

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: P1357244

Luminaire Tested: 4ASL4-5-1-50-UNV

Issue Date: 2/17/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1357244  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/17/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: 4ASL4-5-1-50-UNV  
Description: 4FT 500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDS 1 ROW  
Light Source: -  
Ballast/Driver: -

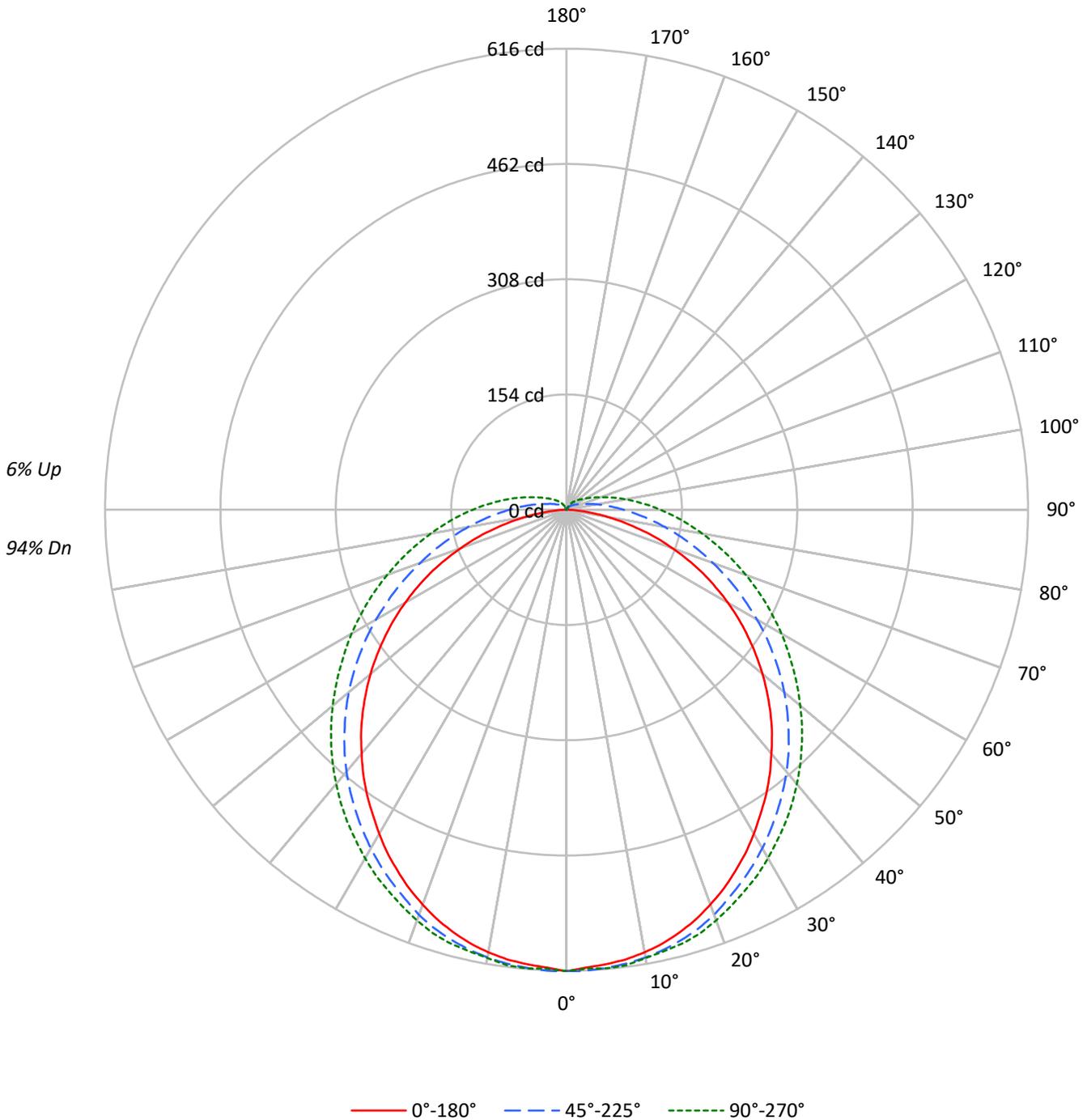
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2064.0 lumens  
Efficiency: N/A  
Efficacy: 122.9 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): 16.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 4ASL4-5-1-50-UNV

### 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	0
RCR																					
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	96	96	96	94
1	106	100	95	91	102	97	93	89	92	88	85	87	84	81	82	80	78	82	80	78	75
2	95	86	79	73	92	84	77	71	79	74	69	75	70	66	71	67	64	71	67	64	61
3	87	76	67	60	84	73	65	59	69	63	57	66	60	55	62	58	54	62	58	54	51
4	79	67	57	50	76	65	56	50	62	54	48	58	52	47	56	50	46	56	50	46	43
5	73	59	50	43	70	58	49	43	55	47	42	52	46	41	50	44	40	50	44	40	37
6	67	53	44	38	65	52	43	37	50	42	36	47	41	35	45	39	35	45	39	35	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	41	35	31	29
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	38	32	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	32	27	22	21

