

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: P1357370

Luminaire Tested: 6ASL4-35VHE-3-50-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357370
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: 6ASL4-35VHE-3-50-UNV
Description: 6FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

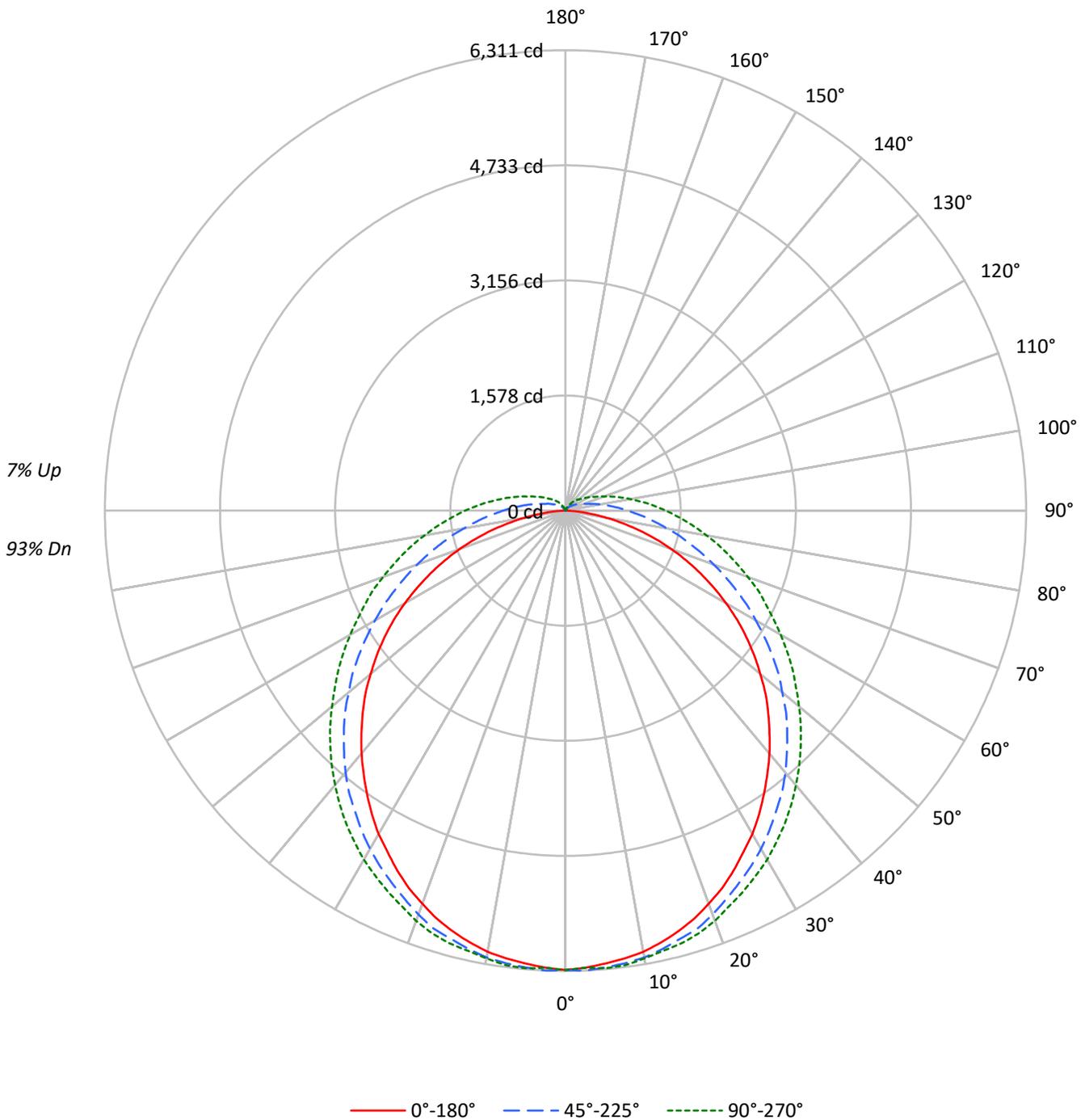
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21414.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 5.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 189.6
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

TEST NUMBER: P1357370
CATALOG NUMBER: 6ASL4-35VHE-3-50-UNV

Luminous Intensity Polar Plot





TEST NUMBER: P1357370
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	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	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	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	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	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	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	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	35	29	41	34	28	39	32	28	37	32	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	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34015	34015	34015
5°	33738	33392	33236
10°	33575	32761	32396
15°	33229	31971	31683
20°	32754	31214	30879
25°	32198	30260	29965
30°	31610	29433	29192
35°	30875	28495	28332
40°	30207	27638	27426
45°	29489	26598	26517
50°	28669	25481	25571
55°	27789	24415	24721
60°	26634	23168	23859
65°	25163	21972	23144
70°	23284	20790	22583
75°	20524	19718	22198
80°	16307	18932	22035
85°	10149	18810	22361

