

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: P1357368

Luminaire Tested: 6ASL4-35VHE-3-35-UNV

Issue Date: 2/17/2026

**Test Information**

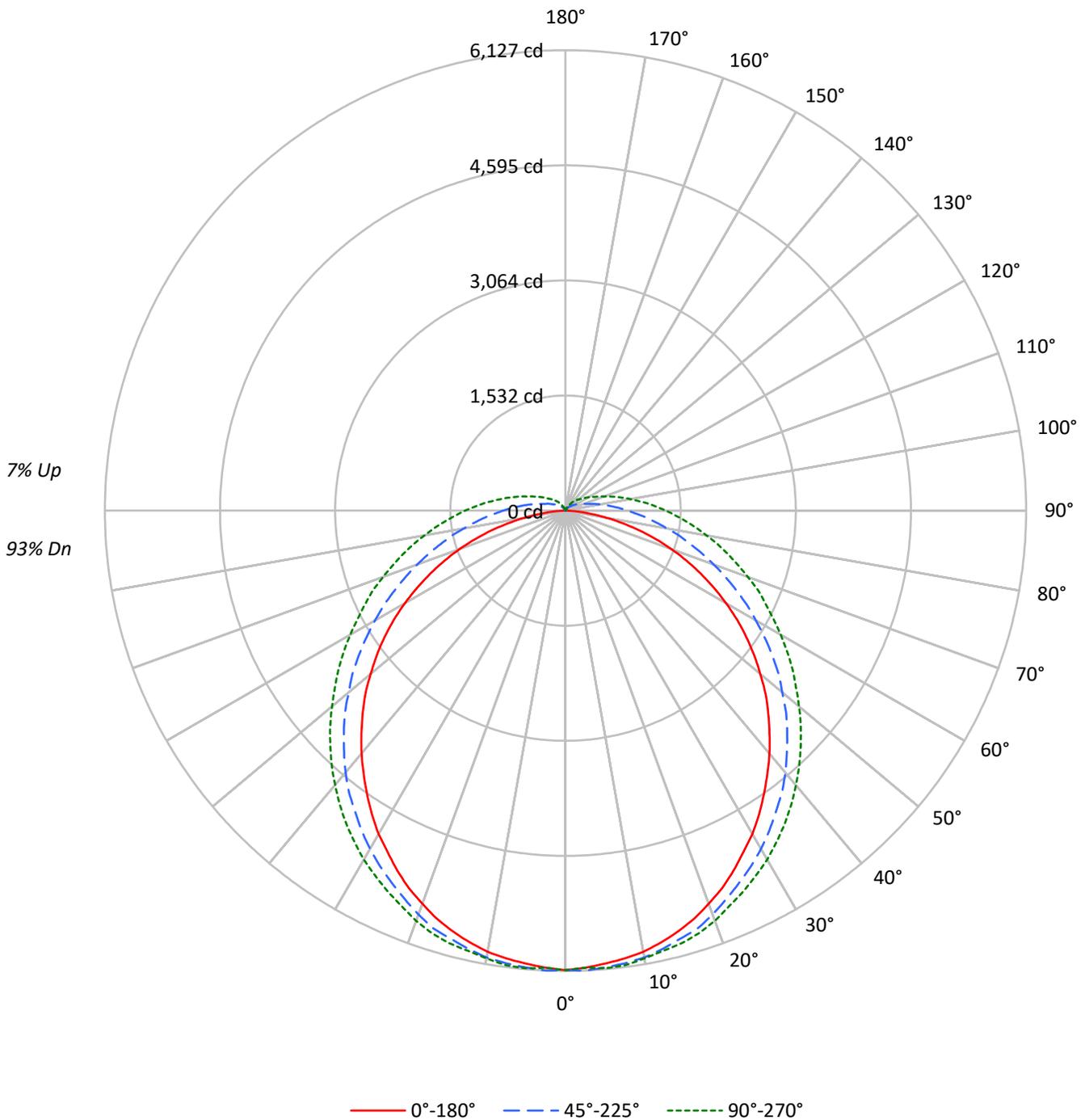
Test Method: LM-79-2019  
Report Number: P1357368  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/17/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: 6ASL4-35VHE-3-35-UNV  
Description: 6FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS 3 ROW  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20790.0 lumens  
Efficiency: N/A  
Efficacy: 109.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 5.98' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 189.6  
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: P1357368  
CATALOG NUMBER: 6ASL4-35VHE-3-35-UNV

