

Photometric test report

Family Highbay 11	Order number: 51HN11DA4NMA EAN: 4069025419408	LP number 59711_326
	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 = 31500 lm Power consumption = 167.9 W Luminous efficacy = 187.6 lm/W
		serial documentation 27.02.2025
		



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	21.5	22.6	21.8	23.0	23.3	20.3	21.5	20.6	21.8	22.1
	3H	21.7	22.7	22.1	23.1	23.4	20.6	21.6	21.0	21.9	22.3
	4H	21.8	22.7	22.2	23.1	23.5	20.7	21.7	21.1	22.0	22.4
	6H	21.8	22.7	22.3	23.0	23.4	20.9	21.7	21.3	22.1	22.5
	8H	21.9	22.6	22.3	23.0	23.4	21.0	21.7	21.4	22.1	22.5
	12H	21.9	22.5	22.3	22.9	23.3	21.0	21.6	21.4	22.0	22.5
4H	2H	21.5	22.5	21.9	22.8	23.2	20.5	21.4	20.9	21.8	22.1
	3H	21.9	22.6	22.3	23.0	23.4	20.9	21.7	21.3	22.0	22.5
	4H	22.0	22.7	22.4	23.1	23.5	21.1	21.8	21.5	22.2	22.6
	6H	22.0	22.6	22.5	23.1	23.5	21.3	21.9	21.7	22.3	22.8
	8H	22.0	22.5	22.5	23.0	23.5	21.3	21.9	21.8	22.3	22.8
	12H	22.0	22.4	22.5	22.9	23.4	21.4	21.8	21.9	22.3	22.8
8H	4H	22.0	22.5	22.4	22.9	23.4	21.1	21.6	21.6	22.1	22.5
	6H	22.0	22.5	22.5	22.9	23.4	21.3	21.7	21.8	22.2	22.7
	8H	22.0	22.4	22.5	22.9	23.4	21.4	21.8	21.9	22.3	22.8
	12H	22.0	22.3	22.5	22.8	23.3	21.5	21.8	22.0	22.3	22.9
12H	4H	21.9	22.4	22.4	22.8	23.3	21.1	21.5	21.6	22.0	22.5
	6H	22.0	22.4	22.5	22.9	23.4	21.3	21.7	21.8	22.1	22.7
	8H	22.0	22.3	22.5	22.8	23.4	21.4	21.7	21.9	22.2	22.8

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°	49904.7	48238.6	46065.6	43184.3	40403.7	37760.4	36915.2
50,0°	37411.9	36109.5	34580.1	32526.8	30088.0	27738.5	26953.3
55,0°	27146.3	26411.3	25496.2	24171.9	22309.9	20364.0	19545.6
60,0°	18625.4	18645.6	18992.3	18145.3	17066.4	15397.6	14629.1
65,0°	14300.1	14058.9	14377.7	14145.0	13846.1	12443.1	11761.8
70,0°	11079.3	10945.8	11759.0	11104.7	11523.9	10609.2	10139.1
75,0°	9712.6	9115.2	9135.8	9012.4	9298.1	9695.3	9678.0
80,0°	7085.8	6822.9	6600.3	6719.6	7508.4	9118.1	9303.6
85,0°	2622.4	2590.2	2709.1	3062.6	4701.6	6922.2	7844.6

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LP number
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Luminance values in cd/m²

