IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx CQM 16.0030X

Issue No: 3

Certificate history:
Issue No. 3 (2018-03-05)
Issue No. 2 (2018-02-09)
Issue No. 1 (2017-07-21)
Issue No. 0 (2016-07-29)

Status: **Current**

Date of Issue: **2018-03-05**

Applicant: **Cooper Electric (Changzhou) Co., Ltd.**
No.189 Liuyanghe Road,Xinbei District, Changzhou,213031,Jiangsu
China

Equipment: **Explosion-protected LED lighting fixture HLL*********

Optional accessory:

Type of Protection: **Ex "d", "e", "i", "m", "t"**

Marking:

For HLL****-EM1***, HLL****-EM2***: Ex db eb ib mb IIC T6 Gb Ex tb IIIC T80°C Db
For HLL*******: Ex db eb mb IIC T6 Gb Ex tb IIIC T80°C Db
For HLL****-EM1***-N, HLL****-EM2***-N: Ex eb ib mb IIC T6 Gb Ex tb IIIC T80°C Db
For HLL*******-N: Ex eb mb IIC T6 Gb Ex tb IIIC T80°C Db

IP66

Tamb: -40°C ~+55°C for HLL********;
-25°C ~+55°C for HLL****-EM1**** and HLL****-EM2****.

Approved for issue on behalf of the IECEx Certification Body: Ji Xiaodong

Position: General Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

China Quality Mark Certification Group Co., Ltd.
No. 33 Zengguang Road, Haidian District,
Beijing City, Postal code: 100048
China

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Manufacturer: **Cooper Electric (Changzhou) Co., Ltd.**
No.189 Liuyanghe Road,Xinbei District, Changzhou,213031,Jiangsu
China

Additional Manufacturing location(s):

Cooper Korea Ltd.
22-5, Seogu-dong, Hwaseong-si, Gyeong-do
Korea, Republic of

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation “m”
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

CN/CQM/ExTR16.0029/00 CN/CQM/ExTR16.0029/01 CN/CQM/ExTR16.0029/02

Quality Assessment Report:

GB/BAS/QAR07.0041/07 GB/BAS/QAR10.0015/05

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

General product information:

The LED luminaire HLL series consist of housing, end caps and PC cover, the end caps are secured to the housing by screws, and the PC cover is secured to the housing by metal hasps. Gaskets are provided between the housing and end caps and between the housing and PC cover in order to meet IP66 rating.
The LED luminaire is suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21 and Zone 22. The input cord is fed in via certified cable glands. Unused entries are sealed with certified plugs to maintain the degree of protection.
The LED luminaire for type HLL********* employs a separately certified safety switch to disconnect the power of the LED module when the PC cover is opened.
The LED driver, LED inverter, safety switch, terminal block and wire connector used in the luminaire are all separately certified, see attachment for details.

Rating

Rated voltage: AC 110 ~ 240V 50/60 Hz; DC 108 ~ 250V

Rated power: HLL-2********: 30W; HLL-4********: 60W

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Do not open when an explosive dust atmosphere is present.
2. Do not open when energized.
3. Potential electrostatic charging hazard-see Instructions.
4. Rated ambient temperature range:

-40°C ~+55°C for HLL********;
-25°C ~+55°C for HLL****-EM1**** and HLL****-EM2****.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

1. Add 3Ah Ni-Cd battery to 60W & 30W fixture.
2. Add different colour temperature LEDs of 4000K, 5000K & 6500K.
3. Add gasket material of SIL6001-SP & Silicone 1.04.030.419.
4. Ta change to -25°C /-40°C~+55°C.
5. Add 2 buckles of the fixture cover.
6. Update IEC 60079-7:2006 to IEC 60079-7:2015.

