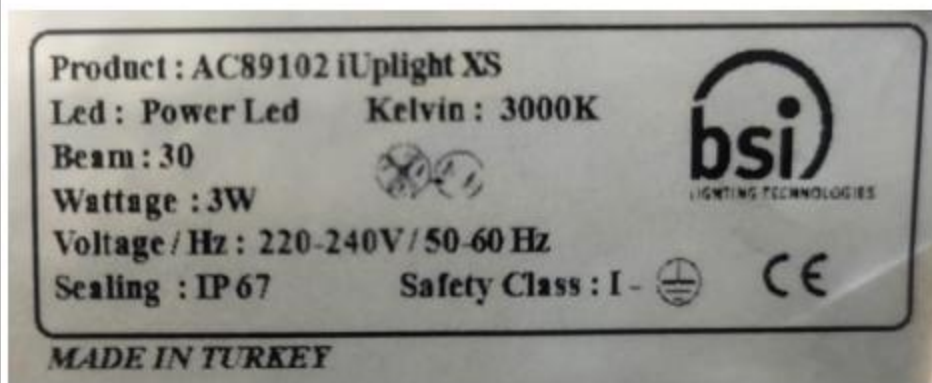
Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

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Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.





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Luminaires Safety Tests
Recessed luminaires and recessed air-handling luminaires

Test item particulars	Decorative Recessed LED Luminaire (Model: iUplight XS)
Classification of installation and use	Class I and Outdoor Use
Supply Connection.....	Permanently Supply Connection / Through Cable
.....	
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	05.01.2024
Date (s) of performance of tests.....	05.01.2024 – 13.02.2024
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	
General product information: Earthed decorative recessed luminaire with 220 - 240 V supply voltage, 50 - 60 Hz supply frequency, IP67 protection at 3W power rating, model number iUplight XS.	





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P:Passed, F:Fail, N/A:Not Applicable

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.4 (0)	GENERAL TEST REQUIREMENTS		P
2.4 (-)	Measurement of ambient temperature according to Annex A		—
2.4 (0.3)	More sections applicable.....:	Yes ☐ No ☒ Section/s:	—
2.4 (0.5)	Components	(See Annex 1)	—
2.4 (0.7)	Information for luminaire design in light sources standards		—
2.4 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard	Use LED. NICHIA / NICHIA 219FT	N/A
2.5 (2)	CLASSIFICATION OF LUMINAIRES		P
2.5 (2.2)	Type of protection	Class I	P
2.5 (2.3)	Degree of protection	IP 67	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....:	Yes ☒ No ☐	—
2.5 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
2.6 (3)	MARKING		P
2.6 (3.2)	Mandatory markings	The signs required by IEC 60598-1 and IEC 60598-2-2 is clearly and durable marked on the luminaire (see IEC 60598 - 1:2020 Table 3.1). Each marking in Table 3.1 is described in detail in the table to be read in conjunction with the relevant subclause.	P



	Position of the marking	Marking to be observed during installation is visible during installation on the outside of the luminaire or behind a cover or part which is removed during installation. Marking to be observed after installation is visible with the luminaire assembled and installed as for normal use and with the lamp in place.	P
	Format of symbols/text	The markings have been selected in accordance with IEC 60598-1:2020.	P
2.6 (3.3)	Additional information	In addition to the IEC 60598-1 clause 3.2 markings, all the details necessary to ensure proper installation, use and maintenance are given in the insulation guide document. See documentation of client.	P
	Language of instructions		P
2.6 (3.3.1)	Combination luminaires	The luminaire is not combination luminaire.	N/A
2.6 (3.3.2)	Nominal frequency in Hz	50 – 60 Hz	P
2.6 (3.3.3)	Operating temperature	Not declared.	N/A
2.6 (3.3.5)	Wiring diagram		P
2.6 (3.3.6)	Special conditions	No special conditions.	N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning	No metal halide lamp.	N/A
2.6 (3.3.8)	Limitation for semi-luminaires	The luminaire is not semi luminaire.	N/A
2.6 (3.3.9)	Power factor and supply current	Power Factor: 0.40 – 0.42 Supply Current: 0.03 A	P
2.6 (3.3.10)	Suitability for use indoors	The luminaire is outdoor use.	N/A
2.6 (3.3.11)	Luminaires with remote control	The luminaire does not have remote control.	N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning	The luminaire is not clip-mounted luminaire.	N/A
2.6 (3.3.13)	Specifications of protective shields	The luminaire does not have protective shield.	N/A
2.6 (3.3.14)	Symbol for nature of supply	~	P
2.6 (3.3.15)	Rated current of socket outlet	The luminaire does not have socket outlet.	N/A
2.6 (3.3.16)	Rough service luminaire	The luminaire is not suitable for rough service use.	N/A



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2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y attachment.	P
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
2.6 (3.3.19)	Protective conductor current in instruction if applicable	Supply Current = 0.03 A	N/A
2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		P
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
2.6 (3.3.23)	Luminaire without control gear provided with necessary information for selection of appropriate component		N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging		P
2.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided	No emitting UV.	N/A
2.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
2.6 (3.4)	Test with water	The durability of the marking is checked by trying to remove it by rubbing lightly for 15 s with a piece of cloth soaked with water and, after drying, for a further 15 s with a piece of cloth soaked with petroleum spirit and by inspection after the tests detailed in Section 12 have been completed.	P
	Test with hexane		P
	Legible after test	After the test, the marking is legible, marking labels are not easily removable and they are show no curling.	P
	Label attached	The label is laser printed.	P
2.6.2 (-)	Luminaires with two IP ratings		N/A
2.6.3 (-)	Symbol "not suitable for direct mounting on normally flammable surface", if applicable		N/A
2.6.4 (-)	Symbol "not suitable for covering with thermally insulated material", if applicable		N/A





