

# Photometric test report

**Family**  
Silica® 21

**Order number: 51MX34DA37SB**  
**EAN: 4058352889114**

**LP number**  
**59283\_69**

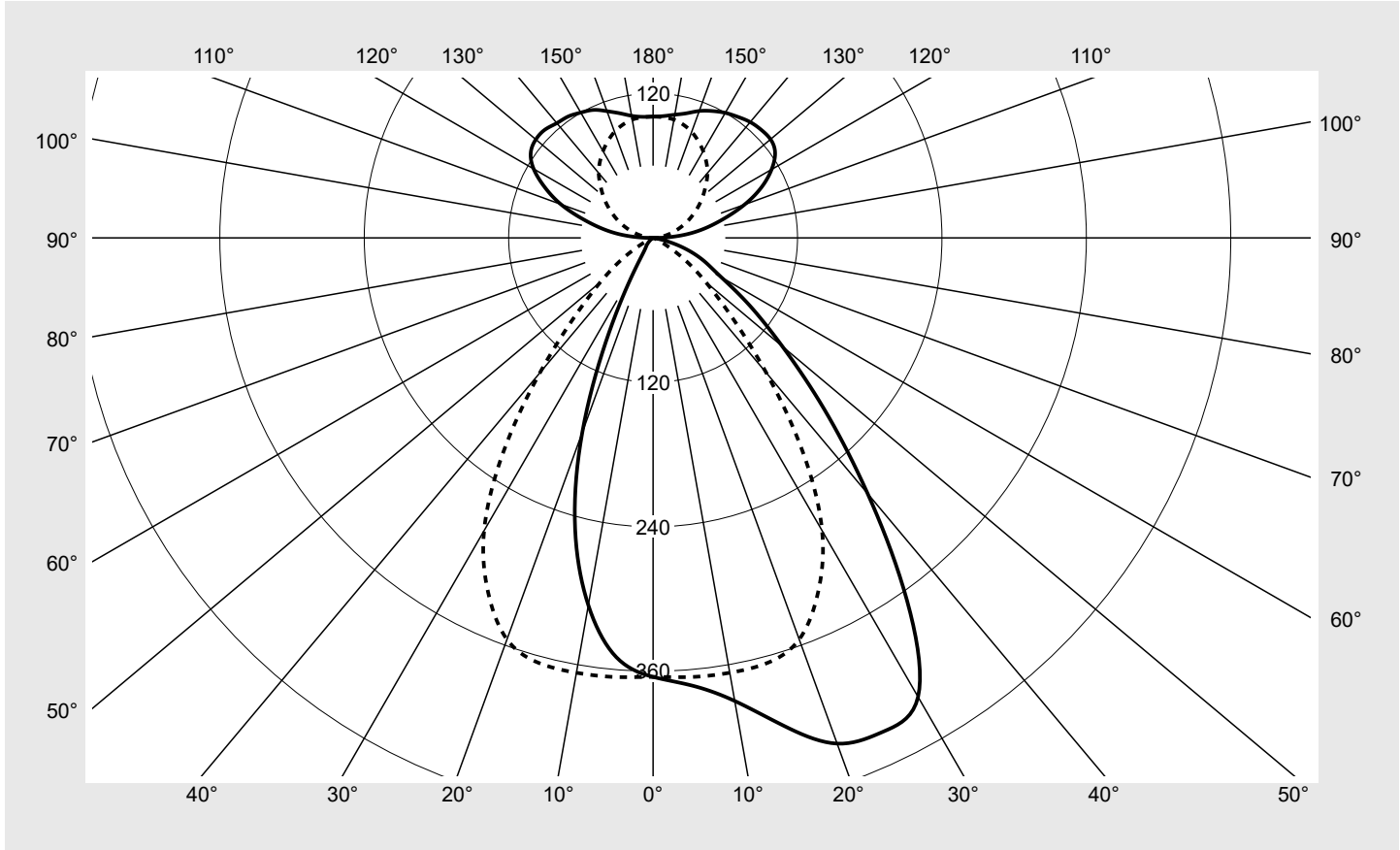


**Version** Suspended luminaire, reflector, black, direct-/indirect distribution, asymmetric distribution  
**Lamps** LED 3000 K | CRI ≥ 80  
**Controlgear** ECG-DALI  
**Rated values** Net luminous flux = 7680 lm  
 Power consumption = 53.6 W  
 Luminous efficacy = 143.3 lm/W

