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TESTING
CNAS L3503

APPLICATION FOR SAA TEST REPORT

On Behalf of

AOK LED Light Company Limited

LED High Bay Light

Model:

**AOK-60WoH-NV-X-0(B), AOK-100WoH-NV-X-0(B), AOK-150WoH-NV-X-0(B),
AOK-200WoH-NV-X-0(B), AOK-240WoH-NV-X-0(B)**

("X" can be L3, L5, O3, O5 and N3 which stands for different LEDs type; when X=L3, stands for LED type is LUXEON 3030 2D; when X=L5, stands for LED type is LUXEON 5050; when X=O3, stands for LED type is GW PSLR31.PM; when X=O5, stands for LED type is GW P9LR31.EM 5050; when X=N3, stands for LED type is NICHIA 3030.

"B" can be B0 and B1 which stands for different light type; when Y=B0, stands for light from front; when Y=B1, stands for light from front and light from back.)

Prepared For : AOK LED Light Company Limited

**East of third floor, Building 1, St George's Industrial Park,
Shajing street, Baoan District, Shenzhen, China (Second
floor, Building 4, St George's Industrial Park)**

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

**East of 4/F., Building A, Hourui No.3 Industrial Zone,
Xixiang Street, Bao'an District, Shenzhen, Guangdong,
China**

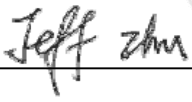
Tel: (86)755-26066544


Fax: (86)755-26014772

Date of Test: Aug. 25, 2017 to Oct. 30, 2017

Date of Report: Oct. 30, 2017

Report Number: R0117080083I

TEST REPORT IEC 60598-2-1 Luminaires Part 2: Particular requirements: Section One – Fixed general purpose luminaires	
Tested by (name + signature).....:	Nico Zou 
Approved by (+ signature).....:	Jeff Zhu 
	
Report Number.....:	R0117080083I
Date of issue.....:	Oct. 30, 2017
Total number of pages.....	51
Applicant's name.....:	AOK LED Light Company Limited
Address.....:	East of third floor, Building 1, St George's Industrial Park, Shajing street, Baoan District, Shenzhen, China (Second floor, Building 4, St George's Industrial Park)
Test specification:	
Standard.....:	IEC 60598-2-1:1979 + A1:1987 used in conjunction with IEC 60598-1:2008
Test procedure.....:	Australia safety report
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60598_2_1C
Test Report Form(s) Originator.....:	Intertek Semko AB
Master TRF.....:	2012-11
Test item description.....:	LED High Bay Light
Trade Mark.....:	 Quality, Honesty, Service and Innovation
Factory.....:	Same as applicant
Model/Type reference.....:	See model list for "General product information"
Ratings.....:	100-240VAC, 50/60Hz, other details see "General product information"

Summary of testing:	
Tests performed (name of test and test clause): this report includes following parts: <ol style="list-style-type: none"> 1. Main report of IEC 60598-2-1:1979 + A1:1987, IEC 60598-1:2008 2. Requirements of IEC 62031+A1+A2, see annex 5 3. Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013, see annex 6 4. Deviation between IEC 60598-2-1:1979 + A1:1987 and ASNZS60598.2.1:2014, see annex 7 	Testing location: Shenzhen Anbotek Compliance Laboratory Limited East of 4/F., Building A, Hourui No.3 Industrial Zone, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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.	
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>LED High Bay Light</p> <p>Model: AOK-100WoH-NV-L3-0(B0)  Quality, Honesty, Service and Innovation</p> <p>Rating: AC100-240V, 50/60Hz, 100W</p> <p>IP65, ta:50°C</p> <p>AOK LED Light Company Limited</p> <p style="text-align: right;">Made in China</p> </div>	
Rating label for other models is same as AOK-100WoH-NV-L3-0(B0) except that number no. and power consumption are different. Remark: Height of letters and numerals at least 2mm.	



Test item particulars:	
Classification of installation and use.....:	Fixed luminaire
Supply Connection.....:	Non-detachable power cord without plug
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.....:	Aug. 25, 2017
Date (s) of performance of tests.....:	Aug. 25, 2017 to Oct. 30, 2017
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(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 type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1	



General product information:

LED High Bay Light, ta 50°C, IP65, used for indoor and outdoor.

Model list:

Model No.	Input power (W)	LED driver	Dimension
AOK-60WoH-NV-X-0(B)	60W	HBG-100-48B	Φ248*138
AOK-100WoH-NV-X-0(B)	100W	HBG-100-48B	Φ248*138
AOK-150WoH-NV-X-0(B)	150W	HBG-160-48B	Φ319*138
AOK-200WoH-NV-X-0(B)	200W	HBG-200-48B	Φ400*141
AOK-240WoH-NV-X-0(B)	240W	HBG-240-48B	Φ400*141

Remark:

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“B” can be B0 and B1 which stands for different light type; when Y=B0, stands for light from front; when Y=B1, stands for light from front and light from back.

All models have the same as construction.

Unless otherwise specified, models AOK-100WoH-NV-L3-0(B0), AOK-150WoH-NV-L3-0(B0) and AOK-240WoH-NV-L3-0(B0) were selected as representative models to perform all tests.



IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.2 (0)	GENERAL TEST REQUIREMENTS		P
1.2 (0.1)	Information for luminaire design considered	Standard Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
1.2 (0.3)	More sections applicable.....:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

1.4 (2)	CLASSIFICATION		P
1.4 (2.2)	Type of protection	Class I	—
1.4 (2.3)	Degree of protection.....:	IP65	—
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
1.4 (2.5)	Luminaire for normal use	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

1.5 (3)	MARKING		P
1.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
1.5 (3.3)	Additional information		P
	Language of instructions	English	P
1.5 (3.3.1)	Combination luminaires		N/A
1.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
1.5 (3.3.3)	Operating temperature		N/A
1.5 (3.3.4)	Symbol or warning notice		N/A
1.5 (3.3.5)	Wiring diagram		N/A
1.5 (3.3.6)	Special conditions		N/A
1.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.5 (3.3.8)	Limitation for semi-luminaires		N/A
1.5 (3.3.9)	Power factor and supply current		N/A
1.5 (3.3.10)	Suitability for use indoors		N/A
1.5 (3.3.11)	Luminaires with remote control		N/A
1.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.5 (3.3.13)	Specifications of protective shields		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5 (3.3.14)	Symbol for nature of supply	~	P
1.5 (3.3.15)	Rated current of socket outlet		N/A
1.5 (3.3.16)	Rough service luminaire		N/A
1.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Tape Z	P
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
1.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
1.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P

