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: P1432267

Luminaire Tested: EHBR1-12-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:	P1432267
	REPORT IS A COMBINATION OF REPORTS P1431644 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-12-UNV-ASM-L830-UPL12
Description:	Elevate Round Highbay at, 12000 lumens, 3000K 80CRI LEDs with ASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	12649.2 lumens
Efficiency:	N/A
Efficacy:	175.4 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):	72.1
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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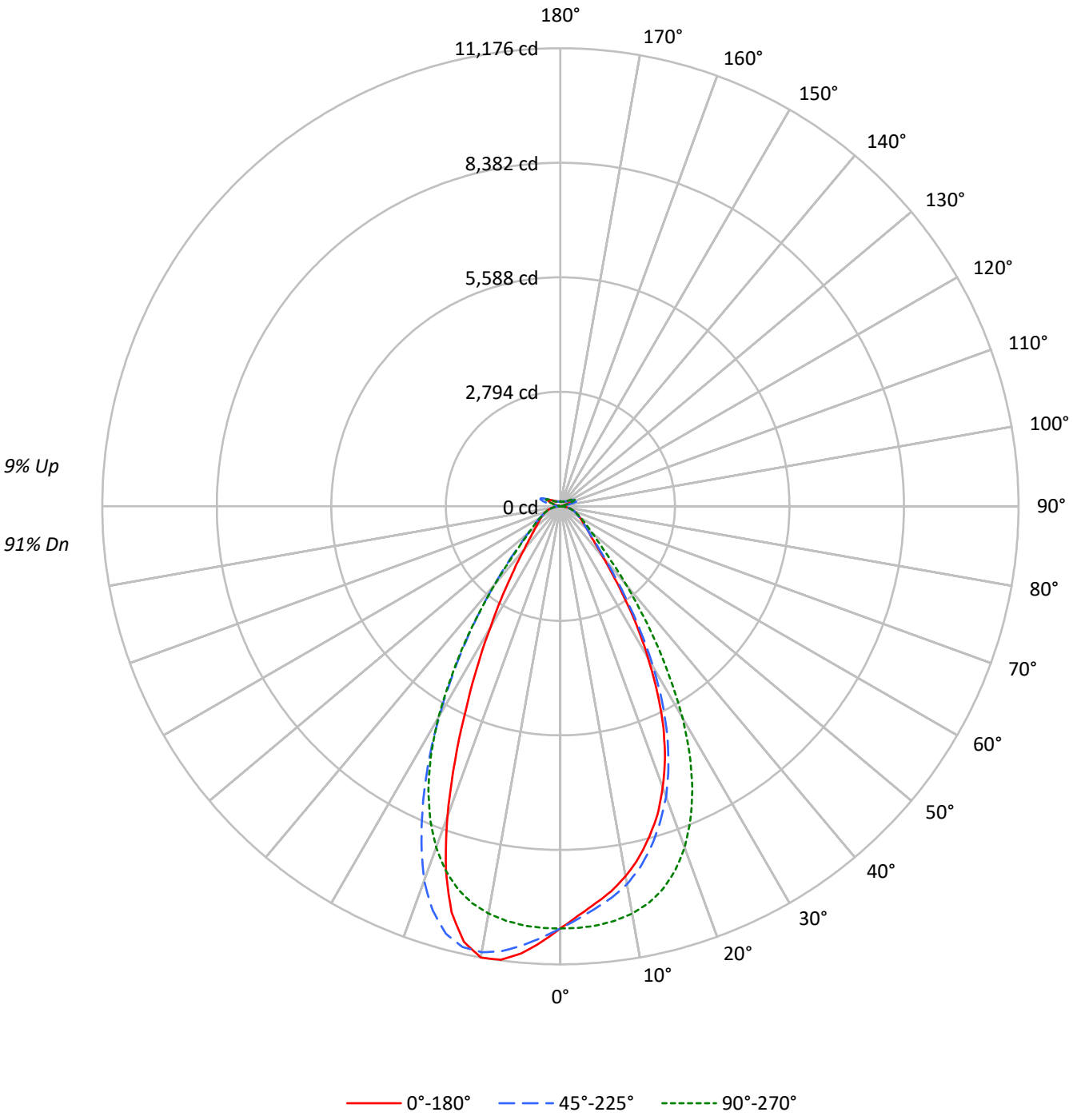
Scaled Data Report

