

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: LUMARK

Report Number: P1067113

Luminaire Tested: **NAV-SA4A-830-U-T3BC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067113
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-830-U-T3BC
Description: Navion AREA AND ROADWAY LUMINAIRE 615mA 4xLight Square PACKAGE
80CRI 3000K FIXTURE w/ TYPE III ANGLED BACKLIGHT CONTROL
Light Source: (56) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11751.7 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G3

Input Watts (W): 107.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



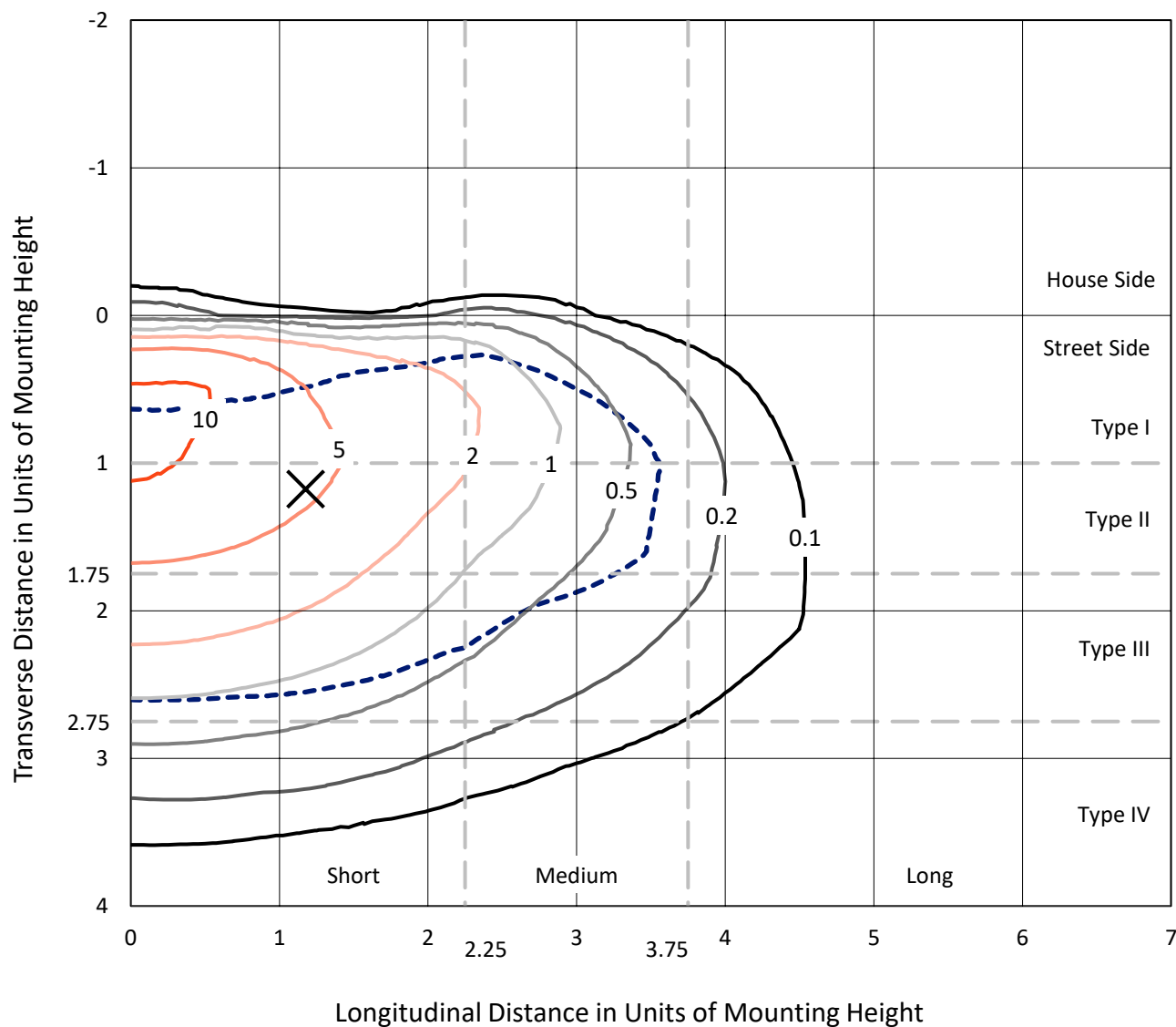
REPORT NUMBER: P1067113

CATALOG NUMBER: NAV-SA4A-830-U-T3BC

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

