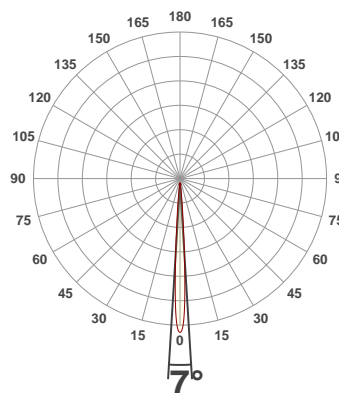
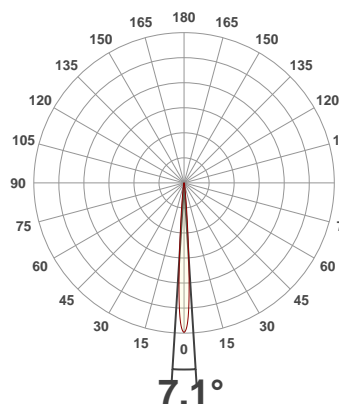




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20190820-524-BMS
DATE OF MEASUREMENT:	2019-08-20
SIZE (mm): (dia. x h)	200 x 78

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

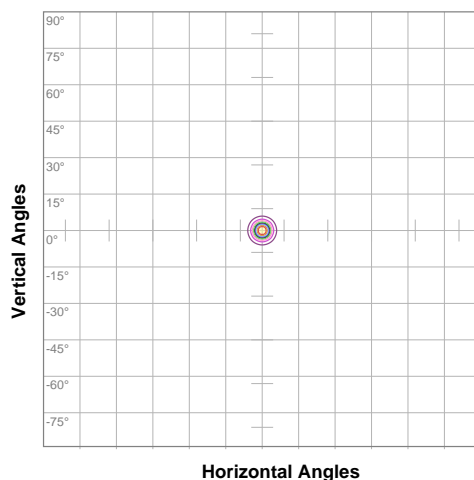


TOTAL LUMEN OUTPUT:	1928 lm
EFFICACY:	77 lm/W
PEAK INTENSITY:	94360 cd
COLOR RENDERING INDEX (CRI):	82.3
COLOR TEMPERATURE (CCT):	3927K
FIDELITY INDEX (TM30Rf):	83.7
GAMUT INDEX (TM30Rg):	97.2

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	7.1°
BEAM ANGLE (FWHM) C90/270:	7°
FIELD ANGLE (10%) C0/180:	13.2°
FIELD ANGLE (10%) C90/270:	13.2°
NUMBER OF PLANES MEASURED:	8

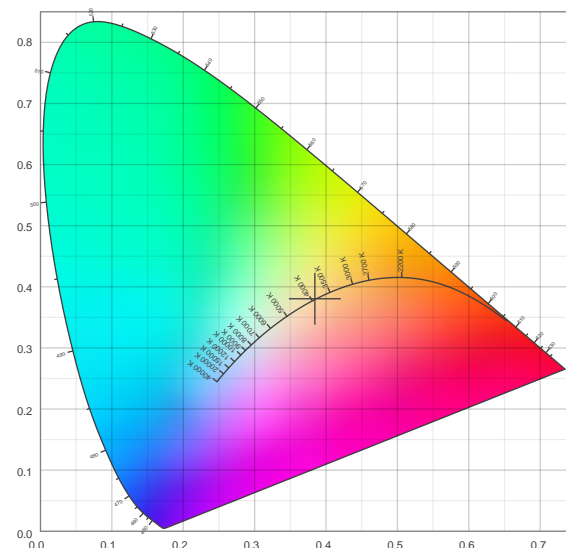
ISO CANDELA DIAGRAM | DATA



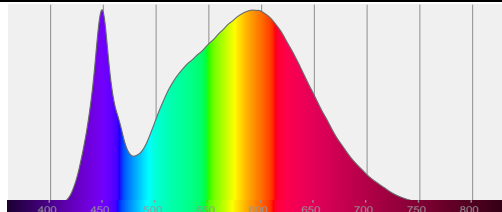
10%	9428 cd
20%	18856 cd
30%	28284 cd
40%	37712 cd
50%	47140 cd
60%	56568 cd
70%	65996 cd
80%	75424 cd
90%	84852 cd

INPUT POWER:	25.0 W
POWER FACTOR:	1.0
OPTICAL POWER:	5.93 mW
PEAK WAVELENGTH:	449 nm
DOMINANT WAVELENGTH:	581 nm

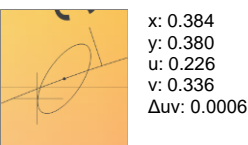
CIE 1931:



SPECTRA



CIE 1931 ZOOM



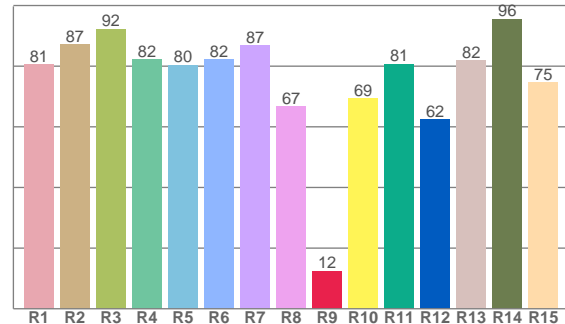
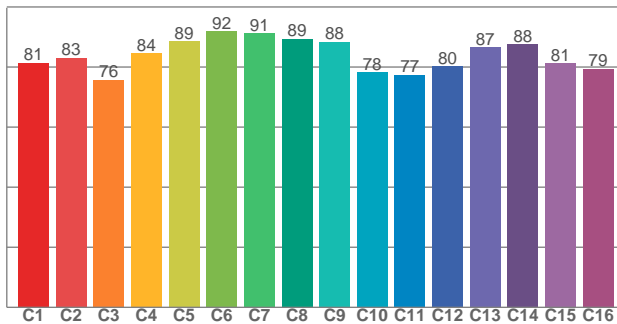
ZONAL LUMEN SUMMARY

0°-10° 1736 lm	10°-20° 163 lm	20°-30° 24.2 lm	30°-40° 4.34 lm	40°-50° 0.074 lm	50°-60° 0.059 lm	60°-70° 0.035 lm	70°-80° 0.013 lm	80°-90° 0.008 lm
90°-100° 0.004 lm	100°-110° 0.002 lm	110°-120° 0.001 lm	120°-130° 0.001 lm	130°-140° 0.001 lm	140°-150° 0.001 lm	150°-160° 0.001 lm	160°-170° 0.000 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 83.7

CRI: 82.3 (R1-R8)



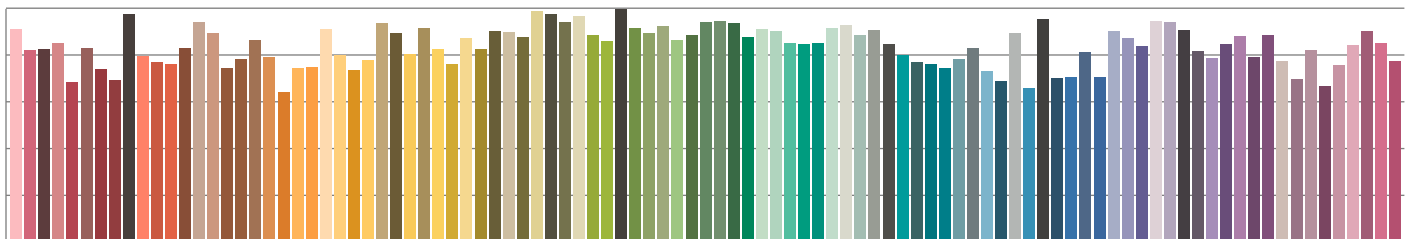
TM30 C values, 16 binned values out of total of 99 C values

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
81.4	83.1	75.7	84.5	88.5	91.9	91.2	89.3	88.4	78.2	77.4	80.2	86.6	87.5	81.3	79.4

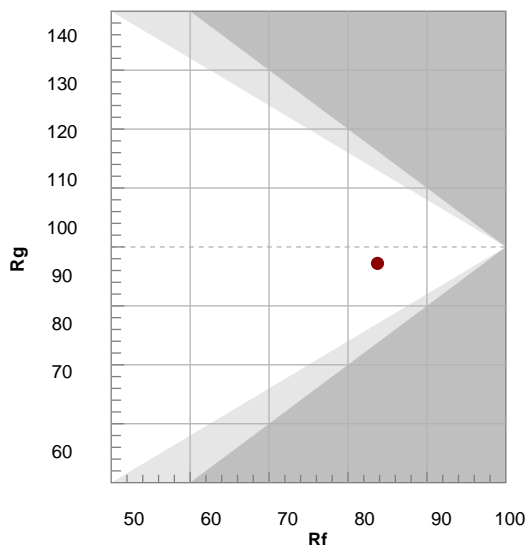
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.5	87.1	92.2	82.2	80.4	82.2	86.8	66.7	12.4	69.4	80.7	62.4	81.8	95.5	74.6

