

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: P977039

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

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P977039  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-64-UNV-L935-CD1-ST-U  
Description: METALUX SKYRIDGE 2x4 6400LM PACKAGE 90CRI 3500K TROFFER with Straw SKYTRIM  
Light Source: 3500K CCT, 90+ CRI LEDS  
Ballast/Driver: -

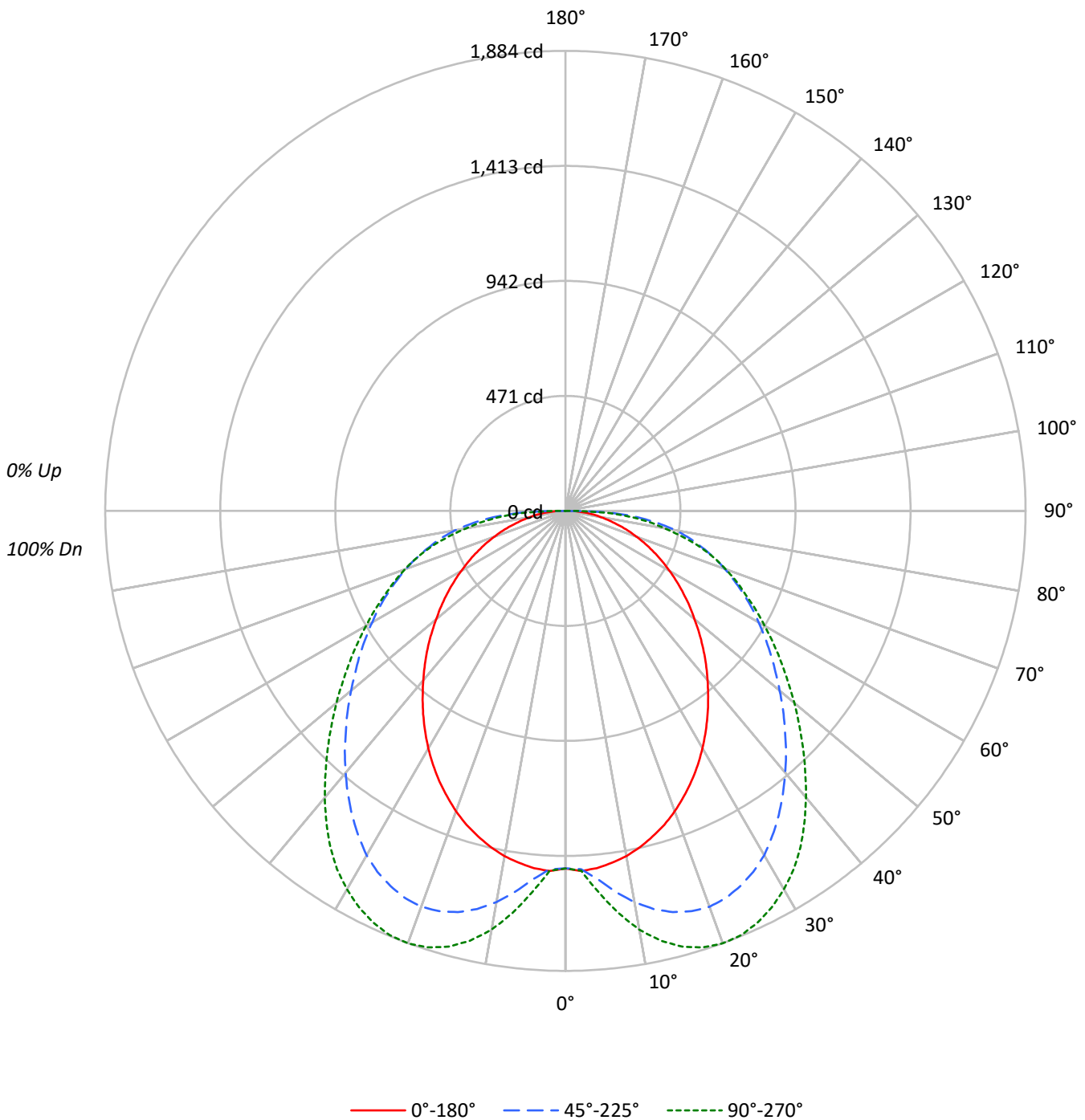
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5558.0 lumens  
Efficiency: N/A  
Efficacy: 116.8 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.62 / 1.56  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 47.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P977039  
CATALOG NUMBER: 24SR-LD2-C-64-UNV-L935-CD1-ST-U

