

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: P632538

Luminaire Tested: GWS-SA2C-830-U-SL4-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P632538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-35)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2C-830-U-SL4-W
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: (32) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7061.1 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 63.2
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



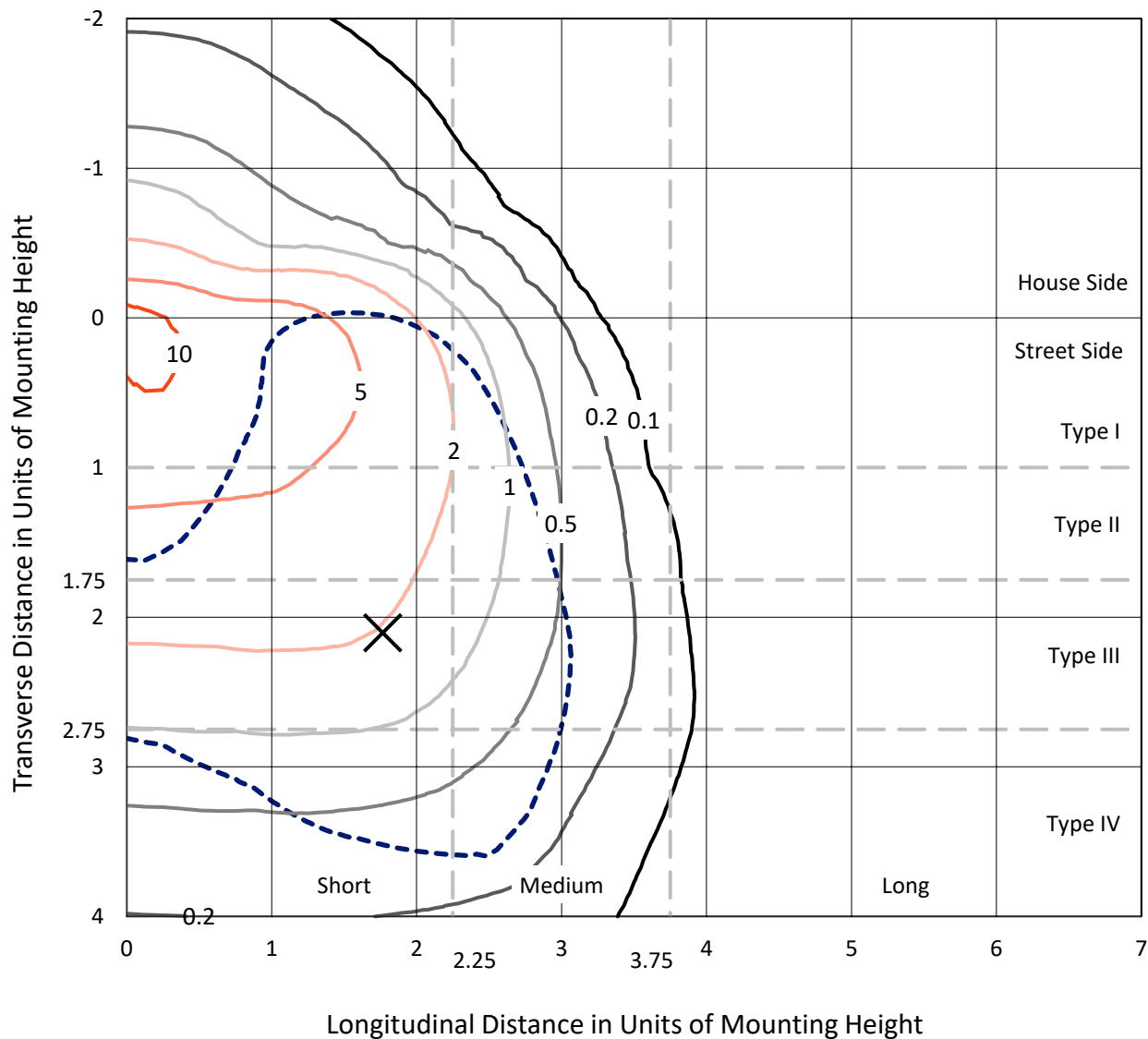
REPORT NUMBER: P632538

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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

