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 02ATEX2012 X**

(4) Equipment or Protection System — Bulb luminaires
Type EV...

(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 there to is specified in the schedule to this certificate and the documents therein refered 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 01.004 QP**

(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:

Ex II 2 G EEx d IIC T3..T5 / EEx de IIC T3..T5

Ta: -20 °C / +55 °C

Madrid, 7 May 2002

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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ENAC INSPECCIÓN Nº 23/EI037
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 -)
Alenza, 2 - 28003-MADRID • ☎ (34) 91 4421366/ 91 3367009 • Fax.(34) 91 4419933 • ✉ lom@lom.upm.es

(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 02ATEX2012 X**

(A3) Description of equipment or protective system

Two sizes bulb luminaires, with generic denomination EV-200 with lamp holder E-27 and diameter 245 mm and EV-500 with lamp holder E-40 and diameter 300 mm.

Codification:

EV _ _ _ _

Lamp type
I = incandescence GLS
S = HP Sodium vapour HSE
M = Mercury vapour HME or mixture HME-SB
H = Metallic halogenide HIT

Lamp power (W)
200 = to 200 W for luminaires without starting equipment
500 = to 500 W for luminaires without starting equipment
Lamp power for luminaires with integrated starting equipment

Entrance type
TD = top direct
UD = lateral direct
WD = auxiliary terminal box screwed with cable entry, top entrance
XM = auxiliary terminal box screwed with cable entry, lateral entrances (*)
ZM = integrated starting equipment box (*)
(*) Increased safety terminal box

Size	Type	Lamp	Power (W)	Temperature class	
				Ta: -20 °C/+40 °C	Ta: -20 °C/+55 °C
EV-200	EVI 200 ..	GLS	150	T4	T4
			200	T4	T4
	EVS 70 ..	HSE	70	T5	T4
	EVM 80 ..	HME	80	T4	T4
	EVM 125 ..	HME	125	T4	T4
	EVM 160 ..	HME-SB	160	T4	T3
EV-500	EVI 500 ..	GLS	500	T3	T3
			300	T4	T4
	EVS 150 ..	HSE	150	T5	T4
	EVS 250	HSE	250	T4	T4
	EVM 250	HME	250	T4	T3
	EVM 250	HME-SB	250	T4	T3
	EVH 250 ..	HIT	250	T4	T3

Rated voltage: 220 a 250 V 50/60 Hz

(A4) Test report: nº **LOM 01.004 QP**

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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(A1) **SCHEDULE**

(A2) EC-Type Examination Certificate: **LOM 02ATEX2012 X**

(A5) Special conditions for safe use

Power supply cable of direct cable entry types shall have to stand a continuous service temperature:

Lamp power	Ta: 40 °C	Ta:55 °C
up to 300 W	≥97 °C	≥112 °C
up to 500 W	≥125 °C	≥140 °C

This is not applied to indirect cable entry ones.

(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, to:
· 735 kPa in the lamp enclosure
· 1200 kPa in the starting equipment auxiliary compartment

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

(A7) Descriptive documents:

		Rev.	Date
Description nr	EV.doc (7 pp)	1	2002-04-25
Part list nr. :	N512112A0127 (2 pp)	A	2000-12-14
	N512112B0128 (4 pp)	B	2000-12-21
	N512112B0129 (3 pp)	-	2000-12-21
Drawings nr.:	N512112A0127	A	2000-12-14
	N512112B0128	B	2000-12-21
	N512112B0129	B	2000-12-21
	N601114-0103	-	2002-04-25
	N601114-0104	-	2002-04-25
	N601114-0105	-	2002-04-25
	9CCN511114A0080	A	2000-12-21

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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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. **1** to EC-Type Examination Certificate number: **LOM 02ATEX2012 X**

(4)	Equipment or Protection System	Bulb luminaries Type EV..
(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 02ATEX2012 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 03.061 TP**

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

Madrid, 6 May 2003

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Angel Vega Remesal
Head of ATEX area

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(A1) **ANNEX**

(A2) Supplement nr. **1** to EC-Type Examination Certificate number: **LOM 02ATEX2012 X**

(A3) Variations included in this supplement

a) To include new induction lamps types PHILIPS serie QL.

Luminarie type		Lamp Power	Enclosure size	Entry	Type of protection
Transparent glass	FROSTED glass				
EVQ 55 UD	EVQ 55T UD	55 W	EV-200	Direct	EEx d IIC
EVQ 85 UD	EVQ 85T UD	85 W	EV-500		
EVQ 55 XM	EVQ 55T XM	55 W	EV-200	Indirect	EEx de IIC
EVQ 55 XM	EVQ 55T XM	85 W	EV-500		
EVQ 165 ZM	EVQ 165T ZM	165 W	EV-500		

