
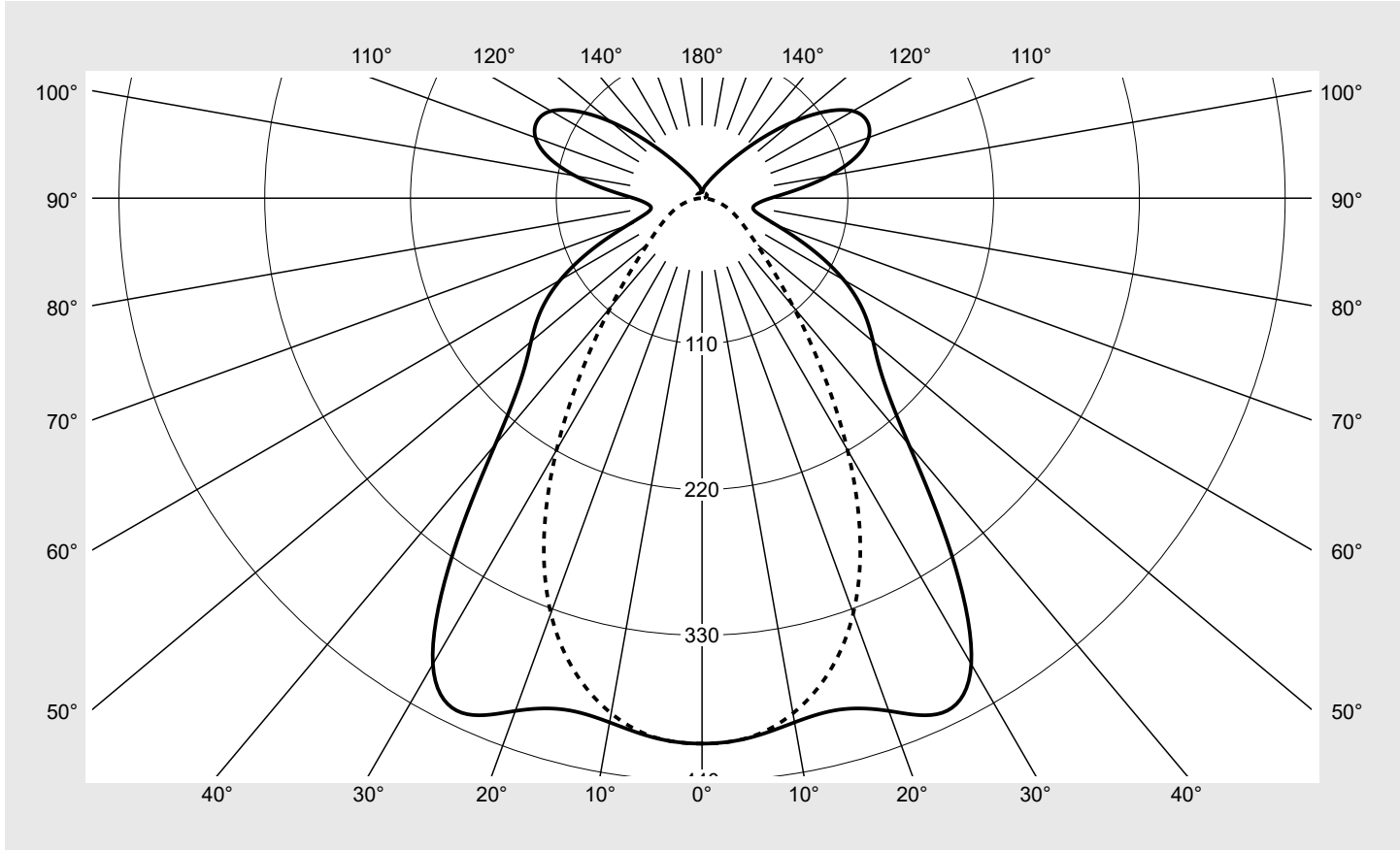


# Photometric test report

|  |   |  |
|--|---|--|
| <b>Family</b><br><b>Licross® 21 Performance</b>                                  | <b>Order number: 52TM16DN4E5M</b><br><b>EAN: 4058352903568</b>  | <b>LP number</b><br><b>58519_241</b>             |
|  | <b>Version</b> cover frosted, direct-/ indirect distribution<br><b>Lamps</b> LED 4000 K   CRI ≥ 80<br><b>Controlgear</b> ECG-DALI<br><b>Rated values</b> Net luminous flux = 14870 lm<br>Power consumption = 84.9 W<br>Luminous efficacy = 175.2 lm/W | <b>serial documentation</b><br><b>03.08.2023</b> |
|  |    |  |

