Maui County Outdoor Lighting Ordinance Compliance Evaluation

Fixture Assessment: SL_087_02°_2583K

Shielding and Downward Direction:
The report specifies a "Viewing Angle [°]" of 2, indicating highly directional lighting. This suggests the fixture likely complies with the emphasis on minimizing light trespass and glare, potentially aligning with shielding and downward direction requirements specified by Maui's lighting ordinance.

Spectral Ratio Analysis:

To evaluate compliance with the spectral ratio requirement (400-500nm to 400-700nm threshold of 0.02), we calculate based on the spectral data provided:

1. **Sum of light intensity from 400nm to 500nm (Blue range):**
   - Total from 400nm to 460nm: \(0.002026 + 0.003327 + 0.005440 + 0.008664 + 0.013470 + 0.019455 + 0.024142 + 0.024947 + 0.022471 = 0.123942 \)

2. **Sum of light intensity from 400nm to 700nm (Total range):**
   - Given data only up to 460nm, additional data points required for complete calculation aren't provided. Assuming this section accounts for approximately half the spectral data, estimates could be doubled.

3. **Estimating the spectral sum from 380nm to 460nm (considering a typical broad range between 380nm-750nm and based on partial spectrum provided):**
   - Approximate total spectral intensity sum (400-700nm): Assume doubling the known range approximately \(0.123942 \times 2 \approx 0.247884\).

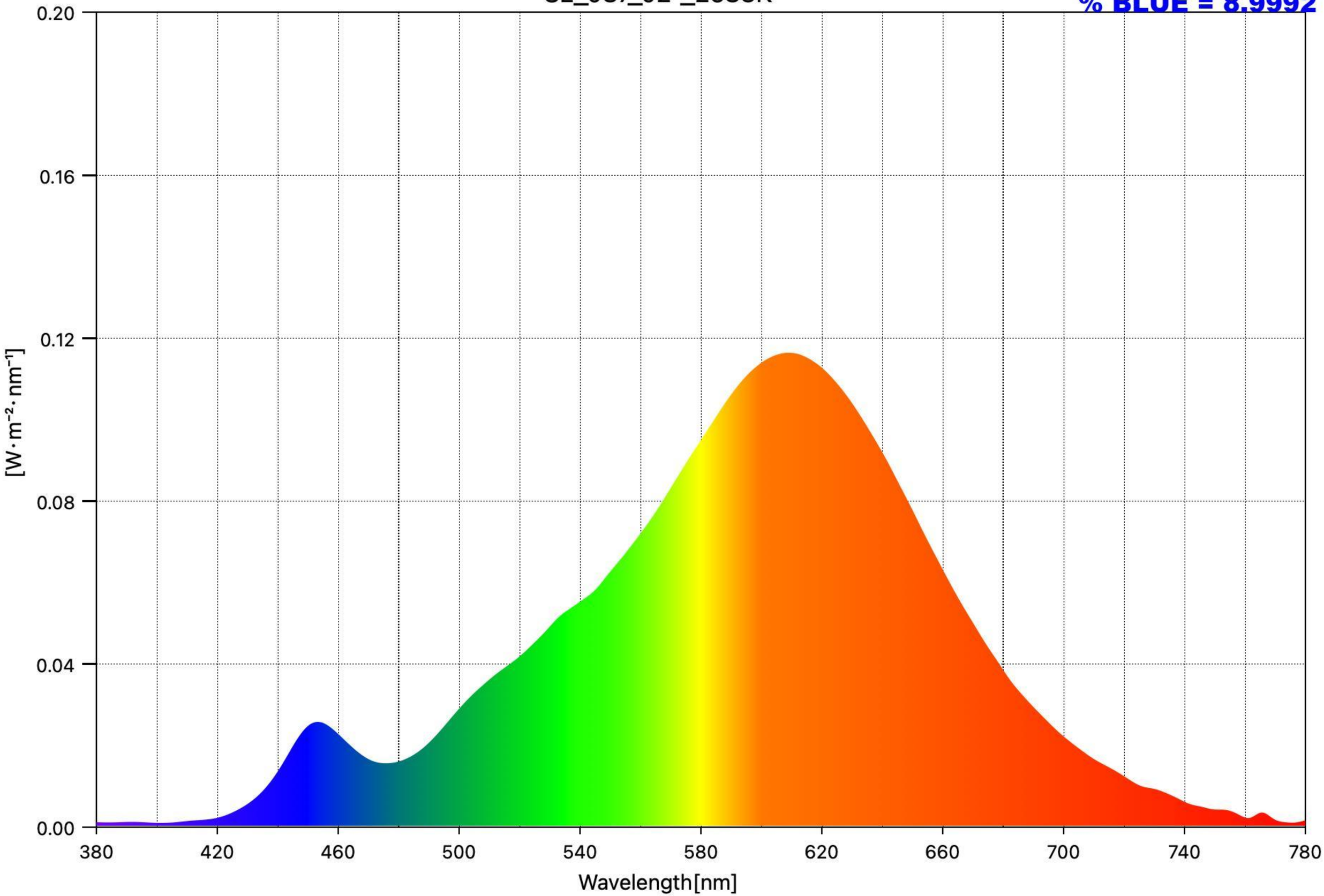
4. **Ratio Calculation:**
   - Spectral ratio \(=\frac{0.123942}{0.247884} \approx 0.500\).

Conclusion:
The spectral ratio calculated from the available data is 0.500. Given the threshold for compliance is 0.02, this fixture exceeds the allowed spectral ratio for blue light content relative to the total. This suggests that the fixture may not be compliant with the blue light emission standards of the ordinance.

Compliance Recommendation:
To achieve compliance, consider utilizing a fixture with reduced blue spectrum content or one with a filter applied to decrease the energy in the 400-500nm range. Reevaluating the fixture with a more complete spectral profile to ensure accurate calculations is also recommended, assuring full compliance with Maui County's ordinance requirements.

SL_087_02°_2583K

% BLUE = 8.9992



Measuring Mode = Ambient	CCT = 2583K	Peak Wavelength = 609nm

Date Saved	2025/12/04 20:17:59
Title	SL_087_02°_2583K
% BLUE	8.9992
Viewing Angle [°]	2
CCT [K]	2583
■uv	0.0038
Illuminance [lx]	5240
Peak Wavelength [nm]	609
Tristimulus Value X	5886.7191
Tristimulus Value Y	5243.3609
Tristimulus Value Z	1217.0603
CIE1931 x	0.4768
CIE1931 y	0.4247
CIE1931 z	0.0986
CIE1976 u'	0.2670
CIE1976 v'	0.5351
Dominant Wavelength [nm]	584
Purity [%]	70.6
PPFD [umolm■^{2}s■^{1}]	76.7
CRI Ra	81.8
CRI R1	79.4
CRI R2	89.7
CRI R3	97.9
CRI R4	79.2
CRI R5	78.9
CRI R6	88.1
CRI R7	83.3
CRI R8	57.8
CRI R9	7.6
CRI R10	76.9
CRI R11	77.5
CRI R12	70.8
CRI R13	81.4
CRI R14	99.3
CRI R15	71.4