Brand Quality Process

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Certified Partner

Goals

- Introduction to brand requirements
- BrandQ purpose and requirements
- Why this matters for a printer
- Live interaction with Chromachecker

What is BrandQ?

Supply chain overview

Initiated by Idealliance

Now an on-line program

Ideallian
BrandQ


3M
BR
CEACO
ESKO
GAMEWRIGHT
GHIRARDELLI
CHOCOLATE
JCPenney
Lindt
MARS
Microsoft
minted.
P&G
RussellStover.png
Sony Interactive Entertainment
TAPESTRY
Tom's OF MAINE
SINCE 1970
AbelsonTaylor
AMERICAN PACKAGING CORPORATION
ARTECH
建樺群業股份有限公司
BEST IMAGE Co., LTD
Image result for cartamundi llc
colorsky
cospecto
Cymmetrik
EMBASSY GRAPHICS
FUJIFILM
Gelato
HAVI
JUST NORMLICHT
立華集團
LIHUA GROUP
LI SHENG
LI SHENG COLOR PRINTING
manroland
THEOLDHAMGROUP
Packaging Corporation of America
Phillips Printing
Rohrer
SAWGRASS
SCHAWK!
sgsco
SLBF Inc.
SPERA
COLOUR MATTERS
TAC
TOTAL PRINT
TAYLOR
TECHKON
think patented.
東
TMPI
明
TSC
The Smarter Choice.
x-rite
IOWA STATE UNIVERSITY
UNIVERSITY OF WISCONSIN
STOUT
alder
COLOR SOLUTIONS
AGL COLOUR
The Color Management Group
香港印藝學會
GRAPHIC ARTS ASSOCIATION OF HONG KONG
Idealliance Africa
Idealliance
Greater Bay Area China
WYSSYSTEM
威仕系統有限公司
WYS SYSTEM LIMITED
Idealliance Korea
Idealliance Taiwan
登華資訊有限公司
Done Hwa Information Co., Ltd.
AGFA
WE EMBODY PRINT
歐諾影像
O KNOW IMAGE
興台彩色印刷
Hsing Tai Color Printing
裕華彩印
Strategic
Account Marketing
인쇄계
GRAPHICS by OLD
Sony Interactive Entertainment
PressMan
SOLUTIONS FOR THE PRINTING INDUSTRY
PROJETO PACK

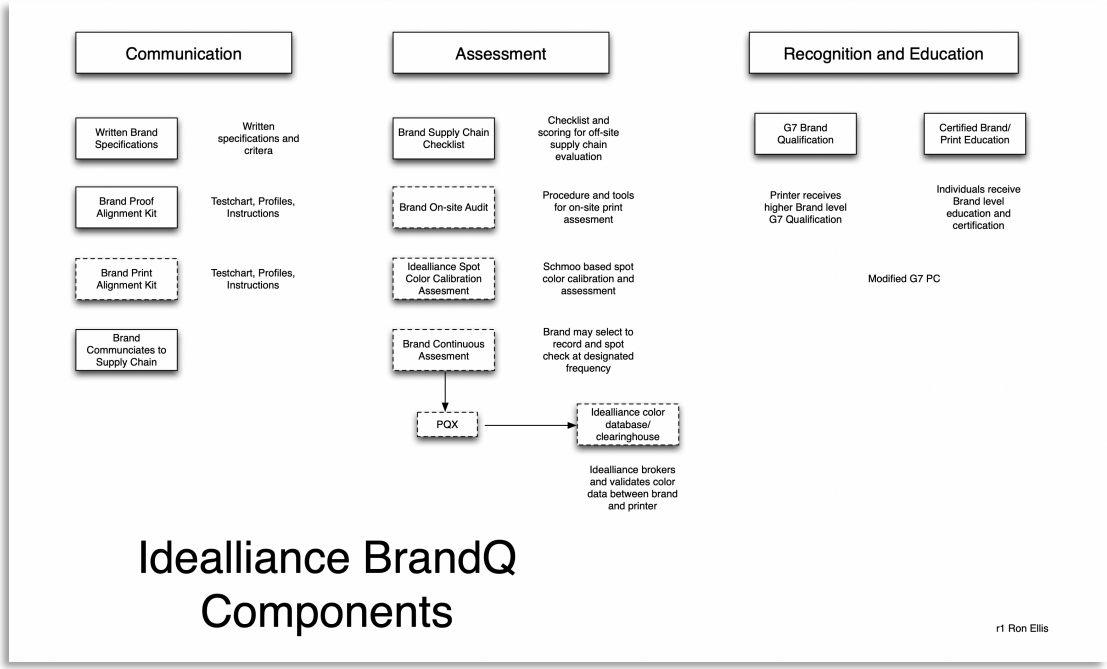
Examples and Case Studies

BrandQ Programs

Education

Brand Manager

Site Certification



Why BrandQ Matters?

- Alignment of brands and suppliers is critical
- Same theory works for suppliers alone
- Standardization makes us more efficient

Practical Use of BrandQ

Use to improve the supply chain alignment

Use to check internal processes

Use top demonstrate competence

Some valuable BrandQ components

Audit

Certification and training

Concepts

BrandQ and ISO

BrandQ concepts based on ISO standards

Audit document refers to and lists relevant standards

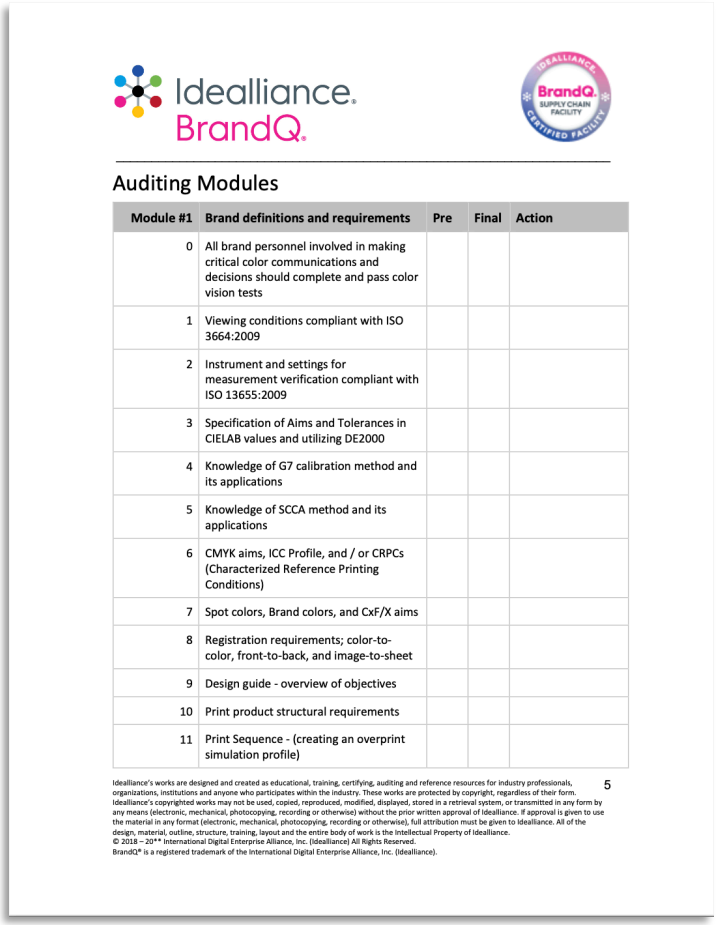
Many brands require a link to ISO standards

Using the BrandQ Audit

Need to fix

Need to work on

Identify problem areas



Idealliance BrandQ

Auditing Modules

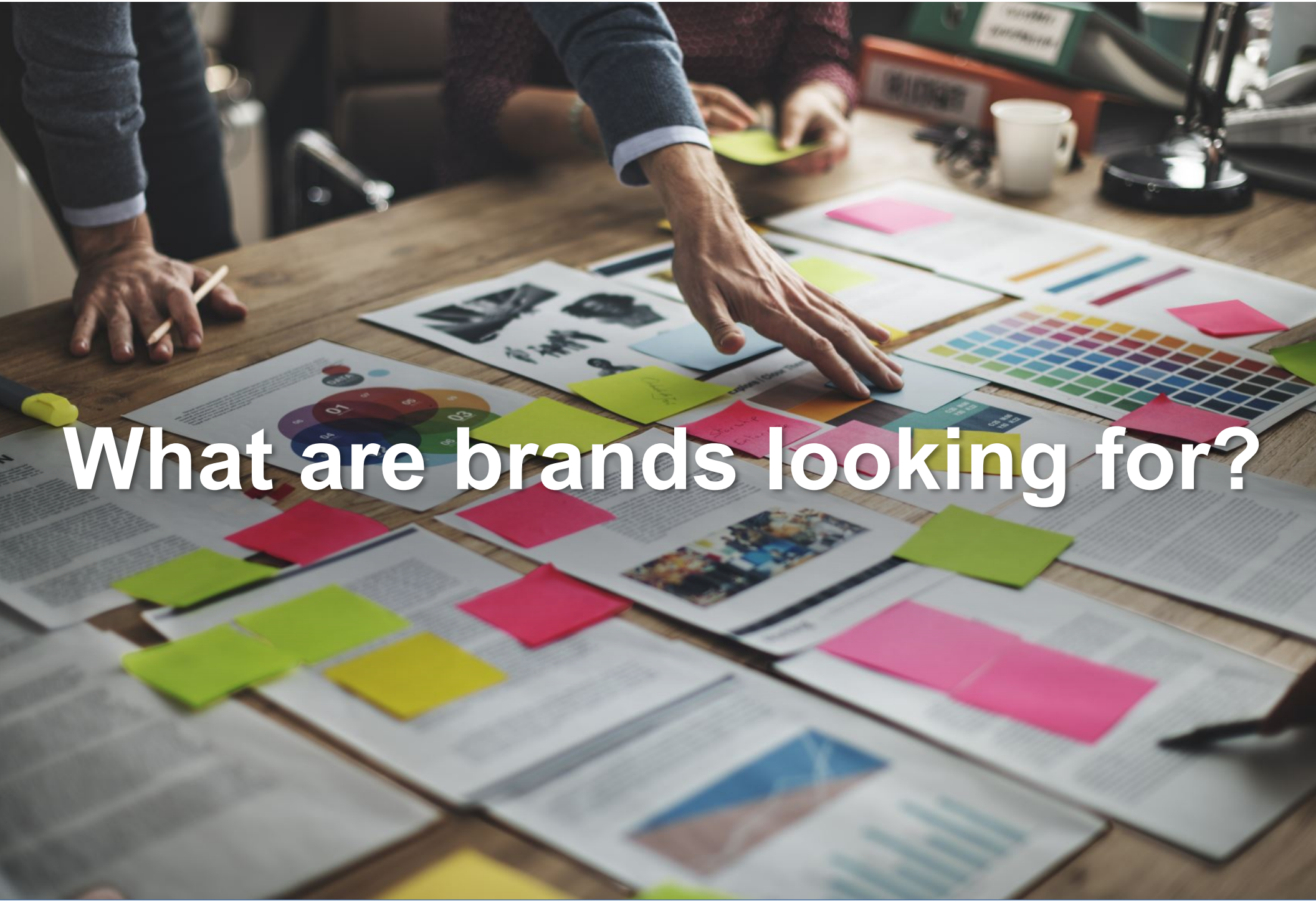
Module #1	Brand definitions and requirements	Pre	Final	Action
0	All brand personnel involved in making critical color communications and decisions should complete and pass color vision tests			
1	Viewing conditions compliant with ISO 3664:2009			
2	Instrument and settings for measurement verification compliant with ISO 13655:2009			
3	Specification of Aims and Tolerances in CIELAB values and utilizing DE2000			
4	Knowledge of G7 calibration method and its applications			
5	Knowledge of SCCA method and its applications			
6	CMYK aims, ICC Profile, and / or CRPCs (Characterized Reference Printing Conditions)			
7	Spot colors, Brand colors, and CxF/X aims			
8	Registration requirements; color-to-color, front-to-back, and image-to-sheet			
9	Design guide - overview of objectives			
10	Print product structural requirements			
11	Print Sequence - (creating an overprint simulation profile)			

What parts of BrandQ matters to me?

There is more in here than you need

It needs to be ‘filtered’ to most important concepts

Audit is adapted to customer needs


What are brands looking for?

Some Big Ideas

Communication

Assessment

Recognition and Education

PQX and PRX

PQX (ISO 20616-2) Used to communicate various attributes of print quality from the printer to the print buyer for assessment, reporting and scoring.

PRX – (ISO 20616-1) Used to communicate print requirements from print buyer to the printer

Going through the audit

Critical items we will examine live with Chromachecker

‘Nice to have’ we will review

Discussion of importance

What can you do with this

Which parts are important?

Which parts really matter?

What will you use from this?

If I had to make a ‘short list’ what would it be?

