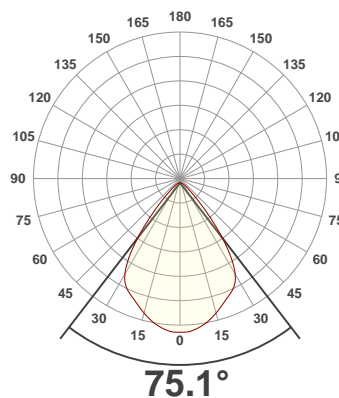
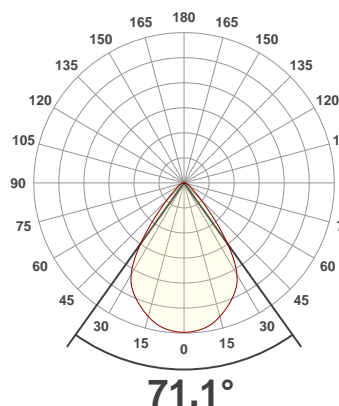




PRODUCT INFORMATION

SERIAL NUMBER:	LL-20190829-574-BMS
DATE OF MEASUREMENT:	2019-08-29
SIZE (mm): (dia. x h)	200 x 78

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

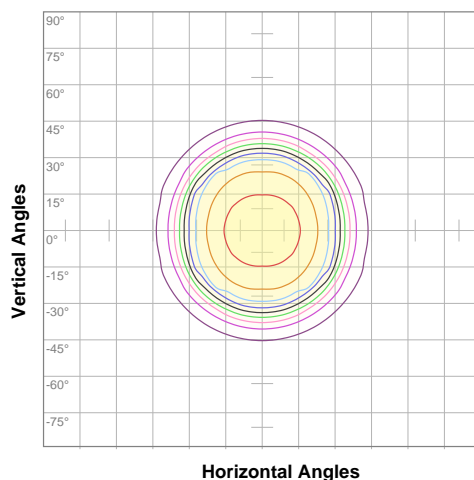


TOTAL LUMEN OUTPUT:	1922 lm
EFFICACY:	80 lm/W
PEAK INTENSITY:	1433 cd
COLOR RENDERING INDEX (CRI):	82.2
COLOR TEMPERATURE (CCT):	3927K
FIDELITY INDEX (TM30Rf):	83.6
GAMUT INDEX (TM30Rg):	97.3

BEAM OUTPUT DATA

BEAM ANGLE (FWHM) C0/180:	71.1°
BEAM ANGLE (FWHM) C90/270:	75.1°
FIELD ANGLE (10%) C0/180:	98.1°
FIELD ANGLE (10%) C90/270:	101.5°
NUMBER OF PLANES MEASURED:	12

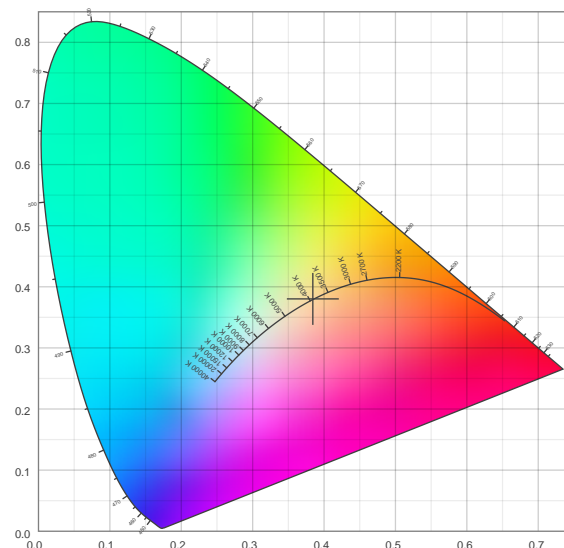
ISO CANDELA DIAGRAM | DATA



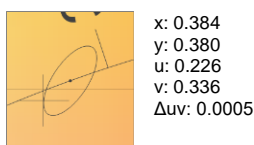
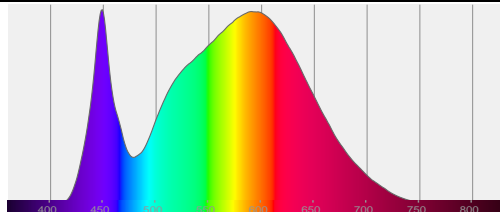
10%	143 cd
20%	286 cd
30%	430 cd
40%	573 cd
50%	716 cd
60%	859 cd
70%	1002 cd
80%	1146 cd
90%	1289 cd

