

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: P1357213

Luminaire Tested: 4ASL4-25VHE-3-A59-UNV

Issue Date: 2/17/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1357213  
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: 4ASL4-25VHE-3-A59-UNV  
Description: 4FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND A59 LEDS 3 ROW  
Light Source: -  
Ballast/Driver: -

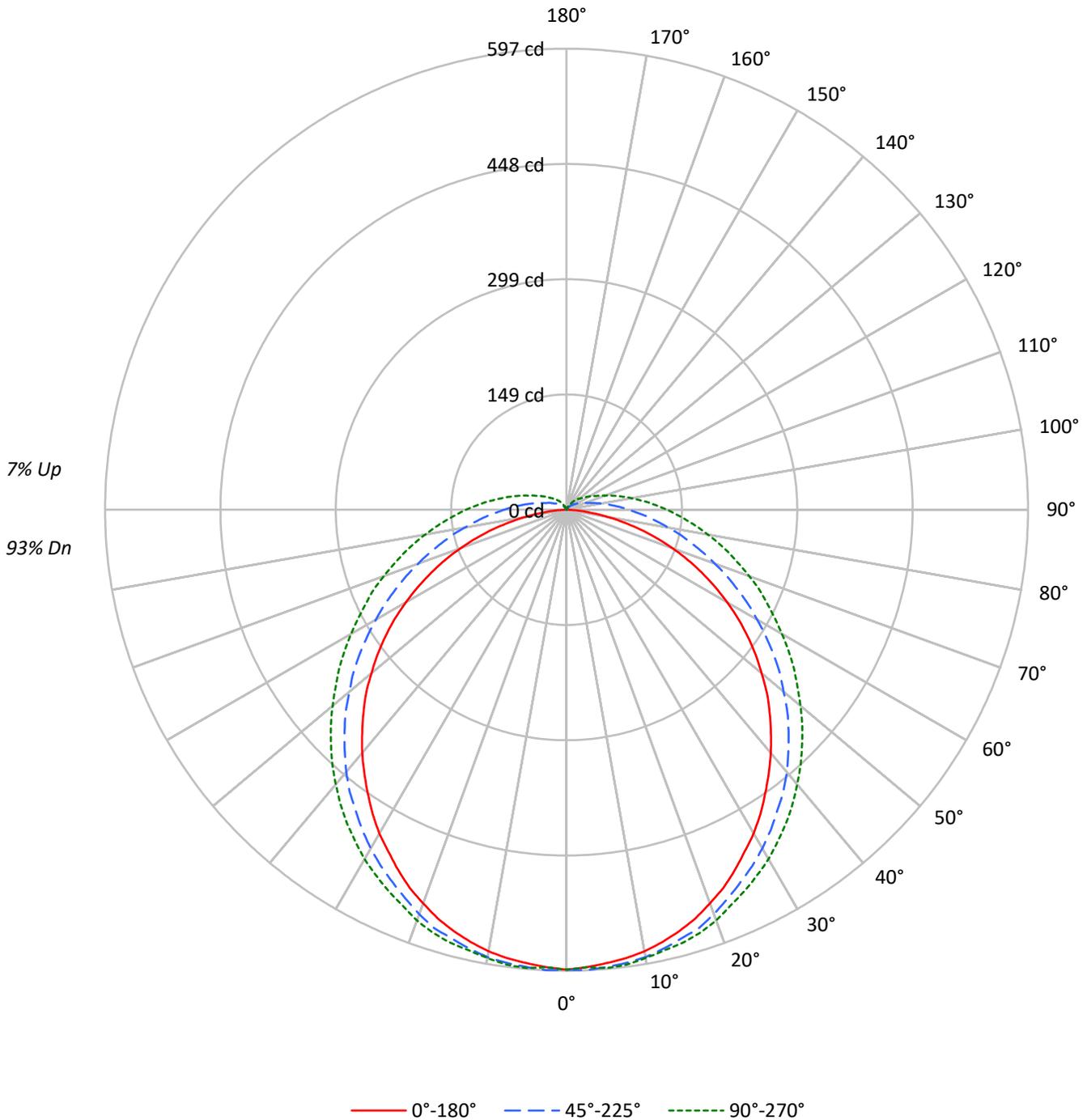
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2025.0 lumens  
Efficiency: N/A  
Efficacy: 34.1 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): 59.3  
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

