

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P638981

Luminaire Tested: GWS-SA4F-830-U-SLR-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-41)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4F-830-U-SLR-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25592 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

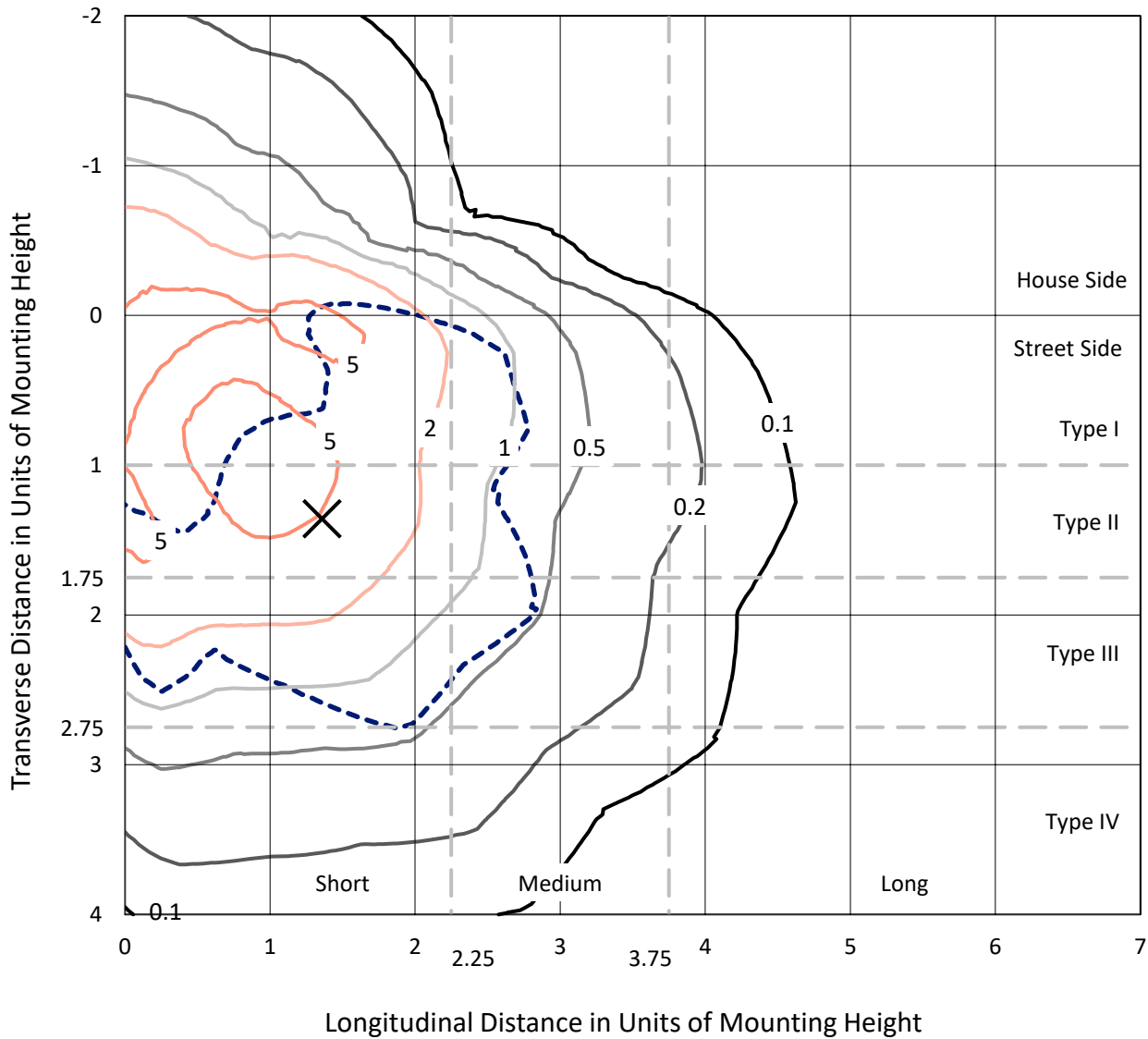
Input Watts (W): 225.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

