

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: P860272

Luminaire Tested: **SPHB-9HE-N-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: P860272  
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-9HE-N-L840-CD  
Description: 9000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 4000K 80CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

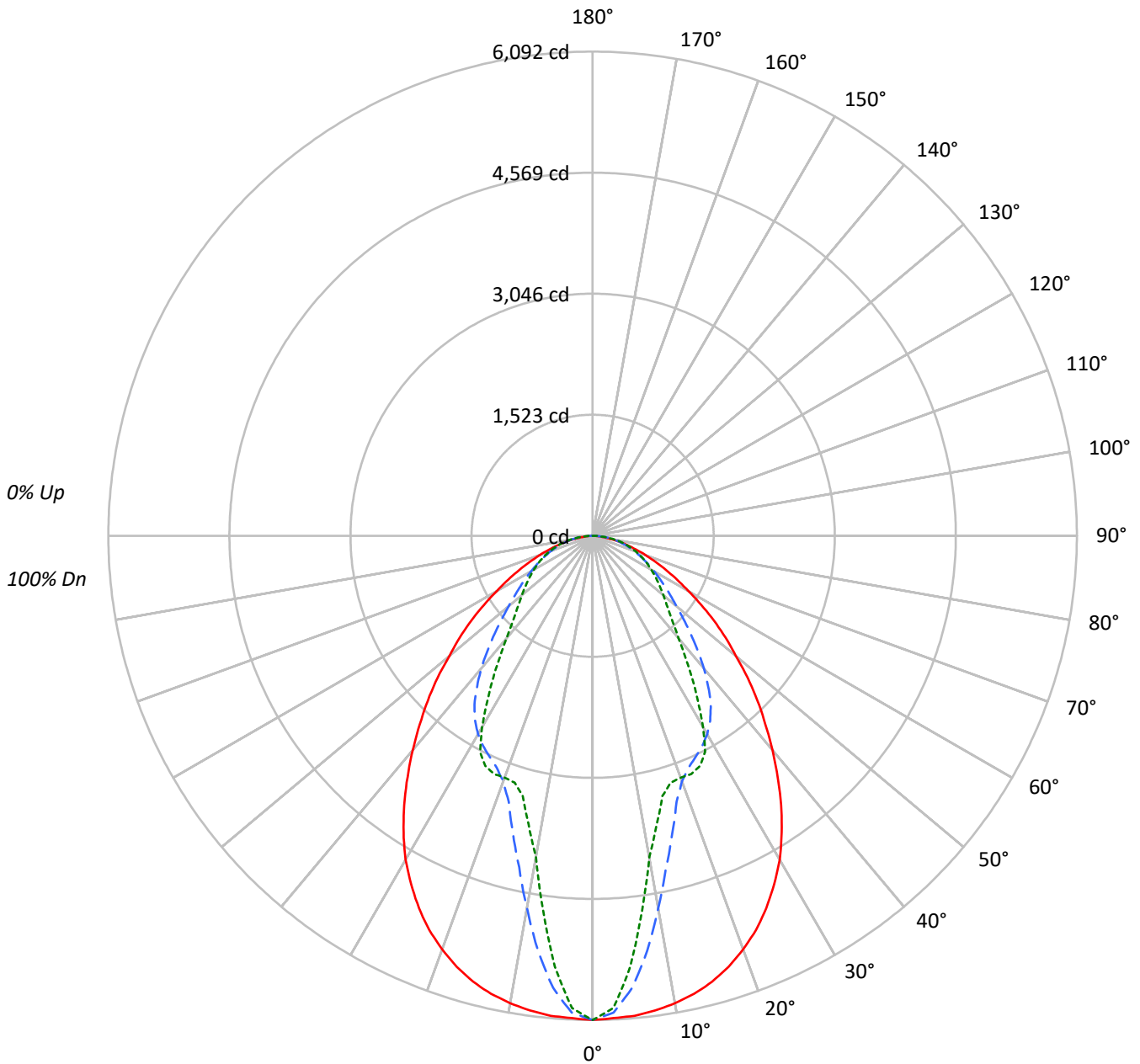
Lumens per Lamp: N/A  
Luminaire Lumens: 8929.0 lumens  
Efficiency: N/A  
Efficacy: 167.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 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: P860272

