

# Photometric test report

**Family**  
**Silica® 21**

**Order number: 51MX33TBT9S**  
**EAN: 4058352685648**

**LP number**  
**59332\_93**



**Version** Suspended luminaire, with homogeneous illumination, prismatic cover, direct-/ indirect distribution, extremely wide distribution, UGR≤16 (L65≤3000cd/m²), tunable white

**Lamps** LED 4000 K | CRI ≥ 80

**Controlgear** ECG-DALI

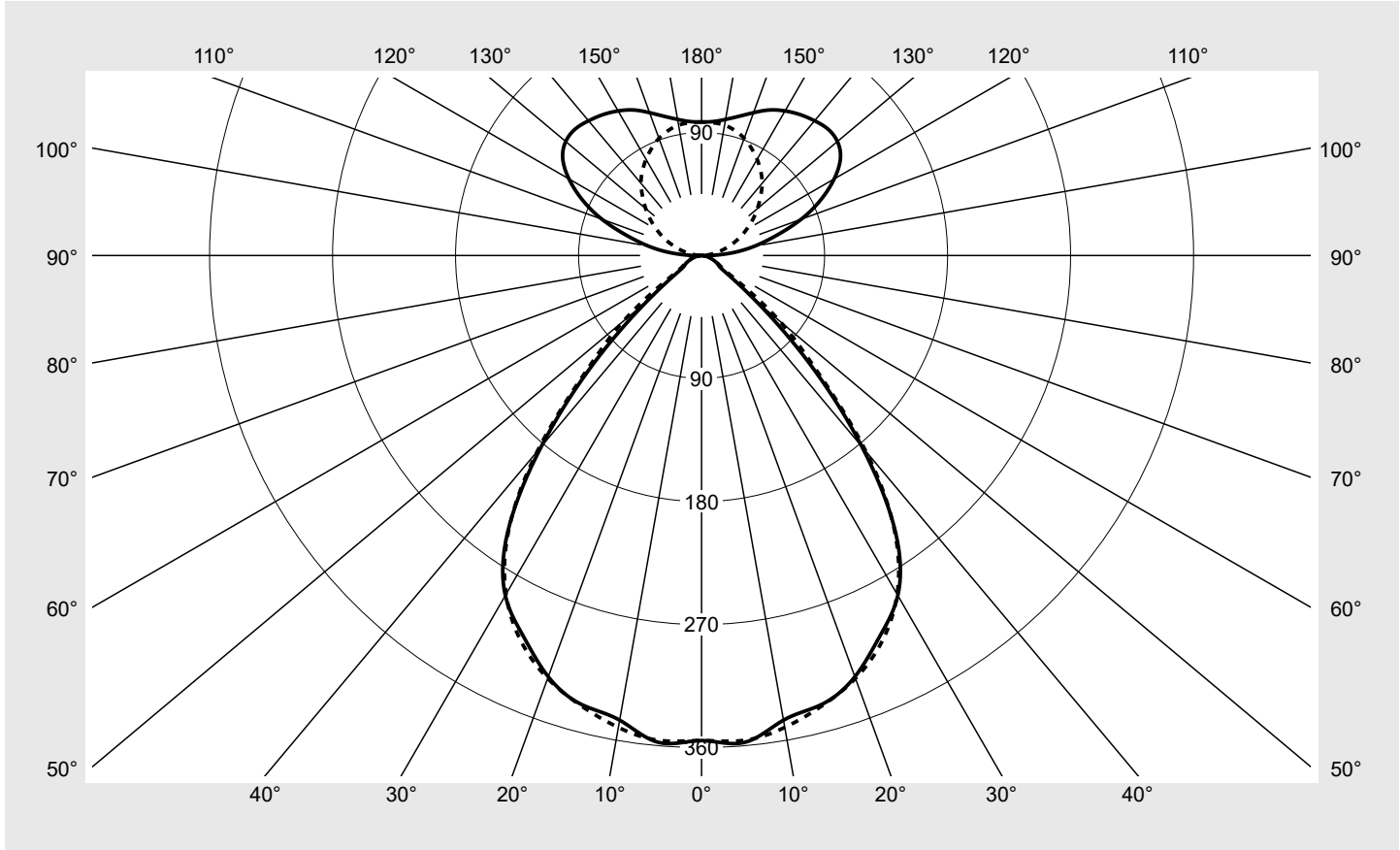
**Setting** factory setting

**Rated values** Net luminous flux = 7170 lm  
Power consumption = 70.8 W  
Luminous efficacy = 101.3 lm/W

**serial documentation**  
**03.05.2023**



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 358 cd/klm**



**Classifications**

|          |                                   |
|----------|-----------------------------------|
| DIN 5040 | C 6 2                             |
| CIE      | N1=78 N2=96 N3=99<br>N4=56 N5=100 |