**serial documentation**  
02.08.2023



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 461 cd/klm**



**Classifications**

|          |                                   |
|----------|-----------------------------------|
| DIN 5040 | C 6 2                             |
| CIE      | N1=74 N2=94 N3=99<br>N4=56 N5=100 |

**Luminaire light output ratios**

|             |        |
|-------------|--------|
| $\eta_{LB}$ | 100.0% |
| $\phi_u$    | 56.1%  |
| $\phi_o$    | 43.9%  |

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

## Photometric test report

|  |  |                              |
|--|--|------------------------------|
| Family<br><b>Silica® 21</b>              | Order number: <b>51MX34DA37SB</b><br>EAN: <b>4058352889114</b> | LP number<br><b>59283_69</b> |
| Table of values for luminous intensities |  | Maximum luminous intensity   |
|  |  | <b>sITeco</b>                |

| C-planes | 0°                           | 15°<br>345° | 30°<br>330° | 45°<br>315° | 60°<br>300° | 75°<br>285° | 90°<br>270° |
|----------|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| $\gamma$ | Luminous intensity in cd/klm |             |             |             |             |             |             |
| 0°       | 364.7                        | 364.7       | 364.7       | 364.7       | 364.7       | 364.7       | 364.7       |
| 5°       | 373.4                        | 374.2       | 373.9       | 372.4       | 372.0       | 370.0       | 366.2       |
| 10°      | 390.7                        | 390.9       | 390.3       | 389.7       | 385.4       | 375.2       | 366.9       |
| 15°      | 419.6                        | 426.1       | 426.0       | 420.4       | 403.3       | 382.3       | 365.7       |
| 20°      | 447.1                        | 456.4       | 458.5       | 446.1       | 411.0       | 376.9       | 355.0       |
| 25°      | 452.6                        | 460.6       | 453.6       | 431.0       | 395.6       | 351.4       | 324.5       |
| 30°      | 440.3                        | 439.8       | 430.3       | 390.5       | 349.9       | 308.3       | 280.9       |
| 35°      | 367.9                        | 364.8       | 361.9       | 334.1       | 285.8       | 241.7       | 216.7       |
| 40°      | 277.4                        | 282.5       | 289.0       | 275.8       | 227.9       | 175.0       | 146.3       |
| 45°      | 200.8                        | 207.3       | 222.4       | 214.2       | 174.3       | 117.9       | 91.5        |
| 50°      | 140.2                        | 148.6       | 163.4       | 159.9       | 127.4       | 79.2        | 57.1        |
| 55°      | 98.0                         | 104.1       | 120.3       | 117.5       | 94.9        | 52.4        | 33.6        |
| 60°      | 65.5                         | 71.2        | 86.2        | 87.8        | 71.3        | 30.8        | 14.6        |
| 65°      | 48.2                         | 50.7        | 59.5        | 65.1        | 47.4        | 16.3        | 4.7         |
| 70°      | 32.8                         | 36.4        | 42.5        | 43.7        | 27.4        | 8.4         | 1.8         |
| 75°      | 16.4                         | 20.5        | 29.1        | 21.1        | 13.2        | 4.7         | 0.6         |
| 80°      | 2.7                          | 3.9         | 8.6         | 8.4         | 6.0         | 1.9         | 0.3         |
| 85°      | 1.0                          | 1.1         | 1.6         | 1.5         | 0.7         | 0.5         | 0.5         |
| 90°      | 5.1                          | 4.9         | 5.2         | 5.1         | 3.1         | 1.0         | 0.4         |
| 95°      | 23.6                         | 24.1        | 25.8        | 24.5        | 15.6        | 8.0         | 4.1         |
| 100°     | 42.3                         | 43.3        | 43.7        | 38.5        | 25.8        | 14.5        | 9.5         |
| 105°     | 60.4                         | 61.7        | 60.5        | 51.6        | 35.4        | 21.8        | 16.0        |
| 110°     | 80.9                         | 81.7        | 76.3        | 63.6        | 45.4        | 29.6        | 23.0        |
| 115°     | 99.3                         | 98.4        | 90.6        | 74.6        | 54.9        | 37.4        | 30.6        |
| 120°     | 113.7                        | 112.0       | 102.2       | 83.3        | 64.1        | 44.9        | 38.1        |
| 125°     | 123.7                        | 120.5       | 109.6       | 92.0        | 71.5        | 52.1        | 46.1        |
| 130°     | 127.4                        | 124.7       | 113.0       | 96.3        | 77.5        | 59.5        | 54.0        |
| 135°     | 127.0                        | 124.4       | 114.1       | 99.9        | 82.2        | 66.6        | 62.0        |
| 140°     | 125.6                        | 123.2       | 114.1       | 102.3       | 86.1        | 73.2        | 70.3        |
| 145°     | 122.8                        | 121.6       | 114.6       | 103.4       | 89.6        | 79.2        | 77.1        |
| 150°     | 119.9                        | 119.3       | 113.7       | 103.5       | 92.3        | 85.0        | 83.2        |
| 155°     | 116.3                        | 116.3       | 110.3       | 102.8       | 94.6        | 90.3        | 88.8        |
| 160°     | 112.2                        | 112.1       | 106.9       | 101.9       | 96.9        | 93.8        | 93.7        |
| 165°     | 107.2                        | 106.8       | 103.8       | 100.5       | 98.5        | 97.0        | 97.3        |
| 170°     | 103.9                        | 102.9       | 102.2       | 100.5       | 99.8        | 99.7        | 99.8        |
| 175°     | 101.6                        | 101.2       | 100.4       | 100.2       | 100.5       | 100.4       | 100.5       |
| 180°     | 100.7                        | 100.7       | 100.7       | 100.7       | 100.7       | 100.7       | 100.7       |

