ANSI/IES RP-40-19

Illuminating Engineering Society

RECOMMENDED PRACTICE:
LIGHTING PORT TERMINALS

AN AMERICAN NATIONAL STANDARD

Approved American National Standard ANSI

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should be directed to IES.

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The Port Terminal Lighting Committee
of the Illuminating Engineering Society

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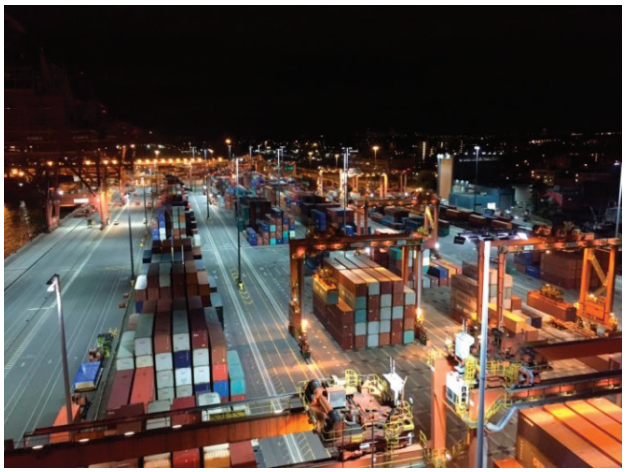

Port of Los Angeles

DP World, Vancouver, BC

1.0 Introduction

The purpose of this document is to provide design recommendations for the illumination of a cargo handling terminal from a permanently installed lighting system. A variety of different cargo handling terminals exist, and each may be unique. The terminal may be a marine or inland facility with container, bulk, breakbulk, or similar operations. In most facilities, the acreage will be shared between loading and unloading operations and the storage of cargo, but the types of cargo stored may vary widely.

The shape, size and design of an individual terminal may vary, but each facility should have a permanent lighting system to deliver general illumination in support of safe personnel-involved operations and terminal security. The illumination recommendations within this document are intended as guidance for the design of port terminal illumination. Each terminal may have unique property features or civil limitations that should be considered within the illumination design. In addition, there may be security or control access criteria and credential requirements.

The IES Port Terminals Lighting Committee has reviewed and considered a variety of installations. The committee has also reviewed standards from the U.S. Occupational Safety and Health Administration 1917.123(a) as well as U.S. Coast Guard CFR 1917.123 – Illumination. These standards have helped to shape this document, which is written with the intent to modernize and clarify the lighting guidelines for illumination of a cargo handling port terminal. Solid-state lighting technology allows for enhanced illumination and increased uniformity relative to the capability of the lighting technology available for generations past. Advancements in optics and control systems also increase the opportunities for optimizing illumination levels for operations and security while minimizing impact on the environment surrounding a facility. *The consensus of the committee was to provide clear and appropriate lighting recommendations*.

These recommendations are independent of any individual existing regulation and are based on expert understanding of terminal operations, the illumination demands of those operations, and the capabilities of modern lighting and control technologies.

2.0 Port Facilities

The areas within marine cargo handling terminals that require general high-mast lighting primarily fall into two categories (see **Figure 2-1**):

- **Wharf:** This area is defined as the area on-dock extending from the waterfront pier head line back toward the land, ending at the back-reach limit of the wharf crane along the waterfront. Terminal crews utilize cranes, trucks, and other heavy lift equipment and cargo transport machinery to