Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P860174

Luminaire Tested: **SPHB-48HE-W-L850-CD**

Issue Date: 7/11/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P860174
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-6)
Test Lab:	INNOVATION CENTER
Issue Date:	7/11/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	METALUX
Catalog Number:	SPHB-48HE-W-L850-CD
Description:	48000 Lumen High Efficacy Select Pro High Bay with Wide Lens and, 5000K 80CRI LEDs
Light Source:	-
Ballast/Driver:	-

Luminaire Equipment:	Sample No.	Condition	Description

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	48770.0 lumens
Efficiency:	N/A
Efficacy:	169.0 lumens/watt
Spacing Criteria (0/90/45):	1.16 / 1.5 / 1.51
Luminous Opening:	Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type:	Direct

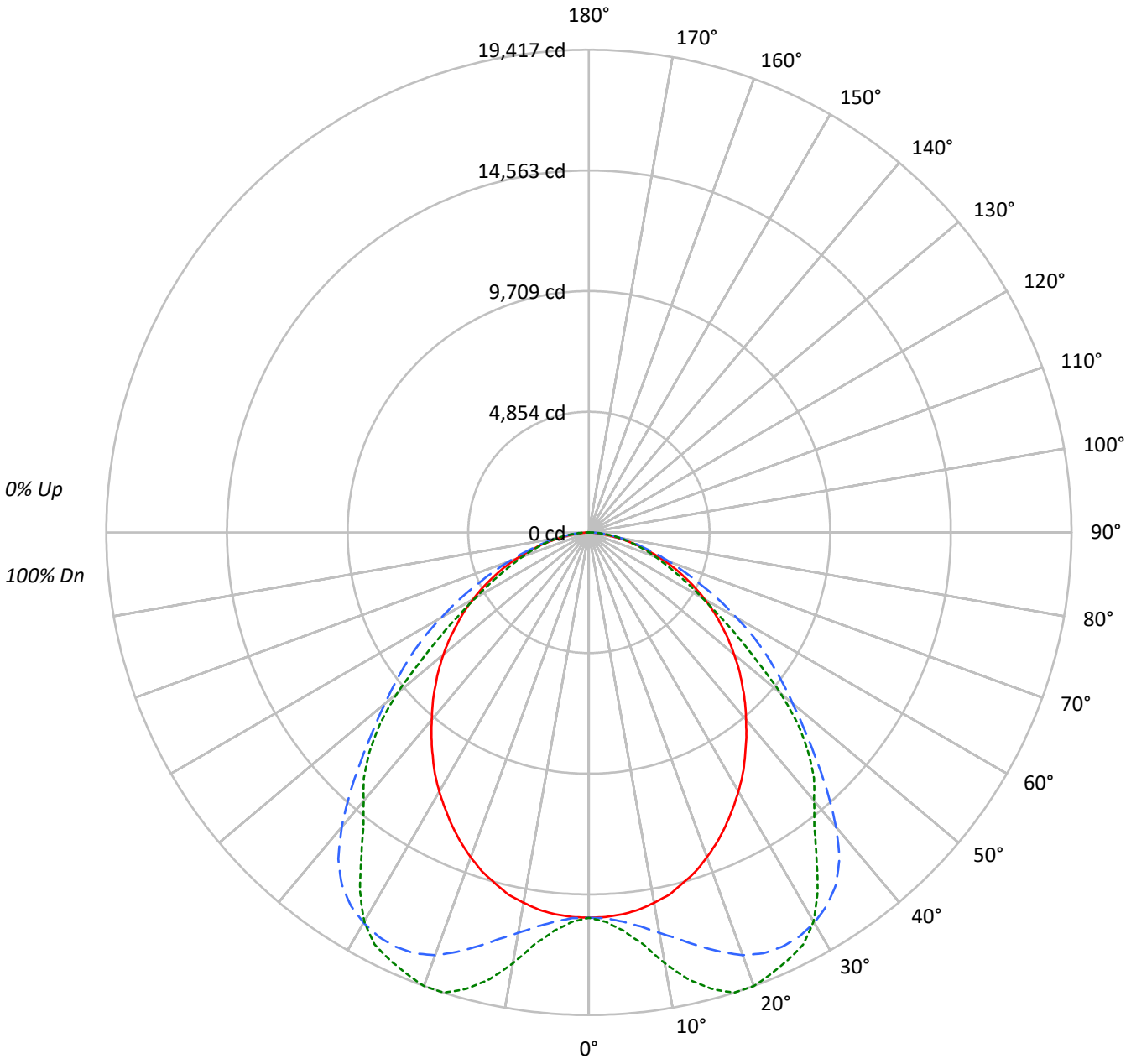
Input Watts (W):	288.6
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P860174
CATALOG NUMBER: SPHB-48HE-W-L850-CD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P860174
CATALOG NUMBER: SPHB-48HE-W-L850-CD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	49361	49361	49361
5°	49307	50238	51428
10°	48917	52889	56898
15°	48153	56827	62673
20°	47111	61346	65804
25°	45751	64655	66666
30°	44262	66678	66485
35°	42601	67348	62038
40°	40884	64307	58596
45°	39337	58290	56219
50°	37805	53002	49839
55°	36076	48970	40557
60°	34291	43658	33401
65°	31930	37514	28961
70°	29049	32029	26194
75°	24947	26880	24016
80°	19498	23056	22273
85°	13187	19567	18361

