



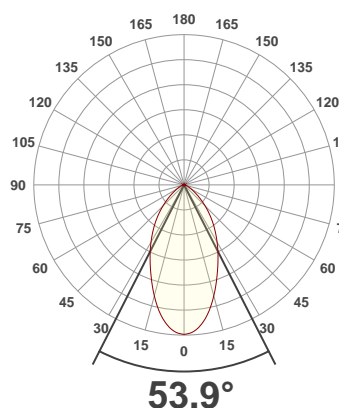
PRODUCT INFORMATION

SERIAL NUMBER: LL-20190710-311-BMS

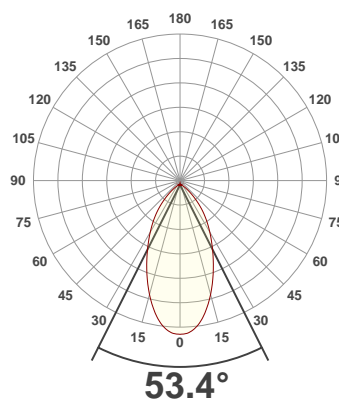
DATE OF MEASUREMENT: 2019-07-10

SIZE (mm): (L x W x H) 298 x 71 x 59.5

ANGULAR DISTRIBUTION AT C0/180



ANGULAR DISTRIBUTION AT C90/270



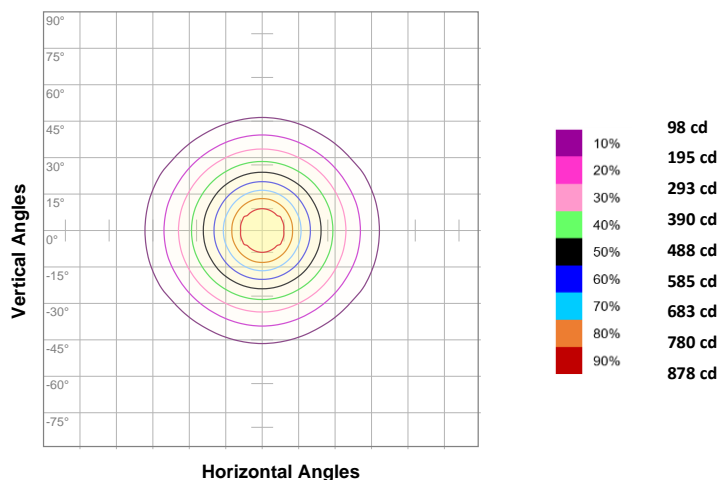
LIGHT OUTPUT DATA

TOTAL LUMEN OUTPUT: 1017 lm
EFFICACY: 80 lm/W
PEAK INTENSITY: 976 cd
COLOR RENDERING INDEX (CRI): 83.9
COLOR TEMPERATURE (CCT): 3787K
FIDELITY INDEX (TM30Rf): 84.6
GAMUT INDEX (TM30Rg): 93.6

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) | C0/180: 53.9°
BEAM ANGLE (FWHM) | C90/270: 53.4°
FIELD ANGLE (10%) | C0/180: 107.3°
FIELD ANGLE (10%) | C90/270: 103.9°
NUMBER OF PLANES MEASURED: 12

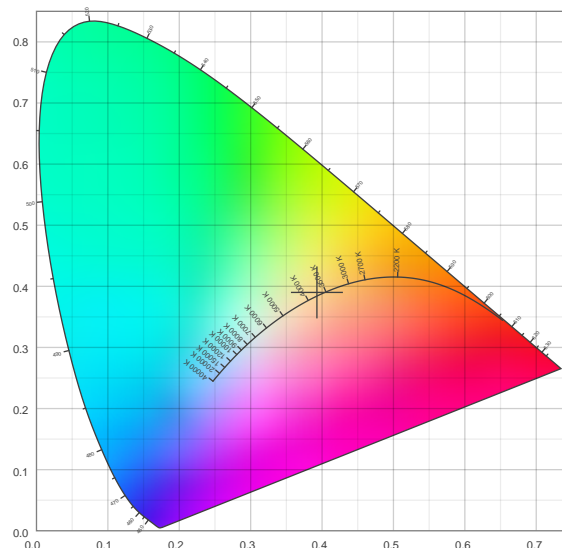
ISO CANDELA DIAGRAM



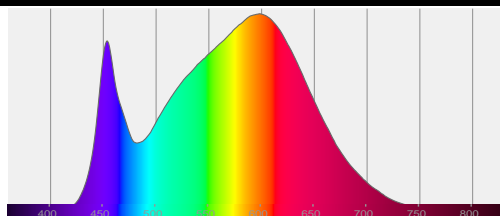
DATA

INPUT POWER: 12.7 W
POWER FACTOR: 1.0
OPTICAL POWER: 3.07 mW
PEAK WAVELENGTH: 598 nm
DOMINANT WAVELENGTH: 580 nm

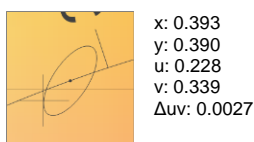
CIE 1931:



SPECTRA



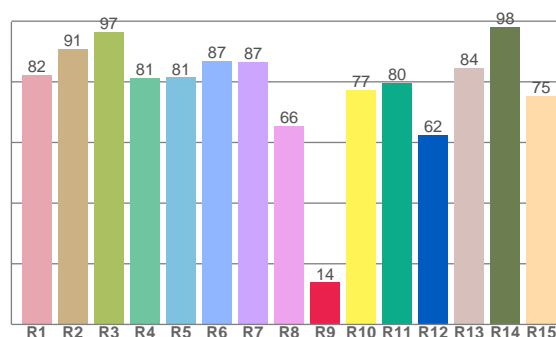
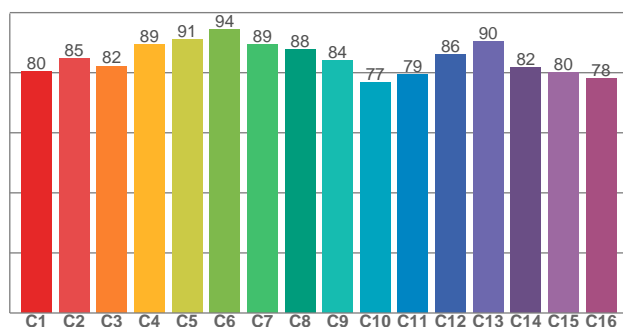
CIE 1931 ZOOM



x: 0.393
y: 0.390
u: 0.228
v: 0.339
Δuv: 0.0027

ZONAL LUMEN SUMMARY

0°-10° 88.1 lm	10°-20° 211 lm	20°-30° 241 lm	30°-40° 210 lm	40°-50° 141 lm	50°-60° 72.0 lm	60°-70° 34.4 lm	70°-80° 14.9 lm	80°-90° 2.95 lm
90°-100° 0.222 lm	100°-110° 0.200 lm	110°-120° 0.219 lm	120°-130° 0.265 lm	130°-140° 0.304 lm	140°-150° 0.321 lm	150°-160° 0.293 lm	160°-170° 0.196 lm	170°-180° 0.077 lm

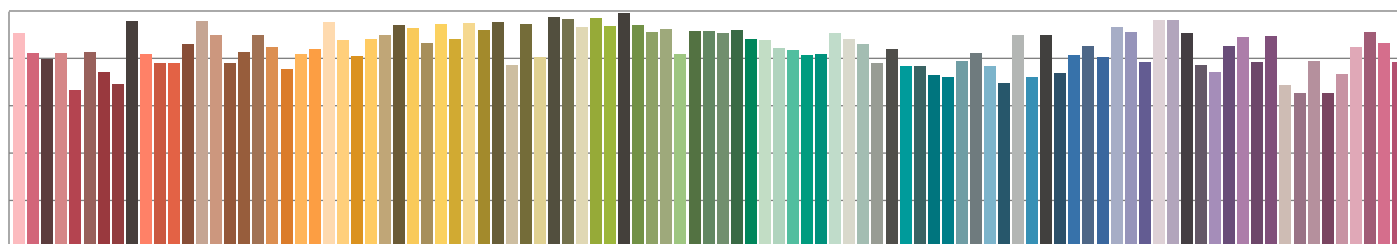
COLOR DETAILS
TM30: 84.6
CRI: 83.9 (R1-R8)


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

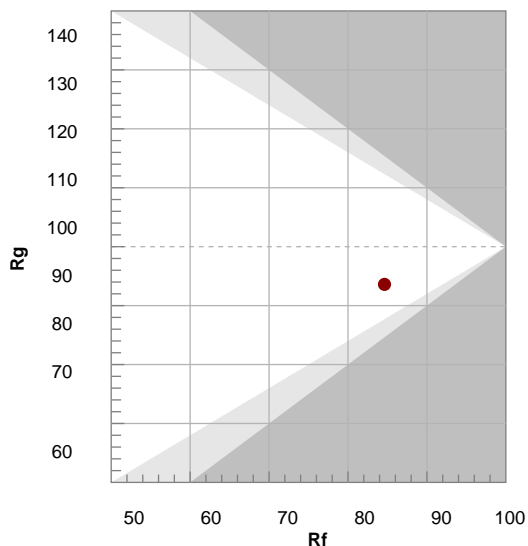
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
80.2	84.8	82.2	89.3	91.0	94.3	89.4	87.7	84.2	76.7	79.4	86.1	90.3	81.8	80.1	78.2

CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.2	90.8	96.5	81.3	81.5	87.0	86.5	65.5	13.9	77.4	79.5	62.4	84.5	98.2	75.4

TM30 COLOR EVALUATION SAMPLE

TM30 DETAILS

Hue Bin	R_f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	0%
2	85	-7%	5%
3	82	-4%	8%
4	89	-2%	4%
5	91	-3%	2%
6	94	-2%	-1%
7	89	-7%	-1%
8	88	-7%	2%
9	84	-6%	10%
10	77	-5%	14%
11	79	3%	14%
12	86	6%	3%
13	90	3%	-5%
14	82	5%	-14%
15	80	-3%	-13%
16	78	-7%	-11%

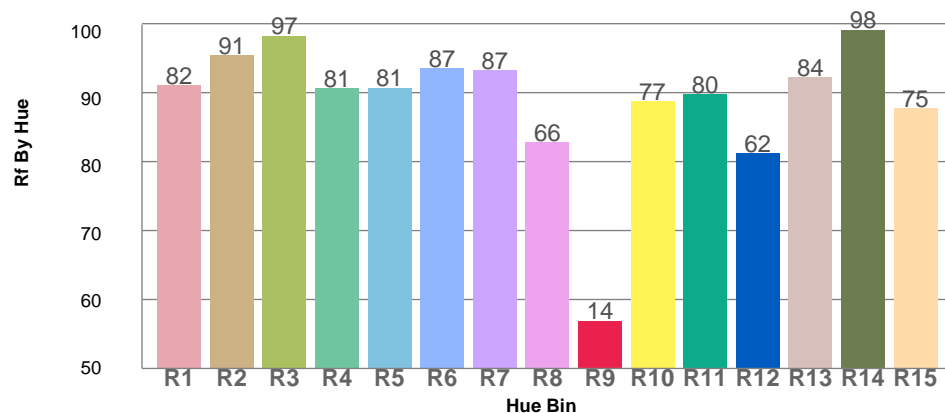


FIDELITY INDEX
 R_f 84.6

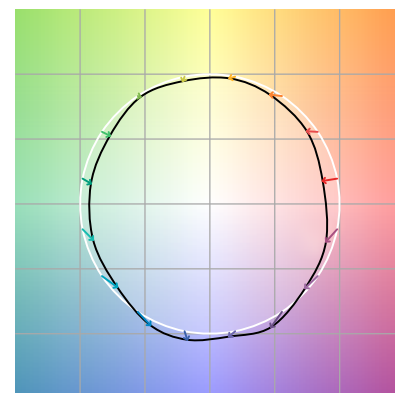
GAMUT INDEX
 R_g 93.6

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

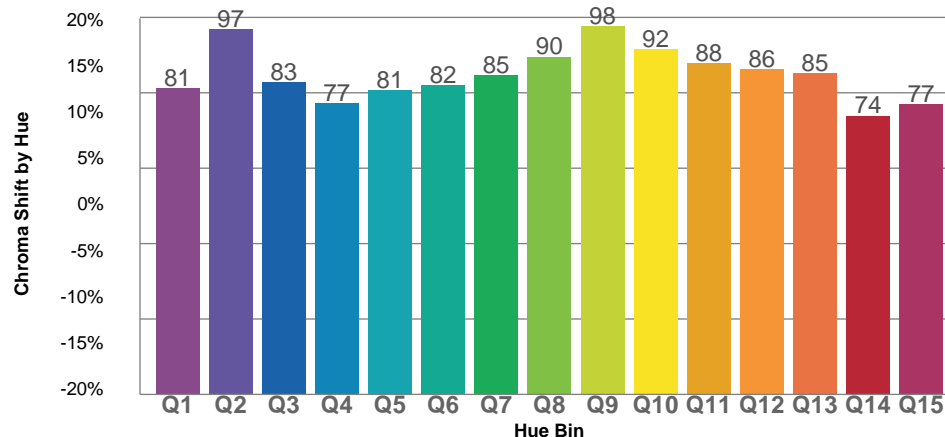
TM30 OVER 50



COLOR VECTOR GRAPHICS

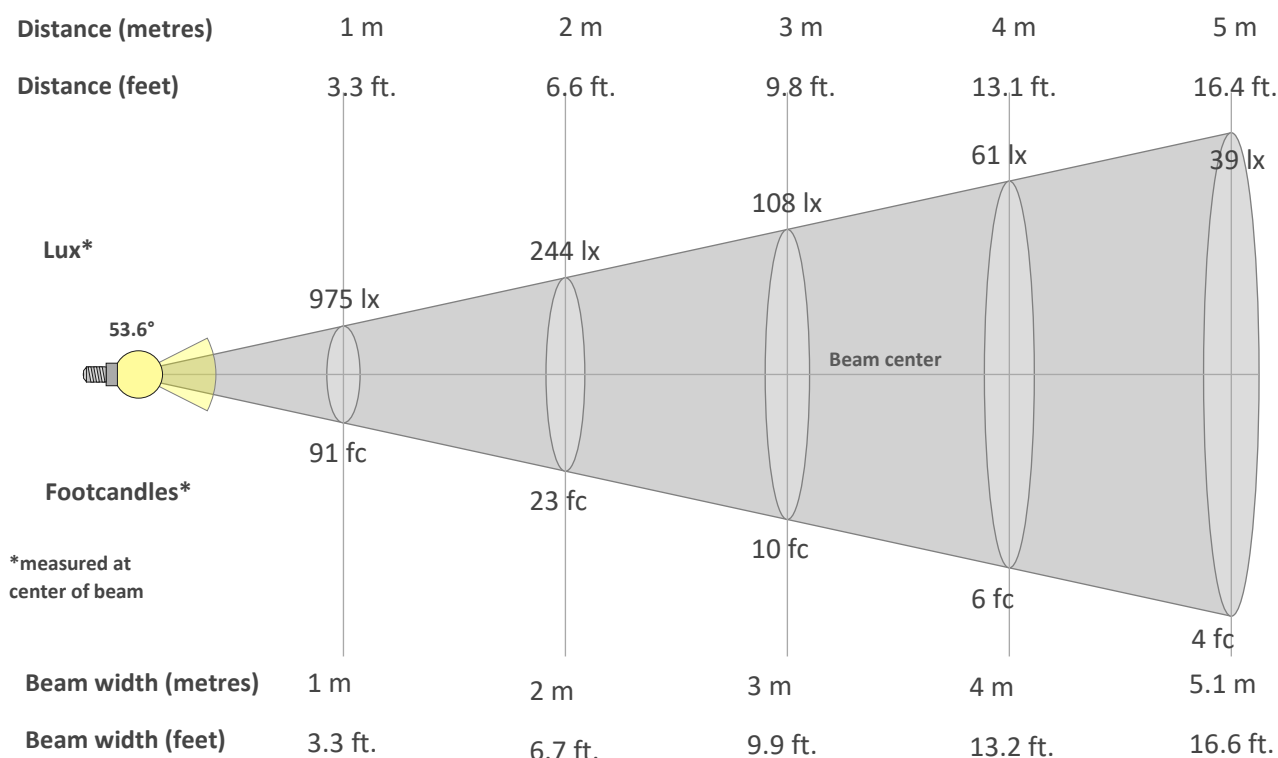


TM30 CHROMA SHIFT



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
975lx	244lx	108lx	61lx	39lx	27lx	20lx	15lx	12lx	10lx	8lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx	2lx
