

Light efficiency:



Output: 1321 lm

Light quality:

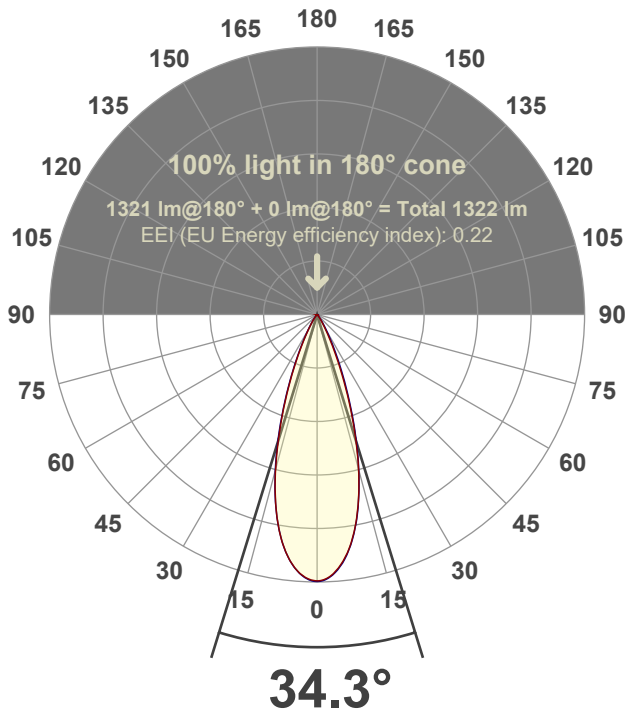


Peak: 3545 cd

Power: 20.8 W



Beam angle



Test number:

GR-F-F-CZ20-30k-FL-RD-91A-Rev2

Luminaire Model:

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

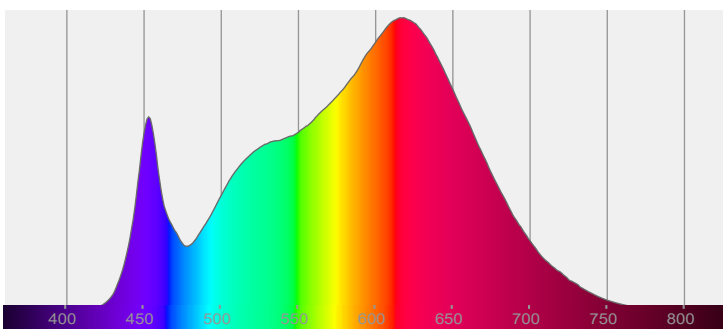
Date and time:

3/9/2022 3:24:59 PM

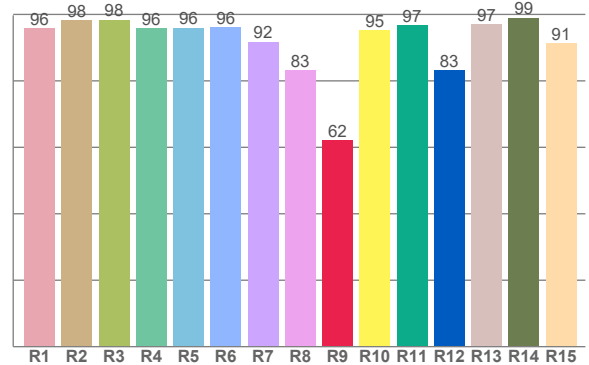
Delivered Lumens

1321

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	92.2	100.6	91.7	0.424	0.394	0.247	0.344	-0.0024

