

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: P977054

Luminaire Tested: 24SR-LD2-C-59-UNV-L950-CD1-ST-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P977054  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-59-UNV-L950-CD1-ST-U  
Description: METALUX SKYRIDGE 2x4 5900LM PACKAGE 90CRI 5000K TROFFER with Straw SKYTRIM  
Light Source: 5000K CCT, 90+ CRI LEDS  
Ballast/Driver: -

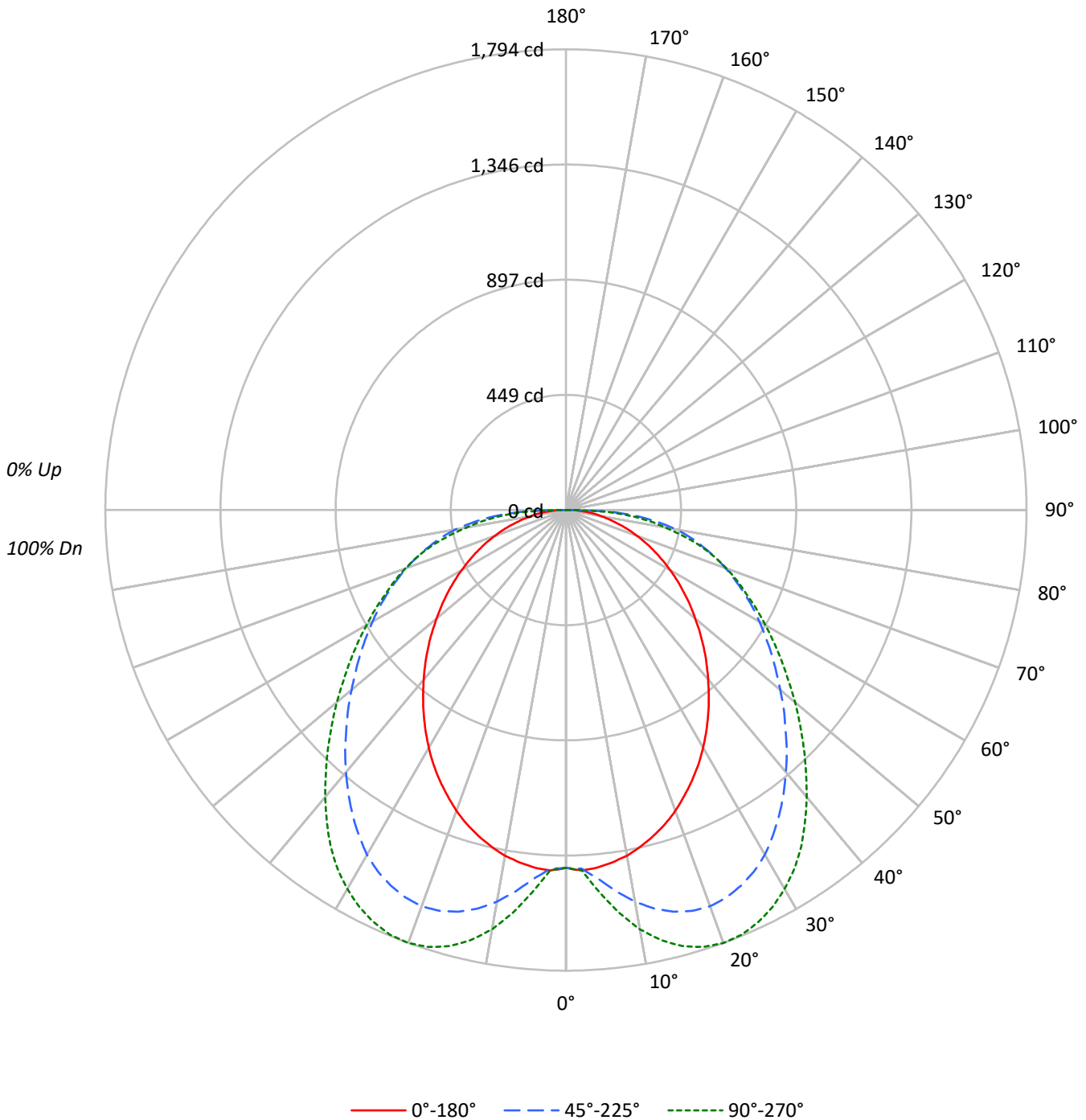
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5291.0 lumens  
Efficiency: N/A  
Efficacy: 120.8 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): 43.8  
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: P977054  
CATALOG NUMBER: 24SR-LD2-C-59-UNV-L950-CD1-ST-U

