

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: P1357198

Luminaire Tested: 4ASL4-20VHE-3-A59-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357198
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: 4ASL4-20VHE-3-A59-UNV
Description: 4FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND A59 LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

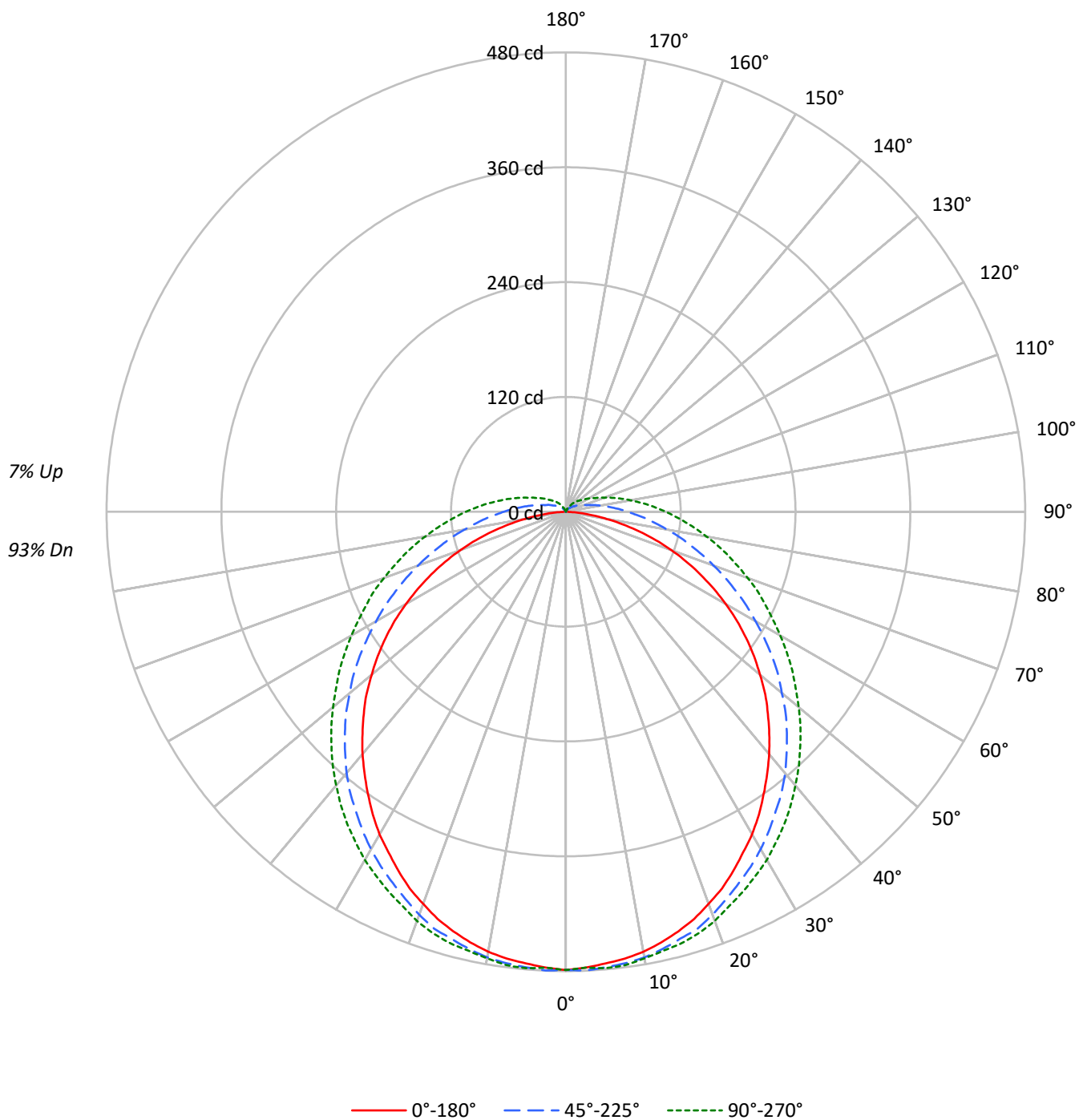
Lumens per Lamp: N/A
Luminaire Lumens: 1628.0 lumens
Efficiency: N/A
Efficacy: 35.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 46.5
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			0
RW	70	50	30	10	70	50	30	10	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	96	96	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	63	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3886	3886	3886
5°	3851	3812	3797
10°	3830	3738	3700
15°	3787	3647	3620
20°	3730	3559	3527
25°	3663	3447	3423
30°	3593	3351	3335
35°	3506	3244	3237
40°	3426	3144	3133
45°	3340	3023	3029
50°	3242	2895	2922
55°	3137	2771	2824
60°	2998	2627	2725
65°	2824	2488	2644
70°	2601	2351	2580
75°	2274	2225	2536
80°	1782	2130	2517
85°	1068	2108	2554