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|   |  |                                     |
|---|--|-------------------------------------|
| <b>Family</b><br><b>Silica® 21</b>              | <b>Order number: 51MX34DA37SB</b><br><b>EAN: 4058352889114</b> | <b>LP number</b><br><b>59283_69</b> |
| <b>Table of values for luminous intensities</b> |  | <b>Maximum luminous intensity</b>   |
|   |  | <b>sITeco</b>                       |

| C-planes | 105°<br>255°                 | 120°<br>240° | 135°<br>225° | 150°<br>210° | 165°<br>195° | 180°  | Phi-zone                | Total<br>Phi-zone |
|----------|------------------------------|--------------|--------------|--------------|--------------|-------|-------------------------|-------------------|
| $\gamma$ | Luminous intensity in cd/klm |              |              |              |              |       | Luminous flux in lm/klm |                   |
| 0°       | 364.7                        | 364.7        | 364.7        | 364.7        | 364.7        | 364.7 | 2.2                     | 2.2               |
| 5°       | 362.9                        | 358.9        | 355.8        | 351.9        | 350.5        | 349.8 | 17.4                    | 19.6              |
| 10°      | 356.4                        | 346.7        | 334.3        | 322.3        | 312.5        | 309.9 | 34.3                    | 53.9              |
| 15°      | 351.5                        | 329.8        | 301.2        | 272.8        | 255.4        | 250.3 | 50.5                    | 104.3             |
| 20°      | 332.5                        | 299.0        | 251.5        | 205.7        | 180.6        | 172.0 | 63.8                    | 168.1             |
| 25°      | 300.5                        | 247.9        | 184.7        | 134.5        | 99.3         | 86.1  | 70.5                    | 238.6             |
| 30°      | 246.1                        | 187.5        | 119.2        | 65.0         | 36.4         | 29.2  | 70.5                    | 309.2             |
| 35°      | 174.7                        | 119.3        | 62.2         | 24.9         | 14.0         | 12.2  | 62.6                    | 371.8             |
| 40°      | 109.6                        | 67.1         | 27.5         | 12.3         | 9.3          | 8.7   | 51.8                    | 423.6             |
| 45°      | 65.7                         | 34.8         | 12.8         | 8.3          | 6.4          | 5.9   | 40.7                    | 464.3             |
| 50°      | 38.9                         | 17.2         | 7.5          | 5.5          | 3.9          | 3.3   | 30.8                    | 495.1             |
| 55°      | 21.5                         | 8.7          | 4.7          | 3.3          | 2.1          | 1.8   | 22.9                    | 518.0             |
| 60°      | 8.2                          | 4.3          | 2.8          | 2.0          | 1.5          | 1.3   | 16.4                    | 534.4             |
| 65°      | 2.7                          | 2.1          | 1.7          | 1.4          | 1.0          | 0.7   | 11.5                    | 545.9             |
| 70°      | 1.1                          | 1.1          | 0.9          | 0.8          | 0.6          | 0.3   | 7.8                     | 553.7             |
| 75°      | 0.4                          | 0.5          | 0.5          | 0.4          | 0.4          | 0.3   | 4.4                     | 558.1             |
| 80°      | 0.2                          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2   | 1.4                     | 559.5             |
| 85°      | 0.5                          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6   | 0.4                     | 559.9             |
| 90°      | 1.0                          | 3.1          | 5.1          | 5.2          | 4.9          | 5.1   | 2.0                     | 562.0             |
| 95°      | 8.1                          | 15.6         | 24.4         | 25.8         | 24.1         | 23.5  | 10.2                    | 572.1             |
| 100°     | 14.5                         | 25.6         | 38.0         | 43.6         | 43.3         | 41.9  | 17.2                    | 589.3             |
| 105°     | 21.9                         | 35.3         | 51.6         | 60.4         | 61.7         | 60.5  | 23.8                    | 613.1             |
| 110°     | 29.6                         | 45.2         | 63.5         | 76.5         | 81.3         | 81.5  | 29.9                    | 643.0             |
| 115°     | 37.4                         | 55.0         | 74.7         | 90.7         | 98.3         | 99.2  | 34.9                    | 677.9             |
