

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: P859868

Luminaire Tested: **SPHB-12SE-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: P859868  
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-12SE-N-L850-CD  
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens  
and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

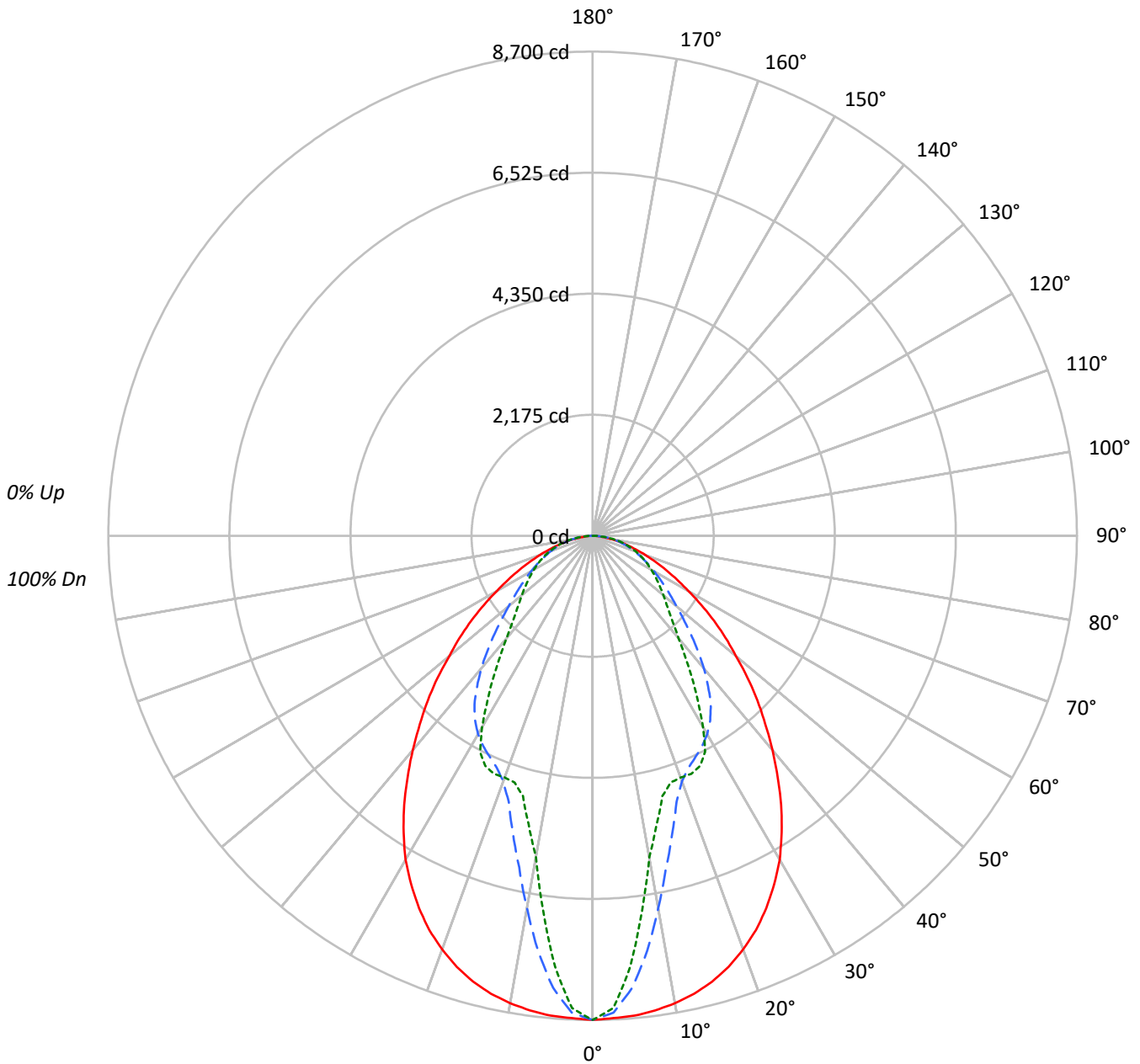
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12750.0 lumens  
Efficiency: N/A  
Efficacy: 167.1 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): 76.3  
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									
RC	80									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	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°	67856	67856	67856
5°	67777	63846	60824
10°	67546	53817	46395
15°	66984	44674	39096
20°	65634	38942	38379
25°	63525	37678	39279
30°	60522	37074	35746
35°	56194	35230	29621
40°	51170	31628	24459
45°	46190	27443	21473
50°	40762	23863	20107
55°	36171	21521	19354
60°	30999	19902	18960
65°	26832	18705	18864
70°	22961	17994	18842
75°	19275	17473	18673
80°	14706	16885	18286
85°	9630	14981	14086