### Luminous Intensity Polar Plot





TEST NUMBER: P977039

CATALOG NUMBER: 24SR-LD2-C-64-UNV-L935-CD1-ST-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	107	102	97	92	104	99	95	91	95	91	88	91	88	85	87	85	83	80	80	80	80
2	97	88	80	74	94	86	79	73	82	76	71	79	74	69	76	71	68	66	66	66	66
3	88	76	68	61	85	75	67	60	72	65	59	69	63	58	66	61	57	54	54	54	54
4	80	67	58	51	78	66	57	50	63	56	50	61	54	49	59	53	48	46	46	46	46
5	74	60	50	43	71	59	50	43	57	49	43	55	48	42	53	47	42	40	40	40	40
6	68	54	44	38	66	53	44	38	51	43	37	49	42	37	48	41	37	34	34	34	34
7	63	49	40	33	61	48	39	33	46	39	33	45	38	33	43	37	32	30	30	30	30
8	58	44	36	30	57	44	35	29	42	35	29	41	34	29	40	34	29	27	27	27	27
9	55	41	32	26	53	40	32	26	39	31	26	38	31	26	37	31	26	24	24	24	24
10	51	37	29	24	50	37	29	24	36	29	24	35	28	24	34	28	24	22	22	22	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1970	1970	1970
5°	1984	2044	2118
10°	1961	2222	2379
15°	1923	2370	2573
20°	1874	2470	2698
25°	1813	2517	2762
30°	1744	2529	2779
35°	1668	2500	2757
40°	1589	2459	2692
45°	1518	2417	2618
50°	1445	2397	2562
55°	1385	2409	2529
60°	1328	2460	2536
65°	1272	2563	2596
70°	1220	2734	2751
75°	1163	3015	2968
80°	1155	3559	3212
85°	1267	4582	4005

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 87.5°  
 Luminance: 6071 cd/sqm