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3340 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	2.8
10°-20°	130.4	8.0
20°-30°	197.1	12.1
30°-40°	238.7	14.7
40°-50°	250.7	15.4
50°-60°	233.9	14.4
60°-70°	193.3	11.9
70°-80°	139.2	8.5
80°-90°	86.5	5.3
90°-100°	50.7	3.1
100°-110°	29.0	1.8
110°-120°	16.4	1.0
120°-130°	9.4	0.6
130°-140°	5.1	0.3
140°-150°	2.1	0.1
150°-160°	0.4	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	372.9	22.9
0°-40°	611.5	37.6
0°-60°	1096.1	67.3
0°-90°	1515.0	93.1
90°-120°	96.0	5.9
90°-150°	112.7	6.9
90°-180°	113.0	6.9
0°-180°	1628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	479	479	479	479	479	
5°	474	478	478	478	479	45
15°	454	460	462	465	467	128
25°	414	421	428	434	438	191
35°	360	370	382	393	398	226
45°	299	310	326	340	346	230
55°	230	243	263	282	289	205
65°	155	170	196	221	230	154
75°	80	100	134	163	175	84
85°	15	45	85	114	125	18
90°	0	27	65	93	104	1
95°	0	17	49	75	86	0
105°	0	6	27	47	55	0
115°	0	3	16	29	34	0
125°	0	2	10	19	22	0
135°	0	0	6	12	15	0
145°	0	0	3	7	8	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	478.8	478.8	478.8	478.8	478.8
2.5°	476.8	479.8	479.8	476.8	476.8
5°	473.8	477.8	477.8	477.8	478.8
7.5°	470.9	475.8	475.8	475.8	477.8
10°	466.9	471.8	472.8	472.8	473.8
12.5°	460.9	466.9	467.9	468.9	469.9
15°	453.9	459.9	461.9	464.9	466.9
17.5°	446.0	452.9	456.9	459.9	461.9
20°	436.0	443.0	448.0	451.9	454.9
22.5°	426.1	432.0	438.0	443.0	446.0
25°	414.1	421.1	428.0	434.0	438.0
27.5°	401.2	409.1	418.1	425.1	429.0
30°	389.2	397.2	407.1	416.1	420.1
32.5°	375.3	384.2	395.2	404.2	409.1
35°	360.4	370.3	382.3	393.2	398.2
37.5°	345.4	355.4	370.3	381.3	386.2
40°	330.5	340.4	356.4	368.3	373.3
42.5°	314.6	324.5	341.4	354.4	360.4
45°	298.6	309.6	326.5	340.4	346.4
47.5°	282.7	293.7	311.6	326.5	332.5
50°	264.8	276.7	294.7	311.6	317.6
52.5°	247.9	259.8	279.7	296.6	302.6
55°	230.0	242.9	262.8	281.7	288.7
57.5°	212.0	225.0	245.9	265.8	273.8
60°	193.1	207.1	229.0	249.9	258.8
62.5°	174.2	189.1	213.0	234.9	243.9
65°	155.3	170.2	196.1	221.0	230.0
67.5°	136.4	152.3	180.2	206.1	217.0
70°	117.5	134.4	164.3	191.1	202.1
72.5°	98.6	116.5	149.3	177.2	188.1
75°	79.6	99.5	134.4	163.3	175.2
77.5°	60.7	83.6	121.4	150.3	162.3
80°	43.8	69.7	107.5	137.4	149.3
82.5°	27.9	55.7	95.6	125.4	137.4
85°	14.9	44.8	84.6	114.5	125.4
87.5°	5.0	34.8	73.7	103.5	114.5
90°	0.0	26.9	64.7	92.6	104.5
92.5°	0.0	20.9	56.7	83.6	94.6
95°	0.0	16.9	48.8	74.7	85.6
97.5°	0.0	13.9	42.8	66.7	76.7
100°	0.0	11.0	36.8	59.7	68.7
102.5°	0.0	9.0	31.9	52.8	61.7
105°	0.0	6.0	26.9	46.8	54.8
107.5°	0.0	5.0	22.9	41.8	48.8
110°	0.0	4.0	20.9	35.8	42.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.0	18.9	31.9	38.8
115°	0.0	3.0	15.9	28.9	33.8
117.5°	0.0	3.0	13.9	25.9	30.9
120°	0.0	2.0	12.9	22.9	27.9
122.5°	0.0	2.0	11.0	20.9	24.9
125°	0.0	2.0	10.0	18.9	21.9
127.5°	0.0	1.0	9.0	16.9	19.9
130°	0.0	1.0	8.0	14.9	17.9
132.5°	0.0	1.0	7.0	13.9	16.9
135°	0.0	0.0	6.0	11.9	14.9
137.5°	0.0	0.0	5.0	11.0	12.9
140°	0.0	0.0	4.0	9.0	11.9
142.5°	0.0	0.0	3.0	8.0	10.0
145°	0.0	0.0	3.0	7.0	8.0
147.5°	0.0	0.0	2.0	5.0	7.0
150°	0.0	0.0	1.0	4.0	5.0
152.5°	0.0	0.0	0.0	3.0	4.0
155°	0.0	0.0	0.0	2.0	3.0
157.5°	0.0	0.0	0.0	0.0	1.0
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	16.04	16.53	16.08	17.62	16.54	18.07	18.55
	3H	15.55	16.95	16.03	17.42	17.94	18.54	19.94	19.02	20.41	20.93
	4H	16.03	17.36	16.53	17.84	18.38	19.74	21.07	20.24	21.55	22.09
	6H	16.30	17.54	16.82	18.04	18.59	20.99	22.23	21.50	22.72	23.28
	8H	16.35	17.54	16.88	18.06	18.62	21.64	22.82	22.16	23.34	23.90
	12H	16.37	17.51	16.90	18.02	18.61	22.34	23.48	22.88	24.00	24.59
4H	2H	14.93	16.26	15.43	16.74	17.28	16.51	17.84	17.01	18.32	18.86
	3H	16.66	17.80	17.18	18.32	18.88	19.20	20.33	19.71	20.86	21.42
	4H	17.26	18.30	17.80	18.84	19.43	20.57	21.61	21.10	22.14	22.73
	6H	17.66	18.58	18.22	19.14	19.75	22.01	22.93	22.57	23.49	24.10
	8H	17.76	18.62	18.32	19.18	19.80	22.76	23.63	23.32	24.19	24.81
	12H	17.80	18.59	18.38	19.18	19.80	23.60	24.38	24.18	24.97	25.60
8H	4H	17.95	18.81	18.51	19.37	19.99	20.78	21.65	21.34	22.21	22.83
	6H	18.52	19.26	19.12	19.86	20.49	22.40	23.13	22.99	23.73	24.36
	8H	18.71	19.37	19.31	19.98	20.62	23.29	23.95	23.90	24.57	25.20
	12H	18.82	19.41	19.43	20.01	20.72	24.31	24.90	24.92	25.50	26.21
12H	4H	18.14	18.92	18.72	19.51	20.14	20.79	21.58	21.37	22.17	22.79
	6H	18.82	19.48	19.42	20.09	20.73	22.43	23.10	23.04	23.71	24.35
	8H	19.10	19.69	19.70	20.29	20.99	23.40	23.99	24.00	24.59	25.29

