

LM-79

Test Report

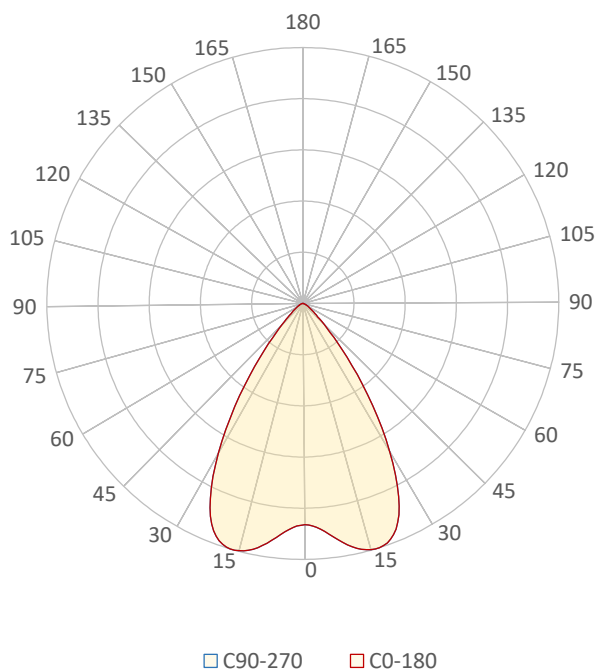
LM79-QUARTZ-3000K-CRI90-WIDE

General Discription

Item number	Q-X-X-3090-W
Date and time	30-9-2022 12:16:40
CCT (Kelvin)	3024 K
Beam angle	67,3°
Luminous flux	7416 lm
Efficiency	88 lm/watt
Weighted energy	83,9 kWh/1000h
Power factor	0,99
CRI (RA)	88,1
Fidelity index Rf	Rf 87,8
Gammut index Rg	Rg 96,0
Peak	6241 cd



Polar diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	5394 lx	1349 lx	599 lx	337 lx	216 lx																			
*measured at center of beam																								
Footcandles*	501,1 fcd	125,3 fcd	55,7 fcd	31,3 fcd	20,0 fcd																			
Beam width (meter)	1,3 m	2,7 m	4 m	5,3 m	6,7 m																			
Beam width (Feet)	4,4 ft	8,7 ft	13,1 ft	17,5 ft	21,8 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
5394lx	1349lx	599lx	337lx	216lx	150lx	110lx	84lx	67lx	54lx	45lx	37lx	32lx	28lx	24lx	21lx	19lx	17lx	15lx	13lx					
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					
501,1fcd	125,3fcd	55,7fcd	31,3fcd	20fcd	13,9fcd	10,2fcd	7,8fcd	6,2fcd	5fcd	4,1fcd	3,5fcd	3fcd	2,6fcd	2,2fcd	2fcd	1,7fcd	1,5fcd	1,4fcd	1,3fcd					
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°					
5394	5429	5519	5659	5825	5983	6112	6200	6238	6222	6132	5949	5657	5251	4749	4187	3599	3013	2450	1932					
100%	101%	102%	105%	108%	111%	113%	115%	116%	115%	114%	110%	105%	97%	88%	78%	67%	56%	45%	36%					
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°					
5394	5429	5519	5659	5825	5983	6112	6200	6238	6222	6132	5949	5657	5251	4749	4187	3599	3013	2450	1932					
100%	101%	102%	105%	108%	111%	113%	115%	116%	115%	114%	110%	105%	97%	88%	78%	67%	56%	45%	36%					
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°					
5394	5429	5519	5659	5825	5983	6112	6200	6238	6222	6132	5949	5657	5251	4749	4187	3599	3013	2450	1932					
100%	101%	102%	105%	108%	111%	113%	115%	116%	115%	114%	110%	105%	97%	88%	78%	67%	56%	45%	36%					
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°					
5394	5429	5519	5659	5825	5983	6112	6200	6238	6222	6132	5949	5657	5251	4749	4187	3599	3013	2450	1932					
100%	101%	102%	105%	108%	111%	113%	115%	116%	115%	114%	110%	105%	97%	88%	78%	67%	56%	45%	36%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
67,3°					92,3°					117,9°					98,0%					92,3%				



