

Photometric test report

Family
Highbay 21

Order number: 52HN12DA4LMA
EAN: 4069025350022

LP number
59723_130

serial
documentation
27.02.2025

siteco

Version primary light control with lens, PMMA, housing, white, for Modario® rail, wide distribution

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

Rated values Net luminous flux = 26500 lm
Power consumption = 142.6 W
Luminous efficacy = 185.8 lm/W

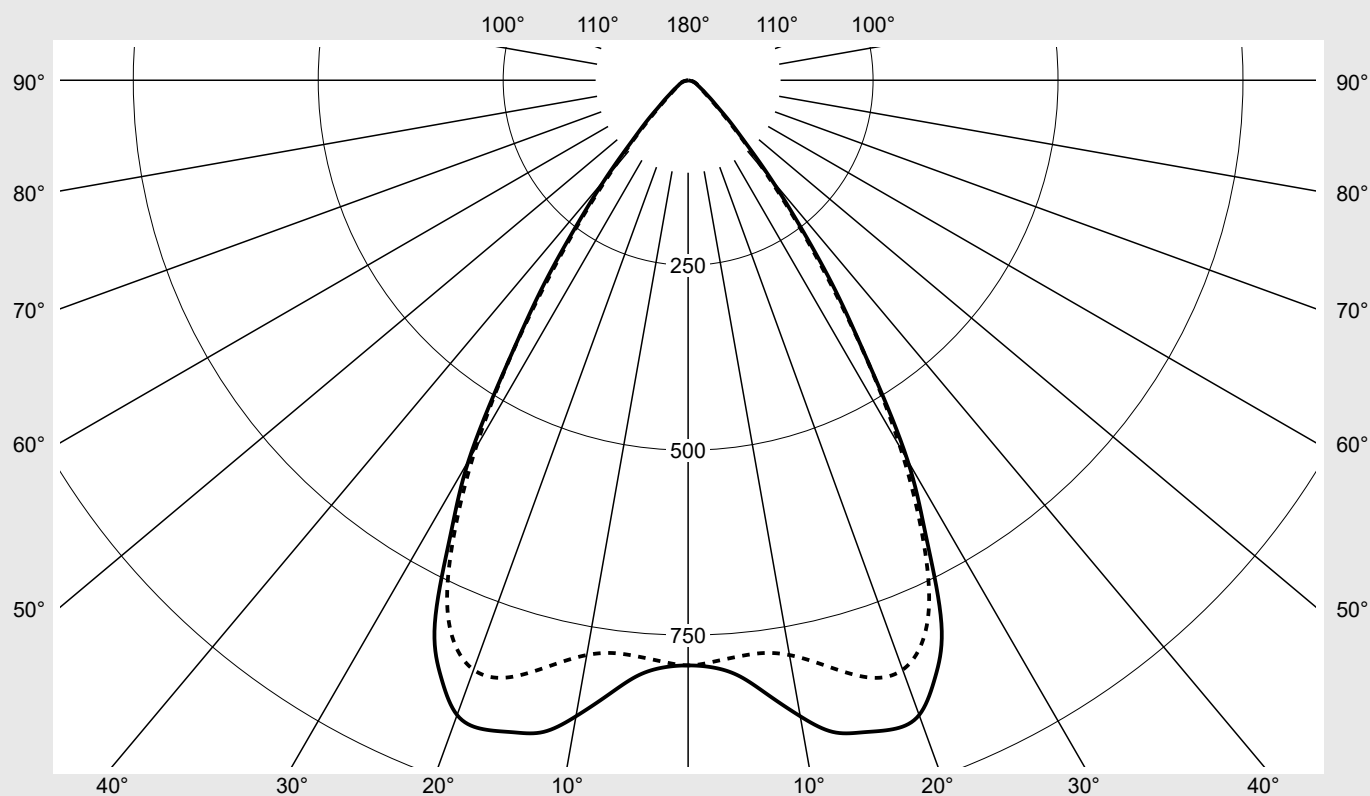


Luminous intensity in cd/klm

C180-0

C270-90

Imax: 920 cd/klm



Classifications

DIN 5040 A 7 0
CIE N1=90 N2=98 N3=100
N4=100 N5=100

Luminaire light output ratios

η_{LB} 100.0%
 ϕ_u 100.0%
 ϕ_o 0.0%

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	0,0° 180,0°	7,5° 172,5° 187,5° 352,5°	15,0° 165,0° 195,0° 345,0°	22,5° 157,5° 202,5° 337,5°	30,0° 150,0° 210,0° 330,0°	37,5° 142,5° 217,5° 322,5°	45,0° 135,0° 225,0° 315,0°
γ	Luminous intensity in cd/klm						
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	791.0
2,5°	794.7	794.4	795.0	795.0	794.2	792.8	792.0
5,0°	809.1	811.4	809.6	807.9	804.8	800.8	797.1
7,5°	839.0	837.9	835.9	831.3	824.9	817.3	810.1
10,0°	873.0	873.9	866.7	857.6	846.5	834.6	825.0
12,5°	902.2	899.8	892.6	881.8	868.2	853.9	842.5
15,0°	912.4	911.0	905.2	895.6	883.1	869.5	858.7
17,5°	919.8	918.2	913.1	904.4	892.7	879.7	870.3