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

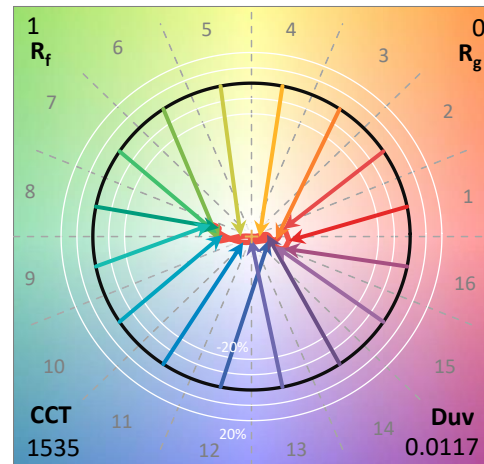
Data in this report applies to families of products including 4ASL

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	CRI (Ra):	-20.0		
CIE u':	0.3534	R1:	-32.1	R9:	-380.5
CIE v':	0.5468	R2:	53.1	R10:	29.9
Duv:	0.0117	R3:	18.5	R11:	-92.0
CIE x:	0.5921	R4:	-65.7	R12:	-8.5
CIE y:	0.4072	R5:	-38.6	R13:	-13.5
CIE z:	0.0007	R6:	42.8	R14:	47.1
Peak Wavelength (nm):	598	R7:	-6.2	R15:	-65.4
Dominant Wavelength (nm):	592	R8:	-132.3		
Purity:	99.97894				
Rf:	1.3				
Rg:	0.1				



Test Conditions

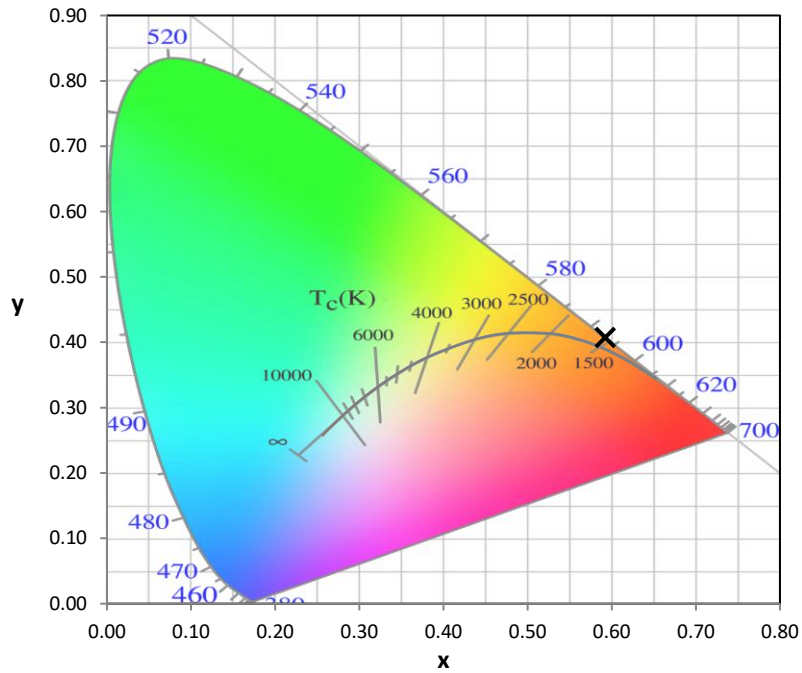
Stabilization Time: 77M
 Operation Time: 2H 17M
 Sphere Temperature (°C): 25.1

