

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: P318878

Luminaire Tested: **GLEON-SA4B-830-U-T4FT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P318878
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA4B-830-U-T4FT
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18428 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

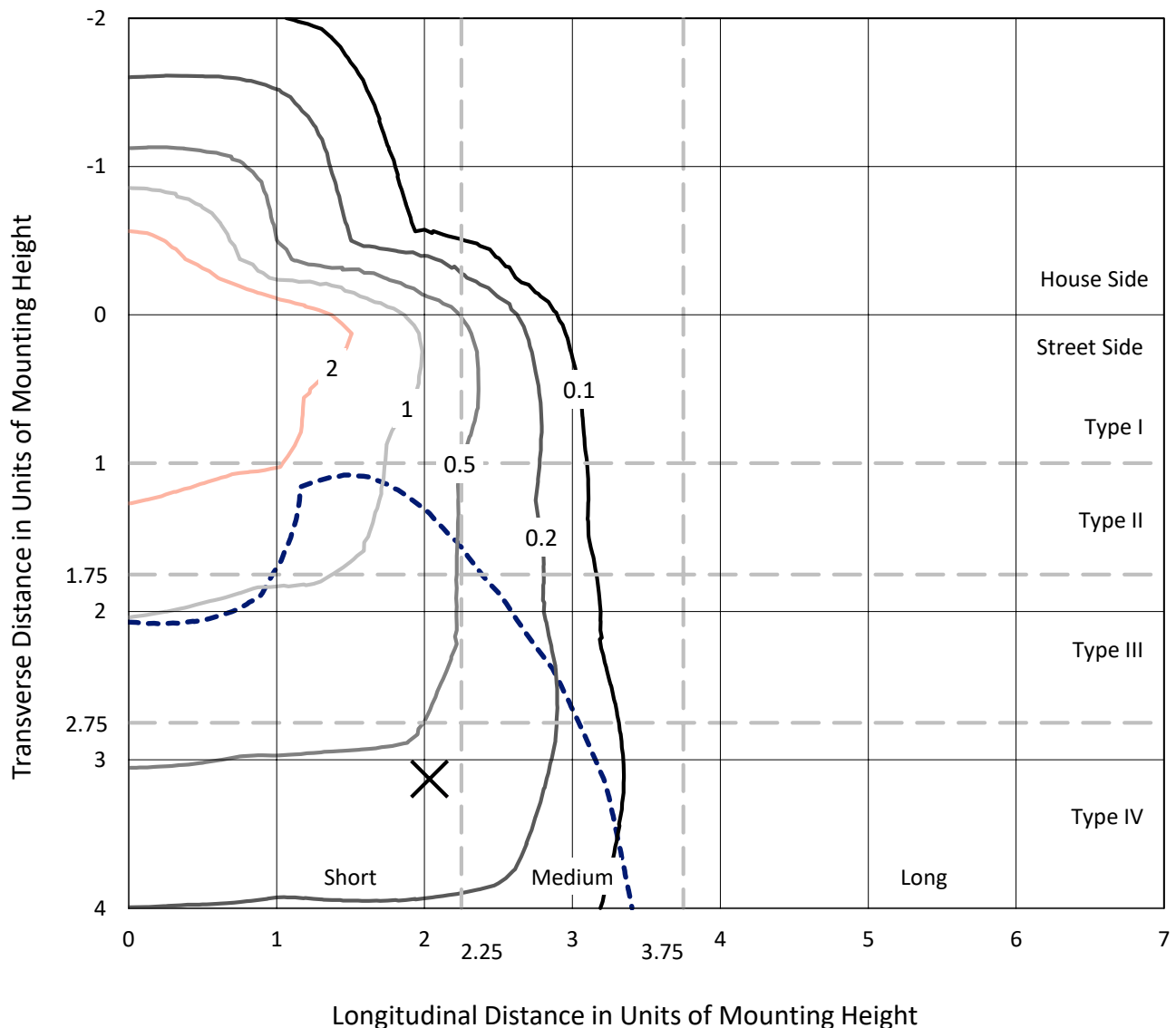
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P318878
 CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

