

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: P1432590

Luminaire Tested: EHBR1-18-UNV-TASM-L835-UPL24

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1432590
REPORT IS A COMBINATION OF REPORTS P1431679 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-18-UNV-TASM-L835-UPL24
Description: Elevate Round Highbay at, 18000 lumens, 3500K 80CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

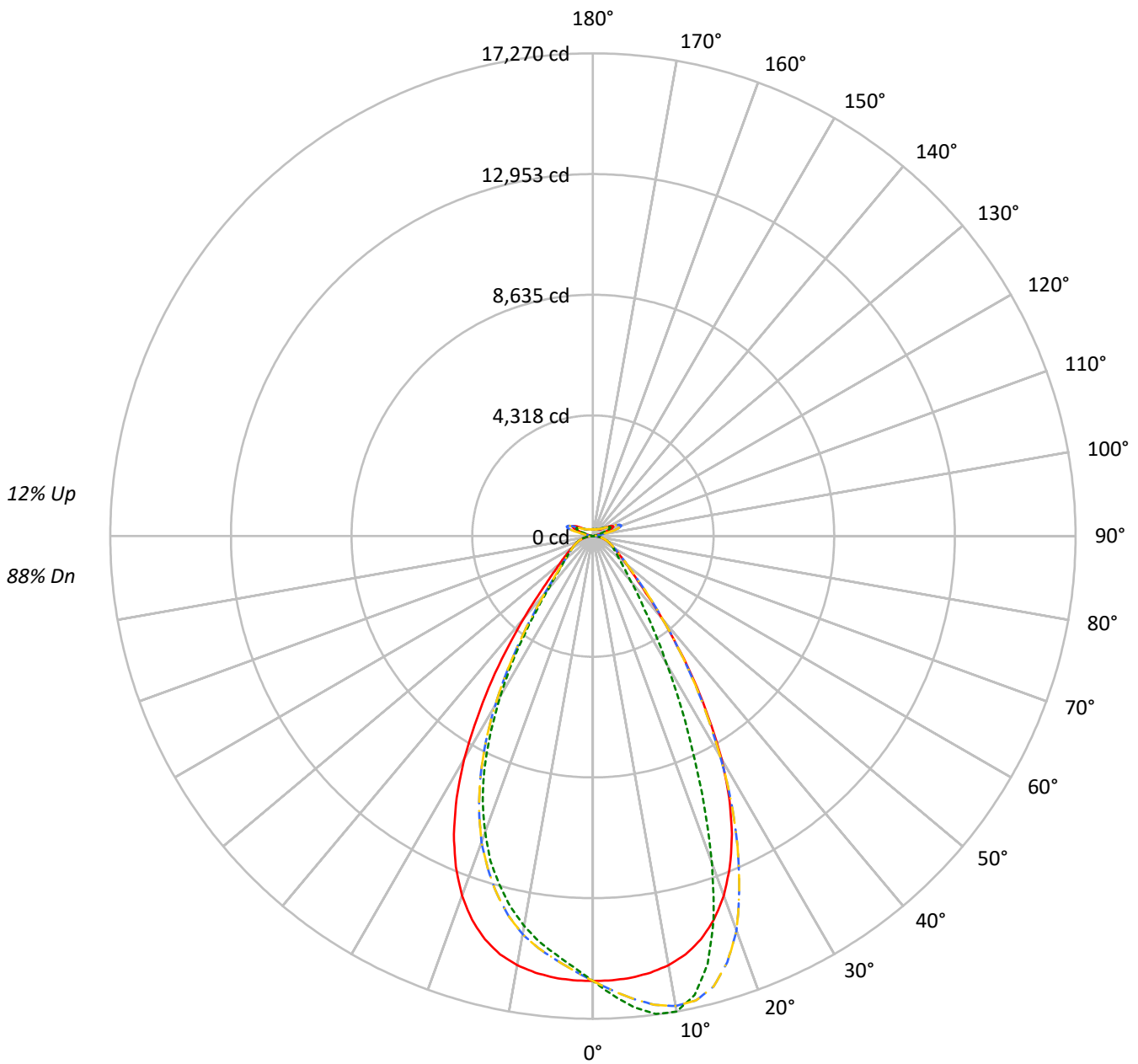
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20155.4 lumens
Efficiency: N/A
Efficacy: 181.3 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): 111.2
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: P1432590
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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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	91	91	91	88			88
1	109	105	102	99	105	102	99	97	96	94	92	90	88	87	85	84	82				80
2	102	96	91	87	98	93	89	85	88	84	81	83	80	78	79	76	74				72
3	95	88	82	77	92	85	80	75	81	76	73	77	73	70	73	70	68				65
4	90	80	74	69	87	79	72	68	75	70	66	71	67	64	68	65	62				60
5	84	74	67	62	81	73	66	62	69	64	60	66	62	58	64	60	57				55
6	79	69	62	57	77	67	61	56	65	59	55	62	57	54	60	56	52				50
7	75	64	57	52	72	63	56	52	60	55	51	58	53	50	56	52	49				47
8	71	60	53	48	69	59	52	48	57	51	47	55	50	46	53	48	45				44
9	67	56	49	45	65	55	49	44	53	48	44	51	46	43	50	45	42				41
10	63	53	46	42	62	52	46	42	50	45	41	48	44	40	47	43	40				38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	74742	74742	74742	74742
5°	74287	79250	74287	70432
10°	73373	81284	73373	66657
15°	71207	75539	71207	61574
20°	66596	60571	66596	54845
25°	58943	41968	58943	45962
30°	47859	27303	47859	34389
35°	34326	17682	34326	22894
40°	22193	12187	22193	14438
45°	14081	9440	14081	10287
50°	10457	8022	10457	8568
55°	8538	7308	8538	7564
60°	7393	6962	7393	7003
65°	6739	6713	6739	6685
70°	6388	6578	6388	6493
75°	5974	6364	5974	6172
80°	5248	6007	5248	5617
85°	3395	4289	3395	4091