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

### Luminous Intensity Polar Plot





TEST NUMBER: P860272

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

**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	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°	47520	47520	47520
5°	47465	44712	42596
10°	47303	37689	32491
15°	46910	31285	27379
20°	45964	27271	26878
25°	44488	26387	27507
30°	42384	25963	25034
35°	39353	24672	20745
40°	35835	22149	17129
45°	32348	19219	15037
50°	28547	16712	14081
55°	25330	15072	13554
60°	21709	13938	13277
65°	18790	13100	13211
70°	16080	12600	13195
75°	13498	12235	13076
80°	10300	11822	12806
85°	6739	10489	9862



TEST NUMBER: P860272

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	519.4	5.8
10°-20°	1192.7	13.4
20°-30°	1611.9	18.1
30°-40°	1696.4	19.0
40°-50°	1439.4	16.1
50°-60°	1115.0	12.5
60°-70°	776.6	8.7
70°-80°	444.7	5.0
80°-90°	129.4	1.4
90°-100°	3.5	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°	3324.0	37.2
0°-40°	5020.3	56.2
0°-60°	7574.8	84.8
0°-90°	8925.5	100.0
90°-120°	3.5	0.0
90°-150°	3.5	0.0
90°-180°	3.0	0.0
0°-180°	8929.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6092	6092	6092	6092	6092	
5°	6062	5951	5711	5492	5440	576
15°	5809	4931	3874	3487	3391	1635
25°	5169	3652	3066	3155	3196	2373
35°	4133	2808	2591	2340	2179	2576
45°	2932	2109	1742	1432	1363	2259
55°	1863	1420	1108	1007	997	1665
65°	1018	834	710	710	716	1017
75°	448	398	406	432	434	478
85°	75	98	117	110	110	96
90°	0	9	17	22	23	4
95°	0	1	3	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



TEST NUMBER: P860272

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6092.4	6092.4	6092.4	6092.4	6092.4
2.5°	6074.7	6054.7	6005.9	5974.3	5949.6
5°	6062.2	5951.0	5710.6	5491.5	5440.3
7.5°	6024.5	5780.3	5266.4	4861.3	4759.0
10°	5972.4	5535.2	4758.5	4251.1	4102.2
12.5°	5903.1	5273.4	4272.0	3793.9	3720.8
15°	5809.2	4930.6	3874.3	3487.4	3390.6
17.5°	5687.3	4576.2	3507.4	3283.6	3256.7
20°	5537.5	4251.1	3285.5	3209.2	3238.1
22.5°	5369.2	3935.3	3156.7	3188.8	3242.7
25°	5169.2	3651.5	3066.0	3154.8	3196.2
27.5°	4944.5	3395.3	2982.7	3064.1	3064.1
30°	4705.9	3181.8	2882.7	2875.3	2779.5
32.5°	4427.3	3000.4	2752.0	2604.6	2462.3
35°	4132.9	2808.3	2591.1	2340.4	2178.6
37.5°	3824.1	2629.7	2387.4	2056.7	1906.0
40°	3519.4	2453.4	2175.3	1801.8	1682.3
42.5°	3216.2	2273.9	1954.4	1595.3	1500.9
45°	2932.5	2108.8	1742.3	1431.6	1363.2
47.5°	2644.1	1933.4	1546.5	1300.0	1252.5
50°	2352.5	1755.8	1377.2	1195.3	1160.4
52.5°	2106.9	1590.2	1233.5	1096.3	1075.3
55°	1862.7	1420.4	1108.3	1007.4	996.7
57.5°	1620.4	1262.3	993.9	926.0	923.7
60°	1391.6	1114.4	893.5	856.3	851.1
62.5°	1196.7	967.4	798.1	780.4	782.8
65°	1018.1	833.5	709.8	709.8	715.8
67.5°	852.5	710.2	628.8	639.5	647.9
70°	705.1	598.6	552.5	571.1	578.6
72.5°	565.6	494.9	479.5	500.0	506.0
75°	447.9	398.1	406.0	431.6	433.9
77.5°	332.1	313.5	333.9	361.9	367.0
80°	229.3	231.2	263.2	282.8	285.1
82.5°	147.9	161.4	197.2	207.4	203.7
85°	75.3	97.7	117.2	110.2	110.2
87.5°	28.8	42.3	49.8	58.6	61.9
90°	0.5	8.8	17.2	21.9	22.8
92.5°	0.5	2.3	3.7	4.2	3.7
95°	0.5	1.4	2.8	2.8	2.3
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: P860272

CATALOG NUMBER: SPHB-9HE-N-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)