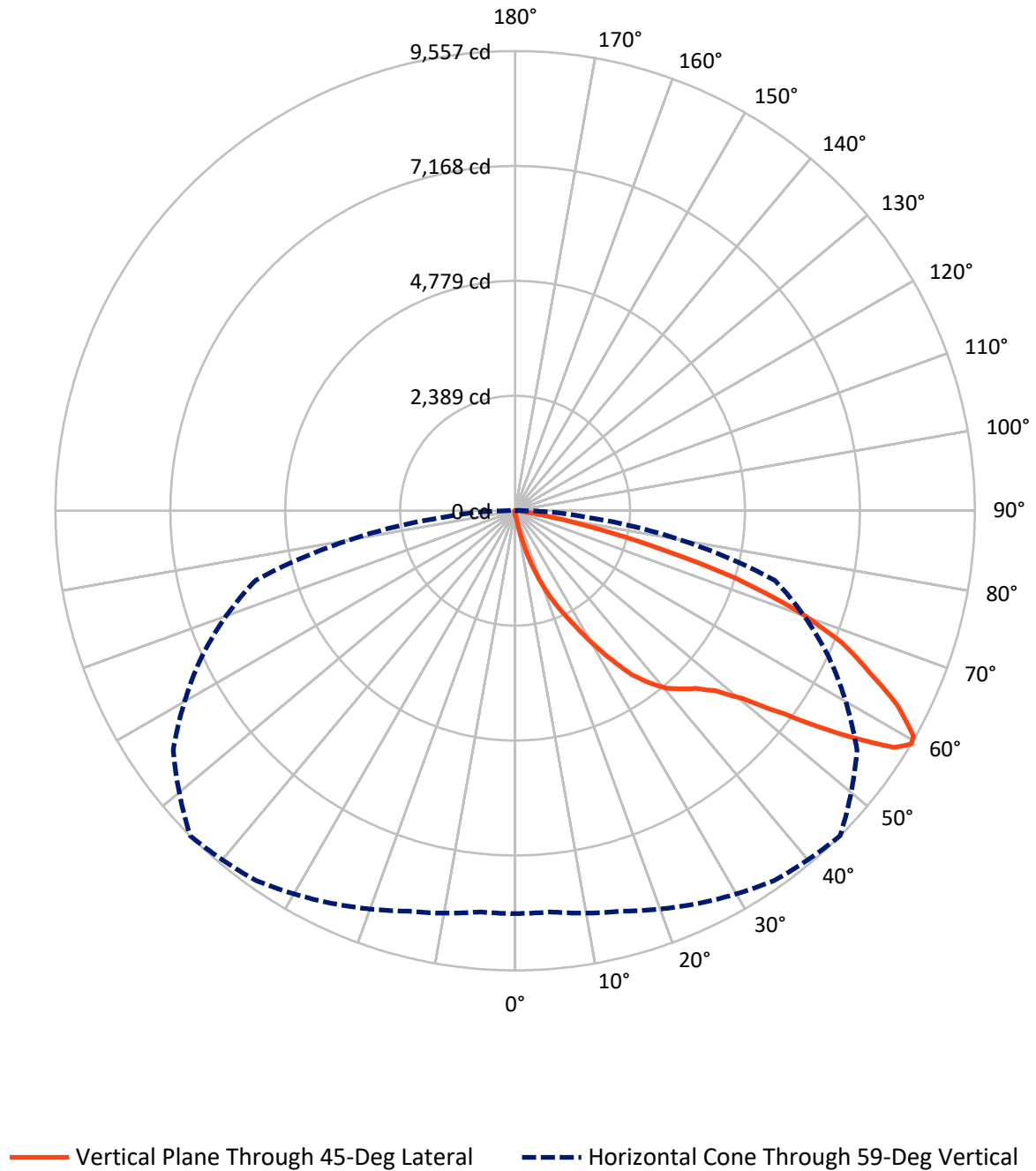
--- 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 12.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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CATALOG NUMBER: NAV-SA4A-830-U-T3BC

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	41.7	0.0	41.7
	% Fixture	0.4	0.0	0.4
Street Side	Lumens	11710.0	0.0	11710.0
	% Fixture	99.6	0.0	99.6
Total	Lumens	11751.7	0.0	11751.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.9	0.1
10°-20°	129.9	1.1
20°-30°	466.7	4.0
30°-40°	1084.5	9.2
40°-50°	1848.5	15.7
50°-60°	3045.8	25.9
60°-70°	3521.6	30.0
70°-80°	1513.0	12.9
80°-90°	130.7	1.1
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°	11751.7	100.0
0°-180°	11751.7	100.0



