

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: P1436410

Luminaire Tested: EHBR1-60-UNV-M-L850

Issue Date: 3/25/2026

Test Information

Test Method: LM-79-2019
Report Number: P1436410
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: EHBR1-60-UNV-M-L850
Description: Elevate Round Highbay at, 60000 lumens, 5000K 80CRI LEDs with M lens
Light Source: -
Ballast/Driver: -

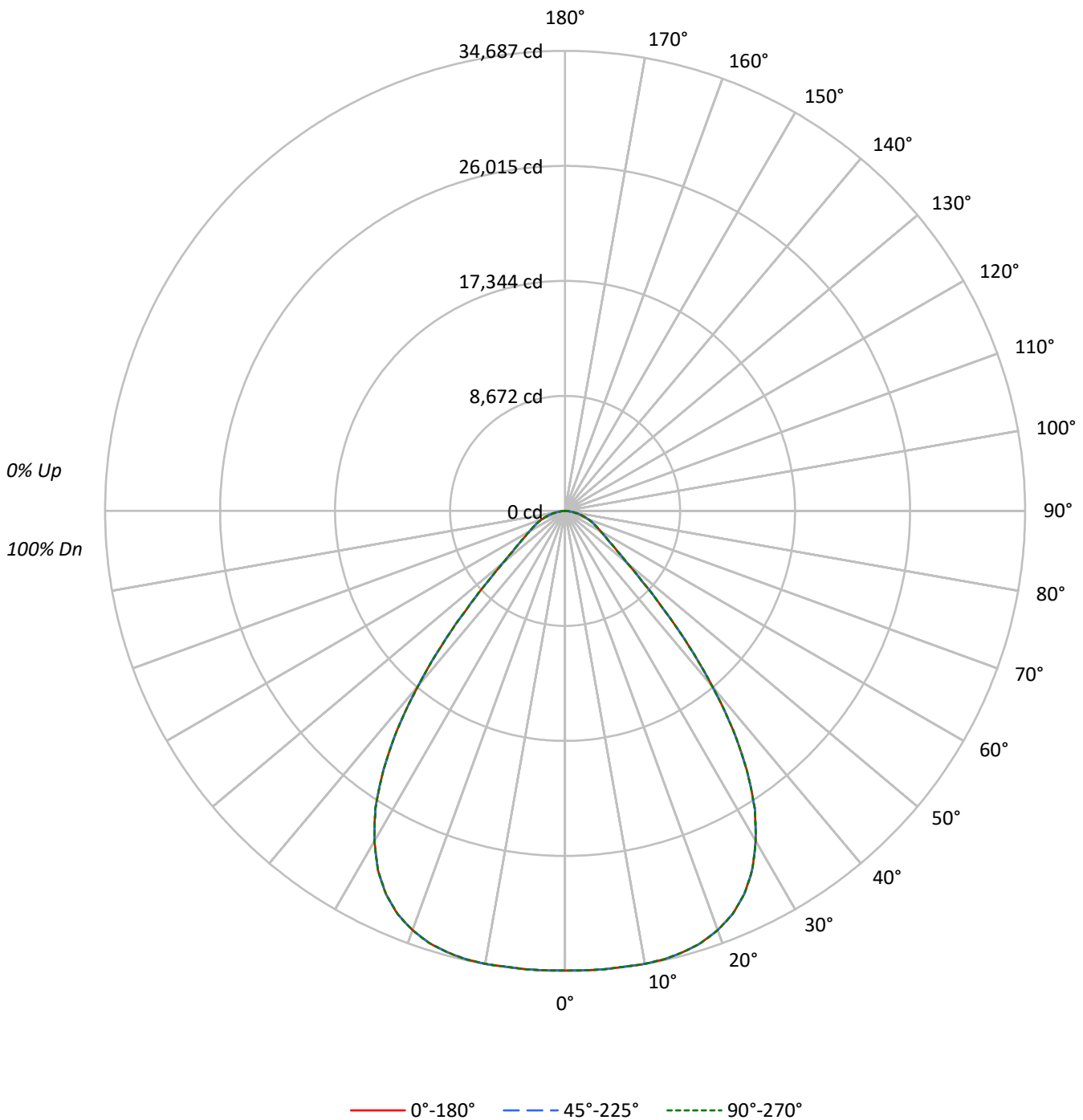
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 58651.9 lumens
Efficiency: N/A
Efficacy: 177.5 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): 330.4
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: P1436410
CATALOG NUMBER: EHBR1-60-UNV-M-L850

Luminous Intensity Polar Plot





TEST NUMBER: P1436410
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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°	162734	162734	162734
5°	163515	163515	163515
10°	165363	165363	165363
15°	167433	167433	167433
20°	168099	168099	168099
25°	165393	165393	165393
30°	155891	155891	155891
35°	136958	136958	136958
40°	105996	105996	105996
45°	70026	70026	70026
50°	44731	44731	44731
55°	33884	33884	33884
60°	29111	29111	29111
65°	27193	27193	27193
70°	25731	25731	25731
75°	23370	23370	23370
80°	20029	20029	20029
85°	13675	13675	13675

