

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: P1436394

Luminaire Tested: EHBR1-48-UNV-M-L850

Issue Date: 3/25/2026

Test Information

Test Method: LM-79-2019
Report Number: P1436394
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: EHBR1-48-UNV-M-L850
Description: Elevate Round Highbay at, 48000 lumens, 5000K 80CRI LEDs with M lens
Light Source: -
Ballast/Driver: -

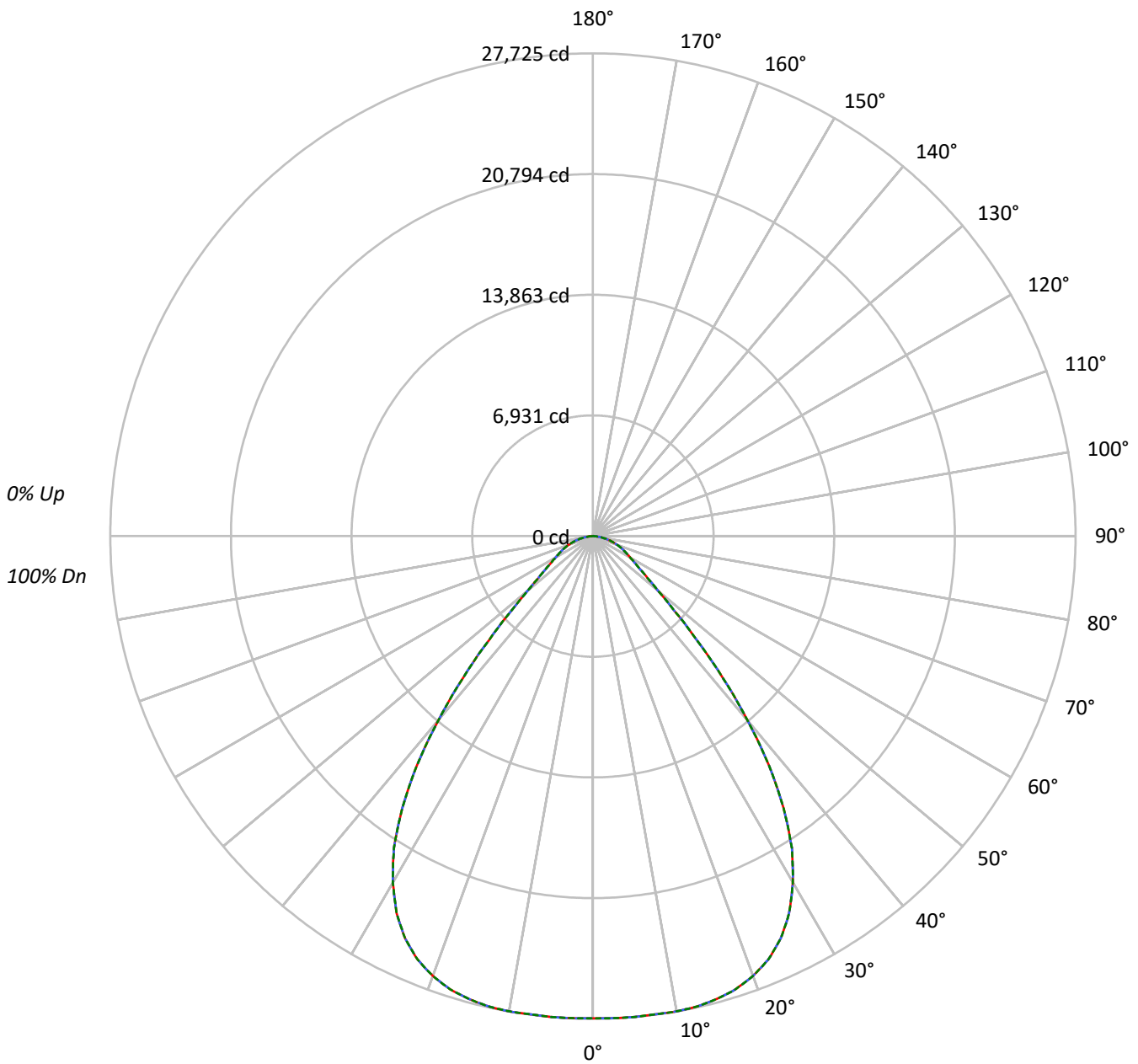
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 46880.3 lumens
Efficiency: N/A
Efficacy: 181.3 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): 258.6
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: P1436394
CATALOG NUMBER: EHBR1-48-UNV-M-L850

Luminous Intensity Polar Plot



0% Up
100% Dn

— 0°-180° - - 45°-225° - - - 90°-270°



TEST NUMBER: P1436394
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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°	130073	130073	130073
5°	130697	130697	130697
10°	132174	132174	132174
15°	133829	133829	133829
20°	134361	134361	134361
25°	132198	132198	132198
30°	124603	124603	124603
35°	109470	109470	109470
40°	84722	84722	84722
45°	55971	55971	55971
50°	35754	35754	35754
55°	27084	27084	27084
60°	23268	23268	23268
65°	21734	21734	21734
70°	20567	20567	20567
75°	18680	18680	18680
80°	16010	16010	16010
85°	10927	10927	10927

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 55971 cd/sqm



TEST NUMBER: P1436394
 CATALOG NUMBER: EHBR1-48-UNV-M-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2645.4	5.6
10°-20°	7768.8	16.6
20°-30°	11656.8	24.9
30°-40°	11728.0	25.0
40°-50°	6713.4	14.3
50°-60°	3070.6	6.5
60°-70°	1948.2	4.2
70°-80°	1092.8	2.3
80°-90°	256.3	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°	22071.1	47.1
0°-40°	33799.1	72.1
0°-60°	43583.0	93.0
0°-90°	46880.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	46880.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	27698	27698	27698	27698	27698	
5°	27725	27725	27725	27725	27725	2645
15°	27527	27527	27527	27527	27527	7769
25°	25513	25513	25513	25513	25513	11657
35°	19095	19095	19095	19095	19095	11728
45°	8428	8428	8428	8428	8428	6713
55°	3308	3308	3308	3308	3308	3071
65°	1956	1956	1956	1956	1956	1948
75°	1030	1030	1030	1030	1030	1093
85°	203	203	203	203	203	256
90°	0	0	0	0	0	



