

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P321111

Luminaire Tested: **GLEON-SA7A-830-U-AFL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P321111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-29)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA7A-830-U-AFL
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26872 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

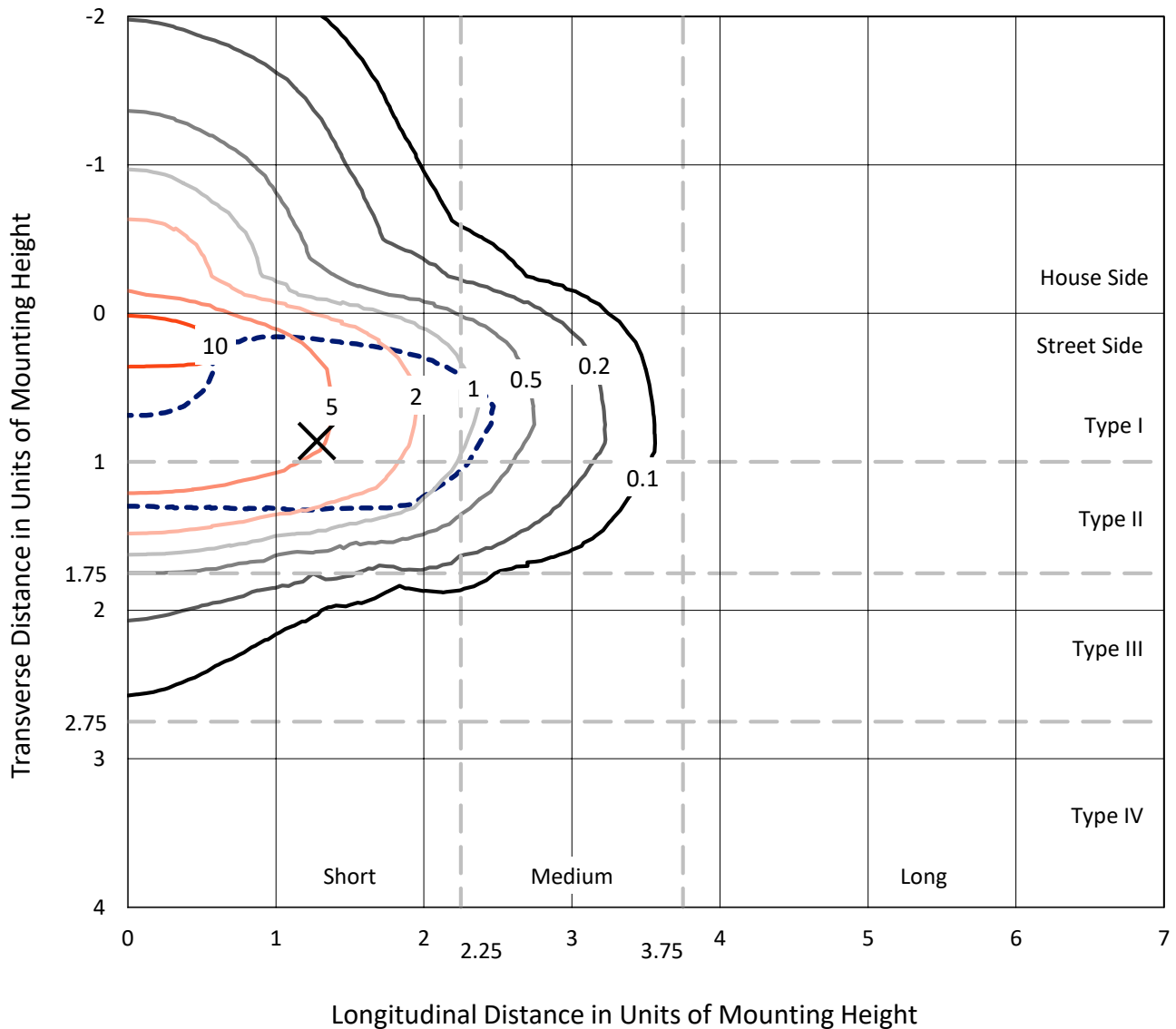
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P321111
 CATALOG NUMBER: GLEON-SA7A-830-U-AFL

