

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: P1433419

Luminaire Tested: EHBR1-12-UNV-TASM-L935-UPL12

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433419
REPORT IS A COMBINATION OF REPORTS P1431644 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-12-UNV-TASM-L935-UPL12
Description: Elevate Round Highbay at, 12000 lumens, 3500K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

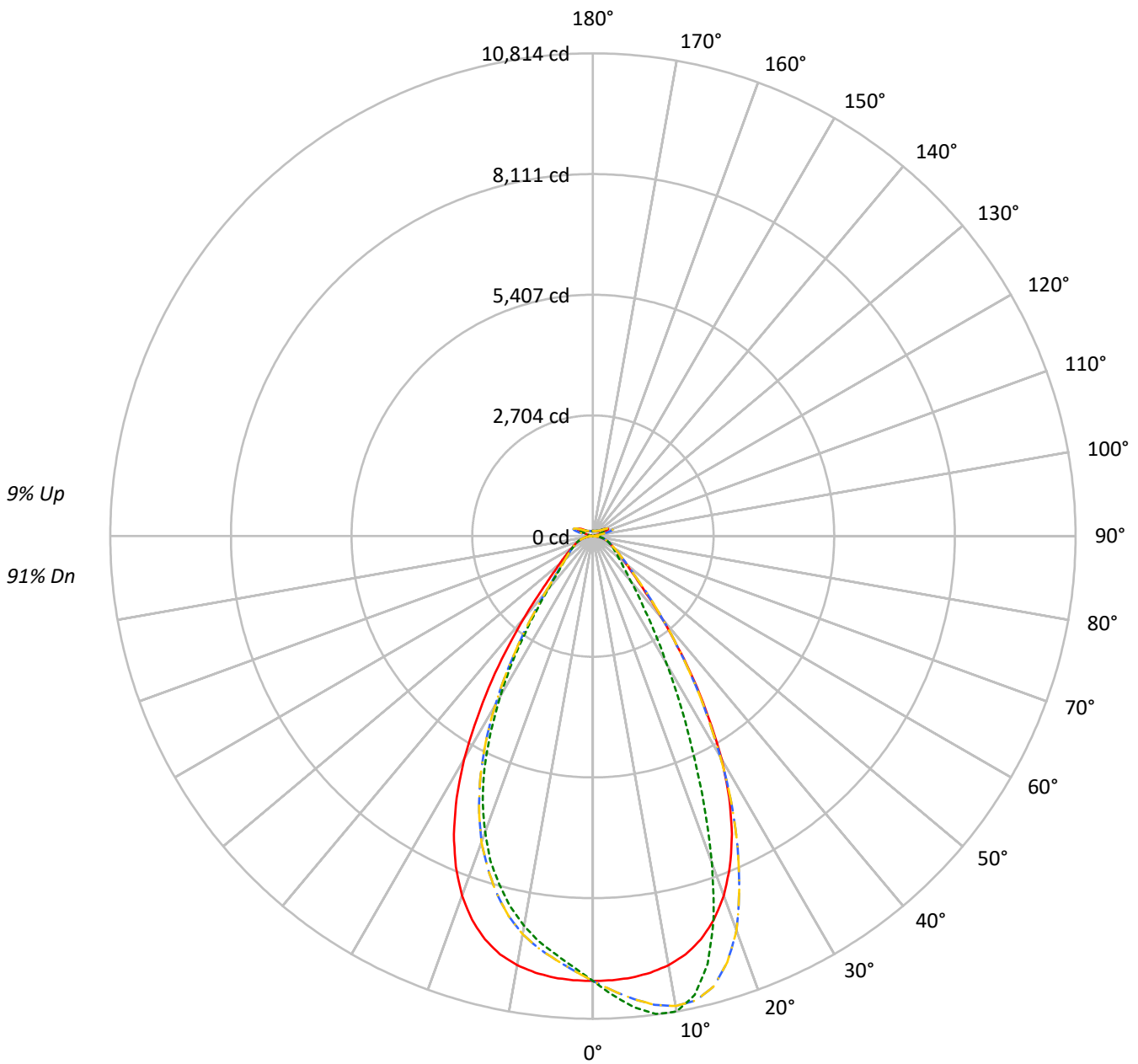
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12239.0 lumens
Efficiency: N/A
Efficacy: 169.8 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 0.84 / 0.9
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 72.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1433419
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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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	91
1	110	106	103	100	106	103	100	98	97	95	93	92	90	89	87	86	85	85	85	85	82
2	103	97	92	87	99	94	90	86	89	86	83	85	82	79	81	79	76	76	76	76	74
3	96	88	82	78	93	86	81	76	82	78	74	79	75	72	75	72	69	69	69	69	67
4	90	81	75	70	88	79	73	69	76	71	67	73	69	65	70	66	63	63	63	63	61
5	85	75	68	63	82	74	67	62	71	65	61	68	63	60	65	61	58	58	58	58	56
6	80	70	63	58	78	68	62	57	66	60	56	63	59	55	61	57	54	54	54	54	52
7	75	65	58	53	73	64	57	53	61	56	52	59	55	51	58	53	50	50	50	50	48
8	71	61	54	49	69	60	53	49	58	52	48	56	51	47	54	50	47	47	47	47	45
9	68	57	50	46	66	56	50	45	54	49	45	53	48	44	51	47	43	43	43	43	42
10	64	53	47	43	63	53	46	42	51	46	42	50	45	41	48	44	41	41	41	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	46800	46800	46800	46800
5°	46516	49624	46516	44102
10°	45944	50898	45944	41739
15°	44587	47300	44587	38555
20°	41700	37928	41700	34342
25°	36908	26279	36908	28780
30°	29968	17096	29968	21533
35°	21494	11072	21494	14335
40°	13897	7631	13897	9041
45°	8817	5912	8817	6441
50°	6547	5023	6547	5366
55°	5346	4576	5346	4737
60°	4629	4359	4629	4385
65°	4220	4204	4220	4186
70°	3999	4119	3999	4065
75°	3741	3985	3741	3865
80°	3285	3762	3285	3517
85°	2127	2688	2127	2560

