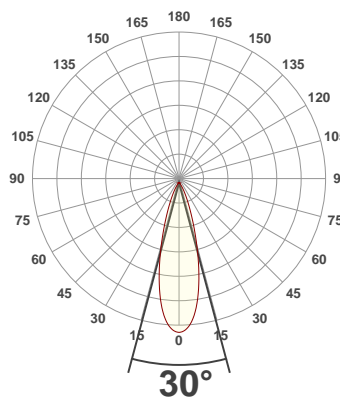
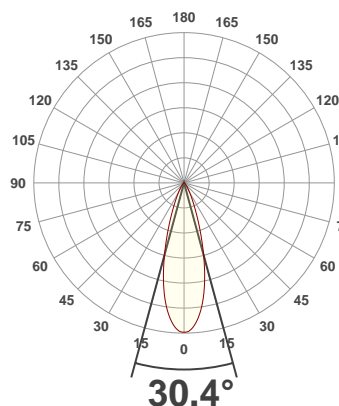




**PRODUCT INFORMATION**

SERIAL NUMBER:	LL-20190829-576-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**

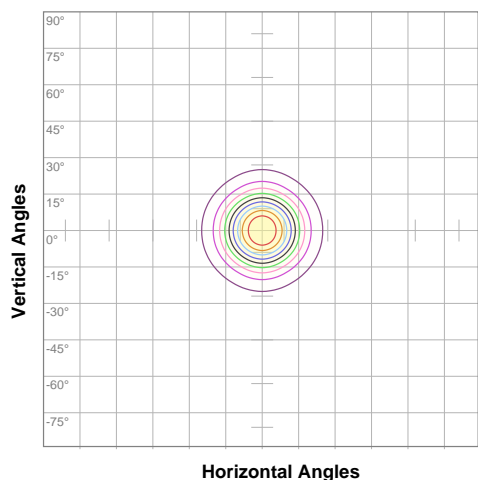


TOTAL LUMEN OUTPUT:	1925 lm
EFFICACY:	80 lm/W
PEAK INTENSITY:	5701 cd
COLOR RENDERING INDEX (CRI):	82.3
COLOR TEMPERATURE (CCT):	3917K
FIDELITY INDEX (TM30Rf):	83.7
GAMUT INDEX (TM30Rg):	97.3

**BEAM OUTPUT DATA**

BEAM ANGLE (FWHM)   C0/180:	30.4°
BEAM ANGLE (FWHM)   C90/270:	30°
FIELD ANGLE (10%)   C0/180:	55.7°
FIELD ANGLE (10%)   C90/270:	56.1°
NUMBER OF PLANES MEASURED:	12

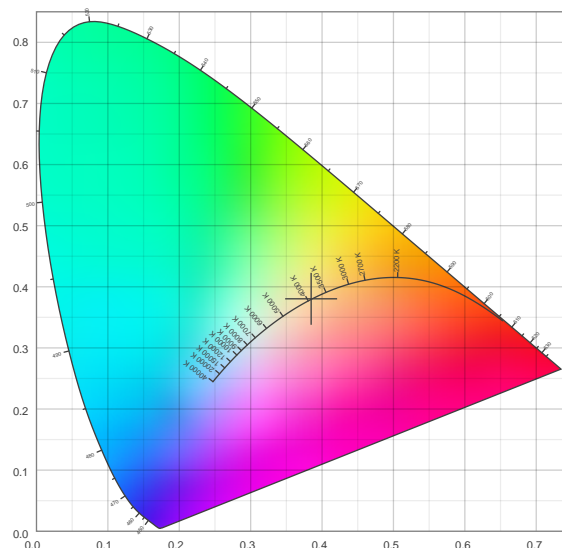
**ISO CANDELA DIAGRAM | DATA**



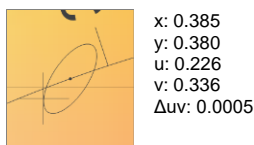
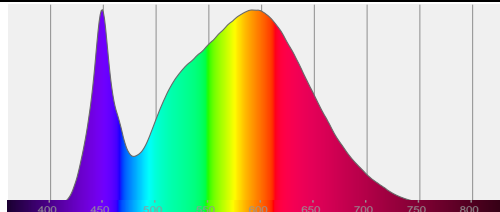
10%	570 cd
20%	1139 cd
30%	1709 cd
40%	2279 cd
50%	2849 cd
60%	3418 cd
70%	3988 cd
80%	4558 cd
90%	5128 cd

