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:

Luminaire Tested: EHBR1-54-UNV-A1-L840-UPL15

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:	
	REPORT IS A COMBINATION OF REPORTS P1431861 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-54-UNV-A1-L840-UPL15
Description:	Elevate Round Highbay at, 54000 lumens, 4000K 80CRI LEDs with A lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	55127.0 lumens
Efficiency:	N/A
Efficacy:	180.6 lumens/watt
Spacing Criteria (0/90/45):	0.8 / 1.07 / 0.95
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	305.3
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:
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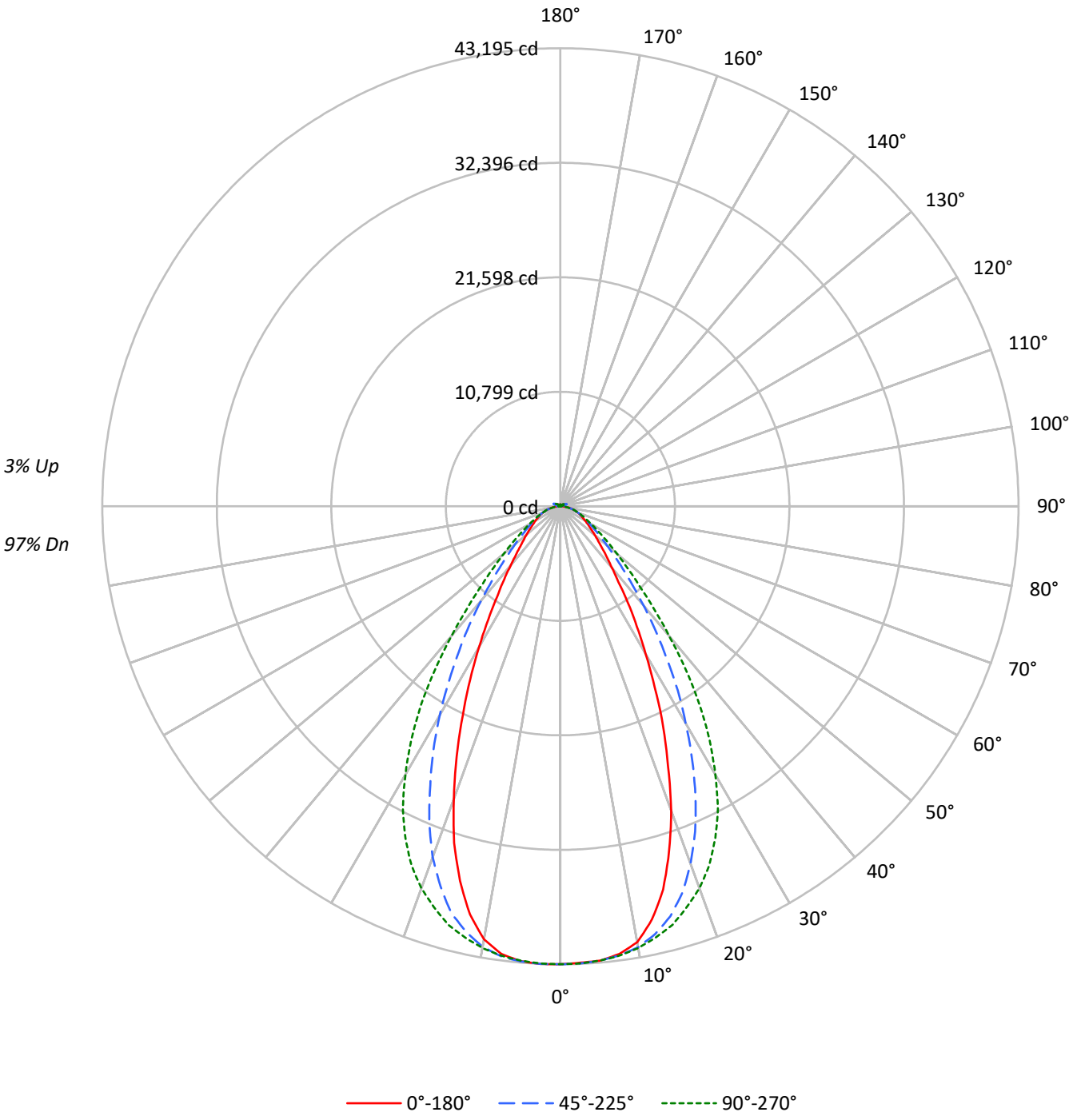
Luminous Intensity Polar Plot



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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	110	110	110	104	104	104	100	100	100	97
1	111	107	104	101	108	105	102	100	100	98	96	96	94	93	92	91	89	87
2	104	98	92	88	101	96	91	87	92	88	85	88	85	82	85	82	80	78
3	97	89	83	78	95	87	82	77	84	79	75	81	77	74	78	75	72	70
4	91	81	75	69	89	80	74	69	77	72	68	75	70	67	73	69	65	64
5	85	75	68	63	83	74	67	62	72	66	61	70	64	61	68	63	60	58
6	80	69	62	57	78	68	62	57	66	60	56	65	59	55	63	58	55	53
7	75	64	57	52	74	63	57	52	62	56	51	60	55	51	59	54	51	49
8	71	60	53	48	70	59	53	48	58	52	48	56	51	47	55	50	47	45
9	67	56	49	45	66	55	49	44	54	48	44	53	48	44	52	47	43	42
10	64	53	46	41	62	52	46	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	202761	202761	202761	202761	202761
5°	201421	201391	201400	201756	201633
10°	196442	198732	199047	198486	195157
15°	178338	190782	194709	189252	174243
20°	148613	174541	186465	171255	142827
25°	114930	150918	172980	145407	108976
30°	83775	122904	151950	118241	79515
35°	60388	94730	124880	90650	56446
40°	43445	69966	92030	67013	42105
45°	34234	51186	64276	48967	33049
50°	28403	38458	46522	37190	27973
55°	24806	30367	35232	29859	24472
60°	22371	25350	28074	25193	22529
65°	20923	22361	23592	22431	21122
70°	19870	20344	20973	20458	20066
75°	18537	18422	18537	18473	18717
80°	16743	15540	15196	15781	16743
85°	11603	9840	9735	9997	11947