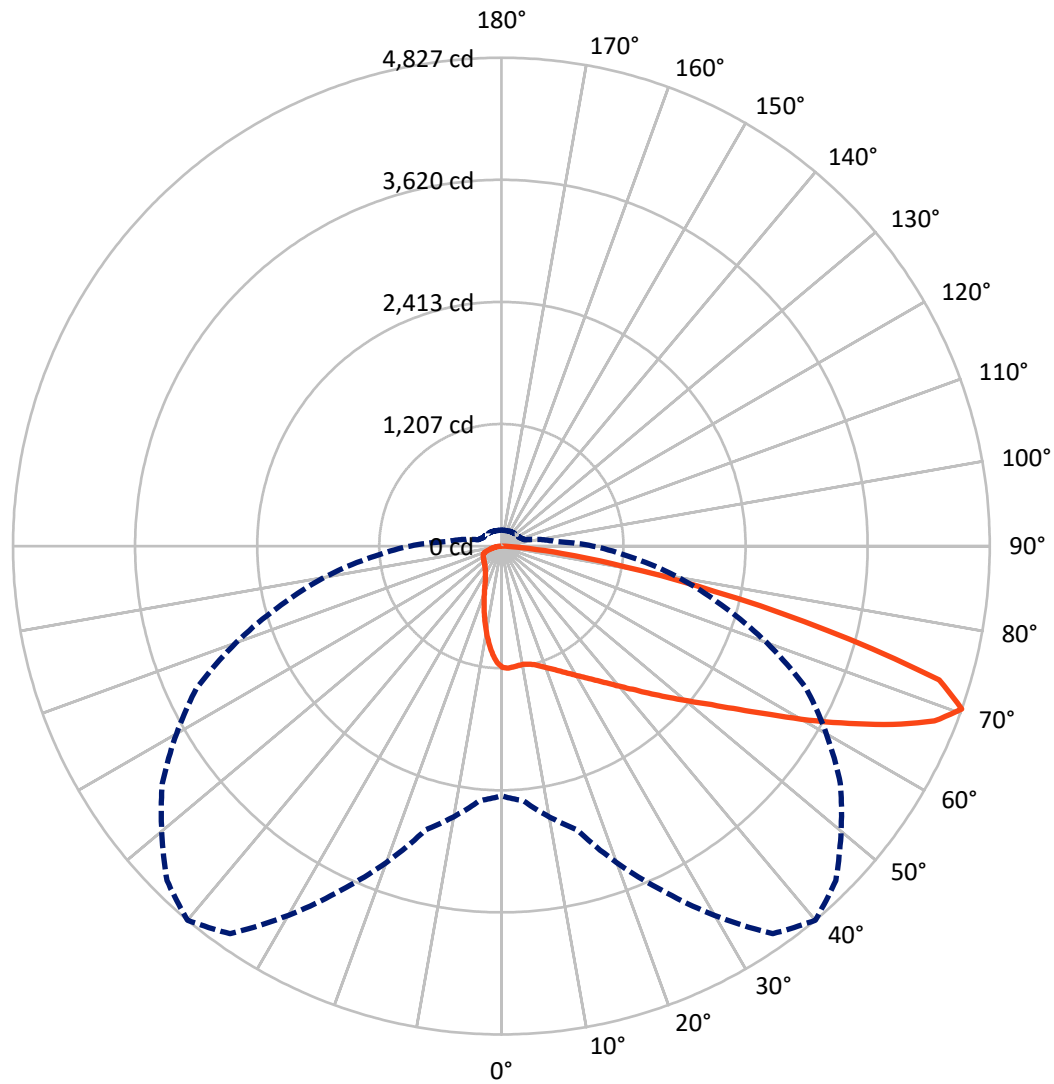


Based on 10 foot mounting height. Maximum calculated value = 12 fc
 Type IV - Short - N/A

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CATALOG NUMBER: GWS-SA2C-830-U-SL4-W

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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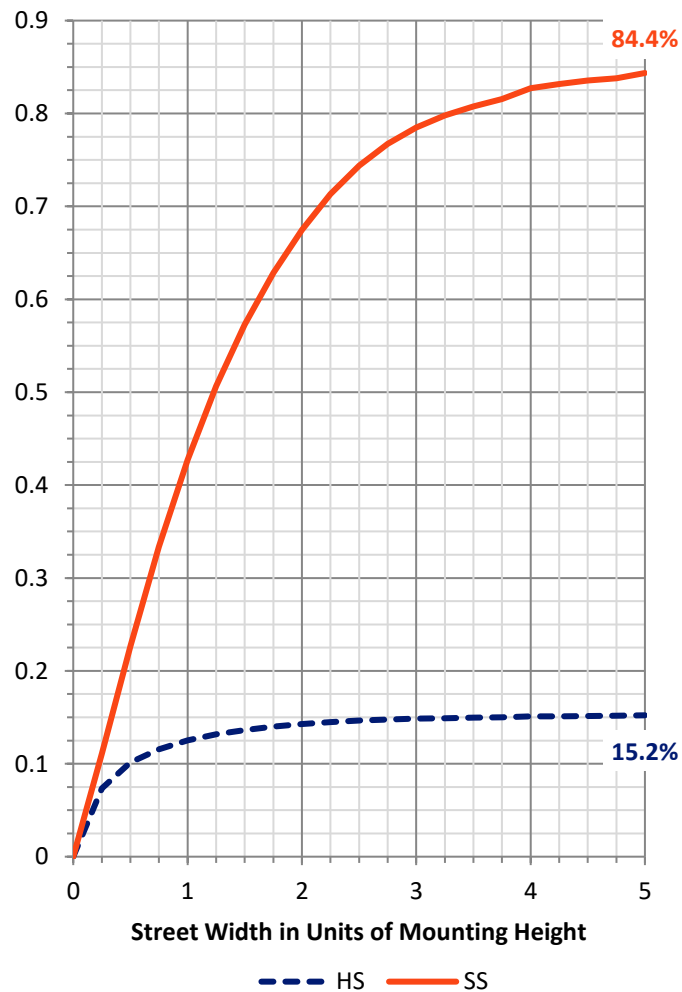
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1087.6	0.0	1087.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	5973.5	0.0	5973.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	7061.1	0.0	7061.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.9	1.5
10°-20°	276.1	3.9
20°-30°	433.5	6.1
