

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: P860011

Luminaire Tested: **SPHB-24HE-W-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: P860011  
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-24HE-W-L840-CD  
Description: 24000 Lumen High Efficacy Select Pro High Bay with Wide Lens and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

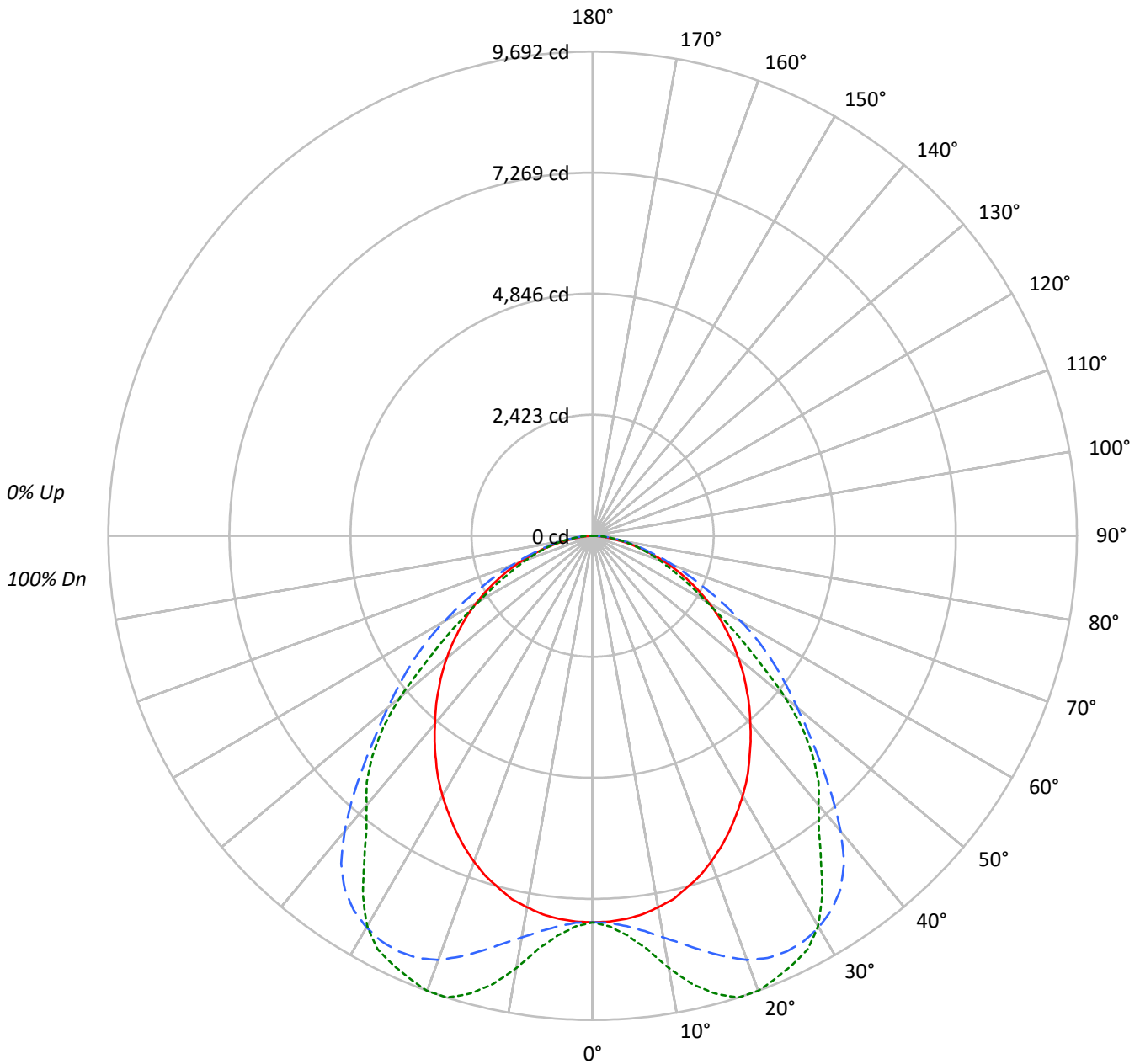
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24344.0 lumens  
Efficiency: N/A  
Efficacy: 166.7 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): 146  
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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85			85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72			72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62			62
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53			53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46			46
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40			40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36			36
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32			32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29			29
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26			26

