



PRODUCT INFORMATION

SERIAL NUMBER: **LL-20190924-743-BMS**

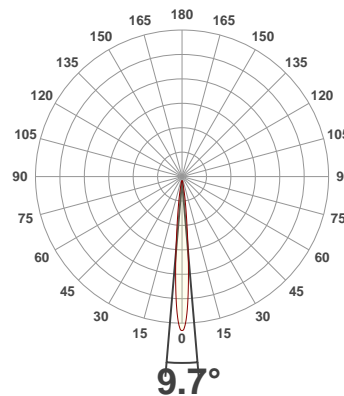
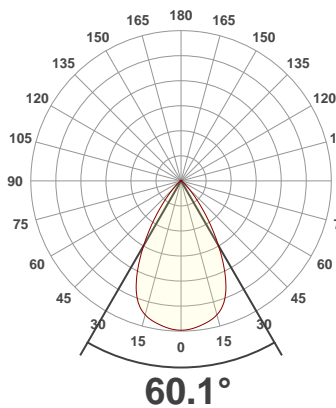
DATE OF MEASUREMENT: **2019-09-24**

SIZE (dia. x h): **310 mm x 85 mm**

ANGULAR DISTRIBUTION AT C0/180

ANGULAR DISTRIBUTION AT C90/270

LIGHT OUTPUT DATA



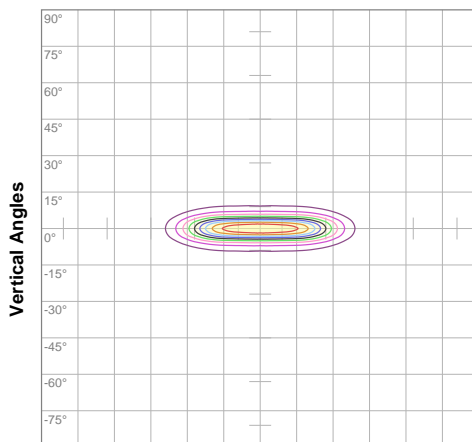
TOTAL LUMEN OUTPUT:	8882 lm
EFFICACY:	92 lm/W
PEAK INTENSITY:	39573 cd
COLOR RENDERING INDEX (CRI):	81.1
COLOR TEMPERATURE (CCT):	3785K
FIDELITY INDEX (TM30rf):	82.2
GAMUT INDEX (TM30Rg):	97.9

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	60.1°
BEAM ANGLE (FWHM) C90/270:	9.7°
FIELD ANGLE (10%) C0/180:	86.6°
FIELD ANGLE (10%) C90/270:	20.7°
NUMBER OF PLANES MEASURED:	36

ISO CANDELA DIAGRAM

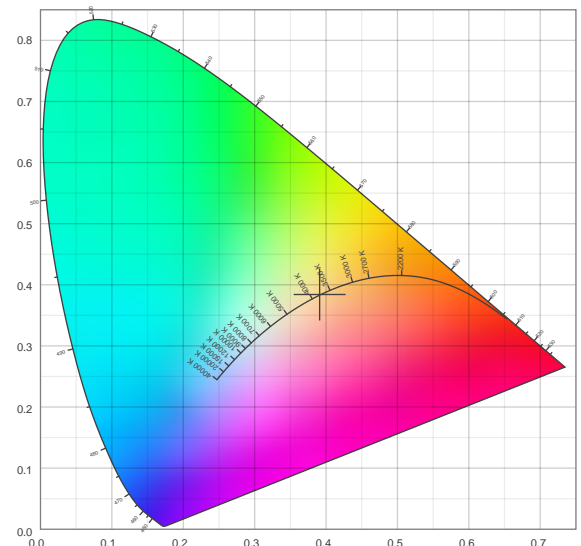
DATA



10%	3954 cd
20%	7908 cd
30%	11862 cd
40%	15816 cd
50%	19770 cd
60%	23724 cd
70%	27678 cd
80%	31632 cd
90%	35586 cd

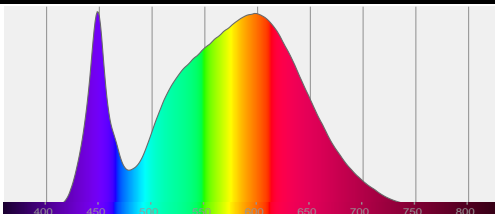
INPUT POWER:	96.9 W
POWER FACTOR:	1.0
OPTICAL POWER:	26.8 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931:



