

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: P1356735

Luminaire Tested: 1ASL4-20VHE-3-R63-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356735
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: 1ASL4-20VHE-3-R63-UNV
Description: 1FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND R63 LEDS 3 ROW
Light Source: -
Ballast/Driver: -

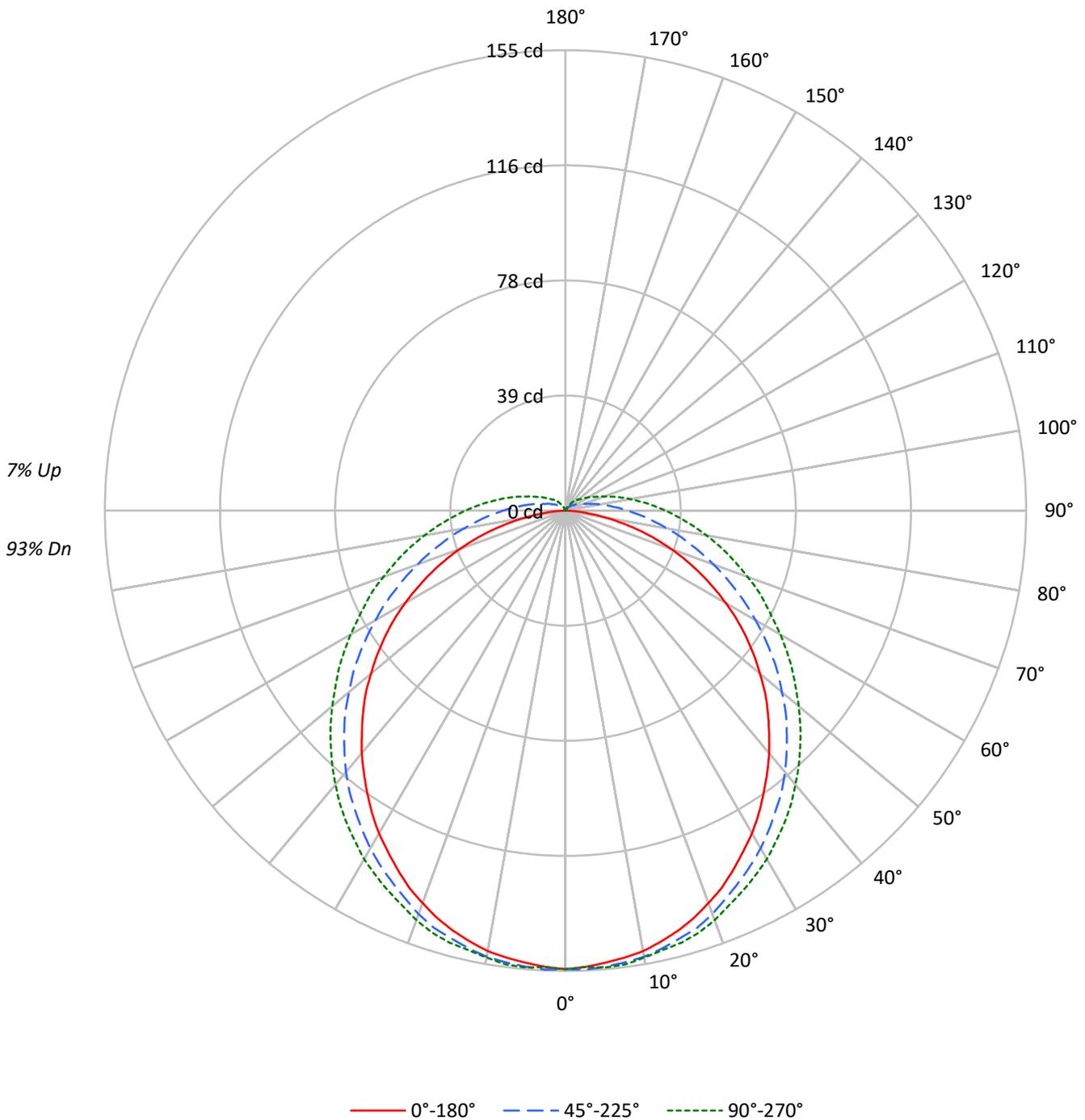
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 525.0 lumens
Efficiency: N/A
Efficacy: 42.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 0.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 12.5
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

