



# **TEST REPORT**

Reference No	: WTZ20F08056713L
Applicant	: EMPIRE OF LIGHT PTY.LTD
Address	: 8 ROWANY CLOSE, BONNYRIGG, NSW, 2177, AUSTRALIA
Manufacturer	: The same as above
Address	: The same as above
Product Name	: Panel light
Model No	: See model list on page 3
Standards	: Luminaires Part 2-2: Recessed luminaires IEC 60598-2-2:2011 IEC 60598-1:2014+A1:2017 used in conjunction with Australian deviation
Date of Receipt sample	2020-08-21
Date of Test	: 2020-08-22 to 2020-10-09
Date of Issue	: 2020-11-12
Test Report Form No	: WSL-6059822A-02A
Test Result	Pass
reproduced, except in full, with	report refer only to the sample(s) tested, this test report cannot be nout prior written permission of the company. The report would be invalinstitute and the signatures of compiler and approver.
	Prepared By:
	Waltek Testing Group (Foshan) Co., Ltd. 3-19, 2/F., 2nd Building, Sunlink International Machinery City, ncun, Shunde District, Foshan, Guangdong, China I 398 Fax:+86-757-23811381 E-mail:info@waltek.com.cn
Compiled by:	Approved by:
~anning	& Orm Your

Bonn Ding / Project Engineer

Oren Yang / Manager



Reference No.: WTZ20F08056713L Page 2 of 62



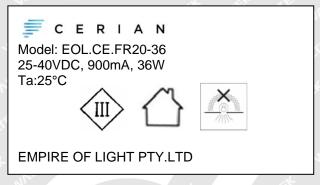
Test item description....: Panel light

Trade Mark....: © C E R I A N

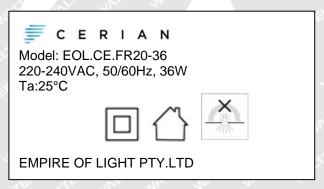
Model/Type reference...: See model list on page 3

Ratings...: See model list on page 3

## Copy of marking plate:



On the luminaries surface



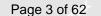
On the luminaire packing(with LED driver)

#### Remark:

The marking labels for other models are identical as above, except the model name and some parameters.

#### Summary of testing:

- Unless otherwise specified, the model EOL.CE.FR20-36 was chosen as representative model to perform all tests; the tests results complied with the requirements of the standards mentioned on page one.
- Australian deviation to IEC 60598-1:2014+A1:2017 and AS/NZS 60598.1:2017+A1:2017, IEC 60598-2-2:2011 and AS/NZS 60598.2.2:2016+A1:2017 were considered and found to comply with the requirement.
- 3. Switch was tested with appliance for 10000 cycles operating test according to AS/NZS 61058.1:2008 and found to comply with the requirement.
- 4. Integral LED module was assessed according to IEC 62031:2018 and found to comply with the requirement.
- Photobiological safety was assessed according to IEC 62471:2006, classification group: exempt isk 1 risk 2 risk 3 risk 3 .
- 6. Only the most unfavorable results are recorded in this report.





### Test items particulars:

Reference No.: WTZ20F08056713L

Classification of installation and use...... Recessed mounting

Supply Connection...... Power cord

#### Possible test case verdicts:

- test case does not apply to the test object...... N (Not applicable)

- test object does meet the requirement......P (Pass)

- test object does not meet the requirement...... F (Fail)

#### General remarks:

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

#### **General product information:**

- 1. These products are Class III recessed LED luminaires.
- 2. All models are with the similar construction except rated power and colour.
- 3. 25-40VDC ,Class III,IP20; for other detail see model list on below:

#### Model list

Item	Model	Rated current (mA)	Rated power (W)	LED driver
1	EOL.CE.FR20-9	210	9W	LF-GIF015YA0210H
2	EOL.CE.FR20-12	300	12W	LF-GIF015YA0300H
3 "	EOL.CE.FR20-18	450	18W	LF-GIF022YA0450H
4	EOL.CE.FR20-24	600	24W	LF-GIF030YA(H)0600H
5	EOL.CE.FR20-36	900	36W	LF-GIF040YA(H)0900H
6	EOL.CE.FS20-9	210	9W	LF-GIF015YA0210H
7 m	EOL.CE.FS20-12	300	12W	LF-GIF015YA0300H
8.4	EOL.CE.FS20-18	450	18W	LF-GIF022YA0450H
9	EOL.CE.FS20-24	600	24W	LF-GIF030YA(H)0600H
10	EOL.CE.FS20-36	900	36W	LF-GIF040YA(H)0900H



Reference	No.: WTZ20F08056713L Page 4 of 62		
TEX	IEC 60598-2-2	and the state of	TEX TEX
Clause	Requirement + Test	Result - Remark	Verdict
et .	cet ite with our my		t let
2.3 (0)	GENERAL TEST REQUIREMENTS	CLIEB MITE WALL WALL	JAP -
2.3 (0.1)	Information for luminaire design considered	Yes ⊠ No □	1 to the second
2.3 (0.3)	More sections applicable	Yes □ No ⊠	$i_{\nu_r} - i_n$
et Jet	THE MITE WALL WALL WALL TO	1 A St SET	JEX J
2.5 (2)	CLASSIFICATION	e with Mur Mur M	Р
2.5 (2.2)	Type of protection:	Class III	EL TEK
2.5 (2.3)	Degree of protection (Requirement: Ordinary):	IP20	10
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces:	Yes ⊠ No □	WILE. A
TEX WALTER	Luminaire not suitable for direct mounting on normally flammable surfaces	Yes □ No ⊠	UNITE <del>K</del>
2.5 (2.5)	Luminaire for normal use:	Yes ⊠ No □	Jet - 18
WILL 1	Luminaire for rough service	Yes □ No ⊠	- AL
LEX.	TEX LITER BUT MILLE WHILL WILL	and the state of	y TEX
2.6 (3)	MARKING	WILL MULL MULLE MALL	₩P
2.6(3.2)	Mandatory markings	See "copy of marking plate"	Р
11/1	Position of the marking	TE RETURNED WALL	P W

2.6 (3)	MARKING	White Walt wall wall	₹ P
2.6(3.2)	Mandatory markings	See "copy of marking plate"	Р
11/2	Position of the marking	The will make much	Р
EX LIEK	Format of symbols/text	L at at the	Р
2.6 (3.3)	Additional information	WILL MULL MULL MULL MINE	Р
ALTEK ON	Language of instructions	In English	P
2.6(3.3.1)	Combination luminaires	WITH MUT THE THE	N
2.6 (3.3.2)	Nominal frequency in Hz	TEV TER STEEL	N.
2.6 (3.3.3)	Operating temperature	S. 24 24	N
2.6(3.3.4)	Symbol or warning notice	I'L A TEX OLITER	√ N
2.6 (3.3.5)	Wiring diagram	The Mr. M. M.	N
2.6 (3.3.6)	Special conditions	TE TER SITER SUITER SIN	N
2.6 (3.3.7)	Metal halide lamp luminaire – warning	m m m	N
2.6 (3.3.8)	Limitation for semi-luminaires	TEX LIER ALTER WITE WITE	N N
2.6 (3.3.9)	Power factor and supply current	In the state of th	N-
2.6 (3.3.10)	Suitability for use indoors	ex liex wife write while	N N
2.6 (3.3.11)	Luminaires with remote control	The state of the s	N
2.6 (3.3.12)	Clip-mounted luminaire – warning	THE MITE WALL WALL ON	N
2.6 (3.3.13)	Specifications of protective shields	The state of the s	+ N
2.6 (3.3.14)	Symbol for nature of supply	ALTER MITE WALL WALL WALL WALL	Р
2.6 (3.3.15)	Rated current of socket outlet		N
2.6 (3.3.16)	Rough service luminaire	the out with while with	Z <sub>0</sub> N

Waltek Testing Group (Foshan) Co., Ltd. http://www.waltek.com.cn



Reference No.: WTZ20F08056713L Page 5 of 62

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
Jet K	the title with the Millians	<u> </u>	et let
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	MILER WHITE WHILE WA	MN
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable	TEX TEX STER WITE	N N
2.6 (3.3.19)	Protective conductor current in instruction if applicable	m m m	N
2.6 (3.3.20)	Provided with information if not intended to be mounted within arms reach	MALLE WHILL WHILL	W PIN
2.6 (5.2.1 )	Non replaceable and non-user replaceable light sources information provided	Non-user replaceable	NIT NP
NITE WALTE	Cautionary symbol	TEX LIEX NITER IN	JN N
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided	of let the the	N
2.6 (3.4)	Test with water	And the All	Р
INLIER AU	Test with hexane	TEX TEX TEX	NI PUI
1/2, 1	Legible after test	Mur. Mr. M.	Р
CLIE MIT	Label attached	Et TEX JEX	P

2.7 (4)	CONSTRUCTION	TER MITE MITE
2.7 (4.2)	Components replaceable without difficulty	N
2.7 (4.3)	Wireways smooth and free from sharp edges	Pul Pul
2.7 (4.4)	Lampholders	N
2.7 (4.4.1)	Integral lampholder	MILL WALL WALL
2.7 (4.4.2)	Wiring connection	L N
2.7 (4.4.3)	Lampholder for end-to-end mounting	NIT WIN
2.7 (4.4.4)	Positioning	L L N
L'ANNE	- pressure test (N)	The Maria Maria - on
ex writex w	After test the lampholder comply with relevant standard sheets and show no damage	L RETEK AN EK NET
MULIEK MU	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation	united united
et de	- bending test (N)	at at a
ur wr	After test the lampholder have not moved from its position and show no permanent deformation	N N
2.7 (4.4.5)	Peak pulse voltage	IN THE WALL NOW
2.7 (4.4.6)	Centre contact	L N
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking	white whi Ni
2.7 (4.4.8)	Lamp connectors	TER TIES ON



Reference No.: WTZ20F08056713L Page 6 of 62

Clause	Requirement + Test	Result - Remark	Verdict
at de	tile sir arrivation	The state of the s	et let
2.7 (4.4.9)	Caps and bases correctly used	NITER WITE WALTER WA	MN
2.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another wa	y at the title said	X NITEN
2.7 (4.5)	Starter holders	We My My My	N
White wi	Starter holder in luminaires other than class II	No starter holder used	N. N.
	Starter holder class II construction	111, 11, 1,	N
2.7 (4.6)	Terminal blocks	x liet sliet wife of	NP.
it it	Tails the tree tree to the tree tree tree tree tree tree tree	211, 211, 22, 2	L N
INCT WALT	Unsecured blocks	JEX STEX WITE WAY	P
2.7 (4.7)	Terminals and supply connections	All All All All	Р
2.7 (4.7.1)	Contact to metal parts	TEX STEEL WITE WAITE	W.V.
2.7 (4.7.2)	Test 8 mm live conductor	And the state of t	P
Mr. M	Test 8 mm earth conductor	ALTER MITER MALITERS	In In
2.7 (4.7.3)	Terminals for supply conductors	711 22	Pot
2.7 (4.7.3.1)	Welded method and material	ALTER WITER WALLER WA	√N N
et et	- stranded or solid conductor		* N
The Market	- spot welding	LIER WILLER WHILE WALL	N
et let	- welding between wires		N
Mr. N	- Type Z attachment	L'ES INLIES MALIE MAL	n N
TEX S	- mechanical test according to 15.8.2	at at at	N.
me me	- electrical test according to 15.9	WILL WILL WILL V	N
TEX TE	- heat test according to 15.9.2.3 and 15.9.2.4		N N
2.7 (4.7.4)	Terminals other than supply connection	Wr. Mury My	N
2.7 (4.7.5)	Heat-resistant wiring/sleeves	LE A LET ITE	J N
2.7 (4.7.6)	Multi-pole plug	L Mr In Mr	N
H CLIER IN	- test at 30 N	A EX TEX TEX	N.C
2.7 (4.8)	Switches	I WILL MUE MILE	N
ALTER INLI	- adequate rating	t et tet itet .	NE NE
	- adequate fixing	Mer Mur My My	N
LIET MITE	- polarized supply	LEK TEK TEK NI	N N
EK JEK	- compliance with IEC 61058-1 for electronic switches	or the text set	N
2.7 (4.9)	Insulating lining and sleeves	LIE MULL AND AND	A <sub>11</sub> B <sub>11</sub>
2.7 (4.9.1)	Retainment	A AN AN AN	CO P.C
111, 111,	Method of fixing	Heat-shrink	Р
2.7 (4.9.2)	Insulated linings and sleeves:	t t	P



Reference No.: WTZ20F08056713L Page 7 of 62

C. TE.	IEC 60598-2-2	HALL SEE SEE	76, 17,
Clause	Requirement + Test	Result - Remark	Verdict
NUTLER MUTTE	Resistant to a temperature > 20 °C to the wire temperature or	WALTER WALTER WALTER	P
LIEN WILLER	a) & c) Insulation resistance and electric strength	LIER MILER WALLER WHITE	N N N
EX TEX	b) Ageing test. Temperature (°C)	- + + +	N (
2.7 (4.10)	Double or reinforced insulation	THE WALL MAN W	Р
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	MITER WILLER WHITER WHI	Pie
LEY JEY	Safe installation fixed luminaires	The state of	P
in, mi	Capacitors and switches	ALTER MILE WALL WALL	N N
TEX WALTER	Interference suppression capacitors according to IEC 60384-14	TEX STEX MITER SMITER	NETEN
2.7 (4.10.2)	Assembly gaps:	The same of the sa	⊬ N
Mr. M	- not coincidental	Wite Will Mill M	N
LEX I	- no straight access with test probe	The state of	H Net
2.7 (4.10.3)	Retainment of insulation:	CLIER WALTE WALT WAL	₩P
LET TEX	- fixed		P
T. Mr.	- unable to be replaced; luminaire inoperative	STER WITE WITE WILL	An P
et let	- sleeves retained in position	at at at	P
111 1	- lining in lampholder	ET WALL WALL WALL W	N
2.7 (4.11)	Electrical connections and current-carrying parts		P
2.7 (4.11.1)	Contact pressure	NUTTE MILL MILL MILL	Р
2.7 (4.11.2)	Screws:	- d' tet de	N
11, 111,	- self-tapping screws	Up. Mur Mur	N N
TEX CLIER	- thread-cutting screws	TEX TEX	JEN .
2.7 (4.11.3)	Screw locking:	in the man	N
EX INCLES	- spring washer	at left light light of	J N
10. 0.	- rivets	MULT AND AND AND	N
2.7 (4.11.4)	Material of current-carrying parts	TEX TEX STER OUT	P
2.7 (4.11.5)	No contact to wood or mounting surface	me me m	Р
2.7 (4.11.6)	Electro-mechanical contact systems	TEK TEK LIEK MITE	N V
2.7 (4.12)	Screws and connections (mechanical) and gla	ands	Р
2.7 (4.12.1)	Screws not made of soft metal	EX TEX STEX STEE	JA CATE PART
L .xt _	Screws of insulating material	Mr. M. M.	N
MULLE MU	Torque test: torque (Nm); part	Screws used for fixing enclosure: 0.5Nm	P
ALTEK MLTE	Torque test: torque (Nm); part	Screws used for fixing LED board: 0.5Nm	P



Reference No.: WTZ20F08056713L Page 8 of 62

Clause	Poguiroment L Toot	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdict
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal	MILIER WHITE WALTER WALTER	ALN.
2.7 (4.12.4)	Locked connections:	TEX STEX STEX OUTER S	N
1 1	- fixed arms; torque (Nm)	"" - "" ""	N
er with wh	- lampholder; torque (Nm)	TEX STEX WITE NO	N
	- push-button switches; torque 0,8 Nm	1/1, 1/1, 1/1,	N
2.7 (4.12.5)	Screwed glands; force (Nm)	of TEX STEE WIFE WITE	N
2.7 (4.13)	Mechanical strength	Mr. Mr. Mr.	P
2.7 (4.13.1)	Impact tests:	LIER SLIER MILE WALL	P
et et	- fragile parts; energy (Nm)	···	N
I MULL A	- other parts; energy (Nm)	Enclosure, lamp cover:0.35Nm	P.V
* .E* .	1) live parts	or the second	P .
MUT, MU	2) linings	WITE WILL MALL WALL	N
All I	3) protection	the state of	P
Mr. Mr.	4) covers	CUIET WITE WALL WALL	WP.
2.7 (4.13.3)	Straight test finger	30N	P
2.7 (4.13.4)	Rough service luminaires	LIE WILL WHILE WALL V	N N
et jet	- IP54 or higher	at the set.	N
m. n	a) fixed	I'E WILL MULL MULL MI	N
- JEX N	b) hand-held	a st set set se	N
Mr. M.	c) delivered with a stand	it with whi with win	N
UNLIEK WATE	d) for temporary installations and suitable for mounting on a stand	ALL STEE MILIER WILLIER	un N
2.7 (4.13.6)	Tumbling barrel		N
2.7 (4.14)	Suspensions, fixings and means of adjusting	g Juni W	P
2.7 (4.14.1)	Mechanical load:		P
m. m	A) four times the weight	4x0.625kg=2.5kg	Р
TEX J	B) torque 2,5 Nm	- Let A	N
mr. m	C) bracket arm; bending moment (Nm)	Intite with with with	ANN N
TEX TEX	D) load track-mounted luminaires	- 1 14 114 114	N
it in	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	White mit mer me	N
IN WILL A	Metal rod. diameter (mm)	We outer write write our	N
t writer and	Fixed luminaire or independent control gear without fixing devices	E TEX TEX STEEL STEEL	× N
2.7 (4.14.2)	Load to flexible cables	Mr. Mr. M. M.	N
alle alie	Mass (kg)	h , est , text , text , wife	



