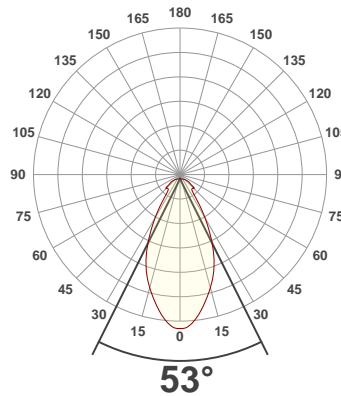
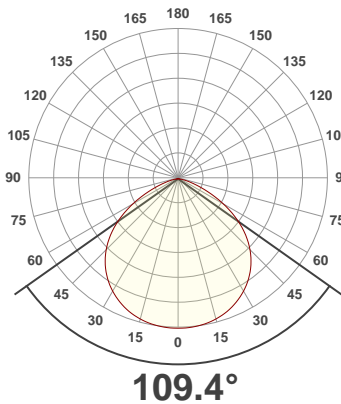




PRODUCT INFORMATION

SERIAL NUMBER:	LL-200414-0639
DATE OF MEASUREMENT:	2020-04-14
SIZE (l x w. x h):	297 mm x 34.9 mm x 34.4 mm

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

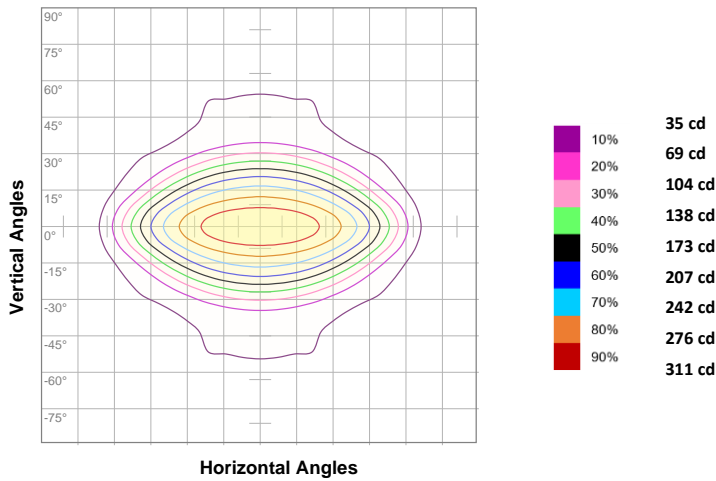


TOTAL LUMEN OUTPUT:	525 lm
EFFICACY:	113 lm/W
PEAK INTENSITY:	347 cd
COLOR RENDERING INDEX (CRI):	84.1
COLOR TEMPERATURE (CCT):	4061K
FIDELITY INDEX (TM30Rf):	83.9
GAMUT INDEX (TM30Rg):	95.0

BEAM OUTPUT DATA

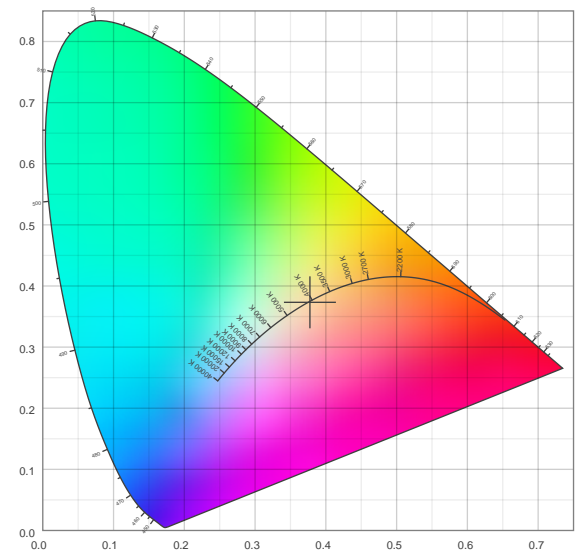
BEAM ANGLE (FWHM) C0/180:	109.4°
BEAM ANGLE (FWHM) C90/270:	53°
FIELD ANGLE (10%) C0/180:	147.2°
FIELD ANGLE (10%) C90/270:	121°
NUMBER OF PLANES MEASURED:	24

ISOCANDELA DIAGRAM

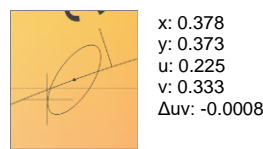
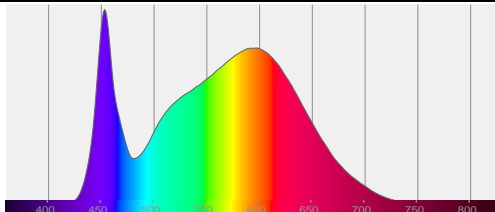


