

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: P317617

Luminaire Tested: **GLEON-SA3D-830-U-T2R**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P317617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-8)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA3D-830-U-T2R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19612 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 191
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

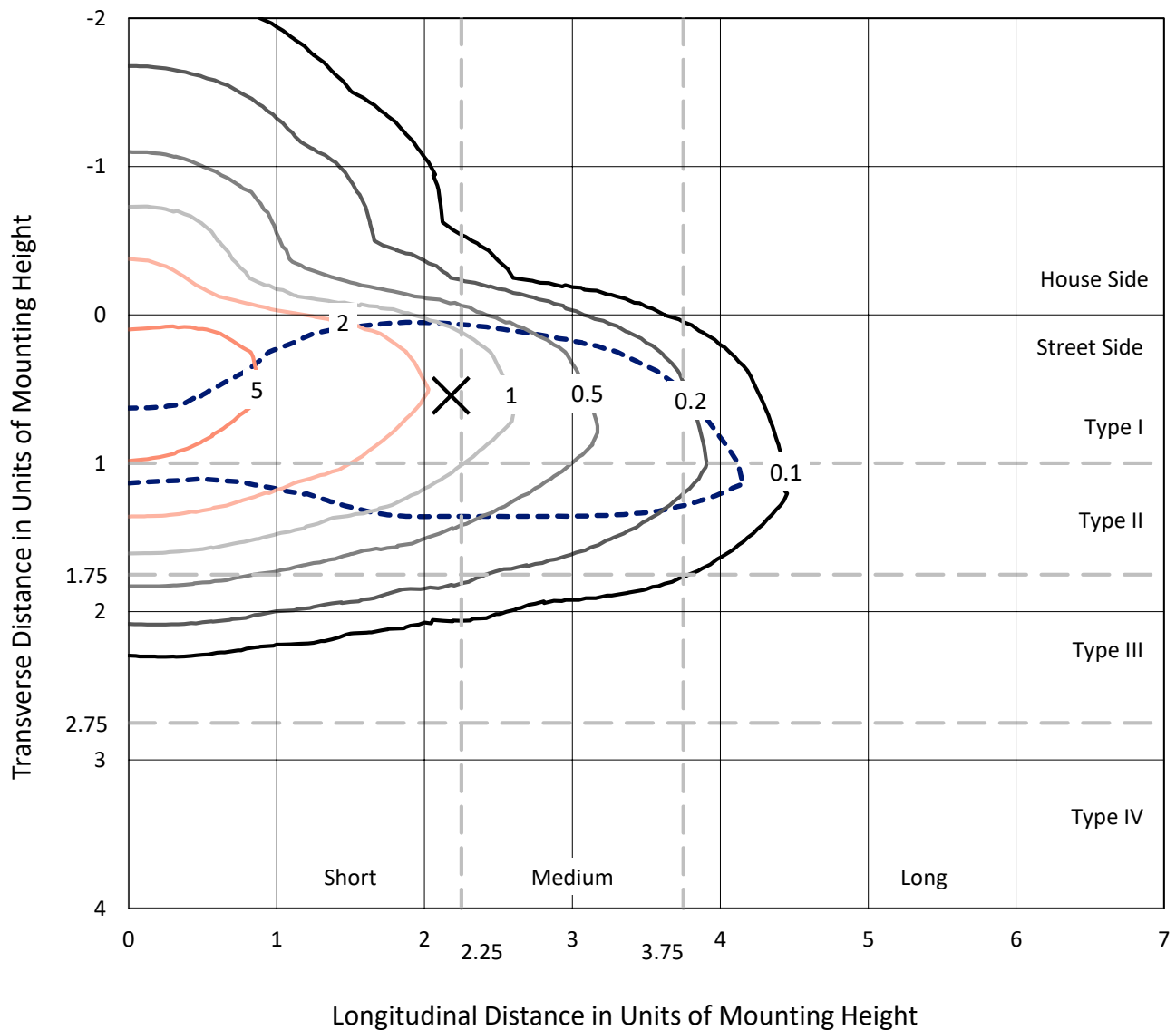


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Iso-Footcandle Lines of Horizontal Illumination

