

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: EHBR1-30-UNV-TASM-L840-UPL15

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number:
REPORT IS A COMBINATION OF REPORTS P1431741 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-30-UNV-TASM-L840-UPL15
Description: Elevate Round Highbay at, 30000 lumens, 4000K 80CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

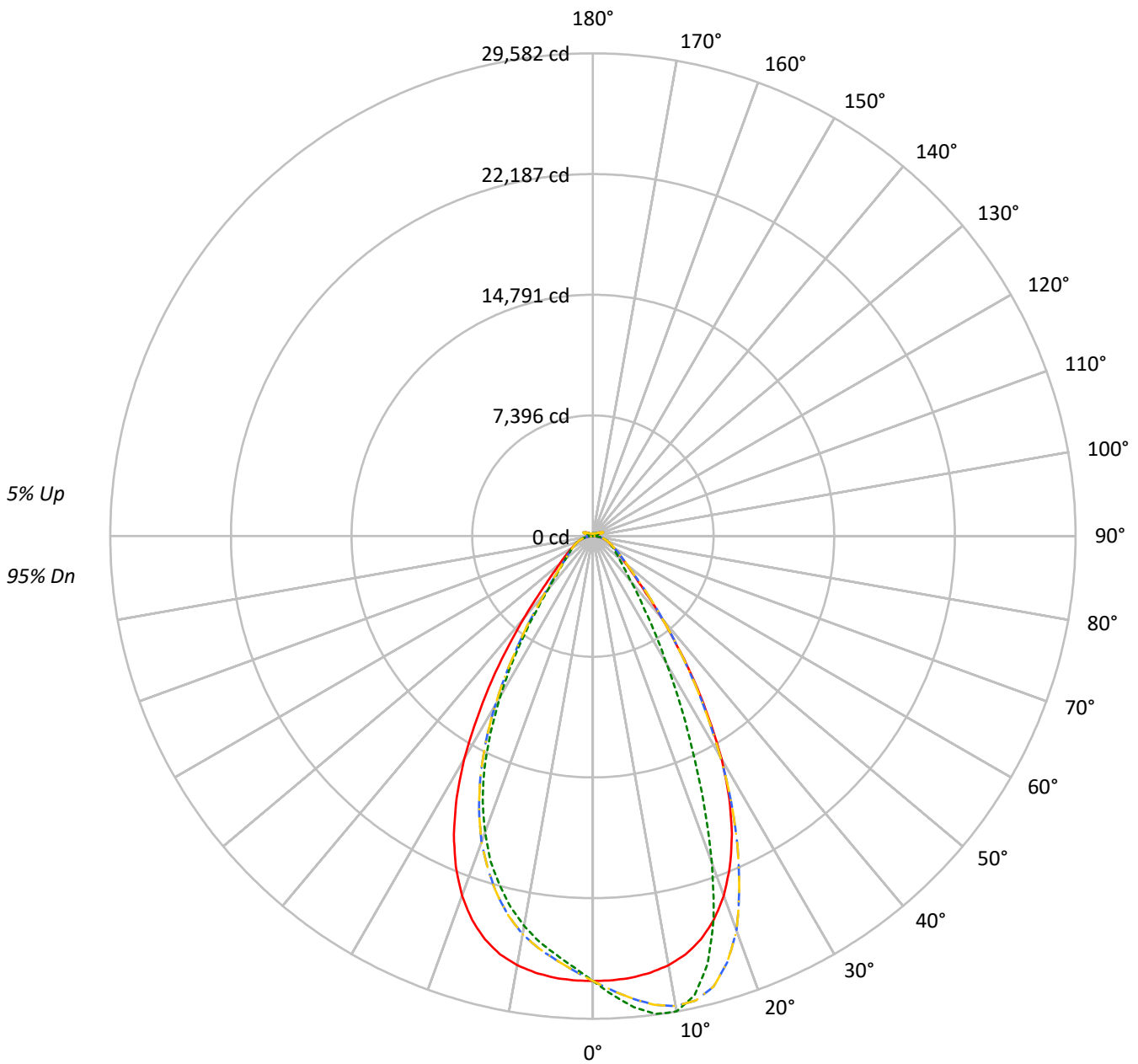
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31970.9 lumens
Efficiency: N/A
Efficacy: 189.1 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 0.84 / 0.9
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 169.1
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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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - · 90°-270° - · - · 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	0
RCR																					
0	118	118	118	118	115	115	115	115	108	108	108	103	103	103	98	98	98	98	98	98	95
1	111	107	104	101	108	105	102	99	100	97	95	95	93	92	91	90	88	88	88	88	86
2	104	98	93	89	101	96	91	87	92	88	85	88	85	82	84	82	80	84	82	80	78
3	97	90	84	79	95	88	82	78	84	80	76	81	77	74	78	75	72	78	75	72	70
4	91	82	76	71	89	81	75	70	78	73	69	75	71	68	73	69	66	73	69	66	64
5	86	76	69	64	84	75	69	64	73	67	63	70	66	62	68	64	61	68	64	61	59
6	81	71	64	59	79	70	63	59	68	62	58	66	61	57	64	60	56	64	60	56	55
7	77	66	59	54	75	65	59	54	63	58	53	62	57	53	60	56	52	60	56	52	51
8	72	62	55	50	71	61	55	50	59	54	50	58	53	49	57	52	49	57	52	49	47
9	69	58	51	47	67	57	51	47	56	50	46	55	49	46	53	49	45	53	49	45	44
10	65	54	48	44	64	54	48	44	53	47	43	52	46	43	50	46	43	50	46	43	41

