

Accelerated Light Fading Test Results

*Epson Stylus Photo 1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

Sample # AaI_20080222_SN001

220 Megalux-hours completed

Conservation Display Rating *	
Lower Exposure Limit (Megalux hours)	Upper Exposure limit (Megalux hours)
6	18

* Please read document **AaI_2009_0118_TA-01.pdf**, “An Overview of the AaI&A Conservation Display Ratings”, located on the Documents page of the AaI&A website for an explanation of the conservation display ratings.

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Test Print Prepared by: AaI&A Member, Category: Amateur

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About this Report

This report contains light fastness information about a single test print produced by a specific digital printing system. “System” refers to all hardware, software, and materials used to make the finished print. The hardware, software, material components, and printmaker’s skills contribute to the final image quality and image permanence. The tested sample is made with current or recently discontinued stocks of commercially available products unless otherwise stated. Each sample has been prepared by Aardenburg Imaging & Archives or one of its members in accordance with customary print making practices unless otherwise noted. The sample may also contain additional finishing materials such as overcoats and laminates which are also noted when used. Finally, the sample has been tested under standardized conditions that are defined on the Sample Description page (see page 2). AaI&A makes every effort to ensure but cannot guarantee that the samples are properly identified and documented and that test results are accurate. For this reason, AaI&A also strives to test independently produced sample replicates in order to increase sampling confidence and to provide information on process variability. Please compare the results in this report to replicate test samples when the data become available.

Understanding the Test Results



AaI_StandardColorSet(v2)forSRGB.tif

The magnitude and visual appearance of fading depends not only on the chosen printing system but the chosen image as well. In other words, different images are comprised of different colors, and the fading relationships between those colors dictate how the image will look as it fades. The sample print in this test report was made by reproducing the digital image shown on the left. It contains 30 standard colors. 24 of the colors are colorimetrically matched to the Macbeth ColorChecker™ chart viewed under D50 illumination. The remaining six colors supplement the ColorChecker™ array with four additional skin tone colors, one patch for paper white, and another for maximum black. The additional colors also round out the distribution of L* lightness values in the test target.

Information about the fading characteristics of the product is provided in three ways:

1) ***You can visually assess the fading.*** The target images reproduced in this report are digitally reconstructed from the spectrally measured color data rather than scanning or otherwise reproducing the physical print by conventional techniques. This method ensures a colorimetrically accurate representation of the print appearance as the print fades. A calibrated monitor is recommended to experience the best possible reproduction of the test sample appearance. The side-by-side presentation of the target images simulates looking at the light-exposed print along side a perfect duplicate of the unexposed original print. The “Before/After” Layer mode takes advantage of Adobe Reader Layer technology. Toggle the “Before/After” layer on and off using the layers feature of Adobe Reader to directly switch between the light exposed print colors and the initial print colors for the image located on the right side of each page. Also, use Adobe Reader’s full screen mode to cycle through the pages and “animate” the fading.

2) ***I* Color and tonal accuracy scores are reported.*** This report includes I* metric scores that compare the color and tonal relationships of the light exposed samples to the color and tonal relationships existing in the original print prior to light exposure. Perfect I* scores of 100% can be approached when no significant fading occurs. Average scores above 90% generally indicate excellent retention of original quality, 80% good, 70% fair, etc., but your conclusions may vary depending on your image quality requirements. ***I* color*** rates the retained color accuracy (hue and chroma) while ***I* tone*** rates the retained tonal accuracy (lightness and contrast). The score is on a percentile scale where 100% is a perfect match between the comparison image (e.g., “after” light exposure) and the reference image (e.g., “before” any light exposure). 0% ***I* color*** means no color accuracy is left. 0% ***I* tone*** means essentially no tonality remains and all image information content is lost. Negative I* values have significance as well and contribute to the average I* score when they occur. Negative I* color values mean false color has occurred, for example, when a skin tone turns green or a neutral gray becomes distinctly colorful. Negative I* tone scores mean visual contrast between colors has become inverted (i.e., like the tonal relationships in a photographic film negative). Serious image quality problems must arise before false colors and/or tones appear. For more information on the I* metric, please refer to the AaI&A web site.

3) ***Color changes are also reported using the classic color difference model, ΔE .*** Note that ΔE values lose perceptual scaling significance when they become large (e.g., > 15). Also, the ΔE equation does not unambiguously measure changes in image contrast. This limitation is generally not a problem for paints and textiles, but can be a serious oversight when evaluating photographic images. It was a major reason behind the development of the I* metric.



Sample Description

Printer: Epson Stylus Photo 1400

Ink: Epson OEM Claria

Paper: Epson Ultra Premium Photo Paper Luster

Sample #: AaI_20080222_SN001

Test Print Prepared by: AaI&A member

Membership category: amateur



Test Image: AaI_StandardColorSet(v2)forSRGB.tif

RIP/Driver settings: Epson driver, Photo RPM, ICM off

Media Setting: "Premium Semigloss"

Printed: January 29, 2008

Original print colors measured on: May 9, 2008

Test started on: May 10, 2008

AaI_StandardColorSet(v2)forSRGB.tif

Profile: R1400_Claria_EpULPrPHLus.icm

Rendering Intent: Absolute Colorimetric**

Profile type: custom

Profile Creation Software: ProfileMaker 5.08

Paper White Color (UV–included versus UV–excluded) and Maximum Printed Black						
Optical Brighteners present? yes***	L*		a*		b*	
	UV inc	UV exc	UV inc	UV exc	UV inc	UV exc
Maximum Paper White (no colorants printed)	94.5	94.5	-0.1	-0.6	-4.2	-2.4
(1) ΔL*, Δa*, Δb* respectively	0.1		0.5		1.8	
(1) Calculated differences, especially for Δb*, indicate the role and magnitude of fluorescence on original paper color						
Maximum Printed black (UV included)	L* = 5.3		a* = 0.6		b* = -2.0	

Light Source: Phillips Colortone F40T12/C50

Filter/Glazing: Sample framed under Glass*

Light Exposure Cycle: 8 hours on, 4 hours off, twice per 24 hours

Average Illuminance during "on" cycle: 11,509 Lux

Average Temperature: 23.1°C over full test duration, 24.5°C during light exposure

Average Relative humidity: 58.1%RH full test period, 58.8%RH during light exposure

CIELAB measurements: D50 2° observer, Xrite Gretag/Macbeth Spectrolino/Spectroscan

Replicates/Compare to:

No Replicates are available at this time.

Notes/Comments:

* The Phillips Colortone F40T12/C50 fluorescent light source and ordinary glass picture frame glazing yields UVA content and overall spectral power similar to natural 5000°K daylight entering a window and then striking a print that has been framed by **standard acrylic glazing** rather than ordinary glass. Other light sources and/or different glazing options may yield greater or lesser fade rates (generally, a 2-5x increase in fade rate for direct sunlight compared to UV-excluded sources at the same Lux level). The spectral quality of the light can also affect individual colors differently.

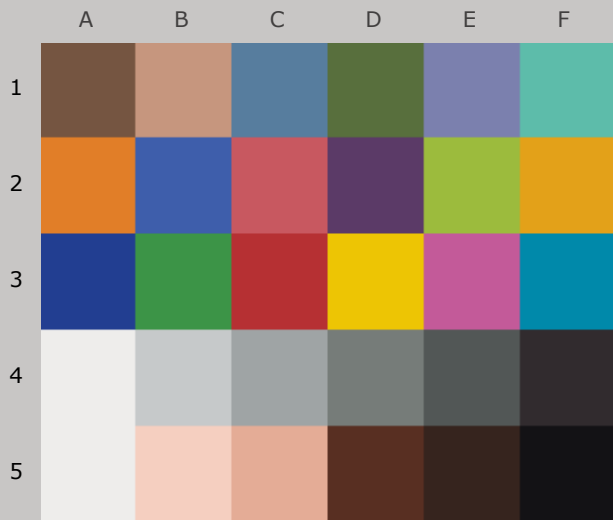
** The use of Absolute colorimetric rendering caused some yellow ink density to be printed in the “paper white” value (column/row A5) of the printed target image in order to more closely match the neutral image white value of the image file. For actual paper white values refer to the paper white color table above.

*** OBAs are in the paper core, but not in the image receiving layer.

July 09, 2008 – 10 Megalux-hr Exposure: The performance of the “skin shadow $L^* = 11$ ” patch (E5) is surprising. Aal&A uses an independent dual measurement quality control method to guard against instrument or operator measurement errors. New measurements on a dark stored sample from the same print batch are also in good agreement with the original print color measured values. A second sample from the same print batch will soon be placed into test in order to serve as an independent replicate for this printer/ink/paper batch result.

Table to Convert Megalux-hours of Light Exposure to estimated “Years on Display”												
Indoor Light Levels for Print Display		Multiply Mlux-hrs by	Megalux-hours in test									
Light Exposure	Description		10	20	30	40	50	60	70	80	90	100
≤ 10 Lux 24 hours per day	Interior rooms, storage areas, or hallways without windows, illuminated sparingly by artificial lighting	11.42	114	228	342	457	571	685	799	913	1027	1142
50 Lux 12 hours per day	“Museum Standard” display condition	4.57	46	91	137	183	228	274	325	365	411	457
120 Lux 12 hours per day “Kodak Display Years” (1)	Average home illumination level for photos is ~ 60 lux. 90% of all displayed photos do not exceed 120 lux (1).	1.90	19	38	57	76	95	114	133	152	171	190
228 Lux 12 hours per day	Relatively bright home or office. Note the simple 1:1 relationship between “years on display” and Mlux-hr values at this condition.	1.00	10	20	30	40	50	60	70	80	90	100
450 Lux 12 hours per day “WIR Display Years” (2) Also equals 500 lux for 11.8 hours per day	A bright home or commercial office building illumination level is 200-500 lux. Also, good illumination for color critical viewing and color matching tasks begins at about 500 lux.	0.51	5	10	15	20	25	30	35	41	46	51
2000 Lux 12 hours per day	Commercial Gallery. Also, critical color evaluation standards call for 2000 lux and a D50 illumination source.	0.114	1.1	2.3	3.4	4.6	5.7	6.8	8.0	9.1	10.3	11.4
5000 Lux 12 hours per day	E.g., Sunlight through a window striking print at an angle.	0.046	0.5	0.9	1.4	1.8	2.3	2.7	3.2	3.7	4.1	4.6
10,000 Lux 12 hours per day	South-facing window in U.S.A. , e.g., storefront display with photos directly facing window.	0.023	0.2	0.5	0.7	0.9	1.1	1.4	1.6	1.8	2.1	2.3
<p>Light levels commonly encountered in the real world fluctuate widely throughout indoor print display environments and produce large variations in how long it takes for artwork to acquire light-induced damage. Use this table as a guide to estimate how many “years on display” (denoted in red text) it takes to accumulate the light exposure test dosage. Review the test results to decide which Megalux-hour dose has caused fading to your level of concern (e.g., just noticeable, easily noticeable, objectionable, etc.). Then choose the print display description that best represents how your print is likely to be displayed. You may want to obtain a lux meter and make some measurements in your own display environment!</p> <p>Note that as the years of display time increase, light-induced fading can be eclipsed by other serious aging mechanisms such as fading and/or staining caused by heat, humidity, and air pollutants. Mould damage can also occur at high humidity. Even when colorants remain water fast, direct contact with liquids may result in physical deformation and staining of the substrate. Also, temperature and especially humidity cycling can cause physical cracks and/or flaking, etc. Handling damage such as scratching, abrasion, tears and creases, and catastrophic damage by smoke, fire, flood, etc., also degrade print quality over time. Thus, as illumination levels are reduced other forms of degradation take on greater proportion of risk and may appear in shorter time intervals.</p> <p>(1) Eastman Kodak has cited this exposure condition and 90% confidence limit as a rationale for estimating print fading times of traditional color photo materials in typical home display environments. For recent light fading claims regarding its line of pigment-based inkjet printers, Kodak has adopted the higher level of 450lux/12 hours per day which is also used by Wilhelm Imaging Research, Inc. (See below).</p> <p>(2) Wilhelm Imaging Research (WIR) has standardized its light fastness ratings on 450 lux for 12 hours per day in order to estimate the years on display necessary to reach “noticeable” fading. This average light exposure condition, an assumed 75°F/60%RH temperature and humidity level, and WIR’s visually weighted densitometric endpoint criteria set V3.0 has become a de facto industry standard for most predictive light fading estimates in the absence of a published International Standards Organization (ISO) test standard.</p>												

100_{color}/100_{tone}



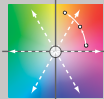
Original Print Colors
(measured before light exposure)



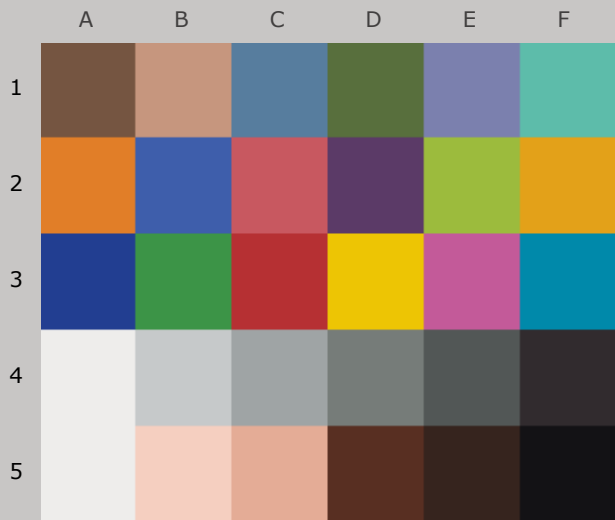
Colors at Zero Megalux-hours of Light Exposure
(same as original print colors)

