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: METALUX

Report Number: P1433282

Luminaire Tested: EHBR1-48-UNV-ASM-L930-UPL12

Issue Date: 3/20/2026

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

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P1433282
	REPORT IS A COMBINATION OF REPORTS P1431836 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-48-UNV-ASM-L930-UPL12
Description:	Elevate Round Highbay at, 49000 lumens, 3000K 90CRI LEDs with ASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	43382.6 lumens
Efficiency:	N/A
Efficacy:	163.1 lumens/watt
Spacing Criteria (0/90/45):	0.84 / 0.99 / 0.92
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	266
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:	24 FT

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Scaled Data Report

TEST NUMBER: P1433282
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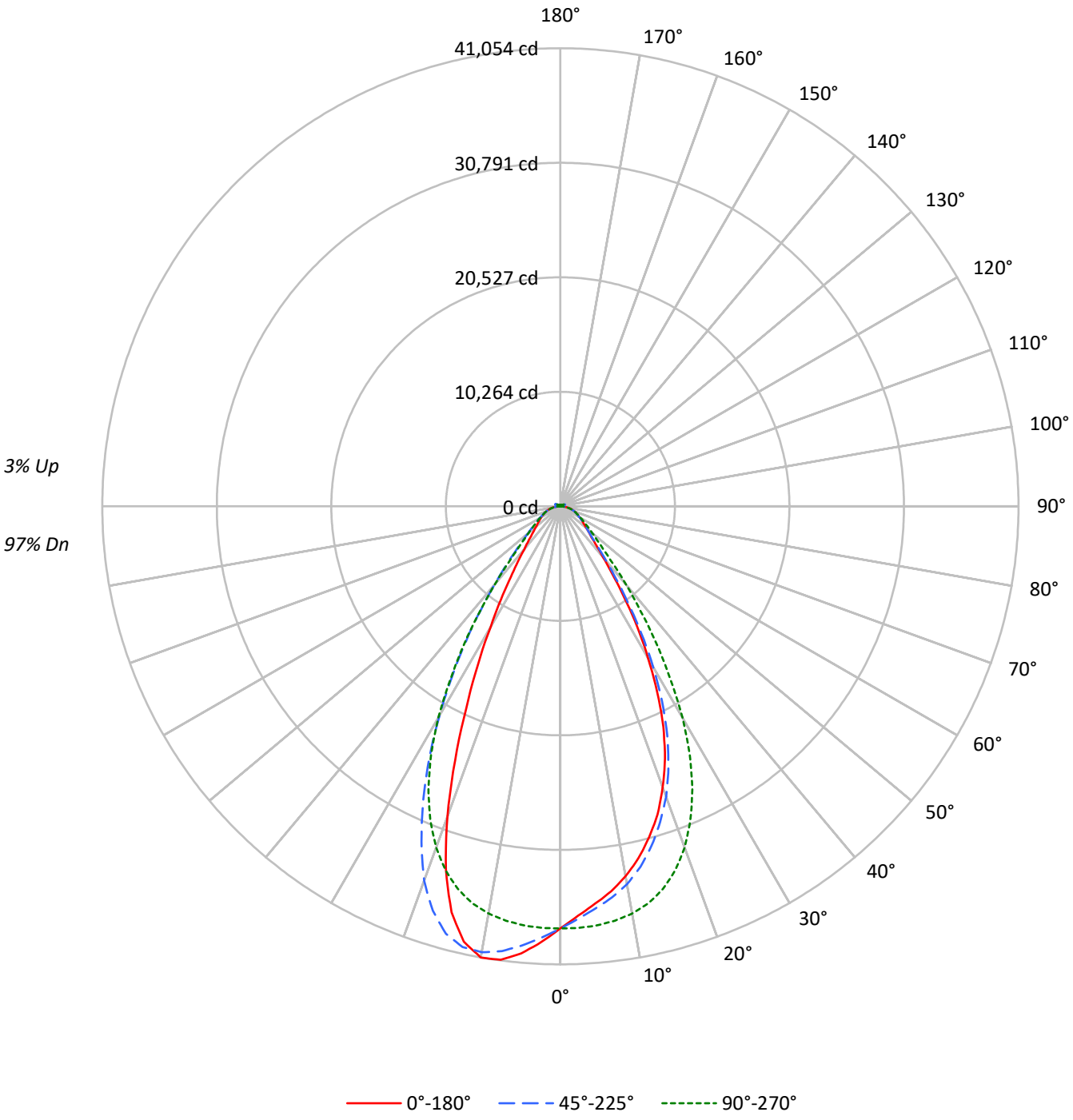
Luminous Intensity Polar Plot