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

	0°	45°	90°
0°	5003	5003	5003
5°	4954	4902	4877
10°	4926	4802	4749
15°	4876	4697	4650
20°	4803	4576	4526
25°	4713	4432	4393
30°	4616	4301	4268
35°	4519	4166	4144
40°	4410	4029	4015
45°	4306	3881	3884
50°	4183	3726	3747
55°	4033	3551	3609
60°	3866	3368	3489
65°	3653	3177	3368
70°	3318	2974	3250
75°	2888	2795	3160
80°	2299	2640	3103
85°	1347	2536	3124

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4306 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	2.8
10°-20°	167.6	8.1
20°-30°	253.4	12.3
30°-40°	306.3	14.8
40°-50°	322.0	15.6
50°-60°	300.0	14.5
60°-70°	246.5	11.9
70°-80°	175.0	8.5
80°-90°	105.5	5.1
90°-100°	59.1	2.9
100°-110°	32.7	1.6
110°-120°	18.2	0.9
120°-130°	10.5	0.5
130°-140°	5.8	0.3
140°-150°	2.6	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	479.4	23.2
0°-40°	785.6	38.1
0°-60°	1407.7	68.2
0°-90°	1934.5	93.7
90°-120°	110.1	5.3
90°-150°	128.9	6.2
90°-180°	129.0	6.2
0°-180°	2064.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	610	615	614	614	615	58
15°	584	592	595	598	600	165
25°	533	543	550	558	562	246
35°	464	476	491	504	510	290
45°	385	399	419	437	444	297
55°	296	312	337	359	369	264
65°	201	219	250	280	293	198
75°	101	127	169	204	218	108
85°	19	54	102	140	153	23
90°	0	32	76	112	125	1
95°	0	19	56	88	100	0
105°	0	7	29	53	63	0
115°	0	4	18	32	38	0
125°	0	2	11	21	24	0
135°	0	1	7	13	17	0
145°	1	0	3	8	10	0
155°	1	1	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: P1357244

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	616.5	616.5	616.5	616.5	616.5
2.5°	612.3	617.9	616.5	613.7	613.7
5°	609.5	615.1	614.4	613.7	615.1
7.5°	606.0	611.6	611.6	612.3	613.7
10°	600.5	607.4	607.4	607.4	608.1
12.5°	593.5	600.5	601.9	602.6	603.9
15°	584.4	592.1	594.9	597.7	599.8
17.5°	574.0	581.6	586.5	590.0	593.5
20°	561.4	569.8	576.1	580.2	583.7
22.5°	548.2	556.5	562.8	569.1	573.3
25°	532.8	542.6	550.2	557.9	562.1
27.5°	517.5	527.2	537.0	546.1	550.9
30°	500.0	511.2	522.4	532.8	537.7
32.5°	481.9	493.8	507.0	518.2	523.7
35°	464.5	476.3	491.0	503.5	509.8
37.5°	445.6	457.5	474.2	488.2	494.5
40°	425.4	438.7	456.8	471.4	478.4
42.5°	405.9	419.1	438.7	454.7	461.7
45°	385.0	398.9	419.1	436.6	444.2
47.5°	363.3	378.0	399.6	417.7	426.1
50°	341.7	357.1	379.4	398.9	407.3
52.5°	318.7	334.8	358.5	379.4	388.5
55°	295.7	312.4	336.8	359.2	368.9
57.5°	272.7	289.4	315.9	339.6	350.1
60°	249.0	266.4	293.6	319.4	331.3
62.5°	224.6	242.7	271.3	299.2	311.7
65°	200.9	219.0	250.4	279.7	292.9
67.5°	175.7	195.3	228.7	259.4	273.4
70°	149.9	172.3	207.8	240.6	254.6
72.5°	126.9	149.9	188.3	221.8	236.4
75°	101.1	126.9	168.8	203.6	218.3
77.5°	78.8	106.7	150.6	186.2	200.9
80°	56.5	87.2	133.2	169.5	184.1
82.5°	36.3	69.7	117.2	154.1	168.1
85°	18.8	54.4	101.8	139.5	153.4
87.5°	5.6	41.8	87.9	124.8	138.8
90°	0.0	32.1	76.0	111.6	124.8
92.5°	0.0	24.4	65.6	99.7	113.0
95°	0.0	18.8	55.8	87.9	100.4
97.5°	0.0	14.6	48.1	77.4	90.0
100°	0.0	11.9	41.1	68.3	80.2
102.5°	0.0	9.8	35.6	60.7	71.1
105°	0.0	7.0	29.3	53.0	62.8
107.5°	0.0	4.9	25.8	46.7	55.1
110°	0.0	4.2	23.0	40.4	48.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.5	20.2	36.3	43.2
115°	0.0	3.5	18.1	32.1	38.4
117.5°	0.0	2.8	15.3	28.6	34.2
120°	0.0	2.8	13.9	25.8	30.7
122.5°	0.0	2.1	12.6	23.0	27.9
125°	0.0	2.1	11.2	20.9	24.4
127.5°	0.0	1.4	9.8	18.8	22.3
130°	0.0	1.4	9.1	16.7	20.2
132.5°	0.0	0.7	8.4	15.3	18.1
135°	0.0	0.7	7.0	13.3	16.7
137.5°	0.0	0.0	6.3	11.9	14.6
140°	0.0	0.0	4.9	10.5	13.3
142.5°	0.7	0.0	4.2	9.1	11.2
145°	0.7	0.0	2.8	7.7	9.8
147.5°	0.7	0.7	2.1	6.3	7.7
150°	0.7	0.7	1.4	4.2	6.3
152.5°	0.7	0.7	0.7	2.8	4.2
155°	0.7	0.7	0.0	2.1	2.8
157.5°	0.7	0.7	0.0	0.7	1.4
160°	0.7	0.7	0.0	0.0	0.7
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	15.00	16.55	15.46	16.99	17.46	16.98	18.53	17.44	18.97	19.44
	3H	16.49	17.90	16.96	18.36	18.87	19.39	20.81	19.86	21.26	21.77
	4H	16.97	18.31	17.46	18.78	19.30	20.56	21.90	21.05	22.37	22.89
	6H	17.24	18.49	17.75	18.97	19.51	21.76	23.01	22.27	23.50	24.04
	8H	17.30	18.49	17.81	19.00	19.54	22.39	23.58	22.90	24.09	24.63
	12H	17.31	18.46	17.83	18.96	19.53	23.07	24.21	23.59	24.72	25.29
4H	2H	15.86	17.20	16.36	17.67	18.20	17.42	18.76	17.91	19.23	19.75
	3H	17.59	18.73	18.10	19.25	19.79	20.05	21.19	20.55	21.70	22.25
	4H	18.19	19.23	18.72	19.76	20.34	21.38	22.43	21.91	22.95	23.53
	6H	18.59	19.51	19.13	20.06	20.65	22.78	23.70	23.32	24.25	24.84
	8H	18.68	19.55	19.23	20.10	20.70	23.50	24.37	24.06	24.92	25.53
	12H	18.72	19.51	19.30	20.09	20.70	24.31	25.10	24.88	25.68	26.29
8H	4H	18.84	19.71	19.39	20.26	20.86	21.60	22.46	22.15	23.01	23.62
	6H	19.41	20.14	19.99	20.74	21.35	23.16	23.89	23.74	24.49	25.10
	8H	19.59	20.25	20.18	20.85	21.48	24.02	24.68	24.62	25.29	25.91
	12H	19.70	20.29	20.29	20.88	21.57	25.01	25.60	25.61	26.19	26.89
12H	4H	19.02	19.81	19.59	20.39	21.00	21.60	22.39	22.18	22.97	23.58
	6H	19.68	20.35	20.28	20.95	21.58	23.19	23.86	23.79	24.46	25.09
	8H	19.95	20.54	20.55	21.14	21.83	24.13	24.72	24.72	25.31	26.00

