

TEST REPORT

Report No.: DL-20231122032S

Product Name:	LED Street Light
Trade Mark:	Sight the world
O, Co,	MSL-F200
Model Number:	MSL-F25,MSL-F30,MSL-F50,MSL-F60,MSL-F80,MSL-F100,MSL-F120,MSL-F150,MSL-F180, MSL-F240,MSL-F300
Prepared For:	MIC Optoelectronic Co.,Ltd
Address:	2nd floor,Third Building, 97# AiNan Road,LongDong, BaoLong Street, LongGang District Shenzhen, China
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Date of Receipt:	Nov. 13, 2023
Test Date	Nov. 13, 2023 - Nov. 23, 2023
Date of Report:	Nov. 23, 2023
Report No.:	DL-20231122032S

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TEST REPORT

BS EN 60598-2-3

Part 2: Particular requirements

Section 3: Luminaires for road and street lighting

Report Number: DL-20231122032S

Tested by (name) Jimi Wu

Compiled by (name) Ray Liang

Approved by (name) Jade Yang

Date of issue Nov. 23, 2023

Total number of pages 57 pages

Applicant's name MIC Optoelectronic Co.,Ltd

LongGang District, Shenzhen, China

Testing Laboratory...... Shenzhen DL Testing Technology Co., Ltd.

101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong

Report No.: DL-20231122032S

Address Industrial Zone, Baolong Street, Longgang District, Shenzhen,

Guangdong, China

Test specification:

Standard...... BS EN IEC 60598-1:2021 + A11:2022

BS EN 60598-2-3:2003+A1:2011

Test procedure: --

Non-standard test method: N/A

Test Report Form No. IEC60598_2_3M

Test Report Form(s) originator...: Intertek Semko AB

Master TRF: Dated 2021-11-11

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Test item description: LED Street Light

Trade Mark.....:



MIC Optoelectronic Co.,Ltd

Manufacturer: 2nd floor, Third Building, 97# AiNan Road, Long Dong, BaoLong Street,

LongGang District, Shenzhen, China

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Ratings: 220-240V, 50/60Hz, 200W

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

Attachment No. 1: 2 pages of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Attachment No. 2: 5 pages of test report of IEC62031:2008, IEC 62031:2008/AMD1:2012 and

IEC62031:2008/AMD2:2014;

1 page of test report for EN62031:2008+A1:2013+A2:2015

Attachment No. 3: 2 pages of test report of IEC TR 62778:2014 (for blue light hazard);

Attachment No. 4: 3 pages of photos.

Summary of testing:

Tests performed (name of test and test clause):

The submitted samples were tested and found to comply with the requirements of:

BS EN IEC 60598-1:2021 + A11:2022

BS EN 60598-2-3:2003+A1:2011

The LED modules in products were found to comply with the requirement of EN 62031:2008+A1:2013+A2:2015

The submitted samples were classified as RG1 according to IEC TR 62778:2014

The submitted samples were LED-light-source technology, they were found to comply with the requirements EN 62493:2015

Testing location:

101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

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Summary of compliance with National Differences:

List of countries addressed: National Differences and Group Differences as per CB bulletin. See the attachment of National and Group Differences for details.

☐ The product fulfils the requirements of BS EN 60598-2-3:2003+A1:2011 and BS EN IEC 60598-1:2021 + A11:2022 and BS EN 62493:2015

General disclaimer:

The test results presented in this report relate only to the object tested.

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Copy of marking plate:

LED Street Light

Model: MSL-F200

Rating: 220-240V, 50/60Hz, 200W

UK CA

MIC Optoelectronic Co.,Ltd

Made in China

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- The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

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Test item particulars:	D. Co. Y. D. Co.
Classification of installation and use:	Class I
Supply Connection:	Non-detachable power supply cord without plug
Possible test case verdicts:	Y Contract of Cont
- test case does not apply to the test object:	N/A
- test object does meet the requirement:	P (Pass)
- test object does not meet the requirement:	F (Fail)
Testing:	Service of Scott
Date of receipt of test item:	Nov. 13, 2023 - Nov. 23, 2023
Date (s) of performance of tests:	Nov. 23, 2023
General remarks:	j. O jo v ov jest
Throughout this report a comma / point is u Clause numbers between brackets refer to clauses i	Or Care Or Care
When differences exist; they shall be identified in th	e General product information section.
Name and address of factory (ies):	MIC Optoelectronic Co.,Ltd
	2nd floor, Third Building, 97# AiNan Road, Long Dong, BaoLong Street, Long Gang District, Shenzhen, China
General product information and other remarks:	
LED Street Light, class I equipment, power by internal	LED driver.

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OL	60598-2-3		O.	
Clause	Requirement + Test	Result - Remark	Verdict	
3.2 (0)	GENERAL TEST REQUIREMENTS	V & V 0°	- or	
3.2 (0.3)	More sections applicable			
3.2 (0.5)	Components	(see Annex 1)	_	
3.2 (0.7)	Information for luminaire design in light sources s	tandards	_	
3.2 (0.7.2)	Light source safety standard:	IEC 62031	_	
Co	Luminaire design in the light source safety standard	Or Care	ÓР	
Q, C		x O' Cer) Oe	
3.4 (2)	CLASSIFICATION OF LUMINAIRES			
3.4 (2.2)	Type of protection:	Class I	Р	
3.4 (2.3)	Degree of protection:	IP66	- e ^C P	
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces:	Yes ⊠ No □	_	
3.4 (2.5)	Luminaire for normal use:	Yes ⊠ No □	_	
×	Luminaire for rough service:	Yes □ No ⊠	_	
3.4 (-)	Modes of installation of road or street lighting	Ohi ciet Or co	_	
Col	a) on a pipe	Yes ⊠ No □	_	
Q, C	b) on a mast arm	Yes □ No □	_	
Or	c) on a post top	Yes □ No ⊠	_	
oft.	d) on span or suspension wires	Yes □ No □	_	
COL	e) on a wall	Yes □ No ⊠	_	
JL' Cet	D' CO' X D' CO'	D. T. Co., F. O.	cert	
3.5 (3)	MARKING		Q\	
3.5 (3.2)	Mandatory markings	- Ox	P	
X	Position of the marking	Cox V.Co	Р	
Co x	Format of symbols/text	ON CONT. OF JOS	P	
3.5 (3.3)	Additional information	Or Car	Р	
0	Language of instructions	English	P.C°	
7 1				

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	60598-2-3				
Clause	Requirement + Test	Result - Remark	Verdict		
3.5 (3.3.1)	Combination luminaires		- N/A		
3.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	Por		
3.5 (3.3.3)	Operating temperature	O. Co.	N/A		
3.5 (3.3.5)	Wiring diagram		N/A		
3.5 (3.3.6)	Special conditions	Cert	N/A		
3.5 (3.3.7)	Metal halide lamp luminaire – warning	Or Coly	N/A		
3.5 (3.3.8)	Limitation for semi-luminaires	Or Call	N/A		
3.5 (3.3.9)	Power factor and supply current	Y ON COST	N/A		
3.5 (3.3.10)	Suitability for use indoors	at or can	Р		
3.5 (3.3.11)	Luminaires with remote control	Contraction of Contraction	N/A		
3.5 (3.3.12)	Clip-mounted luminaire – warning	01,00 et 01	N/A		
3.5 (3.3.13)	Specifications of protective shields	OLO GET ON	N/A		
3.5 (3.3.14)	Symbol for nature of supply	, OV oth	Р		
3.5 (3.3.15)	Rated current of socket outlet		N/A		
3.5 (3.3.16)	Rough service luminaire	Cert V	N/A		
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X Type Y attachments				
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable	e Or cert	N/A		
3.5 (3.3.19)	Protective conductor current in instruction if applicable	Le Oli Coli	N/A		
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach	Cet. Or Cet.	N/A		
3.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non-user replaceable light source	Por		
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided	et Or cet	P		
3.5 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component	Oricest Orice	N/A		

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OV.	60598-2-3	St. A St. St.	0,
Clause	Requirement + Test	Result - Remark	Verdict
0			
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging	Direct A	- Ñ/A
3.5 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided	. Or Court	N/A
3.5 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided	Cert Or Cert	P
3.5 (3.4)	Test with water	D. Col.	P
01,0	Test with hexane	O COL	P
	Legible after test		P
*	Label attached	Cert Or Con	Р
3.5 (-)	Additional information in instruction leaflet	y cert of cert	Р
Cert	a) Design attitude	Or cert Or	P
Dr. Con	b) Weight	OV. COT. OV	P
QV.	c) Overall dimensions	x Dr. cet	P
	d) Maximum projected area if applicable		P
COL	e) Cross-sectional area of wires if applicable	LON X OF GR	P
- eit	f) Suitability for indoors use	D. Y. O.	N/A
OV.	g) Dimensions of the compartment	Q, 700, X	P
OL	h) Torque setting to be applied to bolts or screws	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	P
х О	i) Maximum mounting height	Cox A. Co.	P

3.6 (4)	CONSTRUCTION		
3.6 (4.2)	Components replaceable without difficulty	Or Car	P
3.6 (4.3)	Wireways smooth and free from sharp edges	a or con	P
3.6 (4.4)	Lampholders	So of cot	N/A
3.6 (4.4.1)	Integral lampholder	NO NO CE	N/A
3.6 (4.4.2)	Wiring connection	V Co	N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting	V 0	N/A-

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Clause	Requirement + Test	Result - Remark	Verdict
Ω,		Y O' O'	×
3.6 (4.4.4)	Positioning		- N/A
or cert	- pressure test (N):	The state of	_
	After test the lampholder comply with relevant standard sheets and show no damage	Ser Of Cost	N/A
Cott.	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation	Cott	N/A
N' 6	- bending test (N):	O, Co,	_
QV.	After test the lampholder have not moved from its position and show no permanent deformation	X OV CON	N/A
3.6 (4.4.5)	Peak pulse voltage	Co x Or Con	N/A
3.6 (4.4.6)	Centre contact		- N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking	V. Co. X. OV	N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used	opt V NO	N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way	OV. COR.	N/A
3.6 (4.5)	Starter holders	OV ot. Ov	N/A
Or Co	Starter holder in luminaires other than class II	, Orionality	N/A
Q.	Starter holder class II construction	X OV COX	N/A
3.6 (4.6)	Terminal blocks	Con x OV con	N/A
- oth	Tails	, 50° x	N/A
) - ert	Unsecured blocks	O CO X	N/A
3.6 (4.7)	Terminals and supply connections	Q SON X	P
3.6 (4.7.1)	Contact to metal parts	Cox Or Cox	N/A
3.6 (4.7.2)	Test 8 mm live conductor	Car. O. Car	N/A
Cox	Test 8 mm earth conductor	or car	N/A
3.6 (4.7.3)	Terminals for supply conductors	Ohio Car	P
3.6 (4.7.3.1)	Welded method and material	x OV cott	N/A

