

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: P859958

Luminaire Tested: **SPHB-18HE-W-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: P859958  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-18HE-W-L850-CD  
Description: 18000 Lumen High Efficacy Select Pro High Bay with Wide Lens and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

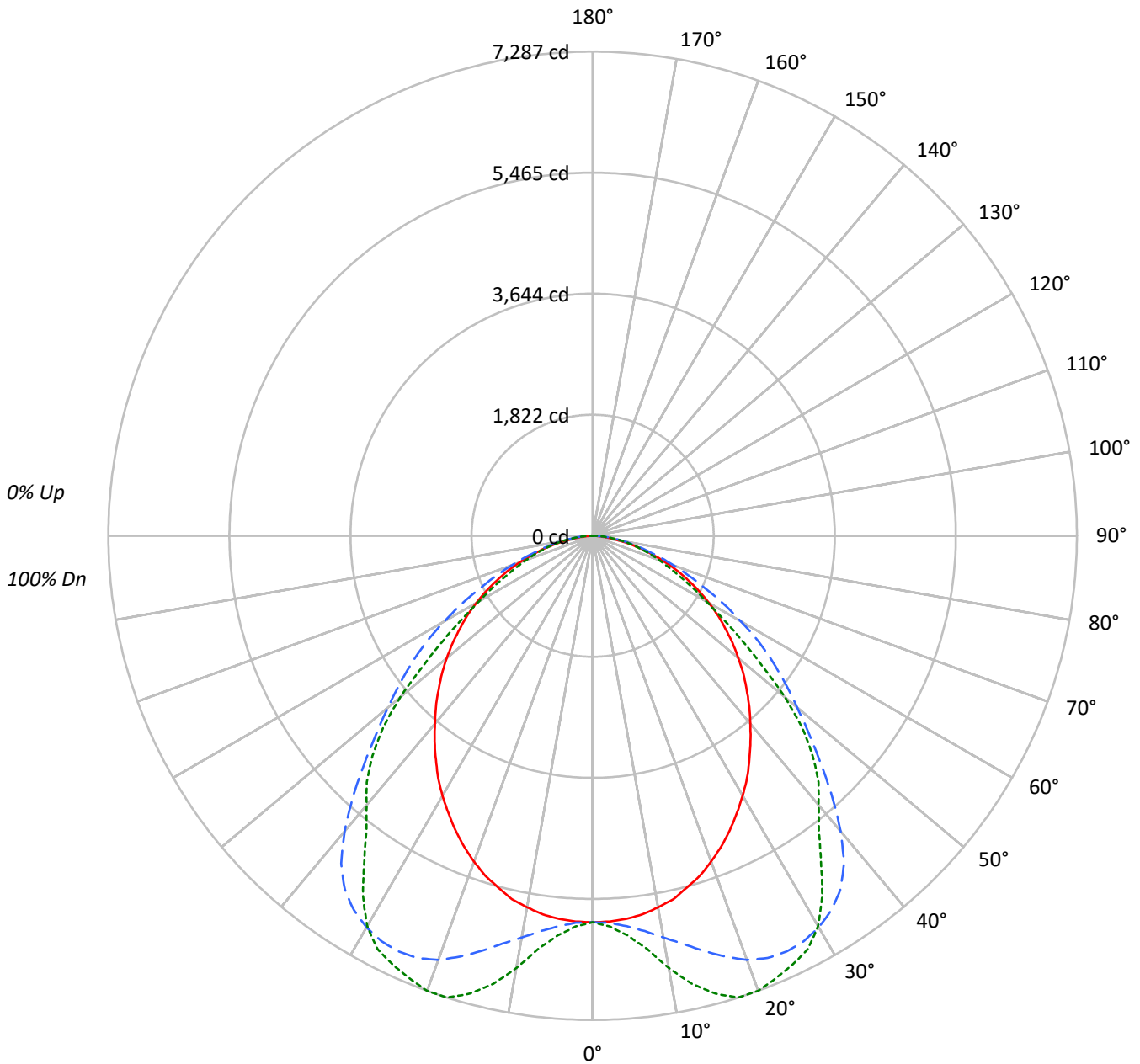
Lumens per Lamp: N/A  
Luminaire Lumens: 18302.0 lumens  
Efficiency: N/A  
Efficacy: 169.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 108.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P859958

