

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: McGRAW-EDISON

Report Number: P316946

Luminaire Tested: **GLEON-SA2A-830-U-5NQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316946
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA2A-830-U-5NQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7815 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G1

Input Watts (W): 66
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



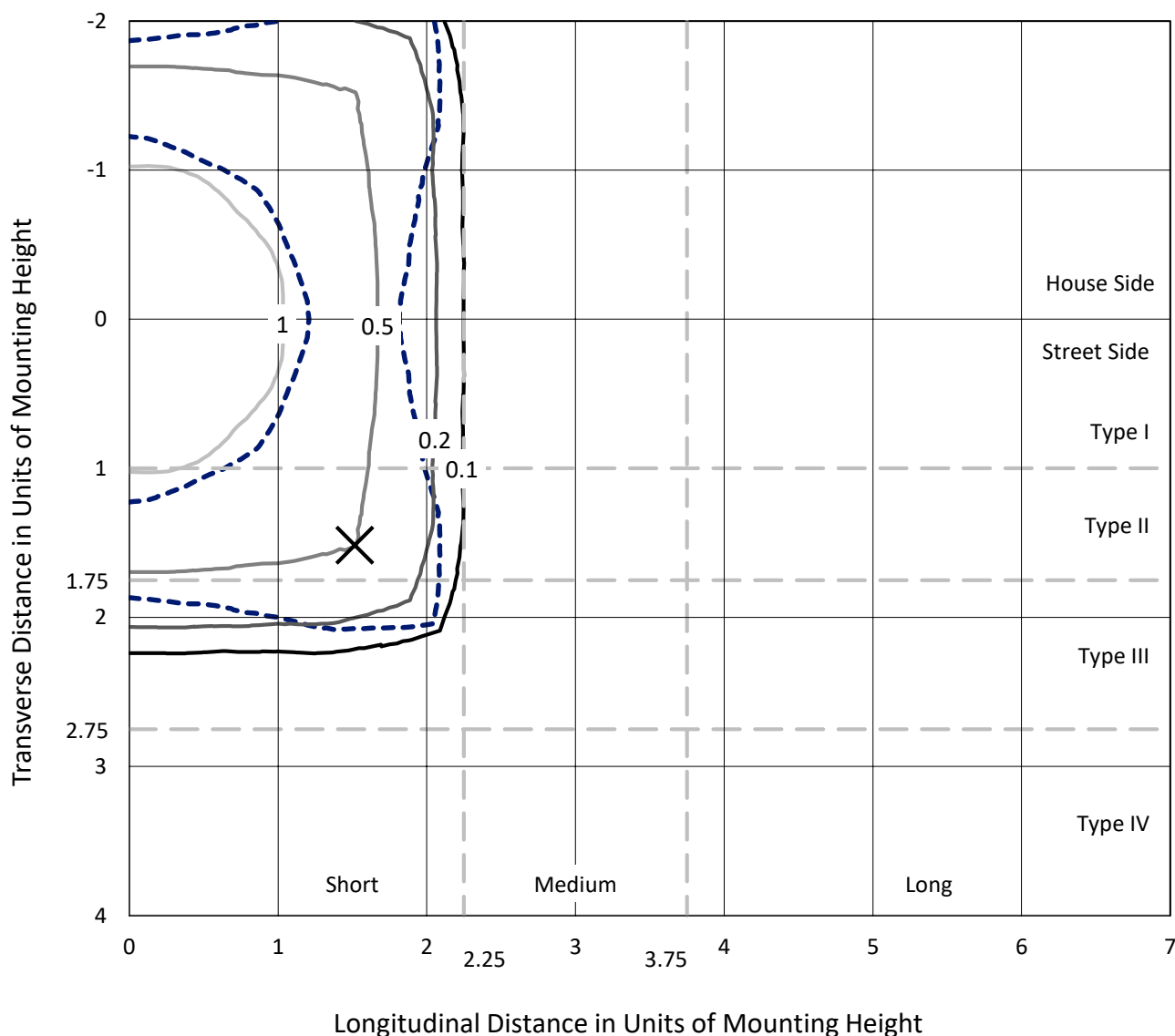
REPORT NUMBER: P316946

CATALOG NUMBER: GLEON-SA2A-830-U-5NQ

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

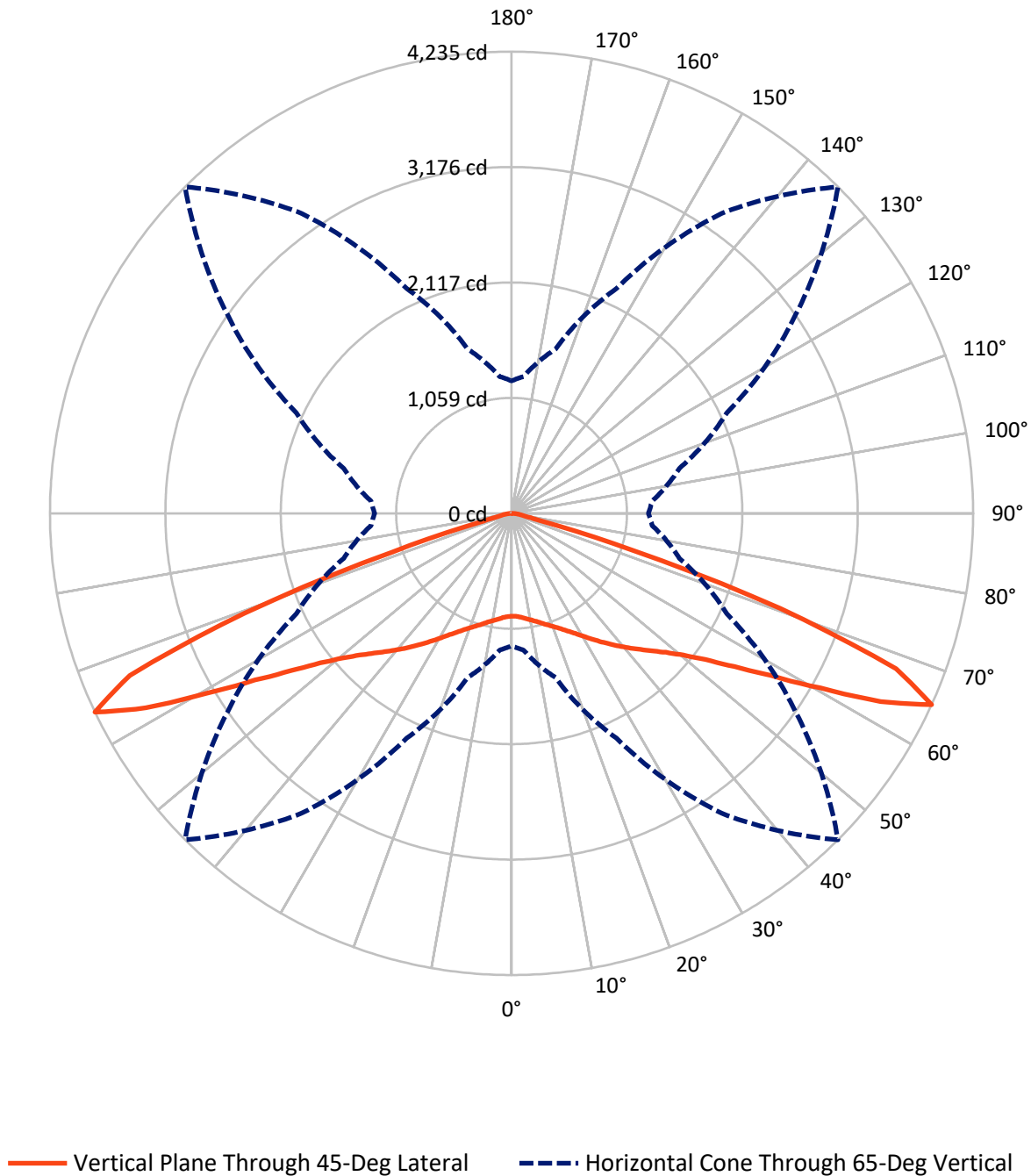


Based on 25 foot mounting height. Maximum calculated value = 1.5 fc

Type V - Short - N/A

REPORT NUMBER: P316946
CATALOG NUMBER: GLEON-SA2A-830-U-5NQ

Luminous Intensity Polar Plot



REPORT NUMBER: P316946

