

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: P1357242

Luminaire Tested: 4ASL4-5-1-35-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357242
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: 4ASL4-5-1-35-UNV
Description: 4FT 500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS 1 ROW
Light Source: -
Ballast/Driver: -

Summary

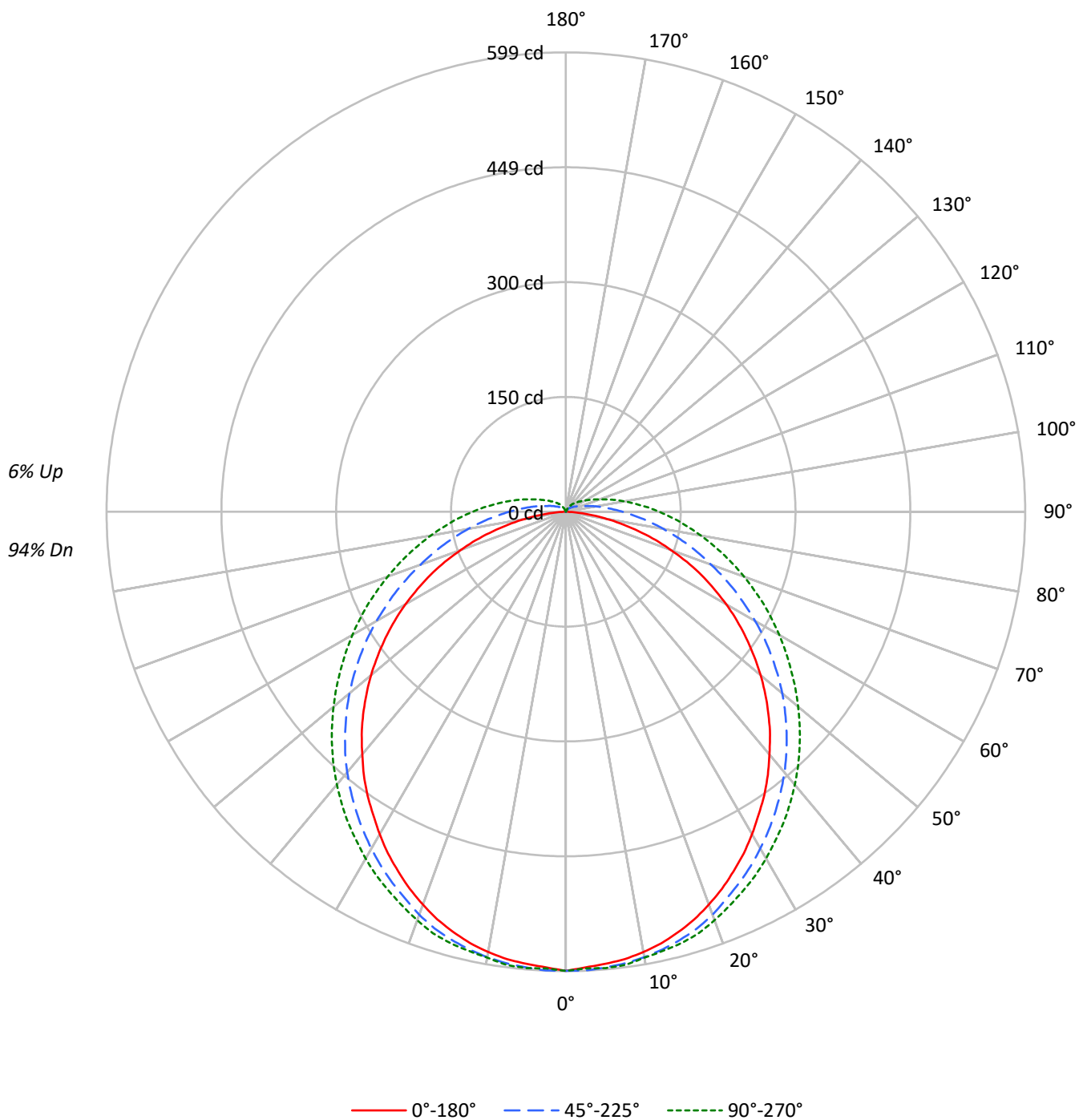
Lumens per Lamp: N/A
Luminaire Lumens: 2004.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108		102	102	102		96
1	106	100	95	91	102	97	93	89	92	88	85		87	84	81		82
2	95	86	79	73	92	84	77	71	79	74	69		75	70	66		71
3	87	76	67	60	84	73	65	59	69	63	57		66	60	55		62
4	79	67	57	50	76	65	56	50	62	54	48		58	52	47		56
5	73	59	50	43	70	58	49	43	55	47	42		52	46	41		50
6	67	53	44	38	65	52	43	37	50	42	36		47	41	35		45
7	62	48	39	33	60	47	39	33	45	37	32		43	36	31		41
8	58	44	35	29	56	43	35	29	41	34	29		39	33	28		38
9	54	40	32	26	52	39	32	26	38	31	26		36	30	25		35
10	51	37	29	24	49	36	29	24	35	28	23		34	27	23		32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4858	4858	4858
5°	4810	4760	4735
10°	4782	4663	4612
15°	4734	4560	4514
20°	4663	4443	4395
25°	4576	4304	4266
30°	4482	4175	4145
35°	4388	4044	4024
40°	4281	3912	3899
45°	4181	3769	3771
50°	4062	3618	3637
55°	3916	3449	3504
60°	3753	3271	3387
65°	3545	3084	3270
70°	3223	2888	3156
75°	2805	2714	3067
80°	2230	2562	3014
85°	1312	2464	3035

