

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: P860281

Luminaire Tested: **SPHB-9HE-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: P860281  
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-9HE-W-L840-CD  
Description: 9000 Lumen High Efficacy Select Pro High Bay with Wide Lens and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

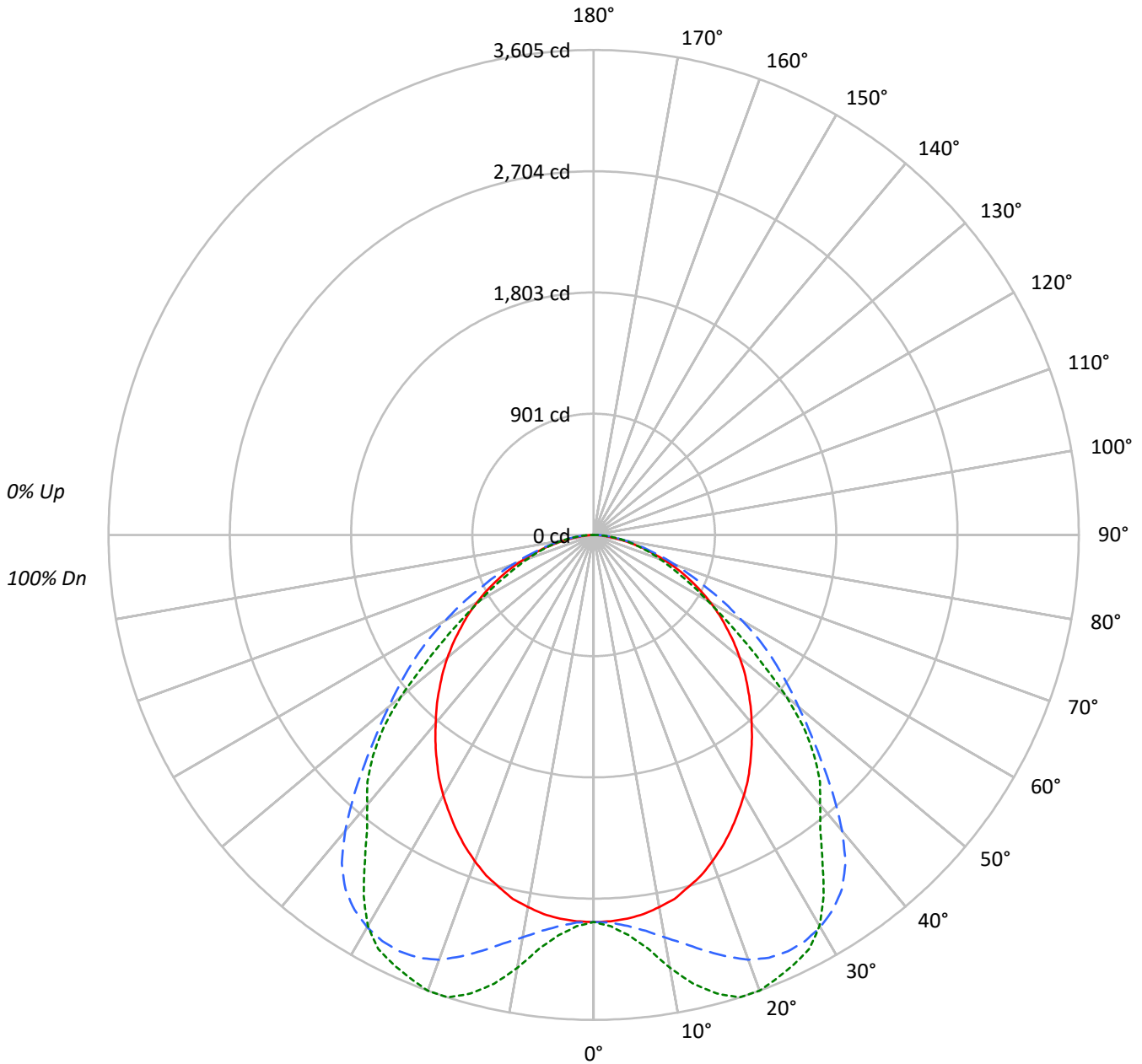
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9054.0 lumens  
Efficiency: N/A  
Efficacy: 169.9 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): 53.3  
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: P860281  
CATALOG NUMBER: SPHB-9HE-W-L840-CD