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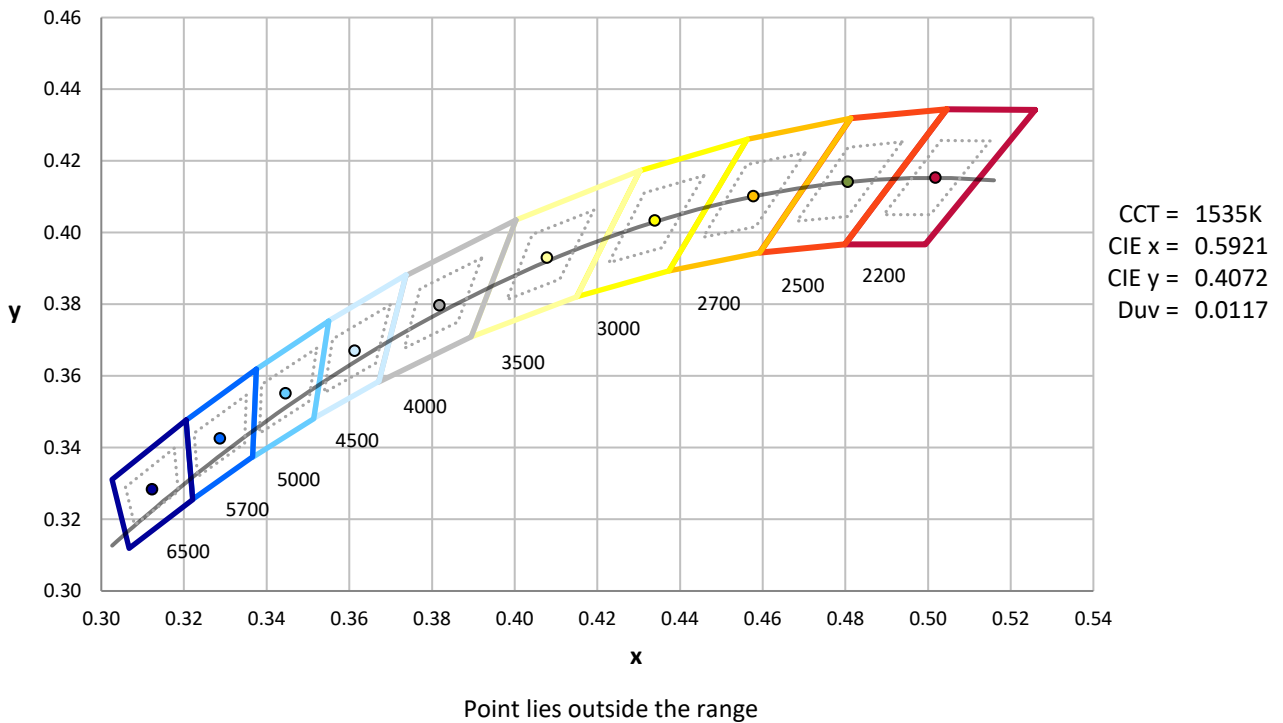
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

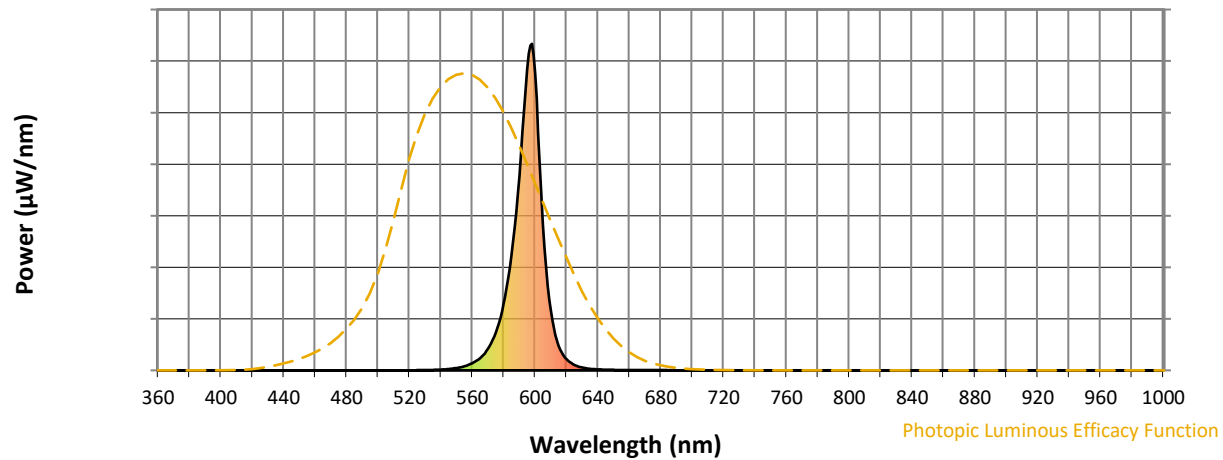


CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



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Photopic Flux vs. Wavelength

