



## Translation

# (1) Type Examination Certificate

(2) - Directive 94/9/EC -  
Equipment and protective systems intended for use  
in potentially explosive atmospheres

(3) **BVS 09 ATEX E 147**

(4) **Equipment:** Luminaire type nLL\* 08 \*/\* resp.  
Luminaire type nLL\* 08 \*/\* CG-S resp.  
Luminaire type nLL\* 08 \*/\* N

(5) **Manufacturer:** Cooper Crouse-Hinds GmbH

(6) **Address:** 69412 Eberbach, Germany

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(8) The certification body of DEKRA EXAM GmbH certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to the Directive.  
The examination and test results are recorded in confidential test and assessment report BVS PP 09.2180 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

|                  |                          |
|------------------|--------------------------|
| EN 60079-0:2006  | General requirements     |
| EN 60079-1:2007  | Flameproof enclosure     |
| EN 60079-7:2007  | Increased safety         |
| EN 60079-15:2005 | Type of protection 'n'   |
| EN 60079-18:2004 | Encapsulation            |
| EN 61241-0:2006  | General requirements     |
| EN 61241-1:2004  | Protection by enclosures |

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.

(11) This Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.  
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

|                                                                                                                   |                                   |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>II 3G Ex nA de IIC T4</b>                                                                                      | Electronic ballast Luxtronic      |
|  <b>II 3G Ex nA de mb IIC T4</b> | Electronic ballast EVG05 or EVG09 |
| <b>II 3D Ex tD A22 IP66 T80°C</b>                                                                                 |                                   |

**DEKRA EXAM GmbH**

Bochum, dated 11. November 2009

Signed: Simanski

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Certification body

Signed: U. Hauke

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Special services unit

(13)

Appendix to

(14)

# Type Examination Certificate

**BVS 09 ATEX E 147**

(15) 15.1 Subject and type

Luminaire type nLL\* 08 \*/\* \*



None : standard  
CG-S : with CG-S module for connection to central battery system  
N : emergency light with internal or external battery

018/18 : 2x 18W  
036 : 1x 36W  
036/36 : 2x 36W  
058 : 1x 58W  
058/58 : 2x 58W

K : plastic enclosure  
S : stainless steel enclosure  
M : pole mounted light (plastic enclosure)

## 15.2 Description

The fluorescent luminaire type nLL\* 08 \*/\* \* is an explosion-protected electrical apparatus that accommodates single or twin fluorescent lamps with socket G13 to provide lighting in potentially explosive atmospheres of zones 2 and 22.

The electronic ballast (German abbreviation EVG) Luxtronic – equipped with emergency light electronics – made by Hadler is used as ballast for the lamp type nLL\* \*/\* \*. As an alternative, the separately certified ballasts EVG05 (cf. PTB 05 ATEX 2018 U) or EVG09 (cf. BVS 09 ATEX E 054 U) may be installed which are suitable for use in zone 1.

The lamps may be replaced inside the potentially explosive atmosphere if the fluorescent luminaire is equipped with a separately certified light switch that meets the requirements of the type of protection Flameproof Enclosure. Either this switch disconnects the lamp at all poles when opening the luminaire or the voltage of the luminaire is set to zero before opening. The variant without a light switch contains a relevant warning on the outside of the enclosure.

Suitable lamps to be used are fluorescent tubes of type T8, T10 and T12.

The luminaire enclosure consists of either glass-mat reinforced polyester or of stainless steel; the light-permitting diffuser is made of polycarbonate. The surrounding groove of the protective cover contains a self-adhesive gasket.

The fluorescent luminaire type nLL\* 08 \*/\* CG-S is equipped with a CG-S module (cf. PTB 04 ATEX 2110 U) which connects to a central battery system.

The fluorescent luminaire type nLL\* 08 \*/\* N is either equipped with one battery consisting of five NiCd-cells of 4Ah connected in series unless the separately certified battery box type eB\* \* (cf. BVS 09 ATEX E 044 X) is used which is flanged on and supplied with either a battery type U or one of type P, providing 4Ah or 7 Ah, respectively.

The types of protection for zone 1 listed in the marking are stated on the type label due to the components built into the luminaire. A complete list of the built-in components and their relevant types of protection and temperature ranges is provided in description no. 4444, item 11, Built-in components; the description is part of this test and assessment report (see below).

