

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: P828390

Luminaire Tested: **OHBL-36HE-MCL-UNV-L940-CD-UPL36**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P828390
REPORT IS A COMBINATION OF REPORTS P826312 AND G3-2310-221-2
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-36HE-MCL-UNV-L940-CD-UPL36
Description:
Light Source: -
Ballast/Driver: -

Summary

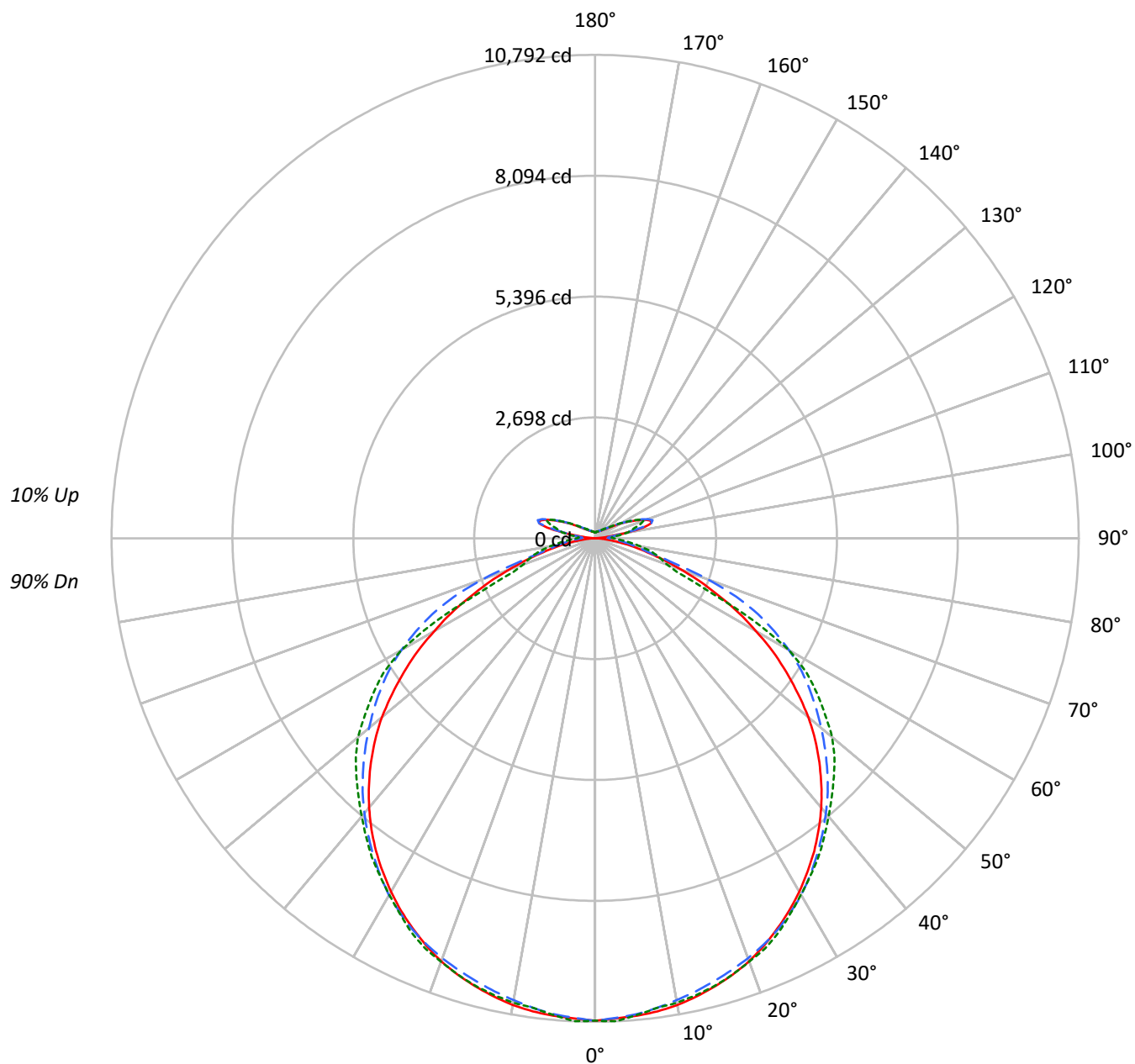
Lumens per Lamp: N/A
Luminaire Lumens: 33555.4 lumens
Efficiency: N/A
Efficacy: 139.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.8' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 240.8
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: 25 FT

TEST NUMBER: P828390

CATALOG NUMBER: OHBL-36HE-MCL-UNV-L940-CD-UPL36

Luminous Intensity Polar Plot





TEST NUMBER: P828390

CATALOG NUMBER: OHBL-36HE-MCL-UNV-L940-CD-UPL36

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
RCR																	
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93
1	107	102	98	94	103	99	95	92	93	90	87	87	85	83	82	80	78
2	97	89	83	77	94	87	81	76	81	77	72	77	73	69	72	69	66
3	89	79	71	64	85	76	69	63	72	66	61	68	63	58	64	60	56
4	81	70	61	55	78	68	60	54	64	57	52	60	55	50	57	52	48
5	75	62	53	47	72	60	52	46	57	50	45	54	48	43	51	46	42
6	69	56	47	41	66	54	46	40	52	44	39	49	43	38	46	41	37
7	64	51	42	36	62	49	41	36	47	40	35	45	38	34	42	37	33
8	59	46	38	32	57	45	37	32	43	36	31	41	35	30	39	33	29
9	55	42	34	29	53	41	34	28	39	33	28	38	31	27	36	30	26
10	52	39	31	26	50	38	31	26	36	30	25	35	29	25	33	28	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17033	17033	17033
5°	16850	16785	16892
10°	16717	16531	16775
15°	16540	16341	16735
20°	16361	16221	16660
25°	16088	16100	16591
30°	15794	15910	16359
35°	15455	15609	16274
40°	15035	15297	16134
45°	14482	14936	16139
50°	13761	14526	16141
55°	12677	14122	15689
60°	11295	13531	14680
65°	9539	12434	9450
70°	7519	9707	7001
75°	5459	5762	7337
80°	3599	4791	7397
85°	1826	4390	7779