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2.7 (4)	CONSTRUCTION		P
2.7 (4.2)	Components replaceable without difficulty	Luminaires incorporating components or parts intended to be replaceable is so designed that there is sufficient space to permit replacement of such components or parts without difficulty and without impairing safety.	P
2.7 (4.3)	Wireways smooth and free from sharp edges	Wireways are smooth and free from sharp edges, burrs, flashes and the like, which might cause abrasion of the insulation of the wiring. Parts such as metal set screws are not protrude into wireways.	P
2.7 (4.4)	Lamp holders		N/A
2.7 (4.4.1)	Integral lamp holder	The luminaire does not have lampholder.	N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lamp holder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N)		—
	After test the lamp holder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lamp holder the lamp holder has not moved from its position and shows no permanent deformation		N/A
	- bending test (N)		—
	After test the lamp holder have not moved from its position and show no permanent deformation		N/A
2.7 (4.4.5)	Peak pulse voltage		N/A
2.7 (4.4.6)	Centre contact		N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
2.7 (4.4.8)	Lamp connectors		N/A
2.7 (4.4.9)	Caps and bases correctly used		N/A
2.7 (4.4.10)	Light source for lamp holder or connection according to IEC 60061 not connected another way		N/A
2.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II	The luminaire does not have starter holder.	N/A
	Starter holder class II construction		N/A
2.7 (4.6)	Terminal blocks		P





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	Tails	The luminaire is provided with connecting leads (tails) requiring a separate terminal block for the connection to the fixed wiring, adequate space for this terminal block is provided within the luminaire, or within a box delivered with the luminaire, or specified by the manufacturer.	P
	Unsecured blocks	The luminaire does not have unsecured block.	N/A
2.7 (4.7)	Terminals and supply connections		P
2.7 (4.7.1)	Contact to metal parts	The luminaire is not portable or frequently adjusted luminaire.	N/A
2.7 (4.7.2)	Test 8 mm live conductor	Supply terminals are located or shielded in such a way that, if a wire of a stranded conductor escapes from a terminal when the conductors are fitted, there is no risk of contact between live parts and metal parts which can be touched with the standard test finger when the luminaire is fully assembled for use or open for the replacement of replaceable light sources or starters.	P
	Test 8 mm earth conductor		P
2.7 (4.7.3)	Terminals for supply conductors	Terminals for supply cords, are suitable for connection to be made by means of screws, nuts or equally effective devices.	P
2.7 (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
2.7 (4.7.4)	Terminals other than supply connection		N/A
2.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
2.7 (4.7.6)	Multi-pole plug	The luminaire does not have multi-pole plug.	N/A
	- test at 30 N		N/A
2.7 (4.8)	Switches		N/A





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	- adequate rating	The luminaire does not have switch.	N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
2.7 (4.9)	Insulating lining and sleeves		N/A
2.7 (4.9.1)	Retainment		N/A
	Method of fixing		N/A
2.7 (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
2.7 (4.10)	Double or reinforced insulation		N/A
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
2.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
2.7 (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 lamp holder		N/A
2.7 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.2 of IEC 60065		N/A
2.7 (4.11)	Electrical connections and current-carrying parts		P



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2.7 (4.11.1)	Contact pressure	Electrical connections are so designed that contact pressure is not transmitted through insulating material other than ceramic, pure mica or other material with characteristics which are at least equivalent, unless there is sufficient resilience in the metallic parts to compensate for any possible shrinkage of the insulating material.	P
2.7 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
2.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
2.7 (4.11.4)	Material of current-carrying parts	Current-carrying parts are of copper, an alloy containing at least 50 % copper, or a material having at least equivalent characteristics.	P
2.7 (4.11.5)	No contact to wood or mounting surface	Current-carrying parts are not in direct contact with the mounting surface or wood.	P
2.7 (4.11.6)	Electro-mechanical contact systems	The luminaire does not have electro-mechanical contact system.	N/A
2.7 (4.12)	Screws and connections (mechanical) and glands		P
2.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
0.5	Torque test: torque (Nm); part.....:	0.4	P
1.2	Torque test: torque (Nm); part.....:	0.5	P
	Torque test: torque (Nm); part.....:	1.2	P
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
2.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)		N/A
	- lamp holder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm		N/A
2.7 (4.12.5)	Screwed glands; force (Nm).....:		P
2.7 (4.13)	Mechanical strength		P
2.7 (4.13.1)	Impact tests:		P





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	- fragile parts; energy (Nm)	0.2	P
	- other parts; energy (Nm).....	0.35	P
	1) live parts	Live parts are not have become accessible.	P
	2) linings	The effectiveness of insulating linings and barriers are not have been impaired.	P
	3) protection	The luminaire is continue to afford the degree of protection against ingress of dust, solid objects and moisture, in accordance with its classification.	P
	4) covers		N/A
2.7 (4.13.2)	Metal parts have adequate mechanical strength	Metal parts enclosing live parts has adequate mechanical strength. Compliance was checked by the appropriate tests of 4.13.3 to 4.13.5.	P
2.7 (4.13.3)	Straight test finger	A straight unjointed test finger is used, with the same dimensions as the standard test finger specified in IEC 60529. The finger is pressed against the surface with a force of 30 N. During the test, metal parts are not touch live parts. After the test, covers are not excessively deformed and the luminaire is continue to meet the requirements of Section 11.	P
2.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher	The luminaire is not rough service luminaire.	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
2.7 (4.13.6)	Tumbling barrel		N/A
2.7 (4.14)	Suspensions, fixings and means of adjusting		N/A
2.7 (4.14.1)	Mechanical load:		N/A
	A) four times the weight	The luminaire is fixed to the ground.	N/A
	B) torque 2,5 Nm		N/A





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	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
	Fixed luminaire or independent control gear without fixing devices		N/A
2.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
2.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken..... :		N/A
	- electric strength test afterwards		N/A
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
2.7 (4.14.5)	Guide pulleys		N/A
2.7 (4.14.6)	Strain on socket-outlets		N/A
2.7 (4.15)	Flammable materials		N/A
	- glow-wire test 650°C	The luminaire does not have covers, shades and similar parts that do not have an insulating function and cannot withstand the 650 °C glow wire test of 13.3.2. See Test Table 5.15 (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
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
2.7 (4.16)	Luminaires for mounting on normally flammable surfaces		P





