

Signify Classified - Internal
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: McGRAW-EDISON

Report Number: P316337

Luminaire Tested: **GLEON-SA3D-830-U-5WQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316337
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-2)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA3D-830-U-5WQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19827 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G3

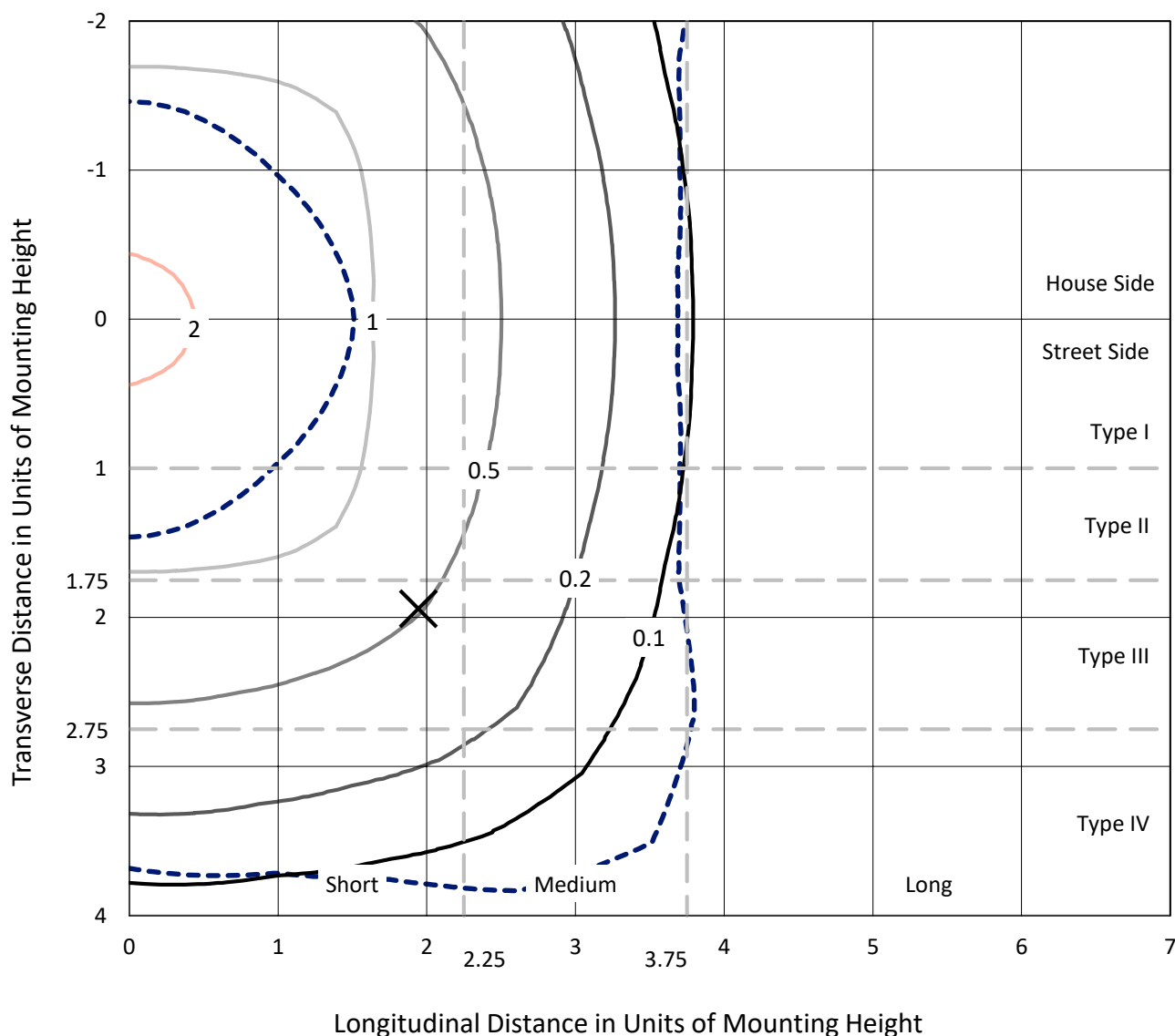
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P316337
 CATALOG NUMBER: GLEON-SA3D-830-U-5WQ