SPECTRA

CIE 1931 ZOOM



x: 0.391
y: 0.384
u: 0.229
v: 0.338
 Δuv : 0.0005

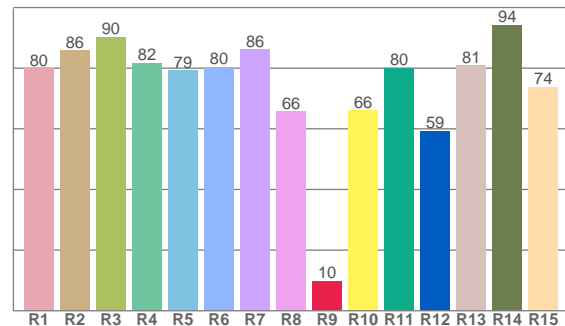
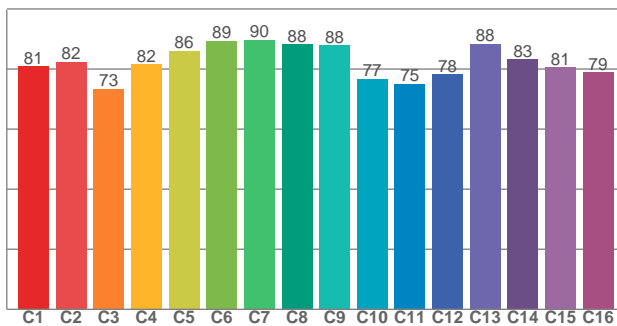
ZONAL LUMEN SUMMARY

0°-10° 2265 lm	10°-20° 2786 lm	20°-30° 2127 lm	30°-40° 1088 lm	40°-50° 391 lm	50°-60° 149 lm	60°-70° 62.0 lm	70°-80° 13.0 lm	80°-90° 0.262 lm
90°-100° 0.004 lm	100°-110° 0.004 lm	110°-120° 0.002 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: 82.2

CRI: 81.1 (R1-R8)



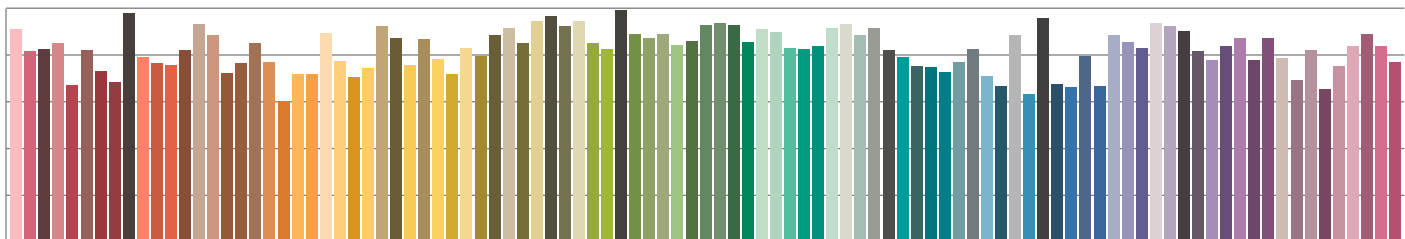
TM30 C values, 16 binned values out of total of 99 C values

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	73.4	81.6	86.0	89.4	89.7	88.2	87.9	76.7	75.0	78.2	88.4	83.2	80.6	78.8

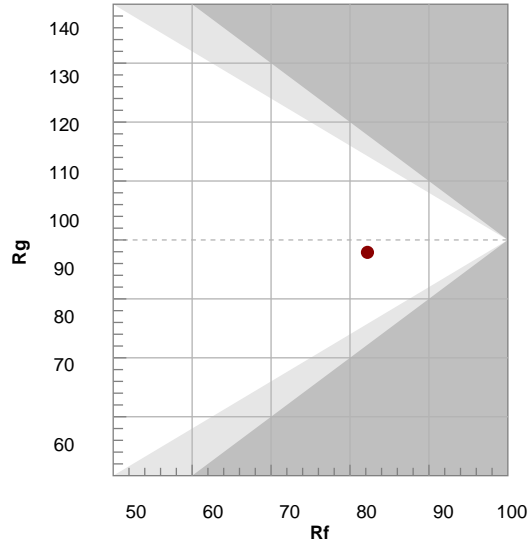
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.8	85.8	90.3	81.6	79.3	80.3	86.1	65.7	9.9	66.0	80.0	59.2	80.8	94.3	73.8