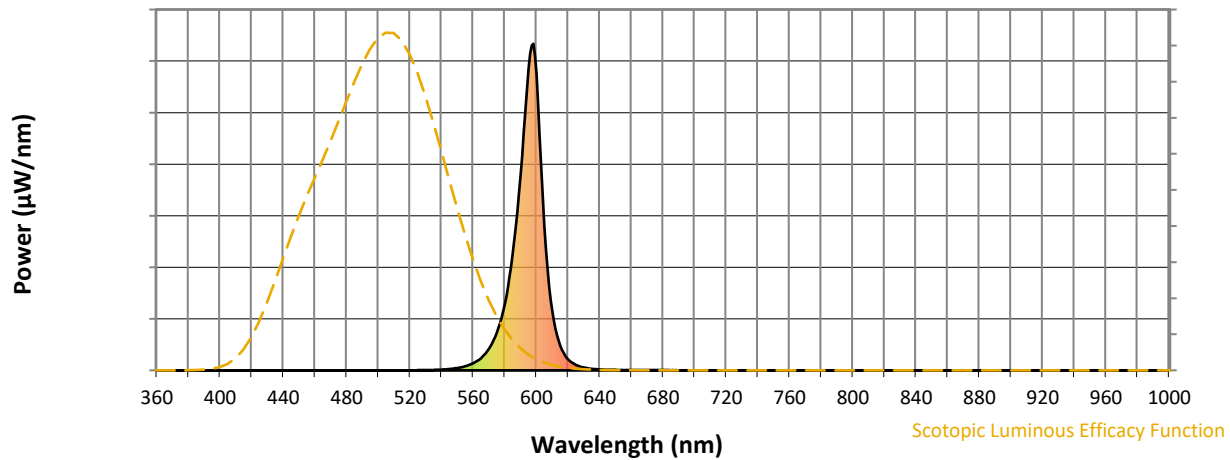


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	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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Scotopic Flux vs. Wavelength



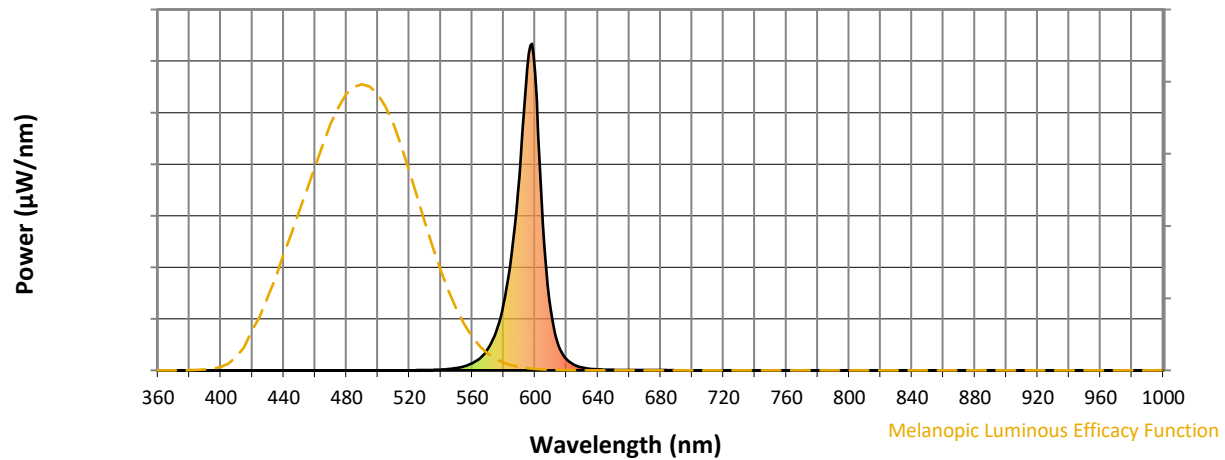
Scotopic Lumens: NR

S/P: 0.22

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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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 0.12

