

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: P316636

Luminaire Tested: **GLEON-SA2B-830-U-5MQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-6)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA2B-830-U-5MQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9761 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G2

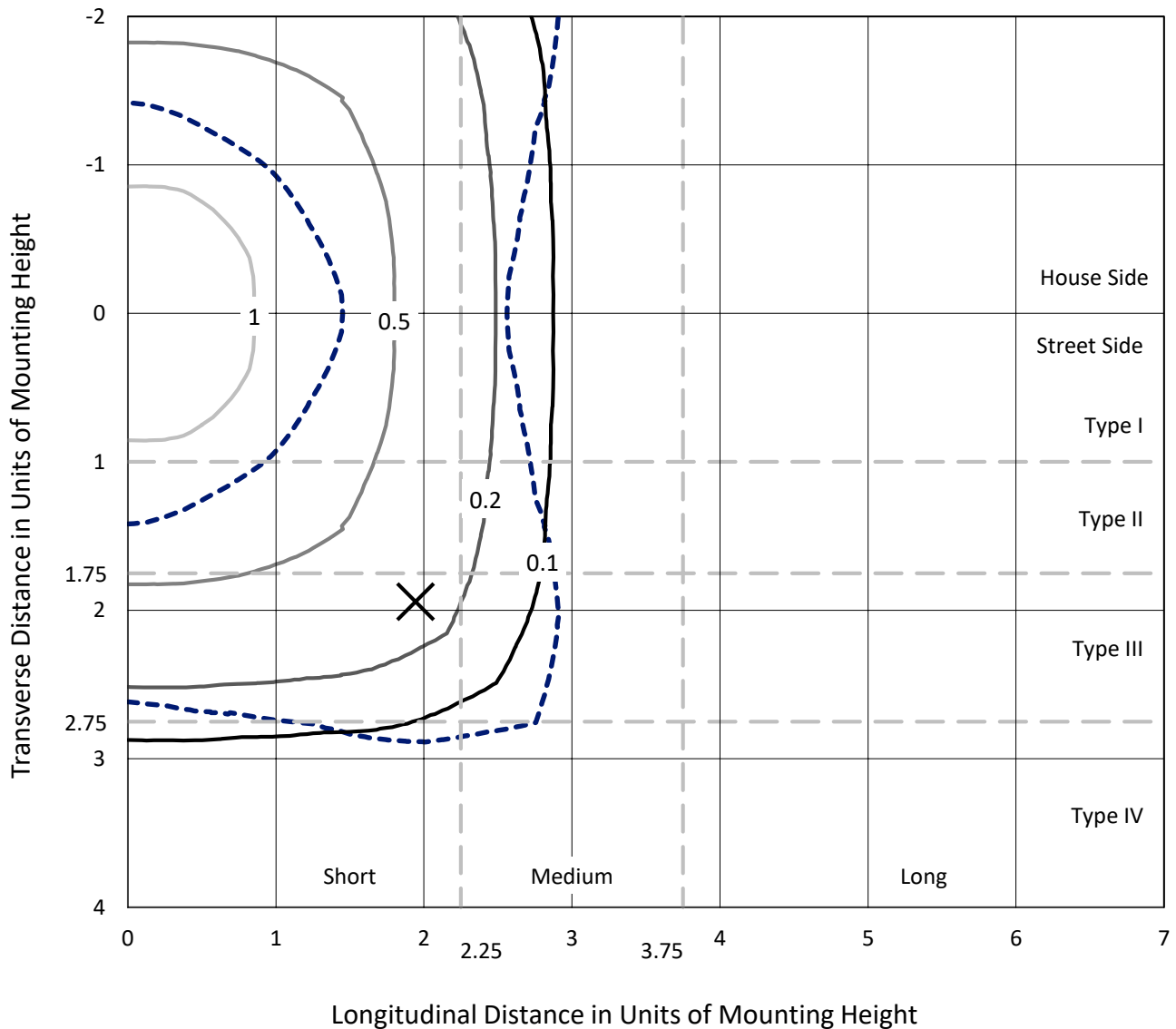
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P316636
 CATALOG NUMBER: GLEON-SA2B-830-U-5MQ

