

# KHATOD<sup>®</sup>

Optical Solutions for LED Lighting

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## Test Report

Number: 130000002179

Optics: PL113310

Source: LUMILEDS LUXEON T

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## 1 Light Source Model

Parameter	Symbol	Value	Unit
Lens / Reflector Model	-	PL113310	-
Material (More info on page 9)	-	PMMA	-
Dimensions	-	See page 8	-
Source Model	-	LUMILEDS LUXEON T	-
Number of Sources	$N$	1	-
Driving Current	$I_F$	-	mA
Nominal Flux	$\Phi$	220×1	lm

## 2 Measurement Setup

Parameter	Symbol	Value	Unit
Operator	-	Simone Bassi	-
Goniophotometer Type	-	KLX12M	-
Measurement Distance	$z$	5	m
Room Temperature	$T$	25	°C
Date	-	2013-Jun-06	-

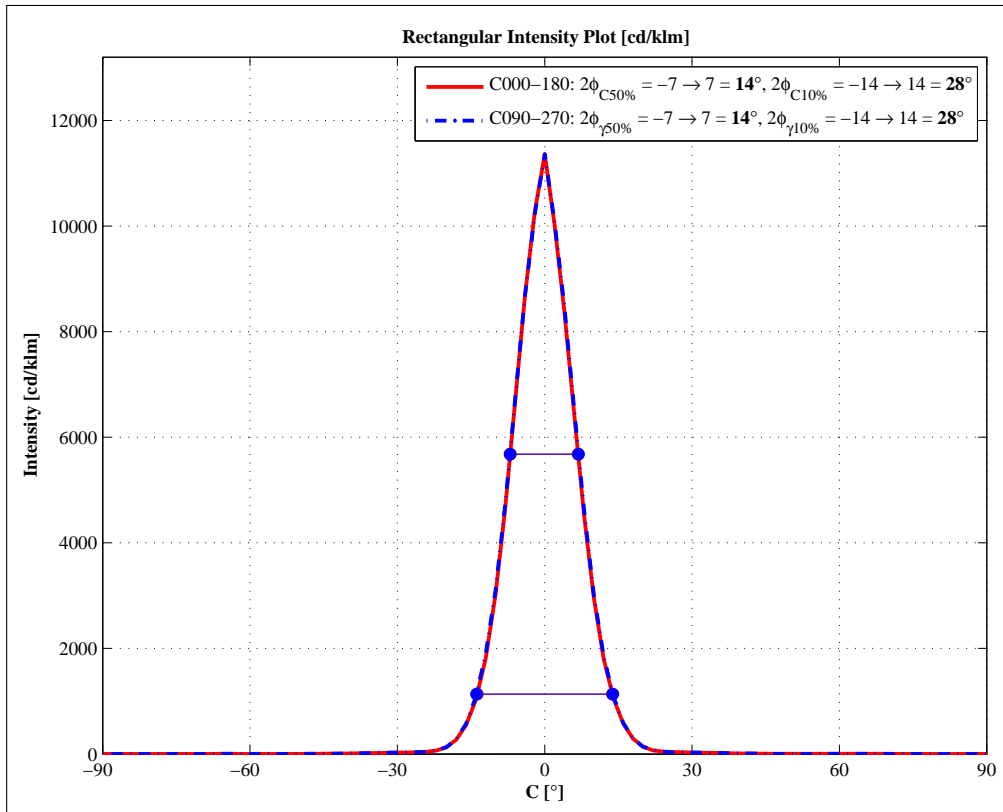
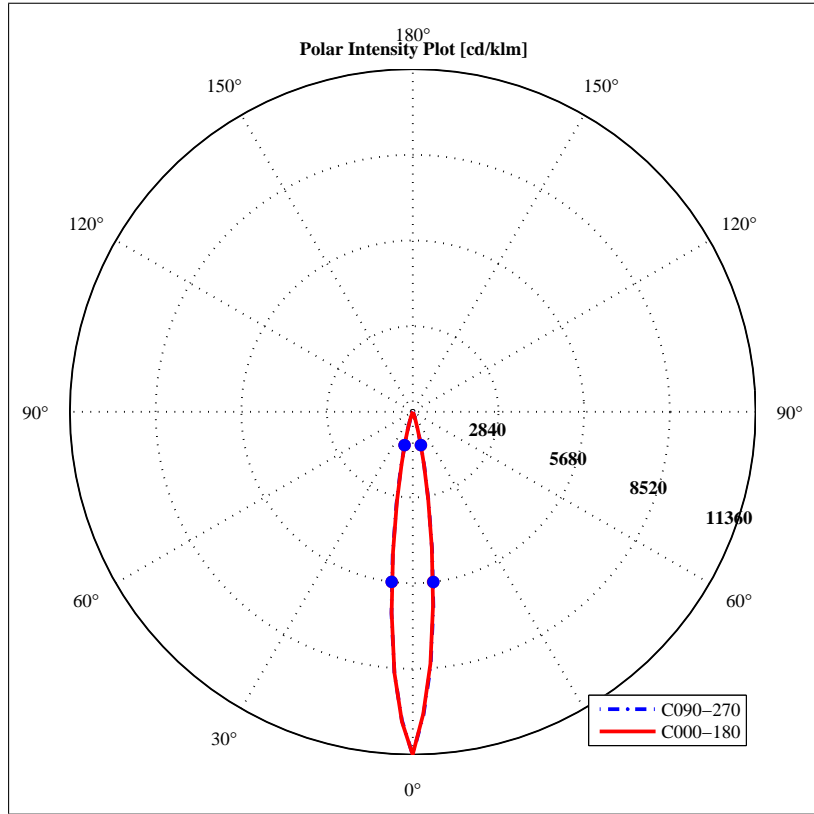
## 3 Results