Module 1

Brand definitions and requirements

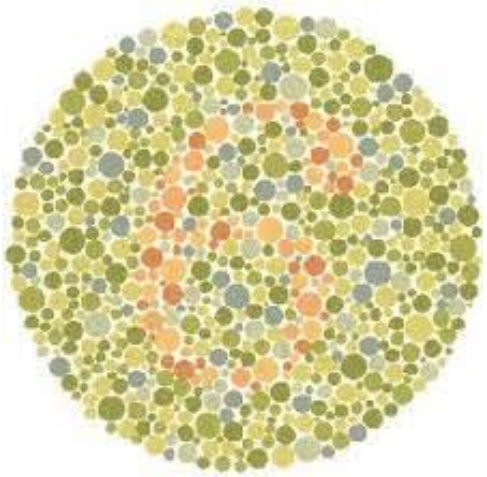
Vision

All brand personnel involved in making critical color communications and decisions should complete and pass color vision tests

Vision

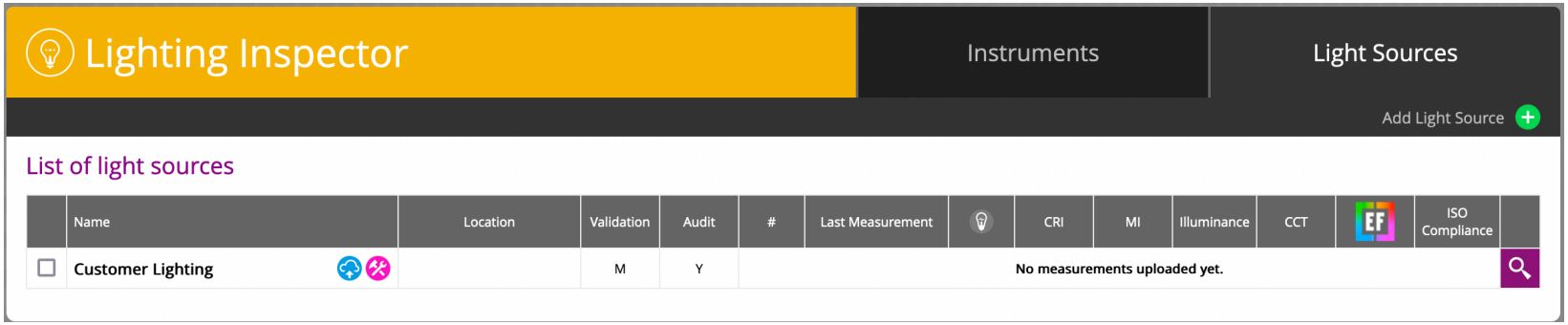
Munsell Hue 100 test

- Ishihara Color Blindness Test



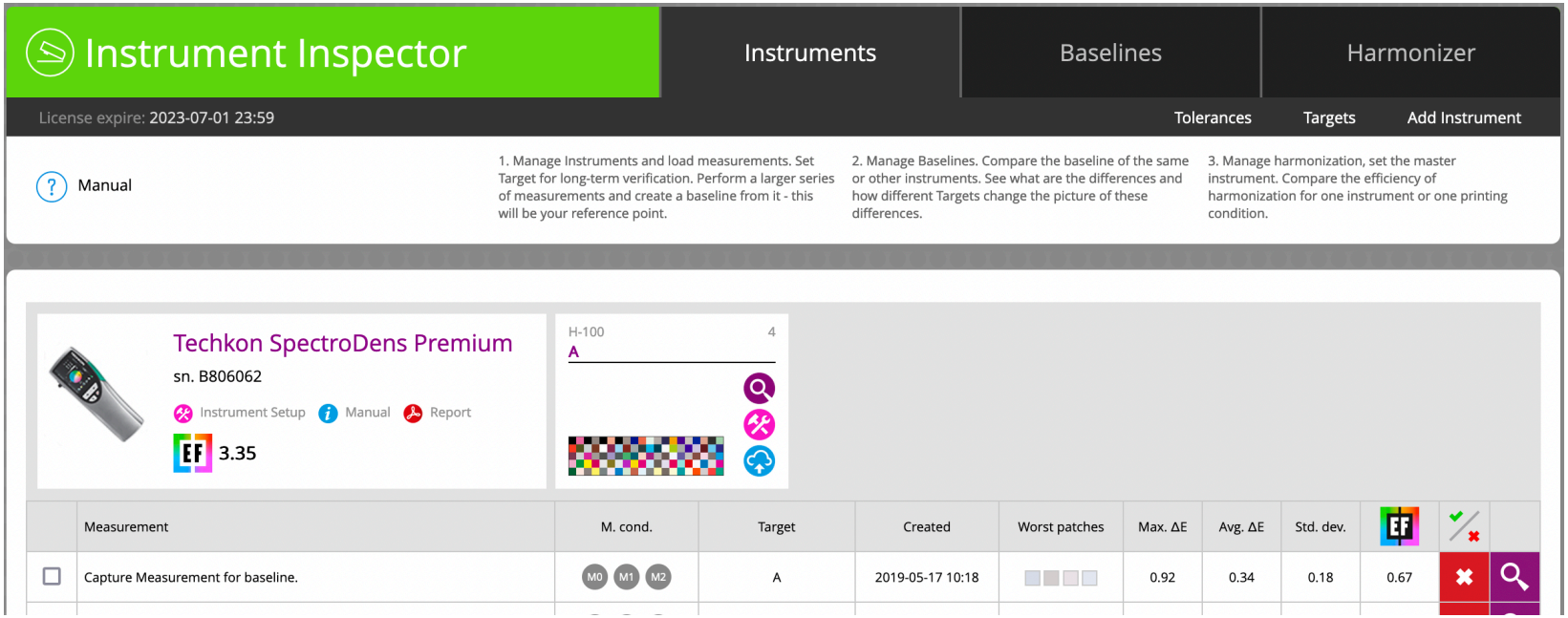
Viewing conditions

Viewing conditions compliant with ISO 3664:2009



Measurement parameters

nstrument and settings for measurement verification
ompliant with ISO 13655:2009

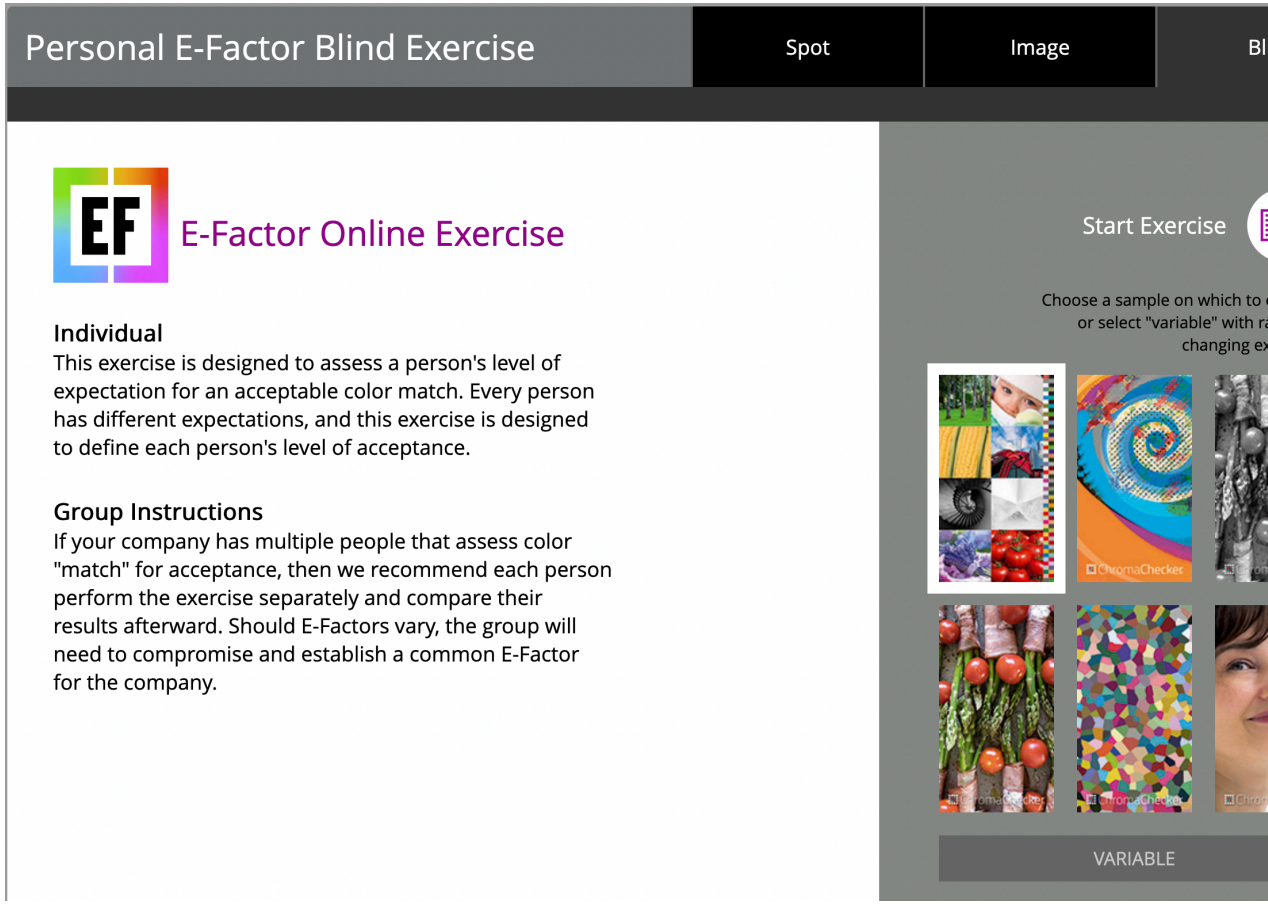


Tolerances

Specification of Aims and Tolerances in CIELAB values and utilizing DE2000

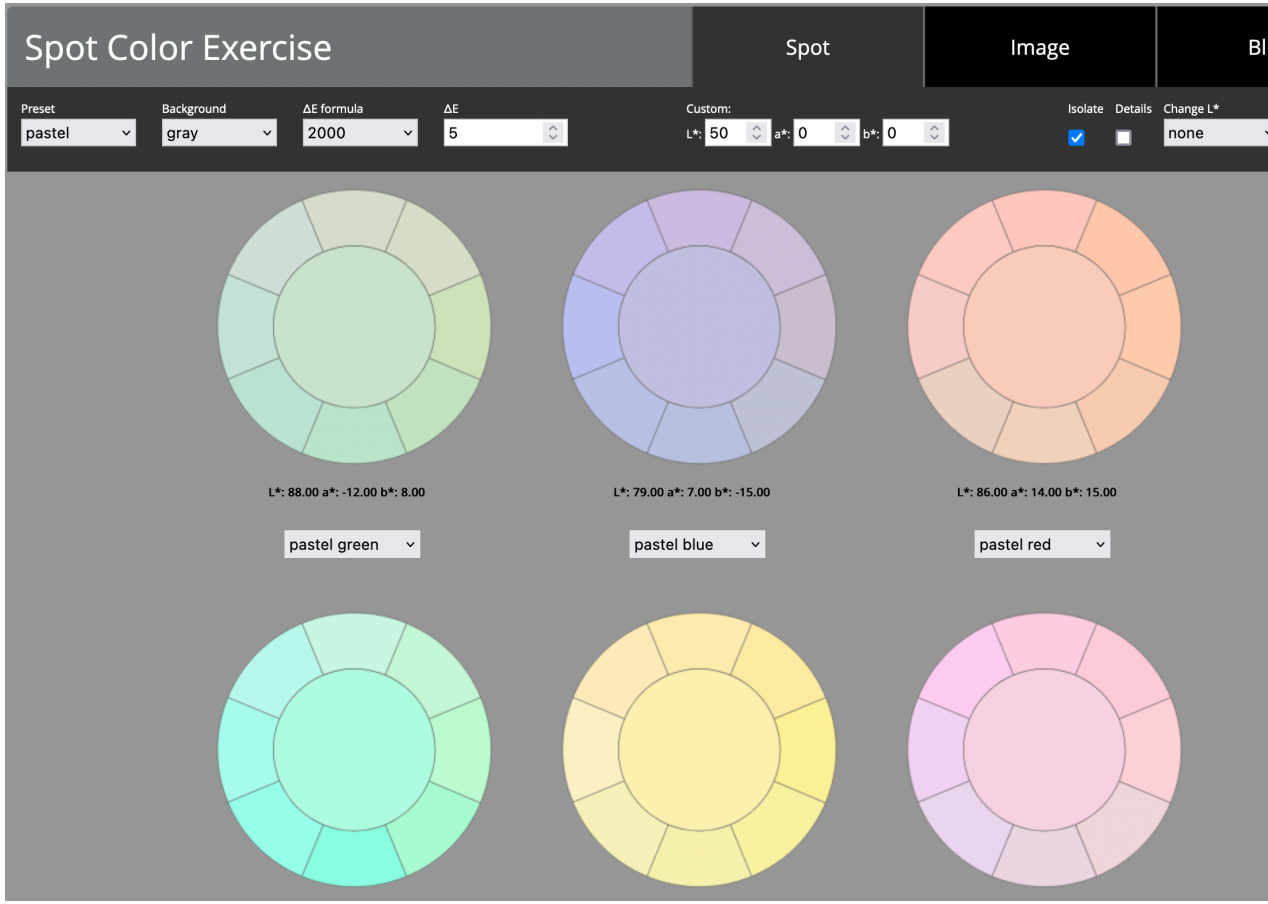
Tolerances - Process

pecification of Aims and olerances in CIELAB values and tilizing DE2000



Tolerances - Spot

pecification of Aims and olerances in CIELAB values and tilizing DE2000



G7

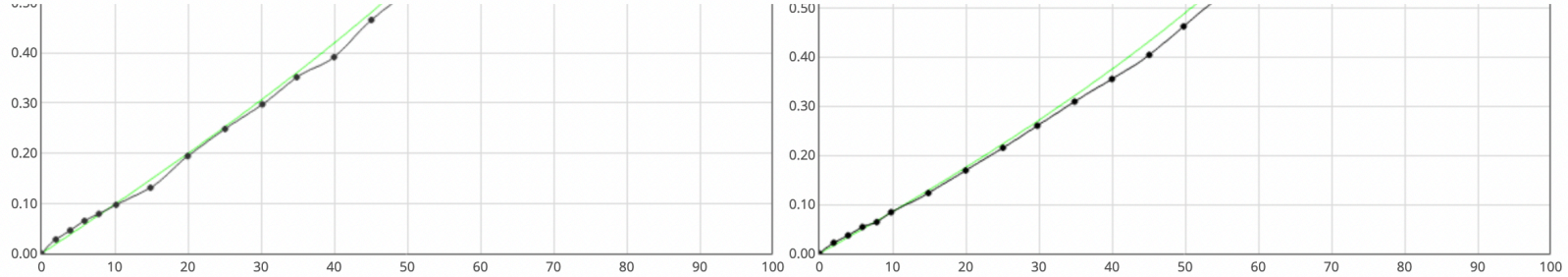
Knowledge of G7 calibration method and its applications

