

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: METALUX

Report Number: P829877

Luminaire Tested: **OHBL-18HE-A-UNV-L740-CD**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P829877
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2103-200-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-18HE-A-UNV-L740-CD
Description: 18000 LUMEN OHBL HE LED LUMINAIRE WITH 70CRI, 4000K LEDS AND AISLE LENS
Light Source: -
Ballast/Driver: -

Summary

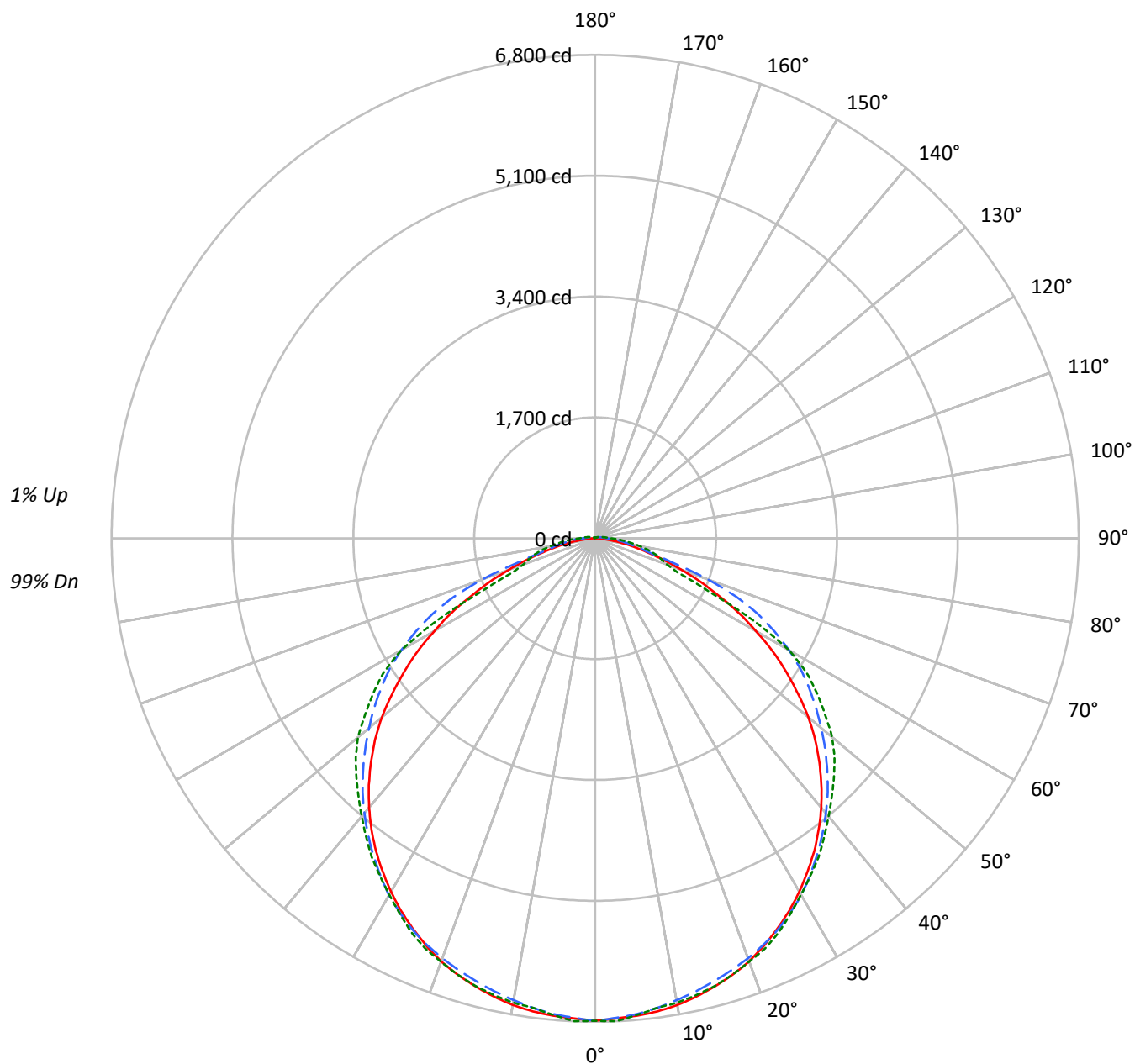
Lumens per Lamp: N/A
Luminaire Lumens: 19182.0 lumens
Efficiency: N/A
Efficacy: 186.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.67' x L: 3.78' x H: 0.17')
CIE Type: Direct

Input Watts (W): 103
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: 25 FT

TEST NUMBER: P829877

CATALOG NUMBER: OHBL-18HE-A-UNV-L740-CD

Luminous Intensity Polar Plot





TEST NUMBER: P829877

CATALOG NUMBER: OHBL-18HE-A-UNV-L740-CD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101			99
1	109	104	100	96	106	102	98	95	97	94	91	93	91	88	90	87	86			83
2	99	91	84	79	96	89	83	78	85	80	76	82	78	74	79	75	72			70
3	91	80	72	66	88	79	71	65	75	69	64	72	67	63	70	65	61			59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	62	57	53			51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	46	56	50	46			44
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40			38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36			34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	42	36	32			30
9	57	43	35	30	55	43	35	29	41	34	29	40	34	29	39	33	29			27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26			24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11591	11591	11591
5°	11516	11418	11440
10°	11473	11240	11305
15°	11401	11105	11223
20°	11328	11019	11116
25°	11191	10932	11009
30°	11042	10797	10793
35°	10865	10586	10670
40°	10634	10368	10504
45°	10313	10117	10425
50°	9879	9831	10330
55°	9190	9548	9931
60°	8287	9137	9166
65°	7109	8384	5796
70°	5726	6532	4190
75°	4293	3866	4235
80°	2988	3199	4015
85°	1701	2905	3715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	639.9	3.3
10°-20°	1835.0	9.6
20°-30°	2802.6	14.6
30°-40°	3400.5	17.7
40°-50°	3564.0	18.6
50°-60°	3229.6	16.8
60°-70°	2165.3	11.3
70°-80°	972.3	5.1
80°-90°	352.8	1.8
90°-100°	106.2	0.6
100°-110°	50.1	0.3
110°-120°	25.1	0.1
120°-130°	13.9	0.1
130°-140°	9.5	0.0
140°-150°	6.4	0.0
150°-160°	4.8	0.0
160°-170°	3.1	0.0
170°-180°	1.0	0.0
0°-30°	5277.5	27.5
0°-40°	8678.0	45.2
0°-60°	15471.5	80.7
0°-90°	18962.0	98.9
90°-120°	181.4	0.9
90°-150°	211.2	1.1
90°-180°	220.0	1.1
0°-180°	19182.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6787	6787	6787	6787	6787	
5°	6742	6766	6719	6740	6731	641
15°	6524	6498	6452	6509	6517	1842
25°	6060	6034	6076	6132	6114	2794
35°	5372	5384	5439	5497	5476	3357
45°	4458	4531	4615	4733	4748	3434
55°	3280	3438	3673	3820	3811	2928
65°	1925	2226	2528	2133	1742	1918
75°	758	1099	809	827	881	828
85°	130	250	321	388	406	159
90°	1	83	166	208	218	8
95°	1	52	114	138	142	1
105°	4	23	56	68	71	5
115°	8	12	28	36	38	7
125°	7	8	18	21	22	7
135°	9	10	11	16	17	7
145°	9	10	10	11	12	6
155°	10	11	11	11	10	5
165°	11	11	11	11	11	3
175°	11	11	10	9	9	1
180°	10	10	10	10	10	



