

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P1357231

Luminaire Tested: 4ASL4-35VHE-3-27-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 4ASL4-35VHE-3-27-UNV
Description: 4FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 2700K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

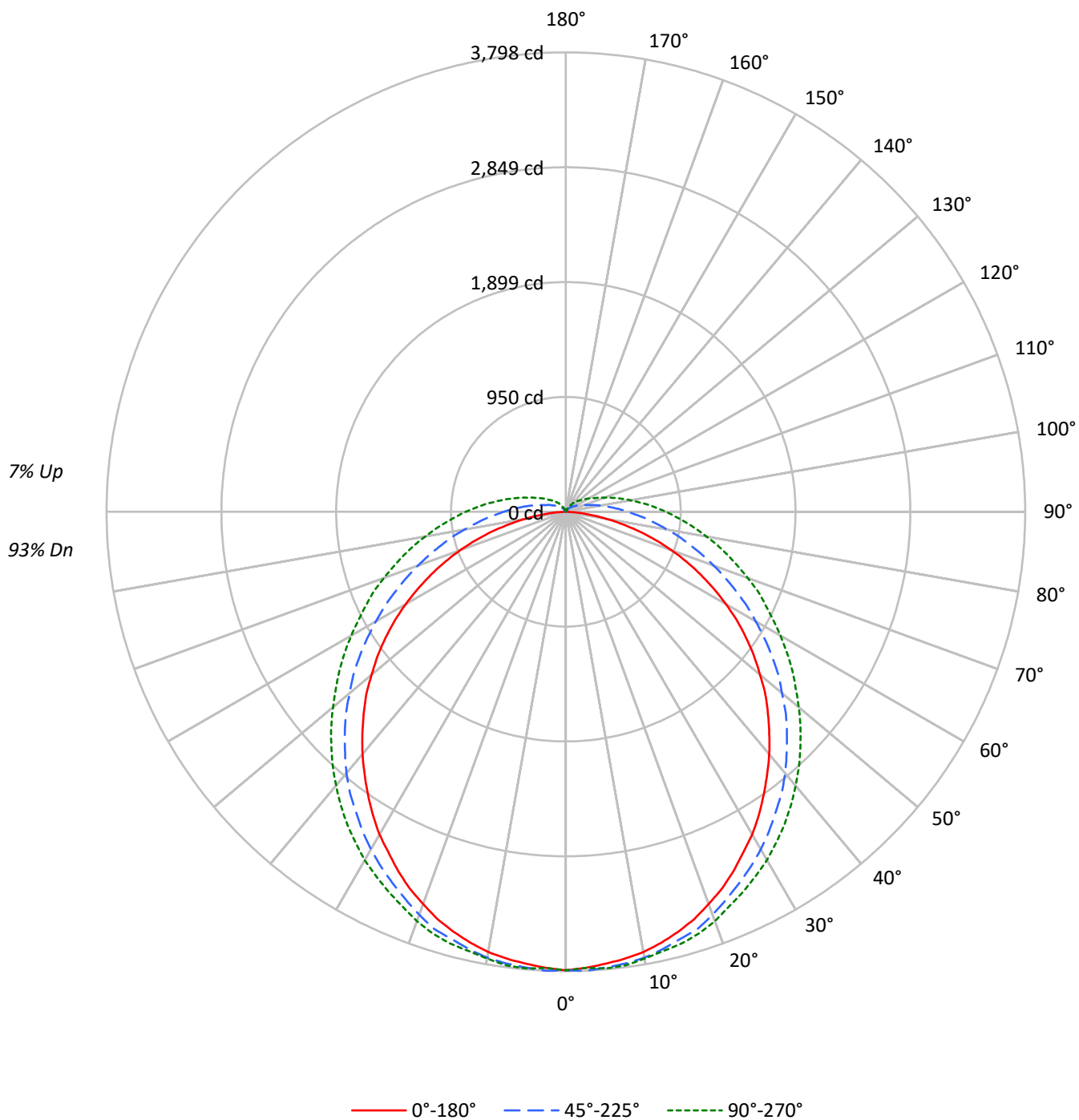
Lumens per Lamp: N/A
Luminaire Lumens: 12888.0 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 126.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	30761	30761	30761
5°	30488	30183	30057
10°	30317	29597	29296
15°	29981	28869	28653
20°	29528	28170	27926
25°	29001	27294	27099
30°	28444	26534	26400
35°	27754	25674	25622
40°	27121	24886	24803
45°	26441	23933	23980
50°	25664	22911	23126
55°	24828	21934	22357
60°	23737	20793	21576
65°	22353	19696	20930
70°	20584	18609	20422
75°	18007	17615	20076
80°	14108	16867	19927
85°	8471	16688	20221