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 70026 cd/sqm



TEST NUMBER: P1436410
 CATALOG NUMBER: EHBR1-60-UNV-M-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3309.7	5.6
10°-20°	9719.6	16.6
20°-30°	14583.8	24.9
30°-40°	14672.9	25.0
40°-50°	8399.1	14.3
50°-60°	3841.6	6.5
60°-70°	2437.4	4.2
70°-80°	1367.2	2.3
80°-90°	320.7	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°	27613.1	47.1
0°-40°	42286.0	72.1
0°-60°	54526.7	93.0
0°-90°	58651.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	58651.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	34653	34653	34653	34653	34653	
5°	34687	34687	34687	34687	34687	3310
15°	34439	34439	34439	34439	34439	9720
25°	31920	31920	31920	31920	31920	14584
35°	23890	23890	23890	23890	23890	14673
45°	10544	10544	10544	10544	10544	8399
55°	4139	4139	4139	4139	4139	3842
65°	2447	2447	2447	2447	2447	2437
75°	1288	1288	1288	1288	1288	1367
85°	254	254	254	254	254	321
90°	0	0	0	0	0	



TEST NUMBER: P1436410
 CATALOG NUMBER: EHBR1-60-UNV-M-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	34653.1	34653.1	34653.1	34653.1	34653.1
2.5°	34670.0	34670.0	34670.0	34670.0	34670.0
5°	34686.9	34686.9	34686.9	34686.9	34686.9
7.5°	34663.0	34663.0	34663.0	34663.0	34663.0
10°	34677.9	34677.9	34677.9	34677.9	34677.9
12.5°	34618.4	34618.4	34618.4	34618.4	34618.4
15°	34438.9	34438.9	34438.9	34438.9	34438.9
17.5°	34142.5	34142.5	34142.5	34142.5	34142.5
20°	33636.8	33636.8	33636.8	33636.8	33636.8
22.5°	32941.7	32941.7	32941.7	32941.7	32941.7
25°	31919.5	31919.5	31919.5	31919.5	31919.5
27.5°	30544.2	30544.2	30544.2	30544.2	30544.2
30°	28748.5	28748.5	28748.5	28748.5	28748.5
32.5°	26622.6	26622.6	26622.6	26622.6	26622.6
35°	23890.0	23890.0	23890.0	23890.0	23890.0
37.5°	20794.5	20794.5	20794.5	20794.5	20794.5
40°	17290.4	17290.4	17290.4	17290.4	17290.4
42.5°	13817.0	13817.0	13817.0	13817.0	13817.0
45°	10544.0	10544.0	10544.0	10544.0	10544.0
47.5°	7937.2	7937.2	7937.2	7937.2	7937.2
50°	6122.7	6122.7	6122.7	6122.7	6122.7
52.5°	4946.8	4946.8	4946.8	4946.8	4946.8
55°	4138.6	4138.6	4138.6	4138.6	4138.6
57.5°	3543.8	3543.8	3543.8	3543.8	3543.8
60°	3099.5	3099.5	3099.5	3099.5	3099.5
62.5°	2756.5	2756.5	2756.5	2756.5	2756.5
65°	2447.2	2447.2	2447.2	2447.2	2447.2
67.5°	2162.5	2162.5	2162.5	2162.5	2162.5
70°	1874.0	1874.0	1874.0	1874.0	1874.0
72.5°	1583.4	1583.4	1583.4	1583.4	1583.4
75°	1288.0	1288.0	1288.0	1288.0	1288.0
77.5°	1007.4	1007.4	1007.4	1007.4	1007.4
80°	740.6	740.6	740.6	740.6	740.6
82.5°	482.9	482.9	482.9	482.9	482.9
85°	253.8	253.8	253.8	253.8	253.8
87.5°	72.4	72.4	72.4	72.4	72.4
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	21.05	22.32	21.41	22.63	22.95	21.05	22.32	21.41	22.63	22.95
	3H	22.62	23.75	23.00	24.08	24.45	22.62	23.75	23.00	24.08	24.45
	4H	23.21	24.26	23.61	24.61	24.99	23.21	24.26	23.61	24.61	24.99
	6H	23.60	24.57	24.01	24.94	25.33	23.60	24.57	24.01	24.94	25.33
	8H	23.70	24.62	24.13	25.01	25.42	23.70	24.62	24.13	25.01	25.42
	12H	23.74	24.62	24.18	25.00	25.43	23.74	24.62	24.18	25.00	25.43
4H	2H	21.53	22.59	21.94	22.94	23.32	21.53	22.59	21.94	22.94	23.32
	3H	23.34	24.20	23.75	24.61	25.01	23.34	24.20	23.75	24.61	25.01
	4H	24.04	24.82	24.48	25.24	25.68	24.04	24.82	24.48	25.24	25.68
	6H	24.55	25.22	25.01	25.67	26.13	24.55	25.22	25.01	25.67	26.13
	8H	24.69	25.31	25.16	25.76	26.23	24.69	25.31	25.16	25.76	26.23
	12H	24.75	25.30	25.24	25.78	26.26	24.75	25.30	25.24	25.78	26.26
8H	4H	24.27	24.89	24.74	25.34	25.81	24.27	24.89	24.74	25.34	25.81
	6H	24.88	25.39	25.39	25.89	26.37	24.88	25.39	25.39	25.89	26.37
	8H	25.07	25.53	25.60	26.05	26.54	25.07	25.53	25.60	26.05	26.54
	12H	25.19	25.59	25.71	26.09	26.66	25.19	25.59	25.71	26.09	26.66
12H	4H	24.27	24.82	24.76	25.30	25.78	24.27	24.82	24.76	25.30	25.78
	6H	24.90	25.36	25.43	25.87	26.37	24.90	25.36	25.43	25.87	26.37
	8H	25.14	25.54	25.66	26.04	26.61	25.14	25.54	25.66	26.04	26.61

