

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: P320166

Luminaire Tested: **GLEON-SA2C-830-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P320166
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA2C-830-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10927 lumens
Efficiency: N/A
Efficacy: 96.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

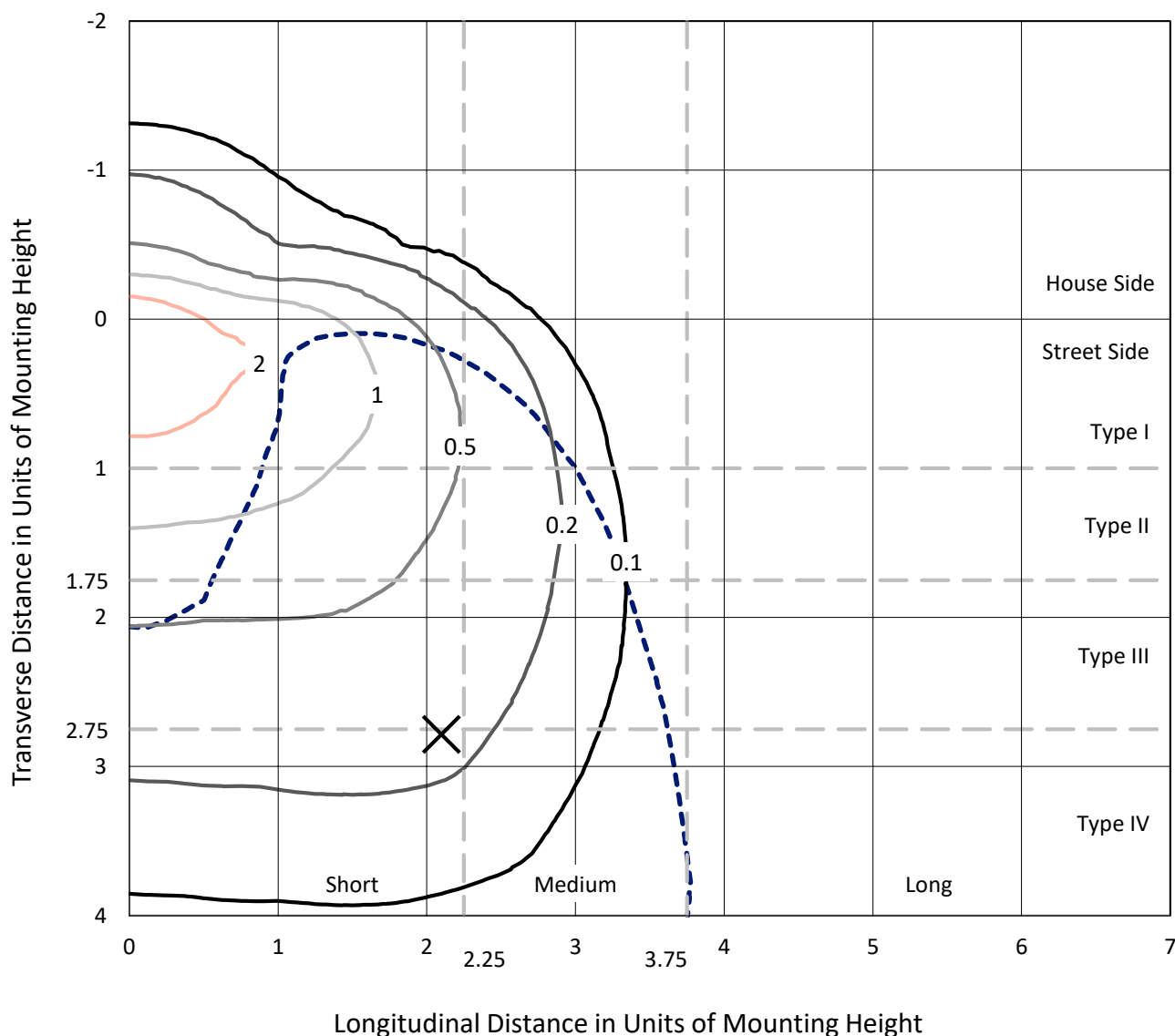
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

