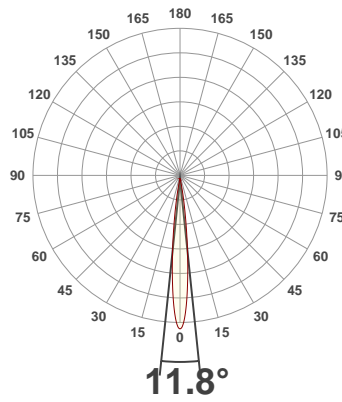
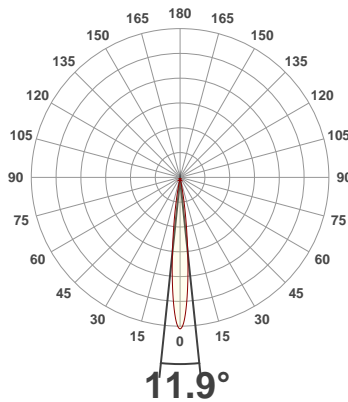




PRODUCT INFORMATION

SERIAL NUMBER:	LL-200325-0495
DATE OF MEASUREMENT:	25/03/2020
SIZE (dia. x h):	73 mm x 47 mm

ANGULAR DISTRIBUTION AT C0/180 | ANGULAR DISTRIBUTION AT C90/270 | LIGHT OUTPUT DATA

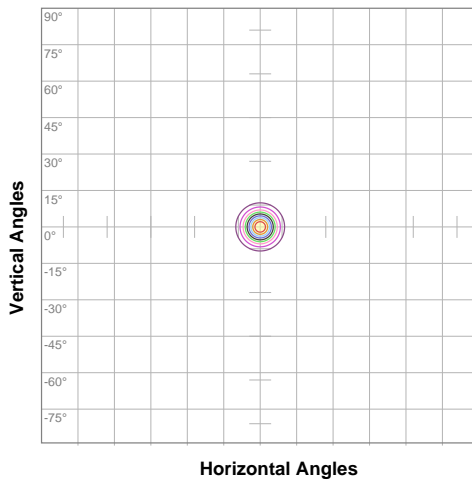


TOTAL LUMEN OUTPUT:	212 lm
EFFICACY:	28 lm/W
PEAK INTENSITY:	3977 cd
COLOR RENDERING INDEX (CRI):	88.3
COLOR TEMPERATURE (CCT):	4122K
FIDELITY INDEX (TM30rf):	82.8
GAMUT INDEX (TM30Rg):	105.7

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	11.9°
BEAM ANGLE (FWHM) C90/270:	11.8°
FIELD ANGLE (10%) C0/180:	22.4°
FIELD ANGLE (10%) C90/270:	22°
NUMBER OF PLANES MEASURED:	12

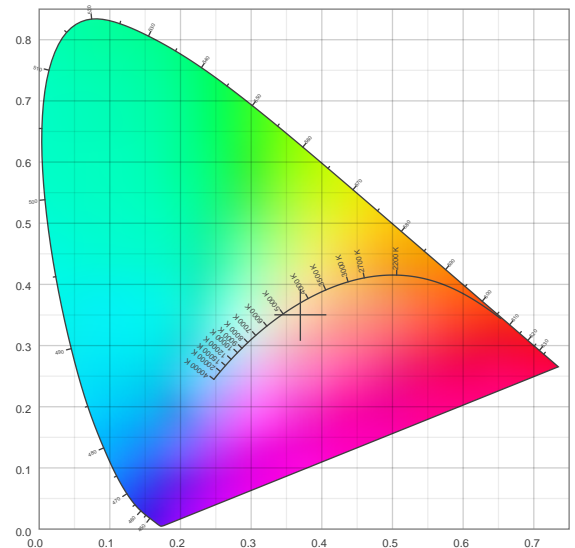
ISOCANDELA DIAGRAM



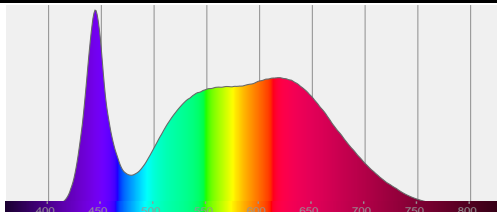
- 10% 398 cd
- 20% 795 cd
- 30% 1193 cd
- 40% 1590 cd
- 50% 1988 cd
- 60% 2385 cd
- 70% 2783 cd
- 80% 3180 cd
- 90% 3578 cd

