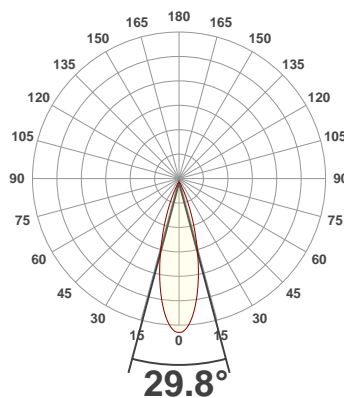
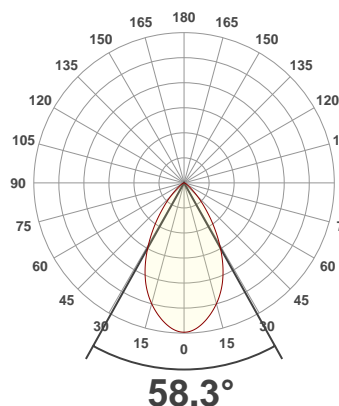




**PRODUCT INFORMATION**

SERIAL NUMBER:	LL-200302-0347
DATE OF MEASUREMENT:	2020-03-02
SIZE (dia. x h):	310 mm x 85 mm

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

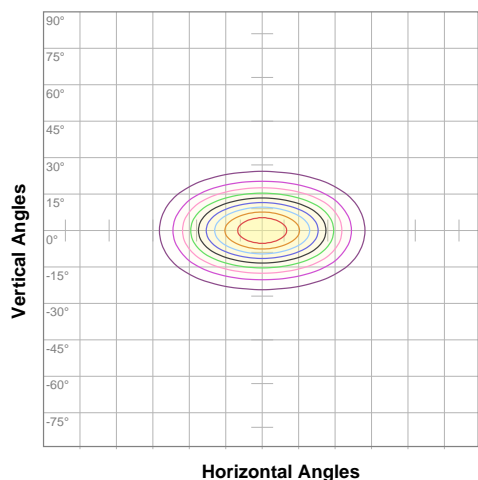


TOTAL LUMEN OUTPUT:	10315 lm
EFFICACY:	106 lm/W
PEAK INTENSITY:	17942 cd
COLOR RENDERING INDEX (CRI):	81.2
COLOR TEMPERATURE (CCT):	3802K
FIDELITY INDEX (TM30Rf):	82.3
GAMUT INDEX (TM30Rg):	98.2

**BEAM OUTPUT DATA**

BEAM ANGLE (FWHM)   C0/180:	58.3°
BEAM ANGLE (FWHM)   C90/270:	29.8°
FIELD ANGLE (10%)   C0/180:	94°
FIELD ANGLE (10%)   C90/270:	54.3°
NUMBER OF PLANES MEASURED:	24

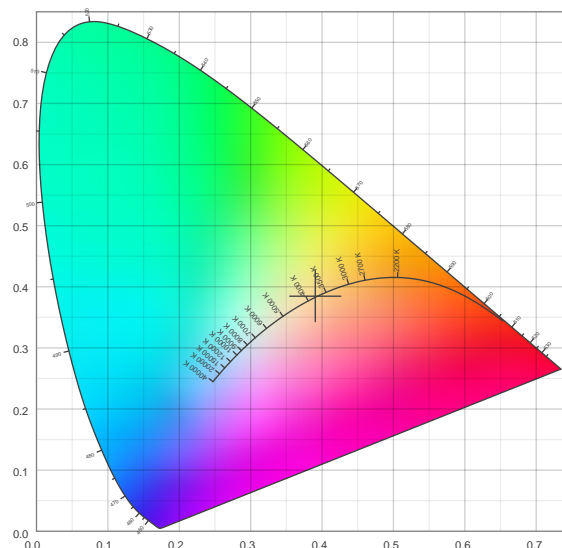
**ISO CANDELA DIAGRAM | DATA**



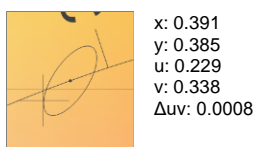
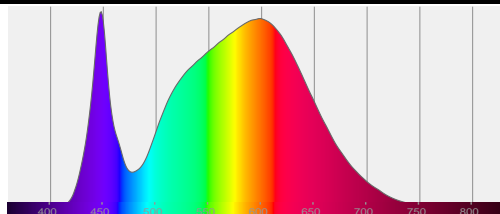
10%	1794 cd
20%	3587 cd
30%	5381 cd
40%	7174 cd
50%	8968 cd
60%	10761 cd
70%	12555 cd
80%	14349 cd
90%	16142 cd

