

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: P977028

Luminaire Tested: 24SR-LD2-C-48-UNV-L930-CD1-ST-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P977028  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-48-UNV-L930-CD1-ST-U  
Description: METALUX SKYRIDGE 2x4 4800LM PACKAGE 90CRI 3000K TROFFER with Straw SKYTRIM  
Light Source: 3000K CCT, 90+ CRI LEDS  
Ballast/Driver: -

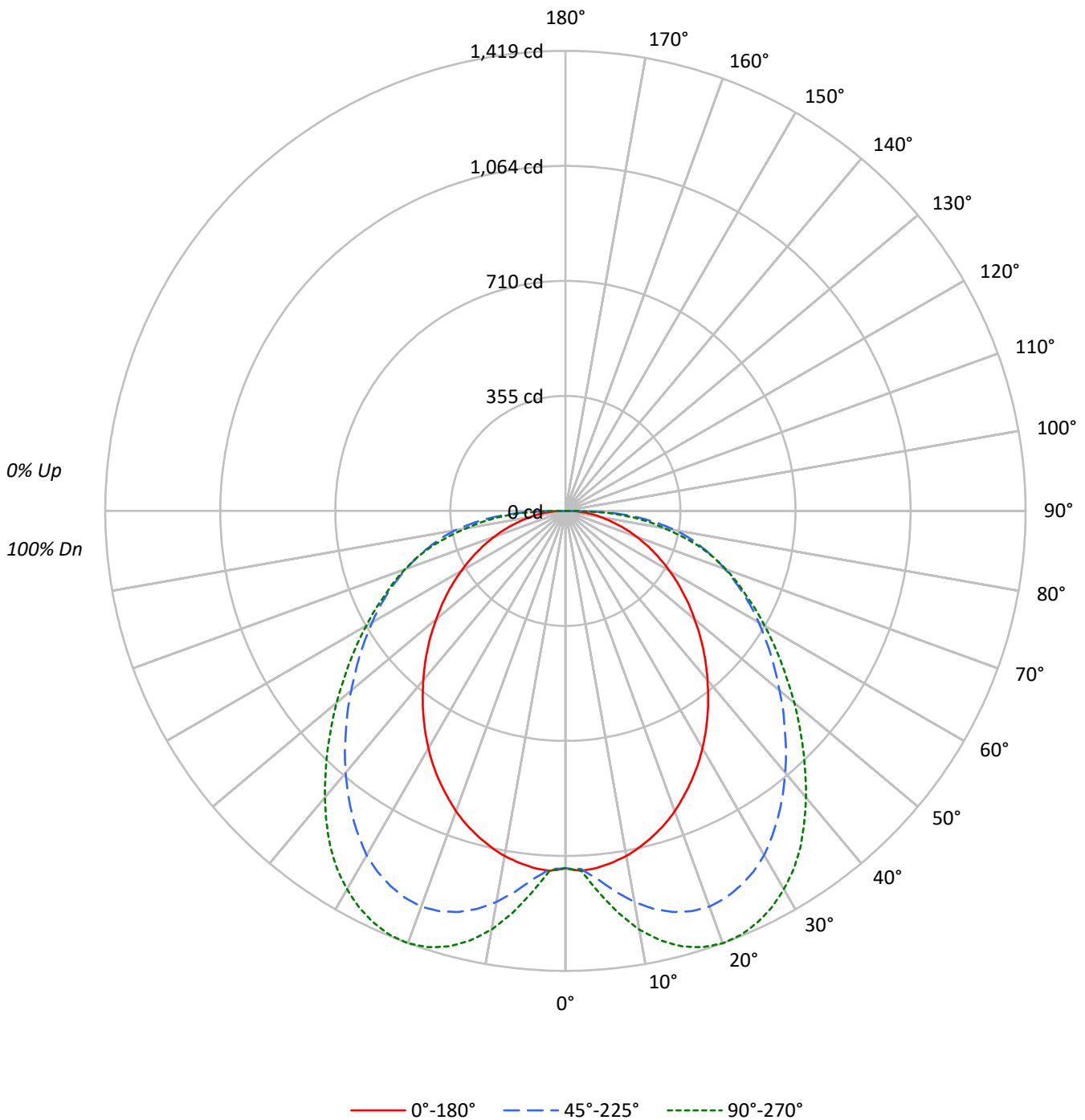
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4185.0 lumens  
Efficiency: N/A  
Efficacy: 120.3 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): 34.8  
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

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CATALOG NUMBER: 24SR-LD2-C-48-UNV-L930-CD1-ST-U

### Luminous Intensity Polar Plot





TEST NUMBER: P977028

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L930-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°	1483	1483	1483
5°	1494	1539	1595
10°	1477	1673	1791
15°	1448	1784	1937
20°	1411	1860	2032
25°	1365	1895	2080
30°	1313	1905	2093
35°	1256	1883	2076
40°	1197	1851	2027
45°	1143	1820	1972
50°	1088	1805	1929
55°	1043	1814	1904
60°	1000	1852	1909
65°	958	1930	1955
70°	918	2058	2071
75°	876	2270	2235
80°	870	2679	2418
85°	954	3450	3017