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TEST NUMBER: P1433282
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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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97
1	111	108	105	102	108	105	103	100	101	99	97	97	95	93	93	91	90	88
2	104	98	93	89	102	96	92	88	93	89	86	89	86	83	86	84	81	79
3	98	90	84	79	96	89	83	79	85	81	77	83	79	75	80	77	74	72
4	92	83	77	72	90	82	76	71	79	74	70	77	72	69	75	71	68	66
5	87	77	70	65	85	76	69	65	74	68	64	72	67	63	70	66	62	60
6	82	71	65	60	80	70	64	59	69	63	59	67	62	58	65	61	57	56
7	77	67	60	55	76	66	59	55	64	58	54	63	58	54	61	57	53	52
8	73	62	56	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48
9	69	58	52	47	68	58	52	47	57	51	47	56	50	47	54	50	46	45
10	66	55	49	44	65	54	48	44	53	48	44	52	47	44	52	47	43	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	177676	177676	177676	177676	177676
5°	167430	169387	176594	185064	188394
10°	158459	161814	174424	191006	193230
15°	146373	150282	169274	189047	179571
20°	130377	134768	158313	173771	143991
25°	109262	113397	140120	145754	99765
30°	81750	86489	113772	112636	64904
35°	54423	57709	81601	80283	42034
40°	34322	36680	52758	53098	28972
45°	24455	25472	33474	34913	22442
50°	20370	20531	24859	25505	19070
55°	17981	18023	20296	20831	17372
60°	16648	16507	17575	17946	16548
65°	15891	15749	16021	16333	15959
70°	15436	15168	15184	15476	15637
75°	14674	14230	14200	14704	15127
80°	13352	12420	12474	13352	14281
85°	9724	8071	8071	9229	10198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
Vertical Angle: 45°
Luminance: 47063 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3597.5	8.3
10°-20°	9787.3	22.6
20°-30°	11478.5	26.5
30°-40°	7982.5	18.4
40°-50°	3967.0	9.1
50°-60°	2372.6	5.5
60°-70°	1670.0	3.8
70°-80°	1075.7	2.5
80°-90°	343.6	0.8
90°-100°	30.3	0.1
100°-110°	190.2	0.4
110°-120°	349.9	0.8
120°-130°	209.2	0.5
130°-140°	128.2	0.3
140°-150°	90.3	0.2
150°-160°	60.7	0.1
160°-170°	36.5	0.1
170°-180°	12.5	0.0
0°-30°	24863.2	57.3
0°-40°	32845.8	75.7
0°-60°	39185.4	90.3
0°-90°	42274.7	97.4
90°-120°	570.4	1.3
90°-150°	998.1	2.3
90°-180°	1108.0	2.6
0°-180°	43382.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	37835	37835	37835	37835	37835	
5°	35749	36167	37706	39514	40225	3353
15°	30708	31528	35513	39661	37673	8564
25°	21820	22645	27982	29107	19923	9845
35°	9988	10592	14977	14735	7715	6363
45°	3957	4121	5416	5649	3631	3198
55°	2430	2436	2743	2815	2348	2205
65°	1659	1644	1672	1705	1666	1647
75°	1034	1002	1000	1036	1066	1091
85°	334	277	277	317	350	344
90°	8	22	8	25	14	21
95°	14	49	16	43	19	14
105°	67	329	88	353	49	89
115°	302	390	372	433	321	278
125°	219	211	239	234	254	199
135°	161	164	154	172	179	126
145°	138	144	142	144	149	87
155°	127	130	129	129	136	59
165°	126	128	128	129	135	36
175°	130	131	132	133	138	12
180°	133	133	133	133	133	

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Scaled Data Report

TEST NUMBER: P1433282
CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	37834.8	37834.8	37834.8	37834.8	37834.8	37834.8	37834.8	37834.8	*37834.8*
2.5°	36711.8	36735.8	36992.6	37326.8	37812.9	38301.6	38697.5	38958.6	*39087.7*
5°	35749.0	35882.4	36166.9	36780.6	37705.7	38684.7	39514.1	40056.8	*40225.0*
7.5°	34811.1	34888.4	35364.4	36139.9	37449.5	38974.9	40207.3	40840.8	*40995.5*
10°	*33666.7*	*33841.9*	*34379.7*	*35294.2*	*37058.7*	*39157.9*	*40581.8*	*41035.9*	*41054.4*
12.5°	32320.2	32552.2	33107.7	34261.3	36435.1	39092.7	40456.2	40307.2	*39968.9*
15°	30708.3	30911.9	31528.4	32866.5	35512.7	38706.0	39661.0	38448.5	*37673.0*
17.5°	28967.3	29151.8	29687.3	31160.9	34213.0	37982.3	38000.8	35602.1	*34139.2*
20°	26796.3	26941.0	27698.8	29144.6	32538.0	36821.7	35714.9	31327.7	*29594.4*
22.5°	24486.3	24621.8	25295.1	26799.9	30438.0	35256.6	32531.6	27027.6	*24663.0*
25°	21819.5	21893.3	22645.3	24006.0	27981.8	33339.0	29107.0	22342.3	*19923.0*
27.5°	18819.2	18944.7	19731.5	21121.4	25092.9	30908.4	25460.4	18257.2	*16025.3*
30°	15724.5	15932.3	16636.2	17880.5	21884.0	27792.4	21665.5	14539.7	*12484.3*
32.5°	12836.2	12986.0	13487.6	14788.0	18291.3	24738.1	18021.0	11650.1	*9909.0*
35°	9988.5	10138.2	10591.6	11868.6	14976.7	20917.0	14734.8	9154.1	*7714.7*
37.5°	7635.2	7899.9	8190.7	9227.2	11753.6	17306.6	11745.8	7371.3	*6257.4*
40°	5948.8	5991.4	6357.5	7020.8	9144.3	13532.2	9203.2	5884.3	*5021.6*
42.5°	4761.9	4877.6	5035.0	5531.7	6928.6	10347.5	7233.7	4829.3	*4265.3*
45°	3956.7	4002.1	4121.3	4454.7	5416.0	7614.6	5648.8	4074.5	*3631.0*
47.5°	3461.5	3441.6	3518.2	3767.9	4410.7	5885.0	4578.1	3494.8	*3184.0*
50°	3035.8	3023.7	3059.9	3226.6	3704.8	4515.7	3801.2	3050.6	*2842.1*
52.5°	2705.1	2715.8	2719.4	2823.0	3182.6	3682.8	3237.2	2718.7	*2578.2*
55°	2429.9	2443.4	2435.6	2512.2	2742.8	3096.1	2815.1	2444.8	*2347.6*
57.5°	2214.9	2205.0	2194.3	2235.5	2408.7	2626.5	2444.8	2211.4	*2146.8*
60°	2001.4	1992.1	1984.4	2011.3	2112.8	2274.5	2157.4	2007.7	*1989.3*
62.5°	1818.4	1812.7	1812.0	1807.0	1885.0	1987.2	1907.8	1824.7	*1808.4*
65°	1658.7	1652.4	1643.8	1636.0	1672.2	1767.3	1704.8	1660.1	*1665.8*
67.5°	1499.1	1499.1	1484.2	1472.2	1507.6	1557.3	1530.3	1504.8	*1511.2*
70°	1354.4	1355.1	1330.9	1321.7	1332.3	1385.5	1357.9	1361.5	*1372.1*
72.5°	1199.0	1181.9	1164.2	1163.5	1164.9	1206.1	1196.9	1205.4	*1216.8*
75°	1033.7	1013.8	1002.4	989.7	1000.3	1031.6	1035.8	1047.9	*1065.6*
77.5°	874.0	843.6	834.3	828.0	820.8	856.3	869.8	886.1	*912.3*
80°	702.4	669.0	653.4	644.2	656.2	672.5	702.4	714.4	*751.3*
82.5°	519.4	494.5	475.3	474.6	480.3	495.2	520.8	543.4	*564.7*
85°	334.2	294.4	277.4	283.8	277.4	300.1	317.2	344.1	*350.5*
87.5°	120.6	94.4	90.1	99.4	97.2	104.3	119.1	129.8	*130.6*
90°	8.5	13.3	22.3	14.4	8.5	14.6	24.9	16.2	*13.5*
92.5°	12.1	19.9	35.5	18.6	10.9	19.3	34.5	20.4	*16.5*
95°	13.9	22.8	49.2	24.7	16.4	23.5	43.4	22.2	*18.9*
97.5°	18.2	25.2	56.4	30.0	24.8	29.0	48.8	23.4	*21.8*
100°	23.5	29.4	87.5	37.3	32.5	32.5	87.7	26.4	*24.2*
102.5°	39.1	61.8	185.1	69.1	48.7	63.2	201.6	49.9	*28.4*
105°	66.7	129.4	329.3	143.3	87.6	142.2	353.0	122.3	*48.9*
107.5°	114.5	231.2	434.7	252.8	164.9	263.7	454.1	237.2	*106.9*
110°	212.7	306.6	455.7	346.7	263.0	367.9	495.4	323.4	*211.1*