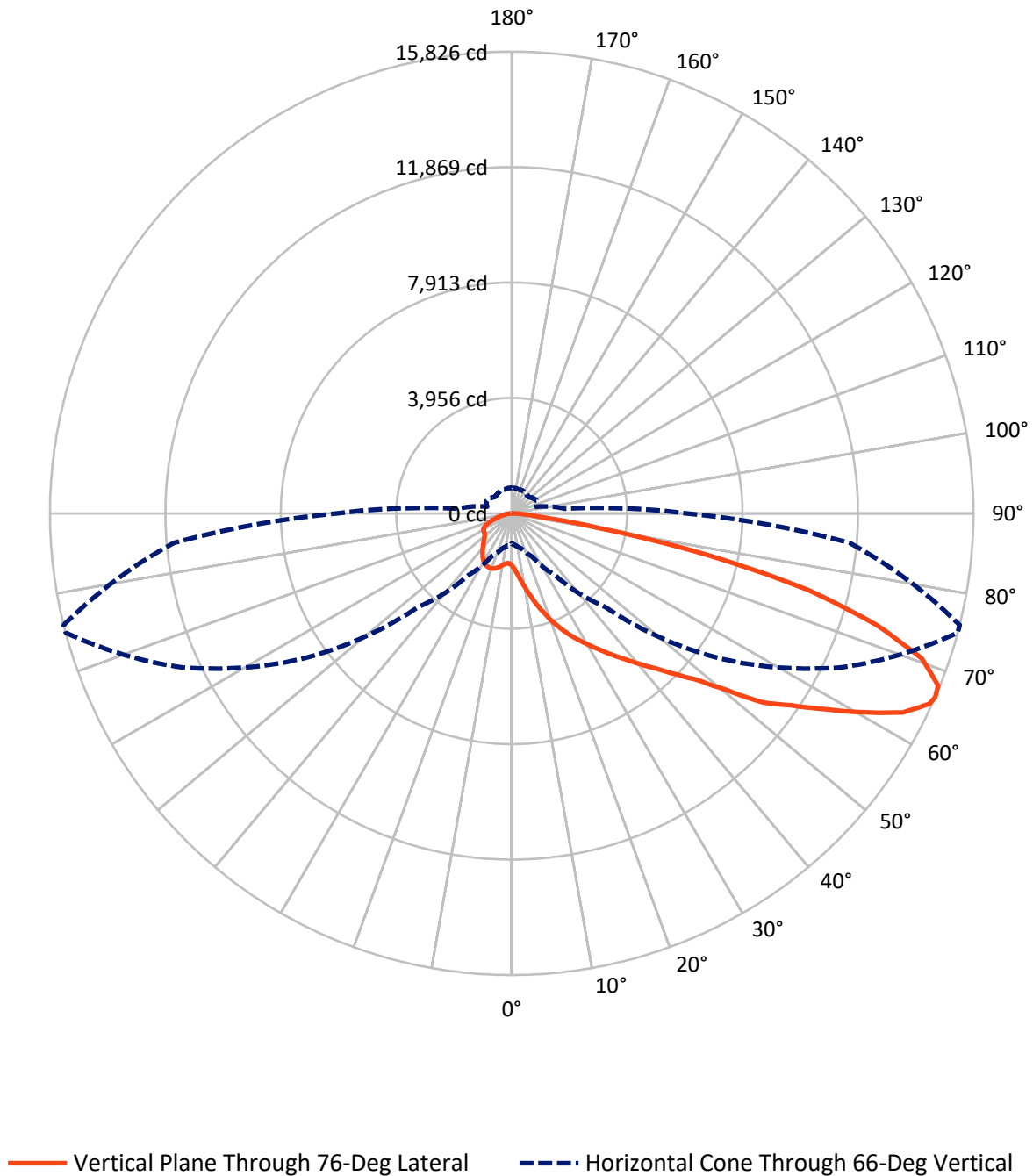
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



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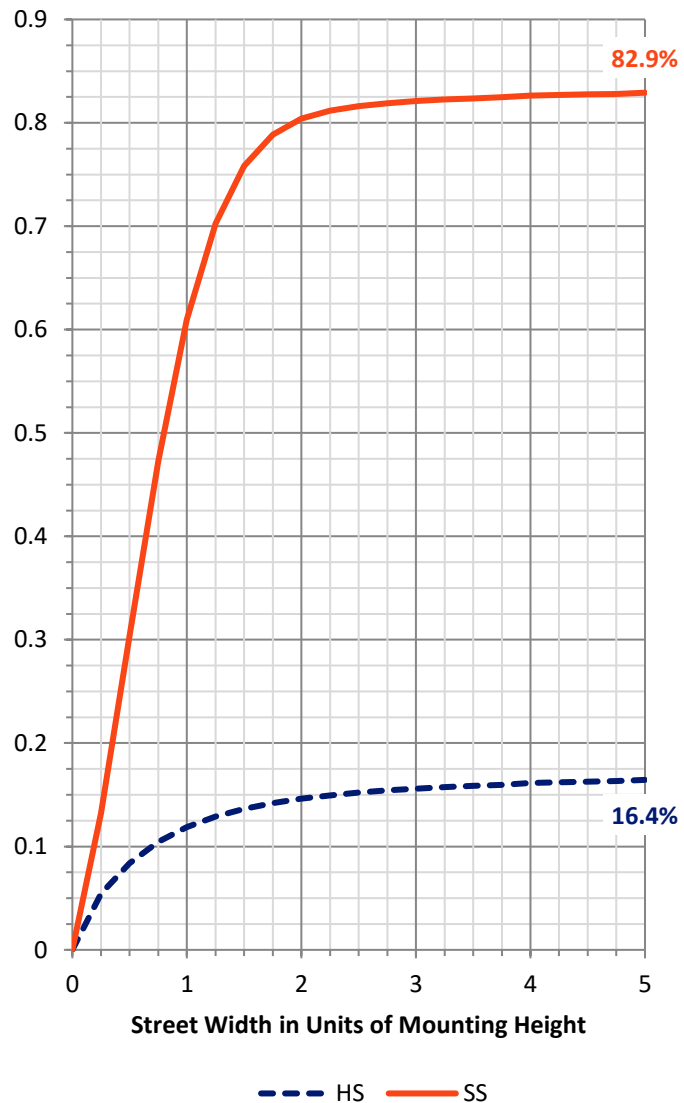
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3300.0	0.0	3300.0
	% Fixture	16.8	0.0	16.8
Street Side	Lumens	16312.0	0.0	16312.0
	% Fixture	83.2	0.0	83.2
Total	Lumens	19612.0	0.0	19612.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.6	1.1
10°-20°	855.3	4.4
20°-30°	1662.0	8.5
30°-40°	2712.7	13.8
40°-50°	3706.3	18.9
50°-60°	4317.1	22.0
60°-70°	3870.3	19.7
70°-80°	1955.9	10.0
80°-90°	315.9	1.6
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°	19612.0	100.0
0°-180°	19612.0	100.0

