Photometric test report

Family
Silica® 21

Order number: 51MX33DB49WB
EAN: 4058352889060

LP number
59331_102

serial documentation
02.08.2023

Version	Suspended luminaire, with homogeneous illumination, prismatic cover, direct-/ indirect distribution, extremely wide distribution, UGR≤16 (L65≤3000cd/m²)
Lamps	LED 4000 K | CRI ≥ 80
Controlgear	ECG-DALI
Rated values	Net luminous flux = 7390 lm Power consumption = 48.3 W Luminous efficacy = 153 lm/W

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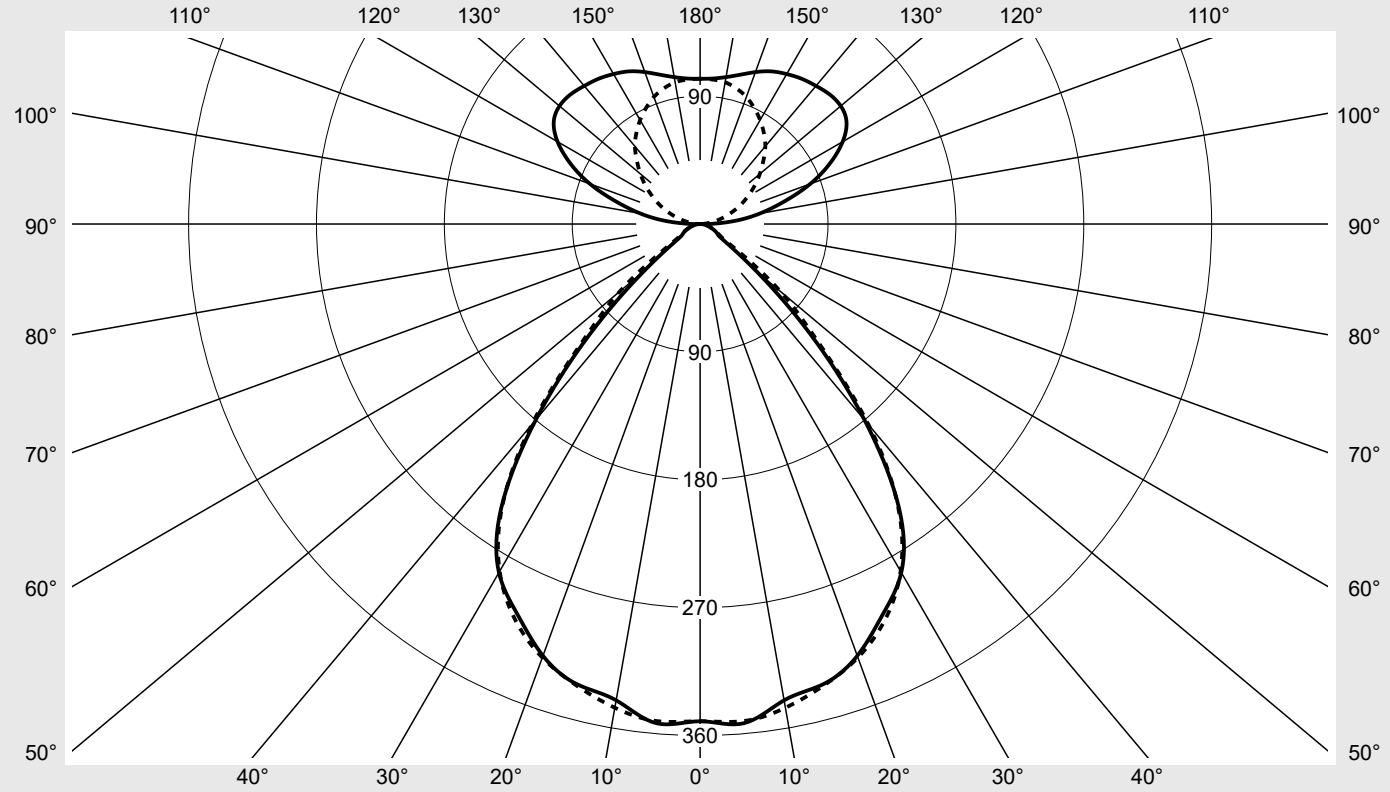
Luminous intensity in cd/klm