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 87.5°  
 Luminance: 4571 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.8	2.6
10°-20°	351.7	8.4
20°-30°	562.5	13.4
30°-40°	680.9	16.3
40°-50°	695.4	16.6
50°-60°	640.8	15.3
60°-70°	545.0	13.0
70°-80°	407.5	9.7
80°-90°	190.4	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°	1025.0	24.5
0°-40°	1705.9	40.8
0°-60°	3042.0	72.7
0°-90°	4185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4185.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1102	1102	1102	1102	1102	
5°	1106	1100	1140	1169	1181	105
15°	1040	1133	1281	1361	1391	293
25°	919	1093	1276	1367	1401	423
35°	764	966	1146	1233	1264	478
45°	601	799	956	1018	1036	463
55°	444	646	773	803	812	398
65°	301	511	606	610	614	298
75°	168	369	437	430	430	180
85°	62	195	224	198	195	65
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°	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5
2.5°	1111.4	1109.1	1105.8	1101.2	1100.2	1100.2	1099.0	1099.0	1101.2	1105.8	1112.4
5°	1105.8	1103.5	1100.2	1096.7	1097.9	1101.2	1108.0	1115.9	1127.1	1139.5	1152.9
7.5°	1094.6	1093.4	1091.1	1091.1	1100.2	1115.9	1131.6	1147.3	1165.3	1184.3	1204.6
10°	1081.0	1079.9	1078.7	1087.8	1108.0	1131.6	1154.0	1175.3	1200.1	1224.7	1248.2
12.5°	1062.0	1062.0	1065.3	1085.5	1113.6	1142.8	1170.9	1199.0	1228.2	1257.3	1283.1
15°	1039.5	1039.5	1050.8	1079.9	1115.9	1149.6	1183.3	1214.7	1248.2	1280.9	1307.8
17.5°	1014.8	1013.8	1035.1	1070.9	1111.4	1150.6	1188.9	1223.6	1258.4	1294.3	1322.4
20°	985.7	987.9	1015.9	1057.4	1102.5	1146.1	1186.6	1223.6	1260.6	1298.9	1325.8
22.5°	953.0	957.6	992.3	1038.4	1088.9	1133.9	1176.5	1215.8	1254.0	1292.1	1319.1
25°	919.3	925.1	967.7	1015.9	1069.8	1115.9	1158.5	1200.1	1238.3	1276.3	1303.4
27.5°	883.5	891.4	939.6	990.2	1044.0	1092.3	1134.9	1177.5	1215.8	1255.0	1279.8
30°	845.3	855.4	907.1	958.6	1014.8	1062.0	1104.6	1148.4	1187.7	1225.9	1249.5
32.5°	805.0	817.2	869.9	926.1	981.1	1027.2	1069.8	1114.7	1151.7	1187.7	1211.2
35°	764.5	779.1	832.9	889.1	942.9	989.0	1030.5	1075.4	1112.4	1146.1	1168.6
37.5°	722.9	740.9	794.8	849.8	902.6	948.7	991.3	1032.8	1069.8	1101.2	1123.8
40°	681.4	701.6	755.6	809.4	862.1	905.9	947.4	989.0	1026.0	1054.1	1075.4
42.5°	641.0	661.1	716.3	770.1	818.4	863.3	904.8	945.2	978.9	1007.0	1026.0
45°	600.6	621.9	675.8	728.5	776.9	821.7	863.3	900.3	932.9	956.5	975.5
47.5°	560.2	582.6	636.5	689.2	735.3	779.1	821.7	855.4	886.9	910.4	926.1
50°	519.7	544.5	597.2	651.2	696.0	739.9	780.2	811.6	840.8	862.1	876.7
52.5°	482.7	506.3	560.2	614.0	659.0	702.7	740.9	771.3	797.0	816.2	830.7
55°	444.5	470.3	526.5	578.2	624.1	667.9	702.7	730.8	754.4	773.4	784.7
57.5°	407.5	436.6	491.6	543.3	590.4	632.0	665.7	692.6	714.0	729.7	739.9
60°	371.5	401.9	459.1	510.8	557.9	598.3	630.9	655.5	674.7	688.2	697.1
62.5°	335.7	370.5	426.7	480.4	525.3	564.6	595.0	617.5	635.5	647.7	653.3
65°	300.8	336.8	395.1	448.0	492.8	529.8	559.0	579.3	596.0	606.1	608.4
67.5°	267.1	305.3	363.7	416.5	460.2	495.1	523.2	542.2	556.7	563.5	565.8
70°	233.4	272.9	332.2	385.1	426.7	460.2	486.0	504.0	516.4	523.2	523.2
72.5°	202.0	241.4	300.8	352.5	390.7	424.4	448.0	464.7	475.9	480.4	479.4
75°	168.5	208.8	267.1	316.5	353.7	385.1	408.7	425.4	433.3	436.6	435.6
77.5°	139.1	177.4	233.4	279.5	318.8	344.6	368.2	383.9	391.8	394.0	393.0
80°	112.3	148.2	197.6	241.4	275.0	303.1	324.4	341.3	347.9	345.8	335.7
82.5°	86.4	119.1	162.7	200.9	232.4	258.2	280.7	290.7	291.9	286.3	277.2
