

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

Report Number : 64.142.18.50080.01
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Guangzhou Branch

Applicant's name : AOK Industrial Company Limited
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Test specification:

Standard : IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017

Test procedure : ENEC Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60598_2_3L

Test Report Form(s) Originator : Intertek Semko AB


Master TRF : Dated 2018-03-09

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Test item description	LED Garden Light
Trade Mark	
Manufacturer	Same as applicant
Model/Type reference	AOK-25WiP-NV-L3-00-XX70-T5-P-I; AOK-50WiP-NV-L3-00-XX70-T5-P-I AOK-75WiP-NV-L3-00-XX70-T5-P-I; AOK-120WiP-NV-L3-00-XX70-T5-P-I (‘XX’ can be 30-65, stands for LED CCT, e.g. 30=3000K, 65=6500K.)
Ratings	100-240VAC; 50/60Hz [AOK-25WiP-NV-L3-00-XX70-T5-P-I; AOK-50WiP-NV-L3-00-XX70-T5-P-I]; 220-240VAC; 50/60Hz [AOK-75WiP-NV-L3-00-XX70-T5-P-I; AOK-120WiP-NV-L3-00-XX70-T5-P-I]; 25W [AOK-25WiP-NV-L3-00-XX70-T5-P-I]; 50W [AOK-50WiP-NV-L3-00-XX70-T5-P-I]; 75W [AOK-75WiP-NV-L3-00-XX70-T5-P-I]; 120W [AOK-120WiP-NV-L3-00-XX70-T5-P-I]

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):	
<input checked="" type="checkbox"/> CB Testing Laboratory:	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Testing location/ address	5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West, Guangzhou 510656, P. R. China
Tested by (name, function, signature)	Annie Wang Project Handler
Approved by (name, function, signature) ..	Kenny Chen Designated Reviewer
	
<input type="checkbox"/> Testing procedure: CTF Stage 1:	
Testing location/ address	
Tested by (name, function, signature)	
Approved by (name, function, signature) ..	
<input type="checkbox"/> Testing procedure: CTF Stage 2:	
Testing location/ address	
Tested by (name + signature)	
Witnessed by (name, function, signature) . :	
Approved by (name, function, signature) .. :	
<input type="checkbox"/> Testing procedure: CTF Stage 3:	
<input type="checkbox"/> Testing procedure: CTF Stage 4:	
Testing location/ address	
Tested by (name, function, signature)	
Witnessed by (name, function, signature) . :	
Approved by (name, function, signature) .. :	
Supervised by (name, function, signature) :	

<p>List of Attachments (including a total number of pages in each attachment):</p> <p>Attachment No. 1:</p> <ul style="list-style-type: none"> - 2 pages of test report for European group differences and national differences for EN 60598-2-3:2003+A1:2011 and EN 60598-1:2015+A1:2018; <p>Attachment No. 2:</p> <ul style="list-style-type: none"> - 5 pages of test report for EN 62031:2008+A1: 2013+A2:2015 (for LED module); <p>Attachment No. 3:</p> <ul style="list-style-type: none"> - 2 pages of test report for IEC TR 62778:2014 (for blue light risk); <p>Attachment No. 4:</p> <ul style="list-style-type: none"> - 10 pages of photo documentation.
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Summary of testing:

<p>Tests performed (name of test and test clause):</p> <p>EN 60598-2-3:2003+A1:2011; EN 60598-1:2015+A1:2018;</p> <p>The LED modules in products were found to comply with the requirements of EN 62031:2008+A1:2013+A2:2015.</p> <p>The submitted samples were classified as RG1 LED products according to IEC TR 62778:2014;</p> <p>The submitted samples were found to comply with the above specifications.</p>	<p>Testing location:</p> <p>5F, Communication Building, 163 Pingyuan Rd, Huangpu Ave. West, Guangzhou 510656, P. R. China</p>
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Summary of compliance with National Differences:

<p>- European group difference</p> <p>The products fulfil the requirements of below standards: EN 60598-2-3:2003+A1:2011; EN 60598-1:2015+A1:2018</p>

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.

According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.



Remark: labels of other models are same as the label of above model, except the model no., power, input voltage and CCT are different.

Location: sticking on middle top external metal surface. (height of CE mark at least 5mm, height of WEEE mark at least 7mm, height of letters and numerals at least 2mm, height of other marks at least 5mm)



Label location

Symbol for models AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I:



Location: sticking on glass cover. (The height of the symbol at least 15mm.)

Test item particulars:

Classification of installation and use	: Fixed and for indoor and outdoor use
Supply Connection	: Supply cord without plug
Protection Class	: I
Degree of Protection	: IP66
ta	: 50°C

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	: 2018-12-20
Date (s) of performance of tests.....	: 2018-12-20 to 2019-04-03
General remarks:	
<p>"(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 <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1</p> <p>The manufacturer/ Importer has to ensure the appliance placing on the EU market conforms to the applicable EU directives which provide the affixing of the CE marking, such as LVD, EMC, RoHS, ErP, and so on.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:	
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:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....	: Same as applicant

General product information:


LED Street Light is for indoor and outdoor use. All models are non-dimmable and have similar construction.

Model list:

Model No.	Rated Voltage (V)	Input current (A)	Rated power (W)	Weight (Kg)	LED number (PCS)	Size (mm)	LED driver
AOK-25WiP-NV-L3-00-XX70-T5-P-I	100-240VAC; 50/60Hz	0,28	25	7,6	140	Φ460*80	XLG-50-AB
AOK-50WiP-NV-L3-00-XX70-T5-P-I		0,55	50	7,6	140	Φ460*80	XLG-50-AB
AOK-75WiP-NV-L3-00-XX70-T5-P-I	220-240VAC; 50/60Hz	0,38	75	7,6	140	Φ460*80	Xi LP 100W 0.3-1.05A S1 230V 1175
AOK-120WiP-NV-L3-00-XX70-T5-P-I		0,60	120	7,6	196	Φ460*80	Xi LP 150W 0.3-1.05A S1 230V 1175

Remark: 'XX' can be 30-65, stands for LED CCT, e.g. 30=3000K, 65=6500K.

LED driver information as follows:

Model No.	Manufacture	Ratings	Standard	Certificate
XLG-50-AB	Mean Well Enterprise Co., Ltd.	Input: 100-240VAC; 50/60Hz; 0,62A; Output: 22-54VDC; max. 2,1A; max. output voltage: 57VDC; max. 50W; ta: 50°C (100-200VAC); ta: 60°C (200-240V); tc:90°C; Constant current; Independent; SELV ; Class I; IP67; 	EN 61347-2-13; EN 61347-1; EN 62384	DEKRA ENEC 35-106403
* Xi LP 100W 0.3-1.05A S1 230V 1175	Philips Lighting B.V.	Input: 220-240VAC; 50/60Hz; 0,45-0,51A; Output: 0,3-1,05mA; 46-143VDC; max. output voltage: 220VDC; max. 100W; ta 50°C; tc:80°C; Constant current; Independent; Class I; IP67	EN 61347-2-13; EN 61347-1; EN 62384	DEKRA ENEC 31-102283
* Xi LP 150W 0.3-1.05A S1 230V 1175	Philips Lighting B.V.	Input: 220-240VAC; 50/60Hz; 0,6-0,7A; Output: 0,3-1,05A; 72-214VDC; max. output voltage: 320VDC; max. 150W; ta 50°C; tc:80°C; Constant current; Independent; Class I; IP67	EN 61347-2-13; EN 61347-1; EN 62384	DEKRA ENEC 31-102283

Remark: '*' For both LED drivers, basic insulation maintains between LV supply and output circuit.

All models have two mounting bracket, see photo document for details.

Unless otherwise specified, the model AOK-120WiP-NV-L3-00-6570-T5-P-I was chosen as representative model to perform all tests.