CATALOG NUMBER: GLEON-SA2A-830-U-5NQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3907.5	0.0	3907.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3907.5	0.0	3907.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	7815.0	0.0	7815.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	1.2
10°-20°	297.6	3.8
20°-30°	558.4	7.1
30°-40°	923.5	11.8
40°-50°	1430.4	18.3
50°-60°	2193.8	28.1
60°-70°	2047.0	26.2
70°-80°	238.2	3.0
80°-90°	33.5	0.4
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°-90°	7815.0	100.0
0°-180°	7815.0	100.0

Coefficient of Utilization



REPORT NUMBER: P316946

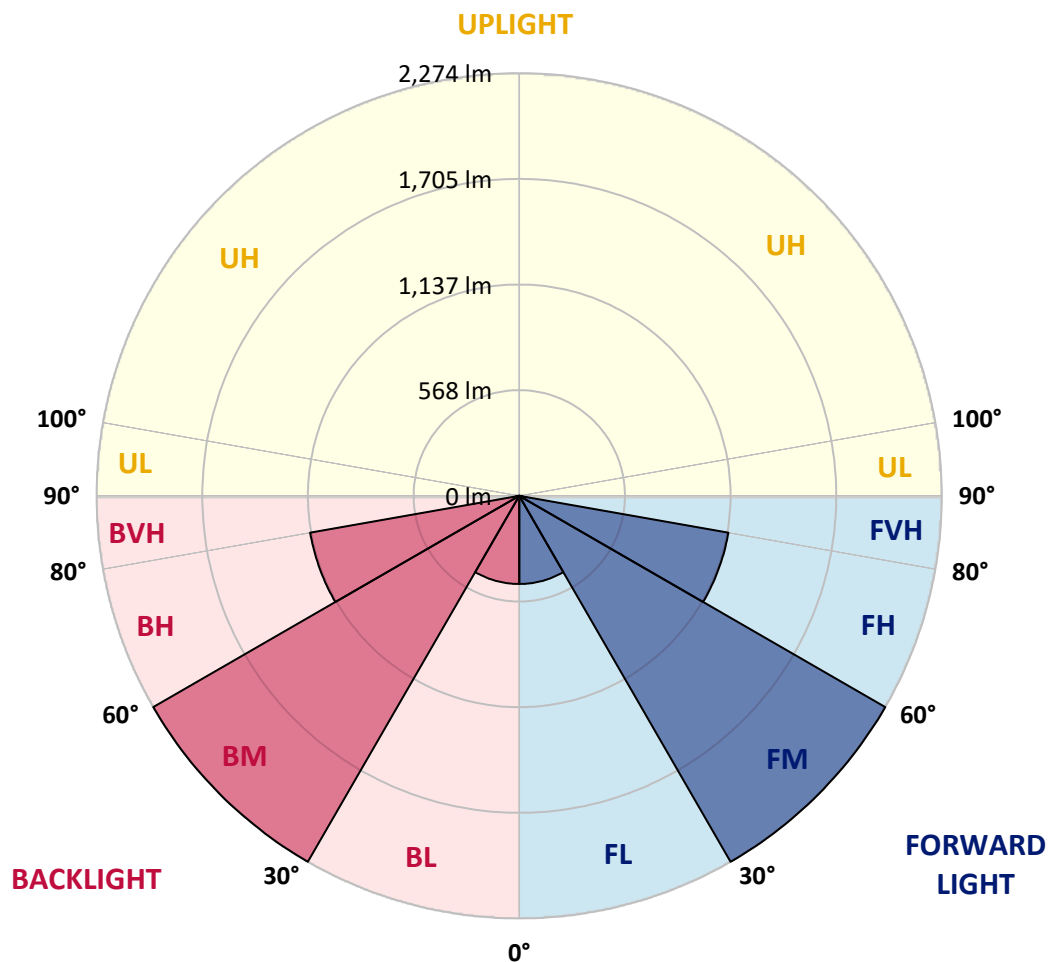
CATALOG NUMBER: GLEON-SA2A-830-U-5NQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	474.3	6.1			
FM	(30°-60°)	2273.8	29.1			
FH	(60°-80°)	1142.6	14.6			G1/1800
FVH	(80°-90°)	16.7	0.2			G1/100
BL	(0°-30°)	474.3	6.1	B1/500		
BM	(30°-60°)	2273.8	29.1	B2/2500		
BH	(60°-80°)	1142.6	14.6	B3/2500		G1/1800
BVH	(80°-90°)	16.7	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1