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

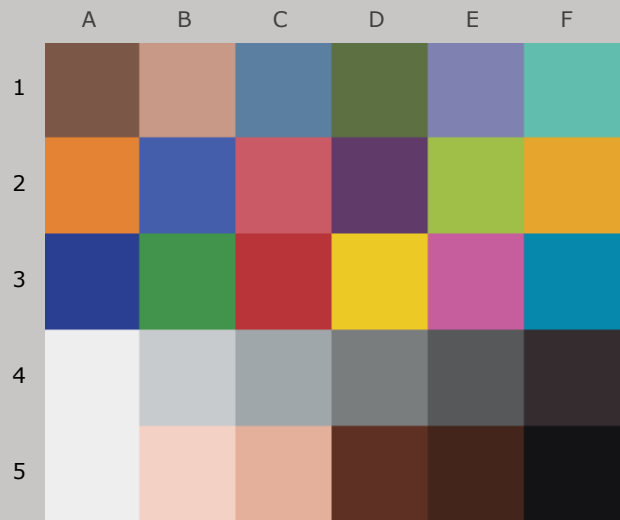
Original Print Colors as Measured and at Start of Test

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	100	0.0	39.4		12.2		17.3	
B1	light Skin	100	0.0	66.2		15.7		19.6	
C1	blue sky	100	0.0	50.7		-7.4		-21.8	
D1	foliage	100	0.0	44.0		-15.6		24.6	
E1	blue flower	100	0.0	54.5		6.2		-25.0	
F1	bluish green	100	0.0	70.4		-33.1		0.1	
A2	orange	100	0.0	63.2		34.6		59.8	
B2	purplish blue	100	0.0	40.3		7.7		-45.7	
C2	moderate red	100	0.0	52.4		46.4		18.8	
D2	purple	100	0.0	29.6		22.3		-21.0	
E2	yellow green	100	0.0	71.9		-24.0		57.5	
F2	orange yellow	100	0.0	71.5		18.1		70.9	
A3	blue	100	0.0	28.4		13.6		-49.7	
B3	green	100	0.0	54.4		-39.9		32.3	
C3	red	100	0.0	42.4		53.7		31.9	
D3	yellow	100	0.0	81.1		3.8		81.1	
E3	magenta	100	0.0	53.4		48.2		-14.5	
F3	cyan	100	0.0	52.0		-24.4		-26.6	
A4	white	100	0.0	93.7		0.0		1.1	
B4	neutral 8	100	0.0	80.9		-0.8		-0.7	
C4	neutral 6.5	100	0.0	67.2		-2.2		-1.4	
D4	neutral 5	100	0.0	51.4		-2.7		0.7	
E4	neutral 3.5	100	0.0	36.7		-2.1		0.3	
F4	black	100	0.0	18.5		3.4		-0.9	
A5	paper white	100	0.0	93.9		-0.1		0.6	
B5	skin highlight L*=89	100	0.0	86.2		12.0		12.5	
C5	skin highlight L*=75	100	0.0	75.1		19.0		20.1	
D5	skin shadow L*=25	100	0.0	24.8		17.9		16.8	
E5	skin shadow L*=11	100	0.0	16.5		8.2		8.0	
F5	Max Black	100	0.0	5.3		0.6		-2.0	
Summary Results		I*Color	I*tone	ΔE	 AARDENBURG IMAGING & ARCHIVES				
Average Score for all patches		100	100	0.0					
Average Score for the Worst 10% (3 lowest scoring patches)		100	100	0.0					

92.6_{color} / 95.0_{tone}



Original Print Colors
(measured before light exposure)



Colors after 10 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

10 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	93.8	2.0	39.4	40.2	12.2	13.2	17.3	15.9
B1	light Skin	93.3	2.5	66.2	67.3	15.7	15.6	19.6	17.5
C1	blue sky	93.3	2.1	50.7	51.3	-7.4	-5.7	-21.8	-22.9
D1	foliage	93.9	2.3	44.0	44.6	-15.6	-13.9	24.6	23.1
E1	blue flower	99.4	1.0	54.5	55.2	6.2	6.6	-25.0	-25.5
F1	bluish green	96.1	1.9	70.4	70.8	-33.1	-32.0	0.1	-1.4
A2	orange	96.1	3.5	63.2	64.6	34.6	33.8	59.8	56.7
B2	purplish blue	97.5	1.8	40.3	40.9	7.7	9.4	-45.7	-45.5
C2	moderate red	98.0	1.9	52.4	53.5	46.4	46.5	18.8	17.3
D2	purple	96.3	1.9	29.6	30.6	22.3	23.8	-21.0	-21.3
E2	yellow green	94.7	4.0	71.9	73.2	-24.0	-24.2	57.5	53.7
F2	orange yellow	95.3	4.2	71.5	73.0	18.1	16.8	70.9	67.2
A3	blue	97.9	1.7	28.4	29.0	13.6	15.1	-49.7	-49.5
B3	green	95.0	3.1	54.4	55.0	-39.9	-37.8	32.3	30.0
C3	red	98.7	1.8	42.4	43.7	53.7	53.6	31.9	30.6
D3	yellow	94.8	4.9	81.1	82.2	3.8	2.2	81.1	76.7
E3	magenta	100.0	1.1	53.4	54.4	48.2	48.1	-14.5	-14.2
F3	cyan	94.1	2.6	52.0	52.3	-24.4	-21.9	-26.6	-27.6
A4	white	97.8	0.7	93.7	93.9	0.0	0.1	1.1	0.4
B4	neutral 8	94.1	1.2	80.9	81.4	-0.8	-0.7	-0.7	-1.7
C4	neutral 6.5	90.9	1.5	67.2	67.8	-2.2	-1.5	-1.4	-2.6
D4	neutral 5	81.4	2.3	51.4	52.1	-2.7	-0.9	0.7	-0.7
E4	neutral 3.5	81.1	2.4	36.7	37.4	-2.1	-0.1	0.3	-0.9
F4	black	86.0	2.0	18.5	19.4	3.4	5.2	-0.9	-1.0
A5	paper white	99.2	0.6	93.9	94.1	-0.1	-0.1	0.6	0.1
B5	skin highlight L*=89	94.7	1.5	86.2	86.7	12.0	11.5	12.5	11.2
C5	skin highlight L*=75	95.2	2.0	75.1	76.0	19.0	18.5	20.1	18.3
D5	skin shadow L*=25	91.8	2.7	24.8	25.8	17.9	20.2	16.8	17.8
E5	skin shadow L*=11	40.5	7.6	16.5	18.5	8.2	14.5	8.0	11.7
F5	Max Black	97.6	0.8	5.3	5.6	0.6	1.1	-2.0	-1.5

Summary Results

I*Color

I*tone

ΔE

Average Score for all patches

92.6

95.0

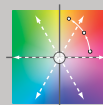
2.3

Average Score for the Worst 10%
(3 lowest scoring patches)

67.7

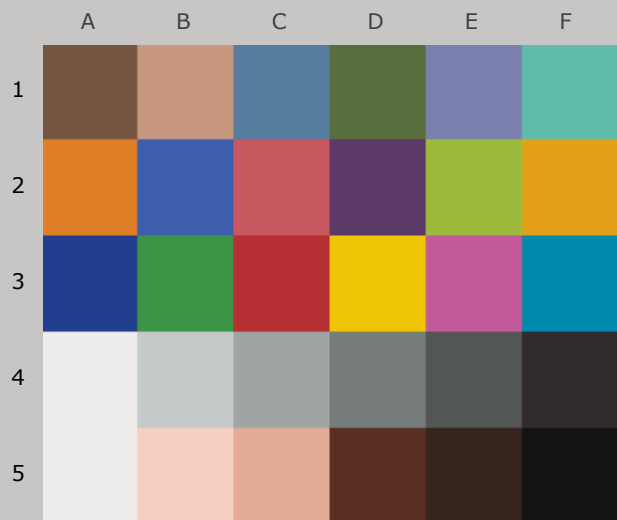
88.4

5.6

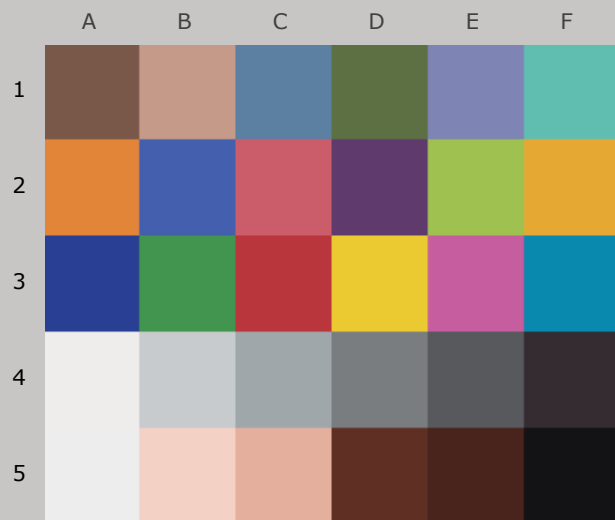


AARDENBURG IMAGING
& ARCHIVES

89.2_{color} / 93.7_{tone}



Original Print Colors
(measured before light exposure)



Colors after 20 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

20 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	86.6	3.5	39.4	40.5	12.2	12.9	17.3	14.1
B1	light Skin	87.5	3.9	66.2	67.6	15.7	15.2	19.6	16.0
C1	blue sky	92.5	2.4	50.7	51.6	-7.4	-5.8	-21.8	-23.4
D1	foliage	92.1	2.9	44.0	44.9	-15.6	-14.5	24.6	22.0
E1	blue flower	99.4	1.6	54.5	56.0	6.2	6.4	-25.0	-25.7
F1	bluish green	94.7	2.3	70.4	71.0	-33.1	-32.1	0.1	-1.9
A2	orange	92.7	5.8	63.2	65.0	34.6	32.9	59.8	54.6
B2	purplish blue	98.0	1.7	40.3	41.2	7.7	9.1	-45.7	-46.1
C2	moderate red	93.6	3.9	52.4	53.7	46.4	46.1	18.8	15.1
D2	purple	92.1	3.1	29.6	30.7	22.3	24.1	-21.0	-23.2
E2	yellow green	92.3	5.6	71.9	73.7	-24.0	-24.6	57.5	52.2
F2	orange yellow	91.9	6.7	71.5	73.5	18.1	15.8	70.9	64.9
A3	blue	97.6	1.9	28.4	29.2	13.6	15.2	-49.7	-50.3
B3	green	94.3	3.5	54.4	55.2	-39.9	-38.5	32.3	29.1
C3	red	94.6	4.0	42.4	43.6	53.7	53.4	31.9	28.0
D3	yellow	91.9	7.3	81.1	82.5	3.8	1.4	81.1	74.4
E3	magenta	99.4	1.5	53.4	54.6	48.2	47.7	-14.5	-15.1
F3	cyan	94.4	2.6	52.0	52.5	-24.4	-22.3	-26.6	-28.0
A4	white	99.4	0.6	93.7	93.8	0.0	0.0	1.1	0.5
B4	neutral 8	90.4	1.5	80.9	81.4	-0.8	-1.0	-0.7	-2.1
C4	neutral 6.5	87.1	1.9	67.2	68.0	-2.2	-1.9	-1.4	-3.1
D4	neutral 5	74.5	3.1	51.4	52.3	-2.7	-1.3	0.7	-1.9
E4	neutral 3.5	73.1	3.2	36.7	37.6	-2.1	-0.3	0.3	-2.2
F4	black	84.3	2.1	18.5	19.2	3.4	5.2	-0.9	-1.6
A5	paper white	100.0	0.5	93.9	93.9	-0.1	-0.1	0.6	0.2
B5	skin highlight L*=89	90.0	2.3	86.2	86.7	12.0	11.0	12.5	10.6
C5	skin highlight L*=75	90.2	3.4	75.1	76.2	19.0	17.8	20.1	17.1
D5	skin shadow L*=25	88.8	3.4	24.8	25.9	17.9	20.7	16.8	18.4
E5	skin shadow L*=11	17.9	10.3	16.5	19.3	8.2	16.6	8.0	13.2
F5	Max Black	93.8	1.1	5.3	5.7	0.6	1.3	-2.0	-1.2

Summary Results

I*Color

I*tone

ΔE

Average Score for all patches

89.2

93.7

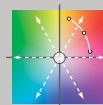
3.3

Average Score for the Worst 10%
(3 lowest scoring patches)

