

LM-79

Test Report

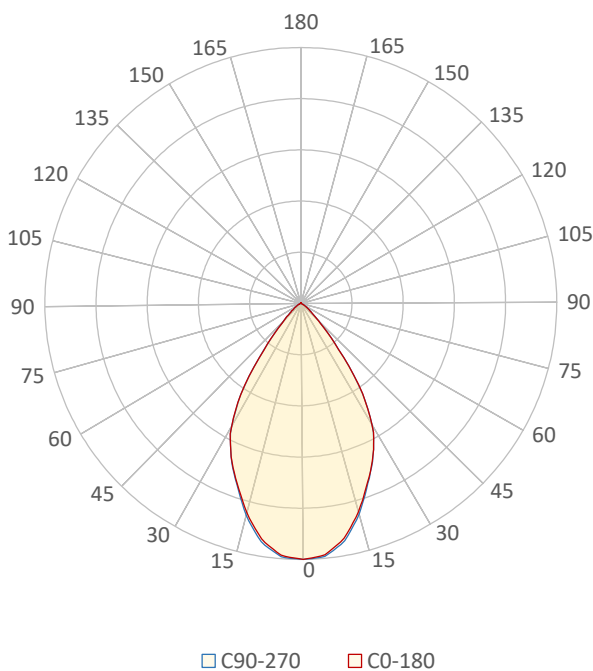
LM79-RUBY-6-2700K-CRI80-FLOOD

General Description

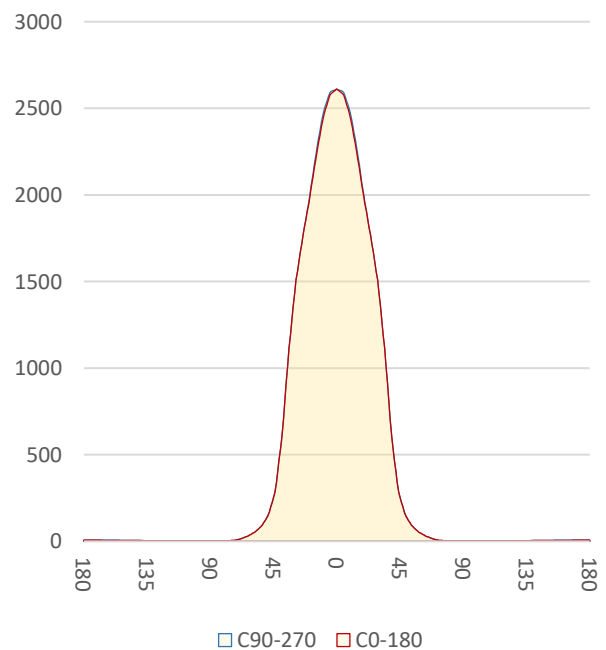
Item number	RU-16-X-X-01-3-X
Date and time	18-11-2016 14:22:28
CCT (Kelvin)	2669 K
Beam angle	63,5°
Luminous flux	2587 lm
Efficiency	90 lm/watt
Weighted energy	28,6 kWh/1000h
Power factor	0,99
CRI (RA)	81,8
Fidelity index Rf	Rf 83,9
Gammut index Rg	Rg 97,0
Peak	2616 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	2611 lx	653 lx	290 lx	163 lx	104 lx																			
*measured at center of beam																								
Footcandles*	242,6 fcd	60,6 fcd	27,0 fcd	15,2 fcd	9,7 fcd																			
Beam width (meter)	1,2 m	2,5 m	3,7 m	5 m	6,2 m																			
Beam width (Feet)	4,1 ft	8,1 ft	12,2 ft	16,3 ft	20,3 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
2611lx	653lx	290lx	163lx	104lx	73lx	53lx	41lx	32lx	26lx	22lx	18lx	15lx	13lx	12lx	10lx	9lx	8lx	7lx	7lx					
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					
242,6fcd	60,6fcd	27fcd	15,2fcd	9,7fcd	6,7fcd	5fcd	3,8fcd	3fcd	2,4fcd	2fcd	1,7fcd	1,4fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,7fcd	0,6fcd					
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°					
2611	2606	2599	2554	2509	2435	2348	2257	2150	2043	1949	1858	1766	1674	1581	1441	1293	1117	900	682					
100%	100%	100%	98%	96%	93%	90%	86%	82%	78%	75%	71%	68%	64%	61%	55%	50%	43%	34%	26%					
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°					
2611	2616	2612	2573	2533	2463	2377	2286	2172	2059	1959	1863	1768	1673	1577	1437	1288	1114	899	684					
100%	100%	100%	99%	97%	94%	91%	88%	83%	79%	75%	71%	68%	64%	60%	55%	49%	43%	34%	26%					
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°					
2611	2606	2599	2554	2509	2435	2348	2257	2150	2043	1949	1858	1766	1674	1581	1441	1293	1117	900	682					
100%	100%	100%	98%	96%	93%	90%	86%	82%	78%	75%	71%	68%	64%	61%	55%	50%	43%	34%	26%					
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°					
2611	2616	2612	2573	2533	2463	2377	2286	2172	2059	1959	1863	1768	1673	1577	1437	1288	1114	899	684					
100%	100%	100%	99%	97%	94%	91%	88%	83%	79%	75%	71%	68%	64%	60%	55%	49%	43%	34%	26%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
63,6°					89,4°					113°					98,1%					92,6%				