85°	61.8	86.4	123.4	156.1	185.2	204.3	217.7	225.6	227.8	223.5	213.3
87.5°	34.7	50.5	73.0	96.5	119.1	132.5	140.4	144.9	148.2	143.7	136.9
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°	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5	1102.5
2.5°	1105.8	1109.1	1108.0	1110.3	1111.4	1111.4	1108.0	1110.3
5°	1154.0	1160.8	1165.3	1172.0	1176.5	1176.5	1177.5	1181.0
7.5°	1206.9	1218.0	1228.2	1236.0	1241.6	1243.9	1247.2	1250.5
10°	1256.1	1269.7	1280.9	1291.0	1297.7	1302.2	1305.5	1311.2
12.5°	1294.3	1310.0	1322.4	1333.6	1342.7	1349.3	1352.6	1357.2
15°	1322.4	1340.4	1354.9	1367.3	1375.2	1383.0	1386.3	1390.9
17.5°	1339.2	1357.2	1372.9	1385.3	1394.2	1402.1	1406.6	1411.1
20°	1343.7	1361.7	1378.5	1390.9	1399.9	1409.9	1414.4	1419.0
22.5°	1336.9	1354.9	1372.9	1386.3	1396.5	1406.6	1411.1	1415.6
25°	1323.5	1342.7	1360.5	1374.1	1383.0	1393.1	1398.7	1401.0
27.5°	1302.2	1321.2	1339.2	1351.6	1361.7	1371.8	1377.4	1378.5
30°	1272.0	1291.0	1309.0	1321.2	1332.6	1341.5	1347.1	1347.1
32.5°	1234.8	1252.8	1272.0	1283.1	1293.3	1302.2	1307.8	1310.0
35°	1192.2	1210.2	1228.2	1238.3	1249.5	1256.1	1260.6	1264.0
37.5°	1146.1	1164.1	1178.7	1187.7	1200.1	1204.6	1211.2	1210.2
40°	1096.7	1111.4	1124.8	1132.7	1142.8	1148.4	1155.2	1154.0
42.5°	1045.2	1059.7	1070.9	1079.9	1085.5	1091.1	1095.7	1094.6
45°	992.3	1005.9	1015.9	1020.4	1029.5	1031.6	1036.1	1036.1
47.5°	939.6	950.8	959.8	966.5	971.0	973.3	977.8	977.8
50°	889.1	899.2	904.8	910.4	915.0	918.3	920.5	921.6
52.5°	839.7	847.6	852.1	856.5	861.0	863.3	865.6	864.3
55°	792.6	798.2	801.5	805.0	808.3	811.6	811.6	811.6
57.5°	745.4	748.8	752.1	754.4	757.7	759.9	759.9	759.9
60°	699.4	702.7	703.9	706.2	709.5	710.5	711.8	709.5
62.5°	654.5	655.5	656.8	657.8	661.1	663.4	663.4	662.3
65°	608.4	608.4	609.6	610.7	612.9	615.2	616.3	614.0
67.5°	563.5	563.5	564.6	564.6	568.1	570.3	571.4	571.4
70°	519.7	518.7	520.9	522.0	524.3	524.3	526.5	526.5
72.5°	475.9	474.9	477.1	477.1	479.4	480.4	480.4	480.4
75°	433.3	430.0	431.0	428.8	431.0	431.0	430.0	430.0
77.5°	387.2	379.4	377.3	372.7	372.7	372.7	370.5	370.5
80°	328.9	321.1	317.7	314.3	314.3	313.2	312.1	312.1
82.5°	270.6	263.8	260.5	257.1	259.3	255.9	257.1	258.2
85°	207.7	202.0	199.9	196.4	195.4	195.4	196.4	195.4
87.5°	134.8	129.0	129.0	125.7	128.0	124.6	121.2	123.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P977028  
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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	12.7	14.4	13.1	14.8	15.1	14.6	16.3	15.0	16.6	16.9
	3H	14.6	16.1	15.0	16.5	16.8	16.9	18.5	17.3	18.8	19.2
	4H	15.3	16.8	15.7	17.1	17.5	18.0	19.5	18.4	19.8	20.2
	6H	15.8	17.2	16.3	17.6	18.0	19.0	20.4	19.4	20.7	21.1
	8H	16.0	17.4	16.5	17.7	18.1	19.4	20.7	19.8	21.1	21.5
	12H	16.2	17.5	16.6	17.8	18.3	19.8	21.1	20.2	21.4	21.9
4H	2H	14.0	15.5	14.4	15.8	16.2	15.4	16.8	15.8	17.2	17.5
	3H	16.3	17.6	16.8	18.0	18.4	17.9	19.2	18.4	19.6	20.0
	4H	17.4	18.5	17.8	18.9	19.4	19.2	20.3	19.6	20.8	21.2
	6H	18.2	19.2	18.7	19.7	20.1	20.3	21.3	20.8	21.8	22.2
	8H	18.5	19.5	19.0	19.9	20.4	20.8	21.8	21.3	22.2	22.7
	12H	18.7	19.6	19.2	20.1	20.5	21.3	22.2	21.8	22.7	23.1
8H	4H	18.3	19.2	18.7	19.7	20.1	19.7	20.7	20.2	21.1	21.6
	6H	19.5	20.3	20.0	20.8	21.3	21.1	21.9	21.6	22.4	22.8
	8H	20.1	20.8	20.6	21.3	21.8	21.7	22.4	22.2	22.9	23.4
	12H	20.5	21.2	21.0	21.7	22.2	22.3	23.0	22.8	23.5	24.0
12H	4H	18.4	19.3	18.9	19.8	20.2	19.8	20.7	20.3	21.2	21.6
	6H	19.8	20.6	20.3	21.0	21.6	21.3	22.0	21.8	22.4	23.0
	8H	20.5	21.2	21.0	21.7	22.2	22.0	22.6	22.5	23.1	23.7