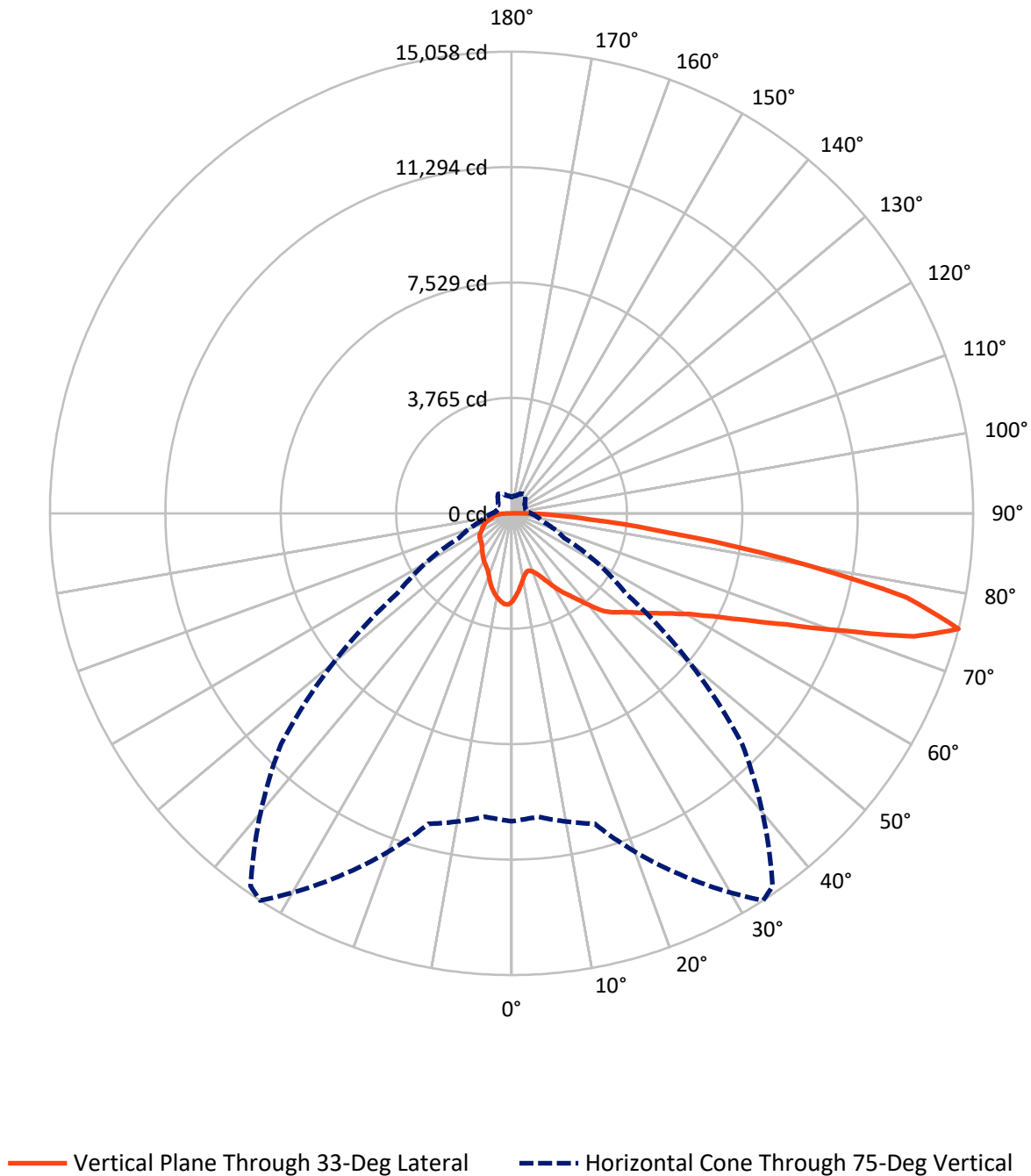
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P318878
CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

