


SNOWFLAKE

SINGLE AXIS TOLERANCE

NAZDAR

Open Capture – Color Inspector

Connect
Problems ?



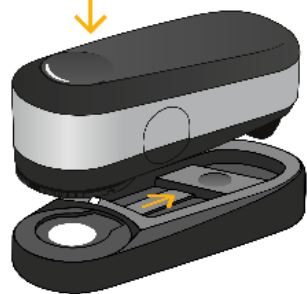
Organization Name:

Instrument:

X-Rite i1Pro
▼

Frequent Calibration

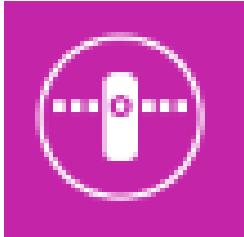
Auto-connect on Application Start



Place the instrument on its calibration target.

Close
Connect

Navigate to QuickChecker



ChromaChecker Capture

File Edit Tools

Scratchpad QuickChecker

Substrate Start Color Match Start Variation Recalibrate Measure

Color Specification Source of Reference Printing Device Customer

M1 / D50 / 2° / White None -

Welcome to QuickChecker! Measure now!

- If you are in Print Industry - measure "[Substrate](#)" first -this will provide the "best match" color report to predict the required density adjustment to provide the best match color result.
- If you want to analyze uniformity (color variations), start a series of measurements with the "[Start Variation](#)" button.
- All measurements are considered temporary and will disappear after 24 hours unless saved.
- For averaged data - select [Average before measuring](#).

No source of reference selected. Select one from top bar to see comparison report.

Once you measure the sample - select Source of Reference.

- For QC Tracking - Select [Projects](#) (require defining by Expert)
- For fast comparison, use [QuickChecker](#) (select any measurement already taken)
- If you have Lab colorimetric coordinates that you want to match, select [L*a*b*](#)
- Compare to Color Library or Color Palette by selecting [Assets](#) (you can load libraries and palettes as CXF libraries using the Web-based interface associated with your QuikChecker account).
- Use [CMYK/ nCLR](#) for process color predictions and substrate assessment. Enter any CMYK or CMYK/nCLR values to refer to.
- [Print Inspector](#) save option allows measurement data to be saved to a print track

ver: 2.2.0v849 Open Beta 2

Measure now! Center of sample Snowflake



Name sample “Snowflake 50 0 0”, Click “Save”

The screenshot shows the ChromaChecker software interface. The 'Sample Name' field is highlighted with a red circle and labeled with '1' and '2'. The interface includes a menu bar (File, Edit, Tools), a toolbar with various icons, and a main workspace with several panels:

- Color Specification:** M1 / D50 / 2° / White
- Source of Reference:** None
- Printing Device:** -
- Customer:** -
- Sample Name:** Snowflake 50 0 0 sample

Below the specification fields, there is a color swatch for 'Snowflake 50 0 0 sample' with a timestamp of '2024-01-23 14:23:19'. To the right of the swatch are icons for Report, CxF, Assets, Grid, Variator, and Snowflake.

The main workspace contains several data visualization panels:

- Spectral Reflectance Graph:** A line graph showing reflectance vs. wavelength (0.36 @ 730nm).
- CIE Lab:**
 - L* = 51.67
 - a* = 6.48
 - b* = 4.32
 - C = 7.79
 - h = 33.7°
 - OBA Index
 - FI
- a* / b* Chromaticity Diagram:** A color wheel diagram showing the position of the sample.
- L* Scale:** A vertical scale from 0 to 100.
- Color Conversion Table:**

ICC	CII	Designer
CMYK	RGB	
ISOcoated_v2_eci	sRGB	
C = 38.82	R = 137	
M = 42.75	G = 119	
Y = 41.57	B = 116	
K = 23.53	(ΔE ₀₀ = 0.13)	
(ΔE ₀₀ = 0.05)	sRGB HEX	
	#897774	

At the bottom of the workspace, a message states: "No source of reference selected. Select one from top bar to see comparison report."

The bottom right corner of the interface shows the version: "ver: 2.2.0v849 Open Beta 2".

Click Assets to export measurement to ChromaChecker Color Palette



The screenshot shows the ChromaChecker software interface. The 'Export to assets' dialog box is highlighted in blue and contains the following elements:

- 1**: Assets icon in the top toolbar.
- 2**: 'Library / Palette' dropdown menu set to 'New Palette'.
- 3**: 'Sample Name' text field containing 'Snowflake 50 0 0'.
- 4**: 'Palette Name' text field containing 'Snowflake 50 0 0'.
- 5**: 'Save' button.




The background interface shows a 'Snowflake 50 0 0 QC' color sample with the following data:

Parameter	Value
L*	51.59
a*	6.55
b*	3.79
C	7.57
h	30.0°
Oba Index	1.7
FI	1.5

Colorimetric data and color space conversions are also displayed:







Color Space	Value
chromaspot	0R4.50 (ΔE ₀₀ = 2.8)
RAL Design	058 52 5 (ΔE ₀₀ = 0.52)
CMYK	C = 38.82, M = 43.14, Y = 41.18, K = 23.53 (ΔE ₀₀ = 0.13)
RGB	R = 137, G = 119, B = 117 (ΔE ₀₀ = 0.13)
sRGB HEX	#897775

Flip over the ChromaChecker to see your new Asset



Global Preferences  LUTs Public Library  Add new 

Color Search

Color Palettes

	Palette Name	Creator	Process	Substrate	Finish	Samples	
<input type="checkbox"/>	 CXF-4Full	ChromaChecker Capture	Other	Coated Paper	None	1	
<input type="checkbox"/>	 Dawn Palette		Offset Lithography	Coated Paper	None	3	
<input type="checkbox"/>	 Snowflake 50 0 0 palette					1	

Color Libraries

	Library Name	Creator	Process	Substrate	Finish	Samples	
<input type="checkbox"/>	 2 ORANGE P2P51 (i1Pro-i1iO) ROW 4-5	X-Rite - Prism				100	

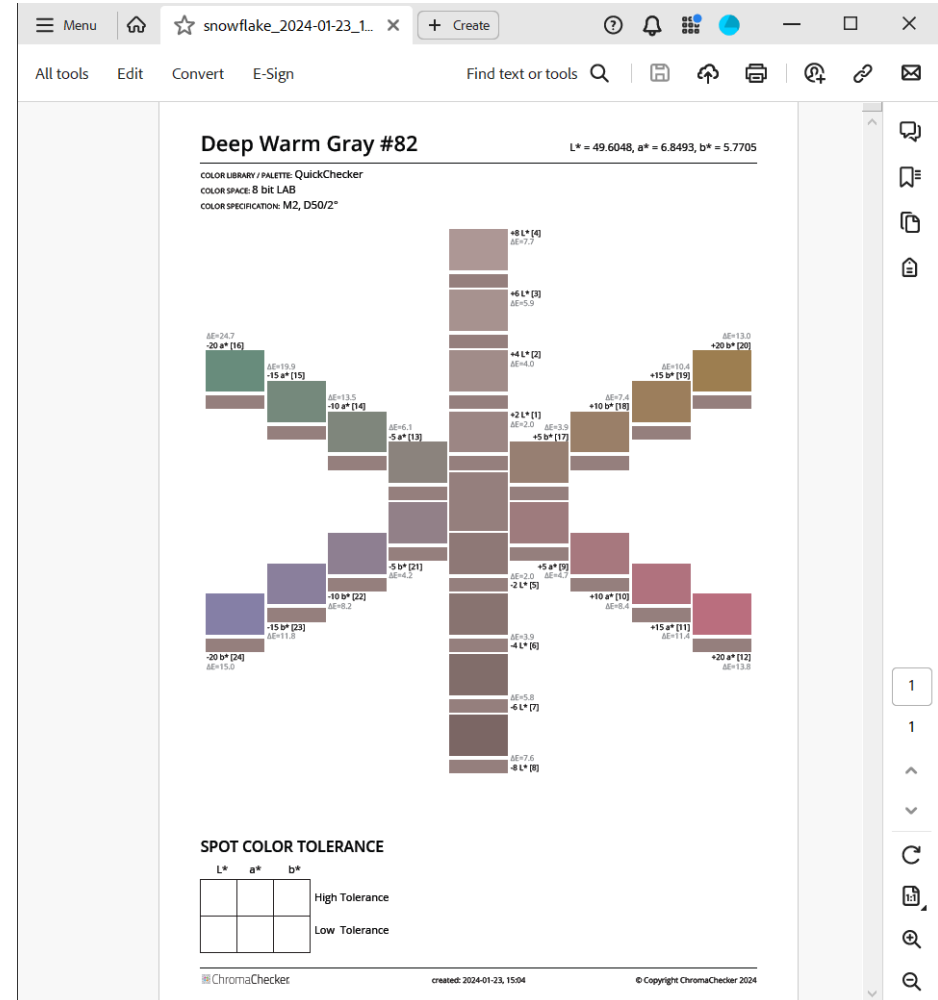
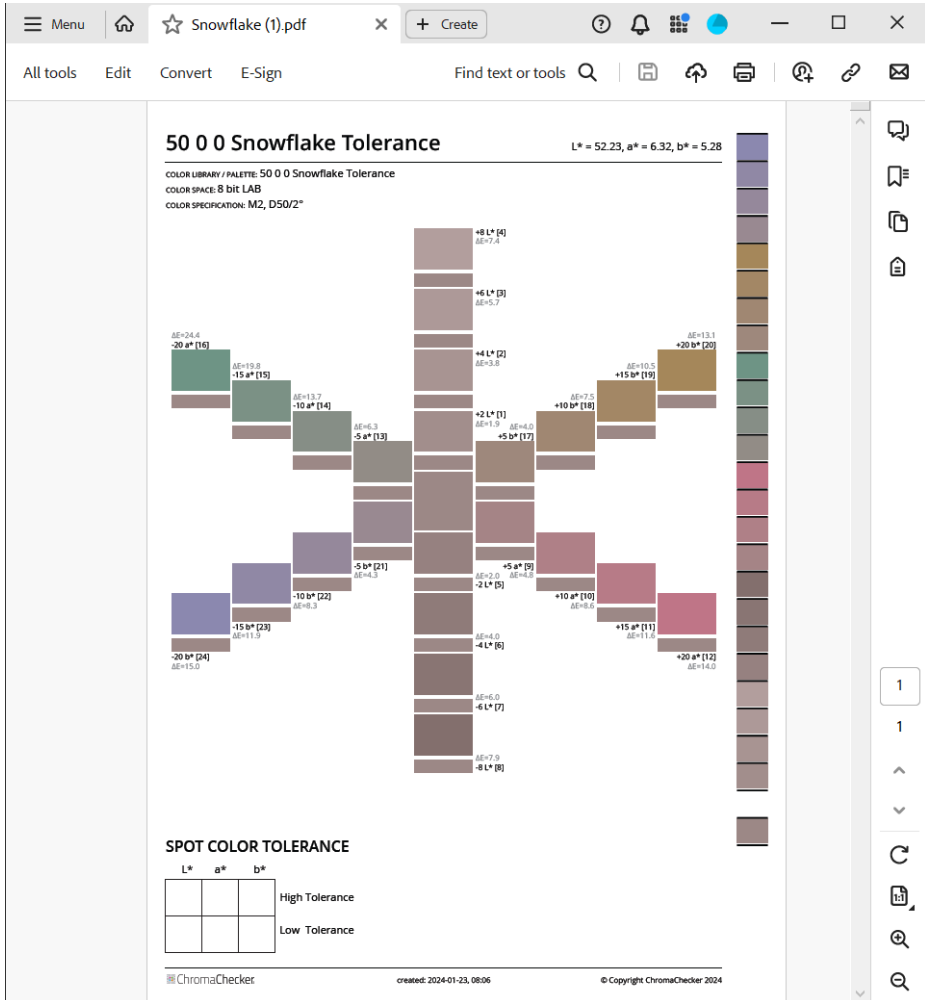
ChromaChecker / Color Inspector / Assets / Snowflake palette

