

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: METALUX

Report Number: P1433754

Luminaire Tested: EHBR1-18-UNV-N-L940

Issue Date: 3/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433754
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-3)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-18-UNV-N-L940
Description: Elevate Round Highbay at, 19000 lumens, 4000K 90CRI LEDs with N lens
Light Source: -
Ballast/Driver: -

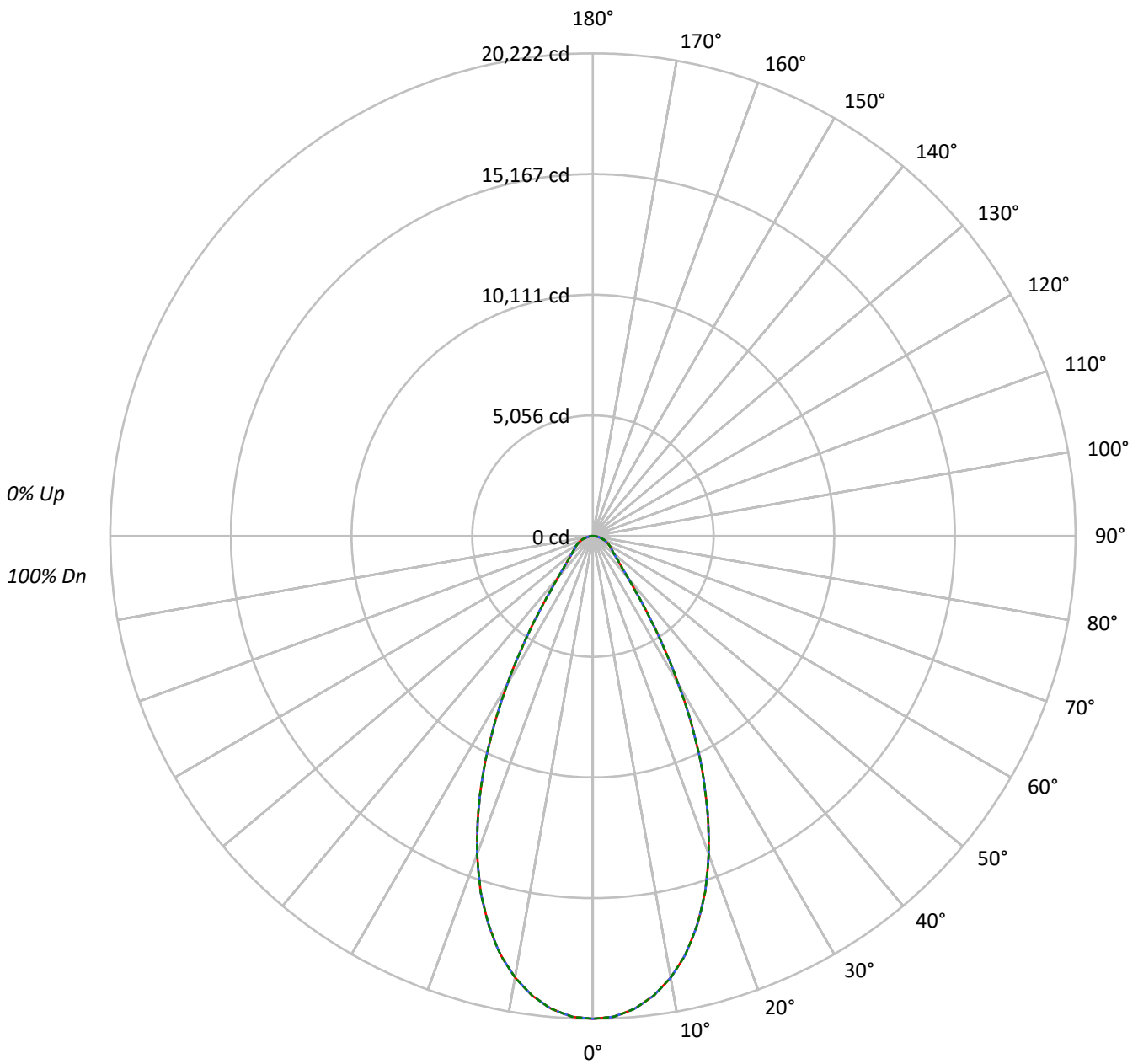
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17328.6 lumens
Efficiency: N/A
Efficacy: 183.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.8
Luminous Opening: Circular (Dia: 1.71' x H: 0')
CIE Type: Direct

Input Watts (W): 94.7
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: P1433754
CATALOG NUMBER: EHBR1-18-UNV-N-L940

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - · 90°-270°



TEST NUMBER: P1433754
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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	96	94	93	91
2	106	100	96	92	104	98	94	91	95	92	89	92	89	87	89	87	85	89	87	85	83
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	84	80	78	76
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72	78	75	72	70
5	89	80	74	69	87	79	73	68	77	72	68	75	71	67	74	70	67	74	70	67	65
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	70	65	62	61
7	80	70	64	59	79	70	63	59	68	63	59	67	62	58	66	61	58	66	61	58	57
8	76	66	60	55	75	66	59	55	64	59	55	63	58	55	62	58	55	62	58	55	53
9	73	62	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	59	55	51	50
10	69	59	53	49	68	59	53	49	58	52	49	57	52	49	56	52	48	56	52	48	47