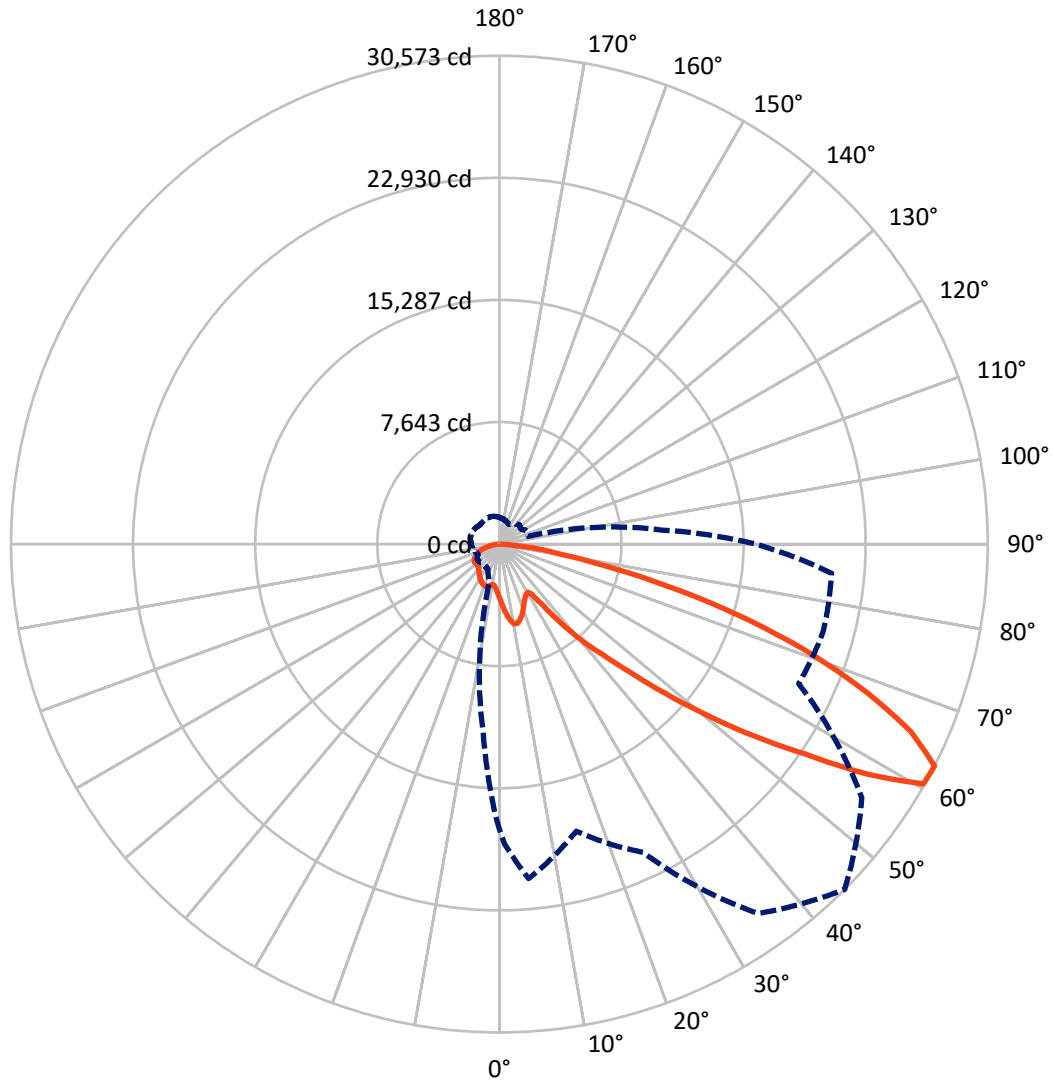
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6106.7	0.0	6106.7
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	19485.3	0.0	19485.3
	% Fixture	76.1	0.0	76.1
Total	Lumens	25592.0	0.0	25592.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.7	1.3
10°-20°	1039.9	4.1
20°-30°	1615.2	6.3
30°-40°	2193.0	8.6
40°-50°	3475.7	13.6
50°-60°	6131.1	24.0
60°-70°	6821.8	26.7
70°-80°	3459.8	13.5
80°-90°	523.9	2.0
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°	25592.0	100.0
0°-180°	25592.0	100.0