**Luminaire light output ratios**

|             |        |
|-------------|--------|
| $\eta_{LB}$ | 100.0% |
| $\phi_u$    | 56.2%  |
| $\phi_o$    | 43.8%  |

**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°<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° | Total                   |          |
|------------------------------|------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|-------------------------|----------|
|                              |            |                             |                             |                             |                             |                             |             | Phi-zone                | Phi-zone |
| Luminous intensity in cd/klm |            |                             |                             |                             |                             |                             |             | Luminous flux in lm/klm |          |
| 0°                           | 354.9      | 354.9                       | 354.9                       | 354.9                       | 354.9                       | 354.9                       | 354.9       | 2.1                     | 2.1      |
| 5°                           | 357.6      | 358.3                       | 358.1                       | 358.3                       | 357.8                       | 357.0                       | 356.1       | 17.1                    | 19.2     |
| 10°                          | 345.2      | 344.3                       | 344.5                       | 346.4                       | 350.1                       | 350.3                       | 350.6       | 33.1                    | 52.3     |
| 15°                          | 340.0      | 338.8                       | 336.2                       | 336.1                       | 338.1                       | 341.2                       | 341.0       | 48.0                    | 100.3    |
| 20°                          | 328.0      | 327.2                       | 323.2                       | 324.1                       | 322.5                       | 324.8                       | 329.3       | 60.9                    | 161.2    |
| 25°                          | 307.9      | 308.7                       | 306.4                       | 306.5                       | 306.8                       | 306.6                       | 312.0       | 71.2                    | 232.5    |
| 30°                          | 287.2      | 287.0                       | 283.4                       | 284.9                       | 285.2                       | 284.2                       | 286.2       | 78.2                    | 310.6    |
| 35°                          | 247.5      | 247.0                       | 244.6                       | 246.0                       | 246.7                       | 245.6                       | 246.4       | 77.4                    | 388.0    |
| 40°                          | 182.5      | 182.1                       | 183.5                       | 184.7                       | 186.1                       | 185.9                       | 187.0       | 65.0                    | 453.0    |
| 45°                          | 111.7      | 111.4                       | 112.8                       | 114.1                       | 115.4                       | 116.9                       | 119.1       | 44.3                    | 497.3    |
| 50°                          | 52.4       | 60.7                        | 68.3                        | 62.5                        | 56.3                        | 66.9                        | 74.7        | 26.5                    | 523.8    |
| 55°                          | 21.3       | 28.6                        | 27.1                        | 30.9                        | 23.3                        | 32.2                        | 30.0        | 12.6                    | 536.4    |
| 60°                          | 14.3       | 14.9                        | 15.7                        | 14.6                        | 14.6                        | 15.6                        | 16.3        | 7.2                     | 543.6    |
| 65°                          | 11.8       | 11.7                        | 12.2                        | 11.9                        | 12.4                        | 12.3                        | 12.4        | 6.0                     | 549.6    |
| 70°                          | 8.5        | 8.7                         | 9.0                         | 9.0                         | 9.2                         | 9.3                         | 9.8         | 4.7                     | 554.2    |
| 75°                          | 5.9        | 6.2                         | 6.8                         | 6.5                         | 6.6                         | 7.0                         | 7.1         | 3.5                     | 557.7    |
| 80°                          | 3.6        | 3.8                         | 4.2                         | 4.6                         | 4.2                         | 4.7                         | 4.8         | 2.3                     | 560.0    |
