

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: P1357183

Luminaire Tested: 4ASL4-20HE-2-A59-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357183
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-7)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 4ASL4-20HE-2-A59-UNV
Description: 4FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND A59 LEDS 2 ROW
Light Source: -
Ballast/Driver: -

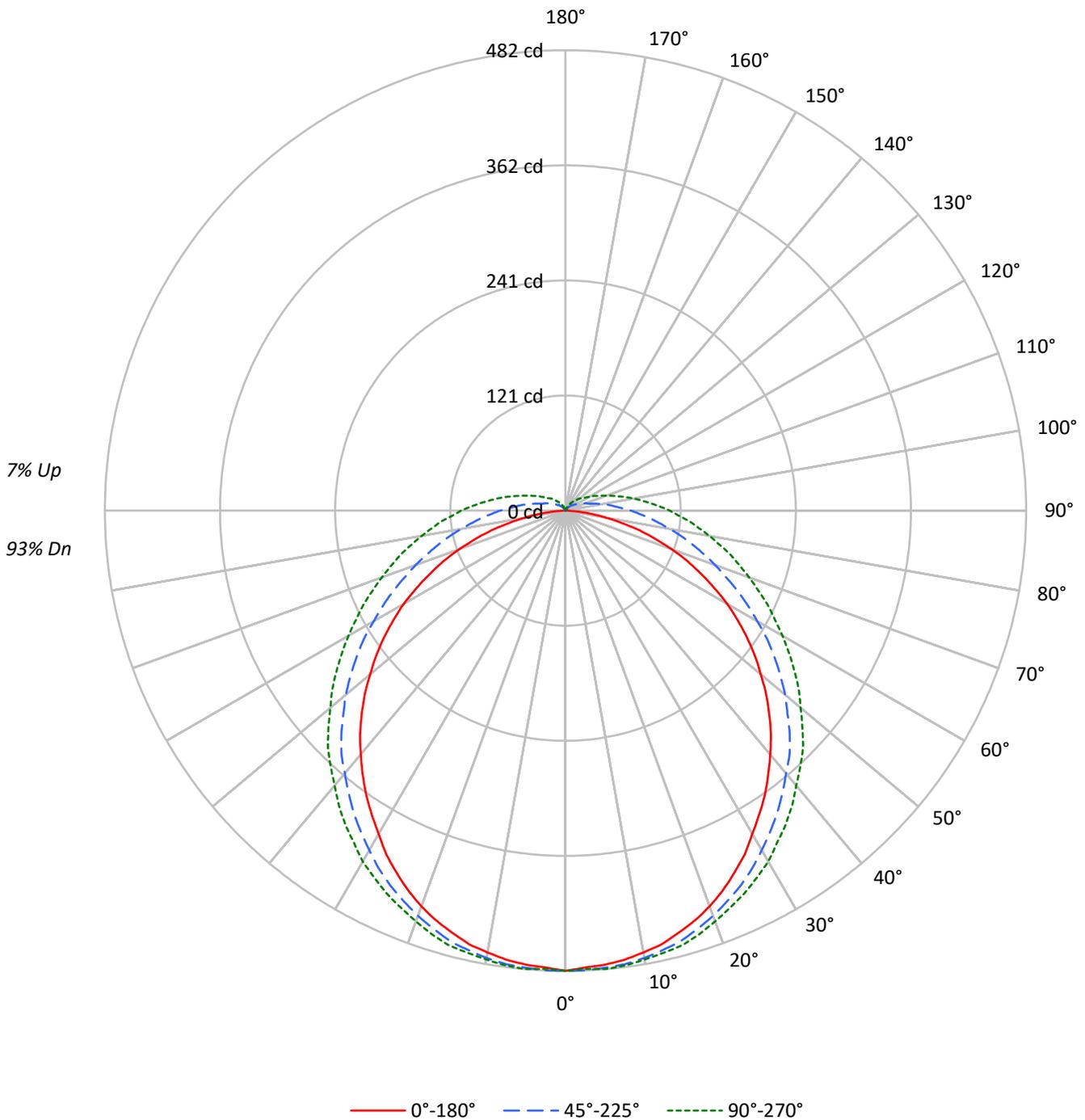
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1654.0 lumens
Efficiency: N/A
Efficacy: 33.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 49.6
Input Voltage (V): NR
Input Current (A_{in}): 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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CATALOG NUMBER: 4ASL4-20HE-2-A59-UNV

