

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: P1433682

Luminaire Tested: EHBR1-60-UNV-TASM-L935

Issue Date: 3/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433682
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: EHBR1-60-UNV-TASM-L935
Description: Elevate Round Highbay at, 60000 lumens, 3500K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

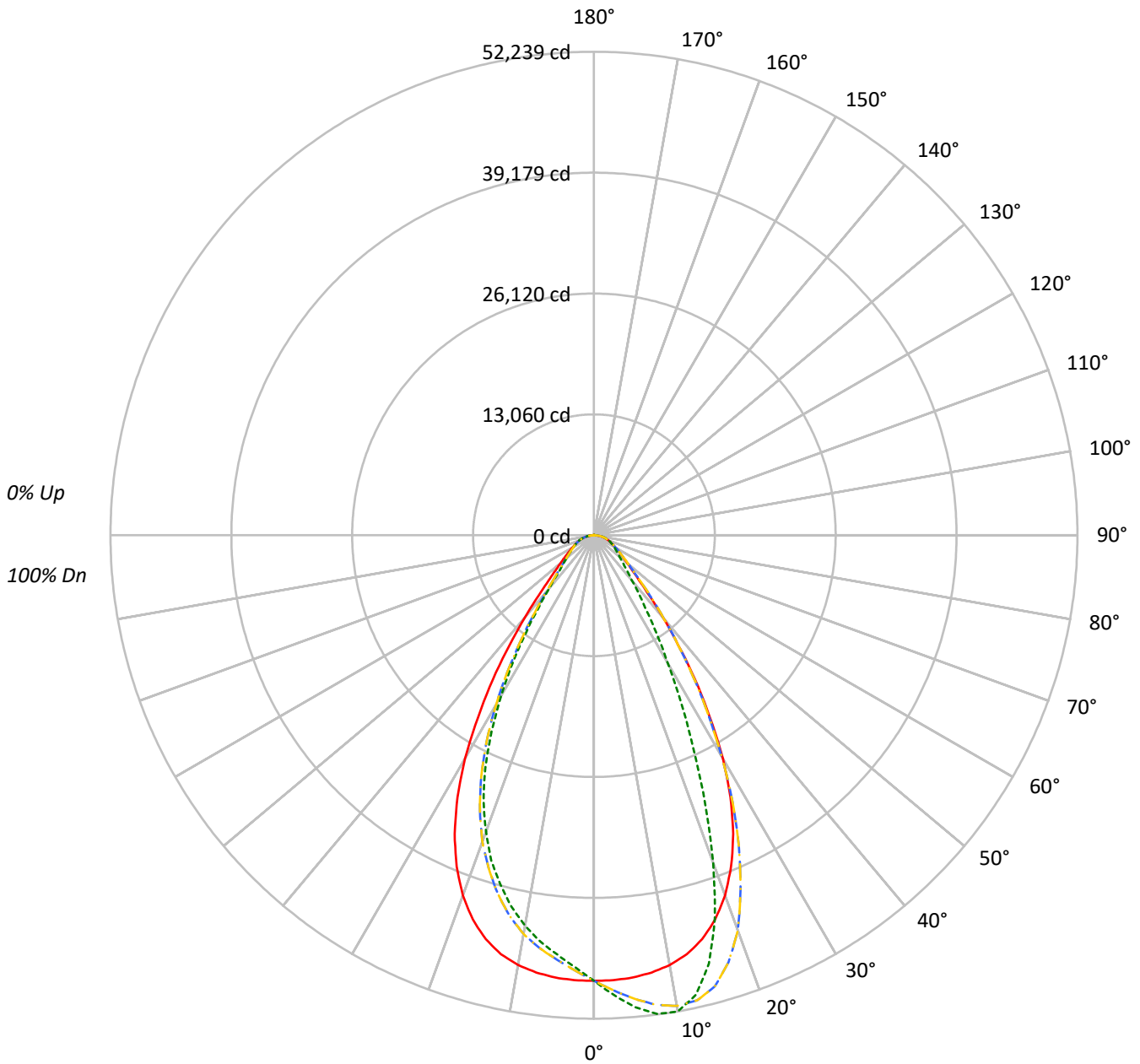
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53830.6 lumens
Efficiency: N/A
Efficacy: 162.9 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): 330.4
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: P1433682
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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	92	92	92	90
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	83	83	83	81
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	76	76	76	74
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	72	69	69	69	69	67
5	87	78	71	66	86	77	70	65	75	69	65	73	68	64	71	67	64	64	64	64	62
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	59	59	59	57
7	78	67	60	56	76	67	60	56	65	59	55	64	59	55	63	58	55	55	55	55	53
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	51	51	51	49
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	47	47	47	47	46
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	45	45	45	43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	226081	226081	226081	226081
5°	226170	241282	226170	214433
10°	224860	249104	224860	204279
15°	219692	233056	219692	189970
20°	206908	188190	206908	170397
25°	184490	131357	184490	143861
30°	150997	86141	150997	108497
35°	109251	56277	109251	72863
40°	71329	39170	71329	46403
45°	45769	30684	45769	33436
50°	34440	26420	34440	28222
55°	28574	24457	28574	25315
60°	25250	23774	25250	23918
65°	23644	23553	23644	23453
70°	23279	23972	23279	23662
75°	23094	24604	23094	23865
80°	22582	25854	22582	24169
85°	19020	24026	19020	22910