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	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
- ex	- stranded or solid conductor		- N/A
St. Cert	- spot welding	0, 10s, 14 0,	N/A
OV.	- welding between wires	, O. Co.	N/A
OV.	- Type Z attachment	Col. Or of	N/A
a.K	- mechanical test according to 15.6.2	Carry Orio	N/A
	- electrical test according to 15.6.3	Dr. Car	N/A
AV. 0	- heat test according to 15.6.3.2.3 and 15.6.3.2.4	ON Car	N/A
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves	St. Of Cer.	N/A
3.6 (4.7.6)	Multi-pole plug	y on or	N/A
Cer	- test at 30 N		N/A
3.6 (4.8)	Switches	Orio cett Or	N/A
0,	- adequate rating	, OY - 6 ^t	N/A
Or	- adequate fixing		N/A
-012	- polarized supply		N/A
- eith	- compliance with IEC 61058-1 for electronic switches	s DY Column	N/A
3.6 (4.9)	Insulating lining and sleeves	ON CONT.	N/A
3.6 (4.9.1)	Retainment		N/A
× <	Method of fixing:	Cay Or Cay	N/A
3.6 (4.9.2)	Insulated linings and sleeves:	St. Co.	N/A
	Resistant to a temperature > 20 °C to the wire temperature or	Or Car Or	N/A
OL	a) & c) Insulation resistance and electric strength		N/A
OV.	b) Ageing test. Temperature (°C):	Carr	N/A
3.6 (4.10)	Double or reinforced insulation	Cer No	N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	Dr. Cert	N/A
O' GE	Safe installation fixed luminaires		N/A

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Or	60598-2-3	art of the same	On
Clause	Requirement + Test	Result - Remark	Verdict
- ex	Capacitors and switches		- N/A
3.6 (4.10.2)	Assembly gaps:	DY 200 x DY	N/A
OL:	- not coincidental		N/A
, O ^V	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A
Co.	- fixed	Or Cay	N/A
O.	- unable to be replaced; luminaire inoperative	Or Car	N/A
V (V	- sleeves retained in position	To Or Car	N/A
	- lining in lampholder	ar or con	N/A
3.6 (4.10.4)	Protective impedance device	The state of con	N/A
D. Cert	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor	Dr. Cor X Dr	N/A
01.	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
- oth	Capacitors comply with IEC 60384-14	Son x OV	N/A
Cert	Resistors comply with test (a) in 14.1 of IEC 60065	D. Co.	N/A
3.6 (4.11)	Electrical connections and current-carrying parts	The open of the open of	P
3.6 (4.11.1)	Contact pressure	The off contraction	N/A
3.6 (4.11.2)	Screws:	Contraction of Contraction	Р
Cerr	- self-tapping screws		O P
N cert	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:	V 01.0	Р
Or	- spring washer	of the second	Р
-01	- rivets	Con . Or -	N/A
3.6 (4.11.4)	Material of current-carrying parts	Dr. Cer.	P
3.6 (4.11.5)	No contact to wood or mounting surface	QV 60°C	Р

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Or	60598-2-3		O.	
Clause	Requirement + Test	Result - Remark	Verdict	
3.6 (4.11.6)	Electro-mechanical contact systems		- N/A	
3.6 (4.12)	Screws and connections (mechanical) and glands			
	X OV ZOV X	S CONT	P	
3.6 (4.12.1)	Screws not made of soft metal	Le Ovi Cett		
, 0*	Screws of insulating material		N/A	
Ce ^t	Torque test: torque (Nm); part:	Screw for enclosure	P	
- cet	Torque test: torque (Nm); part:	D. Co. 7 Or.	N/A	
0),0	Torque test: torque (Nm); part	Q, Co,	N/A	
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal	of Or Co.	N/A	
3.6 (4.12.4)	Locked connections:	The Direction of the Contraction	N/A	
35	- fixed arms; torque (Nm):	A COL	N/A	
	- lampholder; torque (Nm):		N/A	
of con	- push-button switches; torque 0,8 Nm:	OV. OF OV	N/A	
3.6 (4.12.5)	Screwed glands; force (Nm):	Di et	N/A	
3.6 (4.13)	Mechanical strength			
3.6 (4.13.1)	Impact tests:		P	
, o	- fragile parts; energy (Nm):	Or Col.	N/A	
01,0	- other parts; energy (Nm):	0.35Nm	P	
01.0	1) live parts		P	
	2) linings	Con X	N/A	
	3) protection	The state of the s	Р	
Con .	4) covers	Or cor	P	
3.6 (4.13.2)	Metal parts have adequate mechanical strength	Or cert Or	P	
3.6 (4.13.3)	Straight test finger	30N	Р	
3.6 (4.13.4)	Rough service luminaires	Co. x Or cox	N/A	
- ex	- IP54 or higher	50° x 0° 68	N/A	
C.O.T.	a) fixed	D. Y. Co. X. O.	N/A	
01,0	b) hand-held	Q, Q, x	N/A	

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O,	60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict	
COX	c) delivered with a stand		- N/A	
DY COR	d) for temporary installations and suitable for mounting on a stand			
3.6 (4.13.6)	Tumbling barrel	of Or Con	N/A	
3.6 (4.14)	Suspensions, fixings and means of adjusting	Contraction of the contraction o	N/A	
3.6 (4.14.1)	Mechanical load:	Orio Carr Or Co	N/A	
Col	A) four times the weight	OV. COL.	N/A	
D' C'	B) torque 2,5 Nm		N/A	
O,	C) bracket arm; bending moment (Nm):	x OV COX	N/A	
3/4	D) load track-mounted luminaires	Co x Dr. Cox	N/A	
Cert	E) clip-mounted luminaires, glass-shelve. Thickness (mm)	Discontinuity of the	Cet-	
	Metal rod. diameter (mm):	ON COL	N/A	
Or:	Fixed luminaire or independent control gear without fixing devices	Cert Or Cert	N/A	
3.6 (4.14.2)	Load to flexible cables	Se x OV	N/A	
- oth	Mass (kg):	Dr. Con x	_	
01,0	Stress in conductors (N/mm²):	\$ 50° × <	N/A	
OV.	Mass (kg) of semi-luminaire	\$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	N/A	
x Ó	Bending moment (Nm) of semi-luminaire:	Cox O Co	N/A	
3.6 (4.14.3)	Adjusting devices:	N. Co.	N/A	
CO X	- flexing test; number of cycles:	Or Care	N/A	
Co	- strands broken:	OV COK	N/A	
	- electric strength test afterwards	& O' Got	N/A	
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	Cott of Cott	N/A	
3.6 (4.14.5)	Guide pulleys	D. Col. 1	N/A	
3.6 (4.14.6)	Strain on socket-outlets	OV CONT	N/A	

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0,	Cert	- N.O.	60)598-2-3	→ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	of Of
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3.6 (4.15)	Flammable materials		- P
opti	- glow-wire test 650°C:	See Test Table 3.15 (13.3.2)	Рø
OV.	- spacing ≥30 mm	Δ, Co.	N/A
	- screen withstanding test of 13.3.1	OSK ON CO.	N/A
. ~	- screen dimensions	Cert Vice	N/A
Co.	- no fiercely burning material	Or Car	P
Q.,C.	- thermal protection	Or Cay	N/A
	- electronic circuits exempted	Col	N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp	control gear	N/A
35	a) construction	Con of Con	N/A
Corr	b) temperature sensing control	OV. O GIT. OV	N/A
of Cold	c) surface temperature	Or of Or	N/A
3.6 (4.16)	Luminaires for mounting on normally flammable s	surfaces	Р
O _V	No lamp control gear:	(compliance with Section 12)	N/A
ce ^{it}	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces	Orices or Orices	N/A
3.6 (4.16.1)	Lamp control gear spacing:	1,0° ,1° 0	N/A
OV.	- spacing 35 mm		N/A
is o	- spacing 10 mm	Cort Victoria	N/A
3.6 (4.16.2)	Thermal protection:	Cent . OV.	N/A
L'OB OR	- in lamp control gear	Dr. Court	N/A
	- external	ON CONT.	N/A
	- fixed position	et or cer	N/A
	- temperature marked lamp control gear	Con Con	N/A
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	Drain holes	OV. COL	N/A
O' Ce	Clearance at least 5 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
0			×
3.6 (4.18)	Resistance to corrosion		− N/A
3.6 (4.18.1)	- rust-resistance	V Co ok OV	N/A
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium	Opt. Victorial	N/A
3.6 (4.19)	Ignitors compatible with ballast	Con Nico	≿ N/A
3.6 (4.20)	Rough service vibration	Dr. Cey	N/A
3.6 (4.21)	Protective shield	Or Call	N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps	St Or Cau	N/A
357	Shield of glass if tungsten halogen lamps	Co x OV cox	N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path	D CO X DY	N/A
3.6 (4.21.4)	Impact test on shield	Co. X	N/A
OV	Glow-wire test on lamp compartment:	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage	OV. Colt. OV. Col	N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	Photobiological hazards	ar C	Po
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)	Cox Dr. Cox	N/A
3.6 (4.24.2)	Retinal blue light hazard	N. Co.	×Ρ
S. Cet	Class of risk group assessed according to IEC/TR 62778	RG1	_
OV.	Luminaires with E _{thr} :		N/A
0	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2:	Con Nin	⊱ N/A
O.X.	- marking and instruction according 3.2.23	D. Co. A. V.	N/A
2,0	b) Portable and handheld luminaires	OV CON	N/A

