

Photometric test report

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|--|--|---|
| Family Silica® 21 | Order number: 51MX21DB45BB EAN: 4058352896013 | LP number 59268_82 |
|  | Version surface-mounted luminaire, reflector, black, direct distribution, narrow distribution, UGR≤19 (L65≤3000cd/m²) | serial documentation 02.08.2023 |
| | Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI Rated values Net luminous flux = 5400 lm Power consumption = 32.0 W Luminous efficacy = 168.8 lm/W |  |

Luminous intensity in cd/klm C180-0 C270-90 I_{max}: 1647 cd/klm



| Classifications | |
|-----------------|-------------------------------------|
| DIN 5040 | A 7 0 |
| CIE | N1=87 N2=99 N3=100 N4=100 N5=100 |

| Luminaire light output ratios | |
|-------------------------------|--------|
| η_{LB} | 100.0% |
| ϕ_u | 100.0% |
| ϕ_o | 0.0% |

| Measurement conditions |
|---------------------------|
| DIN EN 13032 and DIN 5032 |

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| 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° | 1647.1 | 1647.1 | 1647.1 | 1647.1 | 1647.1 | 1647.1 | 1647.1 | 9.9 | 9.9 |
| 5° | 1556.0 | 1552.2 | 1545.4 | 1552.7 | 1555.3 | 1549.6 | 1552.8 | 74.1 | 84.0 |
| 10° | 1286.3 | 1288.4 | 1295.0 | 1311.1 | 1307.0 | 1291.2 | 1290.4 | 123.4 | 207.4 |
| 15° | 978.4 | 985.5 | 998.6 | 1011.3 | 1007.8 | 991.2 | 986.9 | 141.3 | 348.7 |
| 20° | 761.0 | 758.1 | 743.8 | 731.7 | 736.2 | 737.5 | 737.7 | 139.2 | 488.0 |
| 25° | 575.0 | 565.5 | 534.1 | 513.6 | 528.8 | 542.8 | 539.9 | 125.2 | 613.2 |
| 30° | 426.0 | 419.2 | 386.1 | 366.4 | 385.1 | 401.9 | 392.9 | 108.2 | 721.3 |
| 35° | 308.0 | 307.0 | 281.1 | 264.9 | 280.7 | 295.5 | 280.0 | 90.3 | 811.6 |
| 40° | 209.2 | 211.1 | 196.7 | 188.3 | 198.2 | 205.5 | 193.0 | 70.5 | 882.1 |
| 45° | 130.5 | 131.9 | 127.1 | 124.8 | 130.2 | 130.3 | 123.1 | 49.8 | 932.0 |
| 50° | 76.5 | 78.3 | 78.7 | 78.6 | 80.6 | 77.5 | 73.2 | 32.8 | 964.8 |
| 55° | 42.1 | 44.0 | 46.1 | 47.2 | 47.6 | 43.6 | 40.6 | 20.2 | 985.0 |
| 60° | 13.4 | 16.3 | 24.8 | 26.9 | 25.6 | 18.0 | 14.5 | 9.9 | 994.9 |
| 65° | 4.2 | 5.2 | 7.6 | 13.7 | 8.3 | 5.3 | 4.6 | 3.7 | 998.6 |
| 70° | 1.7 | 1.8 | 1.5 | 2.7 | 1.9 | 2.1 | 2.2 | 1.0 | 999.6 |
| 75° | 0.3 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.4 | 0.3 | 999.9 |
| 80° | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 999.9 |
| 85° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 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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| UGR-Table | Standard room | siteco |
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| | | | | | | | | | | | |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| 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 | 17.1 | 18.3 | 17.5 | 18.6 | 18.9 | 17.0 | 18.2 | 17.4 | 18.5 | 18.8 |
| | 3H | 17.0 | 18.0 | 17.3 | 18.4 | 18.7 | 16.9 | 17.9 | 17.2 | 18.3 | 18.6 |
| | 4H | 16.9 | 17.9 | 17.3 | 18.2 | 18.6 | 16.8 | 17.8 | 17.2 | 18.1 | 18.5 |
| | 6H | 16.8 | 17.7 | 17.3 | 18.1 | 18.5 | 16.7 | 17.6 | 17.2 | 18.0 | 18.4 |
| | 8H | 16.9 | 17.6 | 17.3 | 18.0 | 18.4 | 16.8 | 17.5 | 17.2 | 17.9 | 18.3 |
| | 12H | 16.9 | 17.5 | 17.3 | 17.9 | 18.3 | 16.8 | 17.4 | 17.2 | 17.8 | 18.2 |
| 4H | 2H | 17.0 | 18.0 | 17.4 | 18.4 | 18.7 | 16.9 | 17.9 | 17.3 | 18.3 | 18.6 |
| | 3H | 16.9 | 17.7 | 17.3 | 18.1 | 18.5 | 16.8 | 17.6 | 17.2 | 18.0 | 18.4 |
| | 4H | 16.8 | 17.5 | 17.2 | 17.9 | 18.3 | 16.7 | 17.4 | 17.1 | 17.8 | 18.2 |
| | 6H | 16.7 | 17.3 | 17.2 | 17.7 | 18.2 | 16.6 | 17.2 | 17.1 | 17.6 | 18.1 |
| | 8H | 16.6 | 17.2 | 17.1 | 17.6 | 18.1 | 16.6 | 17.1 | 17.0 | 17.5 | 18.0 |
| | 12H | 16.6 | 17.1 | 17.1 | 17.5 | 18.0 | 16.5 | 17.0 | 17.0 | 17.4 | 17.9 |
| 8H | 4H | 16.6 | 17.2 | 17.1 | 17.6 | 18.1 | 16.6 | 17.1 | 17.0 | 17.5 | 18.0 |
| | 6H | 16.5 | 17.0 | 17.0 | 17.4 | 18.0 | 16.4 | 16.9 | 16.9 | 17.3 | 17.9 |
| | 8H | 16.5 | 16.8 | 17.0 | 17.3 | 17.9 | 16.4 | 16.8 | 16.9 | 17.2 | 17.8 |
| | 12H | 16.5 | 16.7 | 17.0 | 17.2 | 17.8 | 16.4 | 16.6 | 16.9 | 17.1 | 17.7 |
| 12H | 4H | 16.6 | 17.1 | 17.1 | 17.5 | 18.0 | 16.6 | 17.0 | 17.0 | 17.4 | 17.9 |
| | 6H | 16.5 | 16.8 | 17.0 | 17.3 | 17.9 | 16.4 | 16.8 | 16.9 | 17.2 | 17.8 |
| | 8H | 16.5 | 16.7 | 17.0 | 17.2 | 17.8 | 16.4 | 16.6 | 16.9 | 17.1 | 17.7 |