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 26441 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.4	2.8
10°-20°	1032.0	8.0
20°-30°	1560.3	12.1
30°-40°	1889.3	14.7
40°-50°	1984.4	15.4
50°-60°	1851.3	14.4
60°-70°	1530.0	11.9
70°-80°	1101.6	8.5
80°-90°	684.6	5.3
90°-100°	401.1	3.1
100°-110°	229.5	1.8
110°-120°	129.6	1.0
120°-130°	74.6	0.6
130°-140°	40.2	0.3
140°-150°	16.9	0.1
150°-160°	3.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2951.8	22.9
0°-40°	4841.1	37.6
0°-60°	8676.8	67.3
0°-90°	11993.1	93.1
90°-120°	760.2	5.9
90°-150°	891.8	6.9
90°-180°	895.0	6.9
0°-180°	12888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3790	3790	3790	3790	3790	
5°	3751	3783	3783	3783	3790	356
15°	3594	3641	3657	3680	3696	1013
25°	3278	3334	3389	3436	3467	1510
35°	2853	2932	3026	3113	3152	1786
45°	2364	2451	2585	2695	2742	1824
55°	1820	1923	2080	2230	2285	1627
65°	1229	1348	1552	1750	1820	1217
75°	630	788	1064	1292	1387	667
85°	118	355	670	906	993	145
90°	0	213	512	733	828	5
95°	0	134	386	591	678	0
105°	0	47	213	370	433	0
115°	0	24	126	228	268	0
125°	0	16	79	150	173	0
135°	0	0	47	95	118	0
145°	0	0	24	55	63	0
155°	0	0	0	16	24	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3790.5	3790.5	3790.5	3790.5	3790.5
2.5°	3774.8	3798.4	3798.4	3774.8	3774.8
5°	3751.1	3782.7	3782.7	3782.7	3790.5
7.5°	3727.5	3766.9	3766.9	3766.9	3782.7
10°	3696.0	3735.4	3743.3	3743.3	3751.1
12.5°	3648.7	3696.0	3703.8	3711.7	3719.6
15°	3593.5	3640.8	3656.6	3680.2	3696.0
17.5°	3530.5	3585.6	3617.2	3640.8	3656.6
20°	3451.7	3506.8	3546.2	3577.8	3601.4
22.5°	3372.9	3420.1	3467.4	3506.8	3530.5
25°	3278.3	3333.5	3388.6	3435.9	3467.4
27.5°	3175.9	3238.9	3309.8	3365.0	3396.5
30°	3081.3	3144.3	3223.1	3294.1	3325.6
32.5°	2971.0	3041.9	3128.6	3199.5	3238.9
35°	2852.8	2931.6	3026.1	3112.8	3152.2
37.5°	2734.5	2813.3	2931.6	3018.2	3057.6
40°	2616.3	2695.1	2821.2	2915.8	2955.2
42.5°	2490.2	2569.1	2703.0	2805.5	2852.8
45°	2364.2	2450.8	2584.8	2695.1	2742.4
47.5°	2238.1	2324.8	2466.6	2584.8	2632.1
50°	2096.2	2190.8	2332.6	2466.6	2513.9
52.5°	1962.3	2056.8	2214.4	2348.4	2395.7
55°	1820.4	1922.8	2080.5	2230.2	2285.4
57.5°	1678.6	1781.0	1946.5	2104.1	2167.1
60°	1528.8	1639.1	1812.5	1978.0	2048.9
62.5°	1379.1	1497.3	1686.4	1859.8	1930.7
65°	1229.4	1347.6	1552.5	1749.5	1820.4
67.5°	1079.6	1205.7	1426.4	1631.3	1718.0
70°	929.9	1063.9	1300.3	1513.1	1599.7
72.5°	780.2	922.0	1182.1	1402.7	1489.4
75°	630.4	788.1	1063.9	1292.4	1387.0
77.5°	480.7	662.0	961.4	1190.0	1284.5
80°	346.7	551.6	851.1	1087.5	1182.1
82.5°	220.7	441.3	756.5	992.9	1087.5
85°	118.2	354.6	669.8	906.3	992.9
87.5°	39.4	275.8	583.2	819.6	906.3
90°	0.0	212.8	512.2	732.9	827.5
92.5°	0.0	165.5	449.2	662.0	748.7
95°	0.0	134.0	386.1	591.0	677.7
97.5°	0.0	110.3	338.9	528.0	606.8
100°	0.0	86.7	291.6	472.8	543.8
102.5°	0.0	70.9	252.2	417.7	488.6
105°	0.0	47.3	212.8	370.4	433.4
107.5°	0.0	39.4	181.3	331.0	386.1
110°	0.0	31.5	165.5	283.7	338.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	23.6	149.7	252.2	307.3
115°	0.0	23.6	126.1	228.5	267.9
117.5°	0.0	23.6	110.3	204.9	244.3
120°	0.0	15.8	102.4	181.3	220.7
122.5°	0.0	15.8	86.7	165.5	197.0
125°	0.0	15.8	78.8	149.7	173.4
127.5°	0.0	7.9	70.9	134.0	157.6
130°	0.0	7.9	63.0	118.2	141.8
132.5°	0.0	7.9	55.2	110.3	134.0
135°	0.0	0.0	47.3	94.6	118.2
137.5°	0.0	0.0	39.4	86.7	102.4
140°	0.0	0.0	31.5	70.9	94.6
142.5°	0.0	0.0	23.6	63.0	78.8
145°	0.0	0.0	23.6	55.2	63.0
147.5°	0.0	0.0	15.8	39.4	55.2
150°	0.0	0.0	7.9	31.5	39.4
152.5°	0.0	0.0	0.0	23.6	31.5
155°	0.0	0.0	0.0	15.8	23.6
157.5°	0.0	0.0	0.0	0.0	7.9
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	21.24	22.78	21.71	23.23	23.71	23.26	24.80	23.73	25.26	25.74
	3H	22.73	24.14	23.21	24.60	25.13	25.73	27.13	26.21	27.60	28.12
	4H	23.21	24.55	23.72	25.03	25.57	26.92	28.25	27.43	28.74	29.27
	6H	23.49	24.73	24.01	25.23	25.78	28.18	29.42	28.69	29.91	30.47
	8H	23.54	24.73	24.07	25.25	25.81	28.82	30.01	29.35	30.53	31.09
	12H	23.56	24.70	24.09	25.21	25.80	29.53	30.67	30.07	31.19	31.78
4H	2H	22.11	23.44	22.62	23.93	24.46	23.70	25.03	24.20	25.51	26.05
	3H	23.85	24.98	24.36	25.51	26.07	26.39	27.52	26.90	28.05	28.61
	4H	24.45	25.49	24.99	26.03	26.62	27.75	28.79	28.29	29.33	29.92
	6H	24.85	25.77	25.41	26.33	26.94	29.20	30.12	29.75	30.68	31.29
	8H	24.94	25.81	25.51	26.37	26.99	29.95	30.81	30.51	31.38	32.00
	12H	24.99	25.77	25.57	26.36	26.99	30.79	31.57	31.37	32.16	32.78
8H	4H	25.13	26.00	25.69	26.56	27.18	27.97	28.83	28.53	29.40	30.02
	6H	25.71	26.44	26.31	27.05	27.67	29.59	30.32	30.18	30.92	31.55
	8H	25.89	26.56	26.50	27.17	27.81	30.48	31.14	31.08	31.75	32.39
	12H	26.01	26.60	26.62	27.20	27.91	31.50	32.09	32.11	32.69	33.40
12H	4H	25.33	26.11	25.91	26.70	27.33	27.98	28.76	28.56	29.35	29.98
	6H	26.01	26.67	26.61	27.28	27.92	29.62	30.28	30.23	30.90	31.54
	8H	26.29	26.88	26.89	27.48	28.18	30.59	31.17	31.19	31.78	32.48

