

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: P437591

Luminaire Tested: **ISS-SA1D-830-U-SL2**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437591  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: ISS-SA1D-830-U-SL2  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4528 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

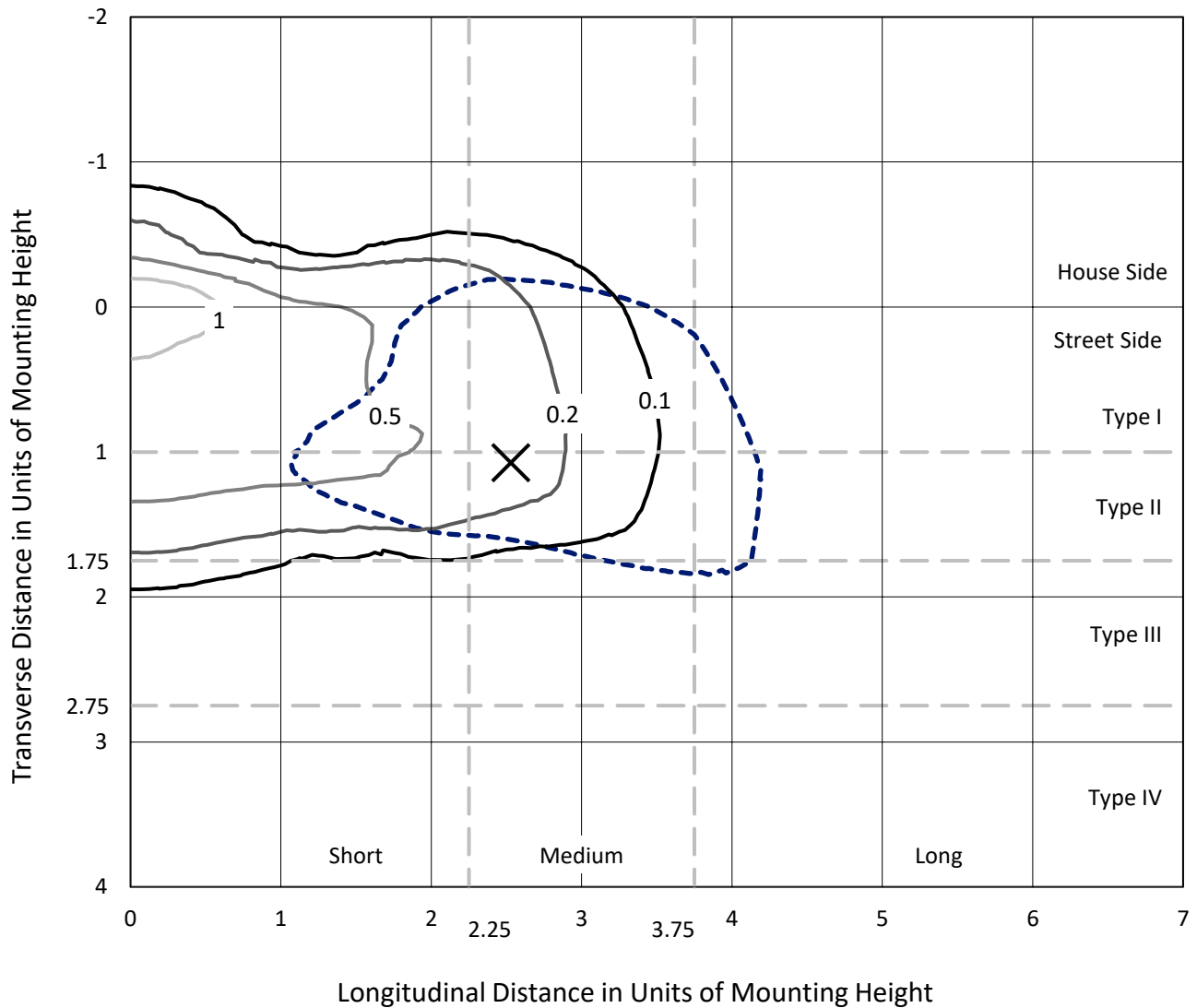
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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 CATALOG NUMBER: ISS-SA1D-830-U-SL2

