

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: P859841

Luminaire Tested: **SPHB-12HE-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: P859841  
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-12HE-N-L850-CD  
Description: 12000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 5000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

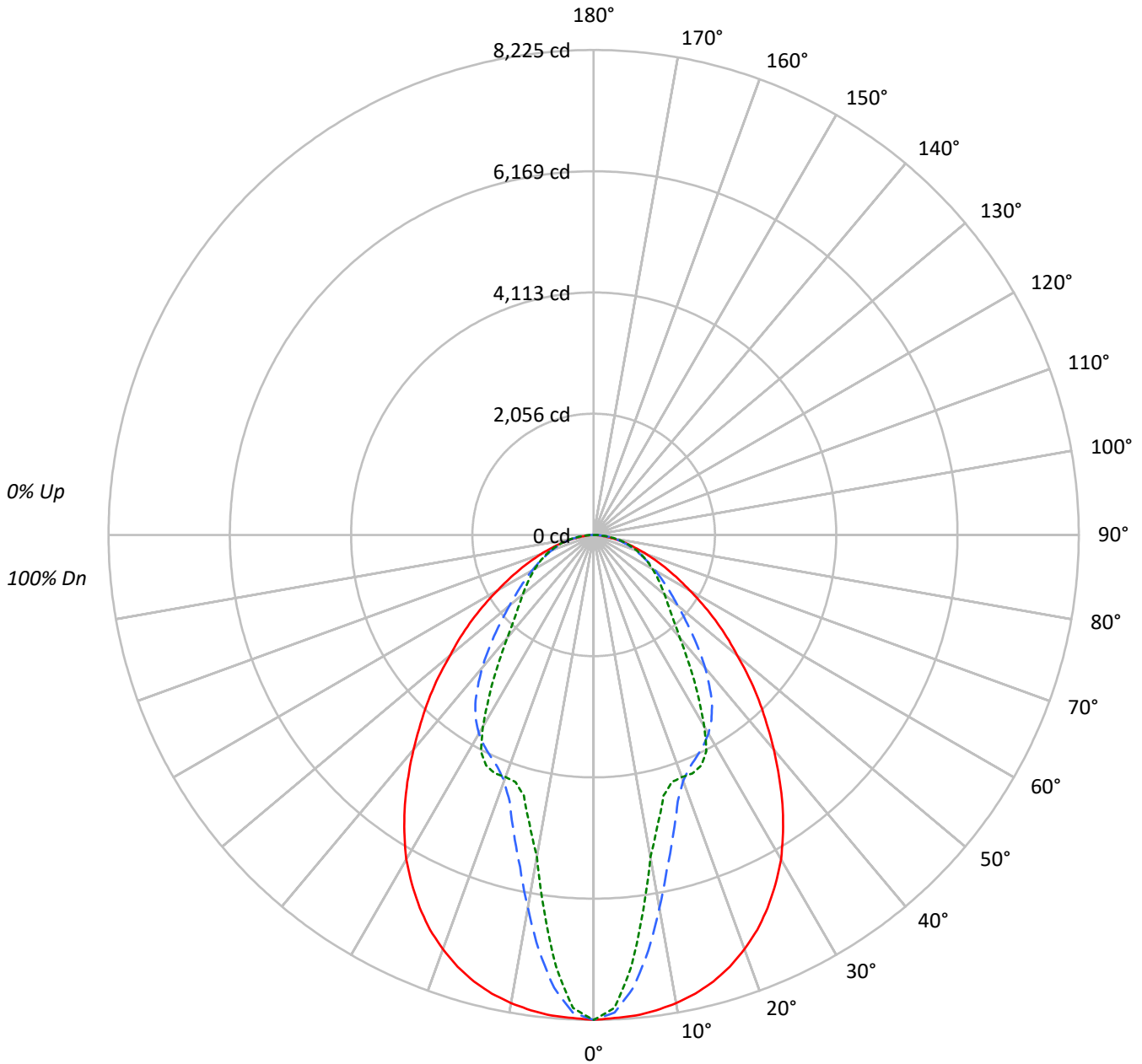
Lumens per Lamp: N/A  
Luminaire Lumens: 12054.0 lumens  
Efficiency: N/A  
Efficacy: 169.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 71.1  
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: P859841

