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: P1432331

Luminaire Tested: EHBR1-24-UNV-ASM-L830-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:	P1432331
	REPORT IS A COMBINATION OF REPORTS P1431708 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-24-UNV-ASM-L830-UPL12
Description:	Elevate Round Highbay at, 24000 lumens, 3000K 80CRI LEDs with ASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	24339.4 lumens
Efficiency:	N/A
Efficacy:	179.4 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):	135.7
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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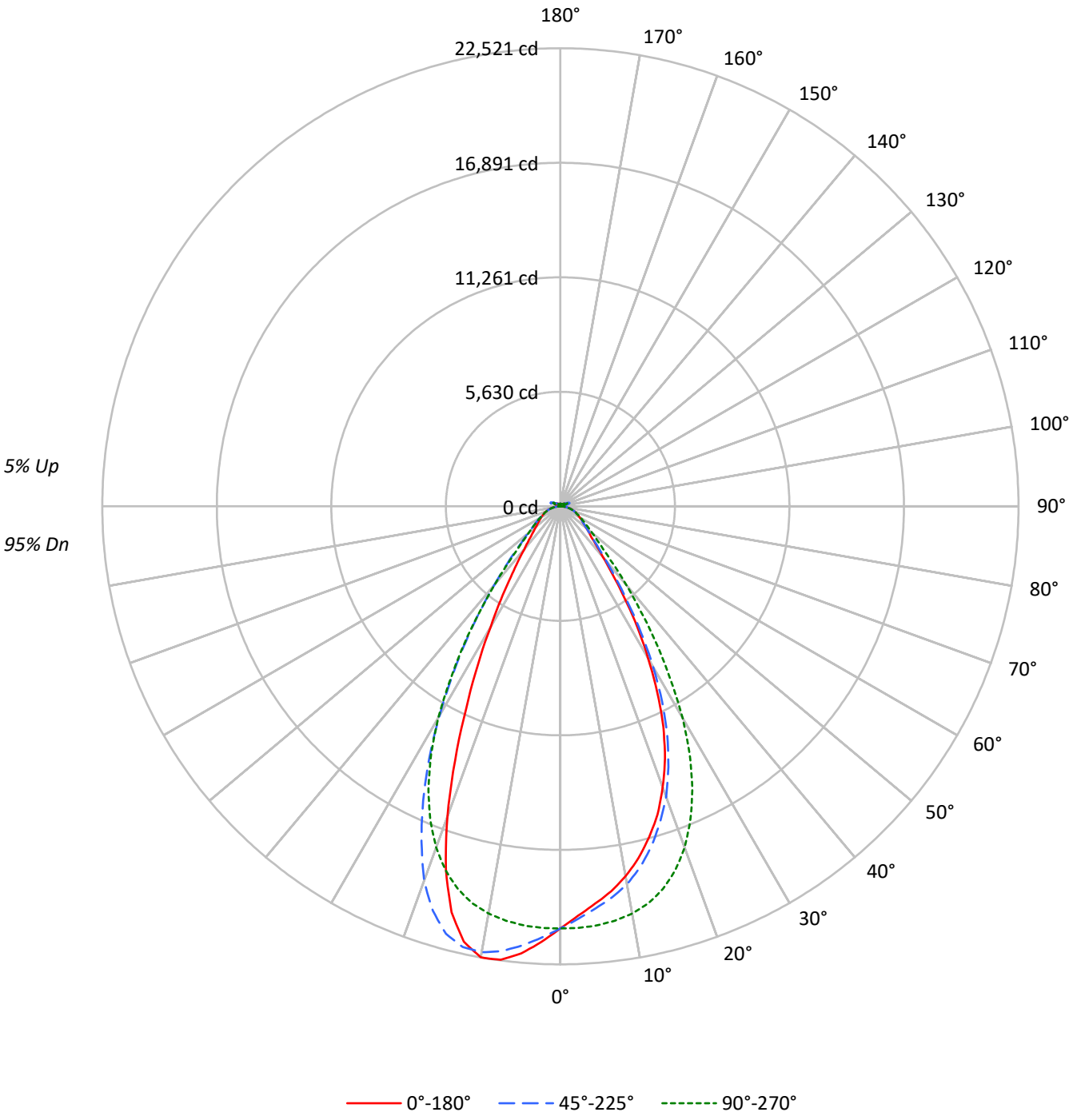
Scaled Data Report

TEST NUMBER: P1432331
CATALOG NUMBER: EHBR1-24-UNV-ASM-L830-UPL12

Luminous Intensity Polar Plot



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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	108	108	108	103	103	103	98	98	98	95
1	111	107	104	101	108	105	102	99	100	97	95	95	93	92	91	90	88	86
2	104	98	93	89	101	96	91	87	92	88	85	88	85	82	84	82	80	78
3	97	90	84	79	95	88	82	78	84	80	76	81	77	74	78	75	72	70
4	91	82	76	71	89	81	75	70	78	73	69	75	71	68	73	69	66	64
5	86	76	69	64	84	75	69	64	73	67	63	70	66	62	68	64	61	59
6	81	71	64	59	79	70	63	59	68	62	58	66	61	57	64	60	56	55
7	77	66	59	54	75	65	59	54	63	58	53	62	57	53	60	56	52	51
8	72	62	55	50	71	61	55	50	59	54	50	58	53	49	57	52	49	47
9	69	58	51	47	67	57	51	47	56	50	46	55	49	46	53	49	45	44
10	65	54	48	44	64	54	48	44	53	47	43	52	46	43	50	46	43	41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	97467	97467	97467	97467	97467
5°	91846	92920	96873	101519	103346
10°	86924	88765	95682	104778	105998
15°	80295	82439	92857	103704	98506
20°	71520	73929	86845	95324	78988
25°	59937	62206	76865	79955	54728
30°	44845	47445	62411	61788	35604
35°	29854	31656	44763	44040	23058
40°	18828	20121	28941	29127	15893
45°	13414	13973	18363	19151	12311
50°	11174	11263	13636	13991	10461
55°	9863	9886	11133	11427	9529
60°	9133	9055	9641	9845	9078
65°	8717	8640	8788	8960	8755
70°	8467	8321	8330	8489	8577
75°	8050	7806	7789	8066	8297
80°	7324	6815	6843	7324	7835
85°	5333	4428	4428	5060	5592