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	94963	94963	94963
5°	93727	93727	93727
10°	89544	89544	89544
15°	82022	82022	82022
20°	70850	70850	70850
25°	56149	56149	56149
30°	38841	38841	38841
35°	23275	23275	23275
40°	13907	13907	13907
45°	10096	10096	10096
50°	8409	8409	8409
55°	7766	7766	7766
60°	7586	7586	7586
65°	7433	7433	7433
70°	7180	7180	7180
75°	6888	6888	6888
80°	6361	6361	6361
85°	5248	5248	5248

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10096 cd/sqm



TEST NUMBER: P1433754
 CATALOG NUMBER: EHBR1-18-UNV-N-L940

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1862.8	10.7
10°-20°	4675.8	27.0
20°-30°	4889.1	28.2
30°-40°	2649.0	15.3
40°-50°	1218.7	7.0
50°-60°	858.8	5.0
60°-70°	660.9	3.8
70°-80°	400.7	2.3
80°-90°	112.8	0.7
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°	11427.6	65.9
0°-40°	14076.7	81.2
0°-60°	16154.2	93.2
0°-90°	17328.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17328.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	20222	20222	20222	20222	20222	
5°	19883	19883	19883	19883	19883	1863
15°	16871	16871	16871	16871	16871	4676
25°	10836	10836	10836	10836	10836	4889
35°	4060	4060	4060	4060	4060	2649
45°	1520	1520	1520	1520	1520	1219
55°	948	948	948	948	948	859
65°	669	669	669	669	669	661
75°	380	380	380	380	380	401
85°	97	97	97	97	97	113
90°	1	1	1	1	1	



TEST NUMBER: P1433754
 CATALOG NUMBER: EHBR1-18-UNV-N-L940

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	20221.8	20221.8	20221.8	20221.8	20221.8
2.5°	20150.2	20150.2	20150.2	20150.2	20150.2
5°	19882.6	19882.6	19882.6	19882.6	19882.6
7.5°	19425.9	19425.9	19425.9	19425.9	19425.9
10°	18778.0	18778.0	18778.0	18778.0	18778.0
12.5°	17940.6	17940.6	17940.6	17940.6	17940.6
15°	16870.8	16870.8	16870.8	16870.8	16870.8
17.5°	15629.8	15629.8	15629.8	15629.8	15629.8
20°	14177.2	14177.2	14177.2	14177.2	14177.2
22.5°	12560.1	12560.1	12560.1	12560.1	12560.1
25°	10836.3	10836.3	10836.3	10836.3	10836.3
27.5°	9008.9	9008.9	9008.9	9008.9	9008.9
30°	7162.8	7162.8	7162.8	7162.8	7162.8
32.5°	5497.2	5497.2	5497.2	5497.2	5497.2
35°	4060.0	4060.0	4060.0	4060.0	4060.0
37.5°	2981.0	2981.0	2981.0	2981.0	2981.0
40°	2268.6	2268.6	2268.6	2268.6	2268.6
42.5°	1819.0	1819.0	1819.0	1819.0	1819.0
45°	1520.2	1520.2	1520.2	1520.2	1520.2
47.5°	1304.8	1304.8	1304.8	1304.8	1304.8
50°	1151.0	1151.0	1151.0	1151.0	1151.0
52.5°	1038.7	1038.7	1038.7	1038.7	1038.7
55°	948.5	948.5	948.5	948.5	948.5
57.5°	875.4	875.4	875.4	875.4	875.4
60°	807.7	807.7	807.7	807.7	807.7
62.5°	740.1	740.1	740.1	740.1	740.1
65°	668.9	668.9	668.9	668.9	668.9
67.5°	596.3	596.3	596.3	596.3	596.3
70°	522.9	522.9	522.9	522.9	522.9
72.5°	451.6	451.6	451.6	451.6	451.6
75°	379.6	379.6	379.6	379.6	379.6
77.5°	309.0	309.0	309.0	309.0	309.0
80°	235.2	235.2	235.2	235.2	235.2
82.5°	164.7	164.7	164.7	164.7	164.7
85°	97.4	97.4	97.4	97.4	97.4
87.5°	34.8	34.8	34.8	34.8	34.8
90°	0.6	0.6	0.6	0.6	0.6



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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	15.73	16.89	16.10	17.21	17.52	15.73	16.89	16.10	17.21	17.52
	3H	17.61	18.64	17.99	18.97	19.34	17.61	18.64	17.99	18.97	19.34
	4H	18.34	19.30	18.74	19.65	20.04	18.34	19.30	18.74	19.65	20.04
	6H	18.88	19.77	19.30	20.14	20.53	18.88	19.77	19.30	20.14	20.53
	8H	19.05	19.89	19.48	20.28	20.68	19.05	19.89	19.48	20.28	20.68
	12H	19.15	19.95	19.58	20.33	20.76	19.15	19.95	19.58	20.33	20.76
4H	2H	16.33	17.29	16.73	17.64	18.03	16.33	17.29	16.73	17.64	18.03
	3H	18.41	19.20	18.83	19.61	20.01	18.41	19.20	18.83	19.61	20.01
	4H	19.26	19.97	19.70	20.40	20.84	19.26	19.97	19.70	20.40	20.84
	6H	19.94	20.55	20.40	21.00	21.47	19.94	20.55	20.40	21.00	21.47
	8H	20.15	20.72	20.62	21.17	21.64	20.15	20.72	20.62	21.17	21.64
	12H	20.28	20.78	20.77	21.27	21.74	20.28	20.78	20.77	21.27	21.74
8H	4H	19.55	20.12	20.02	20.57	21.04	19.55	20.12	20.02	20.57	21.04
	6H	20.36	20.82	20.86	21.31	21.80	20.36	20.82	20.86	21.31	21.80
	8H	20.65	21.06	21.17	21.58	22.07	20.65	21.06	21.17	21.58	22.07
	12H	20.86	21.22	21.38	21.72	22.29	20.86	21.22	21.38	21.72	22.29
12H	4H	19.56	20.06	20.05	20.55	21.02	19.56	20.06	20.05	20.55	21.02
	6H	20.40	20.81	20.93	21.33	21.82	20.40	20.81	20.93	21.33	21.82
	8H	20.75	21.11	21.27	21.60	22.18	20.75	21.11	21.27	21.60	22.18

