

# Photometric test report

**Family**  
Silica® 21

**Order number: 51MX34DB49BB**  
**EAN: 4058352892862**

**LP number**  
59283\_65

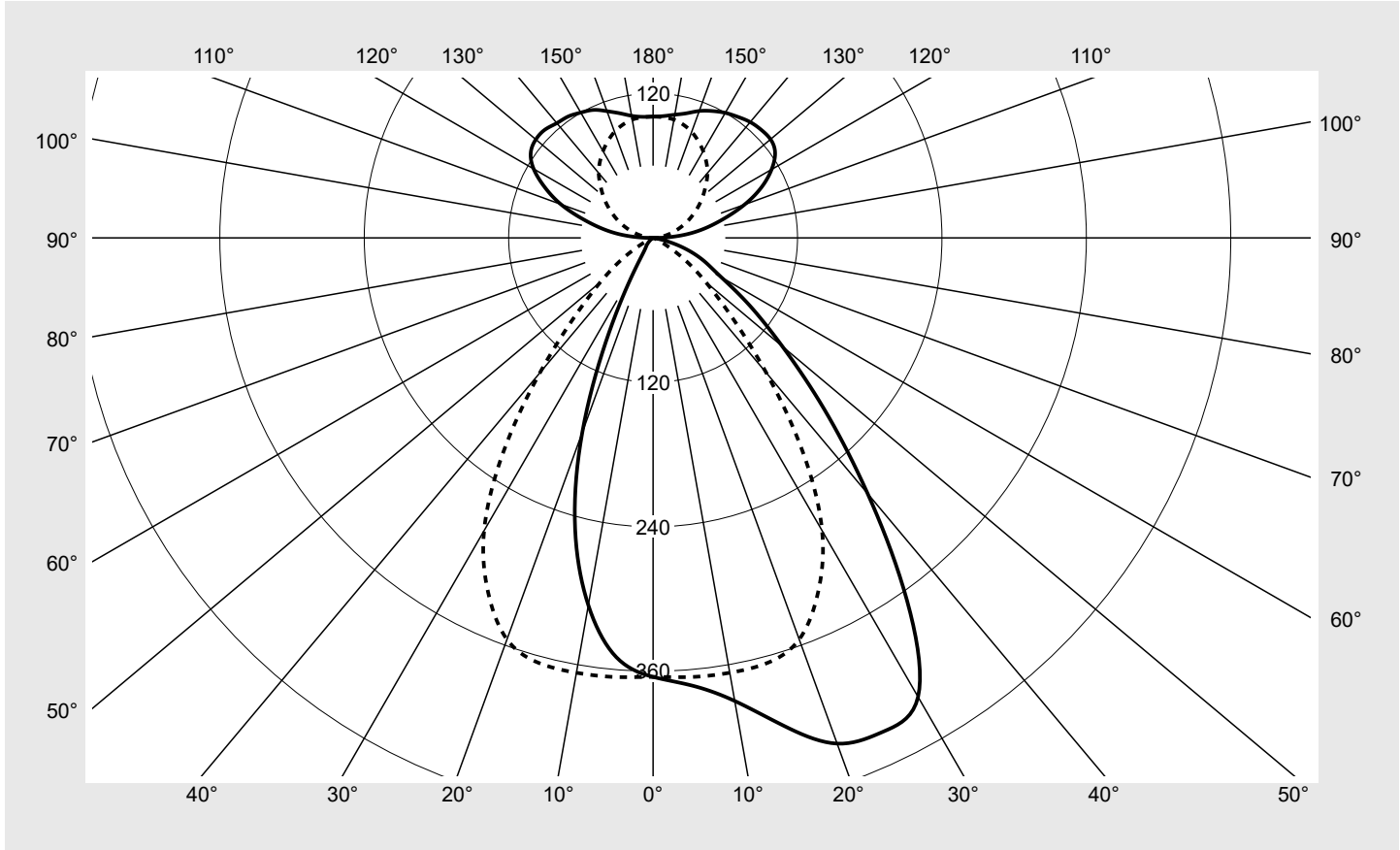


**Version** Suspended luminaire, reflector, black, direct-/indirect distribution, asymmetric distribution  
**Lamps** LED 4000 K | CRI ≥ 80  
**Controlgear** ECG-DALI  
**Rated values** Net luminous flux = 9600 lm  
 Power consumption = 62.4 W  
 Luminous efficacy = 153.8 lm/W