TEST NUMBER: P977039  
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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.1	2.6
10°-20°	467.1	8.4
20°-30°	747.0	13.4
30°-40°	904.3	16.3
40°-50°	923.5	16.6
50°-60°	851.0	15.3
60°-70°	723.9	13.0
70°-80°	541.2	9.7
80°-90°	252.8	4.5
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°	1361.3	24.5
0°-40°	2265.6	40.8
0°-60°	4040.1	72.7
0°-90°	5558.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5558.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1464	1464	1464	1464	1464	
5°	1469	1460	1513	1552	1568	139
15°	1380	1504	1701	1808	1847	389
25°	1221	1451	1695	1816	1861	562
35°	1015	1283	1522	1638	1679	635
45°	798	1062	1270	1352	1376	615
55°	590	858	1027	1067	1078	529
65°	400	679	805	810	815	396
75°	224	491	580	571	571	239
85°	82	259	297	263	259	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1
2.5°	1476.0	1473.0	1468.6	1462.5	1461.1	1461.1	1459.5	1459.5	1462.5	1468.6	1477.4
5°	1468.6	1465.5	1461.1	1456.5	1458.1	1462.5	1471.6	1482.0	1496.8	1513.3	1531.2
7.5°	1453.7	1452.1	1449.1	1449.1	1461.1	1482.0	1502.9	1523.7	1547.6	1572.9	1599.8
10°	1435.6	1434.2	1432.6	1444.7	1471.6	1502.9	1532.6	1560.9	1593.8	1626.5	1657.8
12.5°	1410.4	1410.4	1414.8	1441.7	1479.0	1517.7	1555.0	1592.4	1631.1	1669.8	1704.1
15°	1380.5	1380.5	1395.5	1434.2	1482.0	1526.7	1571.5	1613.2	1657.8	1701.1	1736.8
17.5°	1347.8	1346.4	1374.7	1422.2	1476.0	1528.1	1578.9	1625.1	1671.2	1719.0	1756.3
20°	1309.0	1312.0	1349.2	1404.3	1464.1	1522.1	1575.9	1625.1	1674.2	1725.0	1760.7
22.5°	1265.7	1271.7	1317.9	1379.1	1446.1	1505.9	1562.5	1614.6	1665.4	1716.0	1751.9
25°	1221.0	1228.6	1285.2	1349.2	1420.8	1482.0	1538.6	1593.8	1644.5	1695.1	1731.0
27.5°	1173.4	1183.8	1247.8	1315.1	1386.5	1450.7	1507.3	1563.9	1614.6	1666.8	1699.7
30°	1122.6	1136.1	1204.7	1273.1	1347.8	1410.4	1467.0	1525.1	1577.3	1628.1	1659.4
32.5°	1069.1	1085.3	1155.3	1230.0	1303.0	1364.2	1420.8	1480.4	1529.6	1577.3	1608.6
35°	1015.3	1034.8	1106.2	1180.8	1252.3	1313.5	1368.6	1428.2	1477.4	1522.1	1552.0
37.5°	960.1	984.0	1055.6	1128.7	1198.7	1259.9	1316.5	1371.6	1420.8	1462.5	1492.4
40°	904.9	931.8	1003.4	1074.9	1144.9	1203.1	1258.3	1313.5	1362.6	1399.9	1428.2
42.5°	851.4	878.0	951.3	1022.7	1086.9	1146.5	1201.7	1255.3	1300.0	1337.3	1362.6
45°	797.6	825.9	897.5	967.5	1031.7	1091.3	1146.5	1195.7	1239.0	1270.3	1295.6
47.5°	744.0	773.7	845.3	915.4	976.6	1034.8	1091.3	1136.1	1177.8	1209.1	1230.0
50°	690.2	723.1	793.2	864.8	924.4	982.6	1036.2	1077.9	1116.6	1144.9	1164.4
52.5°	641.1	672.4	744.0	815.4	875.2	933.2	984.0	1024.3	1058.4	1083.9	1103.2
55°	590.3	624.6	699.3	767.9	828.9	887.1	933.2	970.5	1001.8	1027.1	1042.2
57.5°	541.2	579.9	652.9	721.5	784.1	839.3	884.1	919.8	948.3	969.1	982.6
60°	493.4	533.7	609.8	678.4	741.0	794.6	837.9	870.6	896.1	914.0	925.8
62.5°	445.8	492.0	566.6	638.1	697.7	749.8	790.2	820.1	843.9	860.2	867.6
65°	399.5	447.2	524.7	594.9	654.5	703.7	742.4	769.3	791.6	805.0	808.0
67.5°	354.7	405.5	483.0	553.2	611.2	657.5	694.9	720.1	739.4	748.4	751.4
70°	310.0	362.4	441.2	511.5	566.6	611.2	645.5	669.4	685.8	694.9	694.9
72.5°	268.3	320.6	399.5	468.1	518.9	563.6	594.9	617.2	632.0	638.1	636.7
75°	223.7	277.3	354.7	420.4	469.7	511.5	542.8	565.0	575.5	579.9	578.5
77.5°	184.8	235.6	310.0	371.2	423.4	457.7	489.0	509.9	520.3	523.3	521.9
80°	149.1	196.8	262.4	320.6	365.2	402.5	430.8	453.3	462.1	459.3	445.8
82.5°	114.8	158.1	216.1	266.9	308.6	342.9	372.8	386.1	387.7	380.2	368.2
85°	82.1	114.8	163.9	207.3	246.0	271.3	289.1	299.6	302.6	296.8	283.3
87.5°	46.1	67.0	96.9	128.2	158.1	176.0	186.4	192.4	196.8	190.8	181.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P977039