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
Vertical Angle: 45°
Luminance: 67345 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4077.4	7.4
10°-20°	10958.5	19.9
20°-30°	13325.4	24.2
30°-40°	10854.6	19.7
40°-50°	6517.1	11.8
50°-60°	3750.6	6.8
60°-70°	2347.3	4.3
70°-80°	1382.4	2.5
80°-90°	406.9	0.7
90°-100°	39.4	0.1
100°-110°	259.6	0.5
110°-120°	480.1	0.9
120°-130°	285.3	0.5
130°-140°	174.1	0.3
140°-150°	122.8	0.2
150°-160°	81.6	0.1
160°-170°	47.8	0.1
170°-180°	16.2	0.0
0°-30°	28361.3	51.4
0°-40°	39215.9	71.1
0°-60°	49483.6	89.8
0°-90°	53620.2	97.3
90°-120°	779.1	1.4
90°-150°	1361.2	2.5
90°-180°	1507.0	2.7
0°-180°	55127.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	43177	43177	43177	43177	43177	
5°	43006	43000	43002	43078	43052	4064
15°	37414	40025	40849	39704	36555	10293
25°	22952	30138	34544	29038	21762	10457
35°	11083	17386	22920	16638	10360	7012
45°	5539	8282	10400	7923	5347	4369
55°	3352	4104	4761	4035	3307	3030
65°	2184	2334	2462	2341	2205	2171
75°	1306	1298	1306	1301	1318	1383
85°	399	338	335	344	411	426
90°	12	30	11	31	12	25
95°	20	67	21	57	19	19
105°	92	454	119	484	60	123
115°	417	536	511	594	437	384
125°	302	287	326	318	343	275
135°	223	223	209	233	241	174
145°	188	195	192	197	202	119
155°	171	174	172	175	184	80
165°	168	168	166	168	174	48
175°	173	172	168	170	176	16
180°	172	172	172	172	172	

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TEST NUMBER:
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	43176.6	43176.6	43176.6	43176.6	43176.6	43176.6	*43176.6*	43176.6	43176.6
2.5°	*43081.6*	*43120.5*	*43136.8*	*43145.8*	*43155.8*	*43182.9*	*43194.6*	*43175.7*	*43191.9*
5°	43006.5	43009.3	43000.2	43040.9	43002.0	43029.2	*43078.0*	43059.0	43051.8
7.5°	42568.9	42659.3	42712.6	42726.2	42733.4	42766.9	*42801.3*	42606.8	42577.9
10°	41736.9	41887.9	42223.4	42319.3	42290.3	42344.6	*42171.0*	41662.7	41463.8
12.5°	39912.9	40443.7	41315.5	41703.4	41632.9	41680.8	*41089.4*	40016.9	39400.1
15°	37414.3	38192.9	40025.0	40790.1	40848.9	40790.1	*39704.0*	37614.1	36555.2
17.5°	34092.7	35530.6	38228.1	39713.0	39628.0	39656.1	*37594.2*	34505.1	33293.3
20°	30544.2	32077.0	35873.3	38350.2	38324.0	38166.7	*35197.8*	31123.8	29355.0
22.5°	26530.8	28507.7	33174.8	36674.5	36664.6	36402.3	*32279.6*	27431.5	25527.0
25°	22951.5	24890.4	30138.1	34621.7	34544.0	34245.5	*29037.6*	23748.2	21762.4
27.5°	19251.1	21266.8	26896.2	32216.3	32162.9	31837.3	*25938.5*	20305.5	18415.5
30°	16114.0	17957.0	23640.6	29569.3	29227.5	29190.4	*22743.5*	17117.8	15294.7
32.5°	13426.4	15006.2	20571.4	26801.2	26196.2	26368.9	*19559.4*	14451.9	12645.0
35°	11083.3	12475.0	17386.4	23599.9	22919.9	23143.3	*16637.6*	11858.3	10359.8
37.5°	8995.2	10333.6	14687.0	20486.4	19446.4	19867.8	*14067.5*	9903.2	8702.2
40°	7530.2	8591.9	12126.9	17069.9	15951.2	16637.6	*11615.0*	8260.0	7297.8
42.5°	6488.5	7181.2	10009.0	13808.0	12949.8	13436.3	*9573.1*	6905.4	6185.5
45°	5538.9	6091.5	8281.7	10896.1	10399.6	10850.9	*7922.7*	5888.0	5347.2
47.5°	4838.1	5264.0	6817.6	8799.0	8490.6	8633.5	*6616.9*	5138.3	4698.8
50°	4233.1	4562.3	5731.6	7101.6	6933.4	7021.1	*5542.6*	4470.9	4168.9
52.5°	3762.9	4004.3	4807.3	5836.5	5753.3	5766.8	*4723.2*	3932.9	3714.0
55°	3352.3	3520.5	4103.8	4781.1	4761.2	4764.8	*4035.1*	3485.2	3307.1
57.5°	2993.3	3132.6	3526.8	4016.1	3987.1	3993.5	*3494.3*	3095.5	2980.6
60°	2689.4	2782.6	3047.5	3393.9	3374.9	3366.8	*3028.6*	2748.2	2708.4
62.5°	2419.9	2479.6	2663.2	2909.2	2873.0	2881.2	*2662.3*	2482.3	2423.6
65°	2183.9	2204.7	2334.0	2486.0	2462.5	2482.3	*2341.3*	2218.3	2204.7
67.5°	1953.3	1974.1	2050.1	2152.3	2125.1	2141.4	*2051.9*	1979.5	1967.8
70°	1743.5	1742.6	1785.1	1840.3	1840.3	1843.0	*1795.1*	1751.7	1760.7
72.5°	1526.5	1521.1	1533.7	1570.8	1560.8	1595.2	*1544.6*	1531.0	1532.8
75°	1305.8	1290.5	1297.7	1316.7	1305.8	1323.9	*1301.3*	1318.5	1318.5
77.5°	1097.8	1068.9	1059.9	1062.6	1042.7	1069.8	*1075.2*	1087.0	1114.1
80°	880.8	840.1	817.5	816.6	799.4	816.6	*830.2*	854.6	880.8
82.5°	653.8	618.6	580.6	573.3	562.5	572.4	*590.5*	619.5	662.0
85°	398.8	361.7	338.2	325.6	334.6	334.6	*343.6*	384.3	410.6
87.5°	143.8	125.7	103.1	104.0	106.7	110.3	*114.8*	144.7	158.3
90°	12.5	17.4	29.8	19.0	10.7	18.2	*31.4*	16.5	11.6
92.5°	16.6	26.5	47.9	24.8	14.1	24.8	*44.6*	22.3	15.8
95°	20.0	30.6	67.0	33.1	20.7	30.6	*57.0*	24.8	19.1
97.5°	24.9	33.9	76.9	40.5	32.2	38.0	*64.5*	26.5	23.2
100°	32.4	39.7	119.9	49.6	43.0	43.0	*118.2*	30.6	27.4
102.5°	53.9	84.3	254.6	93.4	65.3	84.3	*274.4*	62.0	33.2
105°	91.9	177.7	453.8	195.9	119.0	193.4	*483.6*	162.0	60.5
107.5°	158.0	318.2	598.5	347.2	225.7	361.2	*623.3*	320.7	140.7
110°	293.6	422.4	627.4	476.9	361.2	505.1	*680.3*	439.8	284.5

