

Photometric test report

Family
Silica® 21



Order number: **51MX31DA37WB**
EAN: **4058352886694**

LP number
59281_75

serial
documentation
02.08.2023

Version Suspended luminaire, reflector, black, direct-/indirect distribution, narrow distribution, $UGR \leq 16$ ($L65 \leq 3000 \text{ cd/m}^2$)

Lamps LED 3000 K | CRI ≥ 80

Controlgear ECG-DALI

Rated values Net luminous flux = 7290 lm
Power consumption = 46.8 W
Luminous efficacy = 155.8 lm/W

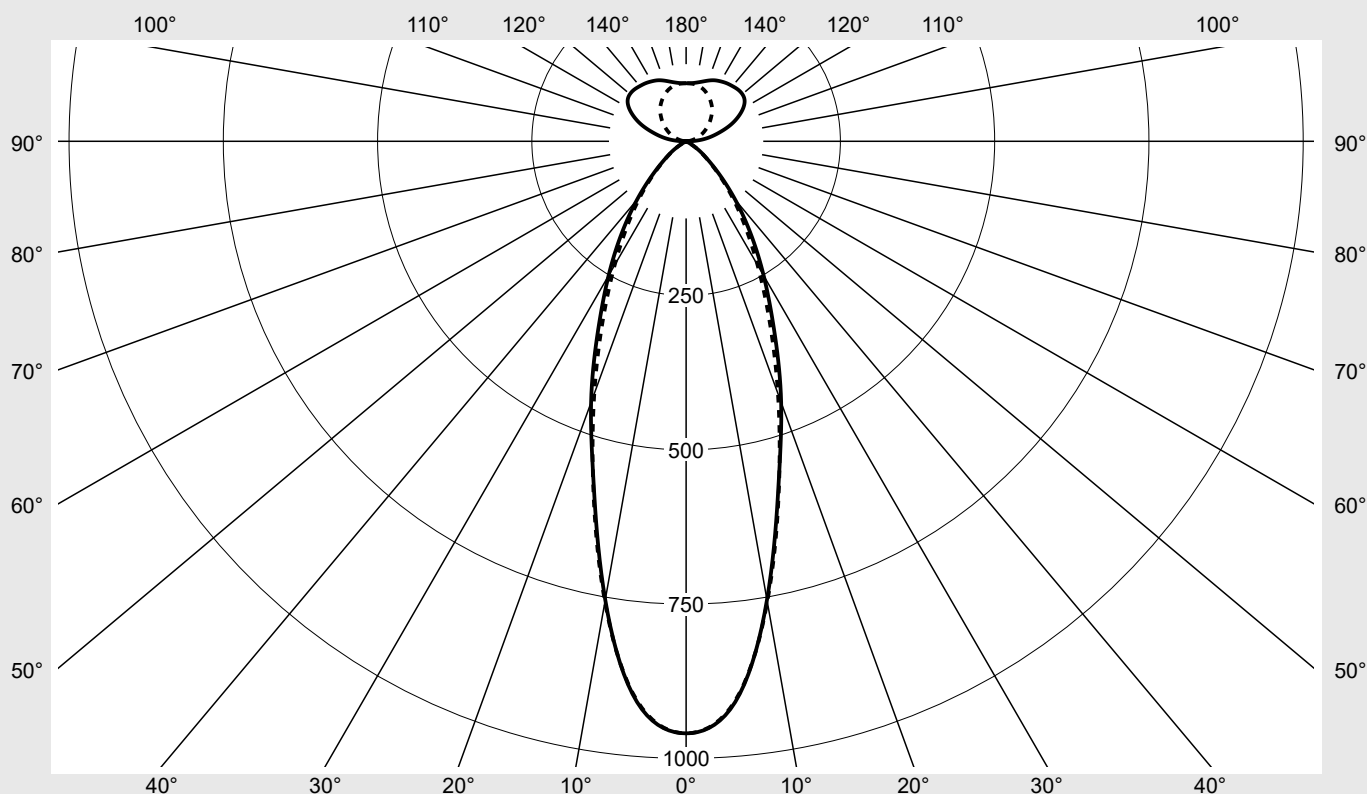
siteco

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

η_{LB} 100.0%
 ϕ_u 59.0%
 ϕ_o 41.0%

Measurement conditions

DIN EN 13032 and DIN 5032

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Table of values for luminous intensities		Maximum luminous intensity
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C- planes	0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	Phi-zone	Total Phi-zone
γ	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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UGR-Table			Standard room							siteco	
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	14.4	14.7	15.3	16.4
	6H	13.7	14.2	14.6	15.2	16.3	13.6	14.2	14.5	15.1	16.2
	8H	13.6	14.1	14.5	15.0	16.2	13.5	14.0	14.4	14.9	16.1
	12H	13.5	13.9	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	15.6
8H	4H	13.3	13.7	14.3	14.7	15.9	13.2	13.6	14.2	14.5	15.7
	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	15.7	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

