

Photometric test report

Family
Modario® 31



Order number: 53BM812DU4M1D2
EAN: 4069025134677

Version

Lamps

Controlgear

Rated values

diffuser optic, frosted, wide distribution

LED 4000 K | CRI ≥ 80

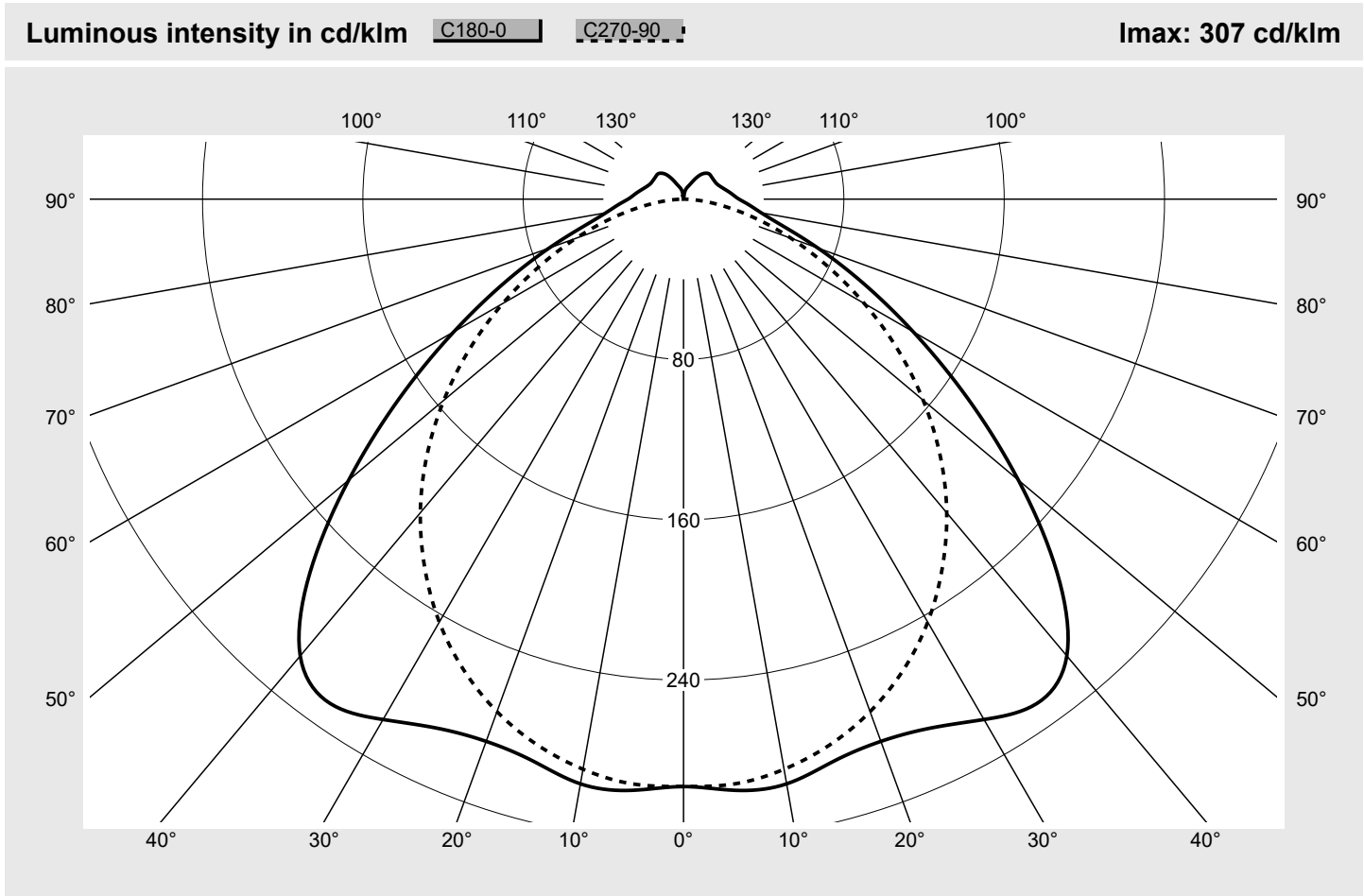
ECG-DALI

Net luminous flux = 26560 lm
Power consumption = 146.1 W
Luminous efficacy = 181.8 lm/W

