

## Photometric test report

Family  
**Silica®**



Order number: **5MX31BD2E4A**  
EAN: **4058352305454**

LP number  
**58997\_10**

**Version** Suspended luminaire, Combined lens and reflector optics, frosted cover, direct-/ indirect distribution,  $UGR \leq 19$  ( $L65 \leq 3000 \text{ cd/m}^2$ )

**Lamps** LED 4000 K | CRI  $\geq 80$

**Controlgear** ECG-DALI

**Setting** individual position: only direct light

**Rated values** Net luminous flux = 9910 lm  
Power consumption = 60.1 W  
Luminous efficacy = 164.9 lm/W

serial  
documentation  
07.10.2020

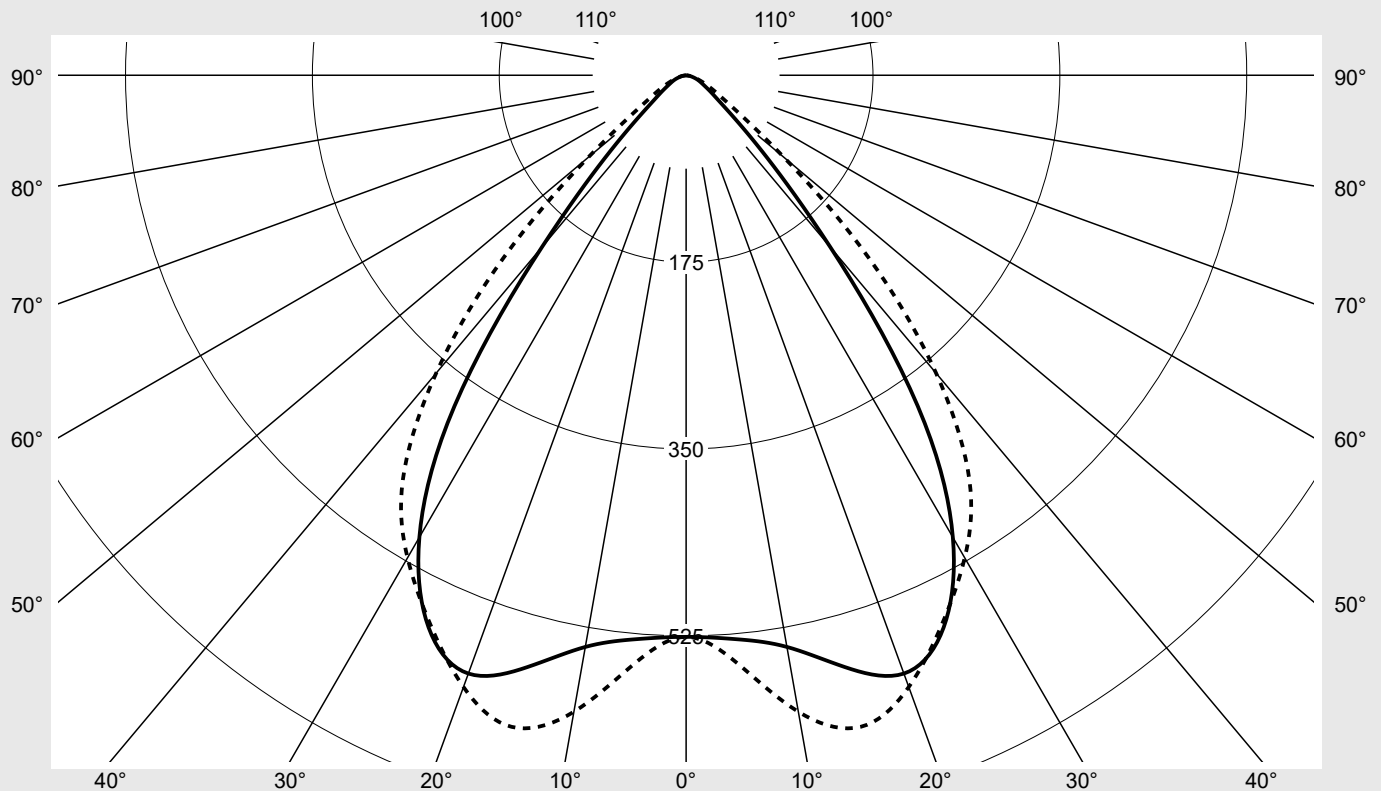
siteco

Luminous intensity in cd/klm

C180-0

C270-90

Imax: 653 cd/klm



### Classifications

DIN 5040 A 6 0  
CIE N1=82 N2=97 N3=100  
N4=100 N5=100

### Luminaire light output ratios

$\eta_{LB}$  100.0%  
 $\phi_u$  100.0%  
 $\phi_o$  0.0%

### Measurement conditions

DIN EN 13032 and DIN 5032

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|--|---|------------------------------|
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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°                           | 525.9      | 525.9                | 525.9                | 525.9                | 525.9                | 525.9                | 525.9       | 3.1                     | 3.1               |
| 5°                           | 530.1      | 532.1                | 531.7                | 539.8                | 547.4                | 550.9                | 553.0       | 25.8                    | 29.0              |
| 10°                          | 543.6      | 552.3                | 561.3                | 580.0                | 594.8                | 602.1                | 605.3       | 55.0                    | 83.9              |
| 15°                          | 573.7      | 588.4                | 603.0                | 623.3                | 632.9                | 632.0                | 631.7       | 87.1                    | 171.0             |
| 20°                          | 596.3      | 620.1                | 639.0                | 641.8                | 629.5                | 614.8                | 609.6       | 117.1                   | 288.1             |
| 25°                          | 570.6      | 616.7                | 653.0                | 638.7                | 597.2                | 573.3                | 567.1       | 140.8                   | 429.0             |
| 30°                          | 499.6      | 560.3                | 609.4                | 604.2                | 567.1                | 527.4                | 521.8       | 154.4                   | 583.3             |
| 35°                          | 378.2      | 424.0                | 476.5                | 520.1                | 513.0                | 469.3                | 462.5       | 147.9                   | 731.2             |
| 40°                          | 210.0      | 238.9                | 292.3                | 362.7                | 384.1                | 367.3                | 364.2       | 113.5                   | 844.7             |
| 45°                          | 100.2      | 117.8                | 146.5                | 199.3                | 232.4                | 237.2                | 242.0       | 71.3                    | 916.1             |
| 50°                          | 49.1       | 55.7                 | 69.4                 | 82.4                 | 93.7                 | 107.9                | 119.5       | 34.5                    | 950.6             |
| 55°                          | 30.0       | 32.2                 | 36.5                 | 41.6                 | 42.2                 | 47.4                 | 55.6        | 18.2                    | 968.7             |
| 60°                          | 20.2       | 21.0                 | 22.3                 | 23.8                 | 24.3                 | 28.1                 | 32.8        | 11.6                    | 980.3             |
| 65°                          | 14.7       | 14.9                 | 15.1                 | 15.2                 | 15.9                 | 19.0                 | 21.0        | 8.1                     | 988.4             |