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 4181 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	2.8
10°-20°	162.7	8.1
20°-30°	246.0	12.3
30°-40°	297.4	14.8
40°-50°	312.7	15.6
50°-60°	291.3	14.5
60°-70°	239.3	11.9
70°-80°	169.9	8.5
80°-90°	102.4	5.1
90°-100°	57.4	2.9
100°-110°	31.8	1.6
110°-120°	17.7	0.9
120°-130°	10.2	0.5
130°-140°	5.6	0.3
140°-150°	2.5	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	465.4	23.2
0°-40°	762.8	38.1
0°-60°	1366.7	68.2
0°-90°	1878.3	93.7
90°-120°	106.9	5.3
90°-150°	125.1	6.2
90°-180°	126.0	6.3
0°-180°	2004.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	599	599	599	599	599	
5°	592	597	596	596	597	56
15°	567	575	578	580	582	160
25°	517	527	534	542	546	238
35°	451	462	477	489	495	282
45°	374	387	407	424	431	288
55°	287	303	327	349	358	257
65°	195	213	243	272	284	192
75°	98	123	164	198	212	105
85°	18	53	99	135	149	23
90°	0	31	74	108	121	1
95°	0	18	54	85	98	0
105°	0	7	28	52	61	0
115°	0	3	18	31	37	0
125°	0	2	11	20	24	0
135°	0	1	7	13	16	0
145°	1	0	3	7	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	598.6	598.6	598.6	598.6	598.6
2.5°	594.5	599.9	598.6	595.9	595.9
5°	591.8	597.2	596.5	595.9	597.2
7.5°	588.4	593.8	593.8	594.5	595.9
10°	583.0	589.8	589.8	589.8	590.5
12.5°	576.2	583.0	584.4	585.0	586.4
15°	567.4	574.9	577.6	580.3	582.3
17.5°	557.3	564.7	569.5	572.8	576.2
20°	545.1	553.2	559.3	563.4	566.8
22.5°	532.2	540.3	546.4	552.5	556.6
25°	517.3	526.8	534.3	541.7	545.8
27.5°	502.4	511.9	521.4	530.2	534.9
30°	485.5	496.3	507.2	517.3	522.1
32.5°	467.9	479.4	492.3	503.1	508.5
35°	451.0	462.5	476.7	488.9	495.0
37.5°	432.7	444.2	460.4	474.0	480.1
40°	413.0	425.9	443.5	457.7	464.5
42.5°	394.1	407.0	425.9	441.5	448.3
45°	373.8	387.3	407.0	423.9	431.3
47.5°	352.8	367.0	388.0	405.6	413.7
50°	331.8	346.7	368.4	387.3	395.4
52.5°	309.4	325.0	348.0	368.4	377.2
55°	287.1	303.4	327.1	348.7	358.2
57.5°	264.8	281.0	306.7	329.8	339.9
60°	241.7	258.7	285.1	310.1	321.6
62.5°	218.0	235.6	263.4	290.5	302.7
65°	195.0	212.6	243.1	271.5	284.4
67.5°	170.6	189.6	222.1	251.9	265.4
70°	145.6	167.2	201.8	233.6	247.2
72.5°	123.2	145.6	182.8	215.3	229.5
75°	98.2	123.2	163.9	197.7	211.9
77.5°	76.5	103.6	146.3	180.8	195.0
80°	54.8	84.6	129.3	164.5	178.8
82.5°	35.2	67.7	113.8	149.6	163.2
85°	18.3	52.8	98.9	135.4	149.0
87.5°	5.4	40.6	85.3	121.2	134.7
90°	0.0	31.1	73.8	108.3	121.2
92.5°	0.0	23.7	63.6	96.8	109.7
95°	0.0	18.3	54.2	85.3	97.5
97.5°	0.0	14.2	46.7	75.2	87.3
100°	0.0	11.5	40.0	66.4	77.9
102.5°	0.0	9.5	34.5	58.9	69.1
105°	0.0	6.8	28.4	51.5	60.9
107.5°	0.0	4.7	25.1	45.4	53.5
110°	0.0	4.1	22.3	39.3	47.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.4	19.6	35.2	42.0
115°	0.0	3.4	17.6	31.1	37.2
117.5°	0.0	2.7	14.9	27.8	33.2
120°	0.0	2.7	13.5	25.1	29.8
122.5°	0.0	2.0	12.2	22.3	27.1
125°	0.0	2.0	10.8	20.3	23.7
127.5°	0.0	1.4	9.5	18.3	21.7
130°	0.0	1.4	8.8	16.3	19.6
132.5°	0.0	0.7	8.1	14.9	17.6
135°	0.0	0.7	6.8	12.9	16.3
137.5°	0.0	0.0	6.1	11.5	14.2
140°	0.0	0.0	4.7	10.2	12.9
142.5°	0.7	0.0	4.1	8.8	10.8
145°	0.7	0.0	2.7	7.4	9.5
147.5°	0.7	0.7	2.0	6.1	7.4
150°	0.7	0.7	1.4	4.1	6.1
152.5°	0.7	0.7	0.7	2.7	4.1
155°	0.7	0.7	0.0	2.0	2.7
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	14.90	16.45	15.36	16.89	17.36	16.88	18.43	17.34	18.87	19.34
	3H	16.39	17.80	16.86	18.25	18.76	19.29	20.70	19.76	21.16	21.66
	4H	16.86	18.20	17.36	18.67	19.20	20.45	21.79	20.95	22.27	22.79
	6H	17.14	18.39	17.65	18.87	19.41	21.66	22.91	22.17	23.39	23.93
	8H	17.19	18.39	17.71	18.90	19.44	22.28	23.48	22.80	23.99	24.53
	12H	17.21	18.35	17.73	18.85	19.43	22.97	24.11	23.49	24.61	25.19
4H	2H	15.76	17.10	16.25	17.57	18.09	17.31	18.65	17.81	19.12	19.65
	3H	17.49	18.63	17.99	19.14	19.69	19.95	21.09	20.45	21.60	22.15
	4H	18.09	19.13	18.61	19.66	20.23	21.28	22.32	21.81	22.85	23.43
	6H	18.48	19.41	19.03	19.96	20.55	22.68	23.60	23.22	24.15	24.74
	8H	18.58	19.44	19.13	19.99	20.60	23.40	24.27	23.95	24.82	25.42
	12H	18.62	19.41	19.19	19.99	20.60	24.21	24.99	24.78	25.57	26.18
8H	4H	18.74	19.61	19.29	20.16	20.76	21.49	22.36	22.04	22.91	23.52
	6H	19.31	20.04	19.89	20.63	21.25	23.06	23.79	23.64	24.38	24.99
	8H	19.48	20.15	20.08	20.75	21.37	23.92	24.58	24.51	25.19	25.81
	12H	19.59	20.18	20.19	20.78	21.47	24.91	25.50	25.50	26.09	26.78
12H	4H	18.92	19.71	19.49	20.29	20.90	21.50	22.29	22.07	22.87	23.48
	6H	19.58	20.24	20.18	20.85	21.47	23.09	23.75	23.69	24.36	24.98
	8H	19.85	20.44	20.45	21.04	21.73	24.02	24.61	24.62	25.21	25.90