Type V Short





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CATALOG NUMBER: GLEON-SA2A-830-U-5NQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	943.8	943.8	943.8	943.8	943.8	943.8	943.8	943.8	943.8	943.8	943.8
2.5°	946.9	946.4	946.9	947.1	945.6	946.4	946.1	947.4	947.9	947.4	947.4
5°	957.8	957.0	958.0	959.3	957.2	957.8	957.0	958.5	959.1	958.0	958.8
7.5°	972.8	973.1	974.1	976.4	975.1	976.2	974.6	974.9	974.6	973.1	973.3
10°	989.2	989.4	991.2	994.3	994.9	994.9	993.8	993.0	992.0	991.0	991.2
12.5°	1008.9	1010.2	1011.5	1015.4	1015.4	1017.4	1016.9	1014.8	1013.0	1011.5	1011.5
15°	1035.6	1035.3	1036.9	1040.8	1042.6	1046.0	1046.0	1043.1	1040.8	1039.2	1038.7
17.5°	1063.6	1064.4	1065.4	1070.1	1073.0	1076.8	1077.4	1075.0	1073.5	1071.4	1070.1
20°	1096.3	1097.6	1101.7	1103.6	1106.2	1109.8	1111.1	1110.6	1109.0	1108.0	1108.2
22.5°	1134.4	1137.8	1140.4	1143.0	1146.1	1148.7	1150.0	1151.8	1150.3	1149.5	1149.0
25°	1180.6	1182.9	1188.1	1192.8	1194.9	1195.7	1197.2	1199.8	1199.5	1197.7	1197.7
27.5°	1233.0	1237.4	1243.9	1250.7	1250.7	1248.1	1253.2	1257.7	1256.1	1253.8	1250.7
30°	1296.6	1300.7	1308.2	1317.6	1312.9	1311.1	1318.1	1326.1	1323.8	1319.9	1319.4
32.5°	1365.1	1368.9	1378.8	1388.9	1383.0	1380.4	1387.9	1399.6	1395.4	1387.6	1383.0
35°	1439.2	1443.1	1457.1	1469.3	1459.2	1454.8	1461.0	1473.7	1466.5	1452.0	1448.3
37.5°	1519.9	1522.0	1540.2	1552.6	1545.6	1533.9	1541.7	1551.1	1544.8	1527.2	1520.2
40°	1603.7	1611.2	1632.3	1646.8	1634.6	1616.2	1629.1	1642.1	1632.8	1610.2	1598.3
42.5°	1701.5	1707.2	1735.2	1748.2	1728.5	1702.6	1720.2	1737.8	1728.5	1706.7	1696.3
45°	1803.2	1812.0	1845.5	1858.5	1829.9	1797.0	1818.5	1849.4	1848.6	1817.2	1806.3
47.5°	1914.0	1922.8	1962.8	1979.9	1949.0	1904.9	1935.3	1978.8	1975.7	1941.2	1932.4
50°	2041.9	2051.2	2101.0	2122.6	2093.8	2042.4	2088.1	2126.4	2120.7	2078.2	2079.0
52.5°	2202.5	2201.9	2263.9	2301.3	2271.7	2226.3	2268.3	2305.7	2282.1	2223.2	2221.4
55°	2343.1	2351.6	2428.4	2499.2	2497.4	2480.0	2496.9	2498.4	2431.0	2352.7	2343.1
57.5°	2435.4	2451.8	2559.9	2688.1	2784.1	2807.2	2774.5	2675.4	2517.4	2392.1	2376.8
60°	2378.6	2403.5	2573.4	2834.7	3117.4	3253.1	3068.6	2761.2	2450.2	2275.6	2254.9
62.5°	1995.2	2037.2	2286.0	2763.8	3404.3	3801.0	3281.9	2623.5	2183.0	1942.5	1907.0
65°	1215.1	1259.5	1559.4	2274.8	3357.9	4234.7	3184.6	2177.5	1593.3	1294.2	1255.8
67.5°	405.0	417.9	594.6	1257.4	2639.1	3804.9	2643.5	1303.6	693.4	459.7	446.2
70°	158.5	159.8	188.6	364.5	1246.2	2613.4	1375.2	371.0	197.2	155.9	159.3
72.5°	116.5	117.0	125.0	152.3	324.8	1151.3	336.5	153.1	121.7	109.2	109.2
75°	93.6	93.6	99.4	111.0	145.5	264.1	147.6	109.7	95.2	87.2	86.1
77.5°	73.9	75.5	79.9	87.4	98.6	127.1	102.2	86.9	76.8	69.3	67.7
80°	55.0	56.6	63.8	67.4	70.8	88.2	75.5	68.0	60.7	51.9	50.3
82.5°	36.1	37.6	46.7	48.8	48.0	57.6	50.8	50.1	44.6	33.5	31.9
85°	23.6	24.1	31.1	32.4	29.8	26.2	32.4	34.2	31.1	21.8	21.0
87.5°	11.2	11.2	15.8	14.8	13.5	10.9	14.8	17.4	17.6	10.6	10.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

