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: McGRAW-EDISON

Report Number: P637465

Luminaire Tested: GWS-SA4C-830-U-5MQ-W

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P637465
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-4)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4C-830-U-5MQ-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source:	(64) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15969.2 lumens
Efficiency:	N/A
Efficacy:	124.3 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B4 - U0 - G2

Input Watts (W):	128.5
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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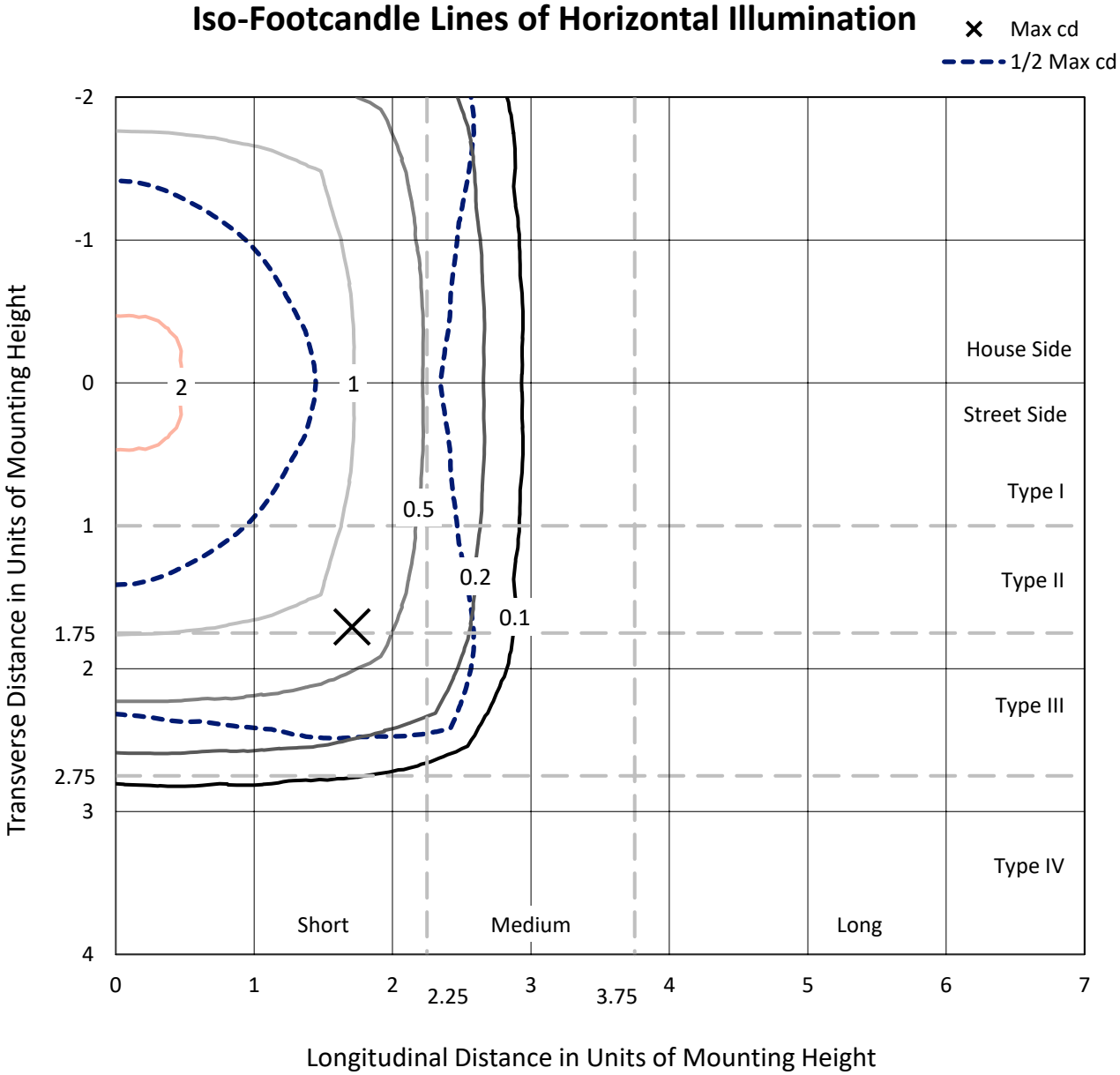
Scaled Data Report