| 85°                          | 1.8        | 1.8                         | 1.8                         | 2.1                         | 2.2                         | 2.6                         | 2.7         | 1.2                     | 561.2    |
| 90°                          | 6.2        | 6.0                         | 6.3                         | 6.0                         | 3.5                         | 1.2                         | 0.4         | 2.4                     | 563.6    |
| 95°                          | 22.4       | 22.9                        | 24.7                        | 23.8                        | 15.7                        | 8.2                         | 4.2         | 9.9                     | 573.5    |
| 100°                         | 39.4       | 40.6                        | 41.5                        | 37.2                        | 25.7                        | 14.7                        | 9.7         | 16.6                    | 590.1    |
| 105°                         | 56.7       | 58.1                        | 58.0                        | 51.0                        | 35.4                        | 22.2                        | 16.2        | 23.0                    | 613.1    |
| 110°                         | 77.6       | 78.3                        | 74.6                        | 63.1                        | 45.4                        | 29.8                        | 23.1        | 29.3                    | 642.4    |
| 115°                         | 96.2       | 95.7                        | 89.3                        | 74.3                        | 55.1                        | 37.6                        | 30.6        | 34.4                    | 676.8    |
| 120°                         | 112.0      | 110.6                       | 101.9                       | 83.7                        | 64.3                        | 45.2                        | 37.9        | 38.0                    | 714.8    |
| 125°                         | 124.0      | 121.0                       | 110.5                       | 92.7                        | 72.3                        | 52.4                        | 45.6        | 39.9                    | 754.8    |
| 130°                         | 129.8      | 127.1                       | 115.2                       | 98.2                        | 78.4                        | 59.6                        | 53.3        | 39.9                    | 794.7    |
| 135°                         | 130.8      | 128.1                       | 117.0                       | 101.7                       | 82.9                        | 66.3                        | 61.0        | 38.2                    | 832.9    |
| 140°                         | 128.7      | 126.6                       | 117.2                       | 103.9                       | 86.2                        | 72.4                        | 69.0        | 35.5                    | 868.4    |
| 145°                         | 125.8      | 124.5                       | 116.6                       | 104.5                       | 89.3                        | 78.0                        | 75.4        | 32.1                    | 900.6    |
| 150°                         | 122.1      | 121.5                       | 114.3                       | 103.4                       | 91.6                        | 83.4                        | 81.3        | 28.1                    | 928.7    |
| 155°                         | 117.5      | 116.9                       | 110.1                       | 102.0                       | 93.3                        | 88.1                        | 86.5        | 23.6                    | 952.4    |
| 160°                         | 111.2      | 110.8                       | 105.7                       | 100.5                       | 94.8                        | 91.7                        | 91.2        | 18.9                    | 971.3    |
| 165°                         | 105.4      | 104.8                       | 102.1                       | 98.7                        | 96.3                        | 94.6                        | 94.6        | 14.1                    | 985.4    |
| 170°                         | 101.1      | 100.5                       | 99.8                        | 98.3                        | 97.2                        | 96.9                        | 96.9        | 9.4                     | 994.7    |
| 175°                         | 98.4       | 98.3                        | 97.7                        | 97.5                        | 97.5                        | 97.5                        | 97.5        | 4.7                     | 999.4    |
| 180°                         | 97.7       | 97.7                        | 97.7                        | 97.7                        | 97.7                        | 97.7                        | 97.7        | 0.6                     | 1000.0   |