INPUT POWER:	4.7 W
POWER FACTOR:	1.0
OPTICAL POWER:	1.61 mW
PEAK WAVELENGTH:	453 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931



SPECTRAL DISTRIBUTION | CIE 1931 ZOOM



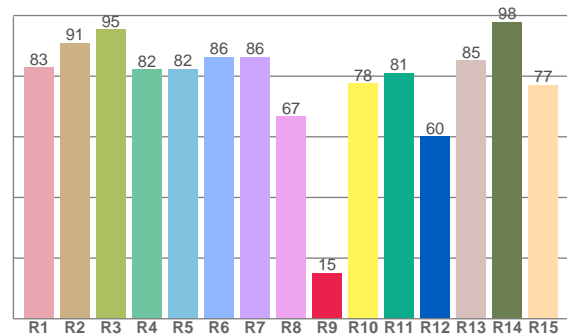
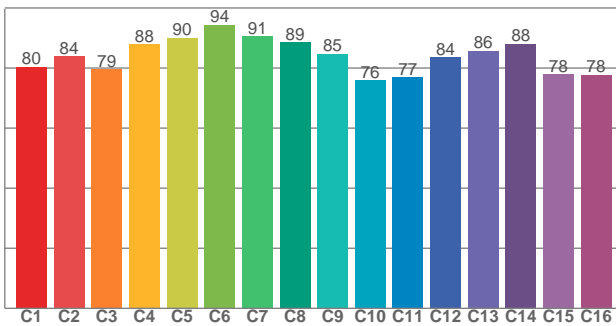
ZONAL LUMEN SUMMARY

0°-10° 31.7 lm	10°-20° 83.2 lm	20°-30° 110 lm	30°-40° 105 lm	40°-50° 78.7 lm	50°-60° 55.5 lm	60°-70° 35.6 lm	70°-80° 17.9 lm	80°-90° 5.34 lm
90°-100° 0.763 lm	100°-110° 0.380 lm	110°-120° 0.336 lm	120°-130° 0.304 lm	130°-140° 0.243 lm	140°-150° 0.187 lm	150°-160° 0.138 lm	160°-170° 0.084 lm	170°-180° 0.028 lm

COLOR DETAILS

TM30: 83.9

CRI: 84.1 (R1-R8)



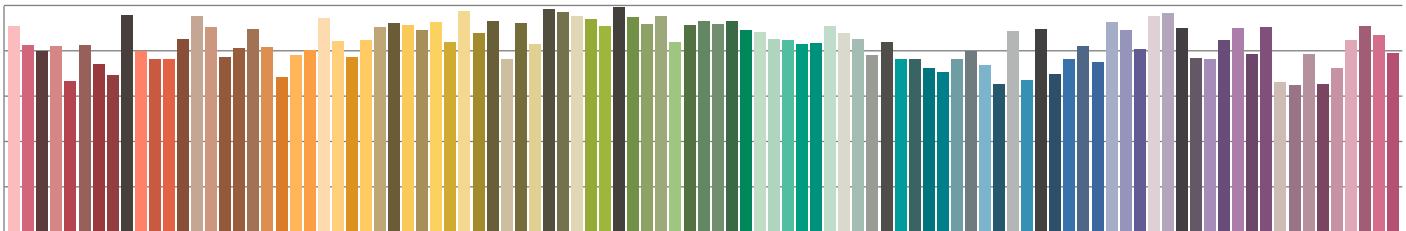
TM30 C values, 16 binned values out of total of 99 C values

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
80.4	83.8	79.5	87.8	90.1	94.3	90.6	88.6	84.7	75.8	76.8	83.5	85.7	88.0	77.9	77.7

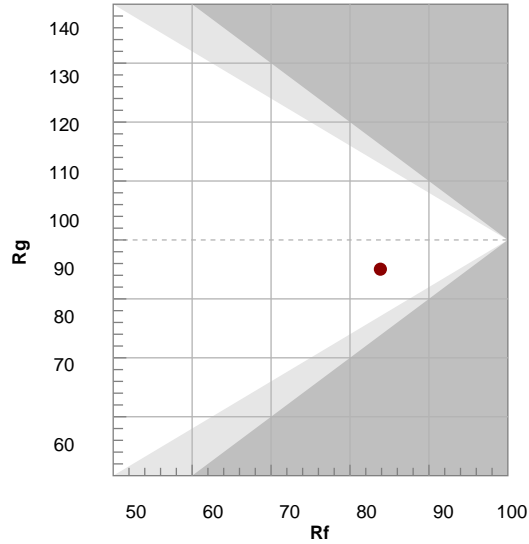
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.9	90.9	95.3	82.2	82.4	86.2	86.3	66.6	15.1	77.6	81.0	60.1	85.2	97.8	77.0

