



Photometric test report

Family Highbay 11	Order number: 51HN31DA4MDA EAN: 4069025431073	LP number 59711_122
	Version	primary light control with lens, PMMA, housing, black, narrow distribution
	Lamps	LED 4000 K CRI ≥ 80
	Controlgear	ECG-DALI
	Setting	AC-mode
	Rated values	Net luminous flux = 28000 lm Power consumption = 146.6 W Luminous efficacy = 191 lm/W
		serial documentation 14.02.2025
		

Luminous intensity in cd/klm C180-0 C270-90 Imax: 2679 cd/klm



Classifications	
DIN 5040	A 7 0
CIE	N1=85 N2=97 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



C-planes γ	0° 180°	15°	30°	45°	60°	75°	90° 270°	Phi-zone	Total Phi-zone
		165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°			
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								
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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	21.1	22.2	21.4	22.5	22.9	19.9	21.1	20.2	21.4	21.7
	3H	21.3	22.3	21.7	22.7	23.0	20.2	21.2	20.5	21.5	21.9
	4H	21.4	22.3	21.8	22.7	23.0	20.3	21.2	20.7	21.6	22.0
	6H	21.4	22.3	21.8	22.6	23.0	20.4	21.3	20.9	21.7	22.1
	8H	21.5	22.2	21.9	22.6	23.0	20.6	21.3	21.0	21.7	22.1
	12H	21.4	22.1	21.9	22.5	22.9	20.6	21.2	21.0	21.6	22.1
4H	2H	21.1	22.1	21.5	22.4	22.8	20.1	21.0	20.5	21.4	21.7
	3H	21.4	22.2	21.9	22.6	23.0	20.5	21.2	20.9	21.6	22.1
	4H	21.6	22.2	22.0	22.7	23.1	20.7	21.4	21.1	21.8	22.2
	6H	21.6	22.2	22.1	22.6	23.1	20.9	21.4	21.3	21.9	22.4
	8H	21.6	22.1	22.1	22.6	23.1	20.9	21.5	21.4	21.9	22.4
	12H	21.6	22.0	22.1	22.5	23.0	21.0	21.4	21.5	21.9	22.4
8H	4H	21.5	22.1	22.0	22.5	23.0	20.7	21.2	21.2	21.6	22.1
	6H	21.6	22.0	22.1	22.5	23.0	20.9	21.3	21.4	21.8	22.3
	8H	21.6	22.0	22.1	22.5	23.0	21.0	21.4	21.5	21.9	22.4
	12H	21.6	21.9	22.1	22.4	22.9	21.1	21.4	21.6	21.9	22.4
12H	4H	21.5	22.0	22.0	22.4	22.9	20.7	21.1	21.2	21.6	22.1
	6H	21.6	22.0	22.1	22.4	23.0	20.9	21.2	21.4	21.7	22.3
	8H	21.6	21.9	22.1	22.4	22.9	21.0	21.3	21.5	21.8	22.4

Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 426 B = 264
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C-planes	γ	Luminance in cd/m ²							
		0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	
45,0°		44359.7	42878.8	40947.2	38386.1	35914.4	33564.8	32813.5	
50,0°		33255.1	32097.3	30737.8	28912.7	26744.9	24656.4	23958.5	
55,0°		24130.0	23476.8	22663.3	21486.1	19831.1	18101.3	17373.8	
60,0°		16555.9	16573.8	16882.1	16129.2	15170.2	13686.8	13003.6	
65,0°		12711.2	12496.8	12780.1	12573.4	12307.7	11060.5	10454.9	
70,0°		9848.2	9729.6	10452.4	9870.8	10243.5	9430.4	9012.6	
75,0°		8633.4	8102.4	8120.7	8011.0	8265.0	8618.0	8602.6	
80,0°		6298.5	6064.8	5866.9	5973.0	6674.1	8105.0	8269.9	
85,0°		2331.0	2302.4	2408.1	2722.3	4179.2	6153.1	6972.9	