1.6 (4)	CONSTRUCTION		P
1.6 (4.2)	Components replaceable without difficulty		P
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	Lampholders		N/A
1.6 (4.4.1)	Integral lampholder		N/A
1.6 (4.4.2)	Wiring connection		N/A
1.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.6 (4.4.4)	Positioning		N/A
	- pressure test (N)		N/A
	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)		N/A
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
1.6 (4.4.5)	Peak pulse voltage		N/A
1.6 (4.4.6)	Centre contact		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.6 (4.4.8)	Lamp connectors		N/A
1.6 (4.4.9)	Caps and bases correctly used		N/A
1.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
1.6 (4.7)	Terminals and supply connections		P
1.6 (4.7.1)	Contact to metal parts		N/A
1.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
1.6 (4.7.3)	Terminals for supply conductors		P
1.6 (4.7.3.1)	Welded connections:		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 15.8.2		N/A
	- electrical test according to 15.9		N/A
	- heat test according to 15.9.2.3 and 15.9.2.4		N/A
1.6 (4.7.4)	Terminals other than supply connection		P
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.6 (4.8)	Switches:		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with 61058-1 for electronic switches		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.9)	Insulating lining and sleeves		N/A
1.6 (4.9.1)	Retainment		N/A
	Method of fixing.....:		N/A
1.6 (4.9.2)	Insulated linings and sleeves		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C).....:		N/A
1.6 (4.10)	Insulation of Class II luminaires		N/A
1.6 (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
1.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
1.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
1.6 (4.11)	Electrical connections		P
1.6 (4.11.1)	Contact pressure		P
1.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
1.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
1.6 (4.11.4)	Material of current-carrying parts		P

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.11.5)	No contact to wood or mounting surface		P
1.6 (4.11.6)	Electro-mechanical contact systems		N/A
1.6 (4.12)	Mechanical connections and glands		P
1.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	Screw fixing enclosure: 1.2Nm	P
	Torque test: torque (Nm); part..... :	Screw LED driver: 2.5Nm	P
	Torque test: torque (Nm); part..... :		N/A
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.6 (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
1.6 (4.12.5)	Screwed glands; force (Nm)..... :	Plastic glands for supply cord; 5Nm Metal glands for supply cord; 7.5Nm	P
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)..... :	Glass cover: 0.2Nm	P
	- other parts; energy (Nm)..... :	Enclosure: 0.35Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
1.6 (4.13.3)	Straight test finger		P
1.6 (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

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.13.6)	Tumbling barrel		N/A
1.6 (4.14)	Suspensions and adjusting devices		P
1.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	4 x Max.6.7Kg= 26.8Kg	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track- mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
1.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		N/A
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
1.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
1.6 (4.14.5)	Guide pulleys		N/A
1.6 (4.14.6)	Strain on socket-outlets		N/A
1.6 (4.15)	Flammable materials:		P
	- glow- wire test 650 °C		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

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- electronic circuits exempted		N/A
1.6 (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
1.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear	(compliance with Section 12)	N/A
1.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.6 (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
1.6 (4.16.3)	Design to satisfy the test of 12.6		N/A
1.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
1.6 (4.18)	Resistance to corrosion:		N/A
1.6 (4.18.1)	- rust-resistance		N/A
1.6 (4.18.2)	- season cracking in copper		N/A
1.6 (4.18.3)	- corrosion of aluminium		N/A
1.6 (4.19)	Igniters compatible with ballast		N/A
1.6 (4.20)	Rough service vibration		N/A
1.6 (4.21)	Protective shield:		N/A
1.6 (4.21.1)	Shield fitted		N/A
	Shield of glass if tungsten halogen lamps		N/A
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.6 (4.21.3)	No direct path		N/A
1.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.22)	Attachments to lamps		N/A
1.6 (4.23)	Semi-luminaires comply Class II		N/A
1.6 (4.24)	UV radiation for tungsten halogen lamps and metal halide lamps (Annex P)		N/A
1.6 (4.25)	No sharp point or edges		P
1.6 (4.26)	Short-circuit protection:		N/A
1.6 (4.26.1)	Uninsulated accessible SELV parts		N/A
1.6 (4.26.2)	Short-circuit test		N/A
1.6 (4.26.3)	Test chain according to Figure 29		N/A
1.6 (4.27)	Terminal blocks with integrated screwless earthing contacts tested 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

1.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V).....:	100-240VAC(for LED driver) Max.49VDC(for LED module)	—
	Voltage form	Sinusoidal <input checked="" type="checkbox"/> (input of LED driver) Non-sinusoidal <input checked="" type="checkbox"/> (input of LED module)	—
	PTI	< 600 <input checked="" type="checkbox"/> (for other parts) ≥ 600 <input checked="" type="checkbox"/> (for LED module)	—
	Impulse withstand category (Normal category II) (Category III Annex U)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—
	Rated pulse voltage (kV).....:	2.5kV	—

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm)..... :	For class I construction: Approved independent SELV LED driver used; For Class III construction: No value was specified for working voltage below 60VDC as the electric strength test voltage of 500V is considered sufficient.	N/A
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm)..... :		N/A
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm)..... :		N/A
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm)..... :		N/A
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm)..... :		N/A

1.8 (7)	PROVISION FOR EARTHING		P
1.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω..... :	0.012Ω	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 Annex V		N/A
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		P
1.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
1.8 (7.2.5)	Earth terminal integral part of connector socket		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
1.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
1.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
1.9 (14)	SCREW TERMINALS		P
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A
1.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 4)	N/A
1.10 (5)	EXTERNAL AND INTERNAL WIRING		P
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection.....: Non-detachable power cord without plug		P
1.10 (5.2.2)	Type of cable.....: H05RN-F		P
	Nominal cross-sectional area (mm ²).....: 3G1.0mm ²		P
	Cables equal to IEC 60227 or IEC 60245	IEC 60245	P
1.10 (5.2.3)	Type of attachment, X, Y or Z	Z	P
1.10 (5.2.5)	Type Z not connected to screws		P
1.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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
1.10 (5.2.9)	Locking of screwed bushings		N/A
1.10 (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
1.10 (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
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
1.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)..... : 60		P
	- torque test: torque (Nm)..... : 0.25		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.2.11)	External wiring passing into luminaire		P
1.10 (5.2.12)	Looping-in terminals		N/A
1.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
1.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Appliance couplers of class II type		N/A
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
1.10 (5.3)	Internal wiring		P
1.10 (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		N/A
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²)..... :		N/A
	Insulation thickness		N/A
	Extra insulation added where necessary		N/A
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
1.10 (5.3.1.4)	Conductors without insulation		N/A
1.10 (5.3.1.5)	SELV current-carrying parts		P
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (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
1.10 (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
1.10 (5.3.4)	Joints and junctions effectively insulated		N/A
1.10 (5.3.5)	Strain on internal wiring		P
1.10 (5.3.6)	Wire carriers		N/A
1.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P

