

LM-79

Test Report

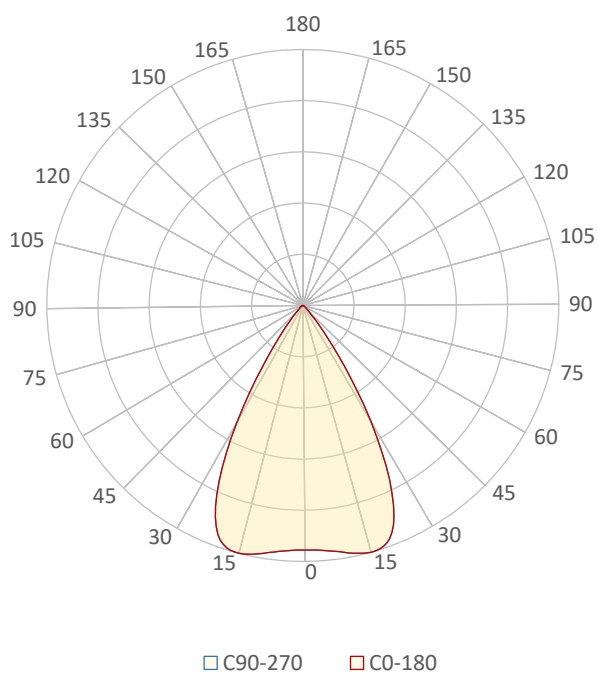
LM79-EMERALD-OFFICE-M6-3500K-CRI90

General Discription

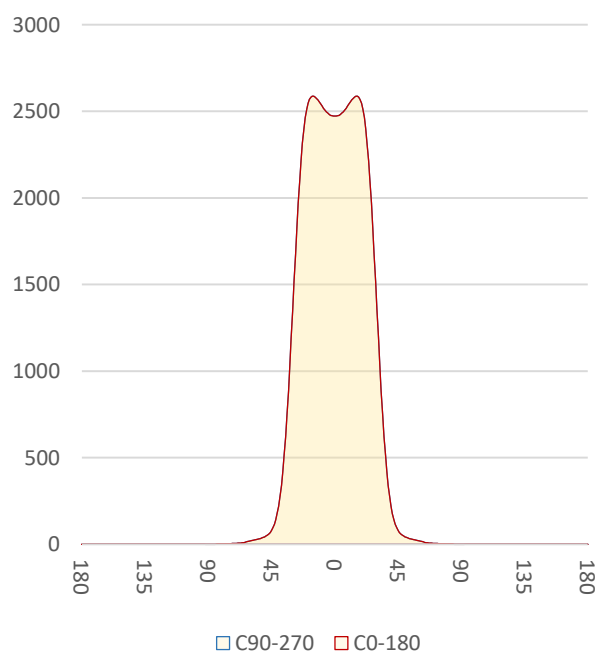
Item number	E-OM6-X-X-3590
Date and time	2-12-2022 13:30:02
CCT (Kelvin)	3343 K
Beam angle	60,7°
Luminous flux	2423 lm
Efficiency	90 lm/watt
Weighted energy	26,8 kWh/1000h
Power factor	0,97
CRI (RA)	93,4
Fidelity index Rf	Rf 90,9
Gammut index Rg	Rg 103,4
Peak	2587 cd



Polar diagram



Cartesian diagram



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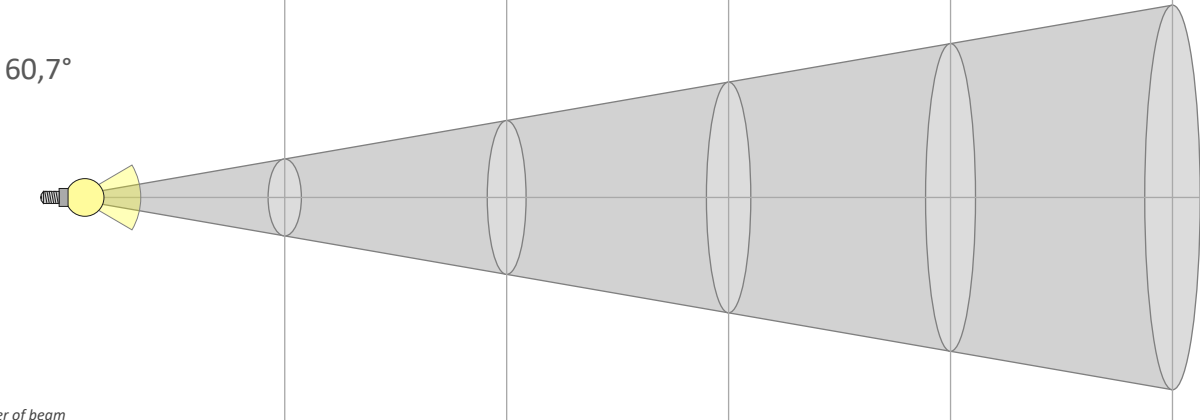
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Beam details		1m	2m	3m	4m	5m
Lux*		2472 lx	618 lx	275 lx	155 lx	99 lx



