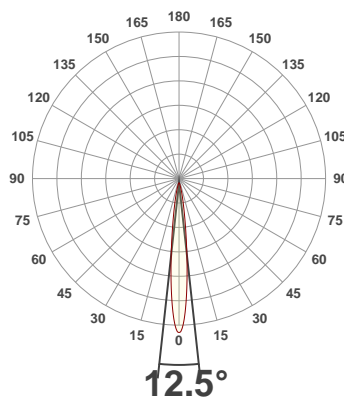
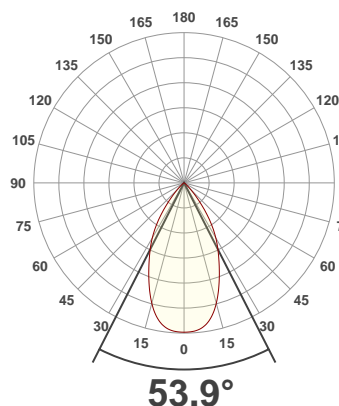




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20190829-577-BMS
DATE OF MEASUREMENT:	2019-08-29
SIZE (mm): (dia. x h)	200 x 78

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

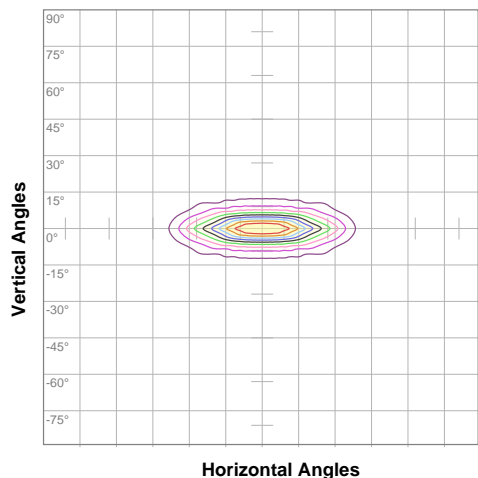


TOTAL LUMEN OUTPUT:	1979 lm
EFFICACY:	82 lm/W
PEAK INTENSITY:	7772 cd
COLOR RENDERING INDEX (CRI):	82.2
COLOR TEMPERATURE (CCT):	3916K
FIDELITY INDEX (TM30Rf):	83.7
GAMUT INDEX (TM30Rg):	97.3

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	53.9°
BEAM ANGLE (FWHM) C90/270:	12.5°
FIELD ANGLE (10%) C0/180:	85.3°
FIELD ANGLE (10%) C90/270:	27.2°
NUMBER OF PLANES MEASURED:	12

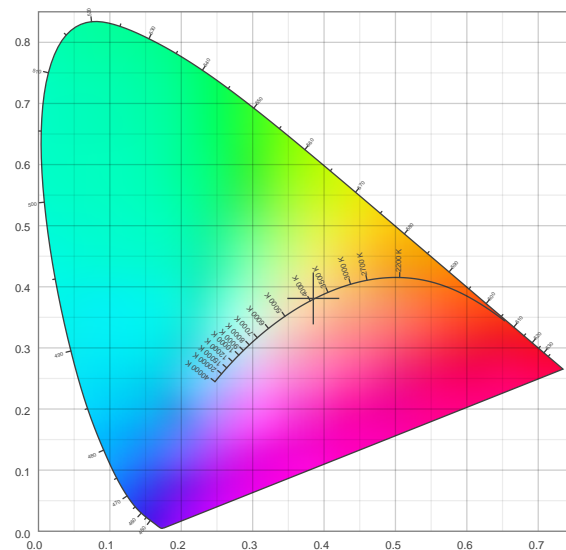
ISO CANDELA DIAGRAM | DATA



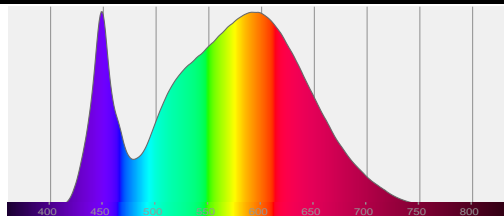
10%	777 cd
20%	1553 cd
30%	2330 cd
40%	3107 cd
50%	3883 cd
60%	4660 cd
70%	5437 cd
80%	6213 cd
90%	6990 cd

INPUT POWER:	24.1 W
POWER FACTOR:	1.0
OPTICAL POWER:	6.08 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	581 nm

