

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: FAIL-SAFE

Report Number: P1357045

Luminaire Tested: 3ASL4-25VHE-3-40-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 3ASL4-25VHE-3-40-UNV
Description: 3FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 4000K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

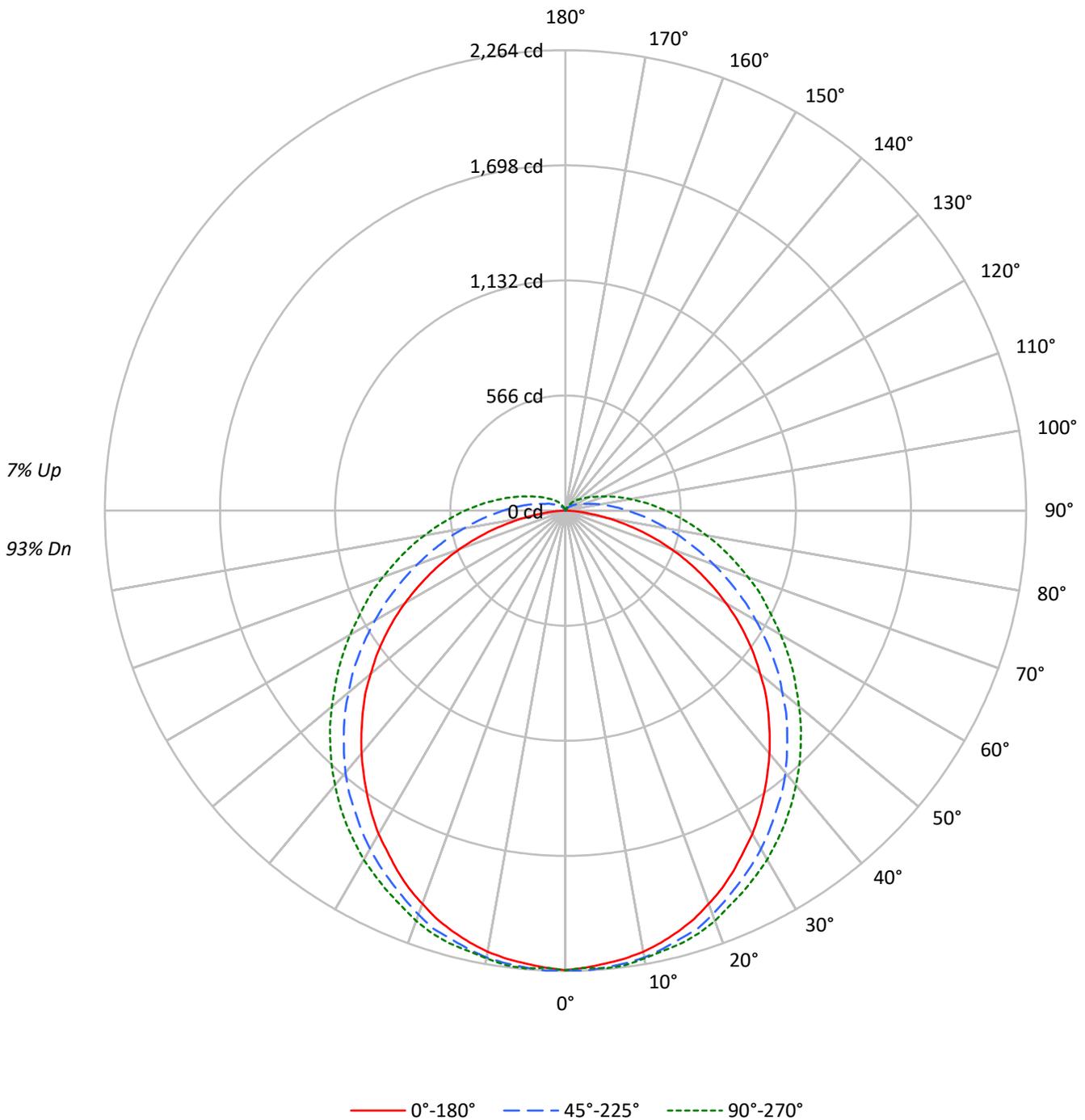
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7683.0 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 2.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 64.2
Input Voltage (V): NR
Input Current (A_{in}): 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: 24 FT

