

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: P323363

Luminaire Tested: **GLEON-SA9B-830-U-SL2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P323363
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-21)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA9B-830-U-SL2-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33625 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G5

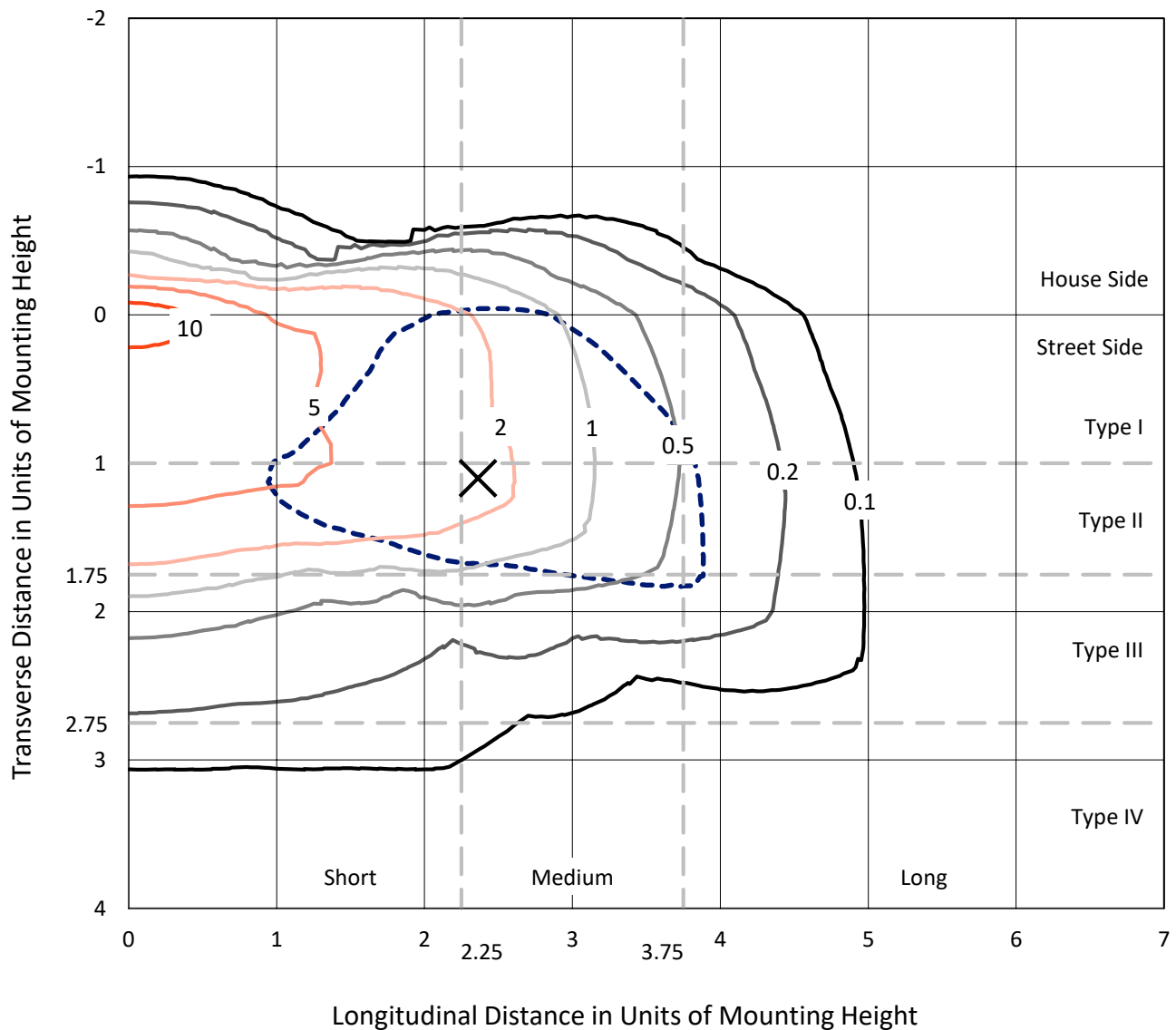
Input Watts (W): 374
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

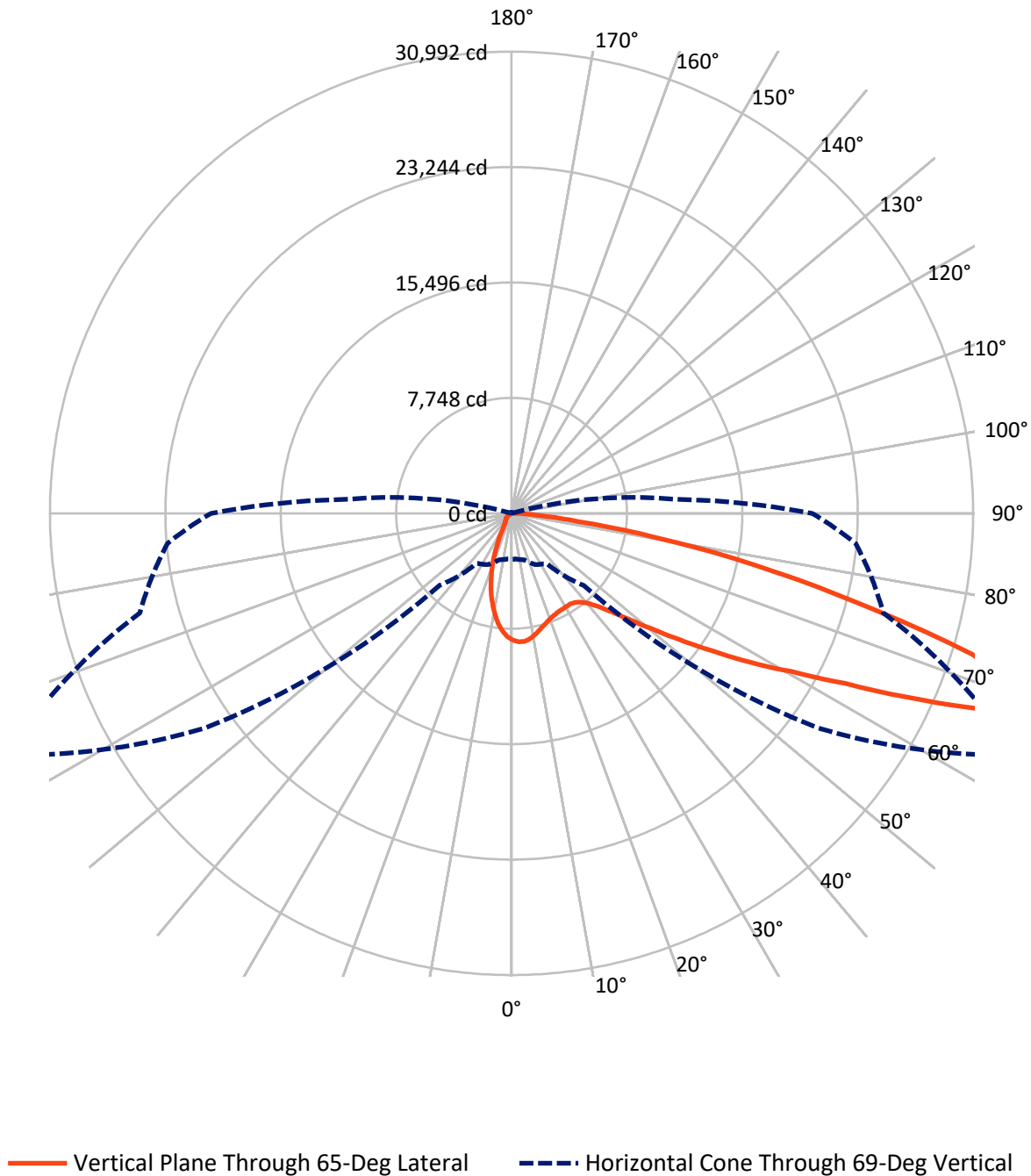
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.6 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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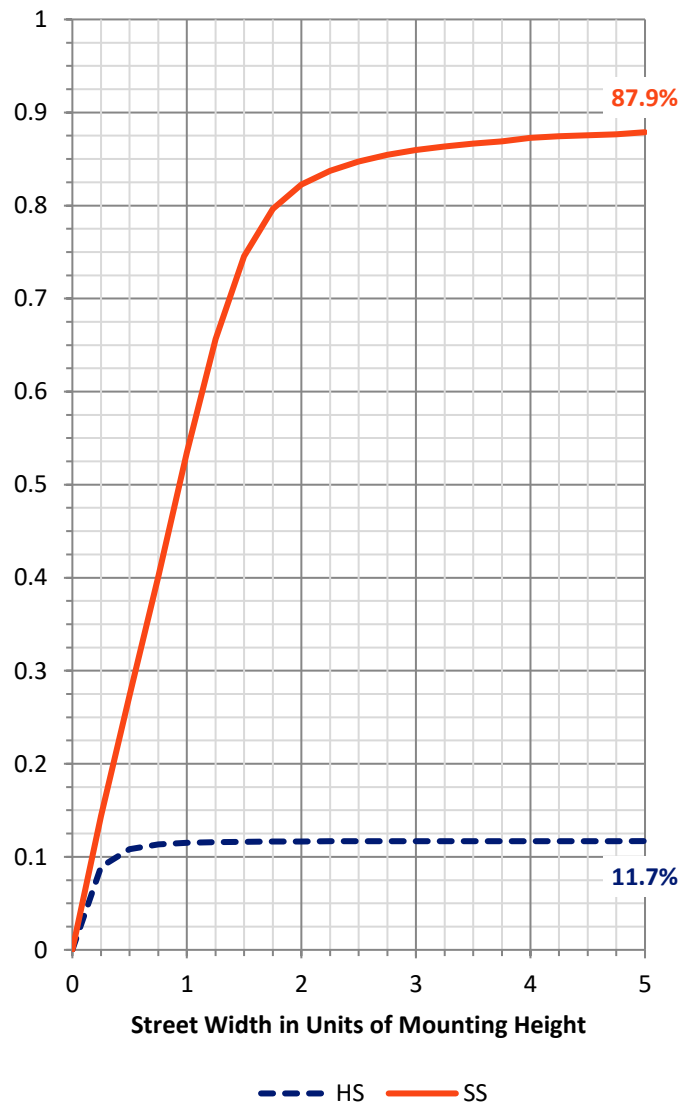
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3963.6	0.0	3963.6
	% Fixture	11.8	0.0	11.8
Street Side	Lumens	29661.4	0.0	29661.4
	% Fixture	88.2	0.0	88.2
Total	Lumens	33625.0	0.0	33625.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	710.5	2.1
10°-20°	1555.4	4.6
20°-30°	2154.3	6.4
