

Photometric test report

Family
Modario® 31

Order number: 53BM813D2V4120
EAN: 4058352421901

LP number
59063_2



Version diffuser optic, frosted, extremely narrow distribution
Lamps LED 4000 K | CRI ≥ 80
Controlgear ECG-DALI
Rated values Net luminous flux = 12260 lm
Power consumption = 79.4 W
Luminous efficacy = 154.4 lm/W

serial
documentation
01.09.2020

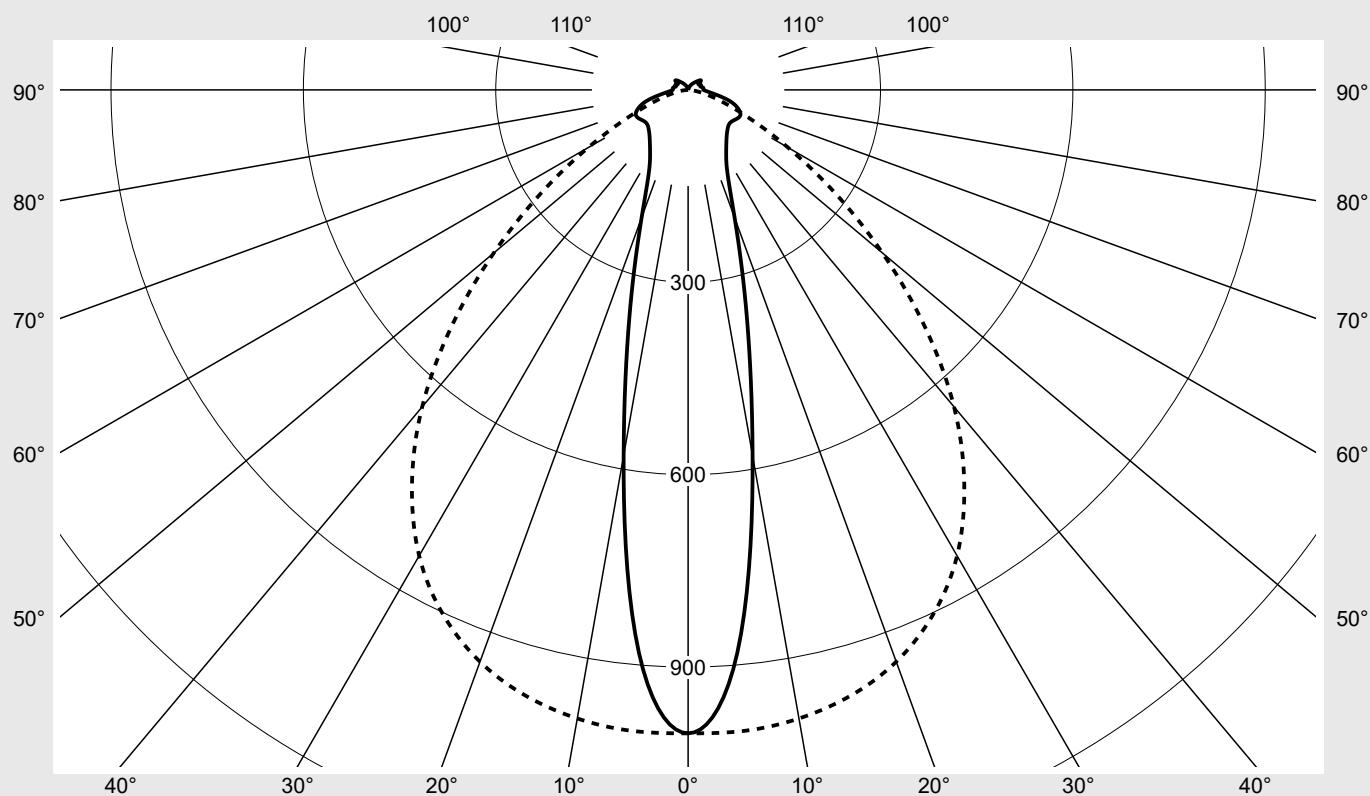
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Luminous intensity in cd/klm