The screenshot shows the ChromaChecker web interface. The browser address bar displays `chromachecker.com/color/en/library/Nazdar_EFI/5905`. The page title is "Snowflake 50 0 0 palette". The interface includes a search bar with the following parameters: Sample: [empty], M. Cond. M0, Mode LAB, L* [empty], a* [empty], b* [empty], within ΔE 0, ΔE Formula ΔE 2000, and a Clear button. Below the search bar is a table with one row of data:

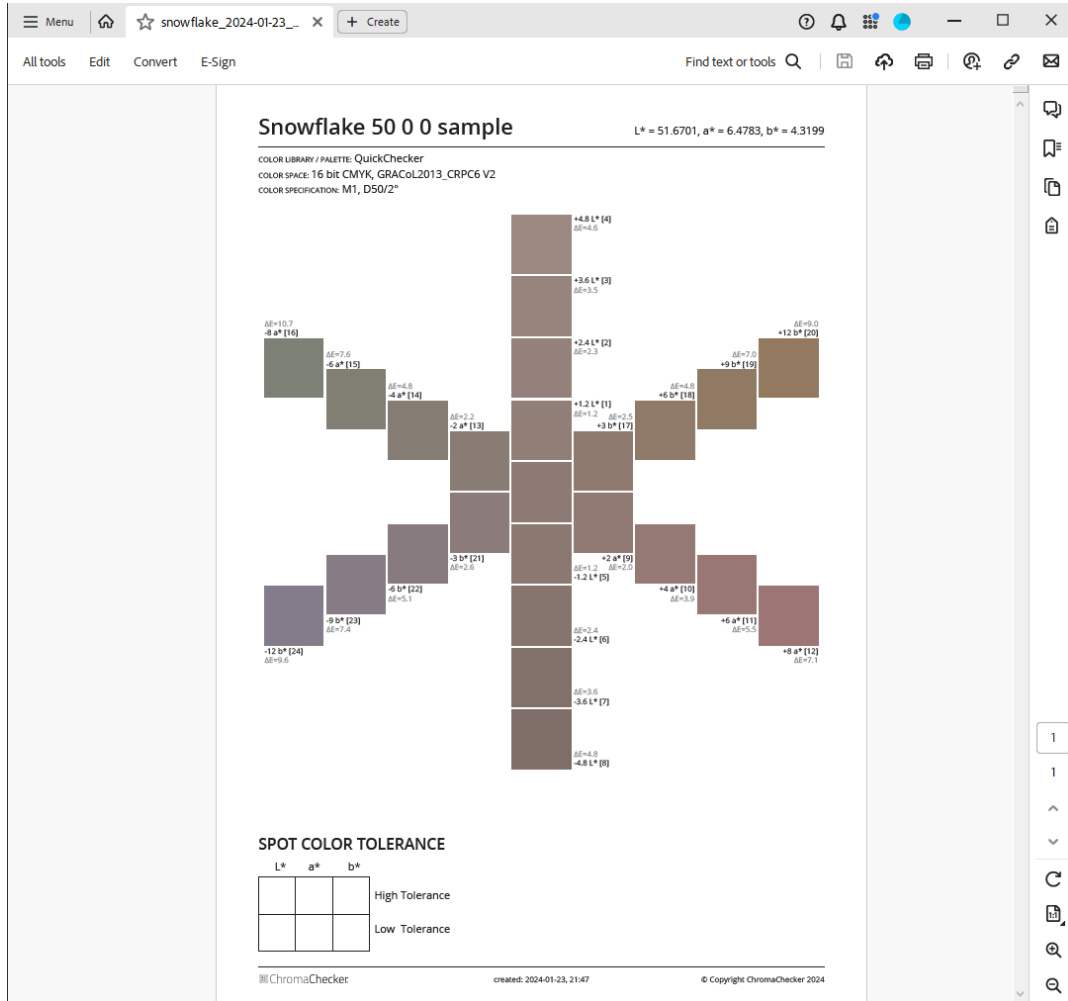
	ID	Name	Projects	Track	L*	a*	b*	Max. error	Avg. error	Ill./Obs.	CxF	M0	M1	M2	M3
<input checked="" type="checkbox"/>		Snowflake 50 0 0 sample			51.64	6.43	4.79			D50/2°	X-4b				

At the bottom of the interface, there is a toolbar with buttons: Compare, Copy to Palette, Set Flag, Average, **Snowflake** (circled in red), Grid, Fanbook, and Delete sample.

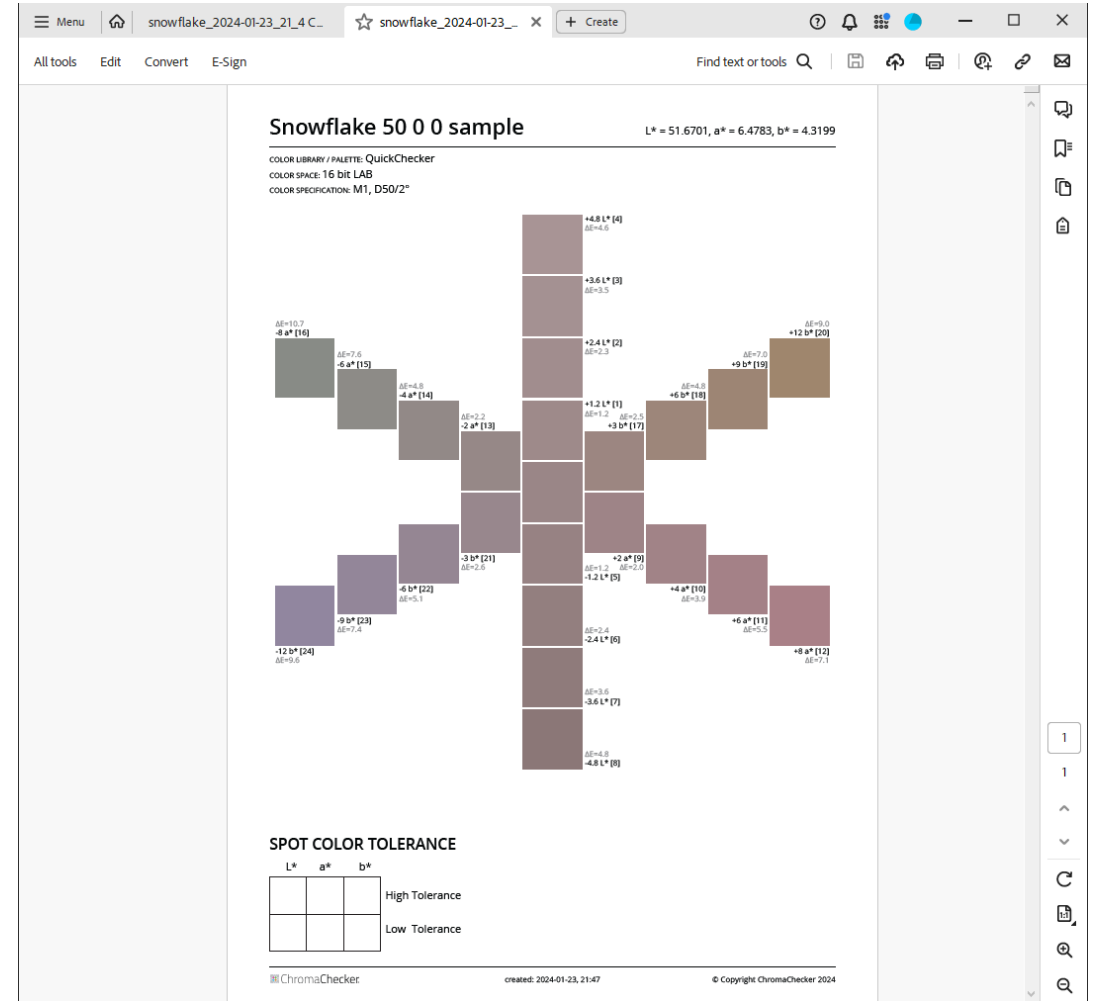
Snowflake Lab space – Same results generated from Color Tools & Scratchpad



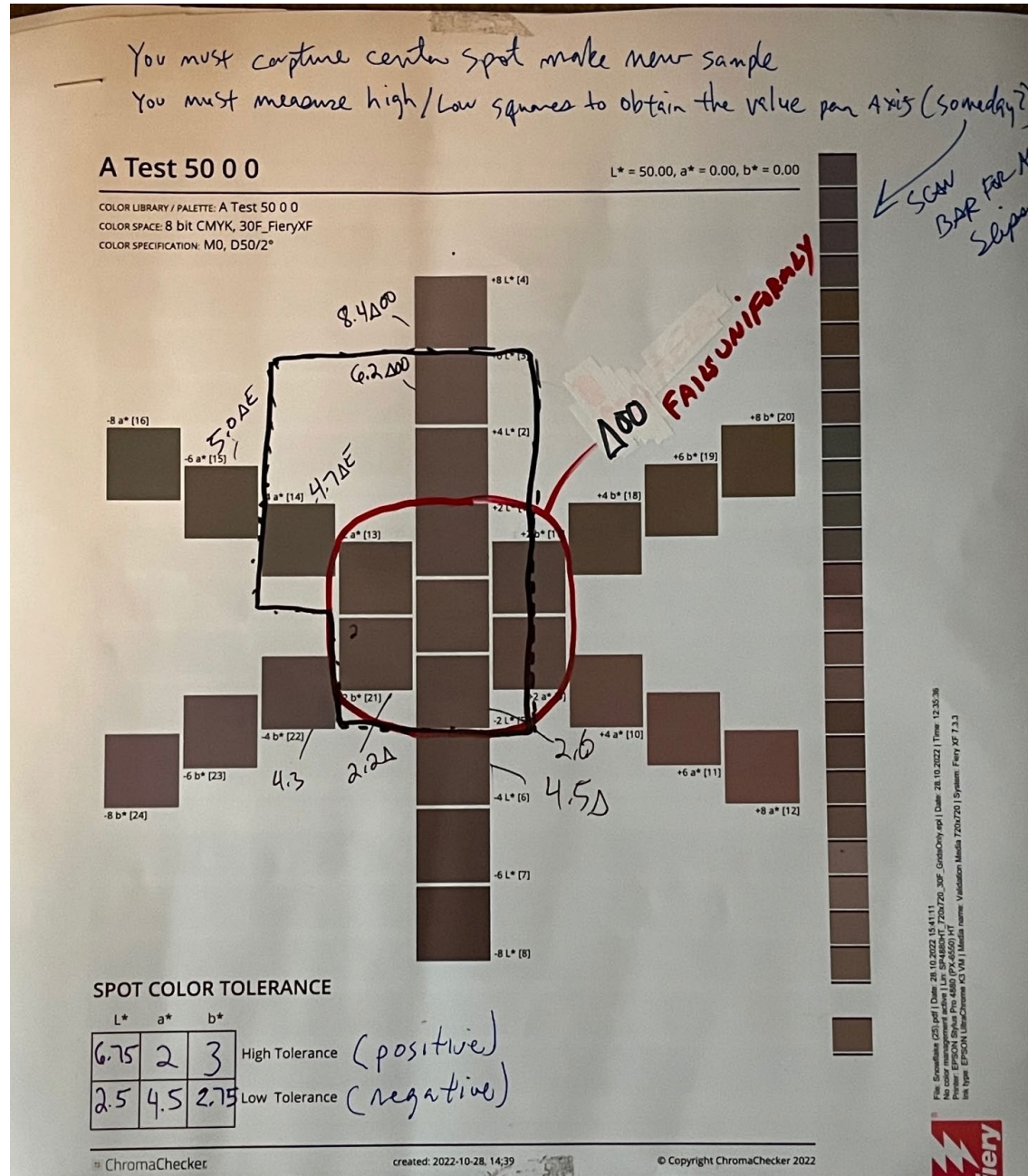
Lab Space and Device



CMYK Space



Tolerance Time!



