

Light efficiency:



Output: 1412 lm

Light quality:

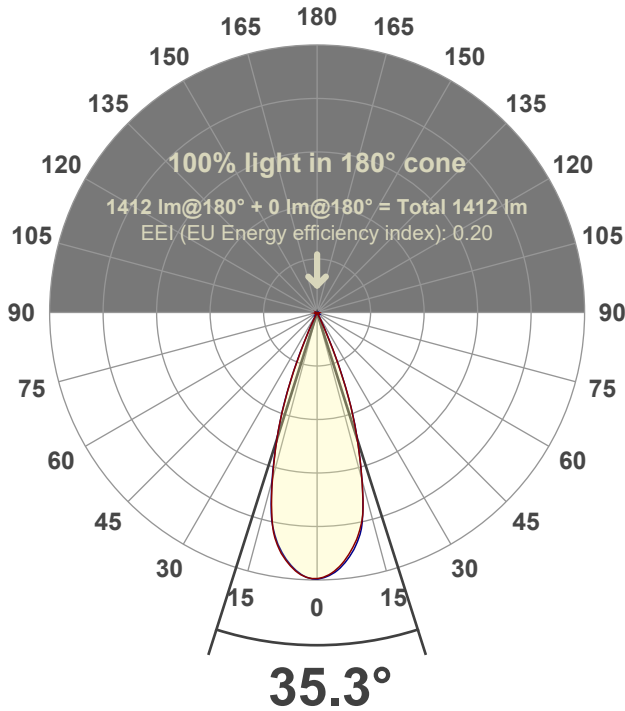


Peak: 4464 cd

Power: 20.8 W



Beam angle



Test number:

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

Luminaire Model:

Graffiti Flat Round Fixed Downlight-CZ20 30k 38° Optic

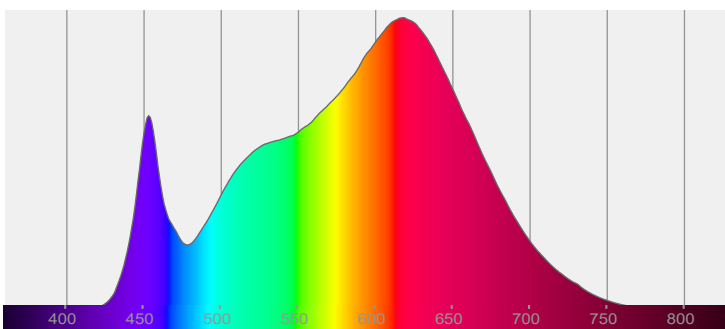
Date and time:

3/9/2022 3:27:56 PM

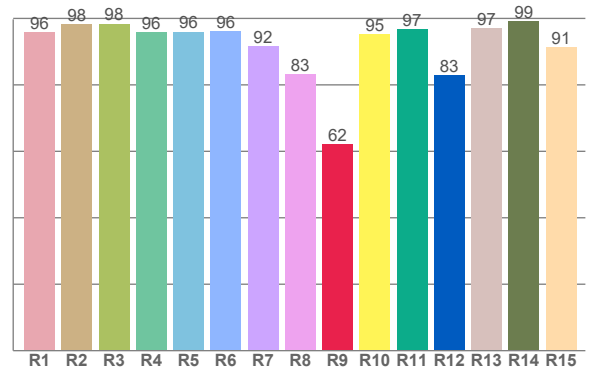
Delivered Lumens

1412

Spectra



CRI: 94.4 (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
	94.4	62.2	92.1	100.5	91.7	0.424	0.393	0.247	0.343	-0.0024