### Iso-Footcandle Lines of Horizontal Illumination

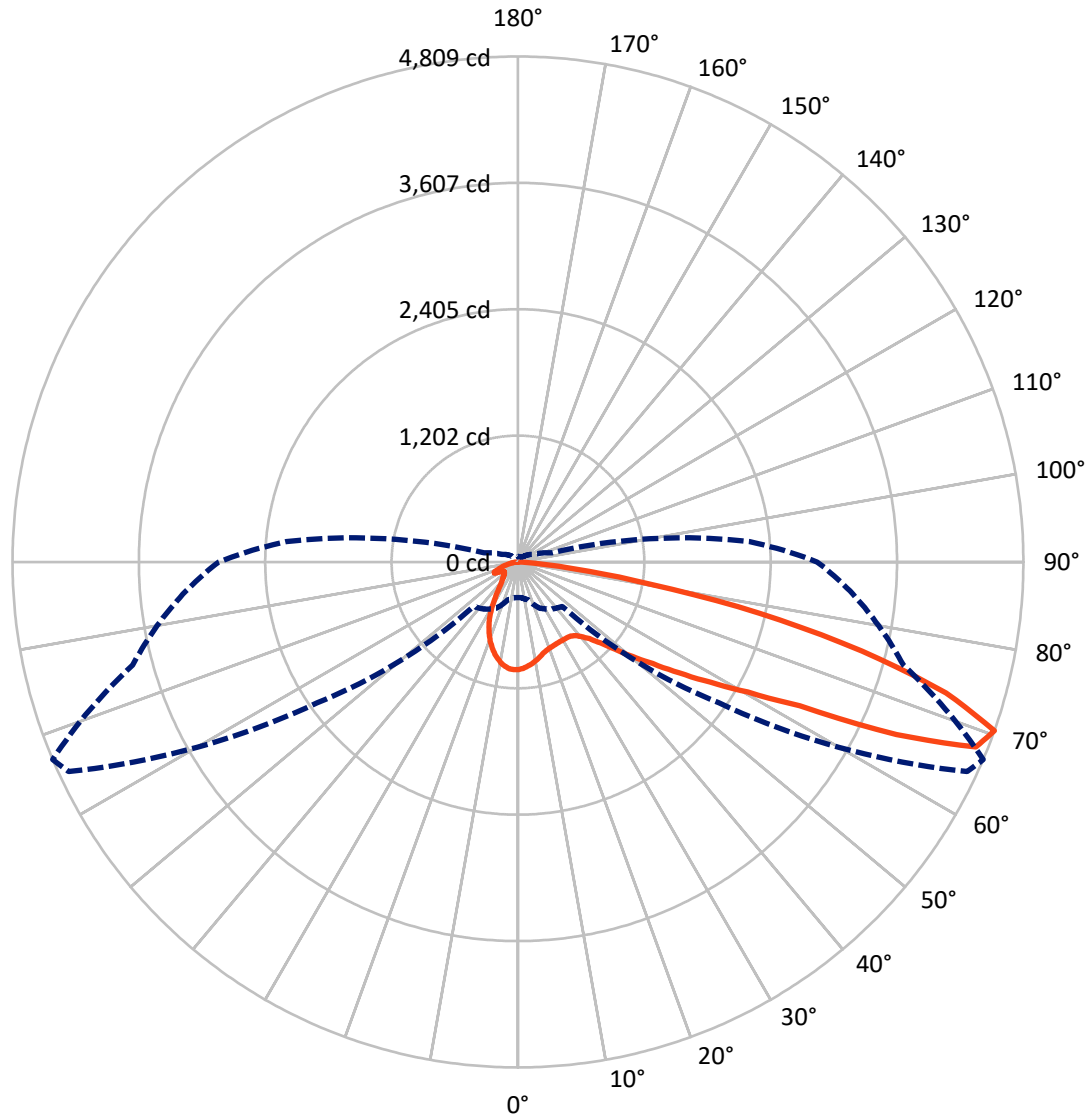
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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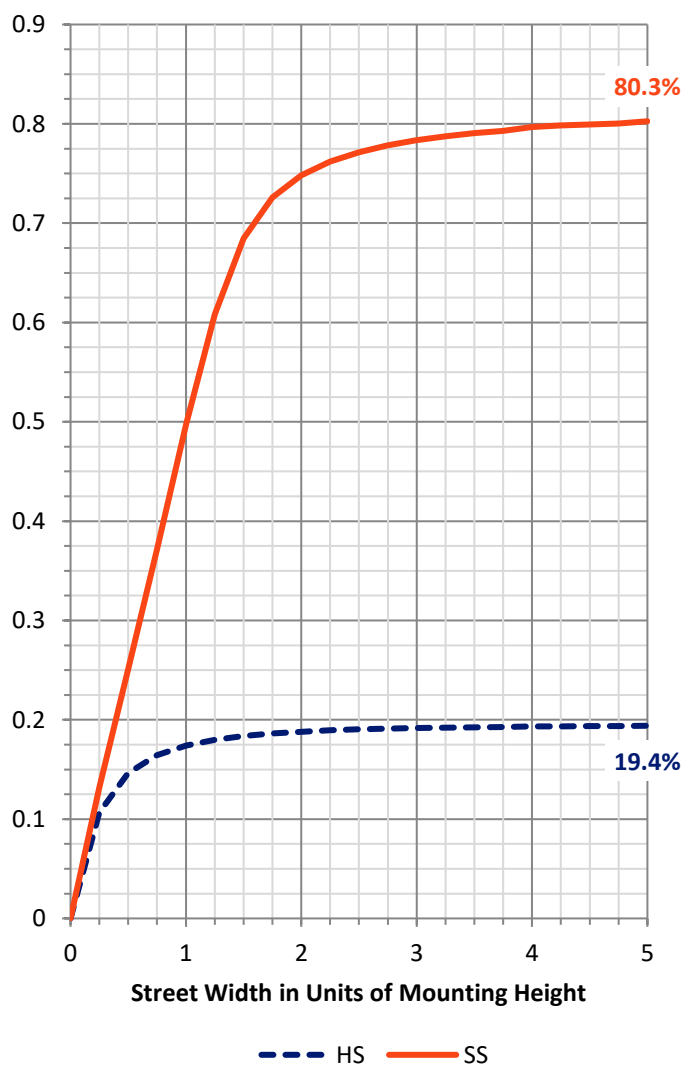
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	886.8	0.0	886.8
	% Fixture	19.6	0.0	19.6
<b>Street Side</b>	Lumens	3641.2	0.0	3641.2
	% Fixture	80.4	0.0	80.4
<b>Total</b>	Lumens	4528.0	0.0	4528.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.7	2.0
10°-20°	217.3	4.8
20°-30°	299.5	6.6
30°-40°	404.5	8.9
40°-50°	600.3	13.3
50°-60°	923.9	20.4
60°-70°	1142.3	25.2
70°-80°	765.2	16.9
80°-90°	85.3	1.9
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°	4528.0	100.0
0°-180°	4528.0	100.0

