

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: P1357060

Luminaire Tested: 3ASL4-35VHE-3-27-UNV

Issue Date: 2/17/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1357060  
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: 3ASL4-35VHE-3-27-UNV  
Description: 3FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 2700K LEDS 3 ROW  
Light Source: -  
Ballast/Driver: -

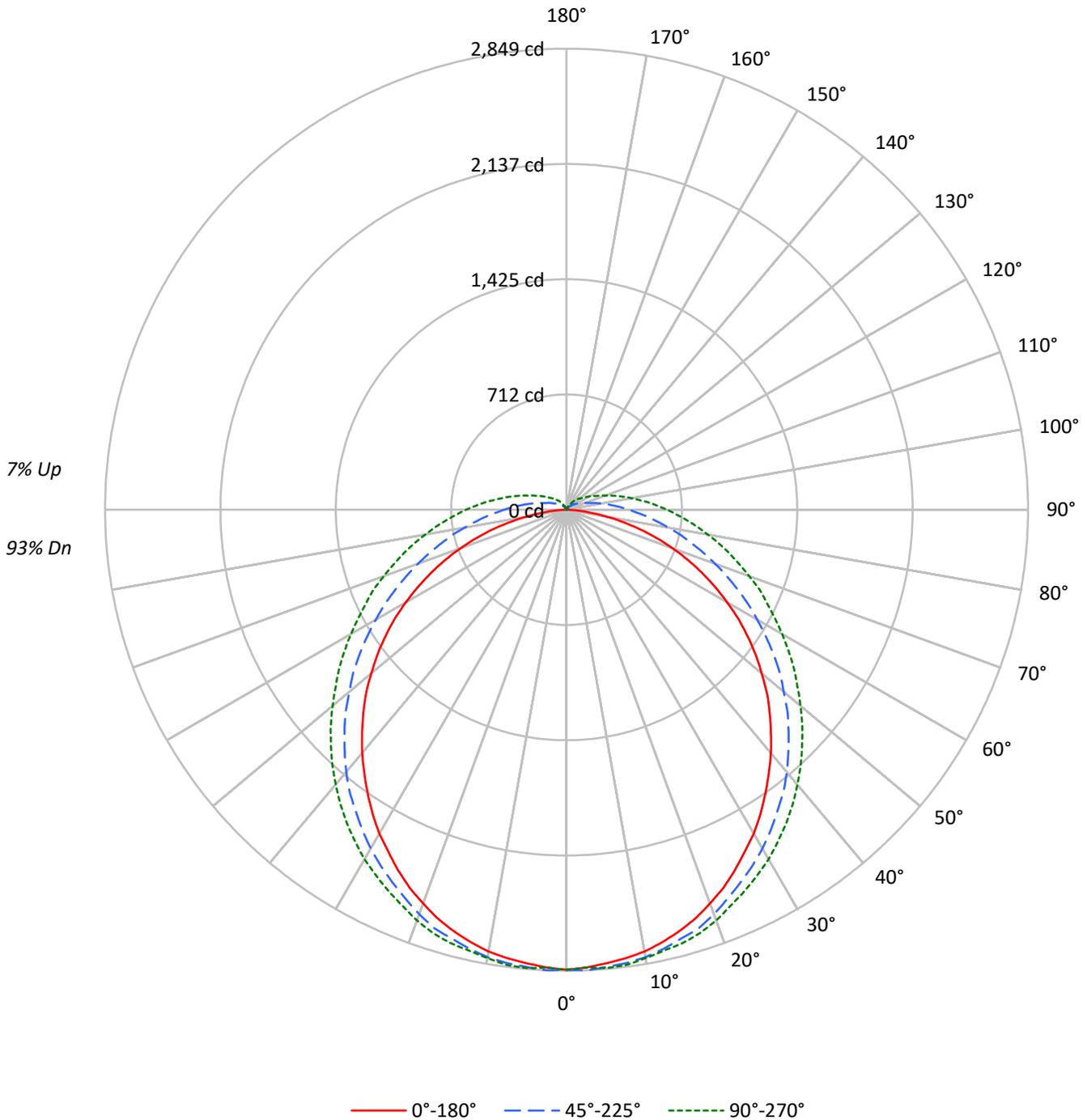
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9666.0 lumens  
Efficiency: N/A  
Efficacy: 102.0 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): 94.8  
Input Voltage (V): NR  
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: 24 FT

