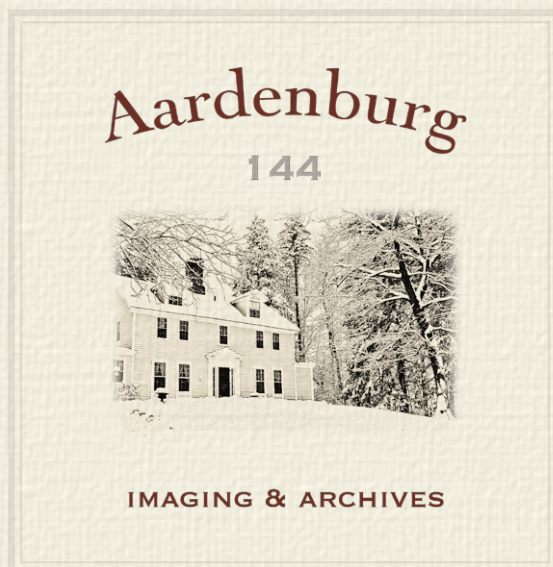




Accelerated Light Fading Test Results

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

Sample # AaI_20080630_SN001

100 Megalux-hours completed

Conservation Display Rating *	
Lower Exposure Limit (Megalux hours)	Upper Exposure limit (Megalux hours)
5	9

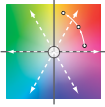
* Please read document **AaI_2009_0118_TA-01.pdf**, "An Overview of the AaI&A Conservation Display Ratings", located on the Documents page of the AaI&A website for an explanation of the conservation display ratings.

Document #: AaI_20080630_SN001Lf.pdf Rev: March 9, 2010

Test Print Prepared by: Aardenburg Imaging and Archives

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For more information please contact: info@aardenburg-imaging.com



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

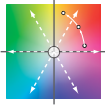
The magnitude and visual appearance of fading depends not only on the chosen printing system but the chosen image as well. In other words, different images are comprised of different colors, and the fading relationships between those colors dictate how the image will look as it fades. The sample print 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 RX680
Ink: Epson Claria 78
Paper: Hp Advanced Photo Paper, Glossy

Sample #: AaI_20080630_SN001

Test Print Prepared by: AaI&A



AaI_StandardColorSet(v2)forSRGB.tif

Test Image: AaI_StandardColorSet(v2)forSRGB.tif

RIP/Driver settings: PSCS3/Epson OEM version 6.10, Print quality= Photo RPM, not high speed; Mode=Epson Standard, Gamma 2.2, no color enhancement

Media Setting: Premium Photo Paper Glossy

Printed: June 30, 2008

Original print colors measured on: August 5, 2008

Test started on: August 9, 2008

Profile: n.a

Rendering Intent: n.a

Profile type: n.a

Profile Creation Software: n.a

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)	95.0	95.0	-0.9	-1.3	-2.8	-1.5
(1) ΔL*, Δa*, Δb* respectively	0.0		0.4		1.3	
(1) Calculated differences, especially for Δb*, indicate the role and magnitude of fluorescence on original paper color						
Maximum Printed black (UV included)	L* = 4.7		a* = 0.3		b* = -3.3	

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: 11,989 Lux

Average Temperature: 23.3°C over full test duration, 24.7°C during light exposure

Average Relative humidity: 59.7%RH full test period, 60.3%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:

* OBAs in paper core and verso of print, not in image receiver coating.

** 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.

October 3, 2008 – HP Advanced Photo Paper Glossy is Hp's comparable paper to Epson Premium Photo Paper Glossy. It is highly competitive in price and is often found at local office supply stores or discount retail outlets in the United States. These local retailers often favor one major OEM brand over another (HP over Epson or vice versa) when stocking their shelves. For the amateur home photo printing enthusiast, it is therefore useful to evaluate "mix and match" printer/ink/paper combinations because the buyer may find one OEM brand of paper locally but not the other when trying to purchase new supplies. Additionally, Hp's Advanced Photo paper was released as a superior microporous "instant dry" photo paper for compatibility with Hp Vivera dye-based inks. The chemistry of this microporous paper was presumably engineered for improved image permanence characteristics with the Hp Vivera dyes even though Hp conscientiously recommends its swellable type photo papers (e.g., Hp Premium Plus Photo Paper High Gloss) for customers who want the highest level of light fastness and gas fade resistance with Hp Vivera dye-based printers. For reasons of cost, availability, and possible dye chemistry compatibility, testing the Hp Advanced Photo paper on an Epson Claria dye-based printer is a worthy experiment.

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

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!

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.

(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).

(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.