20,0°	913.1	910.4	906.8	900.7	891.6	880.0	870.9
22,5°	873.0	875.7	872.3	868.8	863.2	854.7	847.2
25,0°	810.1	803.4	805.6	804.0	800.6	794.9	789.9
27,5°	697.5	704.9	702.5	701.8	699.9	697.0	693.3
30,0°	593.2	587.4	585.8	584.9	582.5	580.2	578.9
32,5°	456.1	464.3	462.1	462.0	458.3	454.5	453.6
35,0°	347.7	343.4	342.9	343.5	340.5	335.4	333.2
37,5°	248.6	249.1	246.7	247.3	245.8	241.7	237.9
40,0°	174.7	169.8	171.0	172.0	172.0	169.5	166.1
42,5°	115.9	118.7	117.3	118.1	118.9	118.2	116.5
45,0°	82.2	79.8	80.4	81.1	81.3	81.6	80.9
47,5°	56.5	57.6	57.2	57.7	57.6	57.9	57.5
50,0°	42.4	41.3	41.7	42.1	42.1	42.1	42.0
52,5°	32.0	31.8	31.7	32.2	32.5	32.7	32.7
55,0°	25.6	24.9	25.0	25.6	26.1	26.6	26.9
57,5°	20.6	20.3	20.3	20.8	21.4	22.1	22.4
60,0°	17.2	16.8	16.6	17.2	18.2	18.6	18.9
62,5°	14.5	14.3	13.9	14.3	15.3	15.8	16.0
65,0°	13.1	12.5	12.0	12.2	13.0	13.5	13.7
67,5°	11.1	10.9	10.3	10.4	11.4	11.4	11.5
70,0°	9.4	9.0	8.7	8.7	9.6	9.3	9.5
72,5°	7.6	7.5	7.3	7.2	7.3	7.4	7.8
75,0°	5.9	5.7	5.6	5.7	5.6	5.7	6.1
77,5°	4.1	4.1	4.1	4.2	4.1	4.2	4.5
80,0°	2.6	2.5	2.5	2.7	2.7	2.8	2.9
82,5°	1.1	1.2	1.2	1.3	1.5	1.5	1.7
85,0°	0.5	0.5	0.5	0.5	0.5	0.5	0.6
87,5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3

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Table of values for luminous intensities		Maximum luminous intensity

