

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: P1433644

Luminaire Tested: EHBR1-54-UNV-TASM-L935-UPL15

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433644
REPORT IS A COMBINATION OF REPORTS P1431869 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-54-UNV-TASM-L935-UPL15
Description: Elevate Round Highbay at, 54000 lumens, 3500K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

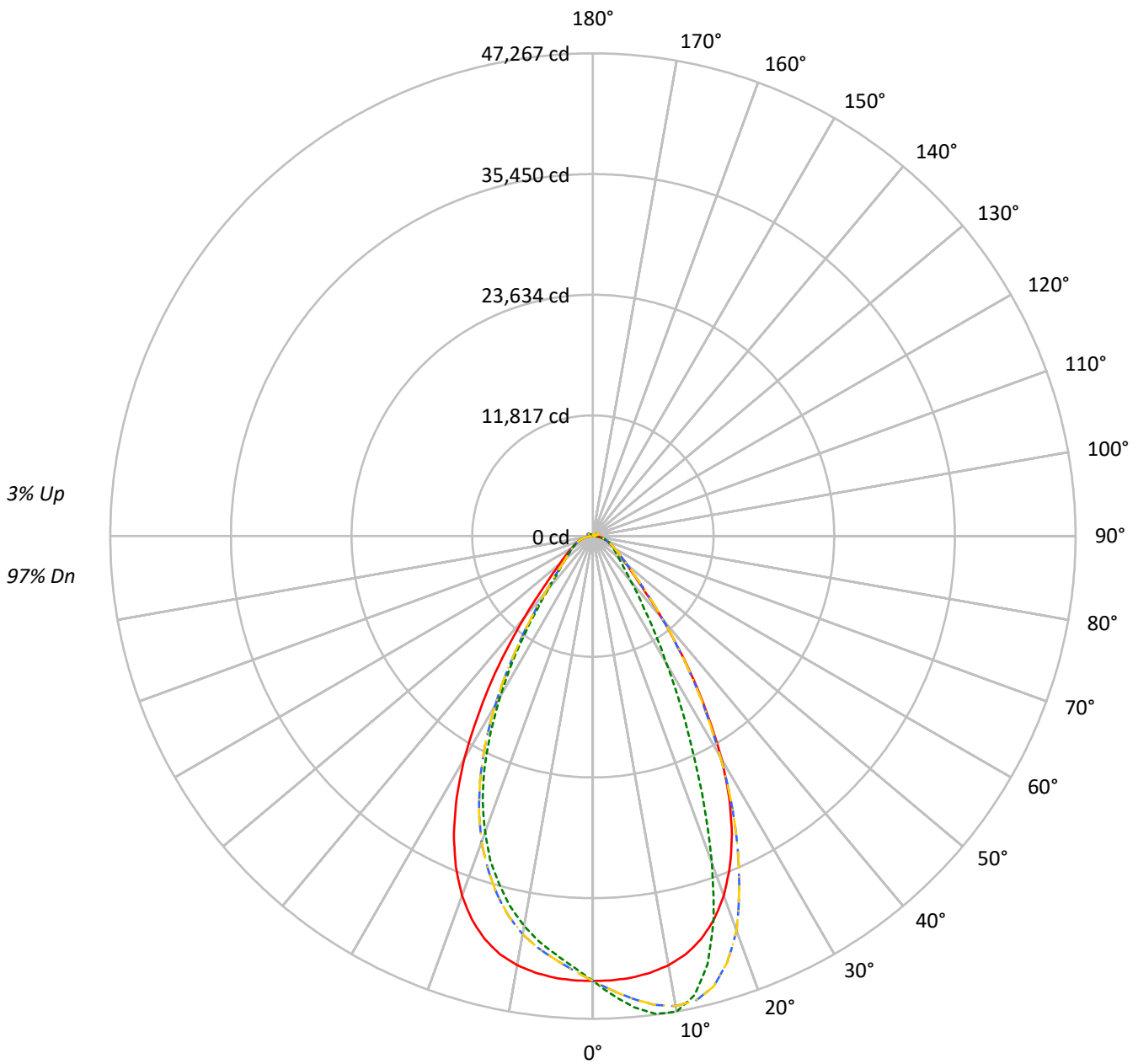
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 50055.6 lumens
Efficiency: N/A
Efficacy: 164.0 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): 305.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1433644
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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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	100	100	100	97
1	111	108	105	102	108	105	103	100	101	98	96	96	95	93	93	91	90	93	91	90	88
2	104	98	93	89	102	96	92	88	93	89	86	89	86	83	86	83	81	86	83	81	79
3	98	90	84	79	95	88	83	79	85	81	77	82	79	75	80	77	74	80	77	74	72
4	92	83	76	71	90	82	76	71	79	74	70	77	72	69	74	71	67	74	71	67	66
5	87	77	70	65	85	76	69	65	73	68	64	71	67	63	70	65	62	70	65	62	60
6	82	71	65	60	80	70	64	59	69	63	59	67	62	58	65	61	57	65	61	57	56
7	77	67	60	55	75	66	59	55	64	58	54	63	57	54	61	57	53	61	57	53	52
8	73	62	56	51	72	62	55	51	60	54	50	59	54	50	58	53	50	58	53	50	48
9	69	58	52	47	68	58	52	47	57	51	47	55	50	47	54	50	46	54	50	46	45
10	66	55	49	44	64	54	48	44	53	48	44	52	47	44	51	47	43	51	47	43	42