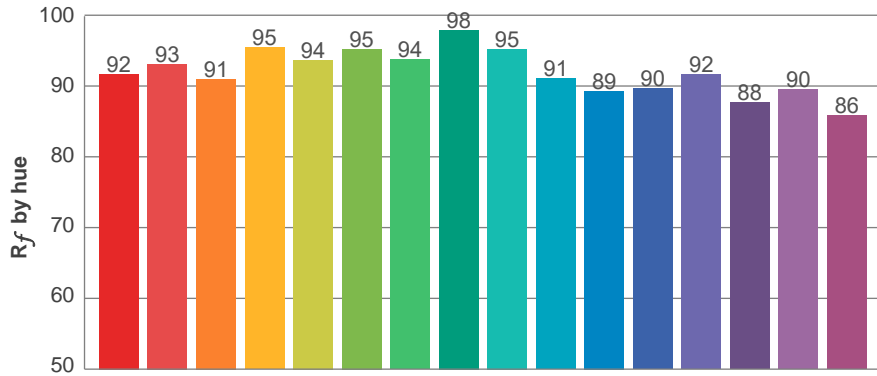
**$R_f$  92.2**  
Fidelity index  $R_f$

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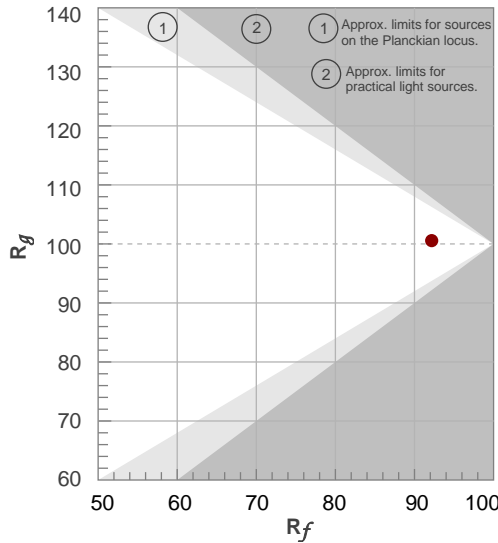
**$R_g$  100.6**  
Gammut index  $R_g$

TM30: 92.2

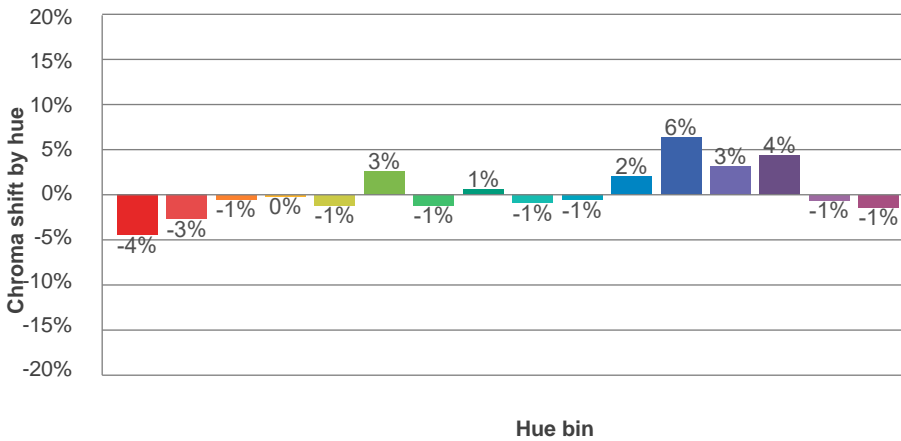
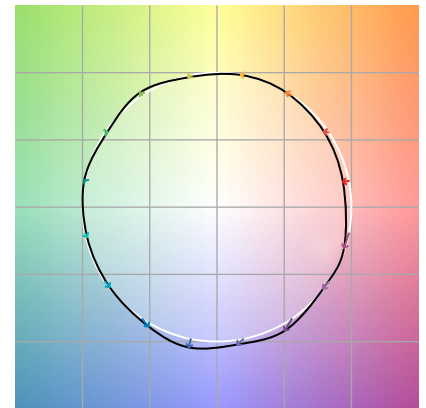
TM-30Color



