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: P976640

Luminaire Tested: 22SR-LD2-C-20-UNV-L935-CD1-ST-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:	P976640
Test Lab:	INNOVATION CENTER(P3)
Issue Date:	03/18/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	22SR-LD2-C-20-UNV-L935-CD1-ST-U
Description:	METALUX SKYRIDGE 2x2 2000LM PACKAGE 90CRI 3500K TROFFER with Straw SKYTRIM
Light Source:	3500K CCT, 90+ CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1706.0 lumens
Efficiency:	N/A
Efficacy:	123.6 lumens/watt
Spacing Criteria (0/90/45):	1.19 / 1.62 / 1.55
Luminous Opening:	Rectangular (W 2' x L: 2' x H: 0')
CIE Type:	Direct

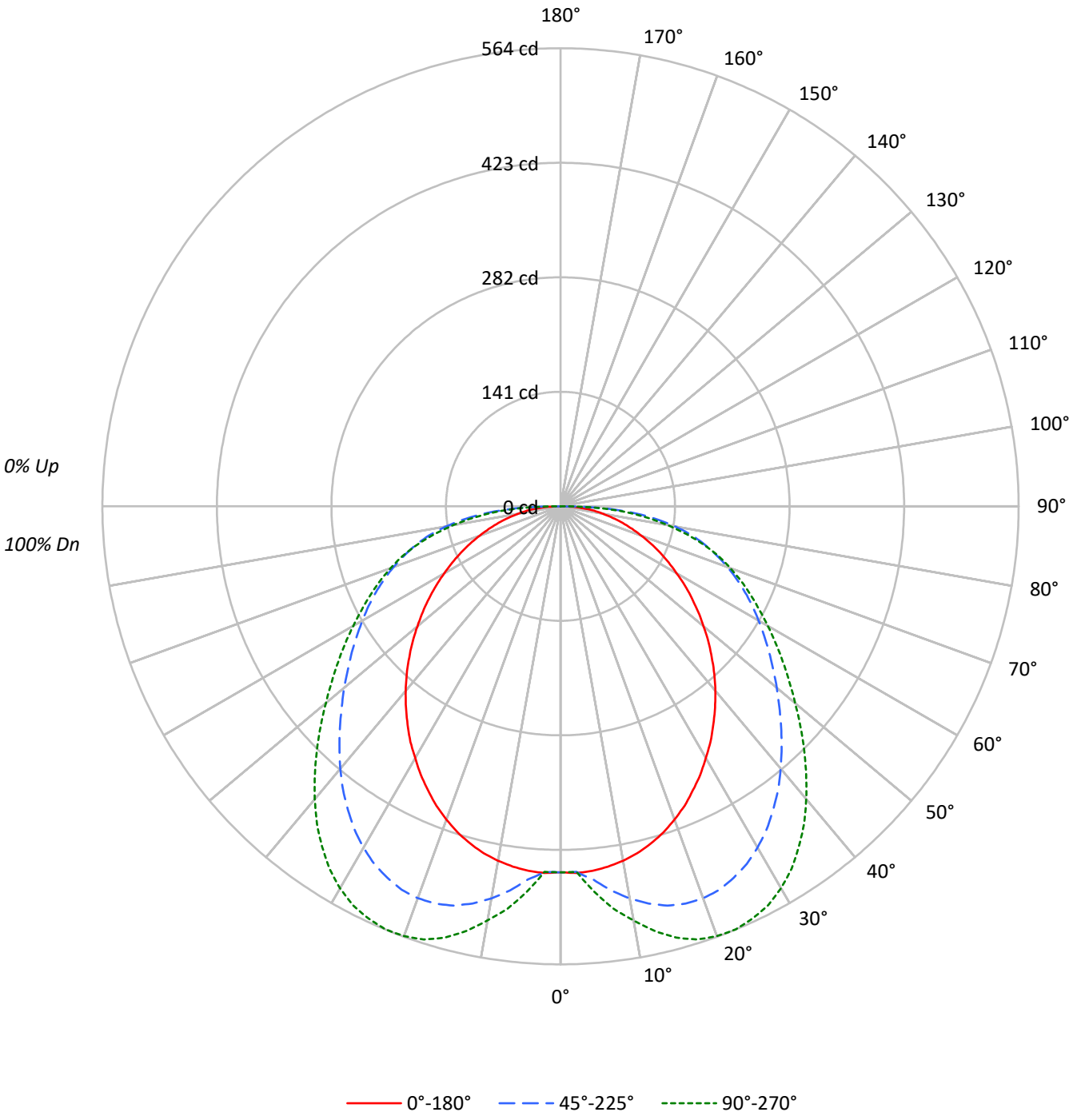
Input Watts (W):	13.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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

Scaled Data Report

TEST NUMBER: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-U

Luminous Intensity Polar Plot



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

Scaled Data Report

TEST NUMBER: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-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	102	97	92	104	99	95	91	95	91	88	91	88	85	87	85	83	80
2	97	87	80	74	94	86	79	73	82	76	71	79	74	69	75	71	68	65
3	88	76	67	60	85	75	66	60	72	64	59	69	63	58	66	61	57	54
4	80	67	58	51	78	66	57	50	63	56	49	61	54	49	59	53	48	46
5	73	60	50	43	71	59	50	43	56	49	42	54	47	42	52	46	42	39
6	68	54	44	38	66	53	44	37	51	43	37	49	42	37	47	41	36	34
7	63	49	39	33	61	48	39	33	46	38	33	45	38	32	43	37	32	30
8	58	44	35	29	57	43	35	29	42	34	29	41	34	29	40	33	29	27
9	54	40	32	26	53	40	32	26	39	31	26	38	31	26	37	30	26	24
10	51	37	29	24	50	37	29	24	36	29	24	35	28	23	34	28	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1213	1213	1213
5°	1217	1246	1287
10°	1211	1339	1415
15°	1198	1418	1532
20°	1175	1470	1613
25°	1146	1498	1662
30°	1111	1508	1687
35°	1078	1499	1681
40°	1042	1481	1653
45°	1002	1461	1614
50°	963	1455	1579
55°	926	1471	1568
60°	890	1516	1586
65°	860	1597	1645
70°	836	1721	1751
75°	823	1920	1902
80°	828	2221	2084
85°	874	2739	2464

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 50°
Vertical Angle: 87.5°
Luminance: 3257 cd/sqm