| 70°                          | 10.4       | 10.5                 | 10.3                 | 10.1                 | 10.5                 | 12.3                 | 12.9        | 5.6                     | 994.0             |
| 75°                          | 6.2        | 6.2                  | 6.1                  | 6.1                  | 6.3                  | 7.1                  | 7.3         | 3.4                     | 997.4             |
| 80°                          | 3.3        | 3.3                  | 3.3                  | 3.3                  | 3.4                  | 3.8                  | 3.9         | 1.9                     | 999.3             |
| 85°                          | 1.2        | 1.2                  | 1.2                  | 1.3                  | 1.3                  | 1.4                  | 1.5         | 0.7                     | 1000.0            |
| 90°                          | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 95°                          | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 100°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 105°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 110°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 115°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 120°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 1000.0            |
| 125°                         | 0.0        | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0                  | 0.0         | 0.0                     | 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                  | 17.4 | 18.7 | 17.7 | 19.0 | 19.4               | 19.2 | 20.6 | 19.6 | 20.9 | 21.2 |
|                              | 3H                  | 17.4 | 18.6 | 17.8 | 18.9 | 19.3               | 19.2 | 20.4 | 19.6 | 20.7 | 21.1 |
|                              | 4H                  | 17.4 | 18.5 | 17.8 | 18.8 | 19.2               | 19.2 | 20.3 | 19.6 | 20.6 | 21.0 |
|                              | 6H                  | 17.3 | 18.3 | 17.8 | 18.7 | 19.1               | 19.2 | 20.1 | 19.6 | 20.5 | 20.9 |
|                              | 8H                  | 17.4 | 18.3 | 17.8 | 18.7 | 19.1               | 19.2 | 20.1 | 19.7 | 20.5 | 20.9 |
|                              | 12H                 | 17.4 | 18.2 | 17.8 | 18.6 | 19.0               | 19.2 | 20.0 | 19.6 | 20.4 | 20.8 |
| 4H                           | 2H                  | 17.3 | 18.4 | 17.7 | 18.8 | 19.1               | 19.1 | 20.2 | 19.5 | 20.5 | 20.9 |
|                              | 3H                  | 17.3 | 18.2 | 17.8 | 18.6 | 19.0               | 19.1 | 20.0 | 19.5 | 20.4 | 20.8 |
|                              | 4H                  | 17.3 | 18.1 | 17.8 | 18.6 | 19.0               | 19.1 | 19.9 | 19.5 | 20.3 | 20.7 |
|                              | 6H                  | 17.3 | 18.0 | 17.8 | 18.4 | 18.9               | 19.0 | 19.7 | 19.5 | 20.2 | 20.6 |
|                              | 8H                  | 17.3 | 17.9 | 17.8 | 18.4 | 18.9               | 19.0 | 19.6 | 19.5 | 20.1 | 20.6 |
|                              | 12H                 | 17.3 | 17.8 | 17.8 | 18.3 | 18.8               | 19.0 | 19.5 | 19.5 | 20.0 | 20.5 |
| 8H                           | 4H                  | 17.3 | 17.9 | 17.8 | 18.3 | 18.8               | 19.0 | 19.6 | 19.4 | 20.0 | 20.5 |
|                              | 6H                  | 17.3 | 17.8 | 17.8 | 18.2 | 18.7               | 18.9 | 19.4 | 19.4 | 19.9 | 20.4 |
|                              | 8H                  | 17.2 | 17.7 | 17.7 | 18.2 | 18.7               | 18.9 | 19.4 | 19.4 | 19.8 | 20.4 |
|                              | 12H                 | 17.2 | 17.6 | 17.8 | 18.1 | 18.6               | 18.9 | 19.3 | 19.5 | 19.8 | 20.3 |
| 12H                          | 4H                  | 17.3 | 17.8 | 17.8 | 18.3 | 18.7               | 19.0 | 19.5 | 19.5 | 19.9 | 20.4 |
|                              | 6H                  | 17.3 | 17.7 | 17.8 | 18.2 | 18.7               | 18.9 | 19.3 | 19.4 | 19.8 | 20.4 |
|                              | 8H                  | 17.2 | 17.6 | 17.8 | 18.1 | 18.6               | 18.9 | 19.3 | 19.4 | 19.8 | 20.3 |

