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: METALUX

Report Number: P976956

Luminaire Tested: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

Issue Date: 03/18/2025

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

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P976956
Test Lab:	INNOVATION CENTER(P3)
Issue Date:	03/18/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	24SR-LD2-C-48-UNV-L850-CD1-SO-U
Description:	METALUX SKYRIDGE 2x4 4800LM PACKAGE 80CRI 5000K TROFFER with Storaro Orange SKYTR
Light Source:	5000K CCT, 80+ CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3335.0 lumens
Efficiency:	N/A
Efficacy:	95.8 lumens/watt
Spacing Criteria (0/90/45):	1.17 / 1.85 / 1.72
Luminous Opening:	Rectangular (W 2' x L: 4' x H: 0')
CIE Type:	Direct

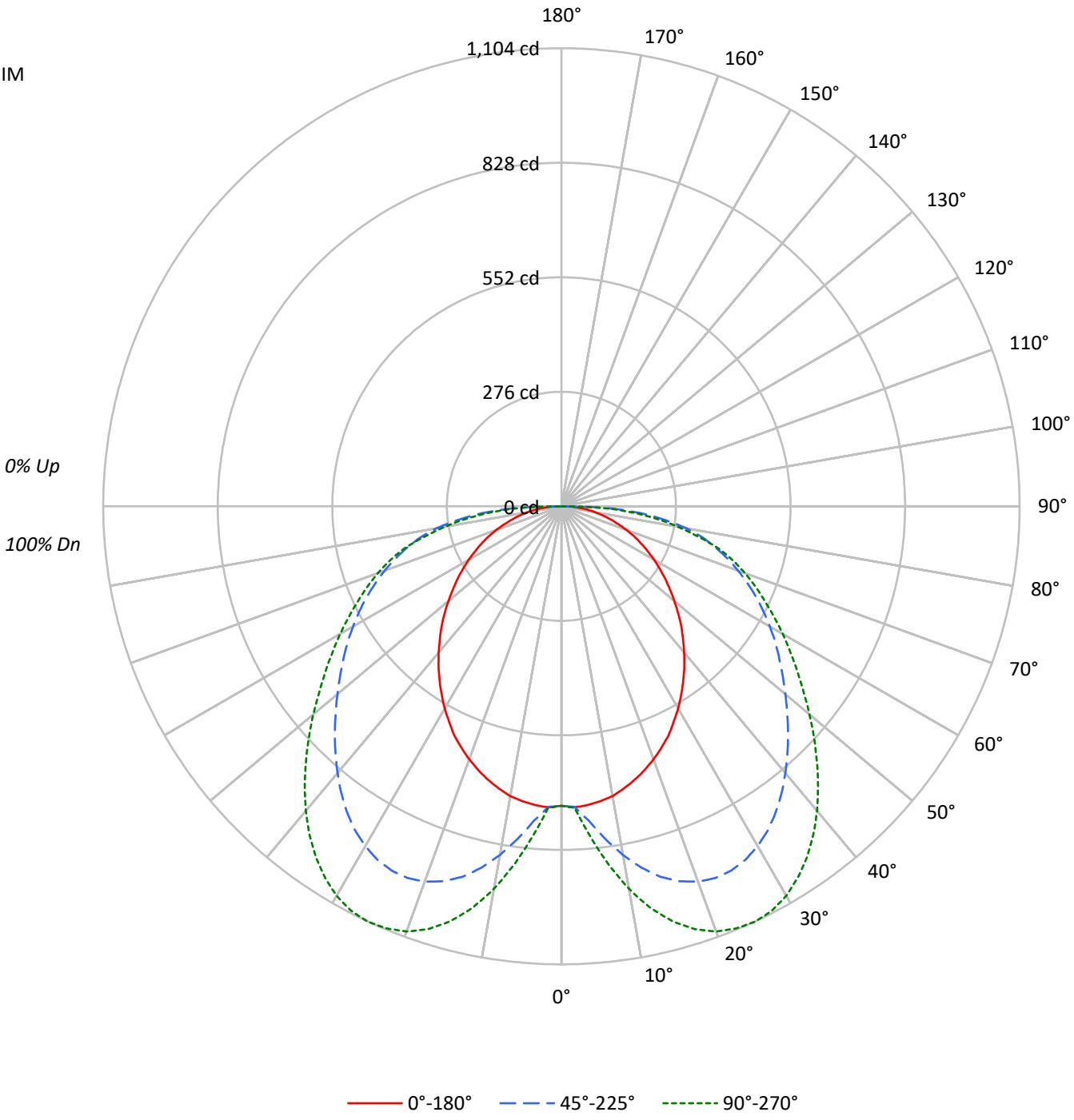
Input Watts (W):	34.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

Luminous Intensity Polar Plot



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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	107	101	96	91	104	99	94	90	94	90	87	90	87	84	87	84	82	79
2	96	87	79	72	93	85	77	71	81	75	70	78	73	68	74	70	66	64
3	87	75	66	59	84	74	65	58	70	63	57	68	61	56	65	60	55	53
4	79	66	56	49	77	65	56	49	62	54	48	60	53	47	57	52	47	44
5	72	59	49	42	70	57	48	42	55	47	41	53	46	41	51	45	40	38
6	67	53	43	36	65	52	43	36	50	42	36	48	41	35	46	40	35	33
7	62	47	38	32	60	47	38	32	45	37	31	43	36	31	42	36	31	29
8	57	43	34	28	56	42	34	28	41	33	28	40	33	28	39	32	27	25
9	53	39	31	25	52	39	31	25	38	30	25	37	30	25	35	29	24	23
10	50	36	28	23	49	36	28	22	35	27	22	34	27	22	33	27	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	971	971	971
5°	976	1028	1079
10°	969	1165	1279
15°	951	1288	1442
20°	929	1378	1561
25°	905	1438	1640
30°	874	1469	1684
35°	841	1479	1695
40°	808	1474	1683
45°	777	1470	1656
50°	743	1474	1634
55°	716	1503	1628
60°	695	1560	1657
65°	675	1648	1721
70°	658	1782	1850
75°	641	2001	2038
80°	643	2366	2215
85°	712	2972	2686

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
Vertical Angle: 87.5°
Luminance: 3769 cd/sqm

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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	2.2
10°-20°	252.1	7.6
20°-30°	422.2	12.7
30°-40°	528.7	15.9
40°-50°	554.6	16.6
50°-60°	524.1	15.7
60°-70°	458.8	13.8
70°-80°	354.3	10.6
80°-90°	165.3	5.0
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°-30°	749.2	22.5
0°-40°	1277.9	38.3
0°-60°	2356.6	70.7
0°-90°	3335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	723	722	761	790	799	69
15°	682	778	924	1008	1035	192
25°	610	783	968	1067	1104	280
35°	512	715	900	997	1032	320
45°	408	606	772	847	870	315
55°	305	504	641	682	694	273
65°	212	413	518	532	541	210
75°	123	309	385	388	392	131
85°	46	162	192	178	174	49
90°	0	0	0	0	0	