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-5

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L930-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L930-CD1-U

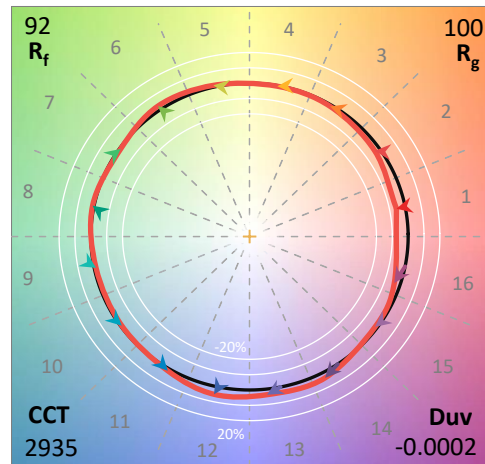
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-457-5  
 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-L930-CD1-U**  
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

**Spectral Parameters**

CCT (K): 2935  
 CIE u': 0.2530  
 CIE v': 0.5224  
 Duv: -0.0002  
 CIE x: 0.4413  
 CIE y: 0.4049  
 CIE z: 0.1538  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 583  
 Purity: 53.99297  
 Rf: 91.8  
 Rg: 99.6

CRI (Ra):	93.5		
R1:	94.7	R9:	55.1
R2:	97.2	R10:	92.3
R3:	98.6	R11:	97.0
R4:	95.2	R12:	86.4
R5:	94.7	R13:	95.3
R6:	96.8	R14:	98.2
R7:	90.9	R15:	89.3
R8:	80.4		



**Test Conditions**

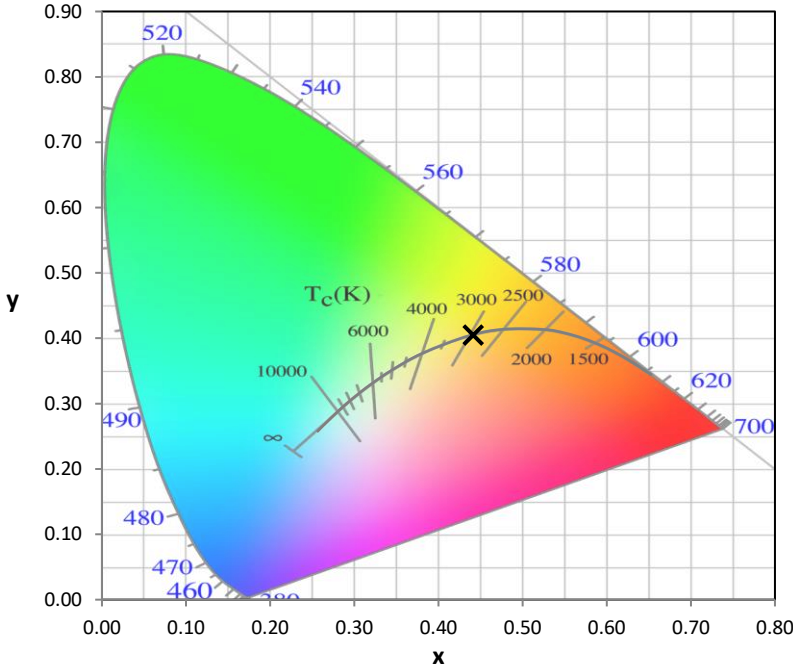
Stabilization Time: 40M  
 Operation Time: 1H 40M  
 Sphere Temperature (°C): 25.0