C180-0

C270-90

Imax: 1003 cd/klm



Classifications

DIN 5040 A 5 1
CIE N1=62 N2=84 N3=96
N4=93 N5=100

Luminaire light output ratios

η_{LB} 100.0%
 ϕ_u 92.6%
 ϕ_o 7.4%

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°	1003.4	1003.4	1003.4	1003.4	1003.4	1003.4	1003.4	6.0	6.0
5°	880.9	882.9	898.7	934.3	971.4	994.6	1003.4	44.8	50.8
10°	579.1	592.1	643.1	740.8	862.1	958.5	995.4	72.7	123.5
15°	347.5	359.5	407.5	513.8	693.4	893.1	978.2	83.5	207.0
20°	212.0	221.0	257.1	342.2	518.7	799.5	948.9	85.0	291.9
25°	146.0	150.7	170.4	227.6	370.3	686.1	903.3	82.2	374.1
30°	118.7	120.4	127.6	159.3	262.2	563.7	838.9	78.2	452.3
35°	103.8	104.5	106.6	120.5	188.1	446.9	750.8	73.0	525.4
40°	93.6	93.2	93.3	98.9	140.1	348.0	645.2	67.1	592.5
45°	86.9	86.1	83.8	84.5	107.8	268.6	521.9	60.4	652.9
50°	83.4	82.5	79.1	74.5	86.1	206.2	395.7	53.7	706.7
55°	84.5	83.4	79.1	70.7	71.8	154.6	278.8	48.0	754.6
60°	88.9	87.5	82.4	72.7	63.0	113.0	180.1	43.8	798.4
65°	90.1	88.0	80.7	67.6	54.9	80.6	107.5	39.0	837.4
70°	82.2	80.0	70.8	57.2	45.3	54.9	61.5	32.6	870.0
75°	67.3	64.9	56.5	45.0	34.3	34.4	33.8	25.2	895.2
80°	45.4	43.8	39.1	31.3	22.5	19.0	16.7	16.8	912.0
85°	30.8	29.6	26.4	21.0	13.5	8.8	6.0	10.7	922.7
90°	24.1	23.3	20.2	14.1	8.7	4.0	0.7	7.6	930.3
95°	23.9	23.0	18.9	12.9	9.6	4.5	0.9	7.4	937.7
100°	22.9	21.6	17.6	14.2	11.3	5.3	1.3	7.4	945.1
105°	19.9	19.2	17.7	16.3	12.4	5.6	1.9	7.2	952.3
110°	21.4	20.9	19.4	16.4	14.4	5.2	2.4	7.6	959.9
115°	19.8	18.9	17.8	21.0	13.3	5.0	2.5	7.2	967.1
120°	18.8	19.4	23.3	22.7	11.0	4.6	2.5	7.3	974.3
125°	24.3	24.7	24.6	17.4	9.1	4.1	2.4	7.0	981.3
