

Aardenburg

144



IMAGING & ARCHIVES

Tested System:

ID#:305

Printer: Canon Pixma Pro-100

Inks/Colorants: Canon Chromalife 100+ (8-color ink set CLI-42)

Media: Canon Photo Paper Plus Semi-Gloss SG-201

Coating(s): no additional coating

Sample #: AaI_20131001_SN003

Testing Status: 120 Megalux hours total light exposure

Testing Is ongoing, next update on approximately DEC 20, 2017

Conservation Display Rating (CDR)

Lower limit: 55 Megalux hours (for weakest 10% of the color patches)

Upper limit: 55 Megalux hours (for average of all the color patches)

Note: a CDR with narrow range (typically less than 2:1) indicates relatively even overall fading of the image. A wide range indicates faster fading in certain local colors/tones prior to general fading of most colors/tones in the entire image. Compare ratings for different systems directly and/or use the table on page 2 to estimate time (years) on display.

* 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 further explanation of the Conservation display ratings.

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Aardenburg Imaging and Archives
Rev:8/17/17



About this Report

This report contains light fastness information about a sample 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 4). 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 this Report



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 CIELAB 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 “before and after” presentation of the target images simulates looking at a perfect copy of the unexposed original print along side the same print after light exposure. You can 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. Properly tracking changes in image contrast was a major reason behind the development of the I* metric.

Table to Convert Megalux-hours of Light Exposure to estimated “Years on Display” Light Fastness Ratings.												
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 an equivalent light exposure 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 “Light Exposure” 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 strong seasonal humidity fluctuations can cause physical cracks and/or flaking, etc., over time. Handling damage such as scratching, abrasion, tears and creases, and catastrophic damage by smoke, fire, flood, etc., also destroy print quality over time. Thus, as illumination levels are reduced other forms of print degradation take on greater probability of occurrence.

(1) Eastman Kodak cited this exposure condition with a 90% confidence limit as a rationale for estimating print fading times of traditional color photo materials in typical home display environments. However, for light fading claims regarding its line of pigment-based inkjet printers, Kodak 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) standardized its light fastness ratings on 450 lux for 12 hours per day in order to estimate the years on display necessary to reach “easily noticeable” fading. This average daily light exposure dosage, at an assumed 75°F/60%RH temperature and humidity level, has become a de facto industry standard for most industry-sponsored predictive “years of life” light fading estimates in the absence of a published International Standards Organization (ISO) test standard. The table above readily shows how much error occurs in such “print lifetime” predictions as actual real world light levels for prints on display routinely deviate above and below the assumed 450 lux intensity value.

Sample Description

Sample # AaI_20131001_SN003 **Batch #:** M1c
Printer: Canon Pixma Pro-100
Ink: Canon Chromalife 100+ (8-color ink set CLi-42)
Media: Canon Photo Paper Plus Semi-Gloss SG-201
Coating(s): no additional coating

Test Print Prepared by: AaI&A
Printed: October 1, 2013
Initial Print colors measured December 10, 2013
Test Started: December 10, 2013

Test Image: AaI_StandardColorSet(v2)forSRGB.tif
RIP?Driver settings: PSCC, Canon OEM driver, ps manages colors, 16bit, quality = 1 (finest)

Media Setting Photo Paper Pro Semi-Gloss

Profile: Canon Pro-100<SG>1/2 Photo Paper Pro Semi-Gloss **Rendering** Perceptual
Profile type: generic, available through OEM driver

Paper White Color (UV-included versus UV-excluded)

Optical Brighteners Present? <i>yes (low)</i>	L*		a*		b*	
Media Whitepoint Color	UV inc	UV exc	UV inc	UV exc	UV inc	UV exc
	94.5	94.7	-0.1	-0.6	-3.6	-1.8
	UV-inc/UV-exc ΔL^*, Δa^*, Δb^* respectively					
	0.1		0.5		1.8	
	<i>Calculated differences, especially for Δb^*, indicate the role and magnitude of fluorescence on original paper color</i>					
Maximum Printed Black	L*	a*	b*	Optical Density (Dmax)		
	4.5	0.4	-0.9	2.30		

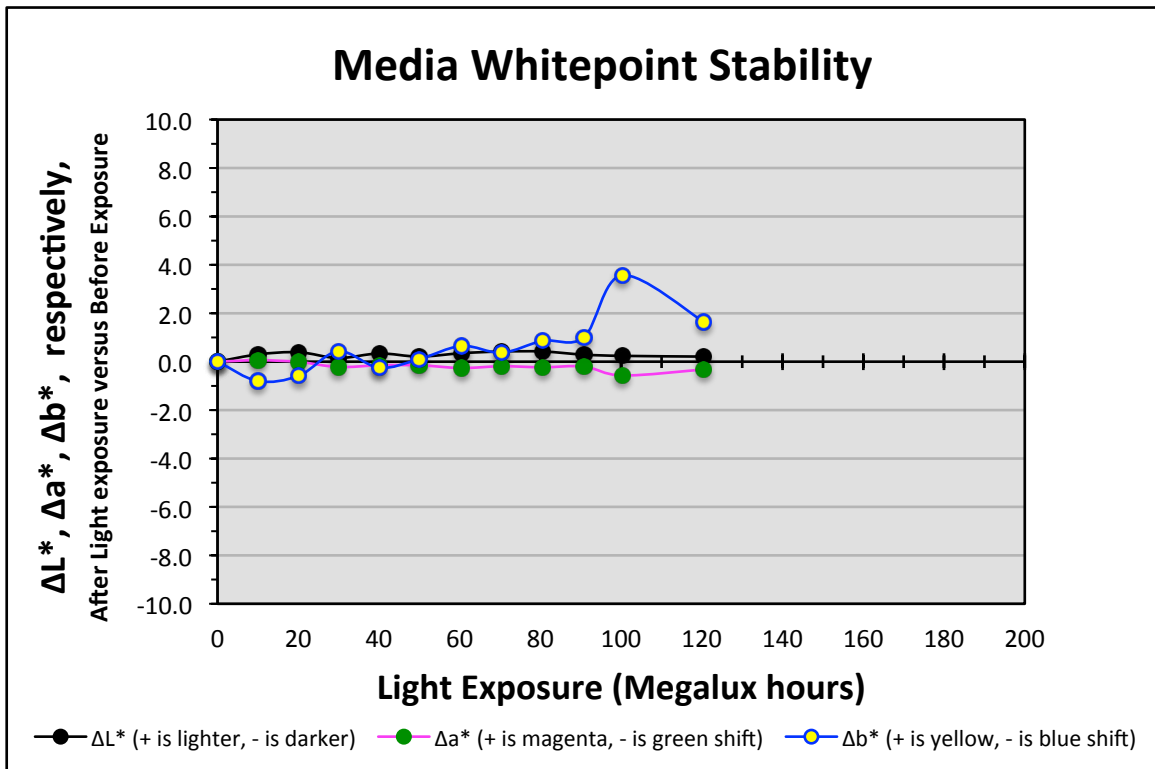
Light source: Phillips Colortone F40T12/C50 – 5000°K full spectrum fluorescent. Color rendering Index (CRI) =92), soda lime glass filtered
Light Exposure Cycle: 8 hours on, 4 hours off, twice per 24 hours
CIELAB measurements: D50 2° observer, Xrite Gretag/Macbeth Spectrolino/Spectroscan

Average Illuminance during “on” cycle: 10727 Lux
Average Temperature: 24.4°C over full test duration, 25.6°C during light exposure.
Average Relative humidity: 56.5%RH over full test duration, 56.6%RH during light exposure.