Coefficient of Utilization



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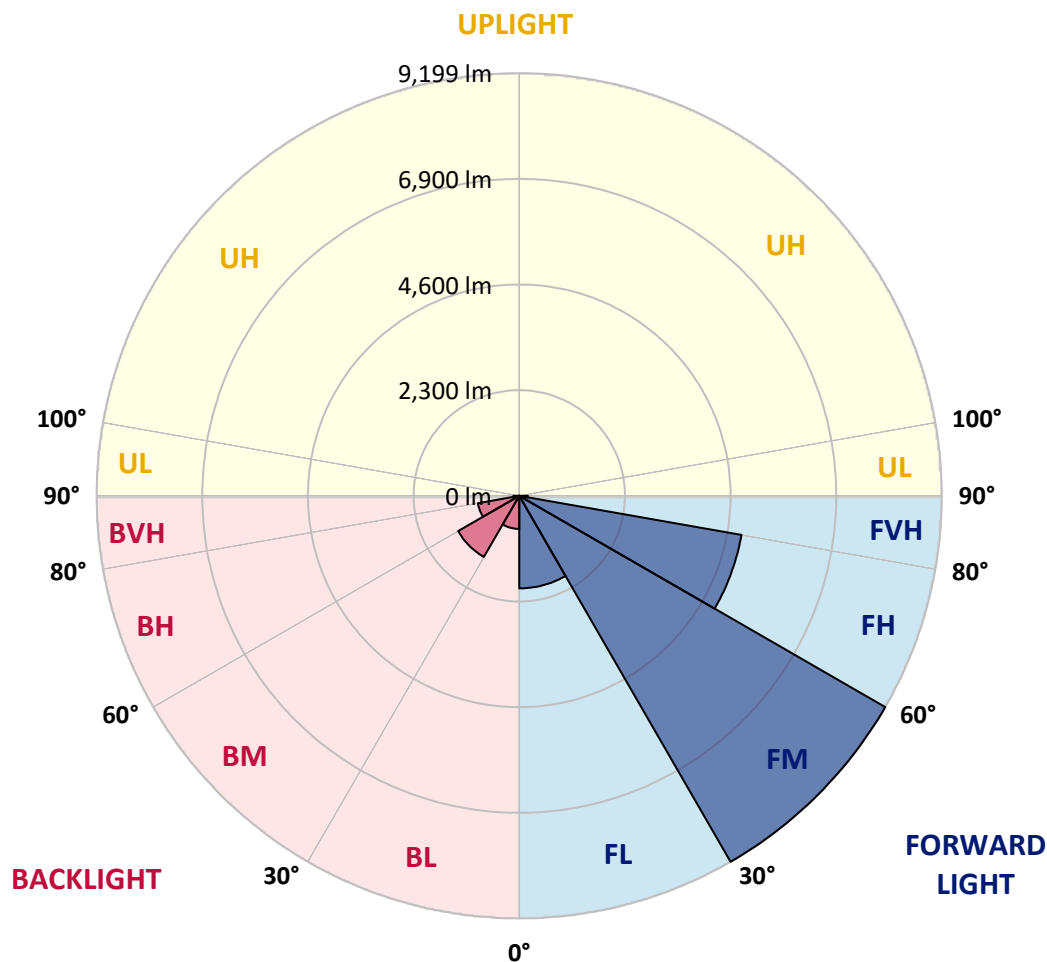
CATALOG NUMBER: GLEON-SA3D-830-U-T2R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2014.1	10.3			
FM	(30°-60°)	9199.4	46.9			
FH	(60°-80°)	4912.0	25.0			G2/5000
FVH	(80°-90°)	186.5	1.0			G2/225
BL	(0°-30°)	719.8	3.7	B2/1000		
BM	(30°-60°)	1536.7	7.8	B2/2500		
BH	(60°-80°)	914.3	4.7	B2/1000		G2/1000
BVH	(80°-90°)	129.3	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0
2.5°	2377.6	2341.6	2338.3	2285.7	2273.7	2173.2	2099.3	2022.1	1934.2	1916.9	1847.6
5°	3054.1	3050.7	3004.8	2918.9	2851.6	2679.9	2510.1	2330.3	2133.2	2101.3	1945.5
7.5°	3662.6	3657.3	3622.0	3529.4	3432.2	3221.2	2978.8	2703.2	2383.6	2336.3	2078.0
10°	4124.7	4122.7	4110.7	4042.8	3960.2	3757.8	3490.2	3114.0	2674.5	2610.0	2243.8
12.5°	4481.5	4485.5	4493.5	4469.6	4430.3	4257.8	3983.5	3549.4	2984.8	2920.9	2428.2
15°	4723.2	4735.2	4776.5	4810.4	4831.1	4725.2	4459.6	3994.8	3332.4	3255.8	2632.6
17.5°	4845.1	4858.4	4929.6	5032.2	5126.7	5116.1	4905.0	4419.6	3665.9	3592.0	2852.3
20°	4950.3	4960.3	5040.2	5163.3	5330.4	5404.3	5285.8	4828.4	4031.5	3943.6	3085.3
22.5°	5255.2	5267.9	5291.8	5361.7	5509.5	5645.4	5588.1	5215.3	4366.4	4284.5	3306.4
25°	5843.8	5859.1	5807.2	5747.9	5775.9	5870.4	5881.1	5568.1	4705.9	4613.4	3544.1
27.5°	6552.9	6574.8	6486.3	6333.8	6200.7	6164.0	6151.4	5857.1	5030.2	4923.0	3779.1
30°	7247.3	7285.2	7170.1	6972.3	6728.0	6556.2	6429.0	6140.1	5349.8	5247.2	4000.8
32.5°	7925.8	7910.4	7743.3	7550.2	7263.9	7048.9	6741.3	6443.7	5709.3	5591.4	4221.2
35°	8390.5	8395.8	8240.7	8011.6	7738.7	7573.5	7159.4	6771.2	6076.1	5967.6	4471.6
37.5°	8786.0	8761.3	8585.6	8371.8	8136.8	8066.2	7648.8	7132.1	6473.6	6355.1	4737.9