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

Scaled Data Report

TEST NUMBER: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	2.6
10°-20°	141.0	8.3
20°-30°	226.0	13.2
30°-40°	276.0	16.2
40°-50°	284.2	16.7
50°-60°	263.4	15.4
60°-70°	225.8	13.2
70°-80°	169.8	10.0
80°-90°	75.0	4.4
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°	411.8	24.1
0°-40°	687.7	40.3
0°-60°	1235.3	72.4
0°-90°	1706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	451	451	461	472	476	43
15°	430	461	509	539	550	121
25°	386	442	505	545	560	178
35°	328	393	456	497	512	205
45°	263	328	384	414	424	203
55°	197	263	314	330	334	177
65°	135	204	251	256	258	134
75°	79	145	185	184	183	84
85°	28	67	89	82	80	30
90°	0	0	0	0	0	

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

Scaled Data Report

TEST NUMBER: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	450.6	450.6	450.6	450.6	450.6	450.6	450.6	450.6	450.6	450.6	450.6
2.5°	451.9	451.3	450.6	451.3	450.6	450.6	450.0	449.3	450.6	450.6	450.6
5°	450.6	450.0	449.3	450.0	450.0	451.3	451.9	455.0	458.8	461.3	465.0
7.5°	447.5	446.8	446.2	448.1	450.6	455.0	460.1	466.3	472.0	477.0	481.4
10°	443.1	442.4	442.4	446.8	453.1	461.3	468.3	475.8	483.3	490.2	496.5
12.5°	437.4	437.4	438.0	446.2	455.7	465.7	473.9	483.3	492.7	500.9	508.4
15°	429.9	429.2	432.4	443.7	455.7	467.0	477.6	488.3	499.7	509.0	517.2
17.5°	421.0	420.5	426.7	440.6	453.1	466.3	478.9	490.9	502.8	512.8	522.3
20°	410.4	410.4	419.2	435.5	449.3	463.8	477.0	489.6	502.8	513.5	523.6
22.5°	*399.1*	*399.7*	*411.0*	*428.0*	*443.1*	*458.1*	*472.0*	*485.8*	*499.0*	*511.0*	*521.0*
25°	385.8	387.1	400.4	417.9	434.3	450.0	464.4	478.9	492.7	504.6	515.4
27.5°	372.7	373.9	389.6	407.3	424.2	440.0	455.0	470.1	484.5	496.5	507.2
30°	357.6	360.8	376.5	394.7	412.3	428.0	443.7	458.8	472.6	485.2	496.5
32.5°	343.8	346.3	363.9	381.4	399.7	415.4	431.1	445.6	459.4	472.0	482.7
35°	328.1	331.8	349.5	367.0	384.7	400.4	416.1	430.5	444.4	456.3	467.0
37.5°	312.4	317.4	334.3	352.6	369.5	385.3	401.0	414.8	428.7	440.0	450.0
40°	296.6	301.1	318.6	336.2	353.8	368.9	384.0	397.1	410.4	421.7	431.1
42.5°	280.3	285.3	302.9	319.9	336.9	351.9	367.0	380.2	392.8	402.8	411.7
45°	263.3	269.6	286.5	303.5	320.5	335.6	350.0	362.6	373.9	384.0	392.2
47.5°	247.0	253.9	270.8	287.8	304.2	318.6	333.1	345.7	356.4	365.2	372.7
50°	230.0	238.2	254.6	270.8	287.8	302.3	316.1	327.4	338.7	347.5	353.8
52.5°	213.7	221.9	238.9	255.1	271.5	286.0	299.8	311.7	321.8	330.0	336.9
55°	197.3	206.2	223.1	239.4	255.8	270.3	284.1	295.4	305.5	313.6	319.2
57.5°	181.6	191.1	207.4	224.3	240.7	255.1	269.0	280.3	289.8	297.3	302.9
60°	165.3	175.9	192.3	208.6	225.6	240.7	253.9	265.2	274.7	281.6	286.5
62.5°	150.2	160.9	177.2	194.2	211.2	226.3	239.4	250.8	259.5	266.5	270.3
65°	135.1	146.4	162.8	179.8	196.7	211.8	225.0	236.3	244.5	250.8	254.6
67.5°	120.6	132.0	148.3	165.3	182.3	197.3	210.6	221.2	229.4	235.1	237.6
70°	106.2	117.5	133.9	150.8	167.2	182.9	196.0	206.2	214.3	218.7	220.6
72.5°	92.4	104.4	120.1	135.8	152.7	167.8	181.0	191.6	198.0	201.7	204.9
75°	79.2	90.5	105.6	121.3	137.0	152.7	165.3	174.7	181.0	184.7	186.0
77.5°	66.0	77.3	91.8	106.2	121.9	136.3	148.9	157.7	162.8	165.9	167.8
80°	53.4	63.5	76.7	90.5	104.9	118.1	129.4	137.6	142.0	143.3	143.3
82.5°	41.5	49.6	61.0	72.9	85.4	97.4	107.5	113.7	116.9	117.5	116.9
85°	28.3	33.9	42.7	52.2	61.6	72.3	81.0	85.4	87.4	88.7	87.4
87.5°	15.1	17.0	22.0	27.7	34.5	41.5	47.1	50.3	52.2	52.2	52.8
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: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	450.6	450.6	450.6	450.6	450.6	450.6	450.6	*450.6*
2.5°	450.6	450.6	451.3	450.6	450.6	451.3	450.6	*450.6*
5°	467.0	468.3	471.4	472.6	473.2	475.1	475.1	*476.3*
7.5°	484.5	487.7	490.9	493.3	495.3	497.7	498.4	*499.7*
10°	500.9	504.6	508.4	512.2	514.7	515.9	517.2	*517.9*
12.5°	514.1	519.1	524.1	527.9	531.1	532.9	534.9	*535.5*
15°	523.6	530.4	536.1	541.1	544.2	546.8	548.6	*549.9*
17.5°	529.8	537.3	543.6	549.3	553.0	555.5	558.1	*559.3*
20°	531.6	539.3	546.8	552.4	556.8	559.9	561.9	*563.2*
22.5°	*529.8*	*538.0*	*545.5*	*551.8*	*556.2*	*559.9*	*561.9*	*563.7*
25°	524.8	533.6	541.7	548.0	553.0	556.8	558.7	*559.9*
27.5°	517.2	526.7	534.9	541.1	546.2	549.9	552.4	*553.7*
30°	506.6	515.4	524.1	530.4	535.5	539.3	541.7	*543.0*
32.5°	493.3	502.2	510.3	516.6	522.3	525.4	527.9	*529.2*
35°	477.0	485.8	494.0	499.7	505.3	508.4	511.0	*511.6*
37.5°	459.4	468.3	475.8	480.7	486.4	488.9	492.0	*492.7*
40°	440.0	448.1	455.0	460.1	465.0	467.6	469.4	*470.7*
42.5°	419.8	427.4	434.3	438.7	442.4	444.9	447.5	*447.5*
45°	400.4	406.0	412.3	416.1	419.8	421.7	423.6	*424.2*
47.5°	380.2	385.8	390.9	393.4	397.1	398.4	399.7	*400.4*
50°	360.8	365.7	369.5	372.1	374.5	375.8	377.1	*377.1*
52.5°	341.8	346.3	349.5	350.7	353.2	353.8	354.4	*355.1*
55°	324.3	327.4	330.0	330.5	332.5	332.5	333.8	*334.3*
57.5°	307.3	309.2	311.1	311.1	312.4	312.4	313.6	*314.2*
60°	290.4	291.6	292.2	292.2	293.5	292.9	294.2	*294.7*
62.5°	273.4	274.0	274.0	274.0	274.7	274.7	275.2	*275.9*
65°	256.4	256.4	256.4	256.4	257.0	256.4	257.7	*258.3*
67.5°	239.4	238.9	238.9	238.2	239.4	238.9	240.1	*240.7*
70°	221.9	221.9	220.6	220.6	221.2	221.9	222.5	*222.5*
72.5°	204.2	203.0	203.0	202.4	203.0	203.6	204.9	*204.2*
75°	186.0	185.4	184.1	183.6	183.6	182.9	183.6	*182.9*
77.5°	164.6	162.8	160.2	159.7	158.4	157.7	158.4	*159.0*
80°	139.5	137.6	135.8	135.1	133.9	133.9	133.9	*134.5*
82.5°	113.1	111.9	110.0	110.0	108.7	108.7	108.7	*108.1*
85°	83.6	83.0	81.7	81.7	80.5	80.5	80.5	*79.8*
87.5°	49.1	49.1	47.8	48.4	46.5	46.5	46.5	*47.1*
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: P976640
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L935-CD1-ST-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	12.0	13.7	12.4	14.1	14.4	14.0	15.7	14.3	16.0	16.3
	3H	13.8	15.4	14.2	15.7	16.1	16.4	17.9	16.8	18.3	18.6
	4H	14.6	16.1	15.0	16.4	16.8	17.5	19.0	17.9	19.3	19.7
	6H	15.2	16.5	15.6	16.9	17.3	18.5	19.9	18.9	20.2	20.6
	8H	15.4	16.7	15.8	17.1	17.5	18.9	20.2	19.3	20.6	21.0
	12H	15.5	16.8	16.0	17.2	17.6	19.3	20.6	19.7	20.9	21.4
4H	2H	13.4	14.8	13.7	15.2	15.5	14.7	16.2	15.1	16.6	16.9
	3H	15.6	16.9	16.0	17.3	17.7	17.4	18.7	17.8	19.1	19.5
	4H	16.6	17.8	17.0	18.2	18.6	18.7	19.9	19.1	20.3	20.7
	6H	17.4	18.4	17.9	18.9	19.3	19.9	20.9	20.3	21.3	21.8
	8H	17.7	18.7	18.2	19.1	19.6	20.4	21.3	20.8	21.8	22.2
	12H	17.9	18.8	18.4	19.2	19.7	20.8	21.7	21.3	22.2	22.6
8H	4H	17.6	18.5	18.0	19.0	19.4	19.2	20.2	19.7	20.6	21.1
	6H	18.8	19.6	19.2	20.0	20.5	20.6	21.4	21.1	21.9	22.4
	8H	19.2	20.0	19.7	20.5	20.9	21.2	22.0	21.7	22.5	23.0
	12H	19.6	20.3	20.1	20.7	21.3	21.8	22.5	22.4	23.0	23.5
12H	4H	17.8	18.6	18.2	19.1	19.6	19.3	20.2	19.8	20.7	21.1
	6H	19.1	19.8	19.6	20.3	20.8	20.8	21.5	21.3	22.0	22.5
	8H	19.7	20.4	20.2	20.9	21.4	21.5	22.2	22.0	22.6	23.2