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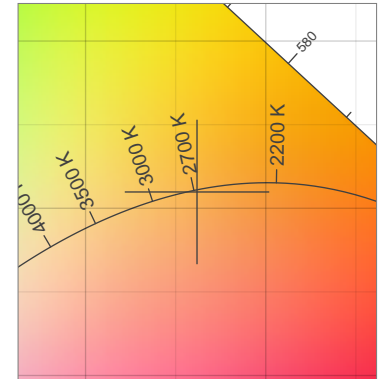
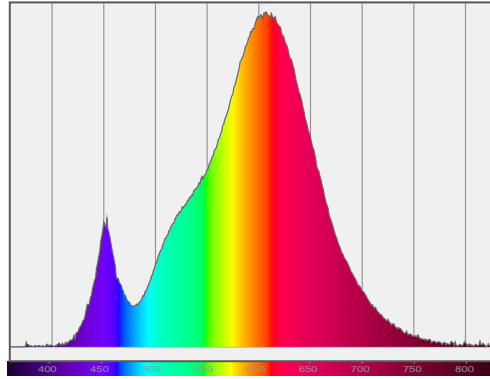
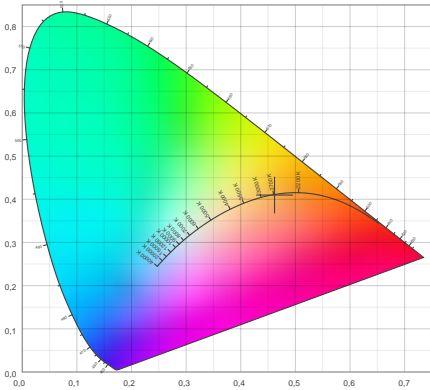
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Color details



CIE 1931

x: 0,462



Spectra

CIE 1931 ZOOM

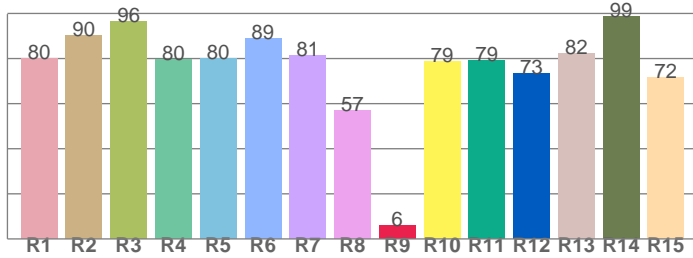
2669 K

y: 0,410

Δuv : 0,0005

CRI: **81,8** (R1-R8)

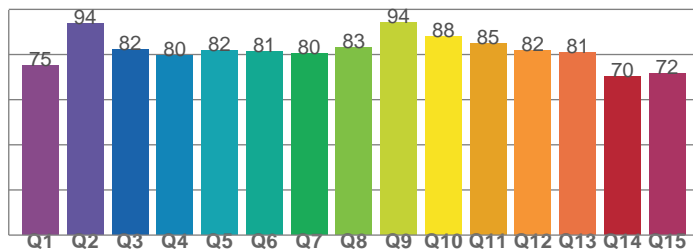
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
80,1	90,5	96,5	79,7	79,9	89,1	81,5	56,8
R9	R10	R11	R12	R13	R14	R15	
6,0	78,7	79,2	73,3	82,4	98,8	71,8	

CQS: **80,7**

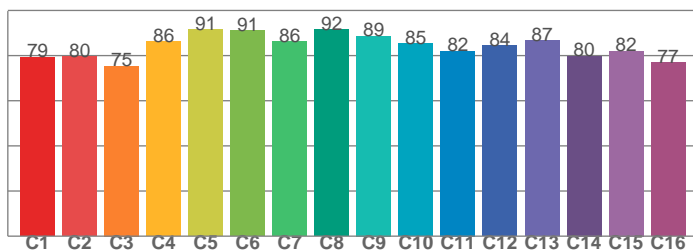
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
75,0	93,8	82,3	79,7	82,0	81,3	80,4	83,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,1	88,1	84,9	82,0	81,0	70,4	71,6	

TM30: **83,9**

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



C1	C2	C3	C4	C5	C6	C7	C8
79,3	79,7	75,4	86,1	91,5	91,2	86,3	91,6
C9	C10	C11	C12	C13	C14	C15	
88,7	85,4	82,1	84,5	86,5	79,8	82,0	

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
2669 K	81,8	6,0	83,9	97,0	80,7	0,462	0,410	0,264	0,352	0,0005