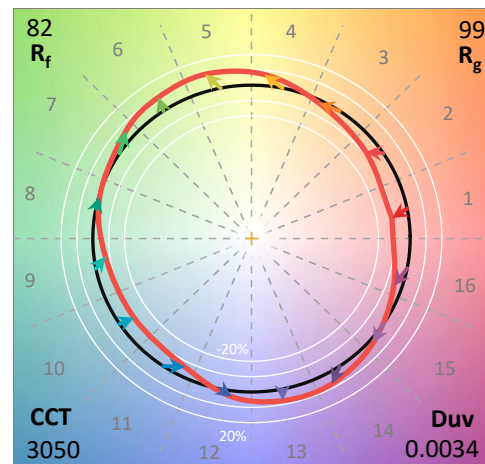
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u' : 0.2476
 CIE v' : 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

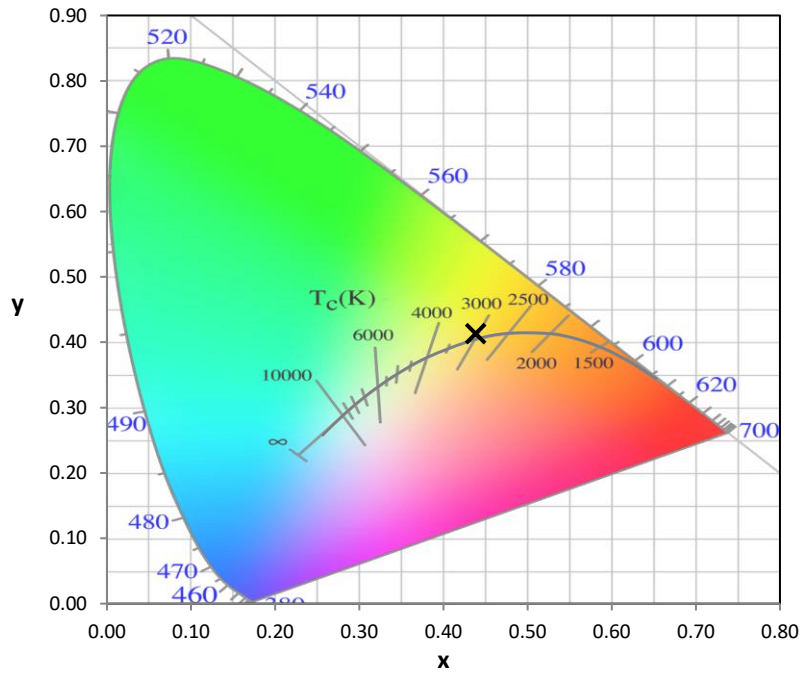
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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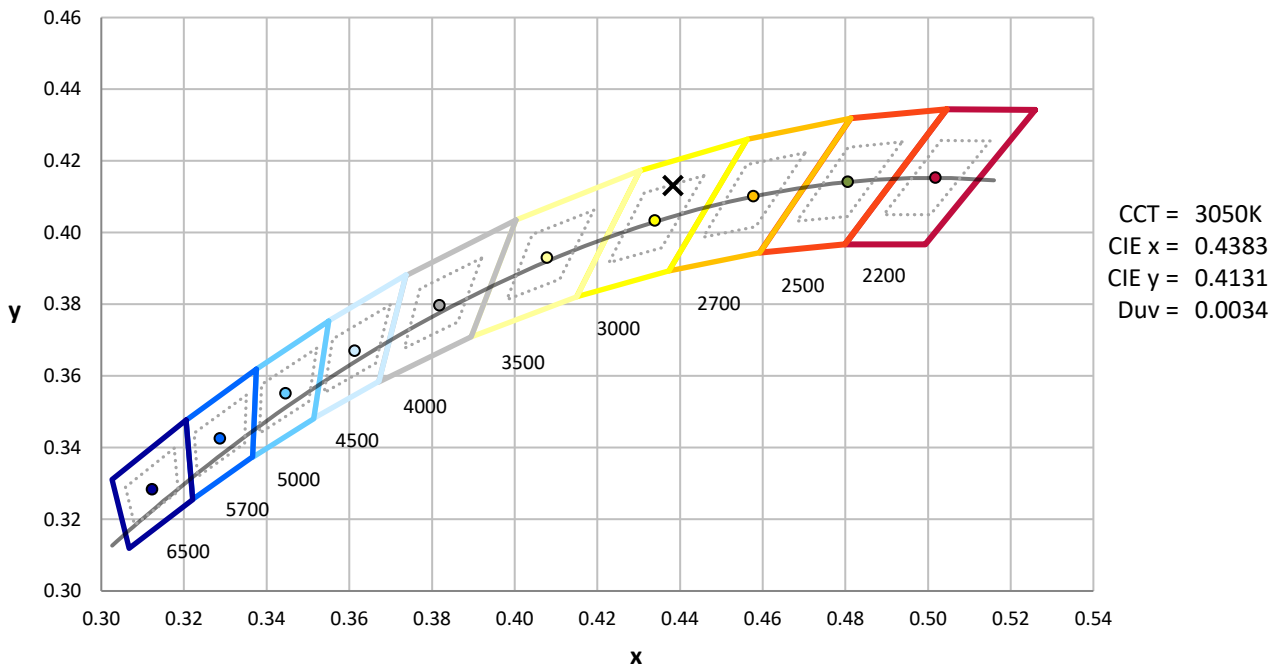
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



