

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: P859940

Luminaire Tested: **SPHB-18HE-M-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: P859940
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-L850-CD
Description: 18000 Lumen High Efficacy Select Pro High Bay with Medium Lens and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

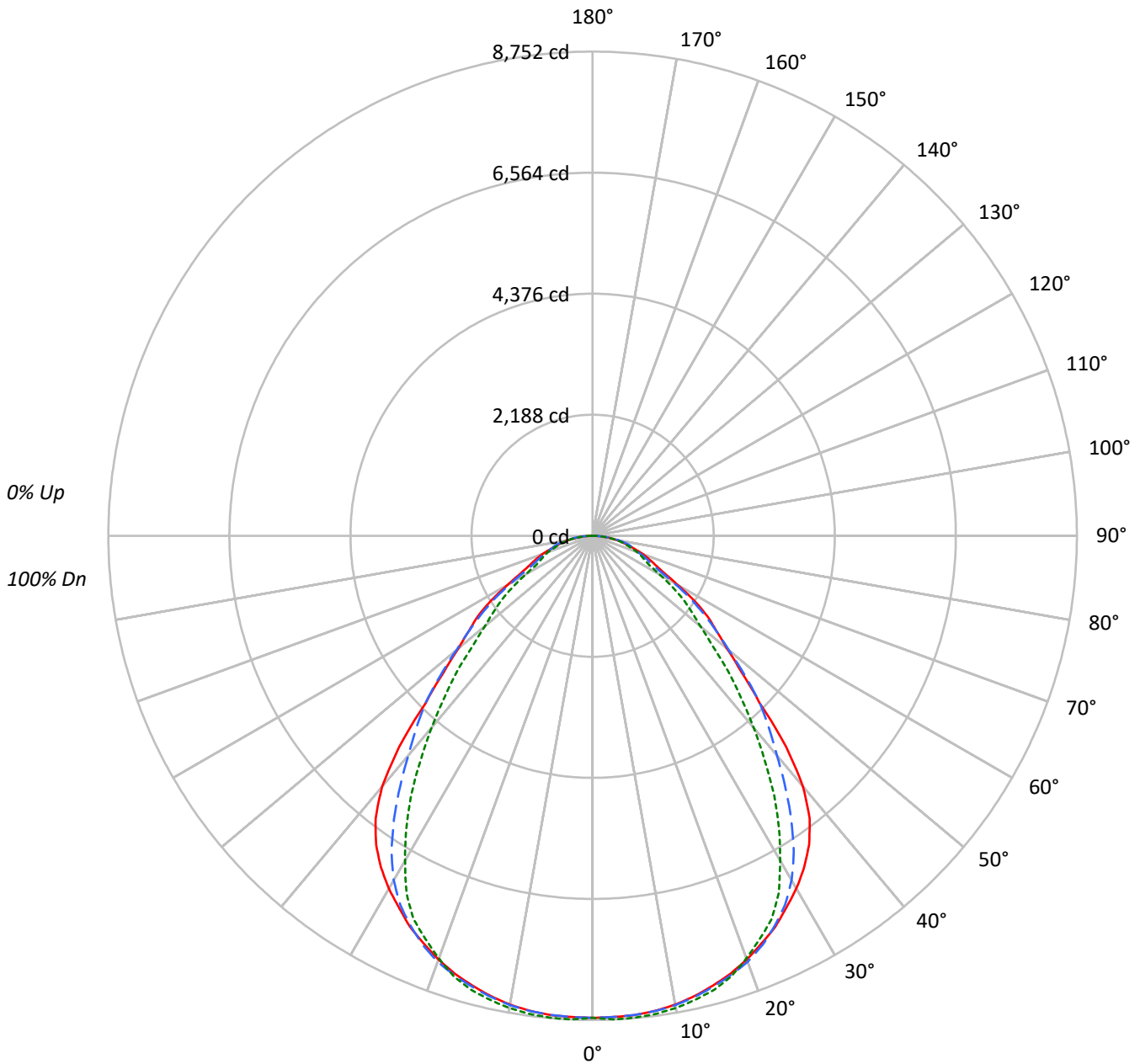
Lumens per Lamp: N/A
Luminaire Lumens: 18085.0 lumens
Efficiency: N/A
Efficacy: 167.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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					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	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°	67961	67961	67961
5°	68094	68076	68463
10°	68154	68227	68645
15°	67955	68131	68604
20°	67658	68001	67458
25°	67163	66976	65838
30°	66313	64750	61056
35°	64921	59570	54416
40°	60248	52725	46090
45°	47003	47130	38143
50°	38390	38934	30804
55°	34395	33098	27067
60°	27535	26066	21656
65°	23076	21125	19152
70°	21909	20128	19499
75°	19878	21367	18805
80°	19975	21835	19822
85°	17380	20360	16556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	828.5	4.6
10°-20°	2382.6	13.2
20°-30°	3556.9	19.7
30°-40°	3881.1	21.5
40°-50°	3174.9	17.6
50°-60°	2087.5	11.5
60°-70°	1197.7	6.6
70°-80°	725.8	4.0
80°-90°	243.7	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°	6767.9	37.4
0°-40°	10649.1	58.9
0°-60°	15911.6	88.0
0°-90°	18078.7	100.0
90°-120°	6.3	0.0
90°-150°	6.3	0.0
90°-180°	6.0	0.0
0°-180°	18085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8713	8713	8713	8713	8713	
5°	8697	8683	8695	8730	8744	827
15°	8415	8414	8437	8491	8496	2375
25°	7804	7822	7782	7688	7650	3590
35°	6818	6664	6256	5830	5715	4226
45°	4261	4579	4273	3772	3458	3382
55°	2529	2460	2434	2092	1990	2228
65°	1250	1232	1145	1114	1038	1278
75°	660	714	709	680	624	714
85°	194	221	228	199	185	211
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°	8713.0	8713.0	8713.0	8713.0	<i>8713.0</i>
