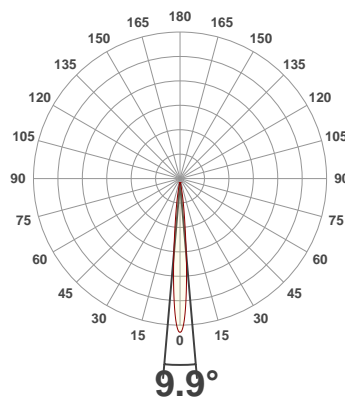
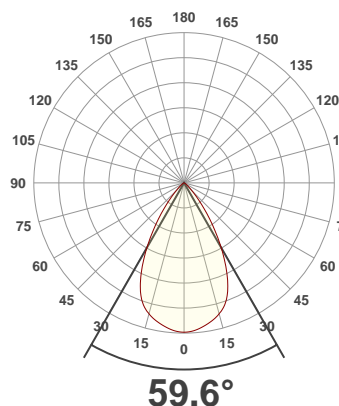




PRODUCT INFORMATION

SERIAL NUMBER:	LL-200302-0349
DATE OF MEASUREMENT:	2020-03-02
SIZE (dia. x h):	310 mm x 85 mm

ANGULAR DISTRIBUTION AT C0/180 | ANGULAR DISTRIBUTION AT C90/270 | LIGHT OUTPUT DATA

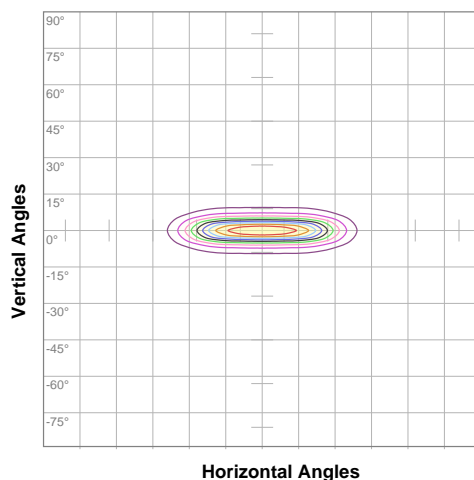


TOTAL LUMEN OUTPUT:	10117 lm
EFFICACY:	104 lm/W
PEAK INTENSITY:	43864 cd
COLOR RENDERING INDEX (CRI):	81.2
COLOR TEMPERATURE (CCT):	3794K
FIDELITY INDEX (TM30Rf):	82.4
GAMUT INDEX (TM30Rg):	97.8

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	59.6°
BEAM ANGLE (FWHM) C90/270:	9.9°
FIELD ANGLE (10%) C0/180:	86.8°
FIELD ANGLE (10%) C90/270:	21.1°
NUMBER OF PLANES MEASURED:	24

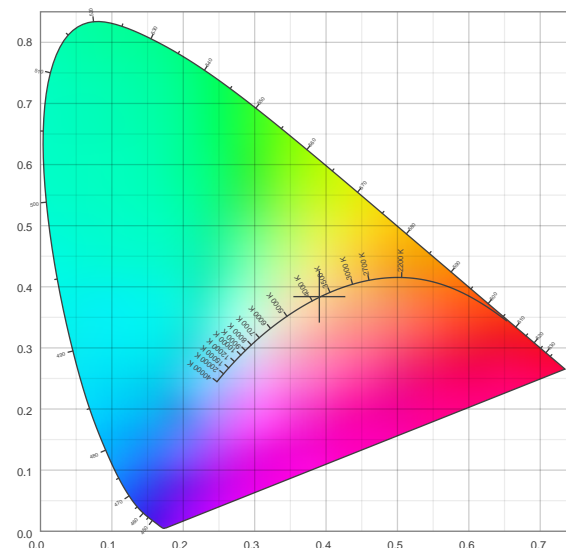
ISO CANDELA DIAGRAM | DATA



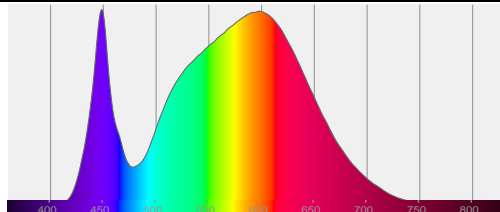
10%	4385 cd
20%	8771 cd
30%	13156 cd
40%	17541 cd
50%	21926 cd
60%	26312 cd
70%	30697 cd
80%	35082 cd
90%	39467 cd

INPUT POWER:	96.9 W
POWER FACTOR:	1.0
OPTICAL POWER:	30.6 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	582 nm

