

LEDiL's latest innovation for linear LED lighting is called LINNEA. A new product family with low profile linear design that allow lenses to be attached seamlessly together and fitted into many existing luminaire designs. The first versions to be released have symmetrical 60- and 90-degree beams followed by many symmetric and asymmetric beams in the future. Fastening the optics with integrated clips and the dedicated end part accessories by snapping makes the whole installation process fast and clean. These

features make LINNEA optics a fine solution for updating your fluorescent light tubes or any other luminaire design that has several rows of lights in it. The long experience and expertise that LEDiL has in LED optics are reflected in high-quality and less glare affected indoor lighting.

For more information about simulations:



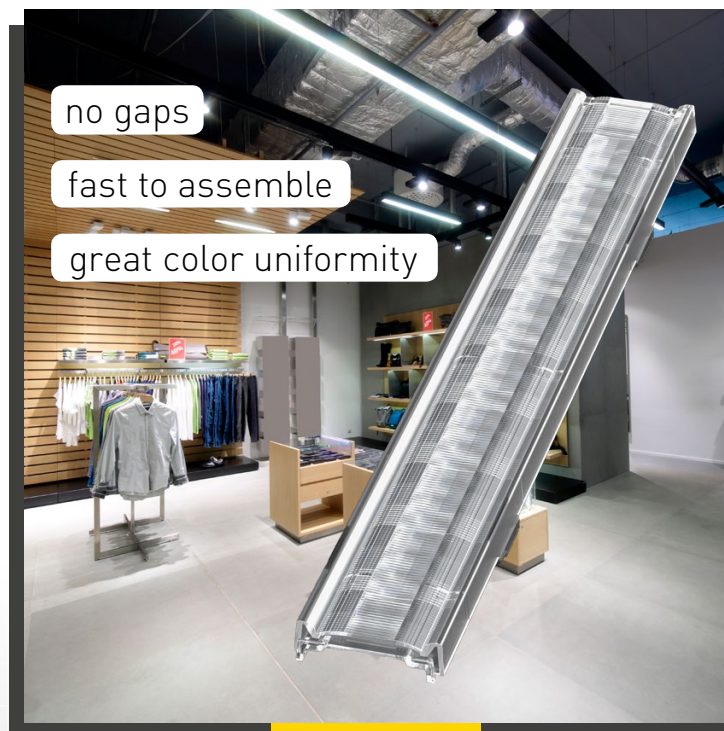
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LINNEA

- 285 x 40mm PC lens with a diffused surface and a low profile
- Wide PCB compatibility and easy installation with integrated clips and no screws needed
- Uniform luminance and improved glare control in all variants
- Allows a solid linear construction without gaps between the lenses
- 90° beam will be followed by a range of symmetrical and asymmetrical beams
- Solid construction and optional end caps to finalize the look and to protect from excessive dust

COMPATIBILITY

- Optimized for the most common Zhaga mid-power 24mm and 20mm wide PCBs



no gaps

fast to assemble

great color uniformity

TYPICAL APPLICATIONS

- Fluorecent lamp replacements
- Industrial lighting
- Office lighting
- Retail
- Garages and canopies
- Pendant luminaires

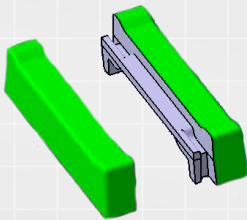
END CAPS

LINNEA END CAPS can be used to close continuous rows of LINNEA optics. The caps be divided into three different versions. The short ones being the most common and used with either LINNEA or LINNEA-B. The regular LINNEA and its clips are designed to be fastened on 1.0mm thick and LINNEA-B for 0.5mm thick profile. This is also the reason for the long end caps to have two versions available, because they do also have integrated installation clips on their sides for either 1.0mm or 0.5mm thick profile installation.

The choice of right END CAP is only dependent on the installation setup and the PCBs used.

