

R23I2R1/WMD

Product datasheet

R23 is a surface mounted diffuser flatpanel

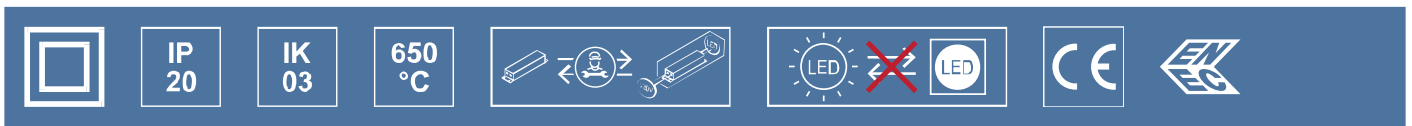


R23

R23 is a surface mounted diffuser flatpanel.

The prismatic optics provides pleasant and even light for every application.

To complete the range a recessed mounted version (U23) is available.



<https://www.etaplighting.com/en/series/u23/R23I2R1WMD>

General data

Housing	lacquered sheet steel
Light source	LED, 3000 K, CRI (Ra): CRI (Ra) 80
Optics	diffuser, acrylic (PMMA) microprism with diffuser foil, wide-angle
UGR classification	<= 19
Luminous flux	4150 lm
Luminous efficacy	120 lm/W
LLMF	90% @50khrs (Tq=25°C)
Ambient temperature	-20°C - 35°C

Mechanical Properties

Dimensions (L x W x H)	598 mm x 598 mm x 50.5 mm
Colour	RAL9003 - signal white
Type	individual luminaire
IP	IP20
IK	IK03
Approximate weight	9.76 kg

Electrical Properties

Driver	DALI dimmable
Power	34.5 W
Voltage	220-240V
Frequency	50-60Hz AC/DC
Power factor	0.99
Nr of luminaires per circuit breaker	B16(32)/C16(54)

Circularity Index



- ▶ Market reference: 120lm/W - L80 @ 35khrs - 2500lm
- ▶ ETAP product score

The **circularity index** indicates the level of circularity and sustainability achieved by our luminaires.

- The **product circularity score** indicates how well our product fits into the **circular economy** based on our endless, effortless and wasteless principles.
- The **lifetime efficiency score** compares the **energy and material impact** of our luminaire with a reference product in the market.

Through the circularity index, we challenge ourselves to continuously enhance our products and achieve higher scores in terms of circularity and sustainability. Review all details in our blog.

Epel data lightsource



Energy class	C
Replaceable/removable	Replaceable control gear by a professional Non-replaceable light source

Spectral properties

SDCM variation	3
Photobiological safety	IEC/TR 62778: RG0

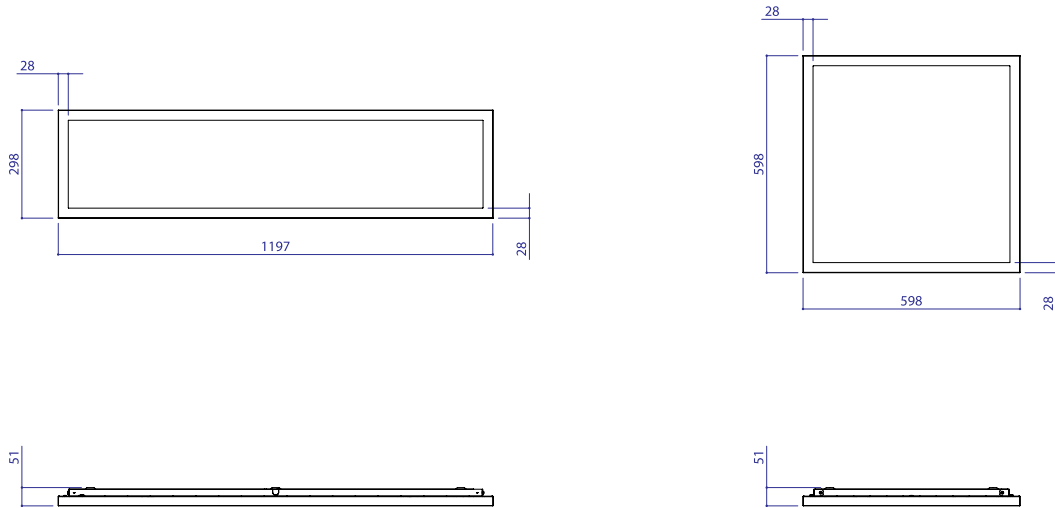
Lifetime Table

Lifetime Data ($T_q=25.0^{\circ}\text{C}$)

