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: P1432456

Luminaire Tested: EHBR1-48-UNV-A1-L830-UPL36

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:	P1432456
	REPORT IS A COMBINATION OF REPORTS P1431833 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-48-UNV-A1-L830-UPL36
Description:	Elevate Round Highbay at, 48000 lumens, 3000K 80CRI LEDs with A lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	47834.0 lumens
Efficiency:	N/A
Efficacy:	166.7 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

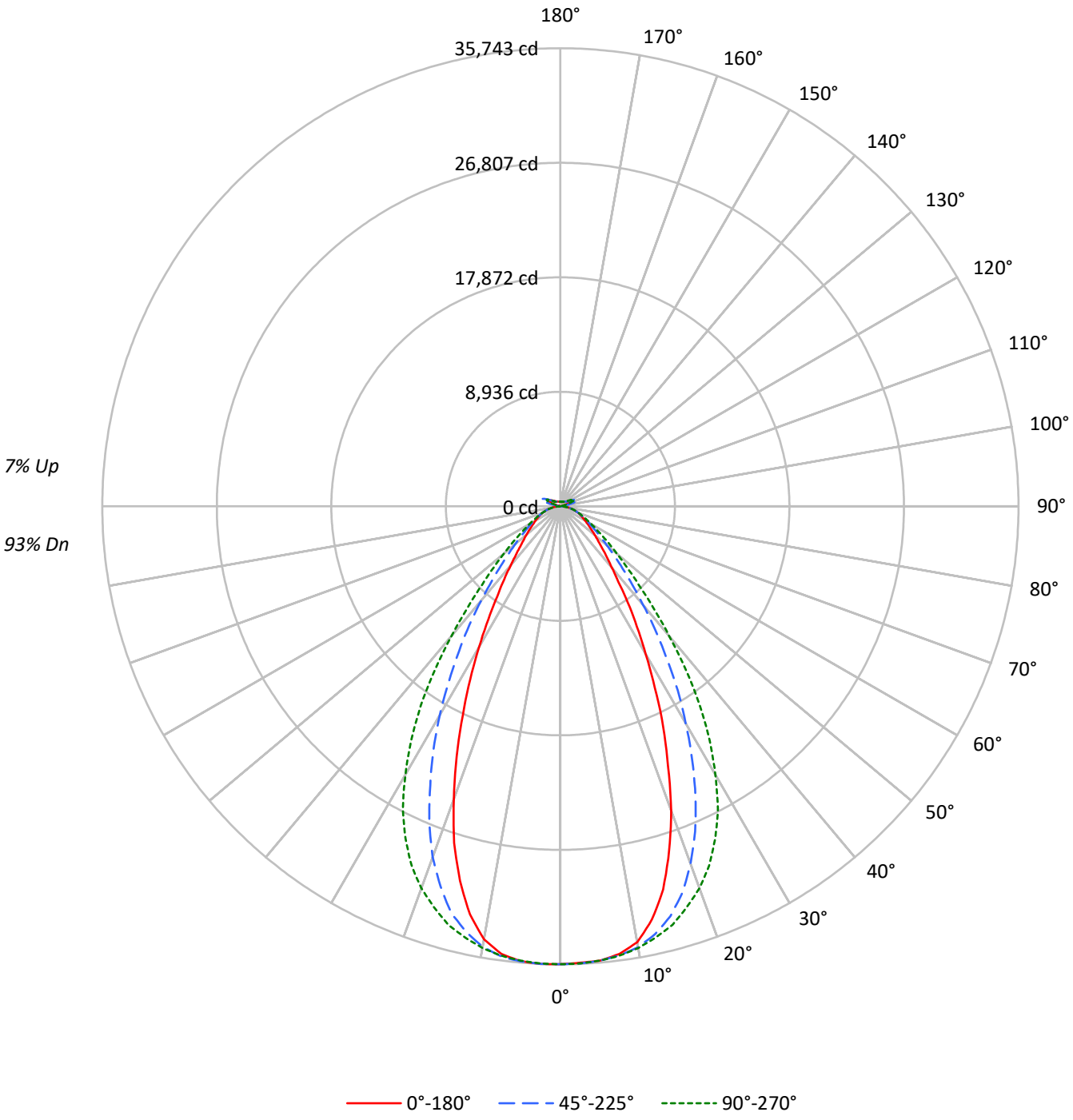
Input Watts (W):	287
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

Luminous Intensity Polar Plot



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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

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	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	110	106	103	100	107	103	101	98	98	96	94	93	91	89	88	87	86	83
2	103	96	91	87	100	94	89	85	89	86	82	85	82	79	81	79	77	74
3	96	88	81	76	93	86	80	75	82	77	73	78	74	71	75	72	69	67
4	90	80	73	68	87	79	72	67	75	70	66	72	68	64	70	66	63	61
5	84	74	67	61	82	72	66	61	70	64	60	67	62	58	65	61	57	55
6	79	68	61	56	77	67	60	55	65	59	54	62	57	53	60	56	52	51
7	74	63	56	51	72	62	55	51	60	54	50	58	53	49	56	52	48	47
8	70	59	52	47	68	58	51	47	56	50	46	54	49	45	53	48	45	43
9	66	55	48	43	64	54	48	43	53	47	43	51	46	42	50	45	42	40
10	63	51	45	40	61	51	44	40	49	44	40	48	43	39	47	42	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	167780	167780	167780	167780	167780
5°	166671	166646	166653	166948	166847
10°	162551	164446	164707	164242	161488
15°	147570	157868	161117	156601	144182
20°	122973	144429	154295	141709	118186
25°	95103	124881	143137	120321	90175
30°	69322	101700	125735	97842	65797
35°	49969	78387	103335	75011	46708
40°	35950	57895	76153	55452	34841
45°	28328	42356	53187	40519	27347
50°	23503	31823	38496	30773	23146
55°	20527	25128	29154	24707	20249
60°	18512	20977	23230	20847	18643
65°	17313	18504	19521	18561	17478
70°	16442	16835	17355	16928	16605
75°	15340	15243	15340	15286	15488
80°	13856	12860	12574	13059	13856
85°	9601	8144	8057	8275	9884