TEST NUMBER: P1357045
CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

Luminous Intensity Polar Plot





TEST NUMBER: P1357045
 CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	63	63	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24494	24494	24494
5°	24257	24020	23933
10°	24102	23541	23327
15°	23816	22950	22814
20°	23437	22383	22235
25°	22998	21677	21578
30°	22536	21061	21021
35°	21965	20367	20401
40°	21440	19729	19749
45°	20875	18962	19094
50°	20229	18138	18413
55°	19532	17349	17801
60°	18630	16431	17179
65°	17486	15546	16665
70°	16027	14665	16262
75°	13922	13855	15984
80°	10767	13233	15867
85°	6264	13040	16101

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20875 cd/sqm



TEST NUMBER: P1357045
 CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.3	2.8
10°-20°	615.2	8.0
20°-30°	930.2	12.1
30°-40°	1126.3	14.7
40°-50°	1183.0	15.4
50°-60°	1103.6	14.4
60°-70°	912.1	11.9
70°-80°	656.7	8.5
80°-90°	408.1	5.3
90°-100°	239.1	3.1
100°-110°	136.8	1.8
110°-120°	77.2	1.0
120°-130°	44.5	0.6
130°-140°	24.0	0.3
140°-150°	10.1	0.1
150°-160°	1.9	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1759.7	22.9
0°-40°	2886.0	37.6
0°-60°	5172.6	67.3
0°-90°	7149.5	93.1
90°-120°	453.2	5.9
90°-150°	531.7	6.9
90°-180°	534.0	7.0
0°-180°	7683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2260	2260	2260	2260	2260	
5°	2236	2255	2255	2255	2260	213
15°	2142	2170	2180	2194	2203	604
25°	1954	1987	2020	2048	2067	900
35°	1701	1748	1804	1856	1879	1065
45°	1409	1461	1541	1607	1635	1087
55°	1085	1146	1240	1330	1362	970
65°	733	803	926	1043	1085	725
75°	376	470	634	770	827	397
85°	70	211	399	540	592	86
90°	0	127	305	437	493	3
95°	0	80	230	352	404	0
105°	0	28	127	221	258	0
115°	0	14	75	136	160	0
125°	0	9	47	89	103	0
135°	0	0	28	56	70	0
145°	0	0	14	33	38	0
155°	0	0	0	9	14	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357045

CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2259.7	2259.7	2259.7	2259.7	2259.7
2.5°	2250.3	2264.4	2264.4	2250.3	2250.3
5°	2236.2	2255.0	2255.0	2255.0	2259.7
7.5°	2222.1	2245.6	2245.6	2245.6	2255.0
10°	2203.3	2226.8	2231.5	2231.5	2236.2
12.5°	2175.1	2203.3	2208.0	2212.7	2217.4
15°	2142.2	2170.4	2179.8	2193.9	2203.3
17.5°	2104.6	2137.5	2156.3	2170.4	2179.8
20°	2057.7	2090.6	2114.0	2132.8	2146.9
22.5°	2010.7	2038.9	2067.1	2090.6	2104.6
25°	1954.3	1987.2	2020.1	2048.3	2067.1
27.5°	1893.2	1930.8	1973.1	2006.0	2024.8
30°	1836.9	1874.4	1921.4	1963.7	1982.5
32.5°	1771.1	1813.4	1865.1	1907.3	1930.8
35°	1700.6	1747.6	1804.0	1855.7	1879.1
37.5°	1630.2	1677.1	1747.6	1799.3	1822.8
40°	1559.7	1606.7	1681.8	1738.2	1761.7
42.5°	1484.5	1531.5	1611.4	1672.4	1700.6
45°	1409.4	1461.0	1540.9	1606.7	1634.9
47.5°	1334.2	1385.9	1470.4	1540.9	1569.1
50°	1249.6	1306.0	1390.6	1470.4	1498.6
52.5°	1169.8	1226.1	1320.1	1400.0	1428.2
55°	1085.2	1146.3	1240.2	1329.5	1362.4
57.5°	1000.6	1061.7	1160.4	1254.3	1291.9
60°	911.4	977.2	1080.5	1179.2	1221.4
62.5°	822.1	892.6	1005.3	1108.7	1151.0
65°	732.9	803.3	925.5	1042.9	1085.2
67.5°	643.6	718.8	850.3	972.5	1024.1
70°	554.3	634.2	775.1	902.0	953.7
72.5°	465.1	549.7	704.7	836.2	887.9
75°	375.8	469.8	634.2	770.4	826.8
77.5°	286.6	394.6	573.1	709.4	765.8
80°	206.7	328.9	507.4	648.3	704.7
82.5°	131.5	263.1	451.0	591.9	648.3
85°	70.5	211.4	399.3	540.3	591.9
87.5°	23.5	164.4	347.6	488.6	540.3
90°	0.0	126.8	305.4	436.9	493.3
92.5°	0.0	98.7	267.8	394.6	446.3
95°	0.0	79.9	230.2	352.3	404.0
97.5°	0.0	65.8	202.0	314.8	361.7
100°	0.0	51.7	173.8	281.9	324.2
102.5°	0.0	42.3	150.3	249.0	291.3
105°	0.0	28.2	126.8	220.8	258.4
107.5°	0.0	23.5	108.1	197.3	230.2
110°	0.0	18.8	98.7	169.1	202.0