Reference No.: WTZ20F08056713L Page 9 of 62

CIE III	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
WILL WALL	Stress in conductors (N/mm²)	- LEK JEH STEK NIE	LUN N
y v	Mass (kg) of semi-luminaire		4
LIELWALTE	Bending moment (Nm) of semi-luminaire		N
2.7 (4.14.3)	Adjusting devices:	My Alle M. And	∠ N
" " " " " " " " " " " " " " " " " " "	- flexing test; number of cycles	ate ate ate with the	N
it i	- strands broken		- N
while with	- electric strength test afterwards	et aller with white whi	N
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	TEX STEEK STIFF SMITH	N. N.
2.7 (4.14.5)	Guide pulleys	The The The The	N
2.7 (4.14.6)	Strain on socket-outlets	TEX LIET MITE MITE	Not
2.7 (4.15)	Flammable materials	har the state of	+ P
MULT M	- glow-wire test 650°C	See table(13.3.2)	Р
All A	- spacing ≥30 mm	The state of	N of
White Whitek	- screen withstanding test of 13.3.1	WILL MULLER MULLE MULL	- N
	- screen dimensions	i it et et	ζŃ.
	- no fiercely burning material	LIE WALL WALL WALL	Р
EX JEX	- thermal protection	at at let let	N
411. 1	- electronic circuits exempted	ILL WILL ME ME M	N
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N
211. 24.	a) construction	White and My and	N
ALTEK INTE	b) temperature sensing control	TEX TEX SITE	N
h. 22.	c) surface temperature	Wr. Mr. MI	N
2.7 (4.16)	Luminaires for mounting on normally flamm	able surfaces	LITE P
4.	No lamp control gear	Electronic lamp control gear	N
2.7 (4.16.1)	Lamp control gear spacing:	LET TEX STEX STEX STEX	N
	- spacing 35 mm	r. Mur. My. M. M.	N
white whi	- spacing 10 mm	H TEX LIER NITER WIT	N
2.7 (4.16.2)	Thermal protection:	Mr. Mr. M. A.	N
ALTE MALL	- in lamp control gear	TEX LIEK MITER MAILE	N
at at	- external	N. M. W.	N
MALL	- fixed position	I FER NIER WIFE WITE OF	W.
	- temperature marked lamp control gear	In the state of	N
2.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N
2.7 (4.17)	Drain holes		N
	Clearance at least 5 mm	LIER WITE WITE WALL	MAN



Reference No.: WTZ20F08056713L Page 10 of 62

Clause	Requirement + Test	Result - Remark	Verdict
	A TEL STEE STEEN SOUTH THE STEEN	The state of the s	164
2.7 (4.18)	Resistance to corrosion	ALTER MITER WALTER WALTER	JU P
2.7 (4.18.1)	- rust-resistance	in the set	Р
2.7 (4.18.2)	- season cracking in copper	LIER WITE WALL MALL VI	P
2.7 (4.18.3)	- corrosion of aluminium		P
2.7 (4.19)	Igniters compatible with ballast	No ignitors used	N
2.7 (4.20)	Rough service vibration	The state of	- N
2.7 (4.21)	Protective shield	INTER ANTIF WALL WALL	√√N
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps	TEX SLEX WIFEX WITEX	NALINK
A Et	Shield of glass if tungsten halogen lamps		N
2.7 (4.21.2)	Particles from a shattering lamp not impair safety	LEE WILLER WILLIAM MULTER AN	Non
2.7 (4.21.3)	No direct path	TEX LIER SLIER ONLY	N
2.7 (4.21.4)	Impact test on shield	The August August	N
MITERIALIT	Glow-wire test on lamp compartment	THE LIER SLIER WITE	N
2.7 (4.22)	Attachments to lamps not cause overheating or damage	or of the text text	N
2.7 (4.23)	Semi-luminaires comply Class II	reconstruction and any	N
2.7 (4.24)	Photobiological hazards		P
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)	t it lit is	N
2.7 (4.24.2)	Retinal blue light hazard Cla	assified as Risk Group 0 unlimited	1/P
TEX TE	Luminaires with Ethr:	at the feet	N
nr m	a) Fixed luminaires	Wir Murrant	n N
ITEX WALTER	- distance x m, borderline between RG1 and RG2	THE MILITER W	LITEN
y TEX	- marking and instruction according 3.2.23		+ N
Mrs. M	b) Portable and handheld luminaires	THE MILE WALL WALL WALL WALL	N
NALTEK WALT	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778	t iter stier wifer wife	- NE
NITEX WILLEY	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		M.
2.7 (4.25)	Mechanical hazard	ITEK SITEK MITER MITER WI	Pur
+	No sharp point or edges	w w	P
2.7 <b>(4.26)</b>	Short-circuit protection	EX STER WITE MILE MILE	N
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts	A SH THE THE	N



Reference No.: WTZ20F08056713L Page 11 of 62

Clause	Requirement + Test Result - Remark	Verdic
Clause	Requirement + Test Result - Remark	Verdic
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3	N N
et et	Test chain not melt through	N
ice must	Test sample not exceed values of Table 12.1 and 12.2	N V
2.7 (4.27)	Terminal blocks with integrated screwless earthing contacts	N.
. *	Test according Annex V	N
WALL WAL	Pull test of terminal fixing (20 N)	N
at all	After test, resistance $< 0.05 \Omega$	_ N_
INLI WALL	Pull test of mechanical connection (50 N)	N N
et et	After test, resistance $< 0.05 \Omega$	N
in whi	Voltage drop test, resistance < 0,05 Ω	W NO
2.7 (4.28)	Fixing of thermal sensing control	N N
mr. m	Not plug-in or easily replaceable type	N
TEX II	Reliably kept in position	No.
NL NL	No adhesive fixing if UV radiations from a lamp can degrade the fixing	- N
VIII WALL	Not outside the luminaire enclosure	JIN N
et et	Test of adhesive fixing:	←N
in we a	Max. temperature on adhesive material (°C)	n, -n
- All .	100 cycles between t min and t max	√ N
Mur Mr	Temperature sensing control still in position	√N
2.7 (4.29)	Luminaires with non-replaceable light source	N
mr mr	Not possible to replace light source	n, N
LIEK WALTER	Live part not accessible after parts have been opened by hand or tools	WHITE'N
2.7 (4.30)	Luminaires with non-user replaceable light source	P P
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:	N
antie anti	Minimum two fixing means	N
2.7 (4.31)	Insulation between circuits	P
nlik walit	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	Р
TEK WITER O	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	un the N
2.7 (4.31.1)	SELV circuits	N
TEX IN	Used SELV source	N



Reference No.: WTZ20F08056713L Page 12 of 62

Clause	IEC 60598-2-2	Result - Remark	Manallat
Clause	Requirement + Test	Result - Remark	Verdict
UNLIES WINLES	Voltage ≤ ELV	LIER NITER WITER WALL	N N
at at	Insulating of SELV circuits from LV supply	me in a t	N
LT WALL	Insulating of SELV circuits from other non SELV circuits	LIER WALLER WALLER WALLER	N N N
MITTER	Insulating of SELV circuits from FELV	EX TEX STEEL OUTER OF	N. N.
ALTEK INC	Insulating of SELV circuits from other SELV circuits	at 1st 1st 1st	N N
ON TEX	SELV circuits insulated from accessible parts according Table X.1	mur aur au	N
ik in	Plugs not able to enter socket-outlets of other voltage systems	With Mutil Mutil Mutil	N N
WALL	Socket outlets does not admit plugs of other voltage systems	TEX WATER WATER WALTER	Way Nan
Writer	Plugs and socket-outlets does not have protective conductor contact	MALIER WALTER WHITER WA	II at MI
2.7 (4.31.2)	FELV circuits	at at at a	Ne Ne
n n	Used FELV source	intite Auti, Auti, Auti	N
TEX STEX	Voltage ≤ ELV	at let get get	√N N
7/1	Insulating of FELV circuits from LV supply	richari, Mur. Mur.	N
ex writer a	FELV circuits insulated from accessible parts according Table X.1	ex writer uniter whitek	IN SEE N N
	Plugs not able to enter socket-outlets of other voltage systems	STEET NUTER WITER ON	TEX NE
ALTEK MYE	Socket outlets does not admit plugs of other voltage systems	who we street street	K N.C
TEX TEX	Socket-outlets does not have protective conductor contact	WE TEX	N
2.7 (4.31.3)	Other circuits	al in mur	1 P 11
t whitek w	Other circuits insulated from accessible parts according Table X.1	* SLIEK MITER MITER W	NI EX PULL
MLTEX NAL	Class II construction with equipotential bonding for contacts with live parts:	or protection against indirect	N N
T .*	- conductive parts are connected together	mr m. m.	N
LIE NALLE	- test according 7.2.3 of above	TEX LIEX SLIEN WIFE	N V
LEK LIEK	- conductive part not cause an electric shock in case of an insulation fault	at all all states	N
All A	- equipotential bonding in master/slave applications	mur mur mu	N
MUT MI	- master luminaire provided with terminal for accessible conductive parts of slave luminaires	MULL MULL MULL WILL	N
INLIE MILIT	- slave luminaire constructed as class I	TEX JEX JIE OUT	N N



Reference No.: WTZ20F08056713L Page 13 of 62

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.32)	Overvoltage protective devices	rek strek atter aktiek	NI WN
et et	Comply with IEC 61643-11	Mr. M. M.	at aN
TI MUT	External to controlgear and connected t	o earth:	A V N W
et let	- only in fixed luminaires		F OF N
With 1	- only connected to protective earth	TER ALTER MALTER MALTER MALTER	m Nu

2.8 (11)	CREEPAGE DISTANCES AND CLEARANCES	WILL WILL MULL MULL	Р
2.8 (11.2)	Creepage distances and clearances	See Table 2.8 (11.2)	Р
nt in	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ⊠ Category III □	10 T

2.9 (7)	PROVISION FOR EARTHING	L L N
2.9 (7.2.1 + 7.2.3)	Accessible metal parts	The water wat No.
WILL WILL	Metal parts in contact with supporting surface	MILE WILL WAY
at at	Resistance < 0,5 Ω	N
rie Muri	Two self-tapping screws used	MILLE MALL MALIN
et et	Thread-forming screws	L L N
Whi.	Thread-forming screw used in a grove	KITE WALL ON NA
LEX.	Earth makes contact first	N
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints etc.	nut unt 1N
2.9 (7.2.4)	Locking of clamping means	MITE WITE WAN
et et	Compliance with 4.7.3	N
MUL	Terminal blocks with integrated screwless earthing contacts tested according Annex V	The Water of the No.
2.9 (7.2.5)	Earth terminal integral part of connector socket	TEX STEEL NO
2.9 (7.2.6)	Earth terminal adjacent to mains terminals	N
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal	A CHIEF WITE WAY
2.9 (7.2.8)	Material of earth terminal	N.
NITE WALL	Contact surface bare metal	MITE MITE MEN.
2.9 (7.2.10)	Class II luminaire for looping-in	N
MULL	Double or reinforced insulation to functional earth	NA NATE OF THE NAT
2.9 (7.2.11)	Earthing core coloured green-yellow	
WILL M	Length of earth conductor	N N



Reference No.: WTZ20F08056713L Page 14 of 62

L TEX	IEC 60598-2-2	2	TEX JE
Clause	Requirement + Test	Result - Remark	Verdict
2.10 (14)	SCREW TERMINALS	TEX SLIEK WILLER WILLER	JUN
et et	Separately approved; component list	(see Annex 1)	N
r. Mur	Part of the luminaire	(see Annex 4)	J N N

2.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS	Р
Y TEX	Separately approved; component list	P
me m	Part of the luminaire	N

2.11 (5)	EXTERNAL AND INTERNAL WIRING		N P
2.11 (5.2)	Supply connection and external wiring	at at all.	TEP TEP
2.11 (5.2.1)	Means of connection	Power cord	P
MULIER M	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	WALTER WALTER WALT	WALL W.
2.11 (5.2.2)	Type of cable	(see Annex 1)	MILIT WIN
A CH	Nominal cross-sectional area (mm²)	(see Annex 1)	, N
THE MULT	Cables equal to IEC 60227 or IEC 60245	TEX NIET WIFE ON	ntit John N.
2.11 (5.2.3)	Type of attachment, X, Y or Z	700	ı, LN
2.11 (5.2.5)	Type Z not connected to screws	EX NITER INITE IN	NA NA
2.11 (5.2.6)	Cable entries:	W 4 0	Ļ ₽
mr. m	- suitable for introduction	NITER MALTE MALTE	W. VP
LEX LE	- adequate degree of protection	The state of	P.
2.11 (5.2.7)	Cable entries through rigid material have rounded edges	nti di mili	an an N
2.11 (5.2.8)	Insulating bushings:	TE I	LITE N LITE P.
t it	- suitably fixed	24 24	, P
White M	- material in bushings	ex alter pares april	RI PI
at a	- material not likely to deteriorate	201 20	Р
White Whi	- tubes or guards made of insulating material	NITER MITER MALTE	Whi MA
2.11 (5.2.9)	Locking of screwed bushings	W. T.	N-
2.11 (5.2.10)	Cord anchorage:	NITER WITE WALTE	W. W.N
et let	- covering protected from abrasion	4 **	A N
, mr	- clear how to be effective	TER WILL MALL WA	N/
+ TEX	- no mechanical or thermal stress	1 1 1 A	* N
mr m	- no tying of cables into knots etc.	White White Whi	W N
TEX TO	- insulating material or lining	1 1	N <sup>3</sup>



Reference No.: WTZ20F08056713L Page 15 of 62

TEX	IEC 60598-2-2	a start at	TEX IT
Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.2.10.1)	Cord anchorage for type X attachment:	WHITEK WHITEK WHITEK W	N
LIE MALIE	a) at least one part fixed	TEX TEX STEX INT	N
	b) types of cable	in the things	N
e. White M	c) no damaging of the cable	TEX LIEX OLIEK MITE	No.
. X	d) whole cable can be mounted	m. m. m.	N
white whi	e) no touching of clamping screws	t liet aliet wife	IN N
at all	f) metal screw not directly on cable	M. M. M.	N_
INLIL WALL	g) replacement without special tool	LIEK OLIER WILE ON	IN N
et et	Glands not used as anchorage		N
J. W.	Labyrinth type anchorages	TER SLIER WALL WALL	ON NOW
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	TEX LIEK MITER	IN I NOTE
2.11 (5.2.10.3)	Tests:	and an an	N CIEF
11, 11,	- impossible to push cable; unsafe	WILL MUST MUST A	N
LIEK NIER	- pull test: 25 times; pull (N)	······································	N N
	- torque test: torque (Nm)	" The man was any	N
EX NUTER	- displacement ≤ 2 mm	ex rex rex life	N
7, 1	- no movement of conductors	MUT MU M	N
INLIE NA	- no damage of cable or cord	TEX ITEX SITES	N <sup>X</sup>
1	- function independent of electrical connection	Mr. Mr. Mr.	N
2.11 (5.2.11)	External wiring passing into luminaire	THE STIFF OF	NN .
2.11 (5.2.12)	Looping-in terminals		N
2.11 (5.2.13)	Wire ends not tinned	TEL TEL	Pol
L at	Wire ends tinned: no cold flow	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N
2.11 (5.2.14)	Mains plug same protection	124 LIER NITER WITE	an' N'
<i>A</i> .	Class III luminaire plug	111 111 111	N
Whi Wh	No unsafe compatibility	aliek aliek antie	NO WIN
2.11 (5.2.16)	Appliance inlets (IEC 60320)	An An	N-
Vr. Mur	Installation couplers (IEC 61535)	LIET WITE WATER WA	N N
IEK WITEK	Other appliance inlet or connector according relevant IEC standard	et jet liet site	K STEKN
2.11 (5.2.17)	No standardized interconnecting cables properly assembled	and the left left	N N
2.11 (5.2.18)	Used plug in accordance with	MULL MULL MU	N N
TEX IN	- IEC 60083	at at at	Nº Nº