30°-40°	3003.7	8.9
40°-50°	4668.8	13.9
50°-60°	7495.2	22.3
60°-70°	8478.4	25.2
70°-80°	4979.4	14.8
80°-90°	579.2	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°	33625.0	100.0
0°-180°	33625.0	100.0

Coefficient of Utilization



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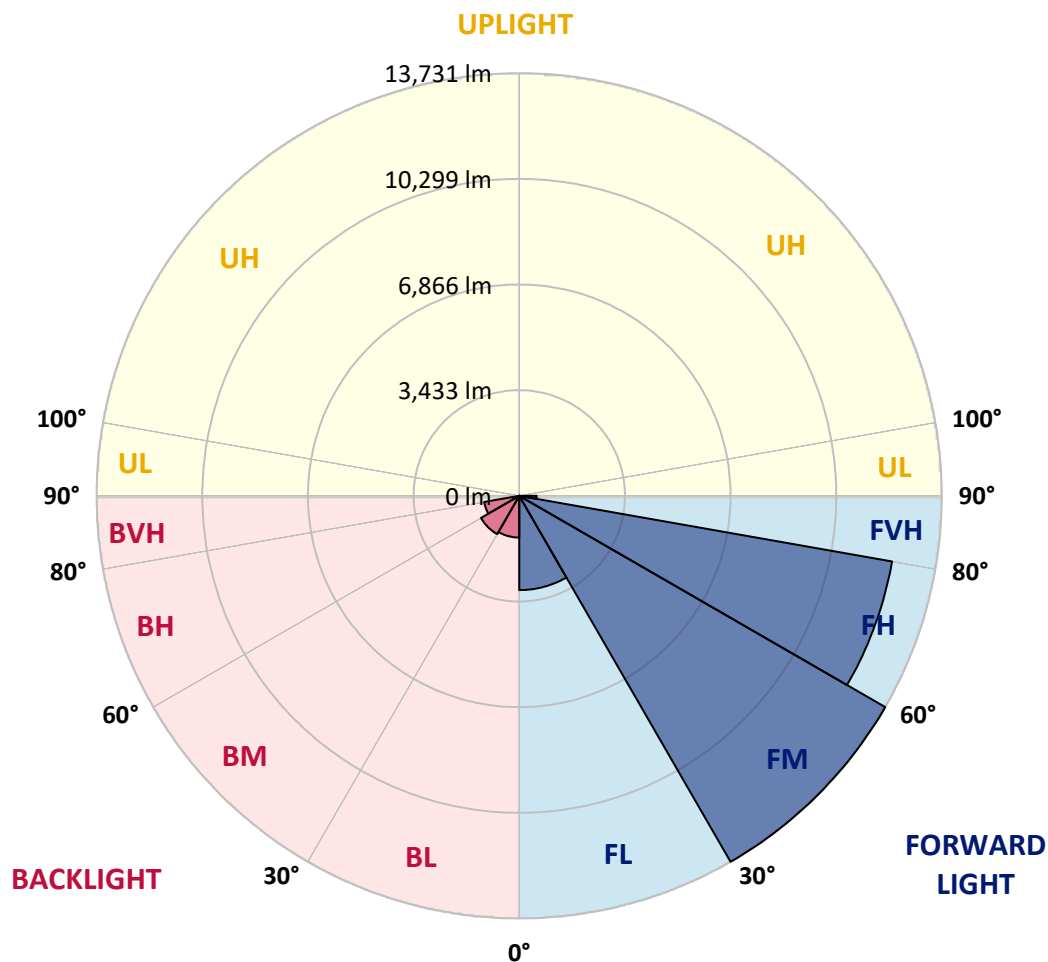
CATALOG NUMBER: GLEON-SA9B-830-U-SL2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3064.0	9.1			
FM	(30°-60°)	13731.5	40.8			
FH	(60°-80°)	12299.7	36.6			G5
FVH	(80°-90°)	566.2	1.7			G4/750
BL	(0°-30°)	1356.2	4.0	B3/2500		
BM	(30°-60°)	1436.3	4.3	B2/2500		
BH	(60°-80°)	1158.1	3.4	B3/2500		G3/2500
BVH	(80°-90°)	13.0	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1
2.5°	8572.5	8551.2	8568.2	8605.2	8623.7	8623.7	8638.0	8620.9	8626.6	8585.3	8525.6
5°	8036.1	8003.4	8050.3	8154.2	8282.3	8391.8	8554.0	8639.4	8647.9	8649.3	8579.6
7.5°	7458.4	7428.6	7498.3	7620.6	7785.7	7989.1	8272.3	8519.9	8534.1	8667.8	8616.6
10°	6988.9	6967.6	7048.7	7179.6	7373.1	7600.7	7947.9	8292.2	8333.5	8629.4	8610.9