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: SP1-2506-457-6

Test Date: 07/01/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L935-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L935-CD1-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

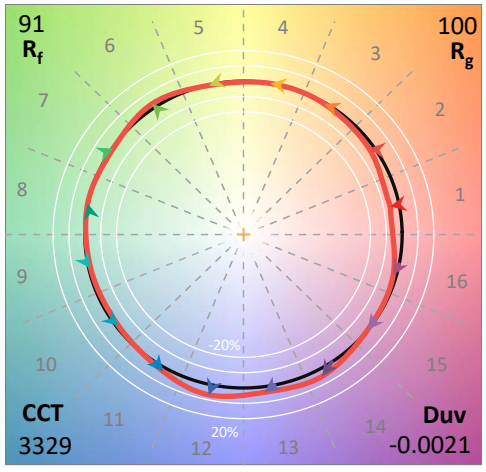
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-457-6
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-L935-CD1-U**
Description:	2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K):	3329
CIE u':	0.2411
CIE v':	0.5118
Duv:	-0.0021
CIE x:	0.4128
CIE y:	0.3894
CIE z:	0.1979
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	582
Purity:	40.74075
Rf:	91.4
Rg:	100.2

CRI (Ra):	93.9				
R1:	95.4	R9:	60.5		
R2:	97.4	R10:	92.5		
R3:	97.7	R11:	95.9		
R4:	94.9	R12:	82.0		
R5:	95.1	R13:	96.0		
R6:	95.7	R14:	98.0		
R7:	91.7	R15:	91.5		
R8:	83.2				



Test Conditions

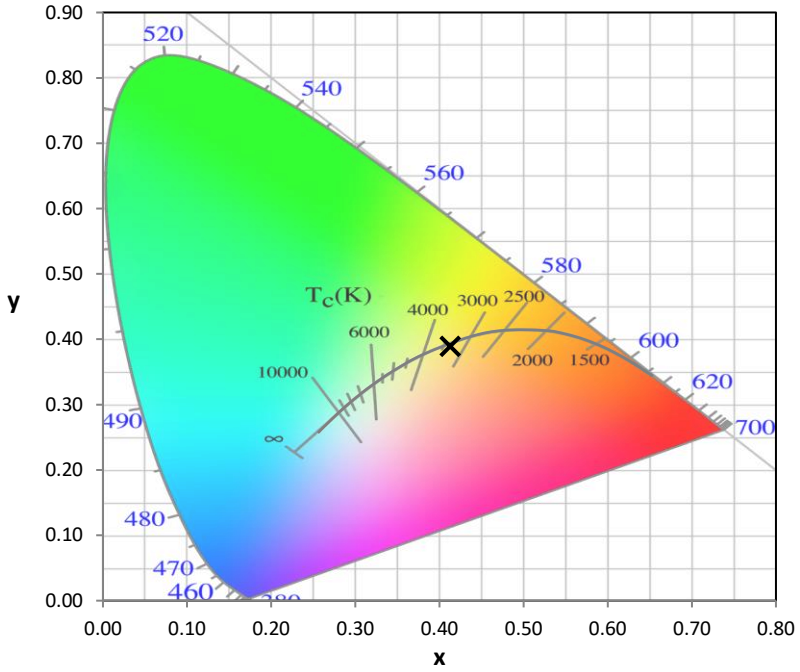
Stabilization Time:	48M
Operation Time:	1H 48M
Sphere Temperature (°C):	24.0