60,7°

*measured at center of beam

Footcandles*		229,7 fcd	57,4 fcd	25,5 fcd	14,4 fcd	9,2 fcd
Beam width (meter)		1,2 m	2,3 m	3,5 m	4,7 m	5,9 m
Beam width (Feet)		3,8 ft	7,7 ft	11,5 ft	15,4 ft	19,2 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2472lx	618lx	275lx	155lx	99lx	69lx	50lx	39lx	31lx	25lx	20lx	17lx	15lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx
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
229,7fcd	57,4fcd	25,5fcd	14,4fcd	9,2fcd	6,4fcd	4,7fcd	3,6fcd	2,8fcd	2,3fcd	1,9fcd	1,6fcd	1,4fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd

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°
2472	2474	2482	2497	2517	2542	2565	2583	2586	2568	2513	2398	2216	1970	1676	1355	1034	747	514	339
100%	100%	100%	101%	102%	103%	104%	104%	105%	104%	102%	97%	90%	80%	68%	55%	42%	30%	21%	14%

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°
2472	2474	2482	2497	2517	2542	2565	2583	2586	2568	2513	2398	2216	1970	1676	1355	1034	747	514	339
100%	100%	100%	101%	102%	103%	104%	104%	105%	104%	102%	97%	90%	80%	68%	55%	42%	30%	21%	14%

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°
2472	2474	2482	2497	2517	2542	2565	2583	2586	2568	2513	2398	2216	1970	1676	1355	1034	747	514	339
100%	100%	100%	101%	102%	103%	104%	104%	105%	104%	102%	97%	90%	80%	68%	55%	42%	30%	21%	14%

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°
2472	2474	2482	2497	2517	2542	2565	2583	2586	2568	2513	2398	2216	1970	1676	1355	1034	747	514	339
100%	100%	100%	101%	102%	103%	104%	104%	105%	104%	102%	97%	90%	80%	68%	55%	42%	30%	21%	14%

Beam angle 50%		Field angle 10%		Cutoff angle 2,5%		Intensity ratio in 120° cone		Intensity ratio in 90° cone	
60,7°		78,5°		92,9°		99,4%		97,3%	



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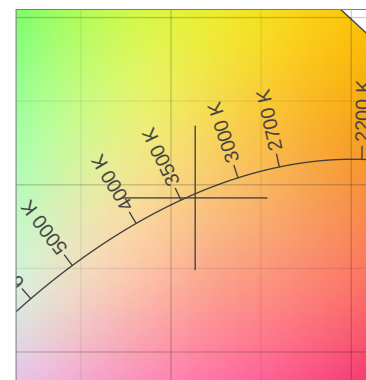
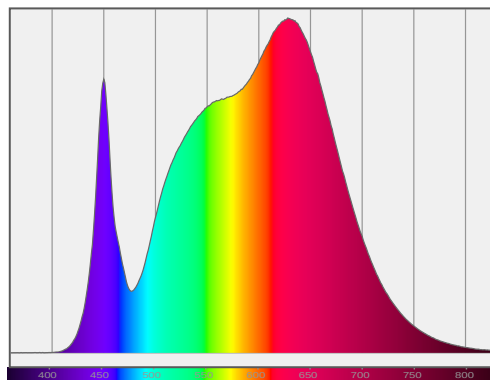
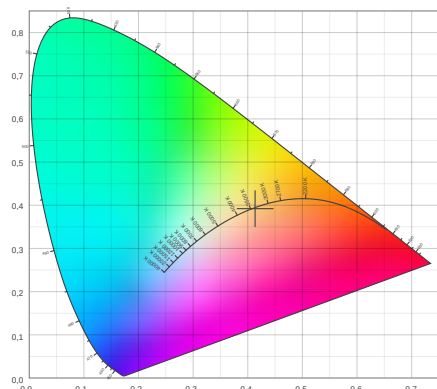
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Color details