Luminous Intensity Polar Plot



REPORT NUMBER: P318878

CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

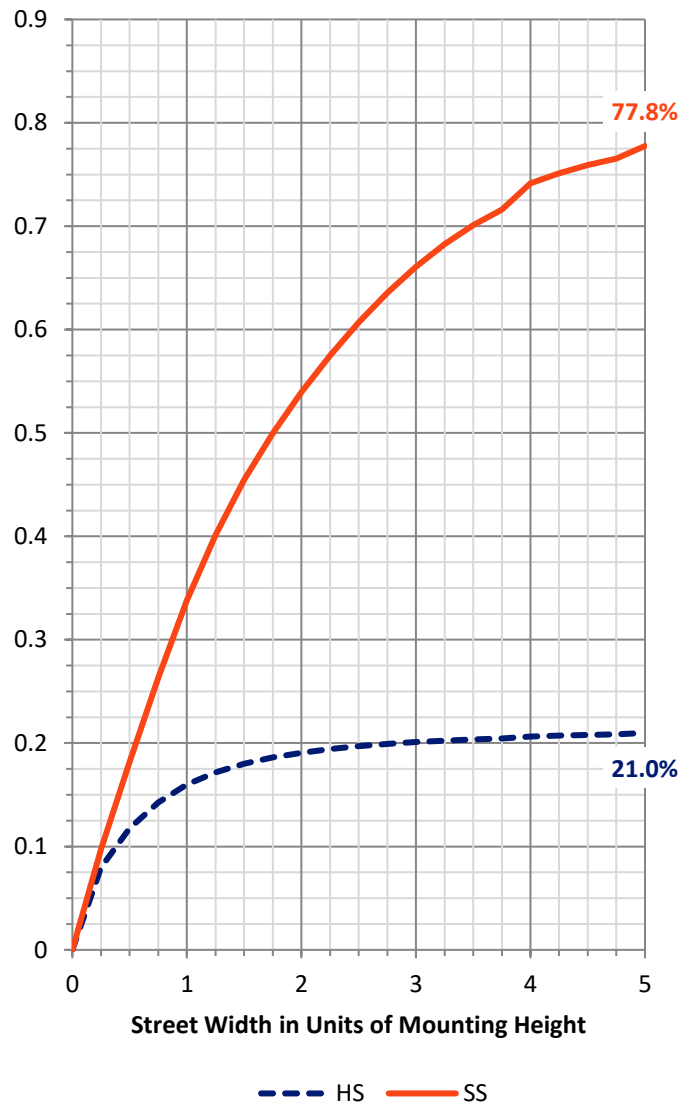
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3957.0	0.0	3957.0
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	14471.0	0.0	14471.0
	% Fixture	78.5	0.0	78.5
Total	Lumens	18428.0	0.0	18428.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.5	1.4
10°-20°	705.5	3.8
20°-30°	1152.2	6.3
30°-40°	1715.9	9.3
40°-50°	2461.1	13.4
50°-60°	3378.8	18.3
60°-70°	4230.1	23.0
70°-80°	3826.7	20.8
80°-90°	697.1	3.8
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°	18428.0	100.0
0°-180°	18428.0	100.0