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-1

Test Date: 11/17/2025

Luminaire Tested: 4ASL-2-35-UNV-OPL-1_600mA

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

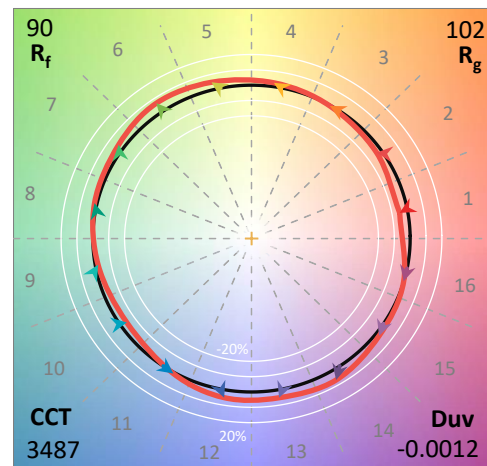
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-1
 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-2-35-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 3487
 CIE u' : 0.2366
 CIE v' : 0.5099
 Duv: -0.0012
 CIE x: 0.4047
 CIE y: 0.3876
 CIE z: 0.2077
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 581
 Purity: 37.79273
 R_f: 90
 R_g: 102.4

CRI (Ra): 92.5
 R1: 94.7
 R2: 94.3
 R3: 92.9
 R4: 93.3
 R5: 93.9
 R6: 93.4
 R7: 92.5
 R8: 85.2
 R9: 61.3
 R10: 85.5
 R11: 93.7
 R12: 80.8
 R13: 94.3
 R14: 95.1
 R15: 90.9



Test Conditions

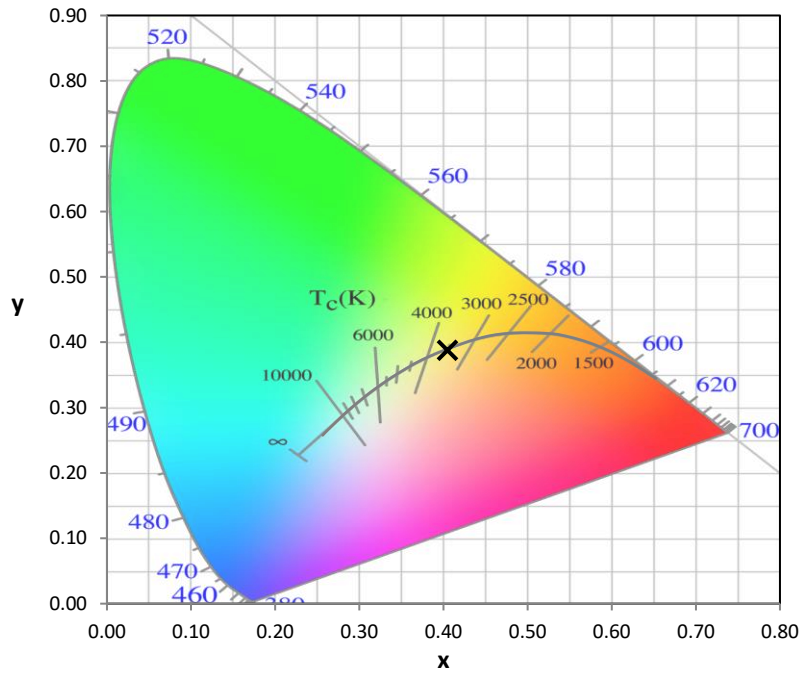
Stabilization Time: 31M
 Operation Time: 1H 31M
 Sphere Temperature (°C): 24.1