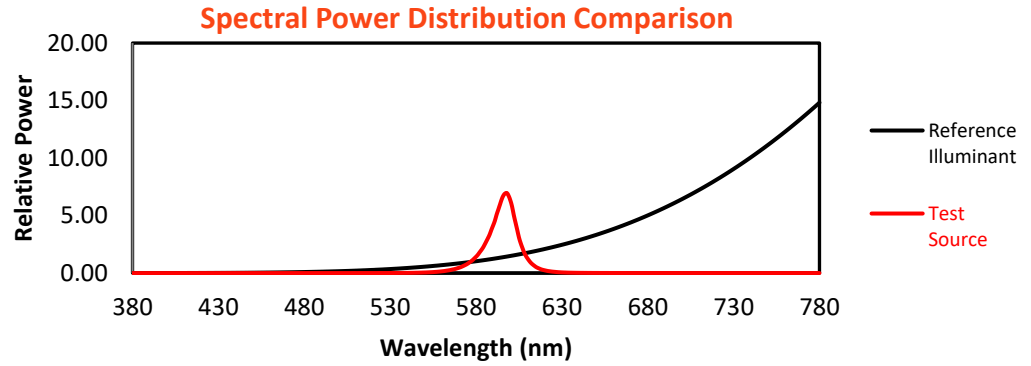
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	0	NR	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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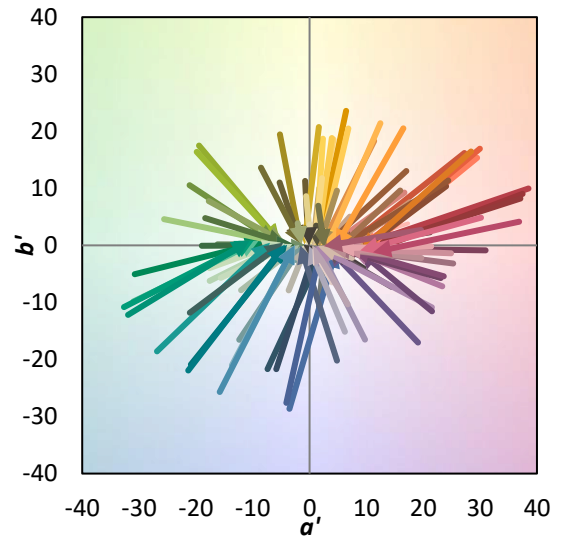
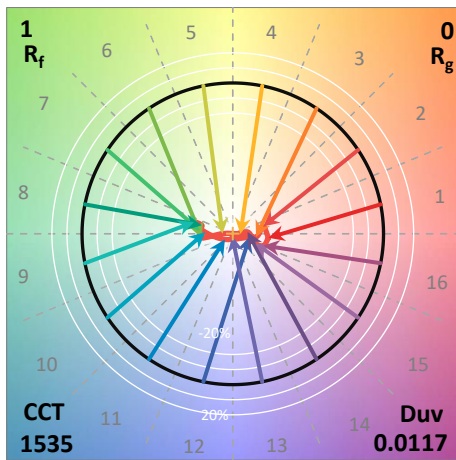
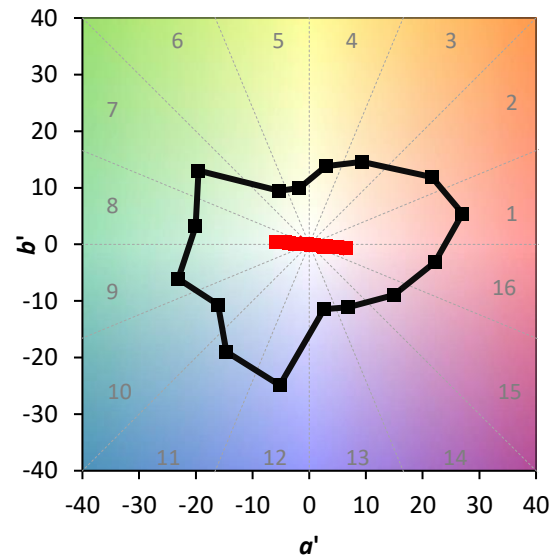
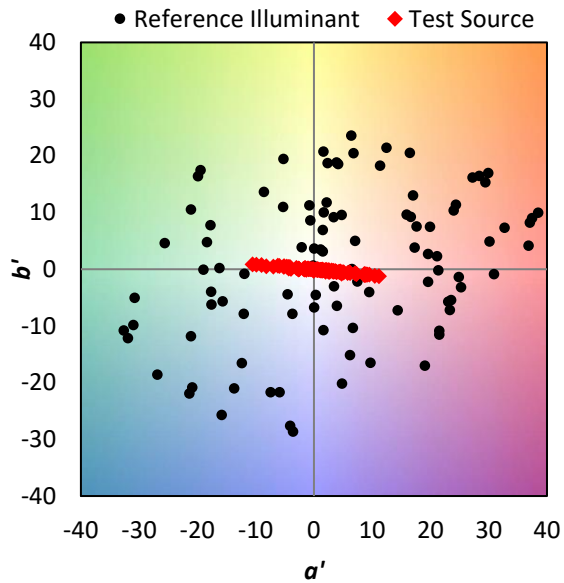
TM-30-18