### Luminous Intensity Polar Plot





TEST NUMBER: P1357368  
 CATALOG NUMBER: 6ASL4-35VHE-3-35-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°	33023	33023	33023
5°	32755	32419	32267
10°	32596	31806	31452
15°	32261	31040	30760
20°	31800	30305	29979
25°	31259	29378	29092
30°	30689	28575	28342
35°	29975	27665	27506
40°	29327	26833	26627
45°	28630	25822	25744
50°	27834	24738	24826
55°	26979	23703	24001
60°	25858	22493	23163
65°	24430	21331	22469
70°	22606	20184	21925
75°	19926	19144	21552
80°	15831	18381	21392
85°	9855	18261	21710

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 28630 cd/sqm



TEST NUMBER: P1357368  
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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	579.8	2.8
10°-20°	1664.8	8.0
20°-30°	2517.0	12.1
30°-40°	3047.7	14.7
40°-50°	3201.0	15.4
50°-60°	2986.4	14.4
60°-70°	2468.1	11.9
70°-80°	1777.1	8.5
80°-90°	1104.3	5.3
90°-100°	647.1	3.1
100°-110°	370.2	1.8
110°-120°	209.0	1.0
120°-130°	120.3	0.6
130°-140°	64.8	0.3
140°-150°	27.3	0.1
150°-160°	5.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4761.7	22.9
0°-40°	7809.4	37.6
0°-60°	13996.9	67.3
0°-90°	19346.4	93.1
90°-120°	1226.2	5.9
90°-150°	1438.5	6.9
90°-180°	1444.0	6.9
0°-180°	20790.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6115	6115	6115	6115	6115	
5°	6051	6102	6102	6102	6115	575
15°	5797	5873	5898	5937	5962	1634
25°	5288	5377	5466	5543	5593	2436
35°	4602	4729	4882	5021	5085	2881
45°	3814	3954	4170	4348	4424	2942
55°	2936	3102	3356	3598	3687	2624
65°	1983	2174	2504	2822	2936	1962
75°	1017	1271	1716	2085	2237	1076
85°	191	572	1080	1462	1602	233
90°	0	343	826	1182	1335	9
95°	0	216	623	953	1093	0
105°	0	76	343	598	699	0
115°	0	38	203	369	432	0
125°	0	25	127	242	280	0
135°	0	0	76	152	191	0
145°	0	0	38	89	102	0
155°	0	0	0	25	38	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1357368

CATALOG NUMBER: 6ASL4-35VHE-3-35-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6114.6	6114.6	6114.6	6114.6	6114.6
2.5°	6089.2	6127.3	6127.3	6089.2	6089.2
5°	6051.1	6101.9	6101.9	6101.9	6114.6
7.5°	6012.9	6076.5	6076.5	6076.5	6101.9
10°	5962.1	6025.6	6038.3	6038.3	6051.1
12.5°	5885.8	5962.1	5974.8	5987.5	6000.2
15°	5796.8	5873.1	5898.5	5936.6	5962.1
17.5°	5695.1	5784.1	5834.9	5873.1	5898.5
20°	5568.0	5657.0	5720.5	5771.4	5809.5
22.5°	5440.9	5517.1	5593.4	5657.0	5695.1
25°	5288.3	5377.3	5466.3	5542.6	5593.4
27.5°	5123.1	5224.8	5339.2	5428.2	5479.0
30°	4970.5	5072.2	5199.3	5313.7	5364.6
32.5°	4792.5	4906.9	5046.8	5161.2	5224.8
35°	4601.9	4729.0	4881.5	5021.4	5084.9
37.5°	4411.2	4538.3	4729.0	4868.8	4932.4
40°	4220.5	4347.6	4551.0	4703.6	4767.1
42.5°	4017.1	4144.2	4360.3	4525.6	4601.9
45°	3813.7	3953.5	4169.6	4347.6	4423.9
47.5°	3610.3	3750.1	3979.0	4169.6	4245.9
50°	3381.5	3534.0	3762.8	3979.0	4055.2
52.5°	3165.4	3317.9	3572.2	3788.3	3864.5
55°	2936.5	3101.8	3356.0	3597.6	3686.6
57.5°	2707.7	2873.0	3139.9	3394.2	3495.9
60°	2466.2	2644.2	2923.8	3190.8	3305.2
62.5°	2224.7	2415.3	2720.4	3000.1	3114.5
65°	1983.1	2173.8	2504.3	2822.1	2936.5
67.5°	1741.6	1945.0	2300.9	2631.4	2771.3
70°	1500.1	1716.2	2097.5	2440.8	2580.6
72.5°	1258.5	1487.3	1906.8	2262.8	2402.6
75°	1017.0	1271.2	1716.2	2084.8	2237.4
77.5°	775.5	1067.8	1550.9	1919.6	2072.1
80°	559.3	889.9	1372.9	1754.3	1906.8
82.5°	355.9	711.9	1220.4	1601.8	1754.3
85°	190.7	572.1	1080.5	1461.9	1601.8
87.5°	63.6	444.9	940.7	1322.1	1461.9
90°	0.0	343.2	826.3	1182.2	1334.8
92.5°	0.0	267.0	724.6	1067.8	1207.7
95°	0.0	216.1	622.9	953.4	1093.3
97.5°	0.0	178.0	546.6	851.7	978.8
100°	0.0	139.8	470.4	762.7	877.1
102.5°	0.0	114.4	406.8	673.8	788.2
105°	0.0	76.3	343.2	597.5	699.2
107.5°	0.0	63.6	292.4	533.9	622.9
110°	0.0	50.8	267.0	457.6	546.6