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 64348 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4577.6	8.5
10°-20°	12453.7	23.1
20°-30°	14605.6	27.1
30°-40°	10157.3	18.9
40°-50°	5047.7	9.4
50°-60°	3019.1	5.6
60°-70°	2124.9	3.9
70°-80°	1368.8	2.5
80°-90°	434.8	0.8
90°-100°	2.5	0.0
100°-110°	3.0	0.0
110°-120°	3.1	0.0
120°-130°	3.9	0.0
130°-140°	5.3	0.0
140°-150°	6.4	0.0
150°-160°	7.1	0.0
160°-170°	6.9	0.0
170°-180°	3.0	0.0
0°-30°	31636.9	58.8
0°-40°	41794.2	77.6
0°-60°	49860.9	92.6
0°-90°	53789.4	99.9
90°-120°	8.6	0.0
90°-150°	24.2	0.0
90°-180°	41.0	0.1
0°-180°	53830.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	48142	48142	48142	48142	48142	
5°	47978	51184	47978	45488	47978	4553
15°	45188	47937	45188	39074	45188	12628
25°	35605	25351	35605	27764	35605	16119
35°	19057	9816	19057	12710	19057	11897
45°	6892	4620	6892	5035	6892	5639
55°	3490	2987	3490	3092	3490	3191
65°	2128	2120	2128	2111	2128	2137
75°	1273	1356	1273	1315	1273	1336
85°	353	446	353	425	353	392
90°	1	7	1	1	1	17
95°	2	7	2	1	2	1
105°	2	8	2	2	2	2
115°	3	8	3	2	3	2
125°	4	9	4	3	4	4
135°	7	10	7	4	7	6
145°	11	12	11	10	11	7
155°	14	16	14	17	14	7
165°	24	30	24	25	24	7
175°	32	39	32	31	32	3
180°	33	33	33	33	33	