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-7

Test Date: 08/04/2025

Luminaire Tested: EHBR-60-L940-N

Data in this report applies to families of products including EHBR-60-L940-N

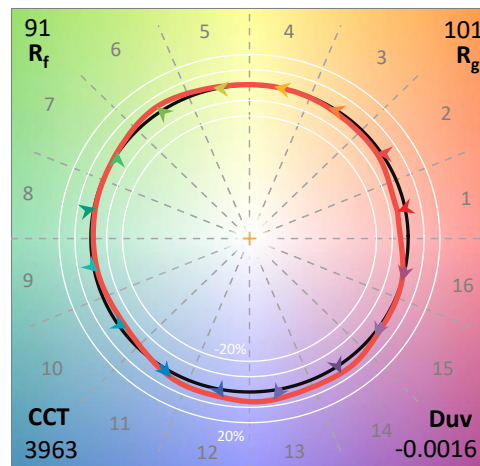
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/05/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **EHBR-60-L940-N**
 Description: Elevate Round Highbay at, 60000 lumens, 4000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 3963
 CIE u': 0.2267
 CIE v': 0.5003
 Duv: -0.0016
 CIE x: 0.3810
 CIE y: 0.3738
 CIE z: 0.2453
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 580
 Purity: 26.49712
 Rf: 90.7
 Rg: 101

CRI (Ra):	93.4		
R1:	95.2	R9:	66.4
R2:	95.1	R10:	86.6
R3:	93.3	R11:	94.4
R4:	94.5	R12:	75.4
R5:	94.2	R13:	95.0
R6:	92.9	R14:	95.4
R7:	94.0	R15:	92.8
R8:	87.7		



Test Conditions

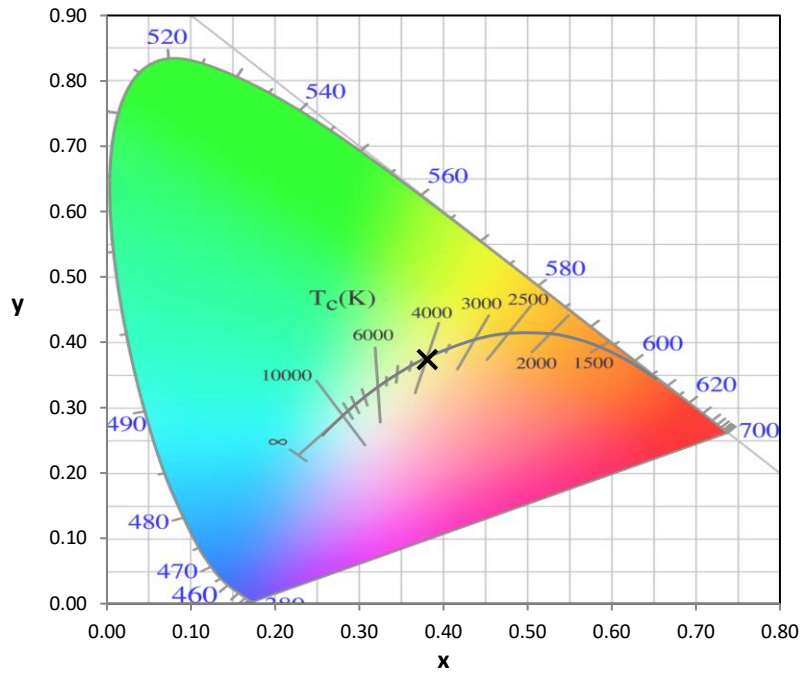
Stabilization Time: 44M
 Operation Time: 1H 44M
 Sphere Temperature (°C): 25.0