SHORT ends caps without clips to be used either with LINNEA or LINNEA-B

F15856_LINNEA-END-MS (MALE SHORT)
F15857_LINNEA-END-FS (FEMALE SHORT)



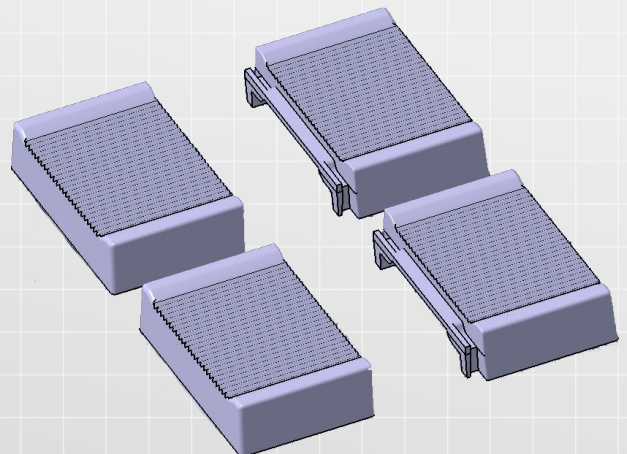
LONG end caps with clips for upcoming longer than ZHAGA standard PCBs when multiple LINNEAs do not match with total length.

A) Clips for 1.0mm thick metal sheet assembly with LINNEA

F15942_LINNEA-END-ML (MALE LONG)
F15943_LINNEA-END-FL (FEMALE LONG)

B) Clips for 0.5mm thick metal sheet assembly with LINNEA-B

F15954_LINNEA-END-B-ML (MALE LONG)
F15955_LINNEA-END-B-FL (FEMALE LONG)



Downloadable files

F15856_LINNEA-END-MS (MALE SHORT)

[2D-Mechanical Drawing](#) [3D-Mechanical Model](#)

F15857_LINNEA-END-FS (FEMALE SHORT)

[2D-Mechanical Drawing](#) [3D-Mechanical Model](#)

F15942_LINNEA-END-ML (MALE LONG)

Links to be added once available

F15943_LINNEA-END-FL (FEMALE LONG)

Links to be added once available

F15954_LINNEA-END-B-ML (MALE LONG)

Links to be added once available

F15955_LINNEA-END-B-FL (FEMALE LONG)

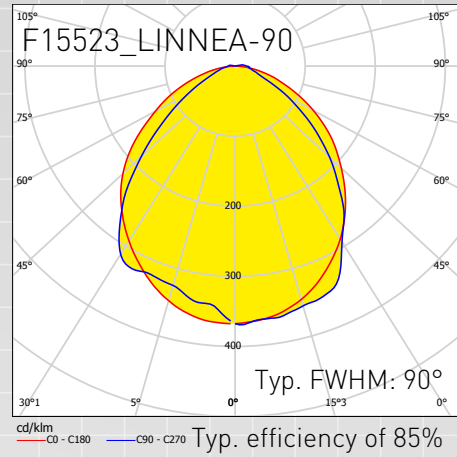
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WAREHOUSE LIGHTING