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 19797 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1513.3	7.5
10°-20°	4117.1	20.4
20°-30°	4828.5	24.0
30°-40°	3358.0	16.7
40°-50°	1668.7	8.3
50°-60°	998.1	5.0
60°-70°	702.5	3.5
70°-80°	452.5	2.2
80°-90°	147.9	0.7
90°-100°	62.9	0.3
100°-110°	412.3	2.0
110°-120°	761.8	3.8
120°-130°	452.6	2.2
130°-140°	273.4	1.4
140°-150°	188.9	0.9
150°-160°	123.0	0.6
160°-170°	70.4	0.3
170°-180°	23.3	0.1
0°-30°	10459.0	51.9
0°-40°	13817.0	68.6
0°-60°	16483.8	81.8
0°-90°	17786.7	88.2
90°-120°	1237.0	6.1
90°-150°	2152.0	10.7
90°-180°	2369.0	11.8
0°-180°	20155.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	15916	15916	15916	15916	15916	
5°	15861	16921	15861	15038	15861	1505
15°	14939	15848	14939	12918	14939	4175
25°	11771	8381	11771	9179	11771	5329
35°	6300	3245	6300	4202	6300	3933
45°	2278	1527	2278	1664	2278	1864
55°	1154	988	1154	1022	1154	1055
65°	703	701	703	698	703	706
75°	421	448	421	435	421	442
85°	117	147	117	141	117	130
90°	17	20	17	17	17	13
95°	33	31	33	29	33	36
105°	189	96	189	143	189	255
115°	811	692	811	658	811	739
125°	519	543	519	475	519	478
135°	328	378	328	347	328	260
145°	296	309	296	288	296	185
155°	263	274	263	255	263	123
165°	247	254	247	242	247	70
175°	245	249	245	241	245	23
180°	244	244	244	244	244	



TEST NUMBER: P1432590
 CATALOG NUMBER: EHBR1-18-UNV-TASM-L835-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7
2.5°	15906.3	16112.0	16278.5	16388.4	16442.7	16388.4	16278.5	16112.0	15906.3	15701.9	15561.4
5°	15861.4	16273.2	16622.1	16850.4	16921.1	16850.4	16622.1	16273.2	15861.4	15472.2	15214.0
7.5°	15753.6	16395.3	16913.7	17180.2	17245.2	17180.2	16913.7	16395.3	15753.6	15202.6	14876.5
10°	15589.2	16472.3	17071.3	17262.2	17270.0	17262.2	17071.3	16472.3	15589.2	14846.9	14462.3
12.5°	15326.8	16444.8	17018.4	16955.8	16813.3	16955.8	17018.4	16444.8	15326.8	14412.4	13927.2
15°	14938.9	16282.1	16683.9	16173.8	15847.6	16173.8	16683.9	16282.1	14938.9	13825.6	13262.8
17.5°	14392.1	15977.7	15985.5	14976.5	14361.0	14976.5	15985.5	15977.7	14392.1	13108.2	12488.3
20°	13687.5	15489.5	15023.9	13178.4	12449.2	13178.4	15023.9	15489.5	13687.5	12260.0	11651.8
22.5°	12804.1	14831.1	13684.7	11369.5	10374.7	11369.5	13684.7	14831.1	12804.1	11273.7	10640.6
25°	11770.9	14024.4	12244.2	9398.5	8380.9	9398.5	12244.2	14024.4	11770.9	10098.4	9525.9
27.5°	10555.6	13002.0	10710.3	7680.1	6741.2	7680.1	10710.3	13002.0	10555.6	8885.0	8300.3
30°	9205.7	11691.2	9113.8	6116.3	5251.7	6116.3	9113.8	11691.2	9205.7	7521.7	6998.2
32.5°	7694.5	10406.4	7580.7	4900.7	4168.4	4900.7	7580.7	10406.4	7694.5	6220.7	5673.7
35°	6300.1	8799.0	6198.4	3850.8	3245.2	3850.8	6198.4	8799.0	6300.1	4992.6	4455.4
37.5°	4944.3	7280.2	4941.1	3100.8	2632.3	3100.8	4941.1	7280.2	4944.3	3881.6	3445.5
40°	3846.6	5692.5	3871.4	2475.3	2112.4	2475.3	3871.4	5692.5	3846.6	2953.3	2674.4
42.5°	2914.6	4352.7	3042.9	2031.5	1794.3	2031.5	3042.9	4352.7	2914.6	2326.9	2118.0
45°	2278.3	3203.1	2376.2	1714.0	1527.4	1714.0	2376.2	3203.1	2278.3	1874.0	1733.6
47.5°	1855.4	2475.6	1925.8	1470.1	1339.4	1470.1	1925.8	2475.6	1855.4	1585.0	1480.0
50°	1558.4	1899.6	1599.1	1283.3	1195.6	1283.3	1599.1	1899.6	1558.4	1357.3	1287.2
52.5°	1338.8	1549.2	1361.8	1143.7	1084.5	1143.7	1361.8	1549.2	1338.8	1187.5	1144.0
55°	1153.8	1302.4	1184.2	1028.5	987.6	1028.5	1184.2	1302.4	1153.8	1056.8	1024.6
57.5°	1013.2	1104.8	1028.5	930.2	903.1	930.2	1028.5	1104.8	1013.2	940.4	923.1
60°	888.7	956.8	907.6	844.6	836.9	844.6	907.6	956.8	888.7	846.1	834.7
62.5°	792.9	835.9	802.5	767.6	760.7	767.6	802.5	835.9	792.9	760.2	762.2
65°	703.4	743.4	717.2	698.4	700.7	698.4	717.2	743.4	703.4	688.2	691.5
67.5°	634.2	655.0	643.7	633.0	635.6	633.0	643.7	655.0	634.2	619.3	624.3
70°	560.5	582.9	571.3	572.7	577.2	572.7	571.3	582.9	560.5	556.0	559.9
72.5°	490.0	507.4	503.5	507.1	511.8	507.1	503.5	507.4	490.0	489.4	489.7
75°	420.8	433.9	435.7	440.8	448.3	440.8	435.7	433.9	420.8	416.3	421.7
77.5°	345.3	360.2	365.9	372.8	383.8	372.8	365.9	360.2	345.3	348.3	350.9
80°	276.1	283.0	295.5	300.5	316.0	300.5	295.5	283.0	276.1	271.0	274.9
82.5°	202.1	208.3	219.1	228.6	237.6	228.6	219.1	208.3	202.1	199.7	200.0
85°	116.7	126.3	133.4	144.8	147.4	144.8	133.4	126.3	116.7	119.4	116.7
87.5°	40.9	43.8	50.1	54.6	54.9	54.6	50.1	43.8	40.9	41.8	37.9
90°	17.4	29.4	50.7	27.9	19.5	27.9	50.7	29.4	17.4	30.4	47.5
92.5°	22.6	39.9	71.7	37.1	26.0	37.1	71.7	39.9	22.6	39.6	76.3
95°	33.4	49.1	91.3	41.0	31.2	41.0	91.3	49.1	33.4	52.8	106.5
97.5°	51.7	60.9	103.1	43.7	37.8	43.7	103.1	60.9	51.7	64.5	122.2
100°	68.8	68.8	188.3	50.2	43.1	50.2	188.3	68.8	68.8	79.2	190.4
102.5°	104.1	134.6	436.3	100.5	52.3	100.5	436.3	134.6	104.1	148.7	404.0
105°	189.3	307.6	767.9	259.0	95.8	259.0	767.9	307.6	189.3	311.2	719.8
107.5°	358.4	573.6	989.4	510.6	222.9	510.6	989.4	573.6	358.4	551.1	949.4
110°	573.3	801.7	1079.8	699.4	450.9	699.4	1079.8	801.7	573.3	756.9	995.3