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N	No. 1. X. II. T. X.	D. C. D	Marilat
Clause	Requirement + Test	Result - Remark	Verdict
Cert	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		- N/A
Or.	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	Ost Or Cot	N/A
3.6 (4.25)	Mechanical hazard		P
o cit	No sharp point or edges	D. Court	P
3.6 (4.26)	Short-circuit protection	ON CONT.	N/A
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3	Co it O' cot	N/A
Cet	Supply source ES1 PSE		- N/A
v cet	Test chain not melt through	V Co	N/A
OV.	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	Terminal blocks with integrated screwless earthin	g contacts	N/A
. ~	Test according Annex V	Cert Co	N/A
36	Pull test of terminal fixing (20 N)	Or Car	N/A
O.	After test, resistance < 0,05 Ω	ON CONT.	N/A
7 / C	Pull test of mechanical connection (50 N)	Col	N/A
	After test, resistance < 0,05 Ω	er or cor	N/A
	Voltage drop test, resistance < 0,05 Ω	Contraction of the contraction o	N/A
3.6 (4.28)	Fixing of thermal sensing control	OV. OR OV	N/A
Cert	Not plug-in or easily replaceable type		N/A
O.	Reliably kept in position	N. O. O. O.	N/A
× 0/	No adhesive fixing if UV radiations from a lamp can degrade the fixing	Ser Dicost	N/A
, S	Not outside the luminaire enclosure	ON COL DE LOS	N/A
, Co,	Test of adhesive fixing:	ON CONTRACTOR	N/A
O, Ce	Max. temperature on adhesive material (°C):		_

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Ov	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
co ^X	100 cycles between t min and t max		N/A
or cer	Temperature sensing control still in position	0 10° x 0	N/A
3.6 (4.29)	Luminaires with non-replaceable light source	. 00	N/A
. 🔷	Not possible to replace light source	der A Sign	N/A
cet	Live part not accessible after parts have been opened by hand or tools	or or or	N/A
3.6 (4.30)	Luminaires with non-user replaceable light source	e or cor	Ç₽.
Dr.C	If protective cover provide protection against electric electric shock risk" symbol:	shock and marked with "caution,	PC
. X	At least one fixing means requiring use of tool	Cert Co	P
3.6 (4.31)	Insulation between circuits	N Coll	P
Jr, Cert	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	Dr. Cert	P
, or	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	Cet Di Cet	N/A
3.6 (4.31.1)	SELV or PELV circuits	A CO X OV	P
OV.	Used SELV/PELV source	\$ 50° × <	P
OL	Voltage ≤ ELV	3	N/A
χ <	Insulating of SELV/PELV circuits from LV supply	Cox O	N/A <
Cox	Insulating of SELV/PELV circuits from other non SELV/PELV circuits	OLICER DISC	N/A
Cer	Insulating of SELV/PELV circuits from FELV		N/A
0/2	Insulating of SELV/PELV circuits from other SELV/PELV circuits	ok direct	N/A
co ^k	SELV/PELV circuits insulated from accessible parts according Table X.1	Oricest Orices	P
Or, Celt	Plugs not able to make any electrical contact with socket-outlets of other voltage systems	Or Care X	N/A
v ()			

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N	No. 1.X. II. T. X	Dec (C Deced)	Marilat
Clause	Requirement + Test	Result - Remark	Verdict
L'OPT BY	Socket outlets does not admit plugs of other voltage systems	Or Cole Or	N/A
0,00	Plugs and socket-outlets does not have protective conductor contact	. O' COT	N/A
3.6 (4.31.2)	FELV circuits	Co x Or con	N/A
-e ^x	Used FELV source		N/A
- OK	Voltage ≤ ELV	DY CON X DY	N/A
OV ~!	Insulating of FELV circuits from LV supply	♦	N/A
OV.	FELV circuits insulated from accessible parts according Table X.1		N/A
COK.	Plugs not able to make any electrical contact with socket-outlets of other voltage systems	3) Cer & Oricer	N/A
V. Cert	Socket outlets does not admit plugs of other voltage systems		N/A
Or	Socket-outlets does not have protective conductor contact	Set a Or Cert	N/A
3.6 (4.31.3)	Other circuits	Y O G	P
OV. Cert	Other circuits insulated from accessible parts according Table X.1	Or Col	P
OL.	Class II construction with equipotential bonding for pr with live parts:	rotection against indirect contacts	N/A
8	- conductive parts are connected together	LOS X OV GOR	N/A
COL	- test according 7.2.3	Co x OV	N/A
V. Ceir	- conductive part not cause an electric shock in case of an insulation fault	Orico Cor	N/A
~	- equipotential bonding in master/slave applications	at Or Car	N/A
.ot	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
- ort	- slave luminaire constructed as class I	DY OY	N/A
3.6 (4.32)	Overvoltage protective devices		N/A

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	60598-2-3	X. O' CEC	
Clause	Requirement + Test	Result - Remark	Verdict
-01	Comply with IEC 61643-11	Y Colt X OX	N/A
) - e ^x	External to controlgear and connected to earth:	A CONTRACTOR	N/A
OV.	- only in fixed luminaires	· O CO	N/A
O,	- only connected to protective earth		N/A
3.6 (4.33)	Luminaire powered via information technology co	ommunication cabling	N/A
	Requirements for Class III luminaire	Or Call	N/A
Or, Co	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector	Or Court	N/A
× <	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
3.6 (4.34)	Electromagnetic fields (EMF)	N Car	Р
, oo.	No harmful electromagnetic fields	Or Call	Р
3.6 (4.35)	Protection against moving fan blades	ON COL	N/A
~	Test with a standard test finger	at of con	N/A
- o ^X	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire	Cot x O' Cot	N/A
- OK	Blades rounded with radius ≥ 0.5 mm and:	A SON X OV	N/A
01,0	-hardness less than D60 Shore	\$ 500 x <	N/A
OV.	-peripheral speed less than 15 m/s	\$ 0° 0° 0° 0° 0° 0° 0° 0° 0° 0° 0° 0° 0°	N/A
χ <	-input power of fan ≤ 2 W at rated voltage	Cox. V. Co.	N/A
3.6 (4.36)	Track-mounted luminaires	N. Cer.	N/A
L'Cer	Test in accordance with Annex A of IEC60570:2003/AMD2:2019	Or Care Or	N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP		N/A
Or	Column-integrated luminaires:		N/A
of the	- parts below 2,5 m. IP:	Con the second	N/A
o K	- parts above 2,5 m. IP:	D. Cer. 1	N/A
3.6.2 (-)	Suspension on span wires	ON COL	N/A

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Nouse	Requirement + Test	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdict
3.6.3 (-)	Means for attaching the luminaire or external parts to		- N/A
N'O' - O'T	its support appropriate to the weight	Or Col.	, ot
3.6.3.1 (-)	Static load test	, OV CONT	N/A
0	- drag coefficient:	Sy O, Co,	N/A
	- loaded area (m²):	Ser Or Con	N/A
Cer	- used load (N):	Or of the	N/A
Col	- measured deformation (cm/m):	01/0 -01/2 O	N/A
O' CO	- no rotation	OV. CONT.	N/A
3.6.4 (-)	Adjustable lampholders	X OV COX	N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be	E CONTRACTOR	N/A
-0,1	a) glass that fractures into small pieces (test according		N/A
V. O'C	to 3.6.5.1), or	Dr. Col.	
	b) glass having a high impact shock resistance (test	· Or Cor	N/A
	according to 3.6.5.2), or	ex or con	× 0×
	c) protected by any means to retain glass fragments		N/A
ge ^x	For tunnel luminaires 3.6.5.1 apply		N/A
Cerr	Method of protection declared by the manufacturer	V CO X OV	N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into smal	Il pieces	N/A
OVÍ	- number of particles is more than 40:	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass	Cet V Co	N/A
3.6.5.2.1 (-)	Glass covers have high mechanical strength	Sex O. Co.	N/A
Co. X	Test according IEC 62262 with test apparatus	OL COL	N/A
	according IEC 60068-2-75 with impact energy of 5J or		Cor
005004	preconditioned sample	X V COX	N1/4
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20:	Dicest of C	N/A
3.6.6 (-)	Connection compartment of column-integrated lumina	aire	N/A
OV - e	- provides adequate space	V 200 x <	N/A

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OL	60598-2-3	er v	0
Clause	Requirement + Test	Result - Remark	Verdict
0			8
Cert	- means for attachment		- N/A
or cer	- means for attachment of metal corrosion-resistant	N.Co at OV	N/A
3.6.7 (-)	Compliance with ISO standard or other:		N/A
3.6.8 (-)	Doors of column-integrated luminaires:	Cott. Victorial	N/A
35.	- corrosion-resistant	Contraction of the contraction o	N/A
, o air	- opening only possible for an authorized person	Or Car	N/A
OV.	- impact test 5 Nm	Or Copy	N/A
	- sample show no damage	of Or Col	N/A
3.6.9 (-)	Column-integrated luminaire:	ex Or Cer	N/A
or a	- dimension of the cable entry slot (mm):	The state of contract of the state of the st	N/A
or cert	- cable path from the slot to the connection compartment (mm):	Orio Cok X Or	N/A
Ol.	- cable path free from obstruction that might cause abrasion of the cable		N/A

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3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		
3.7 (11.2)	Creepage distances and clearances:	See Table 3.7 (11.2)	Cont.
Or Ce	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II Category III	_
er C	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1	Court Orico	N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	N/A
or cer	Creepage distances for frequency over 30 kHz:		N/A
Or Or	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
Cett	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	N/A
ON CE	Clearances distances for frequency over 30 kHz:	7 0 k	N/A

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OV.	60598-2-3	er v	O,
Clause	Requirement + Test	Result - Remark	Verdict
COL	- Controlgear marked with <i>U</i> _P	See Test Table 3.7 (11.2) II	N/A
V ()	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A

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3.8 (7)	PROVISION FOR EARTHING		
3.8 (7.2.1 + 7.2.3)	Accessible metal parts	OLICE TO OLICE	P
OV 69	Metal parts in contact with supporting surface	, , , , , , , , , , , , , , , , , , ,	Po
OL	Resistance < 0,5 Ω:	Max. 0.025Ω	P
2 <	Self-tapping screws used	Cor. O. Co.	N/A
ک _ک	Thread-forming screws	Cer V	N/A
, Co.	Thread-forming screw used in a grove	Or Col	N/A
), 'Co.	Protective earth makes contact first	O. Col.	N/A
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V	et of cet	N/A
Cert	Protective earthing of the luminaire not via built-in control gear	7. Cet 7. Ce	P A
3.8 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.	Or Car	P
3.8 (7.2.4)	Locking of clamping means	× OV, cor	P
st C	Compliance with 4.7.3	Con a Driver	Р
3.8 (7.2.5)	Protective earth terminal integral part of connector socket	Orice Cet. Ori	N/A
3.8 (7.2.6)	Protective earth terminal adjacent to mains terminals	O. Col.	P
3.8 (7.2.7)	Electrolytic corrosion of the protective earth terminal	it of con	Р
3.8 (7.2.8)	Material of protective earth terminal	the officer	Р
Cor	Contact surface bare metal	STORY OF CO	Р
3.8 (7.2.10)	Class II luminaire for looping-in	V 06	N/A
OV 68	Double or reinforced insulation to functional earth	V 200 & 0	N/A