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Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL15

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	396.1	453.8	600.9	526.5	470.3	562.9	*664.6*	487.7	393.6
115°	416.8	436.4	536.5	514.1	510.8	554.7	*593.5*	486.0	436.6
117.5°	403.6	398.4	455.5	462.1	493.5	507.5	*512.5*	456.3	439.1
120°	372.9	354.6	380.2	403.4	445.5	439.8	*431.5*	413.4	414.3
122.5°	336.6	315.0	325.7	343.0	385.2	372.8	*364.5*	368.7	381.3
125°	301.9	280.3	286.8	291.0	326.5	314.1	*318.3*	330.7	343.3
127.5°	271.3	256.3	259.6	254.6	276.9	271.1	*284.4*	299.4	309.4
130°	250.7	238.2	243.1	230.6	242.3	243.9	*261.4*	272.9	279.6
132.5°	234.2	225.9	232.5	217.5	220.8	228.4	*244.1*	254.9	258.2
135°	222.7	215.2	222.6	208.5	208.6	218.5	*232.6*	239.2	240.9
137.5°	212.0	206.2	213.6	203.7	201.2	211.2	*221.9*	226.9	226.1
140°	203.9	198.0	206.3	198.8	197.2	207.1	*212.1*	218.7	217.1
142.5°	194.0	190.7	199.7	194.8	193.1	203.1	*205.6*	209.7	209.0
145°	187.5	185.0	194.8	192.4	191.5	199.0	*197.4*	204.1	201.6
147.5°	183.7	181.0	189.1	188.3	188.3	193.3	*191.7*	197.5	196.1
150°	178.8	176.2	184.2	183.4	184.2	187.5	*185.1*	192.8	192.9
152.5°	173.9	171.3	178.5	176.8	177.6	180.9	*179.5*	187.0	188.0
155°	170.7	168.1	173.7	171.8	171.8	174.4	*174.6*	183.1	184.0
157.5°	170.0	167.4	171.4	169.6	169.6	171.3	*172.3*	179.9	180.8
160°	169.4	166.7	169.9	168.1	167.3	169.8	*170.8*	177.6	178.5
162.5°	168.7	166.1	169.1	167.4	166.5	167.4	*168.4*	176.1	177.0
165°	167.9	166.1	168.5	166.7	165.8	166.7	*167.7*	172.8	174.5
167.5°	168.8	167.1	168.5	166.7	165.9	165.1	*167.8*	172.1	173.8
170°	168.9	168.0	168.6	166.0	164.3	165.2	*167.0*	171.3	173.0
172.5°	170.7	169.8	170.4	167.8	166.1	167.0	*168.0*	171.5	174.0
175°	172.6	170.8	171.5	168.8	167.9	167.9	*169.8*	172.4	175.9
177.5°	174.3	172.5	172.4	169.7	167.9	168.8	*171.5*	174.2	178.4
180°	171.5	171.5	171.5	171.5	171.5	171.5	*171.5*	171.5	171.5

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Scaled Data Report

TEST NUMBER: CATALOG
CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL15

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	20.15	21.36	20.56	21.74	22.12	21.13	22.35	21.54	22.72	23.11
	3H	21.63	22.71	22.06	23.10	23.53	22.39	23.48	22.82	23.87	24.30
	4H	22.23	23.24	22.68	23.65	24.10	22.89	23.90	23.34	24.31	24.76
	6H	22.70	23.63	23.16	24.05	24.52	23.25	24.18	23.71	24.61	25.07
	8H	22.85	23.73	23.33	24.17	24.65	23.35	24.23	23.83	24.67	25.15
	12H	22.92	23.76	23.40	24.20	24.70	23.39	24.23	23.87	24.67	25.17
4H	2H	20.67	21.68	21.12	22.09	22.54	21.45	22.46	21.90	22.87	23.32
	3H	22.36	23.19	22.82	23.65	24.12	22.94	23.77	23.40	24.23	24.70
	4H	23.07	23.82	23.56	24.29	24.80	23.56	24.31	24.05	24.78	25.29
	6H	23.65	24.30	24.17	24.80	25.33	24.04	24.69	24.55	25.19	25.72
	8H	23.84	24.44	24.36	24.94	25.48	24.18	24.78	24.69	25.28	25.81
	12H	23.95	24.48	24.48	25.01	25.55	24.25	24.78	24.78	25.31	25.85
8H	4H	23.30	23.90	23.82	24.40	24.94	23.75	24.35	24.26	24.85	25.38
	6H	23.99	24.48	24.54	25.03	25.57	24.33	24.82	24.88	25.37	25.91
	8H	24.24	24.68	24.81	25.24	25.80	24.52	24.96	25.09	25.53	26.08
	12H	24.41	24.80	24.97	25.34	25.97	24.65	25.03	25.21	25.58	26.21
12H	4H	23.30	23.83	23.84	24.37	24.90	23.75	24.28	24.28	24.81	25.35
	6H	24.01	24.45	24.58	25.02	25.57	24.35	24.79	24.92	25.35	25.91
	8H	24.31	24.69	24.87	25.24	25.87	24.59	24.97	25.15	25.52	26.15

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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: SP1-2506-472-1