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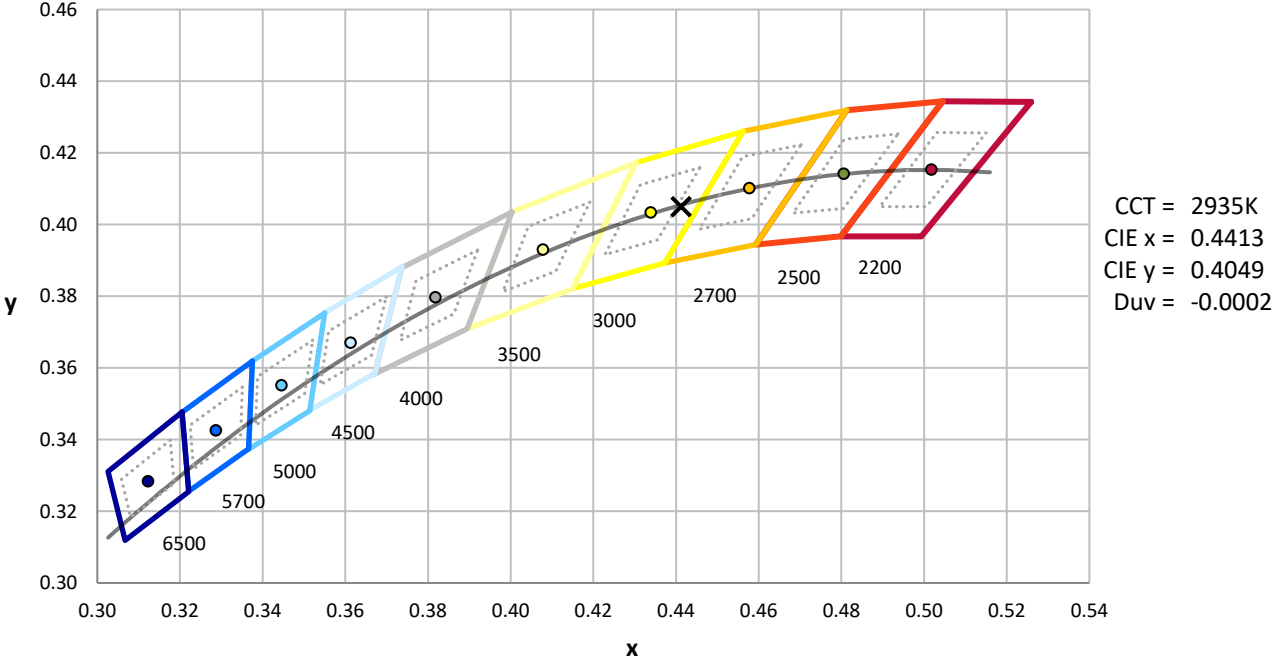
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	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 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-5

**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	108	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	129	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	151	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	168	NR	635	695	NR	765	5	NR	895	0	NR
380	0	NR	510	179	NR	640	225	NR	770	4	NR	900	0	NR
385	0	NR	515	187	NR	645	214	NR	775	4	NR	905	0	NR
390	0	NR	520	194	NR	650	190	NR	780	3	NR	910	0	NR
395	1	NR	525	199	NR	655	160	NR	785	3	NR	915	0	NR
400	2	NR	530	205	NR	660	136	NR	790	2	NR	920	0	NR
405	2	NR	535	213	NR	665	115	NR	795	2	NR	925	0	NR
410	4	NR	540	219	NR	670	106	NR	800	2	NR	930	0	NR
415	7	NR	545	228	NR	675	87	NR	805	1	NR	935	0	NR
420	12	NR	550	236	NR	680	74	NR	810	1	NR	940	0	NR
425	20	NR	555	247	NR	685	64	NR	815	1	NR	945	0	NR
430	32	NR	560	257	NR	690	55	NR	820	1	NR	950	0	NR
435	50	NR	565	267	NR	695	47	NR	825	1	NR	955	0	NR
440	79	NR	570	277	NR	700	40	NR	830	1	NR	960	0	NR
445	133	NR	575	287	NR	705	34	NR	835	1	NR	965	0	NR
450	194	NR	580	297	NR	710	29	NR	840	1	NR	970	0	NR
455	168	NR	585	308	NR	715	24	NR	845	0	NR	975	0	NR
460	117	NR	590	315	NR	720	20	NR	850	0	NR	980	0	NR
465	101	NR	595	320	NR	725	17	NR	855	0	NR	985	0	NR
470	85	NR	600	327	NR	730	14	NR	860	0	NR	990	0	NR
475	73	NR	605	331	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	91	NR	615	398	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-457-5

