

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: P977045

Luminaire Tested: 24SR-LD2-C-53-UNV-L940-CD1-ST-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P977045  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-53-UNV-L940-CD1-ST-U  
Description: METALUX SKYRIDGE 2x4 5300LM PACKAGE 90CRI 4000K TROFFER with Straw SKYTRIM  
Light Source: 4000K CCT, 90+ CRI LEDS  
Ballast/Driver: -

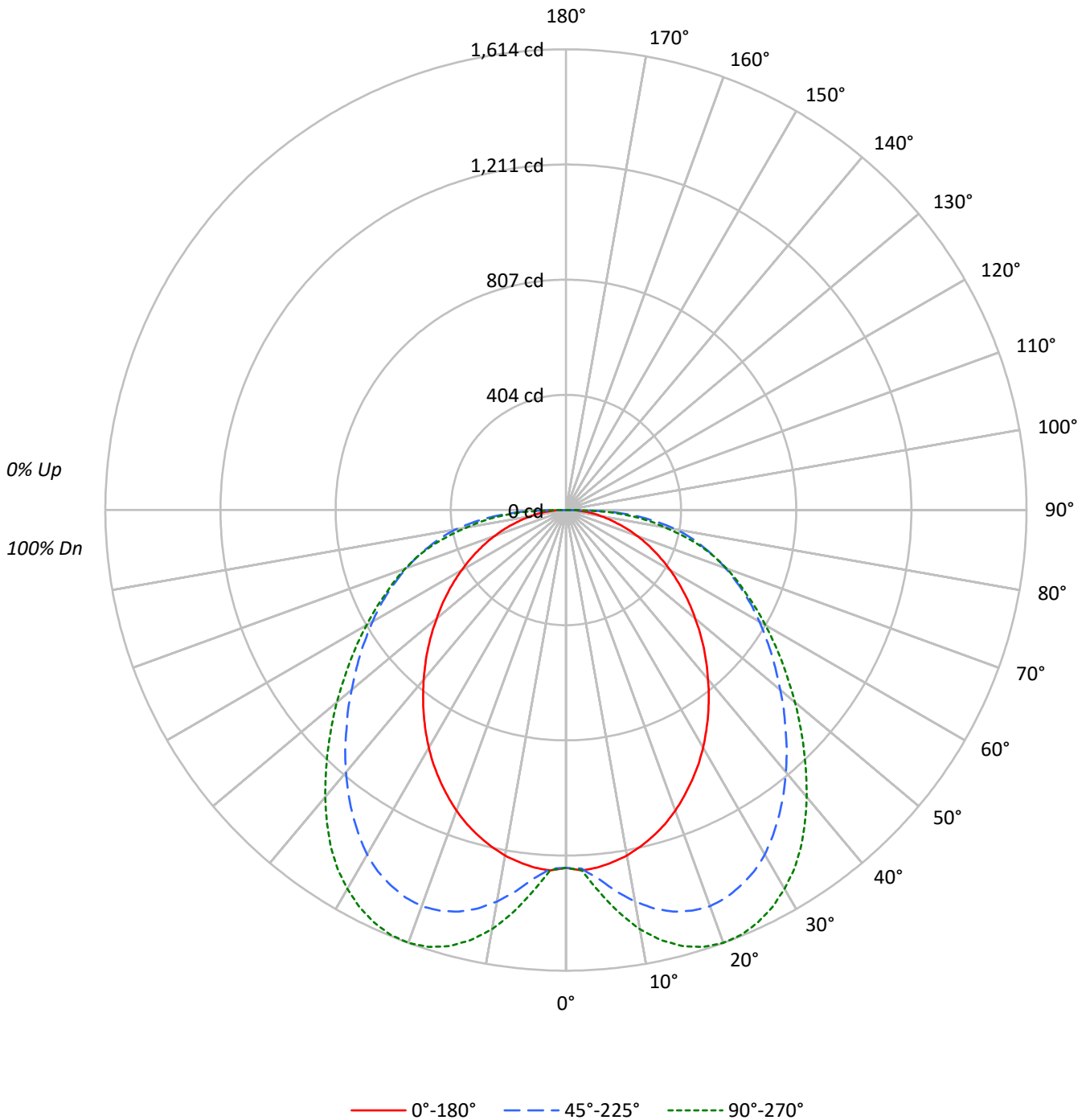
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4759.0 lumens  
Efficiency: N/A  
Efficacy: 123.9 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): 38.4  
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: P977045  
CATALOG NUMBER: 24SR-LD2-C-53-UNV-L940-CD1-ST-U

