

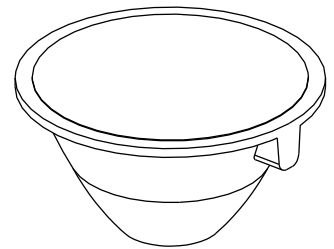
Via Monfalcone 41
20092 Cinisello Balsamo (Milano) – Italy
Tel. +39 0266013695 – Fax +39 0266013500

CODE NUMBER: 110000000098

**SUBJECT: Secondary Optics for Power LEDs - PL124120
Lens Coupling - Output Luminous Intensity Measurement**



- High lighting efficiency
- Excellent luminous flux
- No vibration problems
- Free testing
- Superior optical engineering for a perfect uniform light distribution
- Innovative design
- Easy fixing system to the PCB
- UV protected and guaranteed for outdoor applications
- Complying with UL94 Specifications



Typical Application are:

- Wall Washing
- Architectural lighting
- Lamps
- Most applications where a compact light source is required
- Any application requiring placement of LEDs in narrow or recessed spaces, as well as in diverse LED configurations

Khatod Optics are a basic element to make your optical design real.

The right optical solution is fundamental for type and number of LEDs used in your design.

Advanced research, scientific rigour, great attention to the continuous evolution in LED Technology, have led Khatod to develop optical solutions performing an excellent, homogeneous luminous flux, and a high lighting efficiency.

The product we are proposing, is the result of Khatod's superior engineering. It helps in reducing the costs while meeting the most demanding lighting specifications and applications.

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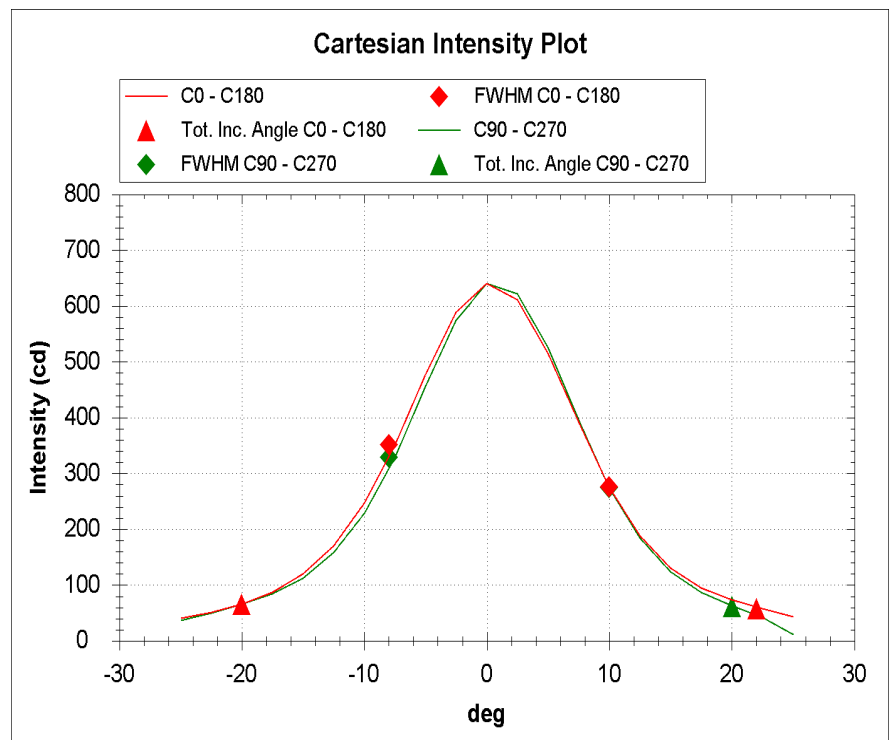
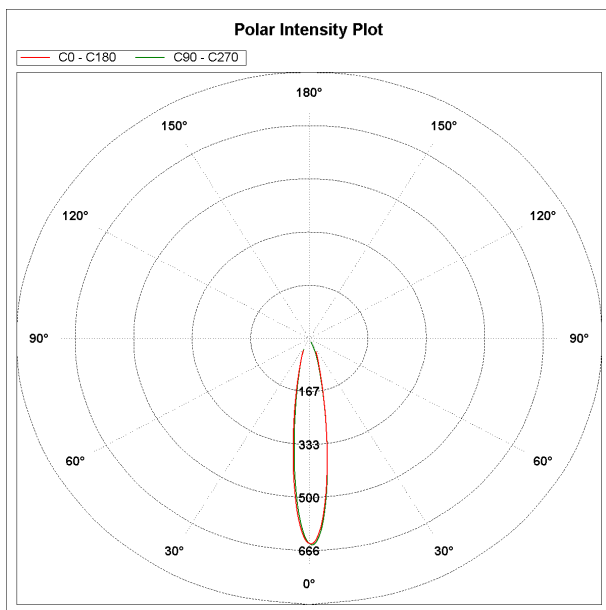
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Goniophotometer Type	KLX12M	Operator	SIMONE BASSI
Power Supply Type	ISO TECH ISP3303	Date	04/02/2011
LED Driver Type	////		