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		—
3.2 (0.3)	More sections applicable	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
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	EN 62031	—
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION		—
3.4 (2.2)	Type of protection	Class I	—
3.4 (2.3)	Degree of protection	IP66	—
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
3.4 (2.5)	Luminaire for normal use	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> With lamp arm mounting bracket	—
	b) on a mast arm	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	c) on a post top	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	d) on span or suspension wires	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> With lifting scaffold mounting bracket	—
	e) on a wall	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

3.5 (3)	MARKING		—
3.5 (3.2)	Mandatory markings		P
	Position of the marking		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	50/60Hz	P
3.5 (3.3.3)	Operating temperature		N/A
3.5 (3.3.4)	Symbol or warning notice		N/A
3.5 (3.3.5)	Wiring diagram		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		N/A
3.5 (3.3.10)	Suitability for use indoors		P
3.5 (3.3.11)	Luminaires with 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	~	P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	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	Non-user replaceable light sources	P
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		P
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		P
	e) Cross-sectional area of wires if applicable		P
	f) Suitability for indoors use		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P

3.6 (4)	CONSTRUCTION		—
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		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		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	Terminals and supply connections		P
3.6 (4.7.1)	Contact to metal parts		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
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		P
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		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		P
3.6 (4.9.1)	Retainment		P
	Method of fixing: Heat shrinkable tube		—
3.6 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		P
	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
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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)	Retention 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
1.6 (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		P
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	Screw for glass cover: 1,2Nm	P
	Torque test: torque (Nm); part	Screw for earthing: 1,2Nm	P
	Torque test: torque (Nm); part	Screw for lens: 0,5Nm	P
	Torque test: torque (Nm); part	Screw for metal enclosure: 2,0Nm	P
	Torque test: torque (Nm); part	Screw for lifting scaffold mounting bracket: 8,0Nm	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part	Screw for lamp arm mounting bracket: 2,0Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
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)	6,25Nm (when luminaire with lifting scaffold mounting bracket)	P
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....	Glass cover for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I models: 0,5Nm;	P
	- other parts; energy (Nm)	Metal enclosure for all models: 0,7Nm; Glass cover for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I: 0,7Nm	P
	1) live parts		P
	2) linings		N/A
	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		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		—
	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		P
	- glow-wire test 650°C	See Test Table 3.15 (13.3.2)	P
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- 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		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	Electronic control gear is exempt from the requirements of this clause.	N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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		N/A
3.6 (4.18)	Resistance to corrosion		P
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		P
3.6 (4.19)	Igniters 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		P
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		P
	Class of risk group assessed according to IEC/TR 62778	RG1	—

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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 ($^{\circ}\text{C}$).....:		—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (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:		P
	Minimum two fixing means	for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I	P
3.6 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	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		P
	Used SELV source	for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I	P
	Voltage ≤ ELV		P
	Insulating of SELV circuits from LV supply		P
	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		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
3.6 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1	for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I	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 of above		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		P
	Comply with IEC 61643-11		P
	External to controlgear and connected to earth:		P
	- only in fixed luminaires		P
	- only connected to protective earth		P
3.6.1 (-)	At least IP X3 or X5 respectively. IP	IP66	P
	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		P
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P
	- drag coefficient	1,2	P
	- loaded area (m ²)	Max. 0,21	P
	- used load (N)	417N	P
	- measured deformation (cm/m)	1,2 (limit 2cm/m)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or	IK08 test was passed	P
	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		P
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		P
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		P
3.6.5.2.2 (-)	Glass covers not break into large pieces		P
	- test according 3.6.5.1, number of particles is more than 20	50pcs	P
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

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Clause	Requirement + Test	Result - Remark	Verdict
3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		—
3.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—
	Category III according Annex U		N/A
	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	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} 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	P
	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		—
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω	0,076 Ω	P
	Self-tapping screws used		N/A
	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 Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/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		P

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Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
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		P
	Length of earth conductor		P
3.8.1 (-)	Attachment prevented from rotation		P
3.9 (14)	SCREW TERMINALS		—
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire.....	(see Annex 3)	N/A
3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		—
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire.....	(see Annex 4)	N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		—
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection.....	Supply cord without plug	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	H05RN-F	P
	Nominal cross-sectional area (mm ²).....	3X1,0mm ²	P
	Cables equal to IEC 60227 or IEC 60245	IEC 60245	P
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (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
	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	Type Y	P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N): 60 (according to clause 3.10.1 of EN 60598-2-3)		P
	- torque test: torque (Nm): 0,25 (according to clause 3.10.1 of EN 60598-2-3)		P
	- displacement \leq 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.11)	External wiring passing into luminaire		P
3.10 (5.2.12)	Looping-in terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		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		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		N/A
	- 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		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)	See Annex 1	P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.1.5)	SELV current-carrying parts	For AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I	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°		P
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		P
	Wire ends tinned: no cold flow		P
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		P
	- pull test: 25 times; pull (N)	60	P
	- torque test: torque (Nm)	0,25	P

3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		—
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lampholders 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		N/A
	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		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
	- touch current		N/A
	- no-load voltage		N/A
	- touch current if applicable (mA)		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P

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Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 µF not exceed 50 V 1 min after disconnection		P
	Portable luminaire with capacitor > 0,1 µF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other plu Other luminaires with capacitor > 0,1 µF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection g connected luminaire with capacitor		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	As in normal use	—
	b) test temperature (°C)	60	—
	c) total duration (h)	240	—
	d) supply voltage (V)	264	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A)	LED	—
	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
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
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.....		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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.....		—
	- calculated temperature of fixing point/exposed part (°C).....		—
	Ball-pressure test.....	See 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.....		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test.....:	See 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 <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out.....:	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out.....:	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions.....:		—
	- highest measured temperature of fixing point/exposed part (°C):.....:		—
	Ball-pressure test:.....:	See 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		P

3.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		—
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:		—
	- classification according to IP.....:	IP66	—
	- mounting position during test	As in normal use	—
	- fixing screws tightened; torque (Nm)	Screw for glass cover: 0,8Nm; Screw for metal gland: 4,2Nm; Screw for metal enclosure: 1,3Nm; Screw for lamp arm mounting bracket:1,3Nm Screw for lifting scaffold mounting bracket: 5,3Nm	—
	- tests according to clauses.....:	9.2.2 and 9.2.7	—
	- electric strength test afterwards		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	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		P
3.13 (9.3)	Humidity test 48 h	25°C; R.H. 93%	P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		—
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		—
	Insulation resistance (MΩ)		—
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :	100MΩ (required: 1MΩ) [for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I]	P
	- between current-carrying parts and metal parts of the luminaire	100MΩ (required: 1MΩ) [for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I]	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		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	100MΩ (required: 2MΩ) [for all models]	P
	- between live parts and metal parts	100MΩ (required: 2MΩ) [for all models];	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
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.....	500V [for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I]	P
	- between current-carrying parts and metal parts of the luminaire	500V [for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I]	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		P
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	Live parts (L/N) to mounting surface:1480V [for all models]; Live parts of LED module to mounting surface: Max.1640V [for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I]	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts and metal parts	Live parts (L/N) to earthing metal enclosure:1480V [for all models]; Live parts of LED module to earthing metal enclosure: Max.1640V [for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I]; Live parts of LED module to glass cover: Max. 2120V [for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I]	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
3.14 (10.3)	Touch current or protective conductor current (mA) :	Touch current: Max. 0,02mA (limit : 0,7mA) (glass cover for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I); Protective conductor current: Max. 0,47mA (limit 3,5mA) (for earthing enclosure)	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		—
3.15 (13.2.1)	Ball-pressure test	See Test Table 3.15 (13.2.1)	P
3.15 (13.3.1)	Needle-flame test (10 s)	See Test Table 3.15 (13.3.1)	P
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

IEC 60598-2-3							
Clause	Requirement + Test				Result - Remark		Verdict
3.7 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	6,0	1,5	11.1	6,0	2,5	11.1
Working voltage (V)					240VAC		—
PTI.....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage if applicable (kV)							—
Supplementary information: minimum value was recorded; approved LED driver and terminal block used. Distance 1: L to N before fuse							
Distance 2:	B	10,0	1,5	11.1	10,0	2,5	11.1
Working voltage (V)					240VAC		—
PTI.....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage if applicable (kV)							—
Supplementary information: minimum value was recorded; Distance 2: Live part of terminal block (screw or screwless) for supply cord to accessible metal part							
Distance 3:	B	3,1	3,0	11.1	3,1	3,0	11.1
Working voltage (V)					Max. 320VDC		—
PTI.....					< 600 <input type="checkbox"/> ≥ 600 <input checked="" type="checkbox"/> LED module was not liable to contamination by dust or moisture.		—
Pulse voltage if applicable (kV)							—
Supplementary information: minimum value was recorded; Distance 3: Current carry part of LED module for AOK-75WiP-NV-L3-00-XX70-T5-P-I and AOK-120WiP-NV-L3-00-XX70-T5-P-I to accessible metal part							
Distance 4:	B	10,0	1,5	11.1	10,0	2,5	11.1
Working voltage (V)					240VAC		—
PTI.....					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Pulse voltage if applicable (kV)							—
Supplementary information: minimum value was recorded; Distance 4: live parts of fuse and accessible metal part.							