TEST NUMBER: P1357060  
CATALOG NUMBER: 3ASL4-35VHE-3-27-UNV

### Luminous Intensity Polar Plot







TEST NUMBER: P1357060  
 CATALOG NUMBER: 3ASL4-35VHE-3-27-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	269.6	2.8
10°-20°	774.0	8.0
20°-30°	1170.3	12.1
30°-40°	1417.0	14.7
40°-50°	1488.3	15.4
50°-60°	1388.5	14.4
60°-70°	1147.5	11.9
70°-80°	826.2	8.5
80°-90°	513.4	5.3
90°-100°	300.8	3.1
100°-110°	172.1	1.8
110°-120°	97.2	1.0
120°-130°	55.9	0.6
130°-140°	30.1	0.3
140°-150°	12.7	0.1
150°-160°	2.3	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2213.9	22.9
0°-40°	3630.9	37.6
0°-60°	6507.6	67.3
0°-90°	8994.8	93.1
90°-120°	570.1	5.9
90°-150°	668.8	6.9
90°-180°	671.0	6.9
0°-180°	9666.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2843	2843	2843	2843	2843	
5°	2813	2837	2837	2837	2843	267
15°	2695	2731	2742	2760	2772	760
25°	2459	2500	2542	2577	2601	1132
35°	2140	2199	2270	2335	2364	1339
45°	1773	1838	1939	2021	2057	1368
55°	1365	1442	1560	1673	1714	1220
65°	922	1011	1164	1312	1365	912
75°	473	591	798	969	1040	500
85°	89	266	502	680	745	108
90°	0	160	384	550	621	4
95°	0	100	290	443	508	0
105°	0	36	160	278	325	0
115°	0	18	95	171	201	0
125°	0	12	59	112	130	0
135°	0	0	36	71	89	0
145°	0	0	18	41	47	0
155°	0	0	0	12	18	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357060

CATALOG NUMBER: 3ASL4-35VHE-3-27-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2842.9	2842.9	2842.9	2842.9	2842.9
2.5°	2831.1	2848.8	2848.8	2831.1	2831.1
5°	2813.3	2837.0	2837.0	2837.0	2842.9
7.5°	2795.6	2825.2	2825.2	2825.2	2837.0
10°	2772.0	2801.5	2807.4	2807.4	2813.3
12.5°	2736.5	2772.0	2777.9	2783.8	2789.7
15°	2695.1	2730.6	2742.4	2760.2	2772.0
17.5°	2647.9	2689.2	2712.9	2730.6	2742.4
20°	2588.8	2630.1	2659.7	2683.3	2701.1
22.5°	2529.6	2565.1	2600.6	2630.1	2647.9
25°	2458.7	2500.1	2541.5	2576.9	2600.6
27.5°	2381.9	2429.2	2482.4	2523.7	2547.4
30°	2311.0	2358.2	2417.4	2470.5	2494.2
32.5°	2228.2	2281.4	2346.4	2399.6	2429.2
35°	2139.6	2198.7	2269.6	2334.6	2364.2
37.5°	2050.9	2110.0	2198.7	2263.7	2293.2
40°	1962.3	2021.4	2115.9	2186.8	2216.4
42.5°	1867.7	1926.8	2027.3	2104.1	2139.6
45°	1773.1	1838.1	1938.6	2021.4	2056.8
47.5°	1678.6	1743.6	1850.0	1938.6	1974.1
50°	1572.2	1643.1	1749.5	1850.0	1885.4
52.5°	1471.7	1542.6	1660.8	1761.3	1796.8
55°	1365.3	1442.1	1560.3	1672.6	1714.0
57.5°	1258.9	1335.7	1459.9	1578.1	1625.4
60°	1146.6	1229.4	1359.4	1483.5	1536.7
62.5°	1034.3	1123.0	1264.8	1394.9	1448.0
65°	922.0	1010.7	1164.3	1312.1	1365.3
67.5°	809.7	904.3	1069.8	1223.5	1288.5
70°	697.4	797.9	975.2	1134.8	1199.8
72.5°	585.1	691.5	886.6	1052.1	1117.1
75°	472.8	591.0	797.9	969.3	1040.2
77.5°	360.5	496.5	721.1	892.5	963.4
80°	260.1	413.7	638.3	815.6	886.6
82.5°	165.5	331.0	567.4	744.7	815.6
85°	88.7	266.0	502.4	679.7	744.7
87.5°	29.6	206.9	437.4	614.7	679.7
90°	0.0	159.6	384.2	549.7	620.6
92.5°	0.0	124.1	336.9	496.5	561.5
95°	0.0	100.5	289.6	443.3	508.3
97.5°	0.0	82.7	254.1	396.0	455.1
100°	0.0	65.0	218.7	354.6	407.8
102.5°	0.0	53.2	189.1	313.3	366.4
105°	0.0	35.5	159.6	277.8	325.1
107.5°	0.0	29.6	135.9	248.2	289.6
110°	0.0	23.6	124.1	212.8	254.1