Iso-Footcandle Lines of Horizontal Illumination

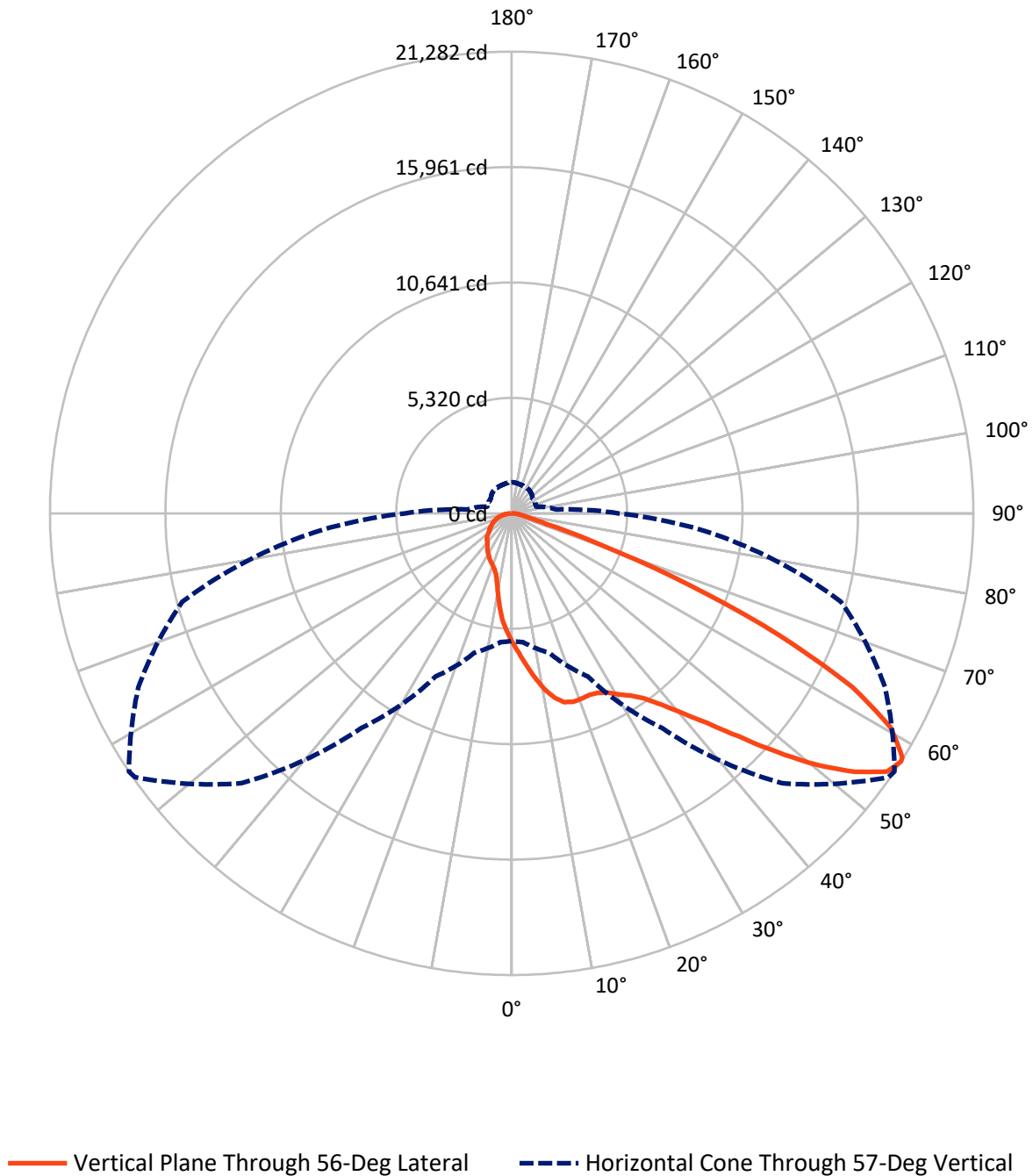
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.2 fc
 Type II - Short - N/A

REPORT NUMBER: P321111
CATALOG NUMBER: GLEON-SA7A-830-U-AFL

Luminous Intensity Polar Plot



REPORT NUMBER: P321111

CATALOG NUMBER: GLEON-SA7A-830-U-AFL

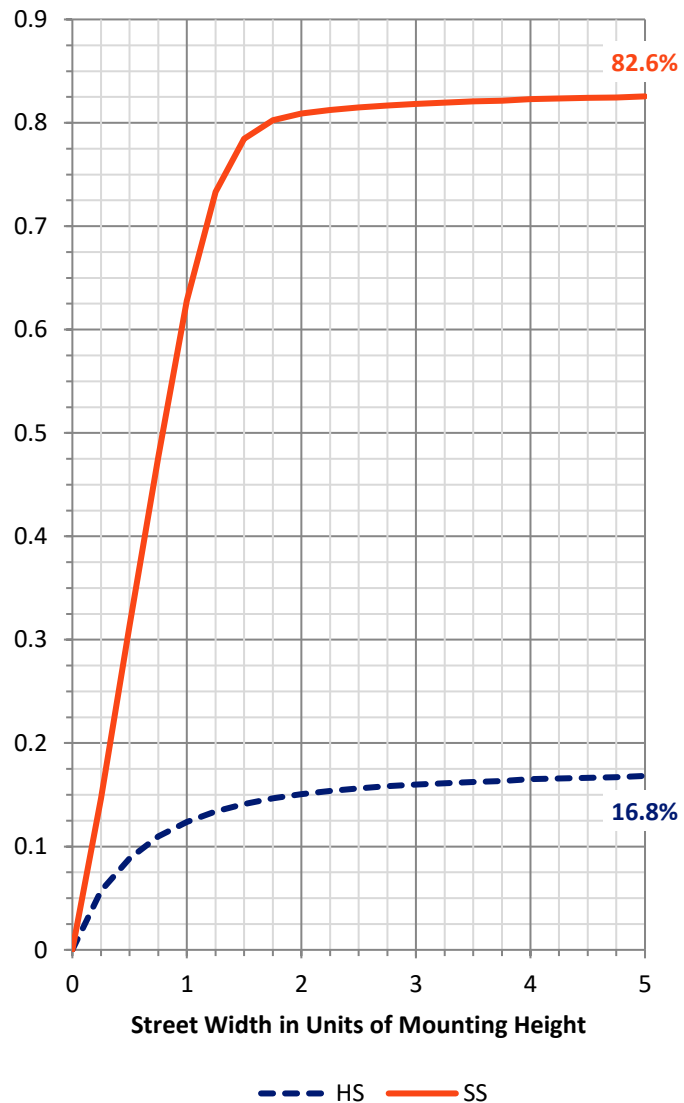
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4632.2	0.0	4632.2
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	22239.8	0.0	22239.8
	% Fixture	82.8	0.0	82.8
Total	Lumens	26872.0	0.0	26872.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.4	2.1
10°-20°	1609.7	6.0
20°-30°	2621.9	9.8
30°-40°	3919.4	14.6
40°-50°	5944.9	22.1
50°-60°	6663.2	24.8
60°-70°	3935.5	14.6
70°-80°	1289.4	4.8
80°-90°	318.6	1.2
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°	26872.0	100.0
0°-180°	26872.0	100.0

