

Photometric test report

Family
Silica® 21

Order number: 51MX31TCTDB
EAN: 4058352795859

LP number
59310_75



Version Suspended luminaire, reflector, black, direct-/ indirect distribution, narrow distribution, UGR≤16 (L65≤3000cd/m²), tunable white

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

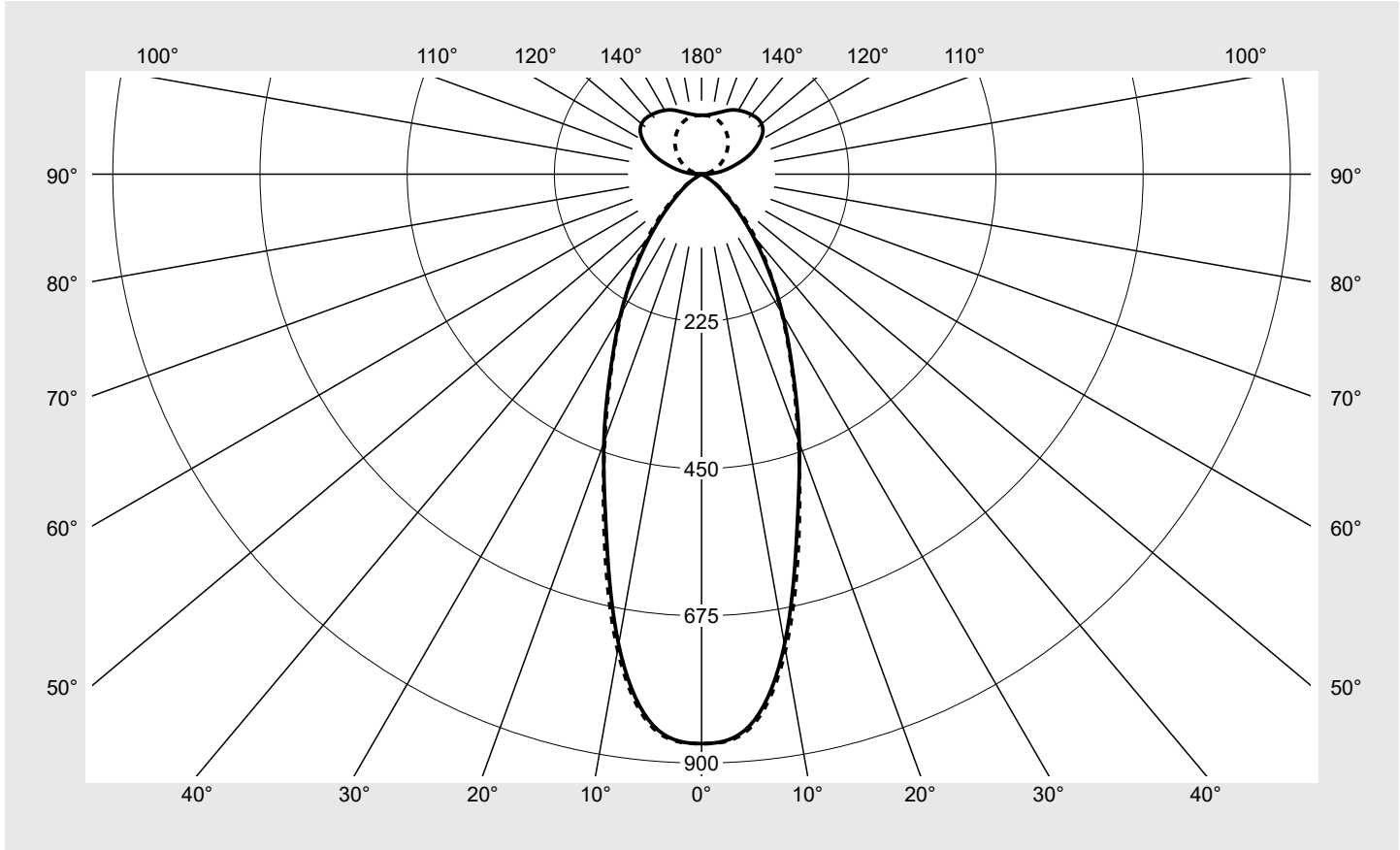
Setting factory setting

Rated values Net luminous flux = 15550 lm
Power consumption = 140.6 W
Luminous efficacy = 110.6 lm/W

