

Evaluation Summary for Outdoor Lighting Compliance:

Shielding and Downward Direction:

- The compliance evaluation based on shielding and downward direction cannot be directly derived from the given measurement report. Typically, physical inspection or design documents would be necessary to ensure that the fixture is appropriately shielded and directed downward to minimize light pollution and skyglow.

Spectral Composition Analysis:

- *Spectral Ratio Calculation*: For compliance, we calculate the spectral ratio of the cumulative spectral power in the 400-500 nm range to the cumulative spectral power in the 400-700 nm range. This helps determine adherence to the spectral requirement set by Maui's ordinances.

1. **Power in 400-500 nm Range**: Sum of spectral data from 400 to 500 nm:

$$\begin{aligned} - 400 \text{ nm} - 460 \text{ nm}: & (0.002586 + 0.004849 + 0.008444 + 0.013618 + 0.019688 + 0.024287 + \\ & 0.024389 + 0.019970 + 0.014326 = 0.132255) \end{aligned}$$

2. **Total Power in 400-700 nm Range**: The spectral data for the complete visible range (400-700 nm) would typically be available in the full dataset. Assuming the total spectrum is provided in the measurement data, additional spectral data up to 700 nm is needed for precise calculation. Using a placeholder total for illustrative purposes:

- Let $\text{\textbackslash}(\text{\textbackslash}text{Total (400-700 nm)}) = X \text{\textbackslash}.$

3. **Spectral Ratio**:

- Given the necessity of spectral data beyond 460 nm and up to 700 nm for a complete evaluation of the ratio, assume a hypothetical total for calculation:
- $\text{\textbackslash}(\text{\textbackslash}text{Ratio}) = \text{\textbackslash}frac{0.132255}{X} \text{\textbackslash}$

Compliance Evaluation:

- **Threshold for Compliance**: The ratio must be ≤ 0.02 for compliance according to the spectral requirement in Maui's ordinance.
- Without the total spectral data up to 700 nm, a definitive conclusion on compliance with the ratio threshold cannot be drawn through this summary alone.

Compliance Recommendation:

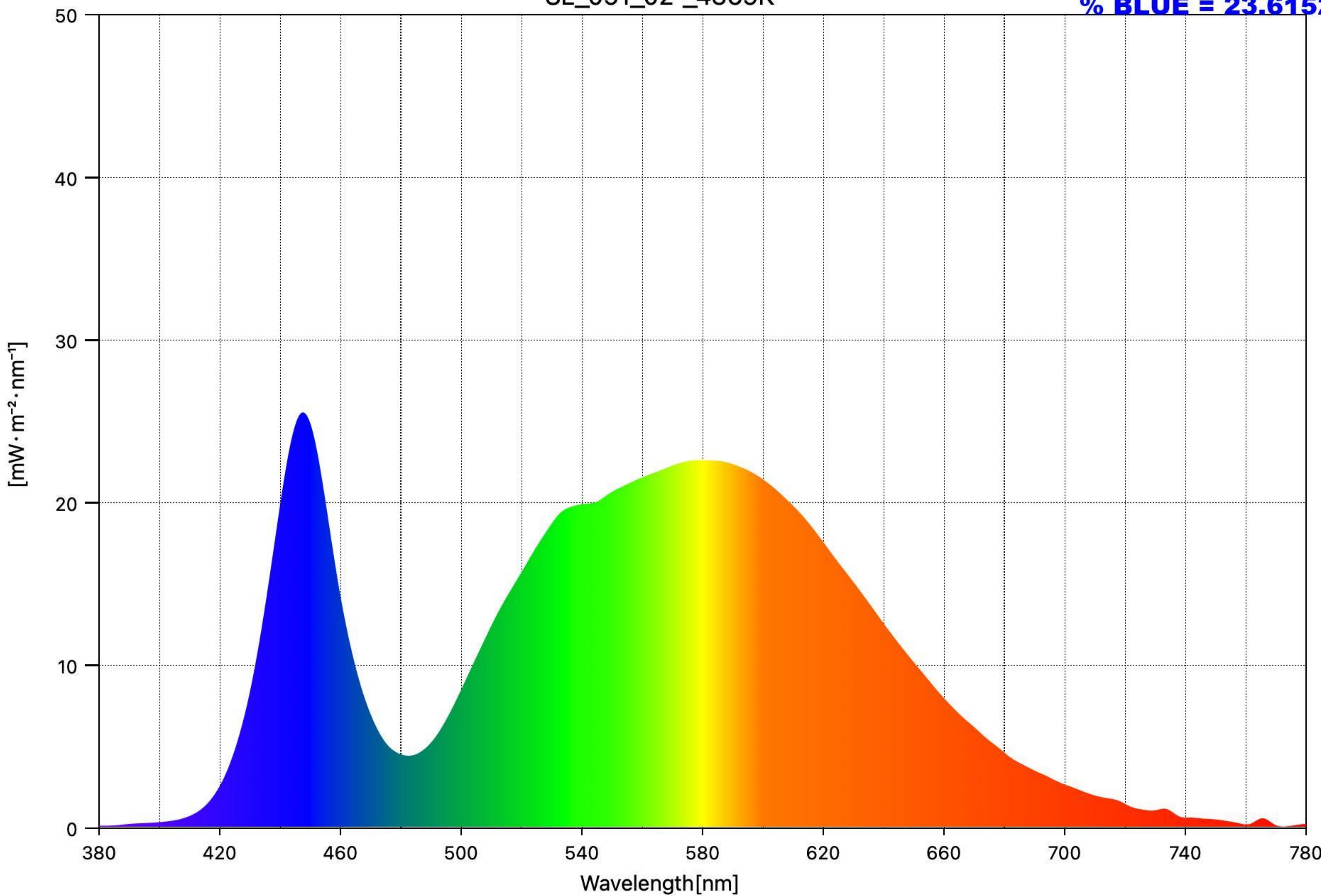
- **Complete Spectral Data Needed**: To finalize compliance, obtain full spectral power data from 460 nm to 700 nm. Cross-reference the sum in this range to evaluate against the 0.02 threshold.
- **Physical Assessment for Shielding**: Conduct a physical inspection or request installation/design documents to ensure proper shielding and downward lighting installation.

Conclusion:

To conclusively determine compliance, ensure access to full spectral data up to 700 nm and validate shielding through additional means. Consider the potential need for fixture adjustments to align perfectly with Maui County's regulatory standards.

SL_091_02°_4369K

% BLUE = 23.6152



Measuring Mode = Ambient

CCT = 4369K

Peak Wavelength = 448nm

Date Saved	2025/12/04 20:18:03
Title	SL_091_02°_4369K
% BLUE	23.6152
Viewing Angle [°]	2
CCT [K]	4369
■uv	0.0026
Illuminance [lx]	1350
Peak Wavelength [nm]	448
Tristimulus Value X	1323.3801
Tristimulus Value Y	1346.6078
Tristimulus Value Z	938.2768
CIE1931 x	0.3668
CIE1931 y	0.3732
CIE1931 z	0.2600
CIE1976 u'	0.2175
CIE1976 v'	0.4980
Dominant Wavelength [nm]	576
Purity [%]	22.1
PPFD [umolm■2s■1]	18.1
CRI Ra	75.3
CRI R1	73.0
CRI R2	80.1
CRI R3	85.2
CRI R4	75.6
CRI R5	72.8
CRI R6	72.2
CRI R7	83.7
CRI R8	59.8
CRI R9	-14.3
CRI R10	52.2
CRI R11	72.2
CRI R12	47.4
CRI R13	73.9
CRI R14	91.5
CRI R15	66.7