

Color Uniformity Analysis Report

Report Generated: 2025-11-10 15:33:46

Generated By: Olufemi Balogun

Company: Photonics QC Lab

Measurement Information

Parameter	Value
Device Serial	WAVEGUIDE-GOOD-001
Operator	Olufemi Balogun
Instrument	Minolta CS-2000
Instrument Serial	Cs2000-12345
Calibration Date	2025-10-15
Temperature	23.5 °C
Humidity	45.0 %
Ambient Light	0.3 lux

QC Test Results

Overall Result: PASS

Uniformity Metrics

Metric	Value	Specification	Status
Mean ΔE*00	0.76	< 3.0	✓
Max ΔE*00	2.11	< 5.0	✓
Std Dev ΔE*00	0.50	< 2.0	✓
Median ΔE*00	0.63	-	-

Color Statistics (CIELAB)

Component	Mean	Std Dev	Min	Max
L* (Lightness)	100.7	0.5	100.0	102.0
a* (Red-Green)	-0.01	0.10	0.00	0.00
b* (Yellow-Blue)	-0.28	0.16	0.00	0.00

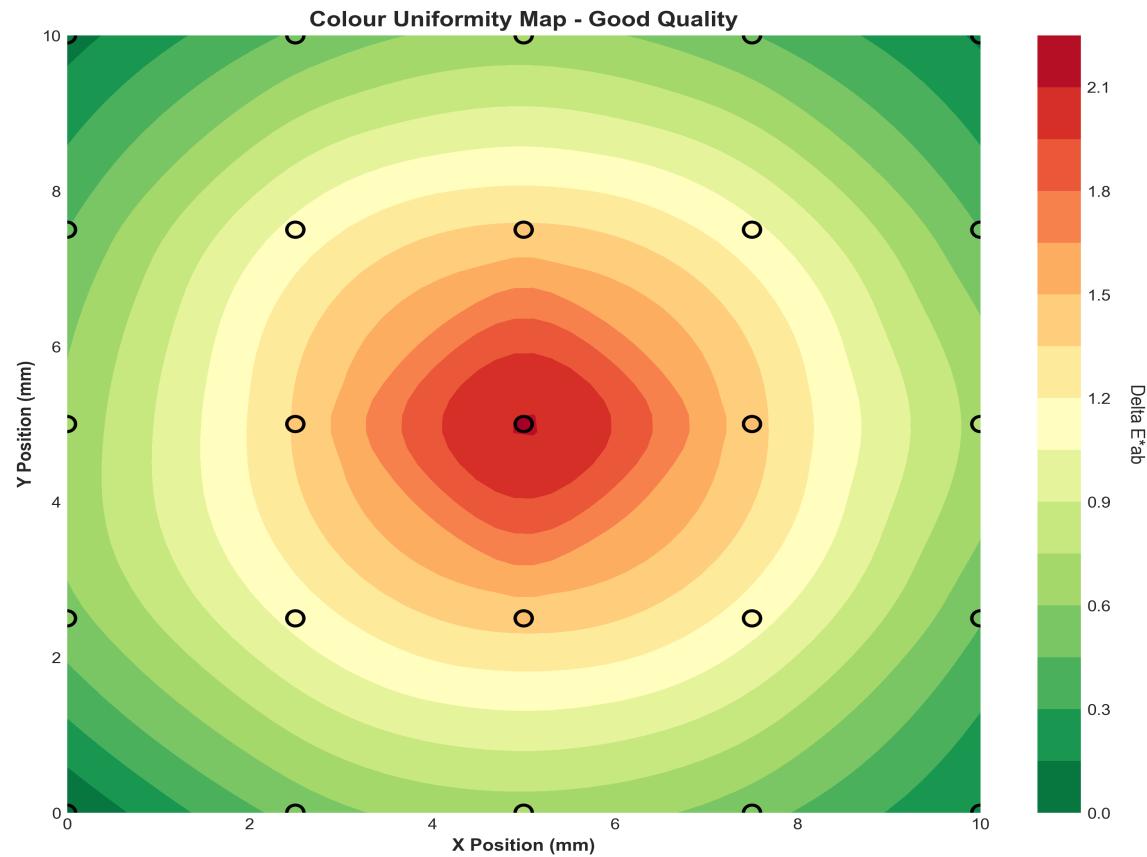
Chromaticity Uniformity (CIE 1931 xy)

Metric	Value	Specification	Status
Mean xy Deviation	0.0007	< 0.01	✓
Max xy Deviation	0.0015	< 0.01	✓