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	204563	204563	204563	204563
5°	203318	216903	203318	192767
10°	200819	222471	200819	182438
15°	194890	206745	194890	168523
20°	182271	165781	182271	150107
25°	161324	114863	161324	125796
30°	130989	74727	130989	94120
35°	93950	48394	93950	62659
40°	60741	33356	60741	39515
45°	38540	25838	38540	28155
50°	28621	21956	28621	23452
55°	23367	20001	23367	20702
60°	20234	19052	20234	19168
65°	18445	18375	18445	18296
70°	17483	18003	17483	17771
75°	16351	17417	16351	16894
80°	14361	16443	14361	15371
85°	9293	11740	9293	11193

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 54185 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4141.9	8.3
10°-20°	11268.4	22.5
20°-30°	13215.5	26.4
30°-40°	9190.5	18.4
40°-50°	4567.3	9.1
50°-60°	2731.7	5.5
60°-70°	1922.7	3.8
70°-80°	1238.5	2.5
80°-90°	395.8	0.8
90°-100°	37.8	0.1
100°-110°	237.8	0.5
110°-120°	437.7	0.9
120°-130°	261.5	0.5
130°-140°	160.1	0.3
140°-150°	112.5	0.2
150°-160°	75.4	0.2
160°-170°	45.2	0.1
170°-180°	15.5	0.0
0°-30°	28625.8	57.2
0°-40°	37816.3	75.5
0°-60°	45115.3	90.1
0°-90°	48672.3	97.2
90°-120°	713.3	1.4
90°-150°	1247.3	2.5
90°-180°	1383.0	2.8
0°-180°	50055.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	43560	43560	43560	43560	43560	
5°	43412	46312	43412	41159	43412	4120
15°	40887	43374	40887	35355	40887	11426
25°	32216	22938	32216	25121	32216	14585
35°	17243	8882	17243	11500	17243	10764
45°	6236	4180	6236	4555	6236	5103
55°	3158	2703	3158	2798	3158	2888
65°	1925	1918	1925	1910	1925	1934
75°	1152	1227	1152	1190	1152	1209
85°	319	404	319	385	319	355
90°	10	16	10	10	10	20
95°	20	23	20	17	20	21
105°	110	60	110	83	110	147
115°	465	401	465	378	465	424
125°	299	317	299	274	299	276
135°	192	223	192	201	192	152
145°	177	185	177	172	177	111
155°	161	168	161	158	161	75
165°	158	166	158	156	158	45
175°	163	170	163	160	163	15
180°	164	164	164	164	164	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3
2.5°	43535.0	44097.8	44553.6	44854.2	45002.8	44854.2	44553.6	44097.8	43535.0	42975.4	42590.7
5°	43411.7	44538.9	45493.8	46118.6	46312.2	46118.6	45493.8	44538.9	43411.7	42346.5	41640.0
7.5°	43116.7	44872.9	46291.8	47021.2	47199.3	47021.2	46291.8	44872.9	43116.7	41609.0	40716.2
10°	42666.8	45083.7	46723.0	47245.8	47267.1	47245.8	46723.0	45083.7	42666.8	40635.3	39582.4
12.5°	41948.8	45008.5	46578.5	46407.0	46017.4	46407.0	46578.5	45008.5	41948.8	39446.0	38117.8
15°	40886.9	44563.3	45662.8	44266.9	43374.1	44266.9	45662.8	44563.3	40886.9	37840.1	36299.6
17.5°	39390.5	43730.2	43751.4	40989.8	39305.5	40989.8	43751.4	43730.2	39390.5	35876.4	34180.0
20°	37462.0	42393.9	41119.6	36068.4	34072.9	36068.4	41119.6	42393.9	37462.0	33555.1	31890.4
22.5°	35044.2	40592.0	37454.5	31117.7	28395.2	31117.7	37454.5	40592.0	35044.2	30855.5	29123.0