TEST NUMBER: P829877

CATALOG NUMBER: OHBL-18HE-A-UNV-L740-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6786.6	6786.6	6786.6	6786.6	6786.6
2.5°	6759.1	6787.6	6752.3	6790.5	6800.3
5°	6742.4	6766.0	6718.9	6739.5	6730.7
7.5°	6712.0	6719.9	6663.9	6680.6	6663.0
10°	6666.9	6663.0	6597.2	6629.6	6633.5
12.5°	6600.2	6588.4	6529.5	6578.6	6579.6
15°	6523.6	6498.1	6452.0	6508.9	6516.8
17.5°	6435.3	6401.9	6371.5	6445.1	6433.3
20°	6332.3	6293.0	6287.1	6367.6	6338.2
22.5°	6204.7	6174.3	6188.0	6264.6	6245.9
25°	6060.5	6034.0	6076.2	6132.1	6114.4
27.5°	5908.4	5892.7	5940.7	5983.9	5949.6
30°	5741.5	5732.7	5796.5	5831.8	5788.6
32.5°	5560.0	5562.9	5623.8	5671.9	5631.6
35°	5371.6	5384.3	5439.3	5497.2	5475.6
37.5°	5164.5	5193.0	5247.9	5313.7	5291.1
40°	4945.7	4986.9	5047.8	5127.2	5106.6
42.5°	4709.2	4761.2	4839.7	4928.0	4926.1
45°	4458.0	4530.6	4615.0	4732.8	4747.5
47.5°	4197.0	4278.4	4385.4	4542.4	4565.0
50°	3913.4	4015.4	4148.9	4337.3	4351.0
52.5°	3597.4	3736.8	3913.4	4093.9	4077.3
55°	3280.5	3438.4	3673.0	3820.2	3811.3
57.5°	2964.5	3142.1	3426.7	3531.7	3530.7
60°	2611.2	2835.9	3147.0	3226.5	3148.0
62.5°	2284.4	2525.8	2848.7	2790.8	2521.9
65°	1925.3	2226.5	2527.8	2133.3	1741.8
67.5°	1606.4	1920.4	2147.1	1461.1	1251.1
70°	1285.5	1631.9	1674.1	1084.3	1069.6
72.5°	1000.9	1369.9	1155.0	928.3	975.4
75°	757.6	1099.0	808.6	827.2	881.2
77.5°	552.5	843.9	629.0	725.2	769.3
80°	379.8	597.6	513.2	609.4	639.8
82.5°	238.5	394.5	411.2	490.6	522.0
85°	130.5	250.2	320.9	387.6	406.3
87.5°	54.0	151.1	245.3	299.3	315.0
90°	1.0	83.4	165.8	208.0	217.8
92.5°	1.0	63.8	135.4	167.8	174.7
95°	1.0	52.0	113.8	138.4	142.3
97.5°	2.0	41.2	95.2	114.8	118.7
100°	2.9	34.3	79.5	96.2	99.1
102.5°	3.9	27.5	66.7	80.5	83.4
105°	3.9	22.6	55.9	67.7	70.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.9	13.7	33.4	42.2	44.2
115°	7.9	11.8	28.5	36.3	38.3
117.5°	7.9	9.8	24.5	30.4	32.4
120°	7.9	8.8	21.6	26.5	27.5
122.5°	7.9	7.9	18.6	23.6	24.5
125°	6.9	7.9	17.7	20.6	21.6
127.5°	7.9	7.9	15.7	18.6	19.6
130°	7.9	8.8	13.7	17.7	17.7
132.5°	8.8	9.8	12.8	16.7	16.7
135°	8.8	9.8	10.8	15.7	16.7
137.5°	9.8	9.8	9.8	14.7	15.7
140°	9.8	9.8	8.8	12.8	13.7
142.5°	8.8	9.8	8.8	11.8	12.8
145°	8.8	9.8	9.8	10.8	11.8
147.5°	9.8	9.8	9.8	9.8	10.8
150°	9.8	9.8	9.8	9.8	9.8
152.5°	9.8	9.8	9.8	9.8	9.8
155°	9.8	10.8	10.8	10.8	9.8
157.5°	9.8	10.8	10.8	10.8	10.8
160°	9.8	10.8	10.8	10.8	10.8
162.5°	10.8	10.8	10.8	10.8	10.8
165°	10.8	10.8	10.8	10.8	10.8
167.5°	10.8	11.8	10.8	10.8	10.8
170°	10.8	10.8	10.8	9.8	9.8
172.5°	10.8	10.8	10.8	9.8	9.8
175°	10.8	10.8	9.8	8.8	8.8
177.5°	11.8	10.8	9.8	8.8	7.9
180°	9.8	9.8	9.8	9.8	9.8



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	4.9	18.6	48.1	57.9	59.9
110°	5.9	15.7	40.2	49.1	51.0



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-3

Test Date: 08/03/2023

Luminaire Tested: OHB-15SE-N-UNV-L740-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L740-CD.

