



# Photometric test report

|  |   |  |
|--|---|--|
| <b>Family</b><br><b>Licross® 21 Protected</b>                                    | <b>Order number: 52TD12DN4E5M3C</b><br><b>EAN: 4058352907795</b>  | <b>LP number</b><br><b>58523_189</b>             |
|  | <b>Version</b> prismatic cover, frosted, wide distribution<br><b>Lamps</b> LED 4000 K   CRI ≥ 80<br><b>Controlgear</b> ECG-DALI<br><b>Setting</b> AC-mode<br><b>Rated values</b> Net luminous flux = 14690 lm<br>Power consumption = 88.7 W<br>Luminous efficacy = 165.6 lm/W | <b>serial documentation</b><br><b>17.08.2023</b> |
|  |    |  |

**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 630 cd/klm**



| Classifications |                                   |
|-----------------|-----------------------------------|
| DIN 5040        | A 5 1                             |
| CIE             | N1=70 N2=91 N3=97<br>N4=98 N5=100 |

| Luminaire light output ratios |        |
|-------------------------------|--------|
| $\eta_{LB}$                   | 100.0% |
| $\phi_u$                      | 98.3%  |
| $\phi_o$                      | 1.7%   |

| Measurement conditions    |
|---------------------------|
| DIN EN 13032 and DIN 5032 |

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| Table of values for luminous intensities |  | Maximum luminous intensity    |
|  |  | <b>siteco</b>                 |