CIE 1931

x: 0,413



Spectra

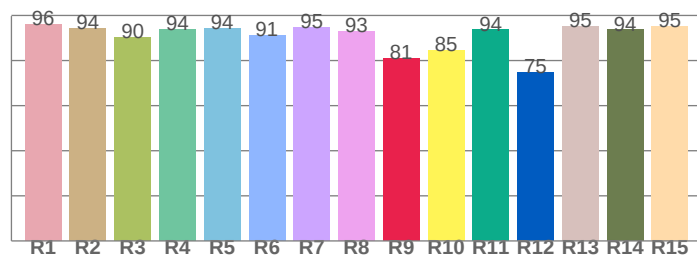
CIE 1931 ZOOM

3343 K

y: 0,392

Δuv : -0,0011

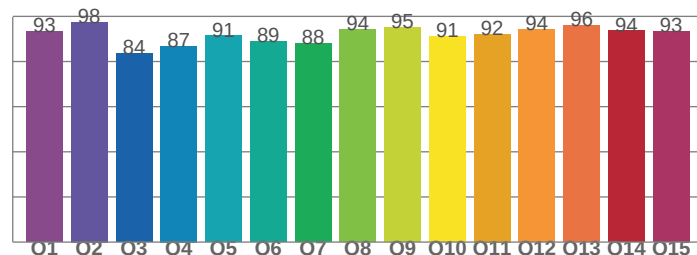
CRI: 93,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
95,9	94,3	90,2	93,9	94,2	91,1	94,7	93,0
R9	R10	R11	R12	R13	R14	R15	
81,0	84,6	93,6	74,8	95,3	93,6	95,0	

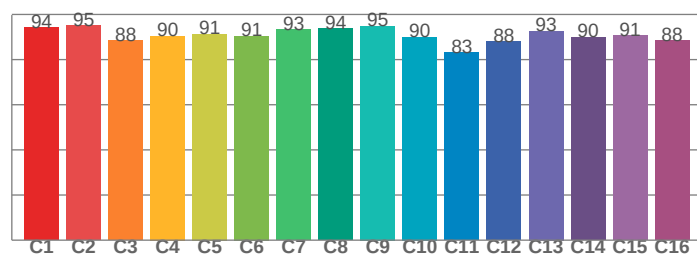
CQS: 91,1



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
93,3	97,5	83,7	86,9	91,4	89,0	88,0	94,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,0	91,2	92,2	94,2	95,8	93,6	93,3	

TM30: 90,9



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

C1	C2	C3	C4	C5	C6	C7	C8
94,1	95,0	88,4	90,4	91,4	90,5	93,3	93,6
C9	C10	C11	C12	C13	C14	C15	
94,9	90,0	83,1	87,9	92,7	89,9	90,7	

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
3343 K	93,4	81,0	90,9	103,4	91,1	0,413	0,392	0,240	0,342	-0,0011



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TM30 details

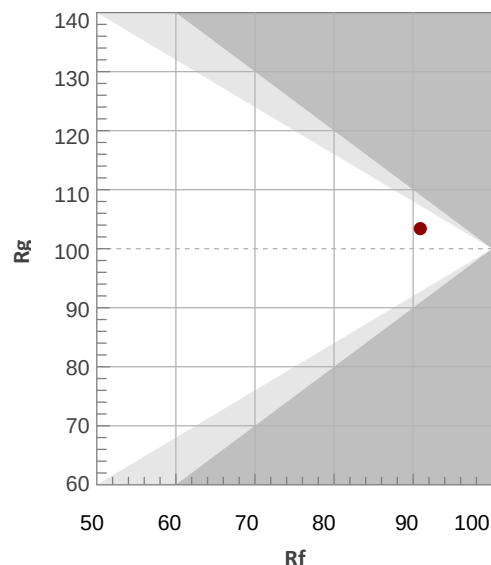
Rf 90,9

Fidelity index Rf

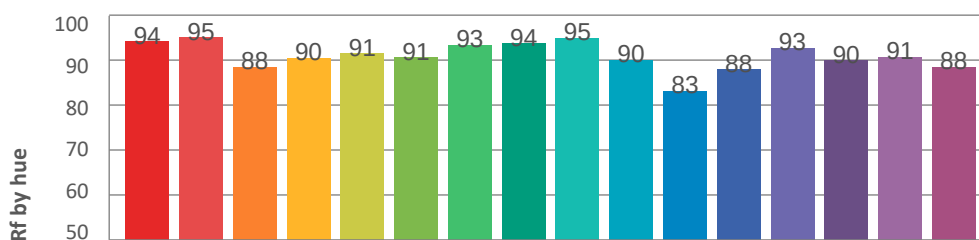
Rg 103,4

Gamut index Rg

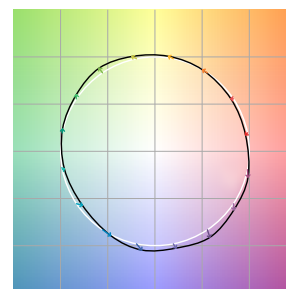
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	-2%	-2%
2	95	-2%	2%
3	88	0%	6%
4	90	2%	6%
5	91	3%	4%
6	91	6%	0%
7	93	3%	-4%
8	94	1%	-4%
9	95	-2%	-1%
10	90	-4%	5%
11	83	0%	11%
12	88	5%	7%
13	93	5%	2%
14	90	8%	-2%
15	91	4%	-5%
16	88	2%	-7%