INPUT POWER:	96.9 W
POWER FACTOR:	1.0
OPTICAL POWER:	31.1 mW
PEAK WAVELENGTH:	448 nm
DOMINANT WAVELENGTH:	581 nm

**CIE 1931:**



**SPECTRA | CIE 1931 ZOOM**



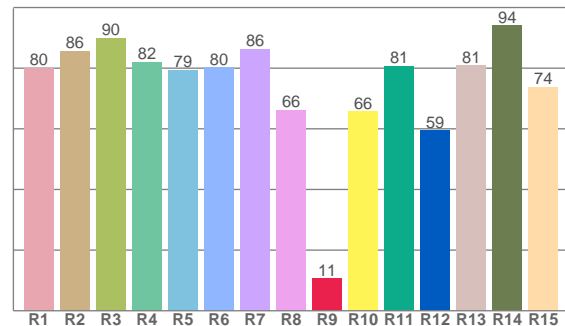
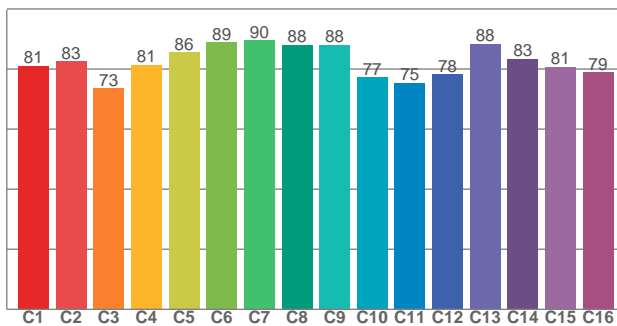
ZONAL LUMEN SUMMARY

0°-10° 1551 lm	10°-20° 3229 lm	20°-30° 2741 lm	30°-40° 1533 lm	40°-50° 690 lm	50°-60° 309 lm	60°-70° 171 lm	70°-80° 80.3 lm	80°-90° 10.6 lm
90°-100° 0.002 lm	100°-110° 0.001 lm	110°-120° 0.001 lm	120°-130° 0.001 lm	130°-140° 0.000 lm	140°-150° 0.000 lm	150°-160° 0.000 lm	160°-170° 0.000 lm	170°-180° 0.000 lm

COLOR DETAILS

TM30: 82.3

CRI: 81.2 (R1-R8)



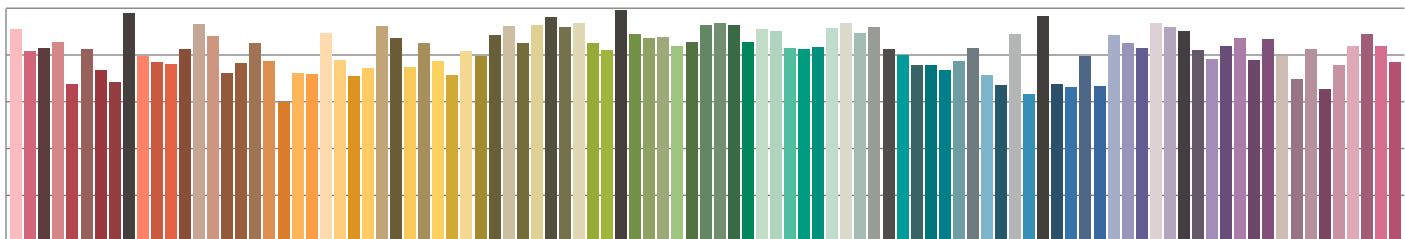
TM30 C values, 16 binned values out of total of 99 C values

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
81.1	82.7	73.5	81.4	85.7	89.0	89.6	88.0	88.0	77.3	75.4	78.1	88.3	83.4	80.7	79.0

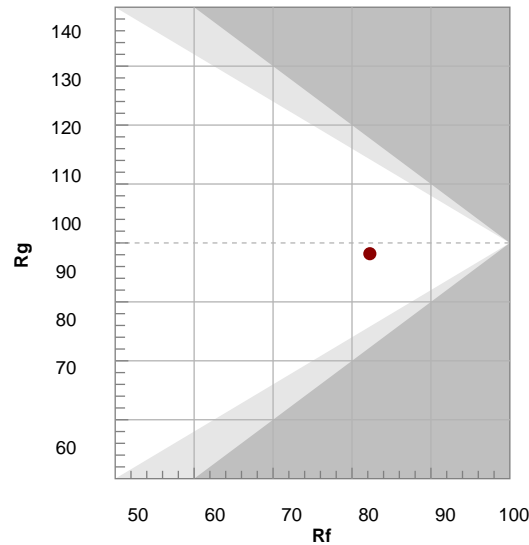
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.0	85.6	89.9	82.0	79.4	80.2	86.2	66.3	10.7	65.6	80.7	59.4	80.8	94.0	73.8

