

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: P830032

Luminaire Tested: **OHBL-24HE-MCL-UNV-L735-CD**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P830032
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-24HE-MCL-UNV-L735-CD
Description: 24000 LUMEN OHBL HE LED LUMINAIRE WITH 70CRI, 3500K LEDS AND MEDIUM CLEAR LENS
Light Source: -
Ballast/Driver: -

Summary

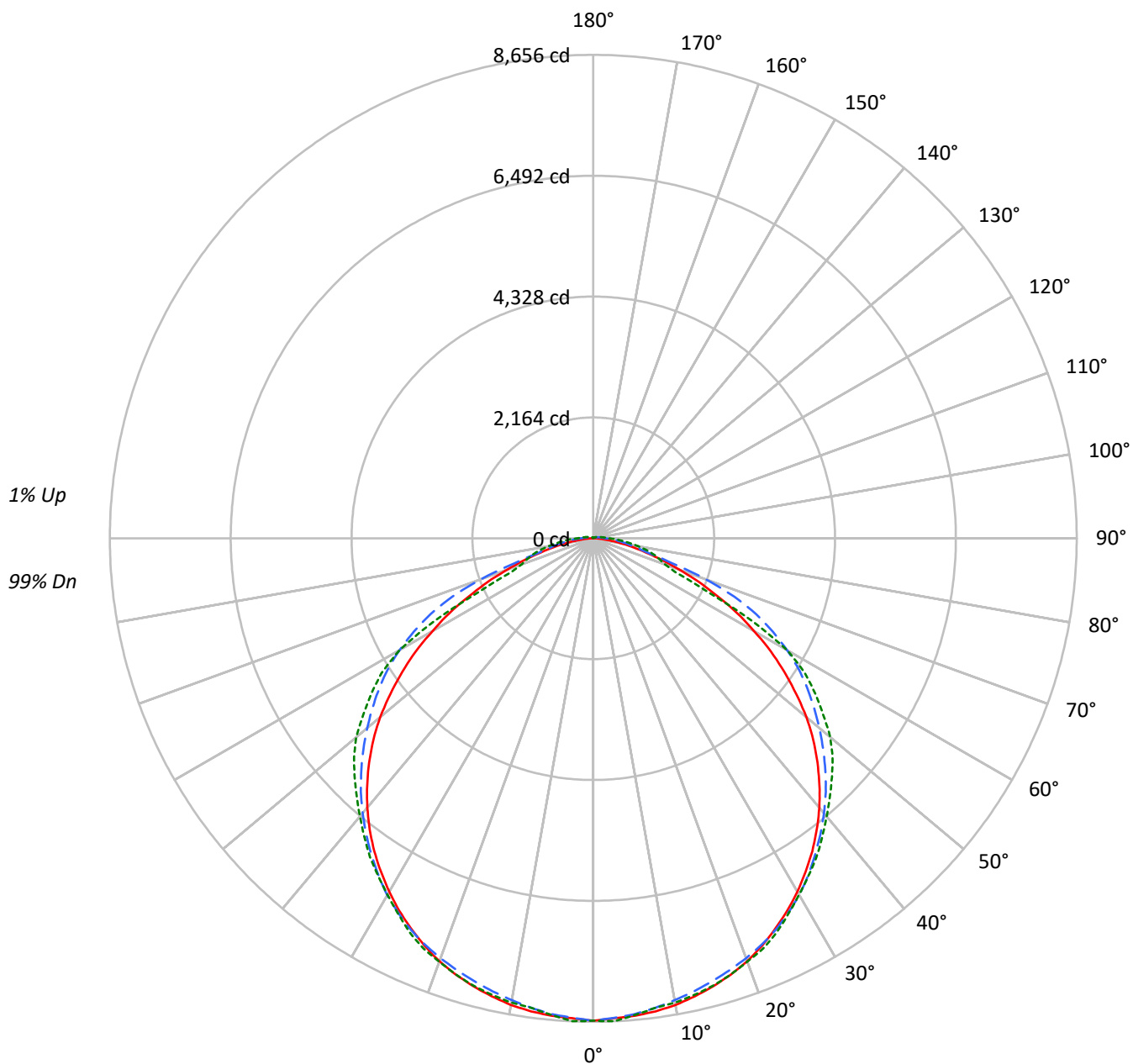
Lumens per Lamp: N/A
Luminaire Lumens: 24415.0 lumens
Efficiency: N/A
Efficacy: 183.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.8' x L: 3.78' x H: 0.17')
CIE Type: Direct

Input Watts (W): 133
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: P830032

CATALOG NUMBER: OHBL-24HE-MCL-UNV-L735-CD

Luminous Intensity Polar Plot





TEST NUMBER: P830032

CATALOG NUMBER: OHBL-24HE-MCL-UNV-L735-CD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
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°	13661	13661	13661
5°	13571	13462	13491
10°	13522	13259	13341
15°	13436	13106	13252
20°	13350	13010	13134
25°	13189	12913	13018
30°	13014	12761	12772
35°	12804	12519	12636
40°	12532	12269	12451
45°	12155	11980	12369
50°	11643	11650	12271
55°	10831	11326	11813
60°	9767	10852	10921
65°	8378	9973	6922
70°	6748	7785	5018
75°	5059	4622	5093
80°	3522	3843	4862
85°	2004	3521	4558