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	128024	128024	128024	128024
5°	127245	135747	127245	120642
10°	125681	139232	125681	114178
15°	121971	129390	121971	105469
20°	114073	103753	114073	93943
25°	100964	71886	100964	78728
30°	81979	46767	81979	58905
35°	58798	30287	58798	39214
40°	38015	20876	38015	24730
45°	24120	16170	24120	17621
50°	17912	13741	17912	14677
55°	14624	12517	14624	12956
60°	12664	11924	12664	11996
65°	11544	11500	11544	11451
70°	10941	11268	10941	11122
75°	10232	10899	10232	10573
80°	8989	10291	8989	9620
85°	5816	7347	5816	7006

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 33911 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2592.2	8.1
10°-20°	7052.2	22.1
20°-30°	8270.8	25.9
30°-40°	5751.8	18.0
40°-50°	2858.4	8.9
50°-60°	1709.6	5.3
60°-70°	1203.3	3.8
70°-80°	775.1	2.4
80°-90°	248.8	0.8
90°-100°	40.6	0.1
100°-110°	261.1	0.8
110°-120°	481.6	1.5
120°-130°	286.8	0.9
130°-140°	174.3	0.5
140°-150°	121.4	0.4
150°-160°	80.1	0.3
160°-170°	46.9	0.1
170°-180°	15.8	0.0
0°-30°	17915.2	56.0
0°-40°	23667.1	74.0
0°-60°	28235.1	88.3
0°-90°	30462.4	95.3
90°-120°	783.2	2.4
90°-150°	1365.8	4.3
90°-180°	1509.0	4.7
0°-180°	31970.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	27262	27262	27262	27262	27262	
5°	27169	28984	27169	25759	27169	2578
15°	25589	27145	25589	22127	25589	7151
25°	20162	14356	20162	15722	20162	9128
35°	10792	5559	10792	7197	10792	6737
45°	3902	2616	3902	2851	3902	3193
55°	1976	1692	1976	1751	1976	1807
65°	1205	1200	1205	1195	1205	1210
75°	721	768	721	745	721	757
85°	200	252	200	241	200	222
90°	11	15	11	11	11	15
95°	22	22	22	19	22	23
105°	120	63	120	91	120	162
115°	512	439	512	416	512	467
125°	328	346	328	301	328	303
135°	209	242	209	220	209	166
145°	190	199	190	185	190	119
155°	171	179	171	167	171	80
165°	164	171	164	161	164	47
175°	166	171	166	163	166	16
180°	166	166	166	166	166	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9
2.5°	27246.1	27598.3	27883.6	28071.7	28164.7	28071.7	27883.6	27598.3	27246.1	26895.9	26655.1
5°	27168.9	27874.4	28472.0	28863.0	28984.2	28863.0	28472.0	27874.4	27168.9	26502.3	26060.1
7.5°	26984.4	28083.4	28971.4	29427.9	29539.3	29427.9	28971.4	28083.4	26984.4	26040.7	25481.9
10°	26702.7	28215.3	29241.3	29568.5	29581.8	29568.5	29241.3	28215.3	26702.7	25431.3	24772.4
12.5°	26253.3	28168.3	29150.8	29043.5	28799.6	29043.5	29150.8	28168.3	26253.3	24687.0	23855.8
15°	25588.8	27889.7	28577.8	27704.1	27145.4	27704.1	28577.8	27889.7	25588.8	23682.0	22717.9
17.5°	24652.2	27368.3	27381.6	25653.2	24599.1	25653.2	27381.6	27368.3	24652.2	22453.1	21391.3
20°	23445.3	26531.9	25734.5	22573.2	21324.3	22573.2	25734.5	26531.9	23445.3	21000.2	19958.4
22.5°	21932.1	25404.2	23440.7	19474.8	17770.9	19474.8	23440.7	25404.2	21932.1	19310.7	18226.4
25°	20162.4	24022.4	20973.1	16098.8	14355.6	16098.8	20973.1	24022.4	20162.4	17297.6	16317.1
27.5°	18080.7	22271.1	18345.5	13155.3	11547.1	13155.3	18345.5	22271.1	18080.7	15219.0	14217.6
30°	15768.6	20025.9	15611.1	10476.6	8995.6	10476.6	15611.1	20025.9	15768.6	12883.8	11987.2
32.5°	13179.8	17825.1	12985.1	8394.5	7140.0	8394.5	12985.1	17825.1	13179.8	10655.5	9718.5
35°	10791.5	15071.8	10617.2	6596.1	5558.8	6596.1	10617.2	15071.8	10791.5	8551.9	7631.7