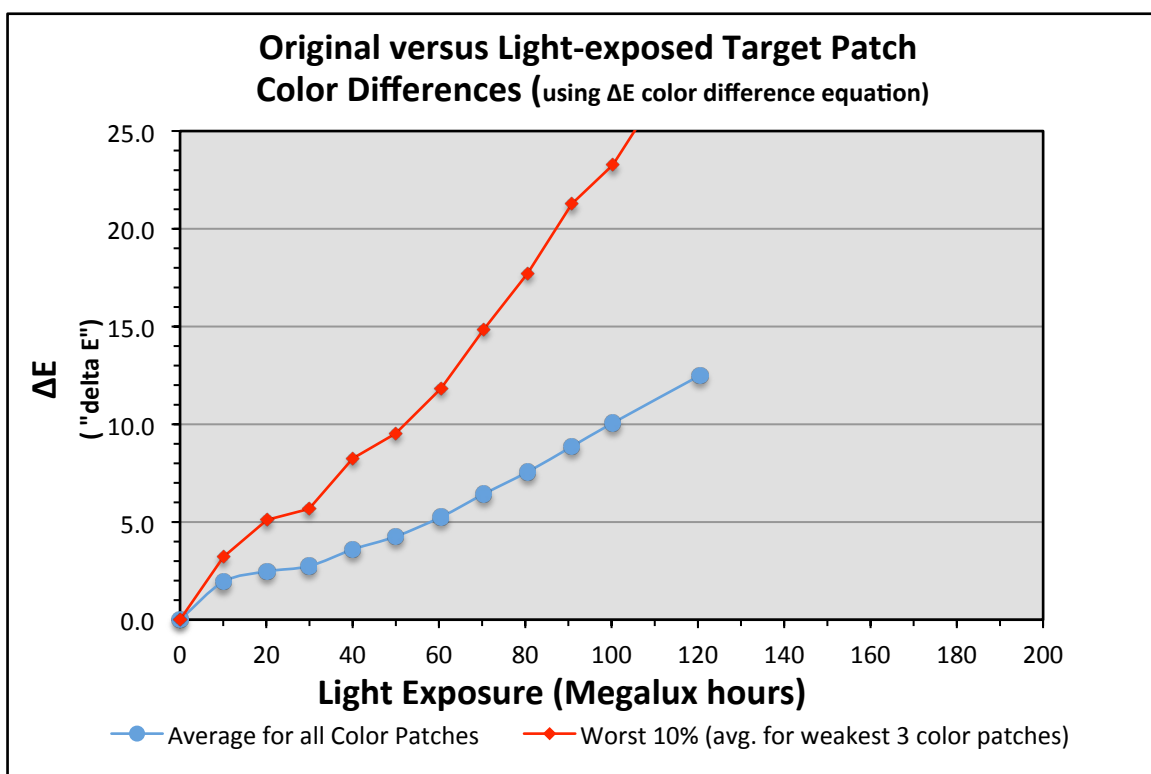
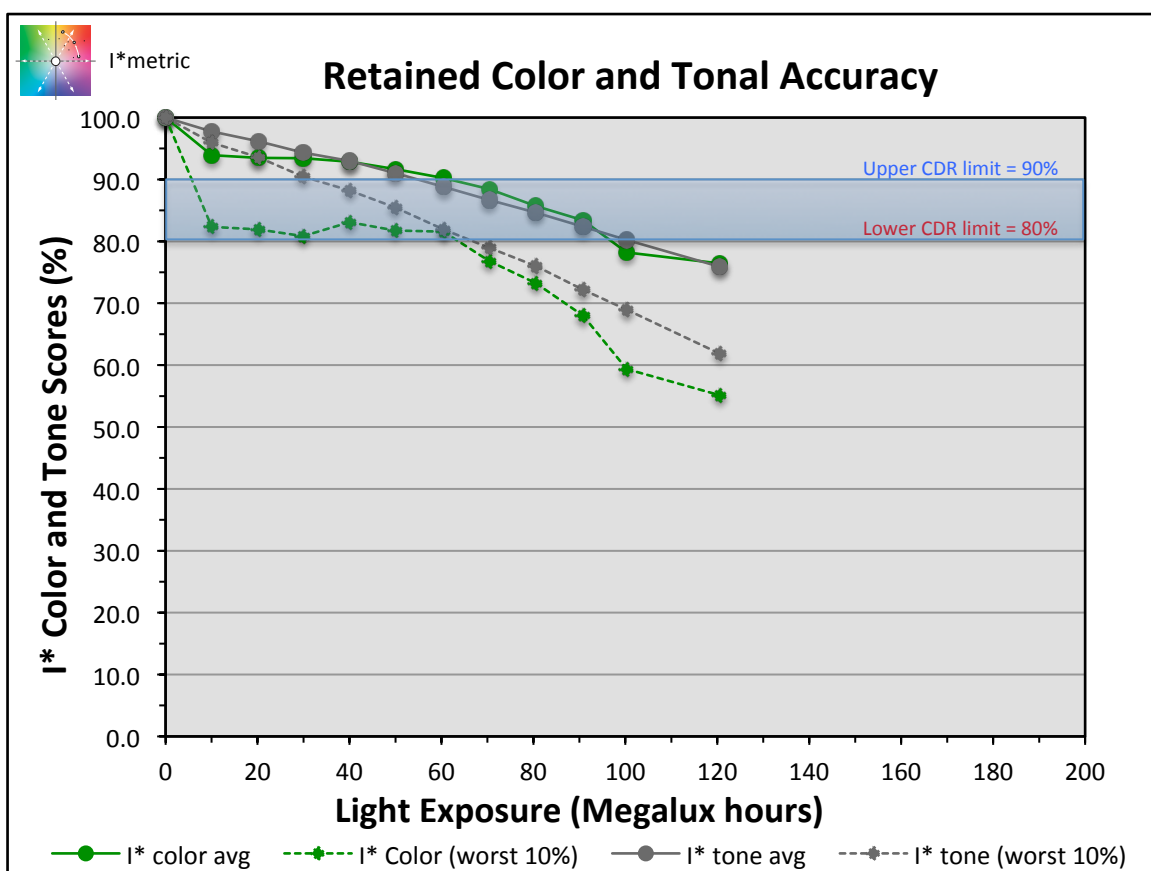
Notes/Comments:

Graphs:

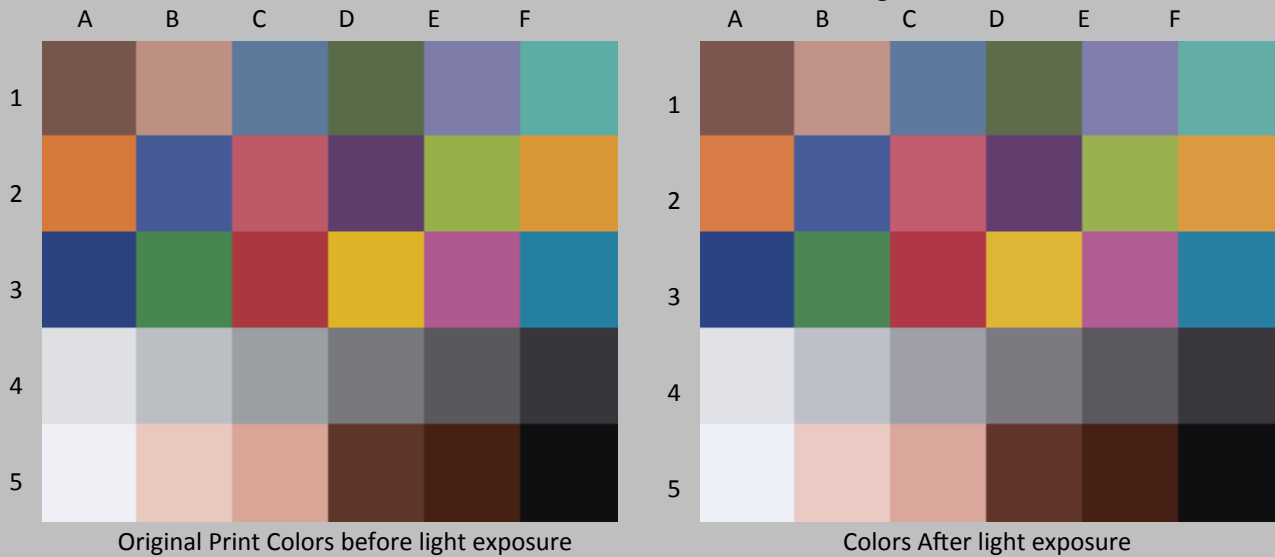
Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus Semi-Gloss SG-201, no additional coating



Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus Semi-Gloss SG-201, no additional coating

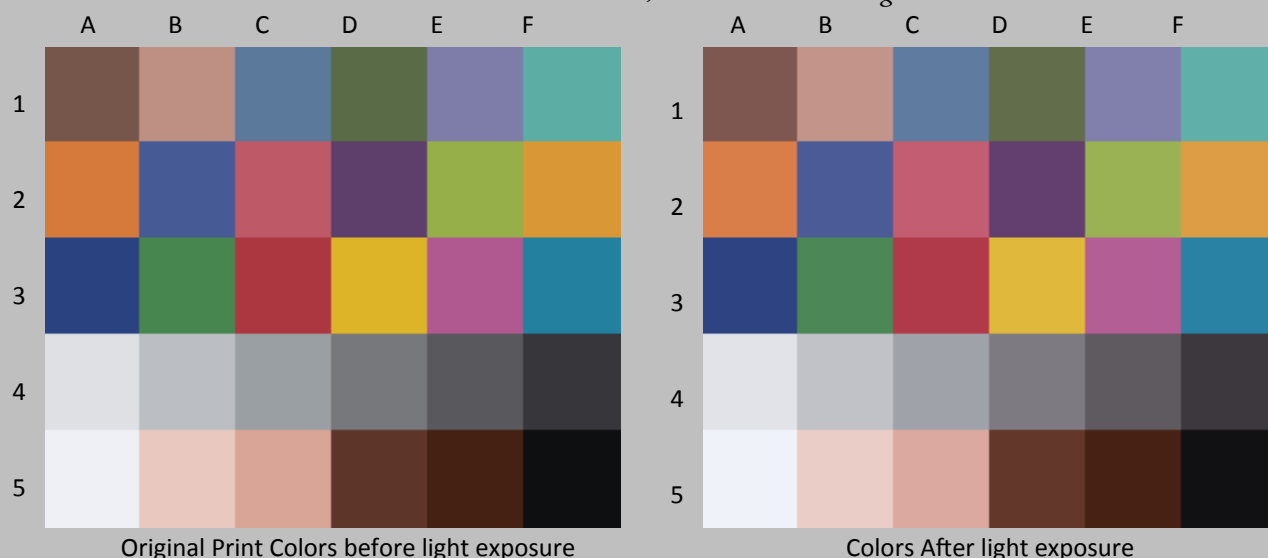


Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus Semi-Gloss SG-201, no additional coating