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1	1464.1
2.5°	1468.6	1473.0	1471.6	1474.6	1476.0	1476.0	1471.6	1474.6
5°	1532.6	1541.6	1547.6	1556.4	1562.5	1562.5	1563.9	1568.5
7.5°	1602.8	1617.6	1631.1	1641.5	1648.9	1651.9	1656.4	1660.8
10°	1668.2	1686.3	1701.1	1714.6	1723.4	1729.4	1733.8	1741.4
12.5°	1719.0	1739.8	1756.3	1771.1	1783.2	1792.0	1796.4	1802.4
15°	1756.3	1780.2	1799.4	1815.9	1826.3	1836.7	1841.2	1847.2
17.5°	1778.6	1802.4	1823.3	1839.8	1851.6	1862.0	1868.0	1874.1
20°	1784.6	1808.5	1830.7	1847.2	1859.2	1872.5	1878.5	1884.5
22.5°	1775.6	1799.4	1823.3	1841.2	1854.6	1868.0	1874.1	1880.1
25°	1757.7	1783.2	1806.9	1824.9	1836.7	1850.2	1857.6	1860.6
27.5°	1729.4	1754.7	1778.6	1795.0	1808.5	1821.9	1829.3	1830.7
30°	1689.3	1714.6	1738.4	1754.7	1769.7	1781.6	1789.0	1789.0
32.5°	1639.9	1663.8	1689.3	1704.1	1717.6	1729.4	1736.8	1739.8
35°	1583.3	1607.2	1631.1	1644.5	1659.4	1668.2	1674.2	1678.6
37.5°	1522.1	1546.0	1565.5	1577.3	1593.8	1599.8	1608.6	1607.2
40°	1456.5	1476.0	1493.8	1504.3	1517.7	1525.1	1534.2	1532.6
42.5°	1388.1	1407.4	1422.2	1434.2	1441.7	1449.1	1455.1	1453.7
45°	1317.9	1335.9	1349.2	1355.2	1367.2	1370.0	1376.1	1376.1
47.5°	1247.8	1262.7	1274.7	1283.6	1289.6	1292.6	1298.6	1298.6
50°	1180.8	1194.3	1201.7	1209.1	1215.1	1219.5	1222.6	1224.0
52.5°	1115.2	1125.6	1131.7	1137.5	1143.5	1146.5	1149.5	1147.9
55°	1052.6	1060.0	1064.4	1069.1	1073.5	1077.9	1077.9	1077.9
57.5°	990.0	994.4	998.8	1001.8	1006.3	1009.3	1009.3	1009.3
60°	928.8	933.2	934.8	937.8	942.3	943.7	945.3	942.3
62.5°	869.2	870.6	872.2	873.6	878.0	881.1	881.1	879.6
65°	808.0	808.0	809.6	811.0	814.0	817.0	818.5	815.4
67.5°	748.4	748.4	749.8	749.8	754.4	757.5	758.9	758.9
70°	690.2	688.8	691.8	693.2	696.3	696.3	699.3	699.3
72.5°	632.0	630.6	633.7	633.7	636.7	638.1	638.1	638.1
75°	575.5	571.0	572.5	569.4	572.5	572.5	571.0	571.0
77.5°	514.3	503.8	501.0	495.0	495.0	495.0	492.0	492.0
80°	436.8	426.4	422.0	417.4	417.4	415.9	414.5	414.5
82.5°	359.4	350.3	345.9	341.5	344.3	339.9	341.5	342.9
85°	275.9	268.3	265.5	260.8	259.4	259.4	260.8	259.4
87.5°	179.0	171.4	171.4	166.9	170.0	165.5	160.9	163.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P977039  
 CATALOG NUMBER: 24SR-LD2-C-64-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	13.7	15.4	14.1	15.7	16.0	15.6	17.3	16.0	17.6	17.9
	3H	15.6	17.1	16.0	17.5	17.8	17.9	19.5	18.3	19.8	20.2
	4H	16.3	17.8	16.7	18.1	18.5	19.0	20.5	19.4	20.8	21.2
	6H	16.8	18.2	17.2	18.6	19.0	20.0	21.3	20.4	21.7	22.1
	8H	17.0	18.3	17.5	18.7	19.1	20.4	21.7	20.8	22.1	22.5
	12H	17.2	18.4	17.6	18.8	19.3	20.8	22.0	21.2	22.4	22.9
4H	2H	15.0	16.5	15.4	16.8	17.2	16.3	17.8	16.7	18.2	18.5
	3H	17.3	18.6	17.7	19.0	19.4	18.9	20.2	19.3	20.6	21.0
	4H	18.4	19.5	18.8	19.9	20.3	20.2	21.3	20.6	21.7	22.2
	6H	19.2	20.2	19.6	20.6	21.1	21.3	22.3	21.8	22.8	23.2
	8H	19.5	20.5	20.0	20.9	21.4	21.8	22.8	22.3	23.2	23.7
	12H	19.7	20.6	20.2	21.1	21.5	22.3	23.2	22.8	23.6	24.1
8H	4H	19.3	20.2	19.7	20.7	21.1	20.7	21.7	21.2	22.1	22.6
	6H	20.5	21.3	21.0	21.8	22.3	22.0	22.9	22.5	23.3	23.8
	8H	21.1	21.8	21.6	22.3	22.8	22.7	23.4	23.2	23.9	24.4
	12H	21.5	22.2	22.0	22.6	23.2	23.3	24.0	23.8	24.4	25.0
12H	4H	19.4	20.3	19.9	20.8	21.2	20.8	21.7	21.3	22.1	22.6
	6H	20.8	21.6	21.3	22.0	22.5	22.2	23.0	22.8	23.4	24.0
	8H	21.5	22.2	22.0	22.7	23.2	23.0	23.6	23.5	24.1	24.7