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	83	-8%	6%
3	73	-4%	14%
4	81	3%	12%
5	86	7%	7%
6	89	7%	-2%
7	90	0%	-7%
8	88	-5%	-6%
9	88	-8%	0%
10	77	-10%	9%
11	75	-1%	17%
12	78	6%	10%
13	88	7%	1%
14	83	10%	-9%
15	81	2%	-13%
16	79	-4%	-13%



FIDELITY INDEX

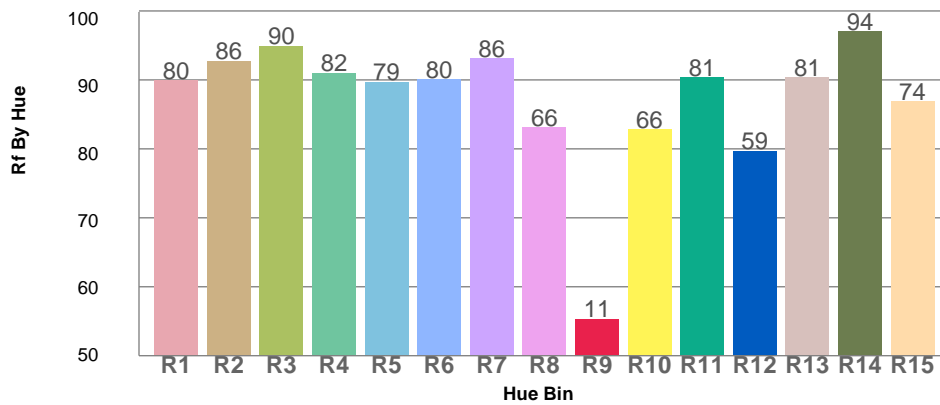
**R<sub>f</sub> 82.3**

GAMUT INDEX

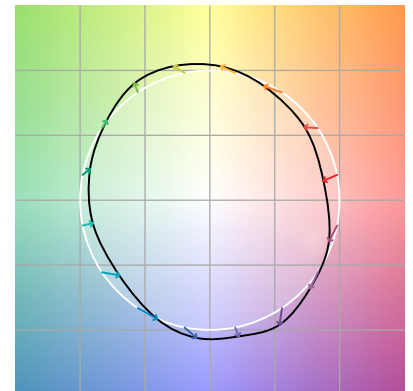
**R<sub>g</sub> 98.2**

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

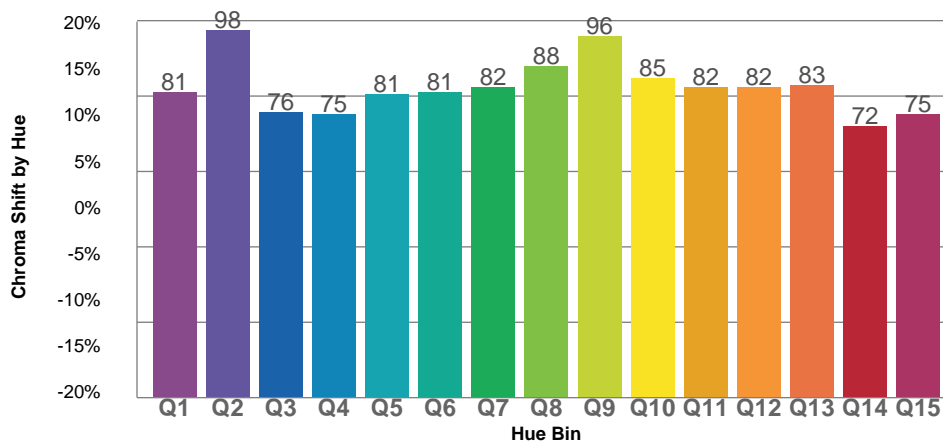
TM30 OVER 50



COLOR VECTOR GRAPHICS



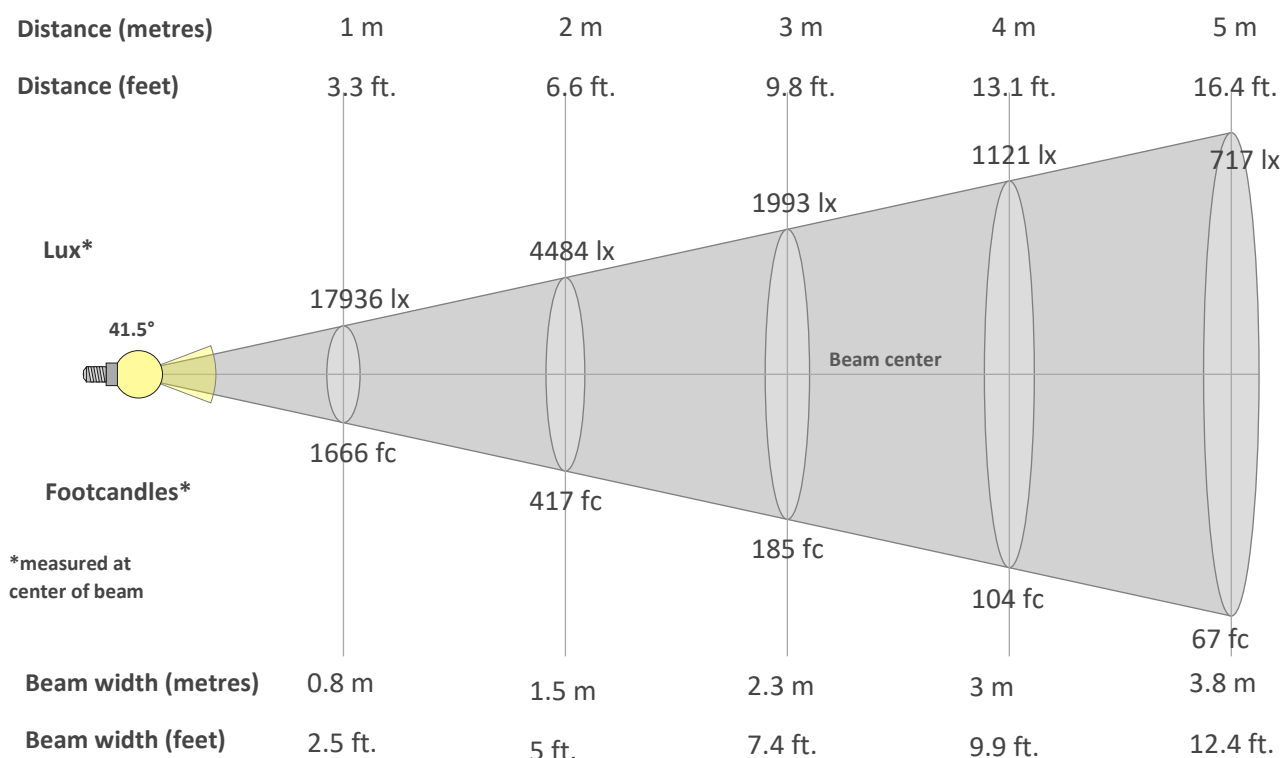
TM30 CHROMA SHIFT



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
17936lx	4484lx	1993lx	1121lx	717lx	498lx	366lx	280lx	221lx	179lx	148lx	125lx	106lx	92lx	80lx	70lx	62lx	55lx	50lx	45lx
1666.3fc	416.6fc	185.1fc	104.1fc	66.7fc	46.3fc	34fc	26fc	20.6fc	16.7fc	13.8fc	11.6fc	9.9fc	8.5fc	7.4fc	6.5fc	5.8fc	5.1fc	4.6fc	4.2fc