TEST NUMBER: P1436394
 CATALOG NUMBER: EHBR1-48-UNV-M-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	27698.1	27698.1	27698.1	27698.1	27698.1
2.5°	27711.6	27711.6	27711.6	27711.6	27711.6
5°	27725.0	27725.0	27725.0	27725.0	27725.0
7.5°	27706.1	27706.1	27706.1	27706.1	27706.1
10°	27718.0	27718.0	27718.0	27718.0	27718.0
12.5°	27670.3	27670.3	27670.3	27670.3	27670.3
15°	27526.9	27526.9	27526.9	27526.9	27526.9
17.5°	27290.0	27290.0	27290.0	27290.0	27290.0
20°	26885.8	26885.8	26885.8	26885.8	26885.8
22.5°	26330.2	26330.2	26330.2	26330.2	26330.2
25°	25513.2	25513.2	25513.2	25513.2	25513.2
27.5°	24413.9	24413.9	24413.9	24413.9	24413.9
30°	22978.6	22978.6	22978.6	22978.6	22978.6
32.5°	21279.4	21279.4	21279.4	21279.4	21279.4
35°	19095.2	19095.2	19095.2	19095.2	19095.2
37.5°	16621.0	16621.0	16621.0	16621.0	16621.0
40°	13820.1	13820.1	13820.1	13820.1	13820.1
42.5°	11043.9	11043.9	11043.9	11043.9	11043.9
45°	8427.8	8427.8	8427.8	8427.8	8427.8
47.5°	6344.2	6344.2	6344.2	6344.2	6344.2
50°	4893.9	4893.9	4893.9	4893.9	4893.9
52.5°	3954.0	3954.0	3954.0	3954.0	3954.0
55°	3308.0	3308.0	3308.0	3308.0	3308.0
57.5°	2832.5	2832.5	2832.5	2832.5	2832.5
60°	2477.4	2477.4	2477.4	2477.4	2477.4
62.5°	2203.3	2203.3	2203.3	2203.3	2203.3
65°	1955.9	1955.9	1955.9	1955.9	1955.9
67.5°	1728.5	1728.5	1728.5	1728.5	1728.5
70°	1497.9	1497.9	1497.9	1497.9	1497.9
72.5°	1265.7	1265.7	1265.7	1265.7	1265.7
75°	1029.5	1029.5	1029.5	1029.5	1029.5
77.5°	805.2	805.2	805.2	805.2	805.2
80°	592.0	592.0	592.0	592.0	592.0
82.5°	385.9	385.9	385.9	385.9	385.9
85°	202.8	202.8	202.8	202.8	202.8
87.5°	57.9	57.9	57.9	57.9	57.9
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	20.27	21.54	20.63	21.85	22.17	20.27	21.54	20.63	21.85	22.17
	3H	21.84	22.97	22.22	23.30	23.67	21.84	22.97	22.22	23.30	23.67
	4H	22.43	23.48	22.83	23.83	24.22	22.43	23.48	22.83	23.83	24.22
	6H	22.82	23.79	23.24	24.16	24.55	22.82	23.79	23.24	24.16	24.55
	8H	22.92	23.84	23.35	24.23	24.64	22.92	23.84	23.35	24.23	24.64
	12H	22.96	23.84	23.40	24.22	24.65	22.96	23.84	23.40	24.22	24.65
4H	2H	20.76	21.81	21.16	22.16	22.55	20.76	21.81	21.16	22.16	22.55
	3H	22.56	23.43	22.97	23.83	24.23	22.56	23.43	22.97	23.83	24.23
	4H	23.26	24.04	23.70	24.46	24.90	23.26	24.04	23.70	24.46	24.90
	6H	23.77	24.44	24.24	24.89	25.35	23.77	24.44	24.24	24.89	25.35
	8H	23.91	24.53	24.38	24.98	25.45	23.91	24.53	24.38	24.98	25.45
	12H	23.97	24.52	24.46	25.01	25.48	23.97	24.52	24.46	25.01	25.48
8H	4H	23.49	24.11	23.96	24.56	25.03	23.49	24.11	23.96	24.56	25.03
	6H	24.11	24.61	24.61	25.11	25.59	24.11	24.61	24.61	25.11	25.59
	8H	24.30	24.75	24.82	25.27	25.76	24.30	24.75	24.82	25.27	25.76
	12H	24.41	24.81	24.93	25.31	25.88	24.41	24.81	24.93	25.31	25.88
12H	4H	23.49	24.04	23.98	24.53	25.00	23.49	24.04	23.98	24.53	25.00
	6H	24.13	24.58	24.65	25.10	25.59	24.13	24.58	24.65	25.10	25.59
	8H	24.36	24.76	24.88	25.26	25.83	24.36	24.76	24.88	25.26	25.83

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-4

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L850-N

Data in this report applies to families of products including EHBR-60-L850-N

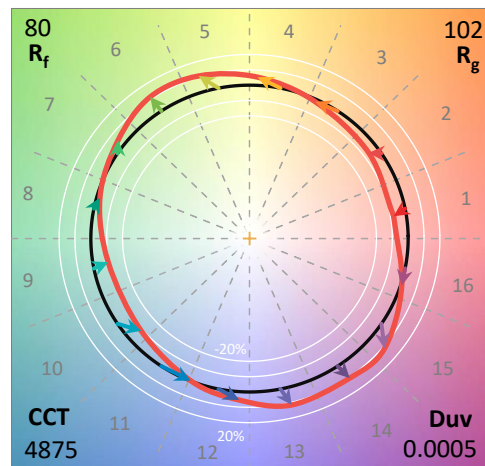
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-4
 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-L850-N**
 Description: Elevate Round Highbay at, 60000 lumens, 5000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K): 4875
 CIE u': 0.2124
 CIE v': 0.4871
 Duv: 0.0005
 CIE x: 0.3488
 CIE y: 0.3555
 CIE z: 0.2957
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 573
 Purity: 11.33556
 Rf: 80
 Rg: 102.3