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P860174
CATALOG NUMBER: SPHB-48HE-W-L850-CD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1521.8	3.1
10°-20°	4825.5	9.9
20°-30°	7897.2	16.2
30°-40°	9634.0	19.8
40°-50°	9541.5	19.6
50°-60°	7630.1	15.6
60°-70°	4759.9	9.8
70°-80°	2332.1	4.8
80°-90°	611.7	1.3
90°-100°	16.1	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	14244.6	29.2
0°-40°	23878.6	49.0
0°-60°	41050.2	84.2
0°-90°	48753.9	100.0
90°-120°	16.1	0.0
90°-150°	16.1	0.0
90°-180°	16.0	0.0
0°-180°	48770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15500	15500	15500	15500	15500	
5°	15424	15492	15715	15989	16088	###
15°	14605	15455	17236	18608	19010	4117
25°	13020	15224	18400	18934	18973	5992
35°	10958	14642	17324	16398	15958	6854
45°	8734	13569	12943	12508	12483	6746
55°	6498	10419	8820	7968	7305	5822
65°	4237	5846	4978	4129	3843	4202
75°	2028	2483	2185	2000	1952	2152
85°	361	512	536	508	502	447
90°	2	52	95	120	124	21
95°	2	8	8	6	4	1
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P860174
CATALOG NUMBER: SPHB-48HE-W-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	15499.8	15499.8	15499.8	15499.8	*15499.8*
2.5°	15484.3	15478.5	15534.8	15637.6	*15684.1*
5°	15424.2	15492.1	15715.2	15988.7	*16087.7*
7.5°	15315.5	15497.9	15990.7	16493.2	*16706.6*
10°	15127.3	15501.8	16355.4	17242.1	*17595.2*
12.5°	14933.3	15488.2	16760.9	18016.2	*18402.3*
15°	14605.4	15455.2	17236.3	18607.9	*19009.6*
17.5°	14300.8	15416.4	17694.1	19110.4	*19415.0*
20°	*13901.2*	*15360.1*	*18101.6*	*19263.7*	*19417.0*
22.5°	13482.1	15315.5	18326.6	19160.9	*19207.5*
25°	13020.3	15224.3	18400.4	18933.9	*18972.7*
27.5°	12527.5	15142.8	18330.5	18652.6	*18685.6*
30°	12036.7	14995.4	18132.6	18214.1	*18080.2*
32.5°	11522.5	14847.9	17812.5	17445.8	*17133.4*
35°	10957.9	14642.3	17323.6	16398.1	*15957.7*
37.5°	10401.1	14444.4	16561.1	15226.3	*14894.5*
40°	9834.6	14199.9	15468.8	14132.0	*14095.2*
42.5°	9299.1	13936.1	14232.9	13280.3	*13404.5*
45°	8734.5	13569.4	12942.7	12508.1	*12482.9*
47.5°	8199.1	13063.0	11768.9	11654.5	*11396.4*
50°	7630.6	12364.6	10698.0	10589.3	*10059.7*
52.5°	7073.8	11474.0	9741.5	9334.0	*8561.9*
55°	6497.6	10418.6	8819.9	7968.2	*7304.7*
57.5°	5962.1	9258.4	7882.8	6778.9	*6183.2*
60°	5383.9	8082.7	6854.5	5735.1	*5244.2*
62.5°	4817.4	6924.4	5923.3	4846.5	*4520.5*
65°	4237.3	5845.7	4978.4	4128.6	*3843.4*
67.5°	3682.4	4912.5	4161.6	3480.6	*3290.5*
70°	3119.8	3985.1	3439.9	2923.8	*2813.2*
72.5°	2539.7	3183.8	2782.2	2467.9	*2384.4*
75°	2027.5	2483.4	2184.6	2000.3	*1951.8*
77.5°	1509.4	1847.0	1707.3	1598.7	*1585.1*
80°	1063.2	1332.9	1257.2	1235.9	*1214.5*
82.5°	679.1	871.1	894.4	880.8	*865.3*
85°	360.9	512.2	535.5	508.3	*502.5*
87.5°	145.5	223.1	240.6	265.8	*273.6*
90°	1.9	52.4	95.1	120.3	*124.2*
92.5°	1.9	11.6	13.6	13.6	*11.6*
95°	1.9	7.8	7.8	5.8	*3.9*
97.5°	0.0	0.0	0.0	0.0	*0.0*
100°	0.0	0.0	0.0	0.0	*0.0*
102.5°	0.0	0.0	0.0	0.0	*0.0*
105°	0.0	0.0	0.0	0.0	*0.0*

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

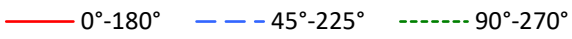
Scaled Data Report

TEST NUMBER: P860174
CATALOG NUMBER: SPHB-48HE-W-L850-CD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.0	0.0	*0.0*
115°	0.0	0.0	0.0	0.0	*0.0*
117.5°	0.0	0.0	0.0	0.0	*0.0*
120°	0.0	0.0	0.0	0.0	*0.0*
122.5°	0.0	0.0	0.0	0.0	*0.0*
125°	0.0	0.0	0.0	0.0	*0.0*
127.5°	0.0	0.0	0.0	0.0	*0.0*
130°	0.0	0.0	0.0	0.0	*0.0*
132.5°	0.0	0.0	0.0	0.0	*0.0*
135°	0.0	0.0	0.0	0.0	*0.0*
137.5°	0.0	0.0	0.0	0.0	*0.0*
140°	0.0	0.0	0.0	0.0	*0.0*
142.5°	0.0	0.0	0.0	0.0	*0.0*
145°	0.0	0.0	0.0	0.0	*0.0*
147.5°	0.0	0.0	0.0	0.0	*0.0*
150°	0.0	0.0	0.0	0.0	*0.0*
152.5°	0.0	0.0	0.0	0.0	*0.0*
155°	0.0	0.0	0.0	0.0	*0.0*
157.5°	0.0	0.0	0.0	0.0	*0.0*
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*

Report Generated By 670246072 / DESKTOP-50001EG


0°-180°
45°-225°
90°-270°

107.5°	0.0	0.0	0.0	0.0	*0.0*
110°	0.0	0.0	0.0	0.0	*0.0*

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2309-187-6

Test Date: 10/10/2023

Luminaire Tested: SPHB-2436SE-M-UNV-L84050-CD-U (36K LUMEN 5000K)

Data in this report applies to families of products including SPHB-2436SE-M-UNV-L84050-CD-U (36K LUMEN 5000K).