Summary

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

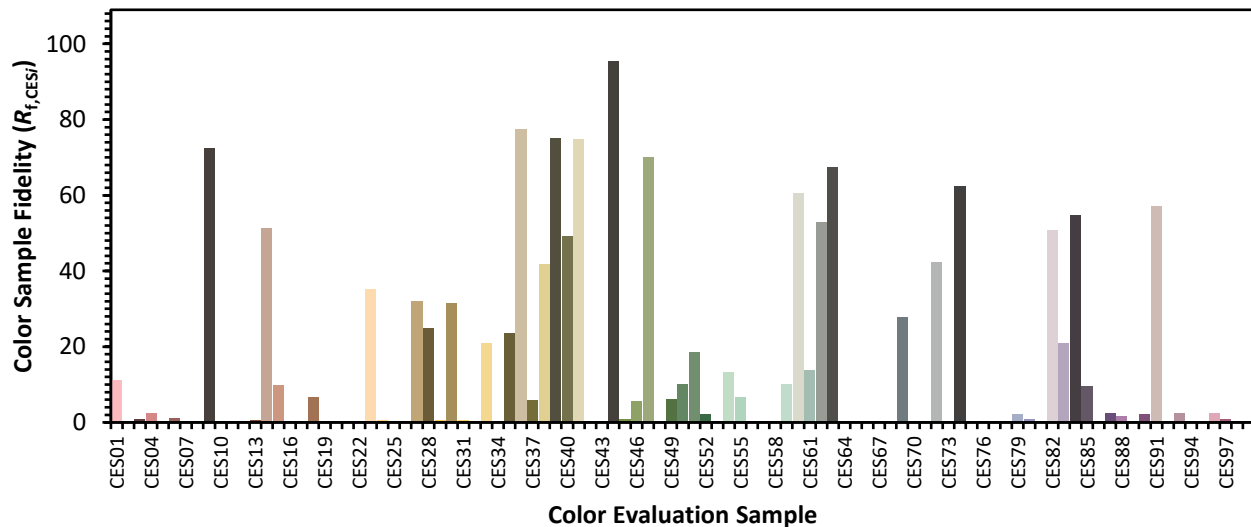


Color Vector Graphics

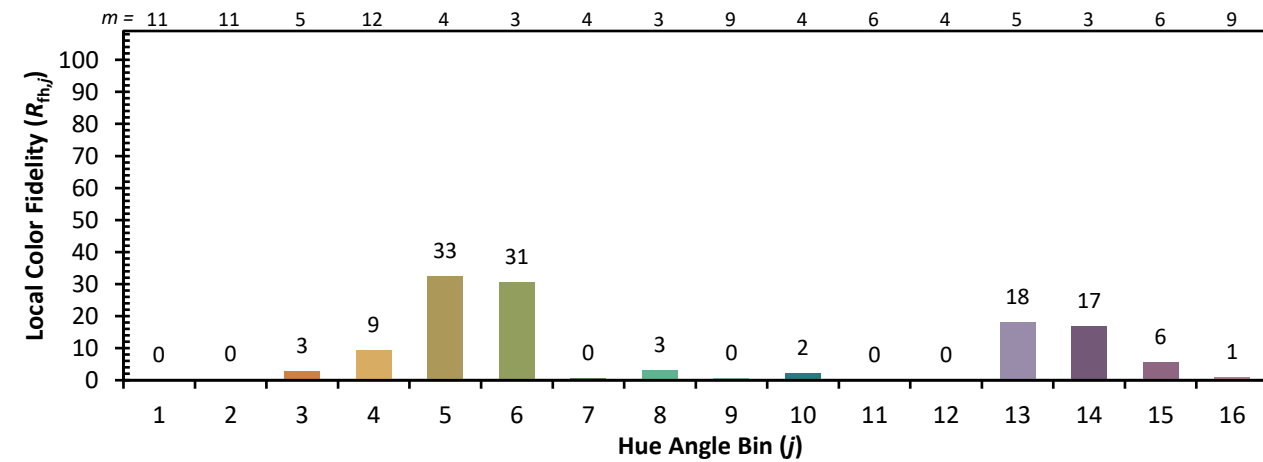
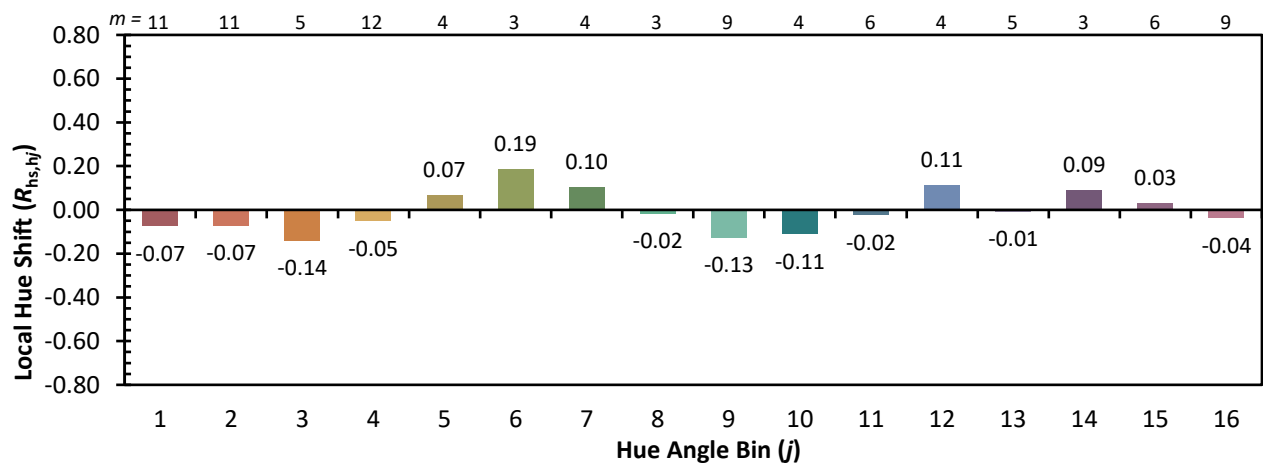
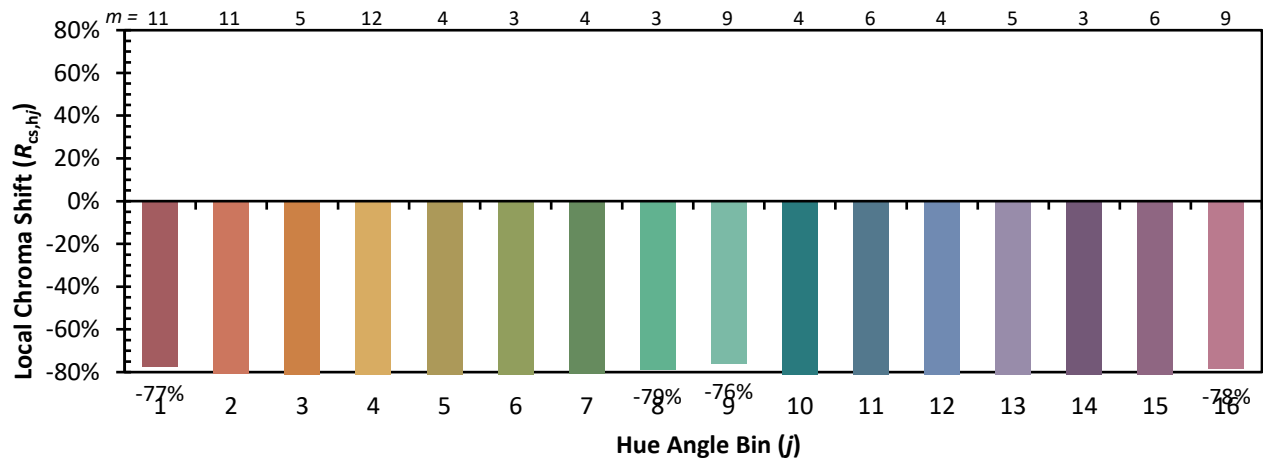