55.1

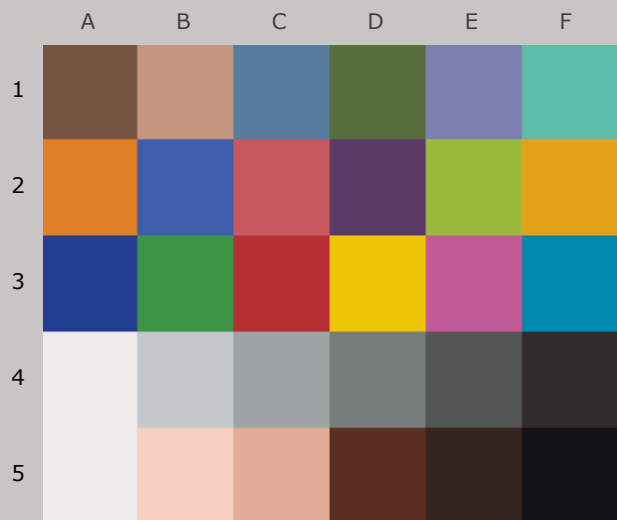
82.5

8.1

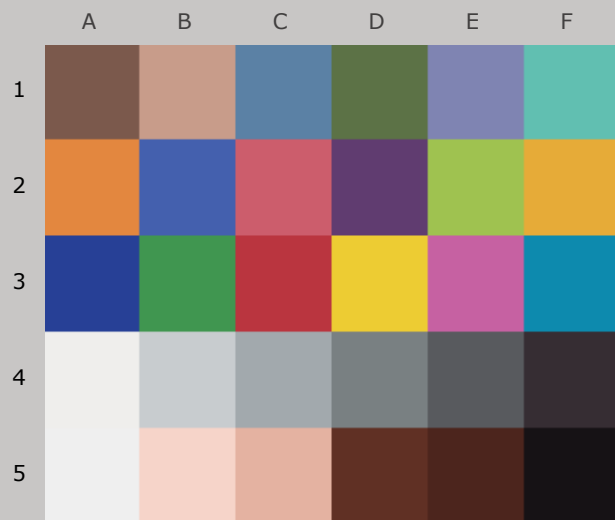


AARDENBURG IMAGING
& ARCHIVES

87.5_{color} / 92.8_{tone}



Original Print Colors
(measured before light exposure)



Colors after 30 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

30 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	82.7	4.5	39.4	41.0	12.2	12.6	17.3	13.2
B1	light Skin	85.3	4.6	66.2	68.2	15.7	14.9	19.6	15.5
C1	blue sky	92.7	2.5	50.7	52.1	-7.4	-6.1	-21.8	-23.6
D1	foliage	91.0	3.4	44.0	45.4	-15.6	-14.9	24.6	21.6
E1	blue flower	100.0	1.7	54.5	56.1	6.2	6.0	-25.0	-25.3
F1	bluish green	94.9	2.4	70.4	71.4	-33.1	-32.0	0.1	-1.8
A2	orange	90.9	7.2	63.2	65.6	34.6	32.5	59.8	53.4
B2	purplish blue	98.9	1.7	40.3	41.8	7.7	8.6	-45.7	-46.0
C2	moderate red	91.2	5.2	52.4	54.3	46.4	46.0	18.8	13.9
D2	purple	89.5	4.1	29.6	31.2	22.3	24.3	-21.0	-24.1
E2	yellow green	91.3	6.4	71.9	74.3	-24.0	-24.7	57.5	51.6
F2	orange yellow	90.4	8.0	71.5	74.2	18.1	15.1	70.9	64.0
A3	blue	97.3	2.2	28.4	29.6	13.6	15.1	-49.7	-50.7
B3	green	93.8	3.9	54.4	55.8	-39.9	-38.7	32.3	28.8
C3	red	92.2	5.6	42.4	44.1	53.7	53.6	31.9	26.5
D3	yellow	90.6	8.4	81.1	83.2	3.8	1.0	81.1	73.5
E3	magenta	98.4	2.3	53.4	55.2	48.2	47.5	-14.5	-15.6
F3	cyan	94.8	2.6	52.0	53.1	-24.4	-22.5	-26.6	-28.1
A4	white	100.0	0.6	93.7	94.2	0.0	-0.1	1.1	0.8
B4	neutral 8	90.6	1.8	80.9	82.0	-0.8	-1.1	-0.7	-2.0
C4	neutral 6.5	85.3	2.4	67.2	68.7	-2.2	-2.1	-1.4	-3.3
D4	neutral 5	73.0	3.4	51.4	53.0	-2.7	-1.7	0.7	-2.2
E4	neutral 3.5	66.1	4.0	36.7	38.2	-2.1	-0.5	0.3	-3.0
F4	black	80.6	2.6	18.5	19.6	3.4	5.3	-0.9	-2.2
A5	paper white	100.0	0.5	93.9	94.3	-0.1	-0.2	0.6	0.5
B5	skin highlight L*=89	88.4	2.8	86.2	87.3	12.0	10.7	12.5	10.4
C5	skin highlight L*=75	87.6	4.3	75.1	77.0	19.0	17.5	20.1	16.5
D5	skin shadow L*=25	89.0	3.6	24.8	26.4	17.9	20.8	16.8	18.1
E5	skin shadow L*=11	7.2	11.6	16.5	20.0	8.2	17.6	8.0	13.9
F5	Max Black	91.8	1.4	5.3	6.0	0.6	1.6	-2.0	-1.2

Summary Results

I*Color

I*tone

ΔE

Average Score for all patches

87.5

92.8

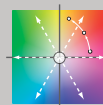
3.9

Average Score for the Worst 10%
(3 lowest scoring patches)

48.8

80.4

9.3

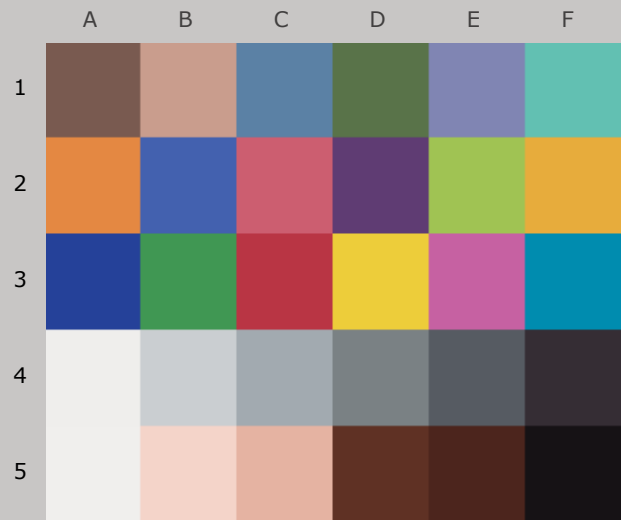


AARDENBURG IMAGING
& ARCHIVES

84.9_{color} / 92.2_{tone}



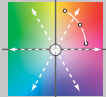
Original Print Colors
(measured before light exposure)



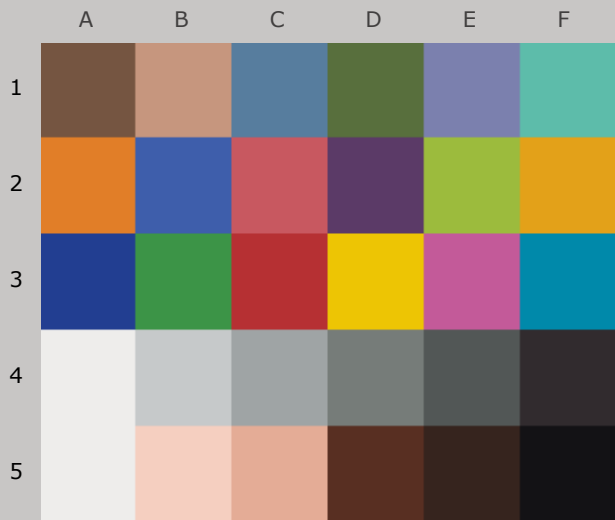
Colors after 40 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

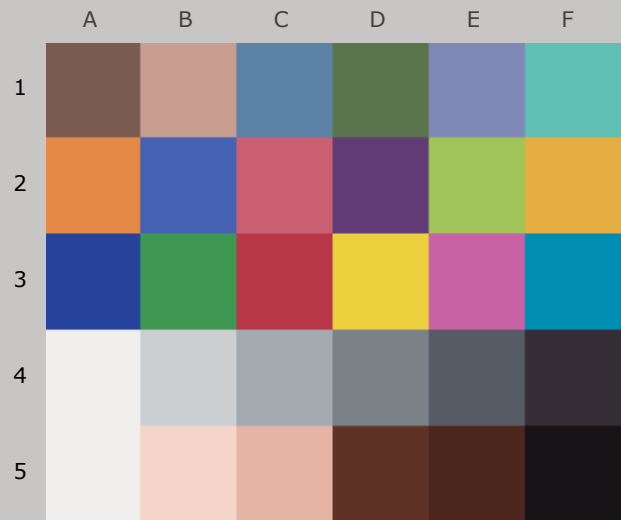
40 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	74.3	6.2	39.4	41.2	12.2	12.0	17.3	11.4
B1	light Skin	81.4	5.6	66.2	68.5	15.7	14.5	19.6	14.6
C1	blue sky	91.3	3.0	50.7	52.3	-7.4	-6.5	-21.8	-24.2
D1	foliage	87.3	4.5	44.0	45.6	-15.6	-15.7	24.6	20.4
E1	blue flower	99.2	2.2	54.5	56.6	6.2	5.6	-25.0	-25.4
F1	bluish green	93.9	2.8	70.4	71.6	-33.1	-32.0	0.1	-2.1
A2	orange	88.5	8.9	63.2	65.8	34.6	31.8	59.8	51.8
B2	purplish blue	99.1	1.9	40.3	42.0	7.7	8.1	-45.7	-46.5
C2	moderate red	87.4	7.1	52.4	54.4	46.4	45.7	18.8	12.0
D2	purple	84.1	5.6	29.6	31.3	22.3	24.3	-21.0	-25.9
E2	yellow green	89.7	7.4	71.9	74.6	-24.0	-24.8	57.5	50.6
F2	orange yellow	88.3	9.6	71.5	74.6	18.1	14.5	70.9	62.6
A3	blue	96.1	2.9	28.4	29.9	13.6	15.0	-49.7	-51.7
B3	green	92.5	4.7	54.4	56.1	-39.9	-39.2	32.3	27.9
C3	red	88.1	8.0	42.4	43.9	53.7	53.5	31.9	24.0
D3	yellow	89.0	9.8	81.1	83.5	3.8	0.6	81.1	72.2
E3	magenta	96.9	3.0	53.4	55.5	48.2	47.1	-14.5	-16.2
F3	cyan	94.8	2.8	52.0	53.3	-24.4	-22.9	-26.6	-28.5
A4	white	100.0	0.6	93.7	94.3	0.0	-0.1	1.1	0.9
B4	neutral 8	88.8	2.1	80.9	82.3	-0.8	-1.1	-0.7	-2.2
C4	neutral 6.5	82.0	2.9	67.2	69.0	-2.2	-2.3	-1.4	-3.6
D4	neutral 5	65.1	4.3	51.4	53.3	-2.7	-2.1	0.7	-3.1
E4	neutral 3.5	52.5	5.3	36.7	38.5	-2.1	-1.0	0.3	-4.6
F4	black	75.5	3.0	18.5	19.5	3.4	4.7	-0.9	-3.4
A5	paper white	100.0	0.5	93.9	94.4	-0.1	-0.2	0.6	0.6
B5	skin highlight L*=89	86.0	3.3	86.2	87.6	12.0	10.4	12.5	10.1
C5	skin highlight L*=75	84.8	5.2	75.1	77.3	19.0	17.1	20.1	15.8
D5	skin shadow L*=25	92.1	2.9	24.8	26.2	17.9	20.2	16.8	17.6
E5	skin shadow L*=11	7.2	11.7	16.5	20.0	8.2	17.7	8.0	13.8
F5	Max Black	90.9	1.5	5.3	6.0	0.6	1.5	-2.0	-1.0
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		84.9	92.2						
Average Score for the Worst 10% (3 lowest scoring patches)		41.6	79.2						

82.0_{color} / 91.2_{tone}



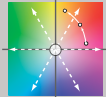
Original Print Colors
(measured before light exposure)



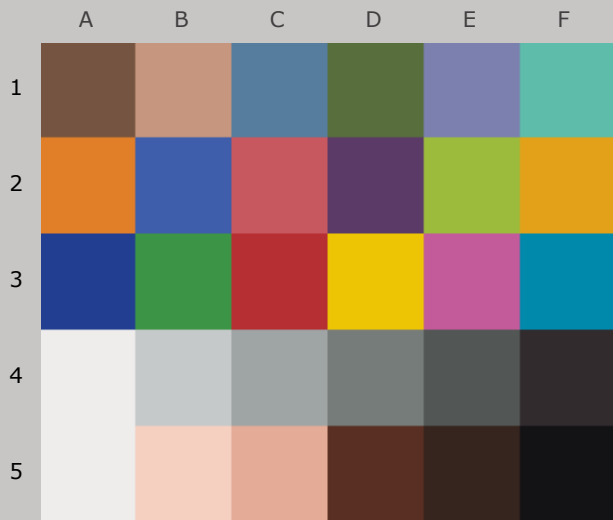
Colors after 50 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

