

Light efficiency:



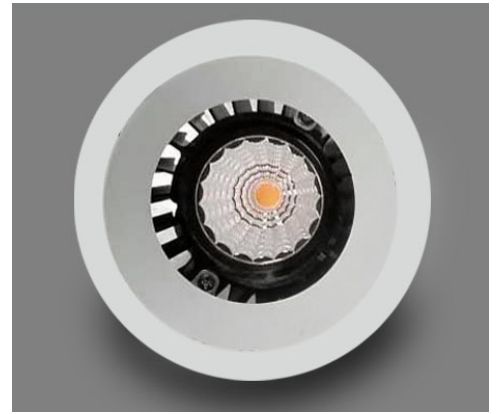
Output: 1929 lm

Light quality:

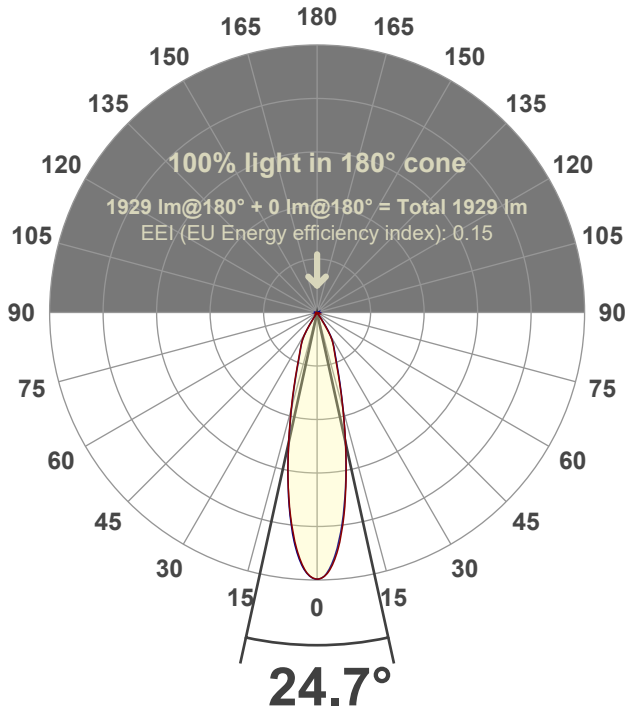


Peak: 7146 cd

Power: 20.7 W



Beam angle



Test number:

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

Luminaire Model:

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

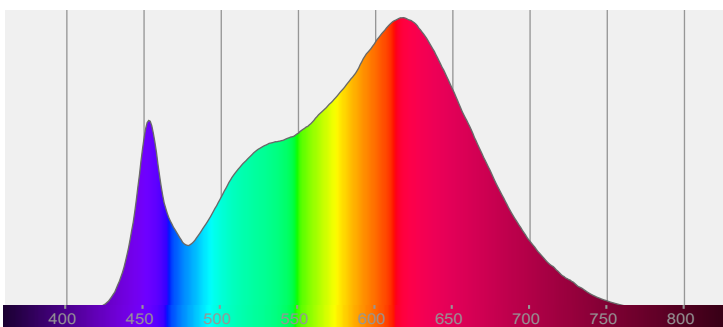
Date and time:

3/2/2022 11:11:12 PM

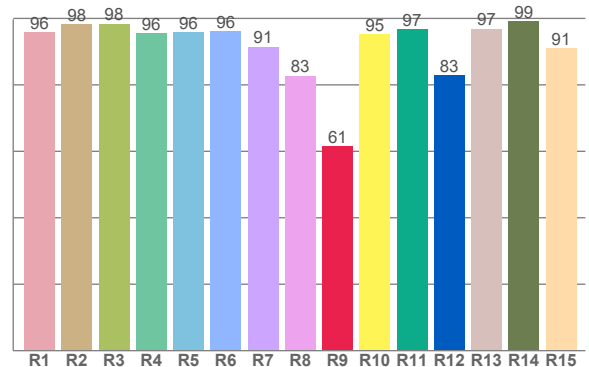
Delivered Lumens

1929

Spectra



CRI: 94.2 (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
	94.2	61.4	92.0	100.3	91.6	0.425	0.394	0.247	0.344	-0.0024