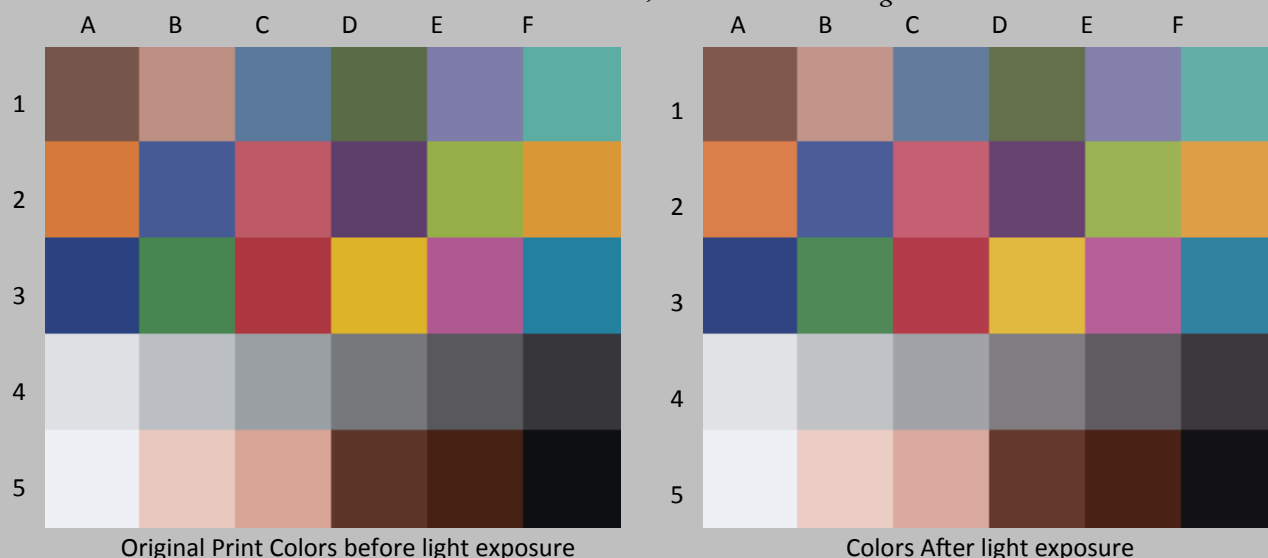
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	89.7	2.4	39.7	40.4	13.3	15.6	11.6	11.1
B1	Light Skin	93.4	2.1	64.0	64.9	16.1	17.2	13.9	12.4
C1	Blue sky	95.2	1.7	49.4	49.9	-3.9	-2.6	-22.3	-23.1
D1	Foliage	91.4	2.4	43.3	43.8	-11.7	-9.7	18.3	17.1
E1	blue flower	97.3	1.3	53.7	54.3	7.6	8.5	-24.0	-24.7
F1	bluish green	95.1	1.9	65.4	65.9	-27.6	-26.4	-3.0	-4.4
A1	orange	95.4	3.3	60.7	61.5	33.1	33.2	49.2	45.9
B2	purplish blue	98.2	1.2	38.7	39.2	6.2	7.1	-36.2	-36.9
C2	moderate red	96.0	2.4	51.4	52.4	42.1	42.8	11.7	9.6
D2	purple	97.0	1.6	31.5	32.1	21.3	22.5	-21.5	-22.1
E2	yellow green	95.3	3.0	67.9	68.5	-19.7	-19.0	48.2	45.3
F2	orange yellow	95.9	3.2	68.1	68.9	18.5	18.5	59.2	56.2
A3	blue	99.0	1.0	28.7	29.2	7.7	8.3	-39.0	-39.6
B3	green	94.6	2.6	50.7	51.2	-30.0	-28.7	23.2	21.1
C3	red	97.0	2.3	41.6	42.4	48.9	49.8	21.8	19.8
D3	yellow	96.4	3.1	75.4	76.2	6.2	6.2	69.5	66.5
E3	magenta	98.0	1.7	50.1	51.1	40.7	41.4	-14.2	-15.3
F3	cyan	96.5	1.7	49.3	49.7	-19.3	-17.9	-25.0	-26.0
A4	white	96.2	1.0	89.2	89.8	-0.1	0.2	-2.2	-2.9
B4	neutral 8	90.3	1.6	77.1	77.8	-1.1	0.0	-2.9	-3.9
C4	neutral 6.5	85.0	2.1	65.3	66.0	-1.1	0.5	-3.4	-4.5
D4	neutral 5	81.5	2.3	50.6	51.2	0.0	2.0	-2.3	-3.3
E4	neutral 3.5	80.6	2.4	37.6	38.1	0.8	3.0	-2.9	-3.6
F4	black	87.3	1.8	22.9	23.3	0.8	2.4	-2.6	-3.1
A5	paper white	96.8	0.9	94.8	95.1	0.1	0.2	-3.4	-4.2
B5	Skin highlight L*=88	93.3	1.7	83.3	84.1	10.7	10.6	9.0	7.6
C5	Skin highlight L* =75	94.1	2.1	72.0	73.0	17.6	18.0	14.7	12.9
D5	Skin shadow L*=28	94.0	2.0	27.5	28.0	16.7	18.6	16.5	16.5
E5	Skin shadow L*=13	97.4	1.1	17.5	17.8	16.7	17.8	16.7	17.0
F5	Maximum Black	100.0	0.2	4.5	4.4	0.4	0.4	-0.9	-1.0
Summary Results		I* Color	I* tone	ΔE	10 Megalux hours				
Average Score for all patches		93.9	97.8	1.9					
Worst 10% (3 lowest scoring patches)		82.4	95.9	3.2					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



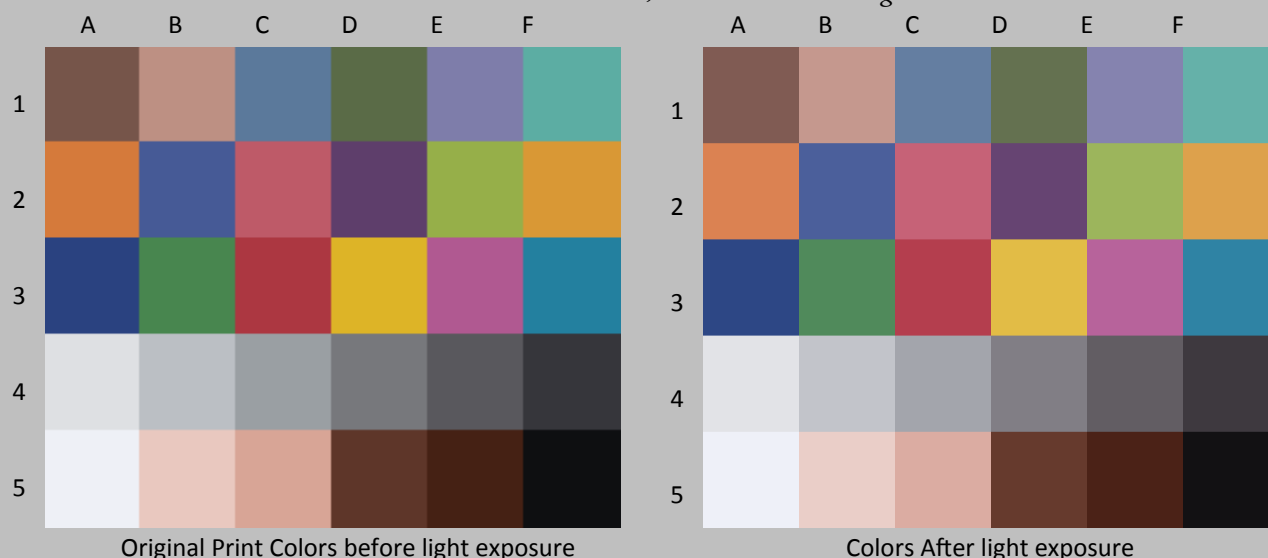
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	89.2	2.8	39.7	41.1	13.3	15.7	11.6	11.4
B1	Light Skin	92.8	2.6	64.0	65.6	16.1	17.0	13.9	12.1
C1	Blue sky	96.6	1.7	49.4	50.5	-3.9	-2.7	-22.3	-22.7
D1	Foliage	90.4	2.9	43.3	44.5	-11.7	-9.5	18.3	17.0
E1	blue flower	99.1	1.5	53.7	54.9	7.6	8.3	-24.0	-24.2
F1	bluish green	94.4	2.3	65.4	66.4	-27.6	-26.2	-3.0	-4.5
A1	orange	92.3	5.3	60.7	62.2	33.1	32.9	49.2	44.1
B2	purplish blue	99.6	1.2	38.7	39.7	6.2	6.8	-36.2	-36.4
C2	moderate red	94.5	3.4	51.4	53.1	42.1	42.7	11.7	8.9
D2	purple	97.3	1.8	31.5	32.7	21.3	22.5	-21.5	-21.8
E2	yellow green	92.7	4.5	67.9	69.1	-19.7	-18.9	48.2	43.9
F2	orange yellow	93.1	5.1	68.1	69.6	18.5	18.2	59.2	54.4
A3	blue	99.9	1.1	28.7	29.6	7.7	8.1	-39.0	-39.3
B3	green	92.4	3.6	50.7	51.8	-30.0	-28.5	23.2	20.2
C3	red	95.8	3.1	41.6	43.1	48.9	49.9	21.8	19.2
D3	yellow	93.9	5.0	75.4	76.8	6.2	5.9	69.5	64.8
E3	magenta	98.7	2.0	50.1	51.9	40.7	41.2	-14.2	-15.2
F3	cyan	97.2	1.7	49.3	50.2	-19.3	-18.0	-25.0	-25.7
A4	white	99.1	1.0	89.2	90.0	-0.1	0.1	-2.2	-2.7
B4	neutral 8	93.6	1.7	77.1	78.4	-1.1	-0.1	-2.9	-3.5
C4	neutral 6.5	87.5	2.2	65.3	66.7	-1.1	0.4	-3.4	-4.2
D4	neutral 5	82.8	2.5	50.6	52.0	0.0	2.0	-2.3	-3.1
E4	neutral 3.5	79.7	2.7	37.6	38.8	0.8	3.2	-2.9	-3.3
F4	black	83.2	2.3	22.9	23.8	0.8	2.9	-2.6	-2.8
A5	paper white	99.2	0.7	94.8	95.1	0.1	0.1	-3.4	-4.0
B5	Skin highlight L*=88	90.7	2.2	83.3	84.5	10.7	10.2	9.0	7.3
C5	Skin highlight L* =75	92.0	2.8	72.0	73.6	17.6	17.7	14.7	12.4
D5	Skin shadow L*=28	91.8	2.7	27.5	28.6	16.7	19.1	16.5	16.8
E5	Skin shadow L*=13	95.2	1.8	17.5	18.2	16.7	18.3	16.7	17.2
F5	Maximum Black	100.0	0.3	4.5	4.7	0.4	0.6	-0.9	-1.0
Summary Results		I* Color	I* tone	ΔE	20 Megalux hours				
Average Score for all patches		93.5	96.2	2.5					
Worst 10% (3 lowest scoring patches)		81.9	93.6	5.1					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