1.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
1.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, within arm's reach, on wall-mounted luminaires		N/A
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.11 (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
1.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
1.11 (8.2.3.c)	Class III luminaires with exposed SELV parts:		N/A
	Ordinary luminaire:		N/A
	- touch current		N/A
	- no-load voltage.....		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage		N/A
1.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		P
1.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N/A
	Portable plug connected luminaire with capacitor		N/A
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A

1.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
1.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 1.13		—
1.12 (12.3)	Endurance test:		P
	- mounting- position.....	As stated in instruction	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- test temperature (°C)..... :	60°C	—
	- total duration (h)..... :	240h	—
	- supply voltage: Un factor; calculated voltage (V) :	264V	—
	- lamp used..... :	LED	—
1.12 (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
1.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
1.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) :		—
	- case of abnormal conditions..... :		—
	- electronic lamp control gear		N/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
1.12 (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
1.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
1.12 (12.7.1)	Luminaire without temperature sensing control		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.12 (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 V:		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:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A
1.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un..:		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A
1.12 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	- Test with standard test finger after the test		N/A
1.12 (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:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A

1.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
1.13 (-)	If IP > IP 20 the order of the test specified in clause 1.12		—
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP.....: IP65		—
	- mounting position during test.....: As normal use		—
	- fixing screws tightened; torque (Nm).....:		—
	- tests according to clauses.....: Clause 9.2.2 & 9.2.6		—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or SELV parts or where it could become a hazard		P
	d) i) For luminaires without drain holes – no water entry		P
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A
	e) no water in watertight luminaire		N/A
	f) no contact with live parts (IP 2X)		N/A
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
	f) no contact with live parts (IP3X and IP4X)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	g) no trace of water on part of lamp requiring protection from splashing water		N/A
	h) no damage of protective shield or glass envelope		N/A
1.13 (9.3)	Humidity test 48 h	25°C, 93%	P

1.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
1.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ)		—
	SELV:		P
	- between current-carrying parts of different polarity.....		N/A
	- between current-carrying parts and mounting surface.....	100 MΩ>1 MΩ	P
	- between current-carrying parts and metal parts of the luminaire.....	100 MΩ>1 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:		P
	- between live parts of different polarity.....		N/A
	- between live parts and mounting surface.....	100 MΩ>2 MΩ	P
	- between live parts and metal parts.....	100 MΩ>2 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
1.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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	P
	- between current-carrying parts and metal parts of the luminaire..... :	500V	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..... :	1480V	P
	- between live parts and metal parts..... :	1480V	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
1.14 (10.3)	Touch current or protective conductor current (mA)..... :	Protective conductor current: 0.56mA	P

1.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
1.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C)..... :	LED PCB; 125°C	P
	- part tested; temperature (°C)..... :	Transparent cover; 100°C	P
	- part tested; temperature (°C)..... :	Terminal block; 100°C	P
1.15 (13.3.1)	Needle flame test (10 s):		P
	- part tested..... :	LED PCB	P
	- part tested..... :	Transparent cover	P
	- part tested..... :	Terminal block	P

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Clause	Requirement + Test	Result - Remark	Verdict
1.15 (13.3.2)	Glow-wire test (650°C):		P
	- part tested..... : LED PCB		P
	- part tested..... : Transparent cover		P
	- part tested..... : Terminal block		P
1.15 (13.4.1)	Tracking test:		N/A
	- part tested..... :		N/A
	- part tested..... :		N/A

Anbotek

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1: components						P
object/part No.	code	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
LED module PCB	B	SHENZHEN YU XINDA SCIENCE AND TECHNOLOGY CO.,LTD.	YXD1	Aluminium base, V-0	--	UL E352507
LED	B	LUMILEDS	LUXEON 3030-2D	Vf: 5.8-6.6Vdc, If: 120mA	IEC 62471	Tested with appliance
Alt.	B	LUMILEDS	LUXEON 5050	Vf: 23.5-26.5Vdc, If: 160mA	IEC 62471	Tested with appliance
Alt.	B	OSRAM	GW PSLR31.P M	Vf: 5.6-6.6Vdc, If: 150mA	IEC 62471	Tested with appliance
Alt.	B	OSRAM	GW P9LR3 1.EM 5050	Vf: 23.2-26.4Vdc, If: 160mA	IEC 62471	Tested with appliance
Alt.	B	NICHIA	NICHIA 3030	Vf: 6.4Vdc, If: 150mA	IEC 62471	Tested with appliance
Transparent cover	B	TEIJIN CHEMICALS PLASTIC COMPOUNDS STANGHAI LTD	L-1225U(#)(f1), L-1225V(#)(f1), L-1225Z(#1)(f1)	HB, PC, 115°C	--	UL E244344
Supply cord of LED driver	B	DONGGUAN RECHEER ELECTIC WIRE&CABLE CO.,LTD	H05RN-F	3G1.0mm ²	IEC/EN 60227-5; AS/NZS 60245.4	NSW 21859
Output cord of LED driver	B	DONGGUAN RECHEER ELECTIC WIRE&CABLE CO.,LTD	H05RN-F	2G1.0mm ²	IEC/EN 60227-5	VDE 40015999

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Clause	Requirement + Test			Result - Remark	Verdict	
LED driver	B	Mean Well Enterprises Co., Ltd.	HBG-100-48B	I/P: 100-240V~, 50/60Hz, Max 1.1A O/P: Max 49Vdc, 2.0A, 96W ta:60°C, tc:85°C, IP67	AS/NZS IEC 61347.2.13:2013 AS/NZS 61347.1:2012	SAA-160127-EA
Alt.	B	Mean Well Enterprises Co., Ltd.	HBG-160-48B	I/P: 100-240V~, 50/60Hz, Max 1.7A O/P: Max +48Vdc, 3.3A, 158.4W ta:50°C, tc:85°C, IP67	AS/NZS IEC 61347.2.13:2013 AS/NZS 61347.1:2012	SAA-160128-EA
Alt.	B	Mean Well Enterprises Co., Ltd.	HBG-240-48B	I/P: 100-240V~, 50/60Hz, Max 2.5A O/P: Max 49Vdc, 5.0A, 240W ta:50°C, tc:75°C, IP67	AS/NZS IEC 61347.2.13:2013 AS/NZS 61347.1:2012	SAA-160086-EA

