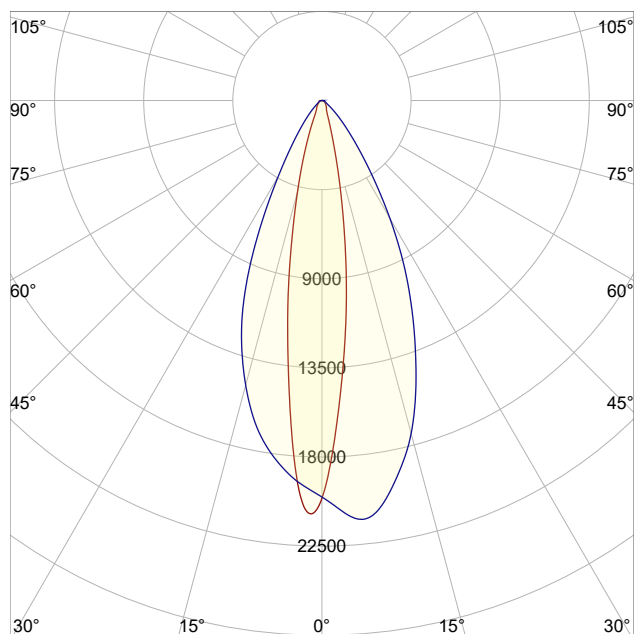
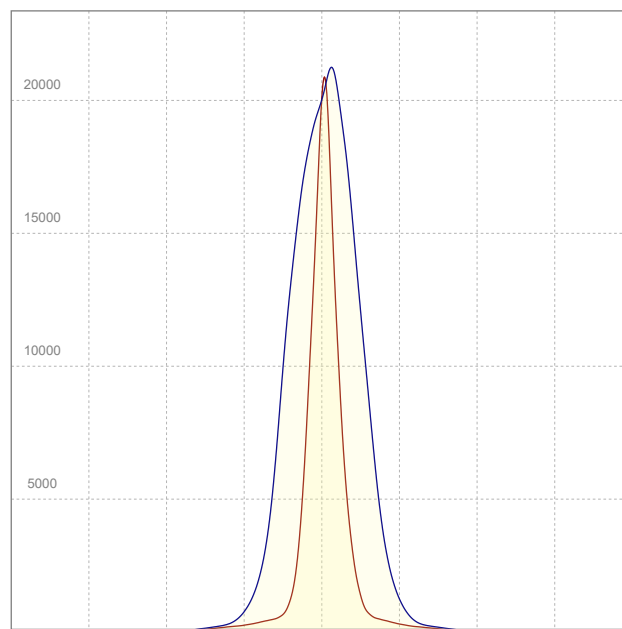


General Discription

Item number	Q-BXX-2280-E
Date and time	5-1-2024 16:32:59
CCT (Kelvin)	2262 K
Beam angle	46,1°
Luminous flux	8684 lm
Efficiency	113 lm/watt
Weighted energy	76,5 kWh/1000h
Power factor	0,56
CRI (RA)	85,0
Fidelity index Rf	Rf 86,0
Gammut index Rg	Rg 99,7
Peak	21244 cd



