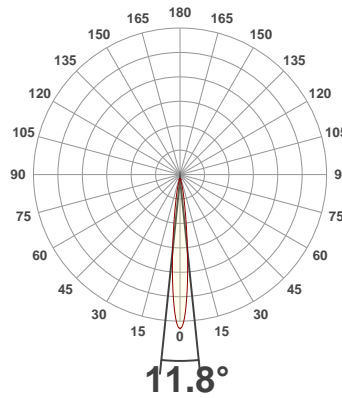
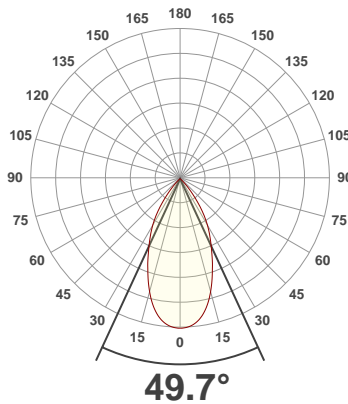




PRODUCT INFORMATION

SERIAL NUMBER:	LL-201203-1551
DATE OF MEASUREMENT:	2020-12-03
SIZE (dia. x h):	73 mm x 47 mm

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

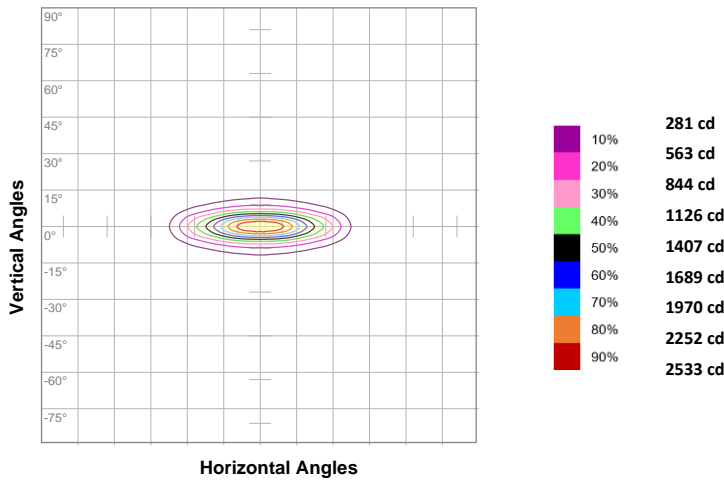


TOTAL LUMEN OUTPUT:	648 lm
EFFICACY:	64 lm/W
PEAK INTENSITY:	2816 cd
COLOR RENDERING INDEX (CRI):	80.1
COLOR TEMPERATURE (CCT):	3012K
FIDELITY INDEX (TM30rf):	81.7
GAMUT INDEX (TM30Rg):	97.4

BEAM OUTPUT DATA

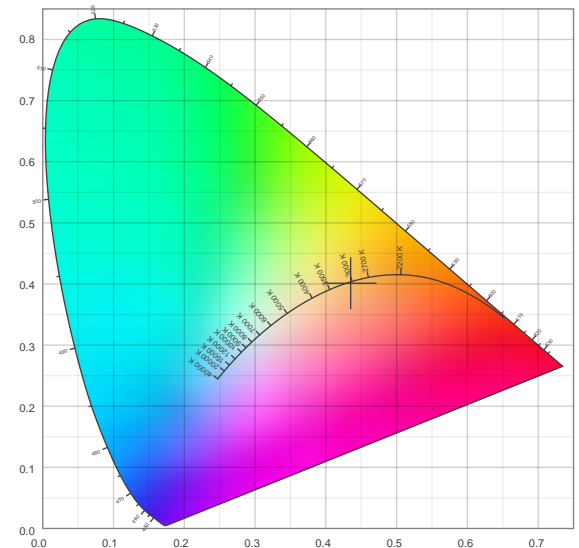
BEAM ANGLE (FWHM) C0/180:	49.7°
BEAM ANGLE (FWHM) C90/270:	11.8°
FIELD ANGLE (10%) C0/180:	83°
FIELD ANGLE (10%) C90/270:	26.1°
NUMBER OF PLANES MEASURED:	24