Individual Sample Fidelity Index (R_{fi})

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	



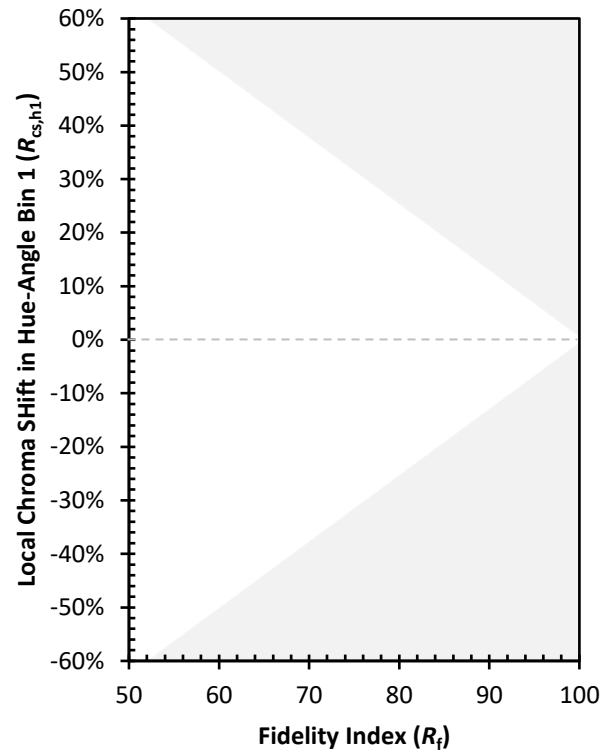
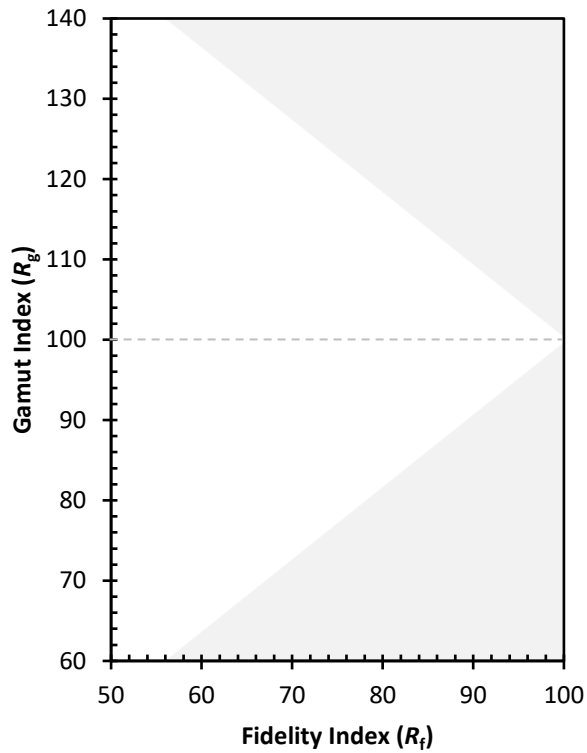
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)