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

IEC 60598-2-3							
Clause	Requirement + Test				Result - Remark		Verdict
3.7 (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 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	---
Peak value of the working voltage \hat{U}_{out} if applicable (kV)							---
Supplementary information: --							

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

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics				P
Allowed impression diameter (mm)				2 mm	---
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Terminal block for internal wire		WAGO KONTAKTTECHNIK GMBH & CO KG	125	1,0	
SMD connector on LED module		Wago-Kontakttechnik GmbH & Co. KG	125	1,0	
Supplementary information: --					

3.15 (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
Terminal block for internal wire	WAGO KONTAKTTECHNIK GMBH & CO KG	0	No	0	Pass
SMD connector on LED module	Wago-Kontakttechnik GmbH & Co. KG	0	No	0	Pass
Supplementary information: --					

IEC 60598-2-3					
Clause	Requirement + Test			Result - Remark	Verdict
3.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				P
Glow wire temperature				650°C	—
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
Lens	IDEMITSU KOSAN CO LTD	0	No	0	Pass
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No)					Yes
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: --					

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

	ANNEX 1: components		P
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object/part No.	code	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
LED driver	B	See 'General product information' for details	See 'General product information' for details	See 'General product information' for details	See 'General product information' for details	See 'General product information' for details
Fuse	B	XC Electronics (Shen Zhen) Corp. Ltd.	3F	250V; 3,15A	EN 60127-1; EN 60127-3	VDE 40019636
Terminal block for supply cord (when luminaire with lamp arm mounting bracket)	B	Heavy Power Co., Ltd.	PA9	450VAC; 24A; 1,0-2,5mm ² ; T110	EN 60998-1; EN 60998-2-1	VDE 40016425
Terminal block for supply cord (when luminaire with lifting scaffold mounting bracket)	B	WAGO KONTAKTTECHNIK GMBH & CO KG	222-413; 222-412	400V; 0,2-2,5mm ² ; 24A	EN 60998-1; EN 60998-2-2; EN 60598-2-3; EN 60598-1	UL ENEC-01360 (Report no. 4787144374.1 .1) + tested with appliance
Supply cord and input cord of LED driver and input/output cord of SPD	B	Ningbo Liansheng Wire & Cable Co., Ltd.	H05RN-F	3x1,0mm ²	EN 50525-2-21	VDE 40033764
Alt.	B	Queshan Yuqiang Cable Co., Ltd.	H05RN-F	3x1,0mm ²	EN 50525-2-21	VDE 40044073
Output cord of LED driver	B	Ningbo Liansheng Wire & Cable Co., Ltd.	H05RN-F	2x1,0mm ²	EN 50525-2-21	VDE 40033764
Alt.	B	Queshan Yuqiang Cable Co., Ltd.	H05RN-F	2x1,0mm ²	EN 50525-2-21	VDE 40044073
Surge Protection Device	B	Shenzhen Zhongyuan Technology Co., Ltd.	ZY-LSP10-S	Uc: 320VAC; 50/60Hz; rated load current: 5A; IP67; In: 5kA; Uoc: 10kV; Up: 1,2kV; Ambient: -45°C to 85°C	EN 61643-11	TÜV Rheinland R 50413220
Internal wire for LED module and earthing wire	B	JIA XING TITION WIRE CO LTD	3173	600V; 125°C; 18AWG	--	UL E320271

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
Earthing wire (Alt.)	B	AOK Industrial Company Limited	--	300VAC; 1,0mm ²	EN 60598-2-3; EN 60598-1	Tested with appliance
Heat-shrinkable tube	B	GUANGZHOU KAIHENG NEW MATERIAL CO LTD	K-102	600V; 125°C	--	UL E321827
Terminal block for internal wire	B	WAGO KONTAKTTECHNIK GMBH & CO KG	222-413; 222-412	400V; 0,2-2,5mm ² ; 24A	EN 60998-1; EN 60998-2-2; EN 60598-2-3; EN 60598-1	UL ENEC-01360 (Report no. 4787144374.1 .1) + tested with appliance
LED module PCB	B	SHENZHEN MINGSIHAI ELECTRONIC TECHNOLOGY CO LTD	MSH-L	Metal Base; V-0; 130°C	--	UL E495831
LED (3030)	B	LUMILEDS	LUXEON3030 2D	V _F : 5,8-6,6V; I _F : 240mA; CCT.: 2700-6500K; viewing angle: 140°	IEC TR62778	Tested with appliance
SMD connector on LED module	B	Wago-Kontakttechnik GmbH & Co. KG	2060-452	320V pollution degree 2; 9A; 0,25-0,75mm ²	EN 60947-7-1; EN 60598-1; EN 60598-2-3; EN 60598-1	DEKRA 2193943.01 + tested with appliance
Lens	B	IDEMITSU KOSAN CO LTD	LEV2200KL(f1)	PC; HB; 130°C	EN 60598-2-3; EN 60598-1	UL E48268 + tested with appliance
Glass	B	AOK Industrial Company Limited	Glass	Glass; -40°C~240°C; Δt: 200°C	EN 60598-2-3; EN 60598-1	Tested with appliance
<p>Supplementary information:</p> <p>¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.</p> <p>The codes above have the following meaning:</p> <p>A - The component is replaceable with another one, also certified, with equivalent characteristics</p> <p>B - The component is replaceable if authorised by the test house</p> <p>C - Integrated component tested together with the appliance</p> <p>D - Alternative component</p>						

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference.....:	AOK-120WiP-NV-L3-00-6570-T5-P-I	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	Xi LP 150W 0.3-1.05A S1 230V I175	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	122,3 (at 240V)	—
	Supply current (A).....:	0,517 (at 240V)	—
	Temperatures in test 1 - 4 below are corrected for ta (°C).....:	50	—
	- abnormal operating mode.....:	Short circuit output of LED driver	—
3.12 (12.4)	- test 1: rated voltage.....:	240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,06X240=254,4V	—
	- 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.....:		—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1X240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1 (Max.)	test 2 (Max.)	test 3	limit	test 4	limit
Supply cord (separation)	50	--	69,0	--	90	--	--
Terminal block	50	--	71,6	--	110	--	--
tc of LED driver	50	81,8	--	--	80+5	--	--
Ambient of SPD	50	--	72,0	--	85	--	--
Internal cord for SPD	50	--	66,5	--	90	--	--
Internal cord for LED driver	50	--	74,7	--	90	--	--
Internal wire for LED module	50	--	80,8	--	125	--	--
Terminal block for internal wire	50	--	74,7	--	Ref.	--	--

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
Metal enclosure (outside)	50	--	77,1	--	Ref.	--	--
Lens	50	--	87,7	--	Ref.	--	--
LED module PCB	50	--	84,8	--	130	--	--
SMD connector for LED module	50	--	83,2	--	Ref.	--	--
Mounting surface	50	--	51,5	--	90	--	--
Lighted object (10cm)	50	--	52,8	--	90	--	--
Glass cover	50	--	67,0	--	240	--	--
Supplementary: 1. Max. values were recorded. 2. Short circuit output of LED driver, unit shut down immediately, the temperature of components was lower than the temperature under normal operation, so no temperature was recorded.							

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12	P
	Type reference.....: AOK-50WiP-NV-L3-00-6570-T5-P-I	—
	Lamp used: LED	—
	Lamp control gear used: XLG-50-AB	—
	Mounting position of luminaire: As in normal use	—
	Supply wattage (W): 49,3 (at 240V) 51,2 (at 100V)	—
	Supply current (A).....: 0,214 (at 240V) 0,512 (at 100V)	—
	Temperatures in test 1 - 4 below are corrected for ta (°C): 50	—
	- abnormal operating mode: Short circuit output of LED driver	—
3.12 (12.4)	- test 1: rated voltage: 100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current:	—
	- 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:	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....: 1,1X240=264V	—
Temperature measurements, (°C)		

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	77,0	--	--	90	--	--

Supplementary: 1. Max. values were recorded.
 2. Short circuit output of LED driver, unit shut down immediately, the temperature of components was lower than the temperature under normal operation, so no temperature was recorded.

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12	P
	Type reference.....: AOK-75WiP-NV-L3-00-6570-T5-P-I	—
	Lamp used.....: LED	—
	Lamp control gear used.....: Xi LP 100W 0.3-1.05A S1 230V 1175	—
	Mounting position of luminaire.....: As in normal use	—
	Supply wattage (W).....: 77,0 (at 240V)	—
	Supply current (A).....: 0,329 (at 240V)	—
	Temperatures in test 1 - 4 below are corrected for ta (°C).....: 50	—
	- abnormal operating mode.....: Short circuit output of LED driver	—
3.12 (12.4)	- test 1: rated voltage.....: 240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	—
	- 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.....:	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....: 1,1X240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1 (Max.)	test 2	test 3	limit	test 4	limit
tc of LED driver (at 240V)	50	76,1	--	--	80	--	--

Supplementary: 1. Max. value was recorded.
 2. Short circuit output of LED driver, unit shut down immediately, the temperature of components was lower than the temperature under normal operation, so no temperature was recorded.

