

LM-79

Test Report

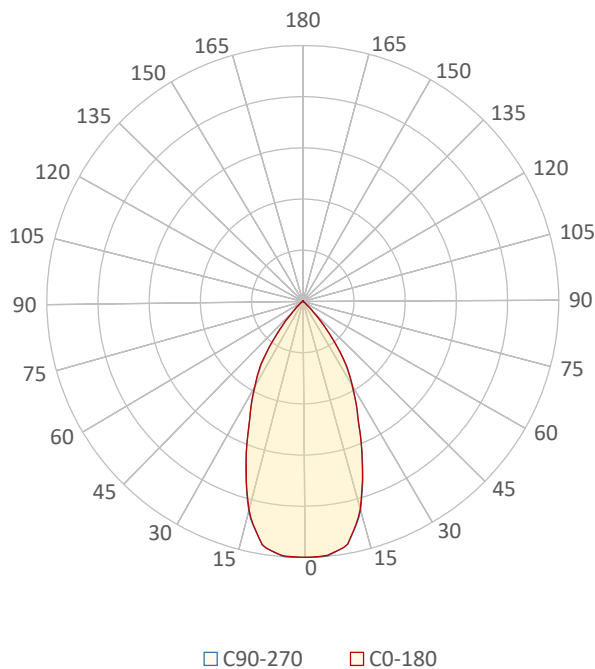
LM79-RUBY-6-4000K-CRI80-MEDIUM

General Description

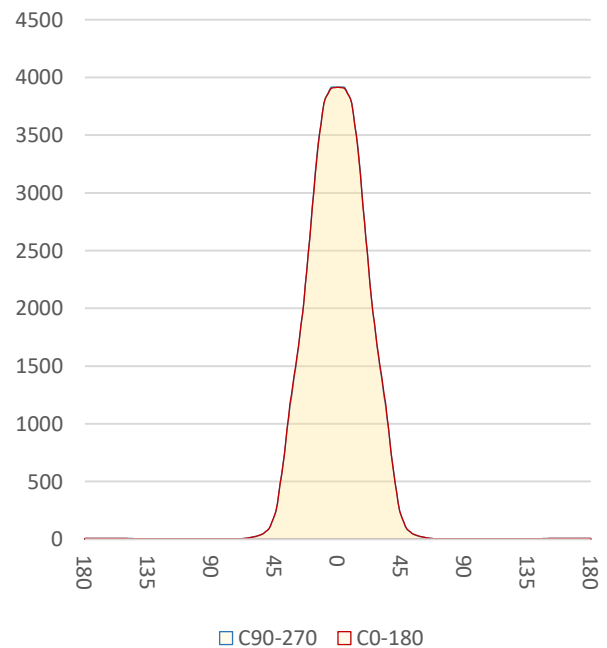
Item number	RU-16-X-X-03-2-X
Date and time	18-11-2016 15:30:57
CCT (Kelvin)	3837 K
Beam angle	49,9°
Luminous flux	3063 lm
Efficiency	106 lm/watt
Weighted energy	28,8 kWh/1000h
Power factor	0,99
CRI (RA)	82,5
Fidelity index Rf	Rf 84,5
Gammut index Rg	Rg 97,7
Peak	3925 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	3916 lx	979 lx	435 lx	245 lx	157 lx														
*measured at center of beam																			
Footcandles*	363,8 fcd	90,9 fcd	40,4 fcd	22,7 fcd	14,6 fcd														
Beam width (meter)	0,9 m	1,9 m	2,8 m	3,7 m	4,6 m														
Beam width (Feet)	3 ft	6,1 ft	9,1 ft	12,2 ft	15,2 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3916lx	979lx	435lx	245lx	157lx	109lx	80lx	61lx	48lx	39lx	32lx	27lx	23lx	20lx	17lx	15lx	14lx	12lx	11lx	10lx
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
363,8fcd	90,9fcd	40,4fcd	22,7fcd	14,6fcd	10,1fcd	7,4fcd	5,7fcd	4,5fcd	3,6fcd	3fcd	2,5fcd	2,2fcd	1,9fcd	1,6fcd	1,4fcd	1,3fcd	1,1fcd	1fcd	0,9fcd
Intensities in 0° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3916	3906	3907	3891	3842	3793	3614	3413	3179	2888	2597	2334	2073	1849	1675	1500	1338	1176	981	750
100%	100%	100%	99%	98%	97%	92%	87%	81%	74%	66%	60%	53%	47%	43%	38%	34%	30%	25%	19%
Intensities in 90° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3916	3925	3921	3912	3903	3781	3656	3456	3181	2905	2607	2308	2059	1851	1647	1491	1334	1150	948	746
100%	100%	100%	100%	100%	97%	93%	88%	81%	74%	67%	59%	53%	47%	42%	38%	34%	29%	24%	19%
Intensities in 180° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3916	3906	3907	3891	3842	3793	3614	3413	3179	2888	2597	2334	2073	1849	1675	1500	1338	1176	981	750
100%	100%	100%	99%	98%	97%	92%	87%	81%	74%	66%	60%	53%	47%	43%	38%	34%	30%	25%	19%
Intensities in 270° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3916	3925	3921	3912	3903	3781	3656	3456	3181	2905	2607	2308	2059	1851	1647	1491	1334	1150	948	746
100%	100%	100%	100%	100%	97%	93%	88%	81%	74%	67%	59%	53%	47%	42%	38%	34%	29%	24%	19%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
49,8°		83,4°				96,6°				98,9%				96,3%					



