KHATOD®
OPTOELECTRONIC

TECHNICAL DEPT.
Lenses Test Report

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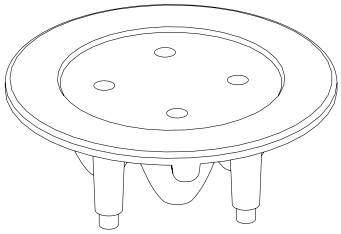
MODEL NO: PL115225

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



PL115225

- Standard MR11
- 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. PL115225.

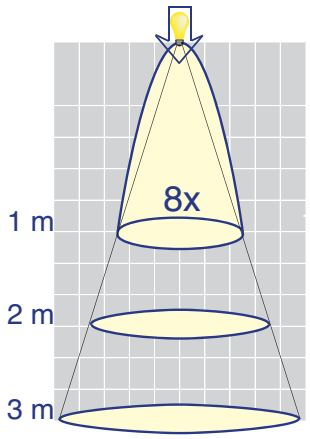
MEASURED DATA:

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

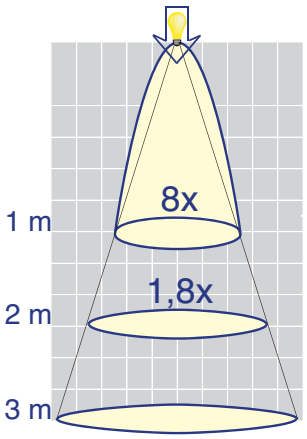
Lens Type	LED Lux from 1 Mt (ftc From 1 Mt)	LED + lens Lux from 1Mt (ftc From 1 Mt)	X*
PL115225 (20°)	27,3 (2,52 ftc)	218 (20,12 ftc)	8
Test carried out after 5 min. of operation of the LED to 350 mA ~ , local power source **GOSSEN KONSTANTER** mod 3226-K118 Measurements carried out with Luxometer mod 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.			

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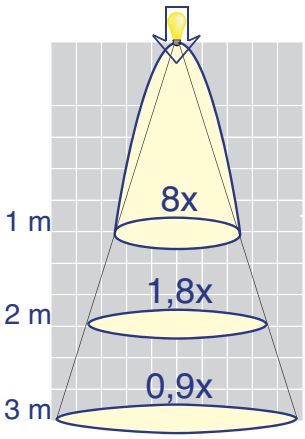
White LED Illuminance chart