TEST NUMBER: P828390

CATALOG NUMBER: OHBL-36HE-MCL-UNV-L940-CD-UPL36

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1015.5	3.0
10°-20°	2912.0	8.7
20°-30°	4447.6	13.3
30°-40°	5396.4	16.1
40°-50°	5656.0	16.9
50°-60°	5125.2	15.3
60°-70°	3436.2	10.2
70°-80°	1543.0	4.6
80°-90°	566.6	1.7
90°-100°	407.7	1.2
100°-110°	1162.9	3.5
110°-120°	936.5	2.8
120°-130°	446.4	1.3
130°-140°	230.0	0.7
140°-150°	135.8	0.4
150°-160°	81.2	0.2
160°-170°	43.2	0.1
170°-180°	13.2	0.0
0°-30°	8375.1	25.0
0°-40°	13771.5	41.0
0°-60°	24552.6	73.2
0°-90°	30098.5	89.7
90°-120°	2507.2	7.5
90°-150°	3319.3	9.9
90°-180°	3457.0	10.3
0°-180°	33555.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10770	10770	10770	10770	10770	
5°	10700	10737	10663	10695	10681	###
15°	10353	10312	10239	10329	10342	2923
25°	9618	9576	9643	9731	9703	4433
35°	8524	8545	8632	8724	8690	5328
45°	7075	7190	7324	7511	7534	5450
55°	5206	5457	5829	6062	6048	4647
65°	3055	3533	4012	3386	2764	3044
75°	1202	1744	1283	1313	1398	1314
85°	207	397	509	615	645	253
90°	8	175	318	393	409	17
95°	56	190	324	402	422	203
105°	1290	1317	1294	1004	922	1228
115°	908	902	935	954	948	917
125°	452	469	495	492	485	426
135°	275	282	291	301	304	217
145°	204	209	214	218	220	130
155°	169	173	175	177	176	79
165°	148	150	151	152	153	42
175°	137	137	136	135	136	13
180°	134	134	134	134	134	



TEST NUMBER: P828390

CATALOG NUMBER: OHBL-36HE-MCL-UNV-L940-CD-UPL36

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10770.1	10770.1	10770.1	10770.1	10770.1
2.5°	10726.4	10771.6	10715.6	10776.2	10791.9
5°	10700.0	10737.4	10662.6	10695.3	10681.3
7.5°	10651.7	10664.2	10575.4	10601.8	10573.8
10°	10580.1	10573.8	10469.5	10520.9	10527.1
12.5°	10474.2	10455.5	10362.0	10439.9	10441.5
15°	10352.7	10312.2	10239.0	10329.3	10341.8
17.5°	10212.6	10159.6	10111.3	10228.1	10209.5
20°	10049.0	9986.7	9977.4	10105.1	10058.3
22.5°	9846.6	9798.3	9820.1	9941.6	9912.0
25°	9617.7	9575.6	9642.6	9731.3	9703.3
27.5°	9376.3	9351.4	9427.6	9496.2	9441.7
30°	9111.5	9097.5	9198.8	9254.8	9186.3
32.5°	8823.5	8828.2	8924.7	9001.0	8937.1
35°	8524.5	8544.7	8631.9	8723.8	8689.6
37.5°	8195.9	8241.0	8328.2	8432.6	8396.7
40°	7848.6	7914.0	8010.5	8136.7	8104.0
42.5°	7473.3	7555.8	7680.4	7820.6	7817.4
45°	7074.7	7189.9	7323.9	7510.7	7534.1
47.5°	6660.5	6789.7	6959.4	7208.6	7244.4
50°	6210.4	6372.3	6584.1	6883.1	6905.0
52.5°	5708.9	5930.0	6210.4	6496.9	6470.4
55°	5206.0	5456.6	5828.8	6062.5	6048.4
57.5°	4704.5	4986.4	5437.9	5604.6	5603.0
60°	4143.9	4500.5	4994.2	5120.2	4995.7
62.5°	3625.3	4008.4	4520.8	4428.9	4002.1
65°	3055.3	3533.4	4011.5	3385.5	2764.1
67.5°	2549.2	3047.6	3407.3	2318.8	1985.6
70°	2040.0	2589.7	2656.7	1720.8	1697.4
72.5°	1588.4	2174.0	1832.9	1473.2	1548.0
75°	1202.2	1744.1	1283.2	1312.8	1398.4
77.5°	876.7	1339.2	998.2	1150.8	1220.9
80°	602.7	948.4	814.4	967.1	1015.3
82.5°	378.4	626.0	652.5	778.7	828.5
85°	207.1	397.1	509.2	615.1	644.7
87.5°	85.6	239.8	389.3	475.0	499.8
90°	8.5	174.9	318.0	392.7	409.2
92.5°	23.3	153.4	281.9	349.8	365.9
95°	55.5	190.3	324.1	402.1	422.3
97.5°	328.3	414.9	454.5	544.8	571.8
100°	702.9	770.9	681.7	712.5	734.6
102.5°	1100.0	1152.2	982.3	852.8	831.4
105°	1290.4	1317.4	1293.8	1003.9	921.6