Iso-Footcandle Lines of Horizontal Illumination

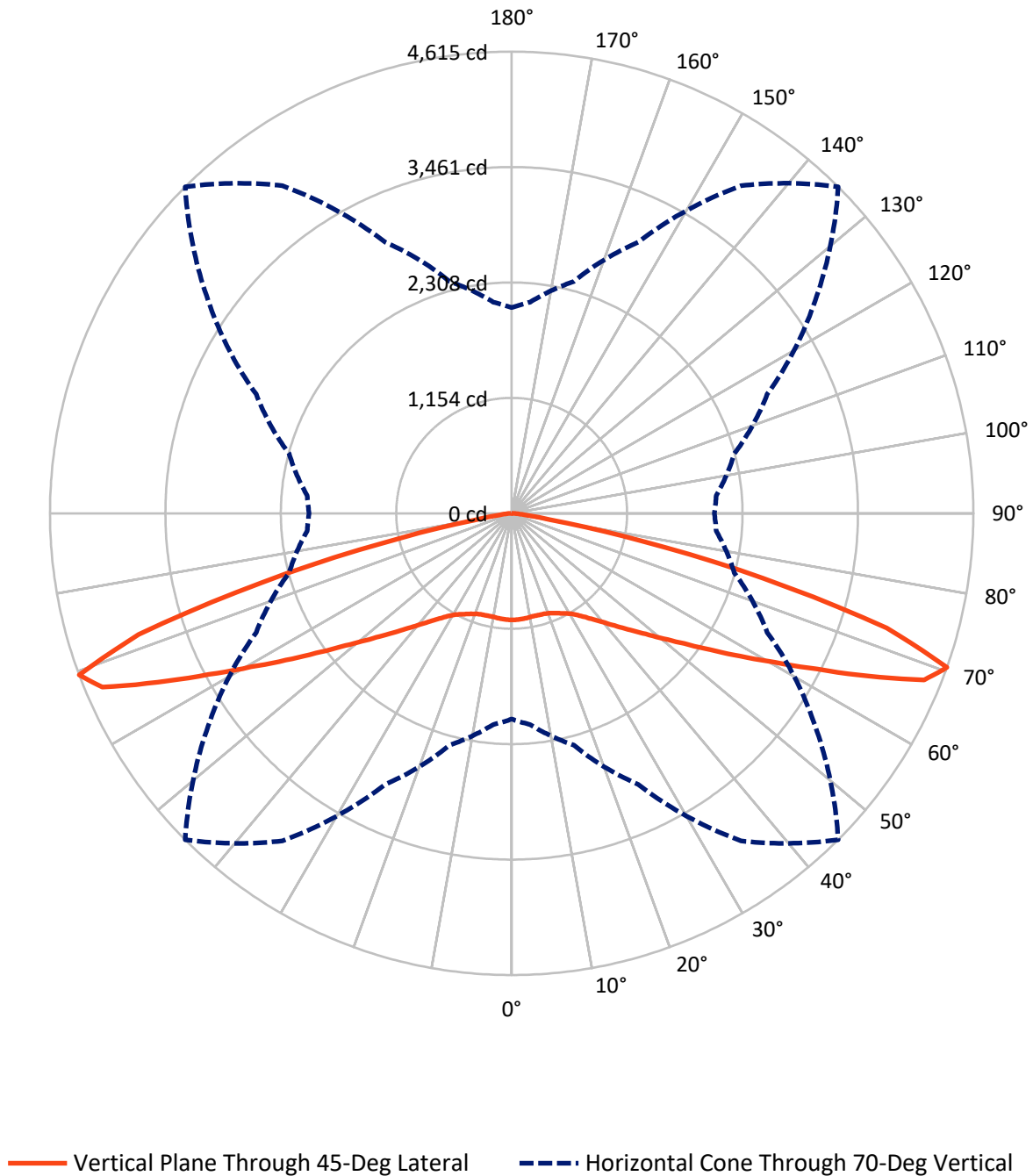
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type V - Short - N/A

REPORT NUMBER: P316636
CATALOG NUMBER: GLEON-SA2B-830-U-5MQ

Luminous Intensity Polar Plot



REPORT NUMBER: P316636

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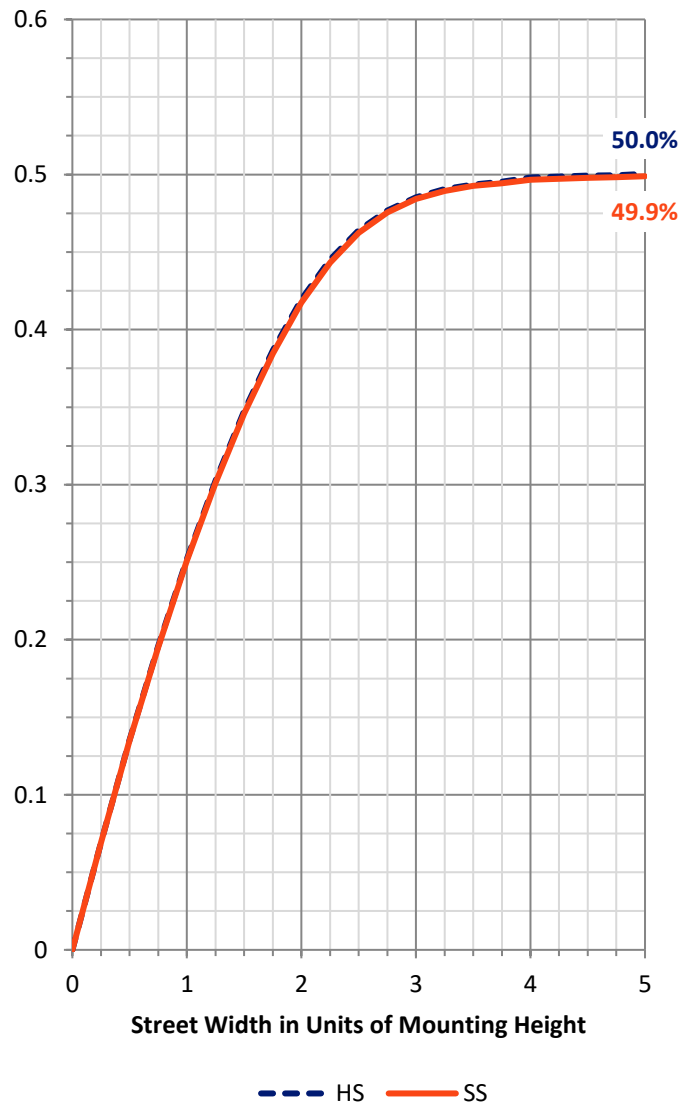
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4880.5	0.0	4880.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4880.5	0.0	4880.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	9761.0	0.0	9761.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	1.0
10°-20°	296.4	3.0
20°-30°	504.6	5.2
30°-40°	800.3	8.2
40°-50°	1302.3	13.3
50°-60°	2147.2	22.0
60°-70°	3152.2	32.3
70°-80°	1393.9	14.3
80°-90°	63.1	0.6
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°	9761.0	100.0
0°-180°	9761.0	100.0