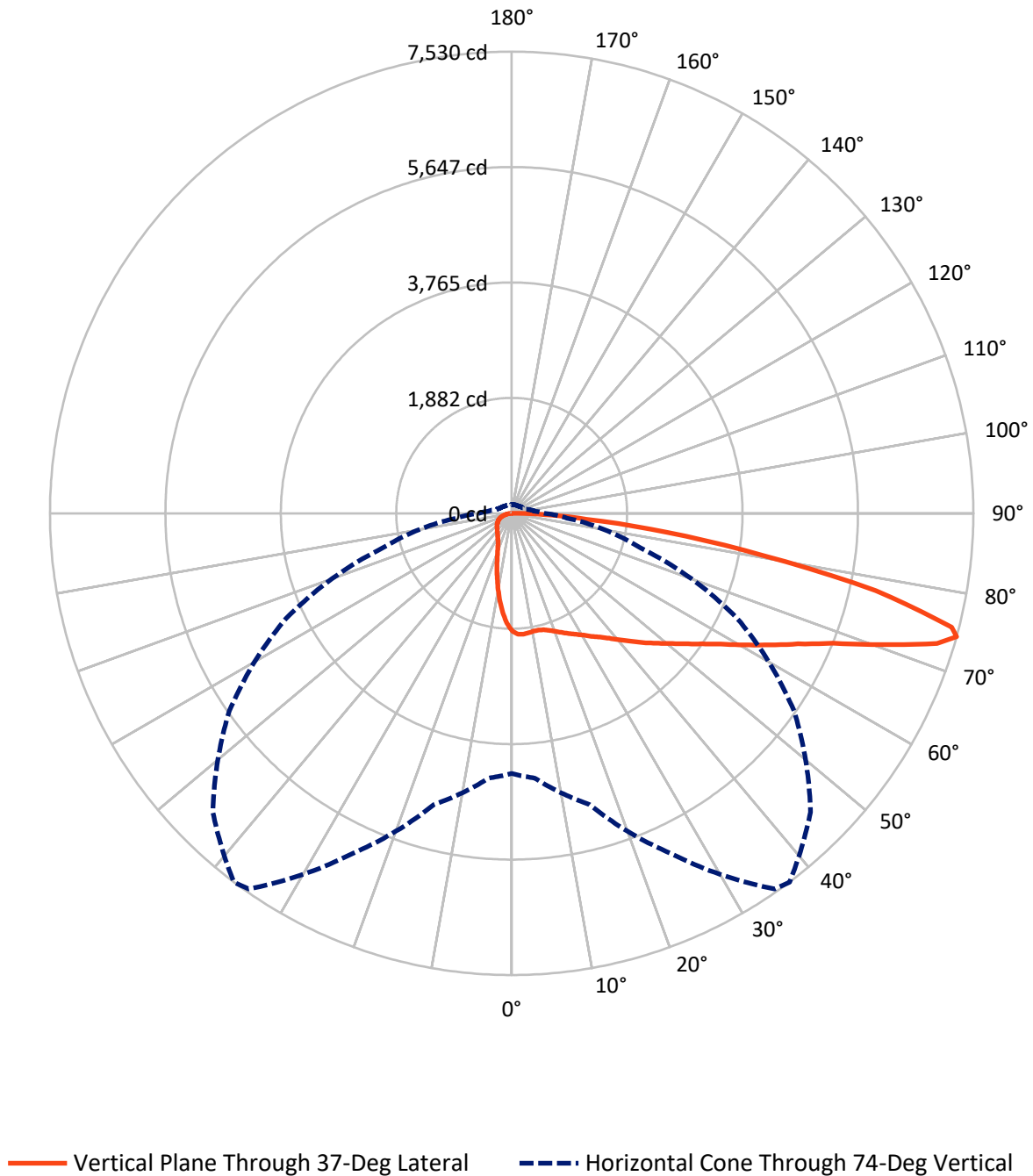
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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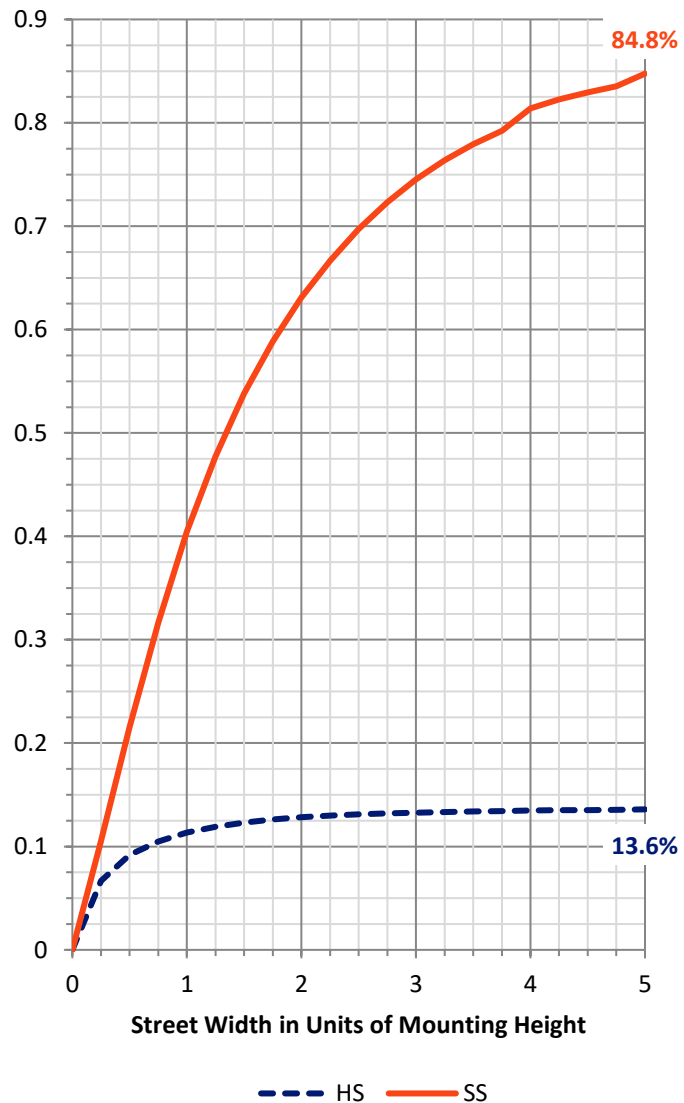
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1503.5	0.0	1503.5
	% Fixture	13.8	0.0	13.8
Street Side	Lumens	9423.5	0.0	9423.5
	% Fixture	86.2	0.0	86.2
Total	Lumens	10927.0	0.0	10927.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.5	1.6
10°-20°	434.6	4.0
20°-30°	669.6	6.1
30°-40°	973.7	8.9
40°-50°	1433.1	13.1
50°-60°	2012.6	18.4
60°-70°	2547.3	23.3
70°-80°	2243.0	20.5
80°-90°	443.5	4.1
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°	10927.0	100.0
0°-180°	10927.0	100.0

