

Photometric test report

Family
Highbay 11

Order number: 51HN12DA4MMA
EAN: 4069025349804

LP number
59710_4

serial
documentation
29.01.2025

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 = 28000 lm
Power consumption = 146.6 W
Luminous efficacy = 191 lm/W



Luminous intensity in cd/klm

C180-0

C270-90

Imax: 772 cd/klm



Classifications

DIN 5040 A 6 0
CIE N1=88 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° 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°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	1.0	1.0
2,5°	644.5	645.1	645.0	644.3	644.2	643.7	641.7	7.7	8.7
5,0°	651.5	652.3	650.7	647.5	645.3	643.2	640.4	15.5	24.1
7,5°	669.6	669.1	664.2	657.2	651.2	645.8	641.3	23.5	47.6
10,0°	693.4	691.0	681.5	670.0	659.9	651.2	645.8	31.9	79.6
12,5°	711.8	709.4	700.3	685.9	671.9	660.7	654.0	40.7	120.2
15,0°	721.3	721.7	717.1	704.9	689.4	675.9	667.7	49.7	169.9
17,5°	743.8	740.8	737.9	726.5	708.9	693.0	684.2	59.4	229.3
20,0°	761.9	761.9	759.6	745.2	724.0	705.6	696.8	69.2	298.5
22,5°	772.0	771.2	770.0	754.7	731.1	710.8	702.6	78.2	376.7
25,0°	758.1	756.6	756.3	743.6	722.7	703.3	695.6	85.1	461.8
27,5°	706.7	709.5	709.5	700.0	685.7	672.3	667.0	87.8	549.7
30,0°	640.4	635.6	633.7	626.6	621.7	614.1	609.9	85.8	635.5
32,5°	530.6	537.6	535.6	526.2	530.2	524.1	520.8	78.1	713.6
35,0°	428.2	426.4	425.9	411.9	420.8	414.2	411.4	66.0	779.6
37,5°	322.5	323.4	327.0	311.0	319.4	310.8	308.2	53.0	832.6
40,0°	236.1	234.0	241.6	230.8	230.9	219.8	218.4	40.7	873.3
42,5°	162.3	165.3	172.9	171.1	161.7	151.3	150.8	30.2	903.5
45,0°	117.3	114.9	119.4	122.5	109.3	102.6	102.3	21.9	925.4
47,5°	80.5	81.4	82.8	85.5	75.2	71.4	70.8	15.9	941.3
50,0°	59.4	58.0	58.0	59.0	52.9	50.5	49.6	11.7	953.0
52,5°	43.3	42.8	42.8	43.0	39.3	37.2	36.6	8.9	961.8
55,0°	33.3	32.4	32.9	33.7	30.5	28.7	28.3	7.1	968.9
57,5°	25.9	25.4	25.9	26.8	24.5	22.9	22.9	5.8	974.7
60,0°	20.9	20.2	21.2	21.8	20.4	18.9	19.2	4.9	979.5
62,5°	16.9	16.2	17.4	18.0	17.2	15.9	16.4	4.1	983.6
65,0°	14.9	13.6	14.4	15.1	14.8	13.6	14.4	3.6	987.2
67,5°	12.3	11.4	12.5	12.4	13.0	11.7	12.6	3.1	990.3
70,0°	10.4	9.5	10.5	10.1	11.1	10.1	11.0	2.7	993.0
72,5°	8.2	7.7	7.9	8.2	8.7	8.6	9.5	2.2	995.2
75,0°	6.5	6.0	6.0	6.4	6.6	7.1	7.9	1.7	996.9
77,5°	4.5	4.3	4.4	4.7	5.1	5.6	6.3	1.3	998.2
80,0°	2.9	2.7	2.9	3.1	3.5	4.1	4.7	0.9	999.1
82,5°	1.3	1.4	1.6	1.8	2.2	2.7	3.3	0.5	999.7
85,0°	0.6	0.6	0.6	0.7	1.0	1.4	1.8	0.3	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	22.1	23.4	22.5	23.7	24.0	21.8	23.1	22.2	23.4	23.7
	3H	22.1	23.2	22.5	23.6	23.9	21.8	22.9	22.2	23.3	23.6
	4H	22.1	23.1	22.5	23.5	23.9	21.8	22.9	22.2	23.2	23.6
	6H	22.1	23.0	22.5	23.4	23.8	21.9	22.8	22.3	23.2	23.6
	8H	22.1	22.9	22.6	23.3	23.7	22.0	22.8	22.4	23.1	23.5
	12H	22.1	22.8	22.5	23.2	23.6	21.9	22.7	22.4	23.1	23.5
4H	2H	22.0	23.0	22.4	23.4	23.8	21.7	22.7	22.1	23.1	23.5
	3H	22.0	22.9	22.4	23.3	23.7	21.8	22.6	22.2	23.0	23.4
	4H	22.0	22.8	22.5	23.2	23.6	21.8	22.6	22.3	23.0	23.4
	6H	22.0	22.6	22.5	23.1	23.6	21.9	22.5	22.3	22.9	23.4
	8H	22.0	22.6	22.5	23.0	23.5	21.9	22.5	22.3	22.9	23.4
	12H	22.0	22.5	22.5	22.9	23.4	21.9	22.4	22.4	22.8	23.3
8H	4H	22.0	22.5	22.4	23.0	23.5	21.8	22.3	22.2	22.8	23.3
	6H	21.9	22.4	22.4	22.9	23.4	21.8	22.3	22.3	22.8	23.3
	8H	21.9	22.3	22.4	22.8	23.3	21.8	22.2	22.3	22.7	23.3
	12H	21.9	22.2	22.4	22.7	23.3	21.9	22.2	22.4	22.7	23.2
12H	4H	22.0	22.4	22.5	22.9	23.4	21.8	22.2	22.3	22.7	23.2
	6H	21.9	22.3	22.4	22.8	23.3	21.8	22.2	22.3	22.7	23.2
	8H	21.9	22.2	22.4	22.7	23.3	21.8	22.1	22.3	22.6	23.2

