

**CIE02 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by wavelength.

| no. | O    | tristimulus values and chromaticities |       |       |       | nu-chromatic values and chromaticities |       |       |          |
|-----|------|---------------------------------------|-------|-------|-------|----------------------------------------|-------|-------|----------|
|     |      | $\lambda_n$                           | X     | Y     | z     | $\lambda_m$                            | $B_m$ | $C_m$ | $A_{Bm}$ |
| 00  | 396  | 31.24                                 | 12.19 | 76.69 | 0.260 | 0.101                                  | 0.638 | -48.7 | -66.6    |
| 01  | 405  | 32.25                                 | 13.34 | 78.13 | 0.135 | 0.064                                  | 0.799 | -47.8 | -72.9    |
| 02  | 466  | 13.27                                 | 8.01  | 79.21 | 0.132 | 0.079                                  | 0.788 | -13.8 | -72.6    |
| 03  | 471  | 13.39                                 | 12.26 | 80.68 | 0.125 | 0.118                                  | 0.755 | -29   | -70.2    |
| 04  | 475B | 14.00                                 | 19.21 | 81.44 | 0.122 | 0.167                                  | 0.710 | -11.2 | -65.6    |
| 05  | 479  | 15.61                                 | 27.50 | 81.85 | 0.124 | 0.220                                  | 0.655 | -27.1 | -59.2    |
| 06  | 481  | 18.42                                 | 36.66 | 82.05 | 0.134 | 0.267                                  | 0.598 | -42.2 | -51.9    |
| 07  | 483  | 20.35                                 | 41.45 | 82.11 | 0.141 | 0.288                                  | 0.570 | -48.9 | -48.0    |
| 08  | 484  | 22.64                                 | 46.29 | 82.14 | 0.149 | 0.306                                  | 0.543 | -54.8 | -44.0    |
| 09  | 485  | 25.29                                 | 51.06 | 82.16 | 0.159 | 0.322                                  | 0.518 | -59.6 | -40.1    |
| 10  | 486C | 26.62                                 | 57.81 | 81.62 | 0.175 | 0.341                                  | 0.482 | -65.1 | -34.0    |
| 11  | 490  | 26.32                                 | 58.17 | 83.51 | 0.177 | 0.393                                  | 0.429 | -74.2 | -15.6    |
| 12  | 497  | 22.01                                 | 58.66 | 82.40 | 0.185 | 0.472                                  | 0.342 | -83.6 | -5.7     |
| 13  | 501  | 22.62                                 | 59.57 | 35.18 | 0.192 | 0.507                                  | 0.299 | -86.8 | 3.7      |
| 14  | 506  | 22.26                                 | 60.29 | 28.28 | 0.200 | 0.543                                  | 0.255 | -89.4 | 21.2     |
| 15  | 519  | 21.83                                 | 61.02 | 17.06 | 0.218 | 0.610                                  | 0.170 | -92.3 | 33.1     |
| 16  | 522G | 24.04                                 | 63.42 | 17.06 | 0.230 | 0.606                                  | 0.163 | -92.5 | 35.0     |
| 17  | 535  | 27.22                                 | 66.19 | 9.71  | 0.263 | 0.641                                  | 0.094 | -91.2 | 44.7     |
| 18  | 544  | 35.20                                 | 72.16 | 7.33  | 0.306 | 0.629                                  | 0.063 | -85.7 | 52.0     |
| 19  | 561  | 65.07                                 | 87.80 | 5.54  | 0.410 | 0.554                                  | 0.034 | -48.6 | 66.6     |
| 20  | 568  | 83.05                                 | 93.65 | 4.13  | 0.459 | 0.517                                  | 0.022 | -17.8 | 72.8     |
| 21  | 569  | 83.03                                 | 91.98 | 3.02  | 0.466 | 0.516                                  | 0.016 | -13.8 | 72.6     |
| 22  | 573  | 82.92                                 | 87.33 | 1.55  | 0.482 | 0.508                                  | 0.009 | -2.9  | 70.2     |
| 23  | 577Y | 82.30                                 | 80.76 | 0.80  | 0.502 | 0.492                                  | 0.004 | 11.3  | 65.6     |
| 24  | 577  | 80.69                                 | 72.49 | 0.38  | 0.525 | 0.472                                  | 0.002 | 27.2  | 59.2     |
| 25  | 581  | 77.87                                 | 63.33 | 0.18  | 0.550 | 0.447                                  | 0.001 | 42.2  | 51.8     |
| 26  | 583  | 75.96                                 | 58.54 | 0.13  | 0.564 | 0.434                                  | 0.000 | 48.9  | 48.0     |
| 27  | 585  | 73.67                                 | 53.70 | 0.09  | 0.577 | 0.421                                  | 0.000 | 54.9  | 44.0     |
| 28  | 587  | 71.01                                 | 48.93 | 0.07  | 0.591 | 0.407                                  | 0.000 | 59.7  | 40.1     |
| 29  | 592R | 66.69                                 | 42.18 | 0.61  | 0.609 | 0.385                                  | 0.005 | 65.1  | 34.0     |
| 30  | 631  | 69.99                                 | 41.82 | 18.71 | 0.536 | 0.320                                  | 0.143 | 74.3  | 15.6     |
| 31  | 702  | 73.30                                 | 41.33 | 39.75 | 0.474 | 0.267                                  | 0.257 | 83.7  | -5.7     |
| 32  | 706  | 73.69                                 | 40.41 | 47.04 | 0.457 | 0.250                                  | 0.291 | 86.9  | -13.8    |
| 33  | 711  | 74.05                                 | 39.70 | 53.95 | 0.441 | 0.236                                  | 0.321 | 89.5  | -21.3    |
| 34  | 724  | 74.18                                 | 38.97 | 65.18 | 0.416 | 0.218                                  | 0.364 | 92.3  | -33.1    |
| 35  | 727M | 72.26                                 | 36.57 | 65.17 | 0.415 | 0.210                                  | 0.374 | 92.6  | -35.1    |
| 36  | 740  | 69.08                                 | 33.80 | 72.53 | 0.393 | 0.192                                  | 0.413 | 91.3  | -44.7    |
| 37  | 749  | 61.10                                 | 27.83 | 74.91 | 0.372 | 0.169                                  | 0.457 | 85.7  | -52.0    |
| 38  | 766  | 31.24                                 | 12.19 | 76.69 | 0.260 | 0.101                                  | 0.638 | -48.7 | -66.6    |
| 39  | 828  | 13.25                                 | 6.34  | 78.11 | 0.135 | 0.064                                  | 0.799 | -47.8 | -72.9    |

$$a=P_{50}D_{50}96.31999, P_{50}=2.5[(1.0000 \times 0.0000 + 0.0000)z] \quad A_{50}=(a-o)Y \quad C_{ABm}=[A_{50}^2+B_{50}^2]^{1/2}$$

$$b=P_{50}n_1P_0=1.0[(0.0000 \times 0.0000 + 1.0000)z] \quad B_{50}=(b-b_0)Y \quad h_{ABm}=\text{atan}[B_{50}/A_{50}]$$

DE700-3N

**CIE02 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by wavelength.

| no. | O    | n-purities  |      |          |       | nu-purities |          |        |           |
|-----|------|-------------|------|----------|-------|-------------|----------|--------|-----------|
|     |      | $\lambda_n$ | Y    | $P_{50}$ | $P_m$ | $\lambda_m$ | $P_{50}$ | $P_m$  | $h_{ABm}$ |
| 00  | 396  | 12.19       | 6.40 | -6.29    | 8.97  | 315         | 3.99     | -5.46  | 6.77      |
| 01  | 405  | 13.34       | 7.21 | -12.32   | 13.38 | 292         | 2.81     | -11.49 | 11.83     |
| 02  | 466  | 8.01        | 1.14 | -9.88    | 10.72 | 292         | 1.73     | -9.06  | 9.23      |
| 03  | 471  | 12.66       | 2.64 | -6.37    | 6.89  | 292         | 0.23     | -5.55  | 5.55      |
| 04  | 475B | 19.21       | 1.82 | -4.23    | 4.61  | 293         | -0.58    | -3.41  | 3.46      |
| 05  | 479  | 27.50       | 1.41 | -2.97    | 3.29  | 295         | -0.98    | -2.15  | 2.36      |
| 06  | 481  | 36.66       | 1.25 | -2.23    | 2.56  | 299         | -1.15    | -1.41  | 1.82      |
| 07  | 483  | 41.45       | 1.22 | -1.98    | 2.33  | 301         | -1.17    | -1.15  | 1.65      |
| 08  | 484  | 46.29       | 1.22 | -1.77    | 2.15  | 304         | -1.18    | -0.95  | 1.51      |
| 09  | 485  | 51.06       | 1.23 | -1.60    | 2.03  | 307         | -1.16    | -0.78  | 1.40      |
| 10  | 486C | 57.81       | 1.28 | -1.41    | 1.90  | 312         | -1.12    | -0.58  | 1.27      |
| 11  | 490  | 58.17       | 1.13 | -1.09    | 1.57  | 316         | -1.27    | -0.26  | 1.30      |
| 12  | 497  | 58.66       | 0.98 | -0.72    | 1.31  | 323         | -1.42    | 0.09   | 1.43      |
| 13  | 501  | 59.57       | 0.94 | -0.59    | 1.11  | 328         | -1.45    | 0.23   | 1.47      |
| 14  | 506  | 60.29       | 0.92 | -0.46    | 1.03  | 333         | -1.48    | 0.35   | 1.52      |
| 15  | 519  | 61.02       | 0.89 | -0.27    | 0.93  | 342         | -1.51    | 0.54   | 1.60      |
| 16  | 522G | 63.42       | 0.94 | -0.26    | 0.98  | 344         | -1.45    | 0.55   | 1.56      |
| 17  | 535  | 66.19       | 1.02 | -0.14    | 1.03  | 351         | -1.37    | 0.67   | 1.53      |
| 18  | 544  | 72.16       | 1.21 | -0.10    | 1.22  | 355         | -1.18    | 0.72   | 1.38      |
| 19  | 561  | 87.80       | 1.85 | -0.06    | 1.85  | 358         | -0.55    | 0.75   | 0.94      |
| 20  | 568  | 93.65       | 2.21 | -0.04    | 2.21  | 358         | -0.19    | 0.77   | 0.80      |
| 21  | 569  | 91.98       | 2.25 | -0.03    | 2.25  | 359         | -0.15    | 0.78   | 0.80      |
| 22  | 573  | 87.33       | 2.77 | -0.01    | 2.73  | 367         | -0.37    | 0.81   | 0.80      |
| 23  | 577Y | 80.76       | 2.54 | -0.00    | 2.54  | 359         | -0.13    | 0.81   | 0.82      |
| 24  | 577  | 72.49       | 2.78 | -0.00    | 2.78  | 359         | -0.03    | 0.81   | 0.89      |
| 25  | 581  | 63.33       | 3.07 | -0.00    | 3.07  | 359         | 0.66     | 0.81   | 1.05      |
| 26  | 583  | 58.54       | 3.24 | -0.00    | 3.24  | 359         | 0.83     | 0.82   | 1.17      |
| 27  | 585  | 53.70       | 3.42 | -0.00    | 3.42  | 359         | 1.02     | 0.82   | 1.31      |
| 28  | 587  | 48.93       | 3.62 | -0.00    | 3.62  | 359         | 1.22     | 0.82   | 1.47      |
| 29  | 592R | 42.18       | 3.95 | -0.01    | 3.95  | 359         | 1.54     | 0.80   | 1.74      |
| 30  | 631  | 41.82       | 4.18 | -0.44    | 4.20  | 353         | 1.77     | 0.37   | 1.81      |
| 31  | 702  | 41.33       | 4.43 | -0.96    | 4.53  | 347         | 2.02     | -0.13  | 2.03      |
| 32  | 706  | 40.41       | 4.55 | -1.16    | 4.70  | 345         | 2.15     | -0.34  | 2.17      |
| 33  | 711  | 39.70       | 4.66 | -1.35    | 4.85  | 343         | 2.25     | -0.53  | 2.31      |
| 34  | 724  | 38.97       | 4.77 | -1.67    | 5.06  | 340         | 2.37     | -0.85  | 2.40      |
| 35  | 727M | 36.57       | 4.94 | -1.87    | 5.25  | 347         | 2.53     | -1.02  | 2.50      |
| 36  | 740  | 33.80       | 5.11 | -2.14    | 5.34  | 337         | 2.70     | -1.32  | 2.60      |
| 37  | 749  | 27.83       | 5.48 | -2.69    | 6.11  | 333         | 3.08     | -1.86  | 3.00      |
| 38  | 766  | 31.24       | 6.40 | -6.29    | 8.97  | 315         | 3.99     | -5.46  | 6.77      |
| 39  | 828  | 13.25       | 6.34 | -12.32   | 13.38 | 292         | 2.81     | -11.49 | 11.83     |

$$a=P_{50}n_1P_{50}=2.5[(1.0000 \times 0.0000 + 0.0000)z] \quad A_{50}=(a-o)Y \quad C_{ABm}=[A_{50}^2+B_{50}^2]^{1/2}$$

$$b=P_{50}n_1P_0=1.0[(0.0000 \times 0.0000 + 1.0000)z] \quad B_{50}=(b-b_0)Y \quad h_{ABm}=\text{atan}[B_{50}/A_{50}]$$