Curve Inspector

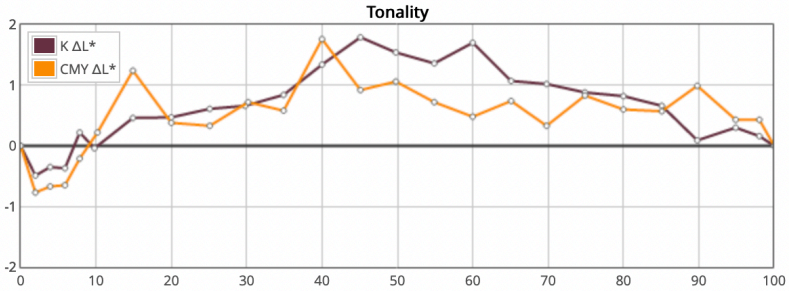
Measurement | G7® Curves

Curve: Offset_Press_OffsetPress_Coated_2020-10-16 Device: Offset Press Track: Coated Created: 2020-10-16 12:09:34

Edit New calculation



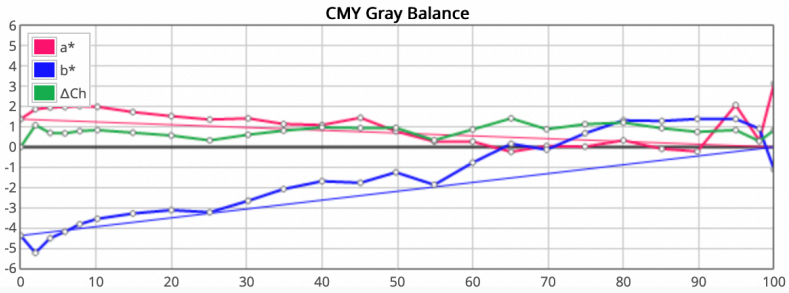
Tonality (wΔL* for CMY and K)



Normative	Average		Max	
CMY	0.68 (1.5)	✔	1.76 (3)	✔
K	0.75 (1.5)	✔	1.79 (3)	✔

Informative	HC (25%)	HR (50%)	SC (75%)
CMY	0.33	1.06	0.83
K	0.61	1.54	0.88

Gray balance (wΔCh, a*, b* for CMY)



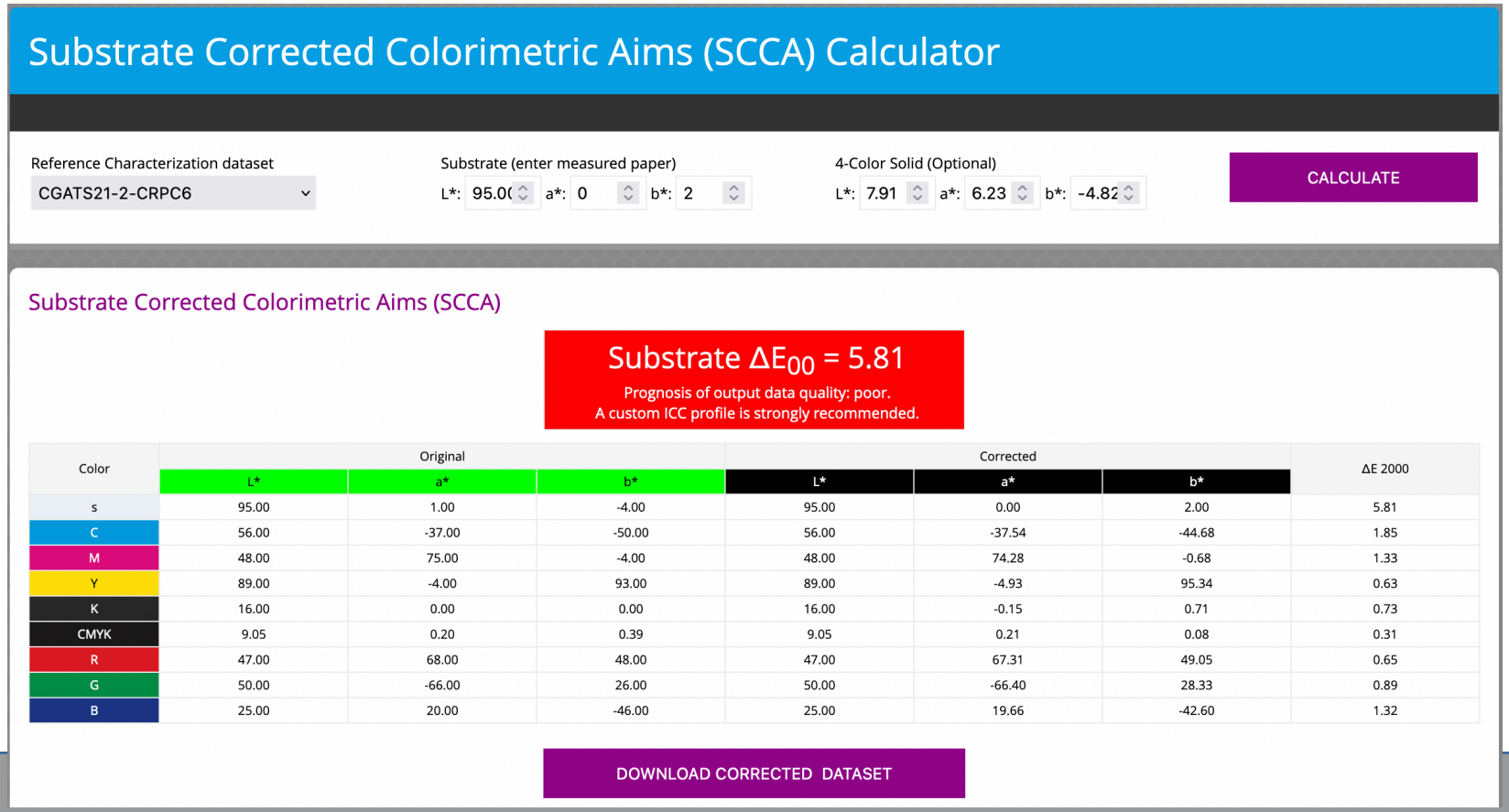
Normative	Average		Max	
CMY	0.81 (1.5)	✔	1.42 (3)	✔

Informative	HC (25%)	HR (50%)	SC (75%)
CMY	0.33	0.95	1.13

Screenshot

SCCA

Knowledge of SCCA method and its applications



Substrate Corrected Colorimetric Aims (SCCA) Calculator

Reference Characterization dataset: CGATS21-2-CRPC6

Substrate (enter measured paper): L*: 95.0(a*: 0 b*: 2

4-Color Solid (Optional): L*: 7.91 a*: 6.23 b*: -4.82

CALCULATE

Substrate Corrected Colorimetric Aims (SCCA)

Substrate ΔE_{00} = 5.81

Prognosis of output data quality: poor.
A custom ICC profile is strongly recommended.

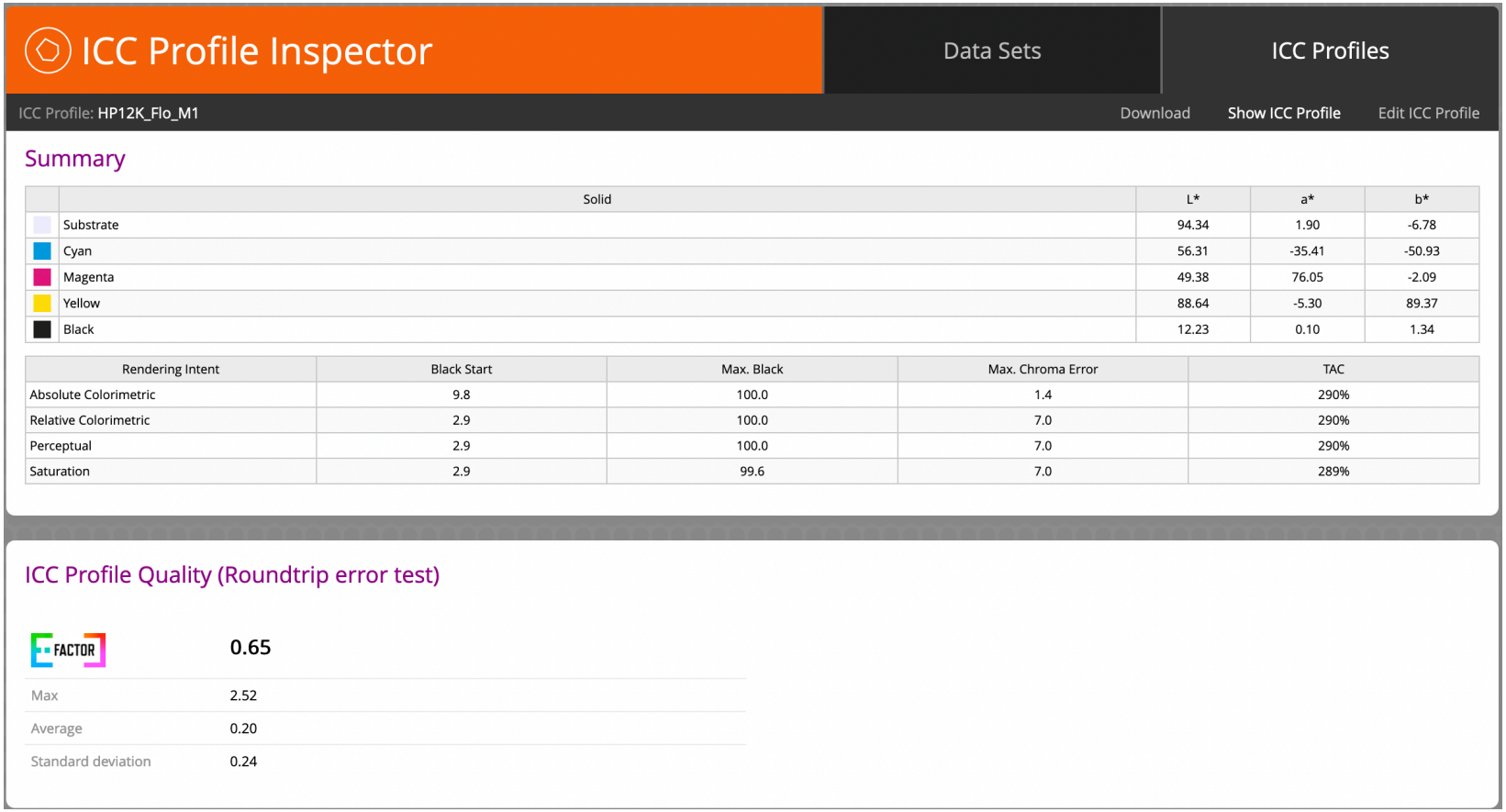
Color	Original			Corrected			ΔE 2000
	L*	a*	b*	L*	a*	b*	
s	95.00	1.00	-4.00	95.00	0.00	2.00	5.81
C	56.00	-37.00	-50.00	56.00	-37.54	-44.68	1.85
M	48.00	75.00	-4.00	48.00	74.28	-0.68	1.33
Y	89.00	-4.00	93.00	89.00	-4.93	95.34	0.63
K	16.00	0.00	0.00	16.00	-0.15	0.71	0.73
CMYK	9.05	0.20	0.39	9.05	0.21	0.08	0.31
R	47.00	68.00	48.00	47.00	67.31	49.05	0.65
G	50.00	-66.00	26.00	50.00	-66.40	28.33	0.89
B	25.00	20.00	-46.00	25.00	19.66	-42.60	1.32

DOWNLOAD CORRECTED DATASET

Defined CMYK print conditions

CMYK aims, ICC Profile, and / or CRPCs
(Characterized Reference Printing Conditions)

Defined CMYK print conditions



ICC Profile Inspector

Data Sets

ICC Profiles

ICC Profile: HP12K_Flo_M1

Download | Show ICC Profile | Edit ICC Profile

Summary

	Solid	L*	a*	b*
	Substrate	94.34	1.90	-6.78
	Cyan	56.31	-35.41	-50.93
	Magenta	49.38	76.05	-2.09
	Yellow	88.64	-5.30	89.37
	Black	12.23	0.10	1.34

Rendering Intent	Black Start	Max. Black	Max. Chroma Error	TAC
Absolute Colorimetric	9.8	100.0	1.4	290%
Relative Colorimetric	2.9	100.0	7.0	290%
Perceptual	2.9	100.0	7.0	290%
Saturation	2.9	99.6	7.0	289%

