

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: P1357109

Luminaire Tested: 4ASL4-10-1-G52-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357109
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: 4ASL4-10-1-G52-UNV
Description: 4FT 1000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND G52 LEDS 1 ROW
Light Source: -
Ballast/Driver: -

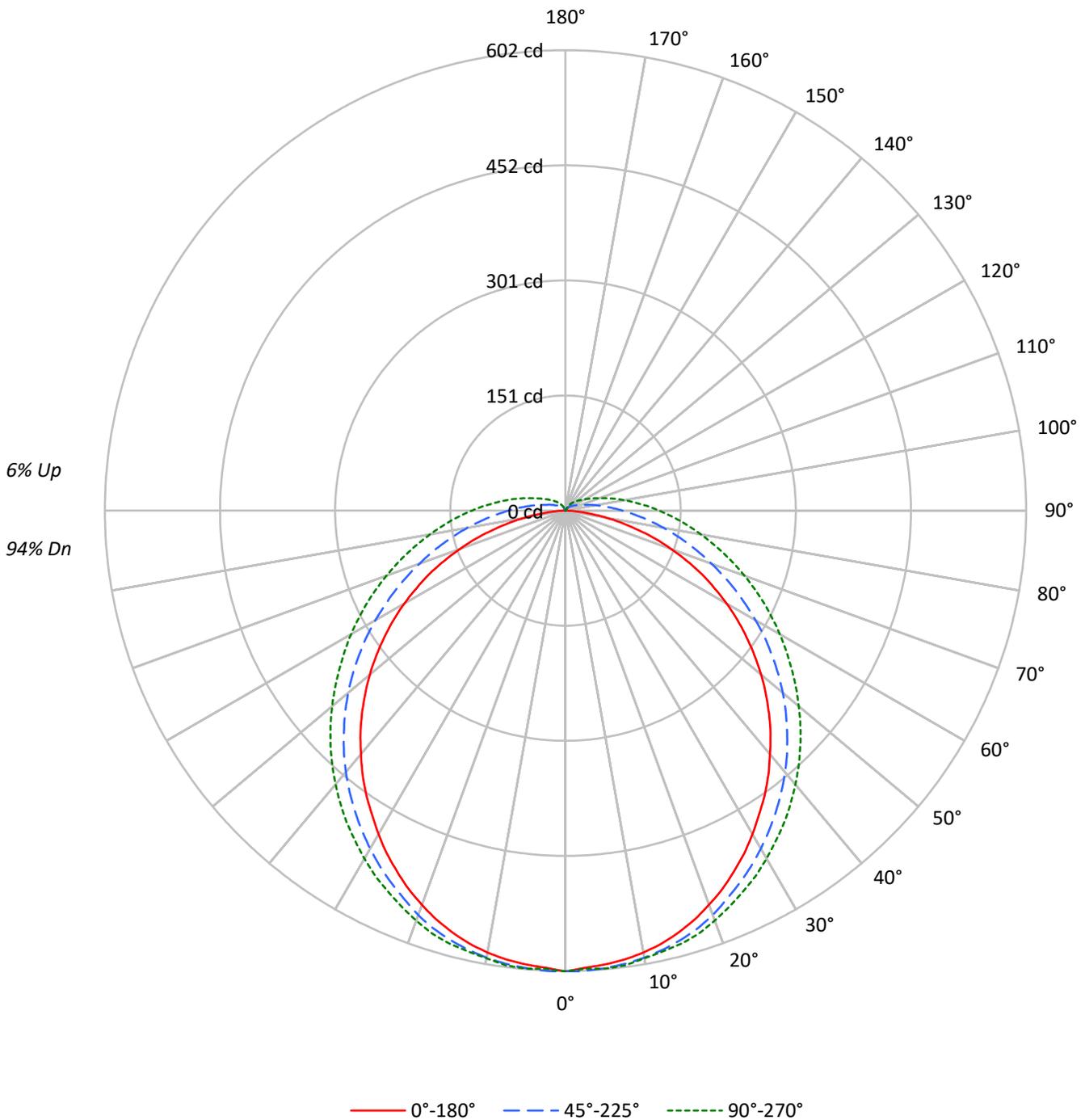
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2017.0 lumens
Efficiency: N/A
Efficacy: 49.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 40.5
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	96	96	96	94
1	106	100	95	91	102	97	93	89	92	88	85	87	84	81	82	80	78	82	80	78	75
2	95	86	79	73	92	84	77	71	79	74	69	75	70	66	71	67	64	71	67	64	61
3	87	76	67	60	84	73	65	59	69	63	57	66	60	55	62	58	54	62	58	54	51
4	79	67	57	50	76	65	56	50	62	54	48	58	52	47	56	50	46	56	50	46	43
5	73	59	50	43	70	58	49	43	55	47	42	52	46	41	50	44	40	50	44	40	37
6	67	53	44	38	65	52	43	37	50	42	36	47	41	35	45	39	35	45	39	35	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	41	35	31	29
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	38	32	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	32	27	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4889	4889	4889
5°	4841	4791	4766
10°	4813	4693	4642
15°	4765	4589	4544
20°	4693	4472	4423
25°	4606	4331	4293
30°	4510	4203	4171
35°	4416	4071	4050
40°	4309	3938	3924
45°	4207	3793	3796
50°	4088	3641	3661
55°	3942	3471	3527
60°	3778	3291	3409
65°	3569	3104	3291
70°	3243	2907	3176
75°	2822	2730	3087
80°	2246	2580	3033
85°	1319	2479	3053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4207 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	2.8
10°-20°	163.8	8.1
20°-30°	247.6	12.3
30°-40°	299.3	14.8
40°-50°	314.7	15.6
50°-60°	293.1	14.5
60°-70°	240.8	11.9
70°-80°	171.0	8.5
80°-90°	103.1	5.1
90°-100°	57.7	2.9
100°-110°	32.0	1.6
110°-120°	17.8	0.9
120°-130°	10.3	0.5
130°-140°	5.6	0.3
140°-150°	2.5	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	468.4	23.2