37.5°	8469.1	12470.3	8463.5	5311.4	4508.8	5311.4	8463.5	12470.3	8469.1	6648.7	5901.8
40°	6588.9	9750.7	6631.3	4239.9	3618.3	4239.9	6631.3	9750.7	6588.9	5058.9	4580.9
42.5°	4992.4	7455.9	5212.2	3479.8	3073.4	3479.8	5212.2	7455.9	4992.4	3985.8	3628.0
45°	3902.5	5486.7	4070.2	2935.8	2616.3	2935.8	4070.2	5486.7	3902.5	3209.8	2969.6
47.5°	3178.1	4240.4	3298.8	2518.2	2294.3	2518.2	3298.8	4240.4	3178.1	2715.0	2535.1
50°	2669.5	3253.8	2739.0	2198.2	2047.9	2198.2	2739.0	3253.8	2669.5	2325.0	2204.8
52.5°	2293.3	2653.7	2332.6	1958.9	1857.7	1958.9	2332.6	2653.7	2293.3	2034.1	1959.4
55°	1976.3	2230.9	2028.5	1761.6	1691.6	1761.6	2028.5	2230.9	1976.3	1810.2	1755.0
57.5°	1735.5	1892.5	1761.6	1593.4	1546.9	1593.4	1761.6	1892.5	1735.5	1610.8	1581.2
60°	1522.4	1638.9	1554.6	1446.7	1433.4	1446.7	1554.6	1638.9	1522.4	1449.3	1429.8
62.5°	1358.3	1431.9	1374.6	1314.8	1303.1	1314.8	1374.6	1431.9	1358.3	1302.0	1305.6
65°	1204.9	1273.4	1228.4	1196.2	1200.3	1196.2	1228.4	1273.4	1204.9	1178.8	1184.5
67.5°	1086.3	1122.1	1102.7	1084.3	1088.9	1084.3	1102.7	1122.1	1086.3	1060.7	1069.4
70°	960.0	998.4	978.4	981.0	988.7	981.0	978.4	998.4	960.0	952.4	959.0
72.5°	839.4	869.0	862.4	868.5	876.7	868.5	862.4	869.0	839.4	838.4	838.9
75°	720.8	743.3	746.4	755.0	767.8	755.0	746.4	743.3	720.8	713.1	722.3
77.5°	591.5	617.0	626.7	638.5	657.4	638.5	626.7	617.0	591.5	596.6	601.2
80°	472.9	484.6	506.1	514.8	541.4	514.8	506.1	484.6	472.9	464.2	470.8
82.5°	346.1	356.8	375.2	391.6	406.9	391.6	375.2	356.8	346.1	342.0	342.5
85°	199.9	216.2	228.5	247.9	252.5	247.9	228.5	216.2	199.9	204.5	199.9
87.5°	70.0	75.1	85.9	93.6	94.1	93.6	85.9	75.1	70.0	71.6	64.9
90°	11.2	19.2	32.9	19.6	14.8	19.6	32.9	19.2	11.2	19.5	30.3
92.5°	14.6	25.8	46.1	25.4	19.0	25.4	46.1	25.8	14.6	25.3	48.4
95°	21.7	31.6	58.5	27.9	22.3	27.9	58.5	31.6	21.7	33.6	67.5
97.5°	33.2	39.0	66.0	29.6	26.4	29.6	66.0	39.0	33.2	41.0	77.4
100°	44.0	44.0	119.7	33.7	29.7	33.7	119.7	44.0	44.0	50.6	120.4
102.5°	66.3	85.8	276.4	65.6	35.5	65.6	276.4	85.8	66.3	94.4	255.1
105°	120.0	194.9	485.6	165.6	63.3	165.6	485.6	194.9	120.0	196.9	454.3
107.5°	226.7	362.7	625.3	324.3	143.5	324.3	625.3	362.7	226.7	348.2	599.5
110°	362.2	506.6	682.3	443.4	287.3	443.4	682.3	506.6	362.2	477.9	628.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	471.3	564.4	666.6	491.3	396.4	491.3	666.6	564.4	471.3	527.5	601.9
115°	512.3	556.2	595.5	489.6	439.4	489.6	595.5	556.2	512.3	515.1	537.5
117.5°	495.0	509.0	514.5	459.9	441.9	459.9	514.5	509.0	495.0	463.6	456.5
120°	447.0	441.3	434.1	416.1	417.1	416.1	434.1	441.3	447.0	404.9	381.2
122.5°	387.2	374.8	367.1	371.9	383.2	371.9	367.1	374.8	387.2	345.0	327.2
125°	328.5	316.1	320.5	333.9	345.7	333.9	320.5	316.1	328.5	293.6	288.8
127.5°	279.5	273.7	286.6	301.7	311.8	301.7	286.6	273.7	279.5	257.2	261.6
130°	244.5	245.6	262.7	275.7	282.0	275.7	262.7	245.6	244.5	233.7	244.8
132.5°	222.6	228.8	245.0	256.4	260.2	256.4	245.0	228.8	222.6	219.8	233.4
135°	209.1	218.0	233.1	240.2	242.0	240.2	233.1	218.0	209.1	210.4	222.6
137.5°	201.3	210.3	221.5	227.5	226.3	227.5	221.5	210.3	201.3	204.3	213.7
140°	196.9	205.8	210.8	217.5	216.9	217.5	210.8	205.8	196.9	198.5	206.0