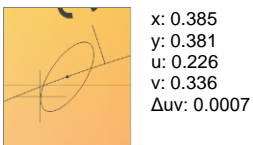
CIE 1931:



SPECTRA



CIE 1931 ZOOM



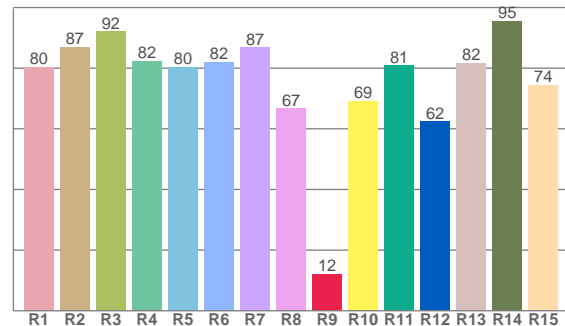
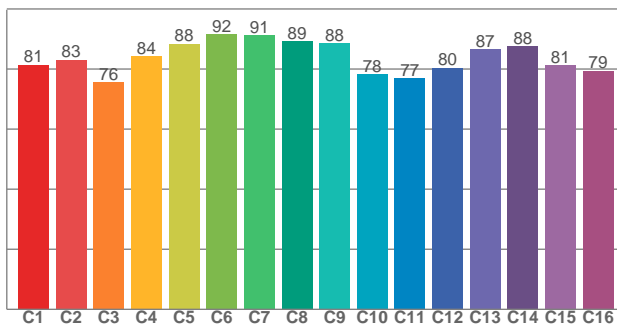
ZONAL LUMEN SUMMARY

0°-10° 510 lm	10°-20° 651 lm	20°-30° 433 lm	30°-40° 236 lm	40°-50° 86.2 lm	50°-60° 35.9 lm	60°-70° 20.1 lm	70°-80° 7.48 lm	80°-90° 0.436 lm
90°-100° 0.017 lm	100°-110° 0.016 lm	110°-120° 0.005 lm	120°-130° 0.003 lm	130°-140° 0.003 lm	140°-150° 0.002 lm	150°-160° 0.002 lm	160°-170° 0.001 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 83.7

CRI: 82.2 (R1-R8)



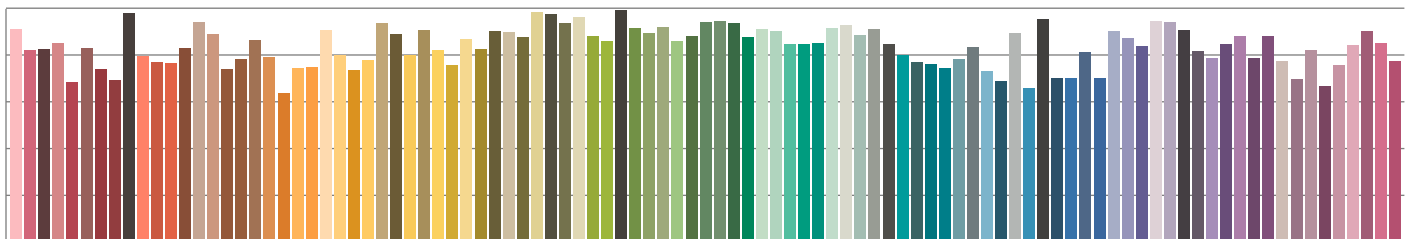
TM30 C values, 16 binned values out of total of 99 C values

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
81.4	83.1	75.6	84.3	88.3	91.7	91.1	89.3	88.4	78.3	76.9	80.4	86.5	87.5	81.2	79.4

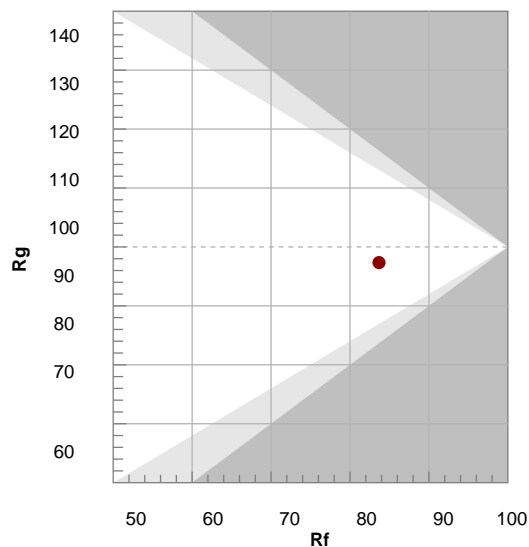
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.5	87.0	92.1	82.3	80.3	82.0	86.8	66.7	12.2	69.1	80.8	62.4	81.7	95.5	74.4