Coefficient of Utilization



REPORT NUMBER: P318878

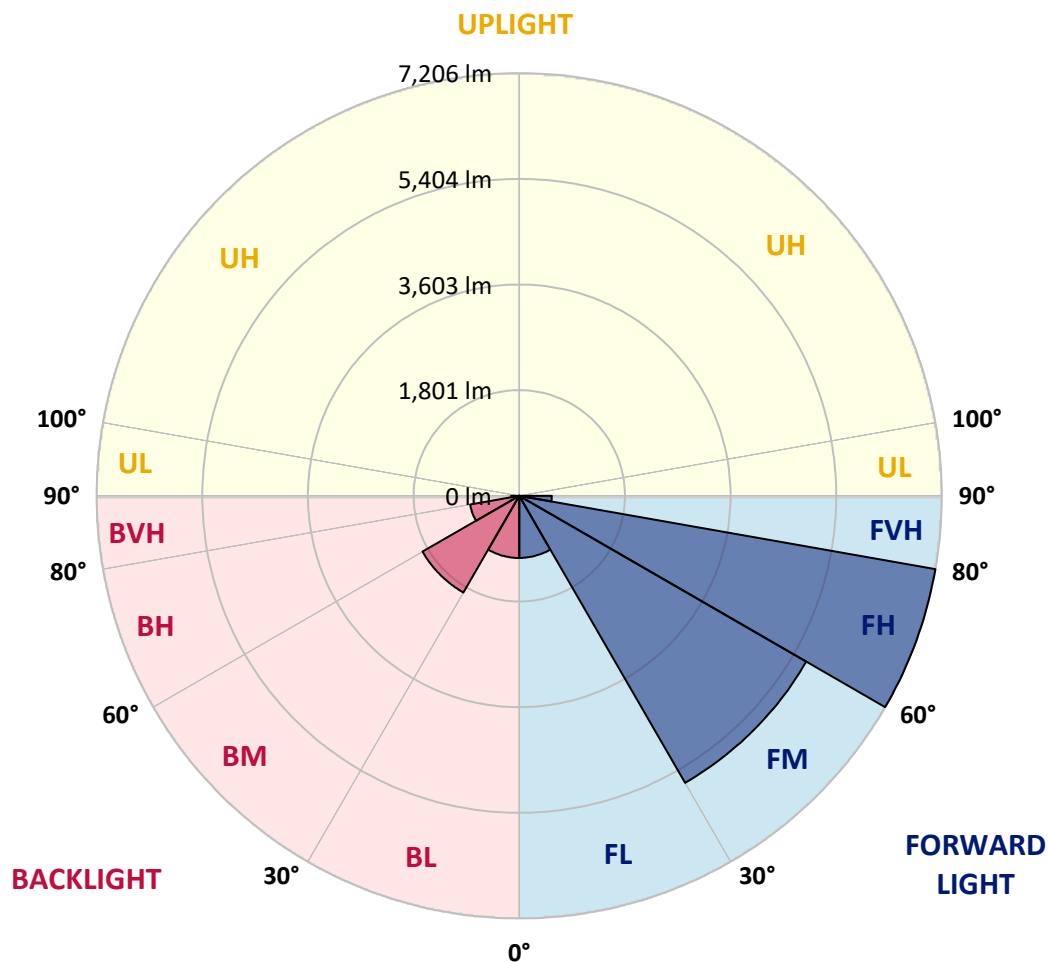
CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1058.4	5.7			
FM	(30°-60°)	5651.5	30.7			
FH	(60°-80°)	7206.0	39.1			G3/7500
FVH	(80°-90°)	555.1	3.0			G4/750
BL	(0°-30°)	1059.9	5.8	B3/2500		
BM	(30°-60°)	1904.4	10.3	B2/2500		
BH	(60°-80°)	850.8	4.6	B2/1000		G2/1000
BVH	(80°-90°)	141.9	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