### Luminous Intensity Polar Plot





TEST NUMBER: P977045

CATALOG NUMBER: 24SR-LD2-C-53-UNV-L940-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	102	102	102	100
1	107	102	97	92	104	99	95	91	95	91	88	91	88	85	87	85	83	83	83	83	80
2	97	88	80	74	94	86	79	73	82	76	71	79	74	69	76	71	68	68	68	68	66
3	88	76	68	61	85	75	67	60	72	65	59	69	63	58	66	61	57	57	57	57	54
4	80	67	58	51	78	66	57	50	63	56	50	61	54	49	59	53	48	48	48	48	46
5	74	60	50	43	71	59	50	43	57	49	43	55	48	42	53	47	42	42	42	42	40
6	68	54	44	38	66	53	44	38	51	43	37	49	42	37	48	41	37	37	37	37	34
7	63	49	40	33	61	48	39	33	46	39	33	45	38	33	43	37	32	32	32	32	30
8	58	44	36	30	57	44	35	29	42	35	29	41	34	29	40	34	29	29	29	29	27
9	55	41	32	26	53	40	32	26	39	31	26	38	31	26	37	31	26	26	26	26	24
10	51	37	29	24	50	37	29	24	36	29	24	35	28	24	34	28	24	24	24	24	22

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

	0°	45°	90°
0°	1687	1687	1687
5°	1698	1750	1814
10°	1680	1903	2037
15°	1646	2029	2203
20°	1605	2115	2310
25°	1552	2155	2365
30°	1493	2166	2380
35°	1428	2141	2361
40°	1361	2105	2305
45°	1299	2070	2242
50°	1237	2052	2194
55°	1186	2063	2165
60°	1137	2106	2171
65°	1089	2195	2223
70°	1044	2341	2355
75°	996	2581	2542
80°	989	3047	2750
85°	1085	3923	3429