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Scaled Data Report

TEST NUMBER: P1433282
CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	286.9	329.3	436.6	382.7	341.9	409.7	484.1	358.1	*290.1*
115°	301.9	316.7	389.9	373.7	372.1	403.8	432.6	356.9	*321.3*
117.5°	291.7	289.2	331.2	336.7	359.5	369.6	373.9	335.3	*323.0*
120°	270.2	257.5	276.7	294.2	324.7	320.5	316.0	303.6	*305.0*
122.5°	243.2	228.8	237.9	251.2	281.8	272.8	267.5	272.1	*280.5*
125°	218.8	203.7	210.6	214.2	239.3	230.3	234.1	244.5	*253.7*
127.5°	196.7	186.3	190.8	187.9	204.1	199.9	209.6	221.2	*229.2*
130°	181.7	173.3	178.9	171.3	179.0	179.6	192.2	202.7	*207.6*
132.5°	169.9	164.4	171.4	161.9	163.6	167.7	179.7	189.1	*192.2*
135°	160.9	156.8	163.6	155.4	154.2	159.9	171.5	177.0	*179.0*
137.5°	153.8	150.3	157.8	151.4	148.8	154.6	163.1	168.2	*167.6*
140°	148.0	145.2	152.6	147.2	146.0	151.8	155.3	160.9	*161.2*
142.5°	141.7	139.3	147.9	144.3	143.1	148.3	150.1	154.4	*154.0*
145°	137.7	135.9	144.5	141.9	142.0	146.1	144.2	149.1	*148.6*
147.5°	134.3	133.0	140.3	139.0	139.0	141.9	140.1	144.5	*143.9*
150°	131.5	130.3	136.8	135.5	136.1	138.5	135.5	140.3	*141.1*
152.5°	128.8	126.8	132.7	131.4	132.0	134.4	132.0	137.5	*137.6*
155°	127.2	125.3	129.9	128.5	129.2	130.5	129.2	134.7	*135.5*
157.5°	126.9	124.8	128.4	127.7	127.7	128.9	128.4	133.3	*134.0*
160°	126.5	125.2	128.1	127.4	127.5	128.7	128.9	133.1	*133.8*
162.5°	126.2	124.8	128.3	127.7	127.7	127.7	128.6	132.9	*134.3*
165°	126.4	125.7	128.0	128.0	128.1	128.7	128.9	132.7	*134.7*
167.5°	126.4	125.8	128.8	128.8	128.9	128.3	129.7	133.7	*135.7*
170°	127.3	126.5	128.9	129.0	128.4	129.1	129.9	133.9	*135.9*
172.5°	128.7	128.0	131.1	130.5	130.6	130.6	131.5	134.7	*137.4*
175°	129.5	128.8	131.3	131.3	132.0	132.1	133.0	135.5	*138.2*
177.5°	130.8	130.1	131.3	131.3	131.4	132.8	134.1	136.9	*140.1*
180°	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	*132.8*

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Scaled Data Report

TEST NUMBER: P1433282
CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL12

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	18.29	19.45	18.70	19.82	20.20	19.05	20.22	19.46	20.59	20.97
	3H	20.10	21.14	20.53	21.53	21.96	20.61	21.65	21.04	22.04	22.47
	4H	20.84	21.81	21.29	22.22	22.66	21.26	22.23	21.71	22.64	23.08
	6H	21.41	22.30	21.88	22.73	23.19	21.76	22.65	22.22	23.07	23.53
	8H	21.60	22.44	22.07	22.88	23.35	21.92	22.76	22.39	23.20	23.67
	12H	21.70	22.50	22.18	22.94	23.43	22.00	22.80	22.48	23.24	23.73
4H	2H	18.81	19.77	19.26	20.18	20.63	19.43	20.40	19.89	20.81	21.26
	3H	20.85	21.65	21.31	22.10	22.57	21.25	22.04	21.71	22.50	22.97
	4H	21.71	22.43	22.19	22.90	23.41	22.03	22.75	22.51	23.22	23.73
	6H	22.41	23.03	22.92	23.52	24.05	22.67	23.29	23.18	23.78	24.31
	8H	22.64	23.21	23.15	23.71	24.24	22.87	23.45	23.39	23.95	24.48
	12H	22.77	23.28	23.30	23.81	24.35	22.99	23.50	23.52	24.03	24.57
8H	4H	21.97	22.55	22.49	23.05	23.58	22.28	22.85	22.79	23.35	23.88
	6H	22.79	23.26	23.34	23.81	24.35	23.04	23.51	23.59	24.06	24.60
	8H	23.09	23.51	23.66	24.07	24.62	23.32	23.74	23.89	24.30	24.86
	12H	23.30	23.66	23.86	24.20	24.83	23.51	23.88	24.07	24.42	25.05
12H	4H	21.98	22.49	22.51	23.02	23.56	22.29	22.80	22.82	23.33	23.86
	6H	22.83	23.25	23.40	23.81	24.36	23.08	23.50	23.65	24.06	24.62
	8H	23.18	23.54	23.74	24.08	24.72	23.42	23.78	23.98	24.32	24.96