**Coefficient of Utilization**



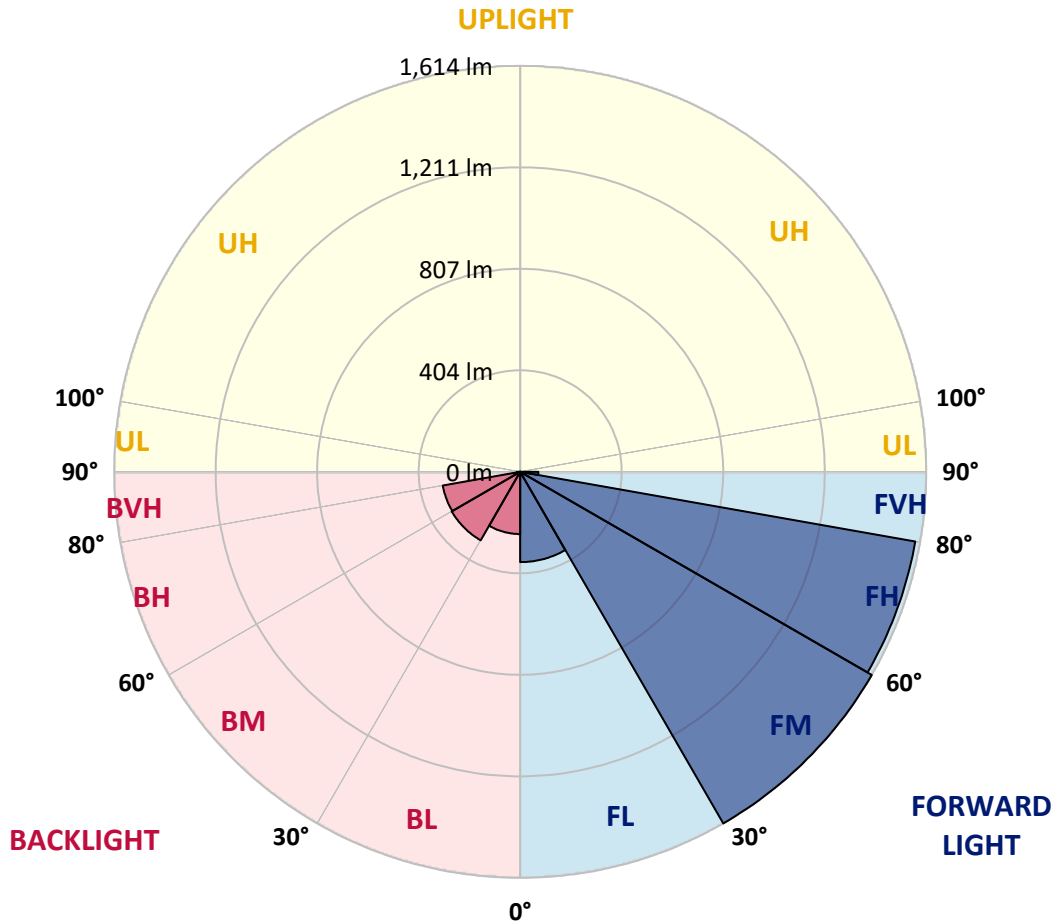
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	359.1	7.9			
FM (30°-60°)	1614.3	35.7			
FH (60°-80°)	1595.2	35.2			G1/1800
FVH (80°-90°)	72.6	1.6			G1/100
BL (0°-30°)	247.4	5.5	B1/500		
BM (30°-60°)	314.4	6.9	B1/1000		
BH (60°-80°)	312.3	6.9	B1/500		G1/500
BVH (80°-90°)	12.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5
2.5°	966.7	973.3	974.9	979.9	986.4	993.0	1001.2	1011.0	1012.6	1017.5	1027.4
5°	901.2	904.5	907.8	917.6	929.1	950.4	971.7	991.3	994.6	1011.0	1029.0
7.5°	840.6	848.8	850.4	858.6	876.6	902.8	932.3	966.7	976.6	999.5	1027.4
10°	796.3	801.3	804.5	819.3	834.0	863.5	899.6	942.2	952.0	986.4	1025.7
12.5°	760.3	768.5	773.4	783.2	806.2	832.4	868.4	914.3	927.4	970.0	1019.2
15°	740.6	747.2	748.8	760.3	778.3	804.5	838.9	891.4	901.2	953.6	1019.2
17.5°	735.7	737.4	739.0	745.5	760.3	781.6	817.6	871.7	883.2	947.1	1019.2
20°	745.5	745.5	745.5	742.3	753.7	770.1	806.2	855.3	871.7	940.5	1024.1
22.5°	768.5	770.1	765.2	757.0	752.1	763.6	794.7	850.4	865.2	938.9	1033.9
25°	801.3	802.9	799.6	788.1	765.2	763.6	789.8	845.5	858.6	937.3	1032.3
27.5°	845.5	855.3	845.5	832.4	802.9	776.7	794.7	842.2	857.0	937.3	1035.6
30°	907.8	914.3	909.4	888.1	850.4	804.5	801.3	845.5	857.0	935.6	1033.9
32.5°	970.0	971.7	976.6	961.8	916.0	845.5	819.3	848.8	858.6	934.0	1029.0
35°	1017.5	1027.4	1048.7	1050.3	996.2	904.5	857.0	861.9	865.2	938.9	1024.1
37.5°	1078.2	1081.4	1115.9	1142.1	1094.6	986.4	909.4	886.5	888.1	955.3	1032.3
40°	1133.9	1147.0	1194.5	1227.3	1210.9	1096.2	981.5	930.7	934.0	984.8	1052.0
42.5°	1217.4	1227.3	1276.4	1322.3	1327.2	1220.7	1081.4	1006.1	997.9	1042.1	1094.6
45°	1291.2	1302.7	1364.9	1432.1	1455.0	1361.6	1206.0	1109.3	1096.2	1138.8	1173.2
47.5°	1394.4	1414.1	1463.2	1540.2	1617.3	1533.7	1364.9	1250.2	1238.7	1268.2	1278.1
50°	1492.7	1504.2	1545.2	1638.6	1774.6	1750.0	1559.9	1433.7	1415.7	1420.6	1443.6
