

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: P859859

Luminaire Tested: **SPHB-12SE-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: P859859
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-12SE-M-L850-CD
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

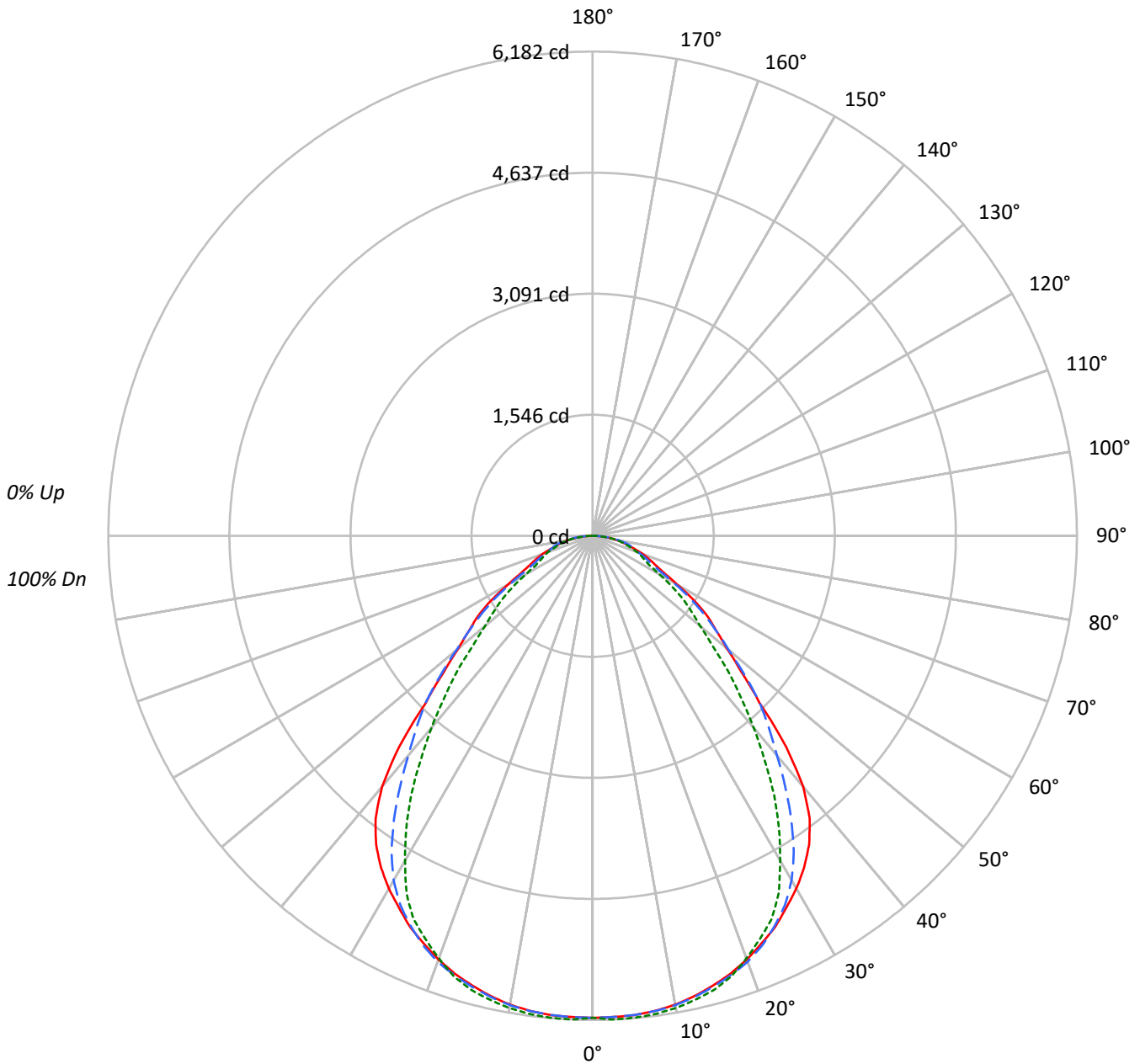
Lumens per Lamp: N/A
Luminaire Lumens: 12775.0 lumens
Efficiency: N/A
Efficacy: 167.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 76.3
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°	48007	48007	48007
5°	48101	48089	48362
10°	48143	48194	48490
15°	48002	48127	48461
20°	47793	48035	47652
25°	47444	47310	46507
30°	46842	45739	43129
35°	45860	42079	38439
40°	42558	37244	32557
45°	33203	33292	26944
50°	27118	27502	21760
55°	24297	23380	19120
60°	19451	18413	15297
65°	16301	14922	13528
70°	15476	14217	13772
75°	14041	15095	13284
80°	14113	15425	14001
85°	12279	14382	11697