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12396 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	947.6	7.7
10°-20°	2578.0	21.1
20°-30°	3023.5	24.7
30°-40°	2102.6	17.2
40°-50°	1044.9	8.5
50°-60°	625.0	5.1
60°-70°	439.9	3.6
70°-80°	283.4	2.3
80°-90°	91.9	0.8
90°-100°	29.3	0.2
100°-110°	191.6	1.6
110°-120°	354.0	2.9
120°-130°	210.4	1.7
130°-140°	127.3	1.0
140°-150°	88.1	0.7
150°-160°	57.5	0.5
160°-170°	33.1	0.3
170°-180°	11.0	0.1
0°-30°	6549.1	53.5
0°-40°	8651.7	70.7
0°-60°	10321.6	84.3
0°-90°	11136.7	91.0
90°-120°	575.0	4.7
90°-150°	1000.7	8.2
90°-180°	1102.0	9.0
0°-180°	12239.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9966	9966	9966	9966	9966	
5°	9932	10596	9932	9416	9932	943
15°	9354	9923	9354	8089	9354	2614
25°	7370	5248	7370	5747	7370	3337
35°	3945	2032	3945	2631	3945	2463
45°	1427	956	1427	1042	1427	1167
55°	722	618	722	640	722	661
65°	440	439	440	437	440	442
75°	264	281	264	272	264	277
85°	73	92	73	88	73	81
90°	8	9	8	8	8	7
95°	16	15	16	14	16	17
105°	88	45	88	67	88	119
115°	377	322	377	306	377	343
125°	241	253	241	221	241	222
135°	152	176	152	161	152	121
145°	138	144	138	134	138	87
155°	123	128	123	119	123	57
165°	116	119	116	114	116	33
175°	116	118	116	114	116	11
180°	115	115	115	115	115	