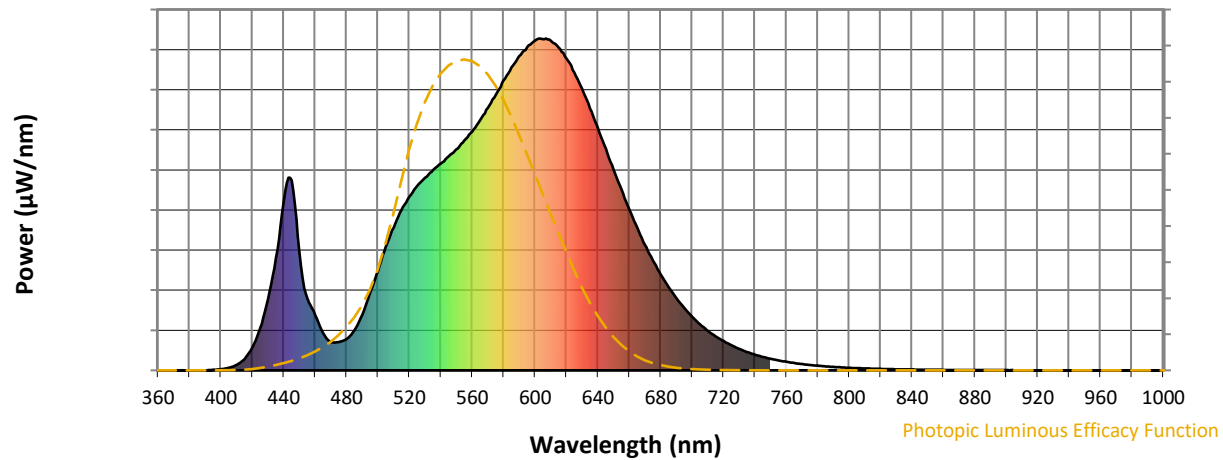
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

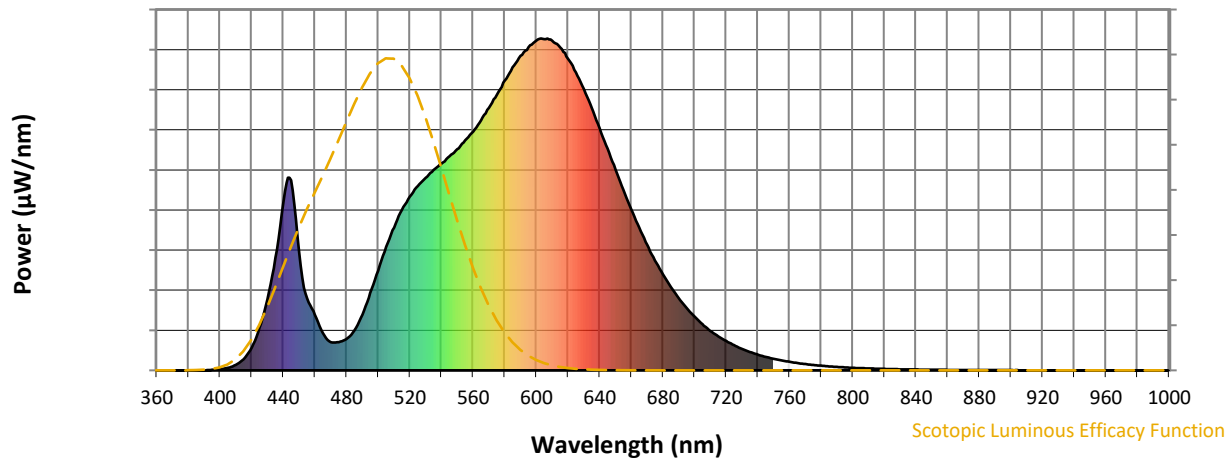


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



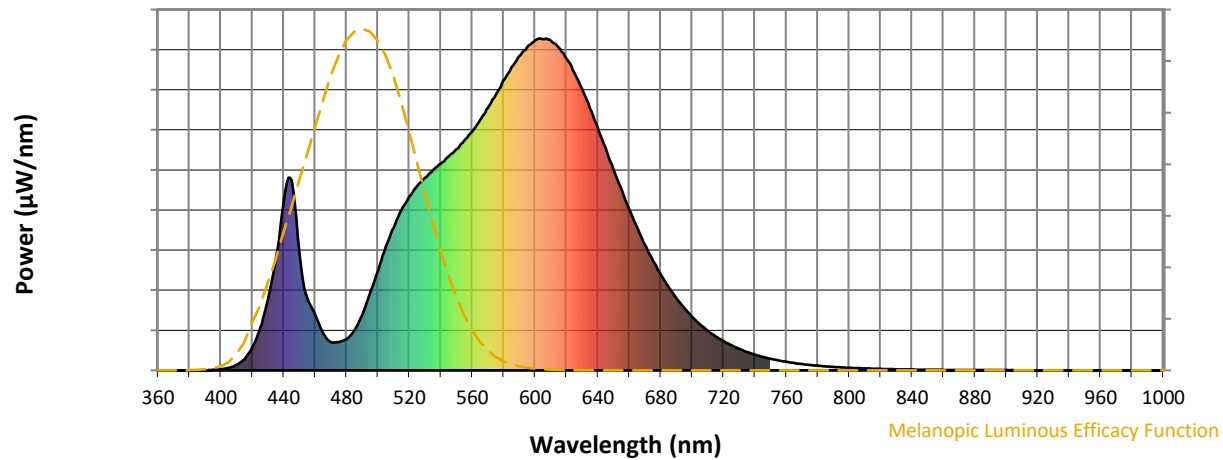
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

