

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: P631562

Luminaire Tested: GWS-SA1F-830-U-T2R-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1F-830-U-T2R-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4486.4 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G0

Input Watts (W): 67.2
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



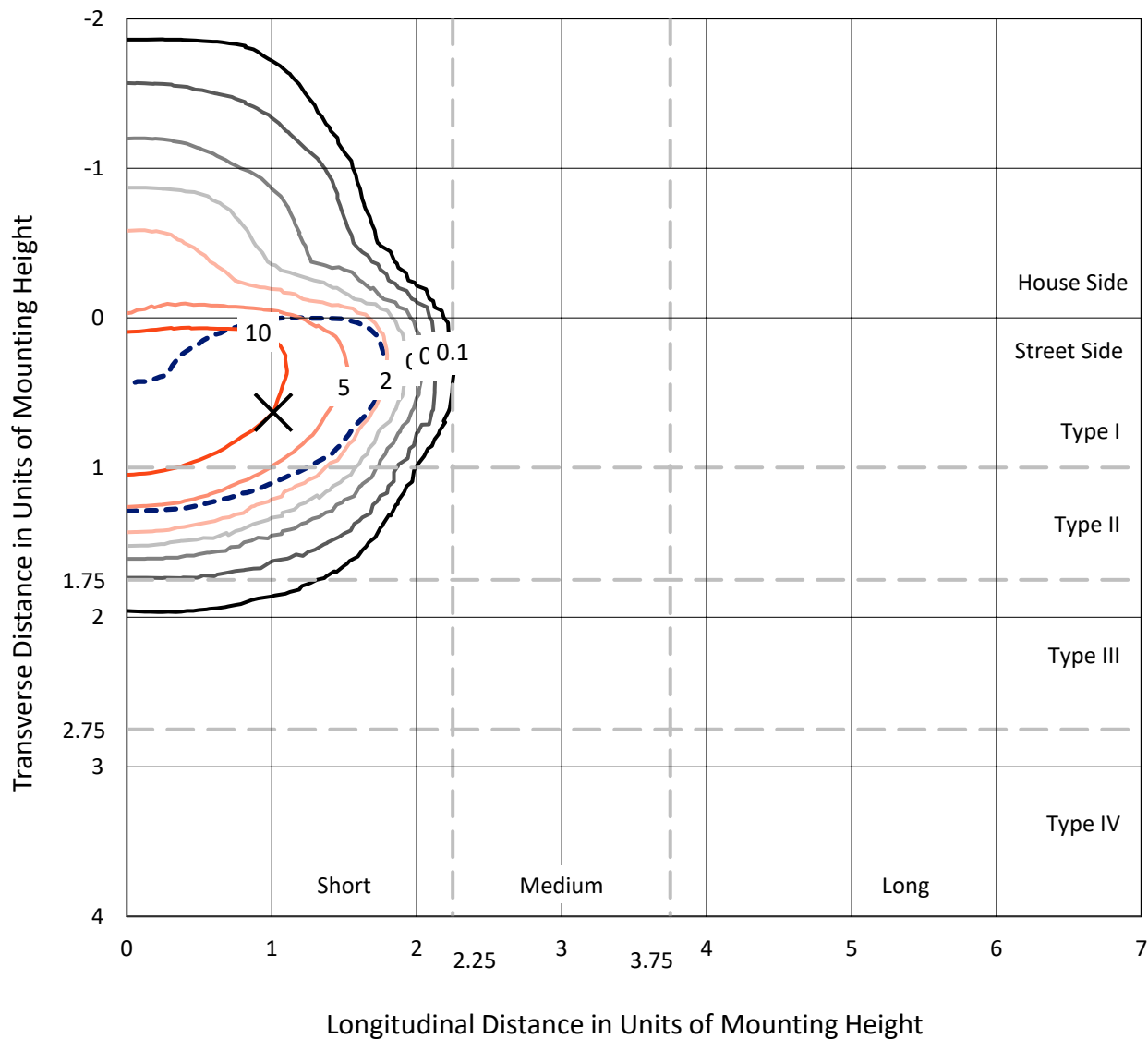
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