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 CATALOG NUMBER: EHBR1-18-UNV-TASM-L835-UPL24

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	746.3	893.4	1054.9	775.4	623.9	775.4	1054.9	893.4	746.3	835.4	953.4
115°	810.9	880.3	942.2	772.8	692.1	772.8	942.2	880.3	810.9	815.8	851.2
117.5°	783.3	805.6	813.8	725.6	696.1	725.6	813.8	805.6	783.3	733.5	722.7
120°	707.3	698.1	685.6	656.1	656.7	656.1	685.6	698.1	707.3	640.5	603.5
122.5°	611.9	592.3	579.4	585.6	603.0	585.6	579.4	592.3	611.9	545.1	517.2
125°	518.9	499.2	505.0	525.4	542.9	525.4	505.0	499.2	518.9	462.8	456.0
127.5°	440.5	431.3	451.3	474.3	489.2	474.3	451.3	431.3	440.5	405.1	412.7
130°	384.5	386.8	413.3	432.6	442.1	432.6	413.3	386.8	384.5	367.4	385.5
132.5°	349.5	359.6	384.9	401.5	407.0	401.5	384.9	359.6	349.5	344.5	366.5
135°	327.5	342.5	365.5	376.2	378.1	376.2	365.5	342.5	327.5	329.0	349.5
137.5°	314.7	329.8	347.2	355.6	353.3	355.6	347.2	329.8	314.7	318.8	334.3
140°	307.1	322.2	330.1	339.9	337.7	339.9	330.1	322.2	307.1	309.7	321.5
142.5°	299.5	313.3	317.3	324.4	322.0	324.4	317.3	313.3	299.5	302.2	310.0
145°	295.9	306.0	303.1	312.6	309.2	312.6	303.1	306.0	295.9	296.9	301.1
147.5°	289.3	296.9	292.9	301.1	297.8	301.1	292.9	296.9	289.3	289.3	290.9
150°	281.7	286.9	281.4	290.9	290.1	290.9	281.4	286.9	281.7	280.4	282.0
152.5°	271.5	276.8	271.5	282.3	281.3	282.3	271.5	276.8	271.5	270.3	271.8
155°	263.0	265.6	263.0	273.7	274.0	273.7	263.0	265.6	263.0	262.7	263.3
157.5°	257.0	258.6	257.3	266.9	267.2	266.9	257.3	258.6	257.0	257.0	257.3
160°	251.6	254.3	253.3	261.4	261.7	261.4	253.3	254.3	251.6	252.7	253.0
162.5°	249.6	249.6	248.9	257.1	257.7	257.1	248.9	249.6	249.6	249.6	251.0
165°	246.6	247.9	245.8	251.6	253.7	251.6	245.8	247.9	246.6	247.6	247.6
167.5°	245.8	244.6	245.1	250.0	251.9	250.0	245.1	244.6	245.8	246.9	246.9
170°	243.5	243.8	243.2	248.0	249.9	248.0	243.2	243.8	243.5	244.9	245.8
172.5°	244.5	244.5	242.7	246.2	249.4	246.2	242.7	244.5	244.5	245.4	246.7
175°	245.0	244.1	243.3	245.5	248.7	245.5	243.3	244.1	245.0	244.8	244.8
177.5°	243.8	244.4	244.9	247.1	251.6	247.1	244.9	244.4	243.8	244.8	244.8
180°	244.4	244.4	244.4	244.4	244.4	244.4	244.4	244.4	244.4	244.4	244.4



