



## SEA TURTLE FRIENDLY LIGHTING



# Understanding Sea Turtles 101: The Threats from Artificial Lighting

## THE PROBLEM:

Nesting turtles once had no trouble finding a quiet, dark beach on which to nest, but now they must compete with tourists, businesses, and coastal residents for use of sandy beaches. U.S. beaches, popular with humans and turtles alike, are now lined with seaside condominiums, houses, and hotels. Lights from these developments discourage females from nesting. If a female fails to nest after multiple false crawls, she will resort to less-than-optimal nesting spots or deposit her eggs in the ocean. In either case, the survival outlook for hatchlings is slim.

Lighting near the shore also can cause hatchlings to become disoriented and wander inland, where they often die of dehydration or predation. Hatchlings, scientists believe, have an innate instinct that leads them in the brightest horizon, which is usually over the ocean. Excess lighting from the nearshore buildings and streets draw hatchlings toward land, where they may be eaten, run over, or drown in swimming pools.

Species Affected: All species of sea turtles are affected.

## THE SOLUTION:

Reducing the amount of artificial light that is visible from nesting beaches is the first step to reducing light pollution that affects sea turtles. Coastal communities around the world have passed ordinances that require residents turn off beachfront lights during turtle nesting season. Unfortunately, these ordinances are not always enforced and don't address the larger problem of sky glow that occurs near cities.



# FWC Sea Turtle Lighting Guidelines

The Florida Fish and Wildlife Conservation Commission (FWC) is one of the leading organizations leading the charge to protect the Sea Turtles. FWC recommends to beachfront residential and commercial buildings follow **three simple golden rules**:

## 1. LOW

## 2. SHIELDED

## 3. LONG

### KEEP IT LOW:

- Fixtures must be mounted as low as possible to achieve required light levels.
- Lamps must produce the lowest wattage/lumens necessary for the needed purpose.

### KEEP IT SHIELDED:

- Fixtures must be completely downward directed.
- Fixtures must shield the lamp from the beach.

### KEEP IT LONG:

- Lamps must produce only long wavelength light (560 nm or greater with is amber, orange or red).

## What is Recommended

### ACCEPTABLE FIXTURES

All exterior lights proposed for the seaward or shore side of a structure, should be well-shielded, full cut-off, downward direction fixtures with a long-wavelength light source (wavelength reading of 560 nanometers (nm) or higher).

### ACCEPTABLE LAMPS

All fixtures visible from the beach should have a long wavelength lamp – a bulb that looks amber or red because it only produces light with wavelengths of 560 nm or higher. While light can disorient nesting sea turtles and their hatchlings, leading them away from the water. True red, orange or amber LEDs are a great source of light.



# OUR PRODUCTS

## MINI LED CORN LAMPS

**Applications:** Beach front open + enclosed fixtures

### 12W

- **Color Temp:** Amber
- **Input Voltage:** 100-277V
- **Dimensions:** 2.36" x 4.92"
- **Base:** E26
- **Wavelength:** 585 nanometers
- **Part #:** C-E26-IP64-12-AMBER-TURTLE-MINI



### 15W

- **Color Temp:** Amber
- **Input Voltage:** 100-277V
- **Dimensions:** 2.52" x 5.91"
- **Base:** E26
- **Wavelength:** 585 nanometers
- **Part #:** C-E26-IP64-15-AMBER-TURTLE-MINI



### 25W

- **Color Temp:** Amber
- **Input Voltage:** 100-277V
- **Dimensions:** 2.52" x 5.91"
- **Base:** E26
- **Wavelength:** 585 nanometers
- **Part #:** C-E26-IP64-25-AMBER-TURTLE-MINI



**Approved**

## MAGNILUMEN PLUS AMBER RETROFITS FOR LINEAR FIXTURES



- **Max Wattage Per Board:** 2 foot: 15W / 4 foot: 30W
- **Color Temp:** Amber
- **Input Voltage:** 100-277V
- **Dimensions:** 2 feet (21"); 4 feet (43")
- **Wavelength:** 585-590 nanometers
- **Part Number:** 2 ft: MRK2220-TURTLE-PLUS  
4 ft: MRK2430-TURTLE-PLUS

**Applications:** Garages, parking lots, outdoor docks, and pool structures



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