Lamp Model	////	Nominal Flux (lm)	130	Angle FWHM C Plane	18
Lens Model	PL124120	Total Flux (lm)	130	Angle FWHM γ Plane	18
LED Model	REBEL ES	Imax (cd)	640		
N. LED	1	Max Ill. @ Meas. Dist. (lux)	25	Total Incl. Angle C Plane	42
Rated Voltage (V)	2.9	Measurement Distance (m)	5	Total Incl. Angle γ Plane	40
LED Drive Current (mA)	350	Room Temperature (°C)	25		

Notes:
General Optical Measurement Tolerance: +/-10%



Polar Intensity Plot

— C0 - C180 — C90 - C270

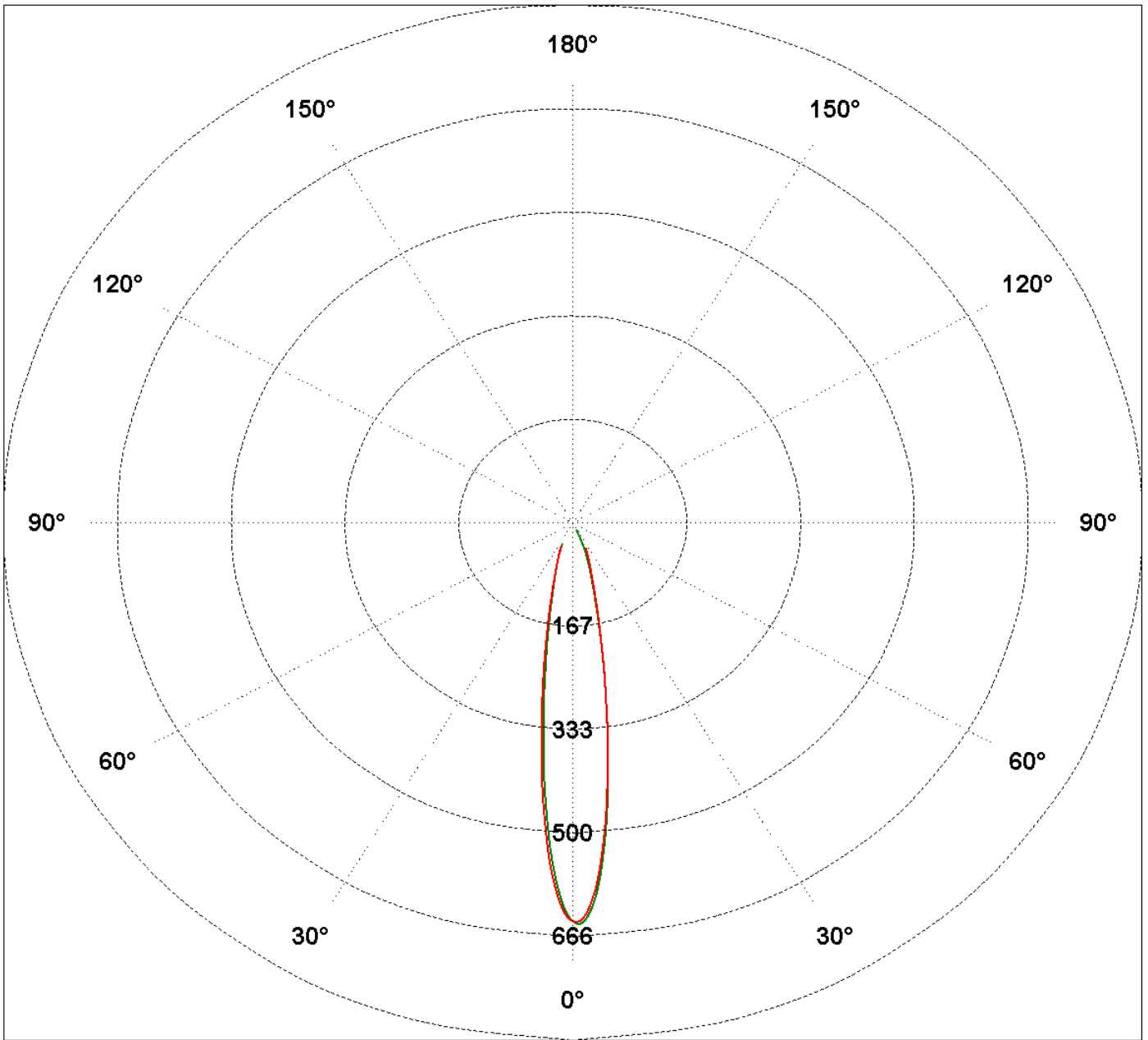


Figure C0-C180

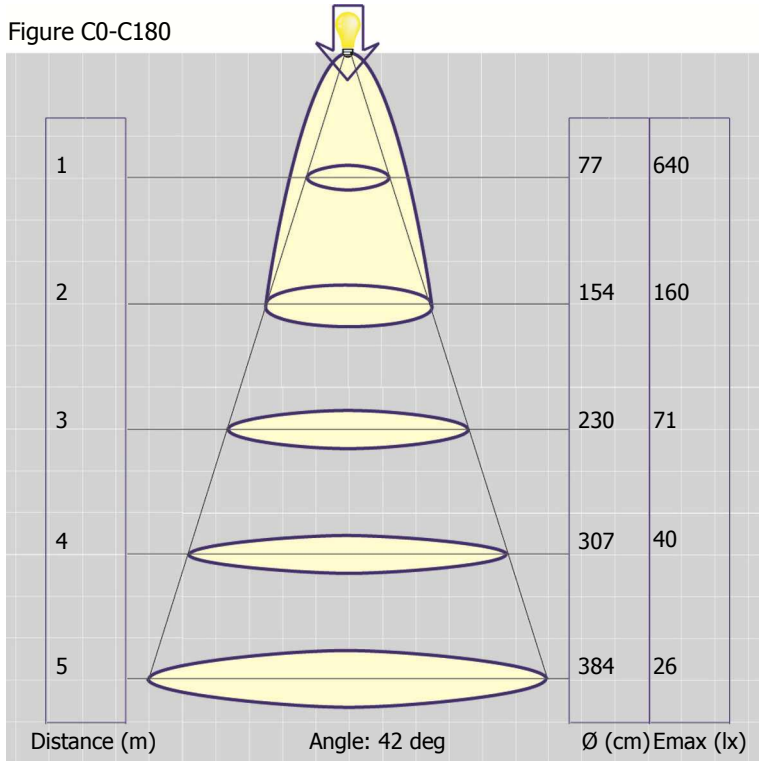
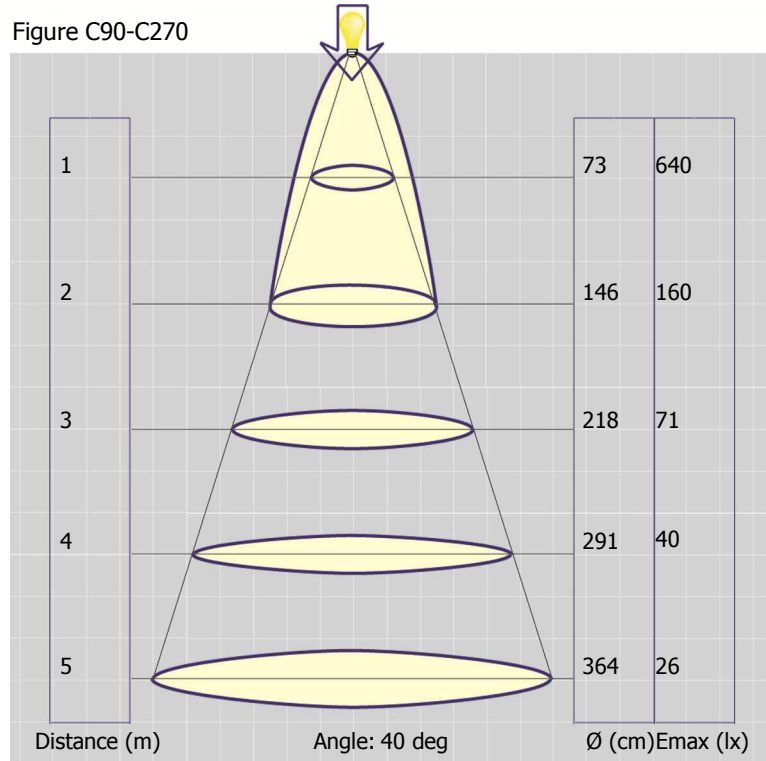
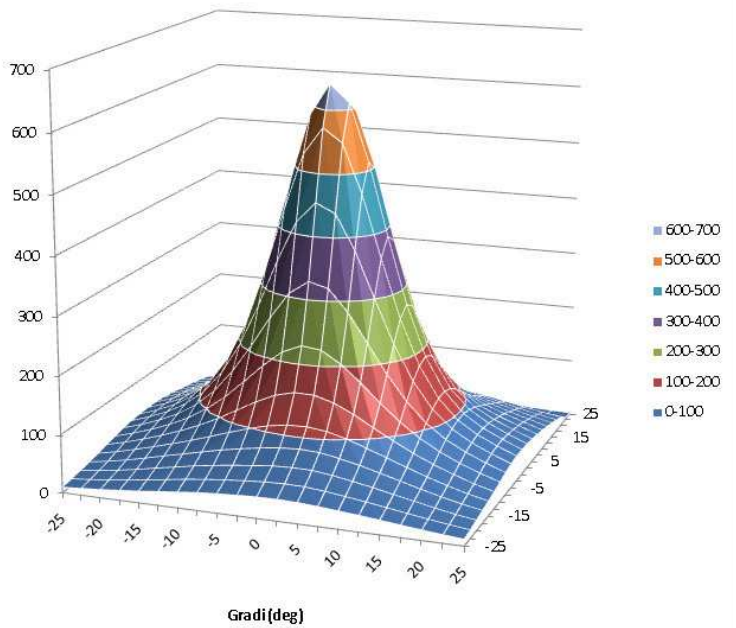