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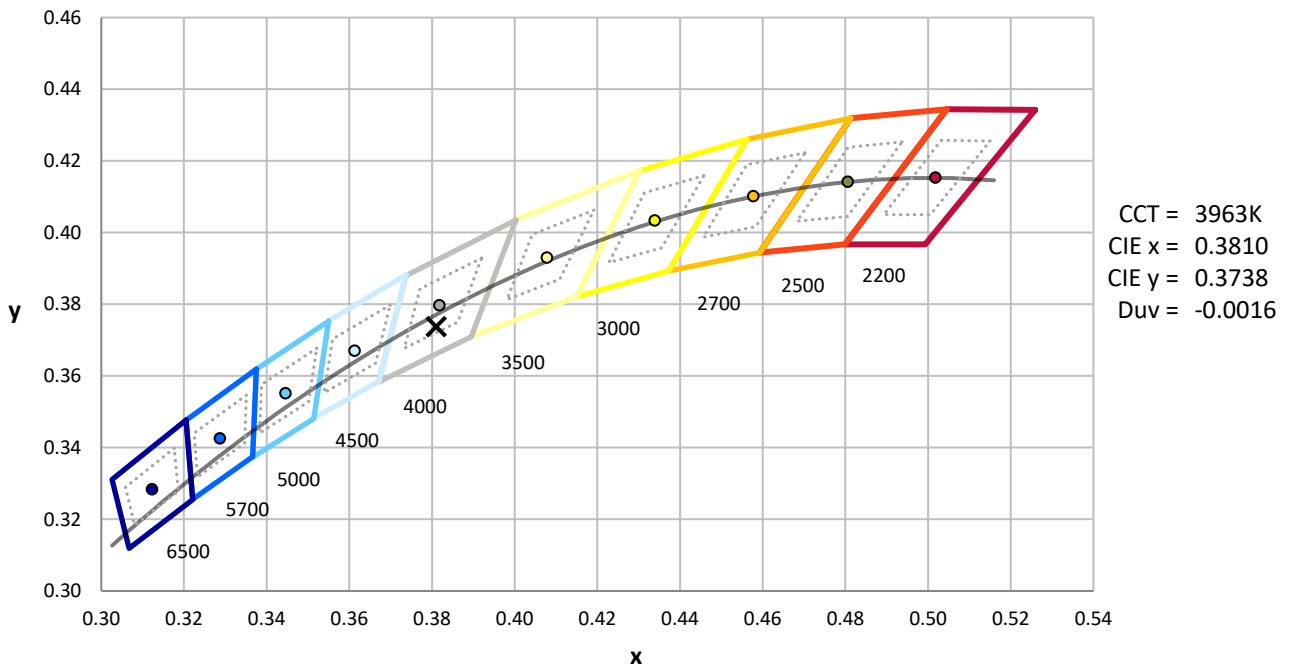
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

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CIE 1931 Chromaticity Diagram



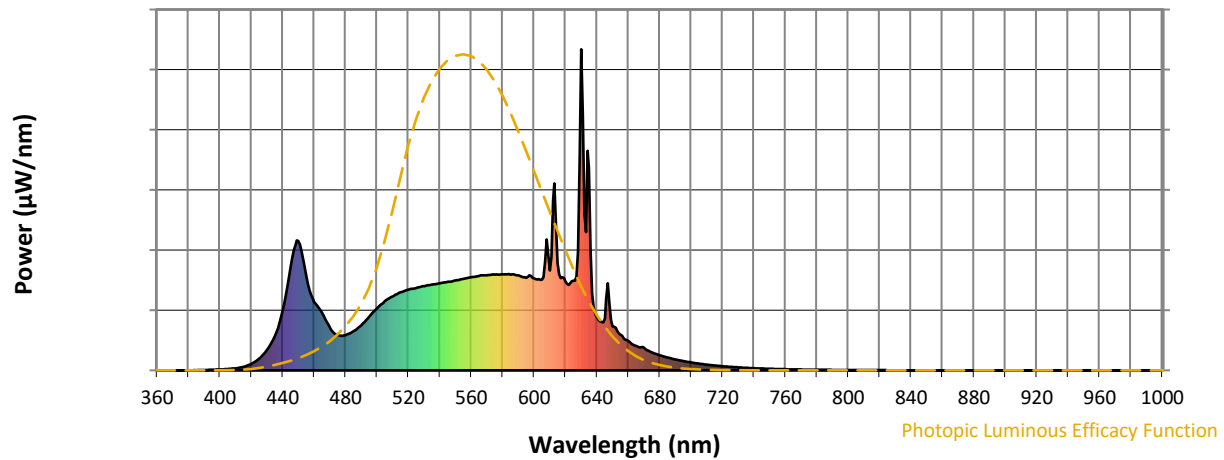
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

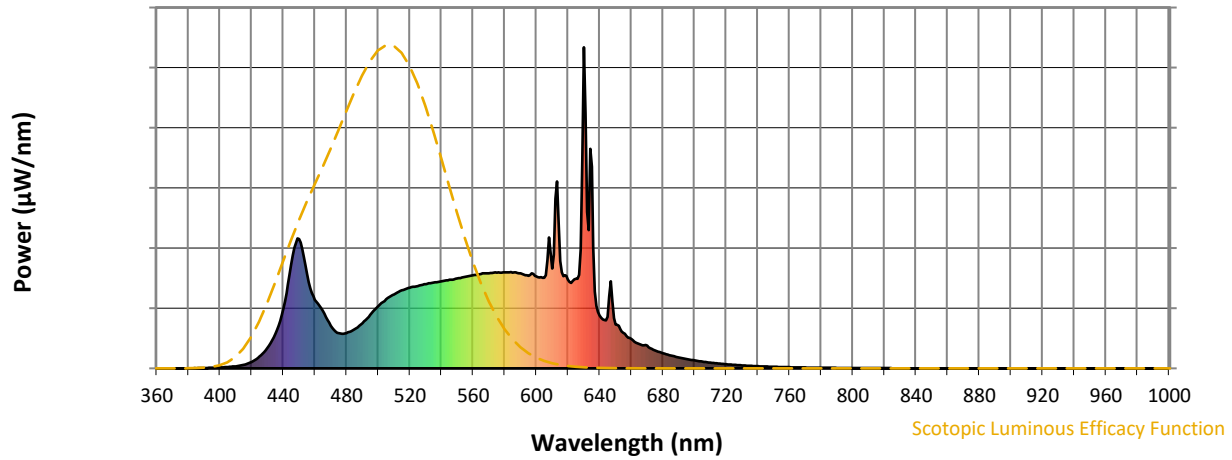


Photopic Lumens: NR

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	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