DE700-4N

**CIE02 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by hue angle.

| no.   | O    | tristimulus values and chromaticities |       |       |       | nu-chromatic values and chromaticities |       |       |       |       |           |           |
|-------|------|---------------------------------------|-------|-------|-------|----------------------------------------|-------|-------|-------|-------|-----------|-----------|
|       |      | X                                     | Y     | Z     | x     | y                                      | z     | A     | B     | C     | $h_{ABm}$ | $h_{BCm}$ |
| 00    | 631  | 69.99                                 | 41.82 | 18.71 | 0.536 | 0.320                                  | 0.143 | 74.3  | 15.6  | 3.7   | 37.1      | 37.1      |
| 01    | 702  | 73.30                                 | 41.33 | 39.75 | 0.474 | 0.267                                  | 0.257 | 83.7  | -5.7  | 83.9  | 56.6      | 56.6      |
| 02    | 706  | 73.69                                 | 40.41 | 47.04 | 0.457 | 0.250                                  | 0.291 | 86.9  | -13.8 | 88.0  | 55.0      | 55.0      |
| 03    | 711  | 74.05                                 | 39.70 | 53.95 | 0.441 | 0.236                                  | 0.321 | 89.5  | -21.3 | 92.0  | 34.6      | 34.6      |
| 04    | 724  | 74.48                                 | 38.97 | 65.18 | 0.416 | 0.218                                  | 0.364 | 92.3  | -33.1 | 98.1  | 34.0      | 34.0      |
| 05    | 727M | 72.26                                 | 36.57 | 65.17 | 0.415 | 0.210                                  | 0.374 | 92.6  | -35.1 | 99.0  | 33.9      | 33.9      |
| 06    | 740  | 69.08                                 | 33.80 | 72.53 | 0.393 | 0.192                                  | 0.413 | 91.3  | -44.7 | 101.7 | 33.3      | 33.3      |
| 07    | 749  | 61.10                                 | 27.83 | 74.91 | 0.372 | 0.169                                  | 0.457 | 85.7  | -52.0 | 100.3 | 32.8      | 32.8      |
| 08    | 396  | 31.24                                 | 12.19 | 76.69 | 0.260 | 0.101                                  | 0.638 | -48.7 | -66.6 | 82.6  | 30.6      | 30.6      |
| 09    | 463  | 13.25                                 | 6.34  | 78.11 | 0.135 | 0.064                                  | 0.799 | 17.8  | -72.8 | 75.0  | 28.3      | 28.3      |
| 10    | 466  | 13.27                                 | 8.01  | 79.21 | 0.132 | 0.079                                  | 0.788 | 13.8  | -72.6 | 73.9  | 28.0      | 28.0      |
| 11    | 475B | 14.00                                 | 19.21 | 81.44 | 0.122 | 0.167                                  | 0.710 | -11.2 | -65.6 | 66.5  | 26.0      | 26.0      |
| 13    | 479  | 15.61                                 | 27.50 | 81.85 | 0.124 | 0.220                                  | 0.655 | -27.1 | -59.2 | 65.1  | 24.5      | 24.5      |
| 14    | 481  | 18.42                                 | 36.66 | 82.05 | 0.134 | 0.267                                  | 0.598 | -42.2 | -51.9 | 66.8  | 23.0      | 23.0      |
| 15    | 483  | 20.35                                 | 41.45 | 82.11 | 0.141 | 0.288                                  | 0.570 | -48.9 | -48.0 | 68.5  | 22.4      | 22.4      |
| 16    | 484  | 22.64                                 | 46.29 | 82.14 | 0.149 | 0.306                                  | 0.543 | -54.8 | -44.0 | 70.3  | 21.8      | 21.8      |
| 17    | 485  | 25.29                                 | 51.06 | 82.16 | 0.159 | 0.322                                  | 0.518 | -59.6 | -40.1 | 71.9  | 21.3      | 21.3      |
| 18    | 486C | 26.62                                 | 57.81 | 81.62 | 0.175 | 0.341                                  | 0.482 | -65.1 | -34.0 | 73.5  | 20.7      | 20.7      |
| 19    | 490  | 26.32                                 | 58.17 | 83.51 | 0.177 | 0.393                                  | 0.429 | -74.2 | -15.6 | 75.8  | 19.1      | 19.1      |
| 20    | 497  | 22.01                                 | 58.66 | 82.48 | 0.185 | 0.472                                  | 0.342 | -83.6 | -5.7  | 83.8  | 17.6      | 17.6      |
| 21    | 501  | 22.62                                 | 59.57 | 35.18 | 0.192 | 0.507                                  | 0.299 | -86.8 | 3.7   | 87.9  | 16.0      | 16.0      |
| 22    | 506  | 22.26                                 | 60.29 | 28.28 | 0.200 | 0.543                                  | 0.255 | -89.4 | 21.2  | 90.6  | 16.6      | 16.6      |
| 23    | 519C | 21.83                                 | 61.02 | 17.06 | 0.218 | 0.610                                  | 0.170 | -92.3 | 33.1  | 98.0  | 16.0      | 16.0      |
| 24    | 522  | 24.04                                 | 63.42 | 17.06 | 0.230 | 0.606                                  | 0.163 | -92.5 | 35.0  | 99.0  | 15.9      | 15.9      |
| 25    | 535  | 27.22                                 | 66.19 | 9.71  | 0.263 | 0.641                                  | 0.094 | -91.2 | 44.7  | 101.6 | 15.3      | 15.3      |
| 26    | 544  | 35.20                                 | 72.16 | 7.33  | 0.306 | 0.629                                  | 0.063 | -85.7 | 52.0  | 100.2 | 14.8      | 14.8      |
| 27    | 561  | 65.07                                 | 87.80 | 5.54  | 0.410 | 0.554                                  | 0.034 | -48.6 | 66.6  | 82.5  | 12.6      | 12.6      |
| 28    | 568  | 83.05                                 | 93.65 | 4.13  | 0.459 | 0.517                                  | 0.022 | -17.8 | 72.8  | 75.0  | 10.3      | 10.3      |
| 29    | 569  | 83.03                                 | 91.98 | 3.02  | 0.466 | 0.516                                  | 0.016 | -13.8 | 72.6  | 73.9  | 10.0      | 10.0      |
| 30    | 573  | 82.92                                 | 87.33 | 1.55  | 0.482 | 0.508                                  | 0.009 | -2.9  | 70.2  | 70.3  | 9.2       | 9.2       |
| 31    | 577Y | 82.30                                 | 80.76 | 0.80  | 0.502 | 0.492                                  | 0.004 | 11.3  | 65.6  | 66.5  | 8.0       | 8.0       |
| 32    | 580  | 80.69                                 | 78.38 | 0.05  | 0.516 | 0.472                                  | 0.001 | 22.2  | 62.9  | 65.1  | 6.5       | 6.5       |
| 33    | 581  | 87.63                                 | 63.33 | 0.18  | 0.550 | 0.416                                  | 0.001 | 42.2  | 51.8  | 60.0  | 4.8       | 4.8       |
| 34    | 583  | 75.96                                 | 58.54 | 0.13  | 0.564 | 0.344                                  | 0.000 | 48.9  | 48.0  | 68.5  | 4.4       | 4.4       |
| 35    | 585  | 73.67                                 | 53.70 | 0.09  | 0.577 | 0.421                                  | 0.000 | 54.9  | 44.0  | 70.4  | 3.8       | 3.8       |
| 36    | 587R | 71.01                                 | 48.93 | 0.07  | 0.591 | 0.407                                  | 0.000 | 59.7  | 40.1  | 72.0  | 3.3       | 3.3       |
| 37    | 592  | 66.69                                 | 42.18 | 0.61  | 0.609 | 0.385                                  | 0.005 | 65.1  | 34.0  | 73.5  | 2.7       | 2.7       |
| 38    | 631  | 69.99                                 | 41.82 | 18.71 | 0.536 | 0.320                                  | 0.143 | 74.3  | 15.6  | 75.9  | 1.1       | 1.1       |
| 39    | D50  | 76.30                                 | 41.33 | 39.75 | 0.474 | 0.267                                  | 0.257 | 83.7  | -5.7  | 83.9  | -0.3      | -0.3      |
| U=0.0 | 631  | 99.99                                 | 99.99 | 82.24 | 0.345 | 0.358                                  | 0.358 | 0.0   | 0.0   | 0.0   | 0.0       | 0.0       |

**CIE10 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by wavelength.

| no. | O    | tristimulus values and chromaticities |       |       |       |       |       | nu-chromatic values |                |                  |                |
|-----|------|---------------------------------------|-------|-------|-------|-------|-------|---------------------|----------------|------------------|----------------|
|     |      | X                                     | Y     | Z     | x     | y     | z     | A <sub>1</sub>      | R <sub>1</sub> | C <sub>100</sub> | h <sub>1</sub> |
| 00  | 376  | 55.24                                 | 26.06 | 71.08 | 0.362 | 0.171 | 0.466 | 75.1                | -49.9          | 90.2             | 326            |
| 01  | 376  | 55.24                                 | 26.06 | 75.87 | 0.136 | 0.076 | 0.786 | 15.1                | -69.8          | 71.5             | 282            |
| 02  | 460  | 13.26                                 | 8.89  | 77.33 | 0.133 | 0.089 | 0.777 | 11.6                | -70.1          | 71.0             | 279            |
| 03  | 462  | 13.28                                 | 10.68 | 78.42 | 0.129 | 0.104 | 0.765 | 7.4                 | -69.7          | 70.1             | 276            |
| 04  | 462B | 13.28                                 | 10.68 | 78.42 | 0.129 | 0.104 | 0.765 | 7.4                 | -69.7          | 70.1             | 276            |
| 05  | 468  | 13.66                                 | 17.92 | 80.19 | 0.122 | 0.160 | 0.717 | -9.1                | -65.6          | 66.2             | 262            |
| 06  | 471  | 14.70                                 | 24.41 | 80.73 | 0.122 | 0.203 | 0.673 | -22.2               | -60.9          | 64.8             | 249            |
| 07  | 473  | 15.60                                 | 28.17 | 80.89 | 0.125 | 0.225 | 0.648 | -29.0               | -58.0          | 64.8             | 243            |
| 08  | 475  | 18.32                                 | 36.37 | 81.08 | 0.134 | 0.267 | 0.597 | -42.0               | -51.5          | 66.5             | 230            |
| 09  | 477  | 22.35                                 | 45.10 | 81.16 | 0.150 | 0.303 | 0.546 | -53.0               | -44.5          | 69.2             | 220            |
| 10  | 477C | 22.35                                 | 45.10 | 81.16 | 0.150 | 0.303 | 0.546 | -53.0               | -44.5          | 69.2             | 220            |
| 11  | 479  | 27.82                                 | 53.94 | 81.17 | 0.170 | 0.331 | 0.498 | -60.7               | -37.3          | 71.3             | 211            |
| 12  | 480  | 30.64                                 | 58.21 | 79.19 | 0.182 | 0.346 | 0.471 | -63.9               | -31.9          | 71.5             | 206            |
| 13  | 484  | 25.67                                 | 56.42 | 59.80 | 0.180 | 0.397 | 0.421 | -72.0               | -14.0          | 73.4             | 191            |
| 14  | 492  | 22.50                                 | 56.65 | 38.03 | 0.192 | 0.483 | 0.324 | -80.5               | 7.9            | 80.9             | 174            |
| 15  | 503  | 21.56                                 | 57.40 | 24.28 | 0.208 | 0.555 | 0.235 | -84.7               | 22.2           | 87.6             | 165            |
| 16  | 512G | 22.19                                 | 58.45 | 18.53 | 0.223 | 0.589 | 0.186 | -85.6               | 28.9           | 90.4             | 161            |
| 17  | 521  | 24.28                                 | 60.61 | 13.79 | 0.246 | 0.614 | 0.139 | -85.6               | 35.3           | 92.7             | 157            |
| 18  | 531  | 29.00                                 | 64.47 | 10.07 | 0.280 | 0.622 | 0.097 | -83.2               | 42.2           | 93.3             | 153            |
| 19  | 541  | 41.39                                 | 73.93 | 10.07 | 0.330 | 0.589 | 0.080 | -75.0               | 49.9           | 90.1             | 146            |
| 20  | 563  | 83.41                                 | 92.59 | 5.28  | 0.460 | 0.510 | 0.029 | -15.0               | 69.8           | 71.4             | 102            |
| 21  | 564  | 83.37                                 | 91.09 | 3.82  | 0.467 | 0.510 | 0.021 | -11.5               | 70.0           | 71.0             | 99             |
| 22  | 565  | 83.35                                 | 89.31 | 2.74  | 0.475 | 0.509 | 0.015 | -7.3                | 69.7           | 70.1             | 95             |
| 23  | 565Y | 83.35                                 | 89.31 | 2.74  | 0.475 | 0.509 | 0.015 | -7.3                | 69.7           | 70.1             | 95             |
| 24  | 568  | 82.96                                 | 82.07 | 0.96  | 0.499 | 0.494 | 0.005 | 9.1                 | 65.6           | 66.2             | 82             |
| 25  | 571  | 81.93                                 | 75.58 | 0.44  | 0.518 | 0.478 | 0.002 | 22.2                | 60.8           | 64.8             | 69             |
| 26  | 573  | 81.03                                 | 71.82 | 0.27  | 0.529 | 0.469 | 0.001 | 29.1                | 58.0           | 64.9             | 63             |
| 27  | 577  | 78.31                                 | 63.62 | 0.08  | 0.551 | 0.447 | 0.000 | 42.1                | 51.5           | 66.5             | 50             |
| 28  | 581  | 74.28                                 | 54.89 | 0.01  | 0.575 | 0.424 | 0.000 | 53.1                | 44.5           | 69.3             | 39             |
| 29  | 581R | 74.28                                 | 54.89 | 0.01  | 0.575 | 0.424 | 0.000 | 53.1                | 44.5           | 69.3             | 39             |
| 30  | 587  | 68.81                                 | 46.05 | 0.00  | 0.599 | 0.400 | 0.000 | 60.8                | 37.3           | 71.3             | 31             |
| 31  | 589  | 67.60                                 | 44.04 | 0.93  | 0.600 | 0.391 | 0.008 | 62.6                | 34.8           | 71.6             | 29             |
| 32  | 692  | 70.96                                 | 43.57 | 21.37 | 0.522 | 0.320 | 0.157 | 72.1                | 13.9           | 73.5             | 10             |
| 33  | 697  | 74.12                                 | 43.34 | 43.14 | 0.461 | 0.269 | 0.268 | 80.6                | -7.9           | 81.0             | 354            |
| 34  | 708  | 75.07                                 | 42.59 | 40.00 | 0.430 | 0.244 | 0.325 | 84.8                | -22.3          | 87.7             | 345            |
| 35  | 717M | 74.44                                 | 41.54 | 62.63 | 0.416 | 0.232 | 0.350 | 85.7                | -28.9          | 90.5             | 341            |
| 36  | 726  | 72.35                                 | 39.38 | 67.37 | 0.403 | 0.219 | 0.376 | 85.7                | -35.4          | 92.7             | 337            |
| 37  | 736  | 67.62                                 | 35.52 | 71.08 | 0.388 | 0.203 | 0.438 | 83.2                | -42.2          | 93.4             | 333            |
| 38  | 746  | 55.24                                 | 26.06 | 71.08 | 0.362 | 0.171 | 0.466 | 75.1                | -49.9          | 90.2             | 326            |
| 39  | 823  | 13.22                                 | 7.40  | 75.87 | 0.136 | 0.076 | 0.786 | 15.1                | -69.8          | 71.5             | 282            |

U=D50 96.63 100.00 81.17 0.347 0.359 0.359  $A_m = (a-m) Y$   $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$

$b=P_{m1}-n_1P_0 = -1.0/(0.000x+0.000+1.000z)/y$   $B_m = (b-b_0) Y$   $h_{ABm} = \text{atan}[B_m/A_m]$

DE700-3N

**CIE10 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by hue angle.

| CIE 1931 tristimulus values, chromaticity values, and purities ( $\lambda_n=2.5, \lambda_n=1.9$ ). |      |                                       |       |       |       |       |       |                     |             |             |             |
|----------------------------------------------------------------------------------------------------|------|---------------------------------------|-------|-------|-------|-------|-------|---------------------|-------------|-------------|-------------|
| Normalized Oswald ( <i>O</i> ) tristimulus values ( $x_{100}=1.00$ ), ordered by hue angle.        |      |                                       |       |       |       |       |       |                     |             |             |             |
| no.                                                                                                | O    | tristimulus values and chromaticities |       |       |       |       |       | nu-chromatic values |             |             |             |
|                                                                                                    |      | $\lambda_n$                           | X     | Y     | Z     | x     | y     | $z$                 | $\lambda_n$ | $\lambda_n$ | $\lambda_n$ |
| 00                                                                                                 | 692  | 70.96                                 | 43.57 | 21.37 | 0.522 | 0.320 | 0.157 | 72.1                | 13.9        | 73.5        | 370         |
| 01                                                                                                 | 697  | 74.12                                 | 43.34 | 43.14 | 0.461 | 0.269 | 0.268 | 80.6                | -7.9        | 81.0        | 354         |
| 02                                                                                                 | 708  | 75.07                                 | 42.59 | 56.88 | 0.430 | 0.244 | 0.325 | 84.8                | -22.3       | 87.7        | 345         |
| 03                                                                                                 | 717  | 74.44                                 | 41.54 | 62.63 | 0.416 | 0.232 | 0.350 | 85.7                | -28.9       | 90.5        | 341         |
| 04                                                                                                 | 726  | 72.35                                 | 39.38 | 67.37 | 0.403 | 0.219 | 0.376 | 85.7                | -35.4       | 92.7        | 337         |
| 05                                                                                                 | 736M | 67.62                                 | 35.52 | 71.08 | 0.388 | 0.203 | 0.408 | 83.2                | -42.2       | 93.4        | 333         |
| 06                                                                                                 | 746  | 55.24                                 | 26.06 | 71.08 | 0.362 | 0.171 | 0.466 | 75.1                | -49.9       | 90.2        | 326         |
| 07                                                                                                 | 823  | 13.22                                 | 7.40  | 75.87 | 0.136 | 0.076 | 0.786 | 15.1                | -69.8       | 71.5        | 282         |
| 08                                                                                                 | 460  | 13.26                                 | 8.89  | 77.33 | 0.133 | 0.089 | 0.777 | 11.6                | -70.1       | 71.0        | 279         |
| 09                                                                                                 | 462  | 13.28                                 | 10.68 | 78.42 | 0.129 | 0.104 | 0.765 | 7.4                 | -69.7       | 70.1        | 276         |
| 10                                                                                                 | 462  | 13.28                                 | 10.68 | 78.42 | 0.129 | 0.104 | 0.765 | 7.4                 | -69.7       | 70.1        | 276         |
| 11                                                                                                 | 468  | 13.66                                 | 17.92 | 80.19 | 0.122 | 0.160 | 0.717 | -9.1                | -65.6       | 66.2        | 262         |
| 12                                                                                                 | 471B | 14.70                                 | 24.41 | 80.73 | 0.122 | 0.203 | 0.673 | -22.2               | -60.9       | 64.8        | 249         |
| 13                                                                                                 | 473  | 15.60                                 | 28.17 | 80.89 | 0.125 | 0.225 | 0.648 | -29.0               | -58.0       | 64.8        | 243         |
| 14                                                                                                 | 475  | 18.32                                 | 36.37 | 81.08 | 0.134 | 0.267 | 0.597 | -42.0               | -51.5       | 66.5        | 230         |
| 15                                                                                                 | 477  | 22.35                                 | 45.10 | 81.16 | 0.150 | 0.303 | 0.546 | -53.0               | -44.5       | 69.2        | 220         |
| 16                                                                                                 | 477  | 22.35                                 | 45.10 | 81.16 | 0.150 | 0.303 | 0.546 | -53.0               | -44.5       | 69.2        | 220         |
| 17                                                                                                 | 479  | 27.82                                 | 53.94 | 81.17 | 0.170 | 0.331 | 0.498 | -60.7               | -37.3       | 71.3        | 211         |
| 18                                                                                                 | 480  | 30.64                                 | 58.21 | 79.19 | 0.182 | 0.346 | 0.471 | -63.9               | -31.9       | 71.5        | 206         |
| 19                                                                                                 | 484  | 25.67                                 | 56.42 | 59.80 | 0.180 | 0.397 | 0.421 | -72.0               | -14.0       | 73.4        | 191         |
| 20                                                                                                 | 492  | 22.50                                 | 56.65 | 38.03 | 0.192 | 0.483 | 0.324 | -80.5               | 7.9         | 80.9        | 174         |
| 21                                                                                                 | 503  | 21.56                                 | 57.40 | 24.28 | 0.208 | 0.555 | 0.235 | -84.7               | 22.2        | 87.6        | 165         |
| 22                                                                                                 | 512  | 22.19                                 | 58.45 | 18.53 | 0.223 | 0.589 | 0.186 | -85.6               | 28.9        | 90.4        | 161         |
| 23                                                                                                 | 521G | 24.28                                 | 60.61 | 13.79 | 0.246 | 0.614 | 0.139 | -85.6               | 35.3        | 92.7        | 157         |
| 24                                                                                                 | 531  | 29.00                                 | 64.47 | 10.07 | 0.280 | 0.622 | 0.097 | -83.2               | 42.2        | 93.3        | 153         |
| 25                                                                                                 | 541  | 41.39                                 | 73.93 | 10.07 | 0.330 | 0.589 | 0.080 | -75.0               | 49.9        | 90.1        | 146         |
| 26                                                                                                 | 563  | 83.41                                 | 92.59 | 5.28  | 0.460 | 0.510 | 0.029 | -15.0               | 69.8        | 71.4        | 102         |
| 27                                                                                                 | 564  | 83.37                                 | 91.09 | 3.82  | 0.467 | 0.510 | 0.021 | -11.5               | 70.0        | 71.0        | 99          |
| 28                                                                                                 | 564  | 83.35                                 | 89.31 | 2.74  | 0.475 | 0.509 | 0.015 | -7.3                | 69.7        | 70.1        | 95          |
| 29                                                                                                 | 565  | 83.35                                 | 89.31 | 2.74  | 0.475 | 0.509 | 0.015 | -7.3                | 69.7        | 70.1        | 95          |
| 30                                                                                                 | 568  | 82.96                                 | 82.07 | 0.96  | 0.499 | 0.494 | 0.005 | 9.1                 | 65.6        | 66.2        | 82          |
| 31                                                                                                 | 571  | 81.93                                 | 75.58 | 0.44  | 0.518 | 0.478 | 0.002 | 22.2                | 60.8        | 64.8        | 69          |
| 32                                                                                                 | 573Y | 81.03                                 | 71.82 | 0.27  | 0.529 | 0.469 | 0.001 | 29.1                | 58.0        | 64.9        | 63          |
| 33                                                                                                 | 577  | 78.31                                 | 63.62 | 0.08  | 0.551 | 0.447 | 0.000 | 42.1                | 51.5        | 66.5        | 50          |
| 34                                                                                                 | 581  | 74.28                                 | 54.89 | 0.01  | 0.575 | 0.424 | 0.000 | 53.1                | 44.5        | 69.3        | 39          |
| 35                                                                                                 | 581  | 74.28                                 | 54.89 | 0.01  | 0.575 | 0.424 | 0.000 | 53.1                | 44.5        | 69.3        | 39          |
| 36                                                                                                 | 587R | 68.81                                 | 46.05 | 0.00  | 0.599 | 0.400 | 0.000 | 60.8                | 37.3        | 71.3        | 31          |
| 37                                                                                                 | 589  | 67.60                                 | 44.04 | 0.93  | 0.600 | 0.391 | 0.008 | 62.6                | 34.8        | 71.6        | 29          |
| 38                                                                                                 | 692  | 70.96                                 | 43.57 | 21.37 | 0.522 | 0.320 | 0.157 | 72.1                | 13.9        | 73.5        | 10          |
| 39                                                                                                 | 697  | 74.12                                 | 43.34 | 43.14 | 0.461 | 0.269 | 0.268 | 80.6                | -7.9        | 81.0        | -5          |

