

Photometric test report

Family Highbay 11	Order number: 51HN11DA4KMA EAN: 4069025419361	LP number 59711_341
	Version	primary light control with lens, PMMA, housing, white, for Modario® rail, narrow distribution
	Lamps	LED 4000 K CRI ≥ 80
	Controlgear	ECG-DALI
	Rated values	Net luminous flux = 23000 lm Power consumption = 117.3 W Luminous efficacy = 196.1 lm/W
		serial documentation 18.03.2025
		



Classifications		Luminaire light output ratios	
DIN 5040	A 7 0	η_{LB}	100.0%
CIE	N1=85 N2=97 N3=100	ϕ_u	100.0%
	N4=100 N5=100	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° 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	
0,0°	2678.6	2678.6	2678.6	2678.6	2678.6	2678.6	2678.6	4.0	4.0
2,5°	2608.0	2619.4	2619.4	2616.5	2617.6	2616.2	2606.1	31.3	35.3
5,0°	2420.1	2415.7	2414.1	2408.4	2406.6	2402.3	2391.7	57.6	92.8
7,5°	2113.4	2116.1	2112.3	2103.0	2097.6	2090.5	2079.6	75.2	168.1
10,0°	1780.1	1768.7	1762.7	1751.6	1743.6	1735.2	1724.7	83.4	251.5
12,5°	1410.1	1409.3	1404.7	1395.9	1388.1	1380.5	1373.1	82.8	334.3
15,0°	1106.5	1097.8	1095.0	1089.4	1083.1	1078.4	1073.9	77.3	411.5
17,5°	830.1	840.2	835.5	831.1	826.6	824.9	824.1	68.5	480.0
20,0°	671.1	661.9	651.8	643.2	639.9	639.4	641.0	60.8	540.8
22,5°	531.9	530.5	514.2	498.9	497.0	496.6	496.8	53.4	594.2
25,0°	450.6	441.3	420.6	401.3	399.0	395.8	392.4	47.9	642.1
27,5°	370.8	368.7	351.4	331.7	326.8	321.1	316.0	43.1	685.2
30,0°	320.4	312.1	300.8	284.1	278.0	270.2	264.7	39.7	724.9
32,5°	271.0	266.8	259.0	245.6	238.0	229.0	224.7	36.5	761.4
35,0°	235.8	228.9	222.7	210.5	201.6	193.0	191.7	33.3	794.7
37,5°	204.4	197.8	191.5	181.1	172.0	164.3	162.4	30.3	825.0
40,0°	176.7	170.7	163.1	154.3	146.1	138.3	135.6	27.3	852.2
42,5°	147.6	145.5	138.6	130.6	123.2	115.8	113.3	24.2	876.4
45,0°	126.0	121.8	116.3	109.0	102.0	95.3	93.2	21.1	897.6
47,5°	103.2	101.5	97.1	90.9	84.6	78.4	76.7	18.3	915.9