Parameter	Symbol	Value	Unit
Total Flux	$\Phi$	220	lm
Max Intensity	$I_{max}$	2499	cd
Max Illuminance at 5 m	$E_{max}$	100	lx
C-Viewing Angle at 50% $I_{max}$	$2\varphi_C$	14	°
$\gamma$ -Viewing Angle at 50% $I_{max}$	$2\varphi_\gamma$	14	°
C-Viewing Angle at 10% $I_{max}$	$2\varphi_{C10\%}$	28	°
$\gamma$ -Viewing Angle at 10% $I_{max}$	$2\varphi_{\gamma10\%}$	28	°
General Optical Measurement Tolerance	-	±10%	-

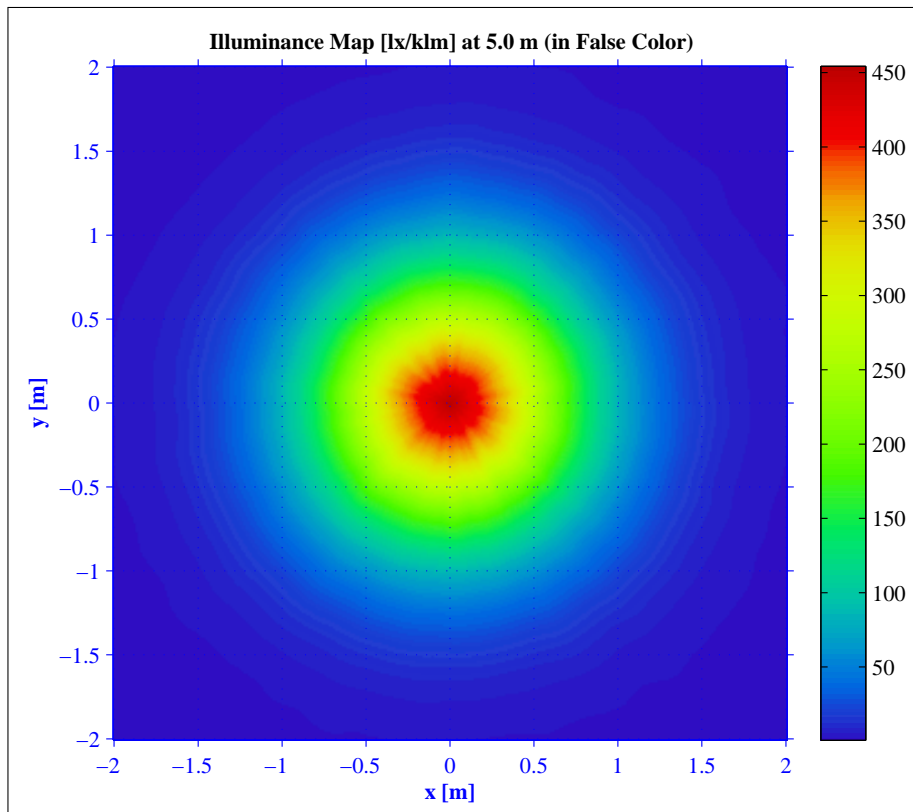
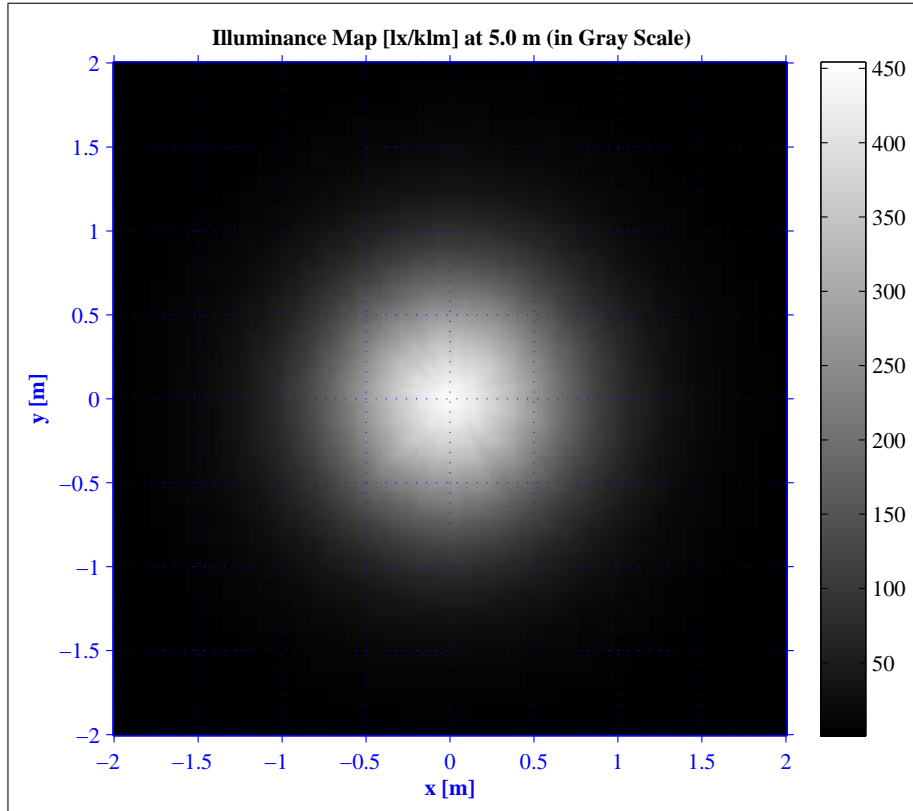
### NOTES:

- Intensity ( $I$ ) and illuminance ( $E$ ) data are normalized by 1000 lm
- The optical values shown are the result of optical simulations carried out with ASAP and ZEMAX software systems. The optical simulations are carried out on the basis of the typical values provided in the LED manufacturers' official datasheets. The photometric analysis has been carried out on physical samples. On request, by supplying your PCB, we can provide the measurement photometric file.