### Luminous Intensity Polar Plot





TEST NUMBER: P977054

CATALOG NUMBER: 24SR-LD2-C-59-UNV-L950-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	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°	1875	1875	1875
5°	1888	1946	2017
10°	1867	2115	2265
15°	1831	2256	2449
20°	1784	2351	2569
25°	1726	2396	2629
30°	1660	2408	2646
35°	1588	2380	2625
40°	1513	2341	2562
45°	1445	2301	2493
50°	1375	2281	2439
55°	1318	2294	2407
60°	1264	2341	2414
65°	1211	2440	2472
70°	1161	2602	2619
75°	1107	2870	2826
80°	1099	3388	3058
85°	1206	4361	3813

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 87.5°  
 Luminance: 5781 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.1	2.6
10°-20°	444.7	8.4
20°-30°	711.1	13.4
30°-40°	860.9	16.3
40°-50°	879.1	16.6
50°-60°	810.1	15.3
60°-70°	689.1	13.0
70°-80°	515.2	9.7
80°-90°	240.7	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°	1295.9	24.5
0°-40°	2156.7	40.8
0°-60°	3846.0	72.7
0°-90°	5291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5291.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1394	1394	1394	1394	1394	
5°	1398	1390	1441	1478	1493	132
15°	1314	1432	1619	1721	1758	370
25°	1162	1382	1614	1729	1771	535
35°	966	1221	1449	1559	1598	604
45°	759	1011	1209	1287	1310	586
55°	562	817	978	1016	1026	503
65°	380	646	766	771	776	377
75°	213	467	552	544	544	228
85°	78	246	282	250	247	82
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°	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8
2.5°	1405.1	1402.2	1398.0	1392.3	1390.9	1390.9	1389.4	1389.4	1392.3	1398.0	1406.4
5°	1398.0	1395.1	1390.9	1386.5	1388.1	1392.3	1400.9	1410.8	1424.9	1440.6	1457.6
7.5°	1383.9	1382.3	1379.5	1379.5	1390.9	1410.8	1430.7	1450.5	1473.3	1497.3	1522.9
10°	1366.7	1365.3	1363.8	1375.3	1400.9	1430.7	1458.9	1485.9	1517.2	1548.3	1578.1
12.5°	1342.6	1342.6	1346.8	1372.4	1407.9	1444.8	1480.3	1515.9	1552.7	1589.6	1622.3
15°	1314.2	1314.2	1328.5	1365.3	1410.8	1453.4	1496.0	1535.7	1578.1	1619.4	1653.4
17.5°	1283.0	1281.7	1308.6	1353.9	1405.1	1454.7	1503.1	1547.0	1590.9	1636.4	1671.9
20°	1246.2	1249.0	1284.4	1336.9	1393.8	1449.0	1500.2	1547.0	1593.8	1642.1	1676.1
22.5°	1204.9	1210.6	1254.6	1312.8	1376.6	1433.5	1487.4	1537.1	1585.4	1633.5	1667.7
25°	1162.3	1169.6	1223.4	1284.4	1352.5	1410.8	1464.7	1517.2	1565.5	1613.7	1647.9
27.5°	1117.0	1127.0	1187.9	1251.9	1319.9	1381.0	1434.9	1488.7	1537.1	1586.7	1618.1
30°	1068.7	1081.5	1146.8	1212.0	1283.0	1342.6	1396.5	1451.9	1501.5	1549.9	1579.7
32.5°	1017.7	1033.2	1099.8	1170.9	1240.4	1298.7	1352.5	1409.3	1456.1	1501.5	1531.3
35°	966.5	985.0	1053.0	1124.1	1192.1	1250.4	1302.9	1359.6	1406.4	1449.0	1477.5
37.5°	914.0	936.7	1004.9	1074.4	1141.1	1199.4	1253.2	1305.8	1352.5	1392.3	1420.7
40°	861.5	887.1	955.2	1023.2	1089.9	1145.3	1197.8	1250.4	1297.2	1332.7	1359.6
42.5°	810.5	835.9	905.6	973.6	1034.7	1091.4	1144.0	1195.0	1237.6	1273.1	1297.2
45°	759.3	786.2	854.4	921.1	982.2	1038.9	1091.4	1138.2	1179.5	1209.3	1233.4
47.5°	708.3	736.5	804.7	871.4	929.6	985.0	1038.9	1081.5	1121.2	1151.0	1170.9
50°	657.1	688.4	755.1	823.3	880.0	935.4	986.4	1026.1	1063.0	1089.9	1108.4
52.5°	610.3	640.1	708.3	776.3	833.2	888.4	936.7	975.1	1007.6	1031.8	1050.2
55°	562.0	594.6	665.7	731.0	789.1	844.5	888.4	923.9	953.7	977.8	992.1