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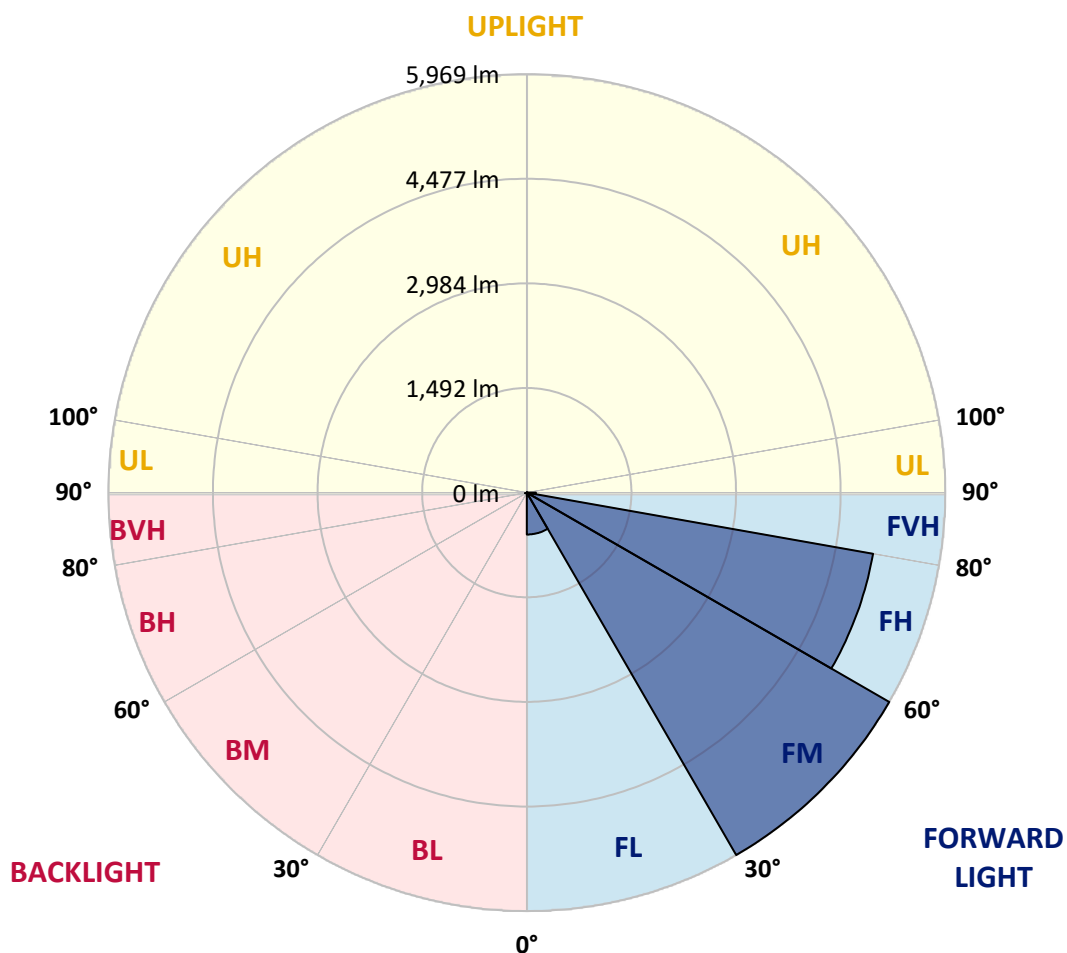
CATALOG NUMBER: NAV-SA4A-830-U-T3BC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	597.2	5.1			
FM	(30°-60°)	5968.7	50.8			
FH	(60°-80°)	5015.0	42.7			G3/7500
FVH	(80°-90°)	129.0	1.1			G2/225
BL	(0°-30°)	10.3	0.1	B0/110		
BM	(30°-60°)	10.1	0.1	B0/220		
BH	(60°-80°)	19.6	0.2	B0/110		G0/110
BVH	(80°-90°)	1.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G3

Type III Short





REPORT NUMBER: P1067113

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3
2.5°	96.4	96.4	94.0	90.9	90.1	87.7	87.7	85.3	82.2	79.8	76.6
5°	139.9	139.1	132.8	124.8	114.6	108.3	108.3	99.6	91.7	84.6	78.2
7.5°	305.8	298.7	275.8	237.8	188.1	154.9	152.5	124.1	105.1	90.9	79.0
10°	701.7	677.2	644.8	553.9	409.3	286.0	280.5	181.0	125.6	98.0	80.6
12.5°	1149.7	1169.5	1104.7	961.7	792.6	589.5	550.0	305.0	165.9	107.5	82.2
15°	1557.5	1552.7	1516.4	1399.4	1204.2	934.0	909.5	530.2	237.8	122.5	83.8
17.5°	1862.5	1856.9	1822.2	1747.1	1597.0	1326.7	1305.4	845.5	373.0	143.8	85.3
20°	2184.1	2177.0	2128.0	2067.9	1936.8	1706.8	1681.5	1197.9	583.9	178.6	85.3
22.5°	2569.7	2556.3	2504.1	2402.2	2263.9	2064.0	2041.1	1558.3	845.5	235.5	89.3
25°	3035.9	3013.0	2941.1	2849.4	2682.7	2417.2	2392.7	1959.7	1160.8	321.6	93.2
27.5°	3567.7	3571.7	3474.5	3319.6	3096.0	2824.9	2779.1	2319.2	1487.1	444.9	98.0
30°	4199.1	4159.6	4022.9	3842.7	3625.4	3280.1	3235.8	2677.2	1853.8	626.6	105.9
32.5°	4790.1	4747.5	4563.3	4336.6	4103.5	3739.2	3702.8	3079.4	2187.2	841.6	120.1
35°	5297.4	5267.4	5009.8	4733.2	4526.2	4200.6	4189.6	3528.2	2579.2	1073.1	135.9
37.5°	5743.9	5689.4	5358.3	5071.4	4861.2	4569.7	4546.0	3939.1	2956.9	1341.7	159.6
40°	6124.8	6094.7	5690.9	5314.0	5143.3	4882.6	4852.6	4299.4	3347.2	1653.9	188.9
42.5°	6532.5	6493.0	6101.0	5678.3	5363.8	5084.9	5065.1	4596.5	3694.9	1996.8	232.3
45°	6993.2	6919.7	6576.0	6196.7	5718.6	5294.3	5272.1	4861.2	4051.3	2365.0	285.3
47.5°	7485.5	7421.5	7143.3	6877.0	6327.0	5639.6	5592.2	5086.4	4405.3	2790.2	352.4
50°	7986.4	7988.0	7779.4	7651.4	7070.6	6200.6	6133.4	5417.5	4777.5	3245.3	452.0
52.5°	8569.6	8584.6	8581.5	8486.6	8036.2	7118.0	7027.9	5920.1	5209.7	3776.3	589.5
55°	8813.8	8840.6	9015.3	9225.5	9103.0	8281.2	8184.8	6786.9	5782.6	4368.2	793.3
57.5°	8613.8	8643.9	8884.9	9253.1	9534.4	9299.7	9288.7	7915.3	6537.2	5085.7	1126.8
59°	8376.0	8372.1	8619.4	9009.7	9389.0	9541.5	9557.3	8678.6	7194.7	5589.0	1414.4
60°	8218.0	8221.1	8385.5	8786.1	9189.1	9453.8	9515.5	9128.3	7578.7	5950.9	1661.0
62.5°	7607.9	7644.3	7774.7	8146.8	8529.3	8824.8	8929.9	9528.9	8677.9	6805.9	2518.3
65°	6945.0	6947.3	7133.0	7451.5	7818.1	8025.9	8092.3	8905.4	9411.9	7676.7	3642.8
67.5°	5762.1	5810.3	6021.2	6537.2	7021.6	7284.8	7335.3	7751.8	9107.7	8244.0	4206.2
70°	4032.3	4095.5	4396.6	5065.9	5787.3	6219.6	6216.4	6444.0	8015.7	7991.2	3566.1
72.5°	2013.4	2122.4	2368.2	3084.9	3958.8	4637.6	4780.6	5183.6	6439.2	6637.6	2660.6
75°	889.8	896.1	1035.9	1397.1	1967.6	2829.7	2957.7	4114.5	4940.3	4613.1	1921.7
77.5°	517.6	522.3	547.6	627.4	797.3	1386.8	1530.6	2698.5	3491.1	2681.1	1253.2
80°	188.1	192.8	192.0	237.8	349.3	546.0	608.4	1307.8	2328.7	1412.1	656.6
82.5°	115.4	115.4	111.4	112.2	127.2	209.4	229.2	557.1	1133.9	695.4	188.1
85°	56.9	60.1	64.0	71.9	85.3	103.5	109.8	159.6	381.7	168.3	45.0
87.5°	34.0	34.8	37.9	45.8	56.9	74.3	79.0	108.3	136.7	113.0	11.1
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: NAV-SA4A-830-U-T3BC