142.5°	192.4	200.5	203.0	208.1	207.0	208.1	203.0	200.5	192.4	194.1	199.0
145°	190.4	196.5	194.4	200.7	199.2	200.7	194.4	196.5	190.4	190.8	193.7
147.5°	186.3	190.8	188.3	193.7	192.4	193.7	188.3	190.8	186.3	186.3	187.6
150°	181.8	185.1	181.3	187.6	187.9	187.6	181.3	185.1	181.8	181.0	182.4
152.5°	175.8	179.1	175.8	182.9	182.6	182.9	175.8	179.1	175.8	175.0	176.3
155°	171.0	172.7	171.0	178.2	178.7	178.2	171.0	172.7	171.0	170.5	171.5
157.5°	167.9	169.2	168.4	174.7	175.2	174.7	168.4	169.2	167.9	167.9	168.4
160°	165.8	167.4	167.2	172.7	173.2	172.7	167.2	167.4	165.8	166.1	166.6
162.5°	165.2	165.2	165.4	170.9	171.9	170.9	165.4	165.2	165.2	165.2	166.0
165°	164.2	165.1	164.4	168.7	170.6	168.7	164.4	165.1	164.2	164.6	164.6
167.5°	164.4	163.6	164.6	168.7	170.5	168.7	164.6	163.6	164.4	164.7	164.7
170°	163.3	163.8	164.0	168.0	169.8	168.0	164.0	163.8	163.3	164.1	164.4
172.5°	164.9	164.9	164.7	167.9	170.6	167.9	164.7	164.9	164.9	165.2	166.0
175°	165.9	165.5	165.7	168.1	170.8	168.1	165.7	165.5	165.9	165.4	165.4
177.5°	165.0	166.0	167.0	169.5	172.9	169.5	167.0	166.0	165.0	165.4	165.4
180°	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	27261.9	27261.9	27261.9	27261.9	27261.9	27261.9
2.5°	26470.1	26452.7	26470.1	26655.1	26895.9	27246.1
5°	25855.1	25759.0	25855.1	26060.1	26502.3	27168.9
7.5°	25138.9	25083.2	25138.9	25481.9	26040.7	26984.4
10°	24384.9	24258.6	24384.9	24772.4	25431.3	26702.7
12.5°	23455.5	23288.4	23455.5	23855.8	24687.0	26253.3
15°	22273.6	22126.9	22273.6	22717.9	23682.0	25588.8
17.5°	21005.3	20872.4	21005.3	21391.3	22453.1	24652.2
20°	19412.4	19308.1	19412.4	19958.4	21000.2	23445.3
22.5°	17741.3	17643.7	17741.3	18226.4	19310.7	21932.1
25°	15775.2	15722.0	15775.2	16317.1	17297.6	20162.4
27.5°	13650.7	13560.2	13650.7	14217.6	15219.0	18080.7
30°	11480.1	11330.3	11480.1	11987.2	12883.8	15768.6
32.5°	9357.1	9249.2	9357.1	9718.5	10655.5	13179.8
35°	7305.1	7197.2	7305.1	7631.7	8551.9	10791.5
37.5°	5692.2	5501.6	5692.2	5901.8	6648.7	8469.1
40°	4317.1	4286.4	4317.1	4580.9	5058.9	6588.9
42.5°	3514.5	3431.2	3514.5	3628.0	3985.8	4992.4
45°	2883.7	2851.0	2883.7	2969.6	3209.8	3902.5
47.5°	2479.8	2494.2	2479.8	2535.1	2715.0	3178.1
50°	2178.7	2187.4	2178.7	2204.8	2325.0	2669.5
52.5°	1956.9	1949.2	1956.9	1959.4	2034.1	2293.3
55°	1760.6	1750.9	1760.6	1755.0	1810.2	1976.3
57.5°	1588.8	1596.0	1588.8	1581.2	1610.8	1735.5
60°	1435.5	1442.1	1435.5	1429.8	1449.3	1522.4
62.5°	1306.1	1310.2	1306.1	1305.6	1302.0	1358.3
65°	1190.6	1195.2	1190.6	1184.5	1178.8	1204.9
67.5°	1080.2	1080.2	1080.2	1069.4	1060.7	1086.3
70°	976.4	975.9	976.4	959.0	952.4	960.0
72.5°	851.7	863.9	851.7	838.9	838.4	839.4
75°	730.5	744.8	730.5	722.3	713.1	720.8
77.5°	607.8	629.8	607.8	601.2	596.6	591.5
80°	482.1	506.1	482.1	470.8	464.2	472.9
82.5°	356.3	374.2	356.3	342.5	342.0	346.1
85°	212.1	240.8	212.1	199.9	204.5	199.9
87.5°	68.0	86.9	68.0	64.9	71.6	70.0
90°	17.9	11.2	17.9	30.3	19.5	11.2
92.5°	27.0	16.2	27.0	48.4	25.3	14.6
95°	31.1	18.7	31.1	67.5	33.6	21.7
97.5°	34.4	24.1	34.4	77.4	41.0	33.2
100°	40.2	31.6	40.2	120.4	50.6	44.0
102.5°	84.8	53.1	84.8	255.1	94.4	66.3
105°	178.2	91.1	178.2	454.3	196.9	120.0
107.5°	318.7	157.2	318.7	599.5	348.2	226.7
110°	422.9	292.8	422.9	628.4	477.9	362.2