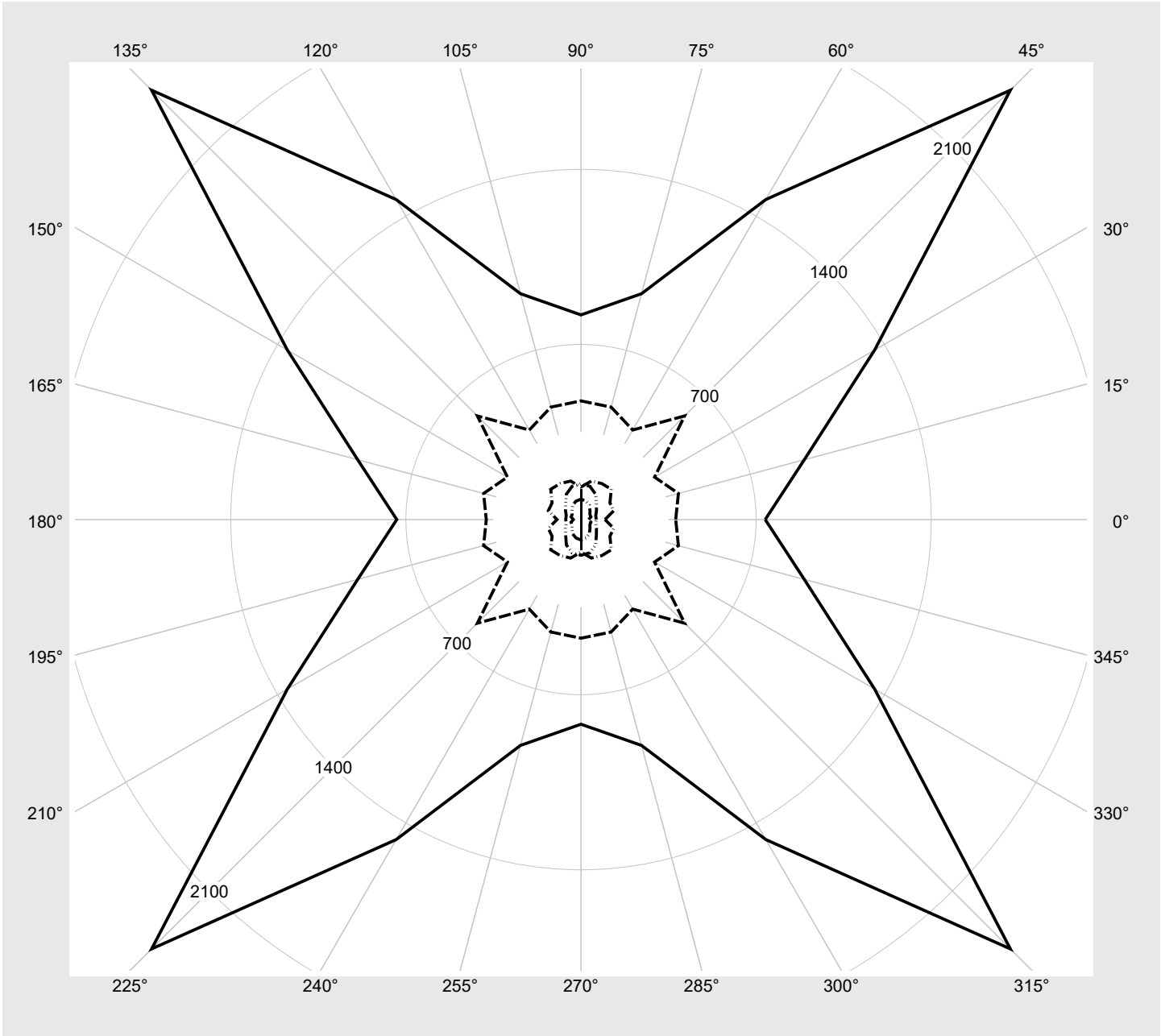
| | | | |
|------------------------|---|--------------------------------------|----------------------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 1470 B = 49 |
|------------------------|---|--------------------------------------|----------------------------------|

