

# Photometric test report

**Family**  
Silica® 21

**Order number: 51MX32TBT9S**  
**EAN: 4058352685525**

**LP number**  
**59308\_94**



**Version** Suspended luminaire, reflector, black, direct-/indirect distribution, wide distribution, UGR≤16 (L65≤1000cd/m²), tunable white

**Lamps** LED 6500 K | CRI ≥ 80

**Controlgear** ECG-DALI

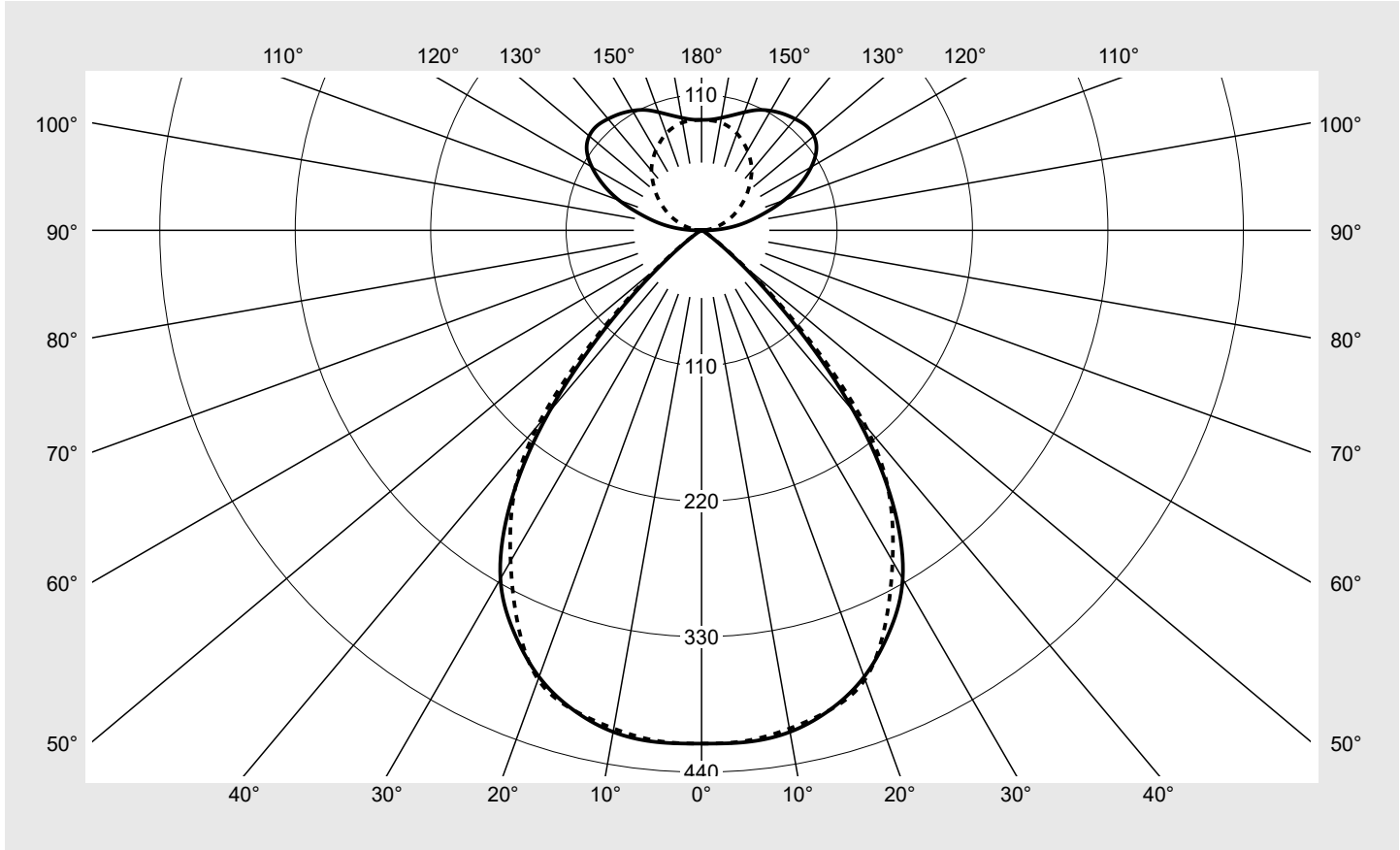
**Setting** individual position

**Rated values** Net luminous flux = 7770 lm  
Power consumption = 66.8 W  
Luminous efficacy = 116.3 lm/W

**serial documentation**  
**03.05.2023**



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 417 cd/klm**



**Classifications**

|          |                                    |
|----------|------------------------------------|
| DIN 5040 | C 6 2                              |
| CIE      | N1=84 N2=99 N3=100<br>N4=60 N5=100 |

**Luminaire light output ratios**

|             |        |
|-------------|--------|
| $\eta_{LB}$ | 100.0% |
| $\phi_u$    | 59.8%  |
| $\phi_o$    | 40.2%  |