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 29489 cd/sqm



TEST NUMBER: P1357370
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	597.2	2.8
10°-20°	1714.8	8.0
20°-30°	2592.6	12.1
30°-40°	3139.2	14.7
40°-50°	3297.1	15.4
50°-60°	3076.1	14.4
60°-70°	2542.2	11.9
70°-80°	1830.4	8.5
80°-90°	1137.5	5.3
90°-100°	666.5	3.1
100°-110°	381.3	1.8
110°-120°	215.3	1.0
120°-130°	123.9	0.6
130°-140°	66.7	0.3
140°-150°	28.1	0.1
150°-160°	5.2	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4904.6	22.9
0°-40°	8043.8	37.6
0°-60°	14417.0	67.3
0°-90°	19927.1	93.1
90°-120°	1263.0	5.9
90°-150°	1481.8	6.9
90°-180°	1487.0	6.9
0°-180°	21414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6298	6298	6298	6298	6298	
5°	6233	6285	6285	6285	6298	592
15°	5971	6049	6076	6115	6141	1683
25°	5447	5539	5630	5709	5761	2509
35°	4740	4871	5028	5172	5238	2967
45°	3928	4072	4295	4478	4557	3031
55°	3025	3195	3457	3706	3797	2703
65°	2043	2239	2580	2907	3025	2021
75°	1048	1309	1768	2147	2304	1108
85°	196	589	1113	1506	1650	240
90°	0	354	851	1218	1375	9
95°	0	223	642	982	1126	0
105°	0	79	354	615	720	0
115°	0	39	210	380	445	0
125°	0	26	131	249	288	0
135°	0	0	79	157	196	0
145°	0	0	39	92	105	0
155°	0	0	0	26	39	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357370
 CATALOG NUMBER: 6ASL4-35VHE-3-50-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6298.1	6298.1	6298.1	6298.1	6298.1
2.5°	6272.0	6311.2	6311.2	6272.0	6272.0
5°	6232.7	6285.1	6285.1	6285.1	6298.1
7.5°	6193.4	6258.9	6258.9	6258.9	6285.1
10°	6141.0	6206.5	6219.6	6219.6	6232.7
12.5°	6062.5	6141.0	6154.1	6167.2	6180.3
15°	5970.8	6049.4	6075.5	6114.8	6141.0
17.5°	5866.0	5957.7	6010.1	6049.4	6075.5
20°	5735.1	5826.8	5892.2	5944.6	5983.9
22.5°	5604.2	5682.7	5761.3	5826.8	5866.0
25°	5447.0	5538.7	5630.4	5708.9	5761.3
27.5°	5276.8	5381.6	5499.4	5591.1	5643.5
30°	5119.7	5224.4	5355.4	5473.2	5525.6
32.5°	4936.4	5054.2	5198.3	5316.1	5381.6
35°	4740.0	4870.9	5028.0	5172.1	5237.5
37.5°	4543.6	4674.5	4870.9	5014.9	5080.4
40°	4347.2	4478.1	4687.6	4844.7	4910.2
42.5°	4137.7	4268.6	4491.2	4661.4	4740.0
45°	3928.2	4072.2	4294.8	4478.1	4556.7
47.5°	3718.7	3862.7	4098.4	4294.8	4373.3
50°	3483.0	3640.1	3875.8	4098.4	4176.9
52.5°	3260.4	3417.5	3679.4	3902.0	3980.5
55°	3024.7	3194.9	3456.8	3705.6	3797.2
57.5°	2789.0	2959.2	3234.2	3496.1	3600.8
60°	2540.2	2723.5	3011.6	3286.6	3404.4
62.5°	2291.4	2487.8	2802.1	3090.2	3208.0
65°	2042.6	2239.0	2579.5	2906.8	3024.7
67.5°	1793.9	2003.4	2370.0	2710.4	2854.5
70°	1545.1	1767.7	2160.5	2514.0	2658.1
72.5°	1296.3	1532.0	1964.1	2330.7	2474.7
75°	1047.5	1309.4	1767.7	2147.4	2304.5
77.5°	798.7	1099.9	1597.5	1977.2	2134.3
80°	576.1	916.6	1414.1	1807.0	1964.1
82.5°	366.6	733.3	1257.0	1649.8	1807.0
85°	196.4	589.2	1113.0	1505.8	1649.8
87.5°	65.5	458.3	968.9	1361.8	1505.8
90°	0.0	353.5	851.1	1217.7	1374.9
92.5°	0.0	275.0	746.3	1099.9	1243.9
95°	0.0	222.6	641.6	982.0	1126.1
97.5°	0.0	183.3	563.0	877.3	1008.2
100°	0.0	144.0	484.5	785.6	903.5
102.5°	0.0	117.8	419.0	694.0	811.8
105°	0.0	78.6	353.5	615.4	720.2
107.5°	0.0	65.5	301.2	549.9	641.6
110°	0.0	52.4	275.0	471.4	563.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	39.3	248.8	419.0	510.7
115°	0.0	39.3	209.5	379.7	445.2
117.5°	0.0	39.3	183.3	340.4	405.9
120°	0.0	26.2	170.2	301.2	366.6
122.5°	0.0	26.2	144.0	275.0	327.3
125°	0.0	26.2	130.9	248.8	288.1
127.5°	0.0	13.1	117.8	222.6	261.9
130°	0.0	13.1	104.8	196.4	235.7
132.5°	0.0	13.1	91.7	183.3	222.6
135°	0.0	0.0	78.6	157.1	196.4
137.5°	0.0	0.0	65.5	144.0	170.2
140°	0.0	0.0	52.4	117.8	157.1
142.5°	0.0	0.0	39.3	104.8	130.9
145°	0.0	0.0	39.3	91.7	104.8
147.5°	0.0	0.0	26.2	65.5	91.7
150°	0.0	0.0	13.1	52.4	65.5
152.5°	0.0	0.0	0.0	39.3	52.4
155°	0.0	0.0	0.0	26.2	39.3
157.5°	0.0	0.0	0.0	0.0	13.1
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	21.60	23.14	22.07	23.59	24.07	23.65	25.19	24.12	25.65	26.13
	3H	23.09	24.50	23.57	24.96	25.49	26.13	27.53	26.61	28.00	28.52
	4H	23.57	24.90	24.07	25.39	25.92	27.34	28.67	27.84	29.15	29.69
	6H	23.85	25.09	24.36	25.58	26.14	28.61	29.85	29.12	30.34	30.90
	8H	23.90	25.09	24.43	25.61	26.17	29.27	30.46	29.79	30.98	31.53
	12H	23.91	25.05	24.45	25.57	26.16	30.00	31.14	30.53	31.65	32.24
4H	2H	22.48	23.81	22.98	24.29	24.83	24.08	25.42	24.59	25.90	26.44
	3H	24.21	25.35	24.73	25.87	26.43	26.78	27.92	27.30	28.44	29.01
	4H	24.82	25.86	25.35	26.39	26.98	28.16	29.20	28.70	29.74	30.33
	6H	25.21	26.13	25.77	26.69	27.30	29.63	30.54	30.18	31.11	31.71
	8H	25.31	26.17	25.87	26.73	27.35	30.39	31.26	30.95	31.82	32.44
	12H	25.35	26.14	25.94	26.73	27.35	31.25	32.04	31.83	32.63	33.25
8H	4H	25.50	26.37	26.07	26.93	27.55	28.38	29.24	28.94	29.80	30.42
	6H	26.08	26.82	26.68	27.42	28.04	30.01	30.74	30.60	31.35	31.97
	8H	26.27	26.93	26.87	27.54	28.18	30.92	31.58	31.52	32.19	32.83
	12H	26.38	26.97	26.99	27.57	28.28	31.96	32.55	32.57	33.16	33.86
12H	4H	25.70	26.49	26.28	27.08	27.70	28.39	29.17	28.97	29.76	30.39
	6H	26.38	27.04	26.99	27.66	28.30	30.05	30.71	30.65	31.32	31.96
	8H	26.66	27.25	27.27	27.85	28.56	31.02	31.61	31.63	32.22	32.92