TEST NUMBER: P1357213  
CATALOG NUMBER: 4ASL4-25VHE-3-A59-UNV

### Luminous Intensity Polar Plot





TEST NUMBER: P1357213

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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	50	0
RCR																						
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	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	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	63	63	63	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	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	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	27	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	22	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4833	4833	4833
5°	4790	4742	4723
10°	4763	4651	4603
15°	4710	4536	4502
20°	4639	4426	4388
25°	4557	4288	4258
30°	4469	4169	4148
35°	4360	4034	4026
40°	4261	3910	3897
45°	4155	3760	3768
50°	4033	3600	3634
55°	3901	3446	3513
60°	3729	3267	3390
65°	3513	3094	3288
70°	3234	2924	3209
75°	2831	2768	3154
80°	2218	2650	3130
85°	1333	2621	3177

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4155 cd/sqm



TEST NUMBER: P1357213  
 CATALOG NUMBER: 4ASL4-25VHE-3-A59-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.5	2.8
10°-20°	162.2	8.0
20°-30°	245.2	12.1
30°-40°	296.9	14.7
40°-50°	311.8	15.4
50°-60°	290.9	14.4
60°-70°	240.4	11.9
70°-80°	173.1	8.5
80°-90°	107.6	5.3
90°-100°	63.0	3.1
100°-110°	36.0	1.8
110°-120°	20.4	1.0
120°-130°	11.7	0.6
130°-140°	6.3	0.3
140°-150°	2.7	0.1
150°-160°	0.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	463.8	22.9
0°-40°	760.6	37.6
0°-60°	1363.3	67.3
0°-90°	1884.4	93.1
90°-120°	119.4	5.9
90°-150°	140.1	6.9
90°-180°	141.0	7.0
0°-180°	2025.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	589	594	594	594	596	56
15°	565	572	574	578	581	159
25°	515	524	532	540	545	237
35°	448	461	476	489	495	281
45°	372	385	406	424	431	287
55°	286	302	327	350	359	256
65°	193	212	244	275	286	191
75°	99	124	167	203	218	105
85°	19	56	105	142	156	23
90°	0	33	80	115	130	1
95°	0	21	61	93	106	0
105°	0	7	33	58	68	0
115°	0	4	20	36	42	0
125°	0	2	12	24	27	0
135°	0	0	7	15	19	0
145°	0	0	4	9	10	0
155°	0	0	0	2	4	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357213

CATALOG NUMBER: 4ASL4-25VHE-3-A59-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	595.6	595.6	595.6	595.6	595.6
2.5°	593.1	596.8	596.8	593.1	593.1
5°	589.4	594.3	594.3	594.3	595.6
7.5°	585.7	591.9	591.9	591.9	594.3
10°	580.7	586.9	588.2	588.2	589.4
12.5°	573.3	580.7	582.0	583.2	584.4
15°	564.6	572.1	574.5	578.2	580.7
17.5°	554.7	563.4	568.3	572.1	574.5
20°	542.3	551.0	557.2	562.1	565.9
22.5°	530.0	537.4	544.8	551.0	554.7
25°	515.1	523.8	532.4	539.9	544.8
27.5°	499.0	508.9	520.0	528.7	533.7
30°	484.1	494.0	506.4	517.6	522.5
32.5°	466.8	477.9	491.6	502.7	508.9
35°	448.2	460.6	475.5	489.1	495.3
37.5°	429.7	442.0	460.6	474.2	480.4
40°	411.1	423.5	443.3	458.1	464.3
42.5°	391.3	403.7	424.7	440.8	448.2
45°	371.5	385.1	406.1	423.5	430.9
47.5°	351.7	365.3	387.6	406.1	413.6
50°	329.4	344.2	366.5	387.6	395.0
52.5°	308.3	323.2	347.9	369.0	376.4
55°	286.0	302.1	326.9	350.4	359.1
57.5°	263.7	279.8	305.8	330.6	340.5
60°	240.2	257.5	284.8	310.8	321.9
62.5°	216.7	235.3	265.0	292.2	303.4
65°	193.2	211.7	243.9	274.9	286.0
67.5°	169.6	189.4	224.1	256.3	269.9
70°	146.1	167.2	204.3	237.7	251.4
72.5°	122.6	144.9	185.7	220.4	234.0
75°	99.1	123.8	167.2	203.1	217.9
77.5°	75.5	104.0	151.1	187.0	201.8
80°	54.5	86.7	133.7	170.9	185.7
82.5°	34.7	69.3	118.9	156.0	170.9
85°	18.6	55.7	105.2	142.4	156.0
87.5°	6.2	43.3	91.6	128.8	142.4
90°	0.0	33.4	80.5	115.2	130.0
92.5°	0.0	26.0	70.6	104.0	117.6
95°	0.0	21.0	60.7	92.9	106.5
97.5°	0.0	17.3	53.2	83.0	95.3
100°	0.0	13.6	45.8	74.3	85.4
102.5°	0.0	11.1	39.6	65.6	76.8
105°	0.0	7.4	33.4	58.2	68.1
107.5°	0.0	6.2	28.5	52.0	60.7
110°	0.0	5.0	26.0	44.6	53.2



