

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P995438

Luminaire Tested: **LTT5612FSMB-950**

Issue Date: 06/09/2025



Test Information

Test Method: LM-79-08
Report Number: P995438
Test Lab: INNOVATION CENTER (G1)
Issue Date: 06/09/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: LTT5612FSMB-950
Description: HALO LT BLACK TRIM HIGH LUMENS 5-6 inch 90 CRI COLOR SELECTABLE
FIXTURE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

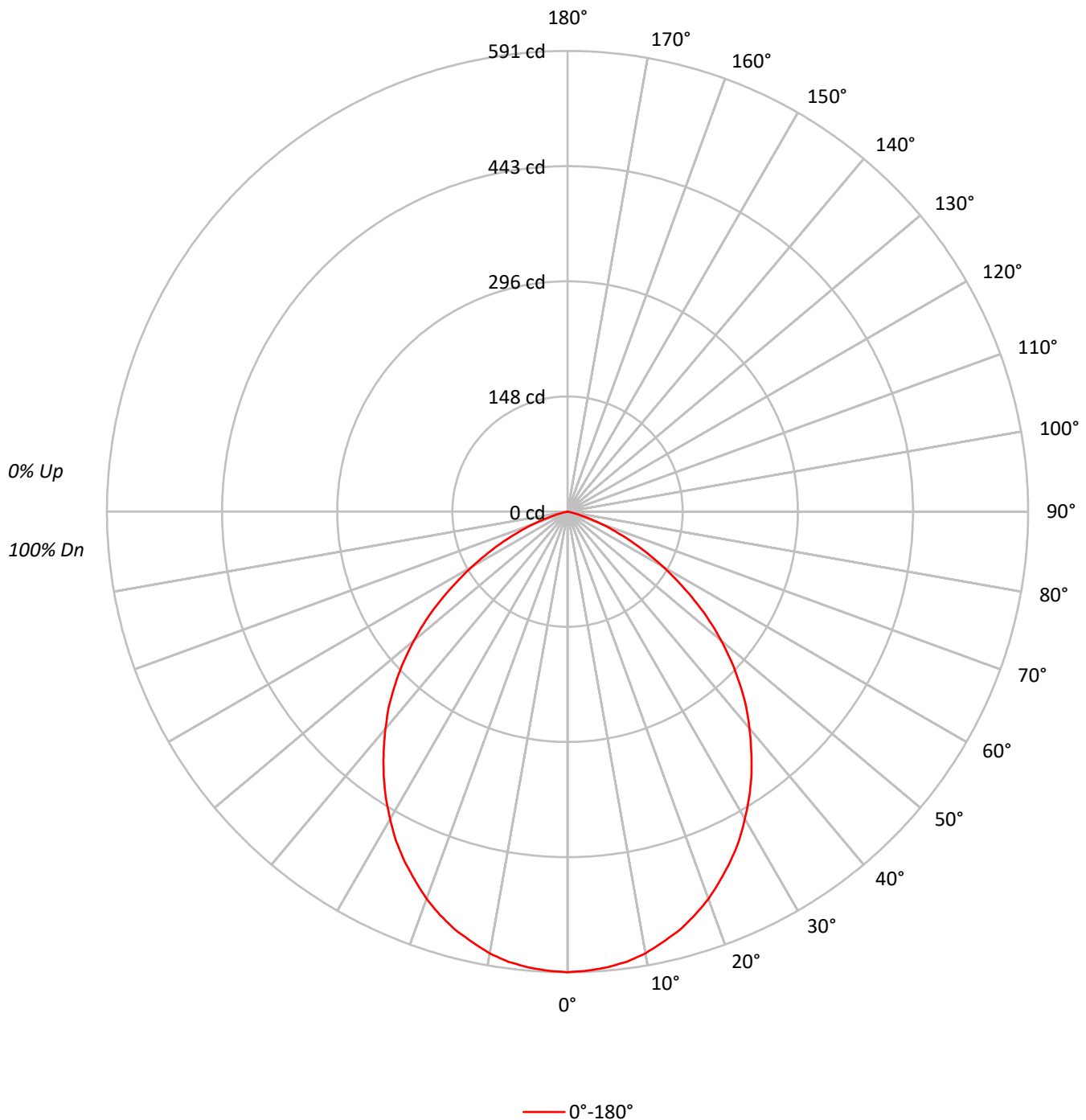
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1223.0 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.25
Luminous Opening: Circular (Dia: 0.4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
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: 25 FT

TEST NUMBER: P995438
CATALOG NUMBER: LTT5612FSMB-950

Luminous Intensity Polar Plot





TEST NUMBER: P995438

CATALOG NUMBER: LTT5612FSMB-950

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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	107	104	101	108	105	102	99	101	98	96		97	95	93		94
2	103	96	90	85	100	94	89	84	91	86	82		87	84	81		84
3	95	86	79	73	92	84	78	72	81	76	71		79	74	70		76
4	87	77	69	63	85	76	68	63	73	67	62		71	66	61		69
5	81	69	61	55	79	68	61	55	66	60	55		64	59	54		63
6	75	63	55	49	73	62	54	49	60	54	48		59	53	48		57
7	70	58	49	44	68	57	49	44	55	48	43		54	48	43		53
8	65	53	45	39	64	52	45	39	51	44	39		50	43	39		49
9	61	49	41	36	60	48	41	36	47	40	36		46	40	35		45
10	57	45	38	33	56	45	37	33	44	37	32		43	37	32		42

