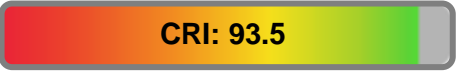


Light efficiency:



Output: 839 lm

Light quality:

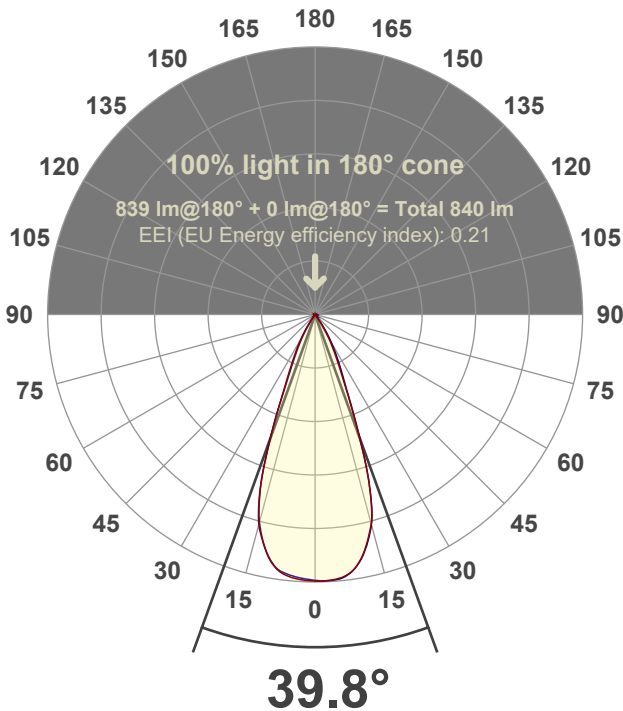


Peak: 1859 cd

Power: 14.1 W



Beam angle



Test number:

**GR-F-F-CZ14-30k-WF-SQ-Rev2**

Luminaire Model:

**Graffiti Flat Square Fixed Downlight-CZ14 30k 60° Optic**

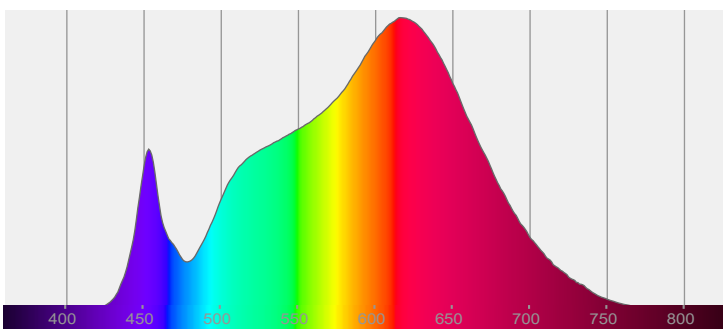
Date and time:

**6/30/2022 7:43:52 PM**

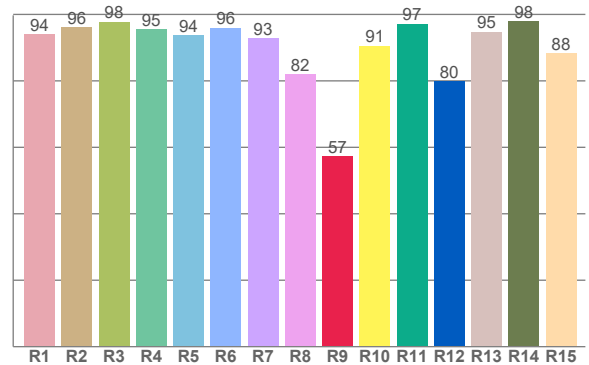
Delivered Lumens

**839**

Spectra



CRI: 93.5 (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
	93.5	57.4	92.2	99.2	91.8	0.437	0.408	0.249	0.349	0.0014

