

Light efficiency:



Output: 1701 lm

Light quality:

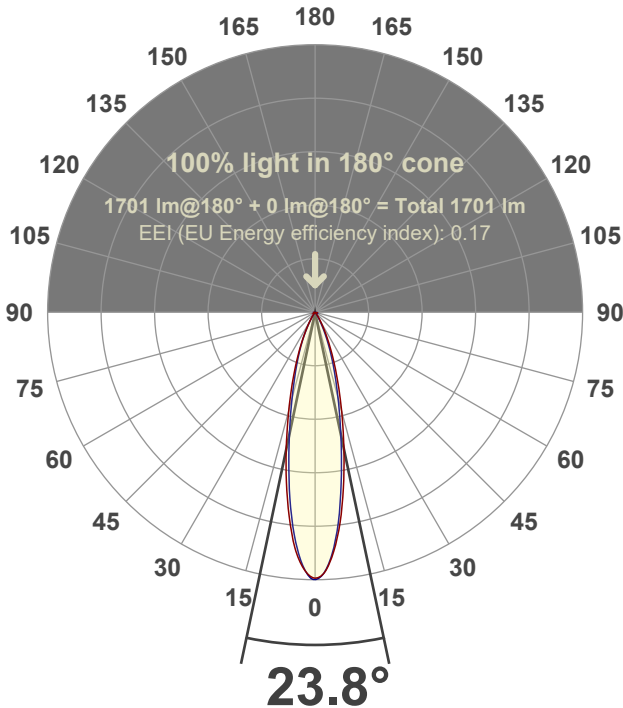


Peak: 6990 cd

Power: 20.7 W



Beam angle



Test number:

GR-F-CZ20-30k-SP-SQ-91A-Rev2

Luminaire Model:

Graffiti Regress Square Fixed Downlight-CZ20 30k 15° Optic-Solite

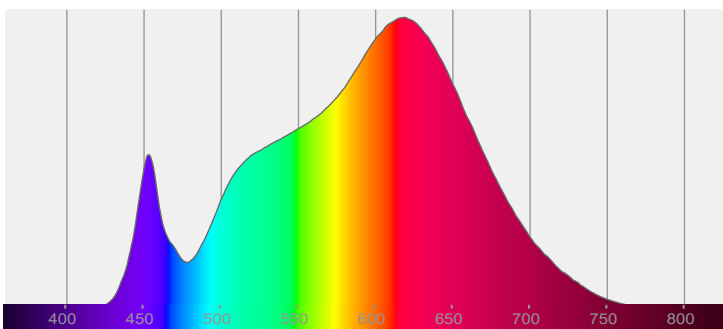
Date and time:

6/30/2022 9:15:05 PM

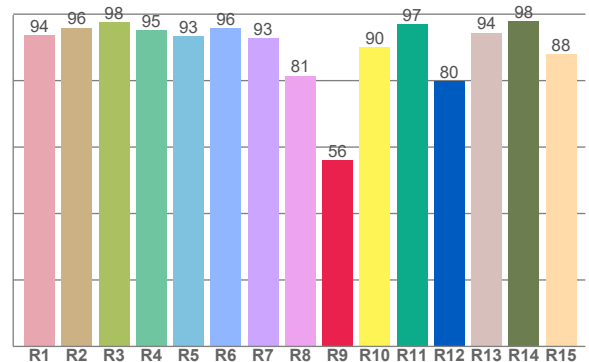
Delivered Lumens

1701

Spectra



CRI: 93.2 (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 divition from black body
CRI	CRI R9	TM30 R <sub>f</sub>	TM30 R <sub>g</sub>	CQS	x	y	u	v	Δuv
93.2	56.0	92.2	99.1	91.6	0.438	0.408	0.249	0.349	0.0016