TEST NUMBER: P1357060  
 CATALOG NUMBER: 3ASL4-35VHE-3-27-UNV

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	17.7	112.3	189.1	230.5
115°	0.0	17.7	94.6	171.4	201.0
117.5°	0.0	17.7	82.7	153.7	183.2
120°	0.0	11.8	76.8	135.9	165.5
122.5°	0.0	11.8	65.0	124.1	147.8
125°	0.0	11.8	59.1	112.3	130.0
127.5°	0.0	5.9	53.2	100.5	118.2
130°	0.0	5.9	47.3	88.7	106.4
132.5°	0.0	5.9	41.4	82.7	100.5
135°	0.0	0.0	35.5	70.9	88.7
137.5°	0.0	0.0	29.6	65.0	76.8
140°	0.0	0.0	23.6	53.2	70.9
142.5°	0.0	0.0	17.7	47.3	59.1
145°	0.0	0.0	17.7	41.4	47.3
147.5°	0.0	0.0	11.8	29.6	41.4
150°	0.0	0.0	5.9	23.6	29.6
152.5°	0.0	0.0	0.0	17.7	23.6
155°	0.0	0.0	0.0	11.8	17.7
157.5°	0.0	0.0	0.0	0.0	5.9
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: P1357060  
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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	21.23	22.77	21.70	23.23	23.71	23.23	24.77	23.70	25.23	25.71
	3H	22.73	24.13	23.21	24.60	25.12	25.68	27.09	26.16	27.55	28.08
	4H	23.21	24.54	23.71	25.02	25.56	26.87	28.20	27.37	28.68	29.22
	6H	23.49	24.73	24.00	25.22	25.78	28.10	29.34	28.62	29.84	30.39
	8H	23.54	24.73	24.07	25.25	25.81	28.74	29.93	29.26	30.45	31.00
	12H	23.55	24.69	24.09	25.21	25.80	29.43	30.57	29.96	31.08	31.67
4H	2H	22.10	23.43	22.61	23.92	24.45	23.67	25.00	24.17	25.48	26.02
	3H	23.84	24.97	24.35	25.50	26.06	26.34	27.48	26.86	28.00	28.56
	4H	24.44	25.48	24.98	26.02	26.61	27.70	28.74	28.24	29.28	29.87
	6H	24.84	25.76	25.40	26.32	26.93	29.13	30.05	29.68	30.61	31.22
	8H	24.94	25.80	25.50	26.36	26.98	29.87	30.73	30.43	31.29	31.91
	12H	24.98	25.77	25.56	26.36	26.98	30.68	31.46	31.26	32.06	32.68
8H	4H	25.12	25.98	25.68	26.54	27.16	27.92	28.78	28.48	29.34	29.96
	6H	25.70	26.43	26.29	27.03	27.66	29.52	30.25	30.11	30.85	31.48
	8H	25.88	26.54	26.48	27.15	27.79	30.40	31.06	31.00	31.67	32.31
	12H	26.00	26.58	26.60	27.19	27.89	31.40	31.99	32.00	32.59	33.29
12H	4H	25.31	26.09	25.89	26.68	27.31	27.93	28.71	28.51	29.30	29.93
	6H	25.99	26.65	26.59	27.26	27.90	29.55	30.22	30.16	30.83	31.47
	8H	26.27	26.86	26.87	27.46	28.16	30.50	31.09	31.11	31.70	32.40