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: 4π
 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_f: 90.4
 R_g: 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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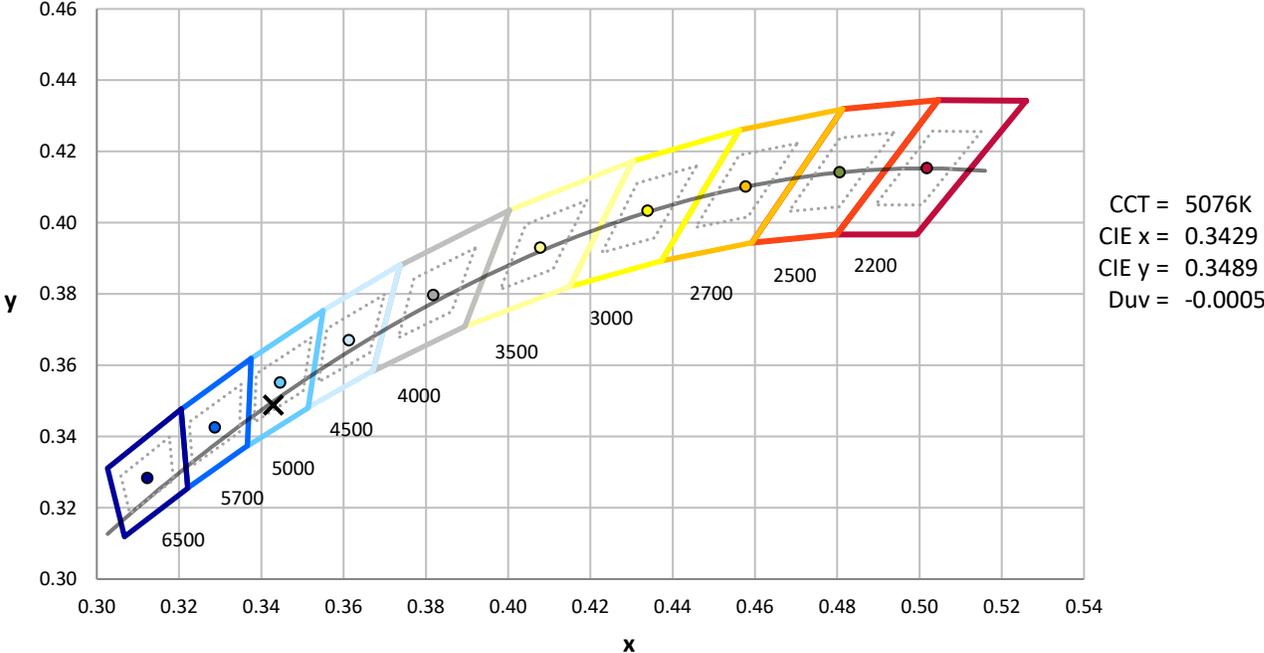
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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



