

# Photometric test report

**Family**  
**Silica® 21**

**Order number: 51MX34DA37SB**  
**EAN: 4058352889114**

**LP number**  
**59283\_69**

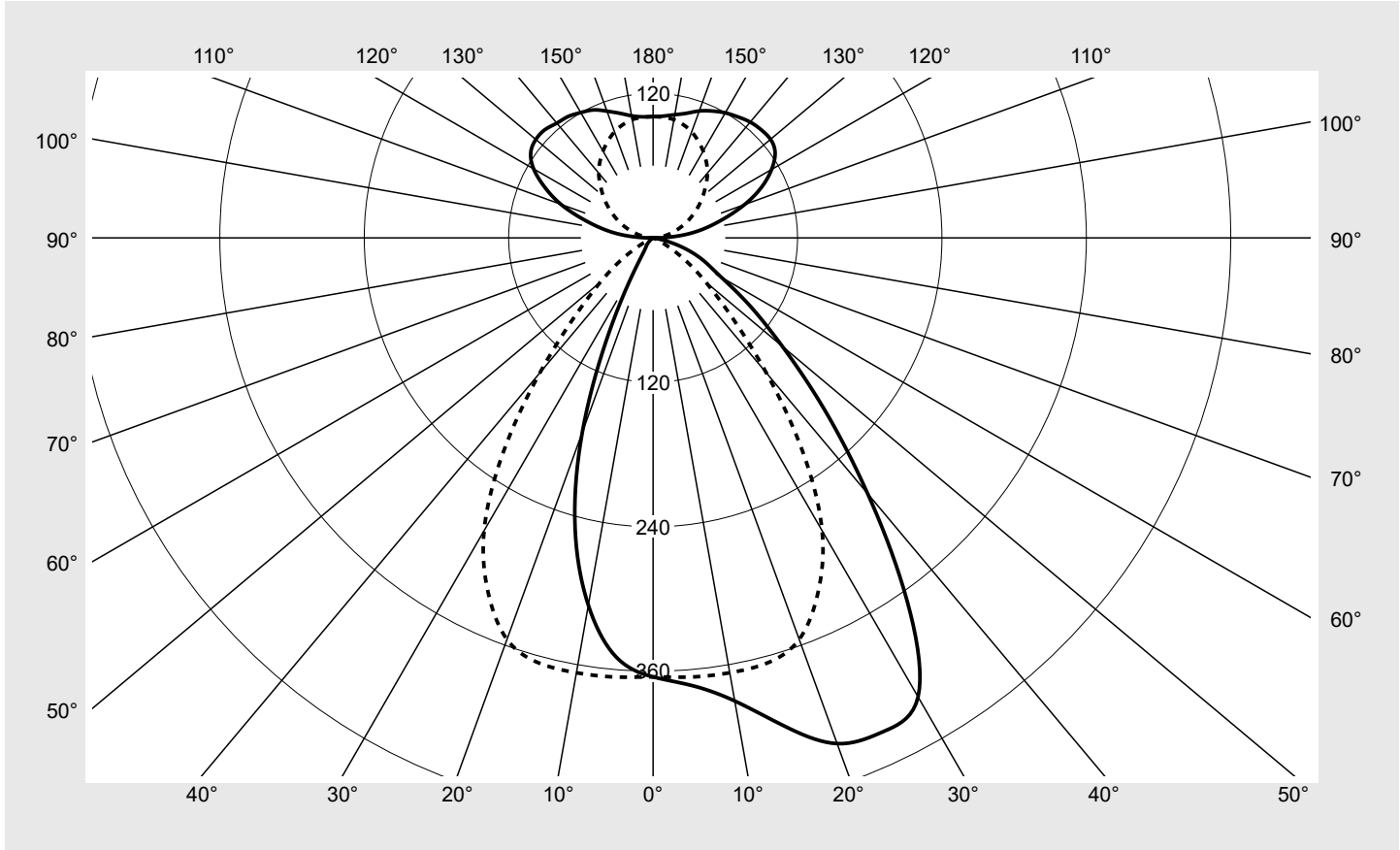


**Version** Suspended luminaire, reflector, black, direct-/indirect distribution, asymmetric distribution  
**Lamps** LED 3000 K | CRI ≥ 80  
**Controlgear** ECG-DALI  
**Rated values** Net luminous flux = 7680 lm  
 Power consumption = 53.6 W  
 Luminous efficacy = 143.3 lm/W

