

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-UPL36

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: REPORT IS A COMBINATION OF REPORTS P1431745 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-UPL36
Description: Elevate Round Highbay at, 30000 lumens, 4000K 80CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

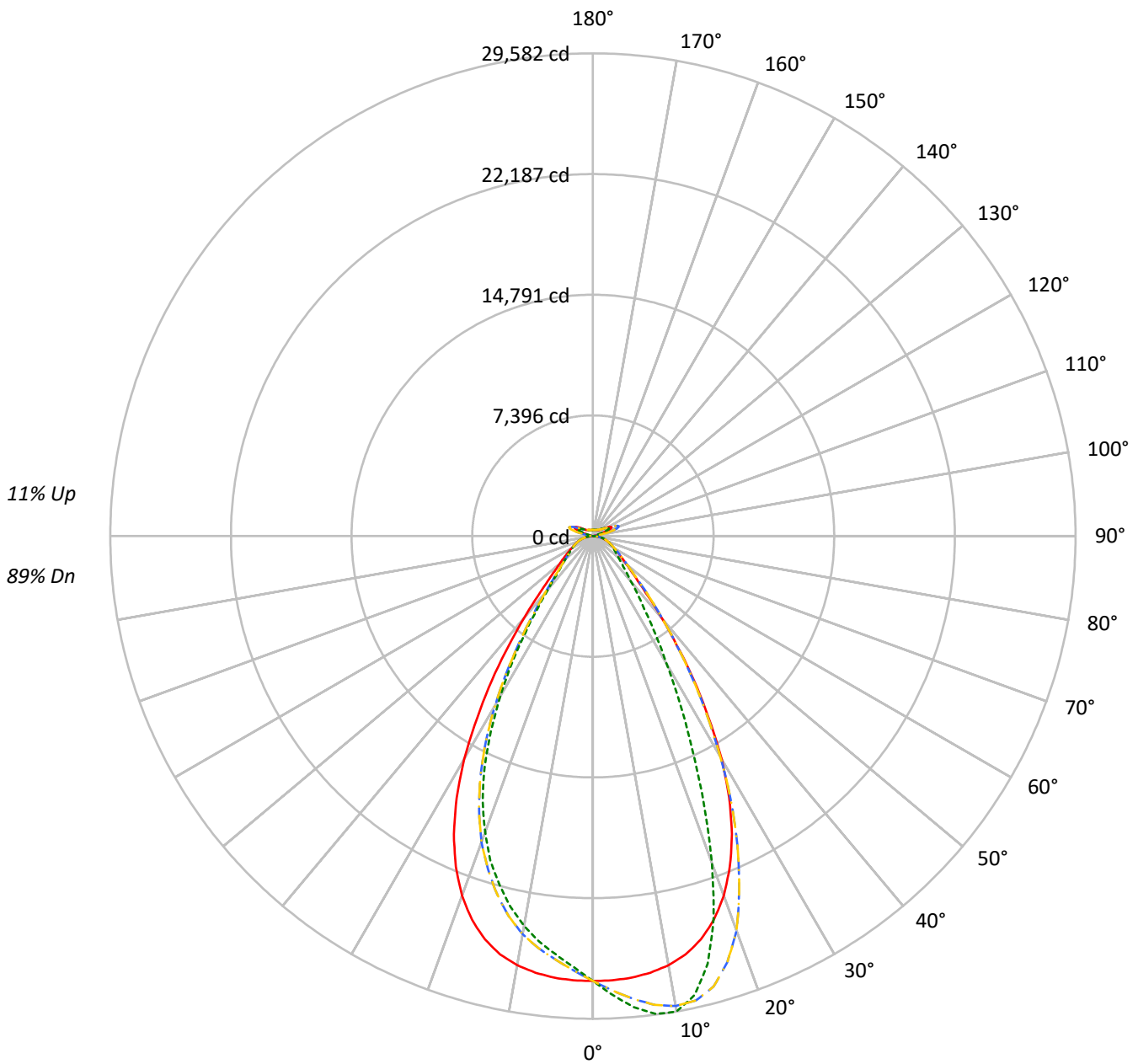
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34165.0 lumens
Efficiency: N/A
Efficacy: 181.5 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: Semi-Direct

