

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: P1431715

Luminaire Tested: EHBR1-24-UNV-TASM-L840

Issue Date: 3/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1431715  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: EHBR1-24-UNV-TASM-L840  
Description: Elevate Round Highbay at, 24000 lumens, 4000K 80CRI LEDs with TASM lens  
Light Source: -  
Ballast/Driver: -

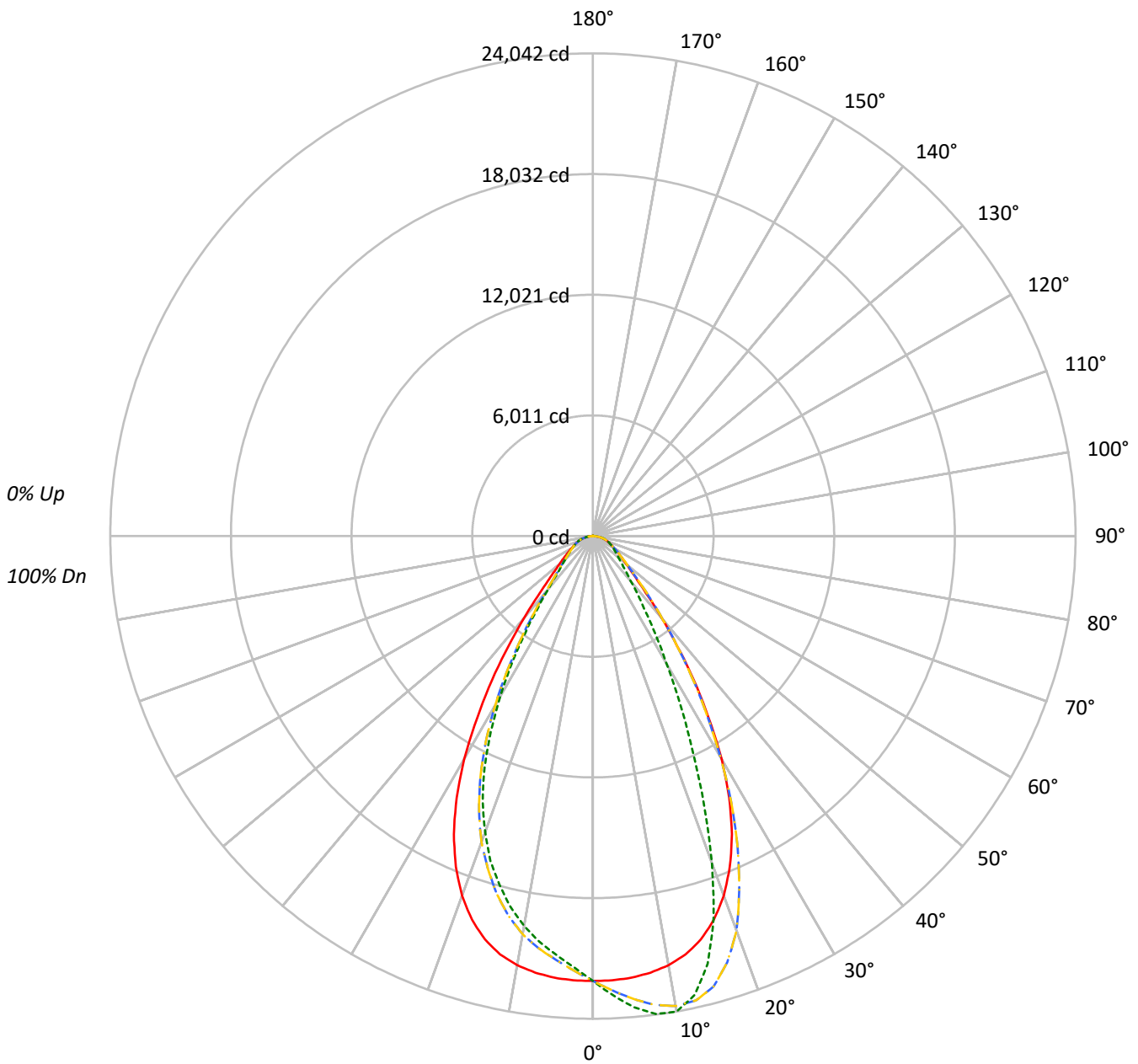
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24774.9 lumens  
Efficiency: N/A  
Efficacy: 193.1 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 0.84 / 0.9  
Luminous Opening: Circular (Dia: 1.71' x H: 0')  
CIE Type: Direct