Coefficient of Utilization



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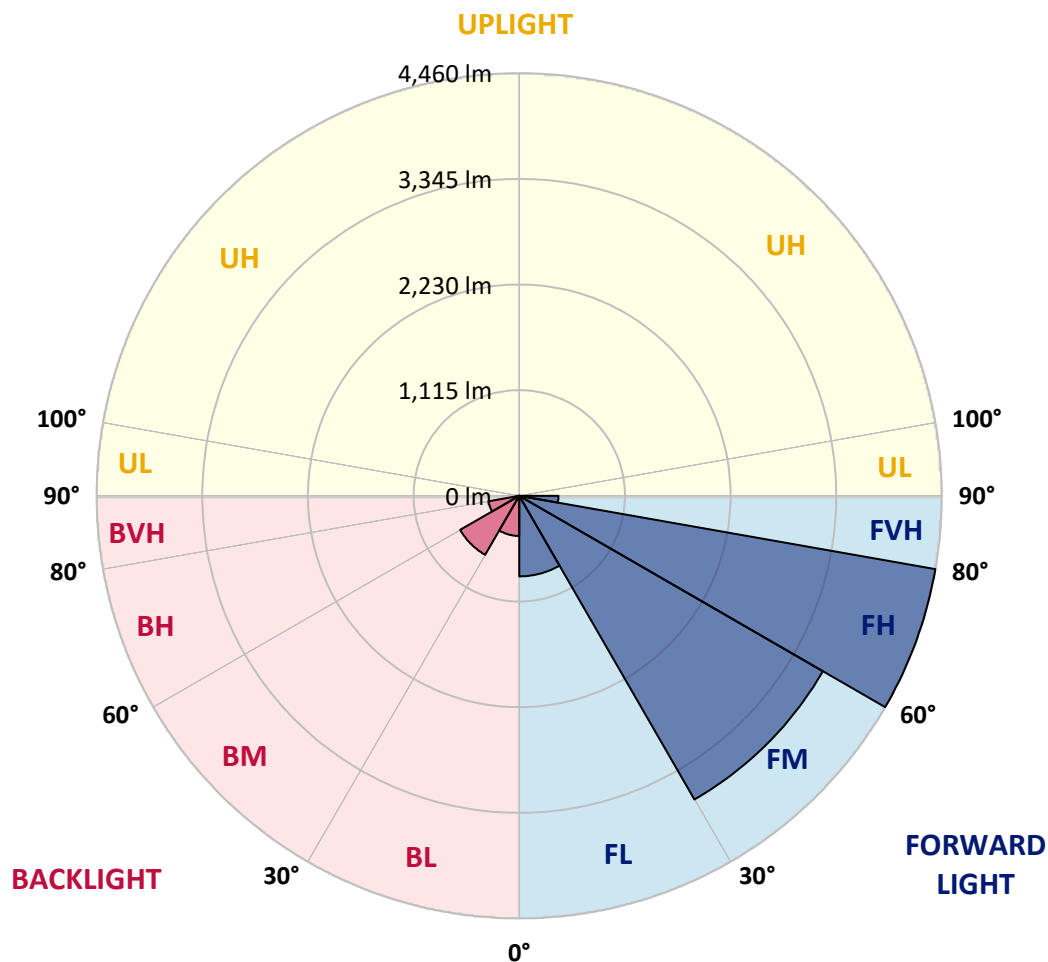
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	850.2	7.8			
FM	(30°-60°)	3700.0	33.9			
FH	(60°-80°)	4459.8	40.8			G2/5000
FVH	(80°-90°)	413.5	3.8			G3/500
BL	(0°-30°)	423.5	3.9	B1/500		
BM	(30°-60°)	719.5	6.6	B1/1000		
BH	(60°-80°)	330.5	3.0	B1/500		G1/500
BVH	(80°-90°)	30.0	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3
2.5°	1991.1	1991.5	1991.1	1988.0	1980.7	1974.6	1969.6	1962.2	1946.1	1933.8	1915.3
5°	2010.0	2007.7	2006.1	2000.4	1988.8	1981.9	1972.3	1958.4	1931.8	1907.2	1877.2
7.5°	2001.1	1998.4	1995.0	1988.0	1974.9	1969.2	1955.7	1937.6	1905.7	1873.3	1830.2
10°	1973.8	1973.0	1971.5	1969.9	1958.8	1954.2	1941.8	1922.6	1891.0	1851.8	1801.4
12.5°	1943.4	1945.3	1951.5	1959.6	1954.5	1952.2	1944.5	1931.5	1899.1	1856.8	1796.0
15°	1924.1	1929.5	1946.1	1967.2	1971.5	1970.7	1968.8	1960.3	1926.1	1879.1	1808.3
17.5°	1917.6	1926.4	1958.0	1993.0	2005.4	2008.0	2008.8	1994.2	1956.1	1906.4	1821.0
20°	1929.5	1940.7	1986.9	2035.0	2054.6	2056.2	2052.7	2027.3	1984.6	1929.9	1827.9
22.5°	1965.7	1975.7	2033.5	2087.7	2110.0	2112.4	2102.0	2063.5	2014.6	1957.6	1837.5
25°	2035.4	2047.7	2105.4	2159.7	2171.2	2171.6	2156.6	2108.9	2053.9	1996.5	1858.3
27.5°	2126.2	2138.5	2190.5	2243.6	2237.5	2234.0	2213.6	2165.9	2105.0	2050.0	1895.3
30°	2227.4	2240.9	2290.2	2327.9	2313.3	2306.4	2289.8	2228.2	2176.3	2123.1	1951.9
32.5°	2332.1	2344.5	2387.6	2413.4	2394.9	2391.8	2366.8	2310.6	2269.0	2234.8	2043.5
35°	2439.5	2448.4	2490.7	2505.3	2480.7	2479.9	2473.0	2421.4	2395.3	2411.4	2176.6
37.5°	2549.2	2551.5	2587.7	2588.5	2581.2	2584.3	2591.6	2559.2	2566.5	2617.0	2349.8
40°	2647.0	2653.2	2679.3	2687.4	2700.1	2710.9	2747.5	2726.3	2782.9	2872.2	2565.4
42.5°	2719.4	2731.3	2773.2	2794.0	2835.2	2852.1	2903.7	2923.4	3037.3	3171.2	2821.7
45°	2780.6	2799.0	2866.4	2909.1	2978.8	3008.4	3082.3	3148.1	3324.8	3495.7	3091.6
47.5°	2846.8	2870.2	2954.5	3036.1	3130.8	3164.3	3298.6	3397.2	3631.6	3822.1	3346.0
50°	2944.1	2962.2	3044.6	3172.8	3290.9	3334.0	3520.0	3661.2	3943.4	4133.1	3566.5
52.5°	3080.0	3073.1	3142.7	3322.5	3481.1	3534.2	3756.3	3942.2	4259.4	4414.5	3752.8
55°	3216.7	3205.1	3254.0	3479.2	3702.8	3758.6	4016.5	4224.3	4560.0	4667.7	3895.6
57.5°	3368.7	3346.7	3387.9	3655.8	3955.3	4021.9	4307.9	4524.2	4855.6	4872.5	3986.5
60°	3525.3	3495.7	3541.9	3874.8	4275.9	4354.4	4648.9	4816.7	5134.2	5036.5	4015.7
62.5°	3662.4	3641.6	3712.8	4119.3	4637.3	4723.6	4983.8	5127.7	5409.1	5104.6	3910.3
65°	3782.1	3785.5	3908.7	4394.1	5040.3	5132.3	5367.9	5511.1	5625.4	5064.2	3663.5
67.5°	3924.9	3944.5	4154.7	4755.9	5547.6	5648.5	5926.8	5929.1	5746.2	4827.1	3177.8
70°	4133.1	4173.5	4493.0	5257.8	6268.9	6407.5	6622.3	6174.6	5576.5	4184.3	2500.3
72.5°	4317.9	4393.3	4852.9	5832.1	7148.1	7253.2	7029.1	6033.0	4867.1	3135.8	1557.7
74°	4242.8	4336.3	4918.3	6115.0	7479.1	7529.5	6891.7	5619.6	4058.1	2171.6	905.3
75°	4081.1	4182.8	4822.9	6112.3	7437.1	7409.0	6559.9	5147.3	3342.1	1481.1	602.4
77.5°	3293.6	3401.0	4063.8	5238.6	6098.1	6071.5	5039.2	3453.0	1463.8	485.8	306.0
80°	1914.9	1996.9	2522.7	3326.7	4111.9	4160.1	3314.0	1708.6	575.8	272.9	207.5