40°	8917.8	8889.2	8774.0	8620.2	8431.8	8425.8	8188.7	7540.9	6923.0	6805.9	5038.2
42.5°	8837.9	8801.3	8754.0	8712.1	8654.1	8680.8	8696.1	8020.3	7417.1	7285.9	5385.7
45°	8543.0	8487.7	8521.0	8612.2	8738.0	8888.5	9154.2	8550.9	7970.4	7860.5	5793.8
47.5°	8089.5	8039.6	8143.5	8338.6	8680.8	9061.6	9587.6	9136.9	8630.8	8521.6	6375.1
50°	7451.7	7466.3	7614.8	7969.7	8487.0	9141.5	10121.6	9912.5	9590.9	9489.1	7168.1
52.5°	6405.1	6407.7	6825.8	7408.4	8143.5	9100.2	10417.9	10903.9	10901.9	10778.7	7923.1
55°	5433.0	5492.2	5823.1	6597.5	7586.9	8935.1	10624.9	11385.9	11762.8	11618.3	8626.8
57.5°	4483.5	4518.2	4831.8	5609.4	6792.6	8495.0	10837.3	11964.5	12754.8	12663.6	9501.7
60°	3403.6	3456.9	3781.1	4499.5	5776.5	7714.0	10857.3	12568.4	13940.6	13848.8	10478.5
62.5°	2209.1	2301.0	2604.6	3277.8	4547.5	6590.8	10393.9	12963.2	15064.5	15031.9	11345.3
65°	1269.7	1338.9	1550.0	2069.3	3137.3	5180.6	9292.0	12811.4	15756.3	15737.7	11669.6
66°	1037.3	1080.6	1242.4	1617.2	2588.7	4549.5	8651.5	12491.2	15824.9	15825.5	11632.3
67.5°	829.6	848.9	921.5	1157.8	1910.2	3606.0	7507.0	11784.8	15739.7	15763.0	11391.9
70°	686.4	696.4	719.1	776.3	1042.7	2174.5	5328.4	9949.1	14884.1	14902.1	10453.8
72.5°	615.9	621.9	630.5	638.5	735.7	1215.1	3254.5	7959.0	13049.8	13073.1	9024.3
75°	557.9	561.3	559.9	560.6	617.2	774.3	1681.8	5942.3	10551.7	10505.1	6913.1
77.5°	490.0	493.4	486.7	488.0	546.0	595.2	836.9	4160.0	7120.8	6791.9	3895.0
80°	414.1	416.8	414.1	418.8	475.4	449.4	486.7	2340.3	3148.6	2978.1	1384.9
82.5°	312.9	324.2	332.2	350.9	391.5	319.6	325.6	911.5	958.8	912.8	424.8
85°	137.2	167.1	250.3	268.3	294.3	191.8	213.7	371.5	390.2	378.2	154.5
87.5°	36.0	39.3	123.8	155.8	163.1	86.6	111.2	169.1	178.4	169.1	51.3
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-SA3D-830-U-T2R

