

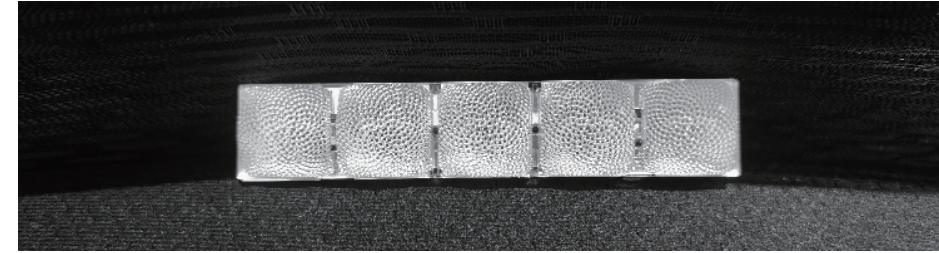
STARRY OPTICAL PLATFORM

Firefly & Hidden Series

HercuLux Optics focuses on the design and manufacture of optics for LED lighting, LED Automotive headlamp, UV LED precision light distribution, laser ultra-short-throw projector matching screen who is a modern high-tech enterprise that provides professional secondary light distribution solutions

FIREFLY SERIES

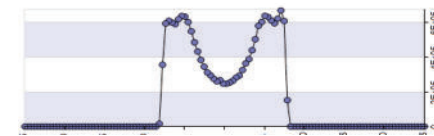
Grille-free design, ultra-low glare, excellent lens surface illumination uniformity.



Development Background

Currently, linear light on the market are all in the form of lens + grille, or reflector + grille, which are combined by buckles.

Reflector + Louver



Reflector 20mm single, maximum illumination: 640000

Advantage:
Glare control is better.

Disadvantage: the center light is uncontrollable, the design height is very high, and the center of the surface illumination is sunken.

Lens + Louver

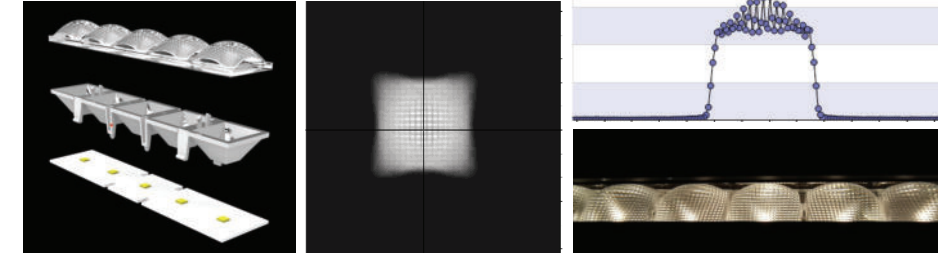


Lens 20mm single, maximum illumination: 1800000

Advantage: Both center light and edge light can be controlled, the design height is relatively high.

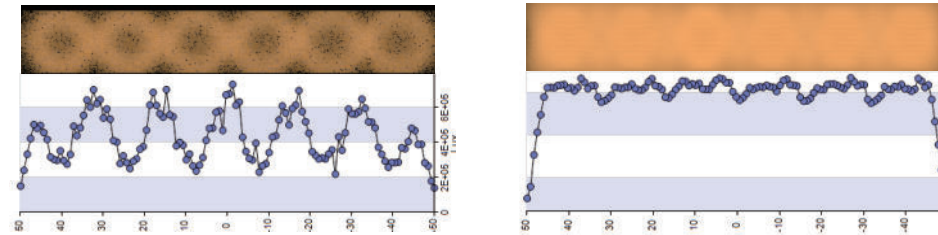
Disadvantage: the surface uniformity is very low, the center brightness is huge, and not anti-glare.

New Solution Design Principles



First optics: Collect light and blend it together.
Second optics: Re-adjust the light correction to achieve even light distribution.

Surface Illumination Comparison

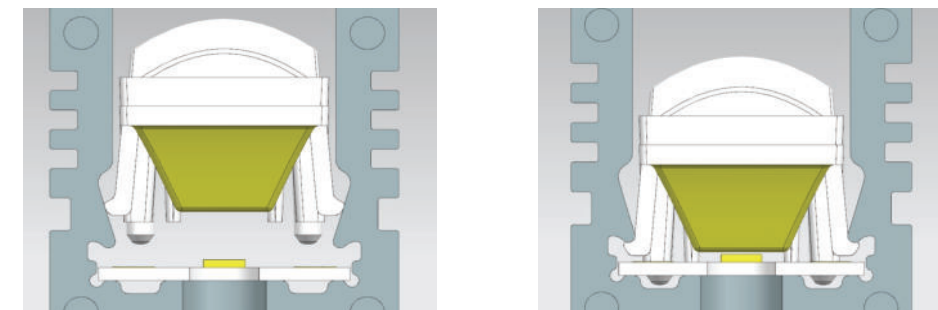


Conventional solutions on the market
Distance from lens to film: 5mm

HercuLux solution
Distance from lens to film: 5mm

Structural design recommendations

1. Make guide groove on the profile, align the position and press down to snap it, assembly is very simple.
2. The assembly process does not require screwing, eliminating the need for labour.



