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: EHBR1-48-UNV-A1-L840-UPL30

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 P1431832 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-48-UNV-A1-L840-UPL30
Description:	Elevate Round Highbay at, 48000 lumens, 4000K 80CRI LEDs with A lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	50434.1 lumens
Efficiency:	N/A
Efficacy:	179.7 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):	280.6
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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TEST NUMBER:
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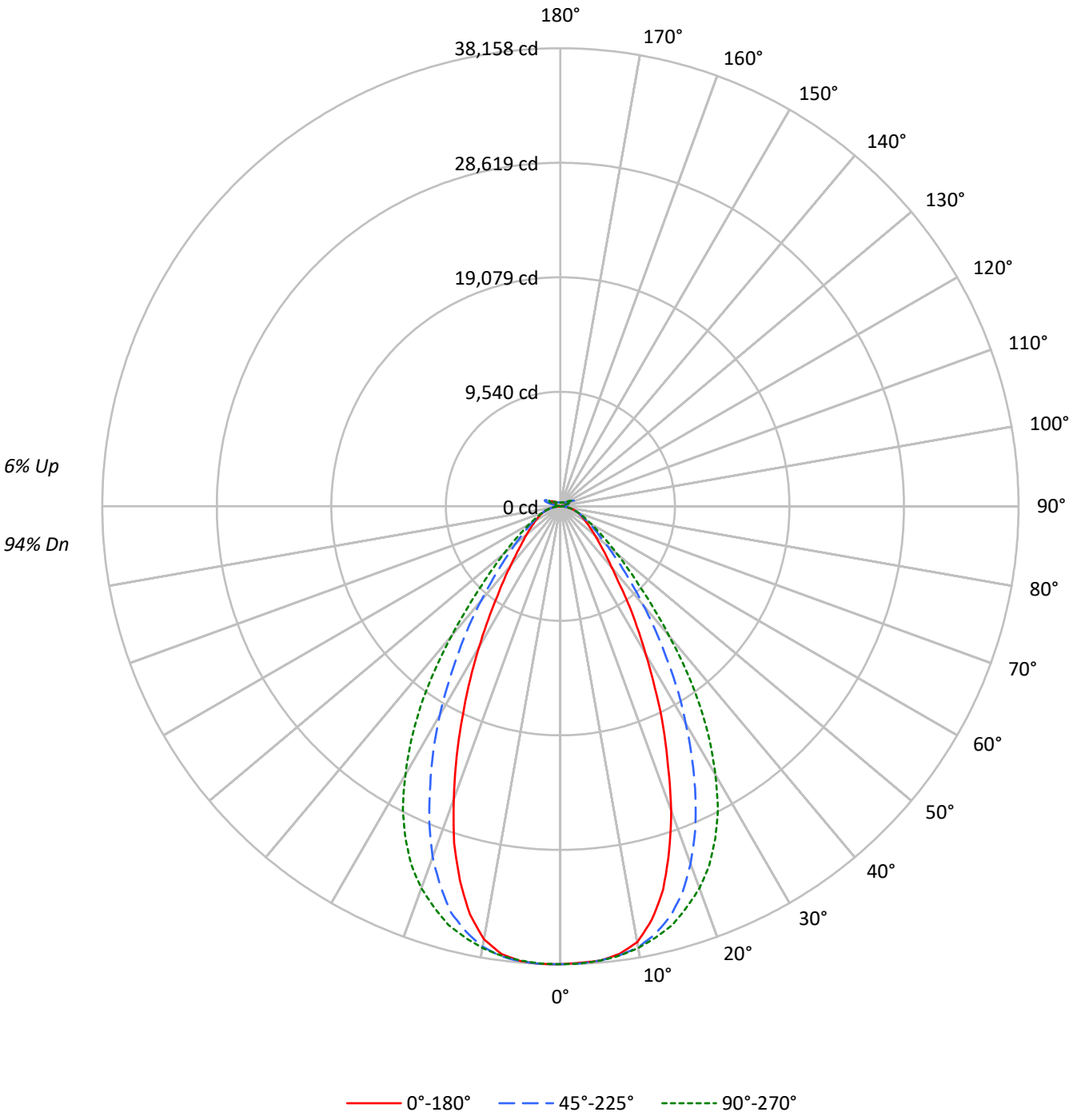
Luminous Intensity Polar Plot



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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	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	110	107	103	101	107	104	101	98	99	96	94	94	92	90	89	88	87	84
2	103	97	91	87	100	94	90	86	90	86	83	86	83	80	82	80	78	75
3	96	88	82	77	93	86	80	76	82	78	74	79	75	72	76	73	70	68
4	90	81	74	69	87	79	73	68	76	71	66	73	69	65	70	67	63	61
5	84	74	67	62	82	73	66	61	70	64	60	68	63	59	65	61	58	56
6	79	68	61	56	77	67	61	56	65	59	55	63	58	54	61	57	53	51
7	74	63	56	51	73	62	56	51	61	55	50	59	53	50	57	52	49	47
8	70	59	52	47	69	58	52	47	57	51	46	55	50	46	53	49	45	44
9	66	55	48	44	65	54	48	43	53	47	43	52	46	43	50	46	42	40
10	63	52	45	41	61	51	45	40	50	44	40	48	43	40	47	43	39	38

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	179117	179117	179117	179117	179117
5°	177932	177906	177914	178228	178120
10°	173535	175557	175836	175340	172399
15°	157541	168534	172003	167182	153924
20°	131282	154187	164721	151284	126171
25°	101528	133319	152808	128450	96268
30°	74005	108572	134231	104453	70242
35°	53345	83683	110317	80079	49864
40°	38379	61807	81299	59198	37195
45°	30242	45217	56781	43257	29195
50°	25091	33973	41097	32853	24710
55°	21914	26826	31123	26376	21618
60°	19763	22395	24800	22255	19903
65°	18483	19754	20841	19816	18659
70°	17553	17973	18528	18072	17726
75°	16376	16274	16376	16319	16534
80°	14791	13728	13424	13941	14791
85°	10250	8694	8601	8833	10553