Iso-Footcandle Lines of Horizontal Illumination

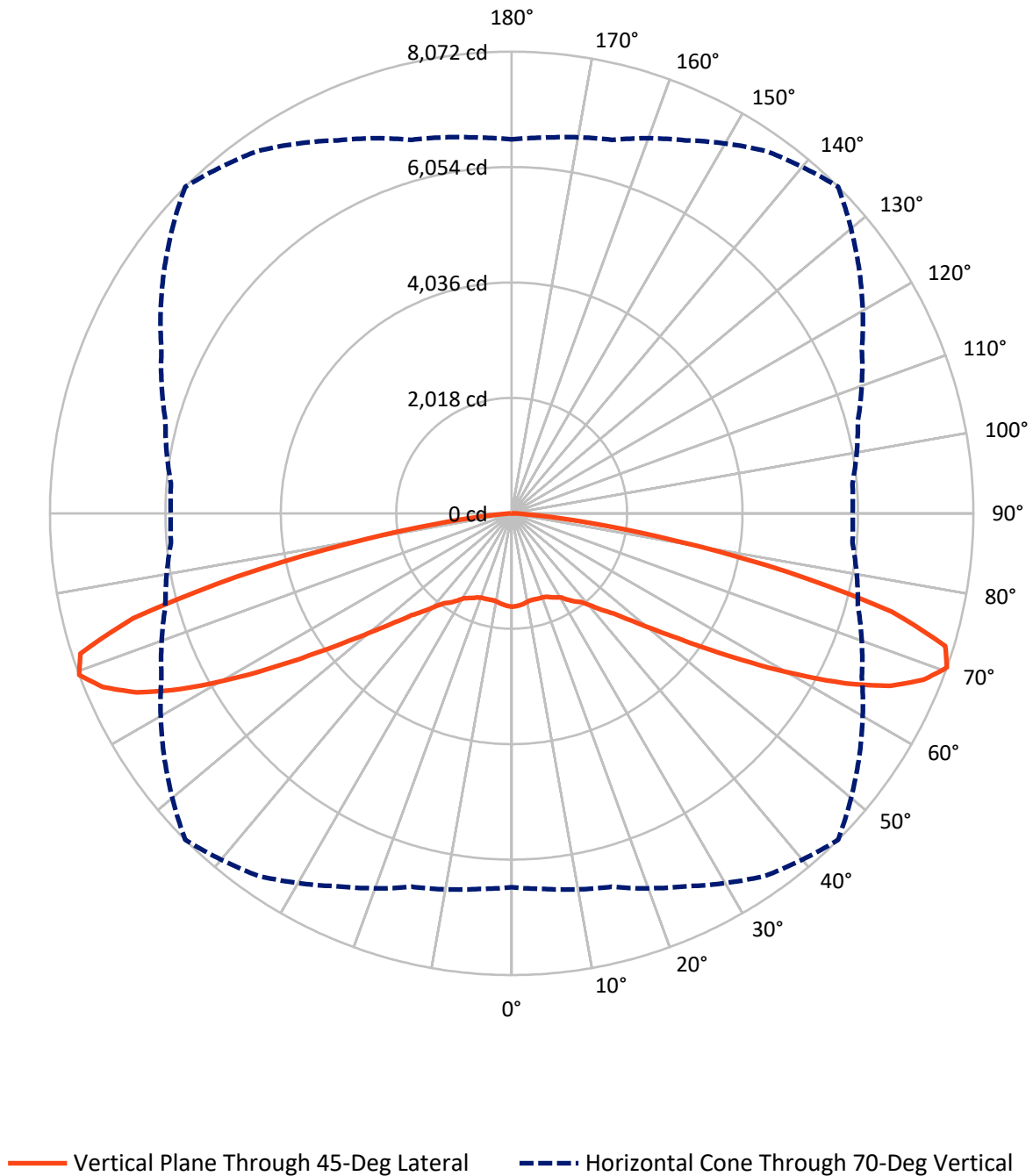
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type V - Short - N/A

REPORT NUMBER: P316337
CATALOG NUMBER: GLEON-SA3D-830-U-5WQ

Luminous Intensity Polar Plot



REPORT NUMBER: P316337

CATALOG NUMBER: GLEON-SA3D-830-U-5WQ

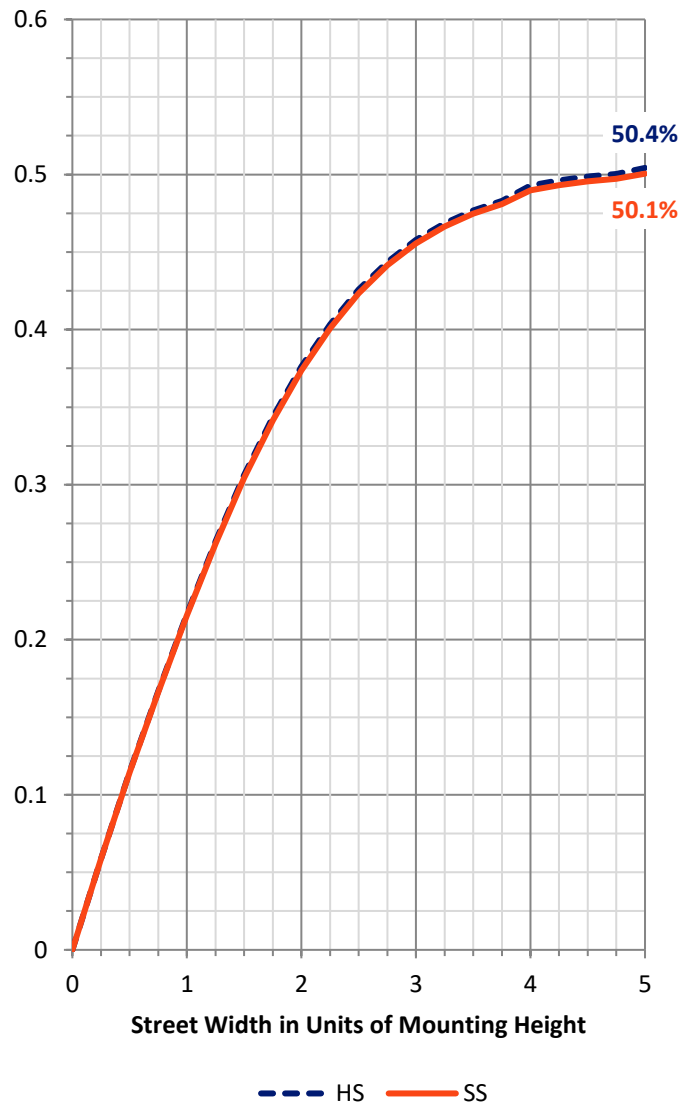
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9913.5	0.0	9913.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9913.5	0.0	9913.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	19827.0	0.0	19827.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.3	0.8
10°-20°	444.9	2.2
20°-30°	758.5	3.8
30°-40°	1185.2	6.0
40°-50°	2008.6	10.1
50°-60°	3662.8	18.5
60°-70°	6305.7	31.8
70°-80°	4942.7	24.9
80°-90°	366.5	1.8
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°	19827.0	100.0
0°-180°	19827.0	100.0

