

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: P324022

Luminaire Tested: **GLEON-SA8D-830-U-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA8D-830-U-SL4-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(8) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40106 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

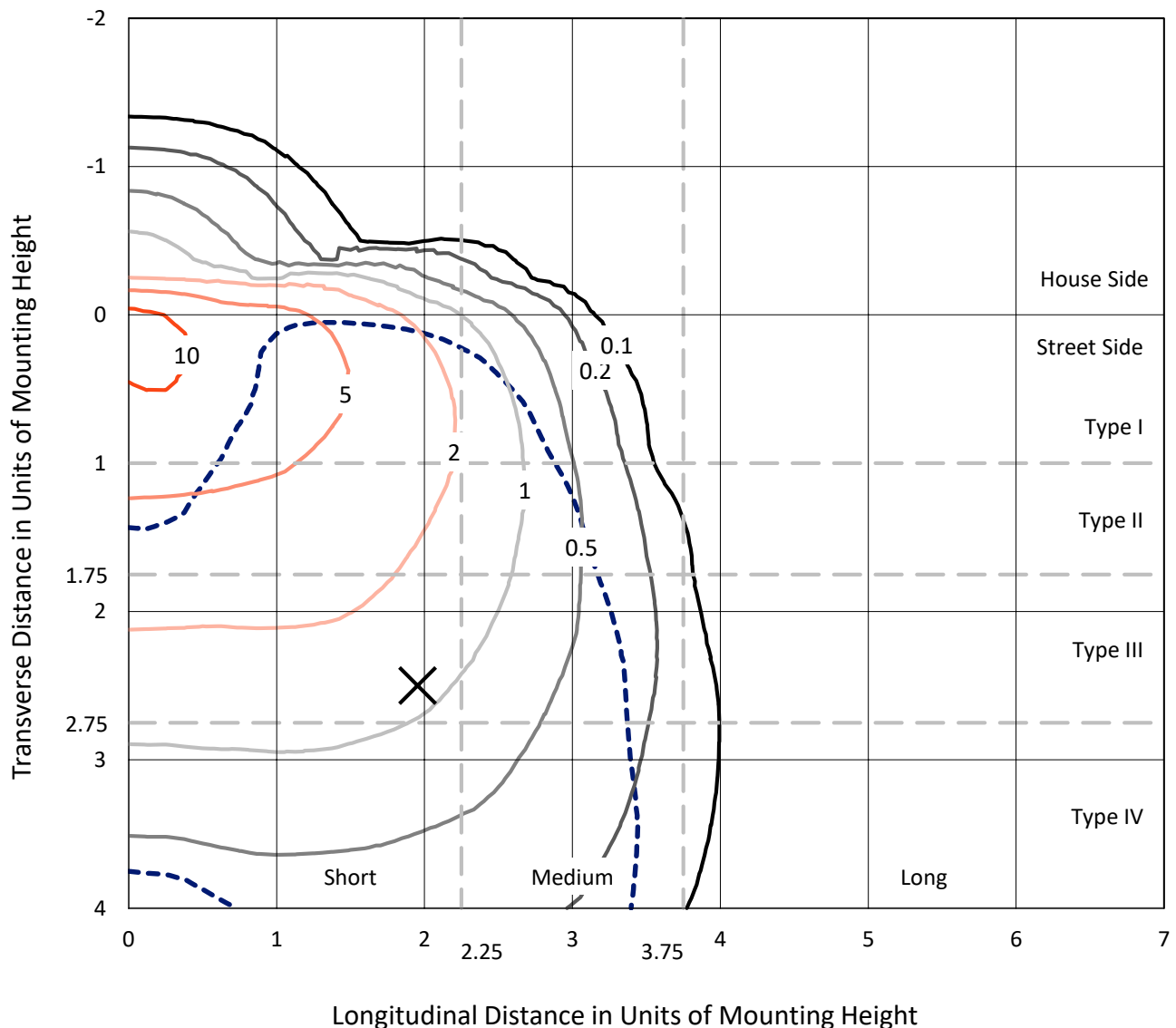
Input Watts (W): 511
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

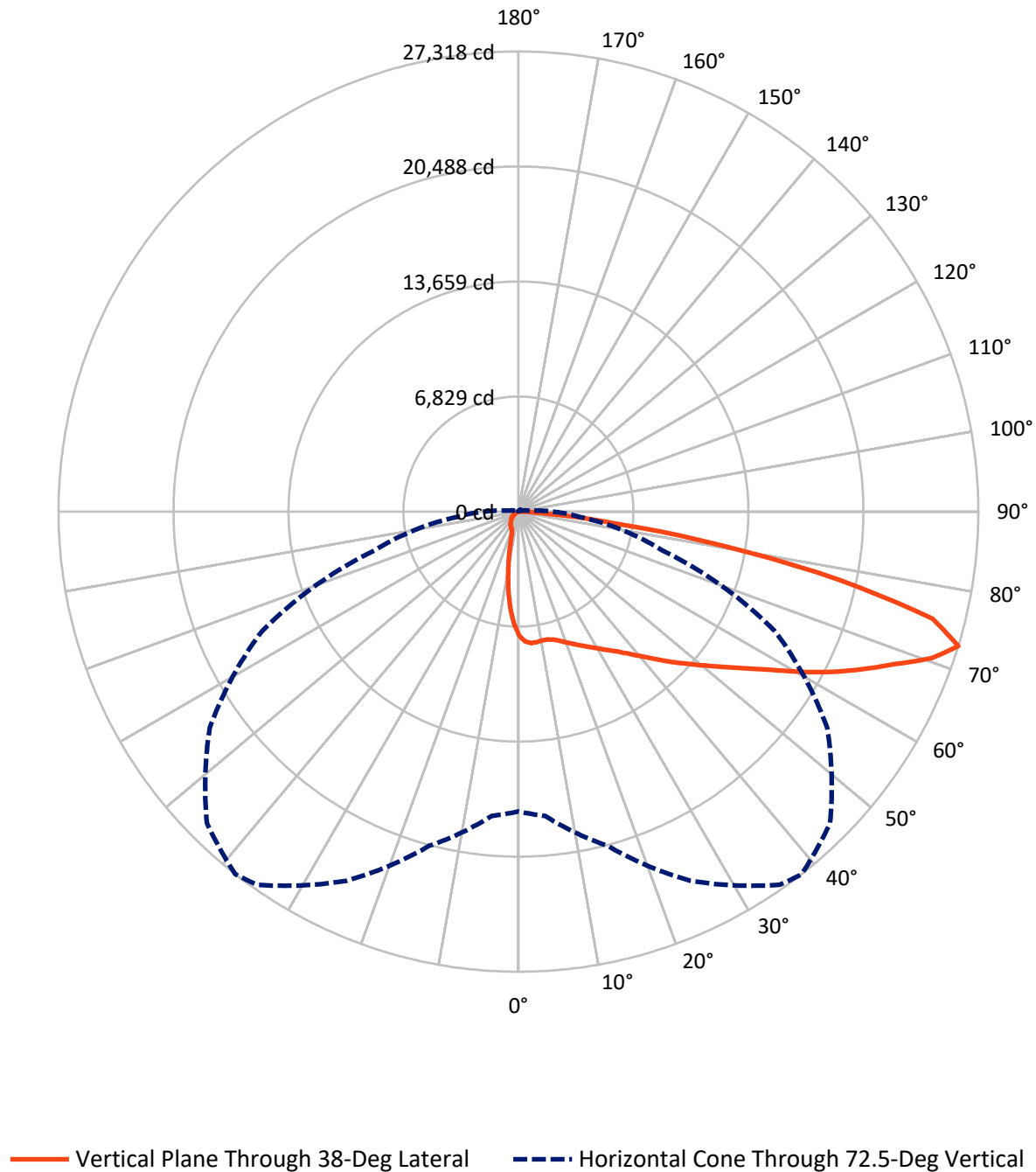
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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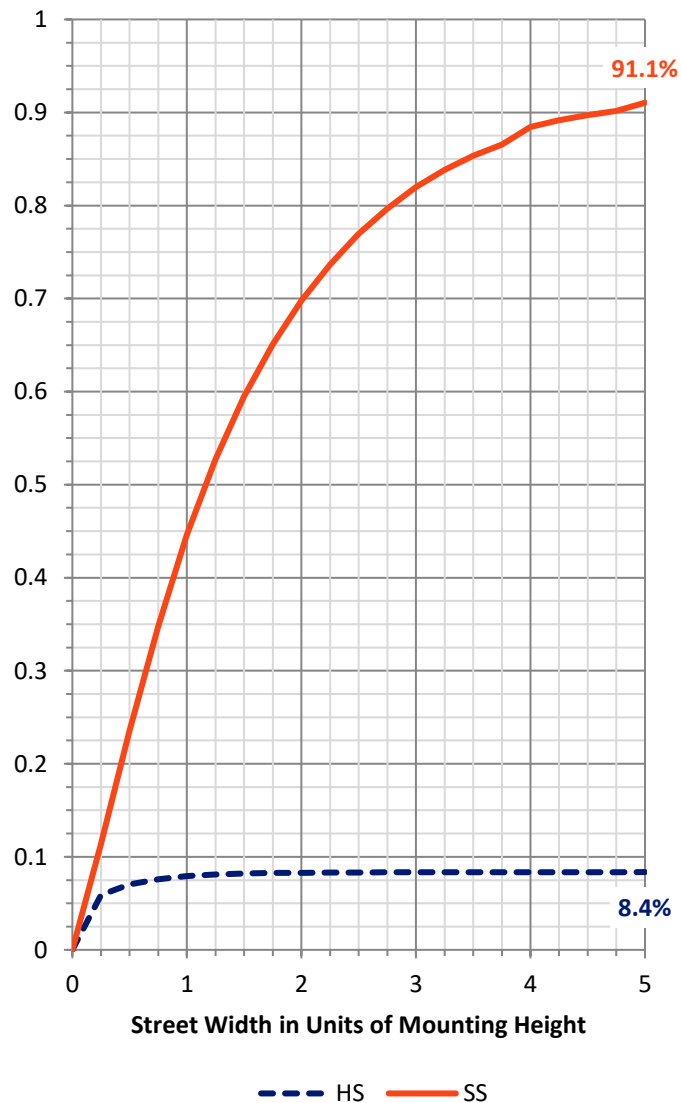
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3375.1	0.0	3375.1
	% Fixture	8.4	0.0	8.4
Street Side	Lumens	36730.9	0.0	36730.9
	% Fixture	91.6	0.0	91.6
Total	Lumens	40106.0	0.0	40106.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	628.5	1.6
10°-20°	1536.9	3.8
20°-30°	2444.4	6.1
30°-40°	3674.9	9.2
40°-50°	5606.2	14.0
50°-60°	7923.5	19.8