TEST NUMBER: P1357368  
 CATALOG NUMBER: 6ASL4-35VHE-3-35-UNV

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	38.1	241.5	406.8	495.8
115°	0.0	38.1	203.4	368.7	432.2
117.5°	0.0	38.1	178.0	330.5	394.1
120°	0.0	25.4	165.3	292.4	355.9
122.5°	0.0	25.4	139.8	267.0	317.8
125°	0.0	25.4	127.1	241.5	279.7
127.5°	0.0	12.7	114.4	216.1	254.2
130°	0.0	12.7	101.7	190.7	228.8
132.5°	0.0	12.7	89.0	178.0	216.1
135°	0.0	0.0	76.3	152.5	190.7
137.5°	0.0	0.0	63.6	139.8	165.3
140°	0.0	0.0	50.8	114.4	152.5
142.5°	0.0	0.0	38.1	101.7	127.1
145°	0.0	0.0	38.1	89.0	101.7
147.5°	0.0	0.0	25.4	63.6	89.0
150°	0.0	0.0	12.7	50.8	63.6
152.5°	0.0	0.0	0.0	38.1	50.8
155°	0.0	0.0	0.0	25.4	38.1
157.5°	0.0	0.0	0.0	0.0	12.7
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



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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	21.49	23.03	21.96	23.49	23.97	23.55	25.09	24.02	25.54	26.03
	3H	22.99	24.39	23.47	24.86	25.38	26.02	27.43	26.51	27.89	28.42
	4H	23.47	24.80	23.97	25.28	25.82	27.23	28.56	27.73	29.05	29.58
	6H	23.75	24.99	24.26	25.48	26.04	28.50	29.74	29.02	30.24	30.79
	8H	23.80	24.99	24.32	25.51	26.06	29.16	30.35	29.69	30.87	31.43
	12H	23.81	24.95	24.34	25.46	26.05	29.90	31.04	30.43	31.55	32.14
4H	2H	22.38	23.71	22.88	24.19	24.73	23.98	25.31	24.48	25.80	26.33
	3H	24.11	25.25	24.63	25.77	26.33	26.68	27.82	27.20	28.34	28.90
	4H	24.71	25.75	25.25	26.29	26.88	28.06	29.10	28.60	29.64	30.23
	6H	25.11	26.03	25.67	26.59	27.20	29.52	30.44	30.08	31.00	31.61
	8H	25.21	26.07	25.77	26.63	27.25	30.29	31.15	30.85	31.72	32.34
	12H	25.25	26.03	25.83	26.63	27.25	31.15	31.93	31.73	32.52	33.15
8H	4H	25.40	26.27	25.96	26.83	27.45	28.28	29.14	28.84	29.70	30.32
	6H	25.98	26.71	26.57	27.32	27.94	29.91	30.64	30.50	31.24	31.87
	8H	26.16	26.82	26.77	27.44	28.08	30.82	31.48	31.42	32.09	32.73
	12H	26.28	26.87	26.88	27.47	28.18	31.86	32.45	32.47	33.05	33.76
12H	4H	25.60	26.38	26.18	26.97	27.60	28.28	29.07	28.87	29.66	30.28
	6H	26.28	26.94	26.88	27.56	28.19	29.94	30.61	30.55	31.22	31.86
	8H	26.56	27.15	27.17	27.75	28.46	30.92	31.51	31.53	32.11	32.82