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

**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**

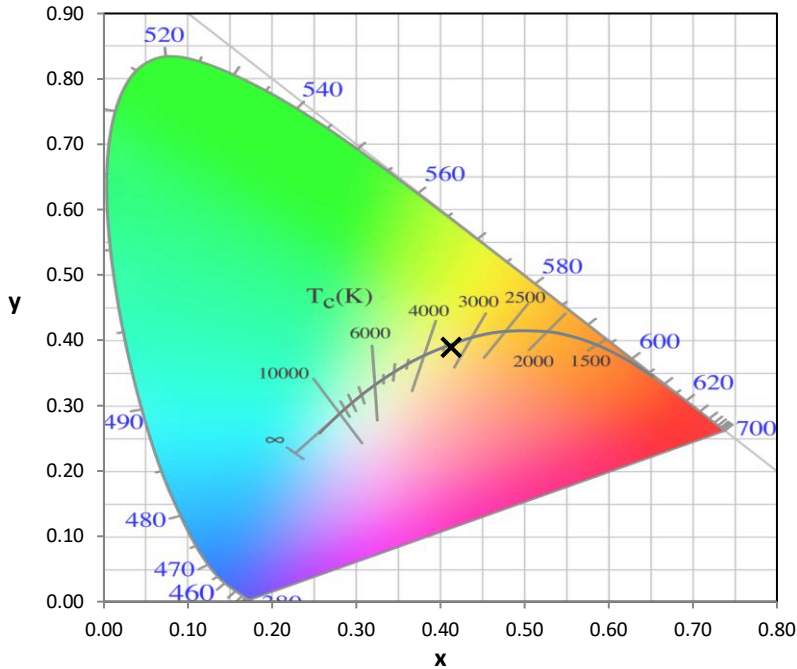
Stabilization Time: 48M  
 Operation Time: 1H 48M  
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2506-457-6

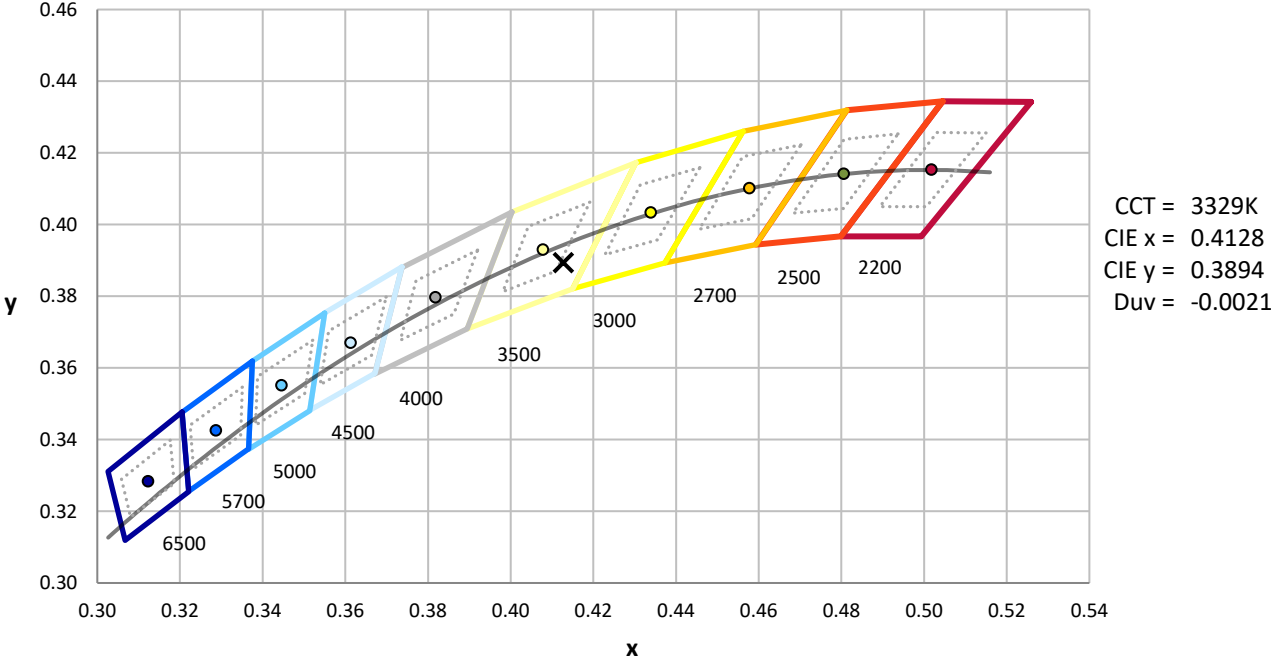
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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