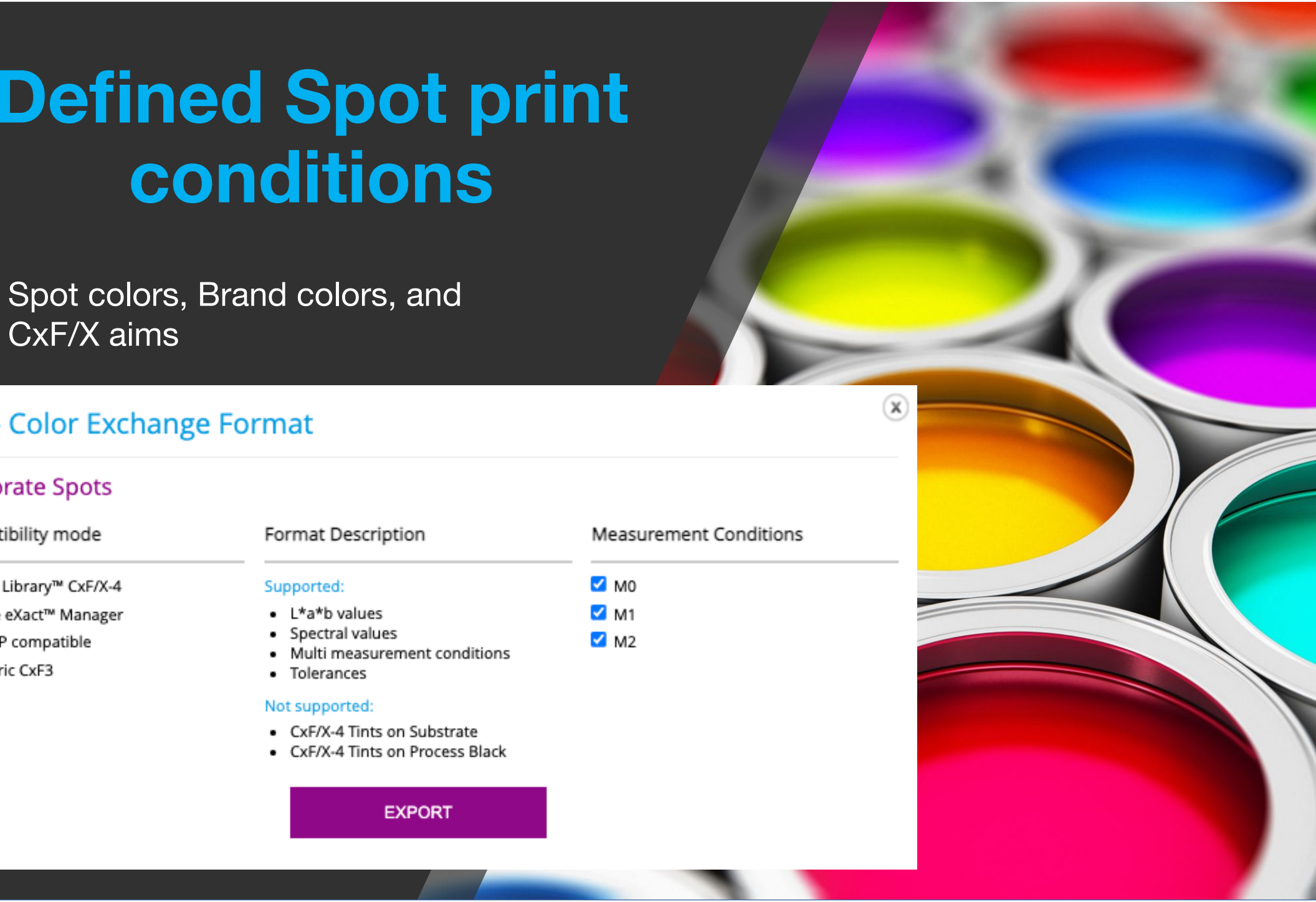
ICC Profile Quality (Roundtrip error test)

E-FACTOR 0.65

Max	2.52
Average	0.20
Standard deviation	0.24

Defined Spot print conditions

Spot colors, Brand colors, and CxF/X aims



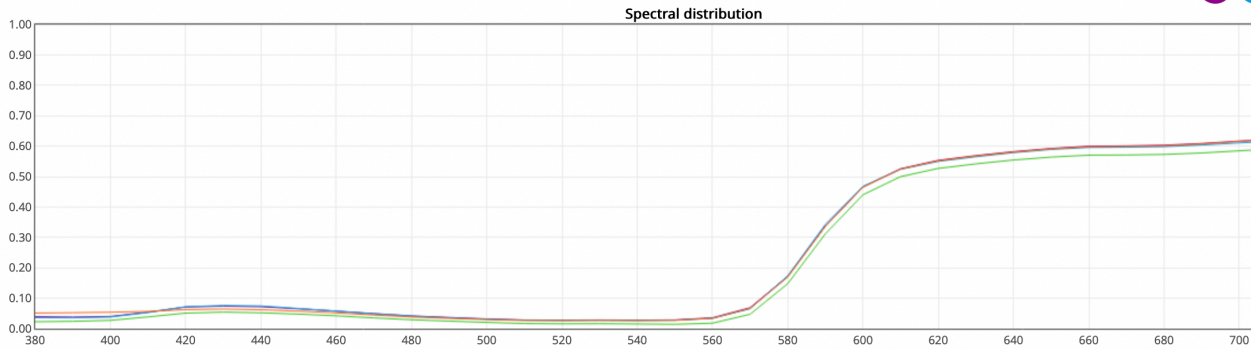
Defined Spot rint conditions

PANTONE 1797 C

Projects | Assets | Track

Library: PANTONE+ Solid Coated-V3 Illuminant: D50 Observer: 2 degree

Spectral distribution



Density

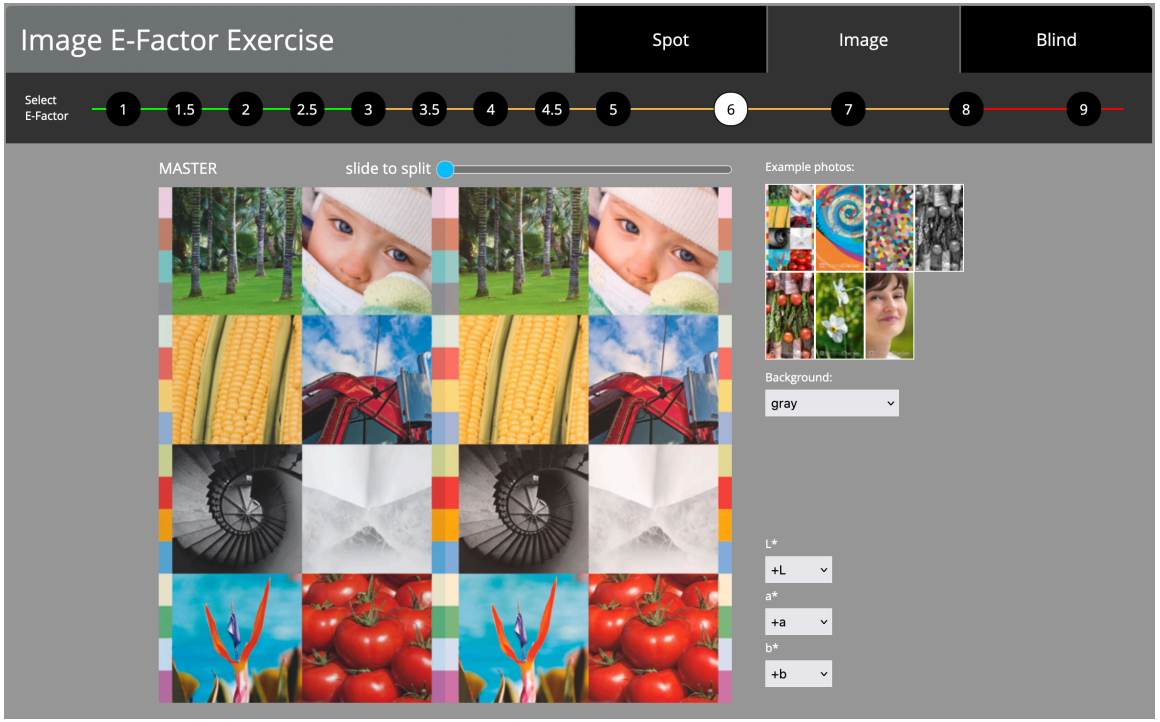
	Wavelength [nm]	Spectral Density	Status T density	Status T density	Status T density	Status T
M0	520	1.55	0.325	1.658	1.406	0.7
M1	540	1.57	0.325	1.658	1.406	0.7
M2	520	1.58	0.325	1.658	1.406	0.7
M3	550	1.84	0.325	1.658	1.406	0.7

Print Quality

Registration requirements; color-to- color, front-to-back, and image-to-sheet

Design guidelines

Design guide - overview of objectives



Structural

Print product structural requirements

Sequence

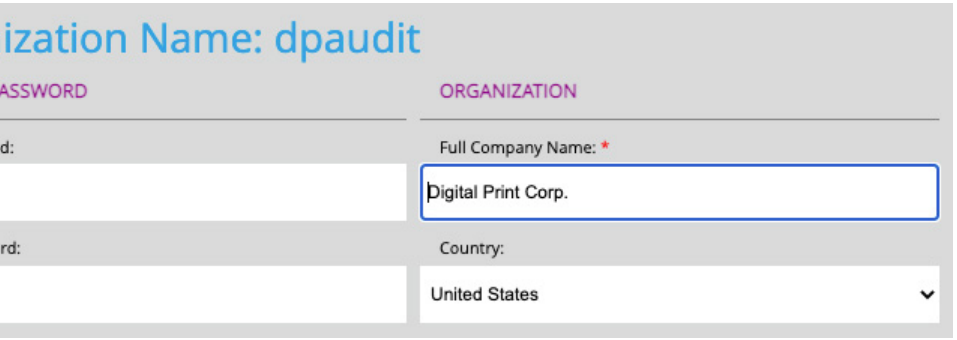
Print Sequence - (creating an overprint simulation profile)

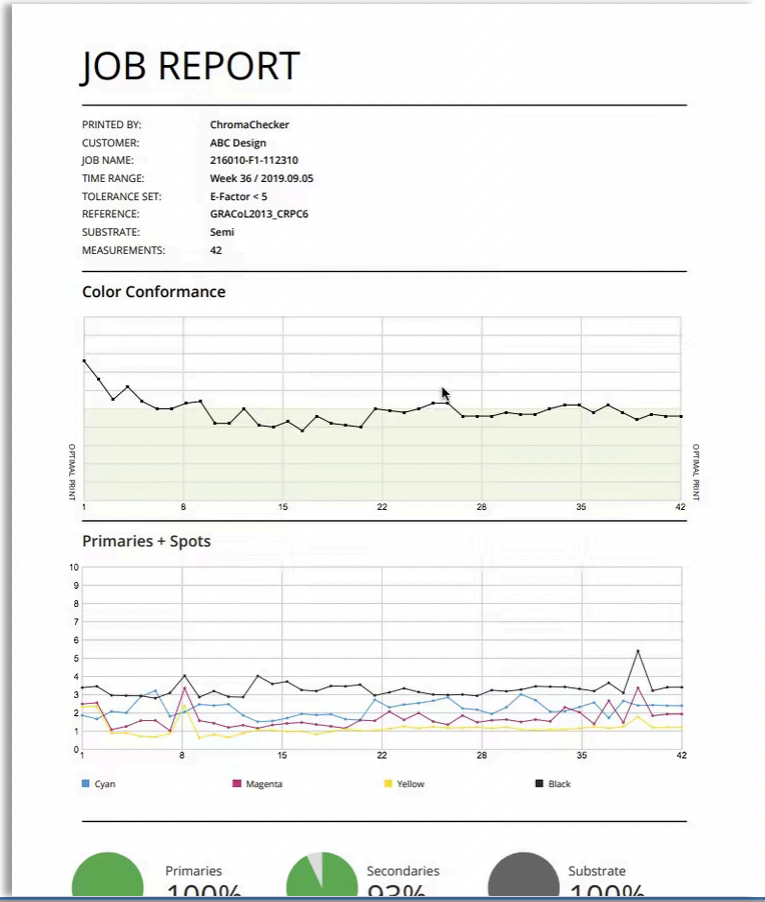
Dies

Die line(s) indications

Reporting

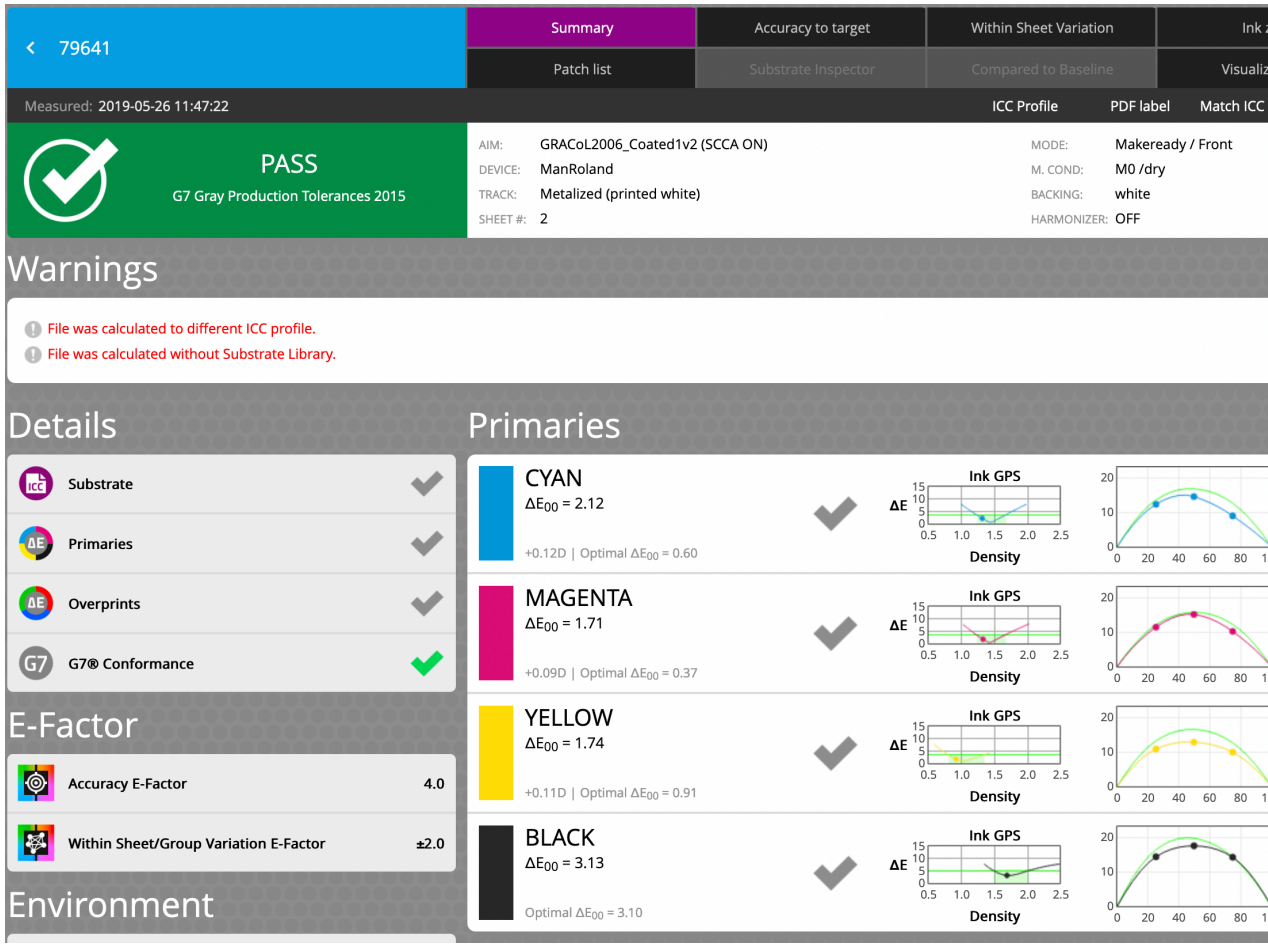
Minimum requirements for print and reporting