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
Vertical Angle: 45°
Luminance: 59492 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3601.9	7.1
10°-20°	9680.6	19.2
20°-30°	11771.5	23.3
30°-40°	9588.8	19.0
40°-50°	5757.1	11.4
50°-60°	3313.3	6.6
60°-70°	2073.6	4.1
70°-80°	1221.2	2.4
80°-90°	362.6	0.7
90°-100°	80.4	0.2
100°-110°	531.9	1.1
110°-120°	983.8	2.0
120°-130°	584.0	1.2
130°-140°	353.6	0.7
140°-150°	245.9	0.5
150°-160°	160.8	0.3
160°-170°	92.4	0.2
170°-180°	30.7	0.1
0°-30°	25054.0	49.7
0°-40°	34642.8	68.7
0°-60°	43713.1	86.7
0°-90°	47370.5	93.9
90°-120°	1596.1	3.2
90°-150°	2779.6	5.5
90°-180°	3064.0	6.1
0°-180°	50434.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38142	38142	38142	38142	38142	
5°	37991	37986	37987	38054	38031	3591
15°	33051	35358	36085	35074	32292	9093
25°	20275	26624	30516	25651	19225	9238
35°	9791	15359	20247	14697	9152	6194
45°	4893	7316	9187	6999	4724	3860
55°	2961	3625	4206	3564	2921	2677
65°	1929	2062	2175	2068	1948	1918
75°	1154	1146	1154	1150	1165	1222
85°	352	299	296	304	363	376
90°	24	61	22	64	23	28
95°	39	137	42	117	38	37
105°	186	930	244	991	122	249
115°	852	1100	1047	1216	893	785
125°	616	588	669	651	700	561
135°	451	452	423	472	489	353
145°	375	391	384	395	403	238
155°	334	343	342	344	360	156
165°	320	325	322	323	334	91
175°	322	324	321	321	329	31
180°	323	323	323	323	323	

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TEST NUMBER:
CATALOG NUMBER: EHBR1-48-UNV-A1-L840-UPL30

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	38141.6	38141.6	38141.6	38141.6	38141.6	38141.6	*38141.6*	38141.6	38141.6
2.5°	*38057.7*	*38092.1*	*38106.5*	*38114.5*	*38123.2*	*38147.2*	*38157.6*	*38140.8*	*38155.2*
5°	37991.4	37993.8	37985.8	38021.8	37987.4	38011.4	*38054.5*	38037.8	38031.4
7.5°	37604.8	37684.7	37731.8	37743.8	37750.2	37779.7	*37810.1*	37638.3	37612.8
10°	36869.8	37003.2	37299.6	37384.3	37358.7	37406.7	*37253.3*	36804.3	36628.6
12.5°	35258.5	35727.5	36497.6	36840.3	36778.0	36820.3	*36297.8*	35350.4	34805.6
15°	33051.3	33739.1	35357.6	36033.4	36085.3	36033.4	*35074.0*	33227.8	32292.4
17.5°	30117.1	31387.2	33770.2	35082.0	35006.9	35031.6	*33210.2*	30481.3	29410.9
20°	26982.3	28336.4	31690.0	33878.1	33854.9	33715.9	*31093.3*	27494.4	25931.8
22.5°	23437.0	25183.3	29306.2	32397.8	32389.0	32157.3	*28515.3*	24232.6	22550.2
25°	20275.1	21987.8	26623.6	30584.4	30515.7	30252.1	*25651.4*	20978.9	19224.6
27.5°	17006.2	18786.8	23759.7	28459.4	28412.3	28124.7	*22913.7*	17937.6	16268.0
30°	14234.9	15863.0	20883.8	26121.2	25819.2	25786.4	*20091.4*	15121.6	13511.1
32.5°	11860.7	13256.3	18172.5	23675.8	23141.4	23294.0	*17278.6*	12766.6	11170.5
35°	9790.8	11020.3	15358.9	20847.9	20247.1	20444.4	*14697.4*	10475.5	9151.8
37.5°	7946.3	9128.6	12974.3	18097.4	17178.7	17551.0	*12427.1*	8748.3	7687.4
40°	6652.1	7590.0	10712.7	15079.3	14091.1	14697.4	*10260.6*	7296.8	6446.8
42.5°	5731.8	6343.8	8841.8	12197.8	11439.7	11869.5	*8456.7*	6100.1	5464.2
45°	4893.0	5381.1	7316.0	9625.5	9186.9	9585.5	*6998.8*	5201.4	4723.7
47.5°	4273.9	4650.2	6022.6	7772.9	7500.5	7626.7	*5845.3*	4539.1	4150.9
50°	3739.5	4030.3	5063.2	6273.5	6124.9	6202.4	*4896.2*	3949.6	3682.7
52.5°	3324.1	3537.4	4246.7	5155.8	5082.4	5094.3	*4172.5*	3474.2	3280.9
55°	2961.4	3110.0	3625.2	4223.6	4206.0	4209.2	*3564.5*	3078.8	2921.4
57.5°	2644.2	2767.3	3115.6	3547.7	3522.2	3527.8	*3086.8*	2734.5	2633.0
60°	2375.8	2458.1	2692.2	2998.1	2981.3	2974.2	*2675.4*	2427.7	2392.6
62.5°	2137.8	2190.5	2352.6	2569.9	2538.0	2545.2	*2351.8*	2192.9	2140.9
65°	1929.2	1947.6	2061.9	2196.1	2175.3	2192.9	*2068.3*	1959.6	1947.6
67.5°	1725.5	1743.9	1811.0	1901.3	1877.3	1891.7	*1812.6*	1748.7	1738.3
70°	1540.2	1539.4	1577.0	1625.7	1625.7	1628.1	*1585.7*	1547.4	1555.4
72.5°	1348.5	1343.7	1354.9	1387.6	1378.8	1409.2	*1364.5*	1352.5	1354.1
75°	1153.6	1140.0	1146.4	1163.1	1153.6	1169.5	*1149.6*	1164.7	1164.7
77.5°	969.8	944.3	936.3	938.7	921.1	945.1	*949.8*	960.2	984.2
80°	778.1	742.1	722.2	721.4	706.2	721.4	*733.4*	754.9	778.1
82.5°	577.6	546.4	512.9	506.5	496.9	505.7	*521.7*	547.2	584.8
85°	352.3	319.5	298.8	287.6	295.6	295.6	*303.6*	339.5	362.7
87.5°	127.0	111.0	91.1	91.9	94.3	97.5	*101.5*	127.8	139.8
90°	23.6	35.6	61.0	39.0	22.0	37.3	*64.4*	33.9	22.8
92.5°	33.0	54.2	98.3	50.8	28.8	50.8	*91.5*	45.7	31.3
95°	38.9	62.7	137.2	67.8	42.4	62.7	*116.9*	50.8	38.1
97.5°	49.0	69.5	157.6	83.0	66.1	77.9	*132.2*	54.2	46.5
100°	64.3	81.3	245.7	101.7	88.1	88.1	*242.3*	62.7	54.1
102.5°	108.3	172.8	521.8	191.5	133.9	172.8	*562.5*	127.1	66.0
105°	186.3	364.3	930.2	401.6	244.0	396.5	*991.2*	332.1	121.9
107.5°	321.8	652.3	1226.7	711.6	462.5	740.4	*1277.5*	657.4	286.2
110°	599.7	865.8	1286.0	977.6	740.4	1035.2	*1394.4*	901.4	581.1