Input Watts (W): 128.3  
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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### 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90	90	90
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81	81	81
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74	74	74
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	72	69	67	67	67
5	87	78	71	66	86	77	70	65	75	69	65	73	68	64	71	67	64	62	62	62
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57	57	57
7	78	67	60	56	76	67	60	56	65	59	55	64	59	55	63	58	55	53	53	53
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49	49	49
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	47	46	46	46
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43	43	43

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	104052	104052	104052	104052
5°	104093	111048	104093	98691
10°	103490	114648	103490	94017
15°	101111	107262	101111	87432
20°	95227	86613	95227	78423
25°	84910	60456	84910	66211
30°	69495	39646	69495	49935
35°	50282	25901	50282	33534
40°	32828	18028	32828	21357
45°	21065	14122	21065	15389
50°	15851	12160	15851	12988
55°	13151	11256	13151	11651
60°	11621	10942	11621	11009
65°	10882	10840	10882	10794
70°	10714	11032	10714	10890
75°	10629	11322	10629	10985
80°	10393	11899	10393	11123
85°	8756	11057	8756	10545

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 29615 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2106.8	8.5
10°-20°	5731.7	23.1
20°-30°	6722.1	27.1
30°-40°	4674.8	18.9
40°-50°	2323.2	9.4
50°-60°	1389.5	5.6
60°-70°	978.0	3.9
70°-80°	630.0	2.5
80°-90°	200.1	0.8
90°-100°	1.1	0.0
100°-110°	1.4	0.0
110°-120°	1.4	0.0
120°-130°	1.8	0.0
130°-140°	2.4	0.0
140°-150°	2.9	0.0
150°-160°	3.3	0.0
160°-170°	3.2	0.0
170°-180°	1.4	0.0
0°-30°	14560.6	58.8
0°-40°	19235.4	77.6
0°-60°	22948.0	92.6
0°-90°	24756.1	99.9
90°-120°	3.9	0.0
90°-150°	11.0	0.0
90°-180°	19.0	0.1
0°-180°	24774.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	22157	22157	22157	22157	22157	
5°	22082	23557	22082	20936	22082	2096
15°	20797	22062	20797	17984	20797	5812
25°	16387	11668	16387	12778	16387	7419
35°	8771	4518	8771	5850	8771	5475
45°	3172	2126	3172	2317	3172	2595
55°	1606	1375	1606	1423	1606	1469
65°	979	976	979	971	979	984
75°	586	624	586	605	586	615
85°	162	205	162	196	162	181
90°	0	3	0	0	0	8
95°	1	3	1	0	1	1
105°	1	4	1	1	1	1
115°	1	4	1	1	1	1
125°	2	4	2	1	2	2
135°	3	5	3	2	3	3
145°	5	5	5	5	5	3
155°	7	8	7	8	7	3
165°	11	14	11	12	11	3
175°	14	18	14	14	14	1
180°	15	15	15	15	15	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1
2.5°	22144.2	22430.5	22662.3	22815.2	22890.8	22815.2	22662.3	22430.5	22144.2	21859.6	21663.9
5°	22081.5	22654.8	23140.5	23458.4	23556.8	23458.4	23140.5	22654.8	22081.5	21539.7	21180.3
7.5°	21931.5	22824.8	23546.4	23917.5	24008.0	23917.5	23546.4	22824.8	21931.5	21164.5	20710.4
10°	21702.6	22932.0	23765.8	24031.7	24042.5	24031.7	23765.8	22932.0	21702.6	20669.3	20133.7
