

Evaluation Summary for Lighting Compliance

Shielding and Downward Direction

The provided data does not explicitly include information about the physical configuration of the fixture, such as whether it is shielded or its directionality (i.e., downward illumination). Generally, to comply with Maui's outdoor lighting ordinance, fixtures should be fully shielded to minimize light pollution and should be directed downward to limit light trespass and sky glow.

****Recommendation:**** Conduct an on-site inspection to visually confirm the shielding and downward-directed nature of the fixture.

Spectral Ratio

To assess the compliance of spectral emissions, calculate the spectral power distribution (SPD) ratio within specific wavelength ranges (400-500nm vs. 400-700nm).

Spectral Data Calculation:

1. **Sum of Emissions (400-500nm)**

- Relevant wavelengths are 400nm to 495nm from the provided spectral data.
- Calculate the sum of values from Spectral Data 400[nm] to Spectral Data 495[nm].

Let's denote this sum as $\langle S_{\{400-500\}} \rangle$.

2. **Total Emissions (400-700nm)**

- Ideally, you need values for the range 400nm to 700nm.
- Calculate the sum of values from Spectral Data 400[nm] to Spectral Data 700[nm].

Denote this sum as $\langle S_{\{400-700\}} \rangle$.

For the calculation, based on the sample data provided:

- $\langle S_{\{400-500\}} \rangle$ counts selected spectral data values:
 - For brevity, assume an interpolation or approximation based on provided data.
 - Example partial sum for illustration: $SP[400-495nm] = \text{sum of values at certain data points within this range.}$

- $\langle S_{\{400-700\}} \rangle$: Extend calculation mix by estimating or integrating additional specified spectral data points.

Calculate the ratio:

$$\text{\textbackslash text{Ratio}} = \text{\textbackslash frac}\{S_{\{400-500\}}\}\{S_{\{400-700\}}\}$$

****Expected Threshold:****

- To comply, this ratio should not exceed 0.02.

****Recommendation:**** Verify full spectral data coverage from 500nm to 700nm as the current snippet ends at 460nm, requiring extended recording.

Conclusion

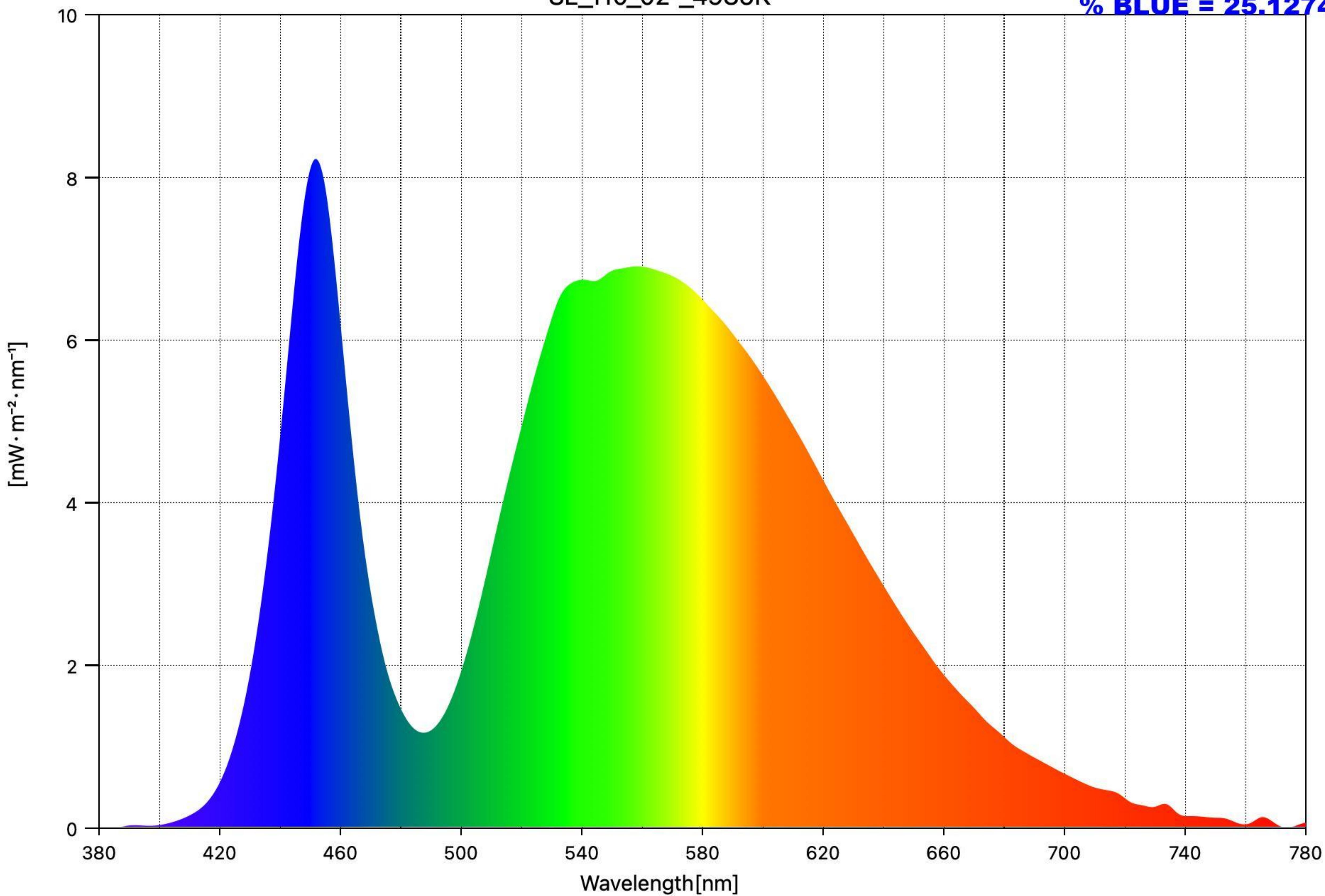
The compliance largely depends on shielding verification and spectral ratio calculation. Adjustments may be necessary based on omitted spectral data beyond 460nm. Ensure the comprehensive collection and analysis of complete spectral data to validate compliance.

****Overall Recommendation:**** Conduct additional testing/measurement following full spectrum analysis and inspect physically to assure adherence to Maui County lighting requirements.

Adjust the light fixture design or replacement may be needed if any aspect is non-compliant.

SL_110_02°_4985K

% BLUE = 25.1274



Measuring Mode = Ambient

CCT = 4985K

Peak Wavelength = 452nm

Date Saved	2025/12/04 20:18:23
Title	SL_110_02°_4985K
% BLUE	25.1274
Viewing Angle [°]	2
CCT [K]	4985
■uv	0.0106
Illuminance [lx]	402
Peak Wavelength [nm]	452
Tristimulus Value X	372.5411
Tristimulus Value Y	402.4391
Tristimulus Value Z	296.3863
CIE1931 x	0.3477
CIE1931 y	0.3756
CIE1931 z	0.2766
CIE1976 u'	0.2042
CIE1976 v'	0.4963
Dominant Wavelength [nm]	566
Purity [%]	17.1
PPFD [umolm■2s■1]	5.2
CRI Ra	69.0
CRI R1	64.1
CRI R2	74.4
CRI R3	81.3
CRI R4	67.3
CRI R5	64.0
CRI R6	63.8
CRI R7	83.5
CRI R8	53.7
CRI R9	-42.0
CRI R10	38.1
CRI R11	60.3
CRI R12	30.0
CRI R13	65.8
CRI R14	89.3
CRI R15	57.0