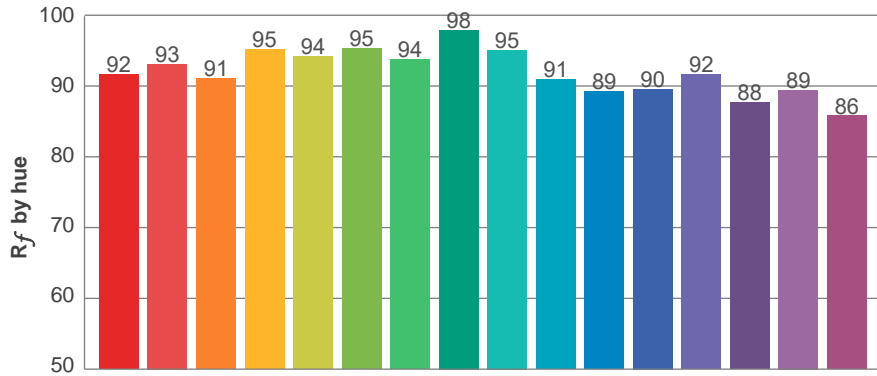
**$R_f$  92.1**  
Fidelity index  $R_f$

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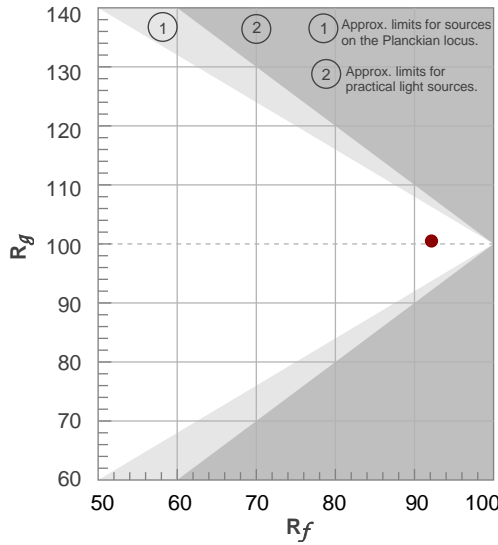
**$R_g$  100.5**  
Gammut index  $R_g$

TM30: 92.1

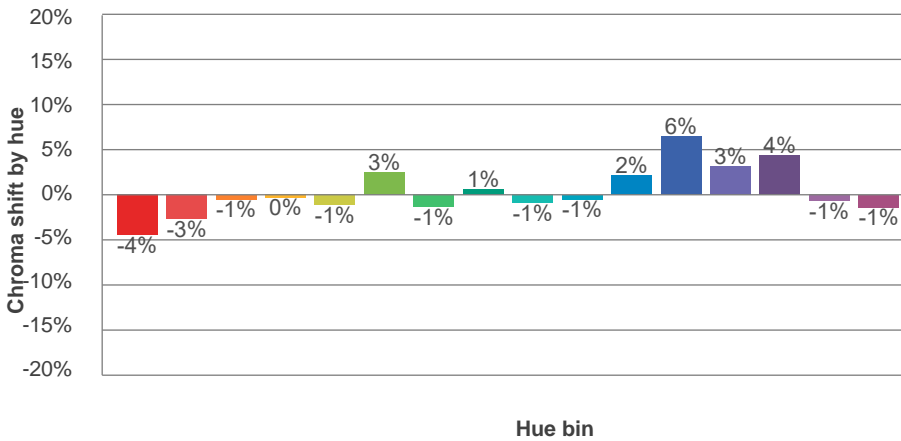
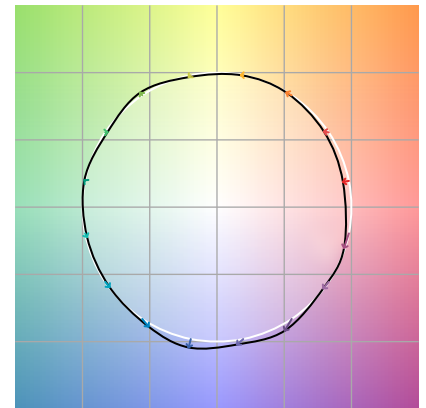
TM-30Color