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	82	-8%	6%
3	73	-4%	14%
4	82	3%	12%
5	86	6%	7%
6	89	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	88	7%	1%
14	83	10%	-9%
15	81	2%	-14%
16	79	-4%	-13%



FIDELITY INDEX

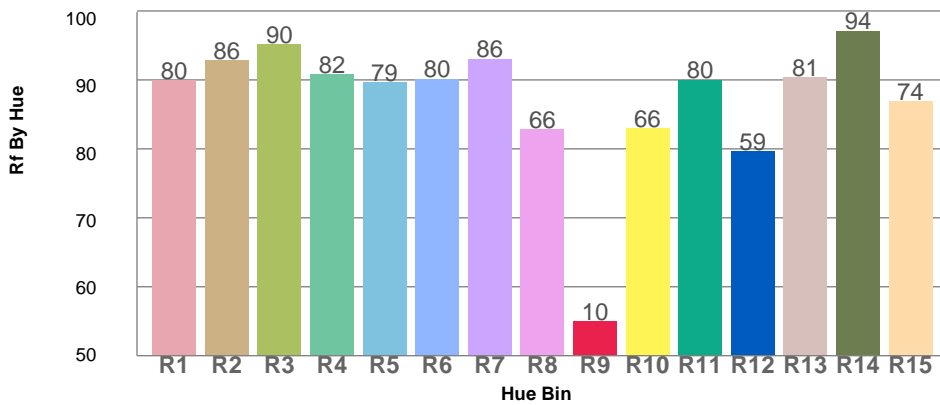
R_f 82.2

GAMUT INDEX

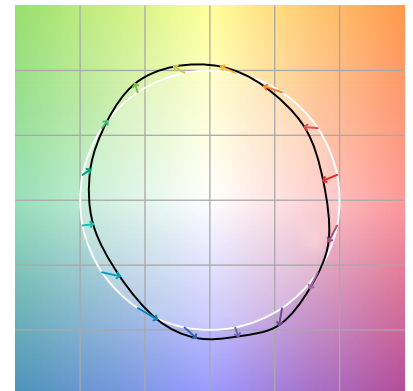
R_g 97.9

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

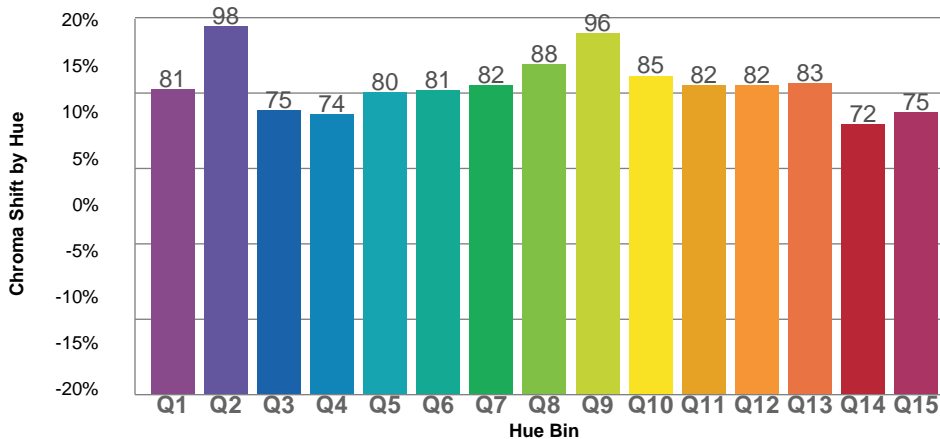
TM30 OVER 50



COLOR VECTOR GRAPHICS



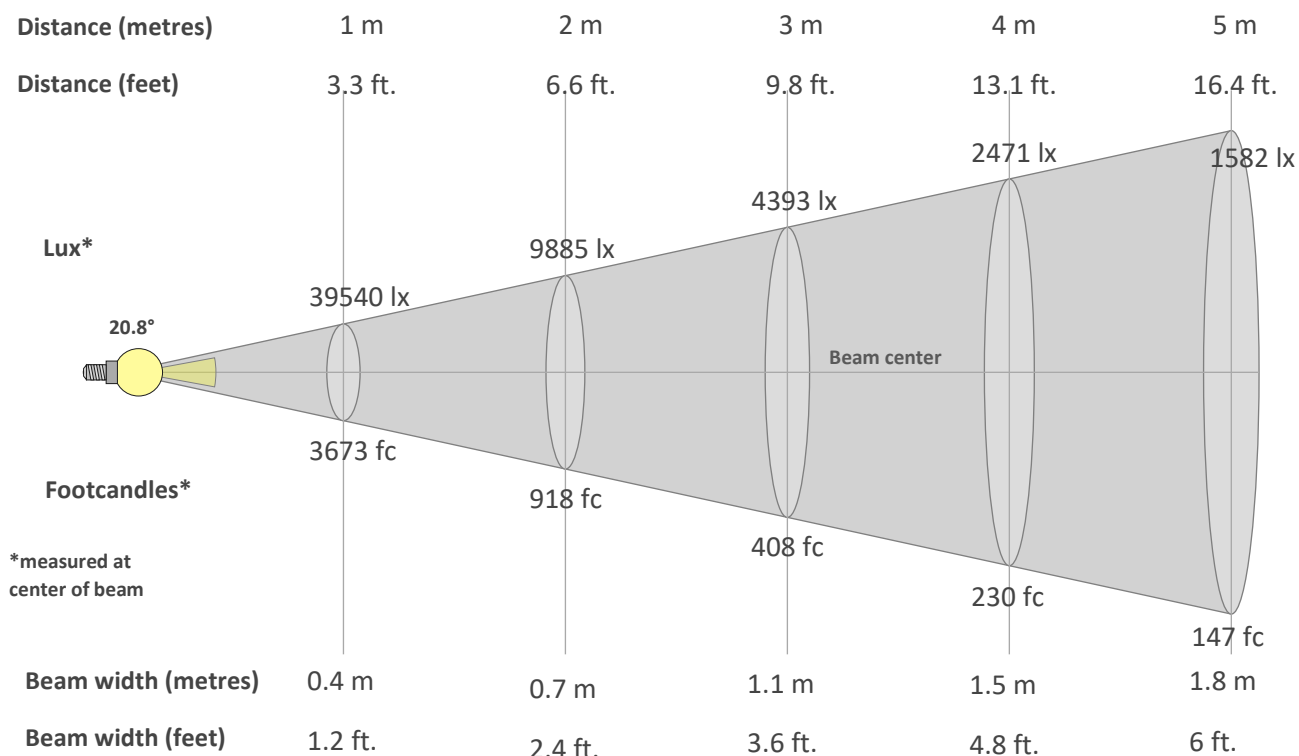
TM30 CHROMA SHIFT



COLOR DISTORTION GRAPHICS



BEAM DETAILS



*measured at center of beam

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
39540lx	9885lx	4393lx	2471lx	1582lx	1098lx	807lx	618lx	488lx	395lx	327lx	275lx	234lx	202lx	176lx	154lx	137lx	122lx	110lx	99lx
3673.3fc	918.3fc	408.1fc	229.6fc	146.9fc	102fc	75fc	57.4fc	45.3fc	36.7fc	30.4fc	25.5fc	21.7fc	18.7fc	16.3fc	14.3fc	12.7fc	11.3fc	10.2fc	9.2fc