Luminous Intensity Polar Plot





TEST NUMBER: P1357183
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	95	95	95	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	65	70	66	63	63	63	63	60
3	86	75	66	59	83	73	65	58	69	62	56	65	59	55	62	57	53	53	53	53	50
4	79	66	57	50	76	64	56	49	61	54	48	58	51	46	55	49	45	45	45	45	42
5	72	59	50	43	70	57	49	42	54	47	41	52	45	40	49	43	39	39	39	39	36
6	67	53	44	37	64	52	43	37	49	41	36	47	40	35	44	39	34	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	34	29	41	33	28	39	32	28	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	24	24	24	24	22
10	50	37	29	24	49	36	28	23	35	28	23	33	27	22	32	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3910	3910	3910
5°	3879	3832	3820
10°	3853	3761	3727
15°	3818	3684	3653
20°	3772	3587	3548
25°	3699	3490	3458
30°	3608	3380	3367
35°	3537	3277	3264
40°	3455	3168	3153
45°	3372	3072	3074
50°	3265	2947	2955
55°	3161	2812	2860
60°	3034	2659	2760
65°	2838	2518	2682
70°	2616	2386	2611
75°	2294	2283	2588
80°	1786	2192	2579
85°	1089	2190	2654

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3372 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.7	2.8
10°-20°	131.3	7.9
20°-30°	199.0	12.0
30°-40°	240.7	14.6
40°-50°	253.8	15.3
50°-60°	236.8	14.3
60°-70°	195.5	11.8
70°-80°	141.9	8.6
80°-90°	89.6	5.4
90°-100°	53.5	3.2
100°-110°	30.7	1.9
110°-120°	17.4	1.1
120°-130°	9.9	0.6
130°-140°	5.4	0.3
140°-150°	2.4	0.1
150°-160°	0.4	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	376.0	22.7
0°-40°	616.7	37.3
0°-60°	1107.3	66.9
0°-90°	1534.4	92.8
90°-120°	101.6	6.1
90°-150°	119.2	7.2
90°-180°	120.0	7.3
0°-180°	1654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	477	482	480	480	482	45
15°	458	464	467	468	471	129
25°	418	424	433	439	442	193
35°	364	373	386	397	402	227
45°	302	314	332	345	352	233
55°	232	245	267	285	292	207
65°	156	173	198	223	233	155
75°	80	102	138	167	179	84
85°	15	47	88	118	130	19
90°	0	29	68	97	109	1
95°	0	18	52	79	89	0
105°	0	6	29	50	58	0
115°	0	3	17	30	36	0
125°	0	2	11	20	23	0
135°	0	0	6	12	15	0
145°	0	0	3	8	9	0
155°	0	0	0	2	3	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357183