REPORT NUMBER: P637465
CATALOG NUMBER: GWS-SA4C-830-U-5MQ-W

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
Type V - Short - N/A

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Scaled Data Report

REPORT NUMBER: P637465
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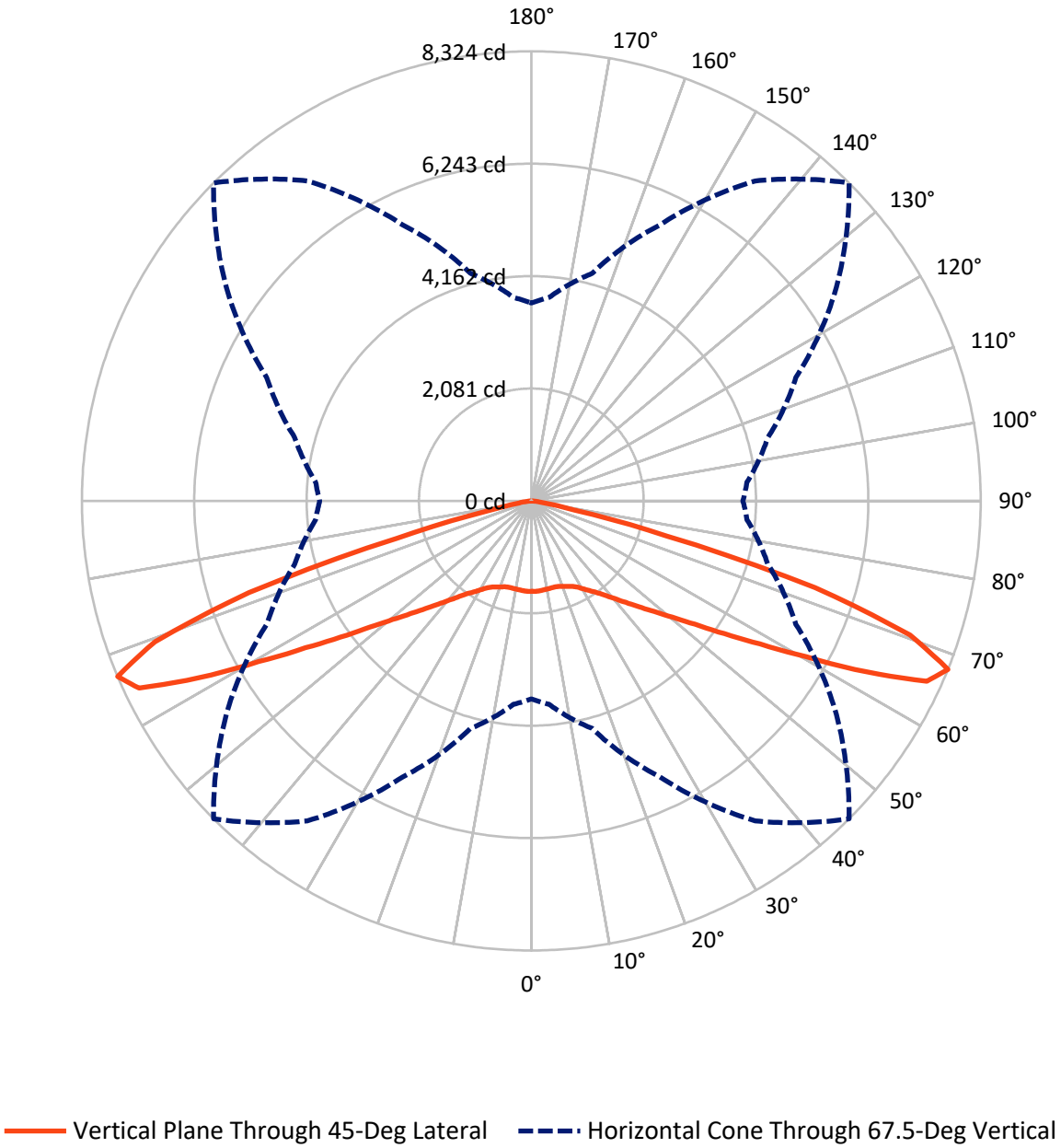
Luminous Intensity Polar Plot



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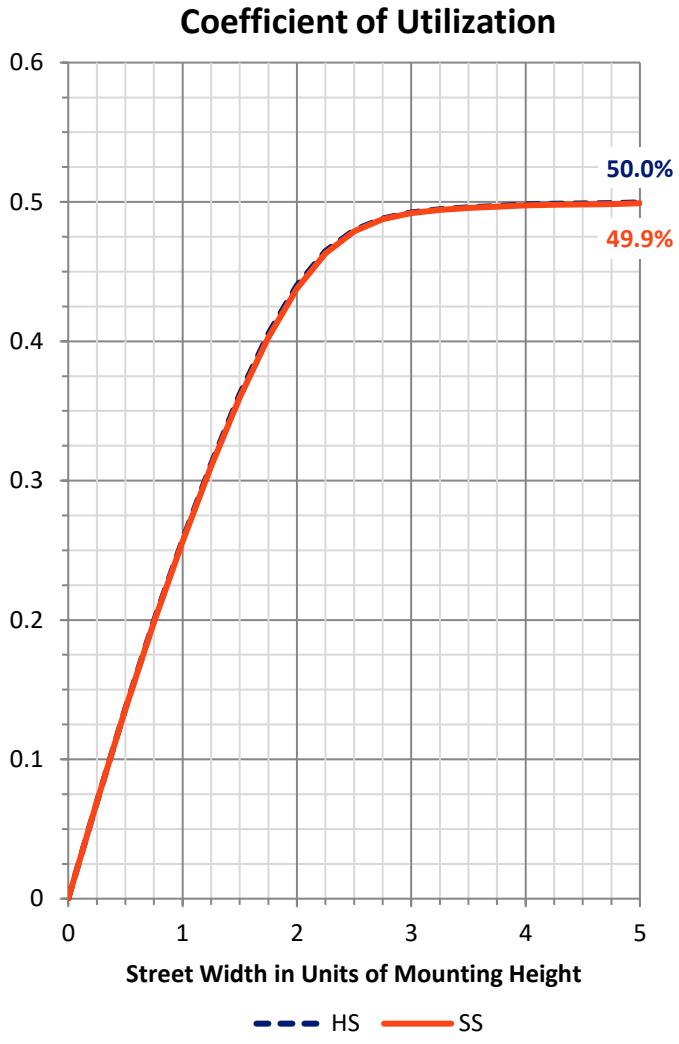
REPORT NUMBER: P637465
CATALOG NUMBER: GWS-SA4C-830-U-5MQ-W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7984.6	0.0	7984.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7984.6	0.0	7984.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	15969.2	0.0	15969.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.3	1.0
10°-20°	464.9	2.9
20°-30°	801.9	5.0
30°-40°	1303.9	8.2
40°-50°	2195.5	13.7
50°-60°	3889.9	24.4
60°-70°	5560.4	34.8
70°-80°	1526.1	9.6
80°-90°	68.4	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°	15969.2	100.0
0°-180°	15969.2	100.0