INPUT POWER:	7.6 W
POWER FACTOR:	1.0
OPTICAL POWER:	0.756 mW
PEAK WAVELENGTH:	445 nm
DOMINANT WAVELENGTH:	590 nm

CIE 1931



SPECTRAL DISTRIBUTION | CIE 1931 ZOOM



x: 0.370
y: 0.350
u: 0.229
v: 0.325
Δuv: -0.0097

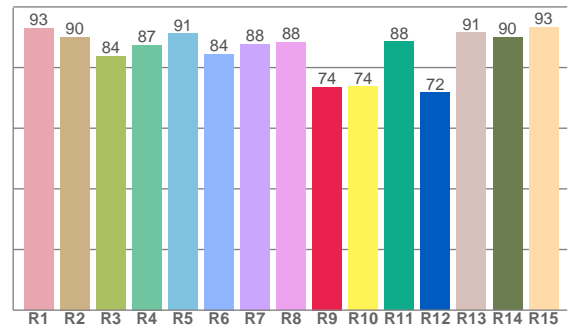
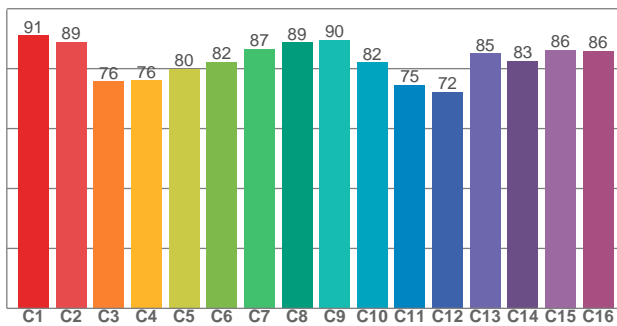
ZONAL LUMEN SUMMARY

0°-10° 167 lm	10°-20° 37.3 lm	20°-30° 5.32 lm	30°-40° 1.38 lm	40°-50° 0.459 lm	50°-60° 0.206 lm	60°-70° 0.124 lm	70°-80° 0.093 lm	80°-90° 0.076 lm
90°-100° 0.028 lm	100°-110° 0.009 lm	110°-120° 0.007 lm	120°-130° 0.006 lm	130°-140° 0.005 lm	140°-150° 0.004 lm	150°-160° 0.003 lm	160°-170° 0.002 lm	170°-180° 0.001 lm

COLOR DETAILS

TM30: 82.8

CRI: 88.3 (R1-R8)



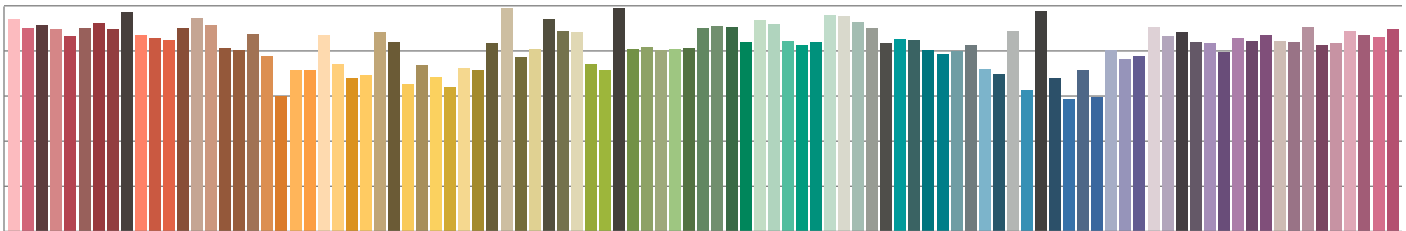
TM30 C values, 16 binned values out of total of 99 C values

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
91.2	88.9	75.7	76.2	80.0	82.3	86.6	88.8	89.6	82.1	74.6	72.3	85.0	82.6	86.3	86.0

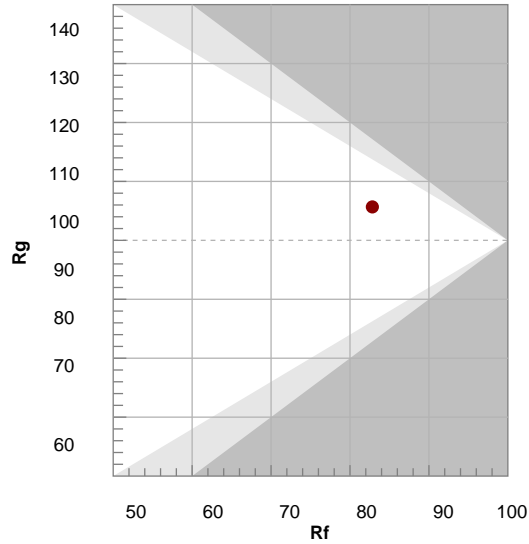
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93.0	90.0	83.8	87.4	91.2	84.5	87.8	88.3	73.6	73.8	88.5	71.7	91.5	90.0	93.3

