

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: P859939

Luminaire Tested: **SPHB-18HE-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: P859939
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-18HE-M-L840-CD
Description: 18000 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

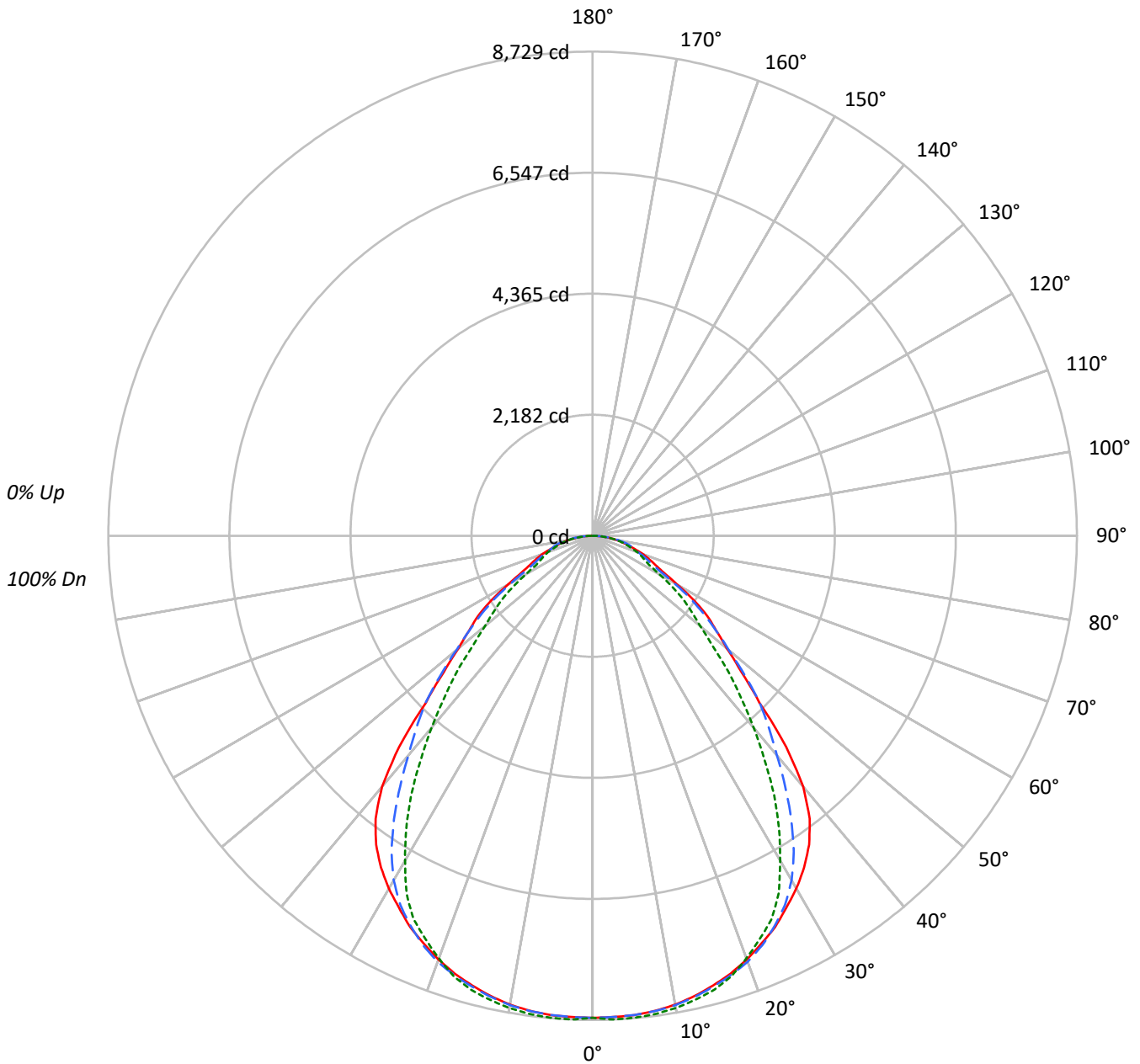
Lumens per Lamp: N/A
Luminaire Lumens: 18038.0 lumens
Efficiency: N/A
Efficacy: 166.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 108.1
Input Voltage (V): NR
Input Current (A_{in}): 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	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°	67785	67785	67785
5°	67917	67899	68285
10°	67976	68049	68467
15°	67778	67954	68426
20°	67482	67824	67282
25°	66989	66802	65667
30°	66141	64582	60896
35°	64752	59415	54275
40°	60092	52587	45970
45°	46882	47008	38044
50°	38289	38832	30723
55°	34307	33012	26996
60°	27464	25999	21600
65°	23015	21070	19102
70°	21852	20076	19449
75°	19827	21313	18757
80°	19926	21776	19768
85°	17335	20306	16512