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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6	721.6
2.5°	726.3	725.2	723.9	721.6	720.5	720.5	720.5	720.5	721.6	725.2	727.3
5°	722.8	722.8	720.5	719.3	720.5	723.9	729.7	739.0	748.1	760.8	771.2
7.5°	717.1	715.9	714.8	715.9	726.3	741.3	756.2	773.6	789.7	808.2	823.0
10°	709.0	707.8	709.0	718.2	739.0	763.2	785.0	806.9	828.8	853.0	873.8
12.5°	696.3	696.3	700.8	721.6	750.5	780.4	809.2	836.9	864.6	892.2	916.4
15°	682.5	683.6	695.1	725.2	760.8	795.4	828.8	861.2	893.5	924.5	951.0
17.5°	666.4	668.6	688.3	725.2	765.5	805.8	843.8	879.5	914.1	947.6	975.2
20°	649.0	651.3	680.2	722.8	767.8	811.6	851.9	891.1	928.1	962.7	991.3
22.5°	629.5	632.9	669.8	715.9	765.5	812.7	854.2	894.6	932.6	969.5	998.3
25°	*609.8*	*614.4*	*657.1*	*706.7*	*758.5*	*806.9*	*850.8*	*891.1*	*931.5*	*968.4*	*997.1*
27.5°	585.6	593.6	642.0	692.7	748.1	796.5	840.4	883.1	923.4	960.3	989.0
30°	562.6	573.0	623.7	676.6	733.2	781.6	825.4	868.0	908.4	945.3	974.1
32.5°	537.2	549.9	602.9	658.3	713.5	760.8	805.8	848.5	888.8	925.7	953.3
35°	511.9	526.8	581.1	637.5	691.7	739.0	782.7	825.4	864.6	900.3	926.8
37.5°	486.4	502.6	556.9	614.4	666.4	712.4	756.2	797.8	838.1	871.4	898.0
40°	459.9	478.4	532.5	587.9	639.9	684.7	728.6	768.9	806.9	839.2	864.6
42.5°	433.4	454.2	508.3	562.6	612.1	656.0	699.7	739.0	774.7	805.8	830.0
45°	408.1	428.9	481.8	536.1	584.5	628.2	670.9	709.0	743.5	772.3	795.4
47.5°	381.6	404.7	457.6	510.6	556.9	600.6	642.0	677.9	711.2	737.7	759.8
50°	355.1	380.3	432.3	484.1	531.4	574.1	614.4	649.0	680.2	704.4	725.2
52.5°	329.6	356.1	409.2	459.9	506.1	548.8	587.9	621.4	650.2	672.1	690.6
55°	305.4	333.2	386.2	435.7	483.0	524.4	561.4	593.6	620.2	640.9	657.1
57.5°	281.2	311.3	364.2	414.9	459.9	501.5	537.2	567.1	591.3	611.0	624.8
60°	258.3	289.3	343.6	393.1	438.0	478.4	513.0	540.6	563.7	579.8	590.2
62.5°	234.1	267.4	321.6	372.3	417.3	455.4	488.8	515.3	534.8	548.8	558.0
65°	212.0	245.5	300.9	351.6	394.3	431.1	462.2	487.7	506.1	517.6	523.4
67.5°	190.2	224.8	280.1	329.6	371.2	406.9	435.7	459.9	476.1	485.4	489.9
70°	167.2	204.0	258.3	306.7	347.0	380.3	409.2	430.0	445.0	453.1	455.4
72.5°	144.1	182.1	236.4	283.6	321.6	354.0	380.3	400.0	413.9	419.6	420.8
75°	123.3	159.1	212.0	257.0	293.9	323.9	350.4	368.9	379.3	385.0	386.2
77.5°	102.5	137.1	187.8	230.5	262.8	291.6	317.1	334.3	344.7	349.3	349.3
80°	83.0	115.3	161.3	199.5	230.5	257.0	280.1	297.4	306.7	305.4	300.9
82.5°	64.5	94.5	133.7	167.2	194.8	219.0	242.1	252.5	255.9	252.5	249.0
85°	46.1	70.3	101.4	129.1	153.3	171.7	186.8	194.8	195.9	192.5	189.1
87.5°	26.5	39.2	57.7	78.3	91.1	102.5	115.3	119.9	119.9	122.2	115.3
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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	721.6	721.6	721.6	721.6	721.6	721.6	721.6	*721.6*
2.5°	726.3	727.3	727.3	729.7	730.9	730.9	729.7	*727.3*
5°	774.7	781.6	786.1	793.1	796.5	800.1	801.2	*798.8*
7.5°	831.1	841.5	850.8	861.2	865.7	869.3	873.8	*870.4*
10°	885.4	899.2	910.7	922.2	929.1	933.8	937.2	*936.1*
12.5°	931.5	947.6	960.3	971.8	981.0	987.9	991.3	*991.3*
15°	967.1	985.6	1001.7	1014.5	1023.6	1030.6	1035.2	*1035.2*
17.5°	994.9	1013.2	1030.6	1043.3	1052.5	1061.8	1066.3	*1068.6*
20°	1011.0	1030.6	1047.8	1061.8	1072.2	1082.4	1087.1	*1090.5*
22.5°	1019.1	1038.7	1057.1	1072.2	1083.6	1092.8	1098.5	*1100.9*
25°	*1019.1*	*1039.7*	*1059.4*	*1074.3*	*1086.0*	*1096.4*	*1102.1*	*1104.4*
27.5°	1012.1	1034.0	1053.7	1067.5	1080.2	1090.5	1096.4	*1098.5*
30°	998.3	1020.2	1039.7	1053.7	1066.3	1075.6	1081.3	*1083.6*
32.5°	976.5	999.4	1017.9	1031.7	1044.4	1053.7	1059.4	*1060.5*
35°	951.0	972.9	990.3	1004.1	1016.8	1024.9	1029.5	*1031.7*
37.5°	920.0	940.6	958.0	970.7	982.2	991.3	996.0	*997.1*
40°	886.5	906.0	921.1	932.6	944.2	952.3	956.8	*958.0*
42.5°	850.8	869.3	883.1	893.5	903.7	910.7	914.1	*915.3*
45°	813.9	830.0	842.7	851.9	861.2	866.9	870.4	*870.4*
47.5°	777.0	792.0	802.3	809.2	817.3	823.0	826.6	*825.4*
50°	740.1	752.8	760.8	767.8	774.7	778.1	781.6	*780.4*
52.5°	703.1	714.8	719.3	725.2	730.9	734.3	737.7	*735.4*
55°	667.5	675.5	680.2	684.7	689.3	692.7	695.1	*694.0*
57.5°	632.9	638.6	642.0	646.7	650.2	652.4	654.7	*653.7*
60°	596.0	600.6	602.9	607.6	611.0	613.3	615.7	*615.7*
62.5°	561.4	564.9	566.0	570.7	573.0	575.2	578.7	*577.5*
65°	524.4	528.0	530.3	533.8	536.1	538.4	541.8	*540.6*
67.5°	489.9	493.4	494.5	498.1	501.5	504.9	506.1	*506.1*
70°	455.4	457.6	458.8	463.5	464.6	468.0	470.3	*470.3*
72.5°	420.8	421.9	424.2	427.7	430.0	432.3	434.6	*433.4*
75°	383.9	386.2	387.3	389.7	389.7	392.0	392.0	*392.0*
77.5°	345.9	342.3	341.3	340.0	338.9	338.9	338.9	*337.7*
80°	293.9	290.5	289.3	287.1	287.1	287.1	287.1	*285.9*
82.5°	243.2	238.6	236.4	235.2	234.1	234.1	234.1	*232.8*
85°	184.4	179.8	178.7	177.5	177.5	176.4	175.3	*174.0*
87.5°	114.2	110.6	109.5	107.2	108.4	106.1	106.1	*106.1*
90°	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