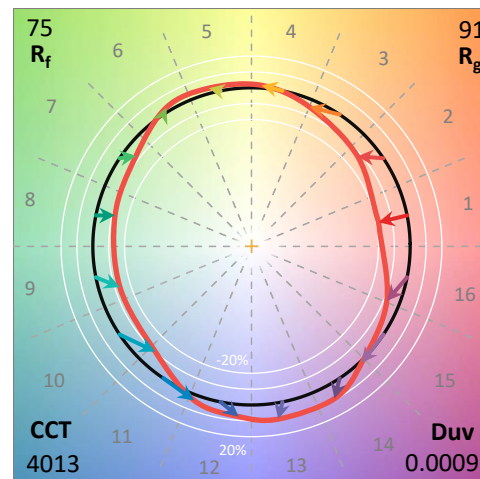
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2307-100-3
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/04/2023
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: **OHB-15SE-N-UNV-L740-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 70CRI, 4000K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K):	4013	CRI (Ra):	71.9		
CIE u':	0.2243	R1:	67.7	R9:	-37.4
CIE v':	0.5023	R2:	81.2	R10:	55.0
Duv:	0.0009	R3:	90.6	R11:	61.2
CIE x:	0.3803	R4:	67.3	R12:	42.7
CIE y:	0.3785	R5:	67.5	R13:	70.6
CIE z:	0.2412	R6:	72.5	R14:	94.8
Peak Wavelength (nm):	454	R7:	80.1		
Dominant Wavelength (nm):	578	R8:	48.1		
Purity:	27.9				
Rf:	74.7				
Rg:	90.6				



Test Conditions

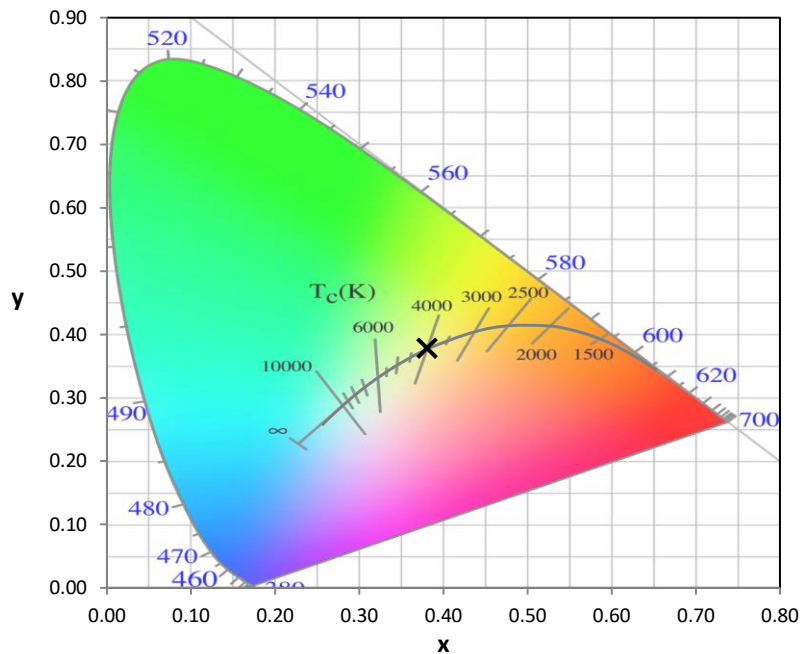
Stabilization Time: 24M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/58%
 Sphere Temperature (°C): 25.2

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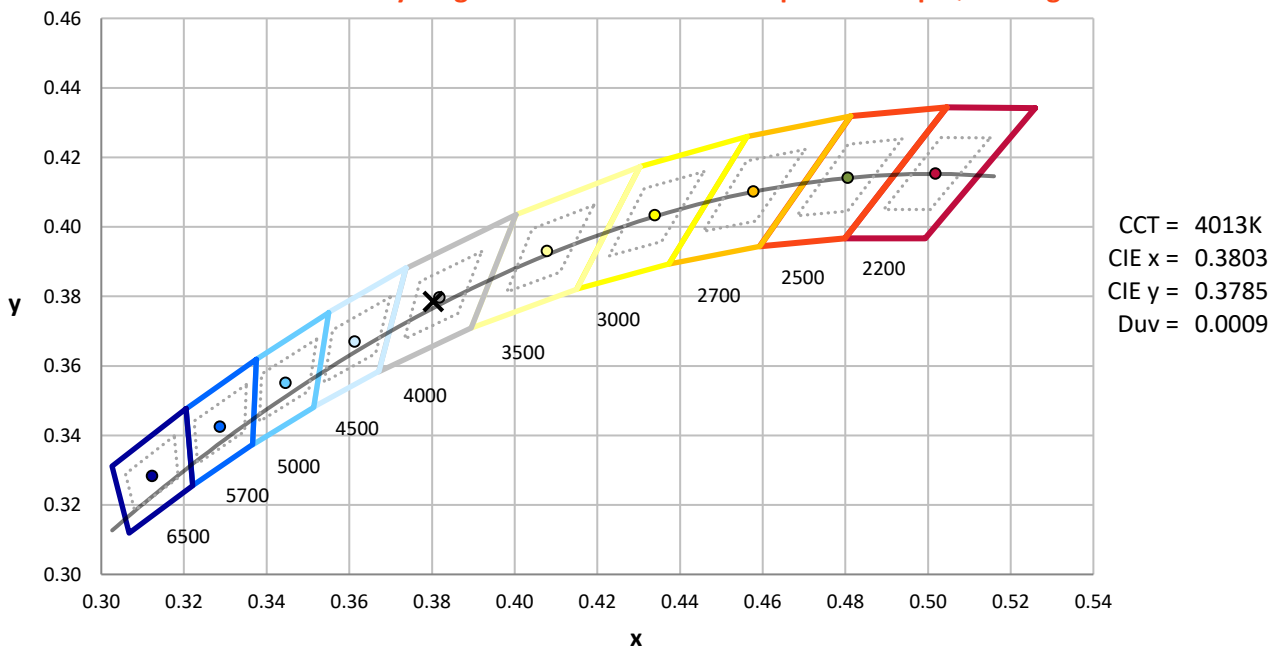
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208	11/28/2022	11/28/2023
Sphere Thermometer	ONSET IN0085	11/28/2022	11/28/2023
Room Thermometer	ONSET IN0046	11/28/2022	11/28/2023