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.12

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

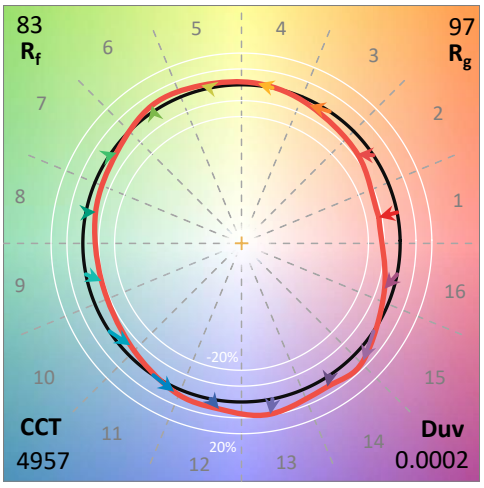
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2309-187-6
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	10/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	**SPHB-2436SE-M-UNV-L84050-CD-U (36K LUMEN 5000K)**
Description:	SPHB SELECT, MEDIUM LENS, 36K LUMENS, 5000K

Spectral Parameters

CCT (K):	4957	CRI (Ra):	83.0		
CIE u':	0.2117	R1:	81.6	R9:	13.4
CIE v':	0.4855	R2:	88.2	R10:	70.8
Duv:	0.0002	R3:	91.8	R11:	80.4
CIE x:	0.3463	R4:	82.0	R12:	55.2
CIE y:	0.3530	R5:	81.2	R13:	83.4
CIE z:	0.3007	R6:	82.2	R14:	95.6
Peak Wavelength (nm):	452	R7:	88.1		
Dominant Wavelength (nm):	573	R8:	69.2		
Purity:	10				

Rf:	83
Rg:	96.6



Test Conditions

Stabilization Time:	10M
Operation Time:	12H
Room Temperature (°C) / RH%:	25.8/38%
Sphere Temperature (°C):	24.2

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

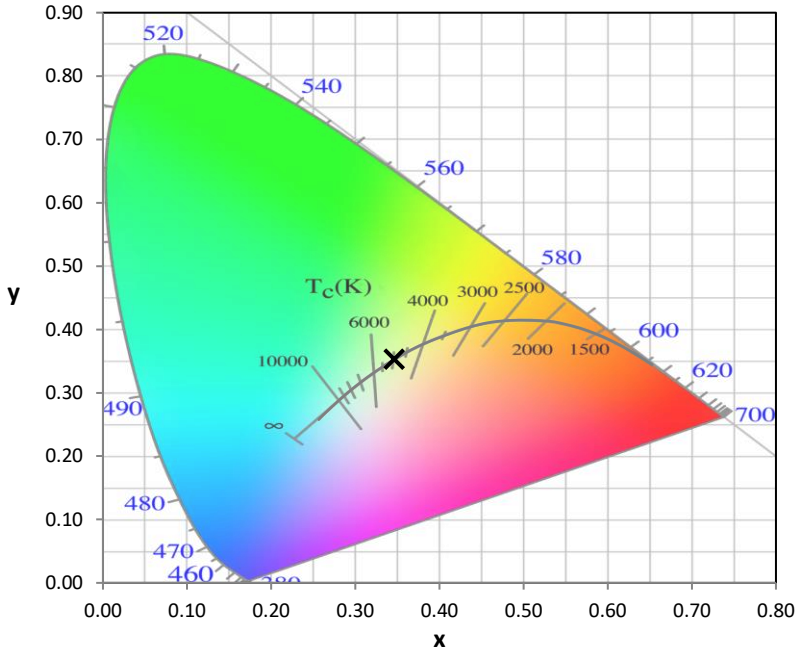
REPORT NUMBER: SP1-2309-187-6

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	8/9/2023	2/9/2024
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208	11/28/2022	11/28/2023
Sphere Thermometer	ONSET IN0085	11/28/2022	11/28/2023
Room Thermometer	ONSET IN0046	11/28/2022	11/28/2023

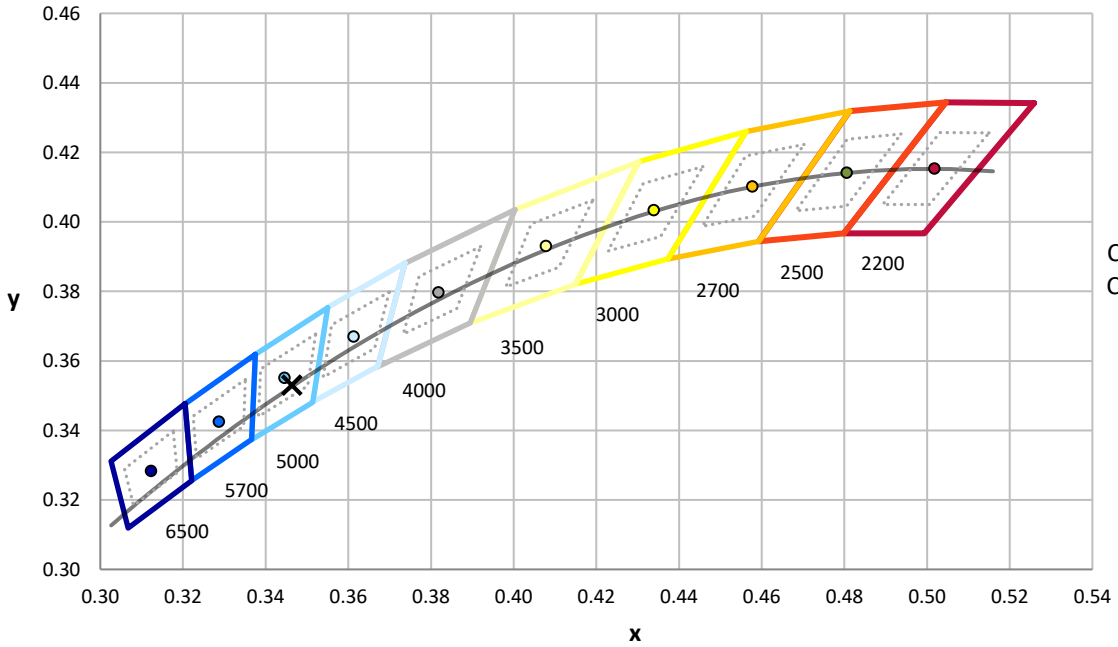
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

