

Color Uniformity Analysis Report

Report Generated: 2025-11-07 16:52:36
Generated By: Olufemi Balogun
Company: Photonics QC Lab

Measurement Information

Parameter	Value
Device Serial	WAVEGUIDE-EXCELLENT-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	0.08	< 3.0	✓
Max ΔE^*00	0.18	< 5.0	✓
Std Dev ΔE^*00	0.05	< 2.0	✓
Median ΔE^*00	0.07	-	-

Color Statistics (CIELAB)

Component	Mean	Std Dev	Min	Max
L* (Lightness)	100.0	0.0	100.0	100.0
a* (Red-Green)	0.04	0.03	0.00	0.00
b* (Yellow-Blue)	-0.05	0.03	0.00	0.00

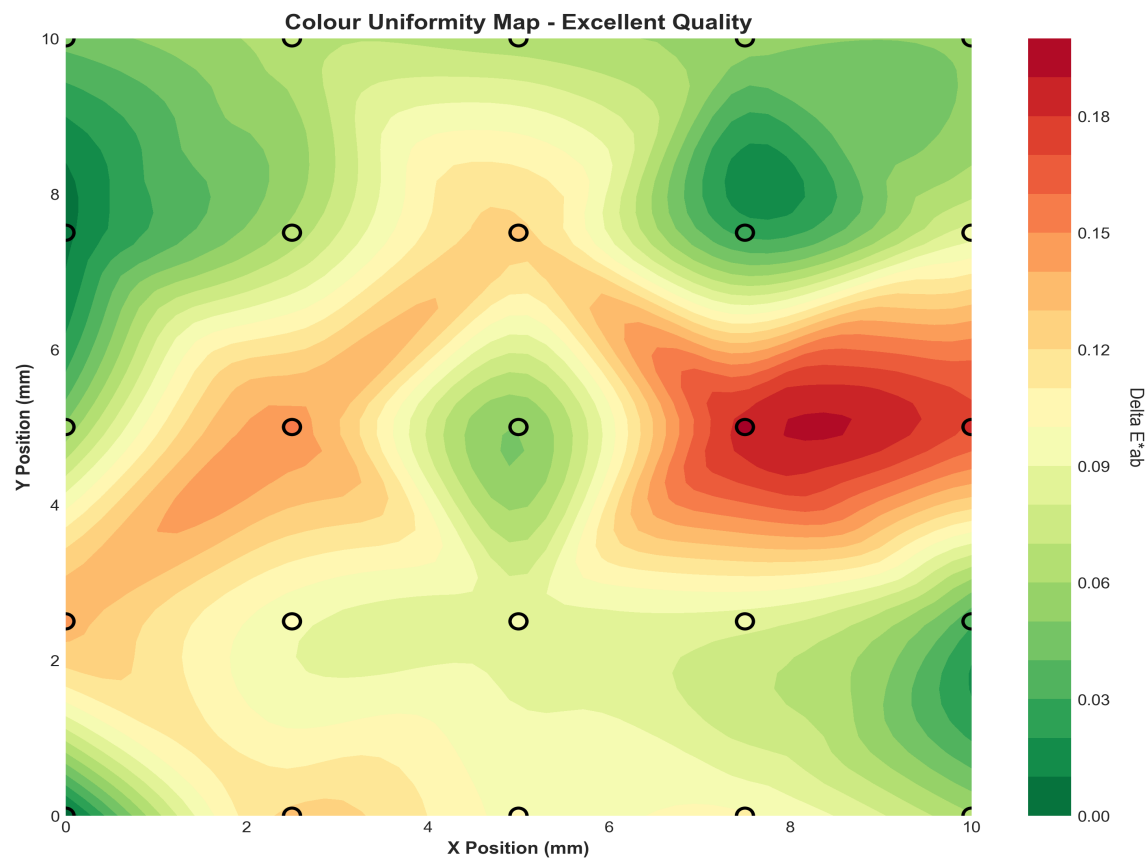
Chromaticity Uniformity (CIE 1931 xy)

Metric	Value	Specification	Status
Mean xy Deviation	0.0001	< 0.01	✓
Max xy Deviation	0.0002	< 0.01	✓