Polar curve

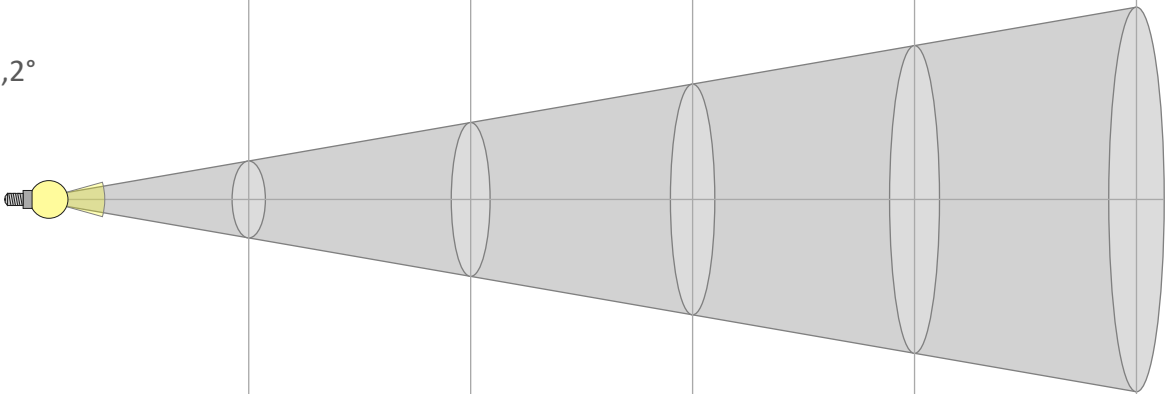


Linear distribution diagram

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Beam details				1m		2m		3m		4m		5m							
Lux*				20022 lx		5005 lx		2225 lx		1251 lx		801 lx							
31,2° 																			
*measured at center of beam																			
Footcandles*				1860,1 fcd		465,0 fcd		206,7 fcd		116,3 fcd		74,4 fcd							
Beam width (meter)				0,6 m		1,1 m		1,7 m		2,2 m		2,8 m							
Beam width (Feet)				1,8 ft		3,7 ft		5,5 ft		7,3 ft		9,2 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
20022lx	5005lx	2225lx	1251lx	801lx	556lx	409lx	313lx	247lx	200lx	165lx	139lx	118lx	102lx	89lx	78lx	69lx	62lx	55lx	50lx
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
1860,1fcd	465fcd	206,7fcd	116,3fcd	74,4fcd	51,7fcd	38fcd	29,1fcd	23fcd	18,6fcd	15,4fcd	12,9fcd	11fcd	9,5fcd	8,3fcd	7,3fcd	6,4fcd	5,7fcd	5,2fcd	4,7fcd
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°
20,0K	17,3K	14,2K	11,5K	8,8K	6,3K	4,4K	2,9K	1,9K	1,3K	0,9K	0,7K	0,6K	0,5K	0,5K	0,5K	0,4K	0,4K	0,4K	0,3K
100%	86%	71%	57%	44%	32%	22%	14%	9%	6%	5%	3%	3%	3%	2%	2%	2%	2%	2%	2%
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°
20,0K	20,5K	21,1K	21,2K	20,8K	20,0K	19,0K	18,0K	16,7K	15,3K	13,8K	12,4K	11,0K	9,6K	8,2K	6,8K	5,6K	4,5K	3,5K	2,8K
100%	103%	105%	106%	104%	100%	95%	90%	84%	77%	69%	62%	55%	48%	41%	34%	28%	22%	18%	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°
20,0K	20,7K	18,8K	15,5K	12,4K	9,8K	7,4K	5,5K	4,1K	3,0K	2,1K	1,5K	1,1K	0,8K	0,7K	0,6K	0,5K	0,5K	0,4K	0,4K
100%	103%	94%	77%	62%	49%	37%	28%	20%	15%	11%	8%	5%	4%	3%	3%	3%	2%	2%	2%
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°
20,0K	19,6K	19,2K	18,7K	18,1K	17,3K	16,5K	15,4K	14,3K	13,1K	11,8K	10,3K	8,7K	7,1K	5,6K	4,4K	3,4K	2,7K	2,1K	1,7K
100%	98%	96%	93%	90%	87%	82%	77%	71%	65%	59%	52%	43%	35%	28%	22%	17%	13%	11%	8%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
31,2°				55,9°				78,8°				97,0%				91,9%			



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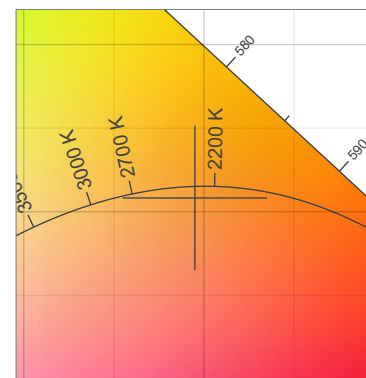
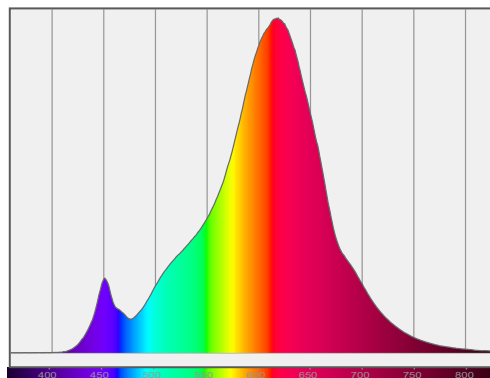
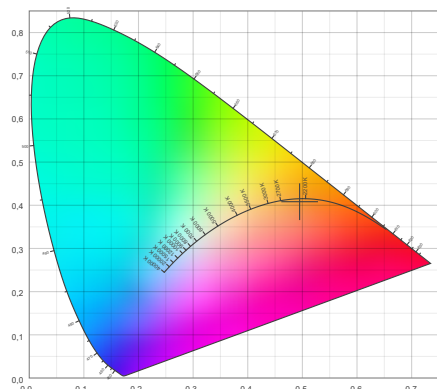
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Color details