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-5

Test Date: 11/18/2025

Luminaire Tested: 4ASL-2-50-UNV-OPL-1\_600mA

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

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2511-597-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 11/18/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Fail-Safe  
 Catalog Number: **4ASL-2-50-UNV-OPL-1\_600mA**  
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDs with 1 rows at 600mA

**Spectral Parameters**

CCT (K): 5076  
 CIE u': 0.2110  
 CIE v': 0.4830  
 Duv: -0.0005  
 CIE x: 0.3429  
 CIE y: 0.3489  
 CIE z: 0.3082  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 572  
 Purity: 7.553016  
 R<sub>f</sub>: 90.4  
 R<sub>g</sub>: 99

CRI (Ra):	94.9		
R1:	96.7	R9:	74.0
R2:	98.2	R10:	93.9
R3:	96.6	R11:	96.2
R4:	95.6	R12:	72.4
R5:	95.1	R13:	98.1
R6:	93.6	R14:	97.8
R7:	94.0	R15:	95.6
R8:	89.6		



**Test Conditions**

Stabilization Time: 24M  
 Operation Time: 1H 24M  
 Sphere Temperature (°C): 24.1

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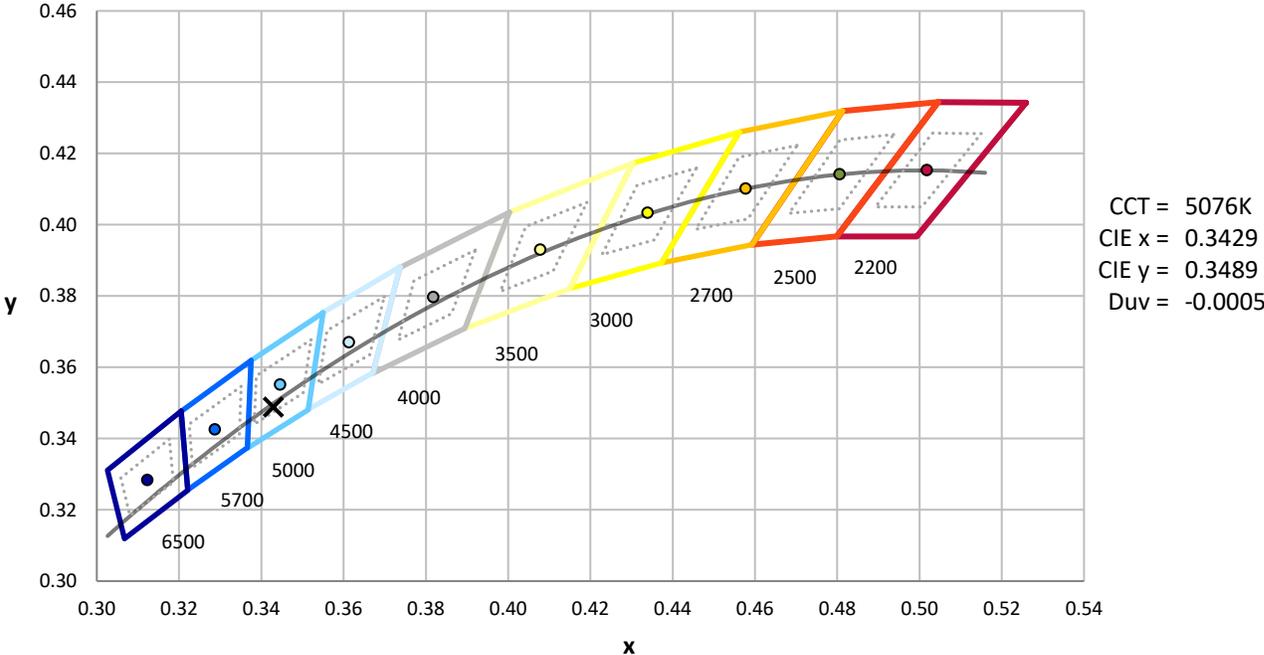
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



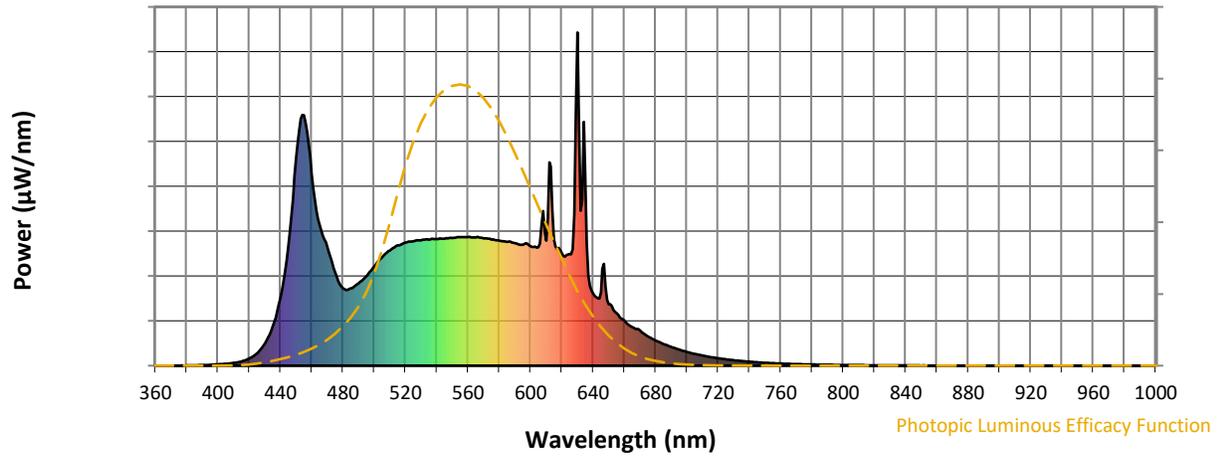
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

