





LABORATORIO OFICIAL J. M. MADARIAGA



(1) EC-TYPE EXAMINATION CERTIFICATE

- (2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC
- (3) EC-Type Examination Certificate number: **LOM 02ATEX2035**
- (4) Equipment or Protection System Luminaires
Type KFL...
- (5) Applicant: Cooper, Crouse-Hinds Division, CEAG
CEAG Nortem, S.A.
- (6) Address: Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN
- (7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in confidential report nr. **LOM 01.291 RP**
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- Standards **EN 50014:1997 + A1:1999 + A2:1999**
 EN 50018:2000
 EN 50019:2000
- (10) If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in this certificate schedule.
- (11) This EC-Type Examination Certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive applies to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.
- (12) The marking of the equipment or protective system shall include the following:

 II 2 G EEx de IIC T3..T4
Ta: -20 °C / +55 °C


Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY



Madrid, 10 July 2002

Angel Vega Remesal
Head of ATEX area

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Page 1/2



LABORATORIO OFICIAL J. M. MADARIAGA

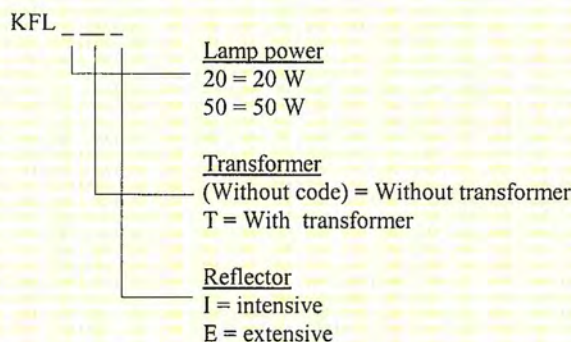
(A1) SCHEDULE

(A2) EC-Type Examination Certificate: **LOM 02ATEX2035**

(A3) Description of equipment or protective system

Projection luminaires with 20 ó 50 W halogen lamps and power supply by transformer or directly. Terminal box is increased safety type of protection.

Codification:



Temperature class:

Lamp power (W)	Temperature class	
	Ta: -20 °C / +40 °C	Ta: -20 °C / +55 °C
20	T4	T4
50	T4	T3

Rated voltage

Without transformer: 12 y 24 Vcc, Vca

With transformer: 42-240 Vca

(A4) Test report: nº **LOM 01.291 RP**

(A5) Individual test

Each manufactured unit must be submitted to a static overpressure test at 1125 kPa in both compartments according 15.1.3.1 of EN 50018:2000.

(A6) Essential Health and Safety Requirements

Explosion safe requirements are covered by application of the standards indicated in page 1/2 of this certificate.

(A7) Descriptive documents:

	<u>Rev.</u>	<u>Date</u>
Description nr. KFL.doc (5 pp)	-	2001-08-01
Partlist nr.:	B	2001-07-19
	A	2001-07-19
Drawings nº:	B	2001-07-19
	A	2001-07-19
	A	2001-08-01
	B	2001-08-01



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LABORATORIO OFICIAL J. M. MADARIAGA




(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

- (2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC
- (3) Supplement nr. 1 to EC-Type Examination Certificate number: **LOM 02ATEX2035**
- (4) Equipment or Protection System Luminaries
Type KFL...
- (5) Applicant Cooper, Crouse-Hinds Division, CEAG
CEAG Nortem, S.A.
- (6) Address Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN
- (7) This certificate supplement increases the scope of certificate LOM 03ATEX2035 to include variants as specified in the annex to this certificate supplement and listed documents.
- (8) The examination and test results are recorded in confidential report nr. **LOM 03.060 SP**

This supplement must be an inseparable part together with base certificate.

Madrid, 6 May 2003


Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY




Angel Vega Remesal
Head of ATEX area

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Page 1/2



LABORATORIO OFICIAL J. M. MADARIAGA

(A1) **ANNEX**


(A2) Supplement nr. 1 to EC-Type Examination Certificate number: **LOM 02ATEX2035**

(A3) Variations included in this supplement

To extend the application of the luminaries type KFL... to combustible dust atmospheres by assessment of the standard EN 50281-1-1:1998 + A1:2002

Lamp power (W)	Temperature class		Surface temperature	
	Ta: -20 °C / +40 °C	Ta: -20 °C / +55 °C	Ta: -20 °C / +40 °C	Ta: -20 °C / +55 °C
20	T4	T4	T105 °C	T120 °C
50	T4	T3	T125 °C	T140 °C

(A4) Marking variations

 II 2 GD EEx de IIC T* IP66 T* (* = according type)

(A5) Test report nr. **LOM 03.060 SP**

(A6) Essential Health and Safety Requirements

No change

(A7) Descriptive documents

Drawing nr. N514114B0003

Rev.
B

Date
2002-10-07



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Page 2/2



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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **2** of EC-Type Examination Certificate: **LOM 02ATEX2035**

(4) Equipment or protective system: Luminaries
Type KFL...