TEST NUMBER: P1433419
 CATALOG NUMBER: EHBR1-12-UNV-TASM-L935-UPL12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8
2.5°	9960.0	10088.8	10193.0	10261.8	10295.8	10261.8	10193.0	10088.8	9960.0	9832.0	9744.0
5°	9931.8	10189.7	10408.2	10551.1	10595.5	10551.1	10408.2	10189.7	9931.8	9688.1	9526.5
7.5°	9864.4	10266.2	10590.7	10757.6	10798.4	10757.6	10590.7	10266.2	9864.4	9519.4	9315.2
10°	9761.4	10314.4	10689.4	10809.0	10813.9	10809.0	10689.4	10314.4	9761.4	9296.7	9055.8
12.5°	9597.1	10297.2	10656.4	10617.1	10527.9	10617.1	10656.4	10297.2	9597.1	9024.5	8720.7
15°	9354.2	10195.3	10446.8	10127.5	9923.2	10127.5	10446.8	10195.3	9354.2	8657.2	8304.7
17.5°	9011.8	10004.7	10009.6	9377.7	8992.4	9377.7	10009.6	10004.7	9011.8	8207.9	7819.8
20°	8570.6	9699.0	9407.4	8251.9	7795.3	8251.9	9407.4	9699.0	8570.6	7676.8	7296.0
22.5°	8017.5	9286.7	8569.0	7119.2	6496.3	7119.2	8569.0	9286.7	8017.5	7059.2	6662.8
25°	7370.5	8781.6	7666.9	5885.1	5247.8	5885.1	7666.9	8781.6	7370.5	6323.3	5964.8
27.5°	6609.6	8141.4	6706.4	4809.1	4221.1	4809.1	6706.4	8141.4	6609.6	5563.4	5197.3
30°	5764.3	7320.6	5706.8	3829.8	3288.4	3829.8	5706.8	7320.6	5764.3	4709.8	4382.0
32.5°	4818.0	6516.2	4746.8	3068.7	2610.0	3068.7	4746.8	6516.2	4818.0	3895.2	3552.6
35°	3944.9	5509.7	3881.2	2411.2	2032.1	2411.2	3881.2	5509.7	3944.9	3126.2	2789.9
37.5°	3095.9	4558.7	3093.9	1941.6	1648.3	1941.6	3093.9	4558.7	3095.9	2430.5	2157.4
40°	2408.7	3564.4	2424.2	1549.9	1322.7	1549.9	2424.2	3564.4	2408.7	1849.3	1674.6
42.5°	1825.0	2725.6	1905.4	1272.0	1123.5	1272.0	1905.4	2725.6	1825.0	1457.1	1326.2
45°	1426.6	2005.7	1487.9	1073.2	956.5	1073.2	1487.9	2005.7	1426.6	1173.4	1085.5
47.5°	1161.8	1550.1	1205.9	920.6	838.7	920.6	1205.9	1550.1	1161.8	992.5	926.7
50°	975.8	1189.5	1001.3	803.6	748.6	803.6	1001.3	1189.5	975.8	849.9	806.0
52.5°	838.4	970.0	852.7	716.1	679.1	716.1	852.7	970.0	838.4	743.6	716.3
55°	722.4	815.5	741.6	643.9	618.4	643.9	741.6	815.5	722.4	661.7	641.5
57.5°	634.4	691.8	643.9	582.5	565.5	582.5	643.9	691.8	634.4	588.8	578.0
60°	556.5	599.1	568.3	528.8	524.0	528.8	568.3	599.1	556.5	529.7	522.7
62.5°	496.5	523.4	502.5	480.6	476.4	480.6	502.5	523.4	496.5	476.0	477.3
65°	440.5	465.5	449.1	437.3	438.8	437.3	449.1	465.5	440.5	431.0	433.0
67.5°	397.2	410.2	403.0	396.3	398.1	396.3	403.0	410.2	397.2	387.7	390.9
70°	350.9	365.0	357.6	358.6	361.4	358.6	357.6	365.0	350.9	348.1	350.6
72.5°	306.9	317.7	315.2	317.5	320.5	317.5	315.2	317.7	306.9	306.4	306.7
75°	263.5	271.7	272.8	276.0	280.7	276.0	272.8	271.7	263.5	260.7	264.0
77.5°	216.3	225.6	229.1	233.4	240.4	233.4	229.1	225.6	216.3	218.1	219.8
80°	172.8	177.2	185.0	188.2	197.9	188.2	185.0	177.2	172.8	169.7	172.1
82.5°	126.5	130.4	137.1	143.1	148.7	143.1	137.1	130.4	126.5	125.0	125.2
85°	73.1	79.0	83.6	90.6	92.4	90.6	83.6	79.0	73.1	74.8	73.1
87.5°	25.6	27.5	31.4	34.2	34.3	34.2	31.4	27.5	25.6	26.2	23.7
90°	8.1	13.8	23.7	13.2	9.3	13.2	23.7	13.8	8.1	14.1	22.1
92.5°	10.5	18.6	33.4	17.5	12.4	17.5	33.4	18.6	10.5	18.4	35.5
95°	15.6	22.8	42.5	19.3	14.9	19.3	42.5	22.8	15.6	24.6	49.5
97.5°	24.1	28.4	48.0	20.6	17.9	20.6	48.0	28.4	24.1	30.0	56.8
100°	32.0	32.0	87.6	23.6	20.3	23.6	87.6	32.0	32.0	36.9	88.5
102.5°	48.5	62.6	202.8	46.9	24.6	46.9	202.8	62.6	48.5	69.2	187.7
105°	88.0	143.0	356.8	120.5	45.0	120.5	356.8	143.0	88.0	144.7	334.3
107.5°	166.6	266.6	459.7	237.5	104.0	237.5	459.7	266.6	166.6	256.0	441.0
110°	266.4	372.5	501.7	325.1	209.9	325.1	501.7	372.5	266.4	351.6	462.4