CIE 1931 Chromaticity Diagram



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



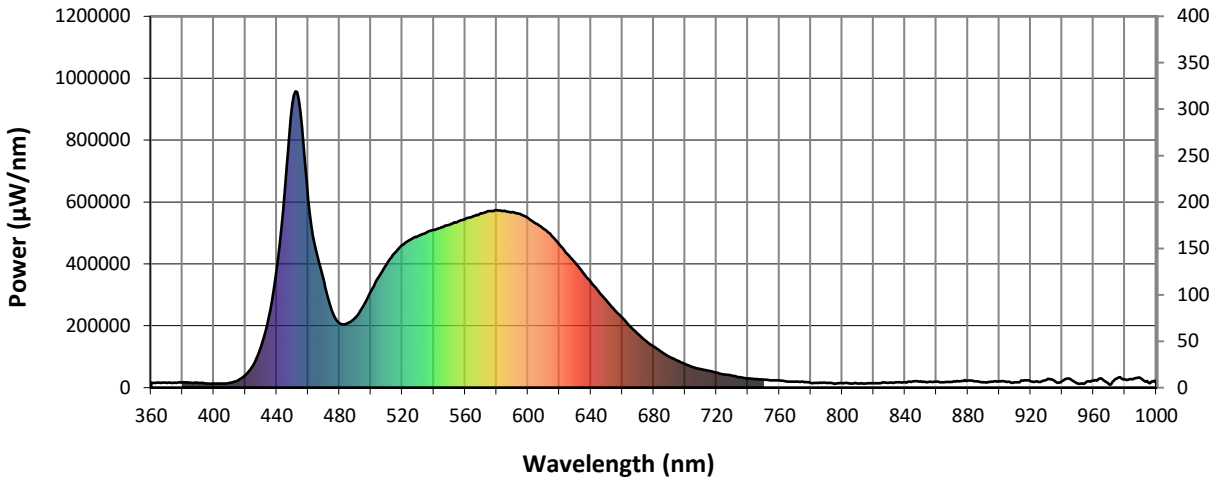
CCT = 4957K
CIE x = 0.3463
CIE y = 0.3530
Duv = 0.0002

Point lies inside the ANSI 5000K 4-step quadrangle

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

Photopic Flux vs. Wavelength



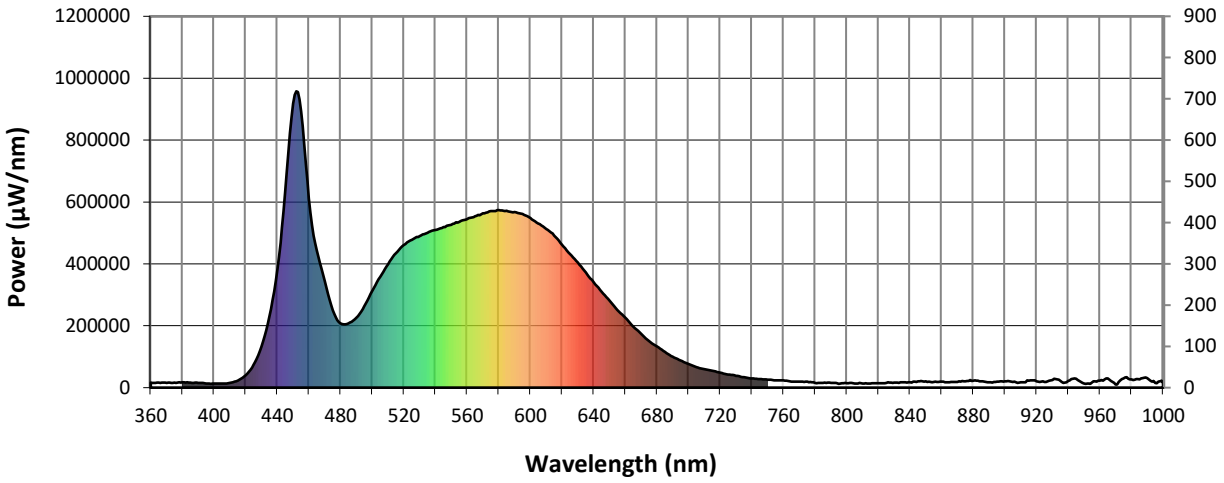
######

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	16466	NR	490	226060	NR	620	461721	NR	750	25725	NR	880	22907	NR
365	15834	NR	495	262555	NR	625	431803	NR	755	23611	NR	885	20279	NR
370	15705	NR	500	311885	NR	630	403609	NR	760	23080	NR	890	16993	NR
375	16161	NR	505	357744	NR	635	372123	NR	765	19807	NR	895	19274	NR
380	17604	NR	510	398986	NR	640	341468	NR	770	19668	NR	900	19961	NR
385	15901	NR	515	433700	NR	645	309940	NR	775	19158	NR	905	18541	NR
390	15561	NR	520	460798	NR	650	281489	NR	780	15443	NR	910	17677	NR
395	13649	NR	525	477719	NR	655	251312	NR	785	15332	NR	915	22715	NR
400	12726	NR	530	489588	NR	660	226441	NR	790	15443	NR	920	20431	NR
405	12867	NR	535	500614	NR	665	197313	NR	795	12716	NR	925	18281	NR
410	14858	NR	540	509478	NR	670	174037	NR	800	14486	NR	930	24254	NR
415	22758	NR	545	518634	NR	675	150402	NR	805	13381	NR	935	22361	NR
420	40173	NR	550	526082	NR	680	133071	NR	810	13493	NR	940	21374	NR
425	73606	NR	555	535227	NR	685	115398	NR	815	13669	NR	945	28437	NR
430	132581	NR	560	544645	NR	690	99841	NR	820	13949	NR	950	12992	NR
435	230438	NR	565	553668	NR	695	87508	NR	825	15609	NR	955	16488	NR
440	382216	NR	570	563202	NR	700	76178	NR	830	16481	NR	960	22861	NR
445	630161	NR	575	570117	NR	705	66441	NR	835	17363	NR	965	29851	NR
450	918124	NR	580	573472	NR	710	60098	NR	840	16960	NR	970	10276	NR
455	893762	NR	585	571600	NR	715	54539	NR	845	20190	NR	975	29525	NR
460	612059	NR	590	567612	NR	720	48071	NR	850	20506	NR	980	26199	NR
465	443338	NR	595	561157	NR	725	42545	NR	855	18525	NR	985	27187	NR
470	344255	NR	600	547832	NR	730	38502	NR	860	19090	NR	990	30712	NR
475	249784	NR	605	530525	NR	735	33410	NR	865	17185	NR	995	15047	NR
480	207499	NR	610	513131	NR	740	29667	NR	870	18599	NR	1000	14588	NR
485	208029	NR	615	491003	NR	745	27521	NR	875	20800	NR			