Coefficient of Utilization



REPORT NUMBER: P316337

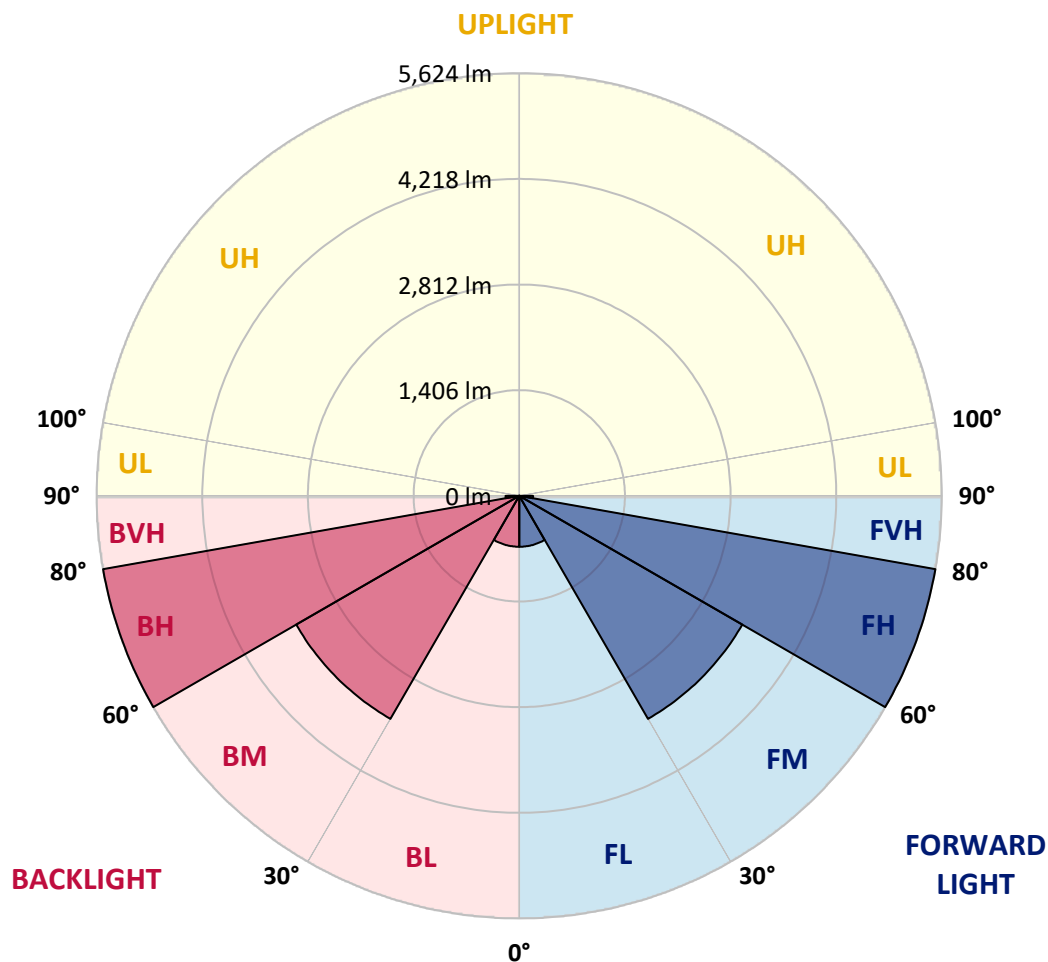
CATALOG NUMBER: GLEON-SA3D-830-U-5WQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	677.8	3.4			
FM	(30°-60°)	3428.2	17.3			
FH	(60°-80°)	5624.2	28.4			G3/7500
FVH	(80°-90°)	183.2	0.9			G2/225
BL	(0°-30°)	677.8	3.4	B2/1000		
BM	(30°-60°)	3428.2	17.3	B3/5000		
BH	(60°-80°)	5624.2	28.4	B5		G3/7500
BVH	(80°-90°)	183.2	0.9			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