Coefficient of Utilization



REPORT NUMBER: P316636

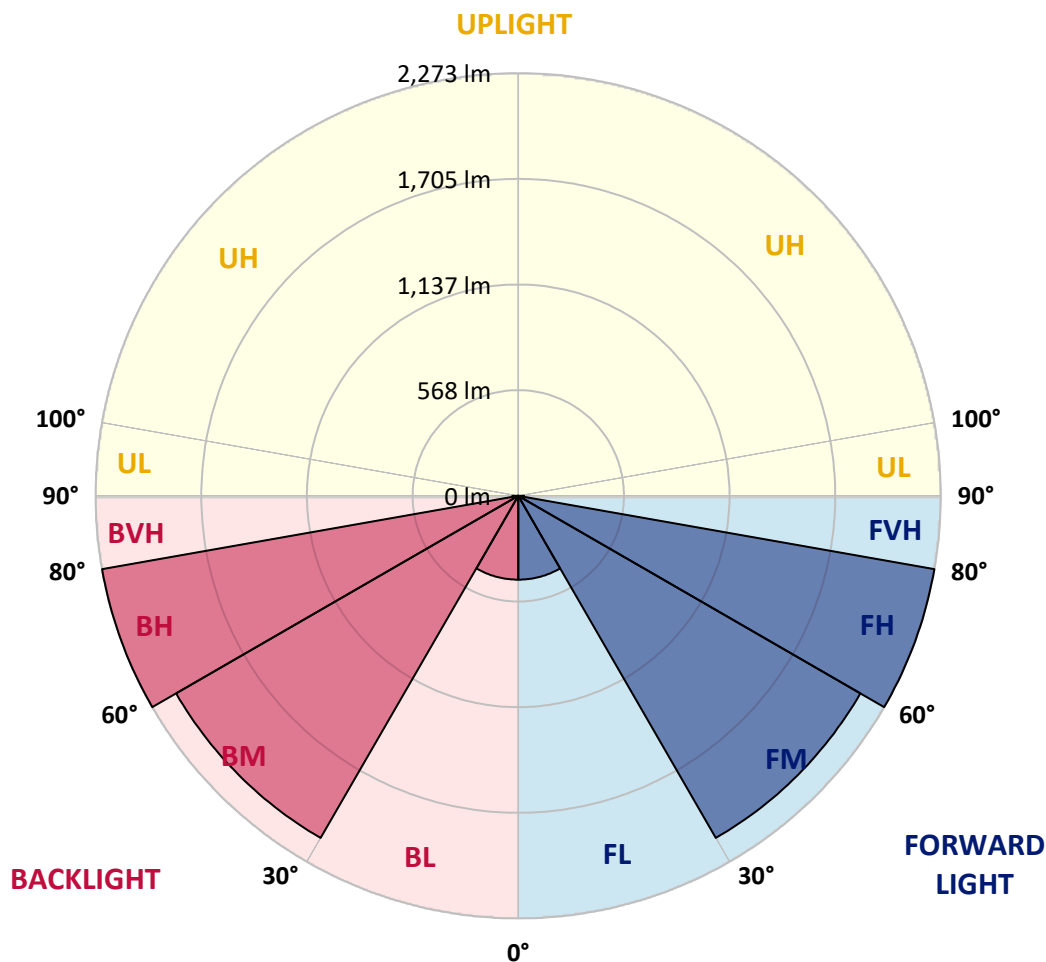
CATALOG NUMBER: GLEON-SA2B-830-U-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	451.0	4.6			
FM	(30°-60°)	2124.9	21.8			
FH	(60°-80°)	2273.1	23.3			G2/5000
FVH	(80°-90°)	31.6	0.3			G1/100
BL	(0°-30°)	451.0	4.6	B1/500		
BM	(30°-60°)	2124.9	21.8	B2/2500		
BH	(60°-80°)	2273.1	23.3	B3/2500		G2/5000
BVH	(80°-90°)	31.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





REPORT NUMBER: P316636

CATALOG NUMBER: GLEON-SA2B-830-U-5MQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1	1066.1
2.5°	1064.4	1063.5	1065.7	1065.4	1063.5	1063.8	1063.8	1064.8	1064.8	1064.1	1064.1
5°	1060.6	1059.9	1062.5	1062.5	1060.6	1061.2	1061.9	1062.8	1062.5	1061.9	1061.5
7.5°	1055.7	1055.4	1058.0	1058.0	1056.7	1057.3	1056.7	1057.0	1056.4	1055.7	1054.7
10°	1047.6	1048.3	1050.5	1051.2	1051.2	1051.5	1050.9	1049.3	1048.3	1047.3	1046.3
12.5°	1040.2	1039.9	1043.1	1044.7	1047.3	1050.2	1048.3	1043.8	1041.8	1039.9	1039.2
15°	1035.4	1035.7	1038.9	1041.8	1046.3	1052.5	1050.2	1043.1	1039.2	1037.0	1036.3
17.5°	1034.4	1035.0	1039.2	1044.4	1049.3	1056.0	1054.7	1047.6	1041.2	1037.0	1036.0
20°	1036.7	1037.0	1043.4	1050.9	1059.3	1065.7	1062.8	1055.1	1046.3	1039.9	1038.3
22.5°	1040.9	1042.1	1050.2	1061.9	1074.8	1083.5	1079.9	1066.7	1053.1	1045.1	1042.8
25°	1054.1	1054.4	1065.4	1081.2	1096.7	1106.8	1102.6	1083.8	1066.4	1057.3	1054.4
27.5°	1081.6	1082.5	1093.5	1111.9	1125.2	1131.6	1129.0	1113.9	1099.0	1089.3	1090.3
30°	1121.3	1122.6	1134.9	1155.2	1163.3	1164.9	1164.3	1157.2	1143.6	1130.7	1131.6
32.5°	1169.8	1170.4	1186.9	1205.3	1211.7	1213.0	1211.7	1205.3	1189.1	1171.7	1172.7
35°	1232.1	1234.0	1249.9	1267.6	1272.8	1275.4	1273.1	1264.7	1247.9	1230.8	1230.2
37.5°	1309.0	1309.3	1325.8	1344.2	1350.7	1351.3	1348.7	1343.2	1322.2	1306.7	1305.8
40°	1398.1	1399.4	1418.8	1438.5	1441.1	1438.2	1441.8	1438.5	1416.9	1399.1	1402.0
42.5°	1506.7	1509.6	1532.9	1552.2	1544.8	1543.2	1545.5	1546.4	1529.0	1507.3	1505.4
45°	1633.0	1635.6	1664.7	1680.2	1675.3	1664.7	1669.2	1676.9	1652.7	1625.9	1628.5
47.5°	1777.1	1783.5	1814.6	1829.1	1817.1	1802.6	1811.3	1823.0	1794.5	1761.2	1759.6
50°	1937.3	1945.4	1986.7	2007.1	1995.1	1968.3	1982.9	1990.6	1949.6	1906.6	1903.1
52.5°	2108.2	2116.3	2168.3	2210.3	2202.5	2160.9	2181.2	2173.1	2126.0	2068.1	2063.6
55°	2301.7	2304.9	2361.1	2429.0	2436.7	2406.0	2404.8	2391.5	2321.7	2254.9	2251.6
57.5°	2500.7	2503.0	2575.6	2655.8	2692.3	2692.3	2656.1	2628.0	2535.3	2457.7	2449.7
60°	2715.5	2723.6	2804.0	2912.9	2998.2	3023.4	2959.4	2882.9	2782.1	2687.4	2678.1
62.5°	2906.8	2916.1	3039.2	3201.4	3338.4	3430.1	3273.8	3149.1	2965.6	2813.7	2796.0
65°	2931.0	2956.2	3135.5	3429.1	3735.7	3918.9	3619.1	3311.9	2977.5	2766.6	2748.5
67.5°	2676.8	2719.4	2961.7	3418.8	4052.3	4445.4	3839.7	3218.8	2763.0	2529.8	2509.7
70°	2056.8	2118.9	2398.3	2990.4	3997.7	4615.0	3701.5	2817.9	2303.6	2052.6	2024.5
72.5°	1128.4	1153.9	1405.3	2047.8	3204.9	3921.8	3087.4	2083.6	1527.7	1243.1	1195.9
75°	357.9	367.0	494.9	838.0	1812.9	2597.6	1961.2	1022.8	563.1	415.1	410.3
77.5°	158.9	159.9	179.0	244.5	624.4	1316.1	750.1	278.5	191.9	167.7	173.2
80°	100.5	100.5	110.8	121.1	169.9	382.2	202.9	132.4	113.1	105.0	107.3
82.5°	48.1	53.3	72.0	77.5	93.4	128.6	104.0	86.6	75.6	56.2	52.3
85°	31.7	26.5	45.5	51.4	54.3	61.7	60.4	57.2	49.4	28.1	31.3
87.5°	14.2	13.6	23.6	21.6	20.4	15.5	23.3	28.8	27.8	13.9	13.9
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.