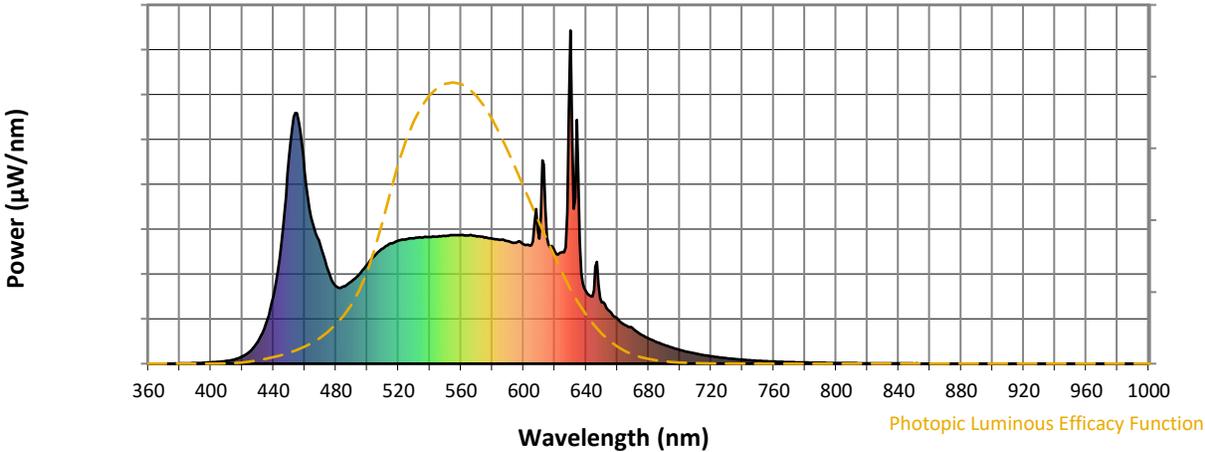
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

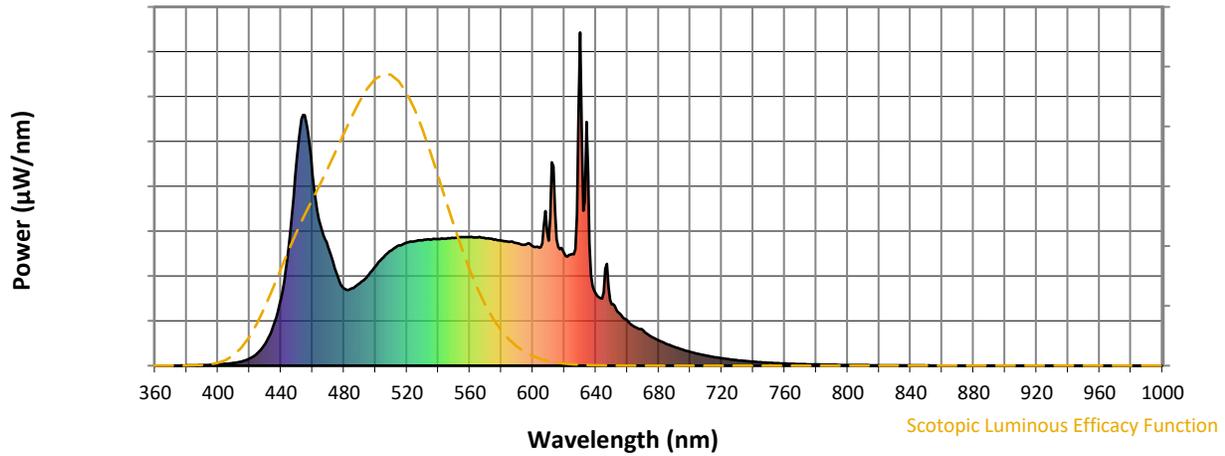


Photopic Lumens: NR

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	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