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Scaled Data Report

TEST NUMBER:
CATALOG NUMBER: EHBR1-48-UNV-A1-L840-UPL30

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	809.8	930.2	1231.8	1079.3	964.1	1153.8	*1362.2*	999.6	804.7
115°	852.1	894.6	1099.6	1053.9	1047.1	1136.9	*1216.5*	996.3	892.8
117.5°	824.1	816.7	933.6	947.1	1011.5	1040.3	*1050.5*	935.3	897.9
120°	762.3	726.9	779.4	826.8	913.2	901.4	*884.4*	846.3	847.1
122.5°	686.9	644.6	667.6	703.1	789.6	764.1	*747.2*	754.8	778.4
125°	615.7	573.5	587.9	596.4	669.3	643.8	*651.4*	676.8	700.5
127.5°	553.1	524.3	532.0	521.8	567.6	555.7	*581.9*	611.6	631.0
130°	510.7	486.2	497.2	472.7	495.5	498.9	*533.6*	557.3	570.0
132.5°	475.9	459.9	473.4	443.8	450.6	464.9	*497.1*	518.3	525.0
135°	451.3	436.9	452.2	424.3	423.4	443.7	*472.5*	486.1	488.6
137.5°	429.3	417.4	432.7	412.3	407.2	427.6	*449.6*	459.8	457.2
140°	410.5	399.6	416.5	401.3	397.9	418.2	*428.4*	441.0	437.7
142.5°	389.3	382.5	402.1	391.9	388.5	408.0	*413.0*	421.5	418.9
145°	374.9	369.8	391.0	385.9	384.2	398.6	*395.2*	407.9	402.8
147.5°	363.7	359.5	378.3	376.6	376.6	386.7	*382.4*	393.4	389.1
150°	352.7	348.5	367.2	365.5	367.2	374.0	*368.0*	381.5	380.6
152.5°	341.6	337.4	354.4	351.9	353.6	360.4	*355.2*	369.6	369.5
155°	333.9	329.7	343.4	341.8	341.8	346.0	*344.2*	359.3	360.1
157.5°	329.5	326.2	336.5	334.9	334.9	337.4	*337.3*	350.8	351.6
160°	326.1	322.8	331.3	329.7	328.0	332.2	*332.1*	343.9	344.7
162.5°	322.6	319.3	328.7	326.2	325.4	326.2	*326.2*	338.7	339.5
165°	320.0	318.4	325.3	323.7	322.0	323.7	*322.7*	331.0	333.5
167.5°	320.8	318.3	324.4	322.8	321.1	319.4	*321.8*	328.5	331.0
170°	319.9	319.1	323.5	320.2	317.7	318.5	*319.2*	325.9	328.4
172.5°	321.5	320.7	325.1	321.8	319.3	320.1	*319.1*	324.1	328.3
175°	322.2	320.6	324.1	321.7	320.9	320.0	*320.7*	324.0	329.0
177.5°	324.7	323.1	324.9	322.5	320.0	320.8	*323.2*	326.5	333.2
180°	323.2	323.2	323.2	323.2	323.2	323.2	*323.2*	323.2	323.2