TEST NUMBER: P1357045
 CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	14.1	89.3	150.3	183.2
115°	0.0	14.1	75.2	136.2	159.7
117.5°	0.0	14.1	65.8	122.1	145.6
120°	0.0	9.4	61.1	108.1	131.5
122.5°	0.0	9.4	51.7	98.7	117.4
125°	0.0	9.4	47.0	89.3	103.4
127.5°	0.0	4.7	42.3	79.9	94.0
130°	0.0	4.7	37.6	70.5	84.6
132.5°	0.0	4.7	32.9	65.8	79.9
135°	0.0	0.0	28.2	56.4	70.5
137.5°	0.0	0.0	23.5	51.7	61.1
140°	0.0	0.0	18.8	42.3	56.4
142.5°	0.0	0.0	14.1	37.6	47.0
145°	0.0	0.0	14.1	32.9	37.6
147.5°	0.0	0.0	9.4	23.5	32.9
150°	0.0	0.0	4.7	18.8	23.5
152.5°	0.0	0.0	0.0	14.1	18.8
155°	0.0	0.0	0.0	9.4	14.1
157.5°	0.0	0.0	0.0	0.0	4.7
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1357045
 CATALOG NUMBER: 3ASL4-25VHE-3-40-UNV

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	20.43	21.97	20.90	22.43	22.91	22.43	23.97	22.90	24.43	24.91
	3H	21.93	23.34	22.41	23.80	24.33	24.88	26.29	25.37	26.75	27.28
	4H	22.41	23.74	22.92	24.23	24.76	26.07	27.40	26.57	27.88	28.42
	6H	22.69	23.93	23.20	24.42	24.98	27.31	28.55	27.82	29.04	29.60
	8H	22.74	23.93	23.27	24.45	25.01	27.94	29.13	28.47	29.65	30.21
	12H	22.75	23.89	23.29	24.41	25.00	28.63	29.77	29.16	30.28	30.87
4H	2H	21.31	22.64	21.81	23.12	23.66	22.87	24.20	23.37	24.68	25.22
	3H	23.04	24.18	23.56	24.70	25.26	25.55	26.68	26.06	27.21	27.77
	4H	23.65	24.68	24.18	25.22	25.81	26.90	27.94	27.44	28.48	29.07
	6H	24.04	24.96	24.60	25.52	26.13	28.33	29.25	28.89	29.81	30.42
	8H	24.14	25.00	24.70	25.56	26.18	29.07	29.93	29.63	30.50	31.11
	12H	24.18	24.97	24.77	25.56	26.18	29.88	30.67	30.47	31.26	31.88
8H	4H	24.32	25.18	24.88	25.75	26.37	27.12	27.98	27.68	28.55	29.17
	6H	24.90	25.63	25.49	26.24	26.86	28.72	29.45	29.31	30.05	30.68
	8H	25.08	25.74	25.69	26.36	26.99	29.60	30.26	30.20	30.87	31.51
	12H	25.20	25.79	25.80	26.39	27.09	30.60	31.19	31.20	31.79	32.50
12H	4H	24.51	25.29	25.09	25.89	26.51	27.13	27.91	27.71	28.50	29.13
	6H	25.19	25.85	25.79	26.47	27.10	28.76	29.42	29.36	30.03	30.67
	8H	25.47	26.06	26.08	26.66	27.37	29.71	30.30	30.31	30.90	31.60

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-4

Test Date: 11/18/2025

Luminaire Tested: 4ASL-2-40-UNV-OPL-1_600mA

Data in this report applies to families of products including 4ASL

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/18/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Fail-Safe
 Catalog Number: **4ASL-2-40-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 4000K LEDs with 1 rows at 600mA