TEST NUMBER: P830032

CATALOG NUMBER: OHBL-24HE-MCL-UNV-L735-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	814.5	3.3
10°-20°	2335.6	9.6
20°-30°	3567.2	14.6
30°-40°	4328.2	17.7
40°-50°	4536.3	18.6
50°-60°	4110.6	16.8
60°-70°	2756.0	11.3
70°-80°	1237.6	5.1
80°-90°	449.1	1.8
90°-100°	135.2	0.6
100°-110°	63.8	0.3
110°-120°	32.0	0.1
120°-130°	17.6	0.1
130°-140°	12.1	0.0
140°-150°	8.2	0.0
150°-160°	6.1	0.0
160°-170°	3.9	0.0
170°-180°	1.2	0.0
0°-30°	6717.2	27.5
0°-40°	11045.4	45.2
0°-60°	19692.3	80.7
0°-90°	24135.0	98.9
90°-120°	230.9	0.9
90°-150°	268.8	1.1
90°-180°	280.0	1.1
0°-180°	24415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8638	8638	8638	8638	8638	
5°	8582	8612	8552	8578	8567	816
15°	8303	8271	8212	8285	8295	2344
25°	7714	7680	7734	7805	7782	3556
35°	6837	6853	6923	6997	6969	4273
45°	5674	5767	5874	6024	6043	4371
55°	4175	4376	4675	4862	4851	3727
65°	2450	2834	3217	2715	2217	2442
75°	964	1399	1029	1053	1122	1054
85°	166	318	408	493	517	203
90°	1	106	211	265	277	10
95°	1	66	145	176	181	2
105°	5	29	71	86	90	6
115°	10	15	36	46	49	9
125°	9	10	22	26	28	9
135°	11	12	14	20	21	9
145°	11	12	12	14	15	7
155°	12	14	14	14	12	6
165°	14	14	14	14	14	4
175°	14	14	12	11	11	1
180°	12	12	12	12	12	



TEST NUMBER: P830032

CATALOG NUMBER: OHBL-24HE-MCL-UNV-L735-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8638.0	8638.0	8638.0	8638.0	8638.0
2.5°	8603.1	8639.3	8594.3	8643.0	8655.5
5°	8581.8	8611.8	8551.9	8578.1	8566.9
7.5°	8543.1	8553.1	8481.9	8503.2	8480.7
10°	8485.7	8480.7	8397.0	8438.2	8443.2
12.5°	8400.7	8385.8	8310.8	8373.3	8374.5
15°	8303.3	8270.8	8212.1	8284.6	8294.6
17.5°	8190.9	8148.4	8109.7	8203.4	8188.4
20°	8059.8	8009.8	8002.3	8104.7	8067.3
22.5°	7897.4	7858.7	7876.2	7973.6	7949.9
25°	7713.8	7680.1	7733.8	7805.0	7782.5
27.5°	7520.2	7500.2	7561.4	7616.4	7572.7
30°	7307.9	7296.6	7377.8	7422.8	7367.8
32.5°	7076.8	7080.6	7158.0	7219.2	7168.0
35°	6837.0	6853.2	6923.2	6996.9	6969.4
37.5°	6573.5	6609.7	6679.6	6763.3	6734.6
40°	6294.9	6347.4	6424.8	6526.0	6499.8
42.5°	5993.9	6060.1	6160.0	6272.5	6270.0
45°	5674.2	5766.6	5874.0	6023.9	6042.6
47.5°	5342.0	5445.6	5581.8	5781.6	5810.3
50°	4981.0	5110.9	5280.7	5520.6	5538.0
52.5°	4578.8	4756.2	4981.0	5210.8	5189.6
55°	4175.4	4376.5	4675.0	4862.3	4851.1
57.5°	3773.2	3999.3	4361.5	4495.1	4493.9
60°	3323.6	3609.6	4005.5	4106.7	4006.8
62.5°	2907.7	3214.9	3625.8	3552.1	3209.9
65°	2450.5	2834.0	3217.4	2715.3	2217.0
67.5°	2044.6	2444.3	2732.8	1859.8	1592.5
70°	1636.2	2077.1	2130.8	1380.1	1361.4
72.5°	1274.0	1743.6	1470.1	1181.5	1241.5
75°	964.2	1398.9	1029.2	1052.9	1121.6
77.5°	703.2	1074.1	800.6	923.0	979.2
80°	483.4	760.6	653.2	775.6	814.3
82.5°	303.5	502.1	523.3	624.5	664.5
85°	166.1	318.5	408.4	493.4	517.1
87.5°	68.7	192.3	312.2	380.9	400.9
90°	1.2	106.2	211.1	264.8	277.3
92.5°	1.2	81.2	172.4	213.6	222.3
95°	1.2	66.2	144.9	176.1	181.1
97.5°	2.5	52.5	121.2	146.1	151.1
100°	3.7	43.7	101.2	122.4	126.1
102.5°	5.0	35.0	84.9	102.4	106.2
105°	5.0	28.7	71.2	86.2	89.9