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-2

Test Date: 11/17/2025

Luminaire Tested: 4ASL-2-27-UNV-OPL-1_600mA

Data in this report applies to families of products including 4ASL

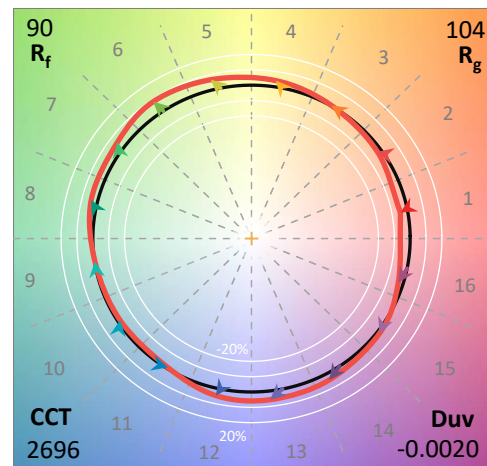
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/18/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Fail-Safe
 Catalog Number: **4ASL-2-27-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 2700K LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 2696
 CIE u' : 0.2632
 CIE v' : 0.5245
 Duv: -0.0020
 CIE x: 0.4568
 CIE y: 0.4045
 CIE z: 0.1387
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 584
 Purity: 58.52757
 R_f: 90.1
 R_g: 103.5

CRI (Ra): 94.4
 R1: 97.5
 R2: 97.8
 R3: 96.9
 R4: 95.3
 R5: 97.2
 R6: 96.5
 R7: 91.2
 R8: 83.2
 R9: 61.8
 R10: 93.6
 R11: 93.7
 R12: 94.1
 R13: 97.6
 R14: 96.8
 R15: 91.9



Test Conditions

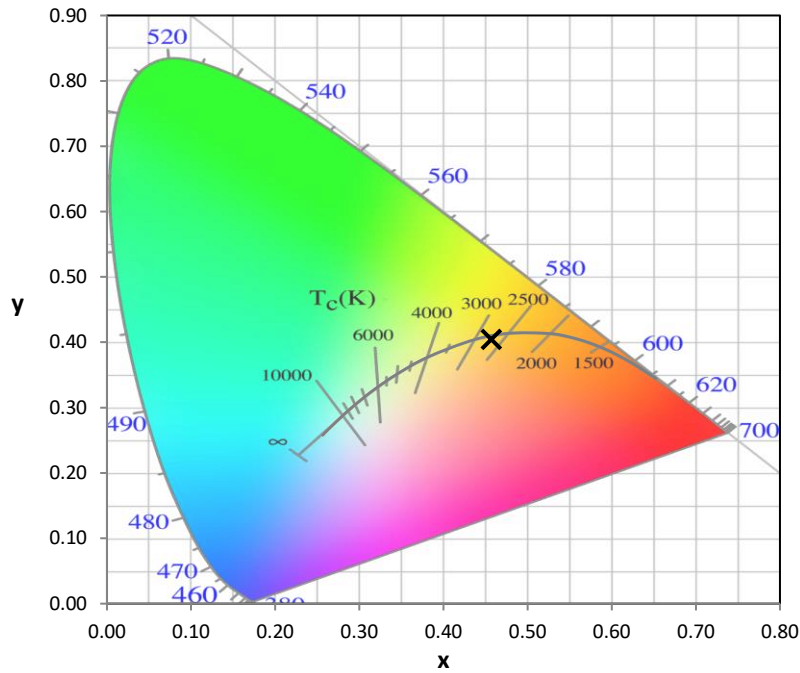
Stabilization Time: 32M
 Operation Time: 1H 32M
 Sphere Temperature (°C): 24.1