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-1

Test Date: 11/17/2025

Luminaire Tested: 4ASL-2-35-UNV-OPL-1\_600mA

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

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2511-597-1  
 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-2-35-UNV-OPL-1\_600mA**  
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDs with 1 rows at 600mA

**Spectral Parameters**

CCT (K): 3487  
 CIE u': 0.2366  
 CIE v': 0.5099  
 Duv: -0.0012  
 CIE x: 0.4047  
 CIE y: 0.3876  
 CIE z: 0.2077  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 581  
 Purity: 37.79273  
 R<sub>f</sub>: 90  
 R<sub>g</sub>: 102.4

CRI (Ra):	92.5		
R1:	94.7	R9:	61.3
R2:	94.3	R10:	85.5
R3:	92.9	R11:	93.7
R4:	93.3	R12:	80.8
R5:	93.9	R13:	94.3
R6:	93.4	R14:	95.1
R7:	92.5	R15:	90.9
R8:	85.2		



**Test Conditions**

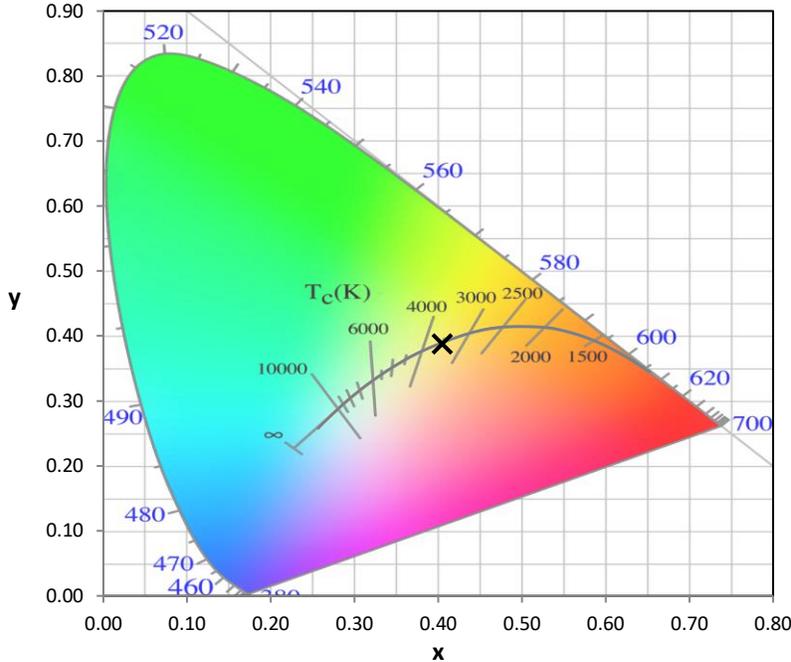
Stabilization Time: 31M  
 Operation Time: 1H 31M  
 Sphere Temperature (°C): 24.1

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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



