

# Photometric test report

**Family**  
Silica® 21

**Order number: 51MX31DB39BB**  
**EAN: 4058352886717**

**LP number**  
59281\_68



**Version** Suspended luminaire, reflector, black, direct-/indirect distribution, narrow distribution, UGR≤16 (L65≤3000cd/m²)

**Lamps** LED 3000 K | CRI ≥ 80

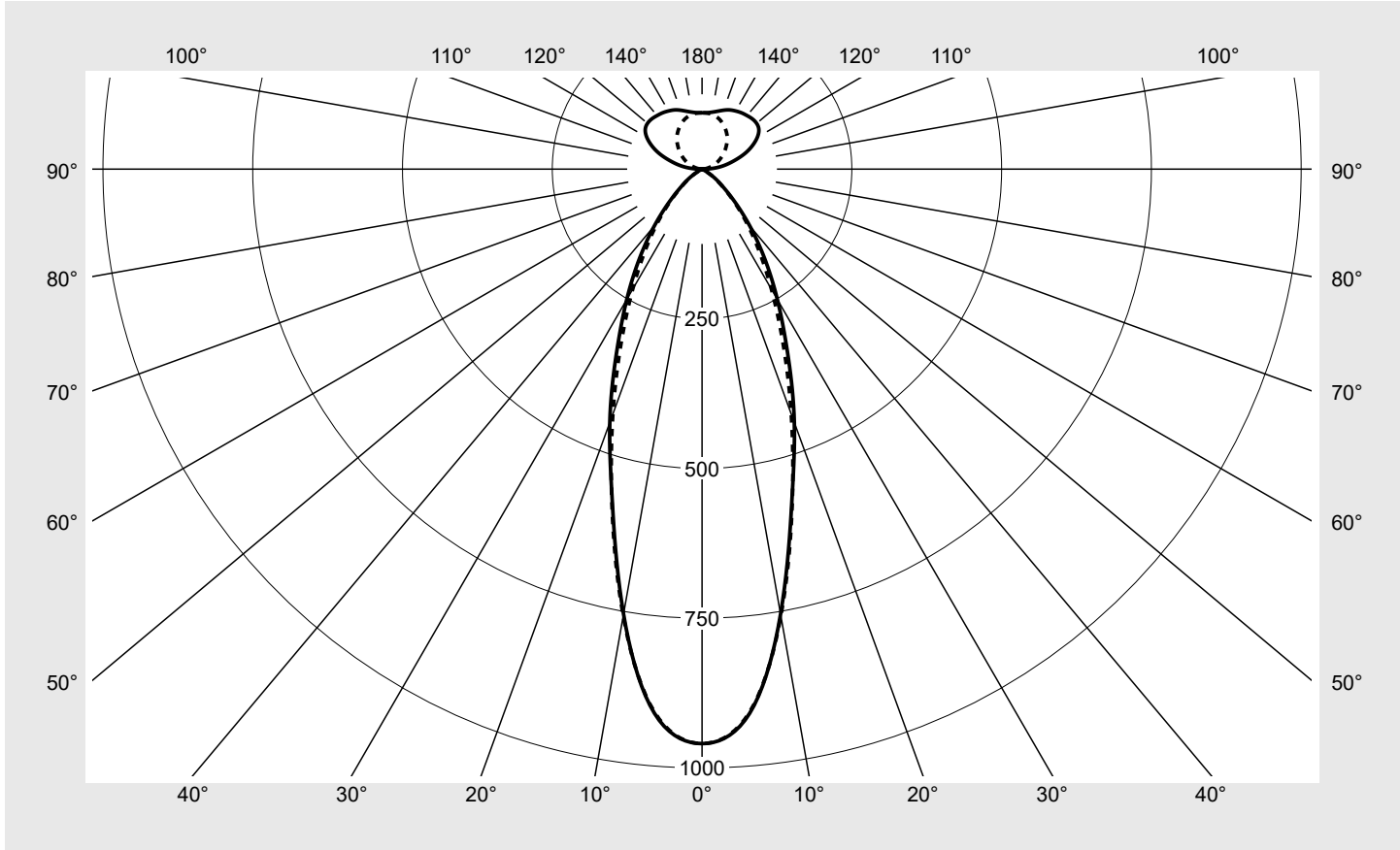
**Controlgear** ECG-DALI

**Rated values** Net luminous flux = 9120 lm  
Power consumption = 58.6 W  
Luminous efficacy = 155.6 lm/W

**serial documentation**  
02.08.2023



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 959 cd/klm**



**Classifications**

DIN 5040	C 7 2
CIE	N1=86 N2=99 N3=100 N4=59 N5=100

**Luminaire light output ratios**

$\eta_{LB}$	100.0%
$\phi_u$	59.0%
$\phi_o$	41.0%

**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>



C-planes $\gamma$	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°	959.4	959.4	959.4	959.4	959.4	959.4	959.4	5.7	5.7
5°	912.2	913.2	911.7	911.4	911.5	911.7	910.3	43.6	49.3
10°	754.6	755.9	762.5	767.9	766.9	758.5	757.5	72.5	121.8
15°	578.2	581.5	588.5	595.2	592.8	584.9	581.1	83.3	205.1
20°	450.2	447.9	438.1	432.3	432.3	433.7	435.2	82.1	287.1
25°	337.4	332.5	314.5	302.7	311.9	319.4	319.2	73.7	360.8
30°	251.3	246.8	227.0	216.4	227.8	237.2	231.6	63.8	424.6
35°	181.9	180.8	165.4	156.1	165.0	174.0	165.2	53.2	477.8