82.5°	850.6	907.2	1218.6	1698.2	2481.5	2543.5	1735.5	895.3	355.7	165.9	124.7
85°	558.1	600.1	739.8	808.7	1181.7	1224.0	849.5	697.1	234.8	91.2	91.6
87.5°	401.5	441.9	549.6	480.0	542.3	513.5	462.3	645.1	94.3	52.0	30.8
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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CATALOG NUMBER: GLEON-SA2C-830-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3	1925.3
2.5°	1907.2	1901.0	1887.2	1861.0	1846.4	1834.1	1813.7	1801.7	1796.4	1796.0	1798.3
5°	1859.9	1845.6	1809.8	1765.9	1730.9	1699.0	1659.3	1635.5	1618.5	1608.5	1611.2
7.5°	1804.8	1782.5	1726.3	1656.2	1600.1	1538.1	1476.9	1440.3	1411.8	1390.7	1394.5
10°	1767.1	1736.3	1654.3	1553.5	1459.9	1369.9	1285.6	1235.2	1195.1	1164.3	1166.6
12.5°	1754.4	1712.8	1599.3	1464.6	1333.3	1210.1	1100.1	1022.7	981.5	946.5	949.2
15°	1756.3	1700.5	1553.1	1384.5	1219.4	1064.3	930.7	840.2	784.4	760.2	760.6
17.5°	1757.9	1686.3	1504.6	1298.7	1106.6	928.0	782.9	691.3	638.6	616.2	616.6
20°	1752.9	1663.2	1444.5	1200.1	988.8	802.9	662.4	584.7	544.6	527.3	527.3
22.5°	1746.3	1635.8	1376.8	1101.2	872.6	694.4	576.2	516.9	493.8	482.3	481.9
25°	1749.4	1615.4	1307.5	999.6	765.6	607.8	518.9	479.6	464.2	456.9	456.5
27.5°	1765.9	1605.8	1243.6	898.4	672.0	542.7	480.4	452.6	442.6	438.0	438.0
30°	1796.0	1605.8	1177.0	812.1	594.3	494.6	450.7	431.9	424.9	421.9	421.9
32.5°	1848.3	1614.7	1112.8	726.7	532.3	456.9	426.1	413.4	408.0	406.5	406.5
35°	1938.4	1644.7	1050.0	645.9	482.3	426.1	402.6	395.3	391.4	391.1	392.2
37.5°	2065.0	1705.9	991.1	586.2	446.9	401.1	383.0	377.2	374.9	376.8	378.4
40°	2224.4	1789.0	937.6	532.3	419.9	381.1	364.9	361.0	359.9	362.6	364.9
42.5°	2416.8	1901.4	893.7	493.4	399.1	364.1	349.5	344.9	343.7	346.8	349.9
45°	2625.1	2022.3	863.0	464.6	383.0	351.4	336.0	331.0	328.7	330.2	333.7
47.5°	2814.4	2136.6	850.6	444.2	367.6	340.6	324.1	317.9	314.1	313.3	316.0
50°	2974.2	2221.7	856.4	431.9	355.3	328.7	312.5	305.6	299.8	296.4	298.3
52.5°	3090.4	2275.2	861.8	426.5	345.6	315.6	299.8	293.3	285.6	279.8	279.8
55°	3174.7	2287.5	849.9	422.2	338.3	301.4	285.6	279.4	271.7	265.2	264.4
57.5°	3207.8	2252.8	805.6	416.1	333.3	287.9	270.6	266.0	259.4	251.7	251.3
60°	3163.1	2145.8	720.2	403.0	326.8	276.7	255.6	252.5	249.4	242.1	241.7
62.5°	2983.8	1911.1	609.7	376.4	313.7	264.8	241.7	243.3	243.6	238.6	237.9
65°	2658.5	1588.5	501.9	341.8	294.1	250.6	227.5	234.8	239.0	238.3	237.1
67.5°	2185.9	1236.3	425.3	305.2	268.3	230.9	212.1	220.6	224.0	226.7	225.9
70°	1622.4	871.8	351.8	266.7	237.1	207.8	192.1	196.3	194.0	197.1	198.2
72.5°	904.5	523.1	286.8	228.2	204.8	180.9	169.7	169.0	164.0	164.0	164.0
74°	542.7	383.8	252.1	204.4	185.1	163.2	153.6	150.1	145.5	145.9	145.5
75°	436.5	329.9	231.3	188.6	171.3	152.8	143.2	138.6	135.1	135.1	134.7
77.5°	275.6	250.6	186.3	150.1	137.0	125.9	119.3	113.2	113.2	112.8	112.4
80°	208.2	199.4	145.1	113.5	105.1	96.6	92.4	89.7	89.7	90.8	90.5
82.5°	142.8	150.1	102.0	79.3	75.1	68.9	68.1	68.5	67.4	65.8	65.4
85°	104.3	112.8	68.9	50.0	45.8	42.0	45.0	46.6	44.6	41.2	39.6
87.5°	40.0	73.9	37.0	20.8	19.2	16.6	19.2	20.0	21.6	16.9	17.3
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