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 RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	0.0	34.3		17.8		14.5	
B1	light Skin	100.0	0.0	60.7		18.7		16.5	
C1	blue sky	100.0	0.0	43.6		-7.6		-19.5	
D1	foliage	100.0	0.0	38.8		-10.7		20.8	
E1	blue flower	100.0	0.0	48.8		6.5		-27.0	
F1	bluish green	100.0	0.0	62.7		-33.7		-1.2	
A2	orange	100.0	0.0	58.9		43.6		48.5	
B2	purplish blue	100.0	0.0	34.0		0.5		-45.8	
C2	moderate red	100.0	0.0	47.2		49.8		21.4	
D2	purple	100.0	0.0	25.6		25.1		-19.9	
E2	yellow green	100.0	0.0	67.8		-25.7		57.0	
F2	orange yellow	100.0	0.0	68.0		25.2		55.7	
A3	blue	100.0	0.0	24.9		1.3		-44.6	
B3	green	100.0	0.0	48.7		-36.8		30.3	
C3	red	100.0	0.0	40.4		56.8		31.5	
D3	yellow	100.0	0.0	77.5		9.5		68.1	
E3	magenta	100.0	0.0	47.0		51.7		-3.7	
F3	cyan	100.0	0.0	43.7		-22.7		-24.6	
A4	white	100.0	0.0	91.2		-1.1		-2.5	
B4	neutral 8	100.0	0.0	75.9		-3.2		-3.7	
C4	neutral 6.5	100.0	0.0	61.4		-1.9		-3.4	
D4	neutral 5	100.0	0.0	45.3		0.4		1.4	
E4	neutral 3.5	100.0	0.0	31.4		2.6		0.1	
F4	black	100.0	0.0	16.9		2.3		-1.5	
A5	paper white	100.0	0.0	94.8		-0.6		-2.8	
B5	skin highlight L*=89	100.0	0.0	83.6		12.2		10.5	
C5	skin highlight L*=75	100.0	0.0	69.9		20.1		16.7	
D5	skin shadow L*=25	100.0	0.0	22.5		17.7		11.5	
E5	skin shadow L*=11	100.0	0.0	14.6		8.9		5.6	
F5	Max Black	100.0	0.0	4.7		0.3		-3.3	
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					

88.4_{color} / 97.9_{tone}



Original Print Colors
(measured before light exposure)



Colors after 10 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	85.3	3.9	34.3	34.6	17.8	18.1	14.5	10.6
B1	light Skin	85.8	4.1	60.7	61.2	18.7	19.1	16.5	12.4
C1	blue sky	79.8	4.8	43.6	44.3	-7.6	-6.2	-19.5	-24.0
D1	foliage	85.9	3.8	38.8	39.4	-10.7	-11.2	20.8	17.0
E1	blue flower	89.9	3.4	48.8	49.3	6.5	7.4	-27.0	-30.1
F1	bluish green	92.7	3.0	62.7	63.3	-33.7	-33.1	-1.2	-4.1
A2	orange	91.9	5.8	58.9	59.3	43.6	43.8	48.5	42.7
B2	purplish blue	93.2	3.6	34.0	34.5	0.5	2.1	-45.8	-49.0
C2	moderate red	88.1	7.0	47.2	47.6	49.8	50.7	21.4	14.5
D2	purple	84.3	5.5	25.6	25.9	25.1	27.1	-19.9	-25.1
E2	yellow green	96.1	3.0	67.8	68.5	-25.7	-26.1	57.0	54.1
F2	orange yellow	94.1	4.1	68.0	68.5	25.2	25.1	55.7	51.6
A3	blue	92.1	4.0	24.9	25.3	1.3	3.6	-44.6	-47.9
B3	green	92.6	4.1	48.7	49.5	-36.8	-37.4	30.3	26.3
C3	red	93.7	4.6	40.4	40.4	56.8	57.5	31.5	27.0
D3	yellow	95.9	3.4	77.5	78.0	9.5	9.1	68.1	64.8
E3	magenta	90.4	5.5	47.0	47.5	51.7	52.9	-3.7	-9.1
F3	cyan	87.7	4.7	43.7	44.4	-22.7	-21.1	-24.6	-29.0
A4	white	100.0	0.5	91.2	91.7	-1.1	-1.0	-2.5	-2.6
B4	neutral 8	92.4	1.3	75.9	76.5	-3.2	-3.0	-3.7	-4.9
C4	neutral 6.5	74.4	3.0	61.4	62.0	-1.9	-1.4	-3.4	-6.3
D4	neutral 5	48.2	5.5	45.3	46.0	0.4	1.2	1.4	-4.0
E4	neutral 3.5	52.2	5.1	31.4	31.8	2.6	3.2	0.1	-4.9
F4	black	89.9	1.5	16.9	17.0	2.3	2.9	-1.5	-2.8
A5	paper white	100.0	0.6	94.8	95.3	-0.6	-0.5	-2.8	-2.7
B5	skin highlight L*=89	95.5	1.4	83.6	84.2	12.2	12.4	10.5	9.3
C5	skin highlight L*=75	90.5	3.0	69.9	70.4	20.1	20.4	16.7	13.7
D5	skin shadow L*=25	96.2	1.3	22.5	22.5	17.7	18.2	11.5	10.3
E5	skin shadow L*=11	92.6	1.3	14.6	15.0	8.9	10.2	5.6	5.6
F5	Max Black	100.0	0.5	4.7	5.1	0.3	0.6	-3.3	-3.2
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		88.4	97.9						
Average Score for the Worst 10% (3 lowest scoring patches)		58.3	94.6						

80.0_{color} / 96.3_{tone}



Original Print Colors
(measured before light exposure)