Input Watts (W): 188.2
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

TEST NUMBER:
CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL36

Luminous Intensity Polar Plot



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



TEST NUMBER:

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2592.2	7.6
10°-20°	7052.2	20.6
20°-30°	8270.8	24.2
30°-40°	5751.8	16.8
40°-50°	2858.4	8.4
50°-60°	1709.6	5.0
60°-70°	1203.3	3.5
70°-80°	775.1	2.3
80°-90°	252.7	0.7
90°-100°	98.3	0.3
100°-110°	643.5	1.9
110°-120°	1189.1	3.5
120°-130°	706.5	2.1
130°-140°	427.0	1.2
140°-150°	295.1	0.9
150°-160°	192.4	0.6
160°-170°	110.2	0.3
170°-180°	36.6	0.1
0°-30°	17915.2	52.4
0°-40°	23667.1	69.3
0°-60°	28235.1	82.6
0°-90°	30466.2	89.2
90°-120°	1931.0	5.7
90°-150°	3359.6	9.8
90°-180°	3699.0	10.8
0°-180°	34165.0	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°	27	31	27	27	27	22
95°	52	49	52	46	52	56
105°	296	150	296	224	296	399
115°	1266	1080	1266	1028	1266	1153
125°	810	848	810	742	810	746
135°	511	591	511	542	511	406
145°	462	483	462	450	462	290
155°	411	428	411	398	411	192
165°	386	397	386	378	386	110
175°	384	390	384	377	384	37
180°	383	383	383	383	383	



TEST NUMBER:
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL36

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°	27.1	46.0	79.2	44.0	30.7	44.0	79.2	46.0	27.1	47.5	74.1
92.5°	35.3	62.4	112.0	58.3	40.9	58.3	112.0	62.4	35.3	61.9	119.1
95°	52.1	76.7	142.6	64.5	49.1	64.5	142.6	76.7	52.1	82.3	166.2
97.5°	80.8	95.1	161.0	68.6	59.3	68.6	161.0	95.1	80.8	100.7	190.7
100°	107.4	107.4	294.0	78.8	67.5	78.8	294.0	107.4	107.4	123.7	297.1
102.5°	162.6	210.1	681.1	157.0	81.8	157.0	681.1	210.1	162.6	232.1	630.5
105°	295.5	480.1	1198.6	404.5	149.8	404.5	1198.6	480.1	295.5	485.8	1123.4
107.5°	559.4	895.3	1544.2	797.2	348.2	797.2	1544.2	895.3	559.4	860.1	1481.9
110°	894.8	1251.2	1685.4	1091.8	704.1	1091.8	1685.4	1251.2	894.8	1181.2	1553.5