### 15.3 Parameters

| Type of luminaire         | Ballast             | Wiring |      | Rated voltage                        | Frequency        | Ambient temperature            |
|---------------------------|---------------------|--------|------|--------------------------------------|------------------|--------------------------------|
|                           |                     | with   | w/o  |                                      |                  |                                |
| Standard luminaire nLL 08 |                     |        |      |                                      |                  |                                |
| nLL* 08 018/18            | EVG Luxtronic 2x18W | x      | x    | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +50°C                  |
| nLL* 08 036               | EVG Luxtronic 1x36W | x      | x    | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +50°C                  |
| nLL* 08 036/36            | EVG Luxtronic 2x36W | x      | ---- | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +45°C                  |
| nLL* 08 036/36            | EVG Luxtronic 2x36W | ----   | x    | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +50°C                  |
| nLL* 08 058               | EVG Luxtronic 1x58W | x      | x    | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +50°C                  |
| nLL* 08 058/58            | EVG Luxtronic 2x58W | x      | x    | 220V..240V AC<br>220V..240V DC       | 50 / 60Hz<br>0Hz | -25°C - +40°C                  |
| nLL* 08 018/18            | EVG 05 218 (**)     | x      | x    | 110V..254V AC/DC<br>195V..250V AC/DC | 0/ 50-60Hz       | -25°C - +50°C<br>-25°C - +55°C |
| nLL* 08 036               | EVG 05 136 (**)     | x      | x    | 110V..254V AC/DC<br>195V..250V AC/DC | 0/ 50-60Hz       | -25°C - +50°C<br>-25°C - +55°C |
| nLL* 08 036/36            | EVG 05 236 (**)     | x      | x    | 110V..254V AC/DC<br>195V..250V AC/DC | 0/ 50-60Hz       | -25°C - +50°C<br>-25°C - +55°C |
| nLL* 08 058               | EVG 05 158 (**)     | x      | x    | 110V..254V AC/DC<br>195V..250V AC/DC | 0/ 50-60Hz       | -25°C - +50°C<br>-25°C - +55°C |
| nLL* 08 058/58            | EVG 05 258 (**)     | x      | ---- | 220V..254V AC<br>195...250V DC       | 50-60Hz<br>0Hz   | -25°C - +40°C                  |
| nLL* 08 058/58            | EVG 05 258 (**)     | ----   | x    | 220V..254V AC<br>195...250V DC       | 50-60Hz<br>0Hz   | -25°C - +45°C                  |
| (**)optionally EVG 09     |                     |        |      |                                      |                  |                                |

| Type of luminaire                                 | Ballast                           | Wiring |      | Rated voltage                  | Frequency        | Ambient temperature |
|---------------------------------------------------|-----------------------------------|--------|------|--------------------------------|------------------|---------------------|
|                                                   |                                   | with   | w/o  |                                |                  |                     |
| Emergency light nLL. 08 N – internal battery 4Ah  |                                   |        |      |                                |                  |                     |
| nLL* 08 018/18 N                                  | VE/EVG<br>Luxtronic<br>2x18W 1,5h | ----   | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +45°C       |
| nLL* 08 018/18 N                                  | VE/EVG<br>Luxtronic<br>2x18W 3,0h | ----   | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +45°C       |
| nLL* 08 036/36 N                                  | VE/EVG<br>Luxtronic<br>2x36W 1,5h | ----   | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +45°C       |
| Emergency light nLL. 08 N – external battery 4Ah  |                                   |        |      |                                |                  |                     |
| nLL* 08 018/18 N                                  | VE/EVG<br>Luxtronic<br>2x18W 1,5h | x      | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +45°C       |
| nLL* 08 018/18 N                                  | VE/EVG<br>Luxtronic<br>2x18W 3h   | x      | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +45°C       |
| nLL* 08 036/36 N                                  | VE/EVG<br>Luxtronic<br>2x36W 1,5h | x      | x    | 220V..240V AC                  | 50 / 60Hz        | -25°C - +40°C       |
| Emergency light nLL. 08 N – external battery 7 Ah |                                   |        |      |                                |                  |                     |
| nLL* 08 036/36 N                                  | VE/EVG<br>Luxtronic<br>2x36W 3h   | x      | ---- | 220V..240V AC                  | 50 / 60Hz        | -25°C - +40°C       |
| Emergency light nLL. 08 CG-S                      |                                   |        |      |                                |                  |                     |
| nLL* 08 018/18<br>CG-S                            | EVG 05 218 (**) + CG-S            | x      | x    | 220V..254V AC<br>195V..250V DC | 50 / 60Hz<br>0Hz | -25°C - +50°C       |
| nLL* 08 036/036<br>CG-S                           | EVG 05 236 (**) + CG-S            | x      | x    | 220V..254V AC<br>195V..250V DC | 50 / 60Hz<br>0Hz | -25°C - +50°C       |
| nLL* 08 058/058<br>CG-S                           | EVG 05 258 (**) + CG-S            | x      | ---- | 220V..254V AC<br>195V..250V DC | 50 / 60Hz<br>0Hz | -25°C - +40°C       |
| nLL* 08 058/058<br>CG-S                           | EVG 05 258 (**) + CG-S            | ----   | x    | 220V..254V AC<br>195V..250V DC | 50 / 60Hz<br>0Hz | -25°C - +45°C       |
| (**) optionally EVG 09                            |                                   |        |      |                                |                  |                     |

(16) Test and assessment report

BVS PP 09.2180 EG as of 11.11.2009

(17) Special conditions for safe use

None

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We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 26.11.2009  
BVS-Kr/Ld/Ar A 20090263

**DEKRA EXAM GmbH**



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Certification body



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Special services unit