52.5°	1507.5	1512.4	1555.0	1653.3	1908.9	2013.8	1799.1	1640.2	1607.4	1612.3	1640.2
55°	1396.0	1415.7	1446.8	1584.5	1918.7	2307.1	2135.0	1912.2	1861.4	1843.4	1866.3
57.5°	1165.0	1188.0	1232.2	1374.7	1805.7	2466.0	2685.6	2236.6	2158.0	2074.4	2102.3
60°	858.6	883.2	911.0	1050.3	1518.9	2490.6	3232.9	2629.9	2513.5	2305.4	2320.2
62.5°	658.7	658.7	683.3	740.6	1015.9	2312.0	3554.0	3295.1	3010.0	2587.3	2569.3
65°	532.5	539.1	563.7	617.7	642.3	1641.8	3681.8	4261.9	3958.8	2924.8	2831.4
67.5°	440.8	442.4	470.3	555.5	562.0	902.8	3339.4	4769.8	4697.7	3347.6	3110.0
70°	337.5	339.2	372.0	483.4	547.3	598.1	2336.6	4717.4	4809.2	3796.5	3170.6
72.5°	224.5	234.3	273.6	383.4	545.6	563.7	1268.2	4125.9	4258.6	3971.9	2967.4
75°	139.3	140.9	181.9	265.4	501.4	562.0	745.5	3214.8	3378.7	3295.1	2574.2
77.5°	85.2	88.5	108.1	173.7	388.3	563.7	530.9	2212.1	2348.1	2162.9	1517.3
80°	52.4	52.4	62.3	104.9	252.3	504.7	457.2	1286.3	1273.2	799.6	430.9
82.5°	19.7	21.3	32.8	57.3	127.8	391.6	401.4	581.7	535.8	236.0	154.0
85°	3.3	3.3	6.6	18.0	34.4	162.2	222.8	204.8	172.0	72.1	63.9
87.5°	0.0	0.0	0.0	1.6	1.6	3.3	4.9	4.9	4.9	4.9	6.6
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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 CATALOG NUMBER: ISS-SA1D-830-U-SL2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5	1022.5
2.5°	1027.4	1030.7	1029.0	1024.1	1019.2	1015.9	1007.7	1002.8	1004.4	1004.4	1006.1
5°	1030.7	1035.6	1027.4	1017.5	999.5	979.9	961.8	952.0	938.9	943.8	940.5
7.5°	1035.6	1038.8	1024.1	994.6	963.5	930.7	899.6	871.7	850.4	840.6	847.1
10°	1032.3	1037.2	1009.4	965.1	917.6	865.2	817.6	771.8	742.3	722.6	727.5
12.5°	1030.7	1025.7	988.0	922.5	857.0	784.9	712.8	657.1	607.9	588.2	591.5
15°	1024.1	1020.8	961.8	878.3	788.1	686.6	591.5	519.4	460.4	440.8	447.3
17.5°	1027.4	1017.5	930.7	824.2	701.3	576.8	460.4	390.0	360.5	353.9	352.3
20°	1024.1	1006.1	899.6	765.2	609.5	447.3	342.5	304.8	304.8	314.6	316.2