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL15

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	454.3	395.3	454.3	601.9	527.5	471.3
115°	436.9	416.0	436.9	537.5	515.1	512.3
117.5°	398.9	401.9	398.9	456.5	463.6	495.0
120°	355.1	372.1	355.1	381.2	404.9	447.0
122.5°	315.1	334.9	315.1	327.2	345.0	387.2
125°	280.4	300.7	280.4	288.8	293.6	328.5
127.5°	256.4	270.1	256.4	261.6	257.2	279.5
130°	237.9	249.5	237.9	244.8	233.7	244.5
132.5°	225.2	232.6	225.2	233.4	219.8	222.6
135°	214.2	220.2	214.2	222.6	210.4	209.1
137.5°	204.8	210.1	204.8	213.7	204.3	201.3
140°	196.7	201.2	196.7	206.0	198.5	196.9
142.5°	188.1	191.4	188.1	199.0	194.1	192.4
145°	182.5	185.0	182.5	193.7	190.8	190.4
147.5°	177.7	179.4	177.7	187.6	186.3	186.3
150°	173.0	174.7	173.0	182.4	181.0	181.8
152.5°	167.7	169.9	167.7	176.3	175.0	175.8
155°	164.6	166.8	164.6	171.5	170.5	171.0
157.5°	163.1	164.9	163.1	168.4	167.9	167.9
160°	162.2	163.6	162.2	166.6	166.1	165.8
162.5°	160.8	162.1	160.8	166.0	165.2	165.2
165°	160.9	161.4	160.9	164.6	164.6	164.2
167.5°	160.6	161.4	160.6	164.7	164.7	164.4
170°	161.1	161.6	161.1	164.4	164.1	163.3
172.5°	162.1	162.7	162.1	166.0	165.2	164.9
175°	162.4	162.9	162.4	165.4	165.4	165.9
177.5°	163.7	164.2	163.7	165.4	165.4	165.0
180°	166.0	166.0	166.0	166.0	166.0	166.0