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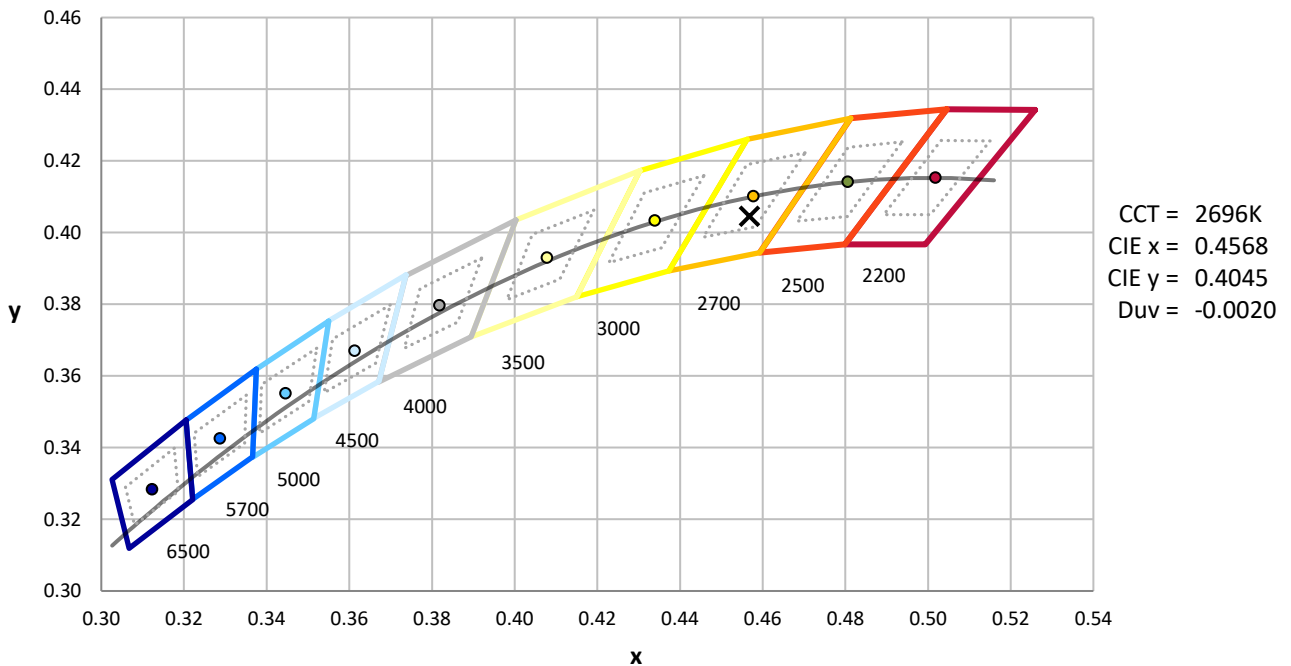
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

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CIE 1931 Chromaticity Diagram



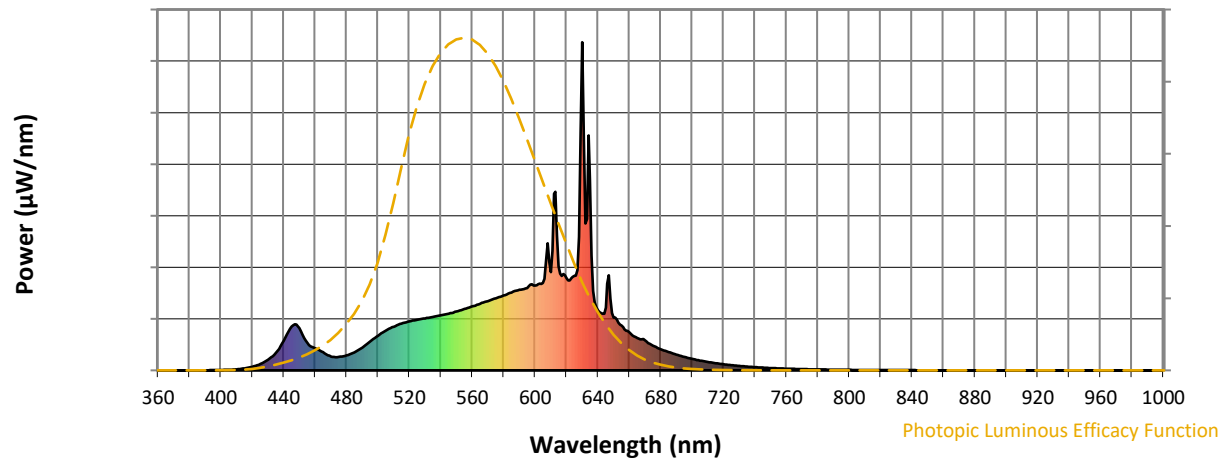
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

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Photopic Flux vs. Wavelength