TEST NUMBER: P1357213  
 CATALOG NUMBER: 4ASL4-25VHE-3-A59-UNV

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.7	23.5	39.6	48.3
115°	0.0	3.7	19.8	35.9	42.1
117.5°	0.0	3.7	17.3	32.2	38.4
120°	0.0	2.5	16.1	28.5	34.7
122.5°	0.0	2.5	13.6	26.0	31.0
125°	0.0	2.5	12.4	23.5	27.2
127.5°	0.0	1.2	11.1	21.0	24.8
130°	0.0	1.2	9.9	18.6	22.3
132.5°	0.0	1.2	8.7	17.3	21.0
135°	0.0	0.0	7.4	14.9	18.6
137.5°	0.0	0.0	6.2	13.6	16.1
140°	0.0	0.0	5.0	11.1	14.9
142.5°	0.0	0.0	3.7	9.9	12.4
145°	0.0	0.0	3.7	8.7	9.9
147.5°	0.0	0.0	2.5	6.2	8.7
150°	0.0	0.0	1.2	5.0	6.2
152.5°	0.0	0.0	0.0	3.7	5.0
155°	0.0	0.0	0.0	2.5	3.7
157.5°	0.0	0.0	0.0	0.0	1.2
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	14.81	16.35	15.27	16.80	17.28	16.83	18.37	17.30	18.83	19.31
	3H	16.30	17.71	16.78	18.17	18.70	19.30	20.70	19.78	21.17	21.69
	4H	16.78	18.12	17.29	18.60	19.14	20.49	21.82	21.00	22.31	22.84
	6H	17.06	18.30	17.57	18.80	19.35	21.75	22.99	22.26	23.48	24.04
	8H	17.11	18.30	17.64	18.82	19.38	22.39	23.58	22.92	24.10	24.66
	12H	17.13	18.26	17.66	18.78	19.37	23.10	24.24	23.64	24.76	25.35
4H	2H	15.68	17.01	16.18	17.50	18.03	17.27	18.60	17.77	19.08	19.62
	3H	17.42	18.55	17.93	19.08	19.64	19.96	21.09	20.47	21.62	22.18
	4H	18.02	19.06	18.56	19.60	20.19	21.32	22.36	21.86	22.90	23.49
	6H	18.42	19.34	18.98	19.90	20.51	22.77	23.69	23.32	24.25	24.85
	8H	18.51	19.38	19.07	19.94	20.56	23.52	24.38	24.08	24.95	25.57
	12H	18.56	19.34	19.14	19.93	20.56	24.36	25.14	24.94	25.73	26.35
8H	4H	18.70	19.57	19.26	20.13	20.75	21.54	22.40	22.10	22.97	23.59
	6H	19.28	20.01	19.88	20.62	21.24	23.16	23.89	23.75	24.49	25.12
	8H	19.46	20.12	20.07	20.74	21.38	24.05	24.71	24.65	25.32	25.96
	12H	19.58	20.17	20.19	20.77	21.48	25.07	25.66	25.68	26.26	26.97
12H	4H	18.90	19.68	19.48	20.27	20.90	21.55	22.33	22.13	22.92	23.55
	6H	19.58	20.24	20.18	20.85	21.49	23.19	23.85	23.80	24.47	25.11
	8H	19.86	20.45	20.46	21.05	21.75	24.16	24.74	24.76	25.35	26.05

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<sub>f</sub>: 1.3  
 R<sub>g</sub>: 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**