| 120°     | 45.0                         | 63.8         | 83.7         | 102.6        | 112.6        | 114.6 | 38.2                    | 716.1             |
| 125°     | 52.1                         | 71.5         | 91.4         | 109.3        | 120.5        | 124.0 | 39.7                    | 755.8             |
| 130°     | 59.5                         | 77.1         | 96.8         | 112.7        | 124.3        | 127.2 | 39.3                    | 795.1             |
| 135°     | 66.2                         | 81.6         | 99.7         | 114.1        | 124.5        | 127.1 | 37.5                    | 832.6             |
| 140°     | 72.6                         | 85.5         | 102.0        | 114.8        | 123.0        | 124.4 | 35.0                    | 867.6             |
| 145°     | 78.7                         | 89.2         | 103.4        | 114.2        | 121.7        | 123.1 | 31.9                    | 899.4             |
| 150°     | 84.6                         | 92.4         | 103.1        | 112.6        | 119.8        | 120.2 | 28.1                    | 927.5             |
| 155°     | 89.7                         | 94.6         | 103.0        | 110.2        | 116.6        | 117.3 | 23.8                    | 951.3             |
| 160°     | 94.2                         | 96.3         | 102.1        | 107.0        | 111.6        | 112.0 | 19.2                    | 970.5             |
| 165°     | 97.4                         | 98.7         | 101.2        | 104.4        | 106.4        | 107.2 | 14.4                    | 985.0             |
| 170°     | 99.8                         | 100.1        | 101.3        | 102.3        | 102.9        | 103.0 | 9.6                     | 994.6             |
| 175°     | 100.7                        | 100.4        | 100.7        | 100.9        | 101.1        | 101.0 | 4.8                     | 999.4             |
| 180°     | 100.7                        | 100.7        | 100.7        | 100.7        | 100.7        | 100.7 | 0.6                     | 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                  | 22.1 | 23.0 | 22.9 | 23.8 | 24.9               | 17.5 | 18.4 | 18.3 | 19.2 | 20.3 |
|                              | 3H                  | 22.4 | 23.2 | 23.3 | 24.1 | 25.3               | 17.3 | 18.1 | 18.2 | 19.0 | 20.1 |
|                              | 4H                  | 22.5 | 23.2 | 23.4 | 24.1 | 25.3               | 17.2 | 17.9 | 18.1 | 18.8 | 20.0 |
|                              | 6H                  | 22.4 | 23.0 | 23.3 | 23.9 | 25.1               | 17.0 | 17.7 | 17.9 | 18.6 | 19.8 |
|                              | 8H                  | 22.3 | 22.9 | 23.2 | 23.8 | 25.0               | 16.9 | 17.6 | 17.9 | 18.5 | 19.7 |
|                              | 12H                 | 22.2 | 22.7 | 23.1 | 23.7 | 24.9               | 16.8 | 17.4 | 17.8 | 18.3 | 19.5 |
| 4H                           | 2H                  | 22.3 | 23.0 | 23.2 | 23.9 | 25.0               | 18.1 | 18.8 | 19.0 | 19.7 | 20.9 |
|                              | 3H                  | 22.9 | 23.5 | 23.8 | 24.4 | 25.6               | 18.1 | 18.7 | 19.1 | 19.7 | 20.9 |
|                              | 4H                  | 23.0 | 23.6 | 24.0 | 24.5 | 25.7               | 18.1 | 18.6 | 19.0 | 19.5 | 20.7 |
|                              | 6H                  | 22.9 | 23.4 | 23.9 | 24.3 | 25.6               | 17.9 | 18.4 | 18.9 | 19.3 | 20.6 |
|                              | 8H                  | 22.8 | 23.3 | 23.8 | 24.2 | 25.5               | 17.8 | 18.2 | 18.8 | 19.2 | 20.5 |
|                              | 12H                 | 22.7 | 23.1 | 23.7 | 24.1 | 25.4               | 17.7 | 18.1 | 18.7 | 19.1 | 20.3 |
| 8H                           | 4H                  | 23.0 | 23.4 | 23.9 | 24.3 | 25.6               | 18.1 | 18.5 | 19.1 | 19.5 | 20.8 |
|                              | 6H                  | 22.9 | 23.3 | 23.9 | 24.3 | 25.5               | 18.1 | 18.4 | 19.1 | 19.4 | 20.7 |
|                              | 8H                  | 22.8 | 23.2 | 23.9 | 24.1 | 25.4               | 18.0 | 18.3 | 19.0 | 19.3 | 20.6 |
|                              | 12H                 | 22.8 | 23.0 | 23.8 | 24.0 | 25.3               | 17.9 | 18.2 | 18.9 | 19.2 | 20.5 |
| 12H                          | 4H                  | 22.9 | 23.2 | 23.8 | 24.2 | 25.5               | 18.1 | 18.4 | 19.0 | 19.4 | 20.7 |
|                              | 6H                  | 22.8 | 23.1 | 23.8 | 24.1 | 25.4               | 18.0 | 18.3 | 19.0 | 19.3 | 20.6 |
|                              | 8H                  | 22.8 | 23.0 | 23.8 | 24.0 | 25.3               | 17.9 | 18.2 | 19.0 | 19.2 | 20.5 |