| C-planes<br>$\gamma$         | 0°<br>180° | 15°                  | 30°                  | 45°                  | 60°                  | 75°                  | 90°<br>270° | Phi-zone                | Total<br>Phi-zone |
|------------------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------------------------|-------------------|
|                              |            | 165°<br>195°<br>345° | 150°<br>210°<br>330° | 135°<br>225°<br>315° | 120°<br>240°<br>300° | 105°<br>255°<br>285° |             |                         |                   |
| Luminous intensity in cd/klm |            |                      |                      |                      |                      |                      |             | Luminous flux in lm/klm |                   |
| 0°                           | 568.0      | 568.0                | 568.0                | 568.0                | 568.0                | 568.0                | 568.0       | 3.4                     | 3.4               |
| 5°                           | 570.0      | 568.0                | 563.9                | 564.4                | 565.6                | 564.2                | 564.6       | 27.0                    | 30.4              |
| 10°                          | 575.1      | 572.9                | 563.4                | 557.9                | 553.3                | 549.0                | 548.2       | 53.3                    | 83.7              |
| 15°                          | 590.1      | 586.0                | 566.8                | 548.5                | 532.2                | 519.9                | 516.5       | 78.2                    | 161.9             |
| 20°                          | 611.6      | 603.6                | 568.7                | 531.0                | 496.5                | 471.9                | 464.3       | 100.3                   | 262.2             |
| 25°                          | 630.0      | 617.6                | 564.2                | 499.9                | 441.6                | 401.0                | 387.5       | 117.1                   | 379.3             |
| 30°                          | 598.0      | 589.4                | 536.5                | 452.4                | 368.0                | 311.9                | 293.8       | 123.5                   | 502.8             |
| 35°                          | 487.1      | 490.1                | 463.2                | 383.1                | 284.6                | 222.1                | 203.0       | 114.7                   | 617.4             |
| 40°                          | 351.1      | 360.8                | 359.1                | 297.2                | 205.7                | 150.3                | 134.3       | 94.9                    | 712.3             |
| 45°                          | 241.7      | 250.7                | 257.1                | 211.9                | 140.4                | 100.6                | 89.9        | 72.8                    | 785.1             |
| 50°                          | 168.3      | 174.0                | 178.9                | 144.5                | 94.4                 | 69.8                 | 63.7        | 54.4                    | 839.5             |
| 55°                          | 118.9      | 121.8                | 123.3                | 97.4                 | 64.6                 | 50.4                 | 47.5        | 40.5                    | 880.0             |
| 60°                          | 85.1       | 85.8                 | 84.4                 | 66.1                 | 45.7                 | 37.4                 | 36.1        | 30.1                    | 910.0             |
| 65°                          | 63.8       | 62.6                 | 58.2                 | 45.7                 | 33.4                 | 28.1                 | 27.2        | 22.6                    | 932.7             |
| 70°                          | 50.4       | 47.7                 | 40.8                 | 32.1                 | 24.8                 | 20.7                 | 19.9        | 17.3                    | 949.9             |
| 75°                          | 41.3       | 37.6                 | 29.5                 | 22.7                 | 17.9                 | 14.5                 | 13.5        | 13.2                    | 963.2             |
| 80°                          | 34.0       | 30.0                 | 21.9                 | 15.9                 | 12.4                 | 9.4                  | 8.0         | 10.0                    | 973.1             |
| 85°                          | 27.2       | 23.7                 | 16.4                 | 11.2                 | 8.0                  | 5.3                  | 3.6         | 7.3                     | 980.4             |
| 90°                          | 20.7       | 17.9                 | 12.0                 | 7.4                  | 4.6                  | 2.2                  | 0.4         | 5.0                     | 985.4             |
| 95°                          | 16.6       | 14.7                 | 10.2                 | 6.3                  | 3.6                  | 1.3                  | 0.3         | 4.0                     | 989.4             |
| 100°                         | 13.2       | 11.9                 | 8.5                  | 5.2                  | 2.7                  | 0.8                  | 0.3         | 3.2                     | 992.6             |
| 105°                         | 10.4       | 9.5                  | 6.9                  | 4.1                  | 1.9                  | 0.4                  | 0.3         | 2.5                     | 995.1             |
| 110°                         | 8.2        | 7.4                  | 5.5                  | 3.1                  | 1.2                  | 0.3                  | 0.3         | 1.9                     | 997.0             |
| 115°                         | 6.5        | 5.8                  | 4.2                  | 2.2                  | 0.7                  | 0.4                  | 0.4         | 1.4                     | 998.4             |
| 120°                         | 4.9        | 4.3                  | 3.0                  | 1.4                  | 0.6                  | 0.5                  | 0.5         | 1.0                     | 999.4             |
| 125°                         | 3.5        | 3.0                  | 2.0                  | 0.9                  | 0.6                  | 0.5                  | 0.5         | 0.7                     | 1000.0            |
| 130°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 135°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 140°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 145°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 150°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 155°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 160°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 165°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 170°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 175°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 180°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |

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|--|--|-------------------------------|

|                  |                      |               |
|------------------|----------------------|---------------|
| <b>UGR-Table</b> | <b>Standard room</b> | <b>siteco</b> |
|------------------|----------------------|---------------|

