

Via Monfalcone 41
20092 Cinisello Balsamo (Milano) – Italy
Tel. +39 0266013695 – Fax +39 0266013530

MODEL NO: PL121425 fox XP-E

SUBJECT: CREE® XLAMP® LEDs XP-E , Lens Coupling - Output Luminous Intensity Measurement

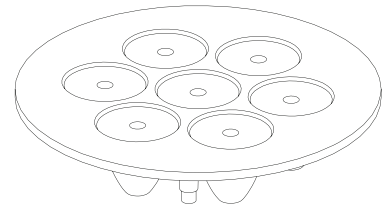


PL121425 for XP-E

- High efficiency
- No vibration problems
- Free testing

Typical applications are

- Architectural lighting
- Lamps
- Torches
- Most applications where a compact light source is required



DESCRIPTION:

Verification of Luminous Intensity with coupling conditions between Khatod lenses and CREE® XLAMP® LEDs XP-E White mod. XPEWHT-L1-7B0-P3-0-01.

REPORT:

From 1 m ± 0,02 distance, we have measured Luminous Intensity emitted by LED. Such measurements have been repeated with the same test conditions but coupling LEDs to the lens Khatod cod. PL121425.

MEASURED DATA:

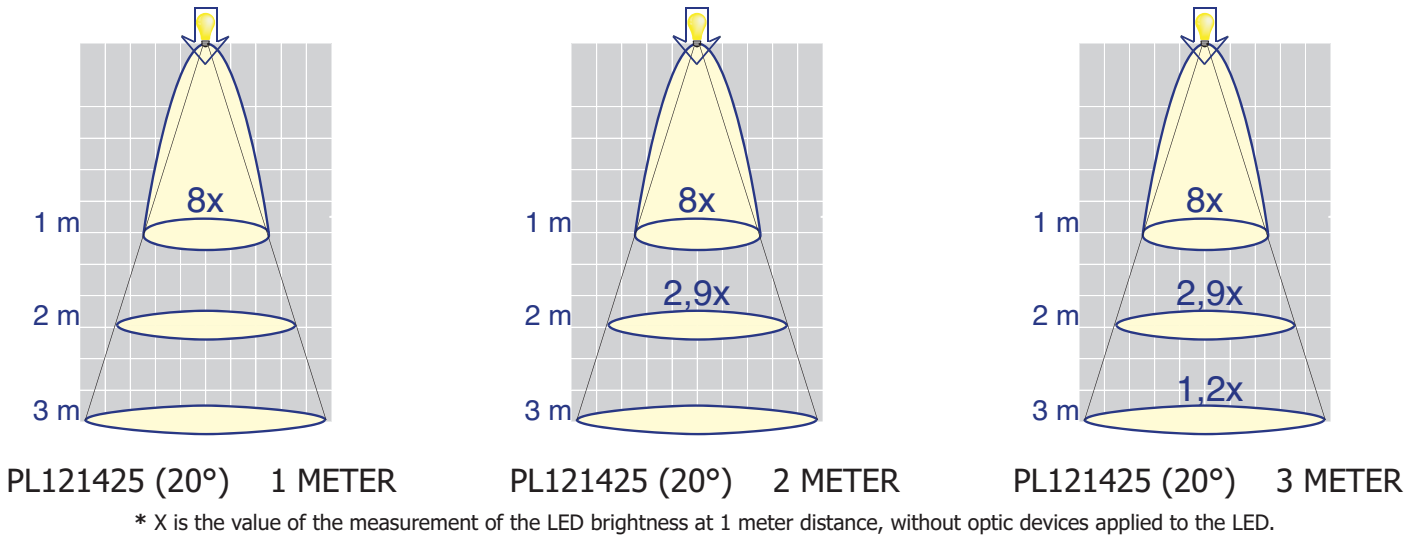
Column 1 shows p/n of the Lenses, column 2 shows Luminous Intensity detected measuring LEDs without lens, column 3 shows Luminous Intensity detected on LEDs coupled with lens, column 4 shows the difference (X*) between col. 2 and col. 3

| Lens Type | LED Lux from 1 Mt (ftc From 1 Mt) | LED + lens Lux from 1Mt (ftc From 1 Mt) | X* |
|----------------|---|---|----|
| PL121425 (20°) | 184 (16,98 ftc) | 1437 (132,62 ftc) | 8 |