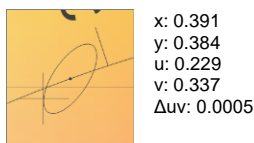
CIE 1931:



SPECTRA



CIE 1931 ZOOM



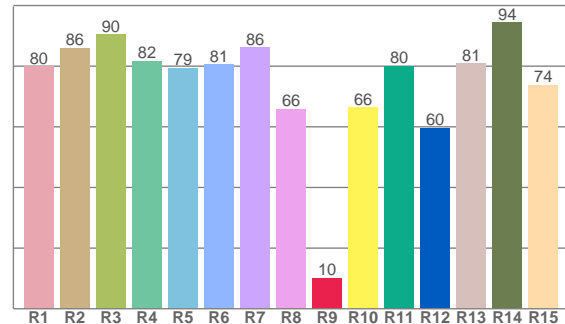
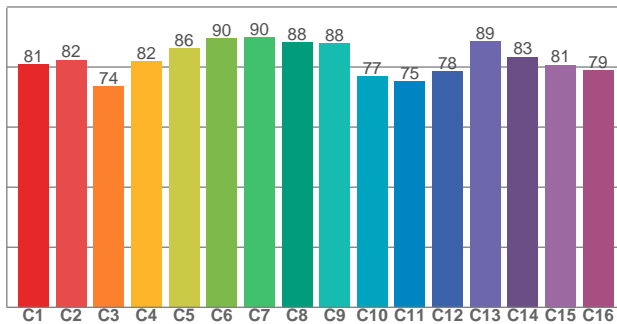
ZONAL LUMEN SUMMARY

0°-10° 2524 lm	10°-20° 3099 lm	20°-30° 2384 lm	30°-40° 1251 lm	40°-50° 480 lm	50°-60° 212 lm	60°-70° 116 lm	70°-80° 47.4 lm	80°-90° 2.96 lm
90°-100° 0.004 lm	100°-110° 0.004 lm	110°-120° 0.001 lm	120°-130° 0.002 lm	130°-140° 0.001 lm	140°-150° 0.000 lm	150°-160° 0.000 lm	160°-170° 0.000 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 82.4

CRI: 81.2 (R1-R8)



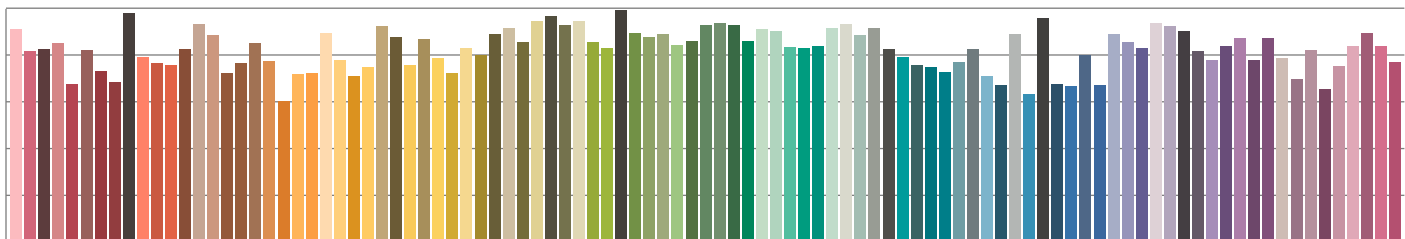
TM30 C values, 16 binned values out of total of 99 C values

CRI R values, only R1-R8 are used to calculate final CRI value

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
80.9	82.4	73.6	81.8	86.2	89.6	89.9	88.3	88.0	76.9	75.3	78.5	88.6	83.3	80.7	79.0

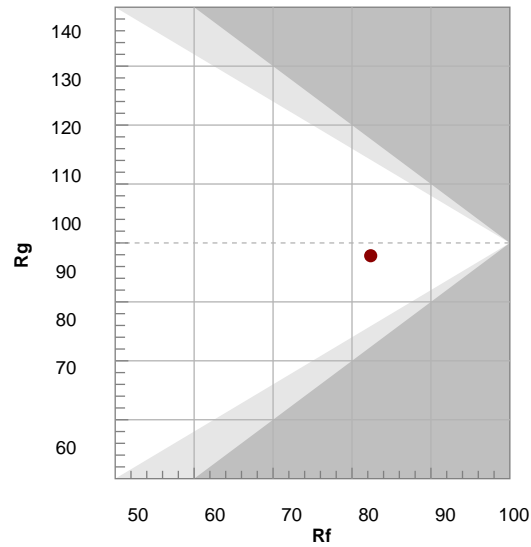
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.9	85.9	90.4	81.7	79.4	80.5	86.2	65.8	10.1	66.3	80.1	59.7	80.9	94.4	73.8