12.5°	21337.3	22893.7	23692.3	23605.0	23406.8	23605.0	23692.3	22893.7	21337.3	20064.3	19388.8
15°	20797.2	22667.3	23226.5	22516.5	22062.4	22516.5	23226.5	22667.3	20797.2	19247.5	18463.9
17.5°	20036.1	22243.5	22254.3	20849.6	19992.9	20849.6	22254.3	22243.5	20036.1	18248.7	17385.7
20°	19055.1	21563.8	20915.6	18346.3	17331.3	18346.3	20915.6	21563.8	19055.1	17067.9	16221.1
22.5°	17825.3	20647.2	19051.4	15828.1	14443.3	15828.1	19051.4	20647.2	17825.3	15694.7	14813.5
25°	16386.9	19524.2	17045.9	13084.3	11667.5	13084.3	17045.9	19524.2	16386.9	14058.6	13261.7
27.5°	14695.1	18100.8	14910.3	10691.9	9384.8	10691.9	14910.3	18100.8	14695.1	12369.2	11555.3
30°	12815.9	16276.0	12687.9	8514.8	7311.2	8514.8	12687.9	16276.0	12815.9	10471.3	9742.6
32.5°	10711.9	14487.3	10553.6	6822.6	5803.0	6822.6	10553.6	14487.3	10711.9	8660.2	7898.7
35°	8770.8	12249.6	8629.1	5360.9	4517.9	5360.9	8629.1	12249.6	8770.8	6950.6	6202.7
37.5°	6883.2	10135.2	6878.7	4316.8	3664.5	4316.8	6878.7	10135.2	6883.2	5403.7	4796.7
40°	5355.1	7924.8	5389.6	3446.0	2940.8	3446.0	5389.6	7924.8	5355.1	4111.6	3723.1
42.5°	4057.6	6059.8	4236.2	2828.2	2497.9	2828.2	4236.2	6059.8	4057.6	3239.5	2948.7
45°	3171.8	4459.3	3308.0	2386.1	2126.4	2386.1	3308.0	4459.3	3171.8	2608.8	2413.5
47.5°	2583.0	3446.4	2681.1	2046.7	1864.7	2046.7	2681.1	3446.4	2583.0	2206.6	2060.4
50°	2169.6	2644.5	2226.1	1786.6	1664.4	1786.6	2226.1	2644.5	2169.6	1889.6	1792.0
52.5°	1863.8	2156.8	1895.8	1592.1	1509.9	1592.1	1895.8	2156.8	1863.8	1653.2	1592.5
55°	1606.2	1813.2	1648.6	1431.7	1374.8	1431.7	1648.6	1813.2	1606.2	1471.2	1426.3
57.5°	1410.6	1538.1	1431.7	1295.0	1257.2	1295.0	1431.7	1538.1	1410.6	1309.2	1285.1
60°	1237.3	1332.0	1263.5	1175.8	1165.0	1175.8	1263.5	1332.0	1237.3	1177.9	1162.1
62.5°	1103.9	1163.8	1117.2	1068.6	1059.1	1068.6	1117.2	1163.8	1103.9	1058.2	1061.1
65°	979.3	1035.0	998.4	972.2	975.5	972.2	998.4	1035.0	979.3	958.1	962.7
67.5°	882.9	912.0	896.2	881.2	885.0	881.2	896.2	912.0	882.9	862.1	869.2
70°	780.3	811.4	795.2	797.3	803.5	797.3	795.2	811.4	780.3	774.0	779.4
72.5°	682.2	706.3	700.9	705.9	712.5	705.9	700.9	706.3	682.2	681.4	681.8
75°	585.8	604.1	606.6	613.7	624.0	613.7	606.6	604.1	585.8	579.6	587.1
77.5°	480.7	501.5	509.4	518.9	534.3	518.9	509.4	501.5	480.7	484.9	488.6
80°	384.3	393.9	411.3	418.4	440.0	418.4	411.3	393.9	384.3	377.3	382.7
82.5°	281.3	290.0	305.0	318.3	330.7	318.3	305.0	290.0	281.3	278.0	278.4
85°	162.5	175.7	185.7	201.5	205.2	201.5	185.7	175.7	162.5	166.2	162.5
87.5°	56.9	61.1	69.8	76.0	76.4	76.0	69.8	61.1	56.9	58.2	52.8
90°	0.4	0.8	1.2	2.5	3.3	2.5	1.2	0.8	0.4	0.4	0.4
92.5°	0.4	0.8	1.2	2.5	3.3	2.5	1.2	0.8	0.4	0.4	0.4
95°	0.8	0.8	1.2	2.5	3.3	2.5	1.2	0.8	0.8	0.4	0.4
97.5°	0.8	0.8	1.2	2.5	3.3	2.5	1.2	0.8	0.8	0.4	0.4
100°	0.8	0.8	1.2	2.5	3.3	2.5	1.2	0.8	0.8	0.8	0.4
102.5°	0.8	1.2	1.7	2.9	3.3	2.9	1.7	1.2	0.8	0.8	0.4
105°	0.8	1.2	1.7	2.9	3.7	2.9	1.7	1.2	0.8	0.8	0.4
107.5°	0.8	1.2	1.7	2.9	3.7	2.9	1.7	1.2	0.8	0.8	0.8
110°	0.8	1.2	1.7	2.9	3.7	2.9	1.7	1.2	0.8	0.8	0.8