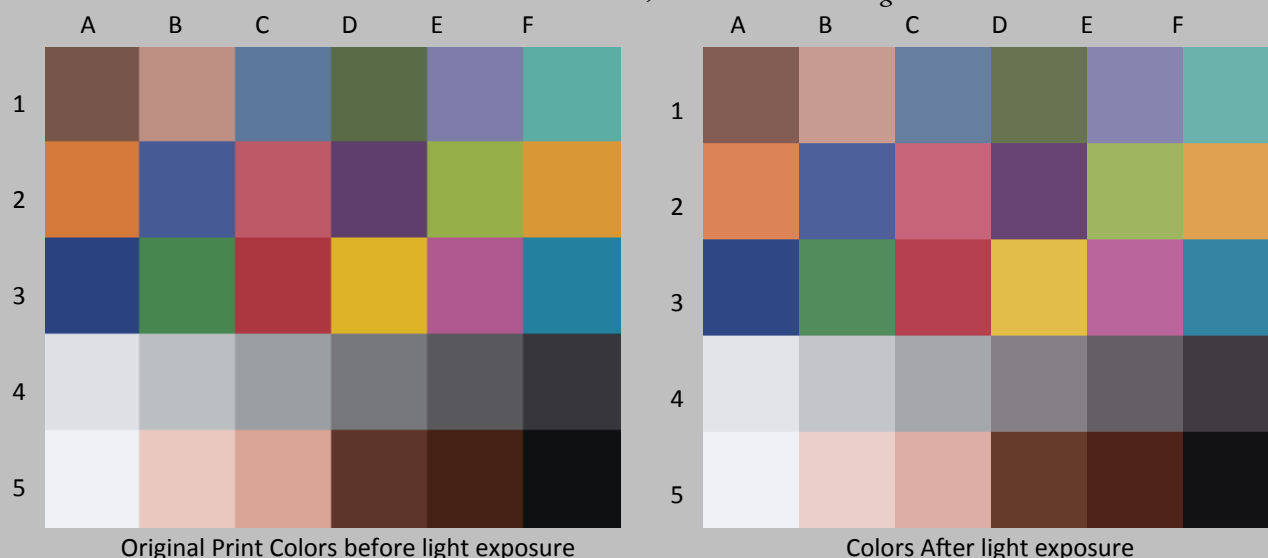
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	88.5	3.2	39.7	41.7	13.3	15.7	11.6	12.6
B1	Light Skin	97.4	2.3	64.0	66.1	16.1	16.7	13.9	13.1
C1	Blue sky	95.9	2.1	49.4	50.9	-3.9	-3.1	-22.3	-21.2
D1	Foliage	91.0	3.0	43.3	45.0	-11.7	-9.3	18.3	17.8
E1	blue flower	96.2	2.2	53.7	55.3	7.6	7.8	-24.0	-22.5
F1	bluish green	96.1	1.9	65.4	66.5	-27.6	-26.1	-3.0	-3.5
A1	orange	91.9	5.7	60.7	62.8	33.1	32.6	49.2	43.9
B2	purplish blue	97.6	1.9	38.7	40.1	6.2	6.2	-36.2	-34.9
C2	moderate red	96.2	3.2	51.4	53.8	42.1	42.3	11.7	9.6
D2	purple	96.5	2.4	31.5	33.3	21.3	22.2	-21.5	-20.2
E2	yellow green	92.3	4.7	67.9	69.3	-19.7	-18.7	48.2	43.8
F2	orange yellow	92.3	5.6	68.1	70.1	18.5	18.1	59.2	54.0
A3	blue	98.5	1.6	28.7	29.9	7.7	7.6	-39.0	-37.9
B3	green	92.2	3.7	50.7	52.0	-30.0	-28.2	23.2	20.3
C3	red	96.9	3.0	41.6	43.8	48.9	49.6	21.8	19.7
D3	yellow	93.0	5.6	75.4	77.1	6.2	5.8	69.5	64.2
E3	magenta	99.9	2.4	50.1	52.4	40.7	40.6	-14.2	-13.7
F3	cyan	97.8	1.7	49.3	50.5	-19.3	-18.3	-25.0	-24.3
A4	white	94.6	1.3	89.2	90.0	-0.1	-0.2	-2.2	-1.1
B4	neutral 8	93.7	1.8	77.1	78.6	-1.1	-0.5	-2.9	-2.0
C4	neutral 6.5	91.8	2.2	65.3	67.1	-1.1	0.1	-3.4	-2.9
D4	neutral 5	85.7	2.6	50.6	52.4	0.0	1.8	-2.3	-1.9
E4	neutral 3.5	79.2	3.0	37.6	39.3	0.8	3.1	-2.9	-2.1
F4	black	77.7	3.0	22.9	24.3	0.8	3.3	-2.6	-1.8
A5	paper white	100.0	0.5	94.8	94.9	0.1	-0.1	-3.4	-3.0
B5	Skin highlight L*=88	95.2	1.8	83.3	84.6	10.7	9.8	9.0	8.3
C5	Skin highlight L* =75	94.9	2.5	72.0	73.9	17.6	17.3	14.7	13.1
D5	Skin shadow L*=28	89.8	3.3	27.5	29.1	16.7	19.3	16.5	17.7
E5	Skin shadow L*=13	90.8	3.0	17.5	18.9	16.7	19.0	16.7	18.1
F5	Maximum Black	99.1	0.7	4.5	4.9	0.4	0.9	-0.9	-0.6
Summary Results		I* Color	I* tone	ΔE	30 Megalux hours				
Average Score for all patches		93.4	94.4	2.7					
Worst 10% (3 lowest scoring patches)		80.9	90.5	5.7					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



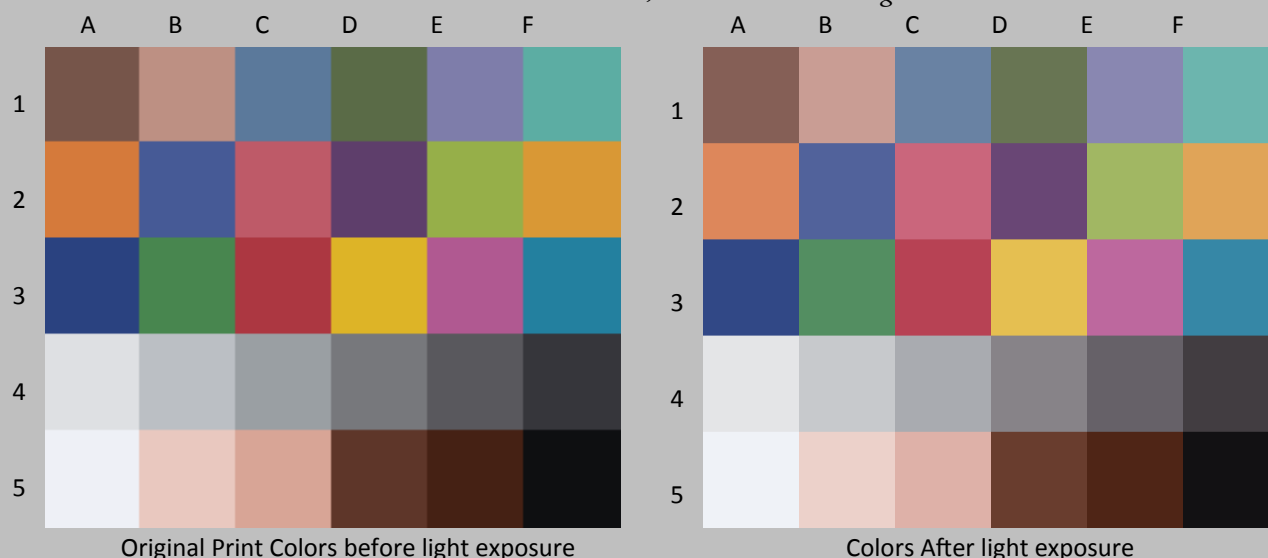
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	91.4	3.4	39.7	42.5	13.3	15.3	11.6	11.4
B1	Light Skin	91.8	3.7	64.0	66.9	16.1	16.5	13.9	11.7
C1	Blue sky	98.0	2.5	49.4	51.7	-3.9	-3.0	-22.3	-22.0
D1	Foliage	89.9	3.7	43.3	45.8	-11.7	-9.6	18.3	16.6
E1	blue flower	99.2	2.5	53.7	56.1	7.6	7.8	-24.0	-23.3
F1	bluish green	93.0	3.0	65.4	67.2	-27.6	-25.7	-3.0	-4.5
A1	orange	87.3	8.5	60.7	63.5	33.1	32.0	49.2	41.2
B2	purplish blue	99.7	2.1	38.7	40.7	6.2	6.2	-36.2	-35.6
C2	moderate red	91.8	5.1	51.4	54.4	42.1	42.1	11.7	7.6
D2	purple	98.6	2.6	31.5	33.9	21.3	22.2	-21.5	-21.4
E2	yellow green	88.8	6.7	67.9	70.1	-19.7	-18.8	48.2	41.9
F2	orange yellow	88.4	8.2	68.1	70.9	18.5	17.5	59.2	51.6
A3	blue	100.0	1.8	28.7	30.5	7.7	7.5	-39.0	-38.6
B3	green	88.8	5.2	50.7	52.7	-30.0	-28.2	23.2	18.8
C3	red	93.2	4.9	41.6	44.2	48.9	49.5	21.8	17.7
D3	yellow	89.7	8.1	75.4	77.9	6.2	5.2	69.5	61.9
E3	magenta	99.3	3.2	50.1	53.2	40.7	40.4	-14.2	-15.0
F3	cyan	97.8	2.3	49.3	51.2	-19.3	-18.1	-25.0	-25.2
A4	white	100.0	1.2	89.2	90.4	-0.1	-0.1	-2.2	-2.1
B4	neutral 8	97.7	2.4	77.1	79.4	-1.1	-0.3	-2.9	-2.8
C4	neutral 6.5	91.7	3.0	65.3	68.0	-1.1	0.2	-3.4	-3.8
D4	neutral 5	85.6	3.3	50.6	53.4	0.0	1.8	-2.3	-3.0
E4	neutral 3.5	82.0	3.3	37.6	40.1	0.8	2.9	-2.9	-3.3
F4	black	81.7	3.0	22.9	24.9	0.8	3.0	-2.6	-2.9
A5	paper white	100.0	0.4	94.8	95.1	0.1	0.0	-3.4	-3.7
B5	Skin highlight L*=88	86.2	3.1	83.3	85.2	10.7	9.5	9.0	6.9
C5	Skin highlight L* =75	88.2	4.2	72.0	74.7	17.6	16.9	14.7	11.6
D5	Skin shadow L*=28	92.2	3.2	27.5	29.7	16.7	19.0	16.5	16.8
E5	Skin shadow L*=13	93.9	2.7	17.5	19.4	16.7	18.6	16.7	17.3
F5	Maximum Black	100.0	0.7	4.5	5.1	0.4	0.6	-0.9	-1.0
Summary Results		I* Color	I* tone	ΔE	40 Megalux hours				
Average Score for all patches		92.9	93.0	3.6					
Worst 10% (3 lowest scoring patches)		83.1	88.2	8.3					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



