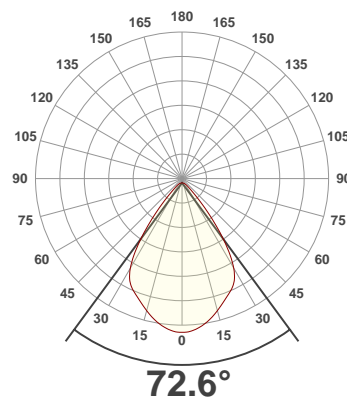
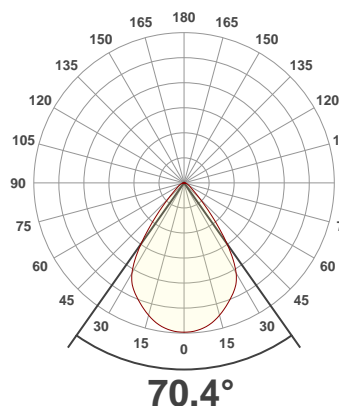




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20191008-833
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

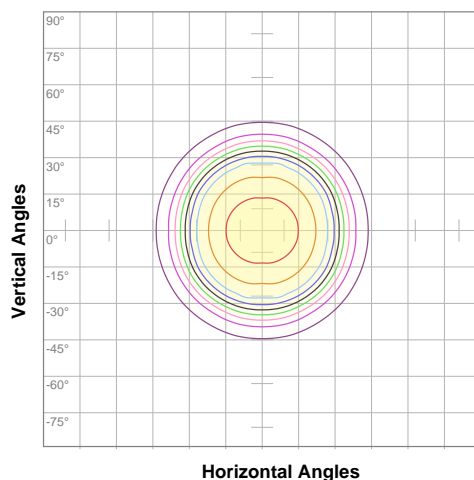


TOTAL LUMEN OUTPUT:	16738 lm
EFFICACY:	85 lm/W
PEAK INTENSITY:	12942 cd
COLOR RENDERING INDEX (CRI):	83.5
COLOR TEMPERATURE (CCT):	3971K
FIDELITY INDEX (TM30Rf):	84.5
GAMUT INDEX (TM30Rg):	96.2

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	70.4°
BEAM ANGLE (FWHM) C90/270:	72.6°
FIELD ANGLE (10%) C0/180:	97.2°
FIELD ANGLE (10%) C90/270:	99.2°
NUMBER OF PLANES MEASURED:	12

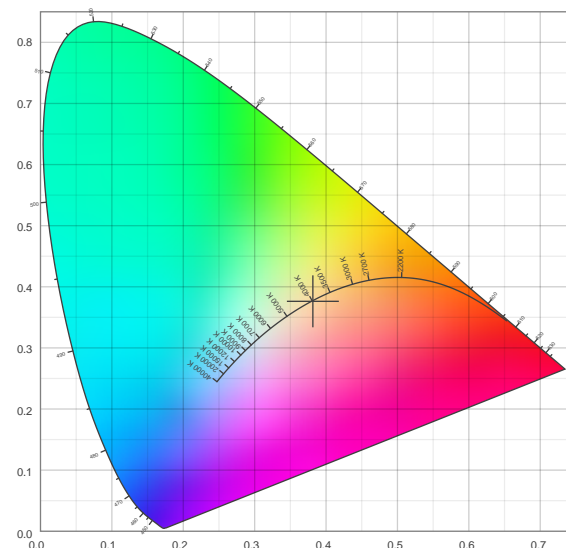
ISO CANDELA DIAGRAM | DATA



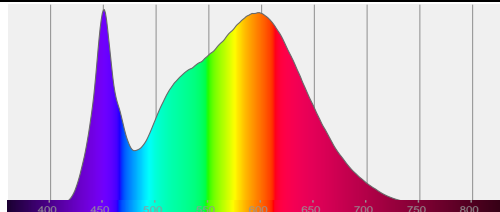
10%	1293 cd
20%	2587 cd
30%	3880 cd
40%	5173 cd
50%	6466 cd
60%	7760 cd
70%	9053 cd
80%	10346 cd
90%	11639 cd

INPUT POWER:	197.4 W
POWER FACTOR:	1.0
OPTICAL POWER:	50.9 mW
PEAK WAVELENGTH:	450 nm
DOMINANT WAVELENGTH:	582 nm

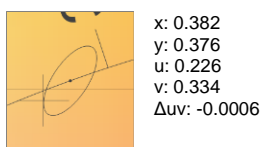
CIE 1931:



SPECTRA



CIE 1931 ZOOM



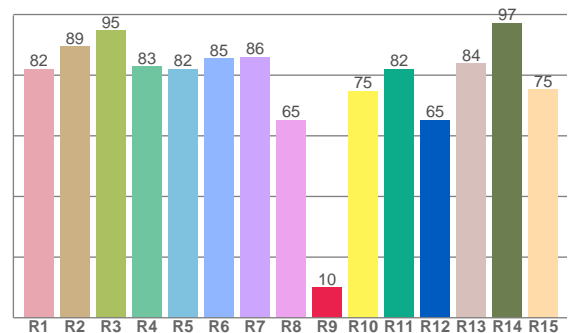
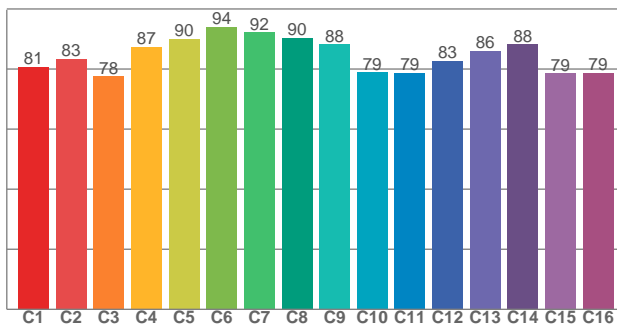
ZONAL LUMEN SUMMARY

0°-10° 1209 lm	10°-20° 3311 lm	20°-30° 4733 lm	30°-40° 4308 lm	40°-50° 1778 lm	50°-60° 711 lm	60°-70° 418 lm	70°-80° 215 lm	80°-90° 46.2 lm
90°-100° 2.44 lm	100°-110° 2.37 lm	110°-120° 1.35 lm	120°-130° 1.03 lm	130°-140° 0.715 lm	140°-150° 0.444 lm	150°-160° 0.327 lm	160°-170° 0.201 lm	170°-180° 0.068 lm

COLOR DETAILS

TM30: 84.5

CRI: 83.5 (R1-R8)



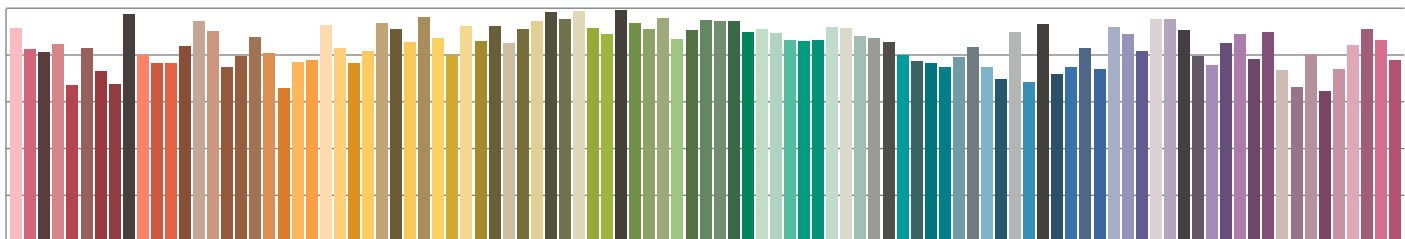
TM30 C values, 16 binned values out of total of 99 C values

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	77.6	87.4	90.1	94.0	92.2	90.3	88.2	78.8	78.7	82.7	86.0	88.2	78.6	78.7

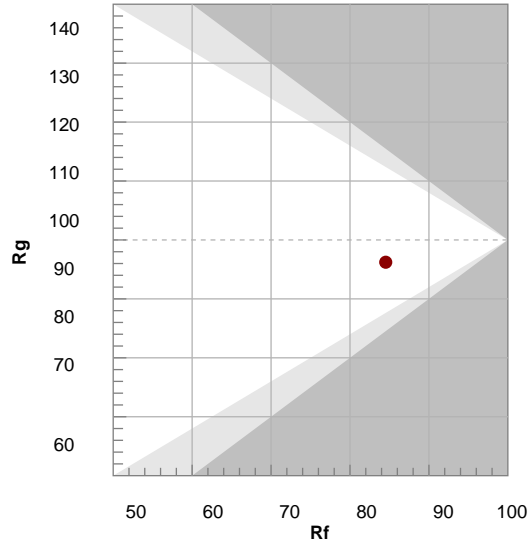
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.0	89.4	94.8	82.9	82.1	85.4	86.0	65.1	10.0	74.8	82.1	65.1	83.9	97.2	75.3