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	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
2.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
2.7 (4.16.2)	Thermal protection:		P
	- in lamp control gear	See photos and lamp control gear datasheet.	P
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
2.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
2.7 (4.17)	Drain holes		N/A
	Clearance at least 5 mm	The luminaire does not have drain hole.	N/A
2.7 (4.18)	Resistance to corrosion		P
2.7 (4.18.1)	- rust-resistance	All grease is removed from the parts to be tested. The parts are then immersed for 10 min in a 10 % solution of ammonium chloride in water at a temperature of 20 °C ± 5 °C. Without drying, but after shaking off any drops, the parts are placed for 10 min in a box containing air saturated with moisture at a temperature of 20 °C ± 5 °C. After the parts have been dried for 10 min in a heating cabinet at a temperature of 100 °C ± 5 °C, their surfaces shall show no signs of rust.	P
2.7 (4.18.2)	- season cracking in copper		P
2.7 (4.18.3)	- corrosion of aluminium		P
2.7 (4.19)	Igniters compatible with ballast		N/A
2.7 (4.20)	Rough service vibration	The luminaire is not rough service luminaire.	N/A
2.7 (4.21)	Protective shield		N/A
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
2.7 (4.21.3)	No direct path		N/A



2.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 2.16 (12.3.2)	N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
2.7 (4.23)	Semi-luminaires comply Class II		N/A
*2.7 (4.24)	Photobiological hazards		*N/A
*2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		*N/A
*2.7 (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
	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
2.7 (4.25)	Mechanical hazard		P
	No sharp point or edges	Luminaires have no sharp points or edges that could, during installation, normal use, or maintenance, create a hazard for the user. Compliance was checked by inspection.	P
2.7 (4.26)	Short-circuit protection		N/A
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		N/A
2.7 (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

* Deney/Deneyler akreditasyon kapsamı dahilinde değildir.

* The test/tests are not within the scope of accreditation.



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2.7 (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
2.7 (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 ($^{\circ}\text{C}$) :	—
	100 cycles between $t_{\min}$ and $t_{\max}$	N/A
	Temperature sensing control still in position	N/A
2.7 (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
2.7 (4.30)	Luminaires with non-user replaceable light source	P
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:	N/A
	One fixing means requiring the use of a tool for its removal	P
2.7 (4.31)	Insulation between circuits	P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	A LED driver conforming to the 61347 standard is used in the luminaire. Relevant insulations are evaluated within the scope of this standard.
	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
2.7 (4.31.1)	SELV or PELV circuits	N/A
	Used SELV or PELV source	N/A
	Voltage $\leq$ ELV	N/A



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	PELV circuit shall have one pole connected to functional earth		N/A
	The connection between PELV and earth shall comply with functional earth		N/A
	Insulating of SELV or PELV circuits from LV supply		N/A
	Insulating of SELV or PELV circuits from other non SELV circuits		N/A
	Insulating of SELV or PELV circuits from FELV		N/A
	Insulating of SELV or PELV circuits from other SELV or PELV circuits		N/A
	SELV or PELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact 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
2.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ 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 make any electrical contact 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
2.7 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	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





Test Laboratuvarları

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	- slave luminaire constructed as class I	N/A
2.7 (4.32)	Overvoltage protective devices	N/A
	Comply with IEC 61643-11	N/A
	External to control gear and connected to earth:	N/A
	- only in fixed luminaires	N/A
	- only connected to protective earth	N/A
2.7(4.33)	Luminaire powered via information technology communication cabling	N/A
	Luminaire shall fulfil the requirement for Class III	N/A
	Rated voltage of luminaire shall be within range of ES1, not exceed maximum voltage rated to used connector	N/A
	The luminaire shall be designed in line with the limits of the electrical parameters of a PSE.	N/A
	No hazard with 130% rated input voltage minimum 7.5VDC for circuit greater than 5VDC	N/A
	No hazard with 150% rated input voltage for circuit equal to or less than 5VDC	N/A
2.7(4.34)	Electromagnetic field (EMF)	N/A
	Compliance to IEC 62493:2015	N/A
2.7(4.35)	Protection against moving fan blades	N/A
	Fan blades not accessible when installed and wired as in normal use and replacing light sources or components	N/A
	This test is not necessary for fans have leading edges and tips rounded with a radius of not less than 0,5mm and:	N/A
	Hardness less than D60 Shore, or	N/A
	Peripheral speed less than 15m/s supplied with rated voltage, or	N/A
	Fan has input power not exceeding 2W supplied with rated voltage.	N/A
2.7(4.36)	Track-mounted luminaires	N/A
	Tested according to Annex A of IEC 60570	N/A

2.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according to Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Control gear marked with $\hat{U}_{OUT}$ and f_{OUT} according to IEC 61347-1, clause 7.1, item w	See Test Table 2.8 (11.2) II	N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Control gear marked with U_p	See Test Table 2.8 (11.2) II	N/A
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A

2.9 (7)	PROVISION FOR EARTHING		P
2.9 (7.2.1 + 7.2.3)	Accessible metal parts	Metal parts of Class I luminaires that are accessible when the luminaire is installed or opened for cleaning and that may become live in the event of an insulation fault are permanently connected to a protective earth terminal or protective earth contact.	P
	Metal parts in contact with supporting surface		P
	Resistance $< 0,5 \Omega$	Max Resistance: 0.025Ω	P
	Self-tapping screws used		P
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
2.9 (7.2.4)	Locking of clamping means		P

	Compliance with 4.7.3	The connection is adequately locked against accidental loosening. It is not possible to loosen the clamping means by hand. It is not possible to loosen the clamping means unintentionally. Protective earthing terminal is comply with the requirements of 4.7.3.	P
	Terminal blocks with integrated screwless earthing contacts tested according to Annex V	Compliance was checked by inspection, by manual test and by the tests specified in 4.7.3.	P
2.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
2.9 (7.2.6)	Earth terminal adjacent to mains terminals		P
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal	Checked by the test in clause 4.18.	P
2.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
2.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow	The luminaire does not have supply cord. The earth wire used in the internal wiring is green-yellow. The colour of the earth cable is yellow and green.	N/A
	Length of earth conductor		N/A
2.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose	The luminaire does not have PELV circuit.	N/A

2.10 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(See Annex 1)	N/A
	Part of the luminaire	(See Annex 2)	N/A

2.10 (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



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Test Laboratuvarları

2.11 (5)	EXTERNAL AND INTERNAL WIRING		P
2.11 (5.2)	Supply connection and external wiring		P
2.11 (5.2.1)	Means of connection		P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c./25V peak interrupted DC voltage with frequency between 10Hz and 200Hz or protected from outdoor environment		N/A
2.11 (5.2.2)	Type of cable	Supply cables used as connection means to the source are not supplied by the luminaire manufacturer.	N/A
	Nominal cross-sectional area (mm ²)		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
2.11 (5.2.3)	Type of attachment, X, Y or Z		N/A
2.11 (5.2.5)	Type Z not connected to screws		N/A
2.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
2.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
2.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
2.11 (5.2.9)	Locking of screwed bushings		N/A
2.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		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
2.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A