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-2

Test Date: 11/17/2025

Luminaire Tested: 4ASL-2-27-UNV-OPL-1\_600mA

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

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2511-597-2  
 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-2-27-UNV-OPL-1\_600mA**  
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 2700K LEDs with 1 rows at 600mA

**Spectral Parameters**

CCT (K): 2696  
 CIE u': 0.2632  
 CIE v': 0.5245  
 Duv: -0.0020  
 CIE x: 0.4568  
 CIE y: 0.4045  
 CIE z: 0.1387  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 584  
 Purity: 58.52757  
 Rf: 90.1  
 Rg: 103.5

CRI (Ra):	94.4		
R1:	97.5	R9:	61.8
R2:	97.8	R10:	93.6
R3:	96.9	R11:	93.7
R4:	95.3	R12:	94.1
R5:	97.2	R13:	97.6
R6:	96.5	R14:	96.8
R7:	91.2	R15:	91.9
R8:	83.2		



**Test Conditions**

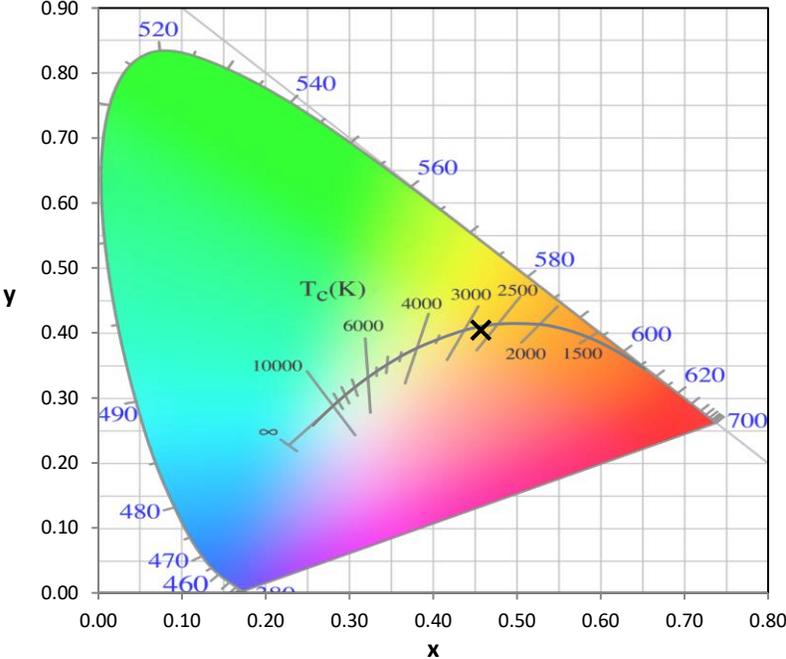
Stabilization Time: 32M  
 Operation Time: 1H 32M  
 Sphere Temperature (°C): 24.1