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
Vertical Angle: 45°
Luminance: 25817 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1973.5	8.1
10°-20°	5368.9	22.1
20°-30°	6296.6	25.9
30°-40°	4378.9	18.0
40°-50°	2176.1	8.9
50°-60°	1301.5	5.3
60°-70°	916.1	3.8
70°-80°	590.1	2.4
80°-90°	189.4	0.8
90°-100°	30.9	0.1
100°-110°	198.7	0.8
110°-120°	366.5	1.5
120°-130°	218.3	0.9
130°-140°	132.7	0.5
140°-150°	92.4	0.4
150°-160°	61.0	0.3
160°-170°	35.7	0.1
170°-180°	12.0	0.0
0°-30°	13639.0	56.0
0°-40°	18017.9	74.0
0°-60°	21495.6	88.3
0°-90°	23191.2	95.3
90°-120°	596.1	2.4
90°-150°	1039.5	4.3
90°-180°	1148.0	4.7
0°-180°	24339.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	20755	20755	20755	20755	20755	
5°	19611	19840	20684	21676	22066	1839
15°	16845	17295	19481	21756	20666	4698
25°	11969	12422	15350	15967	10929	5401
35°	5479	5810	8216	8083	4232	3490
45°	2170	2261	2971	3099	1992	1754
55°	1333	1336	1504	1544	1288	1209
65°	910	902	917	935	914	904
75°	567	550	549	568	584	599
85°	183	152	152	174	192	189
90°	8	23	8	25	11	13
95°	14	51	16	44	17	14
105°	69	346	91	370	48	93
115°	317	409	390	453	334	292
125°	229	220	250	244	263	208
135°	168	170	159	177	184	131
145°	141	148	145	148	152	89
155°	127	131	130	130	136	59
165°	123	125	125	125	130	35
175°	124	126	126	126	130	12
180°	126	126	126	126	126	

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Scaled Data Report

TEST NUMBER: P1432331
CATALOG NUMBER: EHBR1-24-UNV-ASM-L830-UPL12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	20754.8	20754.8	20754.8	20754.8	20754.8	20754.8	20754.8	20754.8	20754.8
2.5°	20138.7	20151.9	20292.8	20476.1	20742.7	21010.9	21228.0	21371.2	21442.0
5°	19610.6	19683.7	19839.8	20176.4	20683.9	21221.0	21675.9	21973.7	22065.9
7.5°	19096.0	19138.5	19399.6	19825.0	20543.4	21380.2	22056.1	22403.7	22488.5
10°	18468.2	18564.4	18859.4	19361.1	20329.0	21480.6	22261.6	22510.7	22520.8
12.5°	17729.7	17856.9	18161.7	18794.4	19986.8	21444.7	22192.8	22111.0	21925.4
15°	16845.4	16957.1	17295.3	18029.3	19480.9	21232.7	21756.5	21091.4	20666.0
17.5°	15890.3	15991.5	16285.3	17093.7	18768.0	20835.7	20845.8	19530.0	18727.5
20°	14699.4	14778.8	15194.5	15987.7	17849.1	20199.0	19591.8	17185.1	16234.4
22.5°	13432.2	13506.6	13875.9	14701.4	16697.1	19340.4	17845.6	14826.3	13529.2
25°	11969.4	12009.8	12422.4	13168.8	15349.8	18288.5	15967.0	12256.2	10929.1
27.5°	10323.5	10392.3	10824.0	11586.3	13765.0	16955.2	13966.6	10015.2	8790.8
30°	8625.9	8739.9	9126.0	9808.6	12004.8	15245.9	11884.9	7975.9	6848.5
32.5°	7041.5	7123.6	7398.8	8112.1	10033.9	13570.4	9885.7	6390.8	5435.7
35°	5479.3	5561.4	5810.1	6510.7	8215.7	11474.3	8083.0	5021.6	4232.0
37.5°	4188.4	4333.6	4493.1	5061.7	6447.6	9493.7	6443.3	4043.6	3432.6
40°	3263.3	3286.6	3487.5	3851.4	5016.2	7423.2	5048.5	3227.9	2754.7
42.5°	2612.2	2675.6	2762.1	3034.5	3800.8	5676.3	3968.1	2649.2	2339.8
45°	2170.4	2195.4	2260.7	2443.7	2971.1	4177.1	3098.6	2235.1	1991.8
47.5°	1898.8	1887.9	1930.0	2066.9	2419.5	3228.3	2511.4	1917.2	1746.7
50°	1665.3	1658.7	1678.6	1770.0	2032.3	2477.1	2085.2	1673.5	1559.1
52.5°	1483.9	1489.8	1491.7	1548.6	1745.8	2020.3	1775.8	1491.3	1414.3
55°	1332.9	1340.3	1336.0	1378.1	1504.5	1698.4	1544.3	1341.1	1287.8
57.5°	1215.0	1209.6	1203.8	1226.3	1321.3	1440.8	1341.1	1213.0	1177.6
60°	1097.9	1092.9	1088.5	1103.3	1159.0	1247.7	1183.5	1101.4	1091.3
62.5°	997.5	994.3	993.9	991.2	1034.0	1090.1	1046.5	1001.0	992.1
65°	909.9	906.5	901.8	897.5	917.3	969.5	935.2	910.7	913.8
67.5°	822.3	822.3	814.2	807.5	827.0	854.3	839.5	825.4	829.0
70°	742.9	743.4	730.1	725.0	730.9	760.0	744.9	746.8	752.6
72.5°	657.8	648.4	638.6	638.3	639.0	661.6	656.5	661.2	667.4
75°	567.1	556.1	549.9	542.9	548.7	565.9	568.2	574.9	584.5
77.5°	479.5	462.7	457.7	454.2	450.3	469.8	477.2	486.1	500.5
80°	385.3	367.0	358.5	353.4	360.0	369.0	385.3	391.9	412.2
82.5°	284.9	271.3	260.8	260.4	263.5	271.6	285.7	298.2	309.8
85°	183.3	161.5	152.2	155.7	152.2	164.6	173.9	188.7	192.2
87.5°	66.1	51.8	49.5	54.5	53.3	57.2	65.4	71.2	71.6
90°	8.5	13.6	23.0	14.8	8.5	14.6	25.0	14.9	11.2
92.5°	12.4	20.5	36.9	19.2	11.1	19.6	35.1	19.3	14.4
95°	14.2	23.6	51.3	25.6	16.5	24.0	44.5	21.2	17.0
97.5°	18.4	26.1	58.9	31.2	25.3	29.7	50.2	22.5	20.0
100°	24.0	30.5	91.6	38.5	33.4	33.4	91.0	25.6	22.6
102.5°	40.4	64.5	194.2	71.8	50.5	65.3	210.5	49.9	27.0
105°	69.3	135.6	345.7	149.9	91.3	148.4	369.6	126.0	48.1
107.5°	119.6	242.6	456.2	265.0	172.5	276.0	475.9	246.8	109.1
110°	222.8	321.9	478.3	363.7	275.7	385.5	519.3	337.4	218.6