Colors after 20 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	72.0	6.9	34.3	34.5	17.8	18.5	14.5	7.6
B1	light Skin	77.5	6.1	60.7	61.4	18.7	19.2	16.5	10.4
C1	blue sky	67.6	7.3	43.6	44.5	-7.6	-5.4	-19.5	-26.4
D1	foliage	73.1	6.8	38.8	39.5	-10.7	-11.1	20.8	14.0
E1	blue flower	84.8	4.8	48.8	49.5	6.5	7.8	-27.0	-31.5
F1	bluish green	88.1	4.6	62.7	63.4	-33.7	-32.7	-1.2	-5.6
A2	orange	86.3	9.4	58.9	59.3	43.6	43.7	48.5	39.1
B2	purplish blue	88.8	5.7	34.0	34.7	0.5	3.1	-45.8	-50.8
C2	moderate red	79.7	11.5	47.2	47.4	49.8	51.2	21.4	10.0
D2	purple	72.3	9.4	25.6	25.8	25.1	28.5	-19.9	-28.6
E2	yellow green	93.0	5.0	67.8	68.6	-25.7	-26.3	57.0	52.2
F2	orange yellow	90.0	6.7	68.0	68.7	25.2	24.8	55.7	49.1
A3	blue	86.9	6.4	24.9	25.5	1.3	5.0	-44.6	-49.7
B3	green	86.7	6.9	48.7	49.7	-36.8	-37.3	30.3	23.5
C3	red	87.3	8.8	40.4	39.8	56.8	58.0	31.5	22.8
D3	yellow	92.9	5.5	77.5	78.2	9.5	8.8	68.1	62.8
E3	magenta	84.6	8.5	47.0	47.4	51.7	53.4	-3.7	-12.1
F3	cyan	80.8	7.0	43.7	44.7	-22.7	-20.2	-24.6	-31.1
A4	white	100.0	0.5	91.2	91.7	-1.1	-1.0	-2.5	-2.5
B4	neutral 8	87.6	1.8	75.9	76.7	-3.2	-2.9	-3.7	-5.4
C4	neutral 6.5	59.4	4.4	61.4	62.2	-1.9	-1.1	-3.4	-7.7
D4	neutral 5	16.1	8.5	45.3	46.2	0.4	1.7	1.4	-7.0
E4	neutral 3.5	14.7	8.6	31.4	31.9	2.6	4.0	0.1	-8.4
F4	black	75.9	2.8	16.9	16.9	2.3	3.4	-1.5	-4.0
A5	paper white	100.0	0.7	94.8	95.4	-0.6	-0.5	-2.8	-2.6
B5	skin highlight L*=89	92.1	1.9	83.6	84.4	12.2	12.3	10.5	8.7
C5	skin highlight L*=75	85.0	4.5	69.9	70.6	20.1	20.3	16.7	12.3
D5	skin shadow L*=25	90.1	2.6	22.5	22.4	17.7	18.5	11.5	9.1
E5	skin shadow L*=11	86.2	2.0	14.6	15.2	8.9	10.9	5.6	5.4
F5	Max Black	100.0	0.9	4.7	5.4	0.3	0.7	-3.3	-3.0
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		80.0	96.3						
Average Score for the Worst 10% (3 lowest scoring patches)		30.1	89.9						

77.1_{color} / 96.0_{tone}



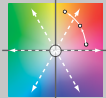
Original Print Colors
(measured before light exposure)



Colors after 30 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	66.1	8.3	34.3	34.7	17.8	18.7	14.5	6.3
B1	light Skin	74.5	6.9	60.7	61.5	18.7	19.2	16.5	9.6
C1	blue sky	64.1	8.1	43.6	44.7	-7.6	-5.2	-19.5	-27.1
D1	foliage	67.1	8.2	38.8	39.8	-10.7	-11.0	20.8	12.6
E1	blue flower	83.7	5.1	48.8	49.8	6.5	7.9	-27.0	-31.8
F1	bluish green	86.9	5.0	62.7	63.6	-33.7	-32.4	-1.2	-5.9
A2	orange	84.1	10.9	58.9	59.6	43.6	43.6	48.5	37.6
B2	purplish blue	87.8	6.2	34.0	34.8	0.5	3.3	-45.8	-51.2
C2	moderate red	76.5	13.2	47.2	47.7	49.8	51.3	21.4	8.3
D2	purple	67.8	10.8	25.6	26.0	25.1	29.1	-19.9	-30.0
E2	yellow green	92.0	5.6	67.8	68.7	-25.7	-26.2	57.0	51.5
F2	orange yellow	88.4	7.6	68.0	68.9	25.2	24.6	55.7	48.1
A3	blue	85.2	7.1	24.9	25.5	1.3	5.3	-44.6	-50.4
B3	green	84.4	8.0	48.7	49.9	-36.8	-37.1	30.3	22.4
C3	red	84.2	10.8	40.4	39.9	56.8	58.1	31.5	20.8
D3	yellow	91.6	6.3	77.5	78.4	9.5	8.7	68.1	61.9
E3	magenta	83.1	9.3	47.0	47.6	51.7	53.4	-3.7	-12.8
F3	cyan	78.5	7.8	43.7	44.8	-22.7	-19.8	-24.6	-31.8
A4	white	100.0	0.6	91.2	91.8	-1.1	-1.1	-2.5	-2.3
B4	neutral 8	87.1	2.0	75.9	76.9	-3.2	-2.8	-3.7	-5.4
C4	neutral 6.5	59.0	4.5	61.4	62.5	-1.9	-1.1	-3.4	-7.7
D4	neutral 5	6.9	9.4	45.3	46.5	0.4	2.0	1.4	-7.8
E4	neutral 3.5	0.2	10.0	31.4	32.2	2.6	4.3	0.1	-9.7
F4	black	73.7	3.0	16.9	17.1	2.3	3.6	-1.5	-4.2
A5	paper white	100.0	0.7	94.8	95.4	-0.6	-0.6	-2.8	-2.5
B5	skin highlight L*=89	91.4	2.1	83.6	84.5	12.2	12.1	10.5	8.6
C5	skin highlight L*=75	83.7	4.9	69.9	70.8	20.1	20.1	16.7	11.9
D5	skin shadow L*=25	88.6	2.9	22.5	22.5	17.7	18.7	11.5	8.8
E5	skin shadow L*=11	78.6	2.9	14.6	15.6	8.9	11.7	5.6	5.9
F5	Max Black	98.0	1.0	4.7	5.4	0.3	0.8	-3.3	-2.9
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		77.1	96.0						
Average Score for the Worst 10% (3 lowest scoring patches)		22.0	89.4						