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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

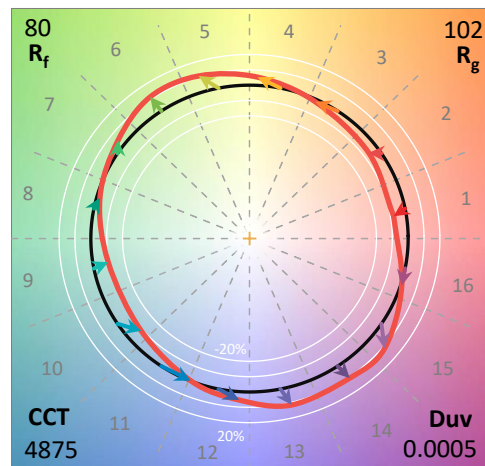
Test Information

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

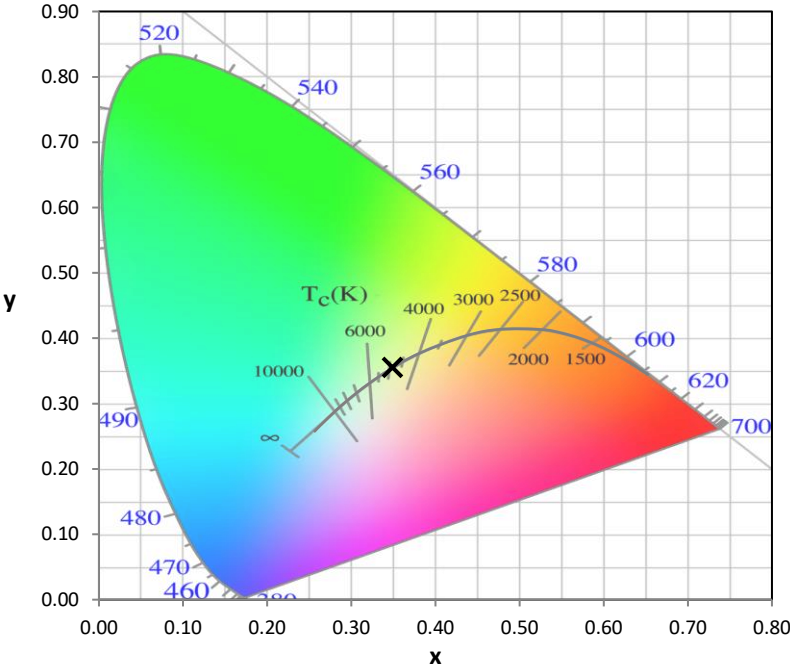
Stabilization Time: 39M
 Operation Time: 1H 39M
 Sphere Temperature (°C): 25.0