60°-70°	9938.7	24.8
70°-80°	7431.4	18.5
80°-90°	921.5	2.3
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°	40106.0	100.0
0°-180°	40106.0	100.0

Coefficient of Utilization



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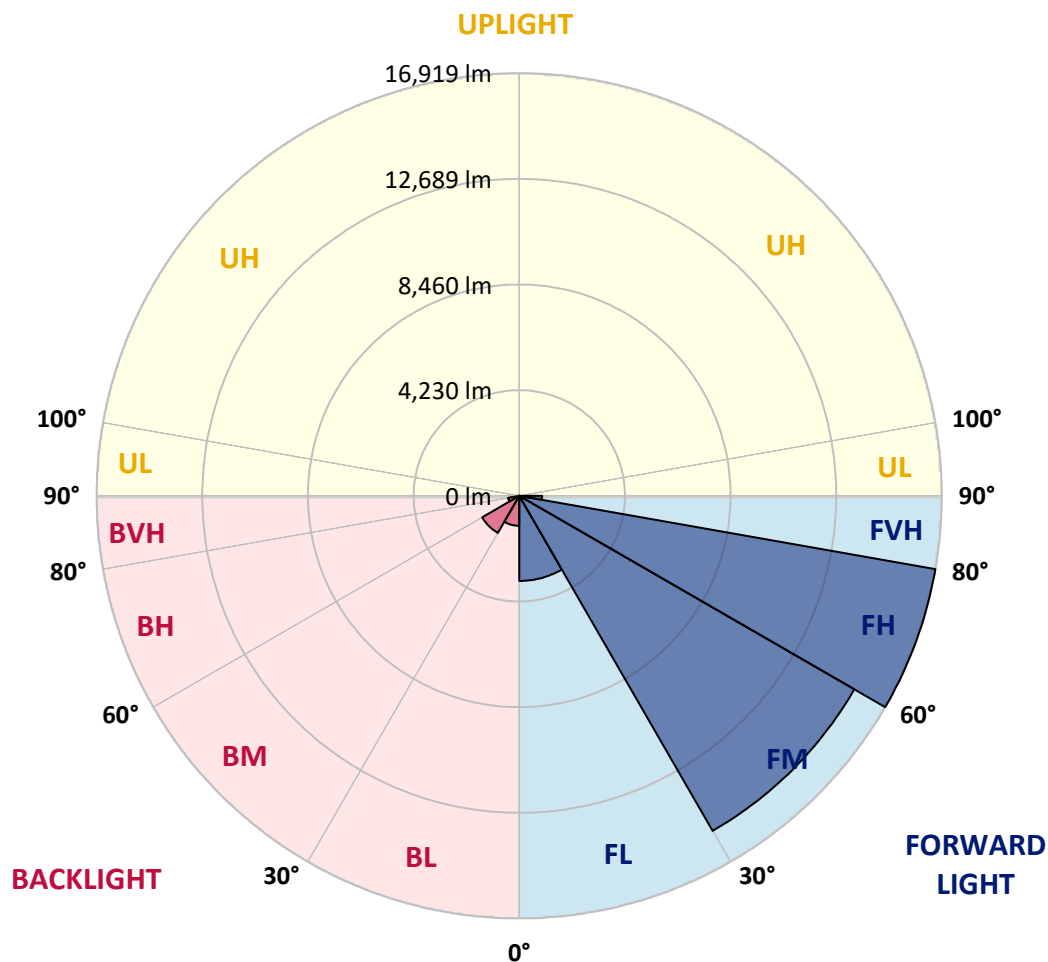
CATALOG NUMBER: GLEON-SA8D-830-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3408.0	8.5			
FM	(30°-60°)	15490.7	38.6			
FH	(60°-80°)	16919.3	42.2			G5
FVH	(80°-90°)	912.9	2.3			G5
BL	(0°-30°)	1201.7	3.0	B3/2500		
BM	(30°-60°)	1713.9	4.3	B2/2500		
BH	(60°-80°)	450.8	1.1	B1/500		G1/500
BVH	(80°-90°)	8.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4
2.5°	7828.4	7830.1	7811.8	7781.8	7743.5	7723.5	7690.2	7636.9	7580.2	7478.6	7368.7
5°	7988.3	7988.3	7965.0	7925.0	7863.4	7845.1	7781.8	7696.8	7580.2	7415.3	7230.5
7.5°	7971.7	7975.0	7943.3	7901.7	7840.1	7823.4	7746.8	7651.9	7506.9	7307.1	7070.6
10°	7885.0	7893.4	7868.4	7848.4	7791.8	7773.4	7701.8	7606.9	7462.0	7248.8	6977.3