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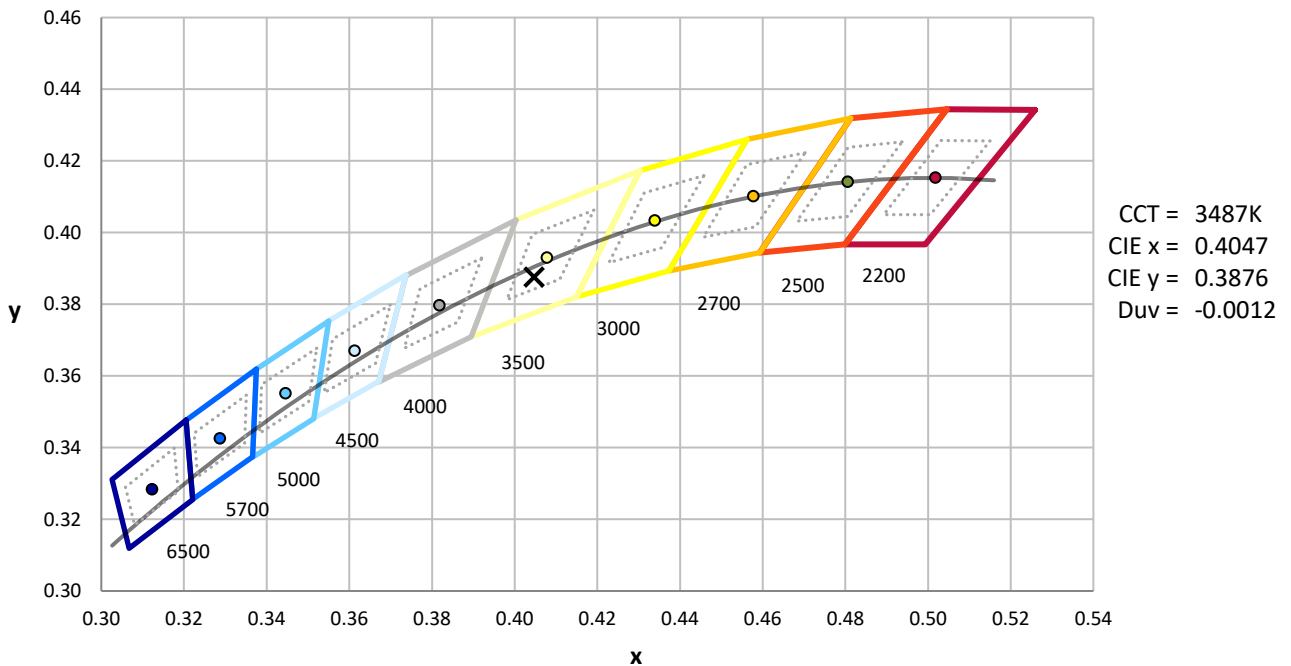
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



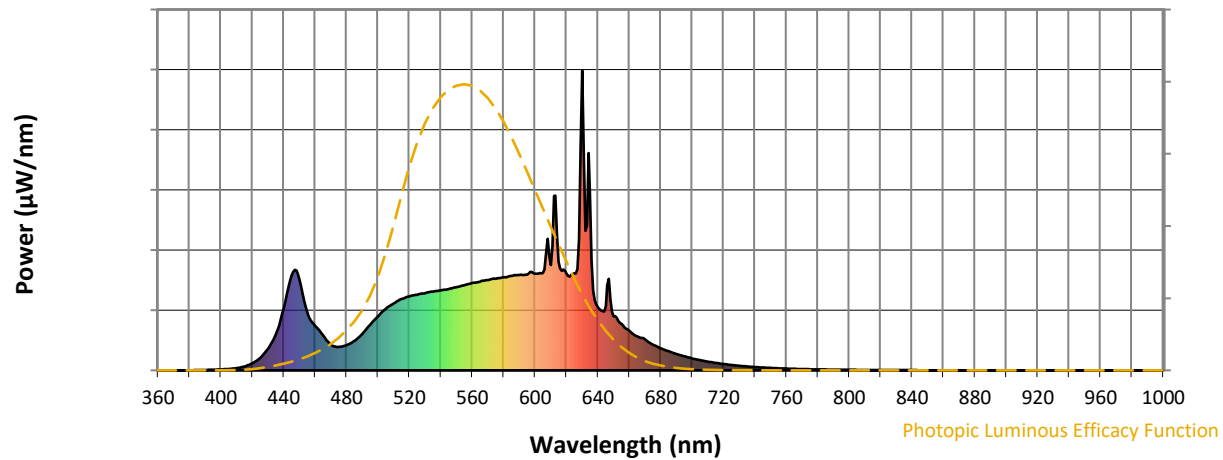
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength

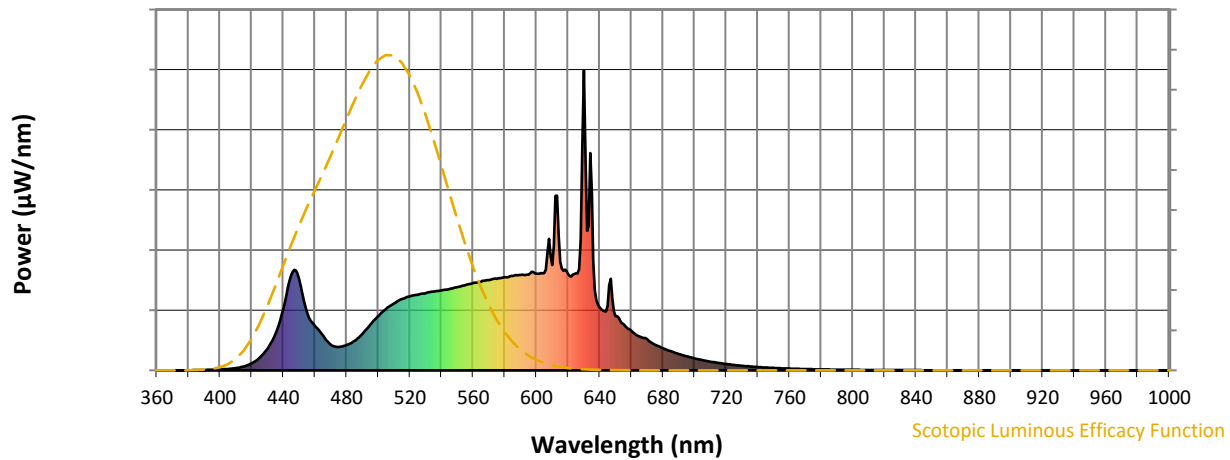


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



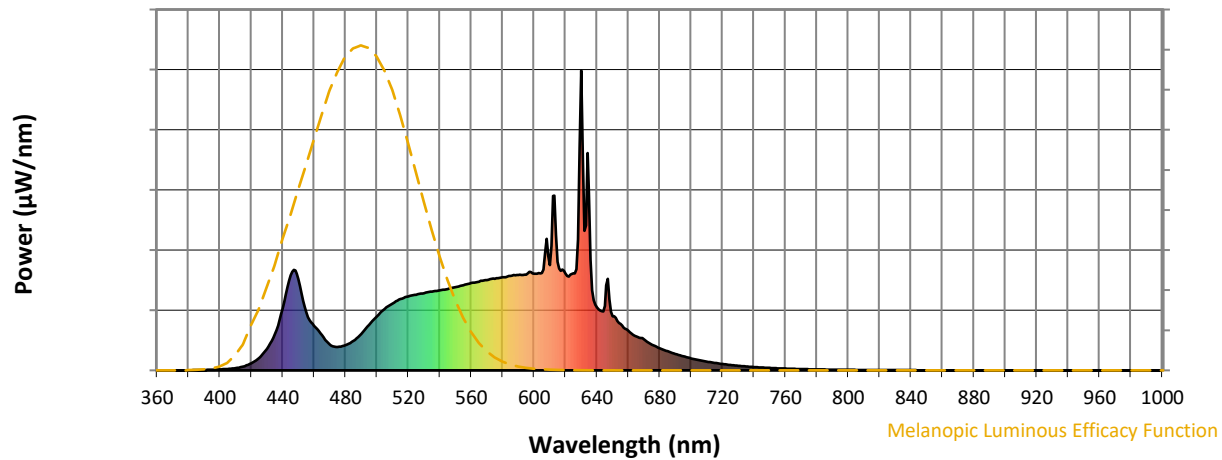
Scotopic Lumens: NR

S/P: 1.58

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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.15

