

**SEGULA**

**DARK LIGHT REFLECTOR**

# What is Dark Light?

Concept by ERCO

Darklight technique

Reflector technology which results in the observer not being subjected to glare as long as the lamp remains above the cut-off angle. The lamp's cut-off angle and the reflector's luminaire cut-off angle are identical. Darklight technology offers optimum efficiency for maximum visual comfort.

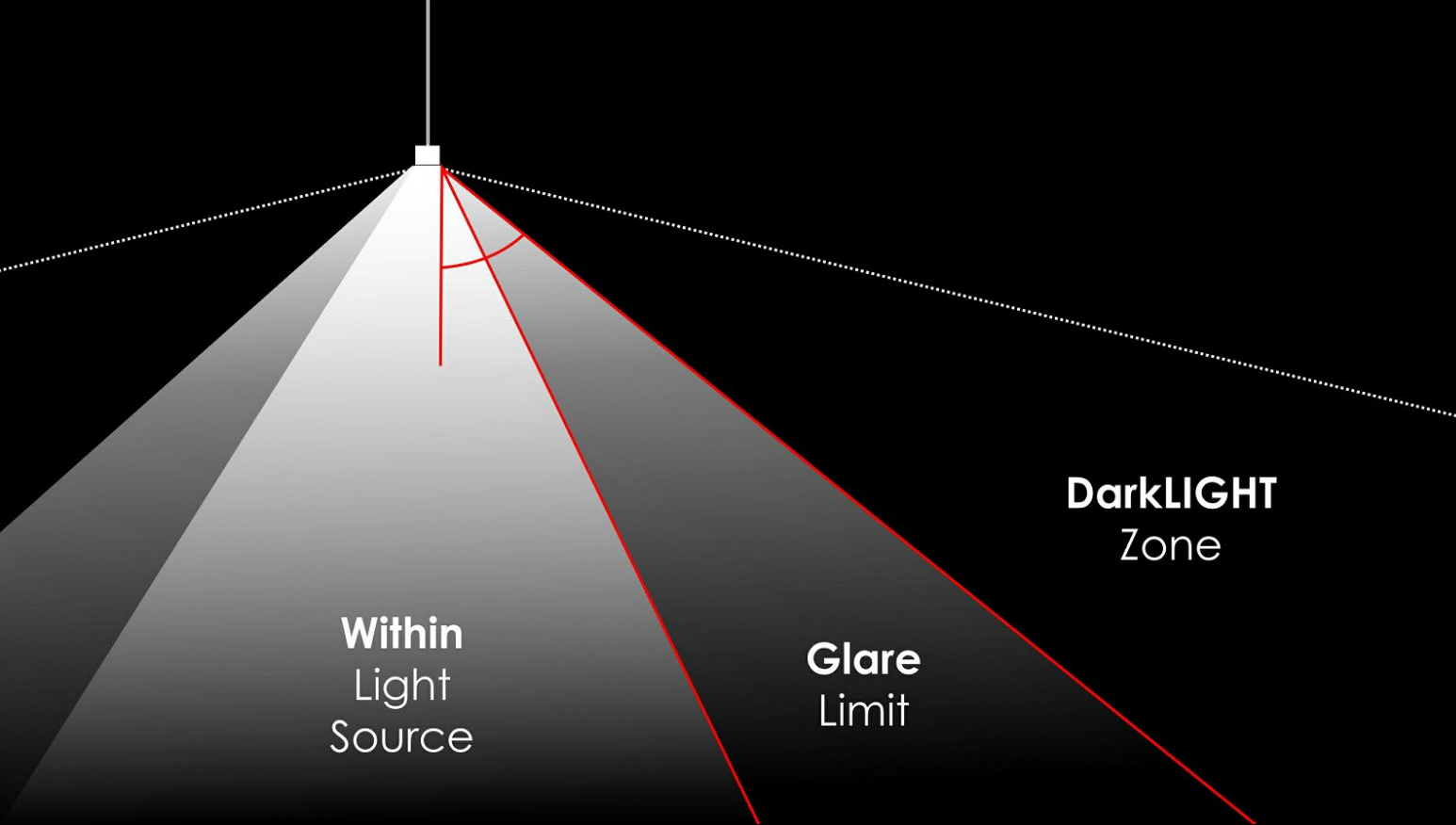
Definition

- 1) Angle above which no direct reflection of the lamp is visible within the reflector. With Darklight
- 2) reflector the luminaire cut-off angle is identical to the lamp cut-off angle.
- 2) Visual comfort expresses the lighting quality with regard to parameters such as illuminance, elimination of glare and colour rendering.

# See the light, without seeing the light source

Light that is so discrete you can barely see the light source can be termed dark light. So basically you can see the light but not the source unless you are standing directly under it looking up. Dark light sets a more natural mood because you cannot see the artificial light source, thereby creating unobtrusive lighting.