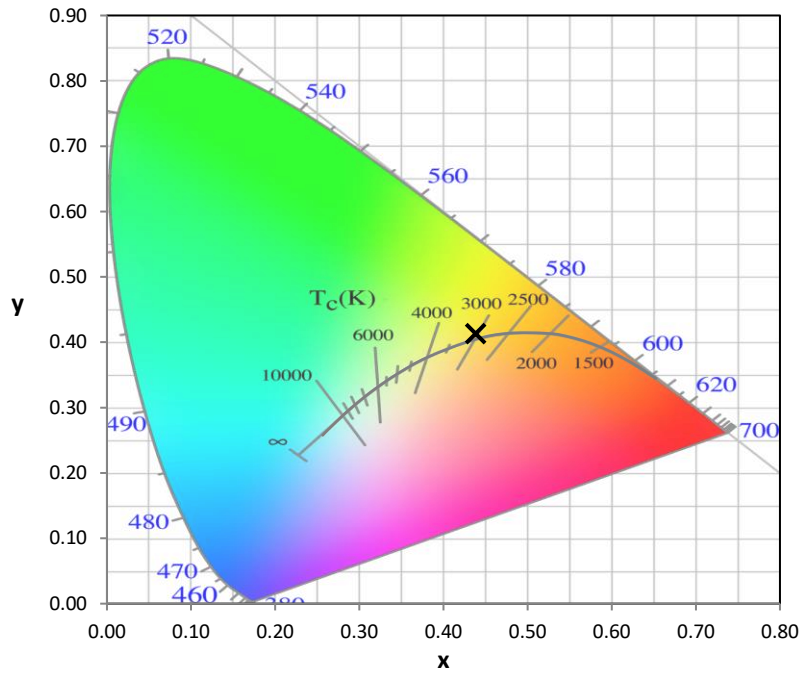
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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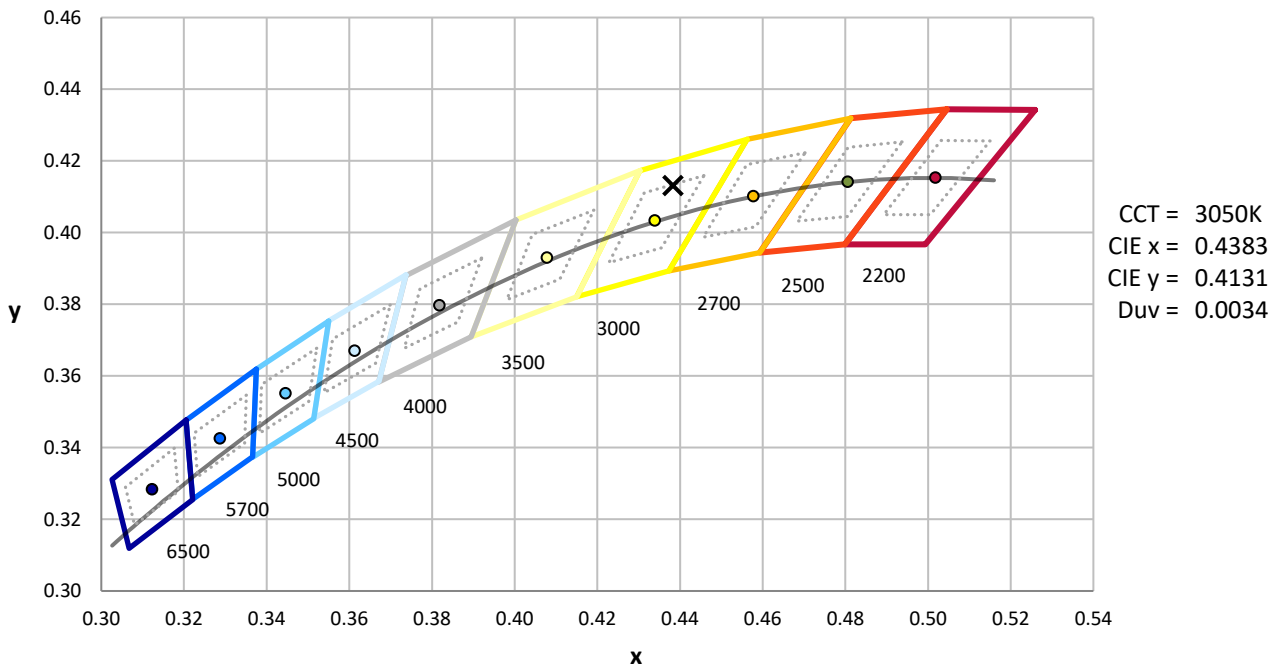
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