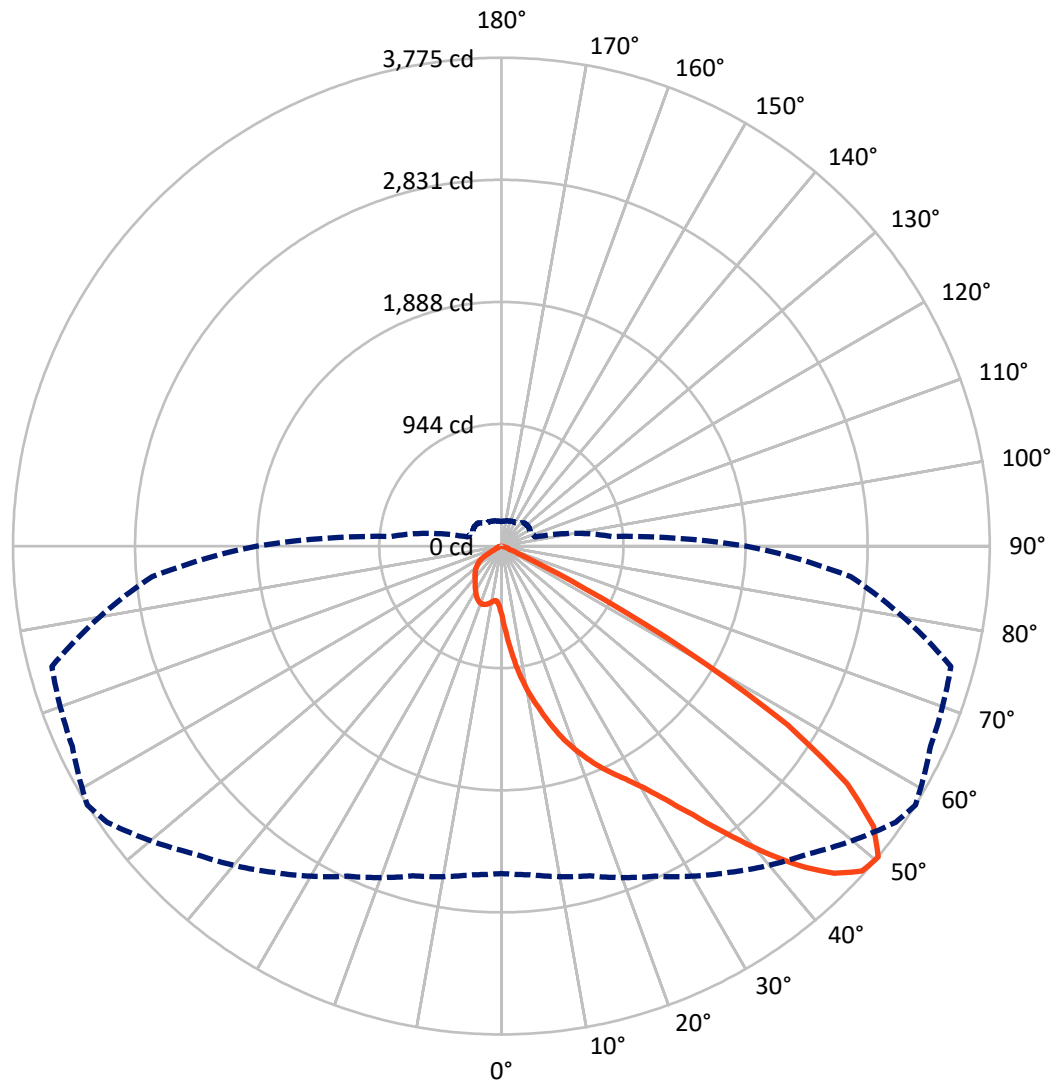


Based on 10 foot mounting height. Maximum calculated value = 16.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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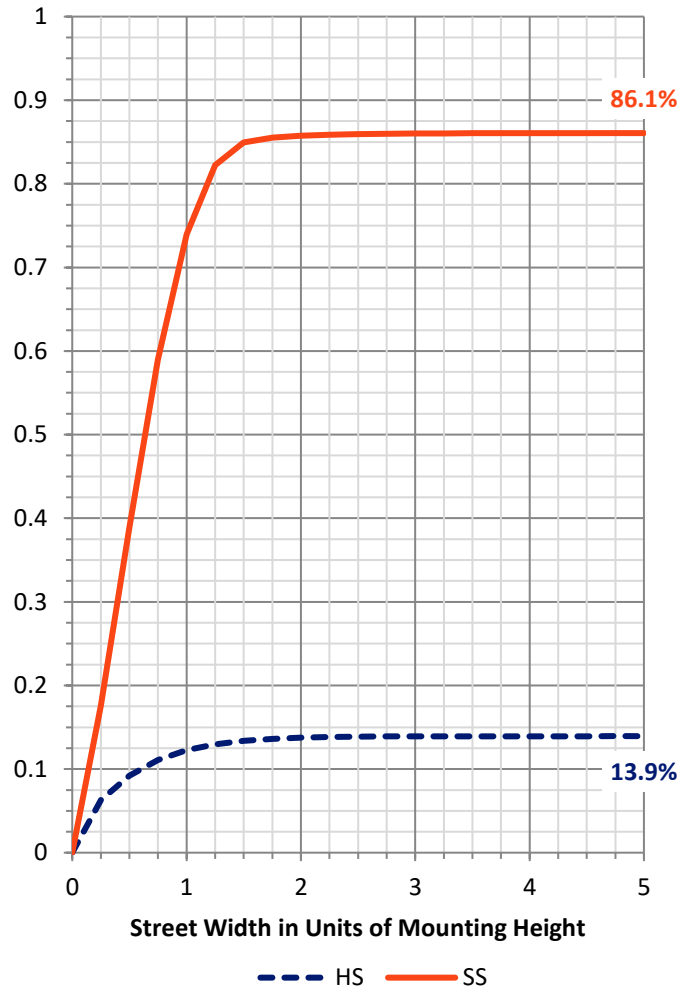
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	628.4	0.0	628.4
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	3858.0	0.0	3858.0
	% Fixture	86.0	0.0	86.0
Total	Lumens	4486.4	0.0	4486.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.4	1.5
10°-20°	262.8	5.9
20°-30°	531.8	11.9
30°-40°	940.8	21.0
40°-50°	1371.5	30.6
50°-60°	1099.3	24.5
60°-70°	198.1	4.4
70°-80°	15.6	0.3
80°-90°	0.0	0.0
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°	4486.4	100.0
0°-180°	4486.4	100.0

