

Light efficiency:



Output: 1659 lm

Light quality:

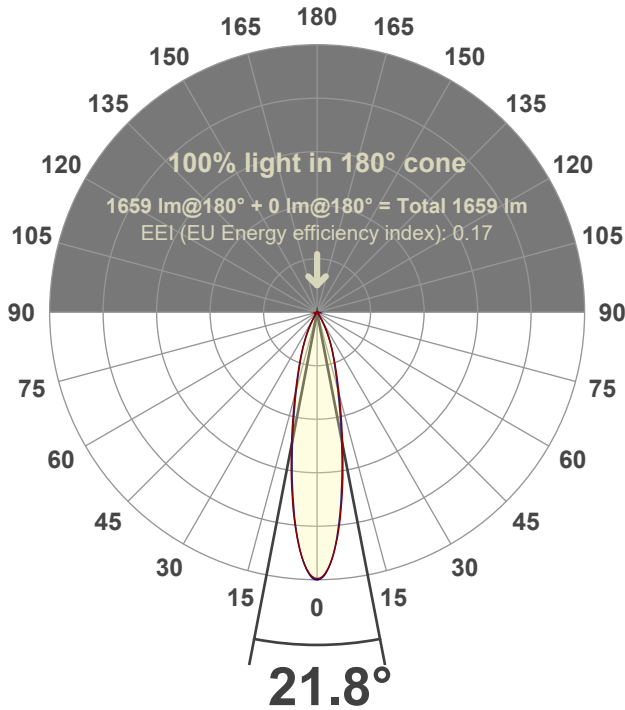


Peak: 7417 cd

Power: 20.7 W



Beam angle



Test number:

**GR-F-CZ20-30k-SP-RD-91A-Rev2**

Luminaire Model:

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

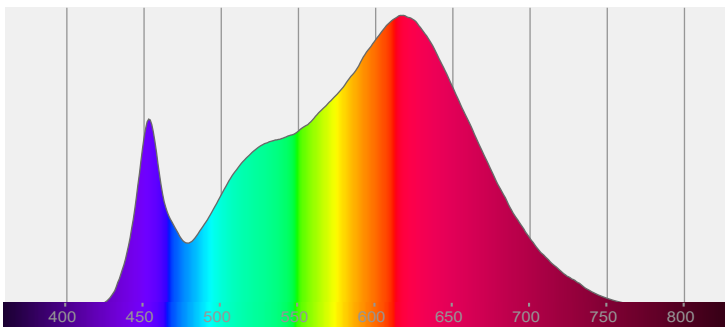
Date and time:

**3/9/2022 5:15:07 PM**

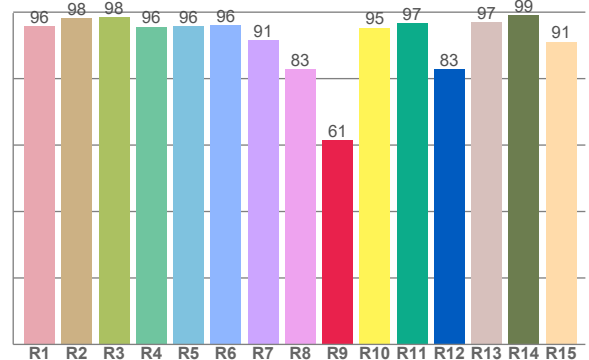
Delivered Lumens

**1659**

Spectra



CRI: 94.3 (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
94.3	61.5	92.1	100.3	91.6	0.425	0.394	0.247	0.344	-0.0023

