

LM-79

Test Report

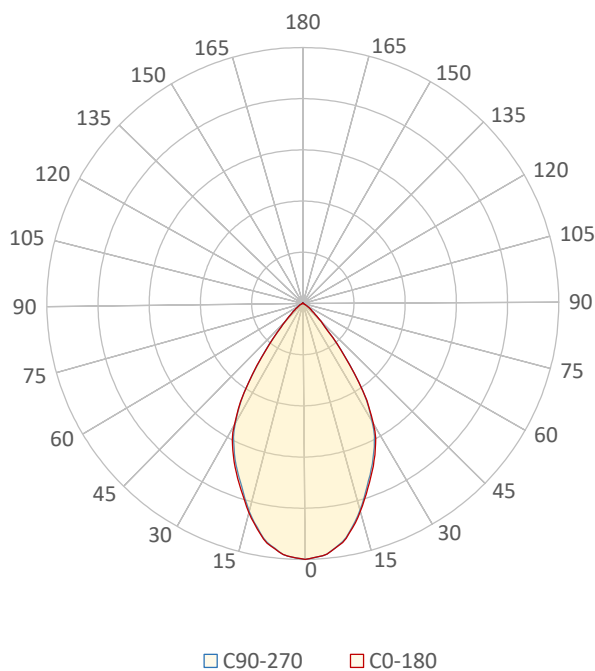
LM79-RUBY-7-3000K-CRI80-FLOOD

General Description

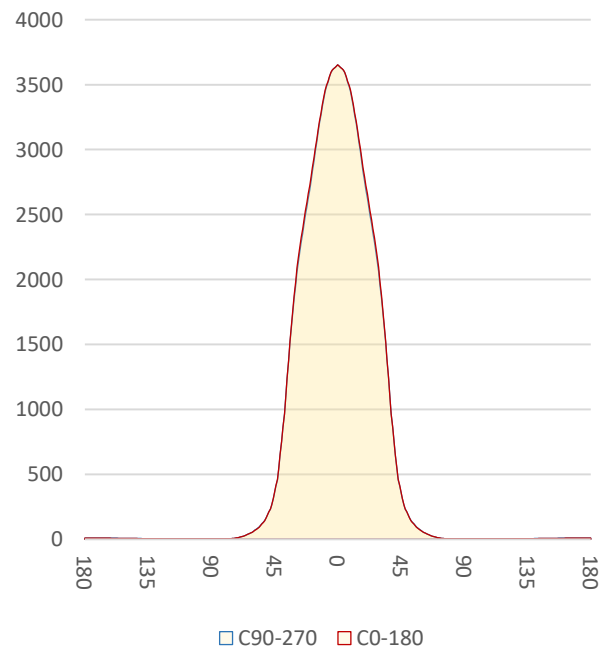
Item number	RU-17-X-X-02-3-X
Date and time	21-11-2016 09:06:58
CCT (Kelvin)	3100 K
Beam angle	63,5°
Luminous flux	3566 lm
Efficiency	86 lm/watt
Weighted energy	41,6 kWh/1000h
Power factor	0,95
CRI (RA)	81,1
Fidelity index Rf	Rf 84,3
Gammut index Rg	Rg 95,6
Peak	3654 cd



Polar diagram



Cartesian diagram



CLS LED BV
info@cls-led.com
www.cls-led.com

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Beam details	1m	2m	3m	4m	5m														
Lux*	3653 lx	913 lx	406 lx	228 lx	146 lx														
*measured at center of beam																			
Footcandles*	339,4 fcd	84,8 fcd	37,7 fcd	21,2 fcd	13,6 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
3653lx	913lx	406lx	228lx	146lx	101lx	75lx	57lx	45lx	37lx	30lx	25lx	22lx	19lx	16lx	14lx	13lx	11lx	10lx	9lx
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
339,4fcd	84,8fcd	37,7fcd	21,2fcd	13,6fcd	9,4fcd	6,9fcd	5,3fcd	4,2fcd	3,4fcd	2,8fcd	2,4fcd	2fcd	1,7fcd	1,5fcd	1,3fcd	1,2fcd	1fcd	0,9fcd	0,8fcd
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°
3653	3653	3617	3582	3510	3419	3310	3156	3001	2861	2723	2590	2463	2334	2188	2042	1800	1529	1251	961
100%	100%	99%	98%	96%	94%	91%	86%	82%	78%	75%	71%	67%	64%	60%	56%	49%	42%	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°
3653	3652	3621	3571	3508	3401	3294	3139	2975	2824	2688	2554	2429	2303	2153	1993	1792	1512	1231	963
100%	100%	99%	98%	96%	93%	90%	86%	81%	77%	74%	70%	66%	63%	59%	55%	49%	41%	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°
3653	3653	3617	3582	3510	3419	3310	3156	3001	2861	2723	2590	2463	2334	2188	2042	1800	1529	1251	961
100%	100%	99%	98%	96%	94%	91%	86%	82%	78%	75%	71%	67%	64%	60%	56%	49%	42%	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°
3653	3652	3621	3571	3508	3401	3294	3139	2975	2824	2688	2554	2429	2303	2153	1993	1792	1512	1231	963
100%	100%	99%	98%	96%	93%	90%	86%	81%	77%	74%	70%	66%	63%	59%	55%	49%	41%	34%	26%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
63,6°		88,6°				112,4°				98,2%				92,8%					