40°	124.1	124.5	116.4	111.0	116.6	120.7	113.9	41.6	519.4
45°	77.3	77.7	75.1	73.6	76.6	76.5	72.7	29.4	548.8
50°	44.9	46.1	46.4	46.4	47.6	45.7	43.0	19.3	568.1
55°	25.0	26.0	27.2	27.9	28.2	25.7	24.0	11.9	580.0
60°	7.9	9.6	14.5	15.8	15.1	10.6	8.6	5.8	585.9
65°	2.5	3.1	4.5	8.1	4.9	3.1	2.7	2.2	588.0
70°	1.0	1.1	0.9	1.6	1.1	1.3	1.3	0.6	588.6
75°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	588.8
80°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	588.8
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	589.1
90°	4.7	4.6	4.9	4.8	2.9	1.0	0.4	1.9	590.9
95°	22.0	22.5	24.1	22.8	14.6	7.5	3.9	9.5	600.4
100°	39.3	40.4	40.8	35.7	24.0	13.5	8.9	16.1	616.5
105°	56.4	57.6	56.5	48.2	33.0	20.5	15.0	22.2	638.7
110°	75.8	76.1	71.3	59.4	42.3	27.6	21.4	27.9	666.6
115°	92.7	91.8	84.7	69.7	51.3	34.9	28.6	32.5	699.2
120°	106.6	104.9	95.6	78.0	59.7	42.0	35.6	35.7	734.9
125°	115.7	112.5	102.2	85.6	66.8	48.7	43.0	37.1	771.9
130°	118.9	116.2	105.4	90.1	72.2	55.6	50.5	36.7	808.6
135°	118.7	116.2	106.6	93.2	76.5	62.0	57.9	35.1	843.7
140°	116.7	115.0	106.9	95.4	80.1	68.1	65.7	32.7	876.4
145°	114.8	113.6	106.8	96.6	83.5	73.7	72.0	29.7	906.1
150°	112.1	111.6	105.6	96.5	86.2	79.2	77.7	26.2	932.3
155°	109.0	108.7	103.0	96.1	88.3	84.0	82.9	22.2	954.6
160°	104.7	104.4	99.9	95.3	90.2	87.8	87.5	17.9	972.5