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

IEC 60598-2-1							
Clause	Requirement + Test	Result - Remark				Verdict	
	ANNEX 2: temperature measurements, thermal tests of Section 12						P
	Type reference.....:	AOK-100WoH-NV-L3-0(B0)				—	
	Lamp used.....:	LED				—	
	Lamp control gear used.....:	HBG-100-48B				—	
	Mounting position of luminaire.....:	As normal use				—	
	Supply wattage (W).....:	106V:103.3W; 254.4V:100.7W				—	
	Supply current (A).....:	106V:0.977A; 254.4V:0.404A				—	
	Calculated power factor.....:	106V:0.995; 254.4:0.977				—	
	Table: measured temperatures corrected for ta = 50°C:					P	
	- abnormal operating mode.....:	--				—	
	- test 1: rated voltage.....:	--				—	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	1.06x100V=106V; 1,06x240V=254,4V				—	
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--				—	
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage.....:					—	
	Through wiring or looping-in wiring loaded by a current of A during the test	--				—	
temperature (°C) of part		Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
	Test voltage	--	106	254.4	--	--	--
	Supply cord of LED driver	--	67.4	67.8	--	90	--
	tc of LED driver	--	80.8	80.9	--	90	--
	Input cord near LED module PCB	--	86.9	89.1	--	105	--
	LED module PCB	--	87.2	89.8	--	Ref.	--
	Metal enclosure	--	78.0	79.8	--	Ref.	--
	Transparent cover	--	78.0	80.8	--	115	--
	Mounting surface	--	55.4	56.8	--	90	--

IEC 60598-2-1							
Clause	Requirement + Test	Result - Remark			Verdict		
	ANNEX 2: temperature measurements, thermal tests of Section 12						P
	Type reference.....:	AOK-150WoH-NV-L3-0(B0)			—		
	Lamp used.....:	LED			—		
	Lamp control gear used.....:	HBG-160-48B			—		
	Mounting position of luminaire.....:	As normal use			—		
	Supply wattage (W).....:	106V:158.2W; 254.4V:155.2W			—		
	Supply current (A).....:	106V:1.56A; 254.4V:0.636A			—		
	Calculated power factor.....:	106V:0.995; 254.4:0.959			—		
	Table: measured temperatures corrected for ta = 50°C:					P	
	- abnormal operating mode.....:	--			—		
	- test 1: rated voltage.....:	--			—		
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	1.06x100V=106V; 1,06x240V=254,4V			—		
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--			—		
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage.....:				—		
	Through wiring or looping-in wiring loaded by a current of A during the test	--			—		
	temperature (°C) of part	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
	Test voltage	--	106 254.4	--	--	--	--
	Supply cord of LED driver	--	68.8 67.1	--	90	--	--
	tc of LED driver	--	84.1 81.2	--	90	--	--
	Input cord near LED module PCB	--	90.7 89.9	--	105	--	--
	LED module PCB	--	91.2 92.3	--	Ref.	--	--
	Metal enclosure	--	80.1 79.9	--	Ref.	--	--
	Transparent cover	--	82.8 92.9	--	115	--	--
	Mounting surface	--	55.6 55.5	--	90	--	--

IEC 60598-2-1							
Clause	Requirement + Test	Result - Remark			Verdict		
	ANNEX 2: temperature measurements, thermal tests of Section 12						P
	Type reference.....:	AOK-240WoH-NV-L3-0(B0)			—		
	Lamp used.....:	LED			—		
	Lamp control gear used.....:	HBG-240-48B			—		
	Mounting position of luminaire.....:	As normal use			—		
	Supply wattage (W).....:	106V:253.5W; 254.4V:242.0W			—		
	Supply current (A).....:	106V:2.391A; 254.4V:0.982A			—		
	Calculated power factor.....:	106V:0.997; 254.4:0.968			—		
	Table: measured temperatures corrected for ta = 50°C:					P	
	- abnormal operating mode.....:	--			—		
	- test 1: rated voltage.....:	--			—		
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	1.06x100V=106V; 1,06x240V=254,4V			—		
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--			—		
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage.....:				—		
	Through wiring or looping-in wiring loaded by a current of A during the test	--			—		
temperature (°C) of part		Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
	Test voltage	--	106	254.4	--	--	--
	Supply cord of LED driver	--	69.4	67.8	--	90	--
	tc of LED driver	--	78.8	78.5	--	80	--
	Input cord near LED module PCB	--	87.9	86.5	--	105	--
	LED module PCB	--	90.1	92.8	--	Ref.	--
	Metal enclosure	--	81.5	84.5	--	Ref.	--
	Transparent cover	--	79.4	82.4	--	115	--
	Mounting surface	--	56.1	57.2	--	90	--

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Clause	Requirement + Test	Result - Remark	Verdict
	ANNEX 3: screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²)..... :		N/A
(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 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	ANNEX 4: screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5.1)	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
(15.5.2)	Permanent connections: pull-off test (20 N)		N/A
(15.6)	Electrical tests		
	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


IEC 60598-2-1												
Clause	Requirement + Test										Result - Remark	Verdict
(15.7)	Terminals external wiring											N/A
	Terminal size and rating											N/A
(15.8.1)	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
(15.9)	Contact resistance test											N/A
	Voltage drop (mV) after 1 h											N/A
terminal	1	2	3	4	5	6	7	8	9	10		
voltage drop (mV)												
Voltage drop of two inseparable joints												
Voltage drop after 10th alt. 25th cycle												
Max. allowed voltage drop (mV).....:												—
terminal	1	2	3	4	5	6	7	8	9	10		
voltage drop (mV)												
Voltage drop after 50th alt. 100th cycle												
Max. allowed voltage drop (mV).....:												—
terminal	1	2	3	4	5	6	7	8	9	10		
voltage drop (mV)												
Continued ageing: voltage drop after 10th alt. 25th cycle												
Max. allowed voltage drop (mV).....:												—
terminal	1	2	3	4	5	6	7	8	9	10		
voltage drop (mV)												
Continued ageing: voltage drop after 50th alt. 100th cycle												
Max. allowed voltage drop (mV).....:												—
terminal	1	2	3	4	5	6	7	8	9	10		
voltage drop (mV)												