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 1176 B = 49	
C-planes	0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°
γ	Luminance in cd/m²						
45°	13822.4	13893.0	13438.6	13172.6	13704.8	13693.4	13008.3
50°	8843.9	9071.0	9124.1	9140.1	9376.2	8994.2	8469.3
55°	5508.6	5731.1	5994.9	6159.7	6219.2	5673.8	5283.4
60°	1998.9	2426.0	3679.7	3986.3	3824.6	2675.4	2167.9
65°	733.7	919.3	1345.9	2419.0	1465.0	930.7	809.1
70°	376.9	400.2	337.0	584.1	411.3	462.7	472.0
75°	95.3	134.4	133.0	170.1	165.7	158.9	129.5
80°	30.6	40.8	40.8	51.0	66.3	75.8	80.9
85°	615.5	599.5	583.5	550.1	537.1	529.8	537.1

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Luminance values in cd/m²

γ 65°

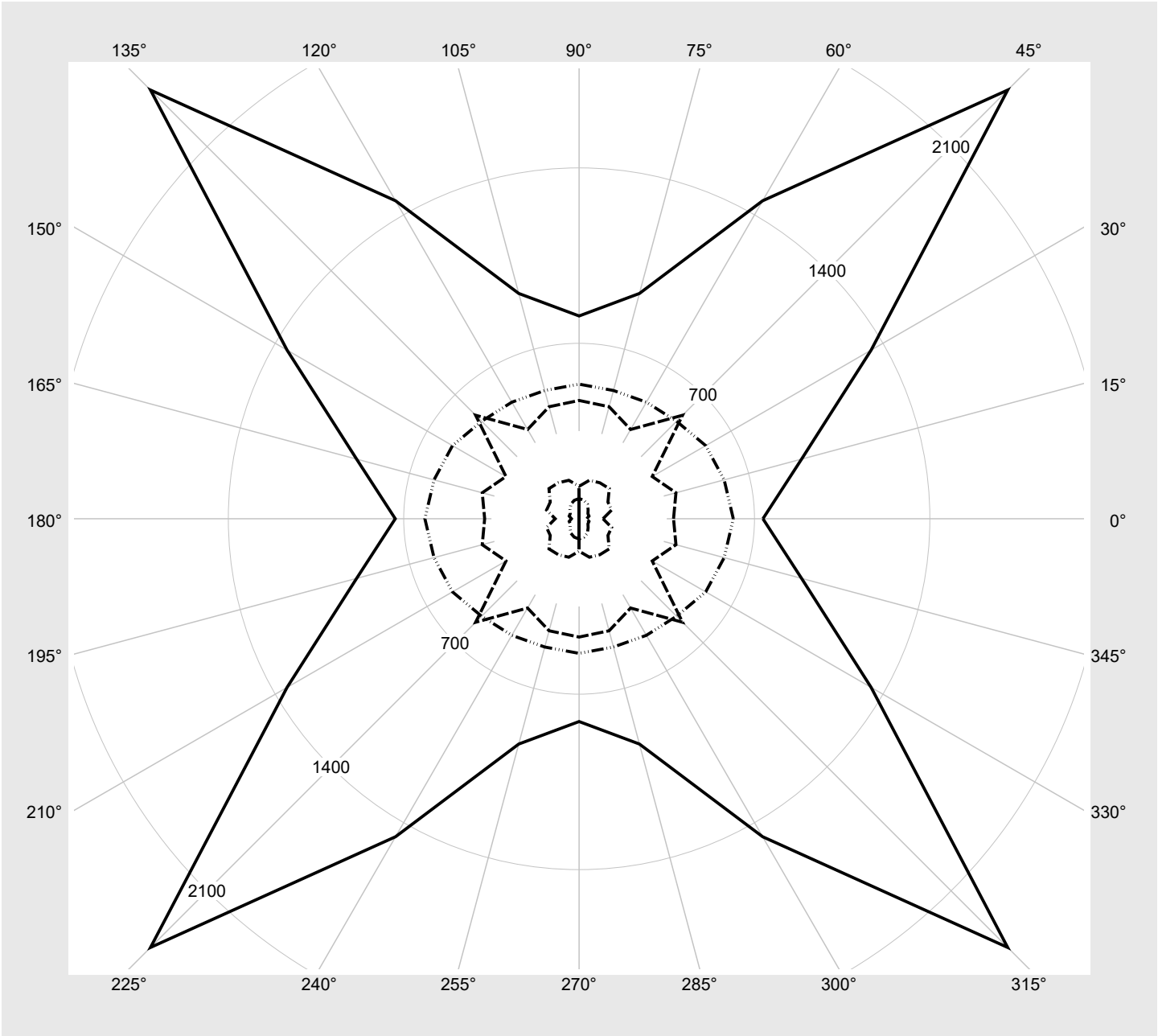
γ 70°

γ 75°

γ 80°

γ 85°

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Dimming levels table		environmental temperature: 25°C

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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	7290	46.8
95	240	252	6913	44.3
90	227	250	6560	42.0
85	214	248	6204	39.6
80	201	245	5845	37.2
75	187	243	5456	34.7
70	174	240	5091	32.4
65	161	237	4726	30.1
60	149	234	4385	27.9
55	136	231	4014	25.6
50	123	227	3639	23.3
45	111	224	3292	21.2
40	98	219	2913	18.9
35	86	214	2562	16.8
30	73	208	2178	14.5
25	61	202	1821	12.5
20	49	194	1463	10.3
15	37	183	1104	8.2
10	25	169	743	6.1
5	12	142	350	4.0
2	5	110	137	3.4