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Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		—
(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	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		—
(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
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.2)	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 25th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A
	Pull test pin or tab terminals (4 samples); pull (N)		N/A

IEC 60598-2-3											
Clause	Requirement + Test									Result - Remark	Verdict
(15.6.3.1)	TABLE: Contact resistance test									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: --											



Attachment No. 1

IEC60598_2_3L - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-3 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according to EN 60598-2-3:2003, AMD1:2011 used in conjunction with EN 60598-1:2015, AMD1:2018			
Annex Form No EU_GD_IEC60598_2_3L Annex Form Originator Intertek Semko AB Master Annex Form 2018-12-07			
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CENELEC COMMON MODIFICATIONS (EN)			—
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3.6 (4)	CONSTRUCTION		—
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		P
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		—
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		—
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings (Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)		N/A
	Glow-wire test for outer parts of luminaires:		
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A



Attachment No. 1

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Report No.: 64.142.18.50080.01

IEC60598_2_3L - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	GB: Requirements according to United Kingdom Building Regulation		N/A



Attachment No. 2

EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict

TEST REPORT EN 62031 LED modules for general lighting – Safety specifications
--

4	GENERAL REQUIREMENTS		—
4.4	Integral modules tested assembled in the luminaire		P
4.5	Independent modules complies with requirements in IEC 60598-1		N/A

5	GENERAL TEST REQUIREMENTS		—
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	N/A
	General conditions for tests in Annex A	(see Annex A)	P

6	CLASSIFICATION		—
	Built-in module	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	Independent module.....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	Integral module	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.		—

7	MARKING		N/A
	Requirements not applicable to the evaluated product.		—

8	TERMINALS		N/A
	Requirements not applicable to the evaluated product.		—

9 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A
	Requirements not applicable to the evaluated product.		—

10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		N/A
	Requirements not applicable to the evaluated product.		—

11 (11)	MOISTURE RESISTANCE AND INSULATION		—
	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):		P
	For basic insulation ≥ 2 MΩ	100MΩ	P
	For double or reinforced insulation ≥ 4 MΩ		N/A

Attachment No. 2

EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A
12 (12)	ELECTRIC STRENGTH		—
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V	for AOK-25WiP-NV-L3-00-XX70-T5-P-I and AOK-50WiP-NV-L3-00-XX70-T5-P-I	P
	Working voltage ≤ 50 V, test voltage 500 V		N/A
	Working voltage > 50 V ≤ 1000 V, test voltage (V):		P
	Basic insulation, $2U + 1000$ V	Live part to metal enclosure: Max. 1640V (AOK-75WiP-NV-L3-00-XX70-T5-P-I; AOK-120WiP-NV-L3-00-XX70-T5-P-I)	P
	Supplementary insulation, $2U + 1000$ V	Live part to glass cover: Max. 2120V (for AOK-75WiP-NV-L3-00-XX70-T5-P-I; AOK-120WiP-NV-L3-00-XX70-T5-P-I)	P
	Double or reinforced insulation, $4U + 2000$ V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A
13 (14)	FAULT CONDITIONS		—
- (14)	When operated under fault conditions the controlgear:		N/A
	- does not emit flames or molten material		N/A
	- does not produce flammable gases		N/A
	- protection against accidental contact not impaired		N/A
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	N/A
- (14.1)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (except between live parts and accessible metal parts)	(see appended table)	N/A

Attachment No. 2

EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3		N/A
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	N/A
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A
- (14.4)	Short-circuit across electrolytic capacitors	(see appended table)	N/A
- (14.5)	After the tests has been carried out on three samples:		N/A
	The insulation resistance $\geq 1 \text{ M}\Omega$		N/A
	No flammable gases		N/A
	No accessible parts have become live		N/A
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N/A
- (14.6)	Relevant fault condition tests with high-power supply		N/A
13.2	Overpower condition		P
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		P
15	CONSTRUCTION		—
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
16 (16)	CREEPAGE DISTANCES AND CLEARANCES		—
- (16)	Creepage and distances and clearances in compliance with IEC 61347-1		N/A
	Insulating lining of metallic enclosures		N/A
	Basic insulation on printed boards tested according to clause 14		N/A
	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16		N/A
	Creepage distances not less than minimum clearance		N/A
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1	See table 3.7 (11.2) of IEC 60598-2-3 for details	P

Attachment No. 2

EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
17 (17)	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		—
	Cl. 17 refer to Cl. 17 of IEC 61347-1 which refer to Cl. 4.11 and 4.12 of IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		—
(4.11)	Electrical connections		P
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
(4.12)	Mechanical connections and glands		N/A
(4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(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
(4.12.5)	Screwed glands; force (Nm).....:		N/A
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		—
- (18.1)	Ball-pressure test		N/A
- (18.3)	Glow-wire test (650°C)		N/A
- (18.4)	Needle-flame test (10 s)		N/A
- (18.5)	Proof tracking test		N/A
19 (19)	RESISTANCE TO CORROSION		—
	- test according 4.18.1 of IEC 60598-1		N/A
	- adequate varnish on the outer surface		N/A

Attachment No. 2

EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
20	INFORMATION FOR LUMINAIRE DESIGN		—
	Information in Annex D (informative)		—
21	HEAT MANAGEMENT		—
21.1	General		N/A
	Exchangeability is safeguarded by cap or base		N/A
21.2	Heat-conducting foil and paste		N/A
	Heat-conducting foil delivered with the module if necessary		N/A
22	PHOTOBIOLOGICAL SAFETY		—
22.1	UV radiation		N/A
	Luminous radiation not exceed 2mW/klm		N/A
22.2	Blue light hazard		P
	Assessed according to IEC TR 62778	RG1	P
22.3	Infrared radiation		N/A
	Requirements for infrared radiation when required		N/A
A	ANNEX A - TESTS		—
	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable		P
ANNEX 1	SELV-operated LED modules		N/A
	Requirements not applicable to the evaluated product.		—



Attachment No. 3

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

<p>TEST REPORT IEC TR 62778 Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires</p>

7	MEASUREMENT INFORMATION FLOW		P
7.1	Basic flow		P
	'Law of conservation of luminance' applied		P
	Use of only true luminance/radiance values		P
	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component		P
	In case E_{thr} value for RG2 was established the peak value was derived from angular light distribution		N/A
7.2	Conditions for the radiance measurement		P
	Standard condition applied (200mm distance, 0,011rad field of view)		P
	Non-standard condition applied		N/A
7.3	Special cases (I): Replacement by a lamp or LED module of another type		N/A
	Light source is a white light source		N/A
	Evaluation done based on highest luminance		N/A
	Evaluation done based on CCT value		N/A
7.4	Special cases (II): Arrays and clusters of primary light sources		N/A
	LED package is evaluated as	<input type="checkbox"/> RG0 unlimited <input type="checkbox"/> RG1 unlimited	N/A
	E_{thr} of LED package applies to array		P

8	RISK GROUP CLASSIFICATION		P
	Risk group achieved:		P
	- .. Risk Group 0 unlimited		N/A
	- .. Risk Group 1 unlimited		P
	- E_{thr} (lx) : Distance to reach RG1 (m) :		N/A



Attachment No. 3

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Spectroradiometric measurement			P
	Measurement performed on:	<input type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input checked="" type="checkbox"/> Luminaire	
	Model number.....:	AOK-120WiP-NV-L3-00-6570-T5-P-I	
	Test voltage (V).....:	240V	—
	Test current (mA).....:	0,517A	—
	Test frequency (Hz).....:	50Hz	—
	Ambient, t (°C).....:	25	—
	Measurement distance.....:	<input checked="" type="checkbox"/> 20 cm <input type="checkbox"/> ... cm	—
	Source size	<input checked="" type="checkbox"/> Non-small <input type="checkbox"/> Small : mm	—
	Field of view	<input type="checkbox"/> 100 mrad <input checked="" type="checkbox"/> 11 mrad <input type="checkbox"/> 1,7 mrad (for small sources)	—

Item	Symb ol	Units	Result	Remark
Correlated colour temperature	CCT	K	/	--
x/y colour coordinates			/	--
Blue light hazard radiance	L _B	W/(m ² •sr ¹)	1,1E+03	--
Blue light hazard irradiance	E _B	W/m ²	/	--
Luminance	L	cd/m ²	5,48E+05	--
Illuminance	E	lx	/	--