130°	23.1	21.9	18.8	13.2	7.5	3.8	2.4	5.5	986.8
135°	18.4	17.0	14.4	10.4	6.1	3.5	2.2	4.0	990.8
140°	14.7	13.6	11.6	8.4	5.1	3.5	2.1	3.0	993.7
145°	11.7	10.8	9.2	6.7	4.3	3.4	2.0	2.2	995.9
150°	8.8	8.2	7.1	5.2	3.9	3.2	1.8	1.5	997.4
155°	6.7	6.3	5.5	4.4	3.6	2.9	1.6	1.0	998.4
160°	5.4	5.2	4.4	3.6	3.2	2.8	1.4	0.7	999.1
165°	4.2	4.0	3.3	3.1	3.0	3.6	1.4	0.5	999.6
170°	3.5	3.0	2.8	2.9	3.0	3.0	1.3	0.3	999.9
175°	2.9	2.4	3.2	3.5	3.0	1.9	1.4	0.1	1000.0
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	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	19.0	20.5	19.4	20.8	21.2	24.7	26.2	25.0	26.5	26.8
	3H	21.8	23.2	22.2	23.5	23.9	25.5	26.8	25.8	27.1	27.5
	4H	22.9	24.2	23.3	24.6	25.0	25.7	26.9	26.1	27.2	27.6
	6H	23.7	24.9	24.1	25.3	25.7	25.8	26.9	26.2	27.3	27.7
	8H	24.0	25.1	24.4	25.5	25.9	25.9	26.9	26.3	27.3	27.7
	12H	24.2	25.3	24.6	25.7	26.1	25.9	26.8	26.3	27.2	27.6
4H	2H	20.0	21.2	20.3	21.5	21.9	24.7	26.0	25.0	26.3	26.7
	3H	22.8	23.9	23.3	24.3	24.7	25.5	26.6	25.9	27.0	27.4
	4H	24.1	25.0	24.5	25.4	25.9	25.8	26.8	26.2	27.2	27.6
	6H	24.9	25.8	25.4	26.2	26.7	26.0	26.8	26.5	27.3	27.7
	8H	25.2	26.0	25.7	26.5	27.0	26.1	26.8	26.5	27.3	27.7
	12H	25.5	26.2	26.0	26.7	27.2	26.1	26.8	26.6	27.2	27.7
8H	4H	24.4	25.1	24.8	25.5	26.0	25.9	26.7	26.4	27.1	27.6
	6H	25.4	26.0	25.9	26.5	27.0	26.2	26.8	26.7	27.3	27.8
	8H	25.8	26.3	26.3	26.8	27.3	26.3	26.8	26.8	27.3	27.8
	12H	26.1	26.6	26.7	27.1	27.7	26.3	26.8	26.8	27.3	27.8
12H	4H	24.4	25.0	24.9	25.5	26.0	25.9	26.6	26.4	27.1	27.6
	6H	25.4	26.0	25.9	26.4	27.0	26.2	26.8	26.7	27.3	27.8
	8H	25.9	26.4	26.4	26.9	27.4	26.3	26.8	26.8	27.3	27.8

