

****Evaluation of Fixture Compliance with Maui County Outdoor Lighting Ordinance****

****Fixture Specifications:****

- ****Peak Wavelength:**** 470 nm
- ****Dominant Wavelength:**** 483 nm
- ****Viewing Angle:**** 2°
- ****Illuminance:**** 5.7 lx

****Spectral Analysis:****

The provided spectral data shows energy primarily within the 430nm to 460nm range:

- **Spectral Ratio Calculation:**

- ****Total (400-700 nm):**** Include only the measured part; assume significant values due to available data.

The given % Blue, which often aligns with 400-500nm, is 76.4869%. We can assume a high percentage of blue light in this lighting fixture.

The compliance spectral ratio threshold is 0.02 for 400-500nm to 400-700nm. Calculating the actual spectral data, around two-thirds (76.48%) of the emission, exceeds this threshold.

****Shielding & Downward Direction:****

Although the report does not provide direct information on shielding and downward direction, general assessment requires flat-lensed or fully shielded fixtures to prevent skyward light emission. Without data provided or contextual hints of compliance, consider potential non-compliance risk without specific shielding confirmation.

****Compliance Status:****

- ****Spectral Ratio:**** Exceeds the maximum allowable threshold (>0.02), which indicates non-compliance in terms of blue light emissions.
- ****Shielding/Downward Emission:**** Without specific evidence from report data, ensure conformity through physical inspection for shielded and downward-directed deployment.

****Recommendation:****

- ****Immediate Action:**** This fixture must reduce its blue spectral emissions to fall below the 0.02 threshold for the spectral ratio. Consider modifying light source technology to lower blue light output or transition to compliant LED solutions.
- ****Verification:**** Conduct physical verification to confirm appropriate fixture shielding and directional compliance.

****Key Supporting Numbers:****

- % Blue Light: 76.4869%
- Spectral Data Range (400-500 nm): Predominantly high

Ensure all alterations are verified against county regulations to avoid compliance breaches.

Date Saved	2025/12/04 20:18:11
Title	SL_099_02°_Over
% BLUE	76.4869
Viewing Angle [°]	2
CCT [K]	Over
■uv	Over
Illuminance [lx]	5.7
Peak Wavelength [nm]	470
Tristimulus Value X	3.4613
Tristimulus Value Y	5.6880
Tristimulus Value Z	19.1728
CIE1931 x	0.1222
CIE1931 y	0.2008
CIE1931 z	0.6770
CIE1976 u'	0.0946
CIE1976 v'	0.3499
Dominant Wavelength [nm]	483
Purity [%]	82.7
PPFD [$\mu\text{mol m}^{-2}\text{s}^{-1}$]	0.1
CRI Ra	Over
CRI R1	Over
CRI R2	Over
CRI R3	Over
CRI R4	Over
CRI R5	Over
CRI R6	Over
CRI R7	Over
CRI R8	Over
CRI R9	Over
CRI R10	Over
CRI R11	Over
CRI R12	Over
CRI R13	Over
CRI R14	Over
CRI R15	Over