TEST NUMBER: P1433682
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4
2.5°	48114.4	48736.4	49240.2	49572.4	49736.7	49572.4	49240.2	48736.4	48114.4	47496.0	47070.9
5°	47978.1	49223.9	50279.2	50969.8	51183.8	50969.8	50279.2	49223.9	47978.1	46801.0	46020.1
7.5°	47652.2	49593.1	51161.2	51967.3	52164.2	51967.3	51161.2	49593.1	47652.2	45985.7	44999.1
10°	47154.8	49826.0	51637.9	52215.6	52239.0	52215.6	51637.9	49826.0	47154.8	44909.7	43746.1
12.5°	46361.3	49743.0	51478.1	51288.5	50857.9	51288.5	51478.1	49743.0	46361.3	43595.3	42127.4
15°	45187.7	49251.0	50466.1	48923.3	47936.6	48923.3	50466.1	49251.0	45187.7	41820.5	40118.0
17.5°	43533.9	48330.2	48353.7	45301.5	43440.0	45301.5	48353.7	48330.2	43533.9	39650.3	37775.3
20°	41402.5	46853.3	45445.0	39862.5	37657.0	39862.5	45445.0	46853.3	41402.5	37084.8	35244.9
22.5°	38730.4	44861.9	41394.4	34391.0	31382.0	34391.0	41394.4	44861.9	38730.4	34101.1	32186.4
25°	35605.1	42421.8	37036.9	28429.2	25350.9	28429.2	37036.9	42421.8	35605.1	30546.1	28814.7
27.5°	31929.1	39328.9	32396.8	23231.2	20391.2	23231.2	32396.8	39328.9	31929.1	26875.6	25107.2
30°	27846.0	35364.1	27568.0	18500.8	15885.6	18500.8	27568.0	35364.1	27846.0	22751.9	21168.4
32.5°	23274.6	31477.7	22930.6	14823.9	12608.6	14823.9	22930.6	31477.7	23274.6	18816.8	17162.1
35°	19056.9	26615.6	18749.1	11648.1	9816.5	11648.1	18749.1	26615.6	19056.9	15102.0	13477.0
37.5°	14955.7	22021.6	14945.8	9379.5	7962.2	9379.5	14945.8	22021.6	14955.7	11741.1	10422.2
40°	11635.5	17218.9	11710.4	7487.4	6389.6	7487.4	11710.4	17218.9	11635.5	8933.5	8089.4
42.5°	8816.2	13166.5	9204.4	6145.0	5427.3	6145.0	9204.4	13166.5	8816.2	7038.6	6406.8
45°	6891.6	9689.1	7187.7	5184.5	4620.2	5184.5	7187.7	9689.1	6891.6	5668.4	5244.0
47.5°	5612.4	7488.3	5825.4	4446.9	4051.5	4446.9	5825.4	7488.3	5612.4	4794.5	4476.7
50°	4714.1	5746.0	4836.9	3881.8	3616.3	3881.8	4836.9	5746.0	4714.1	4105.7	3893.5
52.5°	4049.7	4686.2	4119.2	3459.3	3280.6	3459.3	4119.2	4686.2	4049.7	3592.1	3460.2
55°	3490.0	3939.5	3582.1	3110.9	2987.2	3110.9	3582.1	3939.5	3490.0	3196.6	3099.1
57.5°	3064.8	3342.0	3110.9	2813.9	2731.7	2813.9	3110.9	3342.0	3064.8	2844.5	2792.2
60°	2688.4	2894.2	2745.3	2554.8	2531.3	2554.8	2745.3	2894.2	2688.4	2559.3	2524.9
62.5°	2398.6	2528.6	2427.5	2321.8	2301.1	2321.8	2427.5	2528.6	2398.6	2299.3	2305.6
65°	2127.8	2248.7	2169.3	2112.4	2119.6	2112.4	2169.3	2248.7	2127.8	2081.7	2091.6
67.5°	1918.3	1981.5	1947.3	1914.7	1922.9	1914.7	1947.3	1981.5	1918.3	1873.2	1888.5
70°	1695.4	1763.1	1727.8	1732.4	1745.9	1732.4	1727.8	1763.1	1695.4	1681.8	1693.6
72.5°	1482.3	1534.7	1522.9	1533.8	1548.2	1533.8	1522.9	1534.7	1482.3	1480.5	1481.4
75°	1272.8	1312.5	1318.0	1333.4	1356.0	1333.4	1318.0	1312.5	1272.8	1259.3	1275.6
77.5°	1044.5	1089.6	1106.7	1127.6	1160.9	1127.6	1106.7	1089.6	1044.5	1053.5	1061.6
80°	835.0	855.8	893.7	909.0	956.0	909.0	893.7	855.8	835.0	819.7	831.5
82.5°	611.1	630.1	662.6	691.5	718.6	691.5	662.6	630.1	611.1	604.0	604.8
85°	353.0	381.8	403.5	437.8	445.9	437.8	403.5	381.8	353.0	361.1	353.0
87.5°	123.7	132.7	151.6	165.2	166.1	165.2	151.6	132.7	123.7	126.3	114.7
90°	0.9	1.8	2.7	5.4	7.3	5.4	2.7	1.8	0.9	0.9	0.9
92.5°	0.9	1.8	2.7	5.4	7.3	5.4	2.7	1.8	0.9	0.9	0.9
95°	1.8	1.8	2.7	5.4	7.3	5.4	2.7	1.8	1.8	0.9	0.9
97.5°	1.8	1.8	2.7	5.4	7.3	5.4	2.7	1.8	1.8	0.9	0.9
100°	1.8	1.8	2.7	5.4	7.3	5.4	2.7	1.8	1.8	1.8	0.9
102.5°	1.8	2.7	3.6	6.3	7.3	6.3	3.6	2.7	1.8	1.8	0.9
105°	1.8	2.7	3.6	6.3	8.2	6.3	3.6	2.7	1.8	1.8	0.9
107.5°	1.8	2.7	3.6	6.3	8.2	6.3	3.6	2.7	1.8	1.8	1.8
110°	1.8	2.7	3.6	6.3	8.2	6.3	3.6	2.7	1.8	1.8	1.8