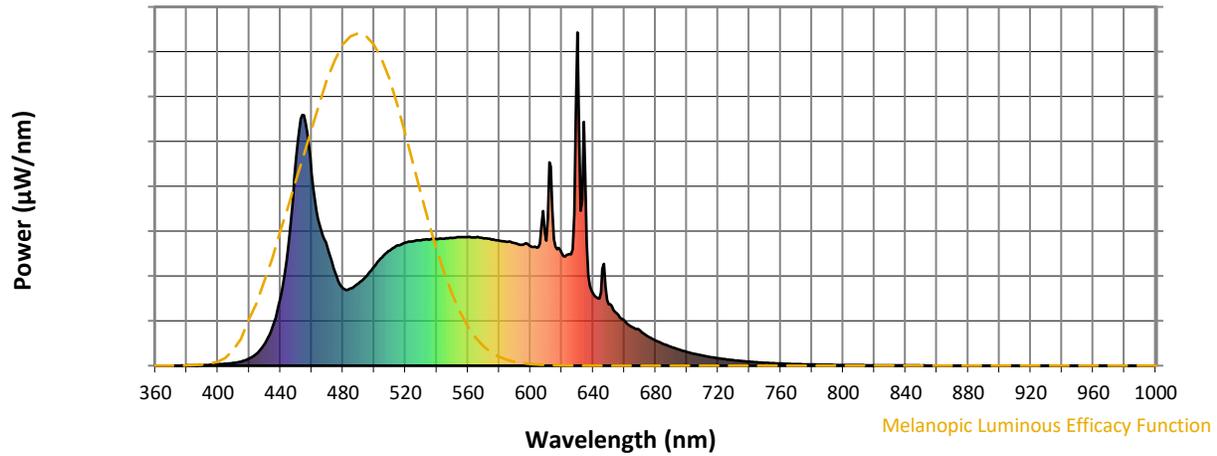
Scotopic Lumens: NR

S/P: 2.12

λ (nm)	Power W [^] /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	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