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3
2.5°	75.1	74.3	70.3	67.2	64.0	60.8	58.5	56.1	56.1	56.9	56.1
5°	75.1	71.9	65.6	60.1	55.3	51.4	47.4	44.3	43.5	43.5	44.3
7.5°	74.3	70.3	61.6	54.5	48.2	42.7	38.7	34.8	34.0	34.8	34.0
10°	73.5	68.7	58.5	49.8	41.1	35.6	30.0	26.1	26.1	26.1	26.9
12.5°	73.5	66.4	55.3	45.0	35.6	29.2	23.7	19.8	19.0	19.0	19.0
15°	72.7	64.8	52.2	39.5	30.0	22.1	17.4	13.4	13.4	13.4	13.4
17.5°	71.1	62.4	48.2	34.8	23.7	16.6	11.9	7.9	7.9	9.5	9.5
20°	69.5	60.1	43.5	28.4	19.8	12.6	7.9	4.7	4.7	7.1	7.9
22.5°	70.3	60.1	40.3	25.3	15.8	9.5	6.3	4.0	3.2	5.5	7.1
25°	71.1	58.5	36.3	22.1	11.9	7.1	4.7	1.6	0.8	1.6	2.4
27.5°	71.1	56.9	31.6	17.4	8.7	5.5	2.4	0.0	0.0	0.0	0.0
30°	70.3	54.5	27.7	14.2	6.3	3.2	0.8	0.0	0.0	0.0	0.0
32.5°	69.5	52.2	25.3	11.1	5.5	1.6	0.0	0.0	0.0	0.0	0.0
35°	70.3	49.0	22.1	8.7	3.2	0.0	0.0	0.0	0.0	0.0	1.6
37.5°	72.7	45.8	19.0	7.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0
40°	75.9	43.5	15.8	5.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	82.2	43.5	14.2	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	90.1	43.5	11.9	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	100.4	44.3	10.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	113.0	45.8	9.5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	122.5	44.3	8.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	139.1	42.7	7.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	161.2	40.3	7.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59°	183.3	37.1	7.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	208.6	35.6	7.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	344.5	31.6	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	665.3	30.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	1075.4	30.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	1130.8	30.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	752.3	24.5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	403.0	22.1	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	217.3	20.5	3.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	95.6	15.0	4.0	2.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	37.9	10.3	4.7	4.0	3.2	1.6	0.0	0.0	0.0	0.0	0.0
85°	18.2	7.9	6.3	5.5	4.0	2.4	0.0	0.0	0.0	0.0	0.0
87.5°	8.7	7.9	7.1	6.3	5.5	4.0	0.8	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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