File: Spectralink_C20.pdf | Date: 28.10.2022, 15:41:11
 No color management active | Library: g:\4400\HT_720\720_30F_GreatOnly.spd | Color: 28.10.2022 | Time: 13:35:36
 Printer: EPSON UltraChrome K3 VAM | Media name: Validation Media 720/720 | System: Fiery XF 7.3.3
 Ink type: EPSON UltraChrome K3 VAM



Measure the Delta's in Scratchpad

The screenshot displays the ChromaChecker software interface. The main window is titled 'ChromaChecker Capture' and features a 'Scratchpad' sidebar on the left with a list of color swatches including 'Deep Warm Gray #7', 'Warm Gray #6', 'Warm Gray #5', 'Warm Gray #4', 'Substrate #1', and 'Snowflake 50 0 0 sample'. The central area shows the 'QuickChecker' tool with various control buttons like 'Substrate', 'Start Color Match', 'Start Variation', 'Recalibrate', and 'Measure'. Below these are input fields for 'Color Specification' (M1 / D50 / 2° / White), 'Source of Reference' (Assets), 'Printing Device', 'Customer', and 'Sample Name' (Snowflake 50 0 0 sample). The main display area is divided into several sections: a 'Spectral Reflectance Graph' showing a line graph of reflectance vs wavelength; 'CIE Lab' data (L* = 51.67, a* = 6.48, b* = 4.32, C = 7.79, h = 33.7°); an 'a*/b*' color space plot; and a table of colorimetric data. The 'Deltas' tab is active, showing ΔE_{00} = 0.0 and $\Delta E_{94 GA}$ = 0.0. The bottom right corner indicates the version: 'ver: 2.2.0v849 Open Beta 2'.

Color Specification: M1 / D50 / 2° / White

Source of Reference: Assets

Printing Device: -

Customer: -

Sample Name: Snowflake 50 0 0 sample

Spectral Reflectance Graph: 0.36 @ 730nm

CIE Lab:

- L* = 51.67
- a* = 6.48
- b* = 4.32
- C = 7.79
- h = 33.7°

Colorimetric Data:

Parameter	Value
CMYK	CMYK
ISOcoated_v2_eci	ISOcoated_v2_eci
C	38.82
M	42.75
Y	41.57
K	23.53
(ΔE_{00})	0.13
(ΔE_{94})	0.05
RGB	RGB
sRGB	sRGB
R	137
G	119
B	116
sRGB HEX	#897774

Deltas:

Delta	Value
ΔE_{00}	0.0
$\Delta E_{94 GA}$	0.0

L+ Upper limit (Inside Perimeter)

The screenshot displays the ChromaChecker software interface. The main window shows the following data and controls:

- Color Specification:** M1 / D50 / 2° / White
- Source of Reference:** Assets
- Printing Device:** -
- Customer:** -
- Sample Name:** Warm Gray #6

Colorimetry Data:

- $b^* = 2.26$
- $C = 5.60$
- $h = 23.8^\circ$
- OBA Index: 2.1
- FI: 2.0

CMYK and RGB Data:

- C = 35.29, M = 37.25, Y = 34.90, K = 16.08
- R = 151, G = 137, B = 136
- sRGB HEX: #978988

Delta E₀₀ Results:

- Measured ΔE_{00} : 6.6
- Suggested Density Correction: +0.13D
- Optimal D: 0.699
- Optimal ΔE_{00} : 1.10

Deltas Table:

Density	Colorimetry	Deltas	Metamerism
ΔE_{00}		6.6	+L
$\Delta E_{94\ GA}$		6.9	
$\Delta E_{94\ TEX}$		3.8	
ΔE_{76}		7.1	
$\Delta E_{CMC(1:1)}$		6.6	
$\Delta E_{CMC(2:1)}$		4.0	
ΔC		-2.2	
ΔH		1.1	

Metamerism Diagram: A star-shaped diagram with a central point and six arms. The top arm is labeled '+L' and has a value of 6.6 circled in red. The left arm is labeled '-a' with a value of -1.4. The bottom arm is labeled '-b' with a value of -2.1. The right arm is labeled '+b'. The bottom-right arm is labeled '+a'.

SPOT COLOR TOLERANCE Table:

L*	a*	b*	Tolerance
6.75	2	3	High Tolerance (positive)
2.5	4.5	2.75	Low Tolerance (negative)

Software version: ver: 2.2.0v849 Open Beta 2

L- Lower limit (Inside Perimeter)

ChromaChecker Capture

File Edit Tools

Scratchpad QuickChecker

Substrate Start Color Match Start Variation Recalibrate Measure

Color Specification: M1 / D50 / 2° / White Source of Reference: Assets Printing Device: - Customer: Sample Name: Deep Warm Gray #7

0.34 @ 730nm

0.4
0.2
0

0.34 @ 730nm

OBa Index: 1.6 FI: 1.5

K = 25.49 (ΔE₀₀ = 0.03) (ΔE₀₀ = 0.17)

sRGB HEX: #86726F

Library / Palette: Snowflake 50 0 0 palette Sample: Autorecognition

Snowflake 50 0 0 sample

ΔE₀₀: 2.0

Suggested Density Correction

Spot: -0.04D Optimal D = 0.689 Optimal ΔE₀₀ = 0.46

Density	Colorimetry	Deltas	Metamerism
ΔE ₀₀	2.0		
ΔE _{94 GA}	2.0		
ΔE _{94 TEX}	1.1		
ΔE ₇₆	2.0		
ΔE _{CMC(1:1)}	1.8		
ΔE _{CMC(2:1)}	1.1		
ΔC	0.7		
ΔH	0.1		
Δh	0.7°		

+L

-a

-b

0.3 +b

+a 0.7

-1.9 -L

ver: 2.2.0v849 Open Beta 2

A+ Upper limit (Inside Perimeter)

The screenshot displays the ChromaChecker software interface. The top navigation bar includes 'Scratchpad', 'QuickChecker', and various tool icons. The main workspace is divided into several sections:

- Left Panel:** A list of color swatches including 'Warm Gray #9', 'Warm Gray #8', 'Deep Warm Gray #7', 'Warm Gray #6', 'Warm Gray #5', 'Warm Gray #4', 'Substrate #1', and 'Snowflake 50 0 0 sample'.
- Top Control Bar:** Buttons for 'Substrate', 'Start Color Match', 'Start Variation', 'Recalibrate', and 'Measure'.
- Configuration Row:** Fields for 'Color Specification' (M1 / D50 / 2° / White), 'Source of Reference' (Assets), 'Printing Device' (-), 'Customer' (empty), and 'Sample Name' (Warm Gray #9).
- Color Analysis Graphs:**
 - A line graph showing a spectral curve with a peak at 0.36 @ 730nm.
 - A graph for 'OBA Index' with a value of 1.8.
 - A graph for 'FI' with a value of 1.6.
 - A color bar with values 42, 44, 46, 48, 50.
- Color Data:**
 - K = 23.53 ($\Delta E_{00} = 0.05$)
 - ($\Delta E_{00} = 0.60$)
 - sRGB HEX: #8B7571
- Library / Palette:** 'Snowflake 50 0 0 palette' and 'Autorecognition'.
- Sample Analysis:**
 - Sample: 'Snowflake 50 0 0 sample'
 - ΔE_{00} : 2.0
 - Suggested Density Correction:
 - Optimal D = 0.681
 - Optimal ΔE_{00} = 1.80
- Measurement Table:**

Density	Colorimetry	Deltas	Metamerism
	ΔE_{00}	2.0	
	$\Delta E_{94 GA}$	1.6	
	$\Delta E_{94 TEX}$	1.5	
	ΔE_{76}	2.1	
	$\Delta E_{CMC(1:1)}$	2.0	
	$\Delta E_{CMC(2:1)}$	1.9	
	ΔC	2.0	
	ΔH	0.4	
	Δh	2.4°	
- Metamerism Diagram:** A color wheel diagram with axes labeled +L, -L, +a, -a, +b, -b. A red circle highlights a region with values 0.8 and 1.9.

A- Lower limit (Inside Perimeter)

The screenshot displays the ChromaChecker software interface. The main window shows a color measurement for a 'Snowflake 50 0 0 sample'. The interface includes a sidebar with a list of color swatches, a top navigation bar with 'QuickChecker' and various tool icons, and a central workspace with several data panels.

Color Specification: M1 / D50 / 2° / White
Source of Reference: Assets
Printing Device: -
Customer: -
Sample Name: Warm Gray #8

Color Data:
 OBA Index: 1.8
 FI: 1.7
 K = 23.14 (ΔE₀₀ = 0.23)
 sRGB HEX: #827A76

Library / Palette: Snowflake 50 0 0 palette
Sample: Autorecognition

Snowflake 50 0 0 sample
 ΔE₀₀: **4.7**
 Suggested Density Correction: ✓
 Optimal D = 0.703
 Optimal ΔE₀₀ = 4.67

Density	Colorimetry	Deltas	Metamerism
ΔE ₀₀	4.7	-4.0	+L 0.2
ΔE _{94 GA}	3.2	-1.1	+b
ΔE _{94 TEX}	3.2	-1.1	+a
ΔE ₇₆	4.5	-1.1	-L
ΔE _{CMC(1:1)}	4.5	-1.1	-L
ΔE _{CMC(2:1)}	4.5	-1.1	-L
ΔC	-3.7	-1.1	-L
ΔH	1.9	-1.1	-L
Δh	-19.1°	-1.1	-L

The 'Deltas' column shows a value of -4.0, which is circled in red in the image. The 'Metamerism' column shows a value of +L 0.2. The interface also includes a color wheel diagram and a graph showing the color profile.

ver: 2.2.0v849 Open Beta 2

B+ High Tolerance (Inside Perimeter)

The screenshot displays the ChromaChecker software interface. The top navigation bar includes 'Scratchpad', 'QuickChecker', and various tool icons. The main workspace is divided into several sections:

- Left Panel:** A list of color swatches including 'Warm Gray #11' through 'Substrate #1' and 'Snowflake 50 0 0 sample'.
- Top Control Bar:** Buttons for 'Substrate', 'Start Color Match', 'Start Variation', 'Recalibrate', and 'Measure'.
- Configuration Row:** Fields for 'Color Specification' (M1 / D50 / 2° / White), 'Source of Reference' (Assets), 'Printing Device' (-), 'Customer' (empty), and 'Sample Name' (Warm Gray #11).
- Graphs:** A spectral graph on the left showing reflectance vs. wavelength (0.37 @ 730nm) and an OBA Index graph on the right.
- Color Data:**
 - h = 45.4°
 - OBA Index = 1.8
 - FI = 1.6
 - Y = 44.71, K = 23.53 (ΔE₀₀ = 0.06)
 - B = 113 (ΔE₀₀ = 0.18), sRGB HEX #8C7871
- Library / Palette:** 'Snowflake 50 0 0 palette' and 'Autorecognition'.
- Bottom Section:**
 - Sample:** 'Snowflake 50 0 0 sample' with a large ΔE_{00} value of 2.1.
 - Suggested Density Correction:** Optimal D = 0.681, Optimal ΔE_{00} = 2.06.
 - Table:**

Density	Colorimetry	Deltas	Metamerism
	ΔE_{00}	2.1	
	$\Delta E_{94 GA}$	2.1	
	$\Delta E_{94 TEX}$	2.0	
	ΔE_{76}	2.5	
	$\Delta E_{CMC(1:1)}$	3.2	
	$\Delta E_{CMC(2:1)}$	3.1	
	ΔC	1.8	
	ΔH	1.8	
	Δh	-11.7°	
 - Metamerism Diagram:** A color wheel showing a red circle around a point labeled '2.5 +b'.

