

Light efficiency:



Output: 1232 lm

Light quality:

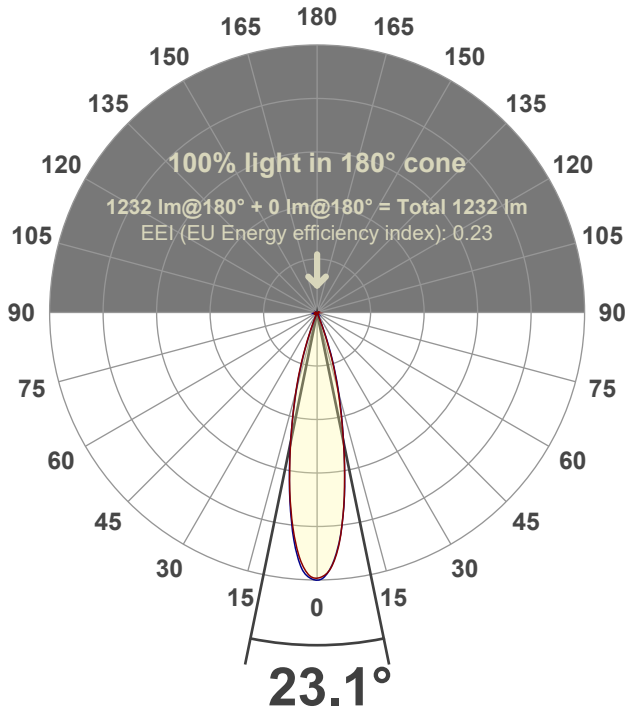


Peak: 7284 cd

Power: 20.9 W



Beam angle



Test number:

GR-F-F-CZ20-30k-NF-SQ-Rev2

Luminaire Model:

Graffiti Flat Square Fixed Downlight-CZ20 30k 24° Optic

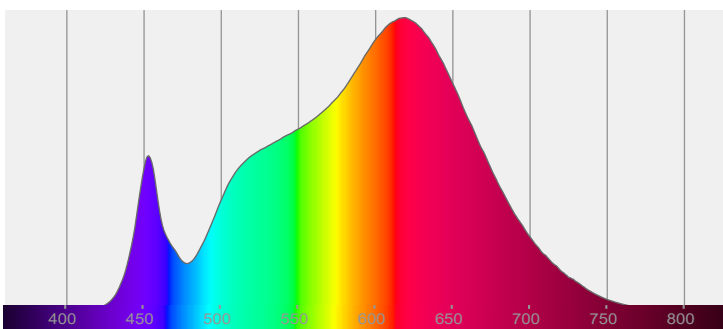
Date and time:

6/30/2022 8:49:09 PM

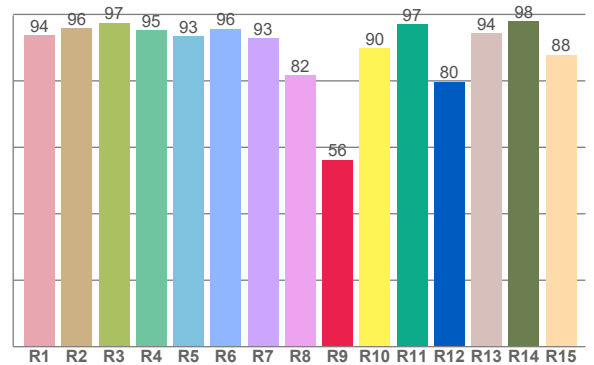
Delivered Lumens

1232

Spectra



CRI: 93.2 (R1-R8)



Color parameters

	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
	CRI	CRI R9	TM30 R <sub>f</sub>	TM30 R <sub>g</sub>	CQS	x	y	u	v	Δuv
	93.2	56.2	92.2	99.2	91.7	0.438	0.409	0.249	0.349	0.0017