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	826.3	4.6
10°-20°	2376.4	13.2
20°-30°	3547.6	19.7
30°-40°	3871.1	21.5
40°-50°	3166.7	17.6
50°-60°	2082.1	11.5
60°-70°	1194.6	6.6
70°-80°	723.9	4.0
80°-90°	243.1	1.3
90°-100°	6.3	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°	6750.3	37.4
0°-40°	10621.4	58.9
0°-60°	15870.2	88.0
0°-90°	18031.7	100.0
90°-120°	6.3	0.0
90°-150°	6.3	0.0
90°-180°	6.0	0.0
0°-180°	18038.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8690	8690	8690	8690	8690	
5°	8674	8661	8672	8708	8721	825
15°	8394	8392	8415	8469	8474	2369
25°	7784	7802	7762	7668	7630	3581
35°	6800	6647	6240	5815	5700	4215
45°	4250	4568	4262	3762	3449	3374
55°	2523	2454	2428	2086	1985	2222
65°	1247	1229	1142	1111	1035	1275
75°	658	712	707	678	622	712
85°	194	220	227	198	184	210
90°	1	16	32	38	40	9
95°	1	2	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8690.4	8690.4	8690.4	8690.4	8690.4
2.5°	8684.6	8672.0	8683.5	8719.0	8729.3
5°	8674.3	8660.6	8672.0	8707.6	8721.3
7.5°	8638.8	8630.8	8642.2	8677.8	8695.0
10°	8582.6	8573.5	8591.8	8622.7	8644.5
12.5°	8499.0	8495.5	8512.7	8557.4	8566.6
15°	8393.5	8392.4	8415.3	8469.2	8473.7
17.5°	8274.3	8273.2	8301.8	8337.3	8324.7
20°	8129.9	8137.9	8171.1	8137.9	8105.8
22.5°	7956.8	7982.0	7990.0	7885.7	7869.7
25°	7783.7	7802.1	7762.0	7668.0	7630.1
27.5°	7560.2	7582.0	7507.5	7373.4	7265.7
30°	7343.6	7323.0	7170.5	6911.5	6761.3
32.5°	7094.9	7021.5	6747.6	6390.0	6253.6
35°	6800.3	6646.7	6239.8	5814.6	5700.0
37.5°	6427.8	6147.0	5702.3	5258.7	5085.6
40°	5901.7	5577.3	5164.7	4706.2	4514.8
42.5°	5164.7	5044.4	4702.8	4187.0	3958.9
45°	4250.1	4567.5	4261.5	3761.8	3448.9
47.5°	3638.0	4079.3	3711.3	3350.3	2919.3
50°	3155.4	3459.2	3200.1	2874.6	2531.9
52.5°	2807.0	2898.7	2794.4	2436.8	2241.9
55°	2522.8	2454.0	2427.6	2086.1	1985.2
57.5°	2169.7	2131.9	2064.3	1819.0	1686.0
60°	1760.5	1840.8	1666.6	1596.6	1384.6
62.5°	1446.5	1525.6	1338.7	1334.2	1157.6
65°	1247.0	1228.7	1141.6	1110.7	1035.0
67.5°	1103.8	1046.5	1016.7	976.5	950.2
70°	958.2	934.1	880.3	888.3	852.8
72.5°	798.9	829.8	776.0	790.9	726.7
75°	657.9	711.8	707.2	678.5	622.4
77.5°	542.1	599.5	609.8	583.4	537.6
80°	443.6	482.5	484.8	468.8	440.1
82.5°	325.5	348.4	365.6	338.1	319.8
85°	193.7	220.1	226.9	198.3	184.5
87.5°	63.0	88.3	98.6	102.0	103.2
90°	1.1	16.0	32.1	37.8	40.1
92.5°	1.1	4.6	6.9	10.3	11.5
95°	1.1	2.3	3.4	3.4	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



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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)