Coefficient of Utilization



REPORT NUMBER: P321111

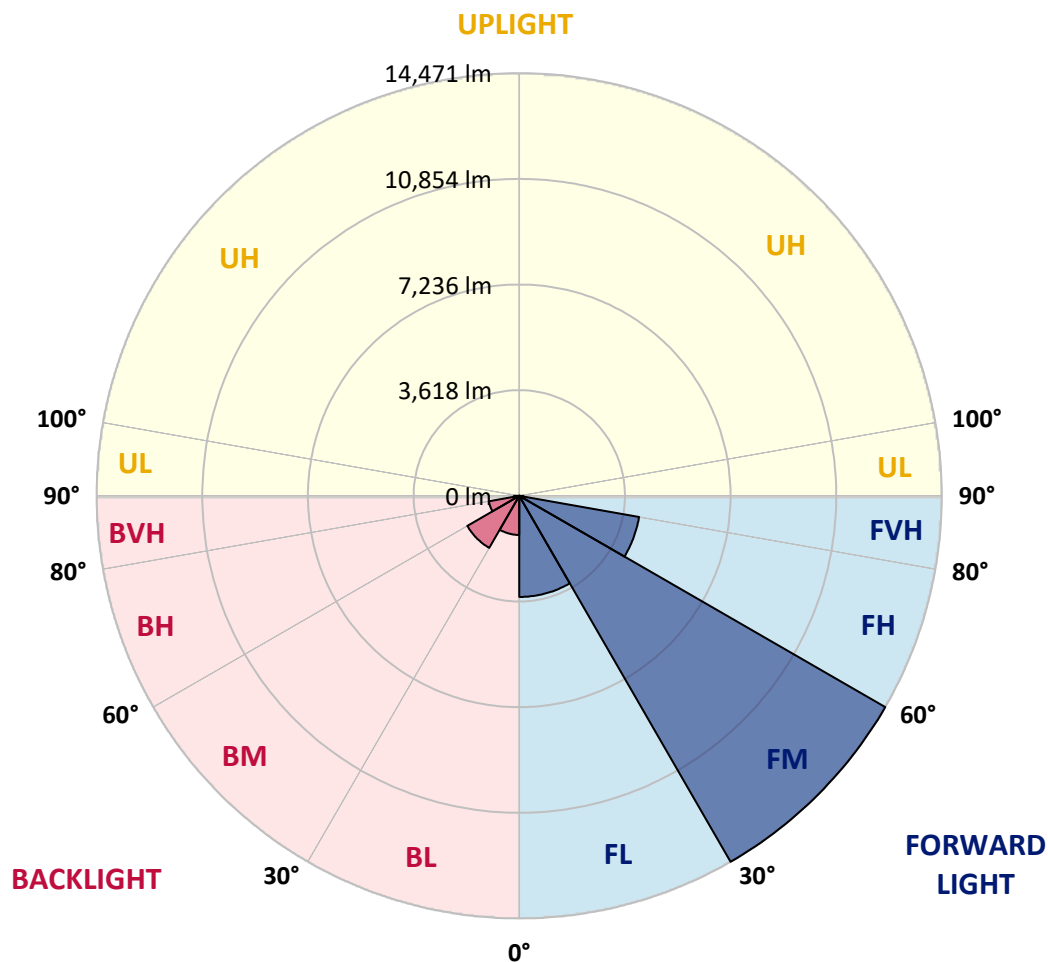
CATALOG NUMBER: GLEON-SA7A-830-U-AFL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3461.5	12.9			
FM	(30°-60°)	14471.5	53.9			
FH	(60°-80°)	4166.6	15.5			G2/5000
FVH	(80°-90°)	140.3	0.5			G2/225
BL	(0°-30°)	1339.4	5.0	B3/2500		
BM	(30°-60°)	2056.1	7.7	B2/2500		
BH	(60°-80°)	1058.4	3.9	B3/2500		G3/2500
BVH	(80°-90°)	178.3	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