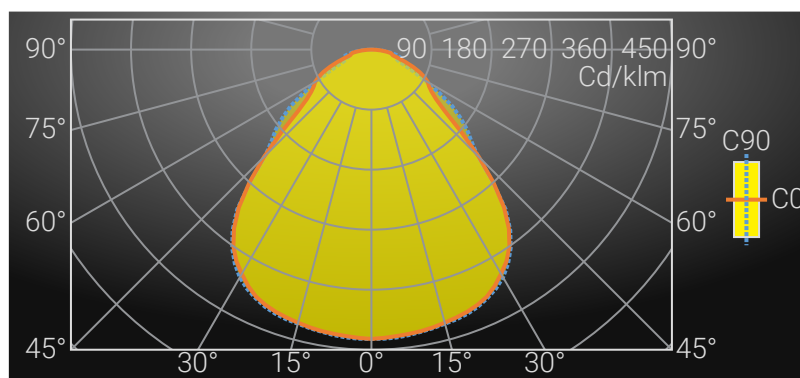
Time(hrs)	LLMF(%)	Cx(%)
10000	97	2
20000	95	4
30000	93	6
40000	91	8
50000	90	9
60000	88	11
70000	86*	13
80000	84*	15
90000	82*	17
100000	81*	18

* Projected lifetime data. All other data is based on the reported lifetime data in accordance with TM-21-11

Dimensional sketch



Polar diagram



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Intensity Table

Intensity for 4150lm

Gamma	C0	C45	C90
0°	1799.7	1799.7	1799.7
5°	1790.0	1797.0	1798.6
10°	1778.1	1781.3	1782.7
15°	1759.3	1764.1	1766.4
20°	1736.3	1749.0	1748.7
25°	1695.9	1694.6	1706.7
30°	1612.3	1620.3	1635.3
35°	1495.8	1500.3	1507.7
40°	1282.5	1286.1	1297.8
45°	943.8	911.2	931.7
50°	594.7	681.3	776.1
55°	455.8	532.1	612.7
60°	403.7	442.4	383.3
65°	330.1	337.8	220.7
70°	225.4	247.3	163.3
75°	138.3	178.1	182.7
80°	121.5	115.2	131.5
85°	59.0	54.4	62.9
90°	1.4	1.5	2.5

Luminance

Average Luminances (Cd/m²) for 4150lm

Gamma	C0	C30	C45	C60	C90
45°	4510	4595	4354	4315	4452
50°	3126	4231	3582	2848	4080
55°	2685	3825	3135	2456	3610
60°	2728	2869	2990	2548	2590
65°	2639	1988	2701	2447	1765
70°	2227	1708	2443	1983	1614
75°	1806	2320	2325	1613	2385
80°	2364	2678	2242	2239	2558
85°	2289	2362	2111	2094	2441

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UGR

Corrected Glare Ratings for a Total Lamp Flux of 4150lm (S = 0.25H)

Room Reflection Factors (%)

Ceiling	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor	20	20	20	20	20	20	20	20	20	20