CIE 1931

x: 0,495



Spectra

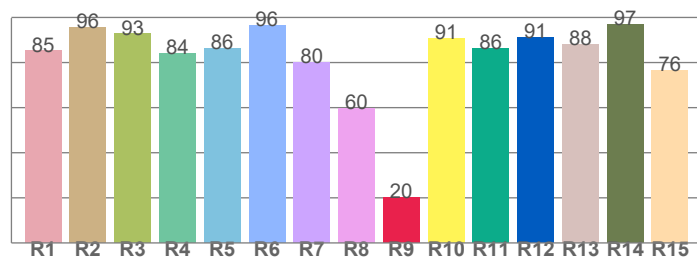
CIE 1931 ZOOM

2262 K

y: 0,408

Δuv : -0,0023

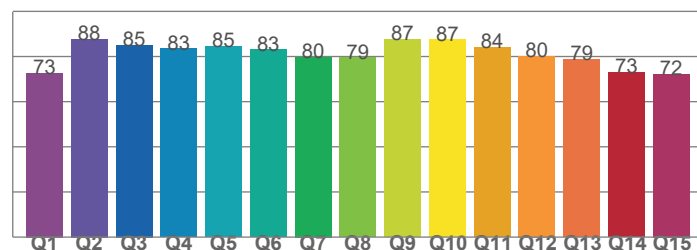
CRI: 85,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
85,2	95,5	92,8	84,0	86,3	96,4	80,1	59,7
R9	R10	R11	R12	R13	R14	R15	
20,3	90,7	86,5	91,3	88,0	97,1	76,5	

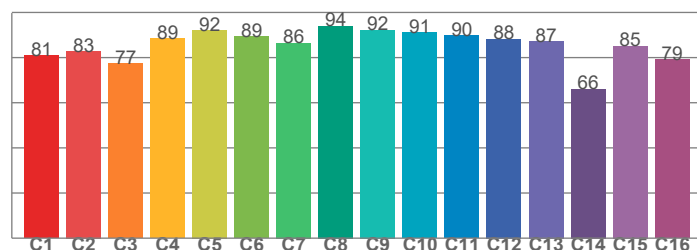
CQS: 80,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
72,7	87,7	85,1	83,4	84,5	83,0	79,8	79,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
87,5	87,4	84,1	80,2	78,8	73,1	72,3	

TM30: 86,0



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

C1	C2	C3	C4	C5	C6	C7	C8
81,0	82,9	77,3	88,5	92,2	89,4	86,4	93,9
C9	C10	C11	C12	C13	C14	C15	
92,3	91,0	89,7	88,2	87,3	66,1	85,2	

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
2262 K	85,0	20,3	86,0	99,7	80,2	0,495	0,408	0,287	0,355	-0,0023