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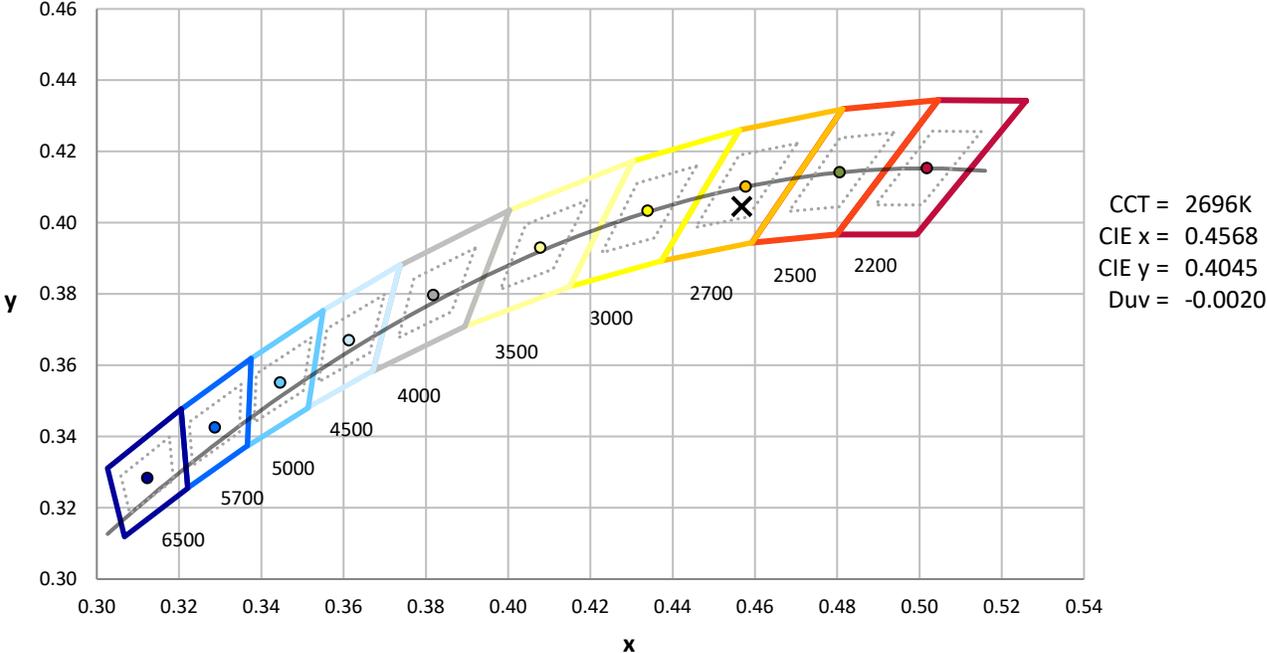
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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 2700K 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	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

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**Scotopic Flux vs. Wavelength**



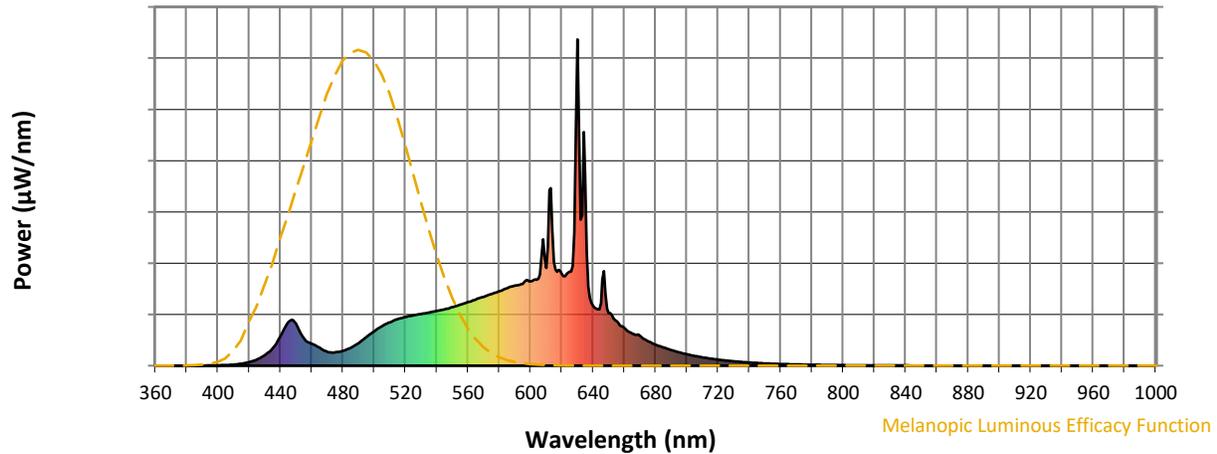
**Scotopic Lumens: NR**

**S/P: 1.29**

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	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.45

