

LM-79

Test Report

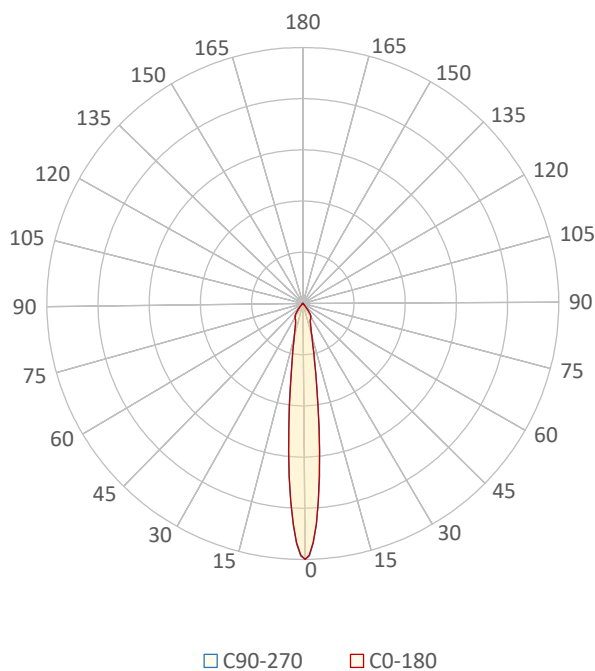
LM79-RUBY-8-4000K-CRI90-SPOT

General Description

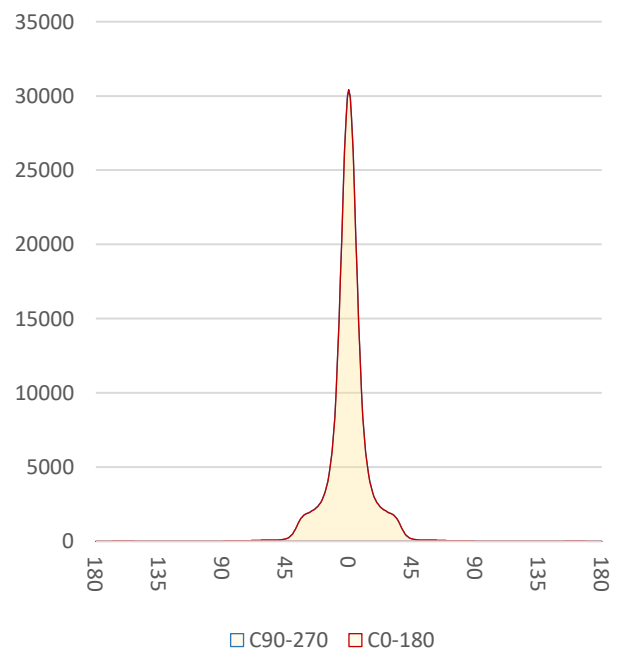
Item number	RU-38-X-X-03-1-X
Date and time	10-6-2020 14:48:17
CCT (Kelvin)	4016 K
Beam angle	13,7°
Luminous flux	4892 lm
Efficiency	87 lm/watt
Weighted energy	56,1 kWh/1000h
Power factor	0,97
CRI (RA)	92,5
Fidelity index Rf	Rf 90,1
Gammut index Rg	Rg 97,7
Peak	30482 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	30420 lx	7605 lx	3380 lx	1901 lx	1217 lx														
*measured at center of beam																			
Footcandles*	2826,2 fcd	706,5 fcd	314,0 fcd	176,6 fcd	113,0 fcd														
Beam width (meter)	0,2 m	0,5 m	0,7 m	1 m	1,2 m														
Beam width (Feet)	0,8 ft	1,6 ft	2,4 ft	3,2 ft	3,9 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
30420lx	7605lx	3380lx	1901lx	1217lx	845lx	621lx	475lx	376lx	304lx	251lx	211lx	180lx	155lx	135lx	119lx	105lx	94lx	84lx	76lx
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
2826,2fcd	706,5fcd	314fcd	176,6fcd	113fcd	78,5fcd	57,7fcd	44,2fcd	34,9fcd	28,3fcd	23,4fcd	19,6fcd	16,7fcd	14,4fcd	12,6fcd	11fcd	9,8fcd	8,7fcd	7,8fcd	7,1fcd
Intensities in 0° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
30,4K	29,9K	28,4K	26,2K	23,5K	20,6K	17,6K	14,8K	12,2K	10,1K	8,4K	7,0K	6,0K	5,1K	4,5K	4,0K	3,6K	3,3K	3,0K	2,8K
100%	98%	93%	86%	77%	68%	58%	49%	40%	33%	27%	23%	20%	17%	15%	13%	12%	11%	10%	9%
Intensities in 90° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
30,4K	30,0K	28,6K	26,4K	23,7K	20,7K	17,7K	14,9K	12,3K	10,2K	8,4K	7,1K	6,0K	5,2K	4,6K	4,0K	3,6K	3,3K	3,0K	2,8K
100%	99%	94%	87%	78%	68%	58%	49%	41%	33%	28%	23%	20%	17%	15%	13%	12%	11%	10%	9%
Intensities in 180° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
30,4K	29,9K	28,4K	26,2K	23,5K	20,6K	17,6K	14,8K	12,2K	10,1K	8,4K	7,0K	6,0K	5,1K	4,5K	4,0K	3,6K	3,3K	3,0K	2,8K
100%	98%	93%	86%	77%	68%	58%	49%	40%	33%	27%	23%	20%	17%	15%	13%	12%	11%	10%	9%
Intensities in 270° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
30,4K	30,0K	28,6K	26,4K	23,7K	20,7K	17,7K	14,9K	12,3K	10,2K	8,4K	7,1K	6,0K	5,2K	4,6K	4,0K	3,6K	3,3K	3,0K	2,8K
100%	99%	94%	87%	78%	68%	58%	49%	41%	33%	28%	23%	20%	17%	15%	13%	12%	11%	10%	9%
Beam angle 50%		Field angle 10%			Cutoff angle 2,5%				Intensity ratio in 120° cone					Intensity ratio in 90° cone					
13,7°		35,7°			76,7°				97,1%					94,7%					



