



(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 02ATEX2020 X**

(4) Equipment or Protection System Suspension bulb luminaries
Type AB51..

(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 01.323 XP**


(9) El cumplimiento con los Requisitos Esenciales de Seguridad y Salud está basado en la conformidad a los siguientes documentos:

- Normas **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 d IIC T3..T5 / EEx de IIC T3..T5
Ta: -20 °C / +55 °C

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY



Madrid, 16 May 2002

Angel Vega Remesal
Head of ATEX area

(This document may only be reproduced in its entirety)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text



LABORATORIO OFICIAL J. M. MADARIAGA

(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 02ATEX2020 X**

(A3) Description of equipment or protective system

Suspension bulb luminaries are intended to incandescent or discharge lamps.

Denomination:

Without switch on equipment:

Nominal tension: to 250 V

Type	Cable entry	Type of protection
AB51 IT	Direct, top entry	EEx d
AB51 IU	Direct, lateral entry	EEx d
AB51 IW	Indirect with auxiliary box, top entry (*)	EEx d / EEx de
AB51 IX	Indirect with auxiliary, box, lateral entry (*)	EEx d / EEx de

(*) Separated terminal box can be used like flameproof or increased safety box..
Increased safety case has terminals with this type of protection.

With switch on equipment:

Nominal tension 220-230-240-250 V 50/60Hz

Type	Cable entry	Type of Protection
AB51 <p><u>Lamp type</u> M = mercury vapour HME o mixture HME-SB S = HP sodium vapour HSE</p> <p><u>Power (W)</u></p> <p><u>Cable entry</u> V = Indirect with auxiliary box, lateral entry Y = Indirect with auxiliary box, top entry.</p>	Direct	EEx d

Lamp type	Power (W)	Temperature class	
		Ta: -20 °C / +40°C	Ta: -20 °C / +55°C
GLS (incandescence)	150	T3	T3
	200	T3	T3
GLS (halogen incandescence)	75	T5	T4
	100/150	T4	T3
PL (compact fluorescent)	15/20	T6	T6
HME-SB (mixture)	100	T4	T4
	160	T3	T3
HME (mercury vapour)	80	T4	T4
	125	T3	T3
HSE (HP sodium vapour)	50	T5	T4
	70	T4	T4

(This document may only be reproduced in its entirety)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text





LABORATORIO OFICIAL J. M. MADARIAGA

(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 02ATEX2020 X**

(A4) Test report: n° **LOM 01.323 XP**

(A5) Special conditions for safe use

Power supply cable of luminaries without auxiliar connection box shall have a continuous service temperature according to:

<u>Lamp power</u>	<u>Ta: -20 °C / +40 °C</u>	<u>Ta: -20 °C / +55 °C</u>
≥ 150 W	≥ 135 °C	≥ 150 °C
≥ 100 W y <150 W	≥ 120 °C	≥ 135 °C
≥ 70 W y <100 W	≥ 105 °C	≥ 120 °C

(A6) Essential Health and Safety Requirements

Each manufactured unit must be submitted to a static pressure test, according to paragraph 15.3.1 of EN 50018:2000, at 675 kPa in lamp enclosure and at 1020 kPa in equipment auxiliar compartment

Explosion safe requirements are covered by application of the standards indicated in page 1/3 of this certificate.

(A7) Descriptive documents:

	<u>Rev.</u>	<u>Date</u>	
Description nr. AB51.doc (6 pp)	1	2002-05-03	
Part lis°:	N511112A0005	A	2001-09-07
	N511112A0006	A	2001-09-07
	N511112A0007	A	2001-09-07
Drwings nr.:	N511112A0005	A	2001-09-07
	N511112A0006	A	2001-09-07
	N511112A0007	A	2001-09-07
	N511114A0016	A	2001-09-28
	N511114A0017	A	2001-09-28
	N511114A0024	A	2001-09-28
Schematics nr.:	N511114A0018	A	2001-09-07
	N511114A0019	A	2001-09-07
	N511114A0020	A	2001-09-07
	N511114A0021	A	2001-09-07
	N511114A0022	A	2001-09-07
	N511114A0023	A	2001-09-07



(This document may only be reproduced in its entirety)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text



(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 02ATEX2020 X**
- (4) Equipment or Protection System Suspension bulb luminaries
Type AB51..
- (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 03ATEX2020 X 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 03.058 QP**

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

(This document may only be reproduced in its entirety)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text



LABORATORIO OFICIAL J. M. MADARIAGA

(A1) **ANNEX**

(A2) Supplement nr. 1 to EC-Type Examination Certificate number: **LOM 02ATEX2020 X**

(A3) Variations included in this supplement

To extend the application of the luminaries type AB51... to combustible dust atmospheres by assessment of the standard **EN 50281-1-1:1998 + A1:2002**

Lamp type	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
GLS (incandescence)	150	T3	T3	T132 °C	T147 °C
	200	T3	T3	T137 °C	T152 °C
GLS (halogen incandescence)	75	T5	T4	T88 °C	T103 °C
	100/150	T4	T3	T123 °C	T138 °C
PL (compact fluorescent)	15/20	T6	T6	T60 °C	T75 °C
HME-SB (mixture)	100	T4	T4	T110 °C	T125 °C
	160	T3	T3	T127 °C	T142 °C
HME (mercury vapour)	80	T4	T4	T112 °C	T127 °C
	125	T3	T3	T127 °C	T142 °C
HSE (HP sodium vapour)	50	T5	T4	T86 °C	T101 °C
	70	T4	T4	T97 °C	T112 °C