25°	32216.3	38384.2	33511.7	25723.4	22938.0	25723.4	33511.7	38384.2	32216.3	27638.8	26072.1
27.5°	28890.2	35585.7	29313.3	21020.1	18450.3	21020.1	29313.3	35585.7	28890.2	24317.6	22717.4
30°	25195.7	31998.2	24944.1	16739.9	14373.7	16739.9	24944.1	31998.2	25195.7	20586.4	19153.7
32.5°	21059.3	28481.8	20748.1	13413.0	11408.5	13413.0	20748.1	28481.8	21059.3	17025.9	15528.6
35°	17243.1	24082.4	16964.6	10539.4	8882.1	10539.4	16964.6	24082.4	17243.1	13664.6	12194.3
37.5°	13532.3	19925.6	13523.3	8486.8	7204.4	8486.8	13523.3	19925.6	13532.3	10623.6	9430.2
40°	10528.0	15580.1	10595.8	6774.7	5781.5	6774.7	10595.8	15580.1	10528.0	8083.3	7319.5
42.5°	7977.1	11913.3	8328.4	5560.2	4910.8	5560.2	8328.4	11913.3	7977.1	6368.8	5797.0
45°	6235.6	8766.9	6503.6	4691.0	4180.5	4691.0	6503.6	8766.9	6235.6	5128.8	4744.9
47.5°	5078.2	6775.5	5270.9	4023.7	3665.9	4023.7	5270.9	6775.5	5078.2	4338.1	4050.7
50°	4265.5	5199.1	4376.6	3512.3	3272.2	3512.3	4376.6	5199.1	4265.5	3714.9	3523.0
52.5°	3664.3	4240.1	3727.2	3130.1	2968.3	3130.1	3727.2	4240.1	3664.3	3250.1	3130.9
55°	3157.8	3564.6	3241.1	2814.8	2702.9	2814.8	3241.1	3564.6	3157.8	2892.4	2804.2
57.5°	2773.1	3023.9	2814.8	2546.1	2471.7	2546.1	2814.8	3023.9	2773.1	2573.8	2526.4
60°	2432.5	2618.7	2484.0	2311.6	2290.4	2311.6	2484.0	2618.7	2432.5	2315.7	2284.7
62.5°	2170.3	2287.9	2196.4	2100.9	2082.1	2100.9	2196.4	2287.9	2170.3	2080.5	2086.2
65°	1925.2	2034.7	1962.8	1911.4	1917.9	1911.4	1962.8	2034.7	1925.2	1883.6	1892.6
67.5°	1735.7	1792.9	1761.9	1732.4	1739.8	1732.4	1761.9	1792.9	1735.7	1694.9	1708.8
70°	1534.0	1595.2	1563.4	1567.5	1579.7	1567.5	1563.4	1595.2	1534.0	1521.7	1532.3
72.5°	1341.2	1388.6	1378.0	1387.8	1400.8	1387.8	1378.0	1388.6	1341.2	1339.6	1340.4
75°	1151.8	1187.7	1192.5	1206.4	1226.9	1206.4	1192.5	1187.7	1151.8	1139.4	1154.2
77.5°	945.0	985.9	1001.4	1020.3	1050.4	1020.3	1001.4	985.9	945.0	953.2	960.6
80°	755.5	774.4	808.6	822.6	865.0	822.6	808.6	774.4	755.5	741.6	752.3
82.5°	553.0	570.2	599.5	625.7	650.2	625.7	599.5	570.2	553.0	546.4	547.2
85°	319.4	345.5	365.2	396.2	403.5	396.2	365.2	345.5	319.4	326.7	319.4
87.5°	111.9	120.1	137.2	149.5	150.3	149.5	137.2	120.1	111.9	114.4	103.8
90°	10.5	18.1	30.9	19.8	16.2	19.8	30.9	18.1	10.5	18.0	27.8
92.5°	13.6	24.1	42.9	25.1	20.0	25.1	42.9	24.1	13.6	23.3	44.2
95°	20.4	29.4	54.1	27.4	23.0	27.4	54.1	29.4	20.4	30.8	61.5
97.5°	30.8	36.1	60.9	28.9	26.7	28.9	60.9	36.1	30.8	37.5	70.5
100°	40.6	40.6	109.6	32.6	29.7	32.6	109.6	40.6	40.6	46.6	109.5
102.5°	60.8	78.9	252.0	61.9	35.0	61.9	252.0	78.9	60.8	86.3	231.6
105°	109.5	177.7	441.6	152.5	60.5	152.5	441.6	177.7	109.5	179.2	412.1
107.5°	206.2	329.8	568.2	296.4	133.2	296.4	568.2	329.8	206.2	316.3	544.1
110°	329.0	460.2	619.8	404.3	263.6	404.3	619.8	460.2	329.0	433.9	570.3



