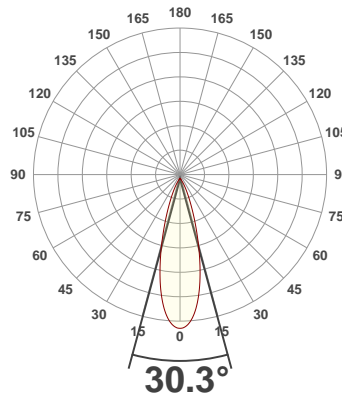
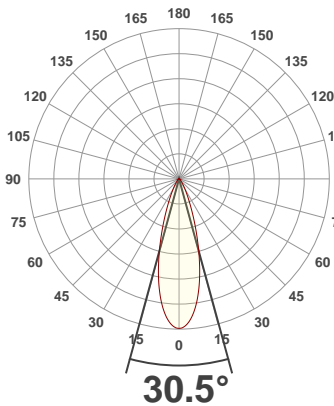




PRODUCT INFORMATION

SERIAL NUMBER:	LL-200228-0341
DATE OF MEASUREMENT:	2020-02-28
SIZE (dia. x h):	310 mm x 85 mm

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

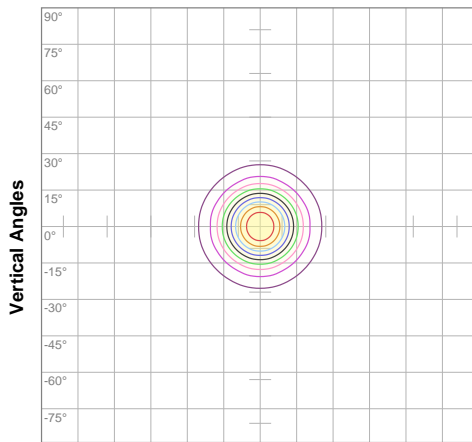


TOTAL LUMEN OUTPUT:	9992 lm
EFFICACY:	103 lm/W
PEAK INTENSITY:	28656 cd
COLOR RENDERING INDEX (CRI):	81.2
COLOR TEMPERATURE (CCT):	3797K
FIDELITY INDEX (TM30Rf):	82.3
GAMUT INDEX (TM30Rg):	97.9

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

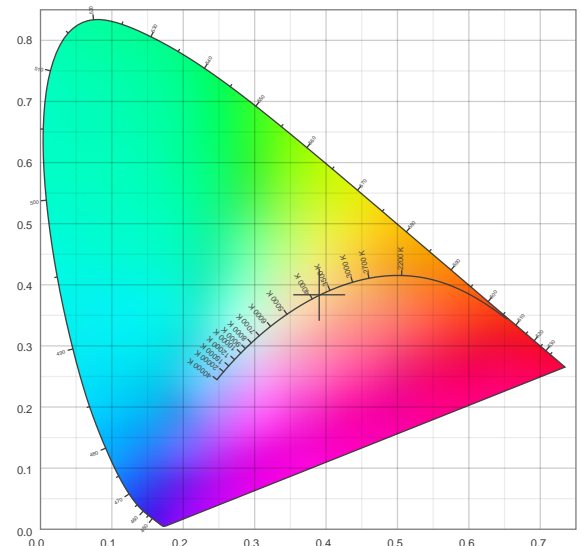
ISO CANDELA DIAGRAM | DATA



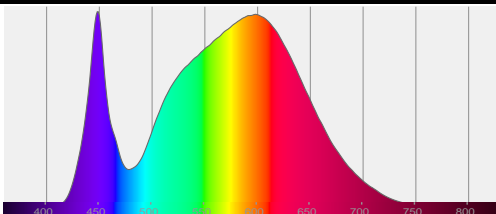
10%	2865 cd
20%	5729 cd
30%	8594 cd
40%	11459 cd
50%	14323 cd
60%	17188 cd
70%	20052 cd
80%	22917 cd
90%	25782 cd

INPUT POWER:	96.8 W
POWER FACTOR:	1.0
OPTICAL POWER:	30.2 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	582 nm

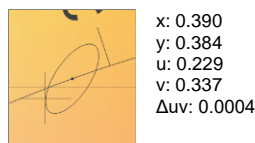
CIE 1931:



SPECTRA



CIE 1931 ZOOM



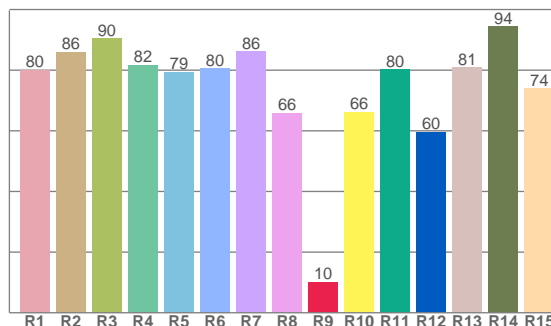
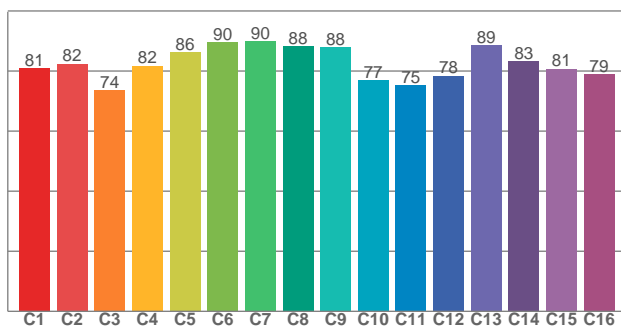
ZONAL LUMEN SUMMARY

0°-10° 2399 lm	10°-20° 3968 lm	20°-30° 2058 lm	30°-40° 821 lm	40°-50° 354 lm	50°-60° 201 lm	60°-70° 128 lm	70°-80° 58.8 lm	80°-90° 5.22 lm
90°-100° 0.002 lm	100°-110° 0.002 lm	110°-120° 0.001 lm	120°-130° 0.001 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: 82.3

CRI: 81.2 (R1-R8)



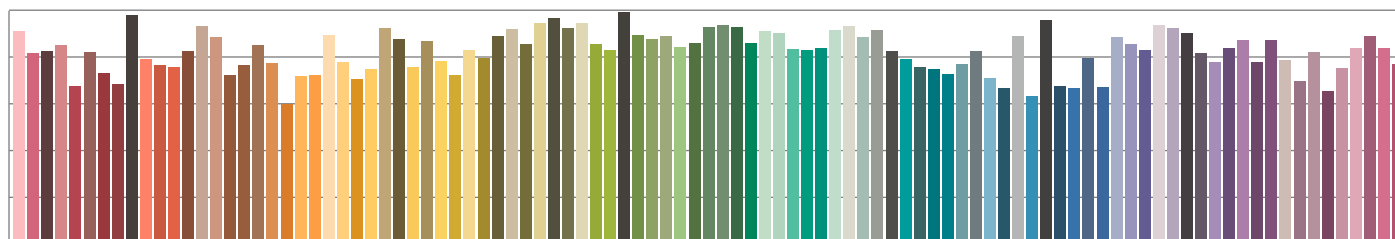
TM30 C values, 16 binned values out of total of 99 C values

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

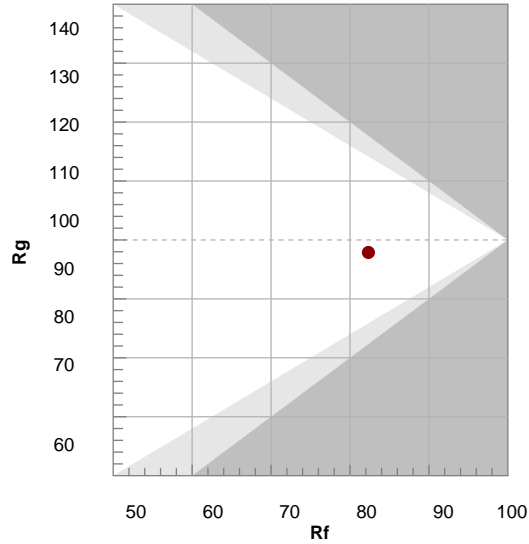
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.9	85.9	90.4	81.7	79.4	80.5	86.2	65.9	10.2	66.3	80.2	59.7	80.9	94.3	73.9