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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°	1.8	2.7	3.6	6.3	8.2	6.3	3.6	2.7	1.8	1.8	1.8
115°	2.7	2.7	3.6	6.3	8.2	6.3	3.6	2.7	2.7	1.8	1.8
117.5°	2.7	2.7	3.6	6.3	8.2	6.3	3.6	2.7	2.7	2.7	1.8
120°	2.7	2.7	4.5	6.3	8.2	6.3	4.5	2.7	2.7	2.7	1.8
122.5°	3.6	3.6	4.5	7.3	8.2	7.3	4.5	3.6	3.6	3.6	2.7
125°	3.6	3.6	5.4	7.3	9.1	7.3	5.4	3.6	3.6	4.5	3.6
127.5°	4.5	4.5	5.4	7.3	9.1	7.3	5.4	4.5	4.5	4.5	3.6
130°	5.4	4.5	5.4	8.2	9.1	8.2	5.4	4.5	5.4	5.4	4.5
132.5°	6.3	5.4	6.3	9.1	10.0	9.1	6.3	5.4	6.3	7.3	6.3
135°	7.3	5.4	7.3	8.2	10.0	8.2	7.3	5.4	7.3	8.2	6.3
137.5°	8.2	6.3	7.3	9.1	10.0	9.1	7.3	6.3	8.2	9.1	8.2
140°	9.1	7.3	7.3	9.1	10.9	9.1	7.3	7.3	9.1	9.1	9.1
142.5°	10.0	8.2	8.2	10.0	10.9	10.0	8.2	8.2	10.0	10.0	10.0
145°	10.9	10.0	9.1	10.0	11.7	10.0	9.1	10.0	10.9	10.0	10.9
147.5°	10.9	10.0	10.0	10.9	12.6	10.9	10.0	10.0	10.9	10.9	11.7
150°	11.7	11.7	10.9	11.7	13.5	11.7	10.9	11.7	11.7	11.7	12.6
152.5°	12.6	12.6	12.6	13.5	14.4	13.5	12.6	12.6	12.6	12.6	13.5
155°	14.4	14.4	14.4	15.3	16.2	15.3	14.4	14.4	14.4	13.5	15.3
157.5°	16.2	17.1	17.1	18.0	18.9	18.0	17.1	17.1	16.2	16.2	17.1
160°	19.8	19.8	20.8	21.7	22.6	21.7	20.8	19.8	19.8	18.9	19.8
162.5°	21.7	21.7	23.5	24.4	26.2	24.4	23.5	21.7	21.7	21.7	21.7
165°	24.4	24.4	26.2	28.0	29.8	28.0	26.2	24.4	24.4	23.5	23.5
167.5°	26.2	26.2	28.0	30.7	32.5	30.7	28.0	26.2	26.2	25.3	25.3
170°	27.1	28.0	29.8	32.5	34.3	32.5	29.8	28.0	27.1	27.1	26.2
172.5°	29.8	29.8	32.5	35.2	37.0	35.2	32.5	29.8	29.8	28.9	28.9
175°	31.6	32.5	34.3	37.0	38.8	37.0	34.3	32.5	31.6	30.7	30.7
177.5°	31.6	33.4	35.2	37.9	39.7	37.9	35.2	33.4	31.6	30.7	30.7
180°	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	48142.4	48142.4	48142.4	48142.4	48142.4	48142.4
2.5°	46744.1	46713.3	46744.1	47070.9	47496.0	48114.4
5°	45658.1	45488.3	45658.1	46020.1	46801.0	47978.1
7.5°	44393.3	44294.9	44393.3	44999.1	45985.7	47652.2
10°	43061.8	42838.8	43061.8	43746.1	44909.7	47154.8
12.5°	41420.5	41125.4	41420.5	42127.4	43595.3	46361.3
15°	39333.5	39074.3	39333.5	40118.0	41820.5	45187.7
17.5°	37093.7	36859.0	37093.7	37775.3	39650.3	43533.9
20°	34280.8	34096.6	34280.8	35244.9	37084.8	41402.5
22.5°	31329.7	31157.3	31329.7	32186.4	34101.1	38730.4
25°	27857.8	27763.9	27857.8	28814.7	30546.1	35605.1
27.5°	24105.9	23946.1	24105.9	25107.2	26875.6	31929.1
30°	20272.9	20008.4	20272.9	21168.4	22751.9	27846.0
32.5°	16523.8	16333.3	16523.8	17162.1	18816.8	23274.6
35°	12900.2	12709.7	12900.2	13477.0	15102.0	19056.9
37.5°	10052.0	9715.3	10052.0	10422.2	11741.1	14955.7
40°	7623.7	7569.5	7623.7	8089.4	8933.5	11635.5
42.5°	6206.4	6059.2	6206.4	6406.8	7038.6	8816.2
45°	5092.4	5034.6	5092.4	5244.0	5668.4	6891.6
47.5°	4379.2	4404.5	4379.2	4476.7	4794.5	5612.4
50°	3847.5	3862.9	3847.5	3893.5	4105.7	4714.1
52.5°	3455.7	3442.2	3455.7	3460.2	3592.1	4049.7
55°	3109.1	3091.9	3109.1	3099.1	3196.6	3490.0
57.5°	2805.7	2818.3	2805.7	2792.2	2844.5	3064.8
60°	2534.9	2546.6	2534.9	2524.9	2559.3	2688.4
62.5°	2306.5	2313.8	2306.5	2305.6	2299.3	2398.6
65°	2102.5	2110.6	2102.5	2091.6	2081.7	2127.8
67.5°	1907.5	1907.5	1907.5	1888.5	1873.2	1918.3
70°	1724.2	1723.3	1724.2	1693.6	1681.8	1695.4
72.5°	1504.0	1525.6	1504.0	1481.4	1480.5	1482.3
75°	1290.0	1315.3	1290.0	1275.6	1259.3	1272.8
77.5°	1073.4	1112.2	1073.4	1061.6	1053.5	1044.5
80°	851.3	893.7	851.3	831.5	819.7	835.0
82.5°	629.2	660.8	629.2	604.8	604.0	611.1
85°	374.7	425.2	374.7	353.0	361.1	353.0
87.5°	120.1	153.4	120.1	114.7	126.3	123.7
90°	0.9	0.9	0.9	0.9	0.9	0.9
92.5°	0.9	0.9	0.9	0.9	0.9	0.9
95°	0.9	0.9	0.9	0.9	0.9	1.8
97.5°	0.9	1.8	0.9	0.9	0.9	1.8
100°	0.9	1.8	0.9	0.9	1.8	1.8
102.5°	0.9	1.8	0.9	0.9	1.8	1.8
105°	0.9	1.8	0.9	0.9	1.8	1.8
107.5°	0.9	1.8	0.9	1.8	1.8	1.8
110°	0.9	1.8	0.9	1.8	1.8	1.8