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
Vertical Angle: 45°
Luminance: 55726 cd/sqm

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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3373.9	7.1
10°-20°	9067.9	19.0
20°-30°	11026.5	23.1
30°-40°	8981.9	18.8
40°-50°	5392.7	11.3
50°-60°	3103.6	6.5
60°-70°	1942.3	4.1
70°-80°	1143.9	2.4
80°-90°	340.7	0.7
90°-100°	91.0	0.2
100°-110°	601.4	1.3
110°-120°	1112.4	2.3
120°-130°	660.3	1.4
130°-140°	399.4	0.8
140°-150°	277.2	0.6
150°-160°	180.9	0.4
160°-170°	103.6	0.2
170°-180°	34.4	0.1
0°-30°	23468.3	49.1
0°-40°	32450.2	67.8
0°-60°	40946.5	85.6
0°-90°	44373.4	92.8
90°-120°	1804.8	3.8
90°-150°	3141.7	6.6
90°-180°	3461.0	7.2
0°-180°	47834.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	35728	35728	35728	35728	35728	
5°	35587	35582	35583	35646	35624	3363
15°	30960	33120	33801	32854	30249	8517
25°	18992	24939	28584	24028	18008	8653
35°	9171	14387	18966	13767	8573	5802
45°	4583	6853	8606	6556	4425	3615
55°	2774	3396	3940	3339	2736	2508
65°	1807	1931	2038	1937	1824	1797
75°	1081	1074	1081	1077	1091	1145
85°	330	280	277	284	340	352
90°	26	69	25	73	26	29
95°	44	155	48	132	43	42
105°	210	1052	276	1121	138	281
115°	963	1244	1184	1376	1009	888
125°	696	665	757	736	792	634
135°	510	511	478	534	552	398
145°	422	441	433	446	454	268
155°	375	386	385	387	405	175
165°	358	365	362	362	374	102
175°	360	362	359	359	367	34
180°	361	361	361	361	361	

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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	35727.6	35727.6	35727.6	35727.6	35727.6	35727.6	*35727.6*	35727.6	35727.6
2.5°	*35649.0*	*35681.2*	*35694.7*	*35702.2*	*35710.3*	*35732.8*	*35742.6*	*35726.8*	*35740.3*
5°	35586.9	35589.1	35581.6	35615.4	35583.1	35605.6	*35646.0*	35630.3	35624.4
7.5°	35224.8	35299.6	35343.7	35355.0	35361.0	35388.6	*35417.1*	35256.1	35232.2
10°	34536.3	34661.2	34938.9	35018.2	34994.2	35039.2	*34895.5*	34474.9	34310.3
12.5°	33027.0	33466.3	34187.6	34508.6	34450.3	34489.9	*34000.5*	33113.0	32602.7
15°	30959.5	31603.7	33119.8	33752.8	33801.4	33752.8	*32854.1*	31124.8	30248.6
17.5°	28211.0	29400.7	31632.9	32861.6	32791.3	32814.4	*31108.3*	28552.1	27549.5
20°	25274.6	26543.0	29684.3	31733.9	31712.2	31582.0	*29125.4*	25754.3	24290.6
22.5°	21953.6	23589.4	27451.4	30347.3	30339.1	30122.0	*26710.5*	22698.9	21123.0
25°	18991.9	20596.2	24938.6	28648.7	28584.3	28337.4	*24027.9*	19651.1	18007.9
27.5°	15929.9	17597.8	22255.9	26658.2	26614.1	26344.7	*21463.5*	16802.3	15238.4
30°	13334.0	14859.0	19562.0	24468.0	24185.1	24154.4	*18819.8*	14164.5	12656.0
32.5°	11110.0	12417.3	17022.3	22177.3	21676.8	21819.7	*16185.0*	11958.6	10463.5
35°	9171.1	10322.8	14386.8	19528.4	18965.6	19150.5	*13767.2*	9812.5	8572.6
37.5°	7443.4	8550.8	12153.1	16952.0	16091.4	16440.2	*11640.6*	8194.6	7200.9
40°	6231.1	7109.6	10034.7	14124.9	13199.3	13767.2	*9611.2*	6835.0	6038.8
42.5°	5369.0	5942.3	8282.2	11425.8	10715.7	11118.3	*7921.5*	5714.0	5118.4
45°	4583.3	5040.5	6853.0	9016.3	8605.5	8978.8	*6555.8*	4872.2	4424.7
47.5°	4003.4	4355.9	5641.4	7280.9	7025.8	7144.0	*5475.3*	4251.8	3888.2
50°	3502.8	3775.2	4742.7	5876.4	5737.2	5809.8	*4586.3*	3699.6	3449.6
52.5°	3113.7	3313.5	3977.9	4829.5	4760.7	4771.9	*3908.4*	3254.3	3073.2
55°	2774.0	2913.2	3395.8	3956.3	3939.8	3942.8	*3338.9*	2883.9	2736.5
57.5°	2476.8	2592.2	2918.4	3323.2	3299.3	3304.5	*2891.4*	2561.4	2466.4
60°	2225.4	2302.5	2521.8	2808.3	2792.6	2786.0	*2506.1*	2274.0	2241.2
62.5°	2002.5	2051.9	2203.7	2407.2	2377.4	2384.1	*2203.0*	2054.1	2005.4
65°	1807.1	1824.3	1931.4	2057.1	2037.6	2054.1	*1937.4*	1835.6	1824.3
67.5°	1616.3	1633.5	1696.4	1781.0	1758.5	1772.0	*1697.9*	1638.0	1628.3
70°	1442.7	1442.0	1477.2	1522.8	1522.8	1525.1	*1485.3*	1449.5	1457.0
72.5°	1263.2	1258.7	1269.1	1299.8	1291.5	1320.0	*1278.1*	1266.9	1268.4
75°	1080.6	1067.8	1073.8	1089.5	1080.6	1095.5	*1076.8*	1091.0	1091.0
77.5°	908.4	884.5	877.0	879.3	862.8	885.3	*889.7*	899.4	921.9
80°	728.9	695.1	676.5	675.7	661.5	675.7	*687.0*	707.1	728.9
82.5°	541.0	511.8	480.4	474.4	465.5	473.7	*488.7*	512.6	547.8
85°	330.0	299.3	279.9	269.4	276.9	276.9	*284.4*	318.0	339.7
87.5°	119.0	104.0	85.3	86.1	88.3	91.3	*95.1*	119.7	131.0
90°	26.4	40.3	68.9	44.0	24.9	42.2	*72.8*	38.3	25.7
92.5°	37.2	61.4	111.1	57.5	32.6	57.5	*103.5*	51.7	35.2
95°	43.7	70.9	155.2	76.6	47.9	70.9	*132.2*	57.5	42.9
97.5°	55.2	78.6	178.2	93.9	74.7	88.1	*149.4*	61.4	52.5
100°	72.4	92.0	277.8	114.9	99.7	99.7	*274.0*	70.9	60.9
102.5°	122.2	195.4	590.1	216.5	151.4	195.4	*636.1*	143.7	74.3
105°	210.3	412.0	1051.8	454.1	275.9	448.3	*1120.9*	375.5	137.5
107.5°	363.6	737.7	1387.2	804.7	523.1	837.2	*1444.6*	743.4	323.4
110°	677.8	979.0	1454.2	1105.5	837.2	1170.6	*1576.9*	1019.3	656.7