|                              |                     |      |      |      |      |                    |      |      |      |      |      |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| Reflection factor of ceiling | 0.7                 | 0.7  | 0.5  | 0.5  | 0.3  | 0.7                | 0.7  | 0.5  | 0.5  | 0.3  |      |
| Reflection factor of walls   | 0.5                 | 0.3  | 0.5  | 0.3  | 0.3  | 0.5                | 0.3  | 0.5  | 0.3  | 0.3  |      |
| Reflection factor of floor   | 0.2                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.2                | 0.2  | 0.2  | 0.2  | 0.2  |      |
| Room dimensions              | View crosswise (C0) |      |      |      |      | View endwise (C90) |      |      |      |      |      |
| x                            | y                   |      |      |      |      |                    |      |      |      |      |      |
| 2H                           | 2H                  | 23.3 | 24.8 | 23.7 | 25.1 | 25.4               | 19.1 | 20.6 | 19.5 | 20.9 | 21.2 |
|                              | 3H                  | 23.9 | 25.2 | 24.3 | 25.5 | 25.9               | 19.6 | 20.9 | 19.9 | 21.2 | 21.6 |
|                              | 4H                  | 24.3 | 25.4 | 24.6 | 25.8 | 26.2               | 19.8 | 21.0 | 20.1 | 21.3 | 21.7 |
|                              | 6H                  | 24.7 | 25.7 | 25.1 | 26.1 | 26.5               | 19.9 | 21.0 | 20.3 | 21.4 | 21.8 |
|                              | 8H                  | 25.0 | 25.9 | 25.4 | 26.3 | 26.7               | 20.0 | 21.0 | 20.4 | 21.4 | 21.8 |
|                              | 12H                 | 25.2 | 26.1 | 25.6 | 26.4 | 26.9               | 20.0 | 21.0 | 20.5 | 21.4 | 21.8 |
| 4H                           | 2H                  | 23.3 | 24.6 | 23.7 | 24.9 | 25.3               | 19.8 | 21.0 | 20.2 | 21.3 | 21.7 |
|                              | 3H                  | 24.1 | 25.1 | 24.5 | 25.5 | 25.9               | 20.4 | 21.4 | 20.8 | 21.8 | 22.2 |
|                              | 4H                  | 24.5 | 25.4 | 25.0 | 25.9 | 26.3               | 20.6 | 21.5 | 21.1 | 21.9 | 22.4 |
|                              | 6H                  | 25.1 | 25.9 | 25.6 | 26.3 | 26.8               | 20.8 | 21.6 | 21.3 | 22.1 | 22.5 |
|                              | 8H                  | 25.4 | 26.1 | 25.9 | 26.6 | 27.0               | 20.9 | 21.7 | 21.4 | 22.1 | 22.6 |
|                              | 12H                 | 25.8 | 26.4 | 26.3 | 26.8 | 27.3               | 21.0 | 21.6 | 21.5 | 22.1 | 22.6 |
| 8H                           | 4H                  | 24.5 | 25.3 | 25.0 | 25.7 | 26.2               | 20.9 | 21.6 | 21.4 | 22.1 | 22.6 |
|                              | 6H                  | 25.2 | 25.8 | 25.7 | 26.3 | 26.8               | 21.3 | 21.8 | 21.8 | 22.3 | 22.8 |
|                              | 8H                  | 25.6 | 26.1 | 26.1 | 26.6 | 27.1               | 21.4 | 21.9 | 21.9 | 22.4 | 22.9 |
|                              | 12H                 | 26.1 | 26.5 | 26.6 | 27.0 | 27.6               | 21.5 | 22.0 | 22.0 | 22.5 | 23.0 |
| 12H                          | 4H                  | 24.5 | 25.2 | 25.0 | 25.6 | 26.1               | 21.1 | 21.6 | 21.5 | 22.1 | 22.6 |
|                              | 6H                  | 25.2 | 25.7 | 25.7 | 26.2 | 26.7               | 21.4 | 21.9 | 21.9 | 22.4 | 22.9 |
|                              | 8H                  | 25.6 | 26.1 | 26.2 | 26.6 | 27.1               | 21.6 | 22.0 | 22.1 | 22.5 | 23.0 |

|                        |   |                                      |                 |                   |                     |
|------------------------|---|--------------------------------------|-----------------|-------------------|---------------------|
| <b>Luminance table</b> | <b>Max. for <math>\gamma \geq 65^\circ</math></b> | <b>Photometric dimensions in mm:</b> | <b>L = 1480</b> | <b>H(C0) = 13</b> | <b>H(C180) = 13</b> |
|                        |   |                                      | <b>B = 78</b>   | <b>H(C90) = 0</b> | <b>H(C270) = 0</b>  |