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 87.5°  
 Luminance: 5198 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.0	2.6
10°-20°	400.0	8.4
20°-30°	639.6	13.4
30°-40°	774.3	16.3
40°-50°	790.7	16.6
50°-60°	728.7	15.3
60°-70°	619.8	13.0
70°-80°	463.4	9.7
80°-90°	216.5	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°	1165.6	24.5
0°-40°	1939.9	40.8
0°-60°	3459.3	72.7
0°-90°	4759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4759.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1257	1250	1296	1329	1343	119
15°	1182	1288	1457	1548	1582	333
25°	1045	1243	1451	1555	1593	481
35°	869	1098	1303	1402	1437	543
45°	683	909	1088	1158	1178	527
55°	506	735	880	913	923	453
65°	342	581	689	694	698	339
75°	192	420	496	489	489	205
85°	70	221	254	225	222	74
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°	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7
2.5°	1263.8	1261.2	1257.4	1252.3	1251.1	1251.1	1249.7	1249.7	1252.3	1257.4	1265.0
5°	1257.4	1254.9	1251.1	1247.1	1248.5	1252.3	1260.0	1269.0	1281.7	1295.8	1311.0
7.5°	1244.7	1243.4	1240.8	1240.8	1251.1	1269.0	1286.8	1304.7	1325.1	1346.8	1369.8
10°	1229.3	1228.1	1226.7	1237.0	1260.0	1286.8	1312.2	1336.5	1364.6	1392.7	1419.5
12.5°	1207.6	1207.6	1211.4	1234.4	1266.4	1299.5	1331.5	1363.4	1396.6	1429.8	1459.1
15°	1182.0	1182.0	1194.9	1228.1	1269.0	1307.3	1345.6	1381.3	1419.5	1456.6	1487.1
17.5°	1154.0	1152.8	1177.0	1217.8	1263.8	1308.5	1351.9	1391.4	1431.0	1471.9	1503.8
20°	1120.9	1123.4	1155.2	1202.5	1253.7	1303.3	1349.4	1391.4	1433.5	1477.0	1507.6
22.5°	1083.7	1088.9	1128.4	1180.8	1238.2	1289.4	1337.8	1382.5	1426.0	1469.3	1500.0
25°	1045.4	1052.0	1100.4	1155.2	1216.6	1269.0	1317.4	1364.6	1408.1	1451.4	1482.2
27.5°	1004.7	1013.6	1068.5	1126.0	1187.2	1242.2	1290.6	1339.0	1382.5	1427.2	1455.4
30°	961.2	972.8	1031.5	1090.1	1154.0	1207.6	1256.1	1305.9	1350.6	1394.0	1420.8
32.5°	915.4	929.3	989.3	1053.2	1115.7	1168.1	1216.6	1267.6	1309.7	1350.6	1377.4
35°	869.3	886.0	947.2	1011.1	1072.2	1124.6	1171.9	1222.9	1265.0	1303.3	1328.9
37.5°	822.1	842.5	903.9	966.4	1026.4	1078.8	1127.2	1174.5	1216.6	1252.3	1277.9
40°	774.8	797.9	859.2	920.4	980.3	1030.1	1077.4	1124.6	1166.7	1198.7	1222.9
42.5°	729.0	751.8	814.5	875.7	930.7	981.7	1028.9	1074.8	1113.1	1145.1	1166.7