REPORT NUMBER: P316337

CATALOG NUMBER: GLEON-SA3D-830-U-5WQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8	1631.8
2.5°	1624.6	1626.5	1624.6	1625.9	1622.6	1623.9	1623.9	1623.9	1623.2	1623.9	1622.6
5°	1610.1	1611.4	1608.8	1610.1	1608.2	1610.1	1610.8	1610.1	1608.8	1609.5	1606.8
7.5°	1588.5	1589.8	1587.8	1589.8	1587.2	1590.4	1589.8	1587.8	1585.9	1585.9	1583.2
10°	1576.7	1577.3	1572.1	1570.1	1564.2	1565.5	1567.5	1569.5	1571.4	1575.4	1574.7
12.5°	1577.3	1577.3	1569.5	1560.9	1552.4	1554.4	1557.7	1564.9	1572.7	1580.0	1580.6
15°	1583.9	1583.2	1571.4	1557.7	1551.8	1557.7	1559.6	1564.2	1576.7	1589.1	1589.8
17.5°	1588.5	1588.5	1570.1	1554.4	1553.7	1562.9	1562.2	1564.2	1578.0	1596.3	1597.0
20°	1597.0	1597.0	1573.4	1556.3	1556.3	1566.2	1566.8	1570.1	1583.9	1604.2	1607.5
22.5°	1616.0	1616.7	1591.8	1578.0	1579.3	1585.2	1587.2	1592.4	1604.9	1627.2	1631.1
25°	1642.9	1644.2	1618.6	1610.8	1615.4	1626.5	1625.2	1629.1	1642.9	1664.6	1668.5
27.5°	1680.3	1677.0	1653.4	1650.1	1654.7	1662.6	1661.9	1662.6	1673.7	1693.4	1698.0
30°	1728.8	1727.5	1710.5	1712.4	1710.5	1707.8	1708.5	1713.7	1719.6	1735.4	1740.0
32.5°	1776.1	1777.4	1766.9	1776.7	1791.1	1801.0	1785.9	1771.5	1764.9	1773.4	1777.4
35°	1861.3	1864.6	1848.2	1841.6	1861.3	1890.2	1847.5	1823.9	1837.0	1848.2	1851.5
37.5°	2006.3	2008.2	1980.7	1954.4	1940.0	1967.6	1924.9	1926.9	1972.8	1993.8	1993.1
40°	2171.5	2172.2	2153.8	2130.9	2105.9	2112.5	2095.5	2100.7	2130.9	2149.9	2155.1
42.5°	2368.3	2366.3	2337.5	2304.7	2297.5	2304.0	2275.2	2271.2	2306.0	2340.1	2340.7
45°	2623.4	2618.8	2581.4	2545.4	2510.6	2496.2	2489.0	2508.0	2555.9	2587.3	2588.0
47.5°	2898.2	2885.8	2866.1	2837.2	2807.1	2792.6	2780.8	2790.0	2824.8	2837.2	2838.5
50°	3180.9	3183.5	3187.5	3176.3	3165.2	3160.6	3129.7	3112.0	3122.5	3099.6	3096.3
52.5°	3516.0	3521.3	3559.3	3591.5	3610.5	3620.3	3561.9	3500.9	3466.8	3422.2	3409.1
55°	3911.5	3920.0	3975.8	4065.0	4156.8	4205.3	4099.7	3985.6	3880.0	3796.7	3769.8
57.5°	4352.2	4367.3	4444.1	4615.2	4803.5	4918.2	4739.9	4532.6	4328.6	4208.6	4187.6
60°	4869.1	4883.5	4989.7	5235.0	5540.0	5712.5	5442.3	5103.2	4849.4	4734.6	4695.9
62.5°	5484.3	5485.6	5616.1	5902.7	6305.4	6545.4	6179.5	5726.3	5464.6	5326.2	5288.8
65°	6146.0	6149.3	6284.4	6594.0	7010.4	7271.5	6858.3	6386.1	6066.0	5862.0	5833.2
67.5°	6613.6	6627.4	6769.7	7142.3	7531.8	7767.3	7339.7	6805.8	6435.9	6192.6	6168.3
70°	6538.9	6592.6	6759.9	7194.7	7736.5	8072.3	7417.7	6756.0	6268.0	5980.7	5960.4
72.5°	5702.7	5805.6	6028.6	6599.2	7465.6	7928.0	6992.1	6050.9	5498.7	5254.0	5217.3
75°	3883.3	4050.6	4387.0	5210.1	6378.2	6864.2	5886.3	4824.5	4305.0	3966.6	3941.7
77.5°	1731.5	1769.5	2195.8	3143.5	4401.4	4929.4	4276.8	3156.0	2368.9	1889.5	1788.5
80°	482.7	488.6	651.9	1170.7	2203.0	2896.3	2365.0	1229.7	691.3	487.3	459.1
82.5°	153.5	166.6	203.3	303.7	740.5	1321.5	760.1	327.9	233.5	186.3	167.9
85°	74.8	74.1	103.0	123.3	188.9	292.5	201.3	152.2	133.1	88.5	80.0
87.5°	31.5	32.1	47.9	43.3	55.1	47.2	64.9	68.2	71.5	39.4	34.1
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.

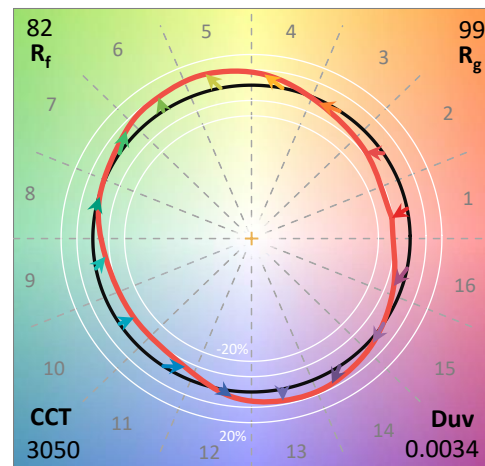
Test Information

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

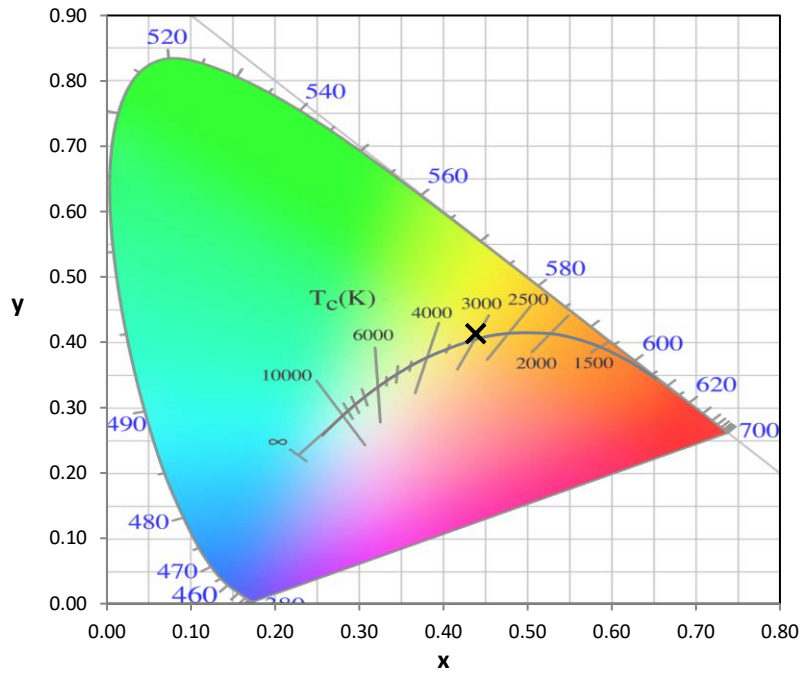
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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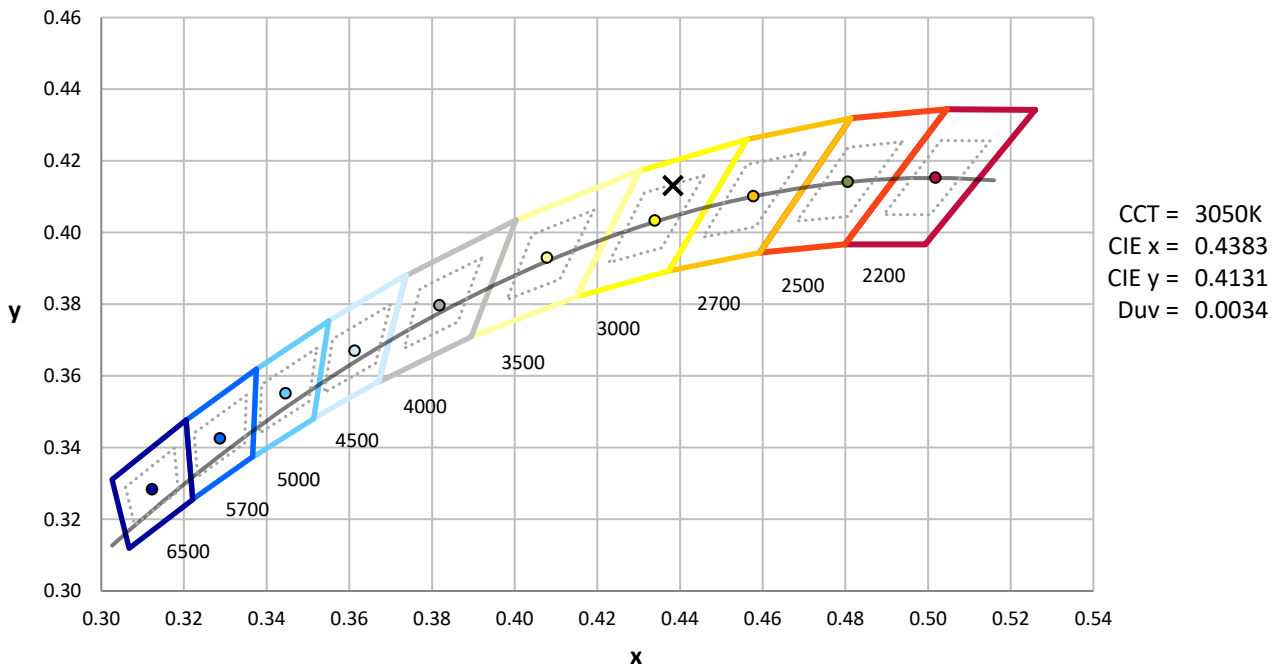
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