Coefficient of Utilization



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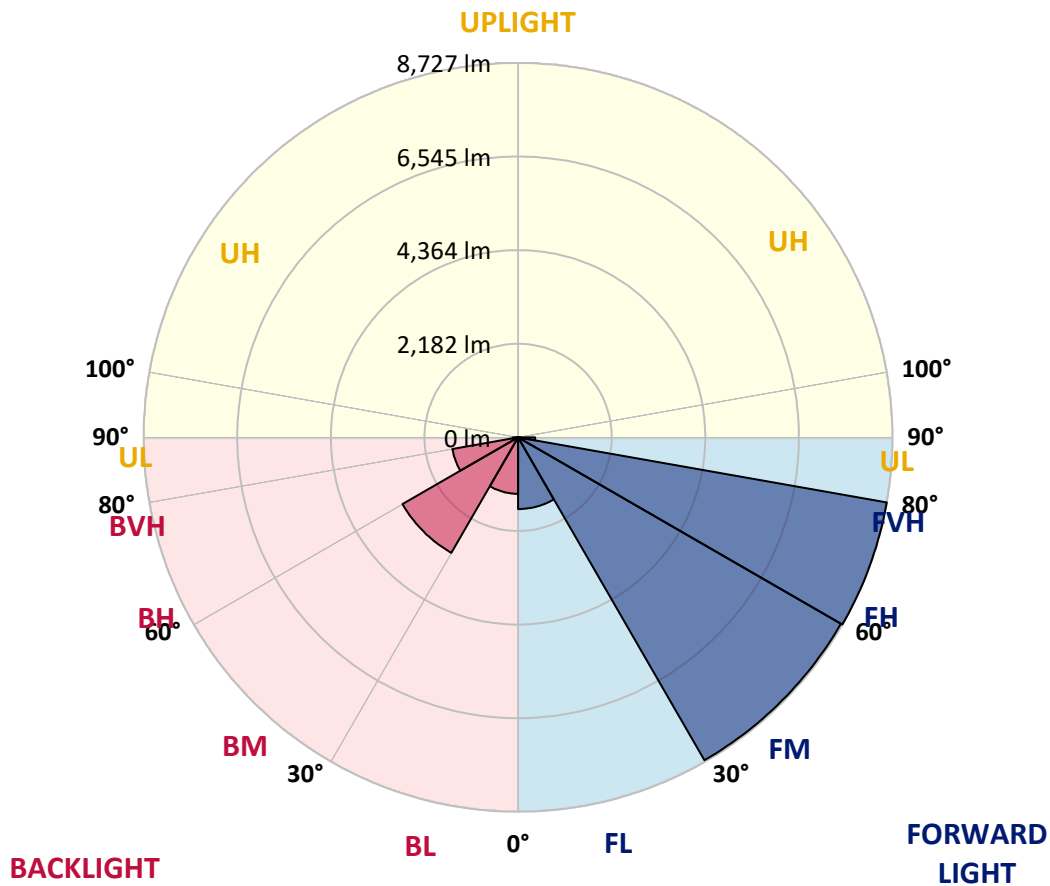
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1670.9	6.5			
FM (30°-60°)	8689.6	34.0			
FH (60°-80°)	8727.1	34.1			G4/12000
FVH (80°-90°)	397.6	1.6			G3/500
BL (0°-30°)	1315.8	5.1	B3/2500		
BM (30°-60°)	3110.2	12.2	B3/5000		
BH (60°-80°)	1554.5	6.1	B3/2500		G3/2500
BVH (80°-90°)	126.2	0.5			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6
2.5°	3650.4	3648.5	3685.3	3741.5	3793.8	3817.0	3855.8	3851.9	3820.9	3780.2	3766.7
5°	3937.2	3944.9	4008.9	4132.9	4270.4	4328.6	4353.7	4344.1	4287.9	4216.2	4090.2
7.5°	4196.8	4210.4	4309.2	4495.2	4665.7	4743.2	4805.2	4793.6	4712.2	4578.5	4392.5
10°	4386.7	4402.2	4520.4	4739.3	4929.2	4997.0	5076.5	5080.3	5008.6	4828.5	4638.6
12.5°	4576.6	4592.1	4702.5	4902.1	5026.1	5028.0	5074.5	5099.7	5103.6	5020.3	4830.4
15°	4774.2	4787.8	4888.5	5000.9	4995.1	4886.6	4886.6	4935.0	5041.6	5101.7	4969.9
17.5°	4942.8	4960.2	5037.7	5000.9	4828.5	4632.8	4609.5	4671.5	4857.5	5088.1	5074.5
20°	5082.3	5095.8	5138.5	4894.3	4580.4	4324.7	4280.1	4351.8	4603.7	5004.8	5154.0
22.5°	5216.0	5223.7	5200.5	4754.8	4313.1	4020.5	3966.2	4041.8	4313.1	4857.5	5221.8
25°	5374.9	5367.1	5256.7	4609.5	4068.9	3780.2	3724.0	3809.3	4092.2	4661.8	5295.4
27.5°	5558.9	5529.9	5305.1	4452.6	3881.0	3602.0	3563.2	3654.3	3917.8	4481.6	5353.5
30°	5715.9	5659.7	5312.8	4313.1	3784.1	3526.4	3503.1	3588.4	3832.5	4359.6	5427.2
32.5°	5890.2	5812.7	5357.4	4276.2	3838.3	3708.5	3739.5	3745.3	3855.8	4324.7	5537.6
35°	6140.2	6039.4	5479.5	4382.8	4396.4	4615.3	4727.7	4576.6	4206.5	4402.2	5746.9
37.5°	6518.0	6390.1	5727.5	4844.0	5549.2	6039.4	6310.7	5965.8	5272.2	4694.8	6062.7
40°	6977.2	6814.5	6045.3	5696.5	6626.5	7411.3	7893.7	7388.0	6368.8	5425.2	6506.4
42.5°	7618.6	7448.1	6661.4	6533.5	7624.4	8792.7	9422.5	8668.7	7335.7	6368.8	7217.5
45°	8736.6	8571.9	7791.0	7372.5	8792.7	10493.9	11377.5	10329.2	8318.0	7316.3	8546.7
47.5°	10802.0	10608.3	9469.0	8302.5	10125.8	12702.8	13939.0	12412.1	9339.1	8401.4	10778.8
50°	13282.1	13096.1	11575.1	9403.1	11598.4	15064.7	16783.3	14859.3	10515.3	9720.8	13446.8
52.5°	16266.0	16231.1	14580.3	10794.3	13131.0	17583.6	19939.7	17570.0	11803.7	11497.6	16469.4
55°	18955.4	19296.4	18397.3	12915.9	15111.2	20747.6	23185.1	20526.7	13551.4	14435.0	20009.4
57.5°	20404.7	21321.2	22702.6	17244.5	17990.4	24529.8	27190.1	24136.5	16554.7	19325.4	23291.7