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	0%
2	84	-7%	6%
3	79	-4%	10%
4	88	-1%	6%
5	90	-1%	3%
6	94	0%	-2%
7	91	-5%	-2%
8	89	-7%	1%
9	85	-7%	9%
10	76	-6%	14%
11	77	4%	15%
12	84	6%	6%
13	86	7%	-7%
14	88	5%	-7%
15	78	-1%	-16%
16	78	-6%	-12%

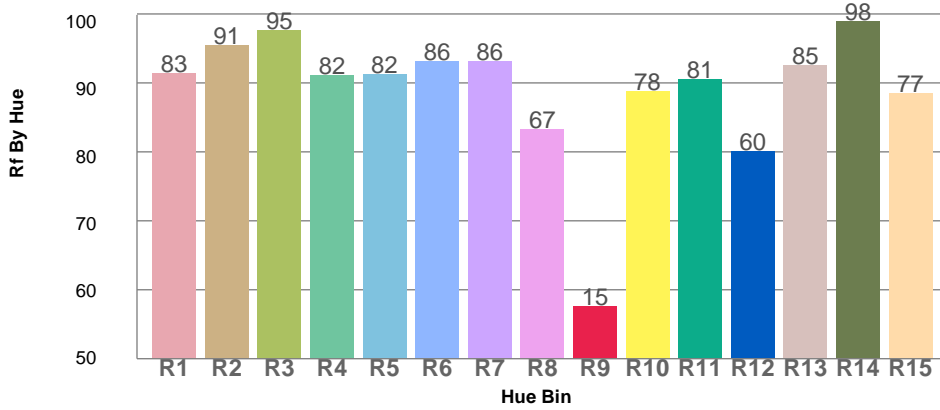


FIDELITY INDEX
R_f 83.9

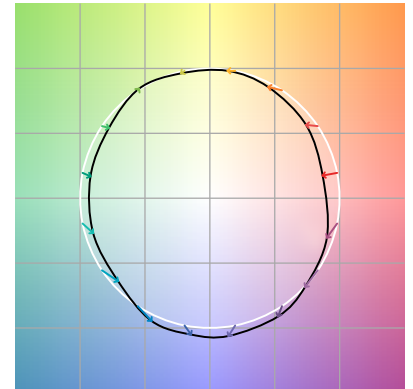
GAMUT INDEX
R_g 95.0

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

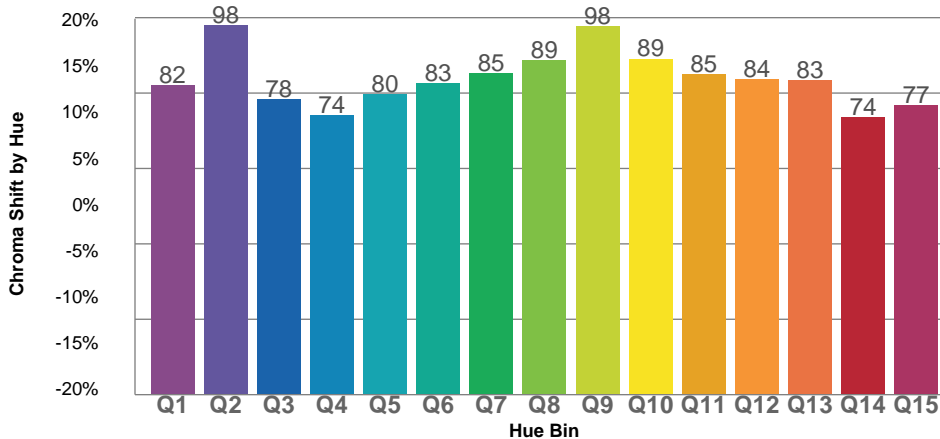
TM30 OVER 50



COLOR VECTOR GRAPHICS



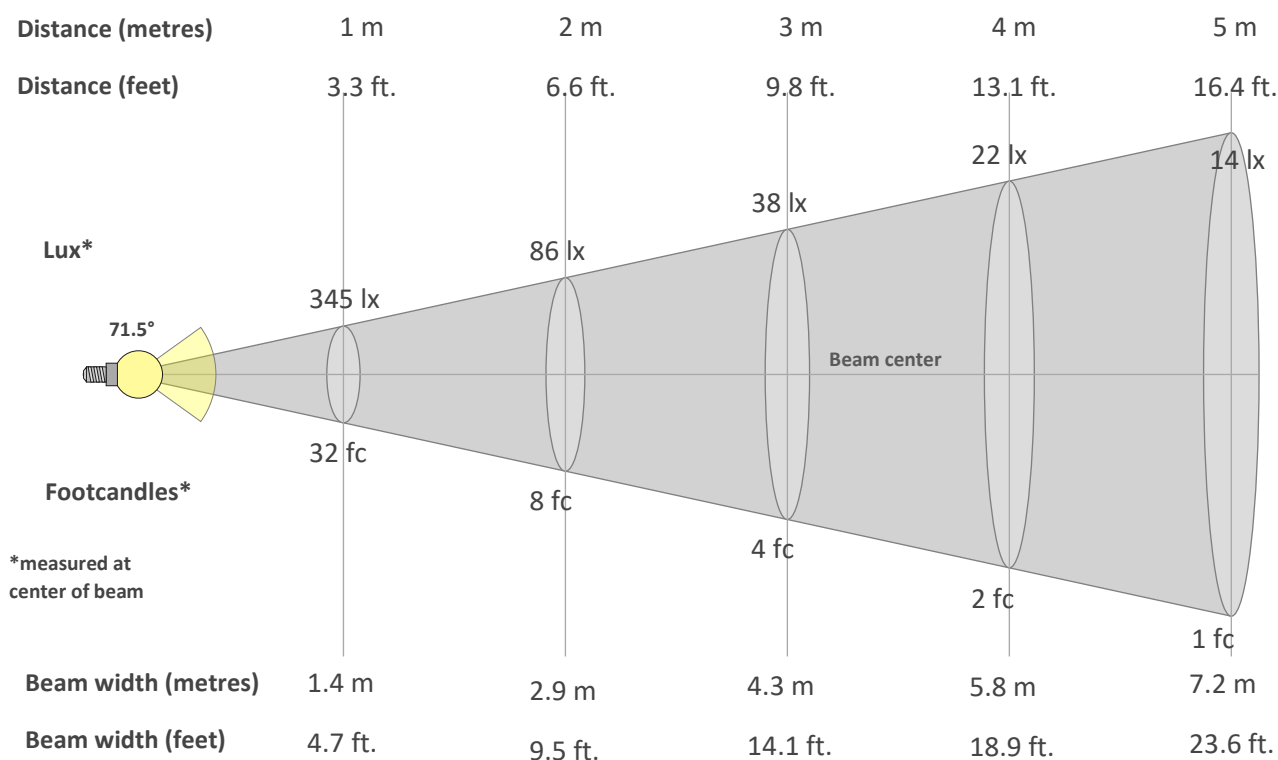
TM30 CHROMA SHIFT



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
345lx	86lx	38lx	22lx	14lx	10lx	7lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx
32.1fc	8fc	3.6fc	2fc	1.3fc	0.9fc	0.7fc	0.5fc	0.4fc	0.3fc	0.3fc	0.2fc	0.2fc	0.2fc	0.1fc	0.1fc	0.1fc	0.1fc	0.1fc	0.1fc

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°
345	344	341	336	328	316	302	284	263	237	207	170	130	89	53	29	14	5	0	0
100%	100%	99%	97%	95%	92%	87%	82%	76%	69%	60%	49%	38%	26%	15%	8%	4%	1%	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°
345	332	302	267	230	187	137	93	60	42	37	37	36	27	23	18	13	6	1	1
100%	96%	87%	77%	67%	54%	40%	27%	17%	12%	11%	11%	10%	8%	7%	5%	4%	2%	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°
345	344	341	336	328	316	302	284	263	237	207	170	130	89	53	29	14	5	0	0
100%	100%	99%	97%	95%	92%	87%	82%	76%	69%	60%	49%	38%	26%	15%	8%	4%	1%	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°
345	332	302	267	230	187	137	93	60	42	37	37	36	27	23	18	13	6	1	1
100%	96%	87%	77%	67%	54%	40%	27%	17%	12%	11%	11%	10%	8%	7%	5%	4%	2%	0%	0%