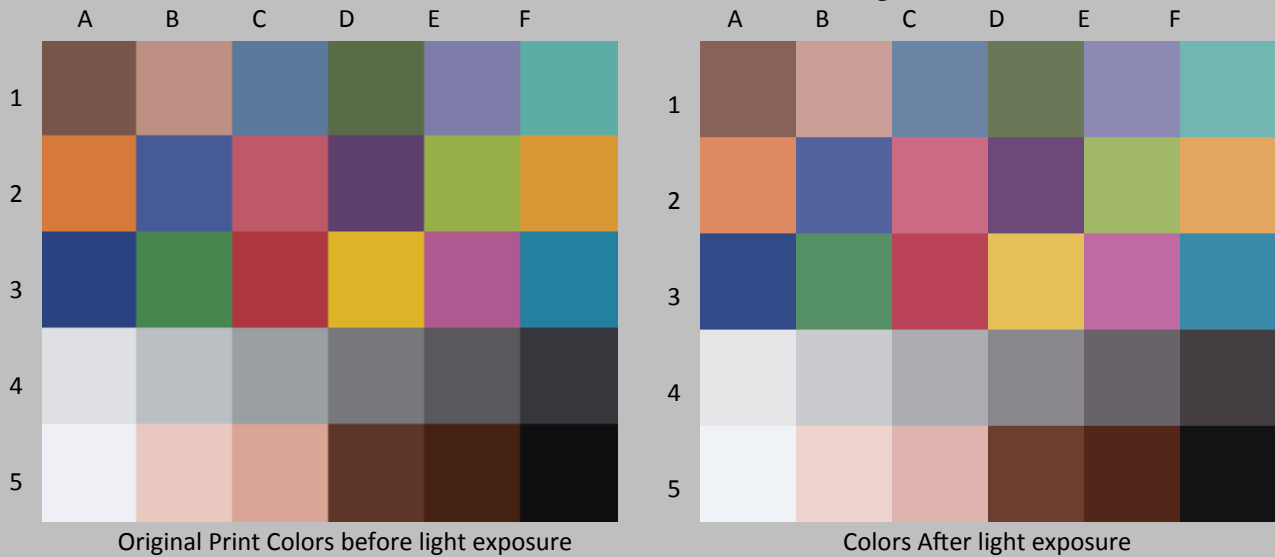
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	90.4	4.3	39.7	43.4	13.3	15.4	11.6	12.3
B1	Light Skin	93.0	4.2	64.0	67.7	16.1	16.4	13.9	12.0
C1	Blue sky	95.5	3.4	49.4	52.4	-3.9	-3.0	-22.3	-21.1
D1	Foliage	90.7	4.2	43.3	46.7	-11.7	-9.5	18.3	17.2
E1	blue flower	95.2	3.6	53.7	56.8	7.6	7.8	-24.0	-22.3
F1	bluish green	92.6	3.5	65.4	67.8	-27.6	-25.2	-3.0	-4.0
A1	orange	85.6	9.7	60.7	64.2	33.1	31.9	49.2	40.2
B2	purplish blue	96.8	3.0	38.7	41.2	6.2	5.9	-36.2	-34.6
C2	moderate red	92.2	5.4	51.4	55.2	42.1	42.0	11.7	7.8
D2	purple	96.8	3.5	31.5	34.6	21.3	22.1	-21.5	-20.3
E2	yellow green	87.5	7.5	67.9	70.6	-19.7	-18.5	48.2	41.3
F2	orange yellow	86.6	9.4	68.1	71.5	18.5	17.4	59.2	50.5
A3	blue	97.9	2.5	28.7	30.8	7.7	7.2	-39.0	-37.8
B3	green	88.2	5.7	50.7	53.3	-30.0	-27.9	23.2	18.7
C3	red	93.6	5.1	41.6	44.9	48.9	49.5	21.8	17.9
D3	yellow	87.9	9.4	75.4	78.3	6.2	5.2	69.5	60.6
E3	magenta	99.9	3.9	50.1	54.0	40.7	40.2	-14.2	-14.0
F3	cyan	97.2	2.8	49.3	51.7	-19.3	-18.1	-25.0	-24.3
A4	white	99.6	1.4	89.2	90.5	-0.1	-0.1	-2.2	-1.6
B4	neutral 8	94.8	2.8	77.1	79.8	-1.1	-0.4	-2.9	-2.2
C4	neutral 6.5	90.7	3.6	65.3	68.6	-1.1	0.3	-3.4	-3.0
D4	neutral 5	85.9	4.0	50.6	54.1	0.0	1.8	-2.3	-2.1
E4	neutral 3.5	81.5	3.9	37.6	40.8	0.8	3.0	-2.9	-2.4
F4	black	78.8	3.7	22.9	25.5	0.8	3.3	-2.6	-2.0
A5	paper white	100.0	0.3	94.8	95.0	0.1	0.0	-3.4	-3.3
B5	Skin highlight L*=88	85.0	3.4	83.3	85.5	10.7	9.2	9.0	6.8
C5	Skin highlight L* =75	87.4	4.6	72.0	75.1	17.6	16.8	14.7	11.4
D5	Skin shadow L*=28	90.2	4.0	27.5	30.4	16.7	19.2	16.5	17.7
E5	Skin shadow L*=13	89.1	3.9	17.5	19.9	16.7	19.3	16.7	18.3
F5	Maximum Black	99.9	0.9	4.5	5.3	0.4	0.9	-0.9	-0.8
Summary Results		I* Color	I* tone	ΔE	50 Megalux hours				
Average Score for all patches		91.7	91.0	4.3					
Worst 10% (3 lowest scoring patches)		81.8	85.5	9.5					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



