



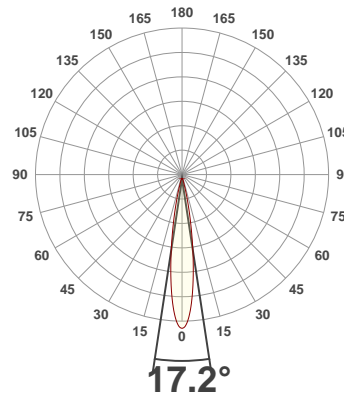
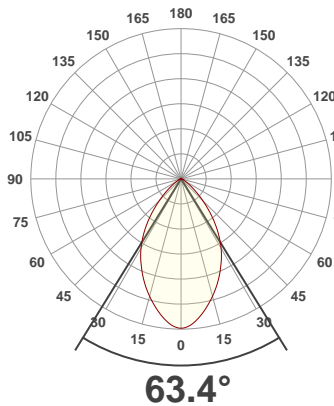
PRODUCT INFORMATION

SERIAL NUMBER: **LL-20190829-578-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

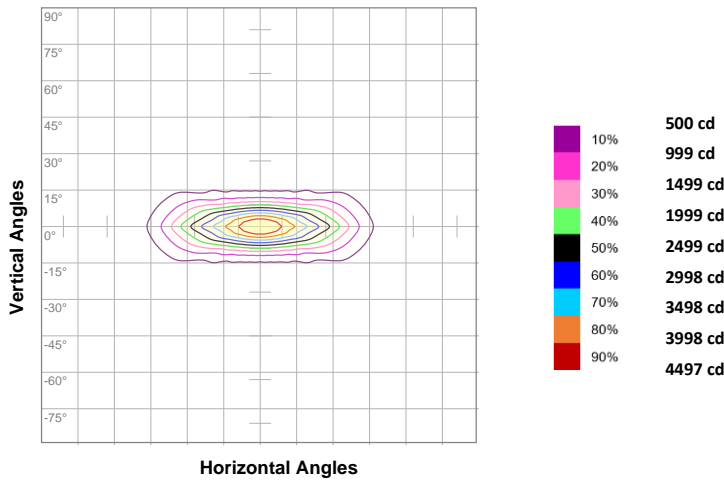


TOTAL LUMEN OUTPUT:	1975 lm
EFFICACY:	82 lm/W
PEAK INTENSITY:	5001 cd
COLOR RENDERING INDEX (CRI):	82.2
COLOR TEMPERATURE (CCT):	3912K
FIDELITY INDEX (TM30Rf):	83.7
GAMUT INDEX (TM30Rg):	97.3

BEAM OUTPUT DATA

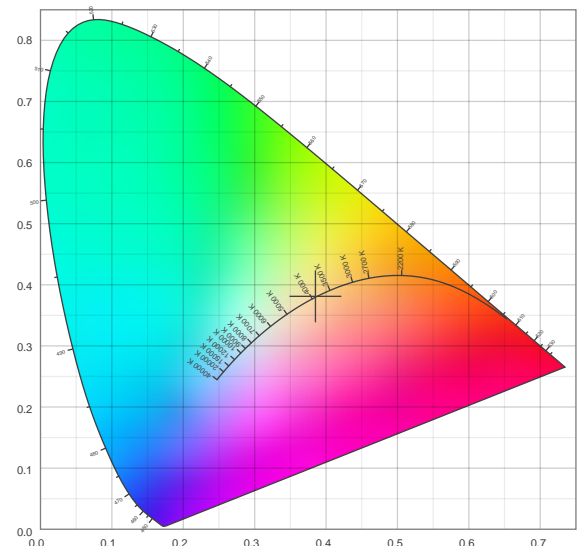
BEAM ANGLE (FWHM) C0/180:	63.4°
BEAM ANGLE (FWHM) C90/270:	17.2°
FIELD ANGLE (10%) C0/180:	103.5°
FIELD ANGLE (10%) C90/270:	32.5°
NUMBER OF PLANES MEASURED:	12

ISO CANDELA DIAGRAM | DATA

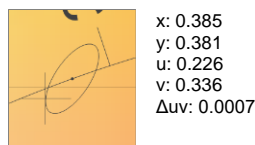
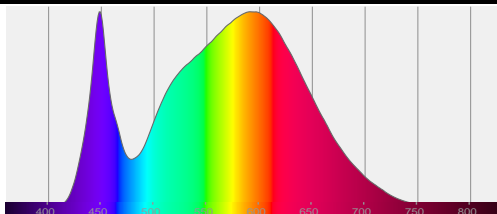