CATALOG NUMBER: 4ASL4-20HE-2-A59-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	481.8	481.8	481.8	481.8	481.8
2.5°	478.8	483.3	481.8	480.3	480.3
5°	477.2	481.8	480.3	480.3	481.8
7.5°	474.2	478.8	478.8	478.8	480.3
10°	469.7	475.7	475.7	475.7	477.2
12.5°	465.1	469.7	471.2	472.7	474.2
15°	457.6	463.6	466.6	468.2	471.2
17.5°	450.0	454.5	459.1	463.6	465.1
20°	440.9	446.9	451.5	456.0	457.6
22.5°	430.3	436.3	442.4	446.9	450.0
25°	418.2	424.2	433.3	439.4	442.4
27.5°	406.0	412.1	422.7	430.3	433.3
30°	390.9	400.0	410.6	419.7	424.2
32.5°	377.3	386.3	398.5	409.1	412.1
35°	363.6	372.7	386.3	396.9	401.5
37.5°	348.5	359.1	372.7	384.8	389.4
40°	333.3	343.9	359.1	372.7	375.7
42.5°	318.2	328.8	347.0	359.1	363.6
45°	301.5	313.6	331.8	345.4	351.5
47.5°	284.8	297.0	315.1	330.3	336.3
50°	266.7	280.3	300.0	315.1	321.2
52.5°	250.0	263.6	283.3	300.0	307.6
55°	231.8	245.4	266.7	284.8	292.4
57.5°	213.6	227.3	250.0	269.7	277.3
60°	195.4	209.1	231.8	254.5	262.1
62.5°	175.7	190.9	215.1	237.9	247.0
65°	156.1	172.7	198.5	222.7	233.3
67.5°	137.9	154.5	181.8	209.1	218.2
70°	118.2	136.4	166.7	193.9	204.5
72.5°	98.5	118.2	151.5	180.3	190.9
75°	80.3	101.5	137.9	166.7	178.8
77.5°	60.6	86.4	124.2	154.5	165.1
80°	43.9	71.2	110.6	142.4	153.0
82.5°	28.8	57.6	98.5	130.3	140.9
85°	15.2	47.0	87.9	118.2	130.3
87.5°	4.5	36.4	77.3	107.6	118.2
90°	0.0	28.8	68.2	97.0	109.1
92.5°	0.0	22.7	59.1	87.9	98.5
95°	0.0	18.2	51.5	78.8	89.4
97.5°	0.0	15.2	45.5	71.2	80.3
100°	0.0	12.1	39.4	63.6	72.7
102.5°	0.0	9.1	33.3	56.1	65.1
105°	0.0	6.1	28.8	50.0	57.6
107.5°	0.0	4.5	24.2	43.9	51.5
110°	0.0	4.5	22.7	37.9	45.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.0	19.7	34.8	40.9
115°	0.0	3.0	16.7	30.3	36.4
117.5°	0.0	3.0	15.2	27.3	33.3
120°	0.0	3.0	13.6	24.2	28.8
122.5°	0.0	1.5	12.1	21.2	25.8
125°	0.0	1.5	10.6	19.7	22.7
127.5°	0.0	1.5	9.1	18.2	21.2
130°	0.0	1.5	9.1	16.7	19.7
132.5°	0.0	0.0	7.6	15.2	18.2
135°	0.0	0.0	6.1	12.1	15.2
137.5°	0.0	0.0	6.1	10.6	13.6
140°	0.0	0.0	4.5	10.6	12.1
142.5°	0.0	0.0	3.0	9.1	10.6
145°	0.0	0.0	3.0	7.6	9.1
147.5°	0.0	0.0	1.5	6.1	7.6
150°	0.0	0.0	1.5	4.5	6.1
152.5°	0.0	0.0	0.0	3.0	4.5
155°	0.0	0.0	0.0	1.5	3.0
157.5°	0.0	0.0	0.0	0.0	1.5
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	14.05	15.59	14.52	16.05	16.54	16.11	17.64	16.58	18.10	18.60
	3H	15.55	16.95	16.04	17.42	17.95	18.56	19.96	19.05	20.43	20.96
	4H	16.03	17.36	16.54	17.85	18.39	19.77	21.10	20.28	21.59	22.13
	6H	16.31	17.54	16.83	18.04	18.61	21.04	22.28	21.56	22.78	23.34
	8H	16.36	17.55	16.89	18.07	18.64	21.70	22.88	22.23	23.41	23.98
	12H	16.38	17.51	16.91	18.03	18.63	22.43	23.57	22.97	24.08	24.68
4H	2H	14.93	16.26	15.44	16.74	17.29	16.54	17.87	17.05	18.36	18.90
	3H	16.67	17.80	17.19	18.33	18.90	19.22	20.35	19.74	20.88	21.45
	4H	17.28	18.32	17.82	18.86	19.46	20.61	21.64	21.14	22.18	22.78
	6H	17.68	18.60	18.24	19.16	19.78	22.07	22.99	22.63	23.56	24.17
	8H	17.78	18.64	18.34	19.21	19.83	22.84	23.70	23.40	24.27	24.89
	12H	17.83	18.61	18.41	19.20	19.84	23.69	24.48	24.28	25.07	25.70
8H	4H	17.98	18.84	18.54	19.40	20.03	20.83	21.69	21.39	22.25	22.88
	6H	18.56	19.29	19.16	19.90	20.53	22.47	23.20	23.07	23.81	24.44
	8H	18.75	19.41	19.36	20.03	20.67	23.38	24.04	23.99	24.66	25.30
	12H	18.87	19.46	19.48	20.07	20.78	24.42	25.01	25.03	25.62	26.33
12H	4H	18.18	18.96	18.76	19.55	20.18	20.83	21.62	21.42	22.21	22.84
	6H	18.87	19.53	19.47	20.15	20.79	22.51	23.17	23.12	23.79	24.43
	8H	19.15	19.74	19.76	20.35	21.06	23.49	24.08	24.10	24.69	25.40

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-9

Test Date: 01/22/2026

Luminaire Tested: 4ASL-2-A590-UNV-OPL-1_600mA

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

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 01/29/2026
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Fail-Safe
 Catalog Number: **4ASL-2-A590-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND AMBER 590 LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 1535
 CIE u': 0.3534
 CIE v': 0.5468
 Duv: 0.0117
 CIE x: 0.5921
 CIE y: 0.4072
 CIE z: 0.0007
 Peak Wavelength (nm): 598
 Dominant Wavelength (nm): 592
 Purity: 99.97894
 R_f: 1.3
 R_g: 0.1

CRI (Ra):	-20.0		
R1:	-32.1	R9:	-380.5
R2:	53.1	R10:	29.9
R3:	18.5	R11:	-92.0
R4:	-65.7	R12:	-8.5
R5:	-38.6	R13:	-13.5
R6:	42.8	R14:	47.1
R7:	-6.2	R15:	-65.4
R8:	-132.3		