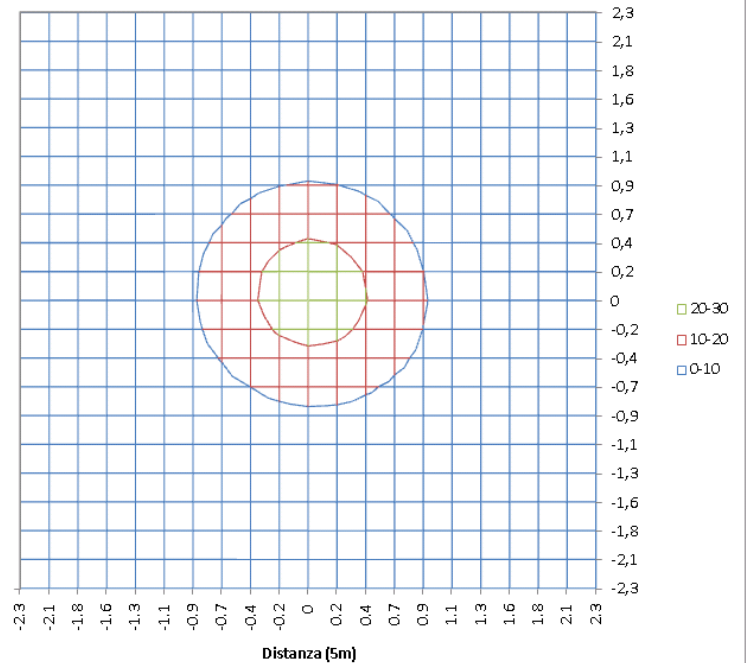
Figure C90-C270

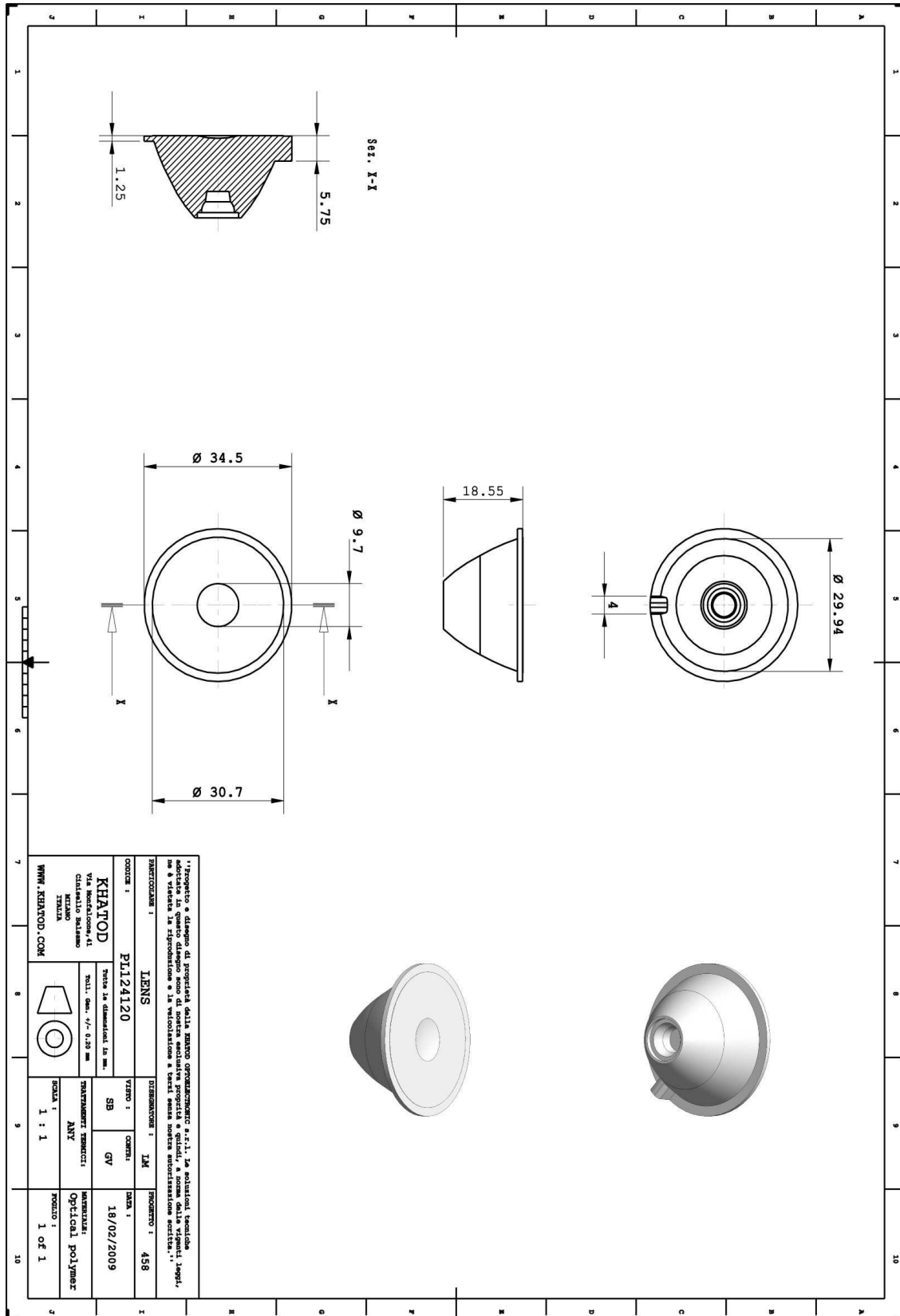


Isocandela Diagram



Isolux Diagram



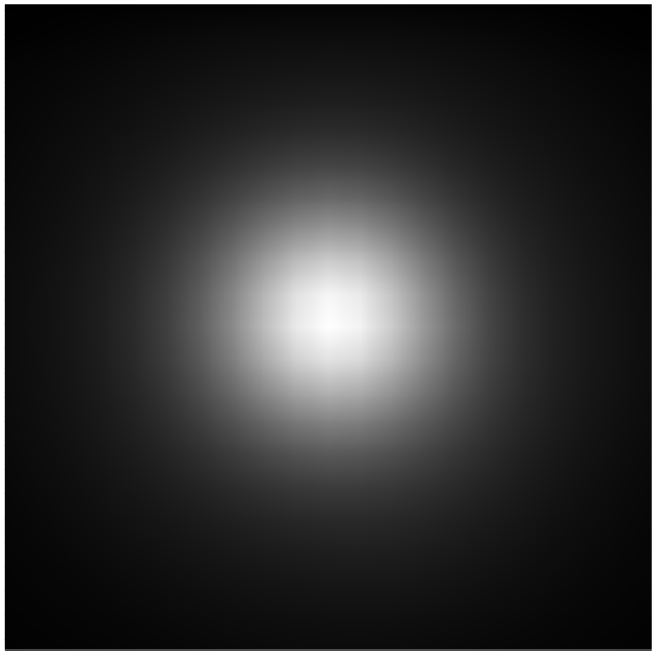


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