45°	682.9	707.1	768.5	828.4	883.4	934.4	981.7	1023.8	1060.9	1087.7	1109.3
47.5°	637.1	662.5	723.8	783.8	836.2	886.0	934.4	972.8	1008.5	1035.3	1053.2
50°	591.0	619.2	679.1	740.5	791.5	841.3	887.2	922.9	956.1	980.3	997.0
52.5°	548.9	575.7	637.1	698.2	749.4	799.1	842.5	877.1	906.3	928.1	944.6
55°	505.5	534.8	598.7	657.5	709.7	759.6	799.1	831.0	857.8	879.5	892.4
57.5°	463.4	496.5	559.1	617.8	671.4	718.7	757.0	787.6	812.0	829.8	841.3
60°	422.5	457.0	522.1	580.9	634.5	680.3	717.5	745.5	767.3	782.6	792.7
62.5°	381.8	421.3	485.2	546.3	597.4	642.0	676.6	702.2	722.6	736.5	742.9
65°	342.1	383.0	449.3	509.4	560.4	602.5	635.7	658.7	677.8	689.3	691.9
67.5°	303.8	347.2	413.5	473.7	523.3	563.0	595.0	616.6	633.1	640.8	643.4
70°	265.4	310.3	377.8	437.9	485.2	523.3	552.7	573.1	587.2	595.0	595.0
72.5°	229.7	274.5	342.1	400.8	444.3	482.6	509.4	528.5	541.2	546.3	545.1
75°	191.6	237.4	303.8	359.9	402.2	437.9	464.7	483.8	492.7	496.5	495.3
77.5°	158.2	201.7	265.4	317.8	362.5	391.9	418.7	436.6	445.5	448.1	446.9
80°	127.7	168.5	224.7	274.5	312.7	344.6	368.9	388.1	395.7	393.3	381.8
82.5°	98.3	135.4	185.0	228.5	264.2	293.6	319.2	330.6	331.9	325.6	315.3
85°	70.3	98.3	140.4	177.5	210.6	232.3	247.6	256.5	259.1	254.1	242.6
87.5°	39.5	57.4	83.0	109.8	135.4	150.7	159.6	164.8	168.5	163.4	155.7
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°	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7	1253.7
2.5°	1257.4	1261.2	1260.0	1262.6	1263.8	1263.8	1260.0	1262.6
5°	1312.2	1320.0	1325.1	1332.7	1337.8	1337.8	1339.0	1343.0
7.5°	1372.4	1385.1	1396.6	1405.5	1411.9	1414.5	1418.3	1422.0
10°	1428.4	1443.8	1456.6	1468.1	1475.6	1480.8	1484.6	1491.1
12.5°	1471.9	1489.7	1503.8	1516.5	1526.8	1534.4	1538.2	1543.3
15°	1503.8	1524.3	1540.7	1554.8	1563.8	1572.7	1576.5	1581.6
17.5°	1522.9	1543.3	1561.2	1575.3	1585.4	1594.4	1599.5	1604.7
20°	1528.0	1548.5	1567.5	1581.6	1591.9	1603.3	1608.4	1613.6
22.5°	1520.3	1540.7	1561.2	1576.5	1588.0	1599.5	1604.7	1609.8
25°	1505.0	1526.8	1547.1	1562.6	1572.7	1584.2	1590.6	1593.1
27.5°	1480.8	1502.4	1522.9	1537.0	1548.5	1560.0	1566.3	1567.5
30°	1446.4	1468.1	1488.5	1502.4	1515.3	1525.5	1531.8	1531.8
32.5°	1404.2	1424.6	1446.4	1459.1	1470.7	1480.8	1487.1	1489.7
35°	1355.7	1376.2	1396.6	1408.1	1420.8	1428.4	1433.5	1437.3
37.5°	1303.3	1323.8	1340.4	1350.6	1364.6	1369.8	1377.4	1376.2