INPUT POWER:	24.1 W
POWER FACTOR:	1.0
OPTICAL POWER:	6.07 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	581 nm

CIE 1931:



SPECTRA | CIE 1931 ZOOM



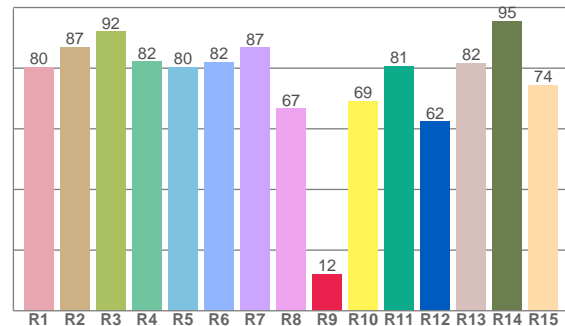
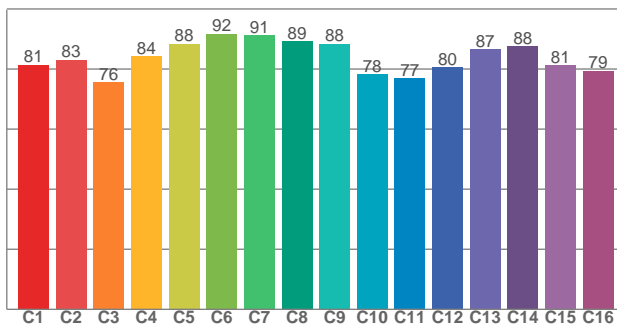
ZONAL LUMEN SUMMARY

0°-10° 376 lm	10°-20° 553 lm	20°-30° 427 lm	30°-40° 308 lm	40°-50° 178 lm	50°-60° 82.2 lm	60°-70° 36.2 lm	70°-80° 13.8 lm	80°-90° 1.42 lm
90°-100° 0.042 lm	100°-110° 0.041 lm	110°-120° 0.019 lm	120°-130° 0.013 lm	130°-140° 0.010 lm	140°-150° 0.007 lm	150°-160° 0.005 lm	160°-170° 0.003 lm	170°-180° 0.001 lm

COLOR DETAILS

TM30: 83.7

CRI: 82.2 (R1-R8)



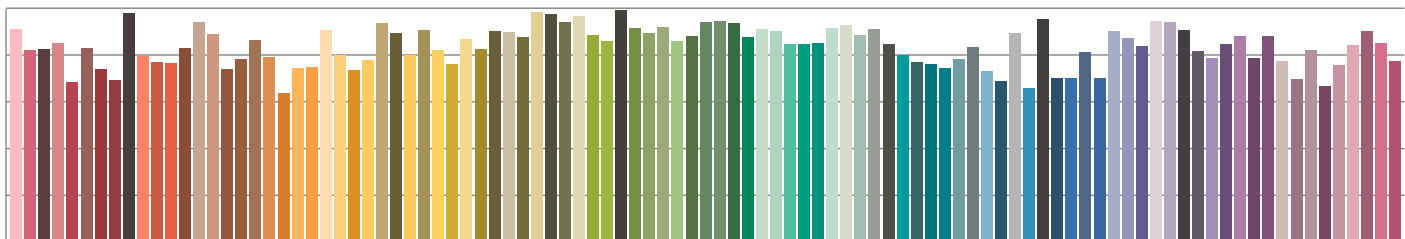
TM30 C values, 16 binned values out of total of 99 C values

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	88.4	91.7	91.1	89.3	88.4	78.3	76.9	80.5	86.5	87.5	81.2	79.4

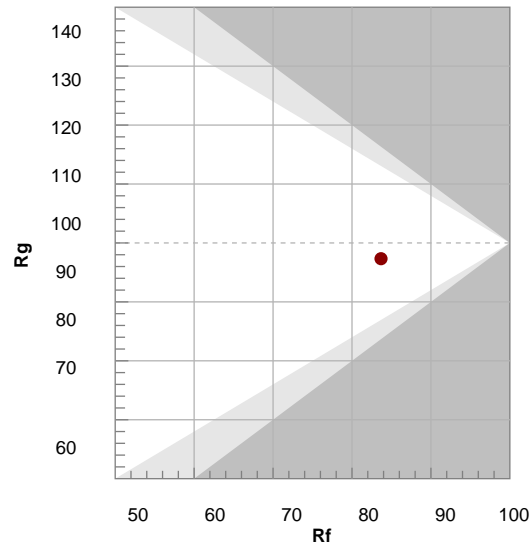
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.4	87.0	92.1	82.2	80.3	82.0	86.8	66.6	12.2	69.1	80.8	62.3	81.7	95.5	74.4