Supplementary information: --

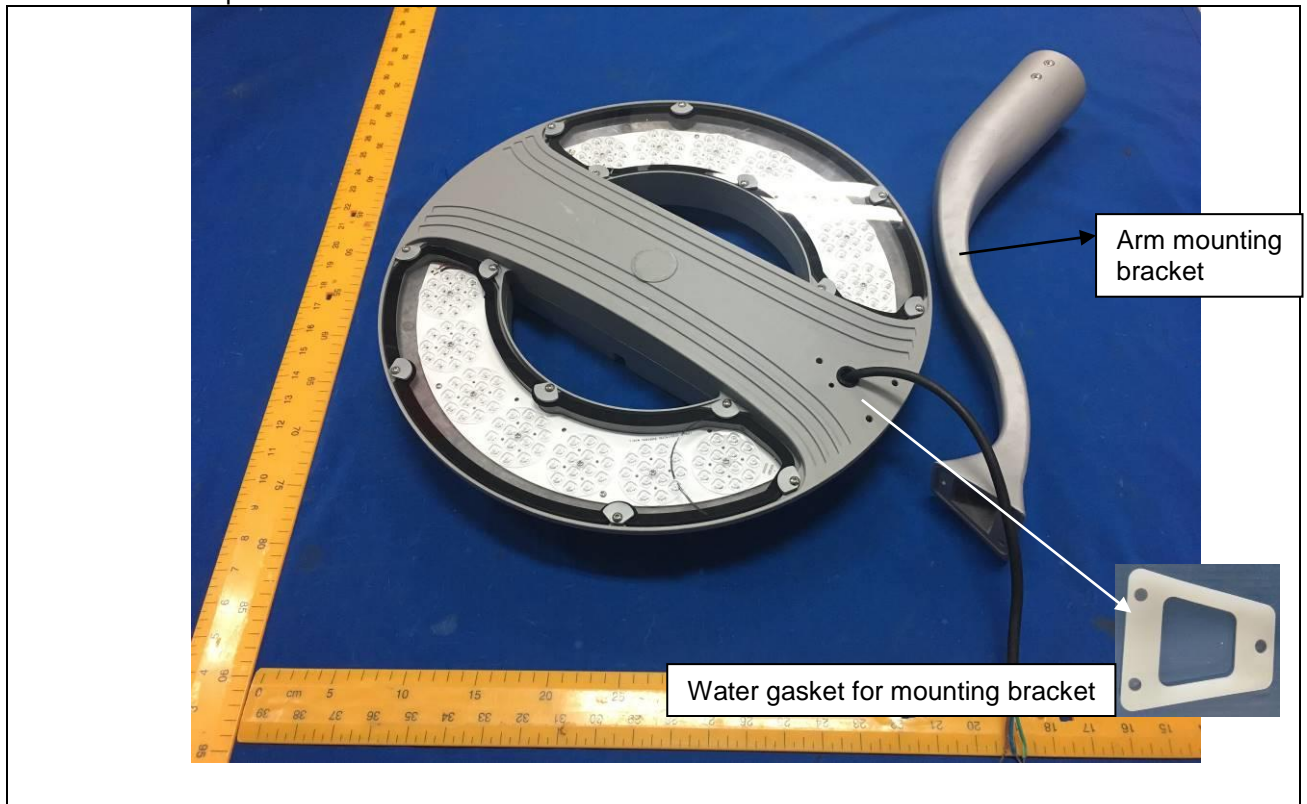
Attachment No. 4

Photo documentation

Page 1 of 10

Report No.: 64.142.18.50080.01

Details of: Outlook with lamp arm mounting bracket
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I



Details of: Back view with lamp arm mounting bracket
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I



Attachment No. 4

Photo documentation

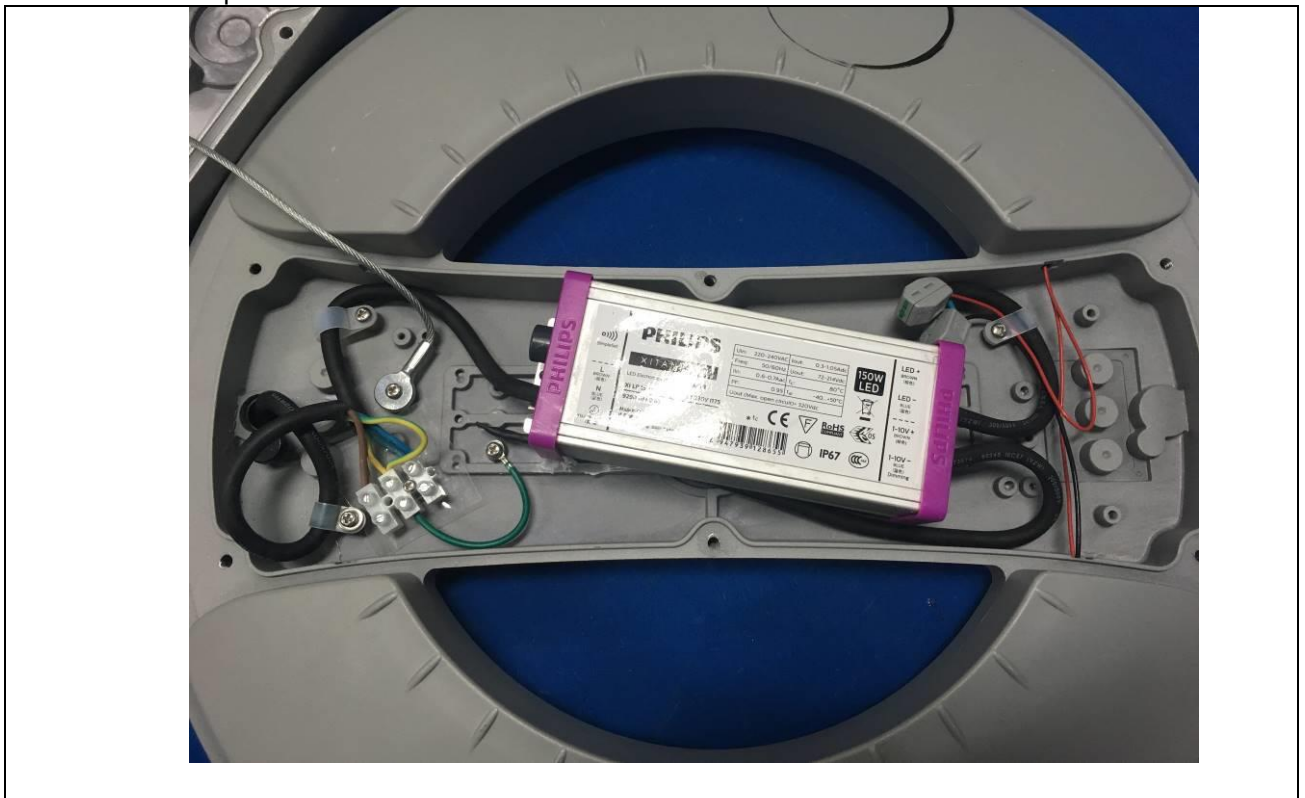
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Report No.: 64.142.18.50080.01

Details of: Internal view with lamp arm mounting bracket
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I without SPD



Details of: Internal view with lamp arm mounting bracket
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I without SPD



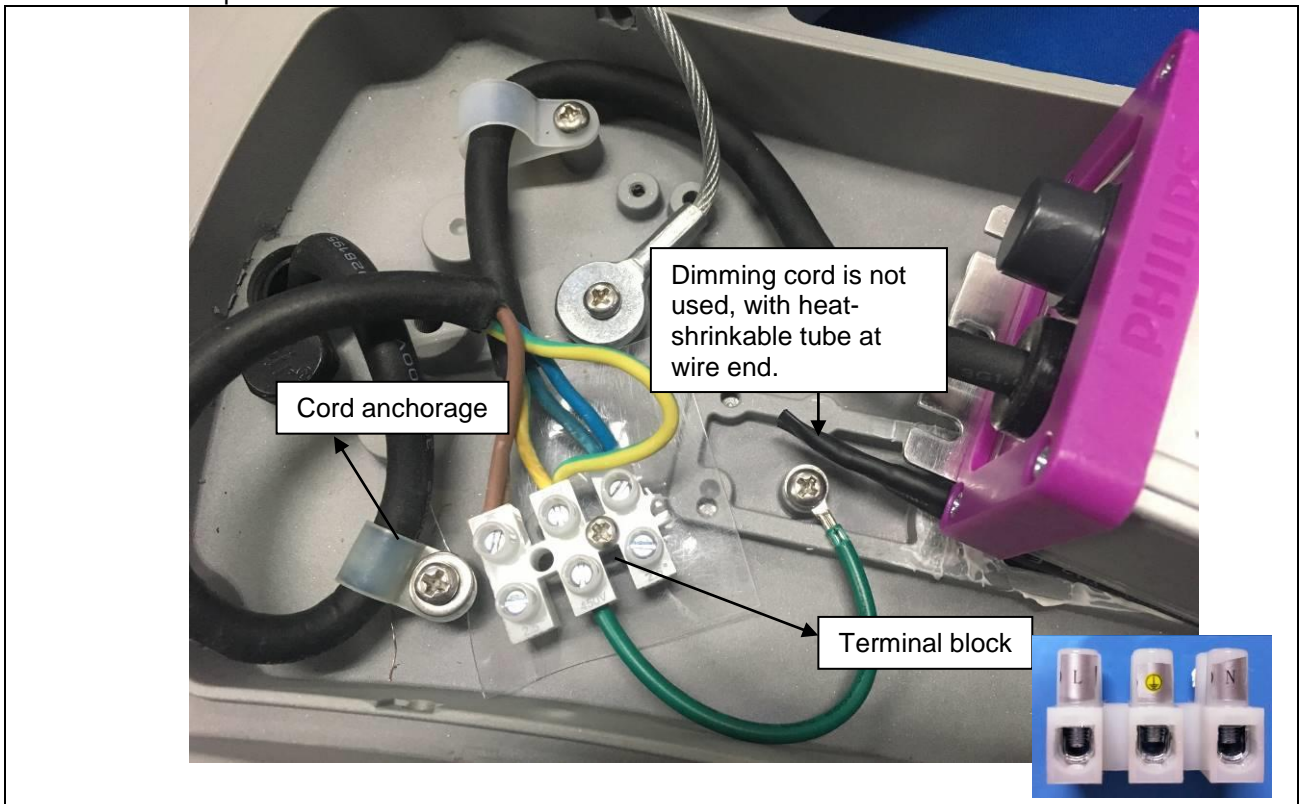
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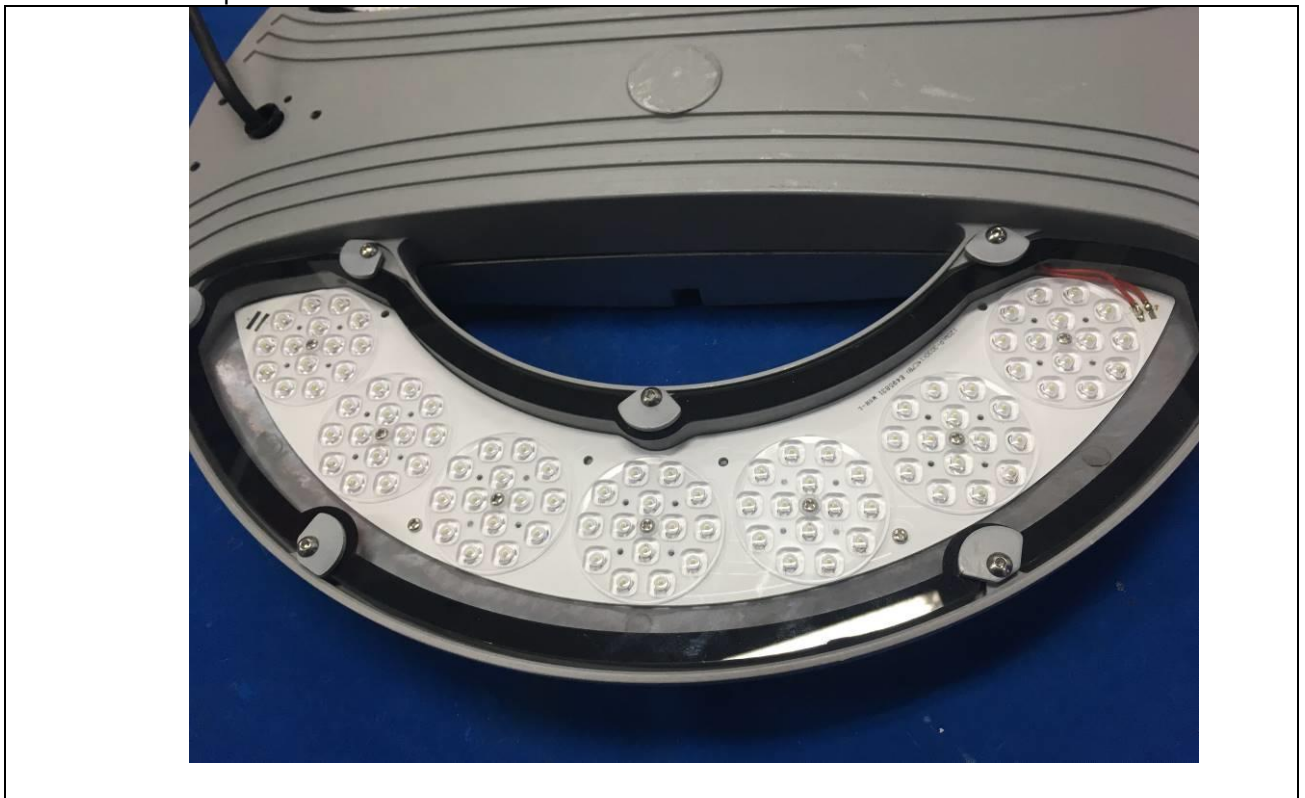
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Details of: Internal view with lamp arm mounting bracket
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I without SPD