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-5

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L930-N

Data in this report applies to families of products including EHBR-60-L930-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

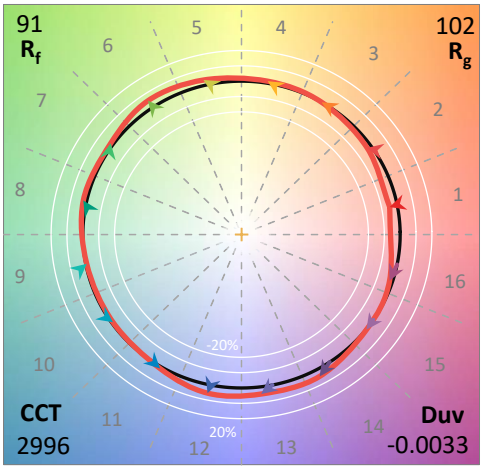
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-5
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/05/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**EHBR-60-L930-N**
Description:	Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K):	2996
CIE u':	0.2519
CIE v':	0.5169
Duv:	-0.0033
CIE x:	0.4325
CIE y:	0.3945
CIE z:	0.1730
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	584
Purity:	48.21818
Rf:	91.3
Rg:	102

CRI (Ra):	94.4
R1:	96.8
R2:	98.1
R3:	97.8
R4:	95.6
R5:	96.9
R6:	95.7
R7:	90.9
R8:	83.0
R9:	61.4
R10:	94.4
R11:	95.7
R12:	88.5
R13:	97.3
R14:	97.8
R15:	92.3



Test Conditions

Stabilization Time:	40M
Operation Time:	1H 40M
Sphere Temperature (°C):	25.0

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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	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

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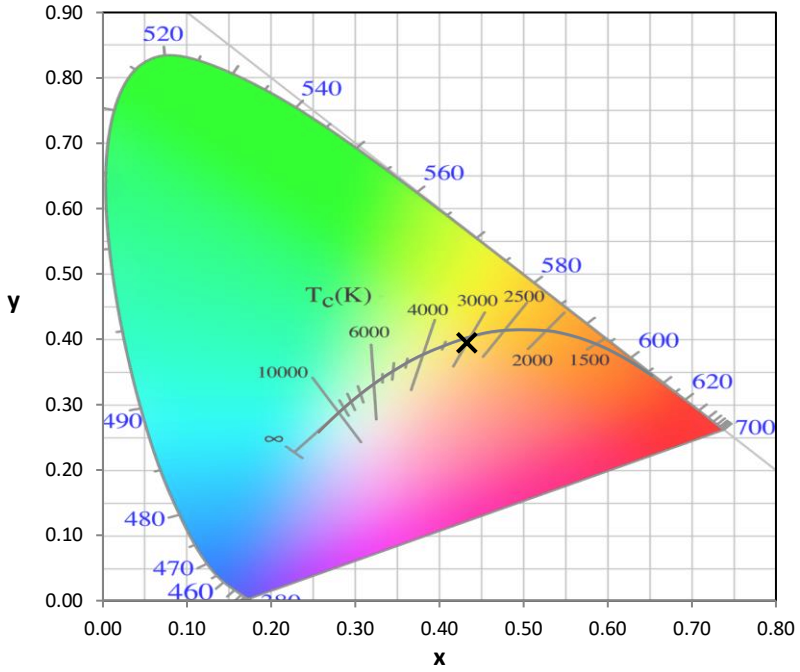
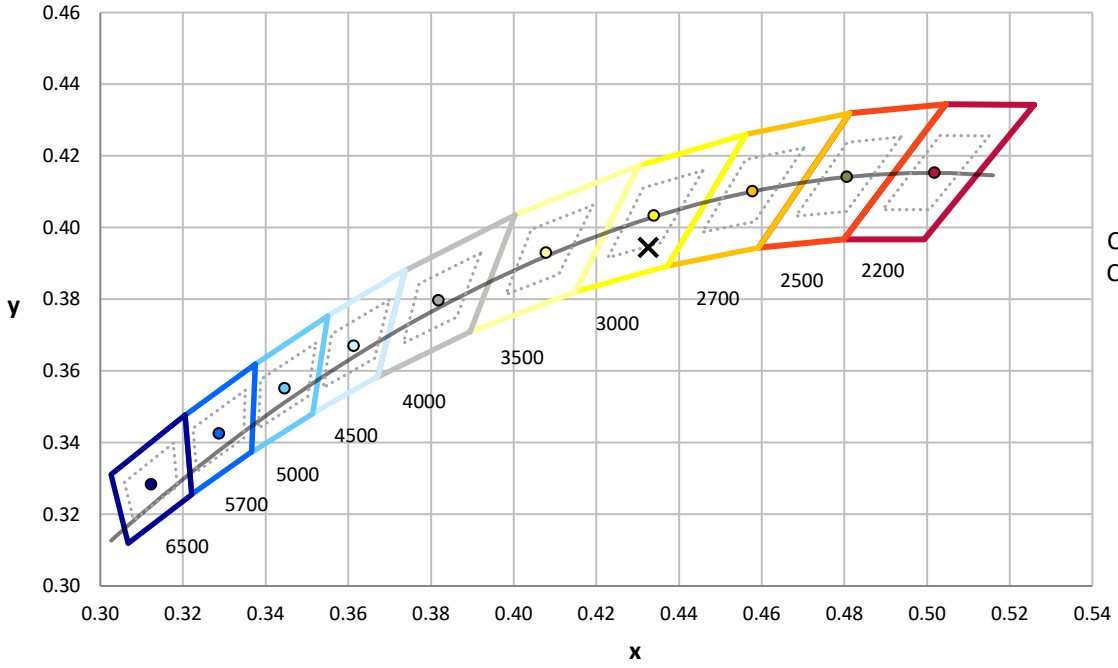
CIE 1931 Chromaticity Diagram