REPORT NUMBER: SP1-2506-457-6

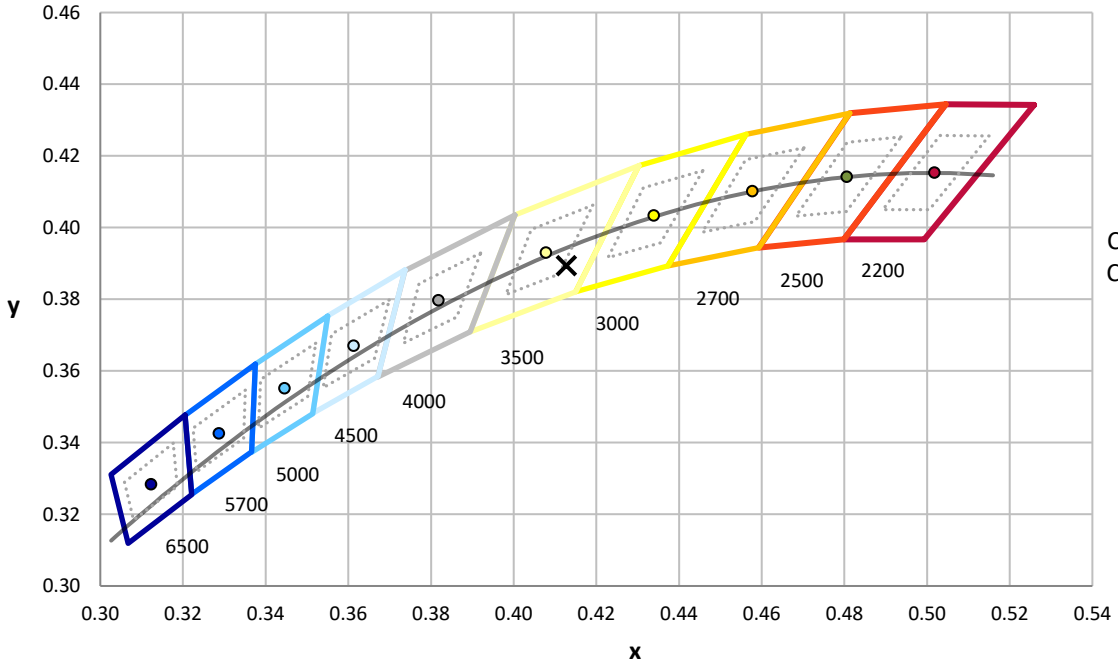
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	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: SP1-2506-457-6