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	50614
5°	50447
10°	50047
15°	49270
20°	48193
25°	46764
30°	45023
35°	43019
40°	40623
45°	37843
50°	34287
55°	29763
60°	24224
65°	18343
70°	11696
75°	4666
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	4.6
10°-20°	156.4	12.8
20°-30°	227.6	18.6
30°-40°	256.8	21.0
40°-50°	240.4	19.7
50°-60°	177.8	14.5
60°-70°	90.1	7.4
70°-80°	18.3	1.5
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	439.6	35.9
0°-40°	696.3	56.9
0°-60°	1114.6	91.1
0°-90°	1223.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1223.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	591	
5°	587	56
15°	556	156
25°	495	228
35°	411	257
45°	312	240
55°	199	178
65°	90	90
75°	14	18
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	590.9
2.5°	589.5
5°	586.7
7.5°	582.4
10°	575.4
12.5°	565.5
15°	555.6
17.5°	542.9
20°	528.7
22.5°	511.8
25°	494.8
27.5°	476.4
30°	455.2
32.5°	434.0
35°	411.4
37.5°	387.4
40°	363.3
42.5°	339.3
45°	312.4
47.5°	285.6
50°	257.3
52.5°	229.0
55°	199.3
57.5°	169.6
60°	141.4
62.5°	114.5
65°	90.5
67.5°	66.4
70°	46.7
72.5°	28.3
75°	14.1
77.5°	4.2
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	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	23.20	24.66	23.56	24.97	25.29	23.20	24.66	23.56	24.97	25.29
	3H	23.79	25.09	24.17	25.42	25.78	23.79	25.09	24.17	25.42	25.78
	4H	23.80	25.01	24.20	25.36	25.74	23.80	25.01	24.20	25.36	25.74
	6H	23.73	24.85	24.15	25.22	25.61	23.73	24.85	24.15	25.22	25.61
	8H	23.70	24.75	24.12	25.14	25.55	23.70	24.75	24.12	25.14	25.55
	12H	23.66	24.67	24.09	25.05	25.48	23.66	24.67	24.09	25.05	25.48
4H	2H	23.47	24.69	23.87	25.04	25.42	23.47	24.69	23.87	25.04	25.42
	3H	24.15	25.13	24.56	25.54	25.94	24.15	25.13	24.56	25.54	25.94
	4H	24.16	25.04	24.59	25.46	25.90	24.16	25.04	24.59	25.46	25.90
	6H	24.10	24.86	24.56	25.30	25.76	24.10	24.86	24.56	25.30	25.76
	8H	24.05	24.76	24.51	25.20	25.67	24.05	24.76	24.51	25.20	25.67
	12H	24.01	24.64	24.49	25.12	25.59	24.01	24.64	24.49	25.12	25.59
8H	4H	24.09	24.80	24.56	25.25	25.71	24.09	24.80	24.56	25.25	25.71
	6H	24.01	24.59	24.51	25.08	25.56	24.01	24.59	24.51	25.08	25.56
	8H	23.95	24.47	24.47	24.98	25.47	23.95	24.47	24.47	24.98	25.47
	12H	23.91	24.37	24.43	24.87	25.43	23.91	24.37	24.43	24.87	25.43
12H	4H	24.05	24.68	24.54	25.16	25.64	24.05	24.68	24.54	25.16	25.64
	6H	23.95	24.47	24.47	24.98	25.47	23.95	24.47	24.47	24.98	25.47
	8H	23.91	24.37	24.43	24.87	25.43	23.91	24.37	24.43	24.87	25.43

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

Report Prepared for

Cooper Lighting Solutions

Halo Recessed

Report Number: SP2-2504-410-5

Test Date: 05/22/2025

Luminaire Tested: LTT5607FSMBSS-5000K

Data in this report applies to families of products including LTT5607FSMBSS-5000K

The results of this test have not been influenced by sources from within Eaton or from external interests.

Report Generated By FNC07603 / LDUCLS01DT447
Version: v7.04

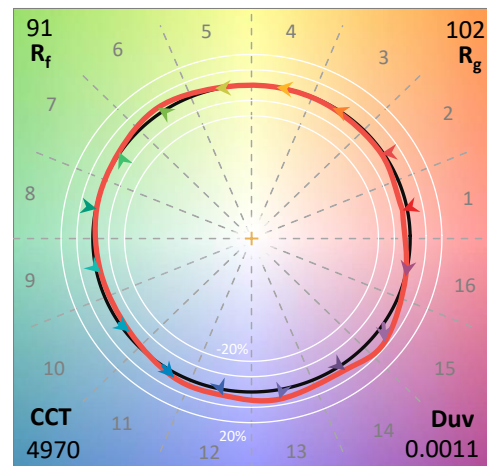
Test Information

Test Method: LM-79-2019
 Report Number: SP2-2504-410-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP2 - 165CM SPHERE
 Measurement Geometry: 4π
 Issue Date: 05/22/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Halo Recessed
 Catalog Number: **LTT5607FSMBSS-5000K**
 Description: HALO LT BLACK LED TRIM 6 INCH SMOOTH

Spectral Parameters

CCT (K): 4970
 CIE u' : 0.2110
 CIE v' : 0.4863
 Duv: 0.0011
 CIE x: 0.3462
 CIE y: 0.3547
 CIE z: 0.2992
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 572
 Purity: 10.2858
 R_f: 91.4
 R_g: 102

CRI (Ra): 95.2
 R1: 97.4
 R2: 95.3
 R3: 90.5
 R4: 96.3
 R5: 95.1
 R6: 91.9
 R7: 97.9
 R8: 97.1
 R9: 87.6
 R10: 85.9
 R11: 94.2
 R12: 67.7
 R13: 96.5
 R14: 93.9
 R15: 96.3