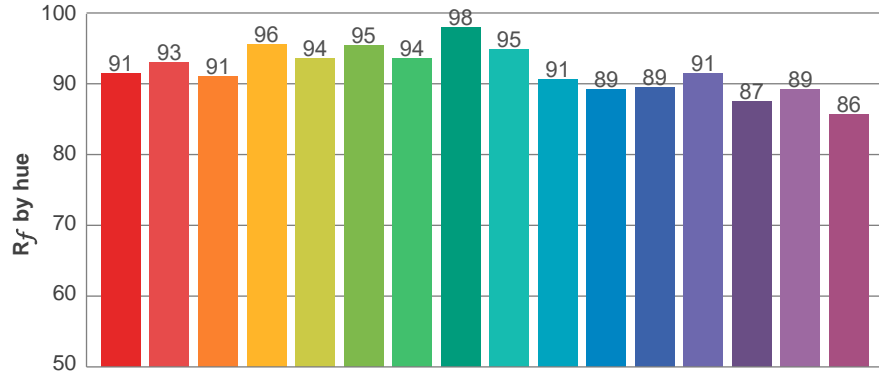
**$R_f$  92.1**  
Fidelity index  $R_f$

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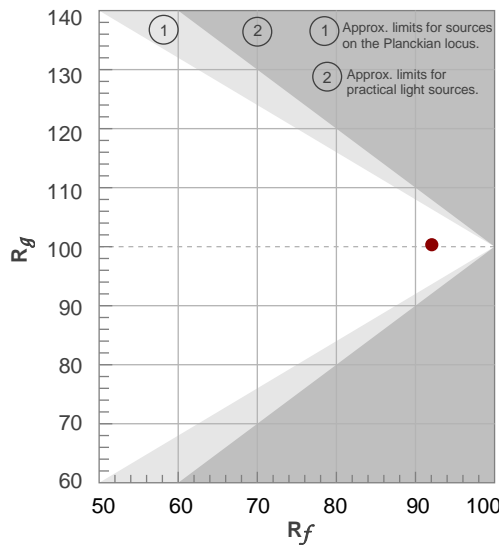
**$R_g$  100.3**  
Gammut index  $R_g$

TM30: 92.1

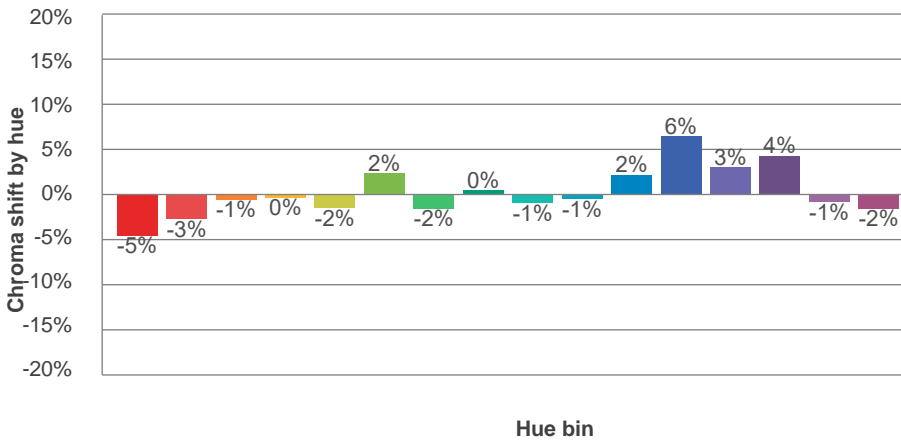
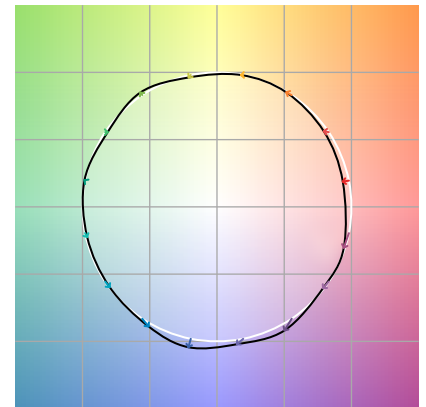
TM-30Color