Test carried out after 5 min. of operation of the LED to 350 mA ~ , local power source **GOSSEN KONSTANTER** mod 3226-K118
Measurements carried out with Luxometer mod LUX-1337 of **ISO-TEC** and **MINOLTA** mod LS – 150

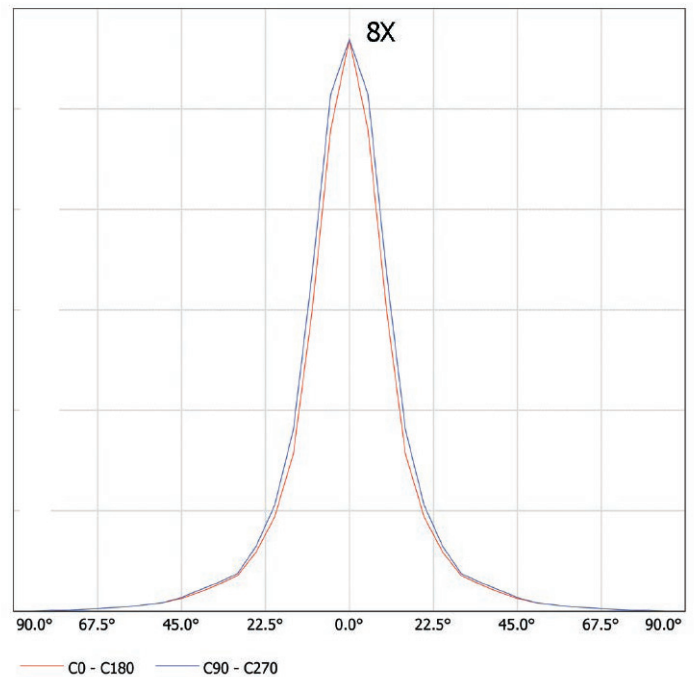
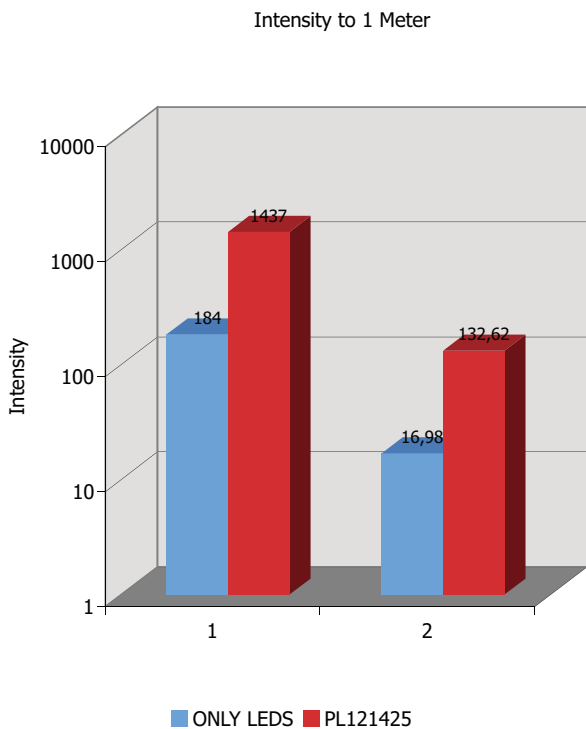
* X is the value of the measurement of the LED brightness at 1 meter distance, without optic devices applied to the LED.

White LED Illuminance chart

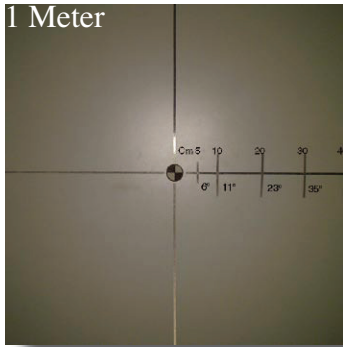


Test conditions:
 Test current: 350 mA / LED
 Room Luminous Intensity :0 Lumen
 Room Temperature: 22,6° C
 LED temperature after 10 min. : ~ 51 °C

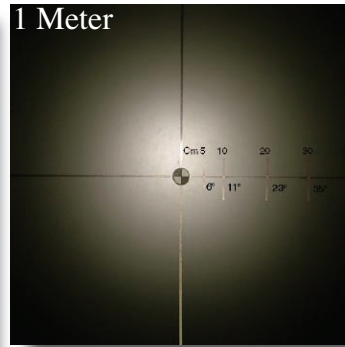
The diagram demonstrates the performance of the Khatod optoelectronic lenses



