

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: P1356984

Luminaire Tested: 3ASL4-10-1-65-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-6)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 3ASL4-10-1-65-UNV
Description: 3FT 1000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 6500K LEDS 1 ROW
Light Source: -
Ballast/Driver: -

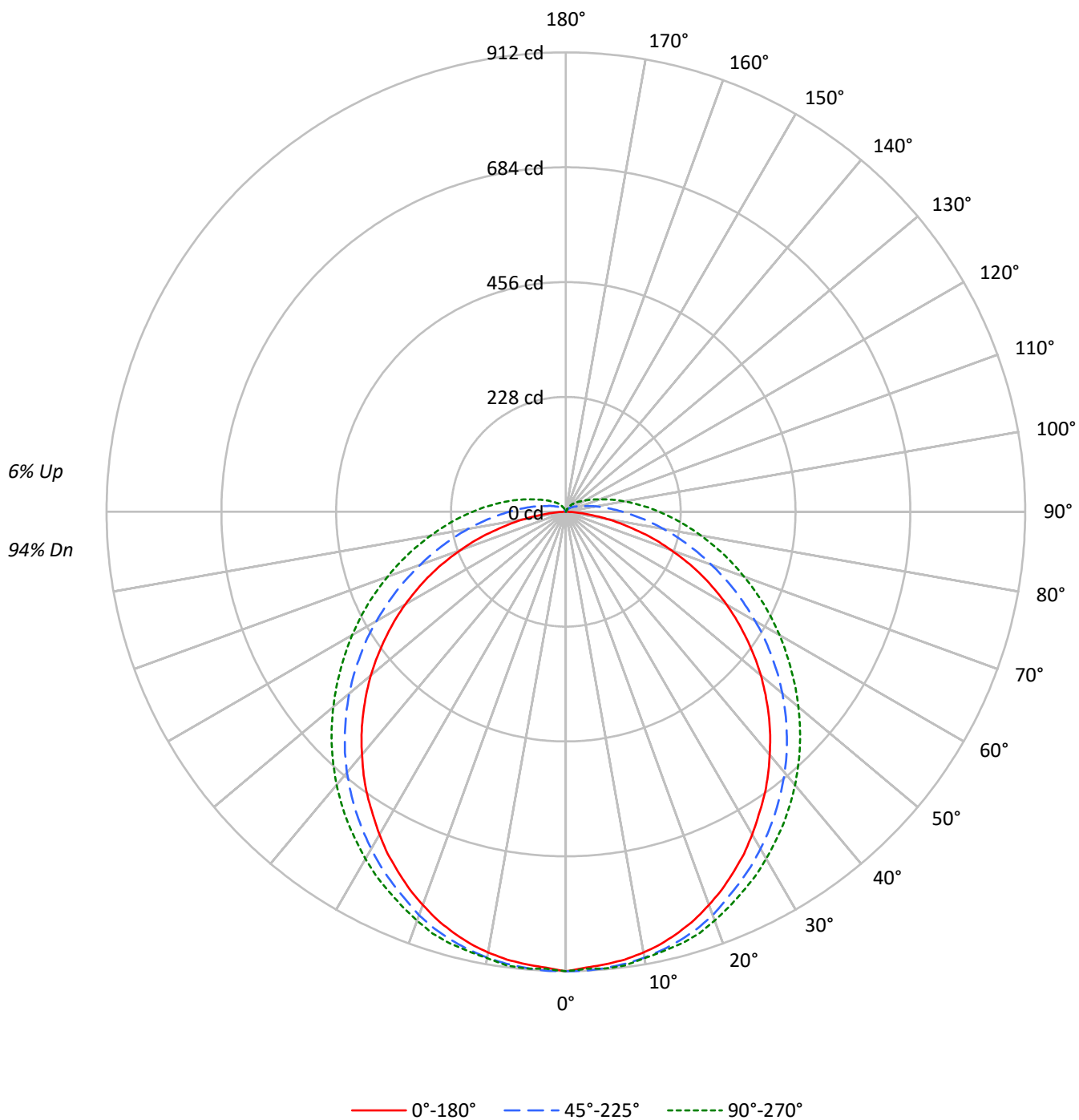
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3054.0 lumens
Efficiency: N/A
Efficacy: 115.7 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): 26.4
Input Voltage (V): NR
Input Current (Ain): 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