60°	19447.5	20486.1	22989.4	20503.5	20846.4	27560.2	30495.6	27170.7	19503.7	22720.1	23105.7
62.5°	17854.8	18786.8	21013.1	18600.8	21288.2	28226.7	30573.1	27699.7	20675.9	20997.6	20871.6
65°	15965.7	16905.4	19263.4	16236.9	19883.5	26643.7	28317.8	26143.8	18569.8	18970.9	19017.4
67.5°	13456.5	14324.5	16725.2	14436.9	18124.1	24320.5	24855.3	23927.2	17101.1	17740.5	17072.0
70°	10054.1	10836.9	12956.6	11732.1	15277.8	21294.0	20861.9	20999.5	15452.2	16087.7	14260.6
72.5°	6870.7	7459.7	9277.1	9219.0	11699.1	17046.8	16444.3	17748.2	12906.2	13749.1	10871.8
75°	4805.2	5264.4	6706.0	7283.4	8843.1	12635.0	11710.7	13284.1	10079.3	11282.5	7932.5
77.5°	2949.0	3253.2	4235.6	5396.2	5688.7	8647.4	7273.7	9996.0	7078.0	8228.9	5291.5
80°	1474.5	1621.8	2057.7	3392.7	3772.5	5095.8	4016.6	5803.1	4789.7	5095.8	2927.7
82.5°	445.6	492.1	602.6	1288.5	1955.0	2933.5	2373.5	3371.4	2615.7	2389.0	1152.9
85°	118.2	133.7	166.6	381.7	685.9	1052.1	802.2	1633.4	1253.6	881.6	434.0
87.5°	9.7	9.7	7.8	7.8	3.9	0.0	0.0	116.3	234.4	133.7	75.6
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°	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6
2.5°	3698.8	3691.1	3611.7	3553.5	3485.7	3419.8	3352.0	3292.0	3224.1	3156.3	3136.9
5°	3997.2	3943.0	3774.4	3633.0	3493.5	3371.4	3264.8	3154.4	3065.3	2978.1	2945.1
7.5°	4260.7	4165.8	3921.7	3706.6	3512.8	3361.7	3204.8	3043.9	2918.0	2794.0	2763.0
10°	4499.1	4373.1	4065.0	3793.8	3578.7	3406.3	3222.2	3007.1	2825.0	2673.9	2633.2
12.5°	4675.4	4537.8	4189.1	3877.1	3633.0	3439.2	3257.1	3067.2	2875.4	2679.7	2635.1
15°	4814.9	4671.5	4291.7	3941.0	3634.9	3385.0	3208.6	3142.8	3082.7	2890.9	2809.5
17.5°	4927.3	4776.1	4380.9	3979.8	3582.6	3220.3	3067.2	3164.1	3317.1	3197.0	3043.9
20°	5030.0	4876.9	4448.7	4006.9	3466.3	2993.6	2908.3	3113.7	3344.3	3340.4	3202.8
22.5°	5142.3	4993.1	4547.5	4022.4	3303.6	2763.0	2813.4	3040.1	3228.0	3284.2	3198.9
25°	5285.7	5154.0	4685.1	4057.3	3119.5	2604.1	2743.6	2945.1	3102.1	3115.6	3065.3
27.5°	5452.4	5353.5	4890.5	4138.7	2941.2	2522.7	2662.2	2811.4	2954.8	2960.6	2900.6
30°	5634.5	5568.6	5080.3	4206.5	2807.6	2497.5	2557.6	2677.7	2768.8	2784.3	2732.0
32.5°	5867.0	5808.9	5248.9	4161.9	2728.1	2491.7	2460.7	2522.7	2598.3	2598.3	2557.6
35°	6186.7	6105.3	5427.2	3991.4	2631.2	2468.5	2358.0	2375.5	2408.4	2414.2	2391.0
37.5°	6640.1	6506.4	5607.4	3654.3	2472.4	2385.2	2239.8	2218.5	2230.2	2245.7	2239.8