Test Date: 07/30/2025

Luminaire Tested: EHBR-60-L840-N

Data in this report applies to families of products including EHBR-60-L840-N

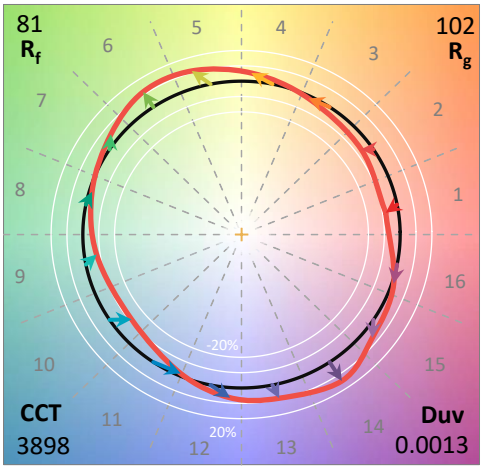
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-1
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-L840-N**
Description:	Elevate Round Highbay at, 60000 lumens, 4000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K):	3898	CRI (Ra):	82.1		
CIE u':	0.2263	R1:	84.4	R9:	38.5
CIE v':	0.5052	R2:	83.5	R10:	58.9
Duv:	0.0013	R3:	80.8	R11:	83.6
CIE x:	0.3861	R4:	83.9	R12:	54.2
CIE y:	0.3831	R5:	82.1	R13:	82.8
CIE z:	0.2308	R6:	77.3	R14:	88.2
Peak Wavelength (nm):	630	R7:	86.4	R15:	81.2
Dominant Wavelength (nm):	578	R8:	78.3		
Purity:	30.85729				
Rf:	80.7				
Rg:	102.1				



Test Conditions

Stabilization Time:	42M
Operation Time:	1H 42M
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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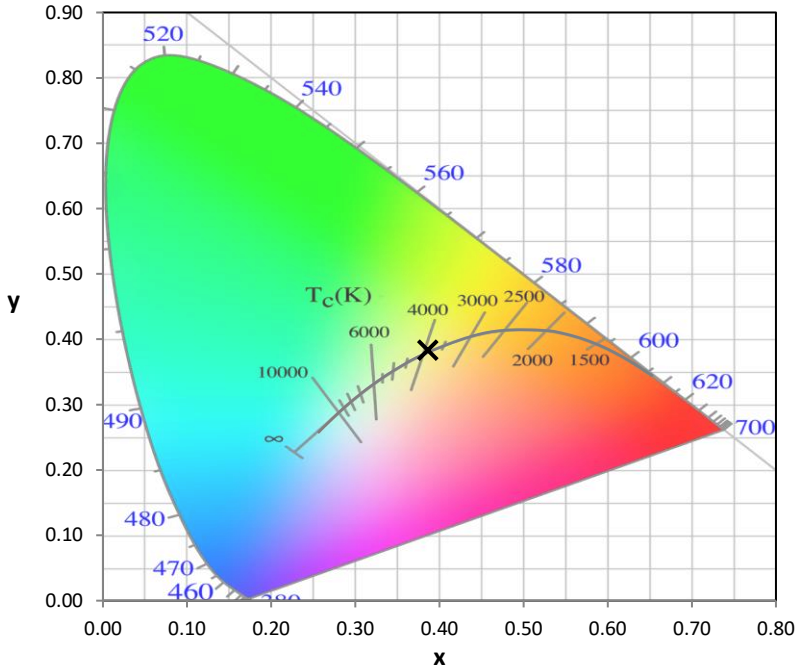
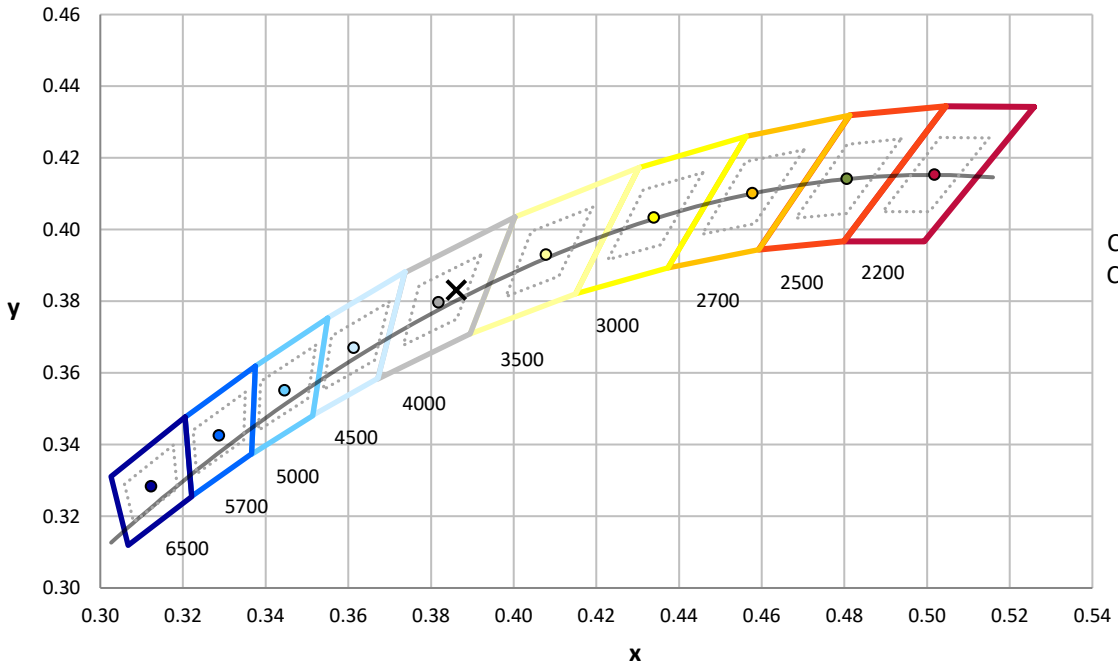
CIE 1931 Chromaticity Diagram



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



CCT = 3898K
CIE x = 0.3861
CIE y = 0.3831
Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