ANNEX 5: IEC 62031+A1+A2			
Clause	Requirement + Test	Result - Remark	Verdict
13 (14)	FAULT CONDITIONS		N/A
- (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
	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

ANNEX 5: IEC 62031+A1+A2			
Clause	Requirement + Test	Result - Remark	Verdict
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		N/A

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ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
0.1	Add the following text at the end of Clause 0.1:		P
	Where the term “lamp” is used in this Standard, it is taken to include electric light sources. LED light sources are subject to the same test parameters as “other discharge lamps”.		P
	NOTE It is recommended that portable, rechargeable, battery operated luminaires comply with AS/NZS 60335.1, Annex B. In addition, portable, rechargeable, battery operated luminaires with lithium ion batteries should have overvoltage protection.		N/A
0.2	Add the following normative references:		P
	AS/NZS 3112, Approval and test specification—plugs and socket-outlets AS/NZS 3133, Approval and test specification—Air-break switches AS/NZS 3191, Electric flexible cords AS/NZS 60695.11.10, Fire hazard testing—Part 11.10: Test flames—50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999, IDT) AS/NZS 61535, Installation couplers intended for permanent connection in fixed installations (IEC 61535, Ed. 1.0 (2009) MOD) IEC 61048, Auxiliaries for lamps—Capacitors for use in tubular fluorescent and other discharge lamp circuits—General and safety requirements IEC 61049, Auxiliaries for lamps—Capacitors for use in tubular fluorescent and other discharge lamp circuits—Performance requirements IEC 61995-1, Devices for the connection of luminaires for household and similar purposes—Part 1: General		P
0.5	Add the following paragraph after the title:		P
	Throughout this document, where there is a relevant Australian/New Zealand Standard, it replaces the IEC Standard unless otherwise specified.		P
0.5.2A	Add the following new Clause after Clause 0.5.2:		P
	0.5.2A Capacitors Capacitors shall comply with Clause 4.2A.		N/A

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
1.2	Add the following new definitions after 1.2.86:		N/A
	<p>1.2.87 installation coupler connecting device consisting of an installation female connector and an installation male connector provided with retaining means for permanent connection not intended to be engaged or disengaged under load nor to be engaged or disengaged other than during first installation, during maintenance of the wiring system or during re-configuration of the wiring system</p> <p>1.2.88 installation male connector load side portion of an installation coupler which contains the male contacts</p> <p>1.2.89 installation female connector supply side portion of an installation coupler which contains the female contacts</p> <p>1.2.90 installation coupler system family of installation couplers consisting of one or more installation female connectors compatible by mechanical coding features with one or more installation male connectors, with the same ratings produced according to the specification of one manufacturer</p>		N/A
2.2	At the end of Clause 2.2, add the following paragraph:		N/A
	Class 0 luminaires are not allowed in Australia or New Zealand.		N/A
TABLE 3.1	Move Item 3.2.21 from the centre column to the right hand column.		N/A
3.2.12	<p>Add the following paragraph after Note 3: In Australia, luminaires for household use and similar with supply cords which are not fitted with a plug shall be marked with a cord tag with the symbol for “must be installed by a licensed electrician”. (Refer to Figure ZZ1).</p>	 <p>FIGURE ZZ1 MUST BE INSTALLED BY A LICENSED ELECTRICIAN</p>	P

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
3.3	Add the following text after the second paragraph:		P
	In Australia and New Zealand, instructions and other texts required by this Standard shall be written in English. Compliance is checked by inspection.		P
3.3.7	Delete Clause 3.3.7 and replace with the following:		N/A
	3.3.7 Luminaires for use with metal halide lamps shall be provided with instructions that state the substance of the following: To avoid potential unsafe lamp failure, the luminaire shall be switched off for at least 30 minutes at least once a week. In addition, the luminaire shall be operated: —complete with its protective shield; or —with a double jacketed lamp.		N/A
3.3.10	Delete Clause 3.3.10.		P
3.3.21	Add the following new Clause:		N/A
	3.3.21 The instructions shall contain details related to components in the luminaire that require replacement as part of a maintenance program.		P
4.8	Add the following paragraph after the third paragraph:		N/A
	Switches that indicate an off position shall have contacts with an air break and comply with AS/NZS 3133 or AS/NZS 61058.1.		N/A
4.2A	Add the following new Clause after Clause 4.2:		N/A
	4.2A Capacitors shall be of a type to ensure that any capacitor failure results in a failsafe outcome (i.e. the capacitor type will fail in the open-circuit mode only and is protected against fire or shock hazard). Capacitors shall be not less than Type B capacitors with metal body and break action protection in accordance with IEC 61048 and IEC 61049. A capacitor complying with ANCI/EIA-456-A shall comply with IEC 61049 and IEC 61048:2006 excluding the endurance test of 18.1.1. NOTE Capacitors of Class S2 (formerly referred to as P2) of IEC 60252 (all parts) do not meet the safety requirements of a Type B capacitor.		N/A

ANNEX 6 Deviation between IEC 60598-1:2008 and AS/NZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
	In addition, capacitors shall have a minimum voltage rating of 250 V at a temperature rating of 100 °C or 280 V at a temperature rating of 85 °C. Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or for voltage dividing, shall comply with IEC 60384-14.		
5.2.1	1. Delete the first paragraph and replace with the following:		P
	<p>Luminaires shall be provided with only one of the following means of connection and isolation to the supply.</p> <p>Fixed luminaires:</p> <ul style="list-style-type: none"> — device for the connection of luminaires; — terminals; plug for engagement with socket-outlets; — connecting lead (tails); — supply cord and plug; — adapter for engagement with supply tracks; — appliance inlet; — installation coupler; — luminaire coupler; <p>Portable luminaires:</p> <ul style="list-style-type: none"> — supply cord with plug; — appliance inlet. <p>Track-mounted luminaires:</p> <ul style="list-style-type: none"> — adaptor; — connector. 	Supply cord	P
	2. Delete the second and third paragraph.		P
5.2.2	1. Delete the first paragraph and replace with the following:		P
	Supply cords used as a means of connection to the supply, when supplied by the luminaire manufacturer, shall be at least equal in their mechanical and electrical properties to those specified in IEC 60227 and IEC 60245, as indicated in Table 5.1, or AS/NZS 3191, and shall be capable of withstanding, without deterioration, the highest temperature to which they may be exposed under normal conditions of use.		P