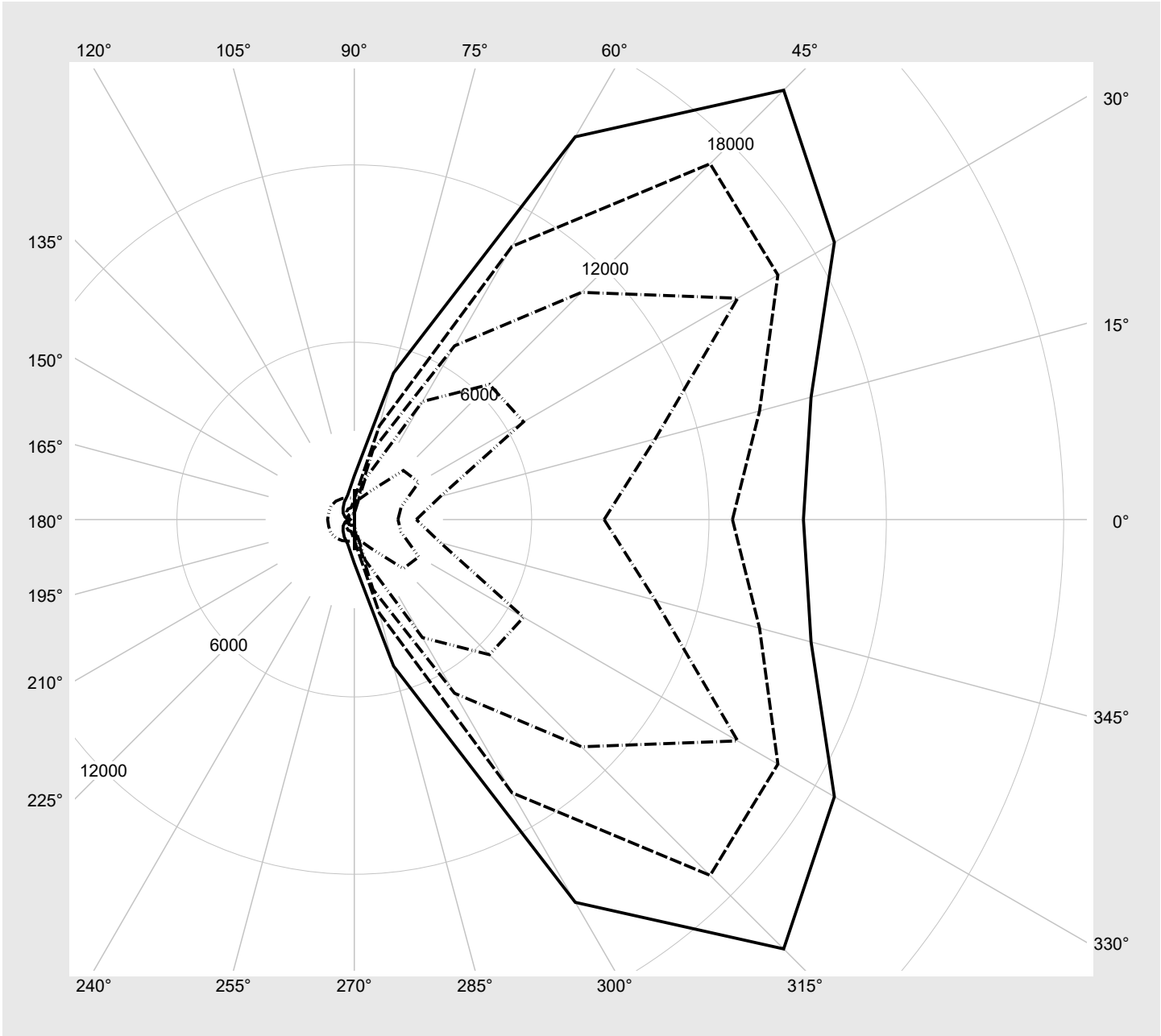
|                        |   |                                      |                 |
|------------------------|---|--------------------------------------|-----------------|
| <b>Luminance table</b> | <b>Max. for <math>\gamma \geq 65^\circ</math></b> | <b>Photometric dimensions in mm:</b> | <b>L = 1176</b> |
|                        |   |                                      | <b>B = 49</b>   |