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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°	427.9	512.6	605.6	447.7	362.4	447.7	605.6	512.6	427.9	478.8	546.2
115°	465.4	505.2	541.2	446.2	401.4	446.2	541.2	505.2	465.4	467.6	487.9
117.5°	449.7	462.4	467.8	419.3	403.7	419.3	467.8	462.4	449.7	421.3	414.5
120°	406.2	401.1	395.2	379.6	381.2	379.6	395.2	401.1	406.2	368.1	346.2
122.5°	352.4	341.1	334.4	339.9	350.5	339.9	334.4	341.1	352.4	314.1	297.6
125°	299.2	287.9	292.6	305.4	316.9	305.4	292.6	287.9	299.2	267.8	263.2
127.5°	255.0	249.8	261.8	276.2	286.1	276.2	261.8	249.8	255.0	234.8	238.5
130°	223.7	224.3	240.2	253.0	259.1	253.0	240.2	224.3	223.7	213.9	223.6
132.5°	204.2	209.5	224.5	235.9	239.7	235.9	224.5	209.5	204.2	202.0	214.0
135°	192.3	199.7	214.1	220.9	223.2	220.9	214.1	199.7	192.3	193.9	204.2
137.5°	185.6	193.0	203.6	209.7	209.0	209.7	203.6	193.0	185.6	188.7	196.9
140°	182.0	189.3	193.9	200.7	200.8	200.7	193.9	189.3	182.0	183.4	190.2
142.5°	178.3	184.9	187.2	192.5	191.9	192.5	187.2	184.9	178.3	179.8	184.3
145°	176.8	182.0	179.7	185.8	185.2	185.8	179.7	182.0	176.8	176.8	179.8
147.5°	173.1	176.8	174.6	179.8	179.3	179.8	174.6	176.8	173.1	173.1	174.6
150°	169.4	172.4	168.6	174.6	175.6	174.6	168.6	172.4	169.4	168.7	170.2
152.5°	164.2	167.2	164.2	171.0	171.1	171.0	164.2	167.2	164.2	163.5	165.0
155°	160.6	162.1	160.6	167.5	168.3	167.5	160.6	162.1	160.6	159.8	161.4
157.5°	158.5	160.1	159.3	165.4	166.2	165.4	159.3	160.1	158.5	158.5	159.3
160°	158.1	159.5	159.6	165.0	165.8	165.0	159.6	159.5	158.1	158.0	158.8
162.5°	158.2	158.2	159.1	164.4	166.0	164.4	159.1	158.2	158.2	158.2	158.9
165°	158.3	159.2	159.2	163.9	166.2	163.9	159.2	159.2	158.3	158.3	158.3
167.5°	159.2	158.5	160.1	164.9	167.2	164.9	160.1	158.5	159.2	159.2	159.2
170°	158.6	159.4	160.2	165.0	167.3	165.0	160.2	159.4	158.6	159.3	159.2
172.5°	161.1	161.1	162.0	165.9	169.1	165.9	162.0	161.1	161.1	161.0	161.7
175°	162.7	162.7	163.6	166.9	170.0	166.9	163.6	162.7	162.7	161.9	161.9
177.5°	161.9	163.5	165.1	168.5	172.3	168.5	165.1	163.5	161.9	161.9	161.9