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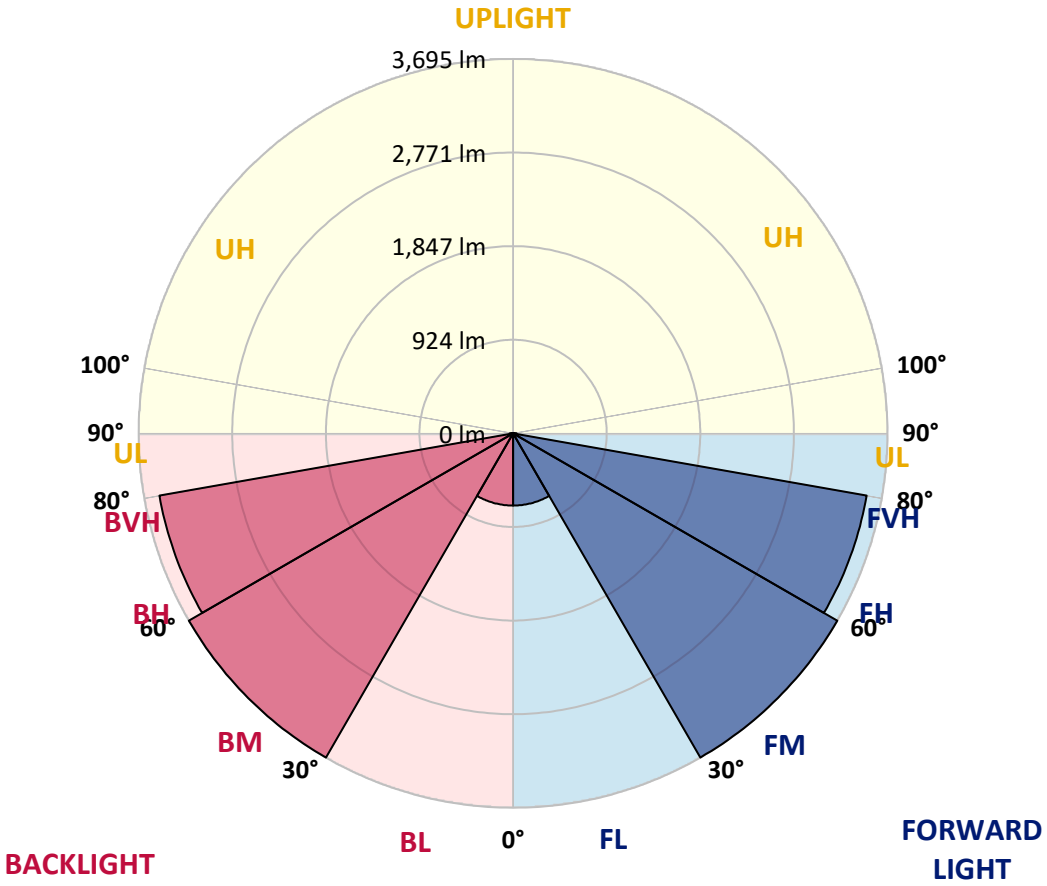
Scaled Data Report

REPORT NUMBER: P637465
CATALOG NUMBER: GWS-SA4C-830-U-5MQ-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	712.5	4.5			
FM	(30°-60°)	3694.6	23.1			
FH	(60°-80°)	3543.2	22.2			G2/5000
FVH	(80°-90°)	34.2	0.2			G1/100
BL	(0°-30°)	712.5	4.5	B2/1000		
BM	(30°-60°)	3694.6	23.1	B3/5000		
BH	(60°-80°)	3543.2	22.2	B4/5000		G2/5000
BVH	(80°-90°)	34.2	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2
Type V Short



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REPORT NUMBER: P637465
CATALOG NUMBER: GWS-SA4C-830-U-5MQ-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5	1672.5
2.5°	1661.4	1660.3	1665.9	1669.2	1668.1	1675.8	1674.7	1672.5	1672.5	1669.2	1678.0
5°	1661.4	1660.3	1664.8	1665.9	1663.6	1670.3	1668.1	1665.9	1665.9	1661.4	1669.2
7.5°	1652.6	1653.7	1657.0	1659.2	1657.0	1662.5	1659.2	1654.8	1653.7	1649.3	1657.0
10°	1636.0	1637.1	1640.4	1646.0	1647.1	1657.0	1651.5	1643.8	1640.4	1636.0	1643.8
12.5°	1626.1	1627.2	1630.5	1637.1	1639.3	1652.6	1647.1	1634.9	1629.4	1625.0	1632.7
15°	1623.9	1625.0	1629.4	1636.0	1639.3	1652.6	1647.1	1632.7	1625.0	1619.4	1626.1
17.5°	1623.9	1626.1	1632.7	1642.6	1649.3	1662.5	1655.9	1639.3	1628.3	1618.3	1625.0
20°	1625.0	1628.3	1638.2	1652.6	1669.2	1688.0	1679.1	1657.0	1641.5	1629.4	1633.8
22.5°	1634.9	1640.4	1652.6	1671.4	1695.7	1717.8	1710.1	1680.2	1658.1	1641.5	1646.0
25°	1669.2	1671.4	1686.9	1711.2	1734.4	1753.2	1745.4	1717.8	1690.2	1670.3	1675.8
27.5°	1730.0	1735.5	1748.8	1774.2	1794.1	1804.0	1802.9	1784.1	1756.5	1738.8	1743.2
30°	1802.9	1808.5	1826.1	1854.9	1874.8	1885.8	1882.5	1868.2	1842.7	1818.4	1822.8
32.5°	1888.0	1890.3	1911.3	1943.3	1964.3	1980.9	1969.8	1954.4	1922.3	1893.6	1895.8
35°	1996.4	1999.7	2021.8	2051.6	2068.2	2081.5	2079.3	2063.8	2029.5	1998.6	2006.3
37.5°	2132.3	2134.6	2154.5	2192.0	2205.3	2215.3	2217.5	2209.7	2174.4	2134.6	2142.3
40°	2301.5	2302.6	2324.7	2357.8	2372.2	2378.9	2380.0	2381.1	2344.6	2314.7	2312.5
42.5°	2498.2	2503.8	2534.7	2566.8	2573.4	2570.1	2581.1	2592.2	2556.8	2515.9	2519.2
45°	2733.7	2737.0	2779.0	2814.4	2802.2	2791.2	2812.2	2834.3	2802.2	2749.2	2733.7
47.5°	3012.3	3018.9	3064.2	3099.6	3079.7	3059.8	3094.1	3117.3	3065.3	3008.9	2994.6
50°	3327.3	3331.7	3395.8	3440.1	3416.8	3380.4	3423.5	3447.8	3378.1	3308.5	3277.6
52.5°	3699.8	3691.0	3776.1	3853.5	3839.1	3791.6	3826.9	3831.4	3727.5	3629.1	3598.1
55°	4154.1	4145.3	4230.4	4315.5	4350.9	4338.8	4322.2	4295.6	4142.0	4037.0	4008.2
57.5°	4683.6	4656.0	4775.4	4890.4	4967.7	4989.8	4919.1	4857.2	4735.6	4606.3	4573.1
60°	5175.6	5174.4	5363.5	5562.4	5774.7	5863.1	5684.0	5516.0	5243.0	5007.5	4960.0
62.5°	5313.7	5336.9	5646.5	6139.5	6663.4	6976.3	6504.3	5948.2	5421.0	5066.1	5003.1
65°	4973.3	5030.7	5470.7	6248.9	7283.6	8048.5	6982.9	5958.2	5223.1	4780.9	4714.6
67.5°	3665.6	3780.5	4363.1	5638.7	7230.5	8323.8	6897.8	5406.6	4536.6	4010.4	3918.7
70°	1808.5	1917.9	2380.0	3709.8	5949.3	7440.5	5968.1	4074.6	3064.2	2557.9	2473.9
72.5°	665.5	709.7	891.0	1587.4	3283.1	5496.1	4081.2	2276.0	1484.6	1181.7	1125.3
75°	326.1	333.8	361.5	532.8	1211.5	2586.7	1917.9	873.3	546.1	475.3	459.9
77.5°	207.8	211.1	224.4	254.2	389.1	814.7	581.4	344.9	267.5	256.5	256.5
80°	116.1	119.4	137.1	158.1	182.4	279.7	208.9	206.7	175.8	153.7	150.3
82.5°	55.3	60.8	87.3	86.2	96.2	140.4	122.7	111.6	112.8	85.1	80.7
85°	25.4	25.4	34.3	40.9	43.1	47.5	56.4	64.1	63.0	43.1	46.4
87.5°	12.2	12.2	12.2	11.1	9.9	8.8	12.2	19.9	28.7	19.9	18.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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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.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

