

LM-79

Test Report

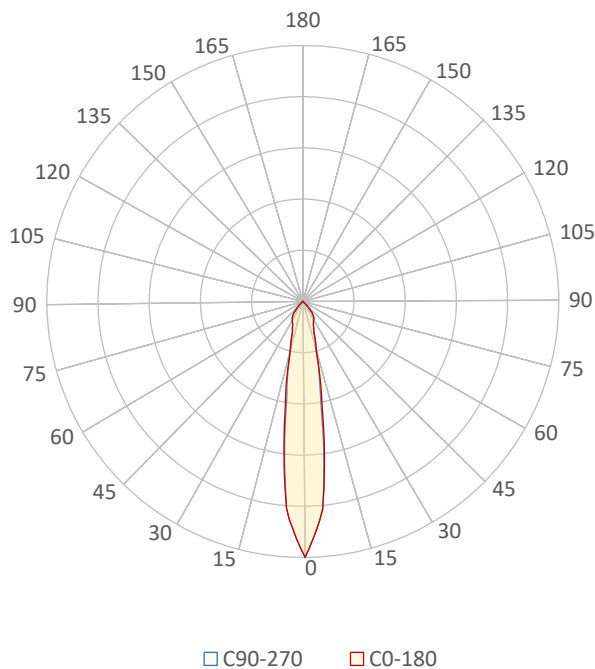
LM79-RUBY-6-3000K-CRI80-SPOT

General Description

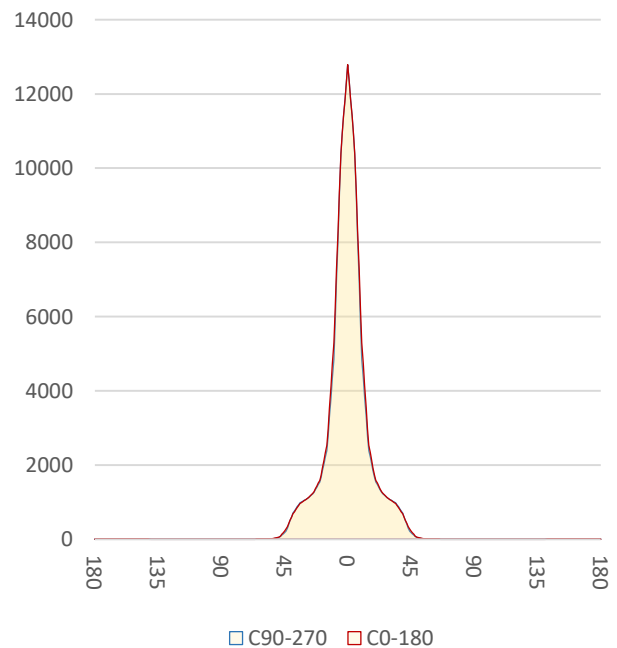
Item number	RU-16-X-X-02-1-X
Date and time	18-11-2016 14:40:17
CCT (Kelvin)	3066 K
Beam angle	17,1°
Luminous flux	2833 lm
Efficiency	100 lm/watt
Weighted energy	28,4 kWh/1000h
Power factor	0,99
CRI (RA)	81,7
Fidelity index Rf	Rf 84,8
Gammut index Rg	Rg 95,8
Peak	12814 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	12788 lx	3197 lx	1421 lx	799 lx	512 lx																			
*measured at center of beam																								
Footcandles*	1188,0 fcd	297,0 fcd	132,0 fcd	74,3 fcd	47,5 fcd																			
Beam width (meter)	0,3 m	0,6 m	0,9 m	1,2 m	1,5 m																			
Beam width (Feet)	1 ft	2 ft	2,9 ft	3,9 ft	4,9 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
12788lx	3197lx	1421lx	799lx	512lx	355lx	261lx	200lx	158lx	128lx	106lx	89lx	76lx	65lx	57lx	50lx	44lx	39lx	35lx	32lx					
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					
1188fcd	297fcd	132fcd	74,3fcd	47,5fcd	33fcd	24,2fcd	18,6fcd	14,7fcd	11,9fcd	9,8fcd	8,3fcd	7fcd	6,1fcd	5,3fcd	4,6fcd	4,1fcd	3,7fcd	3,3fcd	3fcd					
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°					
12,8K	12,8K	11,6K	9,2K	6,8K	5,2K	3,7K	2,8K	2,2K	1,8K	1,6K	1,4K	1,3K	1,2K	1,1K	1,1K	1,0K	1,0K	0,9K	0,8K					
100%	100%	91%	72%	53%	41%	29%	22%	18%	14%	12%	11%	10%	9%	9%	8%	8%	8%	7%	6%					
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°					
12,8K	11,9K	10,9K	9,3K	7,0K	4,7K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	1,0K	1,0K	0,9K	0,8K					
100%	93%	86%	73%	55%	37%	29%	22%	17%	14%	12%	11%	10%	9%	9%	8%	8%	8%	7%	6%					
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°					
12,8K	12,8K	11,6K	9,2K	6,8K	5,2K	3,7K	2,8K	2,2K	1,8K	1,6K	1,4K	1,3K	1,2K	1,1K	1,1K	1,0K	1,0K	0,9K	0,8K					
100%	100%	91%	72%	53%	41%	29%	22%	18%	14%	12%	11%	10%	9%	9%	8%	8%	8%	7%	6%					
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°					
12,8K	11,9K	10,9K	9,3K	7,0K	4,7K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	1,0K	1,0K	0,9K	0,8K					
100%	93%	86%	73%	55%	37%	29%	22%	17%	14%	12%	11%	10%	9%	9%	8%	8%	8%	7%	6%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
17°					47,7°					86,1°					99,4%					97,8%				