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL36

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	1164.8	1394.4	1646.5	1210.4	974.1	1210.4	1646.5	1394.4	1164.8	1303.9	1488.0
115°	1265.6	1374.0	1470.6	1206.3	1080.5	1206.3	1470.6	1374.0	1265.6	1273.2	1328.5
117.5°	1222.6	1257.4	1270.1	1132.7	1086.6	1132.7	1270.1	1257.4	1222.6	1144.9	1128.0
120°	1104.0	1089.7	1070.3	1024.3	1025.3	1024.3	1070.3	1089.7	1104.0	999.7	941.9
122.5°	955.2	924.5	904.6	914.3	941.4	914.3	904.6	924.5	955.2	850.8	807.4
125°	809.9	779.3	788.5	820.2	847.8	820.2	788.5	779.3	809.9	722.6	711.8
127.5°	687.8	673.5	704.7	740.4	763.9	740.4	704.7	673.5	687.8	632.6	644.3
130°	600.4	603.9	645.4	675.5	690.3	675.5	645.4	603.9	600.4	573.8	601.9
132.5°	545.6	561.5	600.9	626.9	635.6	626.9	600.9	561.5	545.6	537.9	572.2
135°	511.4	534.9	570.7	587.5	590.6	587.5	570.7	534.9	511.4	513.9	545.6
137.5°	491.4	514.9	542.0	555.3	551.7	555.3	542.0	514.9	491.4	498.0	522.1
140°	479.6	503.2	515.4	530.8	527.7	530.8	515.4	503.2	479.6	483.7	502.1
142.5°	467.9	489.4	495.5	506.7	503.1	506.7	495.5	489.4	467.9	472.0	484.2
145°	462.2	478.1	473.5	488.3	483.2	488.3	473.5	478.1	462.2	463.8	470.4
147.5°	452.0	463.8	457.6	470.4	465.4	470.4	457.6	463.8	452.0	452.0	454.5
150°	440.2	448.4	439.7	454.5	453.6	454.5	439.7	448.4	440.2	438.2	440.8
152.5°	424.5	432.6	424.5	441.3	439.8	441.3	424.5	432.6	424.5	422.4	425.0
155°	411.1	415.2	411.1	428.0	428.5	428.0	411.1	415.2	411.1	410.6	411.6
157.5°	401.9	404.5	402.4	417.2	417.7	417.2	402.4	404.5	401.9	401.9	402.4
160°	393.7	397.8	396.3	409.1	409.6	409.1	396.3	397.8	393.7	395.2	395.7
162.5°	390.7	390.7	389.7	402.4	403.4	402.4	389.7	390.7	390.7	390.7	392.7
165°	386.1	388.1	385.0	394.2	397.3	394.2	385.0	388.1	386.1	387.6	387.6
167.5°	385.0	383.0	384.0	391.7	394.8	391.7	384.0	383.0	385.0	386.6	386.6
170°	381.4	381.9	381.0	388.6	391.7	388.6	381.0	381.9	381.4	383.5	385.0
172.5°	383.0	383.0	380.4	386.0	391.2	386.0	380.4	383.0	383.0	384.6	386.6
175°	384.0	382.5	381.4	385.1	390.2	385.1	381.4	382.5	384.0	383.5	383.5
177.5°	382.0	383.0	384.0	387.6	394.8	387.6	384.0	383.0	382.0	383.5	383.5
180°	383.0	383.0	383.0	383.0	383.0	383.0	383.0	383.0	383.0	383.0	383.0



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL36

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°	43.5	27.1	43.5	74.1	47.5	27.1
92.5°	66.0	39.4	66.0	119.1	61.9	35.3
95°	76.2	45.5	76.2	166.2	82.3	52.1
97.5°	84.4	58.3	84.4	190.7	100.7	80.8
100°	98.7	76.7	98.7	297.1	123.7	107.4
102.5°	209.1	129.9	209.1	630.5	232.1	162.6
105°	440.3	223.9	440.3	1123.4	485.8	295.5
107.5°	788.0	387.6	788.0	1481.9	860.1	559.4
110°	1045.7	723.0	1045.7	1553.5	1181.2	894.8



TEST NUMBER:

CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-UPL36

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1123.4	976.7	1123.4	1488.0	1303.9	1164.8
115°	1080.5	1027.8	1080.5	1328.5	1273.2	1265.6
117.5°	986.4	993.0	986.4	1128.0	1144.9	1222.6
120°	878.0	919.4	878.0	941.9	999.7	1104.0
122.5°	778.3	827.3	778.3	807.4	850.8	955.2
125°	692.3	741.9	692.3	711.8	722.6	809.9
127.5°	633.0	666.3	633.0	644.3	632.6	687.8
130°	586.5	615.1	586.5	601.9	573.8	600.4
132.5°	554.3	572.7	554.3	572.2	537.9	545.6
135°	526.2	542.0	526.2	545.6	513.9	511.4
137.5°	502.2	516.0	502.2	522.1	498.0	491.4
140°	480.7	492.5	480.7	502.1	483.7	479.6
142.5°	458.7	466.9	458.7	484.2	472.0	467.9
145°	443.3	449.5	443.3	470.4	463.8	462.2
147.5°	430.0	434.1	430.0	454.5	452.0	452.0
150°	416.8	420.9	416.8	440.8	438.2	440.2
152.5°	403.0	407.6	403.0	425.0	422.4	424.5
155°	393.7	398.3	393.7	411.6	410.6	411.1
157.5°	388.6	391.6	388.6	402.4	401.9	401.9
160°	384.1	386.6	384.1	395.7	395.2	393.7
162.5°	378.9	381.5	378.9	392.7	390.7	390.7
165°	377.9	378.4	377.9	387.6	387.6	386.1
167.5°	376.3	378.4	376.3	386.6	386.6	385.0
170°	376.8	377.3	376.8	385.0	383.5	381.4
172.5°	377.8	378.4	377.8	386.6	384.6	383.0
175°	376.9	377.4	376.9	383.5	383.5	384.0
177.5°	379.4	379.9	379.4	383.5	383.5	382.0
180°	383.0	383.0	383.0	383.0	383.0	383.0



TEST NUMBER: CATALOG
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L840-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	17.17	18.22	17.72	18.75	19.33	16.49	17.54	17.04	18.06	18.65
	3H	18.71	19.65	19.28	20.19	20.81	18.33	19.27	18.90	19.81	20.43
	4H	19.35	20.22	19.93	20.78	21.42	19.11	19.99	19.70	20.54	21.18
	6H	19.83	20.63	20.42	21.20	21.85	19.75	20.56	20.35	21.13	21.78
	8H	19.98	20.74	20.59	21.33	21.98	19.97	20.73	20.58	21.32	21.98
	12H	20.05	20.77	20.66	21.35	22.04	20.10	20.82	20.71	21.41	22.09
4H	2H	17.58	18.45	18.16	19.01	19.65	17.06	17.93	17.64	18.49	19.13
	3H	19.37	20.09	19.97	20.70	21.35	19.11	19.83	19.71	20.44	21.09
	4H	20.15	20.80	20.76	21.41	22.10	20.02	20.67	20.63	21.28	21.97
	6H	20.76	21.32	21.40	21.95	22.66	20.79	21.35	21.43	21.98	22.69
	8H	20.95	21.48	21.60	22.11	22.82	21.06	21.58	21.70	22.21	22.93
	12H	21.06	21.52	21.72	22.18	22.90	21.22	21.69	21.88	22.35	23.06
8H	4H	20.39	20.92	21.04	21.55	22.26	20.30	20.82	20.94	21.45	22.16
	6H	21.13	21.56	21.81	22.24	22.96	21.20	21.62	21.87	22.30	23.02
	8H	21.41	21.78	22.09	22.47	23.20	21.55	21.93	22.24	22.62	23.35
	12H	21.58	21.91	22.26	22.58	23.38	21.80	22.13	22.48	22.80	23.60
12H	4H	20.40	20.86	21.06	21.52	22.24	20.30	20.77	20.96	21.43	22.14
	6H	21.18	21.56	21.87	22.24	22.98	21.24	21.62	21.93	22.31	23.04
	8H	21.49	21.82	22.18	22.49	23.30	21.65	21.98	22.33	22.65	23.45