REPORT NUMBER: P318878

CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4
2.5°	2674.8	2664.6	2683.7	2686.3	2702.8	2709.2	2732.1	2767.7	2797.0	2830.7	2861.3
5°	2432.3	2425.3	2452.0	2471.1	2507.4	2522.7	2576.8	2652.5	2720.0	2796.4	2865.8
7.5°	2201.8	2198.0	2227.9	2271.2	2313.2	2334.2	2427.8	2537.9	2650.6	2774.1	2880.4
10°	2007.7	2006.4	2035.1	2077.7	2139.5	2163.0	2284.0	2429.1	2586.9	2756.9	2905.2
12.5°	1898.8	1903.3	1916.7	1952.3	2009.6	2033.1	2167.5	2338.1	2533.5	2751.2	2941.5
15°	1925.6	1932.6	1909.7	1908.4	1949.1	1967.6	2093.6	2273.1	2495.3	2760.7	2994.3
17.5°	2039.5	2040.8	1980.3	1942.1	1966.9	1976.5	2070.7	2236.2	2473.0	2782.4	3060.5
20°	2199.9	2196.7	2089.8	2026.1	2039.5	2042.1	2103.2	2236.8	2471.1	2819.9	3146.5
22.5°	2412.5	2389.0	2245.1	2158.5	2155.4	2151.5	2186.6	2284.0	2499.1	2881.0	3249.0
25°	2690.1	2667.8	2469.8	2351.4	2326.0	2316.4	2321.5	2384.5	2554.5	2946.6	3363.5
27.5°	2998.8	2960.0	2769.0	2601.6	2548.8	2535.4	2504.8	2526.5	2615.0	3009.6	3499.8
30°	3257.2	3236.2	3069.5	2870.9	2808.5	2789.4	2709.2	2685.6	2702.2	3095.6	3671.6
32.5°	3401.7	3387.7	3286.5	3126.1	3068.2	3041.4	2928.1	2881.0	2842.2	3231.1	3904.6
35°	3576.8	3567.9	3506.8	3390.3	3304.3	3276.3	3188.5	3139.5	3039.5	3417.6	4205.7
37.5°	3799.6	3790.0	3791.3	3697.1	3594.6	3568.5	3510.6	3459.0	3295.4	3662.7	4532.9
40°	4051.7	4033.2	4026.2	4021.7	3956.8	3942.2	3911.6	3841.6	3616.3	3955.5	4855.6
42.5°	4431.0	4365.5	4225.4	4278.3	4342.6	4334.9	4359.7	4259.2	3972.7	4301.8	5170.7
45°	4797.1	4689.5	4447.6	4459.0	4599.7	4642.4	4828.3	4757.0	4359.1	4681.2	5496.6
47.5°	4963.8	4882.4	4676.8	4677.4	4816.8	4905.3	5312.7	5261.7	4765.2	5112.2	5894.5
50°	5150.3	5068.9	4884.3	4953.7	5075.2	5169.4	5780.5	5754.4	5151.6	5583.8	6371.3
52.5°	5354.0	5215.9	5098.8	5222.9	5393.5	5503.0	6249.0	6177.7	5506.2	6058.7	6919.3
55°	5356.6	5319.0	5408.1	5499.2	5754.4	5888.7	6739.8	6551.4	5795.2	6525.3	7365.5
57.5°	5661.5	5600.4	5789.4	5831.5	6165.0	6316.5	7228.1	6876.7	6089.3	6883.0	7606.2
60°	6065.1	6012.9	6167.6	6278.3	6673.0	6875.4	7749.4	7210.9	6320.3	7152.9	7594.7
62.5°	6762.1	6702.9	6701.0	6856.3	7387.8	7623.4	8334.4	7538.7	6412.0	7206.4	7270.7
65°	7782.5	7688.3	7510.7	7584.5	8375.1	8610.0	8988.1	7776.1	6291.0	6920.0	6436.2
67.5°	8775.5	8772.3	8554.0	8705.5	9678.8	9867.2	9732.9	7799.7	5913.6	5922.5	4955.6
70°	9765.4	9778.1	9741.2	10268.2	11440.1	11636.2	10526.0	7483.3	5065.0	4277.0	2968.9
72.5°	10549.6	10546.4	10732.3	12091.3	13726.0	13682.1	11194.4	6524.7	3636.6	2308.8	1418.9
75°	10041.6	9930.9	10484.7	12993.9	15058.3	14843.8	10626.0	4551.3	1887.4	1050.9	763.9
77.5°	6549.5	6654.5	7467.4	10734.2	13171.5	12910.6	7795.9	2123.5	889.3	689.4	553.8
80°	2371.8	2482.6	3496.6	6080.3	9074.7	9032.0	3839.0	872.7	601.5	520.7	403.6
82.5°	816.1	856.8	1379.4	2700.3	5123.6	5314.6	1444.3	495.9	437.3	369.2	276.3
85°	320.2	366.7	630.8	1299.2	2584.4	2603.5	585.0	296.6	304.3	241.9	151.5
87.5°	121.6	147.7	301.7	603.5	1180.2	1084.0	209.4	141.3	173.1	143.9	71.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P318878