Temperature class for this kind of lamp is T6 for Ta:-20 °C / +55 °C

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

Size	Type	Lamp	Power (W)	Surface temperature	
				Ta: -20 °C/+40 °C	Ta: -20 °C/+55 °C
EV-200	EVI 200 ..	GLS	150	T105 °C	T120 °C
			200	T115 °C	T130 °C
	EVS 70 ..	HSE	70	T95 °C	T110 °C
	EVM 80 ..	HME	80	T115 °C	T130 °C
	EVM 125 ..	HME	125	T115 °C	T130 °C
	EVM 160 ..	HME-SB	160	T125 °C	T140 °C
	EVQ ...	QL	55	T85 °C	T85 °C
EV-500	EVI 500 ..	GLS	500	T155 °C	T170 °C
			300	T115 °C	T130 °C
	EVS 150 ..	HSE	150	T90 °C	T105 °C
	EVS 250	HSE	250	T115 °C	T130 °C
	EVM 250	HME	250	T125 °C	T140 °C
	EVM 250	HME-SB	250	T125 °C	T140 °C
	EVH 250 ..	HIT	250	T125 °C	T140 °C
	EVQ ...	QL	85 / 165	T85 °C	T85 °C

(A4) Marking variations

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

OFICIAL LABORATORIO J.M. MADARIAGA LOM

(A1) **ANNEX**

(A2) Supplement nr. **1** to EC-Type Examination Certificate number: **LOM 03ATEX2012 X**

(A5) Test report nr: **LOM 03.061 TP**

(A6) Essential Health and Safety Requirements

No change

(A7) Descriptive documents

		Rev.	Date
- Description nr. EVQ.rev1.doc		1	2003-01-28
- Drawings nr:	N601114A 0103	A	2002-10-07
	N601114A 0104	A	2002-10-07
	N601114A 0105	A	2002-10-07
	N511112A0011	A	2003-03-03
	N511112-0012	A	2003-03-03
	N511112A0013	A	2003-03-03
	N511112A0016	A	2003-03-03
	N511112A0017	A	2003-03-03

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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. **2** of EC-Type Examination Certificate: **LOM 02ATEX2012 X**

(4) Equipment or protective system: Bulb luminaries
Type EV..

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

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

(7) Test report: **LOM 04.653 ZP**

(8) Variations included in this certificate

- To increase the use for an ambient temperature Ta: -50 °C /+55 °C for the variants that do not include equipment enclosure.

- To increase the use for an ambient temperature Ta: -45 °C /+55 °C for the variants that include equipment enclosure.

(9) Marking changes

Change to the marking: Ta: -45 °C /+55 °C or Ta: -50 °C /+55 °C according to variants

(10) Change in individual tests

Each manufactured unit must be submitted to overpressure test according paragraph 15.1.3 of EN 50018:2000:

1120 kPa for lamp enclosure
1790 kPa for equipment enclosure

(11) Descriptive documents

	Rev.	Date
- Description nr. Low temperature EV.doc	-	2004-12-21

Madrid, 23th February 2005

OFICIAL LABORATORIO J.M. MADARIAGA LOM

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. **3** of EC-Type Examination Certificate: **LOM 02ATEX2012 X**

(4) Equipment or protective system: Bulb luminaries
Type EV. ... ..

(5) Applicant: COOPER Crouse-Hinds

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

(7) Test report nr.: **LOM 08.244 CP**

(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 a new type of lamp HPS of 100 W in the variant EVS 100:

Size	II 2 G		II 2 D	
Type	-45 °C ≤ Ta ≤ +40 °C	-20 °C ≤ Ta ≤ +55 °C	-45 °C ≤ Ta ≤ +40 °C	-20 °C ≤ Ta ≤ +55 °C
EV-500 EVS 100...	T5	T4	T100°C	T115 °C

(9) Changes in marking

II 2 GD Ex d IIC T3..T5 / Ex de IIC T3..T5
Ex tD A21 IP67 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.	EV.E3	-	2008-05-19
- Drawings nr.:	N51112E0128	E	2008-05-06
	CCH-0805008	0	2008-05-19

Madrid, 4th March, 2009

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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(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 02ATEX2012 X**

(4) Equipment or protective system: Bulb luminaries
Type EV. ... ..

(5) Manufacturer: COOPER Crouse-Hinds

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

(7) Test report nr.: **LOM 10.162 WP**

(8) Variations included in this certificate

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

2 Added new application in the small housing EV200 with a LED lamp and its power module, of 32W, 220-240V. This new variant is called EVQ200LED.

(9) Changes in marking

Generic for all types

Ex II 2 GD
Ex d IIC T3..T6 Gb / Ex de IIC T3..T6 Gb
Ex t IIIC T... °C Db

Specific for EVQ200LED

Ex II 2 GD
Ex d IIC T6 Gb
Ex t IIIC T85 °C Db
-50 °C ≤ Ta ≤ +55 °C

(10) Changes in special conditions for safe use

None

(11) Descriptive documents

		Rev.	Date
- Description nr.	EV _ Extension nr.4	1	2010-02-23
- Drawings nr.:	14001000201	0	2010-03-10
	24001300000	0	2010-03-09
	CCH-20100301	1	2010-05-20

OFICIAL LABORATORIO J.M. MADARIAGA LOM

Madrid, 2010-02-24

Carlos Fernández Ramón
DIRECTOR OF THE LABORATORY

Angel Vega Remesal
Head of ATEX area

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