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

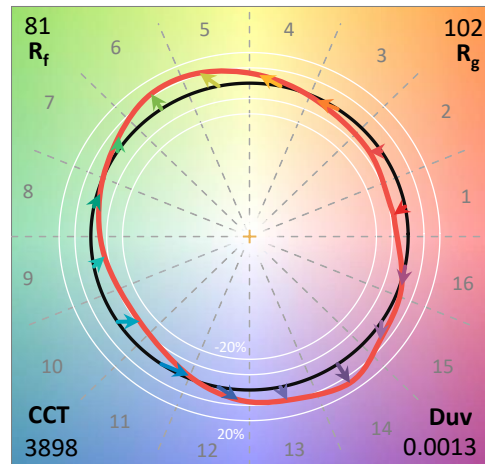
Test Information

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		



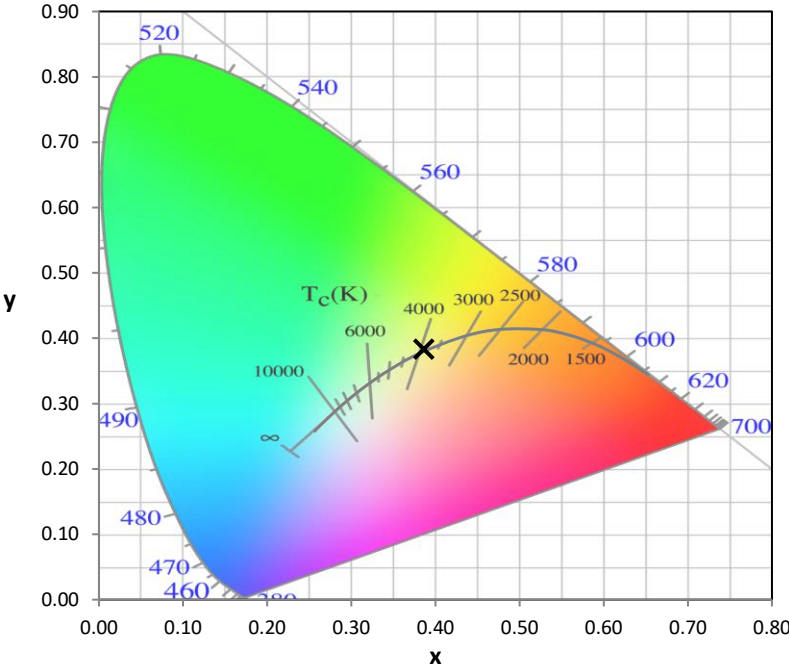
Test Conditions
 Stabilization Time: 42M
 Operation Time: 1H 42M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-1

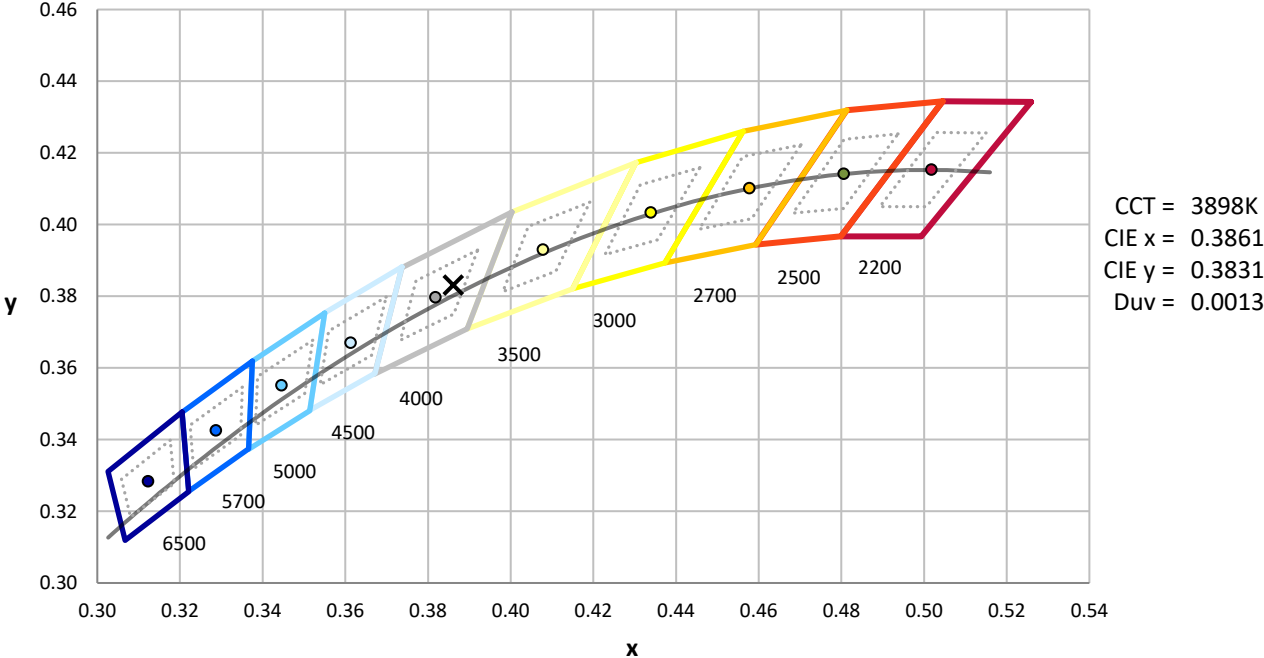
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