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Test Report

LM79-QUARTZ-2200K-CRI80-ELLIPTICAL

TM30 details

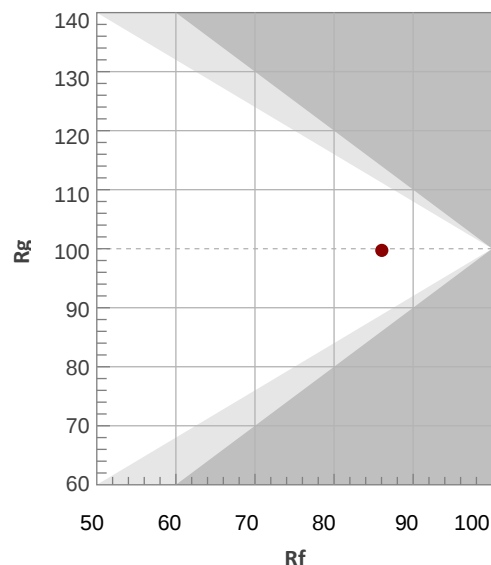
Rf 86,0

Fidelity index Rf

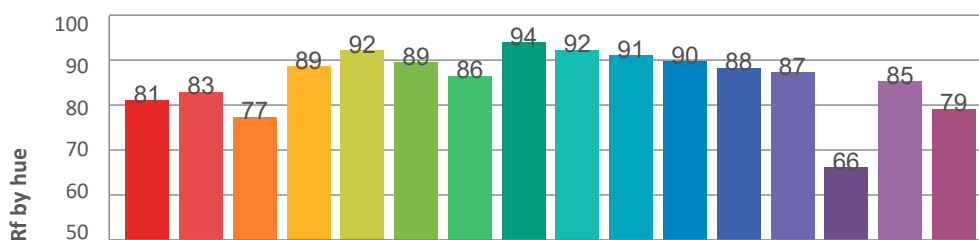
Rg 99,7

Gamut index Rg

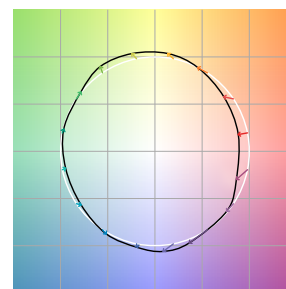
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-10%	0%
2	83	-7%	7%
3	77	-1%	12%
4	89	4%	7%
5	92	6%	4%
6	89	7%	-2%
7	86	0%	-9%
8	94	-1%	-4%
9	92	-4%	-1%
10	91	-3%	4%
11	90	1%	6%
12	88	4%	2%
13	87	6%	-12%
14	66	1%	-24%
15	85	-1%	-11%
16	79	-10%	-12%



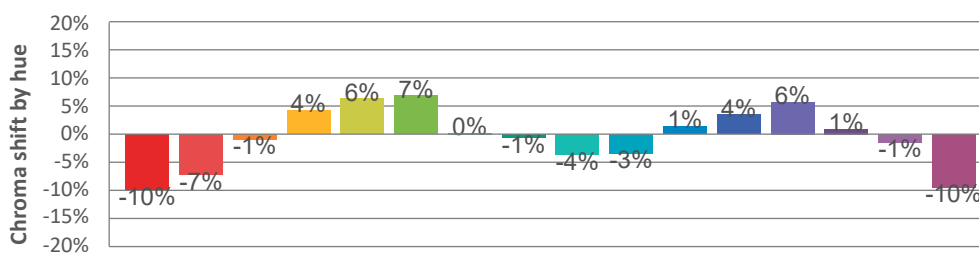
Hue binH



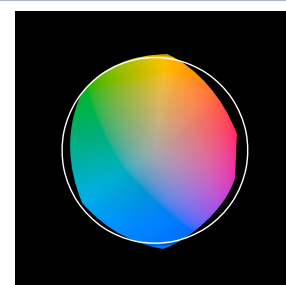
Color vector graphics



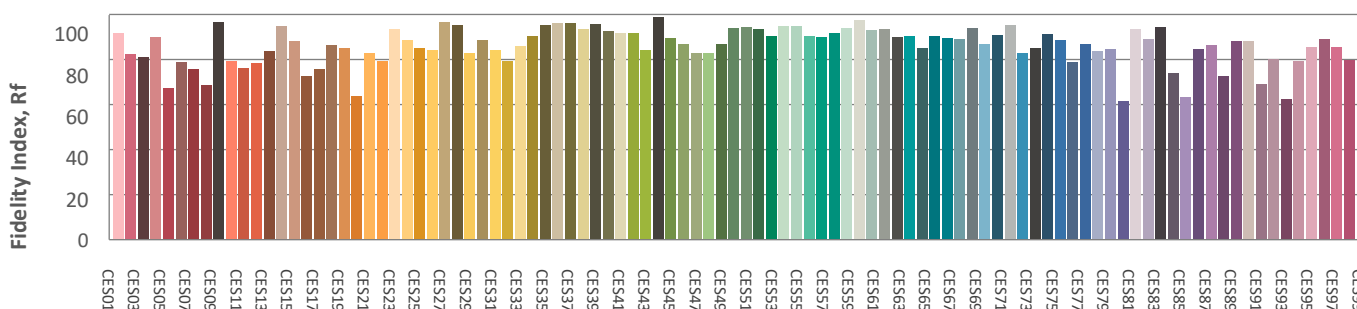
Hue bin



Color distortion graphics



Color Evaluation Sample



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Test Report

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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	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
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 8684lm total luminous flux										



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