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CIE 1931 Chromaticity Diagram



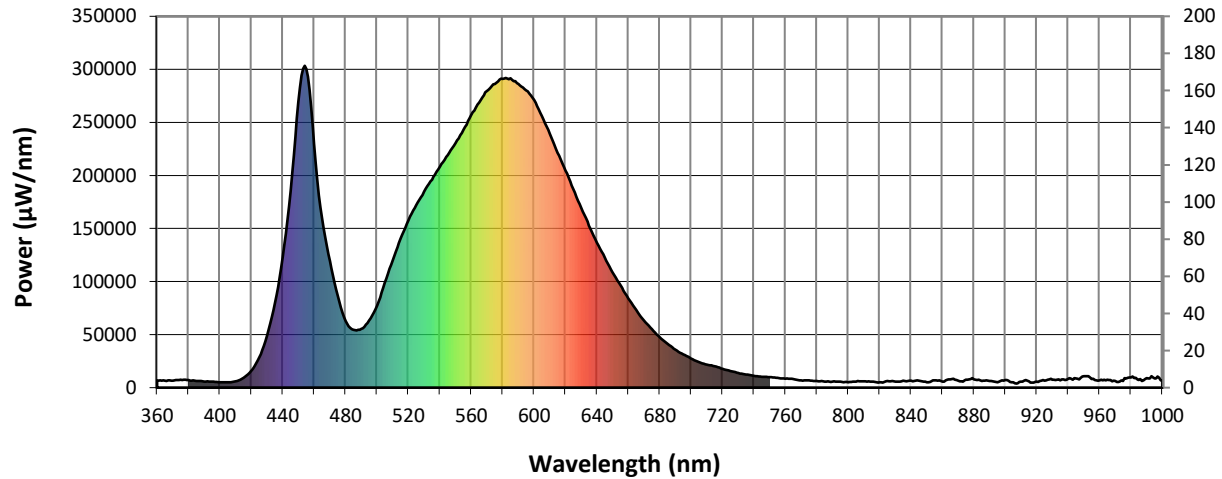
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

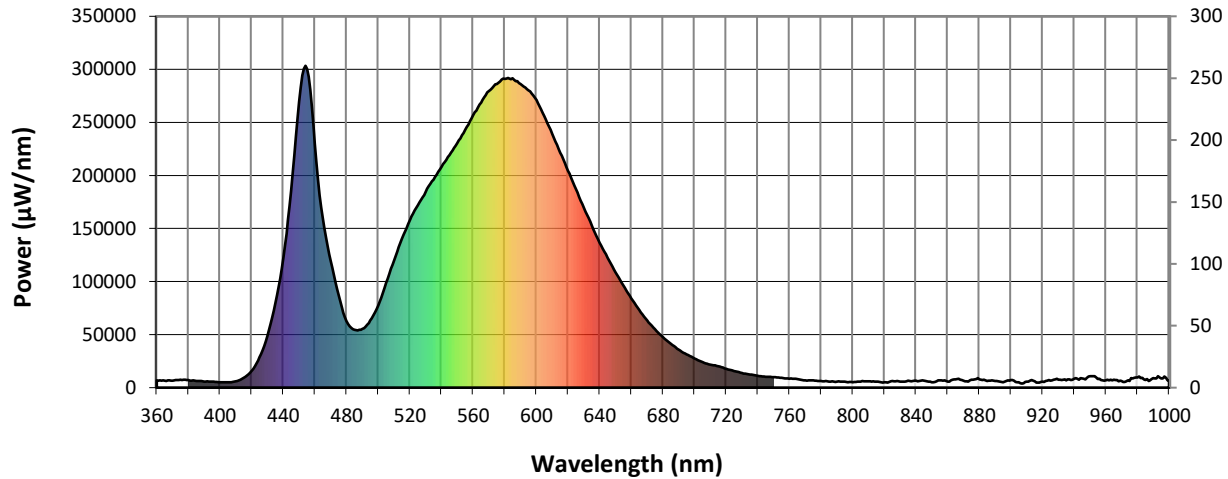


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λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6930	NR	490	55345	NR	620	204359	NR	750	9973	NR	880	7740	NR
365	6548	NR	495	63140	NR	625	187136	NR	755	9262	NR	885	6139	NR
370	6520	NR	500	77260	NR	630	169554	NR	760	8423	NR	890	6392	NR
375	7463	NR	505	98785	NR	635	152565	NR	765	8205	NR	895	5061	NR
380	7033	NR	510	119863	NR	640	136700	NR	770	6817	NR	900	7326	NR
385	6403	NR	515	140055	NR	645	122449	NR	775	6792	NR	905	5039	NR
390	5734	NR	520	157790	NR	650	108580	NR	780	6216	NR	910	5717	NR
395	5717	NR	525	171938	NR	655	96370	NR	785	5732	NR	915	5977	NR
400	4977	NR	530	184920	NR	660	84194	NR	790	5647	NR	920	5766	NR
405	5006	NR	535	196020	NR	665	73166	NR	795	5584	NR	925	6611	NR
410	5959	NR	540	208194	NR	670	63358	NR	800	5174	NR	930	7338	NR
415	9179	NR	545	219324	NR	675	55149	NR	805	5757	NR	935	6930	NR
420	15787	NR	550	230377	NR	680	47533	NR	810	6012	NR	940	8242	NR
425	28518	NR	555	242973	NR	685	41350	NR	815	5577	NR	945	8766	NR
430	48907	NR	560	256802	NR	690	35841	NR	820	5086	NR	950	10931	NR
435	79961	NR	565	268752	NR	695	31197	NR	825	6404	NR	955	8190	NR
440	122565	NR	570	279406	NR	700	27528	NR	830	5767	NR	960	6809	NR
445	185397	NR	575	286045	NR	705	24001	NR	835	6610	NR	965	7570	NR
450	269609	NR	580	291082	NR	710	21755	NR	840	6428	NR	970	6365	NR
455	300483	NR	585	291620	NR	715	20058	NR	845	6469	NR	975	6203	NR
460	229777	NR	590	286117	NR	720	17690	NR	850	5020	NR	980	9515	NR
465	159722	NR	595	280083	NR	725	15738	NR	855	6786	NR	985	7323	NR
470	119038	NR	600	270967	NR	730	13744	NR	860	5776	NR	990	9023	NR
475	86663	NR	605	255964	NR	735	12435	NR	865	7909	NR	995	8813	NR
480	62772	NR	610	239107	NR	740	11118	NR	870	6451	NR	1000	6436	NR
485	54561	NR	615	221194	NR	745	10318	NR	875	7611	NR			