**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 429 cd/klm**



| Classifications |                                   |
|-----------------|-----------------------------------|
| DIN 5040        | B 5 1                             |
| CIE             | N1=63 N2=86 N3=95<br>N4=78 N5=100 |

| Luminaire light output ratios |        |
|-------------------------------|--------|
| $\eta_{LB}$                   | 100.0% |
| $\phi_u$                      | 78.1%  |
| $\phi_o$                      | 21.9%  |

**Measurement conditions**  
DIN EN 13032 and DIN 5032

## Photometric test report

|   |  |                                   |
|---|--|-----------------------------------|
| Family<br><b>Licross® 21 Performance</b>        | Order number: <b>52TM16DN4E5M</b><br>EAN: <b>4058352903568</b> | LP number<br><b>58519_241</b>     |
| <b>Table of values for luminous intensities</b> |  | <b>Maximum luminous intensity</b> |
|   |  | <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°                           | 411.8      | 411.8                | 411.8                | 411.8                | 411.8                | 411.8                | 411.8                   | 2.5      | 2.5               |
| 5°                           | 409.0      | 407.3                | 405.0                | 406.4                | 408.3                | 408.3                | 408.7                   | 19.5     | 21.9              |
| 10°                          | 401.9      | 399.8                | 395.6                | 394.8                | 395.0                | 394.6                | 395.0                   | 37.7     | 59.6              |
| 15°                          | 399.8      | 396.0                | 386.0                | 378.7                | 373.7                | 370.5                | 370.4                   | 54.1     | 113.8             |
| 20°                          | 412.0      | 404.2                | 382.1                | 360.3                | 344.8                | 335.4                | 333.6                   | 68.7     | 182.5             |
| 25°                          | 428.7      | 419.7                | 386.2                | 342.0                | 307.4                | 287.4                | 282.2                   | 81.0     | 263.5             |
| 30°                          | 406.2      | 406.4                | 384.2                | 323.4                | 261.9                | 228.9                | 219.5                   | 87.6     | 351.1             |
| 35°                          | 328.1      | 339.8                | 351.8                | 297.2                | 211.1                | 168.2                | 156.8                   | 84.4     | 435.5             |
| 40°                          | 242.7      | 253.2                | 284.0                | 257.1                | 161.6                | 117.6                | 107.2                   | 73.3     | 508.8             |
| 45°                          | 193.2      | 191.3                | 206.1                | 202.2                | 118.6                | 81.5                 | 73.7                    | 60.3     | 569.1             |
| 50°                          | 168.5      | 157.2                | 146.5                | 145.8                | 85.8                 | 58.6                 | 53.4                    | 49.3     | 618.5             |
| 55°                          | 148.6      | 133.1                | 107.2                | 99.9                 | 62.9                 | 44.3                 | 40.9                    | 40.6     | 659.0             |
| 60°                          | 123.5      | 108.6                | 80.0                 | 67.9                 | 46.9                 | 34.4                 | 32.2                    | 32.9     | 691.9             |
| 65°                          | 91.5       | 81.0                 | 59.1                 | 47.5                 | 36.1                 | 27.0                 | 25.4                    | 25.6     | 717.5             |
| 70°                          | 60.2       | 54.5                 | 42.3                 | 34.6                 | 28.0                 | 21.0                 | 19.4                    | 18.9     | 736.4             |
| 75°                          | 43.1       | 39.2                 | 31.3                 | 26.2                 | 21.7                 | 15.5                 | 13.5                    | 14.3     | 750.7             |
| 80°                          | 39.2       | 35.6                 | 27.4                 | 20.7                 | 16.7                 | 10.7                 | 8.0                     | 12.1     | 762.9             |
| 85°                          | 42.5       | 38.8                 | 29.2                 | 19.4                 | 12.9                 | 6.9                  | 3.4                     | 11.8     | 774.7             |
| 90°                          | 51.7       | 47.2                 | 34.3                 | 20.7                 | 11.3                 | 4.4                  | 0.6                     | 13.1     | 787.8             |
| 95°                          | 71.3       | 64.2                 | 44.5                 | 24.7                 | 12.8                 | 5.2                  | 1.1                     | 17.1     | 804.9             |
| 100°                         | 97.2       | 85.6                 | 55.2                 | 28.6                 | 14.3                 | 6.1                  | 1.8                     | 21.5     | 826.4             |
| 105°                         | 120.2      | 103.0                | 65.3                 | 32.5                 | 15.7                 | 6.9                  | 2.8                     | 25.1     | 851.6             |
| 110°                         | 133.8      | 113.4                | 72.0                 | 35.7                 | 17.0                 | 7.6                  | 3.5                     | 27.0     | 878.6             |
| 115°                         | 137.4      | 116.7                | 75.1                 | 37.4                 | 17.7                 | 8.2                  | 3.9                     | 27.0     | 905.5             |
| 120°                         | 131.5      | 112.0                | 72.9                 | 36.7                 | 17.5                 | 8.5                  | 4.2                     | 25.0     | 930.5             |
| 125°                         | 114.0      | 97.3                 | 64.4                 | 33.4                 | 16.5                 | 8.4                  | 4.4                     | 20.9     | 951.4             |
| 130°                         | 89.6       | 76.8                 | 52.0                 | 28.4                 | 14.9                 | 8.3                  | 4.5                     | 15.9     | 967.3             |
| 135°                         | 64.2       | 55.4                 | 38.9                 | 22.9                 | 13.2                 | 7.9                  | 4.4                     | 11.1     | 978.4             |
| 140°                         | 43.4       | 38.1                 | 28.3                 | 18.4                 | 11.3                 | 7.3                  | 4.5                     | 7.5      | 985.9             |
| 145°                         | 29.7       | 26.7                 | 21.1                 | 14.9                 | 9.5                  | 6.3                  | 4.4                     | 5.0      | 990.9             |
| 150°                         | 21.4       | 19.7                 | 16.5                 | 11.7                 | 8.2                  | 5.8                  | 4.4                     | 3.4      | 994.4             |
| 155°                         | 16.0       | 15.0                 | 12.7                 | 9.4                  | 8.0                  | 5.2                  | 4.3                     | 2.3      | 996.7             |
| 160°                         | 12.3       | 11.7                 | 9.5                  | 8.1                  | 6.6                  | 5.4                  | 4.1                     | 1.5      | 998.2             |
| 165°                         | 10.0       | 9.6                  | 7.9                  | 6.6                  | 5.9                  | 4.7                  | 4.5                     | 1.0      | 999.2             |
| 170°                         | 7.8        | 6.8                  | 5.5                  | 5.6                  | 6.0                  | 4.8                  | 4.8                     | 0.6      | 999.8             |
| 175°                         | 4.9        | 4.4                  | 4.8                  | 4.8                  | 4.9                  | 4.9                  | 5.2                     | 0.2      | 1000.0            |
| 180°                         | 4.5        | 4.5                  | 4.5                  | 4.5                  | 4.5                  | 4.5                  | 4.5                     | 0.0      | 1000.0            |