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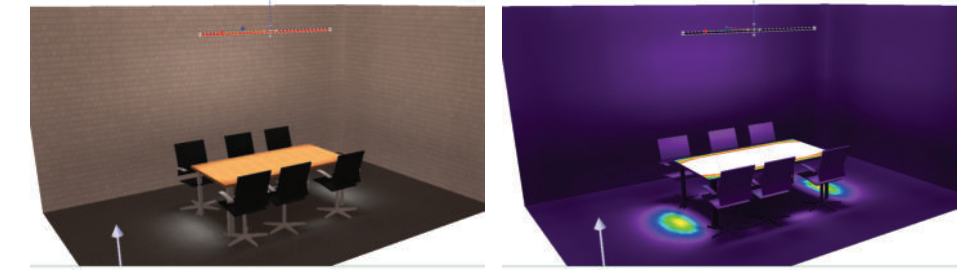
FIREFLY SERIES

Specification	Angle	Product Name	Materials	Status	
6 in 1	24°	HK Firefly 6 in 1-24° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	40°	HK Firefly 6 in 1-40° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	60°	HK Firefly 6 in 1-60° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
5 in 1	Wall washing	HK Firefly 6 in 1-Wall washing Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	20°	HK Firefly 5 in 1-20° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Mass production	
	40°	HK Firefly 5 in 1-40° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	60°	HK Firefly 5 in 1-60° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	Wall washing	HK Firefly 5 in 1-Wall washing Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
1 in 1		HK Firefly 5 in 1 Lens Holder	PC	Samples available	
	20°	HK Firefly Single Lens-20° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	40°	HK Firefly Single Lens-40° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	60°	HK Firefly Single Lens-60° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	Wall washing	HK Firefly Single Lens-Wall washing Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	2 in 1	20°	HK Firefly 2 in 1-20° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available
		40°	HK Firefly 2 in 1-40° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development
60°		HK Firefly 2 in 1-60° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
3 in 1	Wall washing	HK Firefly 2 in 1-Wall washing Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	20°	HK Firefly 3 in 1-20° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Samples available	
	40°	HK Firefly 3 in 1-40° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	60°	HK Firefly 3 in 1-60° Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	
	Wall washing	HK Firefly 3 in 1-Wall washing Linear assembling unit	Lens: PMMA, Reflector: PC+Electroplating	Under development	

