

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: P859949

Luminaire Tested: **SPHB-18HE-N-L850-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: P859949
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-L850-CD
Description: 18000 Lumen High Efficacy Select Pro High Bay with Narrow Lens and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

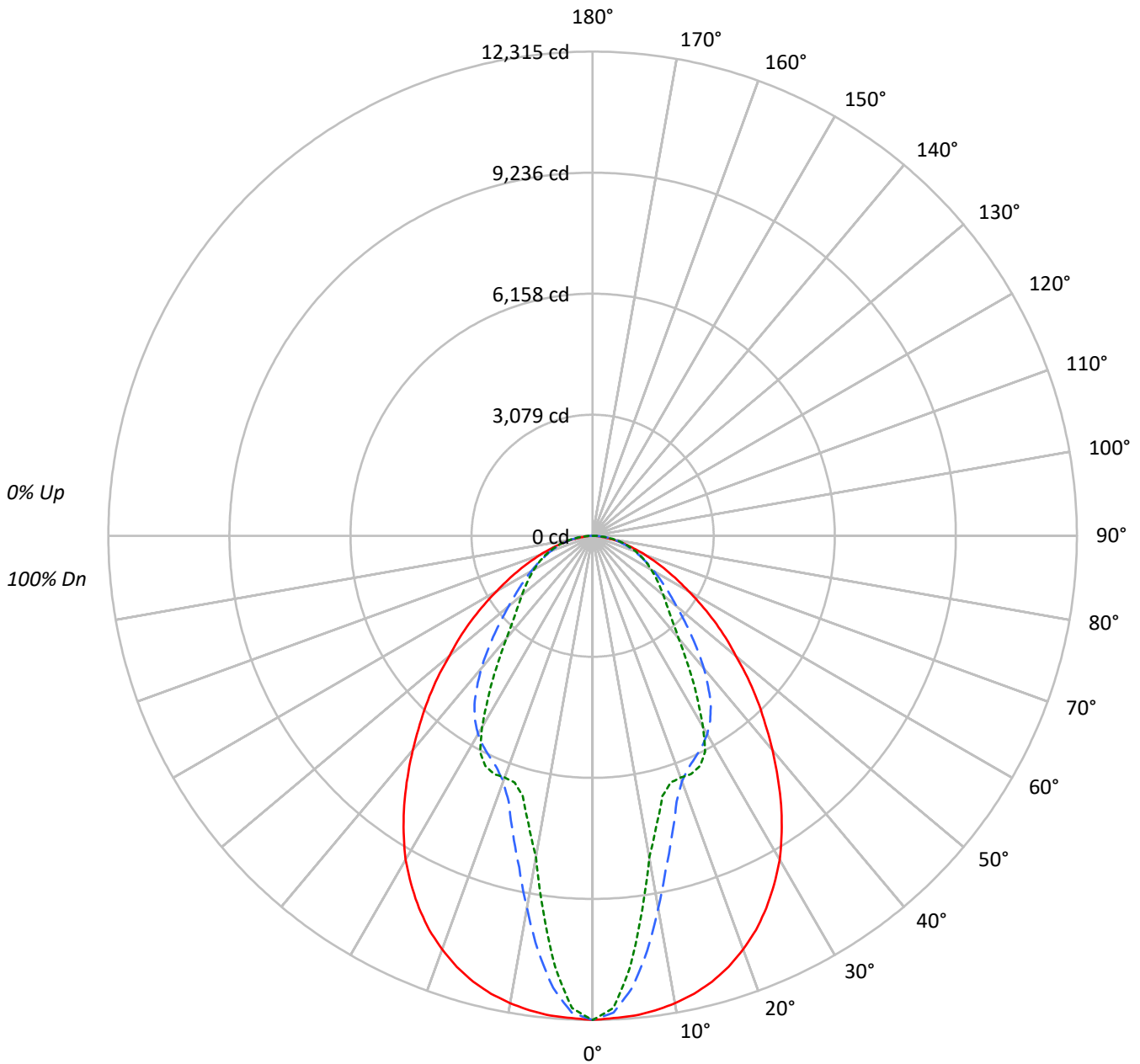
Lumens per Lamp: N/A
Luminaire Lumens: 18049.0 lumens
Efficiency: N/A
Efficacy: 167.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 108.1
Input Voltage (V): NR
Input Current (Ain): 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°	96057	96057	96057
5°	95946	90381	86104
10°	95618	76183	65676
15°	94823	63240	55345
20°	92912	55126	54330
25°	89926	53337	55603
30°	85675	52482	50603
35°	79549	49872	41932
40°	72437	44772	34625
45°	65387	38848	30396
50°	57703	33780	28464
55°	51203	30467	27399
60°	43882	28173	26840
65°	37983	26479	26704
70°	32505	25471	26673
75°	27286	24736	26436
80°	20820	23901	25886
85°	13630	21201	19939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1050.0	5.8
10°-20°	2410.9	13.4
20°-30°	3258.2	18.1
30°-40°	3429.1	19.0
40°-50°	2909.7	16.1
50°-60°	2254.0	12.5
60°-70°	1569.8	8.7
70°-80°	898.9	5.0
80°-90°	261.6	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°	6719.0	37.2
0°-40°	10148.1	56.2
0°-60°	15311.7	84.8
0°-90°	18042.0	100.0
90°-120°	7.0	0.0
90°-150°	7.0	0.0
90°-180°	7.0	0.0
0°-180°	18049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12315	12315	12315	12315	12315	
5°	12254	12029	11543	11100	10997	###
15°	11743	9967	7832	7049	6854	3304
25°	10449	7381	6198	6377	6461	4797
35°	8354	5677	5238	4731	4404	5208
45°	5928	4263	3522	2894	2756	4565
55°	3765	2871	2240	2036	2015	3366