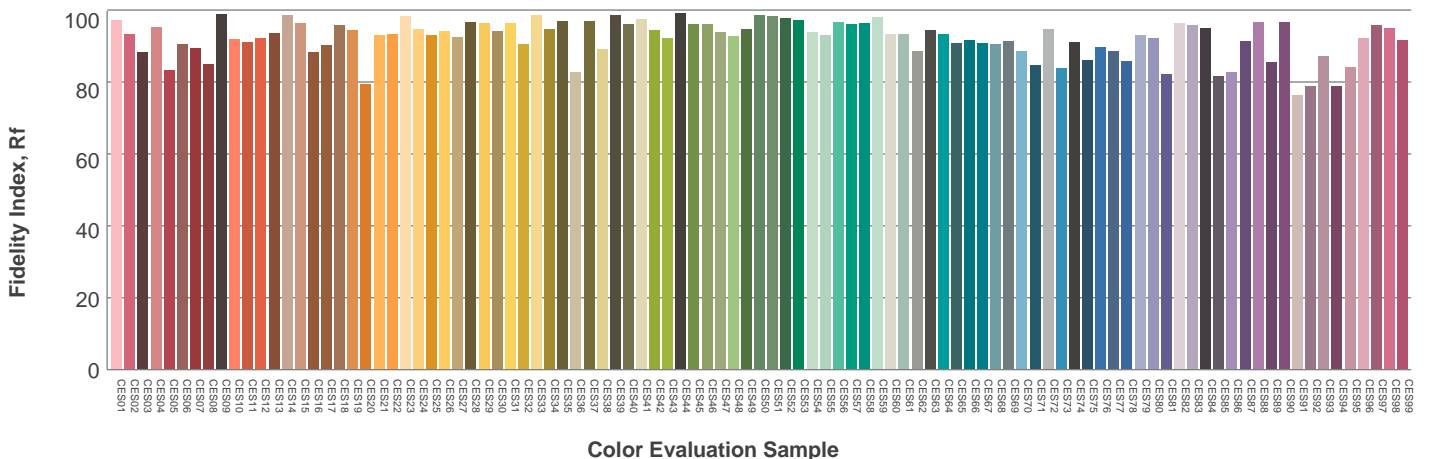
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	3%
3	91	-1%	4%
4	95	0%	2%
5	94	-1%	2%
6	95	3%	0%
7	94	-1%	-1%
8	98	1%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	90	6%	0%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-6%
16	86	-1%	-11%