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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	915.4	1051.8	1392.9	1220.4	1090.1	1304.7	*1540.4*	1130.4	909.6
115°	963.3	1011.6	1243.5	1191.7	1184.1	1285.6	*1375.7*	1126.6	1009.3
117.5°	931.5	923.5	1055.7	1071.0	1143.8	1176.4	*1187.8*	1057.6	1015.0
120°	861.8	822.0	881.3	935.0	1032.7	1019.3	*1000.1*	956.8	957.6
122.5°	776.3	728.9	754.9	795.1	892.9	864.1	*844.9*	853.3	879.8
125°	695.8	648.3	664.9	674.4	756.8	728.1	*736.4*	765.2	791.6
127.5°	625.0	592.7	601.6	590.1	641.8	628.4	*657.9*	691.2	713.0
130°	577.0	549.5	562.1	534.6	560.2	564.0	*603.1*	629.9	644.1
132.5°	537.6	519.6	534.9	501.5	509.2	525.3	*561.7*	585.4	593.1
135°	509.6	493.5	510.7	479.3	478.2	501.1	*533.7*	549.0	551.7
137.5°	484.7	471.3	488.5	465.5	459.7	482.7	*507.6*	519.1	516.0
140°	463.2	450.9	470.0	452.8	449.0	472.0	*483.4*	497.7	493.8
142.5°	439.0	431.4	453.6	442.1	438.3	460.1	*465.8*	475.4	472.3
145°	422.5	416.7	440.9	435.2	433.2	449.3	*445.5*	459.6	453.9
147.5°	409.4	404.8	426.3	424.4	424.4	435.9	*430.9*	443.2	438.2
150°	396.8	392.2	413.7	411.8	413.7	421.3	*414.4*	429.3	428.2
152.5°	384.1	379.6	399.1	396.4	398.4	406.0	*399.9*	415.9	415.5
155°	375.2	370.7	386.4	384.9	384.9	389.5	*387.1*	404.0	404.8
157.5°	369.8	366.4	378.3	376.8	376.8	379.6	*379.1*	394.0	394.7
160°	365.6	362.2	372.2	370.7	368.8	373.4	*372.9*	385.9	386.7
162.5°	361.4	357.9	369.1	366.4	365.7	366.4	*366.1*	379.7	380.5
165°	358.3	356.8	364.8	363.3	361.5	363.3	*361.8*	370.9	373.6
167.5°	359.0	356.3	363.7	362.2	360.3	358.4	*360.6*	367.8	370.6
170°	357.8	357.1	362.5	359.1	356.4	357.2	*357.5*	364.8	367.5
172.5°	359.3	358.6	364.0	360.6	357.9	358.7	*357.1*	362.4	367.0
175°	359.7	358.2	362.4	360.2	359.4	358.3	*358.6*	362.0	367.4
177.5°	362.3	360.8	363.2	360.9	358.3	359.0	*361.3*	364.7	372.0
180°	361.3	361.3	361.3	361.3	361.3	361.3	*361.3*	361.3	361.3