serial documentation
03.05.2023



Luminous intensity in cd/klm C180-0 C270-90 **Imax: 870 cd/klm**



Classifications

| | |
|----------|------------------------------------|
| DIN 5040 | C 7 2 |
| CIE | N1=85 N2=99 N3=100 N4=60 N5=100 |

Luminaire light output ratios

| | |
|-------------|--------|
| η_{LB} | 100.0% |
| ϕ_u | 59.6% |
| ϕ_o | 40.4% |

Measurement conditions
DIN EN 13032 and DIN 5032

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|---|---|-------------------------------------|
| Family Silica® 21 | Order number: 51MX31TCTDB EAN: 4058352795859 | LP number 59310_75 |
| Table of values for luminous intensities | | Maximum luminous intensity |
| | | sITeco |

| C-planes γ | 0° 180° | 15° | 30° | 45° | 60° | 75° | 90° 270° | Phi-zone | Total Phi-zone |
|------------------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------------------------|-------------------|
| | | 165° 195° 345° | 150° 210° 330° | 135° 225° 315° | 120° 240° 300° | 105° 255° 285° | | | |
| Luminous intensity in cd/klm | | | | | | | | Luminous flux in lm/klm | |
| 0° | 870.3 | 870.3 | 870.3 | 870.3 | 870.3 | 870.3 | 870.3 | 5.2 | 5.2 |
| 5° | 846.0 | 847.0 | 846.3 | 847.4 | 849.1 | 850.7 | 849.9 | 40.5 | 45.7 |
| 10° | 729.9 | 730.5 | 735.4 | 740.2 | 741.6 | 737.5 | 738.7 | 70.1 | 115.8 |
| 15° | 563.5 | 566.8 | 573.7 | 583.4 | 582.7 | 575.8 | 574.3 | 81.6 | 197.4 |
| 20° | 436.6 | 435.3 | 429.7 | 429.7 | 431.1 | 427.8 | 432.4 | 80.9 | 278.3 |
| 25° | 328.9 | 328.2 | 319.1 | 311.5 | 316.6 | 319.6 | 325.6 | 74.2 | 352.5 |
| 30° | 247.8 | 246.0 | 233.3 | 230.7 | 239.5 | 241.8 | 245.2 | 65.7 | 418.2 |
| 35° | 177.2 | 177.8 | 169.0 | 168.0 | 180.3 | 183.5 | 180.9 | 55.4 | 473.6 |
| 40° | 120.1 | 121.7 | 120.2 | 121.8 | 131.6 | 132.5 | 129.5 | 44.2 | 517.8 |
| 45° | 75.2 | 76.8 | 78.8 | 83.5 | 89.3 | 88.1 | 85.7 | 32.1 | 549.9 |
| 50° | 44.3 | 46.1 | 49.1 | 53.4 | 57.3 | 54.4 | 51.5 | 21.6 | 571.5 |
| 55° | 25.2 | 26.5 | 29.2 | 32.4 | 34.1 | 31.0 | 29.0 | 13.5 | 585.0 |