0°-40°	767.8	38.1
0°-60°	1375.6	68.2
0°-90°	1890.5	93.7
90°-120°	107.5	5.3
90°-150°	125.9	6.2
90°-180°	127.0	6.3
0°-180°	2017.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	596	601	600	600	601	57
15°	571	579	581	584	586	161
25°	521	530	538	545	549	240
35°	454	466	480	492	498	284
45°	376	390	410	427	434	290
55°	289	305	329	351	360	258
65°	196	214	245	273	286	194
75°	99	124	165	199	213	106
85°	18	53	100	136	150	23
90°	0	31	74	109	122	1
95°	0	18	54	86	98	0
105°	0	7	29	52	61	0
115°	0	3	18	31	38	0
125°	0	2	11	20	24	0
135°	0	1	7	13	16	0
145°	1	0	3	8	10	0
155°	1	1	0	2	3	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°	602.5	602.5	602.5	602.5	602.5
2.5°	598.4	603.8	602.5	599.7	599.7
5°	595.6	601.1	600.4	599.7	601.1
7.5°	592.2	597.7	597.7	598.4	599.7
10°	586.8	593.6	593.6	593.6	594.3
12.5°	580.0	586.8	588.1	588.8	590.2
15°	571.1	578.6	581.3	584.1	586.1
17.5°	560.9	568.4	573.2	576.6	580.0
20°	548.6	556.8	562.9	567.0	570.4
22.5°	535.7	543.9	550.0	556.1	560.2
25°	520.7	530.2	537.7	545.2	549.3
27.5°	505.7	515.2	524.8	533.6	538.4
30°	488.6	499.6	510.5	520.7	525.4
32.5°	470.9	482.5	495.5	506.4	511.8
35°	453.9	465.5	479.8	492.1	498.2
37.5°	435.5	447.1	463.4	477.1	483.2
40°	415.7	428.7	446.4	460.7	467.5
42.5°	396.6	409.6	428.7	444.3	451.2
45°	376.2	389.8	409.6	426.6	434.1
47.5°	355.1	369.4	390.5	408.2	416.4
50°	333.9	348.9	370.7	389.8	398.0
52.5°	311.5	327.1	350.3	370.7	379.6
55°	289.0	305.3	329.2	351.0	360.5
57.5°	266.5	282.8	308.7	331.9	342.1
60°	243.3	260.3	286.9	312.1	323.7
62.5°	219.4	237.2	265.1	292.4	304.6
65°	196.3	214.0	244.7	273.3	286.2
67.5°	171.7	190.8	223.5	253.5	267.2
70°	146.5	168.3	203.1	235.1	248.8
72.5°	124.0	146.5	184.0	216.7	231.0
75°	98.8	124.0	164.9	199.0	213.3
77.5°	77.0	104.3	147.2	182.0	196.3
80°	55.2	85.2	130.2	165.6	179.9
82.5°	35.4	68.2	114.5	150.6	164.2
85°	18.4	53.2	99.5	136.3	149.9
87.5°	5.5	40.9	85.9	122.0	135.6
90°	0.0	31.3	74.3	109.0	122.0
92.5°	0.0	23.9	64.1	97.5	110.4
95°	0.0	18.4	54.5	85.9	98.1
97.5°	0.0	14.3	47.0	75.6	87.9