TEST NUMBER: P1433682
 CATALOG NUMBER: EHBR1-60-UNV-TASM-L935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	0.9	1.8	0.9	1.8	1.8	1.8
115°	0.9	1.8	0.9	1.8	1.8	2.7
117.5°	0.9	1.8	0.9	1.8	2.7	2.7
120°	0.9	1.8	0.9	1.8	2.7	2.7
122.5°	1.8	1.8	1.8	2.7	3.6	3.6
125°	1.8	2.7	1.8	3.6	4.5	3.6
127.5°	1.8	2.7	1.8	3.6	4.5	4.5
130°	2.7	2.7	2.7	4.5	5.4	5.4
132.5°	3.6	3.6	3.6	6.3	7.3	6.3
135°	4.5	3.6	4.5	6.3	8.2	7.3
137.5°	5.4	4.5	5.4	8.2	9.1	8.2
140°	7.3	6.3	7.3	9.1	9.1	9.1
142.5°	8.2	8.2	8.2	10.0	10.0	10.0
145°	10.0	10.0	10.0	10.9	10.0	10.9
147.5°	11.7	11.7	11.7	11.7	10.9	10.9
150°	13.5	13.5	13.5	12.6	11.7	11.7
152.5°	14.4	15.3	14.4	13.5	12.6	12.6
155°	16.2	17.1	16.2	15.3	13.5	14.4
157.5°	18.0	19.8	18.0	17.1	16.2	16.2
160°	20.8	21.7	20.8	19.8	18.9	19.8
162.5°	22.6	23.5	22.6	21.7	21.7	21.7
165°	24.4	25.3	24.4	23.5	23.5	24.4
167.5°	25.3	25.3	25.3	25.3	25.3	26.2
170°	26.2	27.1	26.2	26.2	27.1	27.1
172.5°	28.0	28.9	28.0	28.9	28.9	29.8
175°	29.8	30.7	29.8	30.7	30.7	31.6
177.5°	30.7	31.6	30.7	30.7	30.7	31.6
180°	33.4	33.4	33.4	33.4	33.4	33.4