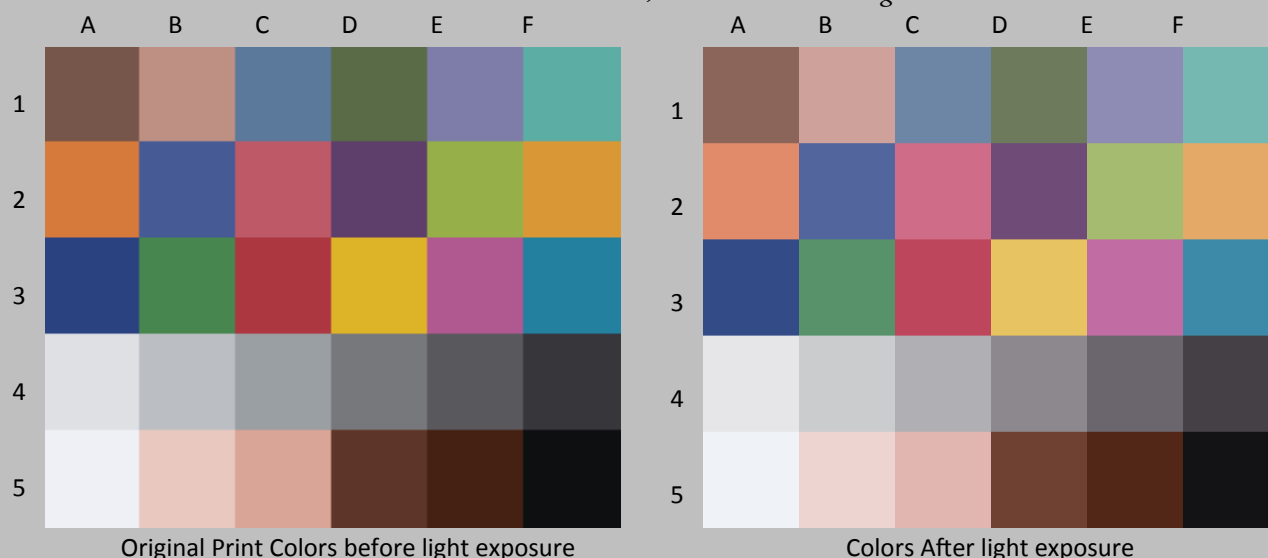
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	92.3	4.9	39.7	44.2	13.3	15.1	11.6	12.1
B1	Light Skin	90.9	5.2	64.0	68.6	16.1	16.1	13.9	11.5
C1	Blue sky	94.5	4.2	49.4	53.2	-3.9	-3.2	-22.3	-20.8
D1	Foliage	89.9	5.0	43.3	47.5	-11.7	-9.6	18.3	16.6
E1	blue flower	93.2	4.6	53.7	57.7	7.6	7.5	-24.0	-21.8
F1	bluish green	91.1	4.3	65.4	68.5	-27.6	-24.7	-3.0	-3.9
A1	orange	81.6	12.2	60.7	65.1	33.1	31.3	49.2	37.9
B2	purplish blue	96.0	3.8	38.7	41.9	6.2	5.5	-36.2	-34.4
C2	moderate red	89.5	6.9	51.4	56.2	42.1	41.7	11.7	6.7
D2	purple	98.2	4.2	31.5	35.5	21.3	21.8	-21.5	-20.6
E2	yellow green	85.0	9.0	67.9	71.4	-19.7	-18.3	48.2	40.0
F2	orange yellow	83.1	11.8	68.1	72.3	18.5	16.8	59.2	48.4
A3	blue	97.8	3.1	28.7	31.5	7.7	6.8	-39.0	-38.0
B3	green	86.1	6.7	50.7	54.1	-30.0	-27.8	23.2	17.9
C3	red	91.0	6.6	41.6	45.6	48.9	49.4	21.8	16.5
D3	yellow	85.1	11.5	75.4	79.0	6.2	4.8	69.5	58.7
E3	magenta	99.1	5.1	50.1	55.1	40.7	39.8	-14.2	-14.0
F3	cyan	96.7	3.5	49.3	52.4	-19.3	-18.1	-25.0	-24.0
A4	white	92.4	2.1	89.2	90.9	-0.1	-0.2	-2.2	-0.9
B4	neutral 8	91.2	3.8	77.1	80.7	-1.1	-0.4	-2.9	-1.8
C4	neutral 6.5	89.5	4.7	65.3	69.8	-1.1	0.3	-3.4	-2.7
D4	neutral 5	86.1	5.0	50.6	55.3	0.0	1.8	-2.3	-2.1
E4	neutral 3.5	82.8	4.7	37.6	41.8	0.8	2.9	-2.9	-2.6
F4	black	81.1	4.2	22.9	26.4	0.8	3.1	-2.6	-2.4
A5	paper white	97.9	0.8	94.8	95.1	0.1	-0.1	-3.4	-2.8
B5	Skin highlight L*=88	82.0	4.1	83.3	86.1	10.7	8.8	9.0	6.6
C5	Skin highlight L* =75	84.0	5.8	72.0	76.1	17.6	16.4	14.7	10.7
D5	Skin shadow L*=28	91.4	4.4	27.5	31.1	16.7	18.9	16.5	17.6
E5	Skin shadow L*=13	87.8	4.5	17.5	20.4	16.7	19.4	16.7	18.8
F5	Maximum Black	100.0	0.8	4.5	5.1	0.4	0.8	-0.9	-1.0
Summary Results		I* Color	I* tone	ΔE	60 Megalux hours				
Average Score for all patches		90.2	88.8	5.3					
Worst 10% (3 lowest scoring patches)		81.6	81.9	11.8					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



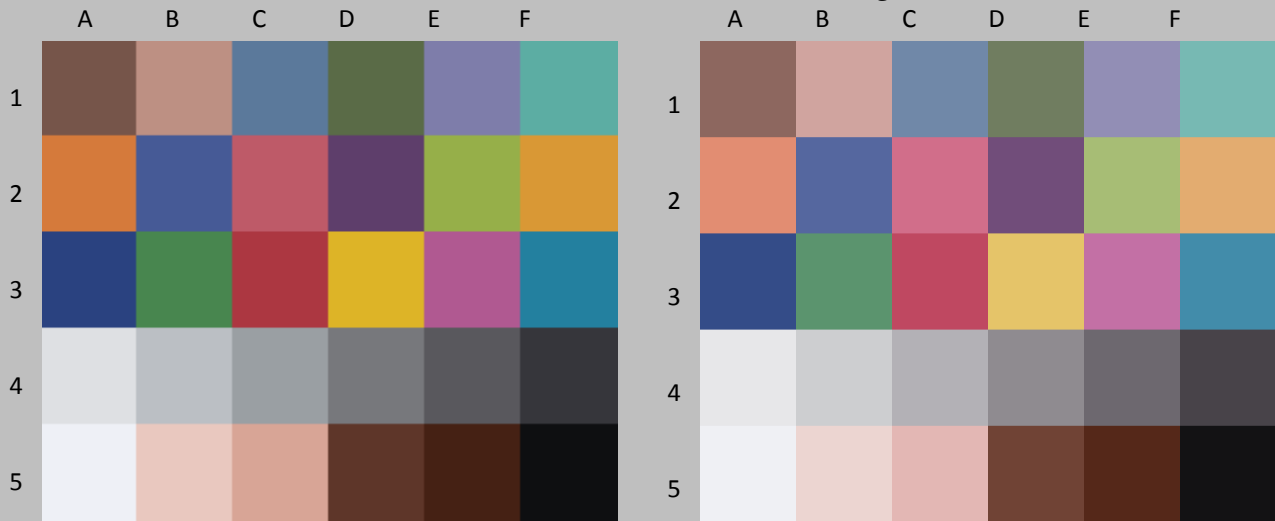
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	93.0	5.8	39.7	45.3	13.3	15.1	11.6	11.7
B1	Light Skin	85.8	6.6	64.0	69.5	16.1	16.2	13.9	10.4
C1	Blue sky	94.0	5.1	49.4	54.1	-3.9	-2.9	-22.3	-20.8
D1	Foliage	86.6	6.3	43.3	48.6	-11.7	-9.5	18.3	15.7
E1	blue flower	92.7	5.4	53.7	58.6	7.6	7.8	-24.0	-21.6
F1	bluish green	87.8	5.4	65.4	69.2	-27.6	-24.0	-3.0	-4.4
A1	orange	76.5	15.4	60.7	66.0	33.1	31.2	49.2	34.8
B2	purplish blue	95.6	4.5	38.7	42.6	6.2	5.6	-36.2	-34.2
C2	moderate red	86.2	8.6	51.4	57.1	42.1	41.8	11.7	5.2
D2	purple	97.9	5.0	31.5	36.3	21.3	22.0	-21.5	-20.6
E2	yellow green	80.9	11.3	67.9	72.2	-19.7	-18.0	48.2	37.9
F2	orange yellow	78.3	14.8	68.1	73.1	18.5	16.6	59.2	45.4
A3	blue	97.4	3.7	28.7	32.1	7.7	6.7	-39.0	-37.8
B3	green	82.1	8.4	50.7	54.9	-30.0	-27.3	23.2	16.5
C3	red	88.1	8.4	41.6	46.4	48.9	49.5	21.8	14.9
D3	yellow	81.0	14.4	75.4	79.7	6.2	4.5	69.5	55.9
E3	magenta	99.2	6.0	50.1	56.1	40.7	39.8	-14.2	-14.4
F3	cyan	95.8	4.3	49.3	53.2	-19.3	-17.7	-25.0	-24.1
A4	white	96.5	2.2	89.2	91.2	-0.1	-0.1	-2.2	-1.3
B4	neutral 8	91.9	4.5	77.1	81.4	-1.1	-0.3	-2.9	-1.9
C4	neutral 6.5	88.2	5.7	65.3	70.8	-1.1	0.5	-3.4	-3.0
D4	neutral 5	83.8	6.1	50.6	56.4	0.0	2.0	-2.3	-2.5
E4	neutral 3.5	81.8	5.7	37.6	42.8	0.8	3.0	-2.9	-3.0
F4	black	80.9	5.0	22.9	27.2	0.8	3.1	-2.6	-2.4
A5	paper white	100.0	0.6	94.8	95.2	0.1	-0.1	-3.4	-3.1
B5	Skin highlight L*=88	75.8	5.1	83.3	86.5	10.7	8.7	9.0	5.6
C5	Skin highlight L* =75	78.2	7.3	72.0	76.9	17.6	16.3	14.7	9.4
D5	Skin shadow L*=28	91.2	5.2	27.5	32.0	16.7	18.9	16.5	17.6
E5	Skin shadow L*=13	86.0	5.2	17.5	21.0	16.7	19.7	16.7	19.1
F5	Maximum Black	100.0	1.0	4.5	5.3	0.4	0.8	-0.9	-1.1
Summary Results		I* Color	I* tone	ΔE	70 Megalux hours				
Average Score for all patches		88.4	86.7	6.4					
Worst 10% (3 lowest scoring patches)		76.8	79.0	14.9					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	92.5	6.9	39.7	46.4	13.3	15.2	11.6	11.6
B1	Light Skin	83.0	7.6	64.0	70.4	16.1	16.3	13.9	9.8
C1	Blue sky	91.4	6.0	49.4	54.8	-3.9	-2.9	-22.3	-20.1
D1	Foliage	83.4	7.4	43.3	49.5	-11.7	-9.3	18.3	15.0
E1	blue flower	89.2	6.5	53.7	59.3	7.6	7.8	-24.0	-20.8
F1	bluish green	86.2	6.2	65.4	69.9	-27.6	-23.4	-3.0	-4.3
A1	orange	71.7	18.3	60.7	66.8	33.1	31.2	49.2	32.0
B2	purplish blue	93.2	5.4	38.7	43.2	6.2	5.4	-36.2	-33.3
C2	moderate red	84.2	9.9	51.4	58.0	42.1	41.8	11.7	4.3
D2	purple	96.4	5.9	31.5	37.1	21.3	22.0	-21.5	-20.1
E2	yellow green	77.3	13.3	67.9	72.9	-19.7	-17.5	48.2	36.1
F2	orange yellow	73.9	17.7	68.1	73.9	18.5	16.6	59.2	42.6
A3	blue	95.3	4.6	28.7	32.6	7.7	6.4	-39.0	-37.0
B3	green	79.0	9.8	50.7	55.7	-30.0	-26.8	23.2	15.4
C3	red	86.2	9.7	41.6	47.3	48.9	49.8	21.8	13.9
D3	yellow	77.1	17.2	75.4	80.3	6.2	4.6	69.5	53.1
E3	magenta	98.8	7.0	50.1	57.0	40.7	39.7	-14.2	-13.8
F3	cyan	94.2	5.1	49.3	53.8	-19.3	-17.7	-25.0	-23.3
A4	white	90.6	2.6	89.2	91.4	-0.1	-0.1	-2.2	-0.8
B4	neutral 8	85.6	5.3	77.1	82.1	-1.1	-0.1	-2.9	-1.3
C4	neutral 6.5	84.4	6.7	65.3	71.7	-1.1	0.7	-3.4	-2.5
D4	neutral 5	81.6	7.1	50.6	57.4	0.0	2.3	-2.3	-2.3
E4	neutral 3.5	79.9	6.6	37.6	43.7	0.8	3.2	-2.9	-2.8
F4	black	78.7	5.7	22.9	28.0	0.8	3.3	-2.6	-2.3
A5	paper white	95.9	1.0	94.8	95.2	0.1	-0.1	-3.4	-2.6
B5	Skin highlight L*=88	74.1	5.5	83.3	86.9	10.7	8.6	9.0	5.5
C5	Skin highlight L* =75	75.3	8.3	72.0	77.6	17.6	16.3	14.7	8.7
D5	Skin shadow L*=28	90.3	6.1	27.5	32.9	16.7	19.1	16.5	17.8
E5	Skin shadow L*=13	83.3	6.1	17.5	21.7	16.7	20.0	16.7	19.7
F5	Maximum Black	98.4	1.1	4.5	5.4	0.4	1.0	-0.9	-1.0
Summary Results		I* Color	I* tone	ΔE	80 Megalux hours				
Average Score for all patches		85.7	84.7	7.6					
Worst 10% (3 lowest scoring patches)		73.3	76.0	17.7					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*