TEST NUMBER: P1432331
CATALOG NUMBER: EHBR1-24-UNV-ASM-L830-UPL12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	300.9	345.7	458.1	401.5	358.7	429.6	507.4	373.9	*301.6*
115°	316.6	332.5	409.1	392.0	390.0	423.3	453.3	372.6	*334.4*
117.5°	305.8	303.6	347.4	352.8	376.7	387.4	391.6	350.0	*336.3*
120°	283.3	270.2	290.1	308.1	340.2	335.8	330.4	316.6	*317.4*
122.5°	254.9	239.8	249.0	262.7	294.8	285.3	279.4	283.1	*291.6*
125°	228.8	213.4	219.9	223.4	250.1	240.6	243.9	254.1	*263.1*
127.5°	205.6	195.1	199.1	195.8	212.7	208.3	218.2	229.6	*237.4*
130°	189.9	181.1	186.3	177.9	186.0	187.0	199.9	209.8	*214.7*
132.5°	177.1	171.4	177.6	167.3	169.5	174.1	186.4	195.2	*198.1*
135°	167.7	163.0	169.5	160.1	159.1	165.9	177.3	182.8	*184.3*
137.5°	159.9	155.9	162.6	155.6	153.2	160.0	168.5	173.2	*172.3*
140°	153.1	149.7	156.8	151.2	149.9	156.6	160.4	165.6	*165.1*
142.5°	145.7	143.1	151.6	147.7	146.5	152.6	154.5	158.4	*157.6*
145°	140.8	138.9	147.5	145.2	145.0	149.6	148.0	152.8	*151.7*
147.5°	136.6	135.3	142.8	141.8	141.8	145.2	143.3	147.5	*146.3*
150°	132.9	131.6	138.8	137.8	138.4	141.0	138.1	142.8	*142.9*
152.5°	129.4	127.6	134.1	133.1	133.8	136.3	133.8	139.2	*138.9*
155°	126.9	125.3	130.6	129.7	130.1	131.4	130.1	135.6	*136.0*
157.5°	125.5	124.1	128.2	127.9	127.9	128.8	128.2	133.0	*133.4*
160°	124.5	123.5	126.8	126.5	126.2	127.4	127.3	131.4	*131.8*
162.5°	123.4	122.3	126.4	125.7	125.7	125.7	125.9	130.0	*130.8*
165°	122.8	122.4	125.2	125.2	125.0	125.6	125.1	128.4	*129.8*
167.5°	122.8	122.2	125.3	125.3	125.1	124.5	125.3	128.3	*129.8*
170°	123.1	122.6	125.1	125.0	124.3	124.7	124.8	128.0	*129.3*
172.5°	123.8	123.5	126.4	125.7	125.4	125.4	125.4	127.8	*129.8*
175°	123.9	123.6	125.8	125.8	126.2	126.0	126.2	127.9	*130.0*
177.5°	125.0	124.6	125.8	125.8	125.5	126.4	127.1	129.0	*131.6*
180°	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	*126.4*

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Scaled Data Report

TEST NUMBER: P1432331
CATALOG NUMBER: EHBR1-24-UNV-ASM-L830-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	16.03	17.16	16.48	17.57	18.01	16.79	17.93	17.24	18.34	18.78
	3H	17.84	18.85	18.31	19.28	19.77	18.35	19.36	18.82	19.79	20.28
	4H	18.58	19.52	19.07	19.97	20.47	19.00	19.94	19.49	20.39	20.89
	6H	19.15	20.01	19.65	20.48	20.99	19.50	20.36	20.00	20.83	21.34
	8H	19.33	20.15	19.85	20.64	21.16	19.65	20.47	20.17	20.96	21.48
	12H	19.43	20.22	19.95	20.69	21.24	19.73	20.52	20.25	20.99	21.54
4H	2H	16.54	17.49	17.03	17.93	18.44	17.17	18.11	17.66	18.56	19.06
	3H	18.58	19.36	19.08	19.86	20.38	18.98	19.76	19.48	20.26	20.78
	4H	19.45	20.15	19.97	20.66	21.21	19.77	20.47	20.29	20.98	21.53
	6H	20.14	20.75	20.69	21.28	21.86	20.40	21.01	20.95	21.54	22.12
	8H	20.37	20.93	20.92	21.47	22.05	20.61	21.17	21.16	21.70	22.29
	12H	20.51	21.00	21.07	21.57	22.15	20.73	21.22	21.29	21.79	22.37
8H	4H	19.71	20.27	20.26	20.80	21.39	20.01	20.57	20.56	21.11	21.69
	6H	20.53	20.98	21.11	21.57	22.16	20.78	21.23	21.36	21.82	22.41
	8H	20.83	21.23	21.43	21.83	22.43	21.06	21.47	21.66	22.06	22.66
	12H	21.03	21.39	21.62	21.96	22.64	21.24	21.60	21.84	22.18	22.86
12H	4H	19.72	20.21	20.28	20.78	21.36	20.02	20.52	20.59	21.09	21.67
	6H	20.56	20.97	21.17	21.57	22.17	20.82	21.23	21.42	21.82	22.43
	8H	20.91	21.27	21.51	21.84	22.52	21.15	21.51	21.75	22.08	22.76