C180-0 C270-90

Imax: 353 cd/klm



Classifications

DIN 5040	C 6 2
CIE	N1=78 N2=96 N3=99 N4=55 N5=100

Luminaire light output ratios

ηLB	100.0%
ϕ_u	55.4%
ϕ_o	44.6%

Measurement conditions

DIN EN 13032 and DIN 5032

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Table of values for luminous intensities

Maximum luminous intensity

C-planes γ	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
	Luminous intensity in cd/klm							Luminous flux in lm/klm	
0°	349.9	349.9	349.9	349.9	349.9	349.9	349.9	2.1	2.1
5°	352.7	353.3	353.1	353.3	352.9	352.0	351.1	16.9	18.9
10°	340.4	339.5	339.7	341.6	345.2	345.5	345.7	32.6	51.5
15°	335.2	334.1	331.5	331.4	333.4	336.4	336.2	47.3	98.9
20°	323.4	322.7	318.7	319.6	318.0	320.3	324.7	60.1	159.0
25°	303.6	304.4	302.2	302.2	302.6	302.3	307.6	70.2	229.2
30°	283.2	283.0	279.5	280.9	281.3	280.3	282.2	77.1	306.3
35°	244.1	243.6	241.2	242.6	243.2	242.2	242.9	76.3	382.6
40°	179.9	179.6	180.9	182.1	183.5	183.3	184.4	64.1	446.7
45°	110.1	109.9	111.2	112.6	113.8	115.2	117.5	43.7	490.4
50°	51.7	59.9	67.3	61.6	55.5	66.0	73.6	26.1	516.5
55°	21.0	28.2	26.7	30.5	23.0	31.8	29.6	12.4	528.9
60°	14.1	14.7	15.5	14.4	14.4	15.4	16.1	7.1	536.0
65°	11.6	11.5	12.0	11.7	12.2	12.2	12.1	5.9	541.9
70°	8.4	8.6	8.9	8.9	9.1	9.2	9.2	4.6	546.5
75°	5.8	6.1	6.7	6.4	6.5	6.9	6.6	3.4	549.9
80°	3.5	3.8	4.1	4.5	4.2	4.7	4.7	2.3	552.2
85°	1.8	1.8	1.8	2.1	2.2	2.5	2.7	1.2	553.3
90°	5.2	5.0	5.3	5.2	3.1	1.1	0.4	2.0	555.4
95°	23.9	24.4	26.2	24.8	15.9	8.2	4.2	10.3	565.7
100°	42.8	43.9	44.3	38.8	26.0	14.7	9.7	17.5	583.2
105°	61.3	62.6	61.4	52.4	35.9	22.2	16.3	24.1	607.3
110°	82.4	82.7	77.5	64.5	46.0	30.0	23.3	30.4	637.7
115°	100.7	99.8	92.0	75.7	55.8	37.9	31.1	35.4	673.0
120°	115.9	114.0	103.9	84.8	64.9	45.6	38.7	38.8	711.8