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0	1791.0
2.5°	1811.0	1778.4	1719.8	1667.8	1628.6	1601.9	1575.3	1562.0	1554.0	1546.0	1547.3
5°	1868.9	1803.0	1702.5	1631.2	1591.3	1566.0	1552.7	1547.3	1544.0	1536.0	1536.0
7.5°	1956.1	1862.9	1724.4	1651.2	1619.9	1600.6	1592.6	1589.9	1585.9	1576.6	1578.0
10°	2066.0	1935.5	1770.4	1699.1	1670.5	1649.2	1637.9	1633.9	1626.6	1615.9	1617.2
12.5°	2195.2	2025.4	1831.0	1756.4	1721.8	1693.1	1674.5	1663.2	1650.5	1636.6	1637.2
15°	2336.3	2123.3	1896.2	1807.7	1760.4	1720.4	1690.5	1671.2	1651.2	1633.9	1633.2
17.5°	2479.5	2217.8	1946.2	1835.6	1771.7	1719.1	1678.5	1648.5	1623.9	1602.6	1600.6
20°	2633.9	2303.0	1974.1	1833.0	1750.4	1687.8	1633.9	1596.6	1569.3	1548.0	1544.7
22.5°	2791.1	2382.9	1978.8	1805.7	1703.1	1626.6	1570.0	1528.7	1500.7	1478.8	1470.8
25°	2934.9	2444.8	1959.5	1753.1	1637.2	1554.7	1499.4	1457.4	1434.8	1408.8	1400.9
27.5°	3066.0	2488.1	1920.9	1685.8	1563.3	1482.1	1430.2	1394.2	1369.6	1349.6	1342.9
30°	3183.9	2511.4	1857.6	1605.9	1487.4	1413.5	1369.6	1344.9	1323.6	1298.3	1293.7
32.5°	3295.7	2511.4	1776.4	1518.7	1412.2	1352.9	1327.0	1311.6	1287.7	1263.0	1256.4
35°	3407.6	2496.1	1680.5	1427.5	1342.9	1309.6	1308.3	1290.3	1253.7	1220.4	1211.8
37.5°	3525.4	2464.8	1572.6	1342.3	1286.3	1290.3	1301.7	1261.7	1209.8	1162.5	1149.8
40°	3658.6	2421.5	1460.8	1268.4	1239.1	1281.7	1283.7	1220.4	1119.2	1075.9	1064.6
42.5°	3815.1	2378.3	1356.9	1203.1	1201.8	1255.7	1249.7	1131.2	1070.6	1048.6	1042.7
45°	4020.8	2353.6	1258.4	1141.2	1172.5	1213.8	1191.8	1081.9	1056.6	1044.0	1038.7
47.5°	4345.0	2366.3	1167.8	1091.9	1143.2	1171.8	1083.9	1062.0	1044.0	1028.7	1023.3
50°	4751.2	2359.0	1094.6	1058.0	1109.9	1127.9	1035.3	1036.0	1026.7	1009.4	1001.4
52.5°	5056.8	2301.7	1047.3	1038.7	1080.6	1050.0	1004.7	1010.7	1006.0	980.7	972.1
55°	5351.7	2252.4	1023.3	1031.3	1059.3	952.8	968.7	983.4	978.7	954.1	950.1
57.5°	5718.6	2243.1	1008.7	1033.3	1041.3	904.2	934.1	953.4	950.1	939.5	937.5
60°	6168.0	2245.8	995.4	1036.7	1021.3	868.2	901.5	926.1	928.1	926.1	924.8
62.5°	6415.0	2173.2	962.1	1027.3	986.1	836.9	867.5	903.5	904.2	908.2	907.5
65°	6205.3	1956.1	900.2	994.7	926.8	811.0	838.2	877.5	867.5	885.5	885.5
66°	6001.6	1831.0	869.5	973.4	901.5	801.0	828.9	864.2	851.6	876.2	876.2
67.5°	5585.4	1619.9	814.3	928.1	865.5	787.0	818.3	842.2	824.9	861.6	858.9
70°	4825.1	1253.0	703.1	825.6	806.3	766.3	803.6	798.3	773.0	828.9	818.3
72.5°	4068.1	952.1	564.6	691.1	716.4	740.4	783.0	742.4	710.4	749.7	726.4
75°	3156.6	715.7	446.1	537.3	605.2	699.8	758.4	677.8	631.8	627.9	615.2
77.5°	1706.5	491.4	353.5	410.1	480.7	649.2	741.7	608.5	539.3	523.3	513.3
80°	675.8	319.6	257.0	310.9	336.2	575.9	701.8	528.0	444.8	428.8	413.5
82.5°	279.0	189.1	165.8	208.4	219.1	492.7	629.9	432.8	343.6	475.4	504.7
85°	119.8	103.9	98.5	107.9	123.8	345.6	501.4	330.2	370.9	330.9	263.0
87.5°	36.0	43.9	41.9	41.3	45.3	82.6	267.0	183.8	272.3	103.2	77.2
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

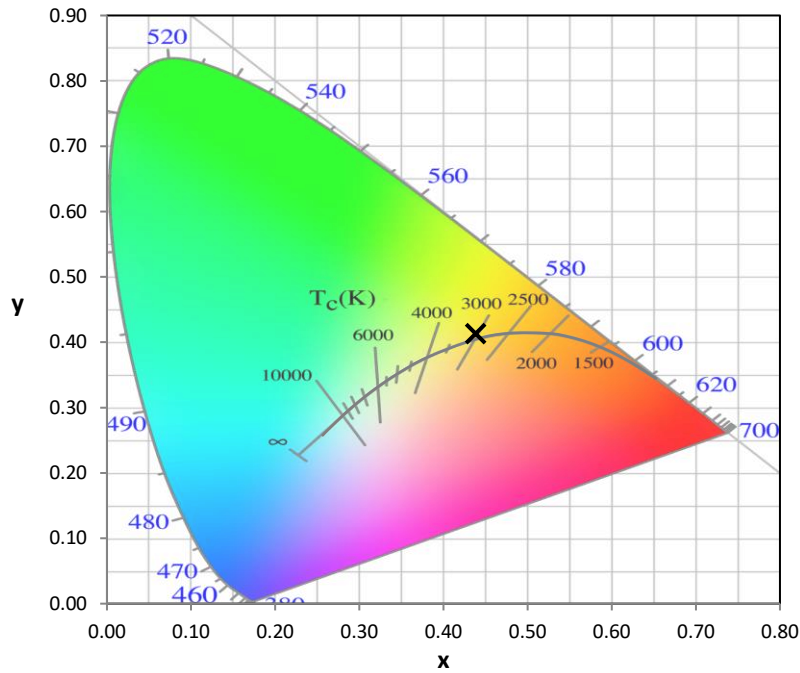
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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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