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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°	0.8	1.2	1.7	2.9	3.7	2.9	1.7	1.2	0.8	0.8	0.8
115°	1.2	1.2	1.7	2.9	3.7	2.9	1.7	1.2	1.2	0.8	0.8
117.5°	1.2	1.2	1.7	2.9	3.7	2.9	1.7	1.2	1.2	1.2	0.8
120°	1.2	1.2	2.1	2.9	3.7	2.9	2.1	1.2	1.2	1.2	0.8
122.5°	1.7	1.7	2.1	3.3	3.7	3.3	2.1	1.7	1.7	1.7	1.2
125°	1.7	1.7	2.5	3.3	4.2	3.3	2.5	1.7	1.7	2.1	1.7
127.5°	2.1	2.1	2.5	3.3	4.2	3.3	2.5	2.1	2.1	2.1	1.7
130°	2.5	2.1	2.5	3.7	4.2	3.7	2.5	2.1	2.5	2.5	2.1
132.5°	2.9	2.5	2.9	4.2	4.6	4.2	2.9	2.5	2.9	3.3	2.9
135°	3.3	2.5	3.3	3.7	4.6	3.7	3.3	2.5	3.3	3.7	2.9
137.5°	3.7	2.9	3.3	4.2	4.6	4.2	3.3	2.9	3.7	4.2	3.7
140°	4.2	3.3	3.3	4.2	5.0	4.2	3.3	3.3	4.2	4.2	4.2
142.5°	4.6	3.7	3.7	4.6	5.0	4.6	3.7	3.7	4.6	4.6	4.6
145°	5.0	4.6	4.2	4.6	5.4	4.6	4.2	4.6	5.0	4.6	5.0
147.5°	5.0	4.6	4.6	5.0	5.8	5.0	4.6	4.6	5.0	5.0	5.4
150°	5.4	5.4	5.0	5.4	6.2	5.4	5.0	5.4	5.4	5.4	5.8
152.5°	5.8	5.8	5.8	6.2	6.6	6.2	5.8	5.8	5.8	5.8	6.2
155°	6.6	6.6	6.6	7.1	7.5	7.1	6.6	6.6	6.6	6.2	7.1
157.5°	7.5	7.9	7.9	8.3	8.7	8.3	7.9	7.9	7.5	7.5	7.9
160°	9.1	9.1	9.6	10.0	10.4	10.0	9.6	9.1	9.1	8.7	9.1
162.5°	10.0	10.0	10.8	11.2	12.0	11.2	10.8	10.0	10.0	10.0	10.0
165°	11.2	11.2	12.0	12.9	13.7	12.9	12.0	11.2	11.2	10.8	10.8
167.5°	12.0	12.0	12.9	14.1	15.0	14.1	12.9	12.0	12.0	11.6	11.6
170°	12.5	12.9	13.7	15.0	15.8	15.0	13.7	12.9	12.5	12.5	12.0
172.5°	13.7	13.7	15.0	16.2	17.0	16.2	15.0	13.7	13.7	13.3	13.3
175°	14.5	15.0	15.8	17.0	17.9	17.0	15.8	15.0	14.5	14.1	14.1
177.5°	14.5	15.4	16.2	17.5	18.3	17.5	16.2	15.4	14.5	14.1	14.1
180°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	22157.1	22157.1	22157.1	22157.1	22157.1	22157.1
2.5°	21513.5	21499.4	21513.5	21663.9	21859.6	22144.2
5°	21013.7	20935.6	21013.7	21180.3	21539.7	22081.5
7.5°	20431.6	20386.3	20431.6	20710.4	21164.5	21931.5
10°	19818.8	19716.1	19818.8	20133.7	20669.3	21702.6
12.5°	19063.4	18927.6	19063.4	19388.8	20064.3	21337.3
15°	18102.8	17983.6	18102.8	18463.9	19247.5	20797.2
17.5°	17072.0	16964.0	17072.0	17385.7	18248.7	20036.1
20°	15777.4	15692.6	15777.4	16221.1	17067.9	19055.1
22.5°	14419.2	14339.8	14419.2	14813.5	15694.7	17825.3
25°	12821.3	12778.1	12821.3	13261.7	14058.6	16386.9
27.5°	11094.5	11021.0	11094.5	11555.3	12369.2	14695.1
30°	9330.4	9208.7	9330.4	9742.6	10471.3	12815.9
32.5°	7604.9	7517.3	7604.9	7898.7	8660.2	10711.9
35°	5937.2	5849.5	5937.2	6202.7	6950.6	8770.8
37.5°	4626.4	4471.4	4626.4	4796.7	5403.7	6883.2
40°	3508.7	3483.8	3508.7	3723.1	4111.6	5355.1
42.5°	2856.4	2788.7	2856.4	2948.7	3239.5	4057.6
45°	2343.7	2317.1	2343.7	2413.5	2608.8	3171.8
47.5°	2015.5	2027.1	2015.5	2060.4	2206.6	2583.0
50°	1770.8	1777.8	1770.8	1792.0	1889.6	2169.6
52.5°	1590.5	1584.2	1590.5	1592.5	1653.2	1863.8
55°	1430.9	1423.0	1430.9	1426.3	1471.2	1606.2
57.5°	1291.3	1297.1	1291.3	1285.1	1309.2	1410.6
60°	1166.7	1172.1	1166.7	1162.1	1177.9	1237.3
62.5°	1061.5	1064.9	1061.5	1061.1	1058.2	1103.9
65°	967.7	971.4	967.7	962.7	958.1	979.3
67.5°	877.9	877.9	877.9	869.2	862.1	882.9
70°	793.6	793.1	793.6	779.4	774.0	780.3
72.5°	692.2	702.2	692.2	681.8	681.4	682.2
75°	593.7	605.4	593.7	587.1	579.6	585.8
77.5°	494.0	511.9	494.0	488.6	484.9	480.7
80°	391.8	411.3	391.8	382.7	377.3	384.3
82.5°	289.6	304.1	289.6	278.4	278.0	281.3
85°	172.4	195.7	172.4	162.5	166.2	162.5
87.5°	55.3	70.6	55.3	52.8	58.2	56.9
90°	0.4	0.4	0.4	0.4	0.4	0.4
92.5°	0.4	0.4	0.4	0.4	0.4	0.4
95°	0.4	0.4	0.4	0.4	0.4	0.8
97.5°	0.4	0.8	0.4	0.4	0.4	0.8
100°	0.4	0.8	0.4	0.4	0.8	0.8
102.5°	0.4	0.8	0.4	0.4	0.8	0.8
105°	0.4	0.8	0.4	0.4	0.8	0.8
107.5°	0.4	0.8	0.4	0.8	0.8	0.8
110°	0.4	0.8	0.4	0.8	0.8	0.8