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108		102	102	102		96
1	106	100	95	91	102	97	93	89	92	88	85		87	84	81		82
2	95	86	79	73	92	84	77	71	79	74	69		75	70	66		71
3	87	76	67	60	84	73	65	59	69	63	57		66	60	55		62
4	79	67	57	50	76	65	56	50	62	54	48		58	52	47		56
5	73	59	50	43	70	58	49	43	55	47	42		52	46	41		50
6	67	53	44	38	65	52	43	37	50	42	36		47	41	35		45
7	62	48	39	33	60	47	39	33	45	37	32		43	36	31		41
8	58	44	35	29	56	43	35	29	41	34	29		39	33	28		38
9	54	40	32	26	52	39	32	26	38	31	26		36	30	25		35
10	51	37	29	24	49	36	29	24	35	28	23		34	27	23		32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9888	9888	9888
5°	9783	9683	9639
10°	9719	9482	9386
15°	9613	9267	9189
20°	9462	9025	8945
25°	9278	8737	8682
30°	9077	8472	8436
35°	8876	8202	8189
40°	8653	7929	7936
45°	8436	7632	7677
50°	8185	7323	7404
55°	7875	6972	7133
60°	7530	6606	6895
65°	7091	6223	6656
70°	6416	5818	6422
75°	5542	5455	6244
80°	4355	5140	6133
85°	2479	4921	6175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8436 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	2.8
10°-20°	248.0	8.1
20°-30°	374.9	12.3
30°-40°	453.2	14.8
40°-50°	476.5	15.6
50°-60°	443.9	14.5
60°-70°	364.7	11.9
70°-80°	258.9	8.5
80°-90°	156.1	5.1
90°-100°	87.4	2.9
100°-110°	48.4	1.6
110°-120°	27.0	0.9
120°-130°	15.6	0.5
130°-140°	8.5	0.3
140°-150°	3.8	0.1
150°-160°	0.9	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	709.3	23.2
0°-40°	1162.5	38.1
0°-60°	2082.8	68.2
0°-90°	2862.5	93.7
90°-120°	162.8	5.3
90°-150°	190.7	6.2
90°-180°	192.0	6.3
0°-180°	3054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	902	910	909	908	910	86
15°	865	876	880	884	887	244
25°	788	803	814	826	832	363
35°	687	705	726	745	754	430
45°	570	590	620	646	657	439
55°	438	462	498	531	546	391
65°	297	324	370	414	433	293
75°	150	188	250	301	323	160
85°	28	80	151	206	227	35
90°	0	48	112	165	185	1
95°	0	28	83	130	149	0
105°	0	10	43	78	93	0
115°	0	5	27	48	57	0
125°	0	3	16	31	36	0
135°	0	1	10	20	25	0
145°	1	0	4	11	14	1
155°	1	1	0	3	4	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.2	912.2	912.2	912.2	912.2
2.5°	906.0	914.3	912.2	908.1	908.1