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	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
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	N/A
2.11 (5.2.10.3)	Tests:	N/A
	- impossible to push cable; unsafe	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
2.11 (5.2.10.4)	Exemption from cord anchorage test in 5.2.10.3 if maximum current 2A, including short circuit current.	N/A
	Prior to the operation of an overcurrent limiting device and the following conditions and test requirements are met	N/A
	Ordinary SELV Class III luminaire at voltage not exceeding 25Vrms or 60VDC	N/A
	Ordinary PELV Class III luminaire at voltage not exceeding 12Vrms or 30VDC	N/A
	Other than ordinary Class III luminaire at voltage not exceeding 12Vrms or 30VDC	N/A
	Pull test 30N for 1min	N/A
2.11 (5.2.11)	External wiring passing into luminaire	N/A
2.11 (5.2.12)	Looping-in terminals	N/A
2.11 (5.2.13)	Wire ends not tinned	N/A
	Wire ends tinned: no cold flow	N/A
2.11 (5.2.14)	Mains plug same protection	N/A
	Class III luminaire plug	N/A
	No unsafe compatibility	N/A



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2.11 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	For appliance inlet or connector systems according to IEC 61984, additional requirements apply:		N/A
	a) Polarization		N/A
	b) Protection against electric shock		N/A
	c) Mechanical locking		N/A
	d) Early contact making		N/A
	e) Protection against short circuit poles		N/A
	f) Cable Clamp		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
2.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
2.11 (5.3)	Internal wiring		P
2.11 (5.3.1)	Internal wiring of suitable size and type	Internal wiring is made with conductors of a suitable size and type to handle the power occurring during normal use. The insulation of the wiring is made of a material capable of withstanding the voltage and the maximum temperature to which it is subjected, without affecting the safety when properly installed and connected to the mains.	P
	Through wiring		P
	- not delivered/ mounting instruction	The luminaire cables are supplied assembled. Cable temperatures do not reach extreme levels.	P
	- factory assembled		P
	- socket outlet loaded (A)		N/A
	- temperatures	(See Annex 2)	P
	Green-yellow for earth only		P
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)		P





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	Insulation thickness (mm)		P
	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²).....		N/A
2.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
2.11 (5.3.1.4)	Conductors without insulation		N/A
2.11 (5.3.1.5)	SELV current-carrying parts		N/A
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.	Internal wiring is so situated or protected that it cannot be damaged by sharp edges, rivets, screws and similar components, or by moving parts of switches, joints, raising and lowering devices, telescopic tubes and similar parts. Wiring is not twisted along the longitudinal axis of the cable through an angle exceeding 360°.	P
	Joints, raising/lowering devices		P
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
2.11 (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
2.11 (5.3.4)	Joints and junctions effectively insulated		N/A
2.11 (5.3.5)	Strain on internal wiring		N/A
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		P
2.11 (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





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2.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
2.12 (8.2.1)	Live parts not accessible	Luminaire was so constructed that their live parts are not accessible when the luminaire has been installed and wired as in normal use, and when it is opened as necessary for replacing replaceable light sources or (replaceable) starters, even if the operation cannot be achieved by hand. According to the manufacturer statement, the connectors cannot be opened without tools.	P
	Basic insulated parts not used on the outer surface without appropriate protection	Basic insulated parts was not used on the outer surface of the luminaire without appropriate protection against accidental contact.	P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	The luminaire is fixed luminaire.	N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires	There are no access to basic insulated parts from the outside of the luminaire by means of a Ø,50 mm probe according to Figure 1 in IEC 61032:1997.	P
	Lamp and starter holders 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	The luminaire does not have tungsten filament.	N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp	The luminaire does not have discharge lamp.	N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	The luminaire is fixed luminaire.	N/A
2.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A





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Test Laboratuvarları

	- glass protective shields not used as supplementary insulation		N/A
2.12 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be earthed		N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V).....:		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:		N/A
	- nominal voltage (V)		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
2.12 (8.2.3.d)	PELV circuit may have exposed current carrying parts under the following conditions:		N/A
	For ordinary luminaires voltage not exceed 12 VRMS or 30VDC (under load and no load)		N/A
	For other than ordinary, voltage not exceed 12 VRMS or 30VDC (under load and no load)		N/A
	If voltage exceed, only the earthed pole may be accessible, other pole shall be insulated accordance with 10.2.2		N/A
	Class III luminaires are accepted by connection to SELV source or PELV source		N/A
2.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
2.12 (8.2.6)	Covers reliably secured		N/A
2.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
2.12 (-)	Parts within ceiling space provide same degree of protection against electric shock as parts below ceiling space		N/A





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2.13 (12)	ENDURANCE TEST AND THERMAL TEST	P
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) specified in 2.14	—
2.13.2 (-)	Luminaire mounted and tested according to Annex B	—
2.13 (12.2)	Selection of lamps and ballasts	—
	Lamp used according to Annex B (Lamp used see Annex 2)	—
	Control gear if separate and not supplied (Control gear used see Annex 2)	—
2.13 (12.3)	Endurance test	P
	a) mounting-position: Normal use	—
	b) test temperature (°C).....: 35	—
	c) total duration (h): 240	—
	d) supply voltage (V): 264	—
	d) if not equipped with control gear, constant voltage/current (V) or (A): -	—
	e) luminaire ceases to operate	—
2.13 (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
2.13 (12.4)	Thermal test (normal operation) (See Annex 2)	P
2.13 (12.5)	Thermal test (abnormal operation) (See Annex 2)	N/A
2.13 (12.6)	Thermal test (failed lamp control gear condition):	N/A
2.13 (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	N/A
	- calculated mounting surface temperature (°C): N/A	N/A
	- track-mounted luminaires	N/A
2.13 (12.6.2)	Temperature sensing control	N/A
	- case of abnormal conditions: —	—





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	- 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
2.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
2.13 (12.7.1)	Luminaire without temperature sensing control		N/A
2.13 (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		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test.....	See Test Table 2-16 (13.2.1)	N/A
2.13 (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 2-16 (13.2.1)	N/A
2.13 (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