**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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Table of values for luminous intensities		Maximum luminous intensity
		<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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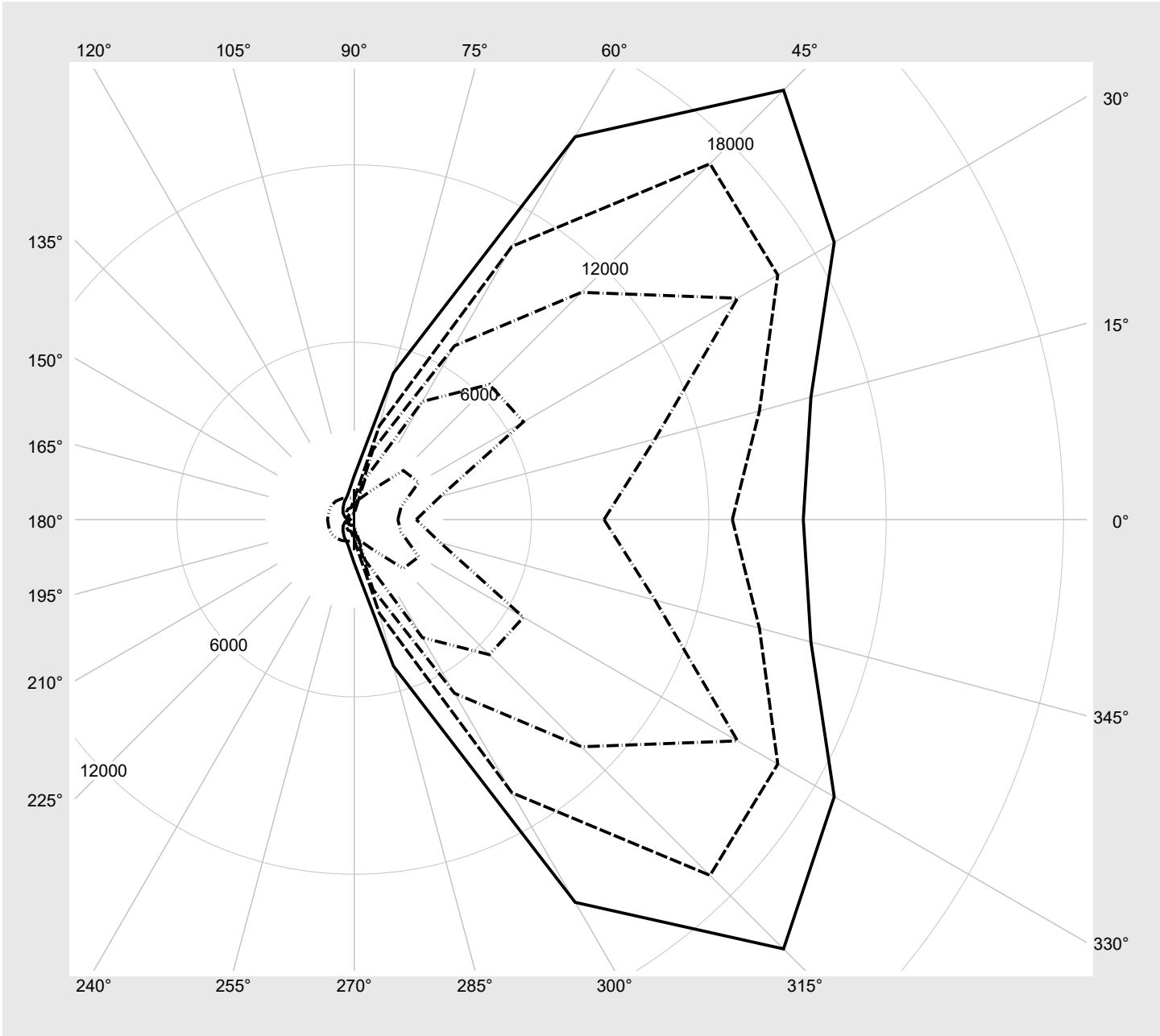
UGR-Table		Standard room									
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
Reflection factor of floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		View crosswise (C0)					View endwise (C90)				
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

Luminance table		Max. for $\gamma \geq 65^\circ$											
		Photometric dimensions in mm: L = 1470 B = 49											
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	----	----	----	----
100	253	254	9565	62.2
95	240	252	9105	59.0
90	227	250	8640	55.8
85	214	248	8172	52.7
80	200	245	7664	49.3
75	187	243	7189	46.1
70	174	240	6708	43.1
65	161	237	6225	40.0
60	149	234	5778	37.1
55	136	231	5289	34.0
50	123	227	4797	31.0
45	111	224	4339	28.1
40	98	219	3840	25.1
35	86	214	3377	22.2
30	73	208	2872	19.2
25	61	202	2402	16.4
20	49	194	1930	13.5
15	37	183	1456	10.7
10	24	168	941	7.8
5	12	142	463	5.2
2	5	110	182	4.2