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OV	60598-2-3	Ser A St. Co	0
Clause	Requirement + Test	Result - Remark	Verdict
0,		Y S	*
3.8 (7.2.11)	Protective earthing core coloured green-yellow		o°P
or cert	Length of earth conductor		Per
3.8 (7.2.12)	PELV circuit connected to protective earth for functional purpose	at Or cet	ON P

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3.9 (14)	SCREW TERMINALS		·
Col	Separately approved; component list	(see Annex 1)	ΟP
Q, C	Part of the luminaire	(see Annex 3)	N/A

3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		🛇
- ot	Separately approved; component list:	(see Annex 1)	N/A
or cet	Part of the luminaire:	(see Annex 4)	N/A

3.10 (5)	3.10 (5) EXTERNAL AND INTERNAL WIRING		-0\ [']
3.10 (5.2)	Supply connection and external wiring	Cox.	Р
3.10 (5.2.1)	Means of connection:	Non-detachable power supplu cord with plug	P
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment	Cet Oricet	N/A
3.10 (5.2.2)	Type of cable:	H05VVH-F	P
), (O),	Nominal cross-sectional area (mm²):	3*0.75 mm²	P
	Cables equal to IEC 60227 or IEC 60245	IEC 60227	P
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	Р
3.10 (5.2.5)	Type Z not connected to screws	of the off of	N/A
3.10 (5.2.6)	Cable entries:		OP.
ON CE	- suitable for introduction		Po

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Clause	Requirement + Test	Result - Remark	Verdict
- ex	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges	Or Car	N/A
3.10 (5.2.8)	Insulating bushings:	- or Cor	N/A
	- suitably fixed	S SE SE SE	N/A
Cock	- material in bushings	or of or	N/A
Col	- material not likely to deteriorate	01,0 - 01x 0	N/A
Or Co	- tubes or guards made of insulating material	STORE CONT.	N/A
3.10 (5.2.9)	Locking of screwed bushings	X OV COX	N/A
3.10 (5.2.10)	Cord anchorage:	The Case Or Williams	Р
Co.	- covering protected from abrasion	ON COL	P
, , , , , ,	- clear how to be effective	· Or Copy	P
	- no mechanical or thermal stress	at of con	P
	- no tying of cables into knots etc.	Ser Or Car	Р
cert	- insulating material or lining	7,00 st 0, 00	N/A
3.10 (5.2.10.1)	Cord anchorage for type X attachment:	Orio Cor X	N/A
OV	a) at least one part fixed		N/A
x 0	b) types of cable	COX X	N/A
× ×	c) no damaging of the cable		N/A
, CO X	d) whole cable can be mounted	Or Car	N/A
Ce	e) no touching of clamping screws	. Or cor	N/A
0,	f) metal screw not directly on cable	x OV COR	N/A
0,	g) replacement without special tool	Contraction of Contraction	N/A
-,e ^x	Glands not used as anchorage	20° x 0' 0'	N/A
cont.	Labyrinth type anchorages	D. Co.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	- of P
3.10 (5.2.10.3)	Tests:	× program	OLP
0	- impossible to push cable; unsafe	E OF GOT	N/A
-ex	- pull test: 25 times; pull (N):	60	P
Ceix	- torque test: torque (Nm):	0.25	P
OV C	- displacement ≤ 2 mm	0.9	P
O ^L	- no movement of conductors	2 00	P
χ <	- no damage of cable or cord	Cor. O. Co.	P
,	- function independent of electrical connection), CS _C , A. Co	Р
3.10 (5.2.10.4)	Luminaire with/designed for use with supply cord with	n maximum current of 2A:	N/A
0,	- Ordinary Class III luminaire supplied with SELV ≤ 25V RMS/60V DC	Cot Original	N/A
-je ^t	- Ordinary Class III luminaire supplied with PELV ≤12V RMS/30V DC	Dr. Cork Dr. Or.	N/A
0), Co.	- Other than ordinary Class III luminaire supplied with voltage ≤12V RMS/30V DC	OV. Cort	N/A
OF	Pull test of 30N		N/A
3.10 (5.2.11)	External wiring passing into luminaire	Car Dr. Ca	P
3.10 (5.2.12)	Looping-in terminals	OV. Cert	N/A
3.10 (5.2.13)	Wire ends not tinned	Cot O' Cot X	N/A
Х.	Wire ends tinned: no cold flow	Copy Of Copy	Р
3.10 (5.2.14)	Mains plug same protection	Dr. Cett Dr.	P
OV (Class III luminaire plug	V 000	N/A

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O	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
c.ext	No unsafe compatibility		- ø P
3.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)	OSK DY COK	N/A
Cot.	Installation couplers (IEC 61535)		N/A
COX	Appliance inlet or connector systems (IEC 61984)		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with	Ceix Y Di Ceix	Р
Cet	- IEC 60083		- e ^T P
N' cet	- other standard	Co or Or	N/A
3.10 (5.3)	Internal wiring	27.00	O P
3.10 (5.3.1)	Internal wiring of suitable size and type	OST.	PO
a.K.	Through wiring	Cott.	_ζ N/A
	- not delivered/ mounting instruction	DY COL	N/A
	- factory assembled	O'V CONT.	N/A
	- socket outlet loaded (A)	y Or Car	N/A
	- temperatures:	(see Annex 2)	N/A
	Green-yellow for protective earth only	TO SEE OF COL	Р
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring	Orio Cer X Orio	N/A
01,0	Cross-sectional area (mm²):	O CO	N/A
01	Insulation thickness	CONT. ON TOWN	N/A
X	Extra insulation added where necessary	Cet O' Co	N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal connected to fixed via internal connected to fixed via internal connected via inte	urrent-limiting device	P
OV - 6	Cross-sectional area (mm²):	7. Co. 8. O	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.1.3)	Double or reinforced insulation for class II	S. Cor.	N/A
3.10 (5.3.1.4)	Conductors without insulation	" Or Cay	N/A
3.10 (5.3.1.5)	SELV/PELV current-carrying parts	Cert Or Cert	P
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber	Dr. Col.	N/A
3.10 (5.3.2)	Sharp edges etc.	A ON CONTRACT	Р
0,	No moving parts of switches etc.	X OY GOT	N/A
,	Joints, raising/lowering devices	Loo x Or cox	N/A
Cet	Telescopic tubes etc.		- N/A
V cet	No twisting over 360°	0° 0° 0°	Pø
3.10 (5.3.3)	Insulating bushings:		N/A
OV.	- suitable fixed	Cert Co	N/A
~	- material in bushings	Call Call	_ζ N/A
30	- material not likely to deteriorate	Dr. Cell	N/A
,Co	- cables with protective sheath	Dr. Car	N/A
3.10 (5.3.4)	Joints and junctions effectively insulated	of Ox Cay	N/A
3.10 (5.3.5)	Strain on internal wiring	er Or Car	N/A
3.10 (5.3.6)	Wire carriers	The state of the s	N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
Col	Wire ends tinned: no cold flow	7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	N/A
3.10 (5.4)	Test to determine suitability of conductors having	g a reduced cross-sectional area	P
× 0/	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	P
-50"	No damage to luminaire wiring after test	Or Car	P
3.10.1 (-)	Cord anchorage if applicable	OF CONT.	<u> </u>
O, Co	- pull test: 25 times; pull (N):		Р

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OV	60598-2-3	Col.	O _V
Clause	Requirement + Test	Result - Remark	Verdict
	torque testi torque (Nm)	OF S	C ^o
Col	- torque test: torque (Nm)		C P

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3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		O>
3.11 (8.2.1)	Live parts not accessible	er V	PO
Cer	Basic insulated parts not used on the outer surface without appropriate protection	Or Coll	P
Or Col	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	OV. Cort	N/A
, O.	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires	Cor Or Cor	(P
or Cort	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements	Dr. Cest. Dr. Cest	N/A
QV.	Basic insulation only accessible under lamp or starter replacement	x Or Car	N/A
. 0	Protection in any position	S. Oli Coli	Р
cer	Double-ended tungsten filament lamp	~ ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	N/A
COL	Insulation lacquer not reliable		N/A
QV 69	Double-ended high pressure discharge lamp	7.0°	N/A
0	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position	Solver St. Or Con.	N/A
3.11 (8.2.3.a)	Class II luminaire:	Orice Carr Dr	N/A
	- basic insulated metal parts not accessible during starter or lamp replacement	et of cot	N/A
Cett	- basic insulation not accessible other than during starter or lamp replacement	orice or orice	N/A
Or, Co	- glass protective shields not used as supplementary insulation	O' Cort	N/A

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	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth	Dr. Cost. Dr.	N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:	× DY CON	N/A
, O.	Ordinary luminaire:	Co x Or Get	N/A
COL	- voltage under load/ no-load AC (V)	LO X OV CS	N/A
C. ST.	- voltage under load/ no-load DC (V)	× × × ×	N/A
ON GE	- interrupted DC voltage (V)	V 200 X	N/A
QV.	- touch current if applicable (mA)	\$ \ \(\sqrt{\chi} \) \(\sqrt{\chi} \)	N/A
x 0	One conductive part insulated if required	Con Con X	N/A
) ,	Other than ordinary luminaire:		N/A
Co. X	- voltage under load/ no-load AC (V)	O' CON O'	N/A
), Ce,	- voltage under load/ no-load DC (V)	OV COR	N/A
O _x	- interrupted DC voltage (V)	x O' cet	N/A
, O'	Class III luminaire only for connection to SELV	or or cert	N/A
Cer	Class III luminaire not provided with means for protective earthing	Dr. Cert X Dr. Ce	N/A
3.11 (8.2.3.d)	PELV circuits with exposed current carrying parts:	A Di Cor	N/A
	Ordinary luminaire:	at Or car	N/A
S. C.	- voltage under load/ no-load AC (V):	Contraction of Contraction	N/A
CONT.	- voltage under load/ no-load DC (V)		N/A
of cert	Other than ordinary luminaire:		N/A
Or (- voltage under load/ no-load AC (V):		N/A
	- voltage under load/ no-load DC (V)		N/A
a ^t	One pole insulated if required		⊱ N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface	DY COR COR	N/A

