

LM-79

Test Report

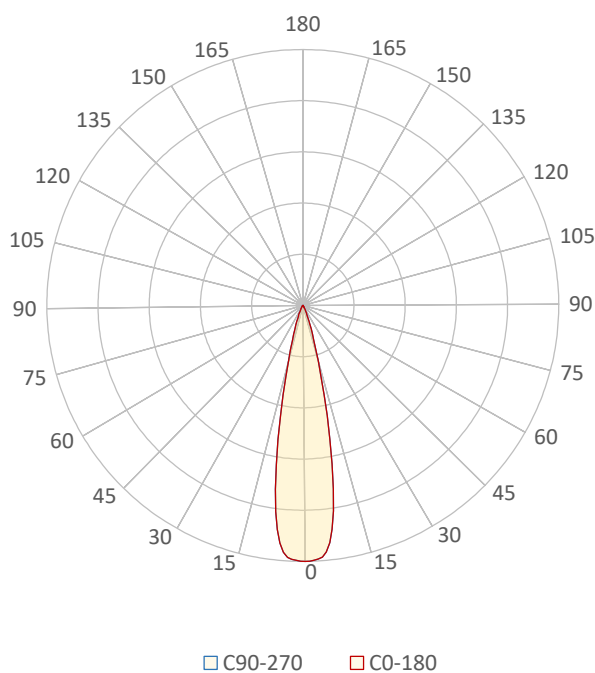
LM79-REVO-MICRO-BASIC-2700K-CRI80-20DEG

General Discription

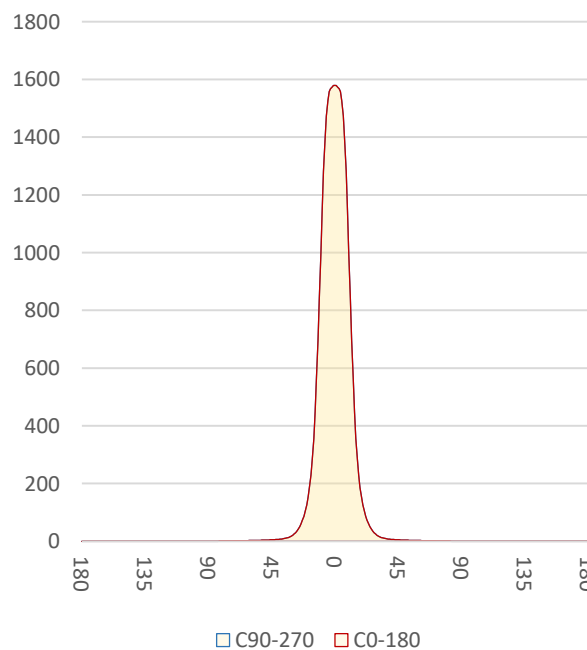
Item number	
Date and time	21-9-2021 17:01:20
CCT (Kelvin)	2635 K
Beam angle	22,7°
Luminous flux	281 lm
Efficiency	54 lm/watt
Weighted energy	5,2 kWh/1000h
Power factor	0,49
CRI (RA)	84,8
Fidelity index Rf	Rf 86,0
Gammut index Rg	Rg 98,6
Peak	1579 cd



Polar diagram



Cartesian diagram



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Beam details		1m	2m	3m	4m	5m
Lux*		1579 lx	395 lx	175 lx	99 lx	63 lx

22,7°

*measured at center of beam

Footcandles*	146,7 fcd	36,7 fcd	16,3 fcd	9,2 fcd	5,9 fcd
Beam width (meter)	0,4 m	0,8 m	1,2 m	1,6 m	2 m
Beam width (Feet)	1,3 ft	2,6 ft	4 ft	5,3 ft	6,6 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
1579lx	395lx	175lx	99lx	63lx	44lx	32lx	25lx	19lx	16lx	13lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	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
146,7fcd	36,7fcd	16,3fcd	9,2fcd	5,9fcd	4,1fcd	3fcd	2,3fcd	1,8fcd	1,5fcd	1,2fcd	1fcd	0,9fcd	0,7fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd	0,4fcd

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°
1579	1579	1574	1568	1558	1527	1473	1392	1282	1147	995	842	696	564	449	356	283	229	187	153
100%	100%	100%	99%	99%	97%	93%	88%	81%	73%	63%	53%	44%	36%	28%	23%	18%	14%	12%	10%