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



CCT = 2996K
CIE x = 0.4325
CIE y = 0.3945
Duv = -0.0033

Point lies inside the ANSI 3000K 7-step quadrangle

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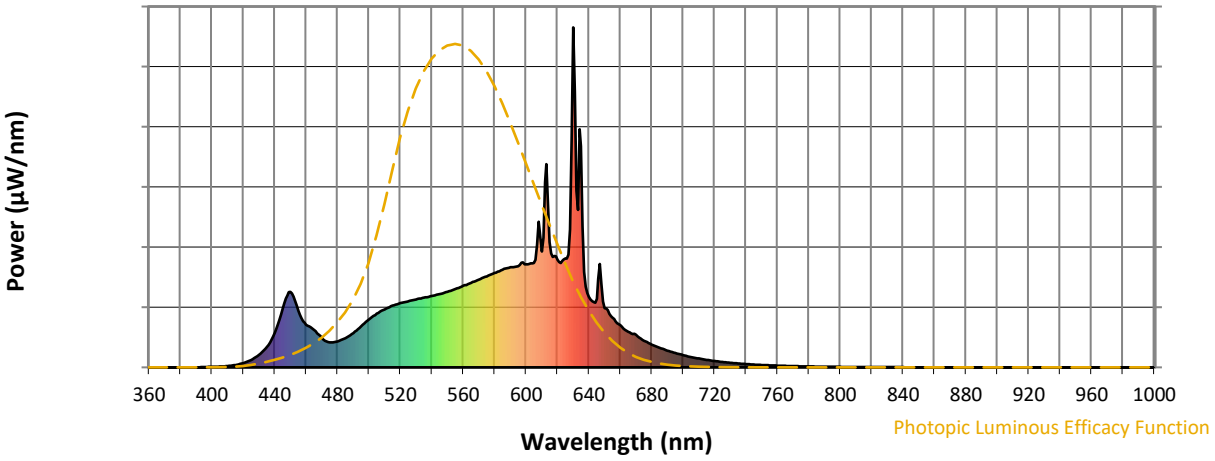
Photopic Flux vs. Wavelength



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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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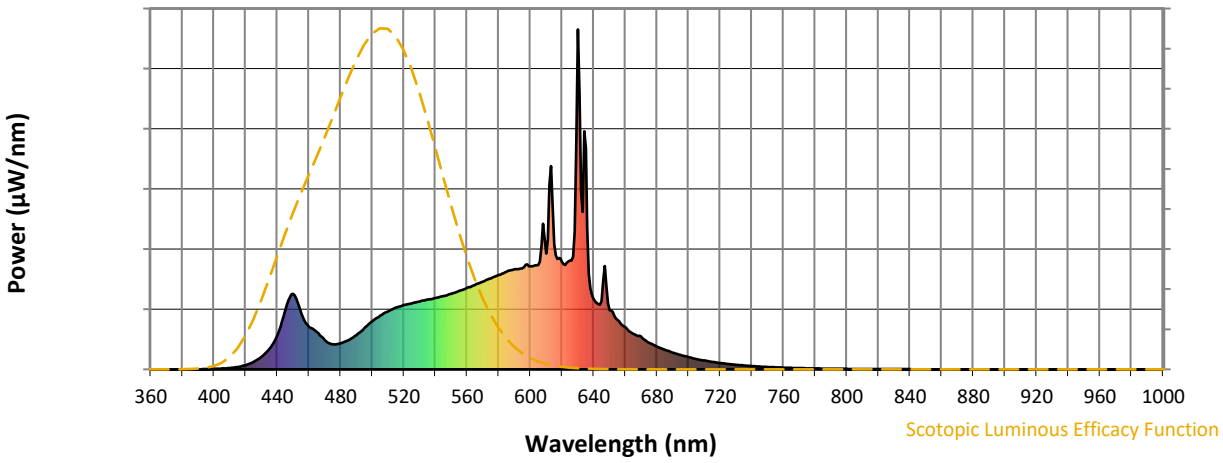
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.44**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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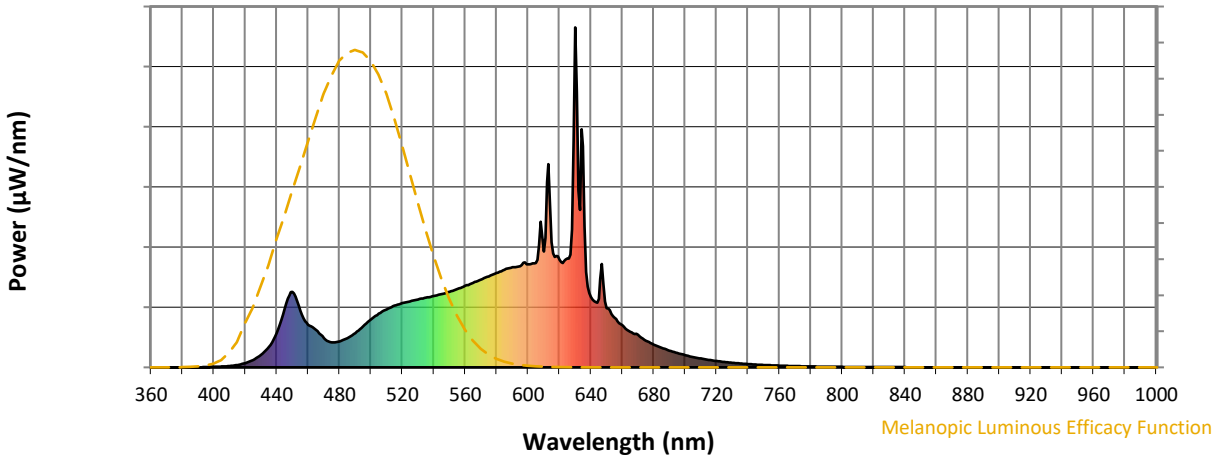
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.85**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