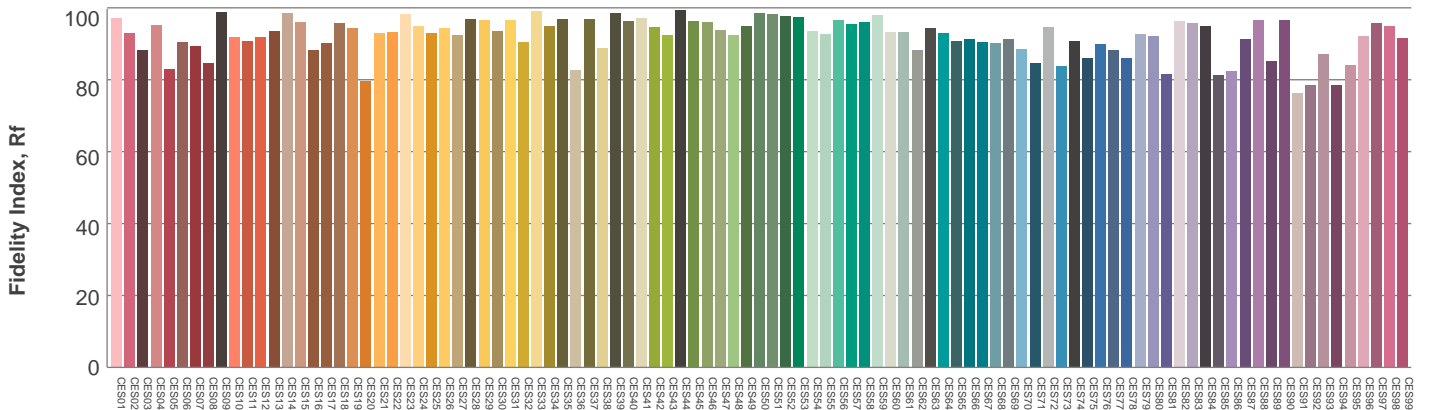
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	0%
2	93	-3%	3%
3	91	-1%	4%
4	96	0%	2%
5	94	-2%	2%
6	95	2%	0%
7	94	-2%	-1%
8	98	0%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	7%
12	89	6%	0%
13	91	3%	-5%
14	87	4%	-9%
15	89	-1%	-6%
16	86	-2%	-11%