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013				
Clause	Requirement – Test	Result - Remark	Verdict	
	2. Table 5.1, delete rows 4 and 5 and replace with the following:		P	
	Luminaires which are other than ordinary Portable rough service luminaires	60245 IEC 57	60227 IEC 53	P
	Portable rough service luminaires	60245 IEC 66	PVC insulated and sheathed heavy duty flexible cord	
	3. Delete the third paragraph and replace with the following:		P	
	To provide adequate mechanical strength, the nominal cross-sectional area of the conductors shall be not less than: — 0,75 mm ² ; — 1,0 mm ² for portable rough service luminaires.		P	
5.2.16	Add the following text at the end of Clause 5.2.16:		N/A	
	Class II luminaires for fixed wiring incorporating an appliance coupler shall not have means to allow further luminaires to be connected, including looping in by cascading. Luminaire couplers incorporated with the luminaire shall comply with IEC 61995-1.		N/A	
5.2.18	Delete Clause 5.2.18 and replace with the following:		N/A	
	5.2.18 All portable luminaires with a flexible supply cord shall be fitted with a plug complying with AS/NZS 3112. Other luminaires with flexible cords shall be fitted with a plug complying with AS/NZS 3112, unless they have the warning allowed by Clause 3.2.12.		N/A	
5.2.19	Add the following new Clause:		N/A	
	5.2.19 Installation couplers incorporated within luminaires shall comply with the requirements of AS/NZS 61535. Luminaires incorporating installation couplers may have means to allow further luminaires to be connected by cascading provided the through wiring is rated for the current rating of the installation coupler.		N/A	
5.3.1	1. Delete the third paragraph and replace with the following:		P	

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
	Internal wires coloured green, yellow or green/yellow combination shall be used for making protective earth connections only. Functional earth connections shall not be made by wires coloured green, yellow or green/yellow combination.		P
	2. Add the following new Note:		P
	NOTE 3 Internal wires of other colours are not precluded from making protective earthing connections.		P
7.2.11	Delete the third paragraph and replace with the following:		N/A
	All conductors, whether internal or external, coloured green, yellow or green/yellow combination, shall only be connected to an earthing terminal.		N/A
8.2.1	Delete the first paragraph and Note 1 and replace with the following:		P
	<p>Luminaires shall be so constructed that their live parts and basic insulation are not accessible when the luminaire has been installed and wired as in normal use. Live parts shall not be accessible when the luminaire is opened as necessary for replacing lamps, replaceable light sources or (replaceable) starters, even if the operation cannot be achieved by hand.</p> <p>NOTE Examples of parts with basic insulation are cables intended for internal wiring, controlgear for building-in etc.</p> <p>This does not apply to the non-current -carrying parts of caps which comply with the relevant IEC safety standard.</p> <p>Where a protective cover is used over a non-user-replaceable light source to provide protection against electric shock, and the cover is marked with the “caution, electric shock risk” symbol in accordance with IEC 60417-6042, the cover shall be left in place during the tests and inspections detailed by Section 8 of this Standard. The cover shall be held securely in position by fixings requiring the use of a tool for their removal, and at least two independent fixings shall be used.</p>		P
12.1	Add the following new Note after Table 12.1:		P
	NOTE Luminaire manufacturers should consider the maximum ambient air temperature in the		P

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
	vicinity of components such as starting devices and electronic ballasts or converters. Component performance specifications advise manufacturers to mark or supply life data as maximum ambient air temperature based on 50,000 hrs. This t-life is often marked as ta and is the temperature of the air in the vicinity of the component and is not related to the luminaire ta. As such, luminaire manufacturers should measure air temperature in the vicinity of such components, within the luminaire, as even those complying with their tc point measurements can still fail prematurely if t-life is exceeded.		
13.3	Delete Clause 13.3 and replace with the following:		P
	<p>13.3 Resistance to flame and ignition</p> <p>Parts of non-metallic material shall be resistant to flame and ignition.</p> <p>For materials other than ceramic, compliance is checked by the tests of 13.3.1 and 13.3.2, 13.3.3 and 13.3.4, as appropriate.</p> <p>This requirement does not apply to decorative trims, knobs, wiring insulation and other parts not likely to be ignited or to propagate flames from inside the luminaire.</p> <p>This Clause applies to all parts, including components, even if they have been tested to their own standard.</p> <p>13.3.1 Parts of non-metallic material supporting connections shall withstand the following test:</p> <p>Parts are subject to a test using a nickel-chromium glow-wire.</p> <p>The test apparatus and test procedure shall be those described in AS/NZS 60695.2.10.</p> <p>The glow wire is heated to 750 °C and applied to the test sample for 30 s.</p> <p>For all tests, any flame or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire, and any burning or molten drop shall not ignite a single layer of tissue paper specified in 4.187 of ISO 4046-4:2002, spread out horizontally 200 mm ± 5 mm below the sample.</p> <p>13.3.2 All other parts of non-metallic material shall withstand the following test:</p>	LED PCB; Transparent cover;	P

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>Parts are subject to a test using a nickel-chromium glow-wire.</p> <p>The test apparatus and test procedure shall be those described in AS/NZS 60695.2.10.</p> <p>The glow wire is heated to 650 °C and applied to the test sample for 30 s.</p> <p>For all tests, any flame or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire, and any burning or molten drop shall not ignite a single layer of tissue paper specified in 4.187 of ISO 4046-4:2002, spread out horizontally 200 mm ± 5 mm below the sample.</p> <p>13.3.3 During the application of the 750 °C glow wire test of Clause 13.3.1, if a flame is produced that persists for longer than 2 s, the luminaire is further tested as follows:</p> <p>The needle-flame test of AS/NZS 60695.11.5 is applied to non-metallic parts that encroach within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm above the point of application of the glow wire. The needle flame is applied to the test sample for 30 s.</p> <p>Parts shielded by a barrier that meets the needle-flame test of AS/NZS 60695.11.5 are not tested.</p> <p>NOTE This requires the needle flame to be applied to all parts likely to be impinged upon by the glow-wire flame within the hypothetical envelope of a vertical cylinder positioned above the point of application of the glow-wire. This applies to all parts unless there is a barrier that passes the needle-flame test and is within the cylinder and would protect the part from the glow-wire flame.</p> <p>The duration of burning shall not exceed 30 s after removal of the test flame and any burning drop shall not ignite the underlying parts or tissue paper specified in 4.187 of ISO 4046-4:2002, spread out horizontally 200 mm ± 5 mm below the sample.</p> <p>The needle-flame test is not carried out on parts that are made of material classified as V-0 or V-1 according to AS/NZS 60695.11.10. The sample of material classified in accordance with AS/NZS 60695.11.10 shall be no thicker than the relevant part.</p> <p>13.3.4 PCBs in luminaires shall be subject to the</p>		