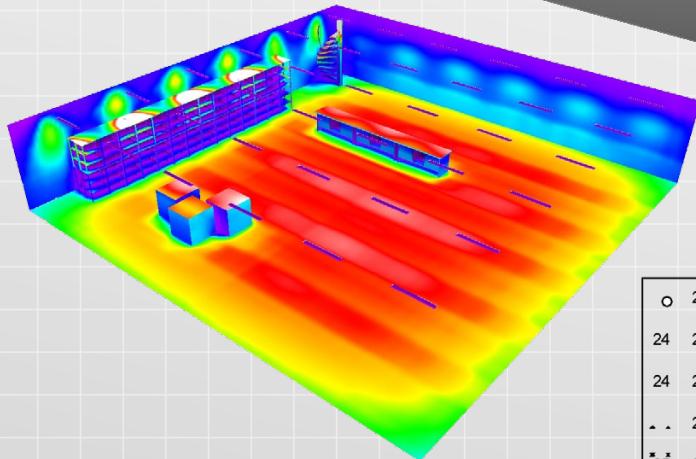
APPLICATION EXAMPLE

Luminaire type	Linear, recessed
Mounting height	5cm from ceiling
Room height	3.2m
No. of optics in luminaire	4pcs
No. of luminaires in a row	6pcs
No. of luminaires in total	36pcs
Luminous flux (Luminaire)	4000lm
Luminaire power consumption	34W

OPTICS USED



- 500lx
- 438lx
- 375lx
- 313lx
- 250lx
- 188lx
- 125lx
- 63lx
- 0lx



CIE standard UGR rating for store rooms is 25

UGR table results

○	24	23	24	24	23	24	23	22	23	20	21	20	<10	<10	15.00 m
	24	24	23	24	24	23	23	22	22	20	20	20	<10	<10	14.28
	24	25	24	24	24	23	24	23	22	22	20	20	<10	<10	
△	25	24	24	24	23	24	23	23	23	21	21	20	<10	<10	11.18
×	25	24	23	23	22	22	22	22	22	20	20	19	<10	<10	10.46
×	25	24	24	24	25	24	24	24	23	23	21	21	<10	<10	9.75
×	25	24	24	24	24	23	23	23	22	22	20	20	<10	<10	9.03
×	25	24	24	24	23	23	23	22	22	20	20	19	<10	<10	8.32
×	25	24	24	24	23	23	23	22	22	20	20	19	<10	<10	7.61
×	25	24	24	24	24	24	24	23	23	21	21	20	<10	<10	6.89
×	25	24	24	24	24	24	24	23	23	21	21	20	<10	<10	6.18
×	24	24	24	24	23	23	23	22	22	20	20	19	<10	<10	5.46
×	26	25	24	25	24	23	24	24	23	23	21	21	<10	<10	4.75
×	25	24	25	24	23	24	24	23	23	21	21	20	<10	<10	4.04
×	25	24	23	24	23	24	23	22	22	20	20	20	<10	<10	3.32
×	25	24	24	24	23	23	23	22	22	20	20	20	<10	<10	2.61
×	24	25	24	24	24	23	24	23	22	23	20	21	<10	<10	1.90
															1.21
															0.00
															0.00