**Scotopic Flux vs. Wavelength**



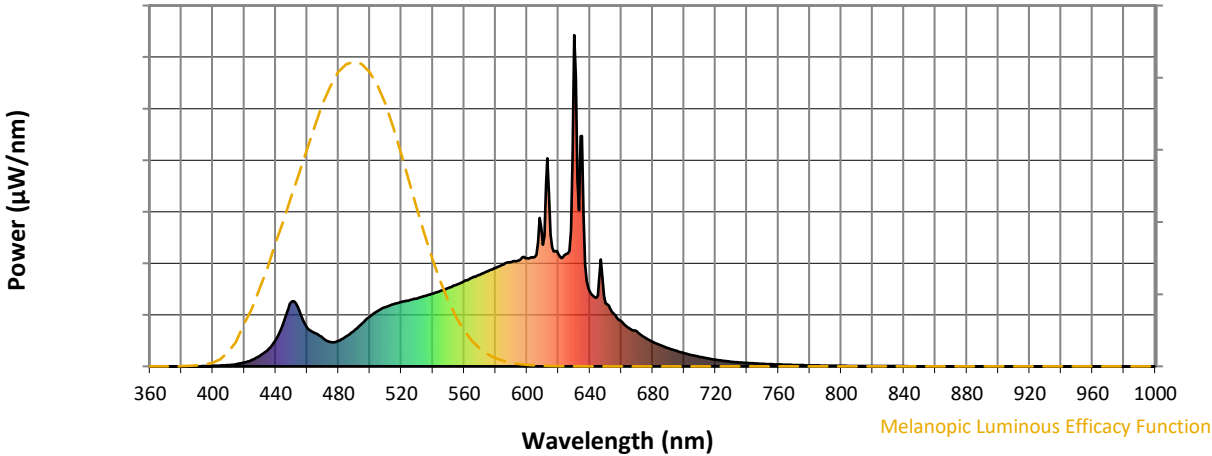
**Scotopic Lumens: NR**

**S/P: 1.4**

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	108	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	129	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	151	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	168	NR	635	695	NR	765	5	NR	895	0	NR
380	0	NR	510	179	NR	640	225	NR	770	4	NR	900	0	NR
385	0	NR	515	187	NR	645	214	NR	775	4	NR	905	0	NR
390	0	NR	520	194	NR	650	190	NR	780	3	NR	910	0	NR
395	1	NR	525	199	NR	655	160	NR	785	3	NR	915	0	NR
400	2	NR	530	205	NR	660	136	NR	790	2	NR	920	0	NR
405	2	NR	535	213	NR	665	115	NR	795	2	NR	925	0	NR
410	4	NR	540	219	NR	670	106	NR	800	2	NR	930	0	NR
415	7	NR	545	228	NR	675	87	NR	805	1	NR	935	0	NR
420	12	NR	550	236	NR	680	74	NR	810	1	NR	940	0	NR
425	20	NR	555	247	NR	685	64	NR	815	1	NR	945	0	NR
430	32	NR	560	257	NR	690	55	NR	820	1	NR	950	0	NR
435	50	NR	565	267	NR	695	47	NR	825	1	NR	955	0	NR
440	79	NR	570	277	NR	700	40	NR	830	1	NR	960	0	NR
445	133	NR	575	287	NR	705	34	NR	835	1	NR	965	0	NR
450	194	NR	580	297	NR	710	29	NR	840	1	NR	970	0	NR
455	168	NR	585	308	NR	715	24	NR	845	0	NR	975	0	NR
460	117	NR	590	315	NR	720	20	NR	850	0	NR	980	0	NR
465	101	NR	595	320	NR	725	17	NR	855	0	NR	985	0	NR
470	85	NR	600	327	NR	730	14	NR	860	0	NR	990	0	NR
475	73	NR	605	331	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	91	NR	615	398	NR	745	9	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



