PHOENIX®
DURABILITY X DESIGN™

White Paper

Quality Loading Dock Lights:

The Key Enabler of Safe and Efficient Loading Docks?

How proper illumination influences loading dock safety, efficiency and success

How proper illumination influences loading dock safety, efficiency and success

Compared with most safety equipment used in loading docks today, the dock light is perhaps one of the more accessible – and essential – tools available to workers. Often, it's the only light source that workers can depend on when loading or unloading cargo – arguably the main purpose of a loading dock.

Besides illumination, it's also mission-critical equipment that plays a part in preventing over 25% of industrial accidents that occur at the loading dock, costing businesses over $170.8 billion in medical costs and bereavement. Any industrial businesses wanting to preserve operational stability and avoid becoming a statistic would have proactively begun improving all mission-critical equipment, starting with their dock lights.

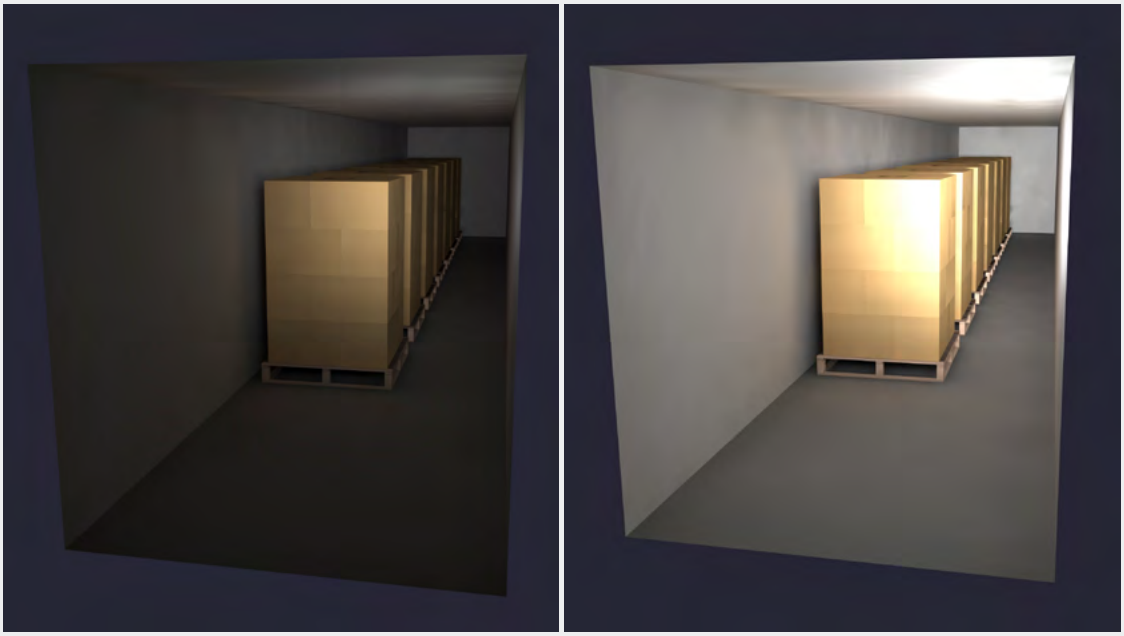
But it's not just safety that's at stake. Due to its importance in today's loading docks, the lighting quality of dock lights can impact four critical aspects of loading dock operations – some of which businesses may not even be aware of:

The four critical aspects of loading dock operations

Leading industrial businesses today have come to realize that dock lights – like any other industrial equipment, systems and processes – are manipulatable 'levers' that they can improve upon to achieve positive outcomes in the four areas above. For them, and for any fast-growing business, it's the only way to retain the safety and stability of operations, amidst ever-increasing demand for faster deliveries and greater shipment volumes.

How to Evaluate Illumination for Trucks, Trailers and Containers

To illuminate the interior space of a truck and trailer, most loading docks today depend on dock lights that project a narrow beam of focused light onto the far end of an enclosed space. This lighting method, however, creates a 'cave effect', where the lesser-lit areas surrounding the hot spot of light appears darker, due to the jarring contrast between the different levels of illumination.



Unsafe versus Safe Lighting

Unsafe dock lighting creates this accentuated darkness, making it harder for dock workers to see or navigate safely within interior spaces. Slip, trip and fall hazards become tougher to spot, leading to injuries and accidents. When workers exit the space, the glare from unsafe dock lights could blind them, causing eye fatigue that erodes concentration and efficiency.

Safe dock lighting, from well-engineered dock lights, is characterized by clear and evenly distributed light that illuminates not just the back, but also the top-down and sides of a space. The result resembles a well-lit corridor where workers can move quickly, see comfortably and focus on the job at hand.