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

Scaled Data Report

TEST NUMBER: P1432456
CATALOG NUMBER: EHBR1-48-UNV-A1-L830-UPL36

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	19.14	20.28	19.63	20.75	21.24	20.12	21.26	20.61	21.73	22.22
	3H	20.61	21.63	21.12	22.11	22.65	21.38	22.40	21.88	22.88	23.42
	4H	21.21	22.17	21.74	22.66	23.22	21.88	22.83	22.40	23.32	23.88
	6H	21.68	22.55	22.22	23.06	23.63	22.23	23.11	22.77	23.62	24.19
	8H	21.83	22.65	22.38	23.18	23.76	22.33	23.16	22.88	23.69	24.26
	12H	21.90	22.69	22.46	23.21	23.82	22.37	23.16	22.92	23.68	24.28
4H	2H	19.65	20.61	20.18	21.10	21.66	20.43	21.39	20.96	21.88	22.44
	3H	21.33	22.12	21.87	22.66	23.24	21.92	22.71	22.46	23.25	23.82
	4H	22.05	22.76	22.61	23.31	23.92	22.54	23.25	23.10	23.80	24.41
	6H	22.63	23.24	23.21	23.81	24.45	23.02	23.63	23.60	24.20	24.84
	8H	22.82	23.38	23.40	23.96	24.60	23.15	23.72	23.74	24.30	24.93
	12H	22.92	23.42	23.53	24.03	24.67	23.22	23.72	23.82	24.33	24.97
8H	4H	22.27	22.84	22.86	23.42	24.05	22.72	23.29	23.31	23.86	24.50
	6H	22.96	23.43	23.58	24.05	24.69	23.30	23.77	23.92	24.39	25.03
	8H	23.22	23.63	23.85	24.26	24.92	23.50	23.91	24.13	24.55	25.20
	12H	23.38	23.74	24.01	24.36	25.09	23.62	23.98	24.25	24.60	25.33
12H	4H	22.27	22.78	22.88	23.38	24.02	22.72	23.22	23.32	23.83	24.47
	6H	22.99	23.40	23.62	24.04	24.69	23.32	23.74	23.96	24.37	25.03
	8H	23.28	23.64	23.91	24.26	24.99	23.56	23.92	24.19	24.54	25.27

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

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

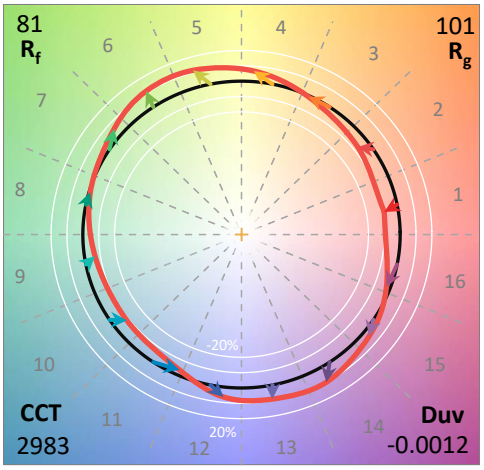
Test Information

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

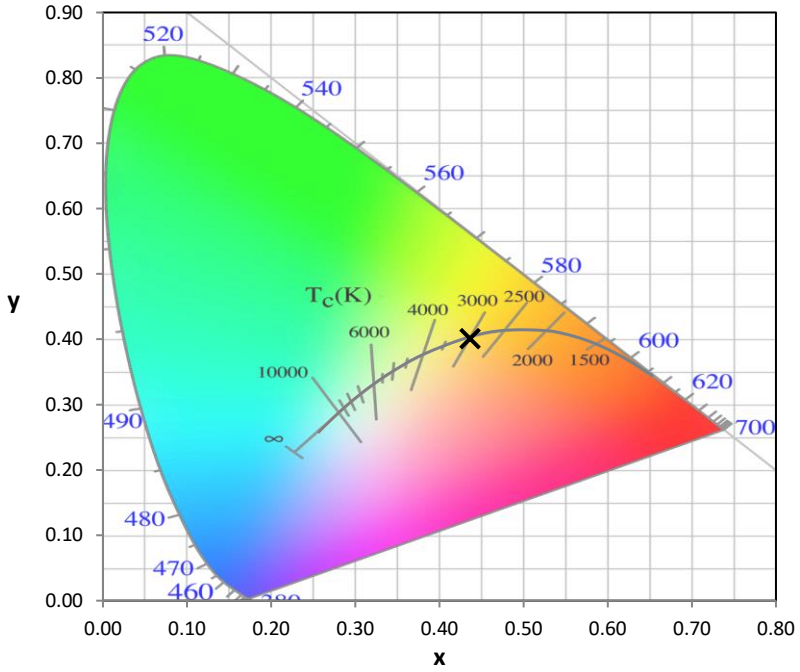
Stabilization Time:	38M
Operation Time:	1H 38M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-2

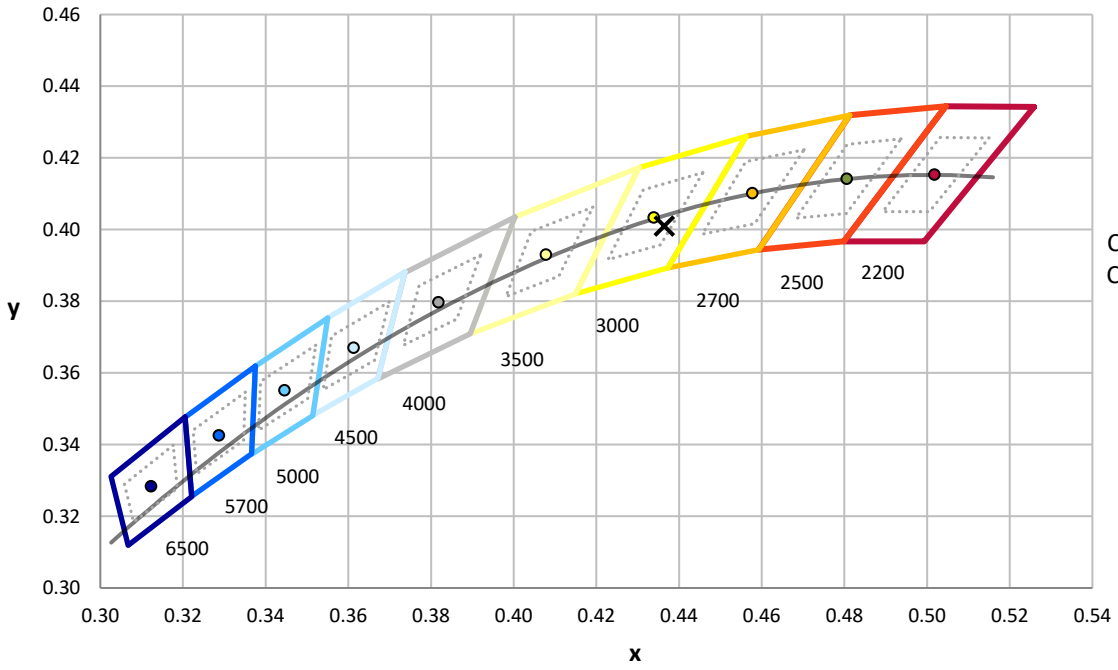
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	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