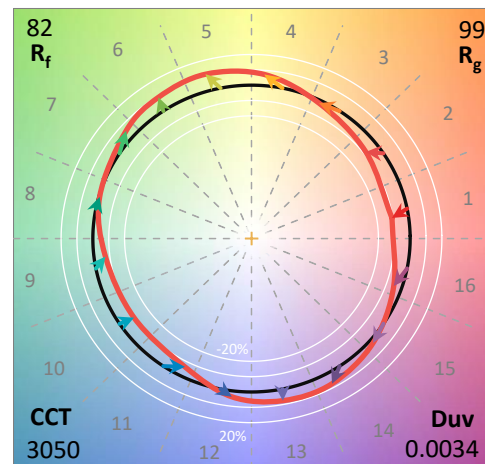
Test Information

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

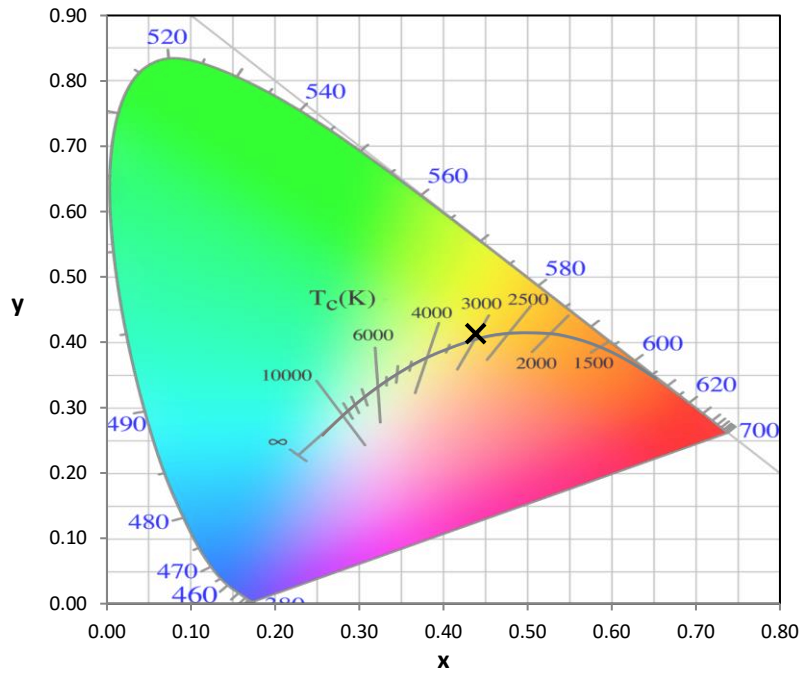
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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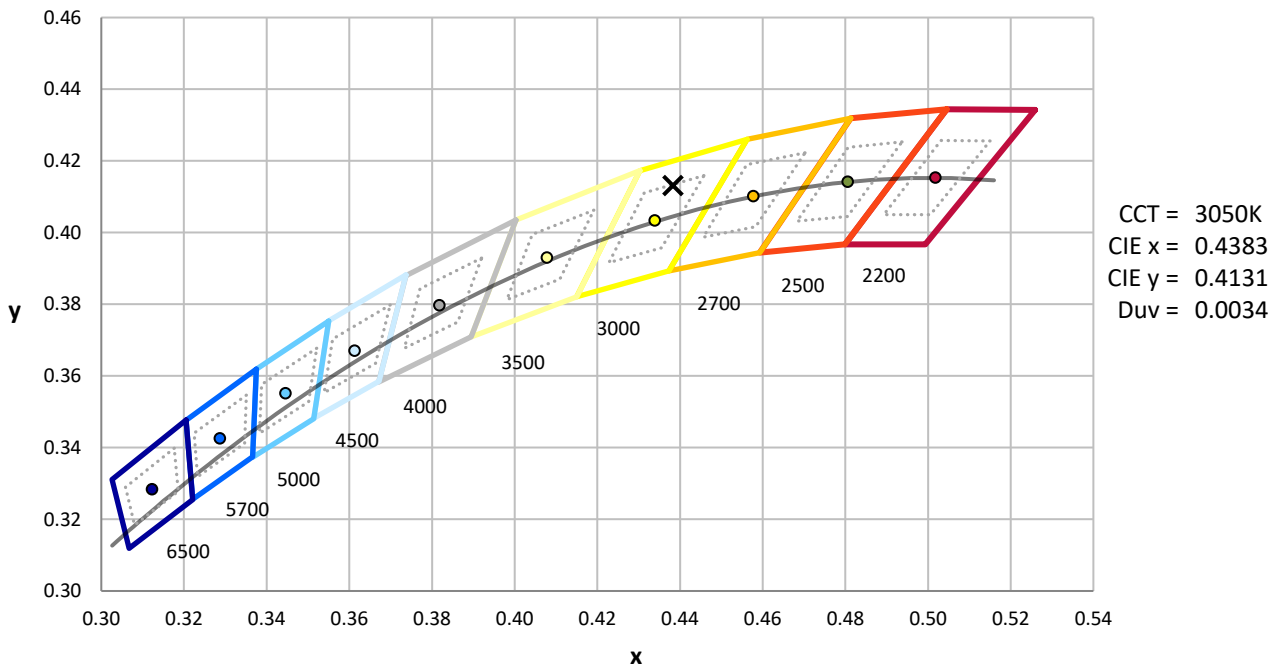
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