40°	1247.1	1263.8	1279.1	1288.0	1299.5	1305.9	1313.6	1312.2
42.5°	1188.5	1205.0	1217.8	1228.1	1234.4	1240.8	1245.9	1244.7
45°	1128.4	1143.9	1155.2	1160.4	1170.7	1173.1	1178.2	1178.2
47.5°	1068.5	1081.2	1091.5	1099.0	1104.2	1106.8	1111.9	1111.9
50°	1011.1	1022.6	1028.9	1035.3	1040.5	1044.2	1046.8	1048.0
52.5°	954.9	963.8	969.0	974.0	979.1	981.7	984.3	982.9
55°	901.3	907.6	911.4	915.4	919.2	922.9	922.9	922.9
57.5°	847.7	851.5	855.2	857.8	861.6	864.2	864.2	864.2
60°	795.3	799.1	800.4	803.0	806.8	808.0	809.4	806.8
62.5°	744.3	745.5	746.8	748.0	751.8	754.4	754.4	753.2
65°	691.9	691.9	693.2	694.4	697.0	699.6	700.8	698.2
67.5°	640.8	640.8	642.0	642.0	646.0	648.6	649.8	649.8
70°	591.0	589.8	592.4	593.6	596.2	596.2	598.7	598.7
72.5°	541.2	540.0	542.6	542.6	545.1	546.3	546.3	546.3
75°	492.7	489.0	490.2	487.6	490.2	490.2	489.0	489.0
77.5°	440.3	431.4	429.0	423.8	423.8	423.8	421.3	421.3
80°	374.0	365.1	361.3	357.4	357.4	356.2	354.9	354.9
82.5°	307.7	300.0	296.2	292.4	294.8	291.0	292.4	293.6
85°	236.2	229.7	227.3	223.3	222.1	222.1	223.3	222.1
87.5°	153.3	146.7	146.7	142.9	145.5	141.7	137.8	140.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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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	13.2	14.9	13.5	15.2	15.5	15.1	16.8	15.4	17.1	17.4
	3H	15.0	16.6	15.4	16.9	17.3	17.4	18.9	17.8	19.3	19.6
	4H	15.8	17.2	16.2	17.6	17.9	18.5	19.9	18.9	20.3	20.7
	6H	16.3	17.7	16.7	18.0	18.4	19.4	20.8	19.8	21.2	21.6
	8H	16.5	17.8	16.9	18.2	18.6	19.8	21.2	20.3	21.6	21.9
	12H	16.6	17.9	17.1	18.3	18.7	20.2	21.5	20.7	21.9	22.3
4H	2H	14.5	15.9	14.9	16.3	16.7	15.8	17.3	16.2	17.6	18.0
	3H	16.8	18.1	17.2	18.4	18.8	18.4	19.6	18.8	20.0	20.4
	4H	17.8	19.0	18.2	19.4	19.8	19.6	20.8	20.1	21.2	21.6
	6H	18.7	19.7	19.1	20.1	20.6	20.8	21.8	21.2	22.2	22.7
	8H	19.0	19.9	19.4	20.4	20.8	21.3	22.2	21.7	22.7	23.1
	12H	19.2	20.1	19.7	20.5	21.0	21.8	22.6	22.2	23.1	23.6
8H	4H	18.7	19.7	19.2	20.1	20.6	20.2	21.1	20.6	21.6	22.0
	6H	20.0	20.8	20.5	21.3	21.7	21.5	22.3	22.0	22.8	23.3
	8H	20.5	21.2	21.0	21.7	22.2	22.1	22.9	22.6	23.4	23.9
	12H	21.0	21.6	21.5	22.1	22.7	22.8	23.4	23.3	23.9	24.5
12H	4H	18.9	19.8	19.4	20.2	20.7	20.3	21.1	20.7	21.6	22.1
	6H	20.3	21.0	20.8	21.5	22.0	21.7	22.4	22.2	22.9	23.4
	8H	21.0	21.6	21.5	22.1	22.7	22.4	23.1	22.9	23.6	24.1