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°	41309.5	40449.3	42046.4	43124.2	38472.7	36122.1	36015.8
50,0°	23016.1	22471.9	22448.3	22849.2	20503.5	19549.5	19214.1
55,0°	14464.3	14077.5	14278.5	14606.2	13249.8	12455.0	12305.3
60,0°	10403.4	10042.9	10552.3	10869.0	10176.3	9424.0	9544.0
65,0°	8778.3	7985.4	8511.5	8878.5	8694.1	8040.2	8494.4
70,0°	7545.1	6884.1	7614.9	7367.4	8082.3	7357.2	8035.0
75,0°	6218.0	5759.1	5743.7	6143.0	6382.5	6831.7	7615.7
80,0°	4198.0	3917.0	4145.0	4477.6	5054.0	5944.3	6775.9
85,0°	1676.8	1668.3	1722.5	2016.8	2982.3	3973.5	5147.6

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Luminance values in cd/m²

γ 65°

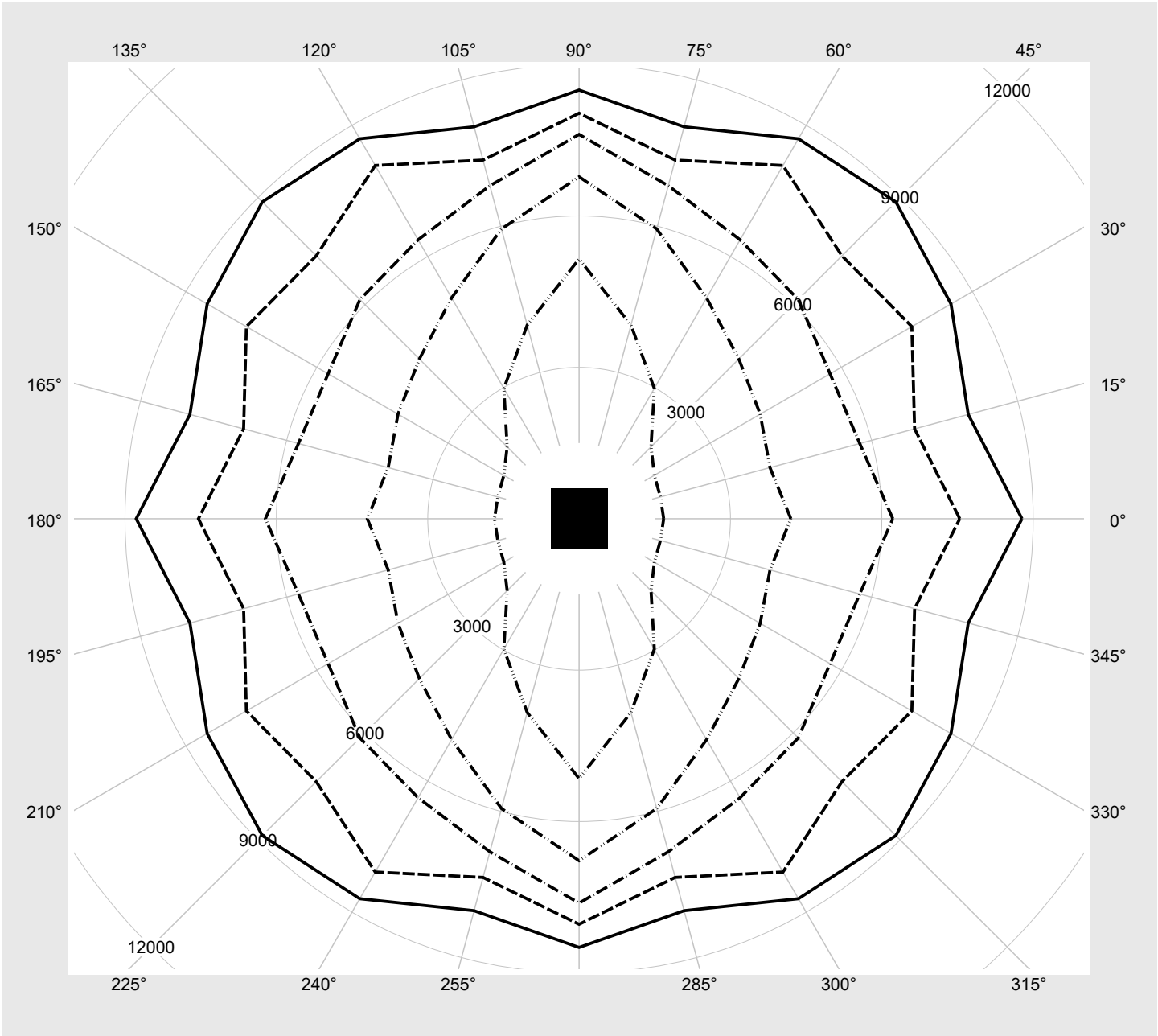
γ 70°

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	----	----	----	----
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