Scaled Data Report

TEST NUMBER: P976956
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L850-CD1-SO-U

CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	11.7	13.4	12.1	13.8	14.1	14.3	16.0	14.7	16.3	16.7
	3H	13.6	15.2	14.0	15.5	15.9	16.7	18.3	17.1	18.7	19.0
	4H	14.3	15.8	14.7	16.2	16.5	17.9	19.4	18.3	19.8	20.1
	6H	14.9	16.3	15.3	16.6	17.0	18.9	20.3	19.3	20.7	21.1
	8H	15.1	16.4	15.5	16.8	17.2	19.4	20.7	19.8	21.1	21.5
	12H	15.2	16.5	15.6	16.9	17.3	19.8	21.1	20.2	21.4	21.9
4H	2H	13.2	14.7	13.6	15.1	15.5	15.0	16.5	15.4	16.9	17.3
	3H	15.6	16.9	16.0	17.3	17.7	17.7	19.0	18.2	19.4	19.8
	4H	16.7	17.8	17.1	18.2	18.7	19.1	20.3	19.5	20.7	21.1
	6H	17.5	18.5	18.0	19.0	19.4	20.3	21.3	20.7	21.8	22.2
	8H	17.8	18.8	18.3	19.2	19.7	20.8	21.8	21.3	22.2	22.7
	12H	18.0	18.9	18.5	19.4	19.9	21.3	22.2	21.8	22.7	23.1
8H	4H	17.7	18.7	18.2	19.1	19.6	19.6	20.6	20.1	21.0	21.5
	6H	19.0	19.8	19.5	20.3	20.8	21.0	21.9	21.5	22.3	22.8
	8H	19.5	20.3	20.0	20.8	21.3	21.7	22.4	22.2	22.9	23.4
	12H	20.0	20.7	20.5	21.1	21.7	22.3	23.0	22.8	23.5	24.0
12H	4H	17.9	18.8	18.4	19.3	19.8	19.7	20.6	20.2	21.1	21.5
	6H	19.4	20.1	19.9	20.6	21.1	21.2	22.0	21.7	22.4	23.0
	8H	20.1	20.7	20.6	21.2	21.8	22.0	22.6	22.5	23.1	23.7

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

Metalux

Report Number: SP1-2506-457-8

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L950-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L950-CD1-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

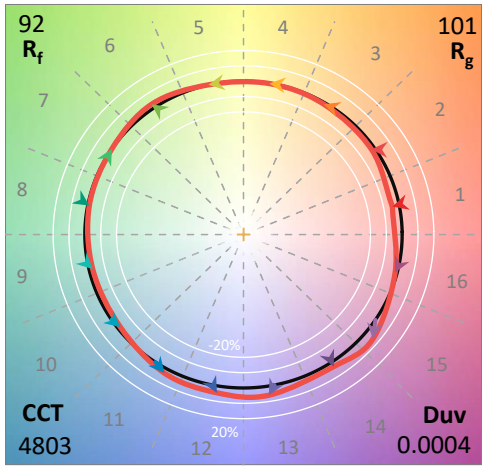
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-457-8
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	07/02/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**24SR-LD2-64-C-UNV-L950-CD1-U**
Description:	2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K):	4803
CIE u':	0.2133
CIE v':	0.4881
Duv:	0.0004
CIE x:	0.3510
CIE y:	0.3570
CIE z:	0.2921
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	574
Purity:	12.41797
Rf:	91.5
Rg:	100.9

CRI (Ra):	94.6				
R1:	95.9	R9:	74.3		
R2:	96.0	R10:	88.6		
R3:	94.0	R11:	95.2		
R4:	95.8	R12:	71.3		
R5:	94.6	R13:	96.0		
R6:	92.9	R14:	96.1		
R7:	96.3	R15:	94.1		
R8:	91.2				



Test Conditions

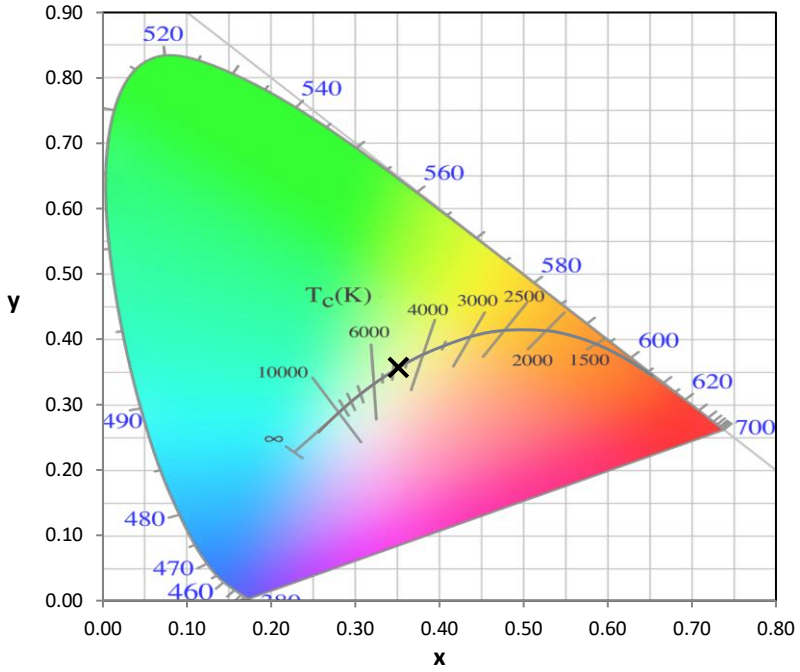
Stabilization Time:	43M
Operation Time:	1H 43M
Sphere Temperature (°C):	24.9