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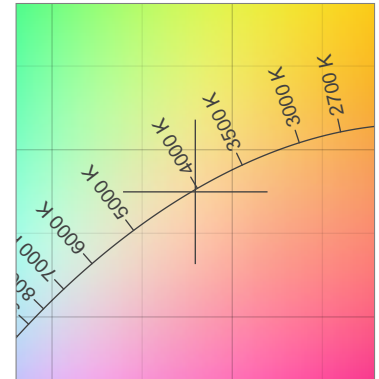
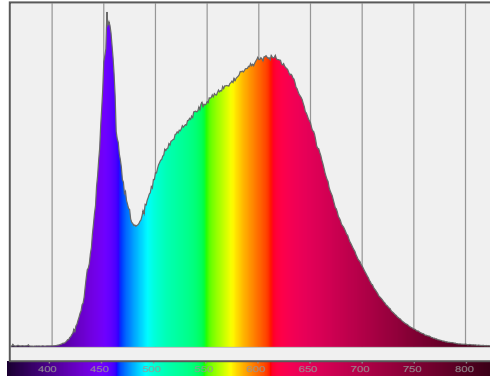
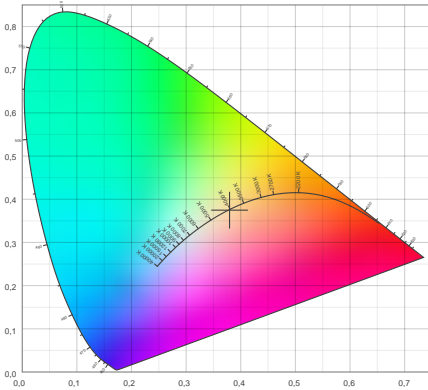
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Color details