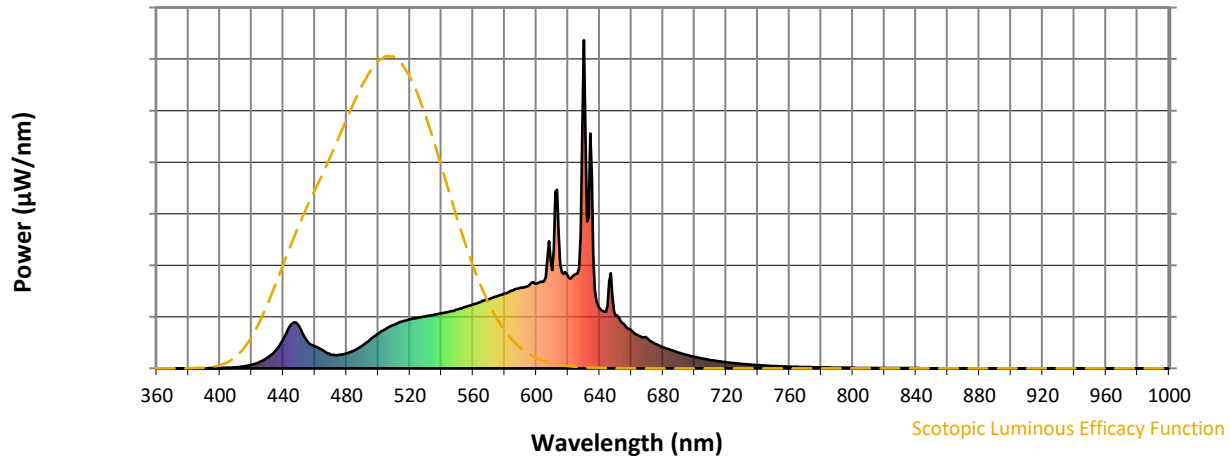


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



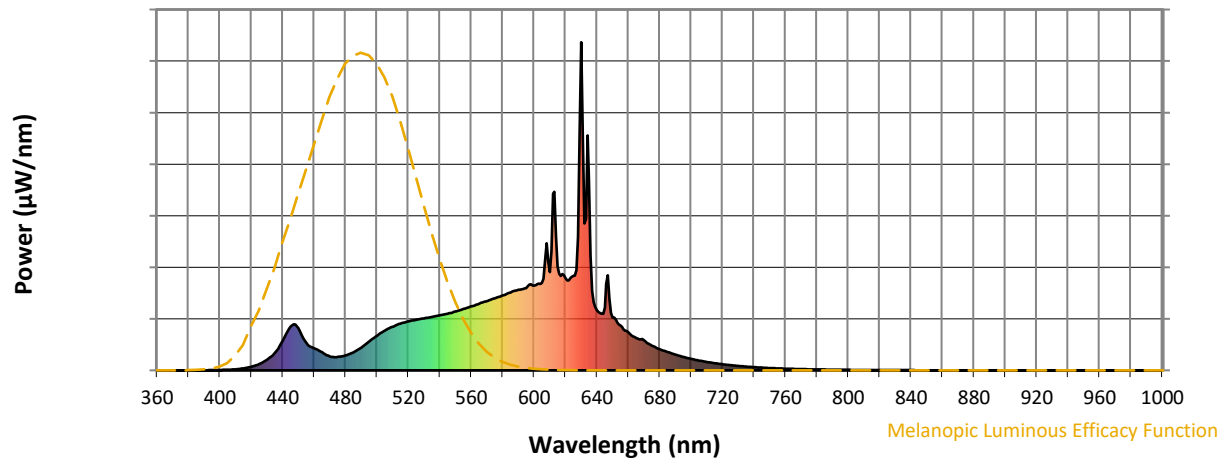
Scotopic Lumens: NR

S/P: 1.29

λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)
360	0	NR	490	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.45

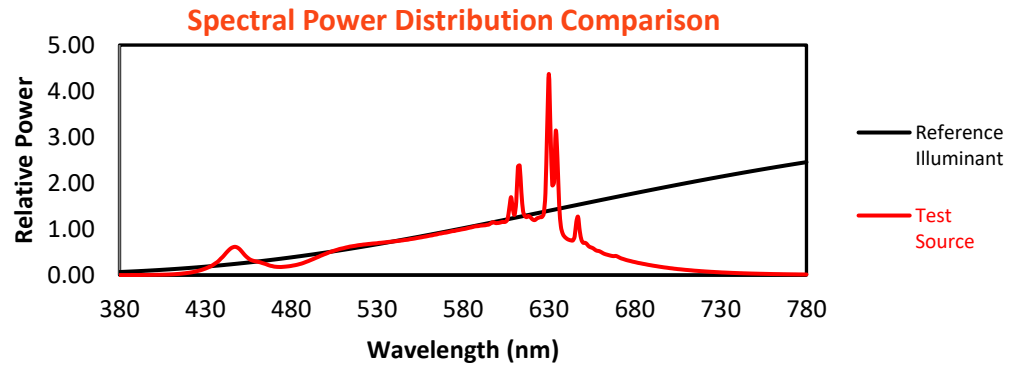
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-2

