

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P859994

Luminaire Tested: **SPHB-24HE-M-L850-CD**

Issue Date: 7/11/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P859994
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-24HE-M-L850-CD
Description: 24000 Lumen High Efficacy Select Pro High Bay with Medium Lens and,
5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

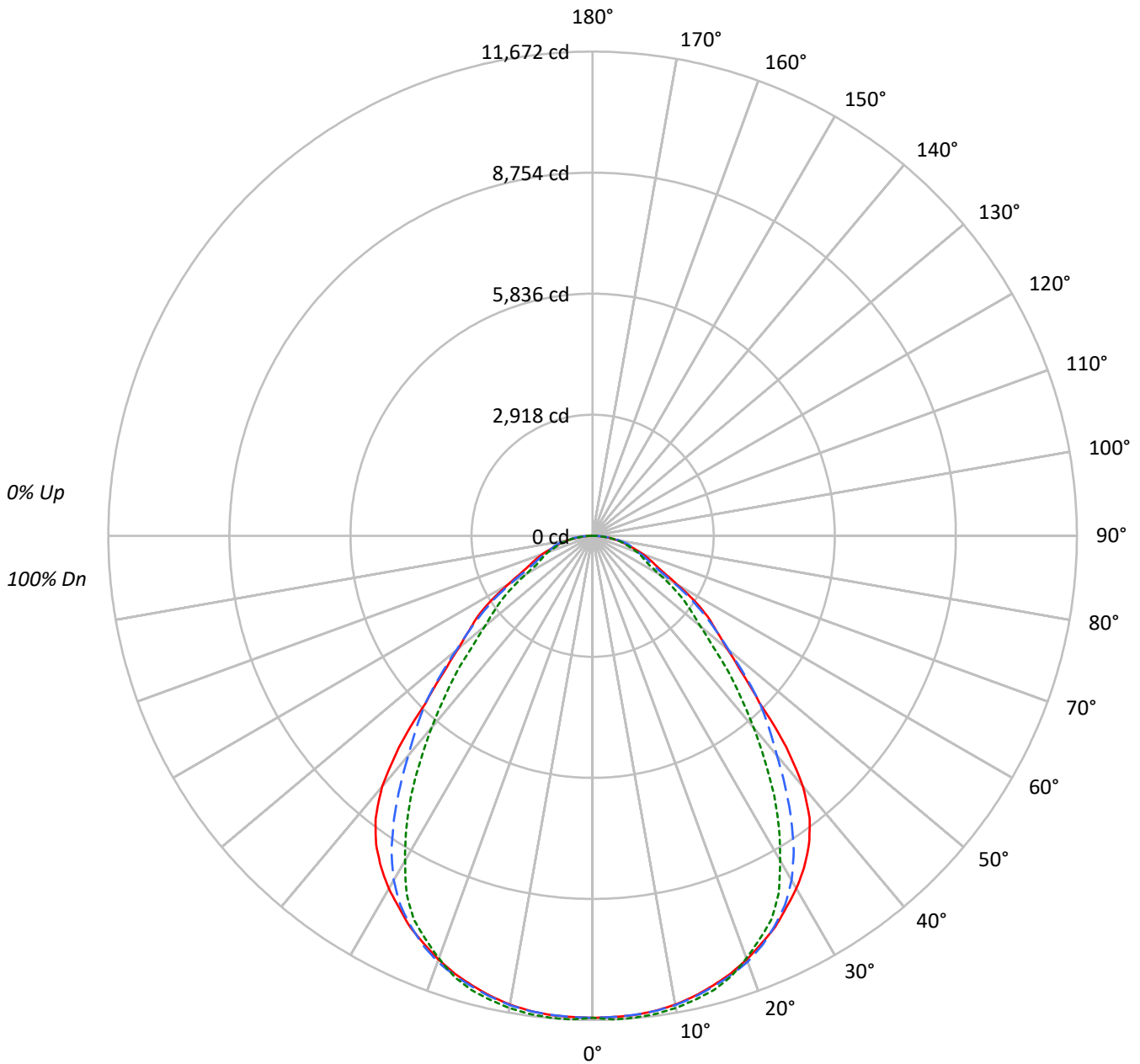
Lumens per Lamp: N/A
Luminaire Lumens: 24118.0 lumens
Efficiency: N/A
Efficacy: 165.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 146
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: 25 FT