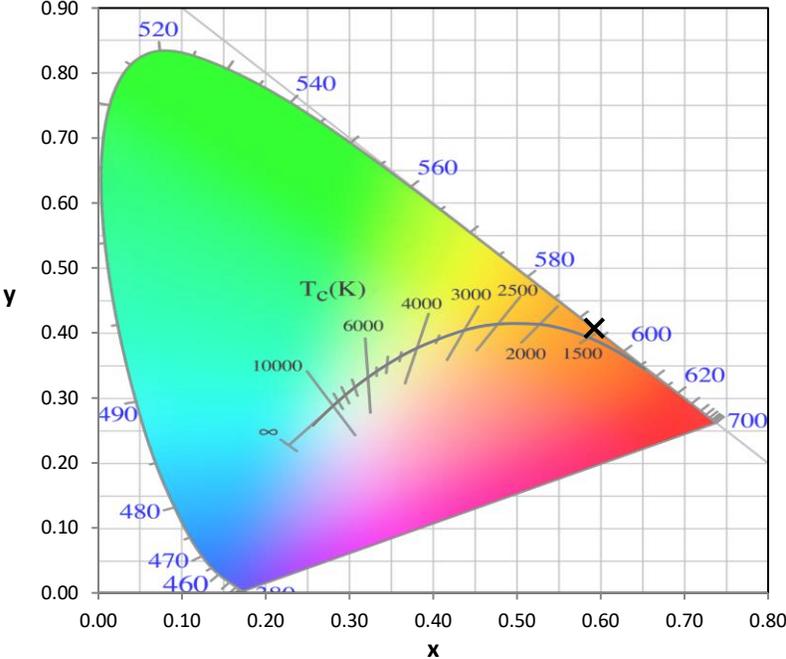
Stabilization Time: 77M  
 Operation Time: 2H 17M  
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2511-597-9

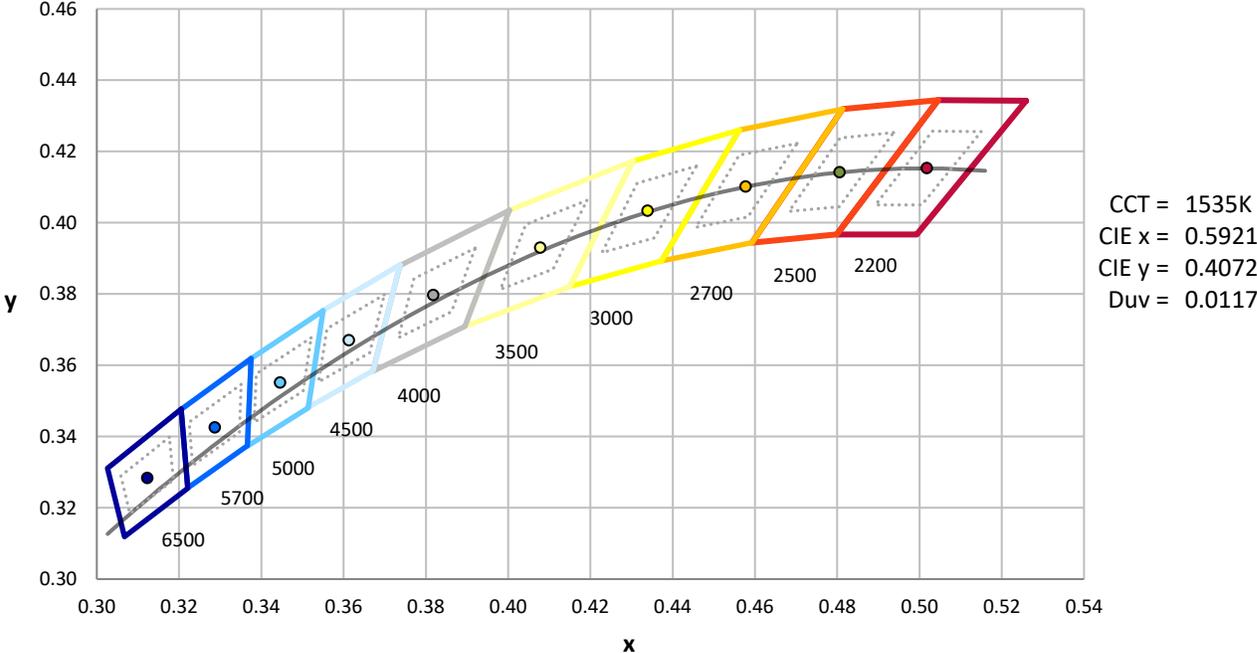
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2511-597-9