Spectral Parameters

CCT (K): 4015
 CIE u': 0.2259
 CIE v': 0.4990
 Duv: -0.0019
 CIE x: 0.3785
 CIE y: 0.3715
 CIE z: 0.2500
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 580
 Purity: 25.06827
 Rf: 90.7
 Rg: 100.2

CRI (Ra): 93.9
 R1: 95.7
 R2: 96.3
 R3: 94.8
 R4: 95.2
 R5: 94.6
 R6: 93.5
 R7: 94.0
 R8: 87.2
 R9: 66.3
 R10: 89.1
 R11: 95.0
 R12: 73.8
 R13: 96.0
 R14: 96.4
 R15: 93.2



Test Conditions

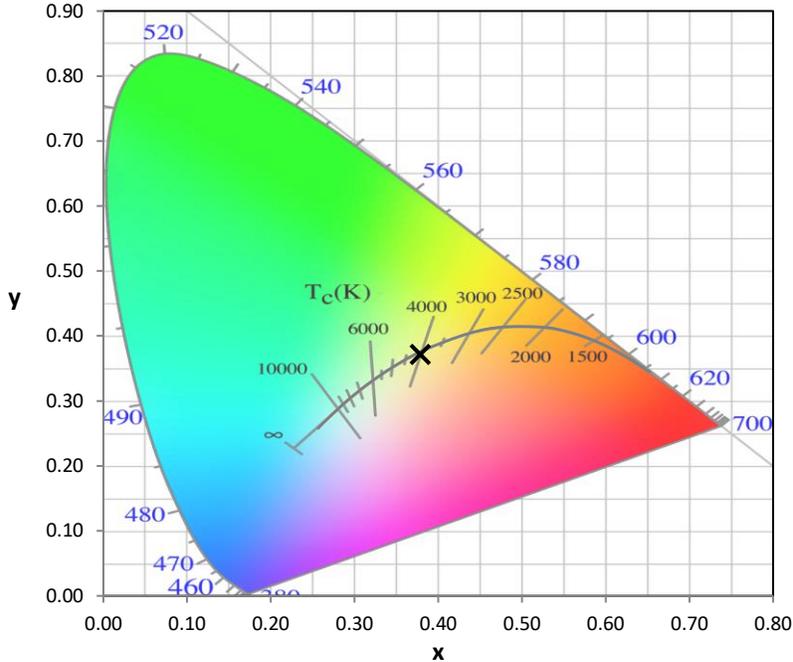
Stabilization Time: 23M
 Operation Time: 1H 23M
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2511-597-4

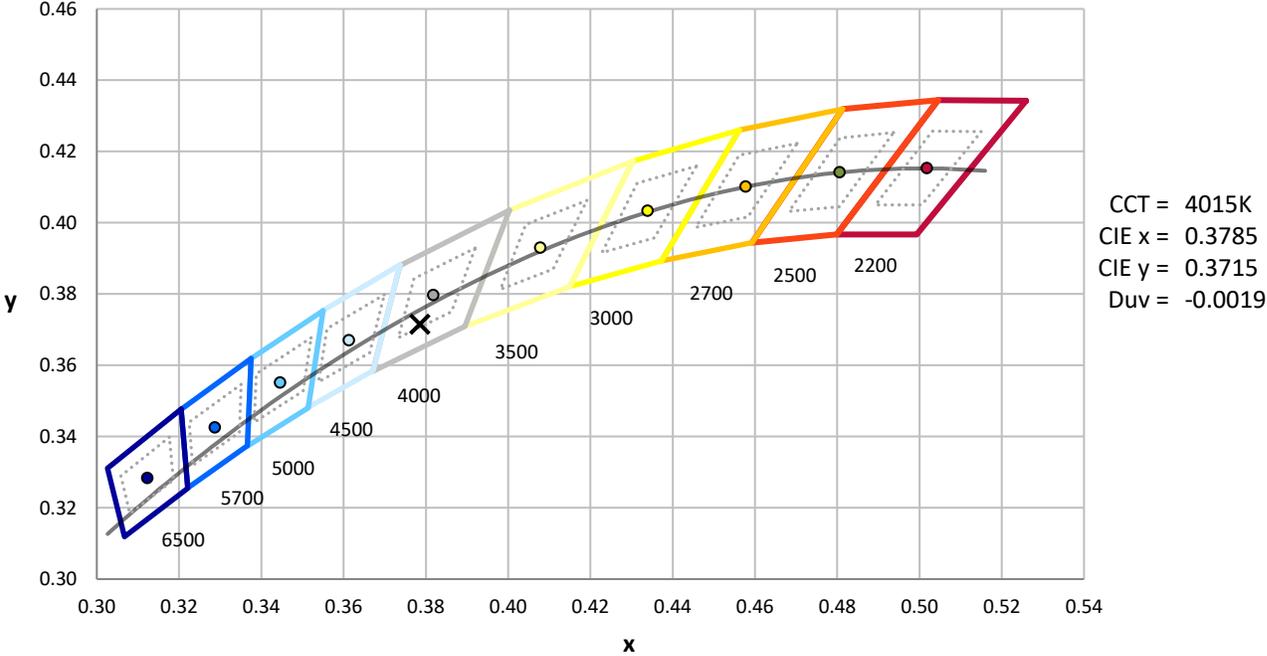
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