COA

Certificate of Analysis (CoA) and Certificate of Conformance (CoC) testing and reporting requirements



Standard Operating Procedures

Module 2 Design and composition responsibilities

PDF

File Format (Native files or PDF/X-4)

Pre-flighted file delivery - PDF/X-4

File Types

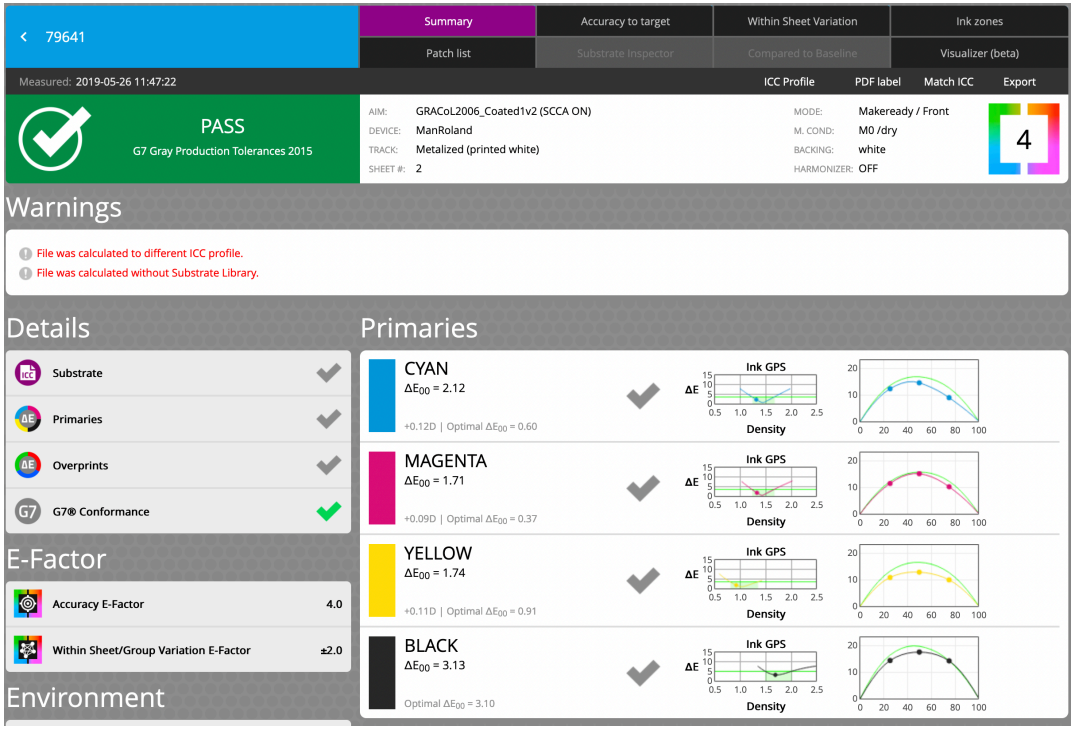
oftware compatible with
ector/Raster formats

Embedded Profiles

Photography RAW and TIFF with embedded ICC Profiles

Validation Prints

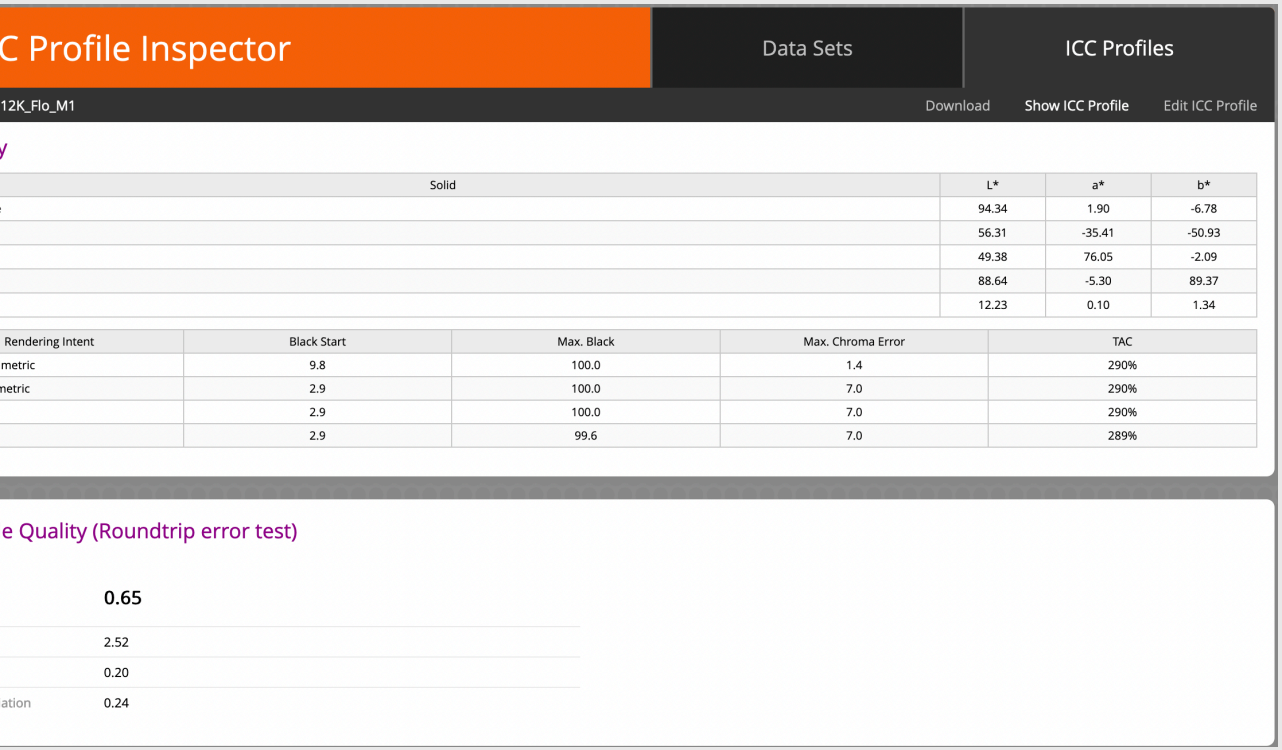
Validation print protocol - validation of color accuracy



SOP

SOP documenting all procedures, and equipment upgrades

Color Space



- Has defined color workin space

Color Space

Has color conversion SOP

Has profiles available for third parties

Adobe CS Apps loaded with proper color working space

Proofer, other apps loaded with proper color working space

Staff knowledge of color working space

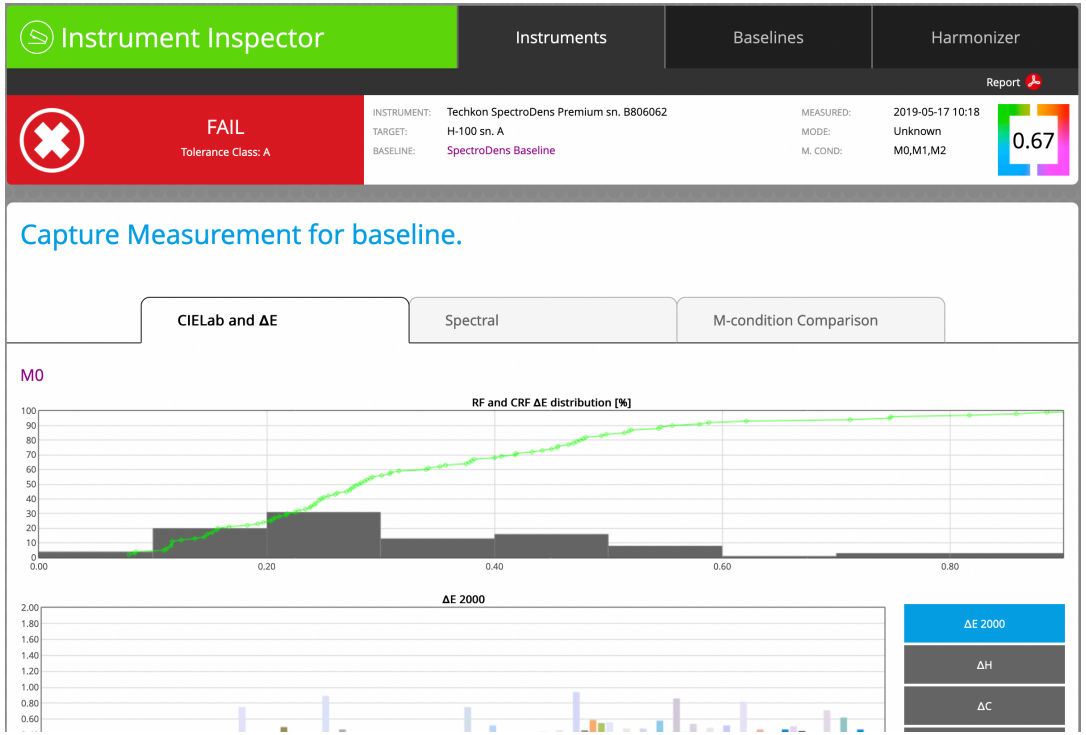
Module 3 Pre Media Responsibilities

Pre-flight

Pre-flight with reporting to supplier procedure for process improvement

Instrument verification

Instrument for measurement verification



File formats

File format - ISO 15390-7 PDF/X-4

Pre-flighted file delivery - PDF/X-4

Color Accuracy

Validation print protocol - validation of color accuracy

Contract proofs per ISO 12647-7 with documentation

Ron Ellis Consulting • Week 13 / 2019.03.26 • Test

Compliance
100%

Summary

#	Sheet	Date	Substrate	Primaries	Overprints	G7	G7 Within Sheet Variation E-Factor	Accuracy E-Factor	Overall E-Factor	Compliance
1		2019-03-26 09:42	✓	✓	✗	✓	±1.2	3.3	3.3	✓
2		2019-03-26 09:35	✓	✓	✗	✓	±2.5	3.8	3.8	✓

Workflow and Print

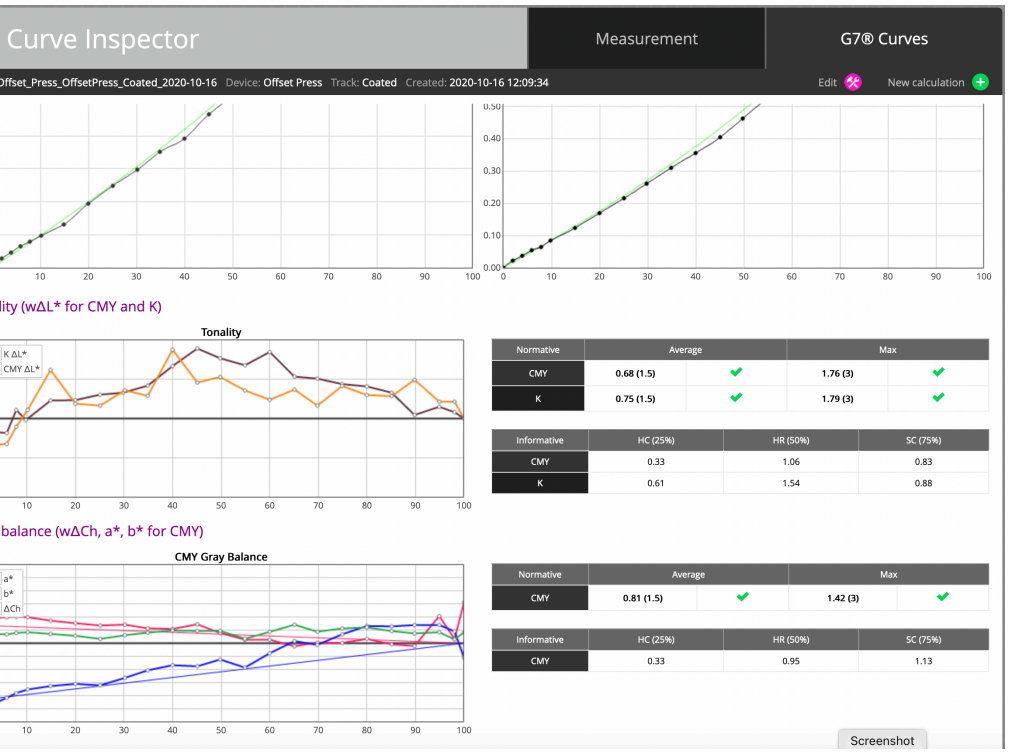
Workflow per ISO 10128

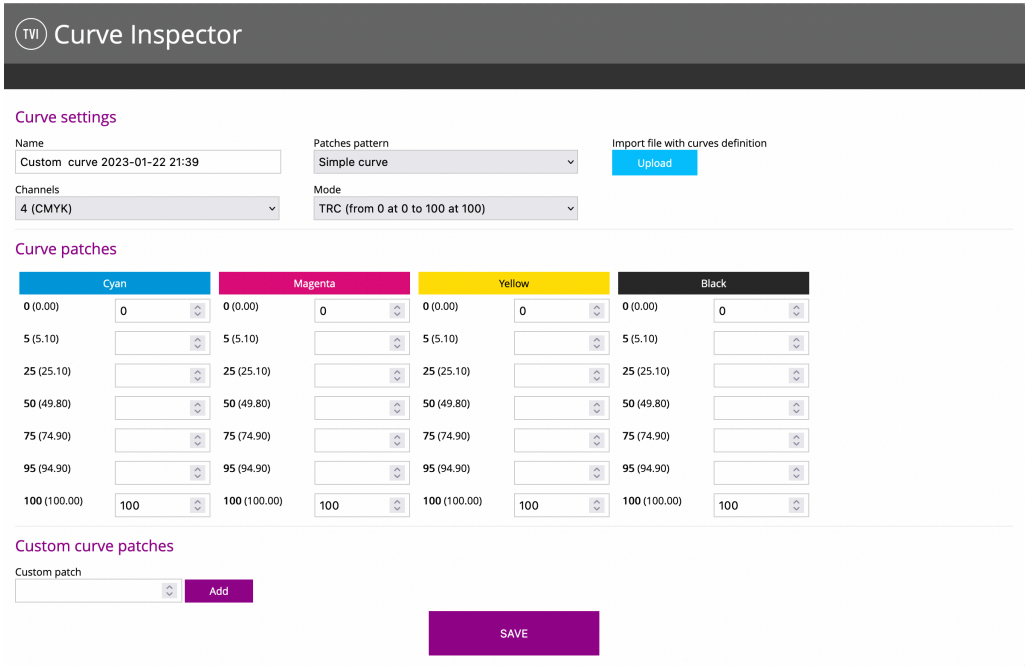
G7 Calibration methodology

ISO 12647 - series TVI (tone value increase)