CRI (Ra):	82.3		
R1:	85.0	R9:	43.9
R2:	83.1	R10:	57.4
R3:	78.8	R11:	83.1
R4:	84.0	R12:	51.0
R5:	83.0	R13:	83.4
R6:	76.3	R14:	87.4
R7:	86.8	R15:	83.4
R8:	81.7		



Test Conditions

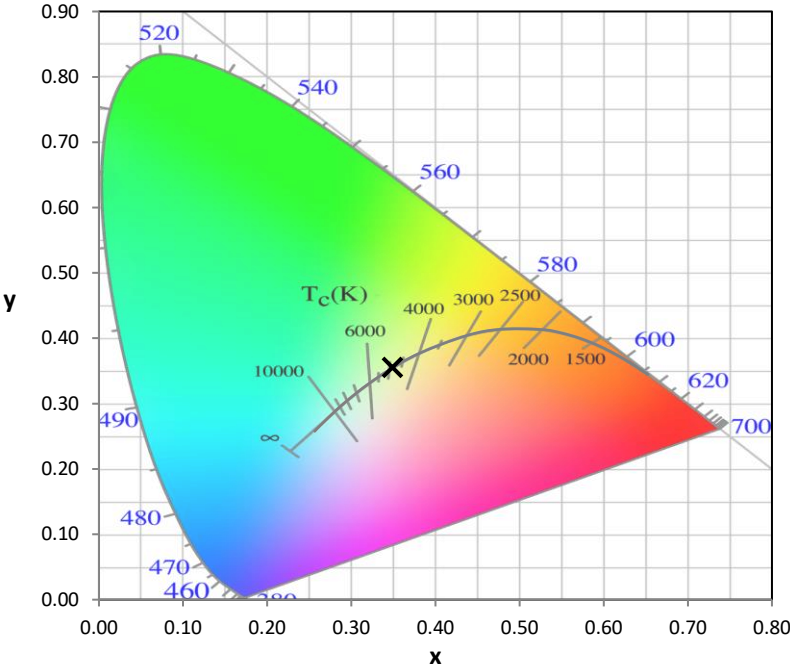
Stabilization Time: 39M
 Operation Time: 1H 39M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-4

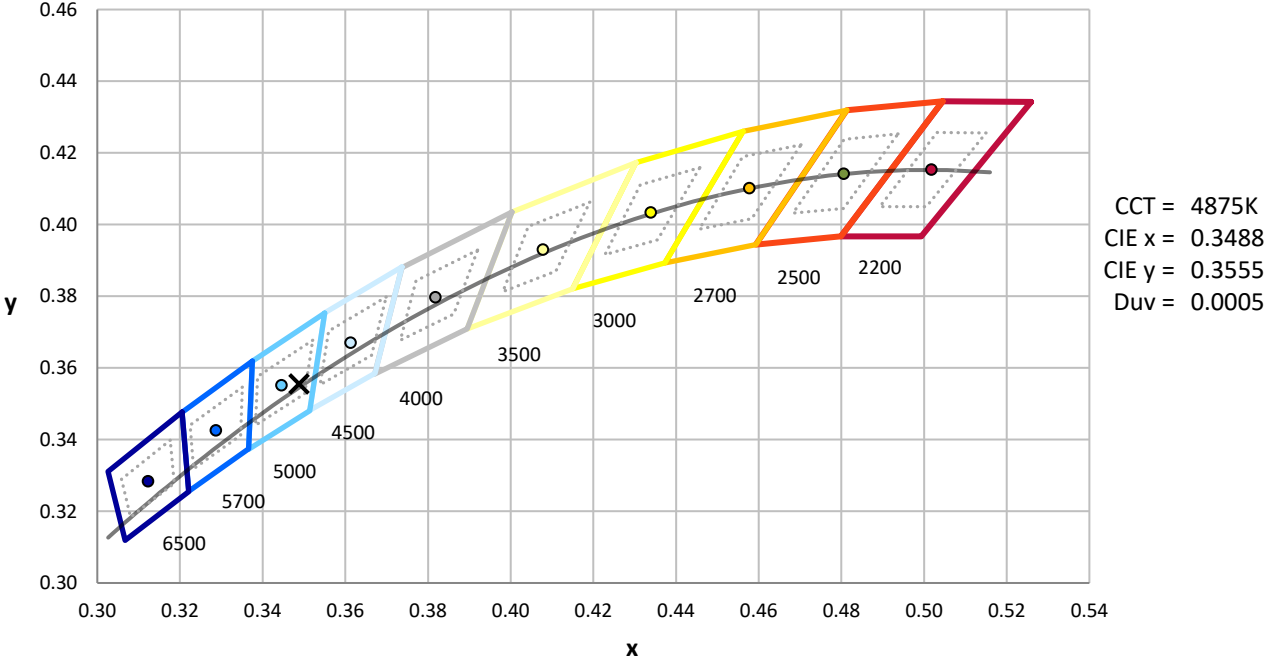
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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



