

# Photometric test report

**Family**  
Silica® 21

**Order number:** 51MX31TCTDW  
**EAN:** 4058352795149

**LP number**  
59310\_48



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

**Lamps** LED 4000 K | CRI ≥ 80

**Controlgear** ECG-DALI

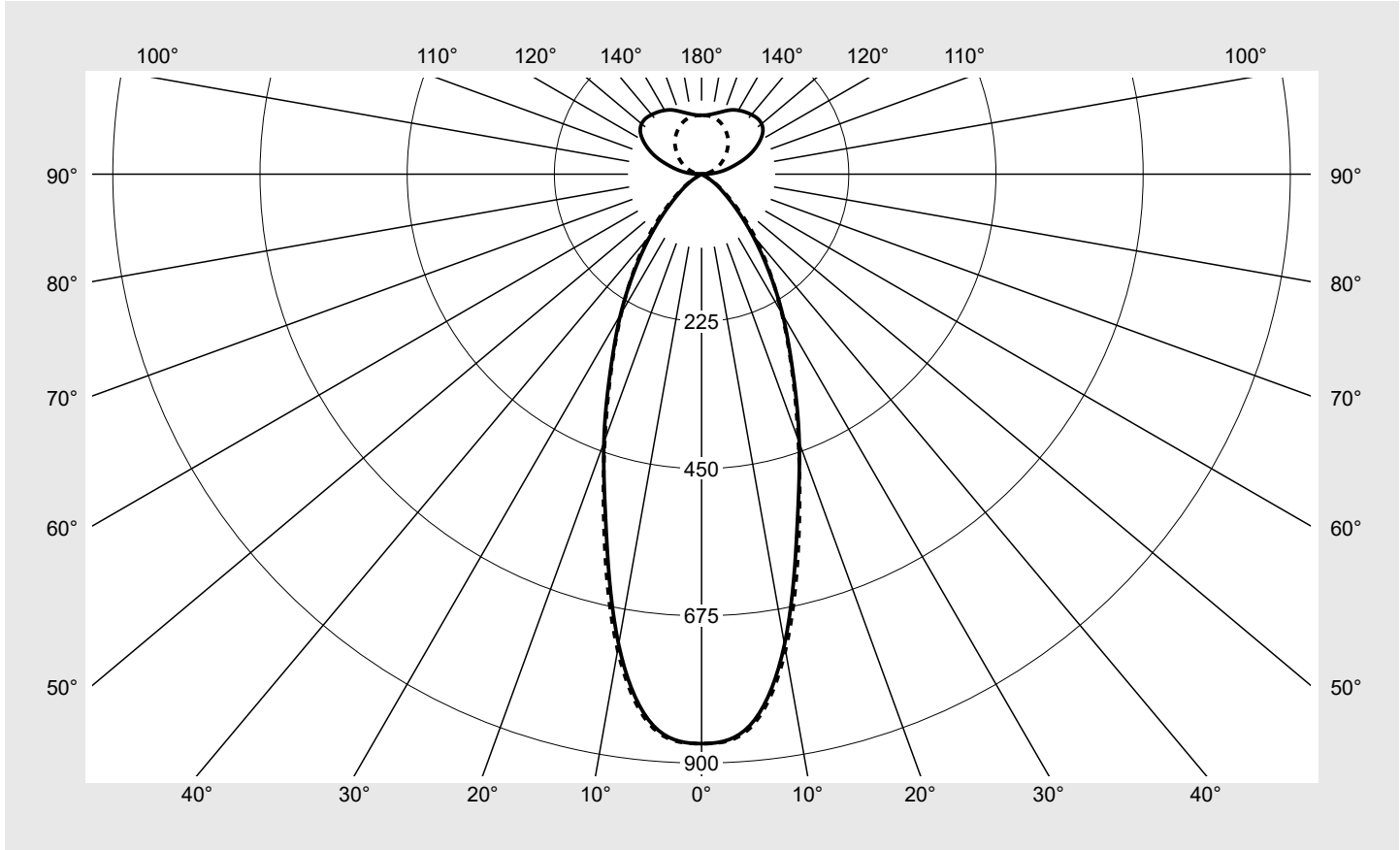
**Setting** factory setting

**Rated values** Net luminous flux = 15550 lm  
Power consumption = 140.6 W  
Luminous efficacy = 110.6 lm/W

**serial documentation**  
03.05.2023



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 870 cd/klm**



**Classifications**

DIN 5040	C 7 2
CIE	N1=85 N2=99 N3=100 N4=60 N5=100

**Luminaire light output ratios**

$\eta_{LB}$	100.0%
$\phi_u$	59.6%
$\phi_o$	40.4%

**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°	870.3	870.3	870.3	870.3	870.3	870.3	870.3	5.2	5.2
5°	846.0	847.0	846.3	847.4	849.1	850.7	849.9	40.5	45.7
10°	729.9	730.5	735.4	740.2	741.6	737.5	738.7	70.1	115.8
15°	563.5	566.8	573.7	583.4	582.7	575.8	574.3	81.6	197.4
20°	436.6	435.3	429.7	429.7	431.1	427.8	432.4	80.9	278.3
25°	328.9	328.2	319.1	311.5	316.6	319.6	325.6	74.2	352.5
30°	247.8	246.0	233.3	230.7	239.5	241.8	245.2	65.7	418.2
35°	177.2	177.8	169.0	168.0	180.3	183.5	180.9	55.4	473.6
40°	120.1	121.7	120.2	121.8	131.6	132.5	129.5	44.2	517.8
45°	75.2	76.8	78.8	83.5	89.3	88.1	85.7	32.1	549.9
50°	44.3	46.1	49.1	53.4	57.3	54.4	51.5	21.6	571.5
55°	25.2	26.5	29.2	32.4	34.1	31.0	29.0	13.5	585.0
60°	8.3	10.2	15.9	18.3	18.2	12.9	10.8	6.7	591.7
65°	2.5	3.2	5.0	9.4	5.8	3.6	3.2	2.5	594.2
70°	1.1	1.1	1.0	1.8	1.2	1.4	1.5	0.7	594.9
75°	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.2	595.0
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	595.1
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	595.3
90°	5.7	5.5	5.8	5.6	3.2	1.1	0.4	2.2	597.5
95°	20.7	21.1	22.8	21.9	14.5	7.6	3.9	9.1	606.6
100°	36.3	37.4	38.2	34.3	23.7	13.6	9.0	15.3	621.9
105°	52.3	53.6	53.5	47.0	32.7	20.5	15.0	21.3	643.2
110°	71.5	72.2	68.8	58.2	41.9	27.5	21.3	27.0	670.2
115°	88.7	88.3	82.4	68.5	50.8	34.7	28.2	31.7	701.9
120°	103.3	102.0	94.0	77.2	59.3	41.7	35.0	35.1	737.0
125°	114.4	111.6	102.0	85.5	66.7	48.3	42.1	36.8	773.8
130°	119.7	117.2	106.2	90.6	72.3	55.0	49.2	36.8	810.6
135°	120.6	118.1	107.9	93.8	76.4	61.1	56.3	35.3	845.9
140°	118.7	116.7	108.1	95.8	79.5	66.7	63.6	32.8	878.7