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-7

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L940-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L940-CD1-U

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-457-7  
 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-L940-CD1-U**  
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

**Spectral Parameters**

CCT (K): 3850  
 CIE u': 0.2283  
 CIE v': 0.5037  
 Duv: -0.0006  
 CIE x: 0.3868  
 CIE y: 0.3794  
 CIE z: 0.2338  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 579  
 Purity: 29.94798  
 Rf: 91.3  
 Rg: 99.8

CRI (Ra): 94.0  
 R1: 95.3  
 R2: 96.3  
 R3: 95.7  
 R4: 95.2  
 R5: 94.4  
 R6: 94.3  
 R7: 94.1  
 R8: 86.7  
 R9: 65.3  
 R10: 89.6  
 R11: 95.5  
 R12: 76.1  
 R13: 95.5  
 R14: 96.8  
 R15: 92.3



**Test Conditions**

Stabilization Time: 38M  
 Operation Time: 1H 38M  
 Sphere Temperature (°C): 24.4

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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



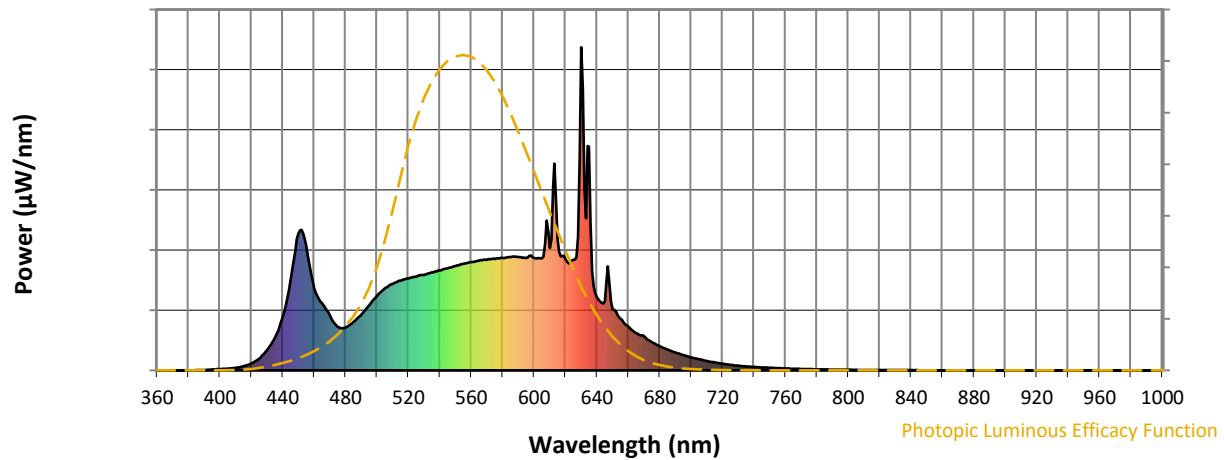
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-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	173	NR	620	343	NR	750	8	NR	880	0	NR
365	0	NR	495	201	NR	625	342	NR	755	7	NR	885	0	NR
370	0	NR	500	231	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	253	NR	635	692	NR	765	5	NR	895	0	NR
380	0	NR	510	268	NR	640	226	NR	770	4	NR	900	0	NR
385	1	NR	515	277	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	284	NR	650	190	NR	780	3	NR	910	0	NR
395	3	NR	525	290	NR	655	160	NR	785	3	NR	915	0	NR
400	4	NR	530	296	NR	660	136	NR	790	2	NR	920	0	NR
405	5	NR	535	303	NR	665	115	NR	795	2	NR	925	0	NR
410	8	NR	540	310	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	316	NR	675	87	NR	805	2	NR	935	0	NR
420	22	NR	550	323	NR	680	75	NR	810	1	NR	940	0	NR
425	37	NR	555	330	NR	685	64	NR	815	1	NR	945	0	NR
430	62	NR	560	335	NR	690	55	NR	820	1	NR	950	0	NR
435	102	NR	565	340	NR	695	47	NR	825	1	NR	955	0	NR
440	164	NR	570	342	NR	700	40	NR	830	1	NR	960	0	NR
445	281	NR	575	345	NR	705	34	NR	835	1	NR	965	0	NR
450	423	NR	580	348	NR	710	29	NR	840	1	NR	970	0	NR
455	384	NR	585	350	NR	715	25	NR	845	1	NR	975	0	NR
460	256	NR	590	351	NR	720	21	NR	850	0	NR	980	0	NR
465	208	NR	595	348	NR	725	17	NR	855	0	NR	985	0	NR
470	169	NR	600	348	NR	730	14	NR	860	0	NR	990	0	NR
475	135	NR	605	347	NR	735	12	NR	865	0	NR	995	0	NR
480	133	NR	610	379	NR	740	11	NR	870	0	NR	1000	0	NR
485	149	NR	615	406	NR	745	9	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.74

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	173	NR	620	343	NR	750	8	NR	880	0	NR
365	0	NR	495	201	NR	625	342	NR	755	7	NR	885	0	NR
370	0	NR	500	231	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	253	NR	635	692	NR	765	5	NR	895	0	NR
380	0	NR	510	268	NR	640	226	NR	770	4	NR	900	0	NR
385	1	NR	515	277	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	284	NR	650	190	NR	780	3	NR	910	0	NR
395	3	NR	525	290	NR	655	160	NR	785	3	NR	915	0	NR
400	4	NR	530	296	NR	660	136	NR	790	2	NR	920	0	NR
405	5	NR	535	303	NR	665	115	NR	795	2	NR	925	0	NR
410	8	NR	540	310	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	316	NR	675	87	NR	805	2	NR	935	0	NR
420	22	NR	550	323	NR	680	75	NR	810	1	NR	940	0	NR
425	37	NR	555	330	NR	685	64	NR	815	1	NR	945	0	NR
430	62	NR	560	335	NR	690	55	NR	820	1	NR	950	0	NR
435	102	NR	565	340	NR	695	47	NR	825	1	NR	955	0	NR
440	164	NR	570	342	NR	700	40	NR	830	1	NR	960	0	NR
445	281	NR	575	345	NR	705	34	NR	835	1	NR	965	0	NR
450	423	NR	580	348	NR	710	29	NR	840	1	NR	970	0	NR
455	384	NR	585	350	NR	715	25	NR	845	1	NR	975	0	NR
460	256	NR	590	351	NR	720	21	NR	850	0	NR	980	0	NR
465	208	NR	595	348	NR	725	17	NR	855	0	NR	985	0	NR
470	169	NR	600	348	NR	730	14	NR	860	0	NR	990	0	NR
475	135	NR	605	347	NR	735	12	NR	865	0	NR	995	0	NR
480	133	NR	610	379	NR	740	11	NR	870	0	NR	1000	0	NR
485	149	NR	615	406	NR	745	9	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