TEST NUMBER: P859994

CATALOG NUMBER: SPHB-24HE-M-L850-CD

Luminous Intensity Polar Plot





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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46					46			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41					41			
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	90632	90632	90632
5°	90810	90787	91303
10°	90889	90986	91545
15°	90624	90859	91490
20°	90228	90687	89961
25°	89569	89319	87801
30°	88435	86351	81423
35°	86578	79443	72569
40°	80347	70313	61465
45°	62684	62852	50867
50°	51196	51921	41079
55°	45870	44140	36095
60°	36722	34761	28880
65°	30774	28172	25542
70°	29218	26842	26003
75°	26511	28497	25080
80°	26641	29120	26434
85°	23179	27153	22078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1104.8	4.6
10°-20°	3177.4	13.2
20°-30°	4743.4	19.7
30°-40°	5175.9	21.5
40°-50°	4234.1	17.6
50°-60°	2783.9	11.5
60°-70°	1597.2	6.6
70°-80°	967.9	4.0
80°-90°	325.0	1.3
90°-100°	8.4	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	9025.7	37.4
0°-40°	14201.5	58.9
0°-60°	21219.5	88.0
0°-90°	24109.6	100.0
90°-120°	8.4	0.0
90°-150°	8.4	0.0
90°-180°	8.0	0.0
0°-180°	24118.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11620	11620	11620	11620	11620	
5°	11598	11580	11595	11643	11661	###
15°	11223	11221	11252	11324	11330	3168
25°	10407	10432	10378	10253	10202	4788
35°	9092	8887	8343	7774	7621	5635
45°	5683	6107	5698	5030	4611	4511
55°	3373	3281	3246	2789	2654	2971
65°	1667	1643	1526	1485	1384	1705
75°	880	952	946	907	832	952
85°	259	294	303	265	247	281
90°	2	22	43	51	54	12
95°	2	3	5	5	3	1
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CATALOG NUMBER: SPHB-24HE-M-L850-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11619.6	11619.6	11619.6	11619.6	11619.6
2.5°	11611.9	11595.1	11610.4	11657.9	11671.7
5°	11598.1	11579.7	11595.1	11642.6	11661.0
7.5°	11550.6	11539.9	11555.2	11602.7	11625.7
10°	11475.5	11463.3	11487.8	11529.2	11558.3
12.5°	11363.7	11359.1	11382.1	11441.8	11454.1
15°	11222.7	11221.1	11251.8	11323.8	11329.9
17.5°	11063.3	11061.8	11100.1	11147.6	11130.7
20°	10870.2	10880.9	10925.4	10880.9	10838.0
22.5°	10638.8	10672.5	10683.2	10543.8	10522.3
25°	10407.4	10431.9	10378.3	10252.6	10202.0
27.5°	10108.5	10137.6	10038.0	9858.7	9714.7
30°	9818.9	9791.3	9587.5	9241.1	9040.4
32.5°	9486.3	9388.2	9022.0	8543.8	8361.4
35°	9092.5	8887.1	8343.1	7774.5	7621.2
37.5°	8594.4	8218.9	7624.3	7031.2	6799.8
40°	7891.0	7457.3	6905.6	6292.5	6036.6
42.5°	6905.6	6744.6	6287.9	5598.3	5293.3
45°	5682.6	6107.1	5697.9	5029.7	4611.4
47.5°	4864.2	5454.3	4962.3	4479.6	3903.3
50°	4219.0	4625.2	4278.8	3843.6	3385.3
52.5°	3753.2	3875.8	3736.3	3258.1	2997.6
55°	3373.1	3281.1	3245.9	2789.2	2654.3
57.5°	2901.1	2850.5	2760.1	2432.1	2254.3
60°	2354.0	2461.2	2228.3	2134.8	1851.3
62.5°	1934.0	2039.8	1790.0	1783.9	1547.8
65°	1667.4	1642.9	1526.4	1485.0	1383.9
67.5°	1475.8	1399.2	1359.3	1305.7	1270.5
70°	1281.2	1249.0	1177.0	1187.7	1140.2
72.5°	1068.2	1109.5	1037.5	1057.4	971.6
75°	879.7	951.7	945.6	907.3	832.2
77.5°	724.9	801.5	815.3	780.1	718.8
80°	593.1	645.2	648.3	626.8	588.5
82.5°	435.2	465.9	488.9	452.1	427.6
85°	259.0	294.2	303.4	265.1	246.7
87.5°	84.3	118.0	131.8	136.4	137.9
90°	1.5	21.5	42.9	50.6	53.6
92.5°	1.5	6.1	9.2	13.8	15.3
95°	1.5	3.1	4.6	4.6	3.1
97.5°	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P859994

CATALOG NUMBER: SPHB-24HE-M-L850-CD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°







107.5°	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)