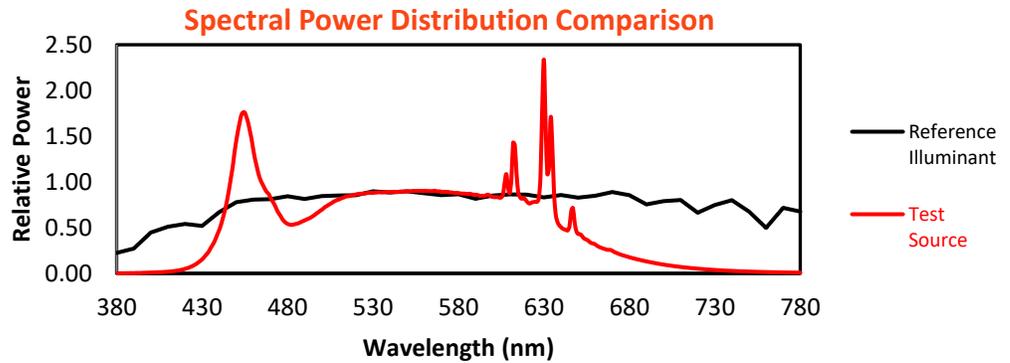
Melanopic Lumens: NR

M/P: 4.65

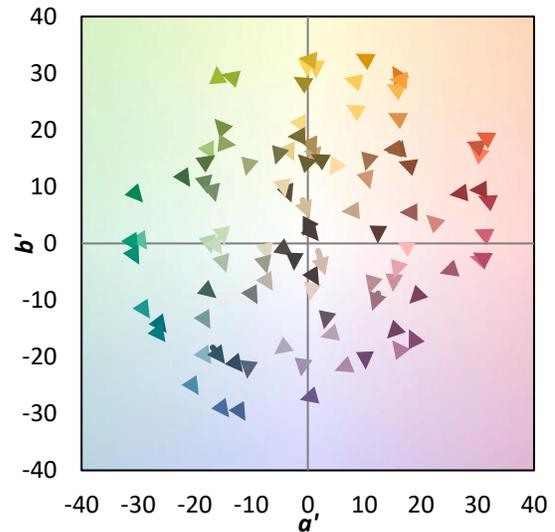
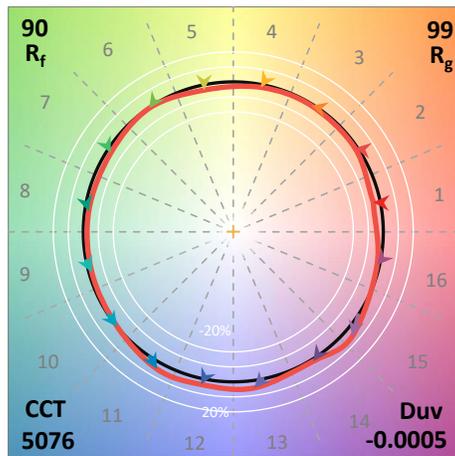
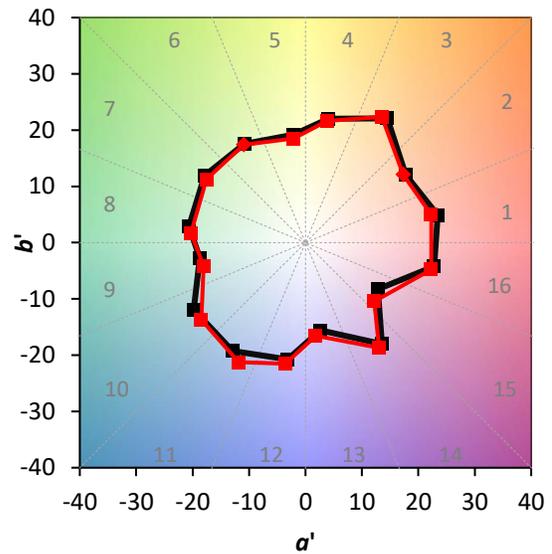
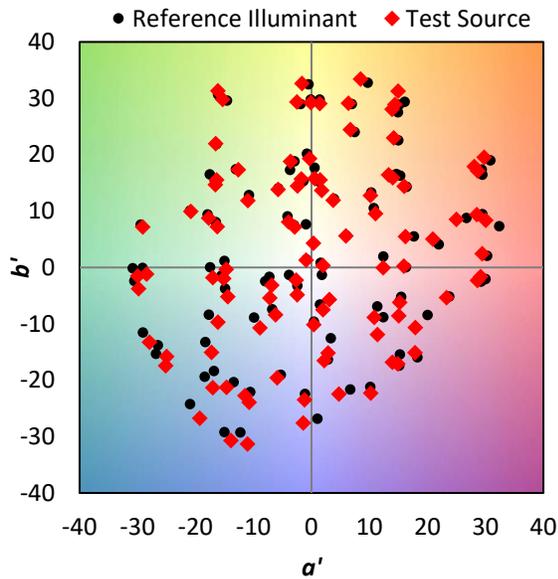
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	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

