



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX NEP 24.0045X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2024-12-20

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

Equipment: **HFL Series LED Explosion-protected luminaire**

Optional accessory:

Type of Protection: **Ex db, eb, mb, tb**

Marking: Ex db eb mb IIC T4...T3 Gb
Ex eb mb IIC T4...T3 Gb
Ex tb IIIC T80°C/ T85°C/ T90°/ T95°C Db
Ta: -40°C ~+40°C/55°C/65°C

Approved for issue on behalf of the IECEx
Certification Body:

Guo Aihua

Position:

General Manager

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

**Shanghai Inspection and Testing Institute of Instruments
and Automatic Systems Co., Ltd. (SITIAS)/
National Supervision and Inspection Center for Explosion
Protection and Safety of Instrumentation (NEPSI)
103 Cao Bao Road
Shanghai 200233
China**



SITIAS
Worldwide Access



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

Manufacturing locations:

Cooper Electric (Changzhou) Co., Ltd. No.189 Liuyanghe Road, Xinbei District, Changzhou, 213031, Jiangsu China	Eaton Electrical (Australia) Pty Ltd 10 Kent Road Mascot NSW 2020 Australia	Eaton Industries Middle East LLC 2nd Industrial City Dammam Eastern Province KHOBAR 31952 (PO Box 3996) Saudi Arabia
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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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0
- [IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0
- [IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1
- [IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0
- [IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with 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/NEP/ExTR24.0064/00](#)

Quality Assessment Reports:

[AU/TSA/QAR06.0020/15](#)

[GB/BAS/QAR07.0041/12](#)

[GB/BAS/QAR16.0002/06](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

HFL series luminaires are designed mainly as per Ex db, Ex eb, Ex mb and Ex tb concepts, it's suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21, Zone22.

The luminaire consists of one or two Ex eb & Ex mb LED enclosure and one Ex e electrical enclosure fixed together for different configurations. There are 4 sizes of HFL series, 12L, 20L, 30L and 40L.

In the LED enclosure, the Ex mb LED module is fixed to aluminum enclosure directly, and the frame with glass is fixed to the enclosure with good sealing by gasket. A safety guard is optional.

In the electrical enclosure, the Ex mb LED drivers, Ex eb terminals, Ex db SPD(optional) and Ex db safety switch(optional) are installed to provide electrical connection. All entries are sealed with certified glands, plugs or breather to maintain the degree of protection IP66.


Refer to annex for type designation & parameters.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Certified components installed inside the enclosure must meet the requirements of their certificates and instructions.
2. Wipe the non-metallic dusts with a damp cotton cloth when maintenance.

Annex:

[IECEX NEP 24.0045X Annex.pdf](#)

<p>Shanghai Inspection and Testing Institute of Instruments and Automatic Systems Co., Ltd. (SITIAS)</p> <p>National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI)</p> <p>103 Cao Bao Road, Shanghai 200233, China</p>	
Annex to IECEx Certificate of Conformity of IECEx NEP 24.0045X Issue No.0	

The complete fixture catalogue number is as follows:

Cat. No.	HFL	-12L	-W2	-1M	-N	-F	-G	-S	-L	-H	-16	-BV	-HT	-DL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

- | | |
|---|--|
| <p>(1) HFL = Zone 1 Flood Light LED</p> <p>(2) 12L = 12000Lm;
20L = 20000Lm;
30L = 30000Lm;
40L = 40000Lm;</p> <p>(3) W2 = 3000K;
C1 = 4000K;
C2 = 5000K;
C3 = 5700K;</p> <p>(4) 1M= 2xM20
2M= 2xM25</p> <p>(5) Default=Wide 120° type V
N = Narrow 30° type V
AT2 = Asymmetric Type II
AT4 = Asymmetric Type IV</p> <p>(6) Default = Clear Glass
F = Foggy Glass</p> <p>(7) Default = without guard
G = with guard</p> | <p>(8) Default = W/O Safety Switch
S = W/Safety Switch</p> <p>(9) Default= W/O handle;
L=W/ handle;</p> <p>(10)Default= 6kv
H=10 kv</p> <p>(11)Default=Galvanized steel bracket with painting
16= S5316 bracket</p> <p>(12) Default=without breather valve
BV=Breather valve</p> <p>(13) Default = -40℃~ 55℃
HT= -40℃~ 65℃(12L/20L/30L only)</p> <p>(14) Default = normal
D =Dimmable 0-10V
DL =DALI</p> |
|---|--|

The following tables are the detail parameters for different models:

Catalog No.	System Power	Driver			SPD (Optional)	Safety switch (Optional)	LED Qty	Gas		Dust (°C)	
		Input	Output	85% of rated output load				-40°C~40°C	-40°C~55°C	40°C	55°C
HFL-12L-**-***-	92W	MU100H120AQ_MBIz (IECEX TPS 21.0024U)			IECEX PRE 19.0104U		52	T4	T4	T80	T80
		100-277Vac 50/60Hz, 125-300Vdc	48-125Vdc 1080 mA	▲T=11.16							
HFL-20L-**-***-	140W	ECH-MU165H135AQ_MBI... (IECEX TPS 24.0052U)			IECEX PRE 19.0104U		82	T4	T3	T80	T85
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 1100 mA	▲T=4.1							
HFL-30L-**-***-	232W	MU100H120AQ_MBIz (IECEX TPS 21.0024U)			NA		134	T4	T3	T80	T85
		100-277Vac 50/60Hz, 125-300Vdc	48-125Vdc 1080 mA	▲T=11.16							
		ECH-MU165H135AQ_MBI... (IECEX TPS 24.0052U)									
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 1100 mA	▲T=4.1							
HFL-40L-**-***-	274W	ECH-MU165H135AQ_MBI... x2 (IECEX TPS 24.0052U)			NA		164	T4	T3	T80	T85
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 1070 mA	▲T=4.1							

Catalog No.	System Power	Driver			SPD (Optional)	Safety switch (Optional)	LED Qty	Gas		Dust (°C)	
		Input	Output	53% of rated output load				-40°C~65°C	65°C		
HFL-12L-**-***-HT-	85W	ECH-MU165H135AQ_MBI... (IECEX TPS 24.0052U)			IECEX PRE 19.0104U		82	T4	T85		
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 660mA	▲T=8.4							
HFL-20L-**-***-HT-	145W	MU100H120AQ_MBIz (IECEX TPS 21.0024U)			NA		134	T3	T80		
		100-277Vac 50/60Hz, 125-300Vdc	48-125Vdc 720mA	▲T=15.27							
		ECH-MU165H135AQ_MBI... (IECEX TPS 24.0052U)									
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 660mA	▲T=8.4							
HFL-30L-**-***-HT-	210W	ECH-MU165H135AQ_MBI... x2 (IECEX TPS 24.0052U)			NA		164	T3	T85		
		100-277Vac 50/60Hz, 125-300Vdc	73-183Vdc 820mA	▲T=7.5							

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