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

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| <b>Table of values for luminous intensities</b> |   | <b>Maximum luminous intensity</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°                           | 416.8      | 416.8                | 416.8                | 416.8                | 416.8                | 416.8                | 416.8       | 2.5                     | 2.5               |
| 5°                           | 417.1      | 417.5                | 416.5                | 416.2                | 416.3                | 416.7                | 416.1       | 19.9                    | 22.4              |
| 10°                          | 413.6      | 412.9                | 413.2                | 414.2                | 413.9                | 410.5                | 410.8       | 39.3                    | 61.7              |
| 15°                          | 403.1      | 404.2                | 404.4                | 407.9                | 407.9                | 405.2                | 403.1       | 57.5                    | 119.2             |
| 20°                          | 385.9      | 389.4                | 389.1                | 391.3                | 390.8                | 389.3                | 388.1       | 73.0                    | 192.2             |
| 25°                          | 360.3      | 366.3                | 366.3                | 363.6                | 359.7                | 355.9                | 353.0       | 83.7                    | 276.0             |
| 30°                          | 326.7      | 332.1                | 328.6                | 321.6                | 313.5                | 309.5                | 310.2       | 87.9                    | 363.8             |
| 35°                          | 270.7      | 274.1                | 269.6                | 265.1                | 262.0                | 263.6                | 266.8       | 84.0                    | 447.8             |
| 40°                          | 192.8      | 195.2                | 197.3                | 201.1                | 204.8                | 204.8                | 207.1       | 70.6                    | 518.5             |
| 45°                          | 103.1      | 111.4                | 121.6                | 126.0                | 125.3                | 116.8                | 115.4       | 45.9                    | 564.4             |
| 50°                          | 37.9       | 43.7                 | 52.7                 | 56.6                 | 56.5                 | 46.6                 | 44.0        | 20.8                    | 585.2             |
| 55°                          | 10.5       | 13.2                 | 18.0                 | 22.2                 | 19.8                 | 14.1                 | 12.7        | 7.4                     | 592.6             |
| 60°                          | 3.5        | 4.2                  | 6.4                  | 8.4                  | 6.8                  | 5.0                  | 4.9         | 2.8                     | 595.3             |
| 65°                          | 1.3        | 1.5                  | 2.2                  | 2.9                  | 2.5                  | 2.0                  | 1.9         | 1.0                     | 596.4             |
| 70°                          | 0.8        | 0.9                  | 0.7                  | 0.6                  | 0.8                  | 1.0                  | 1.0         | 0.4                     | 596.8             |
| 75°                          | 0.2        | 0.2                  | 0.2                  | 0.3                  | 0.3                  | 0.3                  | 0.3         | 0.1                     | 596.9             |
| 80°                          | 0.0        | 0.0                  | 0.1                  | 0.1                  | 0.1                  | 0.1                  | 0.1         | 0.0                     | 597.0             |
| 85°                          | 0.4        | 0.4                  | 0.4                  | 0.4                  | 0.4                  | 0.4                  | 0.4         | 0.2                     | 597.2             |
| 90°                          | 5.7        | 5.5                  | 5.8                  | 5.6                  | 3.2                  | 1.1                  | 0.4         | 2.2                     | 599.4             |
| 95°                          | 20.6       | 21.0                 | 22.7                 | 21.8                 | 14.4                 | 7.5                  | 3.9         | 9.1                     | 608.5             |
| 100°                         | 36.2       | 37.3                 | 38.1                 | 34.2                 | 23.6                 | 13.5                 | 8.9         | 15.2                    | 623.7             |
| 105°                         | 52.0       | 53.4                 | 53.2                 | 46.8                 | 32.5                 | 20.4                 | 14.9        | 21.2                    | 644.8             |
| 110°                         | 71.2       | 71.9                 | 68.5                 | 57.9                 | 41.7                 | 27.4                 | 21.2        | 26.9                    | 671.7             |
| 115°                         | 88.3       | 87.9                 | 82.0                 | 68.2                 | 50.5                 | 34.5                 | 28.1        | 31.6                    | 703.3             |