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	83	-8%	6%
3	76	-4%	13%
4	84	2%	10%
5	89	4%	6%
6	92	5%	-2%
7	91	-2%	-5%
8	89	-5%	-4%
9	88	-8%	2%
10	78	-8%	10%
11	77	0%	15%
12	80	5%	10%
13	87	8%	-3%
14	88	10%	-5%
15	81	1%	-13%
16	79	-4%	-13%



FIDELITY INDEX

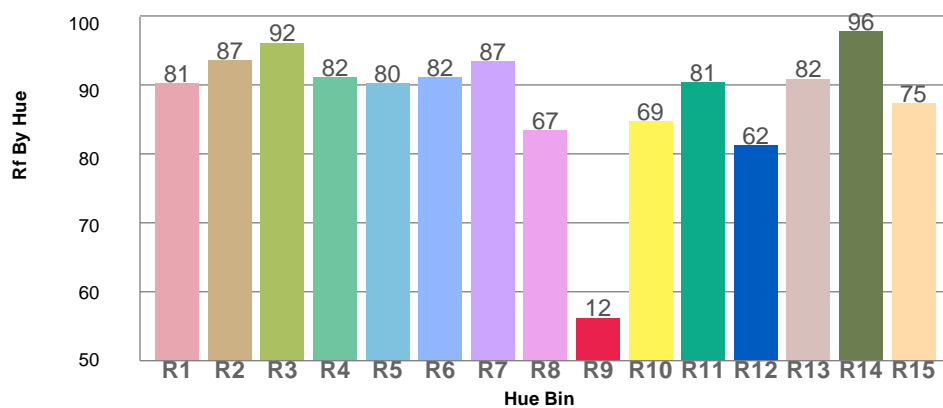
R_f 83.7

GAMUT INDEX

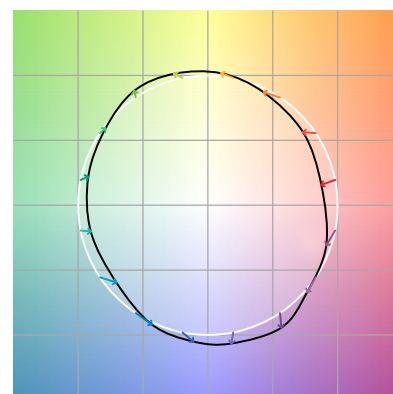
R_g 97.2

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

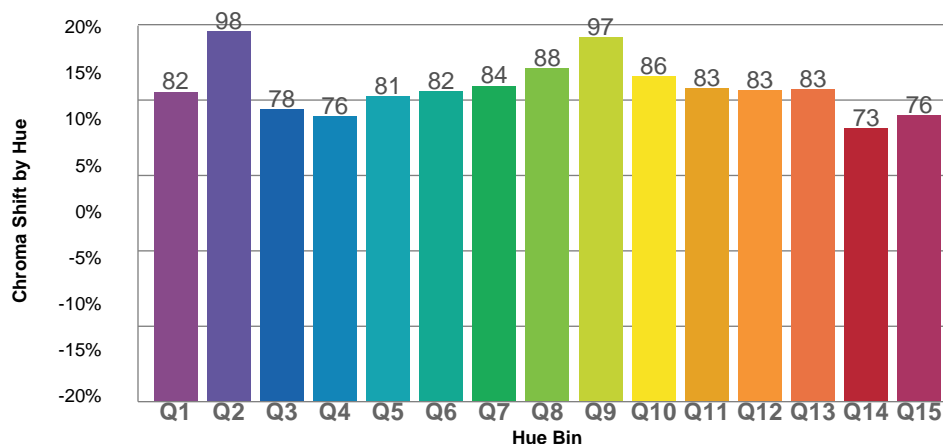
TM30 OVER 50



COLOR VECTOR GRAPHICS



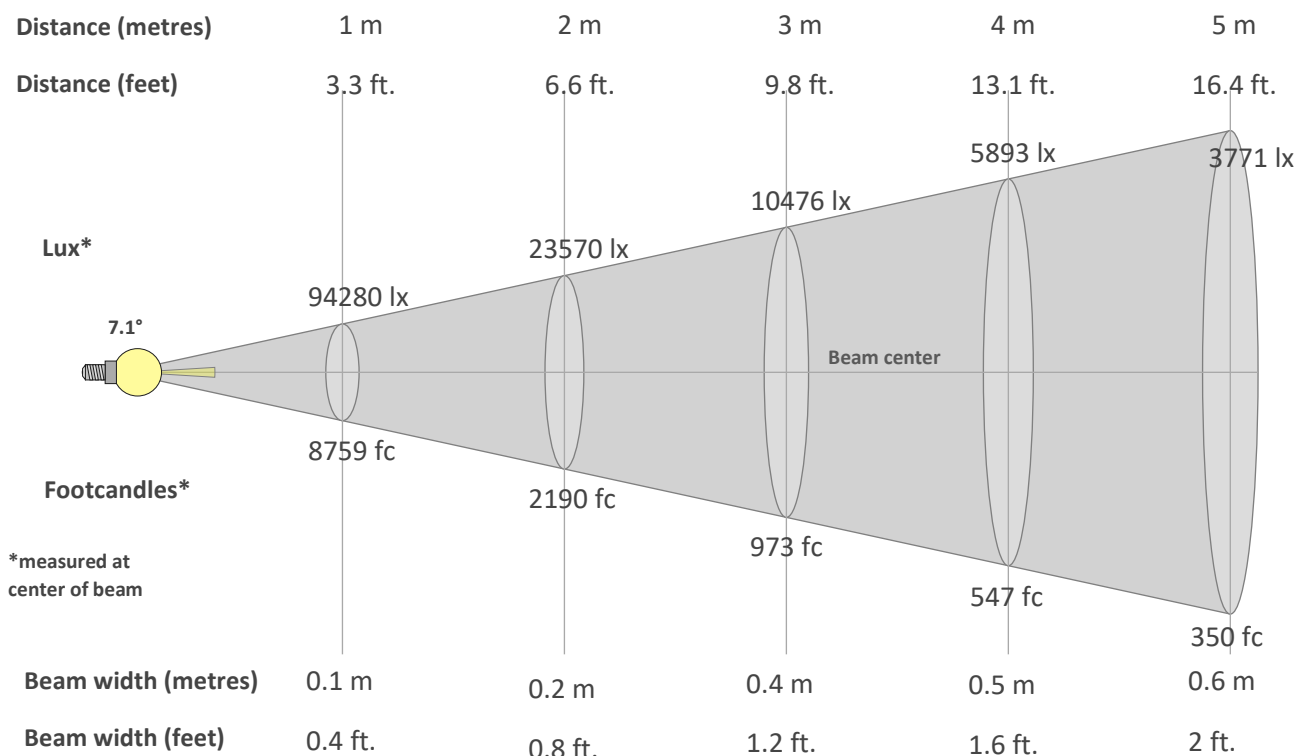
TM30 CHROMA SHIFT



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
94280lx	23570lx	10476lx	5893lx	3771lx	2619lx	1924lx	1473lx	1164lx	943lx	779lx	655lx	558lx	481lx	419lx	368lx	326lx	291lx	261lx	236lx
8758.9fc	2189.7fc	973.2fc	547.4fc	350.4fc	243.3fc	178.8fc	136.9fc	108.1fc	87.6fc	72.4fc	60.8fc	51.8fc	44.7fc	38.9fc	34.2fc	30.3fc	27fc	24.3fc	21.9fc

Intensity in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
94.3K	91.5K	81.3K	60.7K	37.5K	21.7K	12.9K	7.8K	4.8K	3.1K	2.1K	1.5K	1.1K	0.8K	0.5K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	97%	86%	64%	40%	23%	14%	8%	5%	3%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%

Intensity in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
94.3K	91.5K	80.5K	58.7K	36.4K	21.3K	12.7K	7.8K	5.0K	3.2K	2.1K	1.5K	1.1K	0.8K	0.6K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	97%	85%	62%	39%	23%	13%	8%	5%	3%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%

Intensity in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
94.3K	91.5K	81.3K	60.7K	37.5K	21.7K	12.9K	7.8K	4.8K	3.1K	2.1K	1.5K	1.1K	0.8K	0.5K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	97%	86%	64%	40%	23%	14%	8%	5%	3%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%

Intensity in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
94.3K	91.5K	80.5K	58.7K	36.4K	21.3K	12.7K	7.8K	5.0K	3.2K	2.1K	1.5K	1.1K	0.8K	0.6K	0.4K	0.3K	0.3K	0.2K	0.2K
100%	97%	85%	62%	39%	23%	13%	8%	5%	3%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%