Test Conditions

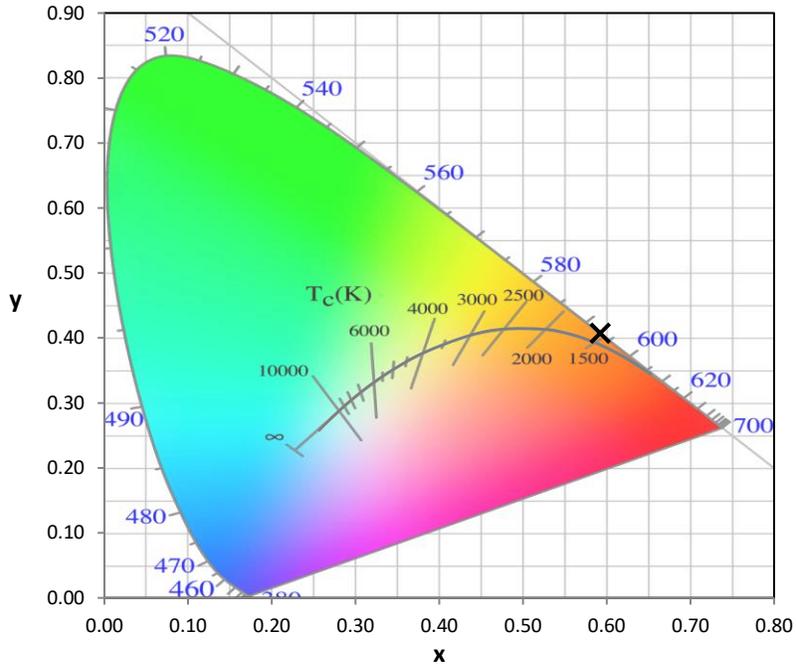
Stabilization Time: 77M
 Operation Time: 2H 17M
 Sphere Temperature (°C): 25.1

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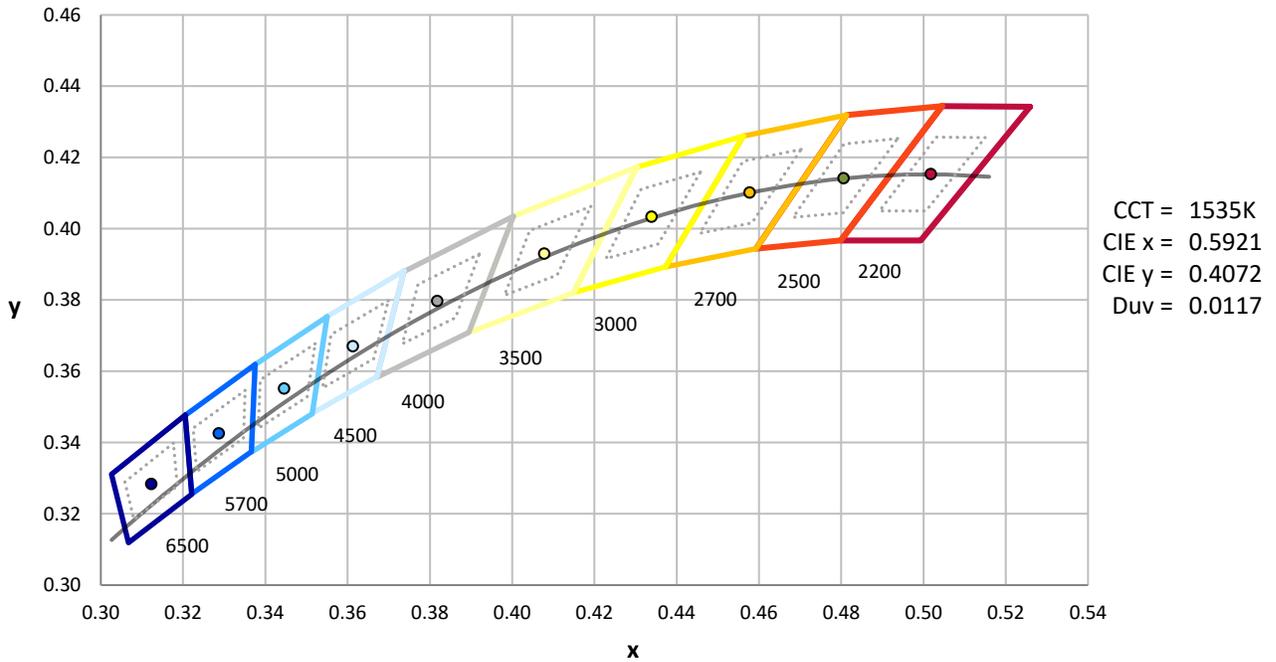
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