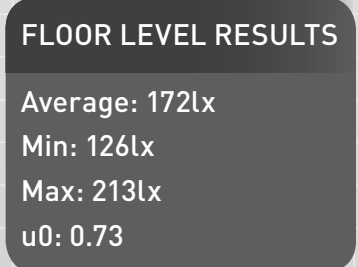
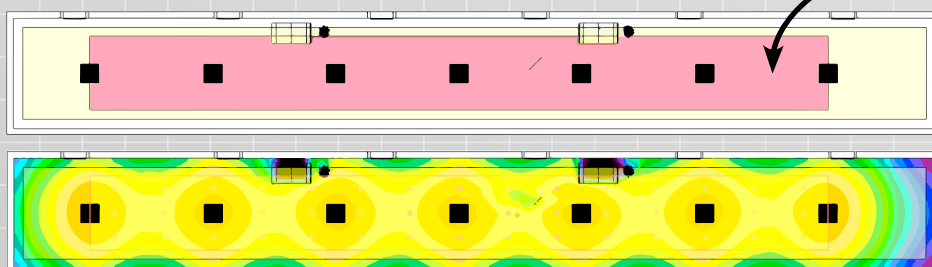
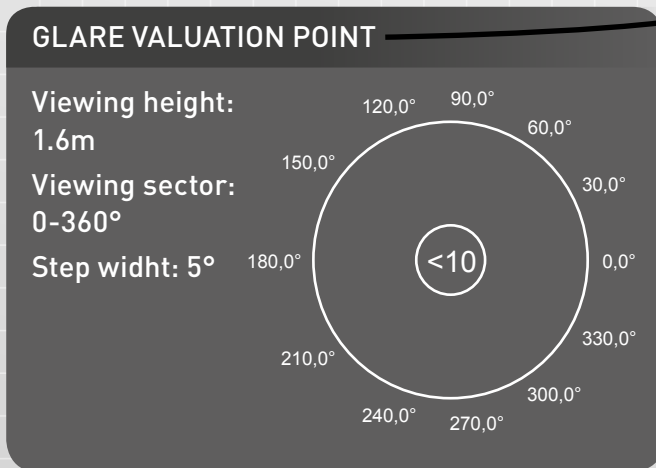
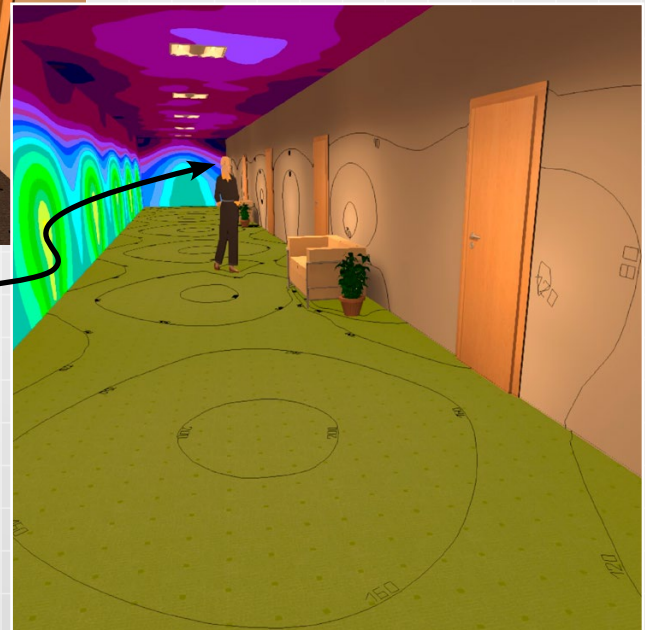