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.7

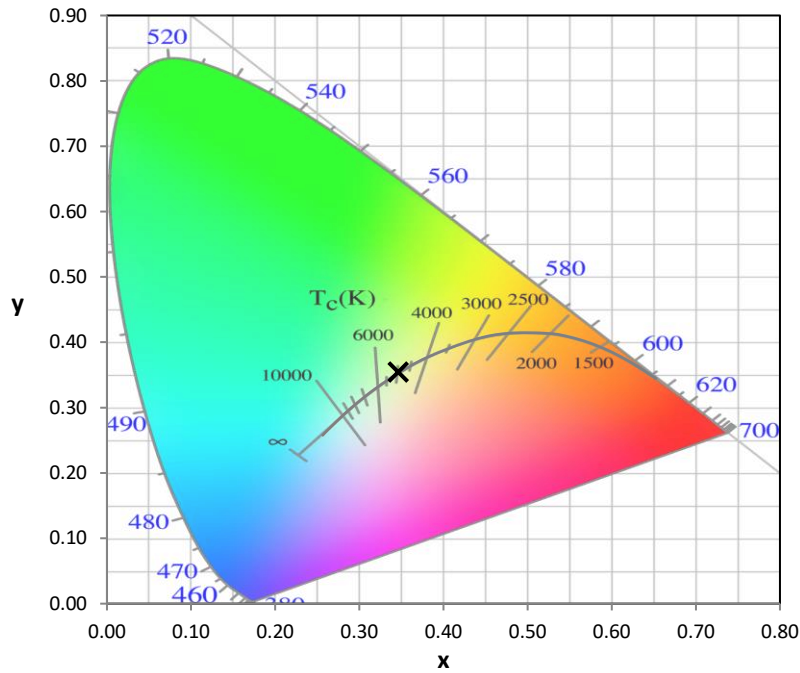
REPORT NUMBER: SP2-2504-410-5

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN2187	1/6/2025	7/6/2025
Power Meter	INXT2011002	1/21/2025	1/21/2026
AC Power Source	IN0458	10/22/2024	10/22/2025
DC Power Source	IN0212	10/22/2024	10/22/2025
Sphere Thermometer	IN4036B	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

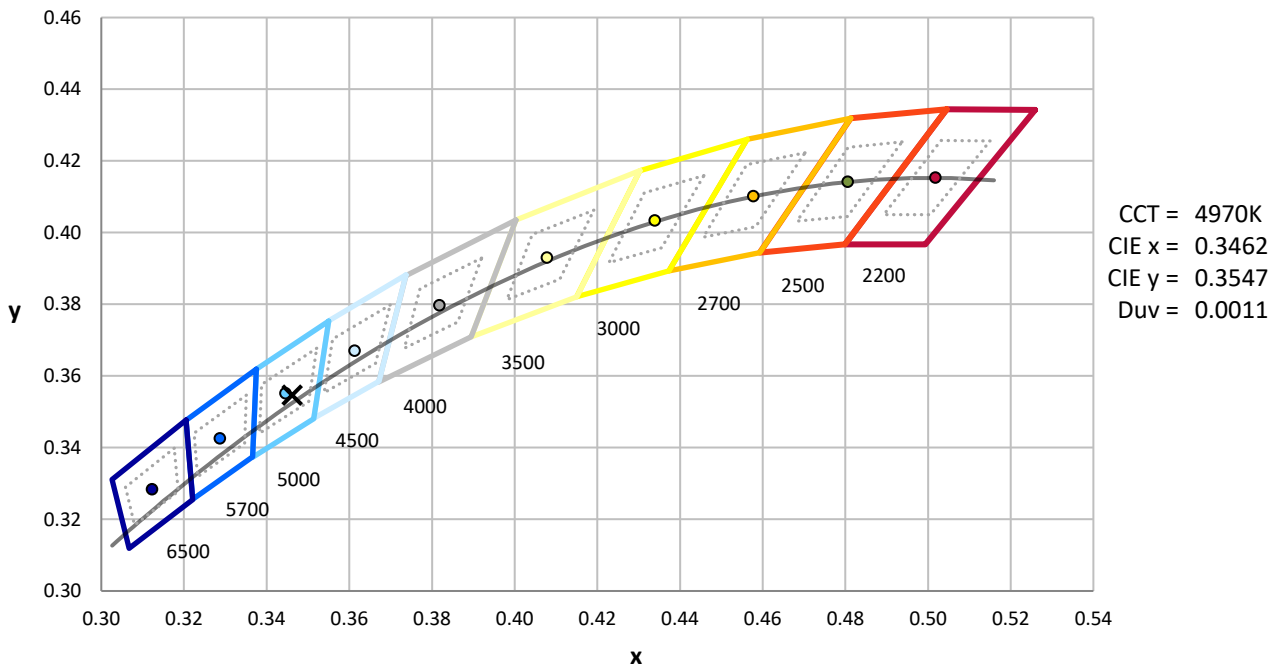
Sample Number	Condition	Description
P2504-410-LM.1	Good	HALO LT BLACK LED TRIM 6 INCH SMOOTH

REPORT NUMBER: SP2-2504-410-5

CIE 1931 Chromaticity Diagram



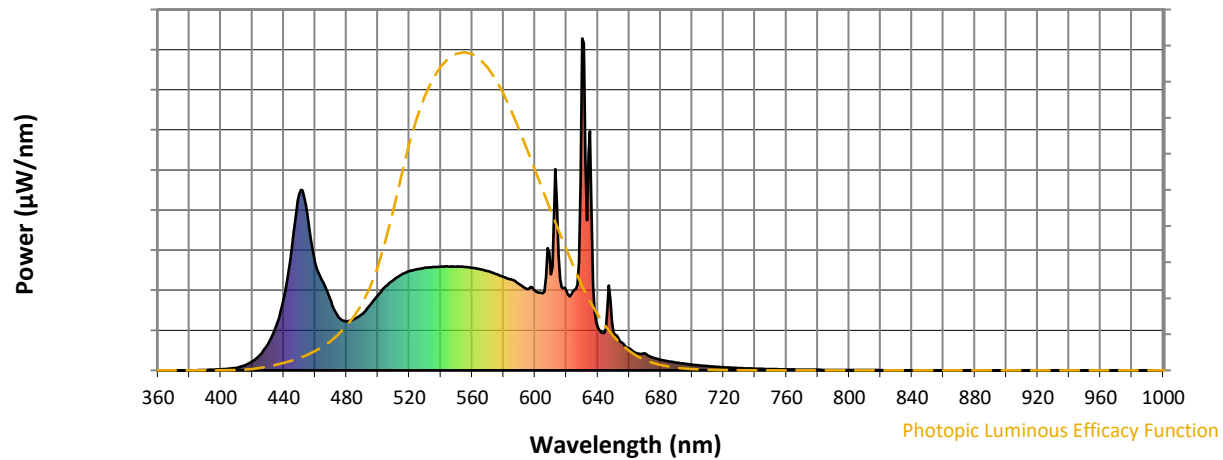
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