TEST NUMBER: P830032

CATALOG NUMBER: OHBL-24HE-MCL-UNV-L735-CD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.7	17.5	42.5	53.7	56.2
115°	10.0	15.0	36.2	46.2	48.7
117.5°	10.0	12.5	31.2	38.7	41.2
120°	10.0	11.2	27.5	33.7	35.0
122.5°	10.0	10.0	23.7	30.0	31.2
125°	8.7	10.0	22.5	26.2	27.5
127.5°	10.0	10.0	20.0	23.7	25.0
130°	10.0	11.2	17.5	22.5	22.5
132.5°	11.2	12.5	16.2	21.2	21.2
135°	11.2	12.5	13.7	20.0	21.2
137.5°	12.5	12.5	12.5	18.7	20.0
140°	12.5	12.5	11.2	16.2	17.5
142.5°	11.2	12.5	11.2	15.0	16.2
145°	11.2	12.5	12.5	13.7	15.0
147.5°	12.5	12.5	12.5	12.5	13.7
150°	12.5	12.5	12.5	12.5	12.5
152.5°	12.5	12.5	12.5	12.5	12.5
155°	12.5	13.7	13.7	13.7	12.5
157.5°	12.5	13.7	13.7	13.7	13.7
160°	12.5	13.7	13.7	13.7	13.7
162.5°	13.7	13.7	13.7	13.7	13.7
165°	13.7	13.7	13.7	13.7	13.7
167.5°	13.7	15.0	13.7	13.7	13.7
170°	13.7	13.7	13.7	12.5	12.5
172.5°	13.7	13.7	13.7	12.5	12.5
175°	13.7	13.7	12.5	11.2	11.2
177.5°	15.0	13.7	12.5	11.2	10.0
180°	12.5	12.5	12.5	12.5	12.5



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	6.2	23.7	61.2	73.7	76.2
110°	7.5	20.0	51.2	62.4	64.9



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-2

Test Date: 08/03/2023

Luminaire Tested: OHB-15SE-N-UNV-L735-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L735-CD.

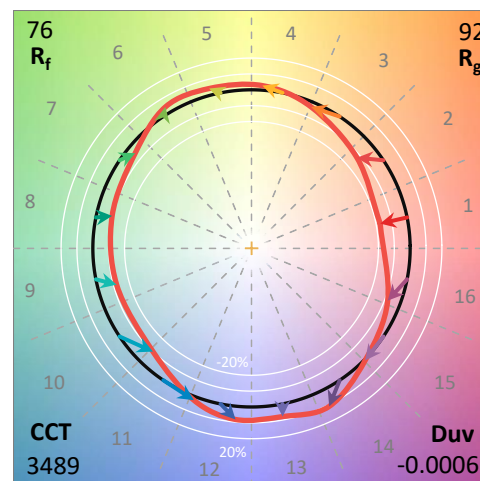
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2307-100-2
 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-L735-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 70CRI, 3500K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K):	3489	CRI (Ra):	73.0		
CIE u':	0.2362	R1:	69.4	R9:	-30.0
CIE v':	0.5107	R2:	82.9	R10:	59.3
Duv:	-0.0006	R3:	92.6	R11:	62.7
CIE x:	0.4052	R4:	68.4	R12:	47.6
CIE y:	0.3895	R5:	68.8	R13:	72.2
CIE z:	0.2053	R6:	75.3	R14:	95.9
Peak Wavelength (nm):	588	R7:	79.3		
Dominant Wavelength (nm):	581	R8:	47.6		
Purity:	38.7				
Rf:	75.9				
Rg:	92.2				