5°	901.9	910.1	909.1	908.1	910.1
7.5°	896.7	905.0	905.0	906.0	908.1
10°	888.5	898.8	898.8	898.8	899.8
12.5°	878.2	888.5	890.5	891.6	893.6
15°	864.7	876.1	880.2	884.3	887.4
17.5°	849.3	860.6	867.8	873.0	878.2
20°	830.7	843.1	852.4	858.5	863.7
22.5°	811.1	823.5	832.7	842.0	848.2
25°	788.4	802.8	814.2	825.5	831.7
27.5°	765.7	780.1	794.6	808.0	815.2
30°	739.9	756.4	772.9	788.4	795.6
32.5°	713.0	730.6	750.2	766.7	775.0
35°	687.2	704.8	726.5	745.0	754.3
37.5°	659.4	676.9	701.7	722.3	731.6
40°	629.5	649.1	675.9	697.6	707.9
42.5°	600.6	620.2	649.1	672.8	683.1
45°	569.6	590.2	620.2	646.0	657.3
47.5°	537.6	559.3	591.3	618.1	630.5
50°	505.6	528.3	561.4	590.2	602.6
52.5°	471.6	495.3	530.4	561.4	574.8
55°	437.5	462.3	498.4	531.4	545.9
57.5°	403.5	428.2	467.5	502.5	518.0
60°	368.4	394.2	434.4	472.6	490.2
62.5°	332.3	359.1	401.4	442.7	461.3
65°	297.2	324.0	370.5	413.8	433.4
67.5°	260.0	288.9	338.5	383.9	404.5
70°	221.9	254.9	307.5	356.0	376.6
72.5°	187.8	221.9	278.6	328.1	349.8
75°	149.6	187.8	249.7	301.3	323.0
77.5°	116.6	157.9	222.9	275.5	297.2
80°	83.6	129.0	197.1	250.8	272.4
82.5°	53.7	103.2	173.4	228.1	248.7
85°	27.9	80.5	150.7	206.4	227.0
87.5°	8.3	61.9	130.0	184.7	205.3
90°	0.0	47.5	112.5	165.1	184.7
92.5°	0.0	36.1	97.0	147.6	167.2
95°	0.0	27.9	82.6	130.0	148.6
97.5°	0.0	21.7	71.2	114.5	133.1
100°	0.0	17.5	60.9	101.1	118.7
102.5°	0.0	14.4	52.6	89.8	105.3
105°	0.0	10.3	43.3	78.4	92.9
107.5°	0.0	7.2	38.2	69.1	81.5
110°	0.0	6.2	34.1	59.9	72.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	5.2	29.9	53.7	64.0
115°	0.0	5.2	26.8	47.5	56.8
117.5°	0.0	4.1	22.7	42.3	50.6
120°	0.0	4.1	20.6	38.2	45.4
122.5°	0.0	3.1	18.6	34.1	41.3
125°	0.0	3.1	16.5	31.0	36.1
127.5°	0.0	2.1	14.4	27.9	33.0
130°	0.0	2.1	13.4	24.8	29.9
132.5°	0.0	1.0	12.4	22.7	26.8
135°	0.0	1.0	10.3	19.6	24.8
137.5°	0.0	0.0	9.3	17.5	21.7
140°	0.0	0.0	7.2	15.5	19.6
142.5°	1.0	0.0	6.2	13.4	16.5
145°	1.0	0.0	4.1	11.4	14.4
147.5°	1.0	1.0	3.1	9.3	11.4
150°	1.0	1.0	2.1	6.2	9.3
152.5°	1.0	1.0	1.0	4.1	6.2
155°	1.0	1.0	0.0	3.1	4.1
157.5°	1.0	1.0	0.0	1.0	2.1
160°	1.0	1.0	0.0	0.0	1.0
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