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TM30 details

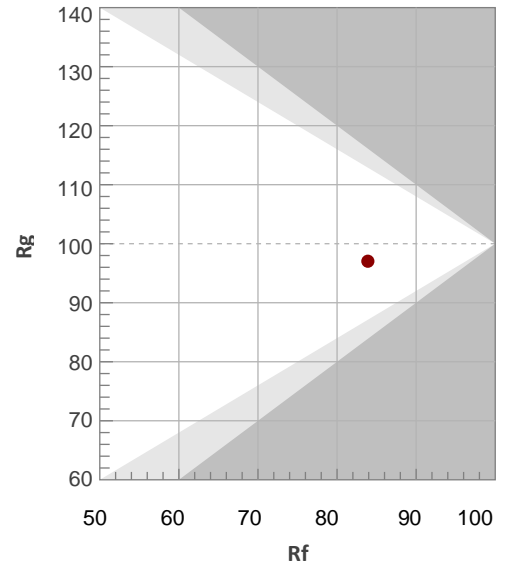
Rf 83,9

Fidelity index Rf

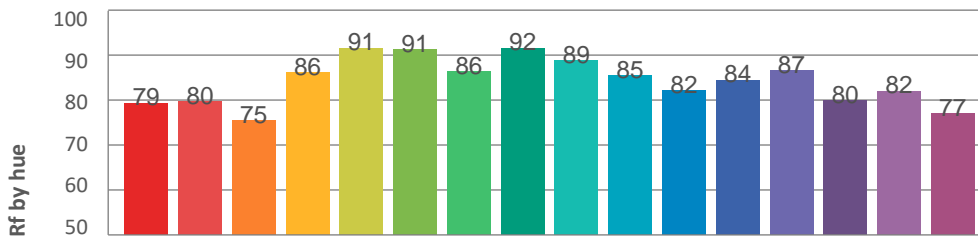
Rg 97,0

Gamut index Rg

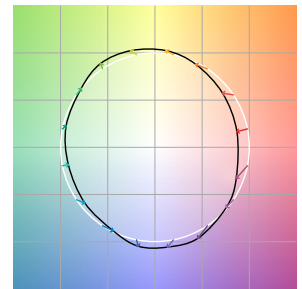
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	80	-9%	8%
3	75	-3%	13%
4	86	3%	8%
5	91	5%	5%
6	91	6%	-2%
7	86	0%	-9%
8	92	-3%	-4%
9	89	-6%	0%
10	85	-5%	8%
11	82	-2%	12%
12	84	6%	3%
13	87	6%	-8%
14	80	5%	-16%
15	82	-2%	-11%
16	77	-9%	-15%



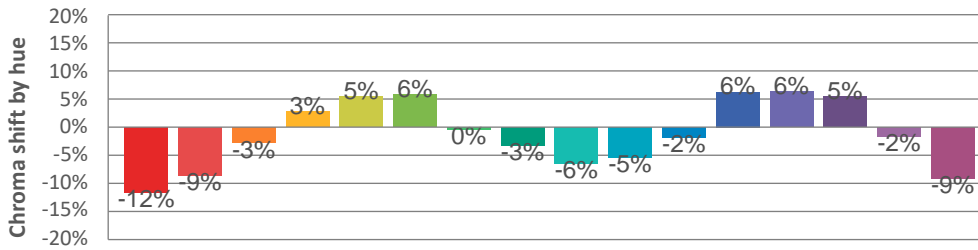
Hue binH



Color vector graphics



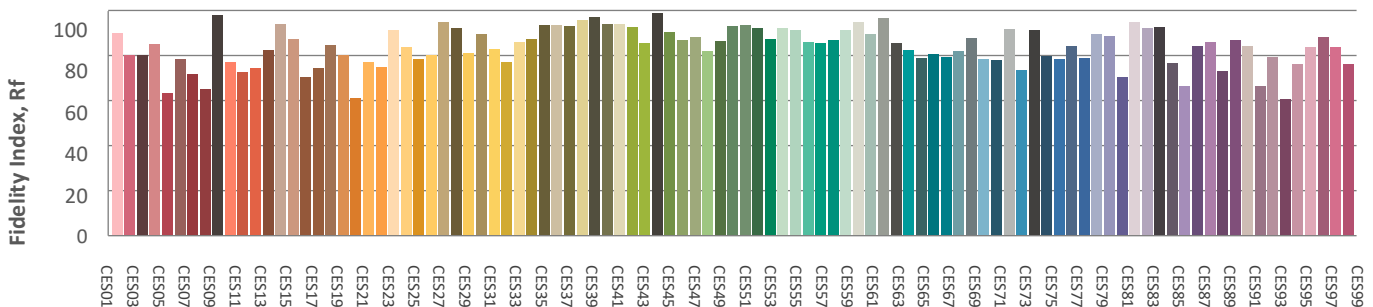
Hue bin



Color distortion graphics



Color Evaluation Sample



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