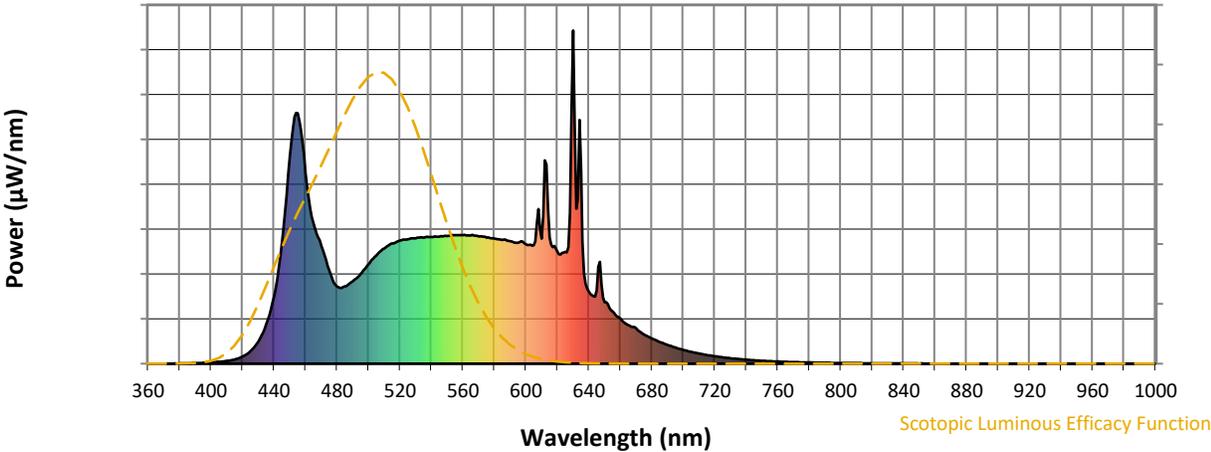


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



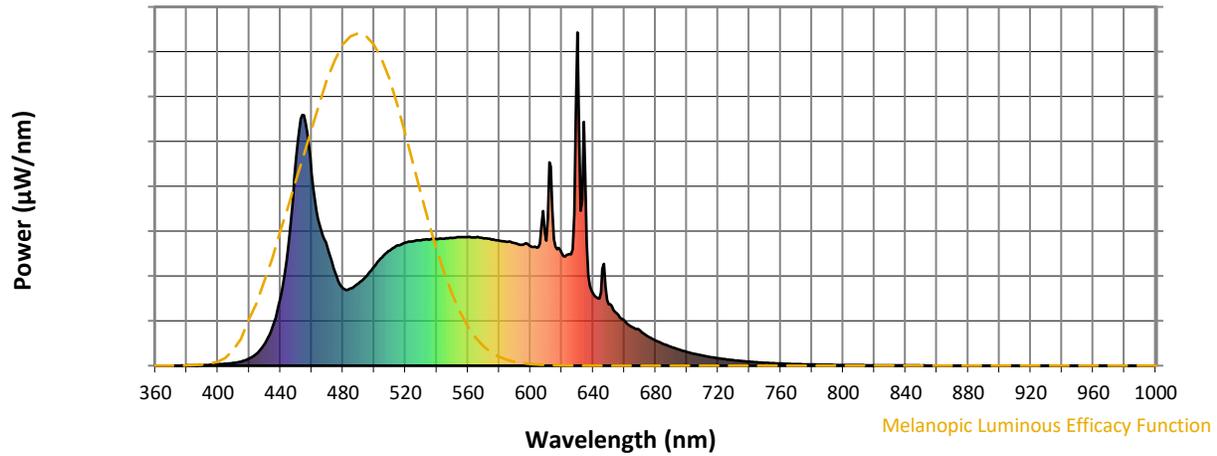
**Scotopic Lumens: NR**

**S/P: 2.12**

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	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

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**Melanopic Flux vs. Wavelength**