22.5°	1027.4	996.2	865.2	698.0	504.7	335.9	267.1	257.3	272.0	293.3	293.3
25°	1027.4	984.8	827.5	622.7	394.9	255.6	227.8	227.8	247.4	267.1	265.4
27.5°	1020.8	961.8	784.9	542.4	293.3	211.4	199.9	204.8	217.9	234.3	232.7
30°	1004.4	938.9	732.4	449.0	222.8	186.8	185.2	186.8	193.3	203.2	201.5
32.5°	989.7	912.7	681.6	349.0	188.4	173.7	172.0	173.7	175.3	178.6	178.6
35°	979.9	889.7	621.0	268.7	170.4	165.5	162.2	162.2	158.9	160.6	160.6
37.5°	968.4	868.4	558.7	209.7	160.6	157.3	154.0	149.1	149.1	145.8	145.8
40°	968.4	852.0	494.8	177.0	154.0	152.4	145.8	139.3	136.0	136.0	136.0
42.5°	994.6	852.0	435.9	162.2	147.5	145.8	137.6	131.1	127.8	127.8	127.8
45°	1038.8	861.9	375.2	152.4	142.6	139.3	129.4	122.9	119.6	119.6	118.0
47.5°	1115.9	902.8	321.2	147.5	137.6	132.7	121.3	114.7	111.4	111.4	111.4
50°	1245.3	984.8	276.9	142.6	132.7	124.5	114.7	108.1	104.9	104.9	103.2
52.5°	1423.9	1107.7	255.6	139.3	126.2	116.3	108.1	101.6	98.3	96.7	96.7
55°	1638.6	1292.8	252.3	137.6	119.6	109.8	101.6	95.0	91.8	90.1	90.1
57.5°	1872.9	1496.0	275.3	134.4	113.1	101.6	95.0	88.5	85.2	83.6	83.6
60°	2099.0	1718.8	349.0	131.1	108.1	95.0	86.8	81.9	78.7	77.0	77.0
62.5°	2361.2	1953.2	511.2	132.7	104.9	88.5	80.3	75.4	73.7	72.1	72.1
65°	2649.5	2221.9	653.8	145.8	106.5	81.9	73.7	70.5	67.2	65.5	65.5
67.5°	2905.2	2395.6	545.6	168.8	116.3	77.0	65.5	63.9	60.6	59.0	60.6
70°	2847.8	2212.1	335.9	170.4	118.0	73.7	59.0	55.7	52.4	52.4	52.4
72.5°	2597.1	1951.5	234.3	147.5	104.9	65.5	50.8	47.5	45.9	45.9	45.9
75°	2185.8	1609.1	186.8	119.6	81.9	54.1	42.6	41.0	39.3	37.7	37.7
77.5°	1196.1	875.0	139.3	91.8	60.6	41.0	36.0	32.8	31.1	31.1	31.1
80°	350.7	299.9	86.8	65.5	39.3	29.5	27.9	24.6	22.9	22.9	22.9
82.5°	147.5	124.5	52.4	36.0	26.2	19.7	18.0	16.4	14.7	13.1	14.7
85°	57.3	60.6	32.8	21.3	14.7	9.8	8.2	6.6	6.6	4.9	6.6
87.5°	6.6	8.2	6.6	4.9	3.3	1.6	1.6	1.6	1.6	1.6	1.6
90°	0.0	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

