

LM-79

Test Report

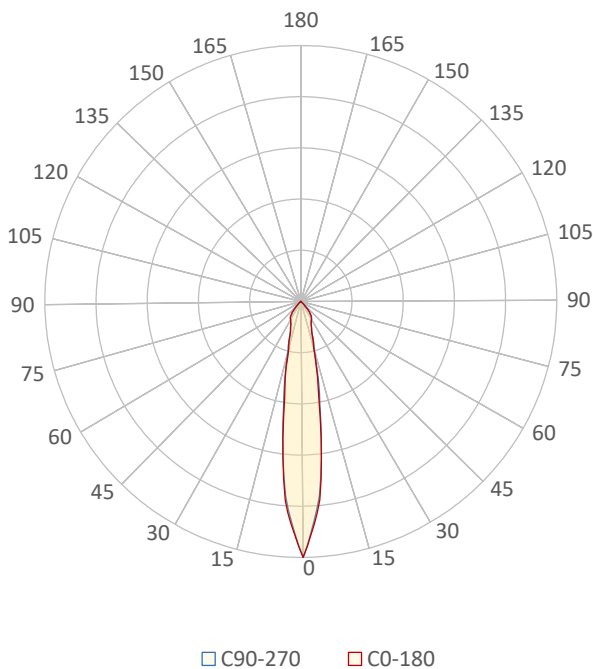
LM79-RUBY-7-4000K-CRI80-SPOT

General Description

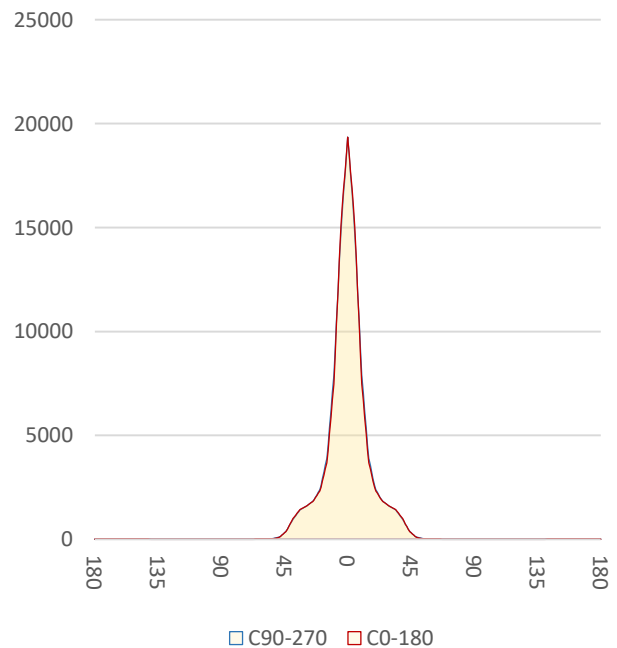
Item number	RU-17-X-X-03-3-X
Date and time	18-11-2016 16:23:10
CCT (Kelvin)	3905 K
Beam angle	17°
Luminous flux	4189 lm
Efficiency	100 lm/watt
Weighted energy	41,8 kWh/1000h
Power factor	0,95
CRI (RA)	82,2
Fidelity index Rf	Rf 84,2
Gammut index Rg	Rg 97,6
Peak	19687 cd



Polar diagram



Cartesian diagram



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

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Beam details	1m	2m	3m	4m	5m														
Lux*	19350 lx	4838 lx	2150 lx	1209 lx	774 lx														
*measured at center of beam																			
Footcandles*	1797,7 fcd	449,4 fcd	199,7 fcd	112,4 fcd	71,9 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	3 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
19350lx	4838lx	2150lx	1209lx	774lx	538lx	395lx	302lx	239lx	194lx	160lx	134lx	114lx	99lx	86lx	76lx	67lx	60lx	54lx	48lx
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
1797,7fcd	449,4fcd	199,7fcd	112,4fcd	71,9fcd	49,9fcd	36,7fcd	28,1fcd	22,2fcd	18fcd	14,9fcd	12,5fcd	10,6fcd	9,2fcd	8fcd	7fcd	6,2fcd	5,5fcd	5fcd	4,5fcd
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°
19,4K	17,7K	16,0K	13,8K	10,5K	7,2K	5,5K	4,2K	3,2K	2,7K	2,3K	2,1K	1,9K	1,7K	1,7K	1,6K	1,5K	1,4K	1,3K	1,1K
100%	91%	83%	71%	54%	37%	29%	22%	16%	14%	12%	11%	10%	9%	9%	8%	8%	7%	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°
19,4K	18,9K	16,1K	13,3K	10,5K	7,7K	5,4K	4,3K	3,2K	2,7K	2,3K	2,0K	1,9K	1,7K	1,7K	1,6K	1,5K	1,4K	1,3K	1,1K
100%	98%	83%	69%	54%	40%	28%	22%	17%	14%	12%	11%	10%	9%	9%	8%	8%	7%	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°
19,4K	17,7K	16,0K	13,8K	10,5K	7,2K	5,5K	4,2K	3,2K	2,7K	2,3K	2,1K	1,9K	1,7K	1,7K	1,6K	1,5K	1,4K	1,3K	1,1K
100%	91%	83%	71%	54%	37%	29%	22%	16%	14%	12%	11%	10%	9%	9%	8%	8%	7%	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°
19,4K	18,9K	16,1K	13,3K	10,5K	7,7K	5,4K	4,3K	3,2K	2,7K	2,3K	2,0K	1,9K	1,7K	1,7K	1,6K	1,5K	1,4K	1,3K	1,1K
100%	98%	83%	69%	54%	40%	28%	22%	17%	14%	12%	11%	10%	9%	9%	8%	8%	7%	7%	6%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
17,1°		46,7°				86°				99,3%				97,6%					