**CIE 1931 Chromaticity Diagram**



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



Point lies outside the range

REPORT NUMBER: SP1-2511-597-9

**Photopic Flux vs. Wavelength**

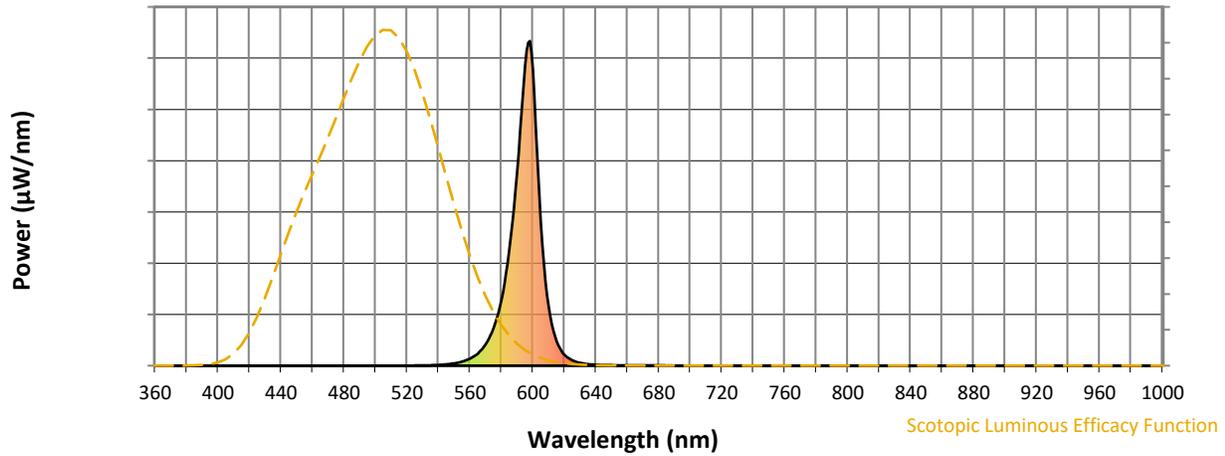


**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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			

REPORT NUMBER: SP1-2511-597-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 0.22**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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			