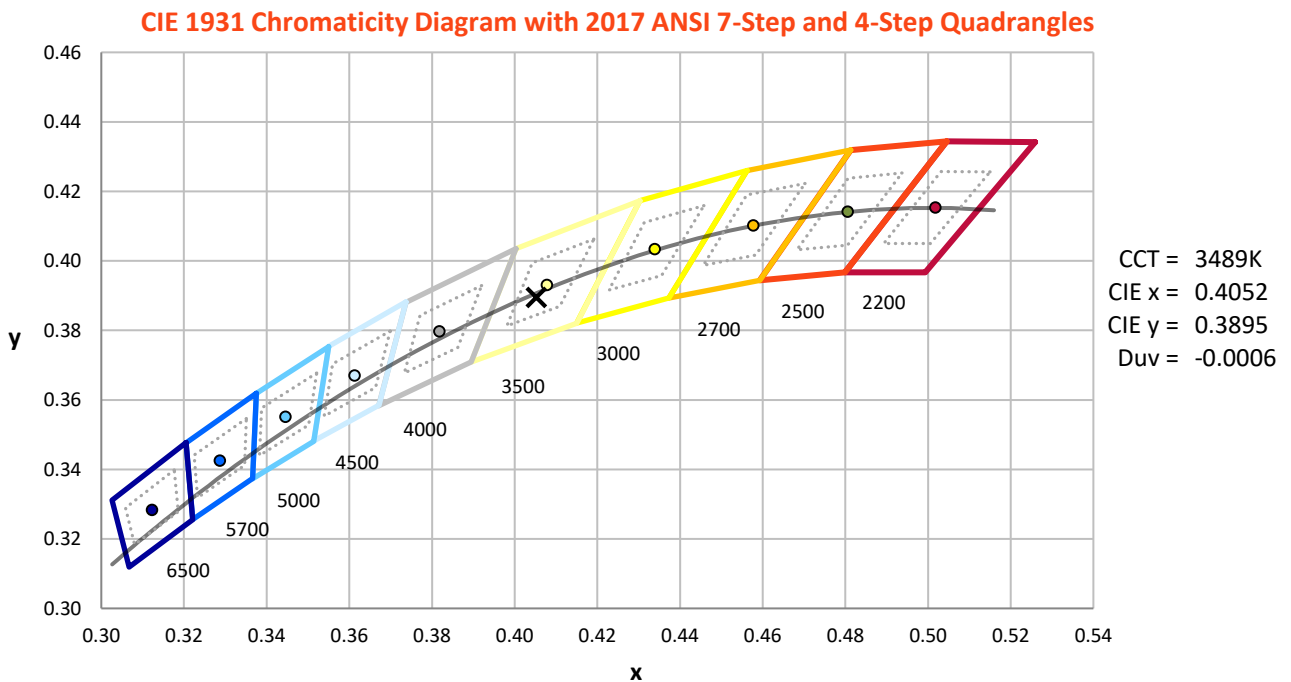
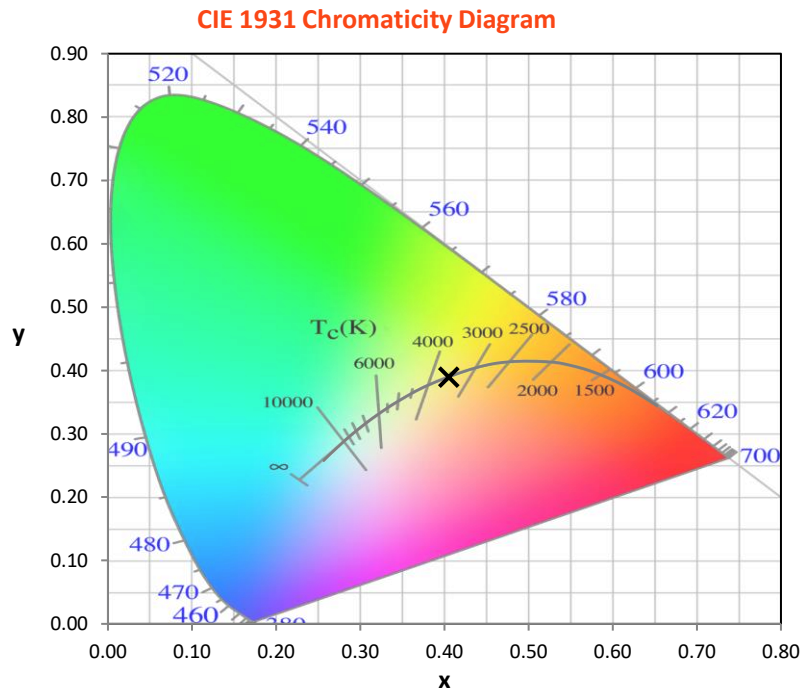
Test Conditions

Stabilization Time: 28M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/58%
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2307-100-2