180°	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	43560.3	43560.3	43560.3	43560.3	43560.3	43560.3
2.5°	42295.1	42267.3	42295.1	42590.7	42975.4	43535.0
5°	41312.4	41158.9	41312.4	41640.0	42346.5	43411.7
7.5°	40168.1	40079.0	40168.1	40716.2	41609.0	43116.7
10°	38963.2	38761.5	38963.2	39582.4	40635.3	42666.8
12.5°	37478.3	37211.2	37478.3	38117.8	39446.0	41948.8
15°	35589.8	35355.3	35589.8	36299.6	37840.1	40886.9
17.5°	33563.2	33350.9	33563.2	34180.0	35876.4	39390.5
20°	31018.1	30851.4	31018.1	31890.4	33555.1	37462.0
22.5°	28347.8	28191.8	28347.8	29123.0	30855.5	35044.2
25°	25206.3	25121.4	25206.3	26072.1	27638.8	32216.3
27.5°	21811.6	21667.0	21811.6	22717.4	24317.6	28890.2
30°	18343.4	18104.0	18343.4	19153.7	20586.4	25195.7
32.5°	14951.1	14778.8	14951.1	15528.6	17025.9	21059.3
35°	11672.4	11500.1	11672.4	12194.3	13664.6	17243.1
37.5°	9095.3	8790.7	9095.3	9430.2	10623.6	13532.3
40°	6898.1	6849.0	6898.1	7319.5	8083.3	10528.0
42.5°	5615.6	5482.5	5615.6	5797.0	6368.8	7977.1
45°	4607.7	4555.4	4607.7	4744.9	5128.8	6235.6
47.5°	3962.4	3985.3	3962.4	4050.7	4338.1	5078.2
50°	3481.3	3495.2	3481.3	3523.0	3714.9	4265.5
52.5°	3126.8	3114.5	3126.8	3130.9	3250.1	3664.3
55°	2813.2	2797.7	2813.2	2804.2	2892.4	3157.8
57.5°	2538.7	2550.1	2538.7	2526.4	2573.8	2773.1
60°	2293.6	2304.3	2293.6	2284.7	2315.7	2432.5
62.5°	2087.0	2093.5	2087.0	2086.2	2080.5	2170.3
65°	1902.4	1909.7	1902.4	1892.6	1883.6	1925.2
67.5°	1725.9	1725.9	1725.9	1708.8	1694.9	1735.7
70°	1560.2	1559.3	1560.2	1532.3	1521.7	1534.0
72.5°	1360.9	1380.4	1360.9	1340.4	1339.6	1341.2
75°	1167.3	1190.1	1167.3	1154.2	1139.4	1151.8
77.5°	971.2	1006.3	971.2	960.6	953.2	945.0
80°	770.3	808.6	770.3	752.3	741.6	755.5
82.5°	569.4	597.9	569.4	547.2	546.4	553.0
85°	339.0	384.7	339.0	319.4	326.7	319.4
87.5°	108.7	138.8	108.7	103.8	114.4	111.9
90°	16.6	10.5	16.6	27.8	18.0	10.5
92.5°	24.8	15.0	24.8	44.2	23.3	13.6
95°	28.5	17.3	28.5	61.5	30.8	20.4
97.5°	31.5	22.6	31.5	70.5	37.5	30.8
100°	36.8	29.4	36.8	109.5	46.6	40.6
102.5°	77.2	48.9	77.2	231.6	86.3	60.8
105°	161.9	83.3	161.9	412.1	179.2	109.5
107.5°	289.2	143.2	289.2	544.1	316.3	206.2
110°	383.6	266.1	383.6	570.3	433.9	329.0