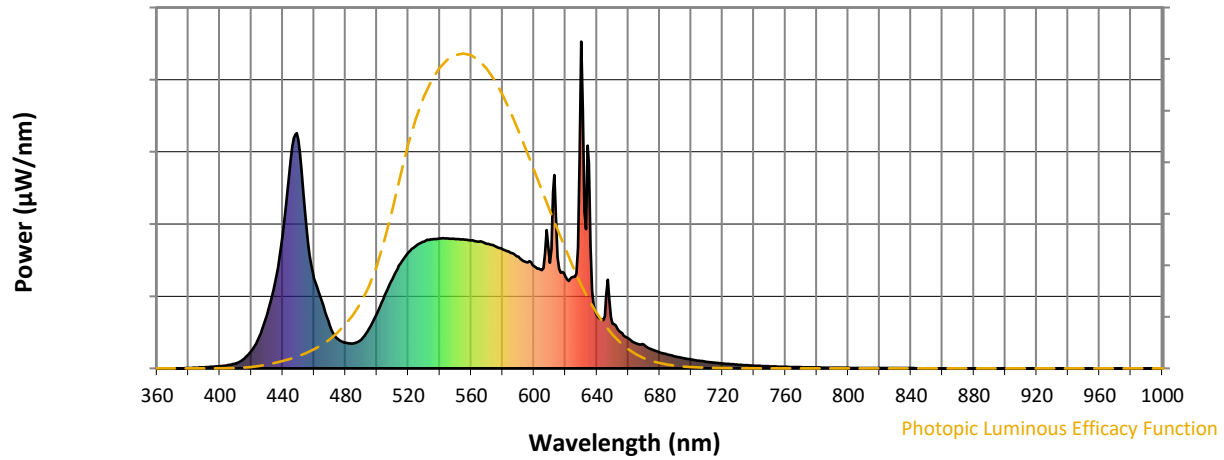
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

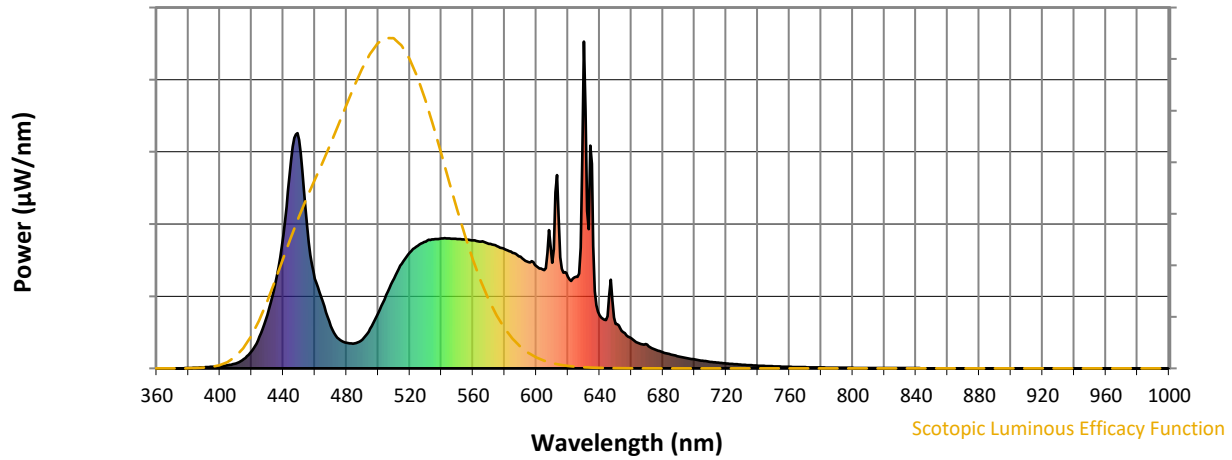


Photopic Lumens: NR

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	89	NR	620	280	NR	750	6	NR	880	0	NR
365	0	NR	495	121	NR	625	280	NR	755	5	NR	885	0	NR
370	0	NR	500	168	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	224	NR	635	626	NR	765	4	NR	895	0	NR
380	1	NR	510	275	NR	640	163	NR	770	4	NR	900	0	NR
385	2	NR	515	321	NR	645	160	NR	775	3	NR	905	0	NR
390	3	NR	520	354	NR	650	136	NR	780	3	NR	910	0	NR
395	5	NR	525	375	NR	655	111	NR	785	2	NR	915	0	NR
400	7	NR	530	388	NR	660	93	NR	790	2	NR	920	0	NR
405	10	NR	535	395	NR	665	76	NR	795	2	NR	925	0	NR
410	15	NR	540	397	NR	670	72	NR	800	2	NR	930	0	NR
415	28	NR	545	398	NR	675	57	NR	805	1	NR	935	0	NR
420	53	NR	550	396	NR	680	49	NR	810	1	NR	940	0	NR
425	97	NR	555	395	NR	685	42	NR	815	1	NR	945	0	NR
430	163	NR	560	392	NR	690	37	NR	820	1	NR	950	0	NR
435	261	NR	565	388	NR	695	32	NR	825	1	NR	955	0	NR
440	409	NR	570	381	NR	700	27	NR	830	1	NR	960	0	NR
445	637	NR	575	374	NR	705	23	NR	835	1	NR	965	0	NR
450	699	NR	580	365	NR	710	20	NR	840	1	NR	970	0	NR
455	436	NR	585	354	NR	715	17	NR	845	0	NR	975	0	NR
460	274	NR	590	342	NR	720	15	NR	850	0	NR	980	0	NR
465	205	NR	595	325	NR	725	13	NR	855	0	NR	985	0	NR
470	130	NR	600	313	NR	730	11	NR	860	0	NR	990	0	NR
475	90	NR	605	301	NR	735	10	NR	865	0	NR	995	0	NR
480	78	NR	610	323	NR	740	8	NR	870	0	NR	1000	0	NR
485	77	NR	615	340	NR	745	7	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