12.5°	7796.8	7805.1	7813.4	7831.7	7796.8	7790.1	7733.5	7653.5	7515.3	7293.7	6987.3
15°	7740.1	7756.8	7816.8	7888.4	7896.7	7890.0	7853.4	7778.4	7638.5	7408.7	7058.9
17.5°	7740.1	7766.8	7891.7	8028.3	8076.6	8081.6	8049.9	7945.0	7778.4	7531.9	7125.5
20°	7805.1	7841.7	8036.6	8229.8	8309.8	8309.8	8248.1	8101.6	7906.7	7643.5	7170.5
22.5°	7971.7	8020.0	8264.8	8488.0	8572.9	8554.6	8471.3	8258.1	8039.9	7770.1	7227.1
25°	8299.8	8336.4	8591.3	8816.1	8867.8	8826.1	8721.2	8448.0	8209.8	7941.7	7330.4
27.5°	8722.8	8727.8	8991.0	9180.9	9149.2	9120.9	8989.3	8686.2	8454.7	8186.5	7508.6
30°	9187.6	9187.6	9419.1	9564.0	9467.4	9444.1	9312.5	8974.4	8767.8	8519.6	7761.8
32.5°	9637.3	9657.3	9845.5	9937.1	9828.8	9805.5	9677.2	9339.1	9184.2	9027.7	8156.5
35°	10072.0	10087.0	10265.2	10315.2	10211.9	10218.6	10127.0	9840.5	9782.2	9762.2	8751.2
37.5°	10493.4	10496.7	10678.3	10709.9	10658.3	10714.9	10723.3	10470.1	10578.3	10739.9	9589.0
40°	10878.2	10881.5	11061.4	11143.0	11231.3	11304.6	11369.5	11234.6	11592.7	11967.5	10586.7