## Photometric test report

|  |  |                               |
|--|--|-------------------------------|
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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                  | 20.8 | 22.0 | 21.4 | 22.6 | 23.3               | 16.4 | 17.6 | 16.9 | 18.2 | 18.8 |
|                              | 3H                  | 21.6 | 22.7 | 22.2 | 23.3 | 24.0               | 16.9 | 18.0 | 17.5 | 18.6 | 19.3 |
|                              | 4H                  | 21.9 | 22.9 | 22.5 | 23.5 | 24.3               | 17.1 | 18.2 | 17.7 | 18.8 | 19.5 |
|                              | 6H                  | 22.2 | 23.1 | 22.9 | 23.8 | 24.5               | 17.3 | 18.3 | 17.9 | 18.9 | 19.7 |
|                              | 8H                  | 22.4 | 23.2 | 23.1 | 23.9 | 24.7               | 17.3 | 18.2 | 18.0 | 18.9 | 19.6 |
|                              | 12H                 | 22.8 | 23.5 | 23.5 | 24.2 | 25.0               | 17.3 | 18.2 | 18.0 | 18.9 | 19.6 |
| 4H                           | 2H                  | 20.8 | 21.8 | 21.4 | 22.5 | 23.2               | 17.0 | 18.0 | 17.6 | 18.6 | 19.4 |
|                              | 3H                  | 21.7 | 22.6 | 22.4 | 23.2 | 24.0               | 17.7 | 18.5 | 18.3 | 19.2 | 20.0 |
|                              | 4H                  | 22.1 | 22.8 | 22.8 | 23.5 | 24.4               | 18.0 | 18.8 | 18.7 | 19.5 | 20.3 |
|                              | 6H                  | 22.6 | 23.2 | 23.3 | 24.0 | 24.8               | 18.3 | 19.0 | 19.0 | 19.7 | 20.5 |
|                              | 8H                  | 22.9 | 23.5 | 23.7 | 24.3 | 25.1               | 18.3 | 19.0 | 19.1 | 19.7 | 20.6 |
|                              | 12H                 | 23.4 | 23.9 | 24.2 | 24.7 | 25.6               | 18.4 | 18.9 | 19.1 | 19.7 | 20.6 |
| 8H                           | 4H                  | 22.0 | 22.7 | 22.8 | 23.4 | 24.2               | 18.3 | 18.9 | 19.0 | 19.6 | 20.5 |
|                              | 6H                  | 22.7 | 23.2 | 23.4 | 23.9 | 24.8               | 18.7 | 19.2 | 19.5 | 20.0 | 20.9 |
|                              | 8H                  | 23.2 | 23.6 | 23.9 | 24.4 | 25.3               | 18.9 | 19.4 | 19.7 | 20.1 | 21.0 |
|                              | 12H                 | 23.9 | 24.3 | 24.7 | 25.1 | 26.0               | 19.0 | 19.4 | 19.8 | 20.2 | 21.1 |
| 12H                          | 4H                  | 22.0 | 22.5 | 22.7 | 23.3 | 24.2               | 18.3 | 18.8 | 19.1 | 19.6 | 20.5 |
|                              | 6H                  | 22.7 | 23.1 | 23.4 | 23.9 | 24.8               | 18.9 | 19.3 | 19.6 | 20.0 | 21.0 |
|                              | 8H                  | 23.2 | 23.6 | 24.0 | 24.4 | 25.3               | 19.1 | 19.5 | 19.9 | 20.3 | 21.2 |