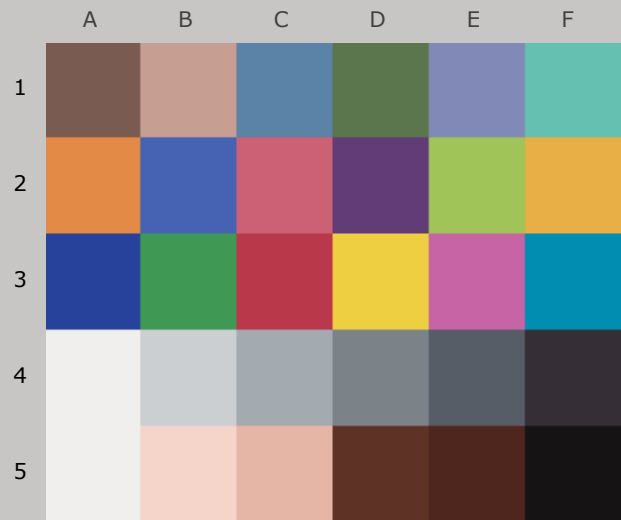
50 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	68.1	7.6	39.4	41.5	12.2	11.9	17.3	10.1
B1	light Skin	77.9	6.6	66.2	68.8	15.7	14.2	19.6	13.8
C1	blue sky	90.0	3.4	50.7	52.6	-7.4	-6.4	-21.8	-24.5
D1	foliage	83.9	5.5	44.0	45.9	-15.6	-15.9	24.6	19.4
E1	blue flower	98.7	2.8	54.5	57.2	6.2	5.4	-25.0	-25.4
F1	bluish green	92.6	3.3	70.4	71.8	-33.1	-31.7	0.1	-2.5
A2	orange	86.3	10.4	63.2	66.2	34.6	31.3	59.8	50.4
B2	purplish blue	99.1	2.2	40.3	42.3	7.7	8.0	-45.7	-46.5
C2	moderate red	85.0	8.4	52.4	54.7	46.4	45.5	18.8	10.8
D2	purple	80.0	6.9	29.6	31.6	22.3	24.6	-21.0	-27.2
E2	yellow green	87.9	8.6	71.9	74.9	-24.0	-24.8	57.5	49.5
F2	orange yellow	86.1	11.2	71.5	75.0	18.1	13.9	70.9	61.1
A3	blue	95.3	3.4	28.4	30.1	13.6	15.0	-49.7	-52.2
B3	green	90.6	5.6	54.4	56.3	-39.9	-39.2	32.3	27.0
C3	red	84.9	10.0	42.4	44.0	53.7	53.4	31.9	22.0
D3	yellow	86.9	11.4	81.1	83.9	3.8	0.1	81.1	70.6
E3	magenta	96.0	3.5	53.4	55.8	48.2	46.8	-14.5	-16.5
F3	cyan	93.7	3.2	52.0	53.6	-24.4	-22.7	-26.6	-28.8
A4	white	100.0	0.7	93.7	94.4	0.0	-0.1	1.1	1.0
B4	neutral 8	86.8	2.5	80.9	82.6	-0.8	-1.1	-0.7	-2.4
C4	neutral 6.5	77.2	3.4	67.2	69.4	-2.2	-2.3	-1.4	-4.0
D4	neutral 5	57.6	5.1	51.4	53.7	-2.7	-2.0	0.7	-3.8
E4	neutral 3.5	38.1	6.7	36.7	38.8	-2.1	-0.8	0.3	-5.9
F4	black	66.6	3.8	18.5	19.7	3.4	4.8	-0.9	-4.3
A5	paper white	100.0	0.6	93.9	94.5	-0.1	-0.2	0.6	0.6
B5	skin highlight L*=89	83.0	3.9	86.2	87.9	12.0	10.1	12.5	9.7
C5	skin highlight L*=75	81.3	6.2	75.1	77.7	19.0	16.7	20.1	14.9
D5	skin shadow L*=25	93.1	2.8	24.8	26.5	17.9	20.0	16.8	16.9
E5	skin shadow L*=11	3.0	12.2	16.5	20.4	8.2	18.1	8.0	14.0
F5	Max Black	89.5	1.6	5.3	6.0	0.6	1.7	-2.0	-1.0
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		82.0	91.2						
Average Score for the Worst 10% (3 lowest scoring patches)		32.9	77.6						

81.1_{color} / 90.5_{tone}



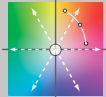
Original Print Colors
(measured before light exposure)



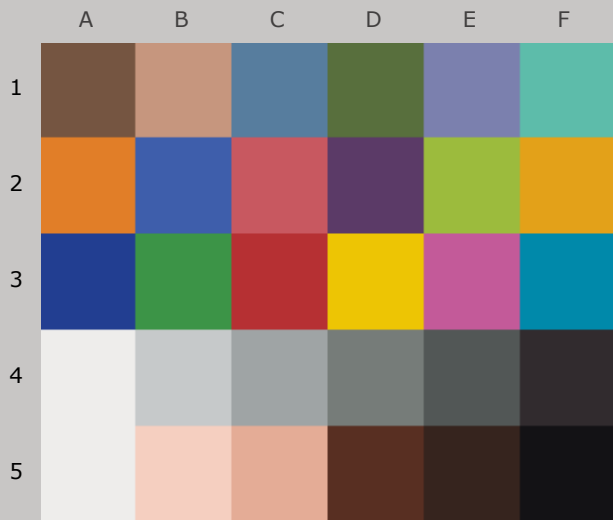
Colors after 60 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

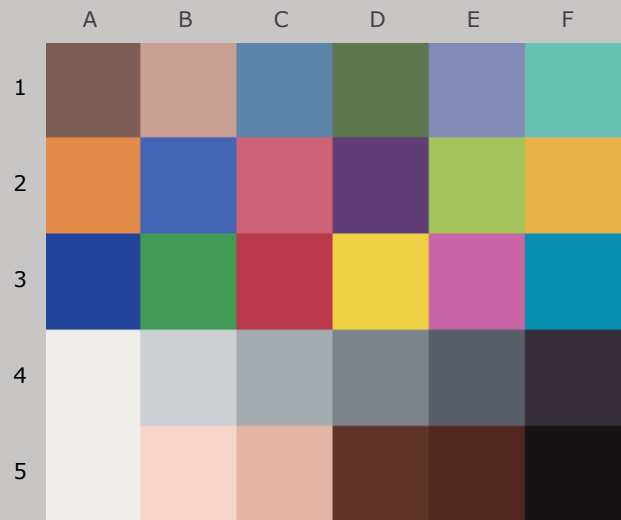
60 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	65.4	8.2	39.4	41.8	12.2	11.8	17.3	9.5
B1	light Skin	76.6	7.0	66.2	69.1	15.7	14.1	19.6	13.5
C1	blue sky	90.6	3.4	50.7	52.9	-7.4	-6.6	-21.8	-24.4
D1	foliage	82.9	5.9	44.0	46.1	-15.6	-15.9	24.6	19.1
E1	blue flower	97.8	3.2	54.5	57.6	6.2	5.1	-25.0	-24.9
F1	bluish green	92.8	3.3	70.4	72.0	-33.1	-31.5	0.1	-2.3
A2	orange	85.2	11.2	63.2	66.5	34.6	31.0	59.8	49.8
B2	purplish blue	99.7	2.4	40.3	42.7	7.7	7.6	-45.7	-46.3
C2	moderate red	83.7	9.0	52.4	55.0	46.4	45.3	18.8	10.2
D2	purple	79.1	7.3	29.6	31.9	22.3	24.5	-21.0	-27.5
E2	yellow green	87.3	9.0	71.9	75.1	-24.0	-24.6	57.5	49.1
F2	orange yellow	84.9	12.1	71.5	75.3	18.1	13.6	70.9	60.3
A3	blue	95.8	3.3	28.4	30.4	13.6	14.7	-49.7	-52.0
B3	green	90.2	5.9	54.4	56.5	-39.9	-39.1	32.3	26.8
C3	red	83.6	10.9	42.4	44.3	53.7	53.4	31.9	21.2
D3	yellow	86.1	12.1	81.1	84.0	3.8	0.0	81.1	70.0
E3	magenta	95.6	3.9	53.4	56.2	48.2	46.4	-14.5	-16.5
F3	cyan	94.4	3.2	52.0	53.9	-24.4	-22.8	-26.6	-28.6
A4	white	100.0	0.8	93.7	94.4	0.0	-0.1	1.1	1.4
B4	neutral 8	89.9	2.4	80.9	82.8	-0.8	-1.2	-0.7	-2.1
C4	neutral 6.5	78.1	3.5	67.2	69.6	-2.2	-2.4	-1.4	-3.9
D4	neutral 5	55.6	5.4	51.4	54.0	-2.7	-2.2	0.7	-4.0
E4	neutral 3.5	34.2	7.2	36.7	39.1	-2.1	-0.9	0.3	-6.3
F4	black	64.3	4.1	18.5	19.9	3.4	4.9	-0.9	-4.5
A5	paper white	100.0	0.7	93.9	94.5	-0.1	-0.2	0.6	1.0
B5	skin highlight L*=89	83.0	3.9	86.2	88.0	12.0	9.9	12.5	9.8
C5	skin highlight L*=75	80.2	6.6	75.1	77.9	19.0	16.5	20.1	14.7
D5	skin shadow L*=25	92.4	3.1	24.8	26.8	17.9	20.2	16.8	17.1
E5	skin shadow L*=11	-3.9	13.2	16.5	20.9	8.2	18.7	8.0	14.5
F5	Max Black	88.2	1.8	5.3	6.2	0.6	1.8	-2.0	-0.9
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		81.1	90.5						
Average Score for the Worst 10% (3 lowest scoring patches)		28.6	75.4						

79.8_{color} / 89.7_{tone}



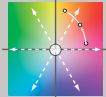
Original Print Colors
(measured before light exposure)



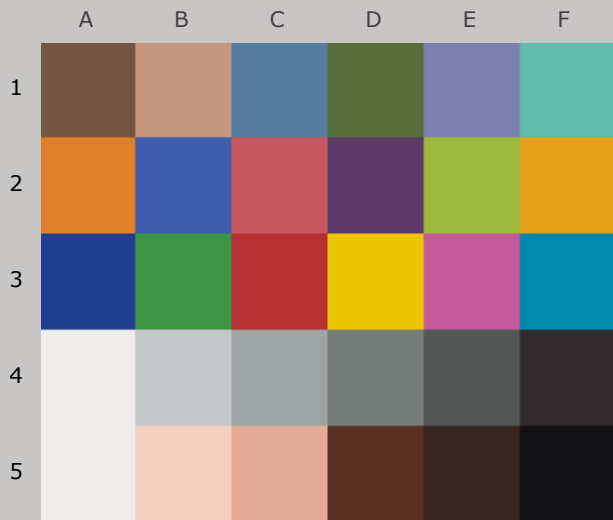
Colors after 70 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

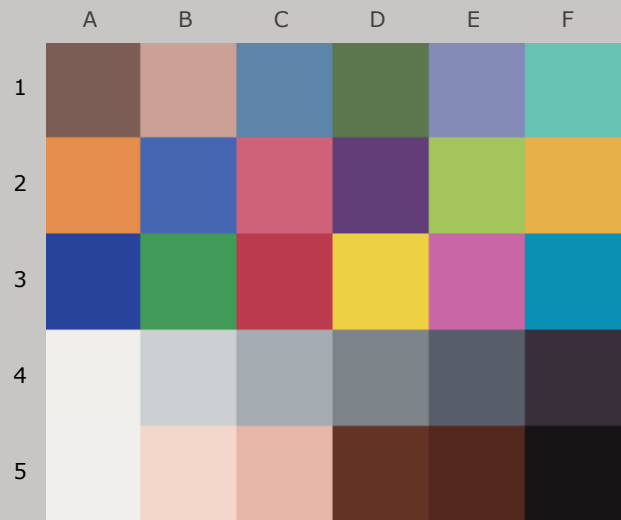
70 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	63.3	8.7	39.4	42.2	12.2	11.7	17.3	9.1
B1	light Skin	75.1	7.5	66.2	69.4	15.7	13.9	19.6	13.1
C1	blue sky	91.5	3.6	50.7	53.3	-7.4	-6.7	-21.8	-24.2
D1	foliage	82.1	6.2	44.0	46.5	-15.6	-16.0	24.6	18.9
E1	blue flower	96.6	3.9	54.5	58.2	6.2	4.9	-25.0	-24.4
F1	bluish green	92.6	3.5	70.4	72.2	-33.1	-31.2	0.1	-2.2
A2	orange	83.9	12.2	63.2	66.8	34.6	30.6	59.8	48.9
B2	purplish blue	99.7	2.8	40.3	43.1	7.7	7.1	-45.7	-45.9
C2	moderate red	82.4	9.8	52.4	55.4	46.4	45.0	18.8	9.6
D2	purple	78.0	7.7	29.6	32.3	22.3	24.6	-21.0	-27.8
E2	yellow green	86.6	9.5	71.9	75.3	-24.0	-24.4	57.5	48.6
F2	orange yellow	83.6	13.2	71.5	75.6	18.1	13.3	70.9	59.3
A3	blue	96.3	3.3	28.4	30.7	13.6	14.4	-49.7	-51.9
B3	green	89.8	6.2	54.4	56.8	-39.9	-39.0	32.3	26.6
C3	red	82.4	11.7	42.4	44.7	53.7	53.4	31.9	20.4
D3	yellow	85.2	12.9	81.1	84.3	3.8	-0.1	81.1	69.2
E3	magenta	94.9	4.5	53.4	56.6	48.2	46.0	-14.5	-16.6
F3	cyan	94.8	3.3	52.0	54.2	-24.4	-22.9	-26.6	-28.5
A4	white	100.0	0.9	93.7	94.5	0.0	-0.1	1.1	1.6
B4	neutral 8	91.0	2.6	80.9	83.1	-0.8	-1.2	-0.7	-1.9
C4	neutral 6.5	77.8	3.8	67.2	69.9	-2.2	-2.5	-1.4	-4.0
D4	neutral 5	53.5	5.7	51.4	54.4	-2.7	-2.3	0.7	-4.2
E4	neutral 3.5	29.8	7.7	36.7	39.5	-2.1	-0.9	0.3	-6.8
F4	black	61.5	4.4	18.5	20.1	3.4	5.2	-0.9	-4.6
A5	paper white	99.7	0.8	93.9	94.6	-0.1	-0.2	0.6	1.2
B5	skin highlight L*=89	81.7	4.2	86.2	88.1	12.0	9.7	12.5	9.7
C5	skin highlight L*=75	78.6	7.1	75.1	78.2	19.0	16.2	20.1	14.3
D5	skin shadow L*=25	91.1	3.7	24.8	27.3	17.9	20.5	16.8	17.4
E5	skin shadow L*=11	-14.7	14.5	16.5	21.5	8.2	19.6	8.0	15.4
F5	Max Black	85.1	2.1	5.3	6.2	0.6	1.9	-2.0	-0.6
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		79.8	89.7						
Average Score for the Worst 10% (3 lowest scoring patches)		22.9	73.3						