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

Scotopic Flux vs. Wavelength



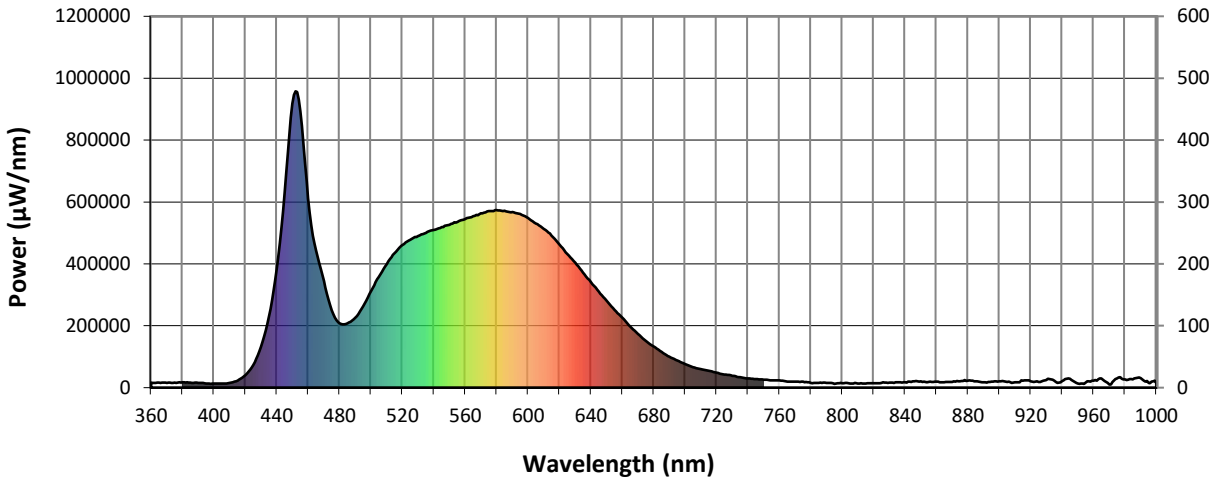
Scotopic Lumens: 69332.4 **S/P: 1.93**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	16466	NR	490	226060	NR	620	461721	NR	750	25725	NR	880	22907	NR
365	15834	NR	495	262555	NR	625	431803	NR	755	23611	NR	885	20279	NR
370	15705	NR	500	311885	NR	630	403609	NR	760	23080	NR	890	16993	NR
375	16161	NR	505	357744	NR	635	372123	NR	765	19807	NR	895	19274	NR
380	17604	NR	510	398986	NR	640	341468	NR	770	19668	NR	900	19961	NR
385	15901	NR	515	433700	NR	645	309940	NR	775	19158	NR	905	18541	NR
390	15561	NR	520	460798	NR	650	281489	NR	780	15443	NR	910	17677	NR
395	13649	NR	525	477719	NR	655	251312	NR	785	15332	NR	915	22715	NR
400	12726	NR	530	489588	NR	660	226441	NR	790	15443	NR	920	20431	NR
405	12867	NR	535	500614	NR	665	197313	NR	795	12716	NR	925	18281	NR
410	14858	NR	540	509478	NR	670	174037	NR	800	14486	NR	930	24254	NR
415	22758	NR	545	518634	NR	675	150402	NR	805	13381	NR	935	22361	NR
420	40173	NR	550	526082	NR	680	133071	NR	810	13493	NR	940	21374	NR
425	73606	NR	555	535227	NR	685	115398	NR	815	13669	NR	945	28437	NR
430	132581	NR	560	544645	NR	690	99841	NR	820	13949	NR	950	12992	NR
435	230438	NR	565	553668	NR	695	87508	NR	825	15609	NR	955	16488	NR
440	382216	NR	570	563202	NR	700	76178	NR	830	16481	NR	960	22861	NR
445	630161	NR	575	570117	NR	705	66441	NR	835	17363	NR	965	29851	NR
450	918124	NR	580	573472	NR	710	60098	NR	840	16960	NR	970	10276	NR
455	893762	NR	585	571600	NR	715	54539	NR	845	20190	NR	975	29525	NR
460	612059	NR	590	567612	NR	720	48071	NR	850	20506	NR	980	26199	NR
465	443338	NR	595	561157	NR	725	42545	NR	855	18525	NR	985	27187	NR
470	344255	NR	600	547832	NR	730	38502	NR	860	19090	NR	990	30712	NR
475	249784	NR	605	530525	NR	735	33410	NR	865	17185	NR	995	15047	NR
480	207499	NR	610	513131	NR	740	29667	NR	870	18599	NR	1000	14588	NR
485	208029	NR	615	491003	NR	745	27521	NR	875	20800	NR			

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: 29078.2 M/P: 0.81

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	16466	NR	490	226060	NR	620	461721	NR	750	25725	NR	880	22907	NR
365	15834	NR	495	262555	NR	625	431803	NR	755	23611	NR	885	20279	NR
370	15705	NR	500	311885	NR	630	403609	NR	760	23080	NR	890	16993	NR
375	16161	NR	505	357744	NR	635	372123	NR	765	19807	NR	895	19274	NR
380	17604	NR	510	398986	NR	640	341468	NR	770	19668	NR	900	19961	NR
385	15901	NR	515	433700	NR	645	309940	NR	775	19158	NR	905	18541	NR
390	15561	NR	520	460798	NR	650	281489	NR	780	15443	NR	910	17677	NR
395	13649	NR	525	477719	NR	655	251312	NR	785	15332	NR	915	22715	NR
400	12726	NR	530	489588	NR	660	226441	NR	790	15443	NR	920	20431	NR
405	12867	NR	535	500614	NR	665	197313	NR	795	12716	NR	925	18281	NR
410	14858	NR	540	509478	NR	670	174037	NR	800	14486	NR	930	24254	NR
415	22758	NR	545	518634	NR	675	150402	NR	805	13381	NR	935	22361	NR
420	40173	NR	550	526082	NR	680	133071	NR	810	13493	NR	940	21374	NR
425	73606	NR	555	535227	NR	685	115398	NR	815	13669	NR	945	28437	NR
430	132581	NR	560	544645	NR	690	99841	NR	820	13949	NR	950	12992	NR
435	230438	NR	565	553668	NR	695	87508	NR	825	15609	NR	955	16488	NR
440	382216	NR	570	563202	NR	700	76178	NR	830	16481	NR	960	22861	NR
445	630161	NR	575	570117	NR	705	66441	NR	835	17363	NR	965	29851	NR
450	918124	NR	580	573472	NR	710	60098	NR	840	16960	NR	970	10276	NR
455	893762	NR	585	571600	NR	715	54539	NR	845	20190	NR	975	29525	NR
460	612059	NR	590	567612	NR	720	48071	NR	850	20506	NR	980	26199	NR
465	443338	NR	595	561157	NR	725	42545	NR	855	18525	NR	985	27187	NR
470	344255	NR	600	547832	NR	730	38502	NR	860	19090	NR	990	30712	NR
475	249784	NR	605	530525	NR	735	33410	NR	865	17185	NR	995	15047	NR
480	207499	NR	610	513131	NR	740	29667	NR	870	18599	NR	1000	14588	NR
485	208029	NR	615	491003	NR	745	27521	NR	875	20800	NR			