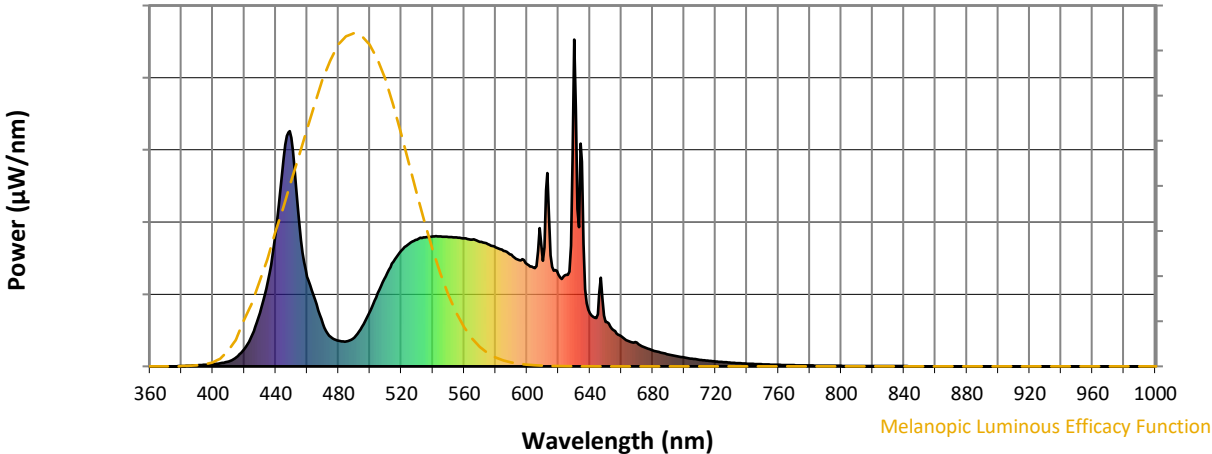
Scotopic Lumens: NR

S/P: 1.82

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	89	NR	620	280	NR	750	6	NR	880	0	NR
365	0	NR	495	121	NR	625	280	NR	755	5	NR	885	0	NR
370	0	NR	500	168	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	224	NR	635	626	NR	765	4	NR	895	0	NR
380	1	NR	510	275	NR	640	163	NR	770	4	NR	900	0	NR
385	2	NR	515	321	NR	645	160	NR	775	3	NR	905	0	NR
390	3	NR	520	354	NR	650	136	NR	780	3	NR	910	0	NR
395	5	NR	525	375	NR	655	111	NR	785	2	NR	915	0	NR
400	7	NR	530	388	NR	660	93	NR	790	2	NR	920	0	NR
405	10	NR	535	395	NR	665	76	NR	795	2	NR	925	0	NR
410	15	NR	540	397	NR	670	72	NR	800	2	NR	930	0	NR
415	28	NR	545	398	NR	675	57	NR	805	1	NR	935	0	NR
420	53	NR	550	396	NR	680	49	NR	810	1	NR	940	0	NR
425	97	NR	555	395	NR	685	42	NR	815	1	NR	945	0	NR
430	163	NR	560	392	NR	690	37	NR	820	1	NR	950	0	NR
435	261	NR	565	388	NR	695	32	NR	825	1	NR	955	0	NR
440	409	NR	570	381	NR	700	27	NR	830	1	NR	960	0	NR
445	637	NR	575	374	NR	705	23	NR	835	1	NR	965	0	NR
450	699	NR	580	365	NR	710	20	NR	840	1	NR	970	0	NR
455	436	NR	585	354	NR	715	17	NR	845	0	NR	975	0	NR
460	274	NR	590	342	NR	720	15	NR	850	0	NR	980	0	NR
465	205	NR	595	325	NR	725	13	NR	855	0	NR	985	0	NR
470	130	NR	600	313	NR	730	11	NR	860	0	NR	990	0	NR
475	90	NR	605	301	NR	735	10	NR	865	0	NR	995	0	NR
480	78	NR	610	323	NR	740	8	NR	870	0	NR	1000	0	NR
485	77	NR	615	340	NR	745	7	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