TEST NUMBER: P1433682
 CATALOG NUMBER: EHBR1-60-UNV-TASM-L935

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	20.48	21.69	20.85	22.01	22.32	19.80	21.01	20.17	21.32	21.64
	3H	22.12	23.20	22.51	23.53	23.90	21.75	22.83	22.14	23.16	23.53
	4H	22.83	23.83	23.23	24.18	24.57	22.61	23.61	23.02	23.97	24.35
	6H	23.40	24.32	23.82	24.69	25.09	23.36	24.28	23.78	24.66	25.05
	8H	23.60	24.47	24.04	24.87	25.28	23.65	24.52	24.09	24.92	25.32
	12H	23.73	24.56	24.16	24.94	25.38	23.85	24.68	24.28	25.06	25.50
4H	2H	20.95	21.95	21.35	22.30	22.69	20.43	21.43	20.84	21.79	22.17
	3H	22.86	23.68	23.27	24.09	24.49	22.61	23.44	23.03	23.84	24.25
	4H	23.71	24.45	24.15	24.88	25.32	23.61	24.35	24.04	24.77	25.22
	6H	24.44	25.08	24.90	25.52	26.00	24.50	25.14	24.97	25.59	26.06
	8H	24.70	25.29	25.17	25.74	26.22	24.85	25.44	25.32	25.89	26.37
	12H	24.87	25.39	25.35	25.88	26.35	25.10	25.62	25.59	26.11	26.58
8H	4H	24.02	24.62	24.50	25.07	25.54	23.95	24.54	24.42	24.99	25.47
	6H	24.90	25.38	25.41	25.88	26.37	25.00	25.48	25.51	25.98	26.47
	8H	25.25	25.68	25.78	26.20	26.70	25.45	25.88	25.98	26.40	26.89
	12H	25.51	25.89	26.03	26.39	26.96	25.81	26.18	26.32	26.68	27.26
12H	4H	24.05	24.58	24.54	25.06	25.54	23.98	24.50	24.47	24.99	25.46
	6H	24.97	25.40	25.50	25.92	26.42	25.07	25.51	25.60	26.02	26.52
	8H	25.39	25.76	25.90	26.26	26.84	25.59	25.97	26.11	26.46	27.04

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-6

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L935-N

Data in this report applies to families of products including EHBR-60-L935-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-6
 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-L935-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3500K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 3406
 CIE u': 0.2394
 CIE v': 0.5094
 Duv: -0.0028
 CIE x: 0.4076
 CIE y: 0.3856
 CIE z: 0.2068
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 582
 Purity: 38.0517
 Rf: 91.3
 Rg: 100

CRI (Ra):	94.6		
R1:	96.6	R9:	63.8
R2:	98.4	R10:	94.7
R3:	98.1	R11:	96.6
R4:	95.8	R12:	80.9
R5:	96.2	R13:	97.4
R6:	95.4	R14:	98.3
R7:	91.8	R15:	93.1
R8:	84.4		