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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: SP1-2506-472-2

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L830-N

Data in this report applies to families of products including EHBR-60-L830-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

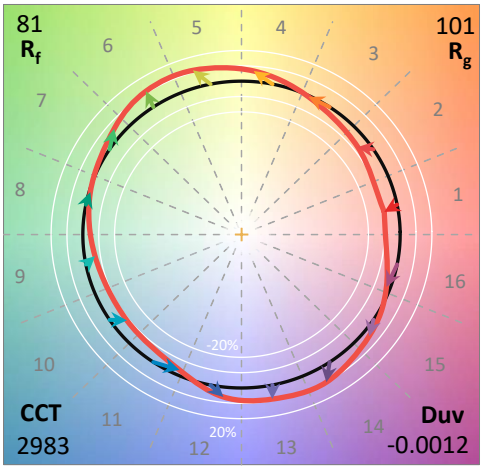
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-2
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-L830-N**
Description:	Elevate Round Highbay at, 60000 lumens, 3000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K):	2983
CIE u':	0.2516
CIE v':	0.5201
Duv:	-0.0012
CIE x:	0.4364
CIE y:	0.4010
CIE z:	0.1626
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	583
Purity:	51.34918
Rf:	81.2
Rg:	101.5

CRI (Ra):	83.4				
R1:	84.0	R9:	29.4		
R2:	87.5	R10:	68.6		
R3:	88.9	R11:	82.2		
R4:	83.8	R12:	61.6		
R5:	81.9	R13:	83.9		
R6:	83.1	R14:	92.5		
R7:	87.1	R15:	79.8		
R8:	70.9				



Test Conditions

Stabilization Time:	38M
Operation Time:	1H 38M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-2

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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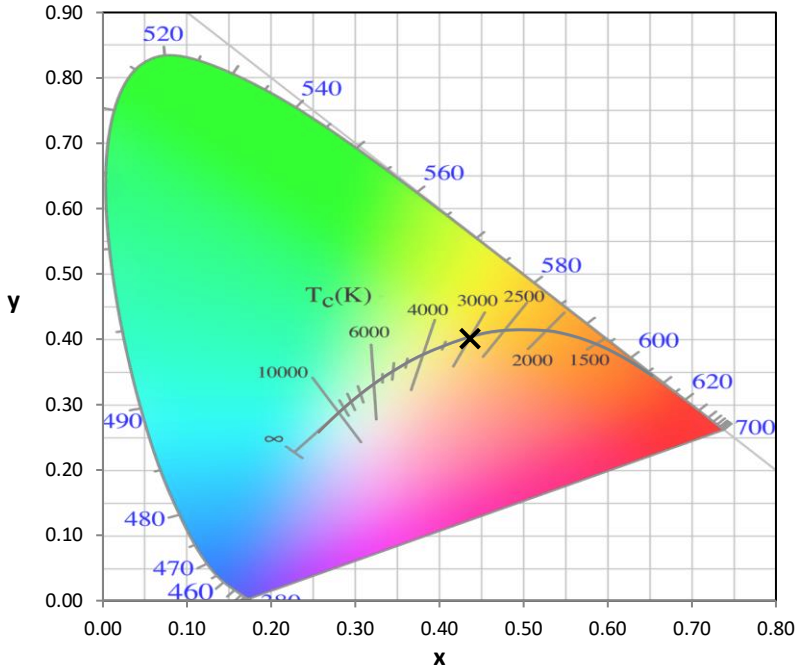
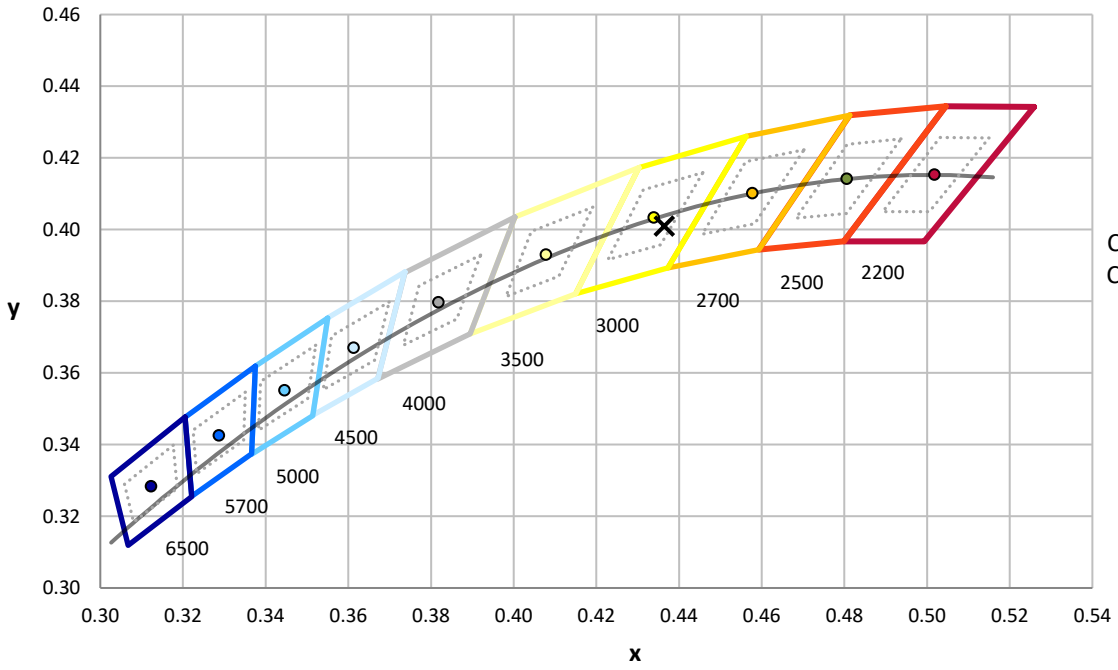
CIE 1931 Chromaticity Diagram