LP number
59594_11

serial
documentation
02.05.2024

siteco



Classifications		Luminaire light output ratios	
DIN 5040	A 4 1	η_{LB}	100.0%
CIE	N1=47 N2=80 N3=95	ϕ_u	92.6%
	N4=93 N5=100	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°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	1.8	1.8
5°	296.1	295.6	293.1	293.6	293.8	293.0	292.9	14.0	15.8
10°	296.3	296.3	293.6	293.6	292.6	289.9	288.9	27.9	43.7
15°	290.3	290.9	288.4	289.1	288.3	284.2	281.9	40.8	84.5
20°	287.9	288.2	282.8	281.1	280.6	275.9	272.2	52.8	137.3
25°	291.3	290.8	281.6	274.0	270.0	264.7	259.4	64.0	201.2
30°	299.8	298.4	283.7	269.7	258.3	250.5	243.7	74.6	275.8
35°	307.3	306.0	288.6	266.7	246.6	233.7	225.0	84.2	360.1
40°	297.5	299.0	287.4	263.1	235.0	215.2	204.3	91.1	451.1
45°	263.6	268.2	268.7	253.4	221.8	194.2	181.1	92.3	543.4
50°	218.1	223.5	232.0	231.1	204.9	171.7	156.1	87.5	630.9
55°	172.9	177.3	186.9	195.4	181.1	147.5	130.2	77.8	708.7
60°	132.3	135.3	142.3	152.9	149.4	121.4	104.1	64.8	773.5
65°	98.5	100.2	104.0	112.2	114.5	94.5	79.4	50.9	824.4
70°	71.4	72.6	74.4	79.3	82.2	69.0	57.1	37.9	862.3
75°	51.0	51.6	52.9	55.5	55.9	46.4	37.5	27.0	889.4
80°	39.4	39.1	38.7	38.1	35.5	27.5	20.9	18.8	908.2
85°	32.8	32.1	30.1	26.5	21.0	13.7	8.3	13.1	921.3
90°	27.7	27.1	24.5	19.3	12.6	5.6	0.8	9.4	930.7
95°	24.8	24.4	22.4	17.8	11.6	5.3	0.8	8.6	939.3
100°	22.5	22.2	20.5	16.7	11.5	5.5	0.8	7.9	947.2
105°	20.6	20.3	18.7	16.0	11.5	5.9	0.8	7.3	954.6
110°	19.2	18.7	17.6	15.5	11.7	6.3	0.7	6.8	961.4
115°	18.2	17.8	17.0	15.3	12.2	5.8	0.8	6.4	967.8
120°	17.9	17.4	16.9	15.5	12.3	5.3	0.8	6.1	973.9
125°	17.8	17.4	16.9	15.5	11.8	5.2	0.8	5.7	979.6
130°	17.9	17.4	16.8	15.0	10.1	5.0	0.9	5.2	984.7