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2.13 (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 2.16 (13.2.1)	N/A
2.13.3 (-)	Wiring, for connection to the supply, not reach unsafe temperature		P
	- measured temperature of the cable (°C)		P
2.13.4(-)	Test for air-handling luminaires under static operating conditions:		NA
	- Normal operation		NA
	- Abnormal operation		NA

2.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.13		P
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP 67.	—
	- mounting position during test	Normal use.	—
	- fixing screws tightened; torque (Nm)	2/3 torque force for screw.	—
	- tests according to clauses	9.2.2 and 9.2.8	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire	IP 6X.	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		N/A
	c.1) For luminaires without drain holes – no water entry		N/A
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire or high pressure and temperature water jet-proof luminaire or high pressure and cold water jet-proof luminaire	IPX7.	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





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	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
2.14 (9.3)	Humidity test 48 h	25°C and %93 Rh.	P

2.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
2.15 (10.2.1)	Insulation resistance test	The insulation resistance is measured with a DC voltage of approximately 500 V, 1 min after the application of the voltage. For the insulation of SELV or PELV parts of luminaire is, the DC voltage to be used for measurement is 100 V.	P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø	Glass.	—
	Insulation resistance (MΩ)		—
	SELV/PELV		P
	- between current-carrying parts of different polarity :	LED driver has certificate.	N/A
	- between current-carrying parts and mounting surface	>999,9 MΩ	P
	- between current-carrying parts and metal parts of the luminaire	>999,9 MΩ	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/PELV		P
	- between live parts of different polarity	LED driver has certificate.	N/A
	- between live parts and mounting surface	>999,9 MΩ	P
	- between live parts and metal parts	>999,9 MΩ	P
	- 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
2.15 (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)	500, 1480, 2960	P
	SELV/PELV		P
	- between current-carrying parts of different polarity :	LED driver has certificate.	N/A
	- between current-carrying parts and mounting surface	500 V	P
	- between current-carrying parts and metal parts of the luminaire	500 V	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/PELV		P
	- between live parts of different polarity	LED driver has certificate.	N/A
	- between live parts and mounting surface	1480 and 2960 V.	P
	- between live parts and metal parts	1480 V.	P
	- 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
2.15 (10.3)	Touch current or protective conductor current (mA):	Max: 0.028	P

2.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
2.16 (13.2.1)	Ball-pressure test.....	See Test Table 2.16 (13.2.1)	P
2.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 2.16 (13.3.1)	P
2.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 2.16 (13.3.2)	P
2.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 2.16 (13.4)	N/A



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2.8 (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		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	R	8.63	3	11.1.B	8.63	5	11.1.A
Working voltage (V)					220 – 240		—
PTI.....					< 600 ☒ $\geq$ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					—		
Supplementary information: LED Driver (L – N)							
Distance 2:	B	21.74	1.2	11.1.B	21.74	0.2	11.1.A
Working voltage (V)					2 – 6 V		—
PTI.....					< 600 ☒ $\geq$ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					—		
Supplementary information: LED PCB (+ – –)							
Distance 3:							
Working voltage (V)							—
PTI.....					< 600 ☐ $\geq$ 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.





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2.8 (11.2)	TABLE II: Creepage distances and clearances						N/A
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 **	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.





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2.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)		2	—	
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
LENS	-	75	1.1	
Driver Enclosure	TEXRUN	125	1.3	
Supplementary information:				

2.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				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
Driver Enclosure	TEXRUN	10	Yes	12	P
Supplementary information:					

2.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests				P
Object/ Part No./ Material	Manufacturer/ trademark	GWT (°C): 650			Verdict
		t _e (s)	t _b (s)	t _h (s)	
LENS	-	0	0	0	P
Driver Enclosure	TEXRUN	0	0	0	P
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :					No
Supplementary information:					

2.16 (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: PTI<600 is accepted. It fulfils the requirements in the tests under these conditions.				





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ANNEX 1		TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
LED	C	NICHIA	NVSW219FT	700 mA 6 V _{DC}	IEC 60825-1:2001 IEC 62471:2006	Data Sheet	
Description:							
LED Driver	C	TEXRUN	ML-700P-IPC	Input: 100 – 340 V _{AC} , 50/60 Hz 0.2A Output: 2 – 6 V _{DC} , 0.7A 4W t _c : 85°C, t _a : 40°C	EN 61347-2-13	Data Sheet	
Cable	C	HANOĞLU	H03VV-F	0.75 mm ²	TS EN 50525-2-11	CE	
Gland	C	ORTAÇ	-	IP68 (5 Bar)	-	Data Sheet	
Description:							
Lens	C	LIMBUS	TLS01	-	-	Data Sheet	
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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ANNEX 2	TABLE: Thermal tests of Section 12		P				
	Type reference.....:	iUplight XS	—				
	Lamp used.....:	LED / NICHIA / NVSW219FT	—				
	Lamp control gear used.....:	TEXRUN / ML-700P-IPC	—				
	Mounting position of luminaire.....:	Normal use	—				
	Supply wattage (W).....:	3.1	—				
	Supply current (A).....:	0.031	—				
	Temperatures in test 1 - 4 below are corrected for ta (°C).....:	-	—				
	- abnormal operating mode.....:	-	—				
2.13 (12.4)	- test 1: rated voltage.....:	220 – 240	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	255	—				
	- 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.....:	-	—				
2.13 (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
Enclosure	21.1 – 22.8 – 19.6	34.3 – 34.4	33.1	-	90	-	-
LED Driver	21.1 – 22.8 – 19.6	40.7 – 41.0	40.6	-	85	-	-
Mounting Enclosure	21.1 – 22.8 – 19.6	32.6 – 32.8	31.4	-	90	-	-
LED Cover	21.1 – 22.8 – 19.6	31.1 – 31.4	29.9	-	Information	-	-
Intenal Cable	21.1 – 22.8 – 19.6	27.6 – 26.3	24.4	-	90	-	-
Enclosure	21.1 – 22.8 – 19.6	27.6 – 28.0	26.1	-	90	-	-
Enclosure	21.1 – 22.8 – 19.6	28.5 – 28.6	27.0	-	90	-	-
Supplementary information:							

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 (mm ²)	---
(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
	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

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
	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



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(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									
	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:										





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10. Deney ve Ölçüm Bilgileri:

Test and Measuring Arrangement

Cihaz Device	İmalatçı Manufacturer	Seri No. / Kod Serial No / Code	Sertifika No Certificate No	Kalibrasyon Tarihi Calibration Date
Humidity Temperature Meter	CEM	LD222	2336549	July/2024
Multimeter	FLUKE	LD377	2304055	July/2024
Humidity Cabinet	NUKLEON	LD140	23/1219 and 23/1220	July/2024
Perforated Metal Housing	LVT	LD461	-	No Need Calibration
Variac	VARSAN	LD403	2305591	October/2024
Digital Scale	YILDIRIM TARTI	LD291	2349273	September/2024
Torque Meter	BRITool / AVT 300A	LD14	2336620	July/2024
Torque Screwdriver	NETRATEK/5-10 N.m	LD396	2336990	August/2026
Torque Screwdriver	NETRATEK/1-6 N.m	LD397	2336969	August/2026
Digital Caliper	STAINLESS HARDENED	LD390	2336960	August/2024
Test Finger	-	LD130	22M04234	May/2025
Test Finger	-	LD131	2336645	July/2026
Test Probe	-	LD132	22M04235	May/2025
Digital Newtonmeter	PCE-FM200	LD248	2333231	July/2026
Temperature Rise Data Logger	ELIMKO	LD80	4131002	September/2024
CE MULTITESTER	METREL	LD364	2303974	July/2024
Power Measurement	ROSYXANDY / ELETEC PRO	LD361	2304360	August/2024
Oscilloscope	HANTEK / DSO4204B	LD374	2304621	August/2024
Spring Hammer Hammer (0.2J)	-	LD142	2325963	May/2025
Spring Hammer Hammer (0.35J)	-	LD143	2325967	May/2025
Glow-Wire Test Apparatus	LISUN GROUP / ZRS- 2H	LD453	2307779	December/2024
Etüv	ELEKTRO-MAG / M 5040 P	LD444	2362570	November/2024
Digital Newtonmeter	PCE-FM200	LD248	2333231	July/2024
Test Probe	LVT	LD132	22M04235	May/2025
IP Dusting Cabinet	LVT	LD100	-	No Need Calibration
Rope Immersion Test Cabinet	LVT	LD117	-	No Need Calibration
TOUCH CURRENT MEASURING CIRCUIT (FIGURE 5)	SINÜO TESTING EQUIPMENT / SN2210-54	LD440	E23111933	December/2025
TOUCH CURRENT MEASURING CIRCUIT (FIGURE 4)	SINÜO TESTING EQUIPMENT / SN2210-54A	LD441	E23111932	December/2025
NEEDLE FLAME TEST	LISUN GROUP / ZY-3	LD451	23-51751	November/2024
Ball Presseure	SYSTEMAK	LD111	AM03562-22	May/2024



Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

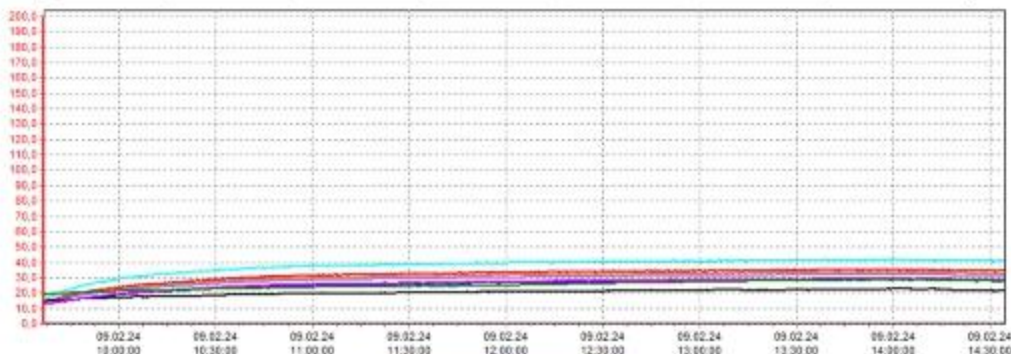
Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires

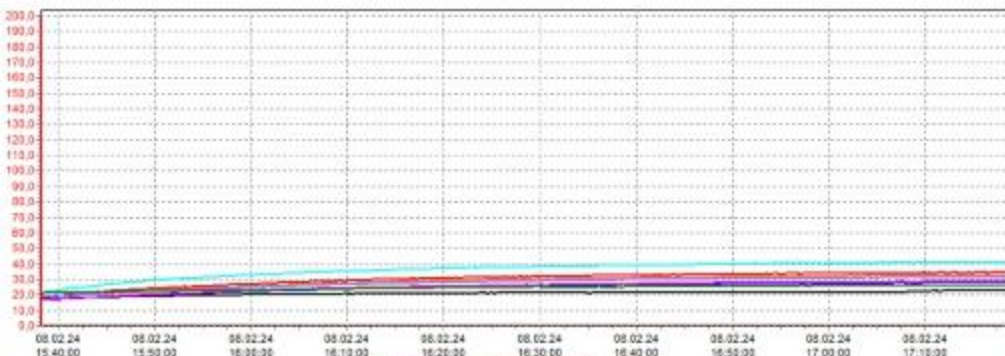
11. Deney Osilogramları:

Test Oscillograms

E-600-06-Kanal-09 PV E-600-06-Kanal-10 PV E-600-06-Kanal-11 PV E-600-06-Kanal-12 PV E-600-06-Kanal-13 PV E-600-06-Kanal-14 PV E-600-06-Kanal-15 PV
E-600-06-Kanal-16 PV



E-600-06-Kanal-09 PV E-600-06-Kanal-10 PV E-600-06-Kanal-11 PV E-600-06-Kanal-12 PV E-600-06-Kanal-13 PV E-600-06-Kanal-14 PV E-600-06-Kanal-15 PV
E-600-06-Kanal-16 PV