Safe Dock Lighting	Unsafe Dock Lighting
Creates evenly distributed and clear light	Creates concentrated hot spot of light
Illuminates the back, top and sides of a space, raising overall visibility and minimizing shadows	Is mostly focused on one area, usually the back of a space, creating a 'cave effect' and accentuating surrounding darkness
Is equipped with optics that don't create light glare	Dock lights create glare that leads to eye fatigue and tiredness

Four Critical Areas Influenced by Dock Lighting

For a simple piece of equipment, dock lights impact loading dock operations in several meaningful ways. From our conversations with leading industrial businesses, we've identified four critical areas that can be helped or hindered by the quality of dock lighting.

Improve safety culture for dock workers.
As primary sources of light during loading and unloading, dock lights are a crucial component towards driving a continuous safety culture amongst workers.

Ensure damage avoidance for cargo.
Inside the narrow space of a trailer or truck, safe lighting prevents that one wrong move that could spell disaster for both workers and handled cargo.

Increase workflow efficiency for the business.
Loading docks are where materials flow in and products flow out. Safe lighting ensures they don't bottleneck critical business operations.

Enable operational continuity with durable equipment.
Retain safe and efficient dock lighting by choosing durable dock lights that remain functional after equipment collisions – and are easily and quickly replaceable if they break.

It's never too late for industrial businesses to consider how the quality of their dock lighting is influences the above four areas – and take actionable steps towards adopting higher quality dock lights for safer, more efficient and productive operations.

Improve safety culture for workers

Today, industrial businesses are expected to establish some level of safety and compliance for their loading docks. Safety, however, isn't just a word in a promise or slogan. It doesn't intuitively happen by implementing certain systems, processes and equipment. Rather, safety is a culture that must be practiced, at every moment, across every work activity and area of the loading dock.

That means everyone - workers and the business alike - must be mindful that safety doesn't end at the lip of the dock, but continues onward into the interior of a truck or trailer. In that dark and narrow space, safety comes in the form of safe lighting - clear and evenly distributed light to the top, back and sides of the space. This creates a work environment that matches the expectations of safety-minded workers. Unsafe lighting, on the other hand, is a clear disconnect from a culture of safety. It gives workers the impression that their safety isn't a concern, impacting their morale.

Safe lighting builds up a safety-first culture, unsafe lighting erodes it. In this view, the value that quality dock lights bring to overall safety and regulatory compliance is abundantly clear. It would be prudent for industrial businesses to pay greater heed to the lighting capabilities and engineering of their chosen dock lights.

To ensure if their dock lights live up to their safety and compliance goals, businesses should consider the following:

1	Do workers slow down or pause before they enter a truck or trailer, even with dock lights at full strength?
2	Do workers depend on external lights – like a flashlight or their phones – when working in a truck or trailer, even with dock lights turned on?
3	Beyond the price, what other benefits or features do existing dock lights have, and how do they contribute to overall loading dock safety?

Ensure damage avoidance of cargo

Within the narrow confines of a truck or trailer, it's not just the safety and well-being of workers that are threatened by unsafe loading dock lighting. Valuable materials and cargo could become irreparably damaged from accidents or collisions, resulting in total write-offs and potential loss of business profits.

Without good dock lighting, workers could trip over loose flooring or pallet jacks, and tip over fragile cargo. Forklifts entering or reversing might accidentally bump into the edge of a pallet or ramp, sending the vehicle crashing sideways into cargo. There's a greater risk of these happening without good light, especially during the hectic rush of peak periods.

But the loss of valuable inventory and cargo is only part of the problem. Businesses will face hefty fines and increased scrutiny from regulatory bodies. Injured workers need time to recuperate, putting strain on manpower. And accidents – especially preventable ones – erode trust between workers and the business, harming morale and efficiency. All these, in some form, impact the business bottom line.

To avoid costly and avoidable accidents to both people and goods, businesses should consider the following:

1	Can existing dock lights provide the same level of illumination, whether it's to the interior of a delivery truck or a 53-foot long trailer?
2	Is the lumen output of existing dock light bright enough to illuminate interiors lined with non-reflective material, like wood or tarp?
3	Do the top and sides of the truck or trailer receive illumination from dock lights, minimizing the possibility of lighting hotspots and dark shadows?

Increase workflow efficiency for the business

Imagine trying to pick clothes from a closet in the dark or walking through a dimly lit room. Our natural tendency is to slow down and allow our eyes to adjust, before making a move. Similarly, dock workers or forklift drivers working inside the dim interior of a truck or trailer will spend much of their time trying to get their bearings right. Additionally, going from a dimly interior into a bright loading dock area could disorient workers, causing further hiccups to workflow.