TEST NUMBER: CATALOG
 CATALOG NUMBER: EHBR1-30-UNV-TASM-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	17.65	18.79	18.10	19.20	19.64	16.97	18.11	17.42	18.52	18.96
	3H	19.20	20.21	19.67	20.64	21.12	18.82	19.83	19.29	20.26	20.74
	4H	19.84	20.78	20.33	21.23	21.73	19.60	20.54	20.09	20.99	21.49
	6H	20.32	21.19	20.82	21.65	22.16	20.25	21.11	20.75	21.58	22.09
	8H	20.47	21.29	20.99	21.78	22.30	20.47	21.29	20.98	21.77	22.29
	12H	20.55	21.33	21.06	21.80	22.35	20.60	21.38	21.11	21.86	22.40
4H	2H	18.07	19.01	18.56	19.46	19.96	17.55	18.49	18.04	18.94	19.44
	3H	19.87	20.65	20.37	21.14	21.66	19.61	20.38	20.11	20.88	21.40
	4H	20.64	21.34	21.16	21.85	22.41	20.52	21.21	21.03	21.72	22.28
	6H	21.26	21.86	21.80	22.40	22.97	21.29	21.89	21.83	22.42	23.00
	8H	21.45	22.02	22.01	22.55	23.13	21.56	22.12	22.11	22.65	23.24
	12H	21.56	22.06	22.13	22.62	23.21	21.73	22.22	22.29	22.79	23.37
8H	4H	20.89	21.45	21.44	21.99	22.57	20.80	21.36	21.35	21.89	22.47
	6H	21.64	22.09	22.22	22.67	23.26	21.70	22.16	22.28	22.74	23.33
	8H	21.91	22.31	22.51	22.91	23.51	22.05	22.46	22.65	23.06	23.66
	12H	22.08	22.43	22.67	23.01	23.69	22.30	22.66	22.90	23.24	23.91
12H	4H	20.90	21.40	21.47	21.97	22.55	20.81	21.30	21.37	21.87	22.45
	6H	21.68	22.09	22.28	22.68	23.28	21.74	22.15	22.35	22.75	23.35
	8H	22.00	22.35	22.59	22.93	23.61	22.15	22.51	22.75	23.08	23.76

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

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		



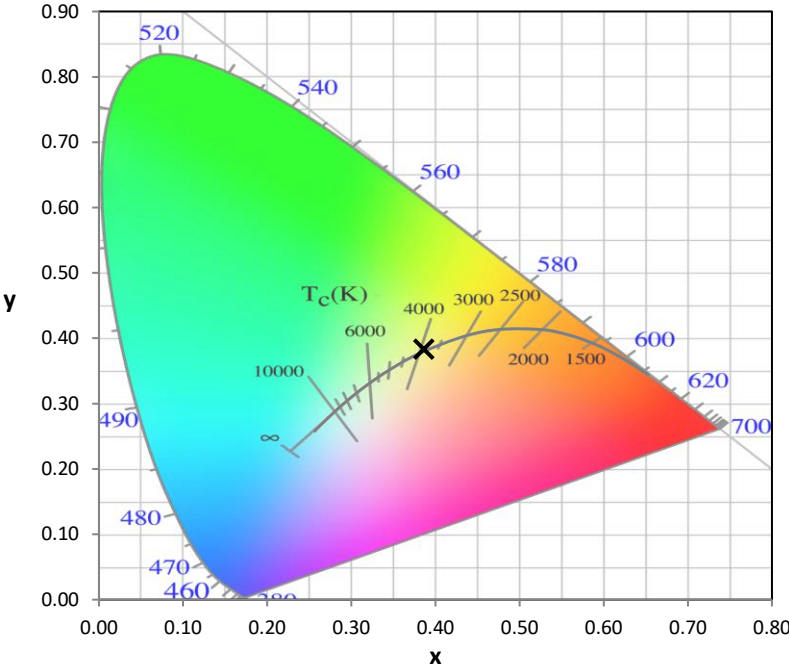
Test Conditions
 Stabilization Time: 42M
 Operation Time: 1H 42M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-1