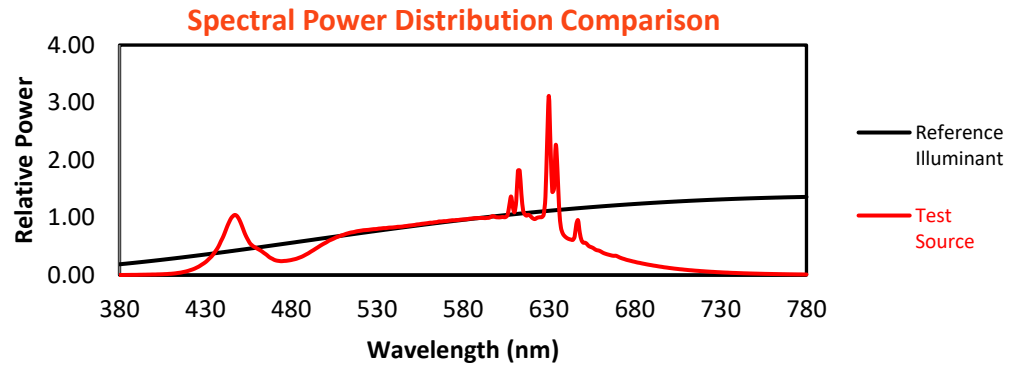
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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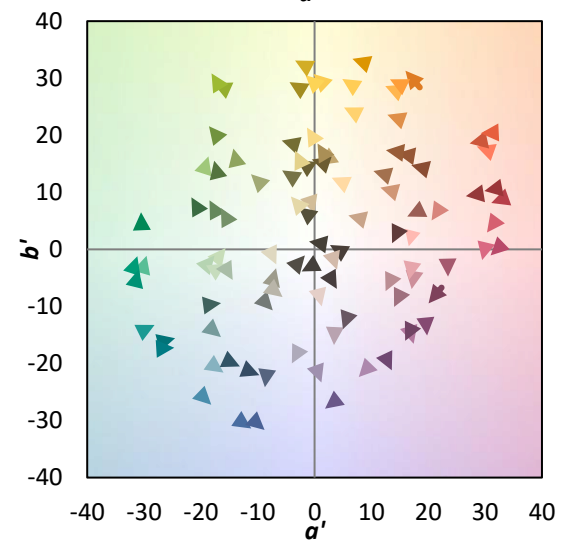
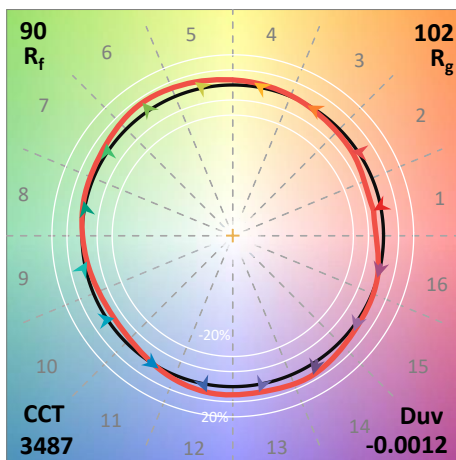
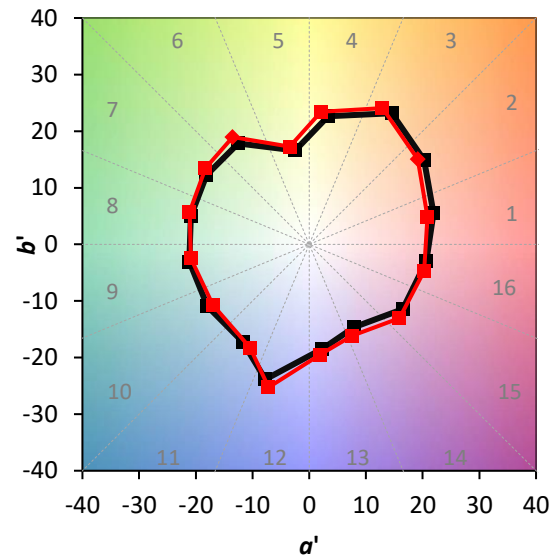
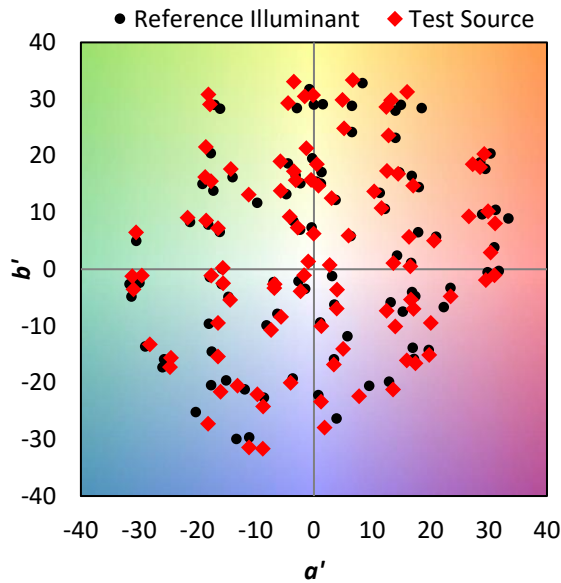
TM-30-18