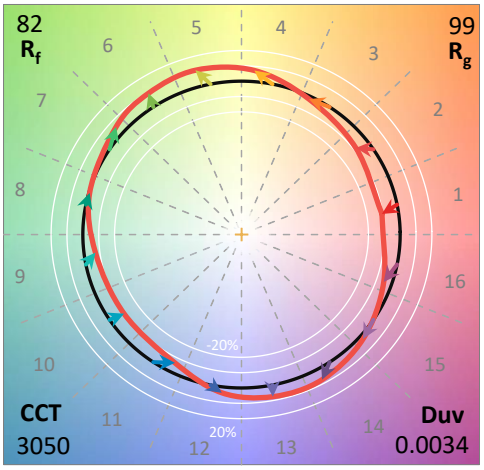
Test Information

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
Rf:	81.5
Rg:	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

REPORT NUMBER: SP1-2408-195-9

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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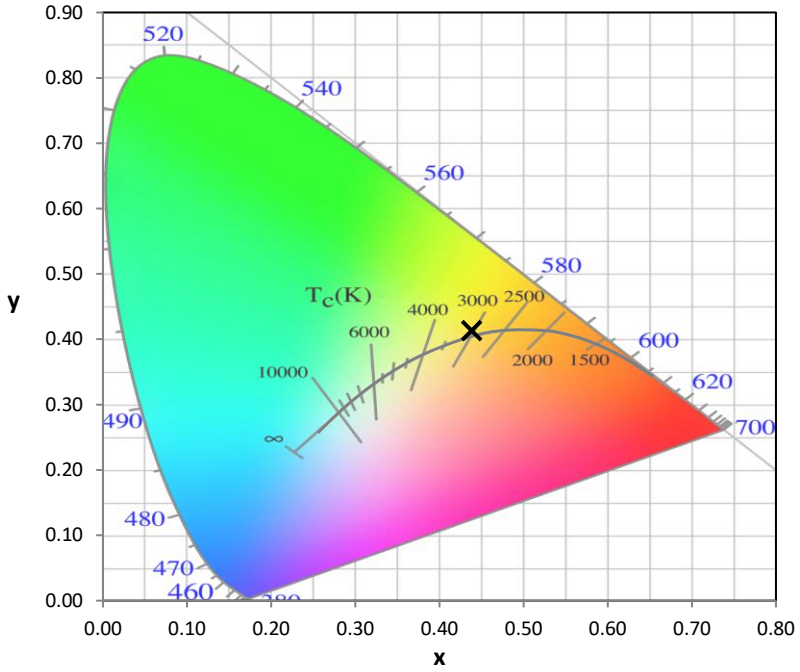
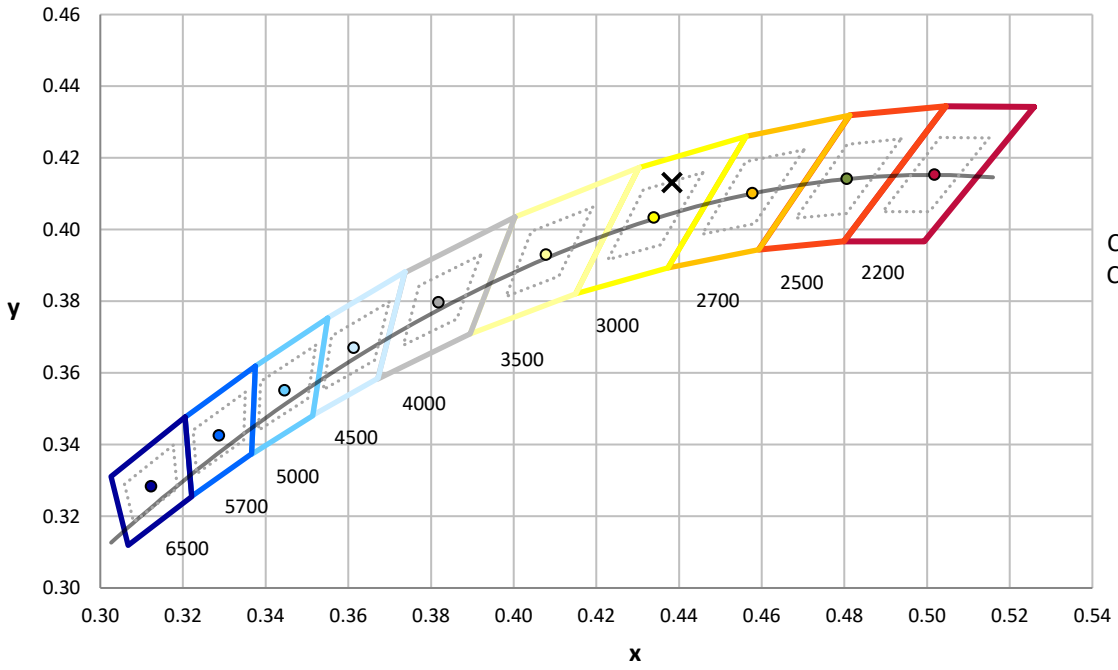
CIE 1931 Chromaticity Diagram



