



Light Levels and Your Eyes

Human-Centric Lighting From Tri Lite

Light Level Basics

Warehouse injuries often occur due to poor light distribution where significant variations make it difficult for worker's eyes to readjust. Good lighting enhances safety and performance by reducing errors and damage to property. The IES recommends 10-20 footcandles, and OSHA specifies a minimum of 5 footcandles for material handling. Trailers are the most difficult area to illuminate and are often left out of these calculations.

Uniformity

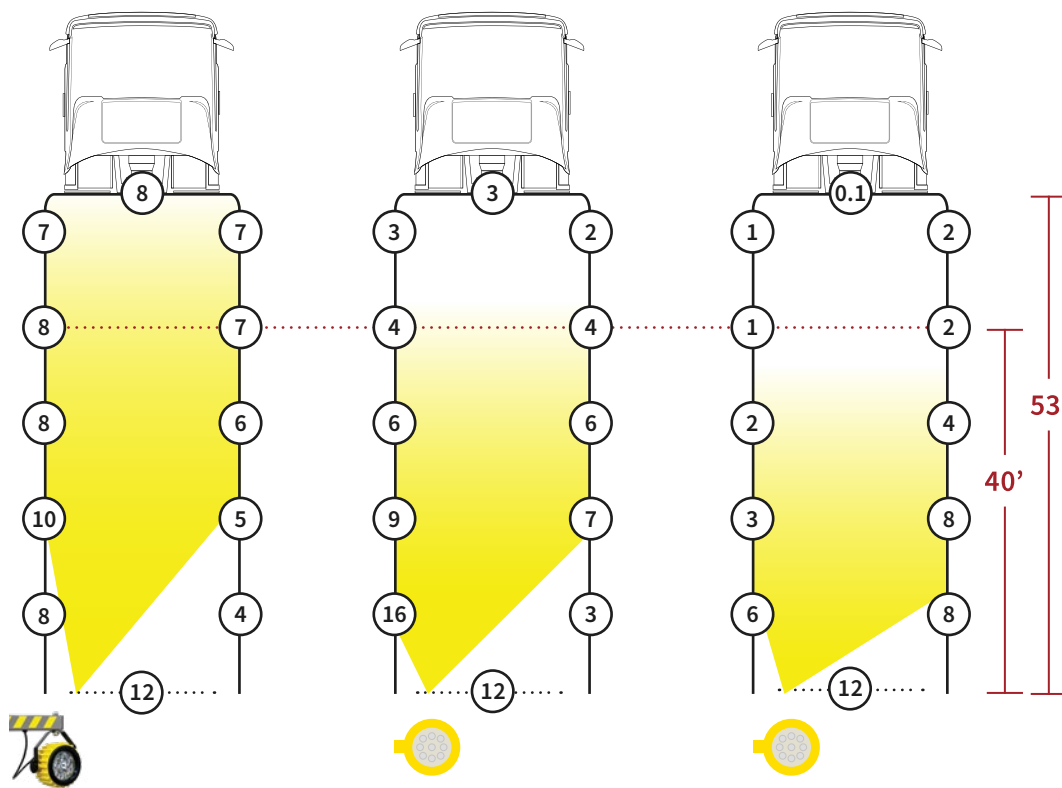
is expressed as the MAX/MIN UNIFORMITY RATIO and should not exceed 3:1.

Biology

As we pass from lower to higher light levels, and vice versa, our iris contracts or expands to enable us to see. This happens quickly. The higher the MAX/MIN ratio, the more the iris needs to expand or contract.

Effects

A loading dock worker can travel in and out of a trailer up to 60 times a day. The more the iris expands and contracts, the more prone the worker is to headaches, eye strain fatigue, and mistakes.

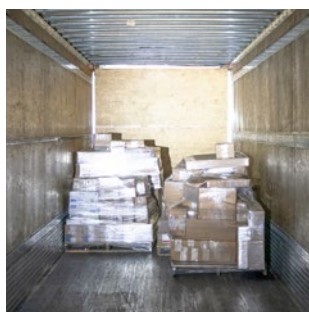


Tri Lite
10° beam angle
1331 lumens
Max-min ratio: 3:1

Competitor 1
25° beam angle
1100 lumens
Max-min ratio: 8:1

Competitor 2
30° beam angle
950 lumens
Max-min ratio: 120:1

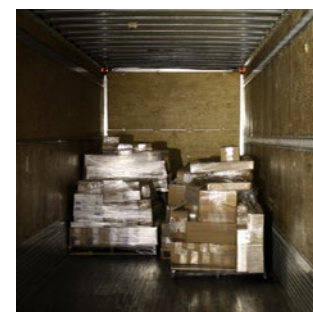
Light Levels in a 53' Trailer



Tri Lite utilizes advanced optics with precision beam spreads, placing the light where it is needed to minimize glare and optimize uniformity ratios.



Dock lights with larger beam spreads cast too much light onto the walls and not enough to the end of the trailer or container.



Dock lights with lower lumen levels do not cast enough light to make it to the end of the trailer or container.