U=D50 96.63 100.00 81.17 0.347 0.359 0.359  $A_m = (a-m) Y$   $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$

$b=P_{m1}-n_1P_0 = -1.0/(0.000x+0.000+1.000z)/y$   $B_m = (b-b_0) Y$   $h_{ABm} = \text{atan}[B_m/A_m]$

DE700-7N

DE700-7P  $\text{pchart}=1$   $\text{xcolor}=1$  (CIE10)

**CIE10 tristimulus values, chromatic values, and putities ( $n_1=2.5, n_2=-1.0$ ).**

Normalized Ostwald (O) tristimulus values ( $Y_0=100$ ), ordered by wavelength.

| no. | O    | $\lambda_c$ | n-purities |                 |             |             | nu-purities     |                   |               |               |
|-----|------|-------------|------------|-----------------|-------------|-------------|-----------------|-------------------|---------------|---------------|
|     |      |             | Y          | $p_{\lambda n}$ | $p_{\mu n}$ | $p_{\nu n}$ | $h_{\lambda n}$ | $p_{\lambda \nu}$ | $p_{\mu \nu}$ | $h_{\mu \nu}$ |
| 00  | 376  | 26.06       | 5.29       | -2.72           | 5.96        | 332         | 2.88            | -1.91             | 3.46          | 326           |
| 01  | 376  | 26.06       | 4.46       | -10.25          | 11.18       | 293         | 2.05            | -9.44             | 9.66          | 282           |
| 02  | 460  | 8.89        | 3.72       | -8.68           | 9.45        | 293         | 1.30            | -7.87             | 7.98          | 279           |
| 03  | 462  | 10.68       | 3.10       | -7.34           | 7.97        | 292         | 0.69            | -6.53             | 6.56          | 276           |
| 04  | 462B | 10.68       | 3.10       | -7.34           | 7.97        | 292         | 0.69            | -6.53             | 6.56          | 276           |
| 05  | 468  | 17.92       | 1.90       | -4.47           | 4.86        | 293         | -0.50           | -3.66             | 3.69          | 262           |
| 06  | 471  | 24.41       | 1.50       | -3.30           | 3.63        | 294         | -0.90           | -2.49             | 2.65          | 249           |
| 07  | 473  | 28.17       | 1.38       | -2.87           | 3.18        | 295         | -1.03           | -2.06             | 2.30          | 243           |
| 08  | 475  | 36.37       | 1.25       | -2.22           | 2.56        | 299         | -1.15           | -1.41             | 1.82          | 230           |
| 09  | 477  | 45.10       | 1.23       | -1.79           | 2.18        | 304         | -1.17           | -0.98             | 1.53          | 220           |
| 10  | 477C | 45.10       | 1.23       | -1.79           | 2.18        | 304         | -1.17           | -0.98             | 1.53          | 220           |
| 11  | 479  | 53.94       | 1.28       | -1.50           | 1.98        | 310         | -1.12           | -0.69             | 1.32          | 211           |
| 12  | 480  | 58.21       | 1.31       | -1.36           | 1.89        | 314         | -1.09           | -0.54             | 1.22          | 206           |
| 13  | 484  | 56.42       | 1.13       | -1.05           | 1.55        | 317         | -1.27           | -0.24             | 1.30          | 191           |
| 14  | 492  | 56.65       | 0.99       | -0.67           | 1.19        | 325         | -1.42           | 0.14              | 1.42          | 174           |
| 15  | 503  | 57.40       | 0.93       | -0.42           | 1.02        | 335         | -1.47           | 0.38              | 1.54          | 165           |
| 16  | 512G | 58.05       | 0.85       | -0.31           | 1.00        | 341         | -1.46           | 0.49              | 1.52          | 161           |
| 17  | 520  | 60.61       | 0.80       | -0.22           | 1.02        | 347         | -1.47           | 0.58              | 1.52          | 157           |
| 18  | 531  | 64.47       | 1.12       | -0.15           | 1.13        | 352         | -1.29           | 0.65              | 1.44          | 153           |
| 19  | 541  | 73.93       | 1.39       | -0.13           | 1.40        | 354         | -1.01           | 0.67              | 1.21          | 146           |
| 20  | 563  | 92.59       | 2.25       | -0.05           | 2.28        | 358         | -0.16           | 0.75              | 0.77          | 102           |
| 21  | 564  | 91.09       | 2.28       | 0.04            | 2.28        | 358         | -0.12           | 0.76              | 0.78          | 99            |
| 22  | 565  | 89.31       | 2.33       | -0.03           | 2.33        | 359         | -0.08           | 0.78              | 0.78          | 95            |
| 23  | 565Y | 89.31       | 2.33       | -0.03           | 2.33        | 359         | -0.08           | 0.78              | 0.78          | 95            |
| 24  | 568  | 82.07       | 2.52       | -0.01           | 2.52        | 359         | 0.11            | 0.79              | 0.80          | 82            |
| 25  | 571  | 75.59       | 2.70       | -0.00           | 2.70        | 359         | 0.10            | 0.80              | 0.80          | 79            |
| 26  | 573  | 71.82       | 2.82       | -0.00           | 2.82        | 359         | 0.40            | 0.80              | 0.90          | 63            |
| 27  | 577  | 63.62       | 3.07       | -0.00           | 3.07        | 359         | 0.66            | 0.81              | 0.10          | 50            |
| 28  | 581  | 54.89       | 3.38       | -0.00           | 3.38        | 359         | 0.96            | 0.81              | 1.26          | 39            |
| 29  | 581Y | 54.89       | 3.38       | -0.00           | 3.38        | 359         | 0.96            | 0.81              | 1.26          | 39            |
| 30  | 587  | 46.05       | 3.73       | 0.00            | 3.73        | 0           | 1.32            | 0.81              | 1.54          | 31            |
| 31  | 589  | 44.04       | 3.83       | -0.02           | 3.83        | 359         | 1.42            | 0.79              | 1.62          | 29            |
| 32  | 692  | 43.57       | 4.07       | -0.49           | 4.10        | 353         | 1.65            | 0.32              | 1.68          | 10            |
| 33  | 697  | 43.34       | 4.27       | -0.59           | 4.38        | 346         | 1.86            | -0.18             | 1.86          | 354           |
| 34  | 702  | 41.54       | 4.33       | -0.66           | 4.40        | 346         | 2.02            | -0.35             | 2.05          | 345           |
| 35  | 717M | 41.54       | 4.48       | -1.50           | 4.72        | 341         | 2.06            | -0.69             | 2.17          | 341           |
| 36  | 726  | 39.38       | 4.59       | -1.71           | 4.90        | 339         | 2.17            | -0.89             | 2.35          | 337           |
| 37  | 736  | 35.52       | 4.75       | -2.00           | 5.16        | 337         | 2.34            | -1.18             | 2.62          | 333           |
| 38  | 746  | 26.06       | 5.29       | -2.72           | 5.96        | 332         | 2.88            | -1.91             | 3.46          | 326           |
| 39  | 823  | 7.40        | 4.46       | -10.25          | 11.18       | 293         | 2.05            | -9.44             | 9.66          | 282           |

**CIEF02 tristimulus values, chromatic variables, and putities ( $n_e=2.5$ ,  $n_h=1.0$ ).**

Normalized Ostwald ( $O$ ) tristimulus values ( $Y_e=100$ ), ordered by wavelength.

| no. | O    | C tristimulus values and chromaticities |       |       |       | nu-chromatic values |       |           |           |
|-----|------|-----------------------------------------|-------|-------|-------|---------------------|-------|-----------|-----------|
|     |      | $\lambda_n$                             | $Y$   | $X$   | $x$   | $\lambda_m$         | $B_m$ | $C_{ABm}$ | $h_{ABm}$ |
| 00  | 386  | 51.50                                   | 23.94 | 74.68 | 0.343 | 15.59               | 89.8  | 322       | 71.0      |
| 01  | 386  | 51.50                                   | 23.94 | 74.68 | 0.343 | 15.59               | 89.8  | 322       | 71.0      |
| 02  | 465  | 12.45                                   | 9.58  | 78.25 | 0.123 | 0.95                | 0.80  | 7.9       | -70.3     |
| 03  | 467  | 12.45                                   | 11.64 | 78.87 | 0.120 | 0.113               | 0.766 | 3.0       | -69.3     |
| 04  | 473B | 13.31                                   | 20.43 | 79.83 | 0.117 | 0.179               | 0.702 | -15.9     | -63.0     |
| 05  | 475  | 14.02                                   | 24.19 | 79.97 | 0.118 | 0.204               | 0.676 | -23.2     | -60.0     |
| 06  | 479  | 17.82                                   | 36.91 | 80.16 | 0.132 | 0.273               | 0.594 | -44.4     | -49.8     |
| 07  | 479  | 17.82                                   | 36.91 | 80.16 | 0.132 | 0.273               | 0.594 | -44.4     | -49.8     |
| 08  | 481  | 21.98                                   | 46.03 | 80.19 | 0.148 | 0.310               | 0.541 | -56.0     | -42.3     |
| 09  | 481  | 21.98                                   | 46.03 | 80.19 | 0.148 | 0.310               | 0.541 | -56.0     | -42.3     |
| 10  | 483C | 27.52                                   | 55.03 | 80.21 | 0.169 | 0.338               | 0.492 | -63.8     | -34.9     |
| 11  | 484  | 28.85                                   | 57.21 | 79.07 | 0.174 | 0.346               | 0.478 | -65.7     | -32.7     |
| 12  | 489  | 25.36                                   | 57.41 | 57.70 | 0.180 | 0.402               | 0.411 | -75.0     | -10.5     |
| 13  | 497  | 22.33                                   | 57.50 | 36.81 | 0.191 | 0.492               | 0.315 | -82.7     | 10.4      |
| 14  | 505  | 21.31                                   | 58.03 | 24.30 | 0.205 | 0.559               | 0.234 | -86.6     | 23.3      |
| 15  | 512  | 21.41                                   | 58.69 | 18.79 | 0.216 | 0.593               | 0.190 | -87.9     | 29.4      |
| 16  | 512G | 22.42                                   | 59.91 | 14.10 | 0.232 | 0.621               | 0.146 | -88.3     | 35.1      |
| 17  | 524  | 25.32                                   | 62.97 | 14.10 | 0.247 | 0.615               | 0.137 | -88.5     | 37.6      |
| 18  | 539  | 30.29                                   | 66.55 | 7.57  | 0.290 | 0.637               | 0.072 | -84.7     | 47.1      |
| 19  | 551  | 44.95                                   | 76.05 | 5.53  | 0.355 | 0.601               | 0.043 | -70.9     | 56.9      |
| 20  | 568  | 84.08                                   | 93.45 | 4.02  | 0.463 | 0.514               | 0.022 | -15.0     | 72.7      |
| 21  | 568  | 84.08                                   | 93.45 | 4.02  | 0.463 | 0.514               | 0.022 | -15.0     | 72.7      |
| 22  | 570Y | 84.05                                   | 90.41 | 1.96  | 0.476 | 0.512               | 0.011 | -7.8      | 72.3      |
| 23  | 570Y | 84.00                                   | 88.35 | 1.33  | 0.483 | 0.508               | 0.007 | -2.9      | 71.2      |
| 24  | 573  | 83.15                                   | 79.56 | 0.38  | 0.509 | 0.487               | 0.002 | 16.0      | 65.0      |
| 25  | 575  | 82.44                                   | 75.80 | 0.24  | 0.520 | 0.478               | 0.001 | 23.3      | 62.0      |
| 26  | 580  | 78.64                                   | 63.07 | 0.05  | 0.554 | 0.444               | 0.000 | 44.5      | 51.7      |
| 27  | 580  | 78.64                                   | 63.07 | 0.05  | 0.554 | 0.444               | 0.000 | 44.5      | 51.7      |
| 28  | 585  | 74.48                                   | 53.96 | 0.02  | 0.579 | 0.420               | 0.000 | 56.1      | 44.3      |
| 29  | 590R | 68.94                                   | 44.96 | 0.00  | 0.605 | 0.394               | 0.000 | 63.9      | 36.9      |
| 30  | 592  | 67.61                                   | 42.78 | 1.14  | 0.606 | 0.383               | 0.010 | 65.8      | 34.1      |
| 31  | 694  | 71.10                                   | 42.58 | 22.52 | 0.522 | 0.312               | 0.165 | 75.0      | 12.4      |
| 32  | 702  | 74.12                                   | 42.58 | 43.40 | 0.463 | 0.265               | 0.271 | 82.8      | -8.4      |
| 33  | 710  | 75.15                                   | 41.96 | 55.91 | 0.434 | 0.242               | 0.323 | 86.7      | -21.4     |
| 34  | 717  | 74.14                                   | 40.08 | 66.11 | 0.408 | 0.232               | 0.368 | 88.4      | -33.1     |
| 35  | 726M | 74.04                                   | 40.08 | 66.11 | 0.410 | 0.222               | 0.366 | 88.4      | -33.1     |
| 36  | 729  | 71.14                                   | 37.02 | 66.11 | 0.408 | 0.212               | 0.379 | 88.6      | -35.6     |
| 37  | 744  | 66.16                                   | 33.43 | 72.64 | 0.384 | 0.194               | 0.421 | 84.7      | -45.1     |
| 38  | 756  | 51.50                                   | 23.94 | 74.68 | 0.343 | 0.159               | 0.497 | 71.0      | -55.0     |
| 39  | 825  | 12.38                                   | 6.54  | 76.19 | 0.130 | 0.068               | 0.801 | 75.1      | -70.8     |

$$U=D50 \quad 96.46, 100.00, 82.22, 0.346, 0.358, 0.358 \quad A_m = (a-o)_Y \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2} \\ b=P_m - n_h P_0 = -1.0, (0.000x + 0.000 + 1.000z)/y \quad B_m = (b-b_0)_Y \quad h_{ABm} = \text{atan}[B_m/A_m]$$