CCT = 1535K
 CIE x = 0.5921
 CIE y = 0.4072
 Duv = 0.0117

Point lies outside the range

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Photopic Flux vs. Wavelength

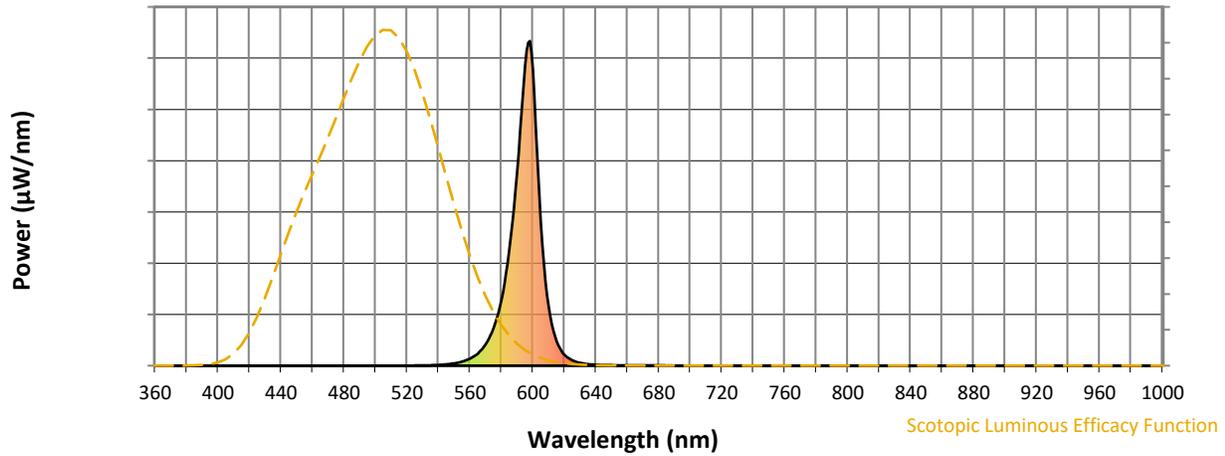


Photopic Lumens: NR

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	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 0.22

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)												
360	0	NR	490	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



