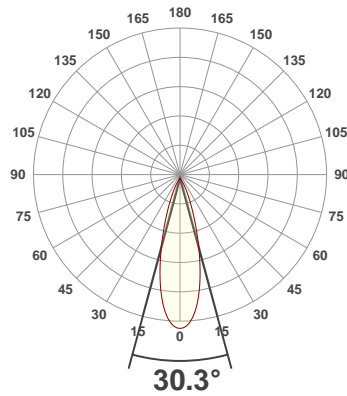
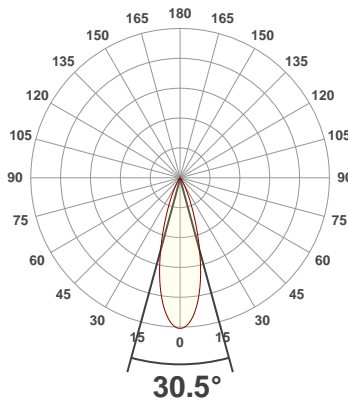




PRODUCT INFORMATION

SERIAL NUMBER:	LL-200228-0341
DATE OF MEASUREMENT:	2020-02-28
SIZE (dia. x h):	251 mm x 78 mm

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

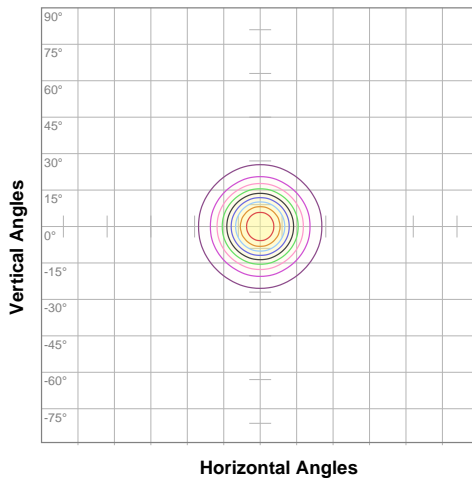


TOTAL LUMEN OUTPUT:	3437 lm
EFFICACY:	69 lm/W
PEAK INTENSITY:	9857 cd
COLOR RENDERING INDEX (CRI):	81.2
COLOR TEMPERATURE (CCT):	3797K
FIDELITY INDEX (TM30rf):	82.3
GAMUT INDEX (TM30Rg):	97.9

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	30.5°
BEAM ANGLE (FWHM) C90/270:	30.3°
FIELD ANGLE (10%) C0/180:	56.4°
FIELD ANGLE (10%) C90/270:	56.6°
NUMBER OF PLANES MEASURED:	12

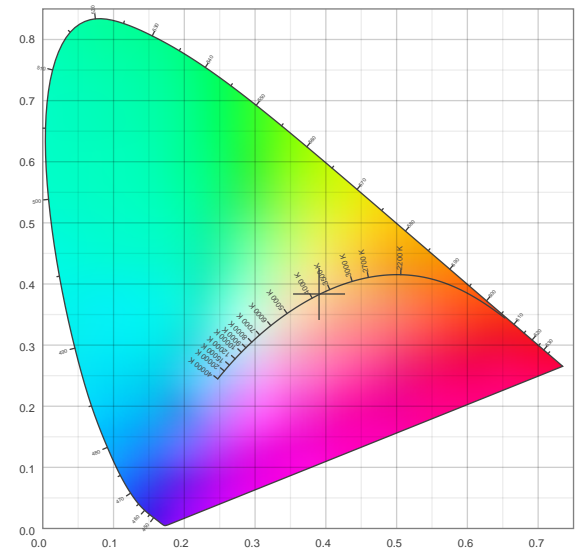
ISOCANDELA DIAGRAM



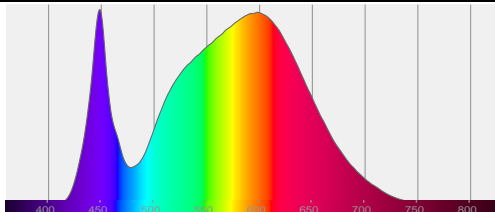
10%	985 cd
20%	1971 cd
30%	2956 cd
40%	3941 cd
50%	4927 cd
60%	5912 cd
70%	6897 cd
80%	7883 cd
90%	8868 cd