CATALOG NUMBER: SPHB-12HE-N-L850-CD

### 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°	64152	64152	64152
5°	64077	60361	57505
10°	63859	50879	43862
15°	63327	42235	36962
20°	62051	36816	36284
25°	60057	35621	37134
30°	57218	35050	33795
35°	53127	33307	28004
40°	48377	29901	23125
45°	43669	25945	20300
50°	38537	22561	19010
55°	34197	20346	18299
60°	29306	18817	17924
65°	25366	17685	17834
70°	21709	17011	17813
75°	18224	16518	17654
80°	13902	15964	17289
85°	9102	14158	13317



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	701.2	5.8
10°-20°	1610.1	13.4
20°-30°	2176.0	18.1
30°-40°	2290.1	19.0
40°-50°	1943.2	16.1
50°-60°	1505.3	12.5
60°-70°	1048.4	8.7
70°-80°	600.3	5.0
80°-90°	174.7	1.4
90°-100°	4.7	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°	4487.3	37.2
0°-40°	6777.4	56.2
0°-60°	10225.9	84.8
0°-90°	12049.3	100.0
90°-120°	4.7	0.0
90°-150°	4.7	0.0
90°-180°	5.0	0.0
0°-180°	12054.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8225	8225	8225	8225	8225	
5°	8184	8034	7709	7413	7344	777
15°	7842	6656	5230	4708	4577	2207
25°	6978	4930	4139	4259	4315	3203
35°	5579	3791	3498	3160	2941	3478
45°	3959	2847	2352	1933	1840	3049
55°	2515	1918	1496	1360	1346	2248
65°	1374	1125	958	958	966	1373
75°	605	538	548	583	586	645
85°	102	132	158	149	149	129
90°	1	12	23	30	31	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: P859841

CATALOG NUMBER: SPHB-12HE-N-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8224.7	8224.7	8224.7	8224.7	8224.7
2.5°	8200.8	8173.8	8107.9	8065.2	8031.9
5°	8183.8	8033.8	7709.2	7413.4	7344.4
7.5°	8133.0	7803.3	7109.5	6562.6	6424.5
10°	8062.7	7472.4	6423.9	5738.9	5537.9
12.5°	7969.1	7118.9	5767.1	5121.6	5023.1
15°	7842.3	6656.2	5230.3	4707.9	4577.3
17.5°	7677.8	6177.8	4734.9	4432.9	4396.4
20°	7475.6	5738.9	4435.4	4332.4	4371.3
22.5°	7248.3	5312.5	4261.4	4304.8	4377.6
25°	6978.3	4929.5	4139.0	4258.9	4314.8
27.5°	6675.0	4583.6	4026.6	4136.5	4136.5
30°	6352.9	4295.4	3891.6	3881.6	3752.2
32.5°	5976.8	4050.5	3715.2	3516.2	3324.0
35°	5579.4	3791.2	3497.9	3159.5	2941.0
37.5°	5162.5	3550.1	3222.9	2776.5	2573.1
40°	4751.2	3312.1	2936.6	2432.4	2271.1
42.5°	4341.8	3069.7	2638.4	2153.6	2026.2
45°	3958.8	2846.8	2352.1	1932.6	1840.3
47.5°	3569.5	2610.1	2087.7	1754.9	1690.9
50°	3175.8	2370.3	1859.2	1613.7	1566.6
52.5°	2844.3	2146.7	1665.1	1479.9	1451.7
55°	2514.7	1917.6	1496.2	1360.0	1345.6
57.5°	2187.5	1704.1	1341.8	1250.1	1247.0
60°	1878.6	1504.4	1206.2	1155.9	1149.0
62.5°	1615.5	1306.0	1077.4	1053.6	1056.7
65°	1374.4	1125.2	958.2	958.2	966.3
67.5°	1150.9	958.8	848.9	863.3	874.6
70°	951.9	808.1	745.9	771.0	781.1
72.5°	763.5	668.1	647.3	675.0	683.1
75°	604.7	537.5	548.1	582.7	585.8
77.5°	448.3	423.2	450.8	488.5	495.4
80°	309.5	312.1	355.4	381.8	384.9
82.5°	199.7	217.9	266.2	280.0	275.0
85°	101.7	131.9	158.2	148.8	148.8
87.5°	38.9	57.1	67.2	79.1	83.5
90°	0.6	11.9	23.2	29.5	30.8
92.5°	0.6	3.1	5.0	5.7	5.0
95°	0.6	1.9	3.8	3.8	3.1
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: P859841

CATALOG NUMBER: SPHB-12HE-N-L850-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)