REPORT NUMBER: SP1-2506-472-2

CIE 1931 Chromaticity Diagram



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

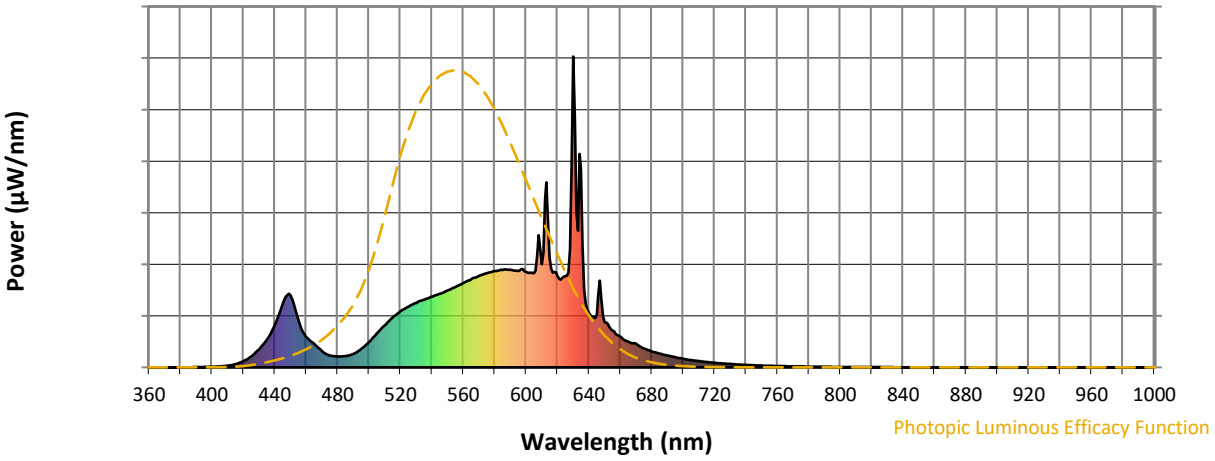


CCT = 2983K
CIE x = 0.4364
CIE y = 0.4010
Duv = -0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-2