INPUT POWER:	50.0 W
POWER FACTOR:	1.0
OPTICAL POWER:	10.4 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931



SPECTRAL DISTRIBUTION | CIE 1931 ZOOM



x:	0.390
y:	0.384
u:	0.229
v:	0.337
Δuv:	0.0004

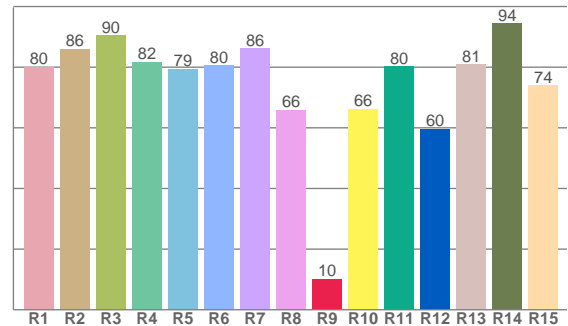
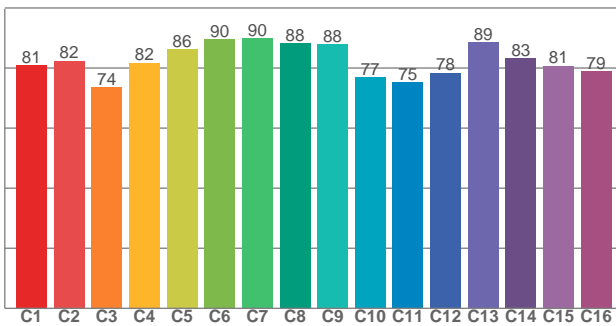
ZONAL LUMEN SUMMARY

0°-10° 825 lm	10°-20° 1365 lm	20°-30° 708 lm	30°-40° 282 lm	40°-50° 122 lm	50°-60° 69.2 lm	60°-70° 44.0 lm	70°-80° 20.2 lm	80°-90° 1.79 lm
90°-100° 0.001 lm	100°-110° 0.001 lm	110°-120° 0.000 lm	120°-130° 0.000 lm	130°-140° 0.000 lm	140°-150° 0.000 lm	150°-160° 0.000 lm	160°-170° 0.000 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 82.3

CRI: 81.2 (R1-R8)



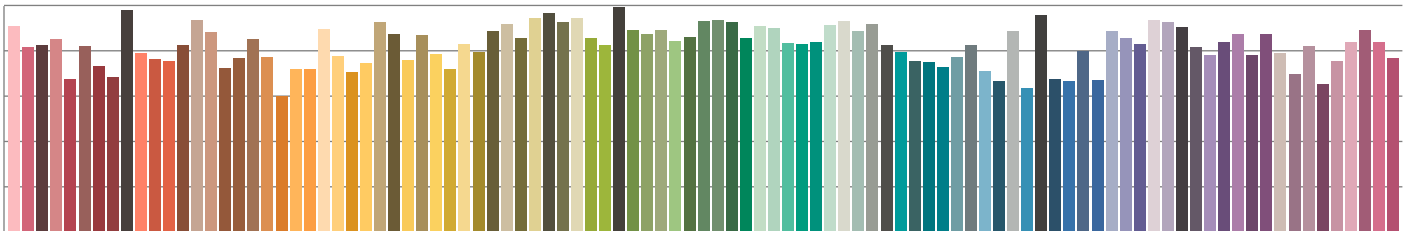
TM30 C values, 16 binned values out of total of 99 C values

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	73.5	81.8	86.1	89.5	89.8	88.3	88.0	76.9	75.2	78.4	88.5	83.3	80.7	79.0

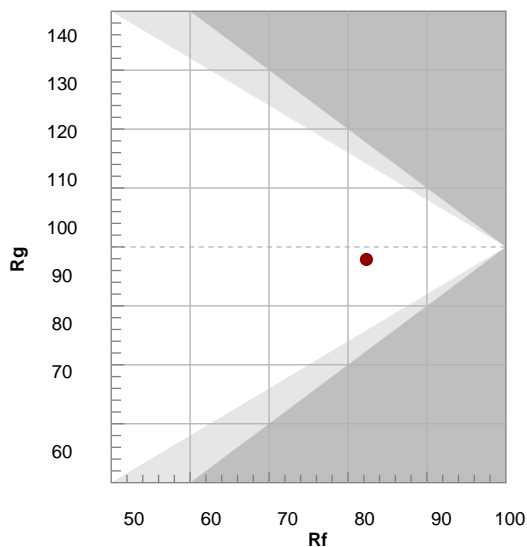
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.9	85.9	90.4	81.7	79.4	80.5	86.2	65.9	10.2	66.3	80.2	59.7	80.9	94.3	73.9