Coefficient of Utilization



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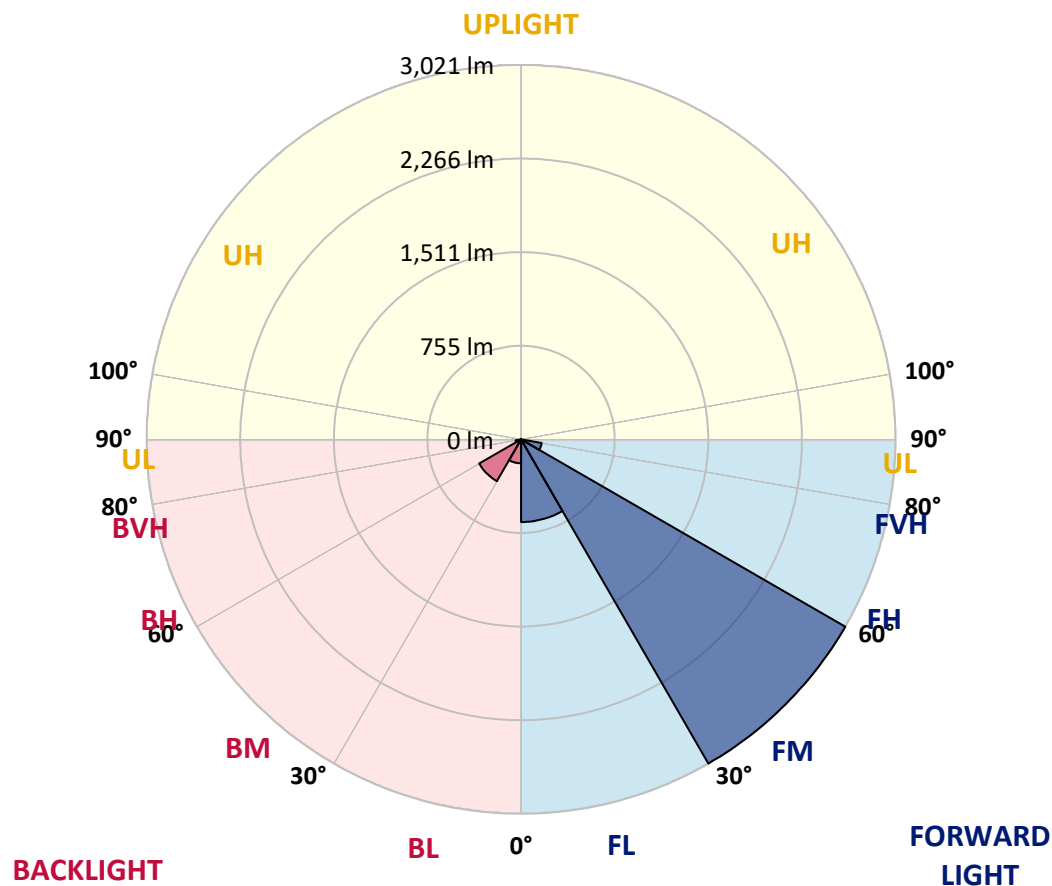
CATALOG NUMBER: GWS-SA1F-830-U-T2R-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	667.6	14.9			
FM	(30°-60°)	3021.5	67.3			
FH	(60°-80°)	169.0	3.8			G0/660
FVH	(80°-90°)	0.0	0.0			G0/10
BL	(0°-30°)	193.5	4.3	B1/500		
BM	(30°-60°)	390.3	8.7	B1/1000		
BH	(60°-80°)	44.7	1.0	B0/110		G0/110
BVH	(80°-90°)	0.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9
2.5°	793.0	780.6	773.4	767.6	742.2	701.9	675.5	661.6	638.6	599.7	566.1
5°	1034.8	1025.7	1008.9	997.4	964.8	907.7	848.7	825.2	772.9	685.1	606.4
7.5°	1195.1	1188.4	1182.1	1166.8	1136.1	1084.3	1019.0	994.5	913.9	789.2	660.2
10°	1318.4	1313.1	1305.9	1305.4	1281.4	1234.9	1171.1	1145.7	1058.4	902.4	723.5
12.5°	1426.8	1422.5	1421.1	1434.5	1419.1	1384.6	1315.5	1283.8	1191.2	1018.1	793.5
15°	1501.2	1500.2	1506.4	1532.8	1541.5	1525.6	1467.6	1433.5	1327.0	1134.2	870.8
17.5°	1535.2	1538.1	1550.1	1595.7	1634.1	1647.5	1602.9	1574.1	1461.8	1251.7	953.3
20°	1593.3	1592.3	1599.5	1642.7	1689.7	1737.7	1724.3	1699.8	1598.1	1376.0	1044.9
22.5°	1756.9	1743.0	1727.6	1734.3	1751.1	1807.3	1832.2	1819.7	1738.7	1503.6	1139.4
25°	2008.3	1993.9	1944.5	1896.5	1864.8	1890.3	1924.3	1930.6	1878.3	1634.5	1238.3
27.5°	2275.0	2262.1	2206.4	2134.5	2043.8	1999.6	2025.1	2037.5	2015.5	1790.5	1343.3
30°	2525.0	2507.7	2446.8	2357.5	2252.5	2184.8	2156.0	2164.7	2177.6	1975.2	1466.6
32.5°	2741.8	2728.9	2656.0	2561.9	2460.7	2390.2	2323.0	2337.4	2369.1	2201.1	1624.5
35°	2925.6	2918.9	2841.6	2748.1	2641.1	2605.1	2547.5	2550.4	2582.1	2474.1	1816.9
37.5°	3085.3	3073.8	3003.8	2916.9	2832.0	2826.3	2810.4	2811.9	2828.2	2792.2	2038.0
40°	3186.1	3175.5	3125.6	3071.9	3011.5	3012.4	3094.5	3100.7	3082.0	3104.5	2271.7
42.5°	3224.0	3216.3	3189.4	3189.9	3183.7	3212.0	3366.0	3377.5	3310.3	3349.7	2471.2
45°	3158.3	3154.9	3156.8	3225.9	3300.8	3388.1	3588.1	3608.3	3513.3	3512.3	2627.2
47.5°	2946.2	2939.5	2995.6	3113.2	3286.4	3456.2	3722.5	3753.6	3655.3	3605.4	2725.0
50°	2530.7	2549.9	2638.7	2815.2	3078.6	3362.6	3721.0	3775.2	3660.6	3597.2	2708.7
52.5°	1833.2	1829.3	2023.6	2266.4	2586.9	3063.3	3523.4	3602.5	3532.5	3517.1	2672.3
55°	997.4	1032.4	1163.4	1484.9	1885.0	2496.7	3071.9	3244.6	3325.7	3487.9	2738.0
57.5°	366.5	381.9	463.9	691.3	997.9	1552.5	2346.5	2607.0	2857.5	3406.3	2727.0
60°	147.8	150.6	183.3	254.3	419.3	790.2	1407.6	1638.9	1874.9	2607.5	2092.7
62.5°	107.5	111.3	124.3	148.7	212.1	345.4	606.9	705.7	771.5	1291.5	1031.0
65°	86.8	89.7	100.3	111.3	140.1	185.7	195.7	188.5	187.6	333.9	236.5