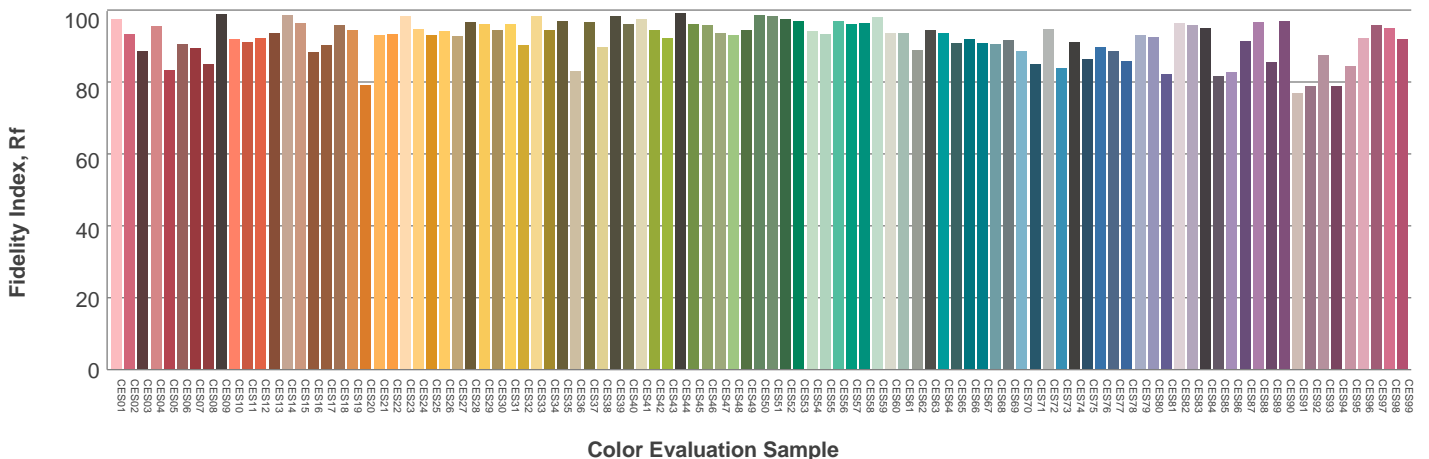
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	3%
3	91	-1%	4%
4	95	0%	2%
5	94	-1%	2%
6	95	3%	0%
7	94	-1%	-1%
8	98	1%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	90	6%	0%
13	92	3%	-5%
14	88	4%	-9%
15	90	-1%	-6%
16	86	-1%	-11%