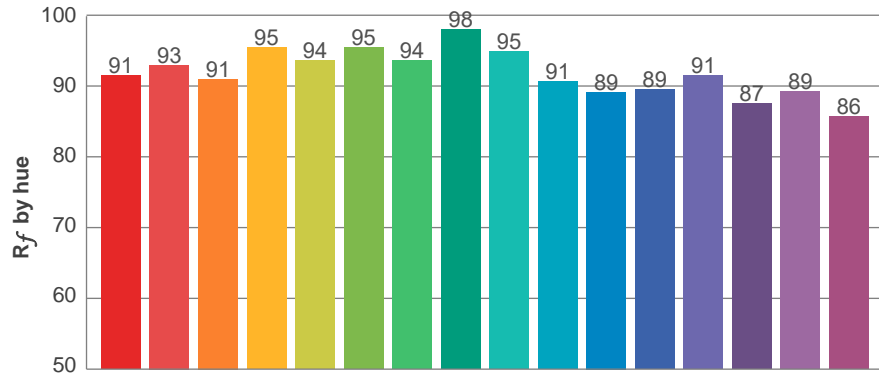
**$R_f$  92.0**  
Fidelity index  $R_f$

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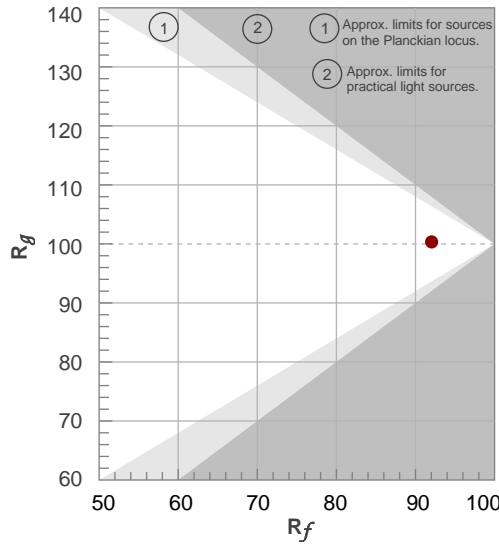
**$R_g$  100.3**  
Gammut index  $R_g$

TM30: 92.0

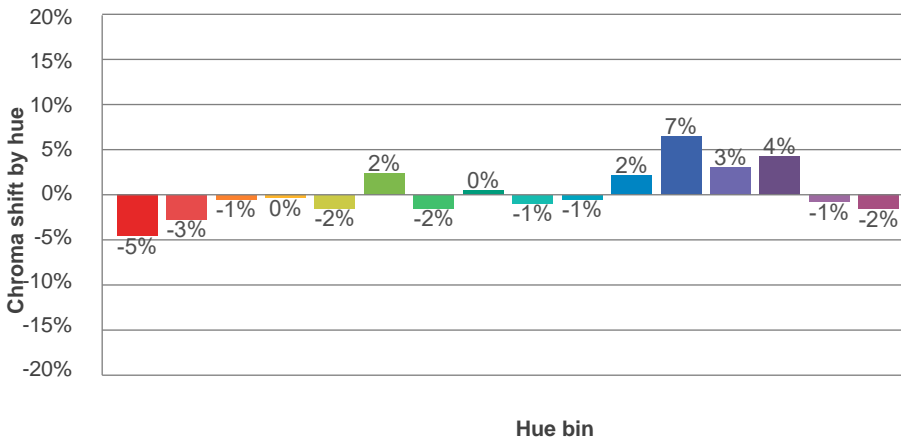
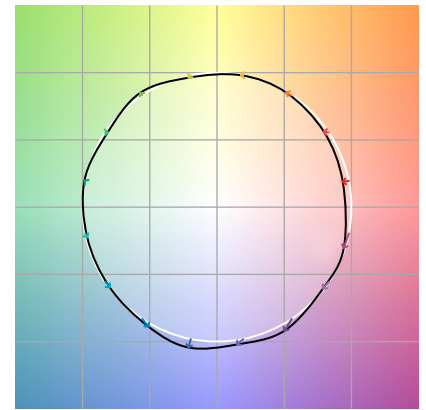
TM-30Color