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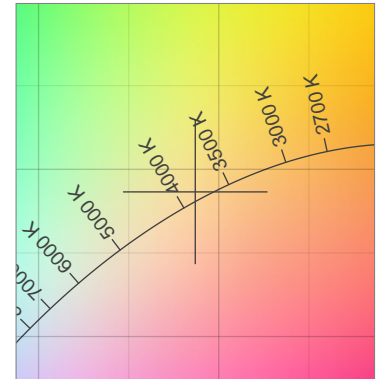
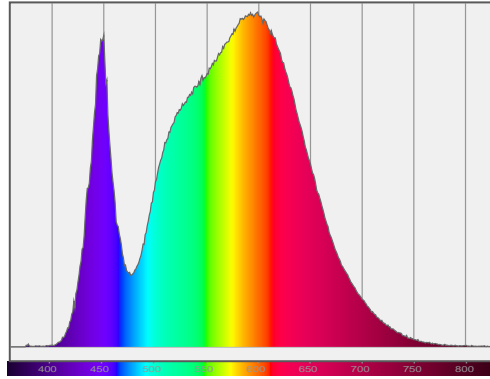
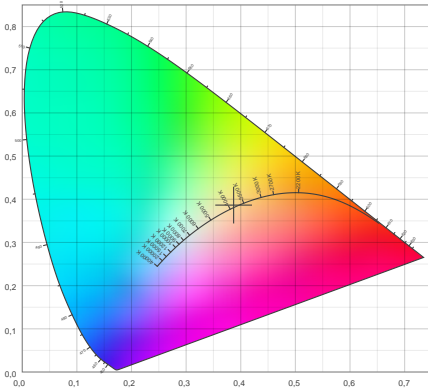
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Color details



CIE 1931

x: 0,387



Spectra

CIE 1931 ZOOM

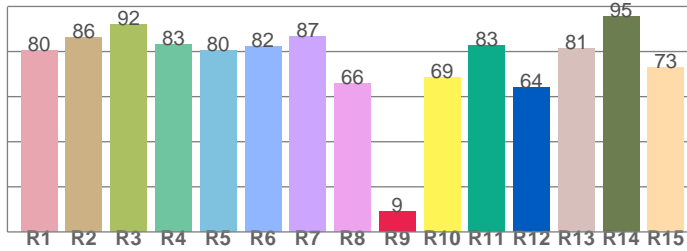
3905 K

y: 0,386

Δuv : 0,0027

CRI: 82,2 (R1-R8)

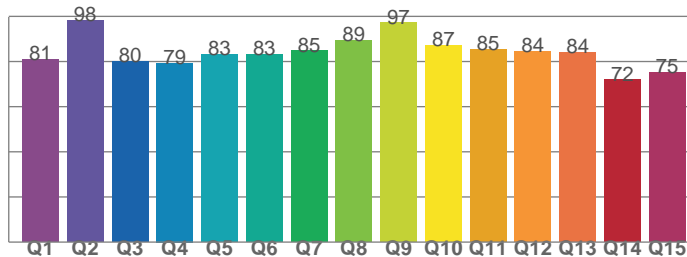
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
80,4	86,3	92,1	83,3	80,5	82,2	86,8	66,0
R9	R10	R11	R12	R13	R14	R15	
9,2	68,5	82,9	64,2	81,4	95,5	73,1	

CQS: 82,9

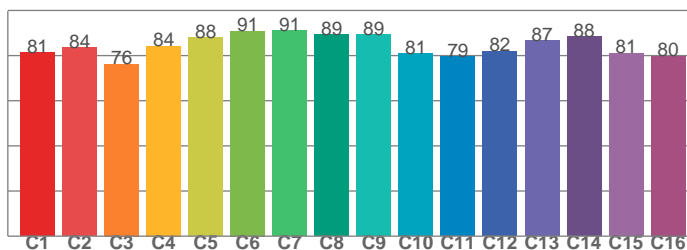
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,0	98,2	80,1	79,4	83,2	83,2	84,7	89,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,1	87,2	85,3	84,4	84,1	71,9	75,1	

TM30: 84,2

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



C1	C2	C3	C4	C5	C6	C7	C8
81,4	83,6	76,2	84,2	87,9	90,9	91,1	89,2
C9	C10	C11	C12	C13	C14	C15	
89,4	80,8	79,5	81,9	86,6	88,3	81,0	

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
3905 K	82,2	9,2	84,2	97,6	82,9	0,387	0,386	0,225	0,338	0,0027