TEST NUMBER: P828390

CATALOG NUMBER: OHBL-36HE-MCL-UNV-L940-CD-UPL36

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1062.9	1076.5	1098.0	1108.5	1083.8
115°	908.0	902.0	935.4	954.0	948.5
117.5°	778.4	772.8	803.2	809.0	802.6
120°	656.7	658.3	687.2	682.9	677.5
122.5°	546.3	558.4	581.7	580.8	571.1
125°	451.7	468.9	494.9	491.8	484.6
127.5°	390.6	395.9	420.6	420.8	422.4
130°	337.6	346.1	363.5	371.4	369.7
132.5°	302.7	311.2	324.6	333.3	336.0
135°	274.8	282.5	291.0	301.4	303.8
137.5°	253.8	259.0	264.2	276.4	278.8
140°	234.7	239.9	243.5	253.3	254.8
142.5°	217.4	224.2	227.0	234.3	235.9
145°	203.5	209.4	213.8	218.0	220.4
147.5°	194.7	198.1	202.5	203.4	205.8
150°	185.1	187.7	191.2	192.9	193.8
152.5°	176.4	179.0	182.5	183.4	184.2
155°	168.6	172.8	175.4	177.1	175.5
157.5°	161.6	165.8	168.4	169.3	169.3
160°	156.4	159.7	162.3	162.3	163.2
162.5°	152.8	154.5	156.2	157.1	158.0
165°	148.4	150.2	151.0	151.9	152.8
167.5°	144.9	147.4	146.7	147.5	147.5
170°	141.5	142.3	143.2	141.6	142.5
172.5°	138.9	139.7	140.6	139.0	139.0
175°	137.1	137.1	136.4	134.9	135.7
177.5°	136.9	136.2	134.7	133.1	132.4
180°	133.8	133.8	133.8	133.8	133.8



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	1304.2	1328.5	1344.0	1208.3	1060.1
110°	1205.7	1232.6	1251.5	1216.0	1150.4



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-8

Test Date: 08/01/2023

Luminaire Tested: OHB-15SE-N-UNV-L940-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L940-CD.

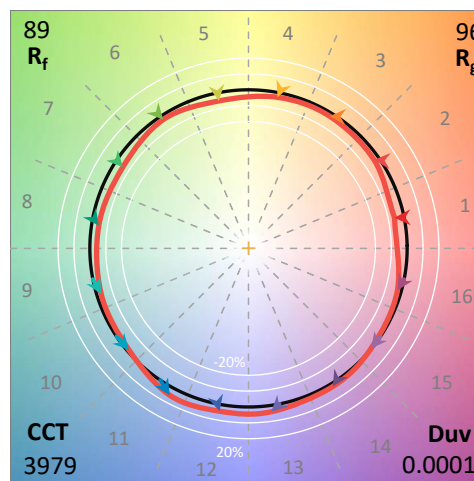
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2307-100-8
 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-L940-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 90CRI, 4000K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K):	3979	CRI (Ra):	91.5		
CIE u':	0.2254	R1:	91.7	R9:	57.0
CIE v':	0.5020	R2:	96.4	R10:	89.6
Duv:	0.0001	R3:	97.6	R11:	89.1
CIE x:	0.3813	R4:	89.2	R12:	69.6
CIE y:	0.3773	R5:	90.3	R13:	93.4
CIE z:	0.2414	R6:	93.0	R14:	98.9
Peak Wavelength (nm):	455	R7:	91.6		
Dominant Wavelength (nm):	579	R8:	81.9		
Purity:	27.8				
Rf:	88.6				
Rg:	96.2				



Test Conditions

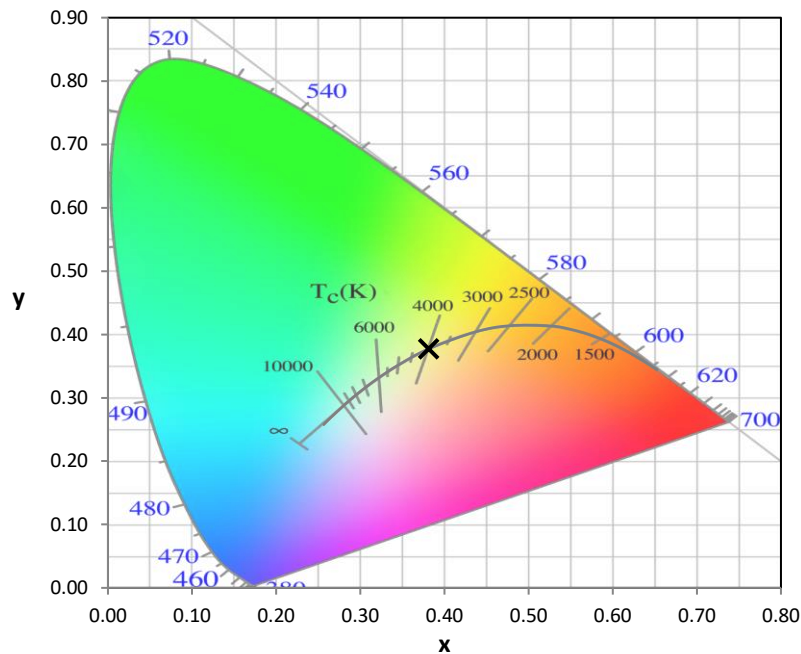
Stabilization Time: 23M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/57%
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2307-100-8