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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	17.36	18.91	17.81	19.35	19.82	19.31	20.86	19.77	21.30	21.77
	3H	18.85	20.26	19.32	20.71	21.22	21.71	23.12	22.18	23.57	24.08
	4H	19.32	20.66	19.82	21.13	21.66	22.86	24.20	23.36	24.67	25.20
	6H	19.60	20.85	20.11	21.33	21.87	24.05	25.30	24.56	25.79	26.32
	8H	19.65	20.85	20.17	21.36	21.90	24.66	25.86	25.18	26.37	26.91
	12H	19.67	20.81	20.19	21.31	21.89	25.32	26.47	25.85	26.97	27.55
4H	2H	18.21	19.55	18.71	20.02	20.55	19.75	21.09	20.24	21.56	22.08
	3H	19.94	21.08	20.45	21.60	22.14	22.37	23.51	22.87	24.02	24.57
	4H	20.54	21.59	21.07	22.11	22.69	23.69	24.73	24.22	25.26	25.84
	6H	20.94	21.86	21.48	22.41	23.00	25.07	25.99	25.62	26.54	27.14
	8H	21.03	21.90	21.58	22.45	23.06	25.78	26.65	26.33	27.20	27.81
	12H	21.08	21.86	21.65	22.44	23.05	26.57	27.35	27.14	27.93	28.54
8H	4H	21.19	22.05	21.74	22.61	23.21	23.90	24.77	24.46	25.32	25.93
	6H	21.76	22.49	22.34	23.08	23.69	25.45	26.19	26.03	26.78	27.39
	8H	21.93	22.60	22.53	23.20	23.82	26.30	26.96	26.90	27.57	28.19
	12H	22.04	22.63	22.64	23.23	23.92	27.27	27.86	27.87	28.45	29.14
12H	4H	21.36	22.15	21.94	22.73	23.34	23.91	24.70	24.49	25.28	25.89
	6H	22.03	22.69	22.62	23.29	23.92	25.49	26.15	26.08	26.76	27.38
	8H	22.30	22.89	22.89	23.48	24.17	26.41	27.00	27.00	27.59	28.28

