

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: P859831

Luminaire Tested: **SPHB-12HE-M-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: P859831  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SPHB-12HE-M-L840-CD  
Description: 12000 Lumen High Efficacy Select Pro High Bay with Medium Lens and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

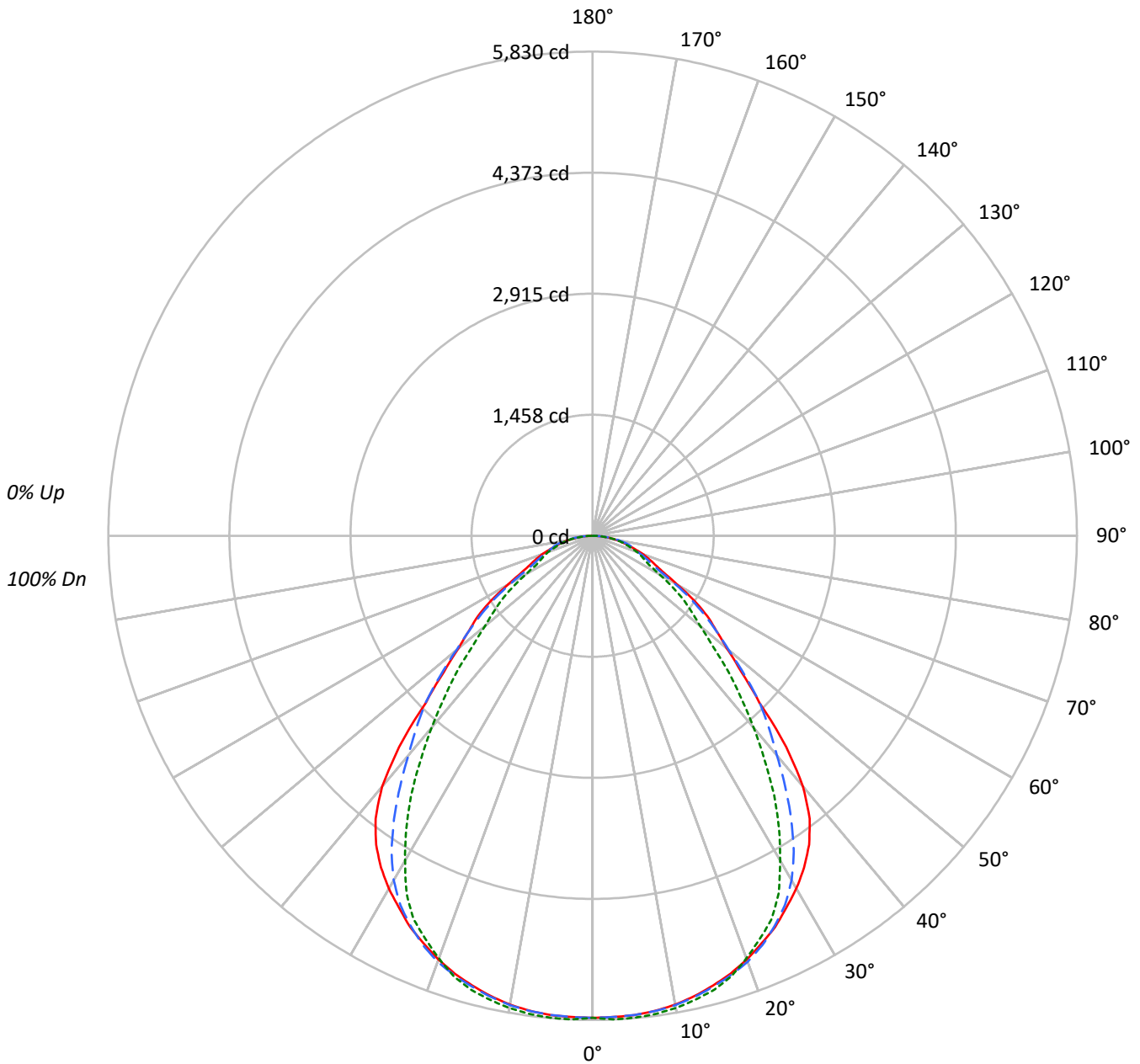
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12047.0 lumens  
Efficiency: N/A  
Efficacy: 169.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
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

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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31								