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

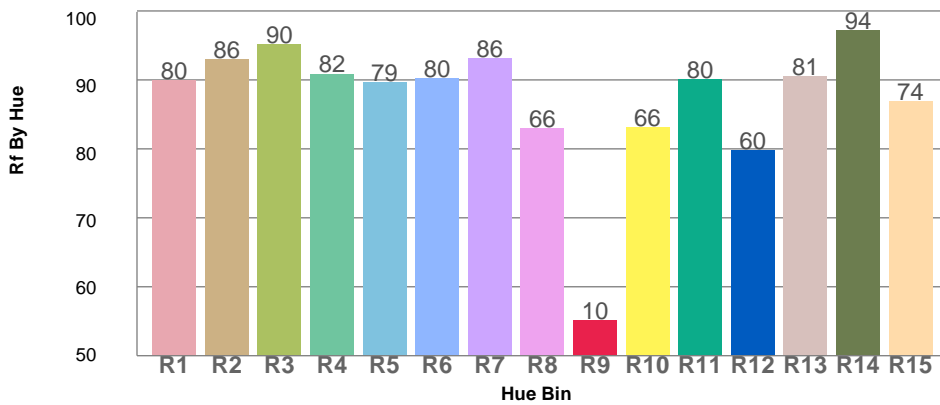
R_f 82.3

GAMUT INDEX

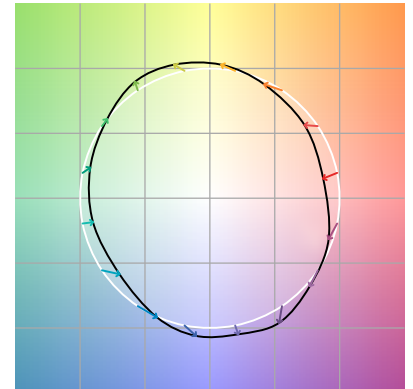
R_g 97.9

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

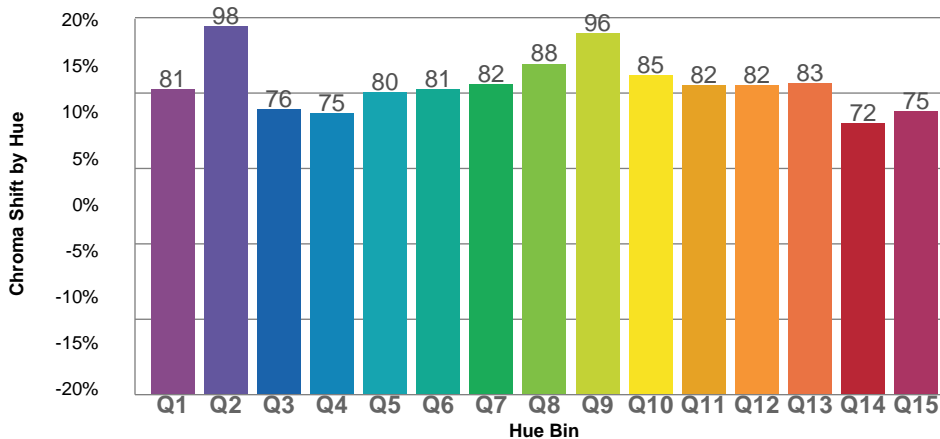
TM30 OVER 50



COLOR VECTOR GRAPHICS



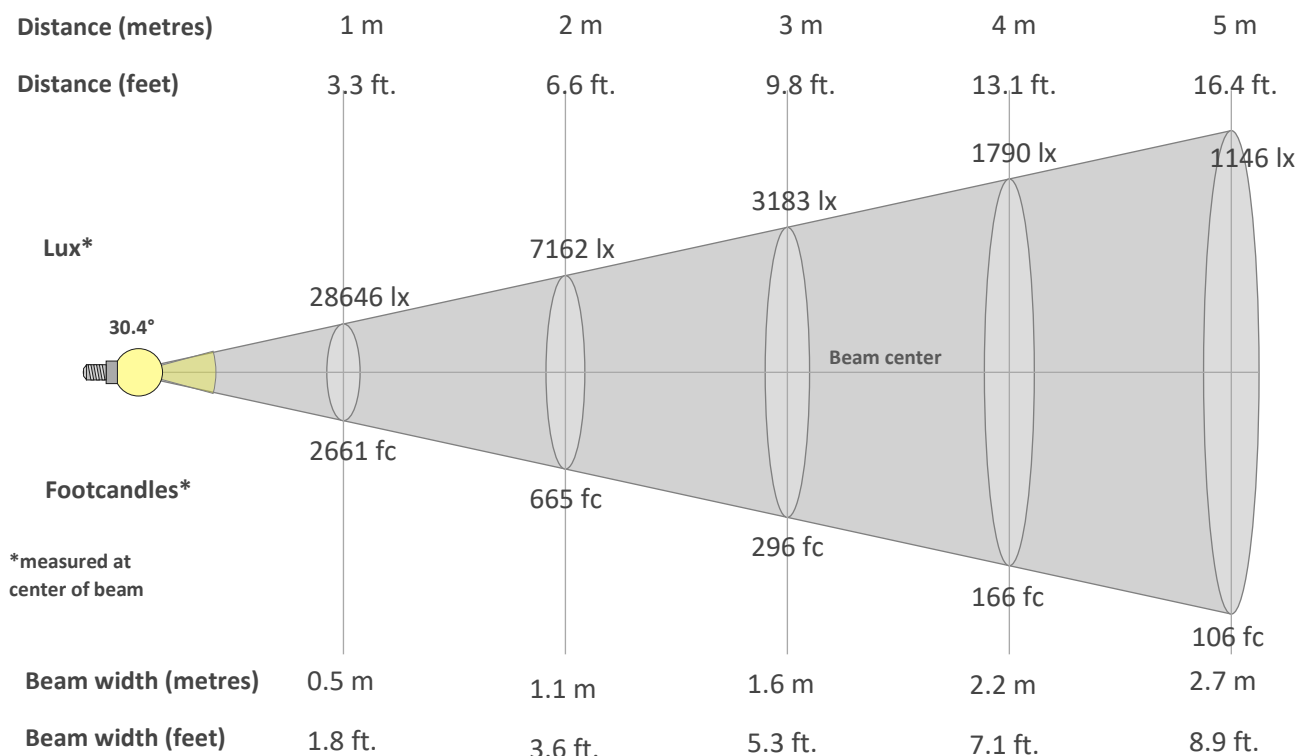
TM30 CHROMA SHIFT



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
28646lx	7162lx	3183lx	1790lx	1146lx	796lx	585lx	448lx	354lx	286lx	237lx	199lx	170lx	146lx	127lx	112lx	99lx	88lx	79lx	72lx
2661.3fc	665.3fc	295.7fc	166.3fc	106.5fc	73.9fc	54.3fc	41.6fc	32.9fc	26.6fc	22fc	18.5fc	15.7fc	13.6fc	11.8fc	10.4fc	9.2fc	8.2fc	7.4fc	6.7fc

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°
28.6K	28.3K	27.4K	26.0K	24.0K	21.6K	19.0K	16.1K	13.3K	10.7K	8.4K	6.4K	4.9K	3.8K	2.9K	2.3K	1.8K	1.4K	1.1K	0.9K
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°
28.6K	28.4K	27.5K	26.1K	24.1K	21.7K	18.9K	16.0K	13.1K	10.5K	8.3K	6.4K	5.0K	3.9K	3.0K	2.3K	1.8K	1.4K	1.1K	0.9K
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°
28.6K	28.3K	27.4K	26.0K	24.0K	21.6K	19.0K	16.1K	13.3K	10.7K	8.4K	6.4K	4.9K	3.8K	2.9K	2.3K	1.8K	1.4K	1.1K	0.9K
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°
28.6K	28.4K	27.5K	26.1K	24.1K	21.7K	18.9K	16.0K	13.1K	10.5K	8.3K	6.4K	5.0K	3.9K	3.0K	2.3K	1.8K	1.4K	1.1K	0.9K
100%	99%	96%	91%	84%	76%	66%	56%	46%	37%	29%	22%	17%	13%	10%	8%	6%	5%	4%	3%