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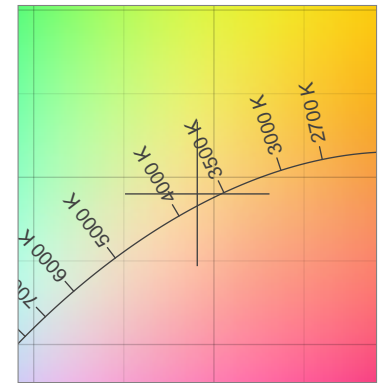
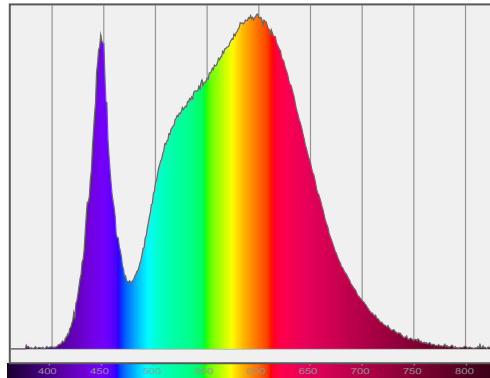
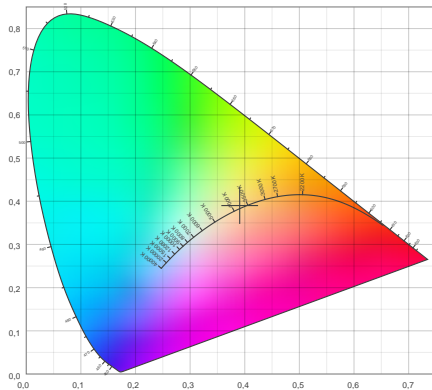
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Color details



CIE 1931

x: 0,391



Spectra

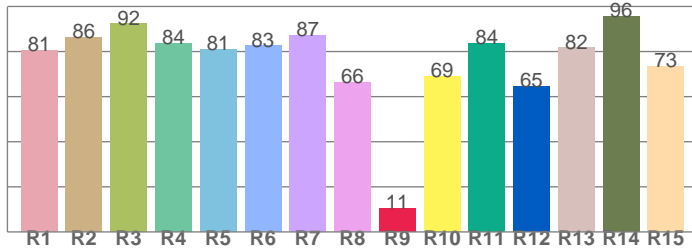
CIE 1931 ZOOM

3837 K

y: 0,390

Δuv : 0,0032

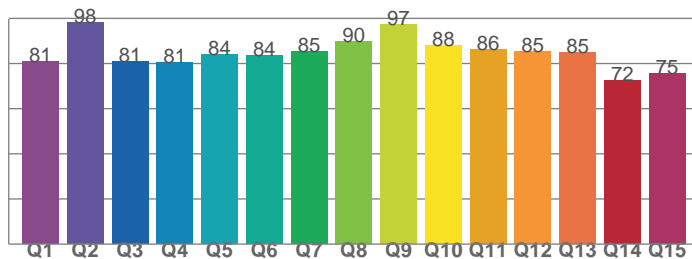
CRI: 82,5 (R1-R8)



CRI values, R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8
80,7	86,5	92,3	83,8	80,8	82,5	87,0	66,4
R9	R10	R11	R12	R13	R14	R15	
10,6	69,0	83,7	64,5	81,6	95,6	73,3	

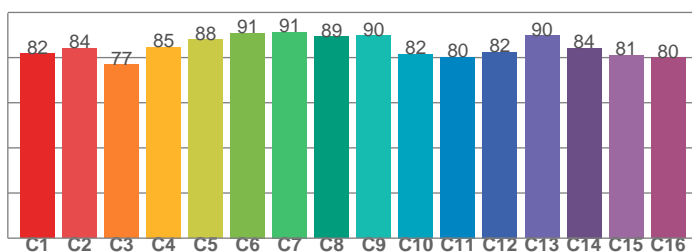
CQS: 83,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,0	98,3	80,9	80,5	83,9	83,6	85,2	89,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,3	87,8	86,3	85,3	84,8	72,4	75,4	

TM30: 84,5



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

C1	C2	C3	C4	C5	C6	C7	C8
81,7	84,2	76,9	84,7	88,1	90,9	91,3	89,4
C9	C10	C11	C12	C13	C14	C15	
89,7	81,6	80,2	82,5	89,8	84,3	81,2	

Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3837 K	82,5	10,6	84,5	97,7	83,4	0,391	0,390	0,227	0,339	0,0032



