

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: P859867

Luminaire Tested: **SPHB-12SE-N-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: P859867  
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-L840-CD  
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens  
and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

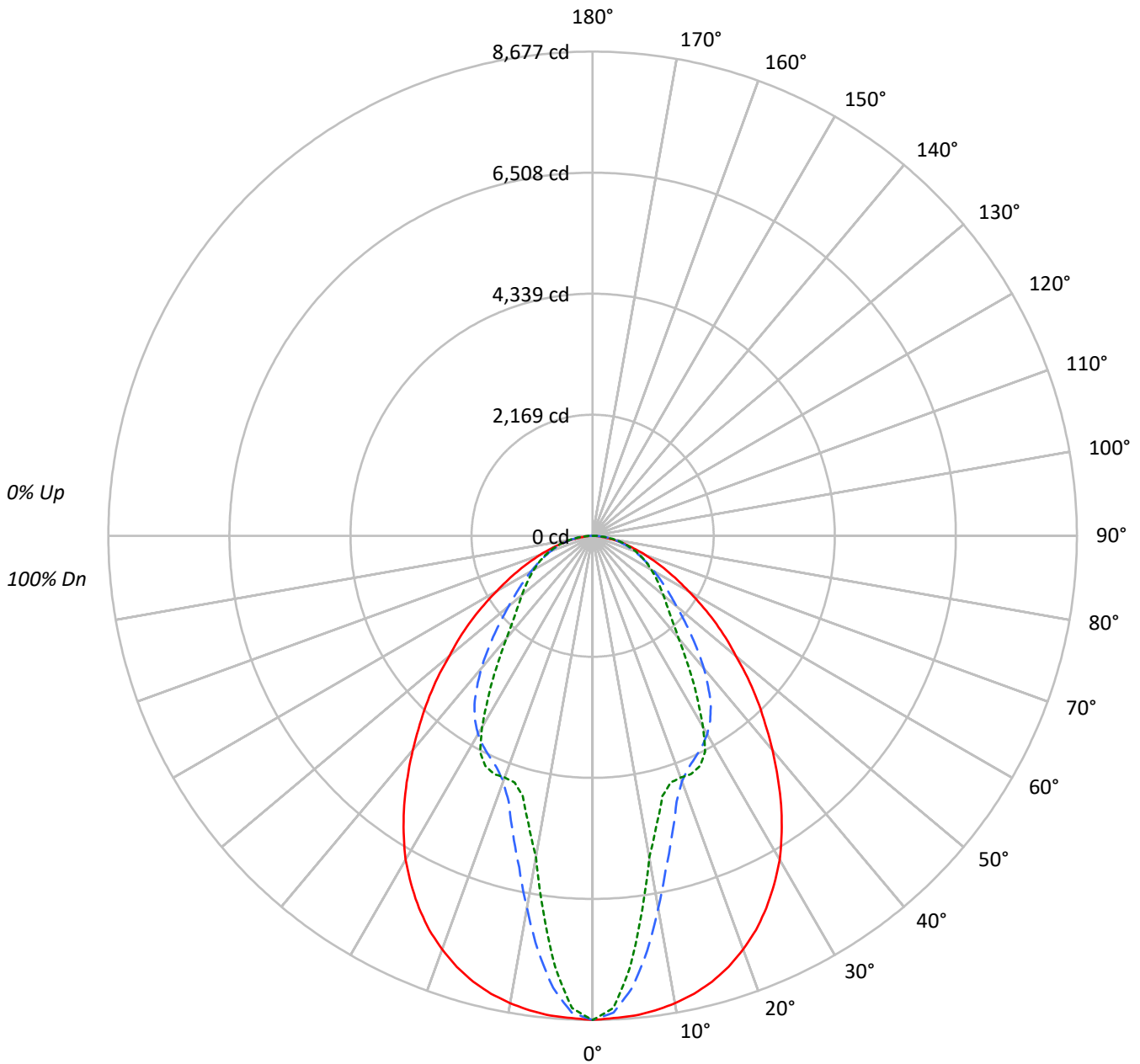
Lumens per Lamp: N/A  
Luminaire Lumens: 12717.0 lumens  
Efficiency: N/A  
Efficacy: 166.7 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P859867