Reference No.: WTZ20F08056713L Page 16 of 62

IEC 60598-2-2		- TEX JE	
Clause	Requirement + Test	Result - Remark	Verdict

Clause	Requirement + Test	Result - Remark	Verdict
TEX ST	et nite with wait with my war		TEX SEX
mr m	- other standard	- Will Muli Muli Mu	JIP P
2.11 (5.3)	Internal wiring		↓ P
2.11 (5.3.1)	Internal wiring of suitable size and type	WILLER WALL MULL MULL	1 P 1
et jet	Through wiring	the state of the s	N S
m, n	- not delivered/ mounting instruction	L'EN UNITE MALL WALL	w N
TEX	- factory assembled		N.C
m, m,	- socket outlet loaded (A)	E - neit wall wall w	N
TEX IE	- temperatures		N <sup>-</sup>
ing Air	Green-yellow for earth only	Write Whit Mur And	N
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring	TEX SLIEN MILEN MALEN	W LIEP W
* LEX	Cross-sectional area (mm²)	(see Annex 1)	P
Mr. M	Insulation thickness	INLIEU MALTE WALLE	n' P
	Extra insulation added where necessary	1 1 st st	Net Net
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via intern	nal current-limiting device	L WP
LITE WALL	Adequate cross-sectional area and insulation thickness	TEK WHITEK WHITEK WHITE	P
2.11 (5.3.1.3)	Double or reinforced insulation for class II	LEEK MITEK WAITEK WALTER	un III Puni
2.11 (5.3.1.4)	Conductors without insulation	EL LIER OLIER MITER	INLIE WALTE
2.11 (5.3.1.5)	SELV current-carrying parts	THE THE STEEL ON	TEX NX
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber	the state of	N
2.11 (5.3.2)	Sharp edges etc.	ar mr mr mr	N P
J. LIER	No moving parts of switches etc.	A OH THE THE	N
111. 11	Joints, raising/lowering devices	it wait and make	N N
الم المالي	Telescopic tubes etc.	s at at tet	Nº
1/1 1/2	No twisting over 360°	WILL MULL MULL MI	Р
2.11 (5.3.3)	Insulating bushings:	et set set of	P
20	- suitable fixed	WHILL AWE, AND AND	Р
IEL OLIES	- material in bushings	et let let let	P
7,,	- material not likely to deteriorate	W. Mur. Mur. M.	Р
INLITER AU	- cables with protective sheath	e- Tex Tex Tex	LI PLI
2.11 (5.3.4)	Joints and junctions effectively insulated	Mus. Miss My	N
2.11 (5.3.5)	Strain on internal wiring	t at let let	N N



Reference No.: WTZ20F08056713L Page 17 of 62

- JEX	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.3.6)	Wire carriers	TEX SITE OF SMITH	SUL N
2.11 (5.3.7)	Wire ends not tinned	me we want	Р
LITE WALL	Wire ends tinned: no cold flow	LIER MITE MILE MILE	N
2.11 (5.4)	Test to determine suitability of conductors having a	reduced cross-sectional area	N S
WILEY W	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N
11/2 11/2	No damage to luminaire wiring after test	Wer Mr. Mr. M.	N

2.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK	WE ME ME AND IN B
2.12 (8.2.1)	Live parts not accessible	of the text of the P
t Jet	Basic insulated parts not used on the outer surface without appropriate protection	IN THE TEXT IS A P
MITEK MIT	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	While whi was with the N
TEK ALTEN	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires	IN THE TEXT TEXT OF THE
ex antiex	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements	ex with the start with
- STEK W	Basic insulation only accessible under lamp or starter replacement	AND
111 111	Protection in any position	wer we we all
LIEK NY	Double-ended tungsten filament lamp	TEL TEL TELL
10, 10,	Insulation lacquer not reliable	N N
LIER WILE	Double-ended high pressure discharge lamp	TEX TIES STEN
y Jex	Relevant warning according to 3.2.18 fitted to the luminaire	THE THE N
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position	Marit and Aut an N
2.12 (8.2.3.a)	Class II luminaire:	WALTER WALTE WALTE WALTE
nite white	- basic insulated metal parts not accessible during starter or lamp replacement	NITER MITTER MITTER MITTER MITTER
IEK WALTER.	- basic insulation not accessible other than during starter or lamp replacement	THE NATES WALTER WATER
k unlitek wi	- glass protective shields not used as supplementary insulation	The state of the N
2.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed	THE THE THE THE



Reference No.: WTZ20F08056713L Page 18 of 62

- TEX	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:	WAITER WALTER WALTER	N N
LIET WILLE	Ordinary luminaire:	TEX TEX STEEL ON	JE NINN
1 1	- touch current	- 1/1 1/1 1/1 1/2	N
E. NALTE V	- no-load voltage	et jet liet wire	No.
	Other than ordinary luminaire:	21/2 211 211	N
WHITE WA	- nominal voltage	- JEK STEK MITE	NILTY NIN'
2.12 (8.2.4)	Portable luminaire have protection independent of supporting surface	THE TEXT TEXT	TEL NL
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe	by my my m	P
2.12 (8.2.6)	Covers reliably secured	TE WALL WALL WALL	7/1 P.1/1
2.12 (8.2.7)	Discharging of capacitors ≥ 0,5 μF	at at all	P
1/12 1/1	Portable plug connected luminaire with capacitor	"NUT! NUT! MUT	W N
JEK N	Other plug connected luminaire with capacitor	at let let	JE PE
211, 211	Discharge device on or within capacitor	AUT. AUT. AUT.	N
TEX LIE	Discharge device mounted separately	at at alt.	AP AP

2.13 (12)	ENDURANCE TEST AND THERMAL TEST			
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 4.13			
2.13 (12.3)	Endurance test:			
TEX SE	- mounting-position	. As in normal use	Et Liet	
me in	- test temperature (°C)	. 35 °C	10, -	
LIEK NIEK	- total duration (h)	. 240 h	LIE	
4,,	- supply voltage: Un factor; calculated voltage (V)	264V	4, -	
EK WIFE N	- lamp used	LED AT ATT	WILL WILL	
2.13 (12.3.2)	2.13 (12.3.2) After endurance test:		Р	
WILL MAL	- no part unserviceable	TEX LIEK OLIEK AN	NP.	
A	- luminaire not unsafe	Mr. M. M.	P.	
Inlie William	- no damage to track system	ITEK SITEK BLIEF SINITE	Jun N	
it let	- marking legible		Р	
The Maria	- no cracks, deformation etc.	JEX NIET MIE MITE	in Su	
2.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	↓ P	
2.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N	
2.13 (12.6)	Thermal test (failed lamp control gear condition):	10, 2,	A NA	



Reference No.: WTZ20F08056713L Page 19 of 62

	IEC 60598-2-2	the second second	
Clause	Requirement + Test	Result - Remark	Verdict
2.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	lifek whilek whilek	MULTER
LIEN INLIER	- case of abnormal conditions	EX TEX TEX SITES	ريات ر
·	- electronic lamp control gear	m, m, m,	N
antici N	- measured winding temperature (°C): at 1,1 Un	- IEX WIEX WIEX	16 - 10 L
oritex and	- measured mounting surface temperature (°C) at 1,1 Un	THE THE STEP SIZE	N
4, 4	- calculated mounting surface temperature (°C)	NE AND AND AND	N
ALTER WALTER	- track-mounted luminaires	TEX LIEX SLIER WITE	Ň
2.13 (12.6.2)	Temperature sensing control	Mr. In	N
TE WALTE	- case of abnormal conditions	ITEK OLIEK MITER IN	rize nu
L A	- thermal link	ALL THE TOTAL PROPERTY.	N
writ w	- manual reset cut- out	TIEL WILL WALLE WAL	N
iet is	- auto reset cut- out	711 - 711 - 1X	N
	- measured mounting surface temperature (°C)		MIN
et tet	- track-mounted luminaires		N
2.13 (12.7)	Thermal test (failed lamp control gear in plastic lumina	aires):	N 3
2.13 (12.7.1)	Luminaire without temperature sensing control	L it it	-N
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W	meric mer mer on	N
White My	Test method 12.7.1.1 or Annex W	LIEK NITER WITE WALT	Unal.
it de	Test according to 12.7.1.1:	m w t	N
ivry and	- case of abnormal conditions	L. JE NALIE WALL	m_
	- Ballast failure at supply voltage (V)	the state of the s	All the
, mi	- Components retained in place after the test	The state of the state of	N
t TEX	- Test with standard test finger after the test	at at alt .	OF N
mr m	Test according to Annex W:	WALL MALL MALL MALL	N
JEK J	- case of abnormal conditions	it it it it	
Mr. M.	- measured winding temperature (°C): at 1,1 Un	Write Mury Mur Mur	20,
VILER MUITER	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	TEX MITEX MATEX WAITEX	unli <del>llik</del>
EX WUTER	- calculated temperature of fixing point/exposed part (°C)	t lifet miter miter	TIEK W
- 24	Ball-pressure test	711 711 11	N
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70	W, transformer > 10 VA	N
ALTE MIT	- case of abnormal conditions	EX TEX JEX LIES	NITE.



Reference No.: WTZ20F08056713L Page 20 of 62

	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
all de	the tree city will work with the		et cet
nur, nur	- measured winding temperature (°C): at 1,1 Un	LIER WILL WALL WALL	nu -
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	TEK STEK STEK MITER	NALTE WA
EK SLIEK I	- calculated temperature of fixing point/exposed part (°C)	u	NIEK MIT
20, 4,	Ball-pressure test		N
2.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA	A SUITER WITTER WHITER WA	I NIE
JEX JE	- case of abnormal conditions		* 150x
11. 11.	- Components retained in place after the test	Will MULL MULL MAN	N
JEK LIEK	- Test with standard test finger after the test	at at at at	J <sup>C</sup> N
2.13 (12.7.2)	Luminaire with temperature sensing control	DITTE WIND WIND	N
Y CLIER IN	- thermal link	Yes 🔲 No 🗌	LIEK WIFE
10, 1,	- manual reset cut-out	Yes 🗌 No 🗌	
WILL WILL	- auto reset cut-out	Yes 🗌 No 🗌	TET STATE
1 x	- case of abnormal conditions	" Not My My And And	7.
LIFE	- highest measured temperature of fixing point/ exposed part (°C):	TEX WHITEK WHITEK WHITE	mri _ m
EK NITER	Ball-pressure test:	Tel Tel Tel	N
2.13.1 (-)	Wiring, for connection to the supply, not reach uns	safe temperature	Р
NITE ON	- measured temperature of the cable (°C)	(See ANNEX 2)	P

2.14 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND	MOISTURE	WI.
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		
TI WILL	- classification according to IP:	IP20	W -M
* TEX	- mounting position during test:	Acc. to user manual	Jet-3
m n	- fixing screws tightened; torque (Nm):	- WILL MULL MULL M	1 m
TEX N	- tests according to clauses:	Cl.9.2.0	E TEN
111, 11,	- electric strength test afterwards	Write Mure Mr. Mr.	Р
LIEK OLIE	a) no deposit in dust-proof luminaire	et set set set	N
1, 20,	b) no talcum in dust-tight luminaire	it, Mut. Mus. Mi	N
IER WALTER	c) no trace of water on current-carrying parts or where it could become a hazard	EX MITEX WAITER WAITER	W TE NW
k whitek wh	d) i) For luminaires without drain holes – no water entry	aliek Nifek Milekay	II NIT
NITEK INLI	d) ii) For luminaires with drain holes – no hazardous water entry	et tet tet set	EX NEX



Reference No.: WTZ20F08056713L Page 21 of 62

TEX	IEC 60598-2-2				
Clause	Requirement + Test	Result - Remark	Verdict		
NUTER WIL	e) no water in watertight luminaire	- CLIEF OLIEF OUTER	N SIN		
et et	f) no contact with live parts (IP 2X)		P		
r. Mur	f) no entry into enclosure (IP 3X and IP 4X)	NIET WHITE WALLE WA	N N		
et let	f) no contact with live parts (IP3X and IP4X)	at at a	+ OFN		
ny 1	g) no trace of water on part of lamp requiring protection from splashing water	the mark mark war.	AL N		
MULL MY	h) no damage of protective shield or glass envelope	White white white	until uN		
2.14 (9.3)	Humidity test 48 h	25°C, 93%RH	ITE STP		

2.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRE	NGTH	√°P
2.15 (10.2.1)	Insulation resistance test	Marie mais mass	P
MUT.	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		7 <u>71</u>
NALL M	Insulation resistance (M $\Omega$ ):	LIER OLIER WITE WAL	NI NI
.t .	SELV	We the second	Р
TI MUL	- between current-carrying parts of different polarity:	TEX NITER WITE WITE	N N
EK WITEK	- between current-carrying parts and mounting surface:	100 ΜΩ	P
TEX	- between current-carrying parts and metal parts of the luminaire:	100 ΜΩ	Р
NITEK NA	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	100 ΜΩ	EX NATES
. <b>L</b> 2	- Insulation bushings as described in Section 5:	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N
TE WALL	Other than SELV	TEL MITE	P
L ex	- between live parts of different polarity:	100 ΜΩ	L P
WILL	- between live parts and mounting surface:	100 ΜΩ	n' Pi
at .	- between live parts and metal parts:	100 ΜΩ	Р
White M	- between live parts of different polarity through action of a switch:	White white white wh	NN
LIFE WAL	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	NIFEK WALTER WALTER WALTE	Just N
WILL	- Insulation bushings as described in Section 5:	SEX OUTER MITE WALLE	MN NA
2.15 (10.2.2)	Electric strength test	- TEK LIEK OLIEK O	E P
7.	Dummy lamp	m. m. m.	N
WITE IN	Luminaires with ignitors after 24 h test	TEX TEX STEP ST	N N



Reference No.: WTZ20F08056713L Page 22 of 62

	IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict	
et .	the the site with the same		t LEX	
ing, in	Luminaires with manual ignitors	alier with while wall	W N	
	Test voltage (V):	in in the list	Р	
ir, Mur	SELV	LIER WITE WALL WALL	J P J	
et let	- between current-carrying parts of different polarity:	- 1	N .	
m	- between current-carrying parts and mounting surface:	500 V	Р	
MUTIE M	- between current-carrying parts and metal parts of the luminaire	500 V	Р	
INLIEK WILL	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	500 V	P	
MALI	- Insulation bushings as described in Section 5:	-or life alter mile	JUN NOT	
L 04	Other than SELV	an an ar	P	
Writ 1	- between live parts of different polarity:	1480 V	Р	
at .	- between live parts and mounting surface:	2960V	P	
WALLE WA	- between live parts and metal parts:	2960V	JI P	
LIEK MIK	- between live parts of different polarity through action of a switch:	THE THE STEE STEEL	N-	
EX WALTEX	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	EX WILEX WILEX	N WY	
LEX	- Insulation bushings as described in Section 5:	1	⊬ N.≪	
2.15 (10.3)	Touch current or protective conductor current (mA).:	Touch current: Max. 0.03mA	P	

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

2.8 (11.2)	TABLE: Creepage distances and clearances					Р		
L 14	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							
MALTE	Applicable part of IEC 60598-1 Table 11.1* and 11.2*						Wall Bu	
L ext	Insulation Measured clearance		Requ	ired	Measured	Required		
		clearance	*Table	creepage	ge creepage	*Table		
Distance 1:	at Bat	2.9	1.5	11.1	2.9	2.5	11.1	
Working vol	tage (V)	00		et et :	Max. 240Vac	WILL WAL	W.	