100°	0.0	11.6	40.2	66.8	78.4
102.5°	0.0	9.5	34.8	59.3	69.5
105°	0.0	6.8	28.6	51.8	61.3
107.5°	0.0	4.8	25.2	45.7	53.8
110°	0.0	4.1	22.5	39.5	47.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.4	19.8	35.4	42.3
115°	0.0	3.4	17.7	31.3	37.5
117.5°	0.0	2.7	15.0	27.9	33.4
120°	0.0	2.7	13.6	25.2	30.0
122.5°	0.0	2.0	12.3	22.5	27.3
125°	0.0	2.0	10.9	20.4	23.9
127.5°	0.0	1.4	9.5	18.4	21.8
130°	0.0	1.4	8.9	16.4	19.8
132.5°	0.0	0.7	8.2	15.0	17.7
135°	0.0	0.7	6.8	12.9	16.4
137.5°	0.0	0.0	6.1	11.6	14.3
140°	0.0	0.0	4.8	10.2	12.9
142.5°	0.7	0.0	4.1	8.9	10.9
145°	0.7	0.0	2.7	7.5	9.5
147.5°	0.7	0.7	2.0	6.1	7.5
150°	0.7	0.7	1.4	4.1	6.1
152.5°	0.7	0.7	0.7	2.7	4.1
155°	0.7	0.7	0.0	2.0	2.7
157.5°	0.7	0.7	0.0	0.7	1.4
160°	0.7	0.7	0.0	0.0	0.7
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	14.92	16.47	15.38	16.91	17.38	16.90	18.45	17.36	18.89	19.36
	3H	16.41	17.82	16.88	18.28	18.79	19.31	20.73	19.78	21.18	21.69
	4H	16.89	18.23	17.38	18.70	19.22	20.48	21.82	20.97	22.29	22.81
	6H	17.16	18.41	17.67	18.89	19.43	21.68	22.93	22.19	23.42	23.96
	8H	17.21	18.41	17.73	18.92	19.46	22.31	23.50	22.82	24.01	24.55
	12H	17.23	18.37	17.75	18.88	19.45	22.99	24.13	23.51	24.64	25.21
4H	2H	15.78	17.12	16.28	17.59	18.12	17.34	18.68	17.83	19.15	19.67
	3H	17.51	18.65	18.02	19.17	19.71	19.97	21.11	20.47	21.62	22.17
	4H	18.11	19.15	18.64	19.68	20.26	21.30	22.35	21.83	22.87	23.45
	6H	18.51	19.43	19.05	19.98	20.57	22.70	23.62	23.24	24.17	24.76
	8H	18.60	19.47	19.15	20.02	20.62	23.42	24.29	23.98	24.84	25.45
	12H	18.64	19.43	19.21	20.01	20.62	24.23	25.02	24.80	25.60	26.21
8H	4H	18.76	19.63	19.31	20.18	20.78	21.52	22.38	22.07	22.93	23.54
	6H	19.33	20.06	19.91	20.66	21.27	23.08	23.81	23.66	24.41	25.02
	8H	19.51	20.17	20.10	20.77	21.40	23.94	24.60	24.54	25.21	25.83
	12H	19.62	20.21	20.21	20.80	21.49	24.93	25.52	25.53	26.11	26.80
12H	4H	18.94	19.73	19.51	20.31	20.92	21.52	22.31	22.10	22.89	23.50
	6H	19.60	20.27	20.20	20.87	21.50	23.11	23.78	23.71	24.38	25.01
	8H	19.87	20.47	20.47	21.06	21.75	24.04	24.64	24.64	25.23	25.92

