

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: P1436154

Luminaire Tested: EHBR1-30-UNV-M-L830

Issue Date: 3/25/2026

Test Information

Test Method: LM-79-2019
Report Number: P1436154
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2603-725-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/25/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-30-UNV-M-L830
Description: Elevate Round Highbay at, 30000 lumens, 3000K 80CRI LEDs with M lens
Light Source: -
Ballast/Driver: -

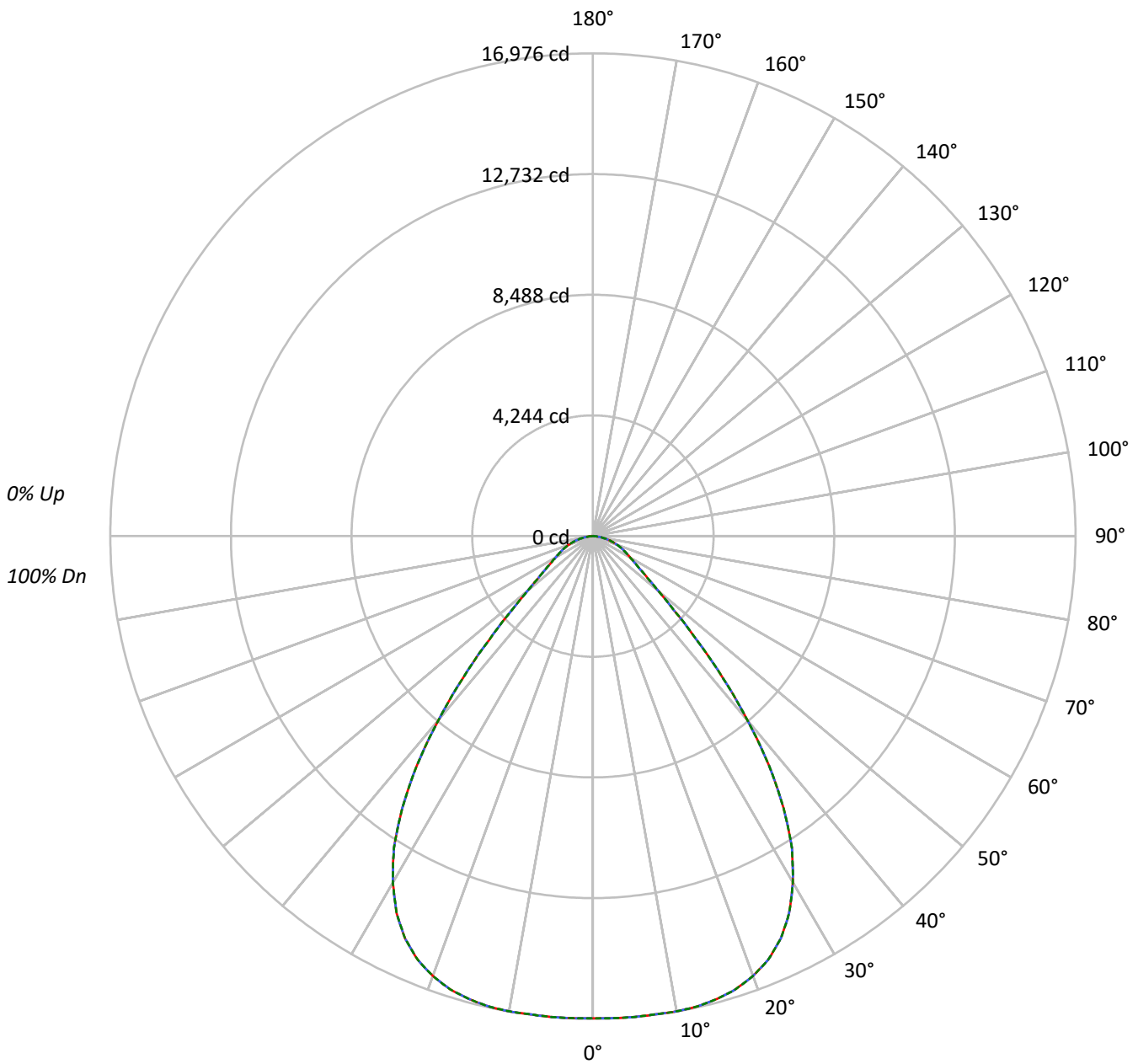
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28705.4 lumens
Efficiency: N/A
Efficacy: 179.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.15
Luminous Opening: Circular (Dia: 1.71' x H: 0')
CIE Type: Direct