FIREFLY SERIES

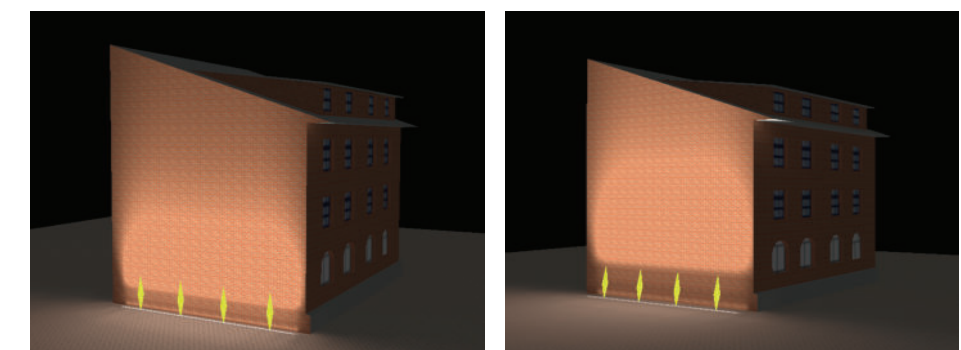
Recommended application

Office



Spread the light gathering evenly on the tabletop

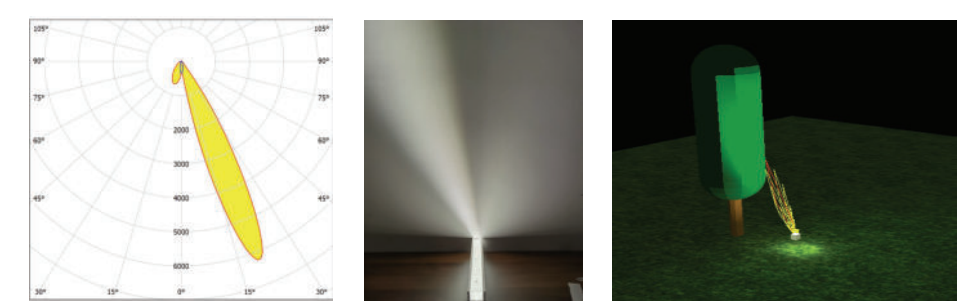
Outdoor wall washing



0.3M from the wall, tit 0

0.8M from the wall, tit 5

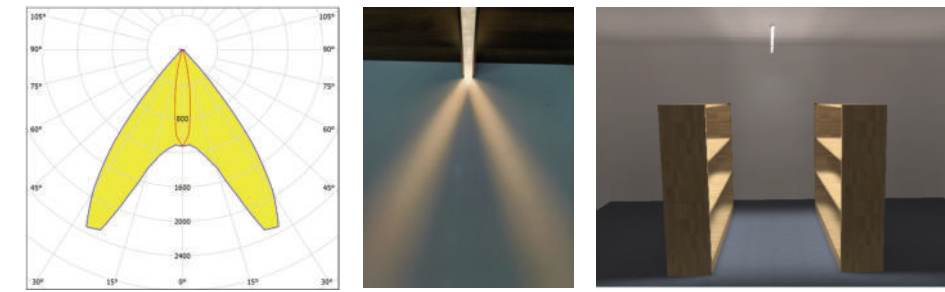
Outdoor floodlight (with single asymmetric film)



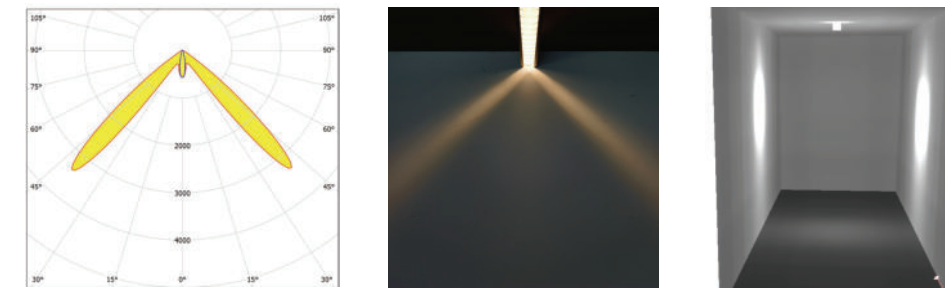
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Recommended application

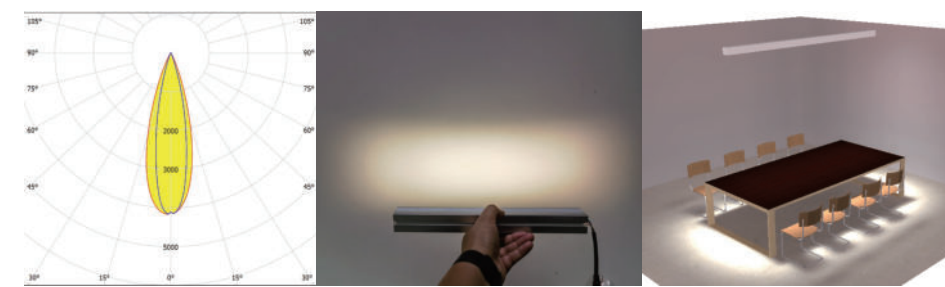
— Supermarket Shelves (with double asymmetric film)



— Indoor double asymmetric lighting (with double asymmetric film)

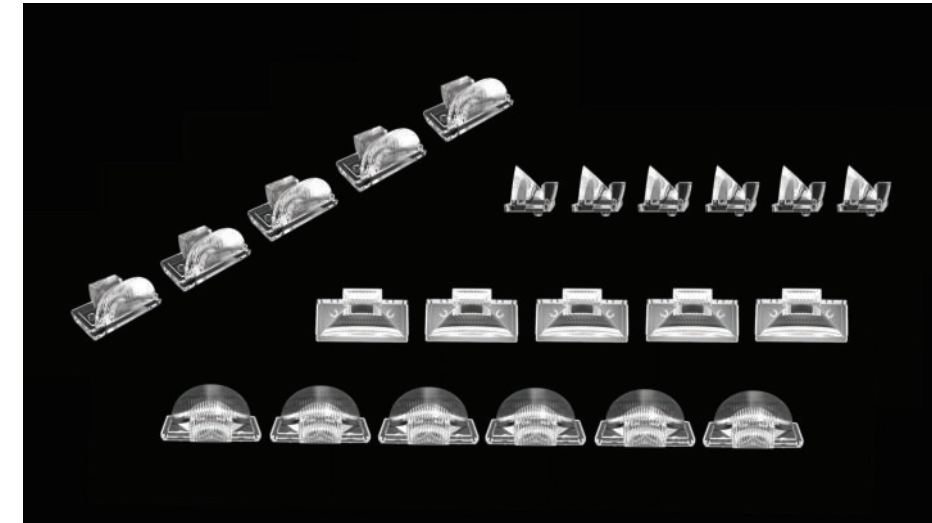


— Office lighting, 20°+30° linear film



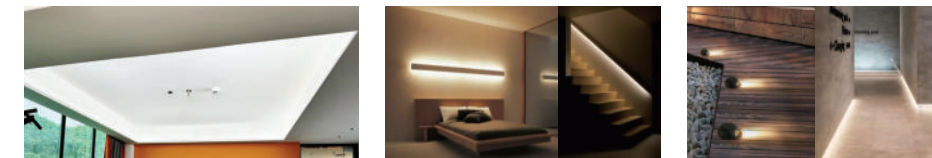
HIDDEN SERIES

A lens that bends the light.



