

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: P859976

Luminaire Tested: **SPHB-18SE-N-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: P859976  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-18SE-N-L850-CD  
Description: 18000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens  
and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

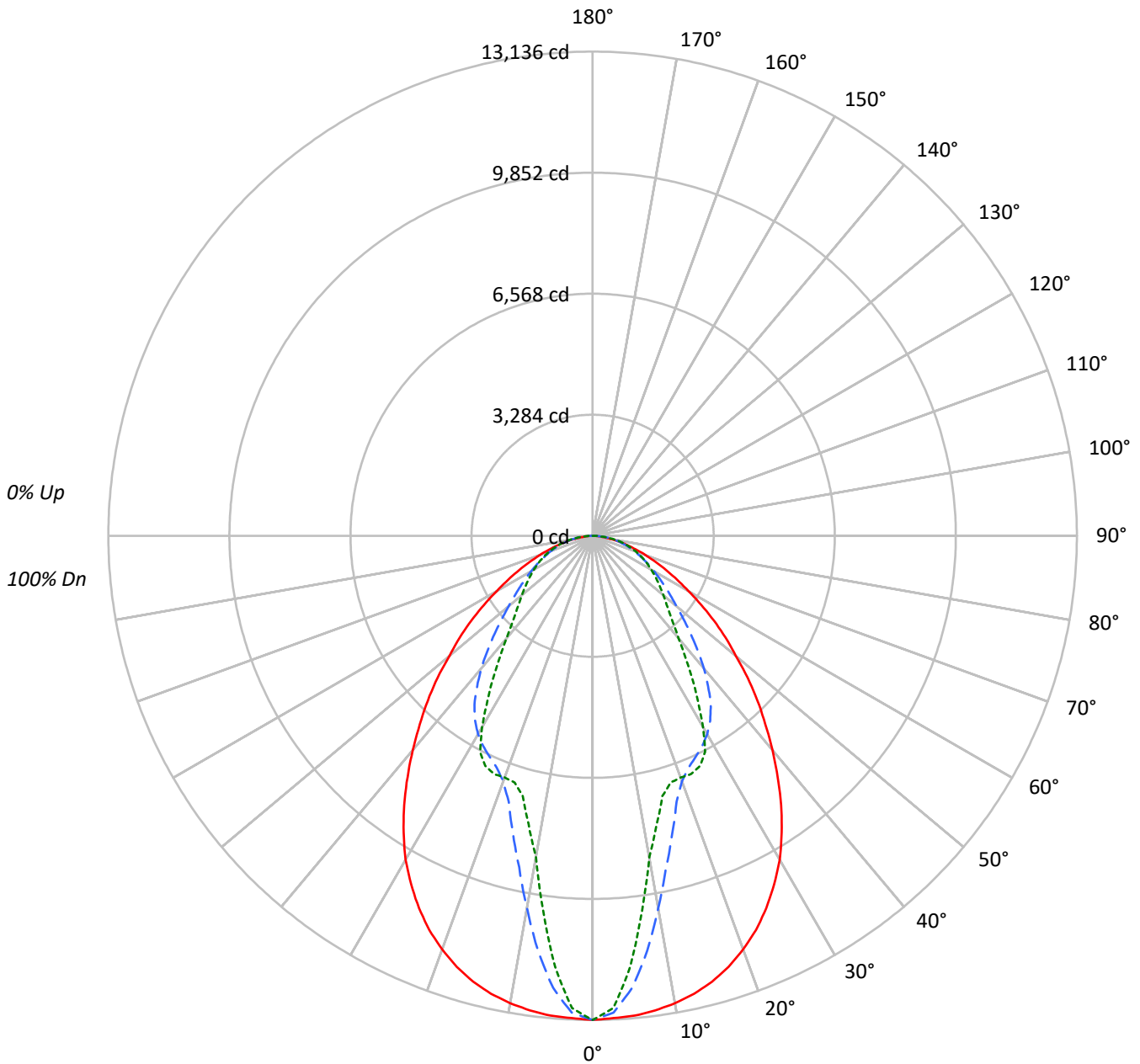
Lumens per Lamp: N/A  
Luminaire Lumens: 19252.0 lumens  
Efficiency: N/A  
Efficacy: 164.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86		
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74		
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64		
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56		
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50		
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45		
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40		
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37		
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34		
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31		