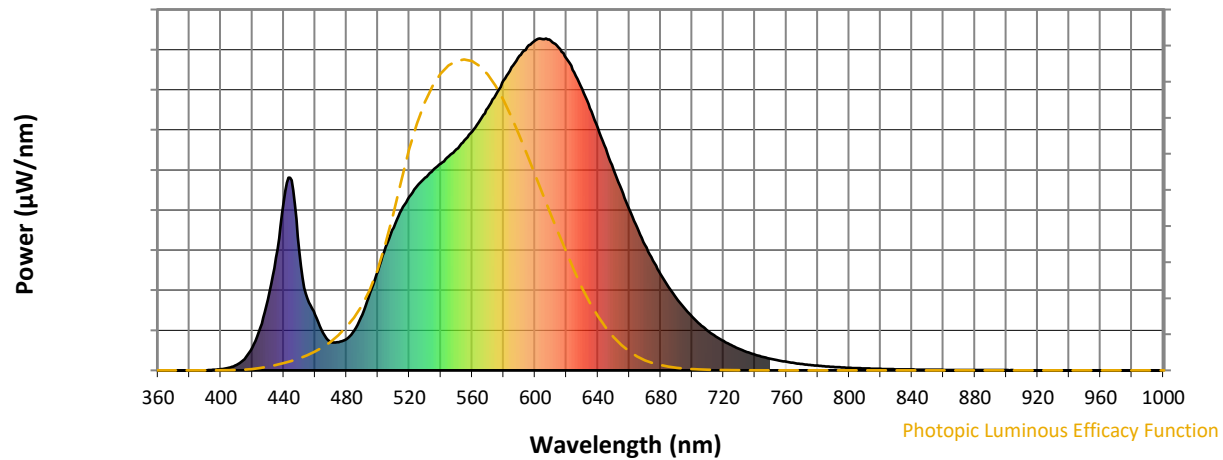
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