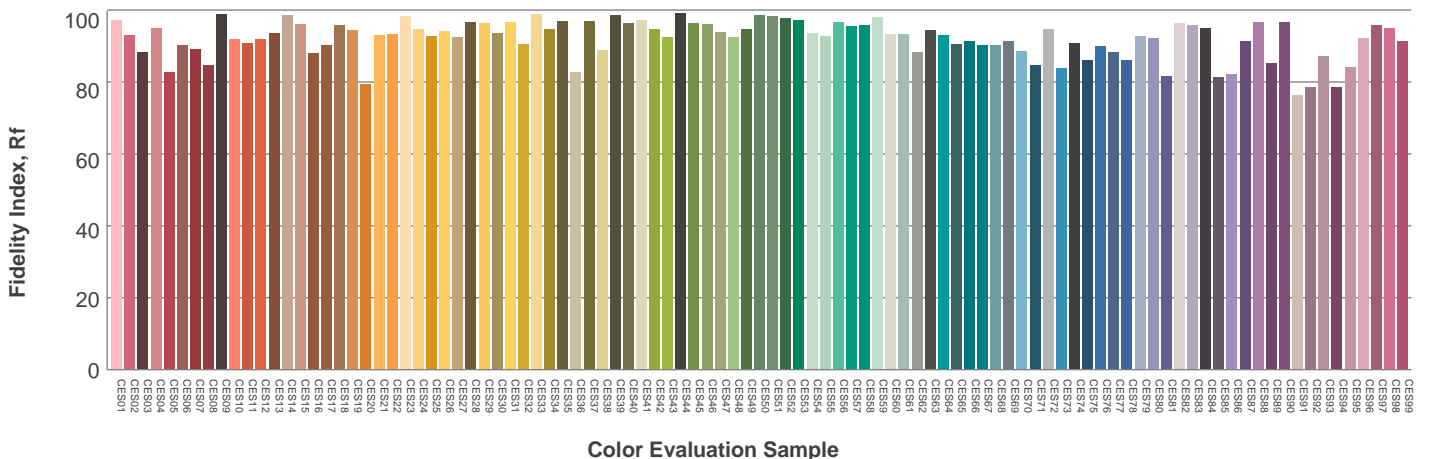
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	0%
2	93	-3%	3%
3	91	-1%	4%
4	95	0%	2%
5	94	-2%	2%
6	95	2%	0%
7	94	-2%	-1%
8	98	0%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	89	7%	0%
13	91	3%	-5%
14	87	4%	-9%
15	89	-1%	-6%
16	86	-2%	-11%



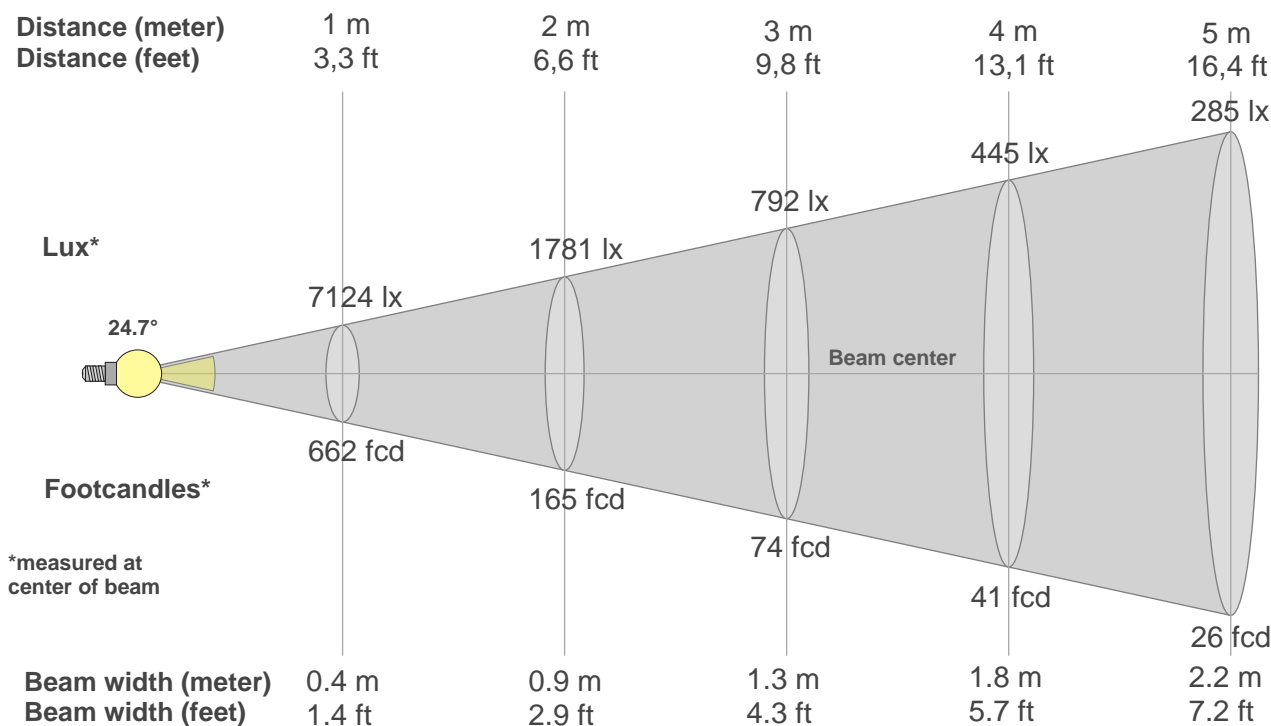
Color vector graphics



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
7124lx	1781lx	792lx	445lx	285lx	198lx	145lx	111lx	88lx	71lx	59lx	49lx	42lx	36lx	32lx	28lx	25lx	22lx	20lx	18lx
661.9fcd	165.5fcd	73.5fcd	41.4fcd	26.5fcd	18.4fcd	13.5fcd	10.3fcd	8.2fcd	6.6fcd	5.5fcd	4.6fcd	3.9fcd	3.4fcd	2.9fcd	2.6fcd	2.3fcd	2fcd	1.8fcd	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°
7124	6997	6617	6037	5307	4489	3716	3023	2433	1953	1584	1336	1153	1009	875	713	458	212	57	15
100%	98%	93%	85%	74%	63%	52%	42%	34%	27%	22%	19%	16%	14%	12%	10%	6%	3%	1%	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°
7124	6995	6572	5949	5225	4455	3691	3006	2455	2004	1644	1370	1181	1035	894	736	540	273	90	15
100%	98%	92%	84%	73%	63%	52%	42%	34%	28%	23%	19%	17%	15%	13%	10%	8%	4%	1%	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°
7124	6986	6583	5998	5287	4507	3719	3027	2442	1963	1588	1334	1144	992	852	698	432	190	49	12
100%	98%	92%	84%	74%	63%	52%	42%	34%	28%	22%	19%	16%	14%	12%	10%	6%	3%	1%	0%

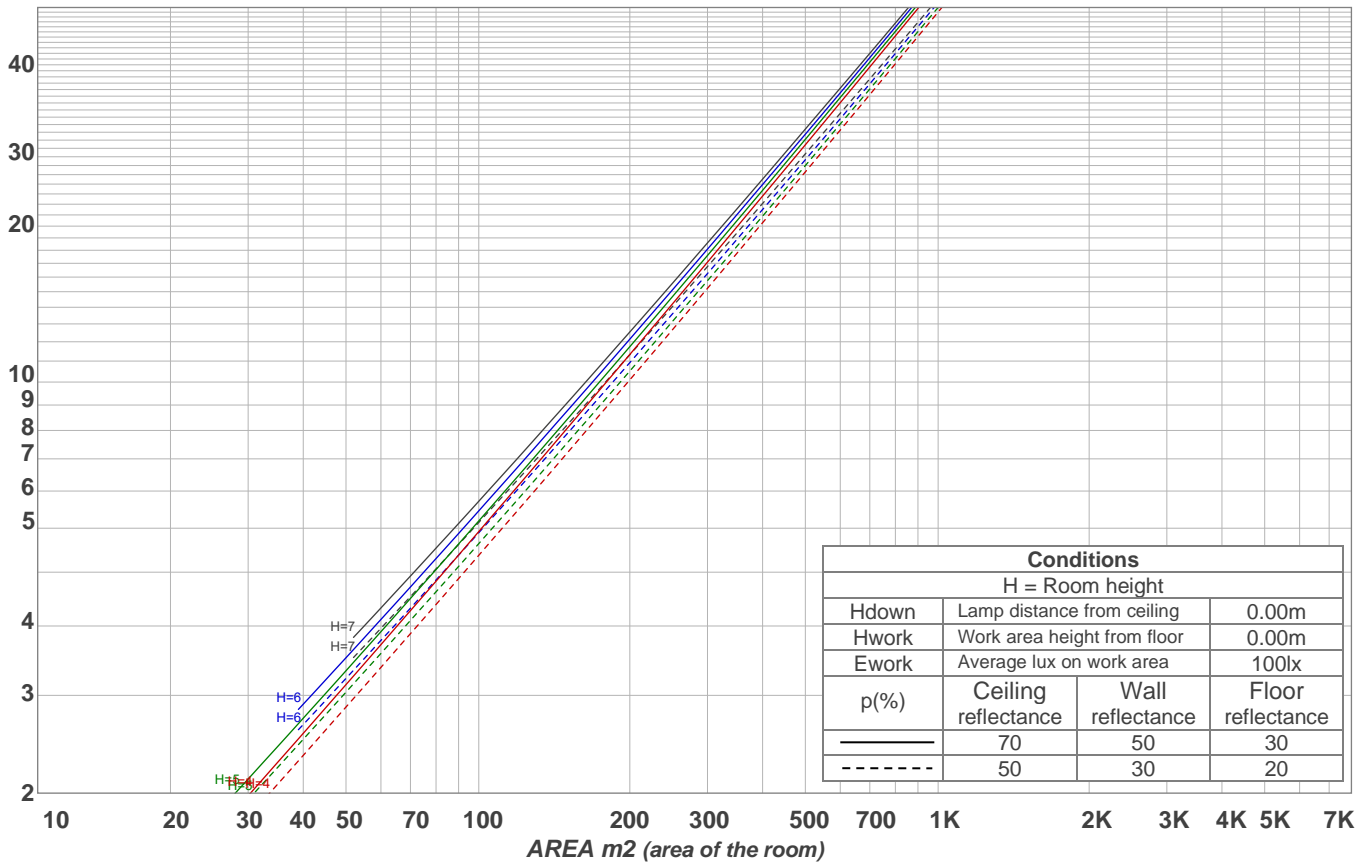
### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7124	6981	6631	6075	5329	4510	3709	2983	2376	1907	1554	1297	1114	977	839	628	371	144	20	14
100%	98%	93%	85%	75%	63%	52%	42%	33%	27%	22%	18%	16%	14%	12%	9%	5%	2%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
24.7°	59.6°	68.4°	99.5%	99.3%

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	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	100	
1	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96	96	96	96	
2	110	106	103	101	108	105	102	99	102	99	97	99	97	95	96	95	93	92	92	92	92	
3	106	101	97	94	105	100	96	94	98	95	92	95	93	91	93	91	89	88	88	88	88	
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	85	85	85	85	
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	82	81	81	81	81	
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	85	82	79	78	78	78	78	
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	77	75	75	75	75	
8	90	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73	73	73	73	
9	87	80	75	72	86	79	75	72	78	74	72	78	74	72	77	74	71	70	70	70	70	
10	84	77	72	70	83	77	72	69	76	72	69	75	72	69	75	71	69	68	68	68	68	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
543 lm	753 lm	495 lm	122 lm	3.26 lm	2.63 lm	2.49 lm	3.45 lm	4.10 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