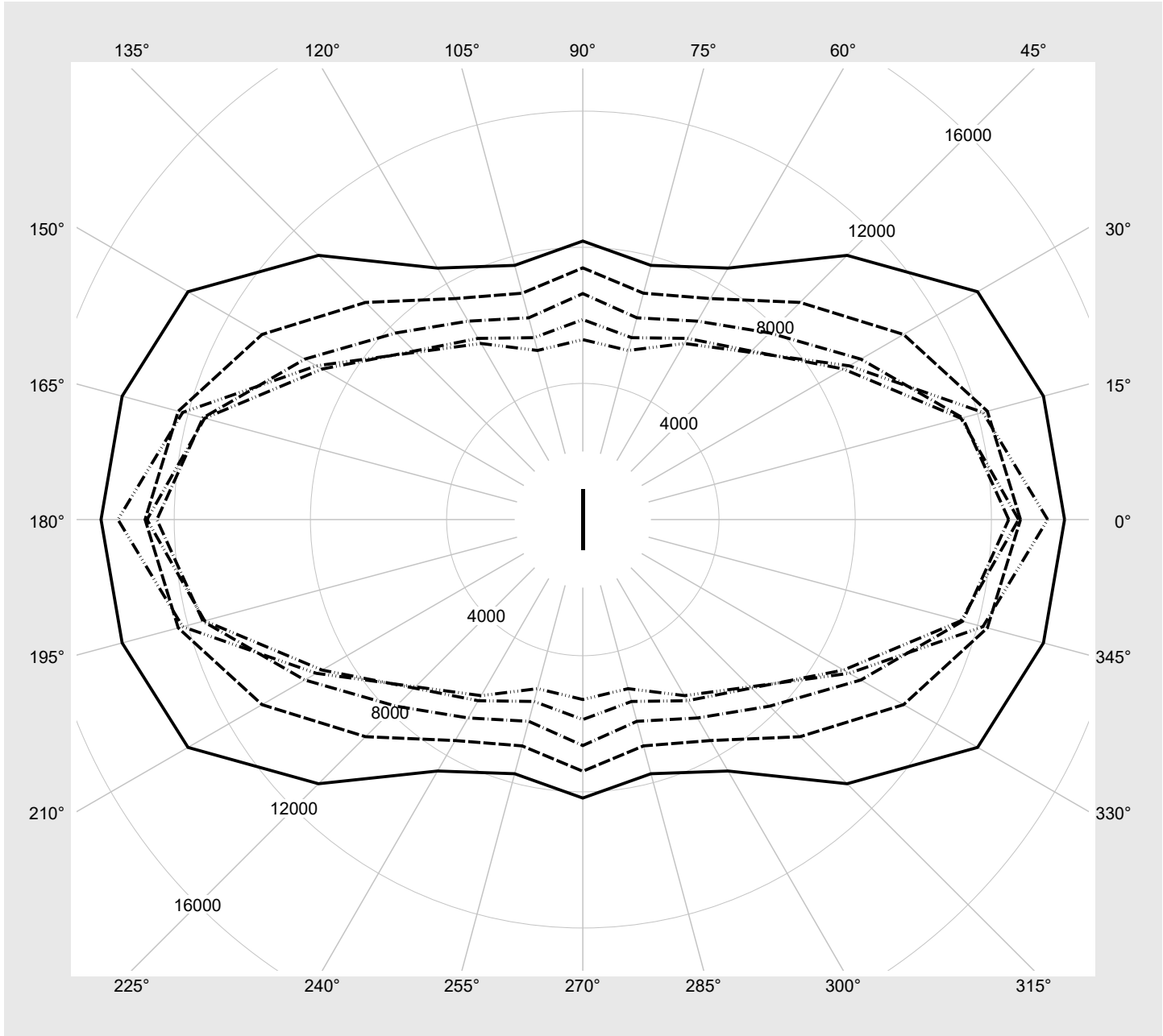
| C-planes | $\gamma$ | Luminance in cd/m <sup>2</sup> |                             |                             |                             |                             |                             |             |  |
|----------|----------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
|          |          | 0°<br>180°                     | 15°<br>165°<br>195°<br>345° | 30°<br>150°<br>210°<br>330° | 45°<br>135°<br>225°<br>315° | 60°<br>120°<br>240°<br>300° | 75°<br>105°<br>255°<br>285° | 90°<br>270° |  |
| 45°      |          | 37284.5                        | 38854.0                     | 40438.1                     | 34107.6                     | 23321.4                     | 17356.4                     | 16184.7     |  |
| 50°      |          | 27798.9                        | 28905.2                     | 30226.8                     | 25083.2                     | 16996.9                     | 13133.6                     | 12614.0     |  |
| 55°      |          | 21303.3                        | 21978.8                     | 22688.0                     | 18492.7                     | 12805.1                     | 10526.7                     | 10543.6     |  |
| 60°      |          | 16805.3                        | 17083.8                     | 17179.5                     | 13975.4                     | 10160.7                     | 8852.0                      | 9177.9      |  |
| 65°      |          | 14149.1                        | 14006.1                     | 13388.8                     | 10976.9                     | 8531.1                      | 7731.4                      | 8182.5      |  |
| 70°      |          | 12854.7                        | 12300.6                     | 10877.6                     | 9022.5                      | 7497.2                      | 6884.6                      | 7394.7      |  |
| 75°      |          | 12509.2                        | 11548.6                     | 9428.0                      | 7754.9                      | 6731.0                      | 6136.8                      | 6639.4      |  |
| 80°      |          | 12799.7                        | 11498.2                     | 8843.8                      | 7001.5                      | 6146.3                      | 5532.7                      | 5875.7      |  |
| 85°      |          | 13652.6                        | 12164.8                     | 9034.3                      | 6949.9                      | 5973.3                      | 5143.8                      | 5286.9      |  |