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CATALOG NUMBER: EHBR1-18-UNV-TASM-L835-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	15915.7	15915.7	15915.7	15915.7	15915.7	15915.7
2.5°	15453.4	15443.2	15453.4	15561.4	15701.9	15906.3
5°	15094.3	15038.3	15094.3	15214.0	15472.2	15861.4
7.5°	14676.2	14643.7	14676.2	14876.5	15202.6	15753.6
10°	14236.0	14162.3	14236.0	14462.3	14846.9	15589.2
12.5°	13693.5	13595.8	13693.5	13927.2	14412.4	15326.8
15°	13003.4	12917.8	13003.4	13262.8	13825.6	14938.9
17.5°	12263.0	12185.4	12263.0	12488.3	13108.2	14392.1
20°	11333.1	11272.2	11333.1	11651.8	12260.0	13687.5
22.5°	10357.5	10300.5	10357.5	10640.6	11273.7	12804.1
25°	9209.6	9178.6	9209.6	9525.9	10098.4	11770.9
27.5°	7969.3	7916.5	7969.3	8300.3	8885.0	10555.6
30°	6702.2	6614.7	6702.2	6998.2	7521.7	9205.7
32.5°	5462.7	5399.7	5462.7	5673.7	6220.7	7694.5
35°	4264.8	4201.8	4264.8	4455.4	4992.6	6300.1
37.5°	3323.2	3211.9	3323.2	3445.5	3881.6	4944.3
40°	2520.4	2502.4	2520.4	2674.4	2953.3	3846.6
42.5°	2051.8	2003.1	2051.8	2118.0	2326.9	2914.6
45°	1683.5	1664.4	1683.5	1733.6	1874.0	2278.3
47.5°	1447.8	1456.1	1447.8	1480.0	1585.0	1855.4
50°	1272.0	1277.0	1272.0	1287.2	1357.3	1558.4
52.5°	1142.4	1138.0	1142.4	1144.0	1187.5	1338.8
55°	1027.8	1022.2	1027.8	1024.6	1056.8	1153.8
57.5°	927.5	931.7	927.5	923.1	940.4	1013.2
60°	838.0	841.9	838.0	834.7	846.1	888.7
62.5°	762.5	764.9	762.5	762.2	760.2	792.9
65°	695.1	697.8	695.1	691.5	688.2	703.4
67.5°	630.6	630.6	630.6	624.3	619.3	634.2
70°	570.0	569.7	570.0	559.9	556.0	560.5
72.5°	497.2	504.3	497.2	489.7	489.4	490.0
75°	426.5	434.8	426.5	421.7	416.3	420.8
77.5°	354.8	367.7	354.8	350.9	348.3	345.3
80°	281.4	295.5	281.4	274.9	271.0	276.1
82.5°	208.0	218.5	208.0	200.0	199.7	202.1
85°	123.8	140.6	123.8	116.7	119.4	116.7
87.5°	39.7	50.7	39.7	37.9	41.8	40.9
90°	27.8	17.4	27.8	47.5	30.4	17.4
92.5°	42.3	25.2	42.3	76.3	39.6	22.6
95°	48.8	29.1	48.8	106.5	52.8	33.4
97.5°	54.0	37.2	54.0	122.2	64.5	51.7
100°	63.2	49.1	63.2	190.4	79.2	68.8
102.5°	134.0	83.1	134.0	404.0	148.7	104.1
105°	282.1	143.4	282.1	719.8	311.2	189.3
107.5°	504.9	248.2	504.9	949.4	551.1	358.4
110°	670.0	463.2	670.0	995.3	756.9	573.3



TEST NUMBER: P1432590
 CATALOG NUMBER: EHBR1-18-UNV-TASM-L835-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	719.8	625.8	719.8	953.4	835.4	746.3
115°	692.3	658.5	692.3	851.2	815.8	810.9
117.5°	632.1	636.2	632.1	722.7	733.5	783.3
120°	562.5	589.1	562.5	603.5	640.5	707.3
122.5°	498.6	530.0	498.6	517.2	545.1	611.9
125°	443.5	475.4	443.5	456.0	462.8	518.9
127.5°	405.5	426.9	405.5	412.7	405.1	440.5
130°	375.7	394.1	375.7	385.5	367.4	384.5
132.5°	355.0	366.8	355.0	366.5	344.5	349.5
135°	337.0	347.2	337.0	349.5	329.0	327.5
137.5°	321.6	330.4	321.6	334.3	318.8	314.7
140°	307.8	315.3	307.8	321.5	309.7	307.1
142.5°	293.6	299.0	293.6	310.0	302.2	299.5
145°	283.7	287.7	283.7	301.1	296.9	295.9
147.5°	275.2	277.8	275.2	290.9	289.3	289.3
150°	266.6	269.2	266.6	282.0	280.4	281.7
152.5°	257.7	260.7	257.7	271.8	270.3	271.5
155°	251.7	254.6	251.7	263.3	262.7	263.0
157.5°	248.4	250.4	248.4	257.3	257.0	257.0
160°	245.4	247.0	245.4	253.0	252.7	251.6
162.5°	242.0	243.7	242.0	251.0	249.6	249.6
165°	241.4	241.7	241.4	247.6	247.6	246.6
167.5°	240.3	241.7	240.3	246.9	246.9	245.8
170°	240.6	240.9	240.6	245.8	244.9	243.5
172.5°	241.2	241.5	241.2	246.7	245.4	244.5
175°	240.6	240.9	240.6	244.8	244.8	245.0
177.5°	242.1	242.4	242.1	244.8	244.8	243.8
180°	244.4	244.4	244.4	244.4	244.4	244.4



TEST NUMBER: P1432590
 CATALOG NUMBER: EHBR1-18-UNV-TASM-L835-UPL24

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	15.22	16.26	15.79	16.81	17.41	14.54	15.58	15.11	16.13	16.73
	3H	16.77	17.69	17.35	18.25	18.90	16.39	17.31	16.97	17.87	18.51
	4H	17.40	18.27	18.00	18.84	19.50	17.17	18.03	17.77	18.60	19.26
	6H	17.88	18.68	18.49	19.26	19.93	17.81	18.60	18.42	19.19	19.86
	8H	18.03	18.78	18.65	19.39	20.07	18.03	18.78	18.65	19.38	20.06
	12H	18.10	18.82	18.73	19.42	20.12	18.15	18.87	18.78	19.47	20.17
4H	2H	15.63	16.50	16.23	17.07	17.73	15.11	15.98	15.71	16.55	17.21
	3H	17.43	18.14	18.04	18.76	19.43	17.17	17.88	17.78	18.50	19.17
	4H	18.20	18.85	18.83	19.47	20.18	18.07	18.72	18.70	19.34	20.05
	6H	18.81	19.37	19.46	20.02	20.74	18.84	19.40	19.49	20.04	20.77
	8H	19.01	19.53	19.66	20.17	20.91	19.11	19.63	19.77	20.27	21.01
	12H	19.11	19.57	19.79	20.24	20.98	19.28	19.74	19.95	20.41	21.15
8H	4H	18.45	18.97	19.10	19.61	20.34	18.35	18.87	19.01	19.51	20.25
	6H	19.19	19.61	19.87	20.30	21.04	19.25	19.67	19.94	20.37	21.10
	8H	19.46	19.83	20.16	20.53	21.29	19.61	19.98	20.31	20.68	21.43
	12H	19.63	19.96	20.33	20.64	21.46	19.85	20.18	20.55	20.86	21.69
12H	4H	18.45	18.91	19.13	19.59	20.32	18.36	18.82	19.03	19.49	20.23
	6H	19.23	19.61	19.93	20.31	21.06	19.30	19.67	20.00	20.37	21.13
	8H	19.55	19.88	20.24	20.56	21.38	19.70	20.03	20.40	20.71	21.53