Reference No.: WTZ20F08056713L Page 23 of 62

- TEX	TEX NI	ET INLIE WAY	IEC (	60598-2-2		at at	TEX TEX
Clause	Require	ment + Test	t ex	LIEK OLIE	Result - Rema	rk we we	Verdict
	Et JET	ماله ماله	ant.	11. 12.		A .0	t set
PTI		70, 70,		:	< 600 ⊠	≥ 600 □	w
Pulse voltage	e if applicat	ole (kV)			11. 12.	at at	The state of the s
Supplementa	ry informat	ion: Live parts o	f different po	larity	LIET WITE W	nii wa.	mr m
Distance 2:	R	6.0	3.0	11.1	6.0	5.0	11.1
Working voltage (V):					Max. 240Vac	in with m	<u> </u>
PTI					< 600 ⊠	≥ 600 □	et Tex
Pulse voltage if applicable (kV)					White white	Mur Mur	10
Supplementa	ry informat	ion: Live parts a	nd accessibl	e part	et et	TEX JE	CLIER
Distance 3:	R	6.0	3.0	11.1A	6.0	5.0	11.1B
Working volta	ge (V)			:	240	JEK JEK	NITE IN
PTI:					< 600 ⊠	≥ 600 □	
Pulse voltage if applicable (kV)				JEX S	EX NITER IN	TEN TITE	
Supplementar	y informati	on: Current-carr	ying parts a	nd supporting	surface	- 1 <sub>11</sub>	I A
Distance 4:	S	2.6	1.5	11.1A	2.6	2.5	11.1B
Working volta	ge (V)			·····:	240	10. 1	<del></del>
PTI	. 2/10			:	< 600 ⊠	≥ 600 □	write on
Pulse voltage	if applicab	le (kV)		:	""		10 <del>1</del> 1
Supplementar anchorage an			urface of a fl	exible cord or o	cable where it is	s clamped in a c	ord

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

Allowed impression diameter (mm) ≤2.0					
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)		
DC connector1	See Annex 1	125	0.7		
DC connector2	See Annex 1	125	0.9		
LED cover	See Annex 1	125	0.8		



Reference No.: WTZ20F08056713L Page 24 of 62

et set s	EX NIET WIFE W	IEC 60598-2-2		EX JEY
Clause	Requirement + Test	ex rex sites wite	Result - Remark	Verdict

2.16 (13.3.1) TABLE: Needle-flame test (IEC 60695-11-5)							
Object/ Part Material	No./	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict	
DC connecto	or1	See Annex 1	10	No	nr O'n	Р	
DC connecto	or2	See Annex 1	10	No	0	- P.	

2.16 (13.3.2)	TABLE	E: Glow-wire test (IEC	60695-2-11)			P
Glow wire	tempera	ture	: 650°C	EK JEK N	ET INLIES N	
Object/ Par Material	t No./	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
DC connec	tor1	See Annex 1	30	No	(L) (L)	P
DC connec	tor2	See Annex 1	30	No	V. 0/V.	√ P
LED cover	Et all	See Annex 1	30	No	at 0 at	Ϋ́P
			uished within 30 s of with			Yes
Supplemen	tary info	rmation:	LEK J.	ET CLIEF WIT	WALL WA	r. 100

2.16 (13.4) <b>TABLE: Proof tracking test (IEC 60112)</b>					
Test voltage PTI		: 175 V	WILL A		
Object/ Part No./ Material Manufacturer/ trademark		Withstand 50 drops without failure on three places or on three specimens	Verdict		
The state	LEK LIER IN	it write we an an an and			
ex write while while	Mir. Mr. 20.	a the set set set set at the set	EL VICTO		
Supplementary information:	TEX TEX INIT	e with mir and any and	, , , <u>, , , , , , , , , , , , , , , , </u>		



Reference No.: WTZ20F08056713L Page 25 of 62

Et JEH	LIER OLIER MIER MIL	IEC 60598-2-2		et tet te
Clause	Requirement + Test	TEK TITEK MIT	Result - Remark	Verdict

ANNEX 1	Com		W.B				
object/part No.	rt code manufacturer/ trademark		type/model	technical data	Standard		rk(s) of formity
Input wire of LED driver	В	Arditi CN Electric (Huizhou) Co., Lt d.	H03VVH2-F	2x0.75mm²	AS/NZS 6022 7.5	SAA110188E	
LED driver 01	unite unite litex	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF040YA (H)0900H	Input:220- 240VAC, 50/60Hz, 0.35A Output:33- 40VDC, 900mA, Max 55VDC, Max 36W, ta:50°C, tc:90°C, Independent, SELV, Constant current	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 50203	SEA TE
LED driver 02	Boot white the state of the sta	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF030YA (H)0600H	Input:220- 240VAC, 50/60Hz, 0.25A Output:33- 40VDC, 600mA, Max 55VDC, Max 24W, ta:50°C, tc:80°C, Independent, SELV, Constant current	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 50203	3EA
LED driver 03	Burt	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF022YA 0450H	Input:220- 240VAC, 50/60Hz, 0.2A Output:25- 40VDC, 450mA, Max 55VDC, Max 24W, ta:50°C, tc:85°C, Independent, SELV, Constant current	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 50203	SEA NETE
LED driver 04	B white united	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF015YA 0300H	Input:220- 240VAC, 50/60Hz, 0.1A Output:25- 40VDC, 300mA, Max 55VDC, Max 24W, ta:50°C, tc:80°C, Independent, SELV, Constant current	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 50203	SEA LIEN



Reference No.: WTZ20F08056713L Page 26 of 62

- TEX S	EX NIET WITER WITE	IEC 60598-2-2		EX JEY
Clause	Requirement + Test	t let sliek wie	Result - Remark	Verdict

LED driver 05	B	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF015YA 0210H	Input:220- 240VAC, 50/60Hz, 0.1A Output:25- 40VDC, 210mA, Max 55VDC, Max 24W, ta:50°C, tc:80°C,	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 502033EA
LED driver 06	B F	Shenzhen Ledfriend Optoelectronics Co., Ltd	LF- GIF015YA 0150H	Independent, SELV, Constant current Input:220- 240VAC, 50/60Hz, 0.1A Output:25- 40VDC, 150mA, Max 55VDC, Max 24W, ta:50°C, tc:80°C, Independent,	AS/NZS 61347.1 AS/NZS 61347.2.13	GMA- 502033EA
Output wire of LED driver & lead wire of LED	B	ZHONGSHAN YUXUAN ELECTRONICS CO LTD	2468	SELV, Constant current 80°C, 300V, 24AWG	TEX WITER	UL E316286
DC connector1	В	TORAY INDUSTRIES INC	CM3004- V0(rr)	PA66; V-0	EX WALLER WAL	UL E41797
DC connector2	В	ZHEJIANG HON GXING ELECTRI CAL CO LTD	- 0	PA66	WALTER WALTE	Tested with appliance
CCT switch	В	LAXXSCOM	SS-23D03- G5	50VDC, 1A, 1E4, T20-60	EN 61058-1 EN 61058-2-1	Tested with appliance
-PCB	В	JIANGMEN JUNYEDA ELECTRONICS CO LTD	JYD-D1	V-0, 130°C	TEX W	UL E345177
-Switch enclosure	В	COVESTRO DEUTSCHLAND AG [PC RESINS]	6555 + (z)(f1)	PC; V-2	Whitek whi	UL E41613
LEDIE	В	MLS	SMD2835	6500K,60mA	EN 62778	Tested with appliance
LED board	B	WING SHING ELECTRONIC & PCB LTD	YS-4	V-0; AI	uret outet.	UL E190407
LED cover	B	HENGDIAN GRO UP TOSPO ENGI NEERING PLAST ICS CO LTD	C301-XX	PC whitek with	ex whitex wh	UL E187910

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 Waltek Testing Group (Foshan) Co., Ltd. http://www.waltek.com.cn



Reference No.: WTZ20F08056713L

E- JEX	iek aliekanite av	IEC 60598-2-2		EX JEY
Clause	Requirement + Test	ex cex sliex wife	Result - Remark	Verdict

# D - Alternative component

ANNEX 2	Temperatur	e measur	ements, t	hermal tes	ts of S	Section	12	UNITER OF	UEP.
EX TEX	Type referer	nce			:	EOL.	CE.FR20-36	et .	et— ,
1115 1	Lamp used						al LED	7/17	-110
LIEK N	Lamp contro	ol gear use	d	7/2	:	Integr	al LED driver	× 16	
111 211	Mounting po	sition of lu	minaire		:	Acc. t	o user manual	m	7/1
LIEK OLIE	Supply watta	age (W) 35			35.7	et let	LIEK	CL <del>EET</del>	
7,	Supply curre	ent (A)			;	0.155	mi mi	an .	<u> </u>
ELOUIE	Calculated p	ower facto				0.957	TEX JEX	LIEF	JE-
	Table: meas	ured temp	eratures c	orrected for	t <sub>a</sub> = 2	25 °C:	i w w		Р
INLIE N	- abnormal o	perating n	node	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	:	Full th	ermal insulation	IEL INLY	<del>. 101</del> 1
	- test 1: rate	d voltage			:	-7/1	1/1° 1/1		
TEK TEK		test 2: 1,06 times rated voltage or 1,05 times atted wattage				100	White VILEK		
ex Jex						ing A			
WILEY OF	- test 4: 1,1 rated wattag					(test v	nes rated voltage vas tested as pe Figure ZA6))		<u>.w</u>
TEX S	Through wirk					<u> </u>	Mrs Mrs	TEX	TEX
emperature	(°C) of part	L/ A	Clause 12	2.4 – norma	al	W.	Clause 12.	5 – abnorr	nal
TEK NALTER		test 1	test 2	test 3	lim	nit	test 4	lin	nit
Power cord		15 Et .	32.1	-3NVT.	7	5	T	, t	£ ,
Output wire o	of LED driver		35.3	of Miles	8	0	ies with wh	il wi	'n'
Lead wire to LED)	LED (near	in -we	54.6	-E+	8	0	t still mit	y Write	WALTE
_ED board			63.5	2115 - 2	Re	ef.	10 T		TEX
Plastic cover for COB		-0+	63.5	LITELY IN	Re	ef.	anii - anii	mr. 1	
PCB of switc	CB of switch		30.4	* ``@	Re	ef.	TEX - TEX	liek ne	TEK WI
Switch enclo	sure	aliek W	27.5	MULT	Re	ef.		at a	ļ.
Enclosure ou	itside (tc)		55.8	A TEX	9	0 ,,,,	e. Murie Mur	MULL	MU
Mounting sur	face	in Mur	30.8	100	9	0	11 10	- JEK	LIER



Reference No.: WTZ20F08056713L Page 28 of 62

et set s	EX NIET WIFE W	IEC 60598-2-2		EX JEY
Clause	Requirement + Test	ex rex sites wite	Result - Remark	Verdict

Illuminated surface (0.1m)	Γ <del></del> <sup>'</sup> ⊁	33.4	LIEK .	90	White white	Murry - Murry
On the side of test box	MULL	30.9	 71, 22	90	TEX- TEX	ALTEK TALTER OF
On the top of test box	JEK.	29.2	TEK -ONL	90	mr mr	7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -
Mounting surface of test box	71. 1.	35.2	t 17 <sup>EH</sup>	90	40.1	90
Outer surface of lamp (hottest)	rit -Mur	44.5	- C. A.	90	ek aliek mi	ek onliek onlie
Simulated building element	ex Te	38.6	Whi.	90	711, T	1 - 1 t
Thermal insulation		37.9	LIEN W	90	45.7	130
Supports	white.	40.2	~ ~	90	TEX - TEX	NIFEK WEITEK





Reference No.: WTZ20F08056713L Page 29 of 62

Et TEX	THE STEE WITH MILE	60598-2-2	t TEX TEX
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	Screwless terminals (part of the luminaire)	mr mr m. m.	N
IE. WITE	MULT MULT AND	TEK JEK LIEK WITE	MITE
(15)	SCREWLESS TERMINALS	in the the	
(15.2)	Type of terminal	L LIER NITER WITE N	11. M
x	Rated current (A)	-4, 4, 4,	
(15.3.1)	Material	LIEK WIER WILL MI	JN
(15.3.2)	Clamping	M. M. A. C.	L N-
(15.3.3)	Stop	LIER WILL MULTE WALL	N. N
(15.3.4)	Unprepared conductors	t it	N
(15.3.5)	Pressure on insulating material	EL WILL WALLE	N/
(15.3.6)	Clear connection method	A st set	N.
(15.3.7)	Clamping independently	WILL MULL MULL M	N
(15.3.8)	Fixed in position	at at at a	e Ne
(15.3.10)	Conductor size	WILL MULL MULL MULL	△ <sub>N</sub> N
TEX LIER	Type of conductor	A SH SEX TEX	Ä.
(15.5.1)	Terminals internal wiring	TIE MULL MULL MULL	N
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples):	T BUTER MUTER WHITER W	N
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples):	- TER SLIER SLIER SIN	N
A A	Insertion force not exceeding 50 N	41, 41, 41,	L N+
(15.5.2)	Permanent connections: pull-off test (20 N)	ati Mile White	N N
(15.6)	Electrical tests	t at	et
MULL	Voltage drop (mV) after 1 h (4 samples):	The Marine	N S
+ LEX	Voltage drop of two inseparable joints		N N
mr m	Number of cycles	- WILL WHILL MULLED	70
NALTEK WAL	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)	TEX SIEK MITER MIL	N C
LIEK MIEK	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)	at the the other	N
EX TEX	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)	a st lit the	N
Mis	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples):	Must mer mer	N N
(15.7)	Terminals external wiring	ALTER MITER MALTER AN	N
A .	Terminal size and rating	70, 00	N



Reference No.: WTZ20F08056713L Page 30 of 62

				, or le	EC 6059	8-2-2					
Clause	Requi	rement +	Test	t ,(i)	الله الم	ik arti	Result	- Remar	k whi	Me	Verdict
(15.8.1)		est spring ections (4				MITEK	: UNITER	WALTER	WALTEK.	UNLIEK	N
LIET WALTE		est pin or N)					1 1 1 W	NITEK W	ALTEK W	LIFE	N N
(15.9)	Conta	ct resista	nce test	ri m	7. 4	, ,	.4	. <del>\</del>	et x		N
11/2	Voltage drop (mV) after 1 h			711	N						
terminal	LIE JAV	1,0	2	3	4	5	6	7	8	9	10
voltage drop	o (mV)				-CLTE	10-11-	Na Tra	115	717	71,	7,
alter alt	Voltag	ge drop o	f two inse	eparable	joints		+	1EX	TEX	LIER	N
711	Voltag	ge drop a	fter 10th	alt. 25th	cycle	NILIE.	MULT	Mr.	1115 1	4,	N
TEK WITE	Max. a	allowed v	oltage dr	rop (mV).		; <sub>[</sub>	- 4	LEX .	TEX	JEK (	11 ET - 10
terminal	× -	1	2	3	4	5	6.0	7.00	8	9	10
voltage drop	o (mV)	n				A		* K	+		
	Voltag	ge drop a	fter 50th	alt. 100tl	n cycle	7	MILL	2/1/2	7,1	- 2,,	N
intitude whi	Max. a	allowed v	oltage dr	rop (mV).		: ·	- TEX	TEX	LIER	MITE	an <del>cile</del>
terminal	+ 124	1	2	3	4	5	6	7	8	9	10
voltage drop	o (mV)	712					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	JEX.	LIE.	U	J. L. J.
* c*	Contir	nued age	ing: volta	ige drop	after 10t	h alt. 25	th cycle	1	, ,		N
WALT.	Max. a	allowed v	oltage dr	rop (mV).		,: /	TEX	1 <sup>EK</sup> . ~ 1	iei ani	, in	10
terminal	TEX.	1	2	3	4	5	6	7	8	9	10
voltage drop	o (mV)		-30		(6	F (			NATIO!	Will.	UAL
at a	Contir	nued age	ing: volta	ige drop	after 50t	h alt. 10	0th cycle	2"	~*-	at-	N.+
inti wh	- 10	allowed v	-						WILL.	MULL	mi.
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)			\ <u>-</u>	4-	12 × 12 × 12 × 12 × 12 × 12 × 12 × 12 ×		-	2 1	<u>-</u>	



Reference No.: WTZ20F08056713L Page 31 of 62

LIEX	Australi	ian deviation	TEX JEY
Clause	Requirement + Test	Result - Remark	Verdict
- 13 12 X	SER STER WITE WALL WALL V		* <u> </u>
ANNEX 4	Australian deviation (AU variations IEC 60598-1:2014)	s of AS/NZS 60598.1:2017+A1:2017 to	Р

	APPENDIX ZZ	<del></del>
WALTE	VARIATIONS TO IEC 60598-1, Ed. 8.0 (2014) FOR AUSTRALIA AND NEW ZEALAND	Mur
0,00	GENERAL INTRODUCTION	P
0.1	Add: 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.
A MUTER	NOTE <b>Portable rechargeable battery operated luminaires</b> should comply with Annex B, 'Appliances powered by rechargeable batteries' of AS/NZS 60335.1, Household and similar electrical appliances—Safety, Part 1: General requirements (IEC 60335-1 ED. 5, MOD). In addition, portable, rechargeable, battery-operated luminaires with lithium ion batteries should have overvoltage protection.	y with
0.4.2	Add: Add: Add Add Add Add Add Add Add Ad	P
	In Australia, for equipment, other than class III equipment, that is intended for connection to the supply mains and not marked with:	NITEX S
	- a rated voltage of at least 240 V for single-phase equipment or a rated voltage of at least 415 V for three-phase equipment; or	EK WA
	- a rated voltage range that includes 240 V for single-phase equipment and 415 V for three-phase equipment,	- WALTE
	the rated voltage is equal to 240 V for single-phase equipment and 415 V for three-phase equipment, and the upper limit of the voltage range is equal to 240 V for single-phase equipment and 415 V for three-phase equipment.	unliek Liek v
0.5	Add: Relevant Australian/New Zealand Standard replaces the IEC Standard unless otherwise specified.	P Whit
0.5.101	Add: Capacitors	No
MULL A	Capacitors shall be of a type to ensure that any capacitor failure results in a failsafe outcome.	W.N