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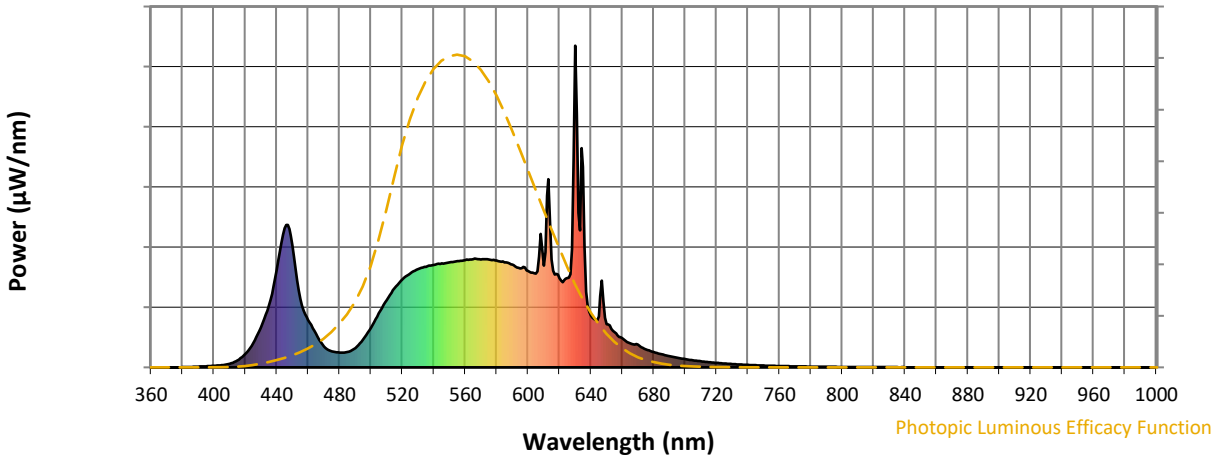
Photopic Flux vs. Wavelength



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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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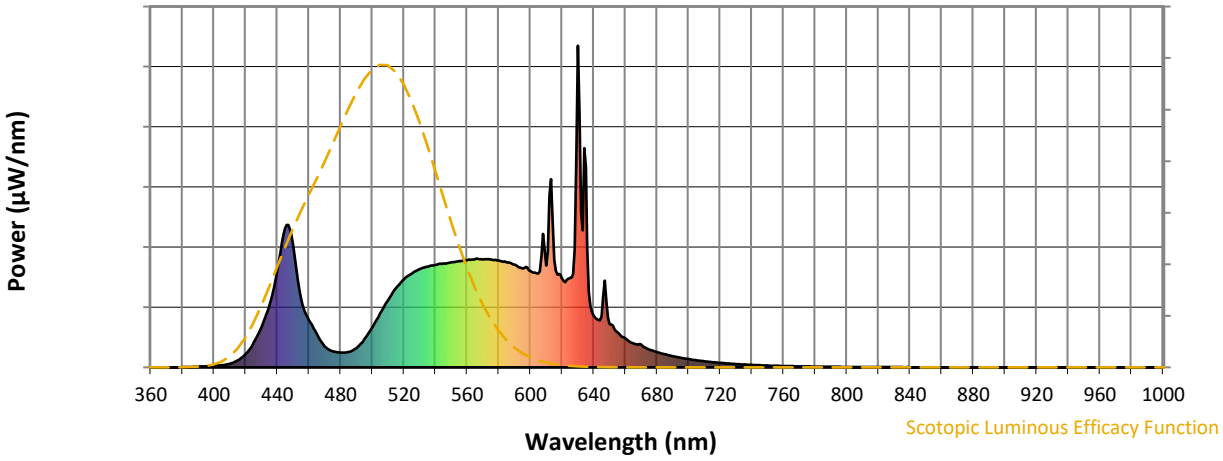
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.55**

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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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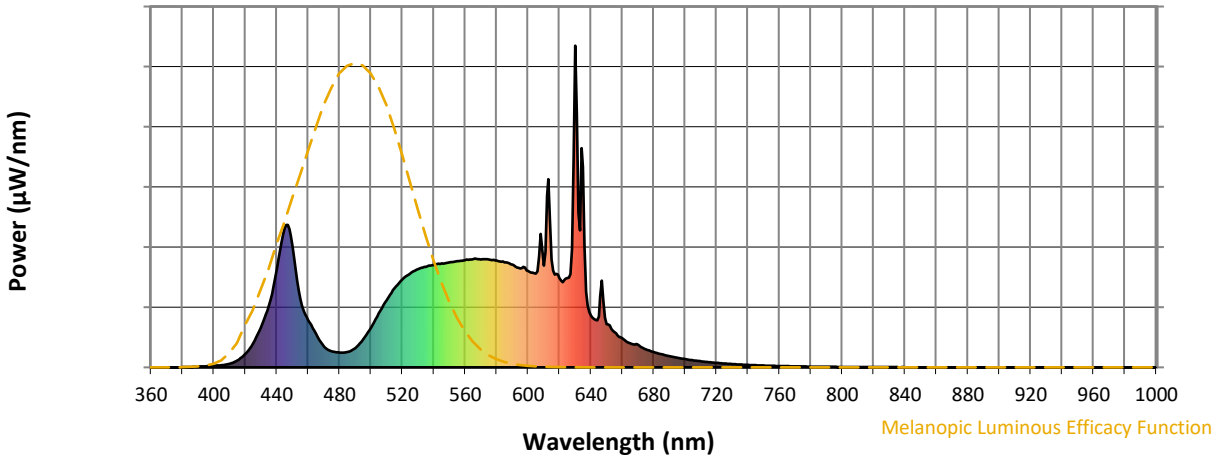
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.99**

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	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	168	NR	635	623	NR	765	4	NR	895	0	NR
380	1	NR	510	209	NR	640	162	NR	770	3	NR	900	0	NR
385	1	NR	515	246	NR	645	158	NR	775	3	NR	905	0	NR
390	2	NR	520	273	NR	650	134	NR	780	2	NR	910	0	NR
395	4	NR	525	292	NR	655	109	NR	785	2	NR	915	0	NR
400	5	NR	530	305	NR	660	91	NR	790	2	NR	920	0	NR
405	7	NR	535	313	NR	665	75	NR	795	2	NR	925	0	NR
410	11	NR	540	319	NR	670	70	NR	800	1	NR	930	0	NR
415	21	NR	545	323	NR	675	56	NR	805	1	NR	935	0	NR
420	42	NR	550	326	NR	680	47	NR	810	1	NR	940	0	NR
425	76	NR	555	330	NR	685	41	NR	815	1	NR	945	0	NR
430	125	NR	560	333	NR	690	35	NR	820	1	NR	950	0	NR
435	193	NR	565	336	NR	695	30	NR	825	1	NR	955	0	NR
440	302	NR	570	336	NR	700	26	NR	830	1	NR	960	0	NR
445	432	NR	575	335	NR	705	22	NR	835	1	NR	965	0	NR
450	380	NR	580	332	NR	710	19	NR	840	0	NR	970	0	NR
455	213	NR	585	326	NR	715	16	NR	845	0	NR	975	0	NR
460	147	NR	590	319	NR	720	14	NR	850	0	NR	980	0	NR
465	104	NR	595	307	NR	725	12	NR	855	0	NR	985	0	NR
470	65	NR	600	299	NR	730	10	NR	860	0	NR	990	0	NR
475	50	NR	605	291	NR	735	9	NR	865	0	NR	995	0	NR
480	46	NR	610	317	NR	740	8	NR	870	0	NR	1000	0	NR
485	47	NR	615	336	NR	745	7	NR	875	0	NR			