40°	7202.0	6983.0	5870.9	3249.3	2282.5	2224.3	2117.8	2077.1	2067.4	2098.4	2110.0
42.5°	7909.2	7574.0	6153.8	2871.5	2110.0	2040.3	1974.4	1939.5	1924.0	1976.3	2007.3
45°	9038.8	8486.6	6425.0	2497.5	2013.1	1883.3	1838.8	1813.6	1821.3	1883.3	1922.1
47.5°	10990.0	9879.7	6682.7	2261.2	2005.4	1770.9	1716.7	1722.5	1743.8	1809.7	1856.2
50°	13458.4	11745.6	6855.2	2162.3	2028.6	1703.1	1631.4	1662.4	1695.4	1759.3	1813.6
52.5°	15971.5	13483.6	6649.8	2108.1	2026.7	1705.1	1552.0	1645.0	1660.5	1724.4	1782.6
55°	17699.8	13677.4	5744.9	2024.8	1995.7	1782.6	1490.0	1637.3	1646.9	1705.1	1757.4
57.5°	18358.6	13014.7	4380.9	2048.0	1902.7	1842.6	1462.9	1583.0	1652.8	1703.1	1757.4
60°	17562.2	11765.0	2662.2	2108.1	1753.5	1838.8	1480.3	1484.2	1604.3	1689.6	1743.8
62.5°	16060.6	10160.7	1869.8	1937.6	1645.0	1736.1	1521.0	1367.9	1519.1	1621.8	1670.2
65°	14340.0	8273.5	1426.1	1668.3	1592.7	1577.2	1534.6	1265.2	1402.8	1503.6	1546.2
67.5°	12547.8	6430.8	1158.7	1243.9	1439.6	1426.1	1402.8	1174.2	1265.2	1336.9	1385.4
70°	10290.5	4499.1	978.5	933.9	1234.2	1278.8	1226.5	1059.9	1088.9	1162.5	1201.3
72.5°	7527.5	2803.7	804.1	771.2	992.0	1118.0	1090.9	933.9	947.5	1017.2	1048.2
75°	5413.6	1604.3	645.2	635.5	757.6	957.2	902.9	804.1	819.6	871.9	893.2
77.5°	3441.1	893.2	498.0	511.5	542.5	715.0	771.2	687.8	687.8	718.8	736.3
80°	1842.6	511.5	364.3	370.1	379.8	546.4	608.4	532.8	532.8	511.5	532.8
82.5°	751.8	294.5	249.9	232.5	253.8	374.0	426.3	339.1	354.6	319.7	327.5
85°	248.0	147.3	124.0	122.1	120.1	164.7	205.4	168.6	201.5	127.9	133.7
87.5°	32.9	27.1	15.5	11.6	13.6	5.8	11.6	13.6	13.6	9.7	9.7
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6
2.5°	3123.4	3107.9	3051.7	3065.3	3055.6	3040.1	3055.6	3026.5	3049.8	3057.5	3105.9
5°	2919.9	2883.1	2828.9	2801.7	2795.9	2780.4	2782.4	2768.8	2772.7	2805.6	2859.9
7.5°	2737.8	2702.9	2660.3	2640.9	2623.5	2606.0	2604.1	2602.2	2617.7	2646.7	2699.1
10°	2606.0	2586.7	2569.2	2577.0	2569.2	2561.5	2547.9	2547.9	2573.1	2625.4	2689.4
12.5°	2606.0	2602.2	2606.0	2629.3	2627.4	2629.3	2611.9	2621.5	2691.3	2780.4	2871.5
15°	2745.6	2714.6	2714.6	2726.2	2722.3	2722.3	2722.3	2763.0	2921.9	3059.4	3156.3
17.5°	2916.1	2825.0	2786.2	2780.4	2778.5	2778.5	2786.2	2873.4	3121.4	3266.8	3323.0
20°	3034.3	2861.8	2797.9	2772.7	2774.6	2778.5	2801.7	2921.9	3195.1	3268.7	3255.1
22.5°	3055.6	2832.7	2755.2	2718.4	2724.2	2728.1	2763.0	2890.9	3094.3	3105.9	3078.8
25°	2956.7	2751.4	2668.1	2639.0	2646.7	2644.8	2675.8	2768.8	2914.1	2910.2	2894.7