(A4) Marking variations



II 2 GD EEx de IIC T* IP67 T* (* = according type)

(A5) Test report nr: **LOM 03.058 QP**

(A6) Essential Health and Safety Requirements

No change

(A7) Descriptive documents

Drawings nr.		Rev.	Date
	N511114B 0016	B	2002-10-07
	N511114B 0017	B	2002-10-07
	N511114B 0024	B	2002-10-07





(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 02ATEX2020 X**

(4) Equipment or protective system: Suspension bulb luminaries
Type AB51..

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

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

(7) Test report: **LOM 04.652 YP**

(8) Variations included in this certificate

- To increase the use for an ambient temperature Ta: -50 °C /+55 °C
- To exclude individual overpressure tests due to prototype overpressure test at four times the reference pressure

(9) Marking changes

Change to the marking: Ta: -50 °C /+55 °C in the correspondent variant.

(10) Change in individual tests

Each manufactured unit having an ambient temperature marking Ta: -50 °C /+55 °C must be submitted to overpressure test according paragraph 15.1.3 of EN 50018:2000:

1050 kPa for lamp enclosure
1560 kPa for equipment enclosure

(11) Descriptive documents

	<u>Rev.</u>	<u>Date</u>
- Description nr. Low temperature AB51.doc	-	2004-12-21

Madrid, 28th February 2005



Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY



Angel Vega Remesal
Head of ATEX area

This supplement must be an inseparable part together with the base certificate **LOM 02ATEX2020 X**
(This document may only be reproduced in its entirety and without any change)
This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text





(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 02ATEX2020 X**

(4) Equipment or protective system
Suspension bulb luminaries
Type AB51.._

(5) Applicant
COOPER Crouse-Hinds

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

(7) Test report nr.: **LOM 08.232 QP**

(8) Variations included in this certificate

- 1 Assessment update to the standards EN 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
- 3 To include new cable bushings used in the variants that include ignition equipment

(9) Changes in marking



II 2 GD Ex d IIB T3..T6 / Ex de IIC T3..T6
Ex tD A21 IP66 T...°C

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

(10) Descriptive documents

	Rev.	Date
- Description nr.	AB51.E3	- 2008-05-19
- Drawings nr.:	N511112B0007	B 2007-12-07
	N511113B0043	- 2008-03-31
	CCH-0805007	0 2008-05-19

Madrid, 5th March, 2009

OFICIAL

LABORATORIO

J.M. MADARIAGA

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

This supplement must be an inseparable part together with the base certificate **LOM 02ATEX2020 X**

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text

(This document may only be reproduced in its entirety and without any change)





(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 to EC-Type Examination Certificate nr. **LOM 02ATEX2020 X**

(4) Equipment or protection system
Suspension bulb luminaries
Type AB51..

(5) Manufacturer
COOPER Crouse-Hinds

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

(7) Test report nr.: **LOM 10.243 ZP**

(8) Variations included in this certificate

- Update to the standards EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007 and EN 60079-31:2009.
- Modification of the outer enclosure, and strengthening the fastening elements. The internal geometry remains unchanged.
- Use of new lamps:

Lamp type Lamp cap E27 or GU10	Power	Ta ≤ +55 °C	
		Temperature class	Surface temperature
Compact fluorescent	Hasta 32 W	T6	T85 °C
LED	Hasta 20 W	T6	T85 °C
Metal halide HI/HM	70 W	T4	T125 °C

The metal halide lamps are include in the type AB51S70

(9) Changes in special conditions for a safe

Indicated conditions in the base certificate and previous supplements remains unchanged

(10) Changes in individual tests

Remain unchanged

(9) Changes in marking

Direct entry



II 2GD Ex d IIC T3..T6Gb
Ex t IIIC T85°C..T152°C Db

Indirect entry



II 2GD Ex de IIC T*Gb
Ex t IIIC T85°C..T152°C Db

And those that correspond to the denomination of new variants.



This supplement must be an inseparable part together with the base certificate **LOM 02ATEX2020 X**

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text

(This document may only be reproduced in its entirety and without any change)





LABORATORIO OFICIAL J. M. MADARIAGA

(3) Supplement nr. 4 to EC-Type Examination Certificate nr. **LOM 02ATEX2020 X**

(11) Descriptive documents

	<u>Rev.</u>	<u>Date</u>
- Technical description nr: AB51.E4	4	2013-01-29
- Drawings ne.:		
N511112-0005	B	2012-12-18
N511112-0006	B	2012-12-18
N511112-0007	C	2012-12-18
N511114-0104	I	2012-12-18
N511114-0018	B	2012-12-18
N511114-0019	B	2012-12-18
N511114-0020	B	2012-12-18
N511114-0021	B	2012-12-18
N511114-0022	B	2010-10-05
N511114-0023	B	2012-12-18
N511113-0043	B	2012-12-18

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY



Getafe, 2013-02-11

Angel Vega Remesal
Head of the ATEX