REPORT NUMBER: SP1-2506-457-8

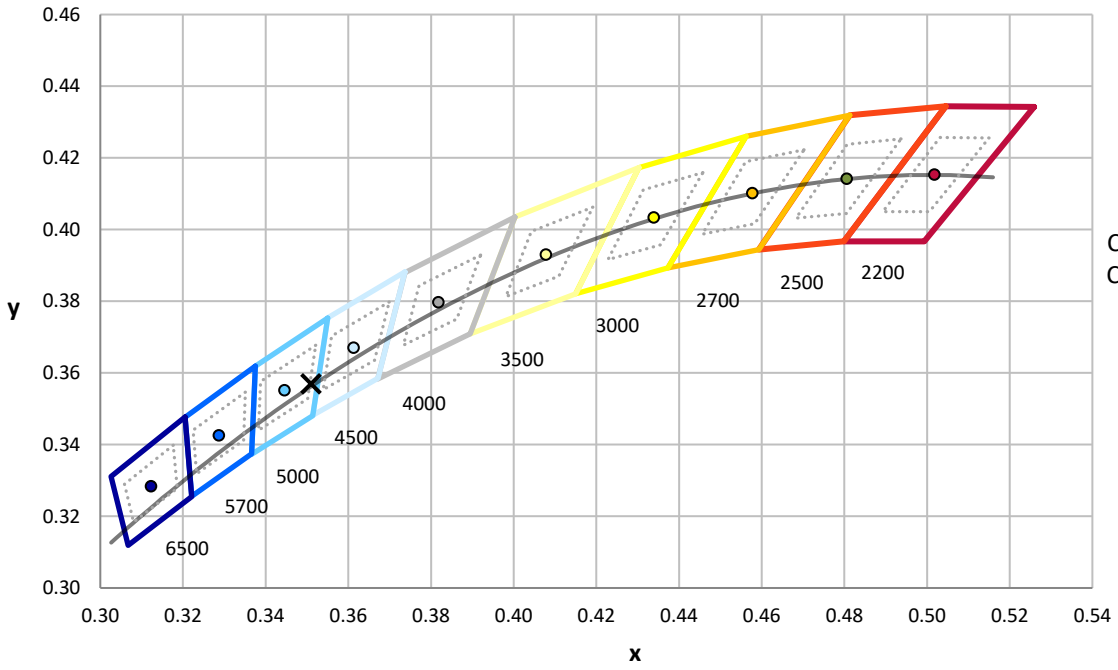
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2506-457-8