Plate Supplier provides micro enlargement and measurement on minimums, and 50% on all plate delivery

Workflow and Print





Printing Aims

Has written printing aims

Staff can communicate printing aims

Printing aim values are colorimetric

Printing aim values based on characterization reference data set

Capable of calculating SCCA printing aim CIELAB values using printing paper colorimetric measurement

Proof to Press Accuracy

Written SOP for comparing proof to aim

Press sheets contain colorimetric data on color control bar (not just density)

Proof contains G7/ISO 12647-7 Control Strip

Site has equipment and system for measurement of control strips

Site has internal tolerances

Staff can communicate aims and evaluation methods

PDFX

Job options for PDF creation

Pre-flight method for PDF reception

Use GWG Specifications

Use(s) GWG Test Suite

Pre-flight Audit Trail

Data Reception

“Data Reception How To” available

Pre-flight procedure

Color Conversion procedure

Data Reception – Control Strip Required

Data Creation SOP

Transparency procedures

Test GWG Suite

TAC Management

Platemaking

Platemaking Checklist

Test file in place

Test file rendered

Plate-reader

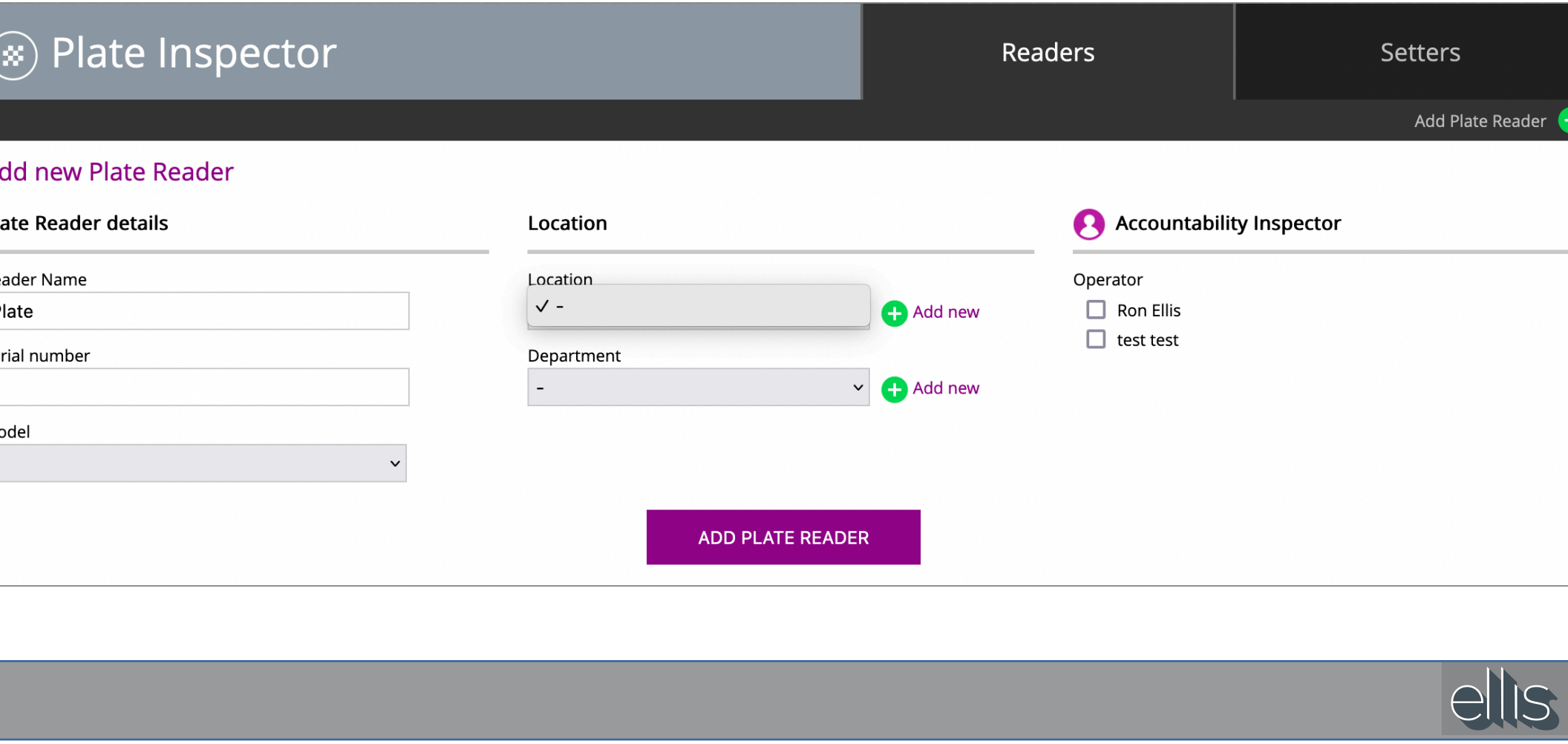
nFactor (if required)

Plate control targets

Capable of create and check linear plate

Capable of create and check curved plate

Platemaking



Module 4 Print Production Responsibilites

Communication

Confirming files and elements
eceived are accurate and
eporting to supplier for
rocess improvement

COA

Bar Code verification per ASTM

Certificate of Analysis (CoA) on all incoming receivables

Substrate with documentation per ISO 15397

Ink manufacturers provides Certificate of Analysis (CoA
with spectral data and conformance demonstrating
Color aims met and light fast qualities met

Laminates meet brand requirements

Brand Capable

Print consistently - Optimized to meet brand requirements

Reporting of aims being met

SOP documenting all procedures, and equipment upgrades

G7

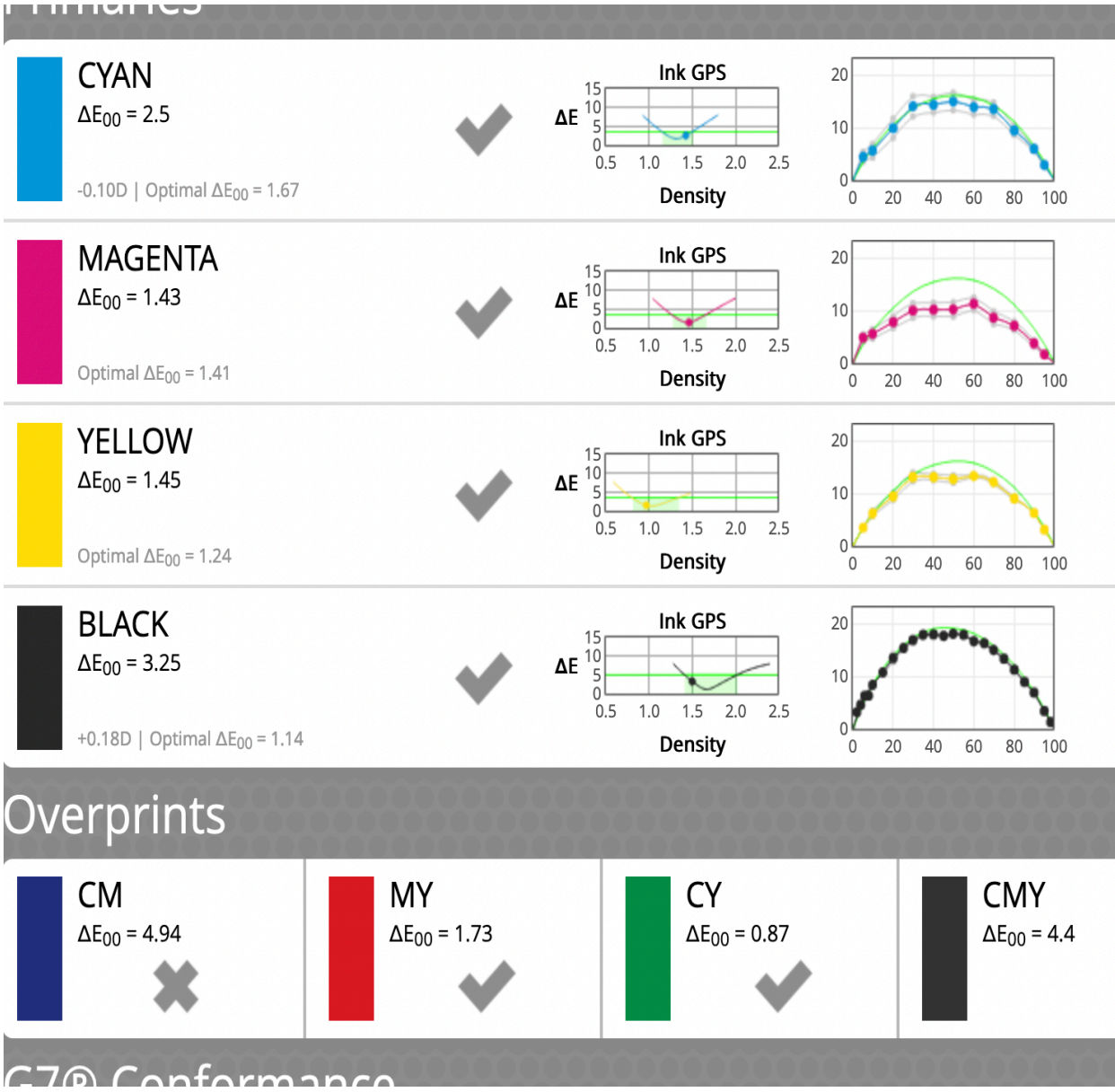
G7 SOP

Calibration tool on-site G7
Calibration Method G7 Gray
G7 Targeted
G7 Colorspace
G7 Elements on press control bar
G7 Master
C, M, Y, K solids (Targeted)
R, G, B overprints (Targeted)
Recorded result Characterization data

Ink

SO 2846-1 Qualified Inks

SO 12647- Inks – Production un Recorded values – olids/overprints Backup ink upplier identified



Color Theory

RGB Color space(s) identified

CMYK Color space identified

Applying CIELAB and G7 Color Metrics

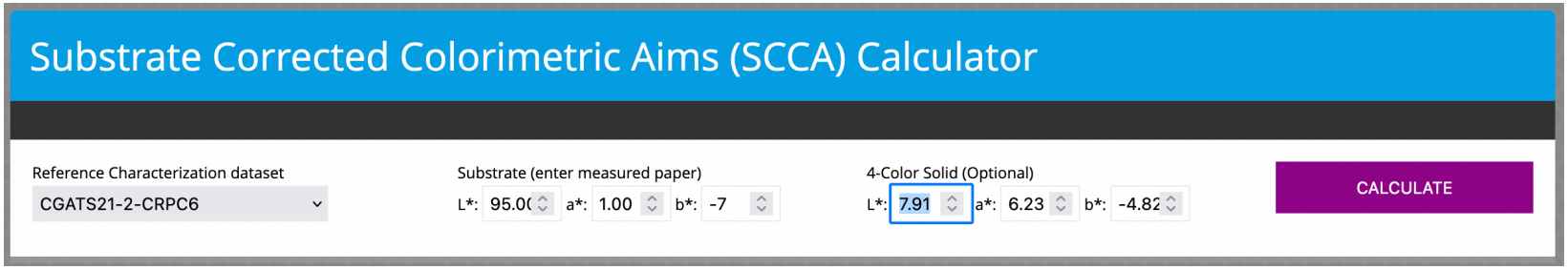
G7 Press conditions recorded CIELAB values