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OL	60598-2-3		O.
Clause	Requirement + Test	Result - Remark	Verdict
0,	× × × ×	V & V 0°	T. Bu
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe	Direct Ali	ger P
3.11 (8.2.6)	Covers reliably secured	· O Cor	P
3.11 (8.2.7)	Luminaire other than below with capacitor $>$ 0,5 μF no exceed 50 V 1 min after disconnection		N/A
Cert	Portable luminaire with capacitor $>$ 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection	or cert or ce	P
Dr. C.	Other luminaires with capacitor > 0,1 µF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection	of Olicer S	N/A

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3.12 (12)	ENDURANCE TEST AND THERMAL TEST		- OX
3.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 3.13		_
3.12 (12.2)	Selection of lamps and ballasts	x OV Cer	_
	Lamp used according Annex B	(Lamp used see Annex 2)	_
Cert	Control gear if separate and not supplied	(Control gear used see Annex 2)	_
3.12 (12.3)	Endurance test:	Q*	Р
OV	a) mounting-position:	As in normal use	_
x. 0	b) test temperature (°C):	35	_
* ×.	c) total duration (h):	240	_
, Con X	d) supply voltage (V):	240V	_
Op. Co.	d) if not equipped with control gear, constant voltage/current (V) or (A):	- Or Car	_
3.12 (12.3.1d)	d) Class III luminaires powered via information techno	logy communication cable:	Р
CO X	- voltage under normal operation (V)	Or Get Or Ge	_
Co	- voltage under abnormal operation (V)	OV. COL	_
D. Co	e) luminaire ceases to operate	OV - ot	_

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	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
c.ex	f) luminaire with constant light output function		Р
3.12 (12.3.2)	After endurance test:		Per
	- no part unserviceable	of Op Car	P
	- luminaire not unsafe	Con Con	Р
Cel .	- no damage to track system	OV, CO	N/A
Cer	- marking legible	O' CO'	CP.
D' C'	- no cracks, deformation etc.		P.O°
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		_ N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	OF CONT. OF	_
	- case of abnormal conditions:	Tr Or Car	_
	- electronic lamp control gear	of the state of th	N/A
cer	- measured winding temperature (°C): at 1,1 Un:	OV OF OF	_
Or Cert	- measured mounting surface temperature (°C) at 1,1 Un:	Orio Cer x Or	N/A
OL	- calculated mounting surface temperature (°C):	S Co	N/A
x 0	- track-mounted luminaires	Con X	N/A
3.12 (12.6.2)	Temperature sensing control	Victoria att. Ovico	N/A
of cert	- case of abnormal conditions:		_
Or I	- thermal link	, over all	N/A
	- manual reset cut-out	er vice est	N/A
- e ^X	- auto reset cut-out	Col , OV -0	⊱ N/A
O'	- measured mounting surface temperature (°C):	Dr. Col. 1 Miles	N/A
0	- track-mounted luminaires	ON COL	N/A

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OV.	Cert V Co	60598-2-3	St. Co.	O,
Clause	Requirement + Test	Co it OV	Result - Remark	Verdict

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3.12 (12.7)	Thermal test (failed lamp control gear in plastic lur	minaires):	N/A
3.12 (12.7.1)	Luminaire without temperature sensing control	Dr. Cey X	N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W	Sex Or Cex	N/A
Cet	Test method 12.7.1.1 or Annex W:		_
Cott	Test according to 12.7.1.1:	O'CO O'C	N/A
O) (- case of abnormal conditions:	V (_
OL	- Ballast failure at supply voltage (V):	, A. Co.	_
× <	- Components retained in place after the test	Cert Co	N/A
,	- Test with standard test finger after the test	Corr Arico	N/A
V, CO.	Test according to Annex W:	Dr. Call	N/A
), O.	- case of abnormal conditions:	ON COL	_
	- measured winding temperature (°C): at 1,1 Un:	at of of	
- o ^t	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		_
Cert	- calculated temperature of fixing point/exposed part (°C)	Or Colt Or	_
Δ', C,	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70\	N, transformer > 10 VA	N/A
- 0 ¹	- case of abnormal conditions:	, CO x 0 1	_
Y cott	- measured winding temperature (°C): at 1,1 Un:	O CO X	_
OL:	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		_
- o ^x	- calculated temperature of fixing point/exposed part (°C):	Cet X OV Cet	_
- et	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA	Or Con	N/A

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N/A

N/A

N/A

	60598-2-3		
Clause	Requirement + Test	Result - Remark	Verdict
0			
Cex	- case of abnormal conditions:		_
or cer	- Components retained in place after the test		N/A
OL.	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control	Coll of Coll	N/A
Col	- thermal link:	Yes No No	_
Col	- manual reset cut-out:	Yes No	_
Q, Č	- auto reset cut-out:	Yes No No	_
0,	- case of abnormal conditions:	x Or cox	_
o ^t	- highest measured temperature of fixing point/ exposed part (°C):	Cot. Original	_
Co or	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only	O Car	N/A
3.12.2 (-)	(See above)	ex Or Cor	_
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer	Cer x Dr. Cer	P
, est	O CON X OLI COX	A CON X ON	COL
3.13 (9)	RESISTANCE TO DUST AND MOISTURE		V 6
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3	3.12	9
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:	Cox V	P
が 人	- classification according to IP:	IP66	_
Co	- mounting position during test:	As in normal use	_
), Co	- fixing screws tightened; torque (Nm):	- 0 ¹ 0 ¹	_
	- tests according to clauses:	Clause 9.2.0	_

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- electric strength test afterwards

a) no deposit in dust-proof luminaire

b) no talcum in dust-tight luminaire



OV.	60598-2-3		O,
Clause	Requirement + Test	Result - Remark	Verdict
0			
OL COR	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	Dr. Cert VI	N/A
OV.	c.1) For luminaires without drain holes – no water entry		N/A
- e ^t	c.2) For luminaires with drain holes – no hazardous water entry	Cert DV Cert	N/A
DY CORK	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof luminaire	Or Carr	N/A
OF	e) no contact with live parts (IP 2X)	IP66	P
ar C	e) no entry into enclosure (IP 3X and IP 4X)	Court of the Court	N/A
COX	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)	Dicert Dir	N/A
O, Co.	f) no trace of water on part of lamp requiring protection from splashing water	ON CORE	N/A
	g) no damage of protective shield or glass envelope		N/A
3.13 (9.3)	Humidity test 48 h	Cert . Or -o	P P

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3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENG	GTH	·
3.14 (10.2.1)	Insulation resistance test	× Or Cox	R.O
ar ar	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø:	Con Or Corr	_
N. C. C.	Insulation resistance (MΩ):	Q, Co. i Or	_
	SELV/PELV:	O, Cor	P
	- between current-carrying parts of different polarity:	St. Or Col.	N/A
- et	- between current-carrying parts and mounting surface:	100 ΜΩ	Р
Cox	- between current-carrying parts and metal parts of the luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
lause	requirement + rest	Nesuit - Nemaik	Verdict
Cex	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	Dr. Ceit Dr.	N/A
O	- Insulation bushings as described in Section 5:	x Oli con	N/A
<	Other than SELV/PELV:	Co x Or Gor	Р
-ex	- between live parts of different polarity:	100 ΜΩ	P
COX	- between live parts and mounting surface:	100 ΜΩ	OP.
OV.	- between live parts and metal parts:	V	N/A
OV.	- between live parts of different polarity through action of a switch	Total Direction	N/A
, ce ^{tt}	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	Dr. Cert Dr. Cert	N/A
V. O.	- Insulation bushings as described in Section 5:	O Con	N/A
3.14 (10.2.2)	Electric strength test	Set D' Cet	P
-ex	Dummy lamp	2,0° & 0' 0	N/A
COX	Luminaires with ignitors after 24 h test	D. Co. Tr. Or.	N/A
Olí (Luminaires with manual ignitors	V 200 X	N/A
OV.	Test voltage (V):		N/A
X	SELV/PELV:	Cox Ox Ox	Р <
	- between current-carrying parts of different polarity:	Con Con	N/A
, Çê	- between current-carrying parts and mounting surface:	500V	P
0,	- between current-carrying parts and metal parts of the luminaire	et different	N/A
jet of	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	Orcest Aprice	N/A
	- Insulation bushings as described in Section 5:	Q 00°	N/A

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OV	60598-2-3	3K V 3K 3K	O
Clause	Requirement + Test	Result - Remark	Verdict
Х.		Y col	
Cox	Other than SELV/PELV:		P
or cert	- between live parts of different polarity:	1480V	Per
OL	- between live parts and mounting surface:	2960V	P
	- between live parts and metal parts:		N/A
, č	- between live parts of different polarity through action	Cost.	χ N/A
Ç x	of a switch:	ov est	<u></u>
	- between the outer surface of a flexible cord or cable	Or cert Or	N/A
Or. C.	where it is clamped in a cord anchorage and accessible metal parts:		01,08
. <	- Insulation bushings as described in Section 5:	COL COL	N/A
3.14 (10.3)	Touch current (mA)	Max. 0.1mA (limit: 0.7mA)	P
or cer	Protective conductor current (mA)	V 200 20 0V	Per

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3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		-0/
3.15 (13.2.1)	Ball-pressure test:	See Test Table 3.15 (13.2.1)	P
3.15 (13.3.1)	Needle-flame test (10 s):	See Test Table 3.15 (13.3.1)	CP C
3.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 3.15 (13.3.2)	P
3.15 (13.4)	Proof tracking test (IEC 60112):	See Test Table 3.15 (13.4)	N/A

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Distances

Insulation

type **

Measured

clearance

Shenzhen DL Testing Technology Co., Ltd.