### 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	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°	22444	22444	22444
5°	22420	22843	23384
10°	22242	24048	25872
15°	21896	25839	28498
20°	21421	27894	29921
25°	20803	29399	30313
30°	20126	30319	30231
35°	19371	30624	28209
40°	18590	29240	26643
45°	17886	26505	25563
50°	17190	24099	22661
55°	16404	22267	18441
60°	15592	19851	15188
65°	14518	17057	13169
70°	13209	14564	11911
75°	11343	12223	10919
80°	8867	10484	10129
85°	5996	8896	8350



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.5	3.1
10°-20°	895.8	9.9
20°-30°	1466.1	16.2
30°-40°	1788.5	19.8
40°-50°	1771.3	19.6
50°-60°	1416.5	15.6
60°-70°	883.7	9.8
70°-80°	433.0	4.8
80°-90°	113.5	1.3
90°-100°	3.0	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°	2644.5	29.2
0°-40°	4433.0	49.0
0°-60°	7620.8	84.2
0°-90°	9051.0	100.0
90°-120°	3.0	0.0
90°-150°	3.0	0.0
90°-180°	3.0	0.0
0°-180°	9054.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2878	2878	2878	2878	2878	
5°	2863	2876	2918	2968	2987	272
15°	2712	2869	3200	3454	3529	764
25°	2417	2826	3416	3515	3522	1112
35°	2034	2718	3216	3044	2962	1272
45°	1622	2519	2403	2322	2317	1252
55°	1206	1934	1637	1479	1356	1081
65°	787	1085	924	766	714	780
75°	376	461	406	371	362	400
85°	67	95	99	94	93	83
90°	0	10	18	22	23	4
95°	0	1	1	1	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



TEST NUMBER: P860281

CATALOG NUMBER: SPHB-9HE-W-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2877.5	2877.5	2877.5	2877.5	2877.5
2.5°	2874.6	2873.5	2884.0	2903.1	2911.7
5°	2863.4	2876.1	2917.5	2968.3	2986.6
7.5°	2843.3	2877.1	2968.6	3061.9	3101.5
10°	2808.3	2877.9	3036.3	3200.9	3266.5
12.5°	2772.3	2875.3	3111.6	3344.7	3416.3
15°	2711.5	2869.2	3199.9	3454.5	3529.1
17.5°	2654.9	2862.0	3284.9	3547.8	3604.3
20°	2580.7	2851.6	3360.5	3576.2	3604.7
22.5°	2502.9	2843.3	3402.3	3557.2	3565.8
25°	2417.2	2826.4	3416.0	3515.0	3522.2
27.5°	2325.7	2811.2	3403.0	3462.8	3468.9
30°	2234.6	2783.8	3366.3	3381.4	3356.5
32.5°	2139.1	2756.5	3306.8	3238.8	3180.8
35°	2034.3	2718.3	3216.1	3044.3	2962.5
37.5°	1930.9	2681.6	3074.5	2826.7	2765.1
40°	1825.8	2636.2	2871.7	2623.6	2616.7
42.5°	1726.4	2587.2	2642.3	2465.4	2488.5
45°	1621.5	2519.1	2402.8	2322.1	2317.4
47.5°	1522.1	2425.1	2184.9	2163.6	2115.7
50°	1416.6	2295.4	1986.0	1965.9	1867.5
52.5°	1313.2	2130.1	1808.5	1732.8	1589.5
55°	1206.3	1934.2	1637.4	1479.3	1356.1
57.5°	1106.8	1718.8	1463.4	1258.5	1147.9
60°	999.5	1500.5	1272.5	1064.7	973.6
62.5°	894.3	1285.5	1099.6	899.7	839.2
65°	786.6	1085.2	924.2	766.5	713.5
67.5°	683.6	912.0	772.6	646.2	610.9
70°	579.2	739.8	638.6	542.8	522.3
72.5°	471.5	591.1	516.5	458.2	442.7
75°	376.4	461.0	405.6	371.3	362.3
77.5°	280.2	342.9	317.0	296.8	294.3
80°	197.4	247.4	233.4	229.4	225.5
82.5°	126.1	161.7	166.0	163.5	160.6
85°	67.0	95.1	99.4	94.4	93.3
87.5°	27.0	41.4	44.7	49.3	50.8
90°	0.4	9.7	17.6	22.3	23.1
92.5°	0.4	2.2	2.5	2.5	2.2
95°	0.4	1.4	1.4	1.1	0.7
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: P860281

CATALOG NUMBER: SPHB-9HE-W-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)