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CATALOG NUMBER: EHBR1-12-UNV-TASM-L935-UPL12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	346.7	415.1	490.1	360.4	290.2	360.4	490.1	415.1	346.7	388.1	442.9
115°	376.8	409.0	437.8	359.2	321.9	359.2	437.8	409.0	376.8	378.9	395.4
117.5°	364.0	374.3	378.1	337.2	323.7	337.2	378.1	374.3	364.0	340.8	335.8
120°	328.6	324.4	318.7	305.0	305.4	305.0	318.7	324.4	328.6	297.5	280.3
122.5°	284.4	275.3	269.4	272.4	280.5	272.4	269.4	275.3	284.4	253.3	240.4
125°	241.2	232.0	234.8	244.3	252.7	244.3	234.8	232.0	241.2	215.2	212.0
127.5°	204.8	200.6	209.9	220.6	227.8	220.6	209.9	200.6	204.8	188.4	191.9
130°	178.8	179.9	192.2	201.4	205.8	201.4	192.2	179.9	178.8	170.9	179.3
132.5°	162.6	167.3	179.0	187.0	189.6	187.0	179.0	167.3	162.6	160.3	170.5
135°	152.4	159.3	170.0	175.2	176.2	175.2	170.0	159.3	152.4	153.3	162.6
137.5°	146.6	153.4	161.5	165.7	164.6	165.7	161.5	153.4	146.6	148.6	155.7
140°	143.1	150.0	153.6	158.3	157.5	158.3	153.6	150.0	143.1	144.4	149.8
142.5°	139.7	146.0	147.8	151.2	150.2	151.2	147.8	146.0	139.7	140.8	144.6
145°	138.0	142.7	141.3	145.7	144.3	145.7	141.3	142.7	138.0	138.4	140.5
147.5°	135.0	138.4	136.6	140.5	138.9	140.5	136.6	138.4	135.0	135.0	135.8
150°	131.5	134.0	131.3	135.8	135.5	135.8	131.3	134.0	131.5	130.9	131.7
152.5°	126.8	129.2	126.8	131.9	131.4	131.9	126.8	129.2	126.8	126.2	127.0
155°	122.9	124.2	122.9	128.0	128.2	128.0	122.9	124.2	122.9	122.7	123.1
157.5°	120.3	121.0	120.5	124.9	125.1	124.9	120.5	121.0	120.3	120.3	120.5
160°	117.9	119.1	118.7	122.5	122.8	122.5	118.7	119.1	117.9	118.4	118.5
162.5°	117.0	117.0	116.9	120.7	121.1	120.7	116.9	117.0	117.0	117.0	117.6
165°	115.8	116.5	115.6	118.4	119.4	118.4	115.6	116.5	115.8	116.3	116.3
167.5°	115.6	115.0	115.4	117.7	118.7	117.7	115.4	115.0	115.6	116.0	116.0
170°	114.6	114.7	114.5	116.9	117.8	116.9	114.5	114.7	114.6	115.2	115.6
172.5°	115.1	115.1	114.5	116.2	117.9	116.2	114.5	115.1	115.1	115.6	116.2
175°	115.5	115.0	114.8	116.0	117.6	116.0	114.8	115.0	115.5	115.3	115.3