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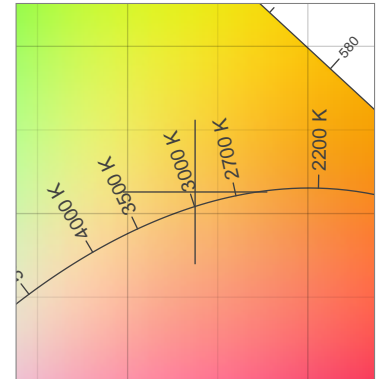
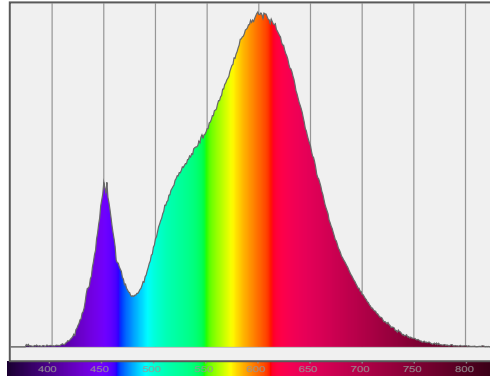
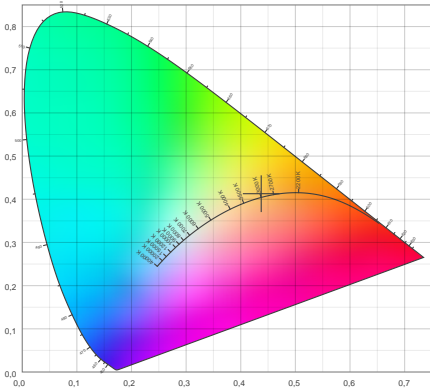
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Color details



CIE 1931

x: 0,437



Spectra

CIE 1931 ZOOM

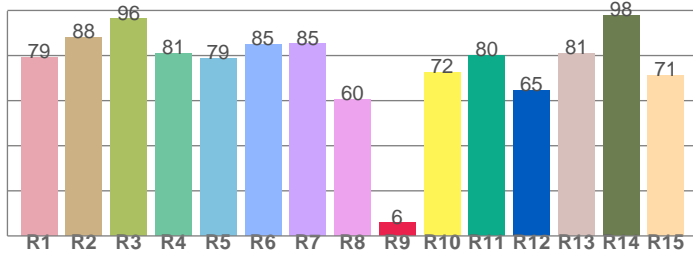
3066 K

y: 0,413

Δuv : 0,0034

CRI: 81,7 (R1-R8)

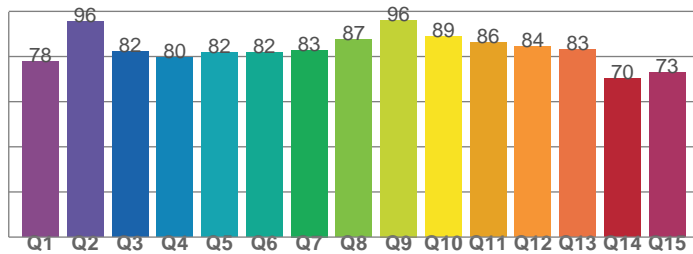
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
79,4	87,9	96,3	81,0	78,9	84,8	85,2	60,5
R9	R10	R11	R12	R13	R14	R15	
5,8	72,4	79,9	64,5	81,1	97,7	71,2	

CQS: 81,9

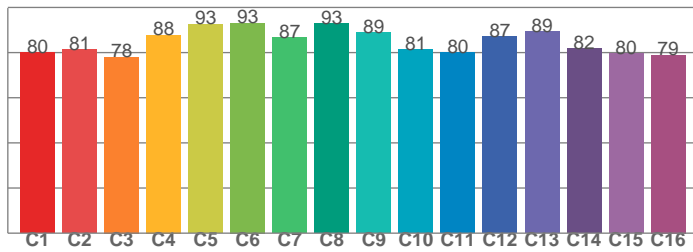
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,7	95,7	82,2	79,7	81,9	81,8	82,9	87,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,2	89,0	86,4	84,4	83,1	70,3	72,9	

TM30: 84,8

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



C1	C2	C3	C4	C5	C6	C7	C8
79,9	81,4	78,1	87,8	92,6	93,2	86,6	92,9
C9	C10	C11	C12	C13	C14	C15	
89,0	81,3	79,9	87,2	89,2	81,8	79,6	