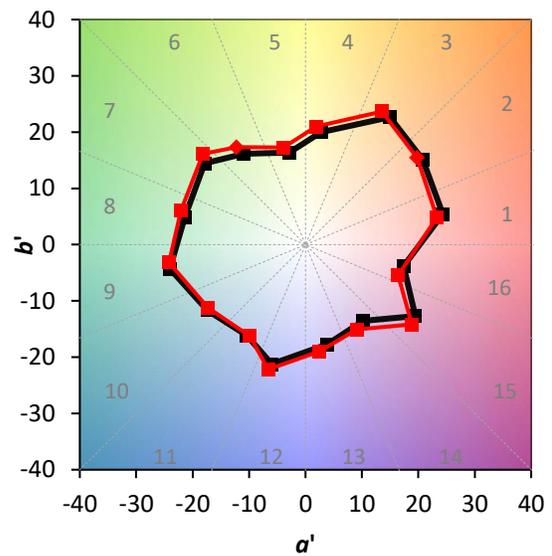
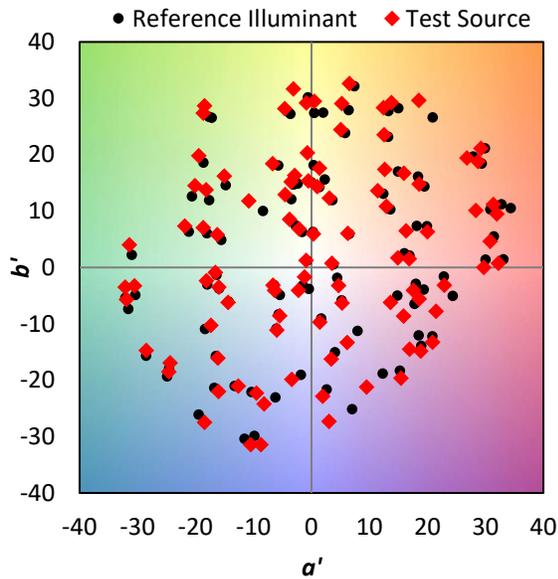
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	70	NR	620	281	NR	750	7	NR	880	0	NR
365	0	NR	495	88	NR	625	288	NR	755	6	NR	885	0	NR
370	0	NR	500	106	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	121	NR	635	581	NR	765	5	NR	895	0	NR
380	0	NR	510	133	NR	640	184	NR	770	4	NR	900	0	NR
385	0	NR	515	143	NR	645	191	NR	775	3	NR	905	0	NR
390	0	NR	520	149	NR	650	161	NR	780	3	NR	910	0	NR
395	1	NR	525	155	NR	655	136	NR	785	2	NR	915	0	NR
400	1	NR	530	158	NR	660	116	NR	790	2	NR	920	0	NR
405	2	NR	535	163	NR	665	99	NR	795	2	NR	925	0	NR
410	3	NR	540	168	NR	670	92	NR	800	2	NR	930	0	NR
415	6	NR	545	173	NR	675	75	NR	805	1	NR	935	0	NR
420	11	NR	550	179	NR	680	65	NR	810	1	NR	940	0	NR
425	19	NR	555	187	NR	685	56	NR	815	1	NR	945	0	NR
430	32	NR	560	195	NR	690	48	NR	820	1	NR	950	0	NR
435	54	NR	565	203	NR	695	41	NR	825	1	NR	955	0	NR
440	90	NR	570	211	NR	700	35	NR	830	1	NR	960	0	NR
445	134	NR	575	219	NR	705	30	NR	835	1	NR	965	0	NR
450	128	NR	580	228	NR	710	26	NR	840	1	NR	970	0	NR
455	83	NR	585	237	NR	715	22	NR	845	0	NR	975	0	NR
460	67	NR	590	246	NR	720	19	NR	850	0	NR	980	0	NR
465	55	NR	595	251	NR	725	16	NR	855	0	NR	985	0	NR
470	42	NR	600	259	NR	730	13	NR	860	0	NR	990	0	NR
475	41	NR	605	266	NR	735	11	NR	865	0	NR	995	0	NR
480	46	NR	610	299	NR	740	10	NR	870	0	NR	1000	0	NR
485	55	NR	615	317	NR	745	8	NR	875	0	NR			