30°-40°	651.8	9.2
40°-50°	1006.1	14.2
50°-60°	1494.2	21.2
60°-70°	1883.4	26.7
70°-80°	1089.1	15.4
80°-90°	120.9	1.7
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°	7061.1	100.0
0°-180°	7061.1	100.0

Coefficient of Utilization



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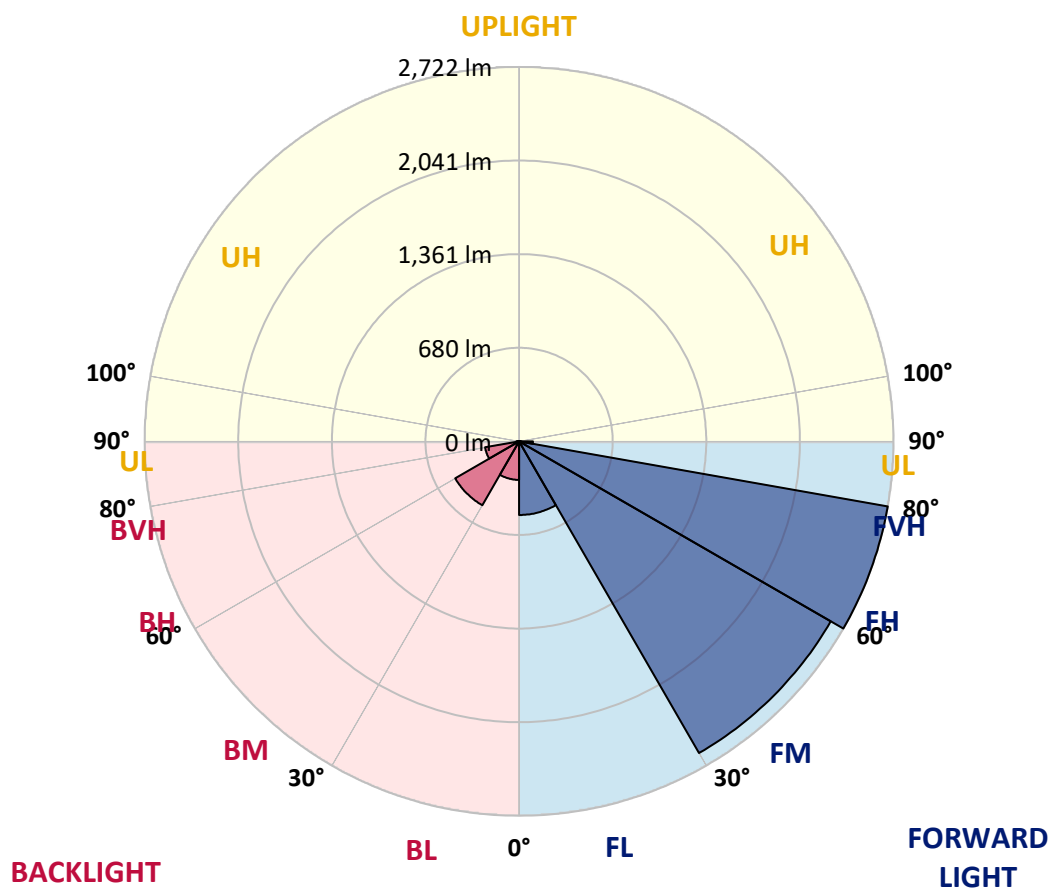
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	535.3	7.6			
FM	(30°-60°)	2616.0	37.0			
FH	(60°-80°)	2721.5	38.5			G2/5000
FVH	(80°-90°)	100.7	1.4			G2/225
BL	(0°-30°)	280.3	4.0	B1/500		
BM	(30°-60°)	536.1	7.6	B1/1000		
BH	(60°-80°)	251.0	3.6	B1/500		G1/500
BVH	(80°-90°)	20.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short



