

Photometric test report

Family Silica® 21	Order number: 51MX21DA34BB EAN: 4058352894934	LP number 59268_81
	Version surface-mounted luminaire, reflector, black, direct distribution, narrow distribution, UGR≤19 (L65≤3000cd/m²)	serial documentation 02.08.2023
	Lamps LED 3000 K CRI ≥ 80 Controlgear ECG-DALI Rated values Net luminous flux = 4320 lm Power consumption = 27.4 W Luminous efficacy = 157.7 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

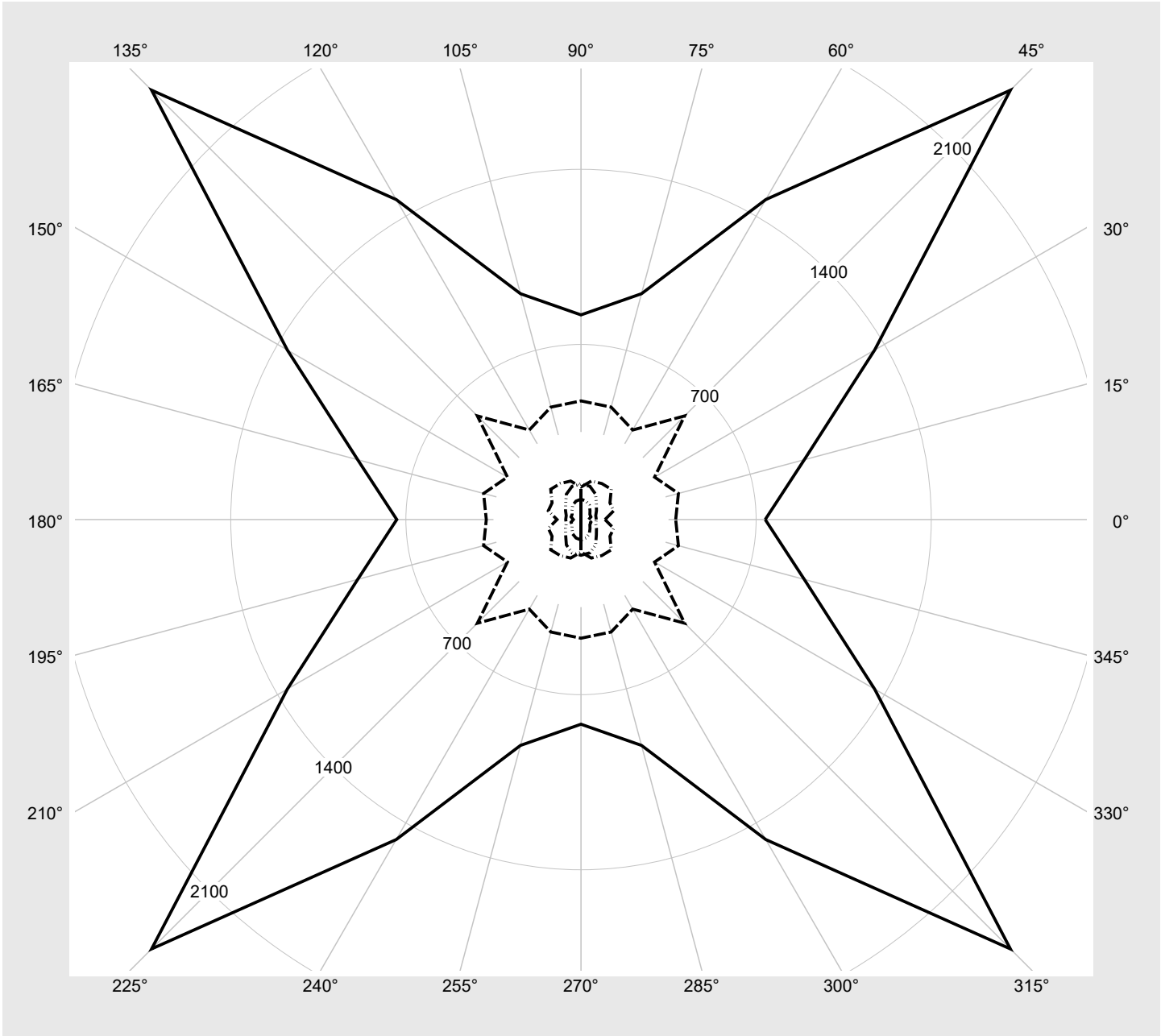
Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 1176 B = 49
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C-planes	γ	Luminance in cd/m ²							
		0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	
45°		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
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	4320	27.4
95	240	252	4098	25.9
90	227	250	3889	24.5
85	214	248	3678	23.1
80	200	245	3450	21.5
75	187	243	3236	20.1
70	174	240	3021	18.7
65	161	237	2805	17.2
60	148	234	2585	15.9
55	136	231	2383	14.6
50	123	227	2160	13.3
45	110	223	1937	11.9
40	98	219	1730	10.6
35	85	214	1503	9.3
30	73	208	1293	8.1
25	61	202	1083	6.9
20	49	194	870	5.8
15	37	183	655	4.5
10	24	168	423	3.3
5	12	142	207	1.9
3	8	127	135	1.3