ISOCANDELA DIAGRAM

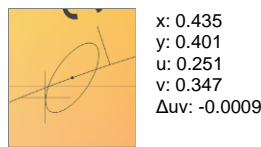


INPUT POWER:	10.1 W
POWER FACTOR:	1.0
OPTICAL POWER:	1.97 mW
PEAK WAVELENGTH:	601 nm
DOMINANT WAVELENGTH:	584 nm

CIE 1931



SPECTRAL DISTRIBUTION | CIE 1931 ZOOM



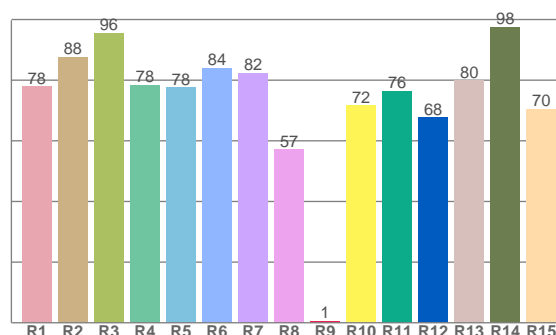
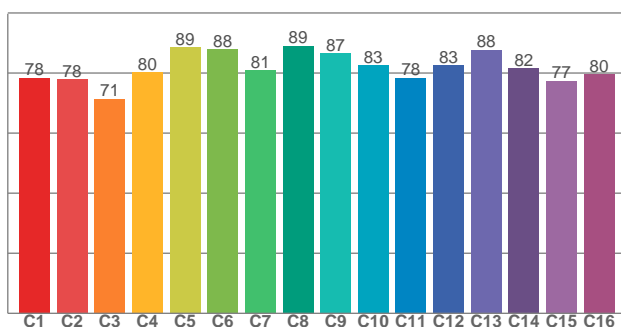
ZONAL LUMEN SUMMARY

0°-10° 178 lm	10°-20° 215 lm	20°-30° 139 lm	30°-40° 72.5 lm	40°-50° 24.7 lm	50°-60° 9.89 lm	60°-70° 5.76 lm	70°-80° 2.97 lm	80°-90° 0.807 lm
90°-100° 0.156 lm	100°-110° 0.130 lm	110°-120° 0.064 lm	120°-130° 0.042 lm	130°-140° 0.031 lm	140°-150° 0.021 lm	150°-160° 0.015 lm	160°-170° 0.009 lm	170°-180° 0.003 lm

COLOR DETAILS

TM30: 81.7

CRI: 80.1 (R1-R8)



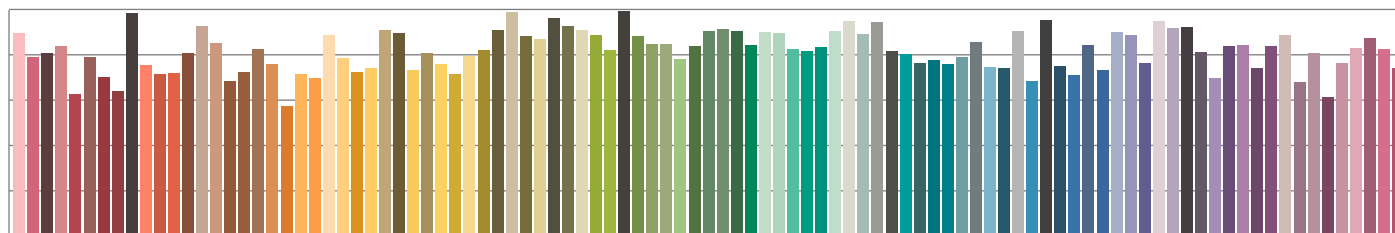
TM30 C values, 16 binned values out of total of 99 C values

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
78.4	78.0	71.4	80.2	88.5	87.9	80.9	89.0	86.5	82.6	78.5	82.6	87.7	81.5	77.4	79.5

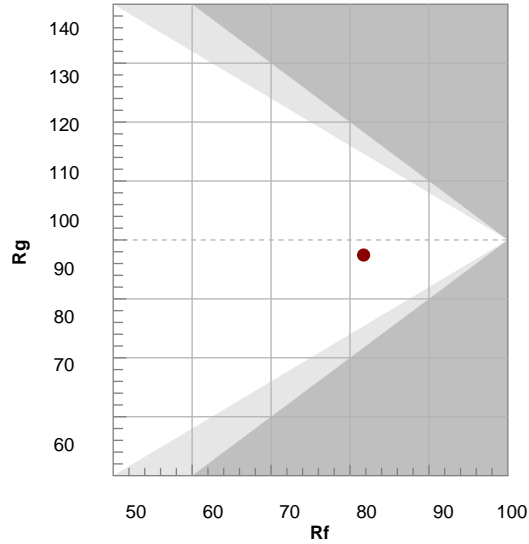
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
77.9	87.7	95.6	78.3	77.6	84.0	82.4	57.1	0.6	71.6	76.3	67.6	79.8	97.5	70.4