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Scotopic Flux vs. Wavelength



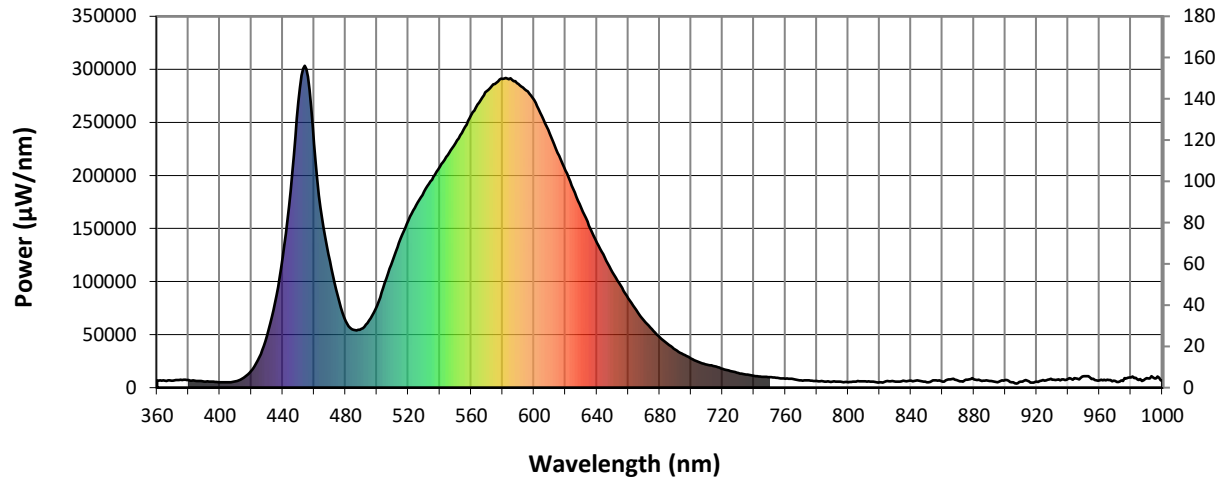
Scotopic Lumens: 24452.5

S/P: 1.56

λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6930	NR	490	55345	NR	620	204359	NR	750	9973	NR	880	7740	NR
365	6548	NR	495	63140	NR	625	187136	NR	755	9262	NR	885	6139	NR
370	6520	NR	500	77260	NR	630	169554	NR	760	8423	NR	890	6392	NR
375	7463	NR	505	98785	NR	635	152565	NR	765	8205	NR	895	5061	NR
380	7033	NR	510	119863	NR	640	136700	NR	770	6817	NR	900	7326	NR
385	6403	NR	515	140055	NR	645	122449	NR	775	6792	NR	905	5039	NR
390	5734	NR	520	157790	NR	650	108580	NR	780	6216	NR	910	5717	NR
395	5717	NR	525	171938	NR	655	96370	NR	785	5732	NR	915	5977	NR
400	4977	NR	530	184920	NR	660	84194	NR	790	5647	NR	920	5766	NR
405	5006	NR	535	196020	NR	665	73166	NR	795	5584	NR	925	6611	NR
410	5959	NR	540	208194	NR	670	63358	NR	800	5174	NR	930	7338	NR
415	9179	NR	545	219324	NR	675	55149	NR	805	5757	NR	935	6930	NR
420	15787	NR	550	230377	NR	680	47533	NR	810	6012	NR	940	8242	NR
425	28518	NR	555	242973	NR	685	41350	NR	815	5577	NR	945	8766	NR
430	48907	NR	560	256802	NR	690	35841	NR	820	5086	NR	950	10931	NR
435	79961	NR	565	268752	NR	695	31197	NR	825	6404	NR	955	8190	NR
440	122565	NR	570	279406	NR	700	27528	NR	830	5767	NR	960	6809	NR
445	185397	NR	575	286045	NR	705	24001	NR	835	6610	NR	965	7570	NR
450	269609	NR	580	291082	NR	710	21755	NR	840	6428	NR	970	6365	NR
455	300483	NR	585	291620	NR	715	20058	NR	845	6469	NR	975	6203	NR
460	229777	NR	590	286117	NR	720	17690	NR	850	5020	NR	980	9515	NR
465	159722	NR	595	280083	NR	725	15738	NR	855	6786	NR	985	7323	NR
470	119038	NR	600	270967	NR	730	13744	NR	860	5776	NR	990	9023	NR
475	86663	NR	605	255964	NR	735	12435	NR	865	7909	NR	995	8813	NR
480	62772	NR	610	239107	NR	740	11118	NR	870	6451	NR	1000	6436	NR
485	54561	NR	615	221194	NR	745	10318	NR	875	7611	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 9678.5

