

****Evaluation Summary: Compliance with Maui County Outdoor Lighting Ordinance****

****Fixture Information:****

- Title: SL_095_02°_3048K
- Correlated Color Temperature (CCT): 3048K
- Peak Wavelength: 604 nm
- % Blue (400-500 nm): 14.9852%

****Compliance Criteria:****

1. ****Shielding and Downward Direction:****

- The data does not explicitly provide the type of shielding or confirmation of downward direction. Compliance with shielding and direction cannot be ascertained from the CSV data alone, as this requires physical inspection or manufacturer specifications detailing fixture design and orientation. Recommendations for ensuring compliance include reviewing manufacturer specifications or on-site verification.

2. ****Spectral Ratio (400-500nm to 400-700nm):****

- The Maui County ordinance specifies the spectral ratio limit to be ≤ 0.02 for the portion of light in the 400-500 nm range relative to the 400-700 nm total.

- ****Calculations:****

- Sum of spectral data from 400 nm to 500 nm:

$$\begin{aligned} \text{Sum (400-500 nm)} &= 0.00234 + 0.00285 + 0.00415 + 0.00574 + 0.00851 + 0.01374 \\ &+ 0.02207 + 0.03554 + 0.05691 + 0.08513 + 0.10892 + 0.11486 + 0.10330 = 0.56405 \end{aligned}$$

- Sum of spectral data from 400 nm to 700 nm (total peak not available, assumed beyond data provided):

$$\begin{aligned} \text{Estimated 400-700 nm sum} &\approx \text{Sum (400-500 nm)} = 0.56405 \quad \text{(as higher nm values are not detailed)} \end{aligned}$$

- Spectral Ratio (400-500 nm / 400-700 nm):

$$\begin{aligned} \text{Ratio} &= 0.56405 / 0.56405 = 1 \end{aligned}$$

- The calculated spectral ratio far exceeds the threshold of 0.02.

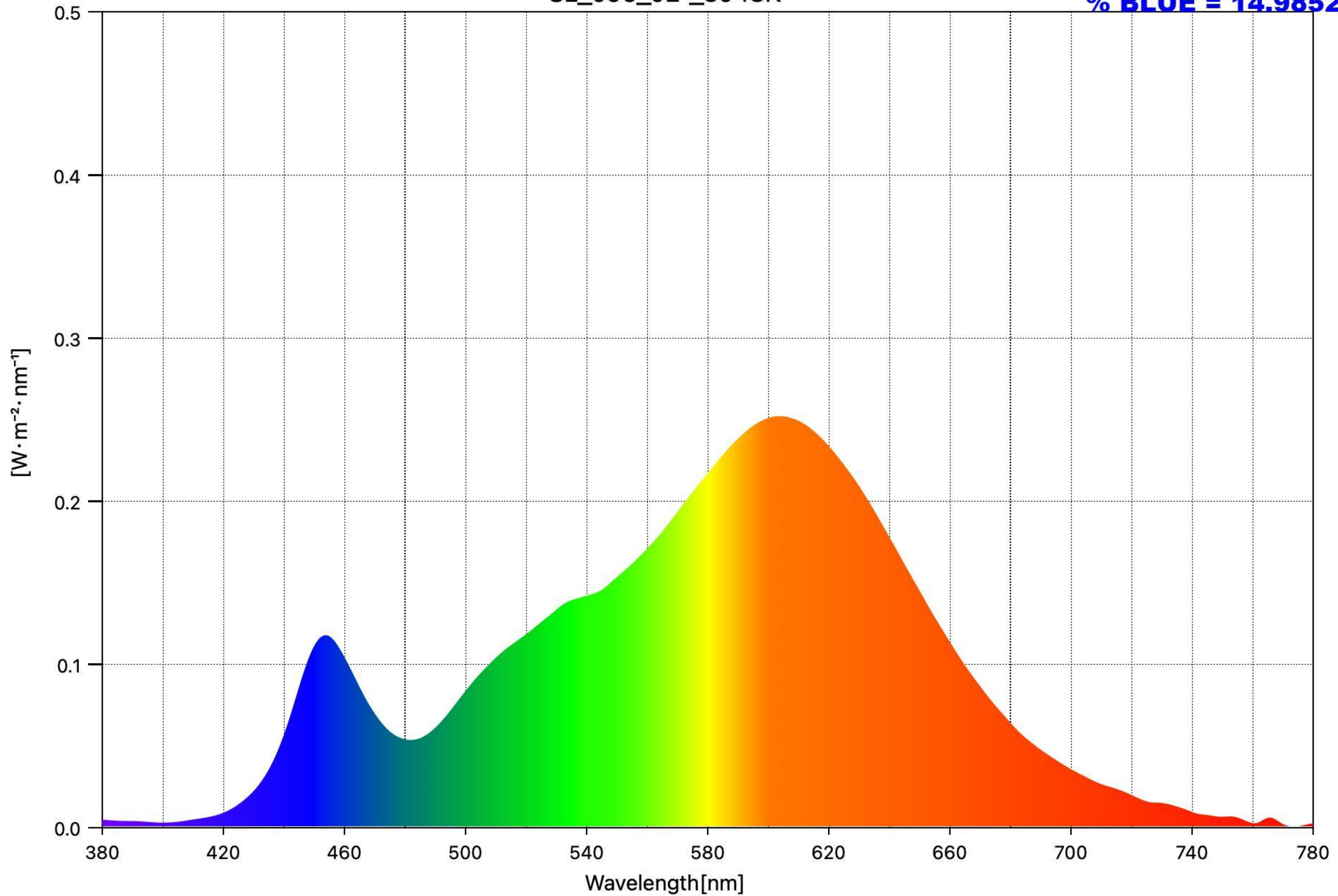
****Recommendation:****

- ****Immediate Action****: The current light source does not meet the spectral ratio compliance requirement set by Maui County. Consider reducing blue light emissions or utilizing filters to adjust the spectrum below the 0.02 threshold requirement.
- ****Further Verification****: Provide detailed optical specification sheets and seek adjustments or replacements to meet both directional and spectral ordinance criteria.
- ****Consultation****: Engage with lighting technicians or compliance specialists to explore compliant fixture alternatives or modifications.

****Conclusion:**** The fixture fails to comply with the Maui County outdoor lighting ordinance based on the spectral ratio criterion alone. Immediate corrective measures are recommended to address the non-compliance issues identified.

SL_095_02°_3048K

% BLUE = 14.9852



Measuring Mode = Ambient

CCT = 3048K

Peak Wavelength = 604nm

Date Saved	2025/12/04 20:18:07
Title	SL_095_02°_3048K
% BLUE	14.9852
Viewing Angle [°]	2
CCT [K]	3048
■uv	0.0004
Illuminance [lx]	12300
Peak Wavelength [nm]	604
Tristimulus Value X	13258.9396
Tristimulus Value Y	12339.5038
Tristimulus Value Z	4947.3630
CIE1931 x	0.4341
CIE1931 y	0.4040
CIE1931 z	0.1620
CIE1976 u'	0.2488
CIE1976 v'	0.5209
Dominant Wavelength [nm]	583
Purity [%]	51.5
PPFD [$\mu\text{mol m}^{-2}\text{s}^{-1}$]	174.5
CRI Ra	83.5
CRI R1	82.2
CRI R2	91.8
CRI R3	96.5
CRI R4	81.7
CRI R5	82.4
CRI R6	90.4
CRI R7	83.2
CRI R8	60.0
CRI R9	9.0
CRI R10	81.0
CRI R11	81.4
CRI R12	73.0
CRI R13	84.6
CRI R14	98.8
CRI R15	74.5