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Scaled Data Report

TEST NUMBER: CATALOG
CATALOG NUMBER: EHBR1-48-UNV-A1-L840-UPL30

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	19.45	20.62	19.92	21.06	21.53	20.43	21.60	20.91	22.04	22.51
	3H	20.93	21.97	21.42	22.42	22.94	21.70	22.73	22.18	23.19	23.70
	4H	21.53	22.50	22.04	22.97	23.50	22.20	23.16	22.70	23.64	24.17
	6H	22.00	22.89	22.52	23.38	23.92	22.55	23.44	23.07	23.93	24.47
	8H	22.15	22.99	22.68	23.50	24.05	22.65	23.49	23.18	24.00	24.55
	12H	22.22	23.03	22.76	23.53	24.10	22.69	23.49	23.22	23.99	24.57
4H	2H	19.97	20.94	20.48	21.41	21.94	20.75	21.72	21.26	22.19	22.72
	3H	21.66	22.45	22.17	22.97	23.52	22.24	23.04	22.76	23.56	24.11
	4H	22.37	23.09	22.91	23.62	24.21	22.86	23.58	23.40	24.11	24.70
	6H	22.95	23.57	23.52	24.13	24.73	23.34	23.96	23.90	24.51	25.12
	8H	23.14	23.71	23.71	24.27	24.88	23.47	24.05	24.04	24.61	25.22
	12H	23.24	23.75	23.83	24.34	24.96	23.54	24.05	24.13	24.64	25.25
8H	4H	22.60	23.17	23.17	23.73	24.34	23.04	23.62	23.61	24.18	24.79
	6H	23.29	23.76	23.89	24.36	24.98	23.62	24.09	24.23	24.70	25.32
	8H	23.54	23.96	24.16	24.57	25.21	23.82	24.24	24.44	24.86	25.49
	12H	23.70	24.07	24.32	24.67	25.38	23.94	24.31	24.55	24.91	25.61
12H	4H	22.60	23.10	23.18	23.69	24.31	23.04	23.55	23.63	24.14	24.75
	6H	23.31	23.73	23.93	24.35	24.98	23.65	24.07	24.27	24.68	25.31
	8H	23.60	23.97	24.22	24.57	25.28	23.88	24.25	24.50	24.85	25.55

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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

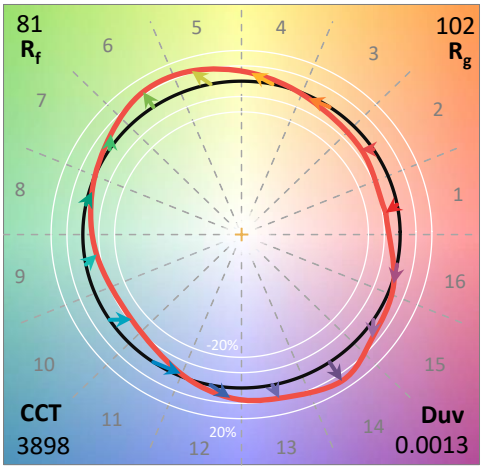
Test Information

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
CIE u':	0.2263
CIE v':	0.5052
Duv:	0.0013
CIE x:	0.3861
CIE y:	0.3831
CIE z:	0.2308
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	578
Purity:	30.85729
Rf:	80.7
Rg:	102.1

CRI (Ra):	82.1				
R1:	84.4	R9:	38.5		
R2:	83.5	R10:	58.9		
R3:	80.8	R11:	83.6		
R4:	83.9	R12:	54.2		
R5:	82.1	R13:	82.8		
R6:	77.3	R14:	88.2		
R7:	86.4	R15:	81.2		
R8:	78.3				



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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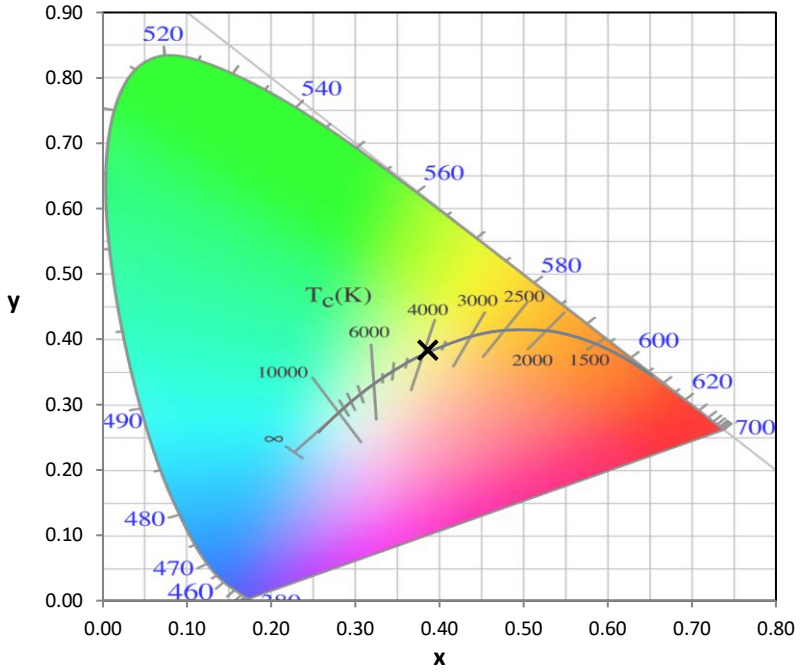
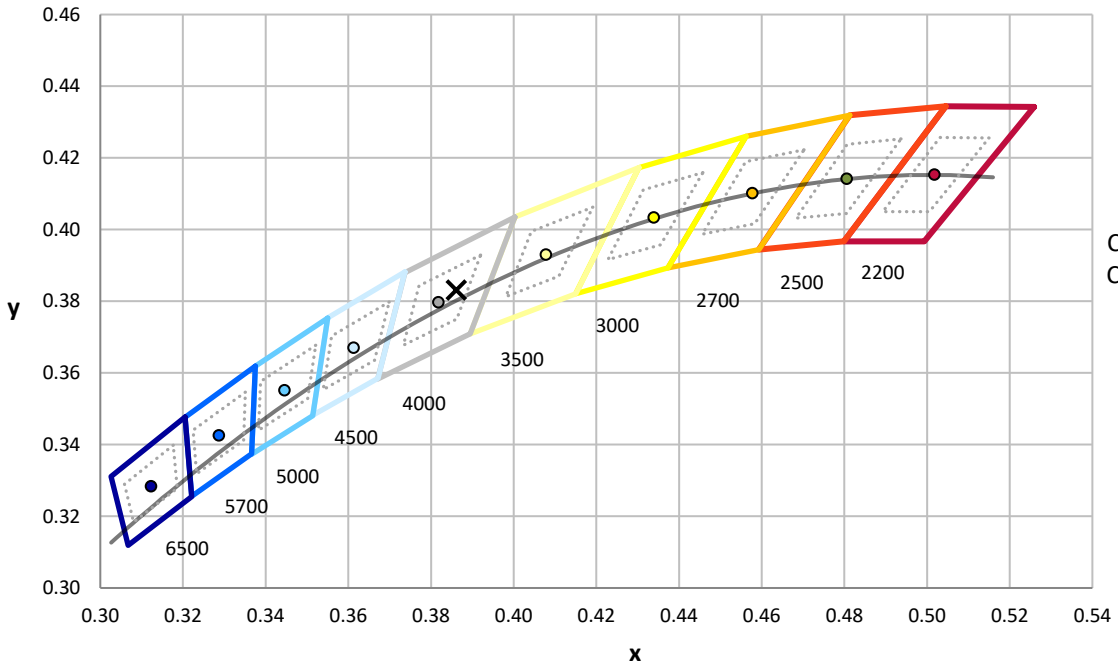
CIE 1931 Chromaticity Diagram