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

	0°	45°	90°
0°	45271	45271	45271
5°	45360	45348	45606
10°	45400	45448	45727
15°	45267	45384	45699
20°	45069	45298	44936
25°	44740	44615	43857
30°	44174	43133	40671
35°	43246	39682	36248
40°	40134	35121	30702
45°	31311	31395	25408
50°	25572	25935	20520
55°	22913	22048	18029
60°	18342	17363	14425
65°	15372	14071	12757
70°	14596	13407	12988
75°	13242	14234	12528
80°	13305	14544	13206
85°	11581	13567	11026



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	551.9	4.6
10°-20°	1587.1	13.2
20°-30°	2369.3	19.7
30°-40°	2585.4	21.5
40°-50°	2114.9	17.6
50°-60°	1390.6	11.5
60°-70°	797.8	6.6
70°-80°	483.4	4.0
80°-90°	162.3	1.3
90°-100°	4.2	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°	4508.3	37.4
0°-40°	7093.7	58.9
0°-60°	10599.2	88.0
0°-90°	12042.8	100.0
90°-120°	4.2	0.0
90°-150°	4.2	0.0
90°-180°	4.0	0.0
0°-180°	12047.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5804	5804	5804	5804	5804	
5°	5793	5784	5792	5816	5825	551
15°	5606	5605	5620	5656	5659	1582
25°	5198	5211	5184	5121	5096	2392
35°	4542	4439	4167	3883	3807	2815
45°	2838	3050	2846	2512	2303	2253
55°	1685	1639	1621	1393	1326	1484
65°	833	821	762	742	691	851
75°	439	475	472	453	416	476
85°	129	147	152	132	123	140
90°	1	11	21	25	27	6
95°	1	2	2	2	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



TEST NUMBER: P859831

CATALOG NUMBER: SPHB-12HE-M-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5804.0	5804.0	5804.0	5804.0	5804.0
2.5°	5800.2	5791.8	5799.4	5823.2	5830.0
5°	5793.3	5784.1	5791.8	5815.5	5824.7
7.5°	5769.6	5764.2	5771.9	5795.6	5807.1
10°	5732.1	5725.9	5738.2	5758.9	5773.4
12.5°	5676.2	5673.9	5685.4	5715.2	5721.3
15°	5605.8	5605.0	5620.3	5656.3	5659.3
17.5°	5526.1	5525.4	5544.5	5568.2	5559.8
20°	5429.7	5435.0	5457.2	5435.0	5413.6
22.5°	5314.1	5330.9	5336.3	5266.6	5255.9
25°	5198.5	5210.8	5184.0	5121.2	5095.9
27.5°	5049.2	5063.8	5014.0	4924.5	4852.5
30°	4904.6	4890.8	4789.0	4616.0	4515.7
32.5°	4738.4	4689.4	4506.5	4267.7	4176.6
35°	4541.7	4439.1	4167.4	3883.4	3806.8
37.5°	4292.9	4105.4	3808.4	3512.1	3396.5
40°	3941.6	3724.9	3449.3	3143.1	3015.3
42.5°	3449.3	3369.0	3140.8	2796.4	2644.0
45°	2838.5	3050.5	2846.1	2512.4	2303.4
47.5°	2429.7	2724.4	2478.7	2237.6	1949.7
50°	2107.4	2310.3	2137.3	1919.9	1691.0
52.5°	1874.7	1935.9	1866.3	1627.5	1497.3
55°	1684.9	1638.9	1621.3	1393.2	1325.8
57.5°	1449.1	1423.8	1378.7	1214.8	1126.0
60°	1175.8	1229.4	1113.0	1066.3	924.7
62.5°	966.1	1018.9	894.1	891.0	773.2
65°	832.9	820.6	762.4	741.8	691.2
67.5°	737.2	698.9	679.0	652.2	634.6
70°	640.0	623.9	587.9	593.3	569.5
72.5°	533.6	554.2	518.2	528.2	485.3
75°	439.4	475.4	472.3	453.2	415.7
77.5°	362.1	400.4	407.2	389.6	359.0
80°	296.2	322.3	323.8	313.1	294.0
82.5°	217.4	232.7	244.2	225.8	213.6
85°	129.4	147.0	151.6	132.4	123.2
87.5°	42.1	58.9	65.8	68.1	68.9
90°	0.8	10.7	21.4	25.3	26.8
92.5°	0.8	3.1	4.6	6.9	7.7
95°	0.8	1.5	2.3	2.3	1.5
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)