12.5°	6616.1	6599.1	6675.9	6826.7	7024.5	7276.3	7639.1	8038.9	8094.4	8542.6	8582.5
15°	6344.4	6341.5	6405.5	6550.7	6769.8	7004.6	7375.9	7804.2	7868.2	8448.7	8578.2
17.5°	6202.1	6206.4	6253.3	6377.1	6564.9	6798.2	7154.0	7606.4	7676.1	8364.8	8599.5
20°	6187.9	6192.1	6217.7	6287.5	6439.7	6646.0	6973.3	7439.9	7512.5	8302.2	8633.7
22.5°	6313.1	6310.2	6317.3	6310.2	6395.6	6552.1	6853.7	7311.9	7395.8	8260.9	8660.7
25°	6553.5	6549.3	6546.4	6493.8	6436.8	6520.8	6803.9	7239.3	7319.0	8231.0	8676.4
27.5°	6887.9	6885.0	6880.8	6794.0	6623.2	6570.6	6809.6	7212.3	7279.2	8206.8	8673.5
30°	7327.5	7347.5	7341.8	7220.8	6954.8	6722.8	6869.4	7198.1	7256.4	8159.9	8643.6
32.5°	7844.0	7883.9	7915.2	7785.7	7452.7	7024.5	7007.4	7213.7	7256.4	8124.3	8589.6
35°	8380.4	8431.6	8546.9	8501.4	8063.1	7478.4	7245.0	7307.6	7343.2	8144.2	8564.0
37.5°	8908.3	8969.5	9219.9	9352.2	8862.8	8078.8	7614.9	7539.5	7558.0	8265.2	8592.4
40°	9521.5	9614.0	9993.9	10207.3	9817.5	8882.7	8168.4	7937.9	7945.0	8531.2	8724.7
42.5°	10326.8	10422.2	10833.4	11167.7	10893.1	9898.6	8919.7	8546.9	8539.8	9029.2	9036.3
