

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: P859832

Luminaire Tested: **SPHB-12HE-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: P859832  
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-12HE-M-L850-CD  
Description: 12000 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**

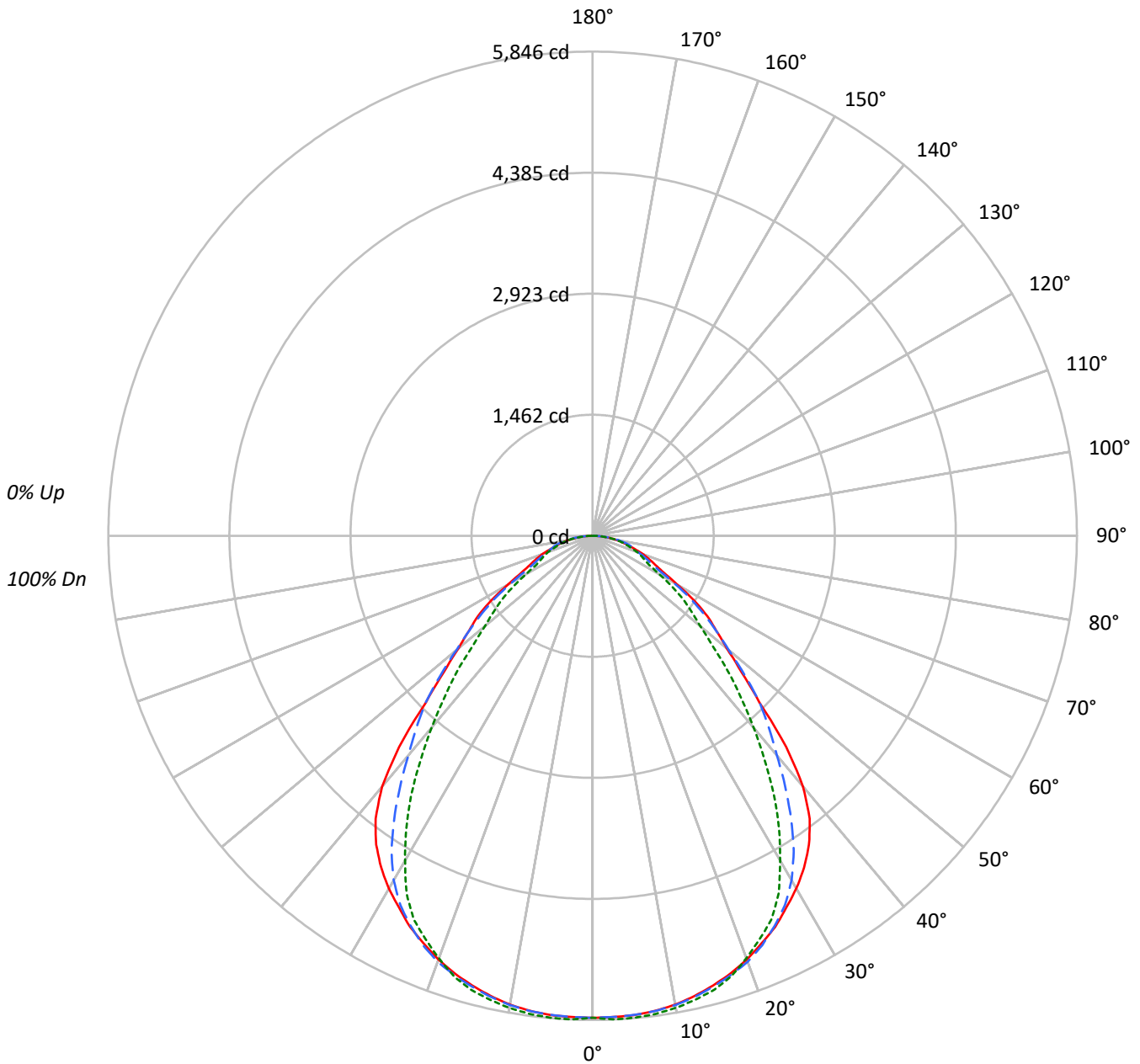
Lumens per Lamp: N/A  
Luminaire Lumens: 12079.0 lumens  
Efficiency: N/A  
Efficacy: 169.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 71.1  
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					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°	45391	45391	45391
5°	45481	45469	45727
10°	45520	45568	45848
15°	45387	45505	45821
20°	45189	45418	45055
25°	44859	44733	43974
30°	44291	43247	40779
35°	43361	39787	36344
40°	40240	35215	30784
45°	31394	31479	25476
50°	25640	26004	20574
55°	22972	22106	18078
60°	18391	17409	14464
65°	15413	14110	12792
70°	14634	13444	13022
75°	13278	14273	12561
80°	13341	14585	13237
85°	11607	13603	11061