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.2	4.6
10°-20°	1683.1	13.2
20°-30°	2512.5	19.7
30°-40°	2741.6	21.5
40°-50°	2242.7	17.6
50°-60°	1474.6	11.5
60°-70°	846.0	6.6
70°-80°	512.7	4.0
80°-90°	172.2	1.3
90°-100°	4.5	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°	4780.8	37.4
0°-40°	7522.4	58.9
0°-60°	11239.7	88.0
0°-90°	12770.5	100.0
90°-120°	4.5	0.0
90°-150°	4.5	0.0
90°-180°	4.0	0.0
0°-180°	12775.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6155	6155	6155	6155	6155	
5°	6143	6134	6142	6167	6177	584
15°	5944	5944	5960	5998	6001	1678
25°	5513	5526	5497	5431	5404	2536
35°	4816	4707	4419	4118	4037	2985
45°	3010	3235	3018	2664	2443	2389
55°	1787	1738	1719	1477	1406	1574
65°	883	870	808	787	733	903
75°	466	504	501	481	441	504
85°	137	156	161	140	131	149
90°	1	11	23	27	28	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6154.8	6154.8	6154.8	6154.8	6154.8
2.5°	6150.7	6141.8	6149.9	6175.0	6182.4
5°	6143.4	6133.6	6141.8	6166.9	6176.7
7.5°	6118.2	6112.5	6120.7	6145.8	6158.0
10°	6078.4	6072.0	6084.9	6106.9	6122.3
12.5°	6019.2	6016.8	6028.9	6060.6	6067.1
15°	5944.5	5943.7	5959.9	5998.1	6001.3
17.5°	5860.1	5859.3	5879.6	5904.7	5895.8
20°	5757.8	5763.5	5787.0	5763.5	5740.8
22.5°	5635.2	5653.1	5658.8	5584.9	5573.5
25°	5512.7	5525.6	5497.2	5430.7	5403.9
27.5°	5354.4	5369.8	5317.0	5222.0	5145.7
30°	5200.9	5186.3	5078.4	4894.9	4788.6
32.5°	5024.8	4972.8	4778.8	4525.6	4429.0
35°	4816.2	4707.4	4419.2	4118.1	4036.9
37.5°	4552.3	4353.5	4038.5	3724.3	3601.8
40°	4179.7	3950.0	3657.8	3333.1	3197.5
42.5°	3657.8	3572.5	3330.6	2965.4	2803.8
45°	3010.0	3234.9	3018.1	2664.2	2442.6
47.5°	2576.5	2889.0	2628.5	2372.8	2067.5
50°	2234.8	2449.9	2266.4	2035.9	1793.2
52.5°	1988.0	2052.9	1979.1	1725.8	1587.8
55°	1786.7	1738.0	1719.3	1477.4	1406.0
57.5°	1536.7	1509.9	1462.0	1288.3	1194.1
60°	1246.9	1303.7	1180.3	1130.8	980.6
62.5°	1024.4	1080.5	948.1	944.9	819.9
65°	883.2	870.2	808.5	786.6	733.0
67.5°	781.7	741.1	720.0	691.6	672.9
70°	678.6	661.6	623.4	629.1	603.9
72.5°	565.8	587.7	549.6	560.1	514.7
75°	465.9	504.1	500.9	480.6	440.8
77.5°	384.0	424.5	431.9	413.2	380.7
80°	314.2	341.8	343.4	332.0	311.7
82.5°	230.5	246.8	259.0	239.5	226.5
85°	137.2	155.9	160.7	140.4	130.7
87.5°	44.6	62.5	69.8	72.2	73.1
90°	0.8	11.4	22.7	26.8	28.4
92.5°	0.8	3.2	4.9	7.3	8.1
95°	0.8	1.6	2.4	2.4	1.6
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)