REPORT NUMBER: P632538

CATALOG NUMBER: GWS-SA2C-830-U-SL4-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1
2.5°	1206.4	1208.5	1210.1	1212.2	1211.2	1208.0	1210.7	1210.7	1204.9	1198.5	1192.7
5°	1208.0	1210.7	1210.1	1209.6	1205.4	1200.1	1200.1	1196.9	1186.9	1176.9	1167.4
7.5°	1204.9	1204.3	1203.8	1202.2	1197.5	1191.7	1190.6	1184.3	1171.1	1157.4	1143.7
10°	1190.6	1190.1	1191.7	1195.4	1194.3	1189.0	1189.0	1183.2	1168.0	1151.1	1133.2
12.5°	1179.0	1179.0	1185.4	1195.4	1199.1	1196.9	1197.5	1193.3	1175.9	1155.8	1134.8
15°	1180.6	1181.1	1194.8	1211.2	1218.0	1216.4	1217.0	1212.2	1192.7	1172.7	1144.2
17.5°	1191.1	1193.8	1217.5	1240.2	1249.1	1247.0	1243.3	1235.4	1213.3	1190.6	1155.8
20°	1213.3	1217.5	1248.1	1276.5	1287.1	1282.3	1276.0	1260.2	1235.9	1211.2	1168.5
22.5°	1257.0	1259.7	1293.4	1321.3	1329.8	1324.0	1311.3	1288.7	1260.7	1234.9	1183.8
25°	1318.7	1321.9	1354.0	1379.8	1377.7	1370.9	1353.5	1325.5	1292.3	1264.9	1205.9
27.5°	1392.0	1397.2	1428.9	1449.4	1435.7	1425.7	1406.2	1372.5	1335.0	1310.3	1239.6
30°	1472.1	1474.2	1501.1	1521.6	1500.5	1486.8	1463.1	1426.7	1393.0	1374.6	1290.2
32.5°	1549.5	1551.7	1574.8	1586.4	1564.3	1554.3	1533.7	1495.3	1471.5	1461.5	1365.6
35°	1631.2	1630.7	1649.7	1659.7	1637.0	1632.8	1611.7	1582.2	1578.0	1591.2	1475.8
37.5°	1712.9	1708.2	1718.2	1731.4	1718.7	1723.0	1709.2	1699.2	1715.6	1749.8	1622.3
40°	1778.3	1778.3	1788.8	1805.2	1809.4	1827.8	1819.9	1833.1	1885.8	1967.5	1803.6
42.5°	1836.3	1836.8	1858.9	1884.2	1914.8	1943.3	1949.6	1983.8	2092.9	2221.0	2031.3
45°	1896.9	1897.4	1927.4	1964.3	2029.2	2083.5	2096.1	2173.1	2329.1	2485.1	2278.5
47.5°	1967.0	1961.2	2002.8	2064.5	2156.7	2234.7	2267.4	2376.5	2573.6	2765.5	2511.4
50°	2046.0	2033.9	2080.3	2186.8	2300.6	2407.6	2462.4	2587.3	2836.1	3024.3	2730.7
52.5°	2135.1	2128.3	2176.7	2306.4	2480.3	2603.7	2678.0	2841.9	3091.2	3282.0	2904.6
55°	2245.8	2229.5	2299.6	2464.5	2691.2	2848.2	2936.2	3093.8	3370.0	3516.0	3037.4
57.5°	2367.0	2349.1	2442.9	2662.2	2965.2	3137.6	3247.7	3377.4	3632.5	3695.2	3115.4
60°	2497.7	2491.9	2603.1	2894.1	3292.0	3492.3	3571.9	3689.4	3860.7	3799.0	3095.9
62.5°	2617.4	2615.3	2777.1	3145.5	3638.3	3858.6	3921.8	3952.9	4025.1	3792.2	2941.0
65°	2743.3	2761.3	2980.0	3436.9	4035.2	4251.2	4277.6	4198.5	4080.5	3612.5	2623.7
67.5°	2759.1	2793.9	3107.5	3710.0	4411.5	4615.4	4594.4	4291.8	3917.1	3112.3	2056.6
70°	2467.7	2528.3	2904.1	3751.6	4676.6	4826.8	4674.5	4091.0	3324.2	2254.8	1293.4
72.5°	2061.8	2114.0	2446.1	3199.2	4334.5	4525.8	4319.8	3462.8	2349.1	1293.4	658.8
75°	1604.9	1665.5	1971.7	2543.1	3245.1	3321.5	3218.2	2415.0	1291.3	533.4	299.4
77.5°	979.3	1023.0	1261.2	1723.0	2270.6	2156.2	1827.3	1354.0	566.6	255.6	185.0
80°	433.2	460.1	621.4	925.5	1311.8	1240.2	977.7	578.2	309.9	162.3	129.1
82.5°	232.4	249.8	306.2	366.3	576.1	602.4	488.6	333.1	166.6	92.8	73.8
85°	102.2	112.3	139.1	132.8	189.2	186.1	187.6	228.7	79.6	42.7	48.0
87.5°	0.0	0.0	0.0	0.0	0.5	0.5	5.8	30.6	7.9	12.6	11.1
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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CATALOG NUMBER: GWS-SA2C-830-U-SL4-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1	1199.1
2.5°	1186.4	1176.9	1174.3	1171.1	1165.3	1155.3	1147.9	1139.5	1135.8	1131.6	1132.1
5°	1156.9	1145.3	1134.2	1120.0	1102.1	1082.0	1068.3	1052.5	1044.1	1036.2	1038.3
7.5°	1131.6	1113.7	1091.0	1061.0	1028.8	993.0	964.0	941.3	926.0	915.5	920.8
10°	1115.8	1094.7	1055.2	1006.2	951.9	897.1	855.4	816.4	792.2	773.2	772.1
12.5°	1112.6	1085.2	1027.8	956.6	878.1	804.8	743.7	691.0	658.8	635.1	644.1
15°	1115.8	1081.0	1004.0	910.8	811.7	712.6	636.7	576.1	537.6	516.0	514.4
17.5°	1119.5	1076.8	977.2	861.2	742.1	628.8	540.8	476.5	436.9	415.3	415.8
20°	1122.6	1070.5	945.5	806.9	671.5	550.8	459.6	398.5	363.1	347.3	350.0
22.5°	1127.9	1064.1	911.8	748.9	599.3	475.4	395.3	345.7	324.7	314.1	314.7
25°	1137.9	1060.4	877.0	685.7	528.1	415.3	351.0	317.8	304.6	298.3	297.8
27.5°	1158.5	1063.6	840.7	624.6	463.8	369.5	322.6	300.9	292.0	287.8	287.2
30°	1192.7	1076.3	809.0	562.4	408.5	333.6	303.1	289.9	284.6	280.9	280.4
32.5°	1244.9	1100.0	774.8	504.4	363.7	307.3	287.8	280.9	277.2	275.1	275.1
35°	1324.0	1143.2	741.0	453.8	328.9	286.7	275.7	273.0	269.9	268.8	269.9
37.5°	1437.8	1212.2	710.5	409.5	304.1	270.9	262.5	263.5	260.9	262.5	264.1
40°	1582.2	1304.5	684.6	373.2	285.7	259.3	250.9	254.6	253.0	254.6	257.2
42.5°	1765.1	1418.8	665.1	344.7	272.5	249.8	241.9	245.6	244.6	246.7	249.3
45°	1969.1	1569.6	656.2	324.7	263.0	243.0	234.5	237.2	236.1	237.7	240.3
47.5°	2164.6	1706.6	664.1	313.1	255.1	237.2	228.2	229.3	228.7	228.2	229.8
50°	2333.3	1815.7	686.8	309.4	249.8	231.4	222.9	223.5	221.9	218.7	219.8
52.5°	2470.8	1903.2	700.5	309.4	247.2	225.1	217.1	217.7	214.5	210.3	210.8
55°	2561.5	1938.5	689.4	308.9	246.1	219.8	211.4	211.9	208.7	203.4	204.0
57.5°	2587.3	1904.3	643.0	303.1	245.1	215.6	205.6	206.6	204.5	198.7	198.7
60°	2515.1	1778.8	558.2	289.9	242.4	212.9	201.3	202.9	201.9	196.1	196.1
62.5°	2325.9	1555.9	457.0	269.9	235.1	209.8	197.6	200.8	203.4	200.3	199.8
65°	1971.7	1246.5	371.6	247.7	225.6	204.5	192.4	200.3	206.1	210.3	210.3
67.5°	1479.5	892.3	303.1	224.5	211.4	194.0	185.5	192.9	197.1	199.8	201.3
70°	901.8	524.9	238.8	197.6	190.8	178.1	171.8	164.4	158.6	157.6	158.1
72.5°	441.1	300.4	194.0	168.1	162.9	151.3	137.0	133.9	131.2	129.7	129.1
75°	243.0	209.2	160.2	139.7	130.2	116.0	112.8	107.5	106.5	104.4	104.9
77.5°	171.8	165.0	132.3	113.3	99.1	91.7	93.3	89.6	89.6	88.0	87.5
80°	129.1	129.7	101.7	82.7	73.3	70.6	72.2	72.2	71.2	70.6	70.1
82.5°	81.7	92.2	68.5	53.2	52.2	52.7	52.2	51.7	52.7	51.1	50.6
85°	56.4	66.4	41.6	31.6	31.6	31.1	32.2	31.6	32.7	31.1	31.1
87.5°	12.6	29.5	15.3	9.5	10.0	9.5	10.0	10.5	11.6	12.1	12.1
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.