57.5°	515.2	552.0	621.5	686.9	746.5	799.0	841.6	875.6	902.7	922.6	935.4
60°	469.7	508.1	580.5	645.8	705.4	756.4	797.7	828.8	853.1	870.1	881.3
62.5°	424.4	468.4	539.4	607.4	664.1	713.8	752.2	780.7	803.4	818.9	825.9
65°	380.3	425.8	499.5	566.3	623.1	669.9	706.7	732.3	753.5	766.3	769.2
67.5°	337.7	386.0	459.8	526.6	581.8	625.9	661.5	685.5	703.9	712.5	715.3
70°	295.1	345.0	420.0	486.9	539.4	581.8	614.5	637.2	652.9	661.5	661.5
72.5°	255.4	305.2	380.3	445.6	494.0	536.5	566.3	587.5	601.7	607.4	606.1
75°	213.0	264.0	337.7	400.2	447.2	486.9	516.7	537.9	547.8	552.0	550.7
77.5°	175.9	224.2	295.1	353.4	403.0	435.7	465.5	485.4	495.3	498.2	496.8
80°	141.9	187.4	249.8	305.2	347.6	383.2	410.1	431.5	439.9	437.2	424.4
82.5°	109.3	150.5	205.7	254.0	293.8	326.4	354.9	367.5	369.0	362.0	350.5
85°	78.1	109.3	156.1	197.3	234.2	258.2	275.2	285.2	288.0	282.5	269.7
87.5°	43.9	63.8	92.3	122.1	150.5	167.5	177.4	183.2	187.4	181.7	173.1
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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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8	1393.8
2.5°	1398.0	1402.2	1400.9	1403.7	1405.1	1405.1	1400.9	1403.7
5°	1458.9	1467.5	1473.3	1481.7	1487.4	1487.4	1488.7	1493.1
7.5°	1525.8	1539.9	1552.7	1562.7	1569.7	1572.6	1576.8	1581.0
10°	1588.1	1605.3	1619.4	1632.2	1640.6	1646.3	1650.5	1657.8
12.5°	1636.4	1656.3	1671.9	1686.1	1697.5	1705.9	1710.1	1715.9
15°	1671.9	1694.6	1713.0	1728.6	1738.6	1748.5	1752.7	1758.4
17.5°	1693.1	1715.9	1735.7	1751.4	1762.6	1772.6	1778.3	1784.0
20°	1698.9	1721.6	1742.8	1758.4	1769.9	1782.5	1788.2	1794.0
22.5°	1690.3	1713.0	1735.7	1752.7	1765.5	1778.3	1784.0	1789.8
25°	1673.3	1697.5	1720.1	1737.2	1748.5	1761.3	1768.4	1771.2
27.5°	1646.3	1670.4	1693.1	1708.8	1721.6	1734.4	1741.4	1742.8
30°	1608.1	1632.2	1654.9	1670.4	1684.7	1696.0	1703.1	1703.1
32.5°	1561.1	1583.9	1608.1	1622.3	1635.1	1646.3	1653.4	1656.3
35°	1507.3	1530.0	1552.7	1565.5	1579.7	1588.1	1593.8	1598.0
37.5°	1449.0	1471.7	1490.3	1501.5	1517.2	1522.9	1531.3	1530.0
40°	1386.5	1405.1	1422.1	1432.0	1444.8	1451.9	1460.5	1458.9
42.5°	1321.4	1339.7	1353.9	1365.3	1372.4	1379.5	1385.2	1383.9
45°	1254.6	1271.8	1284.4	1290.1	1301.5	1304.2	1310.0	1310.0
47.5°	1187.9	1202.0	1213.5	1221.9	1227.6	1230.5	1236.2	1236.2
50°	1124.1	1136.9	1144.0	1151.0	1156.8	1161.0	1163.8	1165.2
52.5°	1061.6	1071.6	1077.3	1082.8	1088.6	1091.4	1094.3	1092.8
55°	1002.0	1009.1	1013.3	1017.7	1021.9	1026.1	1026.1	1026.1
57.5°	942.4	946.6	950.9	953.7	957.9	960.8	960.8	960.8
60°	884.2	888.4	889.9	892.8	897.0	898.3	899.9	897.0
62.5°	827.5	828.8	830.3	831.7	835.9	838.7	838.7	837.4
65°	769.2	769.2	770.7	772.1	774.9	777.8	779.1	776.3
67.5°	712.5	712.5	713.8	713.8	718.2	721.1	722.4	722.4
70°	657.1	655.7	658.6	659.9	662.8	662.8	665.7	665.7
72.5°	601.7	600.3	603.2	603.2	606.1	607.4	607.4	607.4
75°	547.8	543.6	545.0	542.1	545.0	545.0	543.6	543.6
77.5°	489.6	479.6	477.0	471.2	471.2	471.2	468.4	468.4
80°	415.8	405.9	401.7	397.3	397.3	396.0	394.6	394.6
82.5°	342.1	333.5	329.3	325.1	327.8	323.6	325.1	326.4
85°	262.6	255.4	252.7	248.3	247.0	247.0	248.3	247.0
87.5°	170.4	163.1	163.1	158.9	161.8	157.6	153.2	156.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P977054