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

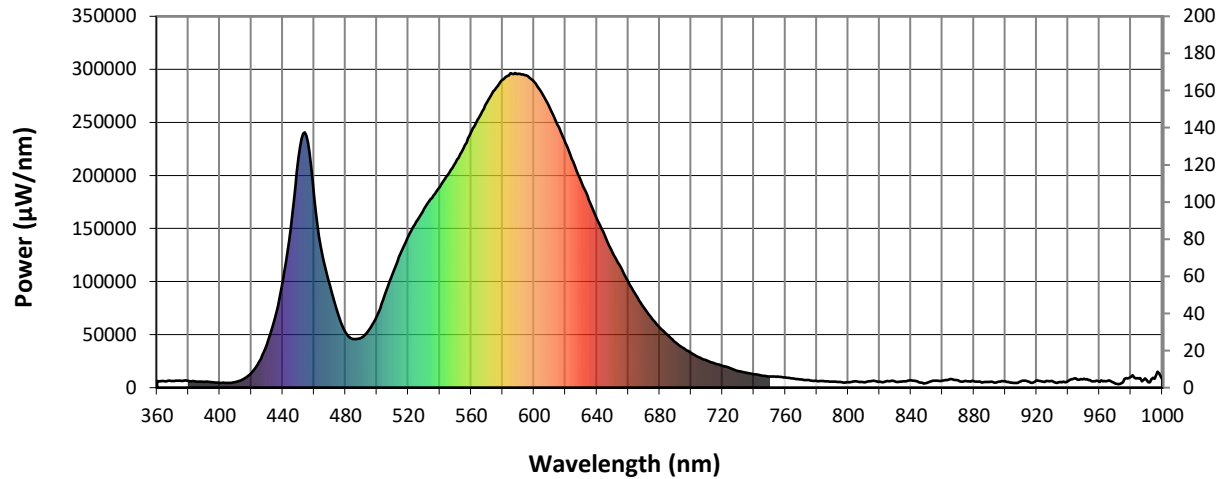
REPORT NUMBER: SP1-2307-100-2



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2307-100-2

Photopic Flux vs. Wavelength

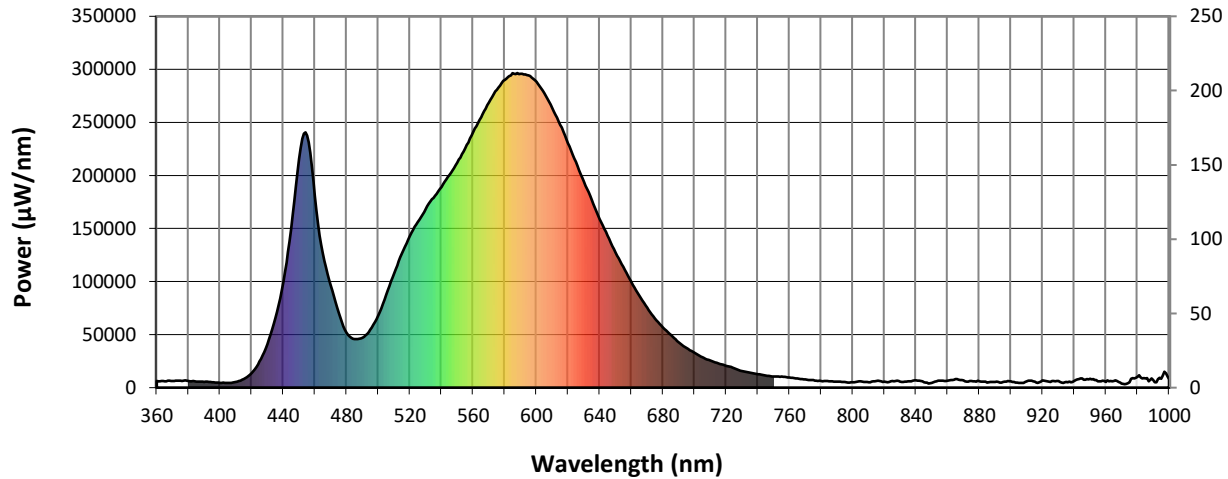


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λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

REPORT NUMBER: SP1-2307-100-2

Scotopic Flux vs. Wavelength



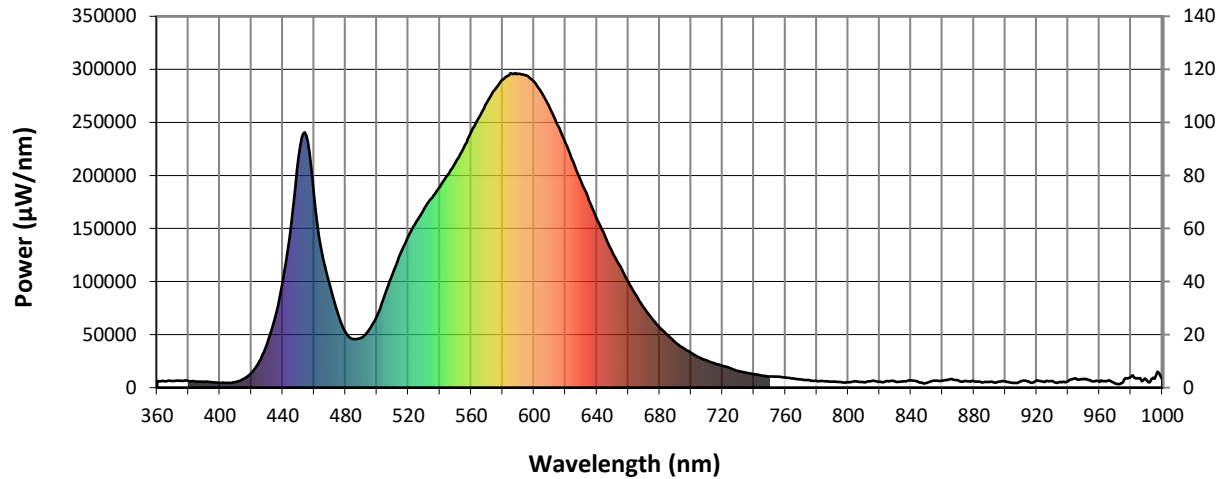
Scotopic Lumens: 21575.7

S/P: 1.41

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	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 8294.3 M/P: 0.54

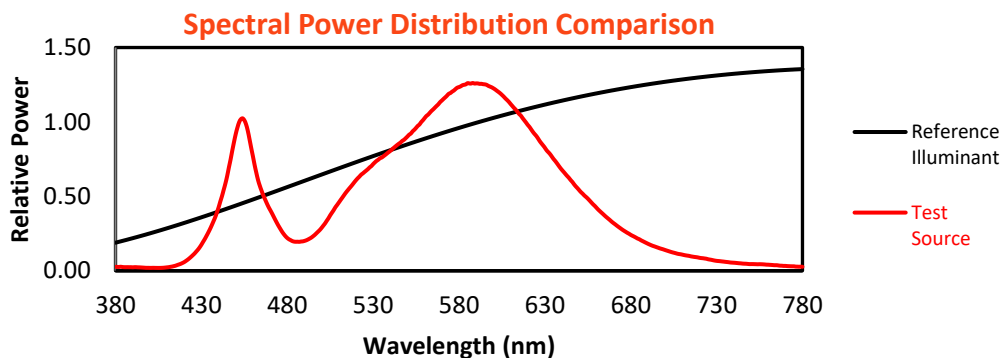
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