TEST NUMBER: P1432267
CATALOG NUMBER: EHBR1-12-UNV-ASM-L830-UPL12

Luminous Intensity Polar Plot



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TEST NUMBER: P1432267
CATALOG NUMBER: EHBR1-12-UNV-ASM-L830-UPL12

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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	110	106	103	100	106	103	100	98	97	95	93	92	90	89	87	86	85	82
2	103	97	92	87	99	94	90	86	89	86	83	85	82	79	81	79	76	74
3	96	88	82	78	93	86	81	76	82	78	74	79	75	72	75	72	69	67
4	90	81	75	70	88	79	73	69	76	71	67	73	69	65	70	66	63	61
5	85	75	68	63	82	74	67	62	71	65	61	68	63	60	65	61	58	56
6	80	70	63	58	78	68	62	57	66	60	56	63	59	55	61	57	54	52
7	75	65	58	53	73	64	57	53	61	56	52	59	55	51	58	53	50	48
8	71	61	54	49	69	60	53	49	58	52	48	56	51	47	54	50	47	45
9	68	57	50	46	66	56	50	45	54	49	45	53	48	44	51	47	43	42
10	64	53	47	43	63	53	46	42	51	46	42	50	45	41	48	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	48369	48369	48369	48369	48369
5°	45580	46113	48075	50381	51287
10°	43138	44051	47483	51998	52603
15°	39848	40912	46082	51465	48885
20°	35493	36688	43098	47306	39199
25°	29745	30870	38145	39679	27159
30°	22255	23545	30973	30663	17669
35°	14816	15710	22214	21856	11443
40°	9344	9986	14363	14455	7887
45°	6657	6934	9113	9505	6110
50°	5546	5589	6768	6944	5191
55°	4895	4906	5525	5671	4729
60°	4533	4494	4784	4885	4505
65°	4327	4287	4361	4446	4345
70°	4202	4129	4134	4212	4258
75°	3995	3874	3865	4002	4118
80°	3635	3382	3395	3635	3889
85°	2648	2197	2197	2514	2779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
Vertical Angle: 45°
Luminance: 12812 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	979.4	7.7
10°-20°	2664.4	21.1
20°-30°	3124.8	24.7
30°-40°	2173.1	17.2
40°-50°	1079.9	8.5
50°-60°	645.9	5.1
60°-70°	454.6	3.6
70°-80°	292.9	2.3
80°-90°	95.0	0.8
90°-100°	30.3	0.2
100°-110°	198.0	1.6
110°-120°	365.9	2.9
120°-130°	217.4	1.7
130°-140°	131.5	1.0
140°-150°	91.0	0.7
150°-160°	59.4	0.5
160°-170°	34.2	0.3
170°-180°	11.4	0.1
0°-30°	6768.6	53.5
0°-40°	8941.7	70.7
0°-60°	10667.6	84.3
0°-90°	11510.0	91.0
90°-120°	594.2	4.7
90°-150°	1034.2	8.2
90°-180°	1139.0	9.0
0°-180°	12649.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10300	10300	10300	10300	10300	
5°	9732	9846	10265	10757	10951	913
15°	8360	8583	9668	10797	10256	2331
25°	5940	6165	7618	7924	5424	2680
35°	2719	2883	4077	4011	2100	1732
45°	1077	1122	1474	1538	988	871
55°	662	663	747	766	639	600
65°	452	448	455	464	454	448
75°	281	273	272	282	290	297
85°	91	76	76	86	96	94
90°	8	23	8	24	10	8
95°	14	51	16	44	15	14
105°	69	346	91	369	46	92
115°	316	409	389	452	333	291
125°	228	219	249	243	261	208
135°	167	168	158	176	182	131
145°	139	145	143	146	149	88
155°	123	127	127	127	132	57
165°	117	120	120	120	123	33
175°	117	119	119	119	122	11
180°	119	119	119	119	119	

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Scaled Data Report

TEST NUMBER: P1432267
CATALOG NUMBER: EHBR1-12-UNV-ASM-L830-UPL12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	10299.9	10299.9	10299.9	10299.9	10299.9	10299.9	10299.9	10299.9	*10299.9*
2.5°	9994.1	10000.7	10070.7	10161.6	10293.9	10427.0	10534.7	10605.8	*10640.9*
5°	9732.0	9768.4	9845.8	10012.9	10264.7	10531.2	10757.1	10904.8	*10950.6*
7.5°	9476.7	9497.8	9627.4	9838.4	10195.0	10610.3	10945.7	11118.2	*11160.3*
10°	*9165.2*	*9212.9*	*9359.3*	*9608.3*	*10088.5*	*10660.1*	*11047.7*	*11171.3*	*11176.3*
12.5°	8798.6	8861.7	9013.0	9327.0	9918.8	10642.3	11013.5	10973.0	*10880.8*
15°	8359.8	8415.2	8583.1	8947.4	9667.8	10537.0	10797.0	10467.0	*10255.8*
17.5°	7885.9	7936.1	8081.9	8483.0	9313.9	10340.0	10345.1	9692.0	*9293.8*
20°	7294.8	7334.2	7540.5	7934.1	8857.9	10024.1	9722.8	8528.5	*8056.5*
22.5°	6666.0	6702.9	6886.1	7295.8	8286.2	9598.0	8856.2	7357.8	*6714.0*
25°	5940.0	5960.1	6164.8	6535.2	7617.6	9076.0	7923.9	6082.3	*5423.7*
27.5°	5123.2	5157.3	5371.6	5749.9	6831.1	8414.3	6931.2	4970.3	*4362.6*
30°	4280.8	4337.3	4528.9	4867.7	5957.6	7566.0	5898.1	3958.2	*3398.7*
32.5°	3494.5	3535.2	3671.7	4025.8	4979.5	6734.6	4905.9	3171.5	*2697.5*
35°	2719.2	2759.9	2883.4	3231.0	4077.1	5694.3	4011.3	2492.0	*2100.2*
37.5°	2078.6	2150.6	2229.7	2512.0	3199.7	4711.5	3197.6	2006.7	*1703.5*
40°	1619.5	1631.1	1730.8	1911.3	2489.4	3683.9	2505.4	1601.9	*1367.0*
42.5°	1296.3	1327.8	1370.7	1505.9	1886.2	2817.0	1969.2	1314.7	*1161.1*
45°	1077.1	1089.5	1121.9	1212.8	1474.4	2072.9	1537.8	1109.2	*988.5*
47.5°	942.3	936.9	957.8	1025.8	1200.8	1602.1	1246.3	951.4	*866.8*
50°	826.5	823.2	833.0	878.4	1008.6	1229.3	1034.9	830.5	*773.7*
52.5°	736.4	739.3	740.3	768.5	866.5	1002.6	881.3	740.1	*701.9*
55°	661.5	665.2	663.0	683.9	746.7	842.9	766.4	665.5	*639.1*
57.5°	603.0	600.2	597.3	608.6	655.7	715.0	665.5	602.0	*584.4*
60°	544.9	542.4	540.2	547.5	575.1	619.2	587.3	546.6	*541.6*
62.5°	495.1	493.5	493.3	492.0	513.1	540.9	519.3	496.7	*492.3*
65°	451.6	449.8	447.5	445.4	455.2	481.1	464.1	452.0	*453.5*
67.5°	408.1	408.1	404.0	400.7	410.5	424.0	416.6	409.6	*411.4*
70°	368.7	368.9	362.3	359.8	362.7	377.2	369.6	370.7	*373.6*
72.5°	326.4	321.8	317.0	316.7	317.2	328.3	325.8	328.1	*331.2*
75°	281.4	276.0	272.9	269.4	272.3	280.8	281.9	285.2	*290.1*
77.5°	237.9	229.7	227.2	225.4	223.5	233.1	236.8	241.2	*248.4*
80°	191.2	182.1	177.9	175.4	178.6	183.1	191.2	194.5	*204.6*
82.5°	141.3	134.6	129.4	129.2	130.8	134.8	141.7	147.9	*153.7*
85°	91.0	80.2	75.5	77.3	75.5	81.7	86.4	93.7	*95.5*
87.5°	32.9	25.7	24.5	27.1	26.4	28.4	32.4	35.3	*35.5*
90°	8.3	13.4	22.9	14.6	8.3	14.2	24.4	13.7	*9.6*
92.5°	12.2	20.3	36.7	19.0	10.9	19.2	34.6	18.1	*12.8*
95°	14.1	23.4	51.1	25.4	16.1	23.6	43.9	20.0	*15.4*
97.5°	18.0	25.9	58.7	31.0	24.9	29.3	49.6	21.3	*18.5*
100°	23.6	30.3	91.4	38.1	33.1	33.1	90.5	24.4	*21.0*
102.5°	40.0	64.4	194.0	71.5	50.1	64.7	209.6	48.5	*25.4*
105°	68.9	135.4	345.6	149.5	91.0	147.8	368.8	124.6	*46.5*
107.5°	119.2	242.4	455.8	264.6	172.2	275.5	475.1	245.4	*107.4*
110°	222.5	321.7	477.9	363.3	275.3	385.0	518.5	336.0	*216.9*