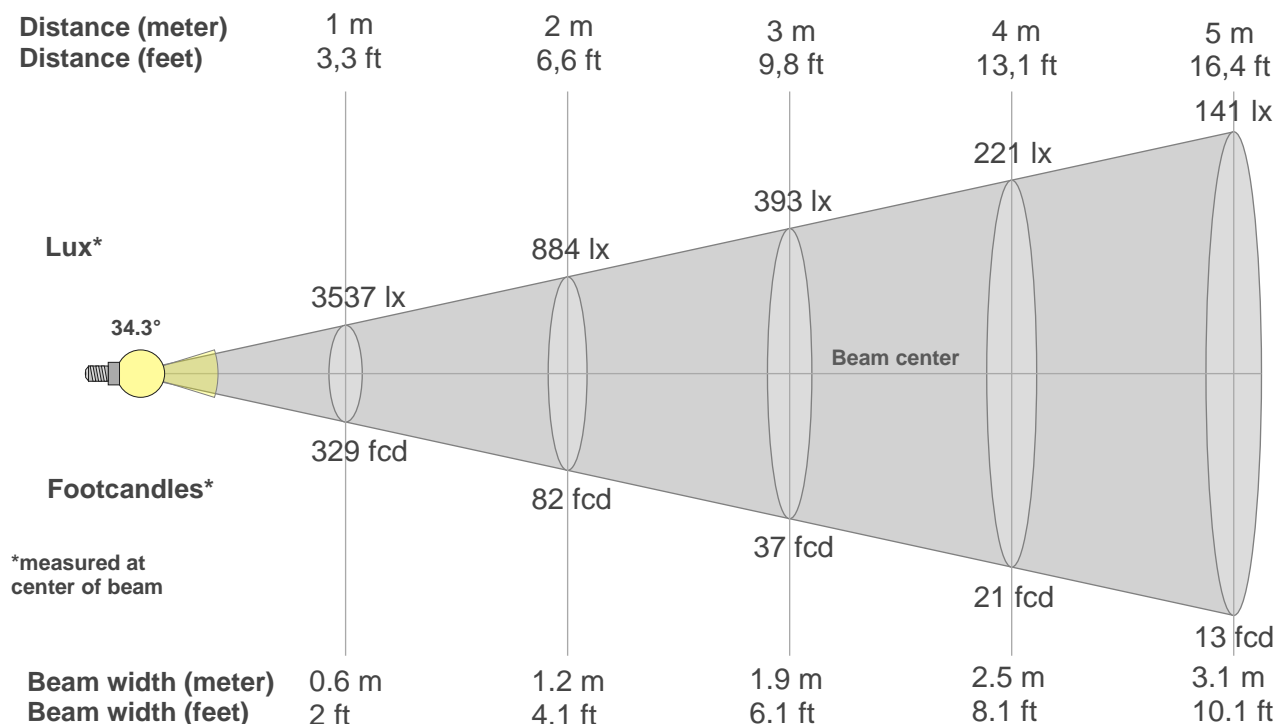
Color vector graphics



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
3537lx	884lx	393lx	221lx	141lx	98lx	72lx	55lx	44lx	35lx	29lx	25lx	21lx	18lx	16lx	14lx	12lx	11lx	10lx	9lx
328.6fcd	82.2fcd	36.5fcd	20.5fcd	13.1fcd	9.1fcd	6.7fcd	5.1fcd	4.1fcd	3.3fcd	2.7fcd	2.3fcd	1.9fcd	1.7fcd	1.5fcd	1.3fcd	1.1fcd	1fcd	0.9fcd	0.8fcd

#### 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°
3537	3504	3422	3292	3120	2888	2611	2300	1963	1610	1269	962	704	498	341	229	164	118	86	62
100%	99%	97%	93%	88%	82%	74%	65%	55%	46%	36%	27%	20%	14%	10%	6%	5%	3%	2%	2%

#### 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°
3537	3516	3440	3304	3121	2891	2619	2309	1978	1640	1316	1022	770	566	411	294	210	150	108	79
100%	99%	97%	93%	88%	82%	74%	65%	56%	46%	37%	29%	22%	16%	12%	8%	6%	4%	3%	2%

#### 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°
3537	3513	3435	3306	3130	2904	2631	2313	1961	1613	1282	980	719	522	370	258	180	128	93	70
100%	99%	97%	93%	88%	82%	74%	65%	55%	46%	36%	28%	20%	15%	10%	7%	5%	4%	3%	2%