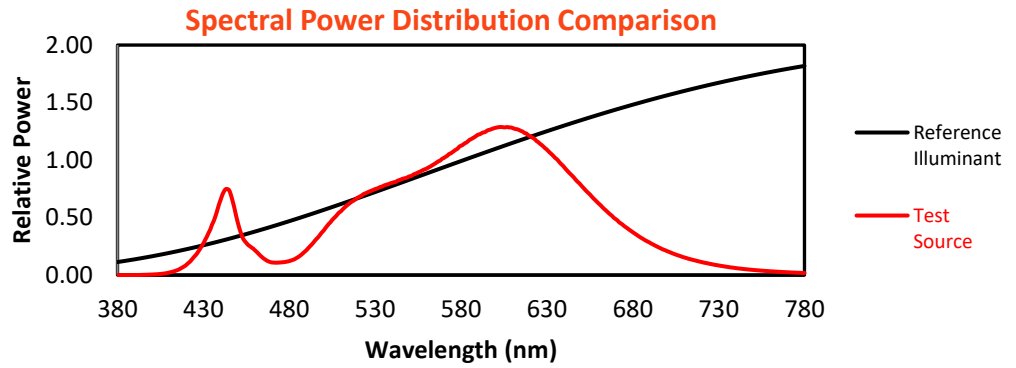
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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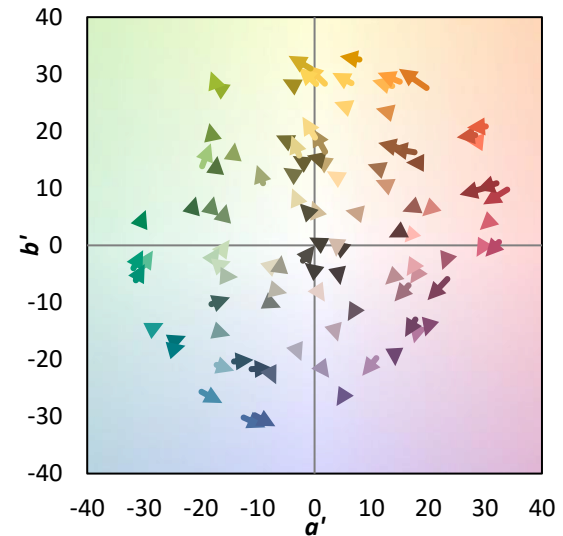
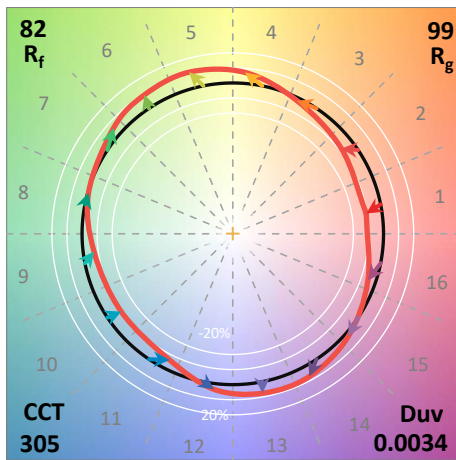
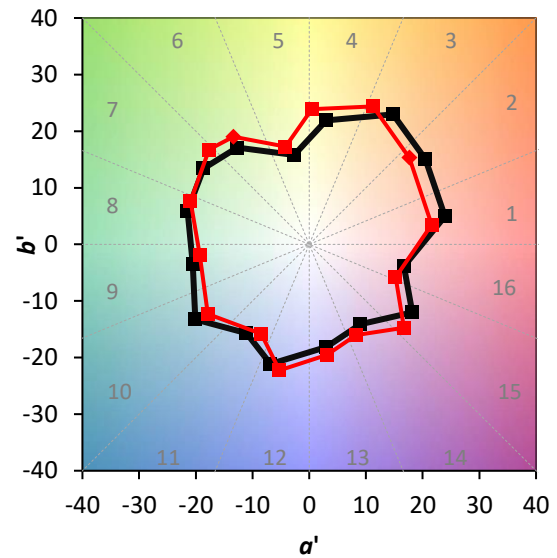
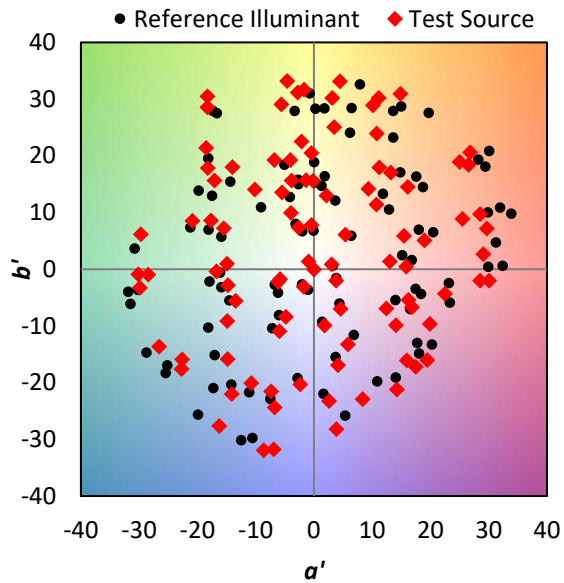
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$