Reference No.: WTZ20F08056713L Page 32 of 62

	Australian deviation		
Clause	Requirement + Test	Result - Remark	Verdic
uncifik vu LTEK vunci	Capacitors (other than those incorporated in control gear that comply with the relevant standard) shall comply with one of the following:  - Capacitors likely to be permanently subjected to	MITER WAITER WALLEY	unit un N
	the supply voltage, used for radio interference suppression or for voltage dividing shall comply with IEC 60384-14.	THE OUTER MITTER WALTE	it while the
	<ul> <li>Other 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 EIA-456-A, Metallized Film Dielectric Capacitors for Alternating Current Applications, shall comply with IEC 61049 and IEC 61048:2006 excluding the endurance test of 18.1.1.</li> </ul>	Whitek whitek whitek w	Whitek whitek
WALTER	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.	WILER WHILE	white with
0.5.102	Add: Control gear	t it it	P
in m	Power supplies shall comply with the relevant part 2 of the AS/NZS 61558 series.	2 Intit wat with	W N
in whi	Control gear shall comply with the relevant part 2 of the AS/NZS 61347 series.	f TER WALTER WALTE WA	P
WALTE	Battery chargers used for lighting other than emergency lighting shall comply with AS/NZS 60335.2.29.	Lix multex multex mult	N N
WILEK AN	Sensor switches and similar control circuits, including those incorporated in other equipment, are considered electronic switches (see Clause 4.8).	White white white	with white
2 412	CLASSIFICATION OF LUMINAIRES	The sur	TEL TEL
2.2 Little	Class 0 luminaires are not permitted in Australia or New Zealand.	SEA WILLER WILLER PARTY	x writex write
304	MARKING	- 11 11 11	CLIFIT OF P
3.1	In Australia and New Zealand, instructions and	Will Mill Mill	P

3,00	MARKING	LIER WIFE WIFE WALTE	ur <b>P</b>
3.1 L	In Australia and New Zealand, instructions and other texts required by this Standard shall at least be written in English.	WIFE WILEY WALLEY WALTER	ONTER W
3.2 JUNE 1	Delete the second paragraph beginning with 'Marking may be on ballast provided'.	EL STEK WIFER WITER W	SEL P
Table 3.1	Move Item 3.2.21 from the second column to the third column.	A TEX ITEX SITES WITH	- P
	3.2.21 The relevant symbol for luminaires not suitable for covering with thermally insulating material	me me me	et



Reference No.: WTZ20F08056713L Page 33 of 62

	Australian deviation		
Clause	Requirement + Test	Result - Remark	Verdict
3.2.3	The rated maximum ambient temperature t <sub>a</sub> . (see Figure 1).	UNLIES WHITES WHITES	IN P
3.2.12 N	Add: 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".	MUST BE INSTALLED BY A LICENSED ELECTRICIAN	ANTE MILES
3.2.23	Add: The additional information shall include the symbol "Do not stare at the operating light source" (see Figure 1) along with an explanation of the symbol.	Whitek whitek whitek w	NEET NEET
3.3.7 Whitek	Delete Clause and replace with:  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 10 minutes at least once a week.  In addition, the luminaire shall be operated: - complete with its protective shield; or - with a double jacketed lamp.		WINDER WHITE  WH
3.3.18	<b>Delete</b> the text ', i.e. for indoor use only'.	est tex liest mis	No.
3.3.21	<b>Delete</b> the text 'Caution, risk of electric shock' and the symbol.	THE TEX TEX	N N
3.3.101	The instructions shall contain details of the components in the luminaire that require replacement as part of a maintenance program.	while while while	WILLEY WILLEY
3.3.102	The instructions for luminaires, including for remotes or other accessories containing coin/button cell batteries and batteries designated R1, shall include the safety warnings below.	t est test in	TEX IN TEXN
NITEK	The safety warnings are not required where these batteries are not intended to be replaced or are only accessible after damaging the equipment.	, which the test	ALTEK MATER



Reference No.: WTZ20F08056713L Page 34 of 62

	Australian deviation				
Clause	Requirement + Test	Result - Remark	Verdict		
MILEK WALTER WALTER WALTER WALTER WALTER	The safety warnings:  - CAUTION: Do not ingest battery—Chemical burn hazard [or equivalent wording].  - [The remote control supplied with] this product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.  - Keep new and used batteries away from children.  - If the battery compartment does not close securely, stop using the product and keep it away from children.  - If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.	est tex test outer on	WEIFER WALTER		

4	CONSTRUCTION	L. Mur. Aug. Bun.
4.7.2	Delete the first paragraph and replace with the following:  Terminals shall be located or shielded in such a way that, if a wire of a stranded conductor escapes from a terminal when the conductors are fitted, there is no risk of contact between live parts and metal parts that can be touched with the standard test finger, nor shall it be possible to touch a live free wire with the standard test finger when the luminaire is fully assembled for use or open for the replacement of replaceable light sources or starters.	Whitek wh
4.8 Li	Add: Switches shall comply with AS/NZS 3133, the AS/NZS 60669 series or AS/NZS 61058.1. Switches that indicate an off position shall have contacts with an air break and comply with AS/NZS 3133, AS/NZS 60669.1 or AS/NZS 61058.1.	white whitek whitek
	Electronic switches, when incorporated in or supplied with the luminaire, shall comply with the requirements of AS/NZS 60669.2.1 or IEC 61058-1 classified for 10,000 operating cycles	Et white mutility whi
4.10.4	Delete the last sentence and replace with the following::  If the working voltage does not exceed the rated voltage of the capacitor, accessible conductive parts separated from live parts by double or reinforced insulation, as above, may be bridged by a single Y1 capacitor with qualification approval as specified in IEC 60384-14.	JUNITER WHITE VIN NEW VINIER V
4.14.6	Add: A fixed socket-outlet complying with AS/NZS 3112 or AS/NZS 60884.1 is used for the test.	MITEL WALE WAS



Reference No.: WTZ20F08056713L Page 35 of 62

	Australian deviation		
Clause	Requirement + Test	Result - Remark	Verdic
4.32	Add:  Metal oxide varistors shall comply with the requirements of AS/NZS 3100 for metal oxide varistors incorporated in accessories.	50Ω	MALTER WATER W
4.101.1	Small batteries	a at at a	# N
WITEK	Batteries that fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1 shall not be removable without the aid of a tool.	TEX TEX TEX	N N
NITEK WA	Luminaires intended for children under the age of three, or parts of such luminaries that contain batteries, shall not fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1.	Will Muries Muries	N. N
ies white	For luminaires or parts of luminaires containing batteries that fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1, the batteries shall not be accessible without the aid of a tool.	ex whitek whitek white	K WIT WILL
LITER !	Compliance is checked by inspection and by the foll	owing test:	LIER NIER
on whitek our care of the care	A force is applied without jerks for 10 s in the most unfavourable direction to parts likely to be weak. The force is as follows:  – push force, 50 N;  – pull force; 30 N;  – if the shape of the part is such that the fingertips cannot easily slip off, 50 N;  – if the projection of the part that is gripped is less than 10 mm in the direction of removal, 30 N.  While the force is being applied, the test fingernail of Figure 7 of AS/NZS 60335.1 is inserted in any aperture or joint with a force of 10 N. The fingernail is then slid sideways with a force of 10 N but is not twisted or used as a lever.	Until Junit Whitek Junitek Jun	AN ALTER WALTER WATTER WATTER WATTER WATTER WALTER WATTER WATTER WATTER WATTER WATTER WATTER WATTER WATTER
yntiek Watiek	If the shape of the part is such that an axial pull is unlikely, the pull force is not applied but the test fingernail is inserted in any aperture or joint with a force of 10 N and is then pulled for 10 s by means of the loop with a force of 30 N in the direction of removal.	MULTER WHITER WHITE	
and a arek antre antrek	If the part is likely to be twisted, the following torque is applied at the same time as the pull or push force:  – 2 Nm, for major dimensions up to 50 mm.  – 4 Nm, for major dimensions over 50 mm.  This torque is also applied when the test fingernail is pulled by means of the loop.  If the projection of the part that is gripped is less	4 Nm white w	NATER OF THE WA
Mr.	than 10 mm, the torque is reduced by 50 %	July Mer Mer	111.
4.101.1	Battery compartment fasteners		N*



Reference No.: WTZ20F08056713L Page 36 of 62

Australian deviation				
Clause	Requirement + Test	Result - Remark	Verdict	
MULLER MILL	If screws or similar fasteners are used to secure a door or cover providing access to the battery compartment, the screw or similar fastener shall be captive to ensure that it remains with the door, cover or equipment.	JUNITER WALTER WHITER WAL		
	Compliance is checked by inspection and by the fol	lowing test:	- JEK -J	
WA STEK	A force of 20 N is applied to the screw or similar fastener without jerks for a duration of 10 s in any direction.	EX TEX ITEX	N N	

5	EXTERNAL AND INTERNAL WIRING		P
5.2.1 SELLING THE MALIER AND LIFE AND L	First paragraph replaced by: Luminaires shall be provided with only one of the following means of connection and isolation to the supply. Fixed luminaires:  - device for the connection of luminaires; - terminals; - plug for engagement with socket-outlets; - connecting leads (tails) in accordance with Clause 4.6 requirements; - supply cord; - supply cord and plug; - adapter for engagement with supply tracks; - appliance inlet; - installation coupler; - luminaire coupler. Portable luminaires: - supply cord with plug; - appliance inlet; - inlet plug complying with AS/NZS 3120. Track-mounted luminaires: - adaptor; - connector.	EX WALTER	TEX WALLEY WALLE
711	Delete the second and third paragraph.	W W WITH	
WALTEK WALTEK ALTEK W	In Australia, non-portable luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112 or a coupler complying with the relevant standard, except where the luminaire has markings and instructions that comply with Clause 3.2.12, in which case, a plug or coupler is not required. For other than portable luminaires a plug is not required if the luminaire has markings and instructions in accordance with Clause 3.2.12.	Whitek whitek whitek whitek	MITES NATES
WAL	The plug portion of a luminaire with integral pins shall comply with the relevant requirements of AS/NZS 3112.	EX WHITE WAITE WALTER WA	N
Mer	NOTE 4 PVC-insulated connection cords should not be used with outdoor luminaires in cold alpine locations.	MULTE WALLE WHILL WALL	m



Reference No.: WTZ20F08056713L Page 37 of 62

	Austra	alian deviation			
Clause	Requirement + Test	LIEK WITE	Result - Remark	MUL MUL	Verdict
5.2.2	First paragraph <b>replaced by</b> : Supply cords used as a means of co supply, when supplied by the luminal manufacturer, shall be at least equal mechanical and electrical properties specified in IEC 60227 and IEC 6022 in Table 5.1, or AS/NZS 3191, and sof withstanding, without deterioration temperature to which they may be expormal conditions of use.	ire in their to those 45, as indicated hall be capable the highest	White white w	UNTEX WATER	IN P
	Table 5	.1 — Supply co	ord		NITEK
	Luminaire	Rubber	PVC	No insulation	10, -
TEX MIT	Ordinary class I luminaires	60245 IEC 51S °	60227 IEC 52 °		LIER
	Ordinary class II luminaires	60245 IEC 53 °	60227 IEC 52 °		
MALTER	Luminaires which are other than ordinary class I and II	60245 IEC 57 °	60227 IEC 53 ac		EXWIT
	Portable rough service luminaires	60245 IEC 66 °	PVC insulated and sheathed heavy duty flexible cord	4	WALTEX
	Class III or with SELV circuits luminaires (up to 25 V a.c./60 V d.c.)			Un-insulated conductor <sup>b</sup>	Willer W
	Class III or with SELV circuits luminaires (above 25 V a.c./60 V d.c.), including 50 V a.c./120 V d.c.	Unsheathed basi conductor	c insulated		LEK WA
	For indoor use only.      AS/NZS 3000 may restrict the use of un-insulated conductors in certain special installations.      For supply voltages greater than 250 V, higher voltage grade cables and cords than those given in the above table may be necessary.				
	Third paragraph <b>replaced by</b> :  To provide adequate mechanical stre of the conductors shall be not less th  — 0,75 mm <sup>2</sup> ;  — 1,0 mm <sup>2</sup> for portable rough service	an:	nal cross-section	al area	itek w
5.2.16	Add:	ALTER INLI	Whi Whi	Mur. Mr.	N
	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 shall comply with IEC 61995-1.		Life WALTER W		in 1
	Luminaires incorporating installation have means to allow further luminair connected by cascading provided the wiring is rated for the current rating coinstallation coupler.	es to be e through	EX WHITEX WAS		y whit



Reference No.: WTZ20F08056713L Page 38 of 62

Australian deviation						
Clause	Requirement + Test	Result - Remark	Verdict			
5.2.18	Replaced by:  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.	whitek whitek whitek whi	PLICE WINN			
5.3.1 ×	Third paragraph <b>replaced with</b> the following: Internal wires coloured green, yellow or green/yellow combination shall be used for making protective earth connections only. <b>Functional earth</b> connections shall not be made by wires coloured green, yellow or green/yellow combination.	Whitek whitek whitek	syntites with a			
TE WALL	NOTE 3 Internal wires of other colours are not precluded from making protective earthing connections	EX WITE WALTER WALT	nu re			
5.3.1.3	Replaced by: In class II luminaires, where the internal wiring has a live conductor and the wiring insulation may touch accessible metal parts under normal operating conditions, the insulation, at least at the places of contact, shall comply with the requirements for double or reinforced insulation, e.g. by applying sheathed cables or sleeves.	Whitek Whitek Whitek	WHITE WHITEK			

7	PROVISION FOR EARTHING	while har and and	N
7.2.11	Third paragraph replaced with the following:	at at at a	N
Whi V	All conductors, whether internal or external, coloured green, yellow or green/yellow combination, shall only be connected to an earthing terminal.	White white white whe	WITEK N

8	PROTECTION AGAINST ELECTRIC SHOCK	THE THE	TE P
8.2.1	First two paragraphs including Note 1 replace by following:	We see the	P
WALTEX NUTEX	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 user cleaning or maintenance, or for replacement of lamps, replaceable light sources or (replaceable) starters, even if the operation cannot be achieved by hand.	Whitek whitek whitek whitek	MALIER MITER MITER MITER
	Luminaires with non-replaceable light sources are subjected to the tests of Clause 4.29 prior to applying the tests and inspections of Section 8 of this Standard.	examile while while while	WUITER MULTER
MITEK	This does not apply to the non-current-carrying parts of caps which comply with the relevant IEC safety standard.	WILE MILIER MILIER MILIER	WALTER



Reference No.: WTZ20F08056713L Page 39 of 62

- TEX	Australian deviation					
Clause	Requirement + Test	Result - Remark	Verdict			
Mr. Contract	Delete "Covers in fixed luminaires that cannot be removed by a single action with one hand are not removed. However, covers which have to be removed for changing lamps or starters are removed for this test."	united whited whited white	un <u>ie</u> uniek un			

9	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		N
9.2	Add after NOTE 1:	TEX ITEX SLIER WITE	No Lite
NITEK V	NOTE 101 A designation of IPX7 or IPX8 is considered unsuitable for exposure to water jets (designated by IPX5 or IPX6) and may not comply with requirements for second numeral 5 or 6 unless it is dual coded.	are mures mures mures	Writek M

10 INSULATION RESISTANCE AND ELECTRIC STRENGTH, TOUCH CURRENT AND PROTECTIVE CONDUCTOR CURRENT		RENGTH, TOUCH CURRENT	P
10.3	<b>Delete</b> the second row beginning with 'Class I luminaires rated up to and including 16 A'.	Whitek white while while	- <u>117</u> 1
	First column, third row, deletes the word 'Metal'.	EX TEX TEX STEE	