B- Lower limit (Inside Perimeter)

The screenshot shows the ChromaChecker software interface. The main display area is divided into several sections:

- Top Bar:** Includes a 'Scratchpad' icon, 'QuickChecker' title, and various control icons (Print, Home, Save, Copy, Paste, Undo, Redo).
- Control Panel:** Contains buttons for 'Substrate', 'Start Color Match', 'Start Variation', 'Recalibrate', and 'Measure'.
- Configuration Section:**
 - Color Specification: M1 / D50 / 2° / White
 - Source of Reference: Assets
 - Printing Device: -
 - Customer: -
 - Sample Name: Warm Gray #10
- Measurement Data:**
 - Graphs: A spectral power distribution graph (0.35 @ 730nm) and an OBA Index graph.
 - Parameters: $K = 20.00$ ($\Delta E_{00} = 0.03$), $\Delta E_{00} = 0.21$, sRGB HEX #867981.
- Library / Palette:** Shows 'Snowflake 50 0 0 palette' and 'Autorecognition'.
- Results Section:**
 - Sample: Snowflake 50 0 0 sample
 - Tab: Deltas
 - Value: $\Delta E_{00} = 5.6$ (highlighted with a red circle and arrow).
 - Optimal D = 0.694, Optimal $\Delta E_{00} = 5.54$.
- Metamerism Diagram:** A color wheel diagram showing various color differences:
 - +L: 0.6
 - +b: 0.1
 - b: -6.6 (highlighted with a red circle and arrow).
 - L: -306.8°
- Table of Colorimetry Data:**

Parameter	Value
ΔE_{00}	5.6
$\Delta E_{94 GA}$	6.0
$\Delta E_{94 TEX}$	6.0
ΔE_{76}	6.0
$\Delta E_{CMC(1:1)}$	10
$\Delta E_{CMC(2:1)}$	10
ΔC	2.9
ΔH	6.6
Δh	-306.8°

Average Tolerance

Microsoft Excel interface showing a spreadsheet, a chart, and a photograph of a color calibration target with handwritten notes.

Spreadsheet Data:

	A	B	C	D	E
1		L*	a	b	
2	Inside Perimeter {POS}	6.6	2.4	2.5	High Tolerance
3	Inside Perimeter {NEG}	1.9	3.9	6.6	Low Tolerance
4	Outside Perimeter {POS}	9	4.3	4.4	High Tolerance
5	Outside Perimeter {NEG}	4	6.7	6.9	Low Tolerance
6	Average {POS}	7.8	3.35	3.45	High Tolerance
7	Average {NEG}	2.95	5.3	6.75	Low Tolerance

Average Axis Tolerance Chart:

	1	2	3	4	5	6
b	2.5	6.6	4.4	6.9	3.45	6.75
a	2.4	3.9	4.3	6.7	3.35	5.3
L*	6.6	1.9	9	4	7.8	2.95

Color Target Photograph:

*You must capture center spot make new sample
You must measure high/Low squares to obtain the value per Axis (Someday?)*

A Test 50 0 0 $L^* = 50.00, a^* = 0.00, b^* = 0.00$

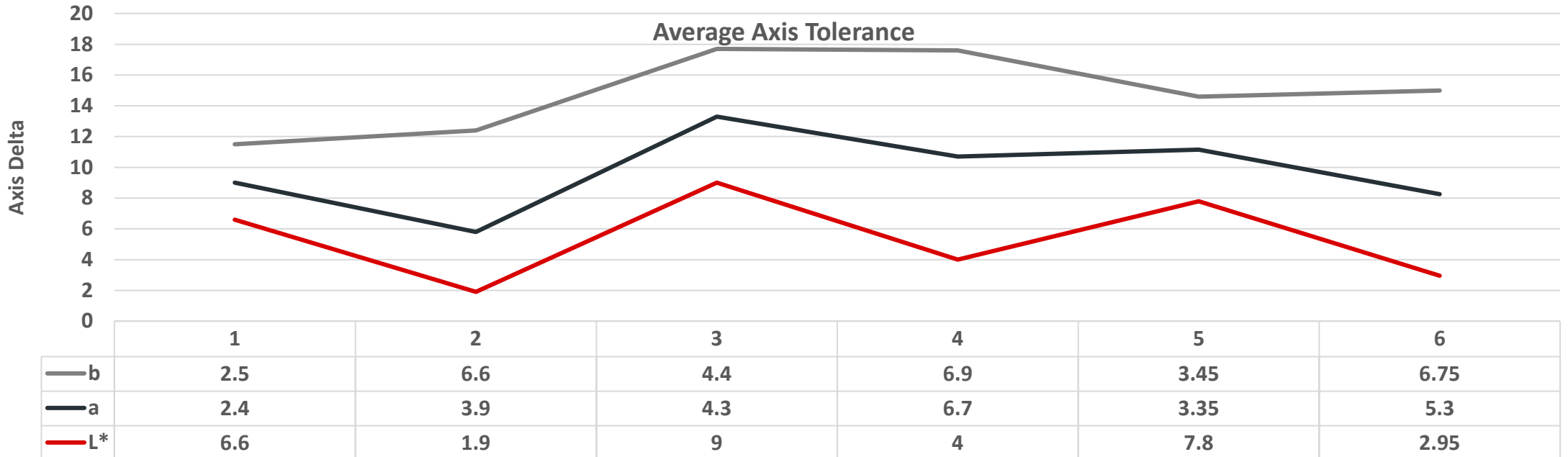
*← SCW
B&P Pa-Ne
S&P*

200 FAULTY/WRANGLY

8.400
6.2000
4.700
4.3
2.22
2.6
4.50

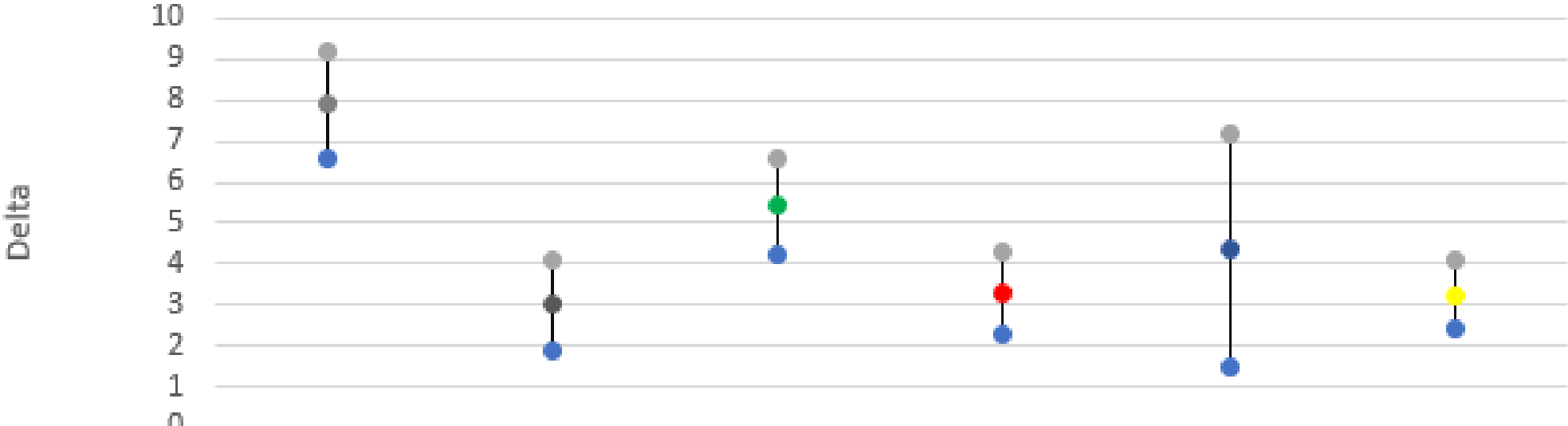
Inside – Outside / Average Axis Tolerance

	L*	a	b	
Inside Perimeter {POS}	6.6	2.4	2.5	High Tolerance
Inside Perimeter {NEG}	1.9	3.9	6.6	Low Tolerance
Outside Perimeter {POS}	9	4.3	4.4	High Tolerance
Outside Perimeter {NEG}	4	6.7	6.9	Low Tolerance
Average {POS}	7.8	3.35	3.45	High Tolerance
Average {NEG}	2.95	5.3	6.75	Low Tolerance



Vertical look at tolerncae

Snowflake Tolerance



	Lighter L Axis	Darker L Axis	A Neg Axis	A Pos Axis	B Neg Axis	B Pos Axis
● Inside PASS	6.6	1.9	4.2	2.3	1.5	2.4
● AVG	7.9	3	5.4	3.3	4.35	3.25
● Outside Fail	9.2	4.1	6.6	4.3	7.2	4.1

Show more steps to add snowflake tol

Time to update the asset tolerance with the average

The screenshot shows a web browser window with the URL `chromachecker.com/color/en/edit_sample/1429422`. The main content is a modal dialog titled "Add new Tolerance".

Formula Section:

- Function: $\Delta L^* \Delta a^* \Delta b^*$ (snowflake)

Advanced Section:

- Measurement Conditions: M1
- Illuminant: D50
- Observer: 2 degree

Color Wheel Diagram:

A central color wheel diagram with six colored arms extending from a center point. Each arm has a numerical value in a white box:

- Top arm (+L*): 6.6
- Right arm (+b*): 2.6
- Bottom-right arm (+a*): 2.0
- Bottom arm (-L*): 1.9
- Bottom-left arm (-b*): 6.6
- Left arm (-a*): 4.7

An "ADD" button is located at the bottom center of the dialog.

Make sure your tolerance was saved correctly

The screenshot shows the ChromaChecker web interface for a 'Snowflake 50 0 0 palette'. The search bar is set to 'Sample: ' with 'M. Cond.' set to 'M0', 'Mode' to 'LAB', and 'ΔE Formula' set to 'ΔE 2000'. A table below displays the sample data with a red circle highlighting the tolerance settings.

	ID	Name	Projects	Track	L*	a*	b*	Max. error	Avg. error	Ill./Obs.	F	M0	M1	M2	M3
<input type="checkbox"/>		Snowflake 50 0 0 sample			51.64	6.43	4.79			D50/2°	4b				

At the bottom of the interface, there are buttons for 'Compare', 'Copy to Palette', 'Set Flag', 'Average', 'Snowflake', 'Grid', 'Fanbook', and 'Delete sample'.