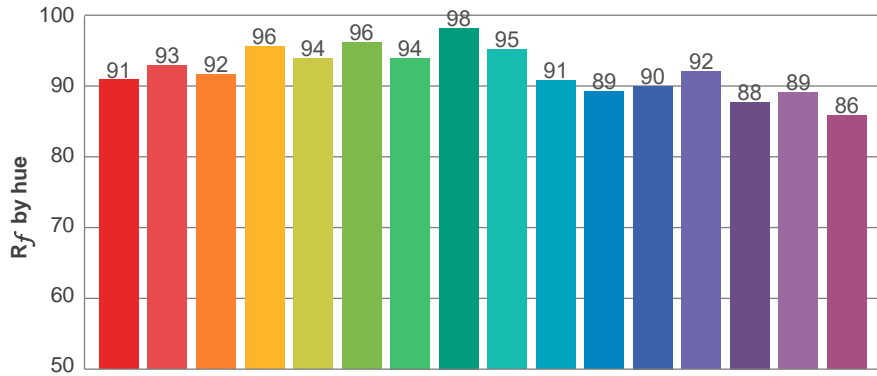
**$R_f$  92.2**  
Fidelity index  $R_f$

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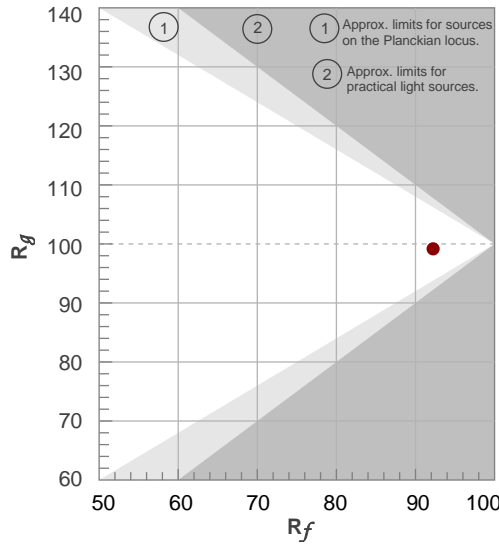
**$R_g$  99.2**  
Gammut index  $R_g$

TM30: 92.2

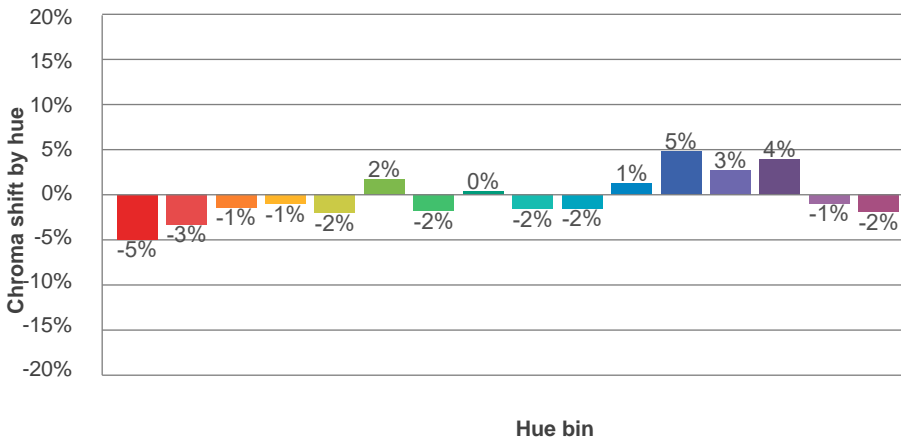
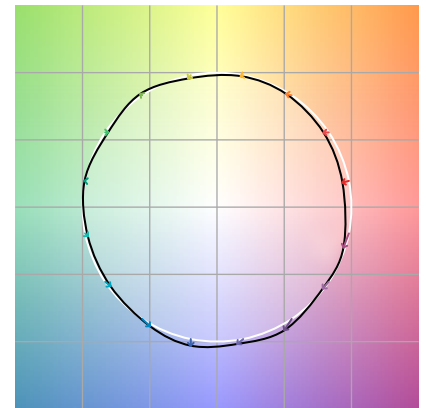
TM-30Color