Point lies inside the ANSI 3500K 7-step quadrangle

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**Photopic Flux vs. Wavelength**

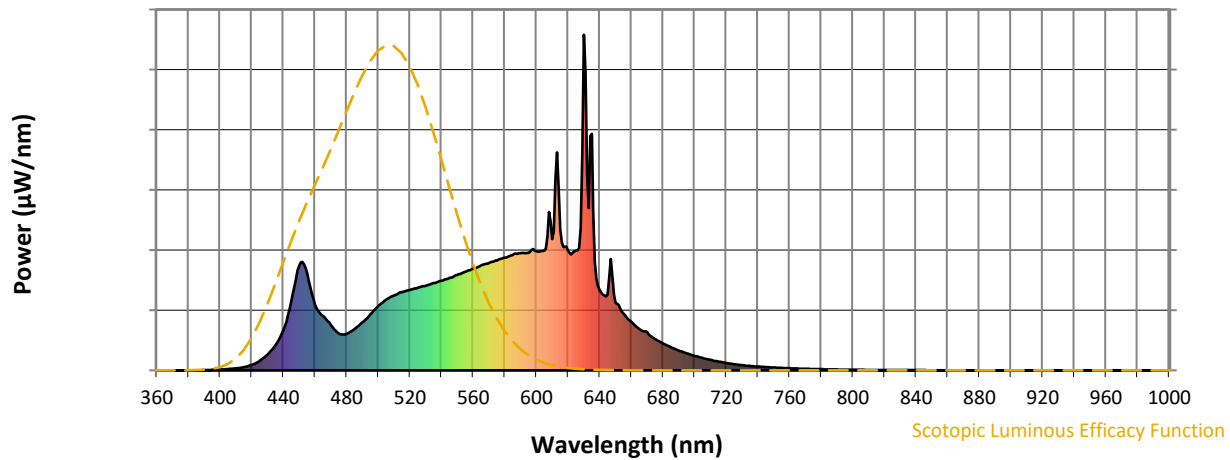


**Photopic Lumens: NR**

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	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			

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**Scotopic Flux vs. Wavelength**