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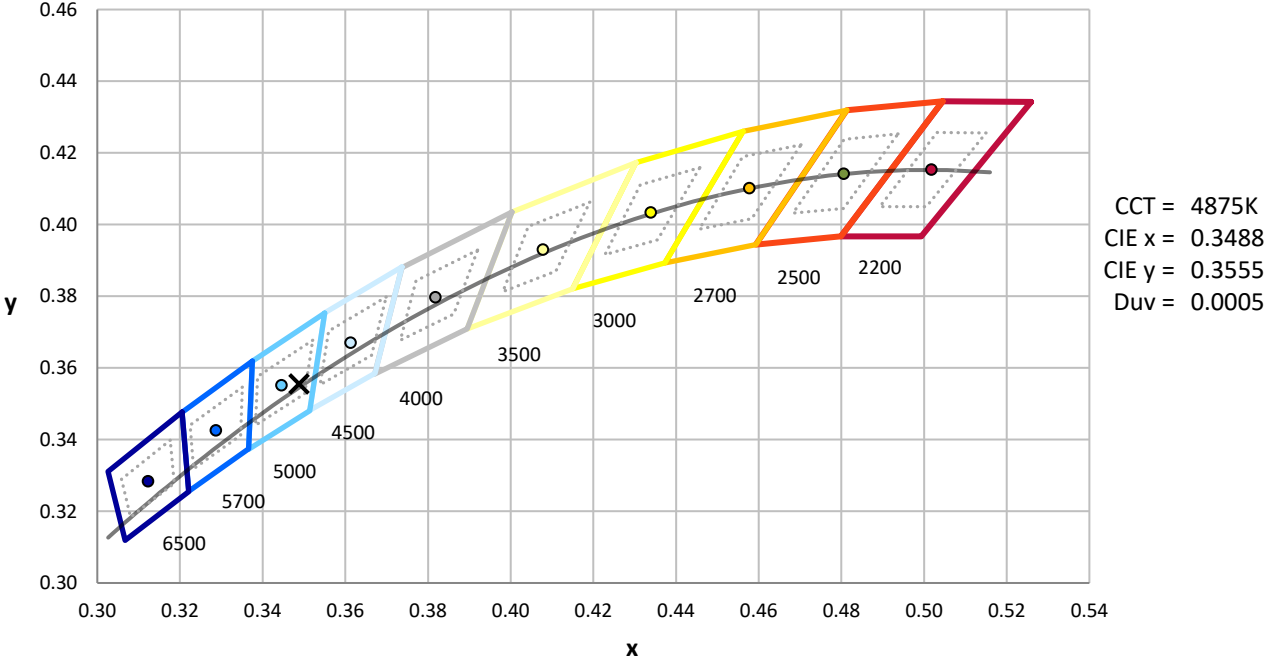
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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



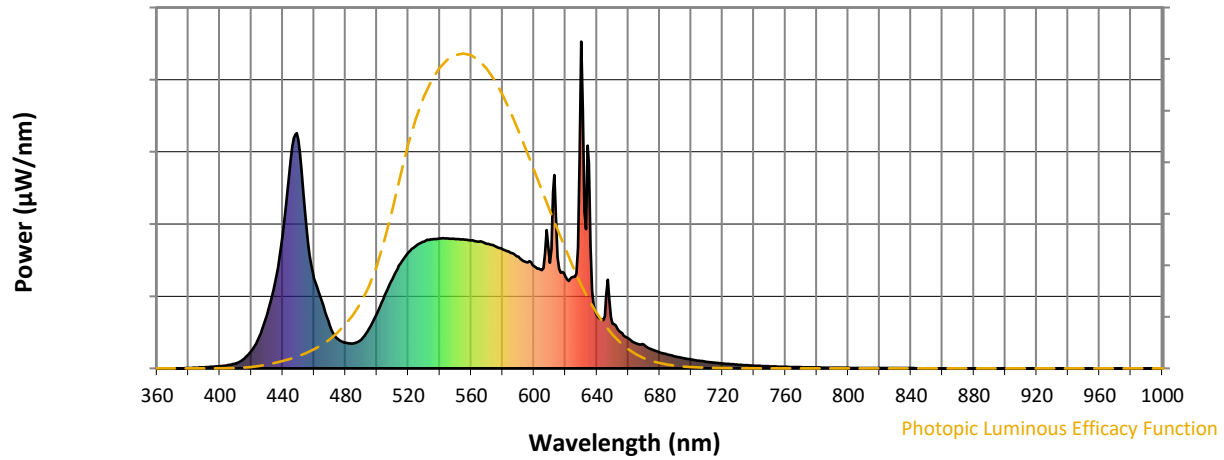
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