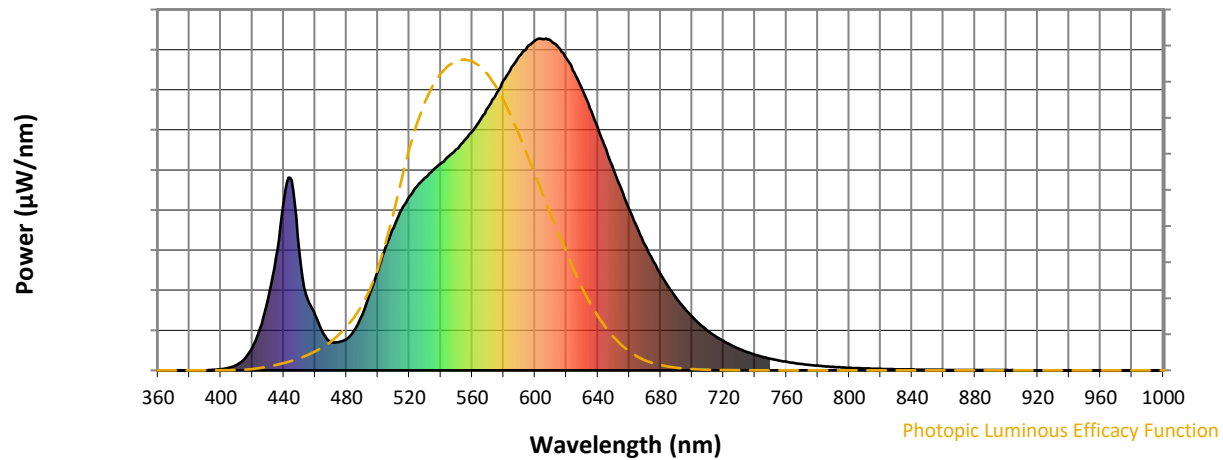
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