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



CCT = 2983K
CIE x = 0.4364
CIE y = 0.4010
Duv = -0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

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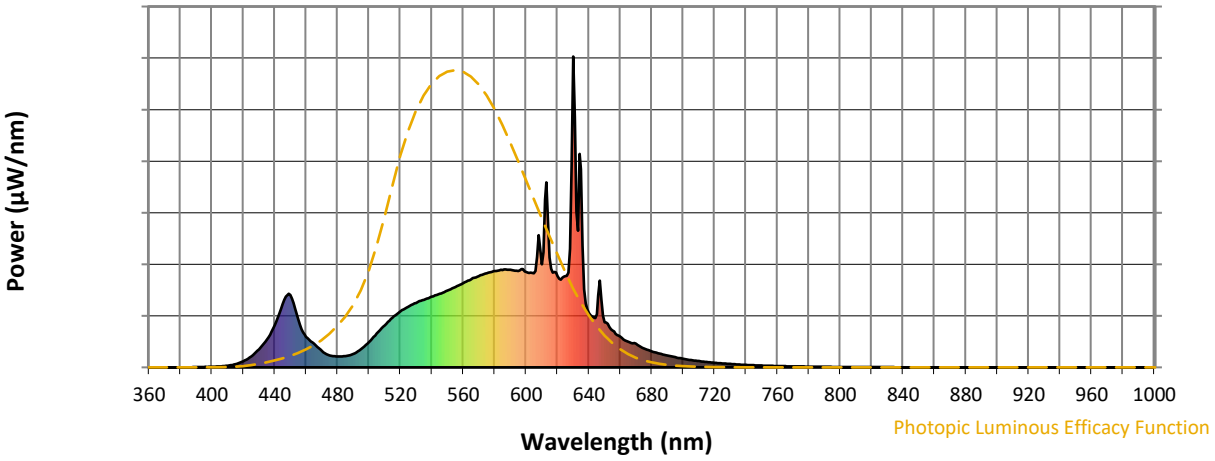
Photopic Flux vs. Wavelength



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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

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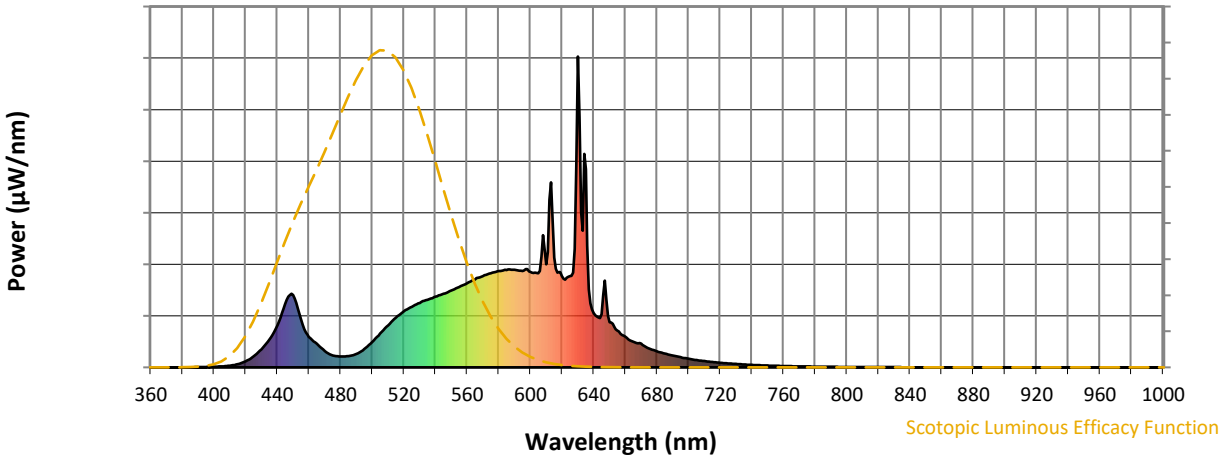
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.27**

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

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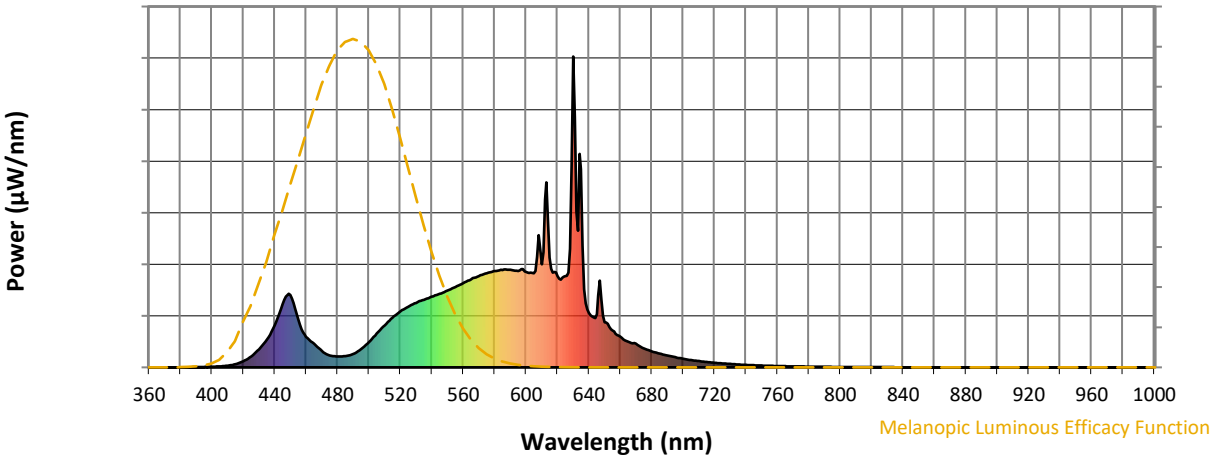
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.34**