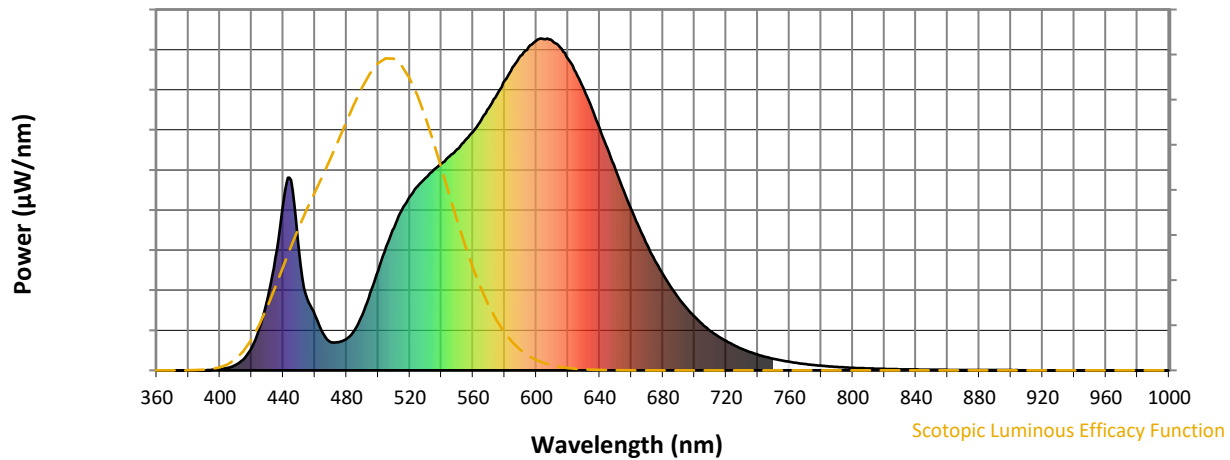


Photopic Lumens: NR

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



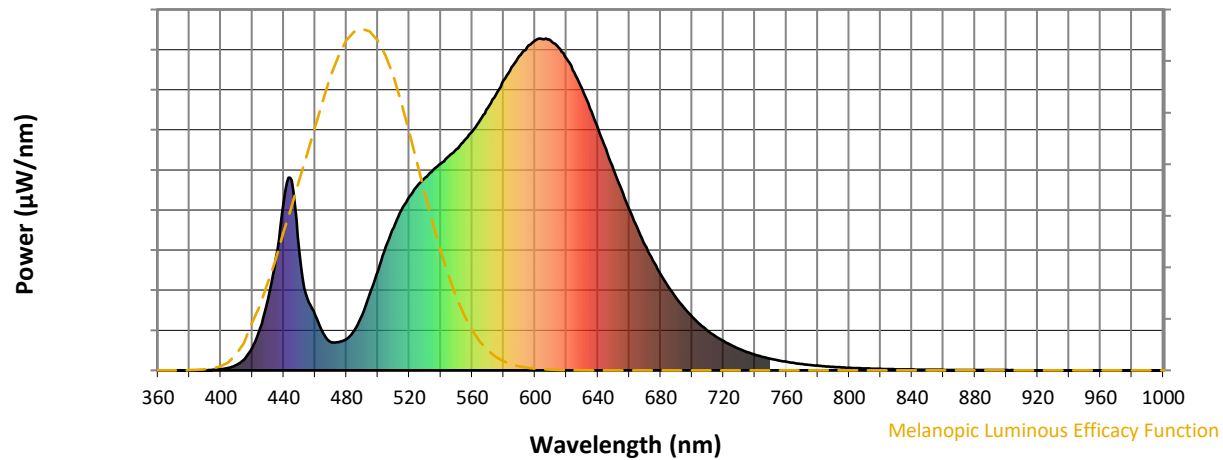
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /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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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 2.32

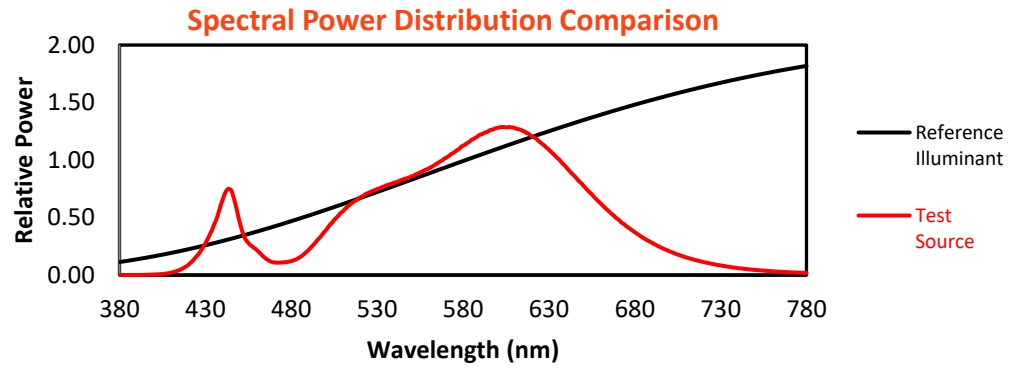
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	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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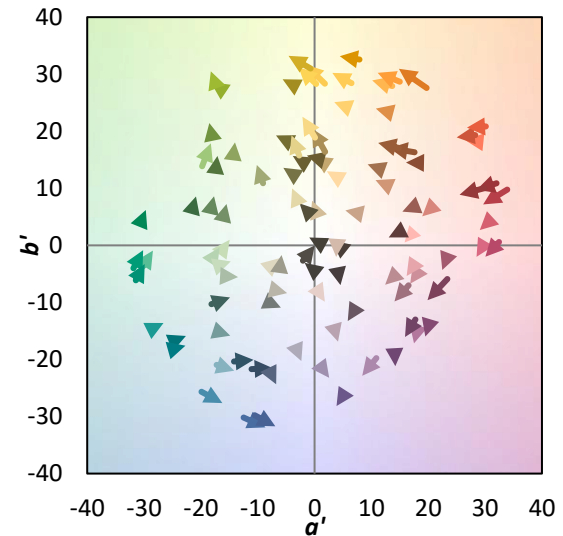
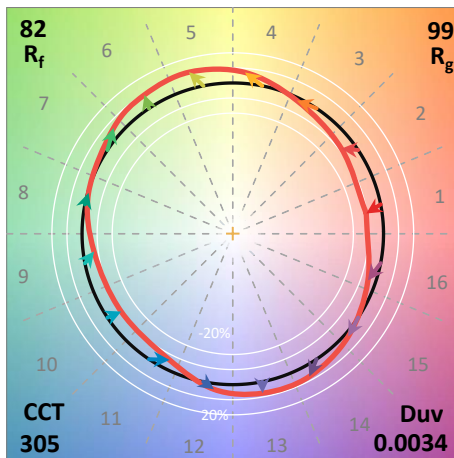
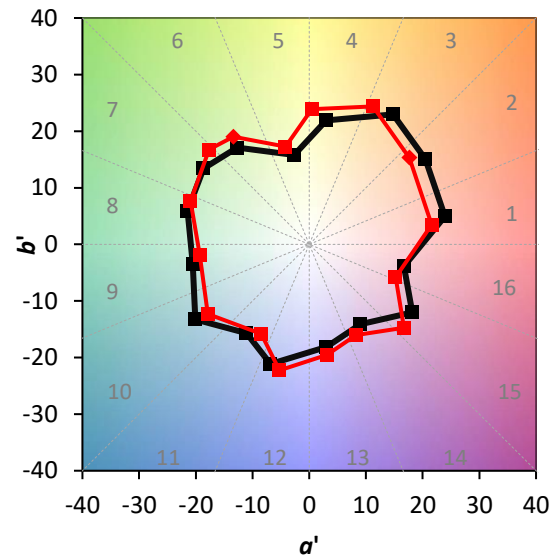
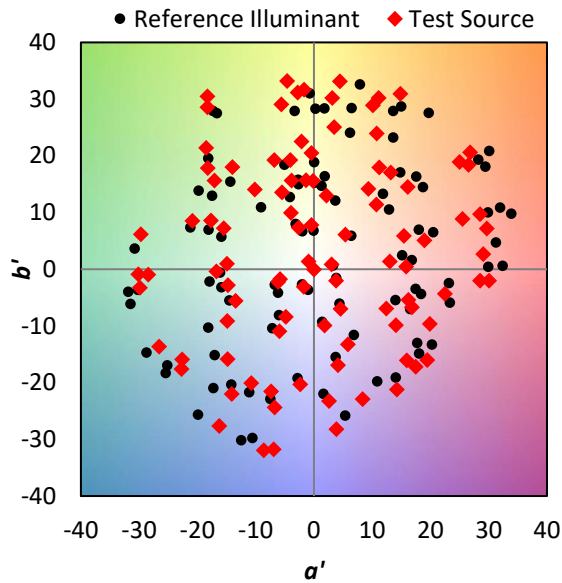
TM-30-18