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O	Cox		605	98-2-3	3		Ο,
Clause	Requirem	ent + Test	Co	OL	Result - Remark	O CO	Verdict
-01	O ^N	Cex		, t	St. Colt.	, 07, Ce	- ot
3.7 (11.2)	TABLE I: Cr	eepage distar	nces and clear	ances			N/A
01/0	Minimum di	stances (mm)	for a.c. up to	30 kHz sinu	soidal voltages	Col	N/A
	Applicable	part of IEC 60	598-1 Table 11	.1A*, 11.1B	* and 11.2*	Cer	N/A
,	Insulation	Measured	Requ	uired	Measured	Requi	red
	type **	clearance	clearance	*Table	creepage	creepage	*Table
Distance 1:	× <	Shi cett	0,	Co, x	OV.	eř O	Č.
Norking vol	tage (V)		<u>, </u>		x OV	- ox	_
РΤΙ	Ç		<u>~</u>		< 600 🗌	≥ 600 □	
Pulse voltag	ge if applicable	e (kV))	O ^x .	Co	OV. ce	× _
Supplement	ary information	ົນ [©] ັ້	OV.	, C	, con	O D	cott
Distance 2:	. 🔷	Cox	OV	c.ex	O, Co,	x Ø	, coit
Working vol	tage (V)	O O)		Co x	_
PTI		Ο,	Ç.		< 600 □	≥ 600 □	_
Pulse voltag	ge if applicable	e (kV)			- oth	Q, ⁽² C ₀)	
Supplement	ary information	n: O	D. Co.	X	OL' CET		, ×
Distance 3:	χ ς	Y cert	O, (CO X	OV.	e ^X	,Co,
Working vol	tage (V)		<i>X</i>	<u></u>	X OV	COK	9 _
PTI	Co X			O C	< 600 □	≥ 600 □	_
Pulse voltag	ge if applicable	e (kV)	Y		Co, x	OV GO	~ _
Supplement 60598-1 Ani		n: ** Insulation	type: B – Basic	; S – Supple	mentary; R – Re	einforced. See als	so IEC
01/0	- ex	O, Co,		N CONTRACTOR	O _V	CON X	
3.7 (11.2)	TABLE II:	Creepage dis	tances and cle	earances	or O	CONT.	N/A
	Minimu	m distances (mm) for a.c. h	igher than 3	0 kHz sinusoid	al voltages	
cer	Applicat	ole part of IEC	61347-1 Table	⊋ 7 and 8* oı	IEC 60664-4 Ta	able 1 and 2	

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*Table

Required

clearance

Measured

creepage

Required

*Table

creepage



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			605	598-2-3			
Clause	Requirement +	Test	× ×	OV.	Result - Rema	ark	Verdict
30	OV Jet		Ç	× <	Y con		, X
Distance 1:		X () ^V	0		* O	Cer
Working voltage	∋ (V)	O°	\O\	ei:	V ,C		<u> </u>
Frequency if ap	plicable (kHz) .)\e ^x			_
PTI	e^`	V			< 600 □	≥600 □	_
Peak value of the	ne working volta	age Û _{out} if appli	icable (kV)	Cork	V	_
Supplementary	information:		OV.	, X	Or Cer		
Distance 2:		Corr		Co art	O.	Cor.	
Working voltage	∋ (V)	Y of			at O	Cert	_
Frequency if ap	plicable (kHz) .	OY	<i>\$</i> ^			Or Col	_
PTI	, C	OV.	CST.		< 600 🗌	≥ 600 □	_
Peak value of the	ne working volta	age Û _{out} if appli	icable (kV	"):		ak OV	_
Supplementary	information:	000	Or	Cert			Col
Distance 3:		OV. OF		SV Cert		N. C.	QV C
Working voltage	e (V)	V 0	X	O :	Coc	OV -OK	_
Frequency if ap	plicable (kHz) .		O ×		Con .		_
PTI	O G	Š		:	< 600 □	≥600 □	_
Peak value of the	ne working volta	age Û _{out} if appli	icable (kV):	O.	Con .	_
Supplementary 60598-1 Annex		nsulation type:	B – Basio	c; S – Supple	ementary; R – I	Reinforced. See als	so IEC
of O	Co,	07	-01	O _V	Co.	OV -0	× 0,
3.15 (13.2.1) T	ABLE: Ball Pr	essure Test o	f Thermo	plastics) Col	, 01,0	P
Allowed impre	ssion diamete	r (mm)	:	2	OV C	er x	· —
Object/ Part No	./ Material	Manufacture trademark	er/	Test tempe	rature (°C)	Impression diame	eter (mm)
LED PCB	Co x	See annex	1.00	125	C° &	0.9	
Supplementary	information:	x 0	-ex	, O _x	ČO, X		. or

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	Cor.	60598-2-3		O,
Clause	Requirement + Test		Result - Remark	Verdict

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3.15 (13.3.1)	TABLE	E: Needle-flame test	Cox	av. Co	Q\'.	er P
Object/ Part N Material	0./	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb)	Verdict
LED PCB	,Co.	See annex 1	10	no	0,000	Pass
Supplementar	y inform		10	50000	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	i as

3.15 (13.3.2)	TABLE: Resistance to	o heat and f	ire - Glow v	wire tests	Ç	х.	0
Object/ Part No./ Material	Glow wire test (°C)						
	Manufacturer/ trademark	650		750		050	Verdict
	i adoma k	te	ti	te	ti	850	
LED PCB	See annex 1	V ,	§ 1	100	- lot	P	Pass
Metal enclosure	See annex 1	1	P	/	V / -0	× 1	Pass
Ignition of the spe	ecified layer placed unde	erneath the t	test specim	en (Yes/No))	:	O,

3.15 (13.4) TABLE: Proof	tracking test (IEC 601	12) 💍 👌	N/A
Test voltage PTI	·····::	175 V	_
Object/ Part No./ Material Manufacturer/ trademark		Withstand 50 drops without failure on three places or on three specimens	Verdict
- " " O O O O O O O O O O O O O O O O O		* 0 - 0 × - 0 ×	
Supplementary information:	300		N' -OIL

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OV.	Cor	2/ ař	60598-2-3	Ser A Ser	O,
Clause	Requirement + Tes	ť "C	in Oh	Result - Remark	Verdict

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ANNEX 1 TA	BLE: Cr	itical components i	information	A, Co.	at Oli	Ø ^C P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Power cord	A	Zhongshan Henglan Boyi Electrical	H03VVH2-F	300/300 V 2 x 0.75 mm ²	DIN EN 50525-2-11 IEC 60227-1	VDE 40036714
, or	O.	Appliance factory	OV. cert	0, 00	IEC 60227-2 IEC 60227-5	Co
Internla wire	В	SHENZHEN HONGYA ELECTRONICS CO LTD	1015	VW-1, 80°C, 300Vac, Min. 24AWG	UL 758	UL E346933
РСВ	В	SHENZHEN YINGHAIXINGYE ELECTRONIC	YH-2	V-0, 130°C	UL 94 UL 796	UL E487319
O N	OV	CO LTD			of V	

Supplementary information:

The codes above have the following meaning:

- A The component is replaceable with another one, also certified, with equivalent characteristics
- B The component is replaceable if authorised by the test house
- C Integrated component tested together with the appliance
- D Alternative component

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12					
,°	Type reference:	MSL-F200	_			
	Lamp used:	LED OF				
OV.Co	Lamp control gear used:	XLG-200-H-A	_			
~	Mounting position of luminaire:	As in normal use	_			
	Supply wattage (W):	198.1W	_			
Cer	Supply current (A):	0.88A	_			
Dr. Col	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	_			

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



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	c ex		7,00	6059	98-2-3	35			
Clause	Rec	quirement -	- Test	CO X	O ^L	Result - Remark), `````	Verdict	
		2 8	, OY	CO		<u> </u>	OX Co		
	- abr	normal ope	rating mode.		:			_	
3.11 (12.4)	- test	t 1: rated v	oltage	Ó,					
, OV	()	- test 2: 1,06 times rated voltage or 1,05 times rated wattage:					1.06*240V=254.4V		
Ge ^X	() .		n wiring to so	Cer	Dr. Car				
Cert	Through wiring or looping-in wiring loaded by a current of A during the test:							<u> </u>	
3.12 (12.5)	watta	age or 1,1	es rated volta times constar ted input volt	nt voltage/cui	rent or			_	
			Ten	nperature me	asurement	s, (°C)			
D .				Clause 1	2.4 – norma	ıl	Clause 12.5	- abnormal	
Part		Ambient	test 1	test 2	test 3	limit	test 4	limit	
tc of LED driv	/er	25.0	V ,0°	82.4	٥×	90	0°-	O ^V	
Internal wire	0	25.0	<u></u>	33.9	-0	80	Co,	χ	
LED module	<	25.0	o ¹	52.1	۸	130	2	 ×	
PCB C	x	OV	- ex	O, C) ×	01,0	X O'	Co.	
Enclosure	31	25.0	11 - oth	33.2	`C <mark>o</mark>	90	- et	O' ,Cº	
Supplementa	ry info	rmation:	~	X.	O' C		N. A.K.	O,	

ANNEX 3	Screw terminals (part of the luminaire)	N/A
(14)	SCREW TERMINALS	N/A
(14.2)	Type of terminal	_
	Rated current (A)	χ –
(14.3.2.1)	One or more conductors	N/A
(14.3.2.2)	Special preparation	N/A
(14.3.2.3)	Terminal size	N/A
0	Cross-sectional area (mm²):	_

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OV.	60598-2-3		\Diamond_{\wedge}
Clause	Requirement + Test	Result - Remark	Verdict
0		V 2 0°	
(14.3.3)	Conductor space (mm):		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out	Contraction of	N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread):	M	N/A
AV.	External wiring	ON COL	N/A
	No soft metal	of Or Cert	N/A
(14.4.5)	Corrosion	Con i	N/A
(14.4.6)	Nominal diameter of thread (mm)	The six of con	N/A
Cerc	Torque (Nm)		N/A
(14.4.7)	Between metal surfaces	OV. OF OV	N/A
Or	Lug terminal		N/A
	Mantle terminal	Carrier Contraction	N/A
-017	Pull test; pull (N):	Con A Direction	N/A
(14.4.8)	Without undue damage	Dy Cay	N/A