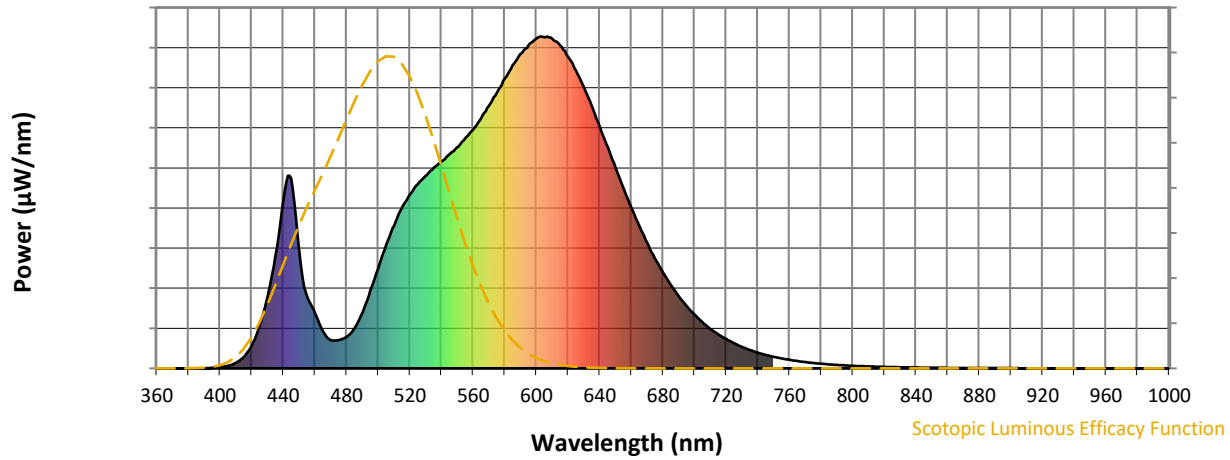


Photopic Lumens: NR

λ (nm)	Power W/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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Scotopic Flux vs. Wavelength