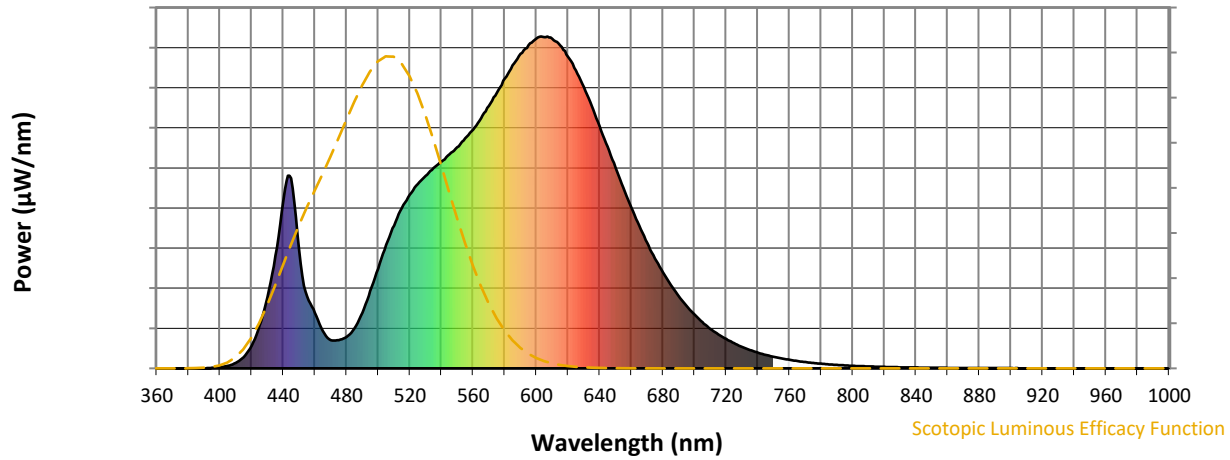


Photopic Lumens: NR

λ (nm)	Power 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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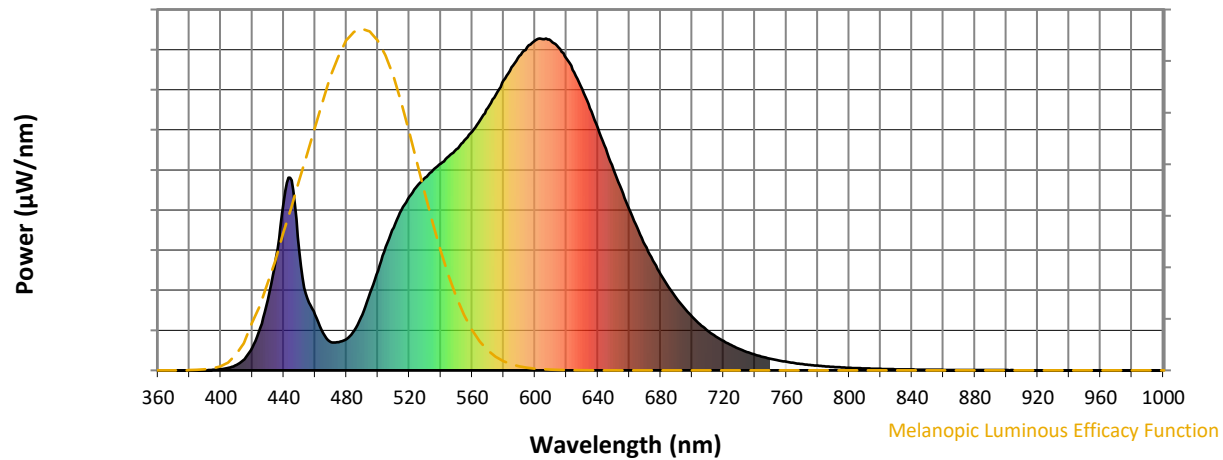
Scotopic Flux vs. Wavelength


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

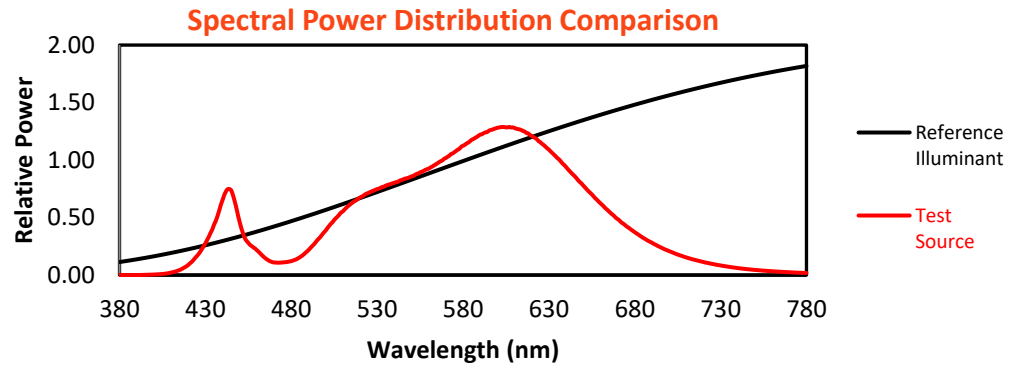
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940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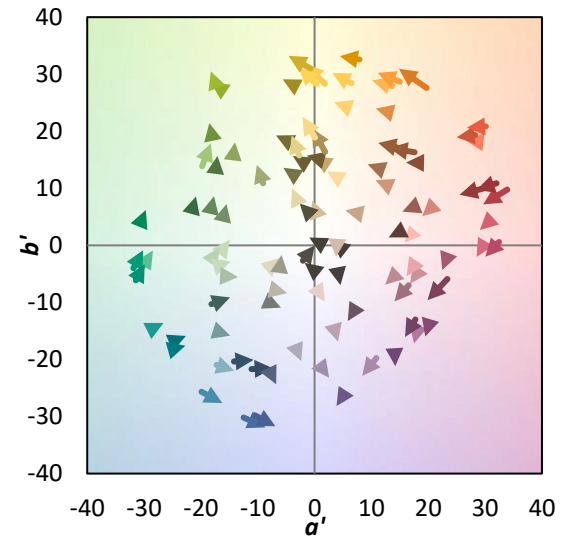
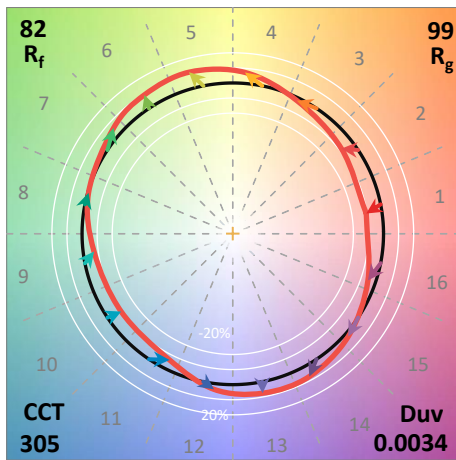
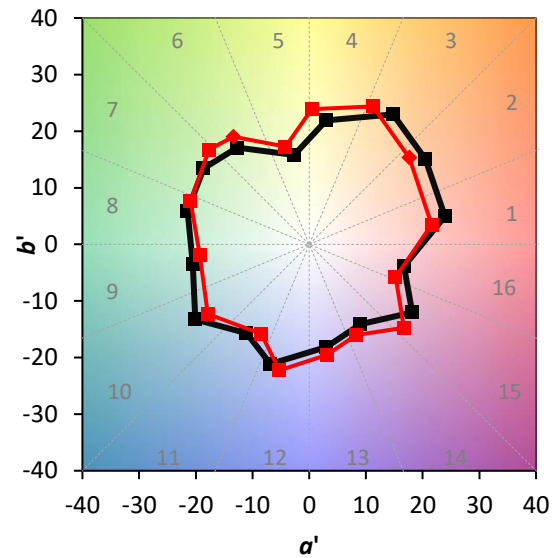
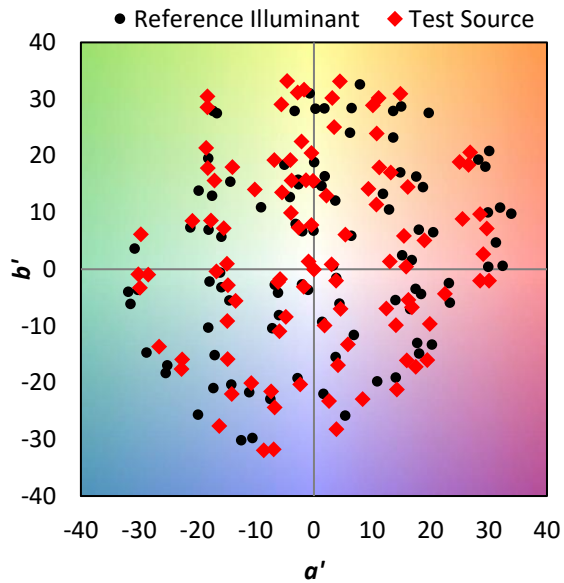
TM-30-18