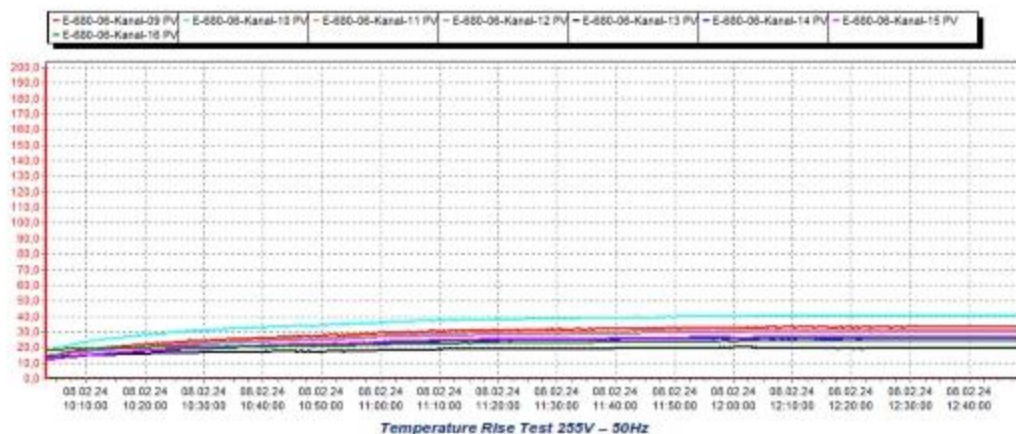
Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri

Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires



12. Deney Fotoğrafları:
Test Photographs



Photograph 1: General View



Photograph 2: General View

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires



Photograph 3: General View



Photograph 4: General View

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires



Photograph 5: All Part



Photograph 6: All Part

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminares Safety Tests

Recessed luminaires and recessed air-handling luminaires



Photograph 7: LED Driver



Photograph 8: LED



Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires

13. Firma Dokümanları:

Documentation of Client

Firma Ünvanı	: BSI AYDINLATMA SAN. VE TİC. A.Ş.
Company Title	
Firma Adresi	: Baskent OSB, 20.Cad. B/3 Blok No:4 Maliköy, Sincan, Ankara / TURKEY
Company Address	
Üretici Ünvanı	: BSI AYDINLATMA SAN. VE TİC. A.Ş.
Manufacturer Title	
Üretici Adresi	: Baskent OSB, 20.Cad. B/3 Blok No:4 Maliköy, Sincan, Ankara / TURKEY
Manufacturer Address	
Marka	: BSI
Brand	
Model	: iUplight XS
Type	
Seri No	: AC89102
SN	
Beyan Gerilimi	: 220-240V
Rated Voltage	
Beyan Akımı	:
Rated Current	
Beyan Gücü	: 3W
Rated Power	
Beyan Frekansı	: 50-60Hz
Rated Frequency	
Numunenin Tanımı	: Dekoratif LED Aydınlatma Armatürü
Test Item Description	: Decorative LED Lighting Fixture



BSI AYDINLATMA SAN. VE TİC. A.Ş.

Baskent OSB 20.Cadde No:3/4

Maliköy Sincan/ANKARA

Tic.Sic.No:35937 Mersis No: 0187065256200001

SINCAV NO: 187 065 2562

Web: bsilightsag.com mail: info@bsilightsag.com

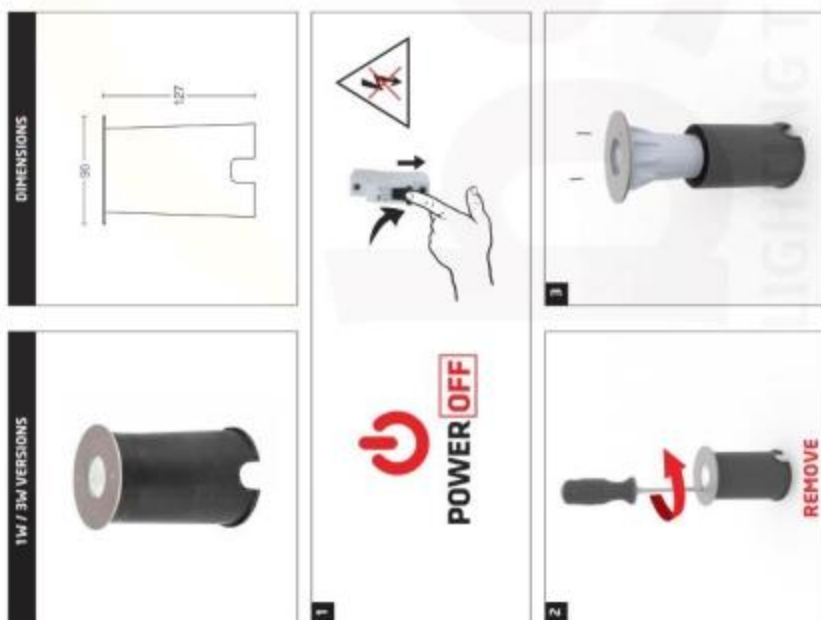
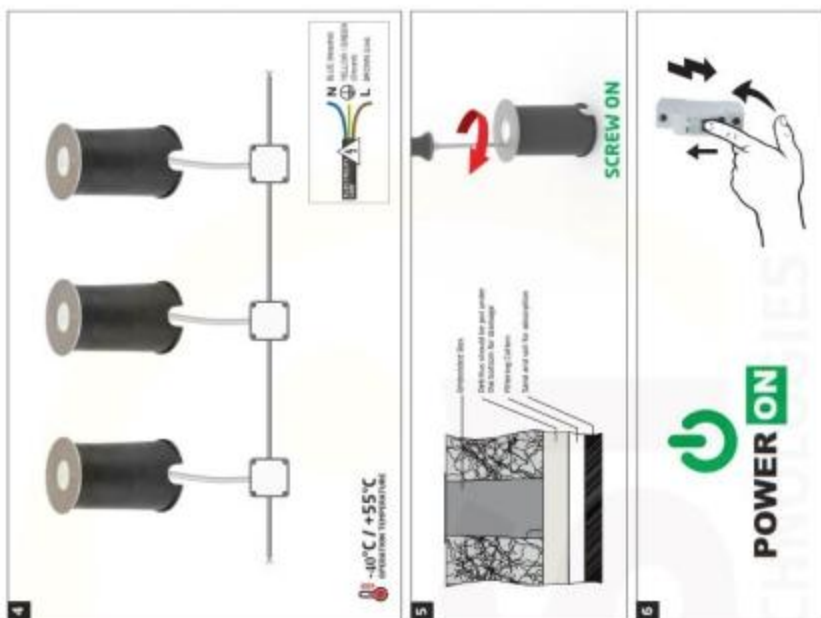


Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminares Safety Tests

Recessed luminaires and recessed air-handling luminaires

UPLIGHT XS INSTALLATION GUIDE



ELECTRICAL SPECIFICATIONS

Item	Technical Norm
INPUT	Max. Output Wattage
	4W
	Rated Input Voltage
	100 - 240VAC
	Input Current
	0.1A
	Frequency (hz)
	50 / 60Hz
	Maximum Input Power
	6.3W
OUTPUT	Power Factor
	≥0.5/100VAC, ≥0.4/240VAC
	THD
	-
	Efficiency
	≥72%
	No-load power
	≤0.4W
	Inrush current
	10.0A
AMBIENT	Turn on time
	≤200ms
	Output Voltage
	2-6V
	Output Current
	700mA
	Output Power
	4.2
	Operating Frequency
	64KHZ
PROTECTION	Ripple & Noise
	≤90mA
	Load Regulation
	≤5%
	Line Regulation
	≤5%
	Storage Temperature
	-20 ... + 70°C
	Operating Ambient Temperature
	-20 ... + 50°C
SYSTEM PARAMETERS	Case Temperature at tc Point
	+80°C
	Relative humidity
	5 ... 85%
	IP Rating
	IP65
	No Load
	Auto-recovery if fault is removed
	Over Load
	Auto-recovery if fault is removed
COMPLIANCES & APPROVALS	Short Circuit
	Auto-recovery if fault is removed
	Withstand voltage
	3.75KVAC
	Average Service Life
	30,000Hours
	Safety
	EN 61347-2:13
	RFI
	EN 55015
	Harmonics
	EN 61000-3-2 Class C
	Immunity
	EN 61547

Note:

- All parameters NOT specially mentioned are measured at rated input or max rated input, and 25°C ambient temperature
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- Average Service Life: The number of hours when 50% of any large group of drivers have failed.



Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires



HANOĞLU®

KABLO SAN. ve TİC. LTD. ŞTİ.

15 /04/ 2019

HNK.12.CE1/2



UYGUNLUK DEKLARASYONU

HANOĞLU KABLO SANAYİ TİCARET ve LİMİTED ŞİRKETİ

Perpa Ticaret Merkezi A Blok Kat:5 no:113 Şişli , İSTANBUL / TÜRKİYE

Aşağıda tipi belirtilen 'ALÇAK GERİLİM ENERJİ KABLOLARI' piyasaya firmamızca tescilli "HANOĞLU KABLO" markalı olarak TS EN 50525-2-11 , TS EN 50525-2-31 standartlarında ve 2006/95/AT sayılı AB direktifine uygun olarak üretilmişini beyan ederiz.

- H05V-U
- H03VVH2-F
- H05V-K
- H03VV-F
- H03VH-H
- H05VH-H

Yüksel Han

KABLO SAN. ve TİC. LTD. ŞTİ.
Perpa Ticaret Merkezi A Blok Kat:5 no:113
Şişli / İSTANBUL
Tic. Sic. No: 241500/289172 Mersis No:0457006272100015
Sığ. No: 457 006 2721

Perpa Tic. Merkezi A Blok Kat: 5 No: 113 Okmeydanı - Şişli / İstanbul Tel: (0212) 320 32 58 (0212) 320 62 58 Fax: (0212) 320 27 95

Şişli V.D. 4570062721 Tic. Sic. No: 241500/289172 Mersis No:0457006272100015

www.hanoglukablo.com.tr e-mail: info@hanoglukablo.com.tr





METAL CABLE GLANDS STANDARD TYPE BRASS

TECHNICAL DETAILS

Material

Cap nut

Clamping insert

Sealing ring

Gland body

O-ring

Connection thread

Certificates

Protection class

Temperature range

: Brass with nickel plated

: Polyamide PA6 V2

: TPV

: Brass with nickel plated

: NBR

: Metric (EN 60423)

: UK, ROHS, CE

: IP68 - 5 bar

: -20 °C +100 °C

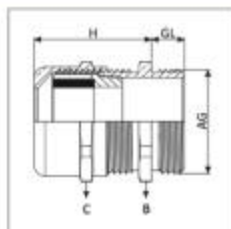
: -40 °C +150 °C (short term)

Properties

Easy to assemble

Long thread versions

High strain relief



METRIC THREAD CABLE GLANDS

AG Thread	Code	H mm	GL mm	B mm	C mm	mm
M 12 x 1,5	OMBG 01	22	6	14	14	3 - 6,5
M 16 x 1,5	OMBG 02	23	7	18	17	4 - 8
M 20 x 1,5	OMBG 03RS	26,5	8	22	22	6 - 10
M 20 x 1,5	OMBG 03	26,5	8	22	22	6 - 12
M 25 x 1,5	OMBG 04	29	8	27	24	10 - 14
M 32 x 1,5	OMBG 05	31,5	9	34	30	13 - 18
M 40 x 1,5	OMBG 06	38	9	43	40	18 - 25
M 50 x 1,5	OMBG 07	43	9	55	50	22 - 32
M 63 x 1,5	OMBG 08	48	14	68	64	33 - 44

LONG THREAD METRIC CABLE GLANDS

M 12 x 1,5	OMBG 09	22	12	14	14	3 - 6,5
M 16 x 1,5	OMBG 10	23	12	18	17	4 - 8
M 20 x 1,5	OMBG 11RS	26,5	12	22	22	6 - 10
M 20 x 1,5	OMBG 11	26,5	12	22	22	6 - 12
M 25 x 1,5	OMBG 12	29	12	27	24	10 - 14
M 32 x 1,5	OMBG 13	31,5	14	34	30	13 - 18
M 40 x 1,5	OMBG 14	38	14	43	40	18 - 25
M 50 x 1,5	OMBG 15	43	14	55	50	22 - 32
M 63 x 1,5	OMBG 16	48	18	70	64	33 - 44



Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires

NICHIA STS-DA1-5639 <Cat.No.190423>

NICHIA CORPORATION

SPECIFICATIONS FOR WHITE LED

NVSW219FT

- Pb-free Reflow Soldering Application
- Built-in ESD Protection Device
- RoHS Compliant





Test Laboratuvarları

Aydınlatma Armatürleri Güvenlik Deneyleri Gömme Armatürler

Luminaires Safety Tests

Recessed luminaires and recessed air-handling luminaires

LIMBUS

CONTROL YOUR LIGHT

BY  TD Lighting Solutions

TLS01NI Single Series

FAMILY DATASHEET