42.5°	11186.3	11221.3	11449.5	11604.4	11837.6	11977.5	12154.0	12147.4	12800.3	13363.3	11792.6
45°	11457.8	11517.8	11835.9	12107.4	12507.1	12730.3	13006.8	13223.3	14159.4	14917.3	13013.5
47.5°	11815.9	11872.5	12235.6	12680.4	13213.4	13506.5	13964.6	14432.6	15653.5	16443.0	14206.1
50°	12320.6	12295.6	12653.7	13291.6	13976.2	14361.0	15013.9	15715.1	17135.9	17772.2	14907.3
52.5°	12858.6	12848.6	13113.4	13956.2	14875.6	15325.4	16188.2	17040.9	18553.3	18688.2	15228.8
55°	13524.8	13453.2	13676.4	14714.1	15943.3	16426.3	17442.4	18353.5	19682.6	19204.6	15390.3
57.5°	14222.7	14104.5	14317.7	15558.5	17147.5	17718.9	18831.5	19632.7	20433.8	19557.7	15388.7
60°	14943.9	14804.0	15057.2	16614.6	18643.3	19304.5	20337.2	20497.1	21135.0	19735.9	15275.4
62.5°	15546.9	15463.6	15840.0	17743.8	20313.9	20963.5	21474.8	21283.3	21726.3	19874.2	15010.6
65°	16184.8	16189.8	16797.8	19061.3	22089.4	22527.5	22570.8	22302.6	22221.0	19845.9	14114.5
67.5°	17047.6	17127.6	18141.9	20850.2	23816.7	24154.8	24151.5	23406.9	22582.5	18719.9	12127.4