Input Watts (W): 159.8
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

TEST NUMBER: P1436154
CATALOG NUMBER: EHBR1-30-UNV-M-L830

Luminous Intensity Polar Plot



0% Up
100% Dn

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



TEST NUMBER: P1436154
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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	87	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	73	68	78	72	68	75	71	67	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58
6	79	68	61	56	78	67	61	55	66	60	55	64	59	55	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	50	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	79646	79646	79646
5°	80028	80028	80028
10°	80932	80932	80932
15°	81946	81946	81946
20°	82272	82272	82272
25°	80947	80947	80947
30°	76296	76296	76296
35°	67030	67030	67030
40°	51876	51876	51876
45°	34272	34272	34272
50°	21893	21893	21893
55°	16584	16584	16584
60°	14248	14248	14248
65°	13309	13309	13309
70°	12592	12592	12592
75°	11438	11438	11438
80°	9803	9803	9803
85°	6692	6692	6692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 34272 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1619.8	5.6
10°-20°	4757.0	16.6
20°-30°	7137.6	24.9
30°-40°	7181.2	25.0
40°-50°	4110.7	14.3
50°-60°	1880.1	6.5
60°-70°	1192.9	4.2
70°-80°	669.2	2.3
80°-90°	156.9	0.5
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°	13514.5	47.1
0°-40°	20695.7	72.1
0°-60°	26686.5	93.0
0°-90°	28705.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	28705.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16960	16960	16960	16960	16960	
5°	16976	16976	16976	16976	16976	1620
15°	16855	16855	16855	16855	16855	4757
25°	15622	15622	15622	15622	15622	7138
35°	11692	11692	11692	11692	11692	7181
45°	5160	5160	5160	5160	5160	4111
55°	2026	2026	2026	2026	2026	1880
65°	1198	1198	1198	1198	1198	1193
75°	630	630	630	630	630	669
85°	124	124	124	124	124	157
90°	0	0	0	0	0	



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 CATALOG NUMBER: EHBR1-30-UNV-M-L830

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16960.0	16960.0	16960.0	16960.0	16960.0
2.5°	16968.2	16968.2	16968.2	16968.2	16968.2
5°	16976.5	16976.5	16976.5	16976.5	16976.5
7.5°	16964.8	16964.8	16964.8	16964.8	16964.8
10°	16972.1	16972.1	16972.1	16972.1	16972.1
12.5°	16942.9	16942.9	16942.9	16942.9	16942.9
15°	16855.2	16855.2	16855.2	16855.2	16855.2
17.5°	16710.1	16710.1	16710.1	16710.1	16710.1
20°	16462.6	16462.6	16462.6	16462.6	16462.6
22.5°	16122.4	16122.4	16122.4	16122.4	16122.4
25°	15622.1	15622.1	15622.1	15622.1	15622.1
27.5°	14949.0	14949.0	14949.0	14949.0	14949.0
30°	14070.1	14070.1	14070.1	14070.1	14070.1
32.5°	13029.7	13029.7	13029.7	13029.7	13029.7
35°	11692.3	11692.3	11692.3	11692.3	11692.3
37.5°	10177.3	10177.3	10177.3	10177.3	10177.3
40°	8462.2	8462.2	8462.2	8462.2	8462.2
42.5°	6762.3	6762.3	6762.3	6762.3	6762.3
45°	5160.4	5160.4	5160.4	5160.4	5160.4
47.5°	3884.6	3884.6	3884.6	3884.6	3884.6
50°	2996.6	2996.6	2996.6	2996.6	2996.6
52.5°	2421.0	2421.0	2421.0	2421.0	2421.0
55°	2025.5	2025.5	2025.5	2025.5	2025.5
57.5°	1734.4	1734.4	1734.4	1734.4	1734.4
60°	1517.0	1517.0	1517.0	1517.0	1517.0
62.5°	1349.0	1349.0	1349.0	1349.0	1349.0
65°	1197.7	1197.7	1197.7	1197.7	1197.7
67.5°	1058.4	1058.4	1058.4	1058.4	1058.4
70°	917.1	917.1	917.1	917.1	917.1
72.5°	775.0	775.0	775.0	775.0	775.0
75°	630.4	630.4	630.4	630.4	630.4
77.5°	493.1	493.1	493.1	493.1	493.1
80°	362.5	362.5	362.5	362.5	362.5
82.5°	236.3	236.3	236.3	236.3	236.3
85°	124.2	124.2	124.2	124.2	124.2
87.5°	35.4	35.4	35.4	35.4	35.4
90°	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	18.56	19.84	18.93	20.15	20.47	18.56	19.84	18.93	20.15	20.47
	3H	20.14	21.27	20.52	21.60	21.97	20.14	21.27	20.52	21.60	21.97
	4H	20.72	21.78	21.13	22.13	22.51	20.72	21.78	21.13	22.13	22.51
	6H	21.12	22.09	21.53	22.46	22.85	21.12	22.09	21.53	22.46	22.85
	8H	21.22	22.14	21.65	22.53	22.93	21.22	22.14	21.65	22.53	22.93
	12H	21.26	22.14	21.69	22.52	22.95	21.26	22.14	21.69	22.52	22.95
4H	2H	19.05	20.11	19.46	20.46	20.84	19.05	20.11	19.46	20.46	20.84
	3H	20.86	21.72	21.27	22.13	22.53	20.86	21.72	21.27	22.13	22.53
	4H	21.56	22.33	22.00	22.75	23.20	21.56	22.33	22.00	22.75	23.20
	6H	22.07	22.74	22.53	23.18	23.65	22.07	22.74	22.53	23.18	23.65
	8H	22.20	22.83	22.67	23.27	23.74	22.20	22.83	22.67	23.27	23.74
	12H	22.27	22.82	22.76	23.30	23.78	22.27	22.82	22.76	23.30	23.78
8H	4H	21.79	22.41	22.26	22.86	23.33	21.79	22.41	22.26	22.86	23.33
	6H	22.40	22.91	22.90	23.41	23.89	22.40	22.91	22.90	23.41	23.89
	8H	22.59	23.05	23.12	23.56	24.06	22.59	23.05	23.12	23.56	24.06
	12H	22.71	23.11	23.23	23.61	24.18	22.71	23.11	23.23	23.61	24.18
12H	4H	21.79	22.34	22.28	22.82	23.30	21.79	22.34	22.28	22.82	23.30
	6H	22.42	22.88	22.94	23.39	23.89	22.42	22.88	22.94	23.39	23.89
	8H	22.66	23.06	23.17	23.55	24.13	22.66	23.06	23.17	23.55	24.13