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 CATALOG NUMBER: EHBR1-24-UNV-TASM-L840

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	0.4	0.8	0.4	0.8	0.8	0.8
115°	0.4	0.8	0.4	0.8	0.8	1.2
117.5°	0.4	0.8	0.4	0.8	1.2	1.2
120°	0.4	0.8	0.4	0.8	1.2	1.2
122.5°	0.8	0.8	0.8	1.2	1.7	1.7
125°	0.8	1.2	0.8	1.7	2.1	1.7
127.5°	0.8	1.2	0.8	1.7	2.1	2.1
130°	1.2	1.2	1.2	2.1	2.5	2.5
132.5°	1.7	1.7	1.7	2.9	3.3	2.9
135°	2.1	1.7	2.1	2.9	3.7	3.3
137.5°	2.5	2.1	2.5	3.7	4.2	3.7
140°	3.3	2.9	3.3	4.2	4.2	4.2
142.5°	3.7	3.7	3.7	4.6	4.6	4.6
145°	4.6	4.6	4.6	5.0	4.6	5.0
147.5°	5.4	5.4	5.4	5.4	5.0	5.0
150°	6.2	6.2	6.2	5.8	5.4	5.4
152.5°	6.6	7.1	6.6	6.2	5.8	5.8
155°	7.5	7.9	7.5	7.1	6.2	6.6
157.5°	8.3	9.1	8.3	7.9	7.5	7.5
160°	9.6	10.0	9.6	9.1	8.7	9.1
162.5°	10.4	10.8	10.4	10.0	10.0	10.0
165°	11.2	11.6	11.2	10.8	10.8	11.2
167.5°	11.6	11.6	11.6	11.6	11.6	12.0
170°	12.0	12.5	12.0	12.0	12.5	12.5
172.5°	12.9	13.3	12.9	13.3	13.3	13.7
175°	13.7	14.1	13.7	14.1	14.1	14.5
177.5°	14.1	14.5	14.1	14.1	14.1	14.5
180°	15.4	15.4	15.4	15.4	15.4	15.4