Quick test to make sure it's working before we setup a project or track

The screenshot displays the ChromaChecker software interface. On the left is a 'Scratchpad' with a list of color swatches. The main area is titled 'QuickChecker' and includes a toolbar with icons for 'Substrate', 'Start Color Match', 'Start Variation', 'Recalibrate', and 'Measure'. Below the toolbar, there are dropdown menus for 'Color Specification' (M1 / D50 / 2° / White), 'Source of Reference' (Assets), 'Printing Device', 'Customer', and 'Sample Name' (Warm Gray #39). A central graph shows a spectral curve with a peak at 0.42 @ 730nm. To the right of the graph are colorimetric values: $b^* = 2.26$, $C = 5.68$, $h = 23.5^\circ$, OBA Index 2.1, and FI 2.0. Further right are RGB values (C=35.29, M=37.25, Y=34.90, K=16.08) and Lab values (R=151, G=137, B=137, $\Delta E_{50} = 0.33$, $\Delta E_{50} = 0.02$, sRGB HEX #978988). Below the graph, there are dropdowns for 'Library / Palette' (Snowflake 50 0 0 palette) and 'Sample' (Autorecognition). The bottom section shows a 'Snowflake 50 0 0 sample' with a 'Warning, Color Difference is too high!' and a large green checkmark icon next to $\Delta E_{00} 6.7$. A color difference diagram shows a central point with arrows pointing to values: -1.3, 6.7, -2.1, and -1.3. Below this is a 'Suggested Density Correction' section with an upward arrow, 'Spot +0.13D', and 'Optimal D = 0.697' and 'Optimal $\Delta E_{00} = 1.01$ '. On the right, there is a table with columns 'Density', 'Colorimetry', 'Deltas', and 'Metamerism'. The 'Deltas' column contains values: ΔE_{00} (6.7), $\Delta E_{94 GA}$ (7.0), $\Delta E_{94 TEX}$ (3.8), ΔE_{76} (7.1), $\Delta E_{CMC(1:1)}$ (6.6), $\Delta E_{CMC(2:1)}$ (4.0), ΔC (-2.1), ΔH (1.2), and Δh (10.2°). To the right of the table is a color difference diagram with a central point and arrows pointing to values: +L (7.8), 6.7, -a (5.3), -1.3, +b (3.45), +a (3.35), -b (6.75), and -L (2.95). The bottom right corner shows the version 'ver: 2.2.0v849 Open Beta 2'.

Everything is working!

Color Specification: M1 / D50 / 2° / White | Source of Reference: Assets | Printing Device: - | Customer: | Sample Name: Warm Gray #40

h = 19.1°
OBA Index: 2.2
FI: 2.1

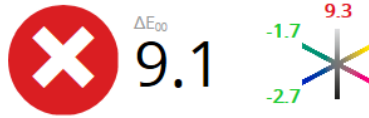
Y = 32.55
K = 13.33
B = 144

($\Delta E_{00} = 0.11$)
sRGB HEX: #9D9090

Library / Palette: Snowflake 50 0 0 palette | Sample: Autorecognition

Snowflake 50 0 0 sample

Warning, Color Difference is too high!



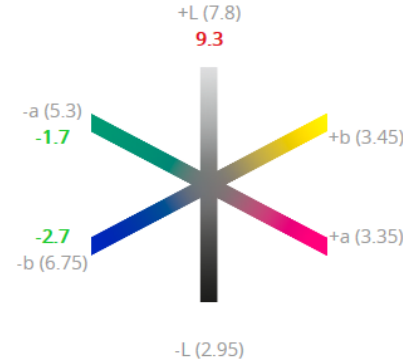
$\Delta L = +9.31$ [7.8] - Color is too bright.

Suggested Density Correction

Spot +0.17D

Optimal D = 0.696
Optimal $\Delta E_{00} = 1.26$

Density	Colorimetry	Deltas	Metamerism
	ΔE_{00}	9.1	+L (7.8)
	$\Delta E_{94 GA}$	9.6	9.3
	$\Delta E_{94 TEX}$	5.3	
	ΔE_{76}	9.8	
	$\Delta E_{CMC(1:1)}$	9.1	
	$\Delta E_{CMC(2:1)}$	5.5	
	ΔC	-2.7	
	ΔH	1.6	
	Δh	14.6°	



Build a Track and Project

The screenshot shows the Print Inspector web application interface. At the top, there is a navigation bar with a 'Back to Welcome screen' button, the user name 'Nazdar_EFI', and a 'TOOLS' menu. Below this is a main header with 'Print Inspector' and tabs for 'Projects' and 'Measurements'. A secondary navigation bar includes 'Devices', 'Locations', 'Departments', 'Tolerances', 'OK Sheets', 'File Parsers', 'My Jobs', 'Shared Jobs', 'Add new Track', 'Add new Device', and 'Device Wizard'. A filter bar at the bottom of the header allows selection by 'Locations', 'Departments', 'Printing Process', and 'All references', with a 'SUBMIT' button.

The main content area is titled 'Default Location' and features a table of tracks. The table has columns for 'Track Name', 'Files', 'Reference Printing Conditions', 'Substrate', and 'Last Meas.'. There are also options to 'Collapse', 'Expand', 'Uncheck All', and 'Check All'. A red circle highlights the 'Track Template Testing with Larry' row.

Default Location				
Collapse Expand Uncheck All Check All				
EFI Pro 24f LED Wide Format Flatbe				
Track Name	Files	Reference Printing Conditions	Substrate	Last Meas.
<input type="checkbox"/> Coated	35 3.0	SCCA GRACoL2013_CRPC6 V2		5 months 1.8
<input type="checkbox"/> Track Template Testing with Larry	0 5.0	ChromaChecker_WideGamut		
<input type="checkbox"/> Snowflake 50 0 0	0 3.0	SCCA GRACoL2013_CRPC6 V2		
EFI Pro 24f LED Wide Format Inkjet Print				
Track Name	Files	Reference Printing Conditions	Substrate	Last Meas.
<input type="checkbox"/> Coated	0 6.0	SCCA GRACoL2013_CRPC6 V2		
<input type="checkbox"/> OnBoarding G7 Check	0 7.0	SCCA GRACoL2013UNC_CRPC3 V2		

Add Substrate

ChromaChecker Capture

File Edit Tools

+ New Substrate

Substrate Inspection

snowflake

Backing Substrate

Last measurements

Measure

+ Add new measurement

substance yet.

Averaged Measurements

Re-position and start measurement

To create more representative data, change the position of the instrument to another location in the sample.

Ready for sample location 2 of 3.

Max. ΔE : 0.000 Avg. ΔE : 0.000

Cancel

Update Track preference “Color Palette & Substrate Library”

The screenshot displays the Print Inspector configuration page. The interface includes a top navigation bar with a 'Back to Track' link, user information 'Nazdar_EFI', and a 'TOOLS' menu. Below this is a main header with 'Print Inspector' and tabs for 'Projects' and 'Measurements'. A secondary navigation bar lists various settings categories: Devices, Locations, Departments, Tolerances, OK Sheets, File Parsers, My Jobs, and Shared Jobs.

The main content area is divided into three sections:

- Calculation:** Contains a note that changes affect only new uploads. It features several dropdown menus: 'Calculate to' (ICC profile), 'Current OK sheet (accuracy)' (-), 'Current baseline (variation)' (-), 'CMYK / nCLR ICC profile' (GRACoL2013_CRPC6 ...), 'RGB profile' (-), 'SCCA' (On), 'TVI' (Colorimetric), 'G7® Native CMY' (Off), 'Setter settings' (-), and 'Substrate library' (snowflake). The 'Substrate library' dropdown is circled in red.
- Spot Colors and nCLR:** Includes 'Spot reference source' (Prioritize Palette an...), 'Color Palette' (Snowflake 50 0 0 pal...), and 'Color Library' (-). The 'Color Palette' dropdown is circled in red.
- Tolerances:** Features 'E-Factor Expectation Limit' (8) and 'PI tolerance set' (-). The 'E-Factor Expectation Limit' input field is circled in red.

A red message at the bottom of the Calculation section states: "This device does not have names of inkzones defined."

Build a Control Strip and Scanning Template

The screenshot displays the Nazdar software interface. At the top, there is a navigation bar with a 'Back to Other Tools' link, the user name 'Nazdar_EFI', and a 'TOOLS' menu. Below this is a main navigation bar with tabs for 'Capture', 'Control Strips', 'Scanning Templates', 'Measurement Tasks', and 'Instruments'. The 'Control Strips' tab is active.

Under the 'Control Strips' tab, there are four numbered instructions:

1. Create your control strip or Import it from Public Library. You may upload existing patch list (cgats txt), add patches from custom Color Palette or Library, and much more.
2. Create Scanning Template - link control strip and instrument of a selected type. Define patch dimension and additional parameters that are required by an instrument.
3. System will create links to all your tracks automatically - You can manage list by disabling unwanted connections and assign aliases if necessary
4. Manage Your registered Instruments

Below the instructions, there are buttons for 'Download' and 'Manual'. The main content area is titled 'Control Strips' and shows a table for 'ChromaChecker Print Inspector' with one entry: 'CC-84 3R horizontal'. An 'Add Color Library/Palettes' dialog box is open over the table, containing the following fields:

- Color Library/Palette: Snowflake 50 0 0 palette
- Color Selection: import whole library
- Tint: 100

An 'Add' button is located at the bottom right of the dialog box.

Finish the Control Strip “Save”

Back to Control Strips
Nazdar_EFI
TOOLS

Upload Add Library Add Substrate Add CMYK Add Spot Add RGB Add L*a*b* Add DUD Scramble Reset

Add new Control Strip

Control Strip Info

Name:

Vendor:

Print:

Description:

Copyrights:

Control Strip Layout

Patches:

Rows:

nCLR Settings

CMYK / nCLR ICC:

Patch grid

Transform:

Save

Patch list

	ID	Type	Special	Spot name	Tint
✖	1	Spot	-	Snowflake 50 0 0 sample	100

Build Scanning Template – Link to Control Strip

Back to Scanning Templates Nazdar_EFI TOOLS

Capture Control Strips Scanning Templates Measurement Tasks Instruments

View Templates Public Library Scanning Template +

Add new Scanning Template

Template settings

Template name: Snowflake 50 0 0 Instrument: X-Rite i1Pro 3

Control Strip

Control Strip: Snowflake 50 0 0

Add horizontal white patches at beginning and at the end
 Add vertical white patches at beginning and at the end

Instrument Specific

Patch Width [mm]: 20
Patch Height [mm]: 20
Horizontal Gap [mm]: 0
Vertical Gap [mm]: 0

Absolute coordinates for predefined positioning (optional)

X: [] Y: []

X: [] Y: []

X: [] Y: []

X: [] Y: []

SCHEMATIC EXAMPLE OF THE TEST CHART

SAVE

Track setup complete - Test



2.1 [3]



6.8 [8]

ChromaChecker Capture

File Edit Tools

EFI Pro 24f LED Wide Format Flatbed Printer

Print Inspector

EFI Pro 30f Wide Format Inkjet Printer

Project: [dropdown] Mode: Spot [dropdown] [checked] Low Resolution (M0) Recalibrate Measure

EFI VUTEK 32h LED Hybrid Inkjet Printer

Track: Snowflake 50 0 0 [dropdown] Template: Snowflake 50 0 0 [dropdown]

EFI VUTEK GS3250x Pro Superwide Inkjet Printer

Job Name: [input] Customer: [input] Sheet nr: 3

EFI VUTEK h5 Superwide Hybrid Inkjet Printer

Channel Editor

00:39

E-Factor

Solids - Optimal Density

6.8 [8]

6.8 [8]

6.8 [8]

Capture Timeline Inkzones Summary

ver: 2.2.0v849 Open Beta 2



0.2 [8]



9 [8]

This completes Snowflake

Back to Track
Nazdar_EFI
TOOLS

← Capture - X-Rite i1Pro 3 sn. 2020212 - 2024-01-23 18:55:58

Summary
Accuracy to target
Within Sheet Variation
Ink zones

Patch list
Substrate Inspector
Compared to Baseline
Visualizer (beta)

Measured: 2024-01-23 18:55:58 Operator: Default Operator
ICC Profile
PDF label
Create LUT
Edit
Match ICC
Export
TVI Curve
G7® Curve

PASS

None

AIM: GRACoL2013_CRPC6 V2 (SCCA ON)	MODE: Production	
DEVICE: EFI Pro 24f LED Wide Format Flatbed Printer	M. COND: M1 /dry	
TRACK: Snowflake 50 0 0	BACKING: white	
SHEET #: 2	HARMONIZER: OFF	

Warnings

No substrate found.