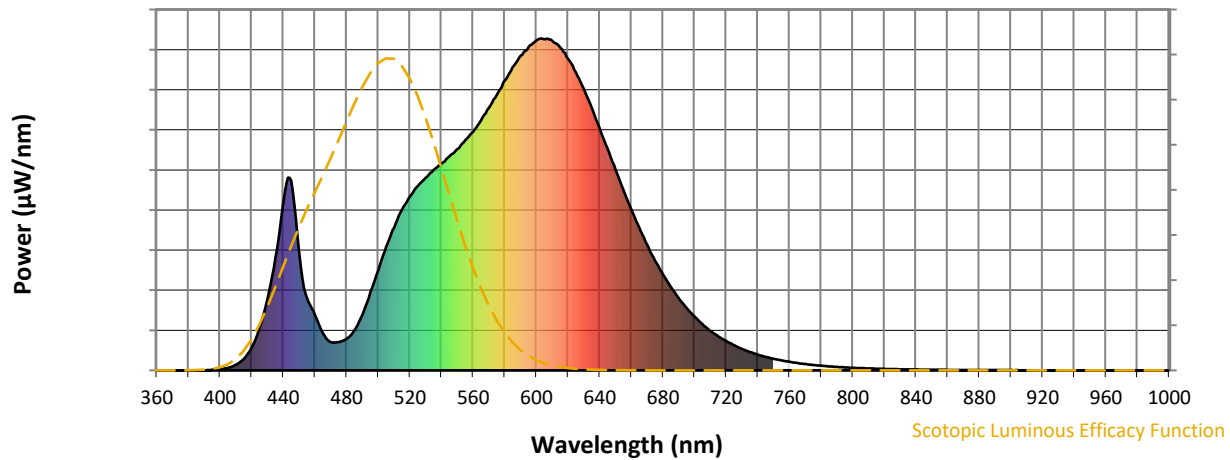


Photopic Lumens: NR

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



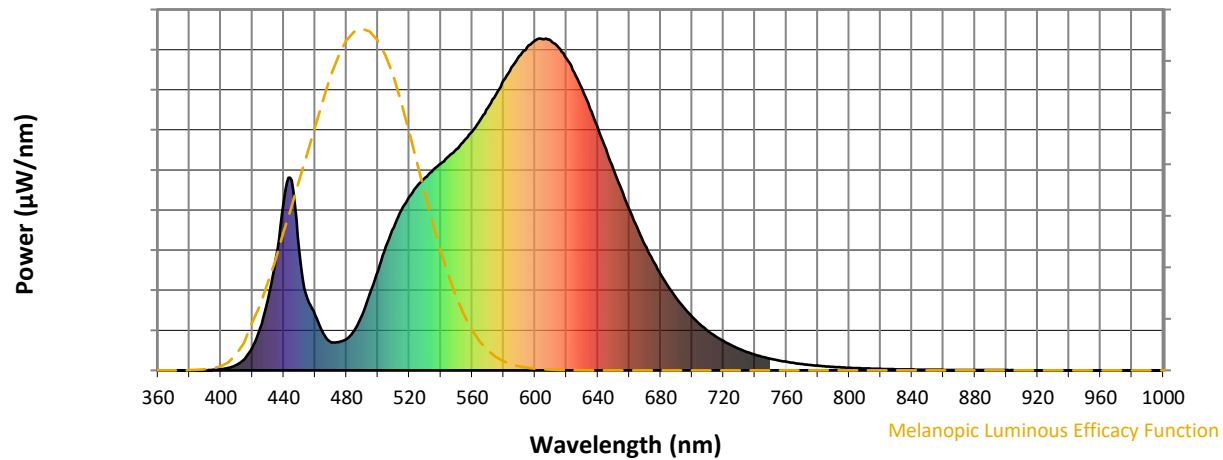
Scotopic Lumens: NR

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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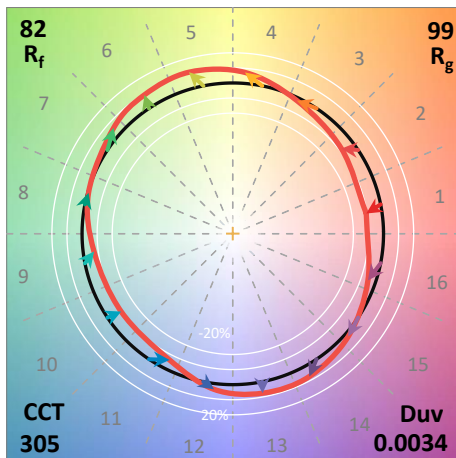
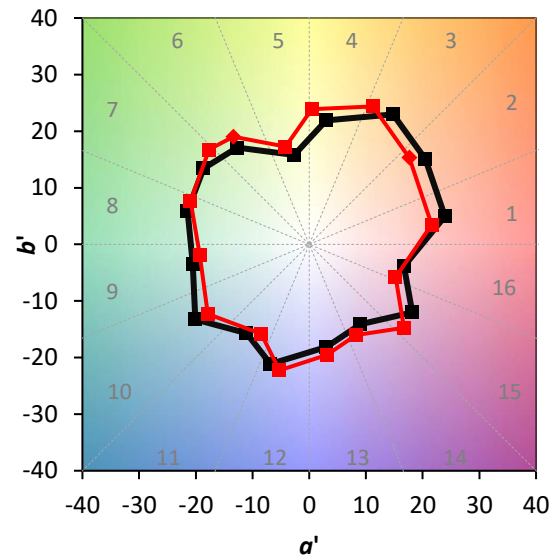
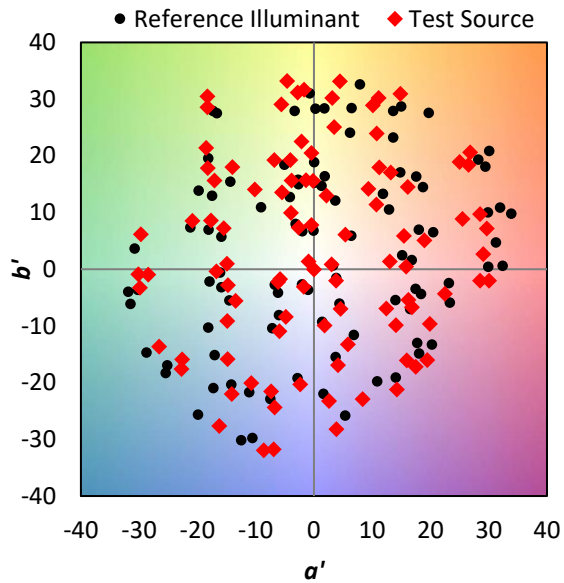
TM-30-18