TEST NUMBER: P1431715  
 CATALOG NUMBER: EHBR1-24-UNV-TASM-L840

**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	17.79	19.00	18.16	19.31	19.63	17.11	18.31	17.47	18.63	18.95
	3H	19.43	20.50	19.81	20.83	21.20	19.06	20.13	19.44	20.46	20.83
	4H	20.13	21.13	20.54	21.49	21.87	19.92	20.92	20.32	21.27	21.66
	6H	20.70	21.62	21.12	22.00	22.39	20.67	21.59	21.09	21.96	22.36
	8H	20.91	21.78	21.34	22.17	22.58	20.96	21.83	21.39	22.22	22.63
	12H	21.03	21.86	21.47	22.25	22.68	21.15	21.98	21.59	22.37	22.80
4H	2H	18.25	19.25	18.66	19.60	19.99	17.74	18.74	18.14	19.09	19.48
	3H	20.16	20.99	20.58	21.39	21.80	19.91	20.74	20.33	21.15	21.55
	4H	21.02	21.76	21.46	22.18	22.63	20.91	21.65	21.35	22.07	22.52
	6H	21.74	22.38	22.21	22.83	23.30	21.81	22.44	22.27	22.89	23.36
	8H	22.00	22.60	22.47	23.05	23.52	22.15	22.75	22.62	23.20	23.67
	12H	22.17	22.69	22.66	23.18	23.66	22.40	22.93	22.89	23.41	23.89
8H	4H	21.33	21.92	21.80	22.37	22.85	21.25	21.85	21.72	22.30	22.77
	6H	22.20	22.69	22.71	23.19	23.67	22.30	22.79	22.81	23.29	23.77
	8H	22.55	22.99	23.08	23.51	24.00	22.75	23.18	23.28	23.70	24.20
	12H	22.81	23.19	23.33	23.69	24.27	23.11	23.49	23.63	23.98	24.56
12H	4H	21.36	21.88	21.85	22.37	22.84	21.28	21.81	21.77	22.29	22.77
	6H	22.27	22.71	22.80	23.23	23.72	22.38	22.81	22.90	23.33	23.82
	8H	22.69	23.07	23.21	23.57	24.14	22.89	23.27	23.41	23.77	24.34

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**

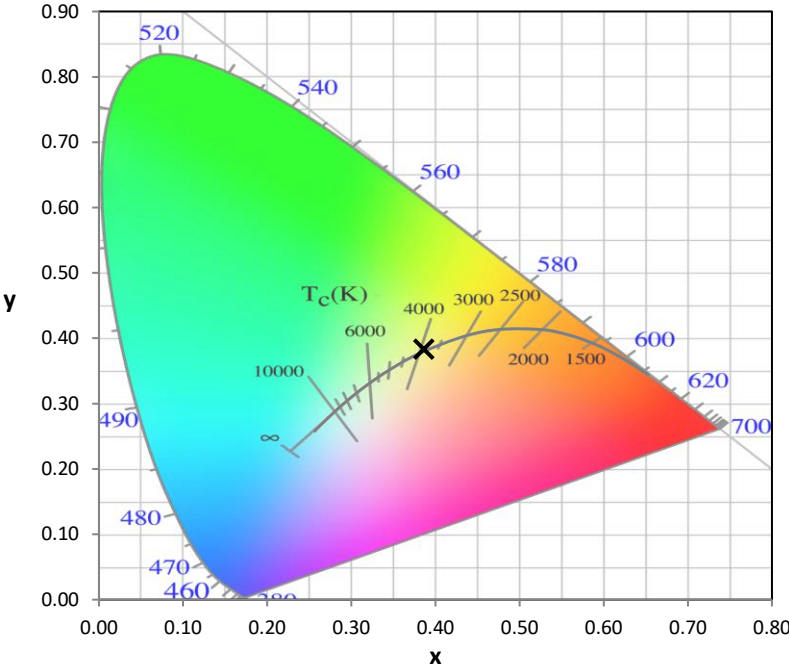
Stabilization Time: 42M  
 Operation Time: 1H 42M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-1