Annex:

IECEx CQM 16.0030X 03 Attachment.pdf

Attachment to Certificate

IECEx CQM 16.0030X issue No.: 3

Applicant: **Cooper Electric (Changzhou) Co., Ltd.**

No.189 Liuyanghe Road, Xinbei District, Changzhou, Jiangsu, 213031

Electrical equipment:

Explosion-protected LED lighting fixture HLL*******

Description of equipment:

1. The complete fixture catalog number is as follows:

Example Cat. No.	HLL	-2	-W	-2L	-D	-EM1	-1/6-120	-C	-R	-N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(1). HLL — Indicates basic catalog series designation.

(2). Indicates Length

-2 — 2 feet length; -4 — 4 feet length.

(3). Indicates LED CCT.

Blank — 5000K/5700K/6500K; -W — 3000K/4000K.

(4). Indicates Total Luminous Flux.

-2L — 2000 Lm(2 feet length 3000K /4000K); -3L — 3000 Lm(2 feet length 5000K/5700K/6500K);

-4L — 4000 Lm(4 feet length 3000K /4000K); -5L — 5000 Lm(4 feet length 5000K/5700K/6500K).

(5). Indicates Zone Area.

-D — Use for Zone 1.

(6). Emergency Duration.

Blank — Non-Emergency; EM1 — 25% Output 1.5h; EM2 — 25% Output 3h.

(7). Indicates wire and entry type.

-1/6-120 —6mm^2 Single-ended 1×M20; -1/6-220 —6mm^2 Single-ended 2×M20;

-1/6-125 —6mm^2 Single-ended 1×M25; -1/6-225 —6mm^2 Single-ended 2×M25;

-2/6-120 —6mm^2 Through wiring 1×M20; -2/6-220 —6mm^2 Through wiring 2×M20;

-2/6-125 —6mm^2 Through wiring 1×M25; -2/6-225 —6mm^2 Through wiring 2×M25;

-1/4-120 —4mm^2 Single-ended 1×M20; -1/4-220 —4mm^2 Single-ended 2×M20;

-1/4-125 —4mm^2 Single-ended 1×M25; -1/4-225 —4mm^2 Single-ended 2×M25;

-2/4-120 —4mm^2 Through wiring 1×M20; -2/4-220 —4mm^2 Through wiring 2×M20;

-2/4-125 —4mm^2 Through wiring 1×M25; -2/4-225 —4mm^2 Through wiring 2×M25;

(8). Indicates Coating.

Blank — No coating; -C — Coating

(9). Indicates Replacement.

Blank — No replace part; -R — Replacement.

(10). Indicates safety switch.

Blank —with safety switch; -N —No safety switch.

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2. The LED driver, LED inverter, safety switch, terminal block and wire connector used in the luminaire are all separately certified, see below table for details.

Ex components	Ex marking	Model	Certificate
LED driver	Ex mb IIC Gb	ECHD30C300, ECHD60C600	IECEx CQM 16.0028U
LED inverter	Ex ib mb IIC Gb	ECHI30/075, ECHI60/150	IECEx CQM 16.0029U
Safety switch	Ex d IIC Gb	SSE-2	IECEx CQM 16.0018U
4 mm^2 terminal block	Ex e IIC Gb	Exe T 6P	IECEx CQM 15.0053U DEMKO 15 ATEX 1599U
6 mm^2 terminal block	Ex e IIC Gb	2410-*	IECEx BVS 13.0088U BVS 13ATEX E080U
Wire connector	Ex e IIC Gb	CNC-CE2, CNC-CE5	IECEx CQM 16.0024U

Assessment of the involved terminal block:

Ex components	Old Version Standard	Latest Version Standard	Comments
4 mm^2 terminal block	IEC 60079-7:2006	IEC 60079-7:2015	1.Terminal insulating material tests were conducted as per Clause 6.10, the results were Pass for maximum conductor size 4mm^2 @ 60N. 2.There are no other major technical changes between the old standard and the latest one.
6 mm^2 terminal block	IEC 60079-7:2006	IEC 60079-7:2015	1.Terminal insulating material tests were conducted as per Clause 6.10, the results were Pass for maximum conductor size 4mm^2 @ 80N. 2.There are no other major technical changes between the old standard and the latest one.

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