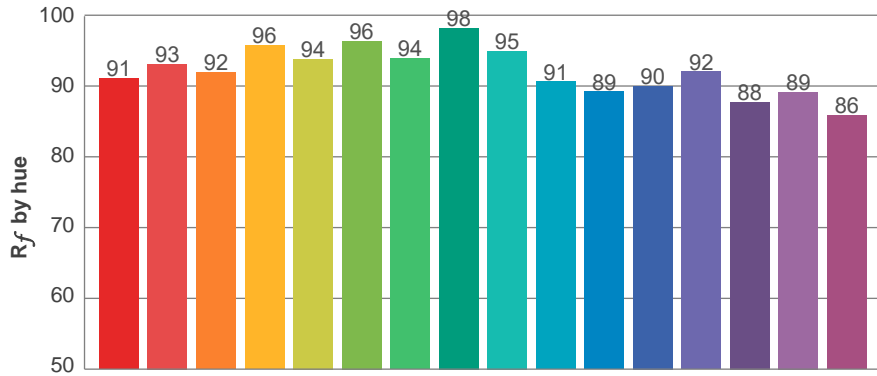
**$R_f$  92.2**  
Fidelity index  $R_f$

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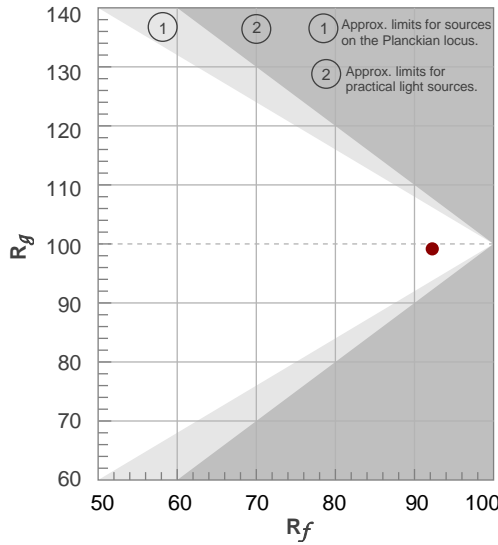
**$R_g$  99.2**  
Gammut index  $R_g$

TM30: 92.2

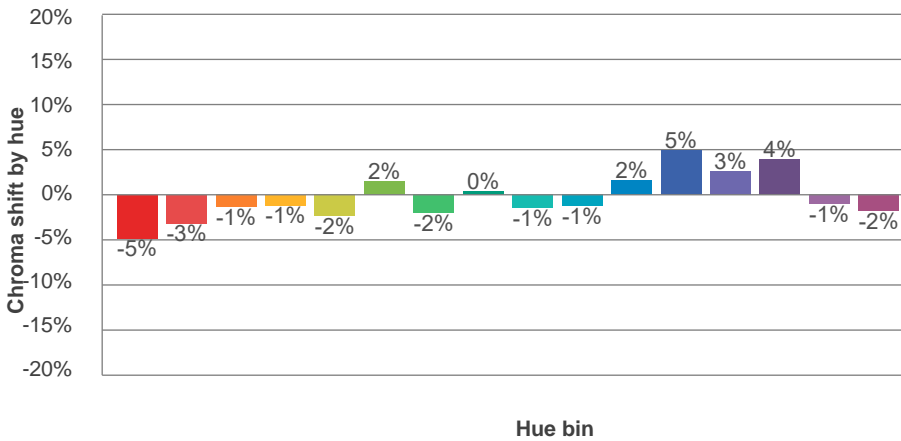
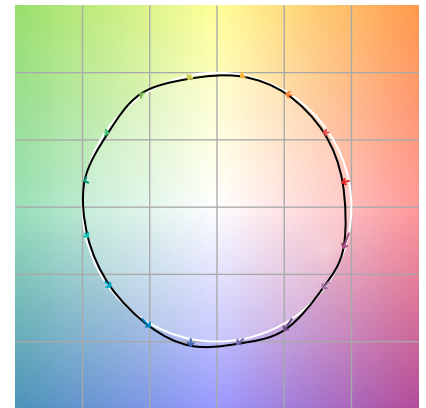
TM-30Color