TEST NUMBER: P1433644

CATALOG NUMBER: EHBR1-54-UNV-TASM-L935-UPL15

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	412.1	359.0	412.1	546.2	478.8	427.9
115°	396.3	377.8	396.3	487.9	467.6	465.4
117.5°	361.9	365.0	361.9	414.5	421.3	449.7
120°	322.2	338.0	322.2	346.2	368.1	406.2
122.5°	286.3	304.3	286.3	297.6	314.1	352.4
125°	254.9	273.6	254.9	263.2	267.8	299.2
127.5°	233.1	245.9	233.1	238.5	234.8	255.0
130°	216.7	227.2	216.7	223.6	213.9	223.7
132.5°	205.6	212.3	205.6	214.0	202.0	204.2
135°	195.9	201.0	195.9	204.2	193.9	192.3
137.5°	187.7	192.1	187.7	196.9	188.7	185.6
140°	181.1	184.8	181.1	190.2	183.4	182.0
142.5°	173.7	176.6	173.7	184.3	179.8	178.3
145°	169.3	171.6	169.3	179.8	176.8	176.8
147.5°	165.7	167.2	165.7	174.6	173.1	173.1
150°	162.1	163.6	162.1	170.2	168.7	169.4
152.5°	157.6	160.0	157.6	165.0	163.5	164.2
155°	155.5	157.9	155.5	161.4	159.8	160.6
157.5°	154.9	157.2	154.9	159.3	158.5	158.5
160°	155.1	156.7	155.1	158.8	158.0	158.1
162.5°	154.5	156.1	154.5	158.9	158.2	158.2
165°	155.3	156.2	155.3	158.3	158.3	158.3
167.5°	155.4	156.2	155.4	159.2	159.2	159.2
170°	156.3	157.1	156.3	159.2	159.3	158.6
172.5°	157.9	158.7	157.9	161.7	161.0	161.1
175°	158.8	159.6	158.8	161.9	161.9	162.7
177.5°	160.3	161.1	160.3	161.9	161.9	161.9
180°	163.5	163.5	163.5	163.5	163.5	163.5



TEST NUMBER: P1433644
 CATALOG NUMBER: EHBR1-54-UNV-TASM-L935-UPL15

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	19.44	20.60	19.85	20.97	21.36	18.76	19.92	19.17	20.29	20.68
	3H	20.99	22.02	21.42	22.41	22.85	20.61	21.64	21.04	22.03	22.47
	4H	21.63	22.59	22.08	23.00	23.46	21.39	22.36	21.84	22.76	23.22
	6H	22.11	23.00	22.57	23.42	23.89	22.03	22.92	22.50	23.35	23.81
	8H	22.26	23.10	22.74	23.55	24.02	22.26	23.10	22.74	23.54	24.02
	12H	22.33	23.14	22.82	23.58	24.07	22.39	23.19	22.87	23.63	24.13
4H	2H	19.86	20.82	20.31	21.23	21.69	19.34	20.30	19.79	20.71	21.16
	3H	21.66	22.45	22.12	22.91	23.39	21.40	22.19	21.86	22.65	23.12
	4H	22.43	23.15	22.92	23.62	24.13	22.30	23.02	22.79	23.49	24.00
	6H	23.05	23.66	23.56	24.16	24.70	23.08	23.69	23.59	24.19	24.73
	8H	23.24	23.82	23.76	24.32	24.86	23.35	23.92	23.87	24.42	24.96
	12H	23.35	23.86	23.89	24.39	24.93	23.52	24.02	24.05	24.56	25.10
8H	4H	22.68	23.26	23.20	23.76	24.30	22.59	23.16	23.10	23.66	24.20
	6H	23.43	23.89	23.98	24.44	24.99	23.49	23.96	24.04	24.51	25.05
	8H	23.69	24.11	24.27	24.68	25.23	23.84	24.26	24.41	24.82	25.38
	12H	23.87	24.23	24.43	24.78	25.42	24.09	24.46	24.66	25.00	25.64
12H	4H	22.69	23.20	23.23	23.74	24.28	22.60	23.10	23.13	23.64	24.18
	6H	23.47	23.89	24.04	24.45	25.01	23.53	23.95	24.11	24.52	25.08
	8H	23.79	24.15	24.35	24.70	25.33	23.94	24.31	24.50	24.85	25.49