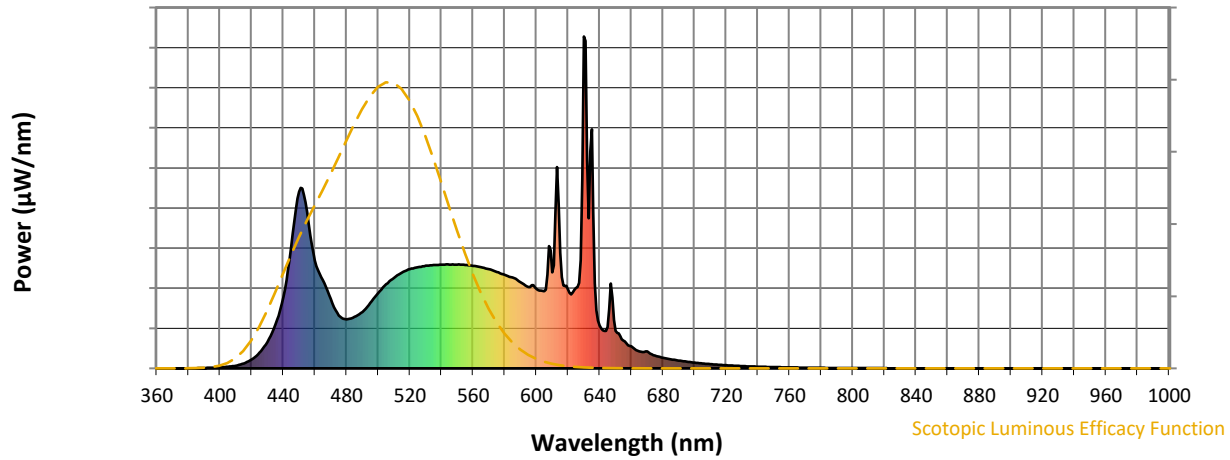


Photopic Lumens: NR

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	170	NR	620	238	NR	750	4	NR	880	0	NR
365	0	NR	495	197	NR	625	242	NR	755	3	NR	885	0	NR
370	0	NR	500	227	NR	630	1000	NR	760	3	NR	890	0	NR
375	0	NR	505	254	NR	635	721	NR	765	2	NR	895	0	NR
380	0	NR	510	273	NR	640	129	NR	770	2	NR	900	0	NR
385	0	NR	515	289	NR	645	124	NR	775	2	NR	905	0	NR
390	1	NR	520	299	NR	650	113	NR	780	2	NR	910	0	NR
395	2	NR	525	305	NR	655	84	NR	785	1	NR	915	0	NR
400	3	NR	530	309	NR	660	67	NR	790	1	NR	920	0	NR
405	5	NR	535	311	NR	665	52	NR	795	1	NR	925	0	NR
410	8	NR	540	312	NR	670	52	NR	800	1	NR	930	0	NR
415	15	NR	545	313	NR	675	38	NR	805	1	NR	935	0	NR
420	27	NR	550	313	NR	680	32	NR	810	1	NR	940	0	NR
425	47	NR	555	312	NR	685	27	NR	815	1	NR	945	0	NR
430	80	NR	560	309	NR	690	23	NR	820	1	NR	950	0	NR
435	132	NR	565	305	NR	695	20	NR	825	0	NR	955	0	NR
440	215	NR	570	299	NR	700	17	NR	830	0	NR	960	0	NR
445	365	NR	575	291	NR	705	15	NR	835	0	NR	965	0	NR
450	532	NR	580	282	NR	710	13	NR	840	0	NR	970	0	NR
455	471	NR	585	274	NR	715	11	NR	845	0	NR	975	0	NR
460	325	NR	590	259	NR	720	9	NR	850	0	NR	980	0	NR
465	266	NR	595	245	NR	725	8	NR	855	0	NR	985	0	NR
470	210	NR	600	239	NR	730	7	NR	860	0	NR	990	0	NR
475	160	NR	605	232	NR	735	6	NR	865	0	NR	995	0	NR
480	148	NR	610	289	NR	740	5	NR	870	0	NR	1000	0	NR
485	155	NR	615	348	NR	745	4	NR	875	0	NR			