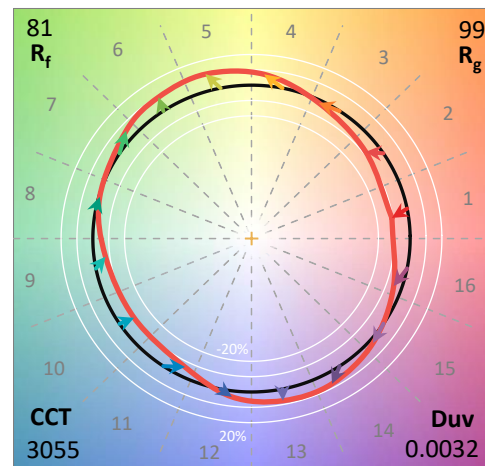
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGraw-Edison
 Catalog Number: **GSS-SB1A-830-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI
 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 3055
 CIE u' : 0.2475
 CIE v' : 0.5247
 Duv: 0.0032
 CIE x: 0.4377
 CIE y: 0.4124
 CIE z: 0.1499
 Peak Wavelength (nm): 604
 Dominant Wavelength (nm): 581
 Purity: 55.16339
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 80.9
 R1: 79.5
 R2: 85.6
 R3: 92.1
 R4: 82.4
 R5: 78.9
 R6: 81.7
 R7: 85.1
 R8: 61.9
 R9: 6.8
 R10: 67.1
 R11: 82.5
 R12: 63.4
 R13: 80.2
 R14: 95.1
 R15: 71.7



Test Conditions

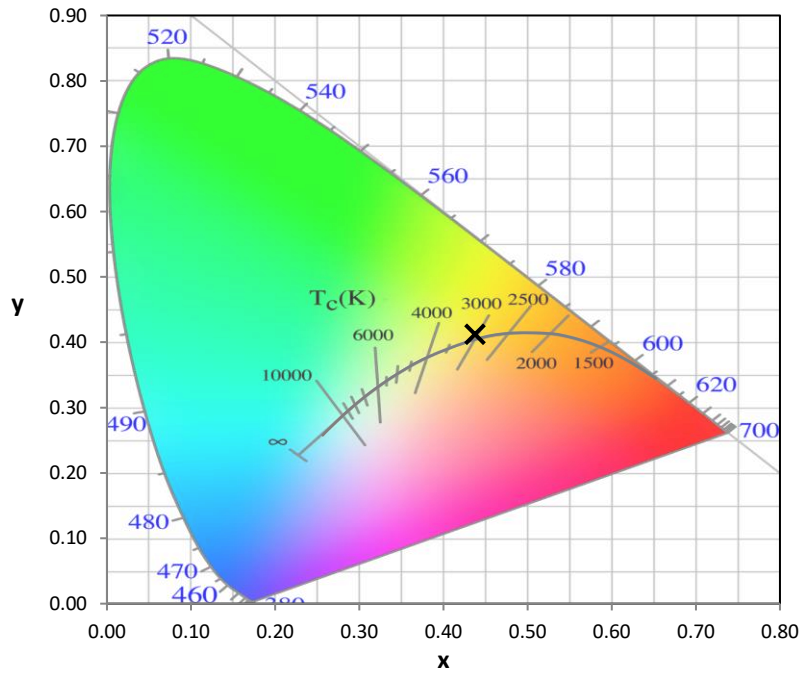
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

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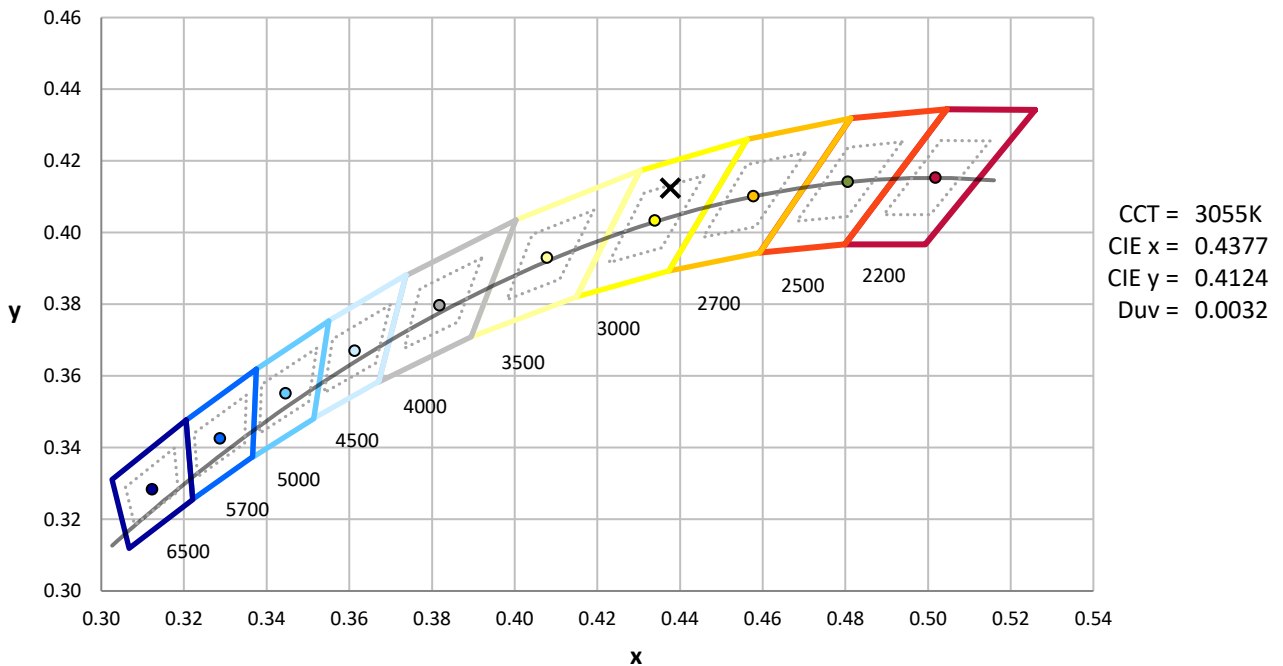
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