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	741.7	5.8
10°-20°	1703.1	13.4
20°-30°	2301.6	18.1
30°-40°	2422.3	19.0
40°-50°	2055.4	16.1
50°-60°	1592.2	12.5
60°-70°	1108.9	8.7
70°-80°	635.0	5.0
80°-90°	184.8	1.4
90°-100°	4.9	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°	4746.4	37.2
0°-40°	7168.7	56.2
0°-60°	10816.4	84.8
0°-90°	12745.1	100.0
90°-120°	4.9	0.0
90°-150°	4.9	0.0
90°-180°	5.0	0.0
0°-180°	12750.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8700	8700	8700	8700	8700	
5°	8656	8498	8154	7842	7768	822
15°	8295	7040	5532	4980	4842	2334
25°	7381	5214	4378	4505	4564	3388
35°	5902	4010	3700	3342	3111	3679
45°	4187	3011	2488	2044	1947	3225
55°	2660	2028	1583	1438	1423	2378
65°	1454	1190	1014	1014	1022	1452
75°	640	568	580	616	620	682
85°	108	140	167	157	157	137
90°	1	13	25	31	32	6
95°	1	2	4	4	3	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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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8699.5	8699.5	8699.5	8699.5	8699.5
2.5°	8674.3	8645.8	8576.0	8530.9	8495.7
5°	8656.4	8497.6	8154.3	7841.5	7768.4
7.5°	8602.6	8253.9	7520.0	6941.6	6795.5
10°	8528.2	7903.9	6794.8	6070.2	5857.7
12.5°	8429.2	7530.0	6100.1	5417.4	5313.1
15°	8295.1	7040.5	5532.3	4979.7	4841.6
17.5°	8121.1	6534.5	5008.3	4688.8	4650.3
20°	7907.2	6070.2	4691.5	4582.6	4623.7
22.5°	7666.8	5619.3	4507.5	4553.3	4630.4
25°	7381.2	5214.1	4378.0	4504.8	4564.0
27.5°	7060.5	4848.2	4259.1	4375.3	4375.3
30°	6719.7	4543.4	4116.3	4105.7	3968.9
32.5°	6321.9	4284.4	3929.7	3719.2	3515.9
35°	5901.5	4010.1	3699.9	3341.9	3110.8
37.5°	5460.5	3755.0	3409.0	2936.8	2721.6
40°	5025.5	3503.3	3106.2	2572.9	2402.2
42.5°	4592.5	3247.0	2790.7	2278.0	2143.2
45°	4187.4	3011.2	2487.9	2044.2	1946.6
47.5°	3775.6	2760.8	2208.3	1856.3	1788.5
50°	3359.2	2507.1	1966.5	1706.8	1657.0
52.5°	3008.5	2270.7	1761.3	1565.4	1535.5
55°	2659.9	2028.3	1582.6	1438.5	1423.2
57.5°	2313.9	1802.5	1419.3	1322.3	1319.0
60°	1987.1	1591.3	1275.8	1222.7	1215.4
62.5°	1708.8	1381.4	1139.7	1114.4	1117.7
65°	1453.8	1190.1	1013.5	1013.5	1022.1
67.5°	1217.4	1014.1	897.9	913.2	925.1
70°	1006.8	854.7	789.0	815.6	826.2
72.5°	807.6	706.6	684.7	713.9	722.6
75°	639.6	568.5	579.8	616.3	619.6
77.5°	474.2	447.6	476.9	516.7	524.0
80°	327.4	330.1	375.9	403.8	407.1
82.5°	211.2	230.5	281.6	296.2	290.9
85°	107.6	139.5	167.4	157.4	157.4
87.5°	41.2	60.4	71.1	83.7	88.3
90°	0.7	12.6	24.6	31.2	32.5
92.5°	0.7	3.3	5.3	6.0	5.3
95°	0.7	2.0	4.0	4.0	3.3
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)