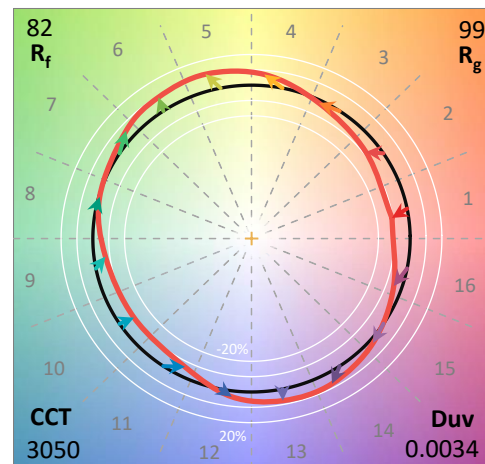
Test Information

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

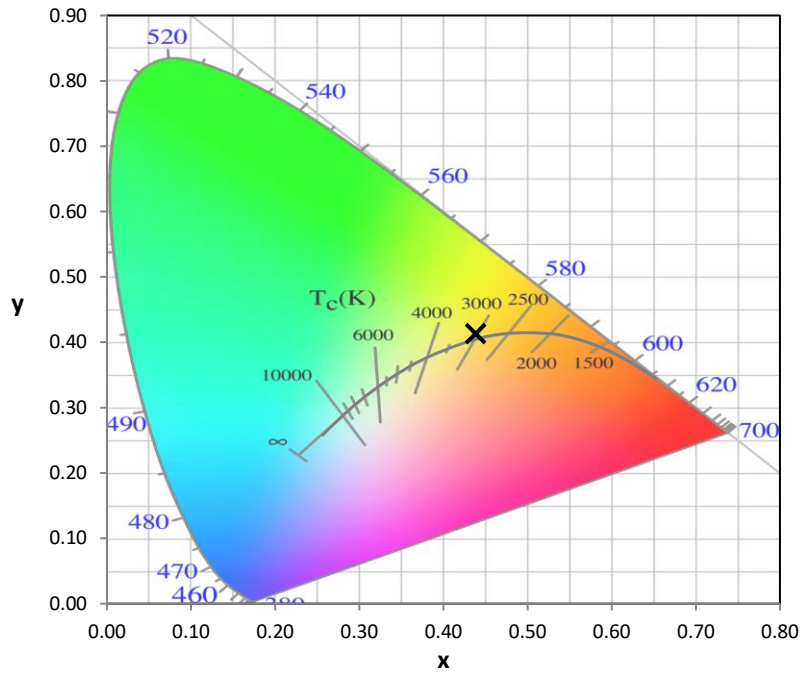
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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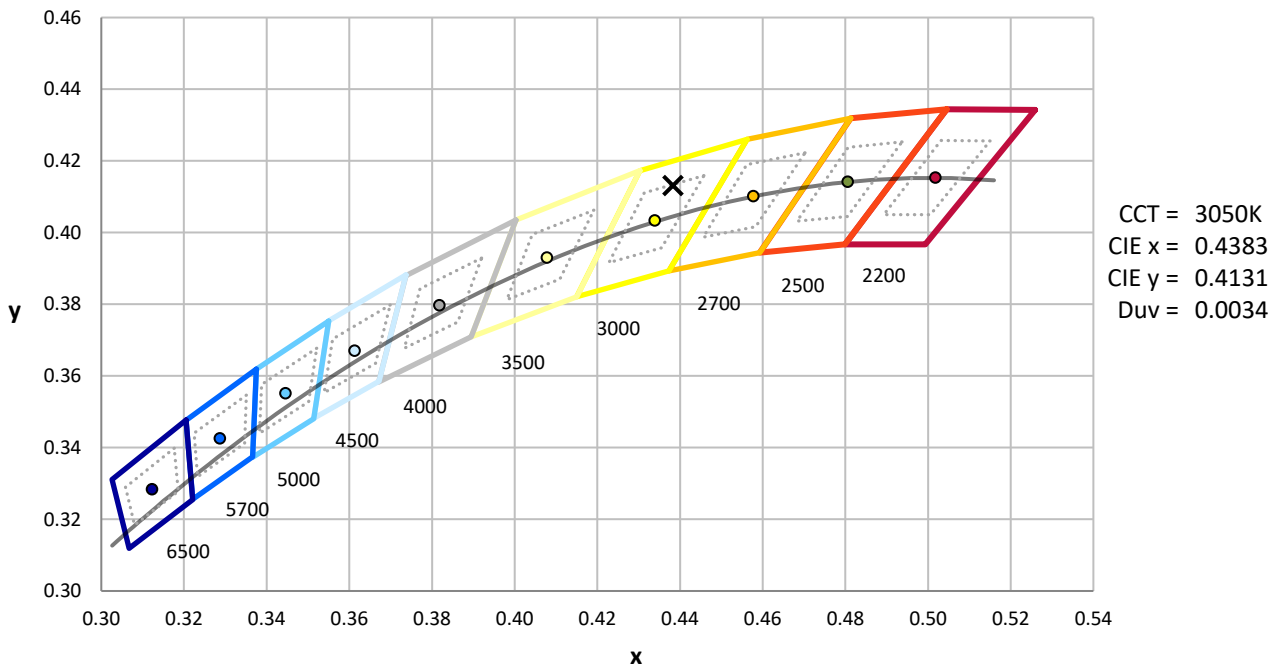
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



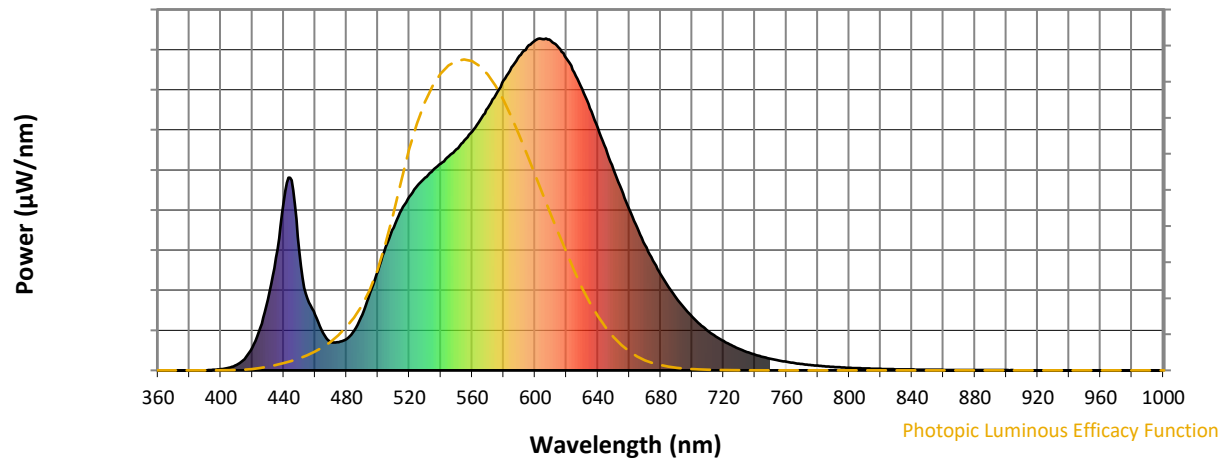
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

