

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: P859984

Luminaire Tested: **SPHB-18SE-W-L840-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: P859984  
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-18SE-W-L840-CD  
Description: 18000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens  
and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

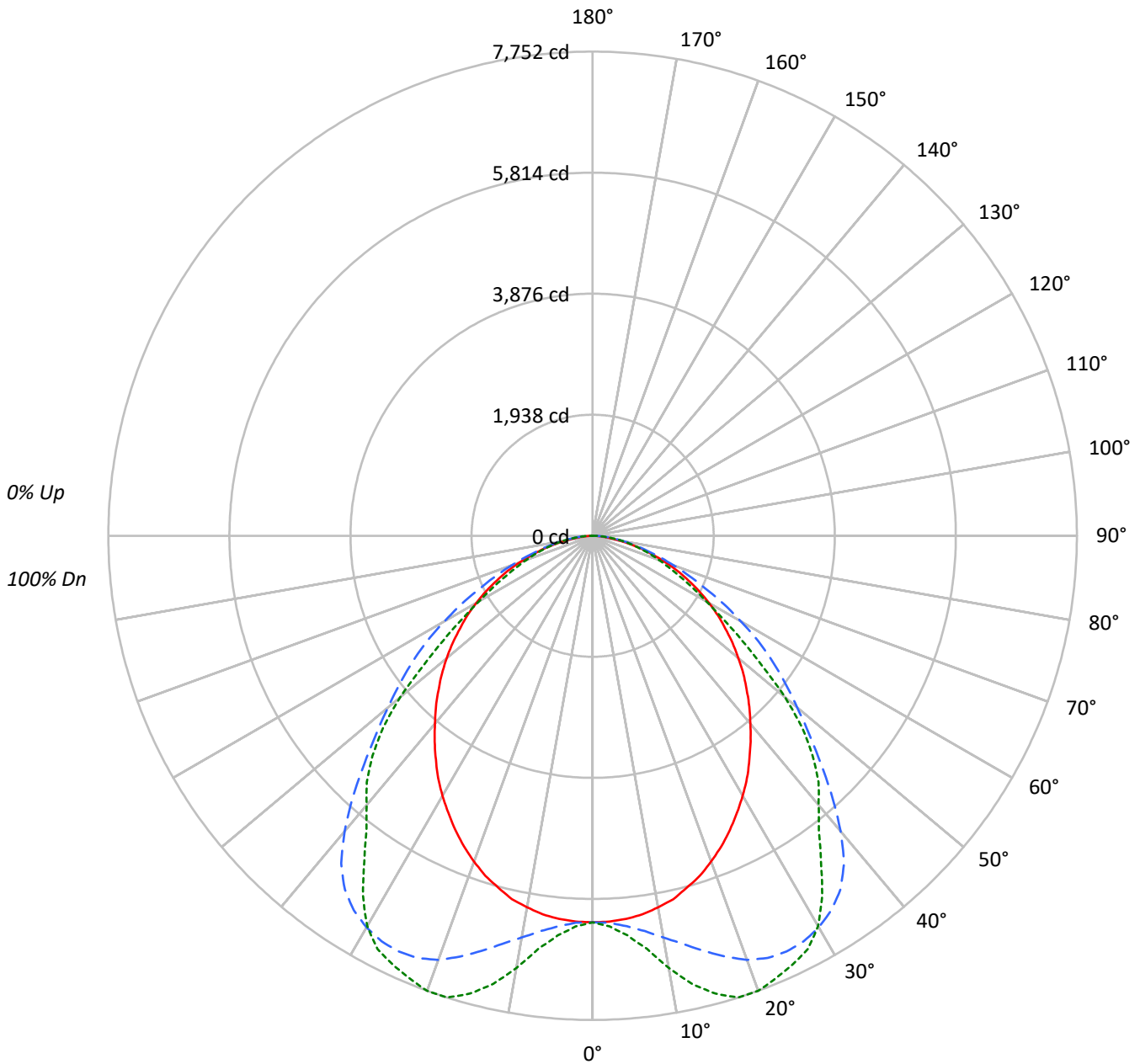
Lumens per Lamp: N/A  
Luminaire Lumens: 19471.0 lumens  
Efficiency: N/A  
Efficacy: 165.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 117.4  
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

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### 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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85			85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72			72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62			62
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53			53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46			46
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40			40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36			36
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32			32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29			29
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26			26