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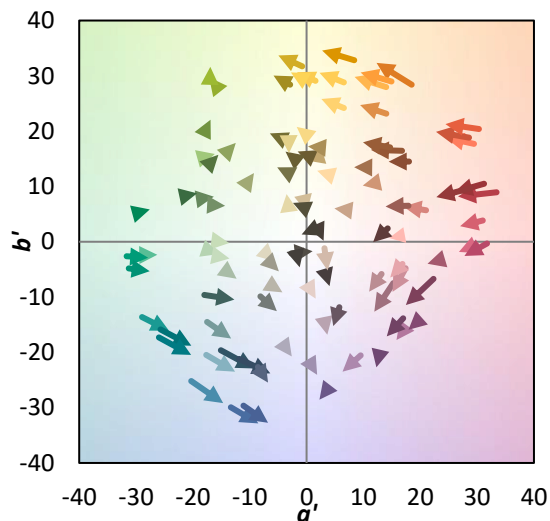
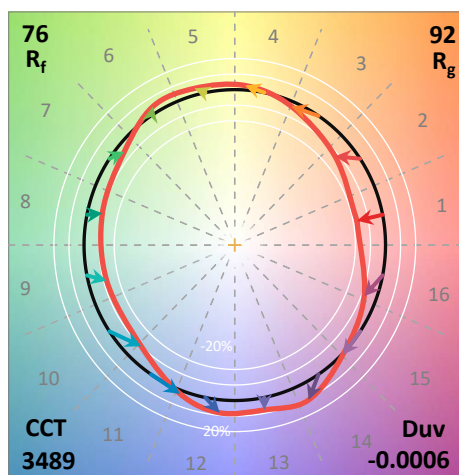
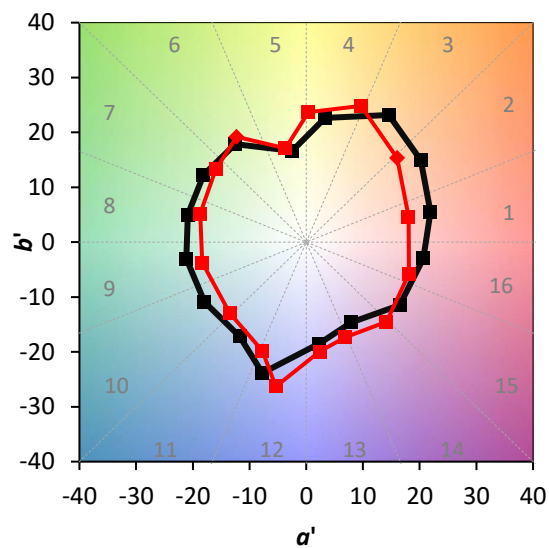
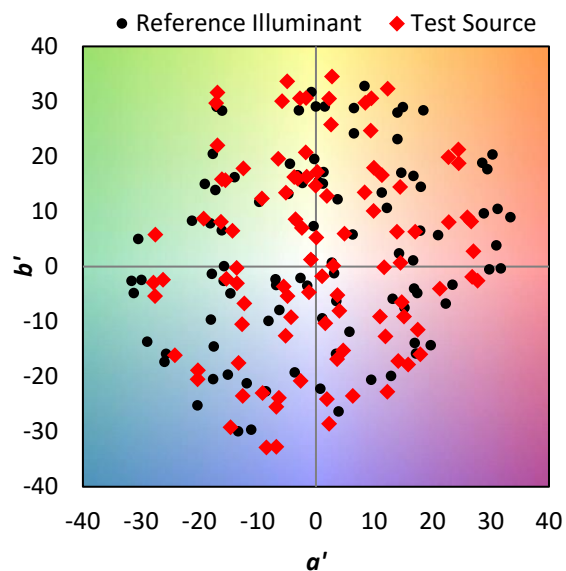
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Summary

$R_f = 75.9$
 $R_g = 92.2$
 CIE $R_a = 73.0$
 $R_g = -30.0$



Color Vector Graphics

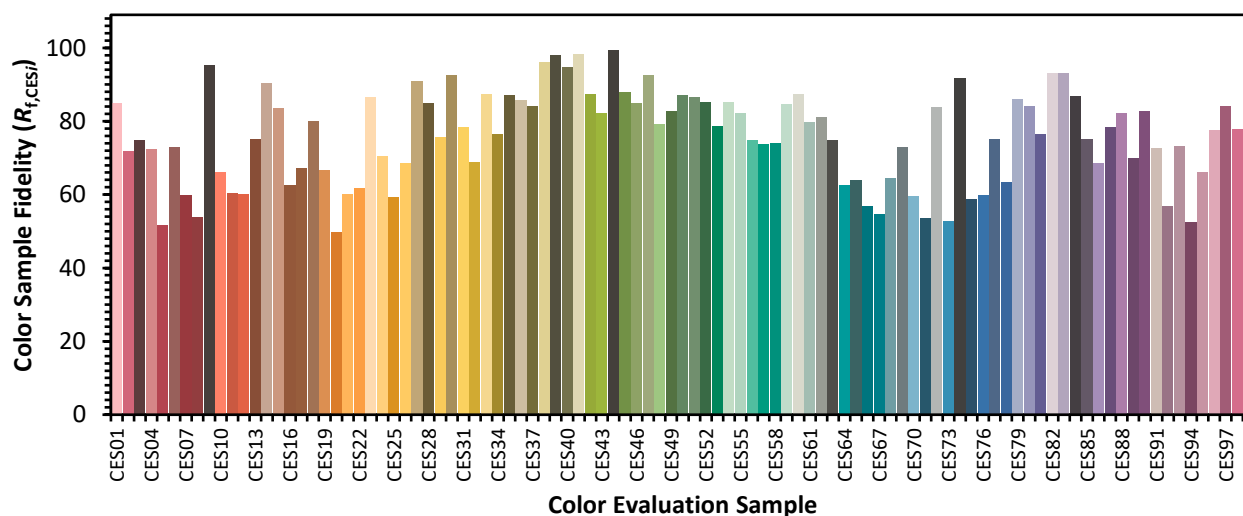


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Individual Sample Fidelity Index ($R_{f,i}$)