177.5°	114.8	115.2	115.6	116.8	119.0	116.8	115.6	115.2	114.8	115.3	115.3
180°	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	9965.8	9965.8	9965.8	9965.8	9965.8	9965.8
2.5°	9676.3	9670.0	9676.3	9744.0	9832.0	9960.0
5°	9451.6	9416.4	9451.6	9526.5	9688.1	9931.8
7.5°	9189.7	9169.3	9189.7	9315.2	9519.4	9864.4
10°	8914.1	8868.0	8914.1	9055.8	9296.7	9761.4
12.5°	8574.3	8513.2	8574.3	8720.7	9024.5	9597.1
15°	8142.3	8088.7	8142.3	8304.7	8657.2	9354.2
17.5°	7678.7	7630.1	7678.7	7819.8	8207.9	9011.8
20°	7096.4	7058.2	7096.4	7296.0	7676.8	8570.6
22.5°	6485.5	6449.8	6485.5	6662.8	7059.2	8017.5
25°	5766.8	5747.3	5766.8	5964.8	6323.3	7370.5
27.5°	4990.1	4957.1	4990.1	5197.3	5563.4	6609.6
30°	4196.7	4141.9	4196.7	4382.0	4709.8	5764.3
32.5°	3420.6	3381.2	3420.6	3552.6	3895.2	4818.0
35°	2670.4	2631.0	2670.4	2789.9	3126.2	3944.9
37.5°	2080.8	2011.1	2080.8	2157.4	2430.5	3095.9
40°	1578.2	1567.0	1578.2	1674.6	1849.3	2408.7
42.5°	1284.7	1254.3	1284.7	1326.2	1457.1	1825.0
45°	1054.2	1042.2	1054.2	1085.5	1173.4	1426.6
47.5°	906.5	911.8	906.5	926.7	992.5	1161.8
50°	796.5	799.7	796.5	806.0	849.9	975.8
52.5°	715.4	712.6	715.4	716.3	743.6	838.4
55°	643.6	640.1	643.6	641.5	661.7	722.4
57.5°	580.8	583.4	580.8	578.0	588.8	634.4
60°	524.8	527.2	524.8	522.7	529.7	556.5
62.5°	477.5	479.0	477.5	477.3	476.0	496.5
65°	435.2	436.9	435.2	433.0	431.0	440.5
67.5°	394.9	394.9	394.9	390.9	387.7	397.2
70°	356.9	356.7	356.9	350.6	348.1	350.9
72.5°	311.3	315.9	311.3	306.7	306.4	306.9
75°	267.0	272.3	267.0	264.0	260.7	263.5
77.5°	222.2	230.2	222.2	219.8	218.1	216.3
80°	176.2	185.0	176.2	172.1	169.7	172.8
82.5°	130.2	136.8	130.2	125.2	125.0	126.5
85°	77.6	88.0	77.6	73.1	74.8	73.1
87.5°	24.8	31.8	24.8	23.7	26.2	25.6
90°	13.0	8.1	13.0	22.1	14.1	8.1
92.5°	19.7	11.8	19.7	35.5	18.4	10.5
95°	22.7	13.6	22.7	49.5	24.6	15.6
97.5°	25.1	17.4	25.1	56.8	30.0	24.1
100°	29.4	22.8	29.4	88.5	36.9	32.0
102.5°	62.3	38.7	62.3	187.7	69.2	48.5
105°	131.1	66.7	131.1	334.3	144.7	88.0
107.5°	234.6	115.4	234.6	441.0	256.0	166.6
110°	311.2	215.3	311.2	462.4	351.6	266.4