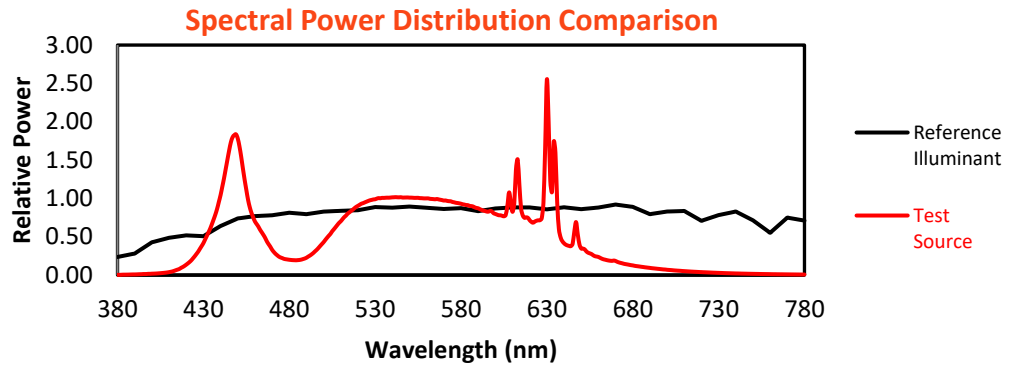
Melanopic Lumens: NR

M/P: 3.71

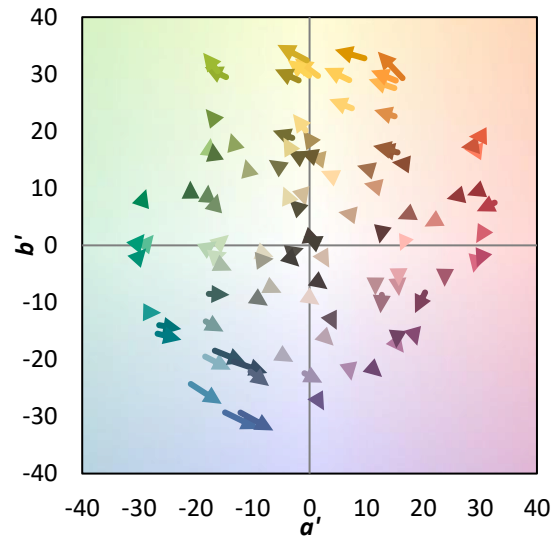
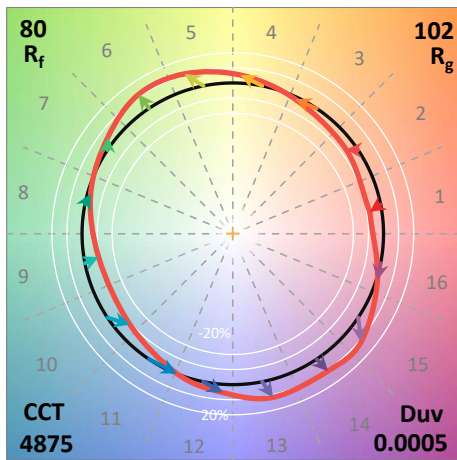
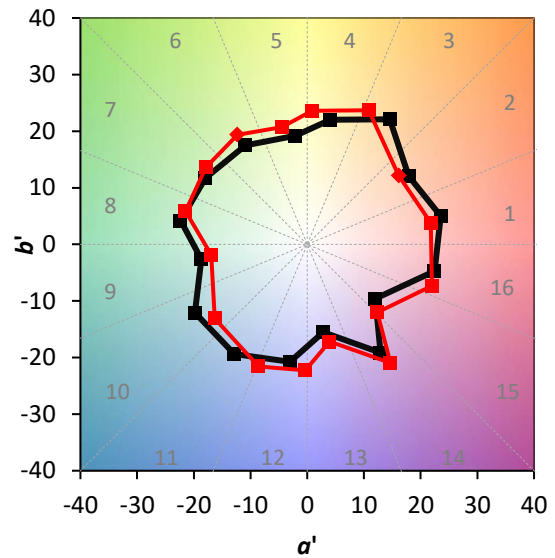
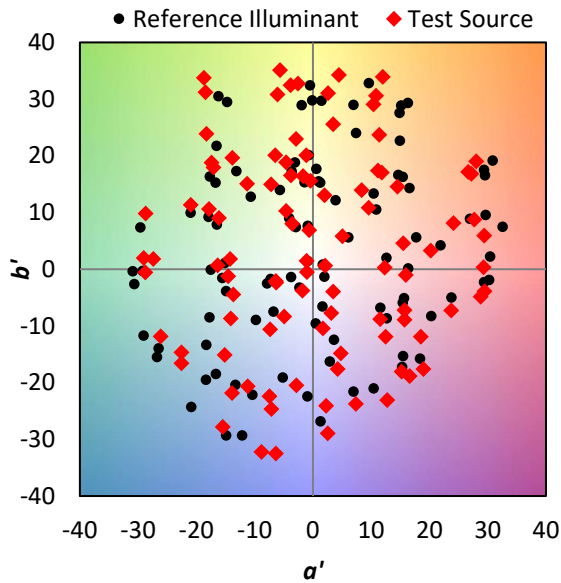
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	89	NR	620	280	NR	750	6	NR	880	0	NR
365	0	NR	495	121	NR	625	280	NR	755	5	NR	885	0	NR
370	0	NR	500	168	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	224	NR	635	626	NR	765	4	NR	895	0	NR
380	1	NR	510	275	NR	640	163	NR	770	4	NR	900	0	NR
385	2	NR	515	321	NR	645	160	NR	775	3	NR	905	0	NR
390	3	NR	520	354	NR	650	136	NR	780	3	NR	910	0	NR
395	5	NR	525	375	NR	655	111	NR	785	2	NR	915	0	NR
400	7	NR	530	388	NR	660	93	NR	790	2	NR	920	0	NR
405	10	NR	535	395	NR	665	76	NR	795	2	NR	925	0	NR
410	15	NR	540	397	NR	670	72	NR	800	2	NR	930	0	NR
415	28	NR	545	398	NR	675	57	NR	805	1	NR	935	0	NR
420	53	NR	550	396	NR	680	49	NR	810	1	NR	940	0	NR
425	97	NR	555	395	NR	685	42	NR	815	1	NR	945	0	NR
430	163	NR	560	392	NR	690	37	NR	820	1	NR	950	0	NR
435	261	NR	565	388	NR	695	32	NR	825	1	NR	955	0	NR
440	409	NR	570	381	NR	700	27	NR	830	1	NR	960	0	NR
445	637	NR	575	374	NR	705	23	NR	835	1	NR	965	0	NR
450	699	NR	580	365	NR	710	20	NR	840	1	NR	970	0	NR
455	436	NR	585	354	NR	715	17	NR	845	0	NR	975	0	NR
460	274	NR	590	342	NR	720	15	NR	850	0	NR	980	0	NR
465	205	NR	595	325	NR	725	13	NR	855	0	NR	985	0	NR
470	130	NR	600	313	NR	730	11	NR	860	0	NR	990	0	NR
475	90	NR	605	301	NR	735	10	NR	865	0	NR	995	0	NR
480	78	NR	610	323	NR	740	8	NR	870	0	NR	1000	0	NR
485	77	NR	615	340	NR	745	7	NR	875	0	NR			