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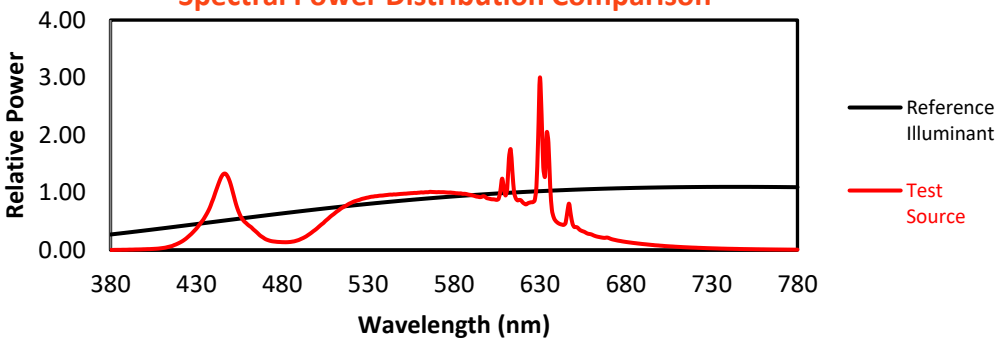
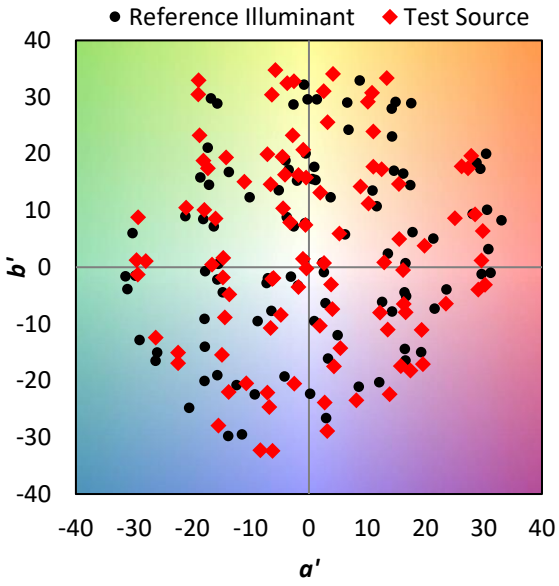
Summary

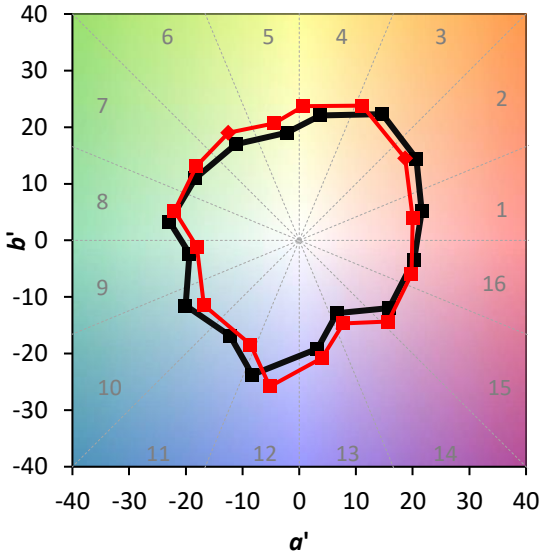
R_f = 80.7
R_g = 102.1
CIE R_a = 82.1
R_9 = 38.5