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C- planes	52,5° 127,5° 232,5° 307,5°	60,0° 120,0° 240,0° 300,0°	67,5° 112,5° 247,5° 292,5°	75,0° 105,0° 255,0° 285,0°	82,5° 97,5° 262,5° 277,5°	90,0° 270,0°	Phi-zone	Total Phi-zone
γ	Luminous intensity in cd/klm						Luminous flux in lm/klm	
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	1.2	1.2
2,5°	791.3	790.7	790.0	789.4	788.0	786.7	9.5	10.7
5,0°	794.2	790.9	788.1	786.0	783.2	781.9	19.1	29.7
7,5°	803.7	797.3	791.2	786.8	782.5	780.9	29.0	58.7
10,0°	816.7	808.7	801.4	796.1	791.2	788.9	39.5	98.2
12,5°	833.0	825.3	818.6	813.6	808.7	806.6	50.4	148.6
15,0°	850.7	844.9	836.9	832.9	831.6	829.0	61.4	210.0
17,5°	864.2	859.8	856.6	853.6	849.6	847.0	72.4	282.5
20,0°	864.8	860.1	856.9	853.9	850.4	848.0	82.3	364.7
22,5°	841.4	836.7	833.2	829.7	826.8	824.5	89.2	453.9
25,0°	786.0	782.5	779.1	775.6	772.9	771.0	91.6	545.4
27,5°	691.2	689.6	687.4	684.8	682.7	681.4	87.8	633.3
30,0°	578.6	579.1	578.3	576.4	575.3	574.3	79.6	712.9
32,5°	454.5	456.7	457.0	455.4	454.6	454.3	67.4	780.2
35,0°	335.0	337.7	338.0	336.6	336.0	336.2	53.3	833.5
37,5°	239.3	241.4	241.0	239.6	239.1	239.2	40.5	874.0
40,0°	166.2	166.4	164.7	163.3	162.9	163.0	29.6	903.6
42,5°	115.3	113.5	111.1	110.0	109.8	109.7	21.3	924.9
45,0°	79.0	76.9	75.1	74.3	74.0	73.9	15.2	940.1
47,5°	56.0	54.4	53.1	52.3	51.9	51.7	11.2	951.3
50,0°	40.9	39.8	38.8	38.0	37.5	37.4	8.5	959.8
52,5°	31.8	30.8	29.9	29.1	28.8	28.7	6.8	966.6
55,0°	25.9	25.0	24.2	23.4	23.2	23.3	5.6	972.3
57,5°	21.7	20.8	20.1	19.5	19.4	19.6	4.8	977.0
60,0°	18.6	18.0	17.1	16.6	16.8	17.1	4.2	981.2
62,5°	16.0	15.6	14.7	14.4	14.7	15.1	3.6	984.8
65,0°	14.0	13.6	12.8	12.7	13.1	13.5	3.2	988.1
67,5°	12.0	12.1	11.2	11.1	11.6	12.1	2.9	991.0
70,0°	9.8	10.4	9.7	9.7	10.2	10.6	2.5	993.4
72,5°	7.8	8.3	8.3	8.3	8.8	9.1	2.1	995.5
75,0°	6.2	6.3	6.8	6.9	7.3	7.6	1.6	997.1
77,5°	4.6	4.9	5.3	5.5	5.8	6.0	1.3	998.4
80,0°	3.1	3.4	3.7	4.0	4.2	4.4	0.9	999.2
82,5°	1.8	2.1	2.4	2.6	2.8	2.9	0.5	999.7
85,0°	0.7	1.0	1.2	1.3	1.6	1.6	0.2	1000.0
87,5°	0.3	0.3	0.3	0.3	0.4	0.4	0.1	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	20.3	21.6	20.7	21.9	22.2	20.2	21.4	20.5	21.7	22.0
	3H	20.4	21.4	20.8	21.8	22.1	20.2	21.3	20.6	21.6	22.0
	4H	20.4	21.4	20.8	21.7	22.1	20.3	21.3	20.7	21.6	22.0
	6H	20.4	21.3	20.8	21.6	22.0	20.3	21.2	20.7	21.6	22.0
	8H	20.5	21.2	20.9	21.6	22.0	20.5	21.2	20.9	21.6	22.0
	12H	20.4	21.1	20.9	21.5	21.9	20.5	21.1	20.9	21.5	21.9
4H	2H	20.2	21.2	20.6	21.6	22.0	20.1	21.1	20.5	21.4	21.8
	3H	20.3	21.1	20.8	21.5	21.9	20.2	21.0	20.6	21.4	21.8
	4H	20.4	21.1	20.8	21.5	21.9	20.3	21.0	20.7	21.4	21.9
	6H	20.3	21.0	20.8	21.4	21.9	20.4	21.0	20.9	21.4	21.9
	8H	20.3	20.9	20.8	21.3	21.8	20.4	21.0	20.9	21.4	21.9
	12H	20.3	20.8	20.8	21.2	21.7	20.5	20.9	21.0	21.4	21.9
8H	4H	20.3	20.9	20.8	21.3	21.8	20.3	20.8	20.7	21.3	21.7
	6H	20.3	20.7	20.8	21.2	21.7	20.4	20.8	20.9	21.3	21.8
	8H	20.3	20.7	20.8	21.1	21.7	20.4	20.8	20.9	21.3	21.8
	12H	20.3	20.6	20.8	21.1	21.6	20.4	20.7	21.0	21.2	21.8
12H	4H	20.3	20.8	20.8	21.2	21.7	20.3	20.7	20.8	21.2	21.7
	6H	20.3	20.7	20.8	21.1	21.7	20.4	20.7	20.9	21.2	21.7
	8H	20.3	20.6	20.8	21.1	21.6	20.4	20.7	20.9	21.2	21.7