Details

Spots
✓

E-Factor

Accuracy E-Factor
2.1

Spots

SNOWFLAKE 50 0 0
 SAMPLE
 $\Delta E_{00} = 2.06$

✓

Ink GPS

Y-axis: ΔE (0 to 15)

X-axis: Density (0.0 to 2.5)

Info

File name: Capture - X-Rite i1Pro 3 sn. 2020212 - 2024-01-23 18:55:58

Color bar: Snowflake 50 0 0

Variator

variator_2024-01-24_19_28.pdf variator_2024-01-24_21_... + Create

All tools Edit Convert E-Sign Find text or tools

SnowFlake 50 0 0 $L^* = 51.83, a^* = 6.59, b^* = 3.76$

COLOR SPACE: sRGB IEC61966-2.1
COLOR SPECIFICATION: M1, D50*

$\Delta E_{00} \approx 5$

Reference

Lighter
a strong change of lightness and a slight change of hue shift

Little Lighter
a moderate change of lightness and hue shift

Constant Lightness
a slight change of lightness and a strong change of hue shift

Little Darker
a moderate change of lightness and hue shift

Darker
a strong change of lightness and a slight change of hue shift

6

variator_2024-01-24_19_... + Create

All tools Edit Convert E-Sign Find text or tools

Use print production x

- Output preview
- Preflight
- Edit object
- Convert colors
- Flattener preview
- Save as PDF/X
- Set page boxes
- Add printer marks
- Fix hairlines
- Ink managers
- Trap presets

SnowFlake 50 0 0 $L^* = 51.83, a^* = 6.59, b^* = 3.76$

COLOR SPACE: sRGB IEC61966-2.1
COLOR SPECIFICATION: M1, D50*

$\Delta E_{00} \approx 1.5$

Reference

Lighter
a strong change of lightness and a slight change of hue shift

Little Lighter
a moderate change of lightness and hue shift

Constant Lightness
a slight change of lightness and a strong change of hue shift

Little Darker
a moderate change of lightness and hue shift

Darker
a strong change of lightness and a slight change of hue shift

1

7

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SnowFlake 50 0 0 $L^* = 51.83, a^* = 6.59, b^* = 3.76$

COLOR SPACE: sRGB IEC61966-2.1
COLOR SPECIFICATION: M1, D50*

$\Delta E_{00} \approx 2$

Reference

Project Inspector – Step 1 – Add Track Template

Project Inspector

Global Preferences Print Service Providers Print Buyers **Track Templates** Add Track Template

Add new Track Template

Track Info

Name
Snowflake 50 0 0 Track Template

Description

Tolerance

Tolerance Set
-

Desired E-Factor
1

Reference

Calculate to:
ICC profile

CMYK / nCLR ICC Profile
GRACoL2013_CRPC6 V2

RGB ICC Profile
-

SCCA

Testform

Default Control Strip
Snowflake 50 0 0

Additional Libraries

Color Library or Palette is required only if You want to use Spot colors and You are not able to define Control Strip (that might be a case for some devices).

Color Palette
Snowflake 50 0 0 palette

Color Library
-

Advanced

Measurement Conditions
M1

Backing
white

TVI
Colorimetric

G7® Native CMY
Off

SAVE

Project Inspector – Step 2 – Add New Project

The screenshot shows the 'Project Inspector' web application interface. At the top left, there is a 'Back to Projects' link with a grid icon. The top right navigation bar includes the user name 'Nazdar_EFI', a profile icon, a 'TOOLS' menu, and icons for notifications, help, and search. Below the navigation bar, the main header features the 'Project Inspector' logo on a teal background, with 'Back to Print' and 'Back to Color' buttons. To the right of the header are 'My Projects' and 'Shared Projects' tabs. A secondary navigation bar contains 'Global Preferences', 'Print Service Providers', 'Print Buyers', and 'Track Templates'. The main content area is titled 'Add new project' and contains a 'Project Info' section with a 'Project Name' label and a text input field containing 'Snowflake 50 0 0 Project'. A purple 'ADD' button is positioned below the input field.

Step 3 – Link Track Template to Project “Snowflake 50 0 0 Project+”

The screenshot displays the Project Inspector web application interface. At the top, there is a navigation bar with a 'Back to Projects' link, the user name 'Nazdar_EFI', and a 'TOOLS' menu. Below this is a header section with the 'Project Inspector' logo and navigation buttons for 'Back to Print' and 'Back to Color'. The main content area shows the project details for 'Project: Snowflake 50 0 0 Project', including a 'SAVE' button and tabs for 'Assets', 'My Devices', 'PSP Sharing (0/1)', and 'Measurements'. The 'Track Template' section is expanded, showing a dropdown menu with 'Snowflake 50 0 0 Track Template' selected. Below this, a table lists project settings: Reference (ICC Profile), CMYK ICC Profile (GRACoL2013_CRPC6 V2), Control Strip (Snowflake 50 0 0), Tolerance, and E-Factor (1). The 'Project name' field contains 'Snowflake 50 0 0 Project' and the 'Project description' field is empty.

Project: **Snowflake 50 0 0 Project** SAVE
Created: 2024-01-24 15:49:22 - Modified:

Assets | My Devices | PSP Sharing (0/1) | Measurements

Track Template

Snowflake 50 0 0 Track Template

Reference	ICC Profile
CMYK ICC Profile	GRACoL2013_CRPC6 V2
Control Strip	Snowflake 50 0 0
Tolerance	
E-Factor	1

Project name

Snowflake 50 0 0 Project

Project description

Step 4 – Add PSP

Back to PSP

Nazdar_EFI

TOOLS

Project Inspector

Back to Print

Back to Color

My Projects

Shared Projects

Global Preferences

Print Service Providers

Print Buyers

Track Templates

Add PSP

Add PSP that already has ChromaChecker:

ChromaChecker Login [*]

Nazdar_Demo_Room

Invite new PSP to ChromaChecker:

Your account cannot Invite PSP to ChromaChecker. Please check our store for Brand Owner license

SEND REQUEST

Step 5 – PSP Must Accept Invitaion

ChromaChecker Dashboard Scheme Nazdar_Demo_Room TOOLS

Print Service Provider Request from: Nazdar_EFI
 Tim Quinn requested You become his Print Service Provider. Deny Accept

Color Print Instrument ICC Profile

Print Inspector · Expire: 2024-12-31
 5 / 5 devices

What's New [more >>>](#)

- Color Quality Conference, 2024
December 15, 2023
- Tips for Interpreting the Print Data
December 12, 2023

Project Inspector Back to Print Back to Color My Projects Shared Projects

Global Preferences Print Service Providers Print Buyers Track Templates

Your Print Buyers:
 Print Buyers can share You projects. If any of Your Print Buyers, shares You new project, You will get email notification as well as You will be able to see it in "Shared Projects" tab above. Printing shared project will result in sending measurement copy to a print buyer. You may choose to send all project measurements or only those which passes required tolerance.

Print Buyer login	Contact person	Contact e-mail	Share measurements
Nazdar_EFI	Tim Quinn	tiquinn@nazdar.com	PASS only

Step 6 Deploy Project

The screenshot shows the Nazdar Project Inspector interface. At the top, there is a navigation bar with a 'Back to Dashboard' link, the user name 'Nazdar_EFI', and a 'TOOLS' menu. Below this is a main header with the 'Project Inspector' logo and buttons for 'Back to Print' and 'Back to Color'. A secondary navigation bar includes 'Global Preferences', 'Print Service Providers', 'Print Buyers', and 'Track Templates'. A green notification banner reads 'New Projects to deploy!'. Below the banner, a text instruction says: 'You are invited to print following projects. Please click green arrow below, select devices that You want to use for this project in "deploy" tab and click "Save".' A table lists project details:

Project Name	Brand Owner	Modified	
Snowflake 50 0 0	Nazdar_Demo_Room	2024-01-23 09:39:37	

Step 6 – Deploy the Printing Device

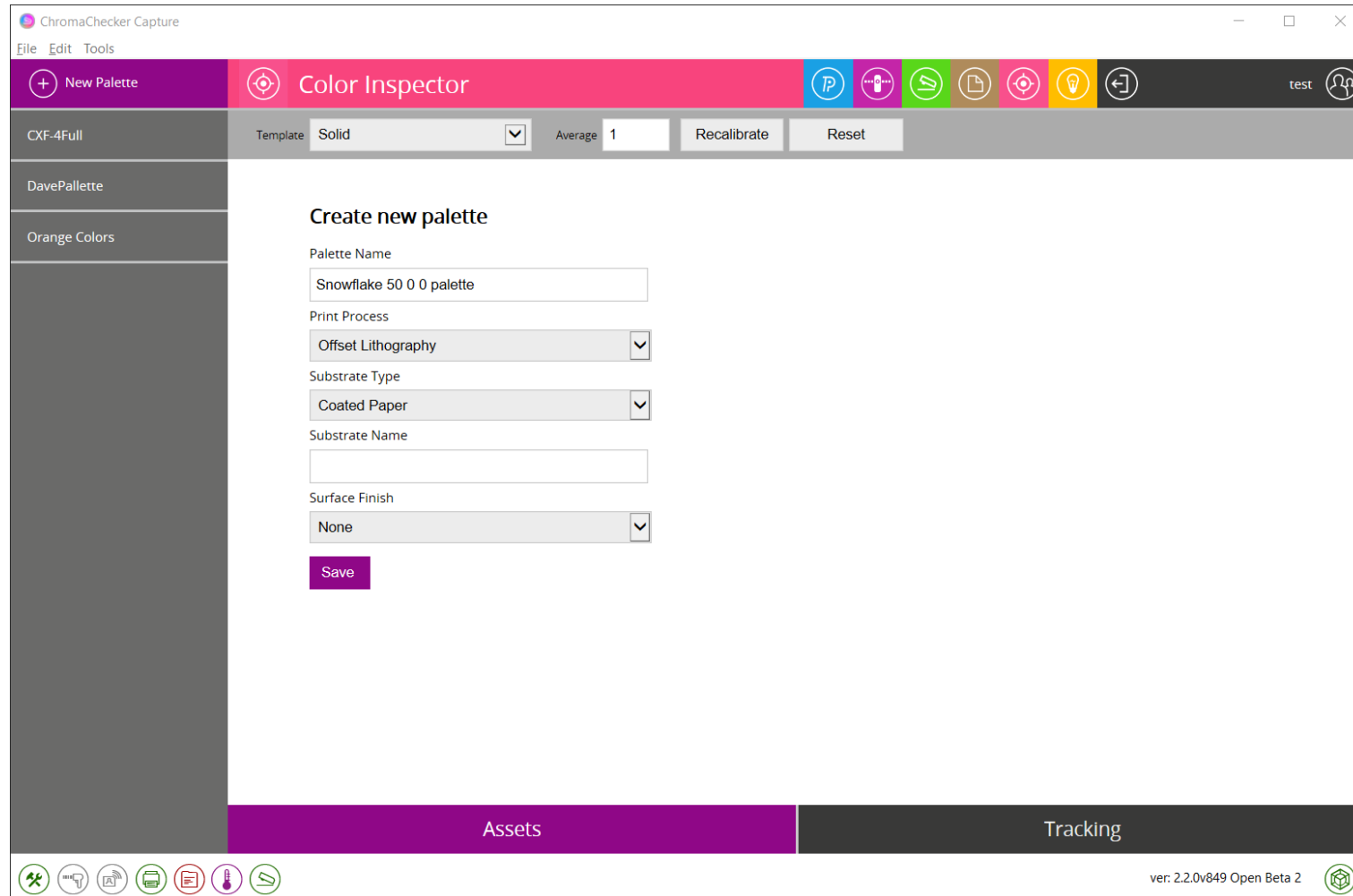
The screenshot shows the 'Project Inspector' web interface. At the top, there is a navigation bar with 'Back to Projects', 'Nazdar_EFI', and 'TOOLS'. Below this is a teal header with the 'Project Inspector' logo and navigation buttons for 'Back to Print' and 'Back to Color'. A secondary navigation bar includes 'Global Preferences', 'Print Service Providers', 'Print Buyers', and 'Track Templates'. The main content area displays the project name 'Project: Snowflake 50 0 0 for Nazdar_Demo_Room' with a 'SAVE' button. Below the project name are three tabs: 'Assets', 'Deploy (0/5)', and 'Measurements'. The 'Deploy (0/5)' tab is active, showing a section for 'Printing Devices' with the instruction 'Please select which devices will be used to print this project and click save.' A table lists the available devices:

	Device Name	Integrated Measurement System	Supplemental Instrument	Status	
<input checked="" type="checkbox"/>	EFI Pro 24f LED Wide Format Flatbed Printer		X-Rite I1 Pro 3	NOT DEPLOYED	
<input type="checkbox"/>	EFI Pro 30f Wide Format Inkjet Printer		X-Rite I1 Pro 3	NOT DEPLOYED	

Steps

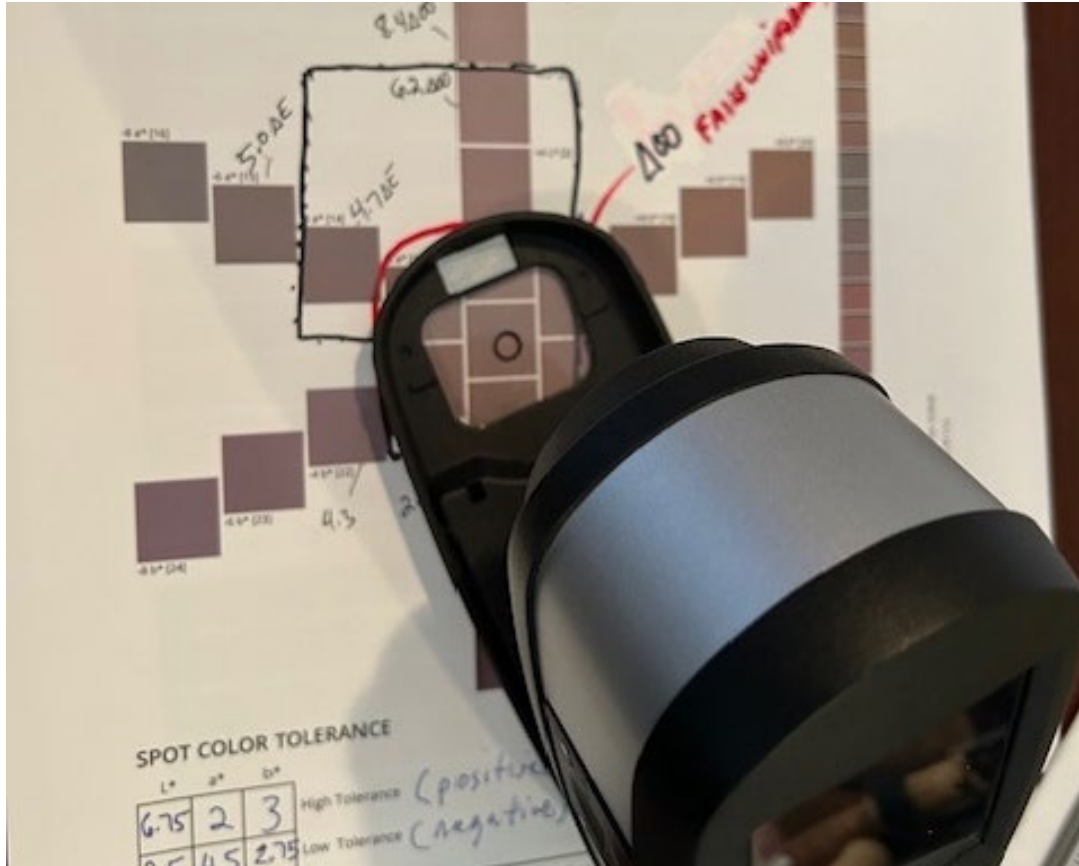
1. Open Capture – Color Inspector
2. Create new palette “Snowflake 50 0 0”
3. Measure Snowflake 50 0 0 Center Patch
4. Navigate to ChromaChecker.com Color Inspector
 - Select “Snowflake 50 0 0” Pallet
 - Export “Color Library CXF/X-4
5. Open Capture QuickColor
6. Need to finish Steps slide to match the other slides (or delete this slide)

Create new palette “Snowflake 50 0 0”



Measure Snowflake 50 0 0 Center Patch

Measure center patch



Save "Snowflake 50 0 0 Center Patch"

Color Inspector

Template: Solid | Average: 1 | Recalibrate | Reset

Measured sample

	L*	a*	b*
M0	52.02	6.50	4.37
M1	52.05	6.55	3.91
M2	51.98	6.20	5.69

Consistency error: max = 0 | avg = 0

Sample Name: Snowflake 50 0 0 Center Patch

ΔE 2000 tolerance (optional)

Inventory ID (optional)

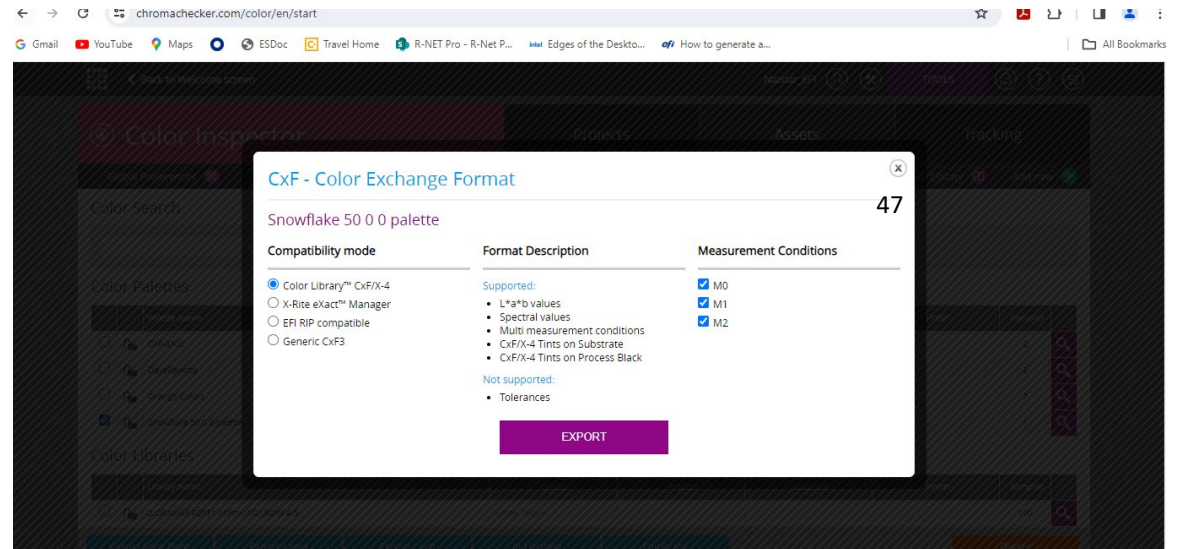
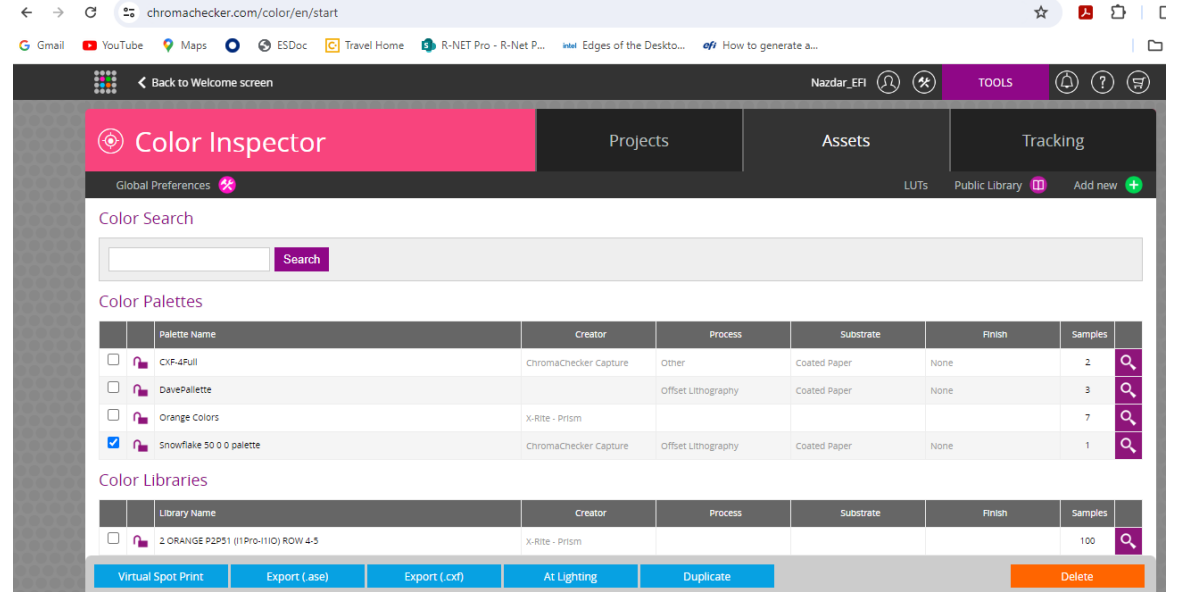
Cancel Save