Summary

$R_f = 80$
 $R_g = 102.3$
 $CIE R_a = 82.3$
 $R_9 = 43.9$

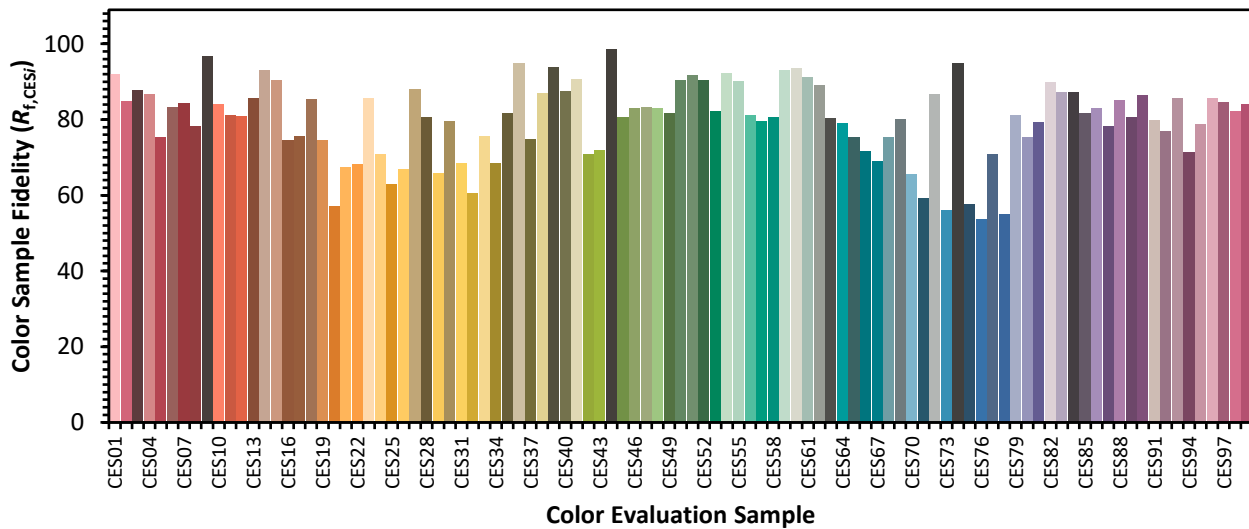


Color Vector Graphics

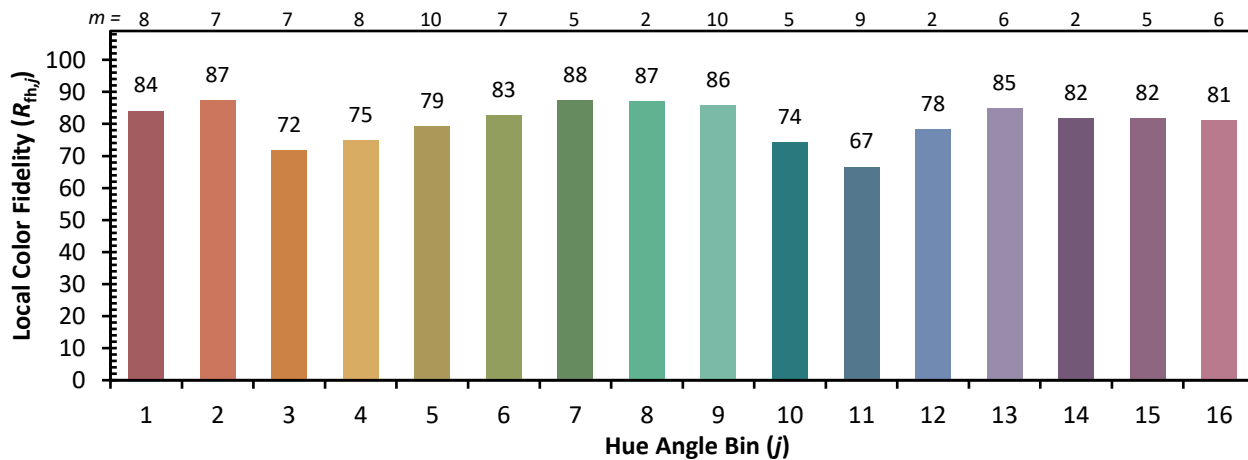
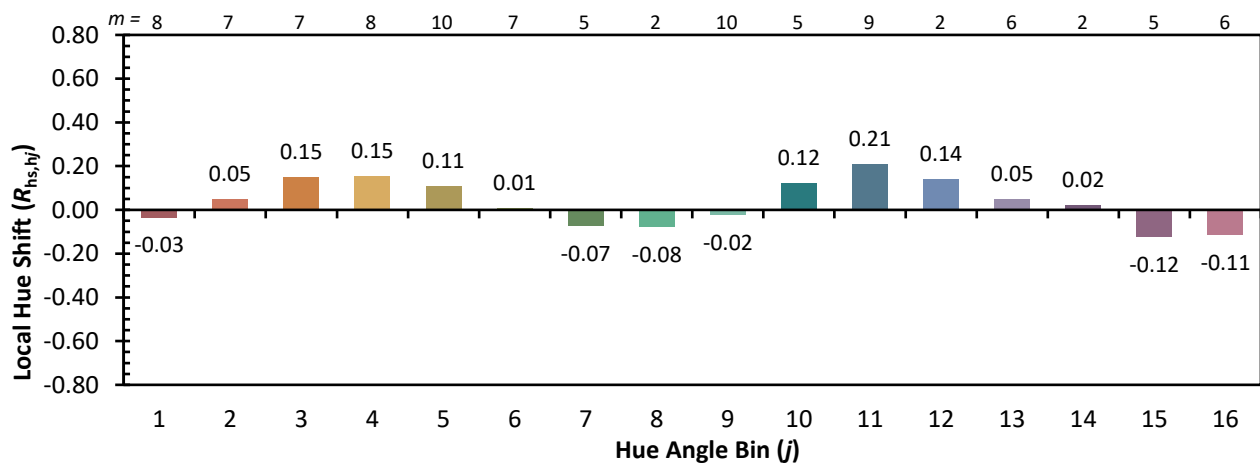
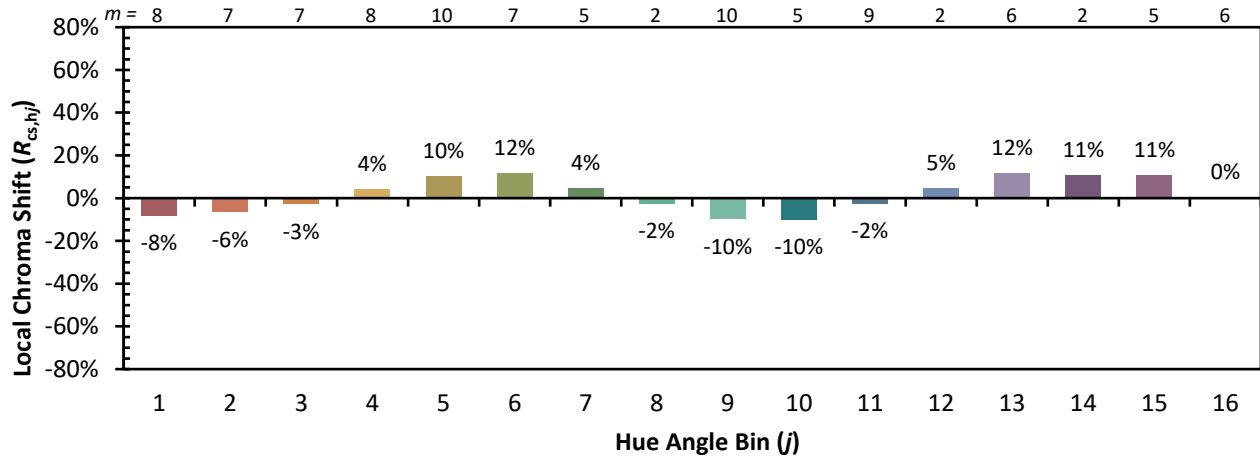


