



|                                       |                             |                                |                             |
|---------------------------------------|-----------------------------|--------------------------------|-----------------------------|
| <b>Print created by:</b>              | https://cielab.xyz          | <b>Measuring device:</b>       | EFI ES-2000 - M0            |
| <b>Last calibration:</b>              | 2023_12_20 granularity 41   | <b>Measurement conditions:</b> | D50 2gr M0                  |
| <b>Proofing system:</b>               | EFI 7                       | <b>Measuring underlay:</b>     | White Backing               |
| <b>Control strip:</b>                 | Ugra Fogra-MediaWedge V2.2a | <b>Printer:</b>                | Epson                       |
| <b>Delta E format:</b>                | dE CIE76                    | <b>Proof profile:</b>          | PMP5 250 2023_12_20         |
| <b>Reference profile:</b>             | PSO LWC Improved            | <b>Proofing substrate:</b>     | PMP5 250 FOGRA Sert         |
| <b>Reference data:</b>                | FOGRA 45L                   | <b>Colorant:</b>               | Ultrachrome K3              |
| <b>Reference printing conditions:</b> | PSO LWC Improved            | <b>Job ID/Name</b>             | -/ PSO_LWC_Improved_eci.icc |
| <b>Fogra PSD Visual Assessment</b>    | DLP 3cc granularity 41      |                                |                             |

## Summary

| Criteria                   | Difference      | Tolerance | Status |
|----------------------------|-----------------|-----------|--------|
| Average all patches        | 0.9 dE -        | 3.0       | OK     |
| Maximum all patches        | 2.7 dE Patch 8  | 6.0       | OK     |
| Paper white                | 0.4 dE Patch 40 | 3.0       | OK     |
| Cyan                       | 1.1 dE Patch 1  | 5.0       | OK     |
| Magenta                    | 2.2 dE Patch 4  | 5.0       | OK     |
| Yellow                     | 1.8 dE Patch 7  | 5.0       | OK     |
| Black                      | 0.7 dE Patch 23 | 5.0       | OK     |
| Hue difference - CMY       | 1.6 dH -        | 2.5       | OK     |
| Hue difference - CMYK      | 1.6 dH -        | 2.5       | OK     |
| Hue difference - CMYRGB    | 1.6 dH -        | 4.0       | OK     |
| Hue diff. average gray     | 0.3 dH -        | 1.5       | OK     |
| Tone value diff.           | 1.2 % Patch 8   | 10.0      | OK     |
| Average CMYK patches       | 0.7 dCh -       | 2.5       | OK     |
| Maximum weighted CMY scale | 0.9 dCh -       | 3.0       | OK     |
| Average weighted CMY scale | 0.5 dCh -       | 1.5       | OK     |
| Maximum weighted K scale   | 0.3 dL -        | 3.0       | OK     |
| Average weighted K scale   | 0.2 dL -        | 1.5       | OK     |
| Maximum weighted CMY scale | 0.4 dL -        | 3.0       | OK     |
| Average weighted CMY scale | 0.2 dL -        | 1.5       | OK     |