REPORT NUMBER: SP1-2511-597-4

CIE 1931 Chromaticity Diagram



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

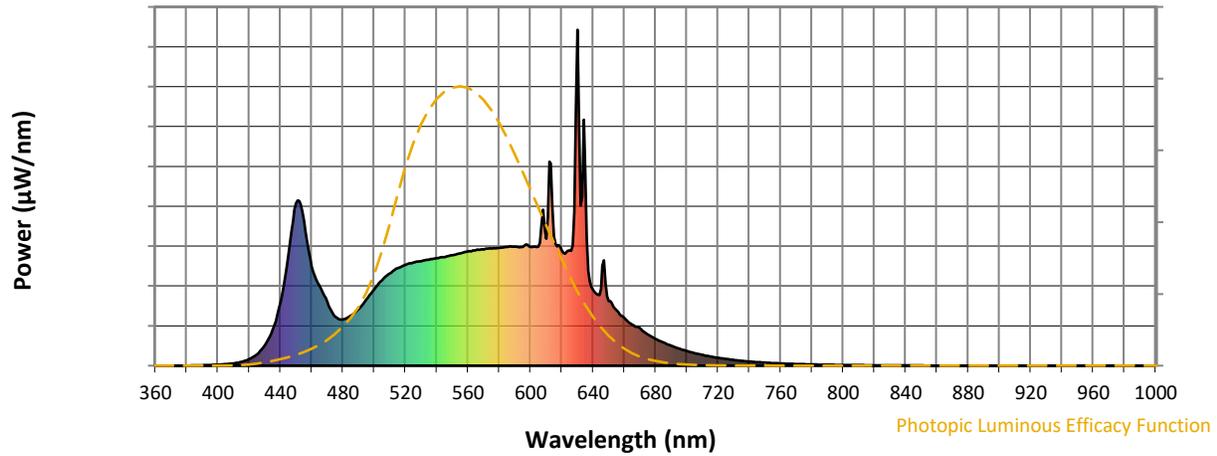


CCT = 4015K
 CIE x = 0.3785
 CIE y = 0.3715
 Duv = -0.0019

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2511-597-4

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	169	NR	620	343	NR	750	9	NR	880	0	NR
365	0	NR	495	197	NR	625	343	NR	755	8	NR	885	0	NR
370	0	NR	500	228	NR	630	1000	NR	760	7	NR	890	0	NR
375	0	NR	505	254	NR	635	591	NR	765	6	NR	895	0	NR
380	0	NR	510	274	NR	640	225	NR	770	5	NR	900	0	NR
385	1	NR	515	290	NR	645	229	NR	775	4	NR	905	0	NR
390	1	NR	520	300	NR	650	193	NR	780	4	NR	910	0	NR
395	2	NR	525	307	NR	655	165	NR	785	3	NR	915	0	NR
400	3	NR	530	311	NR	660	142	NR	790	3	NR	920	0	NR
405	5	NR	535	316	NR	665	122	NR	795	2	NR	925	0	NR
410	7	NR	540	320	NR	670	112	NR	800	2	NR	930	0	NR
415	11	NR	545	323	NR	675	93	NR	805	2	NR	935	0	NR
420	20	NR	550	329	NR	680	80	NR	810	2	NR	940	0	NR
425	35	NR	555	334	NR	685	69	NR	815	1	NR	945	0	NR
430	61	NR	560	340	NR	690	59	NR	820	1	NR	950	0	NR
435	108	NR	565	344	NR	695	51	NR	825	1	NR	955	0	NR
440	187	NR	570	346	NR	700	43	NR	830	1	NR	960	0	NR
445	329	NR	575	349	NR	705	37	NR	835	1	NR	965	0	NR
450	484	NR	580	351	NR	710	32	NR	840	1	NR	970	0	NR
455	433	NR	585	353	NR	715	27	NR	845	1	NR	975	0	NR
460	296	NR	590	354	NR	720	23	NR	850	1	NR	980	0	NR
465	237	NR	595	353	NR	725	20	NR	855	0	NR	985	0	NR
470	188	NR	600	354	NR	730	17	NR	860	0	NR	990	0	NR
475	146	NR	605	354	NR	735	15	NR	865	0	NR	995	0	NR
480	138	NR	610	378	NR	740	12	NR	870	0	NR	1000	0	NR
485	149	NR	615	385	NR	745	11	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-4

