

Photometric test report

Family
Silica® 21

Order number: 51MX34DC4DBB
EAN: 4058352893746

LP number
59283_67

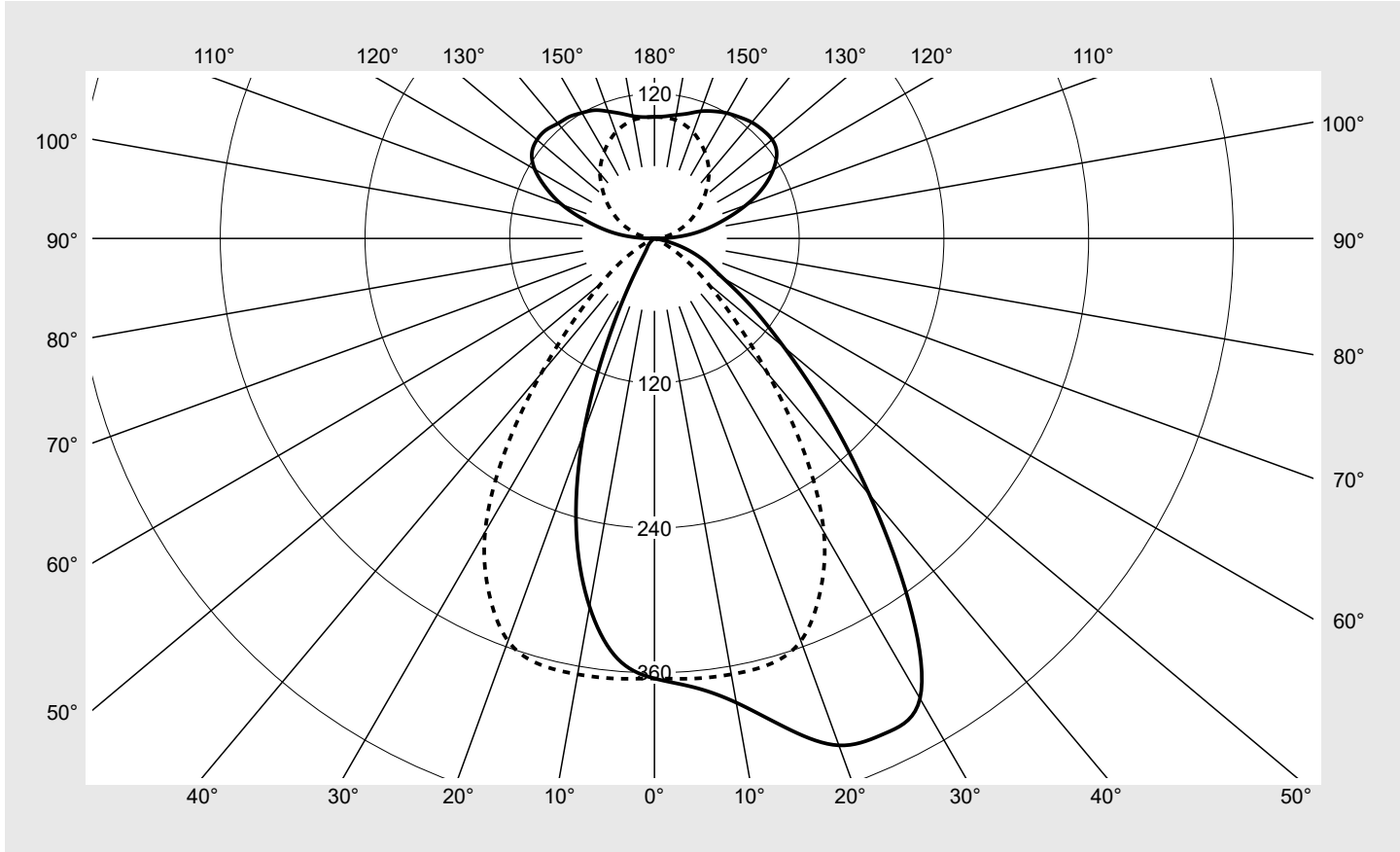


Version Suspended luminaire, reflector, black, direct-/indirect distribution, asymmetric distribution
Lamps LED 4000 K | CRI ≥ 80
Controlgear ECG-DALI
Rated values Net luminous flux = 19200 lm
 Power consumption = 120.3 W
 Luminous efficacy = 159.6 lm/W

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

η_{LB}	100.0%
ϕ_u	56.1%
ϕ_o	43.9%

Measurement conditions
DIN EN 13032 and DIN 5032

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Table of values for luminous intensities		Maximum luminous intensity
		sITeco

C-planes	0°	15° 345°	30° 330°	45° 315°	60° 300°	75° 285°	90° 270°
γ	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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Table of values for luminous intensities		Maximum luminous intensity
		sITeco