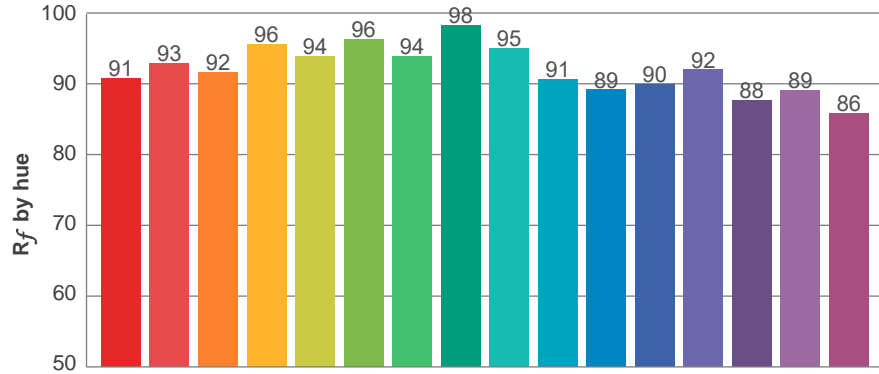
**$R_f$  92.2**  
Fidelity index  $R_f$

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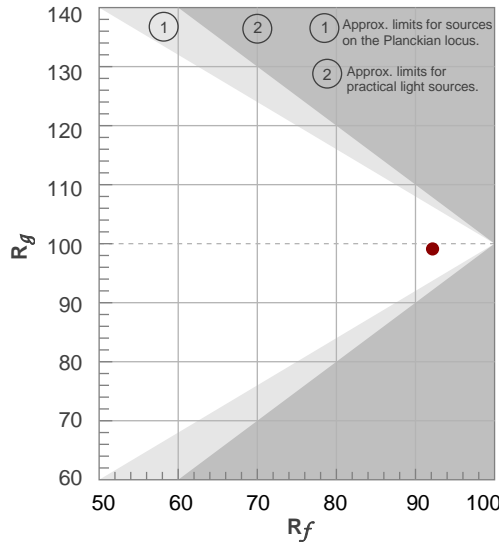
**$R_g$  99.1**  
Gammut index  $R_g$

TM30: 92.2

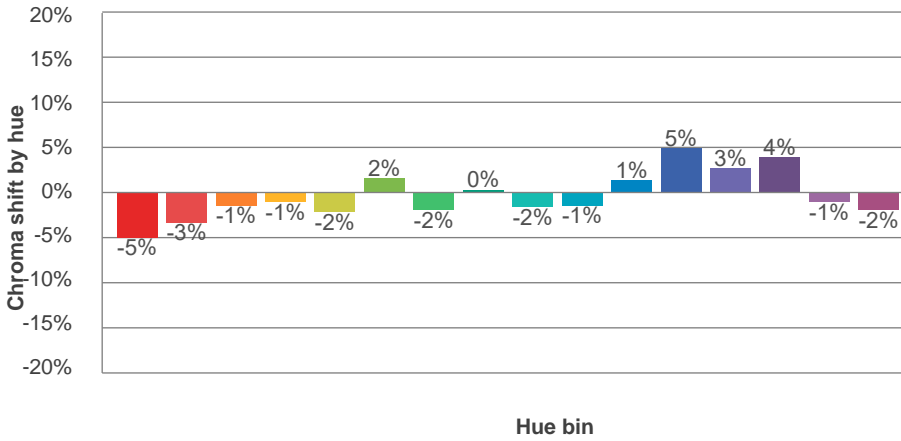
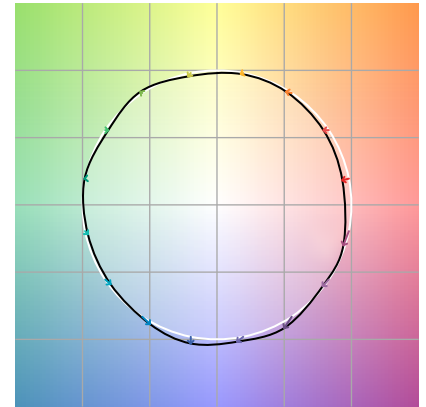
TM-30Color