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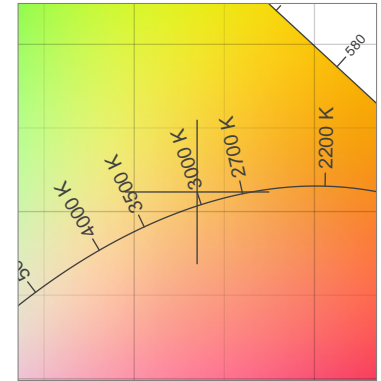
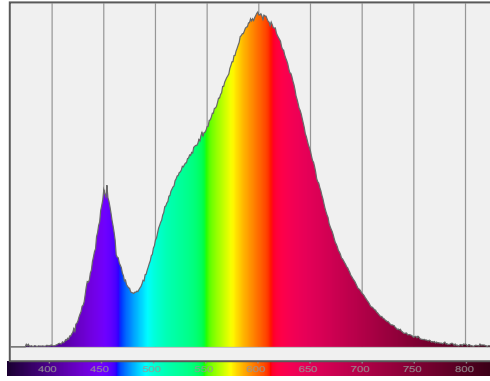
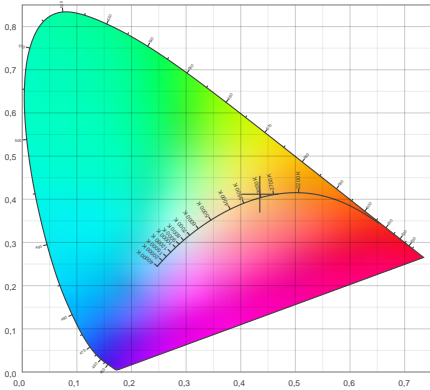
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Color details



CIE 1931

x: 0,435



Spectra

CIE 1931 ZOOM

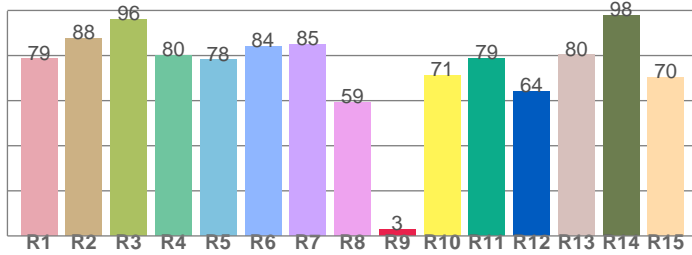
3100 K

y: 0,412

Δuv : 0,0033

CRI: 81,1 (R1-R8)

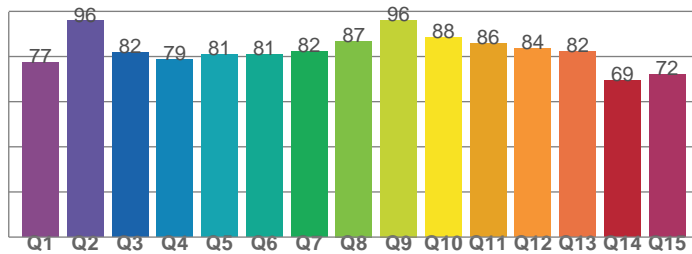
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
78,5	87,5	96,1	80,1	78,1	84,1	84,8	59,4
R9	R10	R11	R12	R13	R14	R15	
2,9	71,4	78,6	64,0	80,3	97,6	70,3	

CQS: 81,3

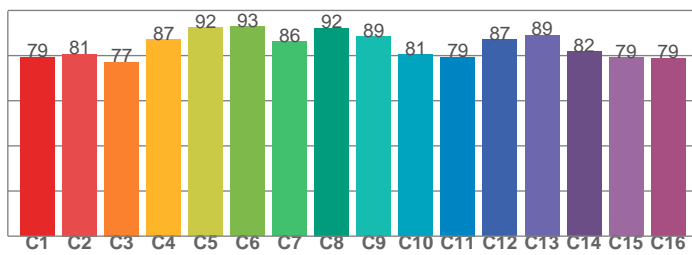
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,2	95,8	81,7	78,8	81,1	81,0	82,1	86,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,1	88,5	85,7	83,6	82,3	69,4	72,2	

TM30: 84,3

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



C1	C2	C3	C4	C5	C6	C7	C8
79,3	80,6	77,2	87,2	92,4	92,9	86,1	92,2
C9	C10	C11	C12	C13	C14	C15	
88,5	80,6	79,4	87,2	89,2	81,7	79,2	

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
3100 K	81,1	2,9	84,3	95,6	81,3	0,435	0,412	0,246	0,349	0,0033