DE700-3N

**CIEF02 tristimulus values, chromatic variables, and putities ( $n_e=2.5$ ,  $n_h=1.0$ ).**

Normalized Ostwald ( $O$ ) tristimulus values ( $Y_e=100$ ), ordered by wavelength.

| no. | O    | n-purities  |      |        |       | nu-purities |       |           |           |
|-----|------|-------------|------|--------|-------|-------------|-------|-----------|-----------|
|     |      | $\lambda_n$ | $Y$  | $P_m$  | $P_n$ | $\lambda_m$ | $B_m$ | $C_{ABm}$ | $h_{ABm}$ |
| 00  | 386  | 23.94       | 5.37 | -3.11  | 6.21  | 329         | 2.96  | -2.29     | 3.75      |
| 01  | 386  | 23.94       | 5.37 | -3.11  | 6.21  | 329         | 2.96  | -2.29     | 3.75      |
| 02  | 465  | 9.58        | 2.33 | -8.16  | 8.78  | 291         | 0.82  | -7.34     | 7.39      |
| 03  | 467  | 11.64       | 2.67 | -6.77  | 7.28  | 291         | 0.26  | -5.95     | 5.96      |
| 04  | 473B | 20.43       | 1.62 | -3.90  | 4.23  | 292         | -0.78 | -3.08     | 3.18      |
| 05  | 475  | 24.19       | 1.44 | -3.30  | 3.60  | 293         | -0.96 | -2.48     | 2.66      |
| 06  | 479  | 36.91       | 1.20 | -2.17  | 2.48  | 299         | -1.20 | -1.34     | 1.80      |
| 07  | 479  | 36.91       | 1.20 | -2.17  | 2.48  | 299         | -1.20 | -1.34     | 1.80      |
| 08  | 481  | 46.03       | 1.19 | -1.74  | 2.11  | 304         | -1.21 | -0.92     | 1.52      |
| 09  | 481  | 46.03       | 1.19 | -1.74  | 2.11  | 304         | -1.21 | -0.92     | 1.52      |
| 10  | 483C | 55.03       | 1.25 | -1.45  | 1.92  | 310         | -1.16 | -0.63     | 1.32      |
| 11  | 484  | 57.21       | 1.26 | -1.38  | 1.87  | 312         | -1.15 | -0.56     | 1.27      |
| 12  | 489  | 57.41       | 1.00 | -1.00  | 1.49  | 317         | -1.30 | -0.18     | 1.31      |
| 13  | 497  | 57.50       | 0.97 | -0.64  | 1.16  | 326         | -1.43 | 0.18      | 1.45      |
| 14  | 505  | 58.03       | 0.91 | -0.41  | 1.00  | 335         | -1.49 | 0.40      | 1.54      |
| 15  | 512  | 58.69       | 0.91 | -0.32  | 0.96  | 340         | -1.49 | 0.50      | 1.58      |
| 16  | 512G | 59.91       | 0.93 | -0.23  | 0.96  | 345         | -1.47 | 0.58      | 1.58      |
| 17  | 524  | 62.97       | 1.00 | -0.22  | 1.02  | 347         | -1.40 | 0.59      | 1.52      |
| 18  | 539  | 66.55       | 1.13 | -0.11  | 1.14  | 354         | -1.27 | 0.70      | 1.45      |
| 19  | 551  | 76.05       | 1.47 | -0.07  | 1.47  | 357         | -0.93 | 0.74      | 1.19      |
| 20  | 568  | 93.45       | 2.24 | -0.04  | 2.24  | 358         | -0.16 | 0.77      | 0.79      |
| 21  | 568  | 93.45       | 2.24 | -0.04  | 2.24  | 358         | -0.16 | 0.77      | 0.79      |
| 22  | 570Y | 90.41       | 2.32 | -0.02  | 2.32  | 359         | -0.08 | 0.80      | 0.80      |
| 23  | 570Y | 88.35       | 2.37 | -0.01  | 2.37  | 359         | -0.03 | 0.80      | 0.80      |
| 24  | 573  | 79.56       | 2.61 | -0.00  | 2.61  | 359         | 0.20  | 0.81      | 0.84      |
| 25  | 575  | 75.80       | 2.71 | -0.00  | 2.71  | 359         | 0.30  | 0.81      | 0.87      |
| 26  | 580  | 63.07       | 3.11 | -0.00  | 3.11  | 359         | 0.70  | 0.82      | 1.08      |
| 27  | 580  | 63.07       | 3.11 | -0.00  | 3.11  | 359         | 0.70  | 0.82      | 1.08      |
| 28  | 585  | 53.96       | 3.45 | -0.00  | 3.45  | 359         | 1.03  | 0.82      | 1.32      |
| 29  | 590R | 44.96       | 3.83 | 0.00   | 3.83  | 0           | 1.42  | 0.82      | 1.64      |
| 30  | 592  | 42.78       | 3.95 | -0.02  | 3.95  | 359         | 1.54  | 0.79      | 1.73      |
| 31  | 694  | 42.58       | 4.17 | -0.52  | 4.20  | 352         | 1.76  | 0.29      | 1.78      |
| 32  | 702  | 42.49       | 4.36 | -1.02  | 4.47  | 346         | 1.95  | -0.19     | 1.96      |
| 33  | 710  | 41.96       | 4.47 | -1.33  | 4.67  | 343         | 2.06  | -0.51     | 2.12      |
| 34  | 717  | 41.30       | 4.54 | -1.80  | 4.78  | 341         | 2.13  | -0.82     | 2.23      |
| 35  | 726M | 40.08       | 4.61 | -1.64  | 4.90  | 340         | 2.20  | -0.22     | 2.35      |
| 36  | 729  | 37.02       | 4.80 | -1.78  | 5.12  | 339         | 2.39  | -0.96     | 2.58      |
| 37  | 744  | 33.43       | 4.94 | -2.17  | 5.40  | 336         | 2.53  | -1.35     | 2.87      |
| 38  | 756  | 23.94       | 5.37 | -3.11  | 6.21  | 329         | 2.96  | -2.29     | 3.75      |
| 39  | 825  | 6.54        | 4.73 | -11.64 | 12.57 | 292         | 2.32  | -10.82    | 11.07     |

$$U=D50 \quad 100.00, 24.10, -0.821, 2.547, 341 \quad A_m = (a-o)_Y \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2} \\ b=P_m - n_h P_0 = -1.0, (0.000x + 0.000 + 1.000z)/y \quad B_m = (b-b_0)_Y \quad h_{ABm} = \text{atan}[B_m/A_m]$$

DE700-4N

**CIEF02 tristimulus values, chromatic variables, and putities ( $n_e=2.5$ ,  $n_h=1.0$ ).**

Normalized Ostwald ( $O$ ) tristimulus values ( $Y_e=100$ ), ordered by hue angle.

| no.    | O    | C tristimulus values and chromaticities |        |       |       | nu-chromatic values |                |                  |                  |      |     |
|--------|------|-----------------------------------------|--------|-------|-------|---------------------|----------------|------------------|------------------|------|-----|
|        |      | $\lambda_n$                             | Y      | X     | x     | $\lambda_m$         | B <sub>m</sub> | C <sub>ABm</sub> | h <sub>ABm</sub> |      |     |
| 00     | 592  | 67.61                                   | 42.78  | 1.14  | 0.606 | 0.383               | 0.010          | 65.8             | 34.0             | 74.1 | 387 |
| 01     | 694  | 71.10                                   | 42.58  | 22.52 | 0.522 | 0.312               | 0.165          | 75.0             | 12.4             | 78.1 | 387 |
| 02     | 702  | 74.12                                   | 42.49  | 43.40 | 0.463 | 0.265               | 0.271          | 82.8             | -8.4             | 83.2 | 354 |
| 03     | 710  | 75.15                                   | 41.96  | 55.91 | 0.434 | 0.242               | 0.323          | 86.7             | -21.4            | 89.3 | 346 |
| 04     | 717  | 75.05                                   | 41.30  | 61.43 | 0.422 | 0.232               | 0.345          | 88.0             | -27.2            | 92.2 | 342 |
| 05     | 726M | 74.04                                   | 40.08  | 66.11 | 0.410 | 0.222               | 0.366          | 88.4             | -33.1            | 94.4 | 339 |
| 06     | 729  | 71.14                                   | 37.02  | 66.11 | 0.408 | 0.212               | 0.379          | 88.6             | -35.6            | 95.5 | 338 |
| 07     | 744  | 66.16                                   | 33.43  | 72.64 | 0.384 | 0.194               | 0.421          | 84.7             | -45.1            | 96.0 | 331 |
| 08     | 386  | 51.50                                   | 23.94  | 74.68 | 0.343 | 0.159               | 0.497          | 71.0             | -55.0            | 89.8 | 322 |
| 09     | 460  | 12.38                                   | 6.54   | 76.19 | 0.130 | 0.068               | 0.801          | 15.1             | -75.0            | 72.4 | 282 |
| 10     | 465  | 12.41                                   | 9.58   | 78.25 | 0.123 | 0.095               | 0.780          | 7.9              | -70.3            | 70.8 | 277 |
| 11     | 467  | 12.45                                   | 11.64  | 78.87 | 0.120 | 0.113               | 0.766          | 3.0              | -69.3            | 69.8 | 277 |
| 12     | 473B | 13.31                                   | 20.43  | 79.83 | 0.117 | 0.179               | 0.702          | -15.9            | -63.0            | 65.0 | 255 |
| 13     | 475  | 14.02                                   | 24.19  | 79.97 | 0.118 | 0.204               | 0.676          | -23.2            | -60.0            | 64.4 | 248 |
| 14     | 479  | 17.82                                   | 36.91  | 80.16 | 0.132 | 0.273               | 0.594          | -44.4            | -49.8            | 66.7 | 228 |
| 15     | 479  | 17.82                                   | 36.91  | 80.16 | 0.132 | 0.273               | 0.594          | -44.4            | -49.8            | 66.7 | 228 |
| 16     | 481  | 21.98                                   | 46.03  | 80.19 | 0.148 | 0.310               | 0.541          | -56.0            | -42.3            | 70.2 | 217 |
| 17     | 481  | 21.98                                   | 46.03  | 80.19 | 0.148 | 0.310               | 0.541          | -56.0            | -42.3            | 70.2 | 217 |
| 18     | 483C | 27.52                                   | 55.03  | 80.21 | 0.169 | 0.338               | 0.492          | -63.8            | -34.9            | 72.8 | 208 |
| 19     | 484  | 28.85                                   | 57.21  | 79.07 | 0.174 | 0.346               | 0.478          | -65.7            | -32.0            | 73.1 | 205 |
| 20     | 489  | 25.36                                   | 57.41  | 57.70 | 0.180 | 0.408               | 0.411          | -75.0            | -10.5            | 73.5 | 187 |
| 21     | 497  | 22.33                                   | 57.50  | 36.81 | 0.191 | 0.492               | 0.315          | -82.7            | 10.4             | 83.3 | 177 |
| 22     | 505  | 21.31                                   | 58.03  | 24.30 | 0.205 | 0.559               | 0.234          | -86.6            | 23.3             | 87.7 | 164 |
| 23     | 512G | 22.42                                   | 59.91  | 14.10 | 0.232 | 0.621               | 0.146          | -87.9            | 29.2             | 92.7 | 161 |
| 24     | 521  | 22.42                                   | 59.91  | 14.10 | 0.232 | 0.621               | 0.146          | -88.3            | 35.1             | 95.1 | 158 |
| 25     | 524  | 25.32                                   | 62.97  | 14.10 | 0.247 | 0.615               | 0.137          | -88.5            | 37.6             | 96.1 | 156 |
| 26     | 539  | 30.29                                   | 66.55  | 7.57  | 0.290 | 0.637               | 0.072          | -84.7            | 47.1             | 96.9 | 150 |
| 27     | 551  | 44.95                                   | 76.05  | 5.53  | 0.355 | 0.601               | 0.043          | -70.9            | 56.9             | 91.0 | 141 |
| 28     | 568  | 84.08                                   | 93.45  | 4.02  | 0.463 | 0.514               | 0.022          | -15.0            | 72.7             | 74.3 | 101 |
| 29     | 568  | 84.08                                   | 93.45  | 4.02  | 0.463 | 0.514               | 0.022          | -15.0            | 72.7             | 74.3 | 101 |
| 30     | 570Y | 84.05                                   | 90.41  | 1.96  | 0.476 | 0.512               | 0.011          | -7.8             | 72.3             | 72.7 | 96  |
| 31     | 570Y | 84.00                                   | 88.35  | 1.33  | 0.483 | 0.508               | 0.007          | -2.9             | 71.2             | 71.2 | 92  |
| 32     | 573  | 83.15                                   | 79.56  | 0.38  | 0.509 | 0.487               | 0              | -16.9            | 61.6             | 68.5 | 76  |
| 33     | 575  | 82.44                                   | 75.80  | 0.24  | 0.520 | 0.478               | 0.001          | 23.3             | 62.0             | 66.3 | 69  |
| 34     | 580  | 78.64                                   | 63.07  | 0.05  | 0.554 | 0.444               | 0.000          | 44.5             | 61.1             | 68.3 | 49  |
| 35     | 580  | 78.64                                   | 63.07  | 0.05  | 0.554 | 0.444               | 0.000          | 44.5             | 61.1             | 68.3 | 49  |
| 36     | 585R | 74.48                                   | 53.96  | 0.02  | 0.579 | 0.420               | 0.000          | 56.1             | 44.3             | 71.5 | 38  |
| 37     | 590  | 68.94                                   | 44.96  | 0.00  | 0.605 | 0.394               | 0.000          | 63.9             | 36.9             | 73.8 | 30  |
| 38     | 592  | 67.61                                   | 42.78  | 1.14  | 0.606 | 0.383               | 0.010          | 65.8             | 34.0             | 74.1 | 27  |
| 39     | 694  | 71.10                                   | 42.58  | 22.52 | 0.522 | 0.312               | 0.165          | 75.0             | 12.4             | 76.1 | 9   |
| U=D=50 |      | 96.46                                   | 100.00 | 82.22 | 0.346 | 0.358               | 0.358          | 0.0              | 0.0              | 0.0  | 0   |

**CIEF10 tristimulus values, chromatic variables, and putities ( $n_1=2.5, n_2=1.0$ ).**

Normalized *Oswald* (*O*) tristimulus values ( $Y_n=100$ ), ordered by wavelength.