79.0_{color} / 88.7_{tone}




Original Print Colors
(measured before light exposure)



Colors after 80 Megalux-hours
light exposure

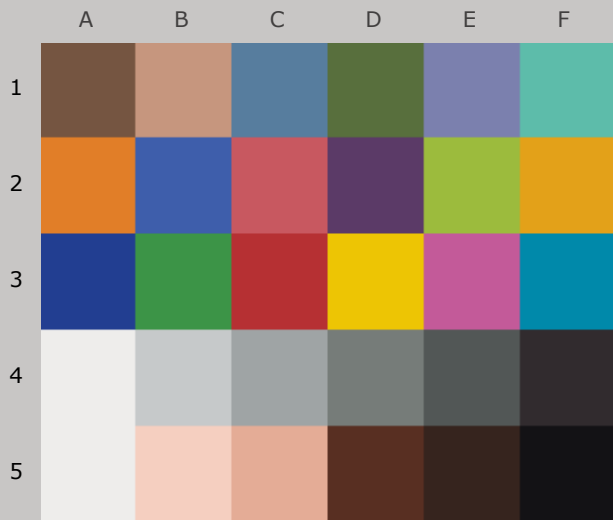
*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

80 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

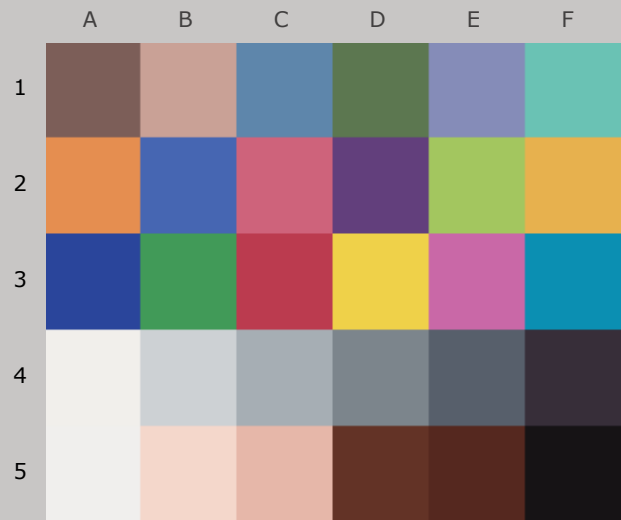
				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	62.1	9.1	39.4	42.5	12.2	11.7	17.3	8.8
B1	light Skin	74.2	7.8	66.2	69.6	15.7	13.8	19.6	12.9
C1	blue sky	92.7	3.6	50.7	53.6	-7.4	-6.7	-21.8	-23.9
D1	foliage	81.8	6.4	44.0	46.7	-15.6	-15.7	24.6	18.8
E1	blue flower	95.1	4.4	54.5	58.6	6.2	4.8	-25.0	-23.9
F1	bluish green	92.2	3.7	70.4	72.4	-33.1	-30.8	0.1	-1.9
A2	orange	83.1	12.8	63.2	67.0	34.6	30.4	59.8	48.4
B2	purplish blue	99.4	3.1	40.3	43.4	7.7	6.9	-45.7	-45.4
C2	moderate red	82.0	10.1	52.4	55.8	46.4	44.8	18.8	9.4
D2	purple	78.1	7.8	29.6	32.6	22.3	24.7	-21.0	-27.8
E2	yellow green	86.0	9.9	71.9	75.4	-24.0	-24.2	57.5	48.2
F2	orange yellow	82.5	14.0	71.5	75.8	18.1	13.1	70.9	58.6
A3	blue	97.3	3.2	28.4	31.0	13.6	14.2	-49.7	-51.4
B3	green	89.3	6.5	54.4	56.9	-39.9	-38.6	32.3	26.4
C3	red	82.0	12.0	42.4	45.0	53.7	53.3	31.9	20.1
D3	yellow	84.4	13.6	81.1	84.4	3.8	-0.2	81.1	68.6
E3	magenta	94.8	4.7	53.4	56.9	48.2	45.7	-14.5	-16.3
F3	cyan	95.3	3.2	52.0	54.4	-24.4	-22.8	-26.6	-28.2
A4	white	96.1	1.1	93.7	94.4	0.0	-0.1	1.1	1.9
B4	neutral 8	94.0	2.6	80.9	83.2	-0.8	-1.1	-0.7	-1.7
C4	neutral 6.5	79.2	3.8	67.2	70.1	-2.2	-2.4	-1.4	-3.8
D4	neutral 5	52.5	5.9	51.4	54.6	-2.7	-2.2	0.7	-4.3
E4	neutral 3.5	26.8	8.1	36.7	39.7	-2.1	-0.8	0.3	-7.0
F4	black	60.1	4.6	18.5	20.3	3.4	5.5	-0.9	-4.6
A5	paper white	96.4	1.0	93.9	94.5	-0.1	-0.2	0.6	1.5
B5	skin highlight L*=89	81.5	4.2	86.2	88.2	12.0	9.5	12.5	9.9
C5	skin highlight L*=75	77.9	7.3	75.1	78.3	19.0	16.1	20.1	14.1
D5	skin shadow L*=25	90.1	4.0	24.8	27.5	17.9	20.6	16.8	17.8
E5	skin shadow L*=11	-21.8	15.5	16.5	22.0	8.2	20.2	8.0	16.0
F5	Max Black	83.5	2.3	5.3	6.2	0.6	2.1	-2.0	-0.6
Summary Results		I*Color	I*tone	ΔE	<div>AARDENBURG IMAGING & ARCHIVES</div>				
Average Score for all patches		79.0	88.7	6.5					
Average Score for the Worst 10% (3 lowest scoring patches)		19.2	70.7	14.3					

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77.0_{color} / 87.9_{tone}



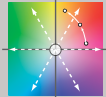
Original Print Colors
(measured before light exposure)



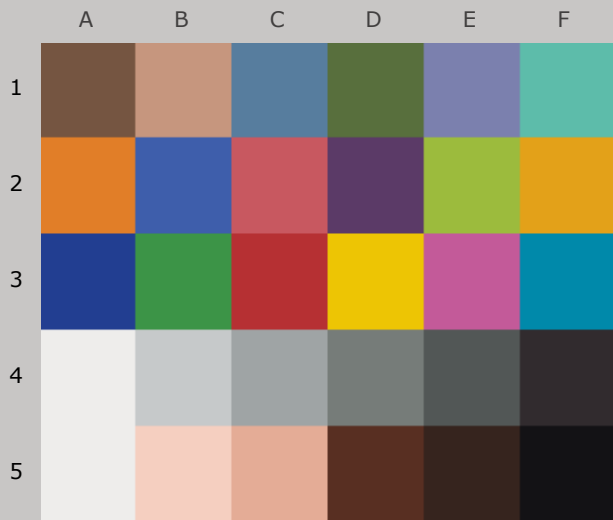
Colors after 90 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

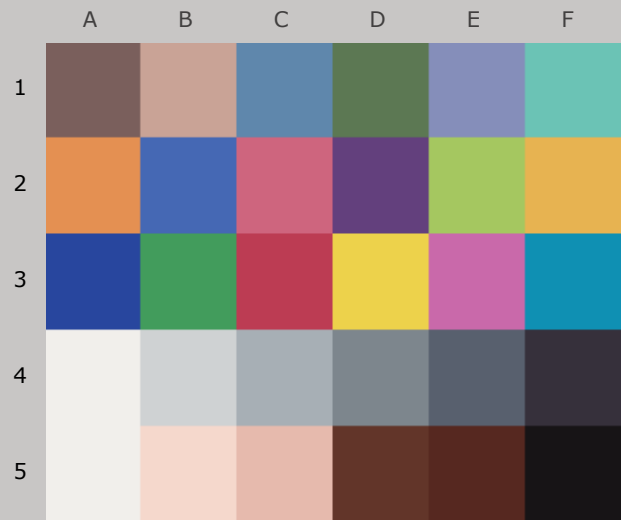
90 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	57.2	10.2	39.4	42.8	12.2	11.6	17.3	7.8
B1	light Skin	71.7	8.5	66.2	70.0	15.7	13.6	19.6	12.3
C1	blue sky	91.6	4.1	50.7	54.0	-7.4	-6.6	-21.8	-24.1
D1	foliage	79.3	7.2	44.0	46.9	-15.6	-15.8	24.6	18.1
E1	blue flower	94.6	4.9	54.5	59.0	6.2	4.7	-25.0	-23.8
F1	bluish green	91.0	4.2	70.4	72.6	-33.1	-30.4	0.1	-2.1
A2	orange	81.3	14.0	63.2	67.3	34.6	30.0	59.8	47.2
B2	purplish blue	98.8	3.5	40.3	43.7	7.7	6.7	-45.7	-45.3
C2	moderate red	80.1	11.1	52.4	56.0	46.4	44.6	18.8	8.5
D2	purple	75.7	8.6	29.6	32.9	22.3	24.7	-21.0	-28.5
E2	yellow green	84.7	10.7	71.9	75.7	-24.0	-24.1	57.5	47.4
F2	orange yellow	80.7	15.3	71.5	76.0	18.1	12.7	70.9	57.3
A3	blue	97.3	3.4	28.4	31.2	13.6	14.0	-49.7	-51.5
B3	green	88.1	7.1	54.4	57.1	-39.9	-38.5	32.3	25.8
C3	red	80.0	13.3	42.4	45.2	53.7	53.1	31.9	18.9
D3	yellow	83.3	14.5	81.1	84.5	3.8	-0.4	81.1	67.7
E3	magenta	94.0	5.3	53.4	57.3	48.2	45.3	-14.5	-16.4
F3	cyan	94.8	3.5	52.0	54.6	-24.4	-22.7	-26.6	-28.3
A4	white	96.9	1.0	93.7	94.4	0.0	-0.1	1.1	1.9
B4	neutral 8	93.9	2.8	80.9	83.4	-0.8	-1.1	-0.7	-1.7
C4	neutral 6.5	76.5	4.2	67.2	70.4	-2.2	-2.4	-1.4	-4.1
D4	neutral 5	46.9	6.5	51.4	54.9	-2.7	-2.2	0.7	-4.8
E4	neutral 3.5	17.9	9.0	36.7	40.0	-2.1	-0.7	0.3	-7.9
F4	black	54.8	5.2	18.5	20.5	3.4	5.6	-0.9	-5.2
A5	paper white	96.9	1.0	93.9	94.5	-0.1	-0.2	0.6	1.4
B5	skin highlight L*=89	79.2	4.7	86.2	88.3	12.0	9.2	12.5	9.6
C5	skin highlight L*=75	75.6	8.0	75.1	78.6	19.0	15.8	20.1	13.6
D5	skin shadow L*=25	90.6	4.0	24.8	27.6	17.9	20.5	16.8	17.7
E5	skin shadow L*=11	-25.4	16.0	16.5	22.4	8.2	20.5	8.0	16.2
F5	Max Black	82.4	2.4	5.3	6.4	0.6	2.2	-2.0	-0.6
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		77.0	87.9						
Average Score for the Worst 10% (3 lowest scoring patches)		13.1	69.2						

75.0_{color} / 87.1_{tone}



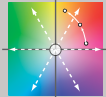
Original Print Colors
(measured before light exposure)



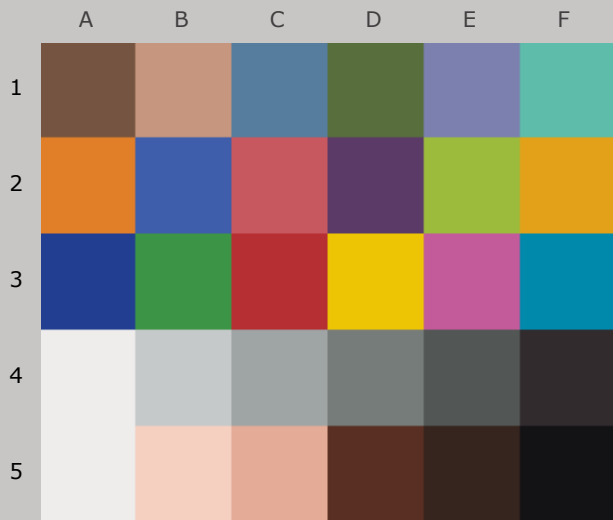
Colors after 100 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