M/P: 0.62

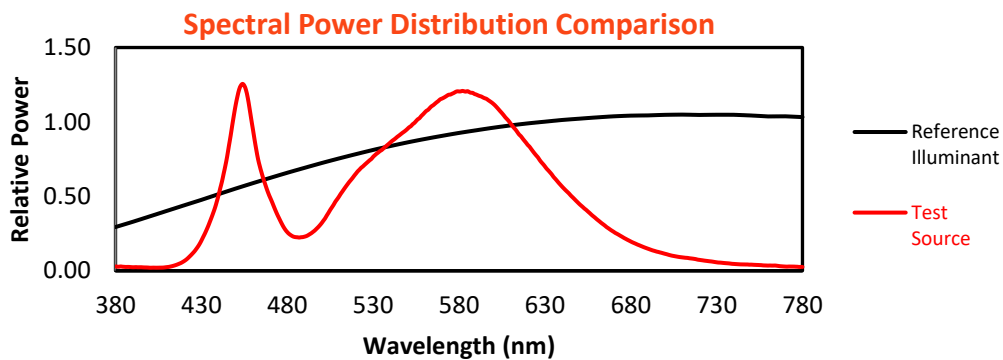
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6930	NR	490	55345	NR	620	204359	NR	750	9973	NR	880	7740	NR
365	6548	NR	495	63140	NR	625	187136	NR	755	9262	NR	885	6139	NR
370	6520	NR	500	77260	NR	630	169554	NR	760	8423	NR	890	6392	NR
375	7463	NR	505	98785	NR	635	152565	NR	765	8205	NR	895	5061	NR
380	7033	NR	510	119863	NR	640	136700	NR	770	6817	NR	900	7326	NR
385	6403	NR	515	140055	NR	645	122449	NR	775	6792	NR	905	5039	NR
390	5734	NR	520	157790	NR	650	108580	NR	780	6216	NR	910	5717	NR
395	5717	NR	525	171938	NR	655	96370	NR	785	5732	NR	915	5977	NR
400	4977	NR	530	184920	NR	660	84194	NR	790	5647	NR	920	5766	NR
405	5006	NR	535	196020	NR	665	73166	NR	795	5584	NR	925	6611	NR
410	5959	NR	540	208194	NR	670	63358	NR	800	5174	NR	930	7338	NR
415	9179	NR	545	219324	NR	675	55149	NR	805	5757	NR	935	6930	NR
420	15787	NR	550	230377	NR	680	47533	NR	810	6012	NR	940	8242	NR
425	28518	NR	555	242973	NR	685	41350	NR	815	5577	NR	945	8766	NR
430	48907	NR	560	256802	NR	690	35841	NR	820	5086	NR	950	10931	NR
435	79961	NR	565	268752	NR	695	31197	NR	825	6404	NR	955	8190	NR
440	122565	NR	570	279406	NR	700	27528	NR	830	5767	NR	960	6809	NR
445	185397	NR	575	286045	NR	705	24001	NR	835	6610	NR	965	7570	NR
450	269609	NR	580	291082	NR	710	21755	NR	840	6428	NR	970	6365	NR
455	300483	NR	585	291620	NR	715	20058	NR	845	6469	NR	975	6203	NR
460	229777	NR	590	286117	NR	720	17690	NR	850	5020	NR	980	9515	NR
465	159722	NR	595	280083	NR	725	15738	NR	855	6786	NR	985	7323	NR
470	119038	NR	600	270967	NR	730	13744	NR	860	5776	NR	990	9023	NR
475	86663	NR	605	255964	NR	735	12435	NR	865	7909	NR	995	8813	NR
480	62772	NR	610	239107	NR	740	11118	NR	870	6451	NR	1000	6436	NR
485	54561	NR	615	221194	NR	745	10318	NR	875	7611	NR			

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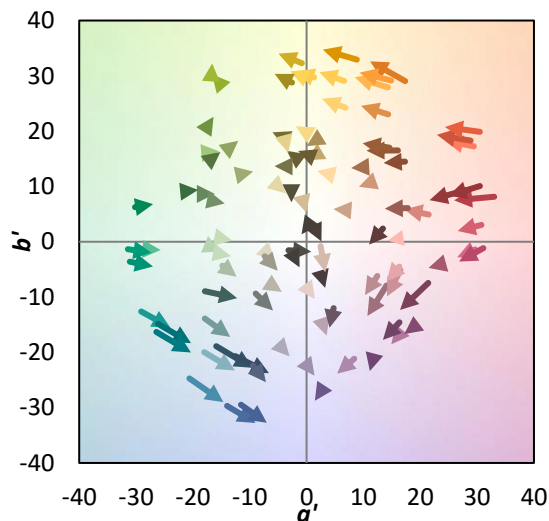
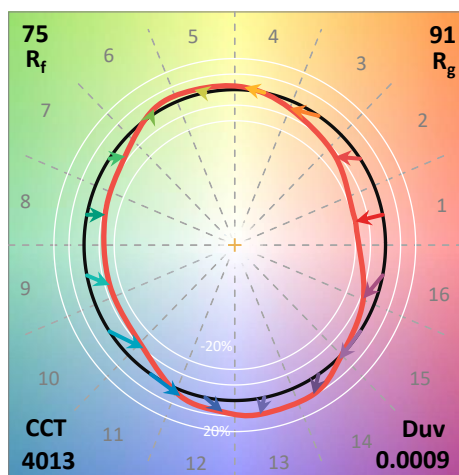
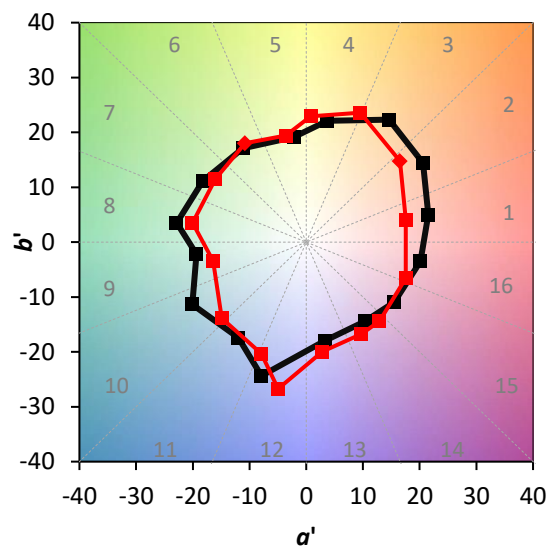
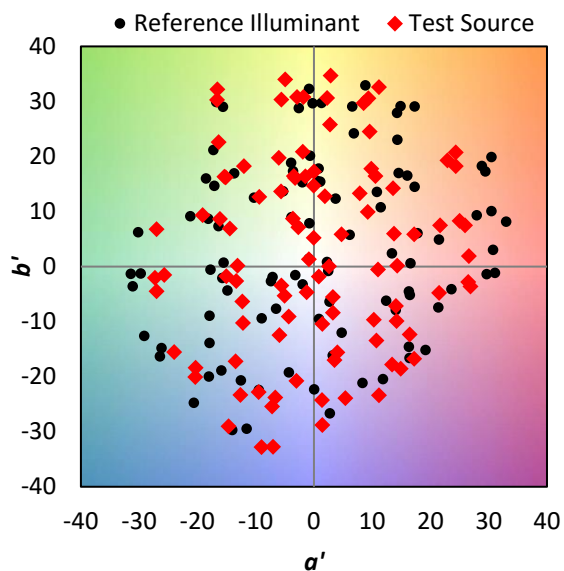
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Summary