145°	116.0	114.8	107.5	96.4	82.4	71.9	69.6	29.6	908.3
150°	112.6	112.0	105.4	95.3	84.5	76.9	75.0	25.9	934.3
155°	108.3	107.8	101.5	94.1	86.0	81.3	79.8	21.8	956.1
160°	102.5	102.2	97.5	92.7	87.4	84.6	84.2	17.4	973.5
165°	97.2	96.6	94.2	91.1	88.8	87.3	87.2	13.0	986.5
170°	93.2	92.7	92.0	90.7	89.7	89.4	89.3	8.7	995.2
175°	90.7	90.6	90.1	89.9	89.9	89.9	89.9	4.3	999.5
180°	90.1	90.1	90.1	90.1	90.1	90.1	90.1	0.5	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	13.9	14.7	14.7	15.5	16.6	14.5	15.3	15.3	16.1	17.2
	3H	13.6	14.3	14.5	15.2	16.3	14.2	15.0	15.1	15.8	16.9
	4H	13.4	14.1	14.3	15.0	16.1	14.1	14.8	15.0	15.6	16.7
	6H	13.2	13.8	14.2	14.7	15.9	13.9	14.5	14.8	15.4	16.6
	8H	13.2	13.7	14.1	14.6	15.8	13.8	14.3	14.7	15.2	16.4
	12H	13.1	13.5	14.0	14.5	15.6	13.7	14.2	14.7	15.1	16.3
4H	2H	13.7	14.3	14.5	15.2	16.3	14.2	14.8	15.1	15.7	16.8
	3H	13.4	13.9	14.3	14.8	16.0	13.9	14.5	14.9	15.4	16.5
	4H	13.2	13.7	14.2	14.6	15.8	13.8	14.3	14.7	15.2	16.4
	6H	13.0	13.5	14.0	14.4	15.6	13.6	14.1	14.6	15.0	16.2
	8H	13.0	13.3	13.9	14.3	15.5	13.6	13.9	14.5	14.9	16.1
	12H	12.8	13.2	13.8	14.1	15.4	13.5	13.8	14.4	14.7	16.0
8H	4H	13.0	13.4	13.9	14.3	15.5	13.5	13.9	14.5	14.9	16.1
	6H	12.8	13.2	13.8	14.1	15.3	13.4	13.7	14.3	14.6	15.9
	8H	12.7	13.0	13.7	14.0	15.2	13.3	13.6	14.3	14.6	15.8
	12H	12.6	12.9	13.6	13.9	15.1	13.2	13.4	14.2	14.4	15.7
12H	4H	12.9	13.2	13.9	14.2	15.4	13.4	13.7	14.4	14.7	15.9
	6H	12.7	13.0	13.7	14.0	15.2	13.3	13.5	14.3	14.5	15.8
	8H	12.6	12.9	13.6	13.9	15.1	13.2	13.4	14.2	14.4	15.7

<b>Luminance table</b>	<b>Max. for <math>\gamma \geq 65^\circ</math></b>	<b>Photometric dimensions in mm:</b>	<b>L = 2940</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°		11481.4	11728.8	12025.0	12747.8	13628.8	13454.0	13084.7	
50°		7443.7	7741.1	8252.8	8967.8	9613.8	9135.7	8645.4	
55°		4742.9	4994.6	5493.3	6092.3	6409.2	5839.9	5462.8	
60°		1795.1	2206.3	3437.5	3943.5	3930.1	2794.2	2337.1	
65°		638.8	808.1	1266.8	2394.5	1474.2	919.0	827.5	
70°		338.6	360.4	305.5	579.8	393.2	455.7	474.7	
75°		89.7	125.5	123.4	163.5	163.5	162.7	133.0	
80°		32.3	35.4	42.3	51.0	64.0	77.7	77.7	
85°		505.3	506.5	500.3	476.8	459.5	465.7	474.3	

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**Luminance values in cd/m<sup>2</sup>**     γ 65°   γ 70°   γ 75°   γ 80°   γ 85°     **siteco**