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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			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°	5092	5092	5092
5°	5012	4973	4975
10°	4950	4853	4850
15°	4860	4713	4745
20°	4750	4578	4623
25°	4628	4412	4485
30°	4503	4270	4371
35°	4354	4111	4241
40°	4213	3962	4107
45°	4060	3789	3969
50°	3889	3602	3828
55°	3704	3422	3701
60°	3470	3217	3573
65°	3183	3016	3467
70°	2828	2818	3383
75°	2344	2621	3323
80°	1670	2459	3302
85°	820	2355	3344

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4060 cd/sqm



TEST NUMBER: P1356735
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.6	2.8
10°-20°	42.0	8.0
20°-30°	63.6	12.1
30°-40°	77.0	14.7
40°-50°	80.8	15.4
50°-60°	75.4	14.4
60°-70°	62.3	11.9
70°-80°	44.9	8.5
80°-90°	27.9	5.3
90°-100°	16.3	3.1
100°-110°	9.4	1.8
110°-120°	5.3	1.0
120°-130°	3.0	0.6
130°-140°	1.6	0.3
140°-150°	0.7	0.1
150°-160°	0.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	120.2	22.9
0°-40°	197.2	37.6
0°-60°	353.5	67.3
0°-90°	488.6	93.1
90°-120°	31.0	5.9
90°-150°	36.3	6.9
90°-180°	36.0	6.9
0°-180°	525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	154	154	154	154	154	
5°	153	154	154	154	154	15
15°	146	148	149	150	151	41
25°	134	136	138	140	141	62
35°	116	119	123	127	128	73
45°	96	100	105	110	112	74
55°	74	78	85	91	93	66
65°	50	55	63	71	74	50
75°	26	32	43	53	56	27
85°	5	14	27	37	40	6
90°	0	9	21	30	34	0
95°	0	6	16	24	28	0
105°	0	2	9	15	18	0
115°	0	1	5	9	11	0
125°	0	1	3	6	7	0
135°	0	0	2	4	5	0
145°	0	0	1	2	3	0
155°	0	0	0	1	1	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1356735

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	154.4	154.4	154.4	154.4	154.4
2.5°	153.8	154.7	154.7	153.8	153.8
5°	152.8	154.1	154.1	154.1	154.4
7.5°	151.8	153.4	153.4	153.4	154.1
10°	150.6	152.2	152.5	152.5	152.8
12.5°	148.6	150.6	150.9	151.2	151.5
15°	146.4	148.3	149.0	149.9	150.6
17.5°	143.8	146.1	147.3	148.3	149.0
20°	140.6	142.9	144.5	145.7	146.7
22.5°	137.4	139.3	141.2	142.9	143.8
25°	133.5	135.8	138.0	140.0	141.2
27.5°	129.4	131.9	134.8	137.1	138.4
30°	125.5	128.1	131.3	134.2	135.5
32.5°	121.0	123.9	127.4	130.3	131.9
35°	116.2	119.4	123.3	126.8	128.4
37.5°	111.4	114.6	119.4	122.9	124.6
40°	106.6	109.8	114.9	118.8	120.4
42.5°	101.4	104.7	110.1	114.3	116.2
45°	96.3	99.8	105.3	109.8	111.7
47.5°	91.2	94.7	100.5	105.3	107.2
50°	85.4	89.2	95.0	100.5	102.4
52.5°	79.9	83.8	90.2	95.7	97.6
55°	74.2	78.3	84.7	90.8	93.1
57.5°	68.4	72.6	79.3	85.7	88.3
60°	62.3	66.8	73.8	80.6	83.5
62.5°	56.2	61.0	68.7	75.8	78.6
65°	50.1	54.9	63.2	71.3	74.2
67.5°	44.0	49.1	58.1	66.5	70.0
70°	37.9	43.3	53.0	61.6	65.2
72.5°	31.8	37.6	48.2	57.1	60.7
75°	25.7	32.1	43.3	52.6	56.5
77.5°	19.6	27.0	39.2	48.5	52.3
80°	14.1	22.5	34.7	44.3	48.2
82.5°	9.0	18.0	30.8	40.4	44.3
85°	4.8	14.4	27.3	36.9	40.4
87.5°	1.6	11.2	23.8	33.4	36.9
90°	0.0	8.7	20.9	29.9	33.7
92.5°	0.0	6.7	18.3	27.0	30.5
95°	0.0	5.5	15.7	24.1	27.6
97.5°	0.0	4.5	13.8	21.5	24.7
100°	0.0	3.5	11.9	19.3	22.2
102.5°	0.0	2.9	10.3	17.0	19.9
105°	0.0	1.9	8.7	15.1	17.7
107.5°	0.0	1.6	7.4	13.5	15.7
110°	0.0	1.3	6.7	11.6	13.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.0	6.1	10.3	12.5
115°	0.0	1.0	5.1	9.3	10.9
117.5°	0.0	1.0	4.5	8.3	10.0
120°	0.0	0.6	4.2	7.4	9.0
122.5°	0.0	0.6	3.5	6.7	8.0
125°	0.0	0.6	3.2	6.1	7.1
127.5°	0.0	0.3	2.9	5.5	6.4
130°	0.0	0.3	2.6	4.8	5.8
132.5°	0.0	0.3	2.2	4.5	5.5
135°	0.0	0.0	1.9	3.9	4.8
137.5°	0.0	0.0	1.6	3.5	4.2
140°	0.0	0.0	1.3	2.9	3.9
142.5°	0.0	0.0	1.0	2.6	3.2
145°	0.0	0.0	1.0	2.2	2.6
147.5°	0.0	0.0	0.6	1.6	2.2
150°	0.0	0.0	0.3	1.3	1.6
152.5°	0.0	0.0	0.0	1.0	1.3
155°	0.0	0.0	0.0	0.6	1.0
157.5°	0.0	0.0	0.0	0.0	0.3
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