CATALOG NUMBER: SPHB-12SE-N-L840-CD

### Luminous Intensity Polar Plot





TEST NUMBER: P859867

CATALOG NUMBER: SPHB-12SE-N-L840-CD

**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°	67680	67680	67680
5°	67602	63681	60667
10°	67371	53677	46274
15°	66810	44558	38995
20°	65465	38841	38280
25°	63360	37581	39177
30°	60366	36978	35653
35°	56049	35139	29545
40°	51038	31545	24396
45°	46071	27372	21417
50°	40657	23801	20055
55°	36078	21466	19305
60°	30919	19851	18910
65°	26762	18657	18816
70°	22901	17948	18792
75°	19224	17428	18624
80°	14670	16840	18241
85°	9603	14937	14051



TEST NUMBER: P859867

CATALOG NUMBER: SPHB-12SE-N-L840-CD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	739.8	5.8
10°-20°	1698.7	13.4
20°-30°	2295.7	18.1
30°-40°	2416.0	19.0
40°-50°	2050.1	16.1
50°-60°	1588.1	12.5
60°-70°	1106.1	8.7
70°-80°	633.4	5.0
80°-90°	184.3	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°	4734.1	37.2
0°-40°	7150.2	56.2
0°-60°	10788.4	84.8
0°-90°	12712.1	100.0
90°-120°	4.9	0.0
90°-150°	4.9	0.0
90°-180°	5.0	0.0
0°-180°	12717.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8677	8677	8677	8677	8677	
5°	8634	8476	8133	7821	7748	820
15°	8274	7022	5518	4967	4829	2328
25°	7362	5201	4367	4493	4552	3380
35°	5886	4000	3690	3333	3103	3669
45°	4177	3003	2481	2039	1942	3217
55°	2653	2023	1578	1435	1420	2372
65°	1450	1187	1011	1011	1020	1448
75°	638	567	578	615	618	680
85°	107	139	167	157	157	136
90°	1	13	24	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



TEST NUMBER: P859867

CATALOG NUMBER: SPHB-12SE-N-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8677.0	8677.0	8677.0	8677.0	8677.0
2.5°	8651.9	8623.4	8553.8	8508.8	8473.7
5°	8634.0	8475.7	8133.2	7821.2	7748.3
7.5°	8580.3	8232.5	7500.6	6923.6	6777.9
10°	8506.1	7883.5	6777.2	6054.5	5842.5
12.5°	8407.4	7510.5	6084.3	5403.4	5299.4
15°	8273.6	7022.3	5518.0	4966.8	4829.0
17.5°	8100.1	6517.5	4995.3	4676.7	4638.3
20°	7886.8	6054.5	4679.3	4570.7	4611.8
22.5°	7647.0	5604.7	4495.8	4541.5	4618.4
25°	7362.1	5200.7	4366.7	4493.2	4552.1
27.5°	7042.2	4835.7	4248.1	4364.0	4364.0
30°	6702.4	4531.6	4105.7	4095.1	3958.6
32.5°	6305.6	4273.3	3919.5	3709.5	3506.8
35°	5886.3	3999.7	3690.3	3333.3	3102.8
37.5°	5446.4	3745.3	3400.2	2929.2	2714.6
40°	5012.5	3494.3	3098.1	2566.2	2396.0
42.5°	4580.6	3238.6	2783.5	2272.1	2137.6
45°	4176.6	3003.4	2481.4	2038.9	1941.6
47.5°	3765.9	2753.7	2202.5	1851.5	1783.9
50°	3350.5	2500.6	1961.4	1702.4	1652.7
52.5°	3000.8	2264.8	1756.7	1561.3	1531.5
55°	2653.0	2023.0	1578.5	1434.8	1419.6
57.5°	2307.9	1797.8	1415.6	1318.9	1315.6
60°	1982.0	1587.2	1272.5	1219.5	1212.2
62.5°	1704.4	1377.8	1136.7	1111.5	1114.9
65°	1450.0	1187.1	1010.9	1010.9	1019.5
67.5°	1214.2	1011.5	895.6	910.8	922.7
70°	1004.2	852.5	787.0	813.5	824.0
72.5°	805.5	704.8	683.0	712.1	720.7
75°	637.9	567.0	578.3	614.7	618.0
77.5°	473.0	446.5	475.6	515.4	522.6
80°	326.6	329.2	374.9	402.8	406.1
82.5°	210.6	229.9	280.9	295.4	290.1
85°	107.3	139.1	166.9	157.0	157.0
87.5°	41.1	60.3	70.9	83.5	88.1
90°	0.7	12.6	24.5	31.1	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



TEST NUMBER: P859867

CATALOG NUMBER: SPHB-12SE-N-L840-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)