(5) Applicant: Cooper Crouse-Hinds, S.A.

(6) Address: Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN

(7) Test report: **LOM 04.655 BP**

(8) Variations included in this certificate

- To increase the use for an ambient temperature Ta: -50 °C /+55 °C

(9) Marking changes

Change to the marking: Ta: -50 °C /+55 °C

(10) Change in individual tests

Each compartment of each manufactured unit must be submitted to overpressure test of 1720 kPa according paragraph 15.1.3 of EN 50018:2000.

(11) Descriptive documents

	<u>Rev.</u>	<u>Date</u>
-Description nr. Low temperature KFL.doc	-	2004-12-21

Madrid, 28th February 2005

OFICIAL

LABORATORIO OFICIAL J.M. MADARIAGA

LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remosal
Head of ATEX area

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Page 1/1



LABORATORIO OFICIAL J. M. MADARIAGA



(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. 3 of EC-Type Examination Certificate: **LOM 02ATEX2035**

(4) Equipment or protective system: Luminaries
Type KFL...

(5) Applicant: Cooper Crouse-Hinds, S.A.

(6) Address: Avda. Santa Eulalia, 290
08223 TARRASA (BARCELONA)
SPAIN

(7) Test report: **LOM 05.243 RP**

(8) Variations included in this certificate

To include a variant that use a halogen lamp of 50 W directly connected to mains supply at 230 V and without transformer.

Class temperature for this variant is T3

(9) Marking changes

Those that affect to electrical an thermal characteristics

(10) Change in individual tests

None

(11) Descriptive documents

	Rev.	Date
- Description nr. Ext. Nr. 3 KFL	-	2005-04-14
- Drawing nr. N514112-0006	-	2005-02-24

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Madrid, 24th June 2005

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **4** of EC-Type Examination Certificate: **LOM 02ATEX2035**

(4) Equipment or protective system
Luminaries
Type KFL...

(5) Applicant
COOPER Crouse-Hinds

(6) Address
Avda. Santa Eulalia, 290
08223-TERRASSA (BARCELONA)
SPAIN

(7) Test report nr.: **LOM 08.234 SP**

(8) Variations included in this certificate

- 1 Assessment update to the standards 60079-0:2006, EN 60079-1:2007, EN 60079-7:2007, EN 61241-0:2006 and EN 61241-1:2004
- 2 Update of the manufacturer/applicant name

(9) Changes in marking



II 2 GD Ex de IIC T3..T4
Ex tD A21 IP66 T... °C

Temperature classes, surface temperatures and ambient temperature ranges are indicated in the base certificate, previous supplements, and this supplement.

(10) Descriptive documents

		Rev.	Date
- Description nr.	Ext varios	-	2008-05-19
- Drawings nr.:	CCH-0805005	0	2008-05-19

Madrid, 3rd March, 2009



Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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Pág. 1 / 1

RCPCER 07.4/3
Rev. 0

UNIVERSIDAD POLITÉCNICA DE MADRID
ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29)



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LABORATORIO OFICIAL J. M. MADARIAGA



(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.
Directive 94/9/EC

(3) Supplement nr. **5** of EC-Type Examination Certificate: **LOM 02ATEX2035**

(4) Equipment or protective system
Luminaries
Type KFL...

(5) Applicant
COOPER Crouse-Hinds


(6) Address
Avda. Santa Eulalia, 290
08223-TERRASSA (BARCELONA)
SPAIN

(7) Test report nr.: **LOM 09.424 MP**

(8) Variations included in this certificate

To include a variant named KFL 7LED witch includes a LED lamp of 7 W. Power supply is 230-240 V and the equipment has direct entry. Temperature class is T6 for an ambient temperature up to 55 °C.

(9) Changes in making
Marking for this variant

 II 2 GD Ex de IIC T6
Ex tD A21 IP66 T80 °C

(11) Descriptive documents

	Rev.	Date
- Description nr.: KFL 7 LD	0	2009-08-26
- Drawings nr.: CCH-0908001	0	2008-08-26
N514112-007	0	2009-08-04



Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Madrid, 2009-10-07

Angel Vega Remesal
Head of ATEX area

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Pág. 1 / 1

RCP CER 07.4/2
Rev. 0

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(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres.

Directive 94/9/EC

(3) Supplement nr. **6** of EC-Type Examination Certificate: **LOM 02ATEX2035**

(4) Equipment or protective system

Luminaries

Type KFL...