| C-planes | 0°                             | 15°<br>345° | 30°<br>330° | 45°<br>315° | 60°<br>300° | 75°<br>285° | 90°<br>270° | 105°<br>255° | 120°<br>240° | 135°<br>225° | 150°<br>210° | 165°<br>195° | 180°   |
|----------|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------|
| $\gamma$ | Luminance in cd/m <sup>2</sup> |             |             |             |             |             |             |              |              |              |              |              |        |
| 45°      | 37847.1                        | 39066.6     | 41924.1     | 40365.0     | 32848.9     | 22219.0     | 17240.8     | 12382.6      | 6567.9       | 2406.2       | 1567.6       | 1215.3       | 1109.8 |
| 50°      | 29067.9                        | 30810.4     | 33888.8     | 33146.8     | 26408.9     | 16415.6     | 11845.9     | 8064.2       | 3571.3       | 1552.6       | 1140.8       | 806.4        | 677.6  |
| 55°      | 22763.6                        | 24190.8     | 27955.8     | 27307.0     | 22040.1     | 12165.8     | 7803.0      | 5001.4       | 2028.8       | 1096.5       | 776.1        | 479.4        | 412.9  |
| 60°      | 17451.9                        | 18977.7     | 22985.1     | 23414.0     | 18995.8     | 8209.6      | 3899.2      | 2185.5       | 1136.6       | 756.0        | 524.0        | 408.9        | 347.9  |
| 65°      | 15195.7                        | 15999.0     | 18754.9     | 20544.0     | 14954.8     | 5133.1      | 1478.7      | 858.1        | 677.7        | 537.7        | 435.2        | 322.6        | 214.1  |
| 70°      | 12794.7                        | 14194.0     | 16548.5     | 17025.4     | 10672.5     | 3279.9      | 694.4       | 413.8        | 416.2        | 369.4        | 305.5        | 220.6        | 135.2  |
| 75°      | 8452.8                         | 10540.4     | 14977.7     | 10871.5     | 6786.5      | 2443.9      | 319.3       | 210.1        | 256.4        | 244.6        | 225.5        | 182.3        | 147.3  |
| 80°      | 2097.6                         | 3013.3      | 6611.4      | 6464.8      | 4610.5      | 1421.4      | 202.6       | 191.1        | 225.6        | 231.8        | 220.3        | 191.1        | 174.2  |
| 85°      | 1477.2                         | 1640.8      | 2520.1      | 2347.3      | 1120.9      | 731.0       | 721.8       | 756.9        | 822.7        | 880.8        | 912.9        | 896.1        | 902.2  |