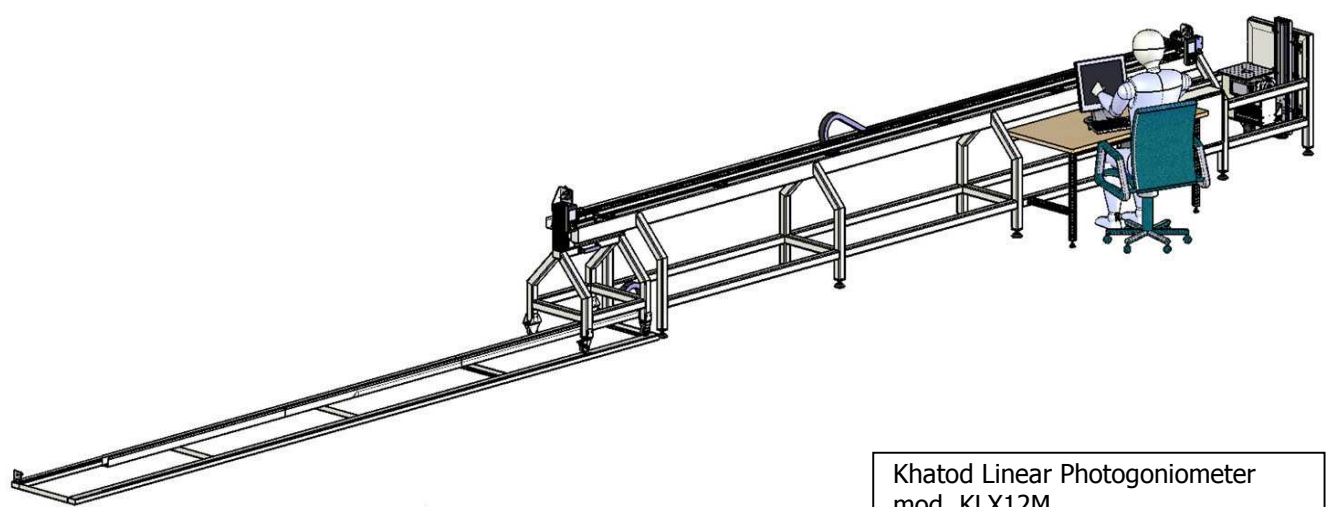
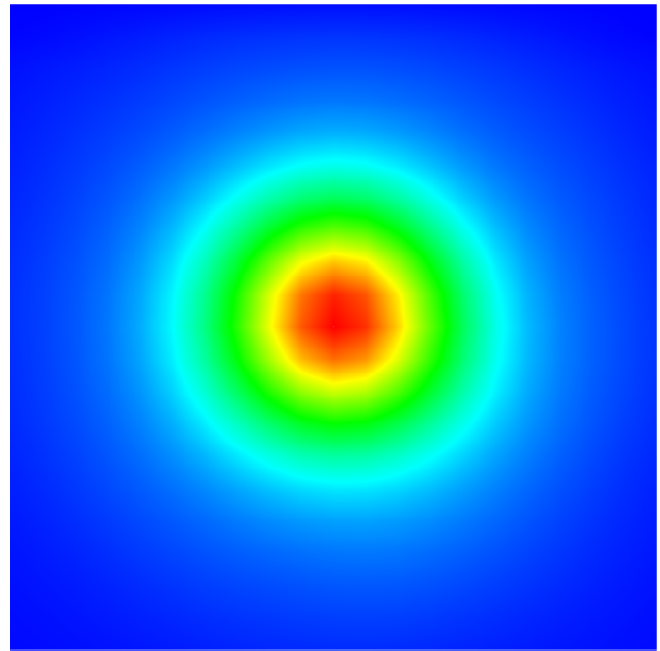
FABBRICAZIONE : KHATOD VIA Michelcomi,41 37060 VERONA				INDIRIZZO : IM		PRODOTTO : 458	
CODICE : PI124120				VEICOLO : SB		DATA : 18/02/2009	
TITOLARI : MICHAEL VERONA				CONTI : GV		REVISIONI : ANY	
TRACIA IN DIMENSIONI IN MM. TOLL. DIM. +/- 0.20 mm				SCALA : 1 : 1		PRODOTTO : Optical polymer	
WWW.KHATOD.COM				PRODOTTO : 1 OF 1			