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

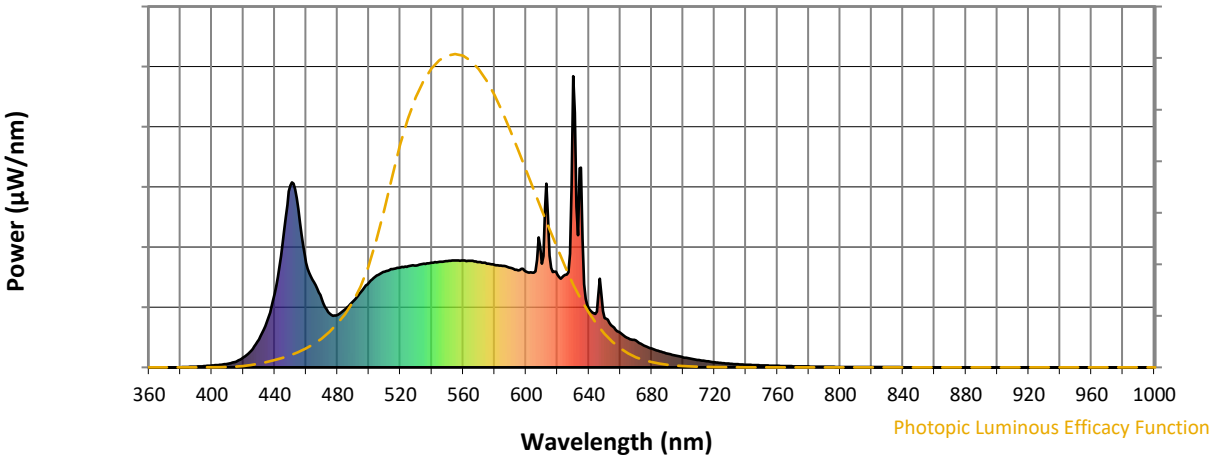


CCT = 4803K
CIE x = 0.3510
CIE y = 0.3570
Duv = 0.0004

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-8

Photopic Flux vs. Wavelength

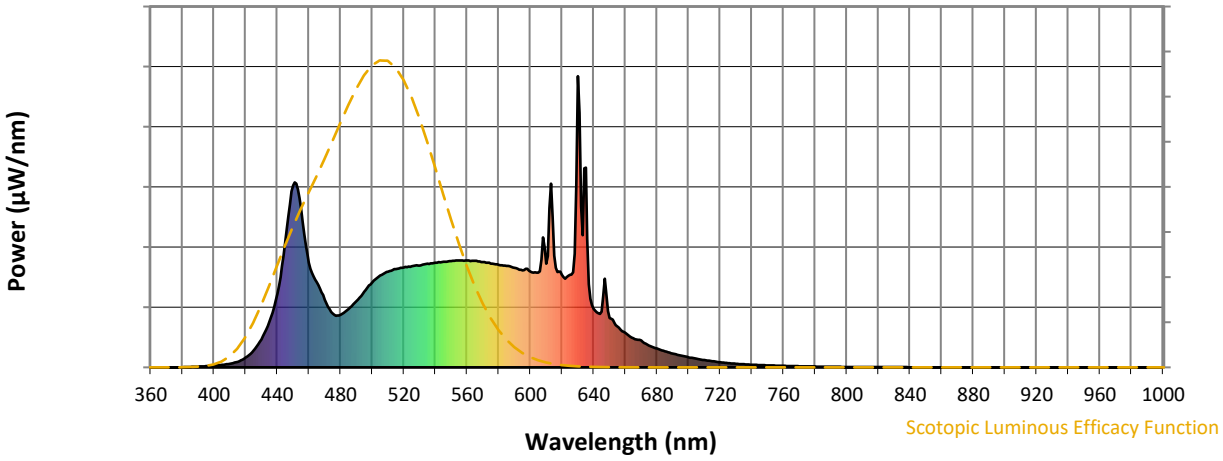


Photopic Lumens: NR

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	227	NR	620	318	NR	750	7	NR	880	0	NR
365	0	NR	495	259	NR	625	318	NR	755	6	NR	885	0	NR
370	0	NR	500	292	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	315	NR	635	686	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	202	NR	770	4	NR	900	0	NR
385	1	NR	515	338	NR	645	192	NR	775	3	NR	905	0	NR
390	3	NR	520	343	NR	650	169	NR	780	3	NR	910	0	NR
395	5	NR	525	347	NR	655	141	NR	785	2	NR	915	0	NR
400	6	NR	530	350	NR	660	119	NR	790	2	NR	920	0	NR
405	9	NR	535	356	NR	665	100	NR	795	2	NR	925	0	NR
410	12	NR	540	359	NR	670	92	NR	800	2	NR	930	0	NR
415	19	NR	545	363	NR	675	75	NR	805	1	NR	935	0	NR
420	34	NR	550	365	NR	680	64	NR	810	1	NR	940	0	NR
425	57	NR	555	368	NR	685	55	NR	815	1	NR	945	0	NR
430	96	NR	560	367	NR	690	47	NR	820	1	NR	950	0	NR
435	157	NR	565	366	NR	695	41	NR	825	1	NR	955	0	NR
440	252	NR	570	361	NR	700	34	NR	830	1	NR	960	0	NR
445	427	NR	575	356	NR	705	30	NR	835	1	NR	965	0	NR
450	625	NR	580	352	NR	710	25	NR	840	1	NR	970	0	NR
455	544	NR	585	348	NR	715	21	NR	845	0	NR	975	0	NR
460	360	NR	590	342	NR	720	18	NR	850	0	NR	980	0	NR
465	292	NR	595	333	NR	725	15	NR	855	0	NR	985	0	NR
470	232	NR	600	329	NR	730	12	NR	860	0	NR	990	0	NR
475	184	NR	605	325	NR	735	11	NR	865	0	NR	995	0	NR
480	180	NR	610	357	NR	740	9	NR	870	0	NR	1000	0	NR
485	201	NR	615	384	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-457-8

Scotopic Flux vs. Wavelength

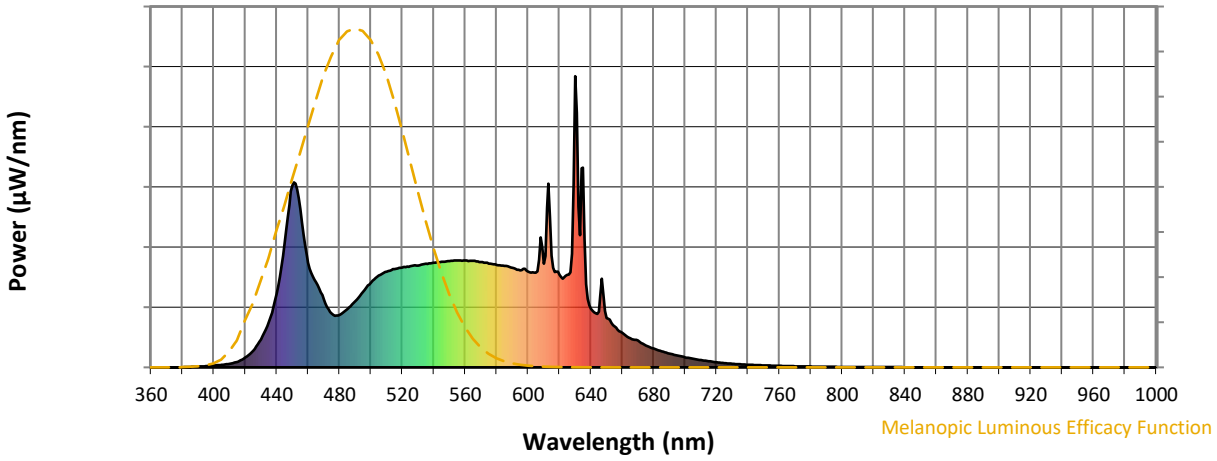


Scotopic Lumens: NR **S/P: 2.02**

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	227	NR	620	318	NR	750	7	NR	880	0	NR
365	0	NR	495	259	NR	625	318	NR	755	6	NR	885	0	NR
370	0	NR	500	292	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	315	NR	635	686	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	202	NR	770	4	NR	900	0	NR
385	1	NR	515	338	NR	645	192	NR	775	3	NR	905	0	NR
390	3	NR	520	343	NR	650	169	NR	780	3	NR	910	0	NR
395	5	NR	525	347	NR	655	141	NR	785	2	NR	915	0	NR
400	6	NR	530	350	NR	660	119	NR	790	2	NR	920	0	NR
405	9	NR	535	356	NR	665	100	NR	795	2	NR	925	0	NR
410	12	NR	540	359	NR	670	92	NR	800	2	NR	930	0	NR
415	19	NR	545	363	NR	675	75	NR	805	1	NR	935	0	NR
420	34	NR	550	365	NR	680	64	NR	810	1	NR	940	0	NR
425	57	NR	555	368	NR	685	55	NR	815	1	NR	945	0	NR
430	96	NR	560	367	NR	690	47	NR	820	1	NR	950	0	NR
435	157	NR	565	366	NR	695	41	NR	825	1	NR	955	0	NR
440	252	NR	570	361	NR	700	34	NR	830	1	NR	960	0	NR
445	427	NR	575	356	NR	705	30	NR	835	1	NR	965	0	NR
450	625	NR	580	352	NR	710	25	NR	840	1	NR	970	0	NR
455	544	NR	585	348	NR	715	21	NR	845	0	NR	975	0	NR
460	360	NR	590	342	NR	720	18	NR	850	0	NR	980	0	NR
465	292	NR	595	333	NR	725	15	NR	855	0	NR	985	0	NR
470	232	NR	600	329	NR	730	12	NR	860	0	NR	990	0	NR
475	184	NR	605	325	NR	735	11	NR	865	0	NR	995	0	NR
480	180	NR	610	357	NR	740	9	NR	870	0	NR	1000	0	NR
485	201	NR	615	384	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-457-8