Details of: LED module view
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I



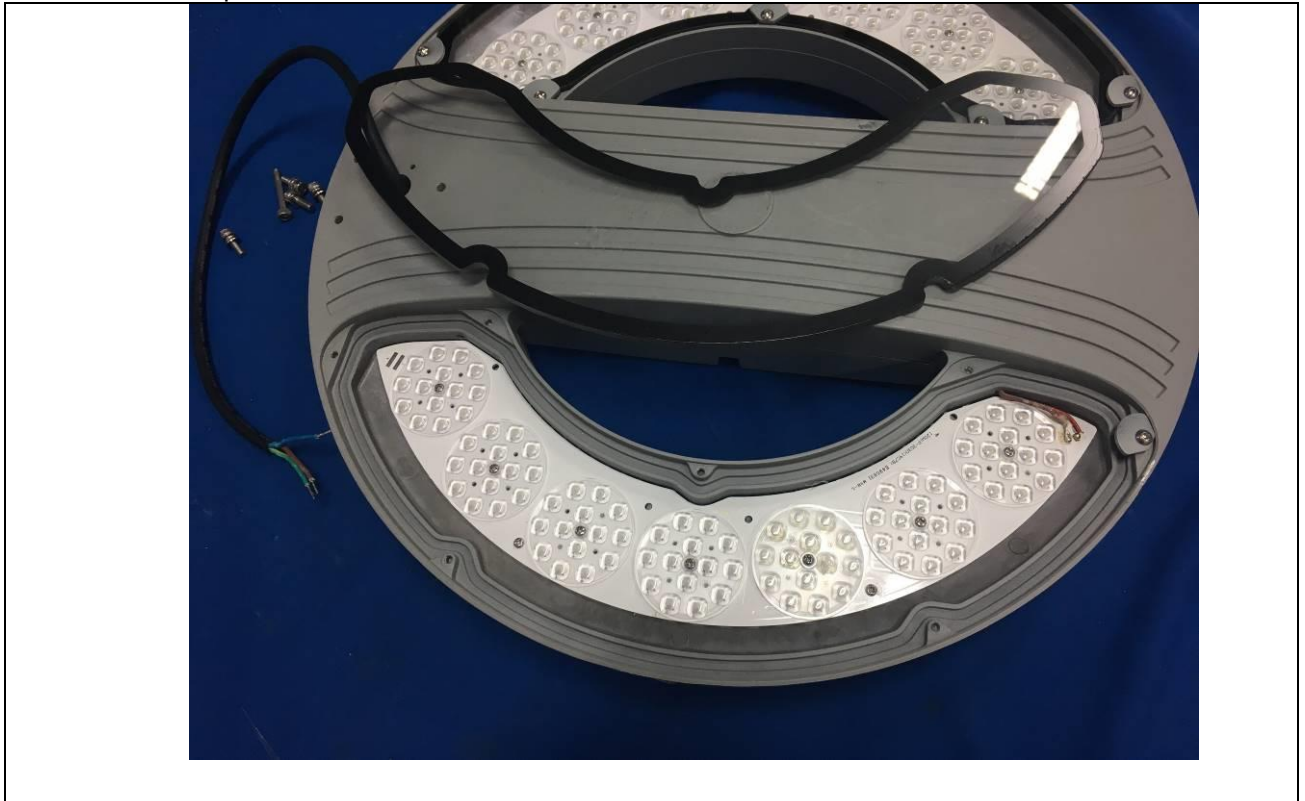
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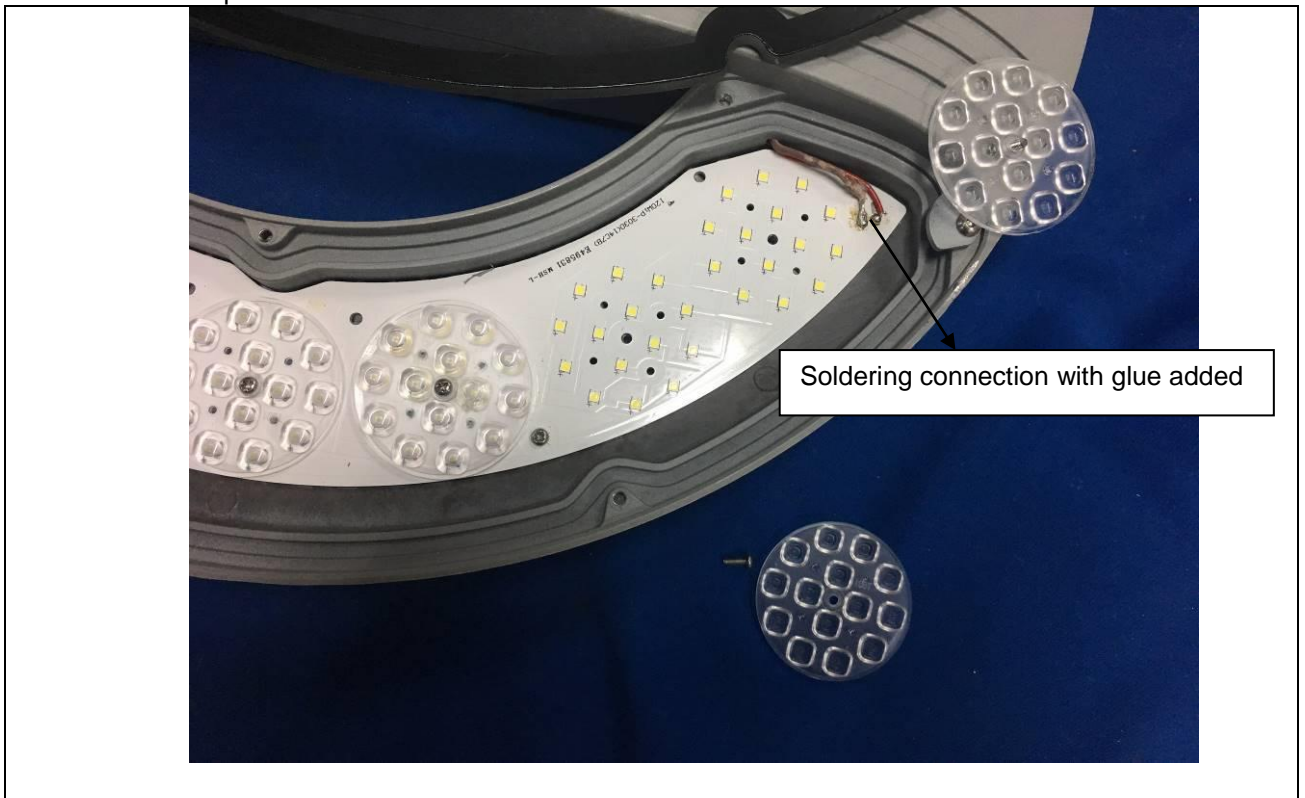
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Details of: LED module view
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I