TEST NUMBER: P1433419

CATALOG NUMBER: EHBR1-12-UNV-TASM-L935-UPL12

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	334.3	290.8	334.3	442.9	388.1	346.7
115°	321.6	306.0	321.6	395.4	378.9	376.8
117.5°	293.6	295.6	293.6	335.8	340.8	364.0
120°	261.3	273.7	261.3	280.3	297.5	328.6
122.5°	231.7	246.2	231.7	240.4	253.3	284.4
125°	206.1	220.9	206.1	212.0	215.2	241.2
127.5°	188.4	198.4	188.4	191.9	188.4	204.8
130°	174.6	183.2	174.6	179.3	170.9	178.8
132.5°	165.0	170.6	165.0	170.5	160.3	162.6
135°	156.7	161.4	156.7	162.6	153.3	152.4
137.5°	149.6	153.7	149.6	155.7	148.6	146.6
140°	143.3	146.7	143.3	149.8	144.4	143.1
142.5°	136.9	139.3	136.9	144.6	140.8	139.7
145°	132.3	134.1	132.3	140.5	138.4	138.0
147.5°	128.4	129.7	128.4	135.8	135.0	135.0
150°	124.5	125.8	124.5	131.7	130.9	131.5
152.5°	120.5	121.9	120.5	127.0	126.2	126.8
155°	117.8	119.2	117.8	123.1	122.7	122.9
157.5°	116.3	117.3	116.3	120.5	120.3	120.3
160°	115.0	115.8	115.0	118.5	118.4	117.9
162.5°	113.7	114.5	113.7	117.6	117.0	117.0
165°	113.4	113.6	113.4	116.3	116.3	115.8
167.5°	113.0	113.6	113.0	116.0	116.0	115.6
170°	113.2	113.4	113.2	115.6	115.2	114.6
172.5°	113.6	113.7	113.6	116.2	115.6	115.1
175°	113.3	113.5	113.3	115.3	115.3	115.5
177.5°	114.1	114.3	114.1	115.3	115.3	114.8
180°	115.2	115.2	115.2	115.2	115.2	115.2