Development Background

What is indirect lighting? Indirect lighting, also known as reflected lighting, refers to the lighting effect in which lamps or light sources do not directly cast light on the object to be illuminated, but are reflected through walls, mirrors or floors. But without exception, the optics of this type of lamps exist through traces of physical obstruction, either through the lamp body itself or the architectural structure.



High Position Lighting

Middle Position Lighting

Low Position Lighting

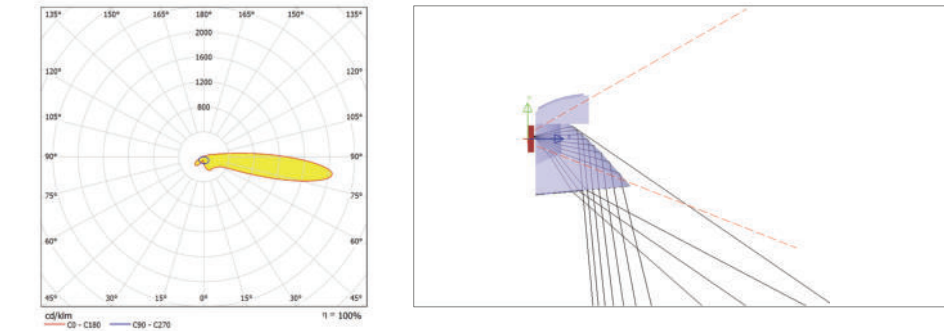
Is there a way to use direct lighting to approach or achieve the requirements for indirect lighting?

A lens that deflects most of the light energy so that the direction of light illumination is not in the same direction as the front direction of the LED should be able to solve the problems of illumination distance and glare.

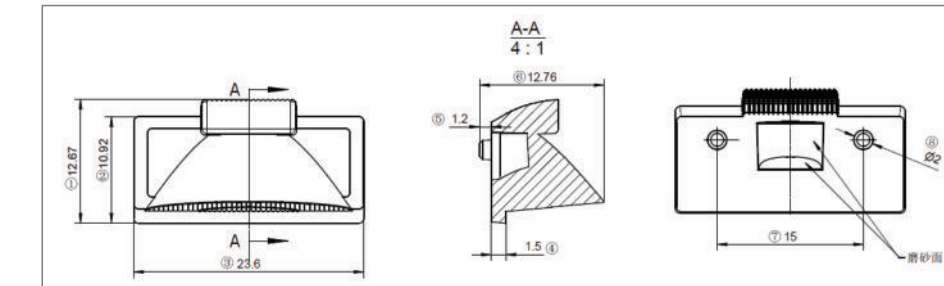
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Design Concept

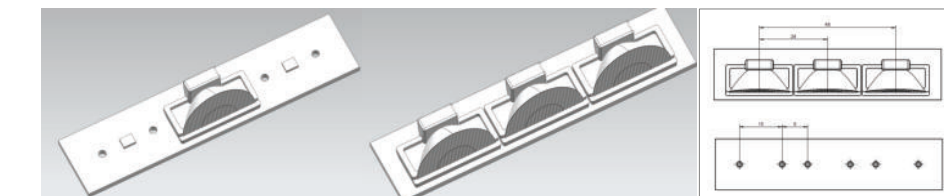
The design uses total reflection to deflect part of the light energy of the LED and emit it, so that the direction of most of the light energy deviates from the direction of the LED surface, thereby achieving indirect lighting.



Appearance



Assembly instructions



HIDDEN SERIES

Recommended application — Washing the ceiling



Illumination effect of light strip without light distribution

Paired with Herculux Starry Optical Platform-Hidden Series

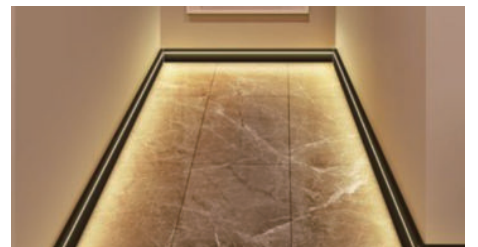
— Washing the wall



— Washing the curtain



— Washing the floor



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