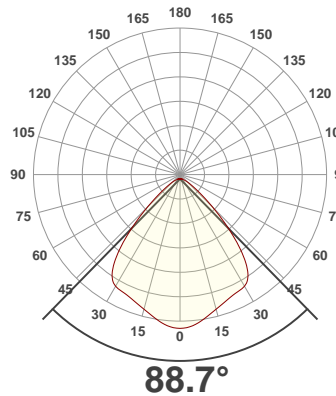
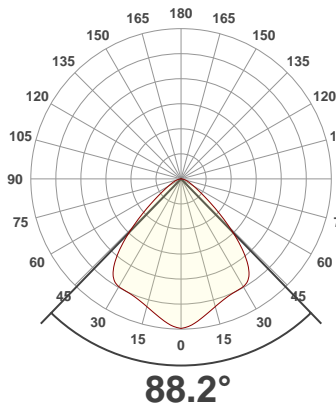




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20191008-834
DATE OF MEASUREMENT:	2019-10-08
SIZE (dia. x h):	440 mm x 92 mm

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

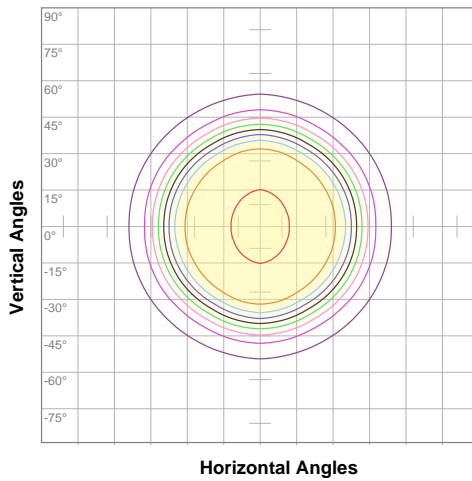


TOTAL LUMEN OUTPUT:	16767 lm
EFFICACY:	85 lm/W
PEAK INTENSITY:	9126 cd
COLOR RENDERING INDEX (CRI):	83.5
COLOR TEMPERATURE (CCT):	3979K
FIDELITY INDEX (TM30Rf):	84.5
GAMUT INDEX (TM30Rg):	96.2

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	88.2°
BEAM ANGLE (FWHM) C90/270:	88.7°
FIELD ANGLE (10%) C0/180:	120°
FIELD ANGLE (10%) C90/270:	121°
NUMBER OF PLANES MEASURED:	12

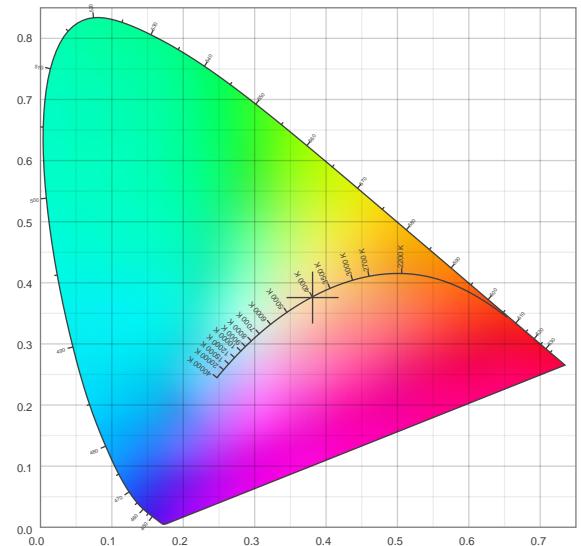
ISO CANDELA DIAGRAM | DATA



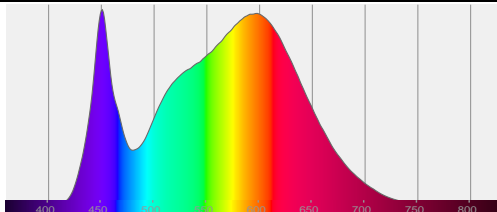
10%	912 cd
20%	1823 cd
30%	2735 cd
40%	3646 cd
50%	4558 cd
60%	5470 cd
70%	6381 cd
80%	7293 cd
90%	8204 cd

INPUT POWER:	197.4 W
POWER FACTOR:	1.0
OPTICAL POWER:	51.0 mW
PEAK WAVELENGTH:	451 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931:



SPECTRA | CIE 1931 ZOOM



x:	0.381
y:	0.376
u:	0.226
v:	0.334
Δuv:	-0.0006

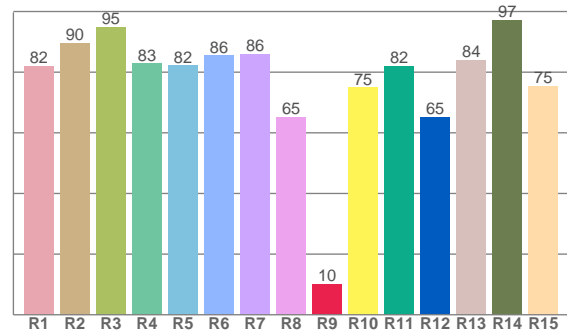
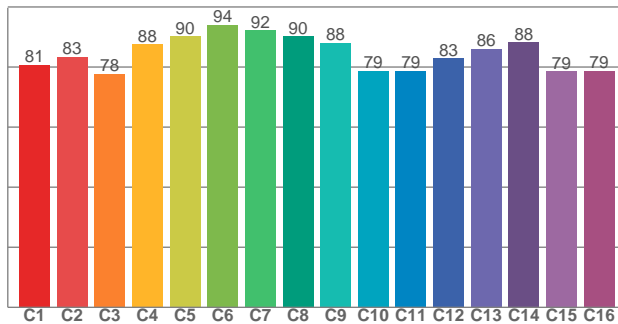
ZONAL LUMEN SUMMARY

0°-10° 841 lm	10°-20° 2314 lm	20°-30° 3579 lm	30°-40° 4434 lm	40°-50° 3227 lm	50°-60° 1386 lm	60°-70° 624 lm	70°-80° 287 lm	80°-90° 62.3 lm
90°-100° 3.20 lm	100°-110° 3.10 lm	110°-120° 1.77 lm	120°-130° 1.34 lm	130°-140° 1.04 lm	140°-150° 0.761 lm	150°-160° 0.561 lm	160°-170° 0.343 lm	170°-180° 0.116 lm

COLOR DETAILS

TM30: 84.5

CRI: 83.5 (R1-R8)



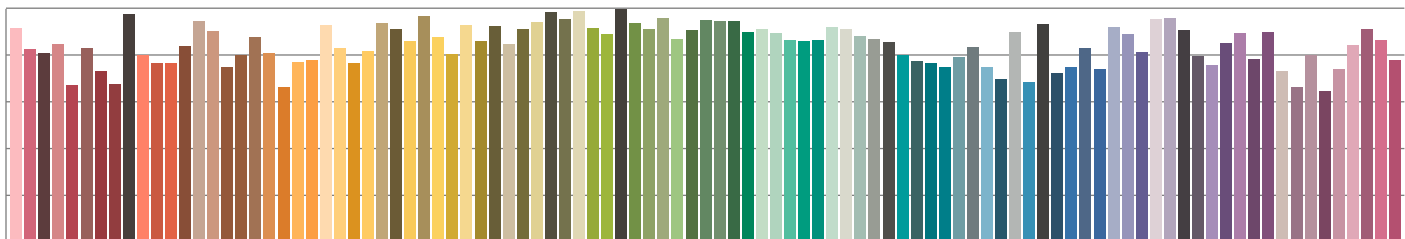
TM30 C values, 16 binned values out of total of 99 C values

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
80.7	83.4	77.7	87.5	90.1	94.1	92.2	90.3	88.1	78.8	78.7	82.8	86.0	88.3	78.6	78.7

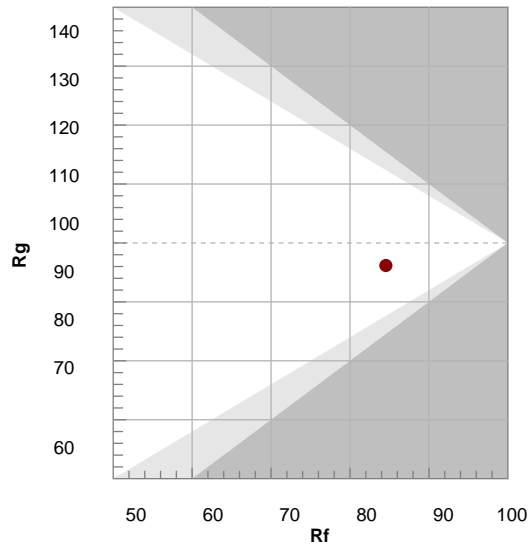
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.0	89.5	94.8	82.9	82.1	85.5	86.0	65.2	10.2	75.0	82.0	65.1	84.0	97.3	75.4

