

# SEA TURTLE FRIENDLY LIGHTING



The Florida Fish and Wildlife Conservation Commission (FWC) has developed a model lighting ordinance as a guideline to help coastal counties and municipalities in Florida develop their own local ordinances to protect sea turtles from the adverse effects of artificial lighting.

When retrofitting fixtures for beachfront commercial and residential property, proper Sea Turtle lighting can provide adequate lighting for safety, attractiveness and compliance with beachfront lighting ordinances.

ZLEDLighting's Magnilumen Plus retrofit boards are sea turtle-friendly because they utilize long-wavelength light of 610 nanometers or longer.

Go to [www.myfwc.com](http://www.myfwc.com) for complete turtle light information.

## 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:** 610 nanometers
- **Part Number:** 2 ft: MRK2220-TURTLE-PLUS  
4 ft: MRK2430-TURTLE-PLUS
- **Applications:** Parking lots, outdoor docks, and pool structures



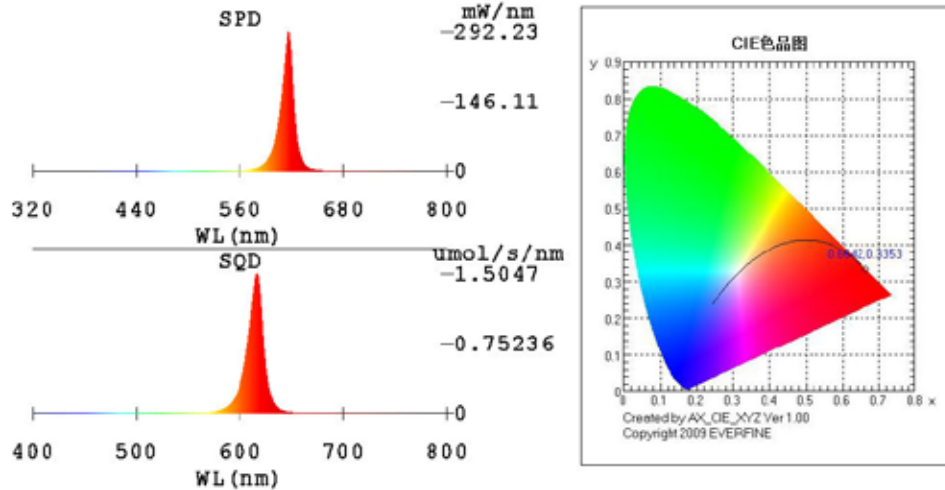
Specifications and actual product may vary.

Office (800) 679-9243 • [sales@zledlighting.com](mailto:sales@zledlighting.com) • [www.zledlighting.com](http://www.zledlighting.com)

# TEST: MRK2220-TURTLE-PLUS

## EVERFINE SP-20Suite Test Report

### Spectrum Test Report



#### Plant Parameters:

##### Radiometry System:

$\Phi_v(\text{lm})$ : 1746  $\Phi_v(\text{lm.s})$ : 1746  
 $\Phi_e, \lambda(\text{W})$ : 0.01064  $Q_e(\text{J})$ : 5.52  
 $\eta_b$ : 0.2169  $\Phi_e, b(\text{W})$ : 5.533  
 $\Phi_r(\text{W})$ : 5.527  $\Phi_{\text{ch-A}}(\text{W})$ : 0.7675  
 $Q_{\text{ch-A}}(\text{J})$ : 0.7675  $\Phi_{\text{ch-B}}(\text{W})$ : 0.5189  
 $Q_{\text{ch-B}}(\text{J})$ : 0.5189

##### Quantum System:

PPF( $\mu\text{mol/s}$ ): 28.29 PPF(400-500)( $\mu\text{mol/s}$ ): 0.008891  
PPF(500-600)( $\mu\text{mol/s}$ ): 2.522 PPF(600-700)( $\mu\text{mol/s}$ ): 25.79  
Numol( $\mu\text{mol}$ ): 28.29 PPE( $\mu\text{mol/s/W}$ ): 1.109  
KFr( $\mu\text{mol/s/W}$ ): 0.001506  $\Phi_{p, uv}(\mu\text{mol/s})$ : 0.006315  
 $\Phi_{p, fr}(\mu\text{mol/s})$ : 0.03842

##### Color Parameters:

Chromaticity Coordinate:  $x = 0.6642$   $y = 0.3353$   $u' = 0.4665$   $v' = 0.5298$   
CCT = 1001K(Duv = -0.0187) Dominant WL:Ld = 609.6nm  
Purity = 99.9% Ratio: R:G:B=86.4:13.6:0.0