Summary

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

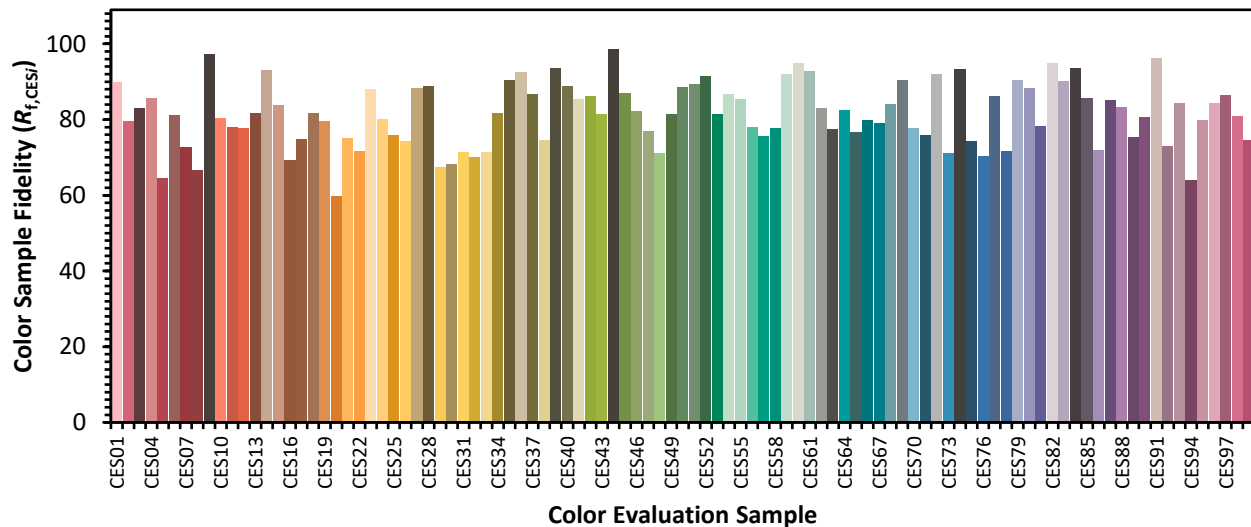


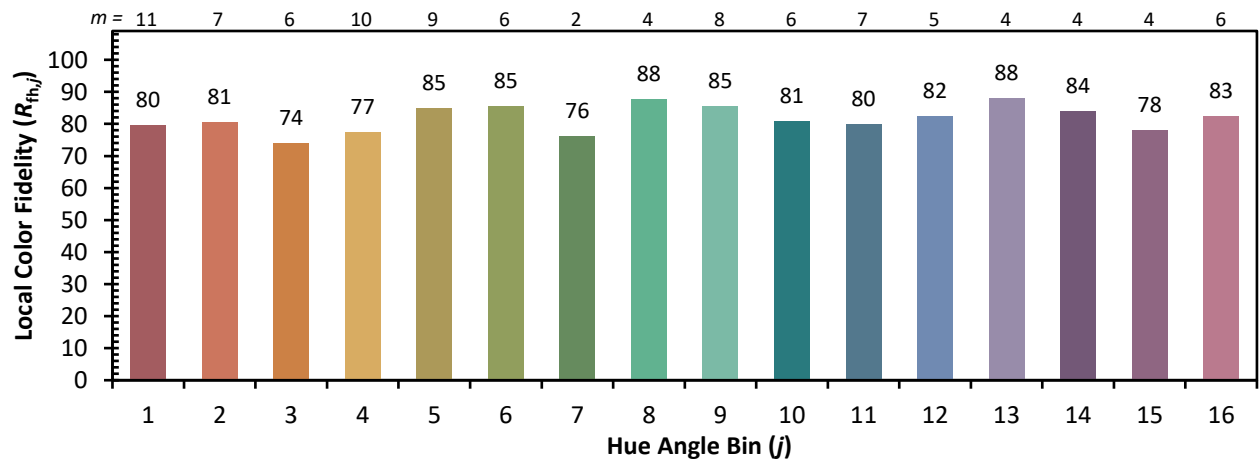
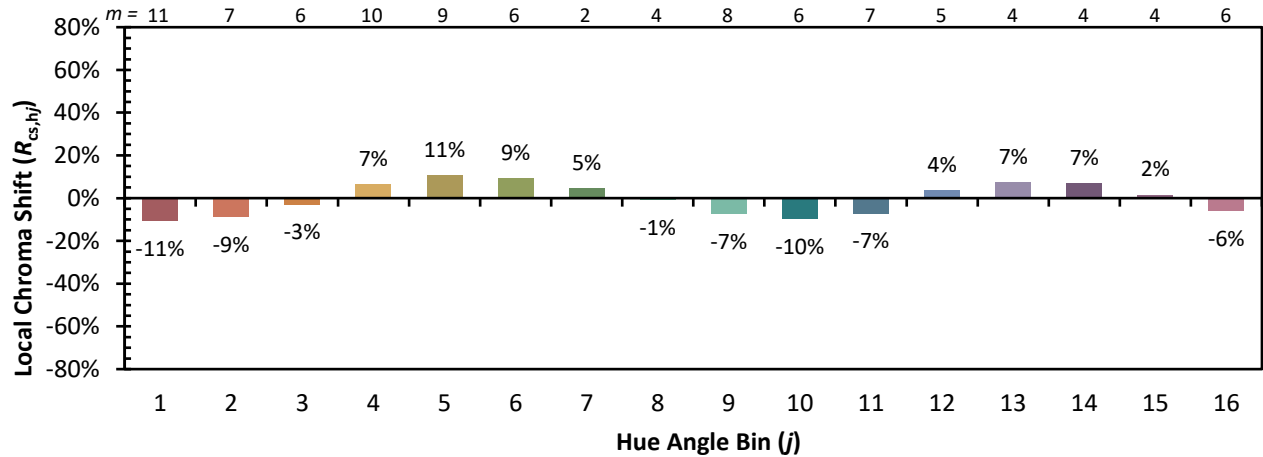