Photopic Flux vs. Wavelength

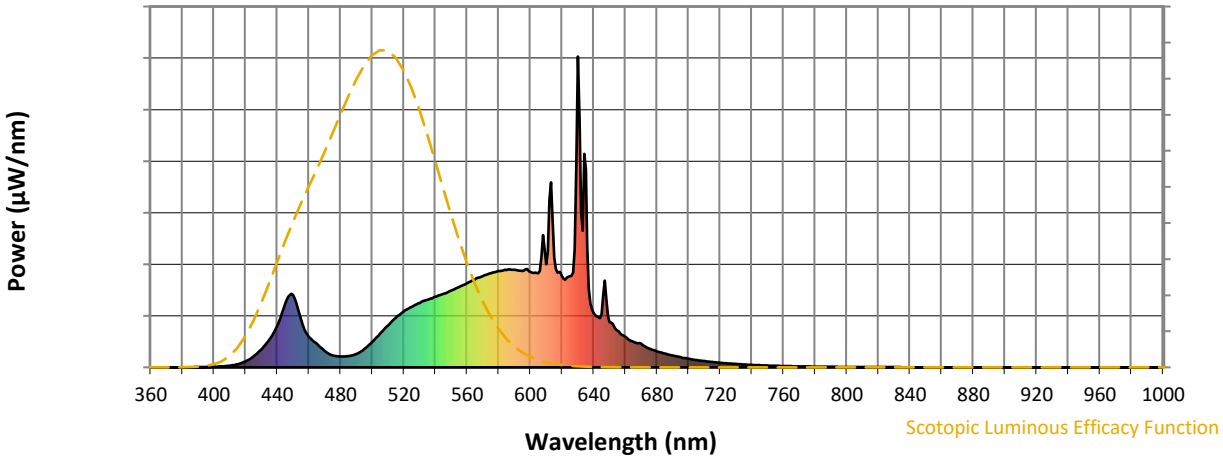


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2506-472-2

Scotopic Flux vs. Wavelength

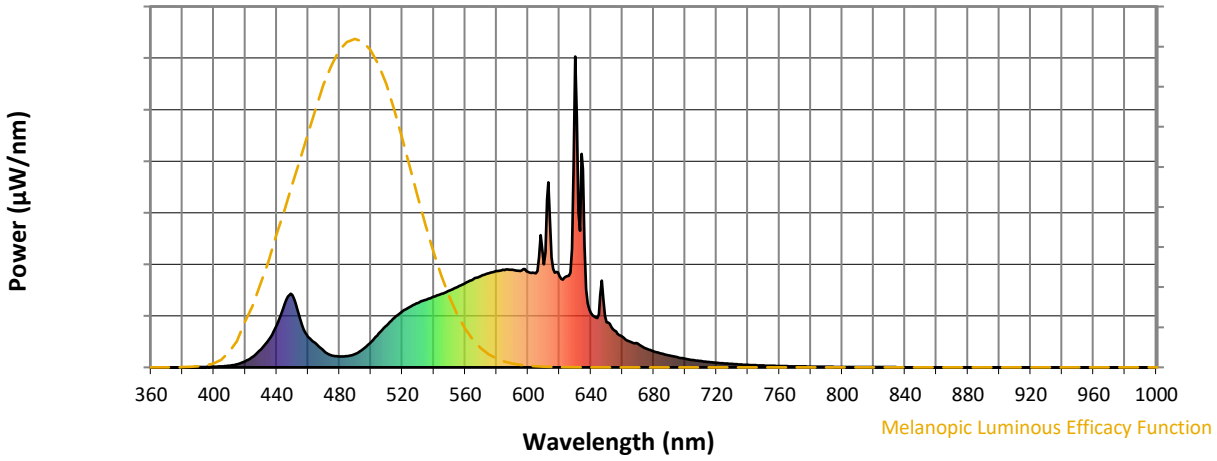


Scotopic Lumens: NR **S/P: 1.27**

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			

REPORT NUMBER: SP1-2506-472-2

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			

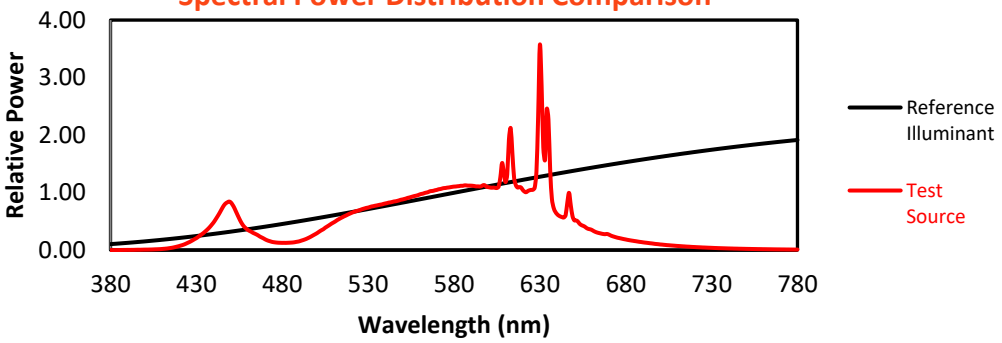
REPORT NUMBER: SP1-2506-472-2

TM-30-18

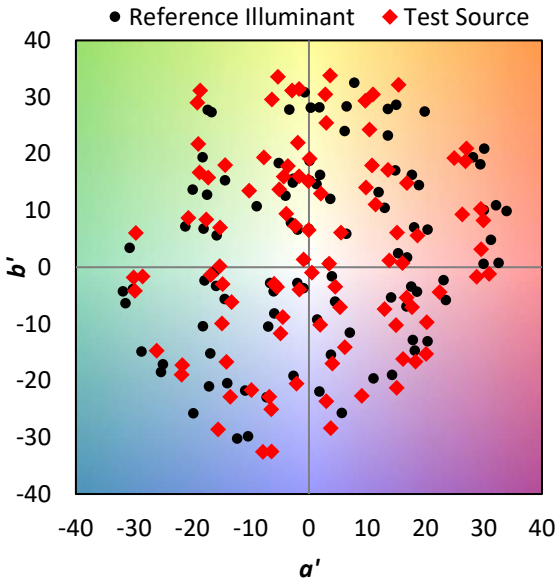
Summary

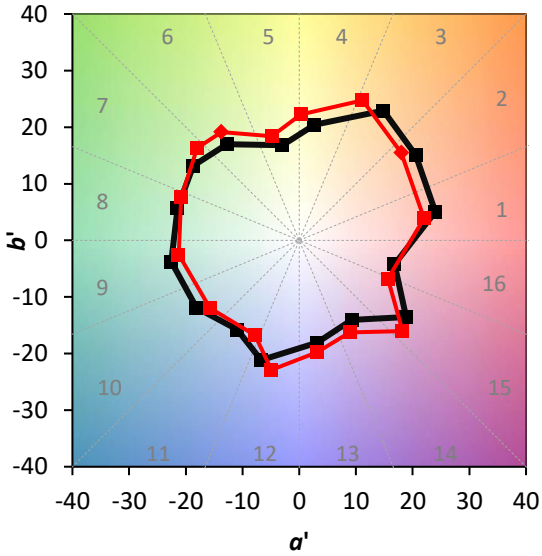
R_f = 81.2
R_g = 101.5
CIE R_a = 83.4
R_9 = 29.4

