

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: P859877

Luminaire Tested: **SPHB-12SE-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: P859877  
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-12SE-W-L850-CD  
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens  
and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

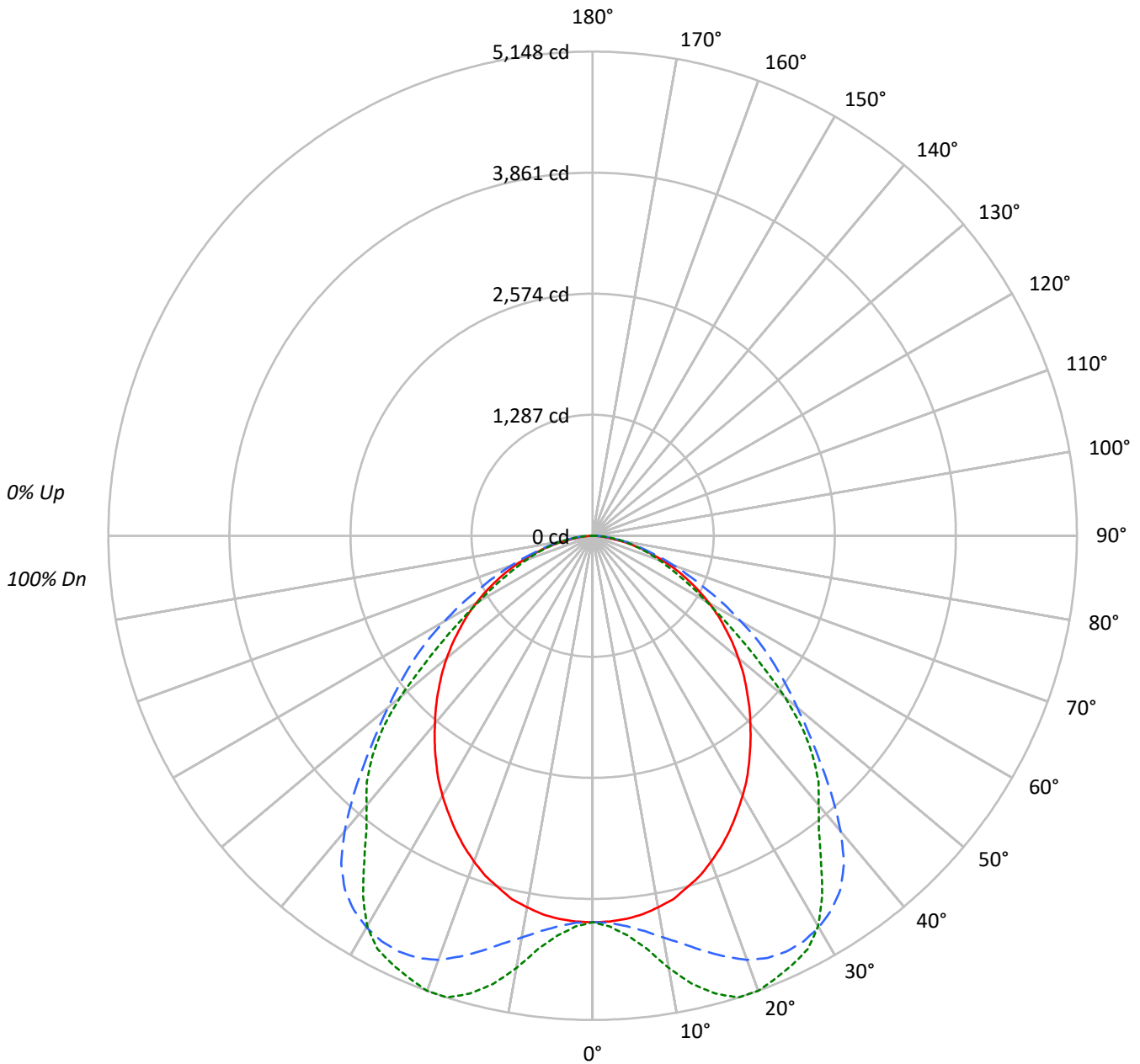
Lumens per Lamp: N/A  
Luminaire Lumens: 12929.0 lumens  
Efficiency: N/A  
Efficacy: 169.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	32050	32050	32050
5°	32016	32619	33393
10°	31763	34341	36944
15°	31266	36898	40694
20°	30589	39833	42727
25°	29706	41981	43287
30°	28739	43295	43170
35°	27661	43730	40282
40°	26547	41755	38046
45°	25542	37848	36503
50°	24547	34414	32360
55°	23424	31797	26334
60°	22266	28347	21687
65°	20732	24359	18805
70°	18862	20796	17008
75°	16198	17452	15593
80°	12662	14971	14464
85°	8565	12708	11921