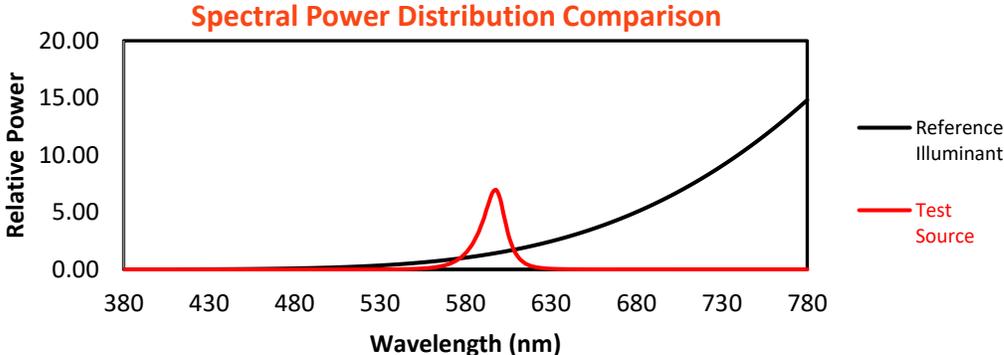
Melanopic Lumens: NR

M/P: 0.12

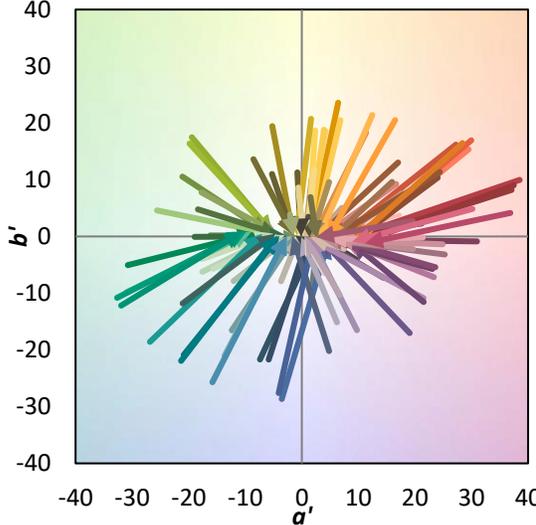
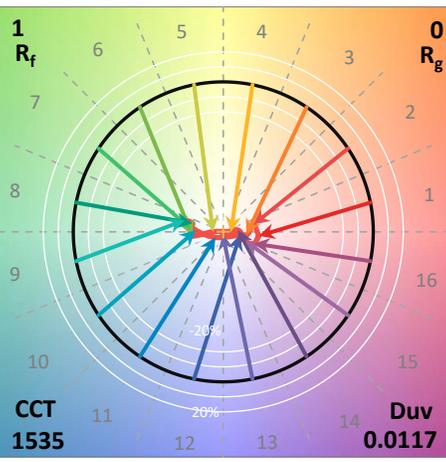
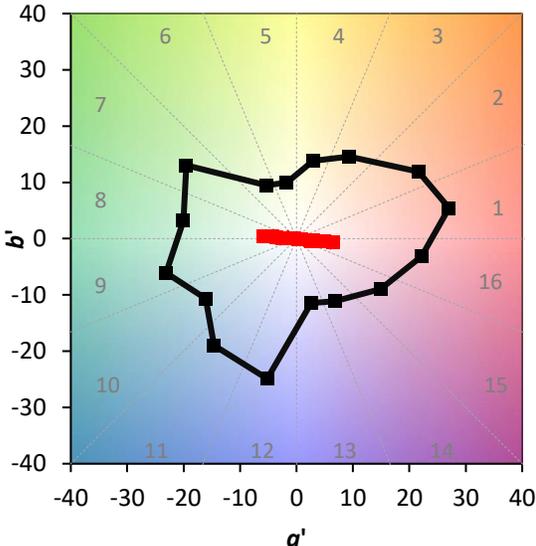
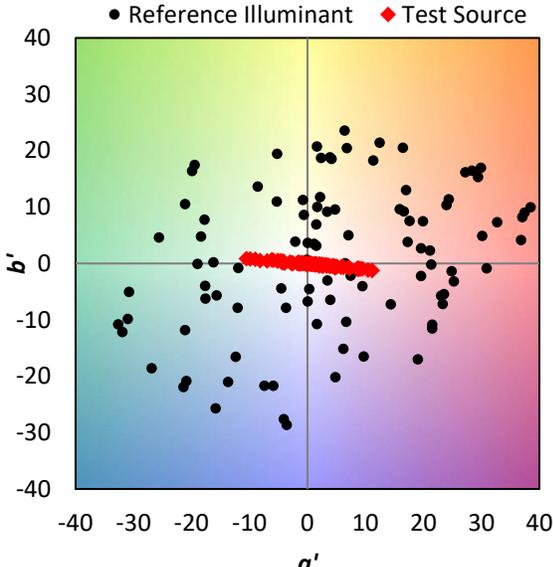
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