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

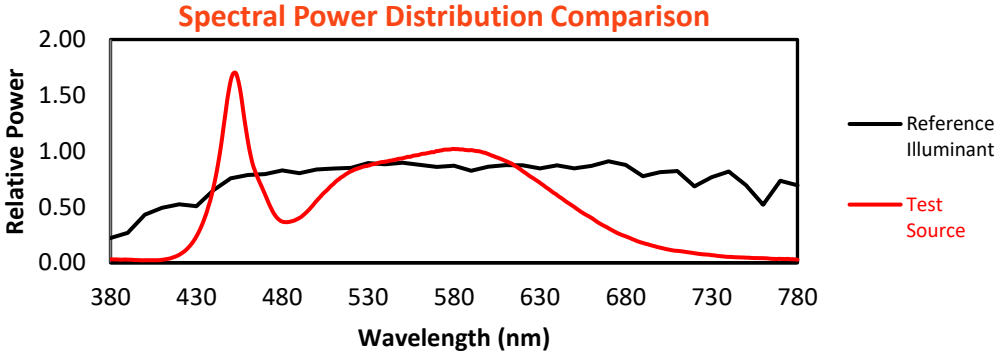
REPORT NUMBER: SP1-2309-187-6

TM-30-18

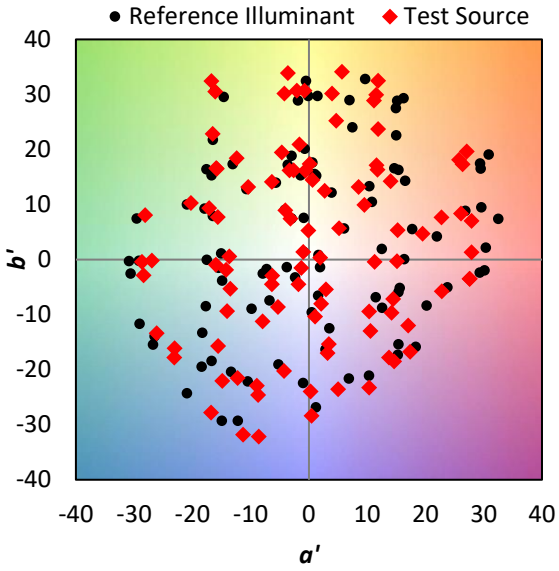
Summary

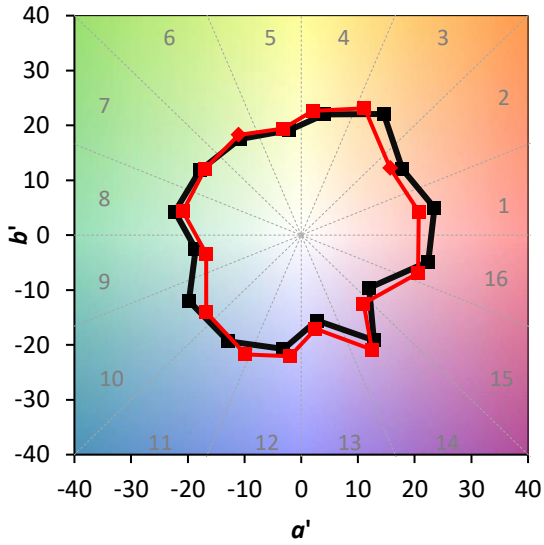
R_f = 83
R_g = 96.6
CIE R_a = 83.0
R_9 = 13.4