| 60° | 8.3 | 10.2 | 15.9 | 18.3 | 18.2 | 12.9 | 10.8 | 6.7 | 591.7 |
| 65° | 2.5 | 3.2 | 5.0 | 9.4 | 5.8 | 3.6 | 3.2 | 2.5 | 594.2 |
| 70° | 1.1 | 1.1 | 1.0 | 1.8 | 1.2 | 1.4 | 1.5 | 0.7 | 594.9 |
| 75° | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | 595.0 |
| 80° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 595.1 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 595.3 |
| 90° | 5.7 | 5.5 | 5.8 | 5.6 | 3.2 | 1.1 | 0.4 | 2.2 | 597.5 |
| 95° | 20.7 | 21.1 | 22.8 | 21.9 | 14.5 | 7.6 | 3.9 | 9.1 | 606.6 |
| 100° | 36.3 | 37.4 | 38.2 | 34.3 | 23.7 | 13.6 | 9.0 | 15.3 | 621.9 |
| 105° | 52.3 | 53.6 | 53.5 | 47.0 | 32.7 | 20.5 | 15.0 | 21.3 | 643.2 |
| 110° | 71.5 | 72.2 | 68.8 | 58.2 | 41.9 | 27.5 | 21.3 | 27.0 | 670.2 |
| 115° | 88.7 | 88.3 | 82.4 | 68.5 | 50.8 | 34.7 | 28.2 | 31.7 | 701.9 |
| 120° | 103.3 | 102.0 | 94.0 | 77.2 | 59.3 | 41.7 | 35.0 | 35.1 | 737.0 |
| 125° | 114.4 | 111.6 | 102.0 | 85.5 | 66.7 | 48.3 | 42.1 | 36.8 | 773.8 |
| 130° | 119.7 | 117.2 | 106.2 | 90.6 | 72.3 | 55.0 | 49.2 | 36.8 | 810.6 |
| 135° | 120.6 | 118.1 | 107.9 | 93.8 | 76.4 | 61.1 | 56.3 | 35.3 | 845.9 |
| 140° | 118.7 | 116.7 | 108.1 | 95.8 | 79.5 | 66.7 | 63.6 | 32.8 | 878.7 |
| 145° | 116.0 | 114.8 | 107.5 | 96.4 | 82.4 | 71.9 | 69.6 | 29.6 | 908.3 |
| 150° | 112.6 | 112.0 | 105.4 | 95.3 | 84.5 | 76.9 | 75.0 | 25.9 | 934.3 |
| 155° | 108.3 | 107.8 | 101.5 | 94.1 | 86.0 | 81.3 | 79.8 | 21.8 | 956.1 |
| 160° | 102.5 | 102.2 | 97.5 | 92.7 | 87.4 | 84.6 | 84.2 | 17.4 | 973.5 |
| 165° | 97.2 | 96.6 | 94.2 | 91.1 | 88.8 | 87.3 | 87.2 | 13.0 | 986.5 |
| 170° | 93.2 | 92.7 | 92.0 | 90.7 | 89.7 | 89.4 | 89.3 | 8.7 | 995.2 |
| 175° | 90.7 | 90.6 | 90.1 | 89.9 | 89.9 | 89.9 | 89.9 | 4.3 | 999.5 |
| 180° | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 | 0.5 | 1000.0 |

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| UGR-Table | Standard room | siteco |
|------------------|----------------------|---------------|