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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	14.90	16.44	15.37	16.89	17.38	16.68	18.22	17.15	18.68	19.16
	3H	16.40	17.80	16.88	18.27	18.79	19.04	20.45	19.52	20.91	21.44
	4H	16.88	18.22	17.39	18.70	19.24	20.16	21.49	20.66	21.97	22.51
	6H	17.16	18.40	17.68	18.90	19.45	21.29	22.53	21.80	23.02	23.58
	8H	17.22	18.40	17.74	18.92	19.48	21.84	23.03	22.37	23.55	24.11
	12H	17.23	18.37	17.76	18.88	19.47	22.41	23.55	22.94	24.06	24.65
4H	2H	15.73	17.06	16.23	17.54	18.08	17.13	18.46	17.63	18.94	19.48
	3H	17.47	18.60	17.98	19.13	19.69	19.72	20.85	20.23	21.38	21.94
	4H	18.07	19.11	18.61	19.65	20.24	21.00	22.04	21.54	22.58	23.17
	6H	18.47	19.39	19.03	19.95	20.56	22.32	23.24	22.88	23.80	24.41
	8H	18.57	19.43	19.13	19.99	20.61	22.98	23.84	23.54	24.40	25.02
	12H	18.62	19.40	19.20	19.99	20.61	23.67	24.45	24.25	25.04	25.67
8H	4H	18.70	19.56	19.26	20.13	20.75	21.23	22.09	21.79	22.66	23.27
	6H	19.28	20.01	19.87	20.61	21.24	22.72	23.45	23.31	24.06	24.68
	8H	19.46	20.12	20.07	20.74	21.37	23.52	24.18	24.12	24.79	25.43
	12H	19.58	20.17	20.18	20.77	21.47	24.39	24.98	25.00	25.58	26.29
12H	4H	18.87	19.65	19.45	20.24	20.87	21.24	22.02	21.82	22.61	23.24
	6H	19.54	20.20	20.14	20.82	21.45	22.76	23.42	23.37	24.04	24.68
	8H	19.82	20.41	20.42	21.01	21.71	23.63	24.22	24.24	24.82	25.53

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-7

Test Date: 01/21/2026

Luminaire Tested: 4ASL-2-R630-UNV-OPL-1_600mA

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

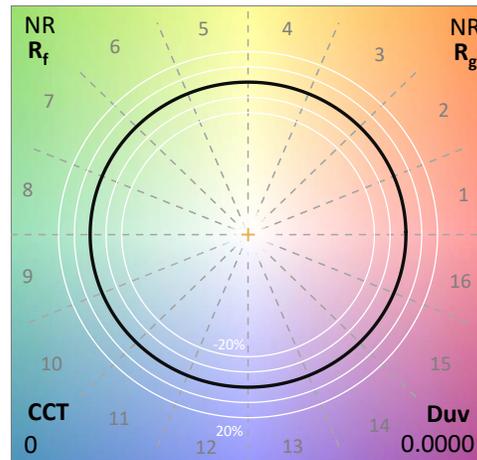
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 01/29/2026
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Fail-Safe
 Catalog Number: **4ASL-2-R630-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND RED 630NM LEDs with 1 rows at 600mA