CATALOG NUMBER: GLEON-SA4B-830-U-T4FT

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4	2880.4
2.5°	2884.9	2898.2	2926.2	2945.3	2965.7	2971.4	2974.0	2979.1	2984.2	2982.2	2982.9
5°	2902.7	2928.8	2974.0	2993.1	3002.0	2991.8	2972.1	2956.1	2944.7	2938.3	2936.4
7.5°	2932.0	2968.9	3017.3	3014.1	2993.7	2948.5	2897.6	2859.4	2827.6	2816.1	2809.7
10°	2970.8	3014.1	3047.8	3011.5	2952.3	2874.0	2797.6	2738.4	2690.7	2672.2	2669.1
12.5°	3020.4	3064.4	3070.7	2993.7	2895.7	2788.7	2685.0	2606.7	2535.4	2512.5	2507.4
15°	3084.7	3126.1	3086.6	2962.5	2825.7	2681.8	2547.5	2441.2	2366.1	2338.1	2327.9
17.5°	3152.2	3191.7	3089.8	2911.0	2734.0	2555.1	2386.4	2277.6	2191.6	2159.2	2155.4
20°	3233.0	3250.9	3076.5	2837.1	2608.0	2390.9	2213.3	2110.8	2065.0	2042.1	2039.5
22.5°	3333.0	3313.9	3045.9	2737.2	2448.2	2201.2	2056.7	2009.0	1997.5	1992.4	1994.3
25°	3438.7	3380.1	3000.7	2606.7	2246.4	2011.5	1942.1	1955.5	1970.8	1968.9	1968.9
27.5°	3555.1	3447.6	2931.3	2433.5	2023.0	1856.2	1864.5	1913.5	1936.4	1935.8	1935.1
30°	3704.7	3524.0	2842.8	2225.4	1814.2	1746.7	1797.0	1856.8	1888.0	1886.7	1887.4
32.5°	3888.7	3608.0	2722.5	1993.0	1663.3	1665.9	1723.8	1783.0	1819.3	1816.1	1816.7
35°	4103.9	3702.2	2559.6	1763.9	1563.4	1601.6	1647.4	1688.8	1723.1	1718.7	1714.2
37.5°	4338.1	3794.5	2343.1	1558.9	1481.9	1541.7	1579.9	1586.9	1602.8	1591.4	1583.1
40°	4560.9	3865.1	2064.3	1390.9	1399.8	1490.8	1515.6	1487.6	1459.0	1455.2	1443.7
42.5°	4755.0	3888.7	1782.3	1256.6	1313.2	1437.3	1452.6	1394.0	1342.5	1318.3	1308.1
45°	4960.0	3897.0	1519.5	1143.9	1229.8	1389.6	1406.1	1327.8	1255.3	1203.1	1185.9
47.5°	5228.0	3956.8	1315.1	1060.5	1166.2	1357.8	1381.3	1275.0	1180.8	1106.3	1090.4
50°	5578.7	4075.2	1149.0	996.8	1124.8	1336.8	1363.5	1223.5	1119.7	1029.9	1014.0
52.5°	5968.3	4184.1	1014.7	945.3	1084.7	1299.8	1340.6	1186.5	1062.4	959.3	942.1
55°	6240.8	4100.7	906.5	891.8	1032.5	1247.0	1308.8	1155.3	980.3	890.5	875.3
57.5°	6293.0	3815.5	824.3	836.4	969.5	1180.8	1259.7	1086.0	935.7	860.6	844.7
60°	6150.4	3418.3	763.2	785.5	902.0	1097.4	1168.1	1036.9	893.1	828.8	815.4
62.5°	5792.0	3011.5	718.0	739.7	839.0	1012.8	1110.8	985.4	849.8	792.5	779.1
65°	5068.2	2528.4	674.7	698.9	780.4	939.6	1059.2	937.6	807.1	763.2	750.5
67.5°	3825.7	1893.7	634.0	655.6	728.2	875.9	1003.2	890.5	765.8	737.8	722.5
70°	2252.8	1185.9	587.5	610.5	673.5	809.7	943.4	839.0	714.2	701.5	681.7
72.5°	1048.4	713.6	534.7	557.0	604.7	721.2	866.3	771.5	653.1	625.1	598.4
75°	625.7	522.0	472.3	492.1	525.8	627.0	769.6	702.8	595.2	558.3	530.2
77.5°	467.9	399.1	403.6	424.6	452.0	548.7	681.7	648.6	550.6	522.0	502.9
80°	336.7	303.0	329.1	352.0	380.7	499.1	653.1	599.6	497.8	459.6	441.8
82.5°	224.7	217.7	247.6	271.2	299.2	436.7	613.6	525.2	425.2	376.8	337.4
85°	124.1	131.1	166.8	177.0	201.2	307.5	502.9	422.0	320.2	257.8	246.3
87.5°	51.6	60.5	89.8	86.6	106.9	183.3	331.0	254.6	203.7	152.1	118.4
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
 Rf: 81.5
 Rg: 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