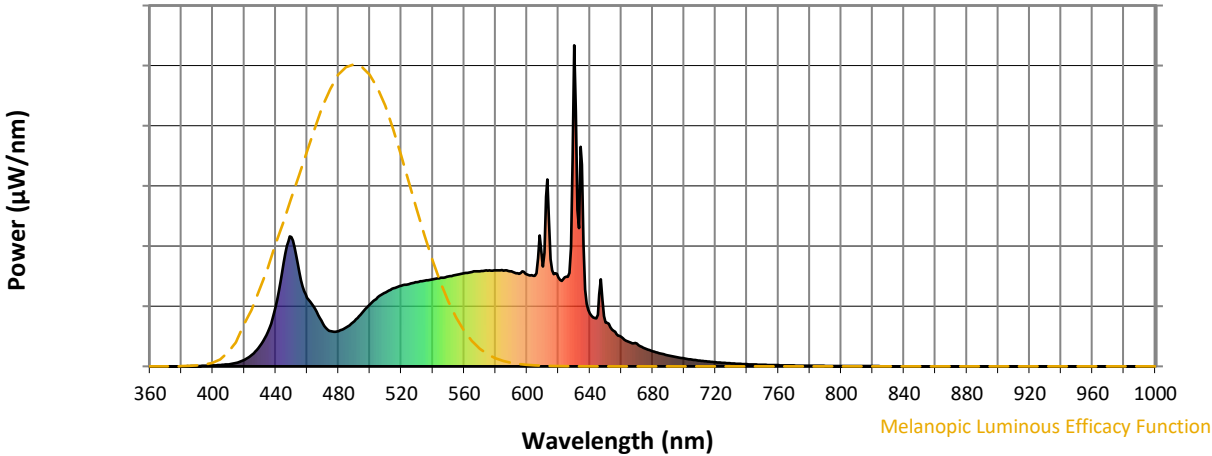
Scotopic Lumens: NR

S/P: 1.76

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	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