Summary

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

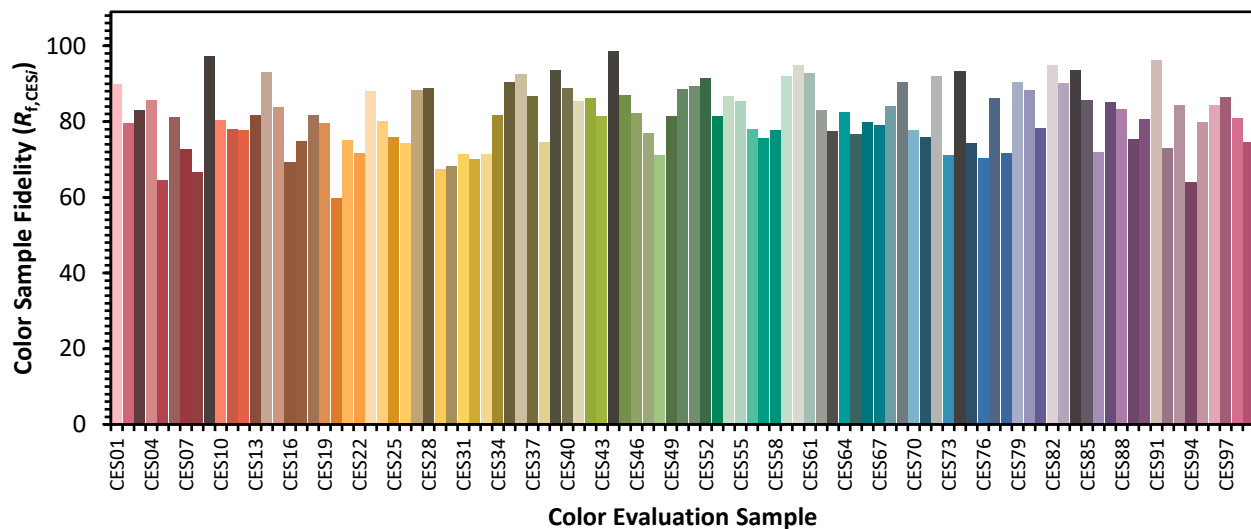


Color Vector Graphics

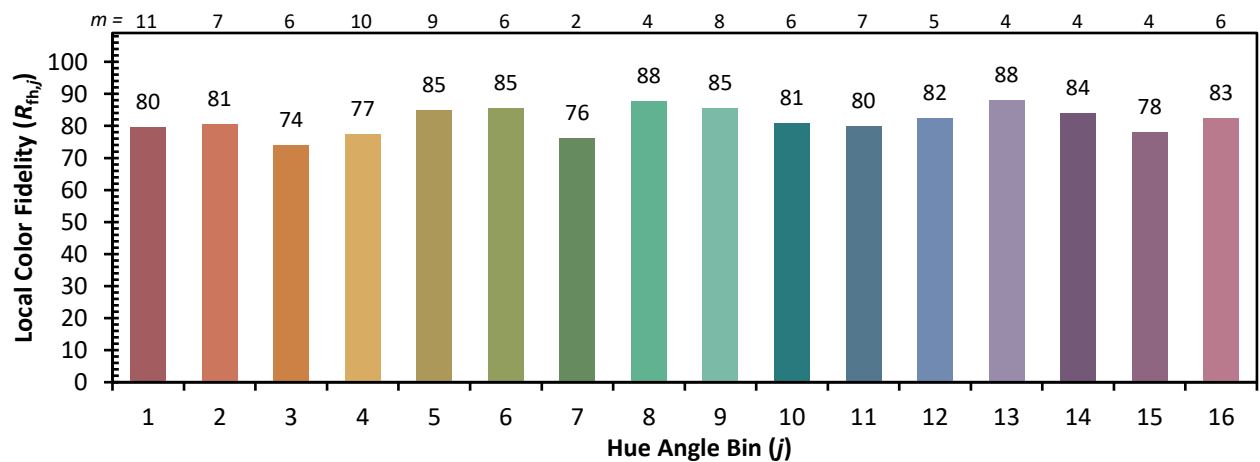
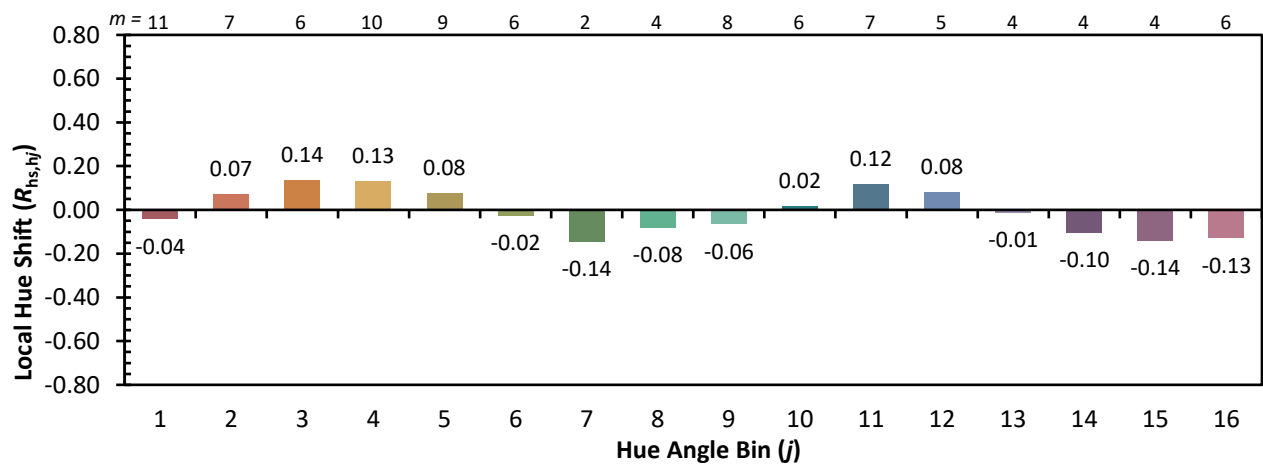