Worst Position: (7.5, 5.0) mm with $\Delta E = 0.18$

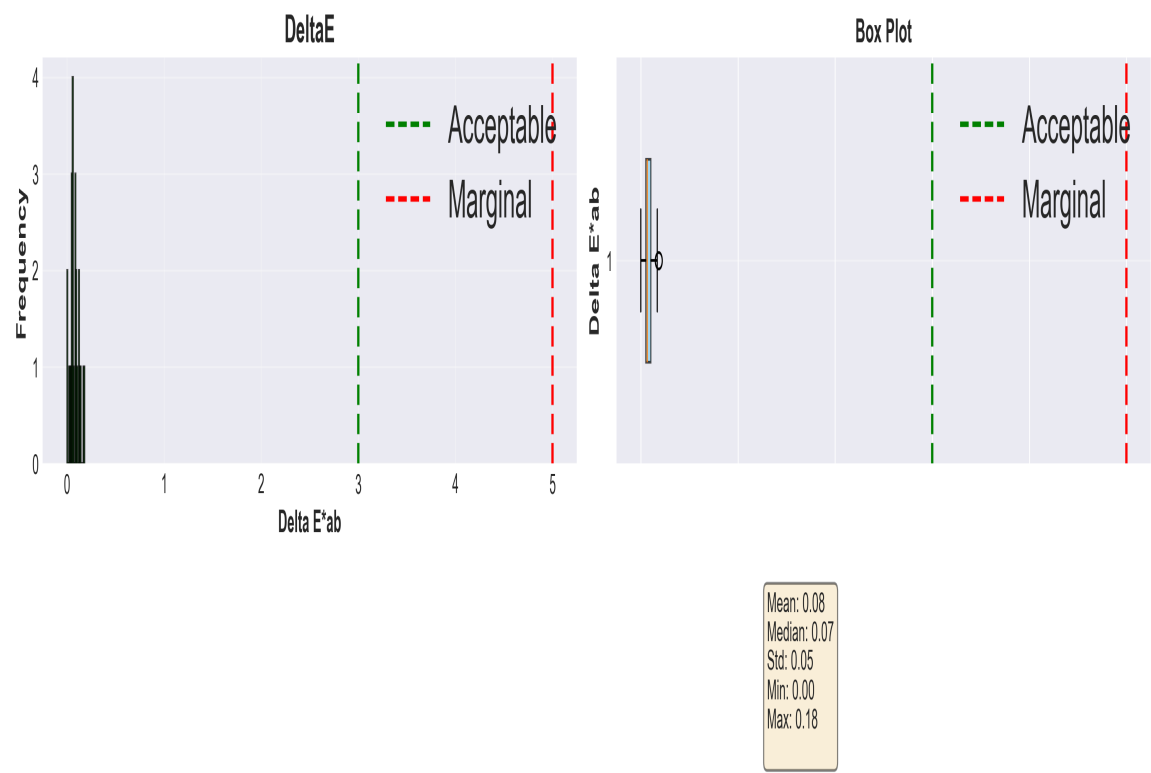
Uniformity Visualizations

Uniformity Heatmap

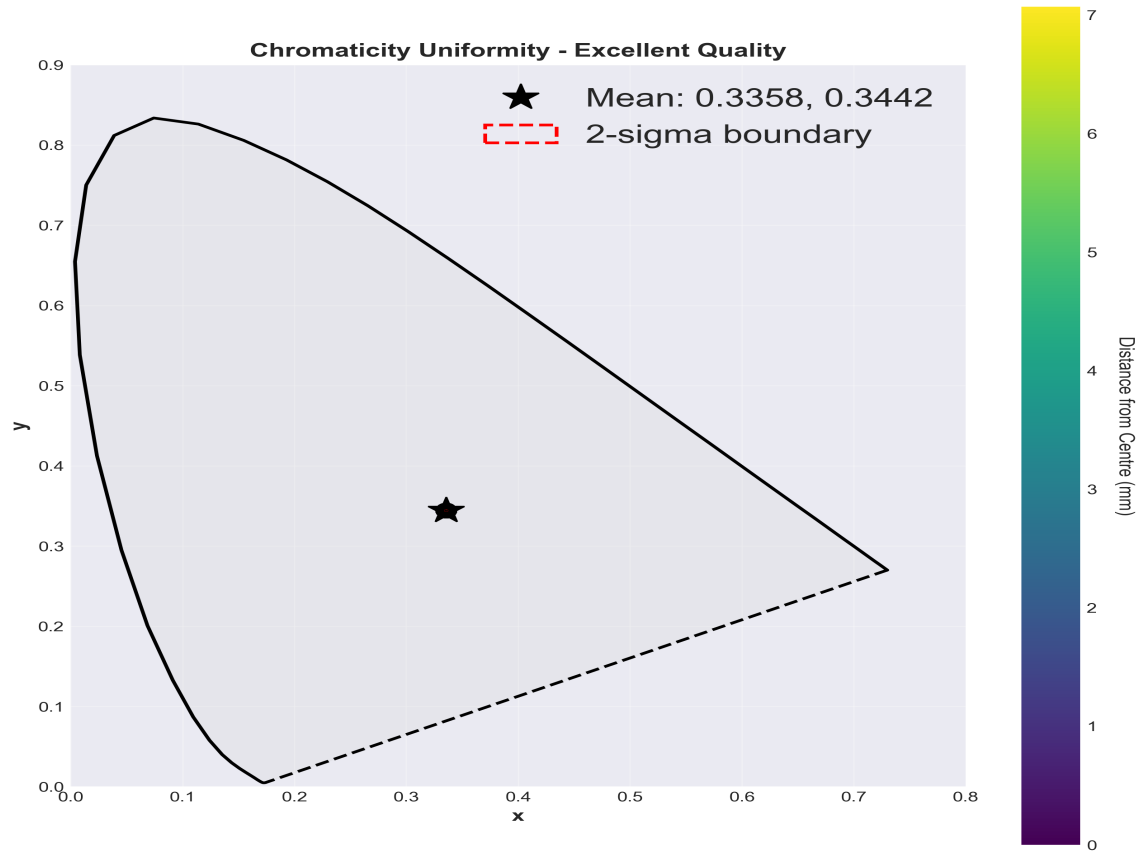


ΔE Distribution

DeltaE Distribution - Excellent Quality



Chromaticity Diagram



Notes

Simulated excellent quality waveguide for testing

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