Test Conditions

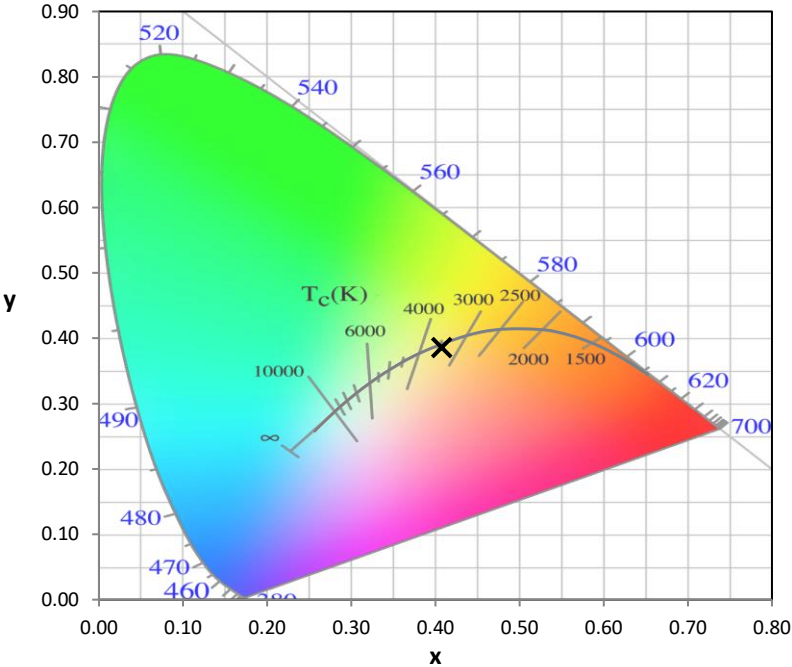
Stabilization Time: 35M
 Operation Time: 1H 35M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-6

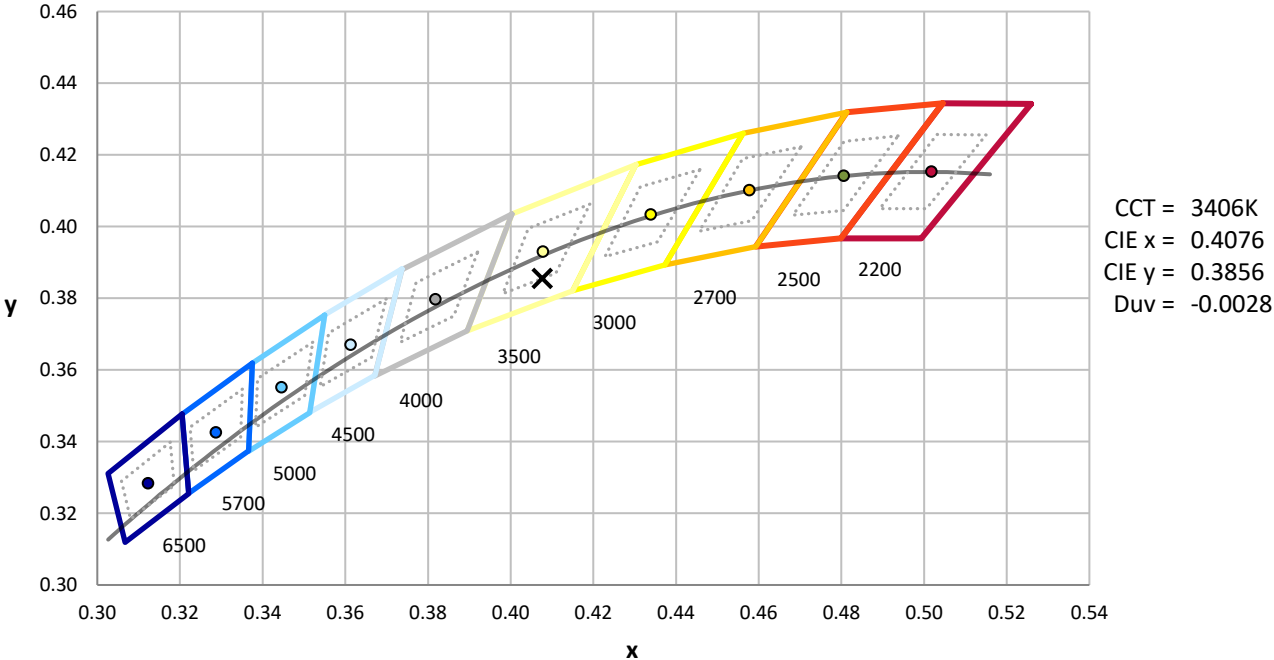
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

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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: SP1-2506-472-6