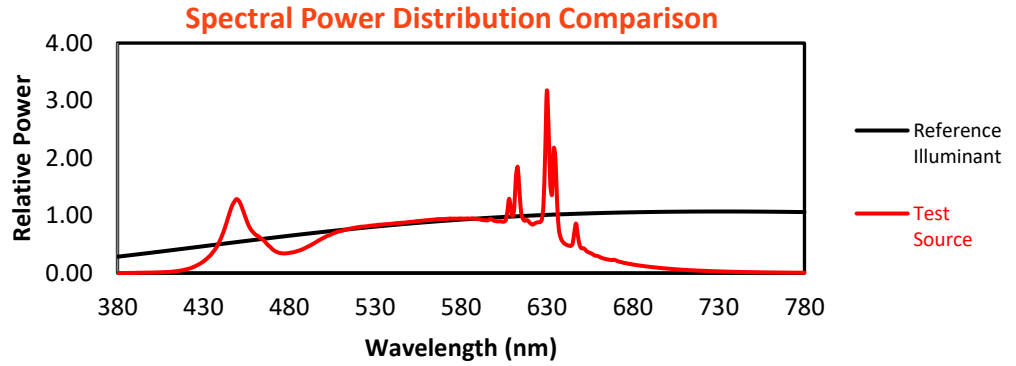
Melanopic Lumens: NR

M/P: 3.64

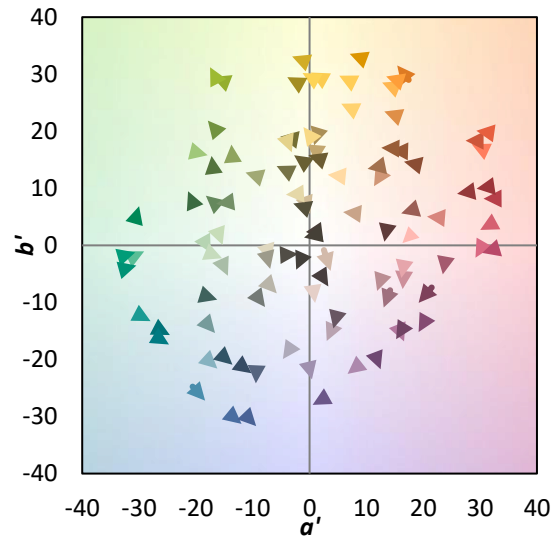
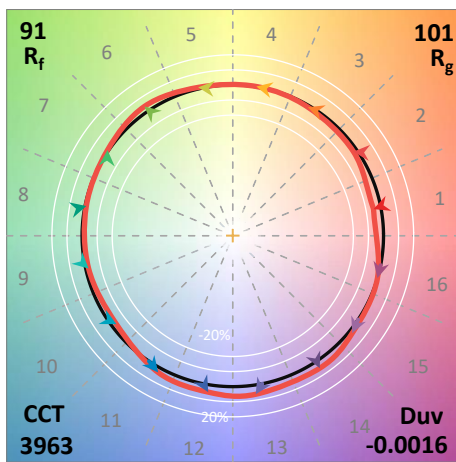
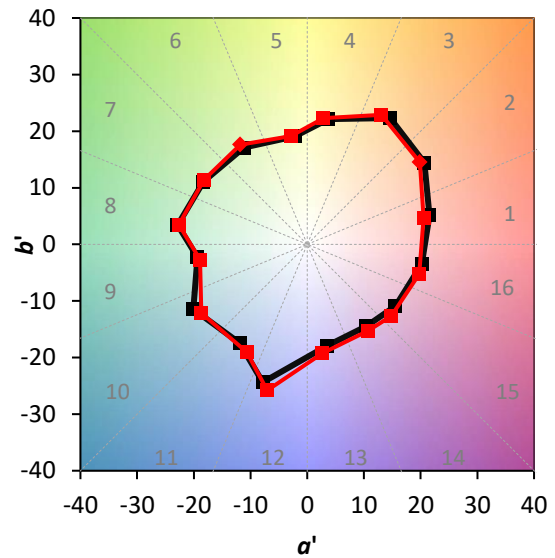
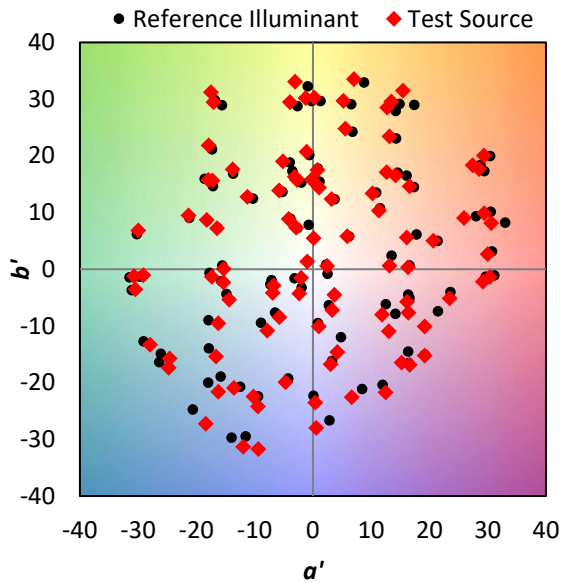
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	141	NR	620	276	NR	750	5	NR	880	0	NR
365	0	NR	495	167	NR	625	279	NR	755	4	NR	885	0	NR
370	0	NR	500	193	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	215	NR	635	628	NR	765	3	NR	895	0	NR
380	0	NR	510	230	NR	640	164	NR	770	3	NR	900	0	NR
385	0	NR	515	243	NR	645	161	NR	775	2	NR	905	0	NR
390	1	NR	520	251	NR	650	137	NR	780	2	NR	910	0	NR
395	2	NR	525	256	NR	655	111	NR	785	2	NR	915	0	NR
400	3	NR	530	262	NR	660	92	NR	790	1	NR	920	0	NR
405	4	NR	535	267	NR	665	76	NR	795	1	NR	925	0	NR
410	6	NR	540	271	NR	670	71	NR	800	1	NR	930	0	NR
415	11	NR	545	276	NR	675	56	NR	805	1	NR	935	0	NR
420	20	NR	550	280	NR	680	47	NR	810	1	NR	940	0	NR
425	37	NR	555	285	NR	685	40	NR	815	1	NR	945	0	NR
430	63	NR	560	290	NR	690	34	NR	820	1	NR	950	0	NR
435	108	NR	565	294	NR	695	29	NR	825	1	NR	955	0	NR
440	186	NR	570	296	NR	700	25	NR	830	0	NR	960	0	NR
445	323	NR	575	298	NR	705	21	NR	835	0	NR	965	0	NR
450	403	NR	580	299	NR	710	18	NR	840	0	NR	970	0	NR
455	293	NR	585	298	NR	715	15	NR	845	0	NR	975	0	NR
460	214	NR	590	296	NR	720	13	NR	850	0	NR	980	0	NR
465	180	NR	595	288	NR	725	11	NR	855	0	NR	985	0	NR
470	132	NR	600	286	NR	730	9	NR	860	0	NR	990	0	NR
475	109	NR	605	282	NR	735	8	NR	865	0	NR	995	0	NR
480	110	NR	610	311	NR	740	7	NR	870	0	NR	1000	0	NR
485	121	NR	615	334	NR	745	6	NR	875	0	NR			