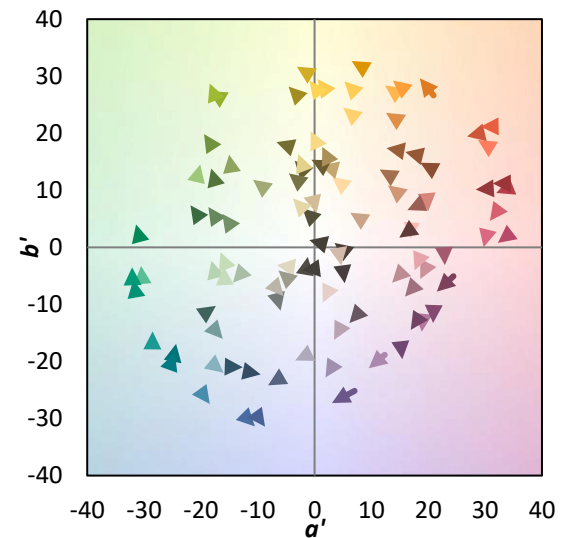
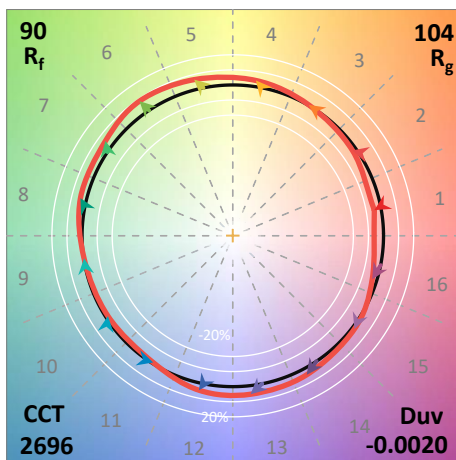
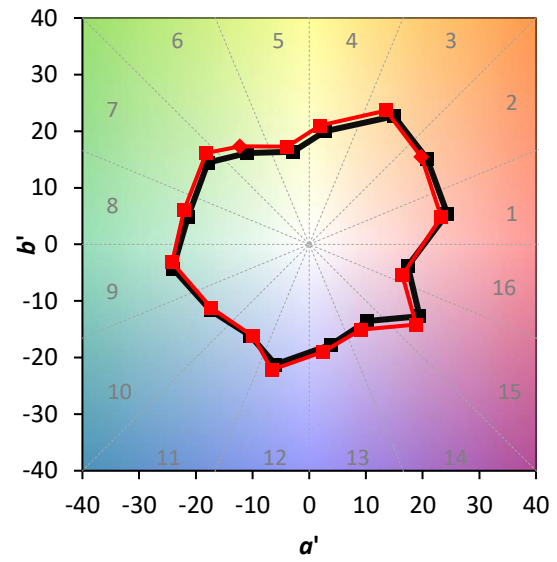
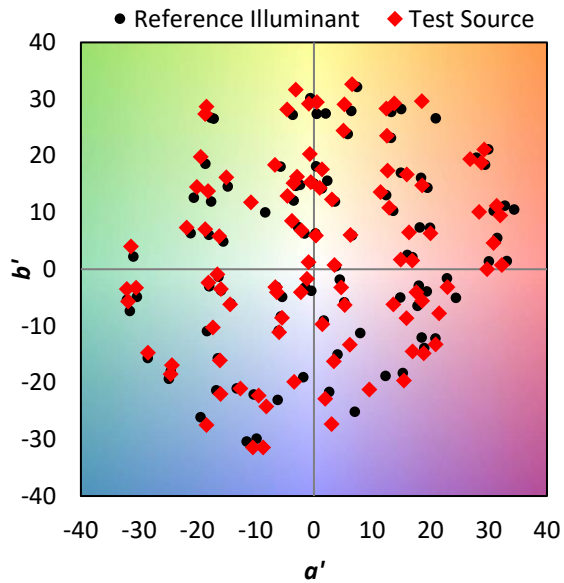
TM-30-18