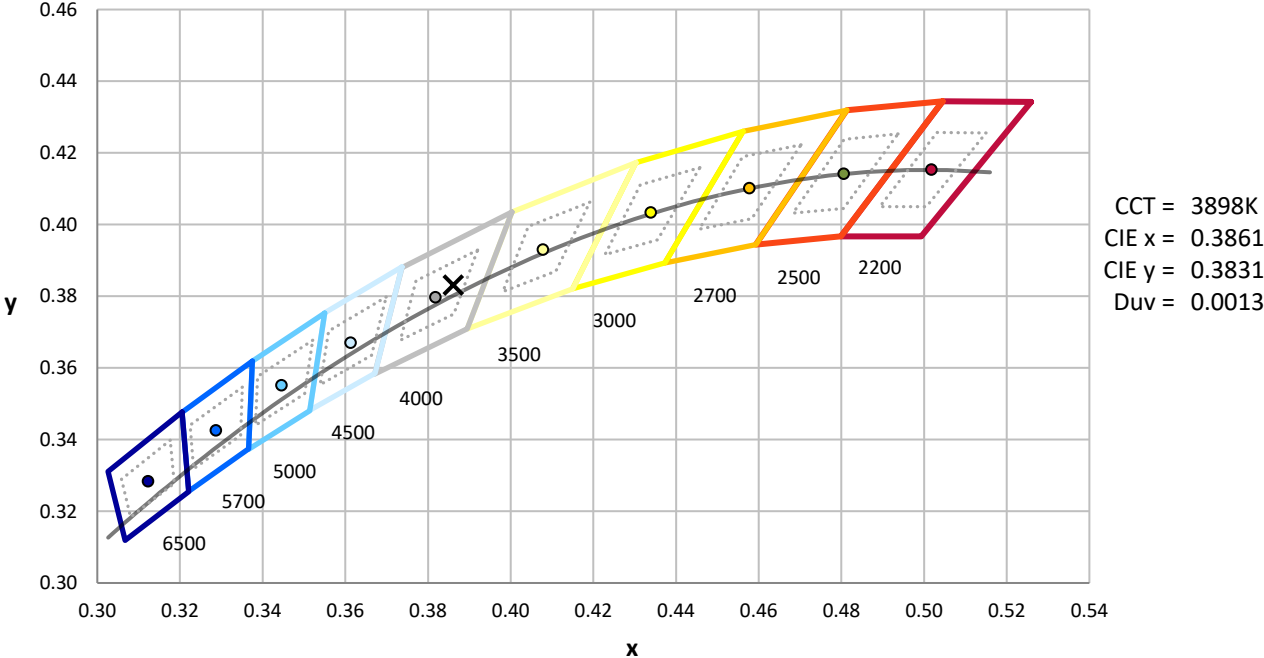
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

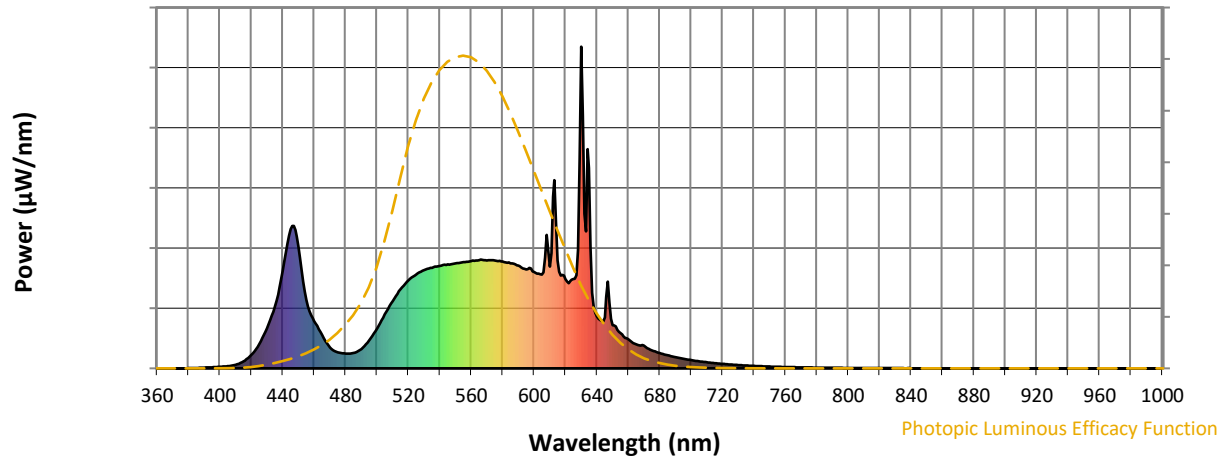


CCT = 3898K  
 CIE x = 0.3861  
 CIE y = 0.3831  
 Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-1

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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