## Overall Result

**PASSED**

## Measuring data analysis

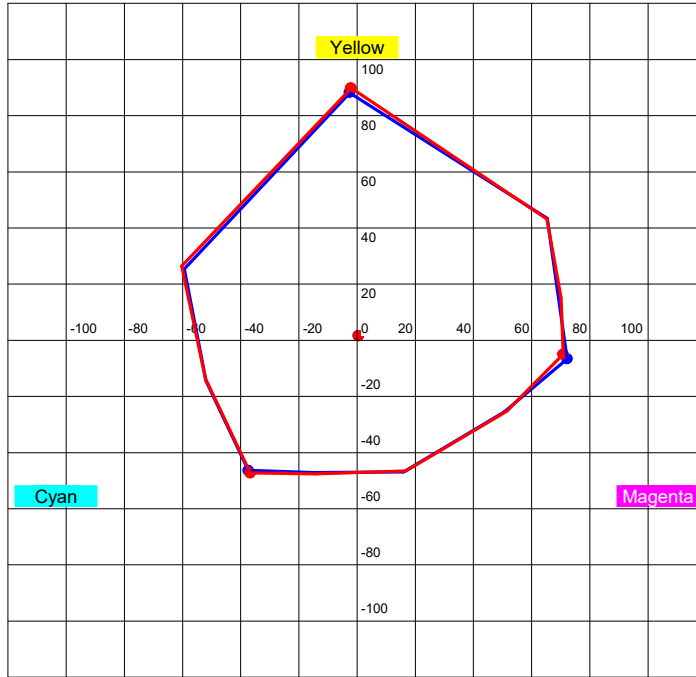
| Patch ID | Reference |     |     |     | Measured |        |        | Delta E | Color difference |        |      |      | Tone value diff. | Result |      |        |    |
|----------|-----------|-----|-----|-----|----------|--------|--------|---------|------------------|--------|------|------|------------------|--------|------|--------|----|
|          | C         | M   | Y   | K   | L*       | a*     | b*     |         | dL*              | da*    | db*  | dH*  |                  |        |      |        |    |
| 1        | 100       | 0   | 0   | 0   | 56.77    | -37.36 | -46.28 | 56.69   | -36.70           | -47.19 | 1.13 | 0.07 | 0.66             | 0.91   | 1.08 | -      | OK |
| 2        | 70        | 0   | 0   | 0   | 66.09    | -27.06 | -35.06 | 66.02   | -26.62           | -35.70 | 0.78 | 0.07 | 0.44             | 0.64   | 0.73 | 0.22%  | OK |
| 3        | 40        | 0   | 0   | 0   | 77.29    | -15.68 | -21.17 | 77.36   | -15.43           | -21.81 | 0.69 | 0.07 | 0.25             | 0.64   | 0.57 | 0.25%  | OK |
| 4        | 0         | 100 | 0   | 0   | 47.79    | 72.22  | -6.56  | 47.68   | 70.85            | -4.88  | 2.17 | 0.11 | 1.37             | 1.68   | 1.57 | -      | OK |
| 5        | 0         | 70  | 0   | 0   | 58.75    | 51.52  | -8.88  | 58.29   | 52.87            | -8.62  | 1.45 | 0.46 | 1.35             | 0.26   | 0.48 | 0.82%  | OK |
| 6        | 0         | 40  | 0   | 0   | 72.98    | 27.43  | -7.74  | 73.10   | 27.90            | -7.71  | 0.49 | 0.12 | 0.47             | 0.03   | 0.16 | 0.17%  | OK |
| 7        | 0         | 0   | 100 | 0   | 85.69    | -2.52  | 88.14  | 85.78   | -2.03            | 89.87  | 1.80 | 0.08 | 0.48             | 1.74   | 0.53 | -      | OK |
| 8        | 0         | 0   | 70  | 0   | 87.20    | -3.64  | 61.50  | 87.38   | -3.28            | 64.16  | 2.69 | 0.18 | 0.36             | 2.67   | 0.51 | 1.22%  | OK |
| 9        | 0         | 0   | 40  | 0   | 89.24    | -3.31  | 32.44  | 90.00   | -2.83            | 33.76  | 1.60 | 0.76 | 0.48             | 1.32   | 0.60 | 0.19%  | OK |
| 10       | 20        | 70  | 70  | 0   | 51.63    | 36.29  | 28.11  | 50.97   | 37.37            | 29.50  | 1.88 | 0.66 | 1.08             | 1.40   | 0.43 | -      | OK |
| 11       | 40        | 70  | 70  | 20  | 40.21    | 20.70  | 15.58  | 39.51   | 21.25            | 16.63  | 1.38 | 0.70 | 0.54             | 1.05   | 0.50 | -      | OK |
| 12       | 40        | 100 | 100 | 20  | 32.87    | 34.70  | 19.29  | 32.24   | 35.17            | 20.07  | 1.11 | 0.64 | 0.48             | 0.79   | 0.45 | -      | OK |
| 13       | 40        | 100 | 40  | 20  | 32.85    | 39.01  | -3.52  | 32.55   | 39.62            | -2.65  | 1.10 | 0.30 | 0.61             | 0.87   | 0.92 | -      | OK |
| 14       | 40        | 40  | 100 | 20  | 48.82    | 1.49   | 38.77  | 48.46   | 2.02             | 39.45  | 0.93 | 0.36 | 0.54             | 0.68   | 0.51 | -      | OK |