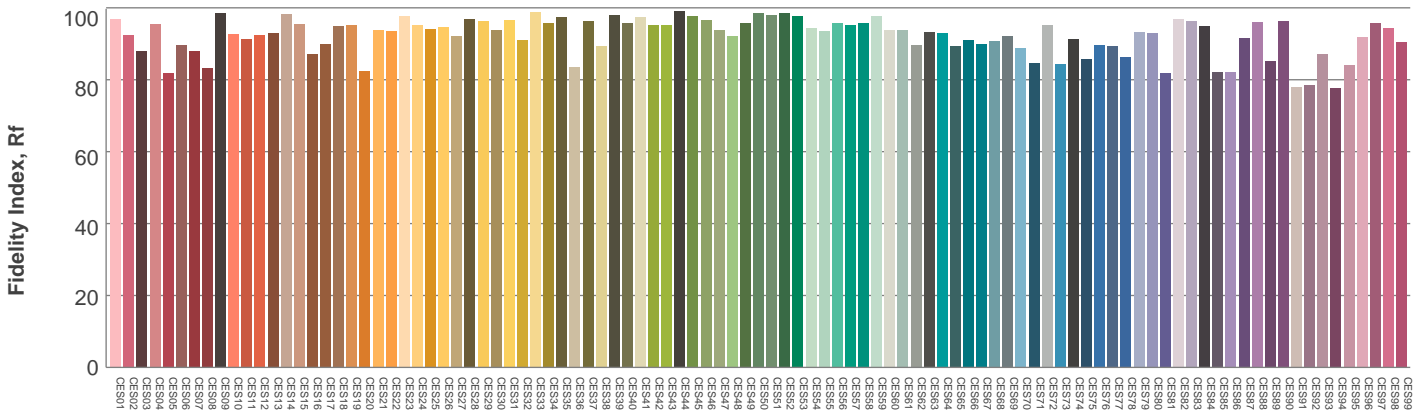
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	0%
2	93	-3%	2%
3	92	-1%	4%
4	96	-1%	2%
5	94	-2%	2%
6	96	2%	1%
7	94	-2%	-1%
8	98	0%	0%
9	95	-2%	3%
10	91	-1%	5%
11	89	1%	8%
12	90	5%	1%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-7%
16	86	-2%	-11%