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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°     **siteco**



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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                       | 7680               | 53.6                  |
| 95              | 240                  | 252                       | 7287               | 50.5                  |
| 90              | 227                  | 250                       | 6918               | 47.8                  |
| 85              | 213                  | 248                       | 6519               | 44.9                  |
| 80              | 200                  | 245                       | 6144               | 42.2                  |
| 75              | 187                  | 243                       | 5765               | 39.5                  |
| 70              | 174                  | 240                       | 5384               | 36.8                  |
| 65              | 161                  | 237                       | 4999               | 34.2                  |
| 60              | 148                  | 234                       | 4610               | 31.6                  |
| 55              | 135                  | 231                       | 4220               | 28.9                  |
| 50              | 122                  | 227                       | 3826               | 26.2                  |
| 45              | 110                  | 223                       | 3459               | 23.8                  |
| 40              | 97                   | 219                       | 3059               | 21.2                  |
| 35              | 85                   | 214                       | 2687               | 18.8                  |
| 30              | 73                   | 208                       | 2313               | 16.3                  |
| 25              | 60                   | 201                       | 1905               | 13.8                  |
| 20              | 48                   | 193                       | 1525               | 11.3                  |
| 15              | 36                   | 182                       | 1143               | 8.8                   |
| 10              | 24                   | 168                       | 759                | 6.5                   |
| 5               | 12                   | 142                       | 374                | 4.3                   |
| 2               | 5                    | 110                       | 148                | 3.4                   |