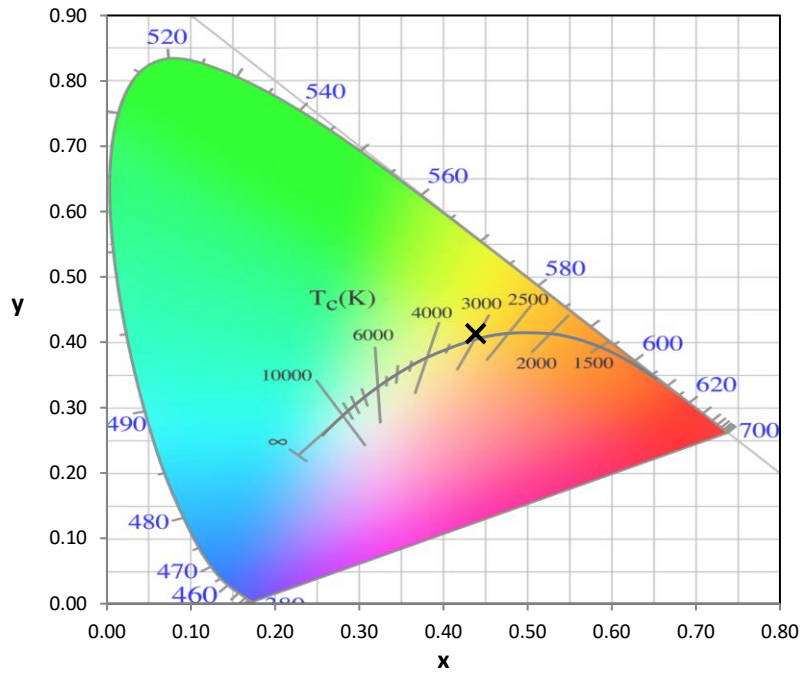
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength



Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

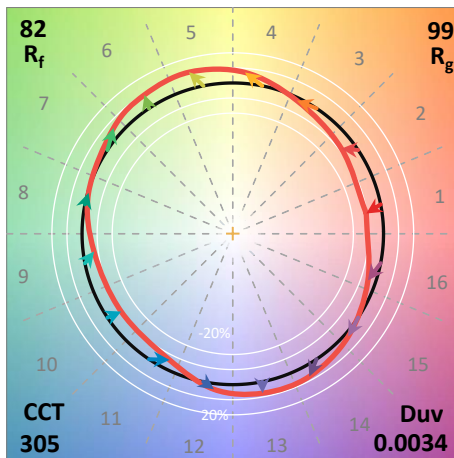
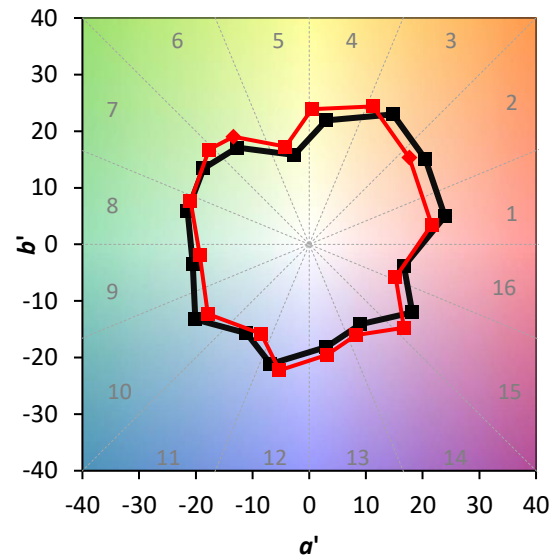
TM-30-18