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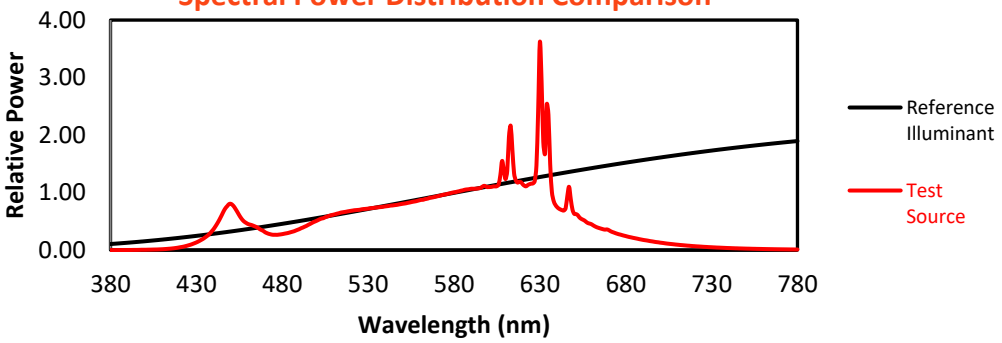
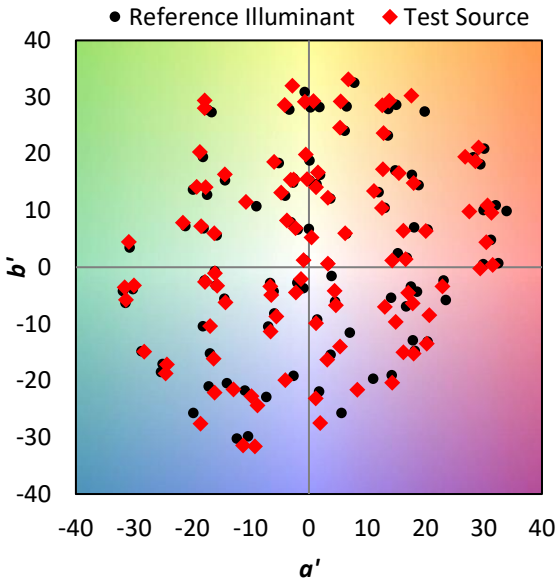
Summary

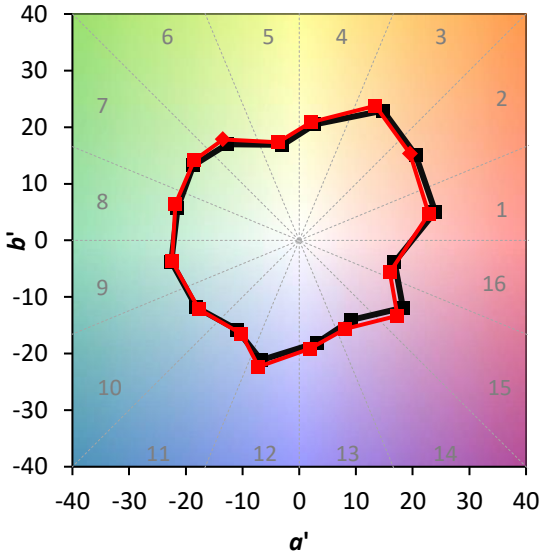
R_f = 91.3
R_g = 102
CIE R_a = 94.4
R_9 = 61.4