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-3

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L835-N

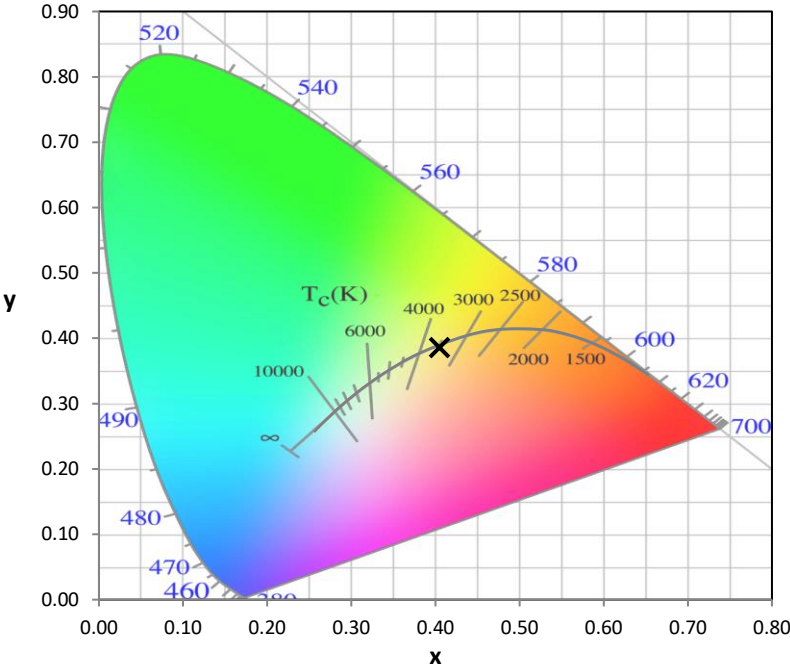
Data in this report applies to families of products including EHBR-60-L835-N

REPORT NUMBER: SP1-2506-472-3

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: SP1-2506-472-3

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-3

Photopic Flux vs. Wavelength

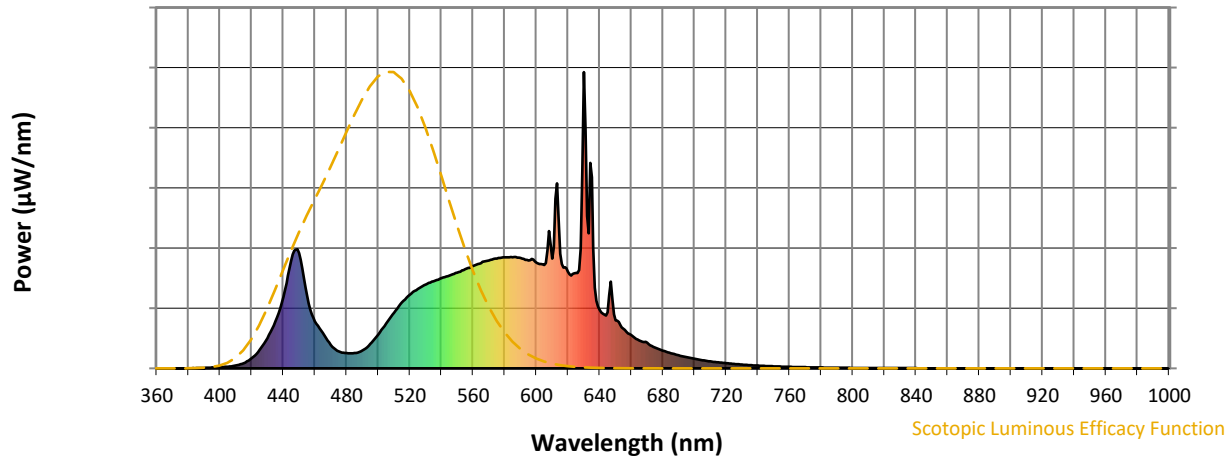


Photopic Lumens: NR

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	327	NR	750	7	NR	880	0	NR
365	0	NR	495	82	NR	625	322	NR	755	6	NR	885	0	NR
370	0	NR	500	114	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	152	NR	635	645	NR	765	4	NR	895	0	NR
380	0	NR	510	189	NR	640	197	NR	770	4	NR	900	0	NR
385	1	NR	515	222	NR	645	189	NR	775	3	NR	905	0	NR
390	2	NR	520	248	NR	650	163	NR	780	3	NR	910	0	NR
395	3	NR	525	268	NR	655	134	NR	785	2	NR	915	0	NR
400	4	NR	530	283	NR	660	113	NR	790	2	NR	920	0	NR
405	6	NR	535	294	NR	665	94	NR	795	2	NR	925	0	NR
410	9	NR	540	305	NR	670	87	NR	800	2	NR	930	0	NR
415	18	NR	545	314	NR	675	70	NR	805	1	NR	935	0	NR
420	34	NR	550	323	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	335	NR	685	51	NR	815	1	NR	945	0	NR
430	102	NR	560	346	NR	690	44	NR	820	1	NR	950	0	NR
435	159	NR	565	356	NR	695	38	NR	825	1	NR	955	0	NR
440	241	NR	570	364	NR	700	32	NR	830	1	NR	960	0	NR
445	363	NR	575	371	NR	705	28	NR	835	1	NR	965	0	NR
450	389	NR	580	375	NR	710	24	NR	840	1	NR	970	0	NR
455	245	NR	585	375	NR	715	20	NR	845	0	NR	975	0	NR
460	158	NR	590	373	NR	720	17	NR	850	0	NR	980	0	NR
465	120	NR	595	364	NR	725	15	NR	855	0	NR	985	0	NR
470	79	NR	600	357	NR	730	13	NR	860	0	NR	990	0	NR
475	57	NR	605	349	NR	735	11	NR	865	0	NR	995	0	NR
480	51	NR	610	371	NR	740	9	NR	870	0	NR	1000	0	NR
485	51	NR	615	387	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-3