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°
1579	1579	1574	1568	1558	1527	1473	1392	1282	1147	995	842	696	564	449	356	283	229	187	153
100%	100%	100%	99%	99%	97%	93%	88%	81%	73%	63%	53%	44%	36%	28%	23%	18%	14%	12%	10%

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°
1579	1579	1574	1568	1558	1527	1473	1392	1282	1147	995	842	696	564	449	356	283	229	187	153
100%	100%	100%	99%	99%	97%	93%	88%	81%	73%	63%	53%	44%	36%	28%	23%	18%	14%	12%	10%

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°
1579	1579	1574	1568	1558	1527	1473	1392	1282	1147	995	842	696	564	449	356	283	229	187	153
100%	100%	100%	99%	99%	97%	93%	88%	81%	73%	63%	53%	44%	36%	28%	23%	18%	14%	12%	10%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
22,7°	37,7°	52,7°	98,7%	97,0%



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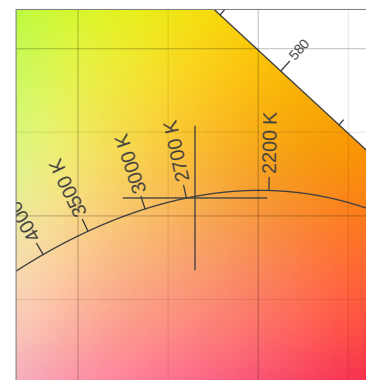
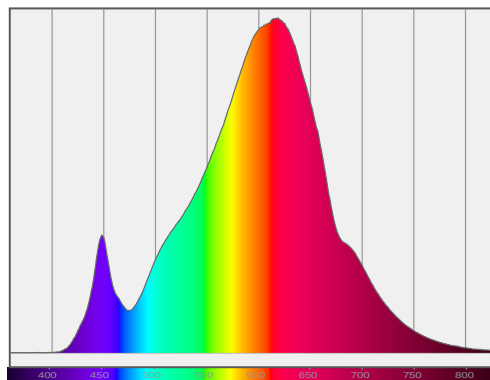
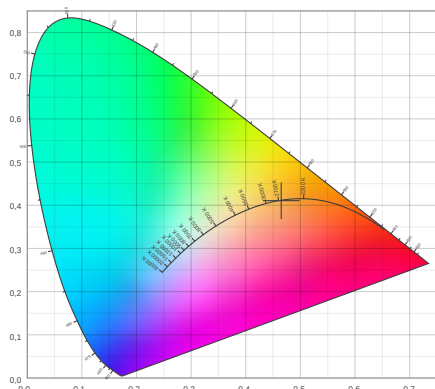
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Color details



CIE 1931

x: 0,465

2635 K

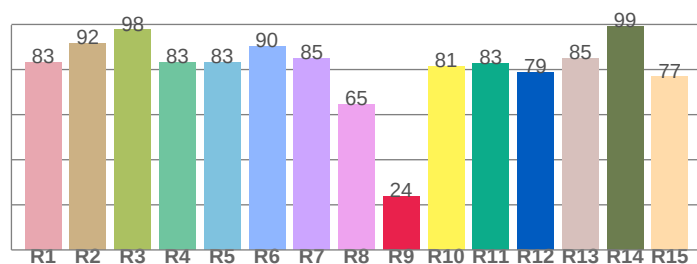
y: 0,411

Spectra

CIE 1931 ZOOM

 $\Delta uv: -0,0004$

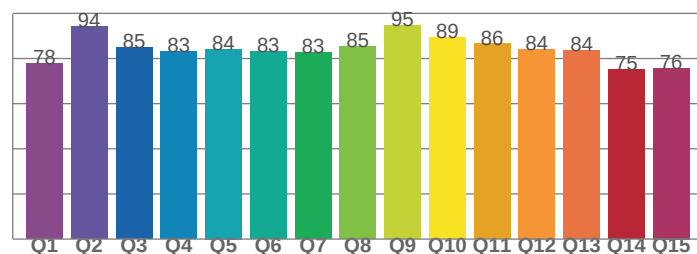
CRI: 84,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
83,2	91,7	97,6	83,1	83,1	90,4	84,8	64,7
R9	R10	R11	R12	R13	R14	R15	
23,9	81,3	82,6	78,8	84,9	99,0	76,8	