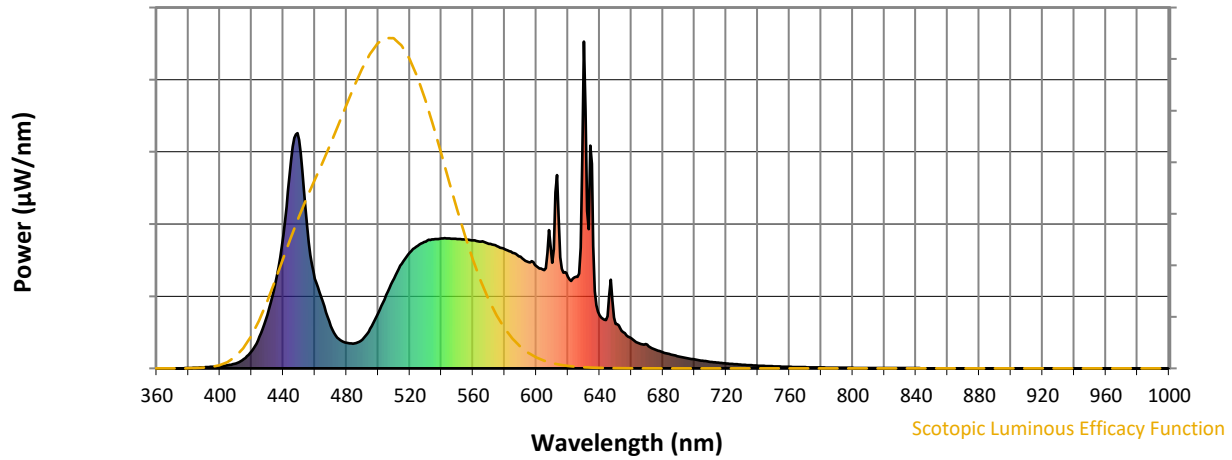


Photopic Lumens: NR

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



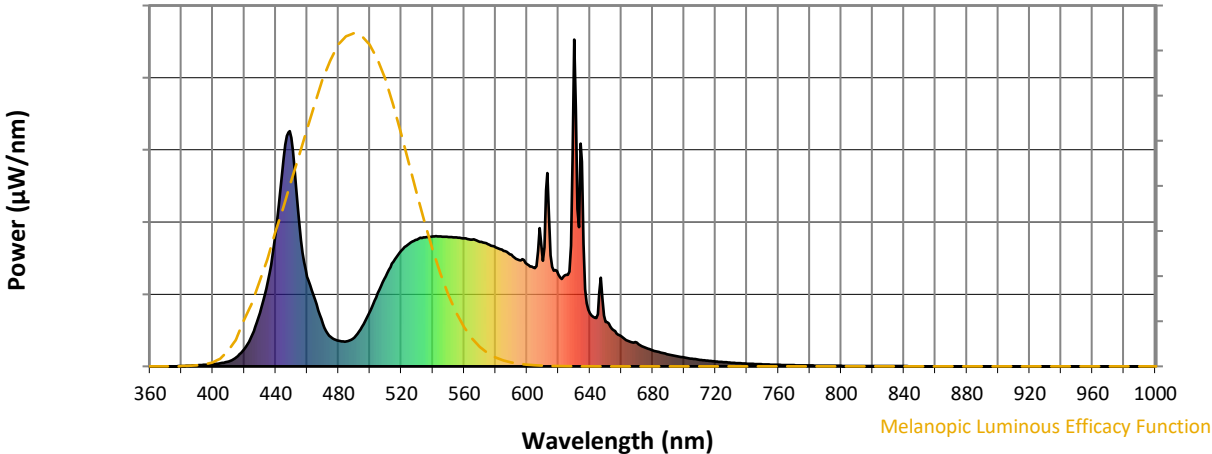
Scotopic Lumens: NR

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



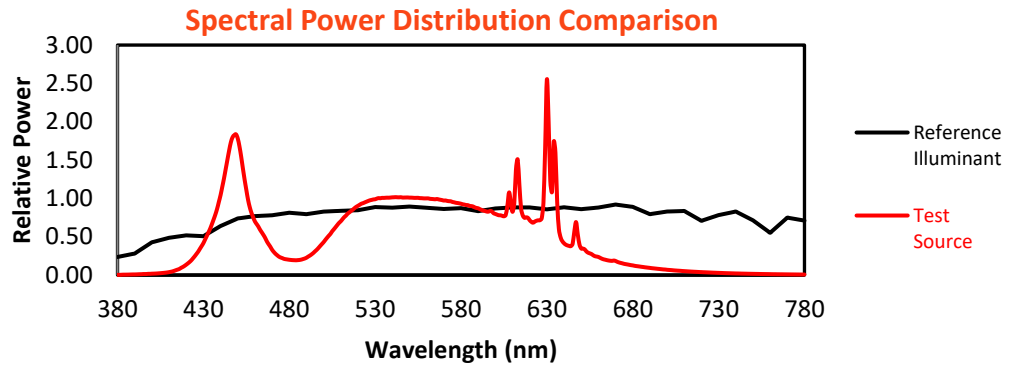
Melanopic Lumens: NR

M/P: 3.71

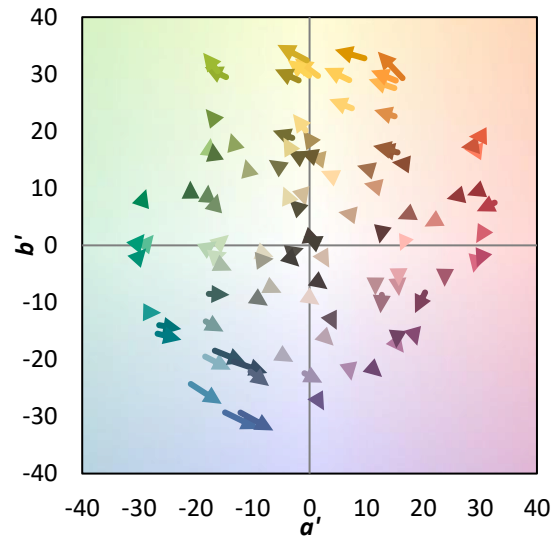