REPORT NUMBER: SP1-2511-597-9

**Melanopic Flux vs. Wavelength**



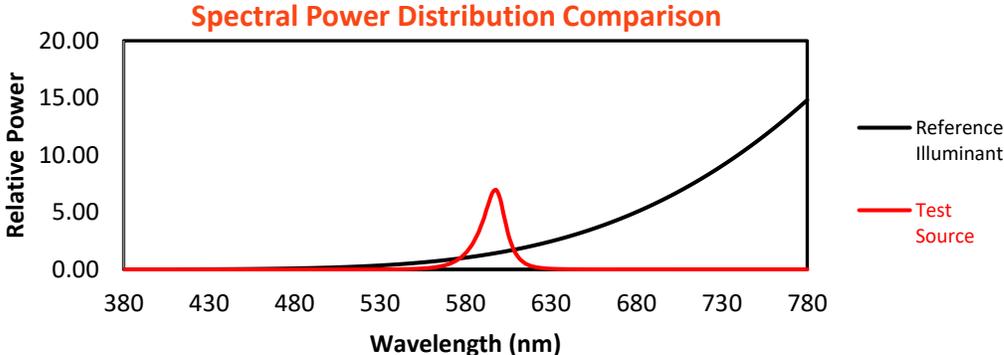
**Melanopic Lumens: NR**

**M/P: 0.12**

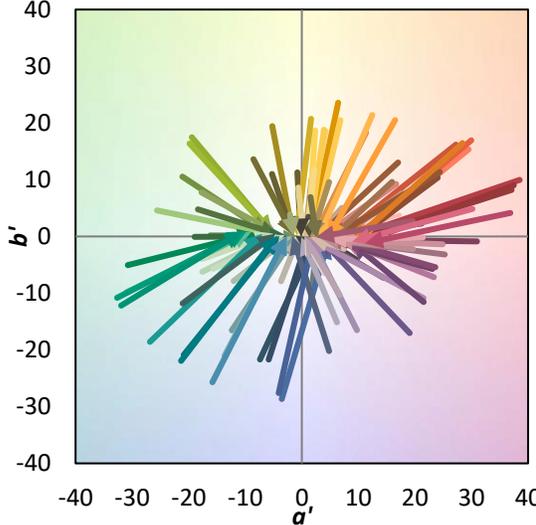
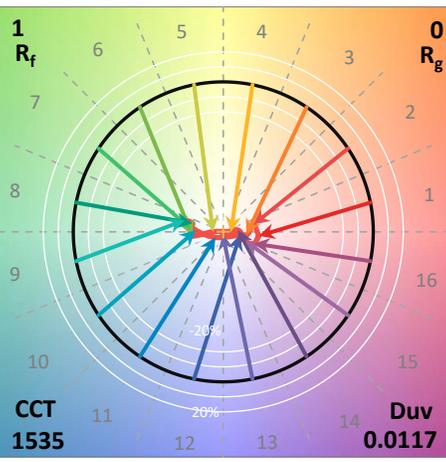
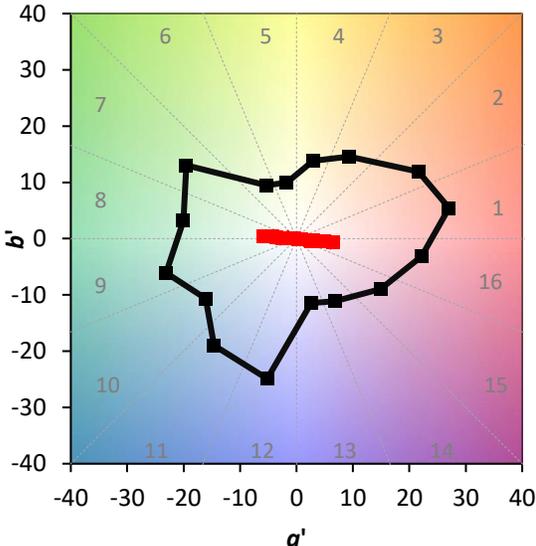
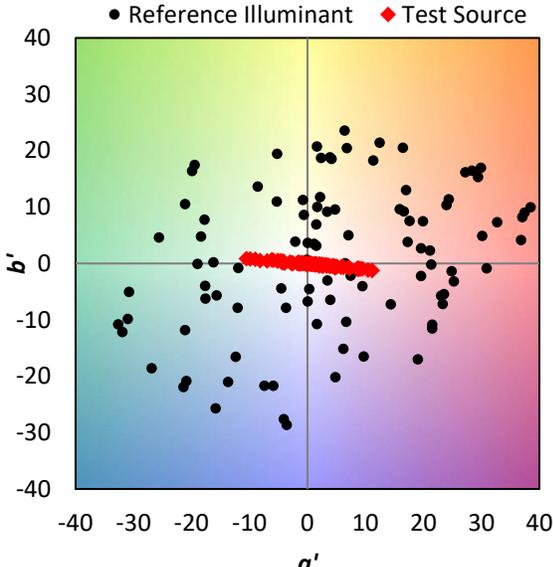
$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )	$\lambda$ (nm)	Power $W^{\wedge}/nm$	Lumens ( $\phi/nm$ )
360	0	NR	490	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**