ANNEX 4	Screwless terminals (part of the luminaire)	N/A
(15)	SCREWLESS TERMINALS	N/A
(15.2)	Type of terminal:	~ D C C -
Co	Rated current (A):	- 10 P
(15.3.1)	Material	N/A
(15.3.2)	Clamping	N/A
(15.3.3)	Stop	N/A
(15.3.4)	Unprepared conductors	N/A
(15.3.5)	Pressure on insulating material	N/A
(15.3.6)	Clear connection method	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	V V V V		
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position	O OV	N/A
(15.3.10)	Conductor size	. Co	N/A
. 0	Type of conductor	OST. VICE ST.	N/A
(15.5)	Terminals and connections for internal wiring	Colt.	N/A
(15.5.1)	Mechanical tests	Dr. Carr	N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples):	Dr. Col.	N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples):	of Or Col	N/A
	Insertion force not exceeding 50 N	ex Or Con	N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)	of the opening	N/A
(15.5.2)	Electrical tests		N/A
oet	Voltage drop (mV) after 1 h (4 samples):		N/A
Or	Voltage drop of two inseparable joints	, OV 9 ^t	N/A
, 0	Number of cycles:		_
Ce ^X	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)	1), Col. (1), Co.	N/A
Or. Co.	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)	OV. Care	N/A
x 0	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)	Cay Dr. Cay	N/A
Cert	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)	N. Cer. O. Ce.	N/A
(15.6)	Terminals and connections for external wiring		N/A
15.6.1)	Conductors		N/A
0	Terminal size and rating	Cert V OV.	N/A
5.6.2	Mechanical tests	Con Time	N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N):	Dr. Col.	N/A

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Ori	ce ^s		2,0	×.	60598	-2-3	- oil		2	A. T.	O.
Clause	Req	uirement +	Test	V. C.	a.X.	OV.	Result	- Remark		50	Verdict
(15.6.2.2)		st pin or tab			(1)		9	Cor.		QV:	N/A
(15.6.3)	Electri	cal tests	Cer			.0	, C	0	Col		N/A
	Tests	according 1	5.6.3.1 +	- 15.6.3.	2 in IEC 6	0598-1	O.T.	O,	Ç	, i	N/A
(15.6.3.1) (15.6.3.2)	TABL	E: Contact	resistan	ice test	/ Heating	tests	,; ~\;	3 th 3 th	0,	Cer	N/A
Cor	Voltag	e drop (mV) after 1	h <) (°	300	Q. (N. O	, X	OV	_
terminal	-	1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)		N,	e.X		S [*] (900	~ <	, V	o. T	0
- T	O	Voltage dro	p of two	insepara	able joints	0	Corr		01	- oft	N/A
- CX	0	Voltage dro	p after 10	Oth alt. 2	25th cycle	1	0	Cer i	¥	01,0	ζN/A
1. of		Max. allowe	ed voltage	e drop (ı	mV)	-0	O.	Cer	· ·	OV.	_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)	o ^X	O,	Cer	k	ON	- ot	0,	Ç®	×.	0
×	01.0	Voltage dro	p after 50	Oth alt. 1	00th cycle		,0	, K	0	Co	N/A
Cox	_	Max. allowe	d voltage	e drop (ı	mV)	:	Oli	- O'T	\Diamond	Co	_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)	Ó	,0	art.	O,	Co,	χ.	OV	COL	\Diamond	Ç
O.	Çe.	Continued a	ageing: v	oltage d	rop after 1	0th alt.	25th cycle	e)\ [']	-ot	N/A
zř. ×	Ò, (Max. allowe	d voltage	e drop (ı	mV)	O,	Cox	X	OV	COL	_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)	0,	,©` X		0)	-01	O.,	, Co.		O ^V	c.o.t.
OV	cex	Continued a	ageing: v	oltage d	rop after 5	0th alt.	100th cyc	cle	Co.	X	N/A
, 0	,	Max. allowe	ed voltage	e drop (ı	mV)	-0\/:	Cox	\Diamond_{λ}	2,00		_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)) - e			, Co.	~	ON	COX		av. Co	
, co	X	OV	COX) Ce	<i>y</i>	Ċ	Y a	S. C.	O.	,Co,
Supplement	ary infor	mation:	1 -0	3/4	O.	Co,	Χ.	OV	COLL		Co

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Clause

Shenzhen DL Testing Technology Co., Ltd.

ON	Cer	0	60598-2-3	Cert AV		O
Clause	Requireme	ent + Test	,C° , , , , , , , , , , , , , , , , , ,	Result - Remark	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Verdict

Report No.: DL-20231122032S

Verdict

Clause	Require	ement + Te	st			Re	esult - Remar	k	ǰ	Verdi	ict
- 90		×.		C)	0		- 1		Co		
art.	0	Ç	. IE	C60598	2 3M ATTA	ACHME	NT S		01/	-05	

ATTACHMENT TO TEST REPORT

Result - Remark

IEC 60598-2-3

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Luminaires

Part 2: Particular requirements

Section 3: Luminaires for road and street lighting

EN IEC 60598-1:2021 + A11:2022

TRF template used IECEE OD-2020-F2:2020, Ed. 1.1

Attachment Form No...... EU_GD_IEC60598_2_3M

Attachment Originator: UL(Demko)

Requirement + Test

Master Attachment 2022-05-24

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	CENELEC COMMON MODIFICATIONS (EN)		
3.5 (3)	MARKING	O, Co, X	Q,
3.5 (3.2.12)	Note 4 deleted	coly Or Coly	N/A
3.6 (4)	CONSTRUCTION	Cot. Or Co.	<u>-</u>
4.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V	Dr. Cert Or	O P
3.10 (5)	EXTERNAL AND INTERNAL WIRING		O ^V
3.10 (5.2.2)	Cables equal to EN 50525 (all parts)	N. V. Co.	N/A
ir o	Paragraph 2 deleted	Cert	N/A
	Replace table 5.1 – Supply cord	Y Coll	N/A
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS	Or Cal	,0 <u>-</u>

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0,	COL	~\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.	60598-2-3	Col.		0,
Clause	Requireme	ent + Test	C° A	Result - Remark	C	Verdict

Report No.: DL-20231122032S

	IEC60598_2_3M ATTACHM	ENT	
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring	ok Olice Cet	N/A
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)	2 ^t
(3.3)	DK: power supply cords of class I luminaires with label	Dr. Cott. Dr.	N/A
(5.2.1)	CY, DK, FI, UK: type of plug	Ceit Directi	N/A
	or cert or cert or	Original Original	ce ^{tt}
(5.2.18)	DK: socket-outlets	St. Or. Cet. Or.	N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	Or Carr	
(4 & 5)	FR: Shuttered socket-outlets 10/16A	. Or con	N/A
, cert	FR: Safety requirements for high buildings (Decree of 30 December 2011 on safety regulation) buildings and their protection against fire and panic Lighting)	C.O.	N/A
O, Ce	Glow-wire test for outer parts of luminaires:		O,
× 0,	- 850°C for luminaires in stairways and horizontal travel paths	Cett Olinicet	N/A
O X	- 650°C for indoor luminaires	of get	N/A
OL Cell	UK: Requirements according to United Kingdom Building Regulation	Or Copy of	N/A

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OL	ATTACHMENT No.2 TO TEST RE	EPORT IEC 62031	0,
Clause	Requirement + Test	Result - Remark	Verdict

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TEST REPORT IEC 62031 LED modules for general lighting – Safety specifications

4	GENERAL REQUIREMENTS		
4.4	Integral modules tested assembled in the luminaire	Cell of or	P
4.5	Independent modules complies with requirements in IEC 60598-1	Or Cay Orice	N/A
5	GENERAL TEST REQUIREMENTS		
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	N/A
	General conditions for tests in Annex A	(see Annex A)	P
6	CLASSIFICATION		1
	Built-in module	Yes No 🛛	_
	Independent module:	Yes □ No ⊠	_
	Integral module:	Yes ⊠ No □	_
Con	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.	Original Original	_
7	MARKING		N/A
ON	Requirements not applicable to the evaluated product.		O.
8	TERMINALS		-0
	Screw terminals according section 14 of IEC 60598-1:	V Colt	N/A
Co.	Separately approved; component list	(see Annex 2)	N/A
S. Co	Part of the luminaire	(see Annex 3)	N/A
	Screwless terminals according section 15 of IEC 6059	8-1:	N/A
~	Separately approved; component list	(see Annex 2)	N/A
Cer	Part of the luminaire	(see Annex 4)	N/A
Cer	Connectors according IEC 60838-2-2:	A COLOR	N/A
0),	Separately approved; component list	(see Annex 2)	N/A

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OV	ATTACHMENT No.2 TO TEST	REPORT IEC 62031	0,
Clause	Requirement + Test	Result - Remark	Verdict

Report No.: DL-20231122032S

9 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A
or cer	Requirements not applicable to the evaluated product.	A CO	e ^x
10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WI	ITH LIVE PARTS	N/A
. 0	Requirements not applicable to the evaluated product.	er v	0
11 (11)	MOISTURE RESISTANCE AND INSULATION		× –
Cert	After storage 48 h at 91-95% relative humidity and 20-30 resistance with d.c. 500 V (M Ω):	0 °C measuring of insulation	P
O, C	For basic insulation \geq 2 M Ω :	100 ΜΩ	РО
O.	For double or reinforced insulation \geq 4 M Ω :	x Oh con	N/A
zř.	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1	Cor Original	N/A
12 (12)	ELECTRIC STRENGTH)°``
Or.Co	Immediately after clause 11 electric strength test for 1 min	X DY COL	P
	Basic insulation for SELV, test voltage 500 V	X OV COX	P
COX.	Working voltage ≤ 50 V, test voltage 500 V		N/A
- er	Working voltage > 50 V ≤ 1000 V, test voltage (V):	DY CON X OV	N/A
Q\'.'	Basic insulation, 2U + 1000 V	A. 7:00, X. Q	N/A
OLi	Supplementary insulation, 2U + 1000 V	· 0, 0, 0,	N/A
х <	Double or reinforced insulation, 4U + 2000 V	Cox V. Co.	N/A
<i>X</i>	No flashover or breakdown	Celt Or J.Co.	P
Dr. Cel	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1	Dr. Cetr V Dr.	N/A
13 (14)	FAULT CONDITIONS		→
(14)	When operated under fault conditions the controlgear:	Co.	N/A
Co x	- does not emit flames or molten material	Y CON VICE	N/A
Co	- does not produce flammable gases	Oli Cell	N/A
O. C.	- protection against accidental contact not impaired	OV - or	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
V. Cerk	Thermally protected controlgear does not exceed the marked temperature value	, dr. cert or	N/A
. <	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	N/A
- (14.1)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (except between live parts and accessible metal parts)	(see appended table)	N/A
ok.	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3	Cox A Cox	N/A
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	N/A
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A
- (14.4)	Short-circuit across electrolytic capacitors	(see appended table)	N/A
- (14.5)	After the tests has been carried out on three samples:		N/A
Cox	The insulation resistance \geq 1 M Ω	Sign of the co	N/A
Cort	No flammable gases	A. Co.	N/A
OV.	No accessible parts have become live	7 Co 3t <	N/A
OL	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite	Cett Director	N/A
- (14.6)	Relevant fault condition tests with high-power supply		N/A
13.2	Overpower condition	OV. Cer O	P
) C	Module withstands overpower condition >15 min.	Oli cott	P
. <	Module with automatic protective device or power limiter, test performed 15 min. at limit.	er Or Cer	N/A
a.K	No fire, smoke or flammable gas is produced	Car	Р
Cor	Molten material does not ignite tissue paper, spread below the module	Or Celt A	P