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

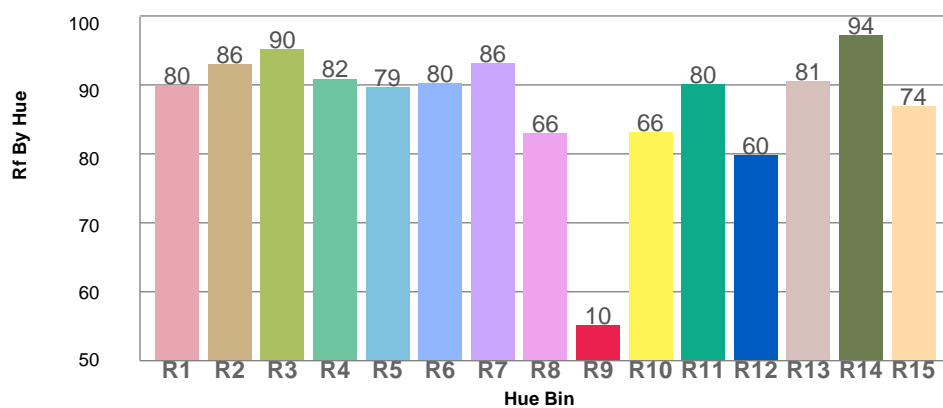
R_f 82.3

GAMUT INDEX

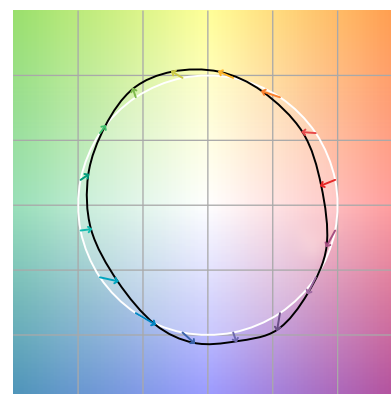
R_g 97.9

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

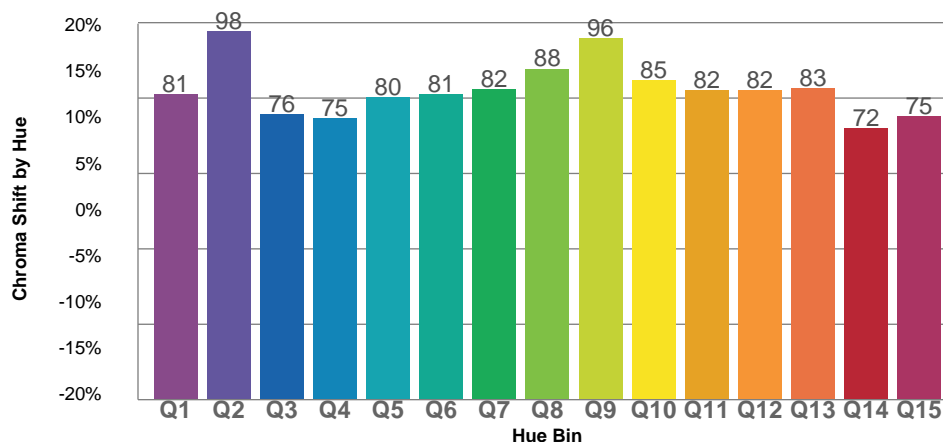
TM30 OVER 50



COLOR VECTOR GRAPHICS



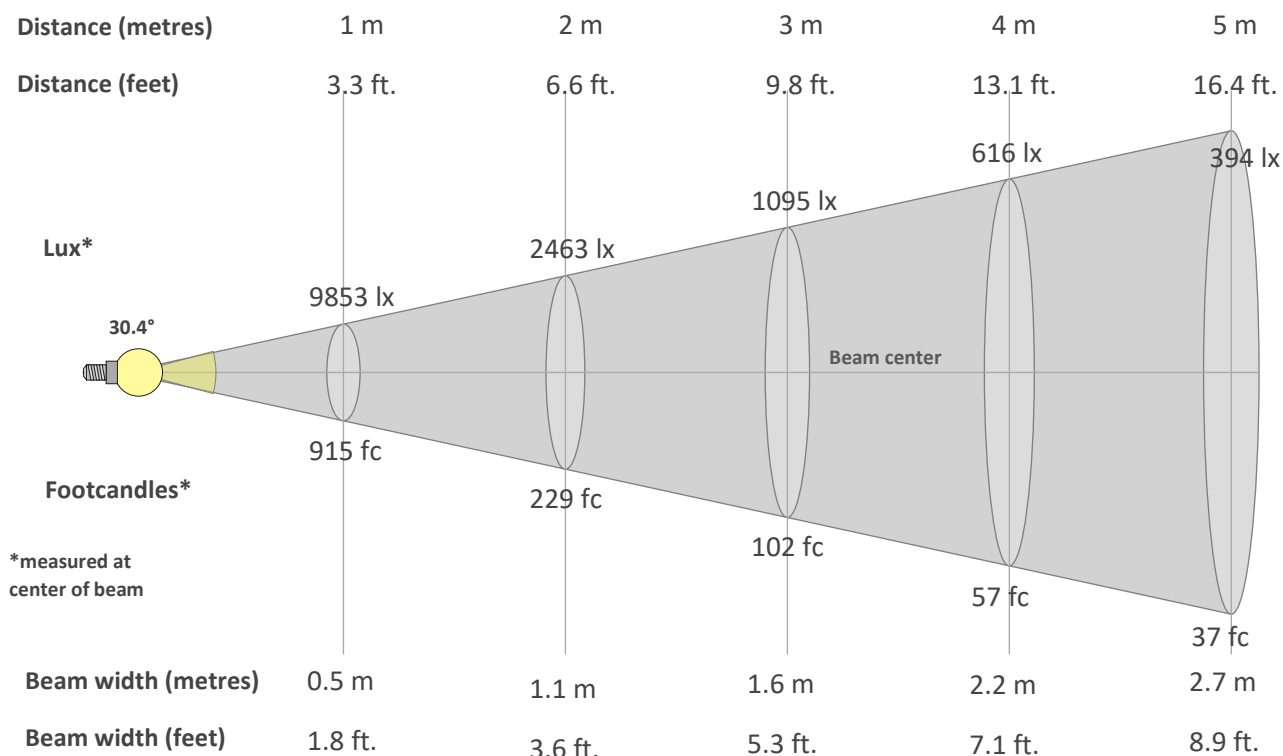
TM30 CHROMA SHIFT



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
9853lx	2463lx	1095lx	616lx	394lx	274lx	201lx	154lx	122lx	99lx	81lx	68lx	58lx	50lx	44lx	38lx	34lx	30lx	27lx	25lx
915.4fc	228.8fc	101.7fc	57.2fc	36.6fc	25.4fc	18.7fc	14.3fc	11.3fc	9.2fc	7.6fc	6.4fc	5.4fc	4.7fc	4.1fc	3.6fc	3.2fc	2.8fc	2.5fc	2.3fc

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°
9853	9744	9430	8926	8257	7444	6525	5541	4572	3664	2873	2214	1697	1305	1011	789	622	492	392	312
100%	99%	96%	91%	84%	76%	66%	56%	46%	37%	29%	22%	17%	13%	10%	8%	6%	5%	4%	3%

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°
9853	9758	9468	8982	8305	7468	6510	5501	4519	3620	2853	2214	1712	1324	1025	796	621	488	386	306
100%	99%	96%	91%	84%	76%	66%	56%	46%	37%	29%	22%	17%	13%	10%	8%	6%	5%	4%	3%

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°
9853	9744	9430	8926	8257	7444	6525	5541	4572	3664	2873	2214	1697	1305	1011	789	622	492	392	312
100%	99%	96%	91%	84%	76%	66%	56%	46%	37%	29%	22%	17%	13%	10%	8%	6%	5%	4%	3%

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°
9853	9758	9468	8982	8305	7468	6510	5501	4519	3620	2853	2214	1712	1324	1025	796	621	488	386	306
100%	99%	96%	91%	84%	76%	66%	56%	46%	37%	29%	22%	17%	13%	10%	8%	6%	5%	4%	3%