

LM-79

Test Report

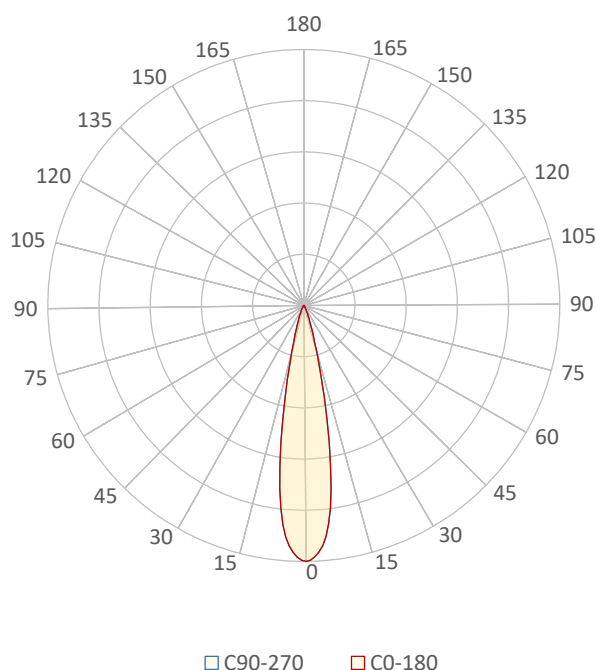
LM79-REVO-MICRO-BASIC-2200K-CRI80-20DEG

General Discription

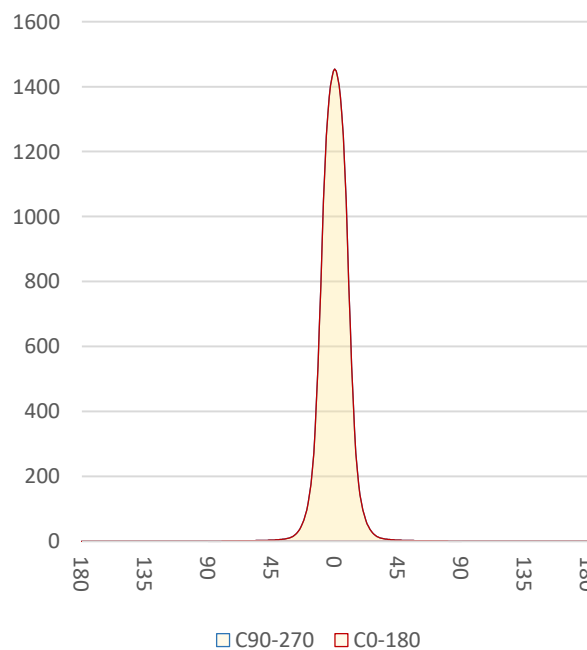
Item number	RM-X-X-10-1
Date and time	29-10-2021 11:06:33
CCT (Kelvin)	2162 K
Beam angle	20,9°
Luminous flux	224 lm
Efficiency	44 lm/watt
Weighted energy	5,1 kWh/1000h
Power factor	0,49
CRI (RA)	86,1
Fidelity index Rf	Rf 88,0
Gammut index Rg	Rg 95,7
Peak	1454 cd



Polar diagram



Cartesian diagram



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Beam details		1m	2m	3m	4m	5m
Lux*		1454 lx	364 lx	162 lx	91 lx	58 lx

20,9°

*measured at center of beam

Footcandles*	135,1 fcd	33,8 fcd	15,0 fcd	8,4 fcd	5,4 fcd
Beam width (meter)	0,4 m	0,7 m	1,1 m	1,5 m	1,8 m
Beam width (Feet)	1,2 ft	2,4 ft	3,6 ft	4,8 ft	6,1 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
1454lx	364lx	162lx	91lx	58lx	40lx	30lx	23lx	18lx	15lx	12lx	10lx	9lx	7lx	6lx	6lx	5lx	4lx	4lx	4lx
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
135,1fcd	33,8fcd	15fcd	8,4fcd	5,4fcd	3,8fcd	2,8fcd	2,1fcd	1,7fcd	1,4fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd

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°
1454	1448	1430	1404	1369	1319	1249	1159	1049	923	789	659	539	432	344	272	217	175	143	117
100%	100%	98%	97%	94%	91%	86%	80%	72%	63%	54%	45%	37%	30%	24%	19%	15%	12%	10%	8%