ANNEX 6 Deviation between IEC 60598-1:2008 and ASNZS60598.1:2013			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>needle-flame test of AS/NZS 60695.11.5. The needle flame shall be applied for 30 seconds to an edge of the PCB at least 10 mm from a corner.</p> <p>The duration of burning shall not exceed 15 s after removal of the needle flame and any burning droplets shall not ignite the tissue paper placed underneath the PCB.</p> <p>The needle-flame test is not carried out on PCBs made of material that is V-0 rated according to AS/NZS 60695.11.10.</p>		
Bibliography	Add the following reference:		N/A
	AS/NZS 60335.1, Household and similar electrical appliances—Safety, Part 1: General requirements (IEC 60335-1 Ed 5, MOD) IEC 60252, AC motor capacitors (all parts)		N/A

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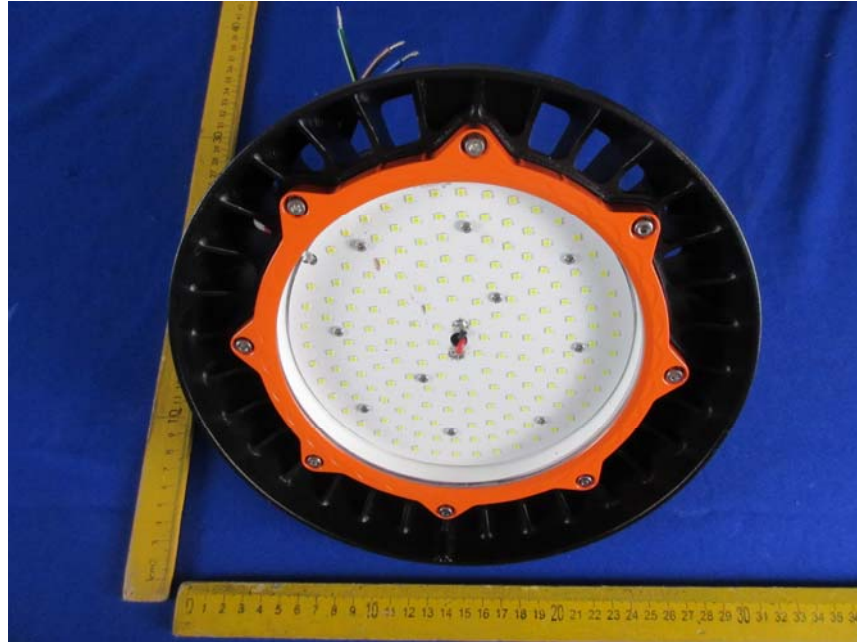
ANNEX 7	Differences between IEC 60598-2-1:1979+A1:1987 and AS/NZS 60598.2.1:2014		
Clause	Requirement + Test	Result - Remark	Verdict

	MARKING		N/A
6	LED luminaires with G5 or G13 lampholders shall be marked with the following warning: WARNING: NOT FOR USE WITH ANY FLUORESCENT LAMP—FOR USE ONLY WITH TYPE A or TYPE B LED LAMPS In the warning, 'X' shall be replaced by 'A' or 'B' to denote Type A or Type B, as appropriate. The warning label shall be durable and the font size shall be a minimum of 5mm for letters and numbers and 5mm for symbols and shall be visible during lamp replacement. NOTE: Manufacturers should specify minimum requirements for the operations of their lamps, including spacing, enclosure design and temperature limitations.		N/A
7	CONSTRUCTION		N/A
	LED luminaires with G5 and G13 lampholders shall include a fuse to protect a fluorescent lamp that is inadvertently installed: Each fuse shall— a) be of the 250 V HRC type; b) have a 0.5 A max. quick-acting type rating; and (c) be used to protect a maximum of two lamps.		N/A
13	ENDURANCE TESTS AND THERMAL TESTS		N/A
	Luminaires with an IP classification greater than IP20 shall be subjected to the relevant tests of Clauses 12.4, 12.5 and 12.6 of Section 12 of AS/NZS 60598.1 after the test(s) of Clause 9.2 but before the test(s) of Clause 9.3 of Section 9 of AS/NZS 60598.1 specified in Clause 14 of this Standard.		N/A
14	RESISTANCE TO DUST AND MOISTURE		N/A
	For luminaires with an IP classification greater than IP20 the order of the tests specified in Section 9 of AS/NZS 60598.1 shall be as specified in Clause 13 of this Standard.		N/A
	APPENDIX A SAFETY REQUIREMENTS FOR DOUBLE-CAPPED LED LAMPS (Normative)		N/A
	Requirements not applicable to the evaluated product.		—
	APPENDIX B SAFETY REQUIREMENTS FOR T8 TO T5 LAMP CONVERTERS (Normative)		N/A

ANNEX 7	Differences between IEC 60598-2-1:1979+A1:1987 and AS/NZS 60598.2.1:2014		
Clause	Requirement + Test	Result - Remark	Verdict
	Requirements not applicable to the evaluated product.		—



photo document:



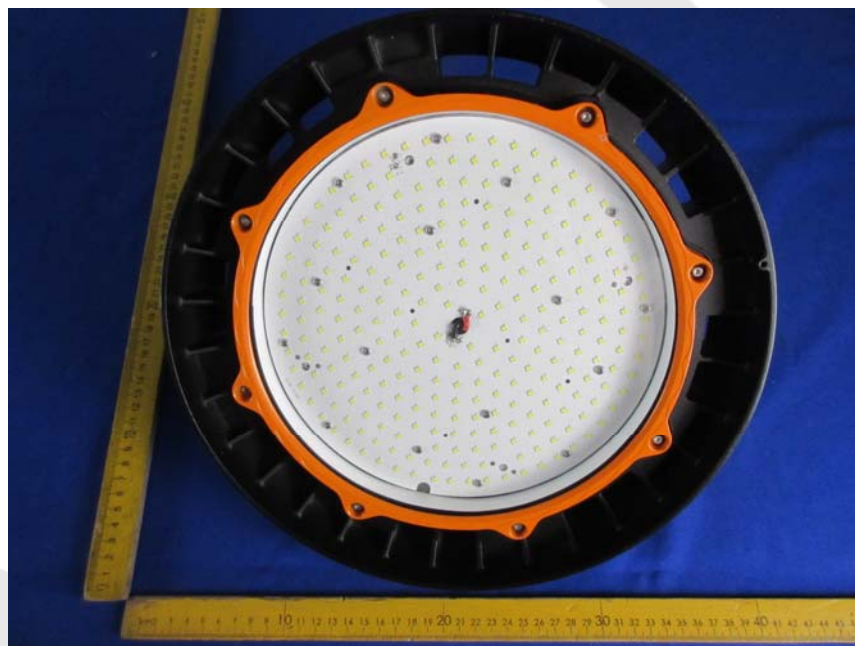
picture 1 for AOK-100WoH-NV-L3-0(B0)



picture 2 for AOK-100WoH-NV-L3-0(B0)