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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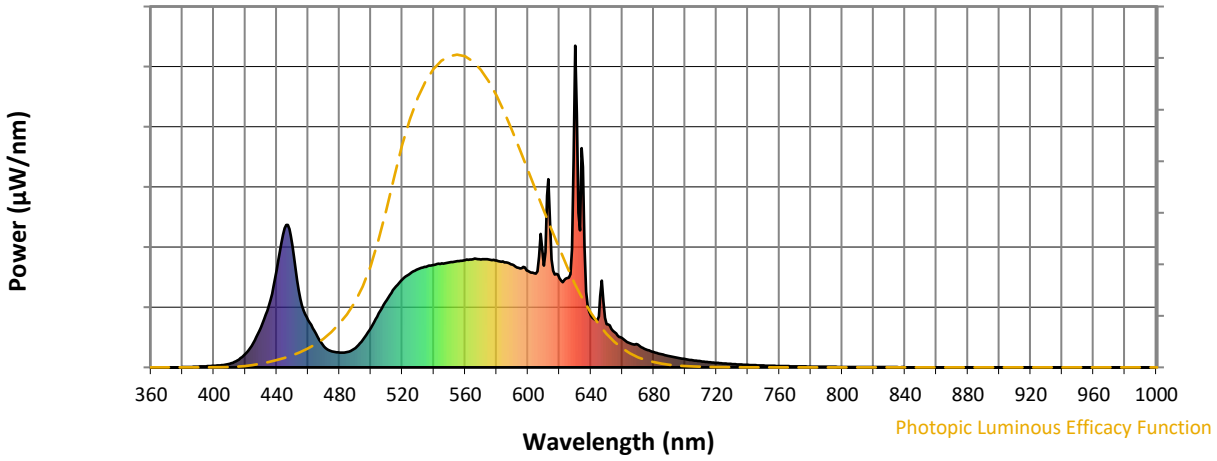
Photopic Flux vs. Wavelength



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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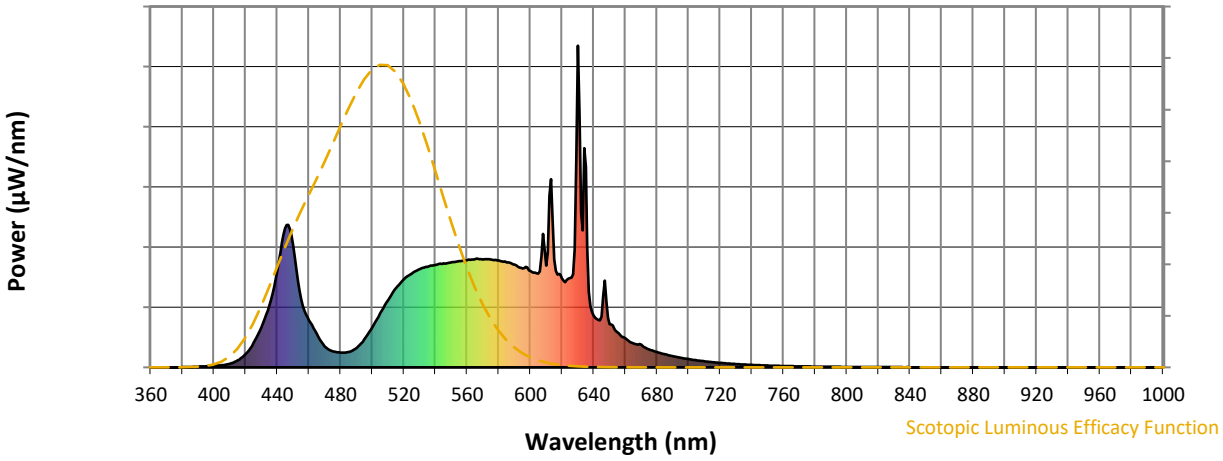
Scotopic Flux vs. Wavelength