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**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	13.5	15.3	13.9	15.6	15.9	15.4	17.1	15.8	17.4	17.8
	3H	15.4	17.0	15.8	17.3	17.6	17.8	19.3	18.1	19.6	20.0
	4H	16.1	17.6	16.5	17.9	18.3	18.8	20.3	19.2	20.7	21.0
	6H	16.7	18.0	17.1	18.4	18.8	19.8	21.2	20.2	21.5	21.9
	8H	16.9	18.2	17.3	18.6	19.0	20.2	21.5	20.6	21.9	22.3
	12H	17.0	18.3	17.4	18.7	19.1	20.6	21.9	21.0	22.3	22.7
4H	2H	14.8	16.3	15.2	16.7	17.0	16.2	17.6	16.6	18.0	18.4
	3H	17.2	18.4	17.6	18.8	19.2	18.8	20.0	19.2	20.4	20.8
	4H	18.2	19.3	18.6	19.7	20.2	20.0	21.2	20.4	21.6	22.0
	6H	19.0	20.0	19.5	20.5	20.9	21.1	22.2	21.6	22.6	23.0
	8H	19.3	20.3	19.8	20.7	21.2	21.7	22.6	22.1	23.0	23.5
	12H	19.6	20.4	20.0	20.9	21.4	22.1	23.0	22.6	23.5	23.9
8H	4H	19.1	20.0	19.5	20.5	20.9	20.5	21.5	21.0	21.9	22.4
	6H	20.3	21.1	20.8	21.6	22.1	21.9	22.7	22.4	23.2	23.6
	8H	20.9	21.6	21.4	22.1	22.6	22.5	23.2	23.0	23.7	24.2
	12H	21.3	22.0	21.8	22.5	23.0	23.1	23.8	23.6	24.3	24.8
12H	4H	19.3	20.1	19.7	20.6	21.1	20.6	21.5	21.1	22.0	22.4
	6H	20.6	21.4	21.2	21.8	22.4	22.1	22.8	22.6	23.3	23.8
	8H	21.4	22.0	21.9	22.5	23.0	22.8	23.4	23.3	23.9	24.5

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

**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**

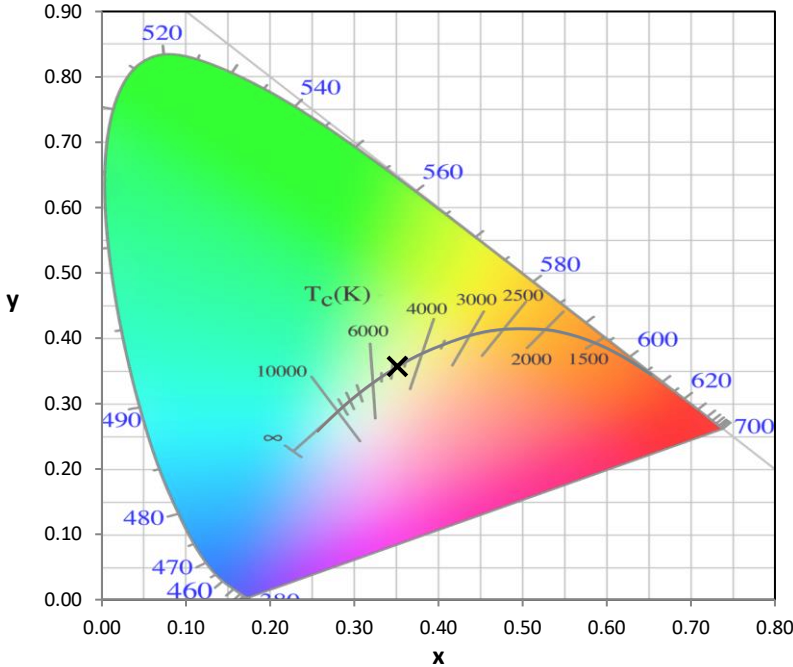
Stabilization Time: 43M  
 Operation Time: 1H 43M  
 Sphere Temperature (°C): 24.9