73.3_{color} / 95.5_{tone}



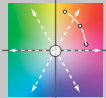
Original Print Colors
(measured before light exposure)



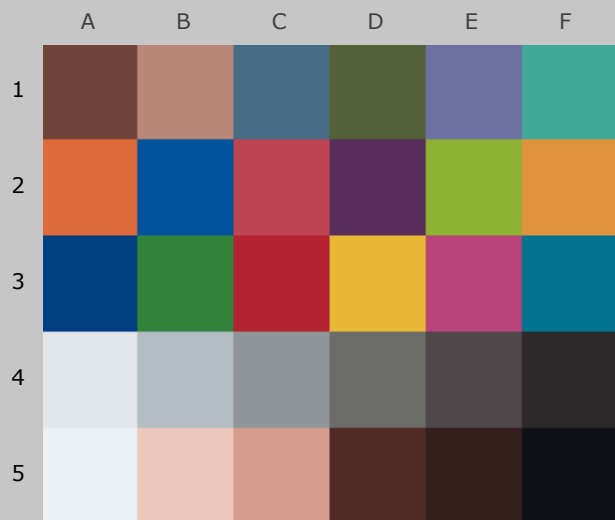
Colors after 40 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	59.3	9.9	34.3	35.0	17.8	18.6	14.5	4.7
B1	light Skin	71.1	7.8	60.7	61.8	18.7	19.1	16.5	8.8
C1	blue sky	59.1	9.1	43.6	44.9	-7.6	-4.9	-19.5	-28.1
D1	foliage	61.1	9.7	38.8	40.0	-10.7	-11.1	20.8	11.2
E1	blue flower	82.3	5.5	48.8	49.9	6.5	7.9	-27.0	-32.2
F1	bluish green	85.0	5.6	62.7	63.7	-33.7	-32.2	-1.2	-6.5
A2	orange	81.1	12.8	58.9	59.7	43.6	43.4	48.5	35.7
B2	purplish blue	87.1	6.5	34.0	35.1	0.5	3.5	-45.8	-51.5
C2	moderate red	72.7	15.3	47.2	47.9	49.8	51.3	21.4	6.3
D2	purple	62.8	12.4	25.6	26.2	25.1	29.5	-19.9	-31.5
E2	yellow green	90.6	6.5	67.8	68.8	-25.7	-26.3	57.0	50.6
F2	orange yellow	85.8	9.2	68.0	69.1	25.2	24.4	55.7	46.6
A3	blue	83.4	7.9	24.9	25.7	1.3	5.8	-44.6	-51.0
B3	green	81.6	9.4	48.7	50.1	-36.8	-37.2	30.3	21.0
C3	red	81.4	12.6	40.4	40.1	56.8	58.2	31.5	19.0
D3	yellow	89.8	7.6	77.5	78.5	9.5	8.6	68.1	60.7
E3	magenta	80.7	10.6	47.0	47.8	51.7	53.5	-3.7	-14.1
F3	cyan	75.5	8.8	43.7	45.1	-22.7	-19.4	-24.6	-32.7
A4	white	100.0	0.6	91.2	91.8	-1.1	-1.0	-2.5	-2.3
B4	neutral 8	84.4	2.2	75.9	77.0	-3.2	-2.8	-3.7	-5.6
C4	neutral 6.5	52.1	5.2	61.4	62.6	-1.9	-1.1	-3.4	-8.4
D4	neutral 5	-8.5	10.9	45.3	46.7	0.4	2.1	1.4	-9.3
E4	neutral 3.5	-17.2	11.7	31.4	32.4	2.6	4.6	0.1	-11.3
F4	black	69.7	3.4	16.9	17.3	2.3	3.7	-1.5	-4.5
A5	paper white	100.0	0.7	94.8	95.4	-0.6	-0.6	-2.8	-2.4
B5	skin highlight L*=89	89.0	2.5	83.6	84.6	12.2	12.1	10.5	8.2
C5	skin highlight L*=75	80.5	5.7	69.9	71.0	20.1	20.1	16.7	11.1
D5	skin shadow L*=25	87.1	3.2	22.5	22.7	17.7	18.6	11.5	8.4
E5	skin shadow L*=11	74.7	3.4	14.6	15.9	8.9	12.0	5.6	6.1
F5	Max Black	96.0	1.4	4.7	5.8	0.3	1.0	-3.3	-2.8
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		73.3	95.5						
Average Score for the Worst 10% (3 lowest scoring patches)		8.8	89.0						

71.5_{color} / 95.1_{tone}



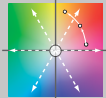
Original Print Colors
(measured before light exposure)