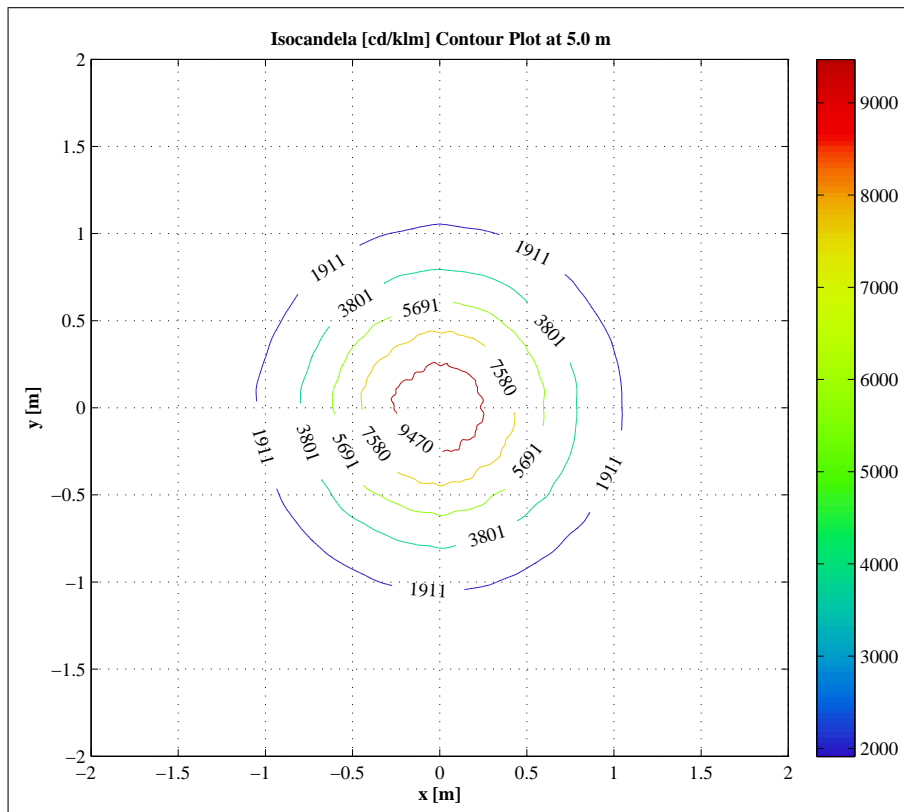
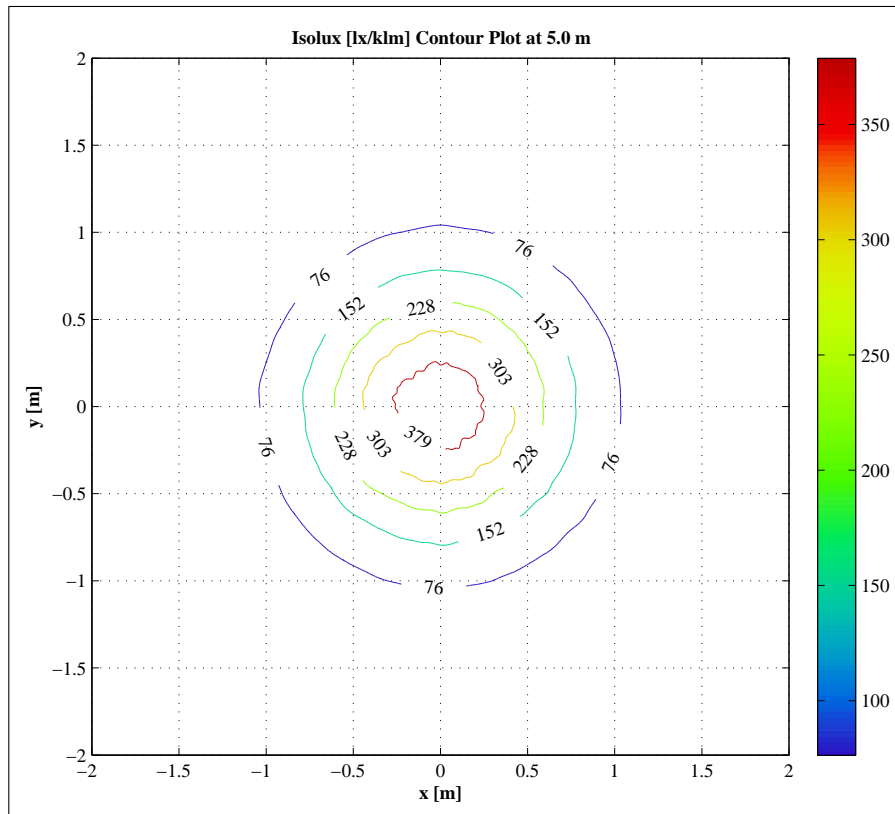
## 4 Intensity Plot