Color vector graphics

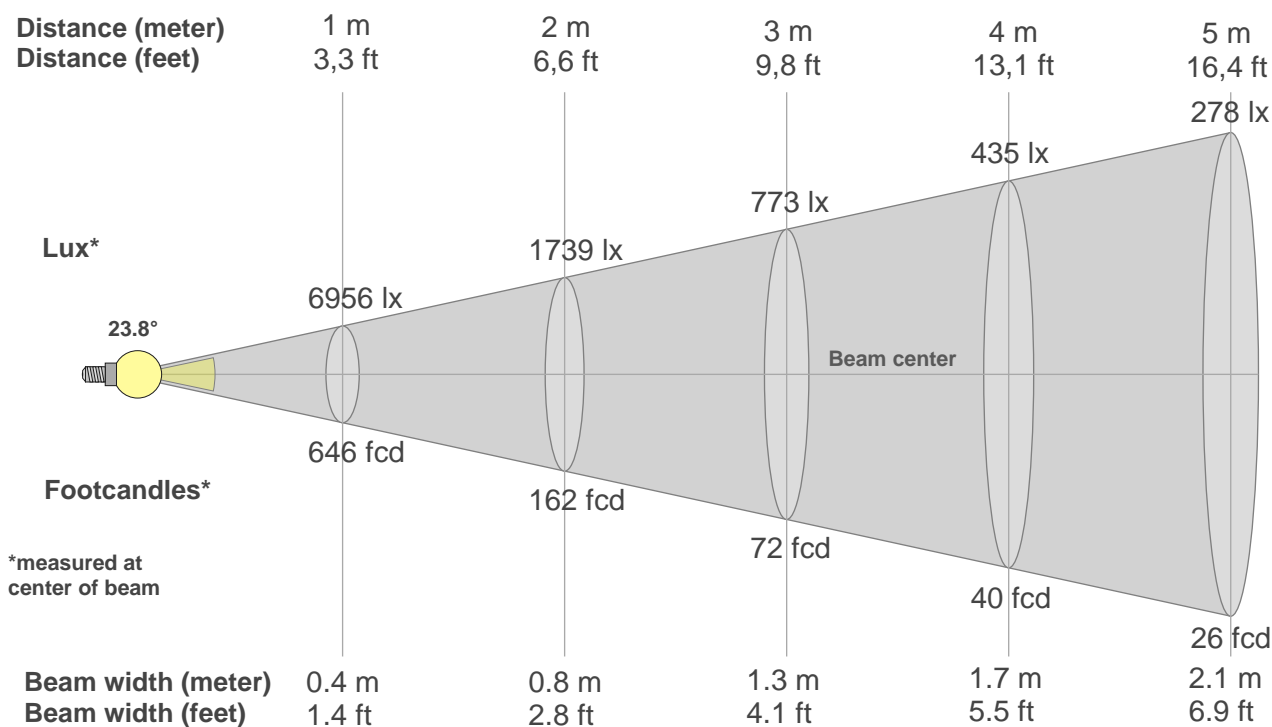


Color distortion



Color Evaluation Sample

### 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
6956lx	1739lx	773lx	435lx	278lx	193lx	142lx	109lx	86lx	70lx	57lx	48lx	41lx	35lx	31lx	27lx	24lx	21lx	19lx	17lx
646.2fcd	161.6fcd	71.8fcd	40.4fcd	25.8fcd	18fcd	13.2fcd	10.1fcd	8fcd	6.5fcd	5.3fcd	4.5fcd	3.8fcd	3.3fcd	2.9fcd	2.5fcd	2.2fcd	2fcd	1.8fcd	1.6fcd

#### 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°
6956	6829	6394	5803	5102	4361	3649	3001	2436	1955	1553	1214	930	697	508	369	270	200	148	110
100%	98%	92%	83%	73%	63%	52%	43%	35%	28%	22%	17%	13%	10%	7%	5%	4%	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°
6956	6805	6359	5657	4828	4009	3268	2626	2086	1655	1303	1004	752	542	374	249	168	117	81	57
100%	98%	91%	81%	69%	58%	47%	38%	30%	24%	19%	14%	11%	8%	5%	4%	2%	2%	1%	1%

#### 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°
6956	6786	6405	5826	5117	4377	3651	2988	2422	1937	1526	1181	895	659	481	350	254	186	138	105
100%	98%	92%	84%	74%	63%	52%	43%	35%	28%	22%	17%	13%	9%	7%	5%	4%	3%	2%	2%