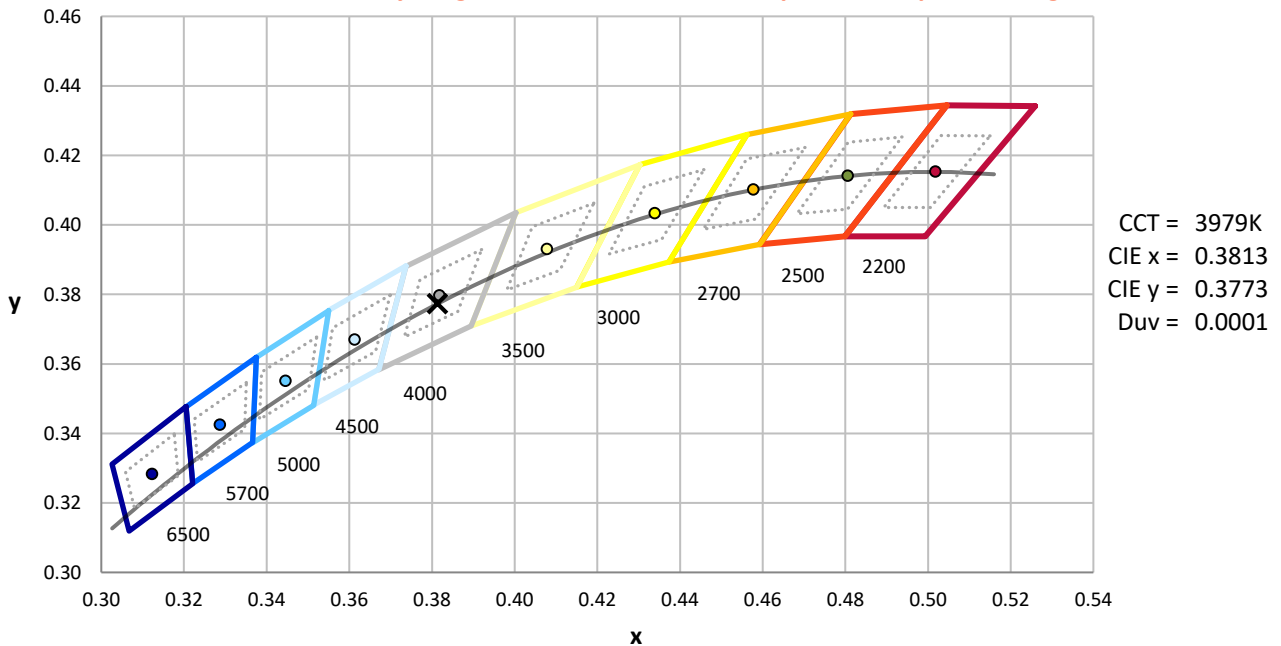
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208	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: SP1-2307-100-8

CIE 1931 Chromaticity Diagram



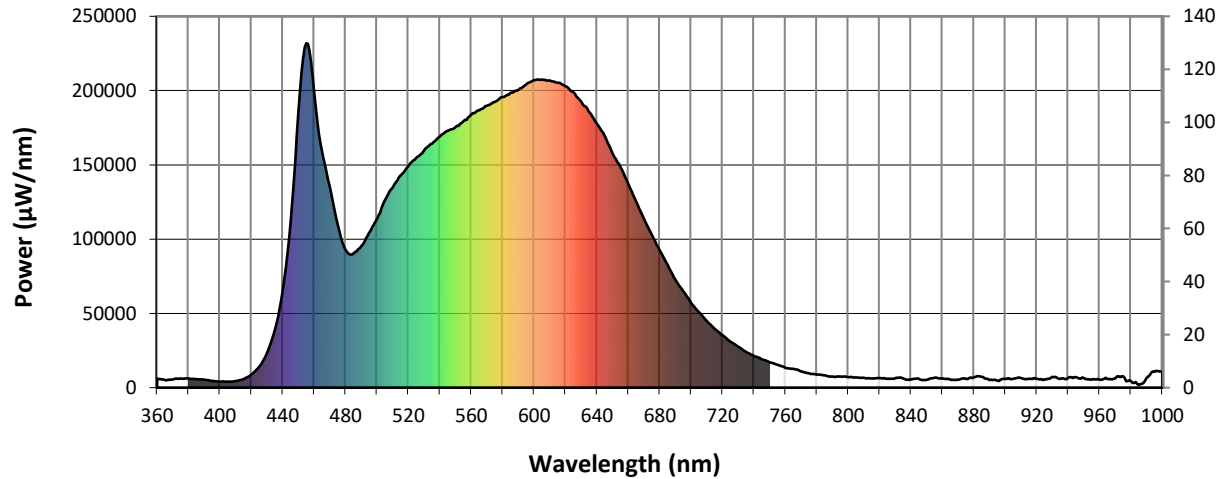
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2307-100-8