| 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° | | 13837.3 | 13986.0 | 13475.6 | 13233.6 | 13804.1 | 13819.2 | 13053.7 | |
| 50° | | 8925.4 | 9130.3 | 9184.1 | 9166.8 | 9400.7 | 9037.8 | 8535.2 | |
| 55° | | 5509.0 | 5751.6 | 6021.4 | 6172.9 | 6227.0 | 5700.7 | 5312.7 | |
| 60° | | 2003.8 | 2439.0 | 3713.1 | 4029.6 | 3843.3 | 2697.1 | 2177.5 | |
| 65° | | 736.4 | 924.0 | 1355.3 | 2427.2 | 1477.0 | 934.7 | 818.1 | |
| 70° | | 378.5 | 403.1 | 339.5 | 585.9 | 413.4 | 465.3 | 474.3 | |
| 75° | | 95.9 | 135.3 | 133.5 | 171.2 | 166.3 | 159.3 | 130.1 | |
| 80° | | 30.7 | 41.0 | 41.0 | 50.9 | 66.5 | 76.4 | 81.6 | |
| 85° | | 61.1 | 61.1 | 71.4 | 86.9 | 117.0 | 137.6 | 142.8 | |

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



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| Dimming levels table | environmental temperature: 25°C | sITeco |
|-----------------------------|---------------------------------|---------------|

| Luminous flux % | Dimming level linear | Dimming level logarithmic | Luminous flux [lm] | Power consumption [W] |
|-----------------|----------------------|---------------------------|--------------------|-----------------------|
| 100 | 254 | 254 | 5400 | 32.0 |
| 95 | 241 | 252 | 5139 | 30.3 |
| 90 | 227 | 250 | 4853 | 28.5 |
| 85 | 214 | 248 | 4589 | 26.8 |
| 80 | 201 | 245 | 4323 | 25.2 |
| 75 | 188 | 243 | 4055 | 23.6 |
| 70 | 175 | 240 | 3785 | 21.9 |
| 65 | 162 | 238 | 3513 | 20.3 |
| 60 | 149 | 234 | 3239 | 18.7 |
| 55 | 136 | 231 | 2962 | 17.1 |
| 50 | 124 | 228 | 2707 | 15.7 |
| 45 | 111 | 224 | 2429 | 14.0 |
| 40 | 99 | 219 | 2170 | 12.5 |
| 35 | 86 | 214 | 1888 | 11.0 |
| 30 | 74 | 209 | 1628 | 9.6 |
| 25 | 61 | 202 | 1343 | 8.2 |
| 20 | 49 | 194 | 1079 | 6.8 |
| 15 | 37 | 183 | 813 | 5.4 |
| 10 | 25 | 169 | 546 | 4.0 |
| 5 | 13 | 145 | 279 | 2.5 |
| 3 | 8 | 127 | 167 | 1.5 |