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-6

Test Date: 11/18/2025

Luminaire Tested: 4ASL-2-65-UNV-OPL-1_600mA

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

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-6
 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-2-65-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 6500K LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 6972
 CIE u' : 0.1979
 CIE v' : 0.4612
 Duv: 0.0005
 CIE x: 0.3066
 CIE y: 0.3177
 CIE z: 0.3758
 Peak Wavelength (nm): 455
 Dominant Wavelength (nm): 483
 Purity: 10.33335
 R_f: 88.2
 R_g: 97.1

CRI (Ra): 94.3
 R1: 96.1
 R2: 98.8
 R3: 96.4
 R4: 92.8
 R5: 92.9
 R6: 92.2
 R7: 93.5
 R8: 91.4
 R9: 82.6
 R10: 95.4
 R11: 95.2
 R12: 63.5
 R13: 99.3
 R14: 98.1
 R15: 93.7



Test Conditions

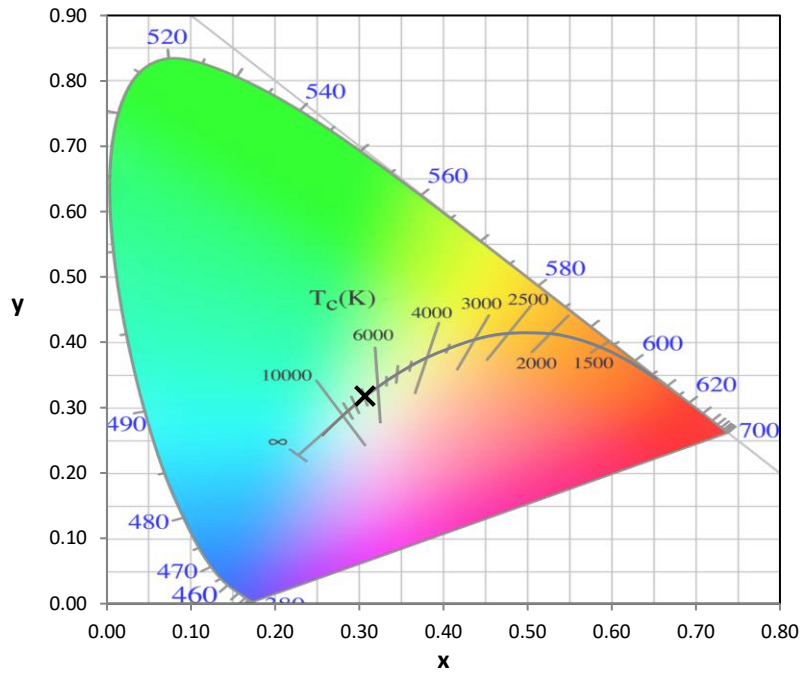
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.1