12	ENDURANCE TEST AND THERMAL TEST	CH TEX TEX TEX	IT P
Table 12.1	First column, first row, the text <b>replaced by</b> :  'Case (of <b>control gear</b> , capacitor, starting device, electronic ballast or convertor, etc.)'	t writes writes arrites and	EK MUTT
Whitek Whitek	Add:  NOTE 101 Luminaire manufacturers should consider the maximum ambient air temperature in the 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 h. 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 to point measurements can still fail prematurely if t-life is exceeded.	whitek wh	WALTER WALTER

13	RESISTANCE TO HEAT, FIRE AND TRACKING	Р
13.3 W	Parts of non-metallic material (other than ceramic) shall be resistant to flame and ignition.  This Clause applies to all parts, including components, even if they have been tested to their own IEC or equivalent standard.	VEX NU
13.3.1	Parts of non-metallic material supporting connections that could become an ignition source, and parts of non-metallic material within a distance of 3 mm of such connections shall withstand the test glow-wire at 750 °C and applied to one test sample for 30 s:	PITE



Reference No.: WTZ20F08056713L Page 40 of 62

- TEX	THE STEEL SOLL MALL AU	stralian deviation	- TEX TEX
Clause	Requirement + Test	Result - Remark	Verdict
2	The state of the s		1

Write W	Welded connections carrying less than 0						m
	Object/ Part No./ Material	Manufa trade		Ignitio	on of specified layer Yes/No	Duration of burning (tb)	Verdict
A WILL	DC connector1	See Annex 1	1	\	No.	0	PU
4,,	DC connector2	See Annex 1	TEX MALIE W	N.	No	0 0	Р
MITE	PCB of switch	See Annex 1		E.F	No	LIE O LIE	P
aliek w	Plastic enclosure of switch	See Annex 1	MUTTER MITE	, . L	No W	Test Officet	P
	LED cover	See Annex 1	WILL MULT	Jul.	No	0	Р
13.3.2	All other parts of r become an ignitio creepage and clea one test sample for	n source, but p arances shall w	rovide protection	n agai	inst electric sho	ck or maintain	I Pun
NALTEK W	Object/ Part No./ Material	Manufa trade		Ignitio	on of specified layer Yes/No	Duration of burning (tb)	Verdict
et .	See table(13.3.2)	See Annex 1		S	No	L 0 L	Р
13.3.3 TE	During the application of the glow-wire tests of sub clauses 13.3.1, if a flame is produced that persists for longer than 2 s, 'the 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' are further applied to needle-flame test of AS/NZS 60695.11.5.				ced with white white	N W	
	Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of the flame (ta); (s	est	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
" Mur.	22					T whi w	-70
Y WALTER	NOTE This requires the glow-wire flame the point of applicat passes the needle-i glow-wire flame.	within the hypoth ion of the glow-w	hetical envelope of vire. This applies to	f a vei o all pa	rtical cylinder pos arts unless there	itioned above is a barrier that	ik <u>vinit</u> i



Reference No.: WTZ20F08056713L Page 41 of 62

- TEX	TEX STEP WITE MY	Australian deviation	L JEN
Clause	Requirement + Test	Result - Remark	Verdict

Annex 5	APPENDIX ZZ VARIATIONS TO IEC 60598-2-2, ED. 3.0 (2011) FOR AUSTRALIA AND NEW ZEALAND	WP V
2.1	SCOPE WE WE WILL THE THE THE STATE OF THE ST	LIE NI
ek waltek	This part also specifies the safety requirements for recessed luminaires to provide adequate protection in respect of the fire risk associated with the combination of recessed luminaires with flammable building elements, flammable debris and building insulation.	EK —

2.3	TEST	REQUIREMENT
ALTE W		IP 20 and classified as CA90, CA135, IC and IC-4. The order of tests as ied in Table ZZ1.
	in Muli	Table ZZ1
	Order	Test
	1	Endurance test of Section 12.3 of AS/NZS 60598.1.
	2	Test for ingress of dust, solid objects and moisture of Section 9.2 of AS/NZS 60598.1.
	3	Ingress test (for the appropriate classification) of Section 2.14 of this Standard.
	4 Miles	Thermal test (normal operation) of Section 12.4 of AS/NZS 60598.1 and normal operation test (for the appropriate classification) of Section 2.13 of this Standard.
	5	Thermal test (abnormal operation) of Section 12.5 of AS/NZS 60598.1.
	0 6	Abnormal operation test (for the appropriate classification) of Section 2.13 of this Standard.
	un 7 Juni	Thermal test (failed windings in lamp controlgear) of Section 12.6 of AS/NZS 60598.1.
	8	Thermal test in regard to fault conditions in lamp controlgear or electronic devices incorporated in thermoplastic luminaires of Section 12.7 of AS/NZS 60598.1.
	9	Humidity test of Section 9.3 of AS/NZS 60598.1.
	10	Insulation resistance and electric strength, touch current and protective conductor current tests of Section 10 of AS/NZS 60598.1.

2.4	DEFINITION	LEX TEX TEX STEEL	nli <del>ell</del> al
2.4.101	Non-IC luminaire	or me me m	_
iek maire Litek	A recessed luminaire that cannot be abutted against or covered by normally flammable materials or used in installations where building insulation or debris is, or may be, present in normal use.	ex unitex unitex unitex un	TEN WALT



Reference No.: WTZ20F08056713L Page 42 of 62

	Australian deviation		TEX TEX
Clause	Requirement + Test	Result - Remark	Verdict
E.K.	tet liter with will show the will		TEX TEX
2.4.102	Do-not-cover luminaire A recessed luminaire that can be used where normally flammable materials, including building insulation, are or may be present, but cannot be abutted against any material and cannot be covered in normal use.	unite unite united unit	ex marex and
2.4.103.1	CA90 luminaire A recessed luminaire that can be abutted against normally flammable materials, including building insulation, but cannot be covered in normal use. Building elements, building insulation or debris have limited access to the heated parts of the luminaire.	while whitek whitek w	MITER WALTER
2.4.103.2	CA135 luminaire (New Zealand only) A recessed luminaire that can be abutted against normally flammable materials, including building insulation, but cannot be covered in normal use. Building elements, building insulation or debris have some access to the heated parts of the luminaire.	EK Whitek whitek whitek	yn te <del>l</del> yn i
2.4.104.1	IC luminaire  A recessed luminaire that can be abutted against normally flammable materials, including building insulation, and can be covered in normal use.  Building elements, building insulation or debris have limited access to the heated parts of the luminaire.	UNLIEK WHITEK WHITEK WIL	ex white wh
2.4.104.2	IC-4 luminaire A recessed luminaire that can be abutted against normally flammable materials, including building insulation, and can be covered in normal use. Building elements, building insulation or debris have restricted access to the heated parts of the luminaire. This classification of recessed luminaire is effectively a sealed unit that has a restricted flow of air between the habitable room the luminaire emits light into and the void/space where the main body of the luminaire is located.	AND THE WHITE WHITEK WH	while whilek whi

2.5	CLASSIFICATION OF LUMINAIRE	L A St All	
2.5.101	Luminaires shall be classified in accordance with the provisions of Section 2 of AS/NZS 60598.1, along with the 2.5.102 and 2.5.103.	White Mail Wall Wall WALLER	WP .
2.5.102	Australian classifications	☐ Non-IC	Р
EX LIE	Relief White Wall All All All	□ Do-not-cover	TEK OUT
The same	THE THE THE	☐ CA90	$a_{n}$
t et	TEX ITEX SUITE WILL WILL WIN W	□ IC	t TEX
Will.	all and an it let let it	□ IC-4	MULL



Reference No.: WTZ20F08056713L Page 43 of 62

- JEFF	Australian deviation		JEK JE
Clause	Requirement + Test	Result - Remark	Verdict
2.5.103	New Zealand classifications	□ Non-IC □ Do-not-cover □ CA90 □ CA135 □ IC □ IC-4	MILLER ON P
2.6	MARKING	the text text text	Mr. IER MILIE
2.6.101	The provisions of Clause 3 of AS/NZS 60598.1 apply, along with the following:  - Clause 3.2.21 of AS/NZS 60598.1 is replaced by Clause 2.6.102.  - The additional requirements of Clause 2.6.103 and Clause 2.6.104 apply, as applicable.	Whitek whitek whitek whi	ALTER INTP
2.6.102	Insulating ceiling IC-4 mark, symbol	white whitek whitek	JUNITER WHITER
EK WHITEK	Insulating ceiling IC mark, symbol	et milet milet while	EK WALTE
untiek wh	Insulating ceiling CA 90 mark, symbol	ALL TEX WALTER OF	NITEK WITEK W
Whitek W	Insulating ceiling CA 135 mark, symbol	TEK WALTER WALTER WALTER	whitek whitek
ner white tex white tallex	Insulating ceiling Non-IC mark, symbol	on the antick mit	EX WATER WATER



Reference No.: WTZ20F08056713L Page 44 of 62

Australian deviation			
Clause	Requirement + Test	Result - Remark	Verdict
untick whitek	Insulating ceiling Do-not-cover mark, symbol	IEX WATER WATER ON	WILLER WILLER WILL
2.6.103	Location and durability of marking	MULLE MULL MULL	1/1/2
WALTER WA	a) legible, durable and visible when the luminaire is installed and viewed from behind;	WALTER WALTER WALTER	WALTE VI PIE
TEX JI	b) a minimum size of 25 mm × 25 mm; and	t it it	THE LIP
	c) permanently marked on the luminaire or on a durable swing tag permanently connected to the luminaire.	the main male a	TEK IN TEK
2.6.104	Additional information to be supplied with the luminaire	in w w	P
2.6.104.1	Information and warning	Mur Aur Au	7/11. 7/11
white whi	a) The minimum clearance distance from the top of the luminaire to any normally flammable building element (mm)	25 mm	unifer on P
LILL	b) The minimum clearance distance from the top of the luminaire to any building insulation (mm)	25 mm	LI DE PUI
	c) The minimum clearance distance from the side of the luminaire to any normally flammable building element (mm)	25 mm	Pint Pint
ann an	d) The minimum clearance distance from the side of the luminaire to any building insulation (mm)	25 mm	WE WA
intie and	The luminaire is suitable for installing in a non- combustible enclosed space or non-combustible premade enclosure.	ALL JIE WATER	unite unin
r nur	The warning for luminaire where the minimum clearance distances are stated.	An In In	Pul
MULTER	Additional warning for classification CA135 luminaire.	t while while while	Mr. Nr.
2.6.104.2	Additional warning	LET LET LET	TIEN PER
2.6.104.2.2	Australia additional warning	Mur. Mur. Mur.	Р
2.6.104.2.3	New Zealand additional warning	LET TEX JEX	LITER NITE
2.6.105	Luminaires intended for use with independent controlgear	t it it	N SEL N
2.6.106	Compliance with Clauses 2.6.101 to 2.6.105 is checked by inspection and the relevant tests of AS/NZS 60598.1.	TEX TEX STE	PW PW

2.7	CONSTRUCTION	t at alt text of	IEX SLIER WITE OF	V(1)
-----	--------------	------------------	-------------------	------



Reference No.: WTZ20F08056713L Page 45 of 62

	Australian deviation	
Clause	Requirement + Test Result - Remark	Verdic
2.7.101	The provisions of Section 4 of AS/NZS 60598.1 apply, along with the 2.7.102, 2.7.103 and 2.7.104.	P
2.7.102	Thermal protection devices	N <sub>N</sub>
K SITEK	Thermal protectors comply with IEC 60730-1 with declared number of cycles of operation declared according 6.10 and 6.11 of IEC 60730-1	N N
10,	- Self-resetting thermal protection device	N
WALTER	- Voltage maintained non-self-resetting thermal protection device	Jun N. F.
TEX	- Other non-self-resetting thermal protection device	N
ic m	- Adequate fixing	N
IEK WALTE	- Single operation non-self-resetting thermal protection devices that are user replaceable are not permitted.	N
WALTE	Electronic controls that regulate the light output during abnormal operation tests to enable the luminaire to comply with the requirements of this Standard shall comply with Clause 2.7.103.	N
2.7.103	Electronic controls	an N
LIFEK WILLER	a) Electronic controls that operate during any test of this Standard and fully turn off the light source shall incorporate the operation of a thermal protection device component that complies with IEC 60730-1 with the number of cycles of operation declared in accordance with Clause 2.7.102.	ALIT N
WALTER WA	b) Electronic controls that operate during any test of this Standard and do not fully turn off the light source shall be bypassed and the relevant test shall be repeated. The luminaire shall comply with the requirements of the relevant test with the electronic control bypassed and any remaining device that operates shall comply with IEC 60730-1 with the number of cycles of operation declared in accordance with Clause 2.7.102.	NE NE SUN SEEL SUN SE
WALTEX V	c) Electronic controls shall comply with the appropriate part of the AS/NZS 61347 series and incorporate a thermal protective device that has been tested to the number of cycles of operation declared in accordance with Clause 2.7.102.	N.C.
ALTEK WALTE	d) Electronic controls with programmable components (including embedded software) shall comply with IEC 62733, unless the luminaire complies with the requirements of this Standard with the electronic controls bypassed.	on in N
2.7.104	Controlgear	et _<



Reference No.: WTZ20F08056713L Page 46 of 62

TEX	Australian deviation		
Clause	Requirement + Test	Result - Remark	Verdict
one white	All controlgear (including controlgear that is a component part and all independent controlgear) that is supplied with, or specified in, the instructions supplied with the luminaire for use with the luminaire shall be assessed with the luminaire to this Standard and shall, in addition, comply with the appropriate part of the AS/NZS 61347 series.	TEX UNLIER WHITEK WHITEK	on P

2.11	EXTERNAL AND INTERNAL WIRING	WP.
2.11 (5.2.1)	The provisions of Section 5 of IEC 60598-1 apply.	NIT P
TEK WALTER	Flexible cables or 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 or IEC 60245 and shall be capable of withstanding without deterioration the highest temperature to which they may be exposed under normal conditions of use. Materials other than p.v.c. and rubber are suitable if the above requirements are met.	itek wh
	Compliance shall be checked by the tests specified in 2.13.	- CEX
	NOTE The use of flexible cables and cords with recessed luminaires is appropriate for the following reasons:	WALL
	The flexible cable or cord cannot be easily touched as it is normally out of reach within the recess.     To facilitate installation of the luminaire into the recess.	TEX
The Mark	3) To permit the adjustment of settable and adjustable recessed luminaires.	10 11
	77 71 105 105 105 105 105 105 105 105 105 10	





Reference No.: WTZ20F08056713L Page 47 of 62

- TEX	Australian deviation	and the state of	EX JE
Clause	Requirement + Test	Result - Remark	Verdict
inriek Mu	Variation	SLIER WIFE WHITE WHITE	W P
	Delete the first paragraph and replace with the following:	VIEW WITER WHITER WHITER	NITEK W
	Luminaires shall be provided with only one of the following means of connection and isolation to the supply.	THE WALTER WALTER WALTER	EK WAL
	Fixed luminaires:	TEX SLIEK WIFER WIFE	WALTE
	<ul> <li>device for the connection of luminaires;</li> </ul>	TEX TEX TEX STEX	MLTEX
	<ul><li>terminals;</li></ul>	Her Mer My Mr.	
	<ul> <li>plug for engagement with socket- outlets;</li> </ul>	EX WHITEX WHITEX WHITEK W	Life w
	connecting lead (tails); in accordance with Clause 4.6 requirements;	Whitek whitek whitek whi	White White
	<ul><li>supply cord</li></ul>	Writer White Mair Mar	m.
	<ul><li>supply cord and plug;</li></ul>	at let tex stex	LIEX
	<ul> <li>adapter for engagement with supply tracks;</li> </ul>	it while with while a	EL .
	<ul><li>appliance inlet;</li></ul>	in write Aut Mur. Au	711
	<ul><li>installation coupler;</li></ul>	e at let let lift	LIE WITE
	<ul><li>— luminaire coupler;</li></ul>	Murit Mur. Aut. Aut.	100
	Portable luminaires:	THE LIER SLITER	MLIER
	<ul><li>supply cord with plug;</li></ul>	VII. In Mr. M.	
	<ul><li>appliance inlet.</li></ul>	TEX MITER IN	VIIE. M
	<ul> <li>inlet plug complying with AS/NZS</li> <li>3120.</li> </ul>	et test itest ritest by	SEX MIL
	Track-mounted luminaires:	me me m	
	<ul><li>— adaptor;</li><li>— connector.</li></ul>	MULEY WALTER WALTER WALTE	WALTE
LIE OLI	Delete the second and third paragraph.	Et TEX JEX JEX	Р



Reference No.: WTZ20F08056713L Page 48 of 62

Clause	Requirement + Test	Result - Remark Ver	
Clause	Requirement + Test	Result - Remark	Verdic
nurie an	3. After Note 3, insert the following text:	JALIER WALTER	ur N
	In Australia, non-portable luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112 or a coupler complying with its standard, except where the luminaire has markings and instructions that comply with Clause 3.2.12, in which case, a plug or coupler is not required. However, for other than portable luminaires a plug is not required if the luminaire has markings and instructions in accordance with Clause 3.2.12.	n tek whitek whitek whitek  Tek steek steek hitek	LIEK WLIEK WALE WALEK WALE WALEK WALE MILEK
	The plug portion of a luminaire with integral pins shall comply with the relevant requirements of AS/NZS 3112.	MULTER WHITER WHITE	* write* write
	NOTE 4 PVC-insulated connection cords should not be used with outdoor luminaires in cold alpine locations.  (AS/NZS 60598.1:2017)	Writek whitek whitek	Whitek Whitek
2.11 (5.2.2)	) Variation	is my my m	Р
	1. Delete the first paragraph and replace with the following:	rist whites whites whi	ier while whi
White white white white white white	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.	Whitek wh	White white white was a suntification of the suntif
WALTER W	2. Delete the third paragraph and replace with the following:	WALTER WALTER	united on PE
	To provide adequate mechanical strength, the nominal cross-sectional area of the conductors shall be not less than:	WILLER MULTER MULTER M	NITER VALLEY
	— 0,75 mm²;	JEX SLIEK WITEK WIL	it. White My
	<ul> <li>1,0 mm² for portable rough service luminaires.</li> </ul>	y ifet lifet slife	t Mitter White
	(AS/NZS 60598.1:2017)	Mr. Mr. M.	20.