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 1476 B = 75	H(C0) = 25 H(C90) = 0	H(C180) = 25 H(C270) = 0
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°
			Luminance in cd/m²					
45°		10211.5	10204.3	10181.0	10708.8	14477.7	38724.1	81747.9
50°		10280.2	10268.5	10138.2	10026.9	12372.0	32214.9	68171.7
55°		11057.4	11032.1	10815.3	10219.0	11198.3	26578.0	53824.6
60°		12476.9	12446.6	12165.8	11431.8	10831.3	21772.5	39892.7
65°		13773.6	13646.3	13066.0	11762.8	10590.4	17825.4	28181.8
70°		13894.5	13739.6	12785.4	11246.8	10067.2	14378.4	19905.0
75°		12836.6	12617.1	11635.3	10242.5	9045.6	11123.1	14461.0
80°		10007.5	9877.0	9446.9	8529.3	7391.2	8119.2	10647.1
85°		8139.4	8023.9	7804.4	7225.1	5888.6	5630.9	7684.0

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Luminance values in cd/m²

γ 65°

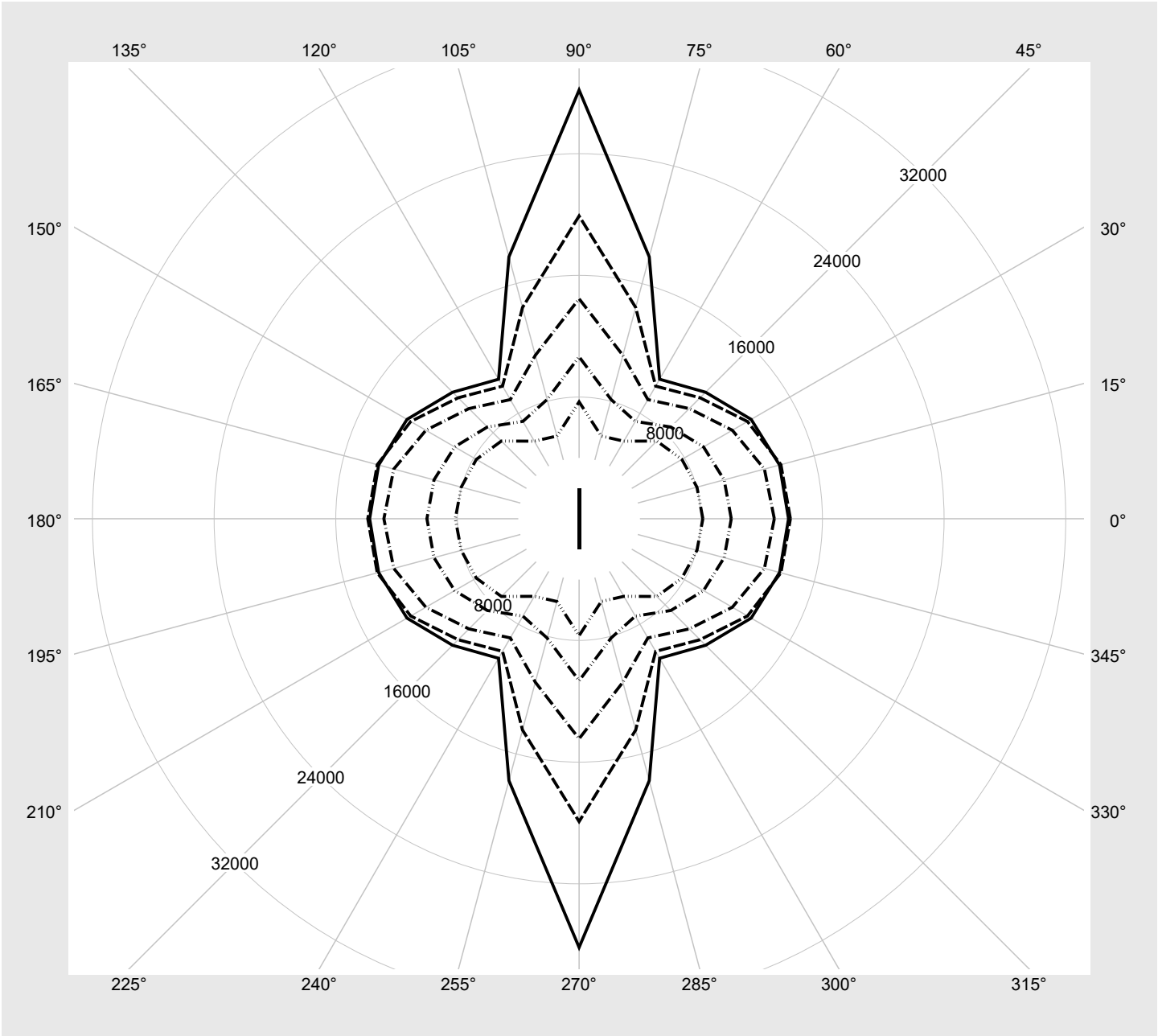
γ 70°

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	12260	79.4
95	239	252	11627	74.7
90	225	250	11020	70.1
85	211	247	10406	65.7
80	198	245	9827	61.6
75	184	242	9195	57.3
70	171	240	8585	53.2
65	158	237	7975	49.2
60	145	233	7359	45.2
55	132	230	6731	41.3
50	120	227	6143	37.6
45	107	222	5502	33.7
40	95	218	4901	30.2
35	83	213	4292	26.6
30	71	207	3675	23.0
25	59	201	3062	19.6
20	47	192	2440	16.1
15	36	182	1863	12.9
10	24	168	1231	9.4
5	12	142	599	6.0
3	7	122	340	4.5