INPUT POWER:	24.1 W
POWER FACTOR:	1.0
OPTICAL POWER:	5.92 mW
PEAK WAVELENGTH:	449 nm
DOMINANT WAVELENGTH:	581 nm

**CIE 1931:**



**SPECTRA | CIE 1931 ZOOM**



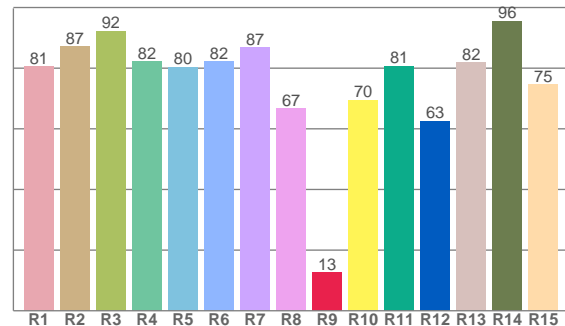
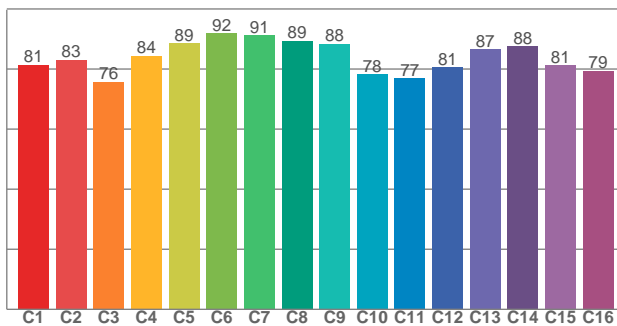
ZONAL LUMEN SUMMARY

0°-10° 443 lm	10°-20° 797 lm	20°-30° 389 lm	30°-40° 162 lm	40°-50° 64.2 lm	50°-60° 36.0 lm	60°-70° 22.8 lm	70°-80° 9.80 lm	80°-90° 0.739 lm
90°-100° 0.021 lm	100°-110° 0.022 lm	110°-120° 0.017 lm	120°-130° 0.007 lm	130°-140° 0.004 lm	140°-150° 0.002 lm	150°-160° 0.001 lm	160°-170° 0.001 lm	170°-180° 0.008 lm

COLOR DETAILS

TM30: 83.7

CRI: 82.3 (R1-R8)



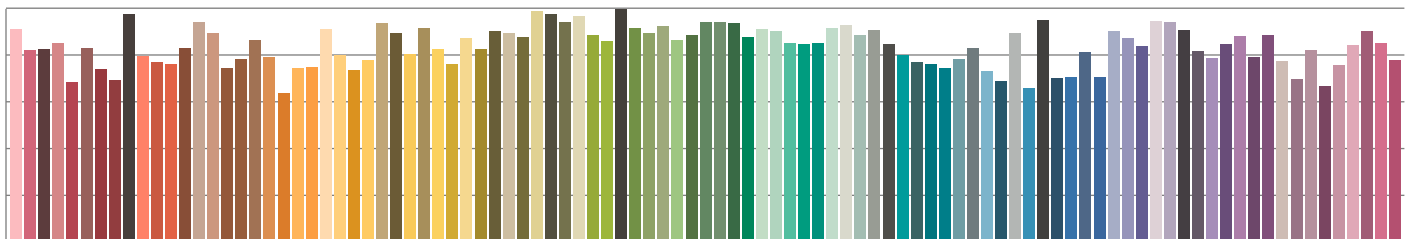
TM30 C values, 16 binned values out of total of 99 C values

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	84.4	88.5	91.9	91.2	89.3	88.4	78.2	76.9	80.5	86.5	87.5	81.3	79.4

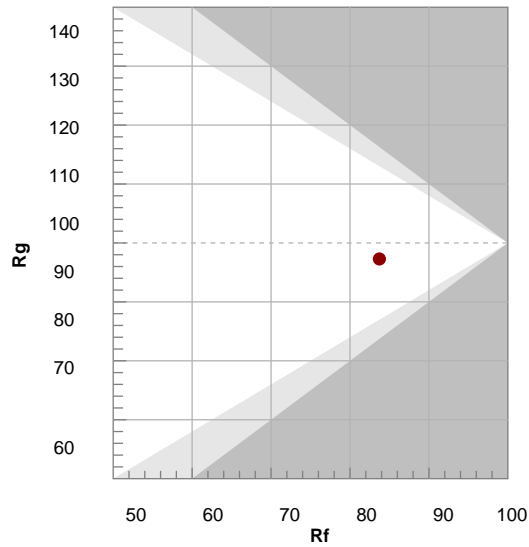
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.6	87.2	92.3	82.2	80.4	82.2	86.8	66.7	12.6	69.5	80.7	62.5	81.8	95.6	74.7