Spectral Parameters

CCT (K): 0
 CIE u': 0.5395
 CIE v': 0.5190
 Duv: 0.0000
 CIE x: 0.7004
 CIE y: 0.2995
 CIE z: 0.0001
 Peak Wavelength (nm): 638
 Dominant Wavelength (nm): 624
 Purity: 99.9862
 Rf: NR
 Rg: NR

CRI (Ra): 0.0
 R1: 0.0
 R2: 0.0
 R3: 0.0
 R4: 0.0
 R5: 0.0
 R6: 0.0
 R7: 0.0
 R8: 0.0
 R9: 0.0
 R10: 0.0
 R11: 0.0
 R12: 0.0
 R13: 0.0
 R14: 0.0
 R15: 0.0



Test Conditions

Stabilization Time: 69M
 Operation Time: 2H 9M
 Sphere Temperature (°C): 25.1

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Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
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



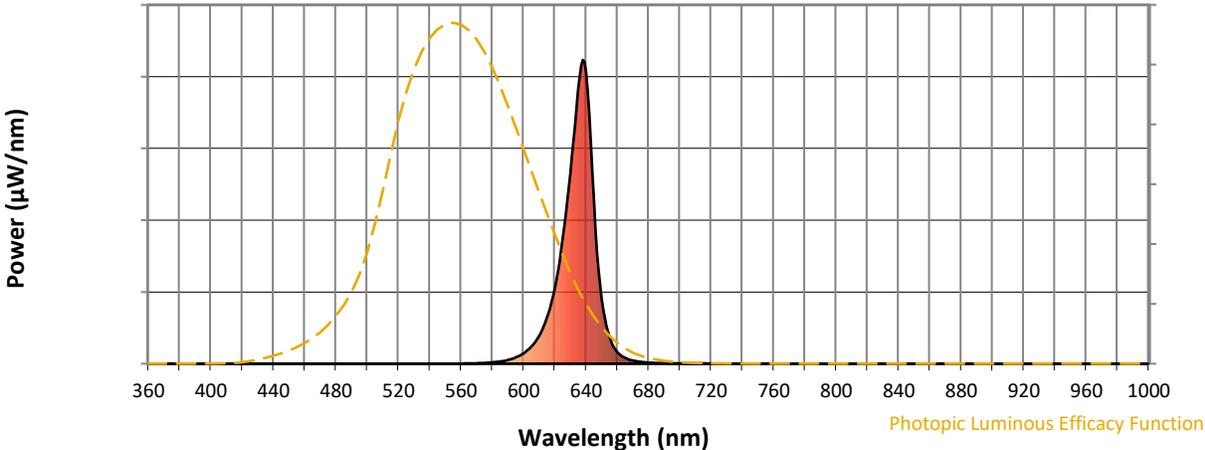
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies outside the range

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Photopic Flux vs. Wavelength