G7 Press conditions recorded CMYK Dens

Demonstrate CIELAB understanding

Paper Relative Theory

Relative paper theory tool on-site

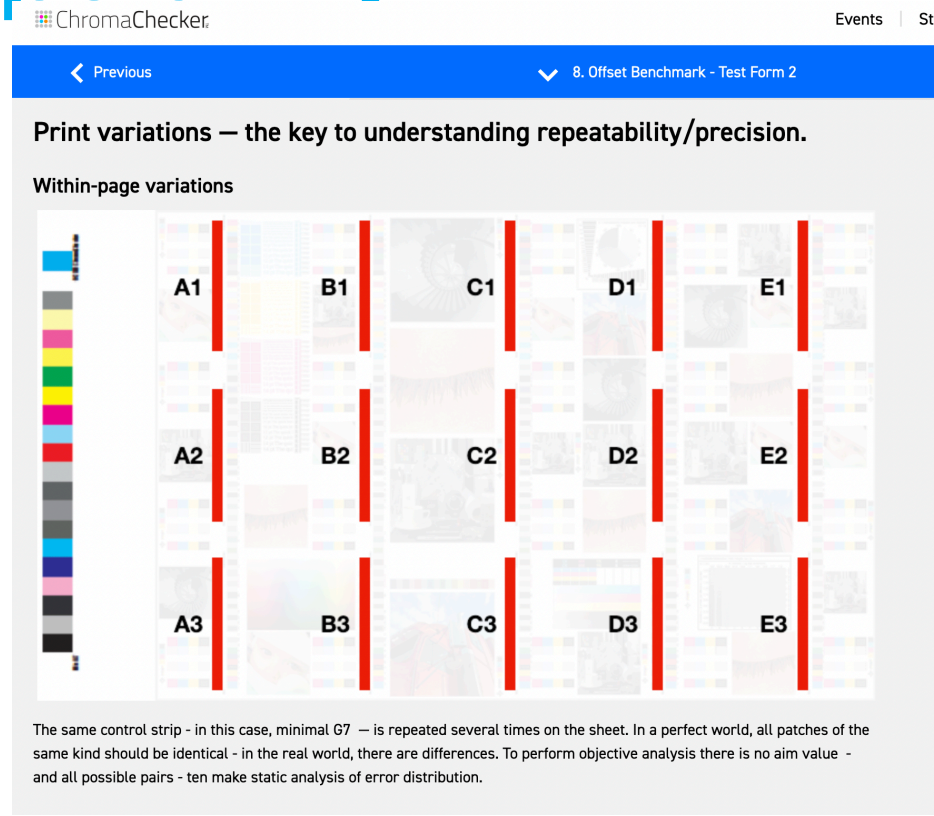


Process Capability

Process Performance SOP

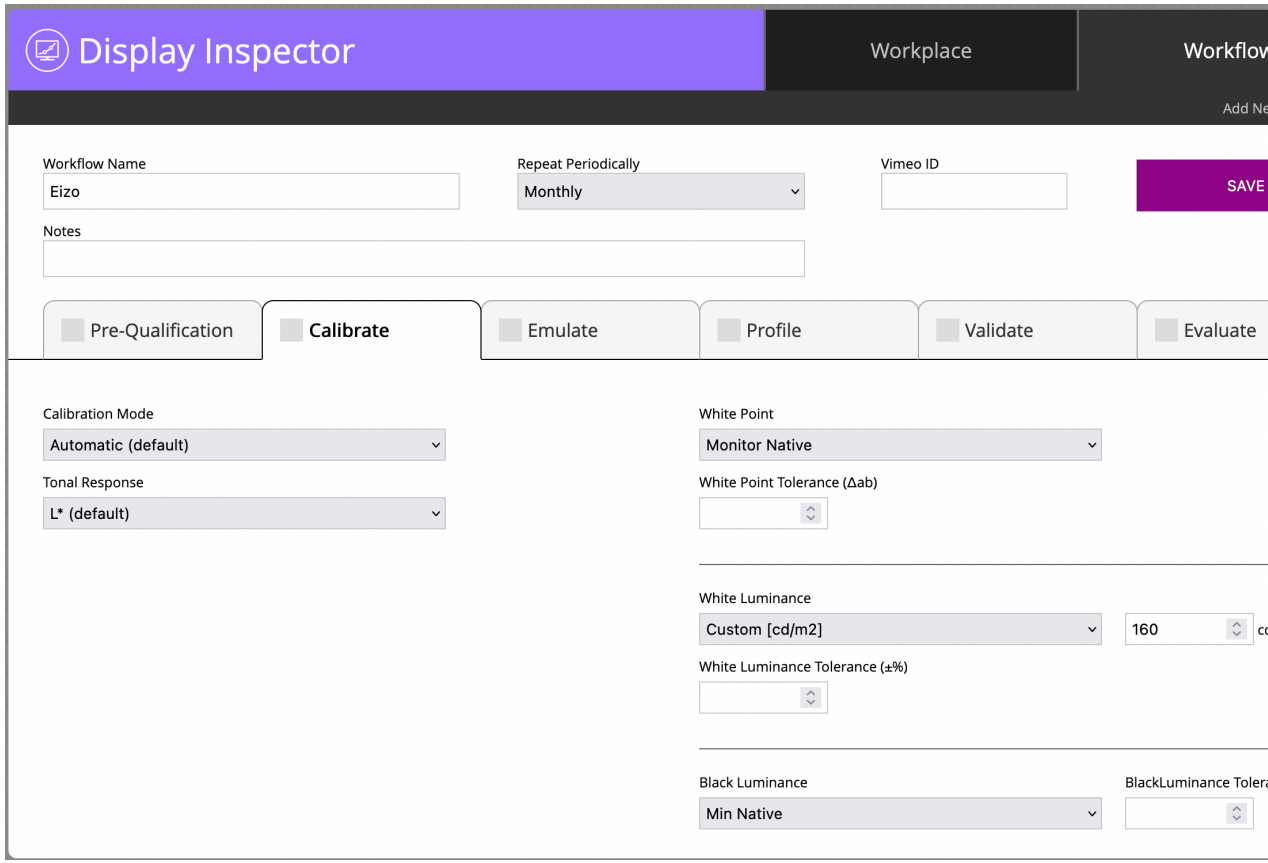
Process Performance Tool

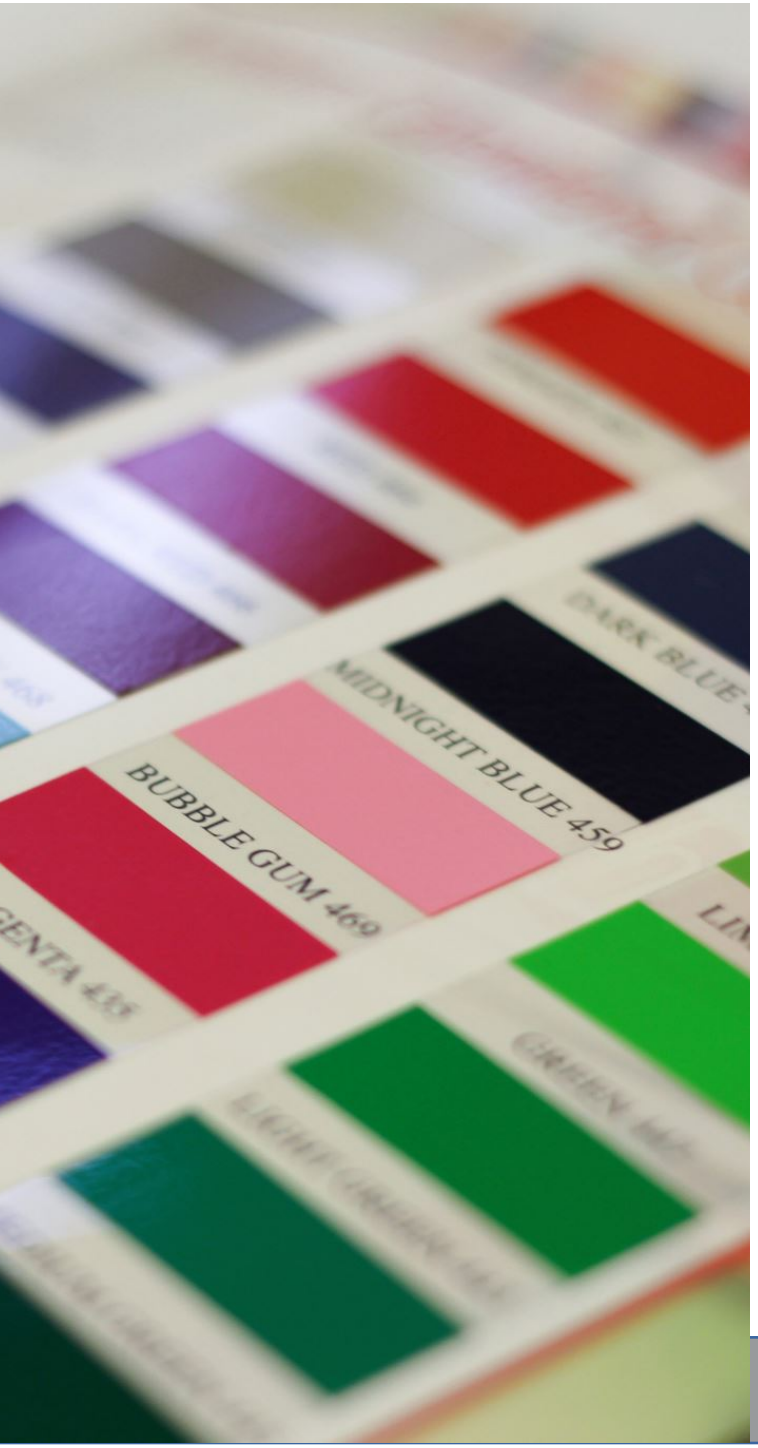
Written/Recorded Machine Capability for each printing machine



Soft Proofing

- alibrated Monitor
- rofiled Monitor
- onfiguration of Working Space
- onfiguration of Proof Simulation
- edicated Soft-proofing pplication
- ppropriate display(s)
- alibration/profiling device
- alibration/profiling software
- isual match

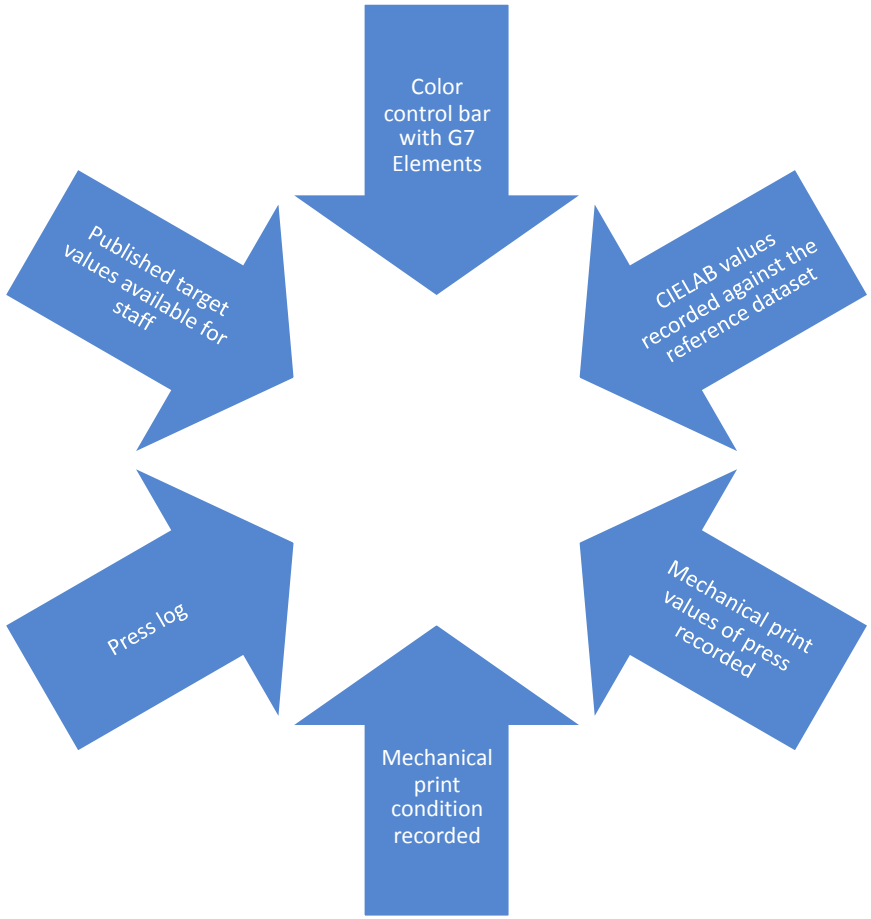




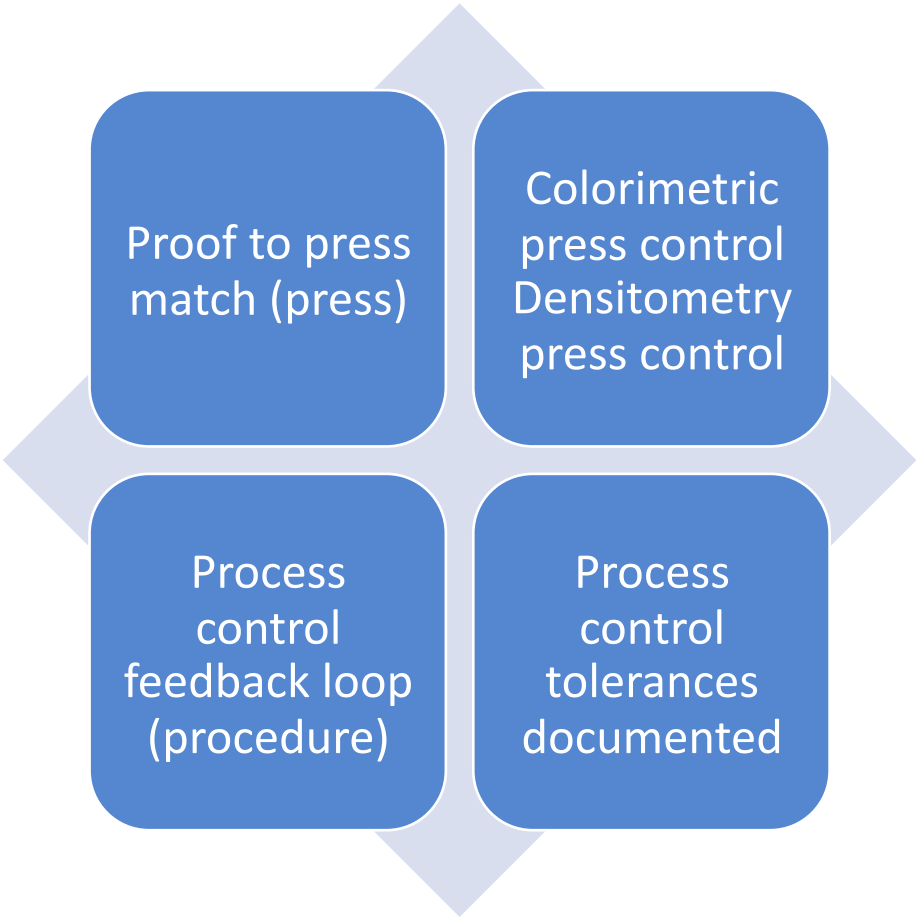
Process Control…

- Spectrophotometer
- Densitometer
- Last instrument calibration date
- Scanning press control
- Color control bar with CMYK per ink key
- Color control bar with tints/overprints