Summary

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

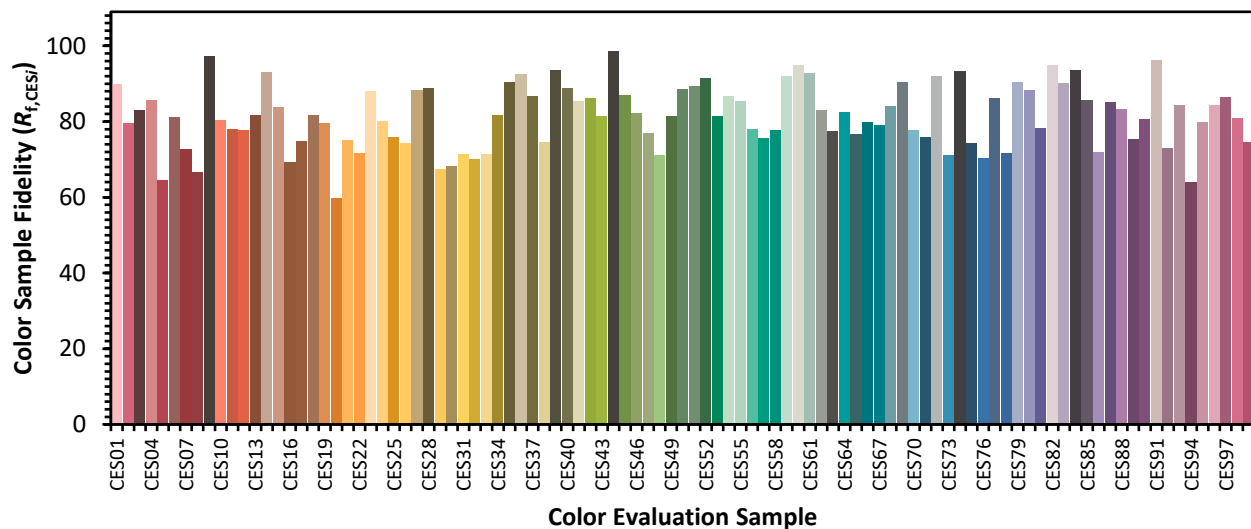


Color Vector Graphics

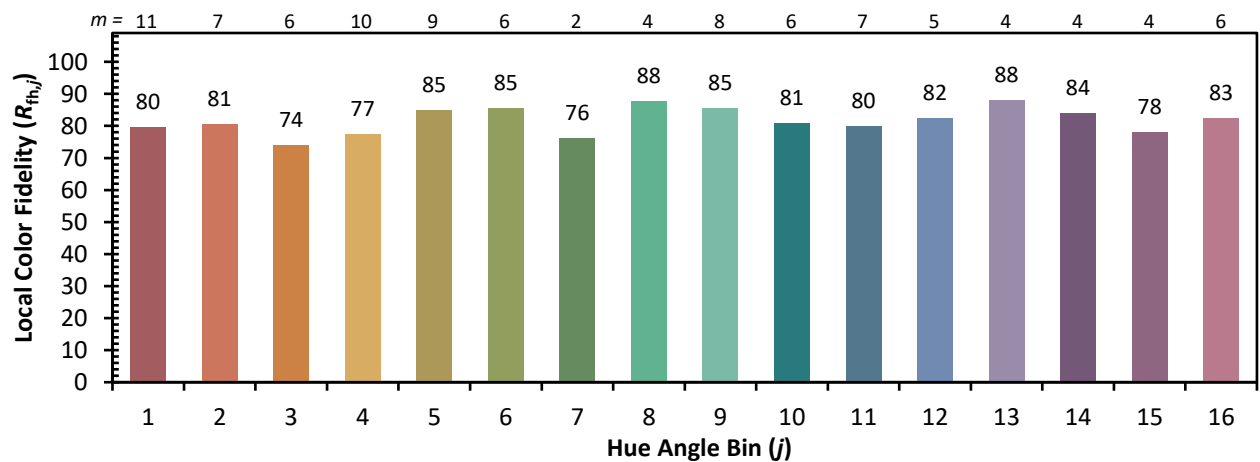
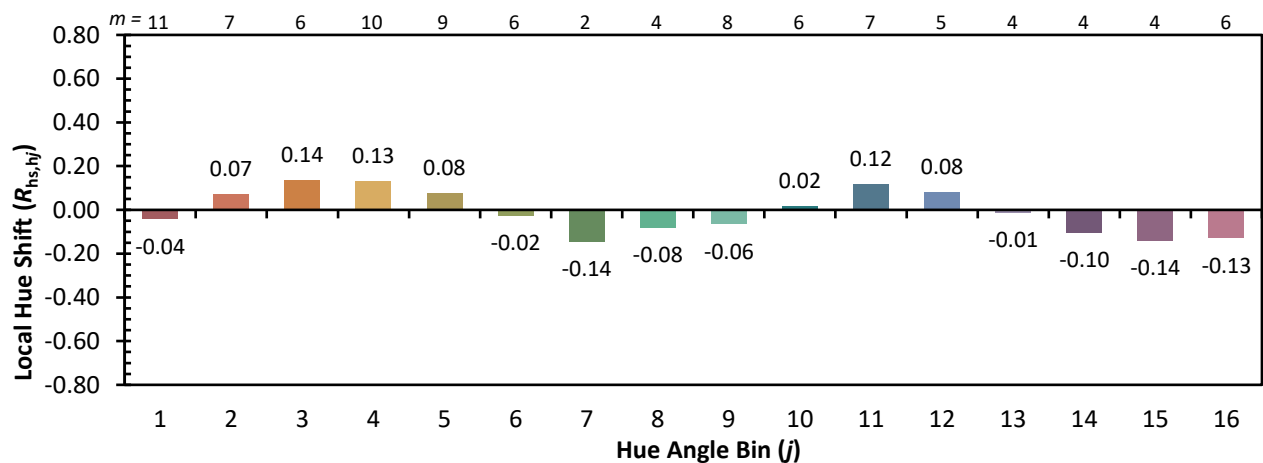
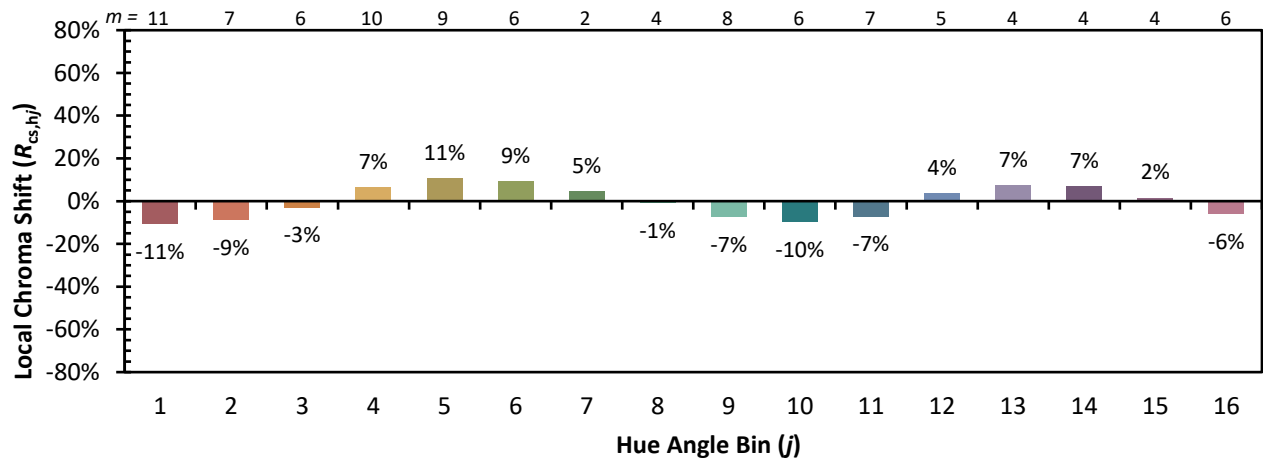