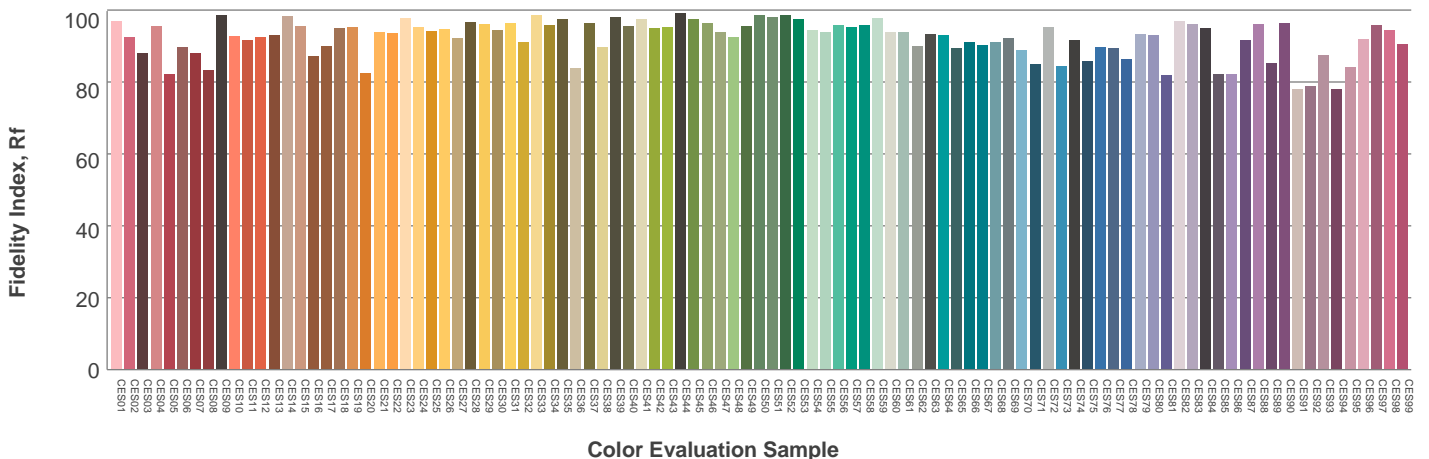
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	0%
2	93	-3%	2%
3	92	-1%	4%
4	96	-1%	2%
5	94	-2%	2%
6	96	2%	1%
7	94	-2%	-1%
8	98	0%	0%
9	95	-2%	2%
10	91	-2%	5%
11	89	1%	8%
12	90	5%	1%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-7%
16	86	-2%	-11%