CIE 1931 Chromaticity Diagram



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

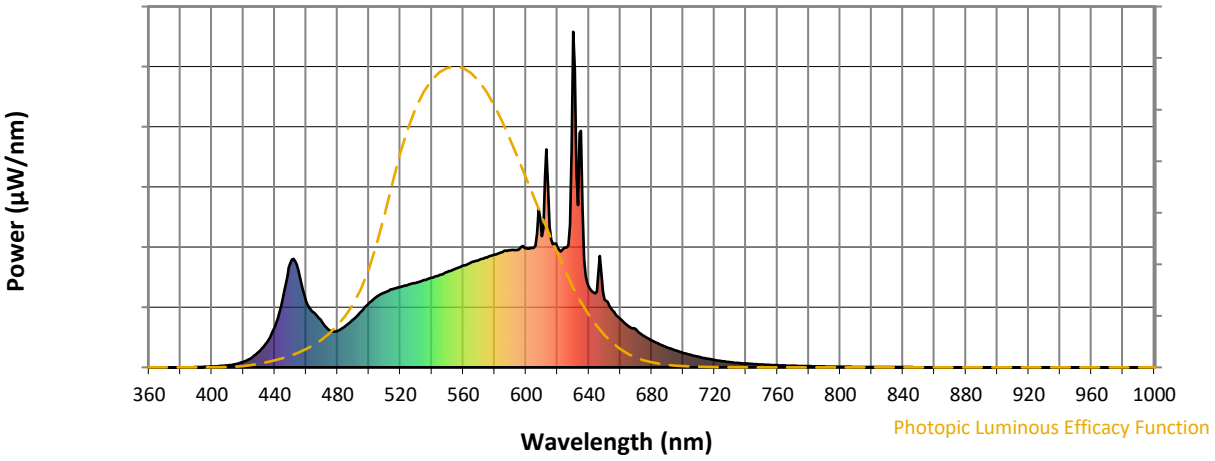


CCT = 3329K
CIE x = 0.4128
CIE y = 0.3894
Duv = -0.0021

Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-6

Photopic Flux vs. Wavelength

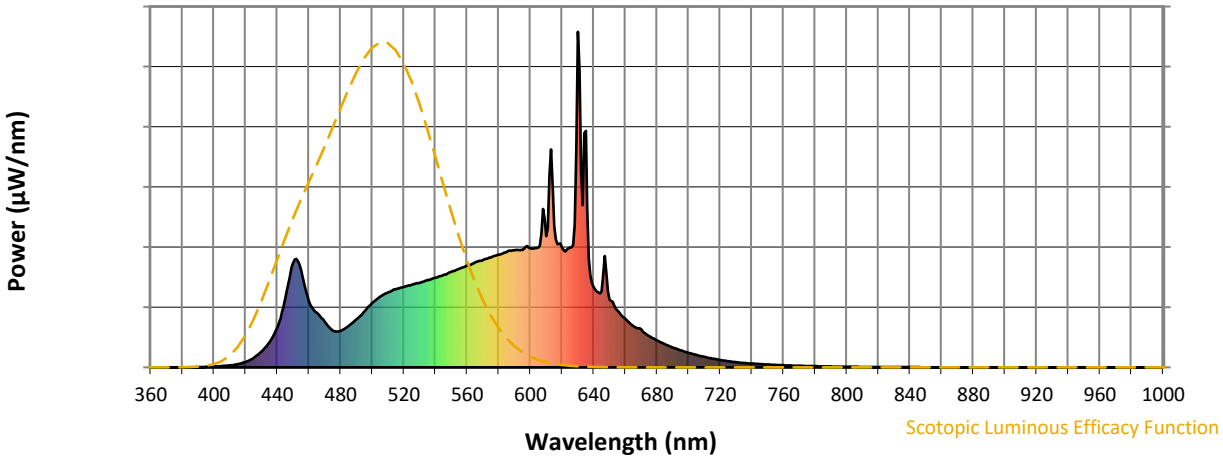


Photopic Lumens: NR

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	143	NR	620	358	NR	750	9	NR	880	0	NR
365	0	NR	495	166	NR	625	357	NR	755	7	NR	885	0	NR
370	0	NR	500	191	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	210	NR	635	705	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	239	NR	770	5	NR	900	0	NR
385	0	NR	515	233	NR	645	226	NR	775	4	NR	905	0	NR
390	1	NR	520	240	NR	650	201	NR	780	3	NR	910	0	NR
395	2	NR	525	246	NR	655	170	NR	785	3	NR	915	0	NR
400	3	NR	530	251	NR	660	145	NR	790	2	NR	920	0	NR
405	4	NR	535	260	NR	665	123	NR	795	2	NR	925	0	NR
410	6	NR	540	267	NR	670	113	NR	800	2	NR	930	0	NR
415	9	NR	545	276	NR	675	93	NR	805	2	NR	935	0	NR
420	16	NR	550	284	NR	680	80	NR	810	1	NR	940	0	NR
425	28	NR	555	294	NR	685	69	NR	815	1	NR	945	0	NR
430	46	NR	560	303	NR	690	59	NR	820	1	NR	950	0	NR
435	75	NR	565	313	NR	695	51	NR	825	1	NR	955	0	NR
440	120	NR	570	319	NR	700	43	NR	830	1	NR	960	0	NR
445	203	NR	575	327	NR	705	37	NR	835	1	NR	965	0	NR
450	311	NR	580	336	NR	710	31	NR	840	1	NR	970	0	NR
455	290	NR	585	344	NR	715	26	NR	845	1	NR	975	0	NR
460	197	NR	590	349	NR	720	22	NR	850	0	NR	980	0	NR
465	163	NR	595	350	NR	725	18	NR	855	0	NR	985	0	NR
470	135	NR	600	355	NR	730	15	NR	860	0	NR	990	0	NR
475	110	NR	605	357	NR	735	13	NR	865	0	NR	995	0	NR
480	108	NR	610	391	NR	740	11	NR	870	0	NR	1000	0	NR
485	123	NR	615	421	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2506-457-6

Scotopic Flux vs. Wavelength

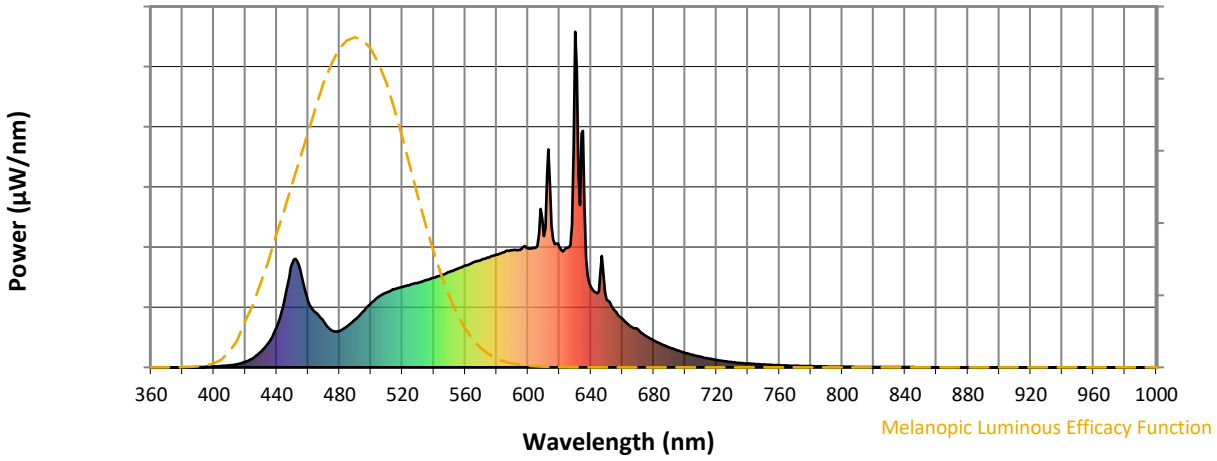


Scotopic Lumens: NR **S/P: 1.57**

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	143	NR	620	358	NR	750	9	NR	880	0	NR
365	0	NR	495	166	NR	625	357	NR	755	7	NR	885	0	NR
370	0	NR	500	191	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	210	NR	635	705	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	239	NR	770	5	NR	900	0	NR
385	0	NR	515	233	NR	645	226	NR	775	4	NR	905	0	NR
390	1	NR	520	240	NR	650	201	NR	780	3	NR	910	0	NR
395	2	NR	525	246	NR	655	170	NR	785	3	NR	915	0	NR
400	3	NR	530	251	NR	660	145	NR	790	2	NR	920	0	NR
405	4	NR	535	260	NR	665	123	NR	795	2	NR	925	0	NR
410	6	NR	540	267	NR	670	113	NR	800	2	NR	930	0	NR
415	9	NR	545	276	NR	675	93	NR	805	2	NR	935	0	NR
420	16	NR	550	284	NR	680	80	NR	810	1	NR	940	0	NR
425	28	NR	555	294	NR	685	69	NR	815	1	NR	945	0	NR
430	46	NR	560	303	NR	690	59	NR	820	1	NR	950	0	NR
435	75	NR	565	313	NR	695	51	NR	825	1	NR	955	0	NR
440	120	NR	570	319	NR	700	43	NR	830	1	NR	960	0	NR
445	203	NR	575	327	NR	705	37	NR	835	1	NR	965	0	NR
450	311	NR	580	336	NR	710	31	NR	840	1	NR	970	0	NR
455	290	NR	585	344	NR	715	26	NR	845	1	NR	975	0	NR
460	197	NR	590	349	NR	720	22	NR	850	0	NR	980	0	NR
465	163	NR	595	350	NR	725	18	NR	855	0	NR	985	0	NR
470	135	NR	600	355	NR	730	15	NR	860	0	NR	990	0	NR
475	110	NR	605	357	NR	735	13	NR	865	0	NR	995	0	NR
480	108	NR	610	391	NR	740	11	NR	870	0	NR	1000	0	NR
485	123	NR	615	421	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2506-457-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.17**

