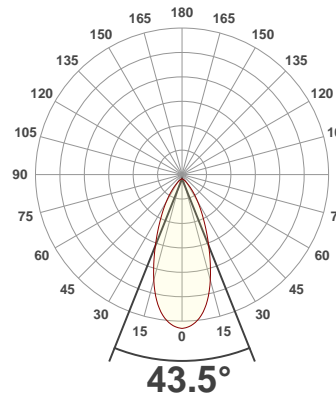
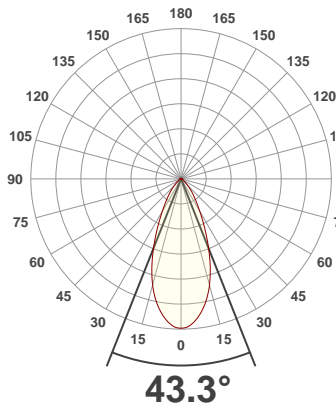




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20191008-831
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

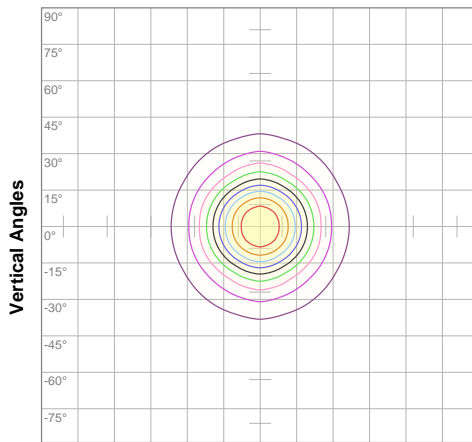


TOTAL LUMEN OUTPUT:	16870 lm
EFFICACY:	85 lm/W
PEAK INTENSITY:	25165 cd
COLOR RENDERING INDEX (CRI):	83.4
COLOR TEMPERATURE (CCT):	3963K
FIDELITY INDEX (TM30Rf):	84.5
GAMUT INDEX (TM30Rg):	96.2

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	43.3°
BEAM ANGLE (FWHM) C90/270:	43.5°
FIELD ANGLE (10%) C0/180:	81.6°
FIELD ANGLE (10%) C90/270:	84.8°
NUMBER OF PLANES MEASURED:	12

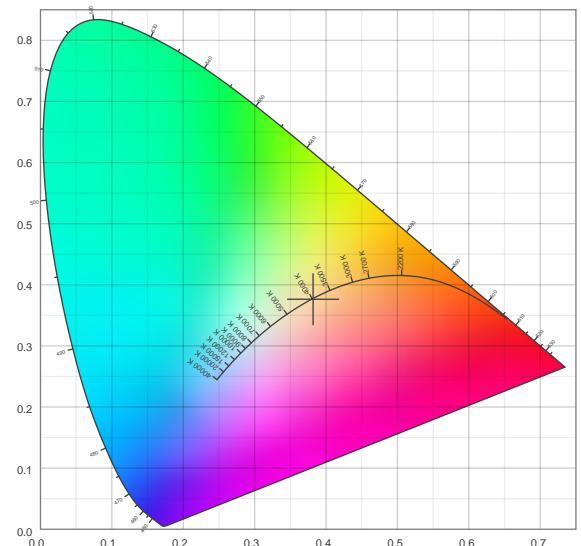
ISO CANDELA DIAGRAM | DATA



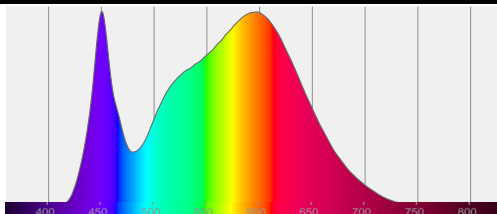
10%	2514 cd
20%	5028 cd
30%	7542 cd
40%	10056 cd
50%	12571 cd
60%	15085 cd
70%	17599 cd
80%	20113 cd
90%	22627 cd

INPUT POWER:	197.4 W
POWER FACTOR:	1.0
OPTICAL POWER:	51.2 mW
PEAK WAVELENGTH:	450 nm
DOMINANT WAVELENGTH:	582 nm

CIE 1931:



SPECTRA | CIE 1931 ZOOM



x:	0.382
y:	0.376
u:	0.226
v:	0.334
Δuv:	-0.0006

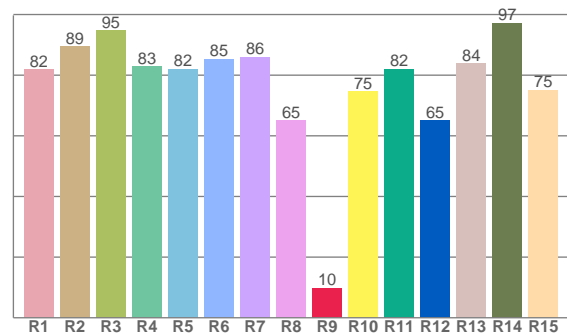
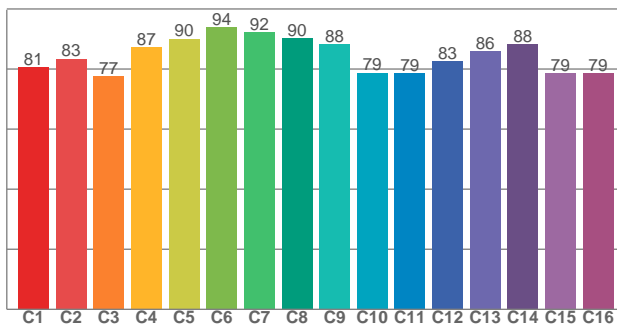
ZONAL LUMEN SUMMARY

0°-10° 2246 lm	10°-20° 5050 lm	20°-30° 4433 lm	30°-40° 2727 lm	40°-50° 1367 lm	50°-60° 589 lm	60°-70° 302 lm	70°-80° 138 lm	80°-90° 18.5 lm
90°-100° 0.041 lm	100°-110° 0.039 lm	110°-120° 0.025 lm	120°-130° 0.017 lm	130°-140° 0.011 lm	140°-150° 0.008 lm	150°-160° 0.006 lm	160°-170° 0.004 lm	170°-180° 0.001 lm

COLOR DETAILS

TM30: 84.5

CRI: 83.4 (R1-R8)



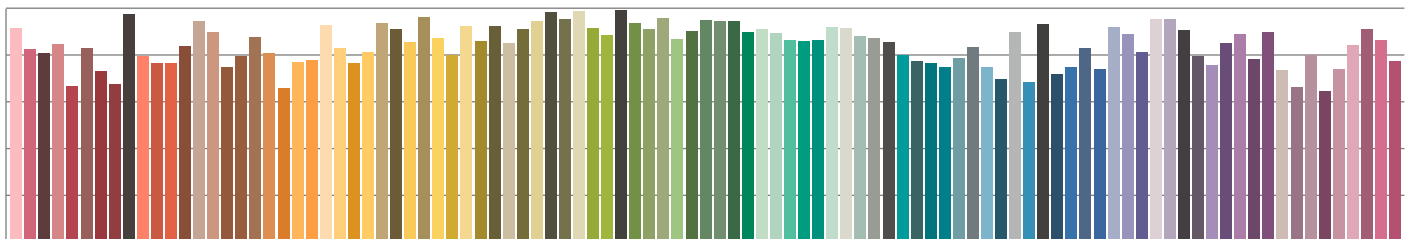
TM30 C values, 16 binned values out of total of 99 C values

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	83.3	77.5	87.3	90.0	93.9	92.2	90.3	88.2	78.7	78.6	82.7	86.0	88.2	78.6	78.7

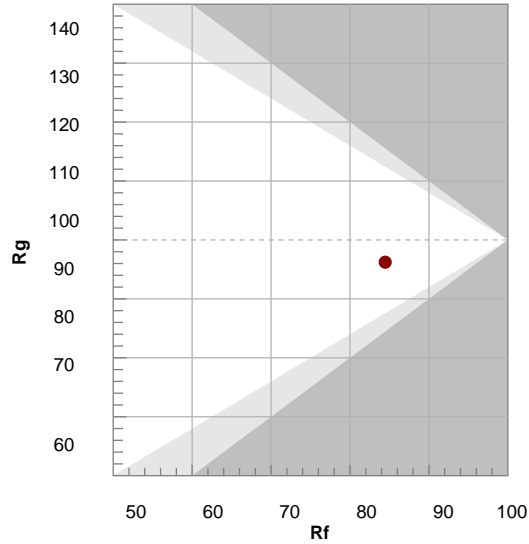
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
81.9	89.4	94.8	82.8	82.0	85.4	85.9	65.0	9.7	74.7	82.0	65.0	83.8	97.2	75.2