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

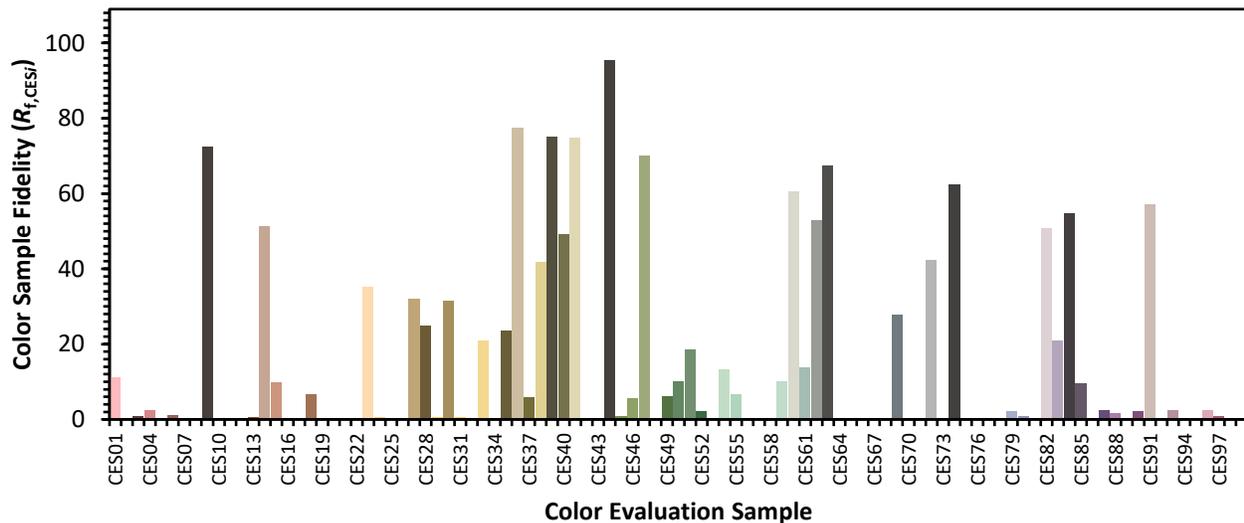


**Color Vector Graphics**

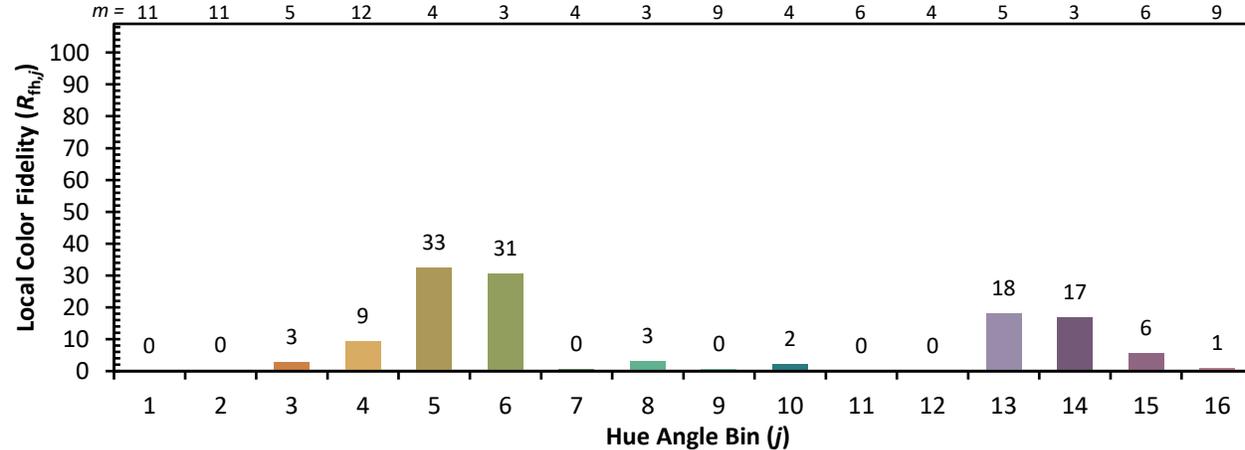
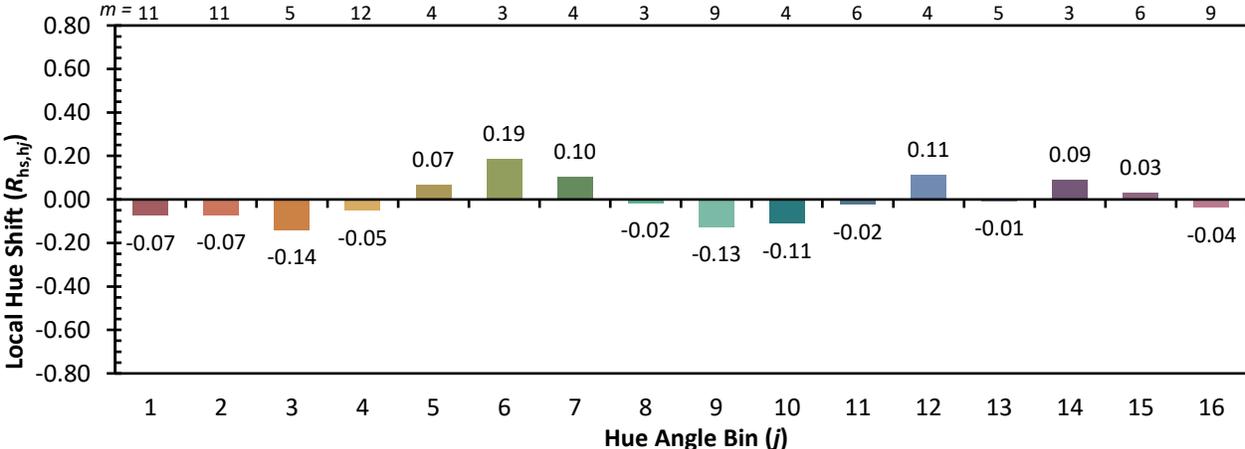
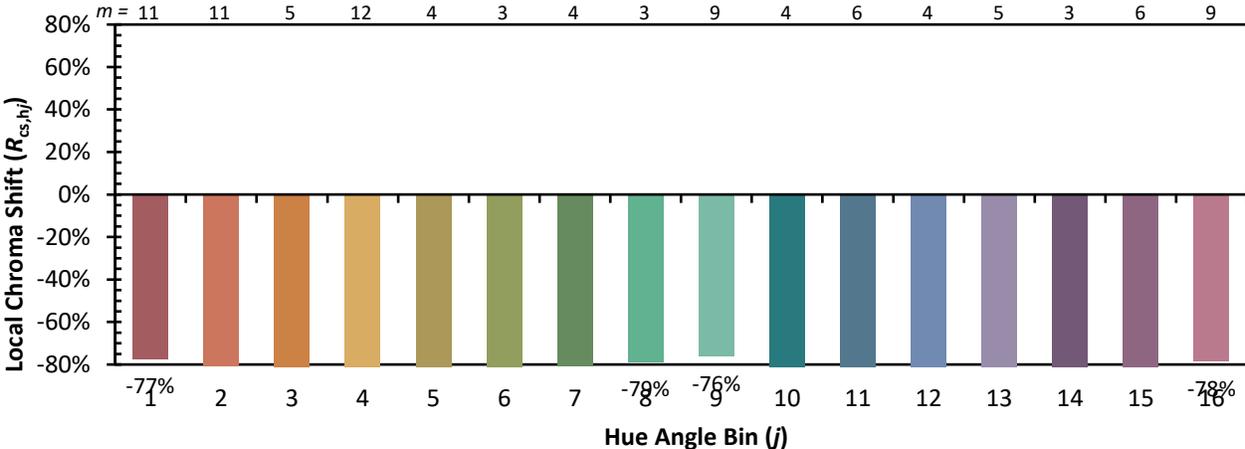