**serial documentation**  
**02.08.2023**



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 461 cd/klm**



**Classifications**

DIN 5040	C 6 2
CIE	N1=74 N2=94 N3=99 N4=56 N5=100

**Luminaire light output ratios**

$\eta_{LB}$	100.0%
$\phi_u$	56.1%
$\phi_o$	43.9%

**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	0°	15° 345°	30° 330°	45° 315°	60° 300°	75° 285°	90° 270°
$\gamma$	Luminous intensity in cd/klm						
0°	364.7	364.7	364.7	364.7	364.7	364.7	364.7
5°	373.4	374.2	373.9	372.4	372.0	370.0	366.2
10°	390.7	390.9	390.3	389.7	385.4	375.2	366.9
15°	419.6	426.1	426.0	420.4	403.3	382.3	365.7
20°	447.1	456.4	458.5	446.1	411.0	376.9	355.0
25°	452.6	460.6	453.6	431.0	395.6	351.4	324.5
30°	440.3	439.8	430.3	390.5	349.9	308.3	280.9
35°	367.9	364.8	361.9	334.1	285.8	241.7	216.7
40°	277.4	282.5	289.0	275.8	227.9	175.0	146.3
45°	200.8	207.3	222.4	214.2	174.3	117.9	91.5
50°	140.2	148.6	163.4	159.9	127.4	79.2	57.1
55°	98.0	104.1	120.3	117.5	94.9	52.4	33.6
60°	65.5	71.2	86.2	87.8	71.3	30.8	14.6
65°	48.2	50.7	59.5	65.1	47.4	16.3	4.7
70°	32.8	36.4	42.5	43.7	27.4	8.4	1.8
75°	16.4	20.5	29.1	21.1	13.2	4.7	0.6
80°	2.7	3.9	8.6	8.4	6.0	1.9	0.3
85°	1.0	1.1	1.6	1.5	0.7	0.5	0.5
90°	5.1	4.9	5.2	5.1	3.1	1.0	0.4
95°	23.6	24.1	25.8	24.5	15.6	8.0	4.1
100°	42.3	43.3	43.7	38.5	25.8	14.5	9.5
105°	60.4	61.7	60.5	51.6	35.4	21.8	16.0
110°	80.9	81.7	76.3	63.6	45.4	29.6	23.0
115°	99.3	98.4	90.6	74.6	54.9	37.4	30.6
120°	113.7	112.0	102.2	83.3	64.1	44.9	38.1
125°	123.7	120.5	109.6	92.0	71.5	52.1	46.1
130°	127.4	124.7	113.0	96.3	77.5	59.5	54.0
135°	127.0	124.4	114.1	99.9	82.2	66.6	62.0
140°	125.6	123.2	114.1	102.3	86.1	73.2	70.3
145°	122.8	121.6	114.6	103.4	89.6	79.2	77.1
150°	119.9	119.3	113.7	103.5	92.3	85.0	83.2
155°	116.3	116.3	110.3	102.8	94.6	90.3	88.8
160°	112.2	112.1	106.9	101.9	96.9	93.8	93.7
165°	107.2	106.8	103.8	100.5	98.5	97.0	97.3
170°	103.9	102.9	102.2	100.5	99.8	99.7	99.8
175°	101.6	101.2	100.4	100.2	100.5	100.4	100.5
180°	100.7	100.7	100.7	100.7	100.7	100.7	100.7

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<b>Table of values for luminous intensities</b>		<b>Maximum luminous intensity</b>
		<b>sITeco</b>