Instead of having bright areas of light dominating a space, dark light luminaires can be used to create a discreet lighting setup where it is hard to notice where the light comes from. With discreet lighting, especially when indirect light is combined, it is possible to create a harmonious, natural lighting atmosphere. This is where dark light luminaires offer a perfect solution.

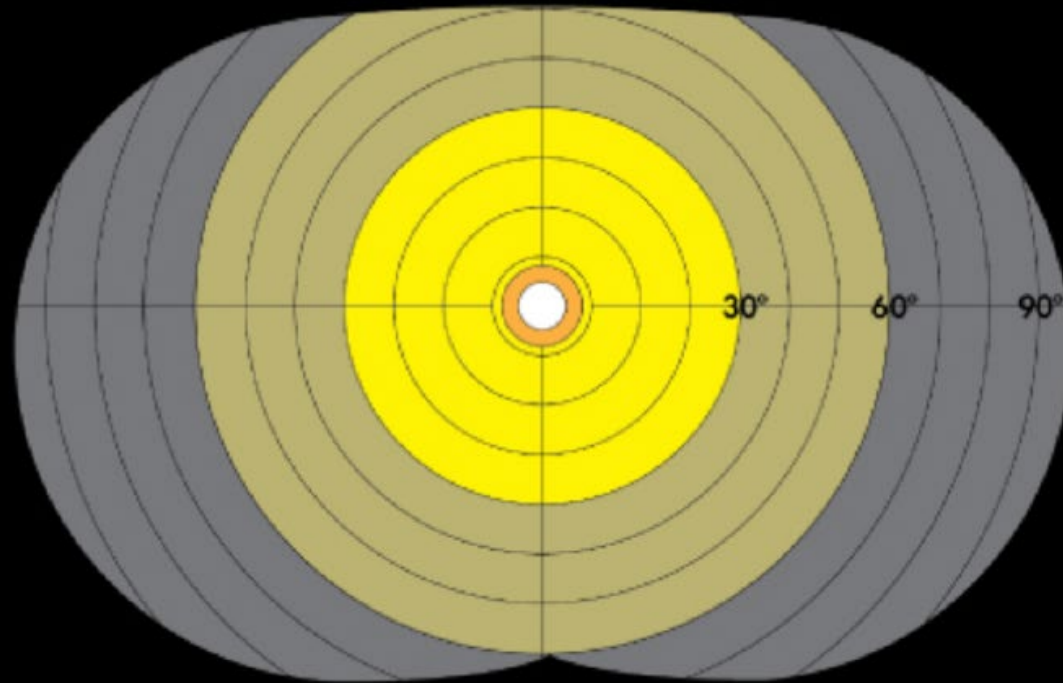


- DarkLIGHT** has 3 main focus areas:
1. Up to 30° = Beam Angle Within Light Source
  2. Between 30° & 60° = Beam Angle Glare Limit
  3. More than 60° = DarkLIGHT Zone

**Requirements for DarkLIGHT Limit:**  
< 200 cd/lm<sup>2</sup> above 60-degree viewing angle.

**DarkLIGHT** concept is a means of controlling light from the luminaire whilst reducing glare from light dominating a space, from a source that can only be identified when standing directly under it looking up.

- Central
- Paracentral
- Near-peripheral
- Mid-peripheral
- Far-peripheral

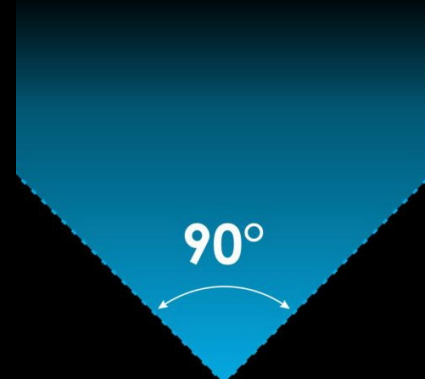
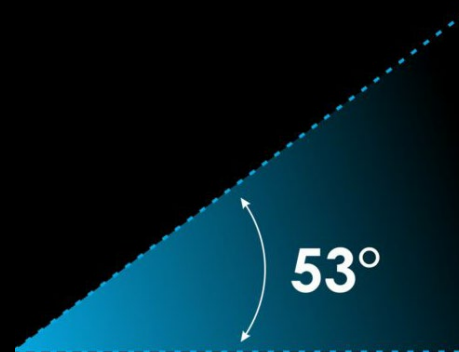


