



(1) **EU-Type Examination Certificate**

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**

(3) Certificate number: **SEV 18 ATEX 0171 X**

(4) Product: Explosion-protected LED lighting fixture Model: NHLL Series

(5) Manufacturer: Cooper Electric (Changzhou) Co., Ltd

(6) Address: No. 189, Liuyanghe Road, Xinbei District Changzhou, Jiangsu, CHINA

(7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no 18-Ex-0198.41

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:12 + A11:13

EN 60079-1:14

EN 60079-11:12

EN 60079-18:15 + A1:17

EN 60079-28:15

EN 60079-31:14

EN 60079-7:15

Except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate.

(11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

See page 4 (20)

Eurofins Electrosuisse Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification



(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 18 ATEX 0171 X

(15) **Description of product**

The NHLL Explosion-protected LED lighting fixture to be applied in Zone 2/21 is composed of a housing (extruded Al) and a transparent lampshade (PC).

External wiring to the chamber (Ex ec) is permitted by means of certified Ex cable gland, where unused entry shall be secured by a certified Ex blanking element. The product is available in 4 power ratings (i.e. 30/40/60/80W, 2 enclosure dimensions are provided) and batteries for emergency mode (optional) can be provided. An optional certified safety switch (Ex db) is used to cut the power of LED module when the lampshade is opened. The LED inverter (Ex ib mb, optional for emergency mode), wire connectors (Ex e) and terminals (Ex eb) used are all separately certified.

Classification of installation and use:	Stationary
Ingress protection:	IP66
Rated ambient temperature range (°C):	-40 °C...+55 °C
	-25 °C...+55 °C
	-40 °C...+50 °C
	-25 °C...+50 °C

Rating:	110 ~ 240 V AC 50/60 Hz
	108 ~ 250 V DC
	30 W / 40 W / 60 W / 80 W

(16) **Report number** 18-Ex-0198.41

(17) **Specific conditions of use**

1. The external earth connection facility shall be connected reliably.
2. The cable entries have to be connected by means of suitable cable entry device with type of protection of Ex e IIC Gc, Ex tb IIIC Db, IP66. The cable entry device is approved in accordance with IEC60079-0:2011, IEC60079-7:2015 and IEC6079-31:2013, and which are covered by a separate conformity certificate.
3. Potential electrostatic charging hazard refer to the instruction.
4. The battery pack could be replaced only by a manufacturer person or the person qualified by the manufacturer.

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**

See test report "Manufacturer's Documents"

Type specifications:

There are two sizes of the luminaires listed as following,

Type	Length (mm)	Width (mm)	Height (mm)
2 Feet	744	178	132
4 Feet	1344	178	132

The complete fixture catalogue number is as follows:


Example Cat. No.	NHLL	-2	-W1	-2L	-EM1	-1/6-120	-C	-N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

- (1) NHLL – Indicates basic catalogue series designation.
- (2) Indicates Length
-2 – 2 feet length; -4 – 4 feet length.
- (3) Indicates LED CCT.
-C1 – 5000K, C2 – 5700K, C3 – 6500K;
-W1 – 3000K, -W2 – 4000K
- (4) Indicates Total Luminous Flux.
-2L – 2000 Lm, -3L – 3000 Lm
-4L – 4000 Lm, -5L – 5000 Lm
-7L – 7000 Lm, -8L – 8000 Lm
- (5) Emergency Duration.
Blank – Non-Emergency;
EM1 – 25% Output 1.5h;
EM2 – 25% Output 3h;
EM3 – 20% Output 3h.
- (6) Indicates wire and entry type.
-1/6-120 – 6mm² Single-ended 1×M20; -1/6-220 – 6mm² Single-ended 2×M20;
-1/6-125 – 6mm² Single-ended 1×M25; -1/6-225 – 6mm² Single-ended 2×M25;
-2/6-120 – 6mm² Through wiring 2-1×M20; -2/6-220 – 6mm² Through wiring 2-2×M20;
-2/6-125 – 6mm² Through wiring 2-1×M25; -2/6-225 – 6mm² Through wiring 2-2×M25;
- (7) Indicates Coating.
Blank – No coating; -C – Coating
- (8) Indicates safety switch.
Blank – with safety switch; -N – No safety switch.