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TM30 details

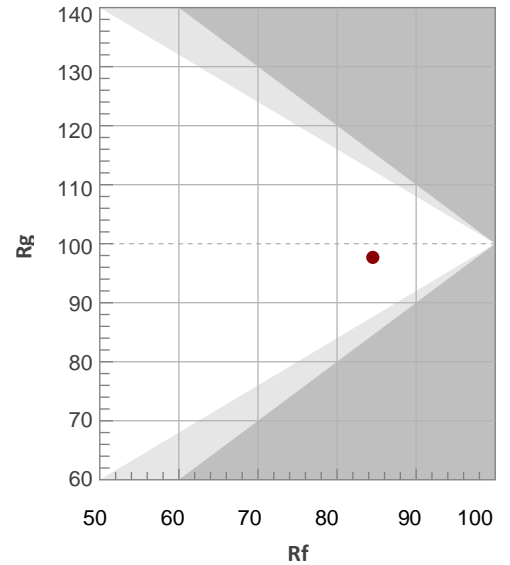
Rf 84,5

Fidelity index Rf

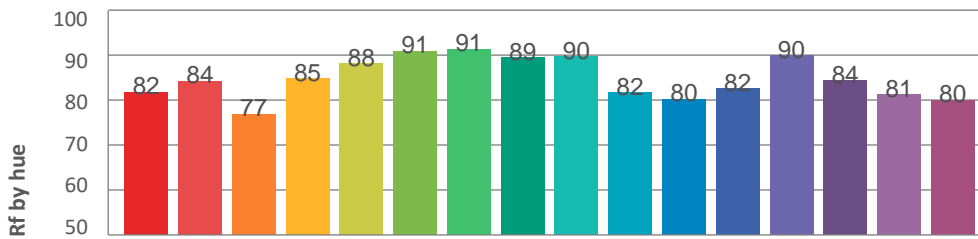
Rg 97,7

Gamut index Rg

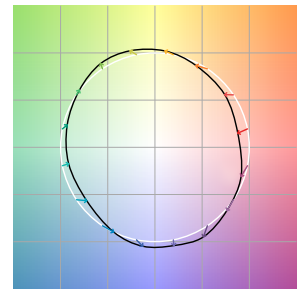
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	82	-11%	-2%
2	84	-8%	5%
3	77	-4%	12%
4	85	2%	9%
5	88	5%	6%
6	91	6%	-1%
7	91	0%	-6%
8	89	-4%	-5%
9	90	-7%	-1%
10	82	-8%	7%
11	80	-1%	13%
12	82	5%	8%
13	90	6%	-1%
14	84	7%	-10%
15	81	1%	-13%
16	80	-4%	-12%



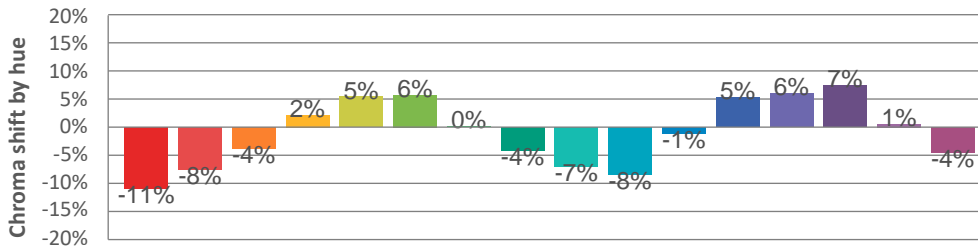
Hue binH



Color vector graphics



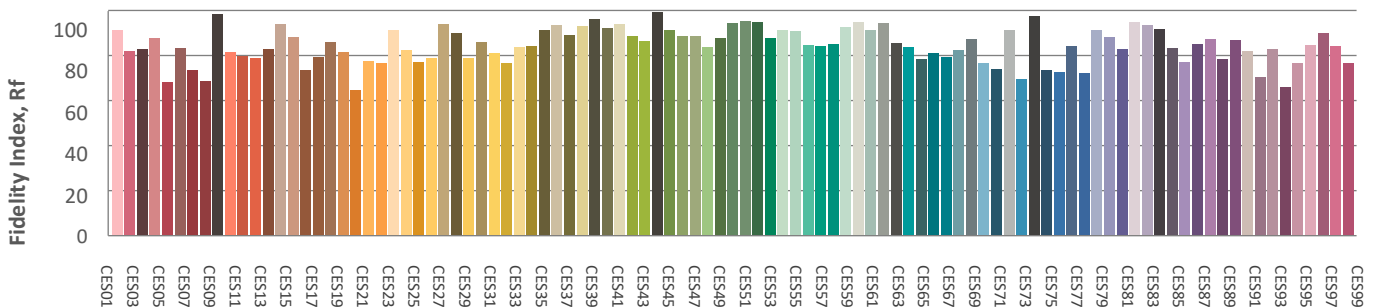
Hue bin



Color distortion graphics



Color Evaluation Sample



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