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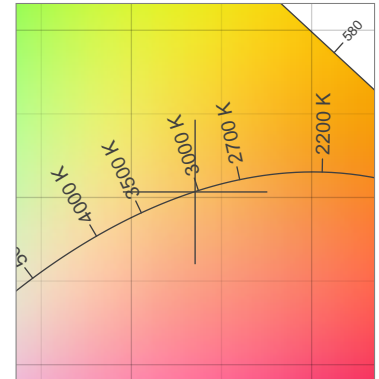
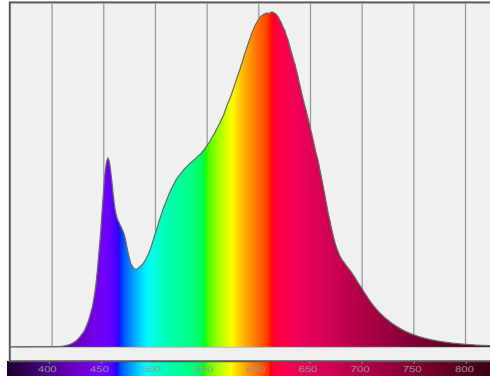
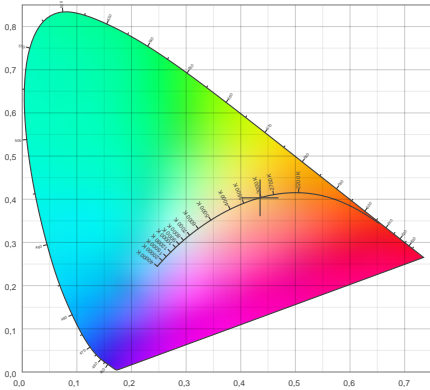
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Color details



CIE 1931

x: 0,435



Spectra

CIE 1931 ZOOM

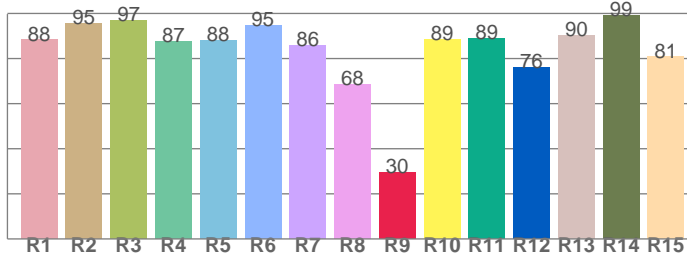
3024 K

y: 0,403

Δuv : -0,0002

CRI: 88,1 (R1-R8)

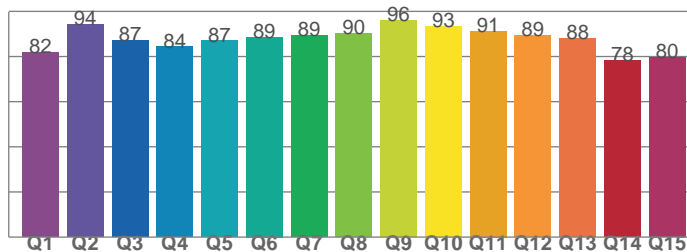
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
88,3	95,4	96,9	87,4	88,2	94,7	85,8	68,5
R9	R10	R11	R12	R13	R14	R15	
29,7	88,7	88,7	76,1	90,5	99,3	80,7	

CQS: 86,8

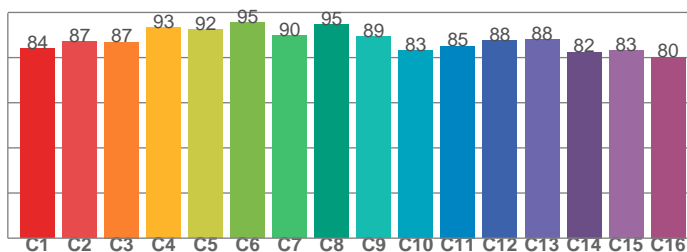
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,9	94,3	87,2	84,3	86,9	88,6	89,2	90,1
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,0	93,4	91,3	89,3	87,9	78,3	79,6	