CODE NUMBER: 11000000098

Gray Scale Illuminance @ 5m Distance



False Colours Illuminance @ 5m Distance



Khatod Linear Photogoniometer
mod. KLX12M

Luminous Distribution Intensity Data

CODE NUMBER: 110000000098

C (deg) γ (deg)	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°
0°	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
5°	514	511	513	522	517	518	524	519	519	524	513	507	507	496	491	491	480	475	476	464
10°	276	274	276	279	276	276	279	277	275	275	270	269	267	263	259	259	253	248	247	241
15°	131	130	130	128	127	126	126	128	126	124	124	124	123	124	123	122	122	121	120	119
20°	73.3	72	70.9	69.4	67.9	66.5	66	65.4	63.7	62.3	62.2	63.5	64.1	64.8	65.7	65.7	65.9	65.8	65.5	65.5
25°	43.5	42.6	42.7	42.6	41.3	39.2	33.9	24.9	15.5	11.8	15.1	24.9	33.5	37.6	39.7	39.9	39.7	40.2	39.8	39.3
30°	0	0	0	0	20.4	11.4	0	0	0	0	0	0	0	12.4	21.8	0	0	0	0	0
35°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

200°	210°	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
457	456	449	446	448	444	446	454	452	457	468	471	478	489	492	500
238	235	230	226	226	224	224	228	231	238	246	250	259	266	269	271
118	115	114	112	110	110	111	113	117	123	126	129	132	134	136	133
65.8	65.1	64.3	62.8	62.1	62	62.2	65.3	68.7	71.3	72.5	73.2	73.4	73.9	75	74.1
39.2	38.3	37.2	36.3	35.4	35.2	35.1	36.3	38.1	39.9	41.8	43	42.5	41.7	43	43.8
0	0	19.5	18.9	0	0	0	0	0	0	0	22.8	23	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lens characteristics

Parameter	Symbol	Rating	Unit
Lens Material	PMMA Optics	--	--
Holder Material	--	--	--
Operating Temperature	Topr	-30 to +80	°C
Storage Temperature	Tstg	-30 to +80	°C

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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