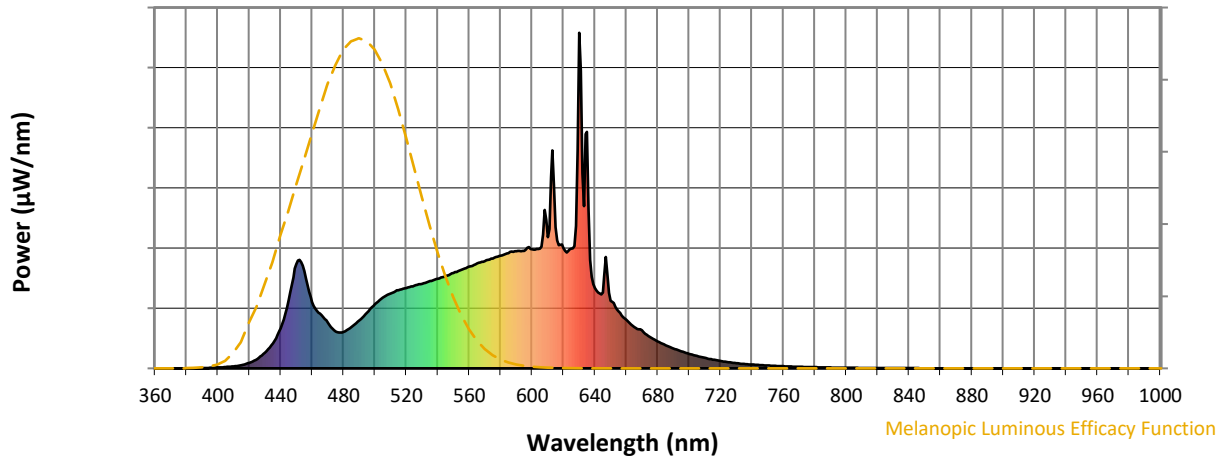
**Scotopic Lumens: NR**

**S/P: 1.57**

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	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			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.17

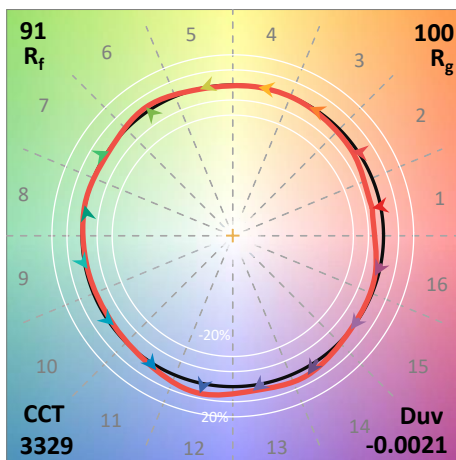
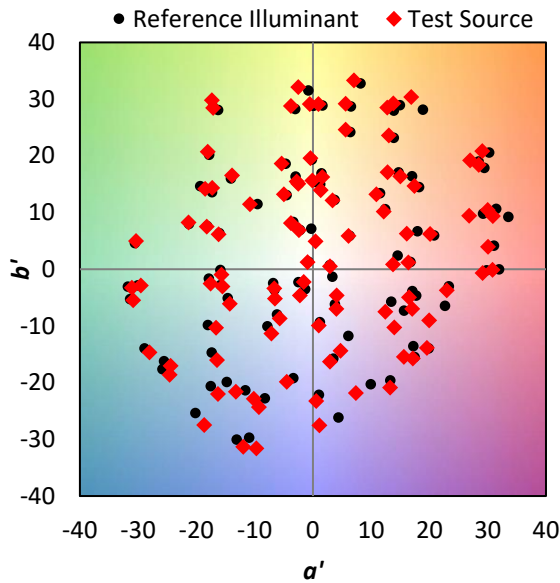
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	143	NR	620	358	NR	750	9	NR	880	0	NR
365	0	NR	495	166	NR	625	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			