γ 65°

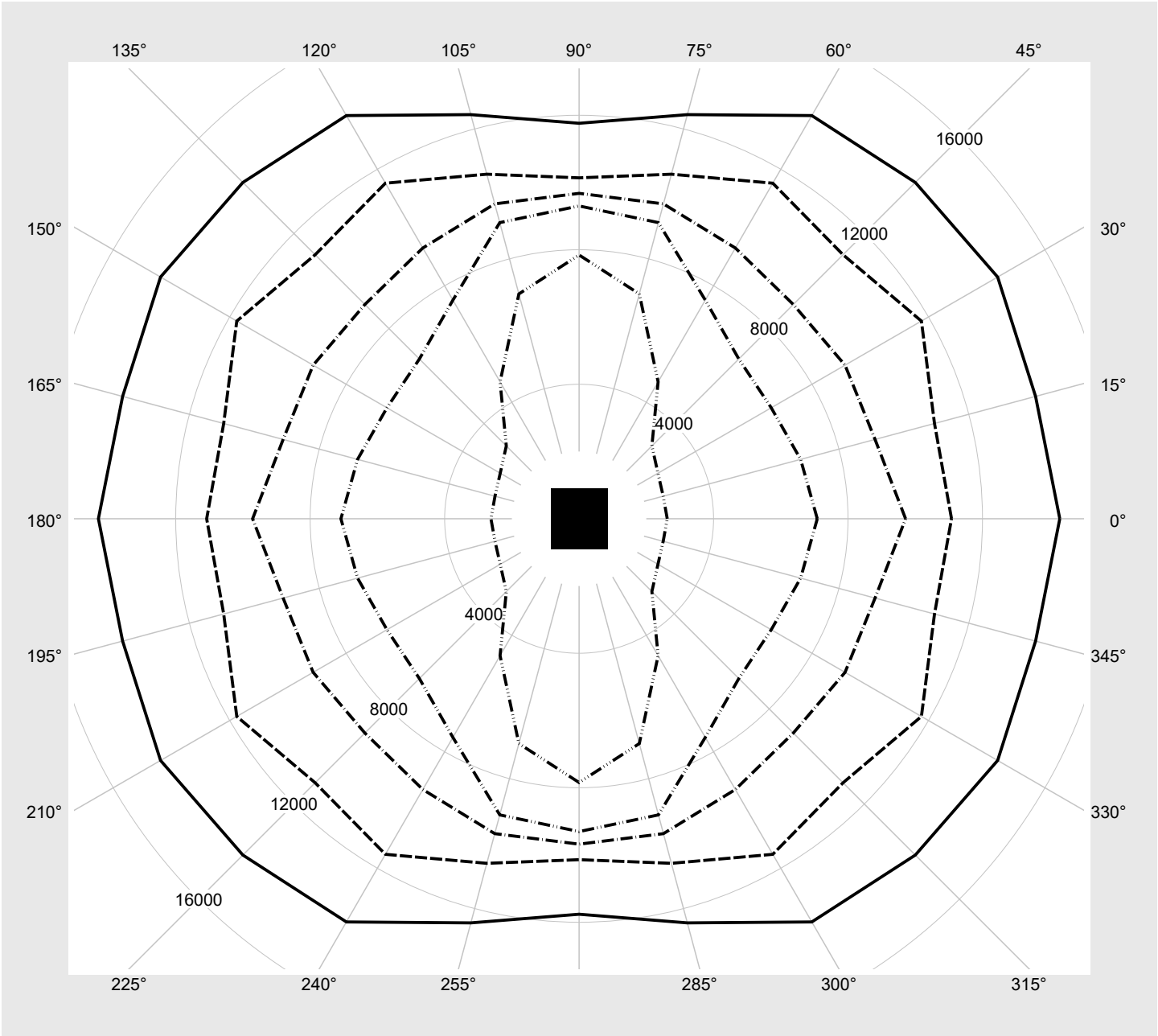
γ 70°

γ 75°

γ 80°

γ 85°

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Dimming levels table		environmental temperature: 25°C

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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	31500	167.9
95	240	252	29894	158.8
90	226	250	28303	148.5
85	213	248	26810	139.7
80	199	245	25167	130.2
75	186	243	23638	121.3
70	173	240	22107	112.7
65	159	237	20436	103.4
60	146	234	18872	94.9
55	133	230	17285	86.4
50	121	227	15808	78.5
45	108	223	14186	70.2
40	95	218	12554	61.9
35	83	213	11024	54.1
30	71	207	9480	46.6
25	59	201	7914	39.0
20	47	192	6334	31.7
15	35	181	4729	24.3
10	23	166	3107	16.9
5	12	142	1596	9.9
2	6	117	763	6.0