Summary

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



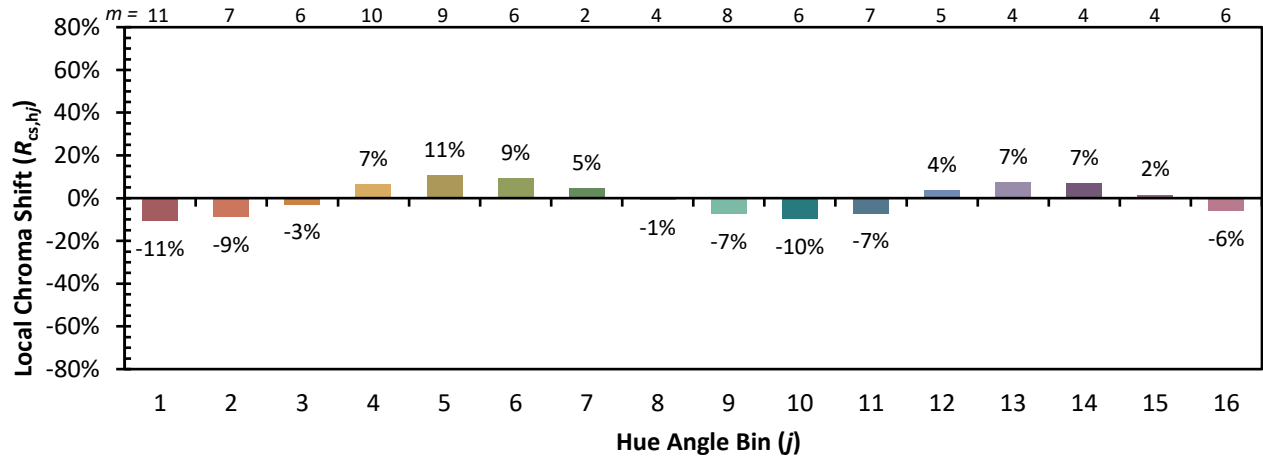
Color Vector Graphics

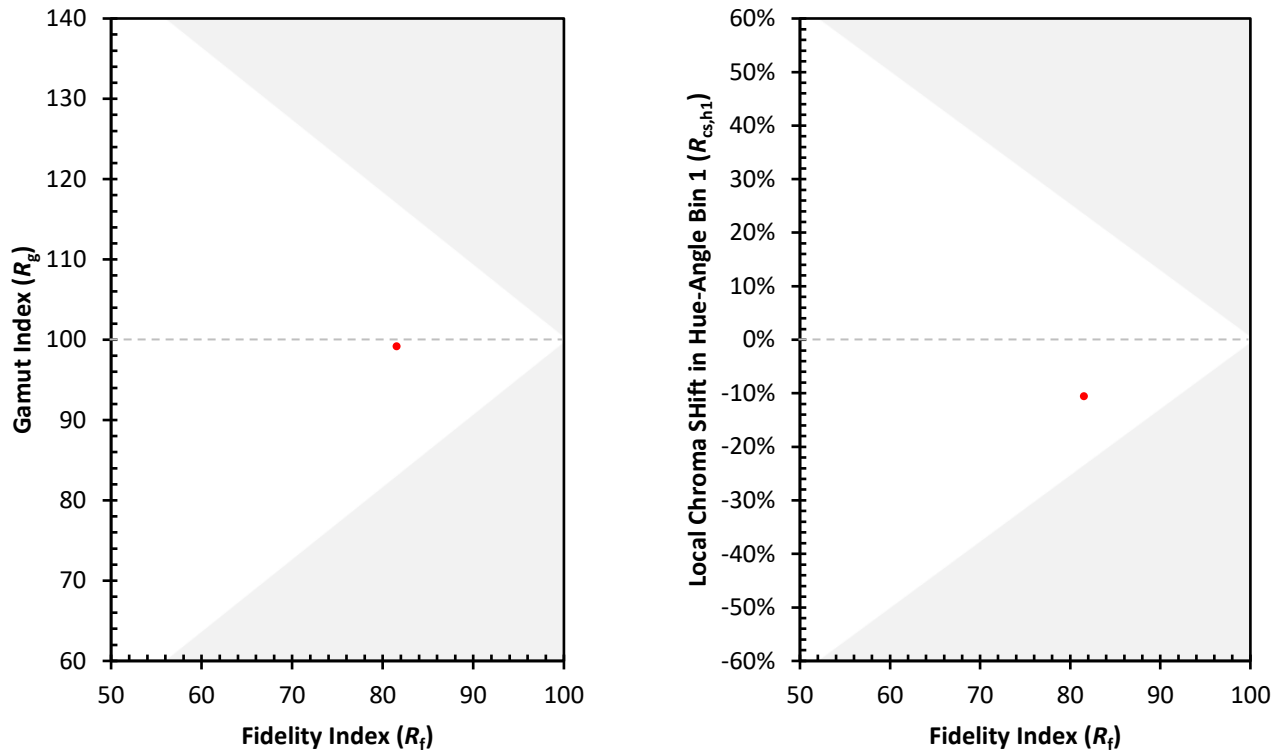


Individual Sample Fidelity Index ($R_{f,i}$)

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)