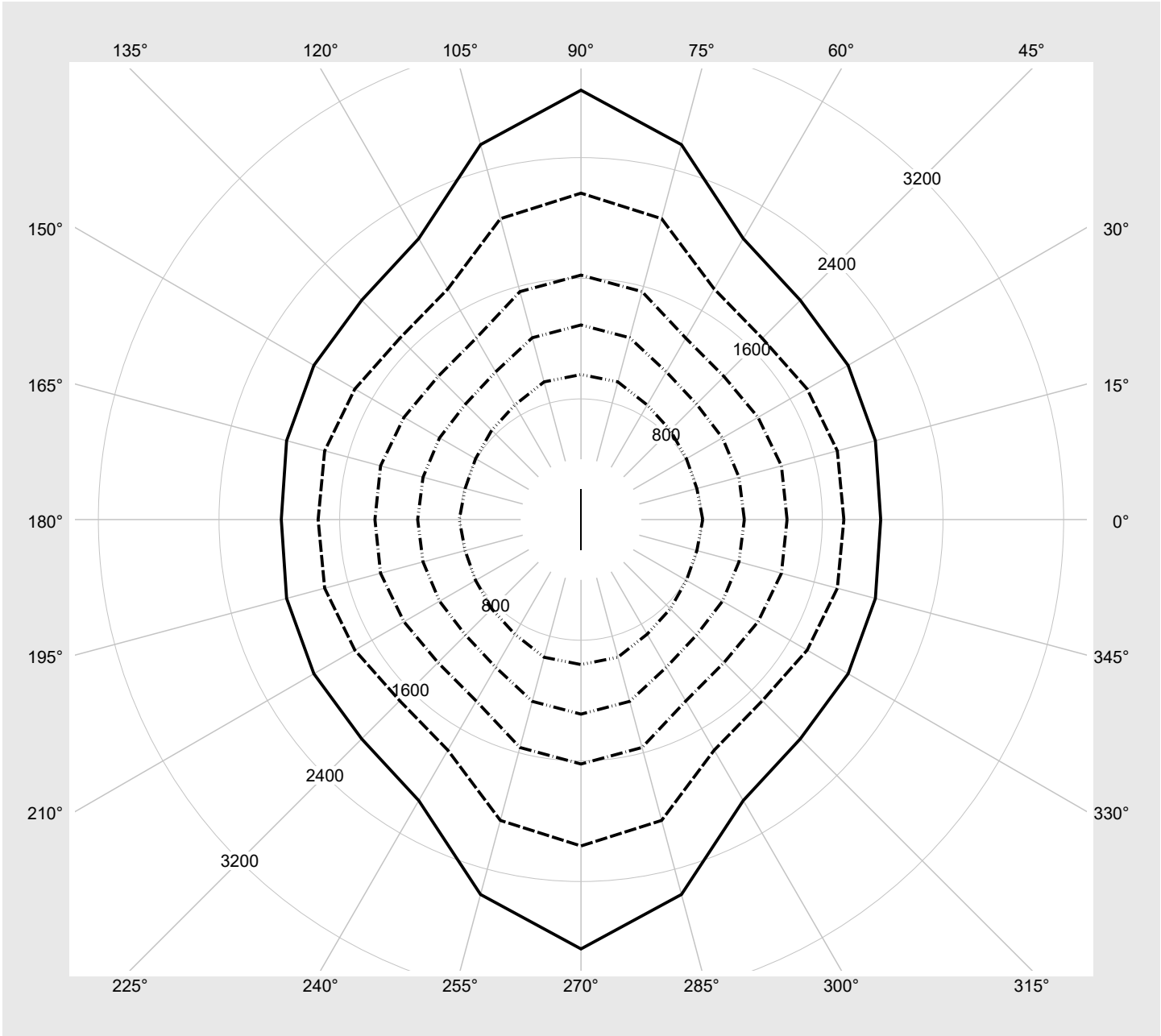
|                        |   |                                      |                                  |
|------------------------|---|--------------------------------------|----------------------------------|
| <b>Luminance table</b> | <b>Max. for <math>\gamma \geq 65^\circ</math></b> | <b>Photometric dimensions in mm:</b> | <b>L = 2836</b><br><b>B = 61</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°      |          | 8114.3                         | 9546.4                      | 11871.8                     | 16147.4                     | 18828.3                     | 19218.4                     | 19605.4     |  |
| 50°      |          | 4375.2                         | 4966.4                      | 6186.2                      | 7339.4                      | 8346.3                      | 9611.5                      | 10651.1     |  |
| 55°      |          | 2992.6                         | 3219.5                      | 3641.3                      | 4154.5                      | 4210.6                      | 4738.2                      | 5553.4      |  |
| 60°      |          | 2315.4                         | 2408.9                      | 2553.1                      | 2725.9                      | 2787.6                      | 3221.7                      | 3756.6      |  |
| 65°      |          | 1987.1                         | 2020.7                      | 2045.0                      | 2056.4                      | 2151.4                      | 2573.6                      | 2846.9      |  |
| 70°      |          | 1742.9                         | 1759.5                      | 1731.5                      | 1699.5                      | 1765.8                      | 2065.3                      | 2164.3      |  |
| 75°      |          | 1366.3                         | 1375.8                      | 1355.4                      | 1341.0                      | 1389.3                      | 1564.6                      | 1620.8      |  |
| 80°      |          | 1083.0                         | 1084.3                      | 1083.0                      | 1083.0                      | 1131.2                      | 1248.0                      | 1290.2      |  |
| 85°      |          | 807.1                          | 795.3                       | 807.1                       | 837.4                       | 877.5                       | 945.1                       | 961.6       |  |