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°
1454	1448	1430	1404	1369	1319	1249	1159	1049	923	789	659	539	432	344	272	217	175	143	117
100%	100%	98%	97%	94%	91%	86%	80%	72%	63%	54%	45%	37%	30%	24%	19%	15%	12%	10%	8%

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°
1454	1448	1430	1404	1369	1319	1249	1159	1049	923	789	659	539	432	344	272	217	175	143	117
100%	100%	98%	97%	94%	91%	86%	80%	72%	63%	54%	45%	37%	30%	24%	19%	15%	12%	10%	8%

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°
1454	1448	1430	1404	1369	1319	1249	1159	1049	923	789	659	539	432	344	272	217	175	143	117
100%	100%	98%	97%	94%	91%	86%	80%	72%	63%	54%	45%	37%	30%	24%	19%	15%	12%	10%	8%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
20,9°	35,8°	50,2°	98,9%	97,3%



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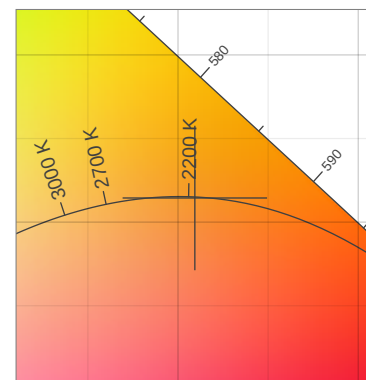
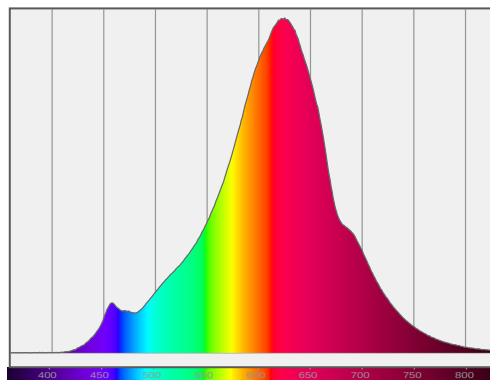
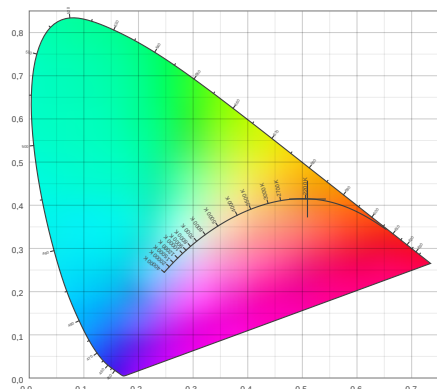
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Color details



CIE 1931

x: 0,509



Spectra

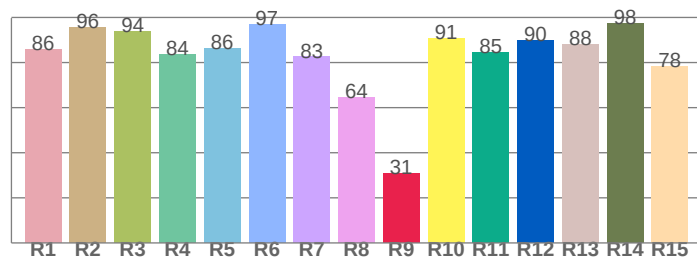
CIE 1931 ZOOM

2162 K

y: 0,414

Δuv : -0,0003

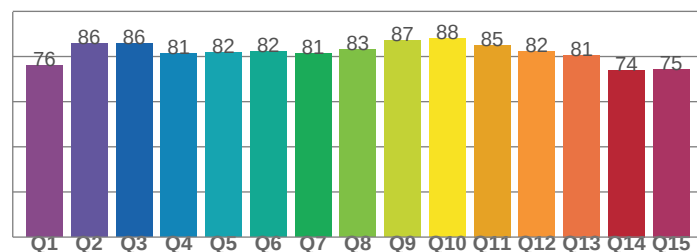
CRI: 86,1 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
85,7	95,7	93,6	83,7	86,3	97,1	82,5	64,4
R9	R10	R11	R12	R13	R14	R15	
30,7	90,8	84,6	89,8	88,1	97,5	78,5	