70°	17960.4	18148.6	19690.9	22897.3	25702.2	26045.3	25868.7	24109.8	21263.3	15137.1	8582.9
72.5°	17807.1	18133.6	20552.1	24188.1	27056.3	27317.8	26170.2	22382.6	16806.1	8797.8	3654.4
75°	13738.0	14116.1	18844.8	22908.9	25635.5	25400.7	22485.9	17417.4	9184.2	2455.1	822.8
77.5°	7257.1	7458.6	12448.8	17452.4	19989.1	19497.7	15840.0	9662.3	2799.9	608.0	369.8
80°	3800.9	3847.6	5424.9	9902.1	12337.2	12340.6	9387.4	4244.0	1154.3	311.5	248.2
82.5°	2035.4	2075.4	2866.5	4575.5	6464.3	5859.6	3594.4	2335.2	671.2	176.6	238.2
85°	489.7	498.0	1625.6	2090.4	2541.7	1815.5	1067.7	1960.4	181.6	103.3	193.2
87.5°	188.2	191.5	603.0	904.4	647.9	419.7	499.7	731.2	23.3	40.0	30.0
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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CATALOG NUMBER: GLEON-SA8D-830-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4
2.5°	7302.1	7258.8	7152.2	7017.3	6897.3	6810.7	6680.8	6595.9	6539.2	6537.6	6515.9