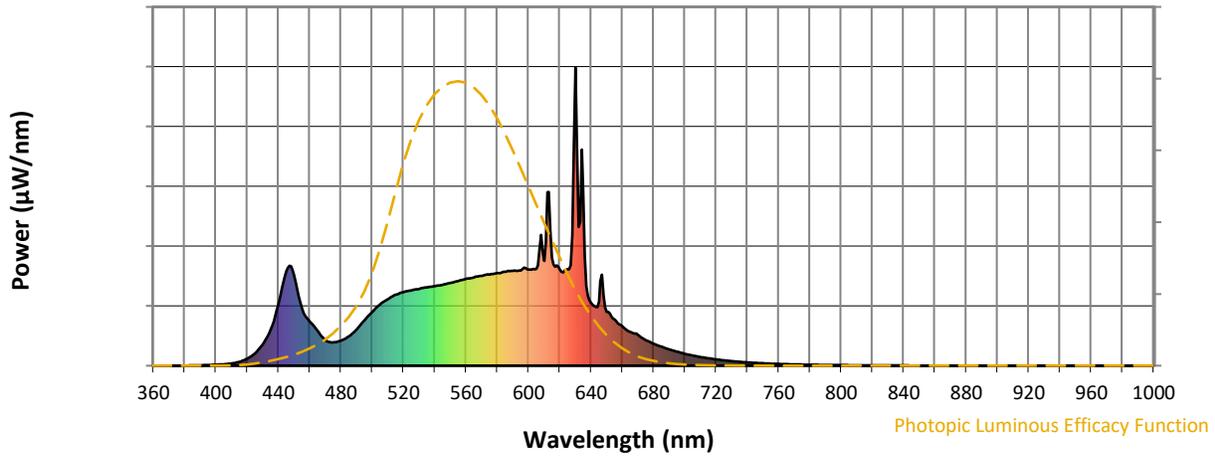
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-1

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.58**

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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 3.15**

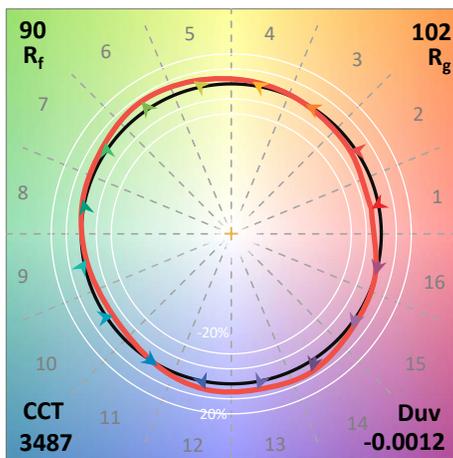
$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