45°	11308.6	11408.2	11833.6	12205.0	12081.2	11102.3	9881.5	9436.2	9427.6	9814.6	9626.8
47.5°	12421.2	12519.4	12899.3	13282.0	13415.8	12508.0	11106.6	10649.8	10629.9	10905.9	10538.8
50°	13376.0	13440.0	13790.0	14305.1	14908.3	14235.3	12630.4	12190.7	12169.4	12355.8	11877.7
52.5°	13723.1	13760.1	14115.8	14837.2	16342.5	16574.5	14632.3	14066.0	14050.4	14131.5	13660.5
55°	13020.2	13087.1	13523.9	14593.9	17119.4	19218.1	17159.2	16388.1	16270.0	16095.0	15524.4
57.5°	11105.1	11211.8	11681.4	13104.2	16756.6	21315.3	20872.8	19014.6	18841.0	17771.1	17039.7
60°	8320.7	8451.6	8841.4	10376.6	14820.1	22062.3	24930.7	21941.3	21550.1	19105.7	18432.7
62.5°	5709.8	5775.2	6039.9	7040.1	10914.5	20838.7	28325.6	25861.2	25147.0	20556.9	19939.4
65°	4361.0	4383.7	4491.9	4836.2	6499.5	16927.3	29675.8	31033.2	30169.5	22292.8	21503.1
67.5°	3514.4	3495.9	3645.3	4137.6	4352.4	10326.8	28100.7	35926.3	35522.2	24613.4	23076.8
69°	3098.9	3073.3	3225.5	3797.5	4087.8	6826.7	25121.4	37037.5	37063.1	25838.5	23184.9
70°	2788.7	2805.8	2956.6	3595.5	3998.1	5358.3	22275.7	36754.4	36956.4	26296.6	22536.1