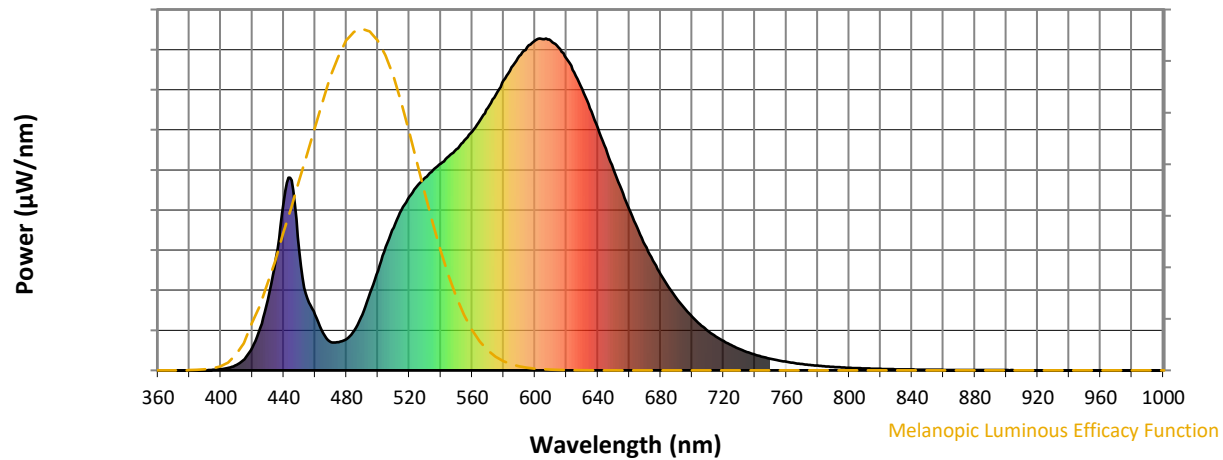
Scotopic Lumens: NR

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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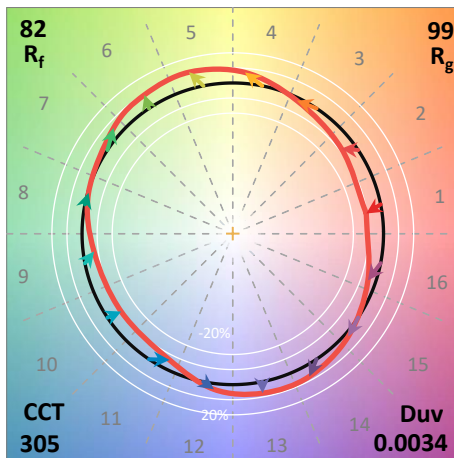
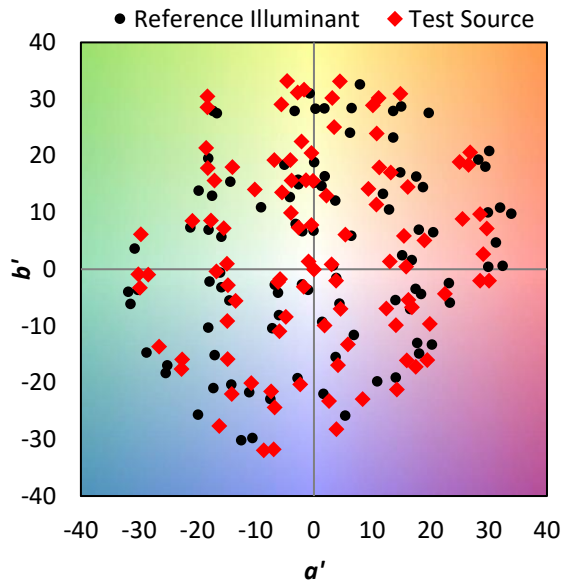
TM-30-18