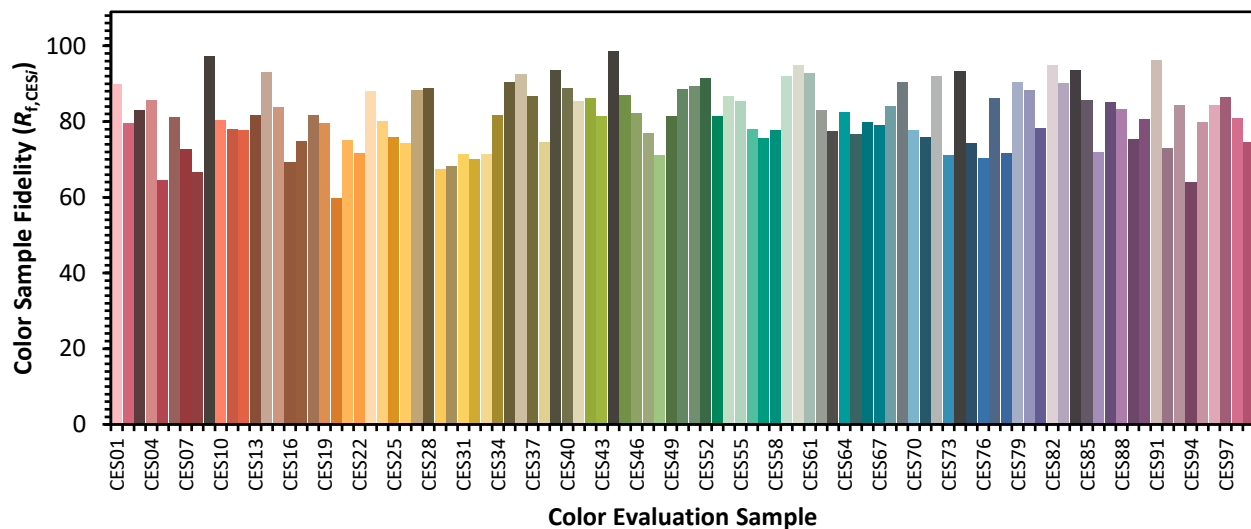


Color Vector Graphics

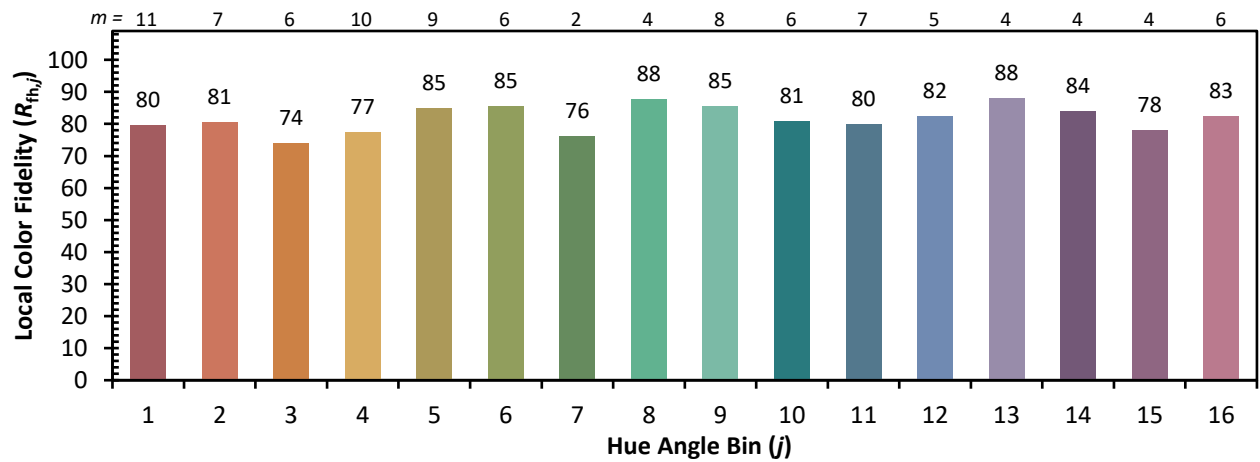
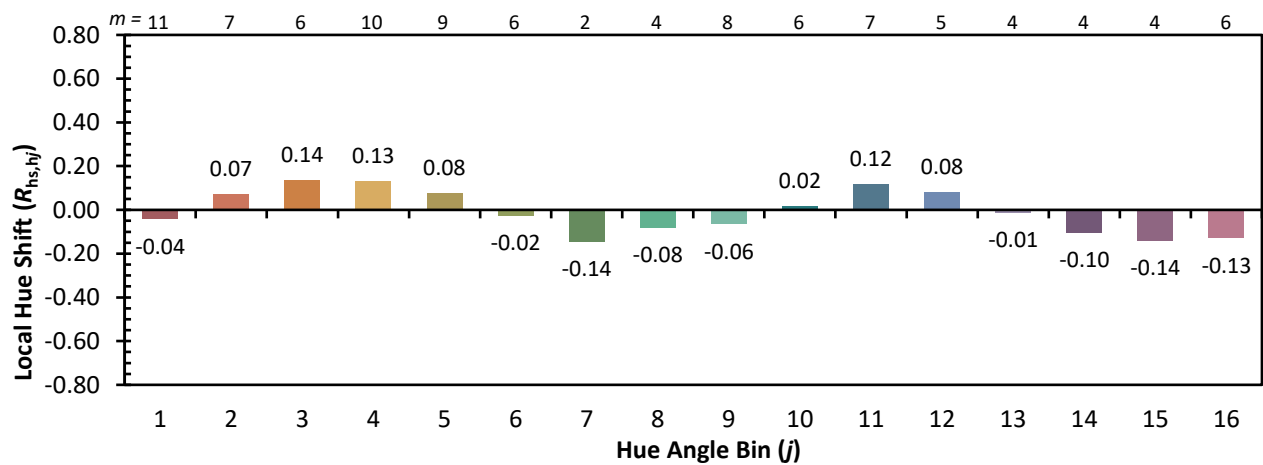
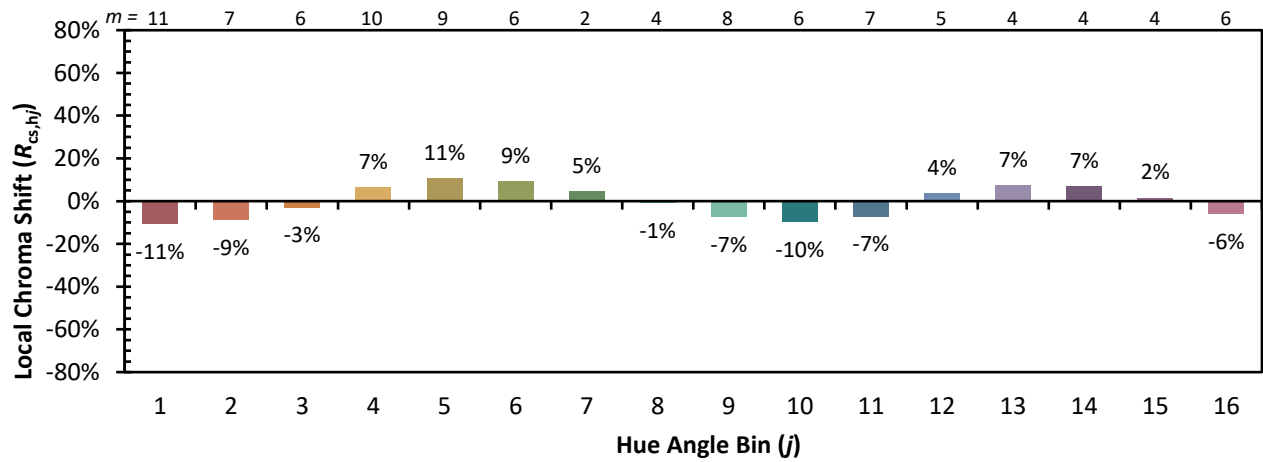