67.5°	72.0	74.8	82.5	90.2	100.7	92.6	67.2	70.5	57.6	57.1	46.5
70°	52.8	56.1	63.8	72.0	60.4	24.9	38.9	57.6	43.7	36.5	35.5
72.5°	39.8	42.2	49.4	47.0	17.8	9.6	25.9	41.7	33.6	26.9	26.4
75°	29.7	31.2	24.9	7.7	1.9	2.4	9.6	17.3	18.7	15.4	15.4
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.4	1.9	2.4	2.9
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9	535.9
2.5°	546.9	526.8	498.0	474.0	455.8	438.0	424.6	411.2	410.7	404.0	402.5
5°	570.0	533.5	480.7	442.8	419.8	405.9	396.3	391.5	389.1	386.7	385.7
7.5°	603.1	550.8	477.8	437.5	418.4	409.2	402.5	399.6	398.2	396.3	395.8
10°	643.8	575.7	488.4	447.6	430.8	422.2	415.0	410.7	408.3	404.9	404.0
12.5°	692.8	606.4	505.2	464.4	446.7	435.1	425.5	419.3	416.0	411.6	410.7
15°	745.5	639.5	523.9	479.8	458.7	443.8	431.8	422.2	416.0	410.7	409.2
17.5°	800.2	673.1	540.7	490.3	464.4	446.7	429.4	416.4	408.8	402.0	400.1
20°	861.7	707.6	551.7	492.2	462.5	439.0	418.8	402.5	394.8	385.7	383.8
22.5°	925.9	739.8	556.5	487.9	451.9	424.6	403.0	386.2	375.2	365.6	362.7
25°	988.3	768.6	554.1	475.9	436.1	404.4	382.4	365.1	353.1	343.5	341.1
27.5°	1054.5	792.6	545.5	458.2	414.5	382.4	361.3	346.4	335.4	324.8	322.4
30°	1128.9	814.6	531.6	436.6	389.1	359.8	343.5	333.4	321.4	310.4	307.0
32.5°	1218.6	834.3	511.4	410.7	366.5	340.2	331.0	323.4	309.4	297.9	295.5
35°	1321.3	850.6	486.0	383.8	344.5	327.7	325.8	315.7	297.5	284.0	281.1
37.5°	1440.2	866.4	455.8	357.4	328.2	321.9	322.4	305.1	283.1	266.7	264.8
40°	1568.3	882.3	422.2	334.4	313.3	318.6	314.2	289.8	253.8	238.0	236.0
42.5°	1701.7	899.6	388.1	312.8	300.8	305.6	299.4	259.1	233.2	225.0	224.0
45°	1822.1	920.2	351.2	291.2	288.3	286.9	276.3	234.6	223.6	217.8	217.3
47.5°	1909.0	916.8	311.8	270.6	274.9	270.1	238.0	223.1	214.0	206.3	204.4
50°	1893.1	858.3	271.1	247.6	257.6	253.3	214.0	209.7	201.5	193.3	190.5
52.5°	1852.8	778.7	235.6	223.1	238.9	228.8	197.7	193.3	186.1	175.6	172.2
55°	1874.4	703.8	207.7	203.4	219.7	189.5	179.4	172.7	165.0	153.5	152.1
57.5°	1804.9	574.3	167.0	169.8	194.3	161.7	157.4	146.8	133.9	126.2	125.2
60°	1249.3	308.5	104.6	107.9	140.6	135.8	141.0	131.5	115.6	108.4	107.0
62.5°	573.8	123.8	57.1	54.7	73.9	92.1	120.9	119.9	100.3	88.8	87.8
65°	139.1	56.6	40.8	38.4	41.7	55.2	78.7	94.5	81.1	67.6	66.2
67.5°	45.1	46.1	37.4	35.0	36.9	41.3	47.0	52.3	51.8	47.5	46.5
70°	36.0	41.7	34.5	31.7	31.7	33.1	31.7	25.4	22.1	24.0	24.9
72.5°	26.9	31.7	27.3	24.5	23.5	23.0	19.7	14.4	10.1	9.1	8.6
75°	15.8	17.8	16.8	14.4	13.4	12.0	9.6	6.2	3.4	2.4	1.4
77.5°	2.9	3.4	3.8	2.9	2.4	1.9	1.4	0.5	0.0	0.0	0.0
80°	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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.