C-planes	105° 255°	120° 240°	135° 225°	150° 210°	165° 195°	180°	Phi-zone	Total Phi-zone
$\gamma$	Luminous intensity in cd/klm						Luminous flux in lm/klm	
0°	364.7	364.7	364.7	364.7	364.7	364.7	2.2	2.2
5°	362.9	358.9	355.8	351.9	350.5	349.8	17.4	19.6
10°	356.4	346.7	334.3	322.3	312.5	309.9	34.3	53.9
15°	351.5	329.8	301.2	272.8	255.4	250.3	50.5	104.3
20°	332.5	299.0	251.5	205.7	180.6	172.0	63.8	168.1
25°	300.5	247.9	184.7	134.5	99.3	86.1	70.5	238.6
30°	246.1	187.5	119.2	65.0	36.4	29.2	70.5	309.2
35°	174.7	119.3	62.2	24.9	14.0	12.2	62.6	371.8
40°	109.6	67.1	27.5	12.3	9.3	8.7	51.8	423.6
45°	65.7	34.8	12.8	8.3	6.4	5.9	40.7	464.3
50°	38.9	17.2	7.5	5.5	3.9	3.3	30.8	495.1
55°	21.5	8.7	4.7	3.3	2.1	1.8	22.9	518.0
60°	8.2	4.3	2.8	2.0	1.5	1.3	16.4	534.4
65°	2.7	2.1	1.7	1.4	1.0	0.7	11.5	545.9
70°	1.1	1.1	0.9	0.8	0.6	0.3	7.8	553.7
75°	0.4	0.5	0.5	0.4	0.4	0.3	4.4	558.1
80°	0.2	0.3	0.3	0.3	0.2	0.2	1.4	559.5
85°	0.5	0.5	0.6	0.6	0.6	0.6	0.4	559.9
90°	1.0	3.1	5.1	5.2	4.9	5.1	2.0	562.0
95°	8.1	15.6	24.4	25.8	24.1	23.5	10.2	572.1
100°	14.5	25.6	38.0	43.6	43.3	41.9	17.2	589.3
105°	21.9	35.3	51.6	60.4	61.7	60.5	23.8	613.1
110°	29.6	45.2	63.5	76.5	81.3	81.5	29.9	643.0
115°	37.4	55.0	74.7	90.7	98.3	99.2	34.9	677.9
120°	45.0	63.8	83.7	102.6	112.6	114.6	38.2	716.1
125°	52.1	71.5	91.4	109.3	120.5	124.0	39.7	755.8
130°	59.5	77.1	96.8	112.7	124.3	127.2	39.3	795.1
135°	66.2	81.6	99.7	114.1	124.5	127.1	37.5	832.6
140°	72.6	85.5	102.0	114.8	123.0	124.4	35.0	867.6
145°	78.7	89.2	103.4	114.2	121.7	123.1	31.9	899.4
150°	84.6	92.4	103.1	112.6	119.8	120.2	28.1	927.5
155°	89.7	94.6	103.0	110.2	116.6	117.3	23.8	951.3
160°	94.2	96.3	102.1	107.0	111.6	112.0	19.2	970.5
165°	97.4	98.7	101.2	104.4	106.4	107.2	14.4	985.0
170°	99.8	100.1	101.3	102.3	102.9	103.0	9.6	994.6
175°	100.7	100.4	100.7	100.9	101.1	101.0	4.8	999.4
180°	100.7	100.7	100.7	100.7	100.7	100.7	0.6	1000.0