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Scaled Data Report

TEST NUMBER: P1432267
CATALOG NUMBER: EHBR1-12-UNV-ASM-L830-UPL12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	300.5	345.6	457.8	401.1	358.3	429.0	506.6	372.5	*299.9*
115°	316.2	332.3	408.7	391.6	389.4	422.7	452.4	371.2	*332.7*
117.5°	305.5	303.4	347.1	352.2	376.2	386.9	390.8	348.5	*334.6*
120°	282.9	270.1	289.7	307.5	339.7	335.2	329.3	315.2	*315.7*
122.5°	254.5	239.4	248.4	261.8	293.9	284.5	278.4	281.5	*289.9*
125°	228.3	213.0	219.1	222.4	249.3	239.8	242.7	252.5	*261.2*
127.5°	205.0	194.7	198.3	194.7	211.7	207.3	216.9	228.0	*235.4*
130°	189.3	180.5	185.3	176.7	184.8	185.9	198.7	208.1	*212.7*
132.5°	176.3	170.6	176.2	165.7	168.0	172.9	185.0	193.2	*196.0*
135°	166.8	162.0	168.0	158.4	157.6	164.7	175.7	181.1	*182.1*
137.5°	158.9	154.7	160.9	153.6	151.5	158.6	166.9	171.2	*170.1*
140°	151.7	148.1	154.8	149.2	147.9	155.0	158.8	163.6	*162.8*
142.5°	144.0	141.4	149.4	145.6	144.3	150.9	152.8	156.2	*155.2*
145°	138.6	136.8	145.2	143.0	142.7	147.4	146.0	150.6	*149.1*
147.5°	134.0	132.7	140.3	139.5	139.5	143.0	141.2	145.2	*143.6*
150°	130.0	128.7	136.1	135.3	135.9	138.4	135.7	140.3	*140.0*
152.5°	126.0	124.5	131.2	130.4	131.0	133.6	131.0	136.3	*135.8*
155°	123.2	121.8	127.2	126.8	127.0	128.3	127.0	132.3	*132.5*
157.5°	121.2	120.2	124.5	124.3	124.3	125.1	124.5	129.1	*129.3*
160°	119.7	118.9	122.5	122.3	121.9	123.1	122.7	126.6	*126.9*
162.5°	118.3	117.5	121.6	120.9	120.9	120.9	120.8	124.8	*125.1*
165°	117.4	117.2	120.2	120.2	119.7	120.4	119.5	122.3	*123.4*
167.5°	117.4	116.8	119.9	119.9	119.5	118.9	119.2	121.7	*122.7*
170°	117.2	117.0	119.5	119.1	118.4	118.6	118.3	120.8	*121.8*
172.5°	117.6	117.4	120.1	119.4	119.0	119.0	118.3	120.1	*121.9*
175°	117.3	117.1	119.1	119.1	119.3	118.9	118.7	119.9	*121.6*
177.5°	118.1	117.9	119.1	119.1	118.7	119.1	119.4	120.7	*123.0*
180°	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	*119.1*