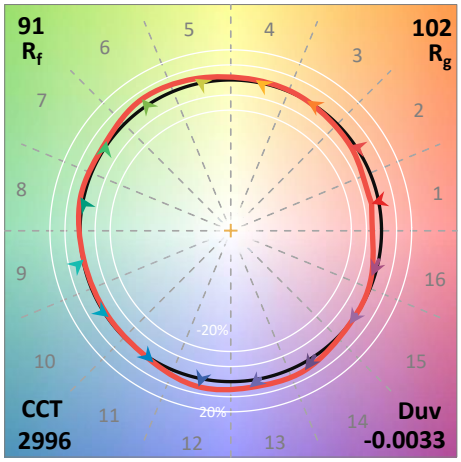
Spectral Power Distribution Comparison

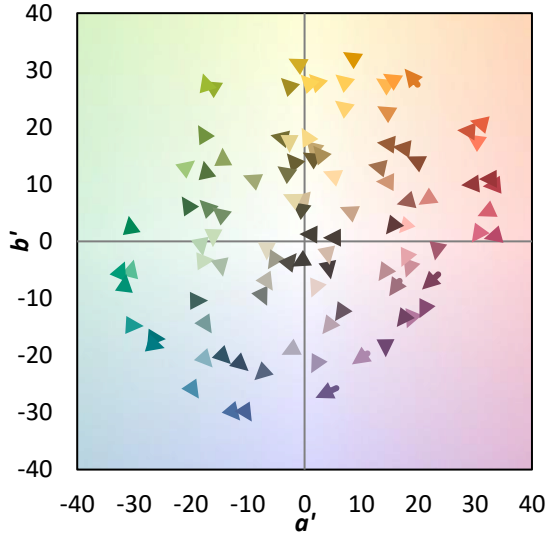


Color Vector Graphics









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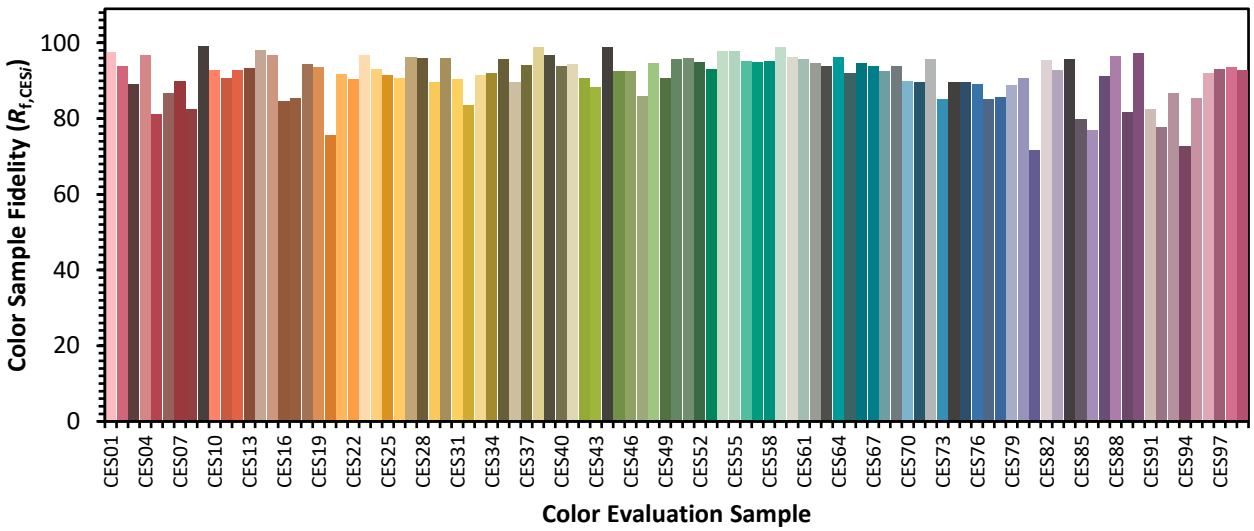
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 91	CES51 = 96	CES76 = 89
CES02 = 63	CES27 = 96	CES52 = 95	CES77 = 85
CES03 = 32	CES28 = 96	CES53 = 93	CES78 = 86
CES04 = 70	CES29 = 90	CES54 = 98	CES79 = 89
CES05 = 51	CES30 = 96	CES55 = 98	CES80 = 91
CES06 = 51	CES31 = 90	CES56 = 95	CES81 = 72
CES07 = 44	CES32 = 84	CES57 = 95	CES82 = 95
CES08 = 42	CES33 = 91	CES58 = 95	CES83 = 93
CES09 = 29	CES34 = 92	CES59 = 99	CES84 = 96
CES10 = 76	CES35 = 96	CES60 = 96	CES85 = 80
CES11 = 59	CES36 = 90	CES61 = 96	CES86 = 77
CES12 = 65	CES37 = 94	CES62 = 95	CES87 = 91
CES13 = 44	CES38 = 99	CES63 = 94	CES88 = 96
CES14 = 74	CES39 = 97	CES64 = 96	CES89 = 82
CES15 = 72	CES40 = 94	CES65 = 92	CES90 = 97
CES16 = 48	CES41 = 94	CES66 = 95	CES91 = 82
CES17 = 50	CES42 = 91	CES67 = 94	CES92 = 78
CES18 = 57	CES43 = 88	CES68 = 93	CES93 = 87
CES19 = 72	CES44 = 99	CES69 = 94	CES94 = 73
CES20 = 67	CES45 = 93	CES70 = 90	CES95 = 85
CES21 = 86	CES46 = 93	CES71 = 90	CES96 = 92
CES22 = 79	CES47 = 86	CES72 = 96	CES97 = 93
CES23 = 92	CES48 = 95	CES73 = 85	CES98 = 94
CES24 = 91	CES49 = 91	CES74 = 90	CES99 = 93
CES25 = 72	CES50 = 96	CES75 = 90	