CATALOG NUMBER: SPHB-18HE-W-L850-CD

### Luminous Intensity Polar Plot





TEST NUMBER: P859958

CATALOG NUMBER: SPHB-18HE-W-L850-CD

**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	100			
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85			
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62			
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53			
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46			
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40			
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36			
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32			
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29			
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	45369	45369	45369
5°	45321	46176	47270
10°	44963	48612	52298
15°	44260	52232	57605
20°	43301	56385	60483
25°	42052	59427	61276
30°	40683	61287	61110
35°	39156	61902	57022
40°	37578	59107	53858
45°	36157	53576	51674
50°	34747	48715	45809
55°	33158	45011	37277
60°	31518	40128	30701
65°	29347	34482	26619
70°	26701	29440	24076
75°	22928	24706	22075
80°	17922	21192	20474
85°	12118	17988	16879



TEST NUMBER: P859958

CATALOG NUMBER: SPHB-18HE-W-L850-CD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	571.1	3.1
10°-20°	1810.9	9.9
20°-30°	2963.6	16.2
30°-40°	3615.4	19.8
40°-50°	3580.7	19.6
50°-60°	2863.3	15.6
60°-70°	1786.3	9.8
70°-80°	875.2	4.8
80°-90°	229.5	1.3
90°-100°	6.0	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°	5345.6	29.2
0°-40°	8961.0	49.0
0°-60°	15405.0	84.2
0°-90°	18295.9	100.0
90°-120°	6.0	0.0
90°-150°	6.0	0.0
90°-180°	6.0	0.0
0°-180°	18302.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5817	5817	5817	5817	5817	
5°	5788	5814	5898	6000	6037	549
15°	5481	5800	6468	6983	7134	1545
25°	4886	5713	6905	7105	7120	2248
35°	4112	5495	6501	6154	5988	2572
45°	3278	5092	4857	4694	4684	2532
55°	2438	3910	3310	2990	2741	2185
65°	1590	2194	1868	1549	1442	1577
75°	761	932	820	751	732	808
85°	135	192	201	191	189	168
90°	1	20	36	45	47	8
95°	1	3	3	2	2	0
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



TEST NUMBER: P859958

CATALOG NUMBER: SPHB-18HE-W-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5816.6	5816.6	5816.6	5816.6	5816.6
2.5°	5810.8	5808.6	5829.8	5868.3	5885.8
5°	5788.3	5813.7	5897.5	6000.1	6037.3
7.5°	5747.5	5815.9	6000.9	6189.4	6269.5
10°	5676.9	5817.4	6137.7	6470.5	6603.0
12.5°	5604.0	5812.3	6289.9	6761.0	6905.9
15°	5481.0	5799.9	6468.3	6983.0	7133.7
17.5°	5366.7	5785.3	6640.1	7171.6	7285.9
20°	5216.7	5764.2	6793.0	7229.1	7286.6
22.5°	5059.4	5747.5	6877.5	7190.5	7208.0
25°	4886.2	5713.3	6905.1	7105.4	7119.9
27.5°	4701.2	5682.7	6878.9	6999.8	7012.2
30°	4517.0	5627.3	6804.7	6835.2	6785.0
32.5°	4324.1	5572.0	6684.5	6546.9	6429.7
35°	4112.2	5494.8	6501.0	6153.8	5988.5
37.5°	3903.2	5420.6	6214.9	5714.0	5589.5
40°	3690.6	5328.8	5805.0	5303.4	5289.5
42.5°	3489.7	5229.8	5341.2	4983.7	5030.3
45°	3277.8	5092.2	4857.0	4693.9	4684.5
47.5°	3076.9	4902.2	4416.5	4373.6	4276.8
50°	2863.5	4640.1	4014.6	3973.9	3775.1
52.5°	2654.6	4305.9	3655.7	3502.8	3213.0
55°	2438.3	3909.8	3309.9	2990.2	2741.2
57.5°	2237.4	3474.4	2958.2	2543.9	2320.4
60°	2020.4	3033.2	2572.3	2152.2	1968.0
62.5°	1807.8	2598.5	2222.8	1818.7	1696.4
65°	1590.1	2193.7	1868.3	1549.4	1442.3
67.5°	1381.9	1843.5	1561.7	1306.2	1234.8
70°	1170.8	1495.5	1290.9	1097.2	1055.7
72.5°	953.1	1194.8	1044.1	926.1	894.8
75°	760.8	931.9	819.8	750.7	732.5
77.5°	566.4	693.1	640.7	599.9	594.8
80°	399.0	500.2	471.8	463.8	455.8
82.5°	254.8	326.9	335.6	330.5	324.7
85°	135.4	192.2	201.0	190.8	188.6
87.5°	54.6	83.7	90.3	99.7	102.7
90°	0.7	19.7	35.7	45.1	46.6
92.5°	0.7	4.4	5.1	5.1	4.4
95°	0.7	2.9	2.9	2.2	1.5
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: P859958

CATALOG NUMBER: SPHB-18HE-W-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)