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-2

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L830-N

Data in this report applies to families of products including EHBR-60-L830-N

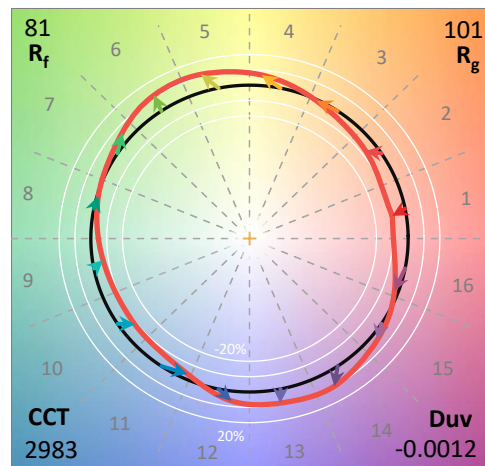
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-2
 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-L830-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K): 2983
 CIE u': 0.2516
 CIE v': 0.5201
 Duv: -0.0012
 CIE x: 0.4364
 CIE y: 0.4010
 CIE z: 0.1626
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 583
 Purity: 51.34918
 Rf: 81.2
 Rg: 101.5

CRI (Ra):	83.4		
R1:	84.0	R9:	29.4
R2:	87.5	R10:	68.6
R3:	88.9	R11:	82.2
R4:	83.8	R12:	61.6
R5:	81.9	R13:	83.9
R6:	83.1	R14:	92.5
R7:	87.1	R15:	79.8
R8:	70.9		



Test Conditions

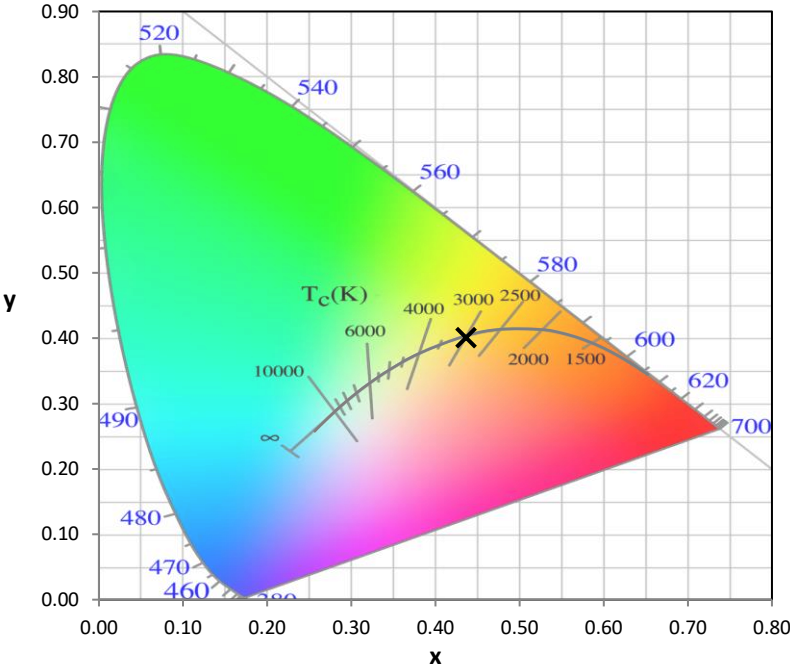
Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-2