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<b>UGR-Table</b>	<b>Standard room</b>	<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	22.1	23.0	22.9	23.8	24.9	17.5	18.4	18.3	19.2	20.3
	3H	22.4	23.2	23.3	24.1	25.3	17.3	18.1	18.2	19.0	20.1
	4H	22.5	23.2	23.4	24.1	25.3	17.2	17.9	18.1	18.8	20.0
	6H	22.4	23.0	23.3	23.9	25.1	17.0	17.7	17.9	18.6	19.8
	8H	22.3	22.9	23.2	23.8	25.0	16.9	17.6	17.9	18.5	19.7
	12H	22.2	22.7	23.1	23.7	24.9	16.8	17.4	17.8	18.3	19.5
4H	2H	22.3	23.0	23.2	23.9	25.0	18.1	18.8	19.0	19.7	20.9
	3H	22.9	23.5	23.8	24.4	25.6	18.1	18.7	19.1	19.7	20.9
	4H	23.0	23.6	24.0	24.5	25.7	18.1	18.6	19.0	19.5	20.7
	6H	22.9	23.4	23.9	24.3	25.6	17.9	18.4	18.9	19.3	20.6
	8H	22.8	23.3	23.8	24.2	25.5	17.8	18.2	18.8	19.2	20.5
	12H	22.7	23.1	23.7	24.1	25.4	17.7	18.1	18.7	19.1	20.3
8H	4H	23.0	23.4	23.9	24.3	25.6	18.1	18.5	19.1	19.5	20.8
	6H	22.9	23.3	23.9	24.3	25.5	18.1	18.4	19.1	19.4	20.7
	8H	22.8	23.2	23.9	24.1	25.4	18.0	18.3	19.0	19.3	20.6
	12H	22.8	23.0	23.8	24.0	25.3	17.9	18.2	18.9	19.2	20.5
12H	4H	22.9	23.2	23.8	24.2	25.5	18.1	18.4	19.0	19.4	20.7
	6H	22.8	23.1	23.8	24.1	25.4	18.0	18.3	19.0	19.3	20.6
	8H	22.8	23.0	23.8	24.0	25.3	17.9	18.2	19.0	19.2	20.5

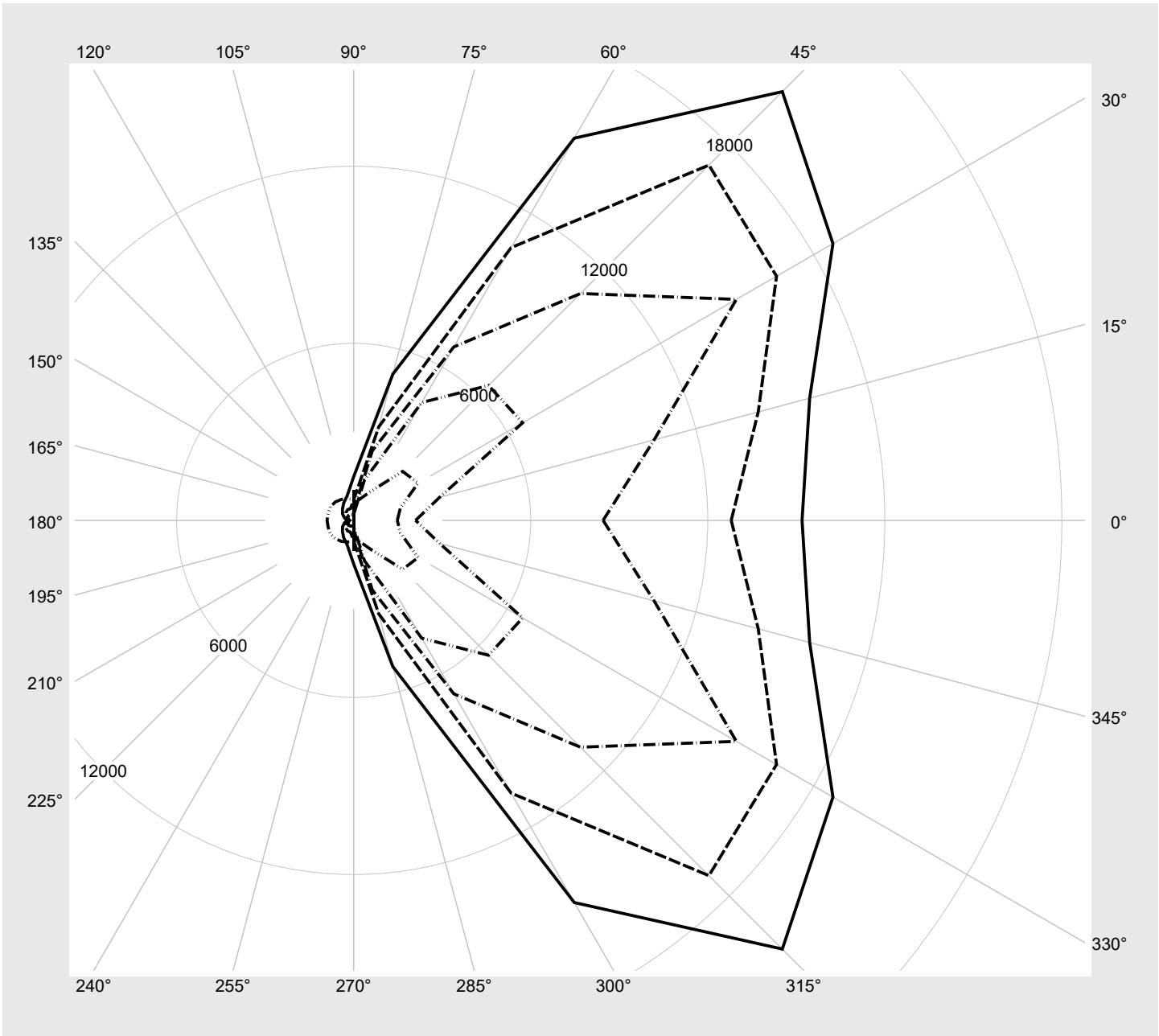
<b>Luminance table</b>	<b>Max. for <math>\gamma \geq 65^\circ</math></b>	<b>Photometric dimensions in mm:</b>	<b>L = 1176</b>
			<b>B = 49</b>