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	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

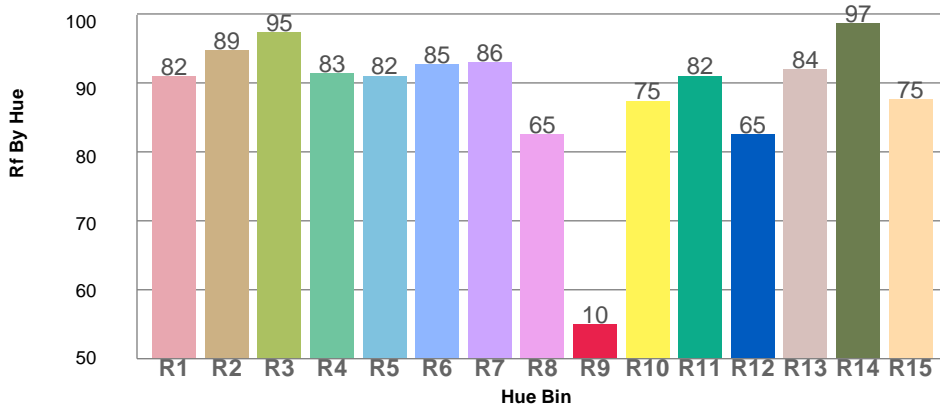
R_f 84.5

GAMUT INDEX

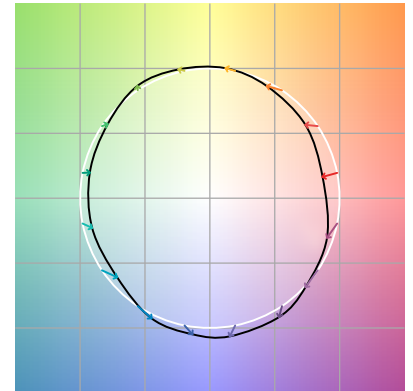
R_g 96.2

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

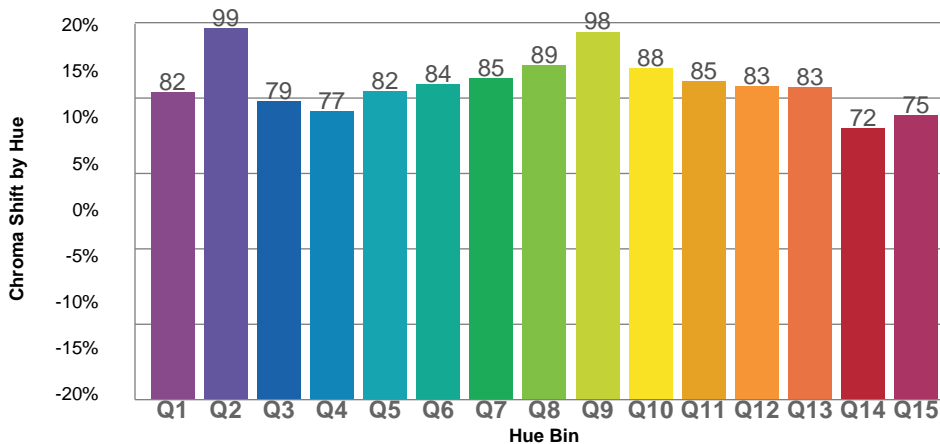
TM30 OVER 50



COLOR VECTOR GRAPHICS



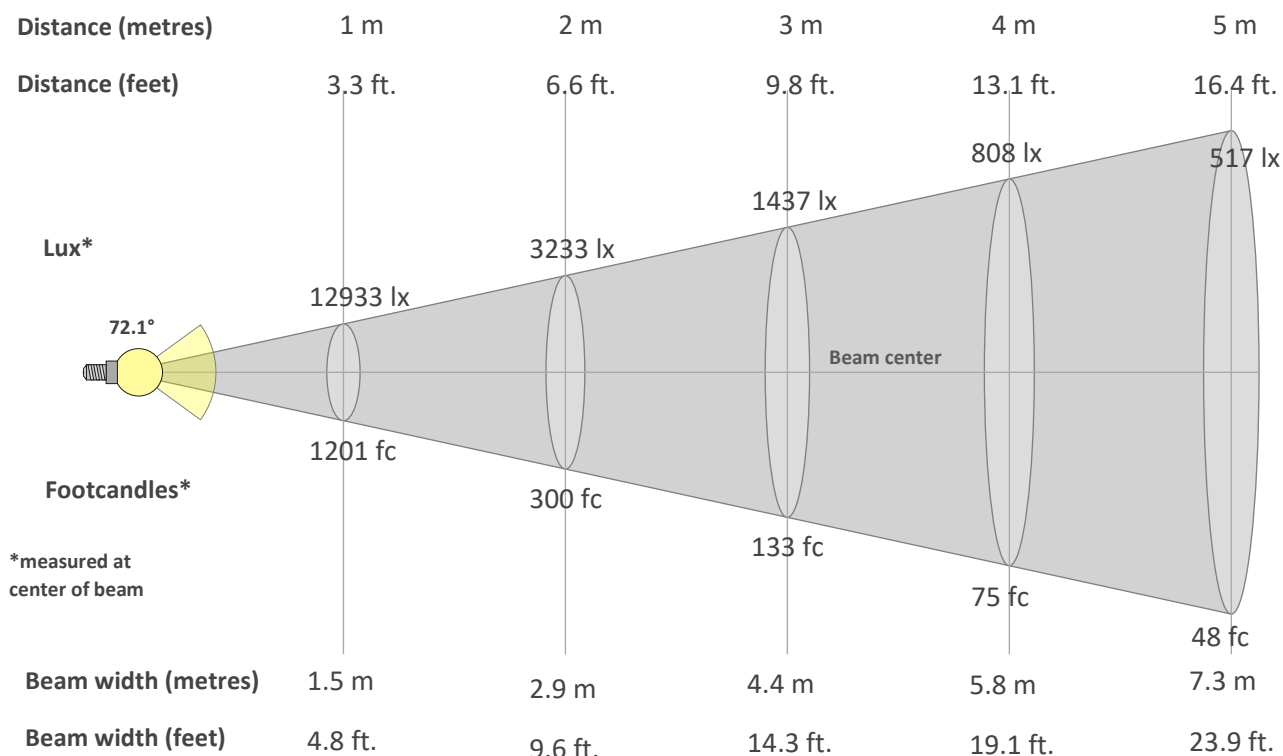
TM30 CHROMA SHIFT



COLOR DISTORTION GRAPHICS



BEAM DETAILS



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
12933lx	3233lx	1437lx	808lx	517lx	359lx	264lx	202lx	160lx	129lx	107lx	90lx	77lx	66lx	57lx	51lx	45lx	40lx	36lx	32lx
1201.5fc	300.4fc	133.5fc	75.1fc	48.1fc	33.4fc	24.5fc	18.8fc	14.8fc	12fc	9.9fc	8.3fc	7.1fc	6.1fc	5.3fc	4.7fc	4.2fc	3.7fc	3.3fc	3fc

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°
12.9K	12.9K	12.9K	12.8K	12.6K	12.5K	12.3K	12.0K	11.7K	11.4K	11.1K	10.8K	10.4K	10.1K	9.6K	9.0K	8.1K	7.1K	6.0K	4.8K