Over time, this erodes the speed and efficiency of loading dock operations. To counter this, opt for dock lights with a good color temperature of between 4000 – 5000K, which is a non-blinding neutral white light. This light color provides adequate visibility for workers and forklift drivers, but without overwhelming glare that causes eye fatigue.

These small improvements are especially critical for highly interconnected businesses like manufacturing and warehousing, where timely and precise handling of materials is critical. Inefficiencies or slowdowns at the loading dock could ripple outward, causing delays throughout larger operations. But the opposite is also true – safe lighting irons out the minor workflow hiccups at the loading dock, which keeps the rest of the business on track.

To ensure loading docks are working at peak efficiency, businesses should ask themselves:

1	Do existing dock lights emit a neutral to cool white that's easy on the eyes? What is their color temperature (CCT)?
2	Do existing docks lights have the right flood or spot optics to properly illuminate different trucks or trailer lengths?
3	Do the dock lights have ease-of-use features, like bendable necks or pivoting arms that allow precise aiming of light?

Enable operational continuity with quality equipment

Dock lights may be an important source of light, but they are also highly susceptible to damage from multiple sources around the loading dock. Forklifts may collide with loading dock lights, smashing them into the wall. Workers could forget to move the light out of the way before sending bay doors crashing into the fixture. The outcome? Broken loading dock lights and loading bays that cannot be used, due to operational safety and health concerns.

As a guiding principle, expect dock lights to be broken, damaged or rendered ineffective before their intended lifespan. That said, loading dock managers could delay this inevitability by investing into loading dock lights that are engineered to remain durable in the impact-heavy environment of a loading dock.

In addition to durability, consider factors like like delivery times, stock availability and quality of customer support. Your dock lights shouldn't just be tough, but also be easily replaceable when broken. Economically priced dock lights often lack the crucial factors above, exposing your loading dock to unacceptable delays and shutdowns when they eventually break.

To preserve operational continuity, it's advisable to look for dock lights with high levels of availability and support from local industrial distributors and suppliers.

When evaluating new options for dock lights, consider:

1	What is the lead time for a replacement dock light? Is it possible to quickly obtain a replacement, without needing to keep ready inventory?
2	The company selling the dock light and its manufacturer. Have they shown trustworthy expertise when it comes to loading dock lighting?
3	Can you easily get a hold of a representative from the manufacturer for warranty claims or customer support requests?

Dock Lights Buyer's Guide: Top Eight Decision Factors to Consider

To ensure the safety, efficiency and continuity of operations, insist on the following specifications when purchasing dock lights.

Ensure your choice of dock lights has:

Considerations	Recommended
Short delivery lead times for new dock lights or replacements	One week or less
After-sales customer support that's easy to reach, from both the manufacturer and distributor	Same day response times for customer service inquiries
Beam optics that facilitate even distribution of light throughout a trailer or truck, minimizing the 'cave effect'	(28° - 45°) Flood and Spot Optics
Beam optics that can sufficiently light the interior of a small truck or 53-foot long trailer	
Adequate lumen output so workers don't depend on external light sources	1000 to 1500 lumens
Lumen output that isn't overly-bright as to create blinding glare when used.	
Neutral cool light within a color temperature range that's easy on the eyes	4000 – 5000K
Ease-of-use features, like bendable necks or pivoting arms for flexible use	Flexible, Gooseneck or Modular Arms

Rethink the Importance of Dock Lights

Dock lights have gone beyond simple lights you install by default to comply with federal safety and health regulations. They are increasingly intertwined with the success of the business as well. Industrial businesses should therefore pay closer attention to loading dock lighting – and adopt well-engineered dock lighting as a way to improve operations.

As the pioneers of dock lighting, Phoenix Lighting is well positioned to support industrial businesses in their journey towards high-performing loading dock operations. We designed and manufactured the first ever dock light – our original docklite® – which has gone on to become both a noun and standard of quality for the material handling industry.

The Phoenix range of docklite® products is engineered for durability in every industrial environment, from hazardous and wet conditions, to high-traffic, high-volume warehouses, distribution centers and industrial complexes. Ready to explore the potential improvements that well-engineered dock lights can bring to your loading dock?

Tell us about your loading dock requirements and let's get started!

About Phoenix Lighting

Ever since we engineered and manufactured the first dock light back in 1960, Phoenix has made immense strides in developing durable, high-quality dock lights that stand up to the demands of the material handling industry. Backing up our lighting solutions is our superior customer service and short lead times that our customers have come to trust and rely on.

Our latest dock lights, like our DLA 2 fixture, are built from sturdy cast aluminum and equipped with an impact-resistant polycarbonate lens – allowing it to withstand the worst that today's loading docks can throw at them. Our lights are also used on marine vessels, at mines, seaports and airports in the US and around the world.