TEST NUMBER: P1433419
 CATALOG NUMBER: EHBR1-12-UNV-TASM-L935-UPL12

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	13.82	14.89	14.34	15.39	15.92	13.13	14.21	13.66	14.70	15.24
	3H	15.36	16.32	15.90	16.83	17.41	14.98	15.94	15.52	16.45	17.03
	4H	16.00	16.89	16.55	17.42	18.02	15.76	16.65	16.32	17.18	17.78
	6H	16.48	17.30	17.05	17.84	18.45	16.40	17.22	16.97	17.77	18.38
	8H	16.63	17.40	17.21	17.96	18.58	16.62	17.40	17.21	17.96	18.58
	12H	16.70	17.44	17.28	17.99	18.63	16.75	17.49	17.34	18.04	18.69
4H	2H	14.23	15.12	14.79	15.65	16.25	13.71	14.60	14.27	15.13	15.73
	3H	16.02	16.76	16.59	17.33	17.95	15.76	16.50	16.33	17.07	17.69
	4H	16.80	17.46	17.38	18.04	18.69	16.67	17.33	17.26	17.91	18.57
	6H	17.41	17.98	18.02	18.59	19.26	17.44	18.01	18.05	18.62	19.29
	8H	17.61	18.14	18.22	18.74	19.42	17.71	18.24	18.33	18.85	19.52
	12H	17.71	18.18	18.34	18.82	19.50	17.88	18.35	18.51	18.98	19.66
8H	4H	17.05	17.58	17.66	18.18	18.86	16.95	17.48	17.56	18.09	18.76
	6H	17.79	18.22	18.43	18.87	19.55	17.85	18.29	18.50	18.94	19.62
	8H	18.06	18.44	18.72	19.10	19.80	18.20	18.59	18.87	19.25	19.95
	12H	18.23	18.57	18.89	19.21	19.98	18.45	18.79	19.11	19.43	20.20
12H	4H	17.05	17.52	17.69	18.16	18.84	16.96	17.43	17.59	18.06	18.74
	6H	17.83	18.22	18.49	18.88	19.57	17.90	18.28	18.56	18.95	19.64
	8H	18.15	18.48	18.81	19.13	19.90	18.30	18.64	18.96	19.28	20.05

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

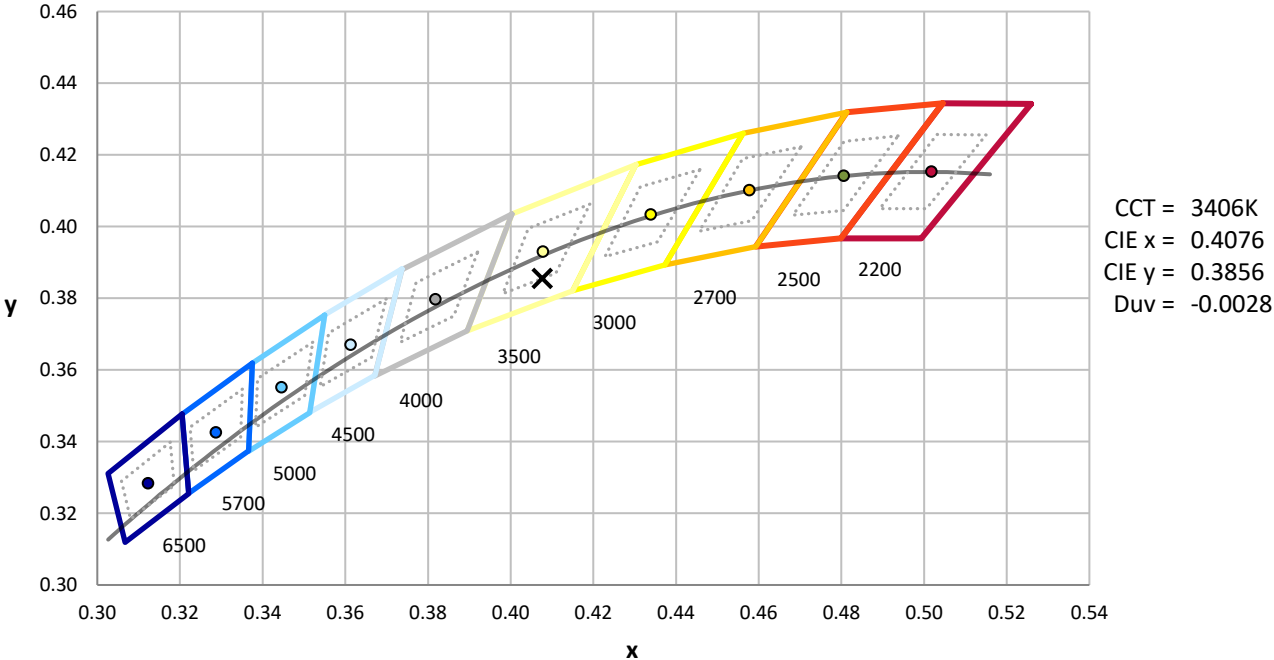
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2506-472-6

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)