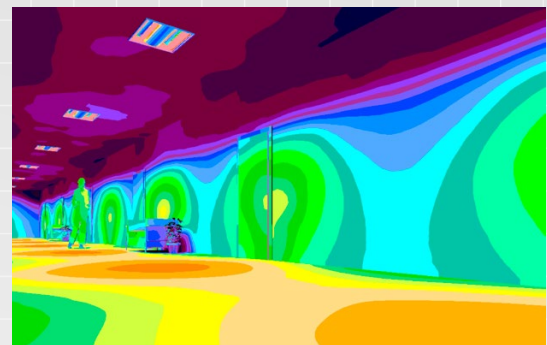
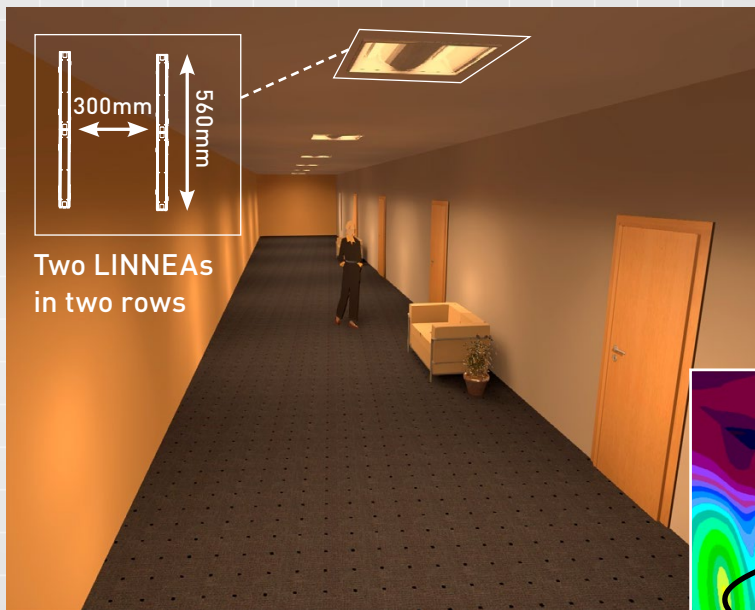
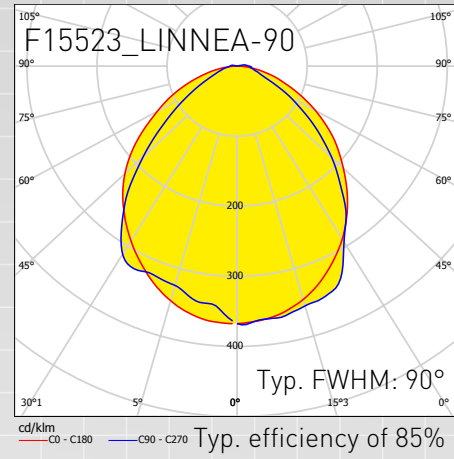
WORKPLANE RESULTS AT 0.8m
 Average: 469lx
 Min: 317lx
 Max: 535lx
 u0: 0.68