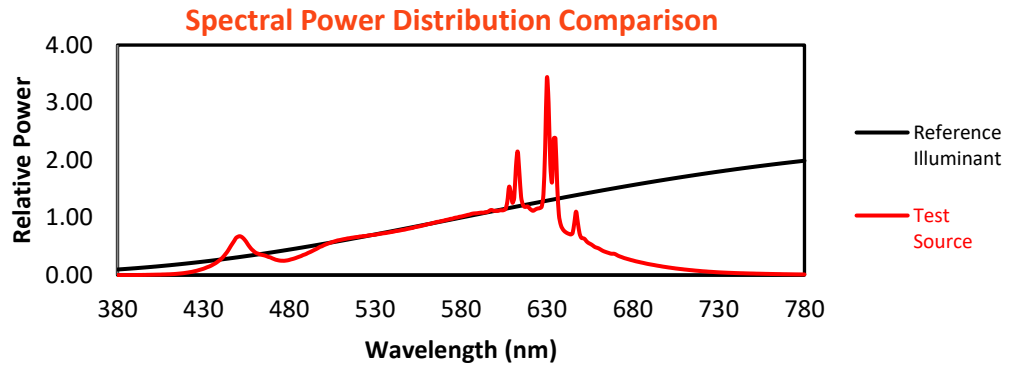
Melanopic Lumens: NR

M/P: 2.72

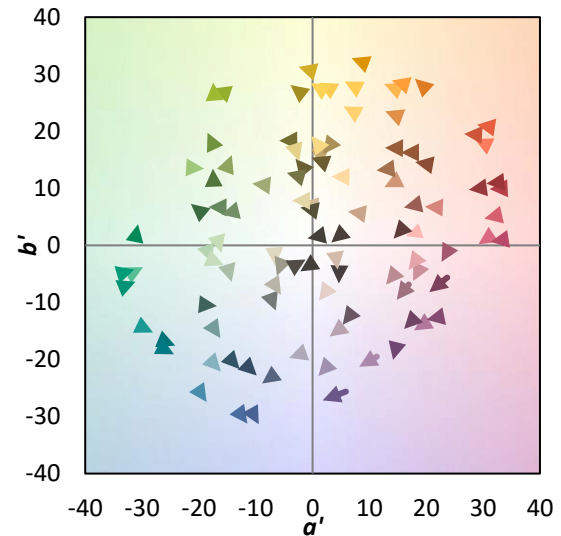
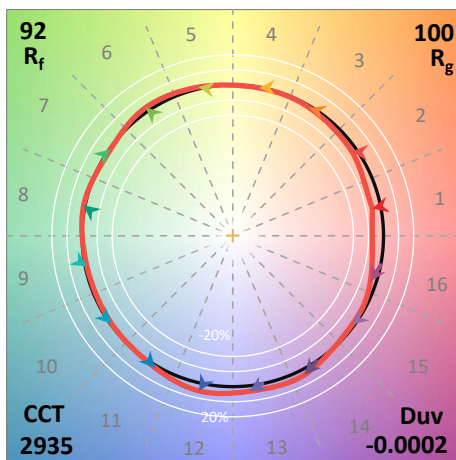
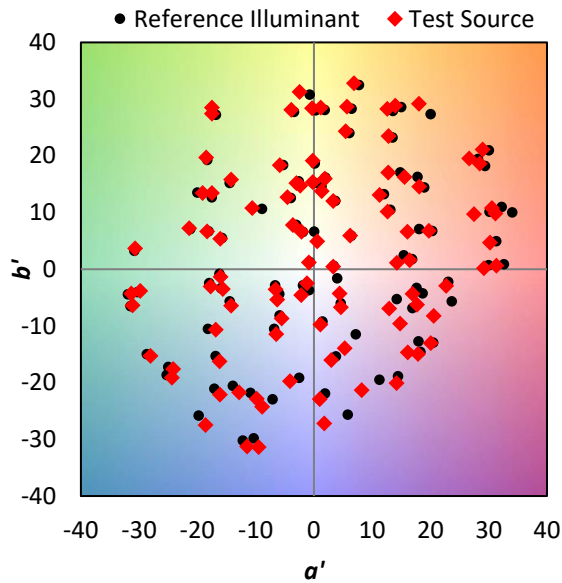
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	108	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	129	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	151	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	168	NR	635	695	NR	765	5	NR	895	0	NR
380	0	NR	510	179	NR	640	225	NR	770	4	NR	900	0	NR
385	0	NR	515	187	NR	645	214	NR	775	4	NR	905	0	NR
390	0	NR	520	194	NR	650	190	NR	780	3	NR	910	0	NR
395	1	NR	525	199	NR	655	160	NR	785	3	NR	915	0	NR
400	2	NR	530	205	NR	660	136	NR	790	2	NR	920	0	NR
405	2	NR	535	213	NR	665	115	NR	795	2	NR	925	0	NR
410	4	NR	540	219	NR	670	106	NR	800	2	NR	930	0	NR
415	7	NR	545	228	NR	675	87	NR	805	1	NR	935	0	NR
420	12	NR	550	236	NR	680	74	NR	810	1	NR	940	0	NR
425	20	NR	555	247	NR	685	64	NR	815	1	NR	945	0	NR
430	32	NR	560	257	NR	690	55	NR	820	1	NR	950	0	NR
435	50	NR	565	267	NR	695	47	NR	825	1	NR	955	0	NR
440	79	NR	570	277	NR	700	40	NR	830	1	NR	960	0	NR
445	133	NR	575	287	NR	705	34	NR	835	1	NR	965	0	NR
450	194	NR	580	297	NR	710	29	NR	840	1	NR	970	0	NR
455	168	NR	585	308	NR	715	24	NR	845	0	NR	975	0	NR
460	117	NR	590	315	NR	720	20	NR	850	0	NR	980	0	NR
465	101	NR	595	320	NR	725	17	NR	855	0	NR	985	0	NR
470	85	NR	600	327	NR	730	14	NR	860	0	NR	990	0	NR
475	73	NR	605	331	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	91	NR	615	398	NR	745	9	NR	875	0	NR			