**Summary**

$R_f = 90$   
 $R_g = 102.4$   
 CIE  $R_a = 92.5$   
 $R_9 = 61.3$



**Color Vector Graphics**

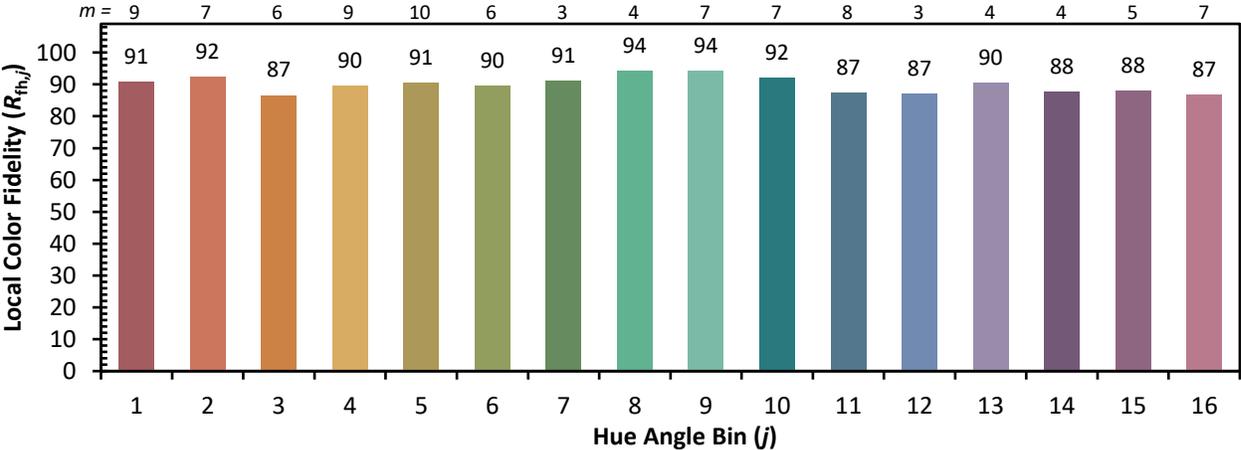
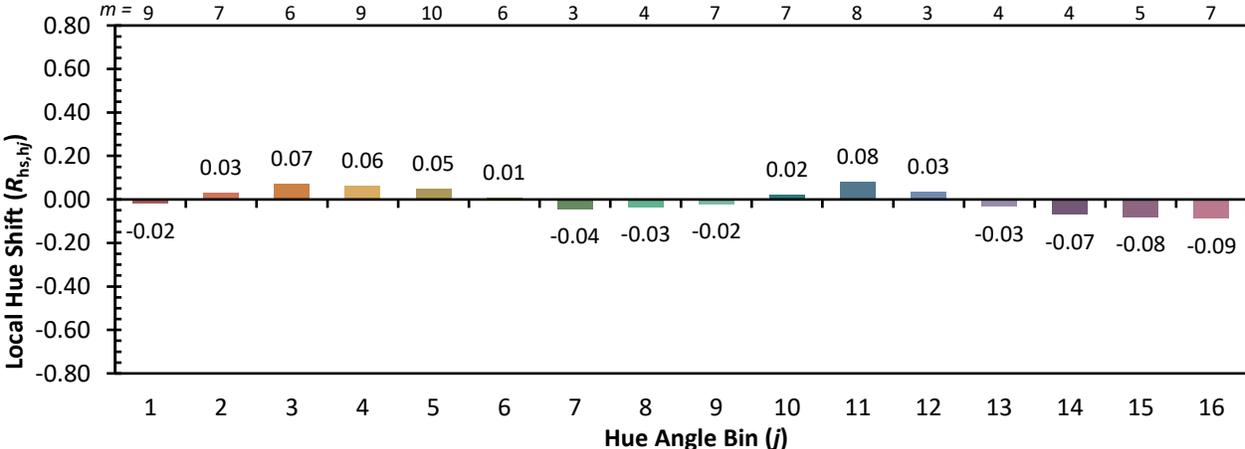
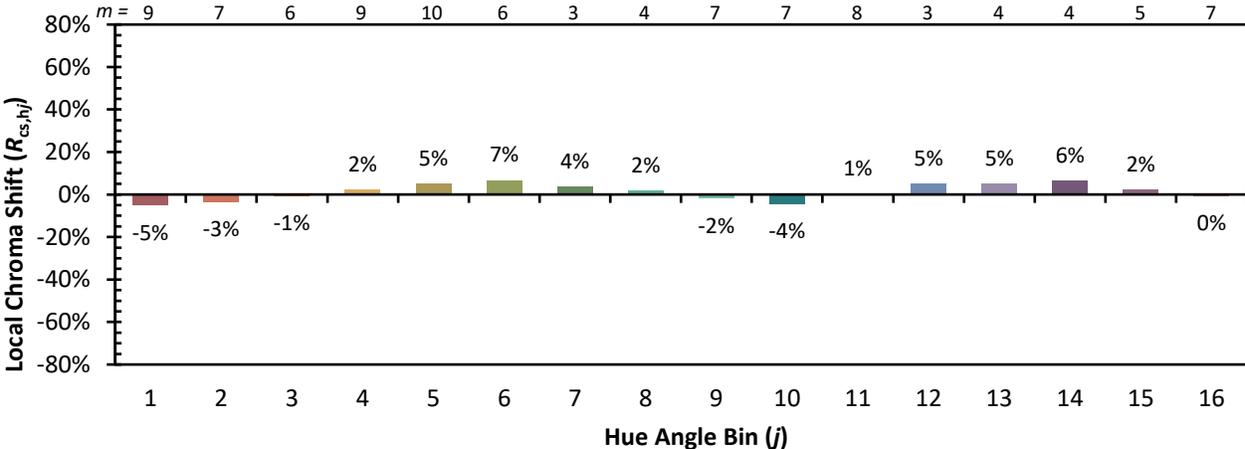