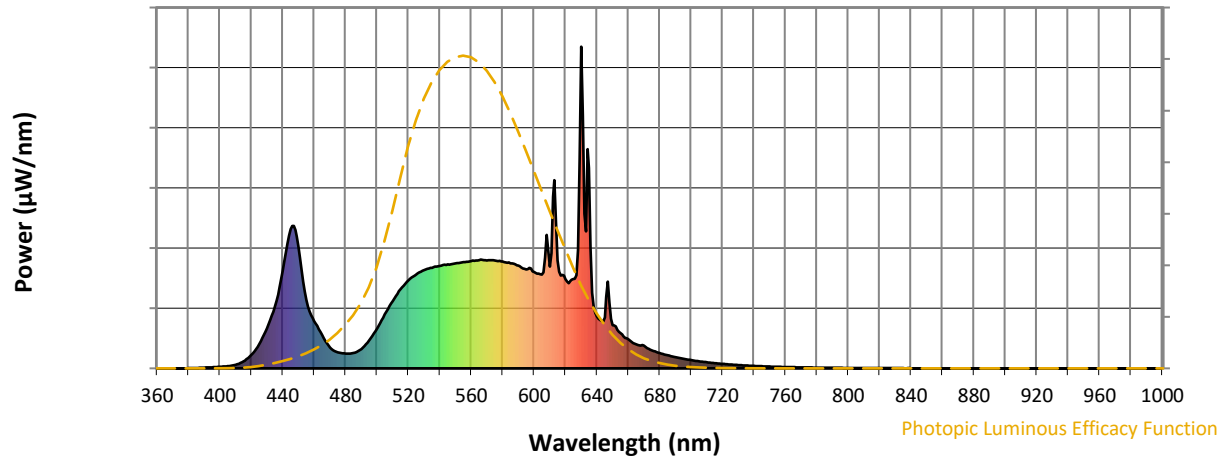


CCT = 3898K
 CIE x = 0.3861
 CIE y = 0.3831
 Duv = 0.0013

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

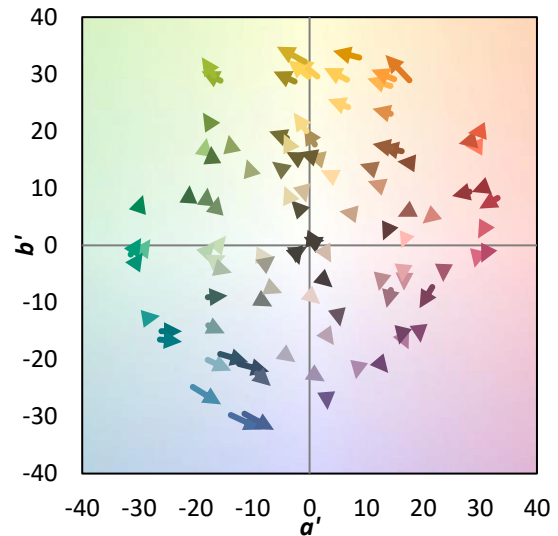
λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	60	NR	620	277	NR	750	6	NR	880	0	NR
365	0	NR	495	87	NR	625	278	NR	755	5	NR	885	0	NR
370	0	NR	500	124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

