



PRODUCT INFORMATION

SERIAL NUMBER: **LL-200312-0403**

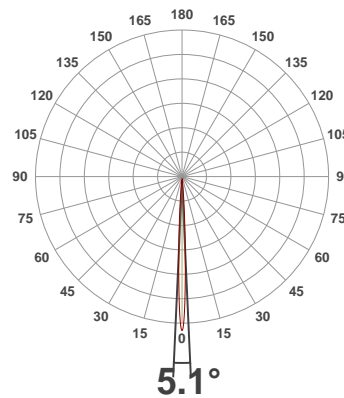
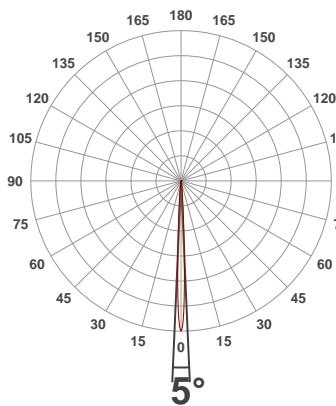
DATE OF MEASUREMENT: **2020-03-12**

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

ANGULAR DISTRIBUTION AT C0/180

ANGULAR DISTRIBUTION AT C90/270

LIGHT OUTPUT DATA



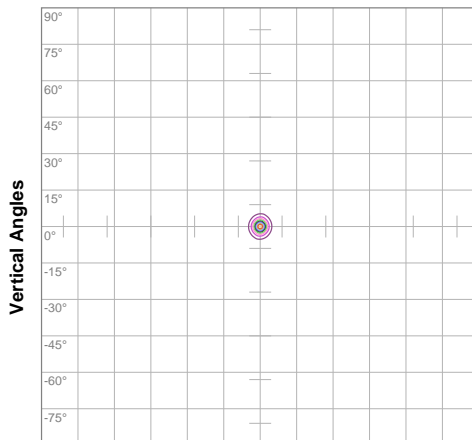
TOTAL LUMEN OUTPUT:	6498 lm
EFFICACY:	67 lm/W
PEAK INTENSITY:	480247 cd
COLOR RENDERING INDEX (CRI):	81.2
COLOR TEMPERATURE (CCT):	3801K
FIDELITY INDEX (TM30Rf):	81.9
GAMUT INDEX (TM30Rg):	98.5

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	5°
BEAM ANGLE (FWHM) C90/270:	5.1°
FIELD ANGLE (10%) C0/180:	10.6°
FIELD ANGLE (10%) C90/270:	11.6°
NUMBER OF PLANES MEASURED:	12

ISO CANDELA DIAGRAM

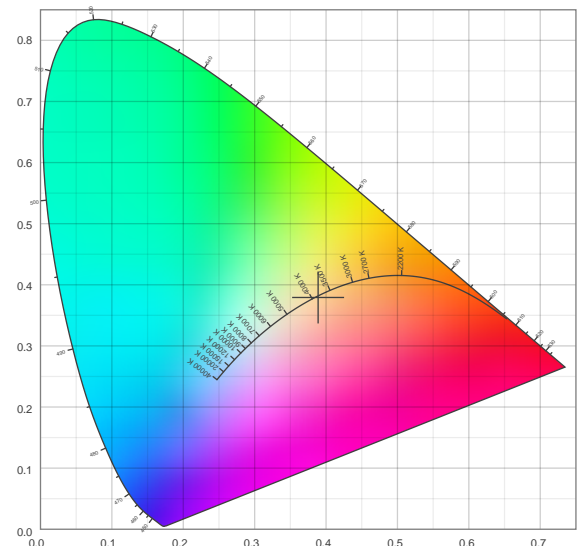
DATA



10%	47913 cd
20%	95827 cd
30%	143740 cd
40%	191654 cd
50%	239567 cd
60%	287481 cd
70%	335394 cd
80%	383308 cd
90%	431221 cd

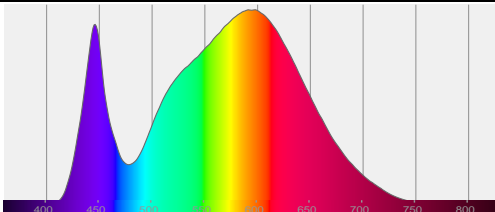
INPUT POWER:	97.0 W
POWER FACTOR:	1.0
OPTICAL POWER:	20.0 mW
PEAK WAVELENGTH:	592 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931:



SPECTRA

CIE 1931 ZOOM



x:	0.389
y:	0.379
u:	0.230
v:	0.336
Δuv:	-0.0012

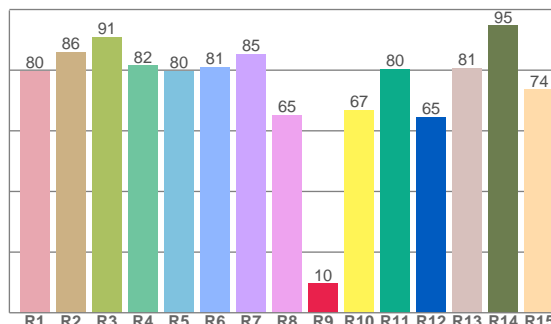
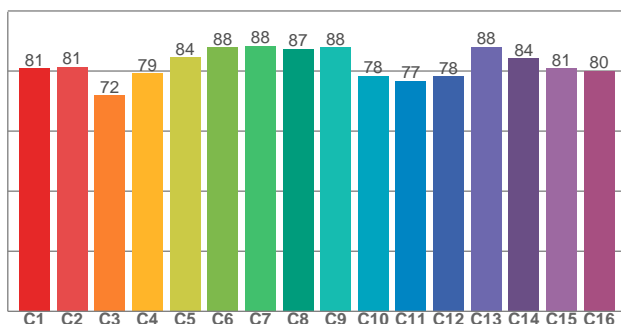
ZONAL LUMEN SUMMARY

0°-10° 5770 lm	10°-20° 567 lm	20°-30° 116 lm	30°-40° 42.7 lm	40°-50° 0.916 lm	50°-60° 0.539 lm	60°-70° 0.320 lm	70°-80° 0.160 lm	80°-90° 0.118 lm
90°-100° 0.011 lm	100°-110° 0.006 lm	110°-120° 0.005 lm	120°-130° 0.005 lm	130°-140° 0.002 lm	140°-150° 0.000 lm	150°-160° 0.000 lm	160°-170° 0.000 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 81.9

CRI: 81.2 (R1-R8)



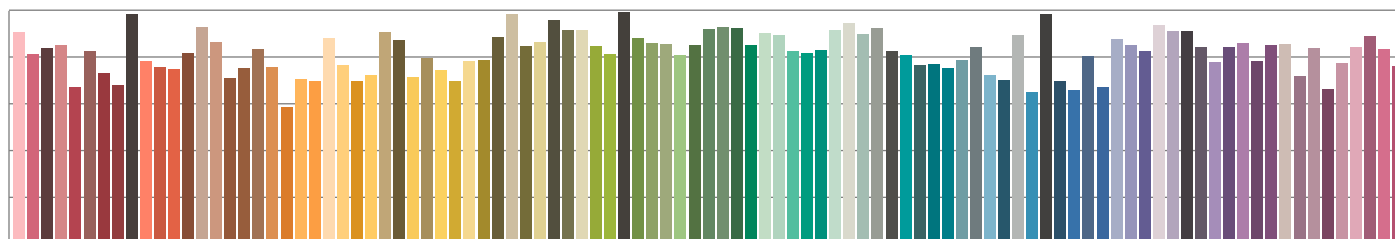
TM30 C values, 16 binned values out of total of 99 C values

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
81.0	81.4	71.9	79.3	84.5	87.8	88.4	87.4	88.0	78.4	76.8	78.3	88.1	84.2	80.8	80.1

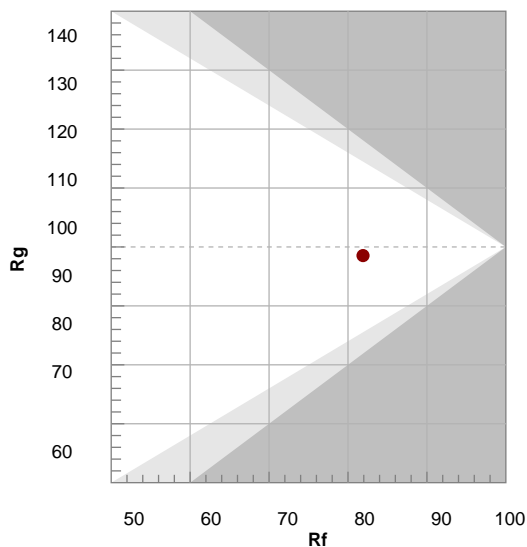
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79.7	85.9	90.9	81.5	79.7	80.9	85.2	65.3	9.6	66.9	80.4	64.5	80.7	94.7	73.7