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	553.3	4.6
10°-20°	1591.4	13.2
20°-30°	2375.6	19.7
30°-40°	2592.2	21.5
40°-50°	2120.6	17.6
50°-60°	1394.3	11.5
60°-70°	799.9	6.6
70°-80°	484.7	4.0
80°-90°	162.8	1.3
90°-100°	4.2	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°	4520.3	37.4
0°-40°	7112.5	58.9
0°-60°	10627.3	88.0
0°-90°	12074.8	100.0
90°-120°	4.2	0.0
90°-150°	4.2	0.0
90°-180°	4.0	0.0
0°-180°	12079.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5819	5819	5819	5819	5819	
5°	5809	5800	5807	5831	5840	552
15°	5621	5620	5635	5671	5674	1586
25°	5212	5225	5198	5135	5110	2398
35°	4554	4451	4178	3894	3817	2822
45°	2846	3059	2854	2519	2310	2259
55°	1689	1643	1626	1397	1329	1488
65°	835	823	764	744	693	854
75°	441	477	474	454	417	477
85°	130	147	152	133	124	141
90°	1	11	22	25	27	6
95°	1	2	2	2	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: P859832

CATALOG NUMBER: SPHB-12HE-M-L850-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5819.4	5819.4	5819.4	5819.4	5819.4
2.5°	5815.6	5807.2	5814.8	5838.6	5845.5
5°	5808.7	5799.5	5807.2	5830.9	5840.2
7.5°	5784.9	5779.5	5787.2	5811.0	5822.5
10°	5747.3	5741.1	5753.4	5774.1	5788.7
12.5°	5691.3	5689.0	5700.5	5730.4	5736.5
15°	5620.6	5619.9	5635.2	5671.3	5674.4
17.5°	5540.8	5540.1	5559.2	5583.0	5574.6
20°	5444.1	5449.5	5471.7	5449.5	5428.0
22.5°	5328.2	5345.1	5350.5	5280.6	5269.9
25°	5212.3	5224.6	5197.7	5134.8	5109.5
27.5°	5062.6	5077.2	5027.3	4937.5	4865.4
30°	4917.6	4903.8	4801.7	4628.2	4527.7
32.5°	4751.0	4701.9	4518.5	4279.0	4187.7
35°	4553.8	4450.9	4178.4	3893.7	3816.9
37.5°	4304.3	4116.3	3818.5	3521.4	3405.5
40°	3952.0	3734.8	3458.5	3151.5	3023.3
42.5°	3458.5	3377.9	3149.2	2803.8	2651.1
45°	2846.0	3058.6	2853.7	2519.0	2309.5
47.5°	2436.1	2731.6	2485.3	2243.5	1954.9
50°	2113.0	2316.4	2143.0	1925.0	1695.5
52.5°	1879.7	1941.1	1871.2	1631.8	1501.3
55°	1689.3	1643.3	1625.6	1396.9	1329.4
57.5°	1452.9	1427.6	1382.3	1218.1	1129.0
60°	1178.9	1232.7	1116.0	1069.2	927.2
62.5°	968.6	1021.6	896.5	893.4	775.2
65°	835.1	822.8	764.5	743.7	693.1
67.5°	739.1	700.8	680.8	653.9	636.3
70°	641.7	625.5	589.5	594.8	571.0
72.5°	535.0	555.7	519.6	529.6	486.6
75°	440.6	476.6	473.6	454.4	416.8
77.5°	363.0	401.4	408.3	390.7	360.0
80°	297.0	323.1	324.7	313.9	294.7
82.5°	218.0	233.3	244.8	226.4	214.1
85°	129.7	147.4	152.0	132.8	123.6
87.5°	42.2	59.1	66.0	68.3	69.1
90°	0.8	10.7	21.5	25.3	26.9
92.5°	0.8	3.1	4.6	6.9	7.7
95°	0.8	1.5	2.3	2.3	1.5
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)