5°	7117.2	7028.9	6799.1	6525.9	6277.7	6054.5	5791.4	5583.2	5428.3	5403.3	5350.0
7.5°	6919.0	6774.1	6421.0	5994.6	5578.2	5155.1	4663.7	4358.9	4097.4	3972.5	3959.2
10°	6797.4	6594.2	6092.8	5476.6	4823.6	4135.7	3492.8	3048.1	2726.6	2635.0	2566.7
12.5°	6772.4	6504.2	5839.7	4990.2	4057.4	3148.0	2436.8	1963.8	1707.3	1625.6	1604.0
15°	6797.4	6462.6	5626.5	4508.8	3281.3	2233.6	1635.6	1360.8	1264.2	1240.9	1239.2
17.5°	6812.4	6412.6	5384.9	3974.2	2528.4	1595.7	1252.5	1172.6	1157.6	1155.9	1159.3
20°	6810.7	6336.0	5096.8	3377.9	1880.5	1254.2	1132.6	1116.0	1112.6	1114.3	1112.6
22.5°	6799.1	6246.1	4780.3	2763.3	1420.8	1121.0	1081.0	1071.0	1069.3	1069.3	1069.3
25°	6820.7	6174.4	4432.2	2175.3	1170.9	1059.3	1034.3	1026.0	1024.4	1024.4	1021.0
27.5°	6899.0	6134.5	4050.8	1673.9	1057.7	1004.4	984.4	982.7	977.7	976.1	979.4
30°	7025.6	6134.5	3632.7	1302.5	989.4	947.7	932.7	929.4	927.7	926.1	927.7
32.5°	7248.8	6181.1	3176.3	1082.7	924.4	884.4	874.5	879.4	874.5	874.5	874.5
35°	7651.9	6321.0	2698.3	944.4	856.1	822.8	812.8	819.5	816.2	816.2	814.5