Summary

$R_f = 90.7$
 $R_g = 101$
 $CIE R_a = 93.4$
 $R_9 = 66.4$

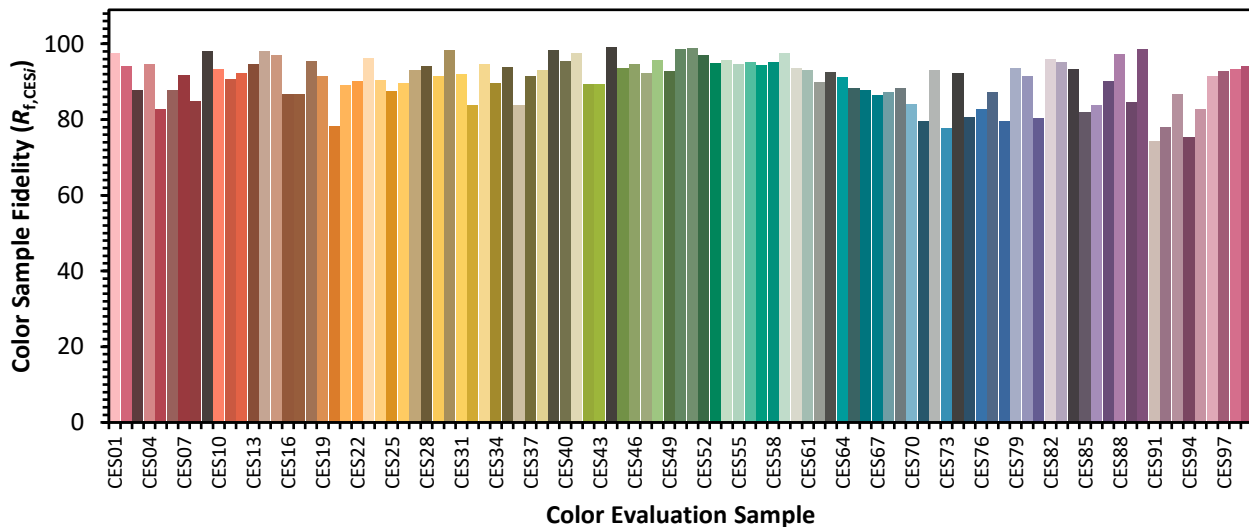


Color Vector Graphics

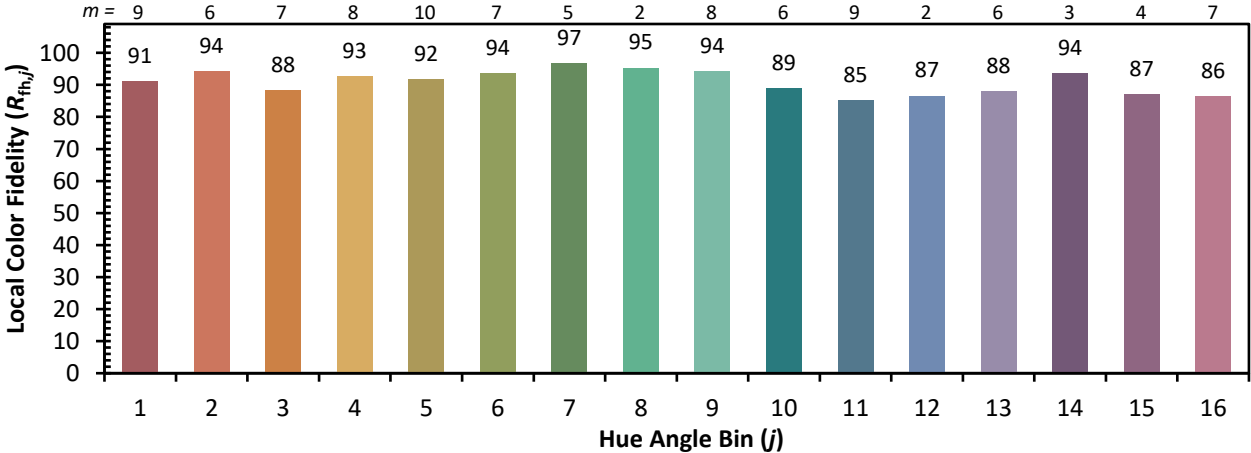
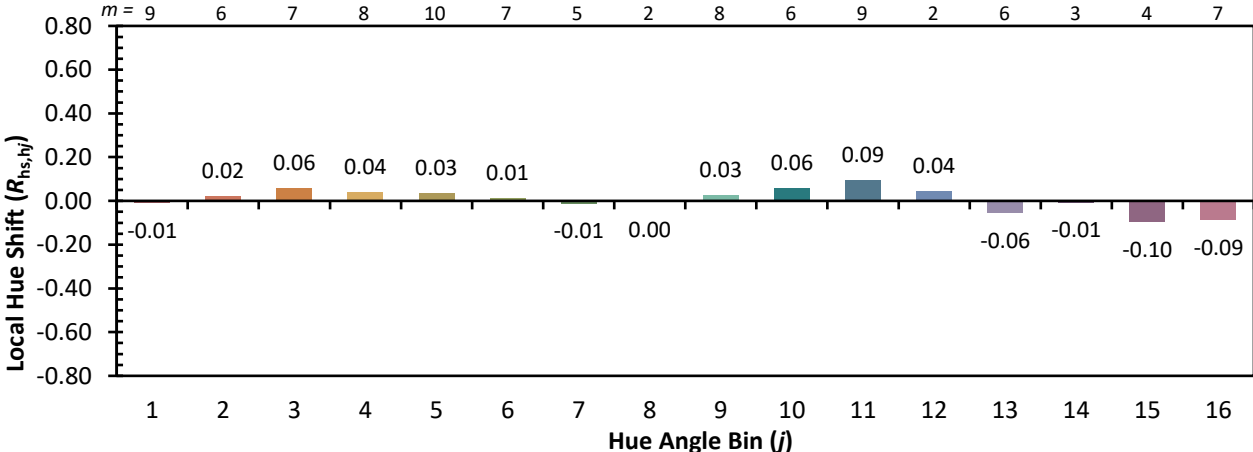
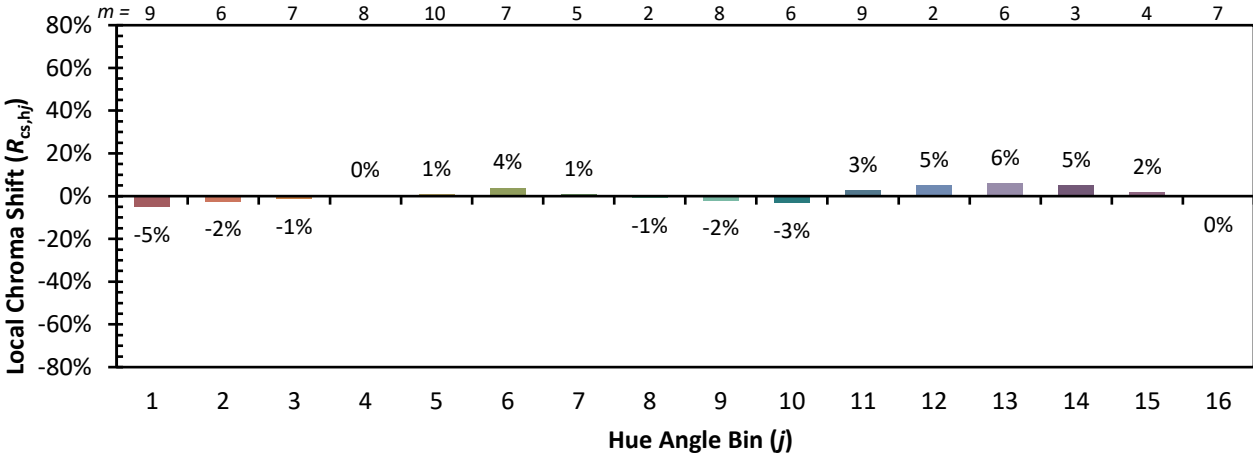