Worst Position: (5.0, 5.0) mm with $\Delta E = 2.11$

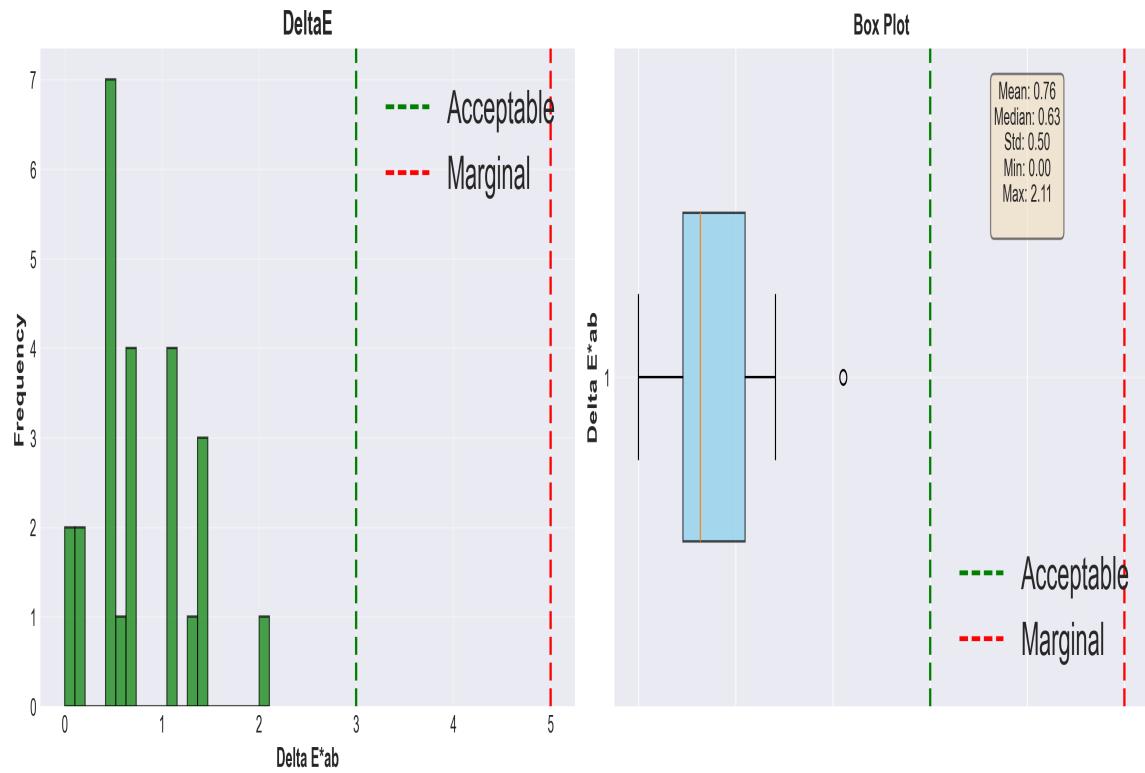
Uniformity Visualizations

Uniformity Heatmap

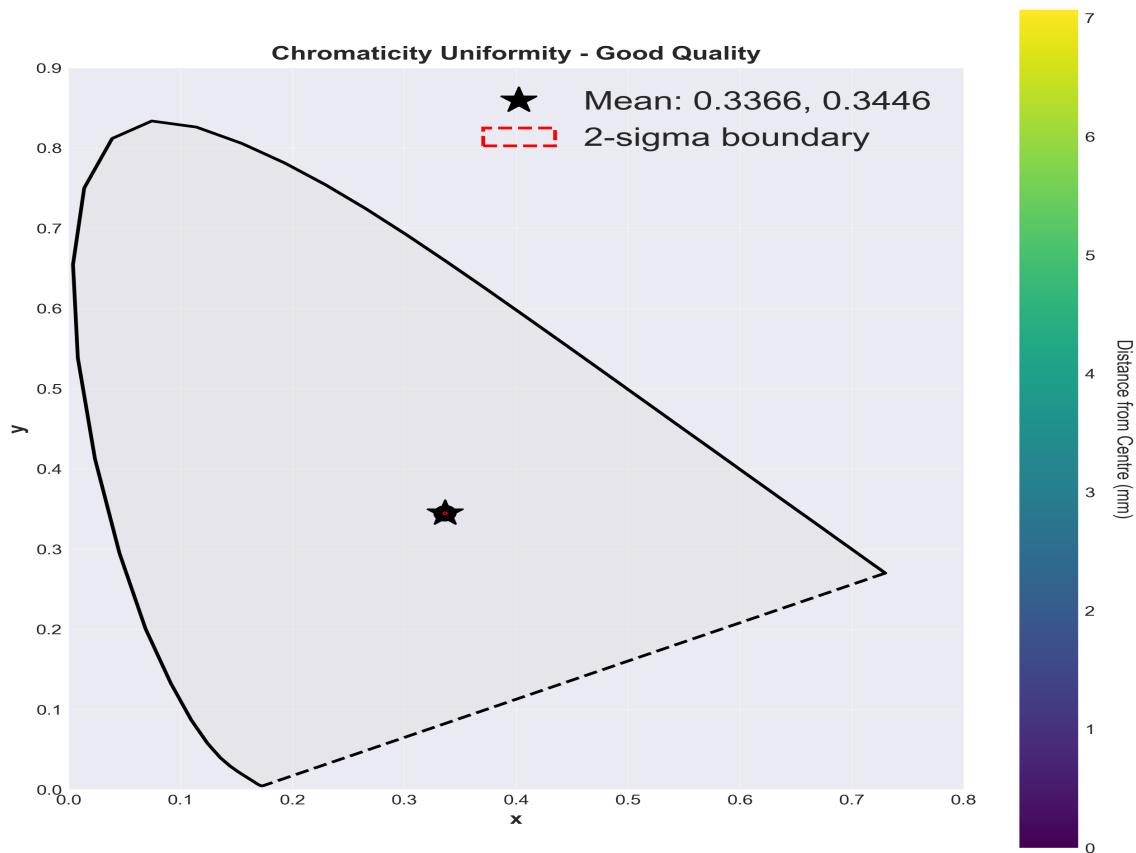


ΔE Distribution

DeltaE Distribution - Good Quality



Chromaticity Diagram



Notes

Simulated good quality waveguide for testing

Generated by Olufemi Balogun | Photonics QC Lab