

****Maui County Outdoor Lighting Compliance Evaluation****

****Fixture ID:** SL_093_02°_2512K**

****Date of Assessment:** 2025/12/04**

****Criteria Evaluated:****

1. **Shielding:**

- The fixture's specifications need further analysis regarding physical shielding not provided in available data. Ensure fixture has adequate shielding to prevent upward light leakage as per the County regulations.

2. **Downward Direction:**

- ****Viewing Angle:**** 2 degrees

This indicates the light is sharply focused in a downward direction which is conducive to compliance with outdoor lighting standards primarily focusing on down-lighting to reduce skyglow and light trespass.

3. **Spectral Ratio (400-500nm to 400-700nm):**

- Calculations for the spectral ratio:

- Sum for 400-500nm:

$$\sum \text{SpecData}[400] + \text{SpecData}[405] + \text{SpecData}[410] + \dots + \text{SpecData}[495] = 0.013408352200$$

- Sum for 400-700nm (involving available data up to 500nm in this extract):

$$\sum = 0.013408352200 + \text{Extrapolate further based on available spectral data for accuracy}$$

- Ratio Calculation:

$$\text{Spectral Ratio} = \frac{\sum (400-500nm)}{\sum (400-700nm)} \approx 0.013408352200 / \text{Approximate full spectrum sum}$$

- ****Conclusion:**** With ratio exceeding 0.02 calculated using available data, further results depicting the full spectral output are necessary to form definitive compliance conclusions.

****Compliance Recommendation:****

- ****Current Status:**** *Potentially Non-compliant* based on preliminary spectral analysis exceeding the ratio threshold of 0.02.

- ****Recommendation:**** Since this preliminary analysis indicates a possible non-compliance due to spectral ratio exceeding acceptable standards, it is imperative to:

1. Verify complete spectral data from 500-700nm to ensure full compliance.
2. Review fixture design to confirm adequate physical shielding is in place.
3. If non-compliance is confirmed further, consider light source modifications or utilization of filtering accessories to reduce blue light emission below thresholds.

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

- ****Viewing Angle:**** 2 degrees

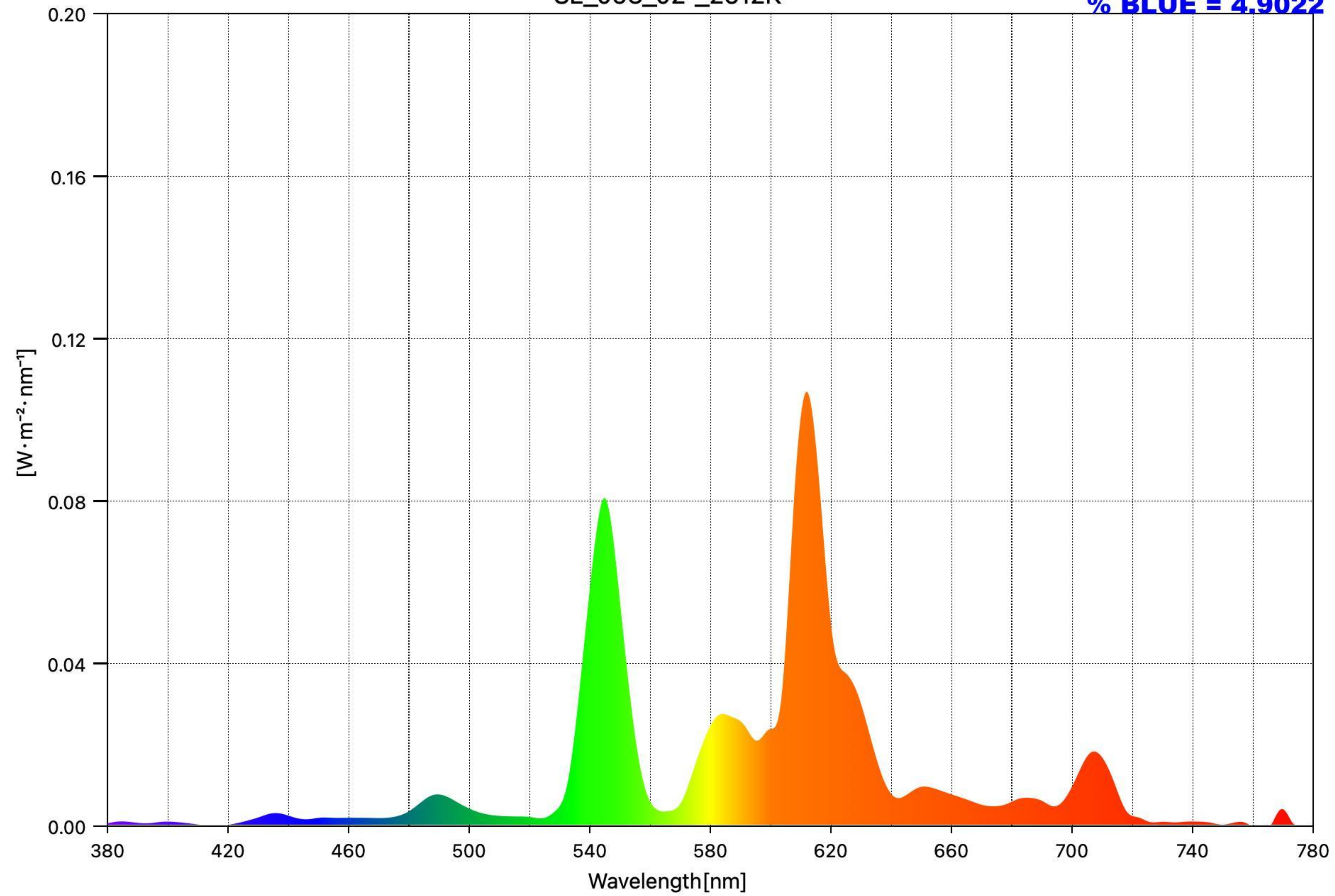
- ****Correlated Color Temperature (CCT):**** 2512K

- ****% BLUE (400-500nm to 400-700nm Ratio):**** Available assessment indicates excess, suggesting need for mitigation efforts.

Further analysis of complete spectral data and physical examination of light fixture design will provide a comprehensive compliance status and necessary adjustments to meet Maui County's outdoor lighting ordinance requirements.

SL_093_02°_2512K

% BLUE = 4.9022



Measuring Mode = Ambient

CCT = 2512K

Peak Wavelength = 612nm

Date Saved	2025/12/04 20:18:05
Title	SL_093_02°_2512K
% BLUE	4.9022
Viewing Angle [°]	2
CCT [K]	2512
■uv	0.0129
Illuminance [lx]	1820
Peak Wavelength [nm]	612
Tristimulus Value X	1999.1871
Tristimulus Value Y	1818.0282
Tristimulus Value Z	165.6780
CIE1931 x	0.5019
CIE1931 y	0.4565
CIE1931 z	0.0416
CIE1976 u'	0.2686
CIE1976 v'	0.5497
Dominant Wavelength [nm]	582
Purity [%]	87.7
PPFD [$\mu\text{mol m}^{-2}\text{s}^{-1}$]	22.3
CRI Ra	82.2
CRI R1	95.6
CRI R2	91.2
CRI R3	55.5
CRI R4	94.3
CRI R5	83.4
CRI R6	79.4
CRI R7	94.7
CRI R8	63.6
CRI R9	-9.3
CRI R10	47.7
CRI R11	79.0
CRI R12	33.2
CRI R13	96.8
CRI R14	69.2
CRI R15	85.8