| 120°                         | 102.8      | 101.5                | 93.6                 | 76.8                 | 59.0                 | 41.5                 | 34.8        | 34.9                    | 738.2             |
| 125°                         | 113.9      | 111.0                | 101.5                | 85.1                 | 66.4                 | 48.1                 | 41.9        | 36.7                    | 774.9             |
| 130°                         | 119.1      | 116.6                | 105.7                | 90.2                 | 72.0                 | 54.7                 | 49.0        | 36.6                    | 811.5             |
| 135°                         | 120.1      | 117.6                | 107.4                | 93.4                 | 76.1                 | 60.8                 | 56.0        | 35.1                    | 846.6             |
| 140°                         | 118.1      | 116.2                | 107.6                | 95.4                 | 79.2                 | 66.4                 | 63.3        | 32.6                    | 879.2             |
| 145°                         | 115.5      | 114.2                | 107.0                | 95.9                 | 82.0                 | 71.6                 | 69.2        | 29.5                    | 908.7             |
| 150°                         | 112.1      | 111.5                | 104.9                | 94.9                 | 84.1                 | 76.5                 | 74.6        | 25.8                    | 934.6             |
| 155°                         | 107.8      | 107.3                | 101.1                | 93.7                 | 85.6                 | 80.9                 | 79.4        | 21.7                    | 956.3             |
| 160°                         | 102.1      | 101.7                | 97.0                 | 92.3                 | 87.0                 | 84.2                 | 83.8        | 17.3                    | 973.6             |
| 165°                         | 96.8       | 96.2                 | 93.8                 | 90.6                 | 88.4                 | 86.9                 | 86.8        | 12.9                    | 986.6             |
| 170°                         | 92.8       | 92.3                 | 91.6                 | 90.3                 | 89.2                 | 88.9                 | 88.9        | 8.6                     | 995.2             |
| 175°                         | 90.3       | 90.2                 | 89.7                 | 89.5                 | 89.5                 | 89.5                 | 89.5        | 4.3                     | 999.5             |
| 180°                         | 89.7       | 89.7                 | 89.7                 | 89.7                 | 89.7                 | 89.7                 | 89.7        | 0.5                     | 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                  | 15.9 | 16.8 | 16.8 | 17.6 | 18.7               | 16.0 | 16.9 | 16.9 | 17.7 | 18.8 |
|                              | 3H                  | 15.7 | 16.4 | 16.5 | 17.3 | 18.4               | 15.8 | 16.6 | 16.6 | 17.4 | 18.5 |
|                              | 4H                  | 15.5 | 16.2 | 16.4 | 17.1 | 18.2               | 15.6 | 16.4 | 16.5 | 17.2 | 18.3 |
|                              | 6H                  | 15.3 | 15.9 | 16.2 | 16.8 | 18.0               | 15.5 | 16.1 | 16.4 | 17.0 | 18.1 |
|                              | 8H                  | 15.2 | 15.8 | 16.2 | 16.7 | 17.9               | 15.3 | 15.9 | 16.2 | 16.8 | 18.0 |
|                              | 12H                 | 15.1 | 15.6 | 16.1 | 16.6 | 17.7               | 15.3 | 15.8 | 16.2 | 16.7 | 17.9 |
| 4H                           | 2H                  | 15.6 | 16.3 | 16.4 | 17.1 | 18.2               | 15.6 | 16.3 | 16.5 | 17.2 | 18.3 |
|                              | 3H                  | 15.3 | 15.9 | 16.2 | 16.8 | 17.9               | 15.4 | 16.0 | 16.3 | 16.9 | 18.0 |
|                              | 4H                  | 15.1 | 15.7 | 16.1 | 16.6 | 17.7               | 15.2 | 15.8 | 16.2 | 16.7 | 17.8 |
|                              | 6H                  | 15.0 | 15.4 | 15.9 | 16.3 | 17.5               | 15.1 | 15.5 | 16.0 | 16.4 | 17.6 |
|                              | 8H                  | 14.9 | 15.3 | 15.8 | 16.2 | 17.4               | 15.0 | 15.4 | 15.9 | 16.3 | 17.5 |
|                              | 12H                 | 14.8 | 15.1 | 15.7 | 16.1 | 17.3               | 14.9 | 15.2 | 15.9 | 16.2 | 17.4 |
| 8H                           | 4H                  | 14.9 | 15.3 | 15.8 | 16.2 | 17.4               | 15.0 | 15.4 | 15.9 | 16.3 | 17.5 |
|                              | 6H                  | 14.8 | 15.1 | 15.7 | 16.0 | 17.3               | 14.8 | 15.1 | 15.8 | 16.1 | 17.3 |
|                              | 8H                  | 14.7 | 15.0 | 15.6 | 15.9 | 17.2               | 14.8 | 15.1 | 15.7 | 16.0 | 17.3 |
|                              | 12H                 | 14.6 | 14.8 | 15.6 | 15.8 | 17.0               | 14.7 | 14.9 | 15.7 | 15.9 | 17.1 |
| 12H                          | 4H                  | 14.8 | 15.1 | 15.8 | 16.1 | 17.3               | 14.9 | 15.2 | 15.8 | 16.2 | 17.4 |
|                              | 6H                  | 14.6 | 14.9 | 15.6 | 15.9 | 17.1               | 14.7 | 15.0 | 15.7 | 16.0 | 17.2 |
|                              | 8H                  | 14.6 | 14.8 | 15.6 | 15.8 | 17.0               | 14.7 | 14.9 | 15.7 | 15.9 | 17.1 |