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

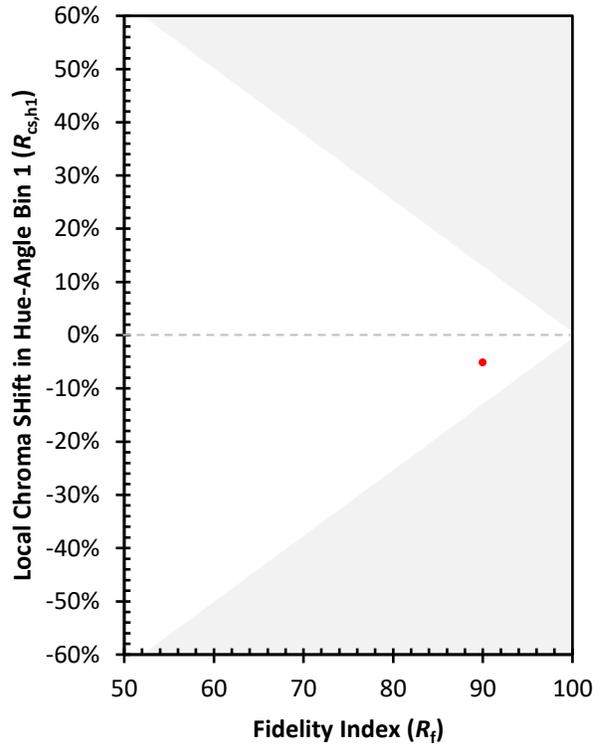
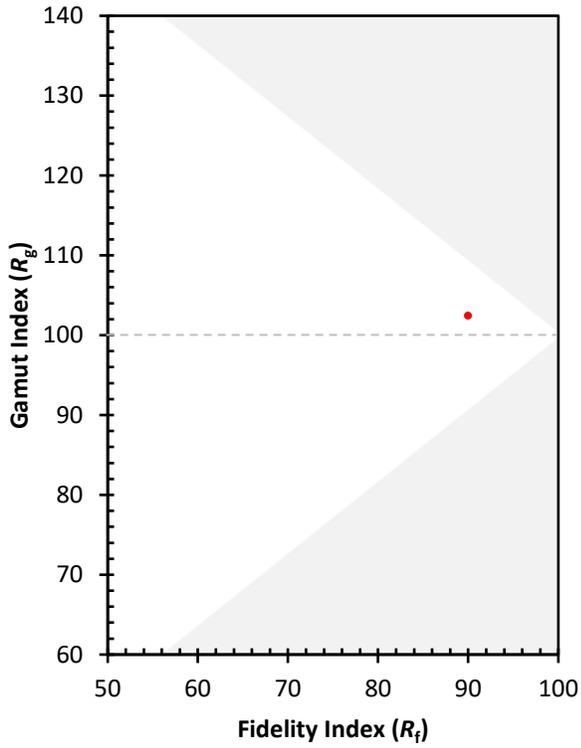
CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 82
CES02 = 62	CES27 = 96	CES52 = 94	CES77 = 89
CES03 = 31	CES28 = 93	CES53 = 90	CES78 = 79
CES04 = 70	CES29 = 84	CES54 = 98	CES79 = 93
CES05 = 50	CES30 = 89	CES55 = 97	CES80 = 91
CES06 = 51	CES31 = 85	CES56 = 91	CES81 = 81
CES07 = 43	CES32 = 80	CES57 = 90	CES82 = 96
CES08 = 41	CES33 = 86	CES58 = 91	CES83 = 94
CES09 = 29	CES34 = 88	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 93	CES60 = 97	CES85 = 84
CES11 = 58	CES36 = 93	CES61 = 96	CES86 = 82
CES12 = 64	CES37 = 91	CES62 = 98	CES87 = 90
CES13 = 43	CES38 = 95	CES63 = 91	CES88 = 94
CES14 = 74	CES39 = 96	CES64 = 93	CES89 = 83
CES15 = 71	CES40 = 92	CES65 = 90	CES90 = 94
CES16 = 47	CES41 = 93	CES66 = 91	CES91 = 83
CES17 = 49	CES42 = 87	CES67 = 91	CES92 = 80
CES18 = 56	CES43 = 85	CES68 = 91	CES93 = 89
CES19 = 71	CES44 = 99	CES69 = 93	CES94 = 75
CES20 = 66	CES45 = 90	CES70 = 87	CES95 = 85
CES21 = 86	CES46 = 90	CES71 = 85	CES96 = 91
CES22 = 78	CES47 = 86	CES72 = 95	CES97 = 90
CES23 = 91	CES48 = 91	CES73 = 80	CES98 = 91
CES24 = 90	CES49 = 88	CES74 = 94	CES99 = 92
CES25 = 71	CES50 = 94	CES75 = 84	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)