REPORT NUMBER: P321111

CATALOG NUMBER: GLEON-SA7A-830-U-AFL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2
2.5°	6844.0	6906.8	6879.1	6783.1	6709.2	6604.8	6488.5	6453.4	6330.6	6193.0	6027.6
5°	7927.3	7895.9	7850.6	7701.0	7543.1	7359.3	7067.5	7021.3	6748.0	6436.8	6108.0
7.5°	8544.2	8541.4	8514.6	8426.9	8282.8	8042.7	7690.9	7636.4	7223.6	6723.0	6213.3
10°	8454.6	8448.1	8492.5	8583.9	8627.3	8577.4	8281.0	8226.5	7719.5	7039.8	6335.2
12.5°	7945.7	7949.4	8020.6	8212.6	8474.0	8788.0	8740.0	8713.2	8233.9	7398.1	6482.9
15°	7549.6	7557.9	7614.2	7781.4	8089.8	8659.6	9018.8	9028.1	8731.6	7793.4	6655.6
17.5°	7376.0	7393.5	7419.4	7536.6	7819.2	8403.8	9085.3	9135.2	9167.5	8203.4	6821.9
20°	7431.4	7448.0	7455.4	7530.2	7762.0	8248.7	9039.2	9128.7	9501.8	8589.4	6988.1
22.5°	7679.8	7689.9	7694.6	7714.0	7894.0	8293.0	9008.7	9102.9	9743.8	8935.7	7113.7
25°	8091.7	8084.3	8054.7	8029.8	8150.8	8468.4	9078.9	9168.5	9940.5	9249.7	7195.9
27.5°	8584.8	8575.6	8518.3	8450.0	8519.2	8741.8	9281.1	9352.2	10116.9	9543.4	7237.4
30°	9176.8	9152.8	9044.7	8963.4	8990.2	9151.8	9614.5	9679.1	10389.3	9876.8	7278.1
32.5°	9861.1	9835.2	9679.1	9544.3	9544.3	9679.1	9958.0	10011.6	10620.2	10253.6	7343.6
35°	10718.1	10685.8	10482.6	10256.3	10192.6	10260.9	10426.3	10464.1	11035.8	10728.2	7462.8
37.5°	11728.4	11685.0	11421.8	11118.9	10979.4	10975.7	11094.9	11172.4	11699.8	11351.6	7665.0
40°	12741.5	12711.0	12481.0	12242.8	11969.4	11881.7	12065.5	12089.5	12567.8	12125.5	7923.6
42.5°	13524.6	13519.0	13476.6	13508.0	13228.1	13050.8	13194.9	13214.3	13628.0	12963.1	8198.8
45°	13938.3	13947.5	14153.5	14609.7	14713.1	14583.8	14654.9	14660.5	14839.6	13808.1	8450.9
47.5°	13606.8	13654.8	14175.6	15196.1	16042.9	16472.4	16354.2	16422.5	16014.3	14534.0	8648.5
50°	12314.8	12373.9	13260.5	14934.8	16663.5	18300.0	18238.1	18222.4	16961.8	15065.9	8755.7
52.5°	10714.4	10760.6	11492.0	13576.3	16208.3	19310.3	19878.2	19797.0	17804.1	15463.9	8776.0
55°	8277.3	8349.3	9050.2	10864.9	14366.8	18924.3	21084.3	21011.3	18571.5	15672.6	8752.0
57°	5884.5	5960.2	6656.5	8292.1	12085.8	17588.0	21204.4	21281.9	18986.1	15707.7	8778.7
57.5°	5251.0	5328.6	6018.4	7606.8	11374.7	17105.0	21100.9	21230.2	19060.9	15702.2	8793.5
60°	2644.0	2673.5	3113.1	4246.2	7190.3	13828.4	19751.7	20085.1	19128.3	15430.7	8857.2
62.5°	1643.8	1622.6	1608.7	1956.0	3498.2	9170.3	16967.4	17609.2	17838.2	14773.1	8703.0
65°	1445.3	1405.6	1253.2	1225.5	1545.0	4454.0	12777.5	13576.3	15081.6	13737.0	8335.5
67.5°	1357.5	1318.8	1147.0	1043.5	1044.5	1765.7	7932.8	8832.3	11748.7	11985.1	7468.3
70°	1267.0	1231.9	1071.3	949.4	889.3	978.0	3649.7	4332.1	7658.5	9420.6	6241.9
72.5°	1150.7	1126.7	974.3	848.7	785.0	732.3	1397.2	1650.3	4433.7	6326.9	4334.9
75°	1028.8	1006.6	876.4	756.3	678.8	576.3	786.8	847.8	2252.4	3236.8	2134.2
77.5°	894.9	881.9	779.4	668.6	606.7	477.4	556.9	586.4	966.0	1388.0	1070.3
80°	712.0	736.9	681.5	595.7	538.4	382.3	394.3	413.7	562.4	677.8	607.7
82.5°	463.6	507.0	533.8	483.9	443.3	301.1	283.5	291.8	366.6	413.7	264.1
85°	193.0	217.0	350.9	316.8	294.6	219.8	190.2	193.9	227.2	235.5	108.0
87.5°	85.9	91.4	154.2	145.0	124.7	75.7	81.3	88.7	121.0	114.5	41.6
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: P321111