Details of: LED module view
Representative: AOK-120WiP-NV-L3-00-6570-T5-P-I



Attachment No. 4

Photo documentation

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Report No.: 64.142.18.50080.01

Details of: LED driver Xi LP 150W 0.3-1.05A S1 230V 1175



Details of: Outlook with lifting scaffold mounting bracket
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-1



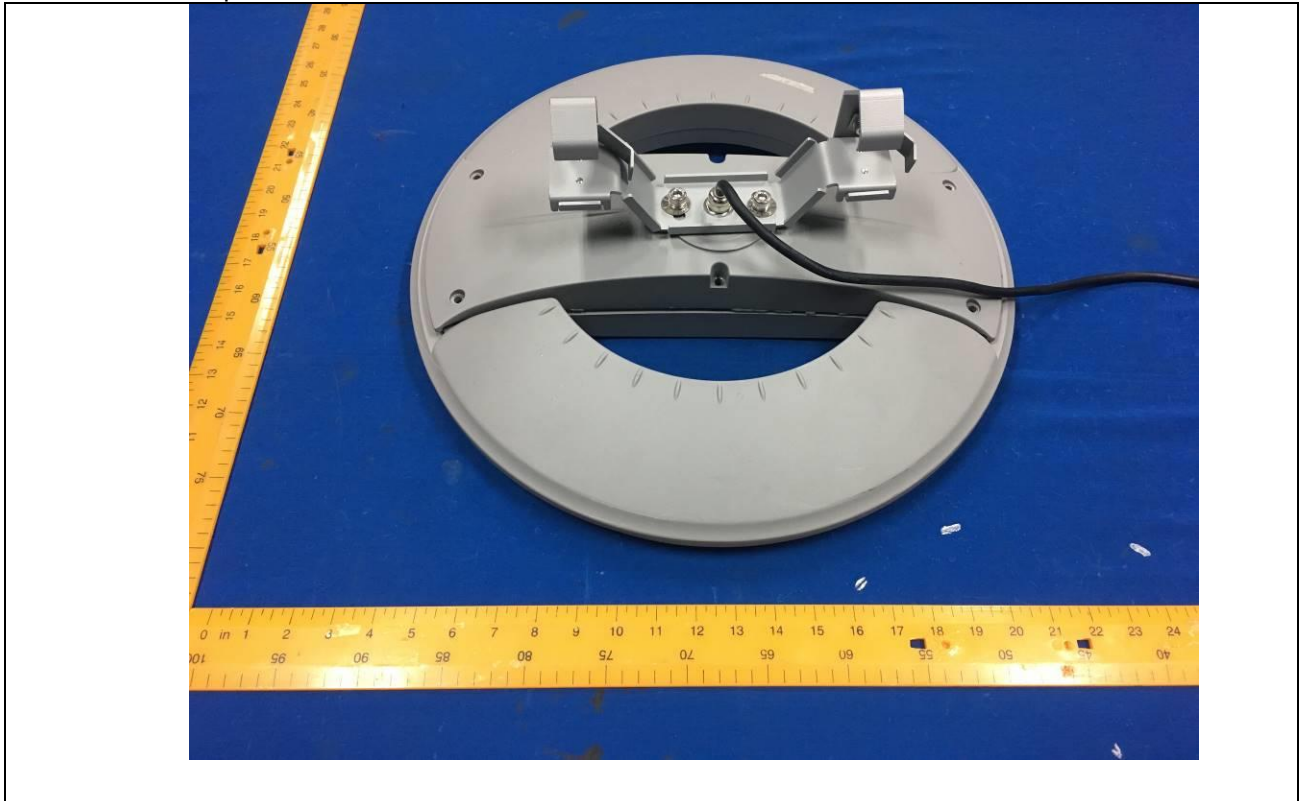
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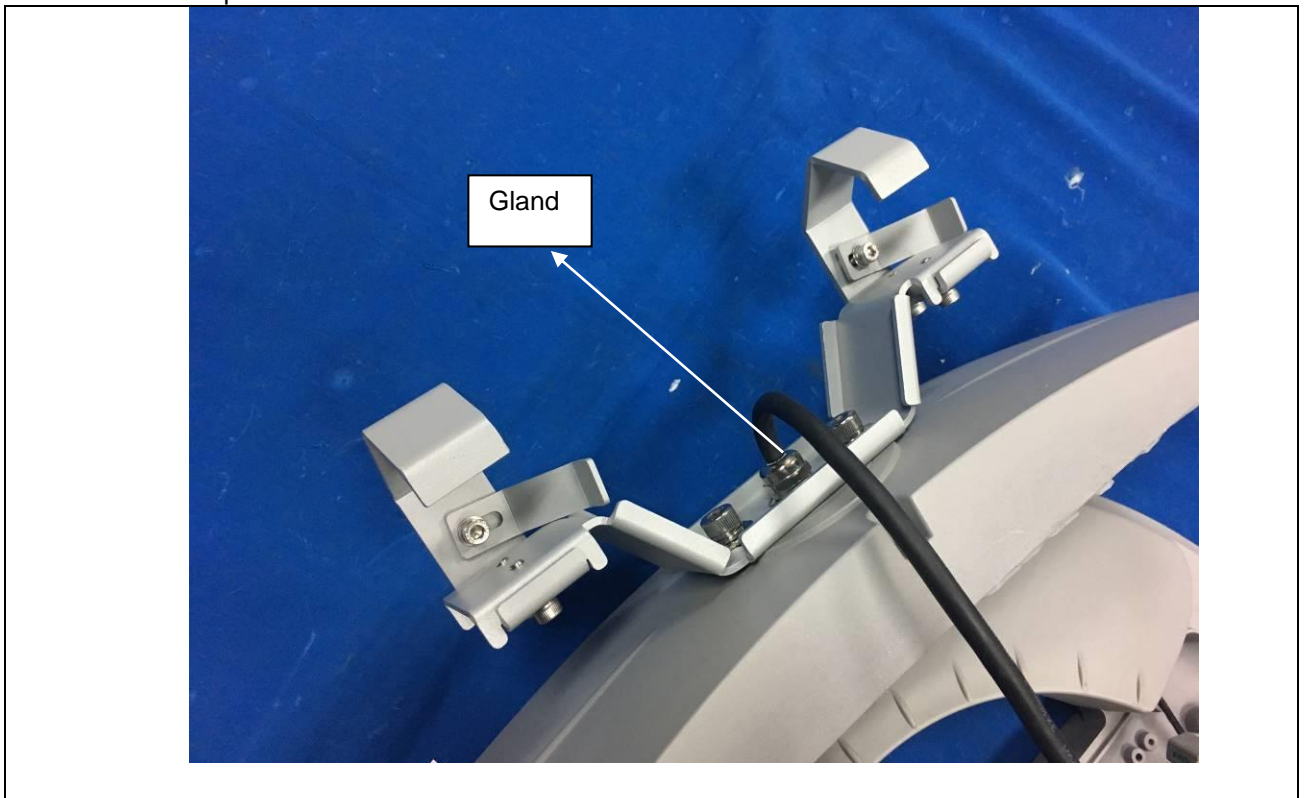
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Details of: Back view with lifting scaffold mounting bracket
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I



Details of: Gland as cord anchorage with lifting scaffold mounting bracket
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I



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Photo documentation

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Details of: Internal view with lifting scaffold mounting bracket
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I with SPD



Details of: Internal view with lifting scaffold mounting bracket
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I with SPD