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	81	-8%	7%
3	72	-4%	15%
4	79	4%	13%
5	84	9%	8%
6	88	8%	-2%
7	88	1%	-8%
8	87	-4%	-6%
9	88	-8%	-2%
10	78	-10%	8%
11	77	-2%	16%
12	78	6%	11%
13	88	7%	2%
14	84	9%	-8%
15	81	2%	-13%
16	80	-4%	-12%



FIDELITY INDEX

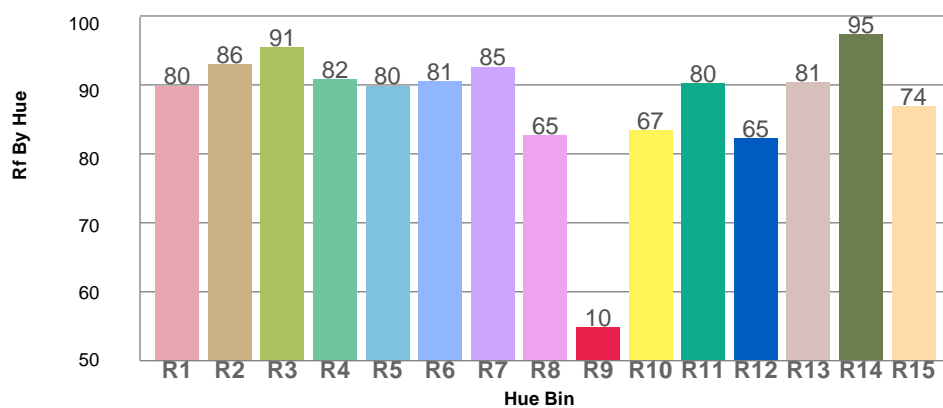
R_f 81.9

GAMUT INDEX

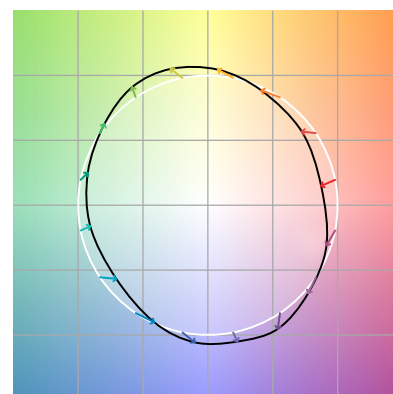
R_g 98.5

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

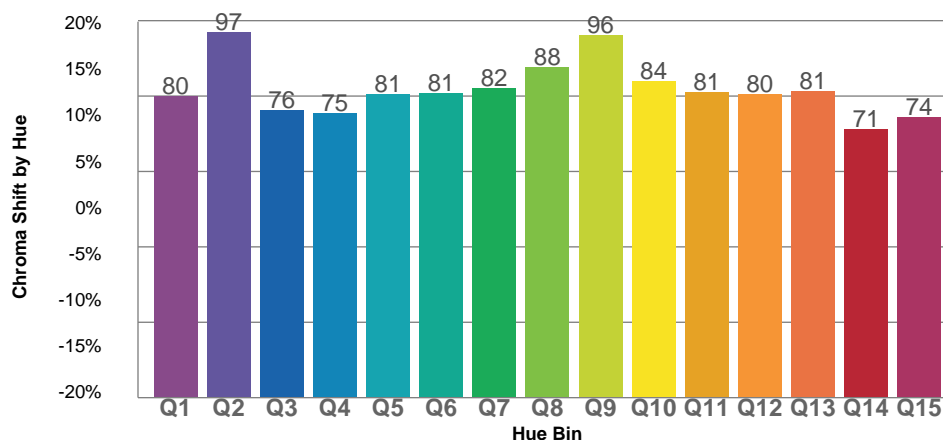
TM30 OVER 50



COLOR VECTOR GRAPHICS



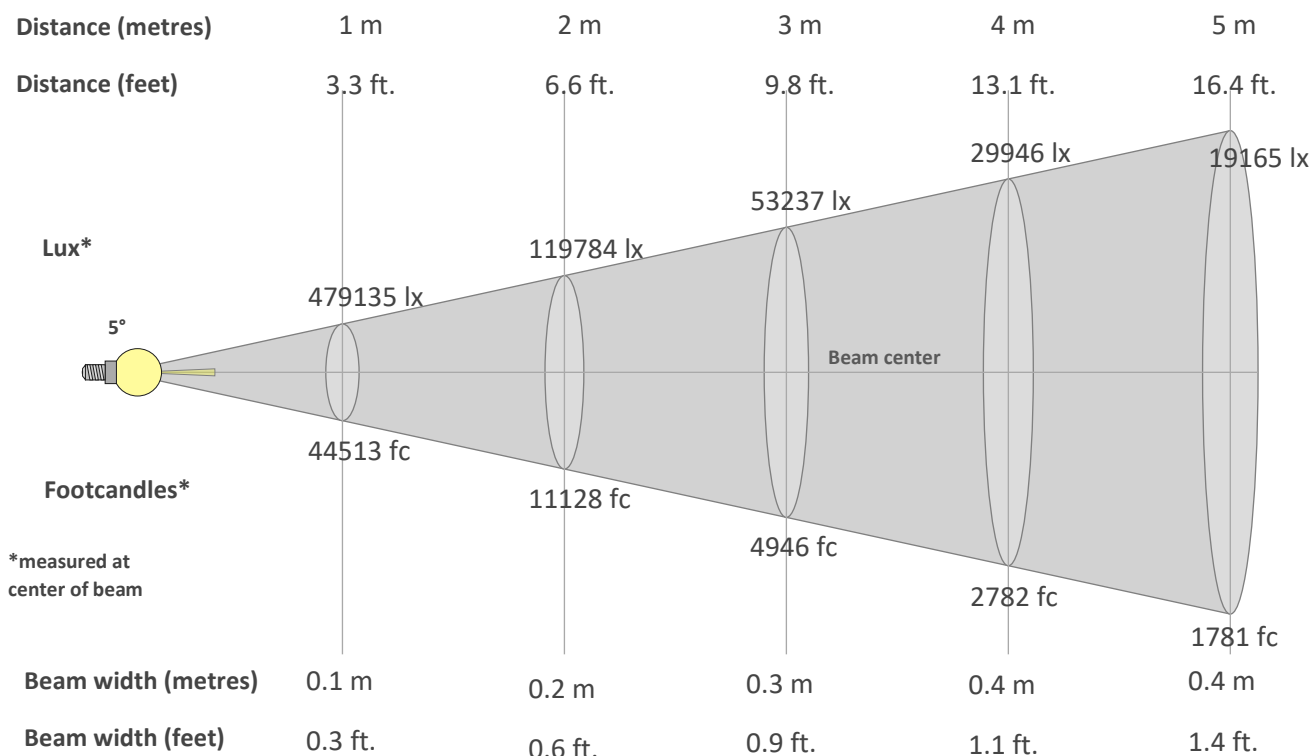
TM30 CHROMA SHIFT



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
479135lx	119784lx	53237lx	29946lx	19165lx	13309lx	9778lx	7486lx	5915lx	4791lx	3960lx	3327lx	2835lx	2445lx	2129lx	1872lx	1658lx	1479lx	1327lx	1198lx
44513.1fc	11128.3fc	4945.9fc	2782.1fc	1780.5fc	1236.5fc	908.4fc	695.5fc	549.5fc	445.1fc	367.9fc	309.1fc	263.4fc	227.1fc	197.8fc	173.9fc	154fc	137.4fc	123.3fc	111.3fc

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°
479K	437K	309K	181K	102K	57K	33K	20K	13K	9K	6K	5K	3K	2K	2K	1K	1K	1K	1K	1K
100%	91%	64%	38%	21%	12%	7%	4%	3%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%

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°
479K	428K	308K	196K	119K	72K	44K	27K	17K	11K	9K	6K	5K	3K	2K	2K	1K	1K	1K	1K
100%	89%	64%	41%	25%	15%	9%	6%	4%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%

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°
479K	437K	309K	181K	102K	57K	33K	20K	13K	9K	6K	5K	3K	2K	2K	1K	1K	1K	1K	1K
100%	91%	64%	38%	21%	12%	7%	4%	3%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%

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°
479K	428K	308K	196K	119K	72K	44K	27K	17K	11K	9K	6K	5K	3K	2K	2K	1K	1K	1K	1K
100%	89%	64%	41%	25%	15%	9%	6%	4%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%