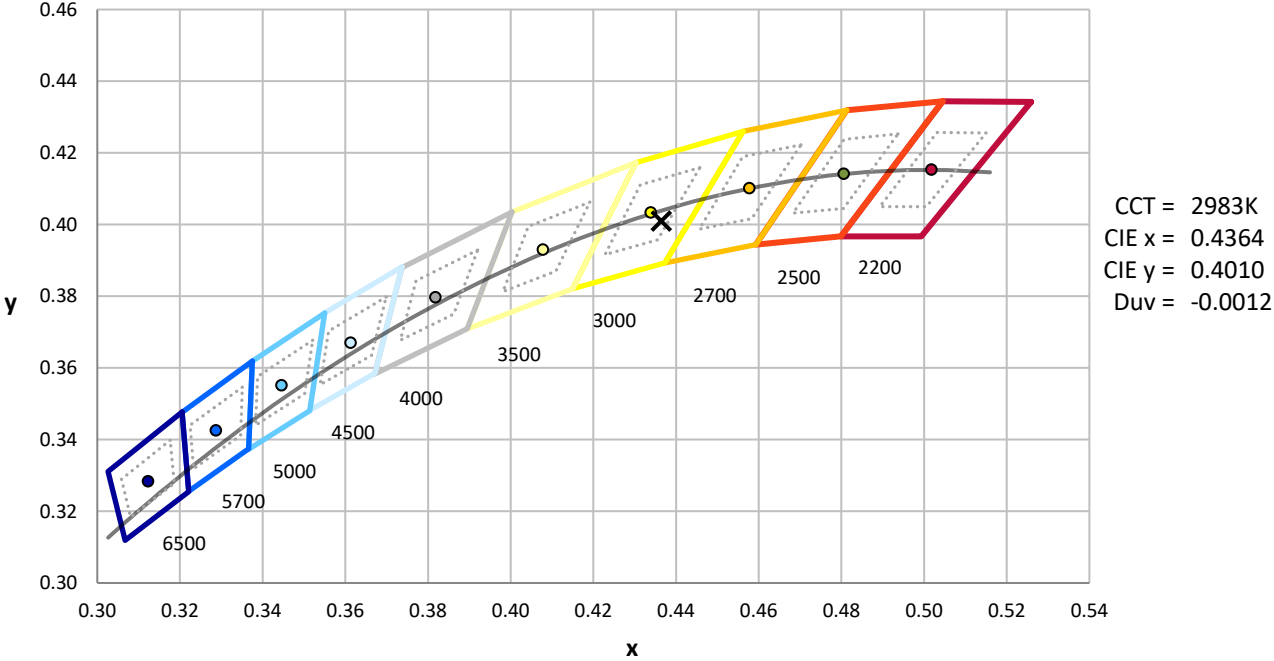
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

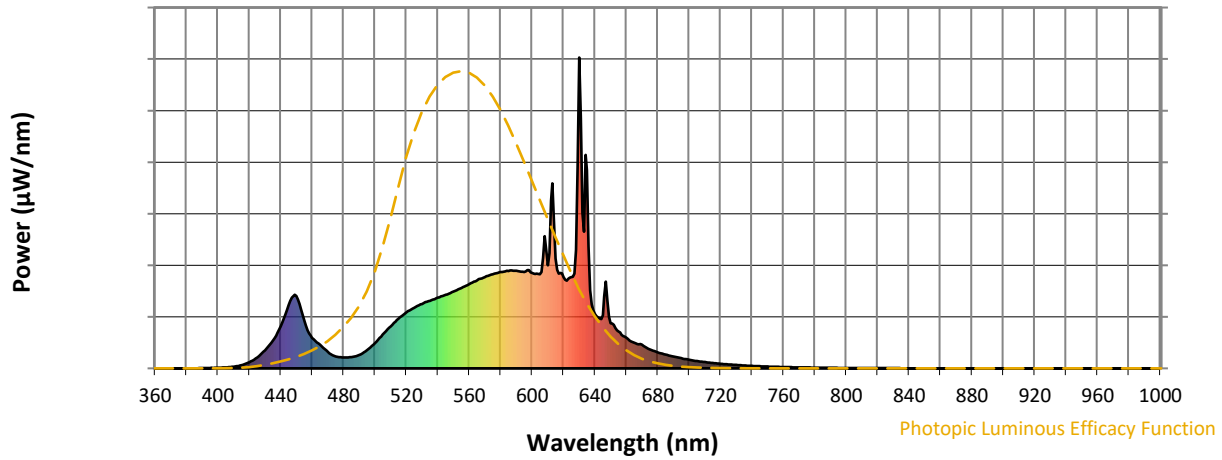


CCT = 2983K
 CIE x = 0.4364
 CIE y = 0.4010
 Duv = -0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