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

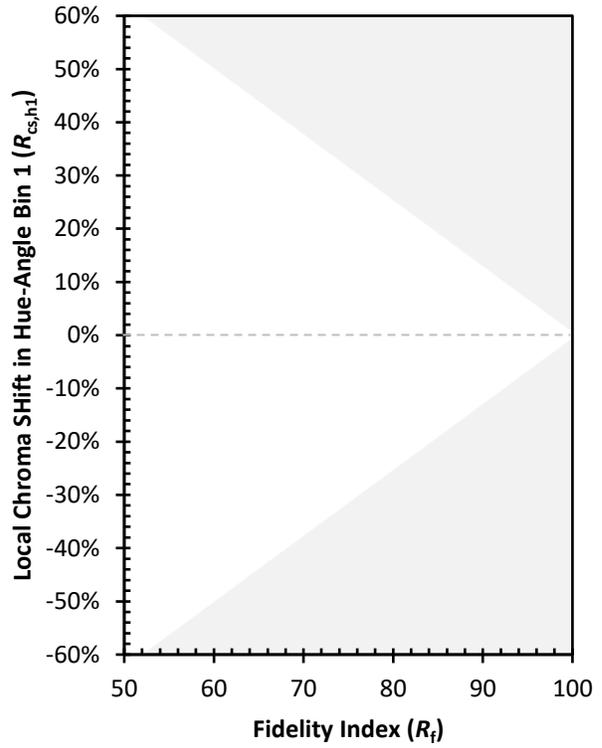
CES01 = 90	CES26 = 0	CES51 = 19	CES76 = 0
CES02 = 70	CES27 = 32	CES52 = 2	CES77 = 0
CES03 = 31	CES28 = 25	CES53 = 0	CES78 = 0
CES04 = 77	CES29 = 1	CES54 = 13	CES79 = 2
CES05 = 52	CES30 = 31	CES55 = 7	CES80 = 1
CES06 = 56	CES31 = 1	CES56 = 0	CES81 = 0
CES07 = 41	CES32 = 0	CES57 = 0	CES82 = 51
CES08 = 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)