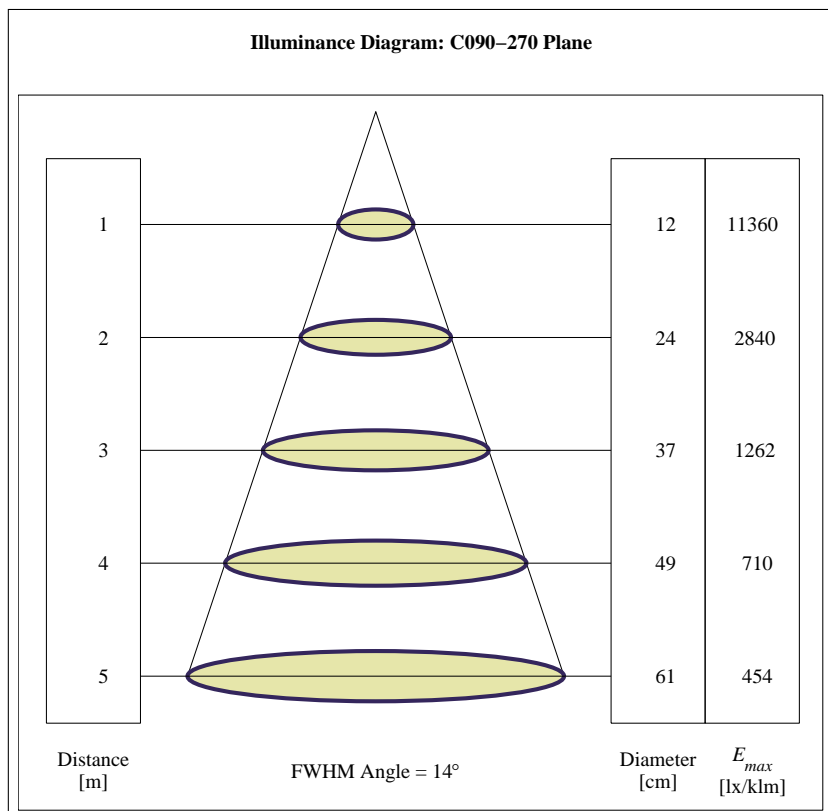
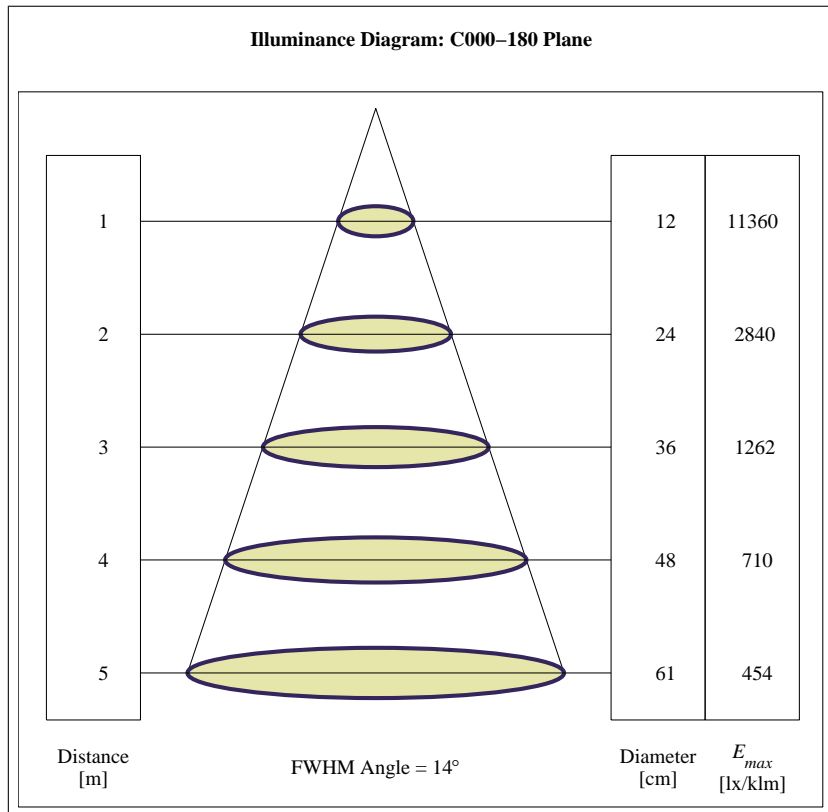
## 5 Illuminance Map