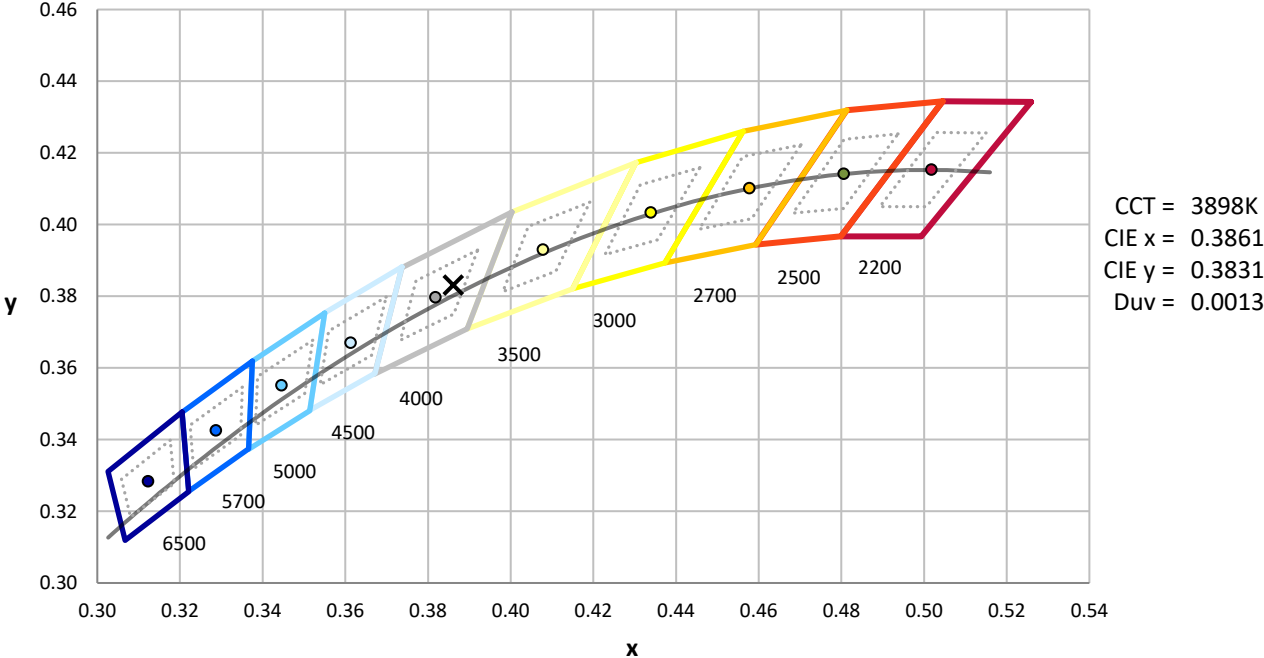
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	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: SP1-2506-472-1

CIE 1931 Chromaticity Diagram



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

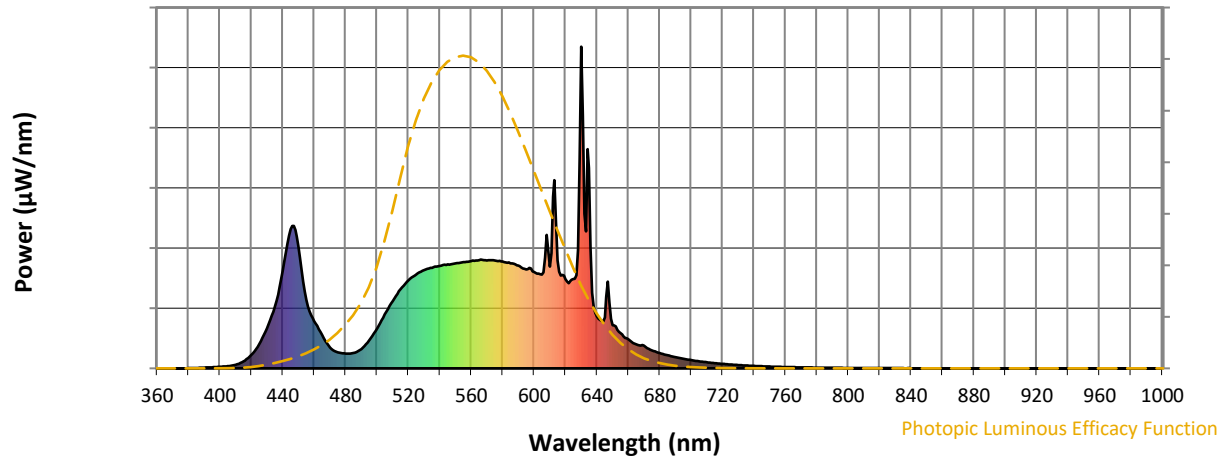


CCT = 3898K
 CIE x = 0.3861
 CIE y = 0.3831
 Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-1

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			

REPORT NUMBER: SP1-2506-472-1

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			

REPORT NUMBER: SP1-2506-472-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.99