Photopic Flux vs. Wavelength

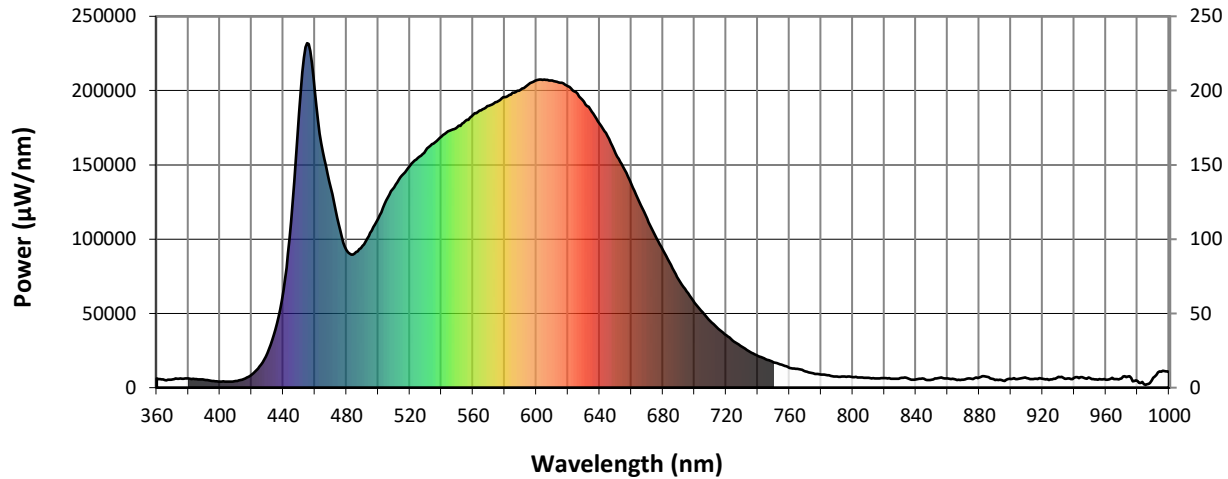


#####

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	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

REPORT NUMBER: SP1-2307-100-8

Scotopic Flux vs. Wavelength



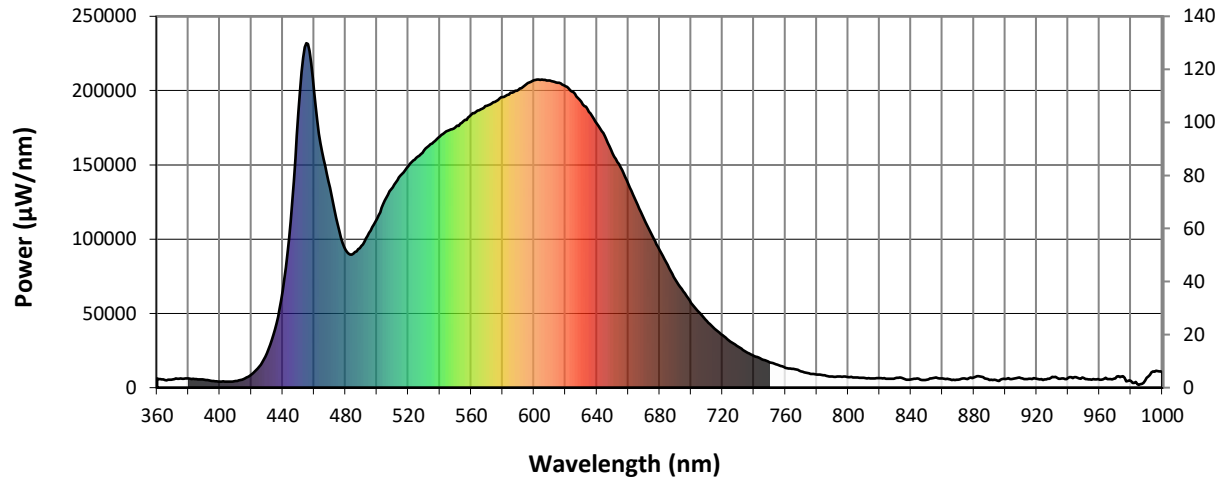
Scotopic Lumens: 22729.8

S/P: 1.79

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	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

REPORT NUMBER: SP1-2307-100-8

Melanopic Flux vs. Wavelength



Melanopic Lumens: 9423.4

M/P: 0.74

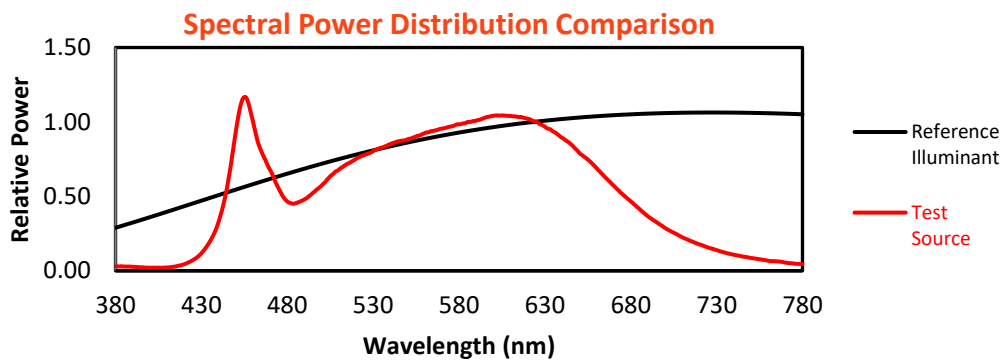
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