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δ _x C	Shenzhen DL Testing Technology Co., Ltd	. Report No.: DL-202	.01122002			
Or	ATTACHMENT No.2 TO TEST REPO	ORT IEC 62031	O _V			
Clause	Requirement + Test	Result - Remark	Verdict			
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	× × × × × × × × × × × × × × × × × × ×	X.			
15	CONSTRUCTION		· · · · ·			
	Wood, cotton, silk, paper and similar fibrous material not used as insulation	Or Cerr Or	Per			
16 (16)	CREEPAGE DISTANCES AND CLEARANCES					
- (16)	Creepage and distances and clearances in compliance with IEC 60598-1	(see appended table)	P			
Cott	Insulating lining of metallic enclosures		N/A			
DL.C	Basic insulation on printed boards tested according to clause 14	S OF CO	N/A			
, oth	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16	Cett of cet	N/A			
Cex	Creepage distances not less than minimum clearance		N/A			
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1	Orice Cert Or	N/A			
17 (17)	7 (17) SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS					
Cott.	Cl. 17 refer to Cl. 17 of IEC 61347-1 which refer to Cl. 4.11 and 4.12 of IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)					
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		Cert			
- (18.1)	Ball-pressure test:	See Test Table 18 (18.1)	N/A			
- (18.2)	Test of printed boards:	See Test Table 18 (18.2)	N/A			
- (18.3)	Glow-wire test (650°C):	See Test Table 18 (18.3)	N/A			
- (18.4)	Needle-flame test (10 s)	See Test Table 18 (18.4)	N/A			
- (18.5)	Proof tracking test:	See Test Table 18 (18.5)	N/A			
19 (19)	RESISTANCE TO CORROSION					
	- test according 4.18.1 of IEC 60598-1	ex Or con	N/A			
	- adequate varnish on the outer surface	Sk Or Car	N/A			
20	INFORMATION FOR LUMINAIRE DESIGN					

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Information in Annex D (informative)



OV.	ATTACHMENT No.2 TO TEST REPORT IEC 62031	O,			
Clause	Requirement + Test Result - Remark	Verdict			
8					
21	HEAT MANAGEMENT	· /©` —			
21.1	General Control of the control of th	N/A			
OV	Exchangeability is safeguarded by cap or base	N/A			
21.2	Heat-conducting foil and paste	N/A			
ceit	Heat-conducting foil delivered with the module if necessary	N/A			
22	PHOTOBIOLOGICAL SAFETY				
22.1	UV radiation	N/A			
O,	Luminous radiation not exceed 2mW/klm	N/A			
22.2	Blue light hazard	Р			
-ex	Assessed according to IEC TR 62778	e ^r P			
22.3	Infrared radiation	N/A			
	Requirements for infrared radiation when required	N/A			

Report No.: DL-20231122032S

A	ANNEX A - TESTS				
Cer	All tests performed in accordance with the advice		Р		
i cet	given in Annex H of IEC 61347-1, if applicable	V X OV	COL		

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ON	IEC62031E - ATTACHMENT
Clause	Requirement + Test Result - Remark Verdict
90	
	ATTACHMENT TO TEST REPORT IEC 62031
	EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Or Co.	LED modules for general lighting – Safety specifications
Differences acc	cording to EN 62031:2008+A1:2013+A2:2015
0,	
	CENELEC COMMON MODIFICATIONS (EN)
	No common modifications N/A
Olin cet	
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS(EN)
x 0 ²	No special National conditions N/A
,e x	Or Car Or Car
zc	ANNEX ZC, NATIONAL DEVIATIONS(EN)
O. Co.	No National deviations N/A

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ATTACHMENT No.3 TO TEST REPORT IEC TR 62778						O
Clause	Requirement + Test	al. Co	OL	Result - Remark	ali ati	Verdict

Report No.: DL-2019082445S

TEST REPORT IEC TR 62778

Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires

7	Measurement information flow		Р			
7.12	Basic flow	* O O	Р			
	'Law of conservation of luminance' applied	O Co	. ₽			
OV.	Use of only true luminance/radiance values	\$ 500 K	P			
o ^k	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component	Signature of the contraction of	ÖP Ó			
Cert	In case E _{thr} value for RG2 was established the peak value was derived from angular light distribution	Dr. Cok Dr.	N/A			
7.2	Conditions for the radiance measurement	. Or corr	P			
	Standard condition applied (200mm distance, 0,011rad field of view)	Sex Di Cer	P			
cet	Non-standard condition applied	, CO x 0 C	N/A			
7.3	Special cases (I): Replacement by a lamp or LED module of another type					
OV	Light source is a white light source	Q	N/A			
Ó	Evaluation done based on highest luminance		N/A			
X	Evaluation done based on CCT value	Cox O S	N/A			
7.4	Special cases (II): Arrays and clusters of primary lig	Special cases (II): Arrays and clusters of primary light sources				
Or, Cor	LED package is evaluated as:	☐ RG0 unlimited ☐ RG1 unlimited	N/A			
OV.	E _{thr} of LED package applies to array	. 0	N/A			
8	RISK GROUP CLASSIFICATION					
X	Risk group achieved:	Cot V	Р			
Ç®	Risk Group 0 unlimited	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	N/A			
Ç	Risk Group 1 unlimited	ON COL	Р			

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Report No.: DL-2019082445S

	ATTA	CHMENT	Γ No.3 TO TE	ST REPOR	T IEC T	R 62778		
Clause	Requirement + Test	0,	O. X	OL.	Result	- Remark	Verdict	
.0	X X	O_	CO			× 0, 00,		
	- E _{thr}	·····		(lx) :			N/A	
	Distance to re	each RG1	l	(m) :			COK	
	S. O.	Cox				O. Co.		
	TABLE: Spectrorad	iometric	measureme	nt			Р	
	Measurement perfor	med on:	· Cer			ED package		
	O. Co.				□ LE	ED module		
	Or Col				☐ La	ımp		
	at or c				─ Luminaire			
07.0	Model number				MSL-I	F200		
	Test voltage (V)	<u>)</u>	- Ø	: 0\/	240VA	C O CO	_	
,0°	Test current (mA)	O _V	<i>G</i> 2	: o`	0.88			
Cox	Test frequency (Hz).		Q. ⁽³)		60	_		
O, Ce,	Ambient, t (°C)	<u> </u>	O,		25			
	Measurement distan	stance:					_	
	Colt.			□ cm				
al ^X	Source size::				⊠ Non-small			
	Or Carr			☐ Small: mm				
Co.	Field of view:					☐ 100 mrad		
	X OV				⊠ 11	mrad		
	Cox				□ 1,7	7 mrad (for small sources)		
	Item	Symbo	Units	Resu	lt	Remark		
Correlated colour temperature		ССТ	R O	/	OL	- St. 07	-jo`	
x/y colour coordinates		- or	O,	S I		Dr. Car O.	Co	
Blue light hazard radiance		L _B	W/(m ² •sr ¹)	5.99e		Q1. C01.	Q, C	
Blue light hazard irradiance		Ев	W/m ²	1,00		OF GOT	0,	
Luminance		L	cd/m ²	307599	011,00	x 0 00	, c	
Illuminance		E	lx	ošt 1).	S	cet	
Supplement	ary information:	Ø, X	OLÍ	CON	\Diamond	X O	v cos	

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Attachment No. 4: EUT PHOTOGRAPHS

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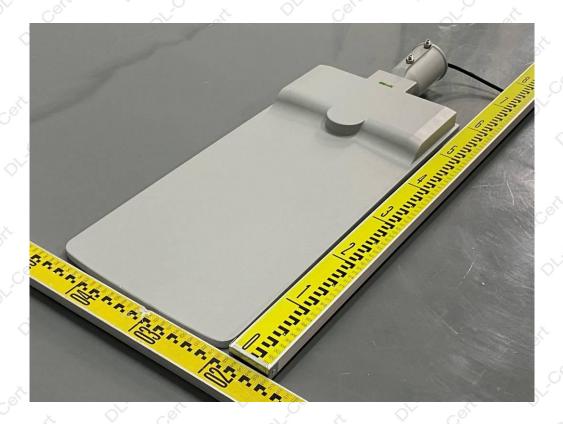


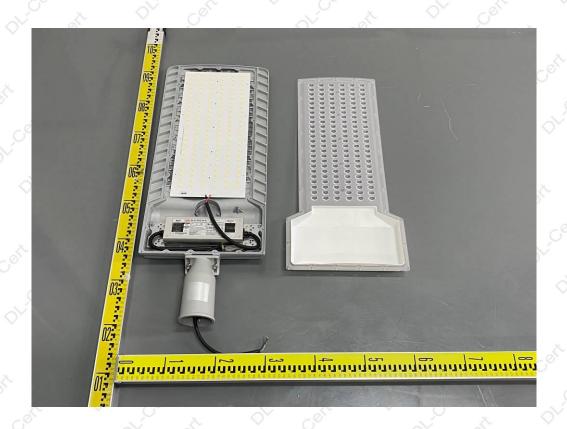


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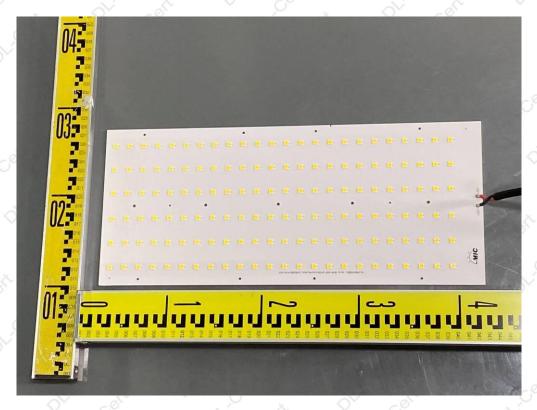


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**** END OF REPORT ****

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