Assets Tracking

Navigate to ChromaChecker.com Color Inspector

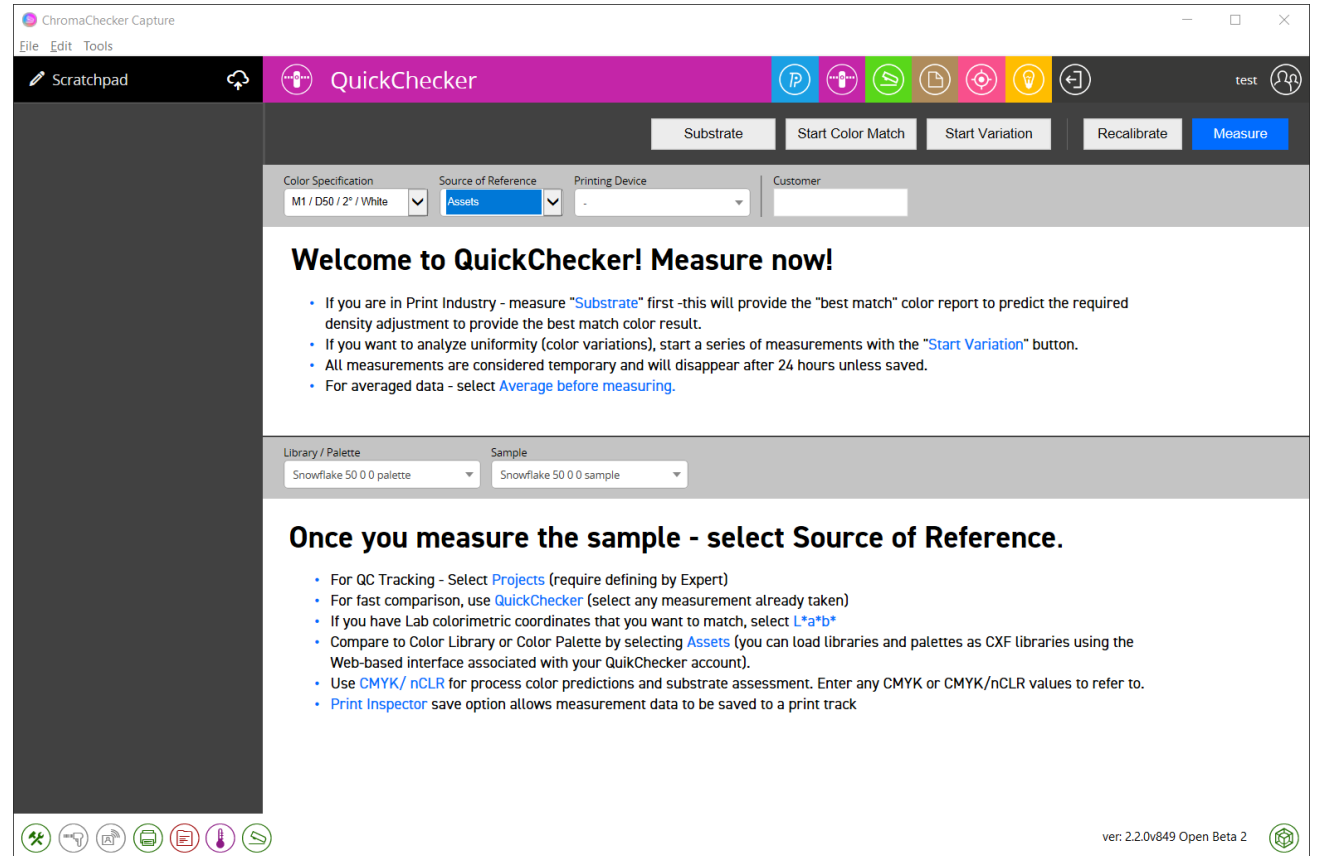
Select "Snowflake 50 0 0" Palette

Export "Color Library CXF/X-4"



Open Capture / QuickChecker

Change the source of reference to “Assets”,
choose Pallet / Sample “Snowflake 50 0 0
sample”



Import cxf data – Avoid “drag and drop” for now

ChromaChecker Capture

File Edit Tools

Scratchpad QuickChecker

Substrate Start Color Match Start Variation Recalibrate Measure

Color Specification: M1 / D50 / 2° / White

Source of Reference: None

Printing Device: -

Customer:

Drag and Drop CxF file here

Welcome to QuickChecker! Measure now!

- If you are in Print Industry - measure "Substrate" first -this will provide the "best match" color report to predict the required density adjustment to provide the best match color result.
- If you want to analyze uniformity (color variations), start with "Average before measuring".
- All measurements are considered temporary and will be deleted after 30 days.
- For averaged data - select [Average before measuring](#).

No source of reference selected. Select one from top bar to see color report.

Once you measure the sample

- For QC Tracking - Select [Projects](#) (require defining by user).
- For fast comparison, use [QuickChecker](#) (select any measurement).
- If you have Lab colorimetric coordinates that you want to match, select [L*a*b*](#).
- Compare to Color Library or Color Palette by selecting [Assets](#) (you can load libraries and palettes as CXF libraries using the Web-based interface associated with your QuikChecker account).

ver: 2.2.0v849 Open Beta 2

If you drag and drop, you will have to restart Capture

```

ChromaChecker Capture
File Edit Tools

<?xml version="1.0" encoding="UTF-8"?>
- <cc:CxF xmlns:sic="http://colorexchangeformat.com/CxF3-SpotInkCharacterisation" xsi:schemaLocation="http://colorexchangeformat.com/CxF3-core
CxF3_Core.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:cc="http://colorexchangeformat.com/CxF3-core">
  - <cc:FileInformation>
    <cc:Creator>ChromaChecker Color Inspector</cc:Creator>
    <cc:CreationDate>2024-01-23T12:45:37</cc:CreationDate>
    <cc:Description>Export for Alwan Color Library</cc:Description>
  </cc:FileInformation>
  - <cc:Resources>
    - <cc:ObjectCollection>
      - <cc:Object Id="M0_S1" Name="Snowflake 50 0 0 sample" ObjectType="Standard">
        <cc:CreationDate>2024-01-23T12:45:37</cc:CreationDate>
        - <cc:ColorValues>
          - <cc:ColorCIELab Name="Snowflake 50 0 0 sample" ColorSpecification="M0">
            <cc:L>51.6393</cc:L>
            <cc:A>6.4252</cc:A>
            <cc:B>4.7853</cc:B>
          </cc:ColorCIELab>
          <cc:ReflectanceSpectrum Name="Snowflake 50 0 0 sample" ColorSpecification="M0" StartWL="380">0.106362 0.12116 0.133592 0.143945
            0.161452 0.166307 0.16869 0.166648 0.162408 0.163889 0.183539 0.232689 0.26944 0.246546 0.203291 0.187155 0.181694
            0.153346 0.133728 0.153523 0.194531 0.227223 0.238607 0.239964 0.244741 0.253837 0.268497 0.290205 0.311797 0.31995
            0.312515 0.300642 0.289841 0.288131 0.310643 0.358972</cc:ReflectanceSpectrum>
          </cc:ColorValues>
        </cc:Object>
      - <cc:Object Id="M1_S1" Name="Snowflake 50 0 0 sample" ObjectType="Standard">
        <cc:CreationDate>2024-01-23T12:45:37</cc:CreationDate>
        - <cc:ColorValues>
          - <cc:ColorCIELab Name="Snowflake 50 0 0 sample" ColorSpecification="M1">
            <cc:L>51.6701</cc:L>
            <cc:A>6.4783</cc:A>
            <cc:B>4.3199</cc:B>
          </cc:ColorCIELab>
          <cc:ReflectanceSpectrum Name="Snowflake 50 0 0 sample" ColorSpecification="M1" StartWL="380">0.106362 0.12116 0.133592 0.144157
            0.167049 0.171429 0.171841 0.168702 0.164344 0.165763 0.18522 0.234146 0.270614 0.24743 0.203867 0.187534 0.181981
            0.153453 0.133728 0.153523 0.194531 0.227223 0.238607 0.239964 0.244741 0.253837 0.268497 0.290205 0.311797 0.31995
            0.312515 0.300642 0.289841 0.288131 0.310643 0.358972</cc:ReflectanceSpectrum>
          </cc:ColorValues>
        </cc:Object>
      - <cc:Object Id="M2_S1" Name="Snowflake 50 0 0 sample" ObjectType="Standard">

```

Instead, click “cloud” once, double click “Drag and Drop CxF file here”

The screenshot shows the ChromaChecker QuickChecker web interface. A red box highlights the cloud icon in the top navigation bar. A red arrow points from the 'Drag and Drop CxF file here' instruction to a Windows File Explorer window showing a file named 'Snowflake 50 0 0 palette.cxf' in the Downloads folder.

ChromaChecker Capture
File Edit Tools

Scratchpad QuickChecker

Substrate Start Color Match Start Variation Recalibrate Measure

Color Specification: M1 / D50 / 2° / White
Source of Reference: None
Printing Device: -
Customer:

Drag and Drop CxF file here

Welcome to QuickChecker! Measure now!

- If you are in Print Industry - measure "Substrate" first -this will provide the "best match" color report to predict the required density adjustment to provide the best match color report.
- If you want to analyze uniformity (color variations), standard deviation, etc. - select **Substrate** and **Start Variation**.
- All measurements are considered temporary and will be deleted after 30 days.
- For averaged data - select **Average before measuring**.

No source of reference selected. Select one from top bar to see color report.

Once you measure the sample

- For QC Tracking - Select **Projects** (require defining by user).
- For fast comparison, use **QuickChecker** (select any measurement).
- If you have Lab colorimetric coordinates that you want to match, select **L*a*b***.
- Compare to Color Library or Color Palette by selecting **Assets** (you can load libraries and palettes as CXF libraries using the Web-based interface associated with your QuikChecker account).

ver: 2.2.0v849 Open Beta 2

CxF data imported

The screenshot shows the ChromaChecker software interface. The main window title is 'ChromaChecker Capture'. The interface includes a menu bar (File, Edit, Tools), a toolbar with various icons, and a central workspace. The workspace displays the following information:

- Sample Name:** Snowflake 50 0 0 sample
- Date/Time:** 2024-01-23 14:23:19
- Color Specification:** M1 / D50 / 2° / White
- Source of Reference:** None
- Printing Device:** -
- Customer:** -

The workspace also features several data visualization tools:

- Spectral Reflectance Graph:** A line graph showing reflectance values from 0 to 1.2 across a wavelength range. A specific value of 0.36 is noted at 730nm.
- CIELab Data:**
 - L* = 51.67
 - a* = 6.48
 - b* = 4.32
 - C = 7.79
 - h = 33.7°
- OBA Index:** -
- FI:** -
- a* / b* Chromaticity Diagram:** A color wheel diagram with a central point and a surrounding polygon.
- L* Scale:** A vertical scale from 0 to 100.
- Color Conversion Data:**
 - ICC:** CMYK, ISOcoated_v2_ecl
 - CII:** RGB, sRGB
 - Designer:** RGB, sRGB
 - CMYK values: C = 38.82, M = 42.75, Y = 41.57, K = 23.53 (ΔE₀₀ = 0.05)
 - RGB values: R = 137, G = 119, B = 116 (ΔE₀₀ = 0.13)
 - sRGB HEX: #897774

A message at the bottom of the workspace states: "No source of reference selected. Select one from top bar to see comparison report."

The software version is displayed in the bottom right corner: ver: 2.2.0v849 Open Beta 2.

Snowflake creation – 2 locations to generate a Snowflake

The screenshot shows the ChromaChecker software interface. The top bar includes a 'QuickChecker' section with various icons. Below this, there are control buttons: 'Substrate', 'Start Variation', 'Recalibrate', and 'Measure'. The main interface is divided into several sections:

- Color Specification:** Includes dropdowns for 'Color Specification' (M1 / D50 / 2° / White), 'Source of Reference' (None), and 'Printing Device' (-). There are also fields for 'Customer' and 'Sample Name' (Snowflake 50 0 0 sample).
- Snowflake Section:** Features a 'Snowflake' icon circled in red. Below it, there are settings for 'PDF Color Space' (L*a*b), 'Color Depth' (8 bit), and 'Snowflake distribution' (Fine, Medium, Coarse, Custom). There are also checkboxes for 'Show ΔE₀₀' and 'Target Comparison', and a 'Download' button.
- Spectral Reflectance Graph:** A line graph showing reflectance values across a wavelength range. The value at 730nm is 0.36.
- CIE Lab:** Displays colorimetric data: L* = 51.67, a* = 6.48, b* = 4.32, C = 7.79, h = 33.7°. It also includes 'OBA Index' and 'Fl'.
- a* / b* Chromaticity Diagram:** A color wheel diagram showing the position of the sample color.
- L* Scale:** A vertical scale from 0 to 100.
- ICC, CII, Designer:** A table showing colorimetric data in different color spaces:

ICC	CII	Designer
CMYK		RGB
ISOcoated_v2_eci		sRGB
C = 38.82		R = 137
M = 42.75		G = 119
Y = 41.57		B = 116
K = 23.53		(ΔE ₀₀ = 0.13)
(ΔE ₀₀ = 0.05)		sRGB HEX
		#897774

At the bottom, a message states: 'No source of reference selected. Select one from top bar to see comparison report.'