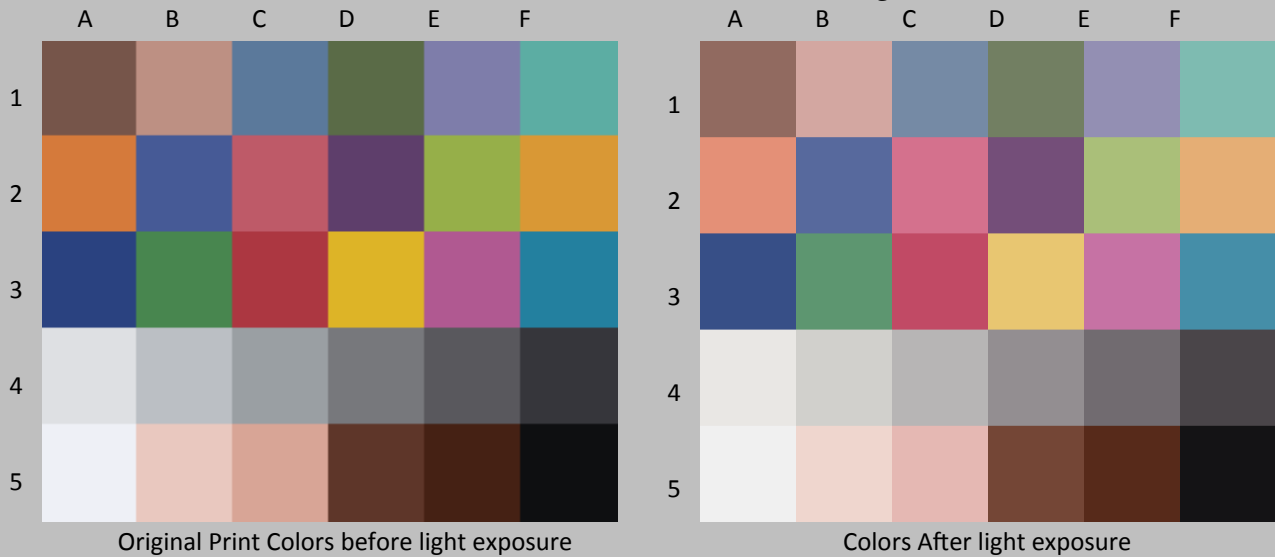


Original Print Colors before light exposure

Colors After light exposure

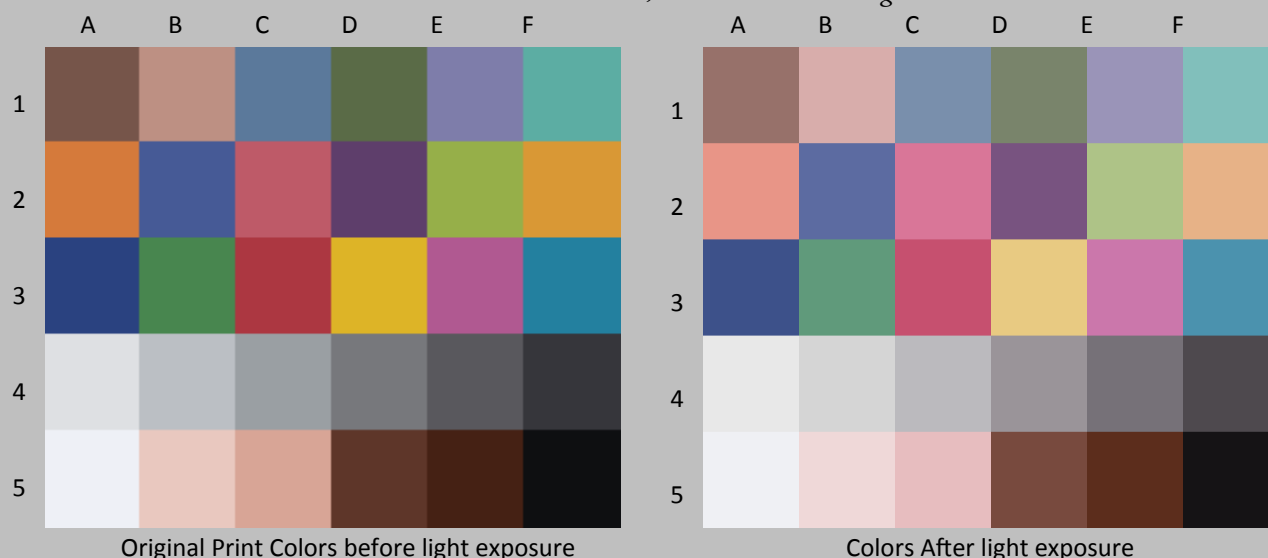
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	92.4	8.1	39.7	47.6	13.3	15.1	11.6	11.0
B1	Light Skin	78.5	9.1	64.0	71.5	16.1	16.3	13.9	8.8
C1	Blue sky	89.8	7.0	49.4	55.7	-3.9	-2.7	-22.3	-19.8
D1	Foliage	79.1	8.8	43.3	50.6	-11.7	-9.1	18.3	14.0
E1	blue flower	87.1	7.5	53.7	60.2	7.6	7.9	-24.0	-20.3
F1	bluish green	83.4	7.3	65.4	70.7	-27.6	-22.7	-3.0	-4.5
A1	orange	65.9	21.8	60.7	67.5	33.1	31.0	49.2	28.6
B2	purplish blue	91.7	6.3	38.7	43.9	6.2	5.3	-36.2	-32.8
C2	moderate red	81.2	11.5	51.4	59.0	42.1	41.8	11.7	3.0
D2	purple	95.7	6.8	31.5	38.0	21.3	22.0	-21.5	-19.8
E2	yellow green	72.5	15.9	67.9	73.7	-19.7	-16.6	48.2	33.7
F2	orange yellow	68.3	21.2	68.1	74.6	18.5	16.5	59.2	39.2
A3	blue	94.0	5.3	28.7	33.1	7.7	6.2	-39.0	-36.6
B3	green	74.3	11.8	50.7	56.5	-30.0	-26.2	23.2	13.7
C3	red	82.6	11.8	41.6	48.2	48.9	49.8	21.8	12.0
D3	yellow	71.9	20.8	75.4	80.9	6.2	4.5	69.5	49.5
E3	magenta	98.2	8.0	50.1	58.0	40.7	39.5	-14.2	-13.8
F3	cyan	92.9	5.9	49.3	54.5	-19.3	-17.4	-25.0	-23.1
A4	white	89.4	2.8	89.2	91.6	-0.1	-0.1	-2.2	-0.6
B4	neutral 8	83.2	6.1	77.1	82.9	-1.1	0.0	-2.9	-1.1
C4	neutral 6.5	82.8	7.7	65.3	72.7	-1.1	0.8	-3.4	-2.4
D4	neutral 5	80.6	8.2	50.6	58.5	0.0	2.3	-2.3	-2.5
E4	neutral 3.5	79.6	7.6	37.6	44.8	0.8	3.2	-2.9	-3.1
F4	black	79.8	6.5	22.9	28.9	0.8	3.2	-2.6	-2.5
A5	paper white	94.4	1.1	94.8	95.0	0.1	-0.1	-3.4	-2.4
B5	Skin highlight L*=88	69.8	6.2	83.3	87.2	10.7	8.4	9.0	4.8
C5	Skin highlight L* =75	70.2	9.6	72.0	78.3	17.6	16.1	14.7	7.5
D5	Skin shadow L*=28	91.6	6.8	27.5	33.8	16.7	19.0	16.5	17.2
E5	Skin shadow L*=13	82.4	6.8	17.5	22.4	16.7	20.1	16.7	19.9
F5	Maximum Black	98.8	1.3	4.5	5.7	0.4	1.0	-0.9	-0.9
Summary Results		I* Color	I* tone	ΔE	90 Megalux hours				
Average Score for all patches		83.4	82.4	8.9					
Worst 10% (3 lowest scoring patches)		68.0	72.2	21.3					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