Summary

$R_f = 90.1$
 $R_g = 103.5$
 $CIE R_a = 94.4$
 $R_9 = 61.8$

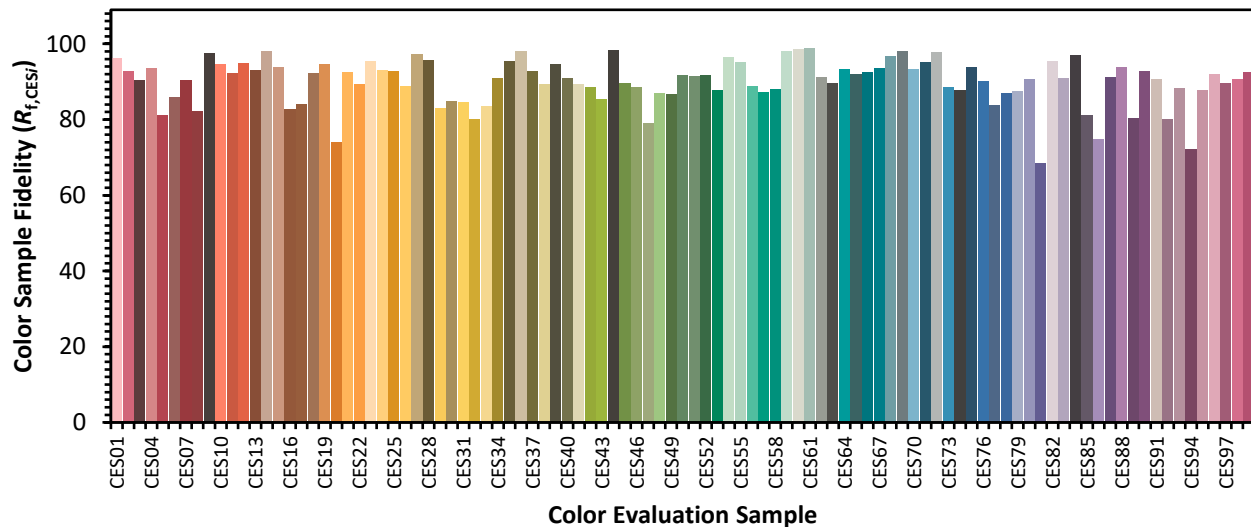


Color Vector Graphics

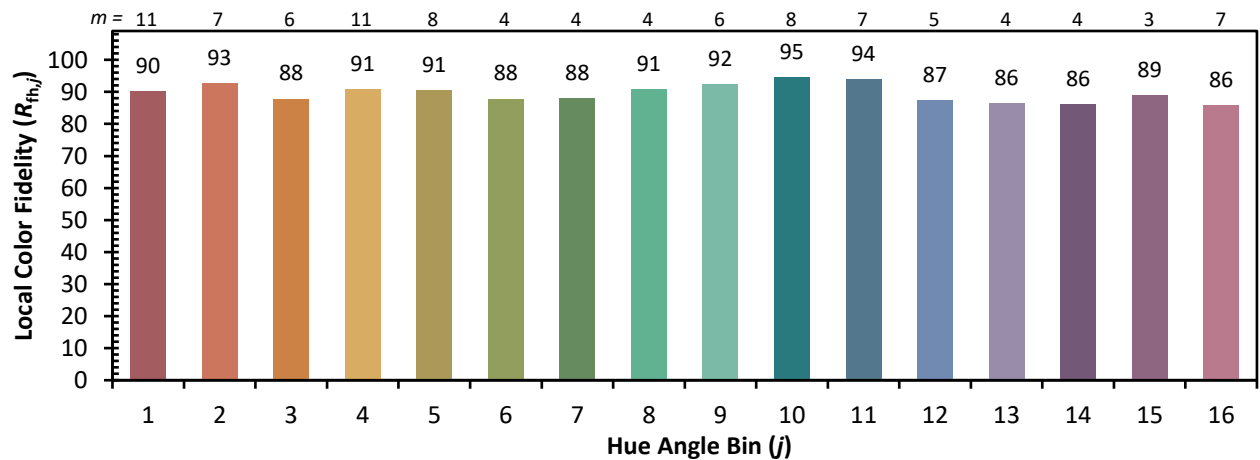
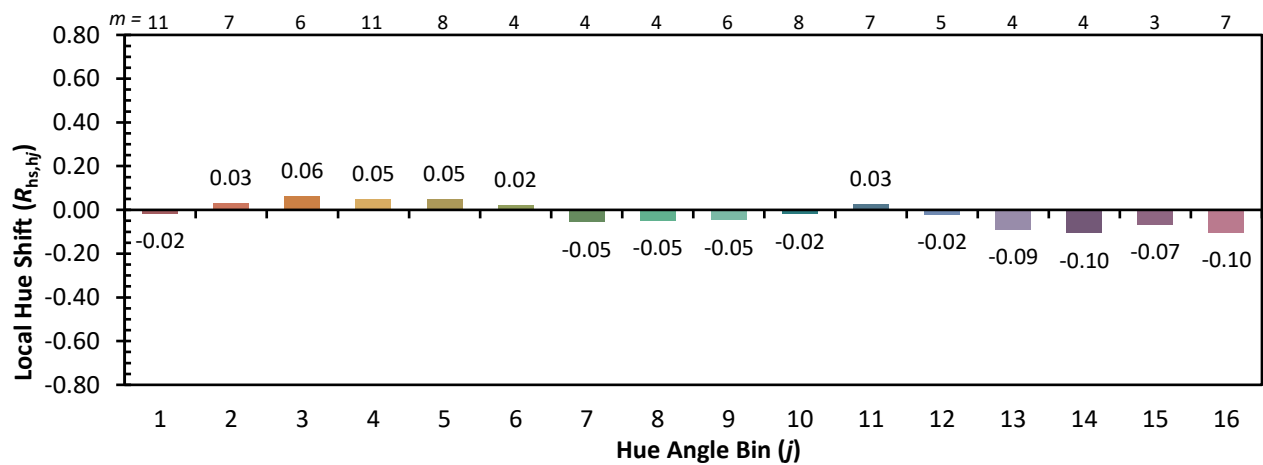
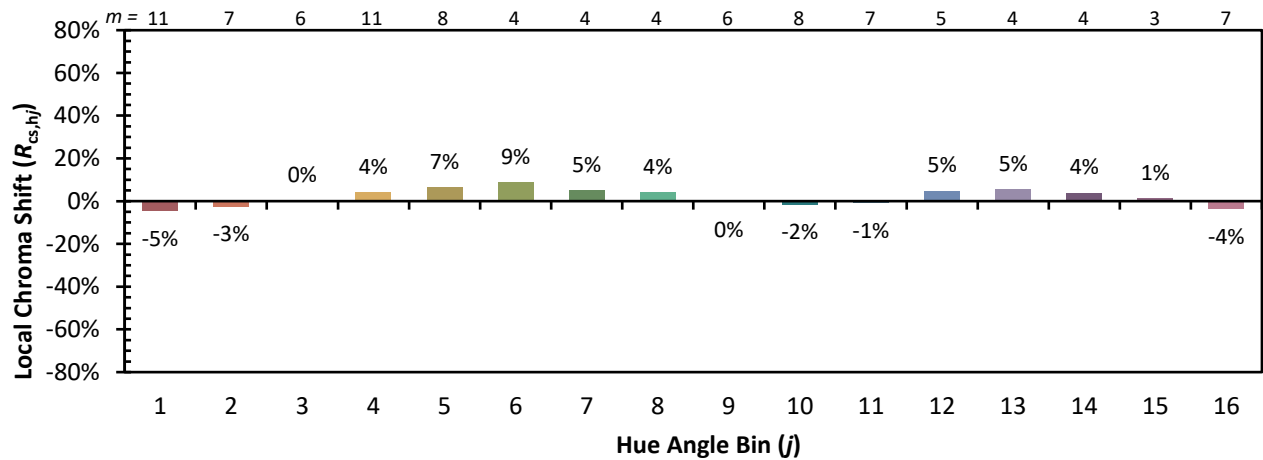