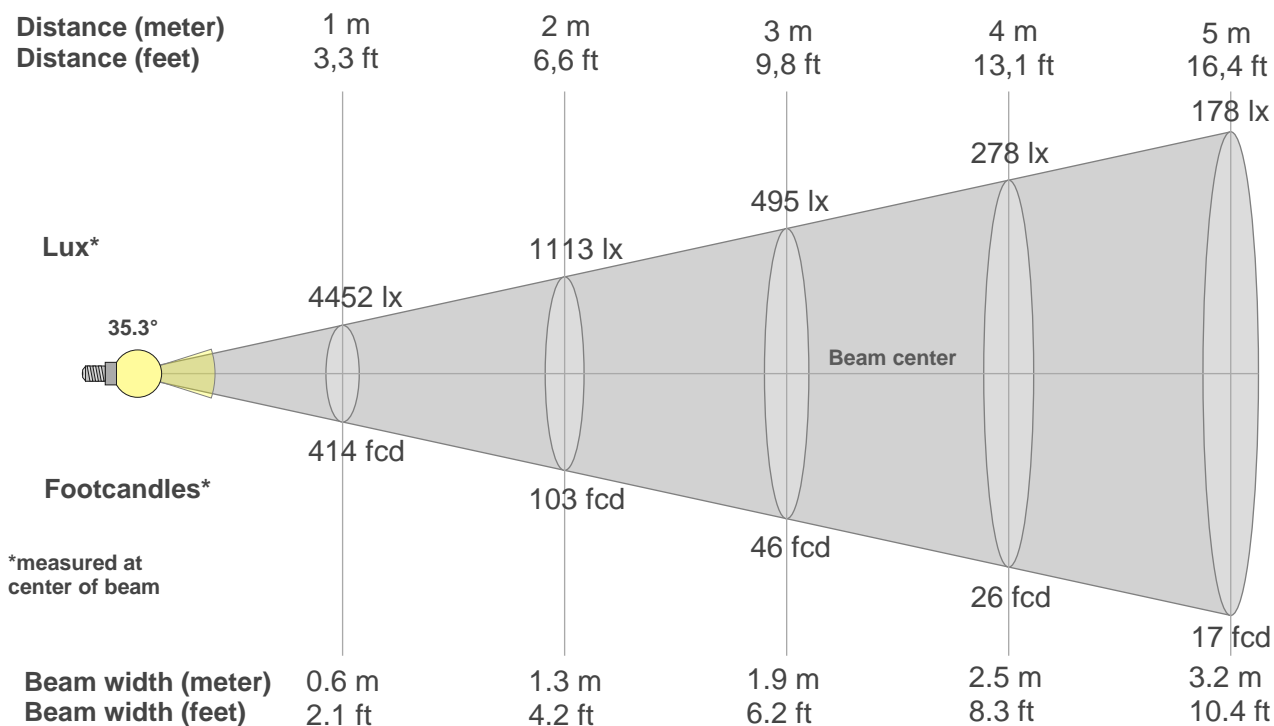
Color vector graphics



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
4452lx	1113lx	495lx	278lx	178lx	124lx	91lx	70lx	55lx	45lx	37lx	31lx	26lx	23lx	20lx	17lx	15lx	14lx	12lx	11lx
413.6fcd	103.4fcd	46fcd	25.9fcd	16.5fcd	11.5fcd	8.4fcd	6.5fcd	5.1fcd	4.1fcd	3.4fcd	2.9fcd	2.4fcd	2.1fcd	1.8fcd	1.6fcd	1.4fcd	1.3fcd	1.1fcd	1fcd

#### 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°
4452	4407	4324	4200	4037	3837	3568	3166	2652	2132	1619	1054	547	200	60	21	11	8	6	6
100%	99%	97%	94%	91%	86%	80%	71%	60%	48%	36%	24%	12%	4%	1%	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°
4452	4427	4351	4234	4081	3884	3621	3161	2650	2141	1616	1053	529	230	88	33	13	9	8	6
100%	99%	98%	95%	92%	87%	81%	71%	60%	48%	36%	24%	12%	5%	2%	1%	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°
4452	4440	4378	4262	4108	3899	3599	3155	2640	2135	1601	1043	513	199	77	29	12	8	6	4
100%	100%	98%	96%	92%	88%	81%	71%	59%	48%	36%	23%	12%	4%	2%	1%	0%	0%	0%	0%