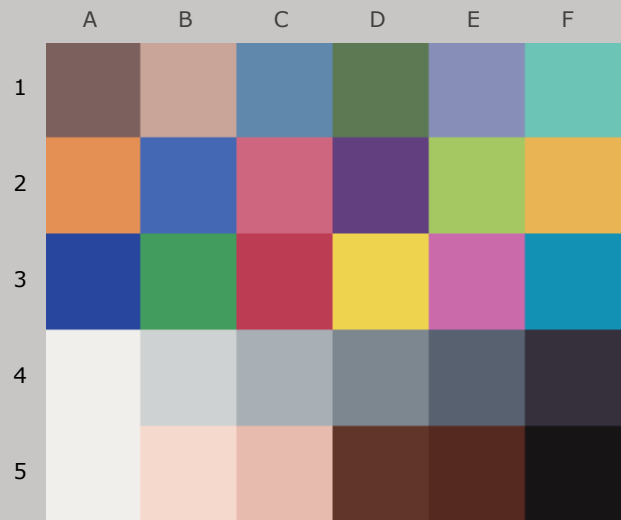
100 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	51.0	11.5	39.4	43.2	12.2	11.3	17.3	6.5
B1	light Skin	68.9	9.3	66.2	70.4	15.7	13.3	19.6	11.7
C1	blue sky	91.3	4.5	50.7	54.5	-7.4	-6.9	-21.8	-24.3
D1	foliage	76.4	8.1	44.0	47.4	-15.6	-16.2	24.6	17.3
E1	blue flower	92.9	5.6	54.5	59.5	6.2	4.4	-25.0	-23.5
F1	bluish green	90.2	4.6	70.4	73.0	-33.1	-30.1	0.1	-2.2
A2	orange	79.5	15.3	63.2	67.7	34.6	29.4	59.8	46.1
B2	purplish blue	97.7	4.2	40.3	44.2	7.7	6.2	-45.7	-45.2
C2	moderate red	77.8	12.3	52.4	56.4	46.4	44.3	18.8	7.3
D2	purple	72.6	9.6	29.6	33.3	22.3	24.7	-21.0	-29.5
E2	yellow green	83.5	11.6	71.9	76.0	-24.0	-24.0	57.5	46.7
F2	orange yellow	79.2	16.5	71.5	76.5	18.1	12.3	70.9	56.3
A3	blue	96.8	3.8	28.4	31.6	13.6	13.8	-49.7	-51.8
B3	green	86.7	7.9	54.4	57.5	-39.9	-38.7	32.3	25.0
C3	red	77.4	14.9	42.4	45.3	53.7	53.2	31.9	17.3
D3	yellow	82.1	15.5	81.1	84.9	3.8	-0.6	81.1	66.7
E3	magenta	93.1	6.0	53.4	57.8	48.2	44.9	-14.5	-16.7
F3	cyan	95.1	3.8	52.0	55.1	-24.4	-22.9	-26.6	-28.3
A4	white	93.7	1.3	93.7	94.5	0.0	-0.1	1.1	2.2
B4	neutral 8	95.9	3.1	80.9	83.9	-0.8	-1.1	-0.7	-1.5
C4	neutral 6.5	76.2	4.7	67.2	71.0	-2.2	-2.5	-1.4	-4.1
D4	neutral 5	41.8	7.3	51.4	55.5	-2.7	-2.5	0.7	-5.3
E4	neutral 3.5	8.2	10.0	36.7	40.5	-2.1	-1.0	0.3	-8.8
F4	black	47.5	5.9	18.5	20.7	3.4	5.4	-0.9	-6.0
A5	paper white	94.2	1.3	93.9	94.6	-0.1	-0.2	0.6	1.7
B5	skin highlight L*=89	77.9	5.0	86.2	88.7	12.0	8.9	12.5	9.6
C5	skin highlight L*=75	73.7	8.7	75.1	79.1	19.0	15.5	20.1	13.2
D5	skin shadow L*=25	92.0	4.0	24.8	27.9	17.9	20.3	16.8	17.0
E5	skin shadow L*=11	-25.7	16.1	16.5	22.6	8.2	20.6	8.0	16.1
F5	Max Black	82.6	2.5	5.3	6.6	0.6	2.2	-2.0	-0.5
Summary Results		I*Color	I*tone	ΔE	 AARDENBURG IMAGING & ARCHIVES				
Average Score for all patches		75.0	87.1	7.8					
Average Score for the Worst 10% (3 lowest scoring patches)		8.1	69.1	16.0					

73.4_{color} / 86.2_{tone}



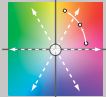
Original Print Colors
(measured before light exposure)



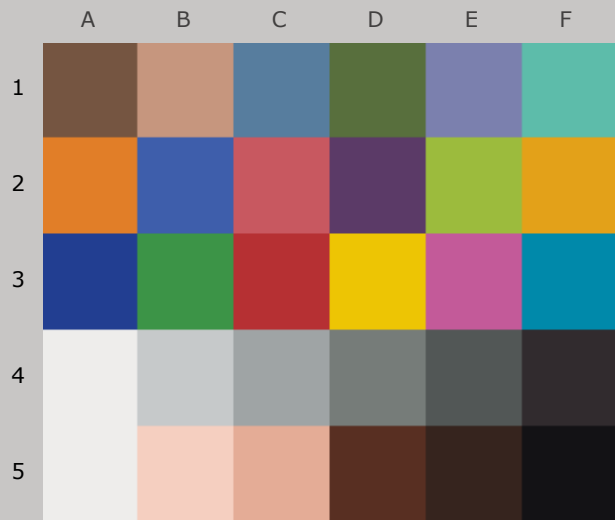
Colors after 110 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

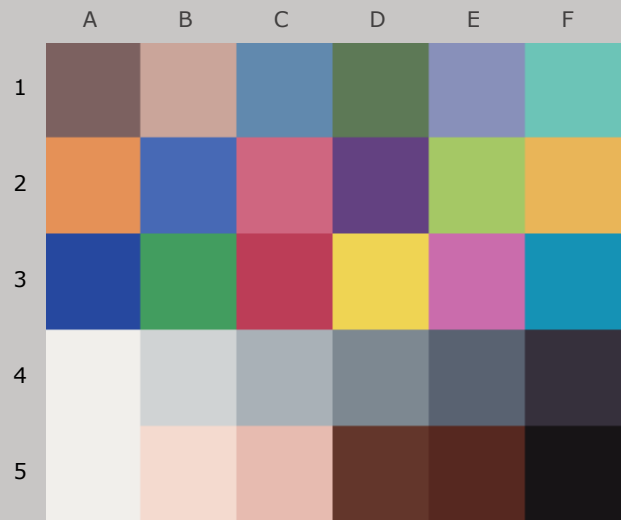
110 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	47.1	12.4	39.4	43.6	12.2	11.1	17.3	5.7
B1	light Skin	67.6	9.7	66.2	70.8	15.7	13.1	19.6	11.4
C1	blue sky	91.5	4.7	50.7	54.8	-7.4	-6.9	-21.8	-24.2
D1	foliage	74.1	8.8	44.0	47.7	-15.6	-16.4	24.6	16.6
E1	blue flower	90.8	6.2	54.5	60.0	6.2	4.1	-25.0	-23.1
F1	bluish green	89.5	4.9	70.4	73.2	-33.1	-29.9	0.1	-2.2
A2	orange	78.2	16.3	63.2	68.0	34.6	29.1	59.8	45.3
B2	purplish blue	96.8	4.6	40.3	44.5	7.7	5.9	-45.7	-44.9
C2	moderate red	76.7	12.9	52.4	56.7	46.4	44.1	18.8	6.8
D2	purple	70.7	10.2	29.6	33.5	22.3	24.7	-21.0	-30.1
E2	yellow green	82.1	12.4	71.9	76.3	-24.0	-23.9	57.5	45.8
F2	orange yellow	77.6	17.7	71.5	76.7	18.1	11.9	70.9	55.2
A3	blue	96.5	4.1	28.4	31.8	13.6	13.5	-49.7	-51.9
B3	green	85.5	8.6	54.4	57.7	-39.9	-38.7	32.3	24.4
C3	red	75.3	16.2	42.4	45.5	53.7	53.1	31.9	16.0
D3	yellow	80.7	16.7	81.1	85.1	3.8	-0.9	81.1	65.7
E3	magenta	92.6	6.4	53.4	58.2	48.2	44.5	-14.5	-16.5
F3	cyan	95.0	4.1	52.0	55.4	-24.4	-22.9	-26.6	-28.4
A4	white	91.3	1.6	93.7	94.6	0.0	-0.2	1.1	2.4
B4	neutral 8	97.8	3.3	80.9	84.1	-0.8	-1.0	-0.7	-1.3
C4	neutral 6.5	75.2	5.0	67.2	71.3	-2.2	-2.5	-1.4	-4.2
D4	neutral 5	37.9	7.8	51.4	55.8	-2.7	-2.5	0.7	-5.7
E4	neutral 3.5	-1.2	10.9	36.7	40.8	-2.1	-1.0	0.3	-9.8
F4	black	40.0	6.6	18.5	20.8	3.4	5.1	-0.9	-6.9
A5	paper white	91.4	1.5	93.9	94.7	-0.1	-0.3	0.6	2.0
B5	skin highlight L*=89	76.6	5.3	86.2	88.9	12.0	8.6	12.5	9.5
C5	skin highlight L*=75	72.4	9.2	75.1	79.5	19.0	15.2	20.1	12.9
D5	skin shadow L*=25	94.5	3.6	24.8	27.9	17.9	19.6	16.8	16.2
E5	skin shadow L*=11	-23.2	15.8	16.5	22.7	8.2	20.4	8.0	15.9
F5	Max Black	82.3	2.6	5.3	6.7	0.6	2.2	-2.0	-0.6
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		73.4	86.2						
Average Score for the Worst 10% (3 lowest scoring patches)		4.5	68.5						

71.6_{color} / 85.6_{tone}



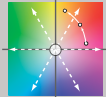
Original Print Colors
(measured before light exposure)



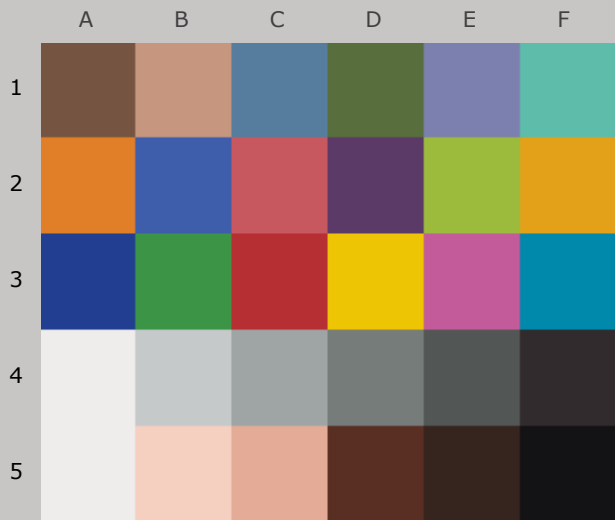
Colors after 120 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

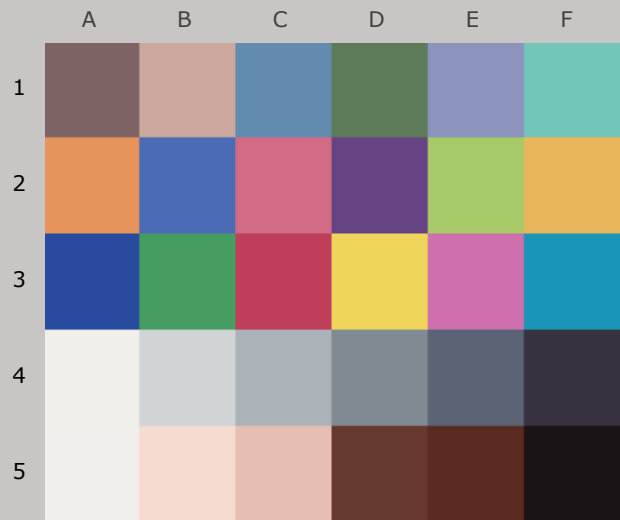
120 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	42.0	13.6	39.4	43.9	12.2	11.0	17.3	4.6
B1	light Skin	65.0	10.5	66.2	71.0	15.7	13.0	19.6	10.8
C1	blue sky	90.7	5.2	50.7	55.2	-7.4	-7.0	-21.8	-24.4
D1	foliage	71.9	9.5	44.0	47.9	-15.6	-16.5	24.6	16.0
E1	blue flower	90.3	6.6	54.5	60.4	6.2	4.0	-25.0	-23.0
F1	bluish green	88.6	5.3	70.4	73.5	-33.1	-29.6	0.1	-2.3
A2	orange	76.5	17.5	63.2	68.3	34.6	28.8	59.8	44.2
B2	purplish blue	96.1	5.1	40.3	44.9	7.7	5.5	-45.7	-44.9
C2	moderate red	74.6	14.0	52.4	57.0	46.4	43.9	18.8	5.8
D2	purple	68.1	11.1	29.6	33.8	22.3	24.9	-21.0	-30.9
E2	yellow green	81.2	13.1	71.9	76.5	-24.0	-23.8	57.5	45.3
F2	orange yellow	76.3	18.7	71.5	77.1	18.1	11.5	70.9	54.3
A3	blue	96.2	4.4	28.4	32.1	13.6	13.3	-49.7	-52.1
B3	green	84.7	9.0	54.4	57.9	-39.9	-38.7	32.3	24.0
C3	red	73.2	17.6	42.4	45.8	53.7	53.1	31.9	14.7
D3	yellow	79.7	17.5	81.1	85.3	3.8	-1.1	81.1	64.9
E3	magenta	91.6	7.0	53.4	58.6	48.2	44.1	-14.5	-16.9
F3	cyan	95.0	4.3	52.0	55.7	-24.4	-22.9	-26.6	-28.4
A4	white	91.5	1.6	93.7	94.6	0.0	-0.1	1.1	2.4
B4	neutral 8	97.9	3.6	80.9	84.4	-0.8	-1.0	-0.7	-1.3
C4	neutral 6.5	73.5	5.4	67.2	71.7	-2.2	-2.5	-1.4	-4.4
D4	neutral 5	33.4	8.3	51.4	56.2	-2.7	-2.6	0.7	-6.1
E4	neutral 3.5	-9.1	11.8	36.7	41.2	-2.1	-1.0	0.3	-10.5
F4	black	34.1	7.2	18.5	20.9	3.4	5.4	-0.9	-7.4
A5	paper white	91.1	1.5	93.9	94.7	-0.1	-0.3	0.6	2.0
B5	skin highlight L*=89	74.8	5.7	86.2	89.1	12.0	8.4	12.5	9.3
C5	skin highlight L*=75	70.3	9.8	75.1	79.7	19.0	15.0	20.1	12.4
D5	skin shadow L*=25	93.2	4.1	24.8	28.3	17.9	19.9	16.8	16.1
E5	skin shadow L*=11	-26.2	16.3	16.5	22.9	8.2	20.8	8.0	16.0
F5	Max Black	80.8	2.7	5.3	6.7	0.6	2.4	-2.0	-0.5
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		71.6	85.6						
Average Score for the Worst 10% (3 lowest scoring patches)		-0.7	67.4						