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



CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

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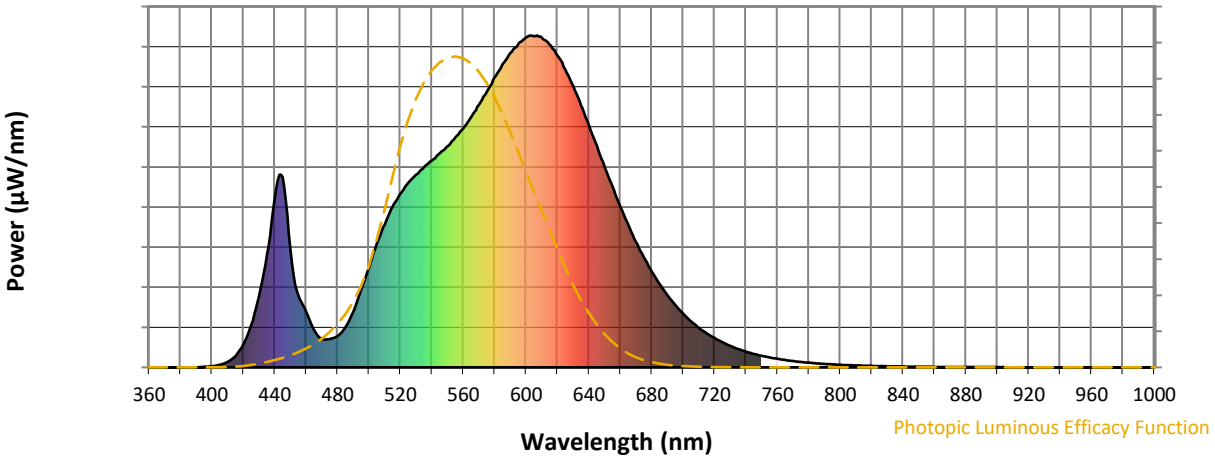
Photopic Flux vs. Wavelength

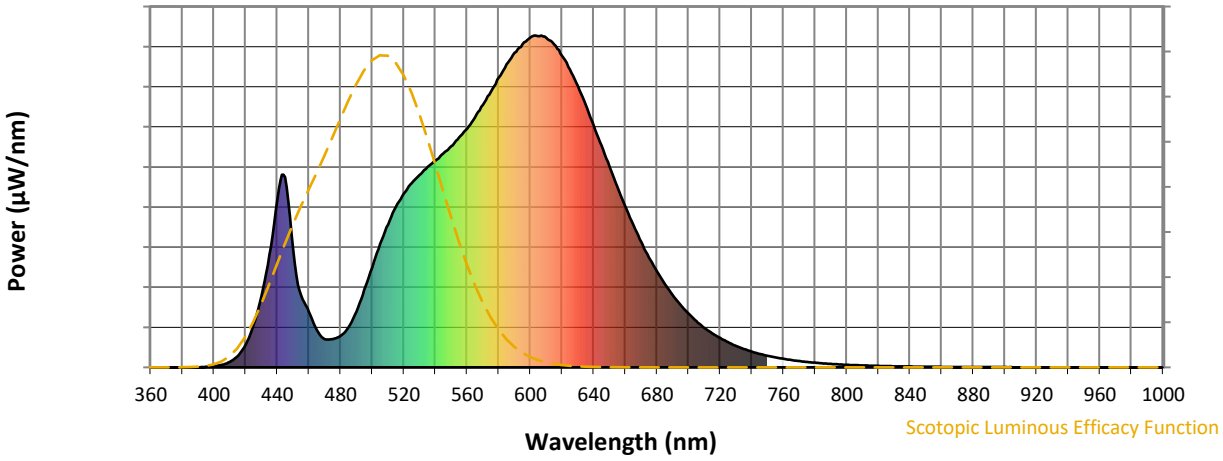


Photopic Lumens: NR

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	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			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength

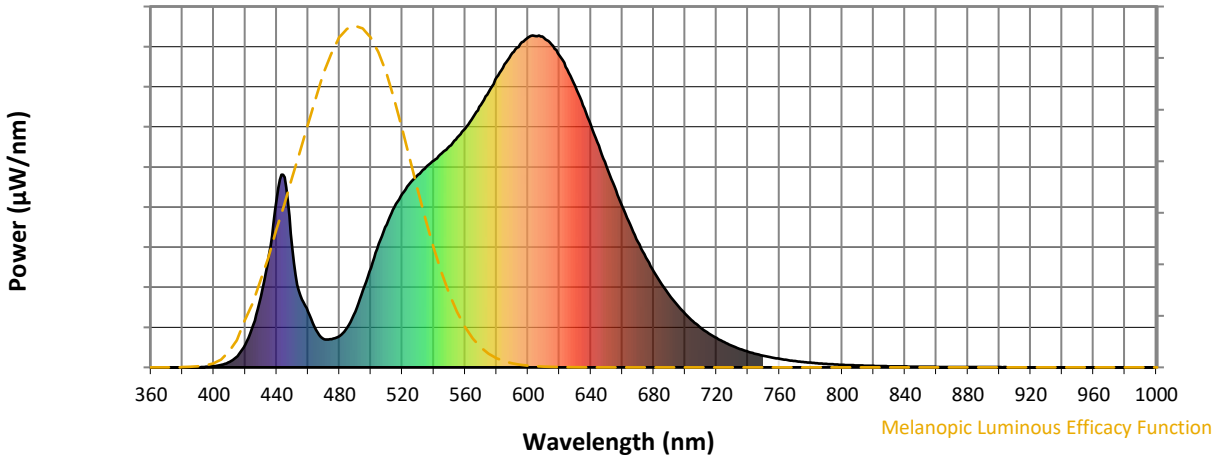


Scotopic Lumens: NR **S/P: 1.27**

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	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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.32**

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	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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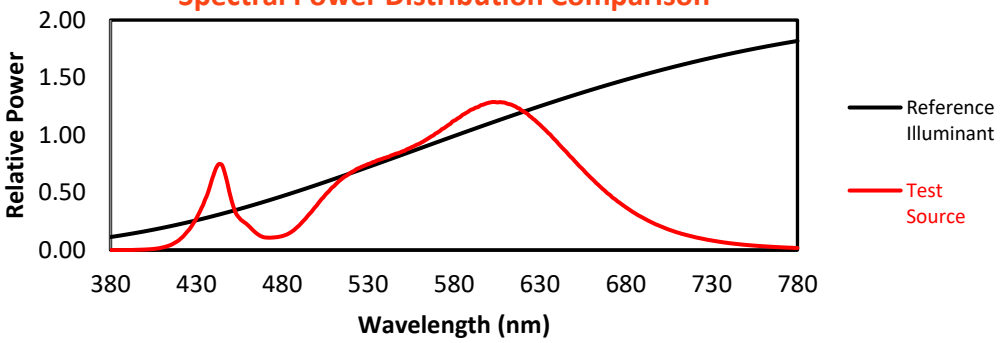
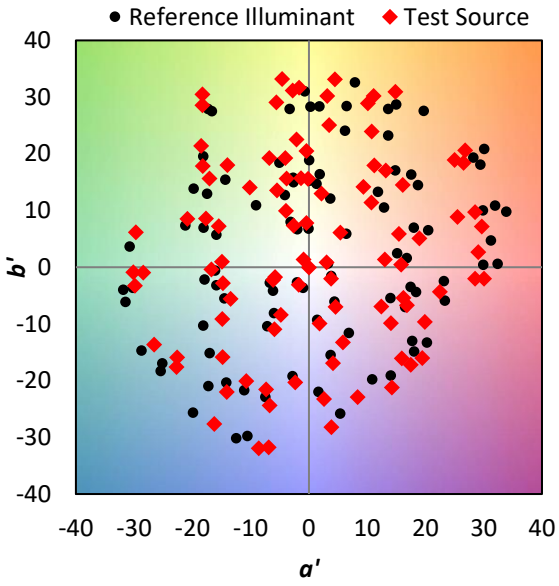
Summary

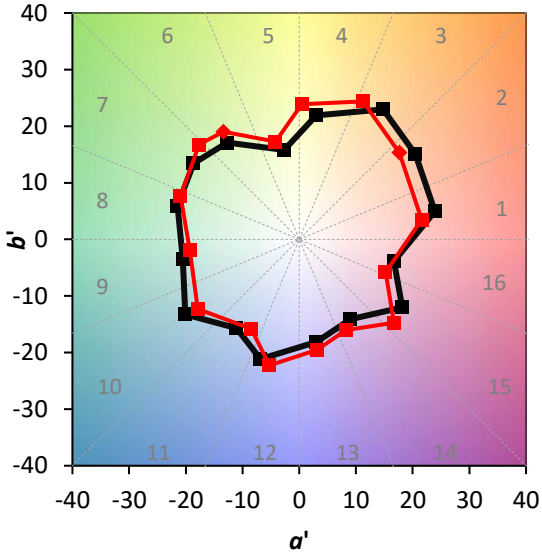
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