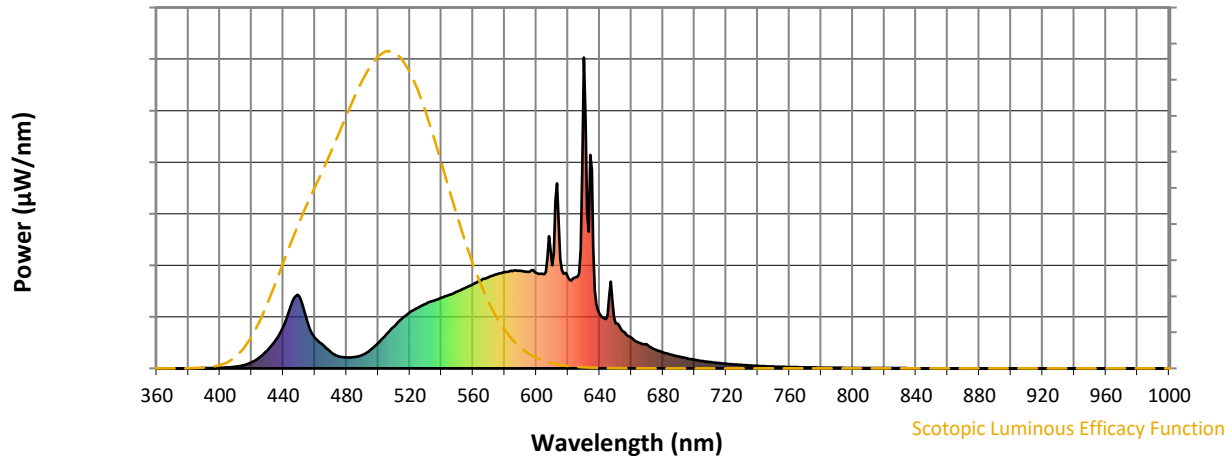


Photopic Lumens: NR

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



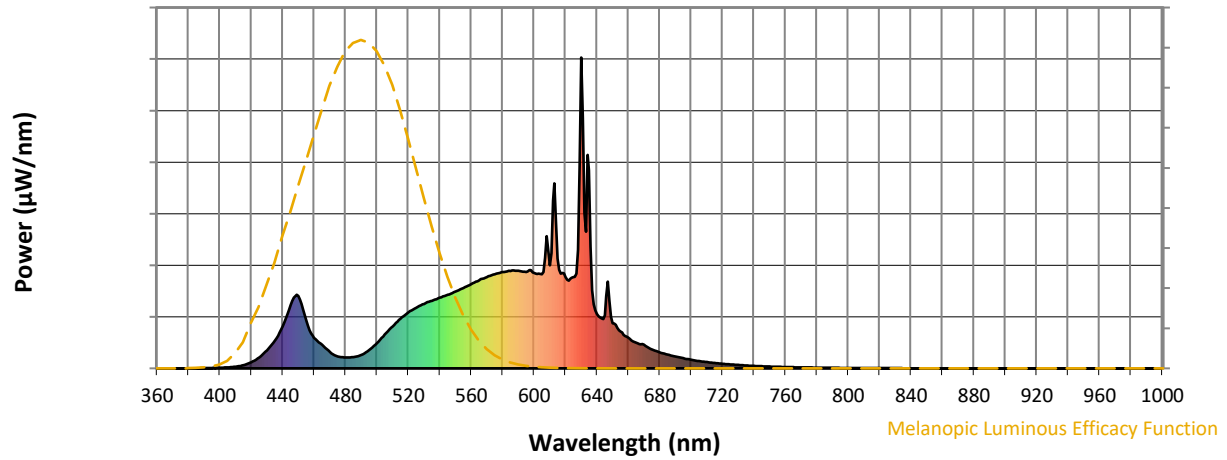
Scotopic Lumens: NR

S/P: 1.27

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-2

Melanopic Flux vs. Wavelength