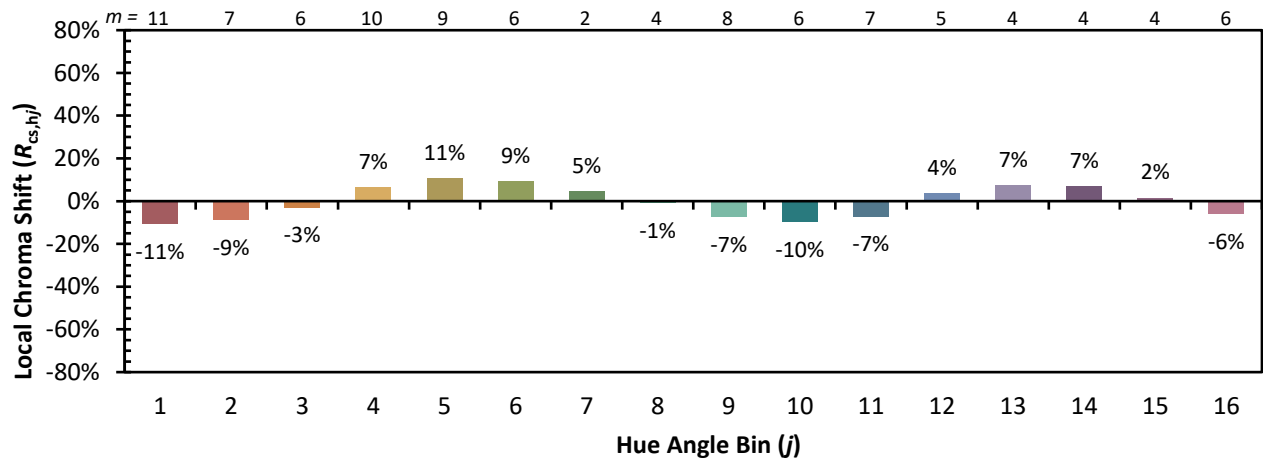


Individual Sample Fidelity Index ($R_{f,i}$)

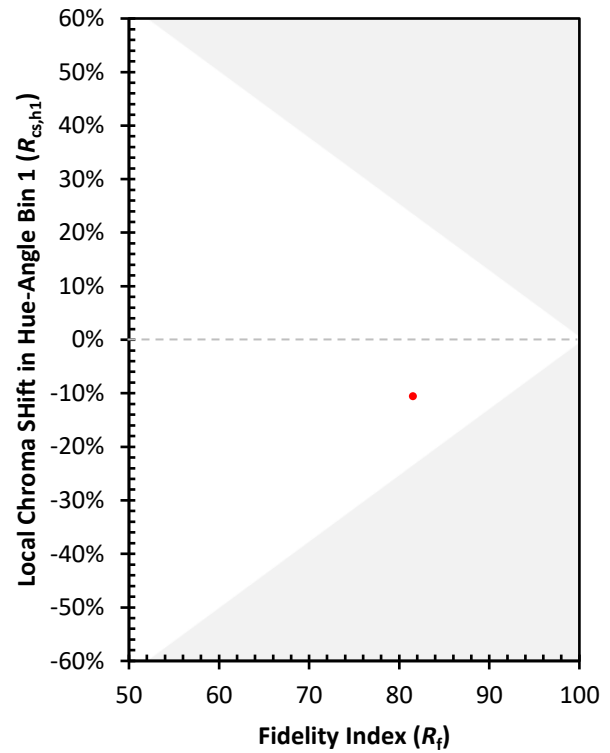
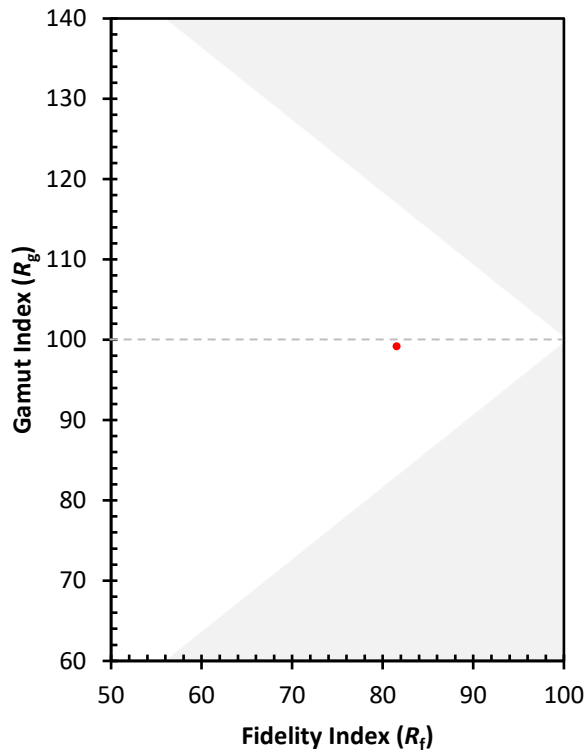
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)