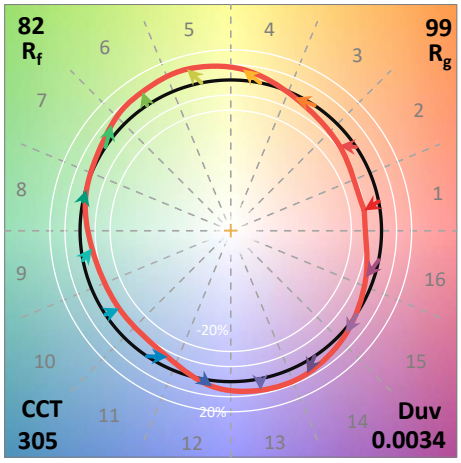
Spectral Power Distribution Comparison

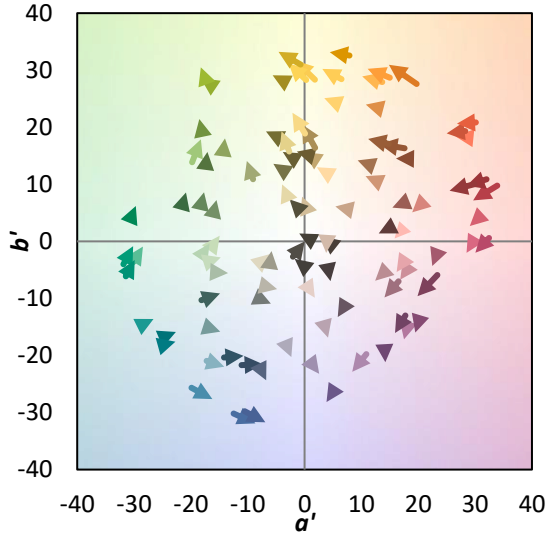


Color Vector Graphics









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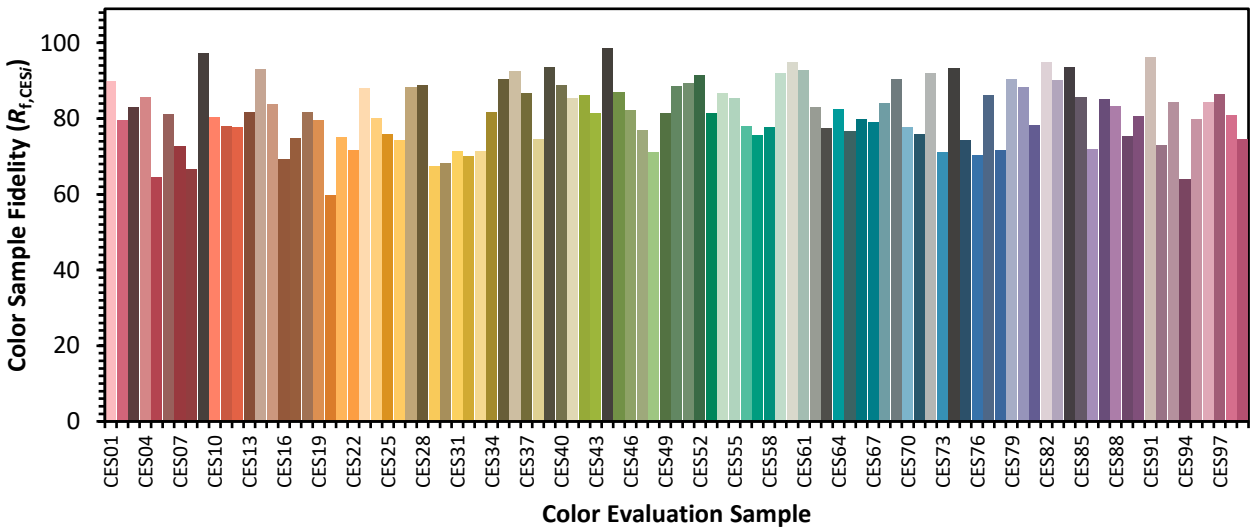
Individual Sample Fidelity Index ($R_{f,i}$)

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	



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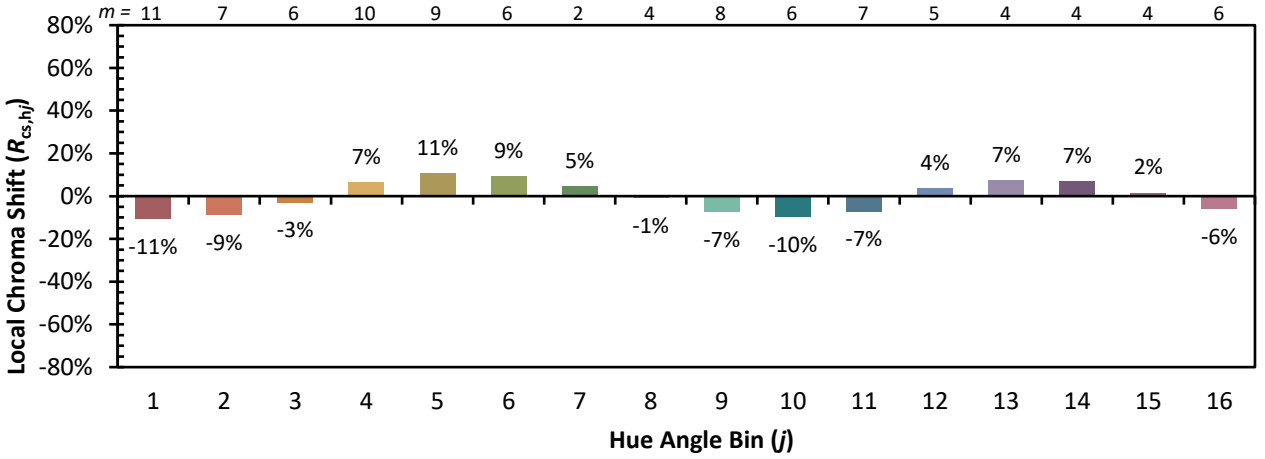
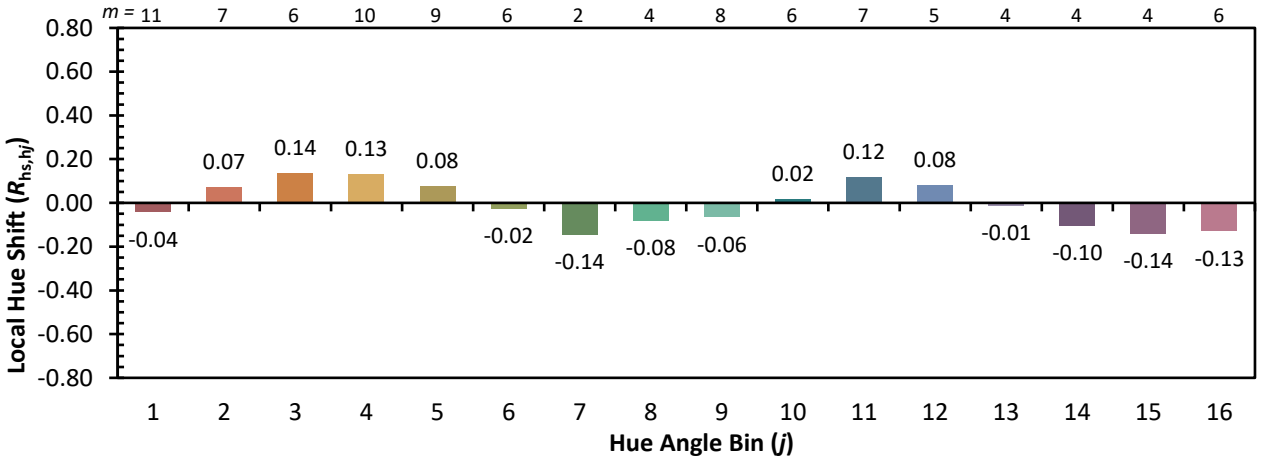
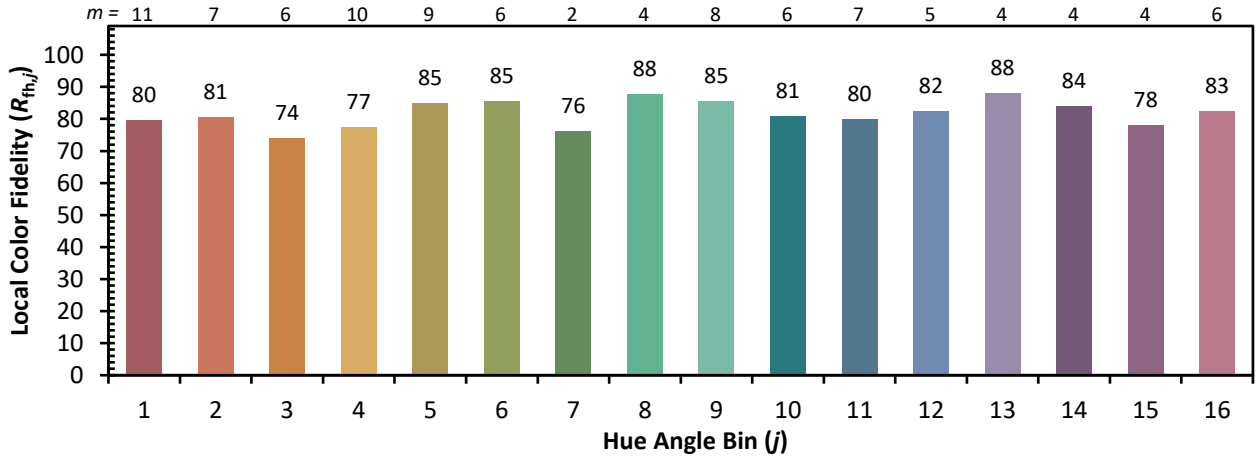
Color Rendition by Hue-Angle Bin