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 4.33**

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	227	NR	620	318	NR	750	7	NR	880	0	NR
365	0	NR	495	259	NR	625	318	NR	755	6	NR	885	0	NR
370	0	NR	500	292	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	315	NR	635	686	NR	765	4	NR	895	0	NR
380	0	NR	510	329	NR	640	202	NR	770	4	NR	900	0	NR
385	1	NR	515	338	NR	645	192	NR	775	3	NR	905	0	NR
390	3	NR	520	343	NR	650	169	NR	780	3	NR	910	0	NR
395	5	NR	525	347	NR	655	141	NR	785	2	NR	915	0	NR
400	6	NR	530	350	NR	660	119	NR	790	2	NR	920	0	NR
405	9	NR	535	356	NR	665	100	NR	795	2	NR	925	0	NR
410	12	NR	540	359	NR	670	92	NR	800	2	NR	930	0	NR
415	19	NR	545	363	NR	675	75	NR	805	1	NR	935	0	NR
420	34	NR	550	365	NR	680	64	NR	810	1	NR	940	0	NR
425	57	NR	555	368	NR	685	55	NR	815	1	NR	945	0	NR
430	96	NR	560	367	NR	690	47	NR	820	1	NR	950	0	NR
435	157	NR	565	366	NR	695	41	NR	825	1	NR	955	0	NR
440	252	NR	570	361	NR	700	34	NR	830	1	NR	960	0	NR
445	427	NR	575	356	NR	705	30	NR	835	1	NR	965	0	NR
450	625	NR	580	352	NR	710	25	NR	840	1	NR	970	0	NR
455	544	NR	585	348	NR	715	21	NR	845	0	NR	975	0	NR
460	360	NR	590	342	NR	720	18	NR	850	0	NR	980	0	NR
465	292	NR	595	333	NR	725	15	NR	855	0	NR	985	0	NR
470	232	NR	600	329	NR	730	12	NR	860	0	NR	990	0	NR
475	184	NR	605	325	NR	735	11	NR	865	0	NR	995	0	NR
480	180	NR	610	357	NR	740	9	NR	870	0	NR	1000	0	NR
485	201	NR	615	384	NR	745	8	NR	875	0	NR			

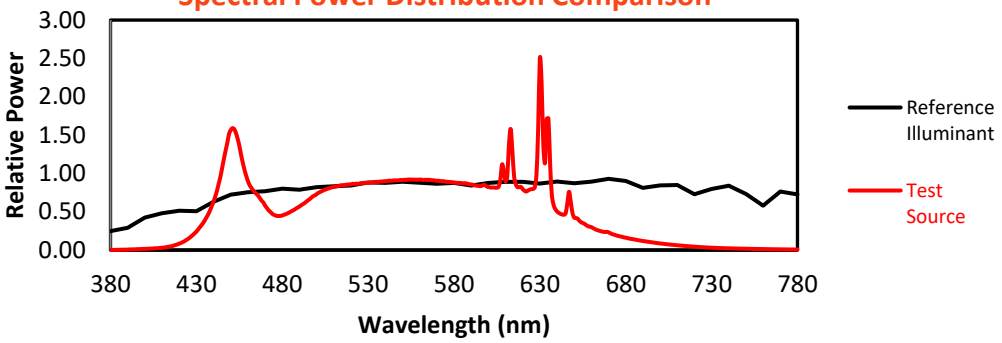
REPORT NUMBER: SP1-2506-457-8

TM-30-18

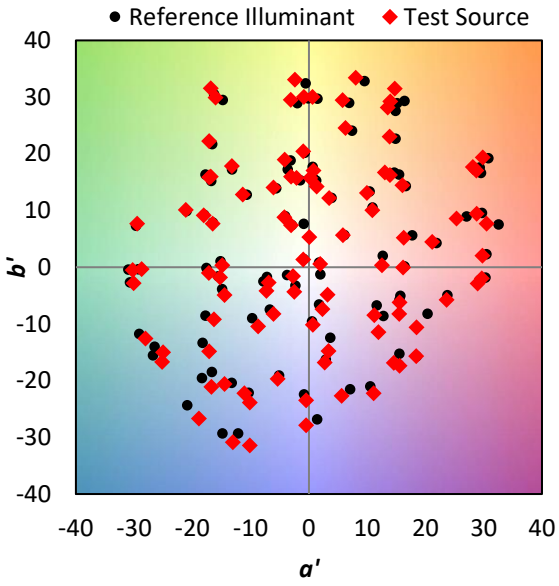
Summary

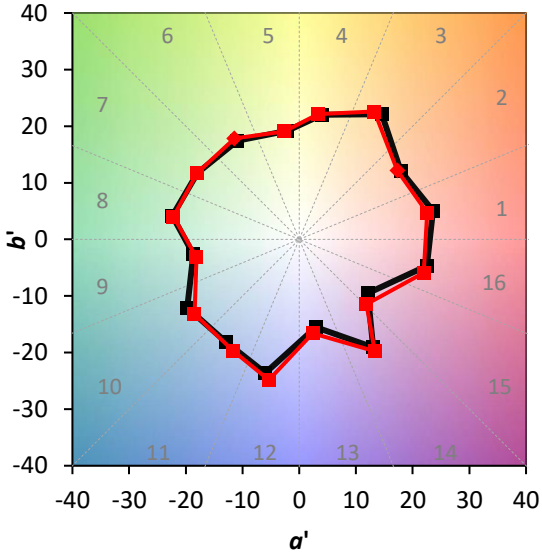
R_f = 91.5
R_g = 100.9
CIE R_a = 94.6
R_9 = 74.3