Summary

$R_f = 1.3$
 $R_g = 0.1$
 $CIE R_a = -20.0$
 $R_g = -380.5$

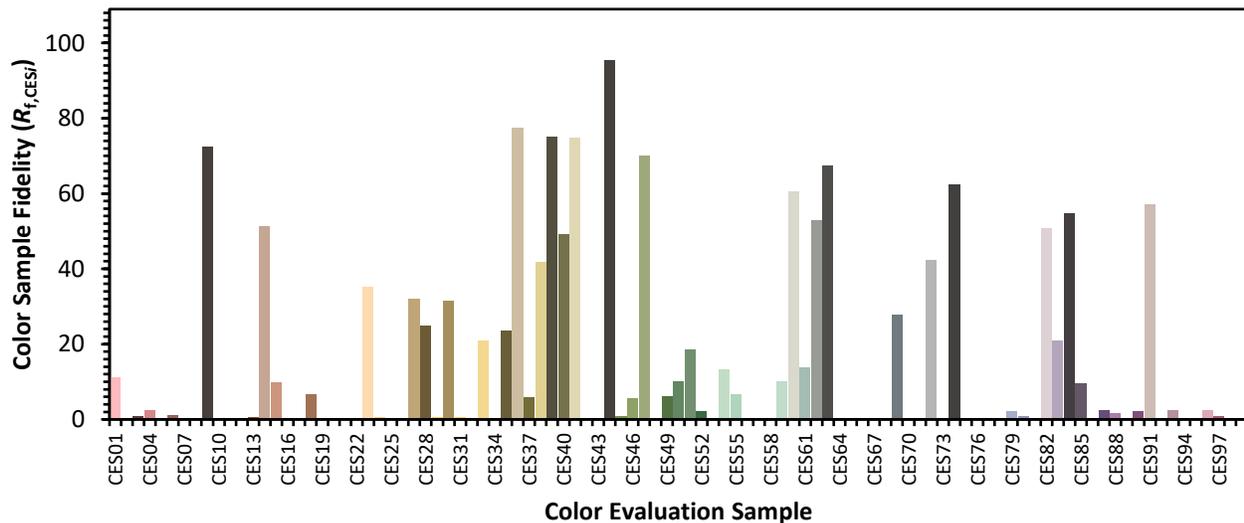


Color Vector Graphics

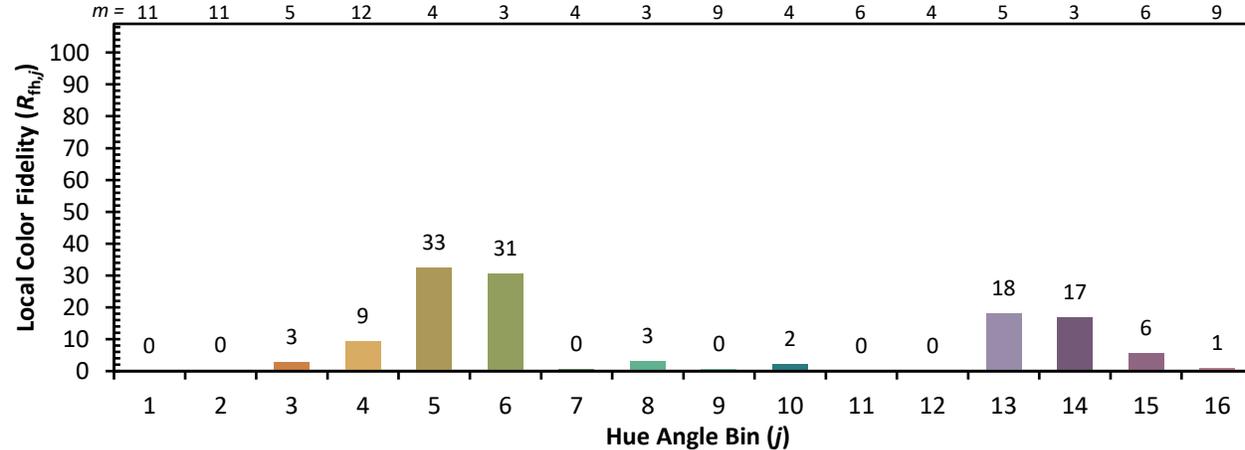
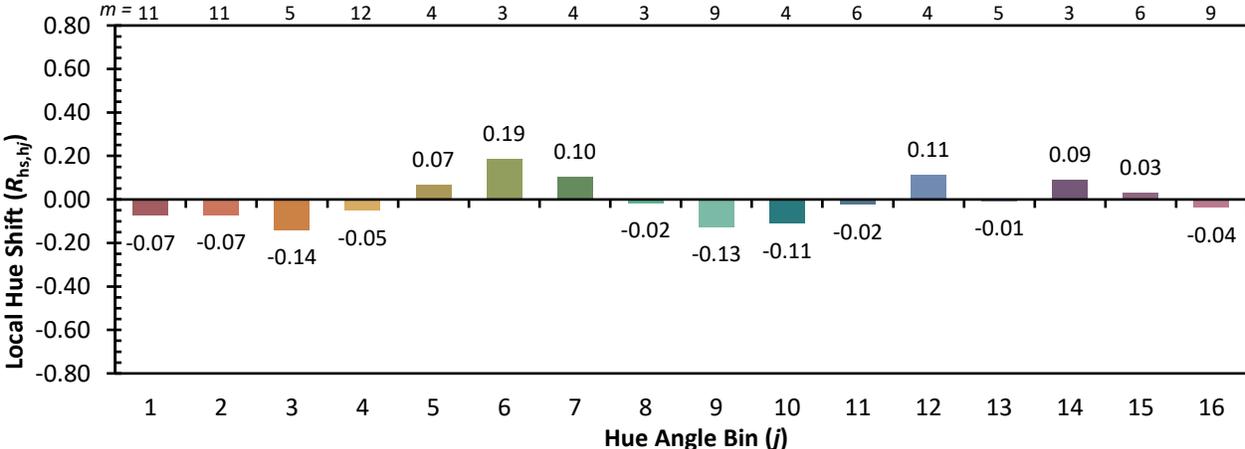
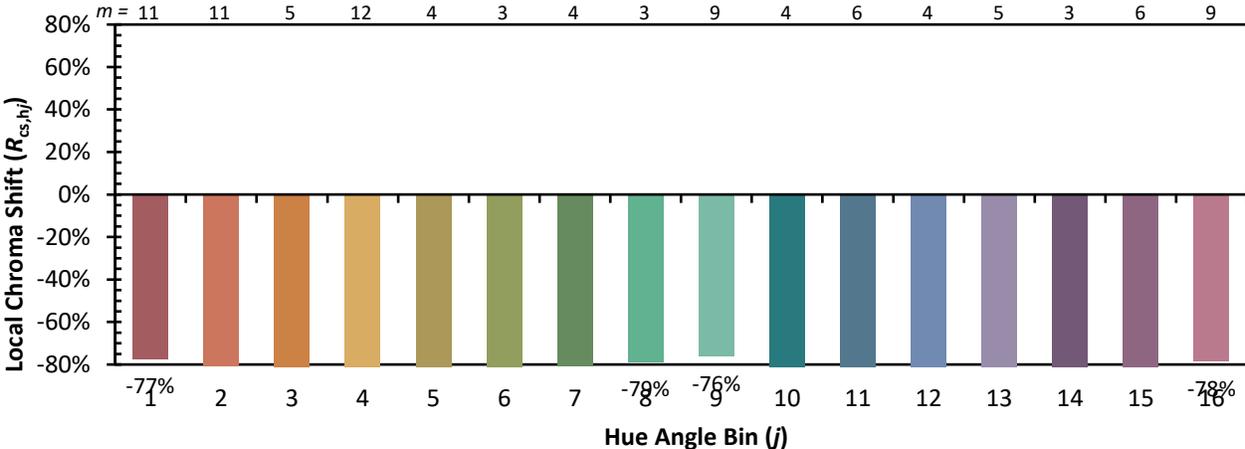