Individual Sample Fidelity Index ($R_{f,i}$)

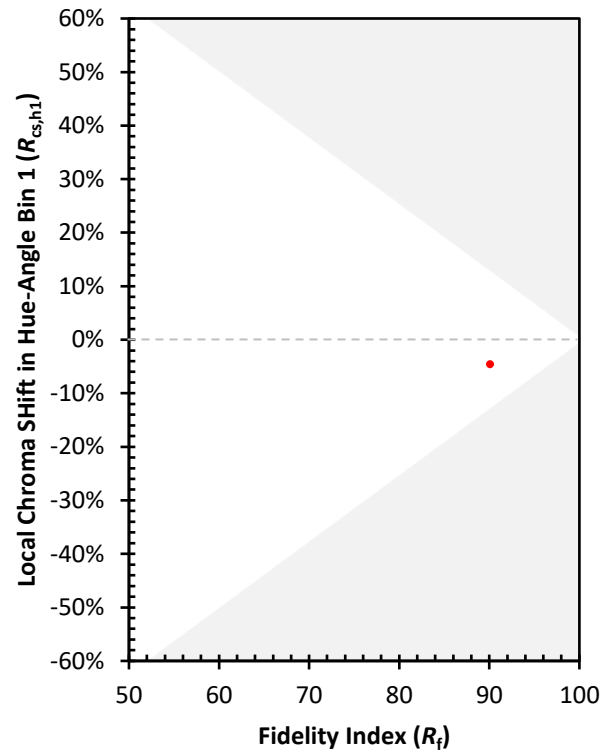
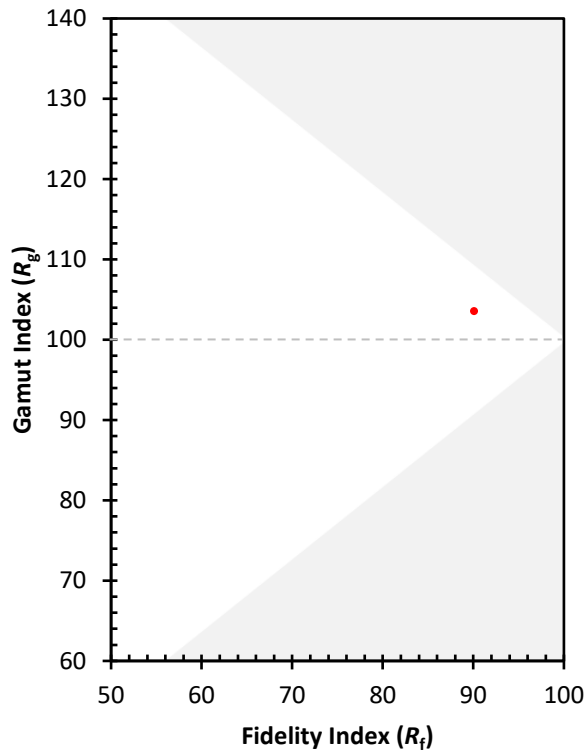
CES01 = 86	CES26 = 89	CES51 = 92	CES76 = 90
CES02 = 64	CES27 = 97	CES52 = 92	CES77 = 84
CES03 = 32	CES28 = 96	CES53 = 88	CES78 = 87
CES04 = 71	CES29 = 83	CES54 = 97	CES79 = 88
CES05 = 51	CES30 = 85	CES55 = 95	CES80 = 91
CES06 = 51	CES31 = 85	CES56 = 89	CES81 = 69
CES07 = 44	CES32 = 80	CES57 = 87	CES82 = 95
CES08 = 43	CES33 = 84	CES58 = 88	CES83 = 91
CES09 = 29	CES34 = 91	CES59 = 98	CES84 = 97
CES10 = 77	CES35 = 96	CES60 = 99	CES85 = 81
CES11 = 59	CES36 = 98	CES61 = 99	CES86 = 75
CES12 = 66	CES37 = 93	CES62 = 91	CES87 = 91
CES13 = 45	CES38 = 89	CES63 = 90	CES88 = 94
CES14 = 74	CES39 = 95	CES64 = 93	CES89 = 80
CES15 = 72	CES40 = 91	CES65 = 92	CES90 = 93
CES16 = 48	CES41 = 89	CES66 = 92	CES91 = 91
CES17 = 50	CES42 = 89	CES67 = 93	CES92 = 80
CES18 = 57	CES43 = 85	CES68 = 97	CES93 = 88
CES19 = 72	CES44 = 98	CES69 = 98	CES94 = 72
CES20 = 68	CES45 = 90	CES70 = 93	CES95 = 88
CES21 = 87	CES46 = 89	CES71 = 95	CES96 = 92
CES22 = 79	CES47 = 79	CES72 = 98	CES97 = 90
CES23 = 92	CES48 = 87	CES73 = 89	CES98 = 91
CES24 = 91	CES49 = 87	CES74 = 88	CES99 = 92
CES25 = 72	CES50 = 92	CES75 = 94	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)