INPUT POWER:	24.1 W
POWER FACTOR:	1.0
OPTICAL POWER:	5.90 mW
PEAK WAVELENGTH:	449 nm
DOMINANT WAVELENGTH:	581 nm

CIE 1931:



SPECTRA | CIE 1931 ZOOM



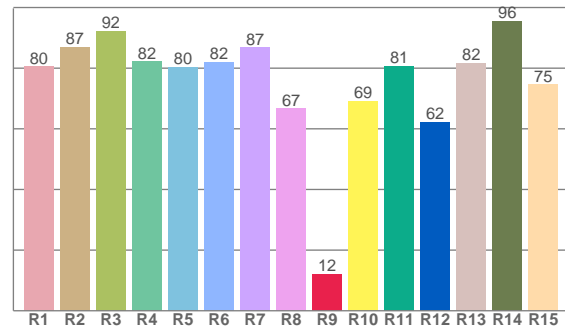
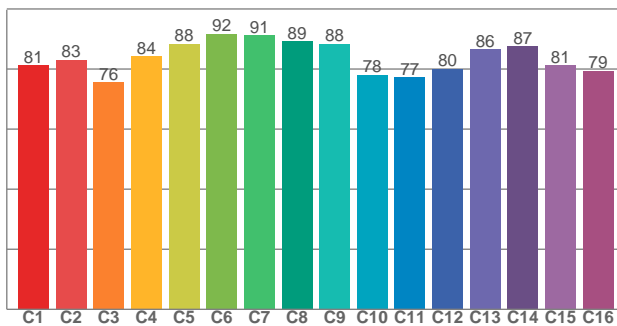
ZONAL LUMEN SUMMARY

0°-10° 134 lm	10°-20° 371 lm	20°-30° 536 lm	30°-40° 506 lm	40°-50° 216 lm	50°-60° 83.9 lm	60°-70° 47.6 lm	70°-80° 22.9 lm	80°-90° 3.09 lm
90°-100° 0.067 lm	100°-110° 0.059 lm	110°-120° 0.037 lm	120°-130° 0.024 lm	130°-140° 0.012 lm	140°-150° 0.005 lm	150°-160° 0.004 lm	160°-170° 0.002 lm	170°-180° 0.001 lm

COLOR DETAILS

TM30: 83.6

CRI: 82.2 (R1-R8)



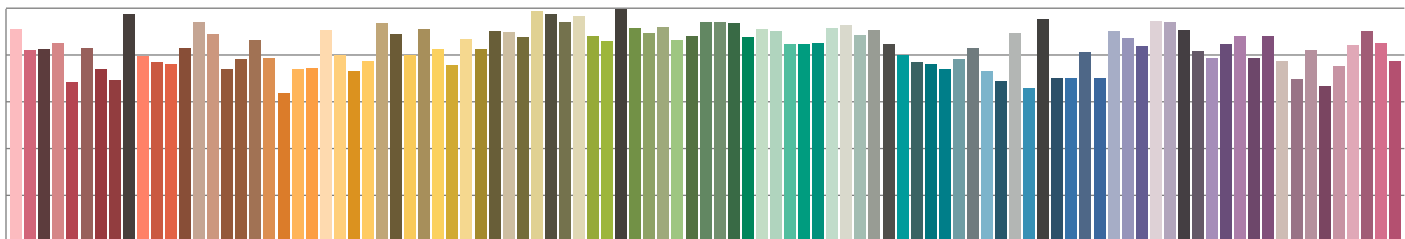
TM30 C values, 16 binned values out of total of 99 C values

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
81.3	83.0	75.6	84.3	88.4	91.7	91.2	89.3	88.4	78.1	77.2	80.0	86.5	87.5	81.2	79.4

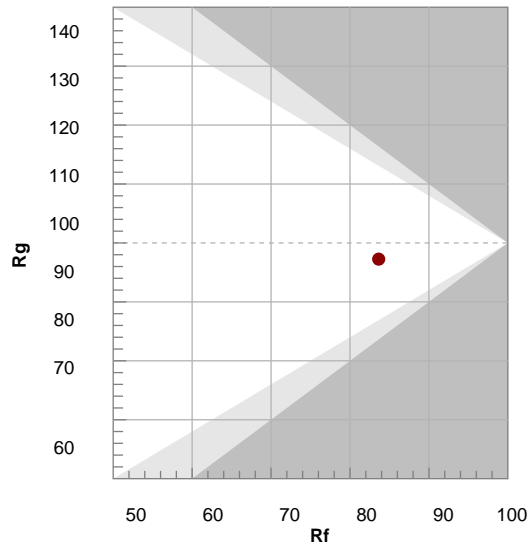
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
80.5	87.0	92.2	82.2	80.3	82.1	86.7	66.6	12.2	69.2	80.7	62.3	81.7	95.5	74.5