Summary

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

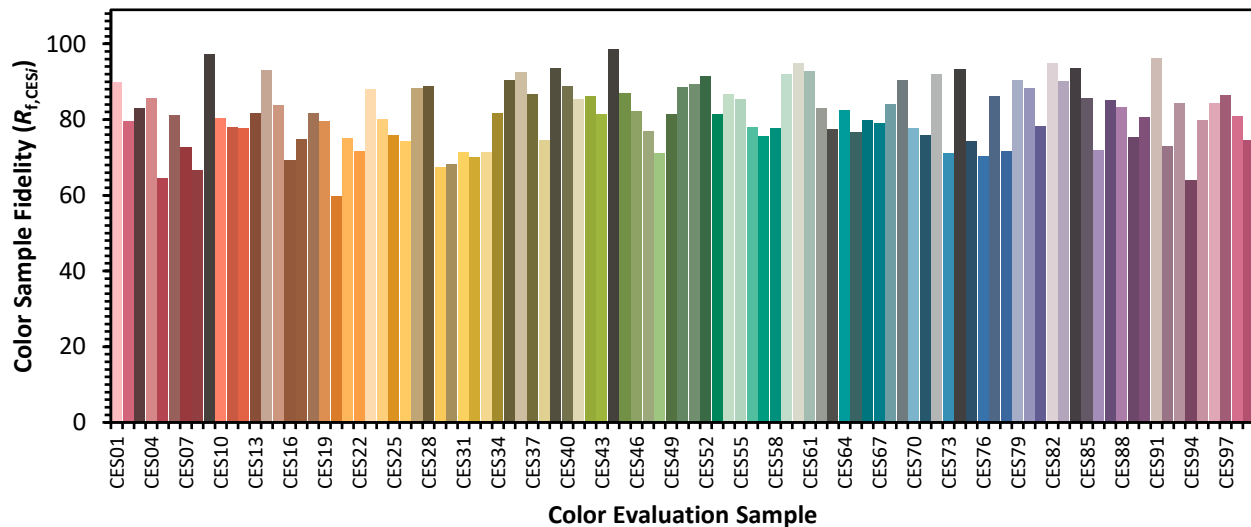


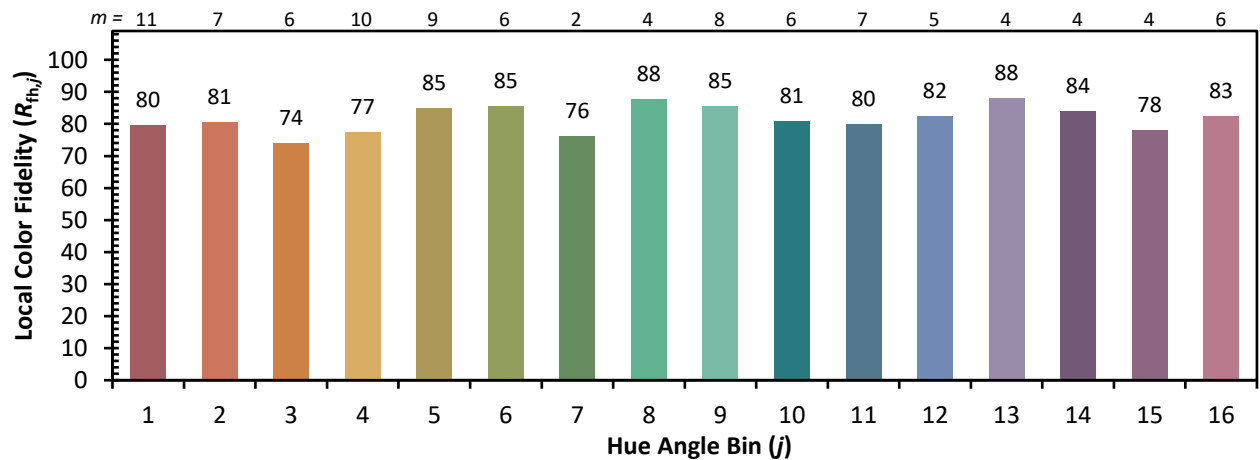
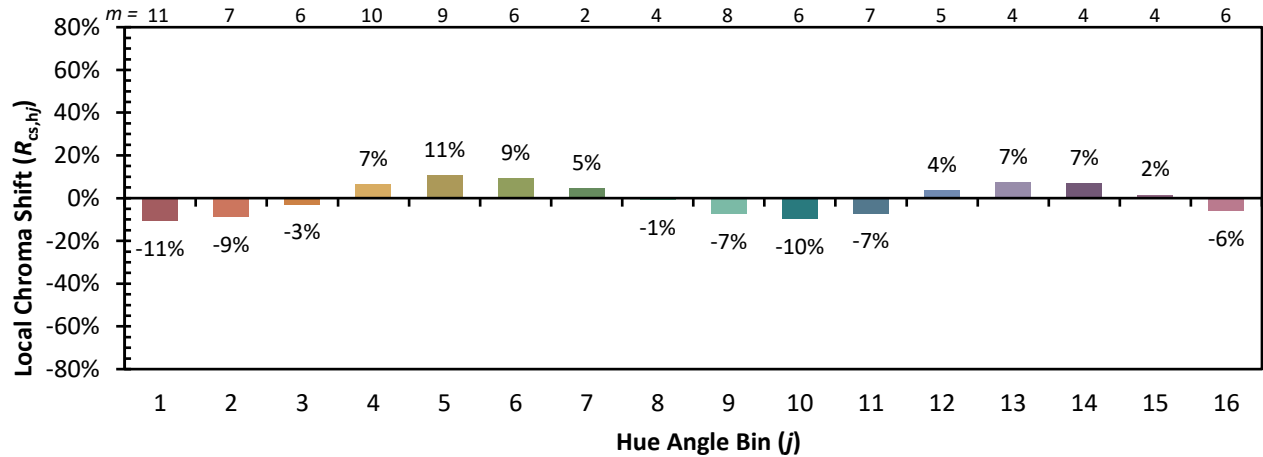
Color Vector Graphics



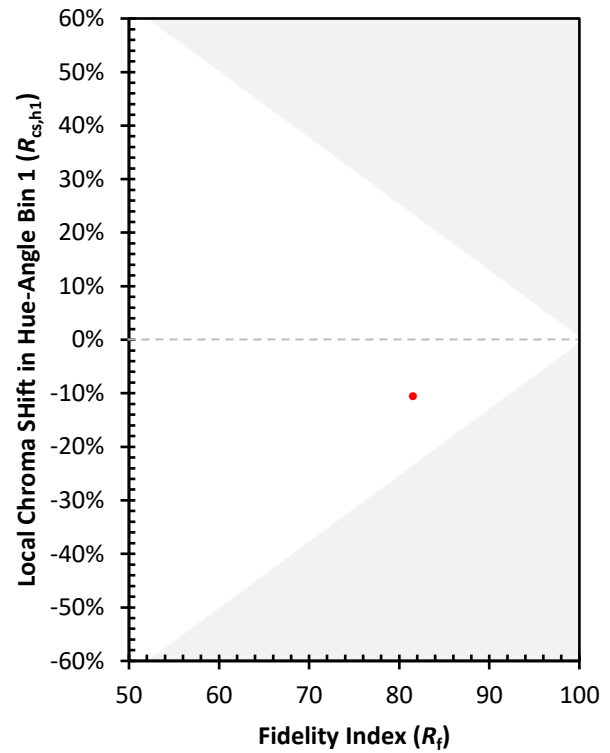
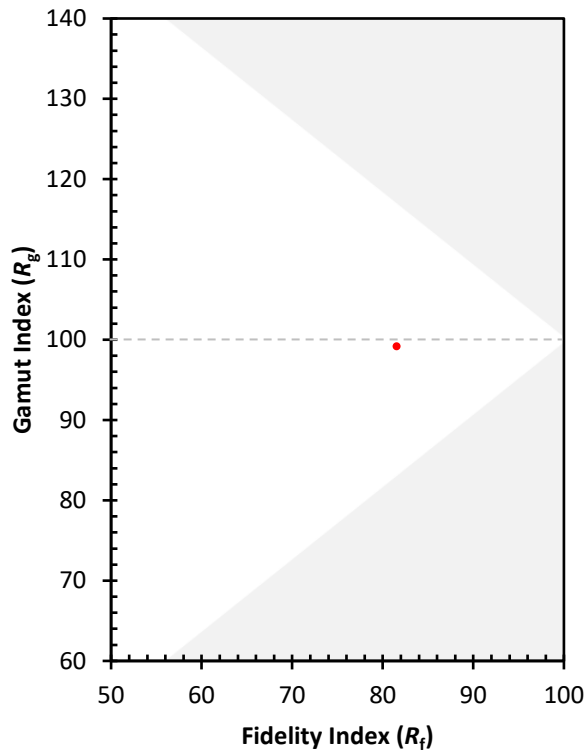
Individual Sample Fidelity Index ($R_{f,i}$)

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)