Individual Sample Fidelity Index ($R_{f,i}$)

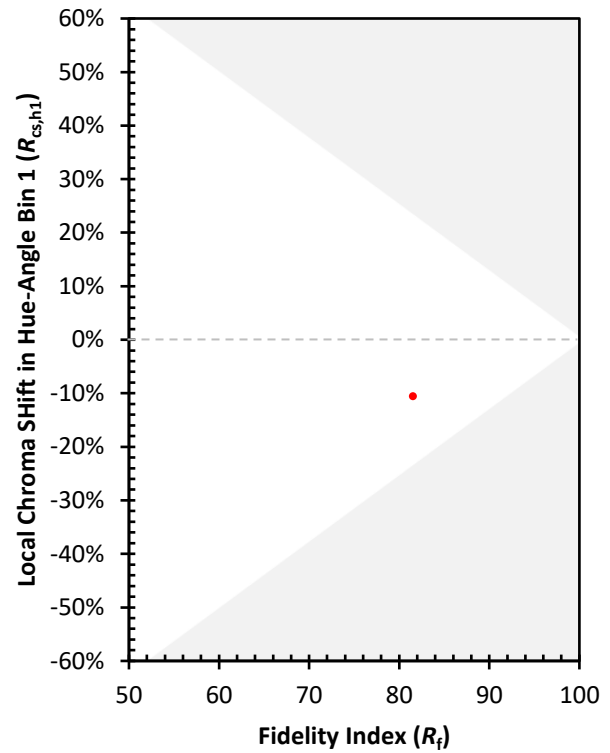
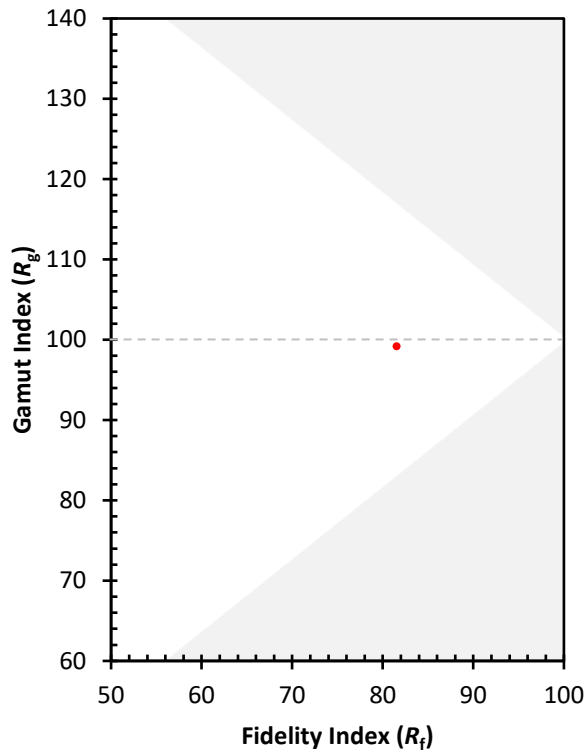
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)