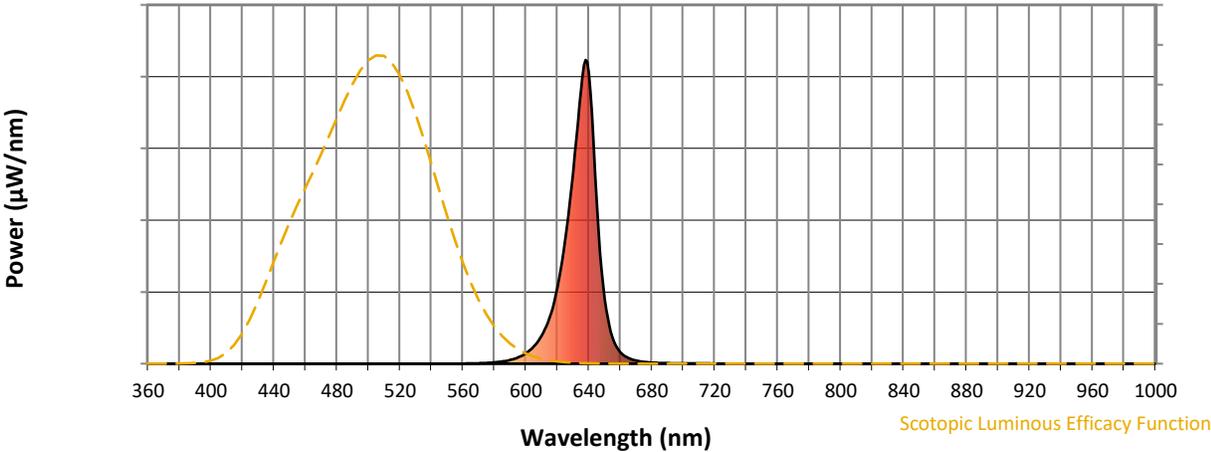


Photopic Lumens: NR

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	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 0.05

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	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



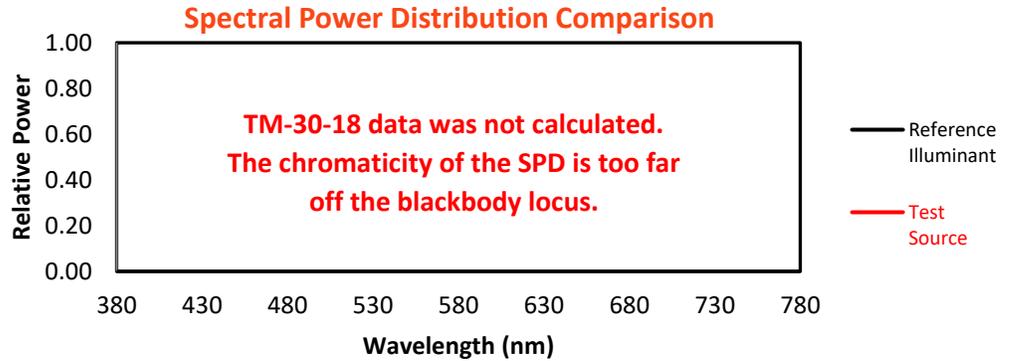
Melanopic Lumens: NR

M/P: 0.02

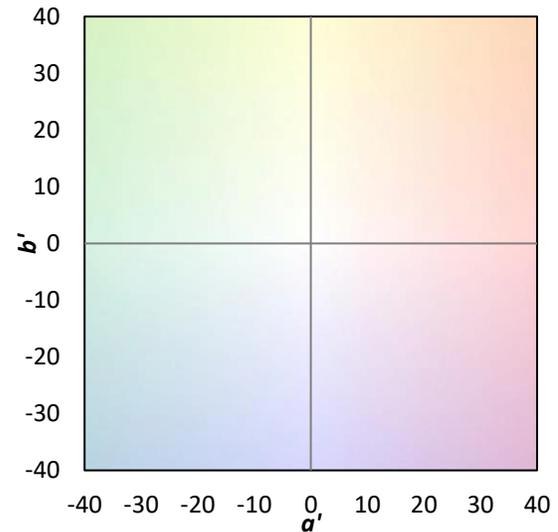
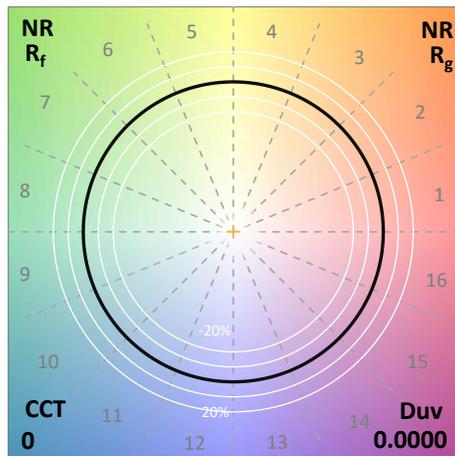
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