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-8

Test Date: 01/22/2026

Luminaire Tested: 4ASL-2-G520-UNV-OPL-1_600mA

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

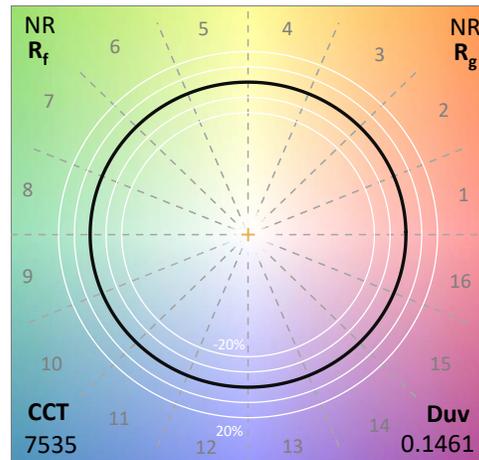
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-8
 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-G520-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND GREEN 520NM LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K): 7535
 CIE u': 0.0718
 CIE v': 0.5710
 Duv: 0.1461
 CIE x: 0.1962
 CIE y: 0.6931
 CIE z: 0.1107
 Peak Wavelength (nm): 524
 Dominant Wavelength (nm): 529
 Purity: 75.95236
 Rf: NR
 Rg: NR

CRI (Ra):	-11.7		
R1:	-30.6	R9:	-351.9
R2:	5.1	R10:	-75.5
R3:	5.6	R11:	-78.0
R4:	-51.7	R12:	-14.7
R5:	-6.4	R13:	-32.5
R6:	-0.6	R14:	52.7
R7:	10.9	R15:	-37.0
R8:	-25.8		



Test Conditions

Stabilization Time: 48M
 Operation Time: 1H 48M
 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



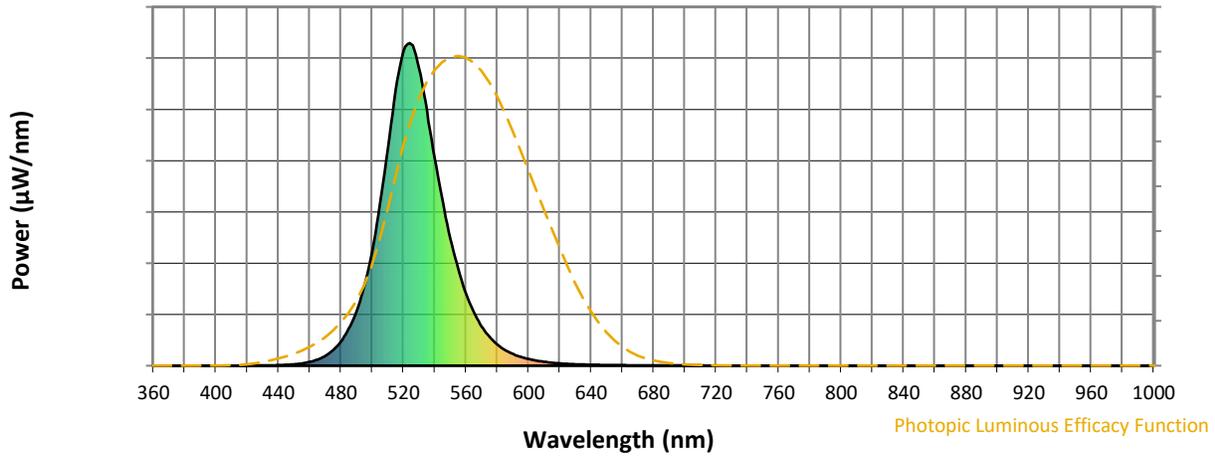
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