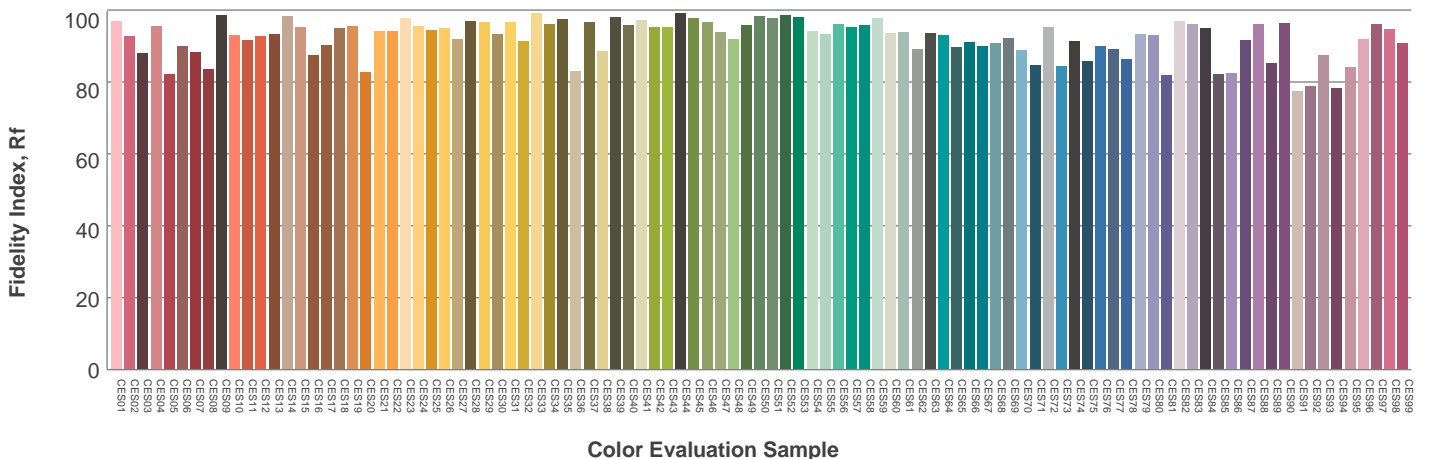
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	0%
2	93	-3%	2%
3	92	-1%	4%
4	96	-1%	1%
5	94	-2%	2%
6	96	2%	1%
7	94	-2%	-1%
8	98	0%	0%
9	95	-1%	3%
10	91	-1%	5%
11	89	2%	8%
12	90	5%	1%
13	92	3%	-5%
14	88	4%	-9%
15	89	-1%	-6%
16	86	-2%	-11%