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

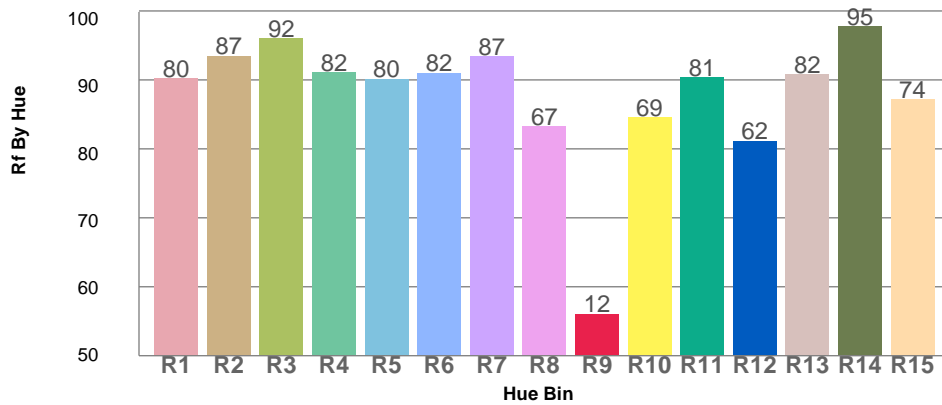
R_f 83.7

GAMUT INDEX

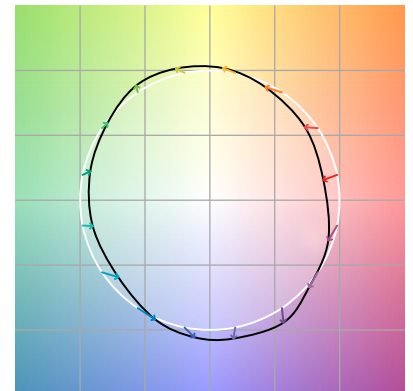
R_g 97.3

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

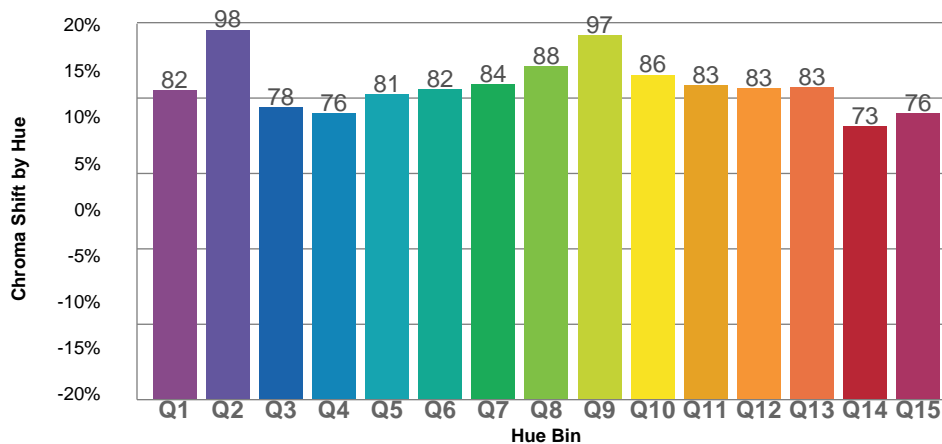
TM30 OVER 50



COLOR VECTOR GRAPHICS



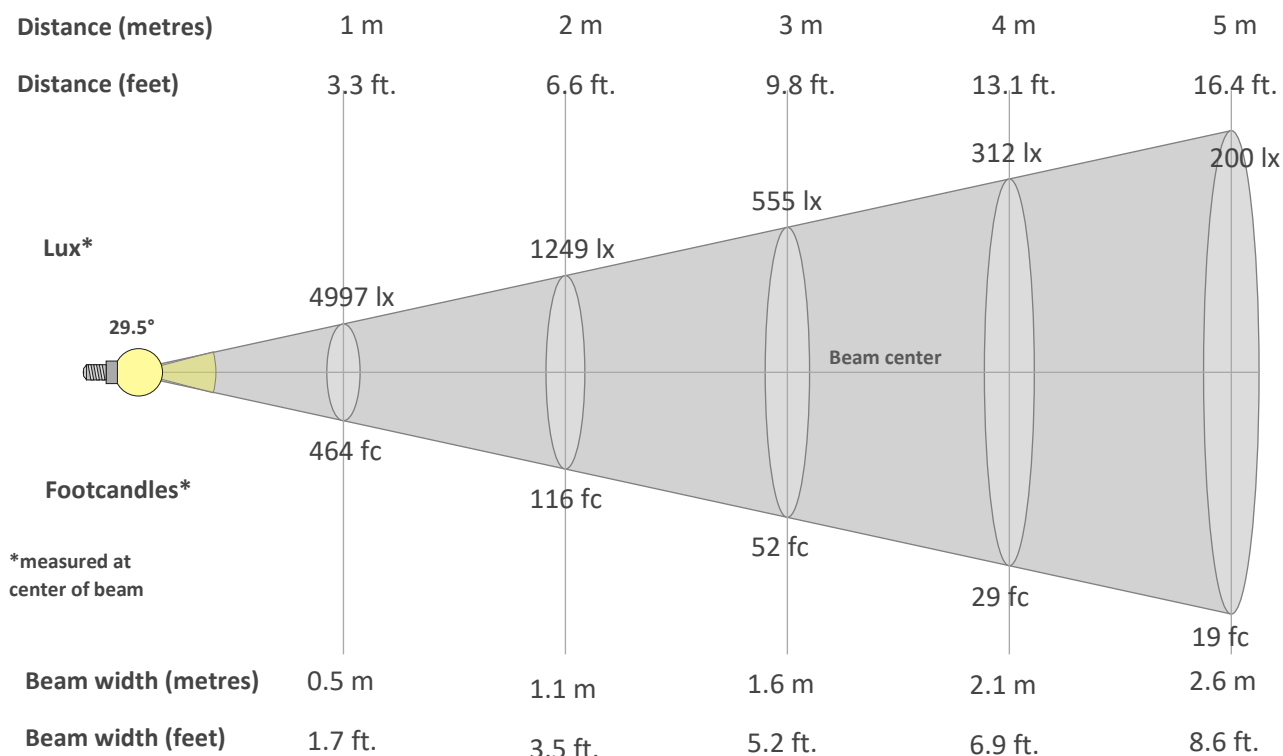
TM30 CHROMA SHIFT



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
4997lx	1249lx	555lx	312lx	200lx	139lx	102lx	78lx	62lx	50lx	41lx	35lx	30lx	25lx	22lx	20lx	17lx	15lx	14lx	12lx
464.2fc	116.1fc	51.6fc	29fc	18.6fc	12.9fc	9.5fc	7.3fc	5.7fc	4.6fc	3.8fc	3.2fc	2.7fc	2.4fc	2.1fc	1.8fc	1.6fc	1.4fc	1.3fc	1.2fc

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°
4997	4966	4889	4771	4633	4479	4316	4150	3980	3806	3626	3441	3252	3068	2878	2677	2466	2247	2020	1790
100%	99%	98%	95%	93%	90%	86%	83%	80%	76%	73%	69%	65%	61%	58%	54%	49%	45%	40%	36%

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°
4997	4812	4308	3571	2744	1959	1308	835	530	346	242	182	145	121	104	90	80	72	65	58
100%	96%	86%	71%	55%	39%	26%	17%	11%	7%	5%	4%	3%	2%	2%	2%	2%	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°
4997	4966	4889	4771	4633	4479	4316	4150	3980	3806	3626	3441	3252	3068	2878	2677	2466	2247	2020	1790
100%	99%	98%	95%	93%	90%	86%	83%	80%	76%	73%	69%	65%	61%	58%	54%	49%	45%	40%	36%

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°
4997	4812	4308	3571	2744	1959	1308	835	530	346	242	182	145	121	104	90	80	72	65	58
100%	96%	86%	71%	55%	39%	26%	17%	11%	7%	5%	4%	3%	2%	2%	2%	2%	1%	1%	1%