The detail Electrical Information & T code is listed as following,

Fixture Cat.No.	LED Qty.	Wattage (W)	Temperature Rating		Ta	LED parameter			Input Voltage	Driver	Inverter		
			Gas	Dust		If Driver output	If LED input	Forward Voltage(Vf)					
NHLL-2-W*-2L*.*.*.*.*	28pcs	30	T6	80	-40 °C~+55 °C	300mA	150mA	5.7-7.1V	AC:110~240V 50/60Hz DC:108~250V	HQLPC35/122/350/D2E1	/		
NHLL-2-W*-2L*-EM*.*.*.*					-25 °C~+55 °C						ECHI30/075		
NHLL-2-C*-3L*.*.*.*.*					-40 °C~+55 °C						/		
NHLL-2-C*-3L*-EM*.*.*.*					-25 °C~+55 °C						ECHI30/075		
NHLL-2-W-3L*.*.*.*.*	64pcs	40	T6	80	-40 °C~+50 °C	700mA~750mA	93.75mA	5.7-7.1V	AC:110~240V 50/60Hz DC:108~250V	HQLPC36/122/700/D2E1	/		
NHLL-2-W*-3L*.*.*.*.*					T5						80	-40 °C~+55 °C	ECHI60/150
					T6						80	-25 °C~+50 °C	
NHLL-2-W*-3L*-EM*.*.*.*					T5						80	-25 °C~+55 °C	
					T6						80	-40 °C~+50 °C	/
NHLL-2-C*-4L*.*.*.*.*					T5						80	-40 °C~+55 °C	
					T6						80	-25 °C~+50 °C	ECHI60/150
NHLL-2-C*-4L*-EM*.*.*.*					T5						80	-25 °C~+55 °C	
	T6	80	-40 °C~+50 °C	ECHI60/150									
NHLL-4-W*-4L*.*.*.*.*	56pcs	60	T6	80	-40 °C~+55 °C	600mA	150mA	5.7-7.1V	AC:110~240V 50/60Hz DC:108~250V	HQLPC60/122/600/D3E1	/		
NHLL-4-W*-4L*-EM*.*.*.*					-25 °C~+55 °C						ECHI60/150		
NHLL-4-C*-5L*.*.*.*.*					-40 °C~+55 °C						/		
NHLL-4-C*-5L*-EM*.*.*.*					-25 °C~+55 °C						ECHI60/150		
NHLL-4-W*-7L*.*.*.*.*	128pcs	80	T6	80	-40 °C~+55 °C	700mA~750mA	93.75mA	5.7-7.1V	AC:110~240V 50/60Hz DC:108~250V	HQLPC80/122/700/D9E1	/		
NHLL-4-W*-7L*-EM*.*.*.*					-25 °C~+55 °C						ECHI60/150		
NHLL-4-C*-8L*.*.*.*.*					-40 °C~+55 °C						/		
NHLL-4-C*-8L*-EM*.*.*.*					-25 °C~+55 °C						ECHI60/150		

(20) The marking of the product shall include the following:

-  II 3G Ex db ec op is IIC T5/T6 Gc
 II 2D Ex tb op is IIIC T80°C Db
- II 3G Ex ec op is IIC T5/T6 Gc
 II 2D Ex tb op is IIIC T80°C Db
- II 3G Ex db ec ib mb op is IIC T5/T6 Gc
 II 2D Ex tb op is IIIC T80°C Db
- II 3G Ex ec ib mb op is IIC T5/T6 Gc
 II 2D Ex tb op is IIIC T80°C Db