135°	17.9	17.3	16.2	13.6	8.1	4.3	1.0	4.5	989.2
140°	16.9	16.0	14.5	11.2	6.7	3.5	1.1	3.6	992.8
145°	14.9	14.0	12.0	8.5	5.5	2.8	1.2	2.7	995.4
150°	11.8	10.8	9.0	6.5	4.7	2.2	1.4	1.8	997.3
155°	8.6	8.1	7.0	5.2	4.0	1.7	1.5	1.2	998.5
160°	6.8	6.5	5.3	4.3	3.2	1.5	1.5	0.8	999.2
165°	5.5	5.3	3.9	3.4	2.1	1.6	1.6	0.5	999.7
170°	3.8	3.1	2.5	2.0	1.6	1.6	1.6	0.2	999.9
175°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.1	1000.0
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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
Reflection factor of walls		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3
Reflection factor of floor		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	24.6	26.3	25.0	26.6	26.9	24.4	26.1	24.8	26.4
	3H	25.5	27.0	25.8	27.3	27.7	25.5	27.1	25.9	27.4
	4H	25.8	27.2	26.2	27.6	27.9	25.9	27.4	26.3	27.7
	6H	26.1	27.4	26.5	27.8	28.1	26.2	27.5	26.6	27.9
	8H	26.3	27.5	26.7	27.9	28.3	26.3	27.5	26.7	27.9
	12H	26.4	27.6	26.8	28.0	28.4	26.3	27.5	26.7	27.9
4H	2H	25.3	26.7	25.6	27.1	27.4	25.1	26.6	25.5	26.9
	3H	26.3	27.5	26.7	27.9	28.3	26.5	27.7	26.9	28.1
	4H	26.7	27.8	27.1	28.2	28.6	27.0	28.1	27.4	28.5
	6H	27.1	28.0	27.5	28.4	28.9	27.3	28.3	27.8	28.7
	8H	27.3	28.1	27.7	28.6	29.1	27.4	28.3	27.9	28.8
	12H	27.5	28.3	28.0	28.7	29.2	27.5	28.3	28.0	28.8
8H	4H	26.9	27.8	27.4	28.3	28.7	27.2	28.1	27.7	28.5
	6H	27.4	28.2	27.9	28.6	29.1	27.7	28.4	28.2	28.9
	8H	27.7	28.4	28.2	28.9	29.4	27.9	28.5	28.4	29.0
	12H	28.1	28.6	28.6	29.1	29.6	28.0	28.6	28.5	29.1
12H	4H	27.0	27.8	27.4	28.2	28.7	27.3	28.0	27.7	28.5
	6H	27.5	28.2	28.0	28.6	29.2	27.8	28.4	28.3	28.9
	8H	27.8	28.4	28.4	28.9	29.4	28.0	28.6	28.5	29.0