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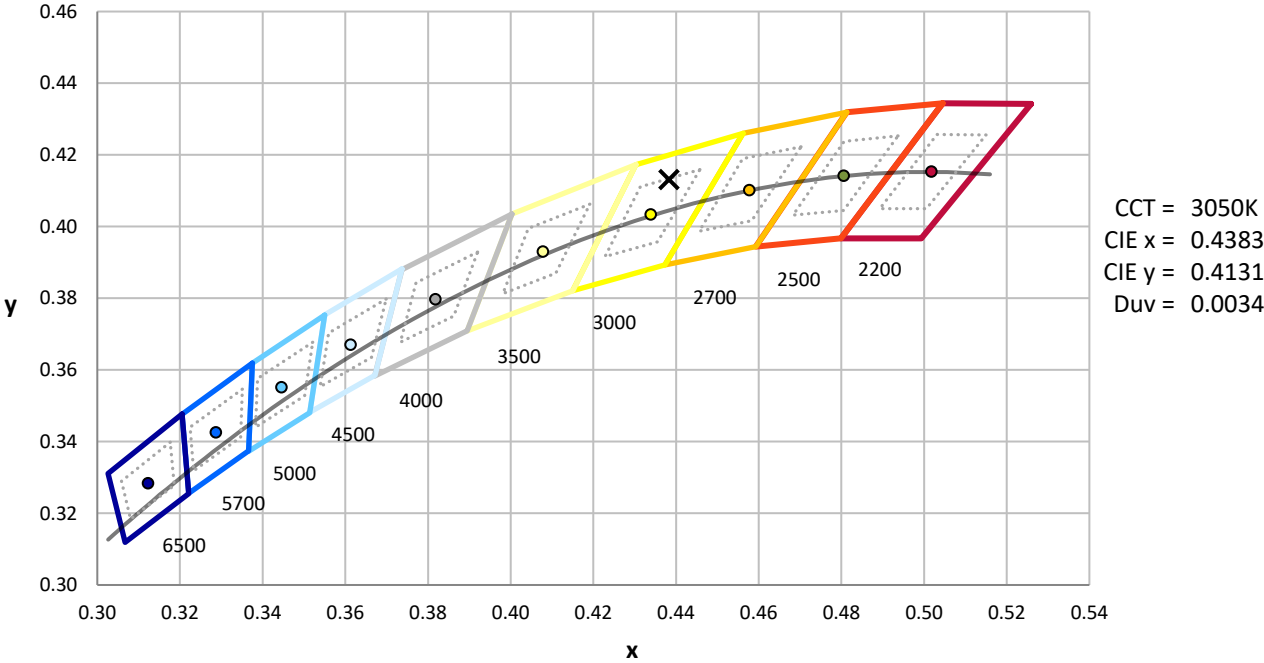
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	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