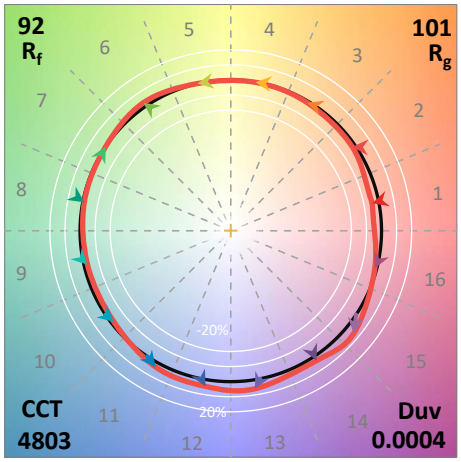
Spectral Power Distribution Comparison

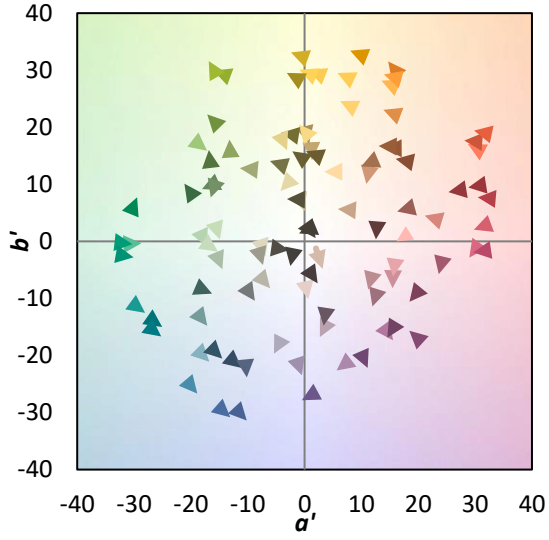


Color Vector Graphics







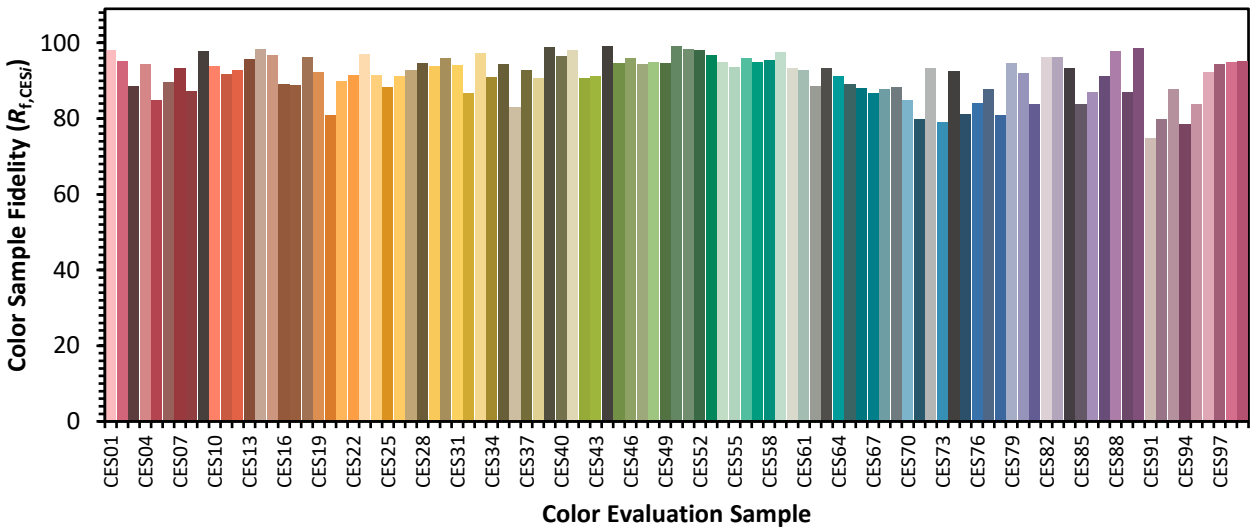


REPORT NUMBER: SP1-2506-457-8

TM-30-18

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

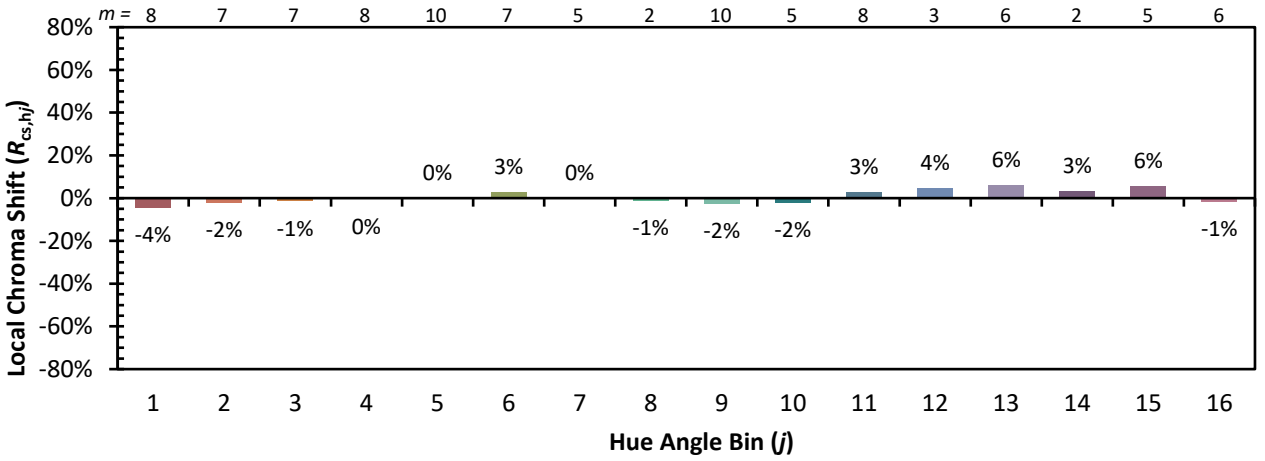
CES01 = 85	CES26 = 91	CES51 = 98	CES76 = 84
CES02 = 61	CES27 = 93	CES52 = 98	CES77 = 88
CES03 = 31	CES28 = 95	CES53 = 97	CES78 = 81
CES04 = 69	CES29 = 94	CES54 = 95	CES79 = 95
CES05 = 48	CES30 = 96	CES55 = 94	CES80 = 92
CES06 = 50	CES31 = 94	CES56 = 96	CES81 = 84
CES07 = 41	CES32 = 87	CES57 = 95	CES82 = 96
CES08 = 40	CES33 = 97	CES58 = 95	CES83 = 96
CES09 = 29	CES34 = 91	CES59 = 98	CES84 = 93
CES10 = 73	CES35 = 94	CES60 = 93	CES85 = 84
CES11 = 56	CES36 = 83	CES61 = 93	CES86 = 87
CES12 = 62	CES37 = 93	CES62 = 89	CES87 = 91
CES13 = 43	CES38 = 91	CES63 = 93	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 87
CES15 = 71	CES40 = 97	CES65 = 89	CES90 = 99
CES16 = 47	CES41 = 98	CES66 = 88	CES91 = 75
CES17 = 48	CES42 = 91	CES67 = 87	CES92 = 80
CES18 = 56	CES43 = 91	CES68 = 88	CES93 = 88
CES19 = 70	CES44 = 99	CES69 = 88	CES94 = 79
CES20 = 65	CES45 = 95	CES70 = 85	CES95 = 84
CES21 = 85	CES46 = 96	CES71 = 80	CES96 = 92
CES22 = 77	CES47 = 94	CES72 = 93	CES97 = 94
CES23 = 91	CES48 = 95	CES73 = 79	CES98 = 95
CES24 = 90	CES49 = 95	CES74 = 93	CES99 = 95
CES25 = 70	CES50 = 99	CES75 = 81	