CIE 1931

x: 0,379



Spectra

CIE 1931 ZOOM

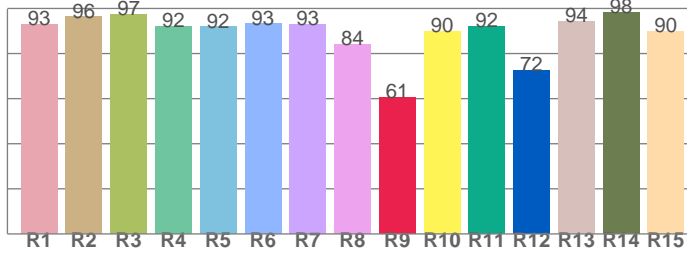
4016 K

y: 0,375

$\Delta uv: -0,0006$

CRI: 92,5 (R1-R8)

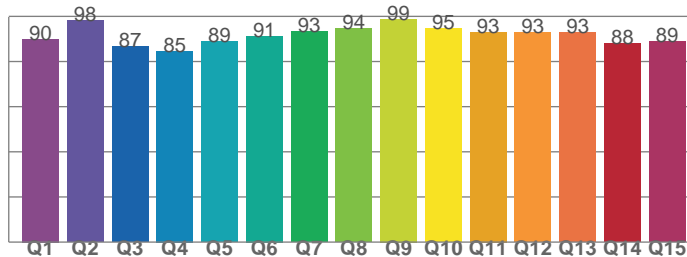
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
92,8	96,3	97,3	91,9	91,8	93,2	92,9	84,0
R9	R10	R11	R12	R13	R14	R15	
60,6	89,7	92,1	72,5	94,1	98,4	89,8	

CQS: 90,9

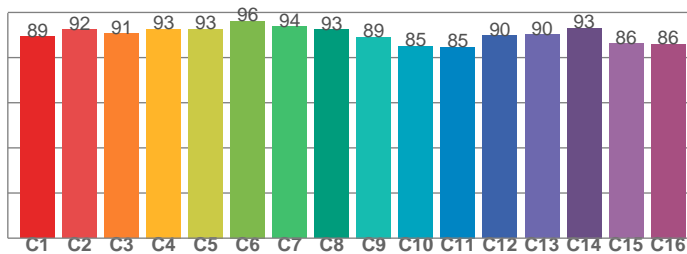
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,0	98,2	86,8	84,6	88,8	91,3	93,3	94,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,8	94,8	93,1	92,8	92,8	88,1	89,0	

TM30: 90,1

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



C1	C2	C3	C4	C5	C6	C7	C8
89,4	92,4	90,5	92,6	92,6	96,3	93,8	92,5
C9	C10	C11	C12	C13	C14	C15	
89,1	85,1	84,7	89,7	90,3	93,1	86,1	

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
4016 K	92,5	60,6	90,1	97,7	90,9	0,379	0,375	0,225	0,334	-0,0006