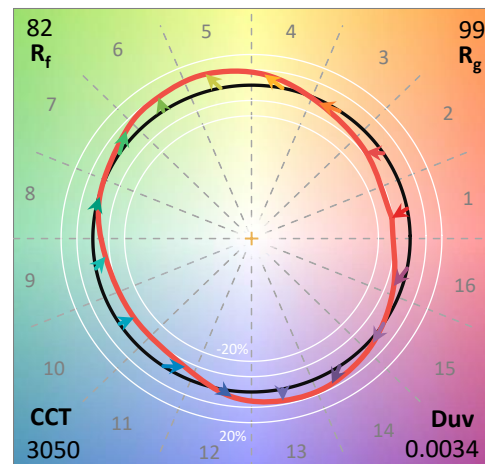
Test Information

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

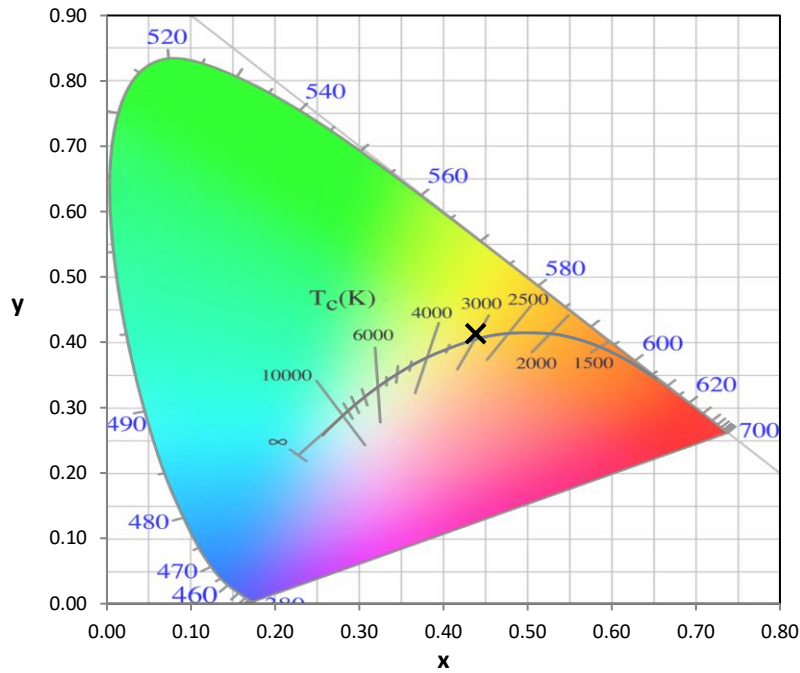
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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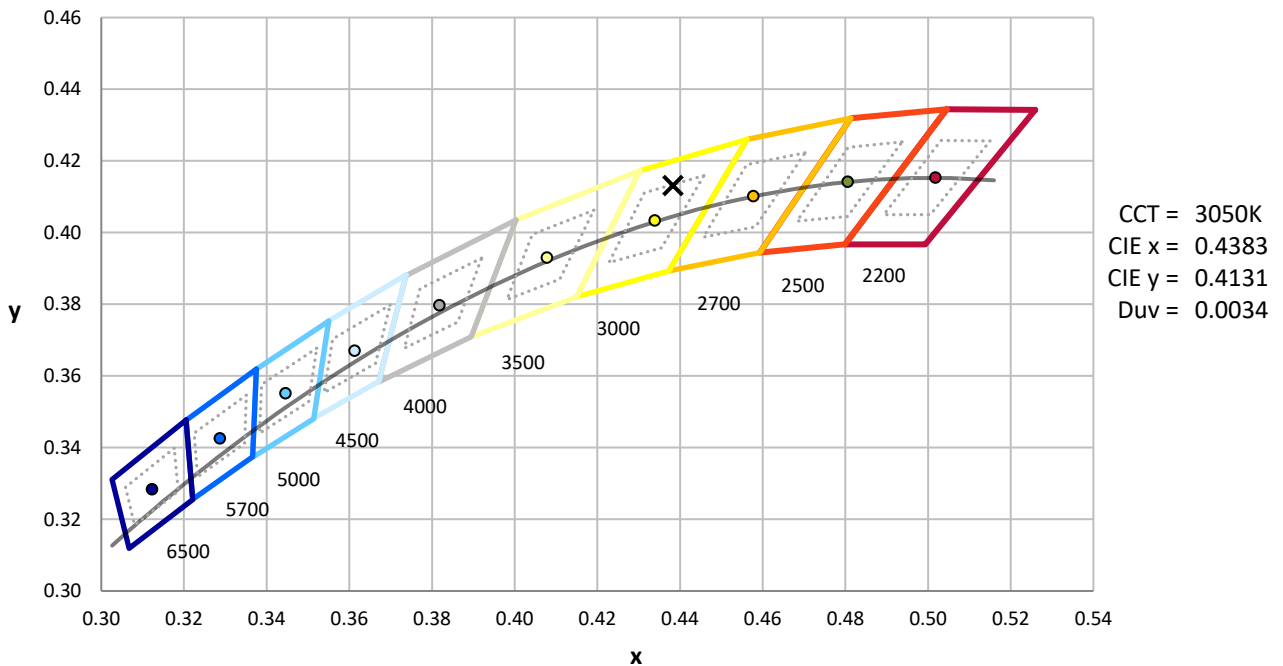
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



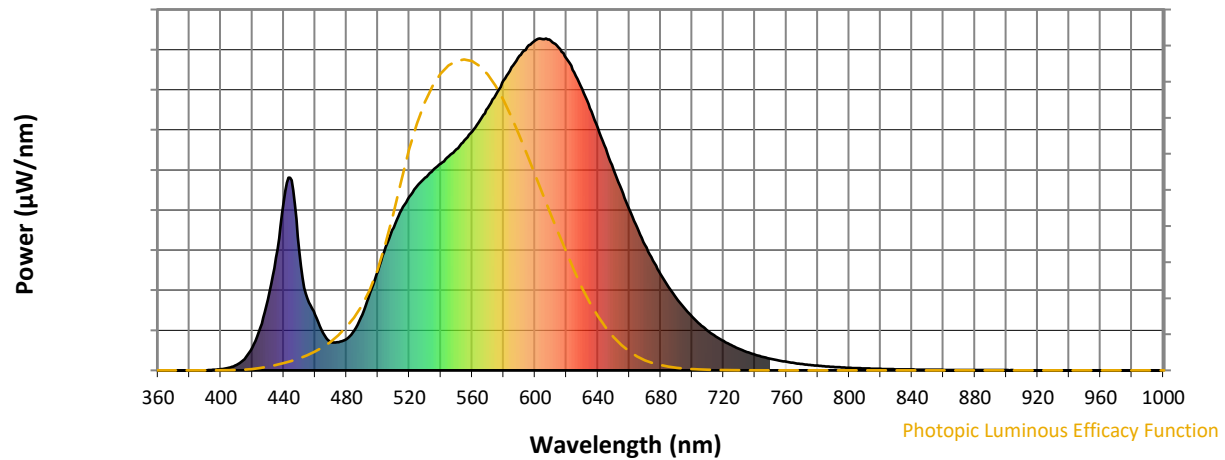
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