|                        |   |                                      |                                  |
|------------------------|---|--------------------------------------|----------------------------------|
| <b>Luminance table</b> | <b>Max. for <math>\gamma \geq 65^\circ</math></b> | <b>Photometric dimensions in mm:</b> | <b>L = 1470</b><br><b>B = 49</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°      |          | 15735.1                        | 17001.5                     | 18543.7                     | 19222.8                     | 19109.3                     | 17818.7                     | 17598.3     |  |
| 50°      |          | 6360.3                         | 7340.6                      | 8839.2                      | 9500.7                      | 9489.1                      | 7812.1                      | 7387.2      |  |
| 55°      |          | 1971.0                         | 2491.3                      | 3389.4                      | 4176.6                      | 3716.8                      | 2655.3                      | 2385.8      |  |
| 60°      |          | 763.9                          | 916.7                       | 1371.0                      | 1821.1                      | 1475.7                      | 1088.2                      | 1052.2      |  |
| 65°      |          | 325.7                          | 384.7                       | 556.4                       | 734.9                       | 641.7                       | 499.8                       | 485.0       |  |
| 70°      |          | 256.4                          | 273.1                       | 207.5                       | 204.1                       | 246.6                       | 318.2                       | 326.4       |  |
| 75°      |          | 75.9                           | 100.9                       | 84.2                        | 117.5                       | 109.2                       | 128.4                       | 116.3       |  |
| 80°      |          | 21.1                           | 24.8                        | 35.4                        | 46.0                        | 60.3                        | 70.8                        | 73.9        |  |
| 85°      |          | 475.3                          | 479.0                       | 480.2                       | 460.4                       | 446.8                       | 459.2                       | 466.6       |  |

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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°