Colors after 50 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	56.4	10.5	34.3	35.1	17.8	18.5	14.5	4.0
B1	light Skin	68.6	8.4	60.7	61.9	18.7	19.0	16.5	8.2
C1	blue sky	57.2	9.6	43.6	45.2	-7.6	-5.0	-19.5	-28.6
D1	foliage	58.4	10.3	38.8	40.2	-10.7	-11.4	20.8	10.6
E1	blue flower	81.5	5.8	48.8	50.1	6.5	7.7	-27.0	-32.4
F1	bluish green	84.4	5.9	62.7	63.8	-33.7	-32.1	-1.2	-6.7
A2	orange	79.1	14.2	58.9	59.8	43.6	43.3	48.5	34.3
B2	purplish blue	86.5	6.8	34.0	35.3	0.5	3.3	-45.8	-51.9
C2	moderate red	70.5	16.5	47.2	48.0	49.8	51.4	21.4	5.0
D2	purple	60.2	13.3	25.6	26.3	25.1	29.9	-19.9	-32.3
E2	yellow green	90.0	6.9	67.8	68.9	-25.7	-26.3	57.0	50.3
F2	orange yellow	84.1	10.3	68.0	69.2	25.2	24.3	55.7	45.6
A3	blue	82.8	8.2	24.9	25.7	1.3	5.8	-44.6	-51.4
B3	green	80.6	9.9	48.7	50.3	-36.8	-37.4	30.3	20.5
C3	red	80.0	13.5	40.4	40.3	56.8	58.4	31.5	18.1
D3	yellow	88.7	8.4	77.5	78.6	9.5	8.4	68.1	59.9
E3	magenta	79.5	11.2	47.0	48.0	51.7	53.5	-3.7	-14.7
F3	cyan	74.9	9.1	43.7	45.3	-22.7	-19.6	-24.6	-33.0
A4	white	100.0	0.8	91.2	91.9	-1.1	-1.0	-2.5	-2.2
B4	neutral 8	85.4	2.3	75.9	77.2	-3.2	-2.8	-3.7	-5.6
C4	neutral 6.5	49.7	5.5	61.4	62.8	-1.9	-1.1	-3.4	-8.6
D4	neutral 5	-13.7	11.4	45.3	46.9	0.4	1.9	1.4	-9.8
E4	neutral 3.5	-23.8	12.3	31.4	32.6	2.6	4.5	0.1	-12.0
F4	black	68.9	3.5	16.9	17.4	2.3	3.8	-1.5	-4.6
A5	paper white	99.4	0.9	94.8	95.4	-0.6	-0.7	-2.8	-2.3
B5	skin highlight L*=89	87.9	2.7	83.6	84.7	12.2	12.0	10.5	8.1
C5	skin highlight L*=75	78.6	6.2	69.9	71.2	20.1	20.1	16.7	10.6
D5	skin shadow L*=25	86.7	3.3	22.5	22.8	17.7	18.8	11.5	8.4
E5	skin shadow L*=11	68.7	4.1	14.6	16.1	8.9	12.6	5.6	6.6
F5	Max Black	95.2	1.4	4.7	5.6	0.3	1.0	-3.3	-2.7
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		71.5	95.1						
Average Score for the Worst 10% (3 lowest scoring patches)		4.1	88.8						

70.8_{color} / 95.1_{tone}



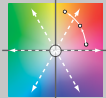
Original Print Colors
(measured before light exposure)



Colors after 60 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	54.0	11.1	34.3	35.3	17.8	18.4	14.5	3.5
B1	light Skin	67.0	8.8	60.7	62.0	18.7	18.9	16.5	7.7
C1	blue sky	56.6	9.7	43.6	45.3	-7.6	-5.0	-19.5	-28.7
D1	foliage	56.7	10.7	38.8	40.3	-10.7	-11.4	20.8	10.2
E1	blue flower	81.6	5.8	48.8	50.2	6.5	7.6	-27.0	-32.5
F1	bluish green	84.5	5.9	62.7	63.9	-33.7	-32.1	-1.2	-6.7
A2	orange	77.9	14.9	58.9	59.9	43.6	43.2	48.5	33.6
B2	purplish blue	86.6	6.8	34.0	35.3	0.5	3.3	-45.8	-51.8
C2	moderate red	69.5	17.0	47.2	48.2	49.8	51.3	21.4	4.5
D2	purple	59.7	13.4	25.6	26.5	25.1	29.8	-19.9	-32.5
E2	yellow green	89.8	7.0	67.8	68.9	-25.7	-26.4	57.0	50.1
F2	orange yellow	83.2	10.8	68.0	69.1	25.2	24.2	55.7	45.0
A3	blue	83.1	8.1	24.9	25.8	1.3	5.7	-44.6	-51.3
B3	green	80.0	10.2	48.7	50.3	-36.8	-37.3	30.3	20.3
C3	red	79.3	14.0	40.4	40.6	56.8	58.2	31.5	17.6
D3	yellow	87.9	8.9	77.5	78.5	9.5	8.3	68.1	59.4
E3	magenta	79.2	11.3	47.0	48.1	51.7	53.3	-3.7	-14.9
F3	cyan	74.6	9.1	43.7	45.3	-22.7	-19.5	-24.6	-33.0
A4	white	100.0	0.7	91.2	91.8	-1.1	-1.0	-2.5	-2.1
B4	neutral 8	85.0	2.2	75.9	77.1	-3.2	-2.7	-3.7	-5.6
C4	neutral 6.5	48.9	5.5	61.4	62.8	-1.9	-1.2	-3.4	-8.7
D4	neutral 5	-16.8	11.7	45.3	47.0	0.4	1.9	1.4	-10.1
E4	neutral 3.5	-26.7	12.6	31.4	32.7	2.6	4.5	0.1	-12.3
F4	black	71.0	3.3	16.9	17.5	2.3	3.7	-1.5	-4.4
A5	paper white	99.1	0.8	94.8	95.2	-0.6	-0.7	-2.8	-2.3
B5	skin highlight L*=89	87.0	2.8	83.6	84.6	12.2	12.0	10.5	7.9
C5	skin highlight L*=75	77.3	6.5	69.9	71.1	20.1	20.0	16.7	10.3
D5	skin shadow L*=25	87.2	3.2	22.5	23.0	17.7	18.6	11.5	8.4
E5	skin shadow L*=11	66.8	4.3	14.6	16.3	8.9	12.7	5.6	7.0
F5	Max Black	93.7	1.6	4.7	5.8	0.3	1.2	-3.3	-2.7
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		70.8	95.1						
Average Score for the Worst 10% (3 lowest scoring patches)		1.8	89.7						