REPORT NUMBER: SP1-2307-100-8

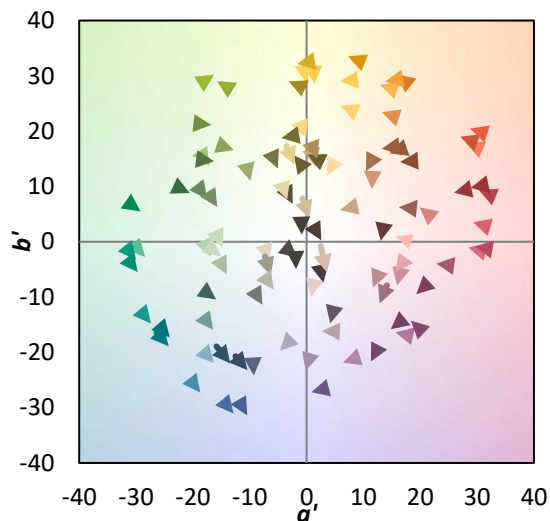
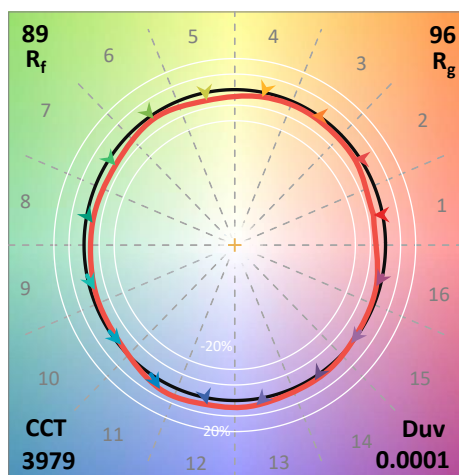
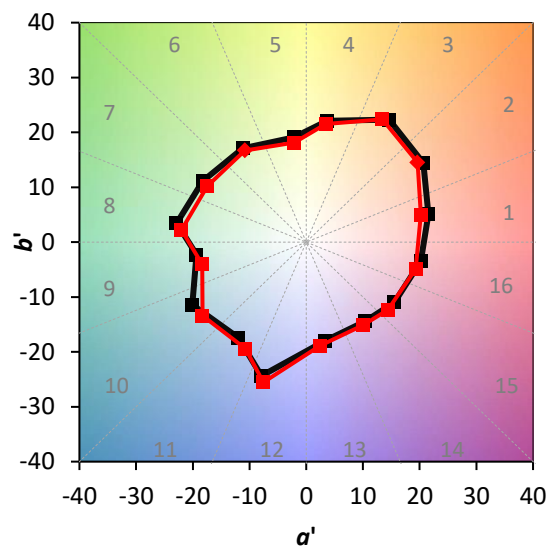
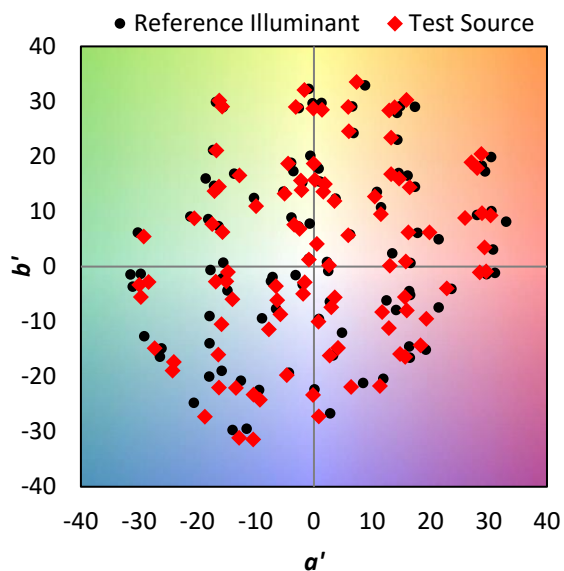
TM-30-18

