

Light efficiency:



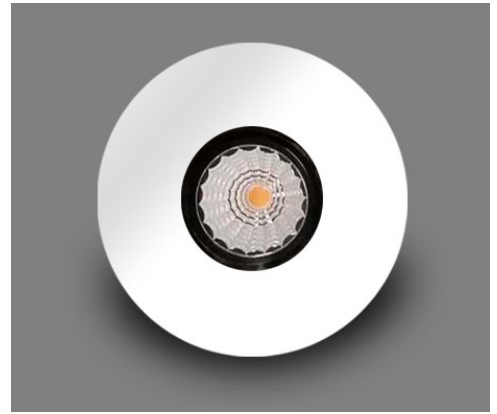
Output: 1389 lm

Light quality:

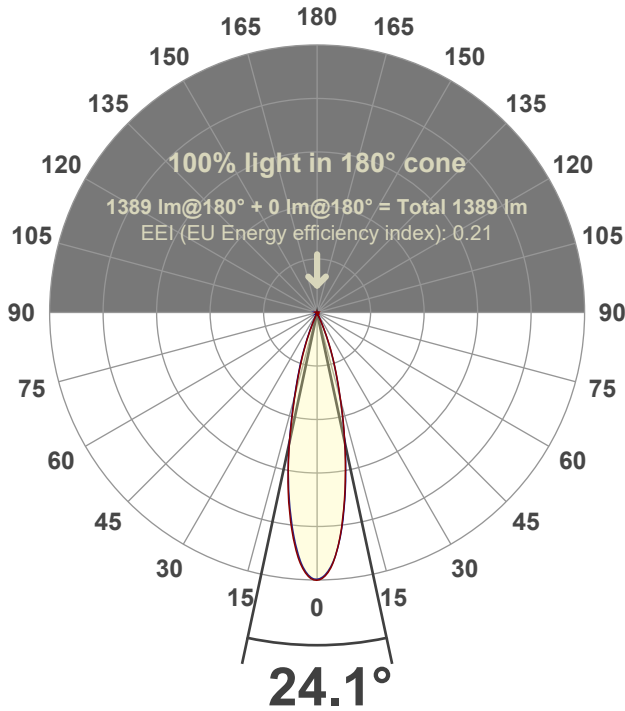


Peak: 7401 cd

Power: 20.8 W



Beam angle



Test number:

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

Luminaire Model:

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

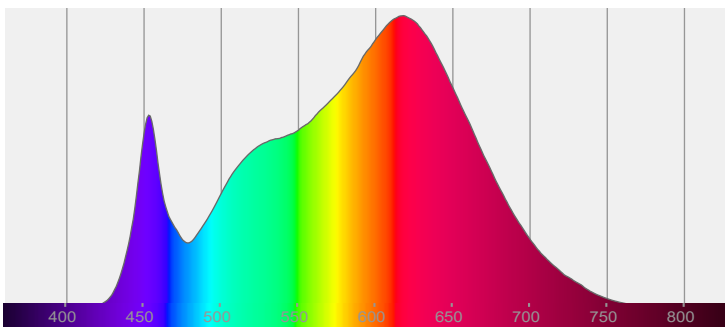
Date and time:

3/9/2022 2:25:15 PM

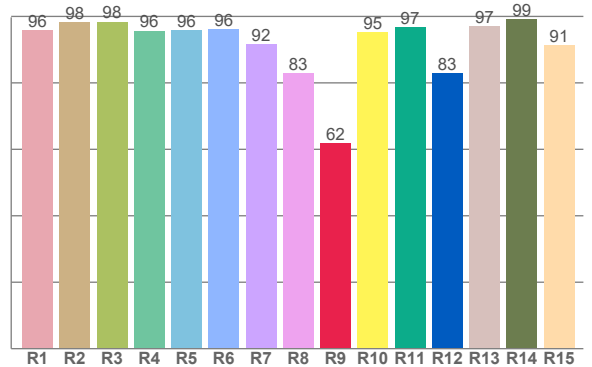
Delivered Lumens

1389

Spectra



CRI: 94.3 (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
	94.3	61.8	92.1	100.4	91.7	0.424	0.394	0.247	0.344	-0.0024

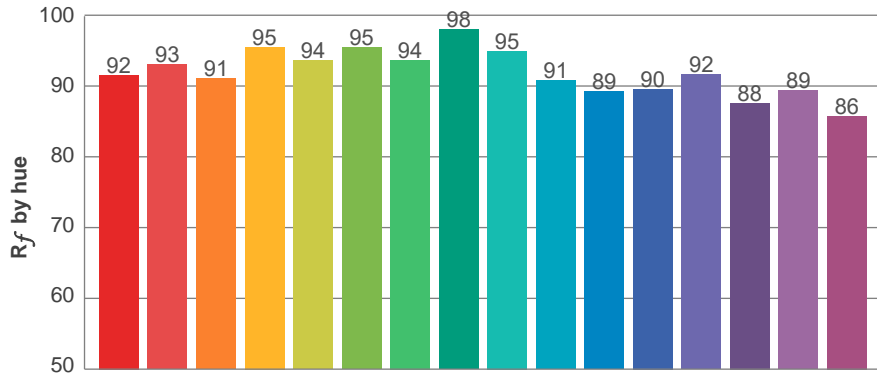
**$R_f$  92.1**  
Fidelity index  $R_f$

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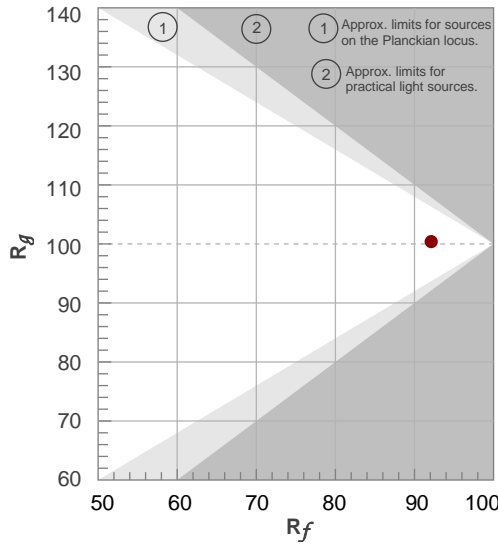
**$R_g$  100.4**  
Gammut index  $R_g$

TM30: 92.1

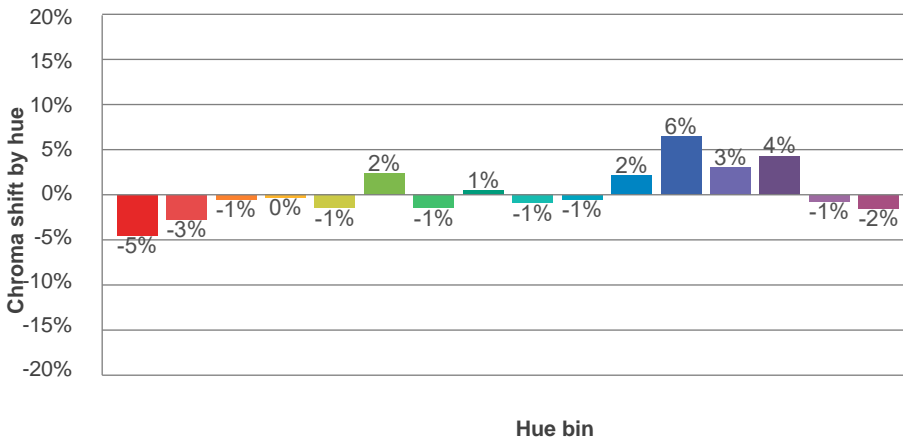
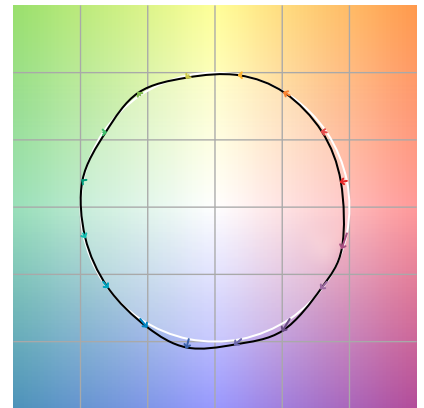
TM-30Color



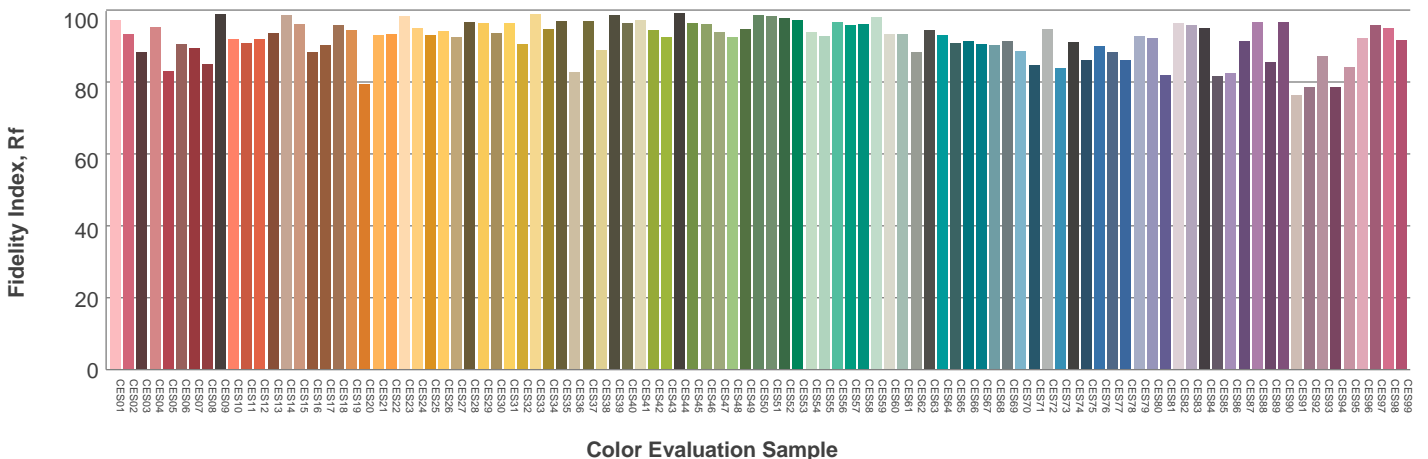
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-5%	0%
2	93	-3%	3%
3	91	-1%	4%
4	95	0%	2%
5	94	-1%	2%
6	95	2%	0%
7	94	-1%	-1%
8	98	1%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	90	6%	0%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-6%
16	86	-2%	-11%



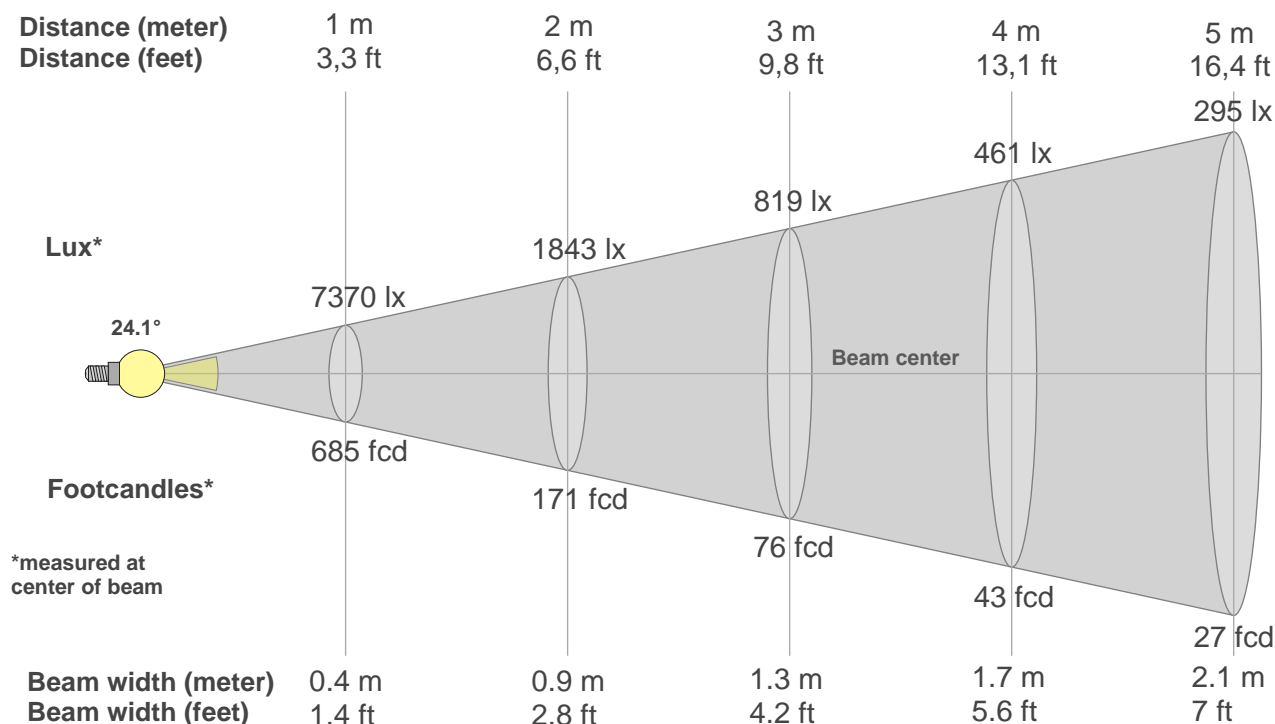
Color vector graphics



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
7370lx	1843lx	819lx	461lx	295lx	205lx	150lx	115lx	91lx	74lx	61lx	51lx	44lx	38lx	33lx	29lx	26lx	23lx	20lx	18lx
684.7fcd	171.2fcd	76.1fcd	42.8fcd	27.4fcd	19fcd	14fcd	10.7fcd	8.5fcd	6.8fcd	5.7fcd	4.8fcd	4.1fcd	3.5fcd	3fcd	2.7fcd	2.4fcd	2.1fcd	1.9fcd	1.7fcd

#### Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7370	7234	6837	6201	5384	4540	3718	2937	2210	1645	1162	716	331	65	24	14	12	10	10	8
100%	98%	93%	84%	73%	62%	50%	40%	30%	22%	16%	10%	4%	1%	0%	0%	0%	0%	0%	0%

#### Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7370	7222	6855	6204	5423	4584	3731	2881	2176	1596	1089	634	253	77	23	17	15	12	11	8
100%	98%	93%	84%	74%	62%	51%	39%	30%	22%	15%	9%	3%	1%	0%	0%	0%	0%	0%	0%

#### Intensities in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7370	7294	6928	6287	5521	4654	3720	2793	2059	1458	945	496	163	51	18	14	11	12	8	7
100%	99%	94%	85%	75%	63%	50%	38%	28%	20%	13%	7%	2%	1%	0%	0%	0%	0%	0%	0%

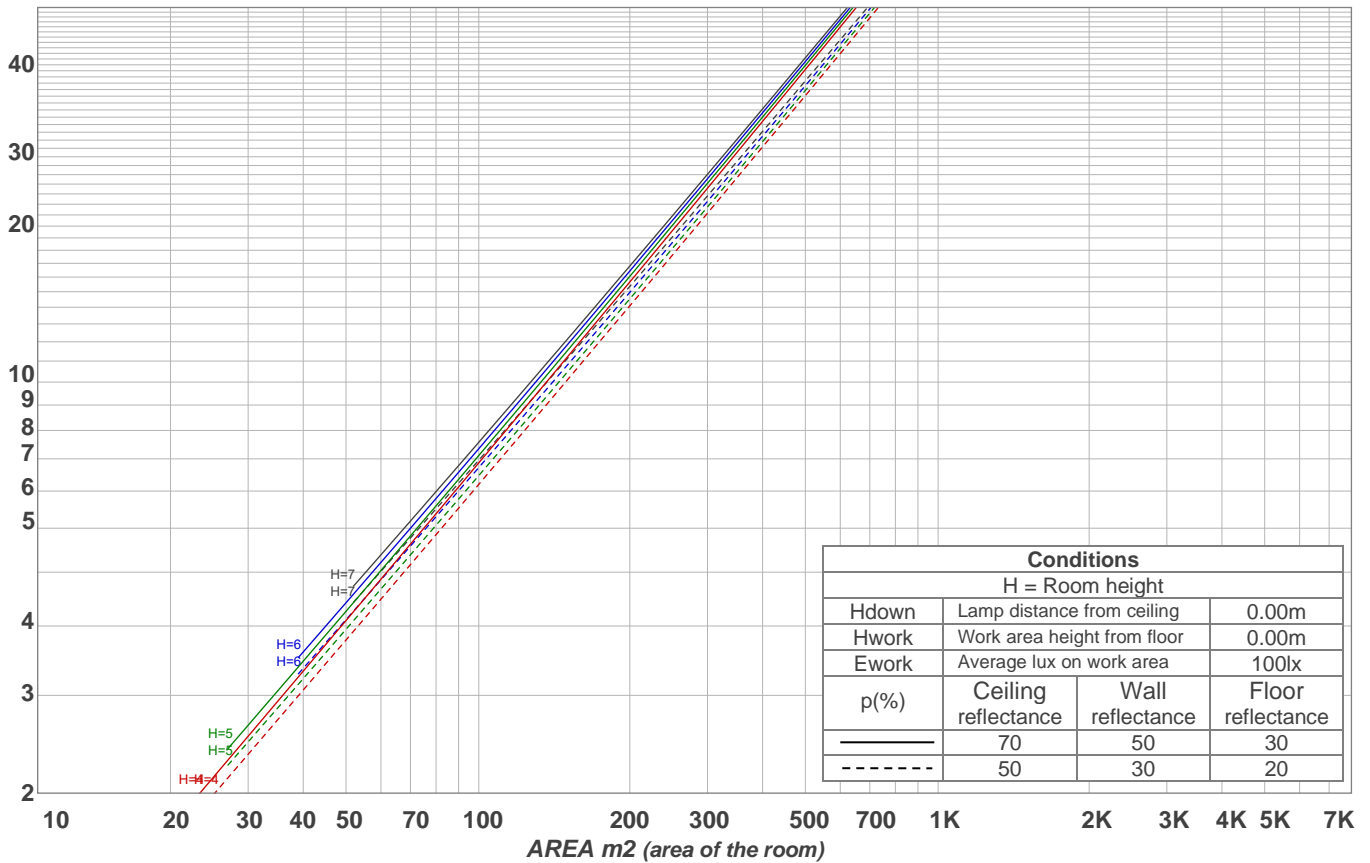
#### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7370	7230	6848	6223	5438	4608	3734	2863	2096	1529	1022	578	227	30	15	11	10	9	9	6
100%	98%	93%	84%	74%	63%	51%	39%	28%	21%	14%	8%	3%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>24.1°</b>	<b>42.7°</b>	<b>49°</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	0	
Floor reflectance	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	
1	115	113	111	109	113	111	109	108	107	106	104	103	102	101	100	99	98	97	
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94	
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89	
5	103	97	93	91	101	96	93	90	95	92	90	93	91	89	92	90	88	87	
6	100	94	91	88	99	94	90	88	93	89	87	91	89	87	90	88	86	85	
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83	
8	96	90	86	83	95	89	86	83	88	85	83	87	85	82	87	84	82	81	
9	93	87	84	81	93	87	83	81	86	83	81	85	83	81	85	82	80	79	
10	91	85	82	79	91	85	82	79	84	81	79	84	81	79	83	81	79	78	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
564 lm	685 lm	114 lm	6.10 lm	3.28 lm	3.23 lm	3.73 lm	4.58 lm	5.27 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