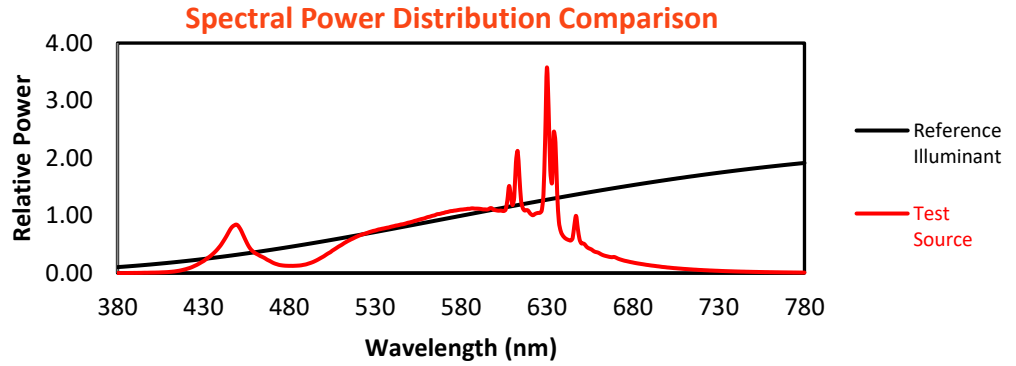
Melanopic Lumens: NR

M/P: 2.34

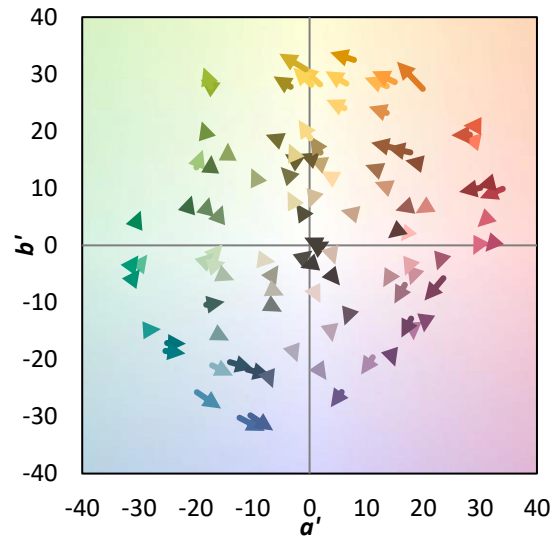
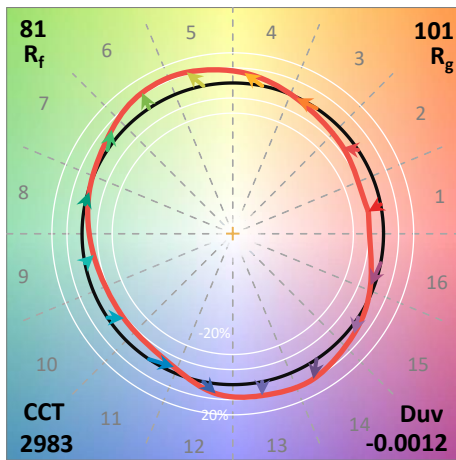
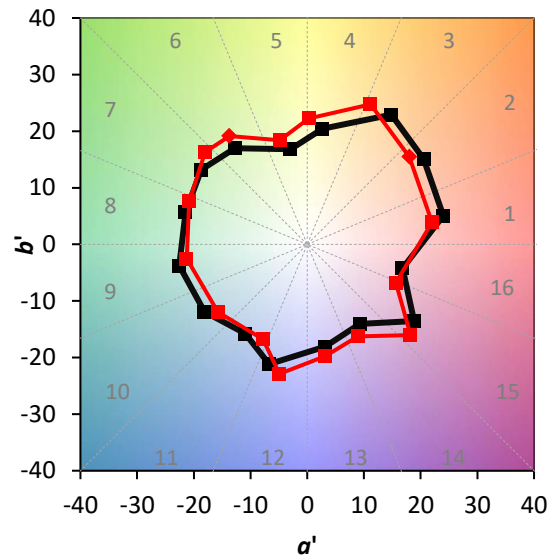
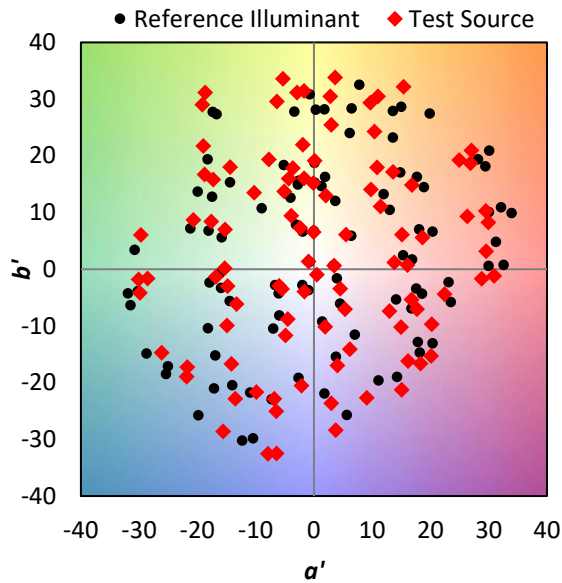
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