Individual Sample Fidelity Index ($R_{f,i}$)

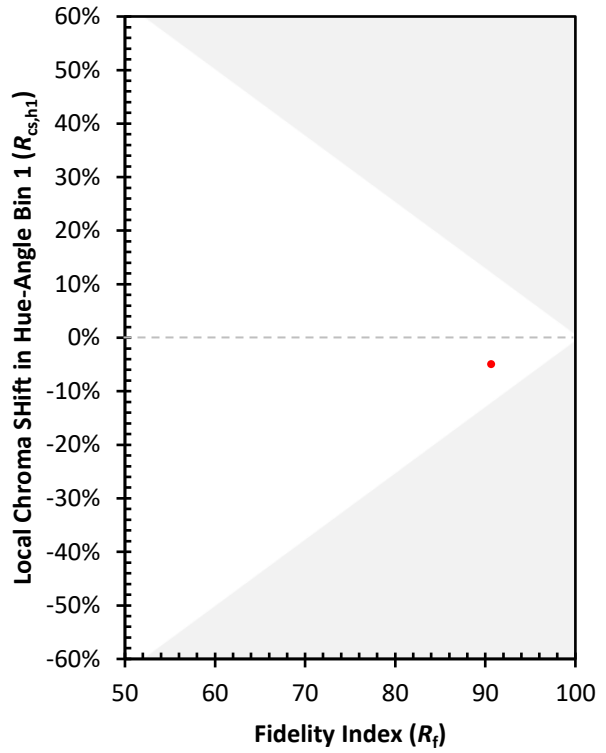
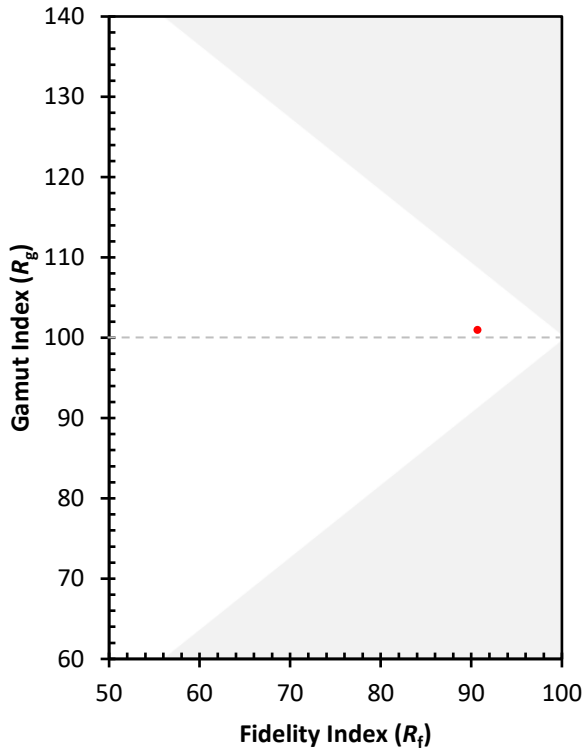
CES01 = 86	CES26 = 90	CES51 = 99	CES76 = 83
CES02 = 62	CES27 = 93	CES52 = 97	CES77 = 87
CES03 = 31	CES28 = 94	CES53 = 95	CES78 = 79
CES04 = 69	CES29 = 91	CES54 = 96	CES79 = 94
CES05 = 49	CES30 = 98	CES55 = 95	CES80 = 91
CES06 = 50	CES31 = 92	CES56 = 95	CES81 = 80
CES07 = 42	CES32 = 84	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 95	CES58 = 95	CES83 = 95
CES09 = 29	CES34 = 90	CES59 = 98	CES84 = 93
CES10 = 74	CES35 = 94	CES60 = 93	CES85 = 82
CES11 = 57	CES36 = 84	CES61 = 93	CES86 = 84
CES12 = 63	CES37 = 92	CES62 = 90	CES87 = 90
CES13 = 43	CES38 = 93	CES63 = 92	CES88 = 97
CES14 = 74	CES39 = 98	CES64 = 91	CES89 = 84
CES15 = 71	CES40 = 96	CES65 = 88	CES90 = 99
CES16 = 47	CES41 = 98	CES66 = 88	CES91 = 74
CES17 = 49	CES42 = 89	CES67 = 87	CES92 = 78
CES18 = 56	CES43 = 89	CES68 = 87	CES93 = 87
CES19 = 71	CES44 = 99	CES69 = 88	CES94 = 75
CES20 = 66	CES45 = 93	CES70 = 84	CES95 = 83
CES21 = 85	CES46 = 95	CES71 = 80	CES96 = 91
CES22 = 78	CES47 = 92	CES72 = 93	CES97 = 93
CES23 = 91	CES48 = 96	CES73 = 78	CES98 = 93
CES24 = 90	CES49 = 93	CES74 = 92	CES99 = 94
CES25 = 71	CES50 = 99	CES75 = 81	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)