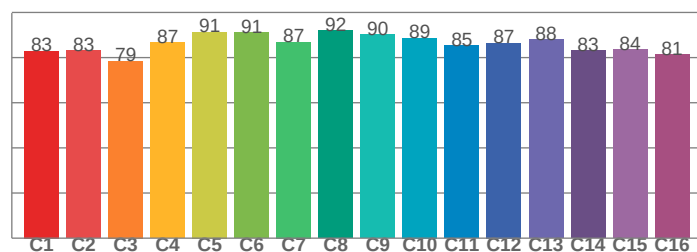
CQS: 83,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,7	94,1	84,8	83,0	84,2	83,0	82,7	85,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,5	89,2	86,5	84,2	83,7	75,3	75,8	

TM30: 86,0



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

C1	C2	C3	C4	C5	C6	C7	C8
82,9	83,1	78,6	86,5	91,3	91,2	86,8	92,0
C9	C10	C11	C12	C13	C14	C15	
90,1	88,7	85,4	86,5	88,0	83,0	83,6	

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
2635 K	84,8	23,9	86,0	98,6	83,2	0,465	0,411	0,266	0,352	-0,0004

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TM30 details

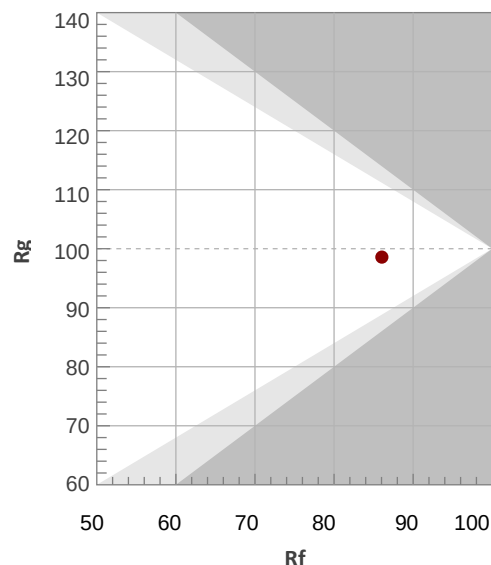
R_f 86,0

Fidelity index R_f

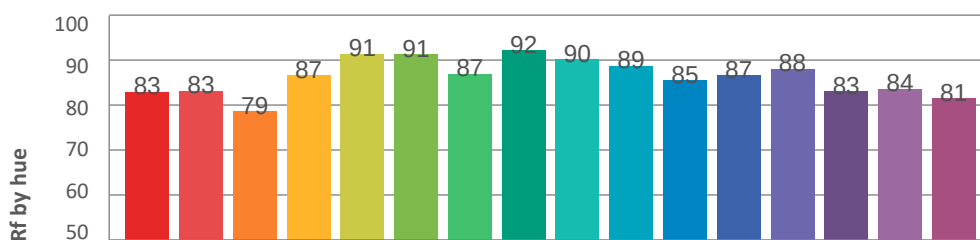
R_g 98,6

Gamut index R_g

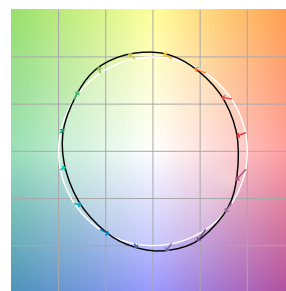
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	83	-9%	-1%
2	83	-7%	7%
3	79	-2%	11%
4	87	4%	8%
5	91	6%	5%
6	91	6%	-2%
7	87	1%	-8%
8	92	-3%	-4%
9	90	-5%	-2%
10	89	-5%	5%
11	85	-1%	9%
12	87	4%	3%
13	88	6%	-7%
14	83	5%	-13%
15	84	-1%	-10%
16	81	-7%	-13%