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**Luminance values in cd/m<sup>2</sup>**

γ 65°
γ 70°
γ 75°
γ 80°
γ 85°



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|                             |                                 |               |
|-----------------------------|---------------------------------|---------------|
| <b>Dimming levels table</b> | environmental temperature: 25°C | <b>sITeco</b> |
|-----------------------------|---------------------------------|---------------|

| Luminous flux % | Dimming level linear | Dimming level logarithmic | Luminous flux [lm] | Power consumption [W] |
|-----------------|----------------------|---------------------------|--------------------|-----------------------|
| 100             | 254                  | 254                       | 14690              | 88.7                  |
| 95              | 240                  | 252                       | 13945              | 83.9                  |
| 90              | 227                  | 250                       | 13245              | 79.6                  |
| 85              | 213                  | 248                       | 12484              | 74.9                  |
| 80              | 200                  | 245                       | 11771              | 70.6                  |
| 75              | 186                  | 243                       | 10993              | 66.0                  |
| 70              | 173                  | 240                       | 10264              | 61.8                  |
| 65              | 160                  | 237                       | 9527               | 57.5                  |
| 60              | 148                  | 234                       | 8841               | 53.6                  |
| 55              | 135                  | 231                       | 8094               | 49.3                  |
| 50              | 122                  | 227                       | 7340               | 45.2                  |
| 45              | 110                  | 223                       | 6637               | 41.3                  |
| 40              | 97                   | 219                       | 5869               | 37.1                  |
| 35              | 85                   | 214                       | 5155               | 33.3                  |
| 30              | 72                   | 208                       | 4378               | 29.3                  |
| 25              | 60                   | 201                       | 3654               | 25.4                  |
| 20              | 48                   | 193                       | 2925               | 21.7                  |
| 15              | 36                   | 182                       | 2191               | 17.9                  |
| 10              | 24                   | 168                       | 1457               | 14.1                  |
| 5               | 12                   | 142                       | 715                | 10.4                  |
| 1               | 4                    | 102                       | 217                | 8.1                   |