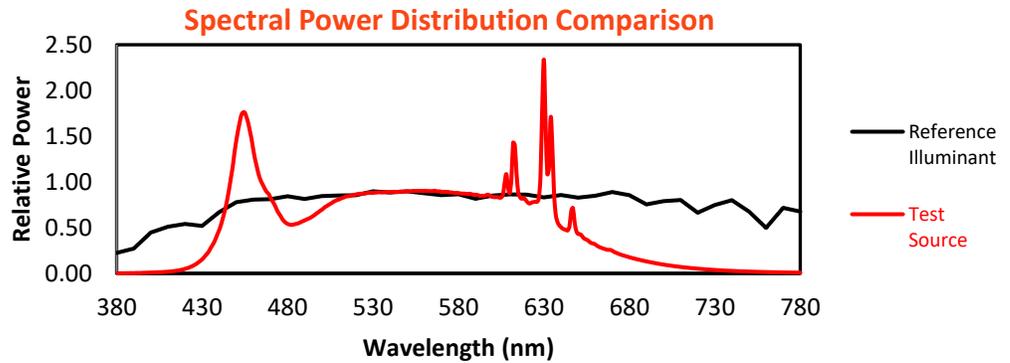
**Melanopic Lumens: NR**

**M/P: 4.65**

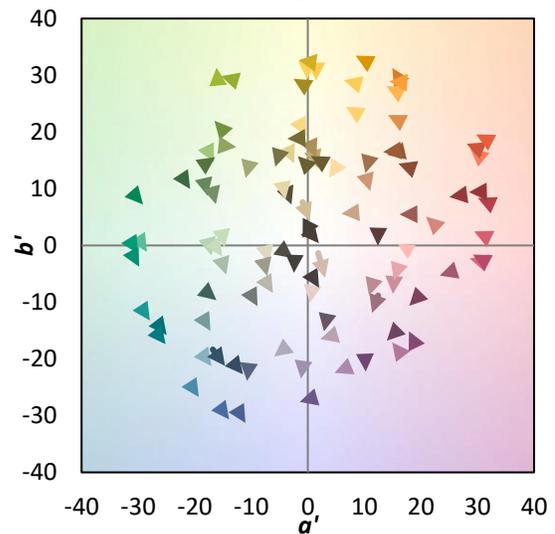
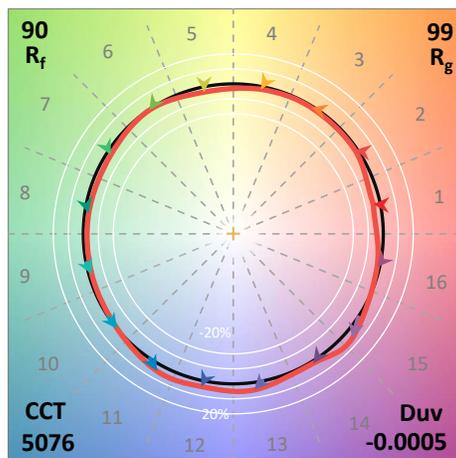
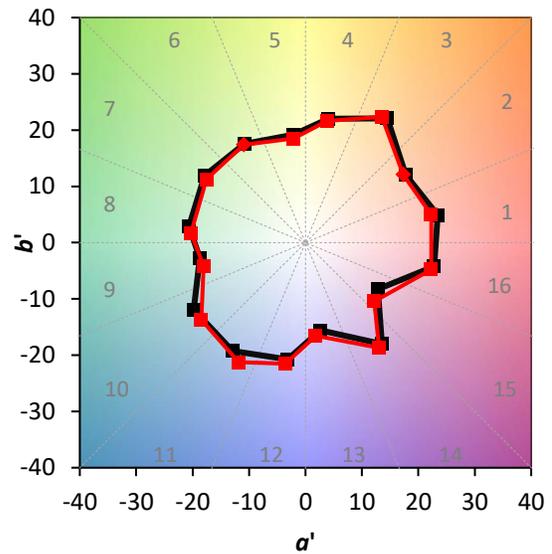
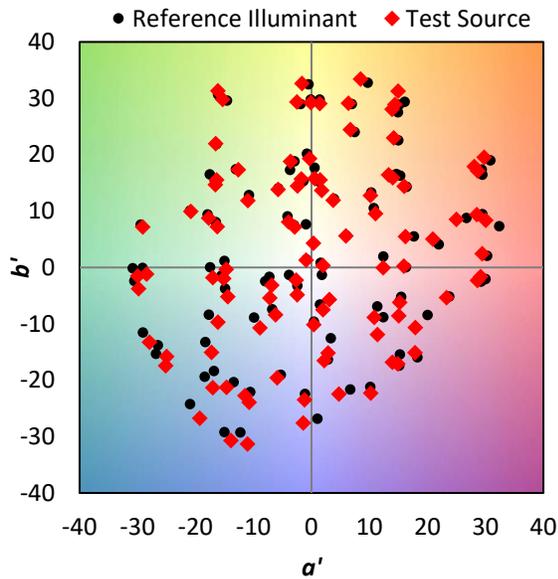
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