Room Dimensions	Viewed Crosswise					Viewed Endwise				
X = 2H Y = 2H	16.2	17.9	16.5	18.1	18.4	15.7	17.4	16.1	17.7	18.0
Y = 3H	17.1	18.6	17.4	18.9	19.2	16.6	18.1	16.9	18.4	18.7
Y = 4H	17.5	18.9	17.8	19.2	19.5	17.1	18.6	17.5	18.9	19.2
Y = 6H	17.8	19.2	18.2	19.5	19.8	17.7	19.0	18.0	19.3	19.6
Y = 8H	18.0	19.3	18.4	19.6	20.0	17.9	19.2	18.2	19.5	19.8
Y = 12H	18.1	19.4	18.5	19.7	20.0	18.0	19.2	18.4	19.6	19.9
X = 4H Y = 2H	16.4	17.9	16.8	18.2	18.5	16.2	17.6	16.5	17.9	18.2
Y = 3H	17.5	18.8	17.9	19.1	19.5	17.2	18.4	17.6	18.8	19.1
Y = 4H	18.1	19.2	18.5	19.6	20.0	17.8	18.9	18.2	19.3	19.7
Y = 6H	18.7	19.7	19.1	20.1	20.5	18.5	19.5	19.0	19.9	20.3
Y = 8H	18.9	19.8	19.4	20.2	20.7	18.8	19.7	19.3	20.1	20.6
Y = 12H	19.1	19.9	19.6	20.4	20.8	19.0	19.9	19.5	20.3	20.7
X = 8H Y = 4H	18.4	19.3	18.8	19.7	20.1	18.1	19.0	18.5	19.4	19.8
Y = 6H	19.2	19.9	19.6	20.4	20.8	18.9	19.7	19.4	20.1	20.6
Y = 8H	19.5	20.2	20.0	20.6	21.1	19.3	20.0	19.8	20.4	20.9
Y = 12H	19.8	20.3	20.3	20.8	21.4	19.6	20.2	20.1	20.7	21.2
X = 12H Y = 4H	18.4	19.2	18.8	19.6	20.1	18.1	18.9	18.6	19.4	19.8
Y = 6H	19.2	19.9	19.7	20.4	20.8	19.0	19.7	19.5	20.2	20.6
Y = 8H	19.6	20.2	20.1	20.7	21.2	19.4	20.0	19.9	20.5	21.0

UGR Variations with Observer Position for Luminaire Spacings S

S = 1.0H	+0.3	-0.4	+0.3	-0.3
S = 1.5H	+0.5	-0.7	+0.4	-0.8
S = 2.0H	+1.0	-1.1	+0.8	-1.3

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Efficiency

Utilisation Factors according to IES (%)

	Room Reflection Factors (%)									
	80	80	80	50	50	50	30	30	30	0
Ceiling	80	80	80	50	50	50	30	30	30	0
Walls	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	0
RCR = 1	105	102	100	99	97	95	95	93	92	86
2	93	88	85	88	84	81	84	81	79	74
3	83	77	72	78	74	70	76	72	68	65
4	74	67	62	71	65	61	68	64	60	57
5	67	60	55	64	58	54	62	57	53	50
6	61	54	48	58	52	48	57	51	47	44
7	56	48	43	54	47	43	52	46	42	40
8	51	44	39	49	43	38	48	42	38	36
9	48	40	35	46	39	35	45	39	35	33
10	44	37	32	43	36	32	42	36	32	30

Utilisation Factors according to LiTG (%)

	Room Reflection Factors (%)									
	80	80	80	50	50	50	50	50	30	0
Ceiling	80	80	80	50	50	50	50	50	30	0
Walls	50	30	50	30	50	30	50	30	30	0
Floor	30	30	10	10	30	30	10	10	10	0
k = 0.60	54	45	51	44	51	44	49	43	43	37
0.80	65	57	61	54	62	55	59	53	53	47
1.00	74	65	68	62	70	63	66	60	60	53
1.25	83	75	76	70	78	72	74	69	68	62
1.50	90	81	81	76	84	78	79	74	73	67
2.00	98	90	87	82	91	85	84	80	79	74
2.50	104	97	92	87	96	91	89	85	84	79
3.00	108	103	95	91	100	96	92	89	88	83
4.00	113	108	98	95	103	100	94	92	90	86
5.00	116	112	100	97	106	103	97	95	93	89

Classifications

CIE	601 / 867 / 968 / 1000 / 1000
CIE FLUXCODE	0.60 / 0.87 / 0.97 / 1.00 / 1.00
BZ	BZ3
CAE	Symmetrical
DIN	A50 (Nach Arbeitsblatt 7)
DIN_U	Phi u = 1.00
DIN_SU	Phi su = 0.62
UTE	1.00 D + 0.00 T
Luminous area	0.296 m ²

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