REPORT NUMBER: SP2-2504-410-5

Scotopic Flux vs. Wavelength



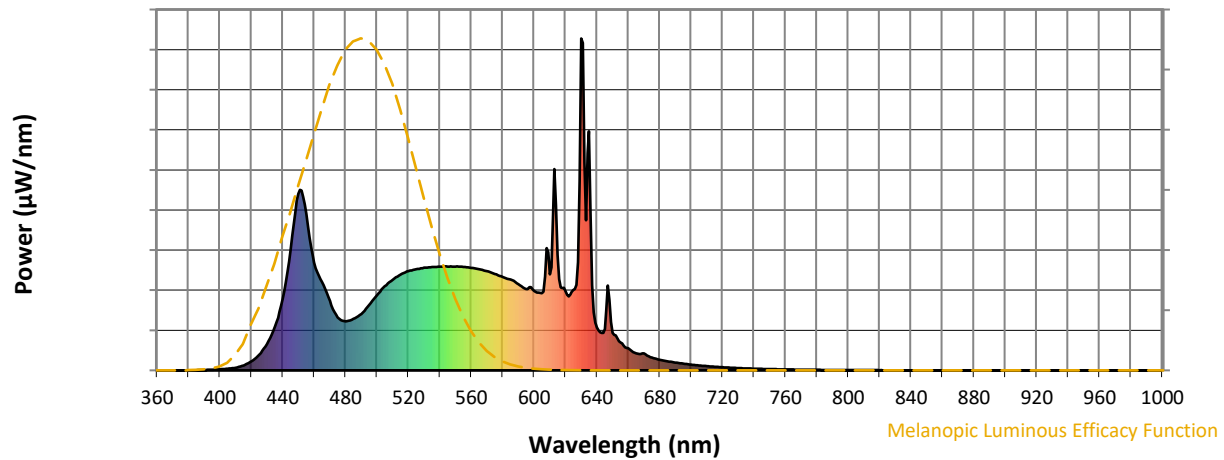
Scotopic Lumens: NR

S/P: 2.05

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	170	NR	620	238	NR	750	4	NR	880	0	NR
365	0	NR	495	197	NR	625	242	NR	755	3	NR	885	0	NR
370	0	NR	500	227	NR	630	1000	NR	760	3	NR	890	0	NR
375	0	NR	505	254	NR	635	721	NR	765	2	NR	895	0	NR
380	0	NR	510	273	NR	640	129	NR	770	2	NR	900	0	NR
385	0	NR	515	289	NR	645	124	NR	775	2	NR	905	0	NR
390	1	NR	520	299	NR	650	113	NR	780	2	NR	910	0	NR
395	2	NR	525	305	NR	655	84	NR	785	1	NR	915	0	NR
400	3	NR	530	309	NR	660	67	NR	790	1	NR	920	0	NR
405	5	NR	535	311	NR	665	52	NR	795	1	NR	925	0	NR
410	8	NR	540	312	NR	670	52	NR	800	1	NR	930	0	NR
415	15	NR	545	313	NR	675	38	NR	805	1	NR	935	0	NR
420	27	NR	550	313	NR	680	32	NR	810	1	NR	940	0	NR
425	47	NR	555	312	NR	685	27	NR	815	1	NR	945	0	NR
430	80	NR	560	309	NR	690	23	NR	820	1	NR	950	0	NR
435	132	NR	565	305	NR	695	20	NR	825	0	NR	955	0	NR
440	215	NR	570	299	NR	700	17	NR	830	0	NR	960	0	NR
445	365	NR	575	291	NR	705	15	NR	835	0	NR	965	0	NR
450	532	NR	580	282	NR	710	13	NR	840	0	NR	970	0	NR
455	471	NR	585	274	NR	715	11	NR	845	0	NR	975	0	NR
460	325	NR	590	259	NR	720	9	NR	850	0	NR	980	0	NR
465	266	NR	595	245	NR	725	8	NR	855	0	NR	985	0	NR
470	210	NR	600	239	NR	730	7	NR	860	0	NR	990	0	NR
475	160	NR	605	232	NR	735	6	NR	865	0	NR	995	0	NR
480	148	NR	610	289	NR	740	5	NR	870	0	NR	1000	0	NR
485	155	NR	615	348	NR	745	4	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.38

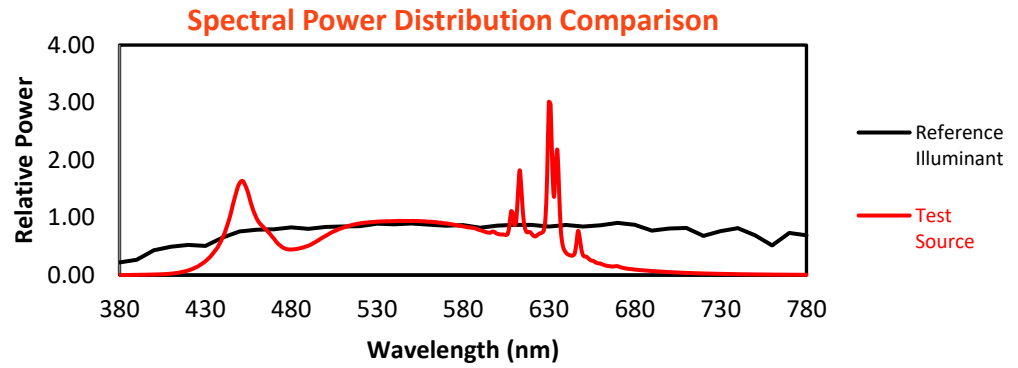
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	170	NR	620	238	NR	750	4	NR	880	0	NR
365	0	NR	495	197	NR	625	242	NR	755	3	NR	885	0	NR
370	0	NR	500	227	NR	630	1000	NR	760	3	NR	890	0	NR
375	0	NR	505	254	NR	635	721	NR	765	2	NR	895	0	NR
380	0	NR	510	273	NR	640	129	NR	770	2	NR	900	0	NR
385	0	NR	515	289	NR	645	124	NR	775	2	NR	905	0	NR
390	1	NR	520	299	NR	650	113	NR	780	2	NR	910	0	NR
395	2	NR	525	305	NR	655	84	NR	785	1	NR	915	0	NR
400	3	NR	530	309	NR	660	67	NR	790	1	NR	920	0	NR
405	5	NR	535	311	NR	665	52	NR	795	1	NR	925	0	NR
410	8	NR	540	312	NR	670	52	NR	800	1	NR	930	0	NR
415	15	NR	545	313	NR	675	38	NR	805	1	NR	935	0	NR
420	27	NR	550	313	NR	680	32	NR	810	1	NR	940	0	NR
425	47	NR	555	312	NR	685	27	NR	815	1	NR	945	0	NR
430	80	NR	560	309	NR	690	23	NR	820	1	NR	950	0	NR
435	132	NR	565	305	NR	695	20	NR	825	0	NR	955	0	NR
440	215	NR	570	299	NR	700	17	NR	830	0	NR	960	0	NR
445	365	NR	575	291	NR	705	15	NR	835	0	NR	965	0	NR
450	532	NR	580	282	NR	710	13	NR	840	0	NR	970	0	NR
455	471	NR	585	274	NR	715	11	NR	845	0	NR	975	0	NR
460	325	NR	590	259	NR	720	9	NR	850	0	NR	980	0	NR
465	266	NR	595	245	NR	725	8	NR	855	0	NR	985	0	NR
470	210	NR	600	239	NR	730	7	NR	860	0	NR	990	0	NR
475	160	NR	605	232	NR	735	6	NR	865	0	NR	995	0	NR
480	148	NR	610	289	NR	740	5	NR	870	0	NR	1000	0	NR
485	155	NR	615	348	NR	745	4	NR	875	0	NR			