**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°
17.9K	17.9K	17.7K	17.3K	16.9K	16.4K	15.9K	15.3K	14.7K	14.0K	13.3K	12.4K	11.5K	10.5K	9.5K	8.5K	7.5K	6.5K	5.6K	4.7K
100%	100%	98%	97%	94%	92%	89%	85%	82%	78%	74%	69%	64%	59%	53%	48%	42%	36%	31%	26%

**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°
17.9K	17.7K	17.0K	16.0K	14.6K	13.1K	11.4K	9.7K	8.1K	6.5K	5.1K	3.9K	2.9K	2.1K	1.6K	1.2K	0.9K	0.7K	0.6K	0.5K
100%	99%	95%	89%	82%	73%	64%	54%	45%	36%	28%	22%	16%	12%	9%	6%	5%	4%	3%	3%

**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°
17.9K	17.9K	17.7K	17.3K	16.9K	16.4K	15.9K	15.3K	14.7K	14.0K	13.3K	12.4K	11.5K	10.5K	9.5K	8.5K	7.5K	6.5K	5.6K	4.7K
100%	100%	98%	97%	94%	92%	89%	85%	82%	78%	74%	69%	64%	59%	53%	48%	42%	36%	31%	26%

**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°
17.9K	17.7K	17.0K	16.0K	14.6K	13.1K	11.4K	9.7K	8.1K	6.5K	5.1K	3.9K	2.9K	2.1K	1.6K	1.2K	0.9K	0.7K	0.6K	0.5K
100%	99%	95%	89%	82%	73%	64%	54%	45%	36%	28%	22%	16%	12%	9%	6%	5%	4%	3%	3%