Summary

$R_f = 88.6$
 $R_g = 96.2$
 CIE $R_a = 91.5$
 $R_9 = 57.0$



Color Vector Graphics

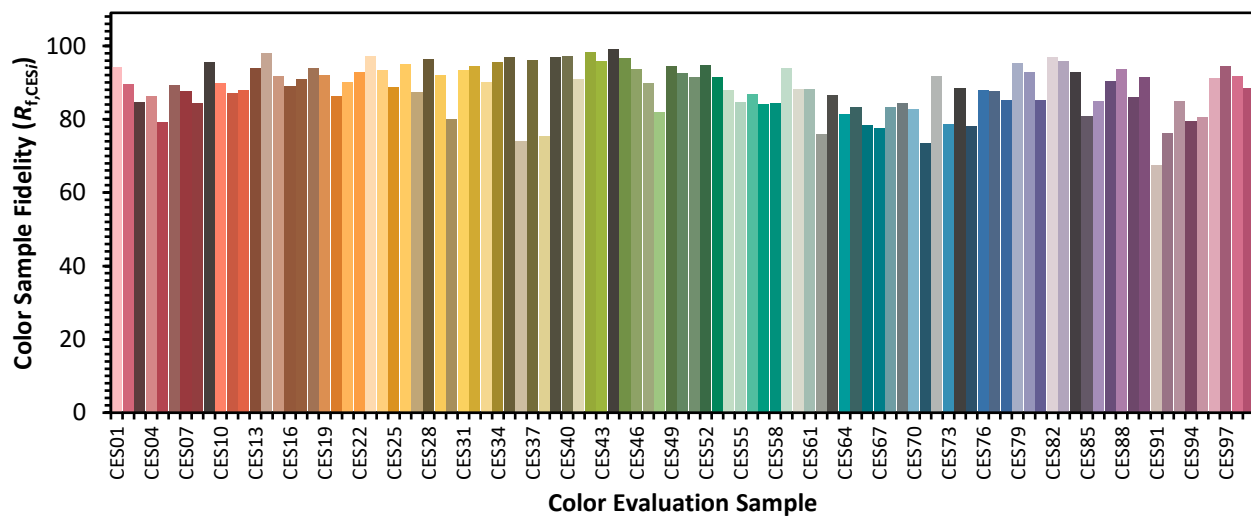


REPORT NUMBER: SP1-2307-100-8

TM-30-18

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

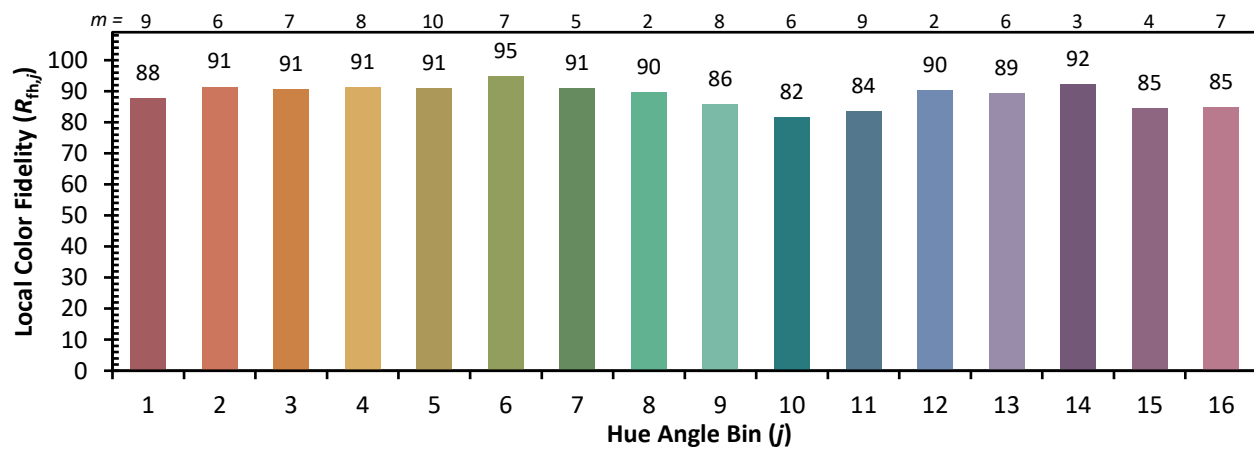
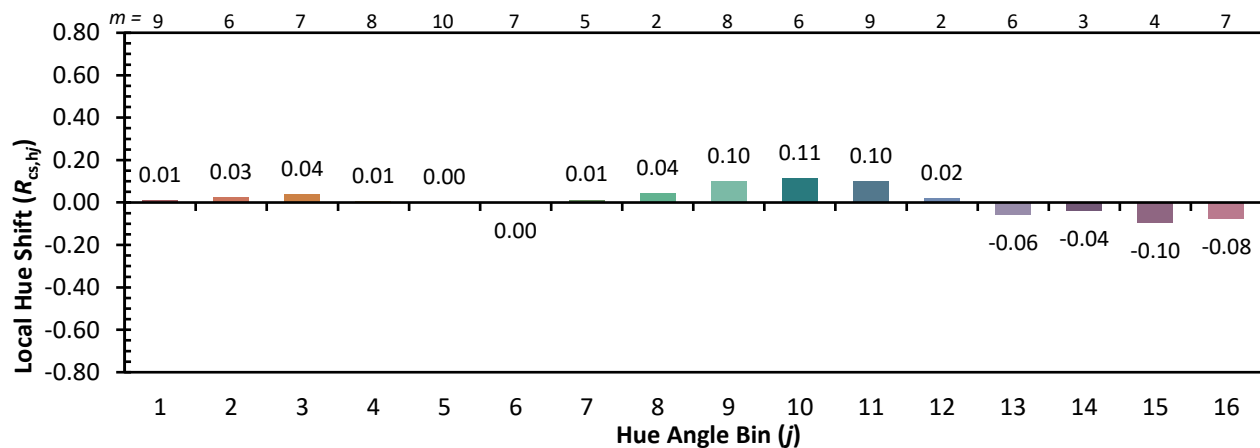
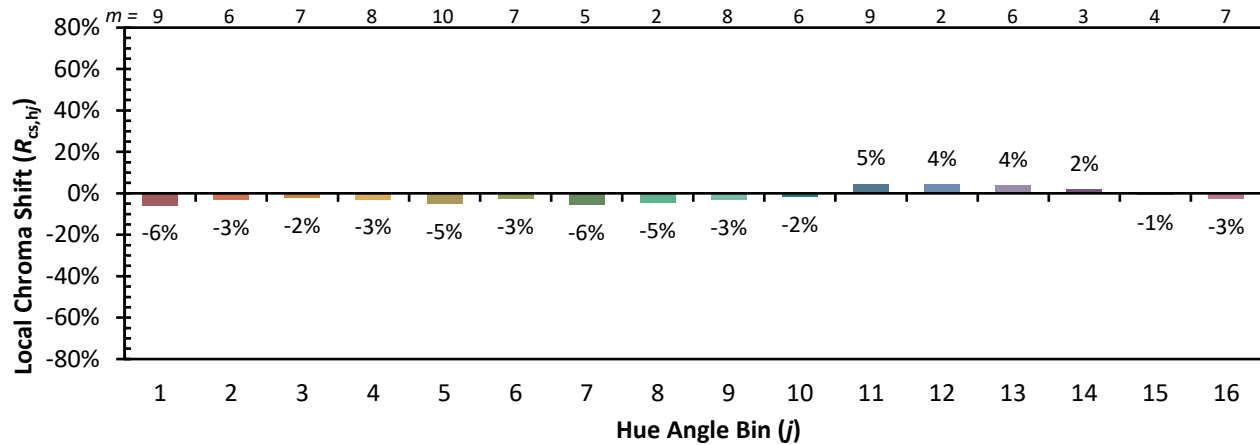
CES01 = 86	CES26 = 95	CES51 = 92	CES76 = 88
CES02 = 62	CES27 = 87	CES52 = 95	CES77 = 88
CES03 = 31	CES28 = 96	CES53 = 92	CES78 = 85
CES04 = 69	CES29 = 92	CES54 = 88	CES79 = 95
CES05 = 49	CES30 = 80	CES55 = 85	CES80 = 93
CES06 = 50	CES31 = 93	CES56 = 87	CES81 = 85
CES07 = 42	CES32 = 94	CES57 = 84	CES82 = 97
CES08 = 41	CES33 = 90	CES58 = 84	CES83 = 96
CES09 = 29	CES34 = 96	CES59 = 94	CES84 = 93
CES10 = 74	CES35 = 97	CES60 = 88	CES85 = 81
CES11 = 57	CES36 = 74	CES61 = 88	CES86 = 85
CES12 = 63	CES37 = 96	CES62 = 76	CES87 = 90
CES13 = 43	CES38 = 75	CES63 = 86	CES88 = 94
CES14 = 74	CES39 = 97	CES64 = 81	CES89 = 86
CES15 = 71	CES40 = 97	CES65 = 83	CES90 = 91
CES16 = 47	CES41 = 91	CES66 = 78	CES91 = 67
CES17 = 49	CES42 = 98	CES67 = 78	CES92 = 76
CES18 = 56	CES43 = 96	CES68 = 83	CES93 = 85
CES19 = 71	CES44 = 99	CES69 = 84	CES94 = 79
CES20 = 66	CES45 = 97	CES70 = 83	CES95 = 81
CES21 = 85	CES46 = 94	CES71 = 74	CES96 = 91
CES22 = 78	CES47 = 90	CES72 = 92	CES97 = 94
CES23 = 91	CES48 = 82	CES73 = 79	CES98 = 92
CES24 = 90	CES49 = 94	CES74 = 89	CES99 = 89
CES25 = 71	CES50 = 93	CES75 = 78	