37.5°	8239.8	6580.9	2216.9	861.1	796.2	761.2	747.9	757.9	754.5	754.5	752.9
40°	8956.0	6959.0	1758.9	797.8	737.9	701.2	689.6	694.6	686.2	686.2	689.6
42.5°	9840.5	7438.7	1359.1	736.2	679.6	644.6	637.9	632.9	617.9	609.6	611.3
45°	10823.2	7938.3	1059.3	676.2	624.6	596.3	586.3	573.0	548.0	531.3	533.0
47.5°	11701.0	8323.1	861.1	617.9	574.6	553.0	538.0	513.0	476.4	456.4	458.0
50°	12162.4	8381.4	732.9	559.6	528.0	506.3	484.7	446.4	403.1	381.4	379.8
52.5°	12280.6	8108.2	637.9	506.3	481.4	456.4	428.1	376.4	328.1	304.8	301.5
55°	12323.9	7691.8	553.0	456.4	431.4	403.1	366.4	308.1	263.2	239.8	238.2
57.5°	12180.7	7070.6	486.4	411.4	381.4	346.4	301.5	246.5	203.2	184.9	184.9
60°	11862.5	6229.4	434.7	363.1	329.8	289.8	243.2	191.5	151.6	136.6	136.6
62.5°	11227.9	5140.1	386.4	313.1	281.5	239.8	196.5	144.9	106.6	98.3	99.9
65°	10030.4	3899.2	338.1	268.2	239.8	198.2	153.2	103.3	71.6	71.6	75.0
67.5°	8179.9	2708.3	288.2	228.2	206.5	161.6	116.6	71.6	50.0	56.6	63.3