Scotopic Flux vs. Wavelength



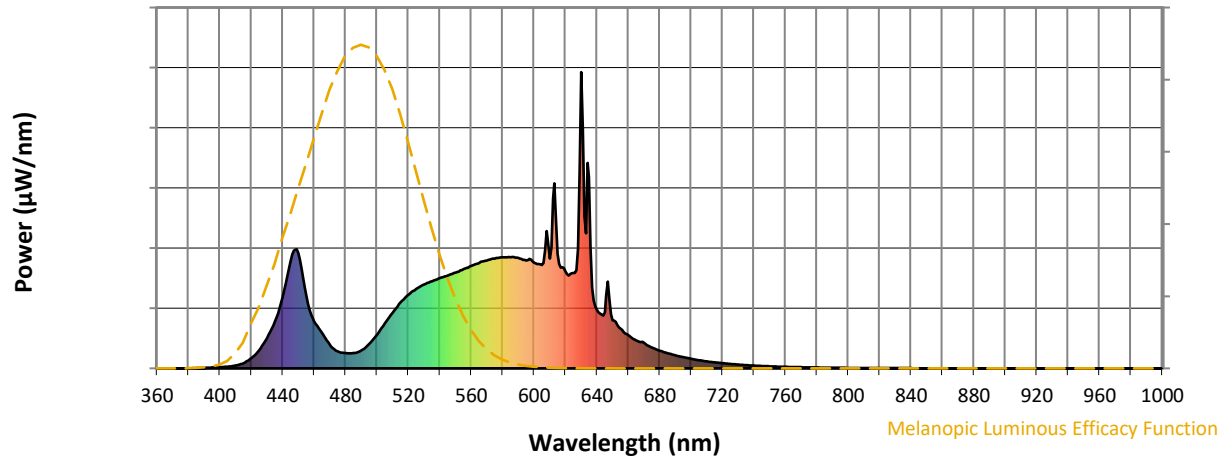
Scotopic Lumens: NR

S/P: 1.43

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	327	NR	750	7	NR	880	0	NR
365	0	NR	495	82	NR	625	322	NR	755	6	NR	885	0	NR
370	0	NR	500	114	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	152	NR	635	645	NR	765	4	NR	895	0	NR
380	0	NR	510	189	NR	640	197	NR	770	4	NR	900	0	NR
385	1	NR	515	222	NR	645	189	NR	775	3	NR	905	0	NR
390	2	NR	520	248	NR	650	163	NR	780	3	NR	910	0	NR
395	3	NR	525	268	NR	655	134	NR	785	2	NR	915	0	NR
400	4	NR	530	283	NR	660	113	NR	790	2	NR	920	0	NR
405	6	NR	535	294	NR	665	94	NR	795	2	NR	925	0	NR
410	9	NR	540	305	NR	670	87	NR	800	2	NR	930	0	NR
415	18	NR	545	314	NR	675	70	NR	805	1	NR	935	0	NR
420	34	NR	550	323	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	335	NR	685	51	NR	815	1	NR	945	0	NR
430	102	NR	560	346	NR	690	44	NR	820	1	NR	950	0	NR
435	159	NR	565	356	NR	695	38	NR	825	1	NR	955	0	NR
440	241	NR	570	364	NR	700	32	NR	830	1	NR	960	0	NR
445	363	NR	575	371	NR	705	28	NR	835	1	NR	965	0	NR
450	389	NR	580	375	NR	710	24	NR	840	1	NR	970	0	NR
455	245	NR	585	375	NR	715	20	NR	845	0	NR	975	0	NR
460	158	NR	590	373	NR	720	17	NR	850	0	NR	980	0	NR
465	120	NR	595	364	NR	725	15	NR	855	0	NR	985	0	NR
470	79	NR	600	357	NR	730	13	NR	860	0	NR	990	0	NR
475	57	NR	605	349	NR	735	11	NR	865	0	NR	995	0	NR
480	51	NR	610	371	NR	740	9	NR	870	0	NR	1000	0	NR
485	51	NR	615	387	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.75

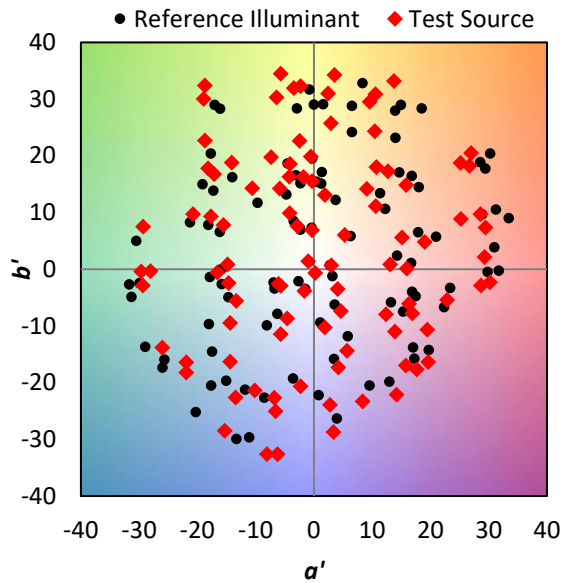
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	60	NR	620	327	NR	750	7	NR	880	0	NR
365	0	NR	495	82	NR	625	322	NR	755	6	NR	885	0	NR
370	0	NR	500	114	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	152	NR	635	645	NR	765	4	NR	895	0	NR
380	0	NR	510	189	NR	640	197	NR	770	4	NR	900	0	NR
385	1	NR	515	222	NR	645	189	NR	775	3	NR	905	0	NR
390	2	NR	520	248	NR	650	163	NR	780	3	NR	910	0	NR
395	3	NR	525	268	NR	655	134	NR	785	2	NR	915	0	NR
400	4	NR	530	283	NR	660	113	NR	790	2	NR	920	0	NR
405	6	NR	535	294	NR	665	94	NR	795	2	NR	925	0	NR
410	9	NR	540	305	NR	670	87	NR	800	2	NR	930	0	NR
415	18	NR	545	314	NR	675	70	NR	805	1	NR	935	0	NR
420	34	NR	550	323	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	335	NR	685	51	NR	815	1	NR	945	0	NR
430	102	NR	560	346	NR	690	44	NR	820	1	NR	950	0	NR
435	159	NR	565	356	NR	695	38	NR	825	1	NR	955	0	NR
440	241	NR	570	364	NR	700	32	NR	830	1	NR	960	0	NR
445	363	NR	575	371	NR	705	28	NR	835	1	NR	965	0	NR
450	389	NR	580	375	NR	710	24	NR	840	1	NR	970	0	NR
455	245	NR	585	375	NR	715	20	NR	845	0	NR	975	0	NR
460	158	NR	590	373	NR	720	17	NR	850	0	NR	980	0	NR
465	120	NR	595	364	NR	725	15	NR	855	0	NR	985	0	NR
470	79	NR	600	357	NR	730	13	NR	860	0	NR	990	0	NR
475	57	NR	605	349	NR	735	11	NR	865	0	NR	995	0	NR
480	51	NR	610	371	NR	740	9	NR	870	0	NR	1000	0	NR
485	51	NR	615	387	NR	745	8	NR	875	0	NR			