REPORT NUMBER: SP2-2504-410-5

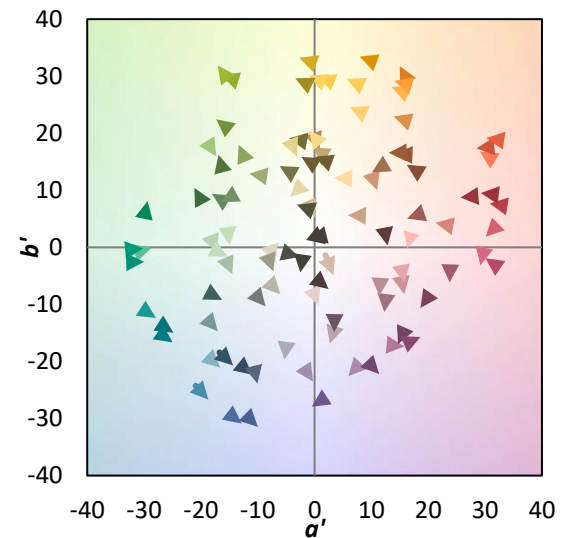
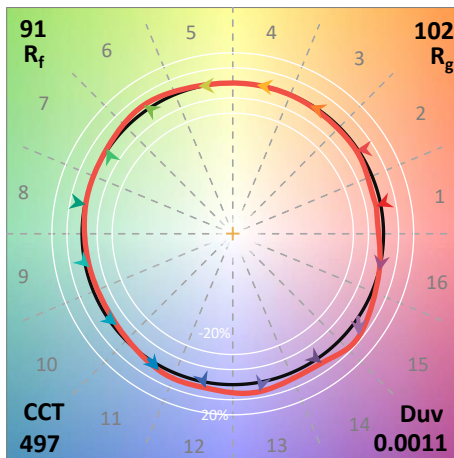
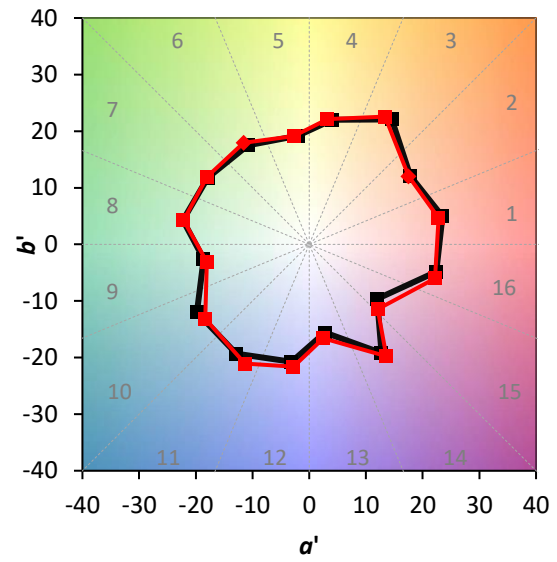
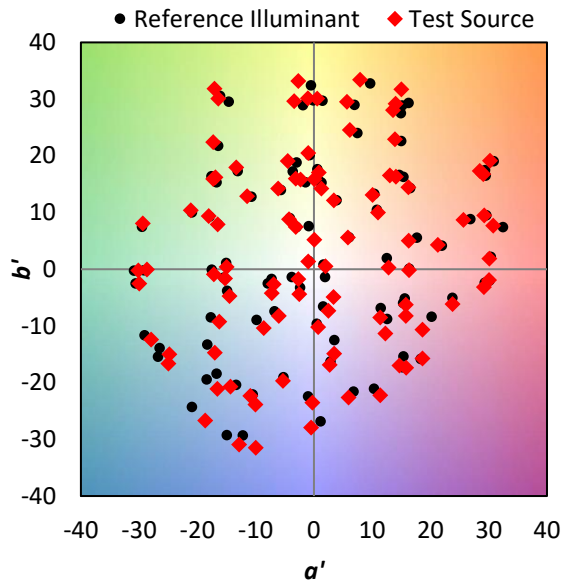
TM-30-18