67.4_{color} / 94.5_{tone}



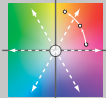
Original Print Colors
(measured before light exposure)



Colors after 70 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	49.3	12.2	34.3	35.3	17.8	18.5	14.5	2.4
B1	light Skin	63.5	9.7	60.7	62.1	18.7	19.0	16.5	6.9
C1	blue sky	52.0	10.7	43.6	45.4	-7.6	-4.7	-19.5	-29.6
D1	foliage	51.9	11.8	38.8	40.4	-10.7	-11.3	20.8	9.1
E1	blue flower	80.3	6.2	48.8	50.3	6.5	7.6	-27.0	-32.8
F1	bluish green	82.8	6.4	62.7	63.9	-33.7	-31.8	-1.2	-7.2
A2	orange	75.6	16.5	58.9	59.9	43.6	43.1	48.5	32.1
B2	purplish blue	85.8	7.2	34.0	35.4	0.5	3.5	-45.8	-52.1
C2	moderate red	66.8	18.5	47.2	48.1	49.8	51.4	21.4	3.0
D2	purple	56.2	14.5	25.6	26.5	25.1	30.2	-19.9	-33.5
E2	yellow green	88.3	7.9	67.8	68.9	-25.7	-26.4	57.0	49.2
F2	orange yellow	81.0	12.2	68.0	69.1	25.2	24.1	55.7	43.6
A3	blue	81.6	8.7	24.9	25.9	1.3	6.2	-44.6	-51.7
B3	green	77.8	11.2	48.7	50.4	-36.8	-37.1	30.3	19.2
C3	red	76.9	15.5	40.4	40.4	56.8	58.2	31.5	16.1
D3	yellow	86.1	10.1	77.5	78.4	9.5	8.2	68.1	58.1
E3	magenta	77.4	12.3	47.0	48.1	51.7	53.4	-3.7	-15.9
F3	cyan	72.1	10.0	43.7	45.3	-22.7	-19.0	-24.6	-33.8
A4	white	100.0	0.6	91.2	91.7	-1.1	-1.0	-2.5	-2.1
B4	neutral 8	82.4	2.5	75.9	77.1	-3.2	-2.6	-3.7	-5.8
C4	neutral 6.5	42.5	6.1	61.4	62.8	-1.9	-1.1	-3.4	-9.3
D4	neutral 5	-30.1	13.0	45.3	47.0	0.4	2.2	1.4	-11.4
E4	neutral 3.5	-42.2	14.1	31.4	32.8	2.6	4.8	0.1	-13.7
F4	black	64.0	4.0	16.9	17.5	2.3	3.9	-1.5	-5.1
A5	paper white	98.5	0.7	94.8	95.0	-0.6	-0.7	-2.8	-2.2
B5	skin highlight L*=89	84.6	3.1	83.6	84.5	12.2	12.0	10.5	7.5
C5	skin highlight L*=75	74.3	7.3	69.9	71.0	20.1	20.0	16.7	9.5
D5	skin shadow L*=25	84.2	3.9	22.5	22.9	17.7	18.5	11.5	7.8
E5	skin shadow L*=11	65.9	4.5	14.6	16.4	8.9	12.8	5.6	6.8
F5	Max Black	92.9	2.0	4.7	6.3	0.3	1.2	-3.3	-2.6
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		67.4	94.5						
Average Score for the Worst 10% (3 lowest scoring patches)		-10.0	88.6						

65.7^{color} / 93.7^{tone}



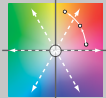
Original Print Colors
(measured before light exposure)



Colors after 80 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

80 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	45.0	13.2	34.3	35.5	17.8	18.6	14.5	1.4
B1	light Skin	61.9	10.1	60.7	62.3	18.7	18.9	16.5	6.5
C1	blue sky	50.4	11.1	43.6	45.7	-7.6	-4.6	-19.5	-29.9
D1	foliage	48.2	12.7	38.8	40.7	-10.7	-11.3	20.8	8.2
E1	blue flower	79.9	6.4	48.8	50.6	6.5	7.7	-27.0	-32.9
F1	bluish green	81.5	6.9	62.7	64.2	-33.7	-31.5	-1.2	-7.6
A2	orange	74.2	17.4	58.9	60.2	43.6	43.0	48.5	31.2
B2	purplish blue	85.4	7.4	34.0	35.7	0.5	3.4	-45.8	-52.4
C2	moderate red	65.3	19.3	47.2	48.4	49.8	51.5	21.4	2.2
D2	purple	53.5	15.4	25.6	26.7	25.1	30.6	-19.9	-34.3
E2	yellow green	87.5	8.4	67.8	69.2	-25.7	-26.3	57.0	48.7
F2	orange yellow	79.9	12.8	68.0	69.4	25.2	23.9	55.7	43.0
A3	blue	80.5	9.2	24.9	26.0	1.3	6.3	-44.6	-52.2
B3	green	76.4	11.9	48.7	50.7	-36.8	-37.1	30.3	18.5
C3	red	75.5	16.4	40.4	40.5	56.8	58.5	31.5	15.2
D3	yellow	85.3	10.7	77.5	78.8	9.5	8.1	68.1	57.6
E3	magenta	76.7	12.6	47.0	48.4	51.7	53.4	-3.7	-16.2
F3	cyan	71.1	10.4	43.7	45.7	-22.7	-19.0	-24.6	-34.1
A4	white	99.6	0.9	91.2	92.0	-1.1	-0.9	-2.5	-2.0
B4	neutral 8	83.3	2.6	75.9	77.5	-3.2	-2.5	-3.7	-5.7
C4	neutral 6.5	41.2	6.3	61.4	63.2	-1.9	-1.0	-3.4	-9.4
D4	neutral 5	-34.3	13.4	45.3	47.4	0.4	2.2	1.4	-11.8
E4	neutral 3.5	-49.9	14.8	31.4	33.0	2.6	5.1	0.1	-14.4
F4	black	60.9	4.3	16.9	17.8	2.3	4.0	-1.5	-5.3
A5	paper white	97.6	0.9	94.8	95.3	-0.6	-0.7	-2.8	-2.1
B5	skin highlight L*=89	83.9	3.3	83.6	84.9	12.2	11.8	10.5	7.4
C5	skin highlight L*=75	73.3	7.7	69.9	71.5	20.1	19.9	16.7	9.2
D5	skin shadow L*=25	82.4	4.3	22.5	23.1	17.7	18.8	11.5	7.4
E5	skin shadow L*=11	61.9	5.0	14.6	16.8	8.9	13.3	5.6	6.9
F5	Max Black	92.8	2.1	4.7	6.4	0.3	1.3	-3.3	-2.7
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		65.7	93.7						
Average Score for the Worst 10% (3 lowest scoring patches)		-14.3	86.9						