CATALOG NUMBER: GLEON-SA7A-830-U-AFL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2	5960.2
2.5°	5965.8	5888.2	5755.2	5608.4	5488.3	5392.3	5295.3	5228.8	5151.3	5109.7	5088.5
5°	5970.4	5818.0	5538.2	5251.0	4994.3	4759.7	4536.2	4364.4	4203.7	4116.9	4092.9
7.5°	5989.8	5760.8	5308.2	4835.4	4379.2	3962.7	3641.3	3440.0	3295.0	3230.4	3211.9
10°	6005.5	5693.3	5023.8	4323.8	3703.2	3281.2	3031.8	2919.2	2869.3	2861.0	2852.7
12.5°	6042.4	5624.1	4724.6	3790.0	3177.7	2885.9	2799.1	2791.7	2805.6	2825.9	2825.9
15°	6100.6	5555.7	4382.9	3332.0	2843.4	2740.9	2758.5	2799.1	2837.0	2868.4	2873.0
17.5°	6143.1	5471.7	4015.4	2965.3	2665.2	2692.9	2755.7	2813.0	2851.8	2882.2	2885.0
20°	6173.6	5341.5	3622.9	2685.5	2562.7	2648.6	2727.1	2777.9	2804.7	2835.1	2839.7
22.5°	6157.9	5167.0	3274.7	2485.1	2479.6	2583.9	2658.7	2719.7	2699.4	2669.8	2689.2
25°	6082.1	4926.8	2916.4	2335.5	2391.9	2497.1	2589.5	2548.8	2480.5	2467.6	2475.0
27.5°	5947.3	4620.2	2584.9	2197.0	2290.3	2416.8	2411.2	2370.6	2346.6	2330.0	2340.1
30°	5802.3	4287.8	2294.9	2076.0	2177.6	2282.0	2260.7	2259.8	2235.8	2209.0	2221.9
32.5°	5659.2	3953.5	2064.9	1976.3	2092.6	2106.5	2152.7	2166.5	2119.4	2063.1	2059.4
35°	5534.5	3637.6	1890.4	1885.8	1990.1	1992.0	2059.4	2040.0	1922.7	1864.5	1864.5
37.5°	5441.2	3322.7	1757.4	1804.5	1855.3	1903.3	1937.5	1857.1	1837.8	1805.4	1804.5
40°	5400.6	3045.7	1674.3	1742.6	1760.2	1821.1	1733.4	1764.8	1774.0	1757.4	1757.4
42.5°	5358.1	2804.7	1602.3	1695.5	1692.8	1684.5	1640.1	1680.8	1717.7	1718.6	1715.9
45°	5315.6	2596.9	1538.5	1594.9	1633.7	1544.1	1552.4	1595.8	1647.5	1666.0	1666.0
47.5°	5268.5	2432.5	1480.4	1488.7	1548.7	1488.7	1482.2	1515.5	1576.4	1606.0	1612.4
50°	5165.1	2284.7	1413.9	1395.4	1412.0	1432.3	1437.9	1453.6	1521.0	1568.1	1579.2
52.5°	5022.0	2152.7	1328.9	1309.5	1309.5	1386.2	1412.0	1416.6	1473.9	1530.2	1541.3
55°	4902.8	2068.6	1241.2	1237.5	1233.8	1337.2	1381.5	1388.9	1428.6	1473.0	1478.5
57°	4911.1	2062.2	1173.8	1177.5	1176.5	1287.4	1352.9	1368.6	1388.9	1426.8	1433.3
57.5°	4915.8	2066.8	1159.0	1160.8	1159.9	1273.5	1344.6	1362.2	1377.9	1417.6	1424.0
60°	4985.0	2078.8	1099.0	1078.6	1083.3	1199.6	1297.5	1319.7	1329.8	1382.5	1390.8
62.5°	4882.5	2025.2	1050.9	1002.0	1002.0	1122.0	1231.9	1267.0	1282.7	1353.8	1367.7
65°	4585.2	1874.7	994.6	915.2	924.4	1044.5	1153.4	1210.7	1234.7	1323.4	1338.1
67.5°	4126.2	1700.2	934.6	837.6	846.8	963.2	1072.2	1134.1	1171.9	1290.1	1302.1
70°	3528.7	1486.8	853.3	755.4	766.5	874.5	976.1	1046.3	1102.7	1258.7	1262.4
72.5°	2601.5	1219.0	739.7	664.9	676.9	771.1	879.2	960.4	1036.2	1180.2	1178.4
75°	1546.9	953.0	614.1	573.5	581.8	669.5	791.4	890.2	1003.8	1149.8	1167.3
77.5°	938.3	717.6	500.5	480.2	490.4	580.0	728.6	833.9	990.0	1084.2	1078.6
80°	567.0	512.5	399.9	386.9	397.1	495.9	674.2	791.4	865.3	926.3	926.3
82.5°	296.4	313.1	293.7	283.5	297.4	402.6	613.2	690.8	764.7	656.6	613.2
85°	121.0	163.5	178.2	177.3	185.6	278.9	529.2	591.0	493.1	468.2	479.3
87.5°	40.6	69.3	86.8	74.8	78.5	175.5	366.6	285.4	338.9	236.4	224.4
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
 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