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

	0°	45°	90°
0°	60347	60347	60347
5°	60282	61420	62875
10°	59805	64661	69562
15°	58871	69475	76623
20°	57596	75000	80450
25°	55934	79046	81505
30°	54113	81520	81284
35°	52083	82338	75846
40°	49984	78620	71638
45°	48093	71264	68733
50°	46219	64798	60932
55°	44105	59869	49584
60°	41923	53375	40836
65°	39037	45864	35408
70°	35515	39157	32023
75°	30498	32864	29362
80°	23838	28191	27229
85°	16118	23922	22445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	759.6	3.1
10°-20°	2408.7	9.9
20°-30°	3942.0	16.2
30°-40°	4808.9	19.8
40°-50°	4762.7	19.6
50°-60°	3808.6	15.6
60°-70°	2376.0	9.8
70°-80°	1164.1	4.8
80°-90°	305.3	1.3
90°-100°	8.0	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°	7110.3	29.2
0°-40°	11919.2	49.0
0°-60°	20490.6	84.2
0°-90°	24335.9	100.0
90°-120°	8.0	0.0
90°-150°	8.0	0.0
90°-180°	8.0	0.0
0°-180°	24344.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7737	7737	7737	7737	7737	
5°	7699	7733	7844	7981	8030	730
15°	7290	7715	8604	9288	9489	2055
25°	6499	7599	9185	9451	9470	2991
35°	5470	7309	8647	8185	7965	3421
45°	4360	6773	6460	6244	6231	3368
55°	3243	5200	4402	3977	3646	2906
65°	2115	2918	2485	2061	1918	2097
75°	1012	1240	1090	998	974	1074
85°	180	256	267	254	251	223
90°	1	26	48	60	62	10
95°	1	4	4	3	2	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°	7736.9	7736.9	7736.9	7736.9	7736.9
2.5°	7729.1	7726.2	7754.3	7805.6	7828.9
5°	7699.1	7733.0	7844.4	7980.9	8030.3
7.5°	7644.9	7735.9	7981.9	8232.7	8339.3
10°	7550.9	7737.9	8164.0	8606.5	8782.8
12.5°	7454.1	7731.1	8366.4	8993.0	9185.7
15°	7290.4	7714.6	8603.6	9288.3	9488.8
17.5°	7138.4	7695.2	8832.2	9539.2	9691.2
20°	6938.9	7667.2	9035.6	9615.7	9692.2
22.5°	6729.7	7644.9	9147.9	9564.3	9587.6
25°	6499.2	7599.4	9184.7	9451.0	9470.4
27.5°	6253.2	7558.7	9149.8	9310.6	9327.1
30°	6008.2	7485.1	9051.1	9091.7	9024.9
32.5°	5751.6	7411.5	8891.3	8708.2	8552.3
35°	5469.8	7308.8	8647.2	8185.3	7965.4
37.5°	5191.8	7210.1	8266.6	7600.3	7434.7
40°	4909.0	7088.0	7721.4	7054.1	7035.7
42.5°	4641.7	6956.3	7104.5	6629.0	6691.0
45°	4359.9	6773.3	6460.5	6243.5	6231.0
47.5°	4092.6	6520.5	5874.6	5817.4	5688.6
50°	3808.9	6171.9	5340.0	5285.8	5021.4
52.5°	3530.9	5727.4	4862.5	4659.2	4273.7
55°	3243.3	5200.5	4402.5	3977.4	3646.2
57.5°	2976.0	4621.4	3934.8	3383.7	3086.4
60°	2687.4	4034.5	3421.5	2862.7	2617.7
62.5°	2404.6	3456.4	2956.7	2419.2	2256.5
65°	2115.1	2917.9	2485.0	2060.8	1918.5
67.5°	1838.1	2452.1	2077.3	1737.4	1642.5
70°	1557.3	1989.2	1717.0	1459.4	1404.2
72.5°	1267.7	1589.2	1388.7	1231.9	1190.2
75°	1012.0	1239.6	1090.5	998.5	974.3
77.5°	753.4	922.0	852.2	798.0	791.2
80°	530.7	665.3	627.6	616.9	606.2
82.5°	339.0	434.8	446.5	439.7	431.9
85°	180.1	255.7	267.3	253.7	250.8
87.5°	72.6	111.4	120.1	132.7	136.6
90°	1.0	26.1	47.5	60.0	62.0
92.5°	1.0	5.8	6.8	6.8	5.8
95°	1.0	3.9	3.9	2.9	1.9
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)