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	143	NR	620	358	NR	750	9	NR	880	0	NR
365	0	NR	495	166	NR	625	357	NR	755	7	NR	885	0	NR
370	0	NR	500	191	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	210	NR	635	705	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	239	NR	770	5	NR	900	0	NR
385	0	NR	515	233	NR	645	226	NR	775	4	NR	905	0	NR
390	1	NR	520	240	NR	650	201	NR	780	3	NR	910	0	NR
395	2	NR	525	246	NR	655	170	NR	785	3	NR	915	0	NR
400	3	NR	530	251	NR	660	145	NR	790	2	NR	920	0	NR
405	4	NR	535	260	NR	665	123	NR	795	2	NR	925	0	NR
410	6	NR	540	267	NR	670	113	NR	800	2	NR	930	0	NR
415	9	NR	545	276	NR	675	93	NR	805	2	NR	935	0	NR
420	16	NR	550	284	NR	680	80	NR	810	1	NR	940	0	NR
425	28	NR	555	294	NR	685	69	NR	815	1	NR	945	0	NR
430	46	NR	560	303	NR	690	59	NR	820	1	NR	950	0	NR
435	75	NR	565	313	NR	695	51	NR	825	1	NR	955	0	NR
440	120	NR	570	319	NR	700	43	NR	830	1	NR	960	0	NR
445	203	NR	575	327	NR	705	37	NR	835	1	NR	965	0	NR
450	311	NR	580	336	NR	710	31	NR	840	1	NR	970	0	NR
455	290	NR	585	344	NR	715	26	NR	845	1	NR	975	0	NR
460	197	NR	590	349	NR	720	22	NR	850	0	NR	980	0	NR
465	163	NR	595	350	NR	725	18	NR	855	0	NR	985	0	NR
470	135	NR	600	355	NR	730	15	NR	860	0	NR	990	0	NR
475	110	NR	605	357	NR	735	13	NR	865	0	NR	995	0	NR
480	108	NR	610	391	NR	740	11	NR	870	0	NR	1000	0	NR
485	123	NR	615	421	NR	745	10	NR	875	0	NR			

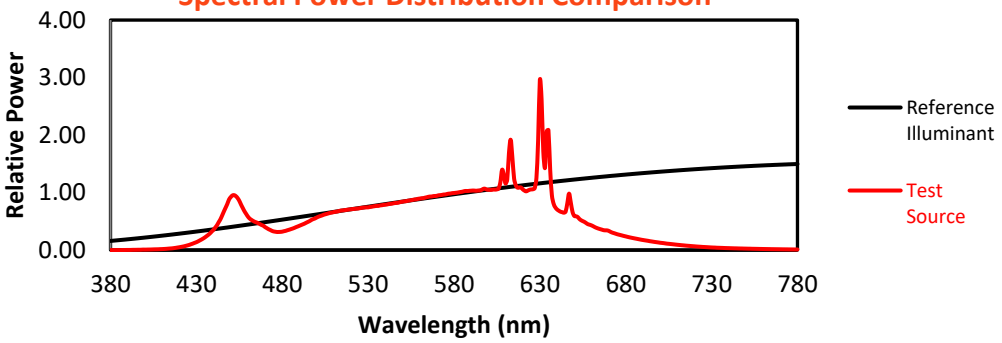
REPORT NUMBER: SP1-2506-457-6

TM-30-18

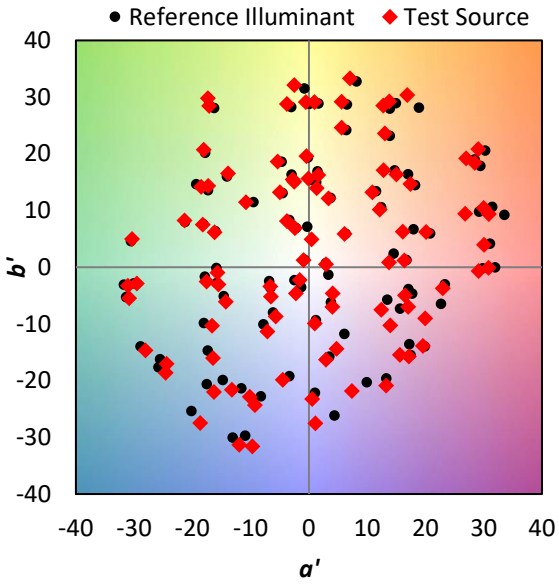
Summary

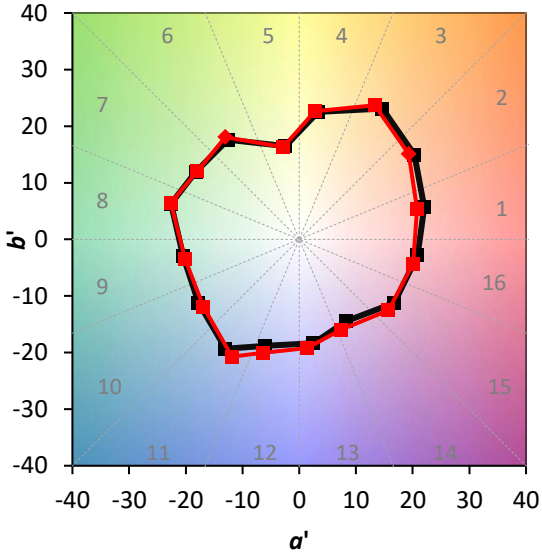
R_f = 91.4
R_g = 100.2
CIE R_a = 93.9
R_9 = 60.5