2.5°	<i>8707.3</i>	<i>8694.6</i>	<i>8706.1</i>	<i>8741.7</i>	<i>8752.1</i>
5°	8696.9	8683.1	8694.6	8730.2	<i>8744.0</i>
7.5°	8661.3	8653.3	8664.7	8700.4	<i>8717.6</i>
10°	8605.0	8595.8	8614.2	8645.2	<i>8667.0</i>
12.5°	8521.1	8517.7	8534.9	8579.7	<i>8588.9</i>
15°	8415.4	8414.2	8437.2	8491.2	<i>8495.8</i>
17.5°	8295.9	8294.7	8323.4	8359.1	<i>8346.4</i>
20°	8151.1	8159.1	8192.4	8159.1	<i>8126.9</i>
22.5°	7977.5	8002.8	8010.9	7906.3	<i>7890.2</i>
25°	7804.0	7822.4	7782.2	7688.0	<i>7650.0</i>
27.5°	7579.9	7601.8	7527.1	7392.6	<i>7284.6</i>
30°	7362.7	7342.1	7189.2	6929.5	<i>6779.0</i>
32.5°	7113.4	7039.8	6765.2	6406.6	<i>6269.9</i>
35°	6818.0	6664.0	6256.1	5829.7	<i>5714.8</i>
37.5°	6444.5	6163.0	5717.1	5272.4	<i>5098.9</i>
40°	5917.1	5591.9	5178.2	4718.5	<i>4526.6</i>
42.5°	5178.2	5057.5	4715.0	4197.9	<i>3969.2</i>
45°	4261.1	4579.4	4272.6	3771.6	<i>3457.9</i>
47.5°	3647.5	4089.9	3721.0	3359.0	<i>2926.9</i>
50°	3163.7	3468.2	3208.5	2882.1	<i>2538.5</i>
52.5°	2814.3	2906.3	2801.7	2443.1	<i>2247.8</i>
55°	2529.3	2460.4	2433.9	2091.5	<i>1990.4</i>
57.5°	2175.4	2137.5	2069.7	1823.7	<i>1690.4</i>
60°	1765.1	1845.6	1670.9	1600.8	<i>1388.2</i>
62.5°	1450.3	1529.5	1342.2	1337.6	<i>1160.7</i>
65°	1250.3	1231.9	1144.6	1113.5	<i>1037.7</i>
67.5°	1106.7	1049.2	1019.3	979.1	<i>952.7</i>
70°	960.7	936.6	882.6	890.6	<i>855.0</i>
72.5°	801.0	832.0	778.0	792.9	<i>728.6</i>
75°	659.6	713.6	709.0	680.3	<i>624.0</i>
77.5°	543.6	601.0	611.4	584.9	<i>539.0</i>
80°	444.7	483.8	486.1	470.0	<i>441.3</i>
82.5°	326.4	349.3	366.6	339.0	<i>320.6</i>
85°	194.2	220.6	227.5	198.8	<i>185.0</i>
87.5°	63.2	88.5	98.8	102.3	<i>103.4</i>
90°	1.1	16.1	32.2	37.9	<i>40.2</i>
92.5°	1.1	4.6	6.9	10.3	<i>11.5</i>
95°	1.1	2.3	3.4	3.4	<i>2.3</i>
97.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
100°	0.0	0.0	0.0	0.0	<i>0.0</i>
102.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
105°	0.0	0.0	0.0	0.0	<i>0.0</i>



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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)