65°	2058	1685	1435	1435	1447	2056
75°	905	805	821	872	877	965
85°	152	197	237	223	223	194
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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	12315.1	12315.1	12315.1	12315.1	12315.1
2.5°	12279.4	12239.0	12140.3	12076.3	12026.5
5°	12254.0	12029.3	11543.3	11100.5	10997.0
7.5°	12177.9	11684.3	10645.4	9826.5	9619.7
10°	12072.6	11188.8	9618.8	8593.1	8292.2
12.5°	11932.5	10659.5	8635.4	7668.9	7521.3
15°	11742.6	9966.6	7831.5	7049.3	6853.8
17.5°	11496.3	9250.2	7089.7	6637.5	6583.0
20°	11193.5	8593.1	6641.3	6487.1	6545.4
22.5°	10853.2	7954.7	6380.9	6445.7	6554.8
25°	10448.9	7381.2	6197.5	6377.1	6460.8
27.5°	9994.8	6863.2	6029.2	6193.8	6193.8
30°	9512.5	6431.6	5827.1	5812.1	5618.4
32.5°	8949.4	6065.0	5562.9	5264.9	4977.2
35°	8354.3	5676.7	5237.6	4730.9	4403.7
37.5°	7730.0	5315.7	4825.8	4157.4	3852.8
40°	7114.2	4959.3	4397.1	3642.2	3400.6
42.5°	6501.2	4596.4	3950.5	3224.7	3033.9
45°	5927.7	4262.7	3521.8	2893.8	2755.6
47.5°	5344.8	3908.2	3126.0	2627.7	2531.8
50°	4755.3	3549.1	2783.8	2416.2	2345.7
52.5°	4258.9	3214.4	2493.3	2216.0	2173.6
55°	3765.3	2871.2	2240.4	2036.4	2014.8
57.5°	3275.5	2551.6	2009.1	1871.9	1867.2
60°	2813.0	2252.6	1806.0	1730.8	1720.5
62.5°	2419.0	1955.5	1613.3	1577.6	1582.3
65°	2058.0	1684.8	1434.7	1434.7	1446.9
67.5°	1723.3	1435.6	1271.1	1292.7	1309.6
70°	1425.3	1210.0	1116.9	1154.5	1169.6
72.5°	1143.2	1000.3	969.3	1010.7	1022.9
75°	905.4	804.8	820.8	872.5	877.2
77.5°	671.3	633.7	675.0	731.4	741.8
80°	463.5	467.3	532.1	571.6	576.3
82.5°	299.0	326.2	398.6	419.3	411.8
85°	152.3	197.4	236.9	222.8	222.8
87.5°	58.3	85.6	100.6	118.5	125.0
90°	0.9	17.9	34.8	44.2	46.1
92.5°	0.9	4.7	7.5	8.5	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)