REPORT NUMBER: SP1-2307-100-8

TM-30-18

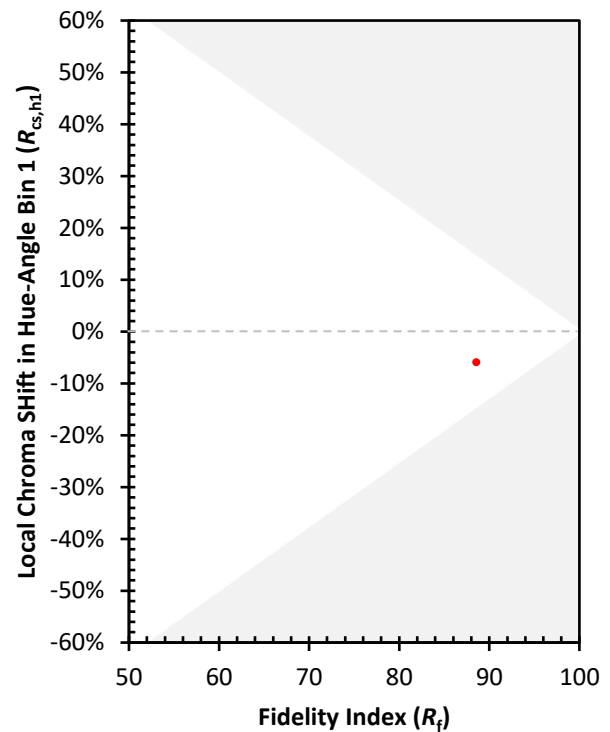
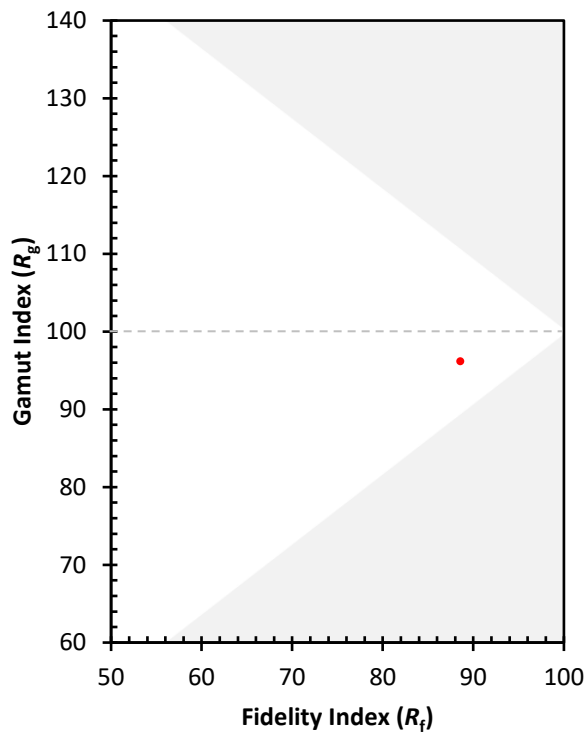
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2307-100-8

TM-30-18

Measure Comparisons



(END OF REPORT)