TM30: 87,8

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



C1	C2	C3	C4	C5	C6	C7	C8
84,1	87,0	86,9	93,2	92,4	95,5	89,7	94,7
C9	C10	C11	C12	C13	C14	C15	
89,3	83,1	85,2	87,6	88,1	82,4	83,0	

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
3024 K	88,1	29,7	87,8	96,0	86,8	0,435	0,403	0,250	0,347	-0,0002



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TM30 details

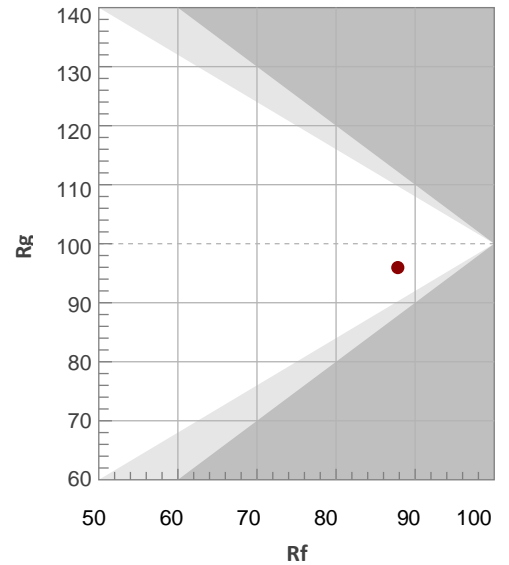
Rf 87,8

Fidelity index Rf

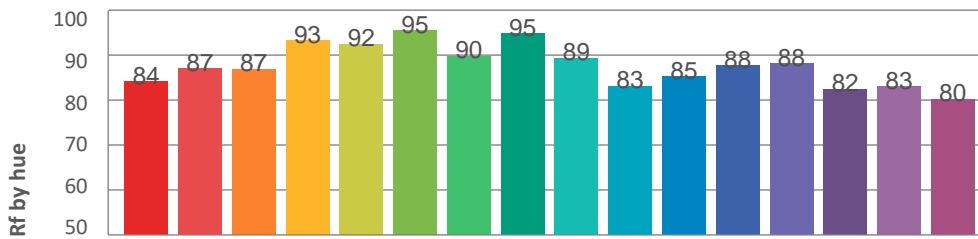
Rg 96,0

Gammut index Rg

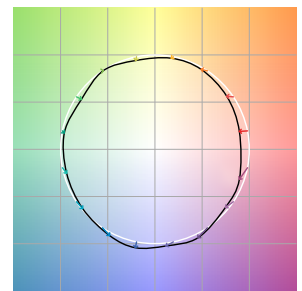
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	84	-9%	1%
2	87	-6%	4%
3	87	-2%	6%
4	93	-2%	2%
5	92	-4%	2%
6	95	0%	-1%
7	90	-6%	-1%
8	95	-2%	2%
9	89	-3%	7%
10	83	-1%	10%
11	85	3%	11%
12	88	6%	0%
13	88	3%	-8%
14	82	3%	-14%
15	83	-4%	-10%
16	80	-6%	-14%