Individual Sample Fidelity Index ($R_{f,i}$)

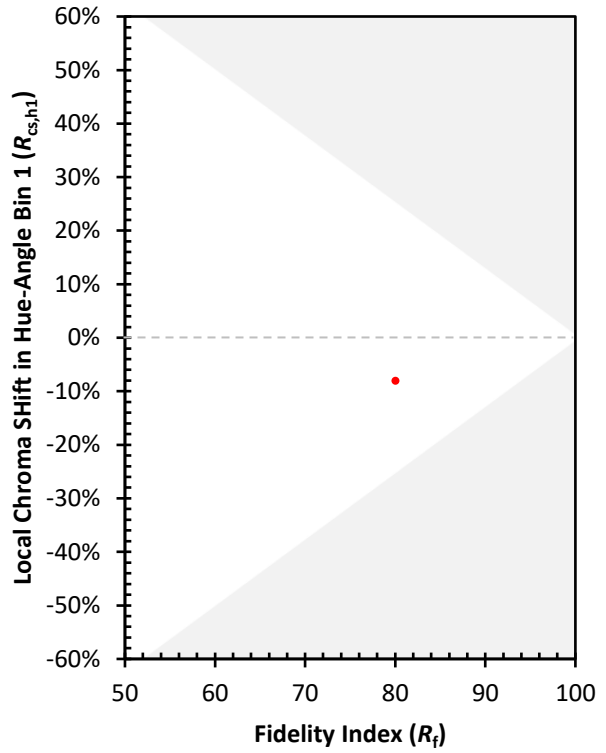
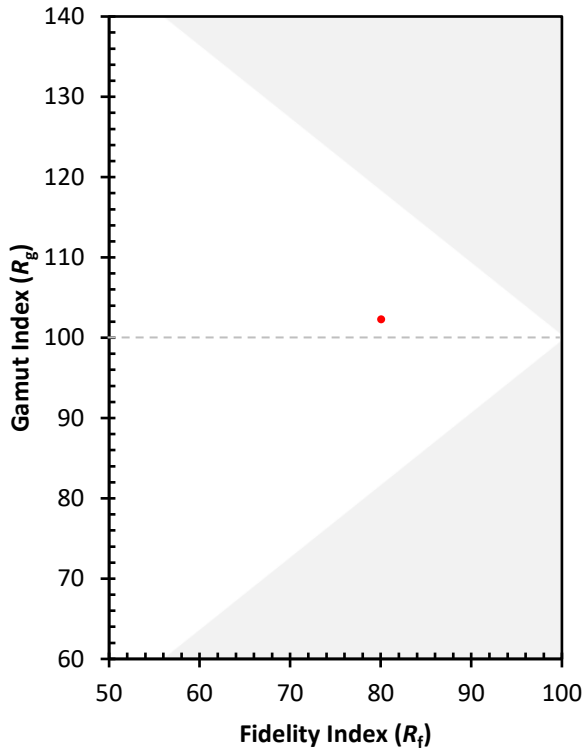
CES01 = 85	CES26 = 67	CES51 = 92	CES76 = 54
CES02 = 60	CES27 = 88	CES52 = 91	CES77 = 71
CES03 = 31	CES28 = 81	CES53 = 82	CES78 = 55
CES04 = 69	CES29 = 66	CES54 = 92	CES79 = 81
CES05 = 47	CES30 = 80	CES55 = 90	CES80 = 75
CES06 = 50	CES31 = 69	CES56 = 81	CES81 = 79
CES07 = 40	CES32 = 61	CES57 = 80	CES82 = 90
CES08 = 39	CES33 = 76	CES58 = 81	CES83 = 87
CES09 = 29	CES34 = 68	CES59 = 93	CES84 = 87
CES10 = 73	CES35 = 82	CES60 = 94	CES85 = 82
CES11 = 56	CES36 = 95	CES61 = 91	CES86 = 83
CES12 = 62	CES37 = 75	CES62 = 89	CES87 = 78
CES13 = 42	CES38 = 87	CES63 = 80	CES88 = 85
CES14 = 74	CES39 = 94	CES64 = 79	CES89 = 81
CES15 = 71	CES40 = 87	CES65 = 75	CES90 = 86
CES16 = 46	CES41 = 91	CES66 = 72	CES91 = 80
CES17 = 48	CES42 = 71	CES67 = 69	CES92 = 77
CES18 = 56	CES43 = 72	CES68 = 75	CES93 = 86
CES19 = 70	CES44 = 99	CES69 = 80	CES94 = 71
CES20 = 65	CES45 = 81	CES70 = 66	CES95 = 79
CES21 = 85	CES46 = 83	CES71 = 59	CES96 = 86
CES22 = 77	CES47 = 83	CES72 = 87	CES97 = 85
CES23 = 91	CES48 = 83	CES73 = 56	CES98 = 82
CES24 = 90	CES49 = 82	CES74 = 95	CES99 = 84
CES25 = 71	CES50 = 91	CES75 = 58	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)