Color vector graphics

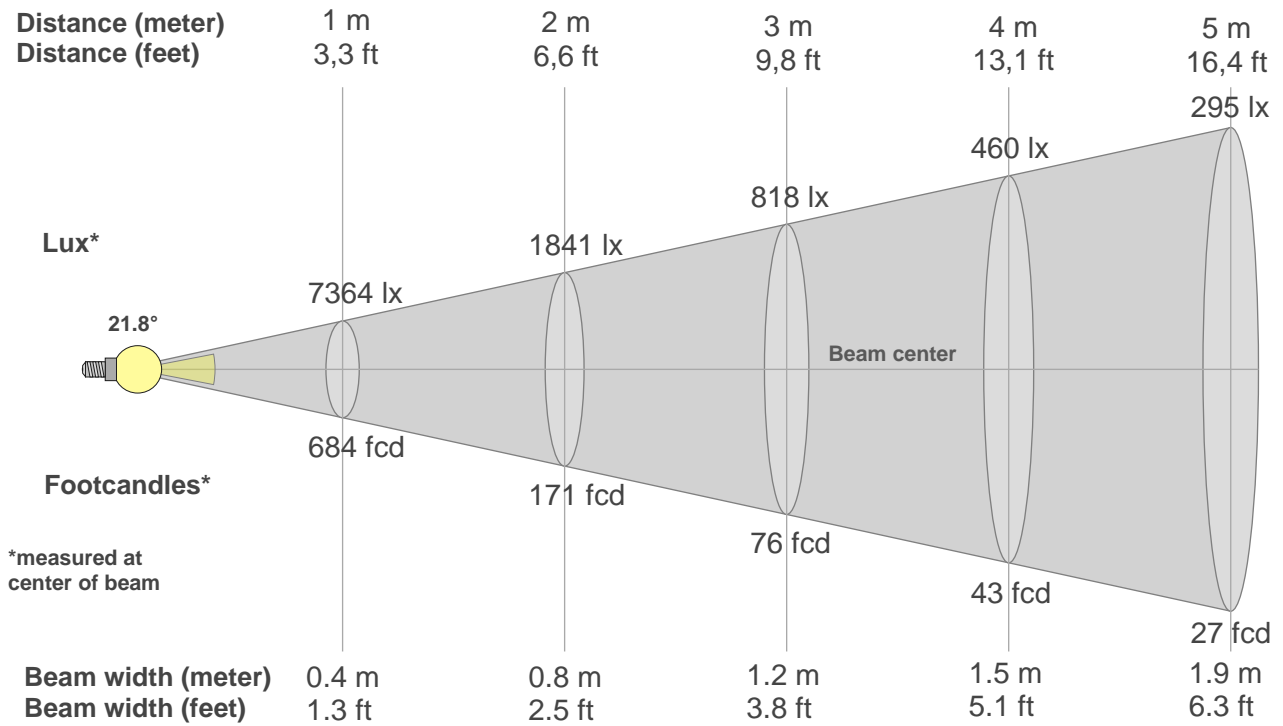


Color distortion



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
7364lx	1841lx	818lx	460lx	295lx	205lx	150lx	115lx	91lx	74lx	61lx	51lx	44lx	38lx	33lx	29lx	25lx	23lx	20lx	18lx
684.2fcd	171fcd	76fcd	42.8fcd	27.4fcd	19fcd	14fcd	10.7fcd	8.4fcd	6.8fcd	5.7fcd	4.8fcd	4fcd	3.5fcd	3fcd	2.7fcd	2.4fcd	2.1fcd	1.9fcd	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°
7364	7169	6677	5938	5038	4151	3363	2691	2140	1714	1397	1129	896	690	509	363	252	172	116	80
100%	97%	91%	81%	68%	56%	46%	37%	29%	23%	19%	15%	12%	9%	7%	5%	3%	2%	2%	1%

**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°
7364	7219	6682	5845	4922	4015	3198	2513	2012	1639	1343	1098	882	683	504	356	241	157	100	68
100%	98%	91%	79%	67%	55%	43%	34%	27%	22%	18%	15%	12%	9%	7%	5%	3%	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°
7364	7179	6682	5906	5037	4166	3361	2668	2108	1692	1357	1078	841	636	466	330	227	153	103	70
100%	97%	91%	80%	68%	57%	46%	36%	29%	23%	18%	15%	11%	9%	6%	4%	3%	2%	1%	1%