72.5°	1862.5	1908.0	2211.1	2985.1	3844.5	4055.0	13449.9	31539.7	32316.6	25265.1	19334.7
75°	1050.0	1084.2	1444.2	2250.9	3622.5	3861.5	7104.2	23236.1	23987.4	21127.5	14909.8
77.5°	515.1	533.6	816.7	1452.7	3029.2	3679.4	4029.4	15783.4	16641.3	13790.0	8433.1
80°	217.7	227.7	408.4	896.4	2165.5	3511.5	2992.2	9713.6	9820.3	5402.5	2246.6
82.5°	83.9	86.8	172.2	559.2	1375.9	2737.5	2502.7	4605.7	4494.7	1017.3	512.2
85°	10.0	11.4	62.6	335.8	765.5	1408.6	2033.2	1984.8	1836.9	202.0	263.2
87.5°	0.0	0.0	4.3	102.4	227.7	660.2	1057.2	823.8	742.7	65.4	136.6
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°	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1	8497.1
2.5°	8475.8	8461.5	8384.7	8273.7	8168.4	8037.5	7912.3	7836.9	7777.1	7737.3	7784.3
5°	8498.5	8435.9	8202.6	7903.8	7610.7	7280.6	6973.3	6712.9	6610.4	6496.6	6547.8
7.5°	8491.4	8373.3	7953.6	7421.4	6883.6	6327.3	5800.8	5395.3	5184.8	4978.5	5031.1
10°	8455.8	8256.6	7620.6	6832.4	6027.1	5227.5	4480.5	3912.8	3595.5	3308.1	3349.3
12.5°	8377.6	8100.1	7227.9	6158.0	5080.9	4026.6	3151.6	2424.5	2034.6	1862.5	1883.8