PL115225 (20°) 1 METER



PL115225 (20°) 2 METER



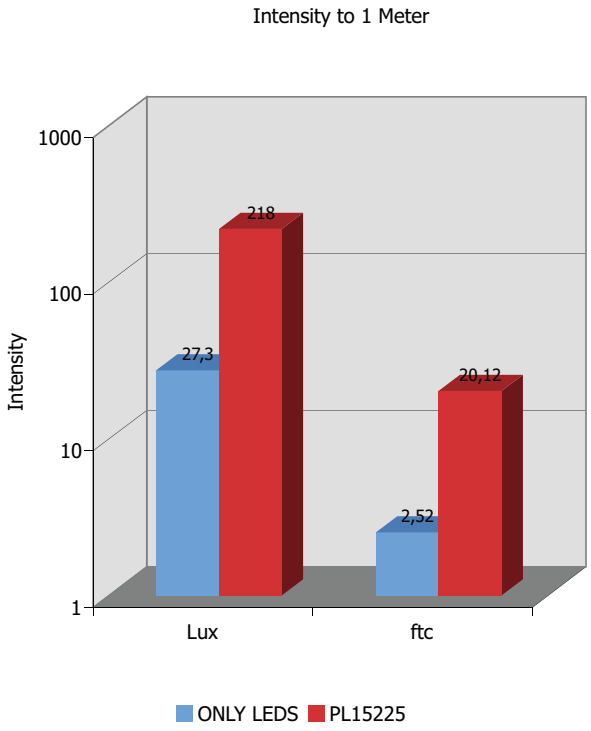
PL115225 (20°) 3 METER

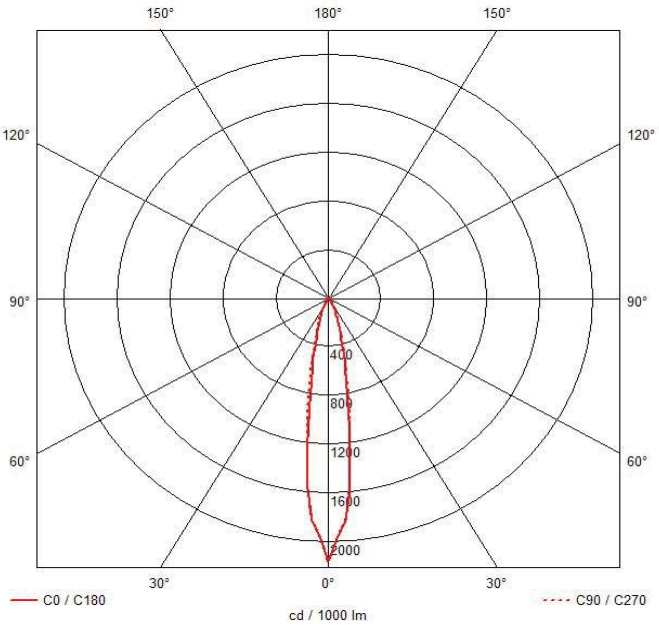
* X is the value of the measurement of the LED brightness at 1 meter distance, without optic devices applied to the LED.

Test conditions:

Test current: 350 mA / LED
Room Luminous Intensity :0 Lumen
Room Temperature: 23° C
LED temperature after 10 min. : ~ 41 °C

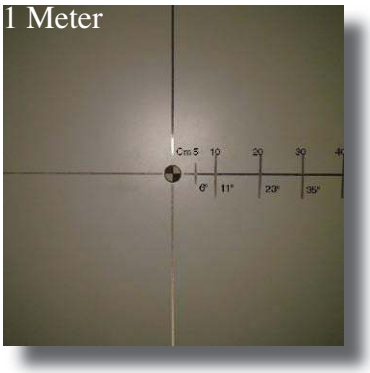
The diagram demonstrates the performance of the Khatod optoelectronic lenses



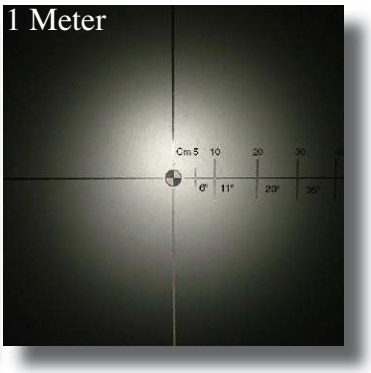


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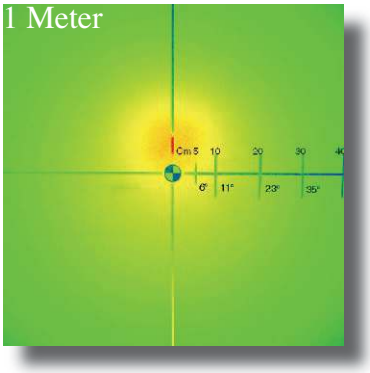
Photos:



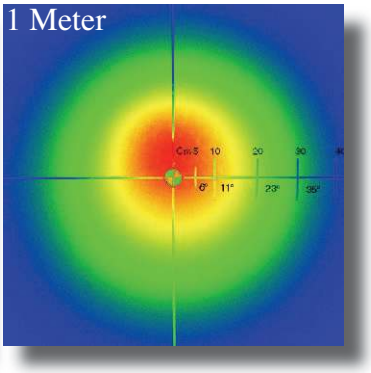
CREE® XLAMP® LEDs



PL115225 (20°)

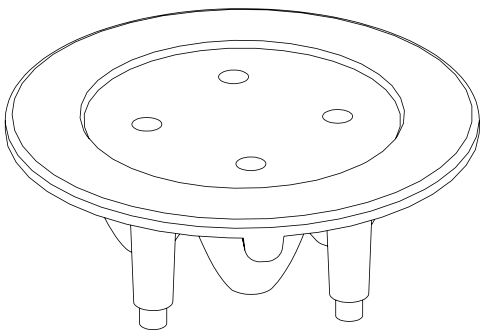


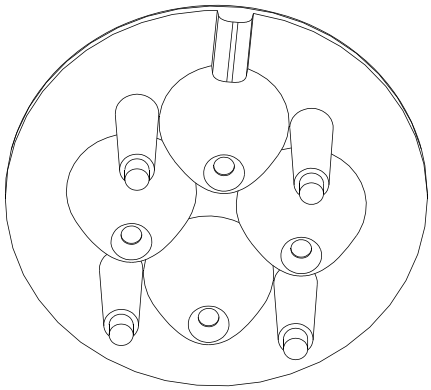
CREE® XLAMP® LEDs
Spectro Metric Analysis