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 info@cls-led.com
 www.cls-led.com

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TM30 details

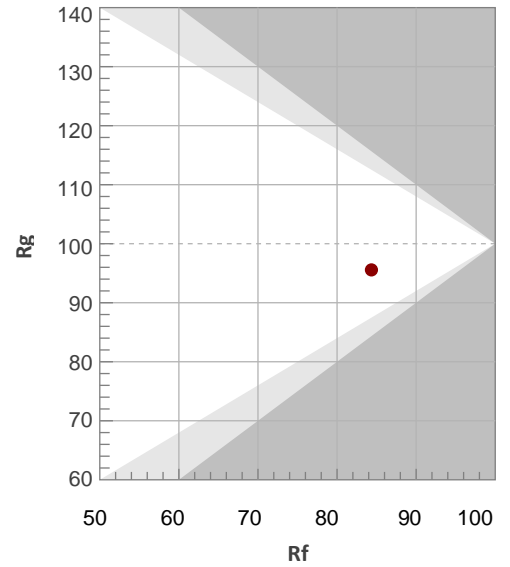
Rf 84,3

Fidelity index Rf

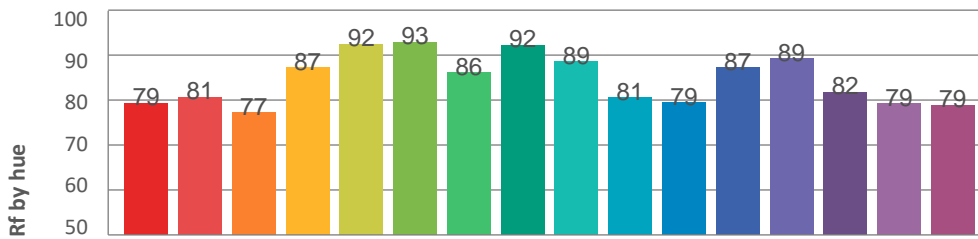
Rg 95,6

Gamut index Rg

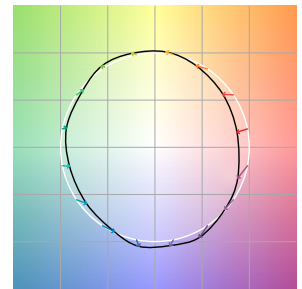
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	81	-9%	7%
3	77	-4%	11%
4	87	1%	8%
5	92	2%	5%
6	93	3%	-2%
7	86	-3%	-8%
8	92	-4%	-2%
9	89	-7%	2%
10	81	-7%	9%
11	79	-2%	14%
12	87	6%	4%
13	89	5%	-5%
14	82	6%	-14%
15	79	-2%	-14%
16	79	-8%	-15%



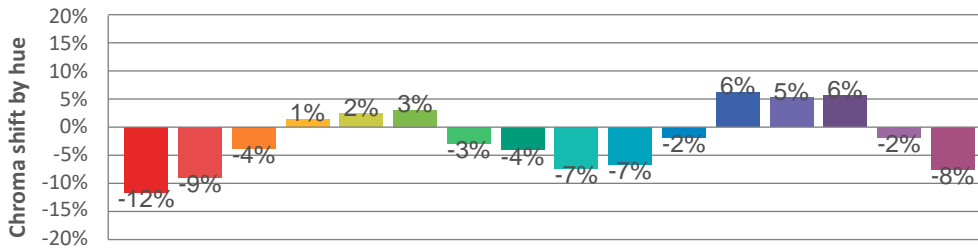
Hue binH



Color vector graphics



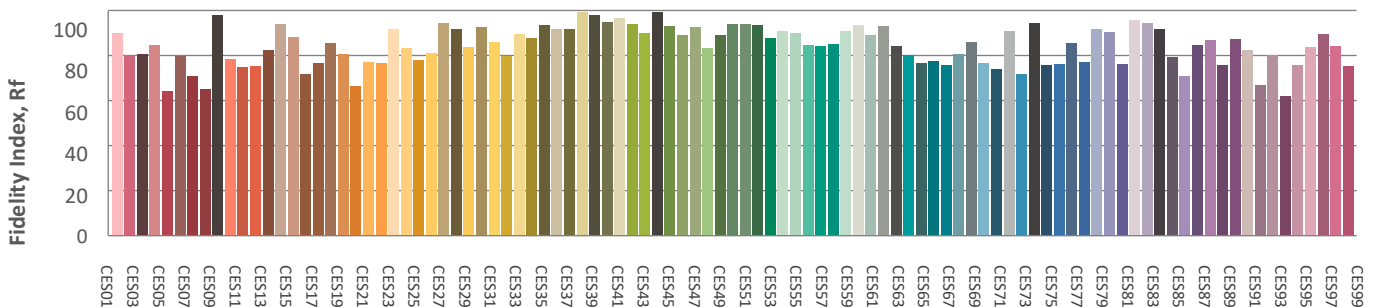
Hue bin



Color distortion graphics



Color Evaluation Sample



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