Photopic Flux vs. Wavelength

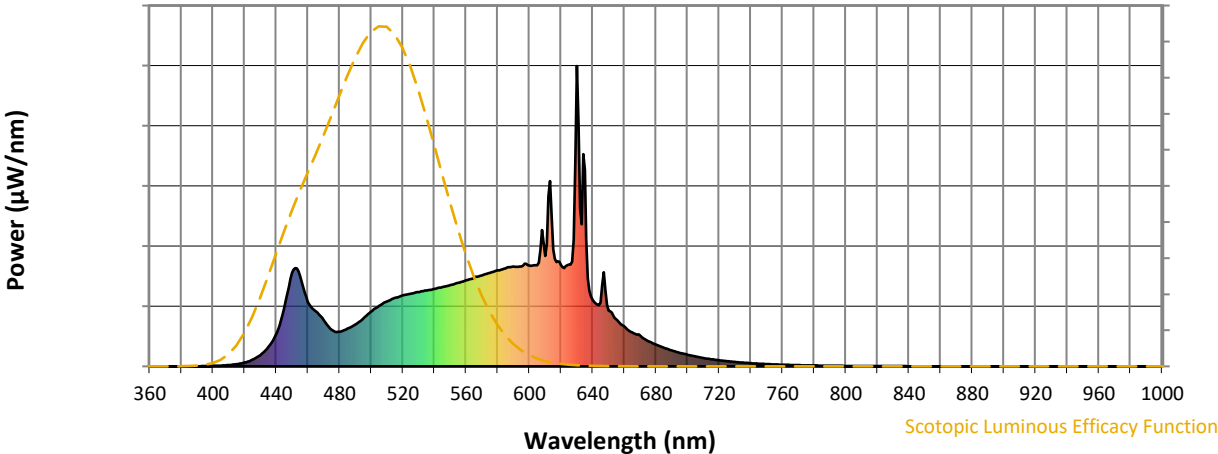


Photopic Lumens: NR

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.62

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.3

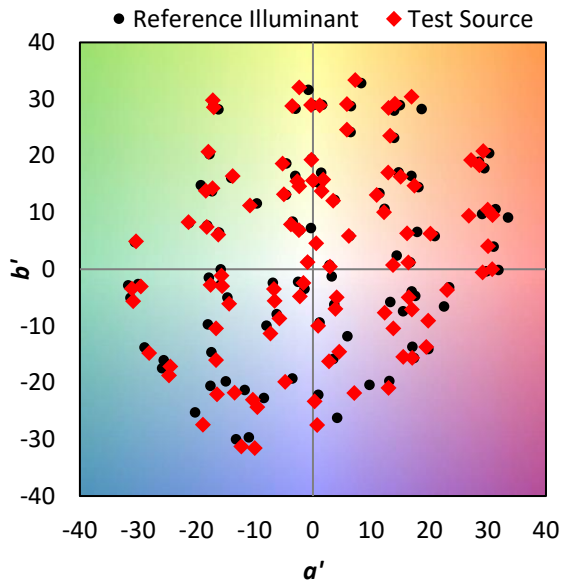
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

Summary

$R_f = 91.3$
 $R_g = 100$
 $CIE R_a = 94.6$
 $R_9 = 63.8$



Color Vector Graphics



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

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 90
CES02 = 63	CES27 = 92	CES52 = 98	CES77 = 86
CES03 = 31	CES28 = 97	CES53 = 98	CES78 = 86
CES04 = 70	CES29 = 97	CES54 = 93	CES79 = 90
CES05 = 50	CES30 = 92	CES55 = 92	CES80 = 91
CES06 = 51	CES31 = 97	CES56 = 96	CES81 = 74
CES07 = 43	CES32 = 89	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 99	CES58 = 95	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 97	CES60 = 92	CES85 = 79
CES11 = 58	CES36 = 81	CES61 = 93	CES86 = 79
CES12 = 64	CES37 = 96	CES62 = 86	CES87 = 92
CES13 = 44	CES38 = 87	CES63 = 94	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 84
CES15 = 72	CES40 = 97	CES65 = 90	CES90 = 96
CES16 = 48	CES41 = 96	CES66 = 89	CES91 = 75
CES17 = 49	CES42 = 94	CES67 = 88	CES92 = 76
CES18 = 56	CES43 = 93	CES68 = 89	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 90	CES94 = 74
CES20 = 67	CES45 = 97	CES70 = 88	CES95 = 83
CES21 = 86	CES46 = 97	CES71 = 83	CES96 = 92
CES22 = 78	CES47 = 91	CES72 = 94	CES97 = 96
CES23 = 91	CES48 = 91	CES73 = 83	CES98 = 95
CES24 = 90	CES49 = 96	CES74 = 90	CES99 = 92
CES25 = 71	CES50 = 98	CES75 = 85	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)