$R_f = 74.7$
 $R_g = 90.6$
 CIE $R_a = 71.9$
 $R_g = -37.4$



Color Vector Graphics

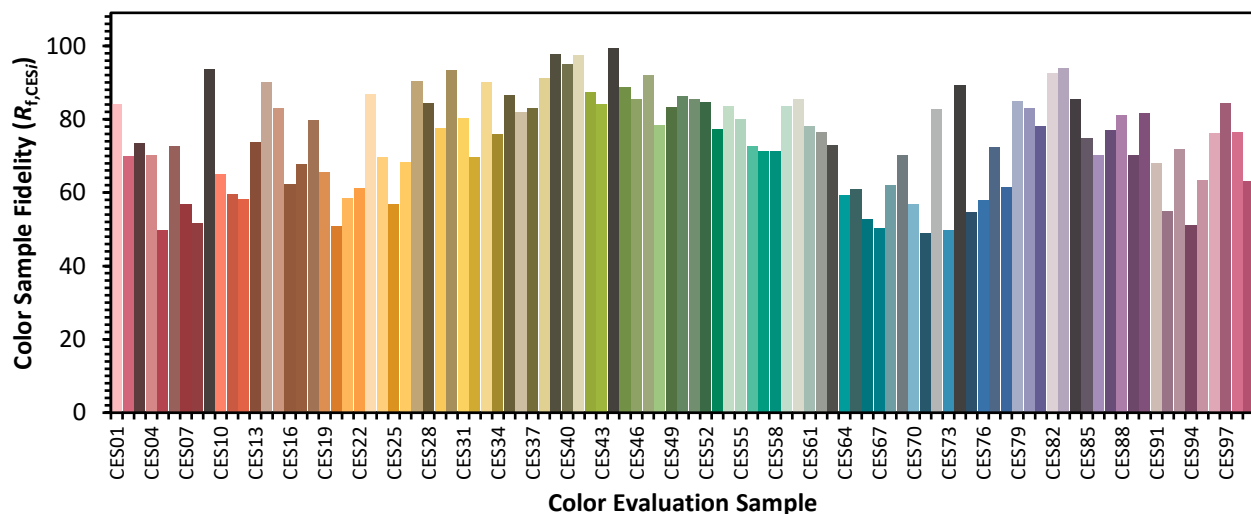


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Individual Sample Fidelity Index ($R_{f,i}$)

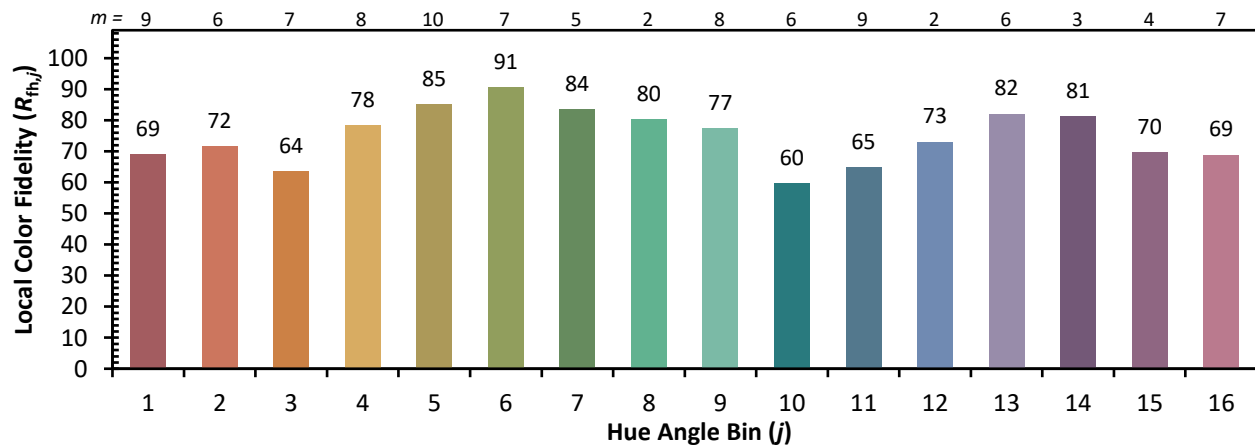
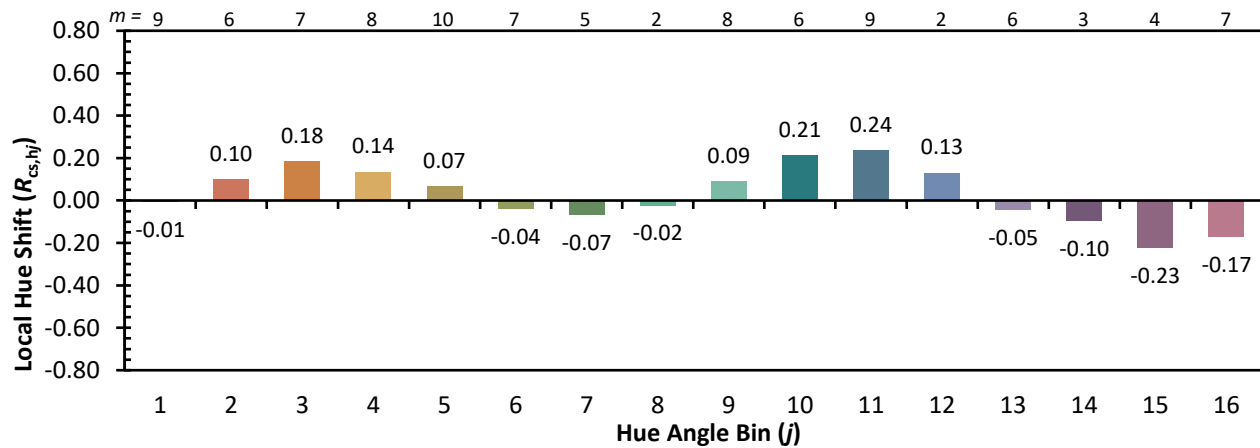
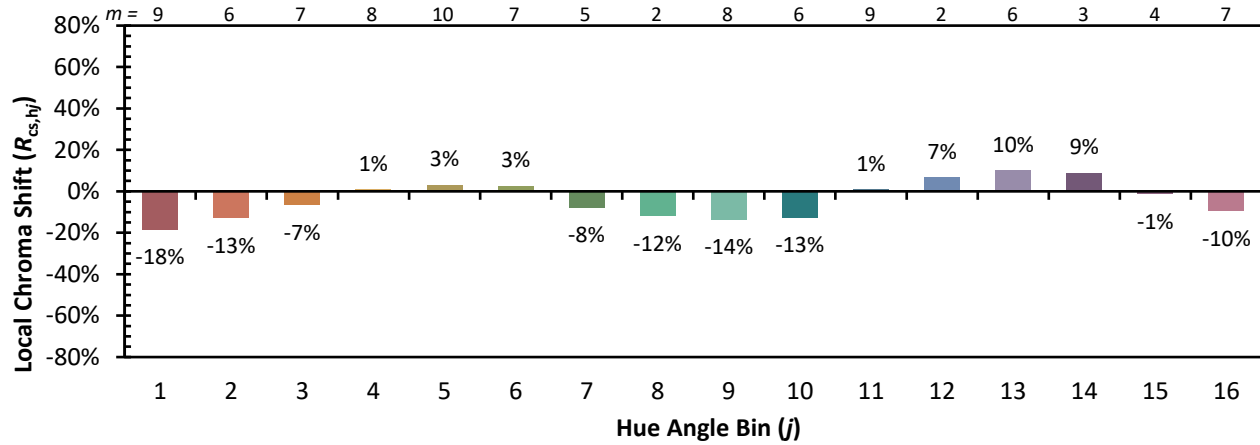
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CES02 = 61	CES27 = 90	CES52 = 85	CES77 = 72
CES03 = 30	CES28 = 84	CES53 = 77	CES78 = 61
CES04 = 70	CES29 = 77	CES54 = 83	CES79 = 85
CES05 = 47	CES30 = 93	CES55 = 80	CES80 = 83
CES06 = 50	CES31 = 80	CES56 = 73	CES81 = 78
CES07 = 39	CES32 = 70	CES57 = 71	CES82 = 93
CES08 = 39	CES33 = 90	CES58 = 71	CES83 = 94
CES09 = 29	CES34 = 76	CES59 = 84	CES84 = 85
CES10 = 74	CES35 = 87	CES60 = 85	CES85 = 75
CES11 = 57	CES36 = 82	CES61 = 78	CES86 = 70
CES12 = 63	CES37 = 83	CES62 = 76	CES87 = 77
CES13 = 42	CES38 = 91	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 98	CES64 = 59	CES89 = 70
CES15 = 71	CES40 = 95	CES65 = 61	CES90 = 82
CES16 = 46	CES41 = 97	CES66 = 53	CES91 = 68
CES17 = 49	CES42 = 87	CES67 = 50	CES92 = 55
CES18 = 56	CES43 = 84	CES68 = 62	CES93 = 72
CES19 = 72	CES44 = 99	CES69 = 70	CES94 = 51
CES20 = 64	CES45 = 89	CES70 = 57	CES95 = 63
CES21 = 86	CES46 = 86	CES71 = 49	CES96 = 76
CES22 = 78	CES47 = 92	CES72 = 83	CES97 = 84
CES23 = 92	CES48 = 78	CES73 = 50	CES98 = 76
CES24 = 91	CES49 = 83	CES74 = 89	CES99 = 63
CES25 = 72	CES50 = 86	CES75 = 55	