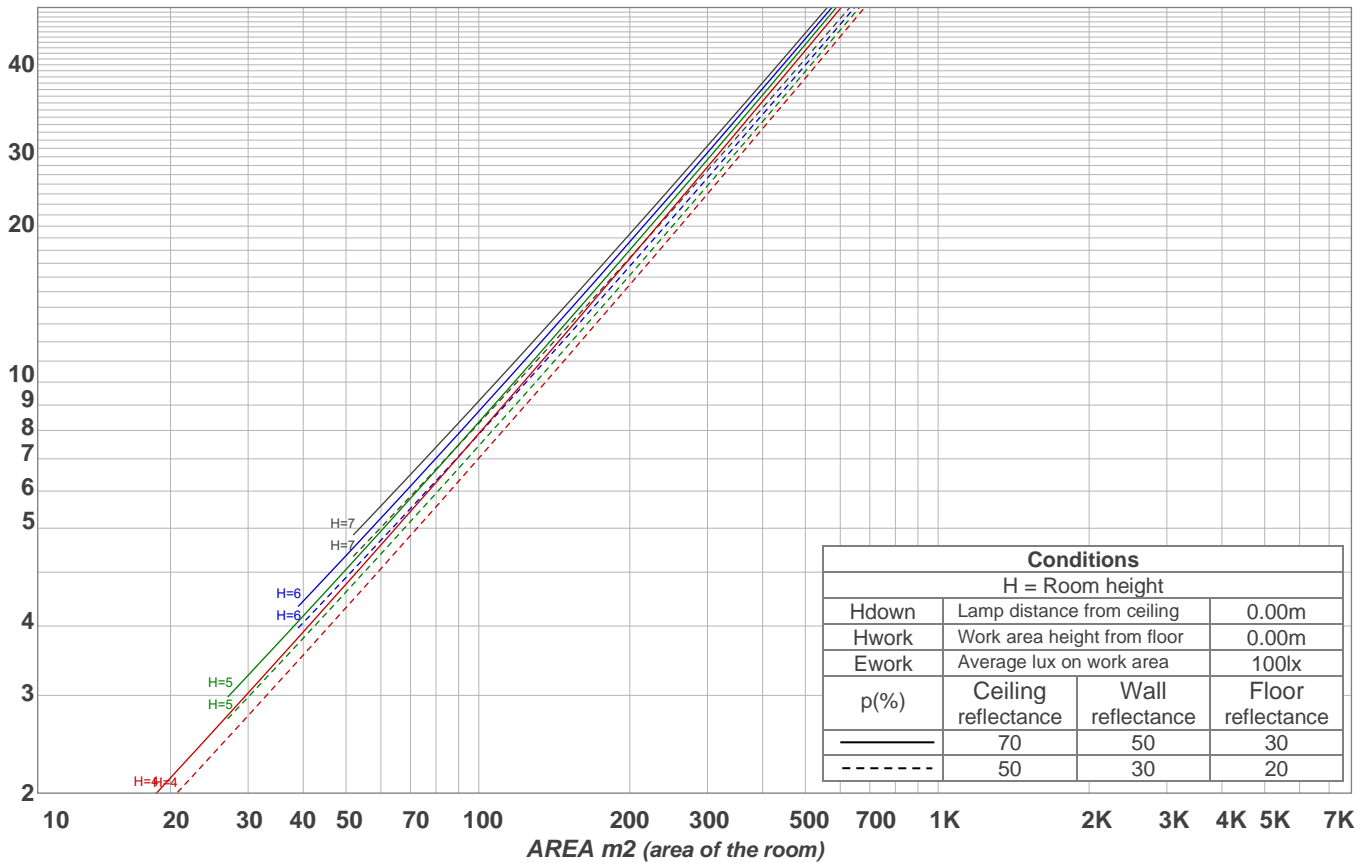
#### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3537	3513	3436	3313	3134	2902	2628	2318	1984	1637	1305	1010	756	547	384	271	196	142	104	76
100%	99%	97%	94%	89%	82%	74%	66%	56%	46%	37%	29%	21%	15%	11%	8%	6%	4%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>34.3°</b>	<b>56.7°</b>	<b>73.2°</b>	<b>98.0%</b>	<b>96.5%</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	114	112	109	107	112	110	108	106	106	104	102	102	101	99	98	97	97	95	95	95	
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90	90	90	
3	105	100	96	92	103	99	95	92	96	93	90	94	91	89	92	89	87	86	86	86	
4	101	95	91	87	100	94	90	86	92	88	85	90	87	85	88	86	84	82	82	82	
5	98	91	86	82	96	90	85	82	88	84	81	87	83	81	85	82	80	79	79	79	
6	94	87	82	79	93	86	82	78	85	81	78	83	80	77	82	79	77	76	76	76	
7	91	83	78	75	90	83	78	75	82	77	74	80	77	74	79	76	74	73	73	73	
8	88	80	75	72	87	80	75	72	79	74	72	78	74	71	77	73	71	70	70	70	
9	85	77	72	69	84	77	72	69	76	72	69	75	71	69	74	71	68	67	67	67	
10	82	74	70	67	81	74	69	66	73	69	66	73	69	66	72	68	66	65	65	65	

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
307 lm	578 lm	298 lm	77.5 lm	22.6 lm	11.7 lm	11.3 lm	9.31 lm	5.53 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