50,0°	85.9	82.9	79.4	74.6	69.1	63.7	61.9	15.5	931.4
52,5°	69.0	67.2	64.5	61.0	56.2	51.6	49.7	13.0	944.4
55,0°	55.6	54.1	52.2	49.5	45.7	41.7	40.0	10.9	955.3
57,5°	43.6	43.1	41.8	39.8	37.0	33.6	32.2	9.0	964.3
60,0°	33.2	33.3	33.9	32.4	30.5	27.5	26.1	7.4	971.7
62,5°	25.9	26.0	27.0	26.2	25.1	22.4	21.3	6.1	977.8
65,0°	21.6	21.2	21.7	21.3	20.9	18.8	17.7	5.1	982.9
67,5°	17.0	17.1	17.8	17.0	17.3	15.6	14.8	4.3	987.2
70,0°	13.5	13.4	14.4	13.6	14.1	13.0	12.4	3.5	990.7
72,5°	11.0	10.8	10.9	10.9	11.0	10.7	10.6	2.8	993.5
75,0°	9.0	8.4	8.4	8.3	8.6	9.0	8.9	2.3	995.8
77,5°	6.6	6.4	6.2	6.2	6.6	7.3	7.4	1.8	997.5
80,0°	4.4	4.2	4.1	4.2	4.7	5.7	5.8	1.3	998.8
82,5°	2.0	2.1	2.2	2.4	3.0	3.9	4.1	0.8	999.6
85,0°	0.8	0.8	0.8	1.0	1.5	2.2	2.4	0.4	999.9
87,5°	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.1	1000.0
90,0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	20.4	21.6	20.7	21.9	22.2	19.2	20.4	19.5	20.7	21.0
	3H	20.6	21.6	21.0	22.0	22.3	19.5	20.5	19.9	20.8	21.2
	4H	20.7	21.6	21.1	22.0	22.4	19.6	20.6	20.0	20.9	21.3
	6H	20.7	21.6	21.2	21.9	22.3	19.8	20.6	20.2	21.0	21.4
	8H	20.8	21.5	21.2	21.9	22.3	19.9	20.6	20.3	21.0	21.4
	12H	20.8	21.4	21.2	21.8	22.2	19.9	20.6	20.3	20.9	21.4
4H	2H	20.4	21.4	20.8	21.7	22.1	19.4	20.3	19.8	20.7	21.1
	3H	20.8	21.5	21.2	21.9	22.4	19.8	20.6	20.2	21.0	21.4
	4H	20.9	21.6	21.3	22.0	22.4	20.0	20.7	20.4	21.1	21.5
	6H	20.9	21.5	21.4	22.0	22.4	20.2	20.8	20.6	21.2	21.7
	8H	20.9	21.5	21.4	21.9	22.4	20.3	20.8	20.7	21.2	21.7
	12H	20.9	21.4	21.4	21.8	22.3	20.3	20.7	20.8	21.2	21.7
8H	4H	20.9	21.4	21.3	21.8	22.3	20.0	20.5	20.5	21.0	21.5
	6H	20.9	21.4	21.4	21.8	22.4	20.2	20.7	20.7	21.1	21.6
	8H	20.9	21.3	21.4	21.8	22.3	20.3	20.7	20.8	21.2	21.7
	12H	20.9	21.2	21.4	21.7	22.3	20.4	20.7	20.9	21.2	21.8
12H	4H	20.8	21.3	21.3	21.7	22.2	20.0	20.4	20.5	20.9	21.4
	6H	20.9	21.3	21.4	21.8	22.3	20.2	20.6	20.7	21.1	21.6
	8H	20.9	21.2	21.4	21.7	22.3	20.3	20.6	20.8	21.1	21.7