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Scaled Data Report

TEST NUMBER: P1432267
CATALOG NUMBER: EHBR1-12-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	13.25	14.32	13.77	14.82	15.36	14.02	15.09	14.54	15.59	16.12
	3H	15.06	16.02	15.60	16.53	17.11	15.57	16.53	16.11	17.04	17.62
	4H	15.80	16.69	16.36	17.22	17.82	16.22	17.11	16.78	17.64	18.24
	6H	16.37	17.19	16.94	17.73	18.34	16.71	17.54	17.28	18.08	18.69
	8H	16.55	17.33	17.13	17.89	18.50	16.87	17.65	17.45	18.21	18.82
	12H	16.65	17.39	17.23	17.94	18.58	16.95	17.69	17.53	18.24	18.88
4H	2H	13.76	14.66	14.32	15.18	15.78	14.39	15.29	14.95	15.81	16.41
	3H	15.80	16.54	16.37	17.11	17.73	16.20	16.94	16.77	17.51	18.12
	4H	16.66	17.33	17.25	17.91	18.56	16.98	17.65	17.57	18.23	18.88
	6H	17.36	17.93	17.97	18.54	19.21	17.62	18.19	18.23	18.80	19.47
	8H	17.58	18.12	18.20	18.72	19.40	17.82	18.36	18.44	18.96	19.64
	12H	17.72	18.19	18.35	18.82	19.50	17.94	18.41	18.57	19.04	19.72
8H	4H	16.92	17.46	17.54	18.06	18.74	17.23	17.76	17.84	18.36	19.04
	6H	17.74	18.17	18.39	18.82	19.51	17.99	18.42	18.64	19.08	19.76
	8H	18.04	18.43	18.70	19.09	19.78	18.27	18.66	18.94	19.32	20.01
	12H	18.24	18.58	18.90	19.22	19.99	18.45	18.79	19.11	19.44	20.20
12H	4H	16.93	17.40	17.56	18.03	18.71	17.23	17.71	17.87	18.34	19.02
	6H	17.78	18.16	18.44	18.83	19.52	18.03	18.42	18.70	19.08	19.78
	8H	18.12	18.46	18.78	19.10	19.87	18.36	18.70	19.02	19.34	20.11

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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

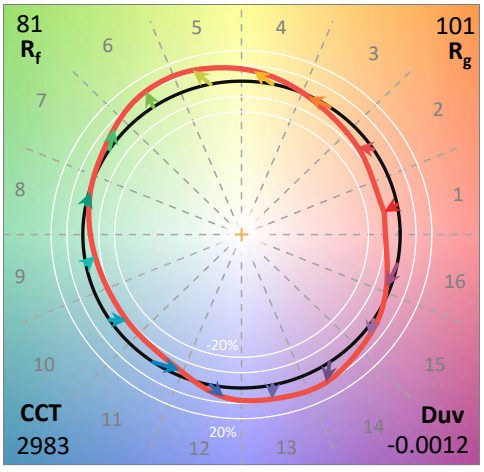
Test Information

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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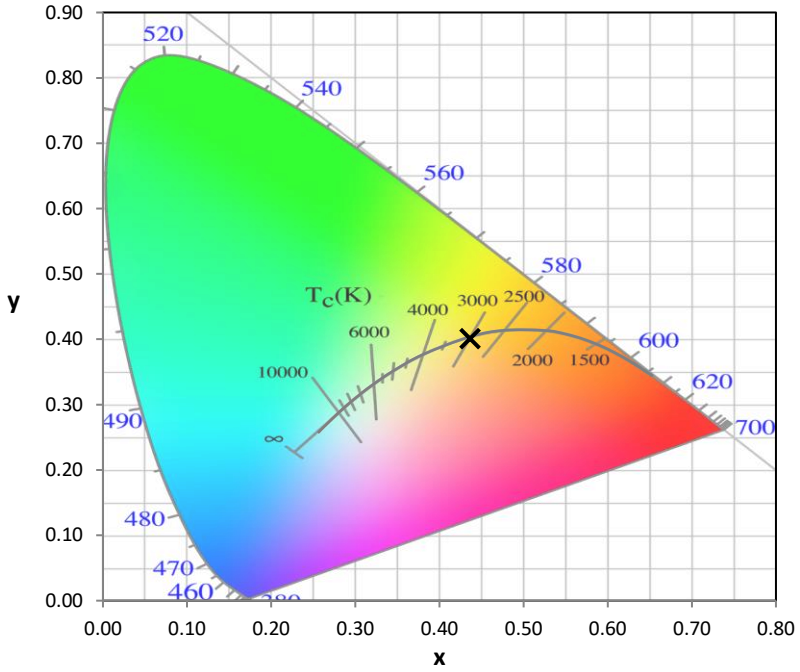
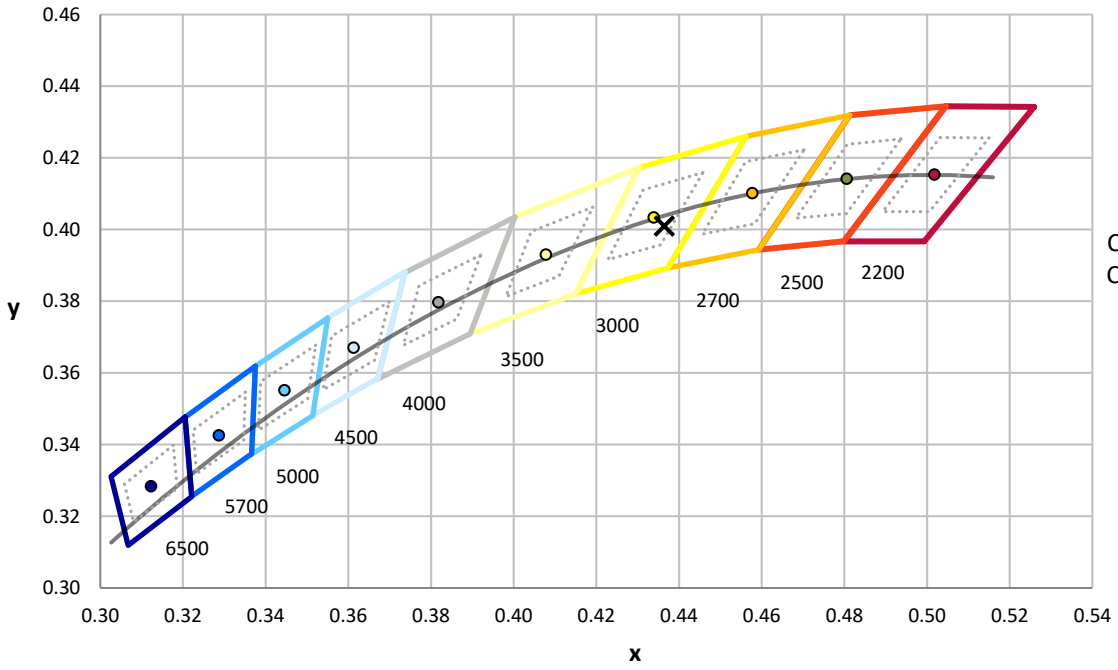
CIE 1931 Chromaticity Diagram