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:			L = 426 B = 264			
C-planes	0,0° 180,0°	10,0° 170,0° 190,0° 350,0°	20,0° 160,0° 200,0° 340,0°	30,0° 150,0° 210,0° 330,0°	40,0° 140,0° 220,0° 320,0°	50,0° 130,0° 230,0° 310,0°	60,0° 120,0° 240,0° 300,0°	70,0° 110,0° 250,0° 290,0°	80,0° 100,0° 260,0° 280,0°	90,0° 270,0°
		Luminance in cd/m²								
γ										
45,0°	27401.4	26553.3	26952.3	27102.1	27158.0	26553.9	25610.6	24909.8	24678.8	24610.9
50,0°	15544.3	15116.0	15399.0	15434.3	15432.2	15139.6	14596.0	14110.9	13802.8	13694.6
55,0°	10524.1	10216.2	10443.5	10710.2	10997.9	10787.2	10253.4	9825.1	9557.4	9589.9
60,0°	8096.8	7863.3	7995.7	8560.0	8829.0	8814.5	8491.2	7971.1	7878.5	8043.5
65,0°	7285.5	6862.0	6714.8	7267.7	7601.8	7818.8	7598.9	7088.5	7218.8	7541.4
70,0°	6502.9	6141.6	5942.3	6582.1	6438.1	6679.6	7147.1	6651.0	6914.9	7329.6
75,0°	5347.7	5162.4	5186.2	5133.8	5291.6	5592.9	5764.7	6277.8	6520.9	6919.1
80,0°	3487.3	3375.8	3591.7	3726.2	3788.3	4141.1	4610.9	5214.6	5604.3	5933.9
85,0°	1362.6	1328.4	1350.6	1357.2	1484.0	1870.6	2636.0	3282.4	4025.0	4387.9

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Order number: 52HN12DA4LMA
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Luminance values in cd/m²