15°	8330.6	7947.9	6812.5	5475.0	4070.7	2804.4	1926.5	1432.8	1254.9	1198.0	1205.1
17.5°	8307.9	7801.3	6382.8	4693.9	3037.7	1785.6	1245.0	1098.4	1060.0	1050.0	1052.9
20°	8285.1	7653.4	5940.3	3921.3	2093.0	1200.9	1023.0	980.3	966.1	953.3	956.1
22.5°	8246.7	7511.1	5465.1	3138.7	1411.4	974.6	922.0	880.7	850.8	835.2	838.0
25°	8199.7	7361.7	4979.9	2337.7	1030.1	869.3	819.5	761.2	725.6	697.2	698.6
27.5°	8124.3	7178.1	4479.0	1701.7	865.1	778.3	711.4	647.4	587.6	554.9	554.9
30°	8019.0	6970.4	3922.7	1217.9	775.4	688.6	607.5	527.9	463.8	434.0	431.1
32.5°	7902.4	6754.1	3360.7	923.4	704.3	604.7	512.2	428.3	371.4	347.2	345.7
35°	7802.8	6520.8	2800.1	774.0	633.2	523.6	422.6	351.4	305.9	286.0	284.6
37.5°	7738.7	6287.5	2253.8	691.5	569.1	448.2	354.3	290.3	257.5	241.9	240.5
40°	7728.8	6113.9	1754.3	628.9	509.4	381.3	295.9	246.1	216.3	199.2	197.8
42.5°	7858.2	6014.3	1346.0	576.2	448.2	323.0	251.8	210.6	179.3	162.2	160.8
45°	8198.3	6045.6	1035.8	529.3	387.0	273.2	213.4	175.0	146.6	133.7	130.9
47.5°	8818.7	6261.8	823.8	482.3	328.7	231.9	182.1	145.1	120.9	108.1	106.7