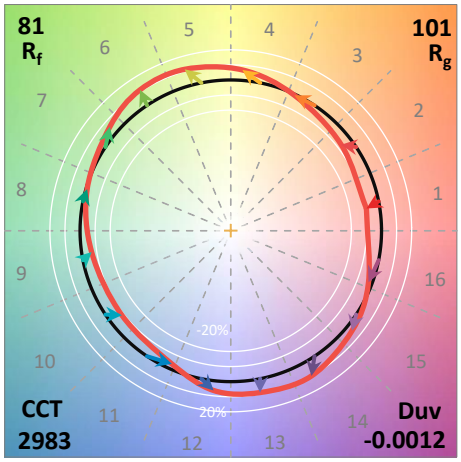
Spectral Power Distribution Comparison

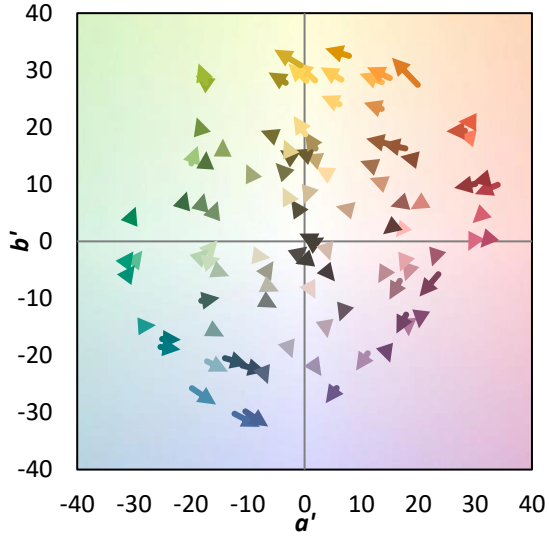


Color Vector Graphics







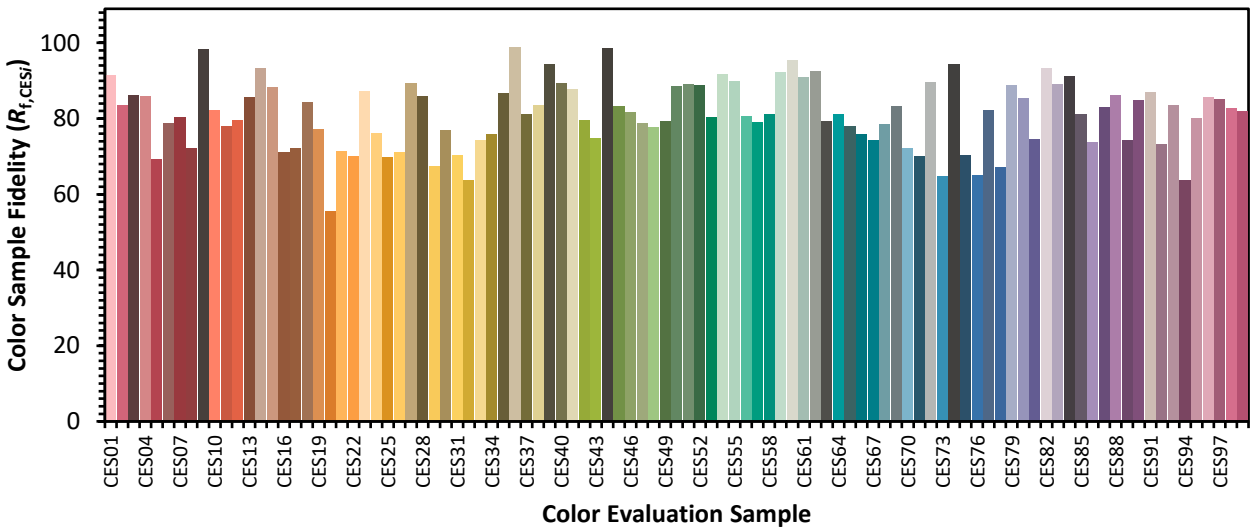


REPORT NUMBER: SP1-2506-472-2

TM-30-18

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

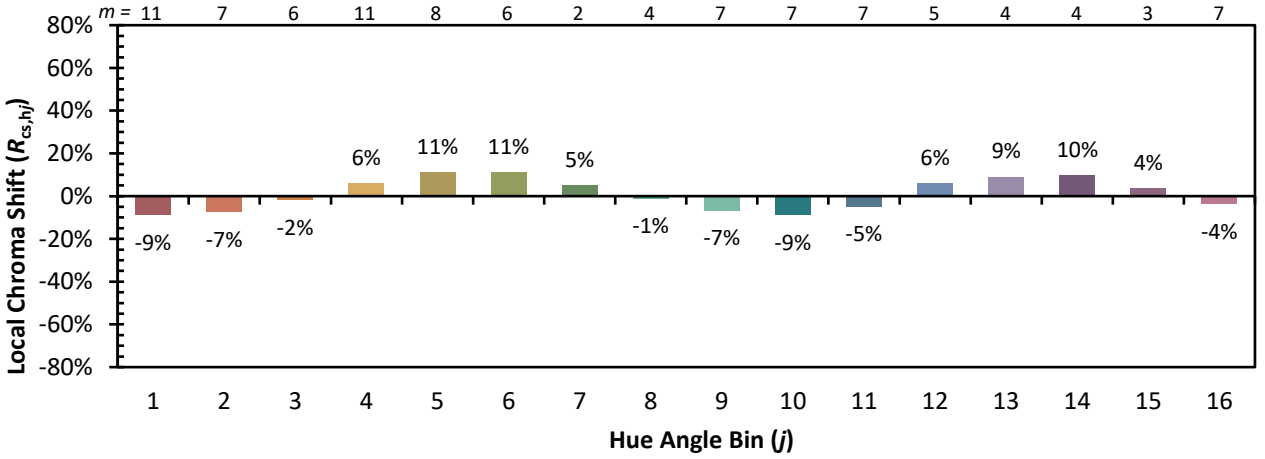
CES01 = 86	CES26 = 71	CES51 = 89	CES76 = 65
CES02 = 63	CES27 = 89	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 86	CES53 = 80	CES78 = 67
CES04 = 70	CES29 = 68	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 77	CES55 = 90	CES80 = 85
CES06 = 51	CES31 = 70	CES56 = 81	CES81 = 75
CES07 = 43	CES32 = 64	CES57 = 79	CES82 = 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	

