

# Photometric test report

<b>Family</b> <b>Silica® 21</b>	<b>Order number: 51MX21DB45BB</b> <b>EAN: 4058352896013</b>	<b>LP number</b> <b>59268_82</b>
	<b>Version</b> surface-mounted luminaire, reflector, black, direct distribution, narrow distribution, UGR≤19 (L65≤3000cd/m²)	<b>serial documentation</b> <b>02.08.2023</b>
	<b>Lamps</b> LED 4000 K   CRI ≥ 80 <b>Controlgear</b> ECG-DALI <b>Rated values</b> 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<sub>max</sub>: 1647 cd/klm



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

Luminaire light output ratios	
$\eta_{LB}$	100.0%
$\phi_u$	100.0%
$\phi_o$	0.0%

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>
		<b>sITeco</b>

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	<b>siteco</b>
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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

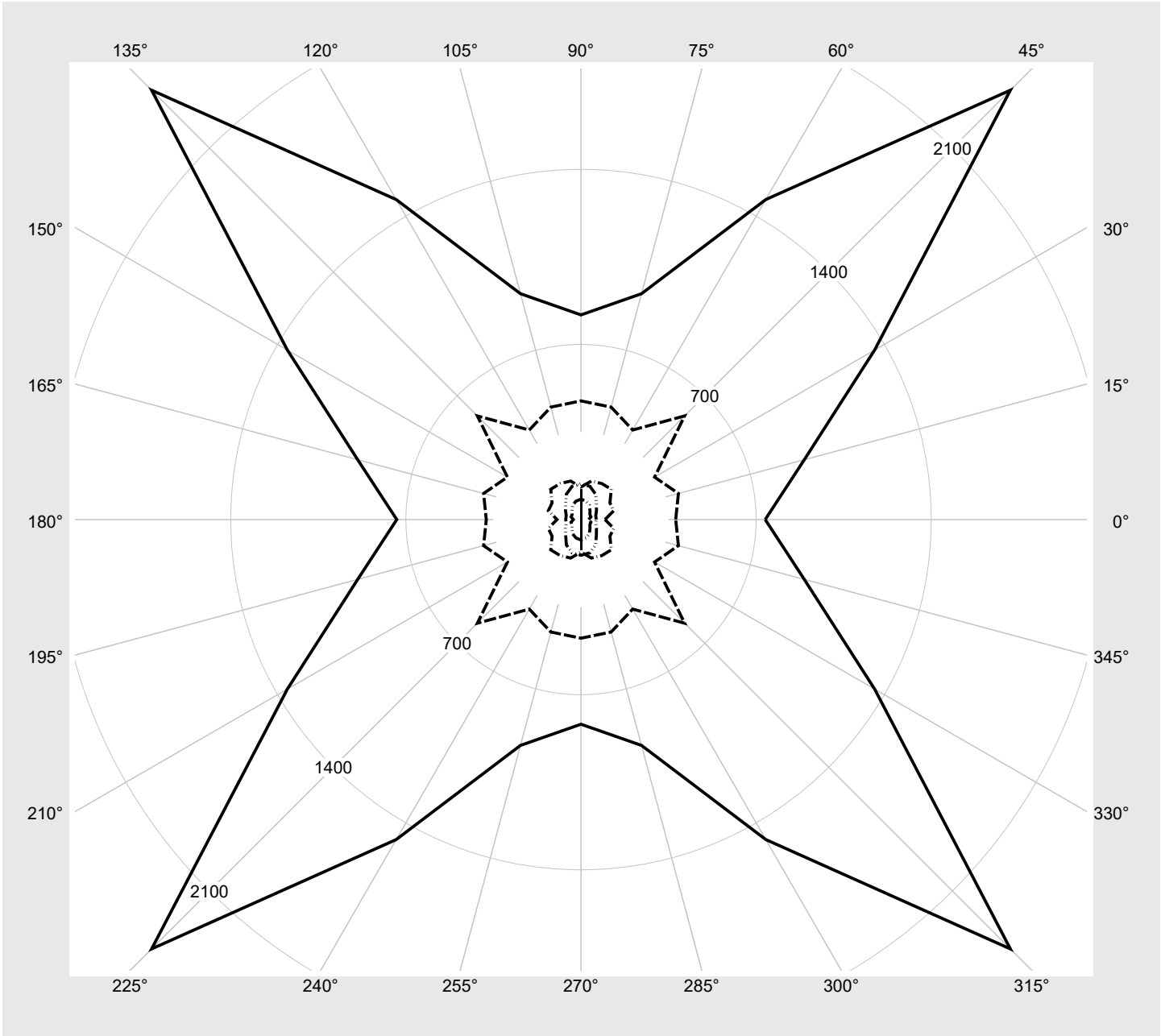
Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 1470 B = 49
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C-planes	$\gamma$	Luminance in cd/m <sup>2</sup>							
		0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 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/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>
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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