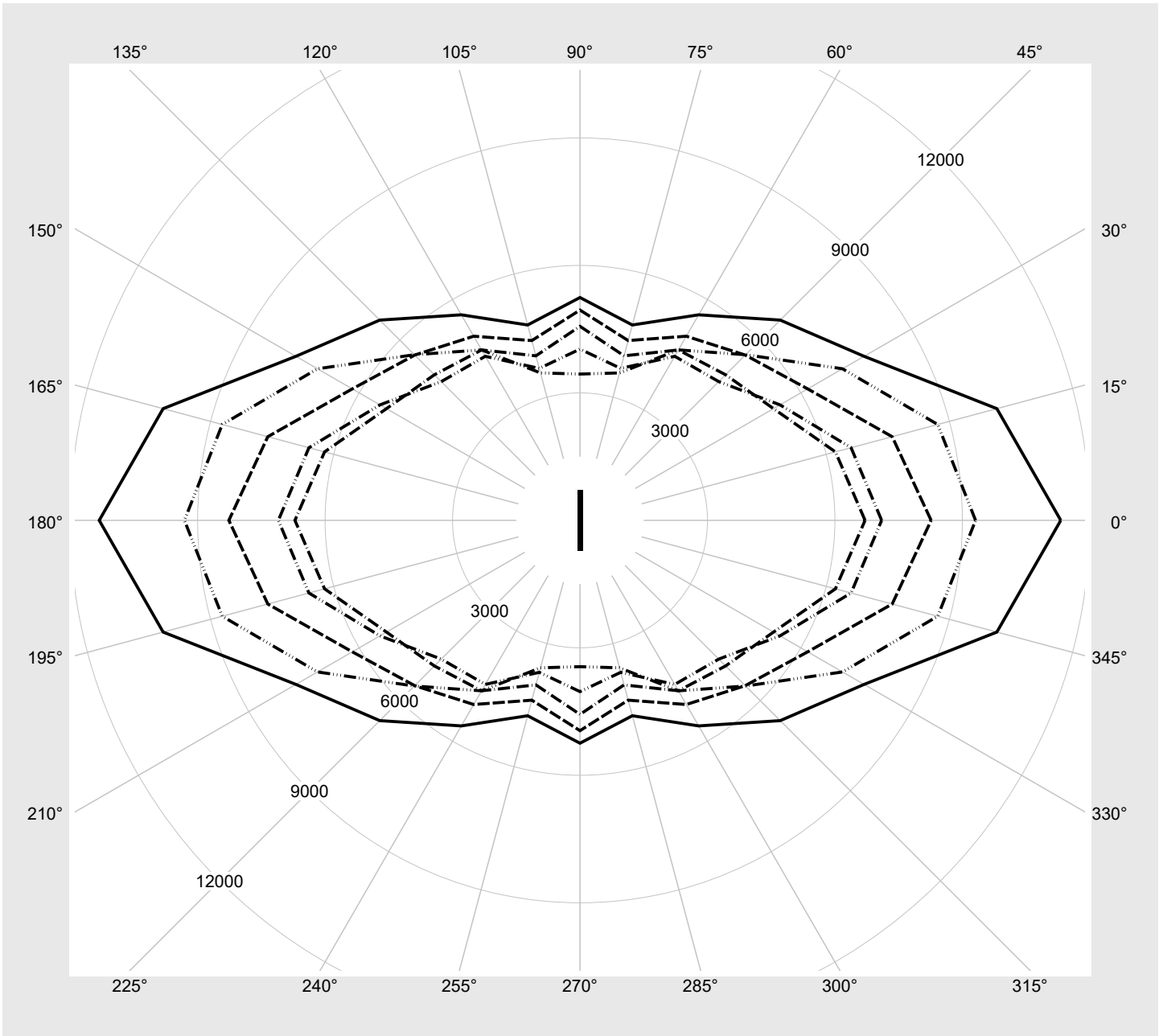
|                        |   |                                      |                 |                   |                     |
|------------------------|---|--------------------------------------|-----------------|-------------------|---------------------|
| <b>Luminance table</b> | <b>Max. for <math>\gamma \geq 65^\circ</math></b> | <b>Photometric dimensions in mm:</b> | <b>L = 1480</b> | <b>H(C0) = 36</b> | <b>H(C180) = 36</b> |
|                        |   |                                      | <b>B = 115</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°      |          | 18183.8                        | 18153.3                     | 20037.8                     | 20457.7                     | 12667.6                     | 9312.2                      | 9109.0      |  |
| 50°      |          | 16678.4                        | 15703.8                     | 15053.4                     | 15677.9                     | 9832.0                      | 7269.0                      | 7261.7      |  |
| 55°      |          | 15644.8                        | 14155.1                     | 11772.1                     | 11557.5                     | 7826.3                      | 6044.3                      | 6229.0      |  |
| 60°      |          | 13989.3                        | 12451.0                     | 9516.8                      | 8578.1                      | 6450.7                      | 5267.5                      | 5623.7      |  |
| 65°      |          | 11316.2                        | 10158.2                     | 7721.5                      | 6665.6                      | 5585.9                      | 4760.5                      | 5244.5      |  |
| 70°      |          | 8264.7                         | 7607.7                      | 6188.3                      | 5501.7                      | 5004.3                      | 4381.2                      | 4949.3      |  |
| 75°      |          | 6709.7                         | 6224.6                      | 5259.2                      | 4846.3                      | 4631.5                      | 4008.9                      | 4566.9      |  |
| 80°      |          | 7100.0                         | 6605.7                      | 5436.2                      | 4618.2                      | 4458.9                      | 3702.7                      | 4030.6      |  |
| 85°      |          | 9310.7                         | 8717.8                      | 7134.9                      | 5513.2                      | 4632.5                      | 3592.7                      | 3443.4      |  |