TM30 COLOR EVALUATION SAMPLE



TM30 DETAILS

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	83	-8%	6%
3	76	-4%	13%
4	84	2%	10%
5	88	5%	6%
6	92	5%	-2%
7	91	-1%	-5%
8	89	-5%	-4%
9	88	-8%	2%
10	78	-8%	10%
11	77	0%	15%
12	80	5%	10%
13	86	8%	-3%
14	87	10%	-5%
15	81	1%	-13%
16	79	-4%	-13%



FIDELITY INDEX

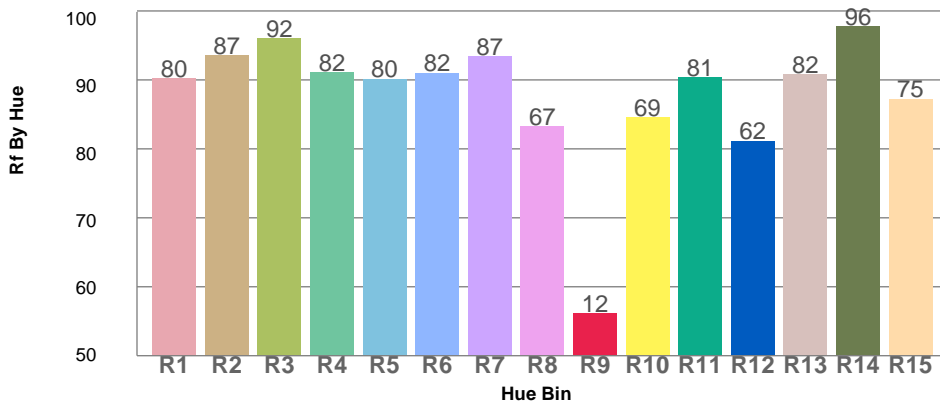
R_f 83.6

GAMUT INDEX

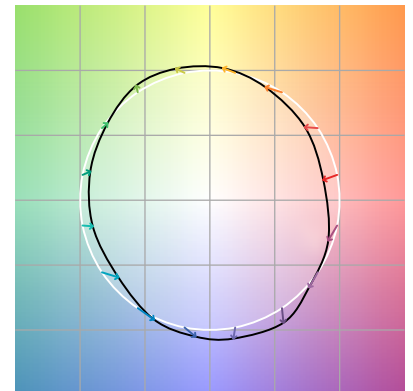
R_g 97.3

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

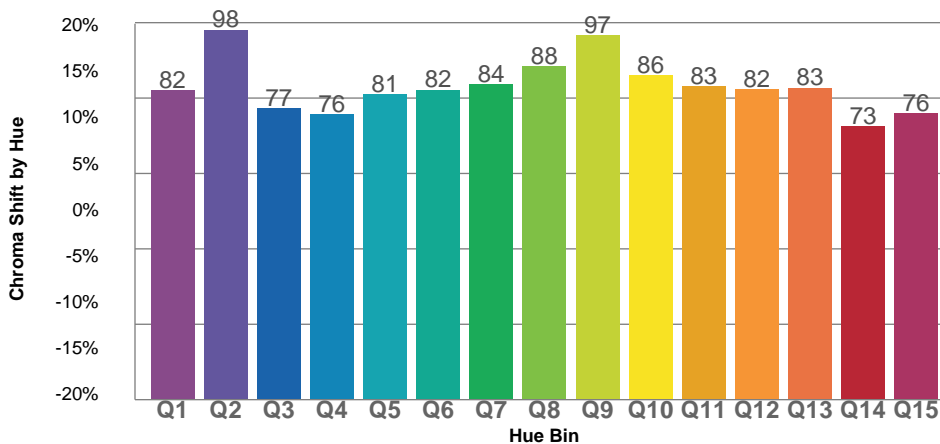
TM30 OVER 50



COLOR VECTOR GRAPHICS



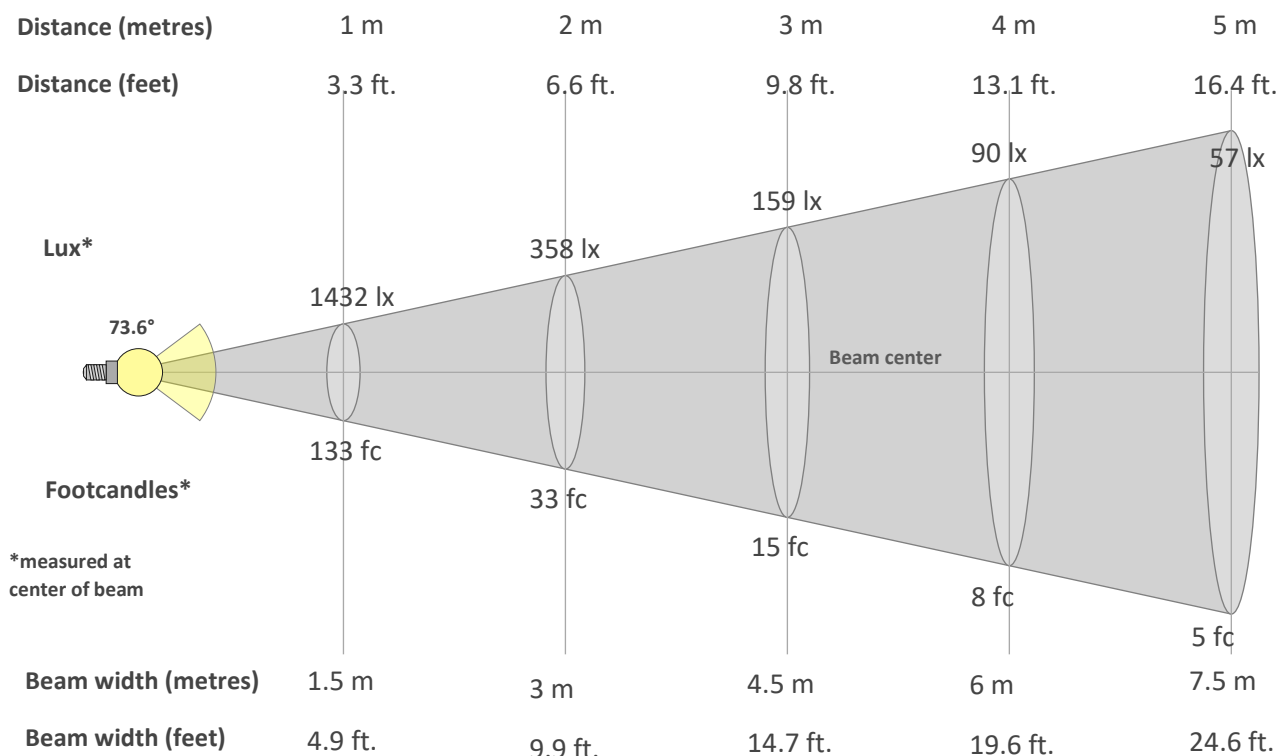
TM30 CHROMA SHIFT



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
1432lx	358lx	159lx	90lx	57lx	40lx	29lx	22lx	18lx	14lx	12lx	10lx	8lx	7lx	6lx	6lx	5lx	4lx	4lx	4lx
133fc	33.3fc	14.8fc	8.3fc	5.3fc	3.7fc	2.7fc	2.1fc	1.6fc	1.3fc	1.1fc	0.9fc	0.8fc	0.7fc	0.6fc	0.5fc	0.5fc	0.4fc	0.4fc	0.3fc

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°
1432	1423	1389	1327	1246	1153	1010	750	443	232	131	85	62	47	33	21	10	2	0	0
100%	99%	97%	93%	87%	81%	71%	52%	31%	16%	9%	6%	4%	3%	2%	1%	1%	0%	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°
1432	1417	1373	1307	1232	1168	1082	874	554	291	155	96	67	49	34	22	10	1	0	0
100%	99%	96%	91%	86%	82%	76%	61%	39%	20%	11%	7%	5%	3%	2%	2%	1%	0%	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°
1432	1423	1389	1327	1246	1153	1010	750	443	232	131	85	62	47	33	21	10	2	0	0
100%	99%	97%	93%	87%	81%	71%	52%	31%	16%	9%	6%	4%	3%	2%	1%	1%	0%	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°
1432	1417	1373	1307	1232	1168	1082	874	554	291	155	96	67	49	34	22	10	1	0	0
100%	99%	96%	91%	86%	82%	76%	61%	39%	20%	11%	7%	5%	3%	2%	2%	1%	0%	0%	0%