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 info@cls-led.com
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TM30 details

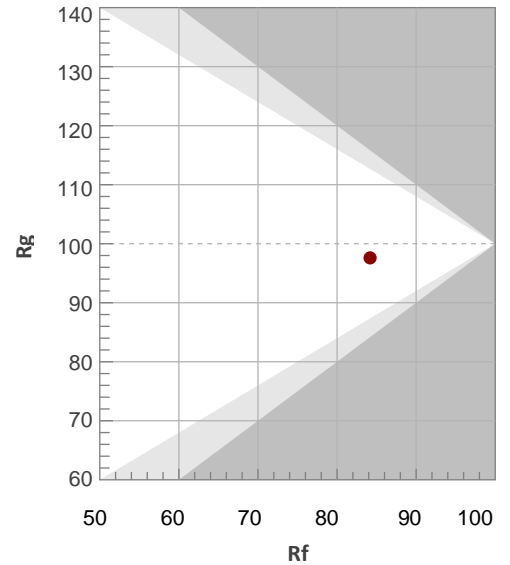
Rf 84,2

Fidelity index Rf

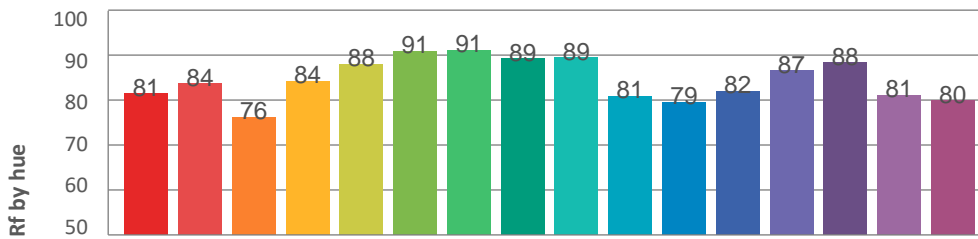
Rg 97,6

Gamut index Rg

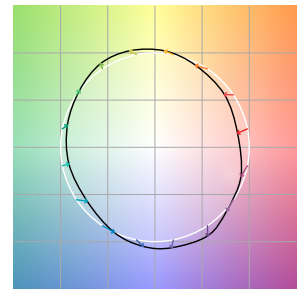
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	84	-8%	6%
3	76	-4%	12%
4	84	2%	10%
5	88	6%	6%
6	91	6%	-2%
7	91	0%	-6%
8	89	-4%	-5%
9	89	-7%	0%
10	81	-9%	8%
11	79	-1%	14%
12	82	5%	8%
13	87	8%	-4%
14	88	9%	-5%
15	81	1%	-13%
16	80	-5%	-12%



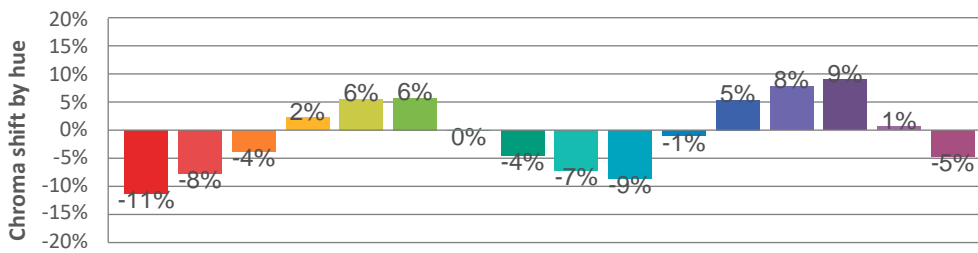
Hue binH



Color vector graphics



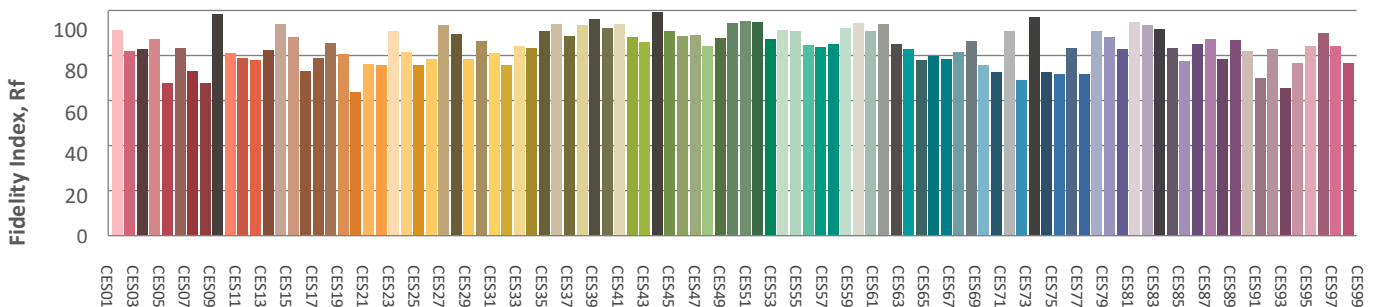
Hue bin



Color distortion graphics



Color Evaluation Sample



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Glare Evaluation According to UGR

p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 4189lm total luminous flux										



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