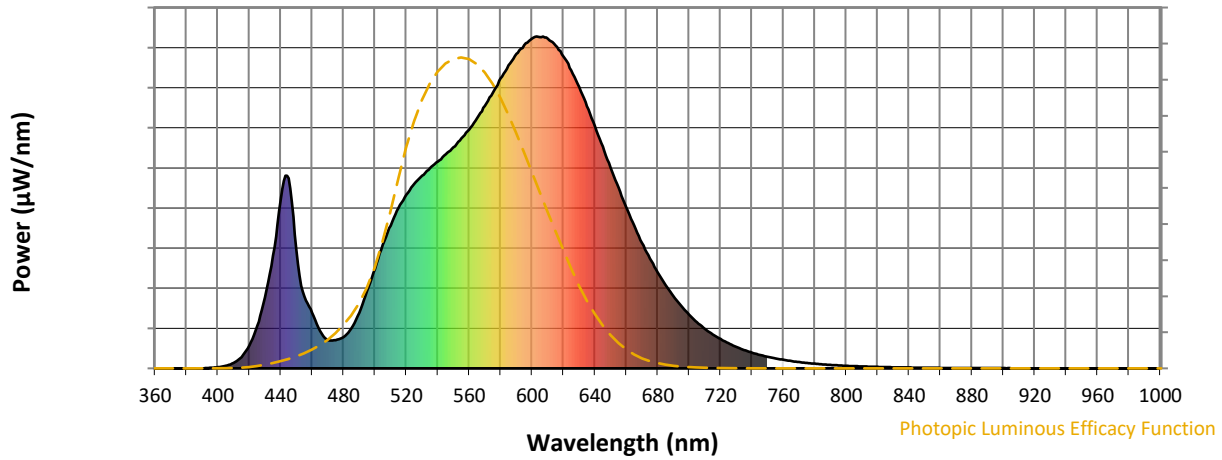


CCT = 3050K  
 CIE x = 0.4383  
 CIE y = 0.4131  
 Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**



