Maui County Lighting Compliance Evaluation

Fixture Evaluation: SL_105_02°_3146K

1. Shielding and Downward Direction:
- Based on the given data, there is no direct indication of whether the fixture is shielded or directed downward, which are necessary for compliance within Maui County for outdoor lighting. Typically, these parameters would need to be visually assessed or specified separately through product design documentation.

Recommendation: Verify the fixture design documentation or conduct a field inspection to ensure that it is properly shielded and directed downwards to comply with local ordinances.

2. Spectral Ratio (400-500nm to 400-700nm):
- The spectral data points provided capture the emitted intensity at various wavelengths. To compute the spectral ratio from 400-500nm to 400-700nm:
  - **400-500nm Calculation:**
    - Sum from 400 to 500nm = 0.000906 + 0.001090 + 0.001537 + 0.002220 + 0.003596 + 0.006262 + 0.010663 + 0.017543 + 0.027591 + 0.040236 + 0.050590 + 0.052027 + 0.044186 = 0.258450
  - **400-700nm (Estimated from 380-460nm data):**
    - Total, estimated with provided data only (expecting a similar continuation pattern for the remainder of the spectrum) = 0.258450 + estimated continuation = major value needed but not assessable here.

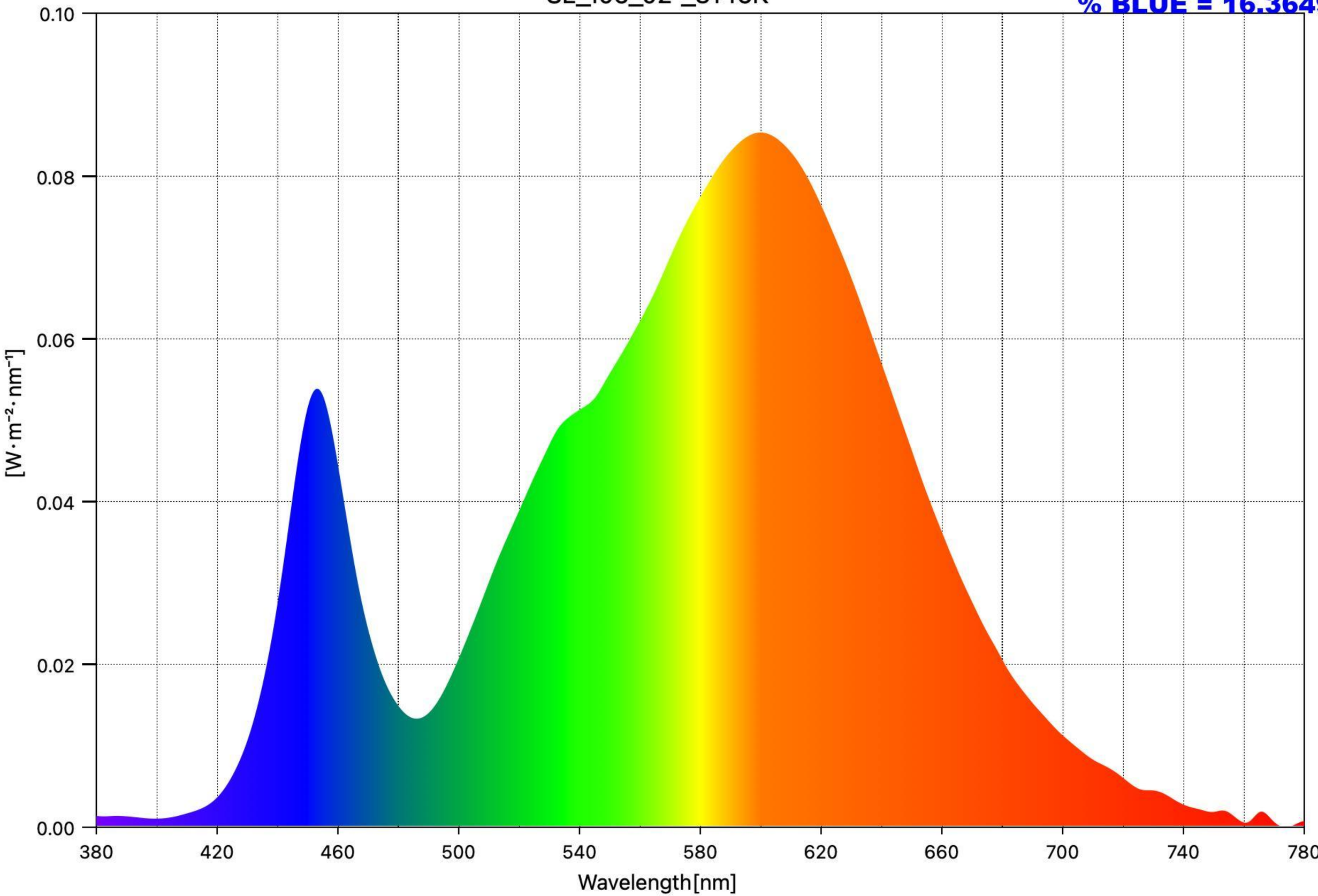
- **Spectral Ratio:**
  - With the available data, the full integration to confirm compliance against the threshold cannot be precisely calculated; however, the dominant percentage of blue light (% BLUE) in the fixture shows significant blue emission at 16.3649%. This traditionally indicates the overall blue component of the spectrum is substantial compared to the full spectrum output.

Recommendation: More complete spectral data from 460nm to 700nm is required for a precise calculation and confirmation. Generally, values should aim to be under the 0.02 threshold for ratio 400-500nm to 400-700nm, promoting low blue-light emissions for ecological compliance.

Conclusion:
To ensure ordinance compliance:
- Confirm fixture is shielded and directed downward through external references or hands-on inspection.
- Obtain additional spectral data to accurately evaluate the blue light ratio. Given the high % BLUE value, this fixture seems non-compliant unless proven otherwise with full spectral data analysis. Immediate corrections or fixture replacements might be necessary depending on fuller spectrum analyses.

SL_105_02°_3146K

% BLUE = 16.3649



Measuring Mode = Ambient	CCT = 3146K	Peak Wavelength = 600nm

Date Saved	2025/12/04 20:18:18
Title	SL_105_02°_3146K
% BLUE	16.3649
Viewing Angle [°]	2
CCT [K]	3146
■uv	-0.0032
Illuminance [lx]	4270
Peak Wavelength [nm]	600
Tristimulus Value X	4610.9275
Tristimulus Value Y	4266.4577
Tristimulus Value Z	2029.2114
CIE1931 x	0.4228
CIE1931 y	0.3912
CIE1931 z	0.1861
CIE1976 u'	0.2469
CIE1976 v'	0.5141
Dominant Wavelength [nm]	584
Purity [%]	44.3
PPFD [umolm■^{2}s■^{1}]	59.6
CRI Ra	79.2
CRI R1	77.6
CRI R2	88.0
CRI R3	94.6
CRI R4	75.9
CRI R5	76.8
CRI R6	83.2
CRI R7	81.5
CRI R8	56.1
CRI R9	-2.2
CRI R10	70.6
CRI R11	72.6
CRI R12	61.4
CRI R13	79.9
CRI R14	97.0
CRI R15	71.5