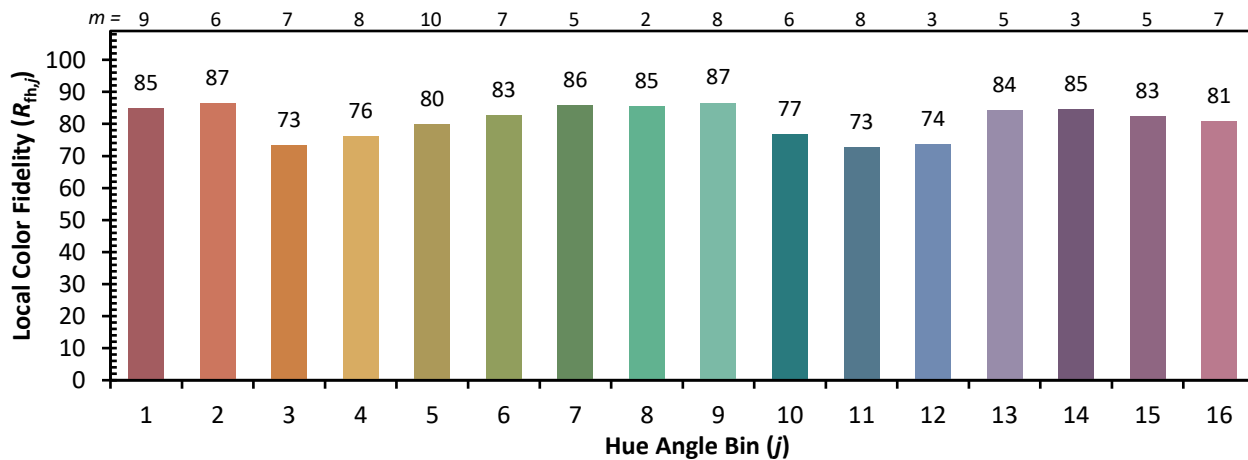
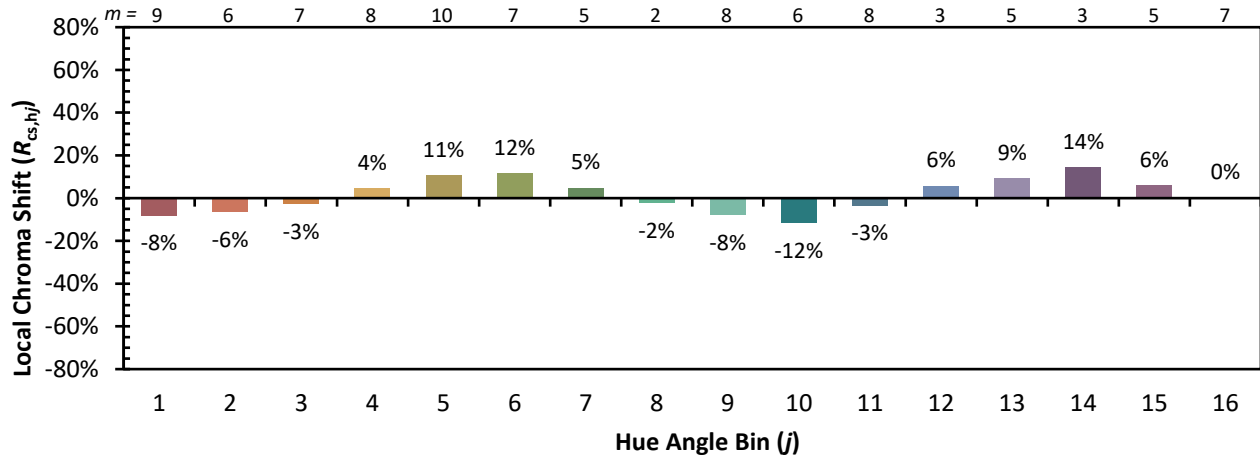


Individual Sample Fidelity Index ($R_{f,i}$)

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)