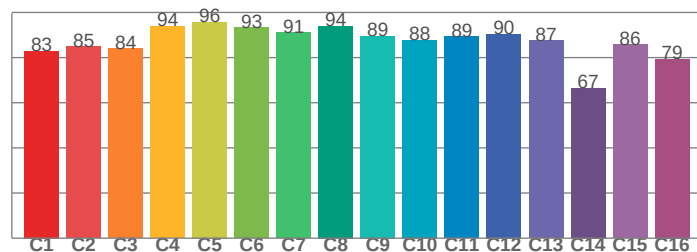
CQS: 81,1



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
76,2	85,8	85,7	81,5	81,8	82,1	81,3	83,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
87,2	88,0	85,1	82,1	80,7	74,0	74,5	

TM30: 88,0



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

C1	C2	C3	C4	C5	C6	C7	C8
83,0	84,9	84,0	93,9	95,8	93,2	91,1	94,0
C9	C10	C11	C12	C13	C14	C15	
89,5	87,8	89,3	90,4	87,5	66,5	85,9	

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
2162 K	86,1	30,7	88,0	95,7	81,1	0,509	0,414	0,293	0,358	-0,0003



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TM30 details

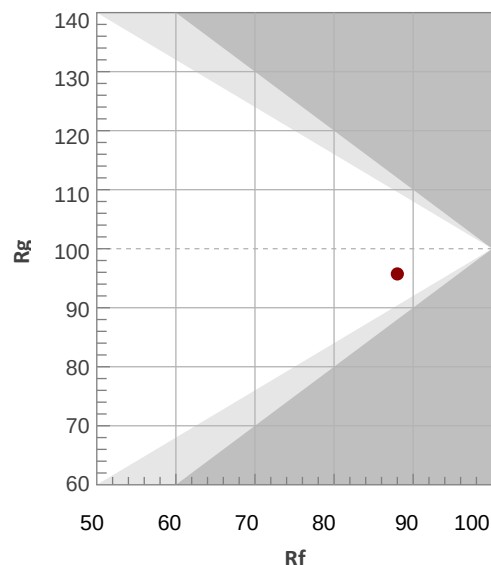
Rf 88,0

Fidelity index Rf

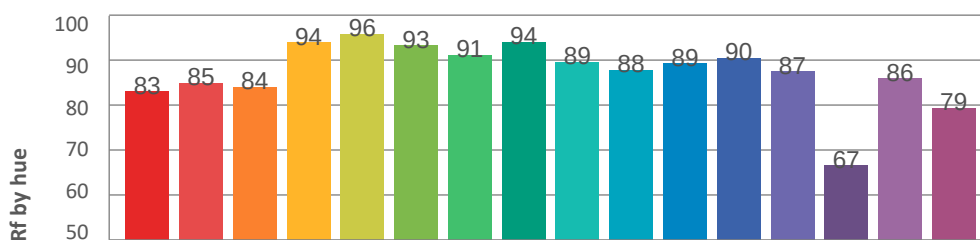
Rg 95,7

Gamut index Rg

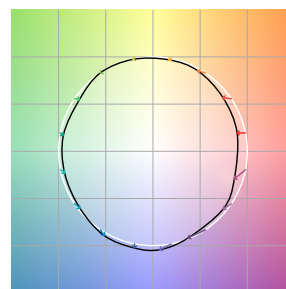
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	83	-9%	2%
2	85	-7%	6%
3	84	-3%	8%
4	94	-2%	3%
5	96	0%	2%
6	93	0%	0%
7	91	-5%	-3%
8	94	-4%	2%
9	89	-4%	4%
10	88	-2%	7%
11	89	3%	6%
12	90	4%	1%
13	87	4%	-13%
14	67	-3%	-20%
15	86	-4%	-9%
16	79	-10%	-12%