Individual Sample Fidelity Index ($R_{f,i}$)

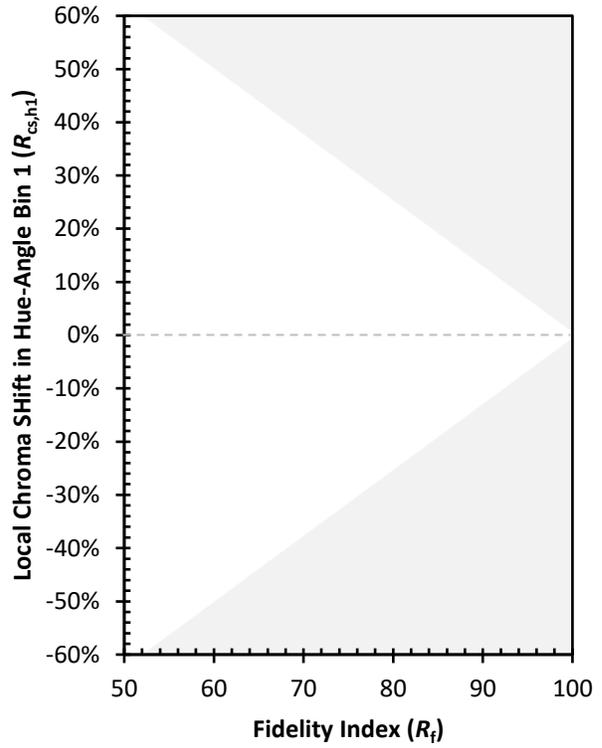
CES01 = 90	CES26 = 0	CES51 = 19	CES76 = 0
CES02 = 70	CES27 = 32	CES52 = 2	CES77 = 0
CES03 = 31	CES28 = 25	CES53 = 0	CES78 = 0
CES04 = 77	CES29 = 1	CES54 = 13	CES79 = 2
CES05 = 52	CES30 = 31	CES55 = 7	CES80 = 1
CES06 = 56	CES31 = 1	CES56 = 0	CES81 = 0
CES07 = 41	CES32 = 0	CES57 = 0	CES82 = 51
CES08 = 39	CES33 = 21	CES58 = 0	CES83 = 21
CES09 = 29	CES34 = 0	CES59 = 10	CES84 = 55
CES10 = 87	CES35 = 24	CES60 = 60	CES85 = 10
CES11 = 70	CES36 = 77	CES61 = 14	CES86 = 0
CES12 = 76	CES37 = 6	CES62 = 53	CES87 = 2
CES13 = 47	CES38 = 42	CES63 = 68	CES88 = 2
CES14 = 77	CES39 = 75	CES64 = 0	CES89 = 0
CES15 = 74	CES40 = 49	CES65 = 0	CES90 = 2
CES16 = 49	CES41 = 75	CES66 = 0	CES91 = 57
CES17 = 56	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 60	CES43 = 0	CES68 = 0	CES93 = 3
CES19 = 80	CES44 = 95	CES69 = 28	CES94 = 0
CES20 = 71	CES45 = 1	CES70 = 0	CES95 = 0
CES21 = 94	CES46 = 6	CES71 = 0	CES96 = 2
CES22 = 87	CES47 = 70	CES72 = 42	CES97 = 1
CES23 = 94	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 95	CES49 = 6	CES74 = 62	CES99 = 0
CES25 = 79	CES50 = 10	CES75 = 0	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)