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 2392 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° 50° 55° 60°	γ	41397.0	42483.4	43657.4	42933.2	39811.1	37434.0	37922.1
		35949.5	37197.9	39757.5	41548.5	39363.4	35865.4	35954.4
		30230.7	31341.2	34156.1	37740.7	37747.5	33902.6	33617.8
		24835.9	25710.7	28081.9	32147.7	34323.2	31264.2	30837.7
65° 70° 75° 80° 85°	γ	20127.1	20771.5	22508.8	26115.1	29561.8	27921.3	27802.3
		16121.4	16668.4	17948.5	20838.8	24412.4	24148.2	24700.7
		12993.4	13407.8	14558.2	16888.0	19710.9	20059.1	21439.2
		11622.0	11802.1	12495.7	13914.3	15575.3	15756.9	17814.7
		11581.7	11664.8	11901.8	12182.9	12300.6	11700.2	14165.2

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Luminance values in cd/m²

γ 65°

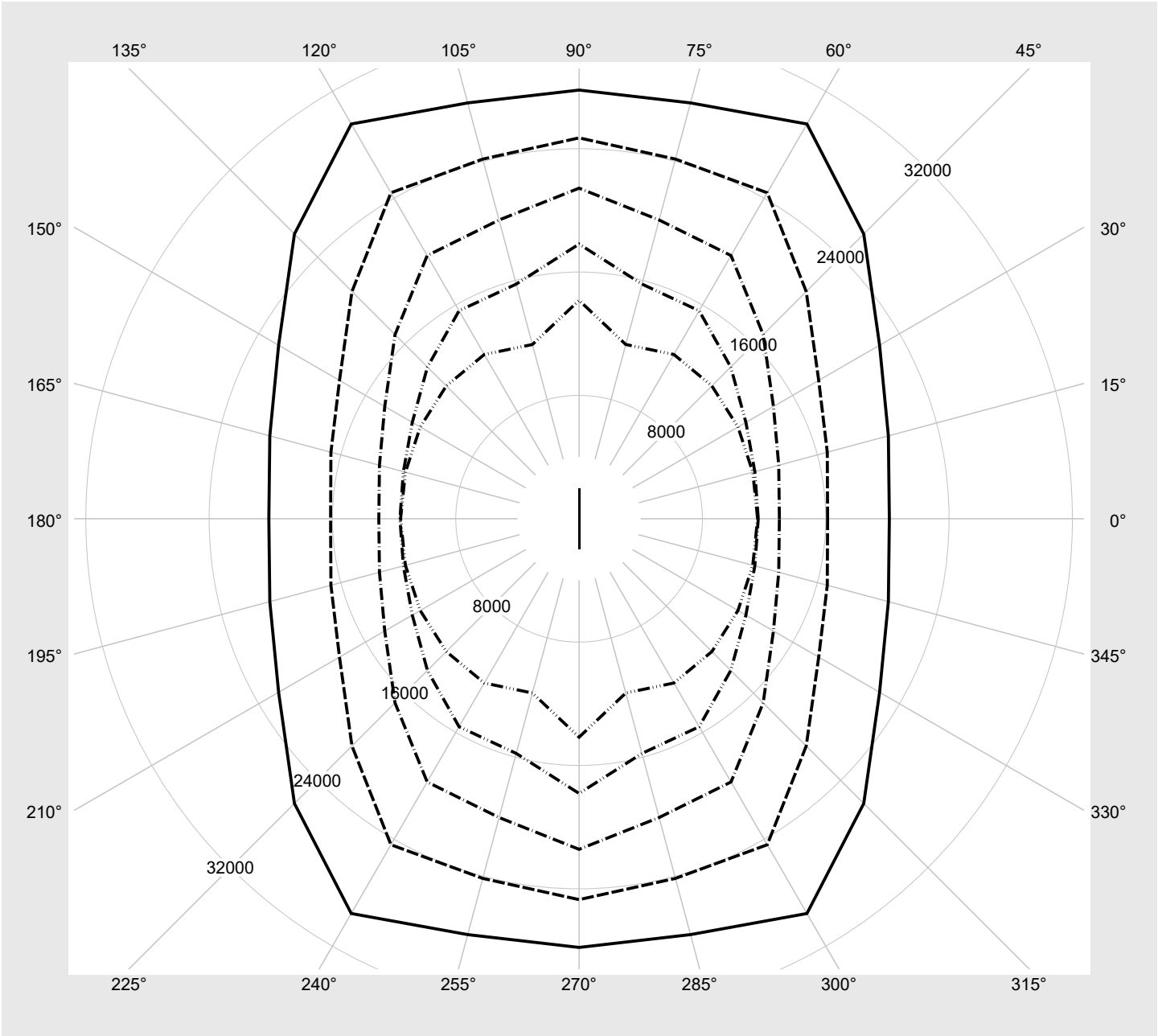
γ 70°

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	26560	146.1
95	240	252	25227	138.1
90	226	250	23873	130.1
85	213	248	22602	122.6
80	199	245	21217	114.5
75	186	243	19917	107.0
70	173	240	18604	99.7
65	160	237	17278	92.4
60	147	234	15937	84.9
55	134	231	14584	77.6
50	122	227	13320	70.8
45	109	223	11943	63.6
40	97	219	10662	56.8
35	84	213	9261	49.5
30	72	208	7958	42.8
25	60	201	6646	36.1
20	48	193	5324	29.3
15	36	182	3994	22.5
10	24	168	2655	15.5
5	12	142	1307	8.2
2	4	102	405	2.9