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

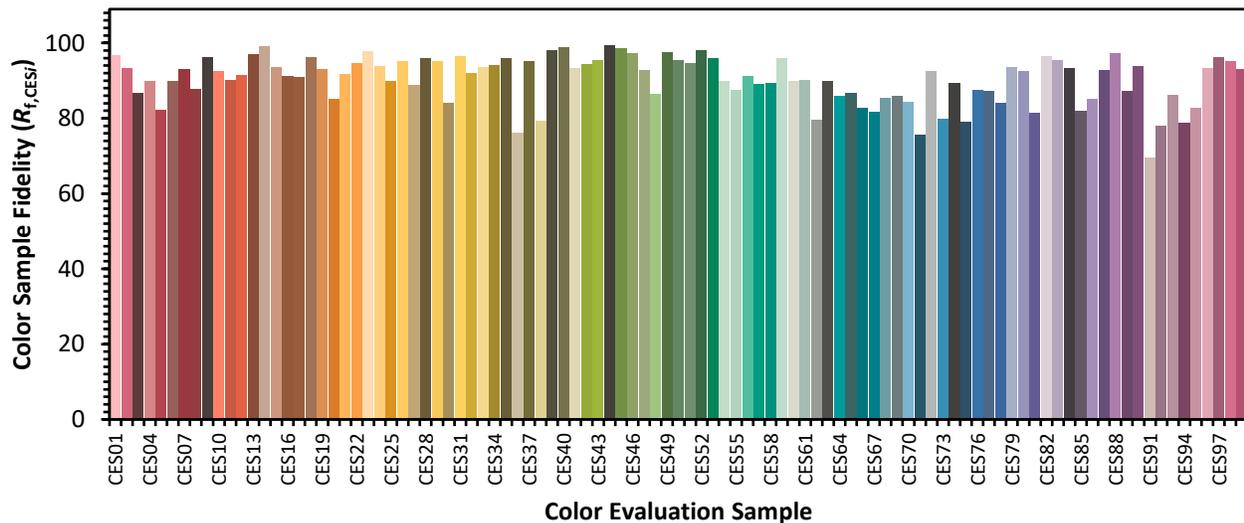


Color Vector Graphics

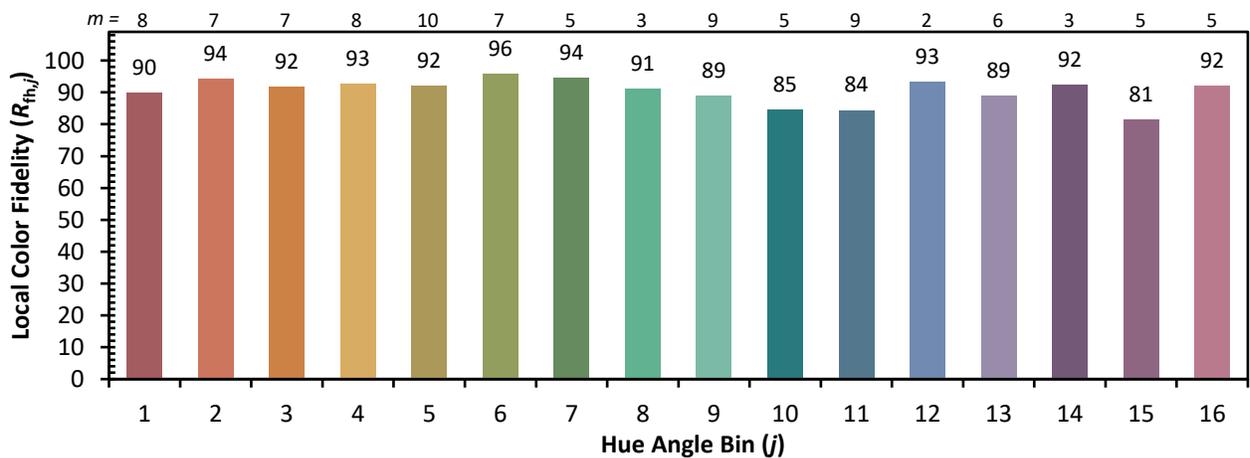
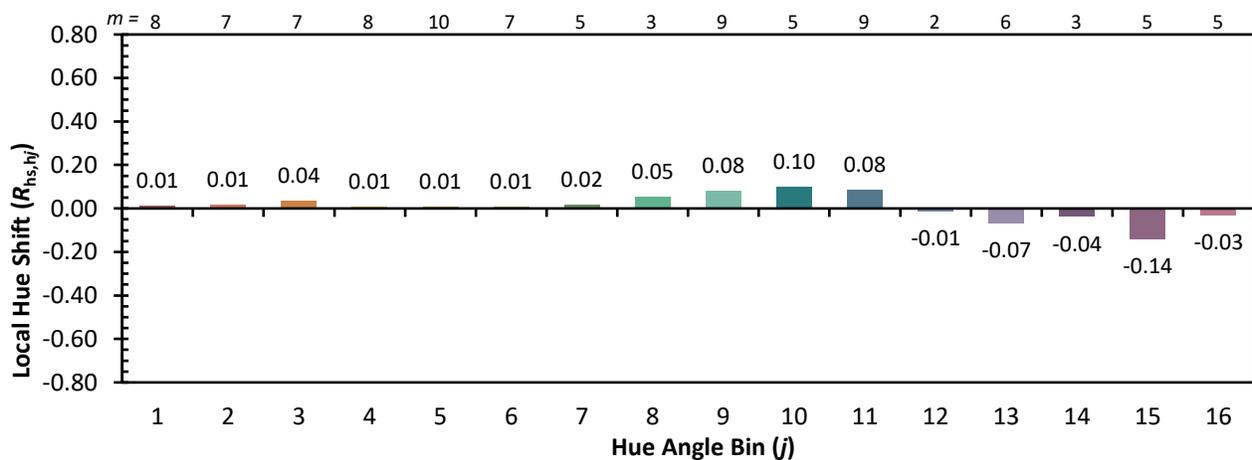
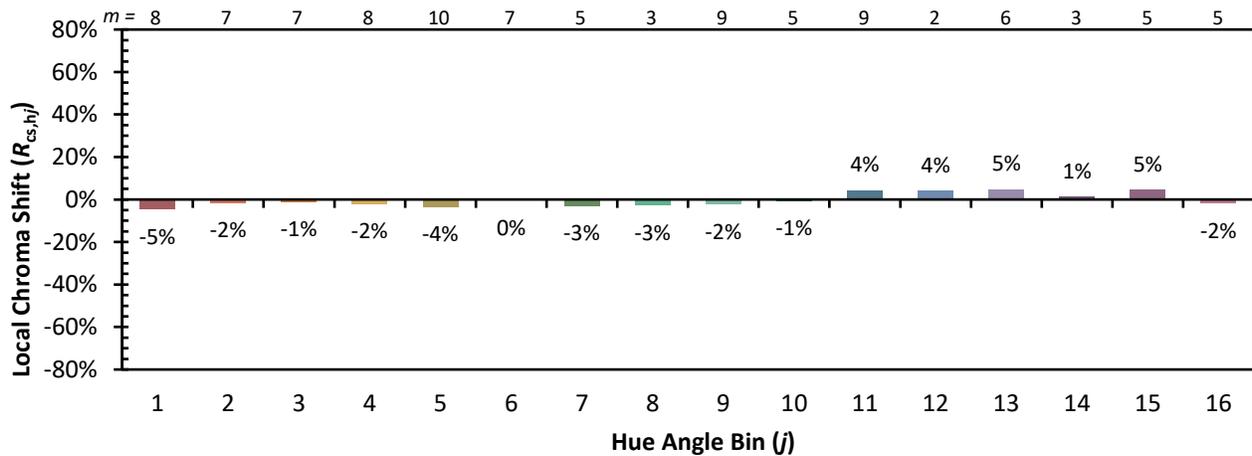