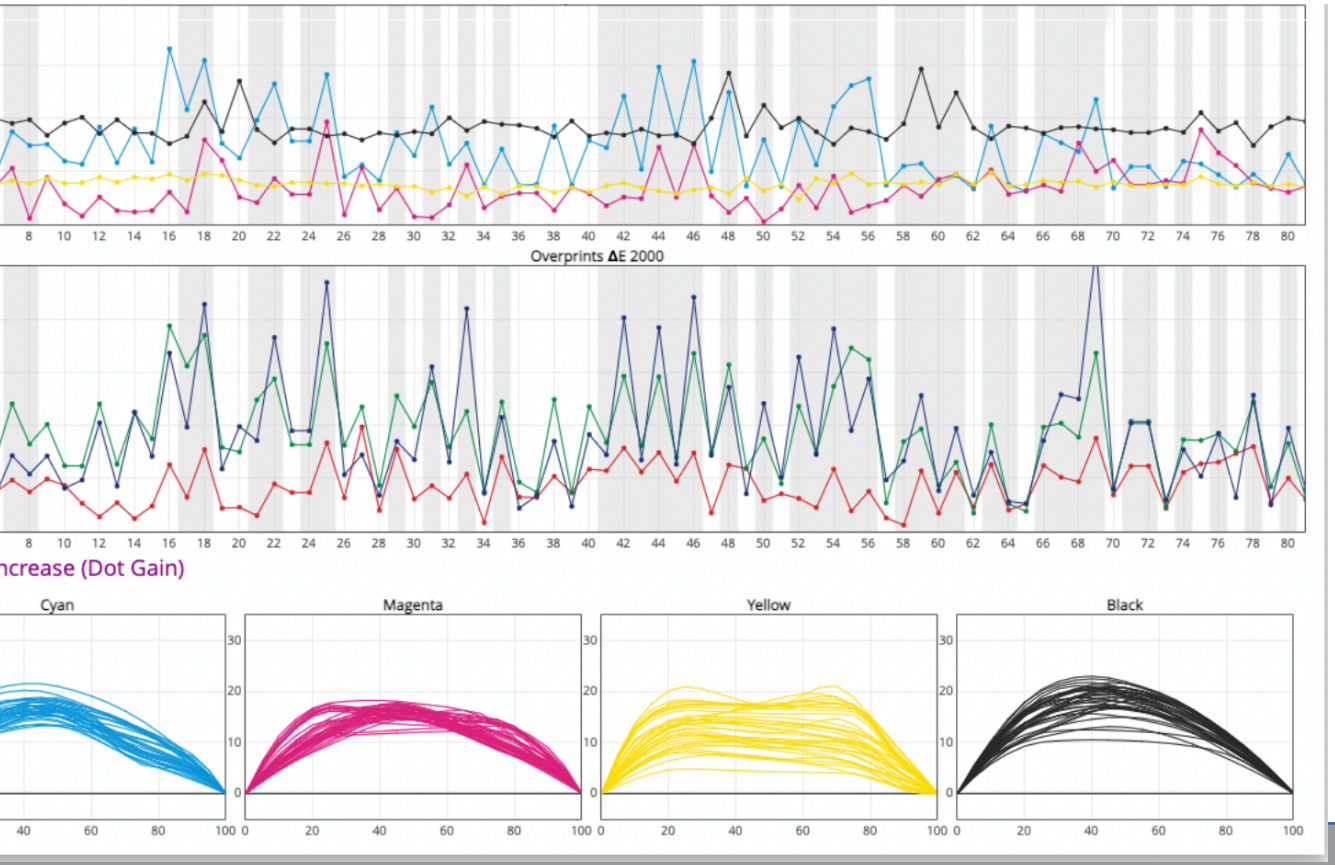
Process Control…



Process Control



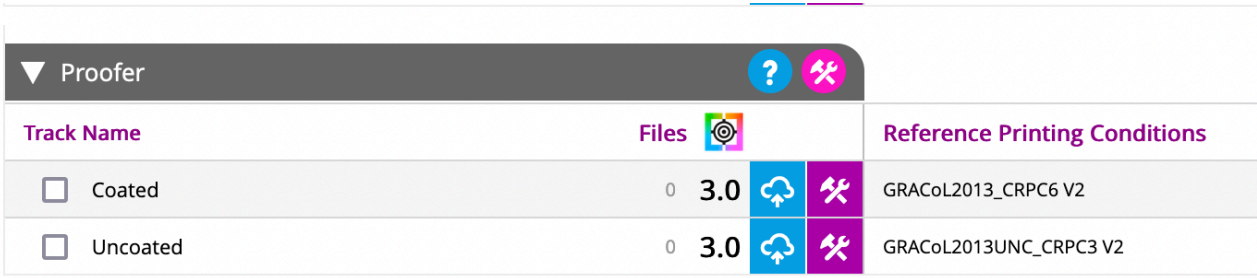
Trending and Analysis



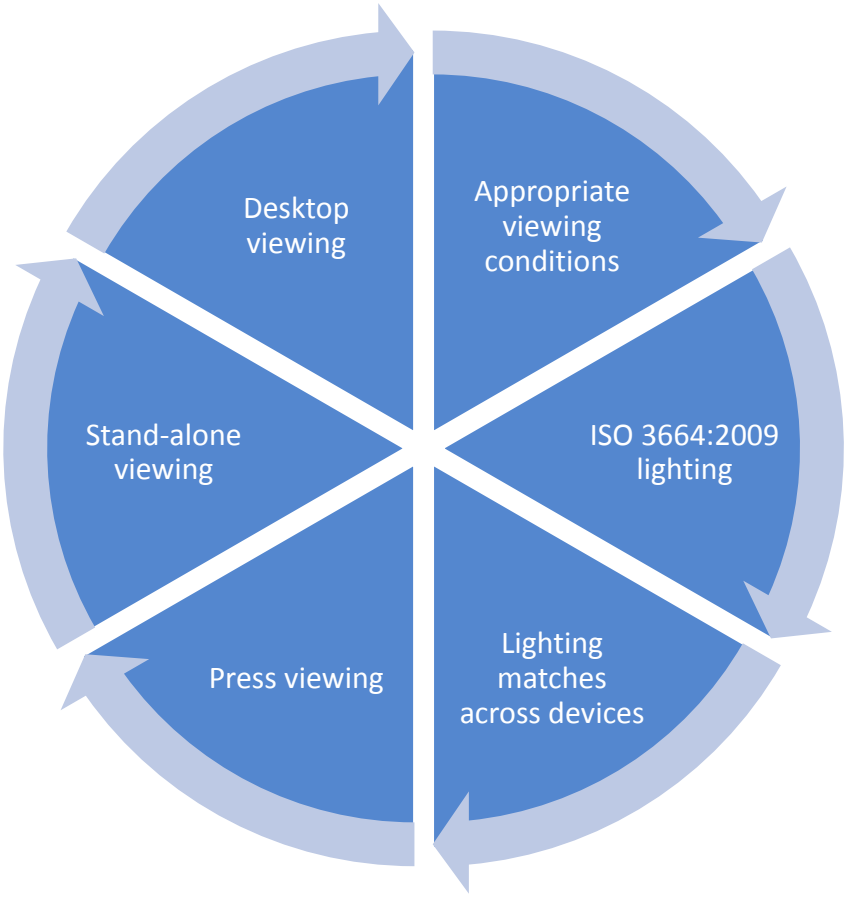
- Trending reports (electronic or physical)
- Target characterization dataset identified
- Trend tolerances documented
- Trend intervals documented

Hardcopy Proofing

- Proof Validation Tool
- Proof Validation Traceability
- Proof tolerances documented
- Proof adjust method
- ISO Compliant paper
- Spectrophotometer
- Accurate RIP
- Viewing condition



Viewing Conditions



Client Training

Sales personnel trained

CSR Trained

Management Trained

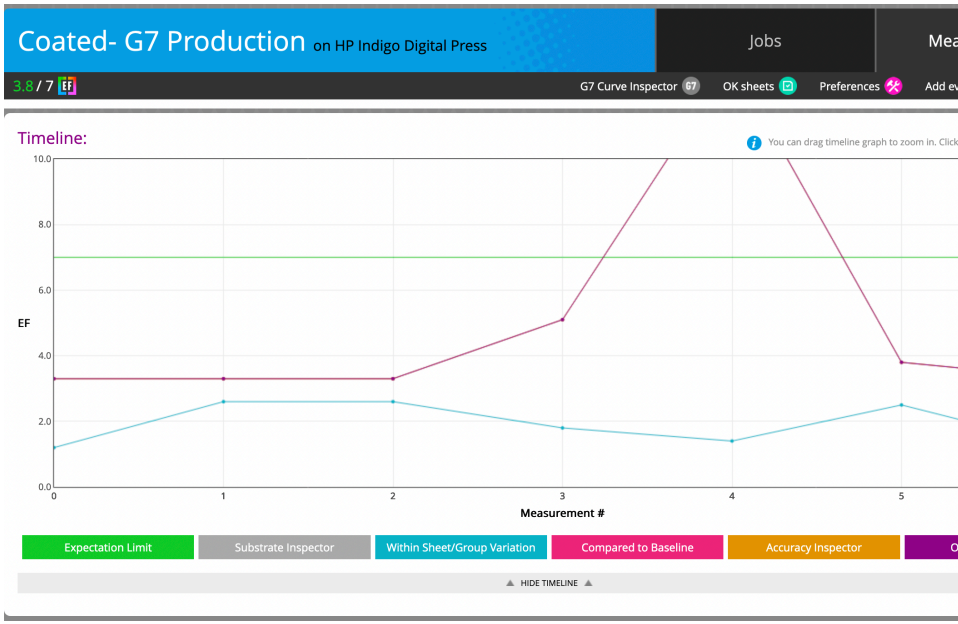
ISO

ISO Docs on-site

Knowledge of fundamental standards related to G7

Digital Calibration

- SOP
- QC Procedure in place
- QC interval in place
- Calibration procedure in place
- Digital Control Strip



Digital Test

Have digital test form

Capable of testing color

Capable of testing rendition of file

Capable of testing RGB to CMYK conversions

Spot Colors

- SCCA Quality/Evaluation
- SCCA Calibration
- Solids Spot Capabilities CXF capable

Module 5 Additional Testing

Additional Brand Tests…

Certificate of Analysis (CoA) and/or Certificate of Conformance (CoC) per brand requirements - document and delivery - testing and reporting protocols

Rub resistance, abrasion testing and documentation

Solvent rub testing and documentation

Additional Brand Tests

Lightfast testing and documentation

COF testing and documentation

Brand Testing Protocol – Defined by brand

Additional product specific testing as require and documented by brand

SOP for all procedures and documentation

Other topics

Correction for Observer Metamerism

The Observer Metamerism issue

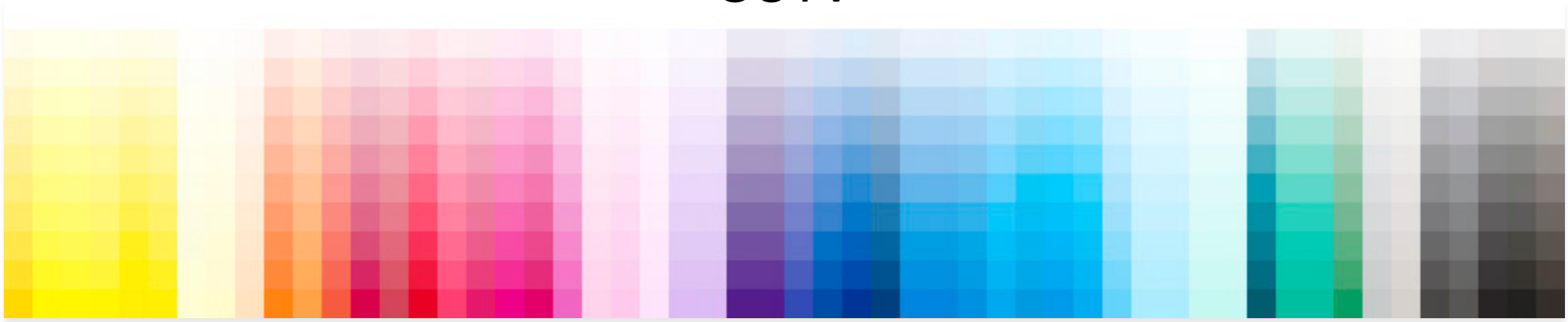
Non-perfect Standard Observer definition

Various issues related to display backlight

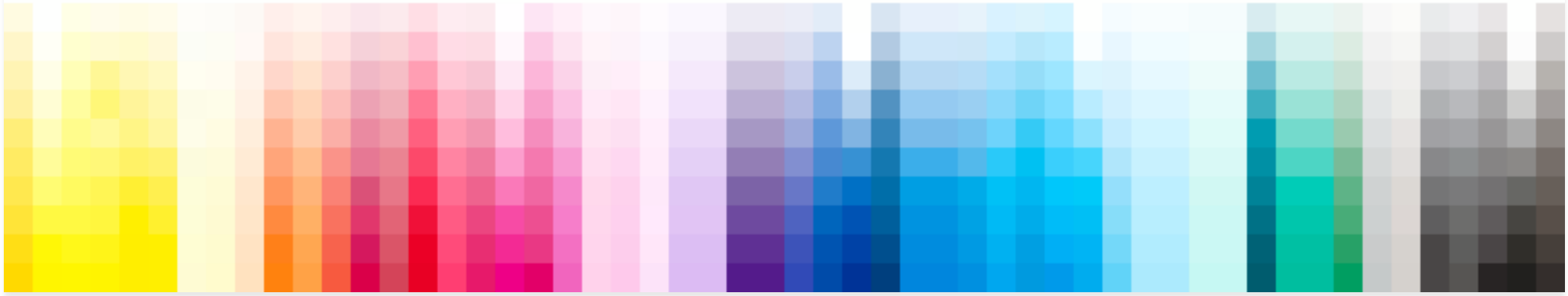
Personal color diseases

SCTV Calibration

SCTV



TVI



Optimize!

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