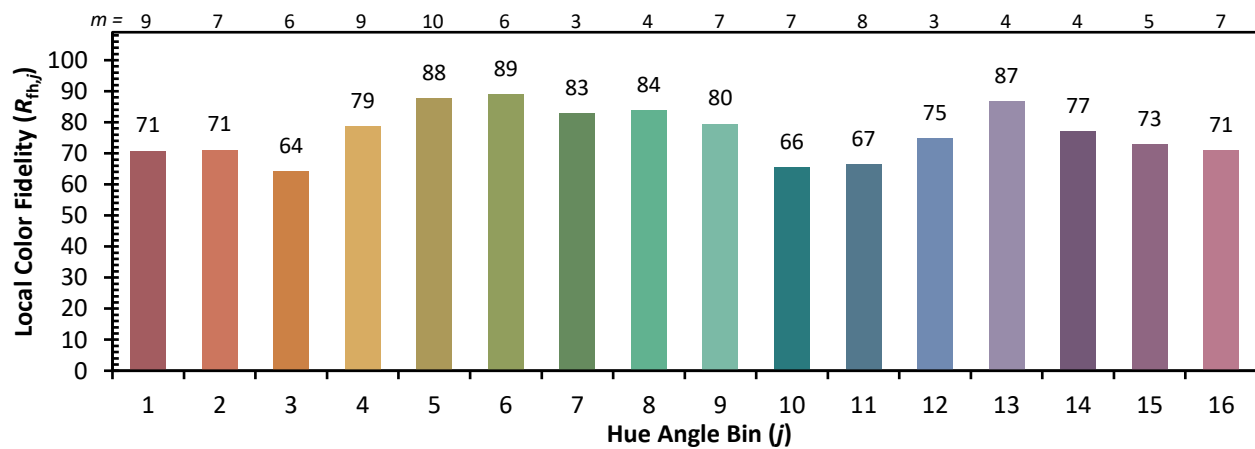
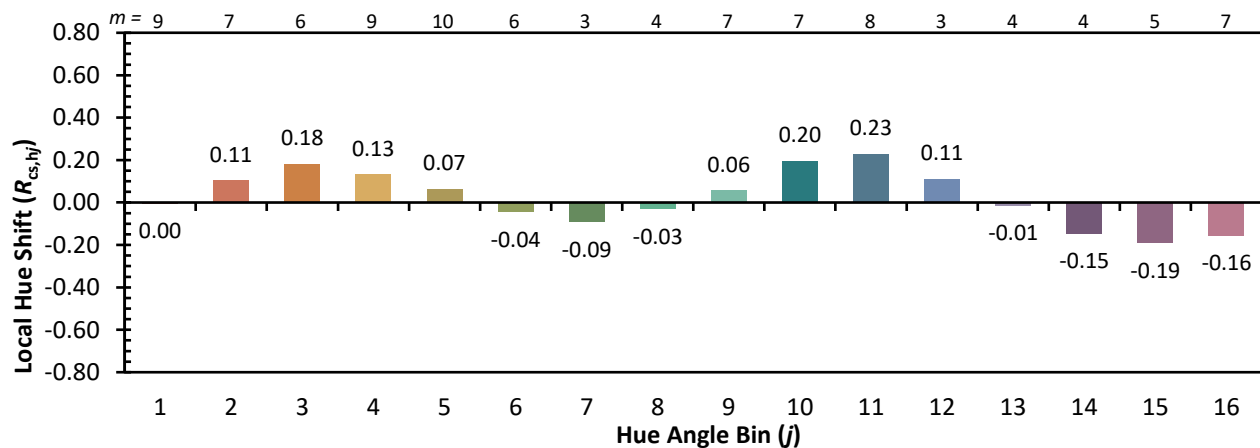
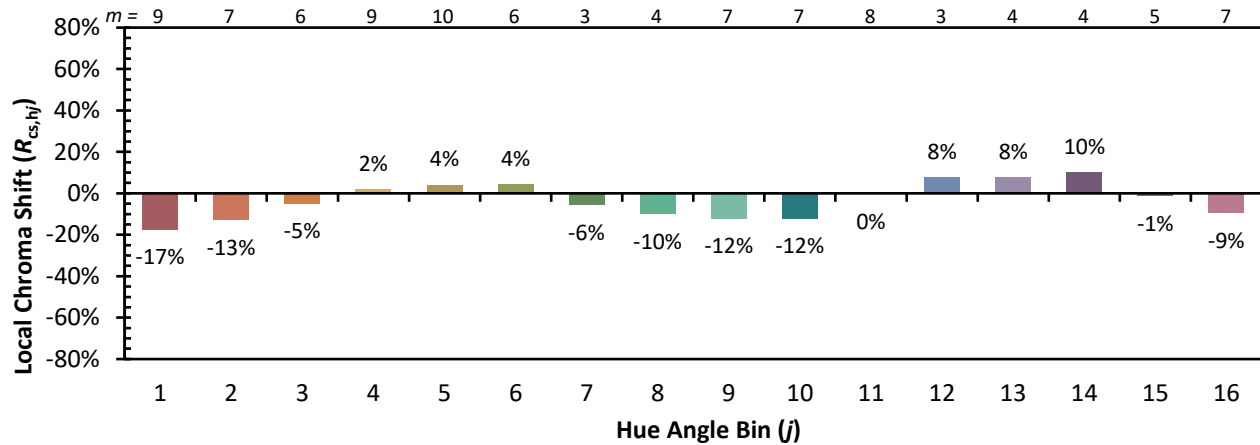
CES01 = 86	CES26 = 69	CES51 = 87	CES76 = 60
CES02 = 62	CES27 = 91	CES52 = 85	CES77 = 75
CES03 = 31	CES28 = 85	CES53 = 79	CES78 = 63
CES04 = 70	CES29 = 76	CES54 = 85	CES79 = 86
CES05 = 48	CES30 = 93	CES55 = 82	CES80 = 84
CES06 = 51	CES31 = 78	CES56 = 75	CES81 = 77
CES07 = 40	CES32 = 69	CES57 = 74	CES82 = 93
CES08 = 39	CES33 = 87	CES58 = 74	CES83 = 93
CES09 = 29	CES34 = 77	CES59 = 85	CES84 = 87
CES10 = 75	CES35 = 87	CES60 = 87	CES85 = 75
CES11 = 58	CES36 = 86	CES61 = 80	CES86 = 68
CES12 = 64	CES37 = 84	CES62 = 81	CES87 = 78
CES13 = 42	CES38 = 96	CES63 = 75	CES88 = 82
CES14 = 74	CES39 = 98	CES64 = 63	CES89 = 70
CES15 = 71	CES40 = 95	CES65 = 64	CES90 = 83
CES16 = 47	CES41 = 98	CES66 = 57	CES91 = 73
CES17 = 50	CES42 = 87	CES67 = 55	CES92 = 57
CES18 = 56	CES43 = 82	CES68 = 64	CES93 = 73
CES19 = 72	CES44 = 99	CES69 = 73	CES94 = 52
CES20 = 65	CES45 = 88	CES70 = 60	CES95 = 66
CES21 = 87	CES46 = 85	CES71 = 54	CES96 = 78
CES22 = 79	CES47 = 92	CES72 = 84	CES97 = 84
CES23 = 92	CES48 = 79	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 83	CES74 = 92	CES99 = 66
CES25 = 72	CES50 = 87	CES75 = 59	