HALLWAY LIGHTING no:1

APPLICATION EXAMPLE

Luminaire type	Troffer
Mounting height	2.9m (recessed)
Luminaire pitch	4m
Room width	3.6m
No. of optics in luminaire	4pcs
Luminous flux (Luminaire)	4400lm
Luminaire power consumption	36W
Luminous efficacy	97.5lm/W
Maintenance factor	0.8

OPTICS USED

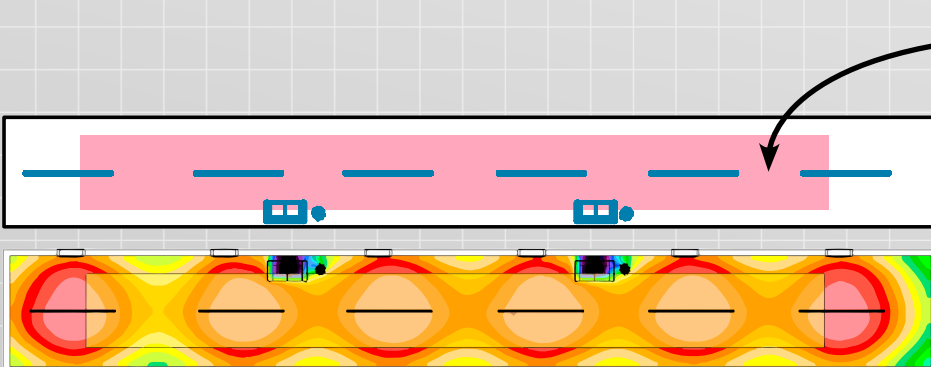
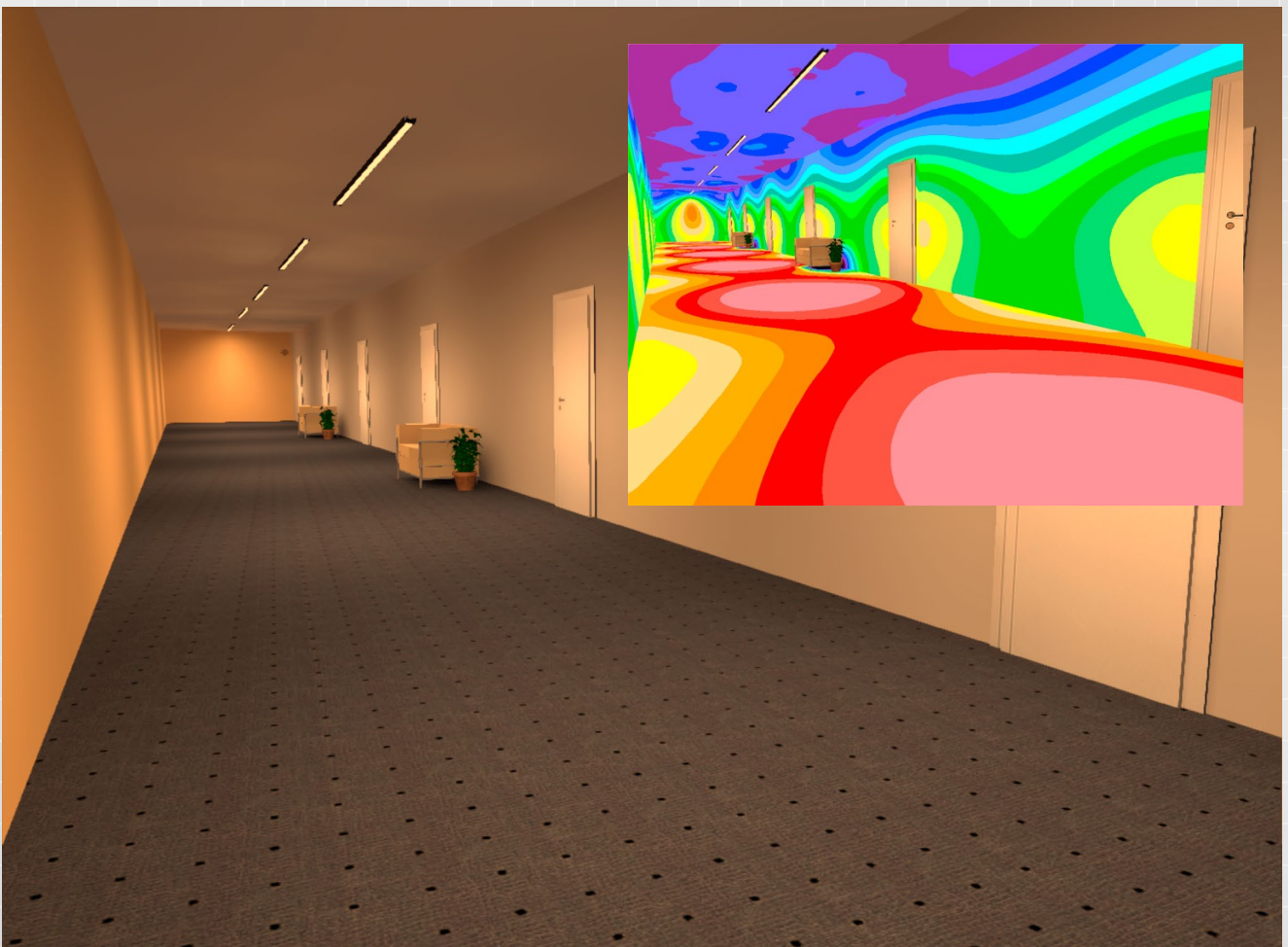
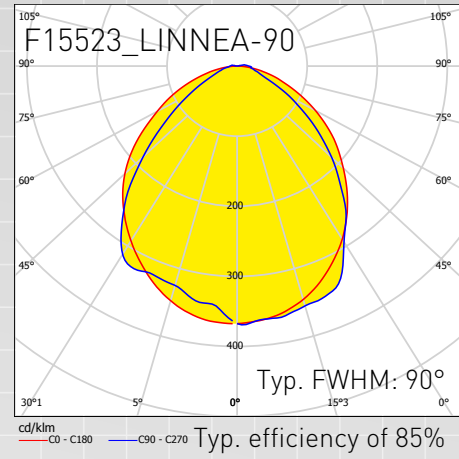