Individual Sample Fidelity Index ($R_{f,i}$)

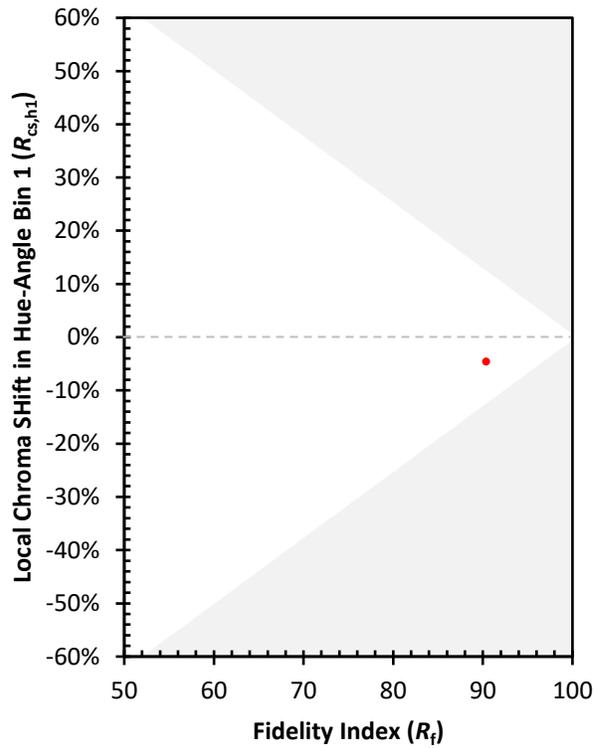
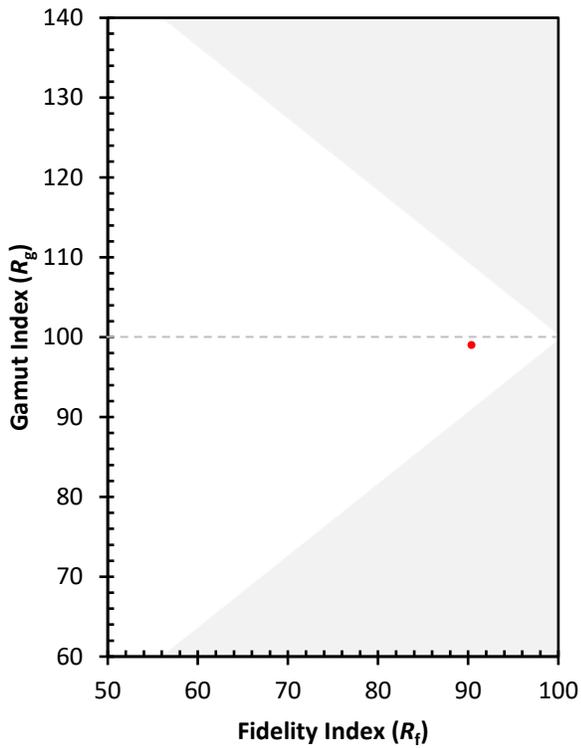
CES01 = 85	CES26 = 95	CES51 = 95	CES76 = 87
CES02 = 61	CES27 = 89	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 96	CES53 = 96	CES78 = 84
CES04 = 69	CES29 = 95	CES54 = 90	CES79 = 94
CES05 = 48	CES30 = 84	CES55 = 88	CES80 = 93
CES06 = 50	CES31 = 96	CES56 = 91	CES81 = 81
CES07 = 41	CES32 = 92	CES57 = 89	CES82 = 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)