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TM30 details

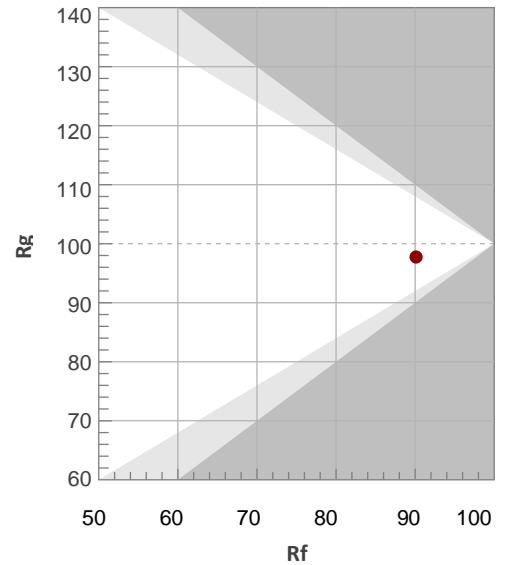
Rf 90,1

Fidelity index Rf

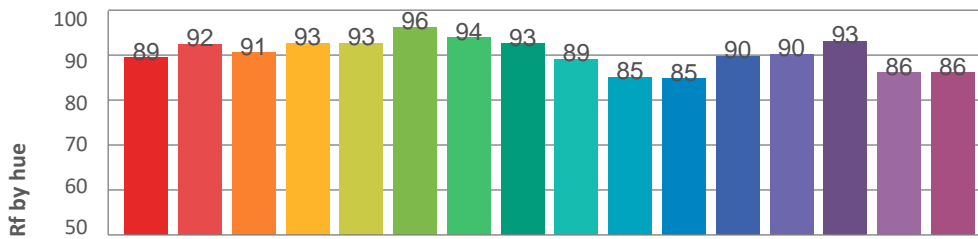
Rg 97,7

Gamut index Rg

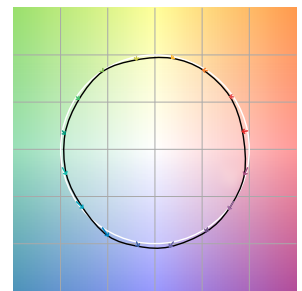
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	0%
2	92	-3%	2%
3	91	-2%	4%
4	93	-2%	1%
5	93	-3%	1%
6	96	-1%	0%
7	94	-4%	1%
8	93	-3%	3%
9	89	-3%	8%
10	85	-2%	9%
11	85	4%	10%
12	90	4%	3%
13	90	4%	-5%
14	93	3%	-3%
15	86	0%	-9%
16	86	-2%	-8%



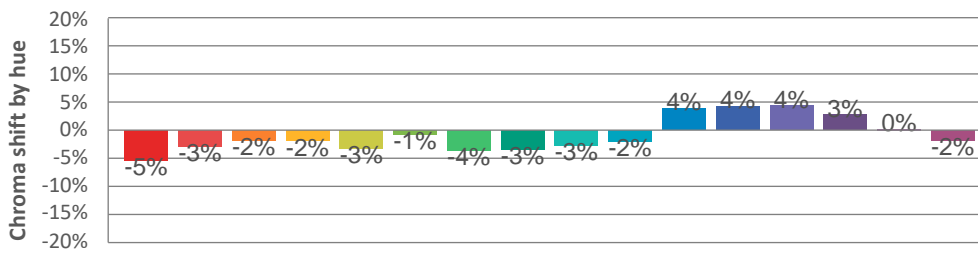
Hue binH



Color vector graphics



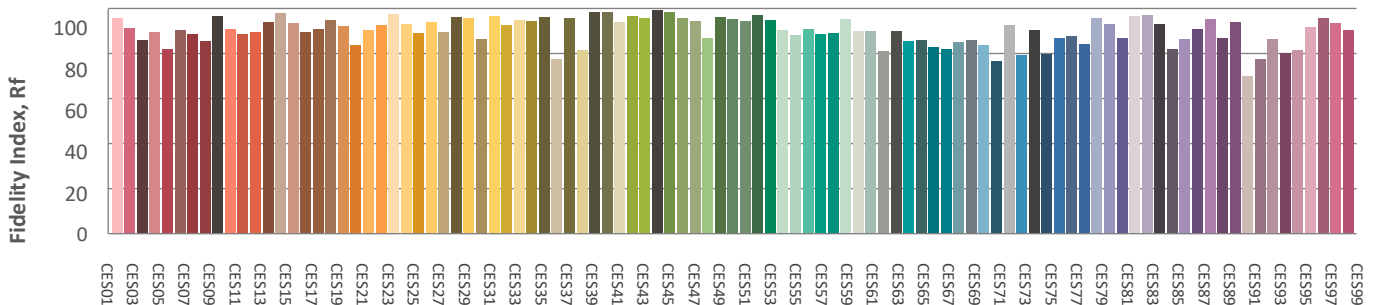
Hue bin



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
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n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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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 4892lm total luminous flux										



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