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

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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 <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	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			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 2.02**

$\lambda$ (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	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 <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	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			

**Summary**

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



**Color Vector Graphics**



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

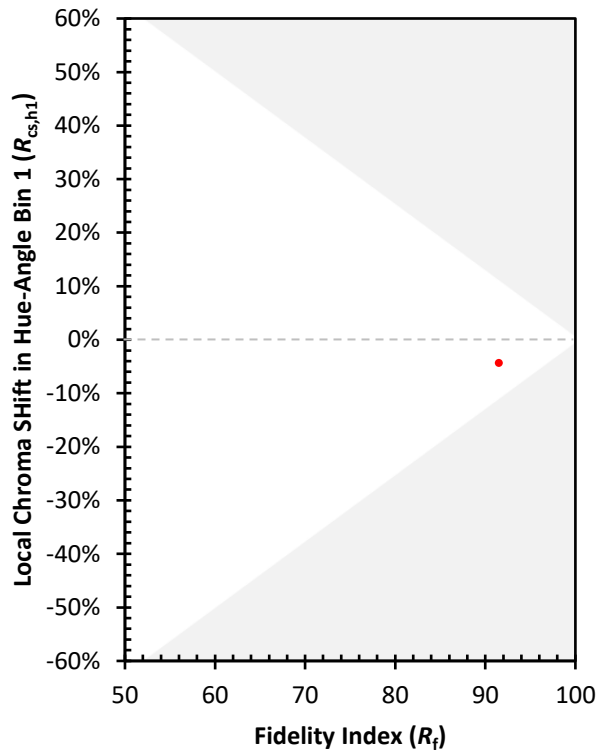
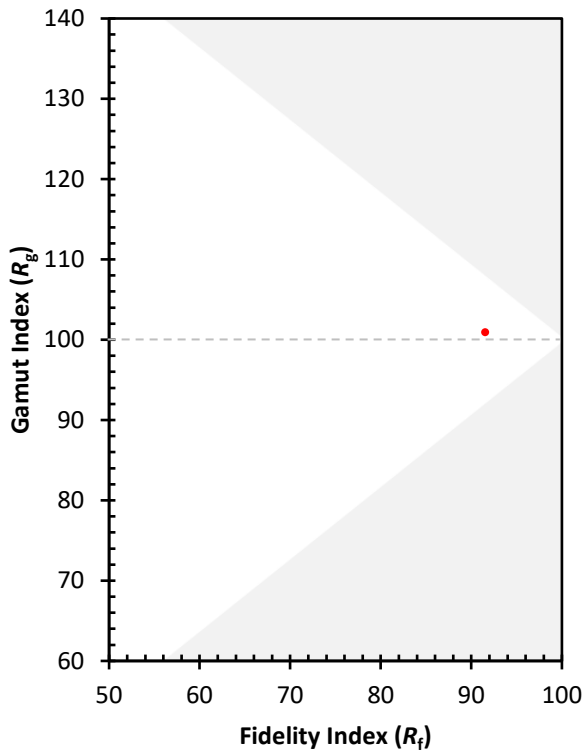
CES01 = 85	CES26 = 91	CES51 = 98	CES76 = 84
CES02 = 61	CES27 = 93	CES52 = 98	CES77 = 88
CES03 = 31	CES28 = 95	CES53 = 97	CES78 = 81
CES04 = 69	CES29 = 94	CES54 = 95	CES79 = 95
CES05 = 48	CES30 = 96	CES55 = 94	CES80 = 92
CES06 = 50	CES31 = 94	CES56 = 96	CES81 = 84
CES07 = 41	CES32 = 87	CES57 = 95	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)