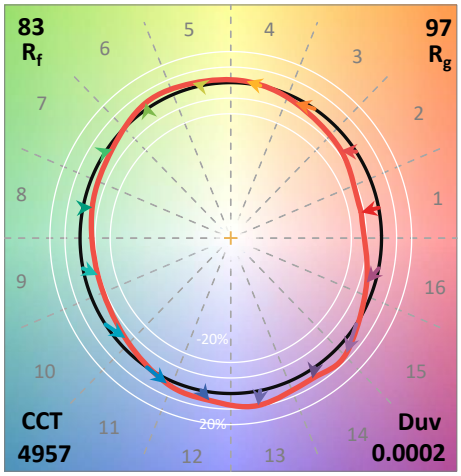
Spectral Power Distribution Comparison

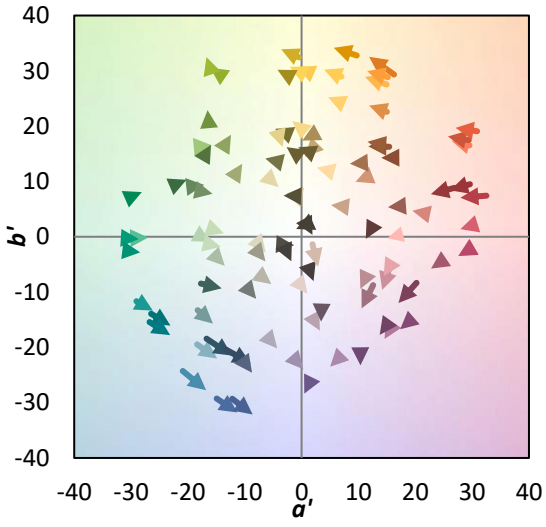


Color Vector Graphics









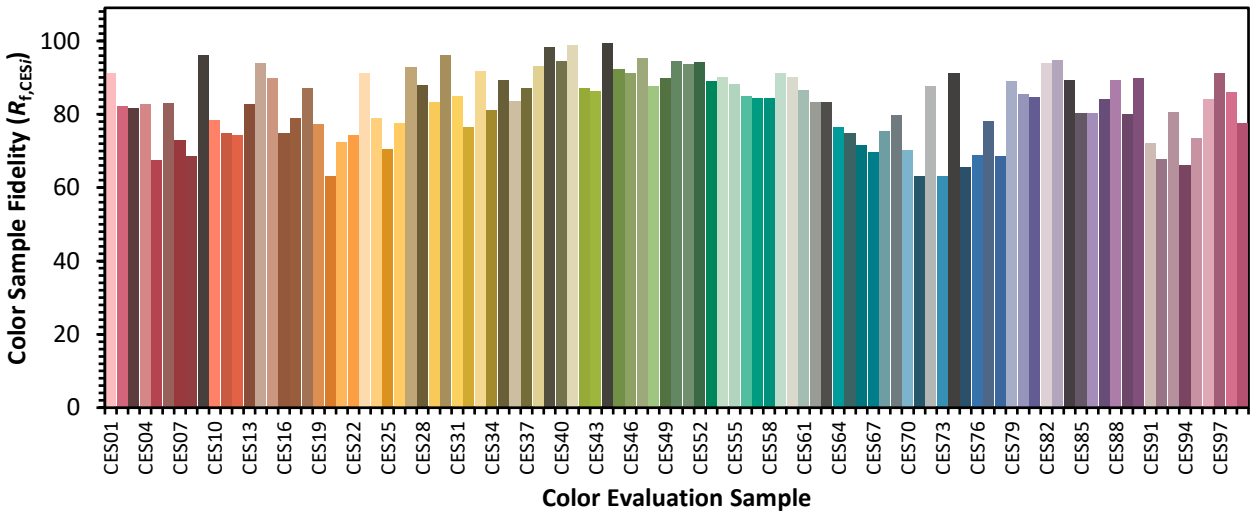
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

TM-30-18

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

CES01 = 85	CES26 = 78	CES51 = 94	CES76 = 69
CES02 = 60	CES27 = 93	CES52 = 94	CES77 = 78
CES03 = 30	CES28 = 88	CES53 = 89	CES78 = 69
CES04 = 69	CES29 = 83	CES54 = 90	CES79 = 89
CES05 = 47	CES30 = 96	CES55 = 88	CES80 = 86
CES06 = 50	CES31 = 85	CES56 = 85	CES81 = 85
CES07 = 40	CES32 = 77	CES57 = 84	CES82 = 94
CES08 = 39	CES33 = 92	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 81	CES59 = 91	CES84 = 89
CES10 = 73	CES35 = 89	CES60 = 90	CES85 = 80
CES11 = 56	CES36 = 84	CES61 = 87	CES86 = 80
CES12 = 62	CES37 = 87	CES62 = 83	CES87 = 84
CES13 = 42	CES38 = 93	CES63 = 83	CES88 = 89
CES14 = 74	CES39 = 98	CES64 = 76	CES89 = 80
CES15 = 71	CES40 = 95	CES65 = 75	CES90 = 90
CES16 = 46	CES41 = 99	CES66 = 72	CES91 = 72
CES17 = 49	CES42 = 87	CES67 = 70	CES92 = 68
CES18 = 56	CES43 = 86	CES68 = 75	CES93 = 80
CES19 = 71	CES44 = 99	CES69 = 80	CES94 = 66
CES20 = 64	CES45 = 92	CES70 = 70	CES95 = 73
CES21 = 85	CES46 = 91	CES71 = 63	CES96 = 84
CES22 = 77	CES47 = 95	CES72 = 88	CES97 = 91
CES23 = 91	CES48 = 88	CES73 = 63	CES98 = 86
CES24 = 90	CES49 = 90	CES74 = 91	CES99 = 77
CES25 = 71	CES50 = 94	CES75 = 65	