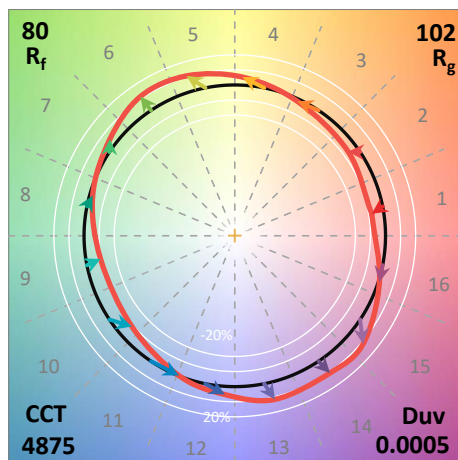
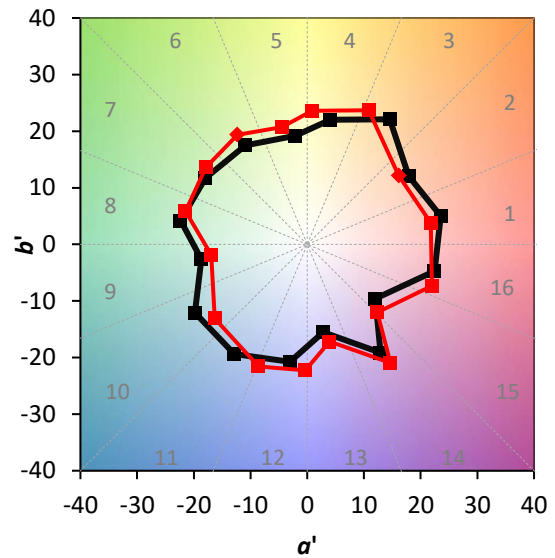
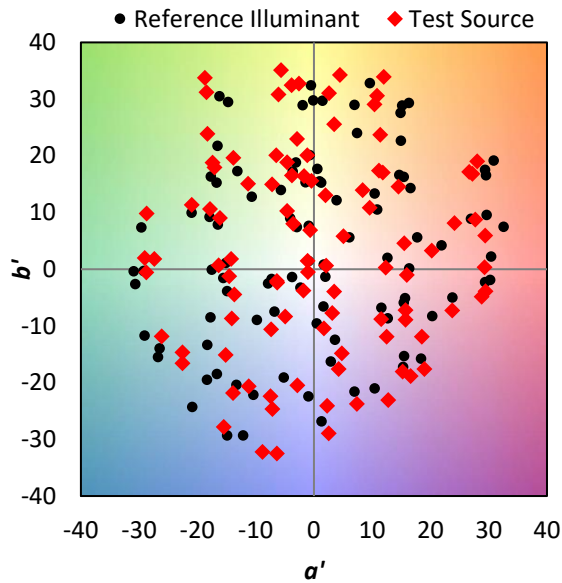
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	89	NR	620	280	NR	750	6	NR	880	0	NR
365	0	NR	495	121	NR	625	280	NR	755	5	NR	885	0	NR
370	0	NR	500	168	NR	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