Ra = 26.4

R1 = 10.7 R2 = 78.7 R3 = 28.2 R4 = 0.0 R5 = 2.1

R6 = 89.4 R7 = 2.2 R8 = 0.0 R9 = 0.0 R10 = 70.7

R11 = 0.0 R12 = 77.0 R13 = 31.3 R14 = 60.5 R15 = 0.0

Electric:U = 129.99 V I = 0.1997 A P = 25.51 W PF = 0.9824 Eff = 68.47 lm/W

$\lambda_p = 616.0\text{nm}$

FWHM = 15.3nm

LEVEL: OUT

WHITE: OUT

Status: Integral T = 81 ms

$I_p = 40329$  (62%)

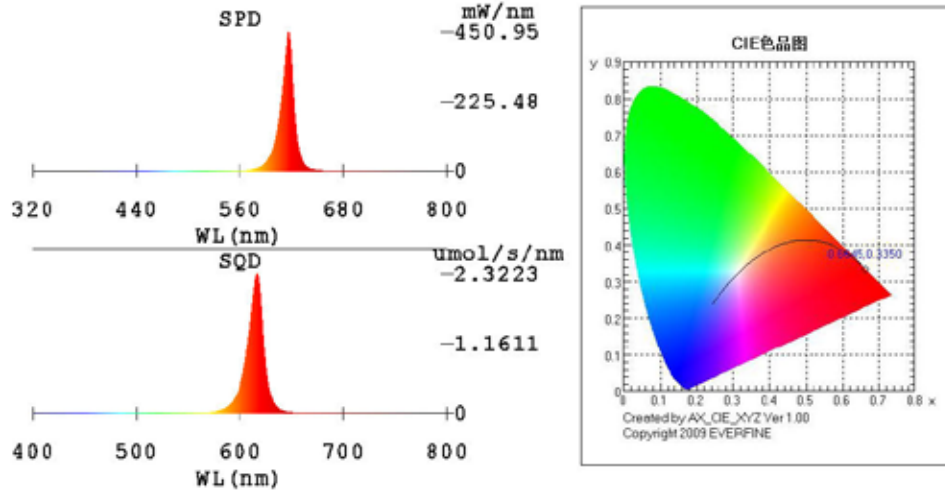
Model:  
Tester:  
Temperature:25.3Deg  
Manufacturer:

Number:15  
Date:2022-05-25 21:31:39  
Humidity:65.0%  
Remarks:0.6m

# TEST: MRK2430-TURTLE-PLUS

## EVERFINE SP-20Suite Test Report

### Spectrum Test Report



#### Plant Parameters:

##### Radiometry System:

$\Phi_v$  (lm): 2673  
 $\Phi_e, \lambda$  (W): 0.01632  
 $\eta_b$ : 0.2109  
 $\Phi_r$  (W): 8.48  
Qch-A (J): 1.178  
Qch-B (J): 0.7959

##### Quantum System:

PPF ( $\mu\text{mol/s}$ ): 43.42  
PPF (500-600) ( $\mu\text{mol/s}$ ): 3.818  
Numol ( $\mu\text{mol}$ ): 43.42  
KFr ( $\mu\text{mol/s/W}$ ): 0.001347  
 $\Phi_p, fr$  ( $\mu\text{mol/s}$ ): 0.05422

##### Color Parameters:

Chromaticity Coordinate:  $x = 0.6645$   $y = 0.3350$   $u' = 0.4671$   $v' = 0.5298$   
CCT = 1001K (Duv = -0.0192)  
Purity = 99.9%

Ra = 26.4

R1 = 10.6 R2 = 78.6 R3 = 28.2 R4 = 0.0 R5 = 2.0

R6 = 89.4 R7 = 2.2 R8 = 0.0 R9 = 0.0 R10 = 70.6

R11 = 0.0 R12 = 77.0 R13 = 31.2 R14 = 60.5 R15 = 0.0

Electric: U = 130.08 V I = 0.3114 A P = 40.24 W PF = 0.9935 Eff = 66.44 lm/W

$\lambda_p$  = 616.3nm

LEVEL: OUT

Status: Integral T = 56 ms

Qv (lm.s): 2673  
Qe (J): 8.47  
 $\Phi_e, b$  (W): 8.487  
 $\Phi_{ch-A}$  (W): 1.178  
 $\Phi_{ch-B}$  (W): 0.7959

PPF (400-500) ( $\mu\text{mol/s}$ ): 0.01207  
PPF (600-700) ( $\mu\text{mol/s}$ ): 39.63  
PPE ( $\mu\text{mol/s/W}$ ): 1.079  
 $\Phi_p, uv$  ( $\mu\text{mol/s}$ ): 0.00893

Dominant WL: Ld = 609.7nm  
Ratio: R:G:B=86.5:13.5:0.0

FWHM = 15.3nm

WHITE: OUT

Ip = 43001 (66%)

Model:  
Tester:  
Temperature: 25.3Deg  
Manufacturer:

Number: 11  
Date: 2022-05-25 21:26:21  
Humidity: 65.0%  
Remarks: 1.2m