Summary

$R_f = 81.2$
 $R_g = 101.5$
 CIE $R_a = 83.4$
 $R_9 = 29.4$

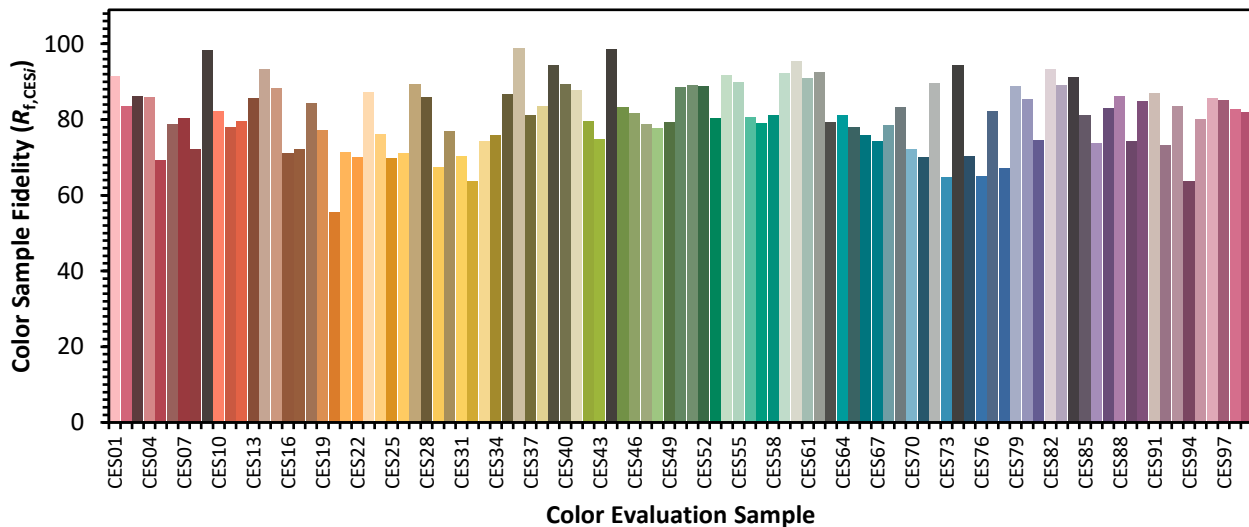


Color Vector Graphics

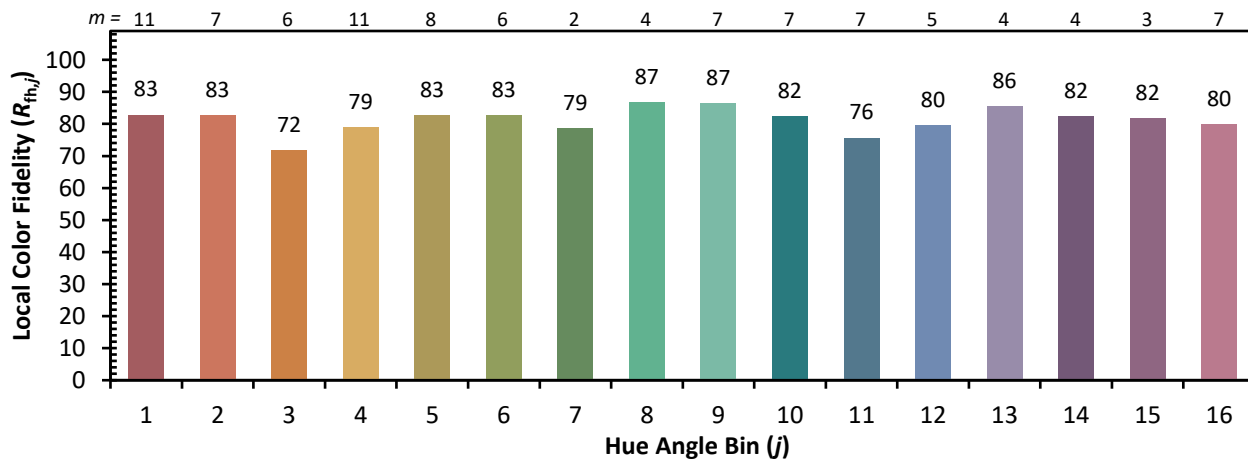
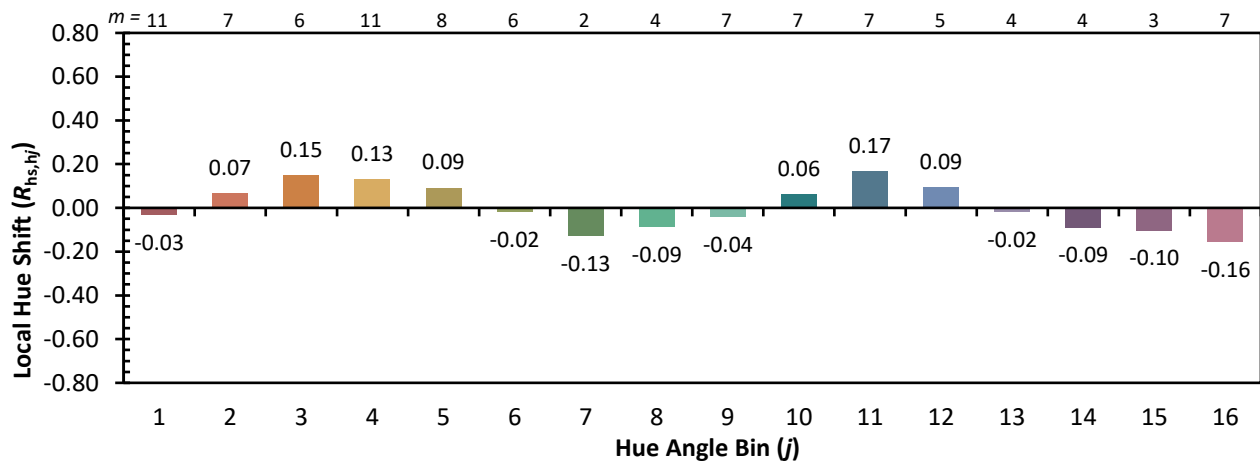
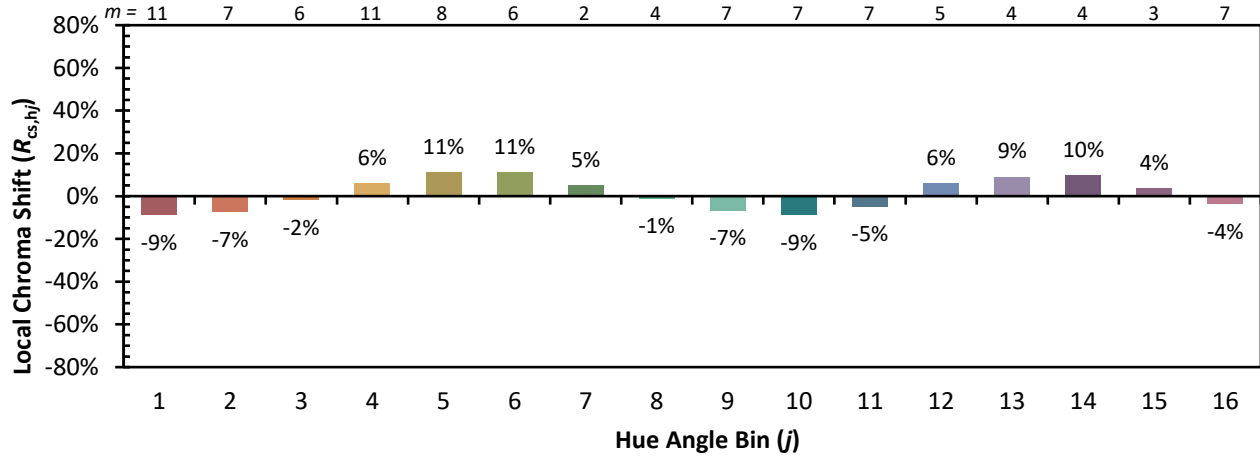