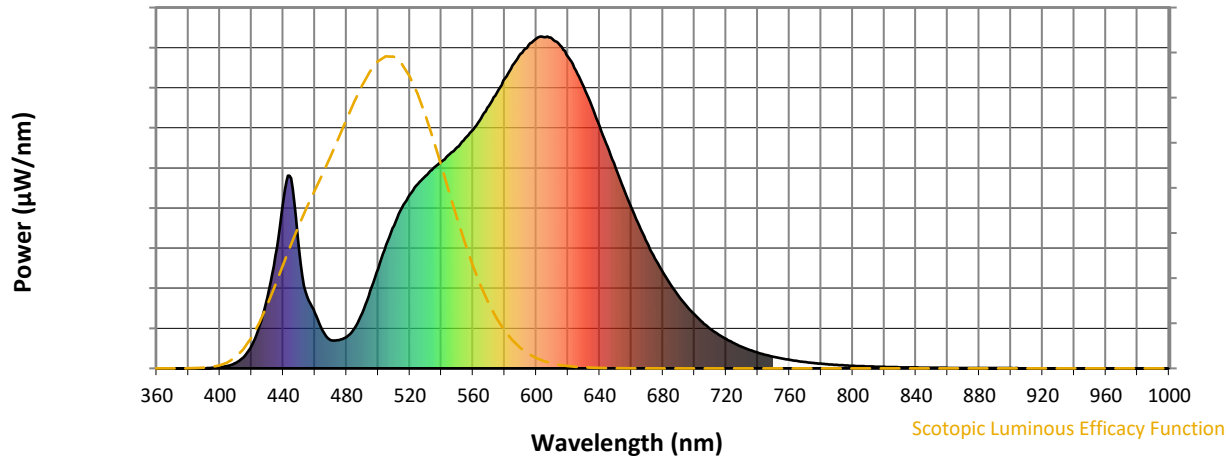


Photopic Lumens: NR

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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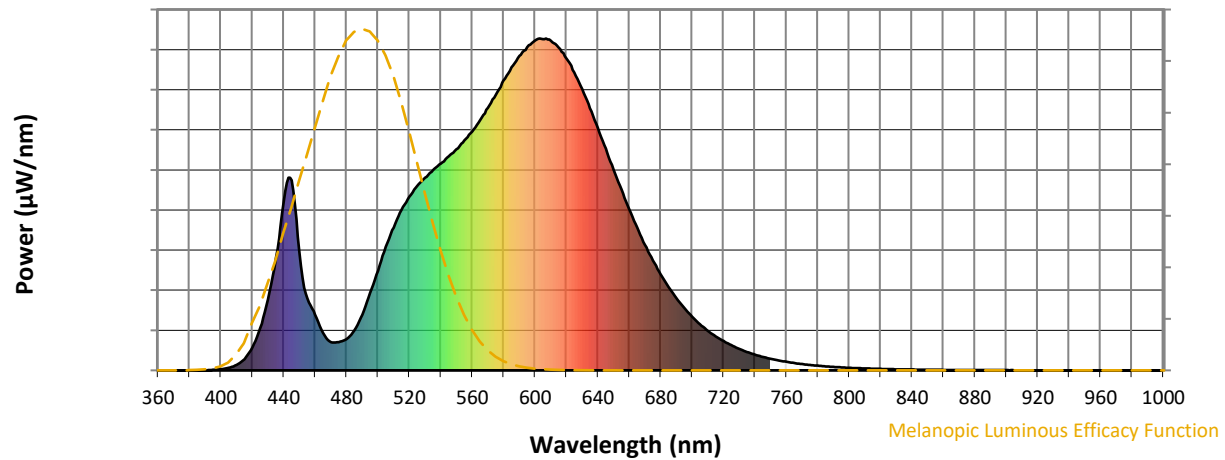
Scotopic Flux vs. Wavelength


Scotopic Lumens: NR
S/P: 1.27

λ (nm)	Power W ^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

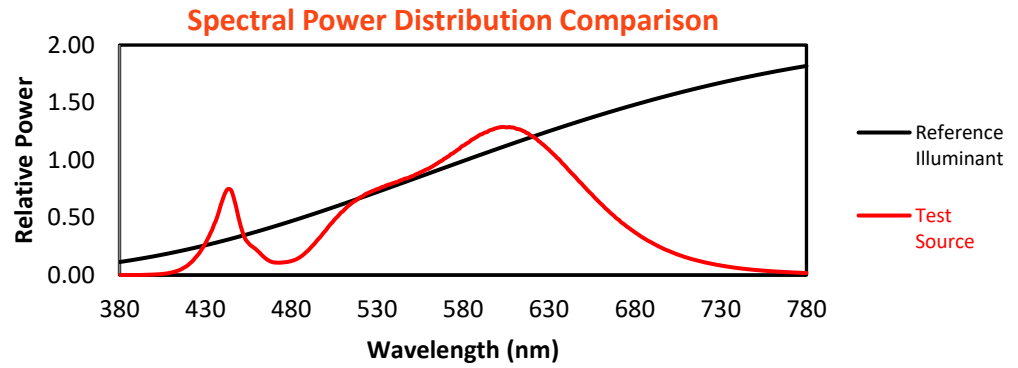
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940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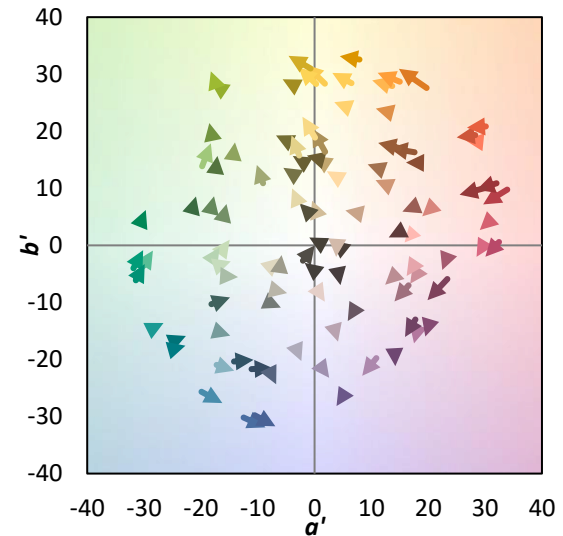
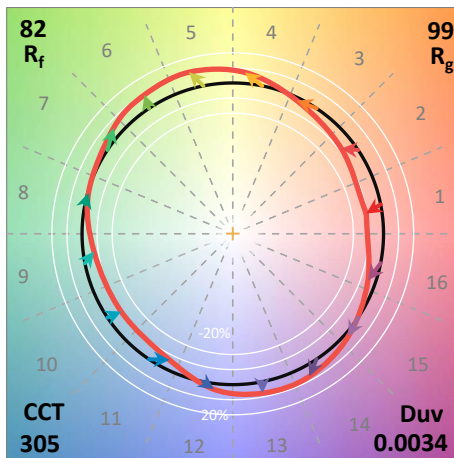
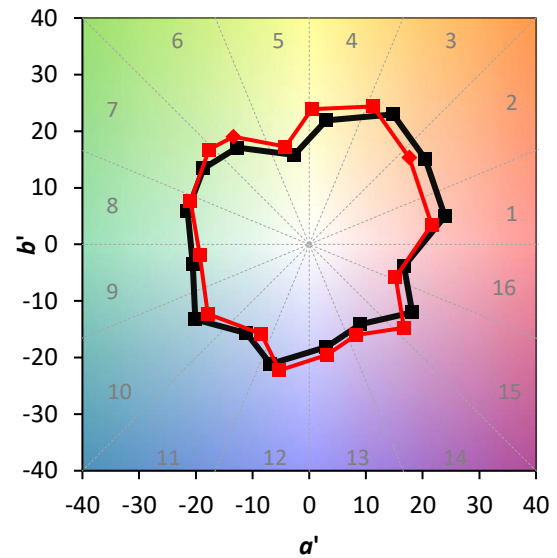
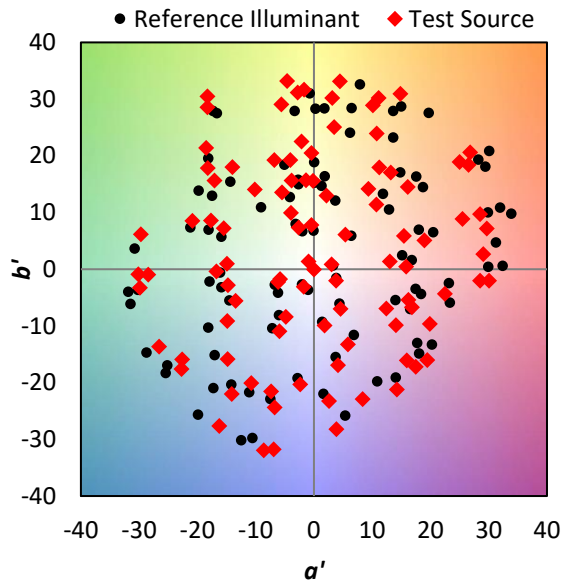
TM-30-18