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

	0°	45°	90°
0°	102460	102460	102460
5°	102341	96405	91843
10°	101991	81261	70054
15°	101143	67455	59034
20°	99105	58800	57952
25°	95920	56893	59309
30°	91386	55980	53976
35°	84851	53196	44727
40°	77266	47756	36933
45°	69745	41438	32423
50°	61550	36032	30361
55°	54617	32497	29224
60°	46806	30052	28629
65°	40515	28244	28483
70°	34671	27170	28450
75°	29103	26385	28196
80°	22207	25495	27611
85°	14543	22615	21273



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1120.0	5.8
10°-20°	2571.6	13.4
20°-30°	3475.3	18.1
30°-40°	3657.6	19.0
40°-50°	3103.6	16.1
50°-60°	2404.2	12.5
60°-70°	1674.4	8.7
70°-80°	958.8	5.0
80°-90°	279.0	1.4
90°-100°	7.4	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°	7166.9	37.2
0°-40°	10824.5	56.2
0°-60°	16332.3	84.8
0°-90°	19244.6	100.0
90°-120°	7.4	0.0
90°-150°	7.4	0.0
90°-180°	7.0	0.0
0°-180°	19252.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	13136	13136	13136	13136	13136	
5°	13071	12831	12313	11840	11730	###
15°	12525	10631	8354	7519	7311	3524
25°	11145	7873	6611	6802	6891	5116
35°	8911	6055	5587	5046	4697	5555
45°	6323	4547	3757	3087	2939	4870
55°	4016	3063	2390	2172	2149	3591
65°	2195	1797	1530	1530	1543	2193
75°	966	858	876	931	936	1030
85°	162	211	253	238	238	207
90°	1	19	37	47	49	9
95°	1	3	6	6	5	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-N-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	13136.0	13136.0	13136.0	13136.0	13136.0
2.5°	13097.9	13054.7	12949.4	12881.3	12828.1
5°	13070.8	12831.1	12312.7	11840.3	11730.0
7.5°	12989.6	12463.1	11355.0	10481.5	10260.9
10°	12877.2	11934.6	10259.9	9165.8	8844.9
12.5°	12727.8	11370.0	9210.9	8180.0	8022.6
15°	12525.3	10630.9	8353.5	7519.2	7310.6
17.5°	12262.5	9866.8	7562.3	7079.9	7021.8
20°	11939.6	9165.8	7083.9	6919.5	6981.7
22.5°	11576.6	8484.9	6806.2	6875.4	6991.7
25°	11145.4	7873.2	6610.6	6802.1	6891.4
27.5°	10661.0	7320.6	6431.1	6606.6	6606.6
30°	10146.6	6860.3	6215.5	6199.4	5992.9
32.5°	9545.9	6469.2	5933.7	5615.8	5308.9
35°	8911.1	6055.0	5586.7	5046.2	4697.2
37.5°	8245.2	5670.0	5147.5	4434.5	4109.6
40°	7588.4	5289.9	4690.2	3884.9	3627.2
42.5°	6934.5	4902.8	4213.9	3439.7	3236.1
45°	6322.8	4546.8	3756.6	3086.7	2939.3
47.5°	5701.0	4168.7	3334.4	2802.9	2700.6
50°	5072.3	3785.7	2969.4	2577.3	2502.0
52.5°	4542.8	3428.7	2659.5	2363.7	2318.5
55°	4016.3	3062.6	2389.7	2172.1	2149.0
57.5°	3493.8	2721.7	2143.0	1996.6	1991.6
60°	3000.4	2402.8	1926.4	1846.2	1835.2
62.5°	2580.3	2085.9	1720.8	1682.7	1687.8
65°	2195.2	1797.1	1530.3	1530.3	1543.3
67.5°	1838.2	1531.3	1355.8	1378.9	1396.9
70°	1520.3	1290.6	1191.4	1231.5	1247.5
72.5°	1219.4	1067.0	1033.9	1078.0	1091.1
75°	965.7	858.4	875.5	930.6	935.6
77.5°	716.0	675.9	720.0	780.2	791.2
80°	494.4	498.4	567.6	609.7	614.7
82.5°	318.9	348.0	425.2	447.3	439.2
85°	162.5	210.6	252.7	237.7	237.7
87.5°	62.2	91.3	107.3	126.4	133.4
90°	1.0	19.1	37.1	47.1	49.1
92.5°	1.0	5.0	8.0	9.0	8.0
95°	1.0	3.0	6.0	6.0	5.0
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)