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	82	-8%	6%
3	74	-4%	14%
4	82	3%	11%
5	86	6%	7%
6	90	7%	-2%
7	90	0%	-7%
8	88	-5%	-5%
9	88	-8%	1%
10	77	-10%	10%
11	75	-1%	17%
12	78	6%	10%
13	89	7%	1%
14	83	9%	-9%
15	81	2%	-14%
16	79	-4%	-13%



FIDELITY INDEX

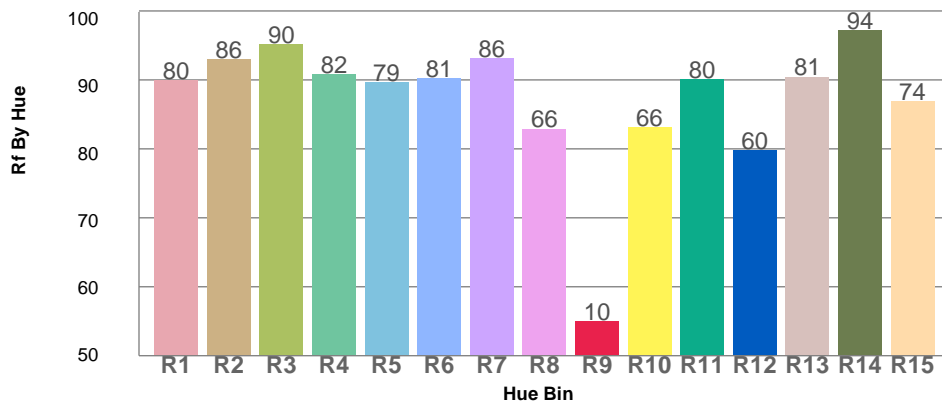
R_f 82.4

GAMUT INDEX

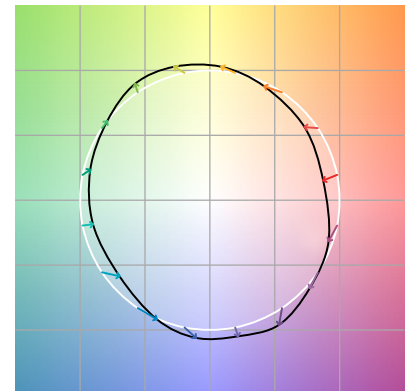
R_g 97.8

Approx. limits for sources on the Planckian locus.
Approx. limits for practical light sources.