69.4_{color} / 83.7_{tone}



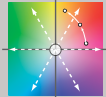
Original Print Colors
(measured before light exposure)



Colors after 140 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

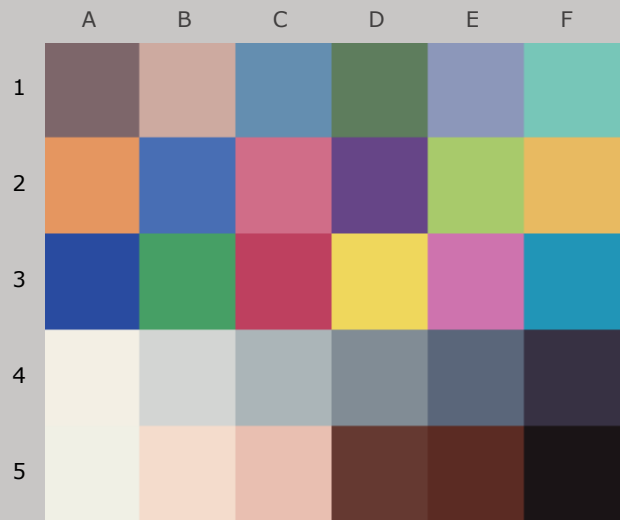
140 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	38.2	14.6	39.4	44.8	12.2	11.0	17.3	3.8
B1	light Skin	63.6	11.1	66.2	71.8	15.7	12.7	19.6	10.5
C1	blue sky	93.8	5.6	50.7	56.0	-7.4	-7.0	-21.8	-23.7
D1	foliage	70.0	10.3	44.0	48.6	-15.6	-15.9	24.6	15.4
E1	blue flower	85.3	8.1	54.5	61.4	6.2	3.6	-25.0	-21.6
F1	bluish green	86.8	6.1	70.4	74.0	-33.1	-28.6	0.1	-1.9
A2	orange	74.4	19.1	63.2	68.9	34.6	28.1	59.8	42.9
B2	purplish blue	93.2	6.5	40.3	45.7	7.7	4.7	-45.7	-43.5
C2	moderate red	73.3	14.9	52.4	57.9	46.4	43.2	18.8	5.3
D2	purple	69.5	11.1	29.6	34.8	22.3	24.7	-21.0	-30.5
E2	yellow green	79.6	14.1	71.9	76.9	-24.0	-23.1	57.5	44.3
F2	orange yellow	74.0	20.5	71.5	77.7	18.1	11.1	70.9	52.6
A3	blue	97.9	4.7	28.4	32.9	13.6	12.4	-49.7	-50.8
B3	green	83.1	10.0	54.4	58.4	-39.9	-37.7	32.3	23.3
C3	red	71.7	18.7	42.4	46.5	53.7	52.8	31.9	13.7
D3	yellow	77.9	19.0	81.1	85.7	3.8	-1.1	81.1	63.4
E3	magenta	90.2	8.2	53.4	59.5	48.2	43.0	-14.5	-16.2
F3	cyan	96.1	4.8	52.0	56.3	-24.4	-22.8	-26.6	-27.7
A4	white	86.0	2.1	93.7	94.7	0.0	-0.2	1.1	2.9
B4	neutral 8	100.0	4.0	80.9	84.8	-0.8	-0.9	-0.7	-0.8
C4	neutral 6.5	76.4	5.9	67.2	72.4	-2.2	-2.5	-1.4	-4.1
D4	neutral 5	31.8	8.9	51.4	57.0	-2.7	-2.6	0.7	-6.3
E4	neutral 3.5	-16.1	12.7	36.7	42.0	-2.1	-0.7	0.3	-11.1
F4	black	28.5	7.9	18.5	21.6	3.4	6.0	-0.9	-7.7
A5	paper white	85.9	2.0	93.9	94.7	-0.1	-0.3	0.6	2.5
B5	skin highlight L*=89	72.8	6.1	86.2	89.4	12.0	7.9	12.5	9.4
C5	skin highlight L*=75	68.1	10.6	75.1	80.3	19.0	14.5	20.1	11.9
D5	skin shadow L*=25	92.4	5.1	24.8	29.3	17.9	20.1	16.8	16.1
E5	skin shadow L*=11	-38.6	18.0	16.5	24.1	8.2	21.8	8.0	17.1
F5	Max Black	77.3	3.2	5.3	7.1	0.6	2.6	-2.0	-0.3
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		69.4	83.7	9.8					
Average Score for the Worst 10% (3 lowest scoring patches)		-8.7	63.9	19.5					

64.5_{color} / 81.9_{tone}




Original Print Colors
(measured before light exposure)



Colors after 160 Megalux-hours
light exposure

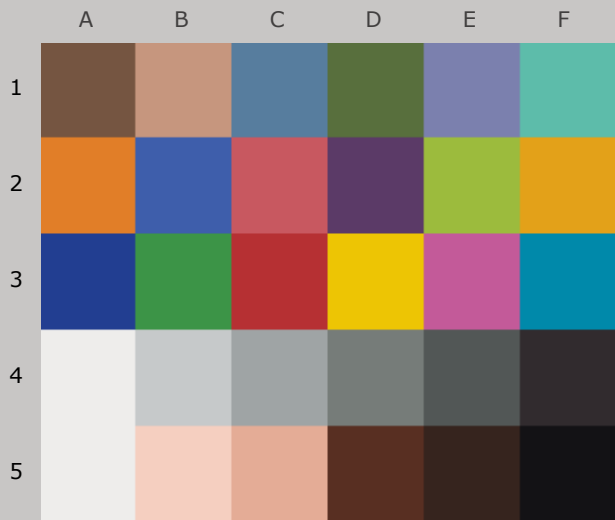
*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

160 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

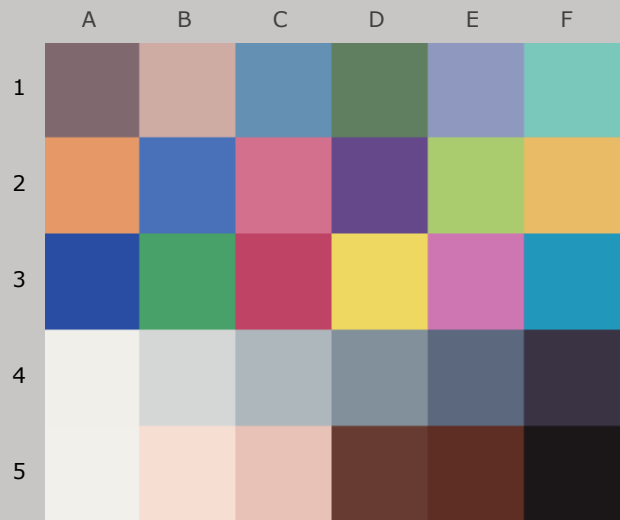
				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	26.9	17.2	39.4	45.6	12.2	10.4	17.3	1.5
B1	light Skin	62.0	11.8	66.2	72.5	15.7	12.0	19.6	10.3
C1	blue sky	96.6	6.1	50.7	56.8	-7.4	-7.7	-21.8	-23.1
D1	foliage	64.5	12.1	44.0	49.3	-15.6	-16.6	24.6	13.8
E1	blue flower	75.7	10.3	54.5	62.3	6.2	2.2	-25.0	-19.5
F1	bluish green	86.5	6.3	70.4	74.4	-33.1	-28.2	0.1	-0.9
A2	orange	71.7	21.1	63.2	69.6	34.6	27.2	59.8	41.2
B2	purplish blue	89.5	8.1	40.3	46.4	7.7	3.4	-45.7	-42.4
C2	moderate red	70.5	16.5	52.4	58.6	46.4	42.5	18.8	4.0
D2	purple	65.1	12.5	29.6	35.3	22.3	24.5	-21.0	-31.9
E2	yellow green	78.2	15.1	71.9	77.4	-24.0	-22.9	57.5	43.4
F2	orange yellow	71.7	22.3	71.5	78.3	18.1	10.2	70.9	51.2
A3	blue	96.4	5.4	28.4	33.3	13.6	11.5	-49.7	-50.8
B3	green	81.2	11.1	54.4	58.9	-39.9	-38.0	32.3	22.3
C3	red	67.2	21.5	42.4	46.9	53.7	52.7	31.9	10.9
D3	yellow	76.4	20.3	81.1	86.1	3.8	-1.6	81.1	62.2
E3	magenta	88.4	9.4	53.4	60.3	48.2	41.9	-14.5	-15.4
F3	cyan	98.6	5.0	52.0	56.9	-24.4	-23.4	-26.6	-26.7
A4	white	56.0	4.7	93.7	94.4	0.0	-0.5	1.1	5.7
B4	neutral 8	83.9	4.8	80.9	85.2	-0.8	-1.1	-0.7	1.4
C4	neutral 6.5	88.1	6.1	67.2	73.1	-2.2	-2.8	-1.4	-2.9
D4	neutral 5	29.8	9.6	51.4	57.8	-2.7	-3.0	0.7	-6.4
E4	neutral 3.5	-31.2	14.3	36.7	42.7	-2.1	-1.1	0.3	-12.6
F4	black	11.1	9.5	18.5	21.7	3.4	5.9	-0.9	-9.5
A5	paper white	56.2	4.7	93.9	94.5	-0.1	-0.6	0.6	5.3
B5	skin highlight L*=89	73.7	6.1	86.2	89.6	12.0	7.1	12.5	11.3
C5	skin highlight L*=75	69.0	10.7	75.1	80.9	19.0	13.7	20.1	12.7
D5	skin shadow L*=25	90.1	5.6	24.8	29.5	17.9	19.3	16.8	14.3
E5	skin shadow L*=11	-35.2	17.7	16.5	24.1	8.2	21.8	8.0	16.3
F5	Max Black	76.8	3.3	5.3	7.2	0.6	2.7	-2.0	-0.3
Summary Results		I*Color	I*tone	ΔE	<div>AARDENBURG IMAGING & ARCHIVES</div>				
Average Score for all patches		64.5	81.9	11.0					
Average Score for the Worst 10% (3 lowest scoring patches)		-18.4	62.5	21.6					

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62.7_{color} / 80.3_{tone}



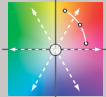
Original Print Colors
(measured before light exposure)



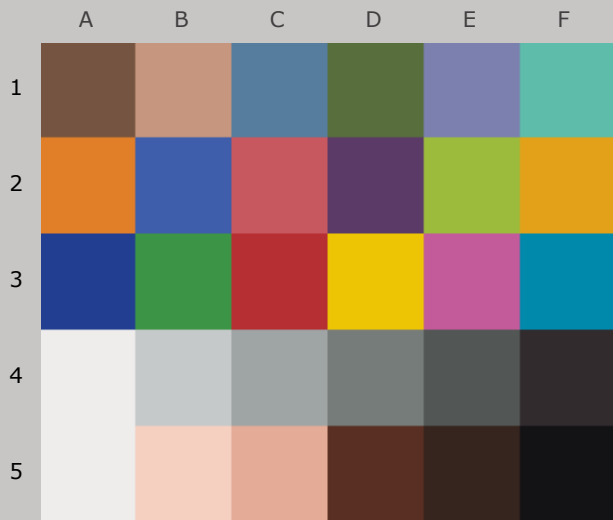
Colors after 180 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

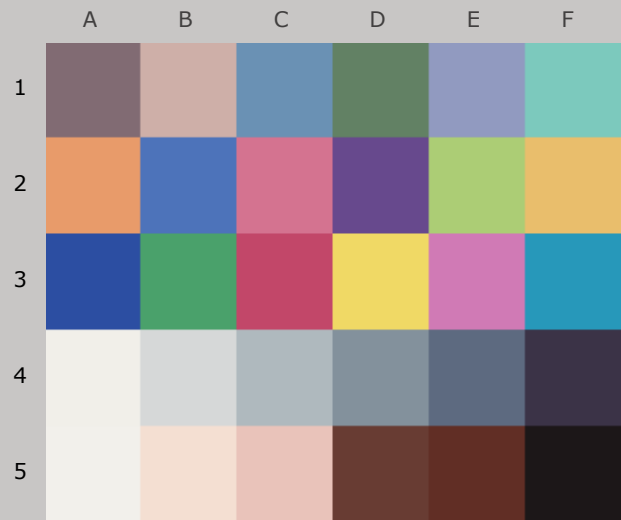
180 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