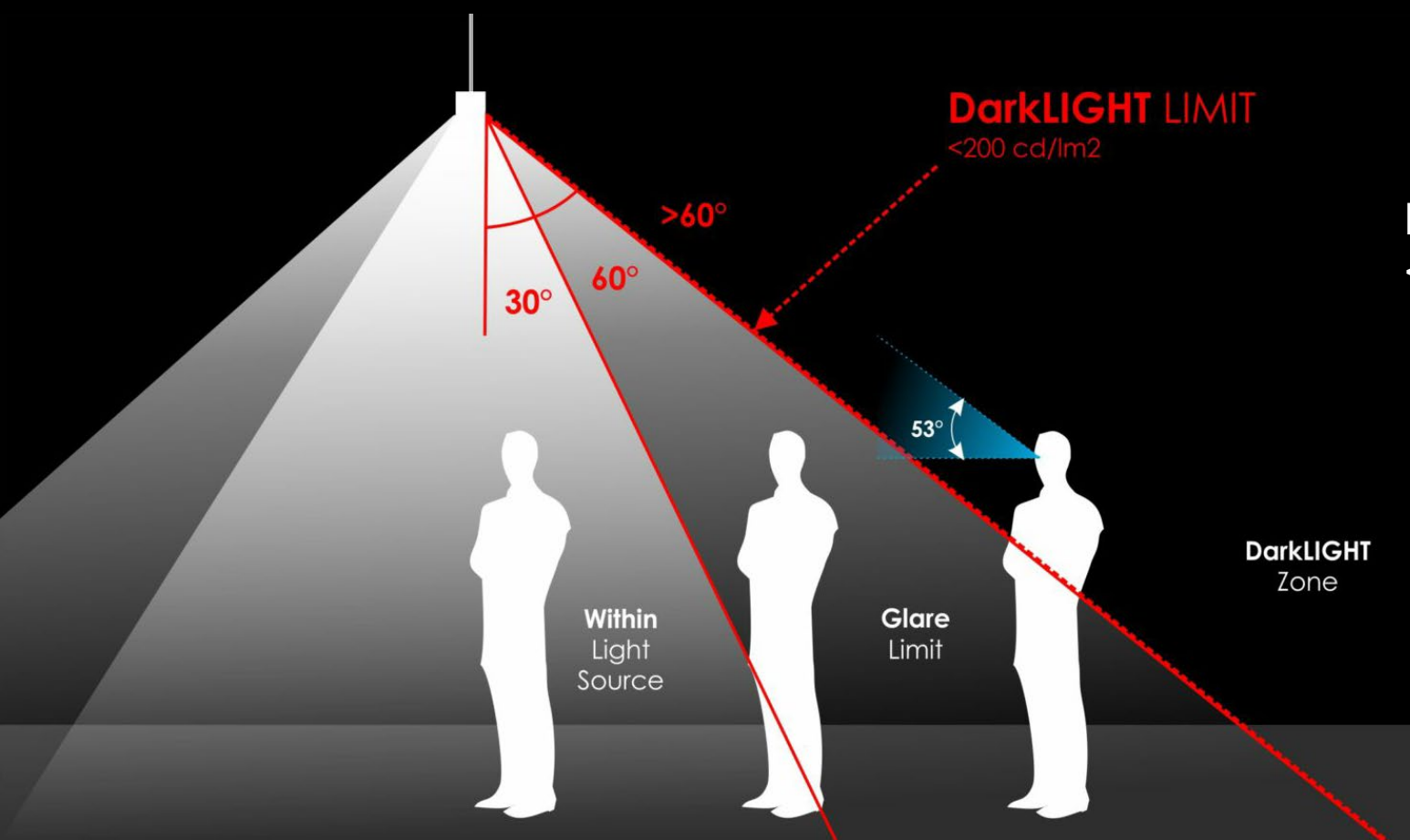
### TYPICAL FIELD OF VISION

An average person has :

**Horizontal** peripheral vision of **+/-90°** per eye.

**Vertical** peripheral vision of **less than 60°**





**Requirements for Dark LIGHT Limit:**  
 <math>< 200 \text{ cd/lm}^2</math> above 60-degree viewing angle.

\* **Standing within the beam of light.**

Can see the luminaire & the light source. (**F**ull light intensities visible).