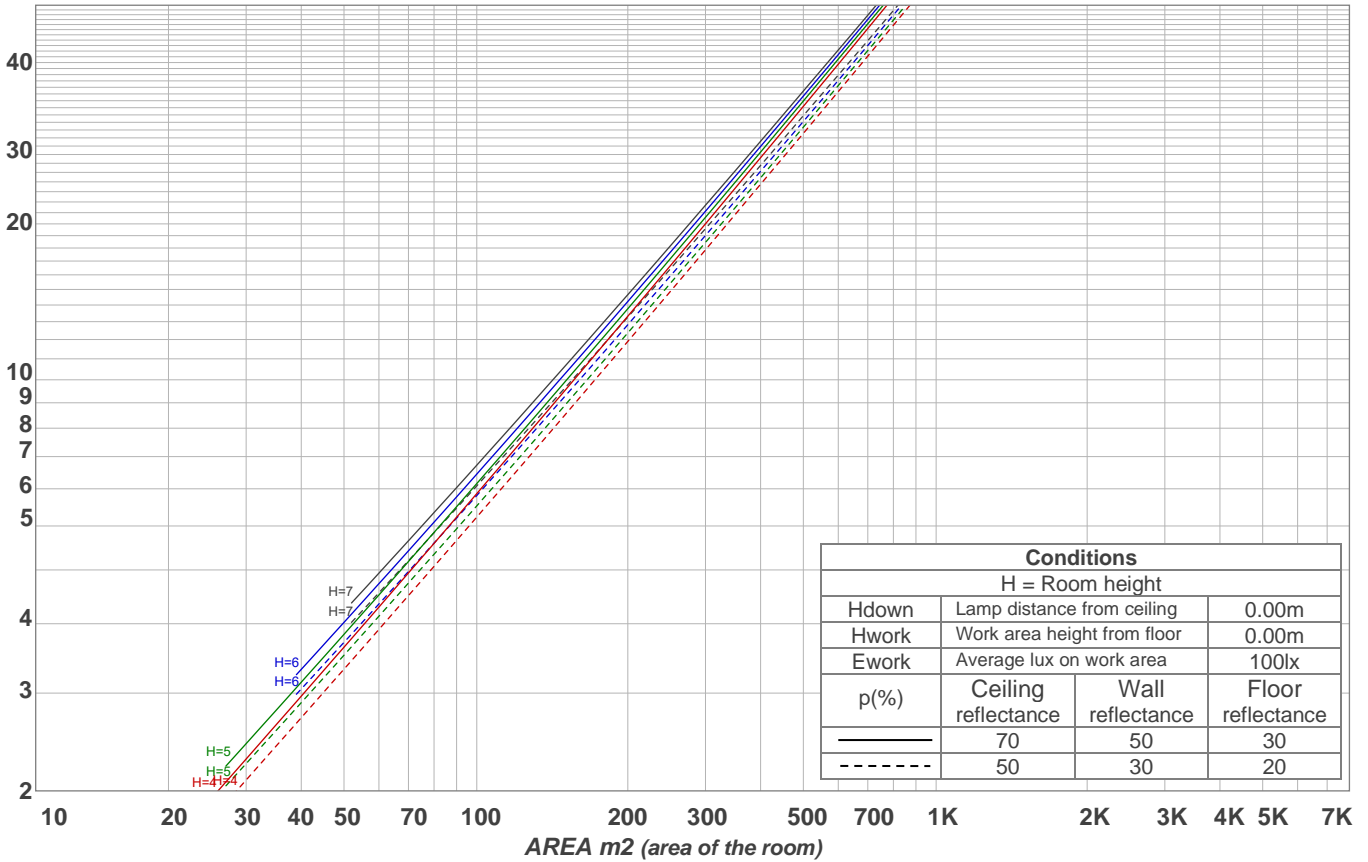
**Intensities in 270° c-plane**

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7364	7173	6636	5855	4929	4019	3217	2548	2017	1608	1300	1040	810	607	432	295	199	133	89	60
100%	97%	90%	80%	67%	55%	44%	35%	27%	22%	18%	14%	11%	8%	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>21.8°</b>	<b>50.3°</b>	<b>66°</b>	<b>99.1%</b>	<b>98.1%</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	98	96
2	111	107	103	101	108	105	102	100	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	91	88	86	85
5	100	93	89	86	98	92	88	85	91	87	84	89	86	84	88	85	83	82
6	96	90	85	82	95	89	85	82	88	84	81	86	83	81	85	82	80	79
7	93	86	82	79	92	86	82	79	85	81	78	84	80	78	83	80	78	76
8	91	84	79	76	90	83	79	76	82	78	76	81	78	75	80	77	75	74
9	88	81	76	73	87	80	76	73	80	76	73	79	75	73	78	75	73	72
10	85	78	74	71	85	78	74	71	77	73	71	77	73	71	76	73	71	70

### Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
528 lm	653 lm	345 lm	88.2 lm	19.9 lm	9.53 lm	6.99 lm	3.82 lm	4.24 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