Summary

$R_f = 91.4$
 $R_g = 102$
 $CIE R_a = 95.2$
 $R_9 = 87.6$

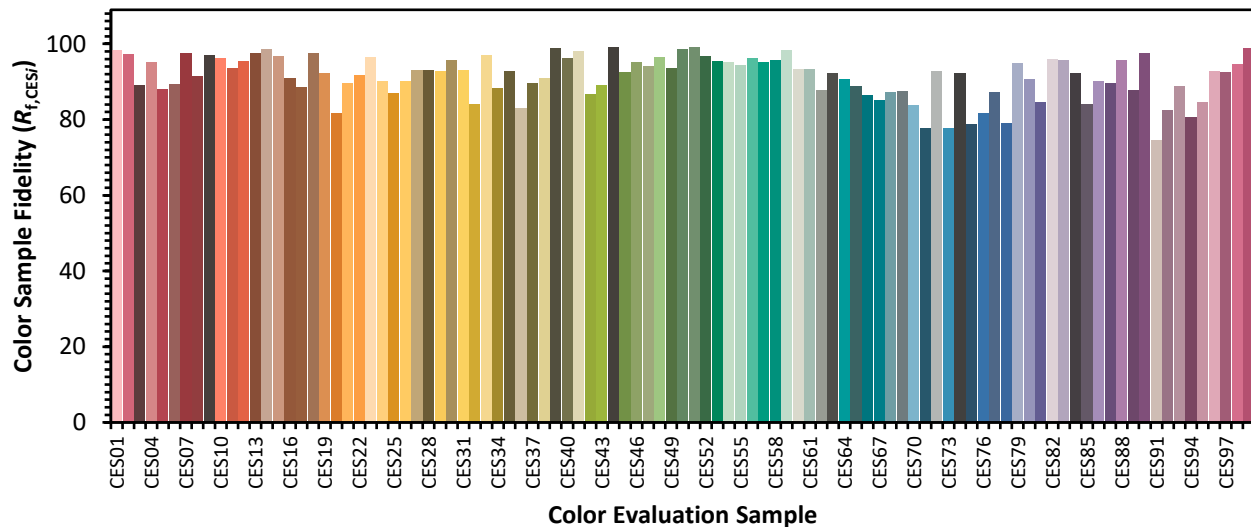


Color Vector Graphics

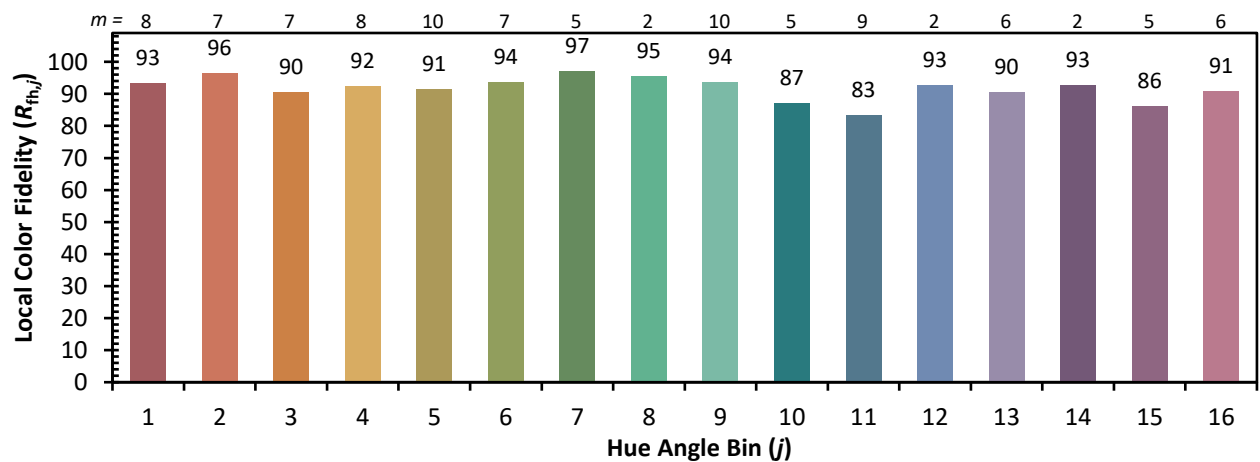
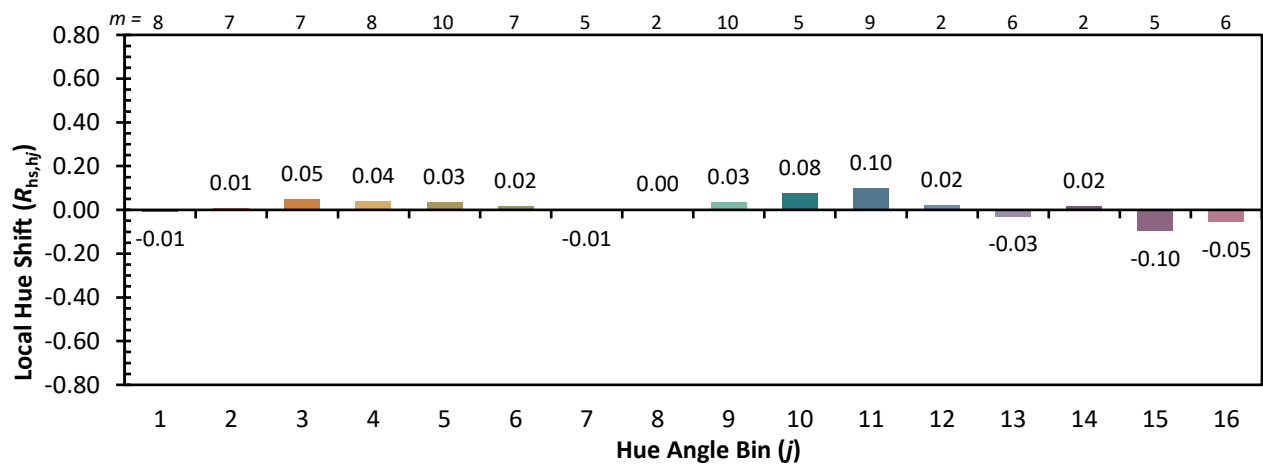
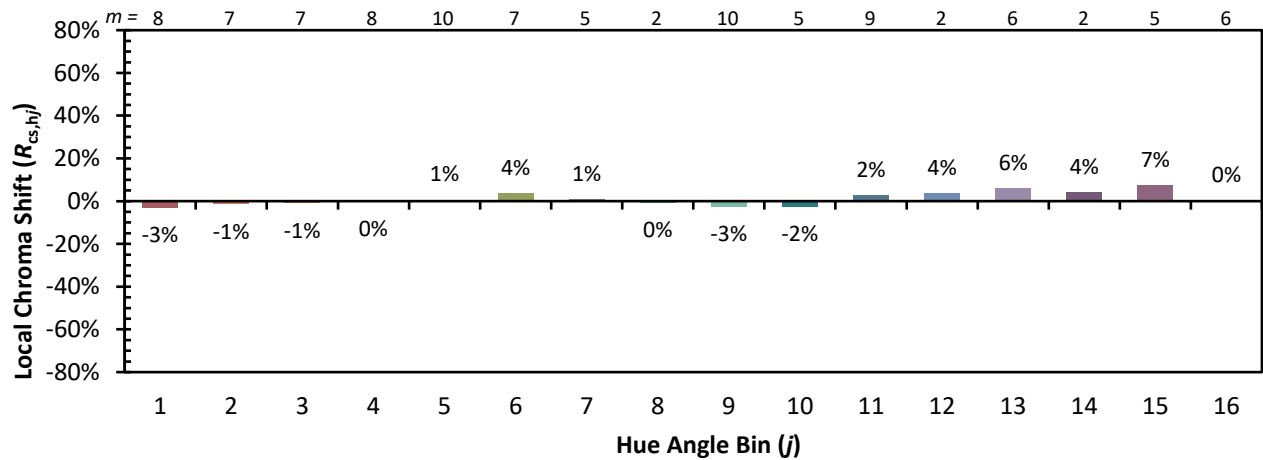