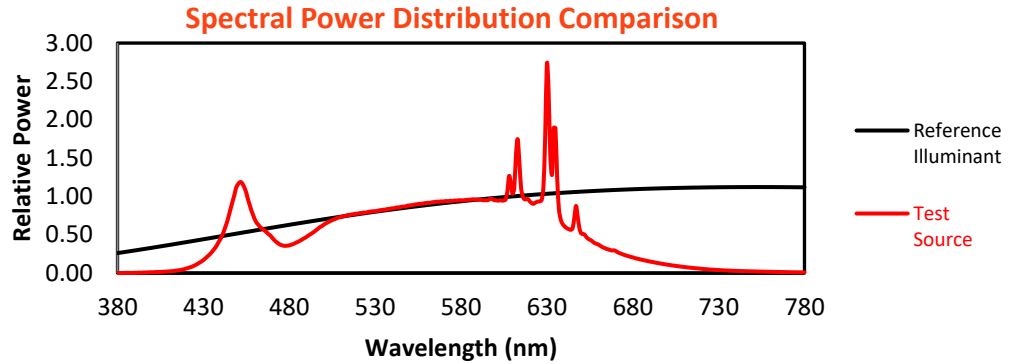
Melanopic Lumens: NR

M/P: 3.6

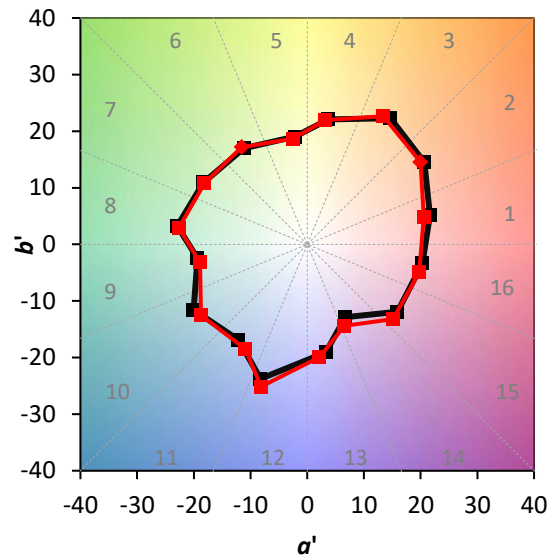
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	173	NR	620	343	NR	750	8	NR	880	0	NR
365	0	NR	495	201	NR	625	342	NR	755	7	NR	885	0	NR
370	0	NR	500	231	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	253	NR	635	692	NR	765	5	NR	895	0	NR
380	0	NR	510	268	NR	640	226	NR	770	4	NR	900	0	NR
385	1	NR	515	277	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	284	NR	650	190	NR	780	3	NR	910	0	NR
395	3	NR	525	290	NR	655	160	NR	785	3	NR	915	0	NR
400	4	NR	530	296	NR	660	136	NR	790	2	NR	920	0	NR
405	5	NR	535	303	NR	665	115	NR	795	2	NR	925	0	NR
410	8	NR	540	310	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	316	NR	675	87	NR	805	2	NR	935	0	NR
420	22	NR	550	323	NR	680	75	NR	810	1	NR	940	0	NR
425	37	NR	555	330	NR	685	64	NR	815	1	NR	945	0	NR
430	62	NR	560	335	NR	690	55	NR	820	1	NR	950	0	NR
435	102	NR	565	340	NR	695	47	NR	825	1	NR	955	0	NR
440	164	NR	570	342	NR	700	40	NR	830	1	NR	960	0	NR
445	281	NR	575	345	NR	705	34	NR	835	1	NR	965	0	NR
450	423	NR	580	348	NR	710	29	NR	840	1	NR	970	0	NR
455	384	NR	585	350	NR	715	25	NR	845	1	NR	975	0	NR
460	256	NR	590	351	NR	720	21	NR	850	0	NR	980	0	NR
465	208	NR	595	348	NR	725	17	NR	855	0	NR	985	0	NR
470	169	NR	600	348	NR	730	14	NR	860	0	NR	990	0	NR
475	135	NR	605	347	NR	735	12	NR	865	0	NR	995	0	NR
480	133	NR	610	379	NR	740	11	NR	870	0	NR	1000	0	NR
485	149	NR	615	406	NR	745	9	NR	875	0	NR			