Summary

$R_f = 90$
 $R_g = 102.4$
 $CIE R_a = 92.5$
 $R_9 = 61.3$

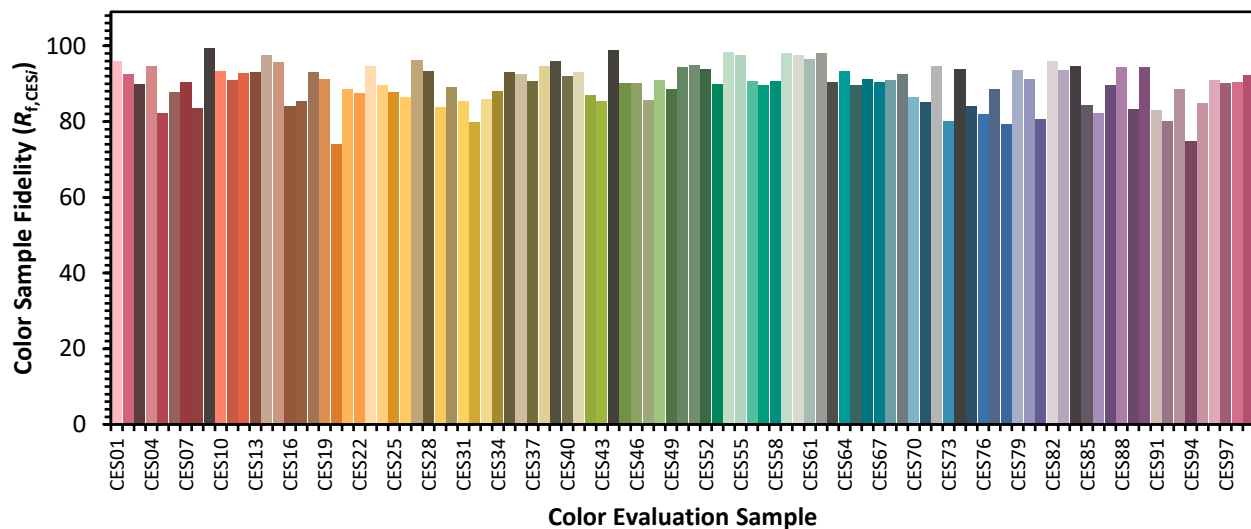


Color Vector Graphics

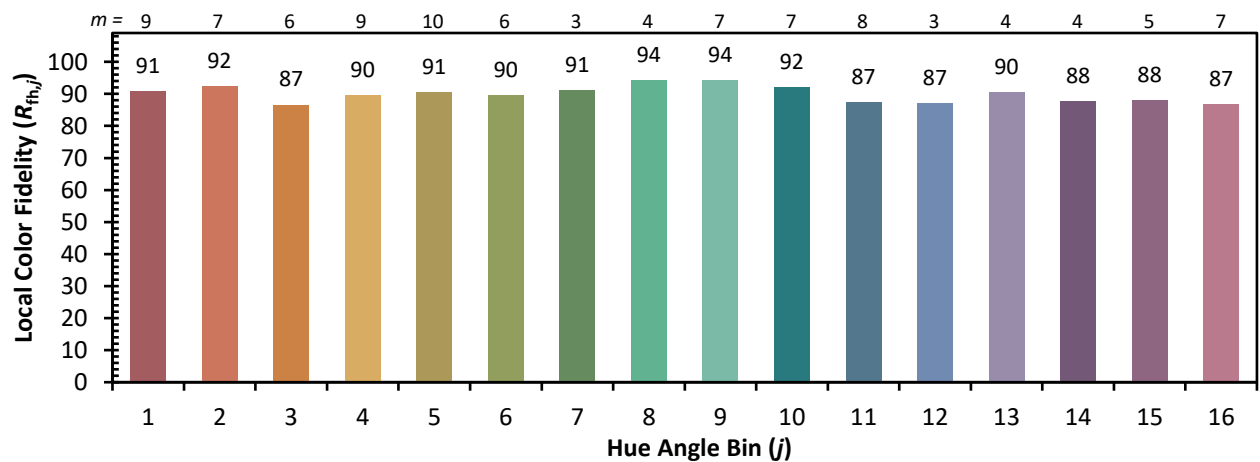
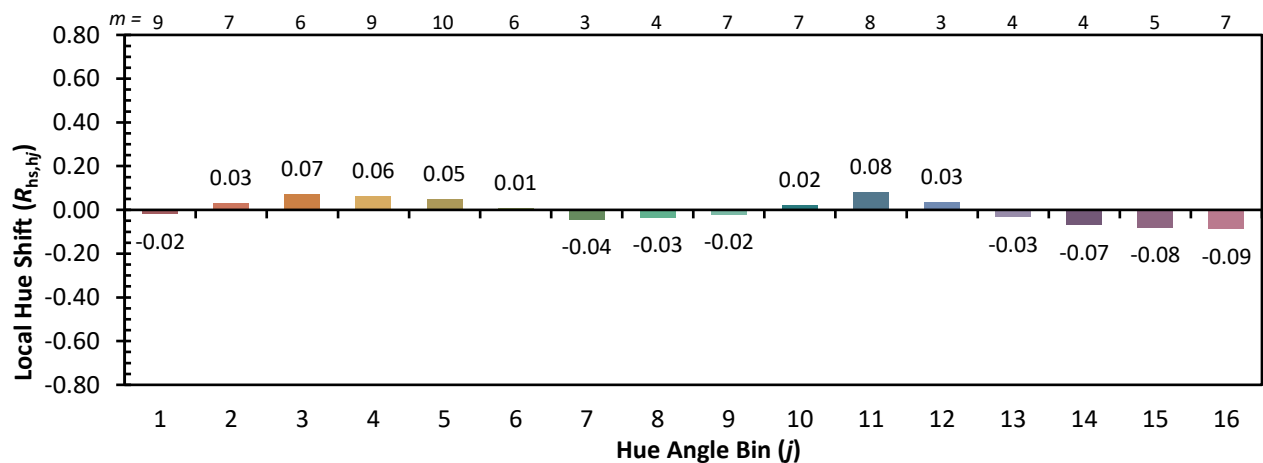
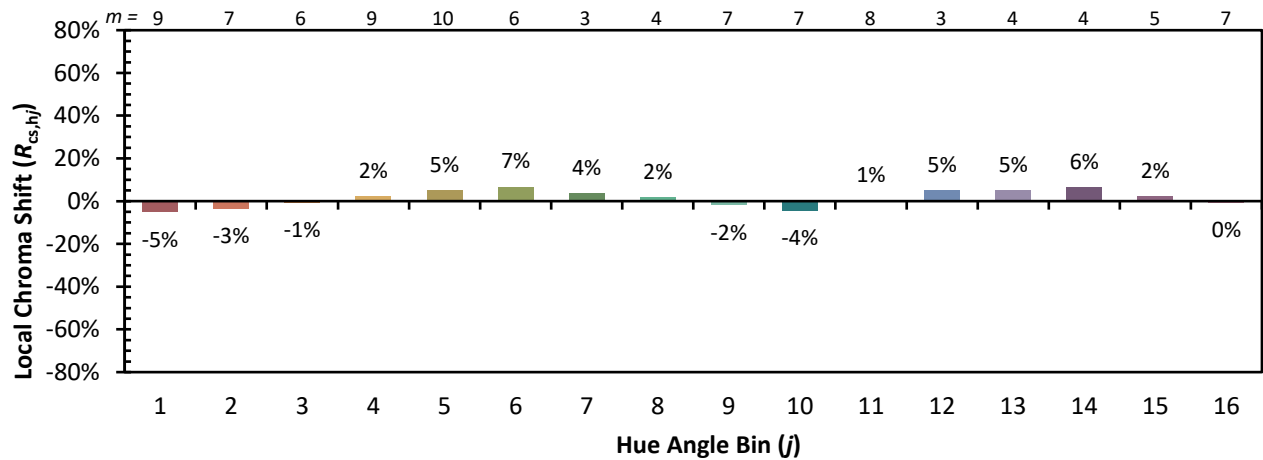