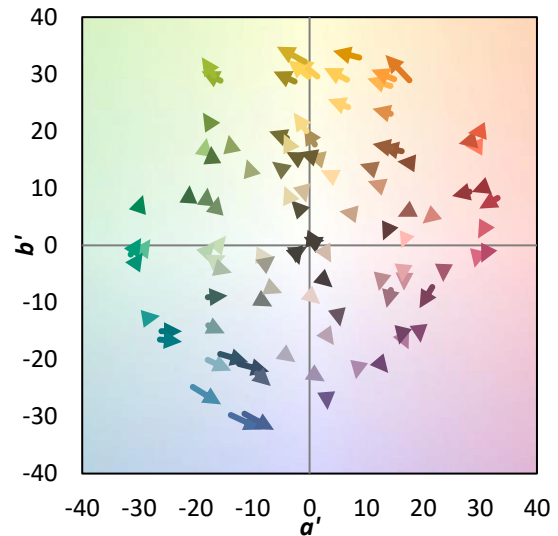
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124	NR	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			

Summary

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



Color Vector Graphics

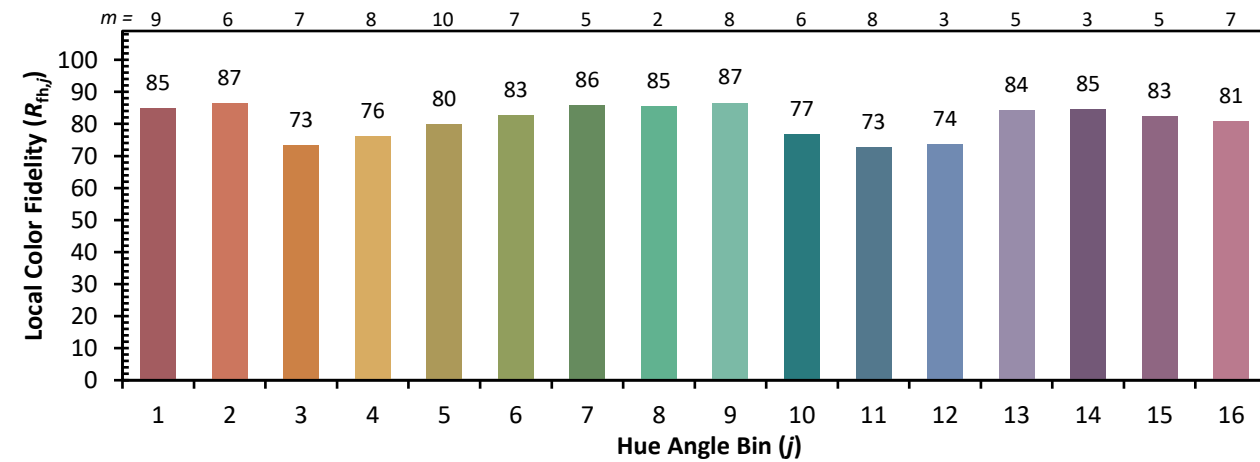
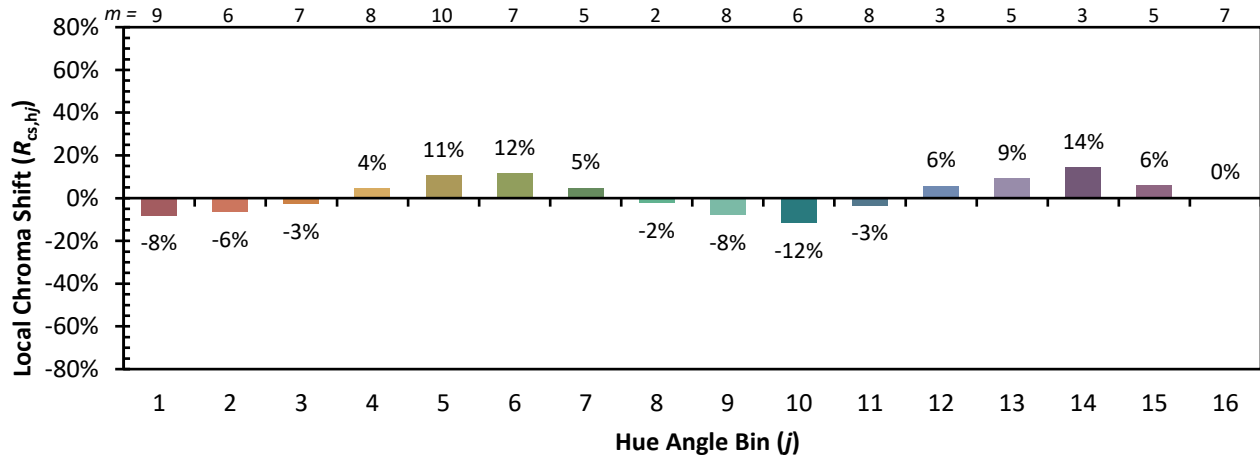


Individual Sample Fidelity Index ($R_{f,i}$)

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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)