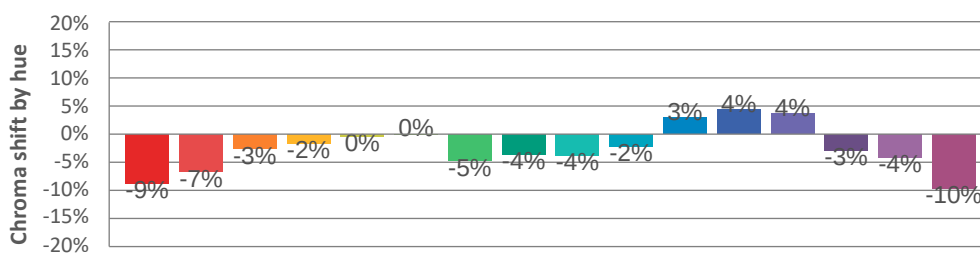
Hue binH



Color vector graphics



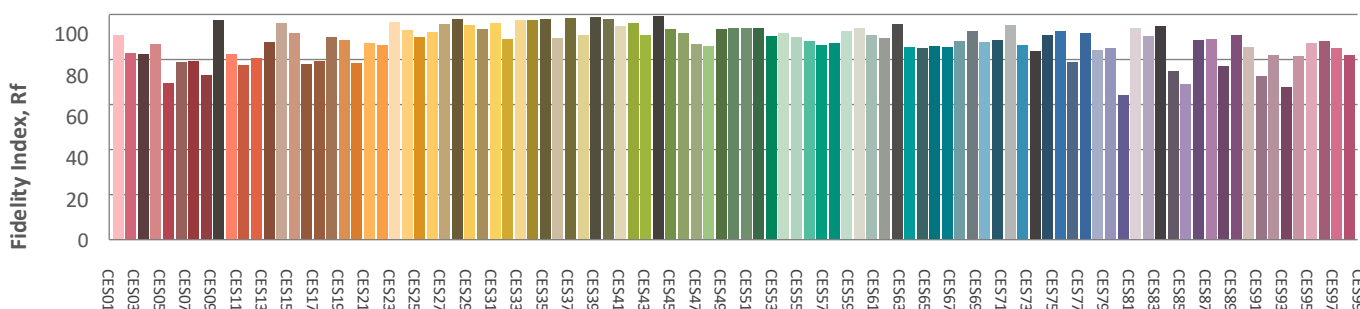
Hue bin



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				
2H	2H	10,5	10,9	10,6	11,1	11,2	10,5	10,9	10,6	11,1	11,2
	3H	11,4	12,0	11,8	12,2	12,3	11,4	12,0	11,8	12,2	12,3
	4H	11,8	12,3	12,2	12,5	12,8	11,8	12,3	12,2	12,5	12,8
	6H	12,1	12,5	12,4	12,8	13,1	12,1	12,5	12,4	12,8	13,1
	8H	12,1	12,5	12,4	12,8	13,2	12,1	12,5	12,4	12,8	13,2
	12H	12,1	12,5	12,4	12,9	13,3	12,1	12,5	12,4	12,9	13,3
4H	2H	10,8	11,4	11,2	11,6	11,8	10,8	11,4	11,2	11,6	11,8
	3H	12,2	12,6	12,5	12,9	13,3	12,2	12,6	12,5	12,9	13,3
	4H	12,5	12,9	13,0	13,3	13,8	12,5	12,9	13,0	13,3	13,8
	6H	12,8	13,2	13,3	13,6	13,9	12,8	13,2	13,3	13,6	13,9
	8H	12,8	13,2	13,3	13,6	13,9	12,8	13,2	13,3	13,6	13,9
	12H	12,9	13,2	13,4	13,6	14,0	12,9	13,2	13,4	13,6	14,0
8H	4H	12,7	13,1	13,2	13,4	13,8	12,7	13,1	13,2	13,4	13,8
	6H	13,0	13,3	13,5	13,7	14,3	13,0	13,3	13,5	13,7	14,3
	8H	13,2	13,3	13,7	13,9	14,5	13,2	13,3	13,7	13,9	14,5
	12H	13,2	13,4	13,8	13,9	14,5	13,2	13,4	13,8	13,9	14,5
12H	4H	12,6	12,9	13,1	13,3	13,8	12,6	12,9	13,1	13,3	13,8
	6H	13,1	13,2	13,6	13,8	14,4	13,1	13,2	13,6	13,8	14,4
	8H	13,1	13,3	13,7	13,8	14,4	13,1	13,3	13,7	13,8	14,4
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,6 / -0,4					0,6 / -0,4				
S = 1.5H		1,3 / -0,6					1,3 / -0,6				
S = 2.0H		2,2 / -1,1					2,2 / -1,1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 224lm total luminous flux											



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