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.79

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	169	NR	620	343	NR	750	9	NR	880	0	NR
365	0	NR	495	197	NR	625	343	NR	755	8	NR	885	0	NR
370	0	NR	500	228	NR	630	1000	NR	760	7	NR	890	0	NR
375	0	NR	505	254	NR	635	591	NR	765	6	NR	895	0	NR
380	0	NR	510	274	NR	640	225	NR	770	5	NR	900	0	NR
385	1	NR	515	290	NR	645	229	NR	775	4	NR	905	0	NR
390	1	NR	520	300	NR	650	193	NR	780	4	NR	910	0	NR
395	2	NR	525	307	NR	655	165	NR	785	3	NR	915	0	NR
400	3	NR	530	311	NR	660	142	NR	790	3	NR	920	0	NR
405	5	NR	535	316	NR	665	122	NR	795	2	NR	925	0	NR
410	7	NR	540	320	NR	670	112	NR	800	2	NR	930	0	NR
415	11	NR	545	323	NR	675	93	NR	805	2	NR	935	0	NR
420	20	NR	550	329	NR	680	80	NR	810	2	NR	940	0	NR
425	35	NR	555	334	NR	685	69	NR	815	1	NR	945	0	NR
430	61	NR	560	340	NR	690	59	NR	820	1	NR	950	0	NR
435	108	NR	565	344	NR	695	51	NR	825	1	NR	955	0	NR
440	187	NR	570	346	NR	700	43	NR	830	1	NR	960	0	NR
445	329	NR	575	349	NR	705	37	NR	835	1	NR	965	0	NR
450	484	NR	580	351	NR	710	32	NR	840	1	NR	970	0	NR
455	433	NR	585	353	NR	715	27	NR	845	1	NR	975	0	NR
460	296	NR	590	354	NR	720	23	NR	850	1	NR	980	0	NR
465	237	NR	595	353	NR	725	20	NR	855	0	NR	985	0	NR
470	188	NR	600	354	NR	730	17	NR	860	0	NR	990	0	NR
475	146	NR	605	354	NR	735	15	NR	865	0	NR	995	0	NR
480	138	NR	610	378	NR	740	12	NR	870	0	NR	1000	0	NR
485	149	NR	615	385	NR	745	11	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-4