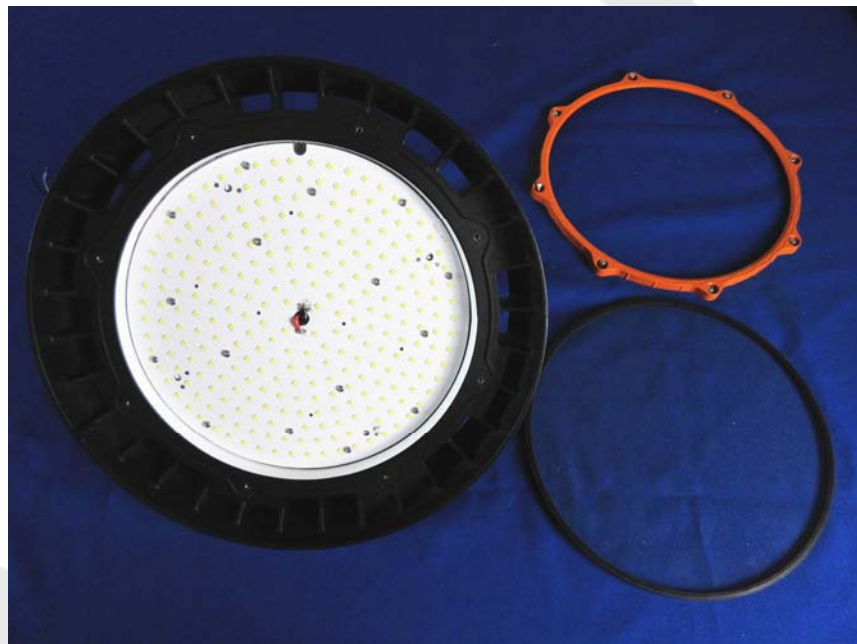
picture 3 for AOK-100WoH-NV-L3-0(B0)



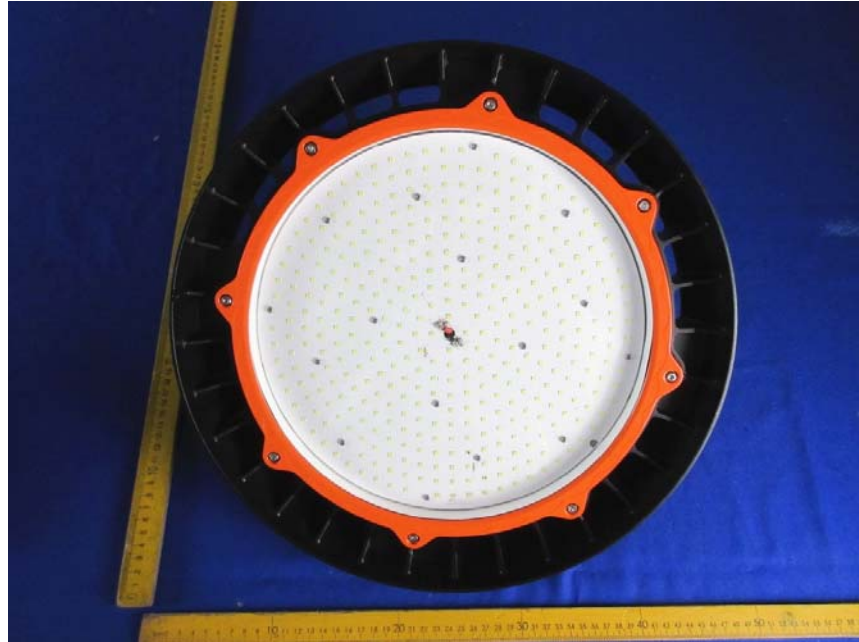
picture 4 for AOK-150WoH-NV-L3-0(B0)



picture 5 for AOK-150WoH-NV-L3-0(B0)



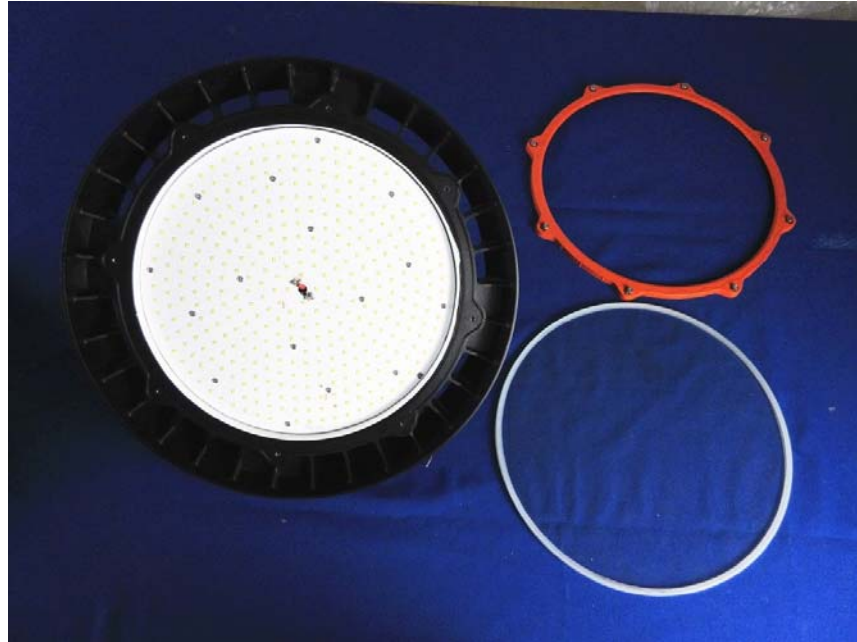
picture 6 for AOK-150WoH-NV-L3-0(B0)



picture 7 for AOK-240WoH-NV-L3-0(B0)



picture 8 for AOK-240WoH-NV-L3-0(B0)



picture 9 for AOK-240WoH-NV-L3-0(B0)



picture 10 internal view for all models

---END OF REPORT---