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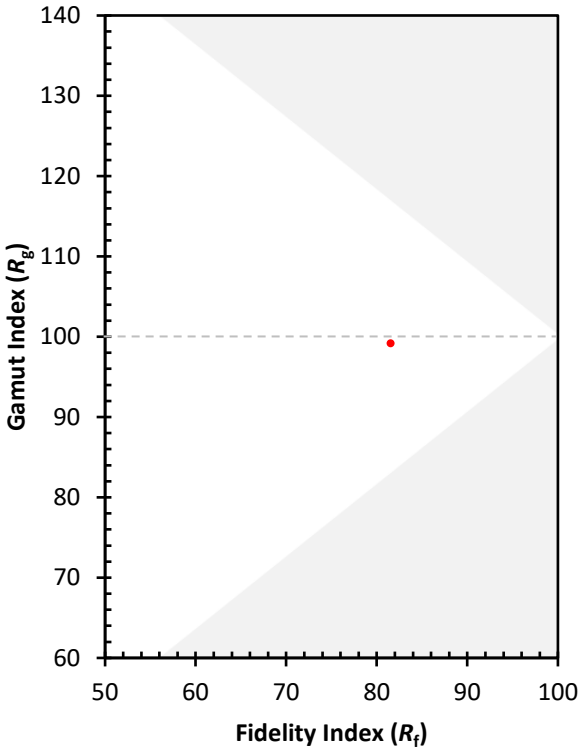
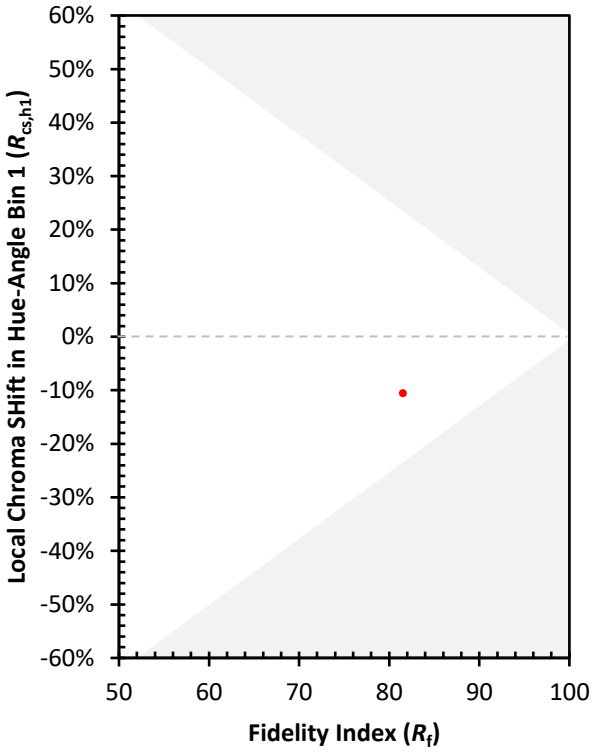
Measure Comparisons





(END OF REPORT)