**Photometric test report**

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

**Luminance values in cd/m<sup>2</sup>**     γ 65°   γ 70°   γ 75°   γ 80°   γ 85°     **siteco**



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|  |  |                                      |
|--|--|--------------------------------------|
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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                       | 14870              | 84.9                  |
| 95              | 240                  | 252                       | 14116              | 80.1                  |
| 90              | 227                  | 250                       | 13407              | 75.8                  |
| 85              | 213                  | 248                       | 12637              | 71.1                  |
| 80              | 200                  | 245                       | 11915              | 66.8                  |
| 75              | 186                  | 243                       | 11128              | 62.2                  |
| 70              | 173                  | 240                       | 10389              | 58.0                  |
| 65              | 160                  | 237                       | 9644               | 53.7                  |
| 60              | 148                  | 234                       | 8949               | 49.8                  |
| 55              | 135                  | 231                       | 8193               | 45.5                  |
| 50              | 122                  | 227                       | 7430               | 41.4                  |
| 45              | 110                  | 223                       | 6718               | 37.5                  |
| 40              | 97                   | 219                       | 5941               | 33.3                  |
| 35              | 85                   | 214                       | 5218               | 29.5                  |
| 30              | 72                   | 208                       | 4431               | 25.5                  |
| 25              | 60                   | 201                       | 3699               | 21.6                  |
| 20              | 48                   | 193                       | 2961               | 17.9                  |
| 15              | 36                   | 182                       | 2218               | 14.1                  |
| 10              | 24                   | 168                       | 1475               | 10.3                  |
| 5               | 12                   | 142                       | 724                | 6.6                   |
| 1               | 4                    | 102                       | 220                | 4.3                   |