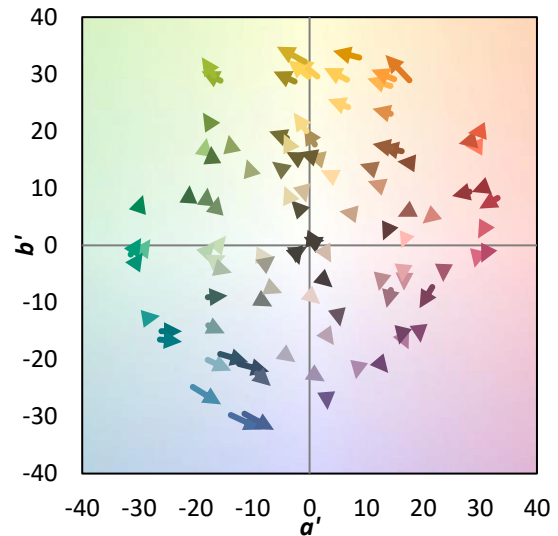
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	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**

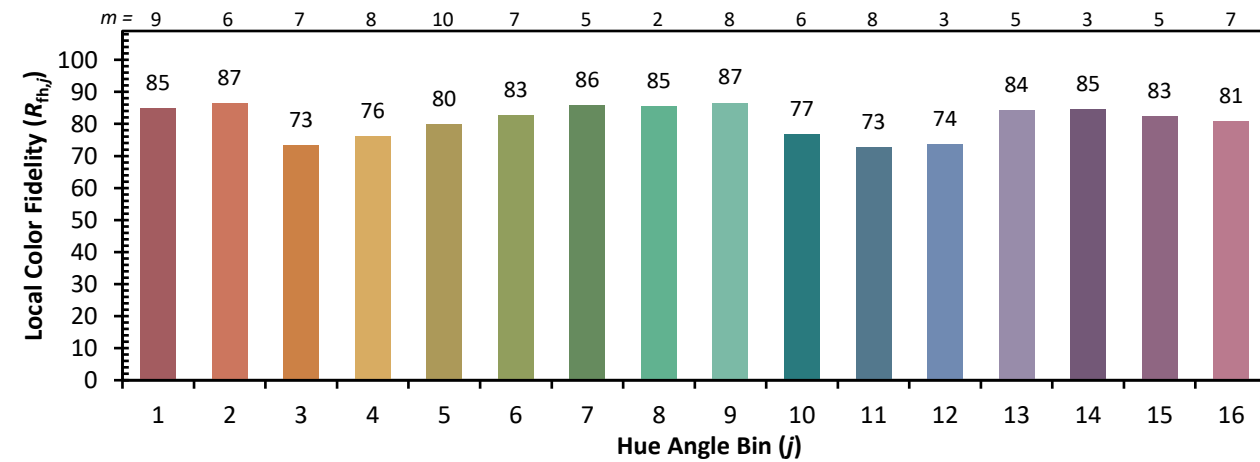
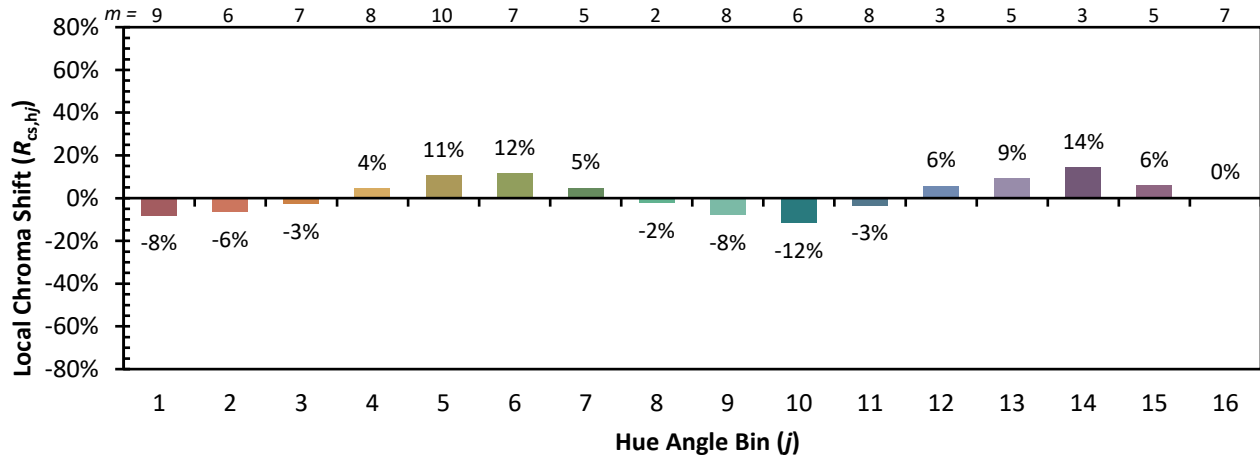


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)