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

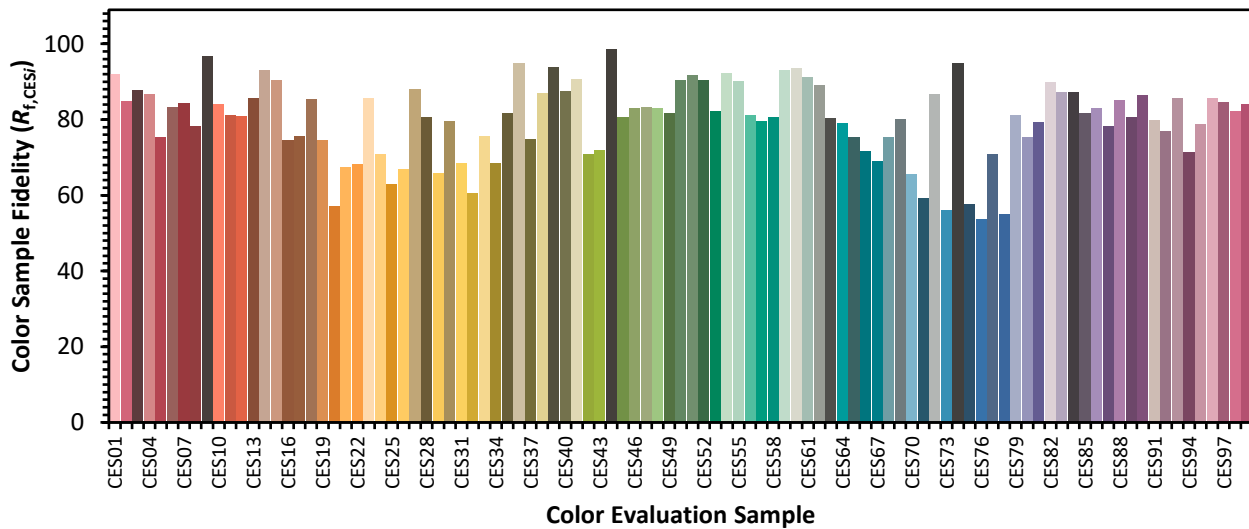


Color Vector Graphics

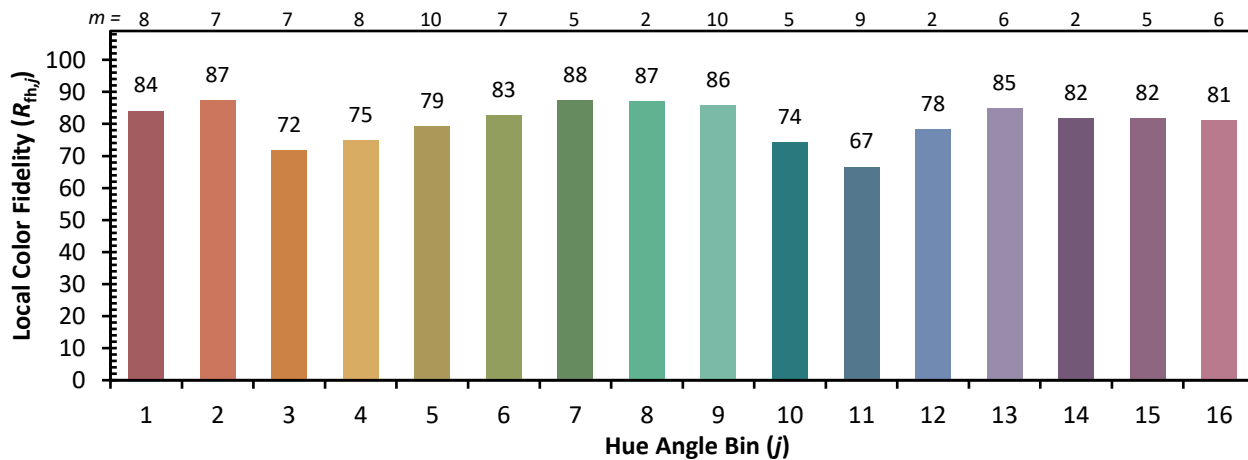
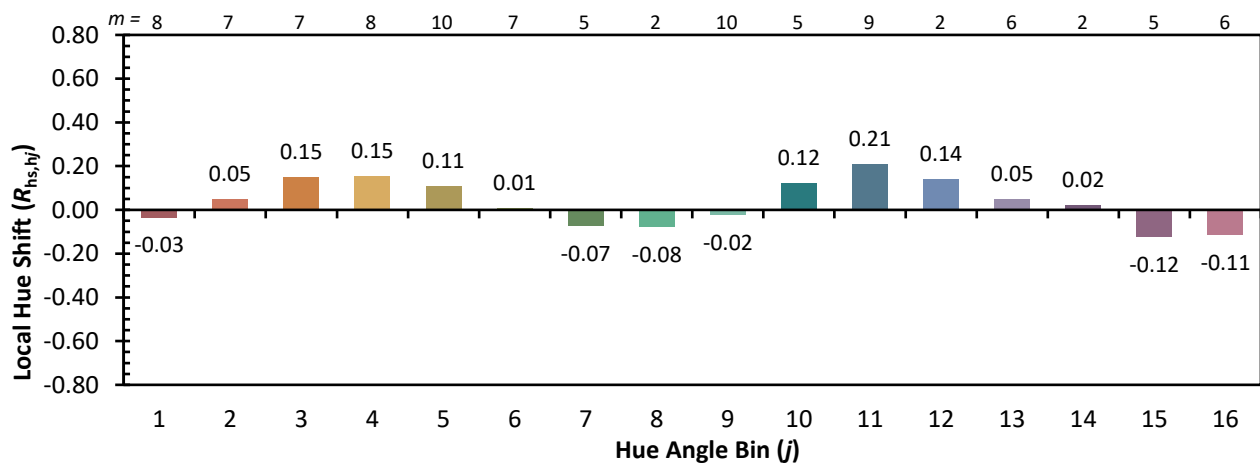
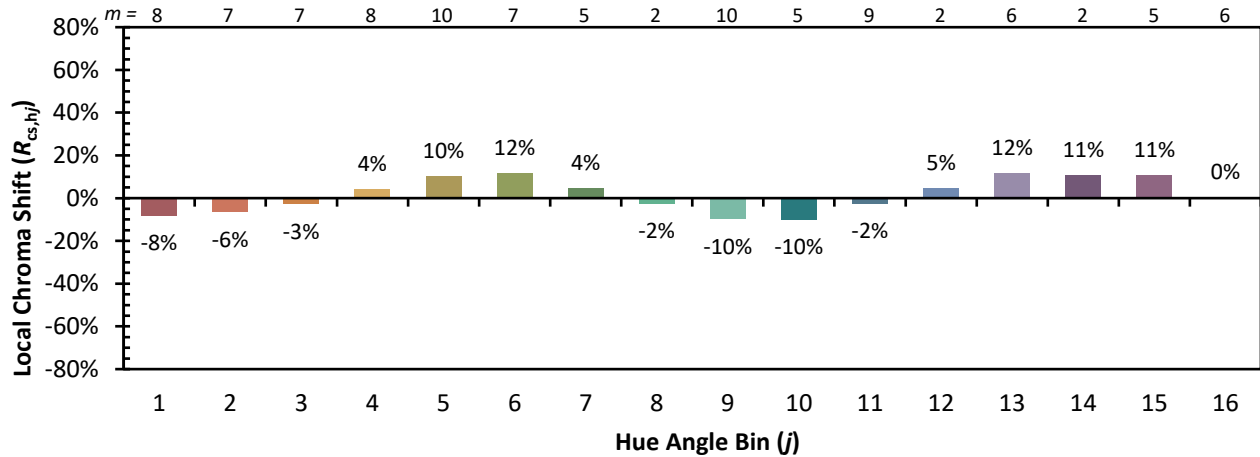