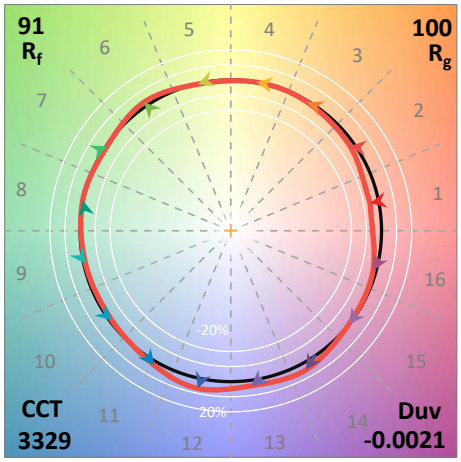
Spectral Power Distribution Comparison

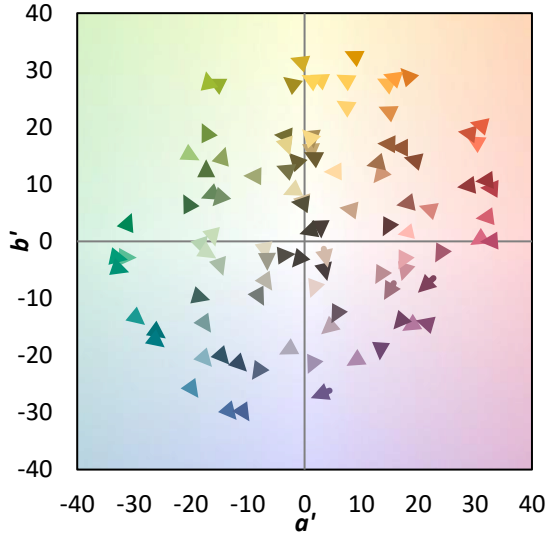


Color Vector Graphics







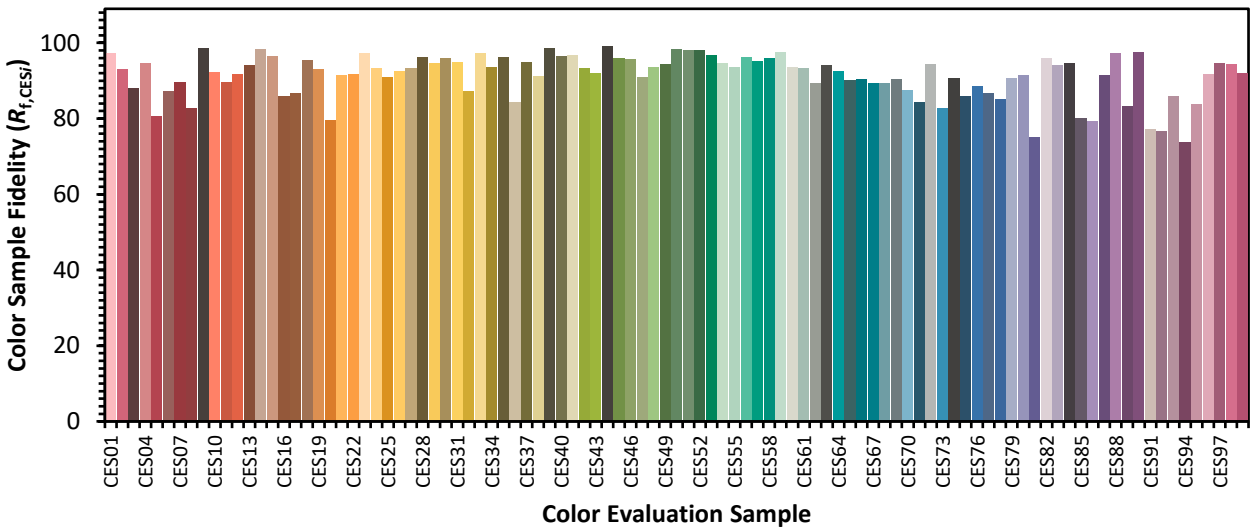


REPORT NUMBER: SP1-2506-457-6

TM-30-18

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

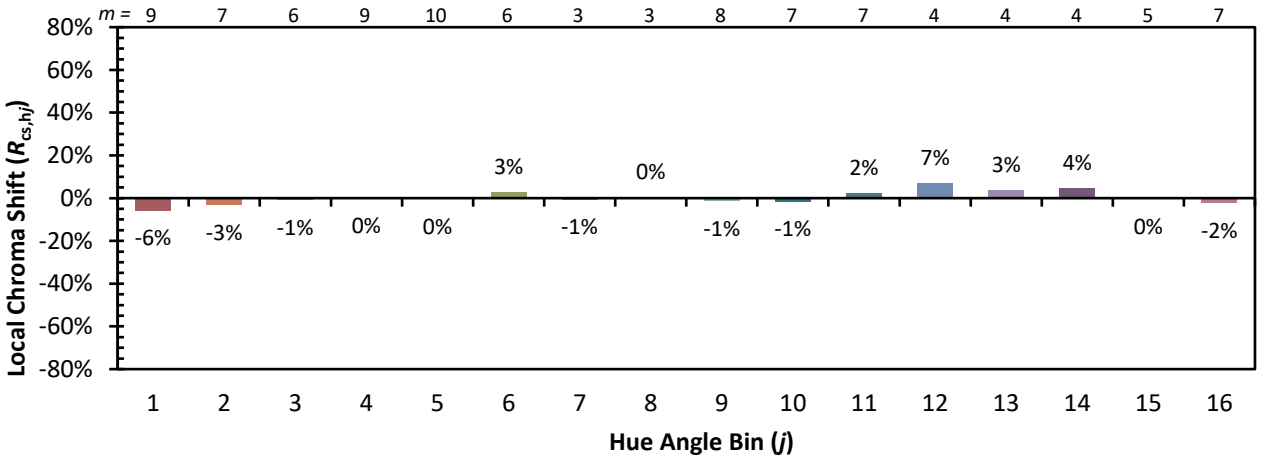
CES01 = 86	CES26 = 93	CES51 = 98	CES76 = 88
CES02 = 63	CES27 = 93	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 96	CES53 = 97	CES78 = 85
CES04 = 70	CES29 = 95	CES54 = 95	CES79 = 91
CES05 = 50	CES30 = 96	CES55 = 94	CES80 = 92
CES06 = 51	CES31 = 95	CES56 = 96	CES81 = 75
CES07 = 43	CES32 = 87	CES57 = 95	CES82 = 96
CES08 = 42	CES33 = 97	CES58 = 96	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 96	CES60 = 94	CES85 = 80
CES11 = 58	CES36 = 84	CES61 = 93	CES86 = 79
CES12 = 64	CES37 = 95	CES62 = 89	CES87 = 91
CES13 = 44	CES38 = 91	CES63 = 94	CES88 = 97
CES14 = 74	CES39 = 99	CES64 = 92	CES89 = 83
CES15 = 72	CES40 = 97	CES65 = 90	CES90 = 98
CES16 = 48	CES41 = 97	CES66 = 90	CES91 = 77
CES17 = 49	CES42 = 93	CES67 = 89	CES92 = 77
CES18 = 56	CES43 = 92	CES68 = 89	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 91	CES94 = 74
CES20 = 67	CES45 = 96	CES70 = 88	CES95 = 84
CES21 = 86	CES46 = 96	CES71 = 84	CES96 = 92
CES22 = 78	CES47 = 91	CES72 = 94	CES97 = 95
CES23 = 91	CES48 = 94	CES73 = 83	CES98 = 94
CES24 = 90	CES49 = 94	CES74 = 91	CES99 = 92
CES25 = 71	CES50 = 98	CES75 = 86	