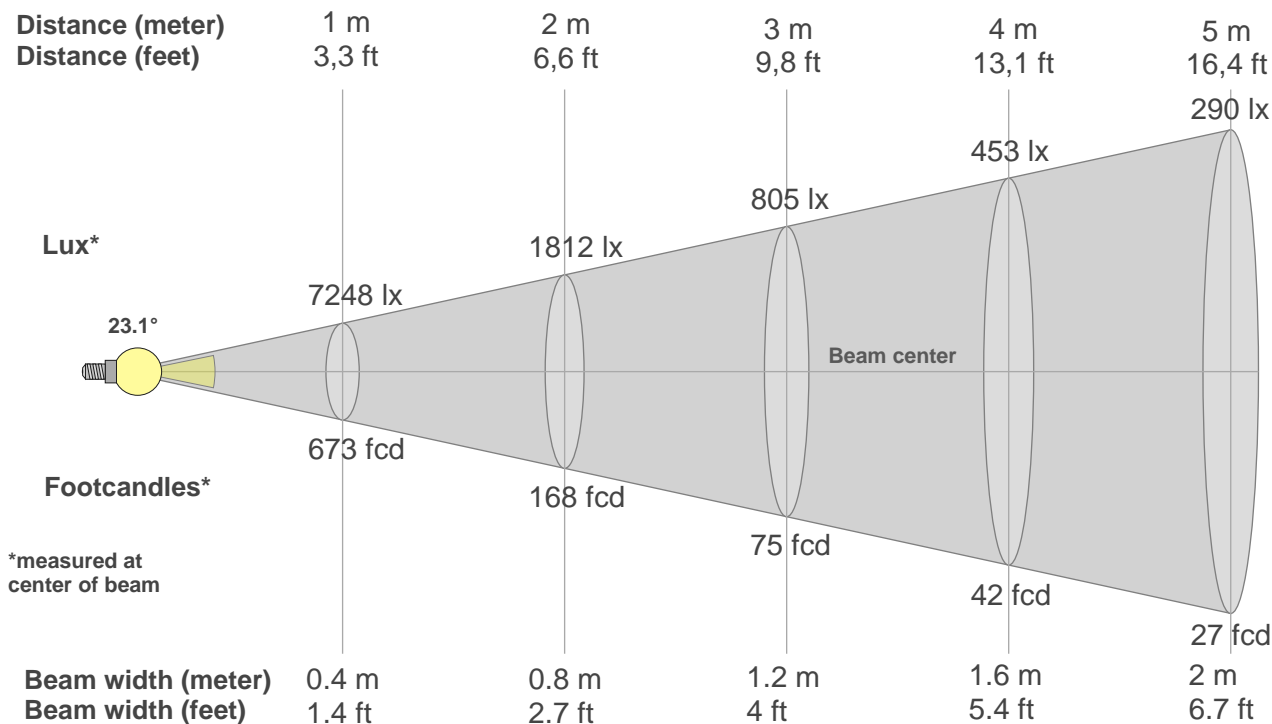
Color vector graphics



Color distortion



### Beam details



#### Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
7248lx	1812lx	805lx	453lx	290lx	201lx	148lx	113lx	89lx	72lx	60lx	50lx	43lx	37lx	32lx	28lx	25lx	22lx	20lx	18lx
673.3fcd	168.3fcd	74.8fcd	42.1fcd	26.9fcd	18.7fcd	13.7fcd	10.5fcd	8.3fcd	6.7fcd	5.6fcd	4.7fcd	4fcd	3.4fcd	3fcd	2.6fcd	2.3fcd	2.1fcd	1.9fcd	1.7fcd

#### Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7248	7211	7105	6999	6745	6469	6122	5702	5277	4807	4338	3881	3428	2999	2615	2231	1897	1565	1245	934
100%	99%	98%	97%	93%	89%	84%	79%	73%	66%	60%	54%	47%	41%	36%	31%	26%	22%	17%	13%

#### Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7248	7261	7133	6959	6740	6429	6119	5702	5279	4825	4347	3880	3461	3041	2675	2321	1983	1665	1348	1056
100%	100%	98%	96%	93%	89%	84%	79%	73%	67%	60%	54%	48%	42%	37%	32%	27%	23%	19%	15%

#### Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7248	7206	7125	6934	6744	6404	6062	5669	5243	4807	4338	3870	3442	3021	2631	2278	1926	1598	1269	969
100%	99%	98%	96%	93%	88%	84%	78%	72%	66%	60%	53%	47%	42%	36%	31%	27%	22%	18%	13%