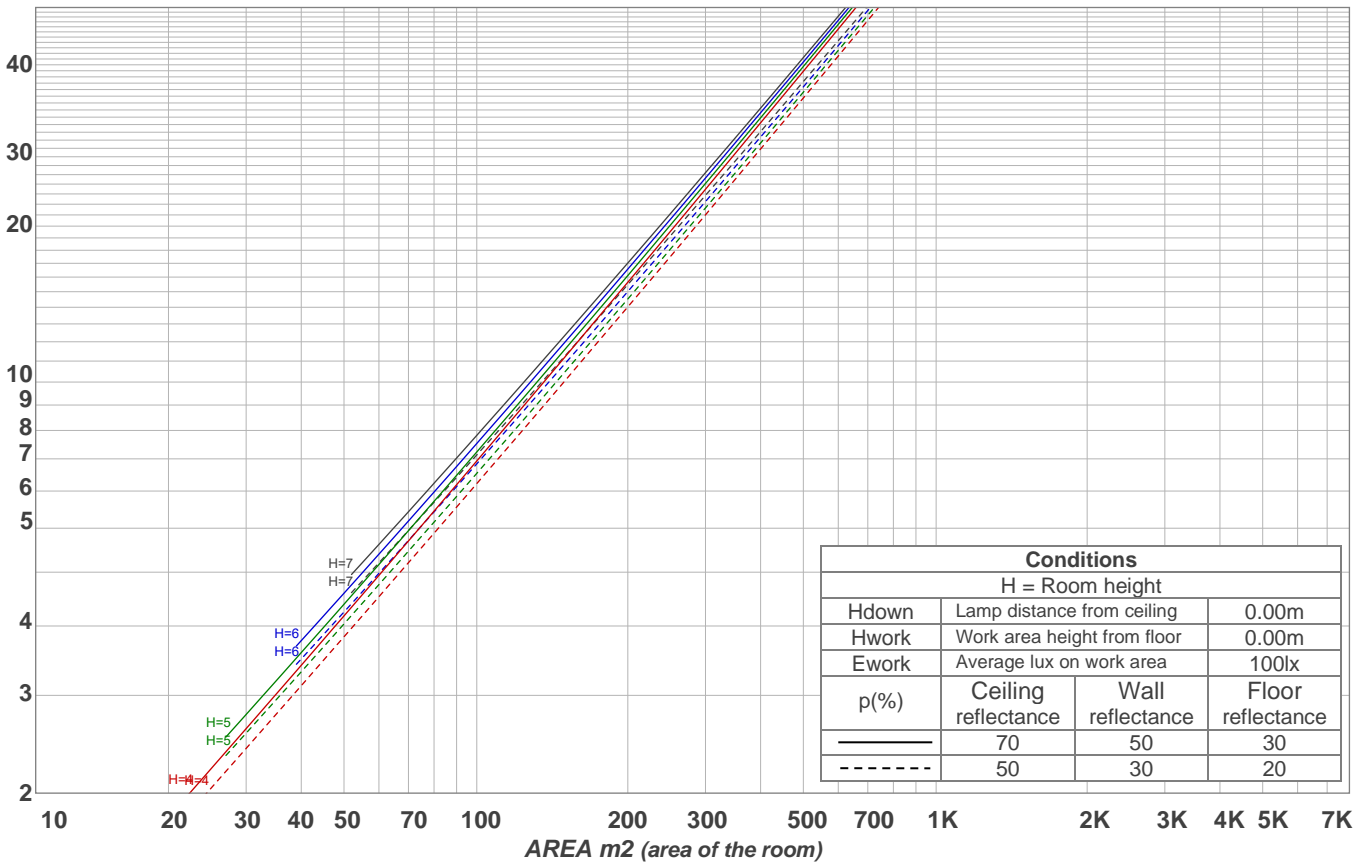
#### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
4452	4434	4360	4243	4087	3885	3596	3169	2663	2137	1616	1035	526	199	55	18	11	8	8	7
100%	100%	98%	95%	92%	87%	81%	71%	60%	48%	36%	23%	12%	4%	1%	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
35.3°	48.8°	54.4°	99.1%	98.9%

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
<b>RCR</b>	<b>(RCR: Room Cavity Ratio)</b>																				
	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	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96	96	96	
2	111	107	104	102	109	106	103	100	102	100	98	100	98	96	97	96	94	93	93	93	
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	94	93	91	90	90	90	
4	104	99	95	92	102	98	94	91	96	92	90	94	91	89	92	90	88	87	87	87	
5	101	95	91	88	100	94	90	87	92	89	87	91	88	86	90	87	85	84	84	84	
6	98	92	87	84	97	91	87	84	90	86	84	88	85	83	87	85	83	81	81	81	
7	95	89	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79	79	79	
8	92	86	82	79	91	85	81	79	84	81	78	83	80	78	83	80	78	77	77	77	
9	90	83	79	76	89	83	79	76	82	78	76	81	78	76	80	78	75	74	74	74	
10	87	81	77	74	87	80	76	74	80	76	74	79	76	74	78	75	73	72	72	72	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
397 lm	776 lm	217 lm	5.39 lm	2.53 lm	2.35 lm	2.82 lm	4.12 lm	4.86 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