| no. | O    | C tristimulus values and chromaticities |                 |                 | nu-chromatic values |                 |                 |       |
|-----|------|-----------------------------------------|-----------------|-----------------|---------------------|-----------------|-----------------|-------|
|     |      | $\lambda_n$                             | $X$             | $Y$             | $Z$                 | $x$             | $y$             |       |
|     |      |                                         | $X_{\lambda_n}$ | $Y_{\lambda_n}$ | $Z_{\lambda_n}$     | $x_{\lambda_n}$ | $y_{\lambda_n}$ |       |
| 00  | 380  | 52.92                                   | 25.78           | 74.65           | 0.345               | 0.168           | 0.486           | 69.9  |
| 01  | 385  | 51.14                                   | 26.01           | 74.65           | 0.139               | 0.079           | 0.790           | 16.8  |
| 02  | 400  | 13.28                                   | 9.49            | 77.94           | 0.131               | 0.094           | 0.773           | 10.2  |
| 03  | 462  | 13.30                                   | 11.32           | 78.97           | 0.128               | 0.109           | 0.762           | 5.8   |
| 04  | 464B | 13.34                                   | 13.45           | 79.69           | 0.125               | 0.126           | 0.748           | 0.8   |
| 05  | 468  | 13.69                                   | 18.67           | 80.47           | 0.121               | 0.165           | 0.713           | -10.9 |
| 06  | 471  | 14.73                                   | 25.21           | 80.80           | 0.121               | 0.208           | 0.669           | -24.1 |
| 07  | 472  | 15.63                                   | 28.96           | 80.89           | 0.124               | 0.230           | 0.644           | -30.9 |
| 08  | 475  | 18.33                                   | 37.06           | 80.98           | 0.134               | 0.271           | 0.593           | -43.7 |
| 09  | 477  | 22.39                                   | 45.70           | 81.01           | 0.150               | 0.306           | 0.543           | -54.5 |
| 10  | 477C | 24.94                                   | 50.08           | 81.01           | 0.159               | 0.320           | 0.519           | -58.7 |
| 11  | 479  | 30.58                                   | 58.60           | 78.68           | 0.182               | 0.349           | 0.468           | -65.2 |
| 12  | 479B | 29.07                                   | 56.38           | 80.12           | 0.175               | 0.340           | 0.483           | -63.6 |
| 13  | 484  | 25.63                                   | 56.72           | 79.32           | 0.180               | 0.400           | 0.418           | -73.0 |
| 14  | 492  | 23.27                                   | 56.85           | 36.73           | 0.192               | 0.490           | 0.316           | -81.5 |
| 15  | 503  | 21.57                                   | 57.63           | 22.95           | 0.211               | 0.564           | 0.224           | -85.4 |
| 16  | 511G | 22.30                                   | 58.68           | 17.25           | 0.227               | 0.597           | 0.175           | -86.1 |
| 17  | 521  | 24.56                                   | 60.88           | 12.62           | 0.250               | 0.620           | 0.128           | -85.7 |
| 18  | 532  | 29.89                                   | 65.12           | 9.04            | 0.287               | 0.625           | 0.086           | -82.7 |
| 19  | 545  | 43.82                                   | 74.21           | 6.37            | 0.352               | 0.596           | 0.051           | -69.8 |
| 20  | 563  | 83.59                                   | 93.38           | 6.37            | 0.455               | 0.509           | 0.034           | -16.8 |
| 21  | 564  | 93.45                                   | 90.50           | 3.08            | 0.471               | 0.511           | 0.017           | -10.1 |
| 22  | 565  | 83.43                                   | 88.67           | 2.06            | 0.479               | 0.509           | 0.011           | -5.8  |
| 23  | 566Y | 83.39                                   | 86.54           | 1.34            | 0.486               | 0.505           | 0.007           | -0.7  |
| 24  | 568  | 83.04                                   | 81.32           | 0.56            | 0.503               | 0.493           | 0.003           | 0.9   |
| 25  | 571  | 82.00                                   | 74.78           | 0.23            | 0.522               | 0.476           | 0.001           | 24.1  |
| 26  | 573  | 81.10                                   | 71.03           | 0.14            | 0.532               | 0.466           | 0.000           | 31.0  |
| 27  | 577  | 78.40                                   | 62.93           | 0.05            | 0.554               | 0.445           | 0.000           | 43.8  |
| 28  | 581  | 74.33                                   | 54.29           | 0.02            | 0.577               | 0.421           | 0.000           | 54.5  |
| 29  | 584R | 71.79                                   | 49.91           | 0.01            | 0.589               | 0.410           | 0.000           | 58.8  |
| 30  | 591  | 66.15                                   | 41.39           | 2.33            | 0.602               | 0.376           | 0.021           | 65.3  |
| 31  | 588  | 67.67                                   | 43.61           | 0.91            | 0.603               | 0.388           | 0.008           | 63.7  |
| 32  | 689  | 71.10                                   | 43.27           | 21.71           | 0.522               | 0.317           | 0.159           | 73.1  |
| 33  | 697  | 74.36                                   | 43.14           | 44.30           | 0.459               | 0.266           | 0.273           | 81.5  |
| 34  | 708  | 75.16                                   | 42.36           | 58.08           | 0.428               | 0.241           | 0.330           | 85.4  |
| 35  | 716M | 74.43                                   | 41.31           | 63.78           | 0.414               | 0.230           | 0.355           | 86.1  |
| 36  | 726  | 71.27                                   | 39.11           | 68.41           | 0.401               | 0.217           | 0.380           | 85.8  |
| 37  | 737  | 66.83                                   | 34.86           | 71.99           | 0.384               | 0.200           | 0.414           | 82.8  |
| 38  | 750  | 52.92                                   | 25.78           | 74.65           | 0.345               | 0.168           | 0.486           | 69.9  |
| 39  | 820  | 13.14                                   | 6.61            | 74.65           | 0.139               | 0.070           | 0.790           | 16.8  |

U=D50 96.74 100.00 81.03 0.348 0.360 0.360 (a=a<sub>0</sub>) Y C<sub>ABnn</sub>=[A<sub>2</sub><sup>2</sup>+B<sub>2</sub><sup>2</sup>]<sup>1/2</sup>

b=p<sub>nn</sub>=n<sub>1</sub>p<sub>1</sub>=1.0/(0.000x+0.000+1.000z)/y B<sub>nn</sub>=(b-b<sub>0</sub>) Y h<sub>ABnn</sub>=atan[B<sub>nn</sub>/A<sub>nn</sub>]

**CIEF10 tristimulus values, chromatic variables, and putities ( $n_1=2.5, n_2=1.0$ ).**

Normalized *Oswald* (*O*) tristimulus values ( $Y_n=100$ ), ordered by wavelength.

| no. | O    | C tristimulus values and chromaticities |                 |                 | nu-purities     |                 |                 |        | nu-purities |          |          |
|-----|------|-----------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-------------|----------|----------|
|     |      | $\lambda_n$                             | $X$             | $Y$             | $Z$             | $x$             | $y$             |        | $p_{nn}$    | $p_{nn}$ | $p_{nn}$ |
|     |      |                                         | $X_{\lambda_n}$ | $Y_{\lambda_n}$ | $Z_{\lambda_n}$ | $x_{\lambda_n}$ | $y_{\lambda_n}$ |        | $p_{nn}$    | $p_{nn}$ | $p_{nn}$ |
| 00  | 380  | 25.78                                   | 5.13            | -2.89           | 5.89            | 330             | 2.71            | -2.08  | 3.42        | 322      | 2.71     |
| 01  | 385  | 26.01                                   | 5.14            | -2.89           | 5.89            | 330             | 2.55            | -10.48 | 10.78       | 283      | 2.55     |
| 02  | 400  | 9.49                                    | 3.49            | -8.21           | 8.92            | 293             | 1.08            | -7.40  | 7.48        | 278      | 1.08     |
| 03  | 462  | 11.32                                   | 2.93            | -6.97           | 7.56            | 292             | 0.51            | -6.16  | 6.18        | 274      | 0.51     |
| 04  | 464B | 13.45                                   | 2.47            | -5.92           | 6.42            | 292             | 0.06            | -5.11  | 5.11        | 270      | 0.06     |
| 05  | 468  | 18.67                                   | 1.83            | -4.31           | 4.68            | 293             | -0.58           | -3.50  | 3.54        | 260      | -0.58    |
| 06  | 471  | 25.21                                   | 1.46            | -3.20           | 3.52            | 294             | -0.95           | -2.39  | 2.57        | 248      | -0.95    |
| 07  | 472  | 28.96                                   | 1.34            | -2.79           | 3.10            | 295             | -1.06           | -1.98  | 2.25        | 241      | -1.06    |
| 08  | 475  | 37.06                                   | 1.23            | -2.18           | 2.51            | 299             | -1.18           | -1.37  | 1.81        | 229      | -1.18    |
| 09  | 477  | 45.70                                   | 1.22            | -1.77           | 2.15            | 304             | -1.19           | -0.96  | 1.53        | 218      | -1.19    |
| 10  | 477C | 50.08                                   | 1.24            | -1.61           | 2.04            | 307             | -1.17           | -0.80  | 1.42        | 214      | -1.17    |
| 11  | 479  | 58.60                                   | 1.20            | -1.34           | 1.87            | 314             | -1.11           | -0.53  | 1.23        | 205      | -1.11    |
| 12  | 479B | 56.38                                   | 1.28            | -1.42           | 1.94            | 312             | -1.12           | -0.61  | 1.28        | 208      | -1.12    |
| 13  | 484  | 56.72                                   | 1.12            | -1.04           | 1.53            | 317             | -1.28           | -0.23  | 1.30        | 190      | -1.28    |
| 14  | 492  | 56.85                                   | 0.98            | -0.64           | 1.17            | 326             | -1.43           | 0.16   | 1.44        | 173      | -1.43    |
| 15  | 503  | 57.63                                   | 0.93            | -0.39           | 1.01            | 336             | -1.48           | 0.41   | 1.53        | 164      | -1.48    |
| 16  | 511G | 58.68                                   | 0.95            | -0.29           | 0.99            | 342             | -1.46           | 0.51   | 1.55        | 160      | -1.46    |
| 17  | 521  | 60.88                                   | 1.00            | -0.20           | 0.92            | 348             | -1.40           | 0.60   | 1.53        | 156      | -1.40    |
| 18  | 532  | 65.12                                   | 1.14            | -0.13           | 1.15            | 353             | -1.27           | 0.67   | 1.43        | 152      | -1.27    |
| 19  | 545  | 74.21                                   | 1.47            | -0.08           | 1.47            | 356             | -0.94           | 0.72   | 1.18        | 142      | -0.94    |
| 20  | 563  | 93.38                                   | 2.23            | -0.06           | 2.23            | 358             | -0.17           | 0.74   | 0.76        | 103      | -0.17    |
| 21  | 564  | 90.50                                   | 2.30            | -0.03           | 2.30            | 359             | -0.11           | 0.77   | 0.78        | 98       | -0.11    |
| 22  | 565  | 83.43                                   | 2.32            | -0.06           | 2.32            | 358             | -0.06           | 0.78   | 0.78        | 94       | -0.06    |
| 23  | 566Y | 86.54                                   | 2.40            | -0.01           | 2.40            | 359             | -0.00           | 0.79   | 0.79        | 90       | -0.00    |
| 24  | 568  | 81.32                                   | 2.55            | -0.00           | 2.55            | 359             | 0.13            | 0.80   | 0.81        | 80       | 0.13     |
| 25  | 571  | 74.78                                   | 2.74            | -0.00           | 2.74            | 359             | 0.32            | 0.80   | 0.86        | 68       | 0.32     |
| 26  | 573  | 71.03                                   | 2.85            | -0.00           | 2.85            | 359             | 0.43            | 0.80   | 0.91        | 61       | 0.43     |
| 27  | 577  | 62.93                                   | 3.11            | -0.00           | 3.11            | 359             | 0.69            | 0.80   | 1.06        | 49       | 0.69     |
| 28  | 581  | 54.29                                   | 3.42            | -0.00           | 3.42            | 359             | 1.00            | 0.80   | 1.29        | 38       | 1.00     |
| 29  | 584R | 49.91                                   | 3.59            | -0.00           | 3.59            | 359             | 1.17            | 0.80   | 1.42        | 34       | 1.17     |
| 30  | 591  | 41.39                                   | 3.99            | -0.05           | 3.99            | 359             | 1.57            | 0.75   | 1.74        | 25       | 1.57     |
| 31  | 588  | 43.61                                   | 3.87            | -0.02           | 3.87            | 359             | 1.46            | 0.78   | 1.66        | 28       | 1.46     |
| 32  | 689  | 43.27                                   | 4.10            | -0.50           | 4.13            | 353             | 1.69            | 0.30   | 1.71        | 10       | 1.69     |
| 33  | 697  | 43.14                                   | 4.30            | -1.02           | 4.42            | 346             | 1.89            | -0.21  | 1.90        | 370      | 1.89     |
| 34  | 708  | 42.36                                   | 4.34            | -1.37           | 4.64            | 342             | 2.01            | -0.72  | 2.09        | 344      | 2.01     |
| 35  | 716M | 41.31                                   | 4.50            | -1.54           | 4.76            | 341             | 2.08            | -0.73  | 2.21        | 340      | 2.08     |
| 36  | 726  | 39.11                                   | 4.61            | -1.74           | 4.93            | 339             | 2.19            | -0.93  | 2.38        | 336      | 2.19     |
| 37  | 737  | 34.86                                   | 4.79            | -2.06           | 5.21            | 336             | 2.37            | -1.25  | 2.68        | 332      | 2.37     |
| 38  | 750  | 25.78                                   | 5.13            | -2.89           | 5.89            | 330             | 2.71            | -2.08  | 3.42        | 322      | 2.71     |
| 39  | 820  | 6.61                                    | 4.96            | -11.29          | 12.33           | 293             | 2.55            | -10.48 | 10.78       | 283      | 2.55     |

U=D50 100.00 2.417 -0.810 2.549 341 0.0 0.0 0.0

a=p<sub>nn</sub>=n<sub>1</sub>p<sub>1</sub>=2.5/(1.000x+0.000+0.000z)/y A<sub>nn</sub>=(a-a<sub>0</sub>) Y C<sub>ABnn</sub>=[A<sub>2</sub><sup>2</sup>+B<sub>2</sub><sup>2</sup>]<sup>1/2</sup>

b=p<sub>nn</sub>=n<sub>1</sub>p<sub>1</sub>=1.0/(0.000x+0.000+1.000z)/y B<sub>nn</sub>=(b-b<sub>0</sub>) Y h<sub>ABnn</sub>=atan[B<sub>nn</sub>/A<sub>nn</sub>]

**CIEF10 tristimulus values, chromatic variables, and putities ( $n_1=2.5, n_2=1.0$ ).**

Normalized *Oswald* (*O*) tristimulus values ( $Y_n=100$ ), ordered by hue angle.