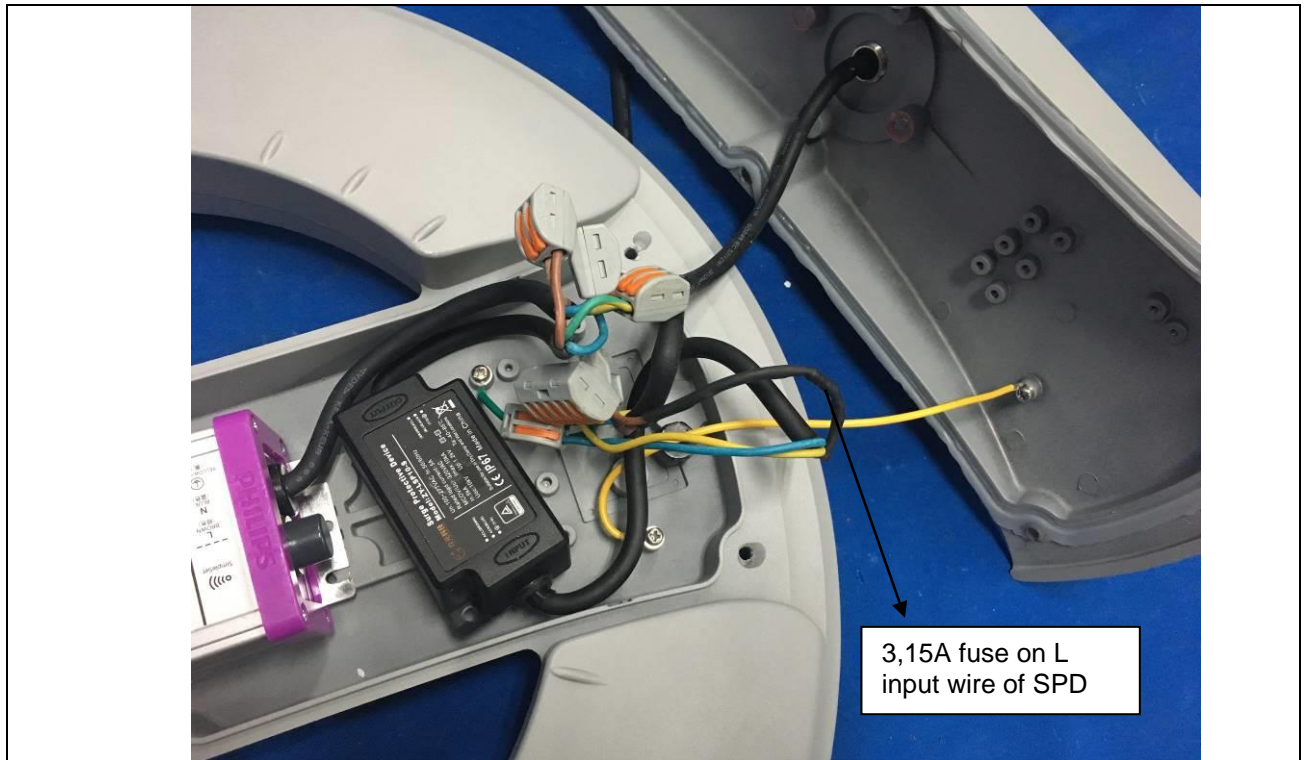
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Photo documentation

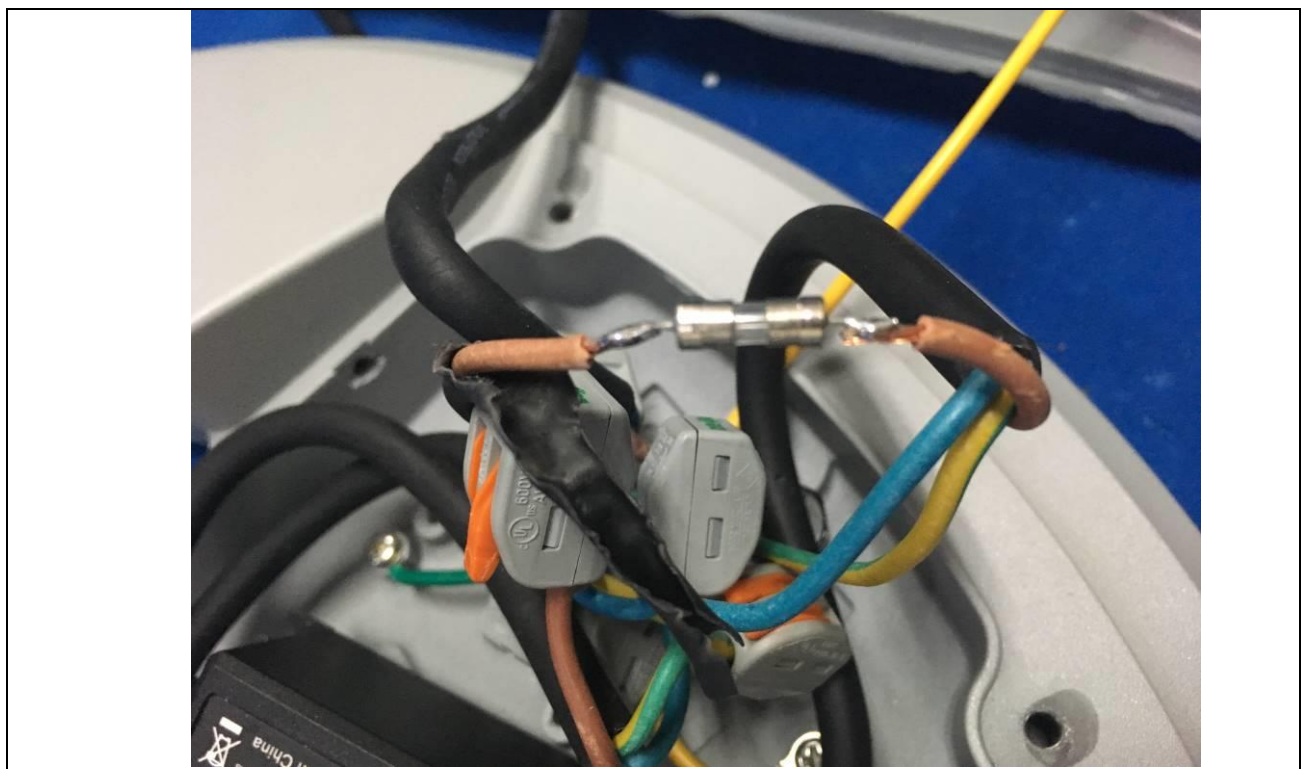
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Details of: SPD view and earthing connection



Details of: Fuse before SPD



Attachment No. 4

Photo documentation

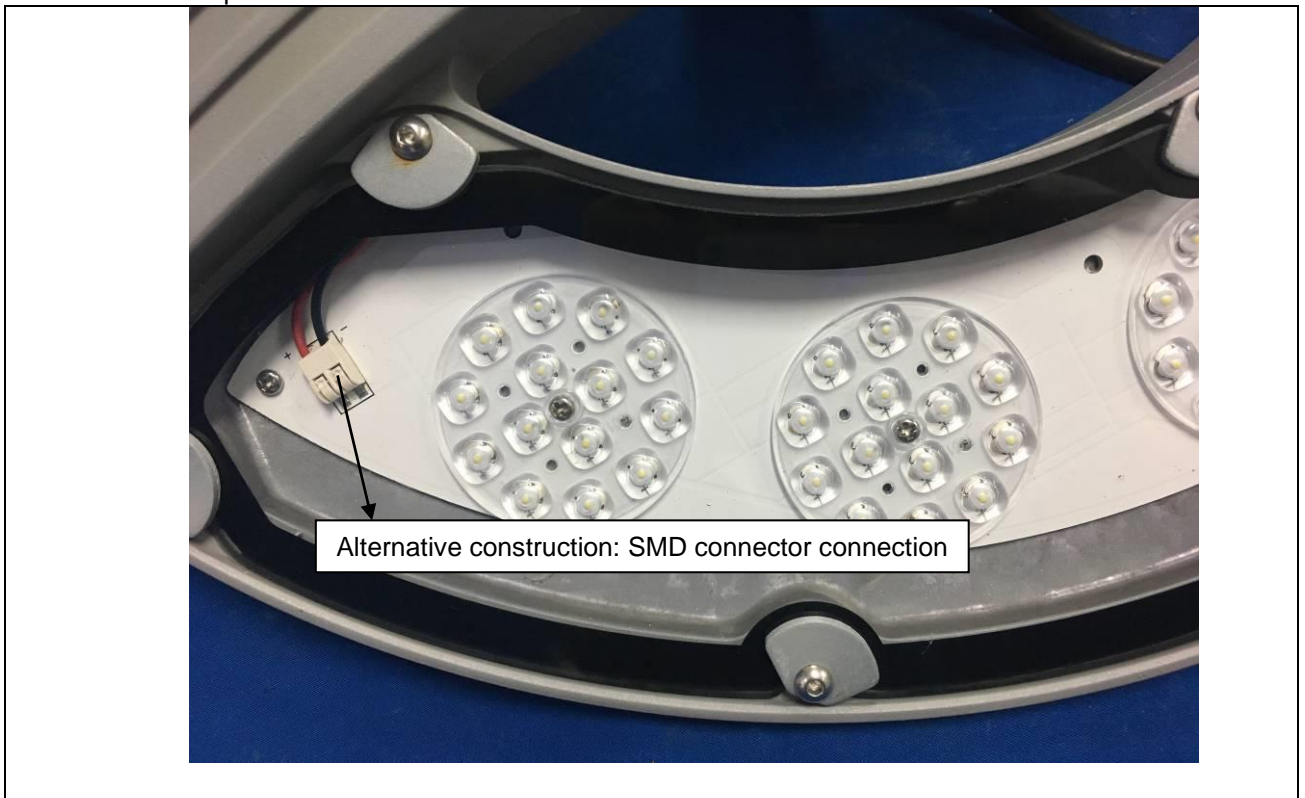
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Details of: LED module view
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I



Details of: LED module view
Representative model: AOK-75WiP-NV-L3-00-6570-T5-P-I



Attachment No. 4

Photo documentation

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Report No.: 64.142.18.50080.01

Details of: LED driver Xi LP 100W 0.3-1.05A S1 230V 1175



Details of: LED driver XLG-50-AB



End of report