70°	5414.9	1519.0	246.5	188.2	176.6	128.3	86.6	48.3	40.0	53.3	65.0
72.5°	2043.7	591.3	206.5	151.6	153.2	98.3	61.6	36.6	36.6	58.3	76.6
75°	569.6	289.8	148.2	111.6	119.9	71.6	45.0	31.6	35.0	66.6	89.9
77.5°	334.8	213.2	96.6	65.0	81.6	50.0	30.0	25.0	30.0	56.6	86.6
80°	269.8	113.3	56.6	33.3	45.0	28.3	20.0	15.0	8.3	21.7	45.0
82.5°	269.8	68.3	26.6	23.3	23.3	15.0	10.0	6.7	1.7	0.0	11.7
85°	181.6	28.3	16.7	15.0	11.7	5.0	3.3	1.7	0.0	0.0	0.0
87.5°	30.0	11.7	6.7	3.3	1.7	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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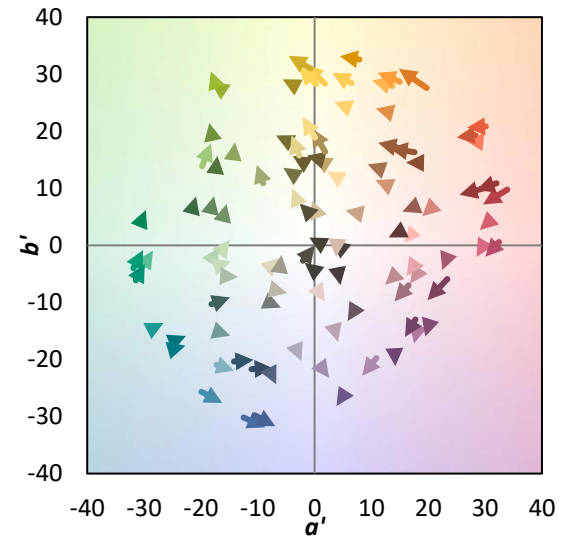
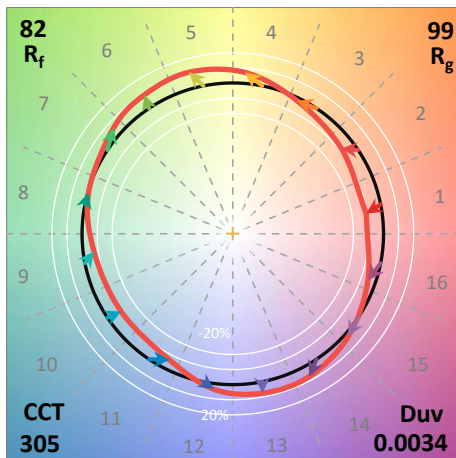
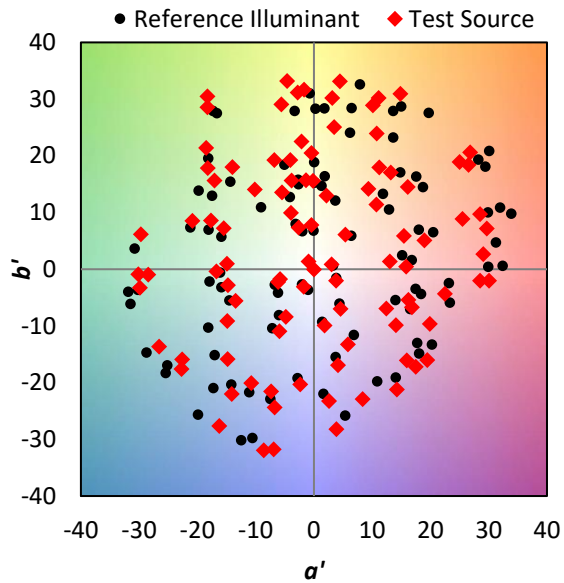
TM-30-18

Summary

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



Color Vector Graphics

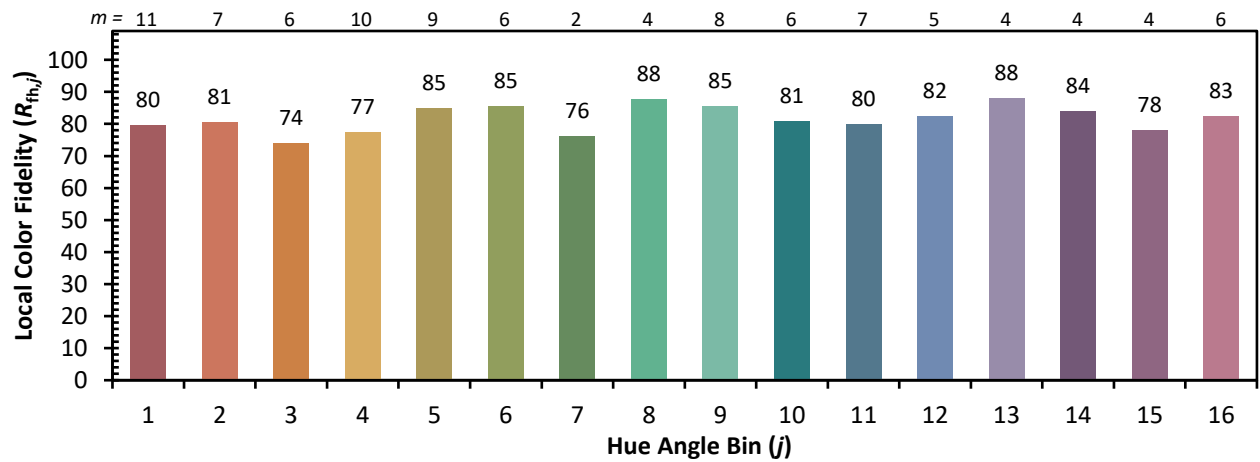
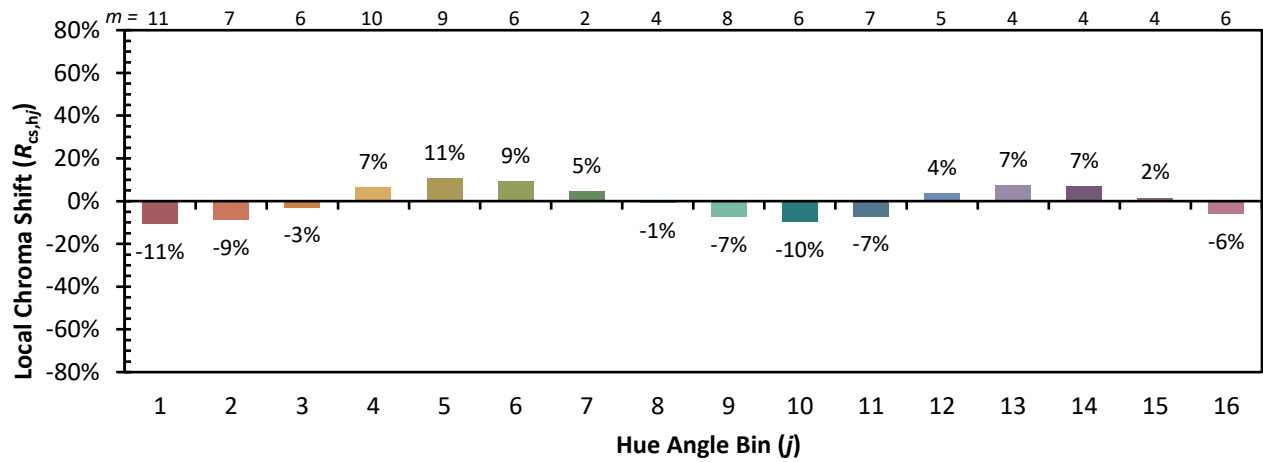


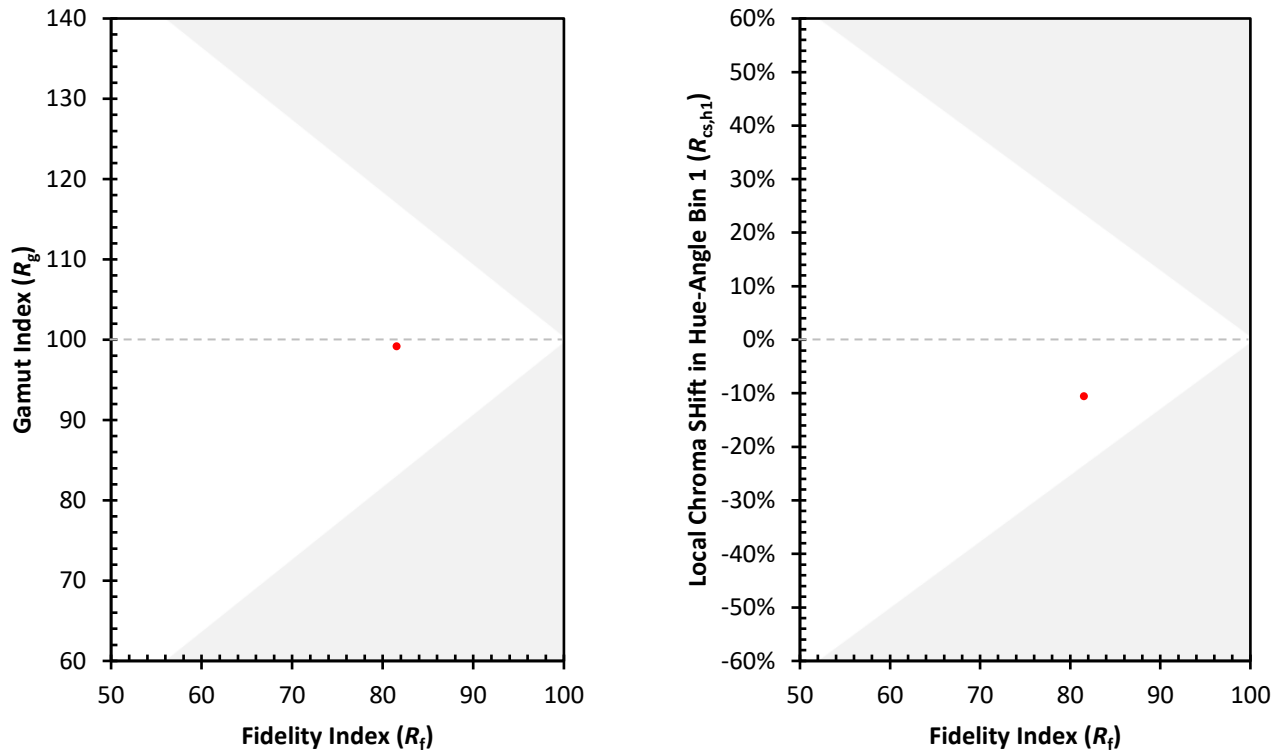
Individual Sample Fidelity Index ($R_{f,i}$)

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)