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

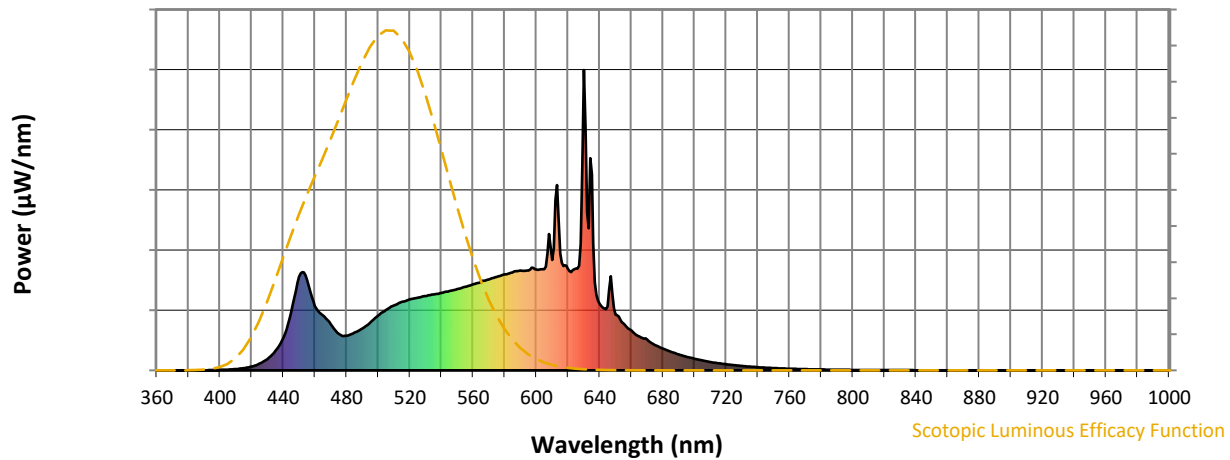


Photopic Lumens: NR

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



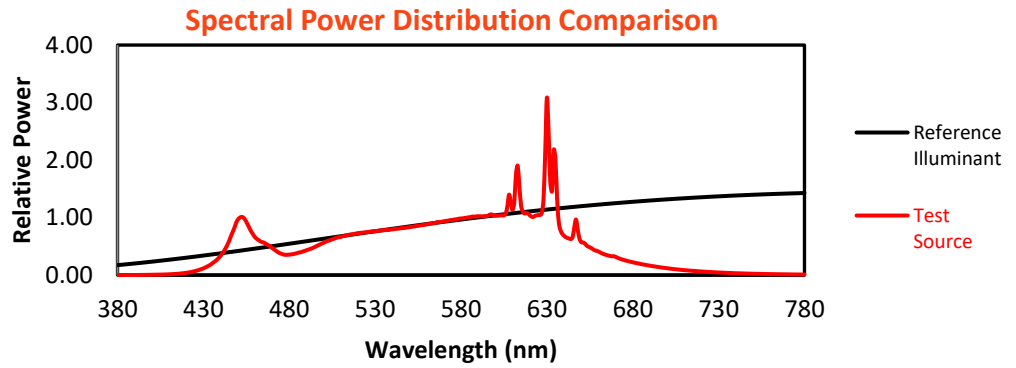
Melanopic Lumens: NR

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)