Individual Sample Fidelity Index ($R_{f,i}$)

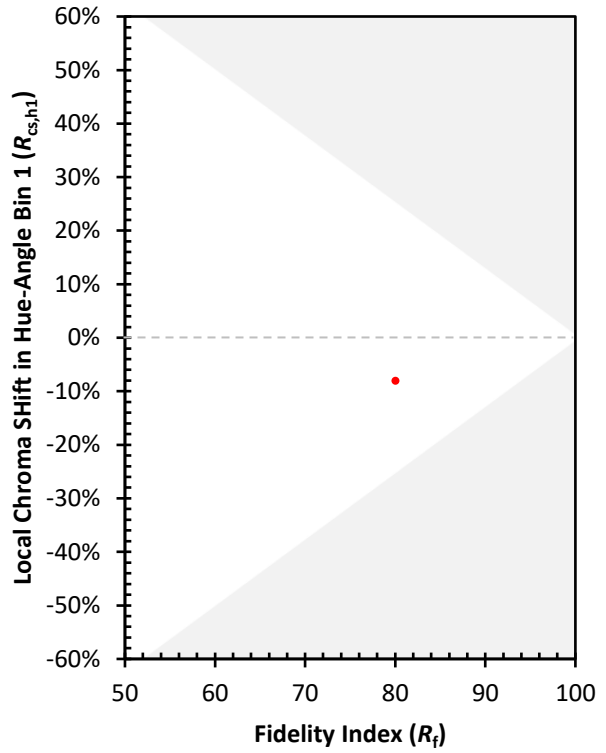
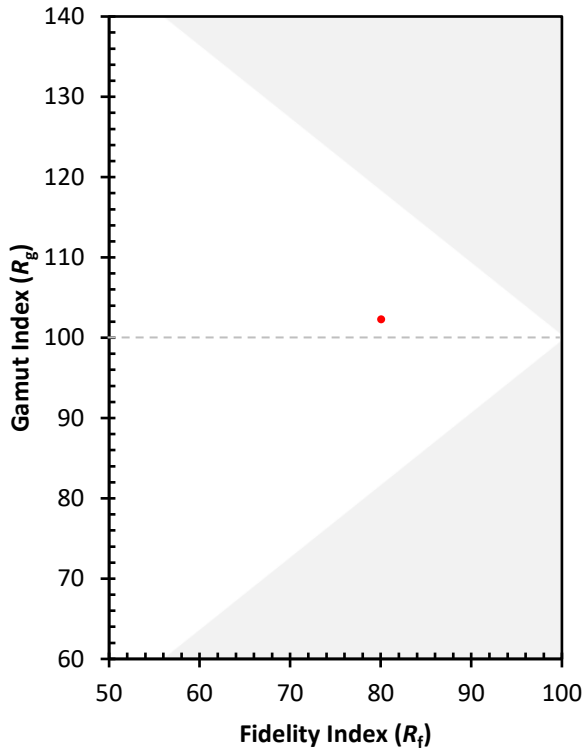
CES01 = 85	CES26 = 67	CES51 = 92	CES76 = 54
CES02 = 60	CES27 = 88	CES52 = 91	CES77 = 71
CES03 = 31	CES28 = 81	CES53 = 82	CES78 = 55
CES04 = 69	CES29 = 66	CES54 = 92	CES79 = 81
CES05 = 47	CES30 = 80	CES55 = 90	CES80 = 75
CES06 = 50	CES31 = 69	CES56 = 81	CES81 = 79
CES07 = 40	CES32 = 61	CES57 = 80	CES82 = 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)