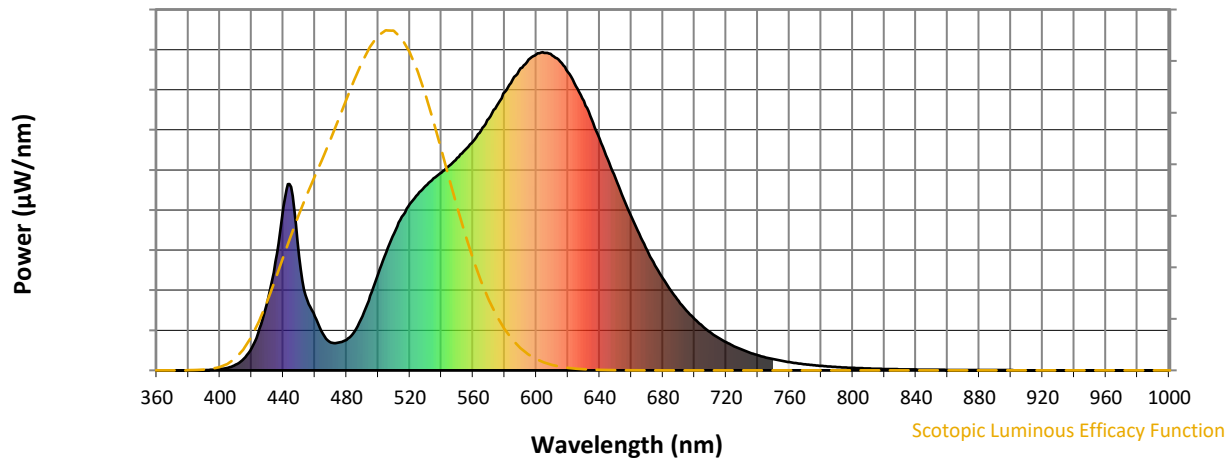


Photopic Lumens: NR

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	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2407-184-9

Scotopic Flux vs. Wavelength



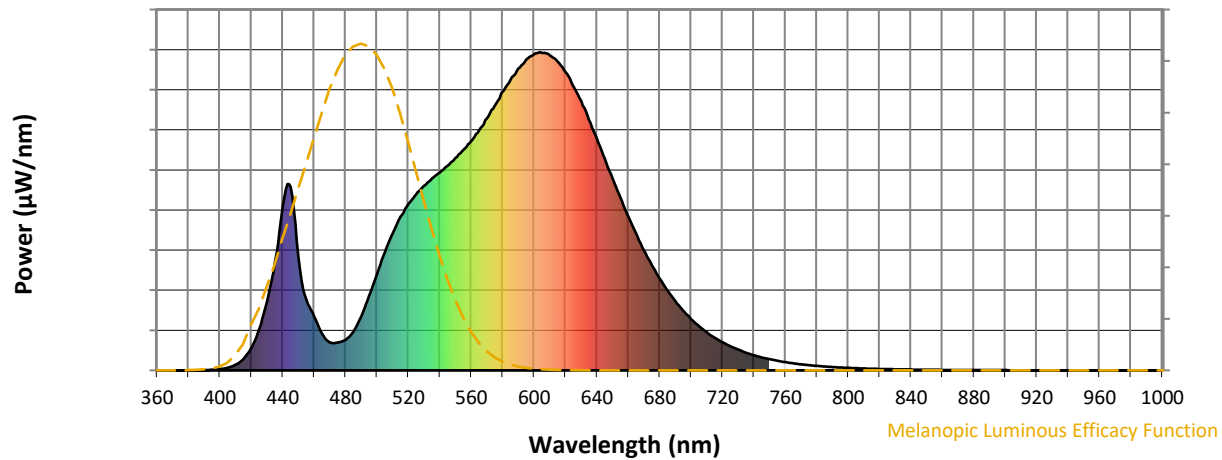
Scotopic Lumens: NR

S/P: 1.28

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	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.33

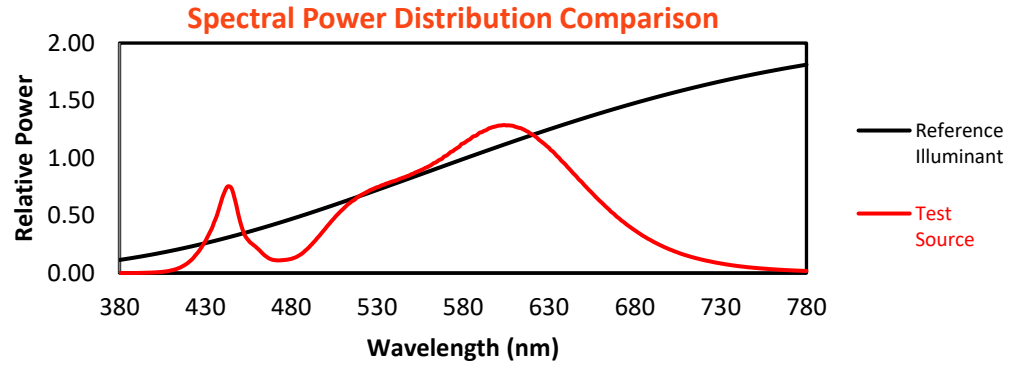
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