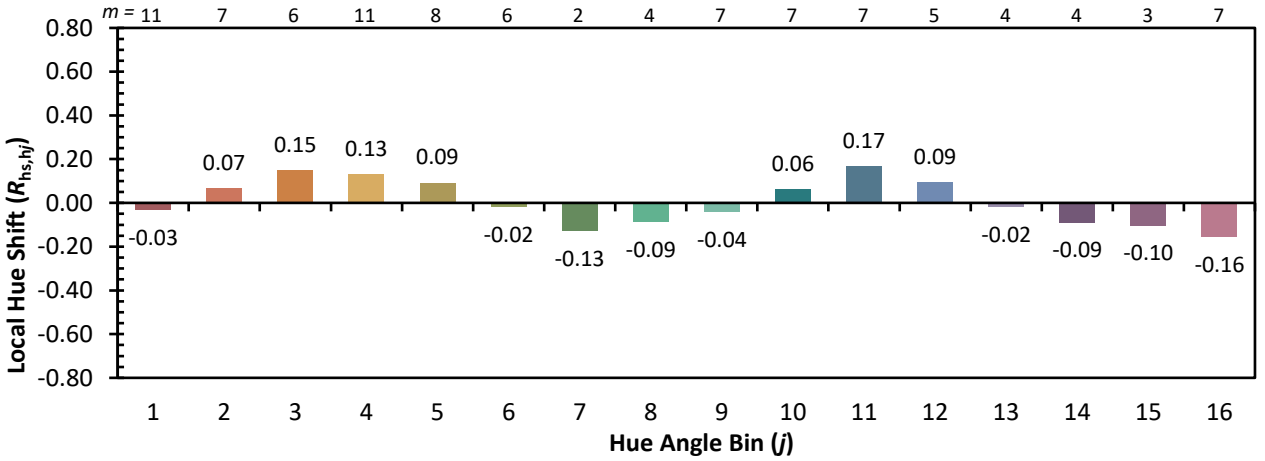


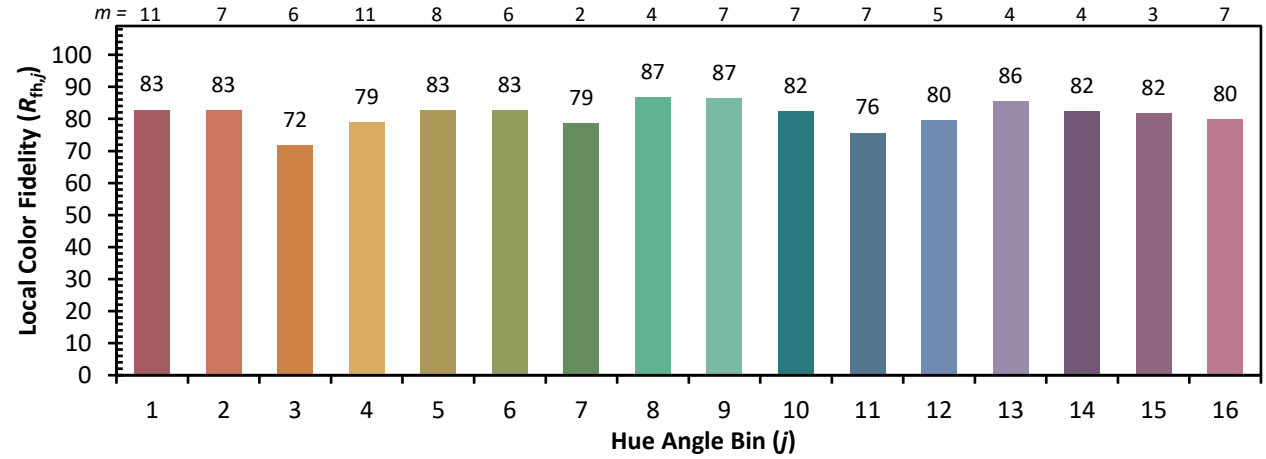
REPORT NUMBER: SP1-2506-472-2

TM-30-18

Color Rendition by Hue-Angle Bin



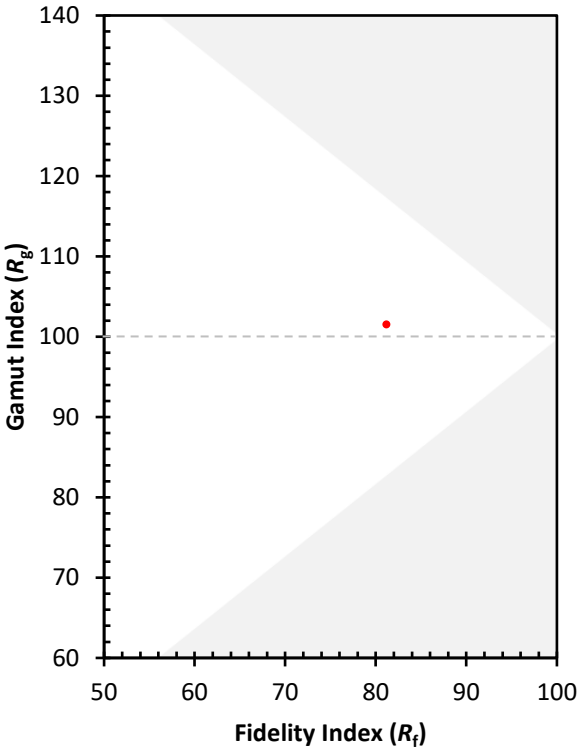


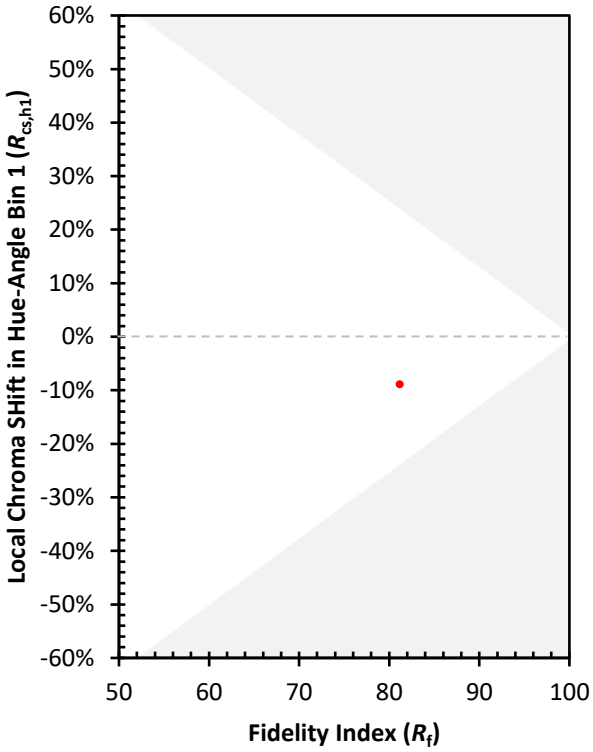


REPORT NUMBER: SP1-2506-472-2

TM-30-18

Measure Comparisons





(END OF REPORT)