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	88	5%	6%
6	92	5%	-2%
7	91	-1%	-6%
8	89	-5%	-4%
9	88	-8%	2%
10	78	-8%	10%
11	77	0%	16%
12	80	6%	9%
13	87	8%	-3%
14	88	10%	-5%
15	81	1%	-13%
16	79	-4%	-13%



FIDELITY INDEX

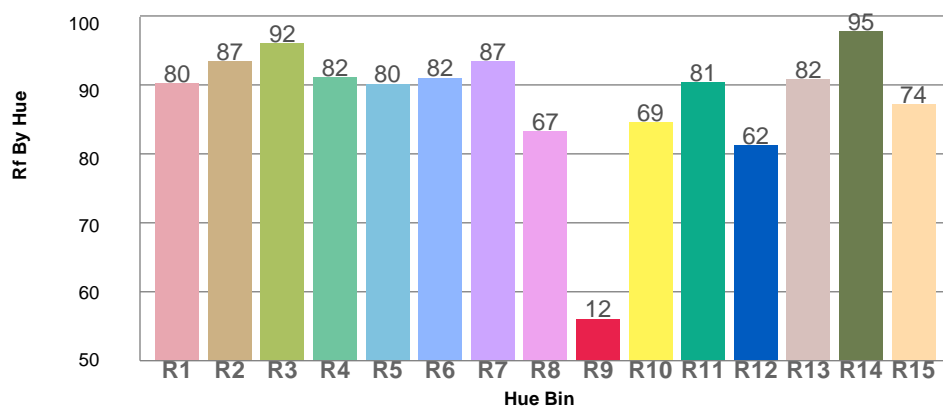
R_f 83.7

GAMUT INDEX

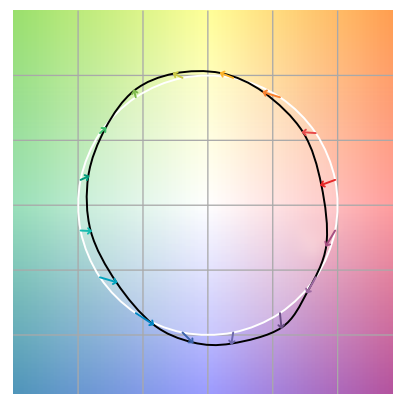
R_g 97.3

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

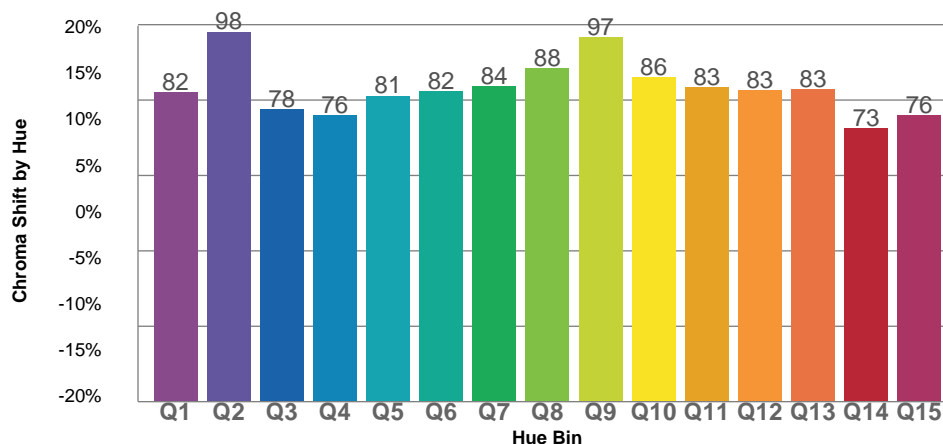
TM30 OVER 50



COLOR VECTOR GRAPHICS



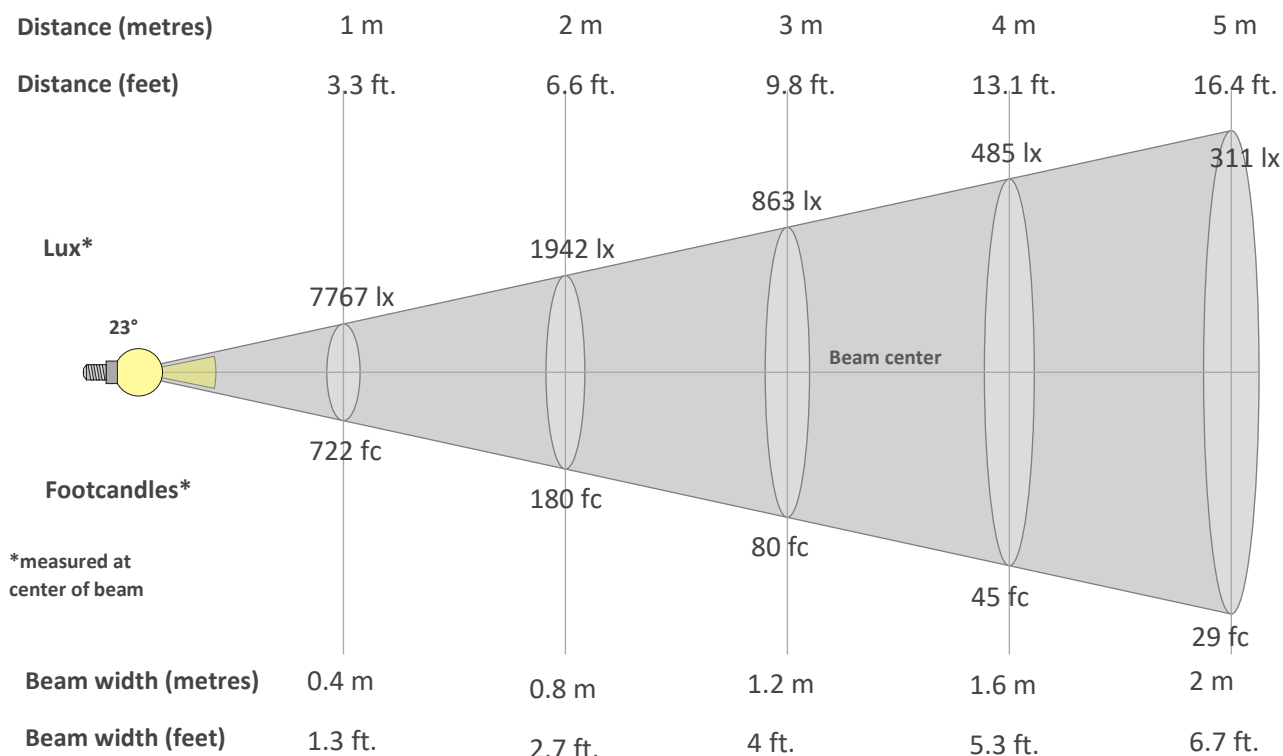
TM30 CHROMA SHIFT



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
7767lx	1942lx	863lx	485lx	311lx	216lx	159lx	121lx	96lx	78lx	64lx	54lx	46lx	40lx	35lx	30lx	27lx	24lx	22lx	19lx
721.5fc	180.4fc	80.2fc	45.1fc	28.9fc	20fc	14.7fc	11.3fc	8.9fc	7.2fc	6fc	5fc	4.3fc	3.7fc	3.2fc	2.8fc	2.5fc	2.2fc	2fc	1.8fc

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°
7767	7762	7732	7660	7527	7326	7042	6686	6271	5820	5353	4899	4471	4070	3691	3300	2891	2462	2015	1579
100%	100%	100%	99%	97%	94%	91%	86%	81%	75%	69%	63%	58%	52%	48%	42%	37%	32%	26%	20%

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°
7767	7198	5749	4053	2628	1662	1075	716	486	336	240	179	140	114	96	81	69	60	52	45
100%	93%	74%	52%	34%	21%	14%	9%	6%	4%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%

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°
7767	7762	7732	7660	7527	7326	7042	6686	6271	5820	5353	4899	4471	4070	3691	3300	2891	2462	2015	1579
100%	100%	100%	99%	97%	94%	91%	86%	81%	75%	69%	63%	58%	52%	48%	42%	37%	32%	26%	20%

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°
7767	7198	5749	4053	2628	1662	1075	716	486	336	240	179	140	114	96	81	69	60	52	45
100%	93%	74%	52%	34%	21%	14%	9%	6%	4%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%