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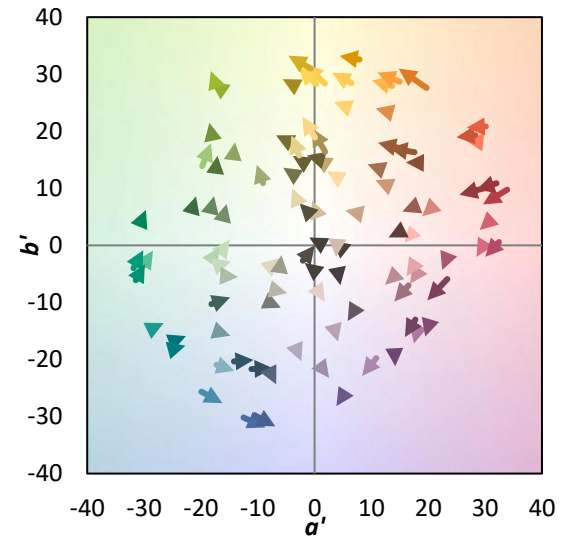
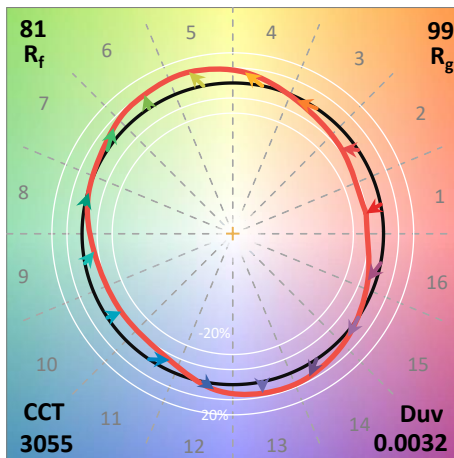
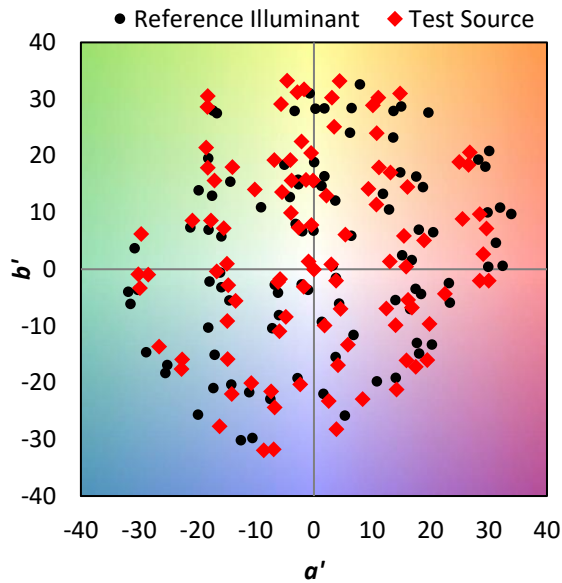
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 80.9$
 $R_g = 6.8$