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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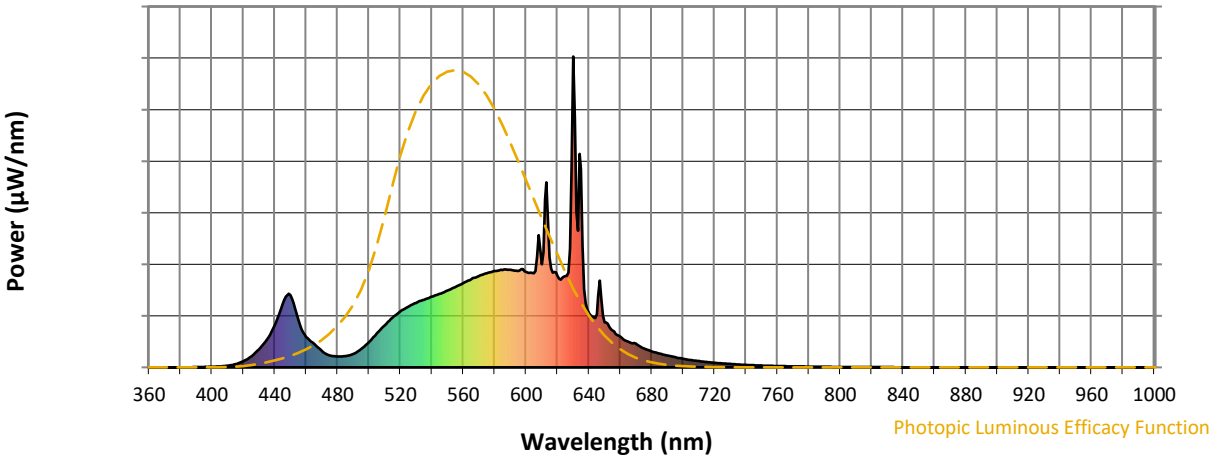
Photopic Flux vs. Wavelength



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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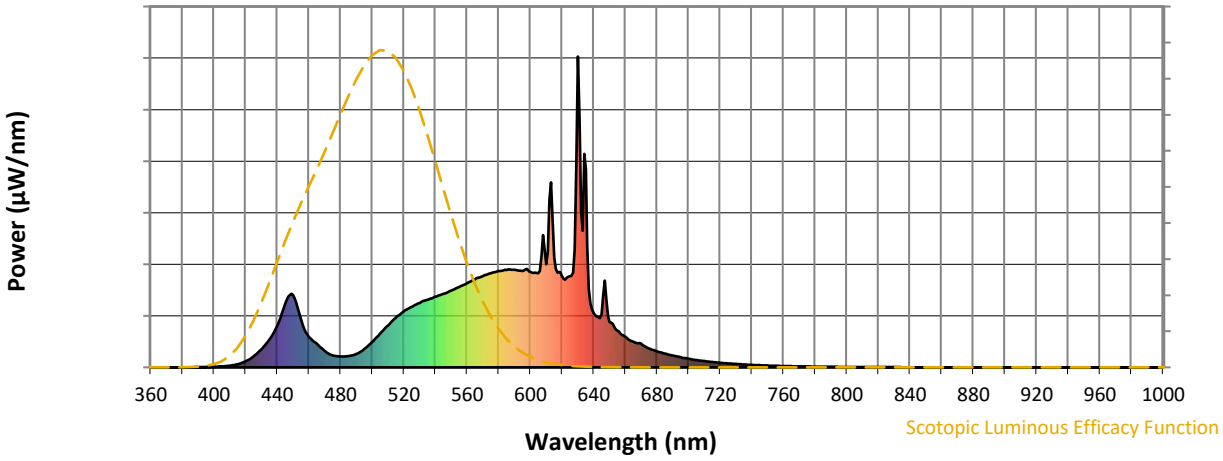
Scotopic Flux vs. Wavelength



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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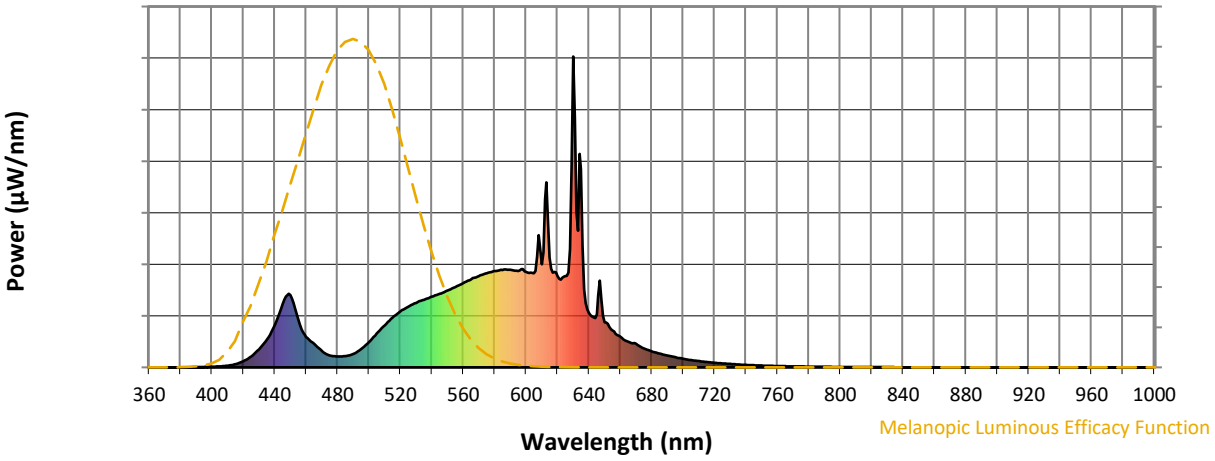
Melanopic Flux vs. Wavelength