Summary

$R_f = 80.1$
 $R_g = 101$
 $CIE R_a = 82.1$
 $R_9 = 27.6$

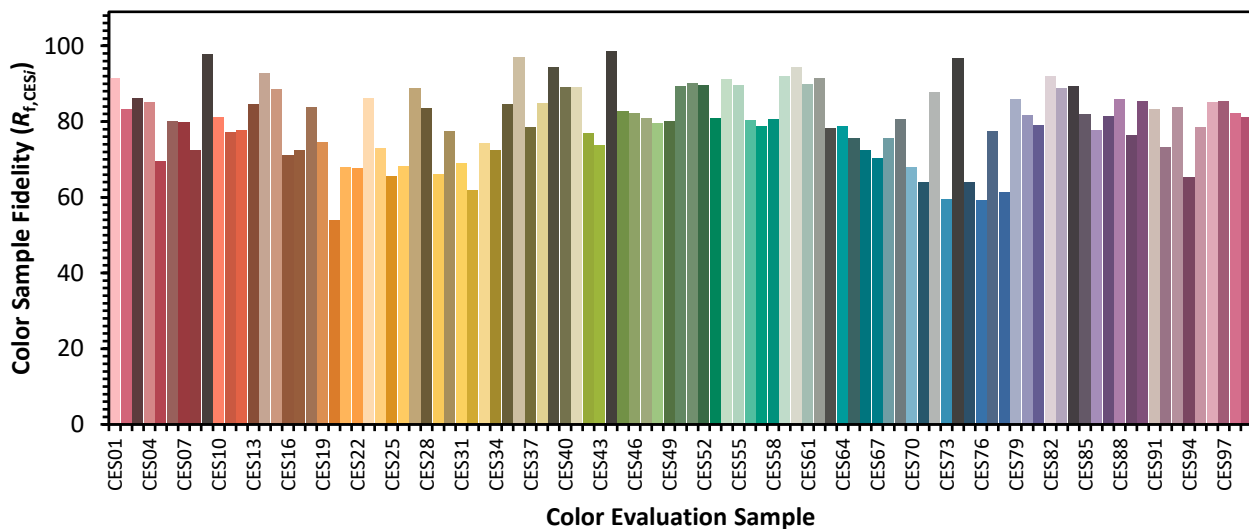


Color Vector Graphics

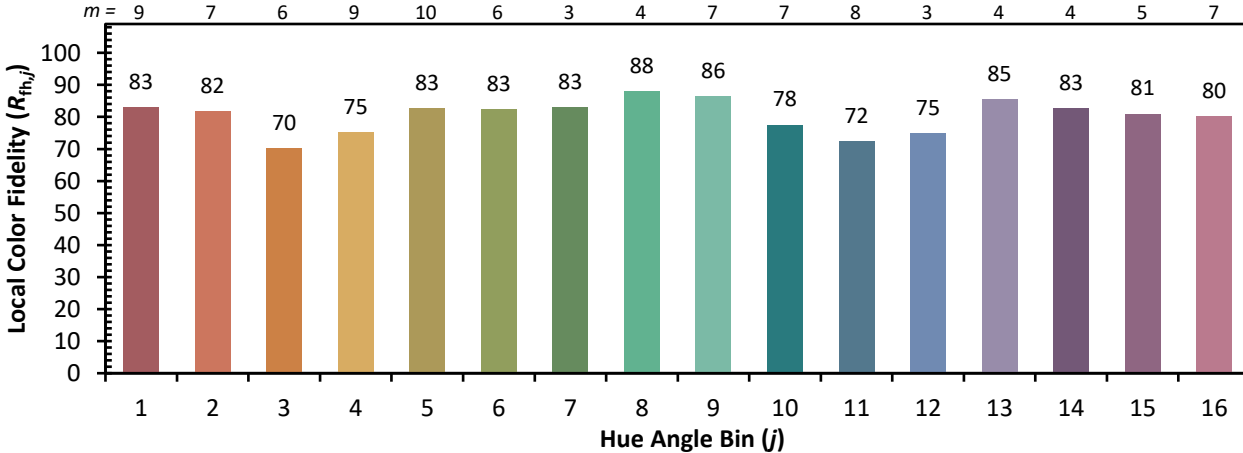
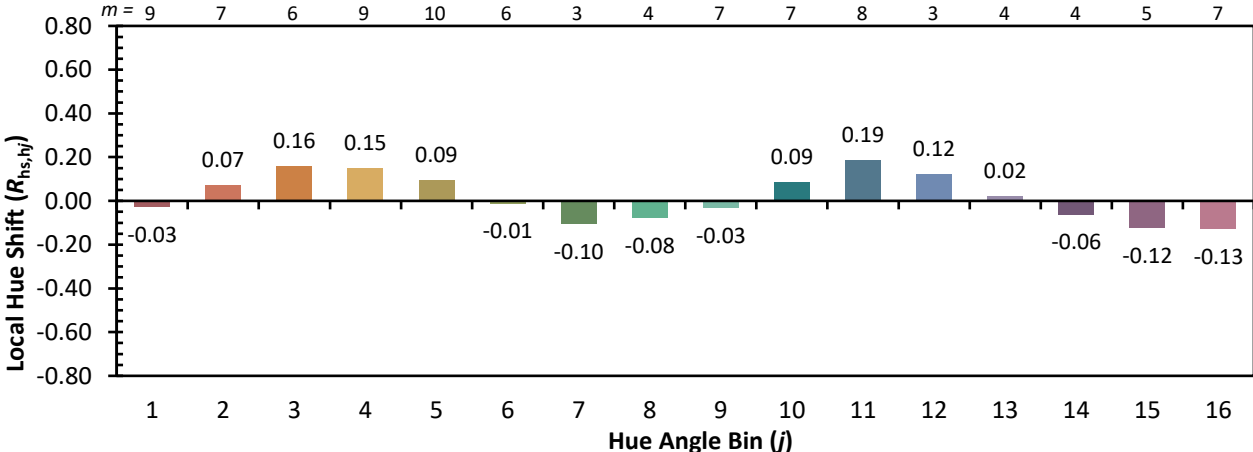
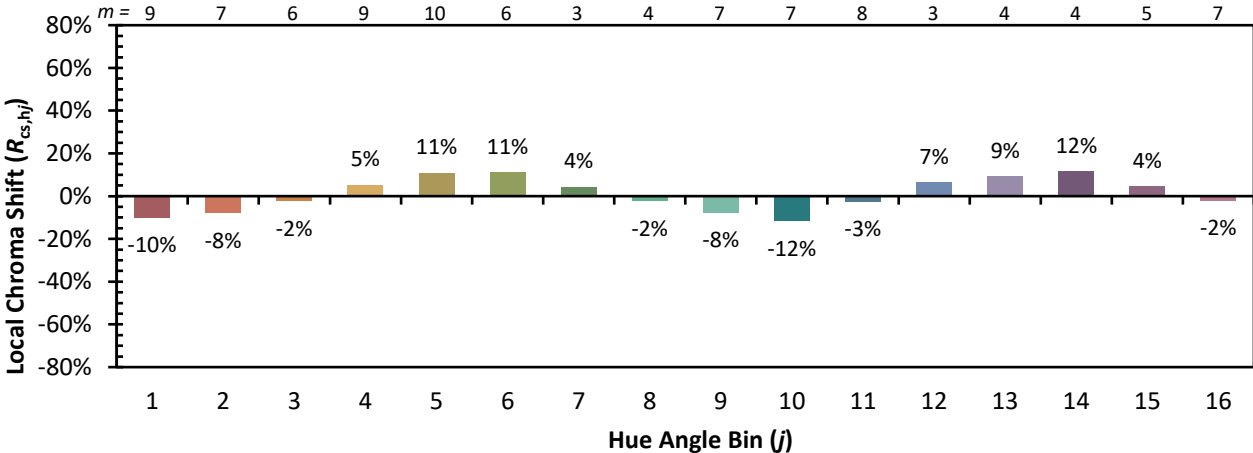