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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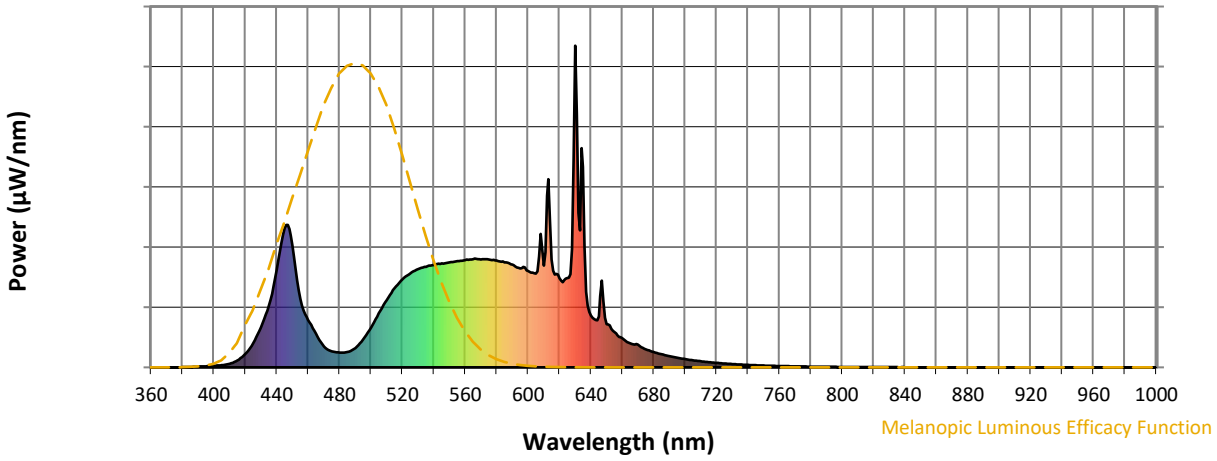
Melanopic Flux vs. Wavelength



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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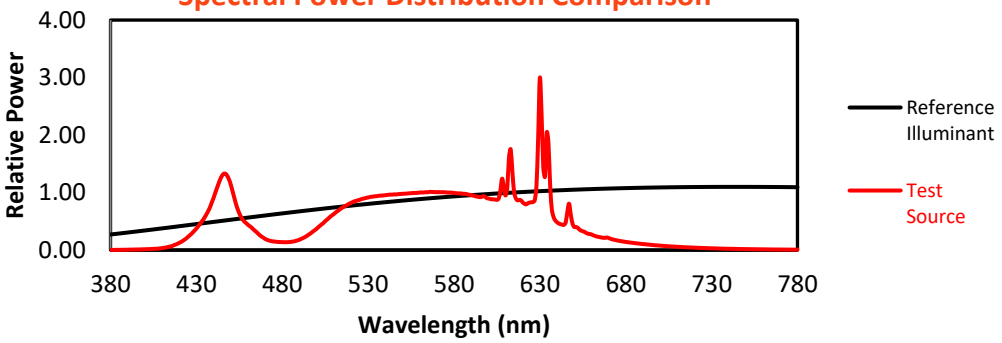
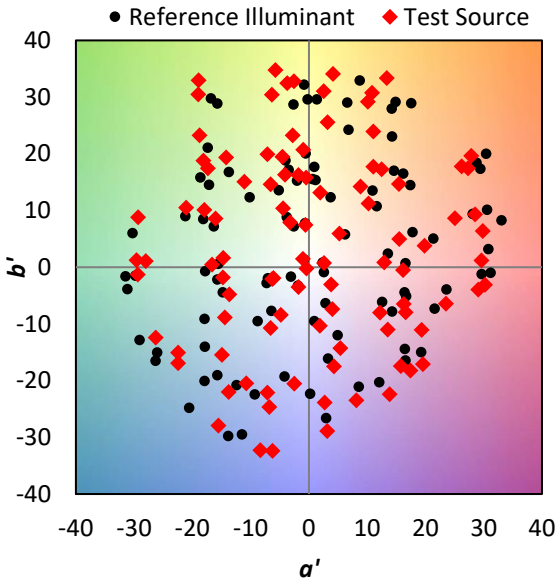
Summary

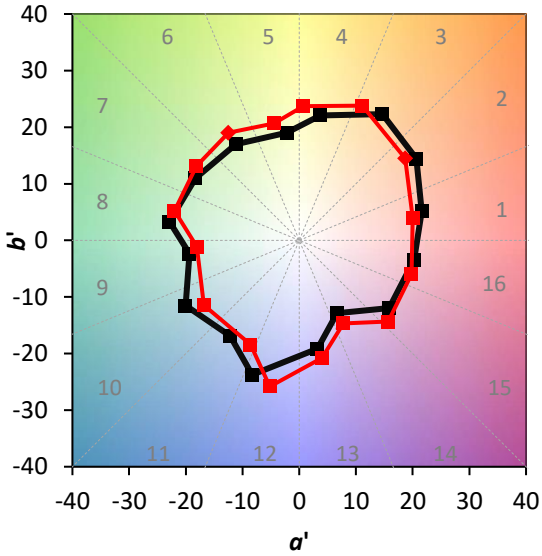
R_f = 80.7
R_g = 102.1
CIE R_a = 82.1
R_9 = 38.5