Color Vector Graphics

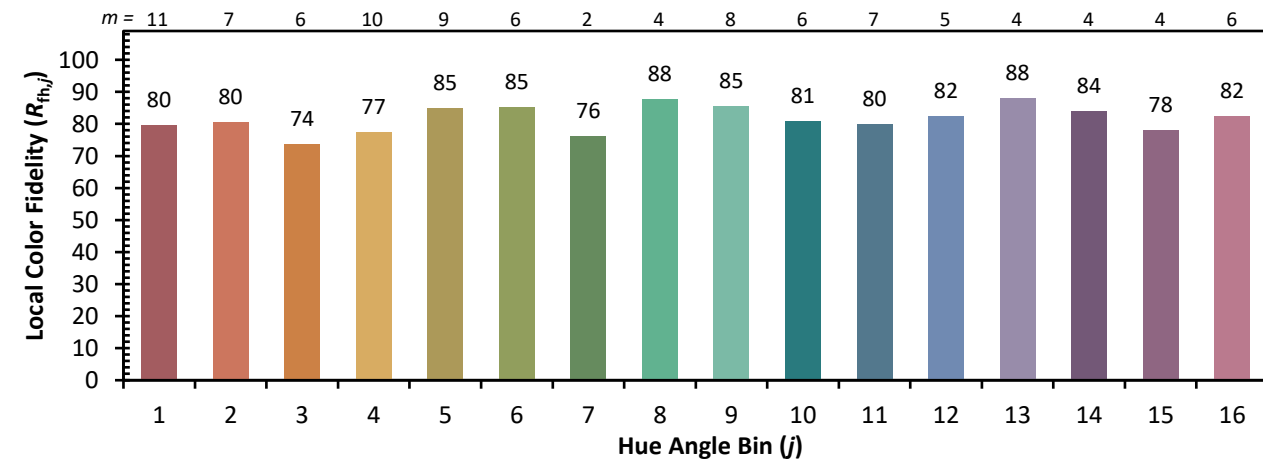
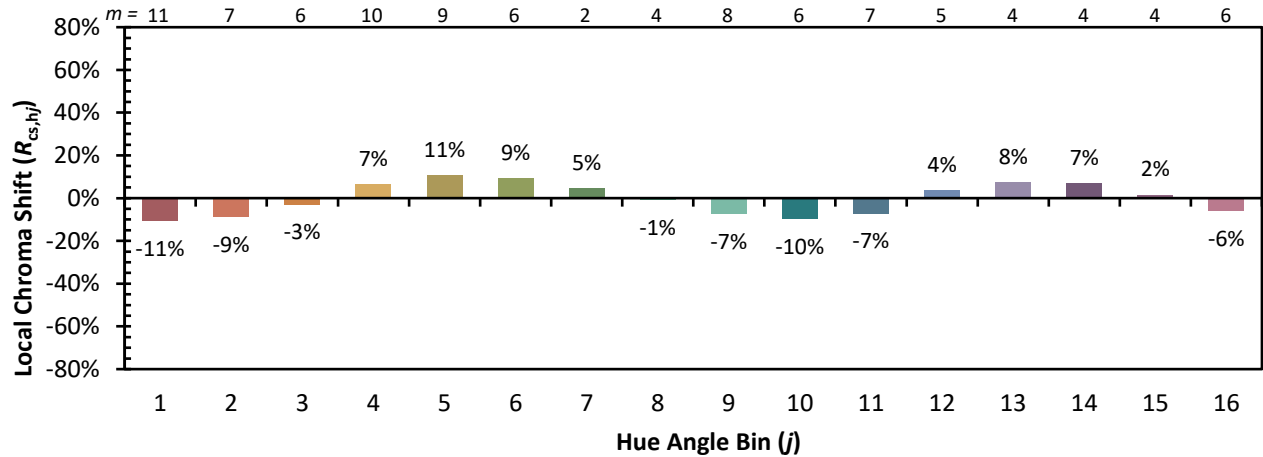


Individual Sample Fidelity Index ($R_{f,i}$)

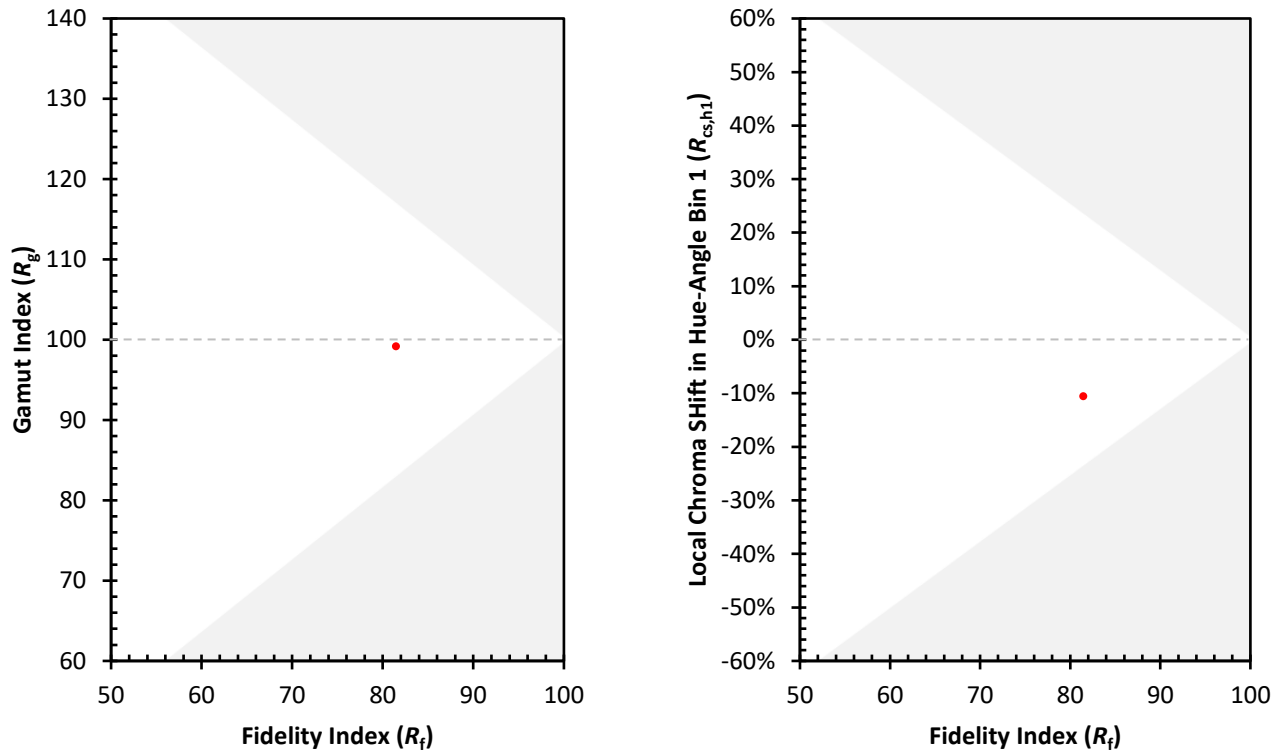
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 91	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 93
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 = 90	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 77	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)