

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: P859948

Luminaire Tested: **SPHB-18HE-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: P859948  
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-18HE-N-L840-CD  
Description: 18000 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**

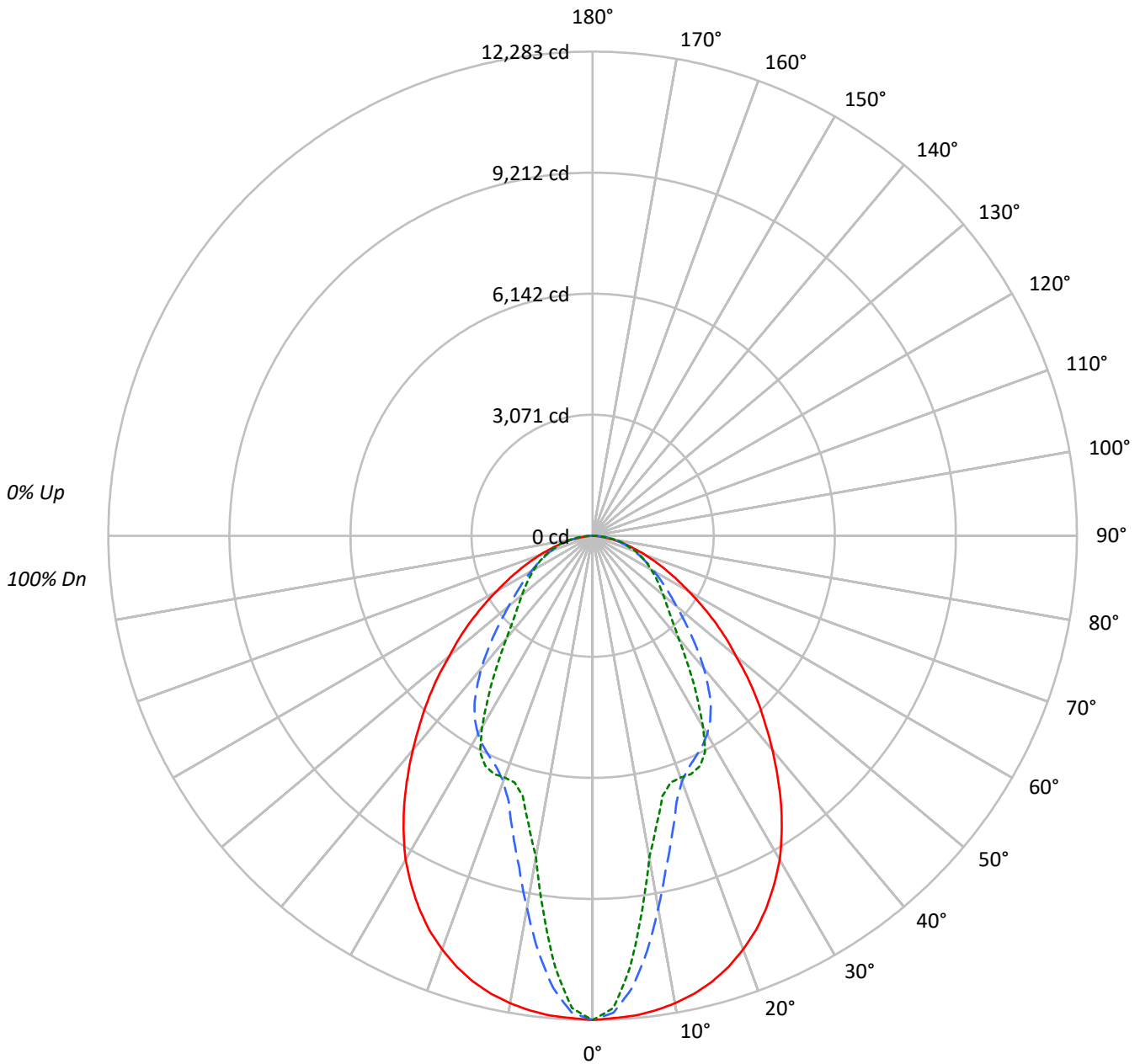
Lumens per Lamp: N/A  
Luminaire Lumens: 18002.0 lumens  
Efficiency: N/A  
Efficacy: 166.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 108.1  
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									
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°	95807	95807	95807
5°	95696	90145	85880
10°	95369	75985	65505
15°	94575	63075	55201
20°	92670	54983	54188
25°	89692	53199	55458
30°	85453	52345	50471
35°	79342	49743	41822
40°	72249	44656	34535
45°	65217	38748	30317
50°	57553	33693	28390
55°	51070	30388	27327
60°	43767	28100	26769
65°	37883	26409	26634
70°	32420	25405	26603
75°	27213	24670	26367
80°	20766	23838	25819
85°	13594	21147	19886