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
3066 K	81,7	5,8	84,8	95,8	81,9	0,437	0,413	0,247	0,350	0,0034



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TM30 details

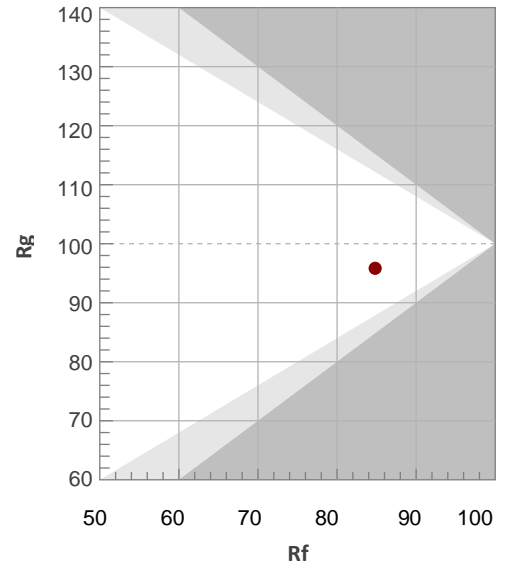
Rf 84,8

Fidelity index Rf

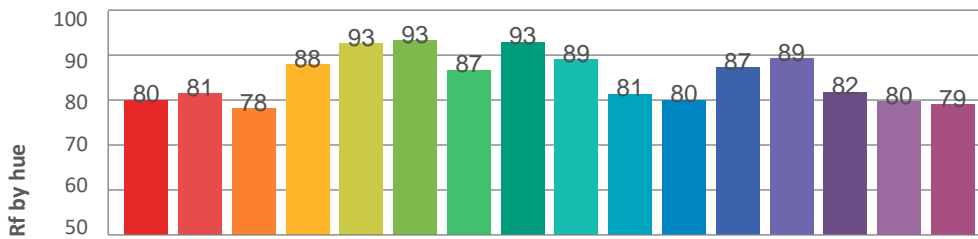
Rg 95,8

Gamut index Rg

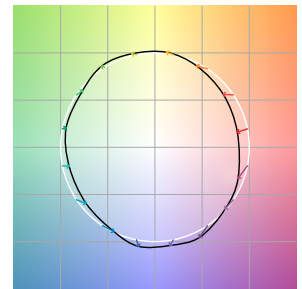
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-1%
2	81	-9%	6%
3	78	-4%	11%
4	88	1%	8%
5	93	2%	5%
6	93	3%	-2%
7	87	-3%	-8%
8	93	-4%	-2%
9	89	-7%	2%
10	81	-6%	9%
11	80	-2%	13%
12	87	6%	4%
13	89	5%	-5%
14	82	6%	-14%
15	80	-2%	-13%
16	79	-7%	-15%



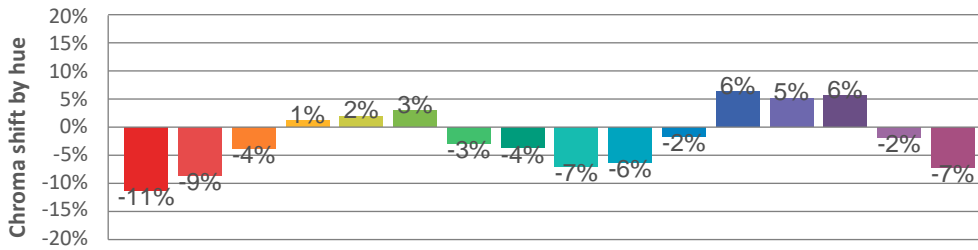
Hue binH



Color vector graphics



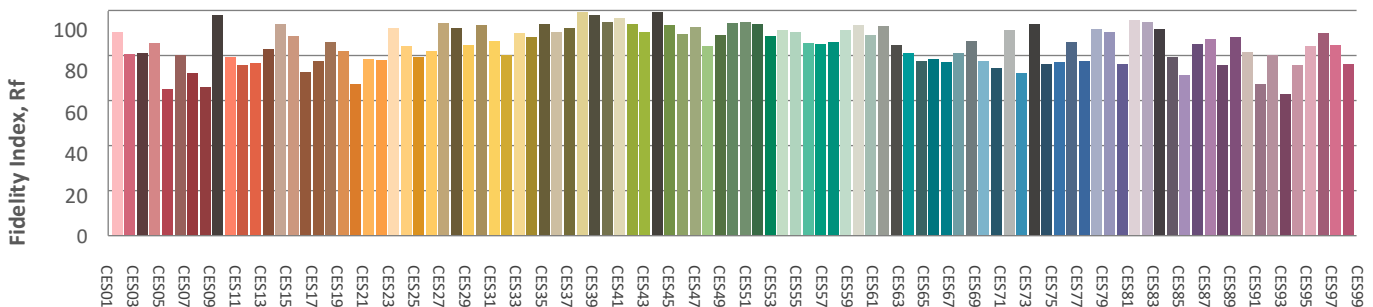
Hue bin



Color distortion graphics



Color Evaluation Sample



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