C-planes	105° 255°	120° 240°	135° 225°	150° 210°	165° 195°	180°	Phi-zone	Total Phi-zone
γ	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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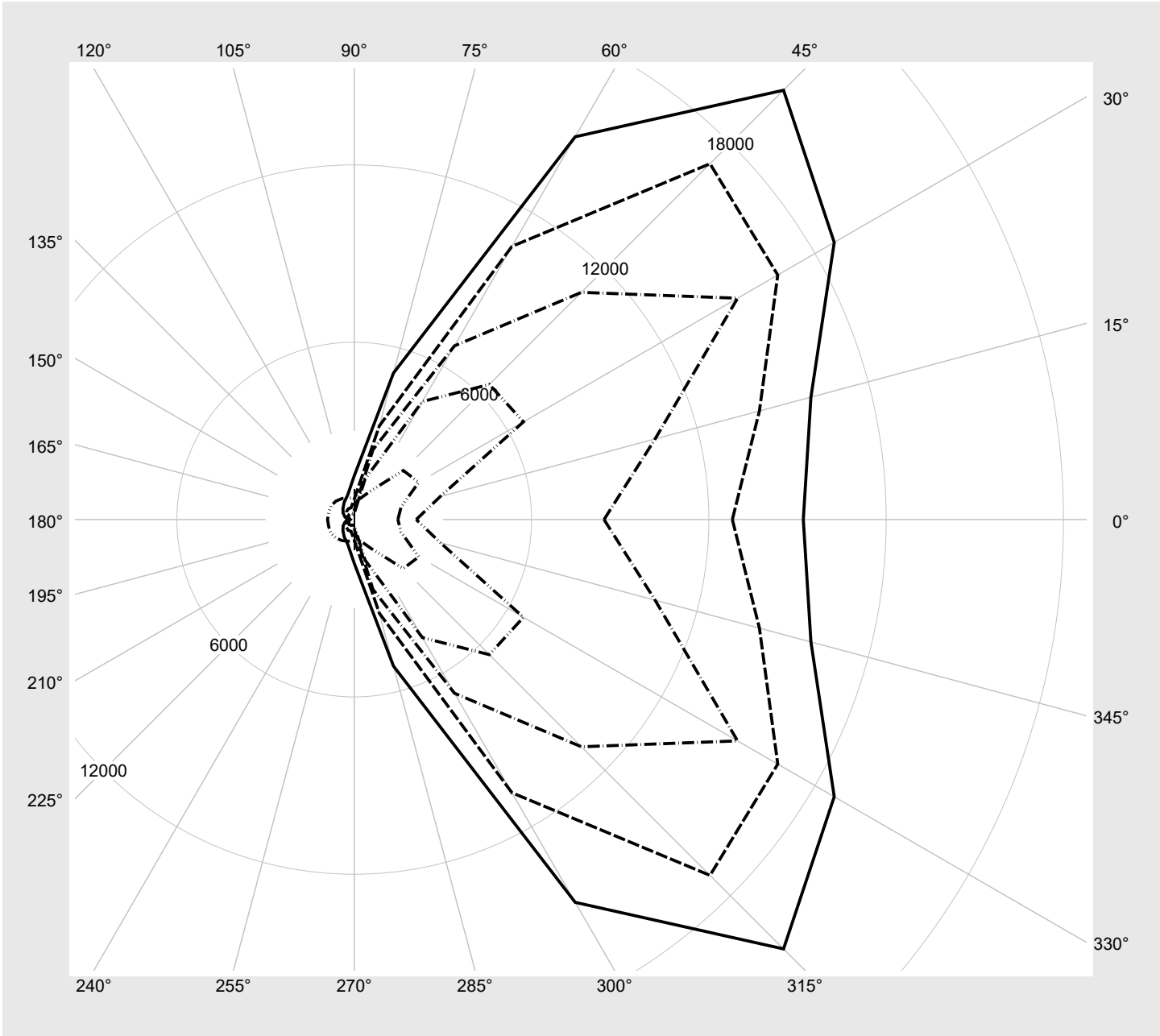
UGR-Table		Standard room									
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
Reflection factor of floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		View crosswise (C0)					View endwise (C90)				
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 = 2940 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°
γ	Luminance in cd/m ²												
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/m² γ 65° γ 70° γ 75° γ 80° γ 85° **siteco**



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Dimming levels table	environmental temperature: 25°C	sITeco
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	19200	120.3
95	240	252	18209	114.1
90	227	250	17279	108.0
85	214	248	16338	101.6
80	200	245	15325	95.4
75	187	243	14374	89.4
70	174	240	13418	83.5
65	161	237	12453	77.3
60	148	234	11484	71.3
55	136	231	10579	65.5
50	123	227	9592	59.5
45	111	224	8677	54.3
40	98	219	7679	48.4
35	86	214	6752	42.9
30	73	208	5742	36.9
25	61	202	4805	31.6
20	49	194	3864	25.8
15	37	183	2912	20.2
10	24	168	1881	14.1
5	12	142	925	8.3
2	5	110	364	4.3