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

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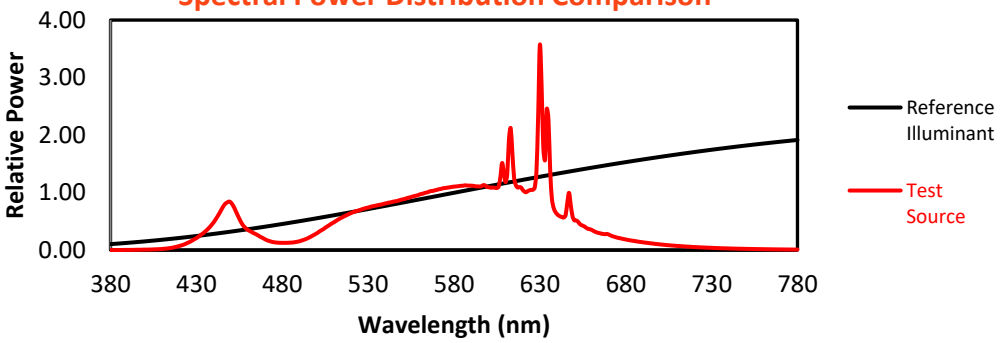
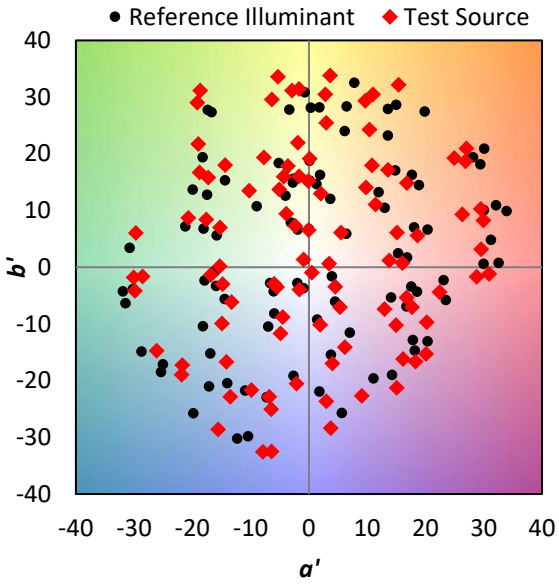
Summary

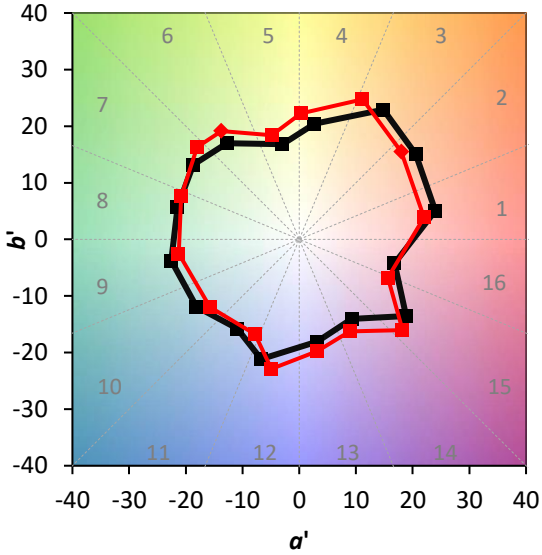
R_f = 81.2
R_g = 101.5
CIE R_a = 83.4
R_9 = 29.4