**Summary**

$R_f = 91.3$   
 $R_g = 99.8$   
 $CIE R_a = 94.0$   
 $R_9 = 65.3$



**Color Vector Graphics**

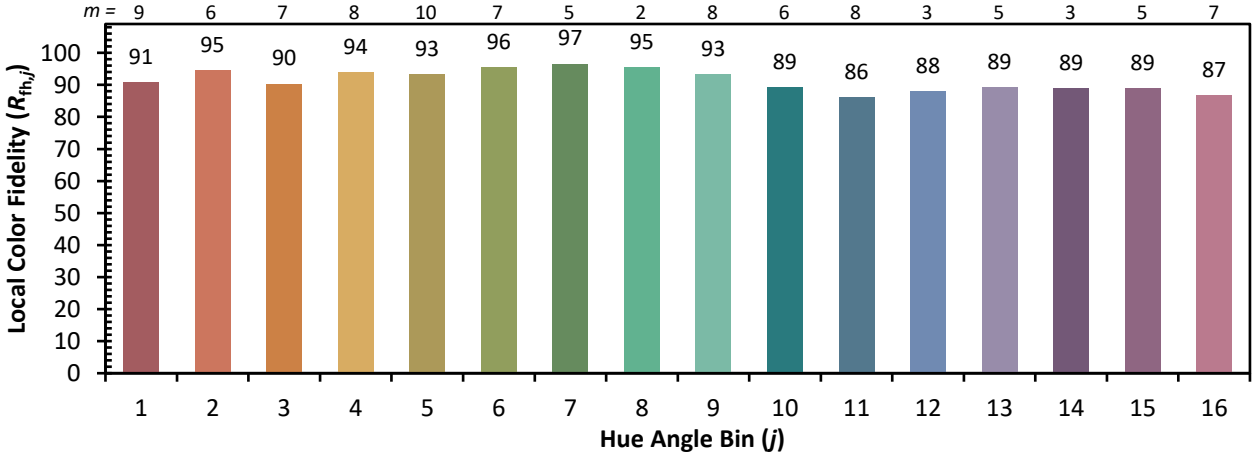


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 93	CES51 = 98	CES76 = 87
CES02 = 62	CES27 = 91	CES52 = 99	CES77 = 88
CES03 = 31	CES28 = 96	CES53 = 97	CES78 = 83
CES04 = 69	CES29 = 96	CES54 = 94	CES79 = 93
CES05 = 49	CES30 = 93	CES55 = 92	CES80 = 92
CES06 = 50	CES31 = 96	CES56 = 95	CES81 = 79
CES07 = 42	CES32 = 88	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 99	CES58 = 95	CES83 = 95
CES09 = 29	CES34 = 93	CES59 = 97	CES84 = 94
CES10 = 74	CES35 = 96	CES60 = 93	CES85 = 81
CES11 = 57	CES36 = 81	CES61 = 92	CES86 = 83
CES12 = 63	CES37 = 94	CES62 = 87	CES87 = 92
CES13 = 43	CES38 = 88	CES63 = 93	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 85
CES15 = 71	CES40 = 97	CES65 = 89	CES90 = 97
CES16 = 47	CES41 = 97	CES66 = 88	CES91 = 73
CES17 = 49	CES42 = 93	CES67 = 87	CES92 = 77
CES18 = 56	CES43 = 93	CES68 = 88	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 89	CES94 = 76
CES20 = 66	CES45 = 96	CES70 = 86	CES95 = 83
CES21 = 85	CES46 = 97	CES71 = 81	CES96 = 92
CES22 = 78	CES47 = 93	CES72 = 94	CES97 = 95
CES23 = 91	CES48 = 92	CES73 = 80	CES98 = 95
CES24 = 90	CES49 = 96	CES74 = 91	CES99 = 93
CES25 = 71	CES50 = 98	CES75 = 83	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)