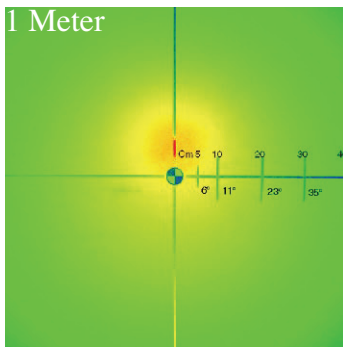
Photos:



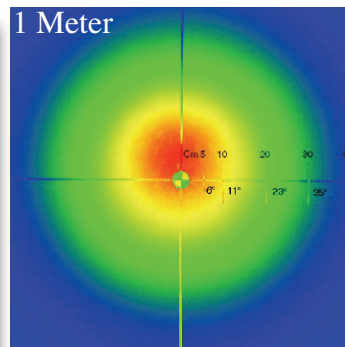
CREE[®] XLAMP[®] LEDs



PL121425 (20°)

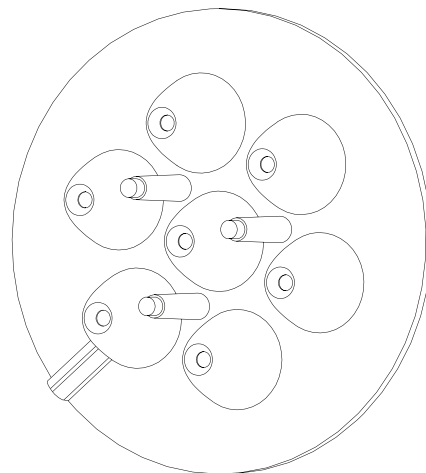
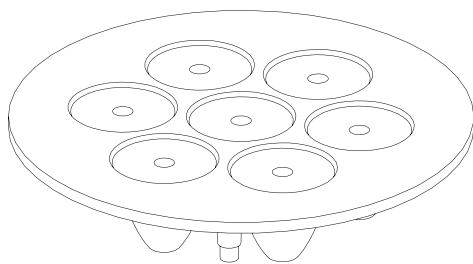