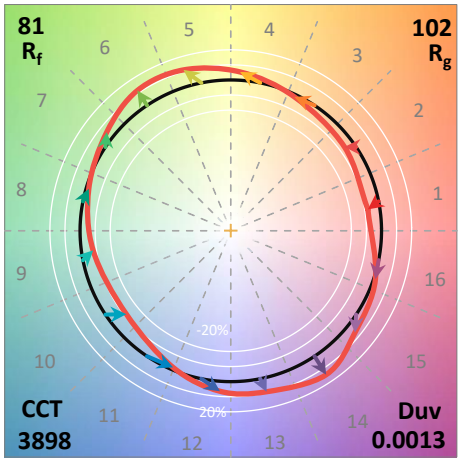
Spectral Power Distribution Comparison

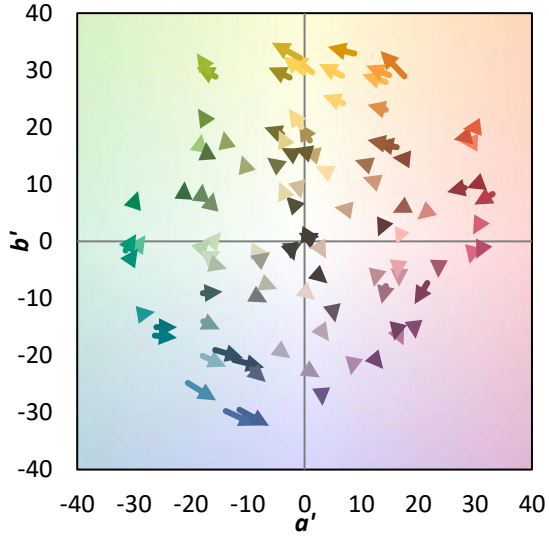


Color Vector Graphics









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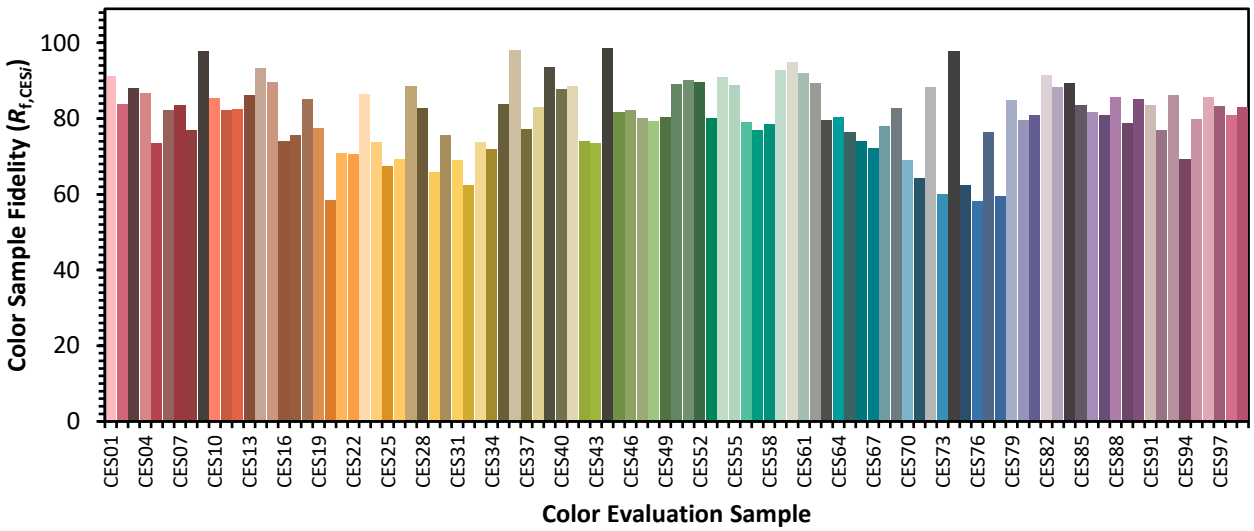
Individual Sample Fidelity Index ($R_{f,i}$)

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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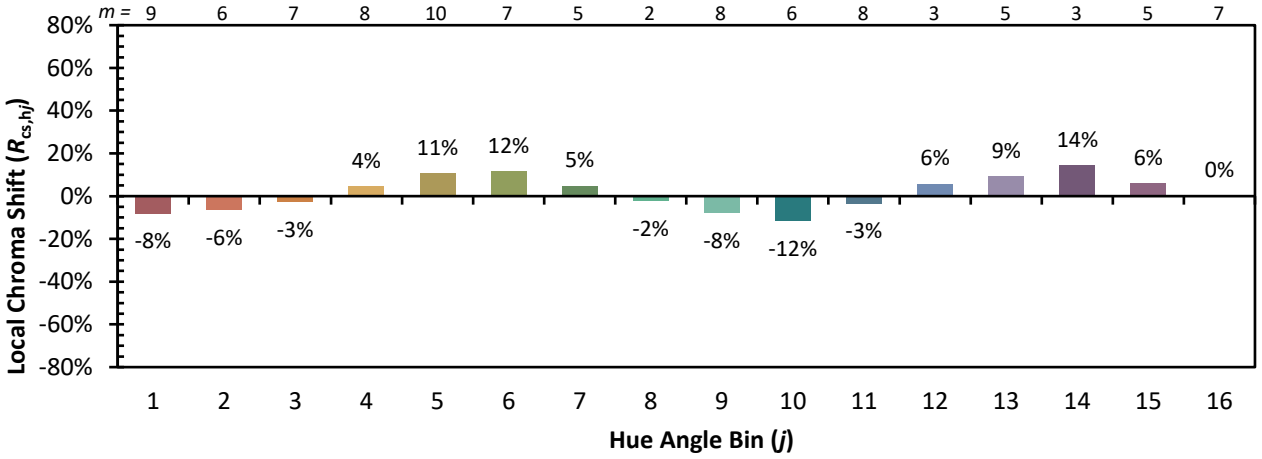
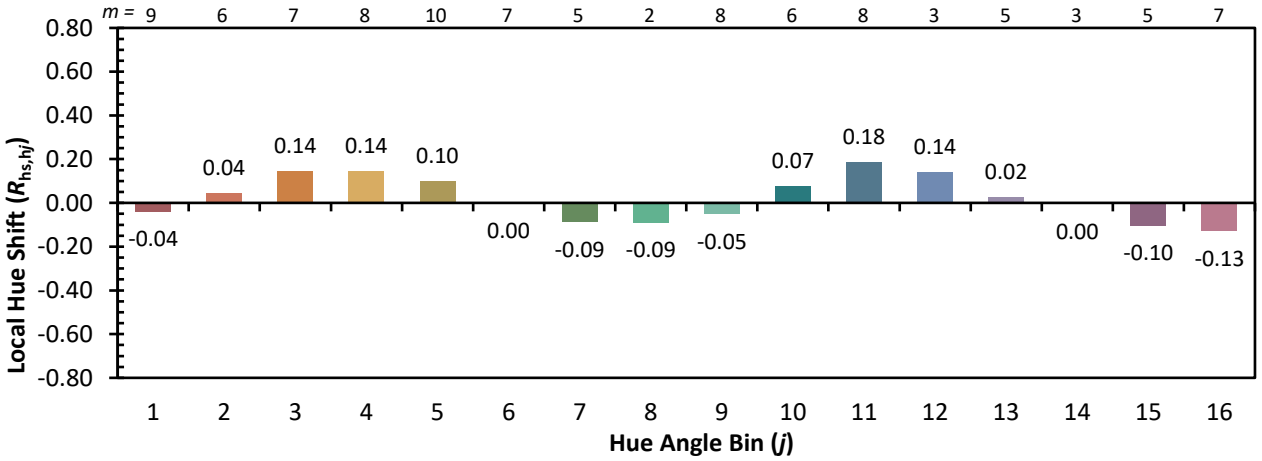
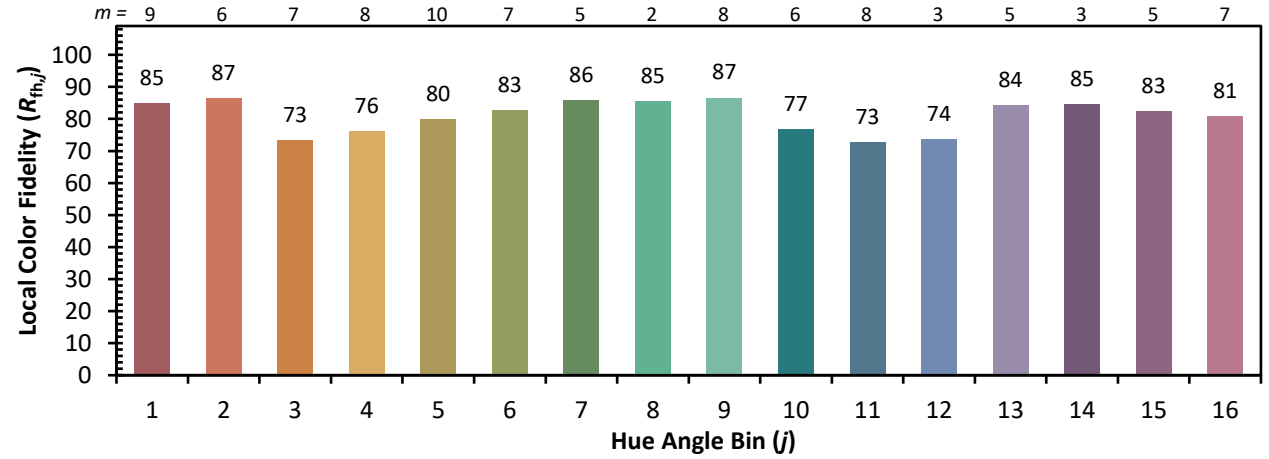
Color Rendition by Hue-Angle Bin