HALLWAY LIGHTING no:2

APPLICATION EXAMPLE

Luminaire type	Linear
Mounting height	2.8m (Inside Al profile)
Luminaire pitch	5.5m
Room width	3.6m
No. of optics in luminaire	6pcs
Luminous flux (Luminaire)	6870lm
Luminaire power consumption	55W
Luminous efficacy	126lm/W
Maintenance factor	0.8

OPTICS USED



Floor calculation surface

FLOOR LEVEL RESULTS

Average: 271lx
 Min: 165lx
 Max: 364lx
 u0: 0.61

OFFICE LIGHTING

APPLICATION EXAMPLE

Downlight

Optics used:	LINNEA-90
Mounting height	2.20m
No. of optics in luminaire	10pcs
Luminous flux (Luminaire)	8070lm
Luminaire power	68W
Luminous efficacy	119lm/W

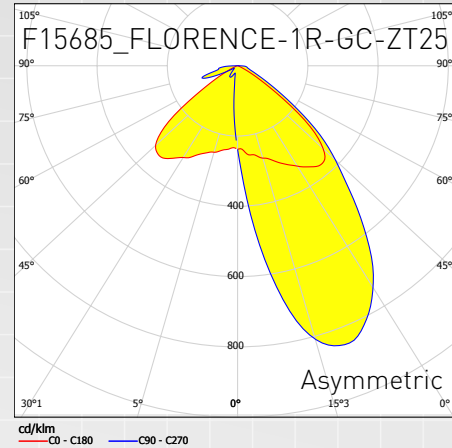
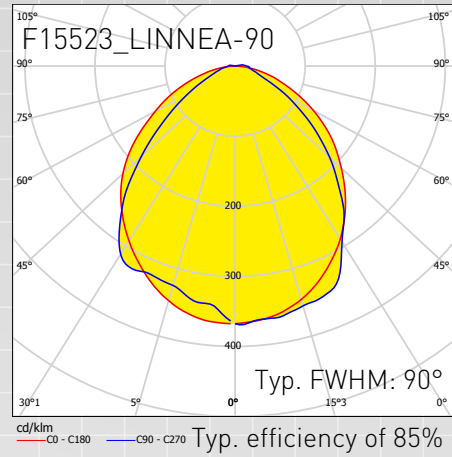
Uplight

Optics used:	LINNEA-90
Mounting height	2.19m
No. of optics in luminaire	4pcs
Luminous flux (Luminaire)	4360lm
Luminaire power	27W
Luminous efficacy	120lm/W

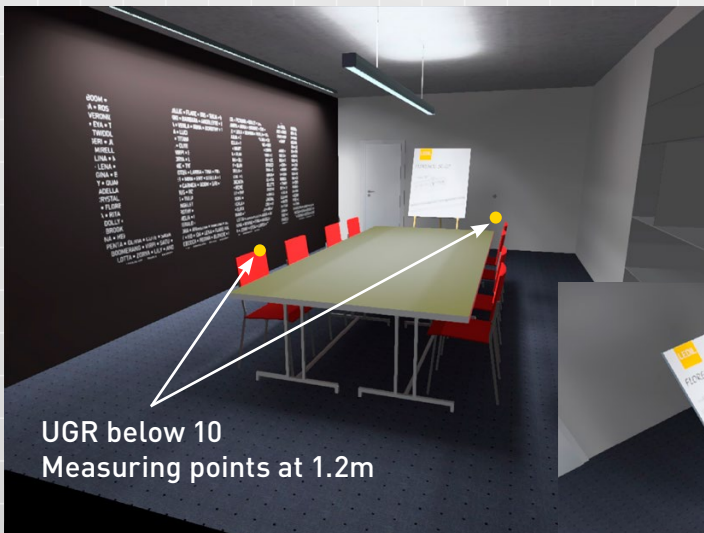
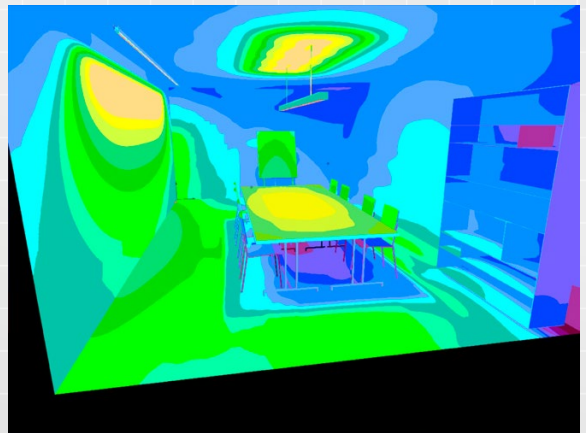
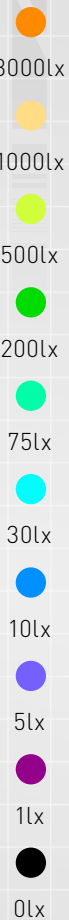
Wall-washing