Reference No.: WTZ20F08056713L Page 49 of 62

TEL	offe with older war	Australian devia	tion	ex ex	TER LIFE
Clause	Requirement + Test	- LIEX WALTER	Result - Rema	rk w	Verdict
Table 5.1	Variation  Delete Table 5.1 and re  Table 5.1 — Supply c		ring:	Junited White	WELLET W
	Luminaire	Rubber	PVC	No Insulation	ic with
	Ordinary class 1 luminaires	60245 IEC 51 °	60227 IEC 52 °	antif un	ENVITE
	Ordinary class II luminaires	60245 IEC 53°	60227 IEC 52 °	TEK LIFEK	CLIEK
	Luminaires which are other than ordinary class I and II	60245 IEC 57 °	60227 IEC 53 °	TEX TEX	OLIEX VI
	Portable rough service luminaires		aller a	11 11 1 1	1
	Class III or with SELV circuits luminaires (u to 25 V a.c./60 V d.c.)	p the state of	whitek wh	Un- insulated conductor	ir whi
	Class III or with SELV circuits luminaires (above 25 V a.c./60 V d.c.), including 50 V a.c./120 V d.c.	conductor	ic insulated	MILEK MILE	WILLER W
	a.For indoor use only b. AS/NZS 3000 may special installations.  c For supply voltages cords than those give	restrict the use of use	higher voltage grad	EK OLIEK WI	iel white
				WALTER WALTER	white.
TEX SITE	(AS/NZS 60598.1:2017)	en my		TEX TEX	LIEK ST
	Addition  At the end of the Clause,	insert the following	text:		Р
2.11 (5.2.16)	Class II luminaires for fi an appliance coupler shallow further luminaires cascading including connuminaire couplers incorpor shall comply with IEC 6198 Luminaires incorporating in have means to allow further connected by cascading pris rated for the current rating coupler.	xed wiring incorpor hall not have mean to be connected ection by looping-increted with the luminal part of the stallation couplers mer luminaires to be rovided the through were all to the stallation with the stallation couplers mer luminaires to be rovided the through were all the stallation with the stallation couplers mer luminaires to be	ating as to describe the state of the state		is whitek

(AS/NZS 60598.1:2017)



Reference No.: WTZ20F08056713L Page 50 of 62

- TEX	Australian deviation			
Clause	Requirement + Test	Result - Remark	Verdict	
2.11 (5.2.18)	Variation	JUNITER WHITE WHITER	n N	
	Delete Clause 5.2.18 and replace with the following:	NIEK WITER WHITER WH	The Water M	
	<b>5.2.18</b> All portable luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112. Other luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112, unless they have the warning specified by Clause 3.2.12.	THE WHITEK WHITEK WHITEK	White white	
inii wii	(AS/NZS 60598.1:2017)	LIEX NIES WITE N	VIII AVII A	
2.11 (5.3.1)	Variation	y, w w	at AN	
it lik	Delete the third paragraph and replace with the following:	White white whi		
whitek white	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.		whitek whitek	
EX WALTER	NOTE 101 Internal wires of other colours are not precluded from making protective earthing connections.	It was miles writes write	et unifet whi	
2.11 (5.3.1.3)	Variation  Delete Clause and replace with the following:	A LIER WIFE WIFER	WALTE VIALE	
INTEX WATER	In class II luminaires, where the internal wiring has a live conductor and the wiring insulation may touch accessible metal parts under normal operating conditions, the insulation, at least at the places of contact, shall comply with the requirements for double or reinforced insulation, e.g. by applying sheathed cables or sleeves. (AS/NZS 60598.1:2017)	Whitek whitek white	NITEK MITEK TEK MI	



Reference No.: WTZ20F08056713L Page 51 of 62

Australian deviation			TEX TEX
Clause	Requirement + Test	Result - Remark	Verdict

2.12	PROTECTION AGAINST ELECTRIC SHOCK	on P
2.12 (8.2.1)	The provisions of Section 8 of IEC 60598-1 apply.	LIEP W
	The parts of the luminaire and components within the ceiling space or cavity shall provide the same degree of protection against electric shock as the luminaire parts below the ceiling space.	
	NOTE The ceiling space or cavity is regarded as accessible for installation and maintenance, and the barriers do not provide adequate protection against electric shock.	WALTER
INLIE WALT	Compliance is checked by inspection.	Р

2.13	ENDURANCE TESTS AND THERMAL	TESTS	P
	The provisions of Section 12 of IEC 60598-1	apply together with the requirements of 2.13.1.	P
2.13.1	2.13.1 Wiring, for connection to the supply, shall not reach unsafe temperature.	which passes into or can touch the luminaire	W P
	Compliance shall be checked by the following	tests:	Will a
		g the cable provided with the luminaire or using luminaire or, if not marked, as specified in the C cable complying with IEC 60227 is used.	IEX WY
	The hottest point is found (along the internal route or on the outer surface of the luminaire) with which the cable is likely to lie in contact during normal service. The cable is lightly held in contact at this point and the temperature of the insulation at the point of contact is measured as described in Annex K of IEC 60598-1.		ynlik Tex
The operating temperature of the cable shall not exceed the limits given in Table		ot exceed the limits given in Table 1.	MLL
	of Clauses 12.4, 12.5, 12.6 and 12.7 of S	an IP20 shall be subjected to the relevant tests ection 12 of IEC 60598-1 after the test(s) of 9.3 of Section 9 of IEC 60598-1 specified in	LTEK W
	Table 1 – Operating temperature of cable		in whi
	Designation of cable	Limit of operating temperature	
	Cable (including sleeves) provided with the luminaire  Cable not provided with the luminaire:	The maximum temperature specified in Table 12.2 of IEC 60598-1	WILLE
	a) luminaires with cable temperature marking	The marked temperature	TEX
	b) luminaires without cable temperature marking	The maximum temperature specified in Table 12.2 of IEC 60598-1 for ordinary PVC not subject to mechanical stress	int.
EL CIE	Canaral		11 11
2.13.101	General The provisions of Section 12 of AS/NZS apply together with the requirements of (Clause 2.13).		P



Reference No.: WTZ20F08056713L Page 52 of 62

Clause	Paguiroment L Teet	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdic
inties and	Clause 12.4 and 12.5 of AS/NZS 60598.1 are applied in conjunction with the following:	UNITED WHITE WHITE	on P
it whitek	a) For Non-IC and Do-not-cover luminaires, the requirements of Clauses 12.4 and 12.5 of AS/NZS 60598.1 are modified by Clause 2.13.102.	EX MILER MULES MULLER	in in m
Whitek Wi	b) For CA90 and CA135 luminaires, the requirements of Clauses 12.4 and 12.5 of AS/NZS 60598.1 are modified by Clause 2.13.103.	Whitek whitek whitek white	E NE
iek witek	c) For IC and IC-4 luminaires, the requirements of Clauses 12.4 and 12.5 of AS/NZS 60598.1 are modified by Clause 2.13.104.	ist test they will be	N
2.13.102	Thermal tests for Non-IC and Do-not-cover luminaires	it lit top	P
	Requirements of Appendix ZA apply	MULL MULL MULL MU	1/2
2.13.102.1	Normal operation test for Non-IC and Do-not-cover luminaires	WIFE WIFE WALTER WALTE	P
JEK JE	- mounting surface (°C):	(see Annex 2),Limit: 90 °C	P
7/1	- internal surfaces of test box (°C)	(see Annex 2),Limit: 90 °C	Р
EX LIEX	- surface of any building element (°C)	(see Annex 2),Limit: 90 °C	P
7,1,	- for other parts (°C)	(see Annex 2)	Р
WITE AL	After normal operation:	FER THE LITER OUT	Р
JEK Y	- no damage to the luminaire such as scorching, deformation or melting	when we are the	Р
10. 24.	- no thermal protection device operate	WELL MUSE MUSE	Р
TEX WALTER	- no electronic control that fully turns off the light source operate	TEK MILIEK	ITE P
2.13.102.2	Abnormal operation test for Do-not-cover luminaires		P
mr 1	- mounting surface (°C)	(see Annex 2),Limit: 90 °C	Р
TEX	- surface of insulation (°C):	(see Annex 2),Limit: 130 °C	P
m, m	After abnormal operation:	MULL MULL MULL MULL	Р
ALTEK WALTE	- no damage to the luminaire such as scorching, deformation or melting	LIEK MITER MILIER WHITER	UNLIP
ex Naliex	- thermal protection device or electronic control operate	et itet stret nitet s	N JEK P
- SLIEK	- no thermal protection devices of any independent controlgear operate	the text text of	P
2.13.103	Thermal tests for CA90 and CA135 luminaires	Mr. Mr. Mr. Mr.	N
LIE N	Requirements of Appendix ZA apply	et et tet ite	NITE.



Reference No.: WTZ20F08056713L Page 53 of 62

Clause	Requirement + Test	Result - Remark	Verdict
on or			761
2.13.103.1	Normal operation test for CA90 and CA135 luminaires	MILIER WALTER WHITE WALLE	an N
lie walte	- mounting surface (°C):	Limit: 90 °C	N
++	- internal surfaces of test box (°C)	Limit: 90 °C	, N
MULL	- surface of any building element (°C):	Limit: 90 °C	N
antifek an	- CA90, outside surface of the luminaire accessible with Ø 5.6 mm probe (°C):	Limit: 90 °C	NE
aliek mis	- CA135, outside surface of the luminaire accessible with Ø 50 mm probe (°C):	Limit: 135 °C	N
72.	- for other parts (°C)	(see Annex 2)	N
iek inlier	After normal operation:	ex jex jex liter in	N
t Jet	- no damage to the luminaire such as scorching, deformation or melting	in the text it	N
7/1 7	- no thermal protection device operate	white with must also	N
NALTEK WAI	- no electronic control that fully turns off the light source operate	WIFE WIFEK WAITER WAITER	NIL N
2.13.103.2	Abnormal operation test CA90 and CA135 luminaires	TEX SIEK NITER MITER	N N
et et	- mounting surface (°C):	Limit: 90 °C	N
MULL	- CA90, outside surface of the luminaire accessible with Ø 5.6 mm probe (°C):	Limit: 130 °C	N
White M	- CA135, outside surface of the luminaire accessible with Ø 50 mm probe (°C):	Limit: 150 °C	N
LIFEK INT	After abnormal operation:	TEN TEN TIEN	Ń
TEX TEX	- no damage to the luminaire such as scorching, deformation or melting	W. Any Any	N
t "Ex	- thermal protection device or electronic control operate	in the me	N
Mur. 1	- no thermal protection devices of any independent controlgear operate	Whitek white white whi	N
2.13.104	Thermal tests for IC and IC-4 luminaires	TEX ITEX LITER WITE	N
*	Requirements of Appendix ZA apply	me me me	<u>_</u>
2.13.104.1	Normal operation test for IC and IC-4 luminaires	TEX SLIEK WIFE WITE	N
EX WIFEX	- mounting surface (°C):	(see Annex 2) Limit: 90 °C	SELVIN
LIEK	- IC, outside surface of the luminaire accessible with Ø 5.6 mm probe (°C):	Limit: 90 °C	N
11/2 1/2	- IC-4, outside surface of the luminaire accessible with Ø 1 mm probe (°C):	(see Annex 2) Limit: 90 °C	N



Reference No.: WTZ20F08056713L Page 54 of 62

Australian deviation			
Clause	Requirement + Test	Result - Remark	Verdict
MUTIER M	- for other parts (°C)	(see Annex 2)	of N
LEX S	After normal operation:		N
r 21	- no damage to the luminaire such as scorching, deformation or melting	Witer Marie Marie Wall of	N
WILL	- no thermal protection device operate	No thermal protection device	N
CLIEK	- no electronic control that fully turns off the light source operate	No electronic control that fully turns off the light source	N

2.14	Resistance to dust and moisture	Р
IE WAL	The provisions of Section 9 of IEC 60598-1 apply.	Por
t NITE	For luminaires with an IP classification greater than IP20, the order of the tests specified in Section 9 of IEC 60598-1 shall be as specified in Clause 2.13 of this section of IEC 60598-2.	

ZA	APPENDIX ZA: THERMAL TEST PROCEDURES F	OR RECESSED LUMINAIRES	wi!
ZA1	GENERAL	As Any Any Any	<del></del>
EX WITT	Recessed luminaires subjected to specified tests and operated as described in clause 12.4.1 of AS/NZS 60598.1, with the following modifications and additions:	TEK MUTEL WATER WATER WATER	PW EK WAL
- LEX	- filament light source: 1,05 times rated wattage:	- W X	N
MUL	- other light sources: 0,94 or 1,06 times rated voltage, whichever produces higher temperatures:	254.4 V	NP.
Wile a	- total duration (h)	8 h	antite .
	- mounting-position:	In accordance with the installation instructions.  The separate component part placed under insulation in the test box	LIEN WY
, L	- test temperature (°C):	25 °C	Р
ZA2	TEST BOX	TEX STEX WITE WITE	MP.
nliek w	A test box, consisting of a mounting surface on top of which is a rectangular box with vertical sides and a top, shall be constructed as specified.	TEX MITER WAITER WHITEK	ALIEP V
iek wat	Test box shall be supported or suspended in a draught-proof enclosure in accordance with AS/NZS 60598.1, Annex D.	EX WHITEK WHITEK WH	TEK P
ZA3	TEST PROCEDURE FOR NON-IC AND DO-NOT-COVER LUMINAIRES	MULTER WALTER WHITER WHITE	Р
WILLER	Test sample mounted in wooden test box as specified.	STEE STEET MITES WHITES	nn P*



Reference No.: WTZ20F08056713L Page 55 of 62

Clause	Dogwiroment L Test	Docult Domort	
Clause	Requirement + Test	Result - Remark	Verdict
Write M	Simulated building element placed as specified.	aliek wier whilek	until unip
LIEK WALT	For do-not-cover luminaires, thermal insulation is added to the test box with the clearance specified in the installation instructions.	TEX WHITEK WHITEK W	ILLEK WILLED
H WALTER	The type of thermal insulation is formed insulation where 200 mm is equivalent to an RI 4.0 classification in accordance with AS/NZS 4859.1.	Whitek Multer Mult	ex white mili
	Thermocouples mounted and positioned as specified.	Whitex whitex whitex	WILL M.B.
ZA4	TEST PROCEDURE FOR CA90 AND CA135 LUMINAIRES	LITER MALTER MALTER OF	INLIER INLIN
EX WALTE	Test sample mounted in wooden test box as specified.	EK LIFEK MLIFEK MA	TEX TEN
t et	Simulated building element placed as specified.	100	L N
whitek	Thermal insulation is added to the test box, so as to fill the remaining space between the side of the test box and the luminaire, and to abut the sides of the luminaire.	White white white	white whites
	The type of thermal insulation is formed insulation where 200 mm is equivalent to an RI 4.0 classification in accordance with AS/NZS 4859.1.	LIER WHITEK WHITEK W	SLIEK WALTER W
ek waite	Thermocouples mounted and positioned as specified.	14 MITER ANTER AND	Ex Nu Ex Nu
ZA5	TEST PROCEDURE FOR ABNORMAL OPERATION—DO-NOT COVER, CA90 AND CA135 LUMINAIRES	WALTER WALTER WALTER	WALTE WALTE
INLTEK WI	Test sample mounted in wooden test box as specified.	all liet whitek	INLER MIP
IEK WALT	Test box completely filled with thermal insulation fully contacting the luminaire.	TEK NY	LIEN TEP
X WALTEX	The type of thermal insulation is formed insulation where 200 mm is equivalent to an RI 4.0 classification in accordance with AS/NZS 4859.1.	et milet mater mails	ik muri
NULLEX	Thermocouples mounted and positioned as specified.	LIET WIFE WIFE	WALTER WAR
ZA6	TEST PROCEDURE FOR NORMAL OPERATION—IC AND IC-4 LUMINAIRES	TEX TEX TEX	NITEX NITEN
ex Jie	Test sample mounted in wooden test box as specified.	it the text	EL N
- TEX	Test box completely filled with thermal insulation fully contacting the luminaire.	Muri Aur Au	N
JINE .	The type of thermal insulation is formed insulation where 200 mm is equivalent to an RI 4.0 classification in accordance with AS/NZS 4859.1.	White Mulit Muli	ANG ANG