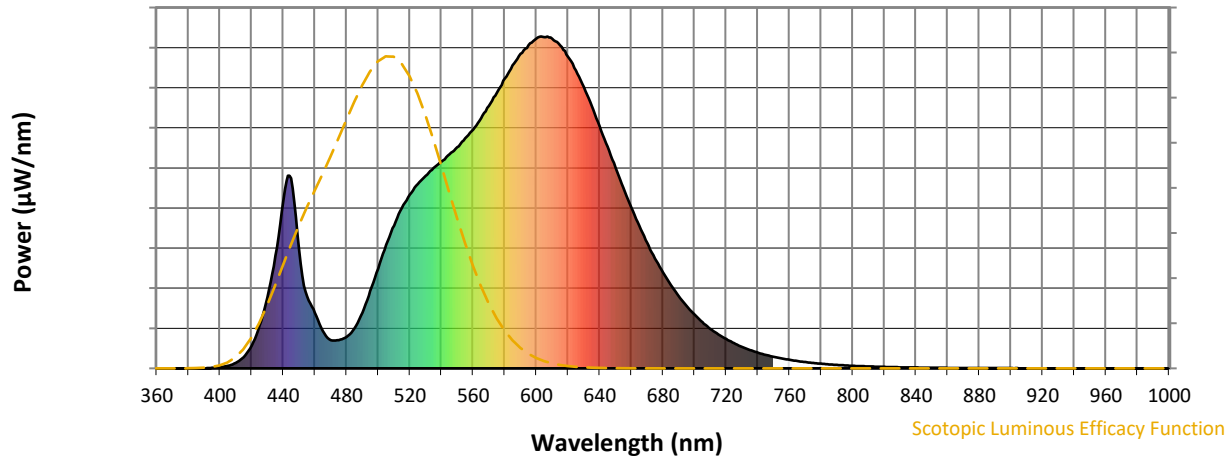


Photopic Lumens: NR

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



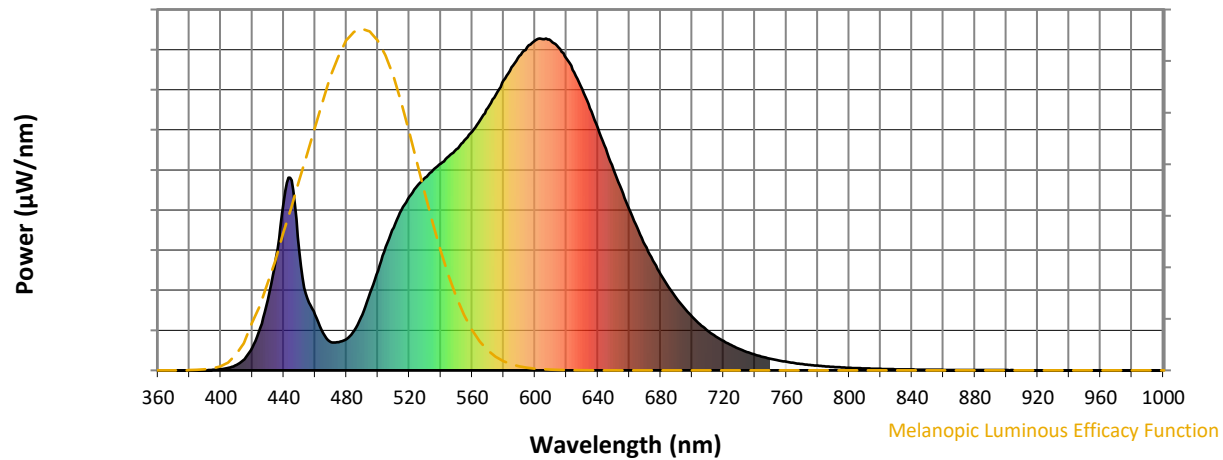
Scotopic Lumens: NR

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

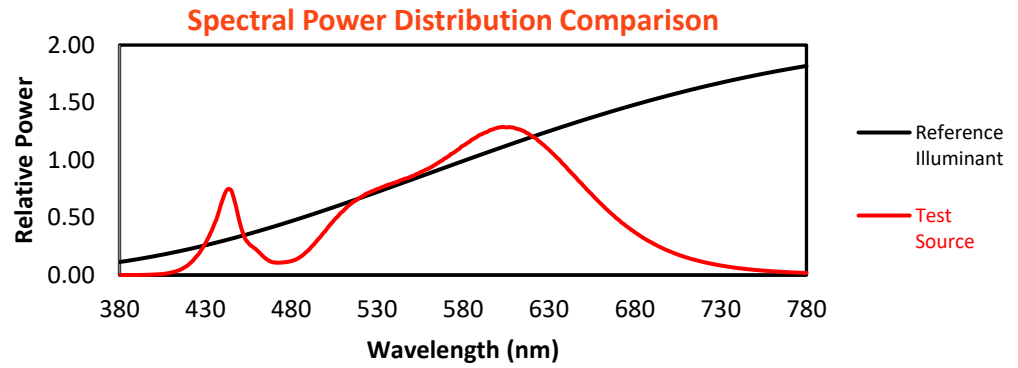
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940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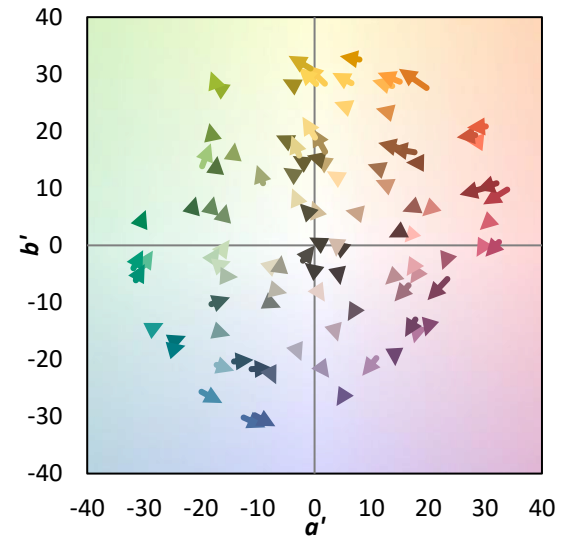
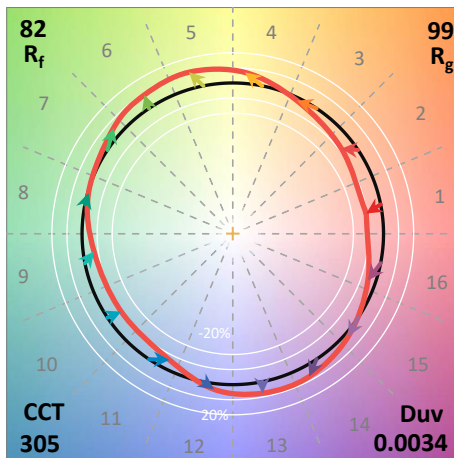
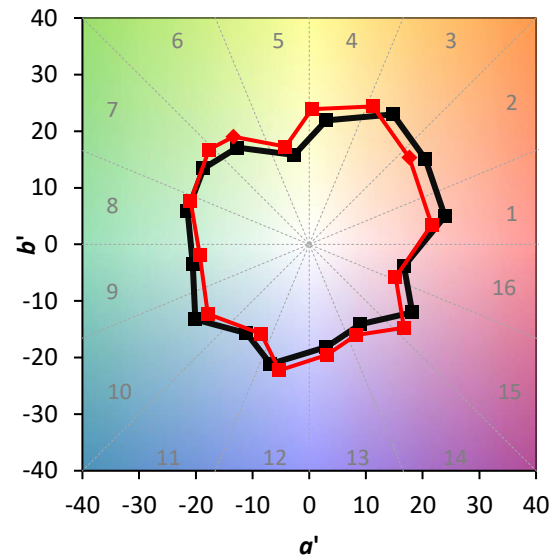
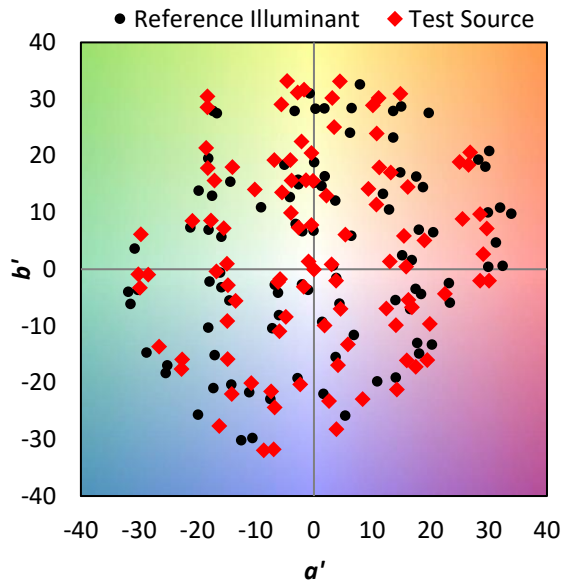
TM-30-18