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R <sub>f</sub>	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%	16%
12	81	6%	9%
13	87	8%	-3%
14	88	10%	-5%
15	81	1%	-13%
16	79	-4%	-13%



FIDELITY INDEX

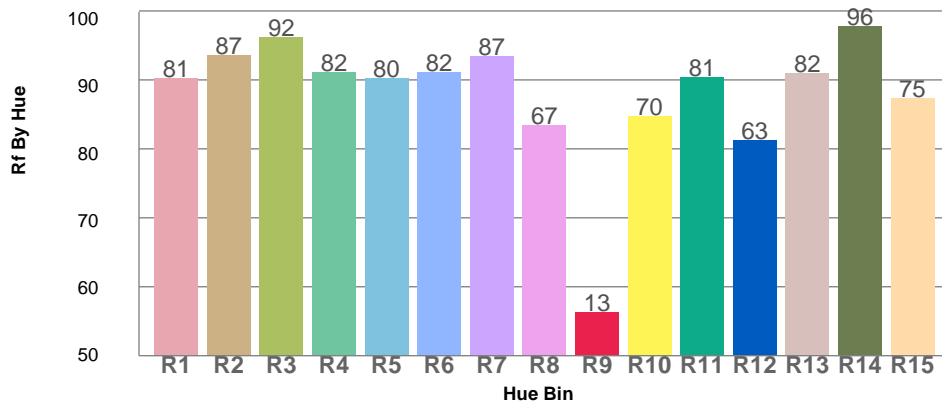
**R<sub>f</sub> 83.7**

GAMUT INDEX

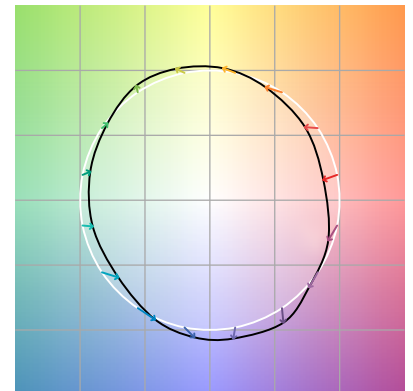
**R<sub>g</sub> 97.3**

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

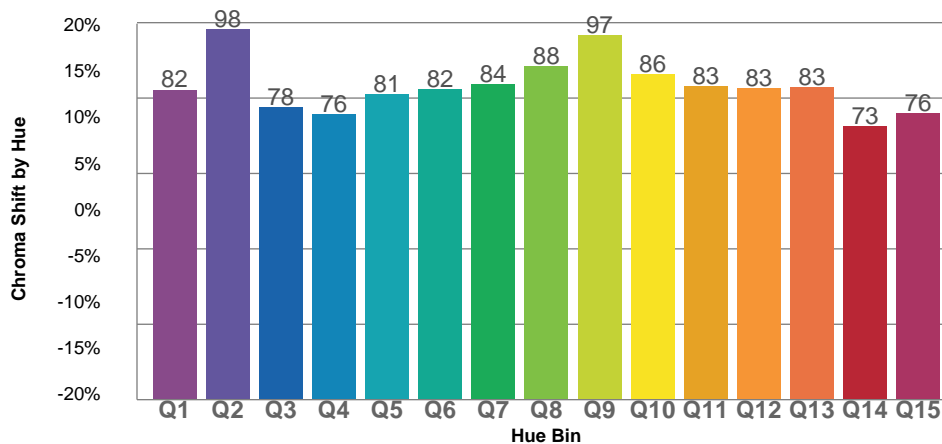
TM30 OVER 50



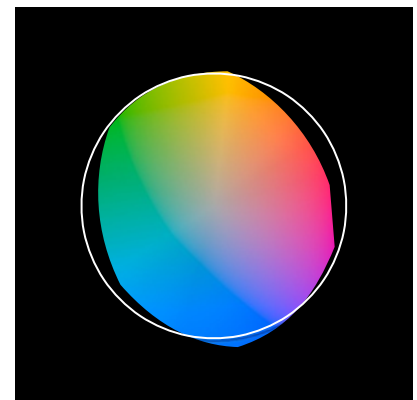
COLOR VECTOR GRAPHICS



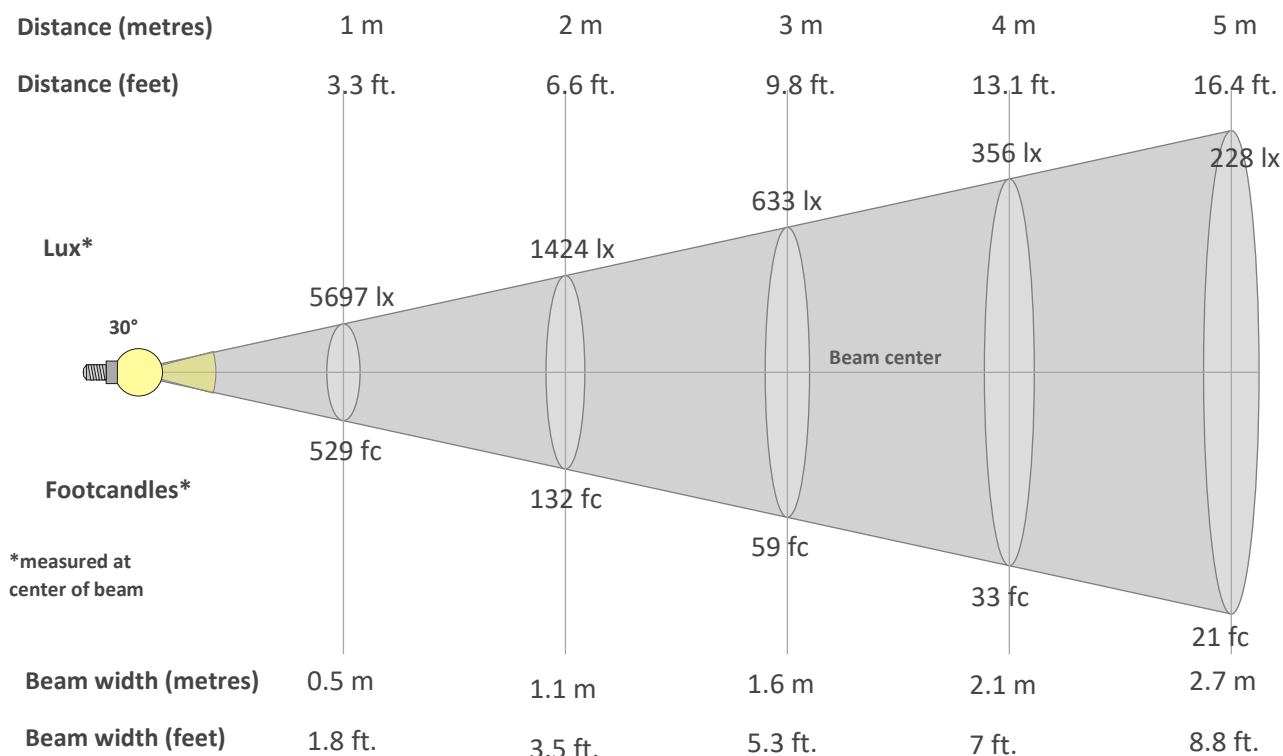
TM30 CHROMA SHIFT



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
5697lx	1424lx	633lx	356lx	228lx	158lx	116lx	89lx	70lx	57lx	47lx	40lx	34lx	29lx	25lx	22lx	20lx	18lx	16lx	14lx
529.3fc	132.3fc	58.8fc	33.1fc	21.2fc	14.7fc	10.8fc	8.3fc	6.5fc	5.3fc	4.4fc	3.7fc	3.1fc	2.7fc	2.4fc	2.1fc	1.8fc	1.6fc	1.5fc	1.3fc

**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°
5697	5628	5450	5155	4777	4306	3766	3185	2606	2073	1607	1229	937	719	558	438	346	273	217	172
100%	99%	96%	90%	84%	76%	66%	56%	46%	36%	28%	22%	16%	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°
5697	5646	5478	5205	4803	4307	3735	3137	2559	2031	1591	1230	954	737	573	445	347	271	214	169
100%	99%	96%	91%	84%	76%	66%	55%	45%	36%	28%	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°
5697	5628	5450	5155	4777	4306	3766	3185	2606	2073	1607	1229	937	719	558	438	346	273	217	172
100%	99%	96%	90%	84%	76%	66%	56%	46%	36%	28%	22%	16%	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°
5697	5646	5478	5205	4803	4307	3735	3137	2559	2031	1591	1230	954	737	573	445	347	271	214	169
100%	99%	96%	91%	84%	76%	66%	55%	45%	36%	28%	22%	17%	13%	10%	8%	6%	5%	4%	3%