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°
39.5K	39.5K	39.5K	39.4K	39.3K	39.1K	39.0K	38.8K	38.6K	38.4K	38.2K	38.0K	37.7K	37.4K	37.1K	36.7K	36.3K	35.8K	35.1K	34.4K
100%	100%	100%	100%	99%	99%	99%	98%	98%	97%	97%	96%	95%	95%	94%	93%	92%	90%	89%	87%

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°
39.5K	38.5K	35.6K	30.8K	24.9K	19.0K	13.9K	10.2K	7.6K	5.7K	4.3K	3.3K	2.5K	2.0K	1.6K	1.3K	1.1K	1.0K	0.9K	0.8K
100%	97%	90%	78%	63%	48%	35%	26%	19%	15%	11%	8%	6%	5%	4%	3%	3%	2%	2%	2%

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°
39.5K	39.5K	39.5K	39.4K	39.3K	39.1K	39.0K	38.8K	38.6K	38.4K	38.2K	38.0K	37.7K	37.4K	37.1K	36.7K	36.3K	35.8K	35.1K	34.4K
100%	100%	100%	100%	99%	99%	99%	98%	98%	97%	97%	96%	95%	95%	94%	93%	92%	90%	89%	87%

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°
39.5K	38.5K	35.6K	30.8K	24.9K	19.0K	13.9K	10.2K	7.6K	5.7K	4.3K	3.3K	2.5K	2.0K	1.6K	1.3K	1.1K	1.0K	0.9K	0.8K
100%	97%	90%	78%	63%	48%	35%	26%	19%	15%	11%	8%	6%	5%	4%	3%	3%	2%	2%	2%