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	169	NR	620	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



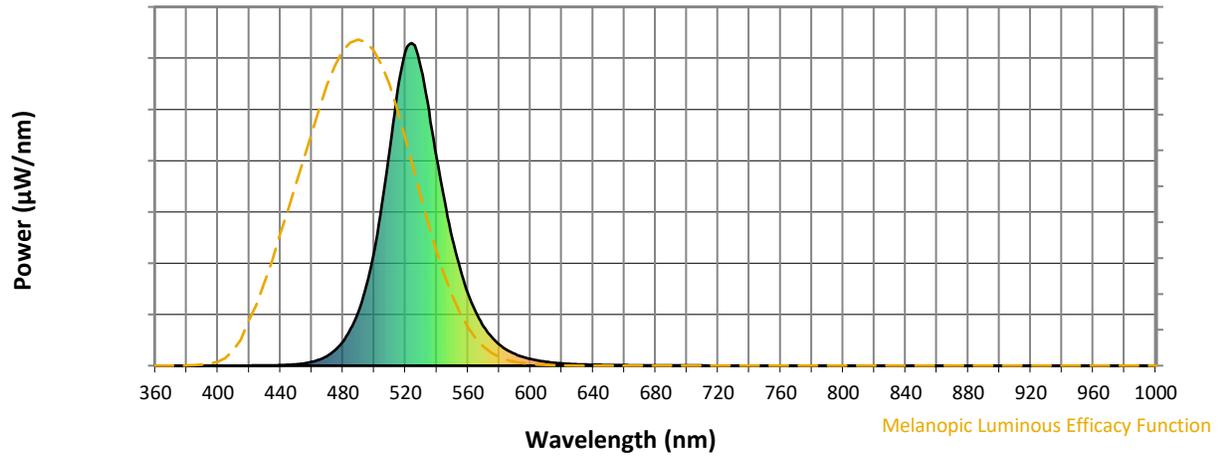
Scotopic Lumens: NR

S/P: 2.63

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	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

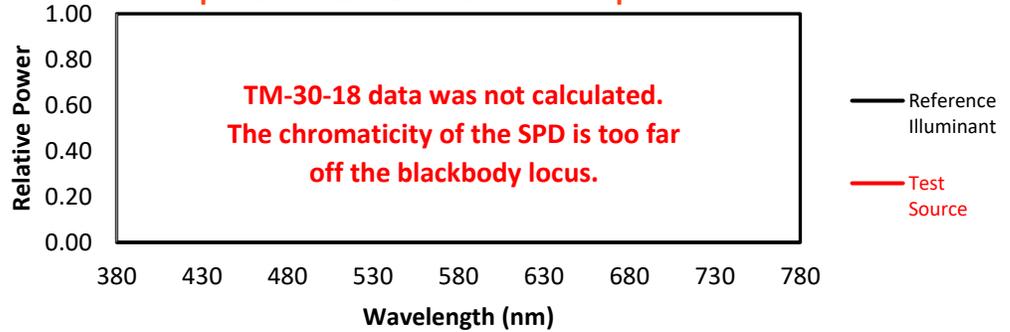
M/P: 4.87

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	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