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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	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

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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 6500K 7-step quadrangle

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Photopic Flux vs. Wavelength

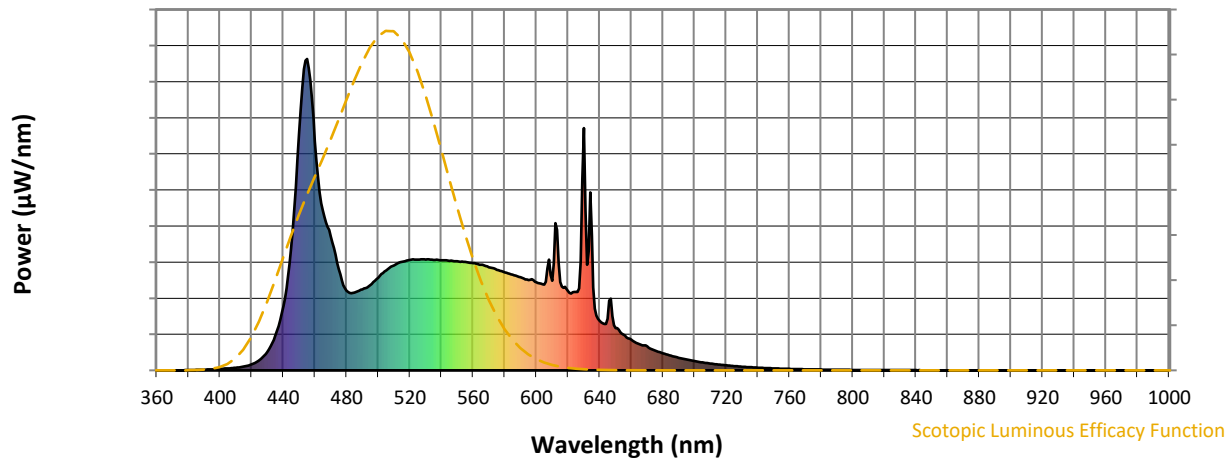


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



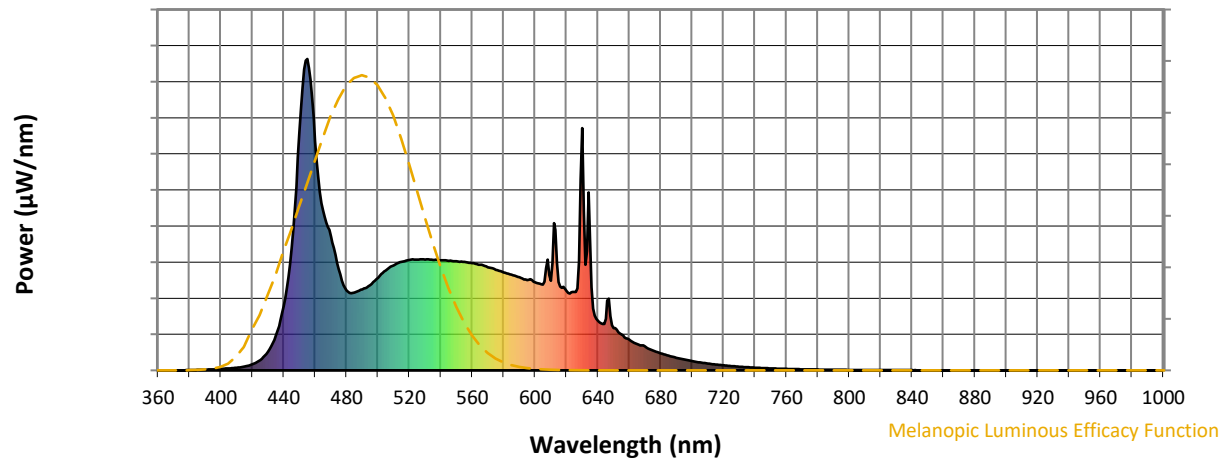
Scotopic Lumens: NR

S/P: 2.48

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	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 5.67