100%	100%	99%	99%	98%	96%	95%	93%	91%	88%	86%	83%	81%	78%	74%	70%	63%	55%	46%	37%

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°
12.9K	12.9K	12.8K	12.7K	12.5K	12.3K	12.0K	11.8K	11.5K	11.2K	10.9K	10.6K	10.4K	10.1K	9.8K	9.3K	8.6K	7.7K	6.6K	5.5K
100%	100%	99%	98%	97%	95%	93%	91%	89%	86%	84%	82%	80%	78%	75%	72%	67%	60%	51%	42%

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°
12.9K	12.9K	12.9K	12.8K	12.6K	12.5K	12.3K	12.0K	11.7K	11.4K	11.1K	10.8K	10.4K	10.1K	9.6K	9.0K	8.1K	7.1K	6.0K	4.8K
100%	100%	99%	99%	98%	96%	95%	93%	91%	88%	86%	83%	81%	78%	74%	70%	63%	55%	46%	37%

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°
12.9K	12.9K	12.8K	12.7K	12.5K	12.3K	12.0K	11.8K	11.5K	11.2K	10.9K	10.6K	10.4K	10.1K	9.8K	9.3K	8.6K	7.7K	6.6K	5.5K
100%	100%	99%	98%	97%	95%	93%	91%	89%	86%	84%	82%	80%	78%	75%	72%	67%	60%	51%	42%