165°	100.1	99.5	97.2	94.2	92.0	90.8	90.9	13.5	985.9
170°	96.6	96.1	95.5	94.2	93.3	93.1	93.2	9.0	994.9
175°	94.6	94.5	94.0	93.8	93.8	93.9	93.9	4.5	999.4
180°	94.1	94.1	94.1	94.1	94.1	94.1	94.1	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	14.3	15.1	15.1	15.9	17.0	14.2	15.0	15.0	15.8	16.9
	3H	14.0	14.7	14.9	15.6	16.7	13.9	14.6	14.8	15.5	16.6
	4H	13.8	14.5	14.7	15.4	16.5	13.8	14.5	14.7	15.3	16.4
	6H	13.7	14.3	14.6	15.2	16.3	13.6	14.2	14.5	15.1	16.3
	8H	13.6	14.1	14.5	15.0	16.2	13.5	14.0	14.4	14.9	16.1
	12H	13.5	14.0	14.4	14.9	16.1	13.4	13.9	14.4	14.8	16.0
4H	2H	14.0	14.7	14.9	15.6	16.7	13.9	14.5	14.8	15.4	16.5
	3H	13.7	14.3	14.7	15.2	16.4	13.6	14.2	14.5	15.1	16.2
	4H	13.6	14.1	14.5	15.0	16.2	13.5	14.0	14.4	14.9	16.1
	6H	13.4	13.8	14.4	14.8	16.0	13.3	13.7	14.3	14.7	15.9
	8H	13.3	13.7	14.3	14.6	15.9	13.2	13.6	14.2	14.6	15.8
	12H	13.2	13.5	14.2	14.5	15.7	13.1	13.5	14.1	14.4	15.7
8H	4H	13.3	13.7	14.3	14.7	15.9	13.2	13.6	14.2	14.5	15.8
	6H	13.2	13.5	14.2	14.5	15.7	13.0	13.3	14.0	14.3	15.6
	8H	13.1	13.4	14.1	14.3	15.6	13.0	13.3	14.0	14.2	15.5
	12H	13.0	13.2	14.0	14.2	15.5	12.9	13.1	13.9	14.1	15.4
12H	4H	13.2	13.6	14.2	14.5	15.8	13.1	13.4	14.1	14.4	15.6
	6H	13.1	13.3	14.1	14.3	15.6	13.0	13.2	14.0	14.2	15.5
	8H	13.0	13.2	14.0	14.2	15.5	12.9	13.1	13.9	14.1	15.4