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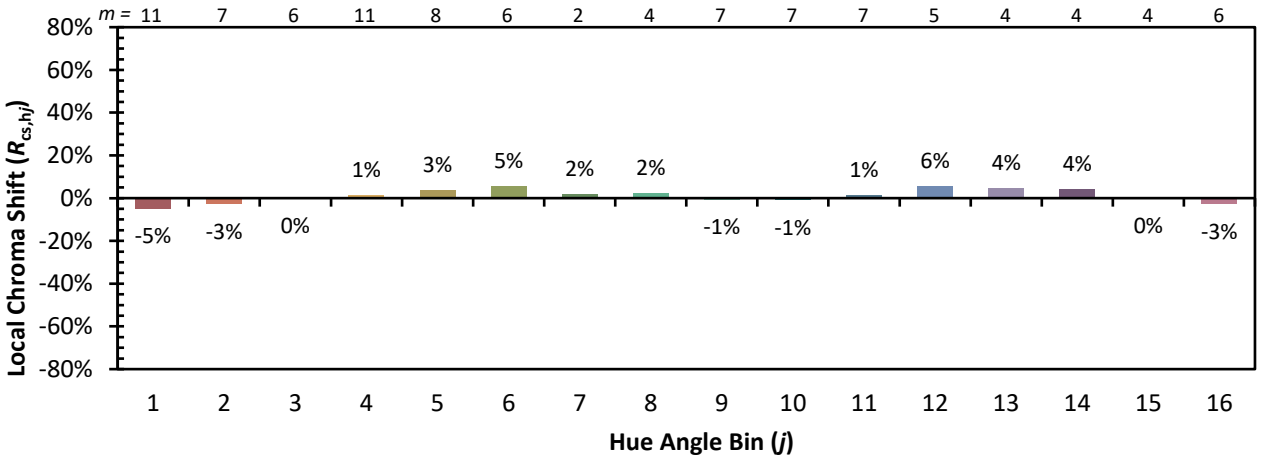
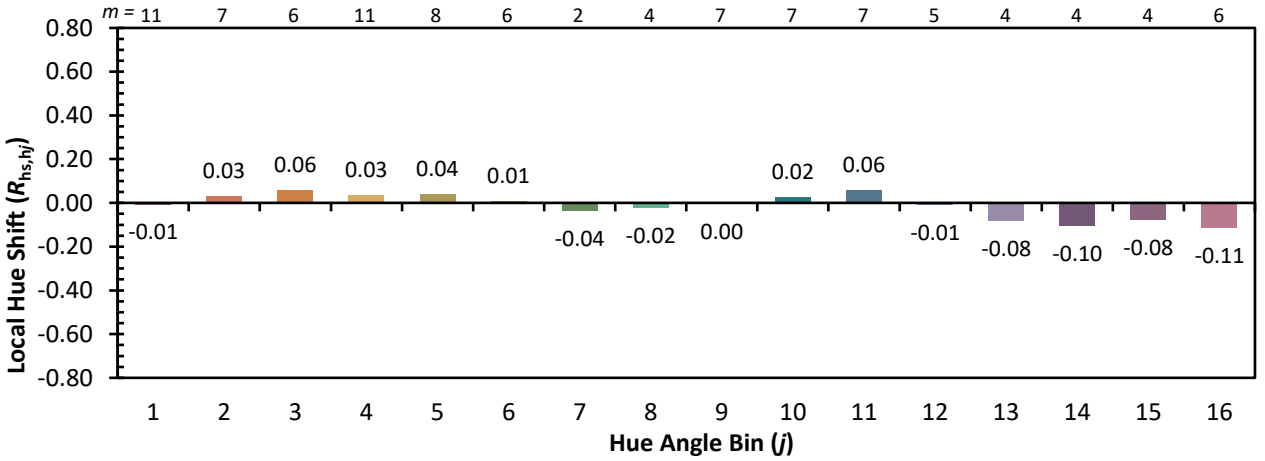
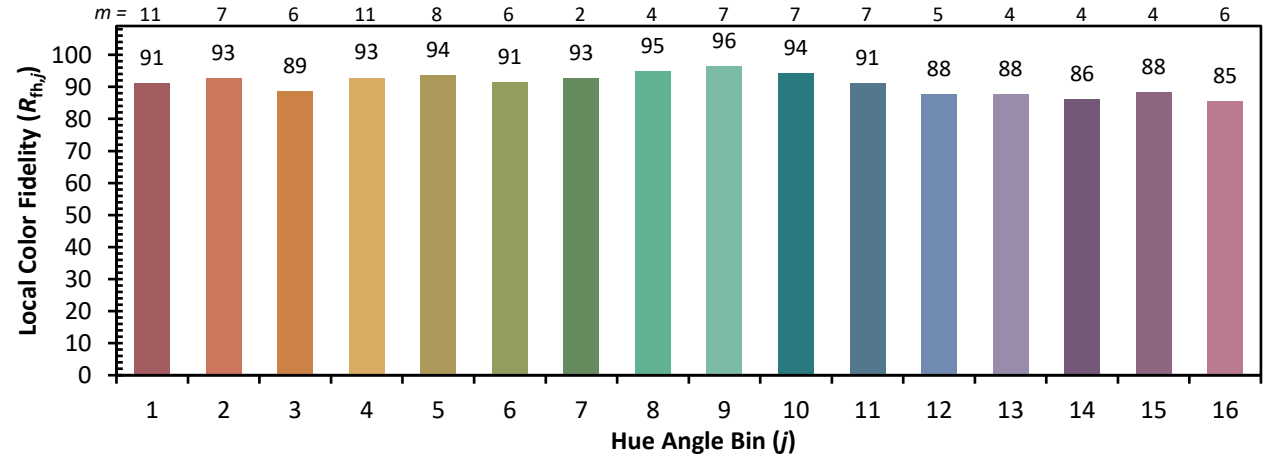
Color Rendition by Hue-Angle Bin







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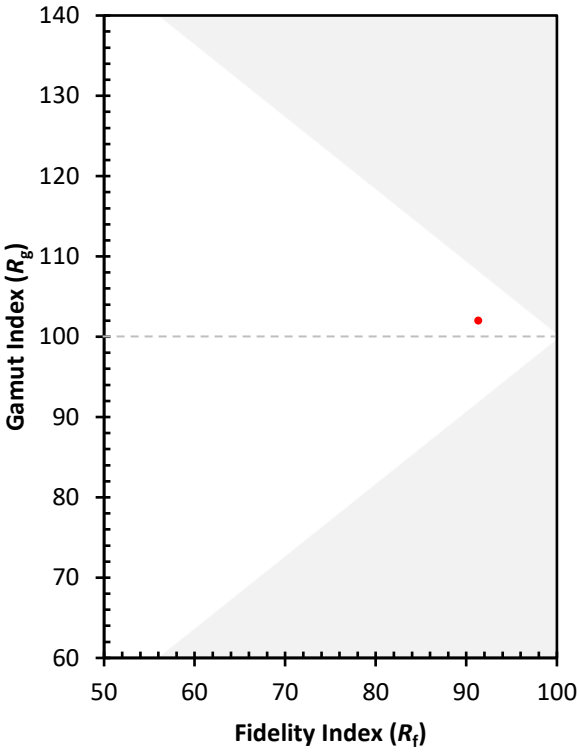
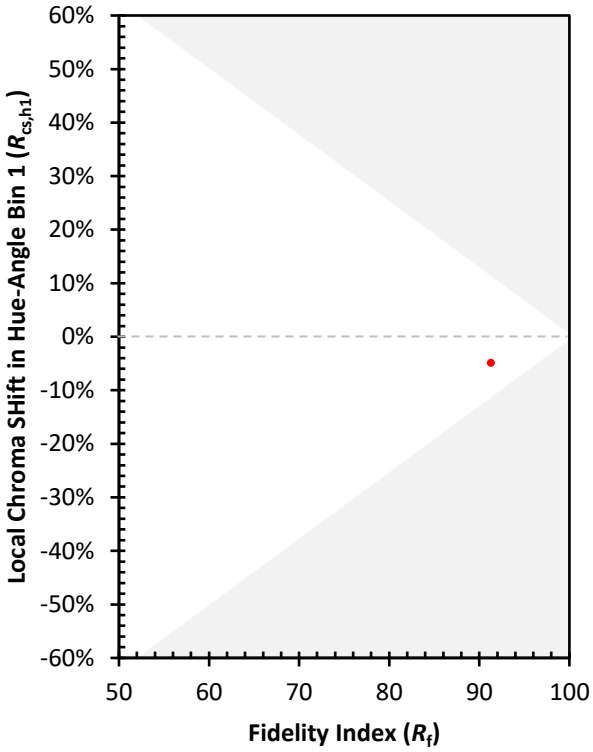
Measure Comparisons





(END OF REPORT)