50°	9922.8	6769.8	688.6	431.1	274.6	197.8	150.8	118.1	98.2	86.8	85.4
52.5°	11388.3	7674.7	614.7	381.3	227.7	167.9	123.8	93.9	76.8	68.3	66.9
55°	13004.6	8770.3	566.3	327.2	186.4	139.4	98.2	74.0	59.8	52.6	49.8
57.5°	14582.5	9719.3	520.8	274.6	155.1	113.8	78.3	58.3	47.0	39.8	38.4
60°	16032.4	10591.5	468.1	220.5	126.6	89.6	61.2	45.5	37.0	29.9	29.9
62.5°	17584.7	11265.9	395.5	172.2	103.9	68.3	49.8	41.3	29.9	25.6	24.2
65°	19229.4	11766.7	310.2	133.7	81.1	51.2	41.3	42.7	24.2	18.5	17.1
67.5°	20444.5	11667.1	229.1	105.3	62.6	39.8	39.8	45.5	21.3	14.2	12.8
69°	20177.0	10857.6	192.1	91.1	54.1	34.1	37.0	45.5	19.9	12.8	11.4
70°	19401.6	9961.2	169.3	81.1	48.4	31.3	35.6	44.1	18.5	12.8	11.4
72.5°	16157.6	7502.5	132.3	61.2	38.4	25.6	29.9	38.4	18.5	12.8	10.0
75°	12153.8	4802.0	101.0	44.1	28.5	19.9	22.8	28.5	18.5	11.4	10.0
77.5°	6613.3	1731.6	72.6	29.9	19.9	15.7	15.7	21.3	17.1	8.5	5.7
80°	1700.3	435.4	45.5	19.9	15.7	11.4	10.0	14.2	10.0	1.4	0.0
82.5°	419.7	98.2	24.2	14.2	11.4	4.3	4.3	7.1	4.3	0.0	0.0
85°	230.5	48.4	15.7	10.0	5.7	0.0	0.0	1.4	0.0	0.0	0.0