\* **Standing in the glare limit.**

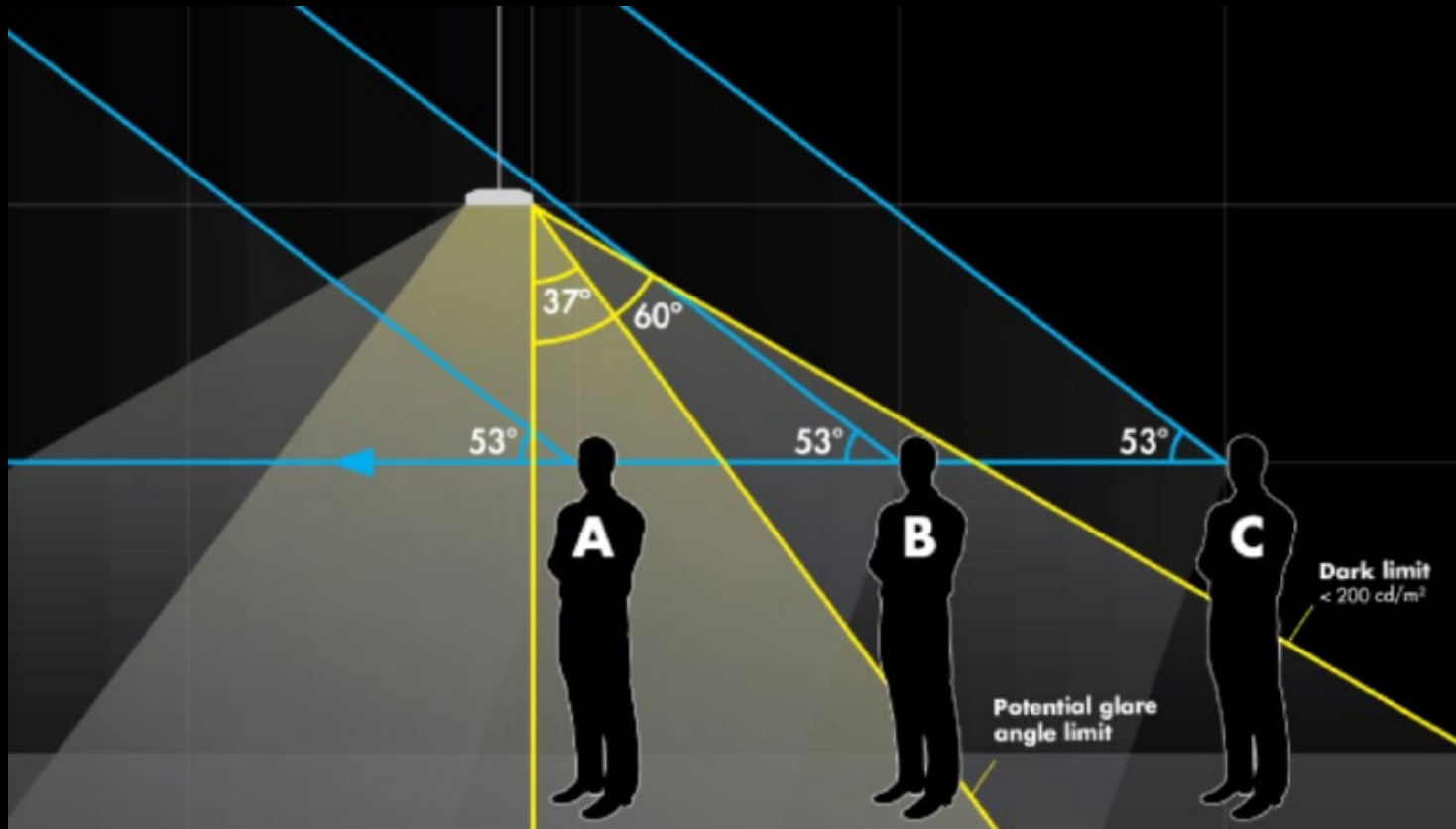
Can see the luminaire & the light source. (**M**ild light intensities visible).

\* **Standing outside the beam of light**

(Beyond the **D**ark **L**IGHT limit). Can see the luminaire, but cannot determine the light source.

In the following diagram Person A cannot see the luminaire and therefore not the light source, so glare is not an issue. Person C is standing outside the beam of light i.e. beyond the dark limit, and cannot determine the light source even though he can see the luminaire. Person B can see the luminaire and he can see some mild light intensities given the light is limited to not cause glare above the potential glare angle limit.

luminaire can be classified as “dark light” only when it fulfills the requirements for dark limit, which means there must be less than 200 cd/m<sup>2</sup> above 60-degree viewing angle.



# SEGULA Dark Light Downlight

# SEGULA



	DAR7598	DAR75128
<b>Wattage</b>	7W/10W/13W	15W/18W
<b>Dimension</b>	Φ82mm*H98mm	Φ82mm*H128mm
<b>Cut-out</b>	Φ75mm	Φ75mm
<b>Beam Angle</b>	15°/24°/36°	15°/24°/36°
<b>Adjustable</b>	Yes	Yes
<b>CRI</b>	>90, R9>50	>90, R9>50
<b>Dimmable</b>	Traic/ 0-10V/ DALI/ Ambient Dimming	
<b>Accessories</b>	Honey Comb Louvre, Spread lens, Soft Lens	
<b>Reflector</b>	Black Titanium Reflector, Gold Reflector, White Reflector, Matt Black Reflector, Chrome Reflector	
		

\* IES file upon request.