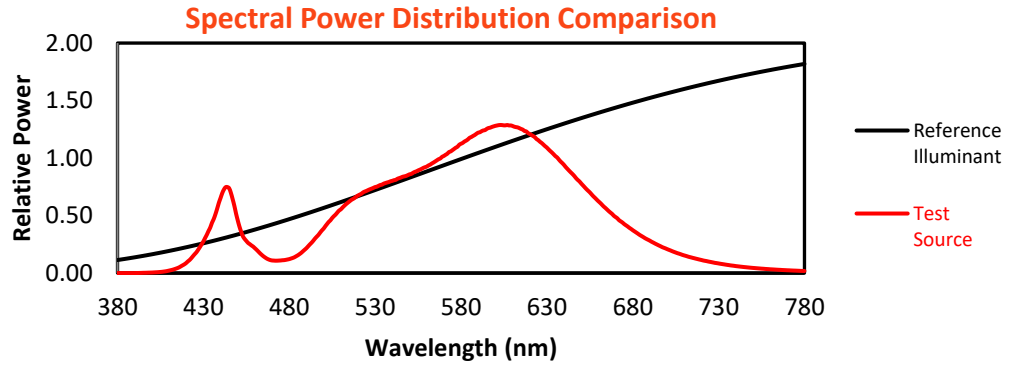
**Melanopic Lumens: NR**

**M/P: 2.32**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**

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



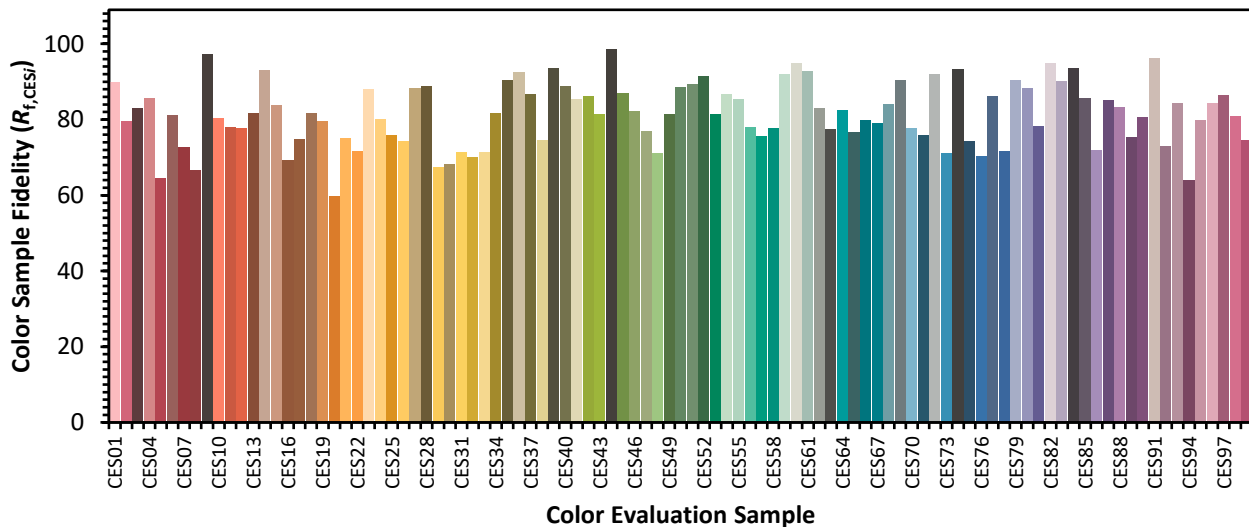
**Color Vector Graphics**



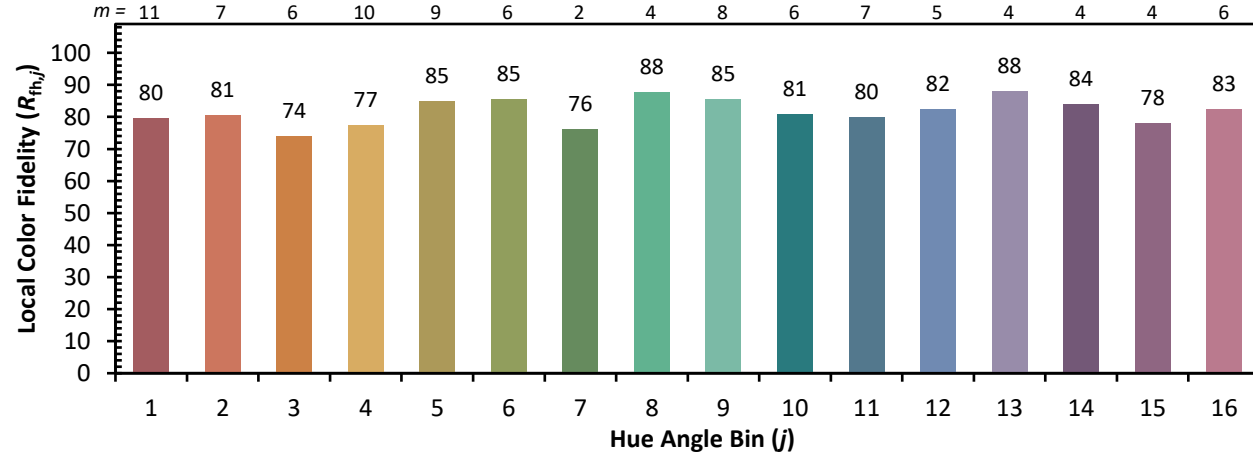


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)