(5) Manufacturer

COOPER Crouse-Hinds

(6) Address

Avda. Santa Eulalia, 290
08223-TERRASSA (BARCELONA)
SPAIN

(7) Test report nr.:

LOM 14.598 MP

(8) Variations included in this certificate

- Assessment update to the standards EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007 and EN 60079-31:2009

To allow for the KFL 7 LED variant the use of LED lamps up to 10W, with Gu10 or Gu5.3 socket, and direct mains voltage up to 277 V. The temperature class is T6 and surface temperature is T85°C for this variant

To allow the use of 20W lamps in KFL 50 variants ... with direct mains connection or via transformer

Temperature class	Surface temperature	
Ta ≤ 55 °C	Ta ≤ 40 °C	Ta ≤ 55 °C
T4	T105 °C	T120 °C

Ambient temperature range is maintained: -50 °C ≤ Ta ≤ +55 °C

(9) Changes in marking

KFL 50...

KFL 7LED



II 2G Ex d e IIC T4 .. T3 Gb
II 2D Ex tb IIIC T105 °C... T140 °C Db



II 2G Ex d e IIC T6 Gb
II 2D Ex tb IIIC T85 °C Db

(10) Changes in the special conditions for a safe use

Without changes

(11) Descriptive documents

Rev. Date

Technical description nr.: KFL Extensión nr.6 0 2014-11-01

Drawings nr.: N601114-0197 2014-11-19

Getafe, 2015-04-09

Carlos Fernández Ramón
Head of Certification Committee

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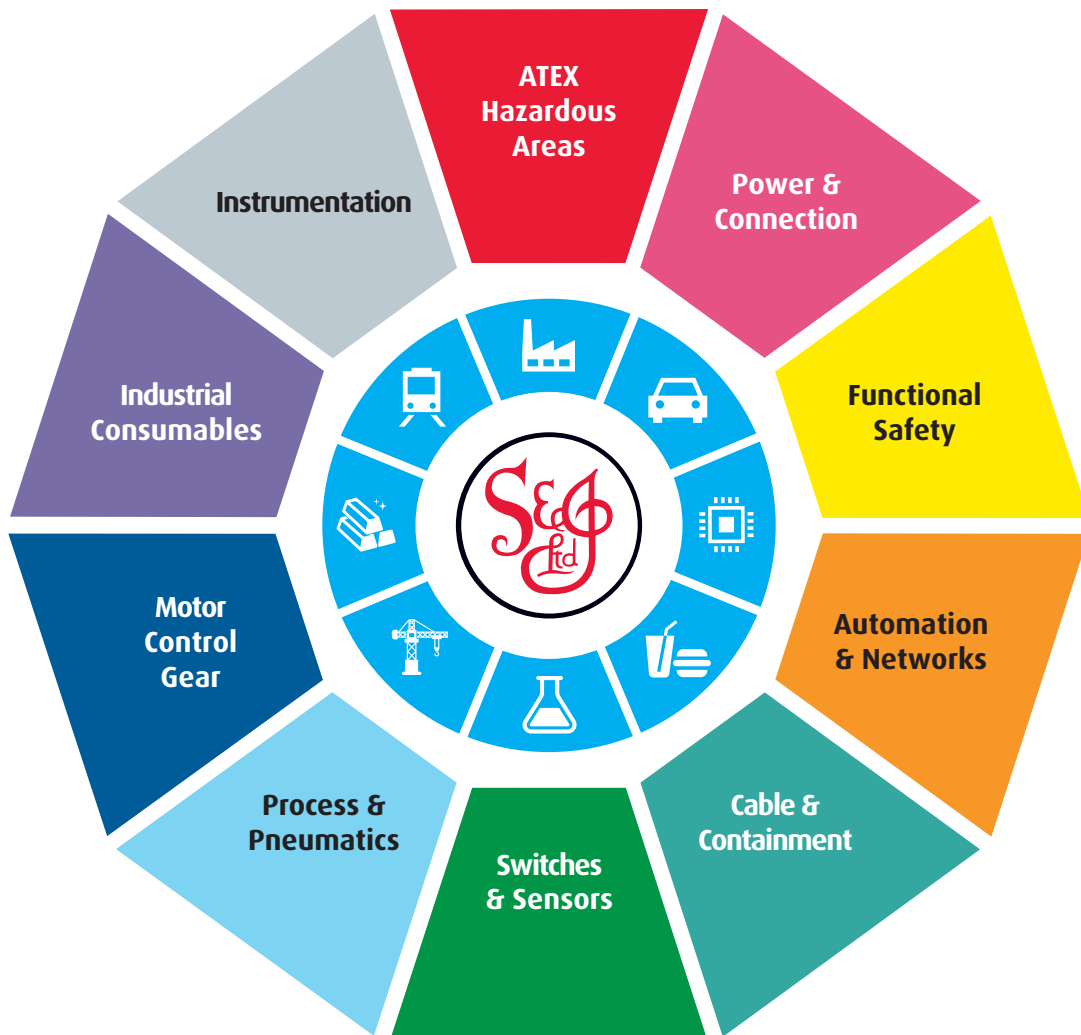
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