C-planes	0°	15° 345°	30° 330°	45° 315°	60° 300°	75° 285°	90° 270°	105° 255°	120° 240°	135° 225°	150° 210°	165° 195°	180°
$\gamma$	Luminance in cd/m <sup>2</sup>												
45°	37847.1	39066.6	41924.1	40365.0	32848.9	22219.0	17240.8	12382.6	6567.9	2406.2	1567.6	1215.3	1109.8
50°	29067.9	30810.4	33888.8	33146.8	26408.9	16415.6	11845.9	8064.2	3571.3	1552.6	1140.8	806.4	677.6
55°	22763.6	24190.8	27955.8	27307.0	22040.1	12165.8	7803.0	5001.4	2028.8	1096.5	776.1	479.4	412.9
60°	17451.9	18977.7	22985.1	23414.0	18995.8	8209.6	3899.2	2185.5	1136.6	756.0	524.0	408.9	347.9
65°	15195.7	15999.0	18754.9	20544.0	14954.8	5133.1	1478.7	858.1	677.7	537.7	435.2	322.6	214.1
70°	12794.7	14194.0	16548.5	17025.4	10672.5	3279.9	694.4	413.8	416.2	369.4	305.5	220.6	135.2
75°	8452.8	10540.4	14977.7	10871.5	6786.5	2443.9	319.3	210.1	256.4	244.6	225.5	182.3	147.3
80°	2097.6	3013.3	6611.4	6464.8	4610.5	1421.4	202.6	191.1	225.6	231.8	220.3	191.1	174.2
85°	1477.2	1640.8	2520.1	2347.3	1120.9	731.0	721.8	756.9	822.7	880.8	912.9	896.1	902.2

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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	7680	53.6
95	240	252	7287	50.5
90	227	250	6918	47.8
85	213	248	6519	44.9
80	200	245	6144	42.2
75	187	243	5765	39.5
70	174	240	5384	36.8
65	161	237	4999	34.2
60	148	234	4610	31.6
55	135	231	4220	28.9
50	122	227	3826	26.2
45	110	223	3459	23.8
40	97	219	3059	21.2
35	85	214	2687	18.8
30	73	208	2313	16.3
25	60	201	1905	13.8
20	48	193	1525	11.3
15	36	182	1143	8.8
10	24	168	759	6.5
5	12	142	374	4.3
2	5	110	148	3.4