Summary

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

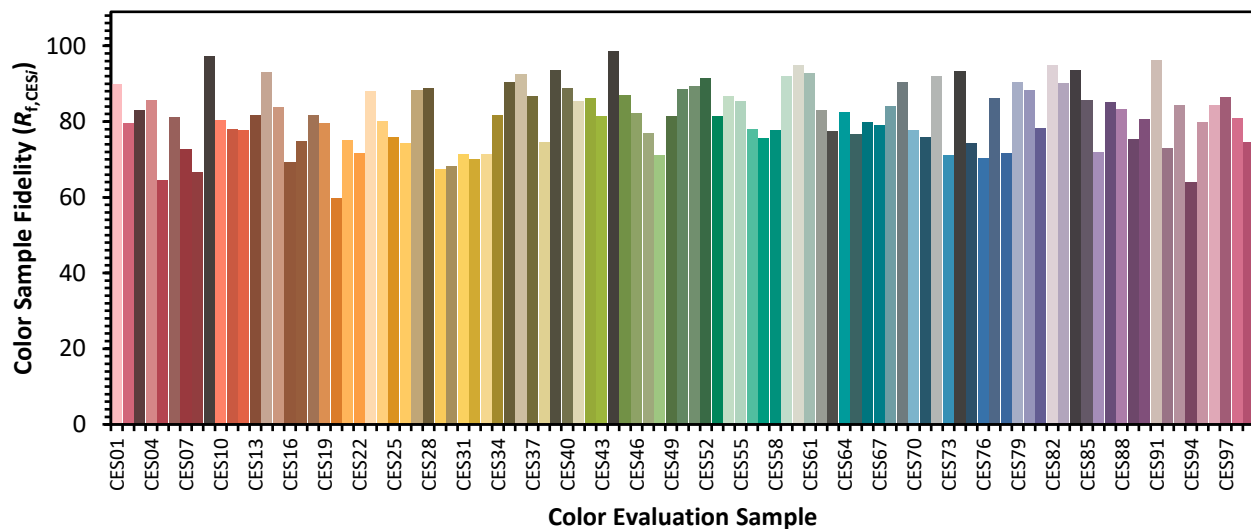


Color Vector Graphics

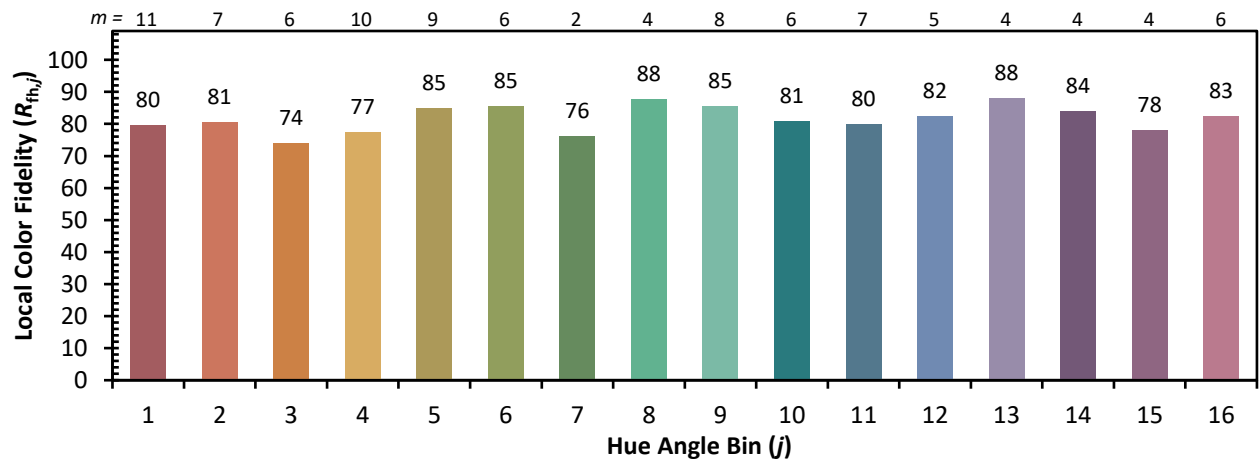
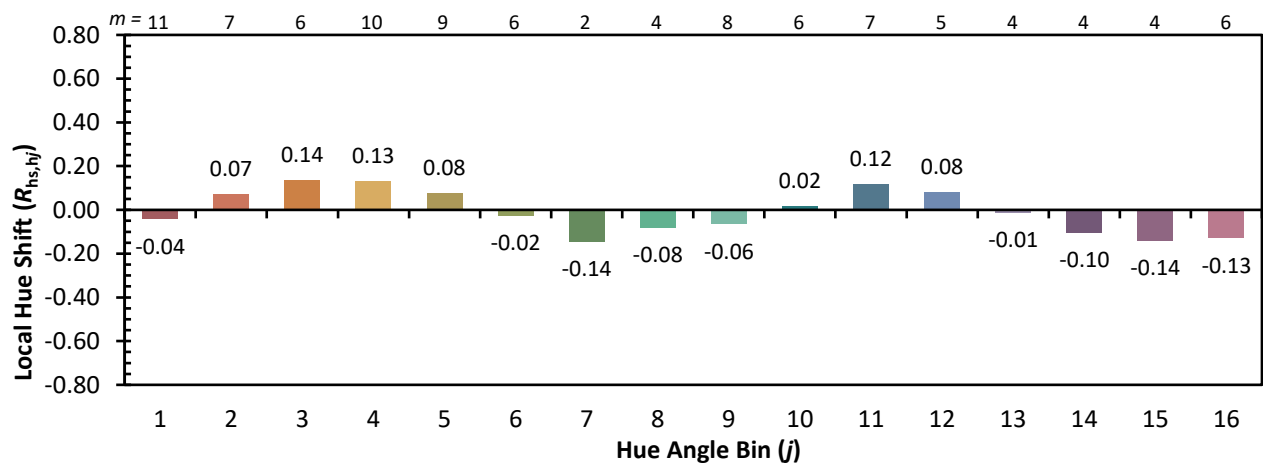
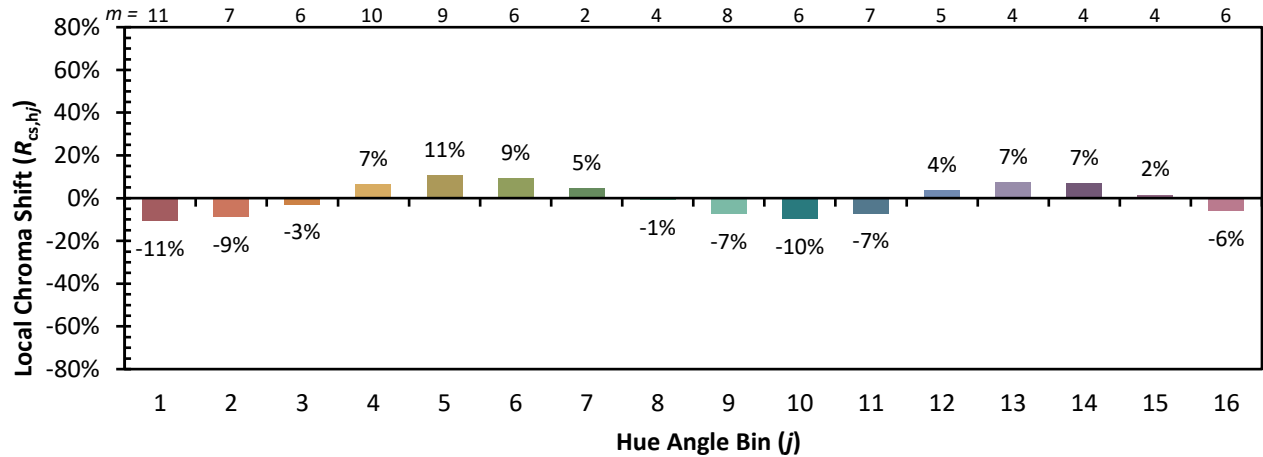