125°	125.7	122.3	111.1	93.1	72.6	52.9	46.8	40.3	752.1
130°	129.2	126.3	114.5	98.0	78.5	60.4	54.8	39.9	792.0
135°	129.0	126.3	115.8	101.3	83.2	67.4	62.9	38.1	830.1
140°	126.9	124.9	116.2	103.6	87.1	74.0	71.4	35.5	865.6
145°	124.8	123.4	116.1	105.0	90.7	80.2	78.2	32.3	897.9
150°	121.9	121.3	114.8	104.9	93.7	86.1	84.5	28.5	926.4
155°	118.5	118.2	111.9	104.4	96.0	91.3	90.1	24.2	950.6
160°	113.8	113.5	108.5	103.6	98.0	95.4	95.1	19.5	970.1
165°	108.8	108.2	105.6	102.3	100.0	98.6	98.8	14.6	984.7
170°	105.0	104.5	103.8	102.4	101.4	101.2	101.3	9.8	994.5
175°	102.8	102.7	102.1	101.9	102.0	102.0	102.0	4.9	999.4
180°	102.2	102.2	102.2	102.2	102.2	102.2	102.2	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	15.4	16.3	16.3	17.2	18.3	15.6	16.5	16.5	17.4	18.5
	3H	15.3	16.1	16.2	17.0	18.1	15.6	16.3	16.5	17.2	18.4
	4H	15.3	16.0	16.2	16.9	18.1	15.6	16.3	16.5	17.2	18.4
	6H	15.2	15.8	16.1	16.8	18.0	15.5	16.2	16.5	17.1	18.3
	8H	15.1	15.7	16.1	16.7	17.9	15.4	16.0	16.4	17.0	18.2
	12H	15.0	15.6	16.0	16.5	17.8	15.5	16.0	16.4	16.9	18.2
4H	2H	15.2	15.9	16.1	16.8	17.9	15.3	16.0	16.2	16.9	18.1
	3H	15.2	15.7	16.1	16.7	17.9	15.4	15.9	16.3	16.9	18.1
	4H	15.2	15.7	16.1	16.6	17.9	15.4	15.9	16.4	16.9	18.1
	6H	15.2	15.6	16.1	16.6	17.8	15.5	15.9	16.4	16.9	18.1
	8H	15.1	15.5	16.1	16.5	17.8	15.5	15.9	16.5	16.9	18.1
	12H	15.0	15.4	16.1	16.4	17.7	15.5	15.8	16.5	16.8	18.1
8H	4H	15.0	15.4	16.0	16.4	17.7	15.2	15.6	16.2	16.6	17.9
	6H	15.1	15.5	16.1	16.5	17.7	15.4	15.7	16.4	16.7	18.0
	8H	15.1	15.4	16.1	16.4	17.7	15.5	15.8	16.5	16.8	18.1
	12H	15.1	15.3	16.1	16.3	17.7	15.5	15.8	16.6	16.8	18.1
12H	4H	15.0	15.3	16.0	16.3	17.6	15.1	15.5	16.2	16.5	17.8
	6H	15.1	15.3	16.1	16.3	17.6	15.3	15.6	16.3	16.6	17.9
	8H	15.1	15.3	16.1	16.3	17.7	15.4	15.7	16.4	16.7	18.0