27.5°	2809.5	2621.5	2559.5	2540.2	2553.7	2538.2	2547.9	2619.6	2732.0	2728.1	2722.3
30°	2658.4	2495.6	2439.4	2429.7	2447.2	2423.9	2425.9	2485.9	2563.4	2559.5	2557.6
32.5°	2507.2	2369.7	2319.3	2319.3	2336.7	2311.5	2315.4	2367.7	2420.0	2404.5	2404.5
35°	2363.8	2267.0	2226.3	2218.5	2232.1	2214.7	2222.4	2270.8	2290.2	2268.9	2255.3
37.5°	2237.9	2195.3	2154.6	2127.5	2129.4	2131.3	2154.6	2191.4	2179.8	2148.8	2131.3
40°	2121.7	2121.7	2082.9	2032.5	2026.7	2040.3	2079.0	2119.7	2086.8	2051.9	2030.6
42.5°	2038.3	2055.8	2019.0	1968.6	1957.0	1980.2	2022.8	2051.9	2013.1	1974.4	1945.3
45°	1960.8	2003.5	1978.3	1922.1	1906.6	1933.7	1988.0	1999.6	1947.3	1910.5	1889.1
47.5°	1906.6	1964.7	1947.3	1893.0	1869.8	1908.5	1964.7	1962.8	1896.9	1858.1	1840.7
50°	1867.8	1941.5	1939.5	1893.0	1867.8	1916.3	1966.6	1941.5	1869.8	1829.1	1811.6
52.5°	1836.8	1939.5	1953.1	1926.0	1908.5	1951.1	1982.1	1933.7	1850.4	1807.8	1794.2
55°	1823.3	1947.3	1957.0	1931.8	1916.3	1955.0	1982.1	1949.2	1850.4	1811.6	1800.0
57.5°	1827.1	1937.6	1939.5	1904.6	1877.5	1926.0	1968.6	1958.9	1871.7	1827.1	1813.6
60°	1803.9	1885.3	1889.1	1834.9	1803.9	1862.0	1937.6	1931.8	1862.0	1815.5	1790.3
62.5°	1726.4	1798.1	1800.0	1749.6	1705.1	1788.4	1871.7	1869.8	1805.8	1759.3	1730.3
65°	1596.6	1672.1	1691.5	1643.1	1608.2	1697.3	1784.5	1780.6	1716.7	1674.1	1645.0
67.5°	1435.7	1517.1	1553.9	1521.0	1507.4	1588.8	1670.2	1668.3	1615.9	1575.3	1550.1
70°	1240.1	1307.9	1369.9	1369.9	1360.2	1453.2	1540.4	1532.6	1484.2	1453.2	1433.8
72.5°	1077.3	1129.6	1149.0	1168.4	1197.4	1294.3	1367.9	1373.7	1338.9	1323.4	1338.9
75°	916.5	949.4	966.9	951.4	1001.7	1102.5	1199.4	1209.1	1172.2	1147.0	1152.9
77.5°	753.7	790.5	808.0	773.1	769.2	897.1	1015.3	1036.6	1005.6	966.9	978.5
80°	544.5	592.9	622.0	598.7	591.0	647.2	809.9	833.2	804.1	773.1	790.5
82.5°	333.3	360.4	368.1	391.4	439.8	463.1	521.2	598.7	577.4	550.3	598.7
85°	131.8	156.9	174.4	197.6	230.6	273.2	321.6	383.6	348.8	337.1	397.2
87.5°	7.8	1.9	0.0	3.9	32.9	63.9	137.6	189.9	158.9	170.5	205.4
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: P638981
 CATALOG NUMBER: GWS-SA4F-830-U-SLR-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6	3396.6
2.5°	3144.7	3195.1	3262.9	3319.1	3390.8	3458.6	3528.3	3598.1	3634.9	3650.4
5°	2921.9	3014.9	3123.4	3243.5	3383.0	3530.3	3679.5	3832.5	3929.4	3937.2
7.5°	2788.2	2921.9	3071.1	3222.2	3394.6	3598.1	3834.5	4070.9	4169.7	4196.8