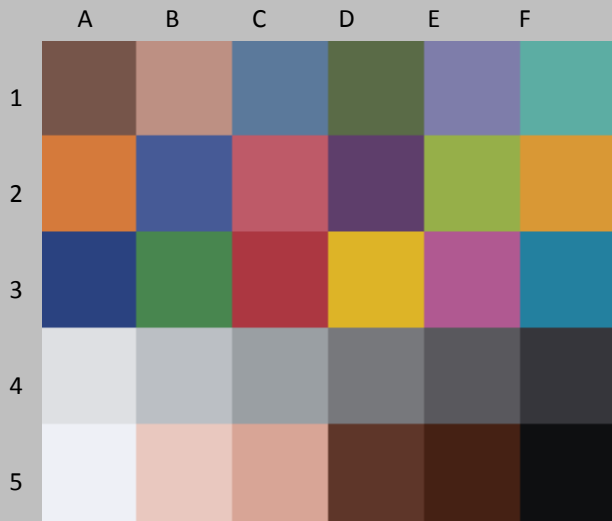
Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	92.6	9.2	39.7	48.7	13.3	15.1	11.6	11.7
B1	Light Skin	82.8	9.4	64.0	72.4	16.1	16.2	13.9	9.8
C1	Blue sky	80.6	8.6	49.4	56.4	-3.9	-3.1	-22.3	-17.5
D1	Foliage	79.4	9.6	43.3	51.5	-11.7	-8.9	18.3	14.3
E1	blue flower	76.6	9.7	53.7	61.0	7.6	7.3	-24.0	-17.6
F1	bluish green	82.1	8.0	65.4	71.3	-27.6	-22.2	-3.0	-2.5
A1	orange	63.4	23.5	60.7	68.4	33.1	31.0	49.2	27.0
B2	purplish blue	85.1	8.4	38.7	44.5	6.2	4.4	-36.2	-30.5
C2	moderate red	81.9	11.9	51.4	59.9	42.1	41.6	11.7	3.3
D2	purple	91.1	8.0	31.5	38.8	21.3	21.6	-21.5	-18.3
E2	yellow green	70.9	17.0	67.9	74.4	-19.7	-16.3	48.2	32.9
F2	orange yellow	65.3	23.2	68.1	75.4	18.5	16.5	59.2	37.3
A3	blue	88.5	7.0	28.7	33.6	7.7	5.2	-39.0	-34.6
B3	green	73.5	12.4	50.7	57.2	-30.0	-25.7	23.2	13.6
C3	red	81.4	12.8	41.6	49.1	48.9	49.9	21.8	11.4
D3	yellow	68.9	23.0	75.4	81.5	6.2	4.7	69.5	47.3
E3	magenta	94.2	9.3	50.1	59.0	40.7	38.9	-14.2	-11.8
F3	cyan	87.3	7.5	49.3	55.2	-19.3	-17.9	-25.0	-20.8
A4	white	59.3	5.1	89.2	91.7	-0.1	-0.4	-2.2	2.2
B4	neutral 8	55.5	8.0	77.1	83.5	-1.1	-0.2	-2.9	1.7
C4	neutral 6.5	65.2	9.2	65.3	73.7	-1.1	0.7	-3.4	0.0
D4	neutral 5	76.2	9.4	50.6	59.6	0.0	2.3	-2.3	-0.8
E4	neutral 3.5	78.3	8.6	37.6	45.8	0.8	3.2	-2.9	-2.0
F4	black	78.8	7.3	22.9	29.7	0.8	3.2	-2.6	-1.7
A5	paper white	67.2	3.6	94.8	95.0	0.1	-0.4	-3.4	0.2
B5	Skin highlight L*=88	77.5	5.6	83.3	87.6	10.7	8.0	9.0	6.5
C5	Skin highlight L* =75	74.4	9.4	72.0	79.0	17.6	15.9	14.7	8.6
D5	Skin shadow L*=28	90.1	7.8	27.5	34.7	16.7	19.2	16.5	17.7
E5	Skin shadow L*=13	79.6	7.7	17.5	23.1	16.7	20.5	16.7	20.5
F5	Maximum Black	99.0	1.5	4.5	5.9	0.4	1.0	-0.9	-0.7
Summary Results		I* Color	I* tone	ΔE	100 Megalux hours				
Average Score for all patches		78.2	80.2	10.1					
Worst 10% (3 lowest scoring patches)		59.4	68.9	23.3					

*Canon Pixma Pro-100, Canon Chromalife 100+ (8-color ink set CLi-42), Canon Photo Paper Plus
Semi-Gloss SG-201, no additional coating*



Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin	88.9	12.1	39.7	51.5	13.3	15.3	11.6	10.1
B1	Light Skin	68.0	12.8	64.0	74.5	16.1	16.3	13.9	6.6
C1	Blue sky	83.7	9.9	49.4	58.3	-3.9	-2.6	-22.3	-18.4
D1	Foliage	68.8	12.8	43.3	53.8	-11.7	-8.5	18.3	11.8
E1	blue flower	79.6	10.7	53.7	62.8	7.6	7.9	-24.0	-18.3
F1	bluish green	77.2	10.1	65.4	72.9	-27.6	-21.0	-3.0	-4.8
A1	orange	53.0	29.9	60.7	70.1	33.1	30.7	49.2	20.9
B2	purplish blue	86.5	9.1	38.7	46.0	6.2	4.9	-36.2	-30.9
C2	moderate red	75.2	15.4	51.4	61.9	42.1	41.6	11.7	0.4
D2	purple	92.1	9.7	31.5	40.7	21.3	21.9	-21.5	-18.7
E2	yellow green	60.8	22.4	67.9	76.0	-19.7	-15.5	48.2	27.7
F2	orange yellow	54.3	30.2	68.1	76.9	18.5	16.2	59.2	30.4
A3	blue	89.9	7.6	28.7	34.8	7.7	5.5	-39.0	-35.1
B3	green	63.5	16.6	50.7	58.9	-30.0	-24.7	23.2	9.9
C3	red	74.6	16.9	41.6	50.9	48.9	50.2	21.8	7.7
D3	yellow	58.2	30.6	75.4	82.8	6.2	4.5	69.5	39.9
E3	magenta	95.5	11.1	50.1	61.0	40.7	38.7	-14.2	-12.7
F3	cyan	88.9	8.5	49.3	56.8	-19.3	-17.1	-25.0	-21.7
A4	white	82.4	3.8	89.2	92.3	-0.1	-0.1	-2.2	0.0
B4	neutral 8	75.4	8.4	77.1	85.1	-1.1	0.2	-2.9	-0.4
C4	neutral 6.5	75.2	10.9	65.3	75.8	-1.1	1.2	-3.4	-1.7
D4	neutral 5	76.8	11.7	50.6	62.0	0.0	2.7	-2.3	-1.9
E4	neutral 3.5	76.8	10.9	37.6	48.2	0.8	3.5	-2.9	-2.8
F4	black	78.2	9.1	22.9	31.6	0.8	3.4	-2.6	-2.4
A5	paper white	87.7	1.7	94.8	95.0	0.1	-0.2	-3.4	-1.8
B5	Skin highlight L*=88	59.1	8.0	83.3	88.3	10.7	7.8	9.0	3.5
C5	Skin highlight L* =75	58.7	13.0	72.0	80.4	17.6	15.7	14.7	4.9
D5	Skin shadow L*=28	90.8	9.9	27.5	37.0	16.7	19.3	16.5	16.3
E5	Skin shadow L*=13	78.3	9.1	17.5	24.6	16.7	20.8	16.7	20.6
F5	Maximum Black	95.0	2.0	4.5	6.2	0.4	1.4	-0.9	-0.6
Summary Results		I* Color	I* tone	ΔE	120 Megalux hours				
Average Score for all patches		76.4	75.9	12.5					
Worst 10% (3 lowest scoring patches)		55.1	61.9	30.2					

The 140 Megalux hour Update will be posted on approximately DEC 20, 2017.



Original Print Colors before light exposure



Colors After light exposure

Patch #	Description	I* Color	ΔE	L*		a*		b*	
				Before	After	Before	After	Before	After
A1	Dark Skin			39.7		13.3		11.6	
B1	Light Skin			64.0		16.1		13.9	
C1	Blue sky			49.4		-3.9		-22.3	
D1	Foliage			43.3		-11.7		18.3	
E1	blue flower			53.7		7.6		-24.0	
F1	bluish green			65.4		-27.6		-3.0	
A1	orange			60.7		33.1		49.2	
B2	purplish blue			38.7		6.2		-36.2	
C2	moderate red			51.4		42.1		11.7	
D2	purple			31.5		21.3		-21.5	
E2	yellow green			67.9		-19.7		48.2	
F2	orange yellow			68.1		18.5		59.2	
A3	blue			28.7		7.7		-39.0	
B3	green			50.7		-30.0		23.2	
C3	red			41.6		48.9		21.8	
D3	yellow			75.4		6.2		69.5	
E3	magenta			50.1		40.7		-14.2	
F3	cyan			49.3		-19.3		-25.0	
A4	white			89.2		-0.1		-2.2	
B4	neutral 8			77.1		-1.1		-2.9	
C4	neutral 6.5			65.3		-1.1		-3.4	
D4	neutral 5			50.6		0.0		-2.3	
E4	neutral 3.5			37.6		0.8		-2.9	
F4	black			22.9		0.8		-2.6	
A5	paper white			94.8		0.1		-3.4	
B5	Skin highlight L*=88			83.3		10.7		9.0	
C5	Skin highlight L* =75			72.0		17.6		14.7	
D5	Skin shadow L*=28			27.5		16.7		16.5	
E5	Skin shadow L*=13			17.5		16.7		16.7	
F5	Maximum Black			4.5		0.4		-0.9	
Summary Results		I* Color	I* tone	ΔE	140 Megalux hours				
Average Score for all patches									
Worst 10% (3 lowest scoring patches)									