<b>Luminance table</b>	<b>Max. for <math>\gamma \geq 65^\circ</math></b>	<b>Photometric dimensions in mm:</b>	<b>L = 1470</b> <b>B = 49</b>
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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°		13833.7	13904.5	13449.7	13183.4	13716.1	13704.6	13019.0	
50°		8851.1	9078.4	9131.6	9147.6	9383.9	9001.6	8476.3	
55°		5513.1	5735.8	5999.8	6164.7	6224.3	5678.4	5287.7	
60°		2000.5	2427.9	3682.7	3989.6	3827.8	2677.6	2169.7	
65°		734.3	920.1	1347.0	2421.0	1466.2	931.4	809.8	
70°		377.2	400.6	337.2	584.5	411.7	463.1	472.4	
75°		95.4	134.5	133.1	170.2	165.8	159.0	129.6	
80°		30.6	40.8	40.8	51.0	66.4	75.8	80.9	
85°		616.0	600.0	584.0	550.6	537.5	530.2	537.5	

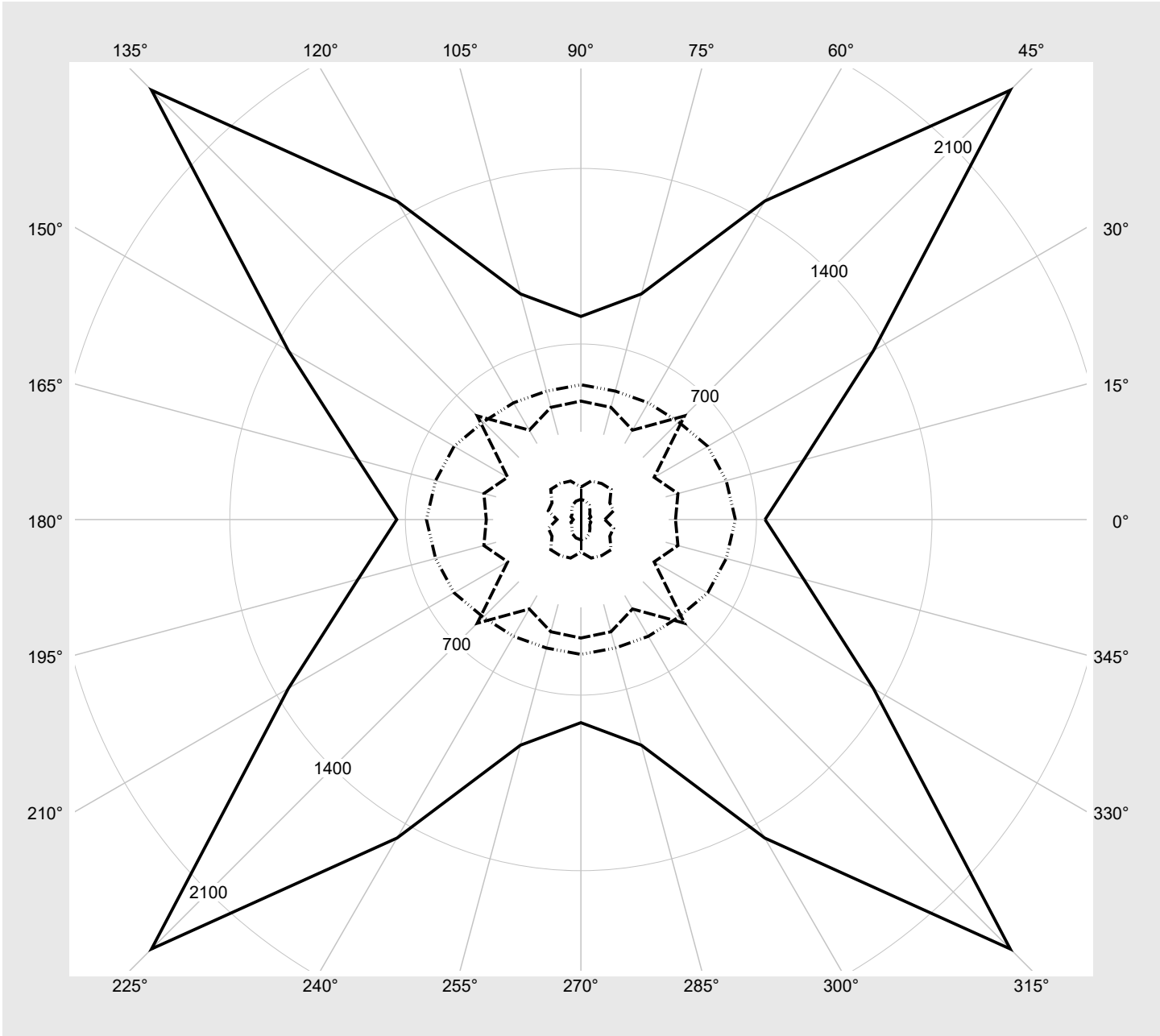
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**Luminance values in cd/m<sup>2</sup>**

$\gamma$  65°   
   $\gamma$  70°   
   $\gamma$  75°   
   $\gamma$  80°   
   $\gamma$  85°



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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	9120	58.6
95	240	252	8648	55.4
90	227	250	8206	52.5
85	214	248	7761	49.5
80	201	245	7312	46.5
75	187	243	6825	43.5
70	174	240	6369	40.6
65	161	237	5911	37.6
60	149	234	5486	34.9
55	136	231	5021	32.1
50	123	227	4553	29.2
45	111	224	4118	26.5
40	98	219	3645	23.6
35	86	214	3205	21.0
30	73	208	2726	18.2
25	61	202	2278	15.5
20	49	194	1831	12.8
15	37	183	1381	10.2
10	25	169	930	7.6
5	12	142	438	5.0
2	5	110	172	4.2