Individual Sample Fidelity Index ($R_{f,i}$)

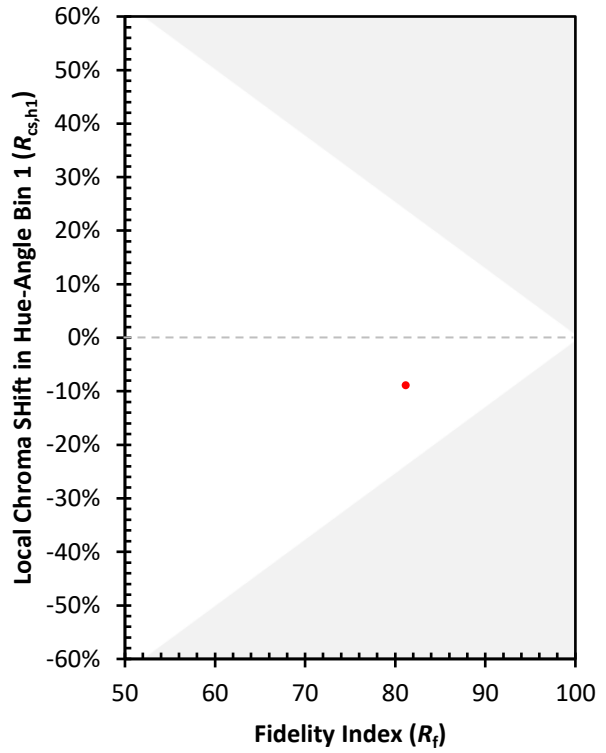
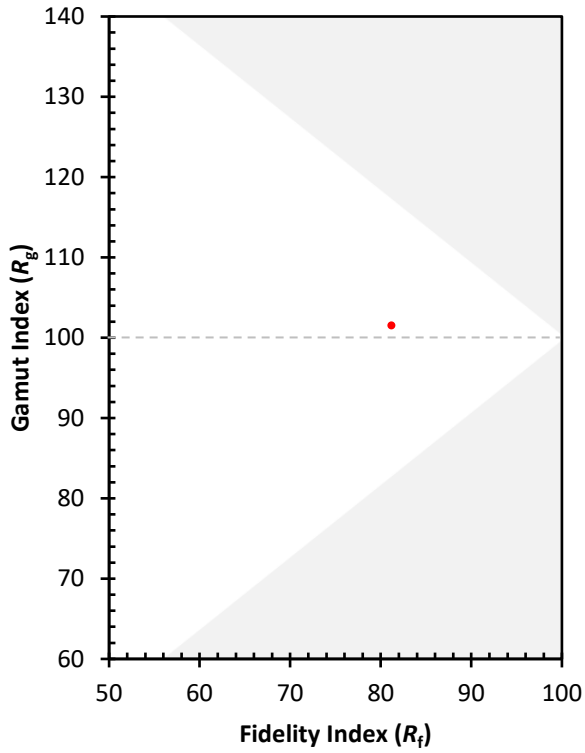
CES01 = 86	CES26 = 71	CES51 = 89	CES76 = 65
CES02 = 63	CES27 = 89	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 86	CES53 = 80	CES78 = 67
CES04 = 70	CES29 = 68	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 77	CES55 = 90	CES80 = 85
CES06 = 51	CES31 = 70	CES56 = 81	CES81 = 75
CES07 = 43	CES32 = 64	CES57 = 79	CES82 = 93
CES08 = 41	CES33 = 74	CES58 = 81	CES83 = 89
CES09 = 29	CES34 = 76	CES59 = 92	CES84 = 91
CES10 = 76	CES35 = 87	CES60 = 96	CES85 = 81
CES11 = 59	CES36 = 99	CES61 = 91	CES86 = 74
CES12 = 65	CES37 = 81	CES62 = 93	CES87 = 83
CES13 = 44	CES38 = 83	CES63 = 79	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 81	CES89 = 74
CES15 = 72	CES40 = 89	CES65 = 78	CES90 = 85
CES16 = 48	CES41 = 88	CES66 = 76	CES91 = 87
CES17 = 50	CES42 = 80	CES67 = 74	CES92 = 73
CES18 = 57	CES43 = 75	CES68 = 79	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 83	CES94 = 64
CES20 = 67	CES45 = 83	CES70 = 72	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 70	CES96 = 86
CES22 = 79	CES47 = 79	CES72 = 90	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 65	CES98 = 83
CES24 = 91	CES49 = 79	CES74 = 94	CES99 = 82
CES25 = 72	CES50 = 88	CES75 = 70	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)