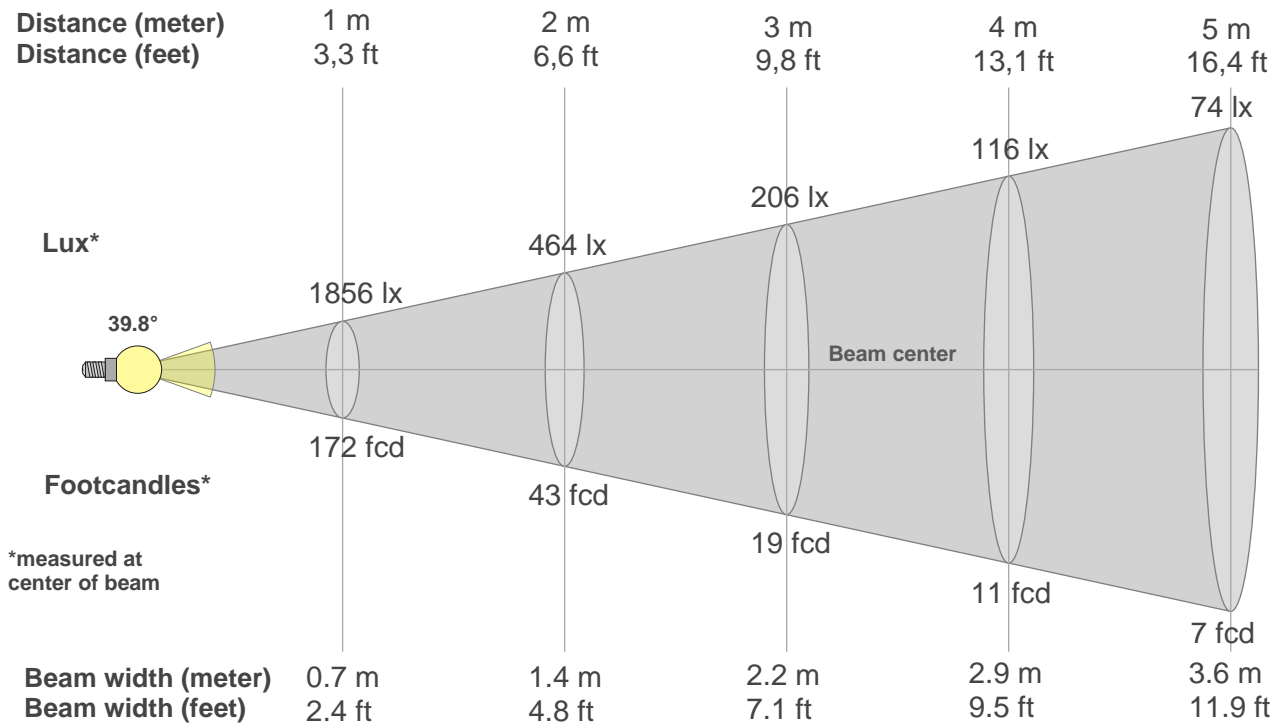
Color vector graphics



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
1856lx	464lx	206lx	116lx	74lx	52lx	38lx	29lx	23lx	19lx	15lx	13lx	11lx	9lx	8lx	7lx	6lx	6lx	5lx	5lx
172.4fcd	43.1fcd	19.2fcd	10.8fcd	6.9fcd	4.8fcd	3.5fcd	2.7fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd

### 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°
1856	1858	1854	1840	1809	1753	1671	1567	1440	1202	914	654	465	350	269	202	143	91	50	26
100%	100%	100%	99%	97%	94%	90%	84%	78%	65%	49%	35%	25%	19%	15%	11%	8%	5%	3%	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°
1856	1857	1855	1846	1813	1756	1676	1571	1431	1207	915	670	501	393	308	238	177	120	73	40
100%	100%	100%	99%	98%	95%	90%	85%	77%	65%	49%	36%	27%	21%	17%	13%	10%	6%	4%	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°
1856	1855	1847	1833	1807	1753	1671	1568	1428	1213	914	652	475	361	278	210	148	95	57	30
100%	100%	100%	99%	97%	94%	90%	84%	77%	65%	49%	35%	26%	19%	15%	11%	8%	5%	3%	2%