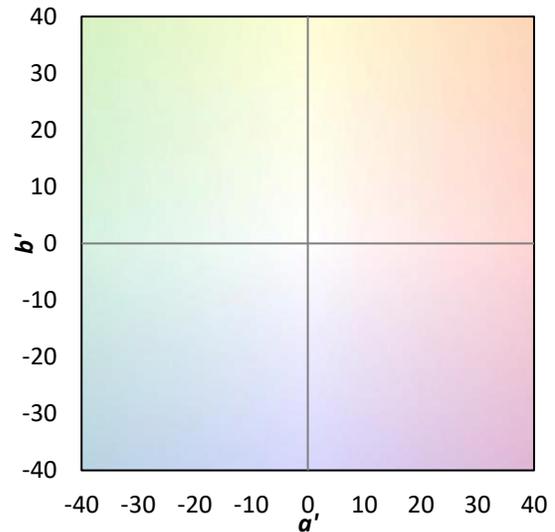
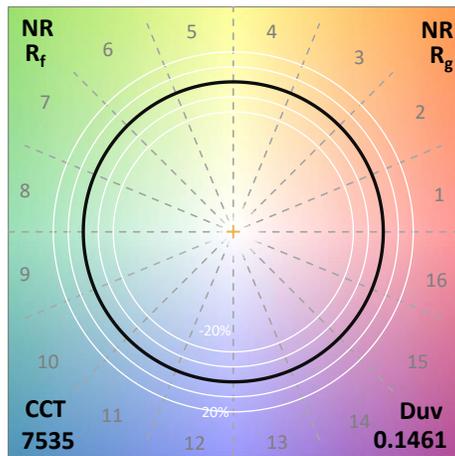
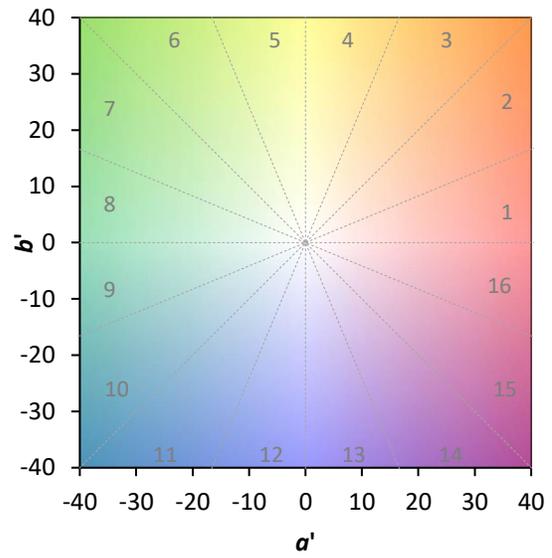
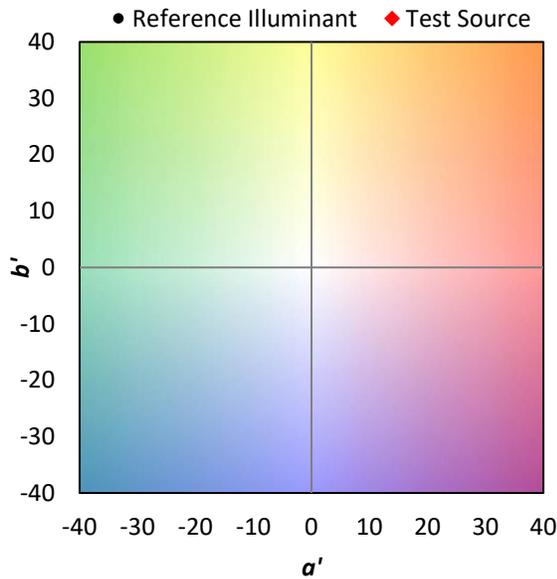
Summary

$R_f = 0$
 $R_g = 0$
 CIE $R_a = -11.7$
 $R_g = -351.9$

Spectral Power Distribution Comparison



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)