Luminance table

Max. for $\gamma >= 65°$

Photometric dimensions in mm: L = 1500, B = 50

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°	15342.7	15309.5	15501.5	15684.2	15853.9	16056.6	16370.6
50°	7923.4	9179.4	10322.9	9447.5	8514.1	10111.8	11288.5
55°	3602.6	4852.8	4584.0	5236.6	3955.1	5461.3	5076.3
60°	2788.1	2893.3	3058.5	2835.0	2845.4	3026.2	3163.1
65°	2708.7	2687.5	2795.5	2726.9	2842.6	2838.4	2826.0
70°	2423.4	2468.7	2568.6	2568.6	2609.0	2638.9	2642.1
75°	2225.2	2309.7	2545.4	2430.8	2486.8	2613.9	2528.3
80°	2009.8	2129.0	2348.0	2555.7	2370.7	2644.8	2655.6
85°	1985.2	1997.7	2073.4	2396.8	2520.0	2873.8	2995.9

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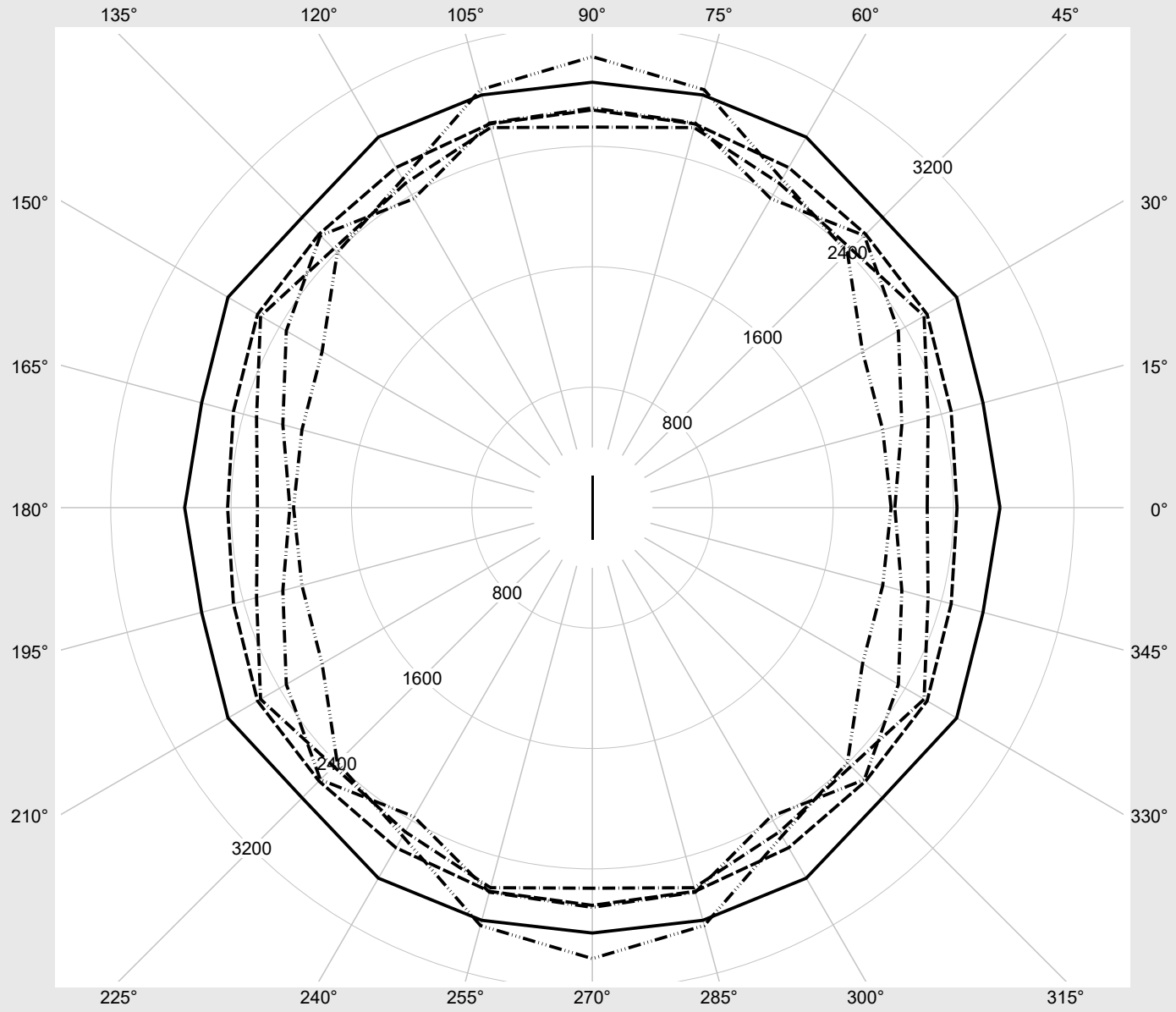
Luminance values in cd/m²

γ 65° γ 70° γ 75° γ 80° γ 85°



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Dimming levels table

environmental temperature: 25°C

Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	7390	48.3
95	241	252	7029	45.9
90	228	250	6665	43.6
85	214	248	6271	41.0
80	201	245	5904	38.6
75	188	243	5535	36.2
70	175	240	5163	33.8
65	162	238	4790	31.5
60	150	235	4444	29.2
55	137	231	4066	26.9
50	124	228	3687	24.5
45	112	224	3336	22.4
40	99	219	2953	20.0
35	87	215	2598	17.9
30	74	209	2210	15.5
25	62	202	1853	13.3
20	49	194	1463	10.9
15	37	183	1103	8.8
10	25	169	740	6.7
5	13	145	377	4.8
2	6	117	164	4.2