10°	2830.8	2980.0	3098.2	3239.6	3429.5	3683.3	3962.4	4239.4	4353.7	4386.7
12.5°	3001.3	3030.4	3067.2	3197.0	3429.5	3757.0	4094.1	4423.5	4545.6	4576.6
15°	3142.8	3003.3	2937.4	3074.9	3383.0	3820.9	4233.6	4597.9	4745.1	4774.2
17.5°	3154.4	2914.1	2770.7	2894.7	3301.6	3865.5	4367.3	4791.6	4915.6	4942.8
20°	3036.2	2819.2	2633.2	2708.7	3191.2	3884.9	4464.2	4933.1	5055.2	5082.3
22.5°	2902.5	2741.7	2540.2	2536.3	3057.5	3906.2	4580.4	5066.8	5198.5	5216.0
25°	2776.6	2635.1	2464.6	2410.4	2902.5	3946.9	4737.4	5268.3	5369.0	5374.9
27.5°	2629.3	2520.8	2404.5	2352.2	2766.9	4024.4	4969.9	5508.5	5568.6	5558.9
30°	2495.6	2414.2	2361.9	2346.4	2681.6	4082.5	5190.8	5744.9	5748.8	5715.9
32.5°	2354.2	2323.2	2323.2	2373.5	2611.9	4068.9	5371.0	5975.5	5938.7	5890.2
35°	2228.2	2234.0	2274.7	2392.9	2495.6	3933.3	5543.4	6264.2	6209.9	6140.2
37.5°	2108.1	2152.7	2210.8	2325.1	2342.5	3731.8	5744.9	6673.0	6605.2	6518.0
40°	2005.4	2073.2	2141.0	2197.2	2179.8	3445.0	6025.9	7153.6	7078.0	6977.2
42.5°	1924.0	1989.9	2065.5	2071.3	2077.1	3146.6	6324.3	7742.6	7729.0	7618.6
45°	1871.7	1914.3	1986.0	1976.3	2071.3	2817.2	6599.4	8641.6	8819.9	8736.6
47.5°	1836.8	1869.8	1877.5	1918.2	2121.7	2522.7	6954.0	10400.9	10897.0	10802.0
50°	1817.5	1850.4	1763.2	1922.1	2129.4	2332.8	7444.2	12609.8	13408.1	13282.1
52.5°	1815.5	1807.8	1676.0	1962.8	2086.8	2216.6	7700.0	14221.9	15992.8	16266.0
55°	1819.4	1722.5	1631.4	1974.4	2001.5	2174.0	6843.5	14996.9	18378.0	18955.4
57.5°	1784.5	1629.5	1656.6	1927.9	1840.7	2288.3	5059.0	14719.8	19331.3	20404.7
60°	1718.6	1540.4	1703.1	1802.0	1676.0	2092.6	3483.8	13483.6	18343.1	19447.5
62.5°	1623.7	1478.4	1697.3	1639.2	1615.9	1712.8	2394.9	11753.4	16775.6	17854.8
65°	1517.1	1428.0	1606.3	1482.3	1495.8	1317.6	1693.4	9800.3	14903.9	15965.7
67.5°	1402.8	1397.0	1472.6	1319.5	1263.3	1044.4	1234.2	7855.0	12499.3	13456.5
70°	1273.0	1315.6	1338.9	1172.2	1025.0	819.6	916.5	5493.0	9221.0	10054.1
72.5°	1143.2	1147.0	1180.0	1019.2	767.3	656.8	687.8	3326.8	6264.2	6870.7
75°	1011.4	974.6	1005.6	829.3	571.6	538.6	530.9	2055.8	4326.6	4805.2
77.5°	870.0	829.3	788.6	623.9	459.2	416.6	406.9	1152.9	2654.5	2949.0
80°	707.2	653.0	589.0	457.3	335.2	298.4	296.5	561.9	1323.4	1474.5
82.5°	550.3	447.6	430.1	284.8	207.3	182.1	193.8	215.1	399.1	445.6
85°	385.6	325.5	228.6	114.3	93.0	75.6	73.6	63.9	106.6	118.2
87.5°	215.1	141.4	73.6	13.6	15.5	17.4	13.6	9.7	9.7	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