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 426 B = 264	
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						
45,0°	36438.3	35221.9	33635.2	31531.4	29501.1	27571.1	26953.9
50,0°	27316.7	26365.7	25248.9	23749.8	21969.0	20253.5	19680.2
55,0°	19821.1	19284.5	18616.3	17649.3	16289.8	14868.9	14271.4
60,0°	13599.5	13614.2	13867.4	13249.0	12461.2	11242.7	10681.6
65,0°	10441.4	10265.2	10498.0	10328.1	10109.9	9085.4	8588.0
70,0°	8089.6	7992.2	8585.9	8108.2	8414.3	7746.4	7403.2
75,0°	7091.7	6655.6	6670.6	6580.5	6789.1	7079.1	7066.5
80,0°	5173.7	4981.8	4819.3	4906.4	5482.3	6657.7	6793.1
85,0°	1914.7	1891.3	1978.1	2236.2	3432.9	5054.3	5727.8

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LP number
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Luminance values in cd/m²

γ 65°

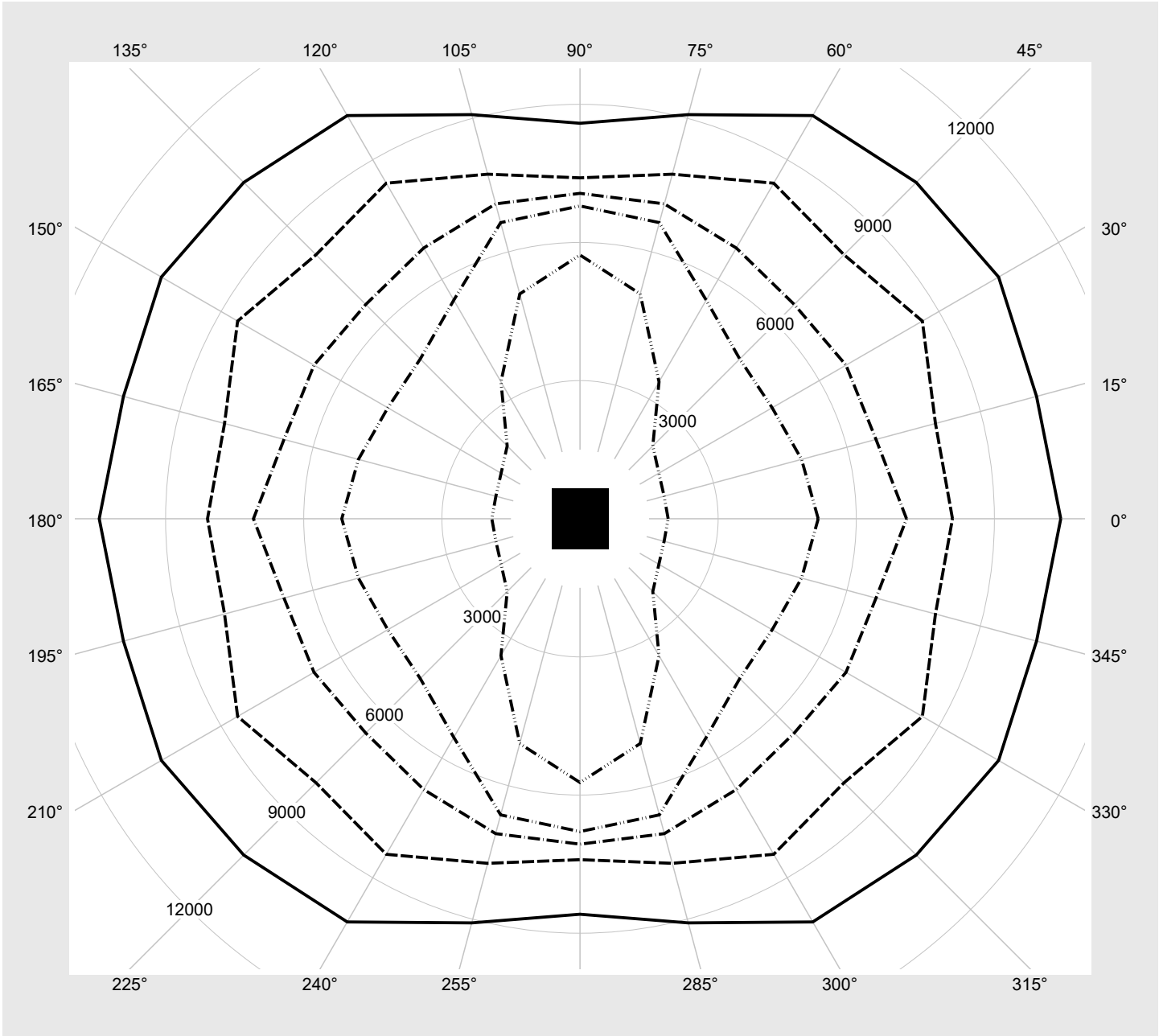
γ 70°

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	23000	117.3
95	240	252	21817	110.5
90	227	250	20712	104.4
85	213	248	19510	97.8
80	200	245	18390	91.7
75	187	243	17257	85.6
70	174	240	16121	79.5
65	161	237	14975	73.5
60	148	234	13820	67.6
55	135	231	12656	61.6
50	122	227	11484	55.6
45	110	223	10395	50.1
40	97	219	9201	44.3
35	85	214	8092	38.9
30	72	208	6876	33.1
25	60	201	5747	27.8
20	48	193	4608	22.6
15	36	182	3453	17.4
10	24	168	2290	12.0
5	12	142	1112	6.5
2	6	117	520	3.8