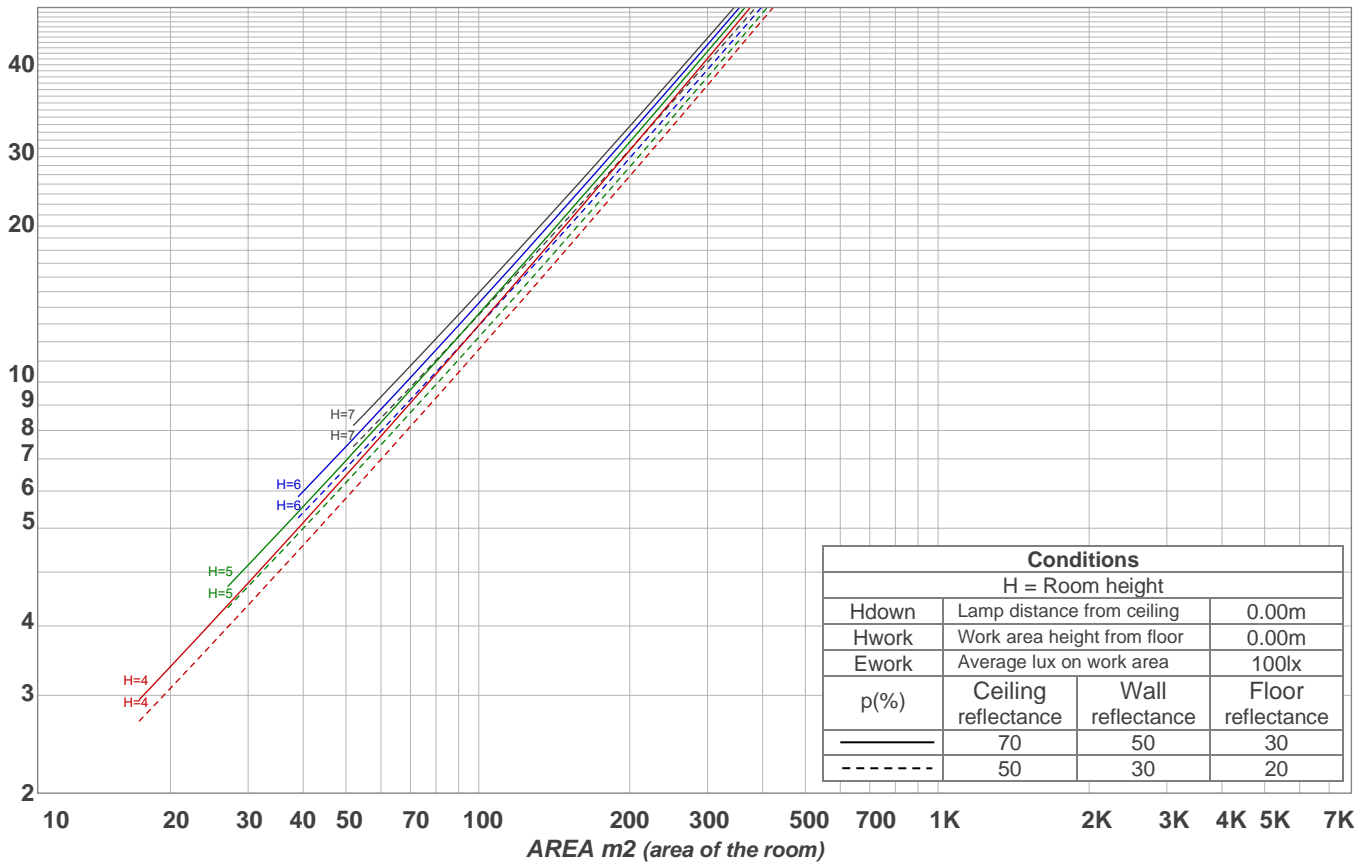
### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1856	1845	1835	1821	1798	1746	1666	1559	1422	1205	915	639	436	320	239	175	121	75	39	19
100%	99%	99%	98%	97%	94%	90%	84%	77%	65%	49%	34%	23%	17%	13%	9%	7%	4%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
39.8°	61.3°	72.9°	98.8%	98.5%

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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	95	
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	94	92	91	91	91	
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87	87	87	
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83	83	83	
5	98	91	87	83	97	91	86	83	89	85	82	87	84	81	86	83	81	80	80	80	
6	95	87	83	79	93	87	82	79	85	81	78	84	81	78	83	80	78	76	76	76	
7	91	84	79	76	90	83	79	76	82	78	75	81	77	75	80	77	74	73	73	73	
8	88	81	76	73	87	80	76	72	79	75	72	78	75	72	77	74	72	70	70	70	
9	85	78	73	70	84	77	73	70	76	72	69	75	72	69	75	71	69	68	68	68	
10	82	75	70	67	82	74	70	67	74	70	67	73	69	67	72	69	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°
174 lm	398 lm	201 lm	51.4 lm	4.06 lm	1.95 lm	2.65 lm	3.17 lm	3.78 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