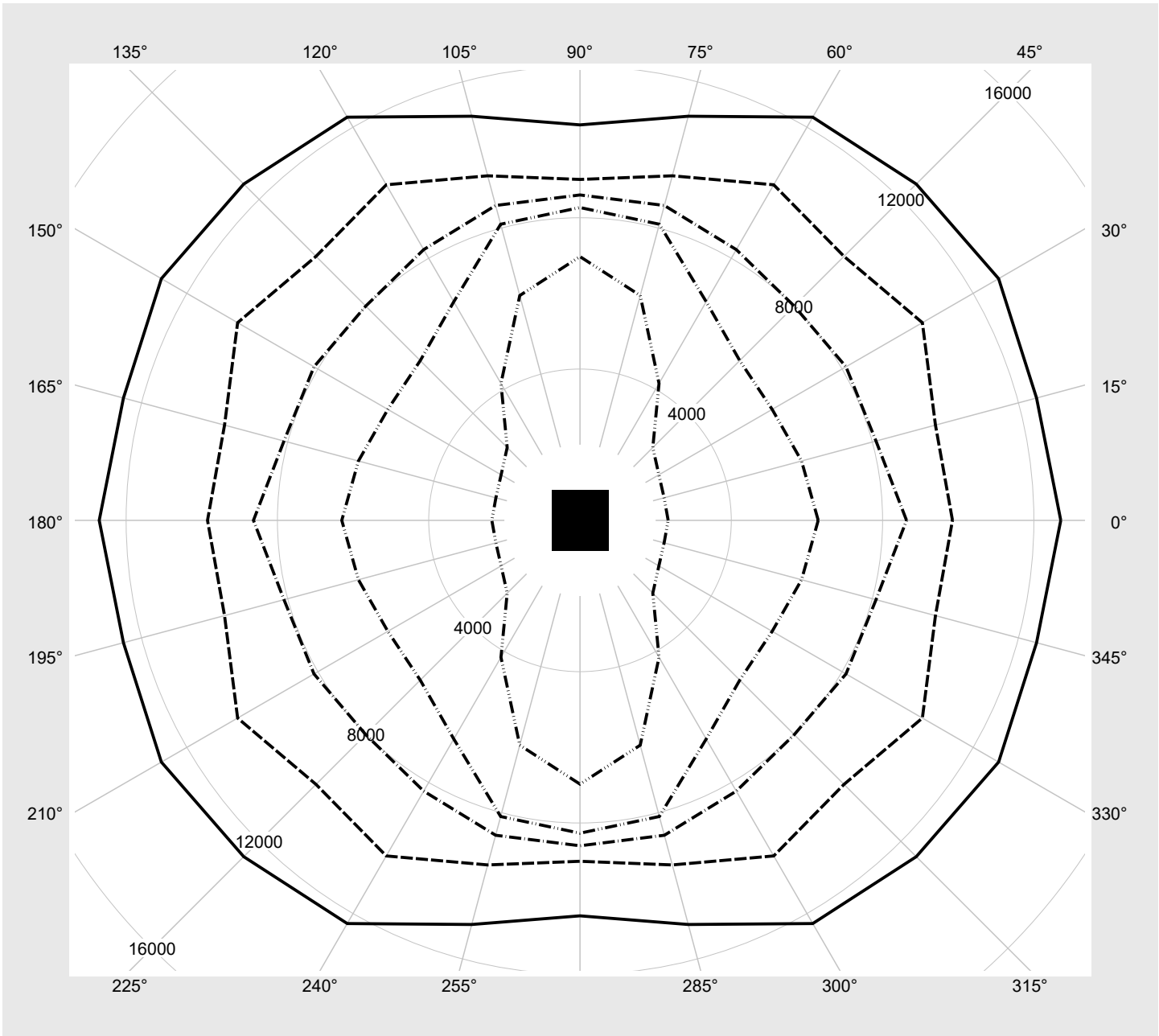
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Luminance values in cd/m²

γ 65°	γ 70°	γ 75°	γ 80°	γ 85°
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siteco



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Dimming levels table	environmental temperature: 25°C	sITeco
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	28000	146.6
95	240	252	26584	138.2
90	227	250	25246	130.3
85	213	248	23796	121.9
80	200	245	22443	114.2
75	186	243	20975	105.9
70	173	240	19598	98.3
65	160	237	18213	90.7
60	147	234	16807	83.1
55	134	231	15399	75.7
50	121	227	13971	68.3
45	109	223	12641	61.5
40	96	218	11192	54.1
35	84	213	9836	47.3
30	71	207	8355	40.2
25	59	201	6969	33.5
20	47	192	5572	27.0
15	35	181	4154	20.6
10	24	168	2843	14.6
5	12	142	1395	7.8
2	5	110	539	3.9