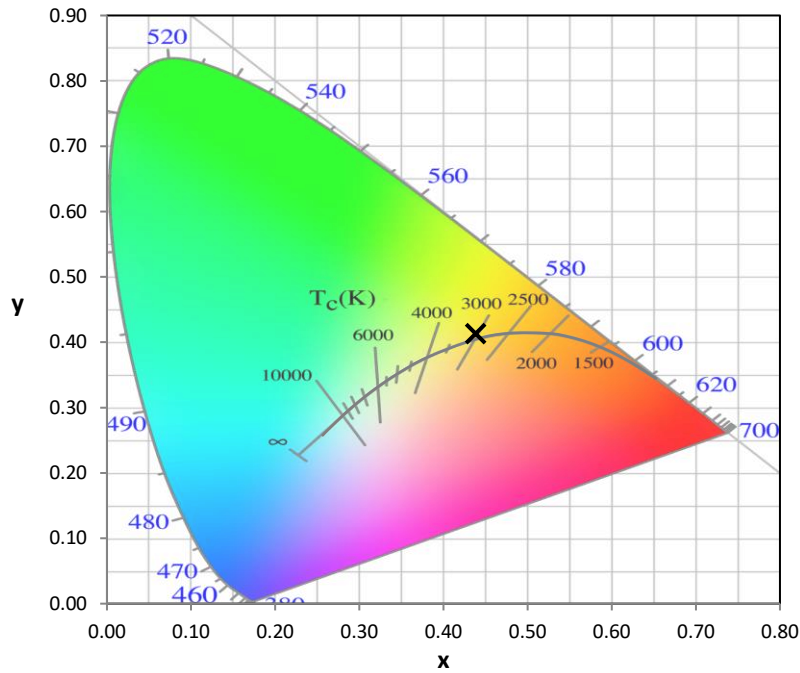
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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

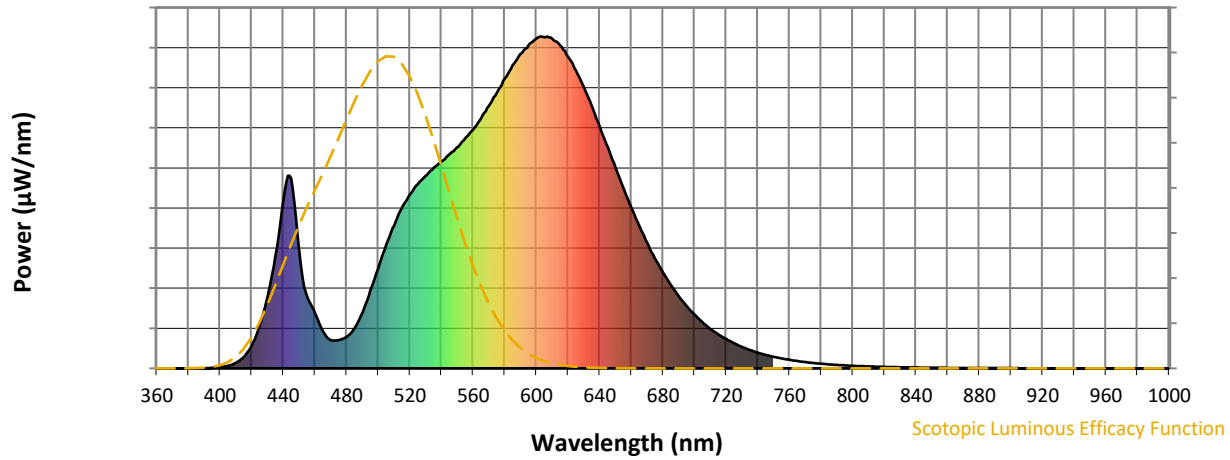


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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