Summary

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

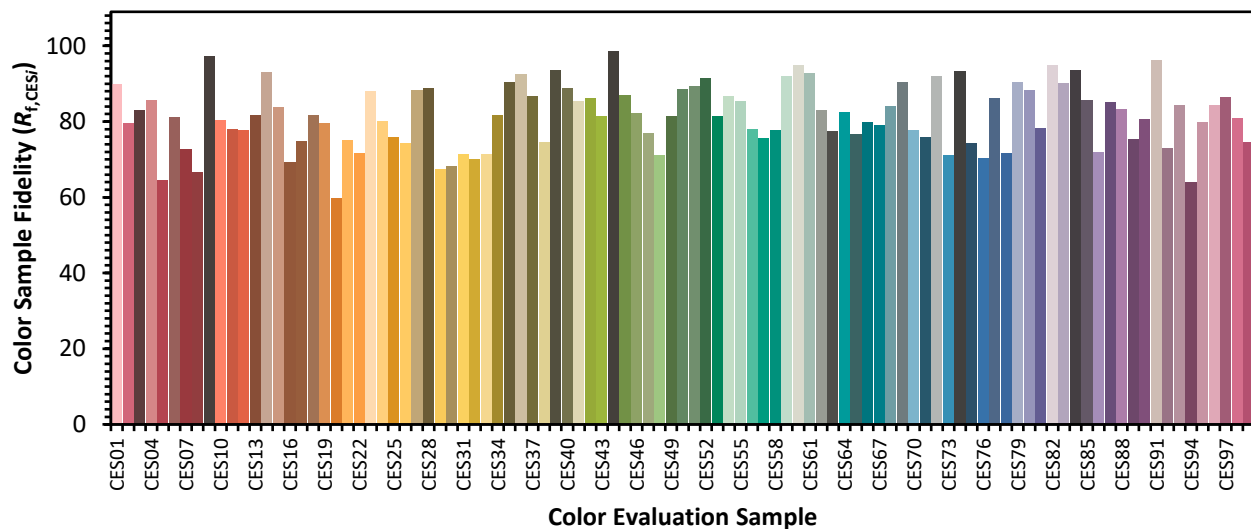


Color Vector Graphics

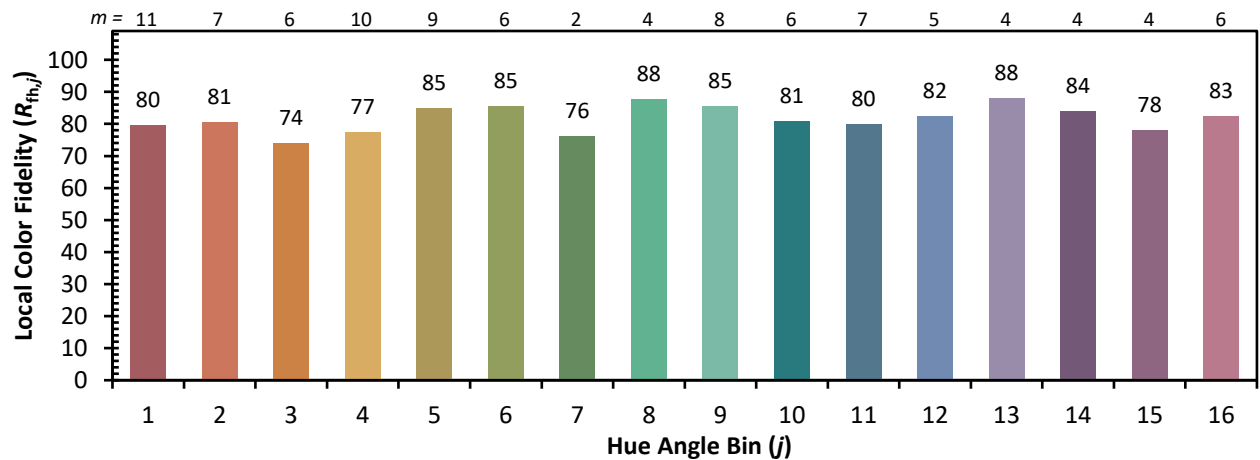
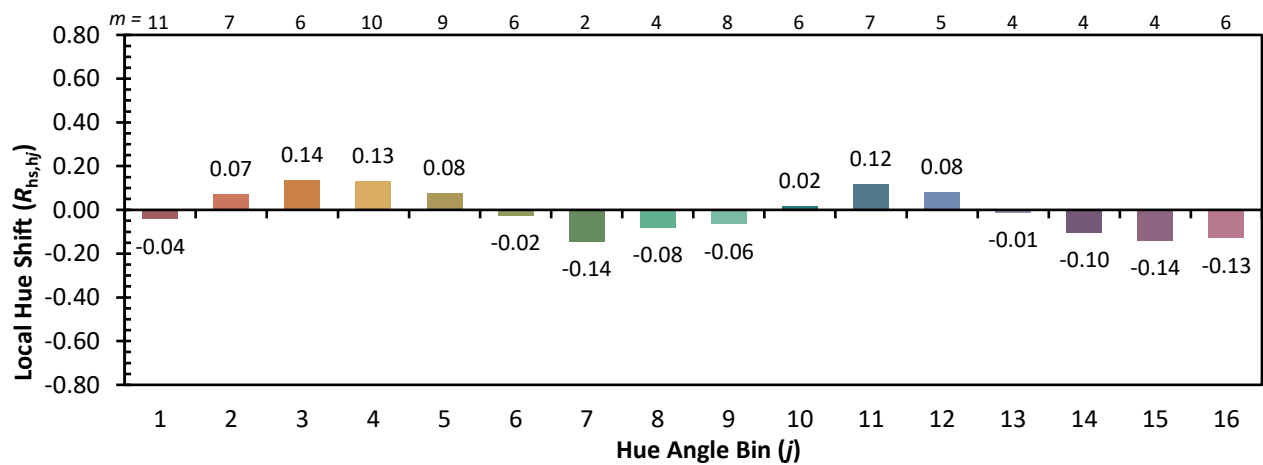
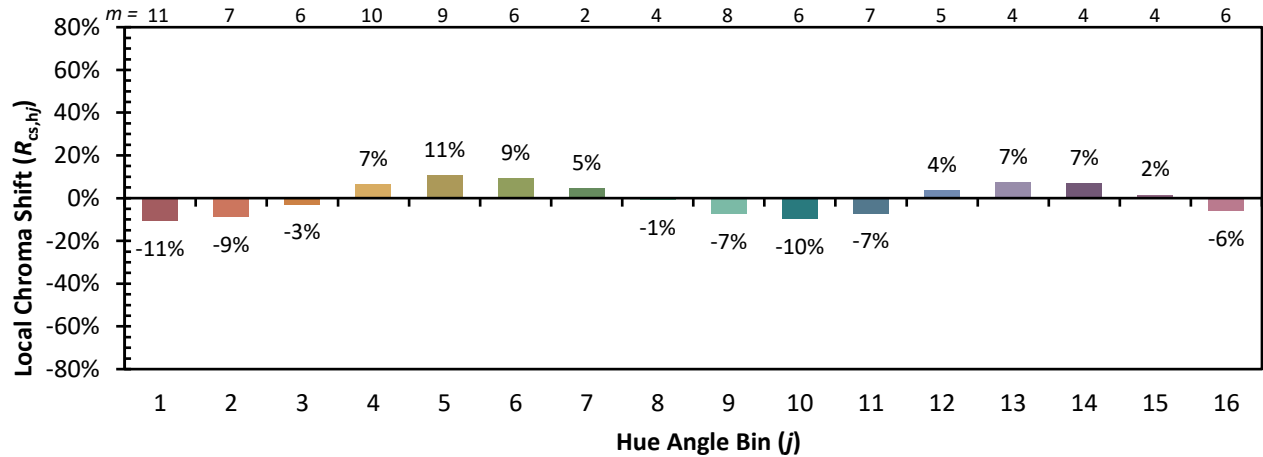