| 15       | 100       | 40  | 100 | 20  | 34.57    | -32.28 | 9.70   | 34.21   | -31.60           | 10.06  | 0.85 | 0.36 | 0.68             | 0.36   | 0.54 | -      | OK |
| 16       | 100       | 40  | 40  | 20  | 35.94    | -24.71 | -18.00 | 35.81   | -24.31           | -18.05 | 0.42 | 0.13 | 0.40             | 0.06   | 0.28 | -      | OK |
| 17       | 100       | 100 | 40  | 20  | 23.76    | 3.10   | -22.71 | 22.93   | 3.98             | -22.92 | 1.23 | 0.83 | 0.88             | 0.22   | 0.83 | -      | OK |
| 18       | 0         | 0   | 0   | 10  | 85.30    | -0.42  | -2.51  | 85.44   | -0.24            | -2.46  | 0.23 | 0.14 | 0.18             | 0.06   | 0.17 | 0.40%  | OK |
| 19       | 0         | 0   | 0   | 20  | 78.85    | -0.36  | -2.49  | 79.17   | 0.22             | -2.74  | 0.71 | 0.32 | 0.58             | 0.25   | 0.59 | -0.13% | OK |
| 20       | 0         | 0   | 0   | 40  | 65.41    | -0.21  | -2.26  | 65.32   | 0.43             | -2.13  | 0.66 | 0.09 | 0.64             | 0.13   | 0.65 | 0.41%  | OK |
| 21       | 0         | 0   | 0   | 60  | 51.02    | -0.20  | -1.83  | 51.35   | 0.11             | -1.45  | 0.59 | 0.32 | 0.30             | 0.38   | 0.30 | -0.32% | OK |
| 22       | 0         | 0   | 0   | 80  | 35.77    | -0.04  | -0.58  | 35.36   | 0.27             | -0.40  | 0.54 | 0.41 | 0.31             | 0.18   | 0.34 | 0.14%  | OK |
| 23       | 0         | 0   | 0   | 100 | 19.92    | 0.51   | 1.54   | 19.22   | 0.56             | 1.62   | 0.71 | 0.70 | 0.05             | 0.08   | 0.02 | -      | OK |
| 24       | 100       | 100 | 0   | 0   | 27.60    | 15.95  | -46.82 | 27.07   | 16.68            | -46.53 | 0.95 | 0.52 | 0.72             | 0.28   | 0.78 | -      | OK |
| 25       | 70        | 70  | 0   | 0   | 40.45    | 16.54  | -38.26 | 40.38   | 17.39            | -38.25 | 0.85 | 0.08 | 0.85             | 0.01   | 0.78 | -      | OK |
| 26       | 40        | 40  | 0   | 0   | 60.82    | 10.02  | -24.97 | 61.05   | 10.44            | -24.82 | 0.50 | 0.23 | 0.42             | 0.15   | 0.44 | -      | OK |
| 27       | 0         | 100 | 100 | 0   | 47.78    | 65.40  | 43.48  | 47.84   | 65.20            | 43.23  | 0.33 | 0.06 | 0.20             | 0.25   | 0.10 | -      | OK |
| 28       | 0         | 70  | 70  | 0   | 57.14    | 47.31  | 37.70  | 57.10   | 48.10            | 37.79  | 0.80 | 0.04 | 0.79             | 0.09   | 0.42 | -      | OK |
| 29       | 0         | 40  | 40  | 0   | 71.26    | 24.44  | 21.95  | 71.45   | 24.81            | 21.98  | 0.42 | 0.18 | 0.36             | 0.04   | 0.21 | -      | OK |
| 30       | 100       | 0   | 100 | 0   | 49.86    | -59.39 | 25.38  | 49.39   | -60.27           | 26.47  | 1.48 | 0.47 | 0.88             | 1.09   | 0.65 | -      | OK |
| 31       | 70        | 0   | 70  | 0   | 60.85    | -39.68 | 23.00  | 60.85   | -40.45           | 23.41  | 0.87 | 0.00 | 0.77             | 0.42   | 0.02 | -      | OK |