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1047.2	5.8
10°-20°	2404.6	13.4
20°-30°	3249.7	18.1
30°-40°	3420.1	19.0
40°-50°	2902.1	16.1
50°-60°	2248.1	12.5
60°-70°	1565.7	8.7
70°-80°	896.6	5.0
80°-90°	260.9	1.4
90°-100°	7.0	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°	6701.5	37.2
0°-40°	10121.7	56.2
0°-60°	15271.9	84.8
0°-90°	17995.0	100.0
90°-120°	7.0	0.0
90°-150°	7.0	0.0
90°-180°	7.0	0.0
0°-180°	18002.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12283	12283	12283	12283	12283	
5°	12222	11998	11513	11072	10968	###
15°	11712	9941	7811	7031	6836	3296
25°	10422	7362	6181	6360	6444	4784
35°	8332	5662	5224	4719	4392	5194
45°	5912	4252	3513	2886	2748	4554
55°	3756	2864	2235	2031	2010	3358
65°	2053	1680	1431	1431	1443	2050
75°	903	803	819	870	875	963
85°	152	197	236	222	222	193
90°	1	18	35	44	46	8
95°	1	3	6	6	5	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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CATALOG NUMBER: SPHB-18HE-N-L840-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12283.1	12283.1	12283.1	12283.1	12283.1
2.5°	12247.4	12207.1	12108.7	12044.9	11995.2
5°	12222.1	11998.0	11513.2	11071.6	10968.4
7.5°	12146.2	11653.9	10617.7	9801.0	9594.7
10°	12041.1	11159.7	9593.7	8570.7	8270.6
12.5°	11901.4	10631.8	8612.9	7648.9	7501.7
15°	11712.0	9940.7	7811.1	7031.0	6835.9
17.5°	11466.3	9226.1	7071.3	6620.2	6565.9
20°	11164.4	8570.7	6624.0	6470.2	6528.3
22.5°	10824.9	7934.0	6364.2	6428.9	6537.7
25°	10421.7	7362.0	6181.4	6360.5	6443.9
27.5°	9968.8	6845.3	6013.5	6177.6	6177.6
30°	9487.8	6414.9	5811.9	5796.9	5603.8
32.5°	8926.1	6049.2	5548.4	5251.2	4964.2
35°	8332.5	5661.9	5224.0	4718.6	4392.2
37.5°	7709.9	5301.8	4813.3	4146.6	3842.7
40°	7095.7	4946.4	4385.7	3632.7	3391.7
42.5°	6484.3	4584.5	3940.3	3216.3	3026.0
45°	5912.3	4251.6	3512.7	2886.3	2748.4
47.5°	5330.9	3898.1	3117.9	2620.9	2525.3
50°	4742.9	3539.9	2776.6	2409.9	2339.6
52.5°	4247.8	3206.0	2486.8	2210.2	2168.0
55°	3755.5	2863.8	2234.6	2031.1	2009.5
57.5°	3267.0	2544.9	2003.9	1867.0	1862.3
60°	2805.6	2246.8	1801.3	1726.3	1716.0
62.5°	2412.7	1950.4	1609.1	1573.5	1578.2
65°	2052.6	1680.4	1430.9	1430.9	1443.1
67.5°	1718.8	1431.9	1267.8	1289.4	1306.2
70°	1421.6	1206.8	1114.0	1151.5	1166.5
72.5°	1140.3	997.7	966.8	1008.0	1020.2
75°	903.0	802.7	818.6	870.2	874.9
77.5°	669.5	632.0	673.3	729.5	739.9
80°	462.3	466.0	530.7	570.1	574.8
82.5°	298.2	325.4	397.6	418.2	410.7
85°	151.9	196.9	236.3	222.2	222.2
87.5°	58.1	85.3	100.3	118.2	124.7
90°	0.9	17.8	34.7	44.1	45.9
92.5°	0.9	4.7	7.5	8.4	7.5
95°	0.9	2.8	5.6	5.6	4.7
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



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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)