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-12%	-1%
2	83	-7%	6%
3	78	-4%	11%
4	88	1%	8%
5	90	2%	4%
6	94	3%	-2%
7	92	-3%	-4%
8	90	-5%	-1%
9	88	-7%	5%
10	79	-7%	11%
11	79	2%	14%
12	83	5%	7%
13	86	7%	-6%
14	88	6%	-7%
15	79	-1%	-16%
16	79	-6%	-12%



FIDELITY INDEX

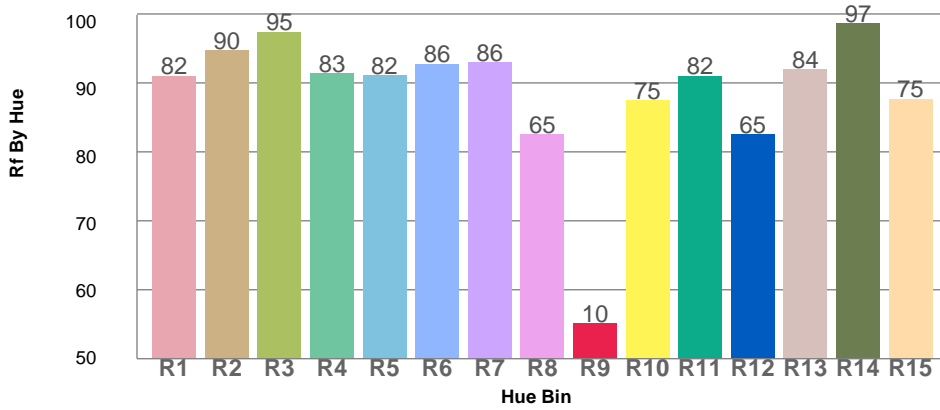
R_f 84.5

GAMUT INDEX

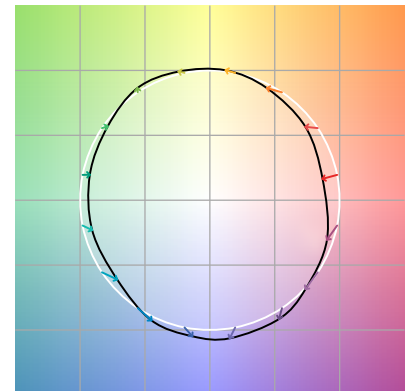
R_g 96.2

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

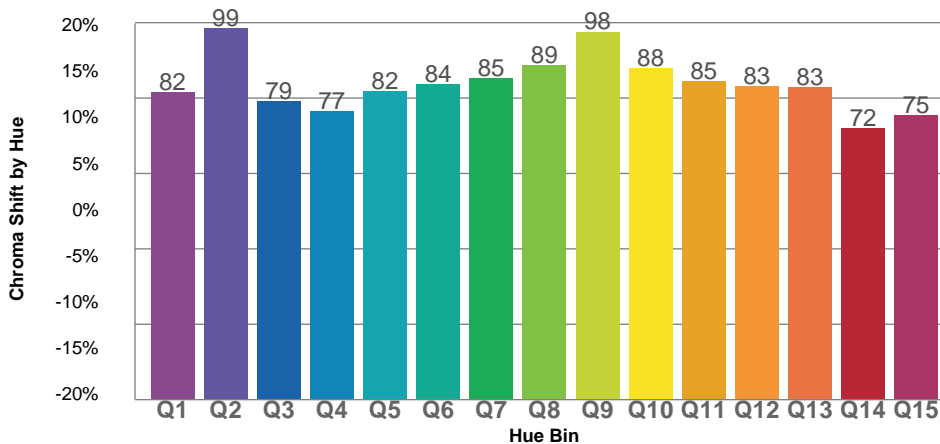
TM30 OVER 50



COLOR VECTOR GRAPHICS



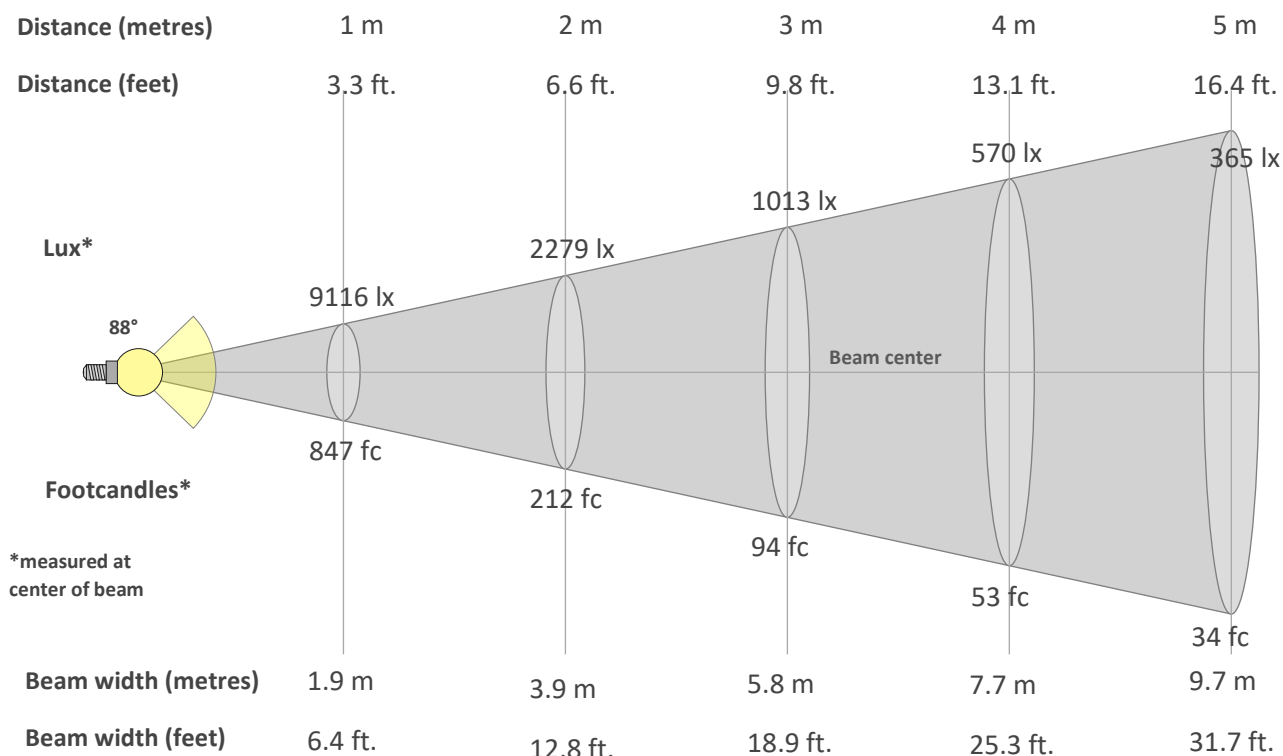
TM30 CHROMA SHIFT



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
9116lx	2279lx	1013lx	570lx	365lx	253lx	186lx	142lx	113lx	91lx	75lx	63lx	54lx	47lx	41lx	36lx	32lx	28lx	25lx	23lx
846.9fc	211.7fc	94.1fc	52.9fc	33.9fc	23.5fc	17.3fc	13.2fc	10.5fc	8.5fc	7fc	5.9fc	5fc	4.3fc	3.8fc	3.3fc	2.9fc	2.6fc	2.3fc	2.1fc

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°
9116	8886	8468	8084	7807	7661	7599	7218	6028	4215	2526	1461	912	613	417	269	144	48	3	3
100%	97%	93%	89%	86%	84%	83%	79%	66%	46%	28%	16%	10%	7%	5%	3%	2%	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°
9116	8989	8671	8320	8040	7835	7730	7364	6157	4308	2633	1545	954	631	424	272	147	49	6	0
100%	99%	95%	91%	88%	86%	85%	81%	68%	47%	29%	17%	10%	7%	5%	3%	2%	1%	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°
9116	8886	8468	8084	7807	7661	7599	7218	6028	4215	2526	1461	912	613	417	269	144	48	3	3
100%	97%	93%	89%	86%	84%	83%	79%	66%	46%	28%	16%	10%	7%	5%	3%	2%	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°
9116	8989	8671	8320	8040	7835	7730	7364	6157	4308	2633	1545	954	631	424	272	147	49	6	0
100%	99%	95%	91%	88%	86%	85%	81%	68%	47%	29%	17%	10%	7%	5%	3%	2%	1%	0%	0%