Individual Sample Fidelity Index ($R_{f,i}$)

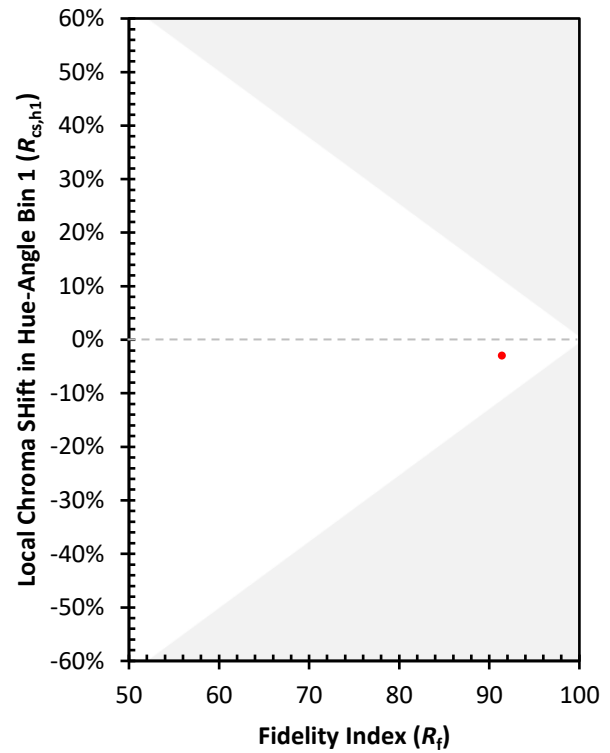
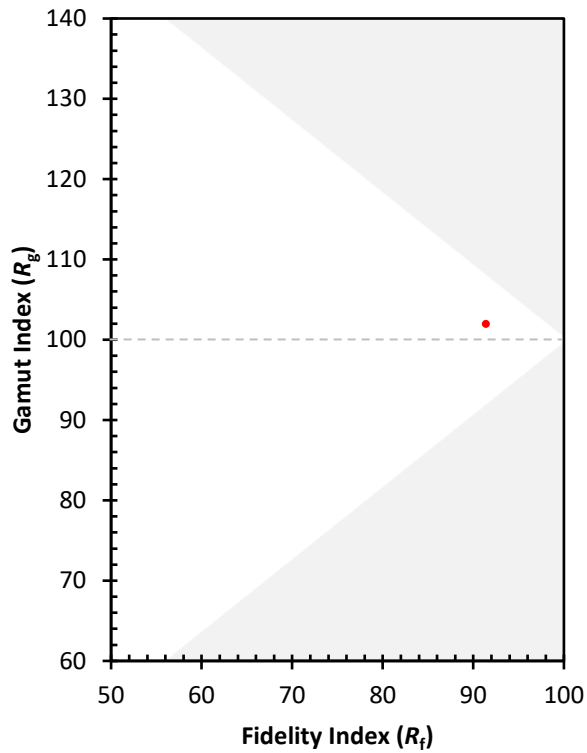
CES01 = 85	CES26 = 90	CES51 = 99	CES76 = 82
CES02 = 61	CES27 = 93	CES52 = 97	CES77 = 87
CES03 = 31	CES28 = 93	CES53 = 96	CES78 = 79
CES04 = 68	CES29 = 93	CES54 = 95	CES79 = 95
CES05 = 48	CES30 = 96	CES55 = 94	CES80 = 91
CES06 = 50	CES31 = 93	CES56 = 96	CES81 = 85
CES07 = 41	CES32 = 84	CES57 = 95	CES82 = 96
CES08 = 40	CES33 = 97	CES58 = 96	CES83 = 96
CES09 = 29	CES34 = 88	CES59 = 98	CES84 = 92
CES10 = 73	CES35 = 93	CES60 = 93	CES85 = 84
CES11 = 55	CES36 = 83	CES61 = 93	CES86 = 90
CES12 = 62	CES37 = 90	CES62 = 88	CES87 = 90
CES13 = 43	CES38 = 91	CES63 = 92	CES88 = 96
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 88
CES15 = 71	CES40 = 96	CES65 = 89	CES90 = 98
CES16 = 47	CES41 = 98	CES66 = 86	CES91 = 75
CES17 = 48	CES42 = 87	CES67 = 85	CES92 = 82
CES18 = 56	CES43 = 89	CES68 = 87	CES93 = 89
CES19 = 70	CES44 = 99	CES69 = 88	CES94 = 81
CES20 = 65	CES45 = 92	CES70 = 84	CES95 = 85
CES21 = 85	CES46 = 95	CES71 = 78	CES96 = 93
CES22 = 77	CES47 = 94	CES72 = 93	CES97 = 93
CES23 = 91	CES48 = 96	CES73 = 78	CES98 = 95
CES24 = 90	CES49 = 94	CES74 = 92	CES99 = 99
CES25 = 70	CES50 = 99	CES75 = 79	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)