62.9_{color} / 93.3_{tone}



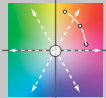
Original Print Colors
(measured before light exposure)



Colors after 90 Megalux-hours
light exposure

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	40.1	14.3	34.3	35.6	17.8	18.9	14.5	0.3
B1	light Skin	59.0	10.9	60.7	62.5	18.7	19.0	16.5	5.7
C1	blue sky	47.0	11.8	43.6	45.8	-7.6	-4.2	-19.5	-30.6
D1	foliage	43.4	13.9	38.8	40.8	-10.7	-10.9	20.8	7.1
E1	blue flower	78.6	6.7	48.8	50.8	6.5	7.9	-27.0	-33.2
F1	bluish green	79.8	7.5	62.7	64.3	-33.7	-31.2	-1.2	-8.0
A2	orange	72.4	18.5	58.9	60.3	43.6	43.0	48.5	30.0
B2	purplish blue	84.3	7.9	34.0	35.7	0.5	3.8	-45.8	-52.7
C2	moderate red	63.3	20.4	47.2	48.5	49.8	51.6	21.4	1.2
D2	purple	50.0	16.6	25.6	26.8	25.1	31.2	-19.9	-35.3
E2	yellow green	86.4	9.1	67.8	69.3	-25.7	-26.3	57.0	48.0
F2	orange yellow	78.4	13.8	68.0	69.7	25.2	23.8	55.7	42.1
A3	blue	79.1	9.9	24.9	26.0	1.3	6.7	-44.6	-52.7
B3	green	74.3	12.9	48.7	50.8	-36.8	-36.8	30.3	17.5
C3	red	73.5	17.7	40.4	40.4	56.8	58.7	31.5	13.9
D3	yellow	84.0	11.6	77.5	79.0	9.5	8.0	68.1	56.8
E3	magenta	75.8	13.1	47.0	48.6	51.7	53.5	-3.7	-16.7
F3	cyan	69.1	11.1	43.7	45.8	-22.7	-18.5	-24.6	-34.7
A4	white	97.9	1.1	91.2	92.1	-1.1	-0.9	-2.5	-1.8
B4	neutral 8	82.1	2.9	75.9	77.8	-3.2	-2.4	-3.7	-5.7
C4	neutral 6.5	38.1	6.7	61.4	63.5	-1.9	-0.9	-3.4	-9.7
D4	neutral 5	-42.7	14.2	45.3	47.6	0.4	2.6	1.4	-12.5
E4	neutral 3.5	-61.3	15.9	31.4	33.2	2.6	5.5	0.1	-15.4
F4	black	55.5	4.8	16.9	17.8	2.3	4.2	-1.5	-5.8
A5	paper white	96.3	1.1	94.8	95.4	-0.6	-0.7	-2.8	-2.0
B5	skin highlight L*=89	82.7	3.6	83.6	85.0	12.2	11.8	10.5	7.2
C5	skin highlight L*=75	71.6	8.1	69.9	71.7	20.1	19.8	16.7	8.8
D5	skin shadow L*=25	80.1	4.8	22.5	23.2	17.7	19.0	11.5	7.0
E5	skin shadow L*=11	58.0	5.4	14.6	16.9	8.9	13.7	5.6	6.9
F5	Max Black	91.4	2.2	4.7	6.4	0.3	1.4	-3.3	-2.6
Summary Results		I*Color	I*tone	 AARDENBURG IMAGING & ARCHIVES					
Average Score for all patches		62.9	93.3						
Average Score for the Worst 10% (3 lowest scoring patches)		-22.0	86.1						

59.5_{color} / 92.7_{tone}



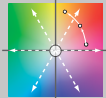
Original Print Colors
(measured before light exposure)