Summary

$R_f = 0$
 $R_g = 0$
 CIE $R_a = 0.0$
 $R_9 = 0.0$



Color Vector Graphics



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

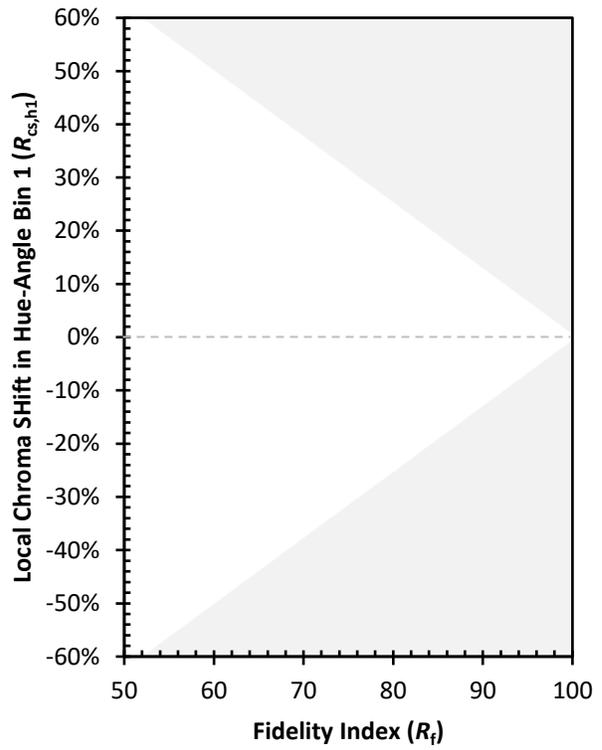
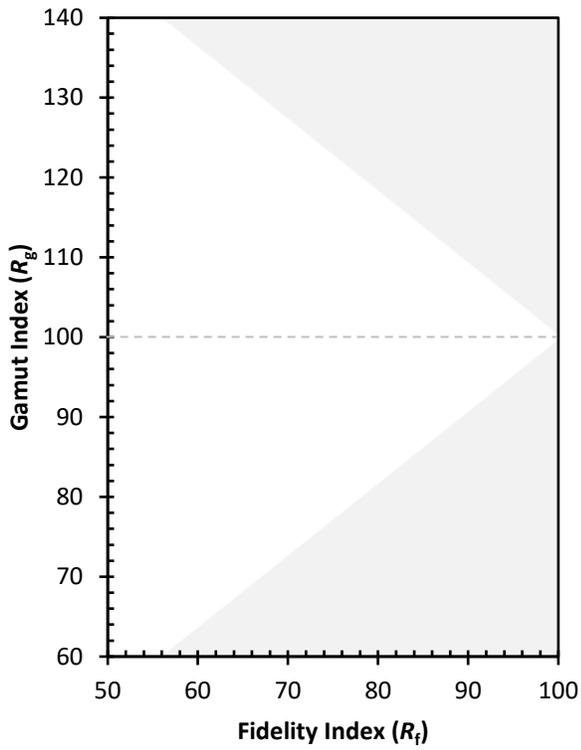
CES01 = 0	CES26 = 0	CES51 = 0	CES76 = 0
CES02 = 0	CES27 = 0	CES52 = 0	CES77 = 0
CES03 = 0	CES28 = 0	CES53 = 0	CES78 = 0
CES04 = 0	CES29 = 0	CES54 = 0	CES79 = 0
CES05 = 0	CES30 = 0	CES55 = 0	CES80 = 0
CES06 = 0	CES31 = 0	CES56 = 0	CES81 = 0
CES07 = 0	CES32 = 0	CES57 = 0	CES82 = 0
CES08 = 0	CES33 = 0	CES58 = 0	CES83 = 0
CES09 = 0	CES34 = 0	CES59 = 0	CES84 = 0
CES10 = 0	CES35 = 0	CES60 = 0	CES85 = 0
CES11 = 0	CES36 = 0	CES61 = 0	CES86 = 0
CES12 = 0	CES37 = 0	CES62 = 0	CES87 = 0
CES13 = 0	CES38 = 0	CES63 = 0	CES88 = 0
CES14 = 0	CES39 = 0	CES64 = 0	CES89 = 0
CES15 = 0	CES40 = 0	CES65 = 0	CES90 = 0
CES16 = 0	CES41 = 0	CES66 = 0	CES91 = 0
CES17 = 0	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 0	CES43 = 0	CES68 = 0	CES93 = 0
CES19 = 0	CES44 = 0	CES69 = 0	CES94 = 0
CES20 = 0	CES45 = 0	CES70 = 0	CES95 = 0
CES21 = 0	CES46 = 0	CES71 = 0	CES96 = 0
CES22 = 0	CES47 = 0	CES72 = 0	CES97 = 0
CES23 = 0	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 0	CES49 = 0	CES74 = 0	CES99 = 0
CES25 = 0	CES50 = 0	CES75 = 0	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)