**Summary**

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



**Color Vector Graphics**

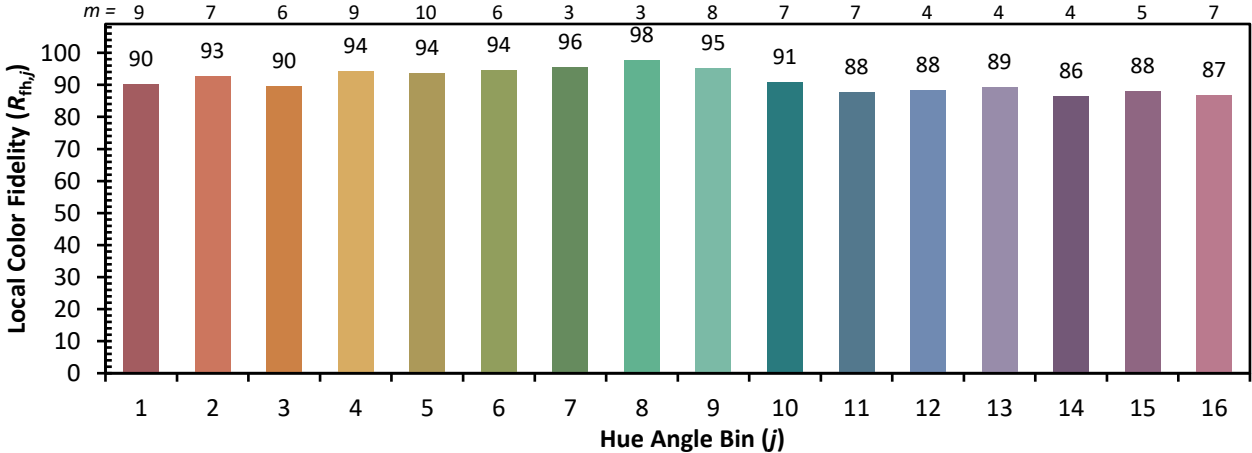
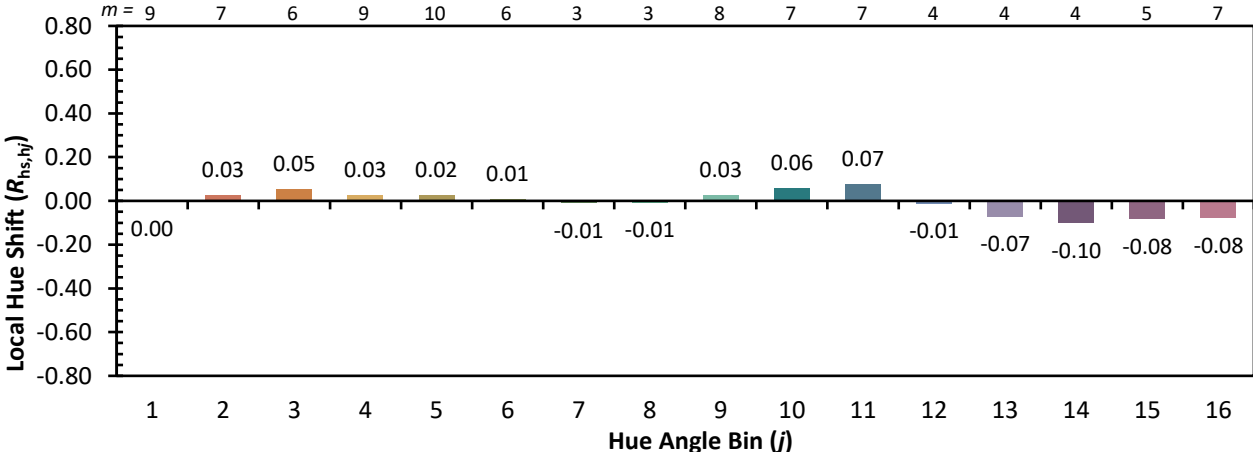
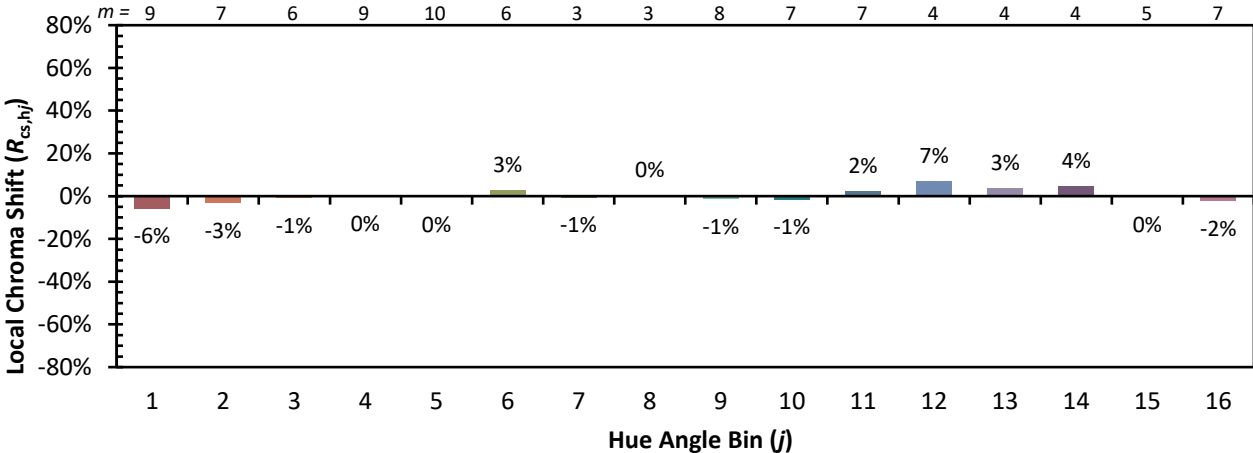


Individual Sample Fidelity Index ( $R_{f,i}$ )

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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)