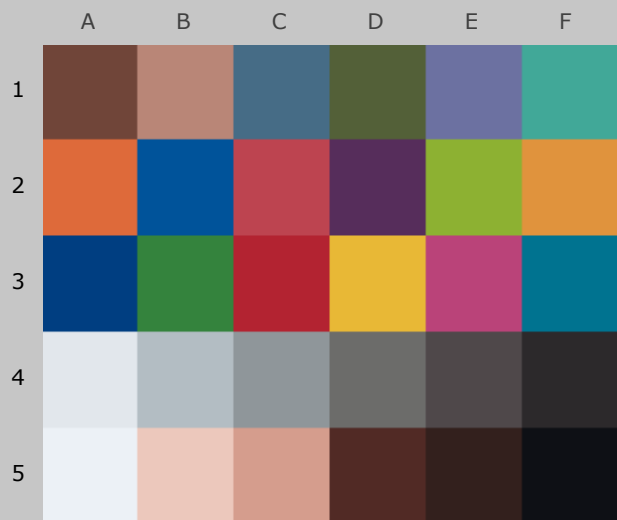


Colors after 100 Megalux-hours
light exposure

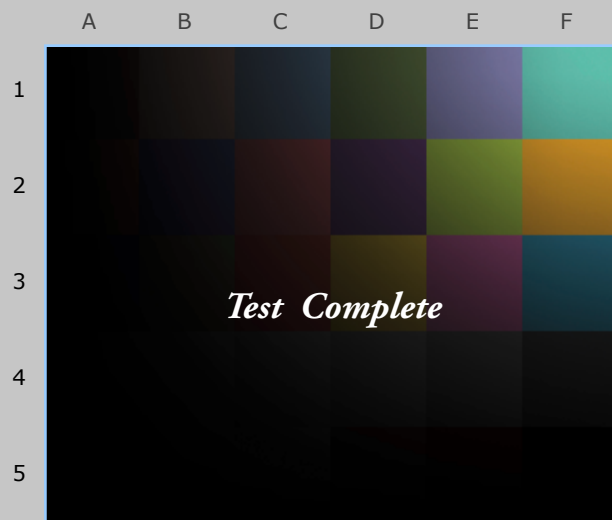
*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*

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	34.2	15.7	34.3	35.7	17.8	19.0	14.5	-1.1
B1	light Skin	55.2	11.8	60.7	62.6	18.7	19.0	16.5	4.8
C1	blue sky	43.3	12.6	43.6	46.0	-7.6	-4.0	-19.5	-31.3
D1	foliage	38.4	15.1	38.8	41.0	-10.7	-10.9	20.8	5.9
E1	blue flower	77.6	7.1	48.8	50.9	6.5	7.9	-27.0	-33.5
F1	bluish green	78.1	8.1	62.7	64.4	-33.7	-30.9	-1.2	-8.6
A2	orange	69.8	20.2	58.9	60.3	43.6	42.9	48.5	28.3
B2	purplish blue	83.5	8.3	34.0	35.8	0.5	3.9	-45.8	-53.1
C2	moderate red	60.5	22.0	47.2	48.5	49.8	51.7	21.4	-0.4
D2	purple	46.5	17.7	25.6	26.8	25.1	31.5	-19.9	-36.3
E2	yellow green	84.9	10.1	67.8	69.4	-25.7	-26.3	57.0	47.1
F2	orange yellow	76.1	15.2	68.0	69.7	25.2	23.7	55.7	40.7
A3	blue	77.5	10.6	24.9	26.1	1.3	7.1	-44.6	-53.3
B3	green	72.0	14.0	48.7	50.9	-36.8	-36.6	30.3	16.4
C3	red	70.9	19.4	40.4	40.3	56.8	58.9	31.5	12.2
D3	yellow	82.2	12.8	77.5	79.0	9.5	7.9	68.1	55.5
E3	magenta	73.8	14.2	47.0	48.6	51.7	53.6	-3.7	-17.7
F3	cyan	66.6	11.9	43.7	46.0	-22.7	-18.1	-24.6	-35.4
A4	white	97.2	1.2	91.2	92.1	-1.1	-0.9	-2.5	-1.8
B4	neutral 8	79.6	3.1	75.9	77.9	-3.2	-2.2	-3.7	-5.9
C4	neutral 6.5	31.9	7.3	61.4	63.6	-1.9	-0.8	-3.4	-10.3
D4	neutral 5	-55.0	15.4	45.3	47.7	0.4	2.8	1.4	-13.7
E4	neutral 3.5	-76.0	17.3	31.4	33.3	2.6	5.8	0.1	-16.8
F4	black	48.7	5.5	16.9	17.9	2.3	4.4	-1.5	-6.4
A5	paper white	95.6	1.1	94.8	95.3	-0.6	-0.7	-2.8	-1.9
B5	skin highlight L*=89	80.4	3.9	83.6	85.0	12.2	11.8	10.5	6.9
C5	skin highlight L*=75	68.1	9.0	69.9	71.7	20.1	19.8	16.7	7.9
D5	skin shadow L*=25	76.8	5.4	22.5	23.2	17.7	19.0	11.5	6.3
E5	skin shadow L*=11	56.5	5.6	14.6	17.0	8.9	13.9	5.6	6.8
F5	Max Black	91.0	2.4	4.7	6.6	0.3	1.5	-3.3	-2.7
Summary Results		I*Color	I*tone	ΔE	 AARDENBURG IMAGING & ARCHIVES				
Average Score for all patches		59.5	92.7	10.8					
Average Score for the Worst 10% (3 lowest scoring patches)		-33.0	84.9	20.5					



Original Print Colors
(measured before light exposure)



Test Complete

No further updates

*Epson Stylus Photo RX680, Epson Claria 78,
Hp Advanced Photo Paper, Glossy*



AARDENBURG IMAGING
& ARCHIVES