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 82
CES02 = 62	CES27 = 96	CES52 = 94	CES77 = 89
CES03 = 31	CES28 = 93	CES53 = 90	CES78 = 79
CES04 = 70	CES29 = 84	CES54 = 98	CES79 = 93
CES05 = 50	CES30 = 89	CES55 = 97	CES80 = 91
CES06 = 51	CES31 = 85	CES56 = 91	CES81 = 81
CES07 = 43	CES32 = 80	CES57 = 90	CES82 = 96
CES08 = 41	CES33 = 86	CES58 = 91	CES83 = 94
CES09 = 29	CES34 = 88	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 93	CES60 = 97	CES85 = 84
CES11 = 58	CES36 = 93	CES61 = 96	CES86 = 82
CES12 = 64	CES37 = 91	CES62 = 98	CES87 = 90
CES13 = 43	CES38 = 95	CES63 = 91	CES88 = 94
CES14 = 74	CES39 = 96	CES64 = 93	CES89 = 83
CES15 = 71	CES40 = 92	CES65 = 90	CES90 = 94
CES16 = 47	CES41 = 93	CES66 = 91	CES91 = 83
CES17 = 49	CES42 = 87	CES67 = 91	CES92 = 80
CES18 = 56	CES43 = 85	CES68 = 91	CES93 = 89
CES19 = 71	CES44 = 99	CES69 = 93	CES94 = 75
CES20 = 66	CES45 = 90	CES70 = 87	CES95 = 85
CES21 = 86	CES46 = 90	CES71 = 85	CES96 = 91
CES22 = 78	CES47 = 86	CES72 = 95	CES97 = 90
CES23 = 91	CES48 = 91	CES73 = 80	CES98 = 91
CES24 = 90	CES49 = 88	CES74 = 94	CES99 = 92
CES25 = 71	CES50 = 94	CES75 = 84	



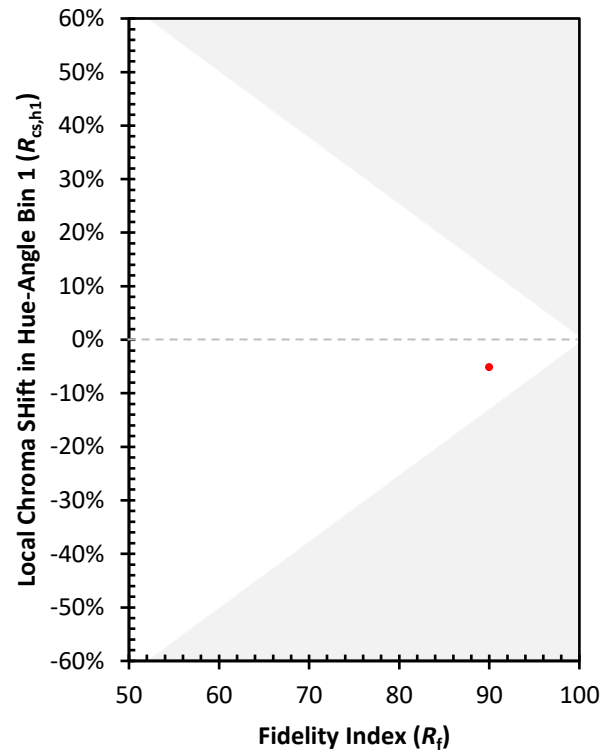
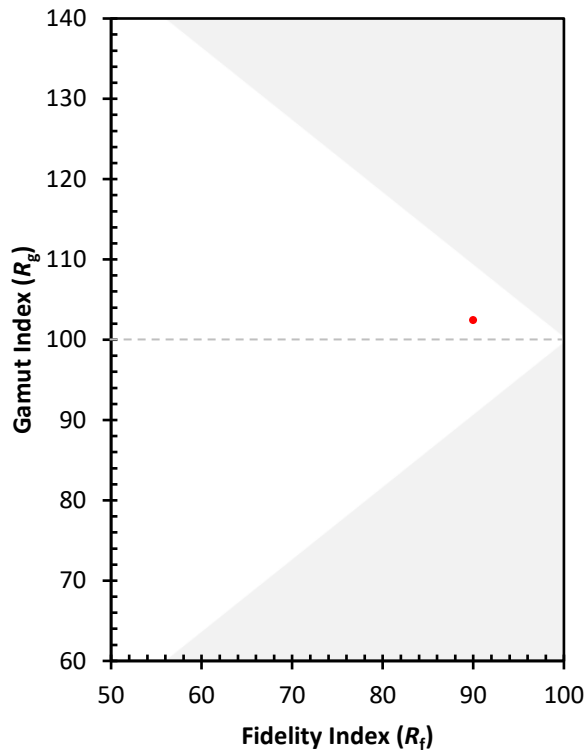
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)