Scotopic Flux vs. Wavelength



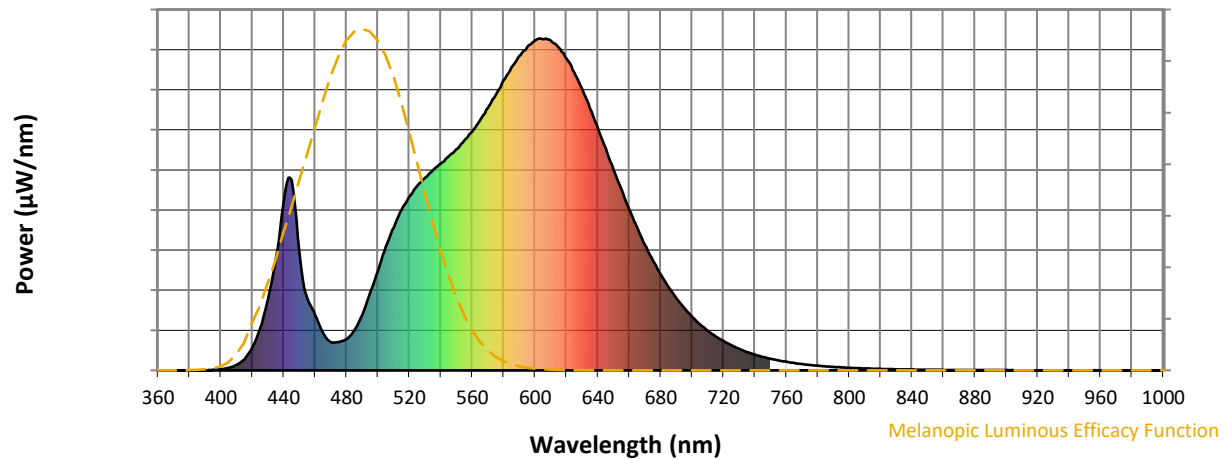
Scotopic Lumens: NR

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

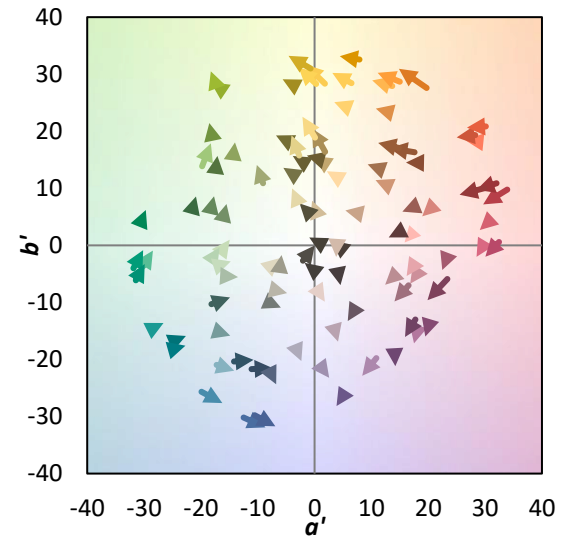
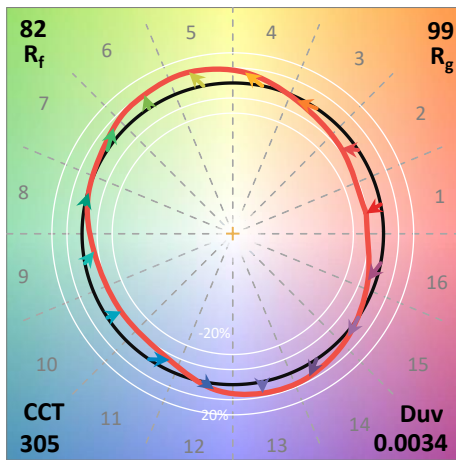
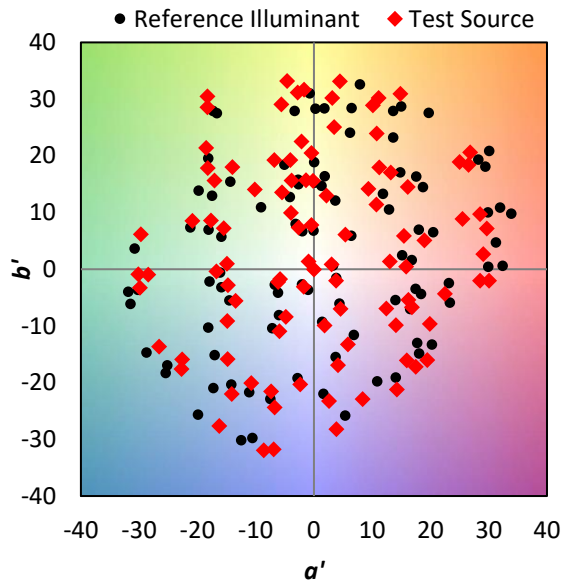
TM-30-18