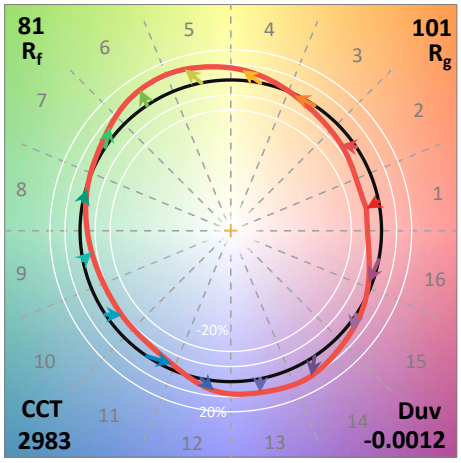
Spectral Power Distribution Comparison

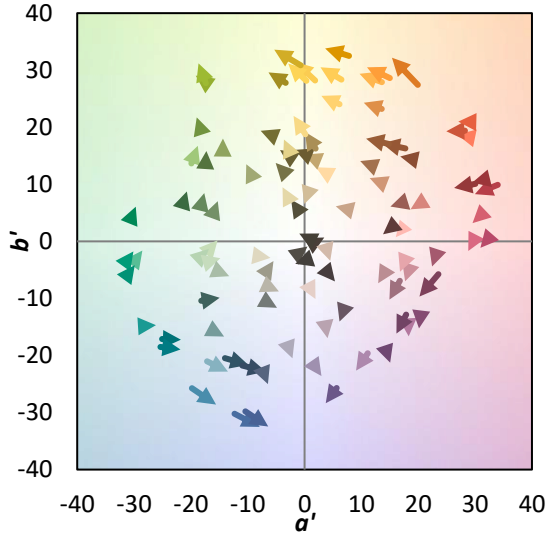


Color Vector Graphics









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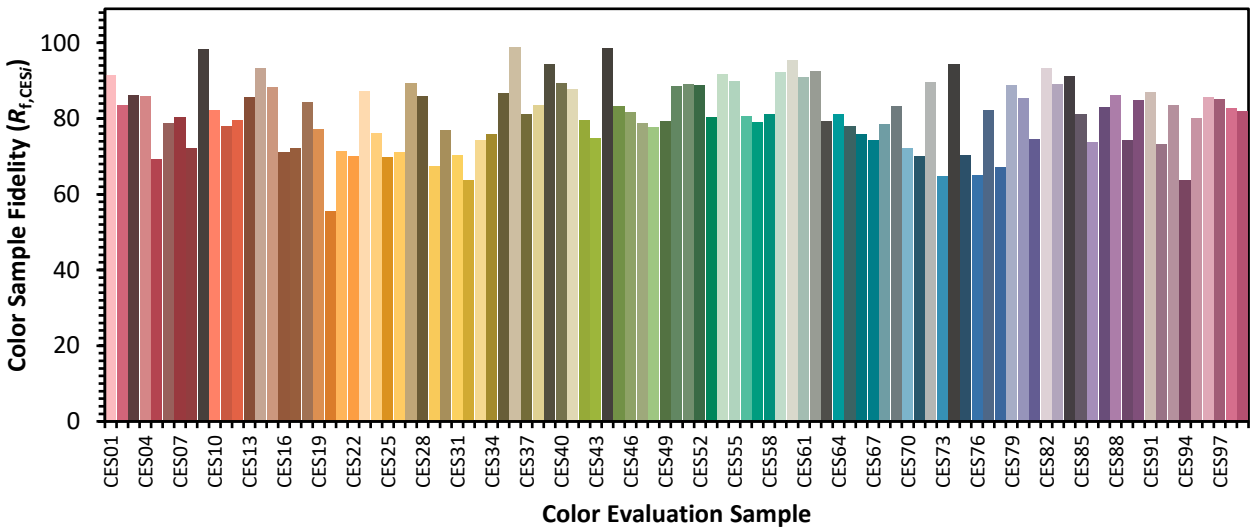
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 71	CES51 = 89	CES76 = 65
CES02 = 63	CES27 = 89	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 86	CES53 = 80	CES78 = 67
CES04 = 70	CES29 = 68	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 77	CES55 = 90	CES80 = 85
CES06 = 51	CES31 = 70	CES56 = 81	CES81 = 75
CES07 = 43	CES32 = 64	CES57 = 79	CES82 = 93
CES08 = 41	CES33 = 74	CES58 = 81	CES83 = 89
CES09 = 29	CES34 = 76	CES59 = 92	CES84 = 91
CES10 = 76	CES35 = 87	CES60 = 96	CES85 = 81
CES11 = 59	CES36 = 99	CES61 = 91	CES86 = 74
CES12 = 65	CES37 = 81	CES62 = 93	CES87 = 83
CES13 = 44	CES38 = 83	CES63 = 79	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 81	CES89 = 74
CES15 = 72	CES40 = 89	CES65 = 78	CES90 = 85
CES16 = 48	CES41 = 88	CES66 = 76	CES91 = 87
CES17 = 50	CES42 = 80	CES67 = 74	CES92 = 73
CES18 = 57	CES43 = 75	CES68 = 79	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 83	CES94 = 64
CES20 = 67	CES45 = 83	CES70 = 72	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 70	CES96 = 86
CES22 = 79	CES47 = 79	CES72 = 90	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 65	CES98 = 83
CES24 = 91	CES49 = 79	CES74 = 94	CES99 = 82
CES25 = 72	CES50 = 88	CES75 = 70	