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.4	3.1
10°-20°	1279.2	9.9
20°-30°	2093.6	16.2
30°-40°	2554.0	19.8
40°-50°	2529.5	19.6
50°-60°	2022.7	15.6
60°-70°	1261.9	9.8
70°-80°	618.2	4.8
80°-90°	162.2	1.3
90°-100°	4.3	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°	3776.3	29.2
0°-40°	6330.3	49.0
0°-60°	10882.5	84.2
0°-90°	12924.7	100.0
90°-120°	4.3	0.0
90°-150°	4.3	0.0
90°-180°	4.0	0.0
0°-180°	12929.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4109	4109	4109	4109	4109	
5°	4089	4107	4166	4239	4265	388
15°	3872	4097	4569	4933	5040	1092
25°	3452	4036	4878	5019	5030	1588
35°	2905	3882	4592	4347	4230	1817
45°	2316	3597	3431	3316	3309	1788
55°	1722	2762	2338	2112	1936	1543
65°	1123	1550	1320	1094	1019	1114
75°	538	658	579	530	517	571
85°	96	136	142	135	133	119
90°	0	14	25	32	33	5
95°	0	2	2	2	1	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-12SE-W-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4109.0	4109.0	4109.0	4109.0	4109.0
2.5°	4104.9	4103.4	4118.3	4145.5	4157.9
5°	4089.0	4107.0	4166.1	4238.6	4264.9
7.5°	4060.2	4108.5	4239.2	4372.4	4428.9
10°	4010.3	4109.5	4335.9	4570.9	4664.5
12.5°	3958.8	4105.9	4443.3	4776.1	4878.5
15°	3871.9	4097.2	4569.4	4933.0	5039.5
17.5°	3791.2	4086.9	4690.7	5066.2	5147.0
20°	3685.2	4072.0	4798.8	5106.8	5147.5
22.5°	3574.1	4060.2	4858.4	5079.6	5091.9
25°	3451.7	4036.0	4878.0	5019.4	5029.7
27.5°	3321.1	4014.4	4859.4	4944.8	4953.6
30°	3190.9	3975.3	4807.0	4828.6	4793.1
32.5°	3054.6	3936.2	4722.1	4624.9	4542.1
35°	2905.0	3881.7	4592.5	4347.2	4230.4
37.5°	2757.4	3829.2	4390.4	4036.5	3948.6
40°	2607.2	3764.4	4100.8	3746.4	3736.6
42.5°	2465.2	3694.5	3773.2	3520.6	3553.5
45°	2315.5	3597.3	3431.1	3315.9	3309.2
47.5°	2173.6	3463.0	3120.0	3089.6	3021.2
50°	2022.9	3277.9	2836.0	2807.2	2666.8
52.5°	1875.3	3041.8	2582.5	2474.5	2269.8
55°	1722.5	2762.0	2338.2	2112.4	1936.5
57.5°	1580.6	2454.4	2089.7	1797.1	1639.2
60°	1427.3	2142.7	1817.1	1520.4	1390.2
62.5°	1277.1	1835.7	1570.3	1284.8	1198.4
65°	1123.3	1549.7	1319.8	1094.5	1018.9
67.5°	976.2	1302.3	1103.3	922.7	872.3
70°	827.1	1056.4	911.9	775.1	745.8
72.5°	673.3	844.0	737.6	654.2	632.1
75°	537.5	658.3	579.1	530.3	517.4
77.5°	400.2	489.6	452.6	423.8	420.2
80°	281.9	353.3	333.3	327.6	322.0
82.5°	180.0	230.9	237.1	233.5	229.4
85°	95.7	135.8	142.0	134.8	133.2
87.5°	38.6	59.1	63.8	70.5	72.5
90°	0.5	13.9	25.2	31.9	32.9
92.5°	0.5	3.1	3.6	3.6	3.1
95°	0.5	2.1	2.1	1.5	1.0
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)