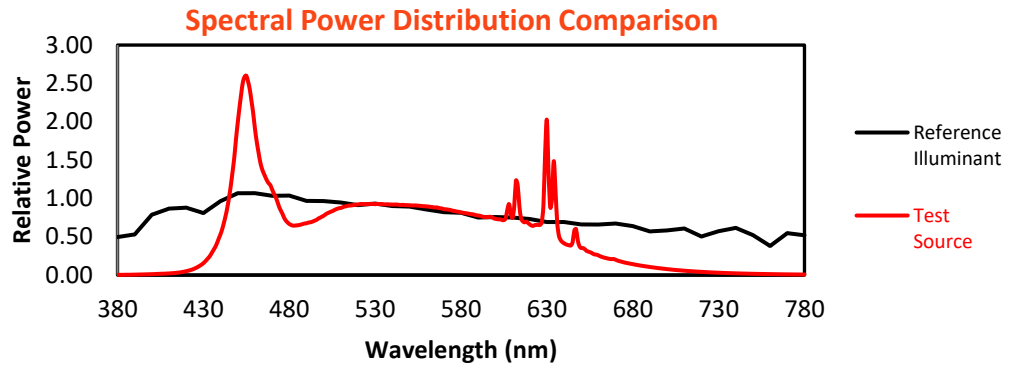
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

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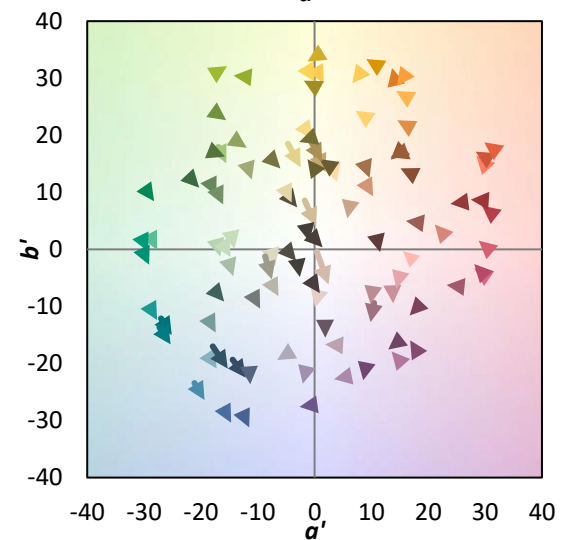
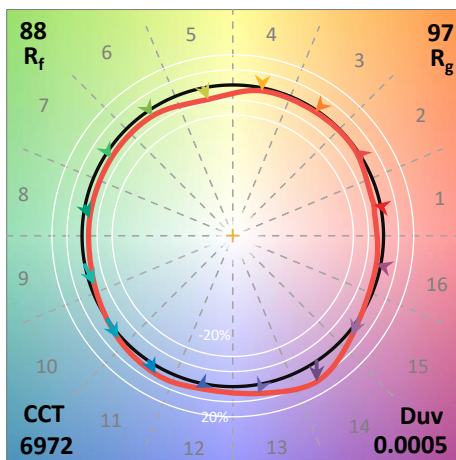
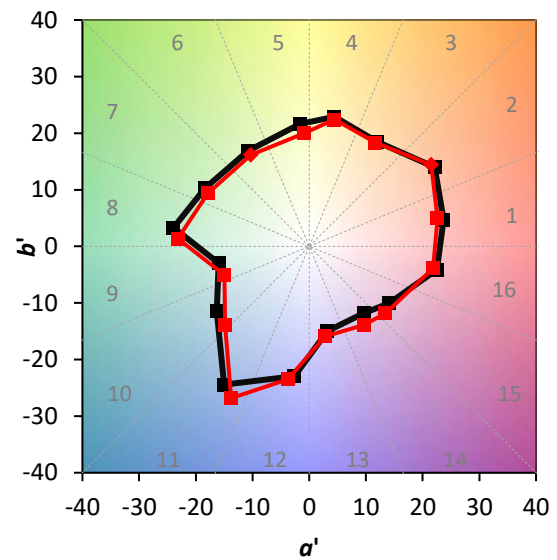
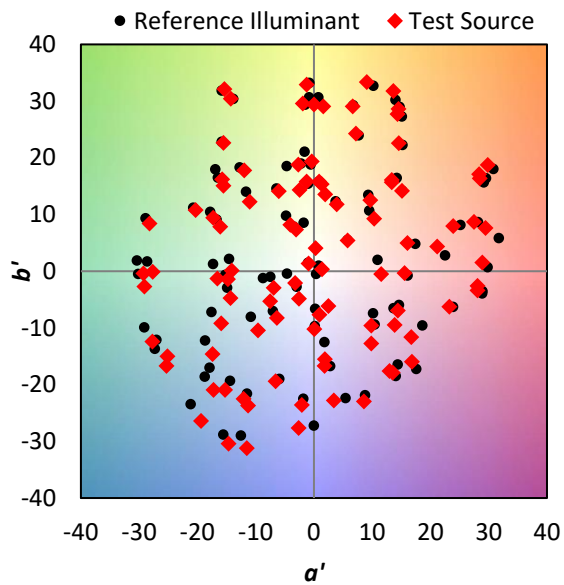
TM-30-18