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-3%
2	89	-4%	5%
3	76	-1%	13%
4	76	5%	14%
5	80	11%	10%
6	82	12%	1%
7	87	6%	-7%
8	89	0%	-7%
9	90	-5%	-4%
10	82	-8%	5%
11	75	-2%	17%
12	72	4%	16%
13	85	10%	9%
14	83	10%	4%
15	86	9%	-6%
16	86	4%	-9%

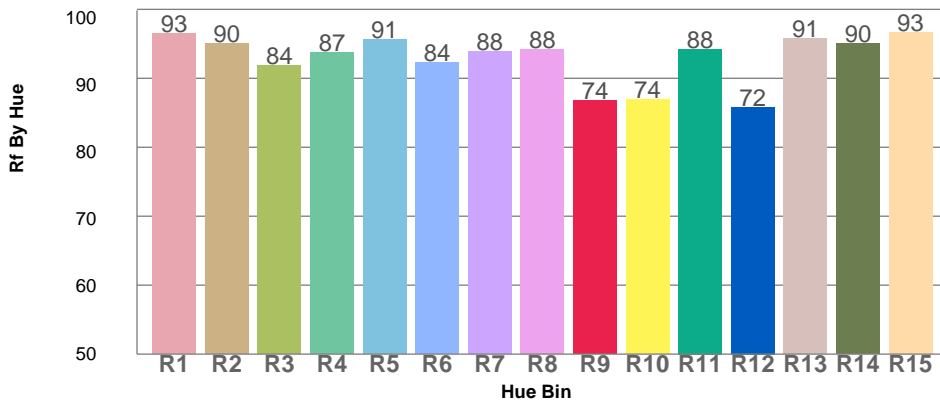


FIDELITY INDEX
R_f 82.8

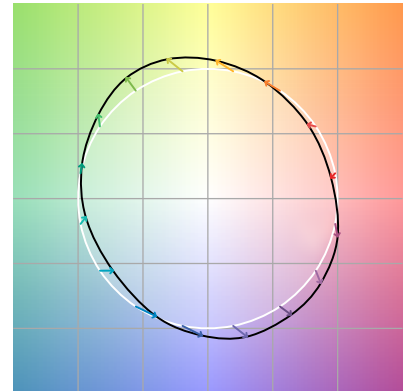
GAMUT INDEX
R_g 105.7

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

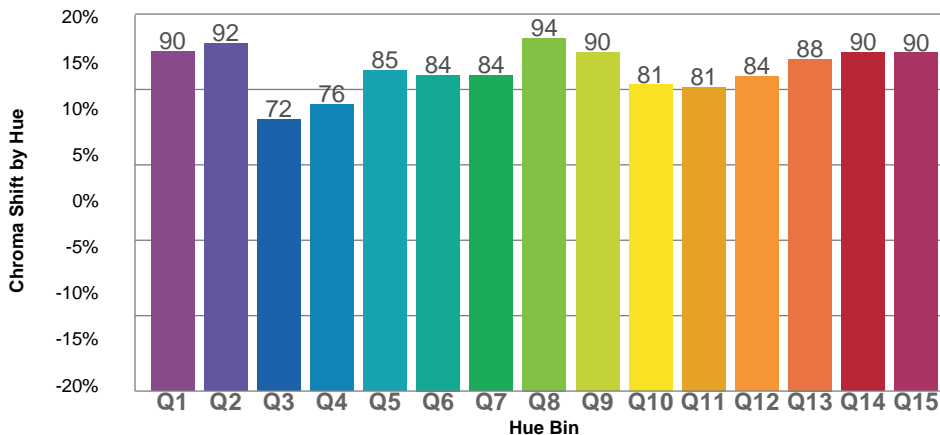
TM30 OVER 50



COLOR VECTOR GRAPHICS



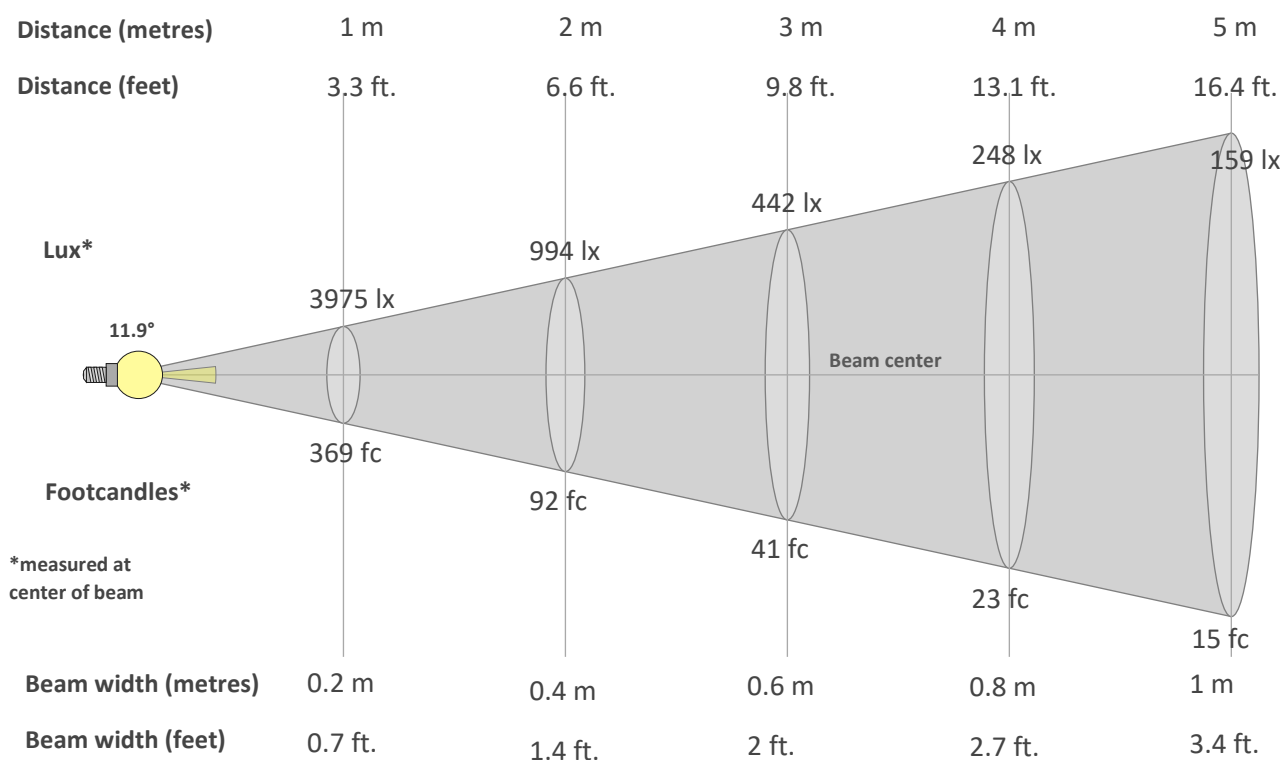
TM30 CHROMA SHIFT



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
3975lx	994lx	442lx	248lx	159lx	110lx	81lx	62lx	49lx	40lx	33lx	28lx	24lx	20lx	18lx	16lx	14lx	12lx	11lx	10lx
369.3fc	92.3fc	41fc	23.1fc	14.8fc	10.3fc	7.5fc	5.8fc	4.6fc	3.7fc	3.1fc	2.6fc	2.2fc	1.9fc	1.6fc	1.4fc	1.3fc	1.1fc	1fc	0.9fc

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°
3975	3894	3667	3317	2892	2433	1970	1541	1171	863	614	426	293	199	136	96	70	53	41	33
100%	98%	92%	83%	73%	61%	50%	39%	29%	22%	15%	11%	7%	5%	3%	2%	2%	1%	1%	1%

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°
3975	3895	3665	3316	2881	2412	1946	1514	1137	826	581	398	268	179	120	84	61	47	37	30
100%	98%	92%	83%	72%	61%	49%	38%	29%	21%	15%	10%	7%	4%	3%	2%	2%	1%	1%	1%

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°
3975	3894	3667	3317	2892	2433	1970	1541	1171	863	614	426	293	199	136	96	70	53	41	33
100%	98%	92%	83%	73%	61%	50%	39%	29%	22%	15%	11%	7%	5%	3%	2%	2%	1%	1%	1%

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°
3975	3895	3665	3316	2881	2412	1946	1514	1137	826	581	398	268	179	120	84	61	47	37	30
100%	98%	92%	83%	72%	61%	49%	38%	29%	21%	15%	10%	7%	4%	3%	2%	2%	1%	1%	1%