Color Vector Graphics



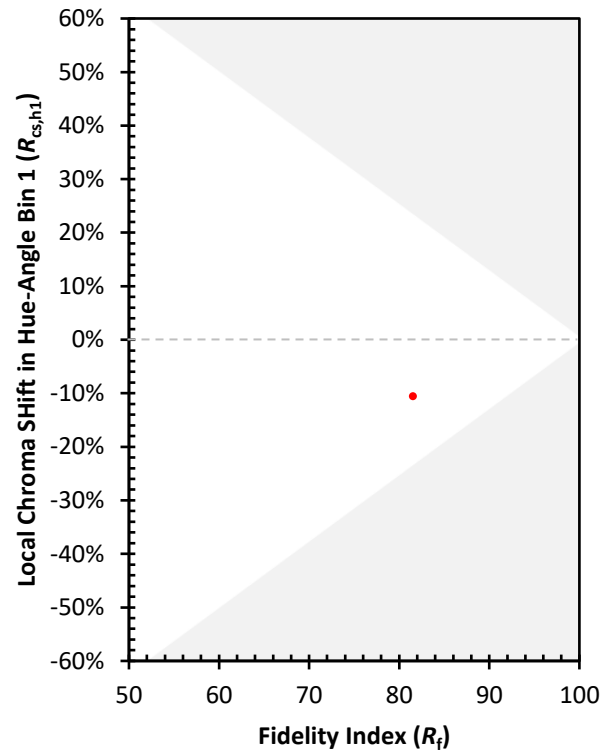
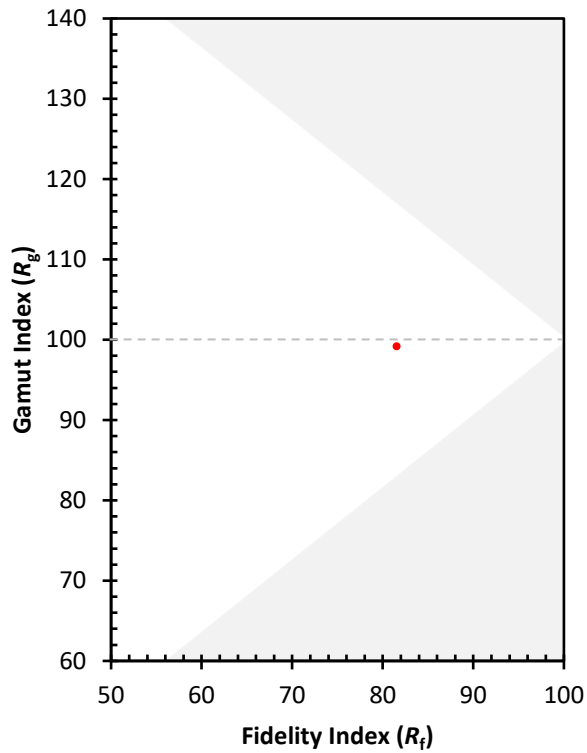
Individual Sample Fidelity Index ($R_{f,i}$)

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)