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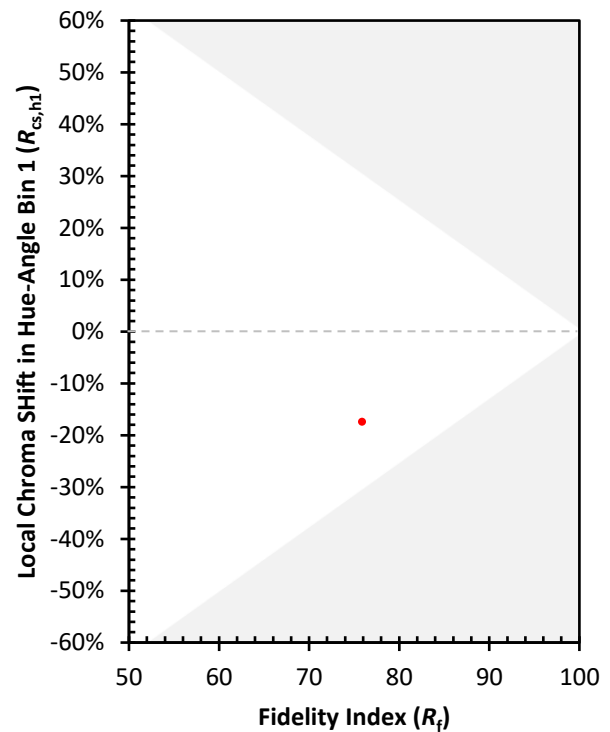
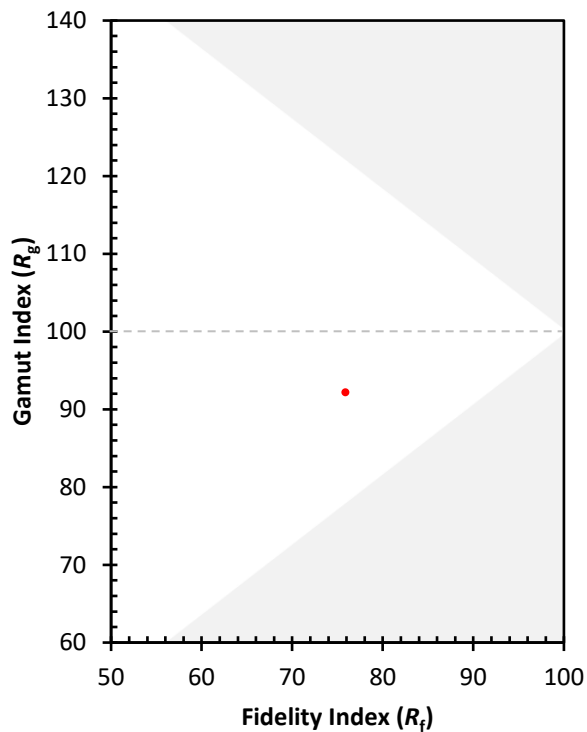
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)