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-12%	-1%
2	83	-7%	6%
3	77	-4%	12%
4	87	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

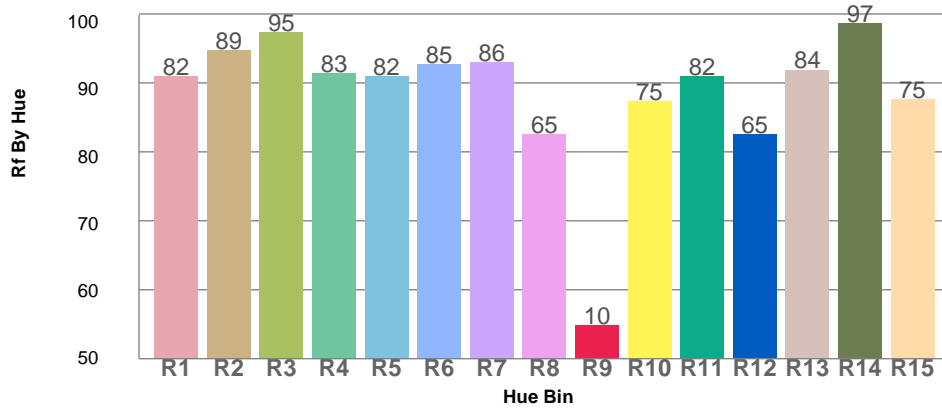
R_f 84.5

GAMUT INDEX

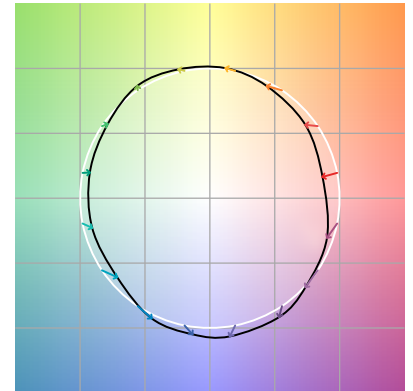
R_g 96.2

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

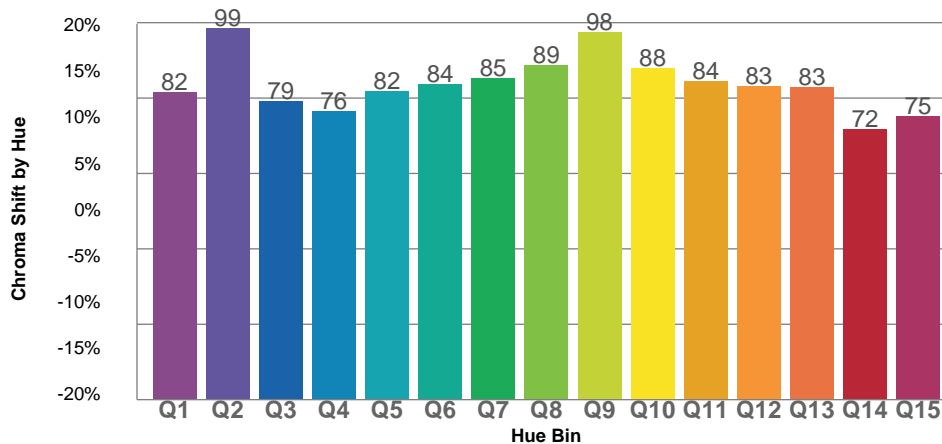
TM30 OVER 50



COLOR VECTOR GRAPHICS



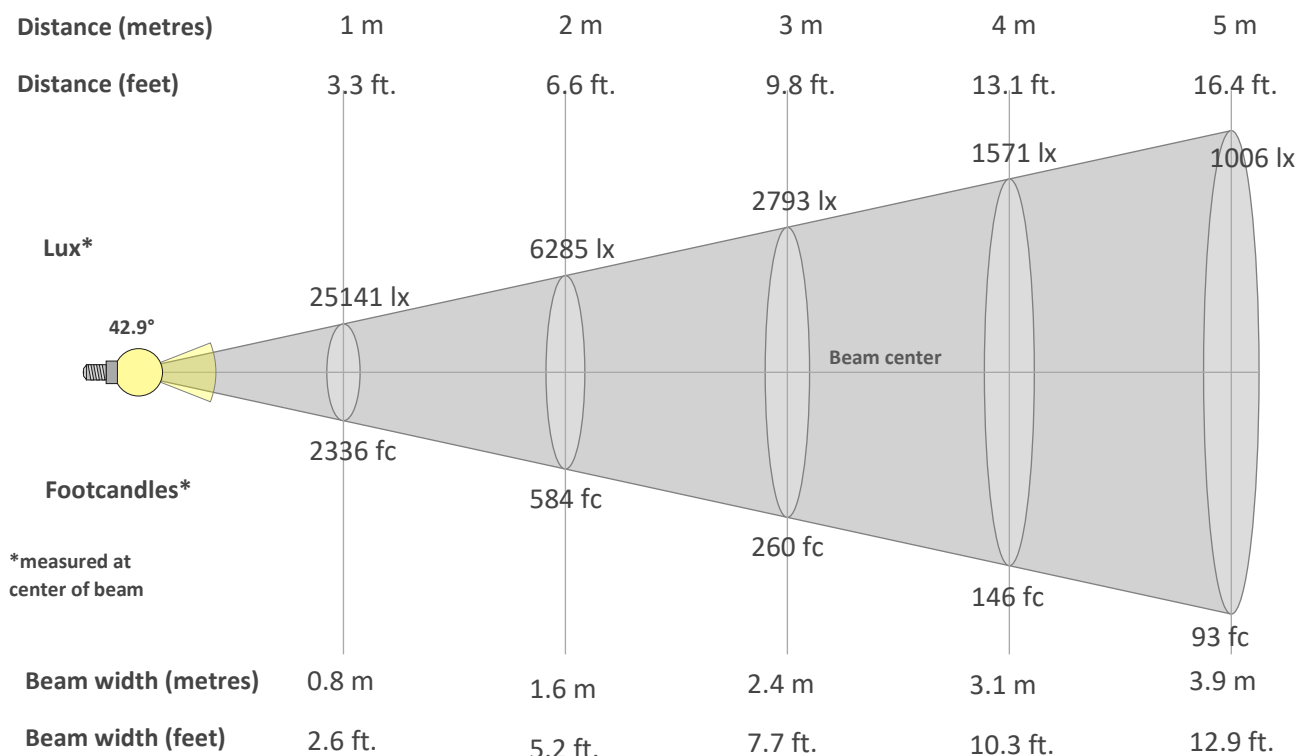
TM30 CHROMA SHIFT



COLOR DISTORTION GRAPHICS



BEAM DETAILS



*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
25141lx	6285lx	2793lx	1571lx	1006lx	698lx	513lx	393lx	310lx	251lx	208lx	175lx	149lx	128lx	112lx	98lx	87lx	78lx	70lx	63lx
2335.7fc	583.9fc	259.5fc	146fc	93.4fc	64.9fc	47.7fc	36.5fc	28.8fc	23.4fc	19.3fc	16.2fc	13.8fc	11.9fc	10.4fc	9.1fc	8.1fc	7.2fc	6.5fc	5.8fc

Intensity in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
25.1K	25.0K	24.5K	23.8K	22.9K	21.8K	20.6K	19.2K	17.6K	15.9K	14.0K	12.2K	10.5K	8.9K	7.5K	6.3K	5.3K	4.5K	3.8K	3.2K
100%	99%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	42%	35%	30%	25%	21%	18%	15%	13%

Intensity in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
25.1K	25.0K	24.6K	24.1K	23.3K	22.3K	21.0K	19.4K	17.7K	15.9K	14.1K	12.4K	10.8K	9.4K	8.1K	7.0K	6.1K	5.2K	4.4K	3.7K
100%	99%	98%	96%	93%	89%	83%	77%	70%	63%	56%	49%	43%	37%	32%	28%	24%	21%	18%	15%

Intensity in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
25.1K	25.0K	24.5K	23.8K	22.9K	21.8K	20.6K	19.2K	17.6K	15.9K	14.0K	12.2K	10.5K	8.9K	7.5K	6.3K	5.3K	4.5K	3.8K	3.2K
100%	99%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	42%	35%	30%	25%	21%	18%	15%	13%

Intensity in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
25.1K	25.0K	24.6K	24.1K	23.3K	22.3K	21.0K	19.4K	17.7K	15.9K	14.1K	12.4K	10.8K	9.4K	8.1K	7.0K	6.1K	5.2K	4.4K	3.7K
100%	99%	98%	96%	93%	89%	83%	77%	70%	63%	56%	49%	43%	37%	32%	28%	24%	21%	18%	15%