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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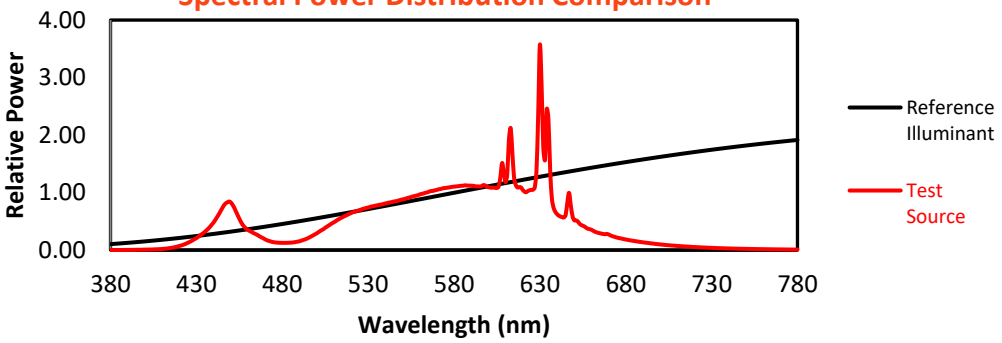
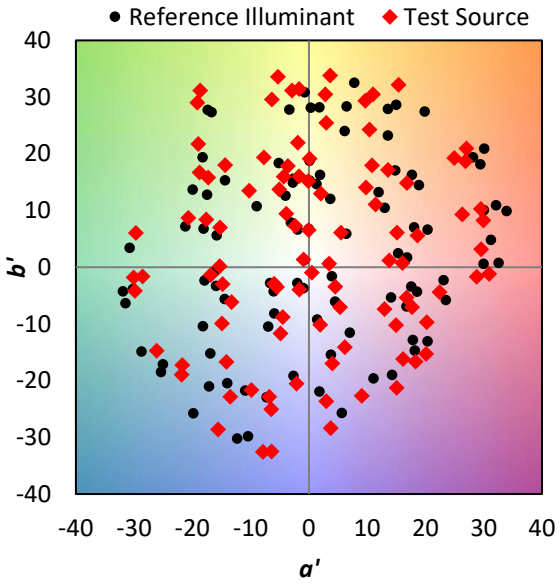
Summary

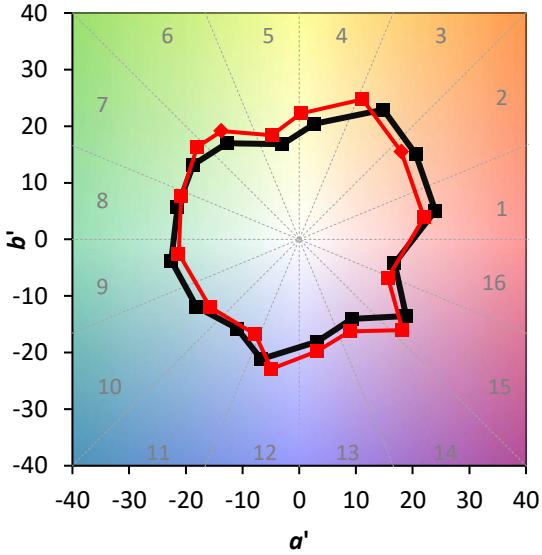
R_f = 81.2
R_g = 101.5
CIE R_a = 83.4
R_9 = 29.4