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	78	-12%	-2%
2	78	-9%	9%
3	71	-3%	15%
4	80	5%	12%
5	89	8%	6%
6	88	7%	-4%
7	81	1%	-12%
8	89	-4%	-6%
9	87	-8%	-1%
10	83	-8%	7%
11	78	-4%	15%
12	83	5%	7%
13	88	7%	-3%
14	82	7%	-13%
15	77	0%	-15%
16	80	-8%	-15%



FIDELITY INDEX

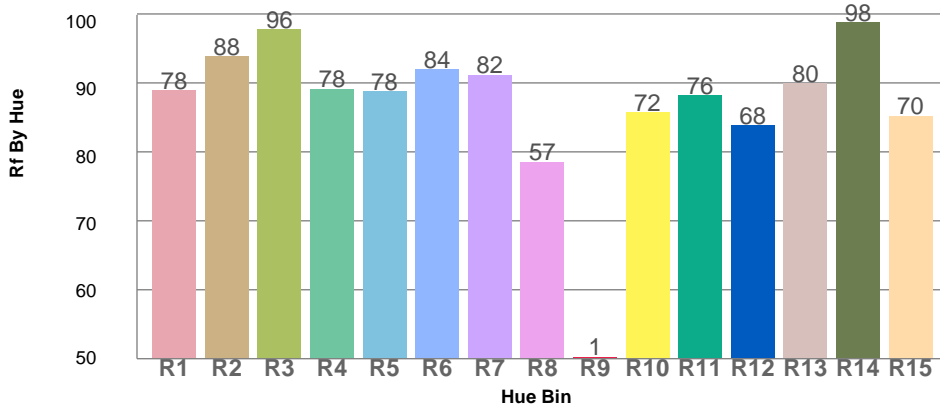
R_f 81.7

GAMUT INDEX

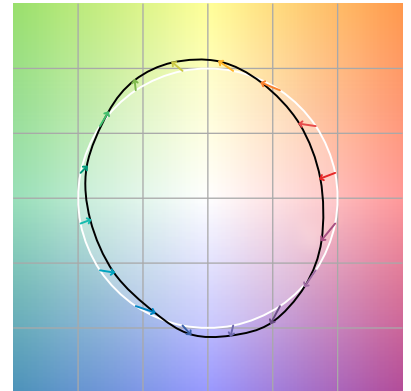
R_g 97.4

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

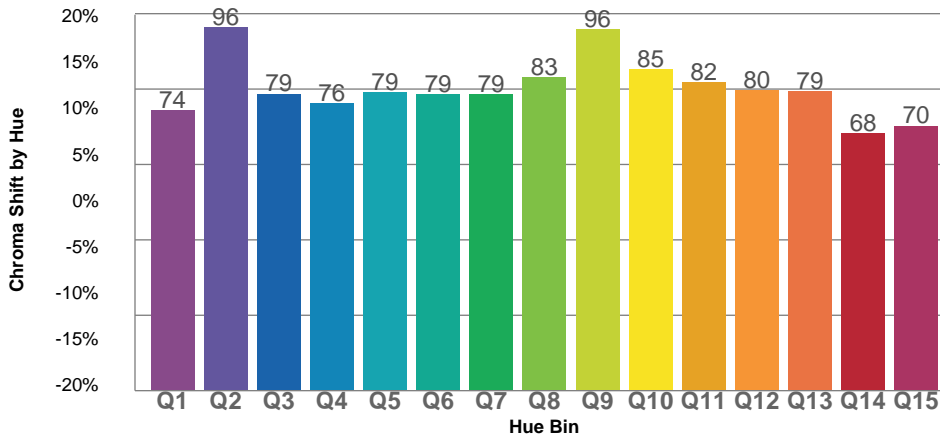
TM30 OVER 50



COLOR VECTOR GRAPHICS



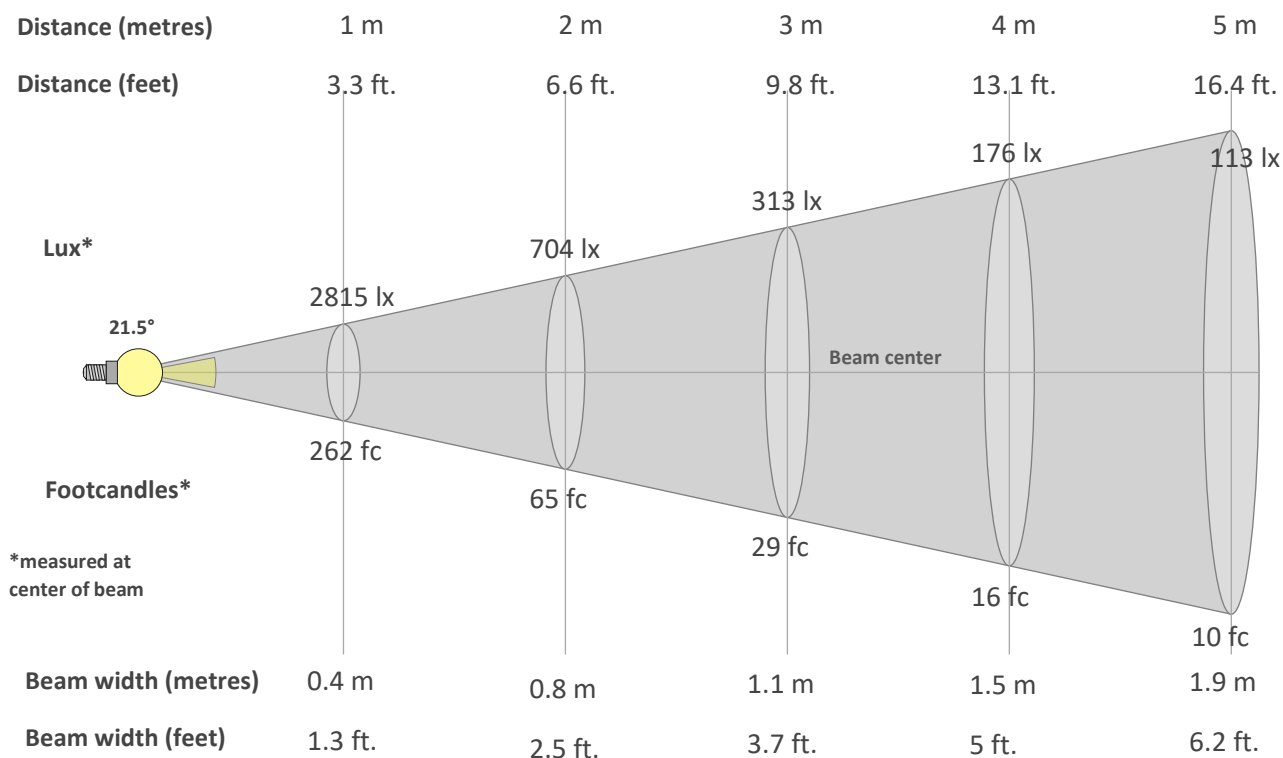
TM30 CHROMA SHIFT



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
2815lx	704lx	313lx	176lx	113lx	78lx	57lx	44lx	35lx	28lx	23lx	20lx	17lx	14lx	13lx	11lx	10lx	9lx	8lx	7lx
261.5fc	65.4fc	29.1fc	16.3fc	10.5fc	7.3fc	5.3fc	4.1fc	3.2fc	2.6fc	2.2fc	1.8fc	1.5fc	1.3fc	1.2fc	1fc	0.9fc	0.8fc	0.7fc	0.7fc

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°
2815	2807	2782	2736	2666	2569	2448	2302	2138	1966	1791	1629	1469	1327	1193	1063	927	782	634	491
100%	100%	99%	97%	95%	91%	87%	82%	76%	70%	64%	58%	52%	47%	42%	38%	33%	28%	23%	17%

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°
2815	2585	2016	1369	854	528	344	235	164	115	82	61	46	36	29	23	19	17	14	12
100%	92%	72%	49%	30%	19%	12%	8%	6%	4%	3%	2%	2%	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°
2815	2807	2782	2736	2666	2569	2448	2302	2138	1966	1791	1629	1469	1327	1193	1063	927	782	634	491
100%	100%	99%	97%	95%	91%	87%	82%	76%	70%	64%	58%	52%	47%	42%	38%	33%	28%	23%	17%

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°
2815	2585	2016	1369	854	528	344	235	164	115	82	61	46	36	29	23	19	17	14	12
100%	92%	72%	49%	30%	19%	12%	8%	6%	4%	3%	2%	2%	1%	1%	1%	1%	1%	1%	0%