Individual Sample Fidelity Index ($R_{f,i}$)

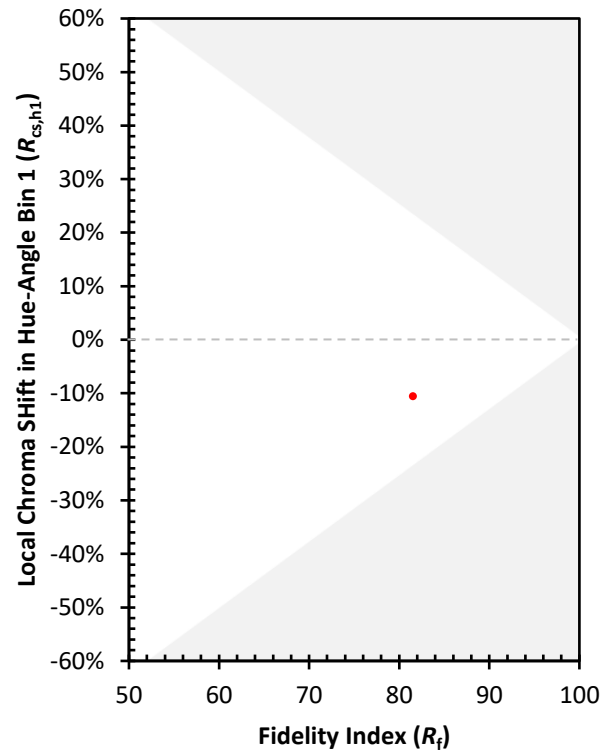
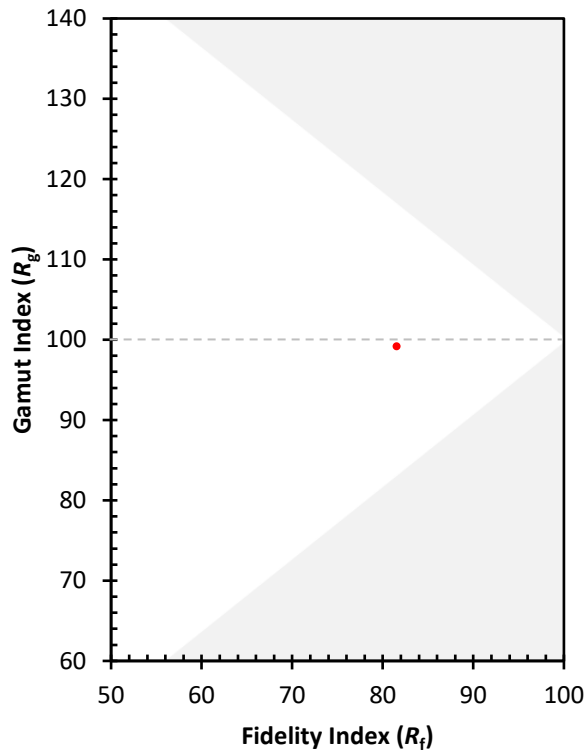
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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