Summary

$R_f = 88.2$
 $R_g = 97.1$
 $CIE R_a = 94.3$
 $R_9 = 82.6$

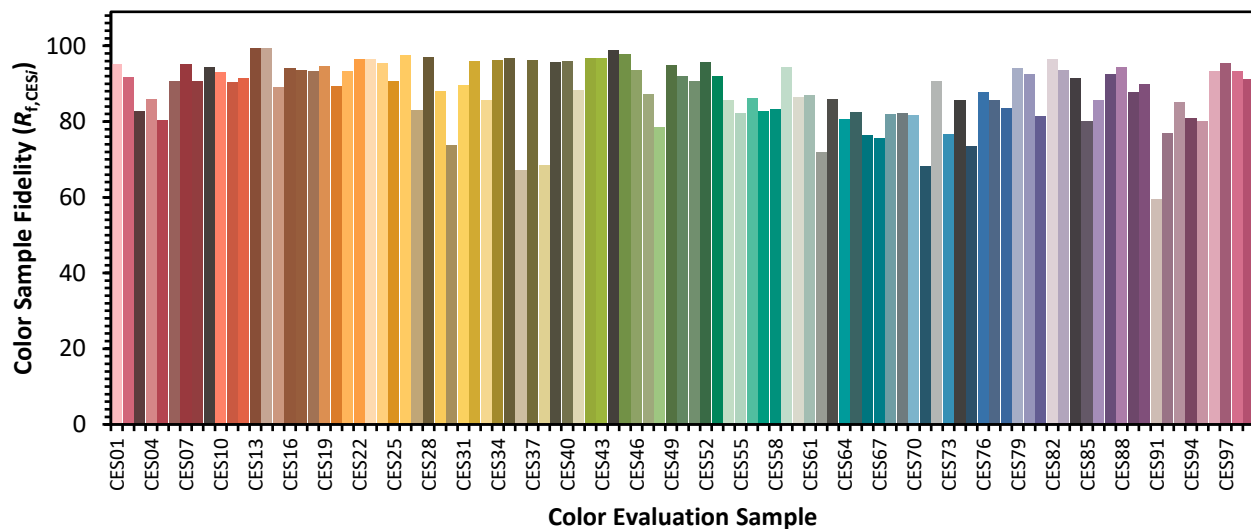


Color Vector Graphics

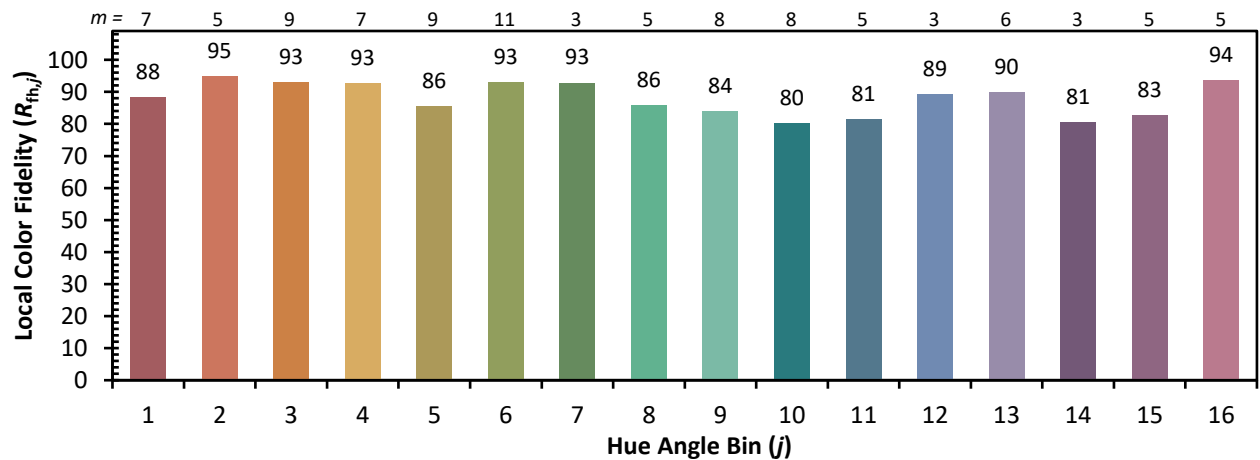


Individual Sample Fidelity Index (R_{fi})

CES01 = 85	CES26 = 97	CES51 = 91	CES76 = 88
CES02 = 60	CES27 = 83	CES52 = 96	CES77 = 86
CES03 = 31	CES28 = 97	CES53 = 92	CES78 = 83
CES04 = 68	CES29 = 88	CES54 = 86	CES79 = 94
CES05 = 47	CES30 = 74	CES55 = 82	CES80 = 93
CES06 = 49	CES31 = 90	CES56 = 86	CES81 = 81
CES07 = 40	CES32 = 96	CES57 = 83	CES82 = 96
CES08 = 39	CES33 = 86	CES58 = 83	CES83 = 94
CES09 = 29	CES34 = 96	CES59 = 94	CES84 = 91
CES10 = 72	CES35 = 97	CES60 = 87	CES85 = 80
CES11 = 55	CES36 = 67	CES61 = 87	CES86 = 86
CES12 = 61	CES37 = 96	CES62 = 72	CES87 = 93
CES13 = 42	CES38 = 68	CES63 = 86	CES88 = 94
CES14 = 74	CES39 = 96	CES64 = 81	CES89 = 88
CES15 = 71	CES40 = 96	CES65 = 83	CES90 = 90
CES16 = 46	CES41 = 88	CES66 = 76	CES91 = 60
CES17 = 48	CES42 = 97	CES67 = 76	CES92 = 77
CES18 = 55	CES43 = 97	CES68 = 82	CES93 = 85
CES19 = 69	CES44 = 99	CES69 = 82	CES94 = 81
CES20 = 64	CES45 = 98	CES70 = 82	CES95 = 80
CES21 = 84	CES46 = 93	CES71 = 68	CES96 = 93
CES22 = 76	CES47 = 87	CES72 = 91	CES97 = 95
CES23 = 91	CES48 = 79	CES73 = 77	CES98 = 93
CES24 = 89	CES49 = 95	CES74 = 86	CES99 = 91
CES25 = 69	CES50 = 92	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)