Optics used:	FLORENCE-1R-GC-ZT25
Mounting height	2.60m
No. of optics in luminaire	15pcs
Luminous flux (Luminaire)	436lm
Luminaire power	27W
Luminous efficacy	120lm/W

OPTICS USED

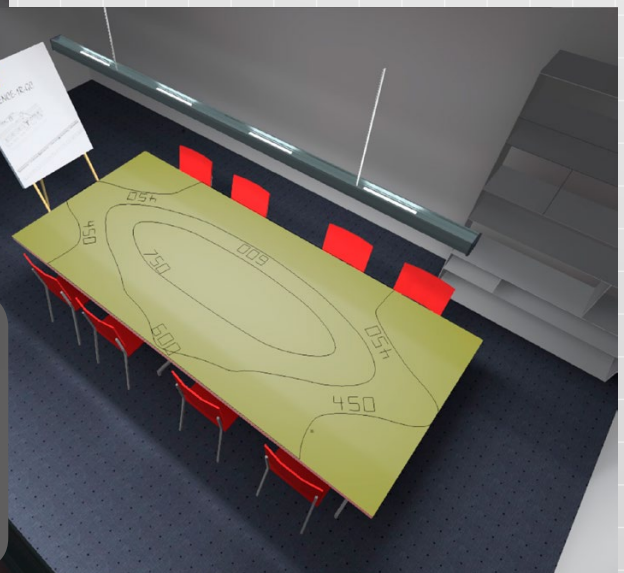


LEDiL • APPLICATION NOTE



RESULTS ON TABLE

Average: 582lx
Min: 320lx
Max: 941lx
u0: 0.34



LINNEA PROFILE EXAMPLES

The low profile LINNEA optics can be installed into various different profile types and these examples are only to show couple of the most common solutions.

METAL SHEET OR PROFILE

LINNEA can be easily snapped into place when used with either 1.0mm or LINNEA-B optimized for 0.5mm thick metal sheets or profiles.

A wider white backplate can be also used to smoothen luminaire illuminance and to reduce glare.



ALUMINIUM EXTRUSION PROFILE

Aluminium profiles offer excellent heat dissipation and sturdy construction. LINNEA optics can be easily pressed in place and the lack of space on the sides prevents lenses from easy removal in a tampering purpose.



Download 2D- and 3D-files from our profile examples!

METAL SHEET

[2D-Mechanical Drawing](#)

[3D-Mechanical Model \(STP and DXF\)](#)

METAL PROFILE

[2D-Mechanical Drawing](#)

[3D-Mechanical Model \(STP and DXF\)](#)

ALUMINIUM EXTRUSION PROFILE

[2D-Mechanical Drawing](#)

[3D-Mechanical Model \(STP\)](#)

Please note that LEDiL only provides files for possible profile design examples and do not provide, sell or manufacture actual profiles.