87.5°	118.1	14.2	4.3	2.8	1.4	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

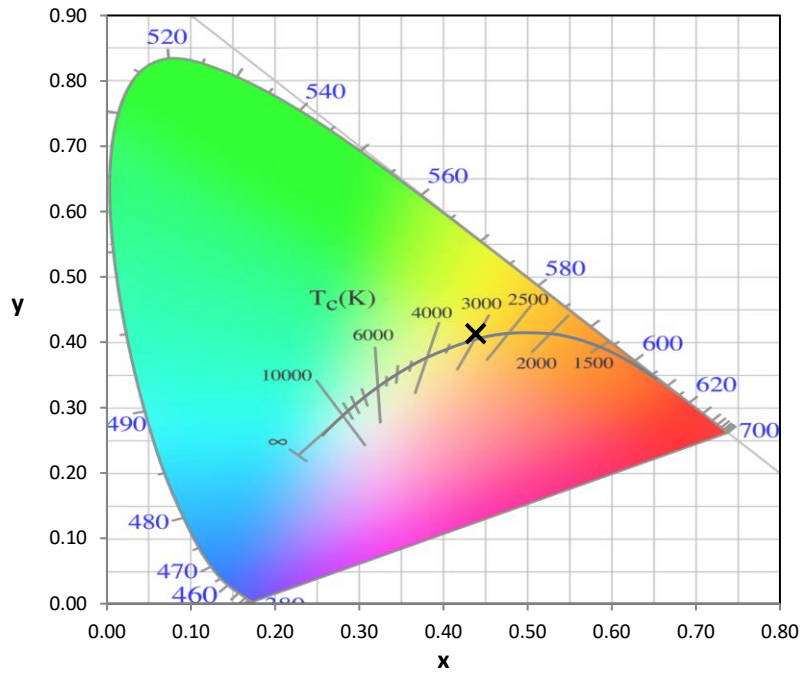
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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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 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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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

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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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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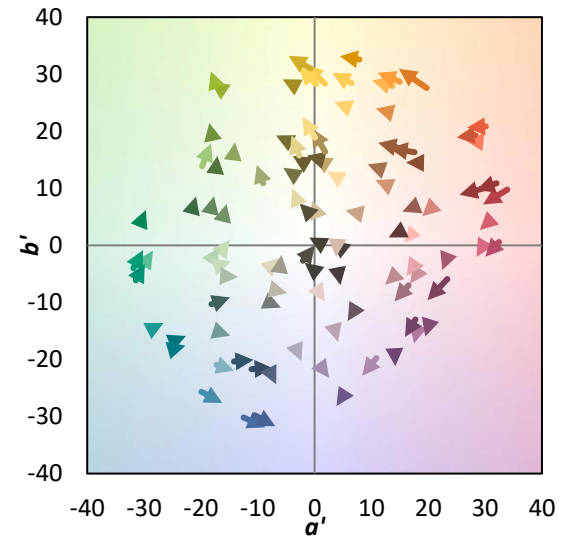
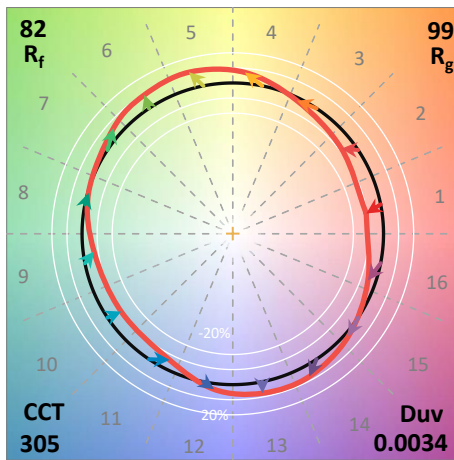
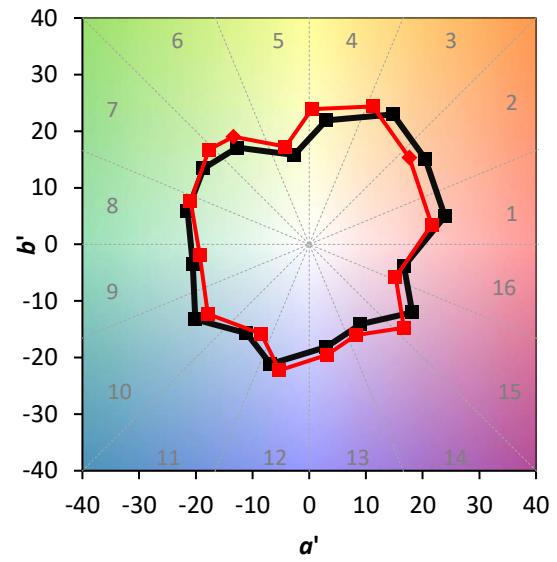
TM-30-18

Summary

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



Color Vector Graphics

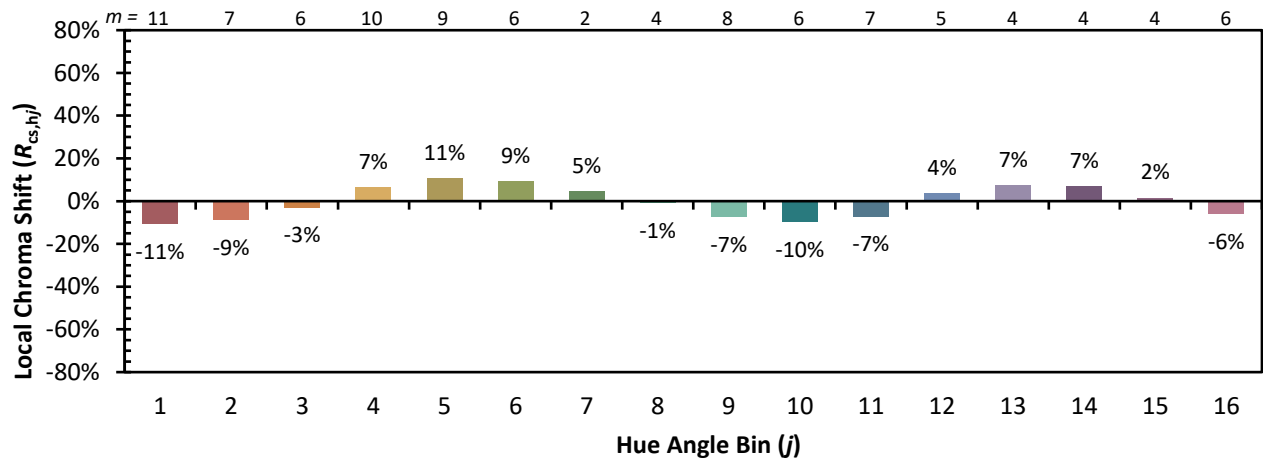


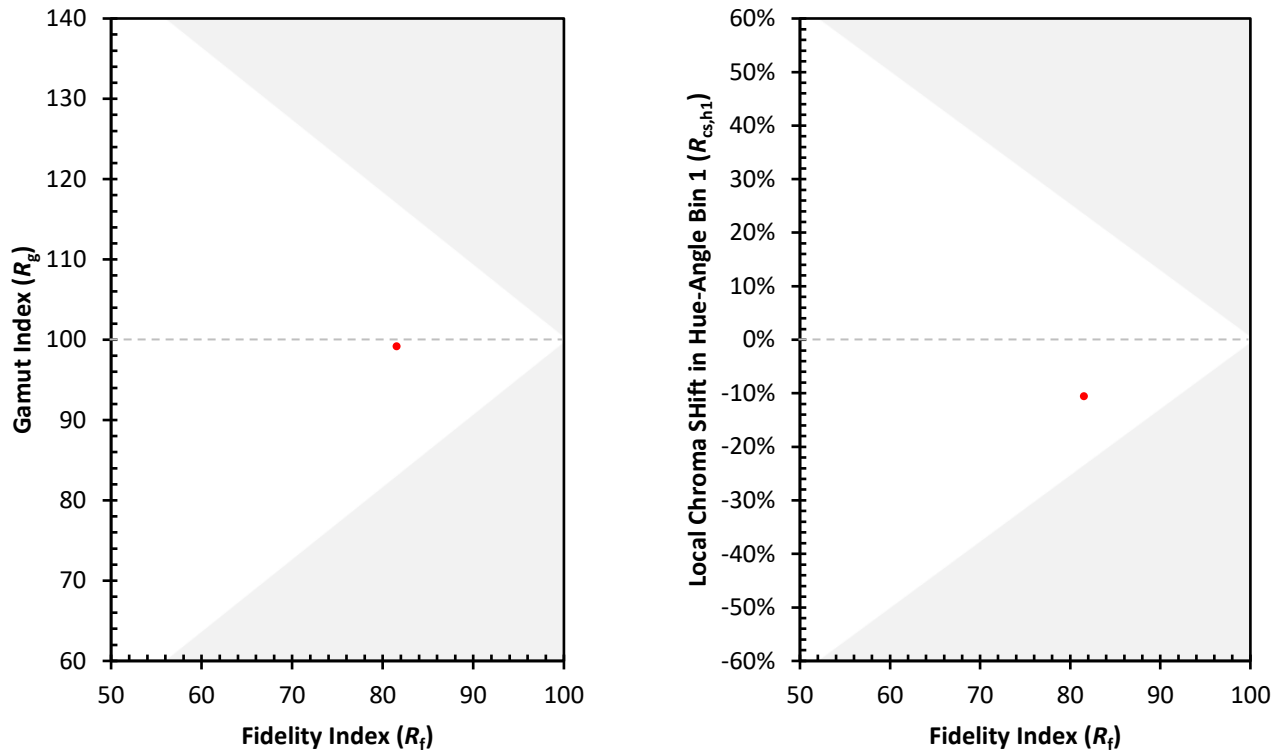
Individual Sample Fidelity Index ($R_{f,i}$)

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)