				L*		a*		b*	
Column/row	Color Patch	I*Color	ΔE	Before	After	Before	After	Before	After
A1	dark Skin	19.2	19.0	39.4	46.6	12.2	10.1	17.3	-0.2
B1	light Skin	55.3	13.7	66.2	73.3	15.7	11.6	19.6	8.6
C1	blue sky	93.5	7.2	50.7	57.7	-7.4	-7.6	-21.8	-23.8
D1	foliage	60.4	13.5	44.0	50.1	-15.6	-16.8	24.6	12.6
E1	blue flower	79.6	10.4	54.5	63.2	6.2	2.5	-25.0	-20.6
F1	bluish green	83.5	7.6	70.4	75.1	-33.1	-27.5	0.1	-1.9
A2	orange	68.2	23.5	63.2	70.3	34.6	26.2	59.8	39.0
B2	purplish blue	89.0	8.9	40.3	47.3	7.7	3.0	-45.7	-42.6
C2	moderate red	66.8	18.5	52.4	59.4	46.4	41.7	18.8	2.3
D2	purple	62.4	13.6	29.6	36.1	22.3	24.4	-21.0	-32.8
E2	yellow green	75.5	16.9	71.9	77.9	-24.0	-22.8	57.5	41.7
F2	orange yellow	68.4	24.8	71.5	78.9	18.1	9.5	70.9	48.9
A3	blue	95.6	6.2	28.4	34.0	13.6	11.1	-49.7	-51.0
B3	green	78.8	12.5	54.4	59.6	-39.9	-37.7	32.3	21.1
C3	red	64.1	23.5	42.4	47.5	53.7	52.3	31.9	9.0
D3	yellow	73.8	22.5	81.1	86.5	3.8	-2.0	81.1	60.1
E3	magenta	86.5	10.7	53.4	61.2	48.2	41.2	-14.5	-16.4
F3	cyan	96.8	5.9	52.0	57.6	-24.4	-23.0	-26.6	-27.5
A4	white	81.6	2.5	93.7	94.7	0.0	-0.3	1.1	3.3
B4	neutral 8	100.0	4.9	80.9	85.8	-0.8	-0.9	-0.7	-0.5
C4	neutral 6.5	72.9	7.3	67.2	73.8	-2.2	-2.7	-1.4	-4.4
D4	neutral 5	15.8	11.2	51.4	58.7	-2.7	-3.1	0.7	-7.8
E4	neutral 3.5	-45.5	15.9	36.7	43.6	-2.1	-1.1	0.3	-14.0
F4	black	2.7	10.4	18.5	22.3	3.4	6.0	-0.9	-10.3
A5	paper white	81.6	2.4	93.9	94.7	-0.1	-0.4	0.6	2.9
B5	skin highlight L*=89	66.9	7.4	86.2	90.0	12.0	6.8	12.5	9.1
C5	skin highlight L*=75	62.0	12.7	75.1	81.5	19.0	13.3	20.1	10.7
D5	skin shadow L*=25	90.2	6.0	24.8	30.0	17.9	19.2	16.8	14.3
E5	skin shadow L*=11	-38.8	18.4	16.5	24.9	8.2	22.1	8.0	16.6
F5	Max Black	74.7	3.8	5.3	7.8	0.6	2.9	-2.0	-0.3
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		62.7	80.3						
Average Score for the Worst 10% (3 lowest scoring patches)		-27.2	60.1						

60.7_{color} / 78.4_{tone}



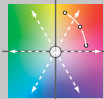
Original Print Colors
(measured before light exposure)



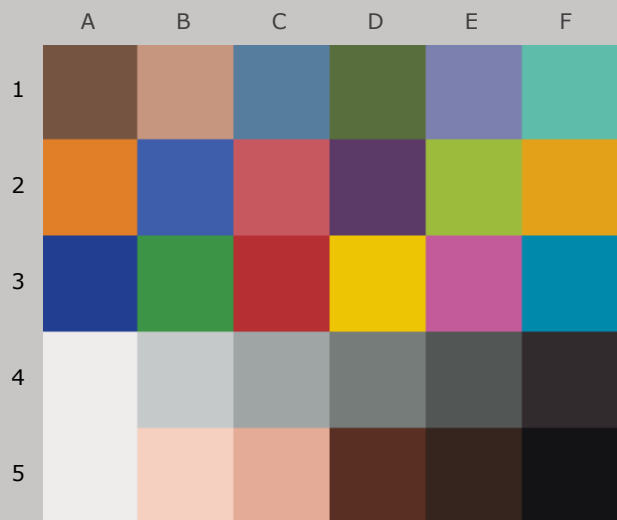
Colors after 200 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

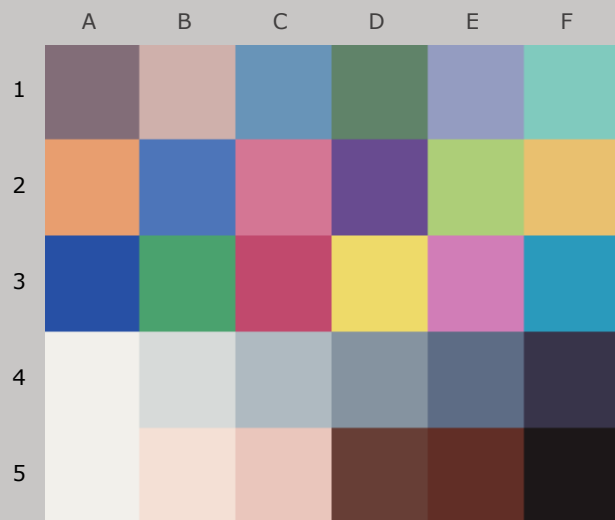
200 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	15.0	20.3	39.4	47.6	12.2	9.9	17.3	-1.0
B1	light Skin	53.1	14.6	66.2	74.0	15.7	11.3	19.6	8.2
C1	blue sky	95.2	7.9	50.7	58.5	-7.4	-7.5	-21.8	-23.4
D1	foliage	57.6	14.6	44.0	50.9	-15.6	-16.4	24.6	11.8
E1	blue flower	80.8	10.9	54.5	64.0	6.2	2.9	-25.0	-20.6
F1	bluish green	81.1	8.5	70.4	75.6	-33.1	-26.7	0.1	-2.1
A2	orange	66.0	25.2	63.2	71.0	34.6	25.5	59.8	37.6
B2	purplish blue	86.9	10.2	40.3	48.1	7.7	2.5	-45.7	-41.6
C2	moderate red	65.3	19.6	52.4	60.4	46.4	41.0	18.8	1.8
D2	purple	63.3	13.9	29.6	37.0	22.3	24.2	-21.0	-32.5
E2	yellow green	73.4	18.3	71.9	78.4	-24.0	-22.2	57.5	40.5
F2	orange yellow	66.1	26.6	71.5	79.5	18.1	9.0	70.9	47.3
A3	blue	95.3	6.9	28.4	34.6	13.6	10.7	-49.7	-50.3
B3	green	76.9	13.6	54.4	60.1	-39.9	-37.0	32.3	20.2
C3	red	62.6	24.6	42.4	48.5	53.7	51.8	31.9	8.1
D3	yellow	71.8	24.1	81.1	86.9	3.8	-2.2	81.1	58.5
E3	magenta	84.9	12.0	53.4	62.2	48.2	40.2	-14.5	-15.9
F3	cyan	96.4	6.5	52.0	58.2	-24.4	-22.7	-26.6	-27.2
A4	white	80.5	2.6	93.7	94.7	0.0	-0.3	1.1	3.4
B4	neutral 8	100.0	5.3	80.9	86.2	-0.8	-0.9	-0.7	-0.3
C4	neutral 6.5	73.5	7.9	67.2	74.5	-2.2	-2.6	-1.4	-4.4
D4	neutral 5	12.7	11.9	51.4	59.4	-2.7	-2.9	0.7	-8.1
E4	neutral 3.5	-51.1	16.8	36.7	44.4	-2.1	-0.9	0.3	-14.5
F4	black	-4.7	11.3	18.5	22.8	3.4	6.6	-0.9	-10.8
A5	paper white	79.5	2.6	93.9	94.7	-0.1	-0.4	0.6	3.1
B5	skin highlight L*=89	64.5	7.8	86.2	90.2	12.0	6.4	12.5	8.9
C5	skin highlight L*=75	59.7	13.5	75.1	82.0	19.0	12.8	20.1	10.2
D5	skin shadow L*=25	90.0	6.6	24.8	30.7	17.9	19.1	16.8	14.2
E5	skin shadow L*=11	-47.1	19.7	16.5	25.9	8.2	22.8	8.0	17.3
F5	Max Black	71.2	4.3	5.3	8.1	0.6	3.2	-2.0	-0.1
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		60.7	78.4						
Average Score for the Worst 10% (3 lowest scoring patches)		-34.3	56.5						

57.7_{color} / 77.1_{tone}



Original Print Colors
(measured before light exposure)



Colors after 220 Megalux-hours
light exposure

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*

220 Mlux-hrs Light Exposure (i.e., after) Compared to Original Print Colors (i.e., before)

Column/row	Color Patch	I*Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	dark Skin	6.2	22.3	39.4	48.3	12.2	9.7	17.3	-2.9
B1	light Skin	49.5	15.6	66.2	74.6	15.7	10.9	19.6	7.3
C1	blue sky	94.1	8.5	50.7	59.0	-7.4	-7.6	-21.8	-23.7
D1	foliage	52.3	16.2	44.0	51.5	-15.6	-16.7	24.6	10.3
E1	blue flower	78.8	11.8	54.5	64.7	6.2	2.6	-25.0	-20.3
F1	bluish green	79.4	9.2	70.4	76.0	-33.1	-26.3	0.1	-2.5
A2	orange	63.4	27.1	63.2	71.6	34.6	24.7	59.8	36.0
B2	purplish blue	85.7	11.0	40.3	48.7	7.7	2.0	-45.7	-41.4
C2	moderate red	62.9	21.0	52.4	61.1	46.4	40.3	18.8	0.7
D2	purple	60.1	15.0	29.6	37.6	22.3	24.1	-21.0	-33.5
E2	yellow green	71.2	19.7	71.9	78.9	-24.0	-22.1	57.5	39.2
F2	orange yellow	63.7	28.4	71.5	80.1	18.1	8.4	70.9	45.6
A3	blue	94.3	7.5	28.4	35.0	13.6	10.2	-49.7	-50.6
B3	green	74.5	14.9	54.4	60.6	-39.9	-37.1	32.3	19.0
C3	red	59.1	26.8	42.4	48.9	53.7	51.5	31.9	6.0
D3	yellow	69.7	25.9	81.1	87.3	3.8	-2.7	81.1	56.9
E3	magenta	83.3	13.1	53.4	63.0	48.2	39.4	-14.5	-15.9
F3	cyan	96.3	7.0	52.0	58.7	-24.4	-22.7	-26.6	-27.4
A4	white	83.0	2.4	93.7	94.8	0.0	-0.3	1.1	3.2
B4	neutral 8	100.0	5.7	80.9	86.6	-0.8	-0.8	-0.7	-0.4
C4	neutral 6.5	70.5	8.5	67.2	75.0	-2.2	-2.6	-1.4	-4.6
D4	neutral 5	5.3	12.9	51.4	60.1	-2.7	-3.0	0.7	-8.8
E4	neutral 3.5	-66.4	18.4	36.7	45.1	-2.1	-1.0	0.3	-16.0
F4	black	-21.6	12.8	18.5	22.9	3.4	6.5	-0.9	-12.6
A5	paper white	82.2	2.4	93.9	94.8	-0.1	-0.4	0.6	2.8
B5	skin highlight L*=89	61.3	8.5	86.2	90.6	12.0	6.1	12.5	8.4
C5	skin highlight L*=75	57.0	14.4	75.1	82.6	19.0	12.4	20.1	9.6
D5	skin shadow L*=25	85.3	7.5	24.8	31.1	17.9	18.5	16.8	12.8
E5	skin shadow L*=11	-40.6	19.1	16.5	25.9	8.2	22.5	8.0	16.4
F5	Max Black	71.6	4.4	5.3	8.3	0.6	3.1	-2.0	0.0

Summary Results

I*Color

I*tone

ΔE

Average Score for all patches

57.7

77.1

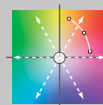
13.9

Average Score for the Worst 10%
(3 lowest scoring patches)

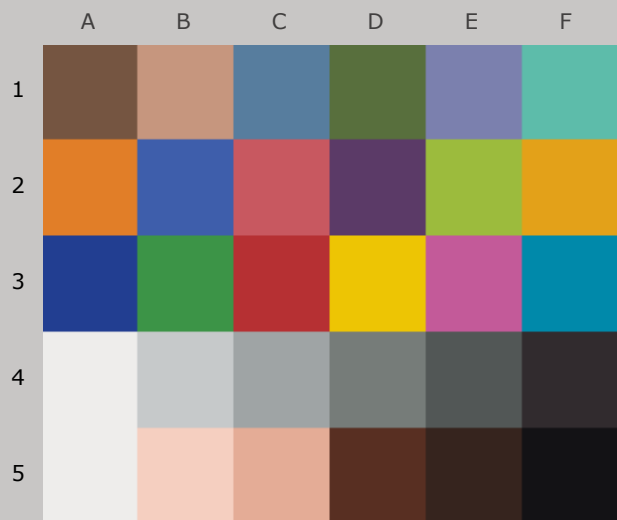
-42.8

56.3

27.4



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Original Print Colors
(measured before light exposure)



Test Complete

No further updates

*Epson Stylus Photo R1400, Epson OEM Claria Ink,
Epson Ultra Premium Photo Paper Luster*



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