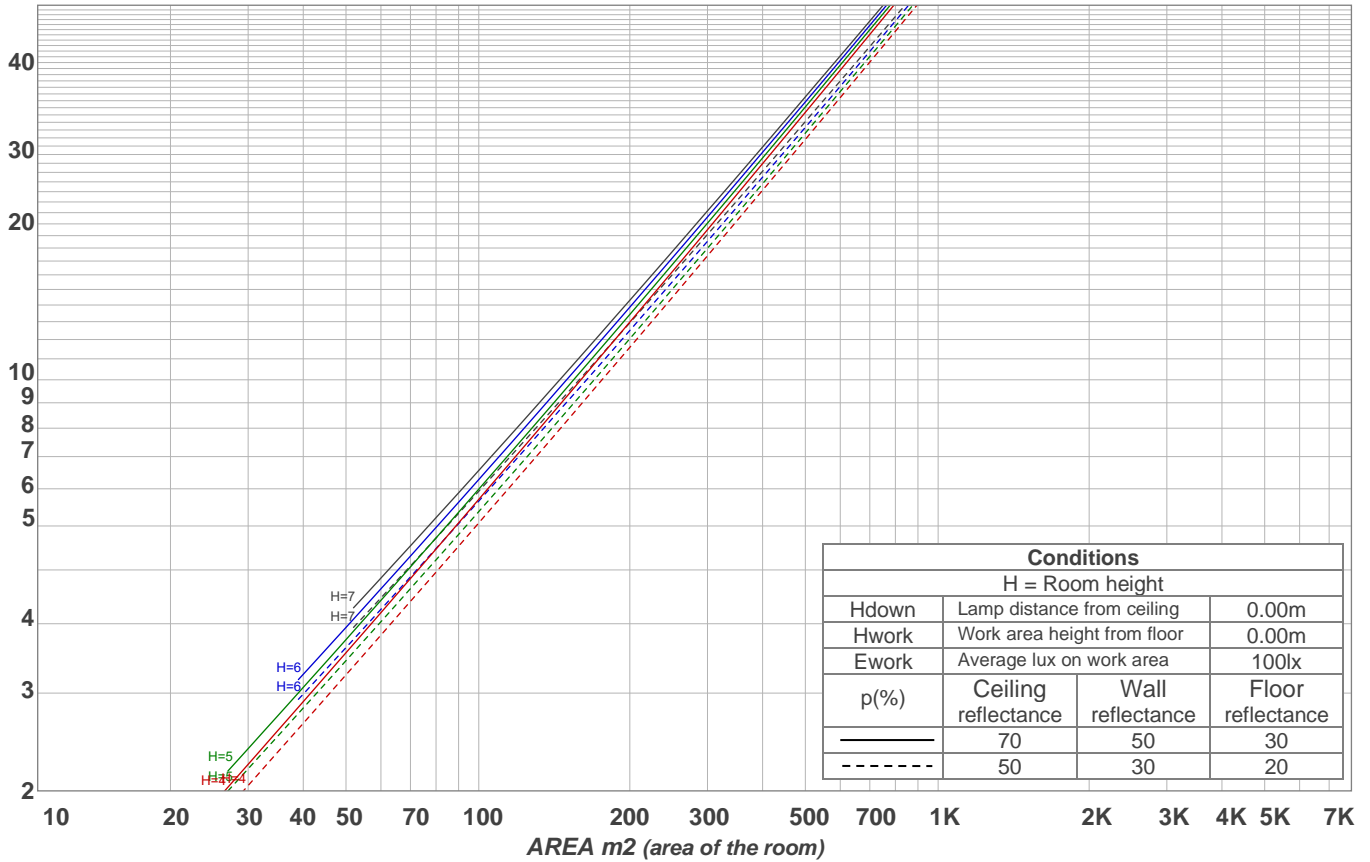
#### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6956	6766	6287	5610	4814	3980	3254	2634	2119	1703	1366	1080	834	622	442	304	207	141	97	68
100%	97%	90%	81%	69%	57%	47%	38%	30%	24%	20%	16%	12%	9%	6%	4%	3%	2%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>23.8°</b>	<b>50.7°</b>	<b>67°</b>	<b>99.2%</b>	<b>98.2%</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	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	112	110	108	112	110	108	107	106	105	103	103	101	100	99	98	97	96
2	110	107	103	101	108	105	102	99	102	99	97	99	97	95	96	95	93	92
3	107	102	98	95	105	100	97	94	98	95	92	95	93	91	93	91	90	88
4	103	97	93	90	101	96	92	89	94	91	88	92	89	87	90	88	86	85
5	99	93	89	85	98	92	88	85	91	87	84	89	86	84	88	85	83	82
6	96	89	85	82	95	89	85	81	87	84	81	86	83	80	85	82	80	79
7	93	86	82	79	92	86	81	78	84	81	78	83	80	78	82	79	77	76
8	90	83	79	76	89	83	78	76	82	78	75	81	77	75	80	77	75	74
9	88	80	76	73	87	80	76	73	79	75	73	78	75	73	78	75	72	71
10	85	78	74	71	84	78	73	71	77	73	70	76	73	70	76	72	70	69

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
517 lm	701 lm	344 lm	92.6 lm	24.5 lm	8.55 lm	5.83 lm	4.03 lm	4.19 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