Individual Sample Fidelity Index ($R_{f,i}$)

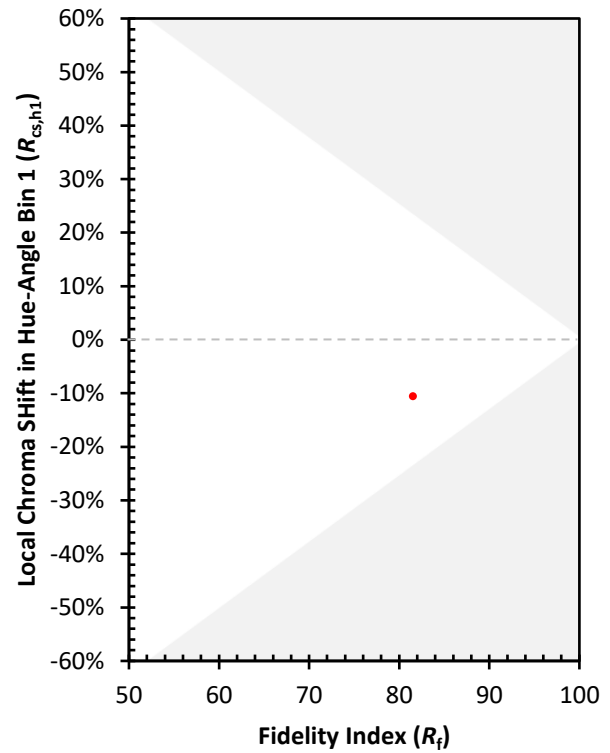
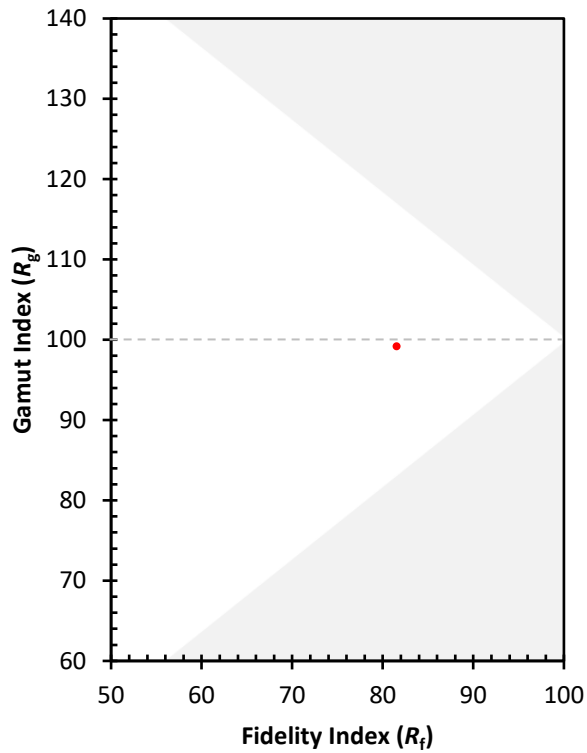
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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