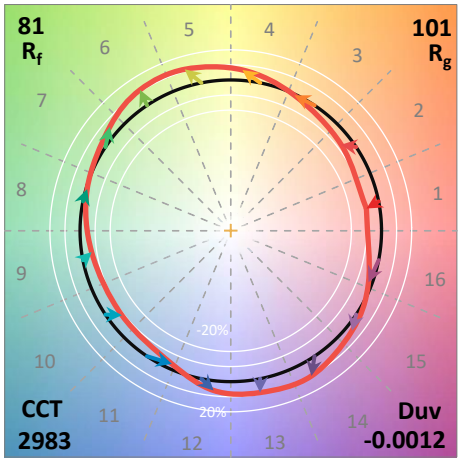
Spectral Power Distribution Comparison

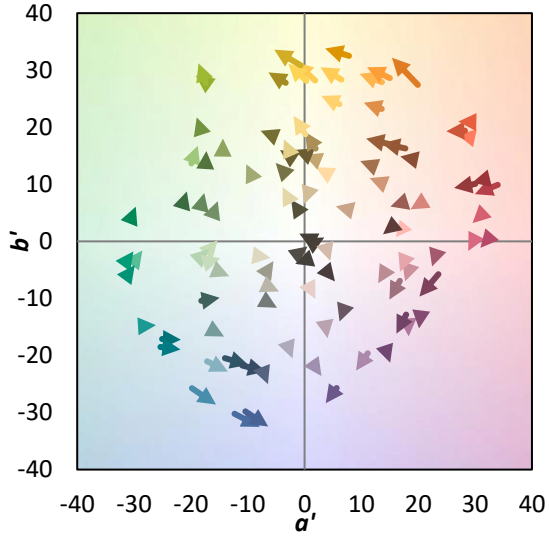


Color Vector Graphics









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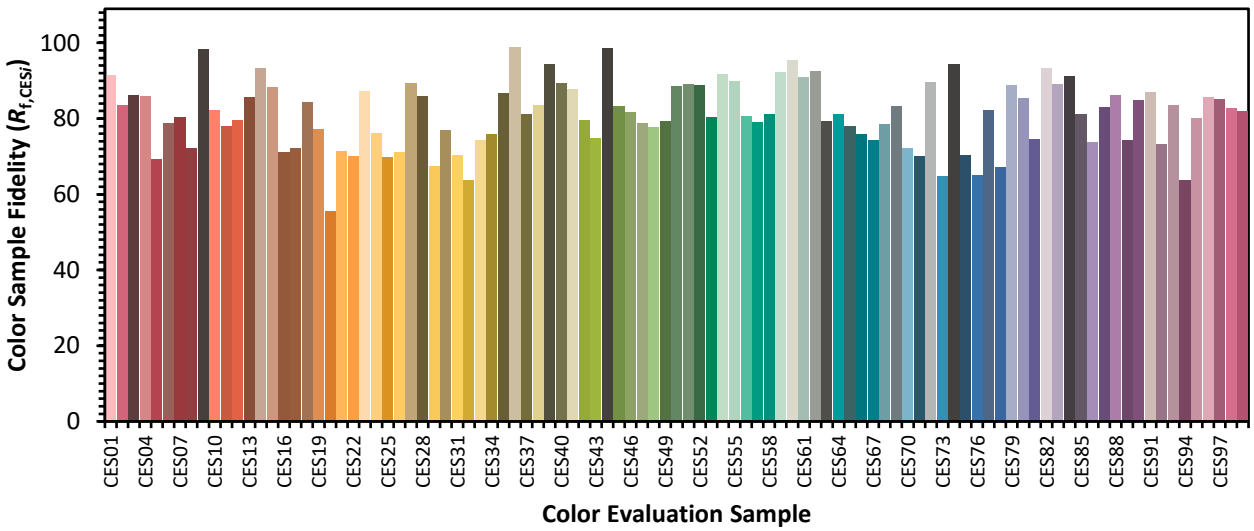
Individual Sample Fidelity Index ($R_{f,i}$)

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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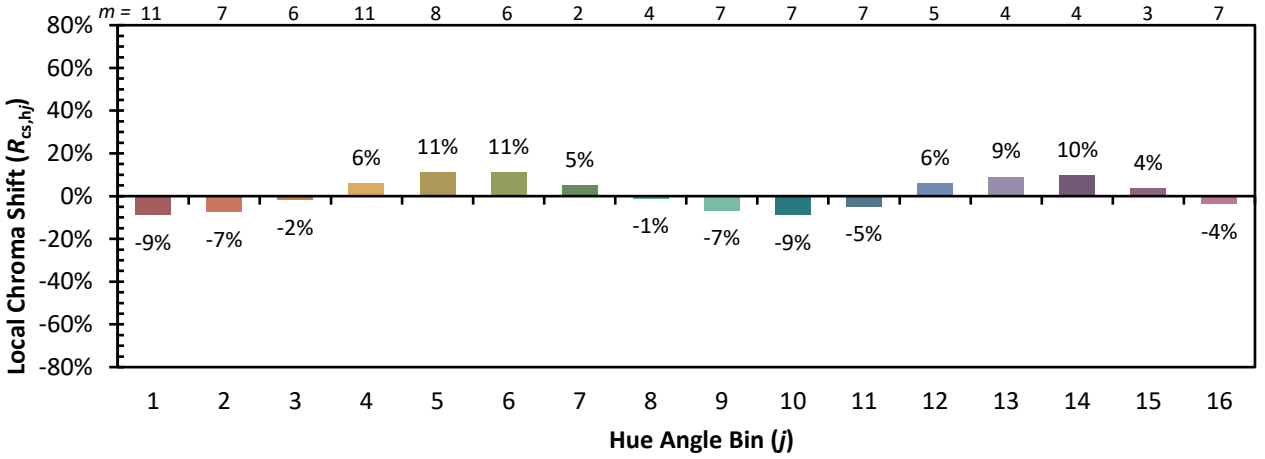
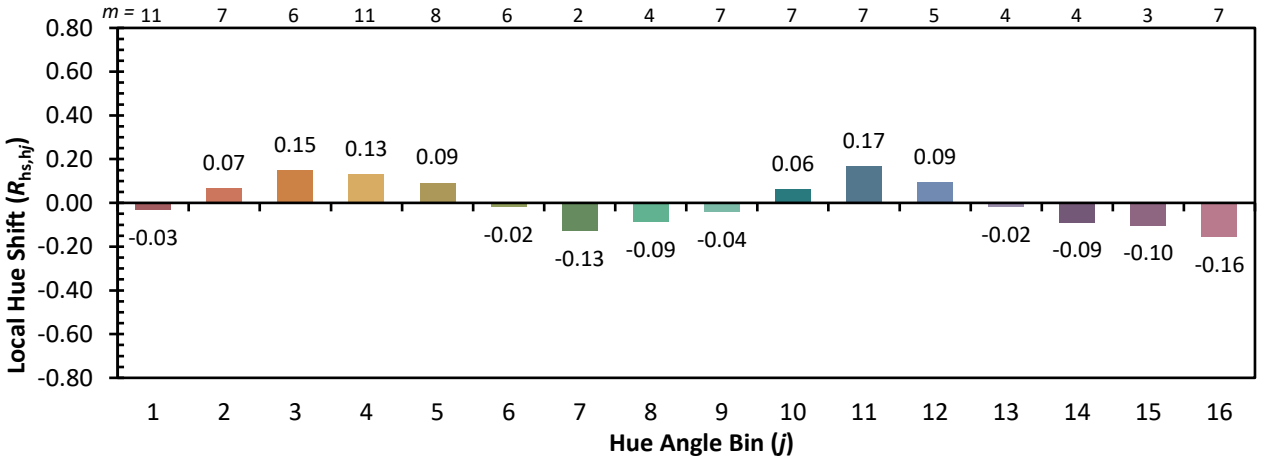
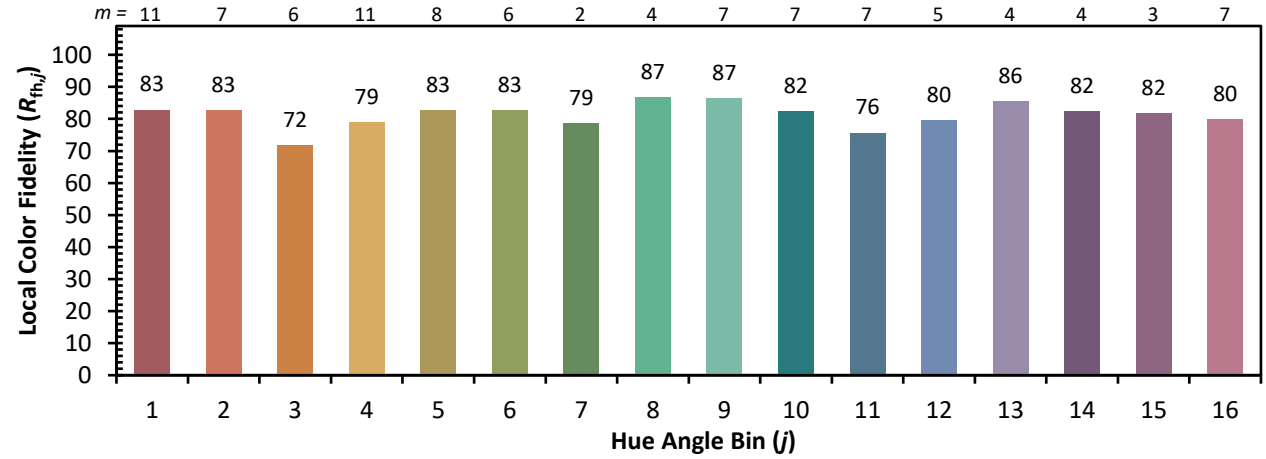
Color Rendition by Hue-Angle Bin