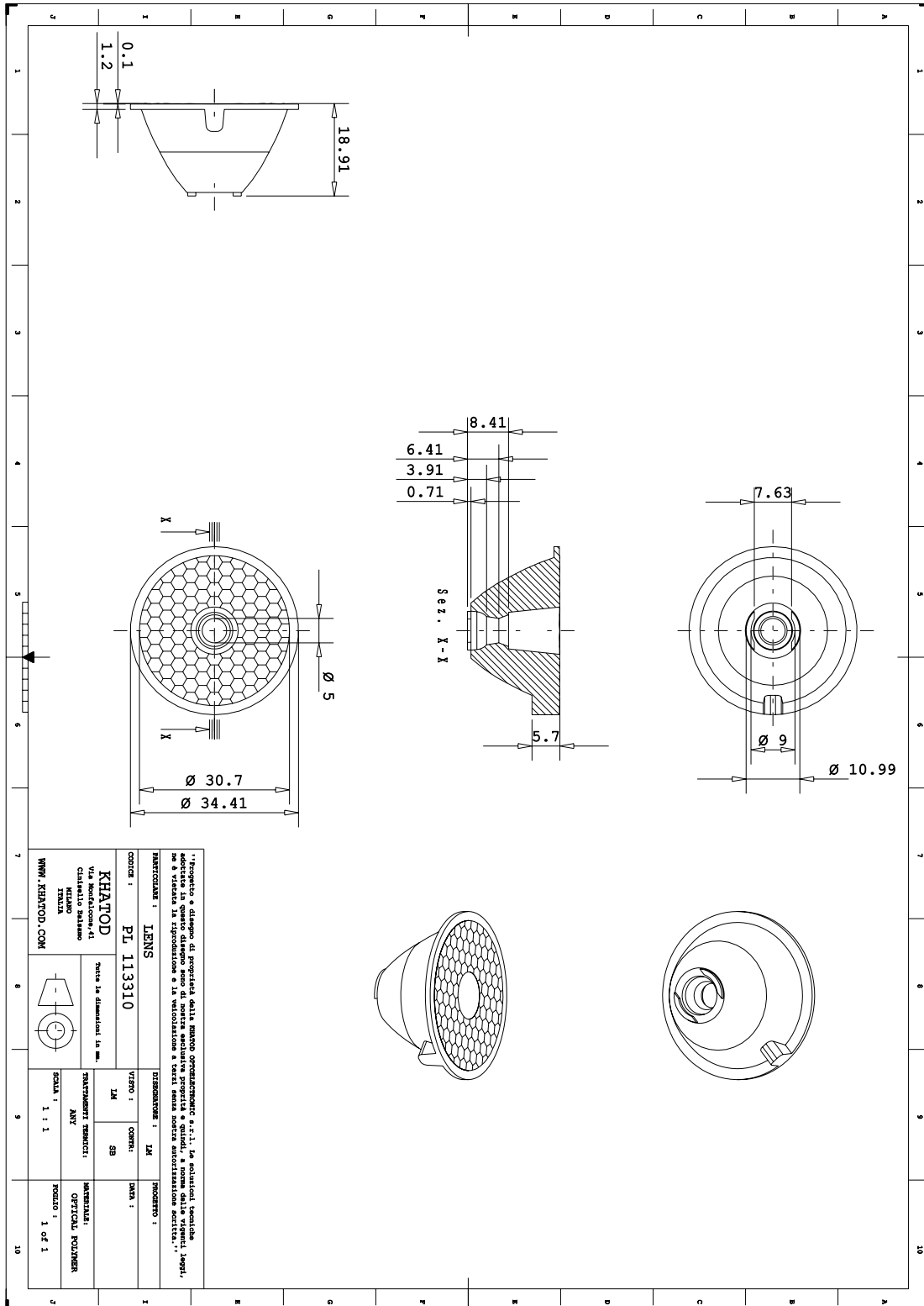
## 6 Isolux / Isocandela Plots



## 7 Illuminance Diagram



# 8 Drawing





## 9 Materials

Material	T <sub>op</sub>	T <sub>stg</sub>
PMMA	-40°...85°C	-40°...85°C
PC	-40°...120°C	-40°...120°C
SILICONE	-40°...200°C	-40°...200°C
PC + Aluminum Coating with protective Clear Coat	-40°...120°C	-40°...120°C
APEC + Aluminum Coating with protective Clear Coat	-40°...180°C	-40°...180°C
ABS	-35°...70°C	-35°...70°C

## 10 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.

## 11 Disclaimer

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 Results on page 3. 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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