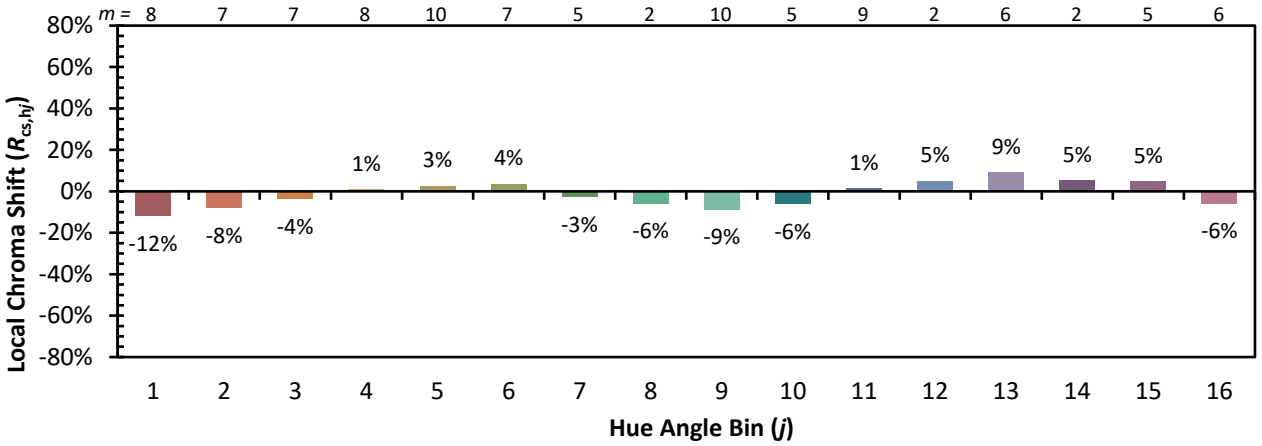


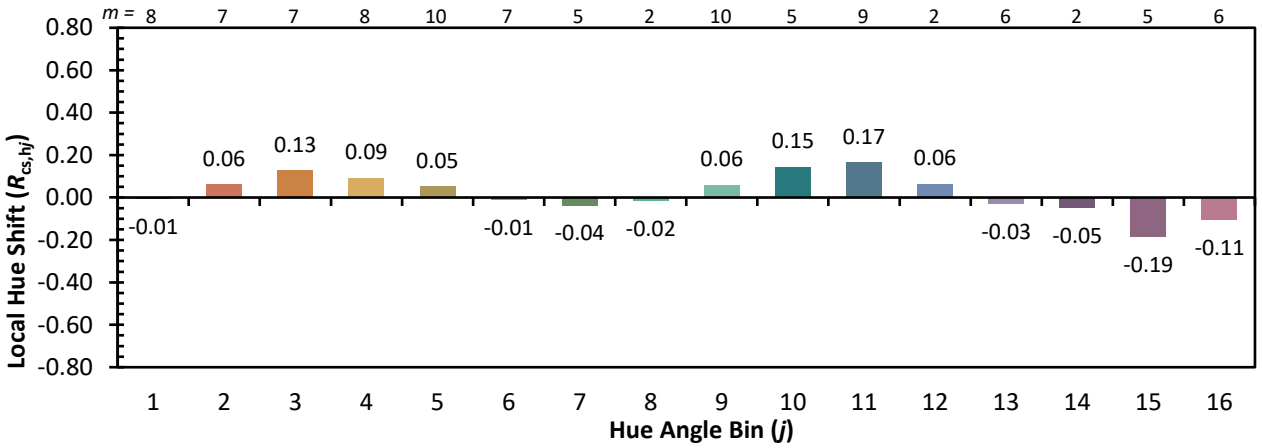
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

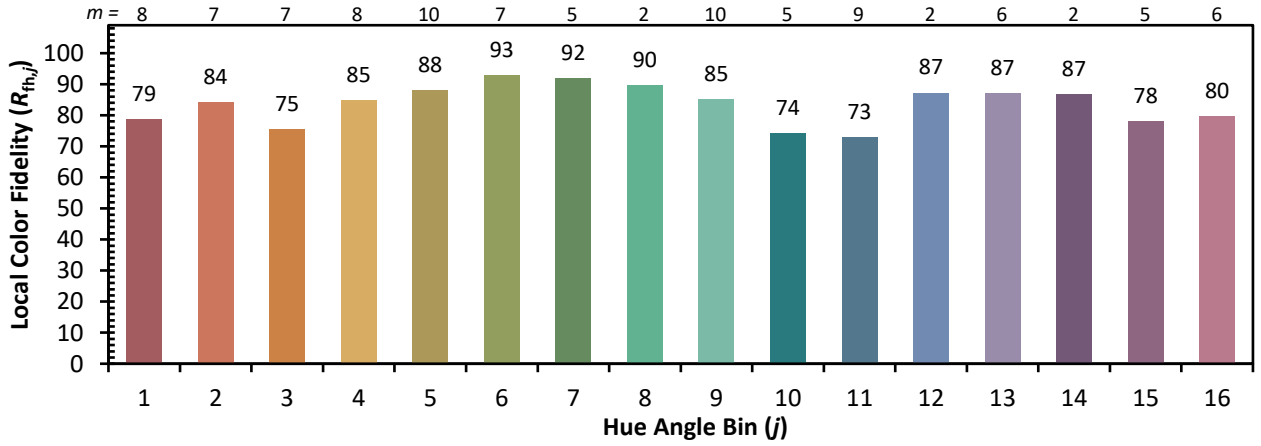
REPORT NUMBER: SP1-2309-187-6

TM-30-18

Color Rendition by Hue-Angle Bin





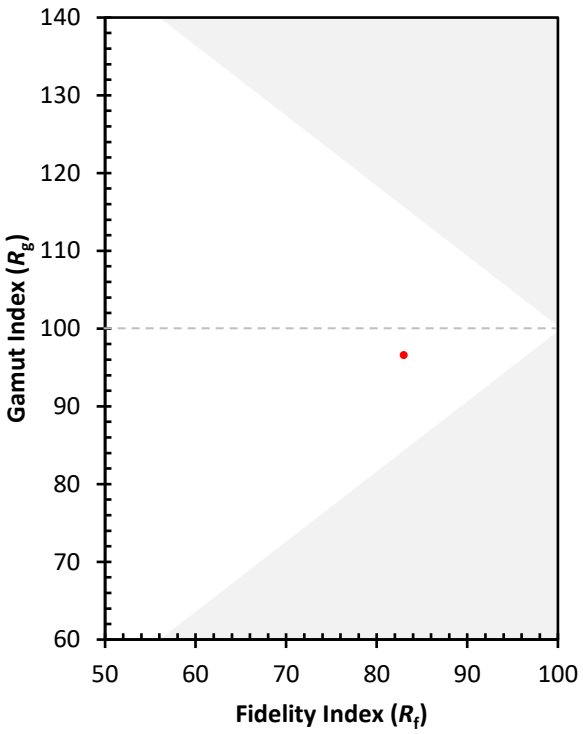


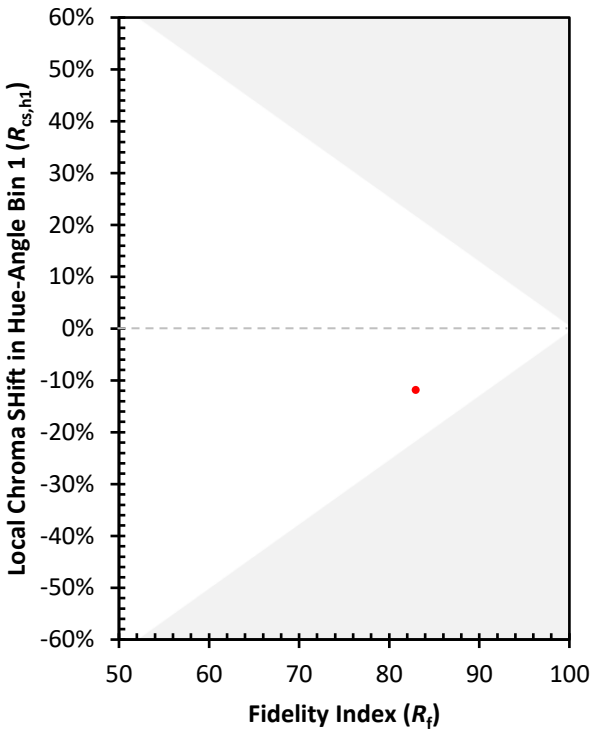
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2309-187-6

TM-30-18

Measure Comparisons





(END OF REPORT)