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

	0°	45°	90°
0°	48268	48268	48268
5°	48215	49125	50290
10°	47834	51718	55637
15°	47087	55568	61285
20°	46067	59987	64346
25°	44738	63223	65190
30°	43281	65201	65013
35°	41658	65857	60664
40°	39979	62883	57299
45°	38467	56999	54974
50°	36967	51828	48735
55°	35277	47885	39658
60°	33532	42691	32661
65°	31222	36684	28321
70°	28404	31319	25615
75°	24393	26285	23482
80°	19068	22544	21781
85°	12896	19134	17953



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	607.6	3.1
10°-20°	1926.5	9.9
20°-30°	3152.9	16.2
30°-40°	3846.3	19.8
40°-50°	3809.4	19.6
50°-60°	3046.2	15.6
60°-70°	1900.4	9.8
70°-80°	931.1	4.8
80°-90°	244.2	1.3
90°-100°	6.4	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°	5687.0	29.2
0°-40°	9533.3	49.0
0°-60°	16388.9	84.2
0°-90°	19464.6	100.0
90°-120°	6.4	0.0
90°-150°	6.4	0.0
90°-180°	6.0	0.0
0°-180°	19471.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6188	6188	6188	6188	6188	
5°	6158	6185	6274	6383	6423	584
15°	5831	6170	6881	7429	7589	1644
25°	5198	6078	7346	7559	7575	2392
35°	4375	5846	6916	6547	6371	2737
45°	3487	5418	5167	4994	4984	2693
55°	2594	4160	3521	3181	2916	2324
65°	1692	2334	1988	1648	1534	1677
75°	809	992	872	799	779	859
85°	144	204	214	203	201	178
90°	1	21	38	48	50	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



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CATALOG NUMBER: SPHB-18SE-W-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6188.2	6188.2	6188.2	6188.2	6188.2
2.5°	6182.0	6179.7	6202.1	6243.2	6261.8
5°	6158.0	6185.1	6274.2	6383.4	6422.9
7.5°	6114.6	6187.4	6384.1	6584.8	6670.0
10°	6039.5	6188.9	6529.8	6883.8	7024.7
12.5°	5962.0	6183.5	6691.7	7192.8	7347.0
15°	5831.1	6170.4	6881.4	7429.1	7589.4
17.5°	5709.5	6154.9	7064.2	7629.7	7751.3
20°	5549.9	6132.4	7226.9	7690.9	7752.1
22.5°	5382.6	6114.6	7316.7	7649.8	7668.4
25°	5198.3	6078.2	7346.2	7559.2	7574.7
27.5°	5001.5	6045.7	7318.3	7446.9	7460.0
30°	4805.5	5986.8	7239.3	7271.8	7218.4
32.5°	4600.3	5927.9	7111.5	6965.1	6840.4
35°	4374.9	5845.8	6916.3	6546.8	6371.0
37.5°	4152.6	5766.8	6611.9	6079.0	5946.5
40°	3926.4	5669.2	6175.8	5642.1	5627.4
42.5°	3712.6	5563.9	5682.4	5302.0	5351.6
45°	3487.2	5417.5	5167.3	4993.8	4983.7
47.5°	3273.4	5215.3	4698.6	4652.9	4549.9
50°	3046.4	4936.4	4271.1	4227.7	4016.2
52.5°	2824.1	4580.9	3889.2	3726.5	3418.3
55°	2594.1	4159.5	3521.3	3181.2	2916.3
57.5°	2380.3	3696.3	3147.1	2706.4	2468.6
60°	2149.5	3226.9	2736.6	2289.7	2093.7
62.5°	1923.3	2764.5	2364.8	1934.9	1804.8
65°	1691.7	2333.8	1987.6	1648.3	1534.5
67.5°	1470.2	1961.3	1661.5	1389.6	1313.7
70°	1245.5	1591.0	1373.3	1167.3	1123.2
72.5°	1013.9	1271.1	1110.8	985.3	952.0
75°	809.4	991.5	872.2	798.6	779.2
77.5°	602.6	737.4	681.6	638.3	632.8
80°	424.5	532.1	501.9	493.4	484.9
82.5°	271.1	347.8	357.1	351.7	345.5
85°	144.1	204.5	213.8	202.9	200.6
87.5°	58.1	89.1	96.0	106.1	109.2
90°	0.8	20.9	38.0	48.0	49.6
92.5°	0.8	4.6	5.4	5.4	4.6
95°	0.8	3.1	3.1	2.3	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



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**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)