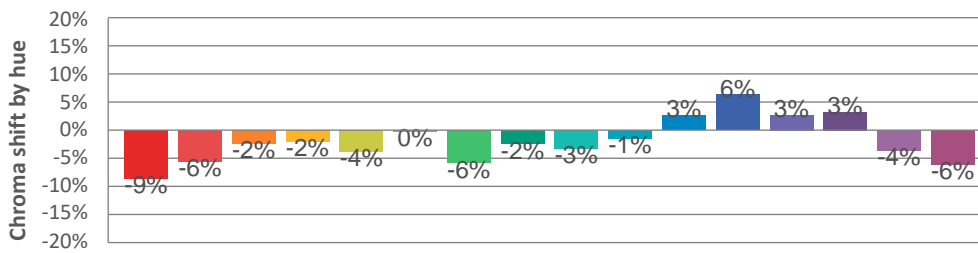
Hue binH



Color vector graphics



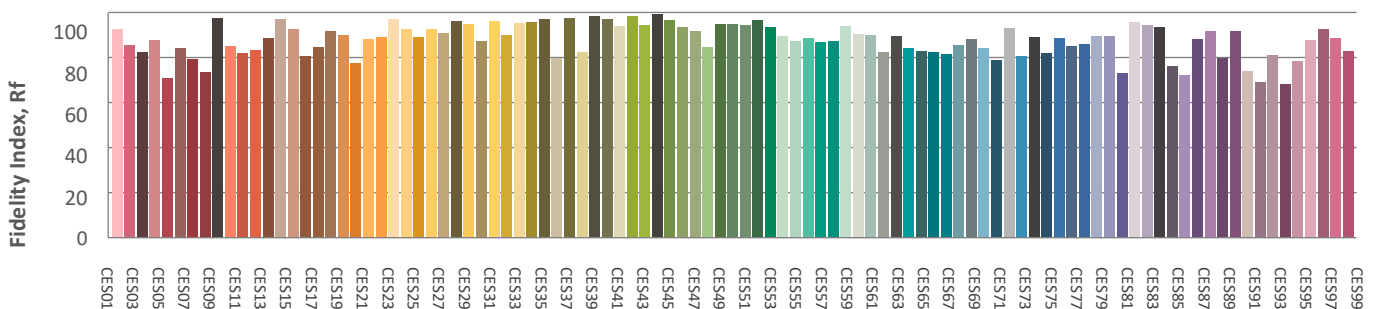
Hue bin



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	19,2	19,9	19,3	20,2	20,4	19,2	19,9	19,3	20,2	20,4
	3H	19,0	19,9	19,4	20,1	20,3	19,0	19,9	19,4	20,1	20,3
	4H	19,0	19,8	19,4	20,0	20,3	19,0	19,8	19,4	20,0	20,3
	6H	19,0	19,7	19,3	20,0	20,3	19,0	19,7	19,3	20,0	20,3
	8H	18,9	19,6	19,3	19,9	20,3	18,9	19,6	19,3	19,9	20,3
	12H	18,9	19,5	19,2	19,9	20,3	18,9	19,5	19,2	19,9	20,3
4H	2H	18,9	19,7	19,3	20,0	20,2	18,9	19,7	19,3	20,0	20,2
	3H	19,0	19,6	19,3	19,9	20,4	19,0	19,6	19,3	19,9	20,4
	4H	18,9	19,4	19,3	19,9	20,4	18,9	19,4	19,3	19,9	20,4
	6H	18,8	19,4	19,3	19,7	20,1	18,8	19,4	19,3	19,7	20,1
	8H	18,8	19,3	19,3	19,6	20,0	18,8	19,3	19,3	19,6	20,0
	12H	18,7	19,1	19,2	19,5	20,0	18,7	19,1	19,2	19,5	20,0
8H	4H	18,8	19,3	19,3	19,6	20,0	18,8	19,3	19,3	19,6	20,0
	6H	18,7	19,1	19,2	19,6	20,1	18,7	19,1	19,2	19,6	20,1
	8H	18,7	19,0	19,2	19,5	20,2	18,7	19,0	19,2	19,5	20,2
	12H	18,7	18,9	19,3	19,4	20,0	18,7	18,9	19,3	19,4	20,0
12H	4H	18,7	19,1	19,2	19,5	20,0	18,7	19,1	19,2	19,5	20,0
	6H	18,7	19,0	19,2	19,5	20,2	18,7	19,0	19,2	19,5	20,2
	8H	18,7	18,9	19,3	19,4	20,0	18,7	18,9	19,3	19,4	20,0
Variation of the observer position for the luminaire distance S											
S = 1.0H	4,1 / -5,4					4,1 / -5,4					
S = 1.5H	6,6 / -7,0					6,6 / -7,0					
S = 2.0H	8,5 / -8,3					8,5 / -8,3					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 7416lm total luminous flux											



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