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

|           |               |               |  |
|-----------|---------------|---------------|--|
| UGR-Table | Standard room | <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                  | 15.4 | 16.3 | 16.3 | 17.2 | 18.3               | 15.6 | 16.5 | 16.5 | 17.4 | 18.5 |
|                              | 3H                  | 15.3 | 16.1 | 16.2 | 17.0 | 18.1               | 15.6 | 16.4 | 16.5 | 17.3 | 18.4 |
|                              | 4H                  | 15.3 | 16.0 | 16.2 | 16.9 | 18.1               | 15.6 | 16.3 | 16.5 | 17.2 | 18.4 |
|                              | 6H                  | 15.2 | 15.8 | 16.1 | 16.8 | 17.9               | 15.6 | 16.2 | 16.5 | 17.1 | 18.3 |
|                              | 8H                  | 15.1 | 15.7 | 16.1 | 16.7 | 17.9               | 15.5 | 16.0 | 16.4 | 17.0 | 18.2 |
|                              | 12H                 | 15.0 | 15.6 | 16.0 | 16.5 | 17.8               | 15.5 | 16.0 | 16.4 | 17.0 | 18.2 |
| 4H                           | 2H                  | 15.2 | 15.9 | 16.1 | 16.8 | 17.9               | 15.3 | 16.0 | 16.2 | 16.9 | 18.1 |
|                              | 3H                  | 15.2 | 15.8 | 16.1 | 16.7 | 17.9               | 15.4 | 16.0 | 16.3 | 16.9 | 18.1 |
|                              | 4H                  | 15.2 | 15.7 | 16.1 | 16.7 | 17.9               | 15.4 | 16.0 | 16.4 | 16.9 | 18.1 |
|                              | 6H                  | 15.2 | 15.6 | 16.1 | 16.6 | 17.8               | 15.5 | 15.9 | 16.5 | 16.9 | 18.1 |
|                              | 8H                  | 15.1 | 15.5 | 16.1 | 16.5 | 17.8               | 15.5 | 15.9 | 16.5 | 16.9 | 18.1 |
|                              | 12H                 | 15.1 | 15.4 | 16.0 | 16.4 | 17.7               | 15.5 | 15.9 | 16.5 | 16.8 | 18.1 |
| 8H                           | 4H                  | 15.1 | 15.5 | 16.0 | 16.4 | 17.7               | 15.3 | 15.7 | 16.2 | 16.6 | 17.9 |
|                              | 6H                  | 15.1 | 15.5 | 16.1 | 16.5 | 17.7               | 15.4 | 15.7 | 16.4 | 16.7 | 18.0 |
|                              | 8H                  | 15.1 | 15.4 | 16.1 | 16.4 | 17.7               | 15.5 | 15.8 | 16.5 | 16.8 | 18.1 |
|                              | 12H                 | 15.1 | 15.3 | 16.1 | 16.3 | 17.6               | 15.6 | 15.8 | 16.6 | 16.8 | 18.1 |
| 12H                          | 4H                  | 15.0 | 15.3 | 16.0 | 16.3 | 17.6               | 15.2 | 15.5 | 16.2 | 16.5 | 17.8 |
|                              | 6H                  | 15.1 | 15.3 | 16.1 | 16.3 | 17.6               | 15.3 | 15.6 | 16.4 | 16.6 | 17.9 |
|                              | 8H                  | 15.1 | 15.3 | 16.1 | 16.3 | 17.6               | 15.4 | 15.7 | 16.5 | 16.7 | 18.0 |

|                 |                                 |                               |                    |
|-----------------|---------------------------------|-------------------------------|--------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 1500<br>B = 50 |
|-----------------|---------------------------------|-------------------------------|--------------------|

| 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°      |          | 15096.2                        | 15063.4                     | 15252.6                     | 15432.3                     | 15599.4                     | 15798.5                     | 16107.6     |  |
| 50°      |          | 7796.1                         | 9031.8                      | 10157.0                     | 9295.6                      | 8377.2                      | 9949.3                      | 11106.9     |  |
| 55°      |          | 3544.6                         | 4774.7                      | 4510.2                      | 5152.5                      | 3891.5                      | 5373.6                      | 4994.7      |  |
| 60°      |          | 2743.3                         | 2847.0                      | 3009.3                      | 2789.4                      | 2799.7                      | 2977.6                      | 3112.2      |  |
| 65°      |          | 2665.2                         | 2644.4                      | 2750.2                      | 2683.1                      | 2796.8                      | 2792.5                      | 2813.1      |  |
| 70°      |          | 2384.3                         | 2429.0                      | 2527.4                      | 2527.1                      | 2567.1                      | 2596.4                      | 2730.3      |  |
| 75°      |          | 2189.3                         | 2272.4                      | 2504.0                      | 2391.3                      | 2446.7                      | 2571.6                      | 2633.6      |  |
| 80°      |          | 1977.5                         | 2094.8                      | 2310.6                      | 2514.9                      | 2332.6                      | 2602.4                      | 2664.6      |  |
| 85°      |          | 1922.8                         | 1949.2                      | 2026.0                      | 2345.1                      | 2462.5                      | 2817.9                      | 2937.5      |  |

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



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

|              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| $\gamma$ 65° | $\gamma$ 70° | $\gamma$ 75° | $\gamma$ 80° | $\gamma$ 85° |
|--------------|--------------|--------------|--------------|--------------|