Individual Sample Fidelity Index ($R_{f,i}$)

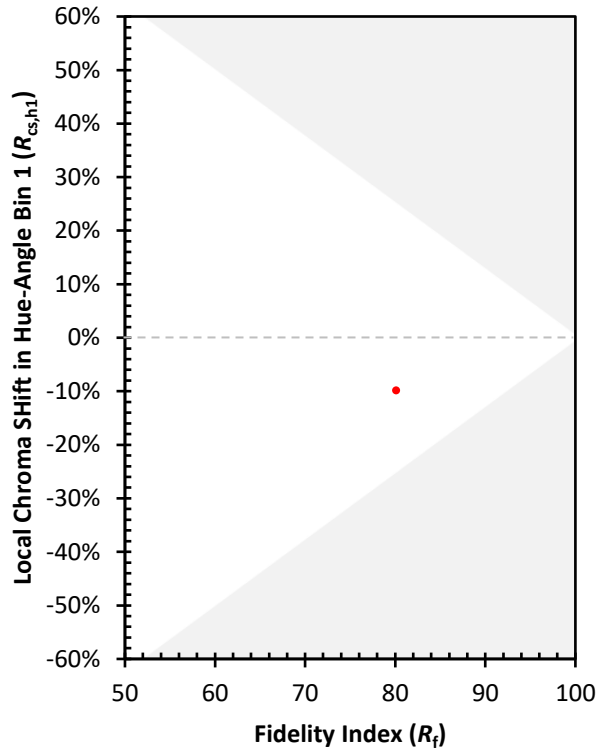
CES01 = 86	CES26 = 68	CES51 = 90	CES76 = 59
CES02 = 62	CES27 = 89	CES52 = 90	CES77 = 78
CES03 = 31	CES28 = 84	CES53 = 81	CES78 = 61
CES04 = 70	CES29 = 66	CES54 = 91	CES79 = 86
CES05 = 49	CES30 = 77	CES55 = 90	CES80 = 82
CES06 = 51	CES31 = 69	CES56 = 80	CES81 = 79
CES07 = 42	CES32 = 62	CES57 = 79	CES82 = 92
CES08 = 41	CES33 = 74	CES58 = 81	CES83 = 89
CES09 = 29	CES34 = 72	CES59 = 92	CES84 = 89
CES10 = 75	CES35 = 85	CES60 = 94	CES85 = 82
CES11 = 58	CES36 = 97	CES61 = 90	CES86 = 78
CES12 = 64	CES37 = 79	CES62 = 92	CES87 = 82
CES13 = 43	CES38 = 85	CES63 = 78	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 79	CES89 = 76
CES15 = 71	CES40 = 89	CES65 = 76	CES90 = 85
CES16 = 47	CES41 = 89	CES66 = 73	CES91 = 83
CES17 = 49	CES42 = 77	CES67 = 70	CES92 = 73
CES18 = 56	CES43 = 74	CES68 = 76	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 81	CES94 = 65
CES20 = 66	CES45 = 83	CES70 = 68	CES95 = 79
CES21 = 86	CES46 = 82	CES71 = 64	CES96 = 85
CES22 = 78	CES47 = 81	CES72 = 88	CES97 = 85
CES23 = 92	CES48 = 80	CES73 = 60	CES98 = 82
CES24 = 91	CES49 = 80	CES74 = 97	CES99 = 81
CES25 = 72	CES50 = 89	CES75 = 64	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)