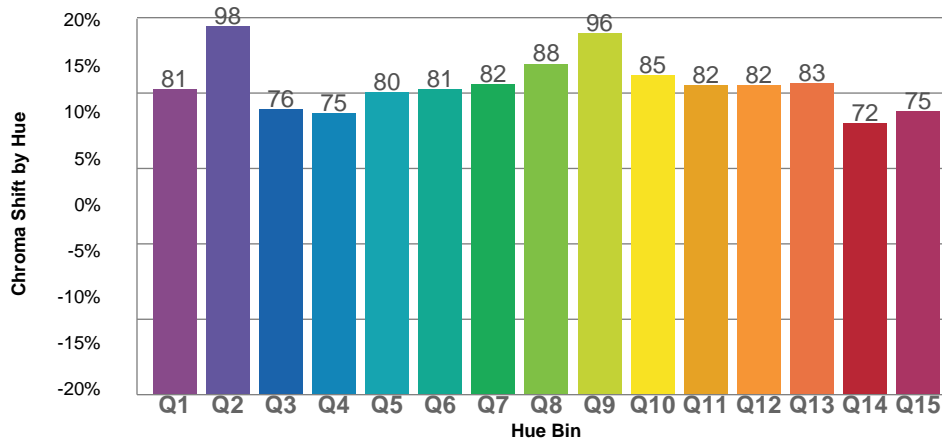
TM30 OVER 50



COLOR VECTOR GRAPHICS



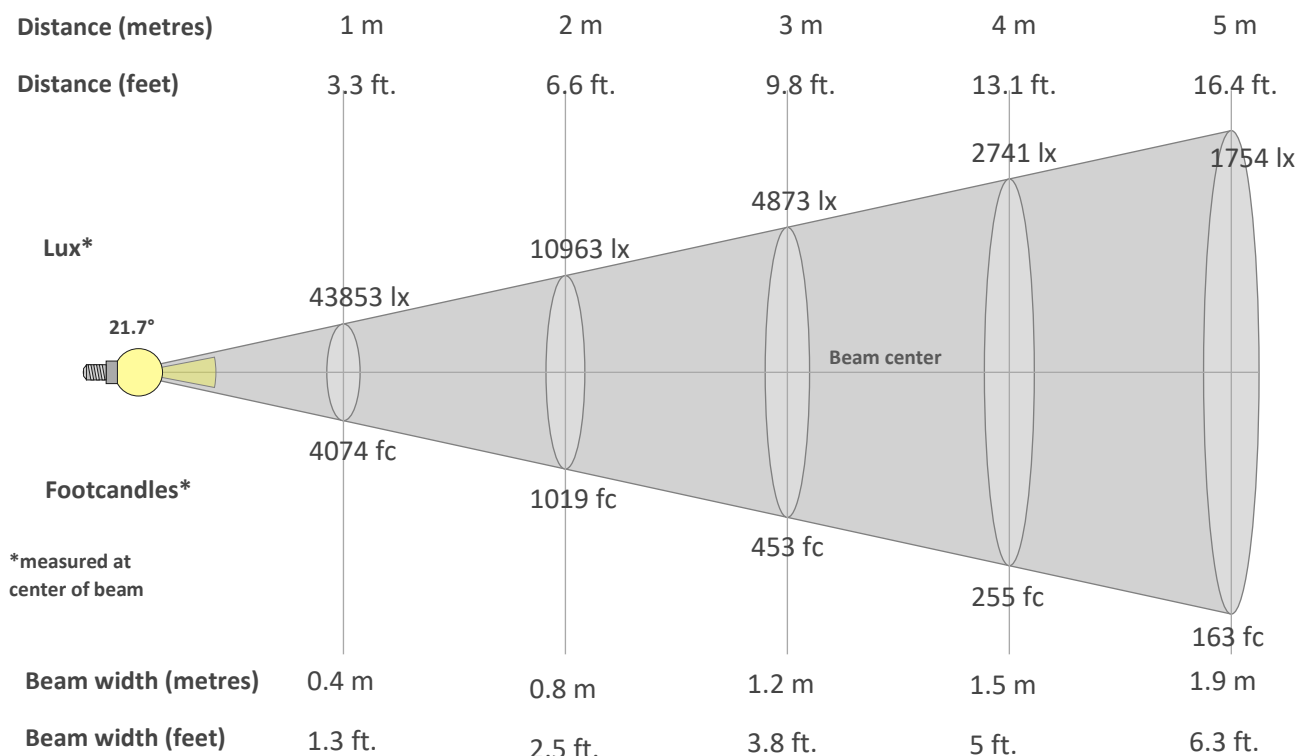
TM30 CHROMA SHIFT



COLOR DISTORTION GRAPHICS



BEAM DETAILS



Beam intensity 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
43853lx	10963lx	4873lx	2741lx	1754lx	1218lx	895lx	685lx	541lx	439lx	362lx	305lx	259lx	224lx	195lx	171lx	152lx	135lx	121lx	110lx
4074fc	1018.5fc	452.7fc	254.6fc	163fc	113.2fc	83.1fc	63.7fc	50.3fc	40.7fc	33.7fc	28.3fc	24.1fc	20.8fc	18.1fc	15.9fc	14.1fc	12.6fc	11.3fc	10.2fc

Intensity in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
43.9K	43.7K	43.5K	43.0K	42.4K	41.8K	41.1K	40.3K	39.3K	38.1K	36.3K	34.1K	31.4K	28.3K	25.0K	21.6K	18.2K	15.1K	12.1K	9.4K
100%	100%	99%	98%	97%	95%	94%	92%	90%	87%	83%	78%	72%	65%	57%	49%	42%	34%	28%	22%

Intensity in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
43.9K	39.5K	28.0K	16.1K	8.9K	5.1K	3.0K	1.9K	1.4K	1.1K	0.8K	0.7K	0.6K	0.5K	0.5K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	90%	64%	37%	20%	12%	7%	4%	3%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	0%

Intensity in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
43.9K	43.7K	43.5K	43.0K	42.4K	41.8K	41.1K	40.3K	39.3K	38.1K	36.3K	34.1K	31.4K	28.3K	25.0K	21.6K	18.2K	15.1K	12.1K	9.4K
100%	100%	99%	98%	97%	95%	94%	92%	90%	87%	83%	78%	72%	65%	57%	49%	42%	34%	28%	22%

Intensity in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
43.9K	39.5K	28.0K	16.1K	8.9K	5.1K	3.0K	1.9K	1.4K	1.1K	0.8K	0.7K	0.6K	0.5K	0.5K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	90%	64%	37%	20%	12%	7%	4%	3%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	0%