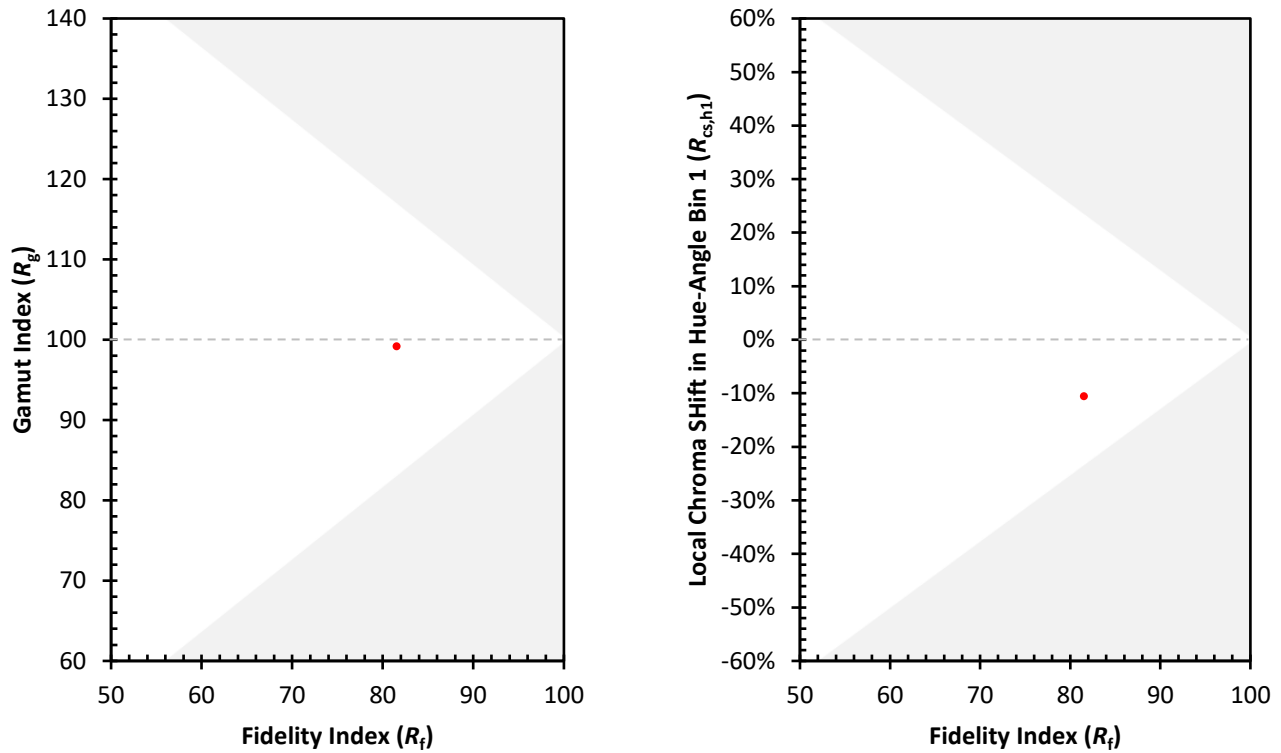
Individual Sample Fidelity Index ($R_{f,i}$)

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)