**Summary**

$R_f = 90.4$   
 $R_g = 99$   
 $CIE R_a = 94.9$   
 $R_9 = 74.0$

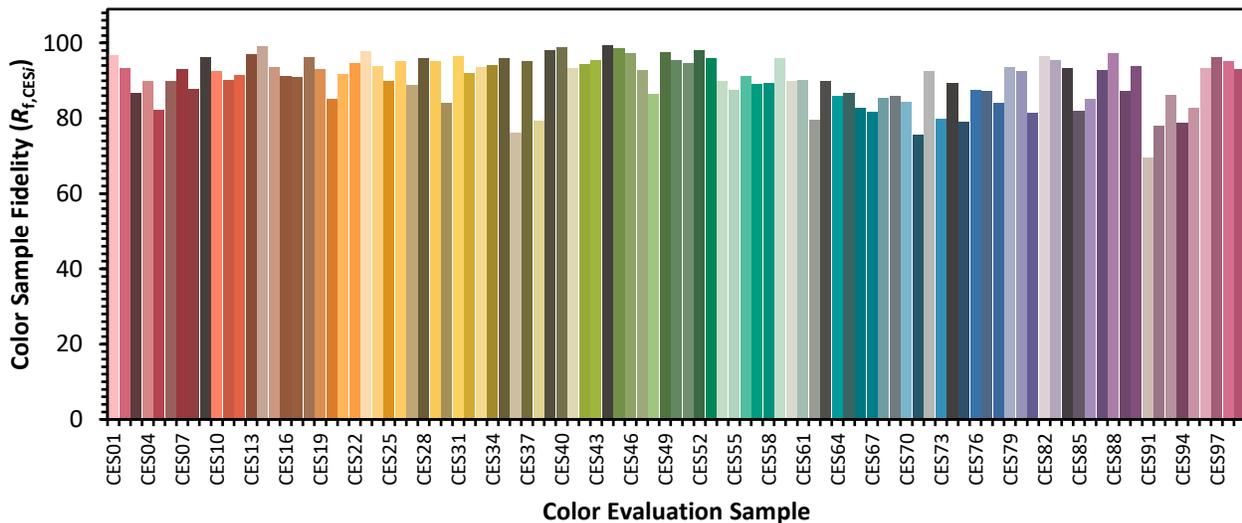