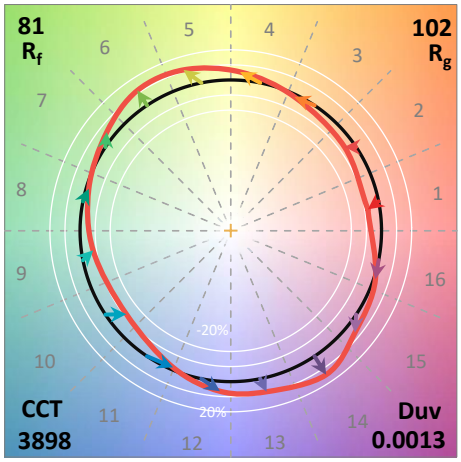
Spectral Power Distribution Comparison

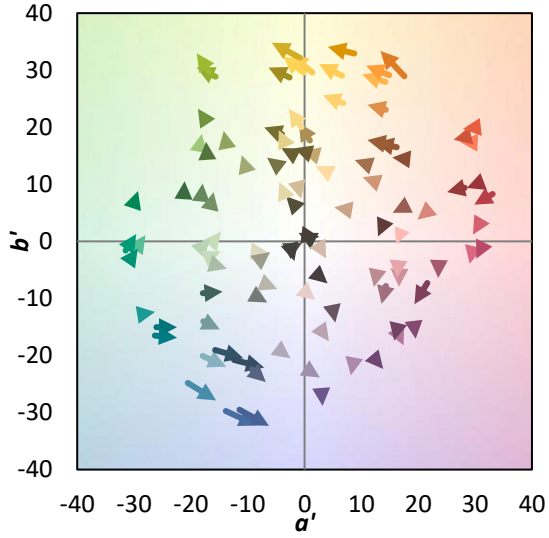


Color Vector Graphics









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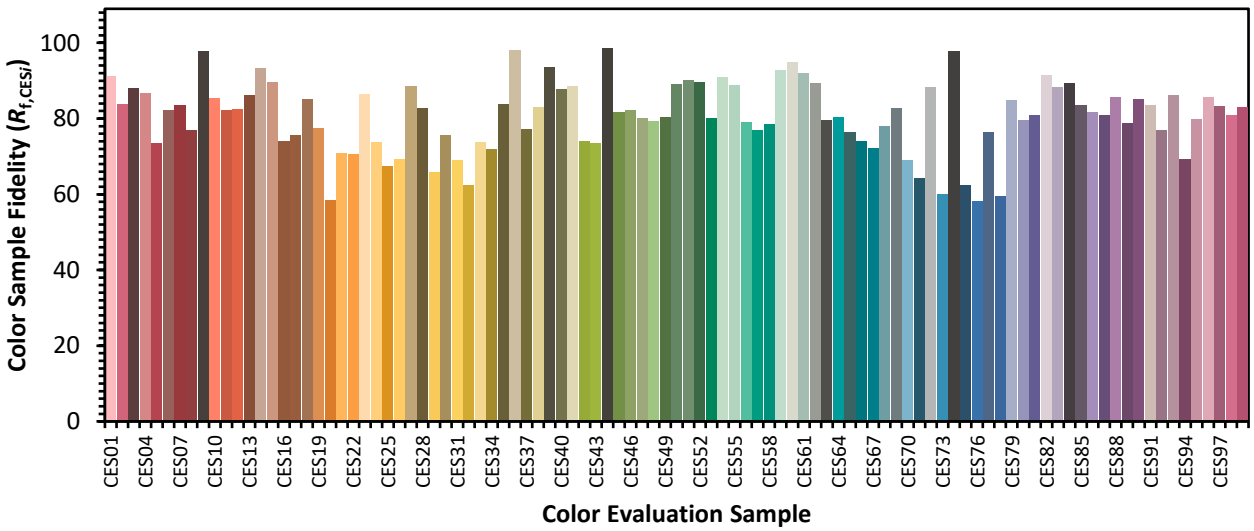
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 69	CES51 = 90	CES76 = 58
CES02 = 61	CES27 = 89	CES52 = 90	CES77 = 76
CES03 = 31	CES28 = 83	CES53 = 80	CES78 = 60
CES04 = 69	CES29 = 66	CES54 = 91	CES79 = 85
CES05 = 48	CES30 = 76	CES55 = 89	CES80 = 79
CES06 = 50	CES31 = 69	CES56 = 79	CES81 = 81
CES07 = 41	CES32 = 62	CES57 = 77	CES82 = 91
CES08 = 40	CES33 = 74	CES58 = 79	CES83 = 88
CES09 = 29	CES34 = 72	CES59 = 93	CES84 = 89
CES10 = 74	CES35 = 84	CES60 = 95	CES85 = 84
CES11 = 57	CES36 = 98	CES61 = 92	CES86 = 82
CES12 = 63	CES37 = 77	CES62 = 89	CES87 = 81
CES13 = 43	CES38 = 83	CES63 = 80	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 80	CES89 = 79
CES15 = 71	CES40 = 88	CES65 = 77	CES90 = 85
CES16 = 47	CES41 = 89	CES66 = 74	CES91 = 83
CES17 = 49	CES42 = 74	CES67 = 72	CES92 = 77
CES18 = 56	CES43 = 73	CES68 = 78	CES93 = 86
CES19 = 71	CES44 = 98	CES69 = 83	CES94 = 69
CES20 = 65	CES45 = 82	CES70 = 69	CES95 = 80
CES21 = 86	CES46 = 82	CES71 = 64	CES96 = 86
CES22 = 78	CES47 = 80	CES72 = 88	CES97 = 83
CES23 = 91	CES48 = 79	CES73 = 60	CES98 = 81
CES24 = 90	CES49 = 80	CES74 = 98	CES99 = 83
CES25 = 71	CES50 = 89	CES75 = 62	