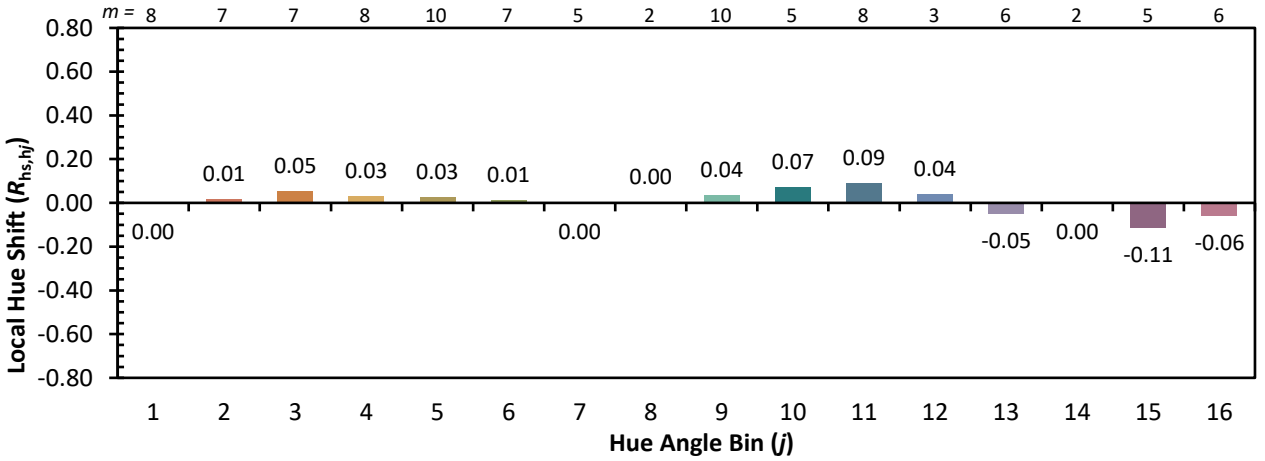


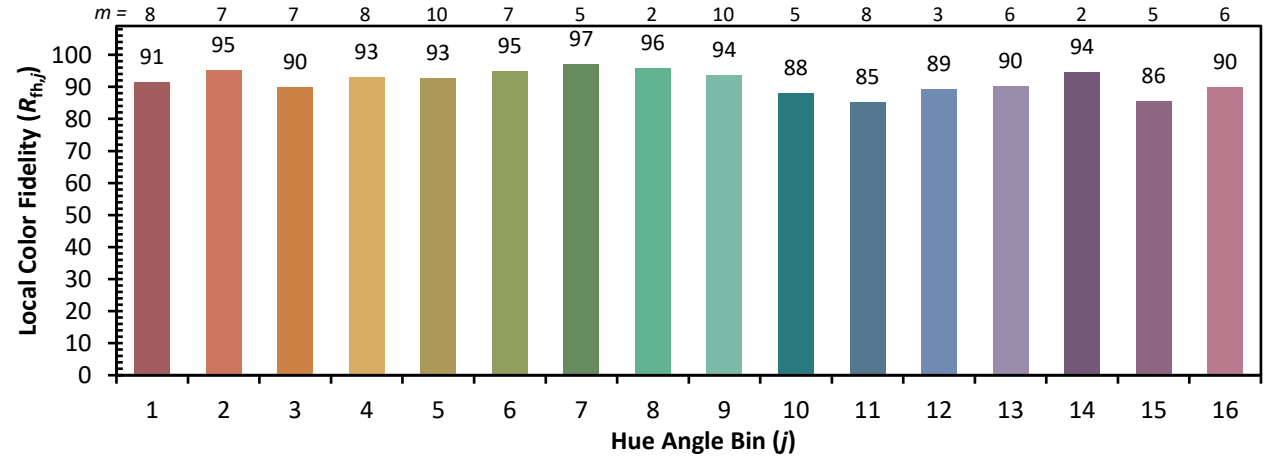
REPORT NUMBER: SP1-2506-457-8

TM-30-18

Color Rendition by Hue-Angle Bin



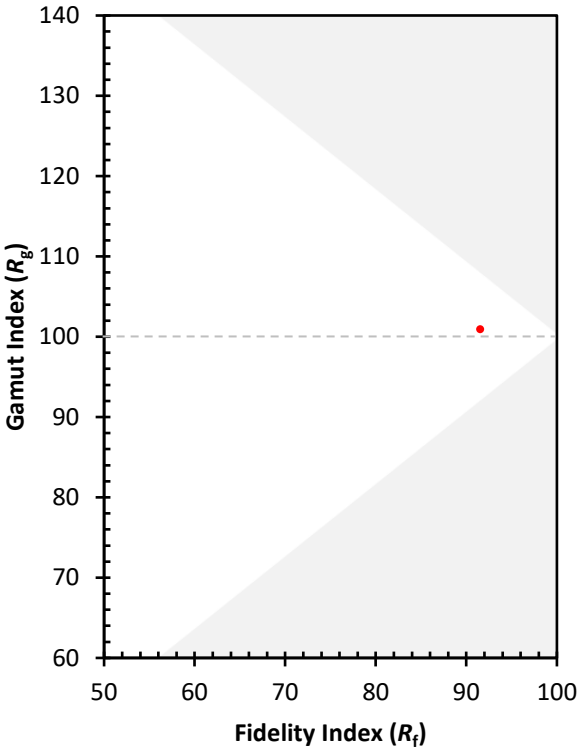


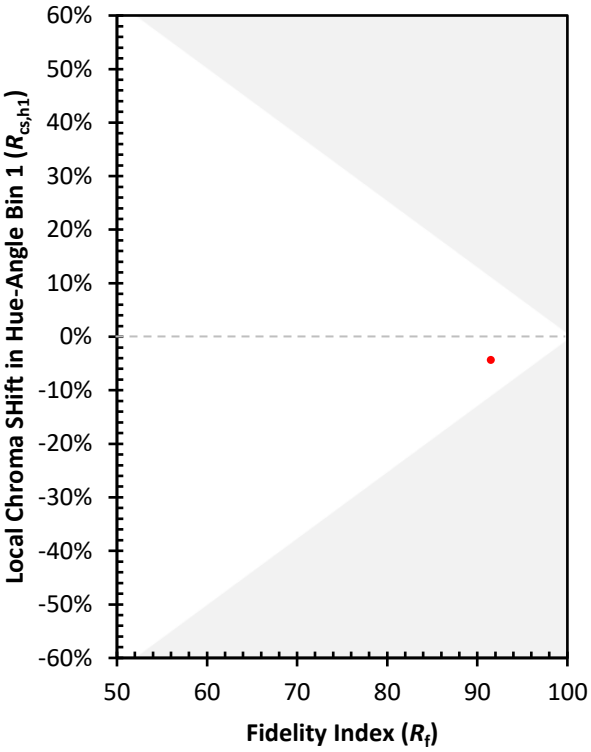


REPORT NUMBER: SP1-2506-457-8

TM-30-18

Measure Comparisons





(END OF REPORT)