PL115225 (20°)
Spectro Metric Analysis

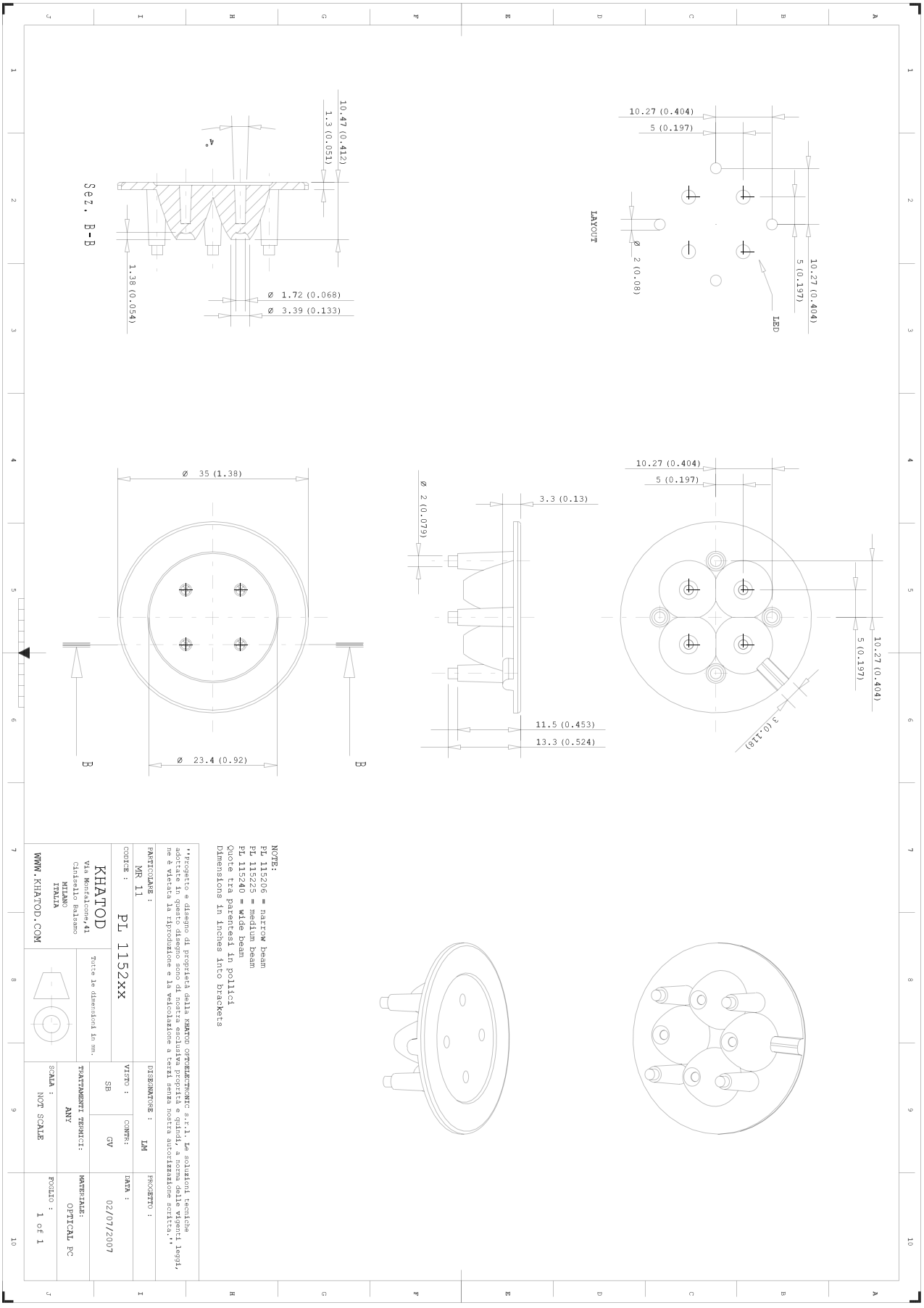
Measurements carried out with Luxometer mod LUX-1337. Room Luminous Intensity: 0 Lumen. Camera mod. Fujifilm S7000





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Drawing.



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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.
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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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