CREE[®] XLAMP[®] LEDs
Spectro Metric Analysis

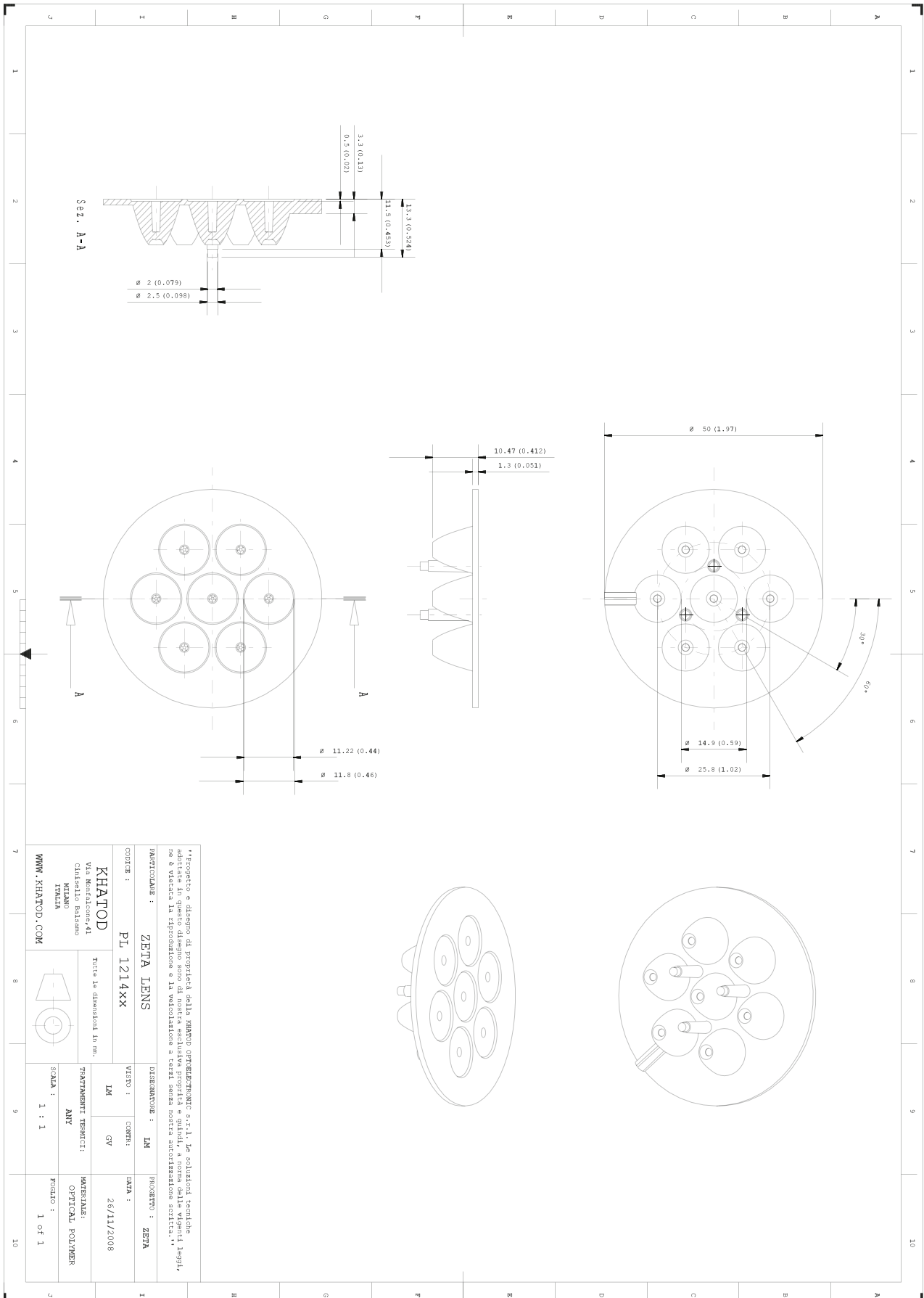


PL121425 (20°)
Spectro Metric Analysis

Measurements carried out with Luxometer mod LUX-1337. Room Luminous Intensity: 0 Lumen. Camera mod. Fujifilm S7000



Drawing.



| | | | | | |
|---|--|---|--|---|--|
| KHATOD VIA Montebello, 41 CHIESALE BALSAMO MILANO ITALIA WWW.KHATOD.COM | | ZETA LENS PL 1214XX Tutte le dimensioni in mm. | | PRODOTTORE : LM VETTORE : LM COMPRESO : OV DATA : 26/11/2008 | |
| PARTICOLARE : | | DESCRIZIONE : | | PRODOTTO : ZETA | |
| CODICE : | | VETTORE : | | COMPRESO : | |
| KHATOD | | LM | | OV | |
| PARTICOLARE TECNICO: | | PARTICOLARE TECNICO: | | PARTICOLARE TECNICO: | |
| ANY | | ANY | | ANY | |
| SCALA : 1 : 1 | | SCALA : 1 : 1 | | SCALA : 1 : 1 | |
| FOGLIO : 1 of 1 | | FOGLIO : 1 of 1 | | FOGLIO : 1 of 1 | |

Lens characteristics

| Parameter | Symbol | Rating | Unit |
|---|-----------|-------------|------|
| Lens Material | PC Optics | -- | -- |
| Holder Material | -- | -- | -- |
| Operating Temperature | Topr | -40 to +120 | °C |
| Storage Temperature | Tstg | -40 to +120 | °C |
| Average transmittance in visible spectrum (400 – 700nm) >90% as measured using 3mm thick Optical Grade PC | | | |

LED characteristics

For technical specification on LEDs please refer to CREE® XLAMP® LEDs datasheet or visit www.cree.com

Notes:

Please note that flow lines and weld lines on the external surfaces of the lenses are acceptable if the optical performance of the lens is within the specification described in the section "OPTICAL CHARACTERISTICS"

- Should you require further information, please contact Khatod for advice.
- All lens testing must be subject to identical conditions as Khatod test condition.
- Published by Khatod optoelectronic srl - All the data contained in this document are the property of Khatod optoelectronic srl and may change without notice.

KHATOD LENS Use And Maintenance

- DO NOT HANDLE OR INSTALL LENSES WITHOUT WEARING GLOVES, SKIN OILS MAY DAMAGE LENS OR LIGHT TRANSMISSION
- CLEAN LENSES WITH MILD SOAP AND WATER AND A SOFT CLOTH
- DO NOT USE ANY COMMERCIAL CLEANING SOLVENTS ON LENSES

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