| 32       | 40        | 0   | 40  | 0   | 74.31    | -21.33 | 12.59  | 74.66   | -21.32           | 13.00  | 0.54 | 0.35 | 0.01             | 0.41   | 0.36 | -      | OK |
| 33       | 10        | 40  | 40  | 0   | 68.12    | 19.57  | 17.46  | 68.23   | 19.76            | 17.34  | 0.25 | 0.11 | 0.19             | 0.12   | 0.22 | -      | OK |
| 34       | 0         | 40  | 100 | 0   | 68.67    | 24.53  | 68.02  | 68.82   | 24.71            | 67.78  | 0.34 | 0.14 | 0.18             | 0.23   | 0.25 | -      | OK |
| 35       | 0         | 100 | 40  | 0   | 47.88    | 68.44  | 15.33  | 47.62   | 70.12            | 15.14  | 1.71 | 0.26 | 1.69             | 0.20   | 0.55 | -      | OK |
| 36       | 40        | 100 | 0   | 0   | 38.50    | 50.54  | -25.55 | 38.46   | 51.48            | -25.17 | 1.01 | 0.04 | 0.94             | 0.38   | 0.76 | -      | OK |
| 37       | 40        | 0   | 100 | 0   | 70.46    | -22.49 | 62.16  | 70.59   | -22.06           | 62.69  | 0.69 | 0.14 | 0.43             | 0.53   | 0.58 | -      | OK |
| 38       | 100       | 0   | 40  | 0   | 53.31    | -51.89 | -14.43 | 52.69   | -52.17           | -13.59 | 1.08 | 0.62 | 0.28             | 0.84   | 0.88 | -      | OK |
| 39       | 100       | 40  | 0   | 0   | 44.03    | -15.13 | -47.12 | 43.84   | -14.35           | -47.50 | 0.89 | 0.18 | 0.78             | 0.37   | 0.86 | -      | OK |
| 40       | 0         | 0   | 0   | 0   | 92.04    | 0.04   | -1.98  | 92.38   | -0.06            | -2.05  | 0.36 | 0.34 | 0.10             | 0.07   | 0.10 | -      | OK |
| 41       | 10        | 6   | 6   | 0   | 85.20    | -1.37  | -3.52  | 85.45   | -1.24            | -3.93  | 0.50 | 0.25 | 0.14             | 0.41   | 0.27 | -      | OK |
| 42       | 20        | 12  | 12  | 0   | 78.80    | -2.25  | -4.23  | 79.06   | -1.76            | -4.61  | 0.67 | 0.26 | 0.50             | 0.38   | 0.61 | -      | OK |
| 43       | 40        | 27  | 27  | 0   | 64.81    | -2.88  | -3.56  | 64.58   | -2.34            | -3.28  | 0.65 | 0.23 | 0.54             | 0.29   | 0.25 | -      | OK |
| 44       | 60        | 45  | 45  | 0   | 50.21    | -3.59  | -2.16  | 50.06   | -2.79            | -1.50  | 1.05 | 0.15 | 0.80             | 0.66   | 0.18 | -      | OK |
| 45       | 80        | 65  | 65  | 0   | 37.74    | -4.57  | -2.13  | 36.99   | -3.70            | -2.22  | 1.15 | 0.76 | 0.87             | 0.09   | 0.48 | -      | OK |
| 46       | 100       | 85  | 85  | 0   | 28.93    | -9.07  | -3.84  | 28.75   | -8.56            | -3.89  | 0.54 | 0.18 | 0.51             | 0.05   | 0.25 | -      | OK |

## Color space comparison

- Reference
- Measured

## Primary colors

- Reference
  - C: L\*56.77 a\*-37.36 b\*-46.28
  - M: L\*47.79 a\*72.22 b\*-6.56
  - Y: L\*85.69 a\*-2.52 b\*88.14
  - K: L\*19.92 a\*0.51 b\*1.54
- Measured
  - C: L\*56.69 a\*-36.70 b\*-47.19
  - M: L\*47.68 a\*70.85 b\*-4.88
  - Y: L\*85.78 a\*-2.03 b\*89.87
  - K: L\*19.22 a\*0.56 b\*1.62



## Gradation Curves