γ 65°

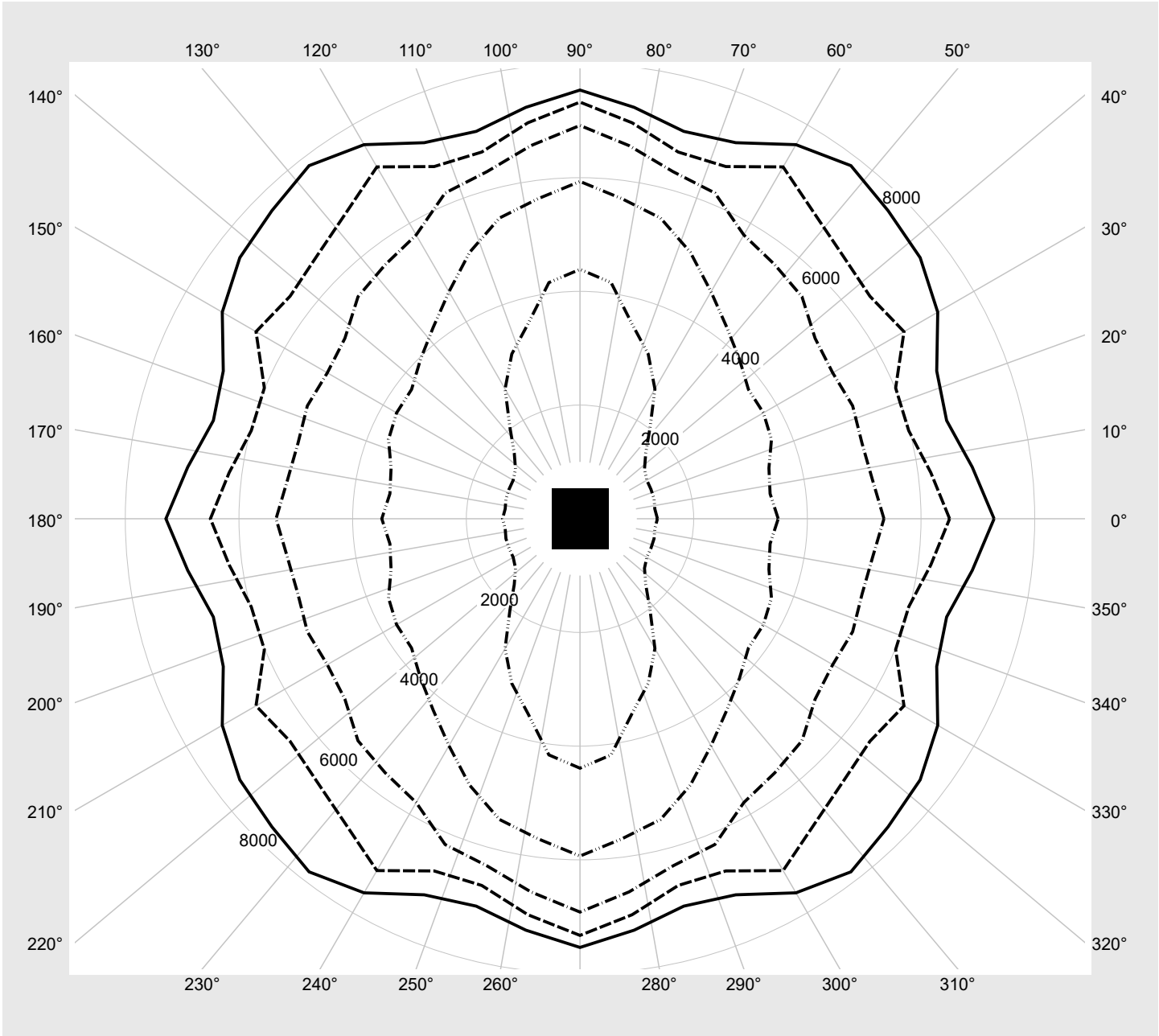
γ 70°

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	26500	142.6
95	240	252	25141	134.6
90	227	250	23858	127.1
85	214	248	22571	119.7
80	200	245	21174	111.7
75	187	243	19866	104.4
70	174	240	18545	97.0
65	161	237	17219	89.7
60	148	234	15875	82.5
55	135	231	14529	75.2
50	123	227	13272	68.7
45	110	223	11900	61.5
40	98	219	10632	54.7
35	85	214	9243	47.6
30	73	208	7956	41.1
25	61	202	6658	34.6
20	48	193	5246	27.6
15	36	182	3931	21.2
10	24	168	2613	14.7
5	12	142	1286	7.9
2	5	110	507	4.1