90.6fc	22.7fc	10.1fc	5.7fc	3.6fc	2.5fc	1.8fc	1.4fc	1.1fc	0.9fc	0.7fc	0.6fc	0.5fc	0.5fc	0.4fc	0.4fc	0.3fc	0.3fc	0.3fc	0.2fc

Intensity in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
975	945	864	749	630	525	431	346	268	195	134	86	56	36	24	14	7	2	0	0
100%	97%	89%	77%	65%	54%	44%	35%	27%	20%	14%	9%	6%	4%	2%	1%	1%	0%	0%	0%

Intensity in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
975	952	877	766	643	524	420	330	251	177	116	73	48	32	22	14	7	2	0	0
100%	98%	90%	78%	66%	54%	43%	34%	26%	18%	12%	8%	5%	3%	2%	1%	1%	0%	0%	0%

Intensity in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
975	945	864	749	630	525	431	346	268	195	134	86	56	36	24	14	7	2	0	0
100%	97%	89%	77%	65%	54%	44%	35%	27%	20%	14%	9%	6%	4%	2%	1%	1%	0%	0%	0%

Intensity in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
975	952	877	766	643	524	420	330	251	177	116	73	48	32	22	14	7	2	0	0
100%	98%	90%	78%	66%	54%	43%	34%	26%	18%	12%	8%	5%	3%	2%	1%	1%	0%	0%	0%