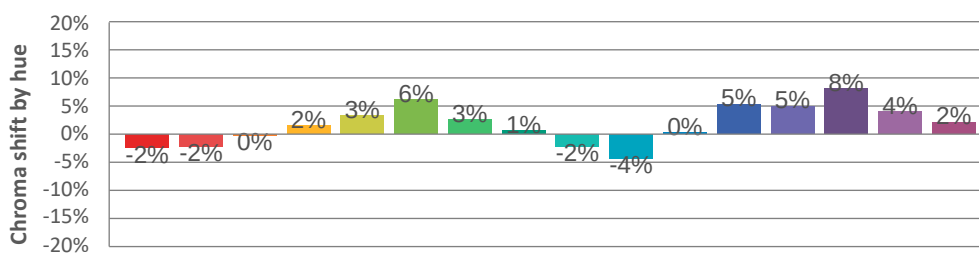
Hue binH



Color vector graphics



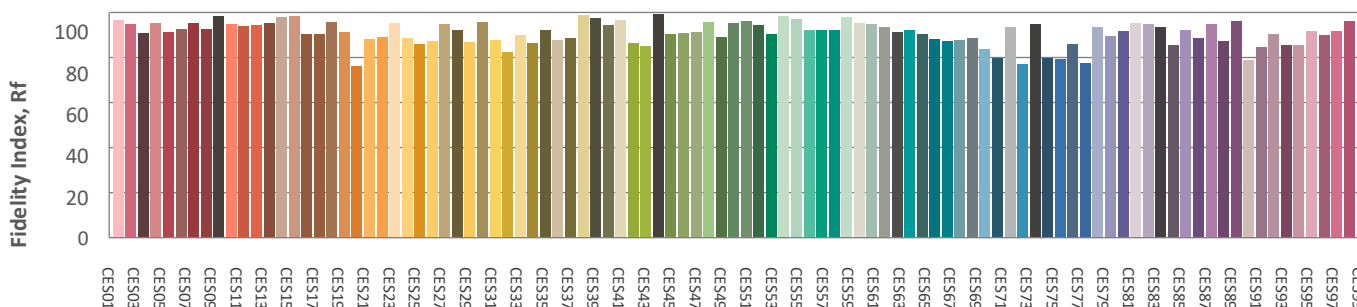
Hue bin



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	23,7	24,3	23,8	24,5	24,7	23,7	24,3	23,8	24,5	24,7
	3H	23,4	24,2	23,8	24,4	24,5	23,4	24,2	23,8	24,4	24,5
	4H	23,3	24,1	23,7	24,3	24,5	23,3	24,1	23,7	24,3	24,5
	6H	23,3	23,9	23,6	24,2	24,6	23,3	23,9	23,6	24,2	24,6
	8H	23,3	23,9	23,6	24,2	24,6	23,3	23,9	23,6	24,2	24,6
	12H	23,2	23,8	23,6	24,1	24,6	23,2	23,8	23,6	24,1	24,6
4H	2H	23,3	24,1	23,7	24,3	24,5	23,3	24,1	23,7	24,3	24,5
	3H	23,2	23,8	23,6	24,1	24,6	23,2	23,8	23,6	24,1	24,6
	4H	23,1	23,6	23,5	24,0	24,5	23,1	23,6	23,5	24,0	24,5
	6H	23,0	23,6	23,5	23,9	24,2	23,0	23,6	23,5	23,9	24,2
	8H	23,0	23,5	23,5	23,8	24,2	23,0	23,5	23,5	23,8	24,2
	12H	22,9	23,3	23,4	23,7	24,2	22,9	23,3	23,4	23,7	24,2
8H	4H	23,0	23,5	23,5	23,8	24,2	23,0	23,5	23,5	23,8	24,2
	6H	22,9	23,2	23,4	23,7	24,2	22,9	23,2	23,4	23,7	24,2
	8H	22,9	23,2	23,4	23,7	24,3	22,9	23,2	23,4	23,7	24,3
	12H	22,8	23,1	23,4	23,6	24,2	22,8	23,1	23,4	23,6	24,2
12H	4H	22,9	23,3	23,4	23,7	24,2	22,9	23,3	23,4	23,7	24,2
	6H	22,9	23,2	23,4	23,7	24,3	22,9	23,2	23,4	23,7	24,3
	8H	22,8	23,1	23,4	23,6	24,2	22,8	23,1	23,4	23,6	24,2
Variation of the observer position for the luminaire distance S											
S = 1.0H		6,1 / -11,6					6,1 / -11,6				
S = 1.5H		8,8 / -14,3					8,8 / -14,3				
S = 2.0H		10,8 / -16,9					10,8 / -16,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 2423lm total luminous flux											



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