Melanopic Flux vs. Wavelength



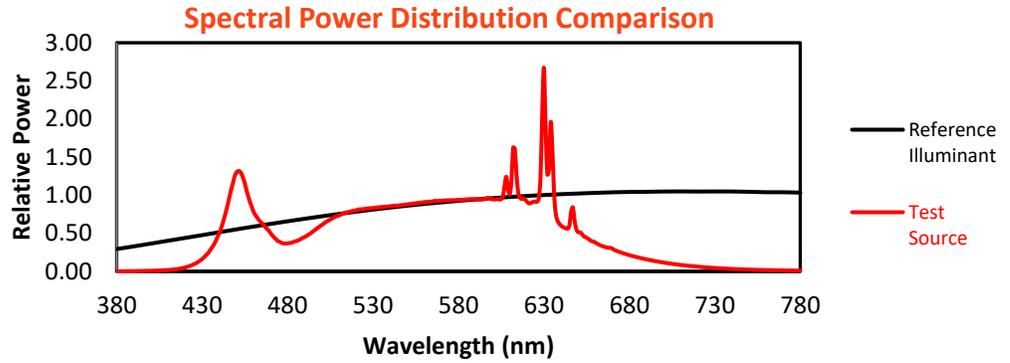
Melanopic Lumens: NR

M/P: 3.74

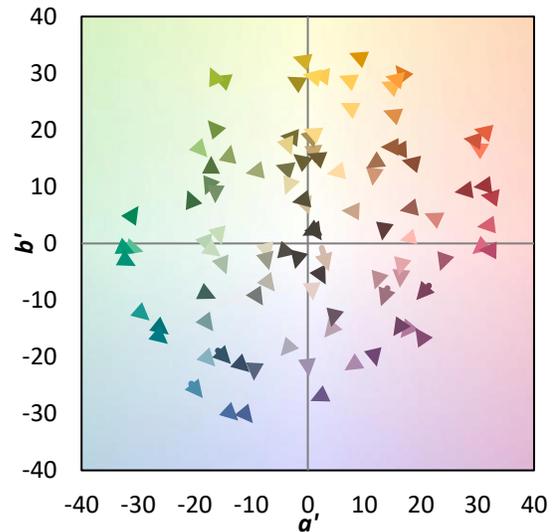
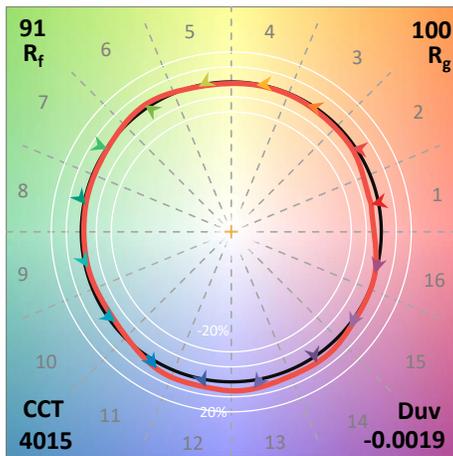
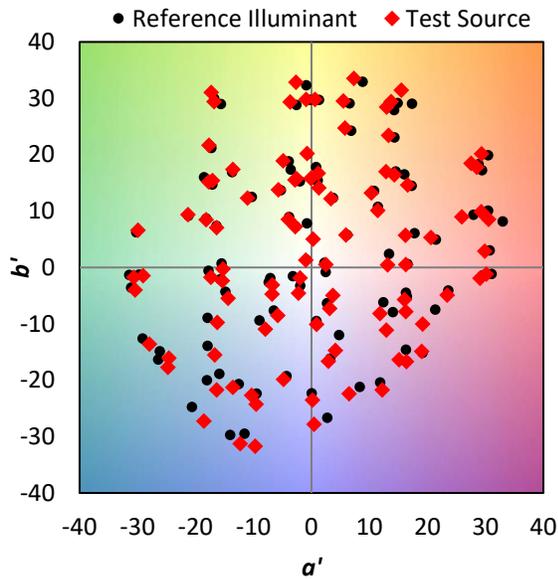
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	169	NR	620	343	NR	750	9	NR	880	0	NR
365	0	NR	495	197	NR	625	343	NR	755	8	NR	885	0	NR
370	0	NR	500	228	NR	630	1000	NR	760	7	NR	890	0	NR
375	0	NR	505	254	NR	635	591	NR	765	6	NR	895	0	NR
380	0	NR	510	274	NR	640	225	NR	770	5	NR	900	0	NR
385	1	NR	515	290	NR	645	229	NR	775	4	NR	905	0	NR
390	1	NR	520	300	NR	650	193	NR	780	4	NR	910	0	NR
395	2	NR	525	307	NR	655	165	NR	785	3	NR	915	0	NR
400	3	NR	530	311	NR	660	142	NR	790	3	NR	920	0	NR
405	5	NR	535	316	NR	665	122	NR	795	2	NR	925	0	NR
410	7	NR	540	320	NR	670	112	NR	800	2	NR	930	0	NR
415	11	NR	545	323	NR	675	93	NR	805	2	NR	935	0	NR
420	20	NR	550	329	NR	680	80	NR	810	2	NR	940	0	NR
425	35	NR	555	334	NR	685	69	NR	815	1	NR	945	0	NR
430	61	NR	560	340	NR	690	59	NR	820	1	NR	950	0	NR
435	108	NR	565	344	NR	695	51	NR	825	1	NR	955	0	NR
440	187	NR	570	346	NR	700	43	NR	830	1	NR	960	0	NR
445	329	NR	575	349	NR	705	37	NR	835	1	NR	965	0	NR
450	484	NR	580	351	NR	710	32	NR	840	1	NR	970	0	NR
455	433	NR	585	353	NR	715	27	NR	845	1	NR	975	0	NR
460	296	NR	590	354	NR	720	23	NR	850	1	NR	980	0	NR
465	237	NR	595	353	NR	725	20	NR	855	0	NR	985	0	NR
470	188	NR	600	354	NR	730	17	NR	860	0	NR	990	0	NR
475	146	NR	605	354	NR	735	15	NR	865	0	NR	995	0	NR
480	138	NR	610	378	NR	740	12	NR	870	0	NR	1000	0	NR
485	149	NR	615	385	NR	745	11	NR	875	0	NR			