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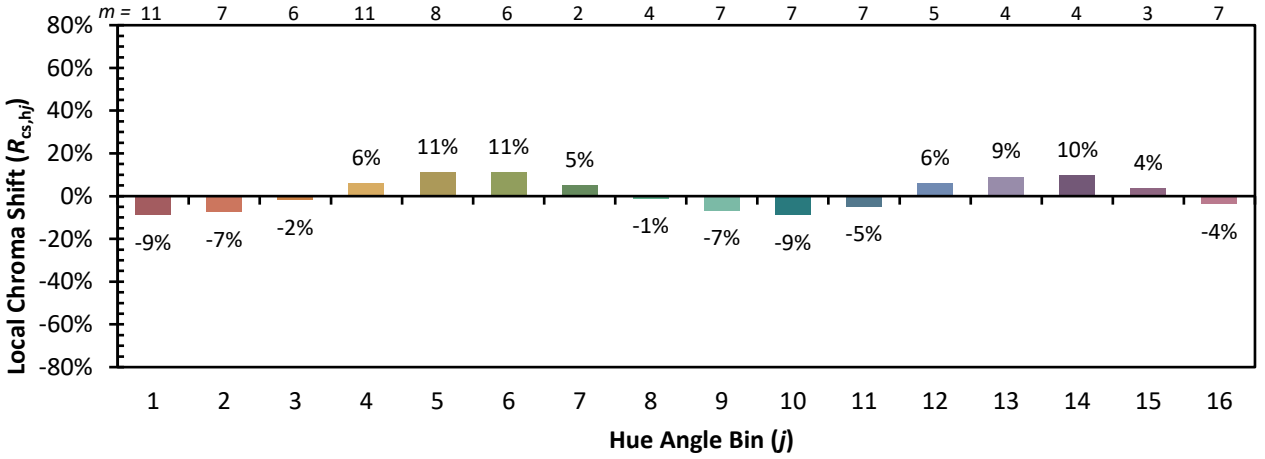
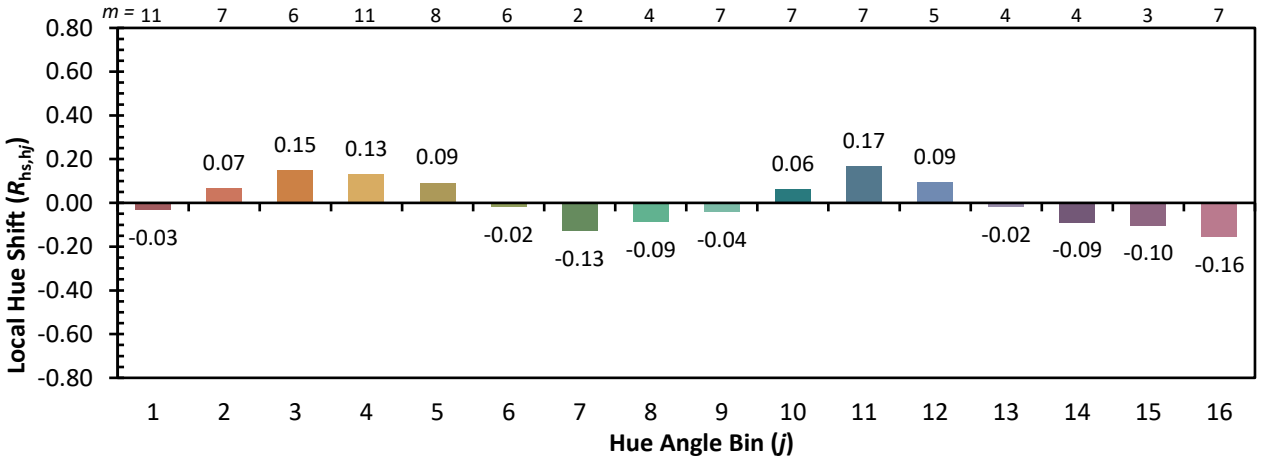
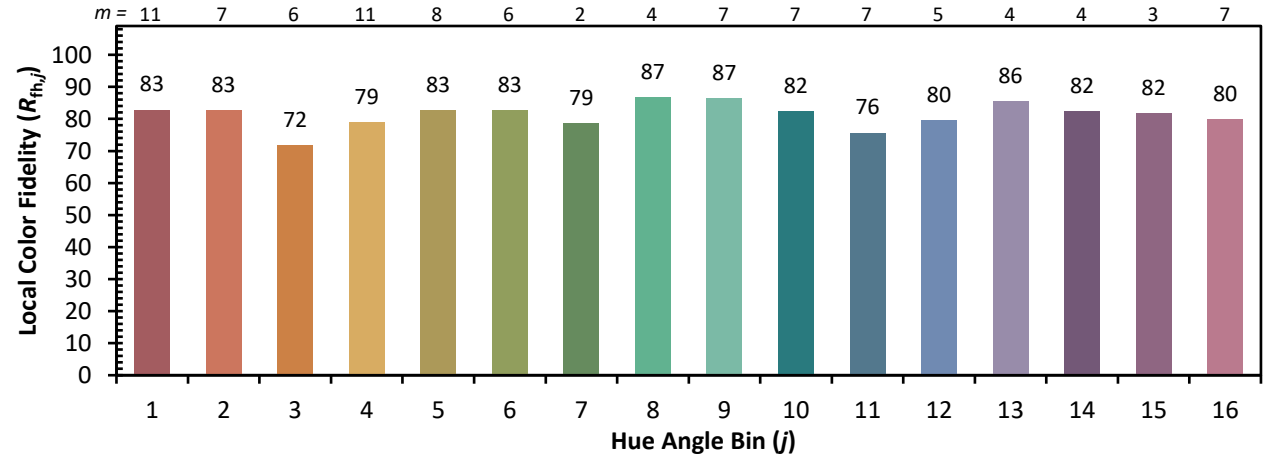
Color Rendition by Hue-Angle Bin







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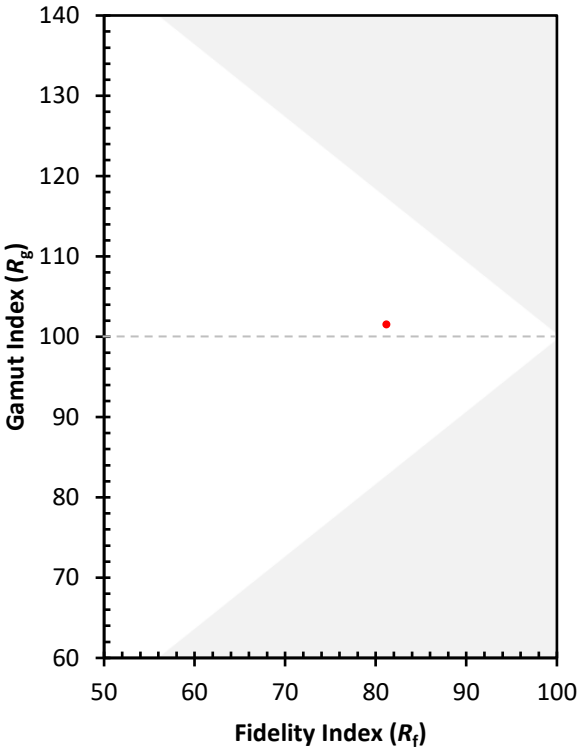
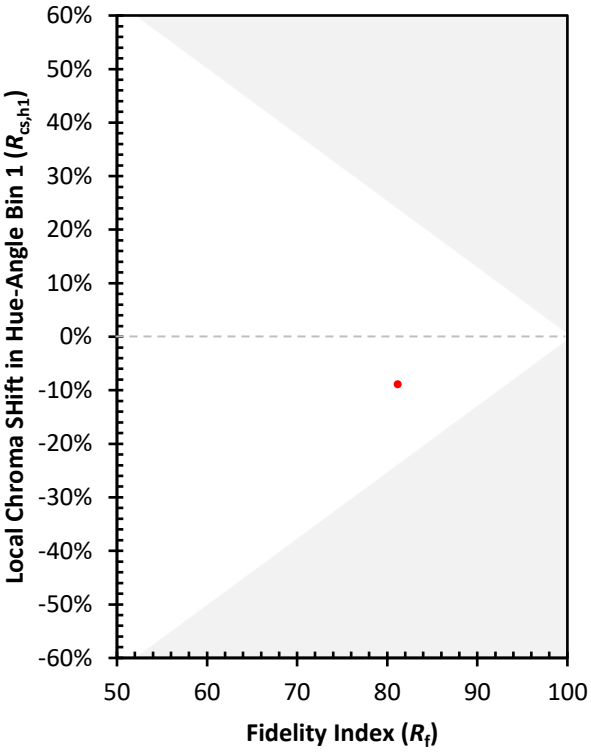
Measure Comparisons





(END OF REPORT)