Reference No.: WTZ20F08056713L Page 56 of 62

Australian deviation				
Clause	Requirement + Test	Result - Remark	Verdict	
nnlifer N	Thermocouples mounted and positione specified.	d as	nti Jin N	





Reference No.: WTZ20F08056713L Page 57 of 62

F TE	IEC 62031	at at all	TEN
Clause	Requirement + Test	Result - Remark	Verdic
ANNEX	6 LED modules for general lighting – Safety s IEC 62031:2018	specifications	until un P
4	GENERAL REQUIREMENTS	THE WILL WITER	Р
4.4	Integral modules treated as part of luminaires defined in clause 0.5 of IEC 60598-1	at ex unitex unitex unit	THE P
4.5	Independent modules complies with requirements IEC 60598-1	in the street and the	while whi
	The second secon	M. W	10 1
5	GENERAL TEST REQUIREMENTS	t TER TERMINE	ULL WITH
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	TEX LIE!
7 72	General conditions for tests in Annex A	(see Annex A)	N
MALTE	Will Mur Mur	TEX TEX LIE	NOTE: UN
6	CLASSIFICATION	my my m	
anlik.	Built-in module:	Yes □ No ⊠	antile antile
t	Independent module:	Yes □ No ⊠	<u>.</u>
Life W	Integral module:	Yes ⊠ No □	Life Marie
iek inli	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.	et let let let	EK OLIEK-
7	MARKING	int was our or	N <sup>2</sup> N <sup>2</sup>
-0'- <u>-</u>	Requirements not applicable to the evaluated prod	luct.	7 -X
UNLITED V	ar an an	TE QUIE	INLIE WALTE
8	TERMINALS		N
LIE WY	Screw terminals according section 14 of IEC 60598	-1: I I	N.
+ .4	Separately approved; component list	(see Annex 1)	← N
MIL	Part of the luminaire	(see Annex 3)	In No
ZEK.	Screwless terminals according section 15 of IEC 60	598-1:	- N
Mr	Separately approved; component list	(see Annex 1)	m nu
TEX	Part of the luminaire	(see Annex 4)	N <sup>+</sup>
V. 1/	Connectors according IEC 60838-2-2:	White while while w	N N
EK J	Separately approved; component list	(see Annex 1)	of JON
711.	THE STEEL ST	MULL MULL MULL MULL	n, n
9 (9)	PROVISION FOR PROTECTIVE EARTHING	A LET LET LET	N.
211.	Requirements not applicable to the evaluated prod	luot 1	711.



Reference No.: WTZ20F08056713L Page 58 of 62

	LIEK WILL WILL WALL	IEC 62031		
Clause	Requirement + Test	TEX STER IN	Result - Remark	Verdict

10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS	JUN 1
LET A	Requirements not applicable to the evaluated product.	1

11 (11)	MOISTURE RESISTANCE AND INSULATION	A P
- CIX	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (M $\Omega$ ):	P
WILL.	For basic insulation $\geq 2 \text{ M}\Omega$	Р
TEX	For double or reinforced insulation $\geq$ 4 M $\Omega$ :	N
iek wi	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1	SULVE TO

12 (12)	ELECTRIC STRENGTH	TEX TEX SITES ON	Polit
TEX	Immediately after clause 11 electric strength test for 1 min	AND AND AND THE	P
711 2	Basic insulation for SELV, test voltage 500 V	NUTT AND MUT AND	Р
LIEN	Working voltage ≤ 50 V, test voltage 500 V	ex tex tex tex	N N
77	Working voltage > 50 V ≤ 1000 V, test voltage (V):	i m m m	N
IET WITE	Basic insulation, 2U + 1000 V	EX TEX LIEX OLIER OF	I North
	Supplementary insulation, 2U + 1000 V	Mr. Mr. Mr.	N
WALTE	Double or reinforced insulation, 4U + 2000 V	TEX STEX WITE OUT	N
*	No flashover or breakdown	111. 11. 11.	P
NATT W	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1	ALL MILLS WILLS	JUNN .

13 (14)	FAULT CONDITIONS	P
- (14)	When operated under fault conditions the controlgear:	
TEX	- does not emit flames or molten material	P. P.
m.	- does not produce flammable gases	Р
CLIEK IN	- protection against accidental contact not impaired	P
(EX . 5	Thermally protected controlgear does not exceed the marked temperature value	N
* White	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected (see appended table)	Pull



Reference No.: WTZ20F08056713L Page 59 of 62

	IEC 62031		
Clause	Requirement + Test	Result - Remark	Verdict
- CH	TEX TEX SITE WILL SINE M. 10		at the
- (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)	SUN ST
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3	et tet tiet with	N IEK NI
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	Р
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	nii N
- (14.4)	Short-circuit across electrolytic capacitors	(see appended table)	SE N
- (14.5)	After the tests has been carried out on three samples	in my my m	N
TER INL	The insulation resistance $\geq$ 1 M $\Omega$ :	>20 MΩ	Р
	No flammable gases	10, 10, 10,	Р
MILLE	No accessible parts have become live	TEX SITER WITE	P.
LIEK	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite	THE THE TEXT	N N
- (14.6)	Relevant fault condition tests with high-power supply	write Aug. Mar. M.	70,-
13.2	Module withstands overpower condition >15 min.	ret tex trex wi	NI P
Et JE	Module with automatic protective device or power limiter, test performed 15 min. at limit.	t of let set	N
VIII TEX	During the tests, tissue paper, spread below module, does not ignite	mic were we	W P
MUL	THE THE STIFE	WILL WHILE WHILE	nr. Mur
15	CONSTRUCTION	The state of the s	PEX PEX
10 M	Wood, cotton, silk, paper and similar fibrous material not used as insulation	ar it will me	P

16	CREEPAGE DISTANCES AND CLEARANCES	J P
WILL	Creepage and distances and clearances in compliance with IEC 60598-1	Р

17 (17)	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS	√P
NLTEX WAL	Screws, current-carrying parts and connections in compliance with IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)	WALLEY W

18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING	Way Now
X NITEX	Resistance to Heat, Fire and Tracking in compliance with IEC 61347-1 (clause numbers between parentheses refer to IEC 61347-1)	AL EX NUE
(18.1)	Ball-pressure test:	N
NITE. N	- part tested; temperature (°C)	N N



Reference No.: WTZ20F08056713L Page 60 of 62

- TEX	IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict	
(18.2)	Test of printed boards	et set set siet siret milet	ori SON	
it.	- part tested		N N	
(18.3)	Glow-wire test (650°C):	EX LIFE OUTER MUTER WALTER WA	N N	
et de	- part tested		# KITN	
(18.4)	Needle flame test (10 s):	THE MITTER WALL WALL WALL WALL	n, N <sub>n</sub>	
TEX	- part tested		N. P	
(18.5)	Tracking test:	White while while whi whi	n n	
TEX	- part tested	i, , , , , , , , , , , , , , , , , ,	N	

19 (19)	RESISTANCE TO CORROSION	et let let liet	LIEN N
42	Rust protection:	ALT ME ME A	N
N. I.I.E.	- test according 4.18.1 of IEC 60598-1	TEX ITEX NITEX IN	N
, L	- adequate varnish on the outer surface	Mr. Mr. M. M.	N

20	INFORMATION FOR LUMINAIRE DESIGN	N
WILL MILL	Information in Annex D	mrii un

21	HEAT MANAGEMENT	Mar Nont			
21.1	General				
MUL	Exchangeability is safeguarded by cap or base	ar an			
21.2	Heat-conducting foil and paste	Not Not			
ing a	Heat-conducting foil delivered with the module if necessary	T N A			
21.4	Construction	N N N			
EK WILER	Electrical connection and mechanical holding are separate	TEL N			

22	Photobiological safety				
22.1	UV radiation	Up My My My	N		
22.2	Blue light hazard	TEX TEX TEX NITER MIT	N P N		
4	RG at 200 mm according to IEC/62778	1/2 1/1 1/1 1/1 1/1	Р		
22.3	Infrared radiation	t let liet wife with	WALL NOW		



Reference No.: WTZ20F08056713L Page 61 of 62

- (18)	LIEN WITH WITH WITH	IEC 62031				
Clause	Requirement + Test Result - Remark					
A	ANNEX A - TESTS					
LIEK .	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable					

Ø	MULIE	ANNEX - SELV-operated LED modules	Nu
A.	- et	SELV-operated LED modules in compliance with Annex I of IEC 61347-2-13	L N





Reference No.: WTZ20F08056713L Page 62 of 62

				IEC 624	71				
Clause Requirement + Test		Result - Remark			r. Mu	Verdict			
Lit .	CER SEE		anti ani	701	20.	4		<u> </u>	
Annex 7	Photob	iological	safety (IEC 6	2471:2006	) CEL	LIEN MIT	MALI	MILL	JUP
Emission lin α=0.11rad	nits for risk (	groups of	continuous w	vave lamps	المام ال المام المام ال	EX INITEX	MITER	WALTER .	NITP W
et let	TEX	IFF OU	Units	Emission Measurement					CEX C
Risk	Action spectrum	Symbol		Exempt		Low risk		Mod risk	
	Spectrum	X NITE	WALTER WI	Limit	Result	Limit	Result	Limit	Result
Actinic UV	S <sub>UV</sub> (λ)	Es	W•m⁻²	0.001	4.0e-05	0.003	-71/1/	0.03	n.
Near UV	MUL	Euva	W•m⁻²	10	1.0e+00	33	WILLE	100	unii
Blue light	Β(λ)	L <sub>B</sub>	W•m <sup>-2</sup> •sr <sup>-1</sup>	100	2.1e+01	10000	NITEK	4000000	TEX-ON
Blue light, small source	Β(λ)	E <sub>B</sub>	W•m⁻²	1.0*	¥	1,0	TEK W	400	y vill
Retinal thermal	R(λ)	L <sub>R</sub>	W•m <sup>-2</sup> •sr <sup>-1</sup>	28000/α	3.2e+03	28000/α	11/11/ 11/11/	71000/α	WALTER
Retinal thermal, weak visual stimulus**	R(λ)	Lir	W•m⁻²•sr⁻¹	6000/α	LIEV	6000/α	Multex Whitex	6000/α	ALTER VI
IR radiation, eye	liter whis	E <sub>IR</sub>	W•m⁻²	100	0.0e+00	570	TEX-JUN	3200	Walte Walte
			ne with α < 0 GLS source	,011 radian	. Averaging	field of vie	w at 100	00 s is 0,1	radian.
Assessmer	nt:	1//	exemp	ot⊠ risk 1	ı risl	∢2□ ri	sk 3□	WALTEN W	LIE W

===== End of Report =====





# **W**

## **Photo Documentation**

Model: EOL.CE.FR20-36



Photo 1

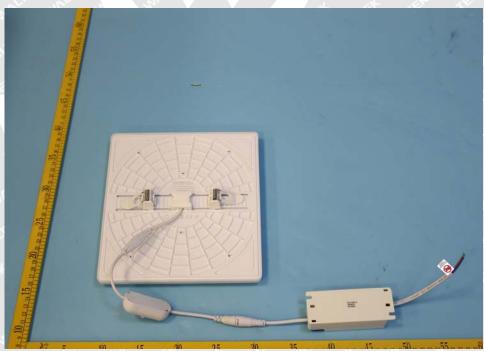


Photo 2

## Page 2 of 6



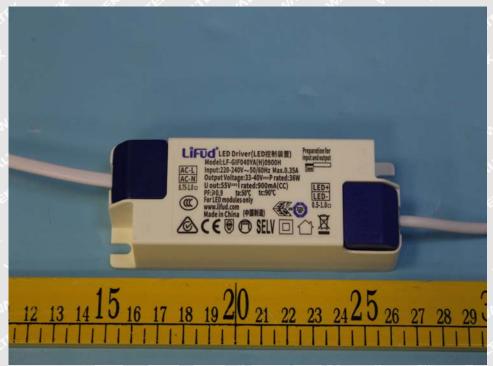


Photo 3

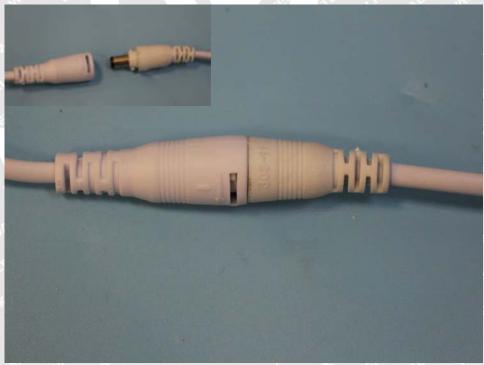


Photo 4





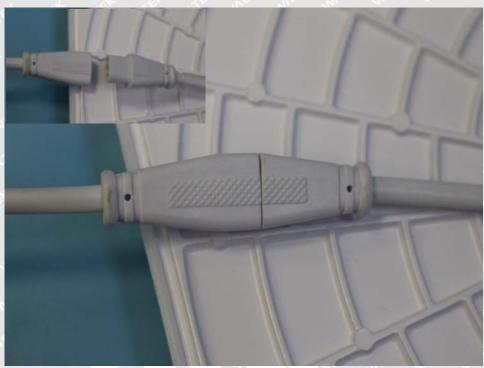


Photo 5



Photo 6





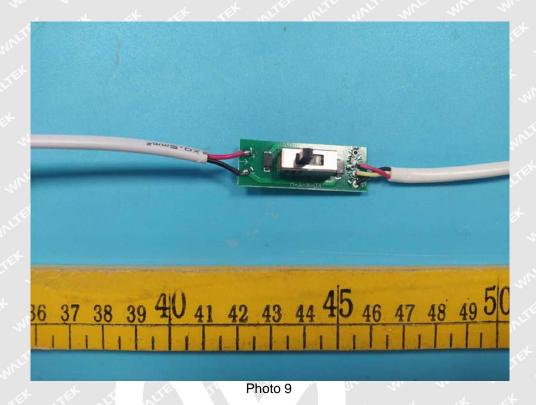


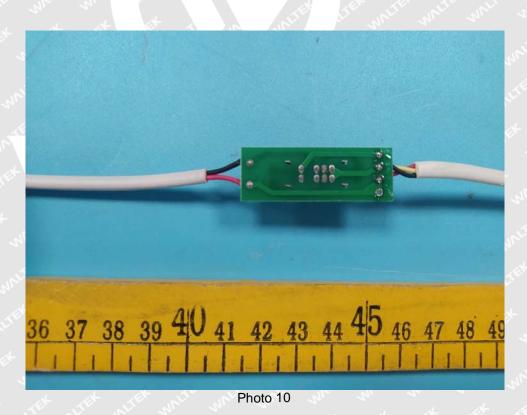
Photo 7



Page 5 of 6







#### Page 6 of 6



### **Photo Documentation**

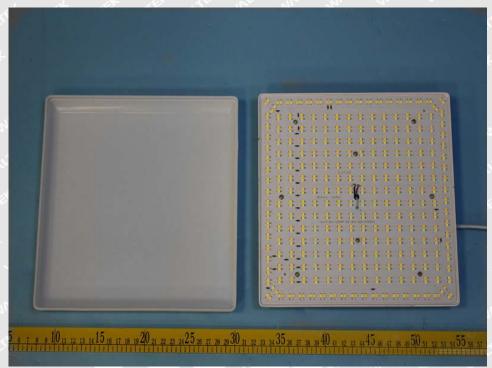


Photo 11



===== End of Photo ======

Waltek Testing Group (Foshan) Co., Ltd. http://www.waltek.com.cn