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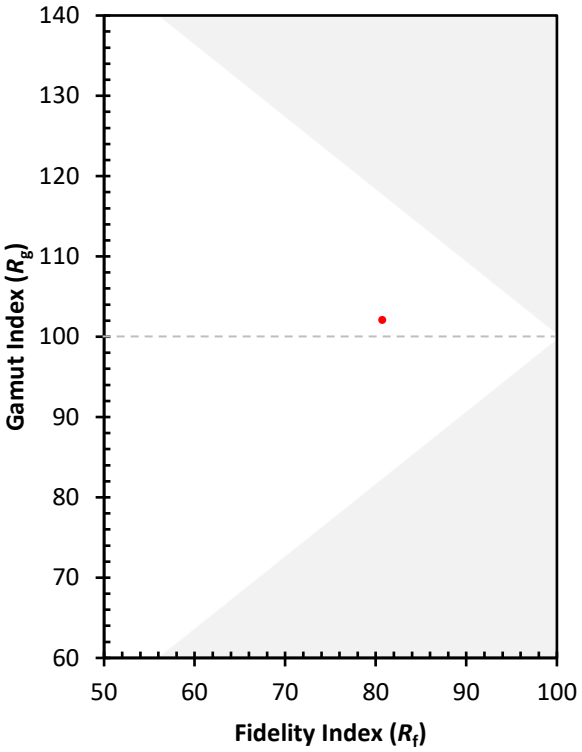
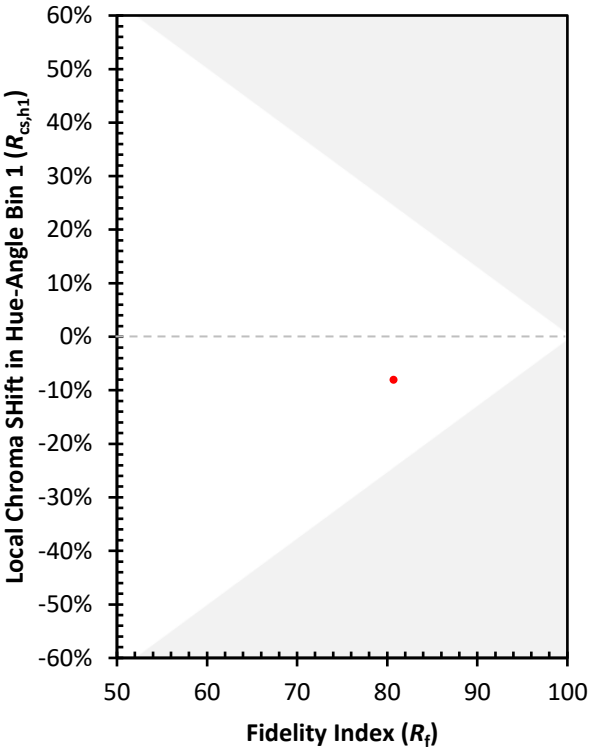
Measure Comparisons





(END OF REPORT)