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|                          |   |                              |
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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                       | 9910               | 60.1                  |
| 95              | 241                  | 252                       | 9421               | 57.1                  |
| 90              | 228                  | 250                       | 8934               | 54.0                  |
| 85              | 215                  | 248                       | 8442               | 50.9                  |
| 80              | 202                  | 246                       | 7947               | 47.9                  |
| 75              | 189                  | 243                       | 7451               | 44.8                  |
| 70              | 176                  | 241                       | 6952               | 41.7                  |
| 65              | 163                  | 238                       | 6446               | 38.7                  |
| 60              | 150                  | 235                       | 5940               | 35.7                  |
| 55              | 137                  | 231                       | 5433               | 32.8                  |
| 50              | 125                  | 228                       | 4961               | 30.0                  |
| 45              | 112                  | 224                       | 4445               | 27.1                  |
| 40              | 100                  | 220                       | 3965               | 24.4                  |
| 35              | 88                   | 215                       | 3486               | 21.7                  |
| 30              | 75                   | 209                       | 2963               | 18.8                  |
| 25              | 63                   | 203                       | 2475               | 16.1                  |
| 20              | 51                   | 195                       | 1988               | 13.4                  |
| 15              | 39                   | 185                       | 1500               | 10.8                  |
| 10              | 27                   | 172                       | 1007               | 8.1                   |
| 5               | 15                   | 150                       | 511                | 5.4                   |
| 3               | 10                   | 136                       | 304                | 4.4                   |