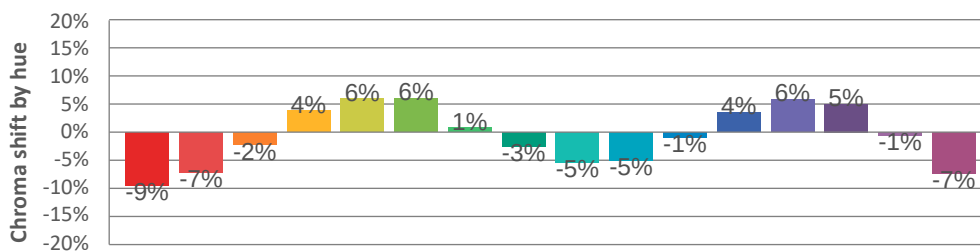
Hue binH



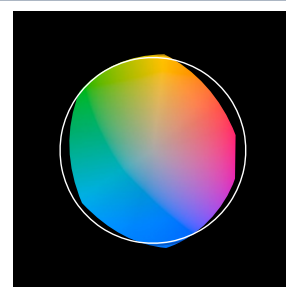
Color vector graphics



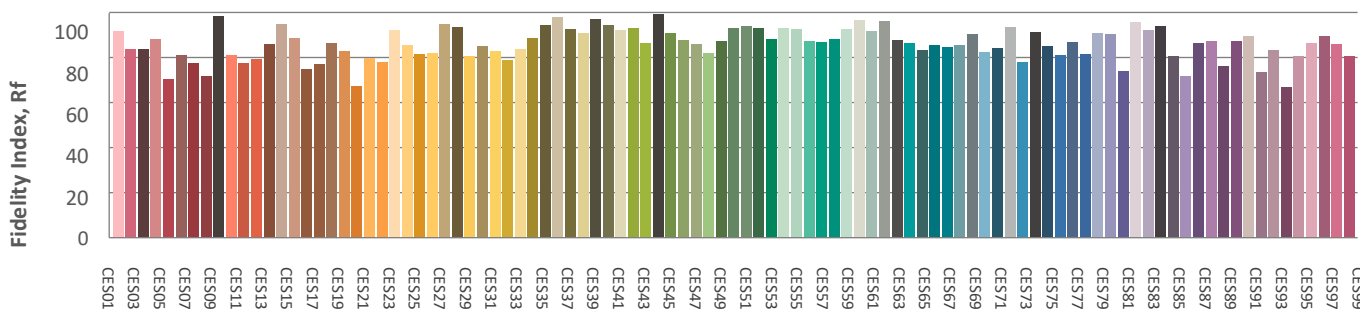
Hue bin



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	12,0	12,3	12,0	12,5	12,7	12,0	12,3	12,0	12,5	12,7
	3H	13,0	13,5	13,3	13,7	13,9	13,0	13,5	13,3	13,7	13,9
	4H	13,4	13,9	13,8	14,1	14,4	13,4	13,9	13,8	14,1	14,4
	6H	13,6	14,1	13,9	14,4	14,7	13,6	14,1	13,9	14,4	14,7
	8H	13,7	14,1	14,0	14,4	14,8	13,7	14,1	14,0	14,4	14,8
	12H	13,7	14,1	14,0	14,4	14,9	13,7	14,1	14,0	14,4	14,9
4H	2H	12,3	12,8	12,7	13,0	13,3	12,3	12,8	12,7	13,0	13,3
	3H	13,7	14,1	14,1	14,5	14,9	13,7	14,1	14,1	14,5	14,9
	4H	14,1	14,5	14,6	15,0	15,5	14,1	14,5	14,6	15,0	15,5
	6H	14,4	14,8	14,9	15,2	15,5	14,4	14,8	14,9	15,2	15,5
	8H	14,4	14,9	15,0	15,2	15,5	14,4	14,9	15,0	15,2	15,5
	12H	14,5	14,8	15,0	15,2	15,6	14,5	14,8	15,0	15,2	15,6
8H	4H	14,3	14,7	14,8	15,0	15,4	14,3	14,7	14,8	15,0	15,4
	6H	14,6	14,9	15,1	15,3	15,9	14,6	14,9	15,1	15,3	15,9
	8H	14,8	15,0	15,3	15,5	16,1	14,8	15,0	15,3	15,5	16,1
	12H	14,8	15,0	15,4	15,5	16,1	14,8	15,0	15,4	15,5	16,1
12H	4H	14,2	14,6	14,7	15,0	15,4	14,2	14,6	14,7	15,0	15,4
	6H	14,7	14,9	15,2	15,4	16,0	14,7	14,9	15,2	15,4	16,0
	8H	14,8	14,9	15,4	15,4	16,0	14,8	14,9	15,4	15,4	16,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,6 / -0,4					0,6 / -0,4				
S = 1.5H		1,4 / -0,6					1,4 / -0,6				
S = 2.0H		2,2 / -0,9					2,2 / -0,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 281lm total luminous flux											



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