**Color Vector Graphics**

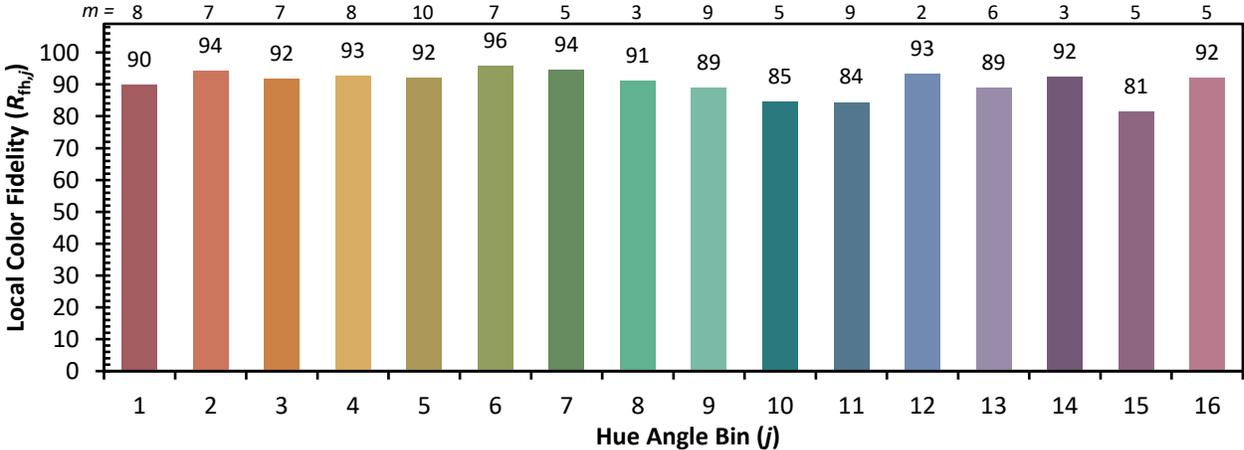
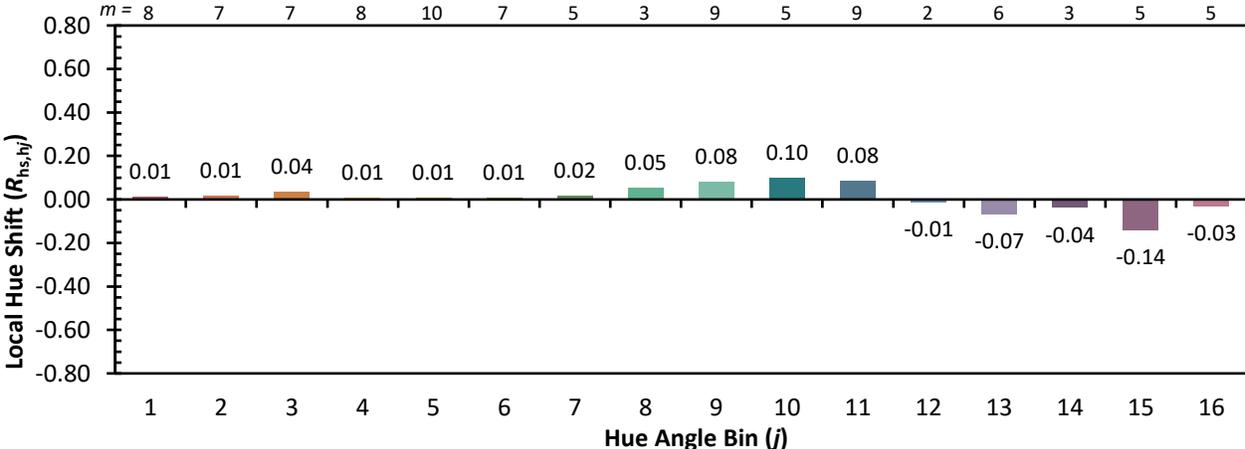
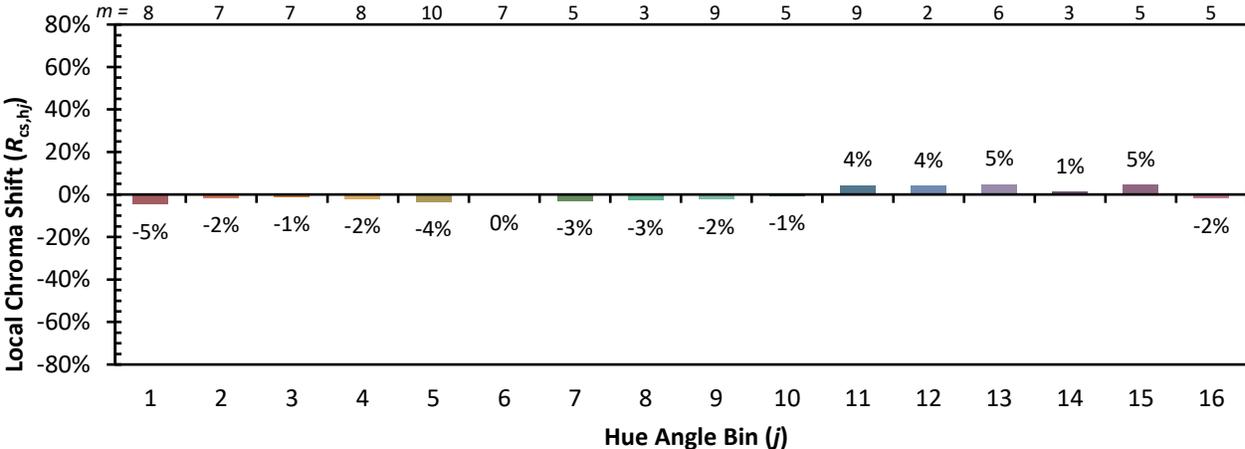