| | | | | | | | | | | | |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| 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 | 13.9 | 14.7 | 14.7 | 15.5 | 16.6 | 14.5 | 15.3 | 15.3 | 16.1 | 17.2 |
| | 3H | 13.6 | 14.3 | 14.5 | 15.2 | 16.3 | 14.2 | 15.0 | 15.1 | 15.8 | 16.9 |
| | 4H | 13.4 | 14.1 | 14.3 | 15.0 | 16.1 | 14.1 | 14.8 | 15.0 | 15.6 | 16.7 |
| | 6H | 13.2 | 13.8 | 14.2 | 14.7 | 15.9 | 13.9 | 14.5 | 14.8 | 15.4 | 16.6 |
| | 8H | 13.2 | 13.7 | 14.1 | 14.6 | 15.8 | 13.8 | 14.3 | 14.7 | 15.2 | 16.4 |
| | 12H | 13.1 | 13.5 | 14.0 | 14.5 | 15.6 | 13.7 | 14.2 | 14.7 | 15.1 | 16.3 |
| 4H | 2H | 13.7 | 14.3 | 14.5 | 15.2 | 16.3 | 14.2 | 14.8 | 15.1 | 15.7 | 16.8 |
| | 3H | 13.4 | 13.9 | 14.3 | 14.8 | 16.0 | 13.9 | 14.5 | 14.9 | 15.4 | 16.5 |
| | 4H | 13.2 | 13.7 | 14.2 | 14.6 | 15.8 | 13.8 | 14.3 | 14.7 | 15.2 | 16.4 |
| | 6H | 13.0 | 13.5 | 14.0 | 14.4 | 15.6 | 13.6 | 14.1 | 14.6 | 15.0 | 16.2 |
| | 8H | 13.0 | 13.3 | 13.9 | 14.3 | 15.5 | 13.6 | 13.9 | 14.5 | 14.9 | 16.1 |
| | 12H | 12.8 | 13.2 | 13.8 | 14.1 | 15.4 | 13.5 | 13.8 | 14.4 | 14.7 | 16.0 |
| 8H | 4H | 13.0 | 13.4 | 13.9 | 14.3 | 15.5 | 13.5 | 13.9 | 14.5 | 14.9 | 16.1 |
| | 6H | 12.8 | 13.2 | 13.8 | 14.1 | 15.3 | 13.4 | 13.7 | 14.3 | 14.6 | 15.9 |
| | 8H | 12.7 | 13.0 | 13.7 | 14.0 | 15.2 | 13.3 | 13.6 | 14.3 | 14.6 | 15.8 |
| | 12H | 12.6 | 12.9 | 13.6 | 13.9 | 15.1 | 13.2 | 13.4 | 14.2 | 14.4 | 15.7 |
| 12H | 4H | 12.9 | 13.2 | 13.9 | 14.2 | 15.4 | 13.4 | 13.7 | 14.4 | 14.7 | 15.9 |
| | 6H | 12.7 | 13.0 | 13.7 | 14.0 | 15.2 | 13.3 | 13.5 | 14.3 | 14.5 | 15.8 |
| | 8H | 12.6 | 12.9 | 13.6 | 13.9 | 15.1 | 13.2 | 13.4 | 14.2 | 14.4 | 15.7 |

| | | | |
|------------------------|---|--------------------------------------|----------------------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 2940 B = 49 |
|------------------------|---|--------------------------------------|----------------------------------|

| C-planes | γ | Luminance in cd/m ² | | | | | | | |
|----------|----------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
| | | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | |
| 45° | | 11481.4 | 11728.8 | 12025.0 | 12747.8 | 13628.8 | 13454.0 | 13084.7 | |
| 50° | | 7443.7 | 7741.1 | 8252.8 | 8967.8 | 9613.8 | 9135.7 | 8645.4 | |
| 55° | | 4742.9 | 4994.6 | 5493.3 | 6092.3 | 6409.2 | 5839.9 | 5462.8 | |
| 60° | | 1795.1 | 2206.3 | 3437.5 | 3943.5 | 3930.1 | 2794.2 | 2337.1 | |
| 65° | | 638.8 | 808.1 | 1266.8 | 2394.5 | 1474.2 | 919.0 | 827.5 | |
| 70° | | 338.6 | 360.4 | 305.5 | 579.8 | 393.2 | 455.7 | 474.7 | |
| 75° | | 89.7 | 125.5 | 123.4 | 163.5 | 163.5 | 162.7 | 133.0 | |
| 80° | | 32.3 | 35.4 | 42.3 | 51.0 | 64.0 | 77.7 | 77.7 | |
| 85° | | 505.3 | 506.5 | 500.3 | 476.8 | 459.5 | 465.7 | 474.3 | |

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Luminance values in cd/m² γ 65° γ 70° γ 75° γ 80° γ 85° **siteco**