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

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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

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

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			

Summary

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



Color Vector Graphics

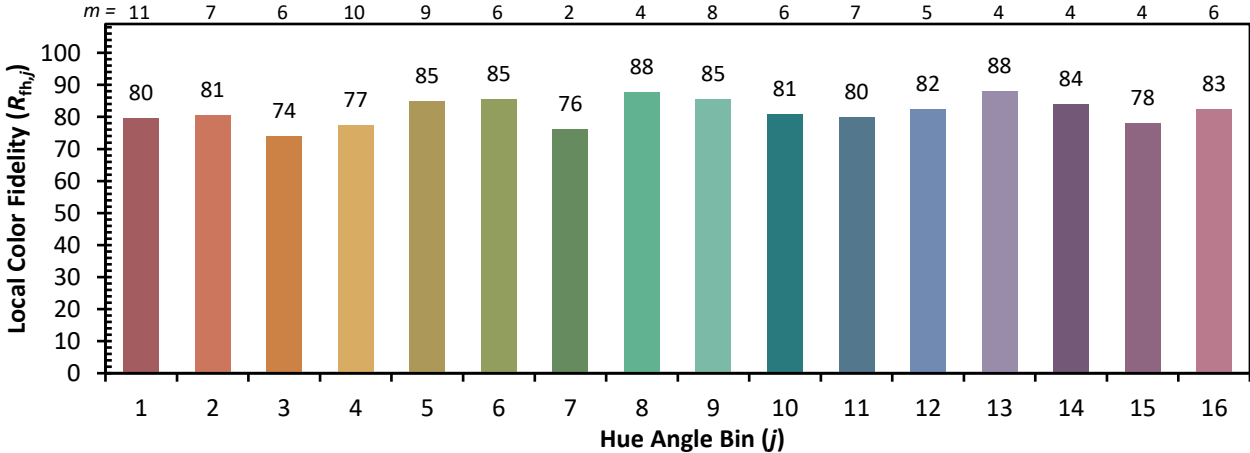


Individual Sample Fidelity Index ($R_{f,i}$)

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)