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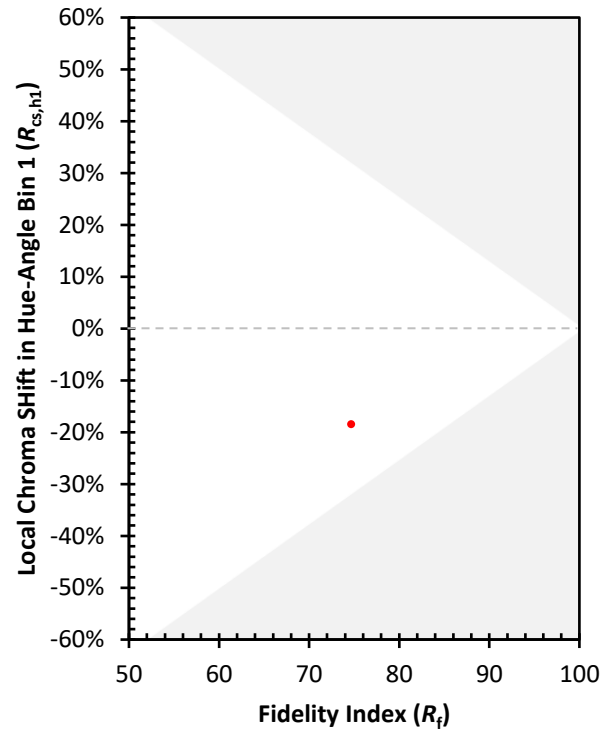
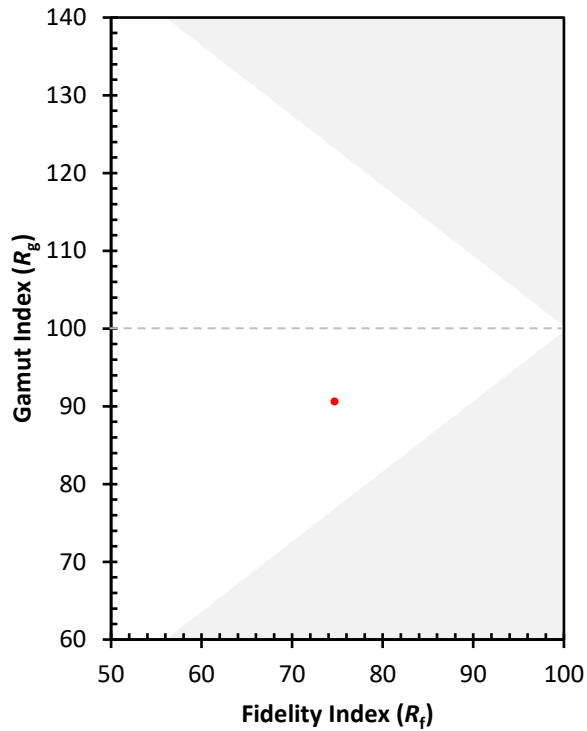
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)