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

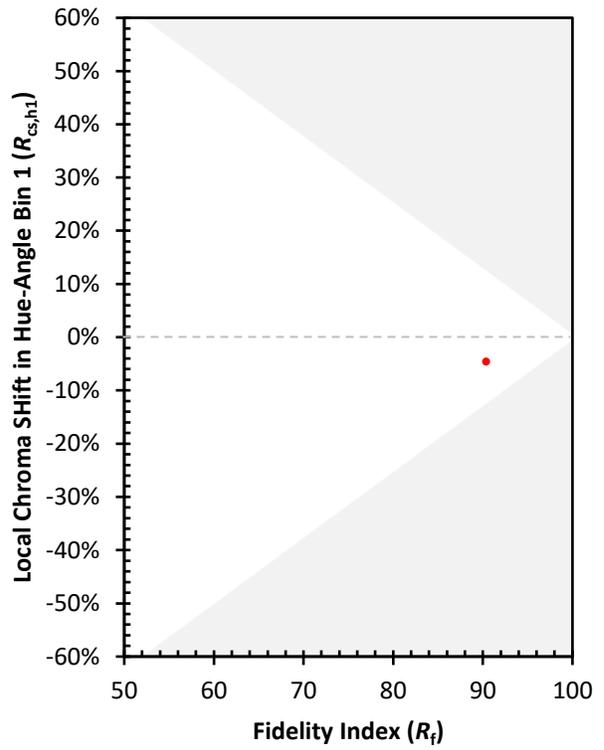
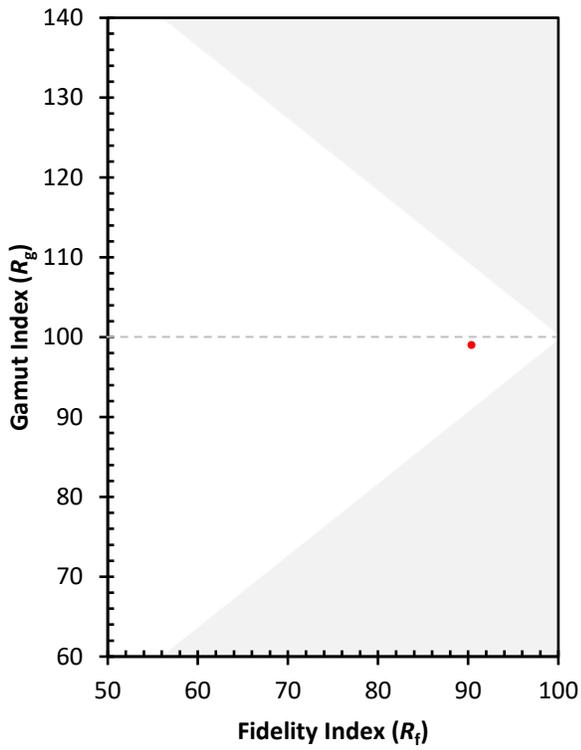
CES01 = 85	CES26 = 95	CES51 = 95	CES76 = 87
CES02 = 61	CES27 = 89	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 96	CES53 = 96	CES78 = 84
CES04 = 69	CES29 = 95	CES54 = 90	CES79 = 94
CES05 = 48	CES30 = 84	CES55 = 88	CES80 = 93
CES06 = 50	CES31 = 96	CES56 = 91	CES81 = 81
CES07 = 41	CES32 = 92	CES57 = 89	CES82 = 97
CES08 = 40	CES33 = 94	CES58 = 89	CES83 = 95
CES09 = 29	CES34 = 94	CES59 = 96	CES84 = 93
CES10 = 73	CES35 = 96	CES60 = 90	CES85 = 82
CES11 = 56	CES36 = 76	CES61 = 90	CES86 = 85
CES12 = 62	CES37 = 95	CES62 = 80	CES87 = 93
CES13 = 42	CES38 = 79	CES63 = 90	CES88 = 97
CES14 = 74	CES39 = 98	CES64 = 86	CES89 = 87
CES15 = 71	CES40 = 99	CES65 = 87	CES90 = 94
CES16 = 47	CES41 = 93	CES66 = 83	CES91 = 70
CES17 = 48	CES42 = 94	CES67 = 82	CES92 = 78
CES18 = 56	CES43 = 95	CES68 = 85	CES93 = 86
CES19 = 70	CES44 = 99	CES69 = 86	CES94 = 79
CES20 = 65	CES45 = 99	CES70 = 84	CES95 = 83
CES21 = 85	CES46 = 97	CES71 = 76	CES96 = 93
CES22 = 77	CES47 = 93	CES72 = 92	CES97 = 96
CES23 = 91	CES48 = 86	CES73 = 80	CES98 = 95
CES24 = 90	CES49 = 98	CES74 = 89	CES99 = 93
CES25 = 70	CES50 = 96	CES75 = 79	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)