Summary

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



Color Vector Graphics

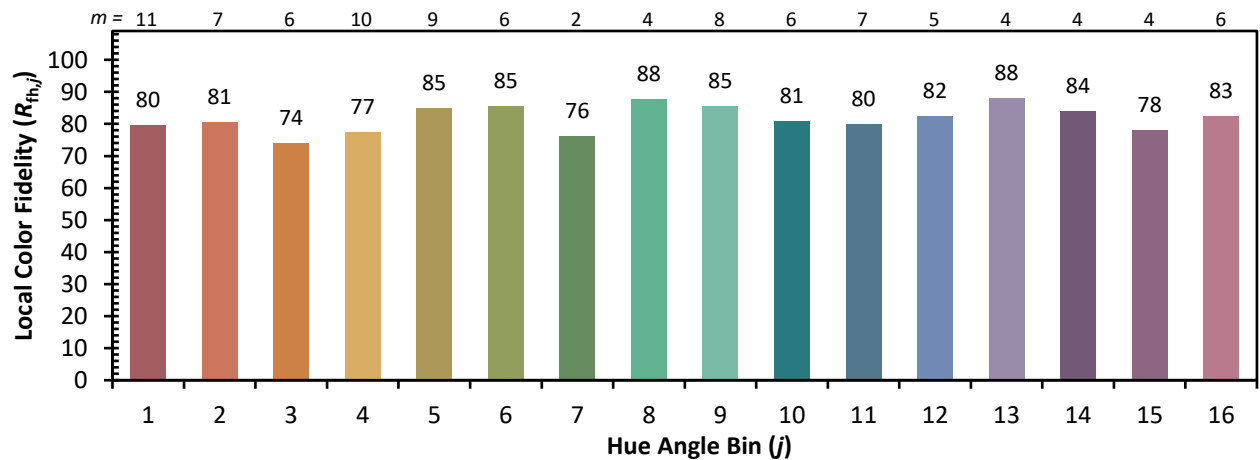
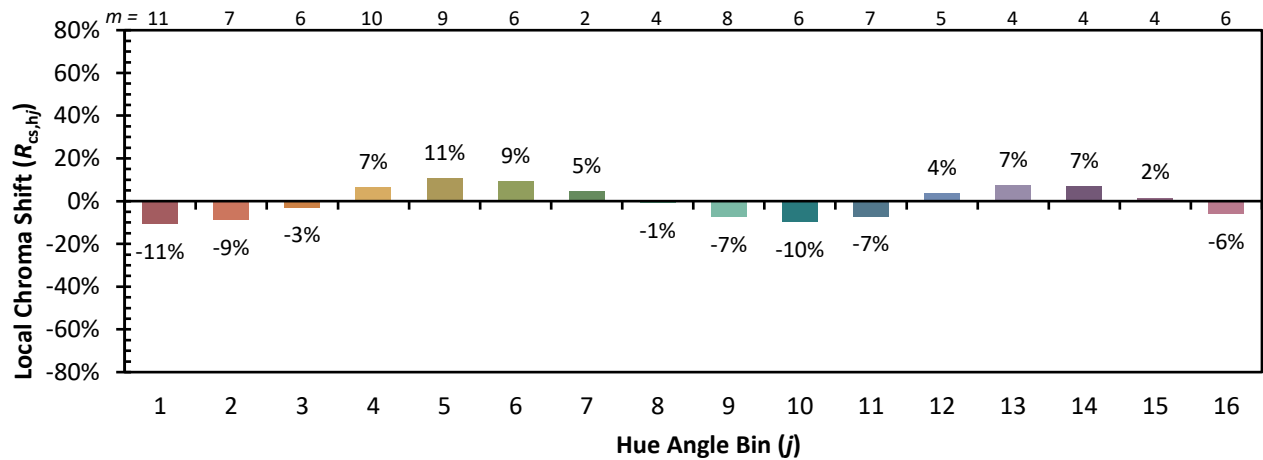


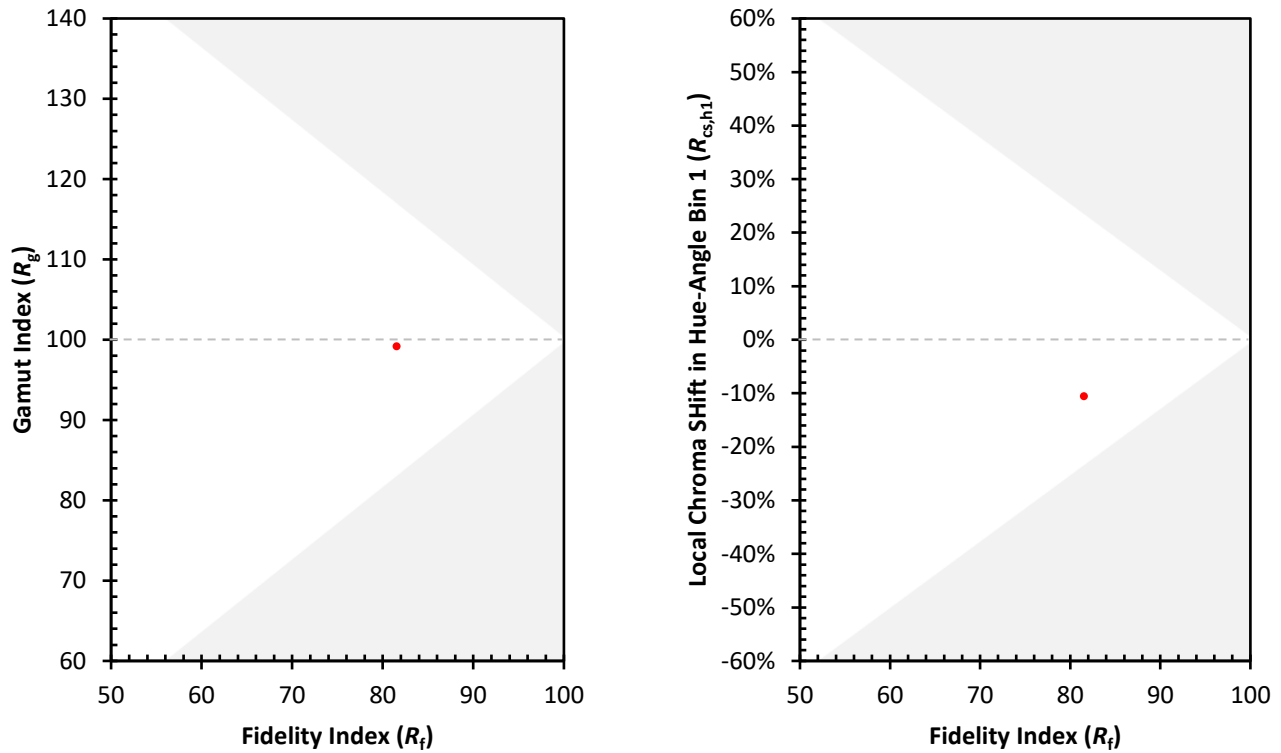
Individual Sample Fidelity Index ($R_{f,i}$)

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)