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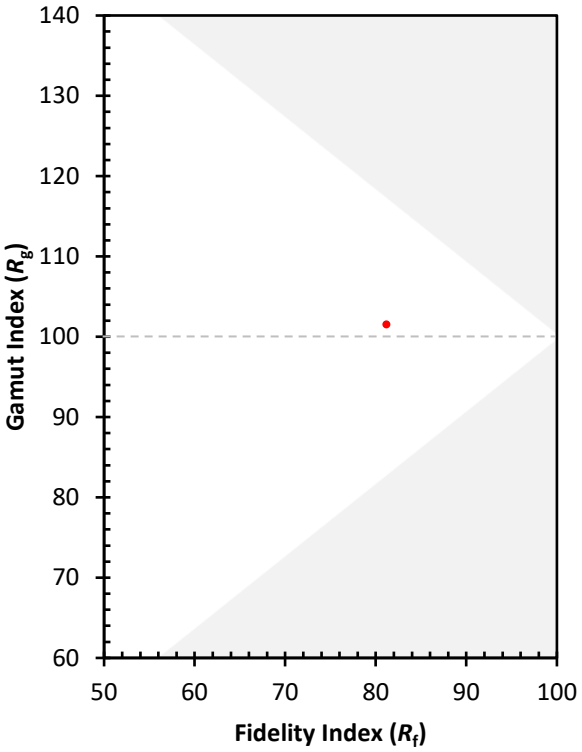
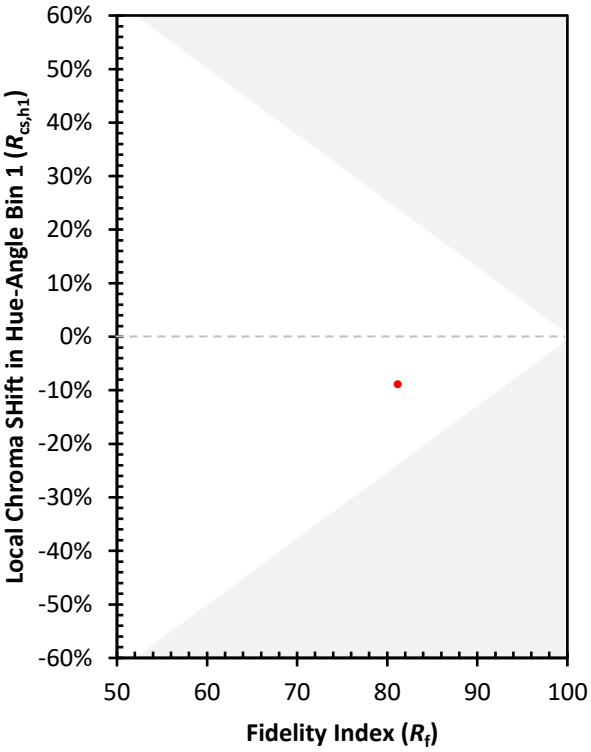
Measure Comparisons





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