**Summary**

$R_f = 90.1$   
 $R_g = 103.5$   
 CIE  $R_a = 94.4$   
 $R_9 = 61.8$

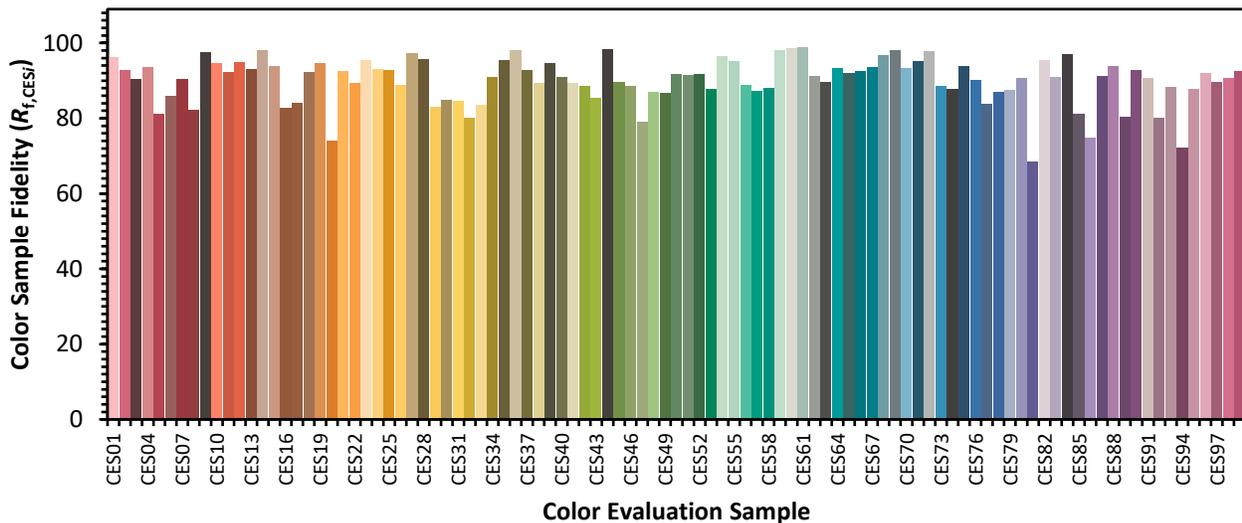


**Color Vector Graphics**

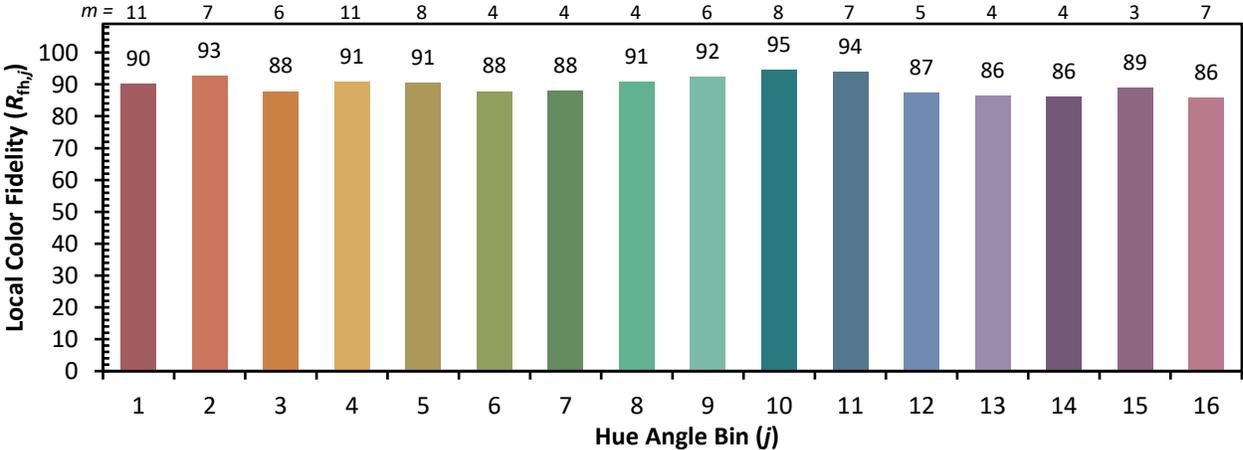


Individual Sample Fidelity Index ( $R_{f,i}$ )