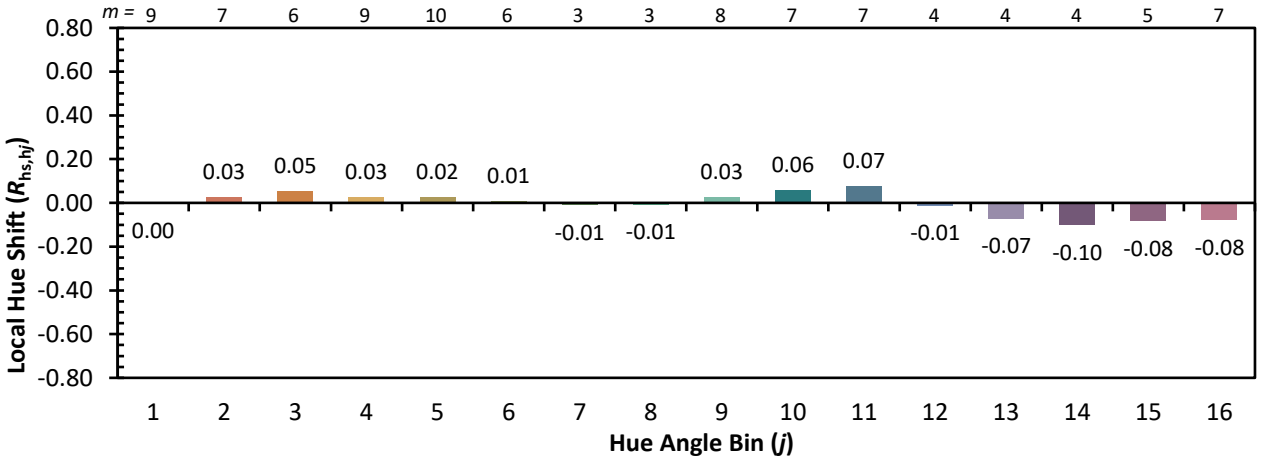


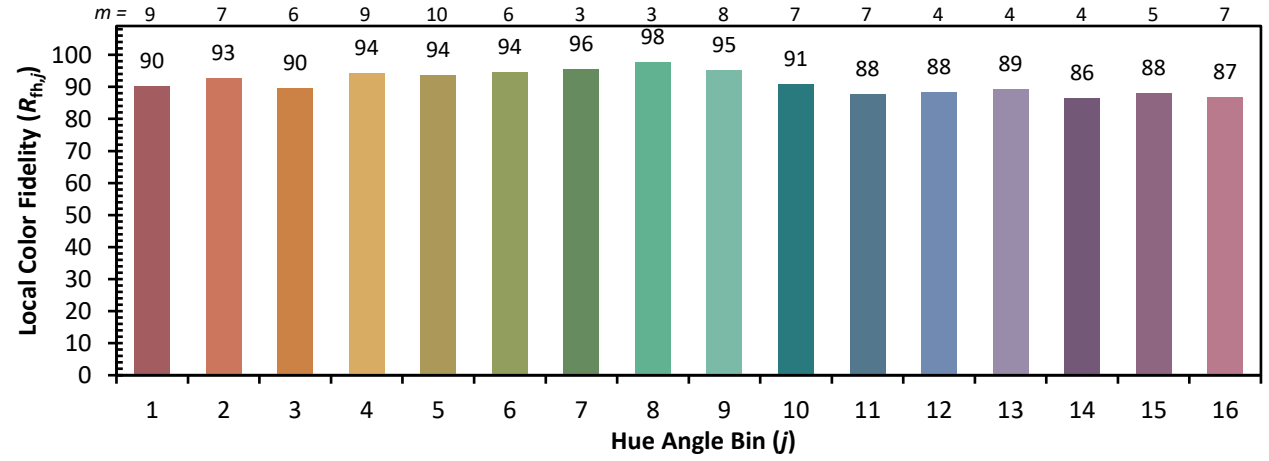
REPORT NUMBER: SP1-2506-457-6

TM-30-18

Color Rendition by Hue-Angle Bin



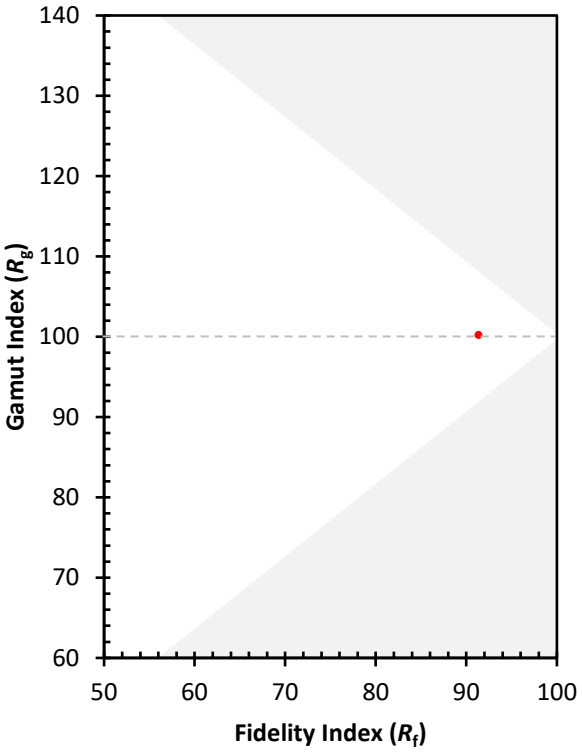


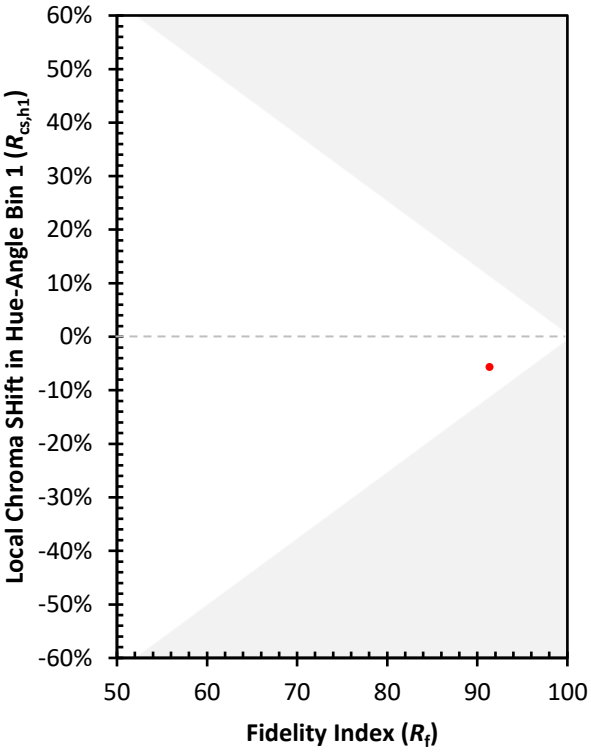


REPORT NUMBER: SP1-2506-457-6

TM-30-18

Measure Comparisons





(END OF REPORT)