| Normalized Ostwald (O) tristimulus values ( $Y_n=100$ ), ordered by hue angle.                                                                         |      |                                         |       |       |       |                     |       |                 |                 |                 |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------|-------|-------|-------|---------------------|-------|-----------------|-----------------|-----------------|-------------------|
| no.                                                                                                                                                    | λ    | C tristimulus values and chromaticities |       |       |       | nu-chromatic values |       |                 |                 |                 |                   |
|                                                                                                                                                        |      | X                                       | Y     | Z     | x     | y                   | z     | $A_{\text{nu}}$ | $B_{\text{nu}}$ | $C_{\text{nu}}$ | $A_{\text{ABnu}}$ |
| 00                                                                                                                                                     | 588  | 67.67                                   | 43.61 | 0.91  | 0.603 | 0.388               | 0.008 | 63.7            | 34.4            | 72.4            | 388               |
| 01                                                                                                                                                     | 689  | 71.10                                   | 43.27 | 21.71 | 0.522 | 0.317               | 0.159 | 73.1            | 13.3            | 74.3            | 370               |
| 02                                                                                                                                                     | 697  | 74.36                                   | 43.14 | 44.30 | 0.459 | 0.266               | 0.273 | 81.5            | -9.3            | 82.1            | 353               |
| 03                                                                                                                                                     | 708  | 75.16                                   | 42.36 | 58.08 | 0.428 | 0.241               | 0.330 | 85.4            | -23.7           | 88.7            | 344               |
| 04                                                                                                                                                     | 716  | 74.43                                   | 41.31 | 63.78 | 0.414 | 0.230               | 0.355 | 86.1            | -30.3           | 91.3            | 340               |
| 05                                                                                                                                                     | 726M | 71.27                                   | 39.11 | 68.41 | 0.401 | 0.217               | 0.380 | 85.8            | -36.7           | 93.3            | 336               |
| 06                                                                                                                                                     | 737  | 66.83                                   | 34.86 | 71.99 | 0.384 | 0.200               | 0.414 | 82.8            | -43.7           | 93.6            | 332               |
| 07                                                                                                                                                     | 380  | 52.92                                   | 25.78 | 74.65 | 0.345 | 0.168               | 0.486 | 69.9            | -57.7           | 88.2            | 325               |
| 08                                                                                                                                                     | 455  | 13.14                                   | 6.61  | 74.65 | 0.139 | 0.070               | 0.790 | 16.8            | -69.2           | 88.5            | 283               |
| 09                                                                                                                                                     | 460  | 13.28                                   | 9.49  | 77.94 | 0.131 | 0.094               | 0.773 | 10.2            | -70.1           | 70.1            | 278               |
| 10                                                                                                                                                     | 462  | 13.30                                   | 11.32 | 78.97 | 0.128 | 0.109               | 0.762 | 5.8             | -69.7           | 70.0            | 274               |
| 11                                                                                                                                                     | 464  | 13.34                                   | 13.45 | 79.69 | 0.125 | 0.126               | 0.748 | 0.8             | -68.7           | 68.7            | 270               |
| 12                                                                                                                                                     | 468B | 13.69                                   | 18.67 | 80.47 | 0.121 | 0.165               | 0.713 | -10.9           | -65.3           | 66.2            | 260               |
| 13                                                                                                                                                     | 471  | 14.73                                   | 25.21 | 80.80 | 0.121 | 0.208               | 0.669 | -24.1           | -60.3           | 65.0            | 248               |
| 14                                                                                                                                                     | 472  | 15.63                                   | 28.96 | 80.89 | 0.124 | 0.230               | 0.644 | -30.9           | -57.4           | 65.2            | 241               |
| 15                                                                                                                                                     | 475  | 18.33                                   | 37.06 | 80.98 | 0.134 | 0.271               | 0.593 | -43.7           | -50.9           | 67.1            | 229               |
| 16                                                                                                                                                     | 477  | 22.39                                   | 45.70 | 81.01 | 0.150 | 0.306               | 0.543 | -54.5           | -43.9           | 70.0            | 218               |
| 17                                                                                                                                                     | 477C | 24.94                                   | 50.08 | 81.01 | 0.159 | 0.320               | 0.519 | -58.7           | -40.4           | 71.3            | 214               |
| 18                                                                                                                                                     | 479  | 30.58                                   | 58.60 | 78.68 | 0.182 | 0.349               | 0.468 | -65.2           | -31.2           | 72.3            | 205               |
| 19                                                                                                                                                     | 479B | 29.07                                   | 56.38 | 80.12 | 0.175 | 0.340               | 0.483 | -63.6           | -33.4           | 72.3            | 208               |
| 20                                                                                                                                                     | 484  | 25.63                                   | 56.72 | 79.32 | 0.180 | 0.400               | 0.418 | -73.0           | -13.2           | 74.2            | 190               |
| 21                                                                                                                                                     | 492  | 23.27                                   | 56.85 | 36.73 | 0.192 | 0.490               | 0.316 | -81.5           | 9.3             | 82.0            | 173               |
| 22                                                                                                                                                     | 503  | 21.57                                   | 57.63 | 22.95 | 0.211 | 0.564               | 0.224 | -85.4           | 23.7            | 88.6            | 164               |
| 23                                                                                                                                                     | 511G | 22.30                                   | 58.68 | 17.25 | 0.227 | 0.597               | 0.175 | -86.1           | 30.2            | 91.2            | 160               |
| 24                                                                                                                                                     | 521  | 24.56                                   | 60.88 | 12.62 | 0.250 | 0.620               | 0.128 | -85.7           | 36.6            | 93.3            | 156               |
| 25                                                                                                                                                     | 532  | 29.89                                   | 65.12 | 9.04  | 0.287 | 0.625               | 0.086 | -82.7           | 43.7            | 93.5            | 152               |
| 26                                                                                                                                                     | 545  | 43.82                                   | 74.21 | 6.37  | 0.352 | 0.596               | 0.051 | -69.8           | 53.7            | 88.1            | 142               |
| 27                                                                                                                                                     | 563  | 83.39                                   | 93.38 | 6.37  | 0.455 | 0.509               | 0.034 | -16.8           | 69.2            | 71.2            | 103               |
| 28                                                                                                                                                     | 564  | 83.45                                   | 90.50 | 3.08  | 0.471 | 0.511               | 0.017 | -10.1           | 70.2            | 70.9            | 98                |
| 29                                                                                                                                                     | 565  | 83.43                                   | 88.67 | 2.06  | 0.479 | 0.509               | 0.011 | -5.8            | 69.7            | 70.0            | 94                |
| 30                                                                                                                                                     | 566  | 83.39                                   | 86.54 | 1.34  | 0.486 | 0.505               | 0.007 | -0.7            | 68.7            | 68.7            | 90                |
| 31                                                                                                                                                     | 567  | 83.04                                   | 81.32 | 0.23  | 0.503 | 0.500               | 0.000 | 0.9             | 65.9            | 66.6            | 80                |
| 32                                                                                                                                                     | 571  | 81.00                                   | 78.00 | 0.23  | 0.513 | 0.476               | 0.001 | 24.1            | 60.3            | 60.0            | 68                |
| 33                                                                                                                                                     | 573  | 81.10                                   | 71.03 | 0.14  | 0.532 | 0.466               | 0.000 | 31.7            | 57.3            | 65.2            | 61                |
| 34                                                                                                                                                     | 577  | 78.40                                   | 62.93 | 0.05  | 0.554 | 0.445               | 0.000 | 43.8            | 50.9            | 67.2            | 49                |
| 35                                                                                                                                                     | 581  | 74.33                                   | 54.29 | 0.02  | 0.577 | 0.421               | 0.000 | 54.5            | 43.9            | 70.0            | 38                |
| 36                                                                                                                                                     | 584R | 71.79                                   | 49.91 | 0.01  | 0.589 | 0.410               | 0.000 | 58.8            | 40.4            | 71.3            | 34                |
| 37                                                                                                                                                     | 591  | 66.15                                   | 41.31 | 2.33  | 0.602 | 0.376               | 0.021 | 65.3            | 31.1            | 72.3            | 25                |
| 38                                                                                                                                                     | 588  | 67.67                                   | 43.61 | 0.91  | 0.603 | 0.388               | 0.008 | 63.7            | 34.4            | 72.4            | 28                |
| 39                                                                                                                                                     | 689  | 71.10                                   | 43.27 | 21.71 | 0.522 | 0.317               | 0.159 | 73.1            | 13.3            | 74.3            | 10                |
| <b>D=50</b> <b>96.74</b> <b>100.00</b> <b>81.03</b> <b>0.348</b> <b>0.360</b> <b>0.360</b> <b>0.00</b> <b>0.00</b> <b>0.00</b> <b>0.00</b> <b>0.00</b> |      |                                         |       |       |       |                     |       |                 |                 |                 |                   |
| $a=P-P_n=2.5[1.000+(0.000+0.000)Y_n]$ $b=A_n-W_n=(a-r_n)$ $Y_n C_{ABnu}=[A^2+B^2+C^2]^{1/2}$                                                           |      |                                         |       |       |       |                     |       |                 |                 |                 |                   |

**R17M** tristimulus values, chromatic values, and putities ( $n_2=2.5, n_3=-1.0$ ).  
Normalized Ostwald (O) tristimulus values ( $Y_n=100$ ), ordered by wavelength.

| no.   | O    | C tristimulus values and chromaticities |        |       |       | nu-chromatic values |       |       |       |
|-------|------|-----------------------------------------|--------|-------|-------|---------------------|-------|-------|-------|
|       |      | $\lambda_n$                             | X      | Y     | Z     | x                   | y     | $A_m$ | $B_m$ |
| 00    | 373  | 50.84                                   | 23.58  | 64.46 | 0.366 | 0.169               | 0.464 | 71.6  | -45.4 |
| 01    | 450  | 16.22                                   | 10.37  | 70.14 | 0.245 | 0.504               | 0.457 | 41.1  | -61.7 |
| 02    | 463  | 19.81                                   | 9.03   | 72.37 | 0.195 | 0.089               | 0.715 | 28.3  | -65.0 |
| 03    | 465  | 19.87                                   | 11.18  | 74.25 | 0.188 | 0.106               | 0.705 | 23.4  | -65.2 |
| 04    | 470B | 20.04                                   | 16.46  | 77.00 | 0.176 | 0.145               | 0.678 | 11.3  | -63.6 |
| 05    | 474  | 20.76                                   | 23.15  | 78.71 | 0.169 | 0.188               | 0.641 | -2.5  | -60.0 |
| 06    | 477  | 22.69                                   | 31.32  | 79.75 | 0.169 | 0.234               | 0.596 | -16.8 | -55.4 |
| 07    | 479  | 24.27                                   | 35.77  | 80.07 | 0.173 | 0.255               | 0.571 | -23.3 | -51.1 |
| 08    | 481  | 28.86                                   | 45.22  | 80.48 | 0.186 | 0.292               | 0.520 | -34.1 | -43.9 |
| 09    | 482  | 30.21                                   | 48.30  | 79.14 | 0.191 | 0.306               | 0.501 | -37.9 | -40.1 |
| 10    | 487C | 26.13                                   | 48.90  | 65.44 | 0.186 | 0.348               | 0.465 | -49.5 | -25.9 |
| 11    | 496  | 20.48                                   | 50.06  | 44.06 | 0.178 | 0.436               | 0.384 | -66.4 | -3.6  |
| 12    | 500  | 20.60                                   | 52.31  | 38.55 | 0.184 | 0.469               | 0.345 | -71.4 | 3.7   |
| 13    | 509  | 19.40                                   | 53.50  | 28.42 | 0.191 | 0.528               | 0.280 | -77.2 | 14.8  |
| 14    | 511  | 21.83                                   | 56.54  | 28.46 | 0.204 | 0.529               | 0.266 | -78.2 | 17.2  |
| 15    | 518  | 24.65                                   | 60.36  | 24.01 | 0.226 | 0.553               | 0.220 | -80.2 | 24.7  |
| 16    | 530G | 29.99                                   | 65.40  | 16.35 | 0.268 | 0.585               | 0.146 | -78.7 | 36.5  |
| 17    | 538  | 43.18                                   | 76.41  | 16.37 | 0.317 | 0.562               | 0.120 | -71.6 | 45.3  |
| 18    | 557  | 74.80                                   | 89.62  | 10.69 | 0.403 | 0.533               | 0.063 | -41.1 | 61.7  |
| 19    | 557  | 74.22                                   | 90.96  | 8.45  | 0.427 | 0.523               | 0.048 | -28.2 | 65.0  |
| 20    | 558  | 74.15                                   | 88.81  | 6.58  | 0.437 | 0.523               | 0.038 | -23.3 | 65.1  |
| 21    | 561  | 73.98                                   | 83.52  | 3.84  | 0.458 | 0.517               | 0.023 | -11.3 | 63.6  |
| 22    | 565  | 73.26                                   | 76.83  | 2.11  | 0.481 | 0.504               | 0.013 | -2.5  | 59.5  |
| 23    | 570Y | 71.33                                   | 68.67  | 1.09  | 0.505 | 0.486               | 0.007 | 16.9  | 54.4  |
| 24    | 572  | 69.75                                   | 64.22  | 0.76  | 0.517 | 0.475               | 0.005 | 23.4  | 51.1  |
| 25    | 578  | 65.16                                   | 54.77  | 0.35  | 0.541 | 0.455               | 0.002 | 34.1  | 43.9  |
| 26    | 581  | 63.81                                   | 51.69  | 1.69  | 0.544 | 0.441               | 0.014 | 38.0  | 40.0  |
| 27    | 600  | 67.89                                   | 51.09  | 15.38 | 0.505 | 0.380               | 0.114 | 49.6  | 25.9  |
| 28    | 705  | 73.42                                   | 47.68  | 42.28 | 0.449 | 0.291               | 0.258 | 71.4  | -3.7  |
| 29    | 714R | 74.62                                   | 46.49  | 52.41 | 0.430 | 0.267               | 0.302 | 77.2  | -14.8 |
| 30    | 716  | 72.19                                   | 43.45  | 52.37 | 0.429 | 0.258               | 0.311 | 78.3  | -17.2 |
| 31    | 723  | 69.37                                   | 39.63  | 56.82 | 0.418 | 0.238               | 0.342 | 80.2  | -24.7 |
| 32    | 735  | 63.43                                   | 34.59  | 64.49 | 0.392 | 0.212               | 0.395 | 78.7  | -36.5 |
| 33    | 743  | 50.84                                   | 23.58  | 64.46 | 0.366 | 0.169               | 0.464 | 71.6  | -45.4 |
| 34    | 815  | 26.22                                   | 10.37  | 70.14 | 0.245 | 0.097               | 0.657 | 41.1  | -61.7 |
| U=D50 |      | 94.03                                   | 100.00 | 80.83 | 0.342 | 0.363               | 0.363 | 0.0   | 0.0   |

$$a=P_m=n_2P_2=2.5[(1.000\times0.000+0.000\times y)/A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_3P_3=-1.0[(0.000\times0.000+1.000\times y)/B_m=(b-b_y) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE700-3N

**R17M** tristimulus values, chromatic values, and putities ( $n_2=2.5, n_3=-1.0$ ).  
Normalized Ostwald (O) tristimulus values ( $Y_n=100$ ), ordered by hue angle.

| no.   | O    | C tristimulus values and chromaticities |        |       |       | nu-chromatic values |       |       |       |
|-------|------|-----------------------------------------|--------|-------|-------|---------------------|-------|-------|-------|
|       |      | $\lambda_n$                             | X      | Y     | Z     | x                   | y     | $A_m$ | $B_m$ |
| 00    | 600  | 67.89                                   | 51.09  | 15.38 | 0.505 | 0.380               | 0.114 | 49.6  | 25.9  |
| 01    | 705  | 73.42                                   | 47.68  | 42.28 | 0.449 | 0.291               | 0.258 | 71.4  | -3.7  |
| 02    | 714  | 74.62                                   | 46.49  | 52.41 | 0.430 | 0.267               | 0.302 | 77.2  | -14.8 |
| 03    | 716  | 72.19                                   | 43.45  | 52.37 | 0.429 | 0.258               | 0.311 | 78.3  | -17.2 |
| 04    | 723  | 69.37                                   | 39.63  | 56.82 | 0.418 | 0.238               | 0.342 | 80.2  | -24.7 |
| 05    | 735M | 63.43                                   | 34.59  | 64.49 | 0.392 | 0.212               | 0.395 | 78.7  | -36.5 |
| 06    | 743  | 50.84                                   | 23.58  | 64.46 | 0.366 | 0.169               | 0.464 | 71.6  | -45.4 |
| 07    | 815  | 26.22                                   | 10.37  | 70.14 | 0.245 | 0.097               | 0.657 | 41.1  | -61.7 |
| 08    | 463  | 19.81                                   | 9.03   | 72.37 | 0.195 | 0.089               | 0.715 | 28.3  | -65.0 |
| 09    | 465  | 19.87                                   | 11.18  | 74.25 | 0.188 | 0.106               | 0.705 | 23.4  | -65.2 |
| 10    | 470  | 20.04                                   | 16.46  | 77.00 | 0.176 | 0.145               | 0.678 | 11.3  | -63.6 |
| 11    | 474  | 20.76                                   | 23.15  | 78.71 | 0.169 | 0.188               | 0.641 | -2.5  | -60.0 |
| 12    | 477B | 22.69                                   | 31.32  | 79.75 | 0.169 | 0.234               | 0.596 | -16.8 | -55.4 |
| 13    | 479  | 24.27                                   | 35.77  | 80.07 | 0.173 | 0.255               | 0.571 | -23.3 | -51.1 |
| 14    | 481  | 28.86                                   | 45.22  | 80.48 | 0.186 | 0.292               | 0.520 | -34.1 | -43.9 |
| 15    | 482  | 30.21                                   | 48.30  | 79.14 | 0.191 | 0.306               | 0.501 | -37.9 | -40.1 |
| 16    | 487  | 26.13                                   | 48.90  | 65.44 | 0.186 | 0.348               | 0.465 | -49.5 | -25.9 |
| 17    | 496  | 20.48                                   | 50.06  | 44.06 | 0.178 | 0.436               | 0.384 | -66.4 | -3.6  |
| 18    | 500C | 20.60                                   | 52.31  | 38.55 | 0.184 | 0.469               | 0.345 | -71.4 | 3.7   |
| 19    | 509  | 19.40                                   | 53.50  | 28.42 | 0.191 | 0.528               | 0.280 | -77.2 | 14.8  |
| 20    | 511  | 21.83                                   | 56.54  | 28.46 | 0.204 | 0.529               | 0.266 | -78.2 | 17.2  |
| 21    | 518  | 24.65                                   | 60.36  | 24.01 | 0.226 | 0.553               | 0.220 | -80.2 | 24.7  |
| 22    | 530  | 29.99                                   | 65.40  | 16.35 | 0.268 | 0.585               | 0.146 | -78.7 | 36.5  |
| 23    | 538G | 43.18                                   | 76.41  | 16.37 | 0.317 | 0.562               | 0.120 | -71.6 | 45.3  |
| 24    | 557  | 74.80                                   | 89.62  | 10.69 | 0.403 | 0.533               | 0.063 | -41.1 | 61.7  |
| 25    | 557  | 74.22                                   | 90.96  | 8.45  | 0.427 | 0.523               | 0.048 | -28.2 | 65.0  |
| 26    | 558  | 74.15                                   | 88.81  | 6.58  | 0.437 | 0.523               | 0.038 | -23.3 | 65.1  |
| 27    | 561  | 73.98                                   | 83.52  | 3.84  | 0.458 | 0.517               | 0.023 | -11.3 | 63.6  |
| 28    | 565  | 73.26                                   | 76.83  | 2.11  | 0.481 | 0.504               | 0.013 | -2.5  | 59.5  |
| 29    | 570  | 71.33                                   | 68.67  | 1.09  | 0.505 | 0.486               | 0.007 | 16.9  | 54.4  |
| 30    | 572  | 69.75                                   | 64.22  | 0.76  | 0.517 | 0.475               | 0.005 | 23.4  | 51.1  |
| 31    | 578  | 65.16                                   | 54.77  | 0.35  | 0.541 | 0.455               | 0.002 | 34.1  | 43.9  |
| 32    | 581Y | 63.81                                   | 51.69  | 1.69  | 0.544 | 0.441               | 0.014 | 38.0  | 40.0  |
| 33    | 600  | 67.89                                   | 51.09  | 15.38 | 0.505 | 0.380               | 0.114 | 49.6  | 25.9  |
| 34    | 705  | 73.42                                   | 47.68  | 42.28 | 0.449 | 0.291               | 0.258 | 71.4  | -3.7  |
| U=D50 |      | 94.03                                   | 100.00 | 80.83 | 0.342 | 0.363               | 0.363 | 0.0   | 0.0   |

$$a=P_m=n_2P_2=2.5[(1.000\times0.000+0.000\times y)/A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_3P_3=-1.0[(0.000\times0.000+1.000\times y)/B_m=(b-b_y) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE700-7R\_pchart=0\_xcolor=4(R17M)

**R17M** tristimulus values, chromatic values, and putities ( $n_2=2.5, n_3=-1.0$ ).  
Normalized Ostwald (O) tristimulus values ( $Y_n=100$ ), ordered by wavelength.

| no.   | O    | n-purities  |       |        |       | nu-purities |          |          |          |
|-------|------|-------------|-------|--------|-------|-------------|----------|----------|----------|
|       |      | $\lambda_n$ | Y     | $P_m$  | $P_n$ | $P_{nn}$    | $P_{nn}$ | $P_{nn}$ | $P_{nn}$ |
| 00    | 373  | 23.58       | 5.39  | -2.73  | 6.04  | 333         | 3.04     | -1.92    | 3.59     |
| 01    | 450  | 10.37       | 3.32  | -6.76  | 9.25  | 313         | 3.97     | -5.95    | 7.15     |
| 02    | 463  | 9.03        | 5.48  | -8.01  | 9.71  | 304         | 3.13     | -7.20    | 7.85     |
| 03    | 465  | 11.18       | 4.44  | -6.64  | 7.99  | 303         | 2.09     | -5.83    | 6.19     |
| 04    | 470B | 16.46       | 3.04  | -4.67  | 5.57  | 303         | 0.69     | -3.86    | 3.92     |
| 05    | 474  | 23.15       | 2.24  | -3.40  | 4.07  | 303         | -0.10    | -2.59    | 2.59     |
| 06    | 477  | 31.32       | 1.81  | -2.54  | 3.12  | 305         | -0.53    | -1.73    | 1.81     |
| 07    | 479  | 35.77       | 1.69  | -2.23  | 2.80  | 307         | -0.65    | -1.43    | 1.57     |
| 08    | 481  | 45.22       | 1.59  | -1.77  | 2.39  | 311         | -0.75    | -0.97    | 1.23     |
| 09    | 482  | 48.30       | 1.56  | -1.63  | 2.26  | 313         | -0.78    | -0.83    | 1.14     |
| 10    | 487C | 48.90       | 1.33  | -1.33  | 1.89  | 314         | -1.01    | -0.53    | 1.14     |
| 11    | 496  | 50.06       | 1.02  | -0.88  | 1.34  | 319         | -1.32    | -0.07    | 1.32     |
| 12    | 500  | 52.31       | 0.98  | -0.73  | 1.22  | 323         | -1.36    | 0.07     | 1.36     |
| 13    | 509  | 53.50       | 0.90  | -0.53  | 1.05  | 329         | -1.44    | 0.27     | 1.46     |
| 14    | 511  | 56.54       | 0.96  | -0.50  | 1.08  | 332         | -1.38    | 0.30     | 1.41     |
| 15    | 518  | 60.36       | 1.02  | -0.39  | 1.09  | 338         | -1.32    | 0.41     | 1.39     |
| 16    | 530G | 65.40       | 1.14  | -0.25  | 1.17  | 347         | -1.20    | 0.55     | 1.32     |
| 17    | 538  | 76.41       | 1.41  | -0.21  | 1.42  | 351         | -0.93    | 0.59     | 1.10     |
| 18    | 553  | 89.62       | 1.89  | -0.11  | 1.89  | 356         | -0.45    | 0.68     | 0.82     |
| 19    | 557  | 90.96       | 2.03  | -0.09  | 2.04  | 357         | -0.31    | 0.71     | 0.77     |
| 20    | 558  | 88.81       | 2.08  | -0.07  | 2.08  | 357         | -0.26    | 0.73     | 0.77     |
| 21    | 561  | 83.52       | 2.21  | -0.04  | 2.21  | 358         | -0.13    | 0.76     | 0.77     |
| 22    | 565  | 76.83       | 2.32  | -0.02  | 2.38  | 360         | 0.03     | 0.78     | 0.78     |
| 23    | 570Y | 68.67       | 2.59  | -0.01  | 2.59  | 359         | 0.24     | 0.79     | 0.82     |
| 24    | 572  | 64.22       | 2.71  | -0.01  | 2.71  | 359         | 0.36     | 0.79     | 0.87     |
| 25    | 578  | 54.77       | 2.97  | -0.00  | 2.97  | 359         | 0.62     | 0.80     | 1.01     |
| 26    | 581  | 51.69       | 3.08  | -0.03  | 3.08  | 359         | 0.73     | 0.77     | 1.06     |
| 27    | 600  | 51.09       | 3.32  | -0.30  | 3.33  | 354         | 0.97     | 0.50     | 1.09     |
| 28    | 705  | 47.68       | 3.84  | -0.88  | 3.95  | 347         | 1.49     | -0.07    | 1.50     |
| 29    | 714R | 46.49       | 4.01  | -1.12  | 4.16  | 344         | 1.66     | -0.31    | 1.69     |
| 30    | 716  | 43.45       | 4.15  | -1.20  | 4.32  | 343         | 1.80     | -0.39    | 1.84     |
| 31    | 723  | 39.63       | 4.37  | -1.43  | 4.60  | 341         | 2.02     | -0.62    | 2.12     |
| 32    | 735  | 34.59       | 4.62  | -1.86  | 4.98  | 338         | 2.27     | -1.05    | 2.51     |
| 33    | 743  | 23.58       | 5.39  | -2.73  | 6.04  | 333         | 3.04     | -1.92    | 3.59     |
| 34    | 815  | 10.37       | 3.32  | -6.76  | 9.25  | 313         | 3.97     | -5.95    | 7.15     |
| U=D50 |      | 100.00      | 2.350 | -0.808 | 2.485 | 341         | 0.0      | 0.0      | 0.0      |

$$a=P_m=n_2P_2=2.5[(1.000\times0.000+0.000\times y)/A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_3P_3=-1.0[(0.000\times0.000+1.000\times y)/B_m=(b-b_y) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE700-1N

**R17M** tristimulus values, chromatic values, and putities ( $n_2=2.5, n_3=-1.0$ ).  
Normalized Ostwald (O) tristimulus values ( $Y_n=100$ ), ordered by hue angle.

|--|

**R17Ms** tristimulus values, chromatic values, and putities ( $n_p=2.5$ ,  $n_h=1.0$ ).

| Normalized Ostwald (O) tristimulus values ( $Y_p=100$ ), ordered by wavelength. |      |                                         |       |       |       |                     |       |       |       |          |          |          |
|---------------------------------------------------------------------------------|------|-----------------------------------------|-------|-------|-------|---------------------|-------|-------|-------|----------|----------|----------|
| no.                                                                             | O    | C tristimulus values and chromaticities |       |       |       | nu-chromatic values |       |       |       |          |          |          |
|                                                                                 |      | $\lambda_n$                             | Y     | X     | Z     | x                   | $A_m$ | $B_m$ | $C_m$ | $A_{Bm}$ | $B_{Bm}$ | $A_{Bm}$ |
| 00                                                                              | 375  | 52.09                                   | 25.14 | 67.62 | 0.359 | 0.173               | 0.466 | 71.3  | -47.2 | 85.5     | 326      | 326      |
| 01                                                                              | 375  | 47.16                                   | 9.33  | 67.62 | 0.260 | 0.089               | 0.649 | 46.0  | -60.0 | 75.6     | 307      | 307      |
| 02                                                                              | 463  | 21.19                                   | 9.55  | 72.48 | 0.205 | 0.092               | 0.702 | 30.5  | -64.7 | 71.6     | 295      | 295      |
| 03                                                                              | 465  | 21.27                                   | 11.71 | 74.36 | 0.198 | 0.109               | 0.692 | 25.7  | -64.8 | 69.7     | 291      | 291      |
| 04                                                                              | 470B | 21.43                                   | 17.01 | 77.11 | 0.185 | 0.147               | 0.667 | 13.7  | -63.3 | 64.8     | 282      | 282      |
| 05                                                                              | 474  | 22.09                                   | 23.68 | 78.83 | 0.177 | 0.190               | 0.632 | -0.2  | -59.6 | 59.6     | 269      | 269      |
| 06                                                                              | 476  | 22.83                                   | 27.59 | 79.42 | 0.175 | 0.212               | 0.611 | -7.5  | -57.0 | 57.5     | 262      | 262      |
| 07                                                                              | 479  | 25.44                                   | 36.25 | 80.19 | 0.179 | 0.255               | 0.565 | -21.3 | -50.8 | 55.1     | 247      | 247      |
| 08                                                                              | 480  | 27.41                                   | 40.88 | 80.43 | 0.184 | 0.274               | 0.540 | -27.2 | -47.3 | 54.6     | 240      | 240      |
| 09                                                                              | 481  | 29.88                                   | 45.66 | 80.60 | 0.191 | 0.292               | 0.516 | -32.3 | -43.8 | 54.3     | 233      | 233      |
| 10                                                                              | 482C | 31.14                                   | 48.71 | 79.26 | 0.195 | 0.306               | 0.498 | -36.3 | -39.8 | 53.9     | 227      | 227      |
| 11                                                                              | 488  | 25.13                                   | 49.09 | 60.78 | 0.186 | 0.363               | 0.450 | -52.2 | -21.0 | 56.3     | 201      | 201      |
| 12                                                                              | 496  | 20.67                                   | 50.20 | 44.12 | 0.179 | 0.436               | 0.383 | -65.9 | -3.4  | 66.0     | 183      | 183      |
| 13                                                                              | 500  | 20.63                                   | 52.39 | 38.61 | 0.184 | 0.469               | 0.345 | -71.2 | 3.7   | 71.3     | 176      | 176      |
| 14                                                                              | 505  | 20.59                                   | 54.04 | 33.36 | 0.190 | 0.500               | 0.308 | -75.1 | 10.3  | 75.9     | 172      | 172      |
| 15                                                                              | 515  | 20.37                                   | 55.82 | 24.00 | 0.203 | 0.557               | 0.239 | -79.8 | 21.1  | 82.6     | 165      | 165      |
| 16                                                                              | 522G | 23.24                                   | 59.39 | 19.95 | 0.226 | 0.578               | 0.194 | -81.1 | 28.1  | 85.8     | 160      | 160      |
| 17                                                                              | 530  | 29.26                                   | 65.19 | 16.37 | 0.264 | 0.588               | 0.147 | -79.6 | 36.3  | 87.5     | 155      | 155      |
| 18                                                                              | 540  | 41.69                                   | 74.85 | 13.32 | 0.321 | 0.576               | 0.102 | -71.2 | 47.2  | 85.4     | 146      | 146      |
| 19                                                                              | 552  | 66.62                                   | 90.66 | 13.33 | 0.390 | 0.531               | 0.078 | -45.9 | 60.0  | 75.6     | 127      | 127      |
| 20                                                                              | 557  | 72.58                                   | 90.44 | 8.47  | 0.423 | 0.527               | 0.049 | -30.5 | 64.7  | 71.5     | 115      | 115      |
| 21                                                                              | 558  | 72.51                                   | 88.28 | 6.59  | 0.433 | 0.527               | 0.039 | -25.6 | 64.8  | 69.7     | 111      | 111      |
| 22                                                                              | 565  | 72.35                                   | 82.98 | 3.84  | 0.454 | 0.521               | 0.024 | -13.6 | 63.3  | 64.7     | 102      | 102      |
| 23                                                                              | 565Y | 71.69                                   | 76.31 | 2.11  | 0.477 | 0.508               | 0.014 | 0.3   | 59.6  | 57.6     | 89       | 89       |
| 24                                                                              | 567  | 70.94                                   | 72.40 | 1.53  | 0.489 | 0.499               | 0.010 | 7.6   | 57.0  | 57.5     | 82       | 82       |
| 25                                                                              | 572  | 68.33                                   | 63.74 | 0.76  | 0.514 | 0.479               | 0.005 | 21.4  | 50.8  | 55.1     | 67       | 67       |
| 26                                                                              | 575  | 66.36                                   | 59.11 | 0.52  | 0.526 | 0.469               | 0.004 | 27.3  | 47.3  | 54.6     | 59       | 59       |
| 27                                                                              | 578  | 63.90                                   | 54.33 | 0.35  | 0.538 | 0.458               | 0.002 | 32.4  | 43.6  | 54.3     | 53       | 53       |
| 28                                                                              | 581  | 62.64                                   | 51.28 | 1.69  | 0.541 | 0.443               | 0.014 | 36.4  | 39.8  | 53.9     | 47       | 47       |
| 29                                                                              | 614R | 68.65                                   | 50.90 | 20.17 | 0.491 | 0.364               | 0.144 | 52.3  | 21.0  | 56.3     | 21       | 21       |
| 30                                                                              | 701  | 73.11                                   | 49.79 | 36.82 | 0.457 | 0.311               | 0.230 | 66.0  | 3.4   | 66.1     | 3        | 3        |
| 31                                                                              | 705  | 73.15                                   | 47.60 | 42.34 | 0.448 | 0.291               | 0.259 | 71.3  | -3.8  | 71.4     | 356      | 356      |
| 32                                                                              | 710  | 47.93                                   | 45.95 | 47.59 | 0.438 | 0.275               | 0.285 | 75.2  | -10.4 | 75.9     | 352      | 352      |
| 33                                                                              | 720  | 73.40                                   | 44.17 | 56.94 | 0.420 | 0.253               | 0.326 | 79.9  | -21.1 | 82.7     | 345      | 345      |
| 34                                                                              | 727M | 70.53                                   | 40.59 | 61.00 | 0.409 | 0.235               | 0.354 | 81.1  | -28.1 | 85.9     | 340      | 340      |
| 35                                                                              | 735M | 64.31                                   | 34.79 | 64.58 | 0.393 | 0.212               | 0.394 | 79.7  | 36.4  | 87.6     | 335      | 335      |
| 36                                                                              | 745  | 52.09                                   | 25.14 | 67.62 | 0.359 | 0.173               | 0.466 | 71.3  | -47.2 | 85.5     | 326      | 326      |
| 37                                                                              | 809  | 27.16                                   | 9.33  | 67.62 | 0.260 | 0.089               | 0.649 | 46.0  | -60.0 | 75.6     | 307      | 307      |
| <b>U=D50 93.78 100.00 80.94 0.341 0.363 0.363 0.0 0.0 0.0 0</b>                 |      |                                         |       |       |       |                     |       |       |       |          |          |          |

$$a^*_{p=m} = n_p \cdot p_p = 2.5 \cdot [(1.000x + 0.000 + 0.000z)/y] \quad A_m = (a^* - a^*_Y) \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2}$$

$$b^*_{p=m} = n_p \cdot p_b = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y] \quad B_m = (b^* - b^*_Y) \quad h_{ABm} = \text{atan}[B_m/A_m]$$

DE700-3N

**R17Ms** tristimulus values, chromatic values, and putities ( $n_p=2.5$ ,  $n_h=1.0$ ).

| Normalized Ostwald (O) tristimulus values ( $Y_p=100$ ), ordered by hue angle. |      |                                         |       |       |       |                     |       |       |       |          |          |          |
|--------------------------------------------------------------------------------|------|-----------------------------------------|-------|-------|-------|---------------------|-------|-------|-------|----------|----------|----------|
| no.                                                                            | O    | C tristimulus values and chromaticities |       |       |       | nu-chromatic values |       |       |       |          |          |          |
|                                                                                |      | $\lambda_n$                             | Y     | X     | Z     | x                   | $A_m$ | $B_m$ | $C_m$ | $A_{Bm}$ | $B_{Bm}$ | $A_{Bm}$ |
| 00                                                                             | 614  | 68.65                                   | 50.90 | 20.17 | 0.491 | 0.364               | 0.144 | 52.3  | 21.0  | 56.3     | 381      | 381      |
| 01                                                                             | 701  | 73.11                                   | 49.79 | 36.82 | 0.457 | 0.311               | 0.230 | 66.0  | 3.4   | 66.1     | 363      | 363      |
| 02                                                                             | 705  | 73.15                                   | 47.60 | 42.34 | 0.448 | 0.291               | 0.259 | 71.3  | -3.8  | 71.4     | 356      | 356      |
| 03                                                                             | 710  | 47.93                                   | 45.95 | 47.59 | 0.438 | 0.275               | 0.285 | 75.2  | -10.4 | 75.9     | 352      | 352      |
| 04                                                                             | 720  | 73.40                                   | 44.17 | 56.94 | 0.420 | 0.253               | 0.326 | 79.9  | -21.1 | 82.7     | 345      | 345      |
| 05                                                                             | 727M | 70.53                                   | 40.59 | 61.00 | 0.409 | 0.235               | 0.354 | 81.1  | -28.1 | 85.9     | 340      | 340      |
| 06                                                                             | 735  | 64.31                                   | 34.79 | 64.58 | 0.393 | 0.212               | 0.394 | 79.7  | 36.4  | 87.6     | 335      | 335      |
| 07                                                                             | 375  | 52.09                                   | 25.14 | 67.62 | 0.359 | 0.173               | 0.466 | 71.3  | -47.2 | 85.5     | 326      | 326      |
| 08                                                                             | 444  | 27.16                                   | 9.33  | 67.62 | 0.260 | 0.089               | 0.649 | 46.0  | -60.0 | 75.6     | 307      | 307      |
| 09                                                                             | 463  | 21.19                                   | 9.55  | 72.48 | 0.205 | 0.092               | 0.702 | 30.5  | -64.7 | 71.6     | 295      | 295      |
| 10                                                                             | 465  | 21.27                                   | 11.71 | 74.36 | 0.198 | 0.109               | 0.692 | 25.7  | -64.8 | 69.7     | 291      | 291      |
| 11                                                                             | 470  | 21.43                                   | 17.01 | 77.11 | 0.185 | 0.147               | 0.667 | 13.7  | -63.3 | 64.8     | 282      | 282      |
| 12                                                                             | 474B | 22.09                                   | 23.68 | 78.83 | 0.177 | 0.190               | 0.632 | -0.2  | -59.6 | 59.6     | 269      | 269      |
| 13                                                                             | 476  | 22.83                                   | 27.59 | 79.42 | 0.175 | 0.212               | 0.611 | -7.5  | -57.0 | 57.5     | 262      | 262      |
| 14                                                                             | 479  | 25.44                                   | 36.25 | 80.19 | 0.179 | 0.255               | 0.565 | -21.3 | -50.8 | 55.1     | 247      | 247      |
| 15                                                                             | 480  | 27.41                                   | 40.88 | 80.43 | 0.184 | 0.274               | 0.540 | -27.2 | -47.3 | 54.6     | 240      | 240      |
| 16                                                                             | 481  | 29.88                                   | 45.66 | 80.60 | 0.191 | 0.292               | 0.516 | -32.3 | -43.8 | 54.3     | 233      | 233      |
| 17                                                                             | 482C | 31.14                                   | 48.71 | 79.26 | 0.195 | 0.306               | 0.498 | -36.3 | -39.8 | 53.9     | 227      | 227      |
| 18                                                                             | 488  | 25.13                                   | 49.09 | 60.78 | 0.186 | 0.363               | 0.450 | -52.2 | -21.0 | 56.3     | 201      | 201      |
| 19                                                                             | 496  | 20.67                                   | 50.20 | 44.12 | 0.179 | 0.436               | 0.383 | -65.9 | -3.4  | 66.0     | 183      | 183      |
| 20                                                                             | 500  | 20.63                                   | 52.39 | 38.61 | 0.184 | 0.469               | 0.345 | -71.2 | 3.7   | 71.3     | 176      | 176      |
| 21                                                                             | 505  | 20.59                                   | 54.04 | 33.36 | 0.190 | 0.500               | 0.308 | -75.1 | 10.3  | 75.9     | 172      | 172      |
| 22                                                                             | 515  | 20.37                                   | 55.82 | 24.00 | 0.203 | 0.557               | 0.239 | -79.8 | 21.1  | 82.6     | 165      | 165      |
| 23                                                                             | 522G | 23.24                                   | 59.39 | 19.95 | 0.226 | 0.578               | 0.194 | -81.1 | 28.1  | 85.8     | 160      | 160      |
| 24                                                                             | 530  | 29.26                                   | 65.19 | 16.37 | 0.264 | 0.588               | 0.147 | -79.6 | 36.3  | 87.5     | 155      | 155      |
| 25                                                                             | 540  | 41.69                                   | 74.85 | 13.32 | 0.321 | 0.576               | 0.102 | -71.2 | 47.2  | 85.4     | 146      | 146      |
| 26                                                                             | 552  | 66.62                                   | 90.66 | 13.33 | 0.390 | 0.531               | 0.078 | -45.9 | 60.0  | 75.6     | 127      | 127      |
| 27                                                                             | 557  | 72.58                                   | 90.44 | 8.47  | 0.423 | 0.527               | 0.049 | -30.5 | 64.7  | 71.5     | 115      | 115      |
| 28                                                                             | 558  | 72.51                                   | 88.28 | 6.59  | 0.433 | 0.527               | 0.039 | -25.6 | 64.8  | 69.7     | 111      | 111      |
| 29                                                                             | 565  | 72.35                                   | 82.98 | 3.84  | 0.454 | 0.521               | 0.024 | -13.6 | 63.3  | 64.7     | 102      | 102      |
| 30                                                                             | 565Y | 71.69                                   | 76.31 | 2.11  | 0.477 | 0.508               | 0.014 | 0.3   | 59.6  | 57.6     | 89       | 89       |
| 31                                                                             | 567  | 70.94                                   | 72.40 | 1.53  | 0.489 | 0.499               | 0.010 | 7.6   | 57.0  | 57.5     | 82       | 82       |
| 32                                                                             | 572Y | 68.33                                   | 63.74 | 0.76  | 0.514 | 0.479               | 0.005 | 21.4  | 50.8  | 55.1     | 67       | 67       |
| 33                                                                             | 575  | 66.36                                   | 59.11 | 0.52  | 0.526 | 0.469               | 0.004 | 27.3  | 47.3  | 54.6     | 59       | 59       |
| 34                                                                             | 578  | 63.90                                   | 54.33 | 0.35  | 0.538 | 0.458               | 0.002 | 32.4  | 43.6  | 54.3     | 53       | 53       |
| 35                                                                             | 581  | 62.64                                   | 51.28 | 1.69  | 0.541 | 0.443               | 0.014 | 36.4  | 39.8  | 53.9     | 47       | 47       |
| 36                                                                             | 614R | 68.65                                   | 50.90 | 20.17 | 0.491 | 0.364               | 0.144 | 52.3  | 21.0  | 56.3     | 21       | 21       |
| 37                                                                             | 701  | 73.11                                   | 49.79 | 36.82 | 0.457 | 0.311               | 0.230 | 66.0  | 3.4   | 66.1     | 3        | 3        |
| <b>U=D50 93.78 100.00 80.94 0.341 0.363 0.363 0.0 0.0 0.0 0</b>                |      |                                         |       |       |       |                     |       |       |       |          |          |          |

$$a^*_{p=m} = n_p \cdot p_p = 2.5 \cdot [(1.000x + 0.000 + 0.000z)/y] \quad A_m = (a^* - a^*_Y) \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2}$$

$$b^*_{p=m} = n_p \cdot p_b = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y] \quad B_m = (b^* - b^*_Y) \quad h_{ABm} = \text{atan}[B_m/A_m]$$

DE700-7R\_pchart=0\_xcolor=5(R17Ms)

**R17Ms** tristimulus values, chromatic values, and putities ( $n_p=2.5$ ,  $n_h=1.0$ ).

| Normalized Ostwald (O) tristimulus values ( $Y_p=100$ ), ordered by wavelength. |      |             |       |        |       |          |             |          |          |          |          |       |       |      |
|---------------------------------------------------------------------------------|------|-------------|-------|--------|-------|----------|-------------|----------|----------|----------|----------|-------|-------|------|
| no.                                                                             | O    | n-purities  |       |        |       |          | nu-purities |          |          |          |          |       |       |      |
|                                                                                 |      | $\lambda_n$ | Y     | $p_m$  | $p_h$ | $h_{32}$ | $p_m$       | $p_{nm}$ | $p_{rh}$ | $h_{32}$ | $h_{31}$ |       |       |      |
| 00                                                                              | 375  | 25.14       | 5.17  | -2.69  | 5.83  | 332      | 2.83        | -1.88    | 3.40     | 326      | 2.83     | -1.88 | 3.40  |      |
| 01                                                                              | 375  | 47.16       | 9.33  | 7.27   | -7.24 | 10.27    | 315         | 4.93     | -6.43    | 8.11     | 307      | 4.93  | -6.43 | 8.11 |
| 02                                                                              | 463  | 9.55        | 5.54  | -7.58  | 9.40  | 306      | 3.20        | -6.78    | 7.49     | 295      | 3.20     | -6.78 | 7.49  |      |
| 03                                                                              | 465  | 11.71       | 4.54  | -6.35  | 7.80  | 305      | 2.19        | -5.54    | 5.96     | 291      | 2.19     | -5.54 | 5.96  |      |
| 04                                                                              | 470B | 17.01       | 3.14  | -4.53  | 5.51  | 304      | 0.80        | -3.72    | 3.81     | 282      | 0.80     | -3.72 | 3.81  |      |
| 05                                                                              | 474  | 23.68       | 2.33  | -3.32  | 4.06  | 305      | -0.01       | -2.51    | 2.51     | 269      | -0.01    | -2.51 | 2.51  |      |
| 06                                                                              | 476  | 27.59       | 2.06  | -2.87  | 3.54  | 305      | -0.27       | -2.06    | 2.08     | 262      | -0.27    | -2.06 | 2.08  |      |
| 07                                                                              | 479  | 36.25       | 1.75  | -2.21  | 2.82  | 308      | -0.58       | -1.40    | 1.52     | 247      | -0.58    | -1.40 | 1.52  |      |
| 08                                                                              | 480  | 48.88       | 1.67  | -1.96  | 2.58  | 310      | -0.66       | -1.15    | 1.33     | 240      | -0.66    | -1.15 | 1.33  |      |
| 09                                                                              | 481  | 45.66       | 1.63  | -1.76  | 2.40  | 312      | -0.70       | -0.95    | 1.18     | 233      | -0.70    | -0.95 | 1.18  |      |
| 10                                                                              | 482C | 48.71       | 1.59  | -1.62  | 2.28  | 314      | -0.74       | -0.81    | 1.10     | 227      | -0.74    | -0.81 | 1.10  |      |
| 11                                                                              | 488  | 49.09       | 1.28  | -1.23  | 1.78  | 315      | -1.15       | -0.42    | 1.14     | 201      | -1.15    | -0.42 | 1.14  |      |
| 12                                                                              | 490  | 52.00       | 1.02  | -0.87  | 1.35  | 319      | -1.31       | -0.06    | 1.31     | 183      | -1.31    | -0.06 | 1.31  |      |
| 13                                                                              | 500  | 50.39       | 0.98  | -0.73  | 1.22  | 323      | -1.35       | 0.07     | 1.36     | 176      | -1.35    | 0.07  | 1.36  |      |
| 14                                                                              | 505  | 54.04       | 0.95  | -0.61  | 1.13  | 327      | -1.39       | 0.19     | 1.40     | 172      | -1.39    | 0.19  | 1.40  |      |
| 15                                                                              | 515  | 55.82       | 0.91  | -0.42  | 1.00  | 334      | -1.43       | 0.37     | 1.48     | 165      | -1.43    | 0.37  | 1.48  |      |
| 16                                                                              | 522G | 59.39       | 0.97  | -0.33  | 1.03  | 341      | -1.36       | 0.47     | 1.44     | 160      | -1.36    | 0.47  | 1.44  |      |
| 17                                                                              | 530  | 65.19       | 1.12  | -0.25  | 1.14  | 347      | -1.22       | 0.55     | 1.34     | 155      | -1.22    | 0.55  | 1.34  |      |
| 18                                                                              | 540  | 74.85       | 1.39  | -0.17  | 1.40  | 352      | -0.95       | 0.63     | 1.14     | 146      | -0.95    | 0.63  | 1.14  |      |
| 19                                                                              | 552  | 90.66       | 1.83  | -0.14  | 1.84  | 355      | -0.50       | 0.66     | 1.83     | 127      | -0.50    | 0.66  | 1.83  |      |
| 20                                                                              | 557  | 90.44       | 2.00  | -0.09  | 2.00  | 357      | -0.33       | 0.71     | 0.79     | 115      | -0.33    | 0.71  | 0.79  |      |
| 21                                                                              | 558  | 88.28       | 2.05  | -0.07  | 2.05  | 357      | -0.29       | 0.73     | 0.79     | 111      | -0.29    | 0.73  | 0.79  |      |
| 22                                                                              | 561  | 82.98       | 2.17  | -0.02  | 2.18  | 358      | -0.06       | 0.76     | 0.78     | 102      | -0.06    | 0.76  | 0.78  |      |
| 23                                                                              | 565Y | 79.24       | 2.30  | 0.02   | 2.35  | 359      | 0.00        | 0.78     | 0.78     | 89       | 0.00     | 0.78  | 0.78  |      |
| 24                                                                              | 567  | 72.40       | 2.44  | 0.02   | 2.45  | 359      | 0.10        | 0.78     | 0.79     | 82       | 0.10     | 0.78  | 0.79  |      |
| 25                                                                              | 572  | 63.74       | 2.68  | -0.01  | 2.68  | 359      | 0.33        | 0.79     | 0.86     | 67       | 0.33     | 0.79  | 0.86  |      |
| 26                                                                              | 575  | 59.11       | 2.80  | -0.00  | 2.80  | 359      | 0.46        | 0.80     | 0.92     | 59       | 0.46     | 0.80  | 0.92  |      |
| 27                                                                              | 578  | 54.33       | 2.94  | -0.00  | 2.94  | 359      | 0.59        | 0.80     | 1.00     | 53       | 0.59     | 0.80  | 1.00  |      |
| 28                                                                              | 581  | 51.28       | 3.05  | -0.03  | 3.05  | 359      | 0.70        | 0.77     | 1.05     | 47       | 0.70     | 0.77  | 1.05  |      |
| 29                                                                              | 614R | 50.90       | 3.37  | -0.39  | 3.39  | 353      | 1.02        | 0.41     | 1.10     | 21       | 1.02     | 0.41  | 1.10  |      |
| 30                                                                              | 701  | 49.79       | 3.67  | -0.73  | 3.74  | 348      | 1.32        | 0.06     | 1.32     | 3        | 1.32     | 0.06  | 1.32  |      |
| 31                                                                              | 705  | 47.60       | 3.84  | -0.88  | 3.94  | 346      | 1.49        | -0.08    | 1.50     | 356      | 1.49     | -0.08 | 1.50  |      |
| 32                                                                              | 710  | 45.95       | 3.98  | -1.03  | 4.11  | 345      | 1.63        | -0.22    | 1.65     | 352      | 1.63     | -0.22 | 1.65  |      |
| 33                                                                              | 720  | 44.17       | 4.15  | -1.28  | 4.34  | 342      | 1.81        | -0.47    | 1.87     | 345      | 1.81     | -0.47 | 1.87  |      |
| 34                                                                              | 730  | 42.50       | 4.35  | -1.50  | 4.55  | 340      | 1.99        | -0.69    | 1.99     | 335      | 1.99     | -0.69 | 1.99  |      |
| 35                                                                              | 735M | 34.79       | 4.63  | -1.85  | 4.99  | 338      | 2.29        | -1.04    | 2.52     | 333      | 2.29     | -1.04 | 2.52  |      |
| 36                                                                              | 745  | 25.14       | 5.17  | -2.69  | 5.83  | 332      | 2.83        | -1.88    | 3.40     | 326      | 2.83     | -1.88 | 3.40  |      |
| 37                                                                              | 809  | 9.33        | 7.27  | -7.24  | 10.27 | 315      | 4.93        | -6.43    | 8.11     | 307      | 4.93     | -6.43 | 8.11  |      |
| U=D50                                                                           |      | 100,00      | 2,343 | -0,809 | 2,479 | 340      | 0,0         | 0,0      | 0,0      | 0        | 0,0      | 0,0   | 0,0   |      |