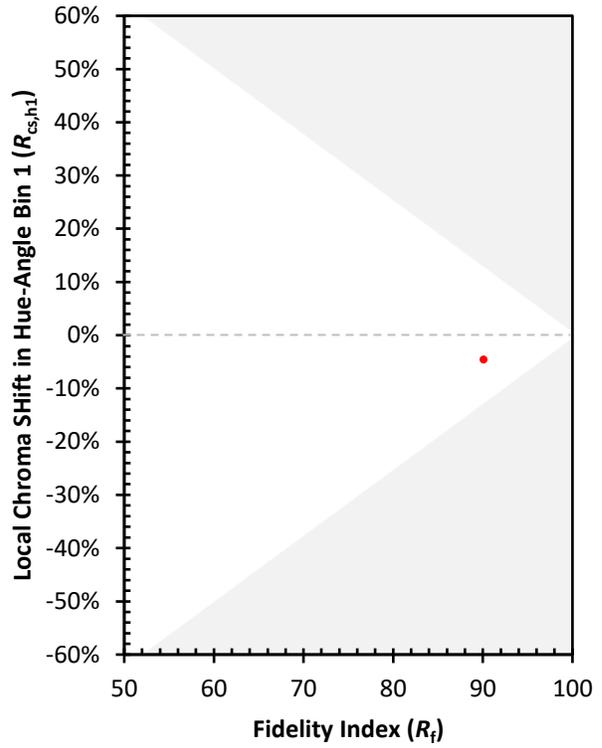
CES01 = 86	CES26 = 89	CES51 = 92	CES76 = 90
CES02 = 64	CES27 = 97	CES52 = 92	CES77 = 84
CES03 = 32	CES28 = 96	CES53 = 88	CES78 = 87
CES04 = 71	CES29 = 83	CES54 = 97	CES79 = 88
CES05 = 51	CES30 = 85	CES55 = 95	CES80 = 91
CES06 = 51	CES31 = 85	CES56 = 89	CES81 = 69
CES07 = 44	CES32 = 80	CES57 = 87	CES82 = 95
CES08 = 43	CES33 = 84	CES58 = 88	CES83 = 91
CES09 = 29	CES34 = 91	CES59 = 98	CES84 = 97
CES10 = 77	CES35 = 96	CES60 = 99	CES85 = 81
CES11 = 59	CES36 = 98	CES61 = 99	CES86 = 75
CES12 = 66	CES37 = 93	CES62 = 91	CES87 = 91
CES13 = 45	CES38 = 89	CES63 = 90	CES88 = 94
CES14 = 74	CES39 = 95	CES64 = 93	CES89 = 80
CES15 = 72	CES40 = 91	CES65 = 92	CES90 = 93
CES16 = 48	CES41 = 89	CES66 = 92	CES91 = 91
CES17 = 50	CES42 = 89	CES67 = 93	CES92 = 80
CES18 = 57	CES43 = 85	CES68 = 97	CES93 = 88
CES19 = 72	CES44 = 98	CES69 = 98	CES94 = 72
CES20 = 68	CES45 = 90	CES70 = 93	CES95 = 88
CES21 = 87	CES46 = 89	CES71 = 95	CES96 = 92
CES22 = 79	CES47 = 79	CES72 = 98	CES97 = 90
CES23 = 92	CES48 = 87	CES73 = 89	CES98 = 91
CES24 = 91	CES49 = 87	CES74 = 88	CES99 = 92
CES25 = 72	CES50 = 92	CES75 = 94	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)