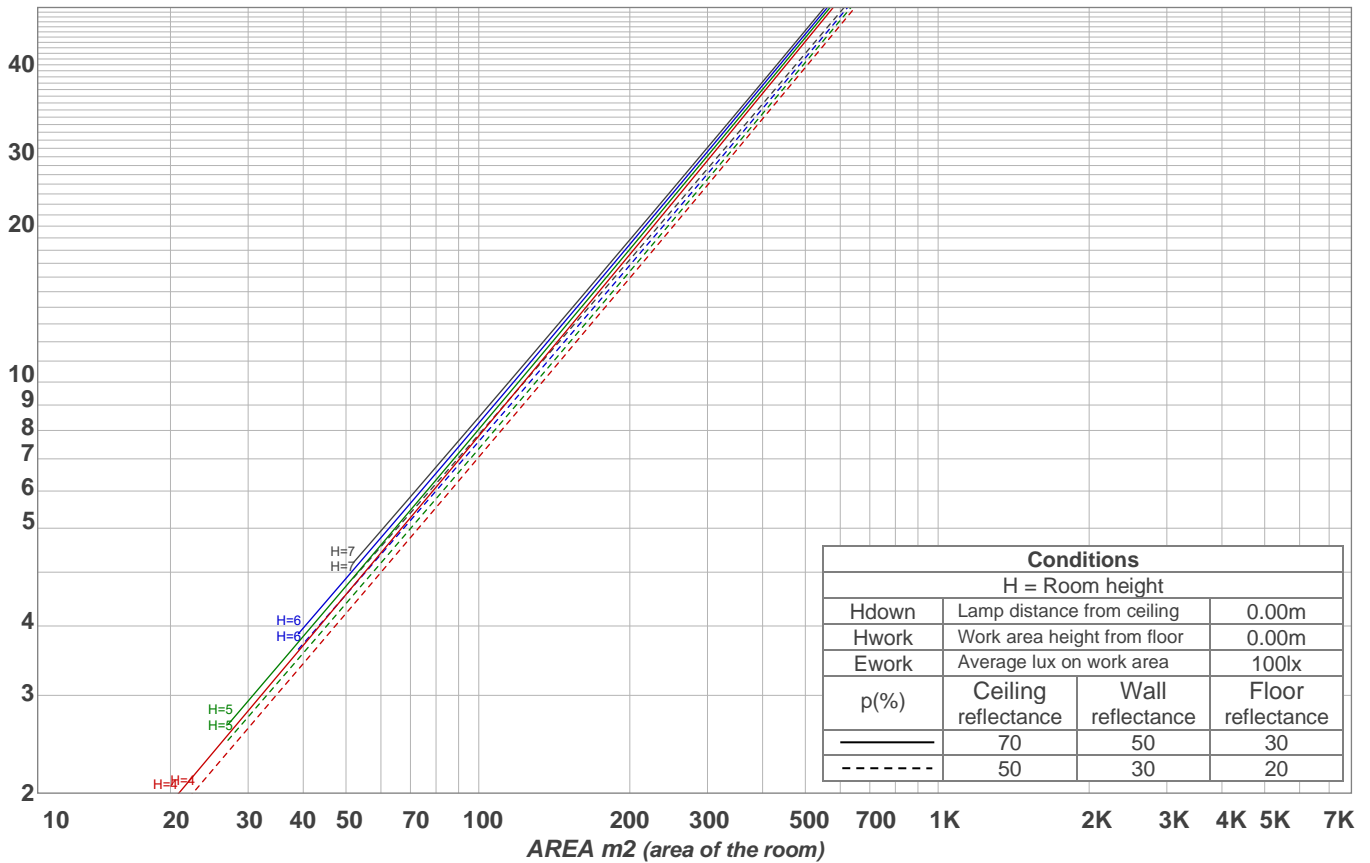
#### Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7248	7283	7176	7059	6834	6517	6182	5743	5303	4839	4368	3902	3444	2987	2597	2206	1843	1496	1160	857
100%	100%	99%	97%	94%	90%	85%	79%	73%	67%	60%	54%	48%	41%	36%	30%	25%	21%	16%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>23.1°</b>	<b>39.5°</b>	<b>44.8°</b>	<b>99.0%</b>	<b>98.7%</b>

LAMPS (number of lamps)  
50

### Light planning Luminaire budgetary diagram



### Luminaire budgetary diagram AREA m2 (area of the room) Coefficients of Utilization

Ceiling reflectance	80				70				50			30			10			0			
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio)																				
	Room Values are expressed as percentage of Lumens delivered to the task surface																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	
1	115	113	111	110	113	111	109	108	107	106	105	103	103	102	100	99	99	97	97	97	
2	112	109	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	95	95	95	
3	109	105	101	99	107	103	100	98	101	98	96	99	97	95	97	95	94	92	92	92	
4	106	101	98	95	105	100	97	94	98	96	93	96	94	92	95	93	91	90	90	90	
5	104	98	95	92	102	97	94	92	96	93	91	94	92	90	93	91	89	88	88	88	
6	101	96	92	89	100	95	91	89	94	91	88	92	90	88	91	89	87	86	86	86	
7	99	93	90	87	98	93	89	87	92	89	86	91	88	86	90	87	86	85	85	85	
8	97	91	87	85	96	91	87	85	90	87	84	89	86	84	88	86	84	83	83	83	
9	95	89	85	83	94	89	85	83	88	85	83	87	84	82	86	84	82	81	81	81	
10	93	87	84	81	92	87	83	81	86	83	81	86	83	81	85	82	81	80	80	80	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
548 lm	604 lm	55.4 lm	7.17 lm	2.54 lm	2.34 lm	3.10 lm	3.92 lm	4.95 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm