

Light efficiency:



Output: 1709 lm

Light quality:

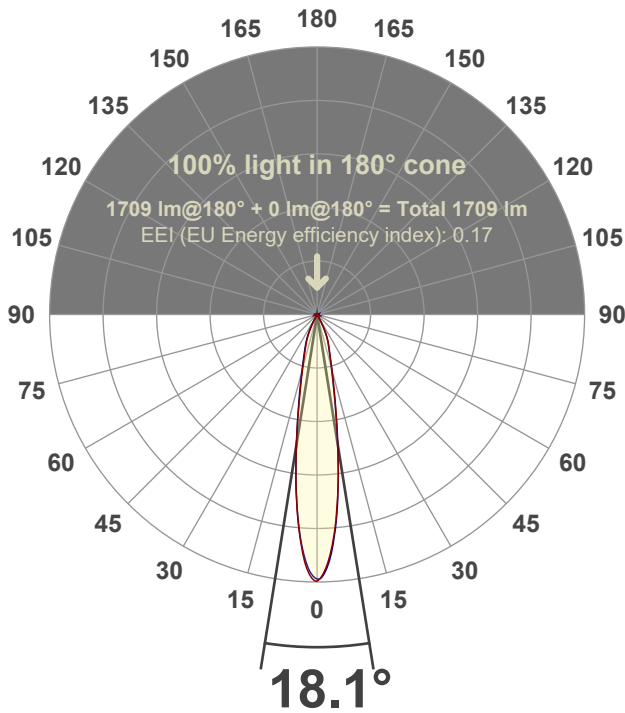


Peak: 10502 cd

Power: 20.8 W



Beam angle



Test number:

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

Luminaire Model:

Graffiti Regress Round Fixed Downlight-CZ20 30k 15° Optic

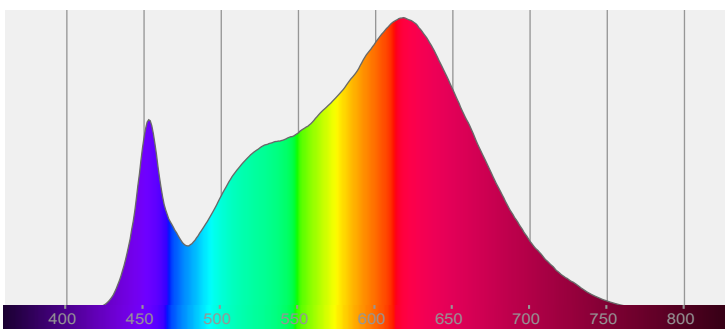
Date and time:

3/9/2022 5:10:34 PM

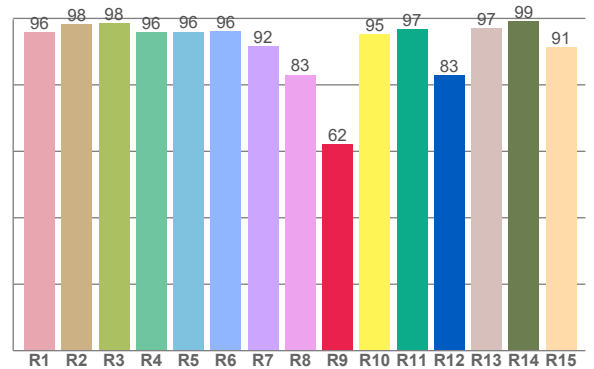
Delivered Lumens

1709

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	62.1	92.2	100.4	91.7	0.425	0.394	0.247	0.344	-0.0023

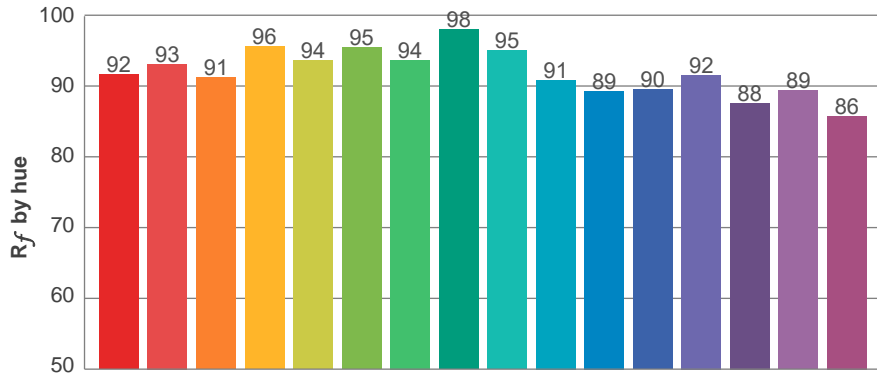
**$R_f$  92.2**  
Fidelity index  $R_f$

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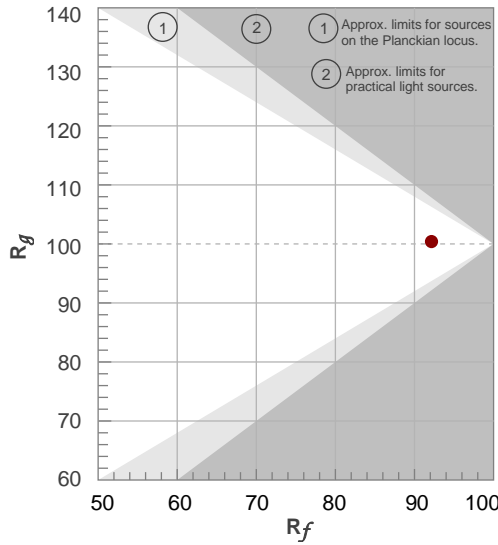
**$R_g$  100.4**  
Gammut index  $R_g$

TM30: 92.2

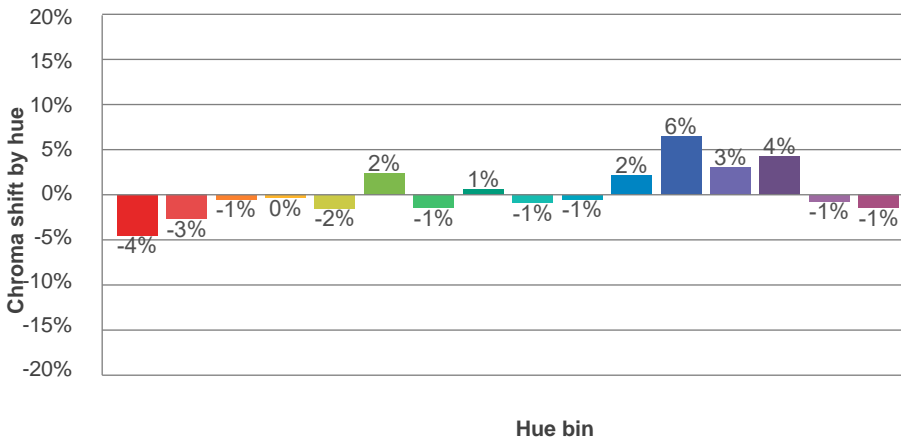
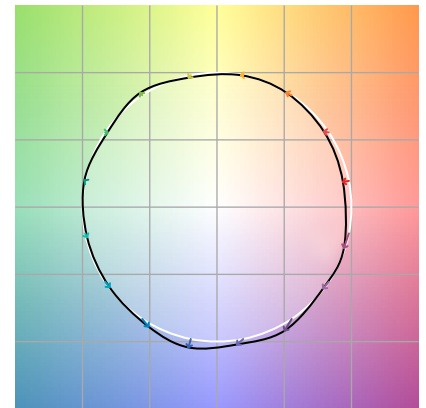
TM-30Color



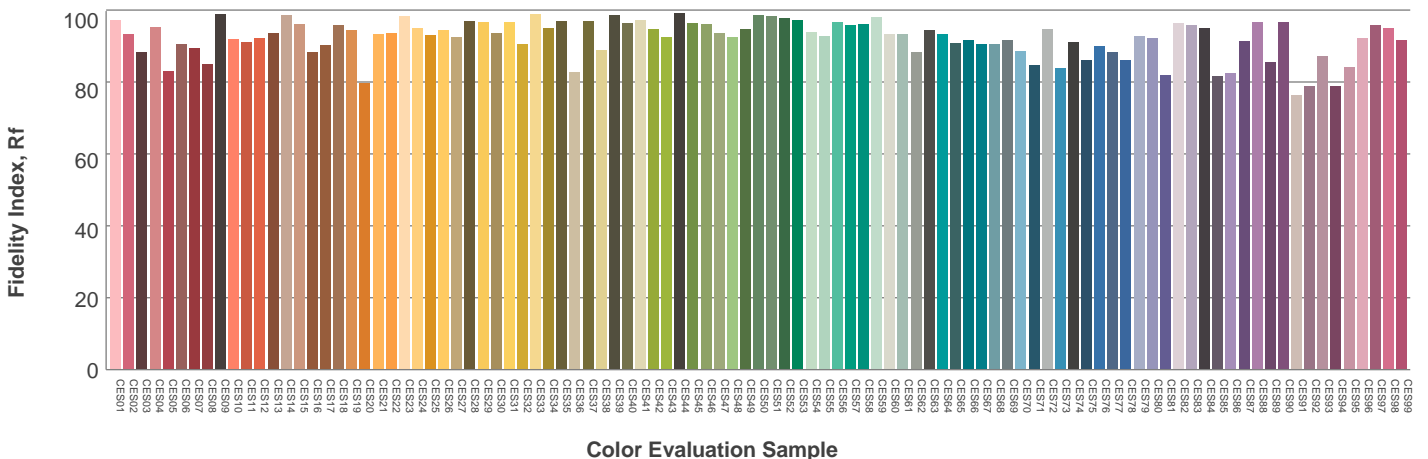
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	3%
3	91	-1%	4%
4	96	0%	2%
5	94	-2%	2%
6	95	2%	0%
7	94	-1%	-1%
8	98	1%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	90	6%	0%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-6%
16	86	-1%	-11%



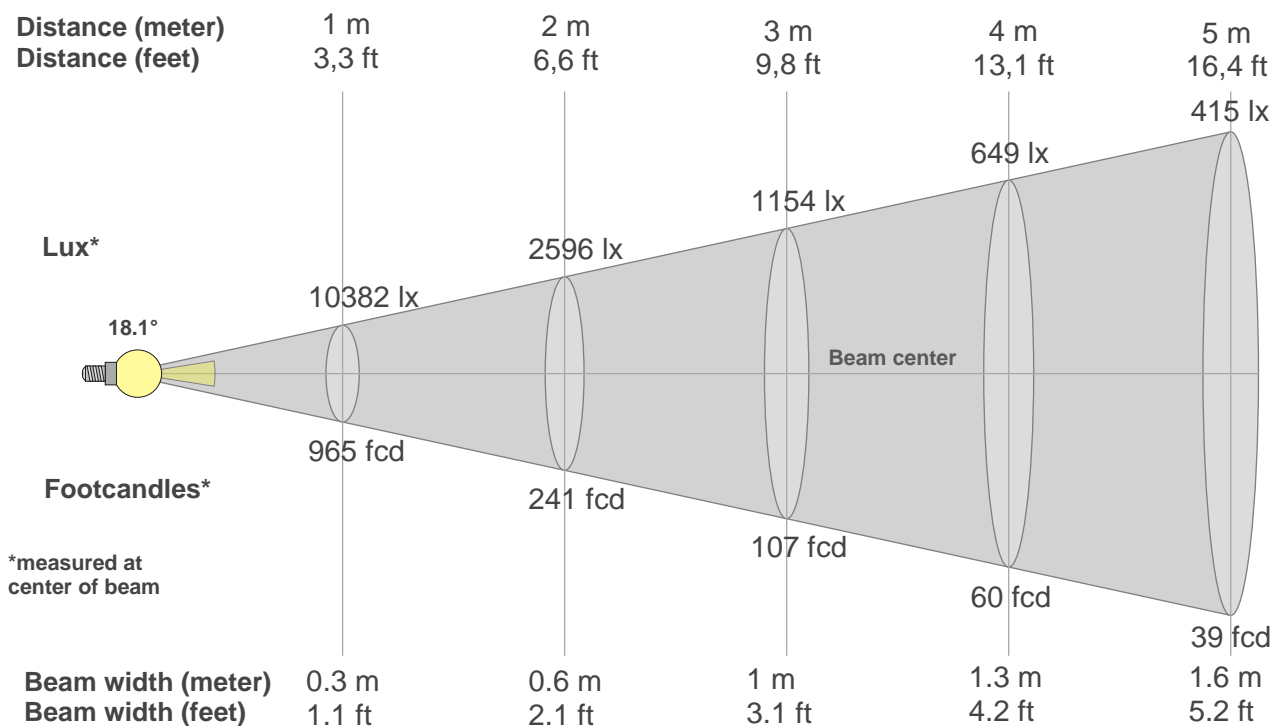
Color vector graphics



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
10382lx	2596lx	1154lx	649lx	415lx	288lx	212lx	162lx	128lx	104lx	86lx	72lx	61lx	53lx	46lx	41lx	36lx	32lx	29lx	26lx
964.6fcd	241.1fcd	107.2fcd	60.3fcd	38.6fcd	26.8fcd	19.7fcd	15.1fcd	11.9fcd	9.6fcd	8fcd	6.7fcd	5.7fcd	4.9fcd	4.3fcd	3.8fcd	3.3fcd	3fcd	2.7fcd	2.4fcd

#### 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°
10.4K	9.9K	8.9K	7.5K	6.0K	4.6K	3.4K	2.6K	2.1K	1.7K	1.4K	1.2K	1.0K	0.7K	0.5K	0.2K	0.1K	0.0K	0.0K	0.0K
100%	96%	86%	73%	58%	44%	33%	25%	20%	16%	13%	11%	9%	7%	4%	2%	1%	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°
10.4K	10.0K	9.0K	7.6K	6.0K	4.5K	3.3K	2.5K	2.0K	1.6K	1.3K	1.1K	0.9K	0.6K	0.4K	0.2K	0.1K	0.0K	0.0K	0.0K
100%	96%	87%	73%	58%	43%	32%	24%	19%	15%	13%	11%	9%	6%	4%	2%	1%	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°
10.4K	10.0K	9.0K	7.6K	6.0K	4.5K	3.4K	2.6K	2.0K	1.6K	1.3K	1.1K	0.8K	0.6K	0.4K	0.2K	0.0K	0.0K	0.0K	0.0K
100%	97%	87%	73%	58%	44%	32%	25%	19%	15%	13%	10%	8%	6%	3%	2%	0%	0%	0%	0%

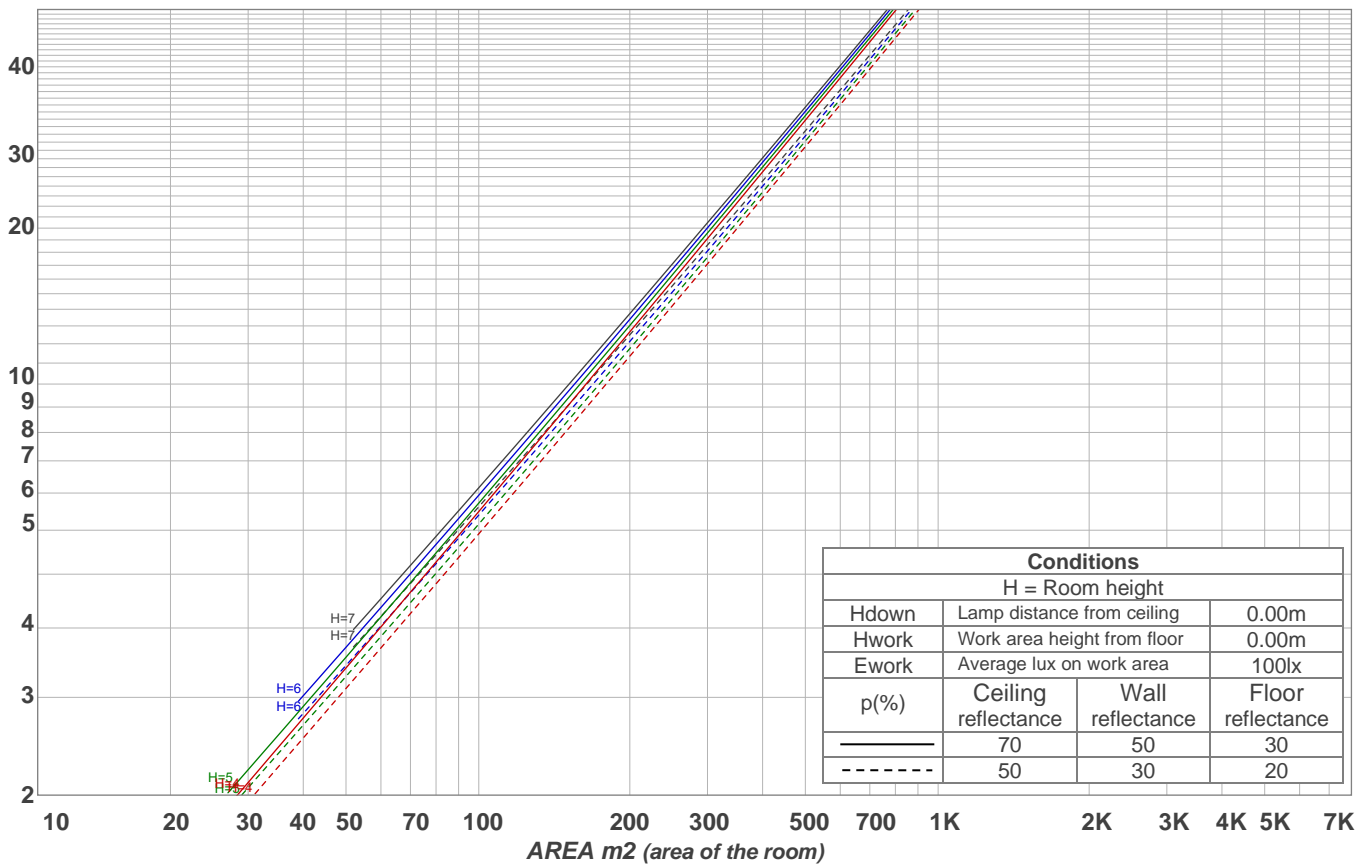
#### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
10.4K	10.0K	9.0K	7.6K	6.0K	4.6K	3.5K	2.6K	2.1K	1.7K	1.4K	1.2K	0.9K	0.7K	0.4K	0.2K	0.1K	0.0K	0.0K	0.0K
100%	96%	86%	73%	58%	44%	33%	25%	20%	16%	14%	11%	9%	6%	4%	2%	1%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18.1°	45.6°	58.7°	99.1%	98.8%

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	109	113	111	109	107	107	105	104	103	102	101	100	99	98	98	96	96	
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	95	93	93	
3	108	103	100	97	106	102	99	96	99	97	94	97	95	93	95	93	92	92	90	90	
4	105	99	95	92	103	98	95	92	96	93	91	94	92	90	93	91	89	88	86	86	
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85	83	83	
6	99	93	89	86	98	92	88	85	91	87	85	89	86	84	88	86	84	83	81	81	
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80	78	78	
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78	76	76	
9	91	85	81	78	90	84	81	78	84	80	78	83	80	77	82	79	77	76	74	74	
10	89	82	79	76	88	82	78	76	81	78	76	81	78	76	80	77	75	74	72	72	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
666 lm	660 lm	340 lm	20.2 lm	3.90 lm	4.43 lm	5.48 lm	4.31 lm	4.81 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