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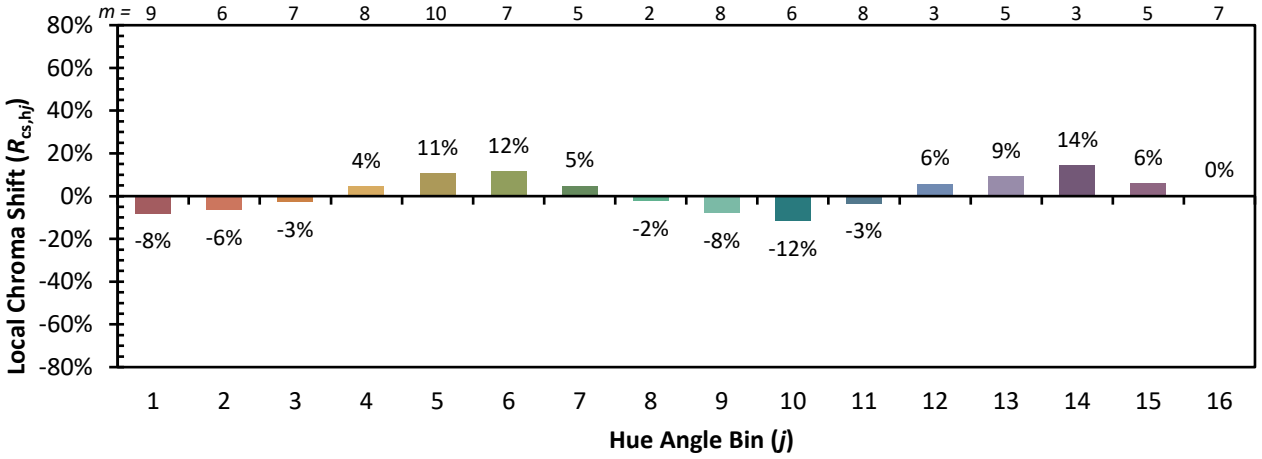
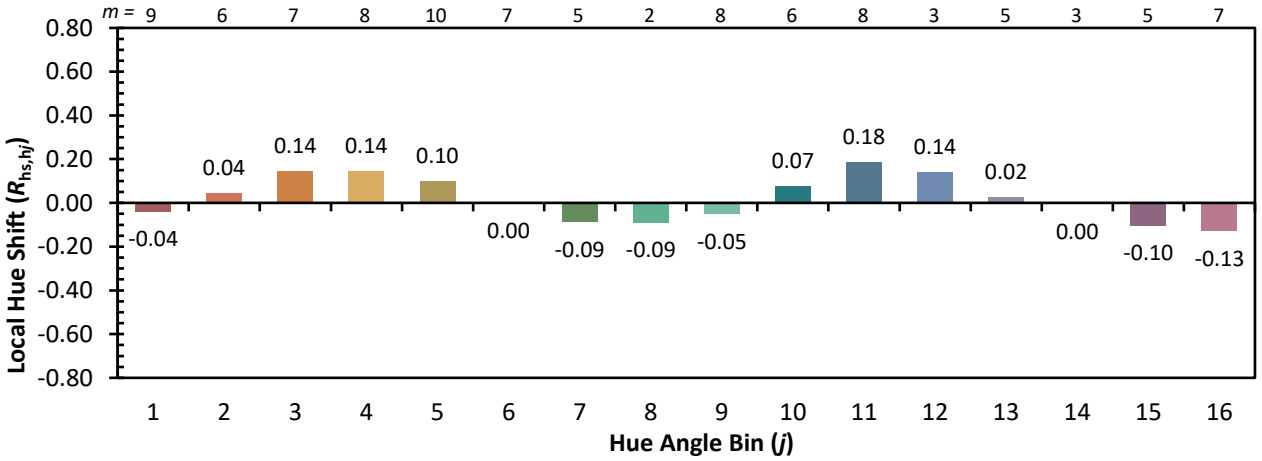
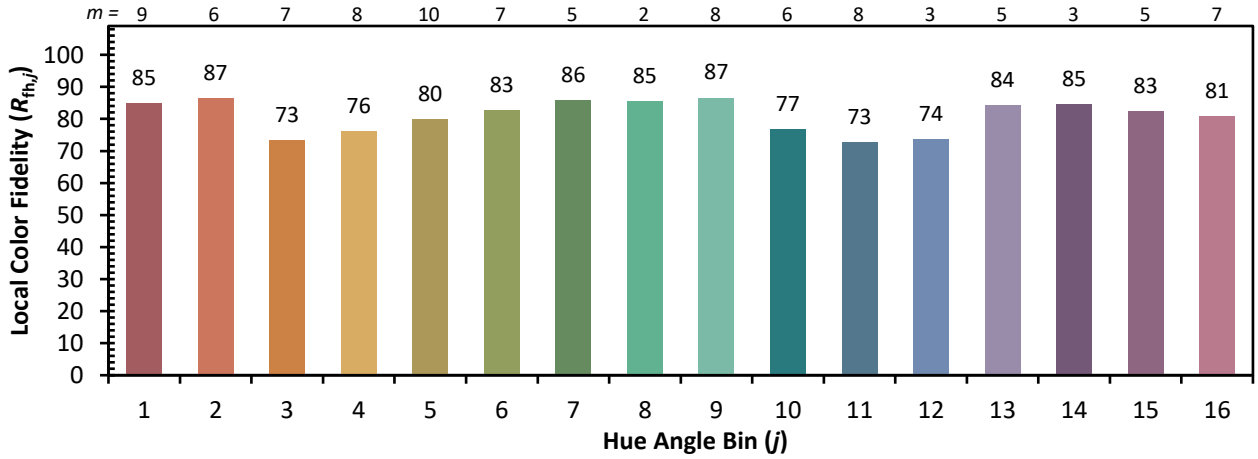
Color Rendition by Hue-Angle Bin







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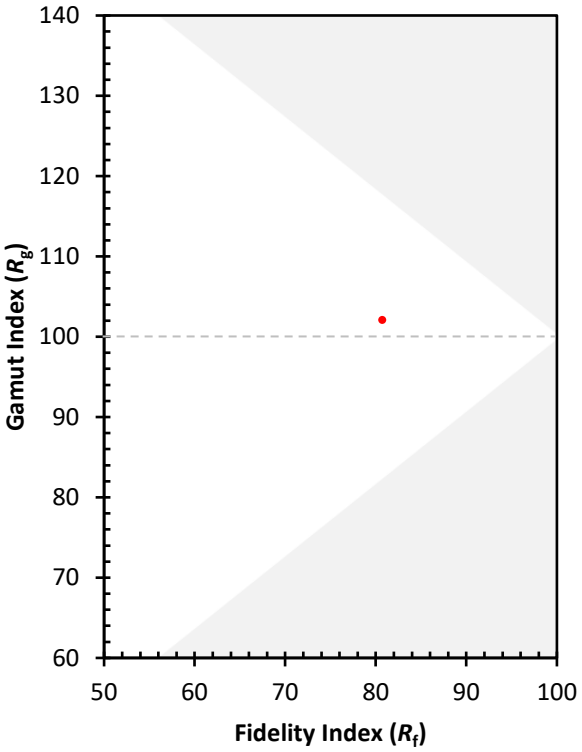
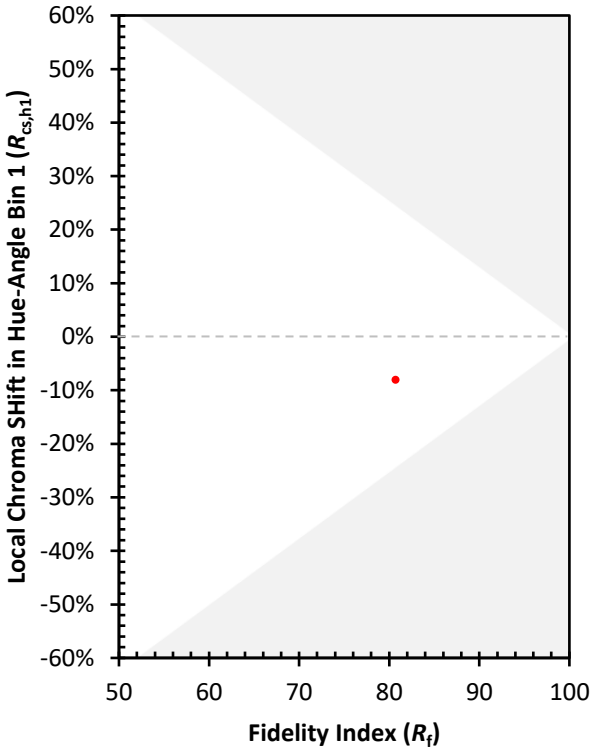
Measure Comparisons





(END OF REPORT)