**Summary**

$R_f = 91.8$   
 $R_g = 99.6$   
 $CIE R_a = 93.5$   
 $R_9 = 55.1$

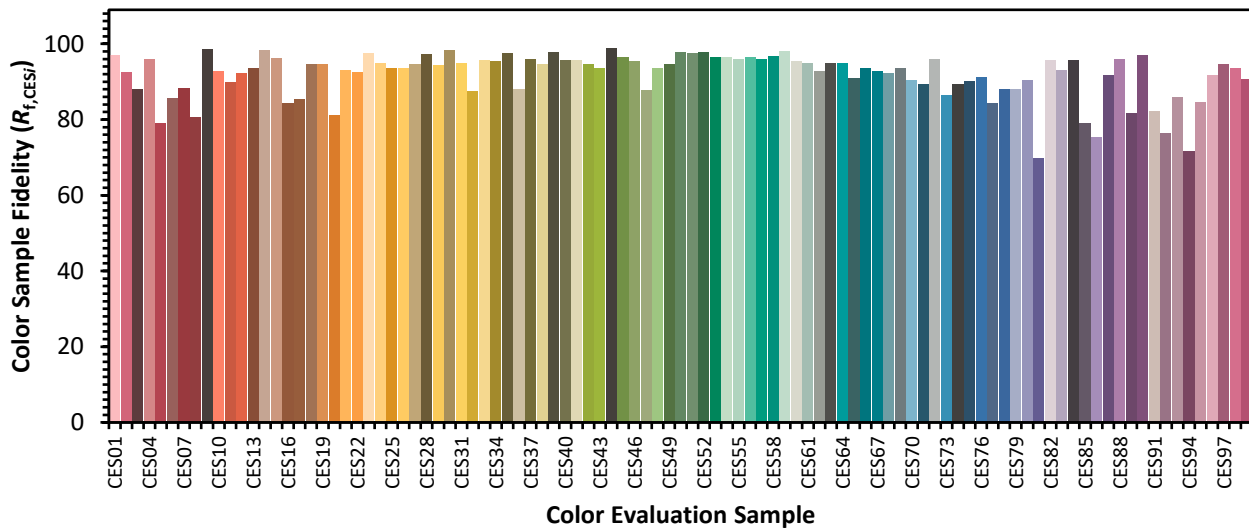


**Color Vector Graphics**

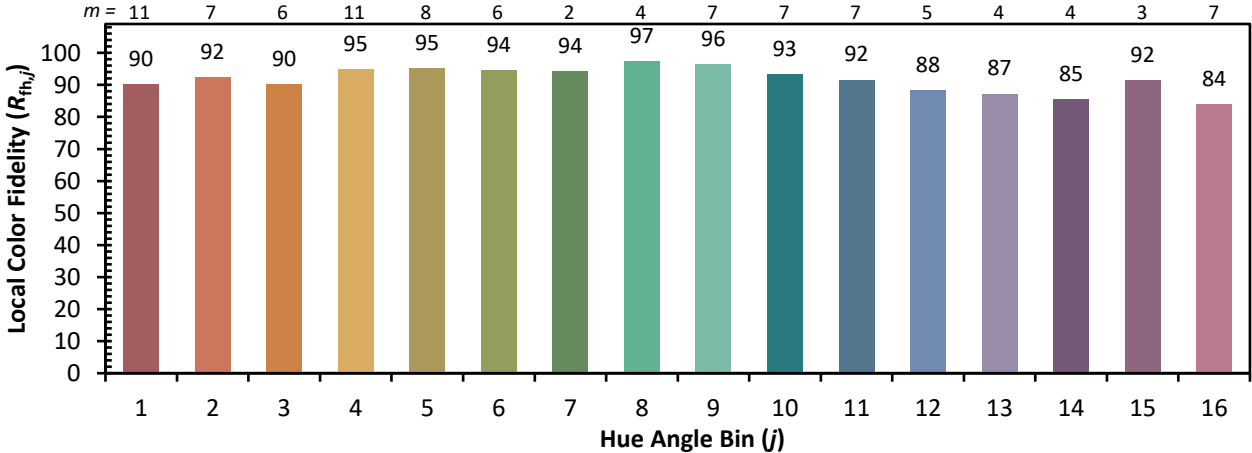


Individual Sample Fidelity Index ( $R_{f,i}$ )

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 91
CES02 = 63	CES27 = 95	CES52 = 98	CES77 = 84
CES03 = 32	CES28 = 97	CES53 = 97	CES78 = 88
CES04 = 70	CES29 = 94	CES54 = 96	CES79 = 88
CES05 = 51	CES30 = 98	CES55 = 96	CES80 = 90
CES06 = 51	CES31 = 95	CES56 = 97	CES81 = 70
CES07 = 44	CES32 = 87	CES57 = 96	CES82 = 96
CES08 = 42	CES33 = 96	CES58 = 97	CES83 = 93
CES09 = 29	CES34 = 95	CES59 = 98	CES84 = 96
CES10 = 76	CES35 = 97	CES60 = 95	CES85 = 79
CES11 = 59	CES36 = 88	CES61 = 95	CES86 = 75
CES12 = 65	CES37 = 96	CES62 = 93	CES87 = 92
CES13 = 44	CES38 = 95	CES63 = 95	CES88 = 96
CES14 = 74	CES39 = 98	CES64 = 95	CES89 = 82
CES15 = 72	CES40 = 96	CES65 = 91	CES90 = 97
CES16 = 48	CES41 = 96	CES66 = 94	CES91 = 82
CES17 = 50	CES42 = 95	CES67 = 93	CES92 = 77
CES18 = 57	CES43 = 94	CES68 = 92	CES93 = 86
CES19 = 72	CES44 = 99	CES69 = 93	CES94 = 72
CES20 = 67	CES45 = 97	CES70 = 91	CES95 = 85
CES21 = 86	CES46 = 95	CES71 = 89	CES96 = 92
CES22 = 79	CES47 = 88	CES72 = 96	CES97 = 95
CES23 = 92	CES48 = 94	CES73 = 86	CES98 = 94
CES24 = 91	CES49 = 95	CES74 = 89	CES99 = 91
CES25 = 72	CES50 = 98	CES75 = 90	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)