Summary

$R_f = 90.7$
 $R_g = 100.2$
 CIE $R_a = 93.9$
 $R_9 = 66.3$

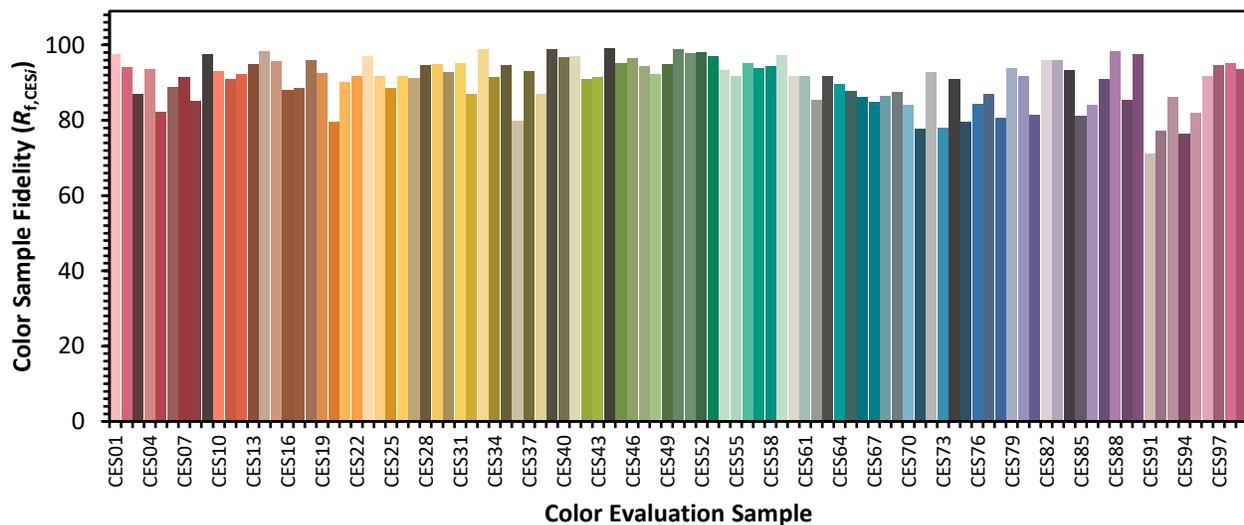


Color Vector Graphics



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

CES01 = 86	CES26 = 92	CES51 = 98	CES76 = 84
CES02 = 62	CES27 = 91	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 95	CES53 = 97	CES78 = 81
CES04 = 69	CES29 = 95	CES54 = 93	CES79 = 94
CES05 = 49	CES30 = 93	CES55 = 92	CES80 = 92
CES06 = 50	CES31 = 95	CES56 = 95	CES81 = 81
CES07 = 42	CES32 = 87	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 99	CES58 = 94	CES83 = 96
CES09 = 29	CES34 = 91	CES59 = 97	CES84 = 93
CES10 = 74	CES35 = 95	CES60 = 92	CES85 = 81
CES11 = 57	CES36 = 80	CES61 = 92	CES86 = 84
CES12 = 63	CES37 = 93	CES62 = 85	CES87 = 91
CES13 = 43	CES38 = 87	CES63 = 92	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 90	CES89 = 85
CES15 = 71	CES40 = 97	CES65 = 88	CES90 = 98
CES16 = 47	CES41 = 97	CES66 = 86	CES91 = 71
CES17 = 49	CES42 = 91	CES67 = 85	CES92 = 77
CES18 = 56	CES43 = 91	CES68 = 87	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 87	CES94 = 76
CES20 = 66	CES45 = 95	CES70 = 84	CES95 = 82
CES21 = 85	CES46 = 96	CES71 = 78	CES96 = 92
CES22 = 78	CES47 = 94	CES72 = 93	CES97 = 95
CES23 = 91	CES48 = 92	CES73 = 78	CES98 = 95
CES24 = 90	CES49 = 95	CES74 = 91	CES99 = 94
CES25 = 71	CES50 = 99	CES75 = 80	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)