

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: P859858

Luminaire Tested: **SPHB-12SE-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: P859858
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-L840-CD
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 4000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

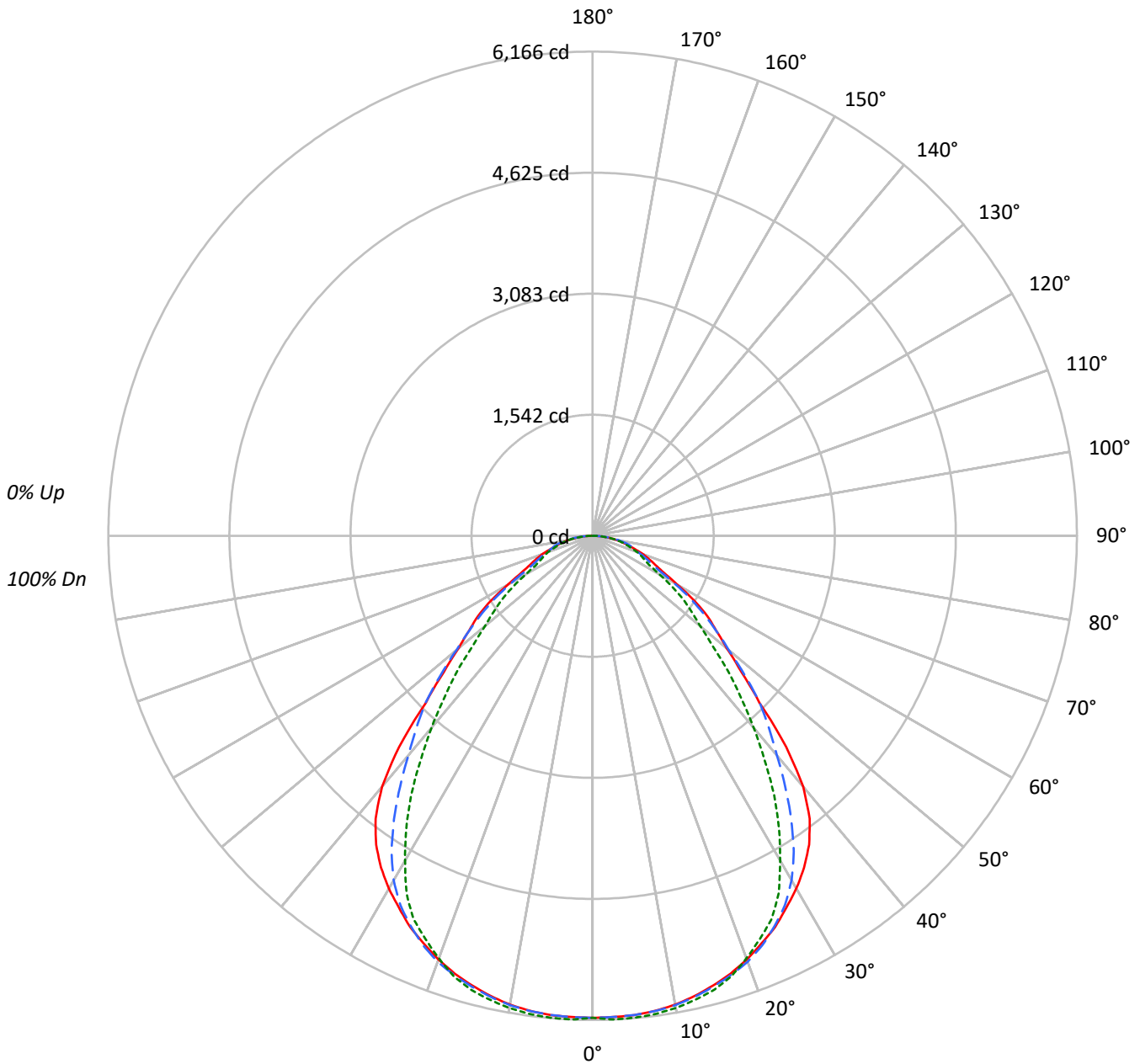
Lumens per Lamp: N/A
Luminaire Lumens: 12742.0 lumens
Efficiency: N/A
Efficacy: 167.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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°	47883	47883	47883
5°	47977	47964	48237
10°	48018	48070	48365
15°	47879	48002	48336
20°	47669	47911	47528
25°	47321	47188	46387
30°	46722	45620	43017
35°	45741	41971	38339
40°	42448	37147	32474
45°	33117	33206	26874
50°	27048	27431	21703
55°	24234	23321	19070
60°	19400	18364	15258
65°	16258	14883	13493
70°	15437	14180	13738
75°	14005	15056	13248
80°	14073	15384	13965
85°	12243	14346	11670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.7	4.6
10°-20°	1678.7	13.2
20°-30°	2506.0	19.7
30°-40°	2734.5	21.5
40°-50°	2236.9	17.6
50°-60°	1470.8	11.5
60°-70°	843.8	6.6
70°-80°	511.3	4.0
80°-90°	171.7	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°	4768.4	37.4
0°-40°	7502.9	58.9
0°-60°	11210.7	88.0
0°-90°	12737.5	100.0
90°-120°	4.5	0.0
90°-150°	4.5	0.0
90°-180°	4.0	0.0
0°-180°	12742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6139	6139	6139	6139	6139	
5°	6128	6118	6126	6151	6161	583
15°	5929	5928	5944	5983	5986	1674
25°	5498	5511	5483	5417	5390	2530
35°	4804	4695	4408	4107	4026	2977
45°	3002	3226	3010	2657	2436	2383
55°	1782	1734	1715	1474	1402	1570
65°	881	868	806	785	731	901
75°	465	503	500	479	440	503
85°	137	156	160	140	130	148
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°	6138.9	6138.9	6138.9	6138.9	6138.9
2.5°	6134.8	6125.9	6134.0	6159.1	6166.4
5°	6127.5	6117.8	6125.9	6151.0	6160.7
7.5°	6102.4	6096.8	6104.8	6129.9	6142.1
10°	6062.7	6056.3	6069.2	6091.1	6106.5
12.5°	6003.6	6001.2	6013.4	6044.9	6051.4
15°	5929.2	5928.3	5944.5	5982.6	5985.8
17.5°	5844.9	5844.1	5864.4	5889.5	5880.6
20°	5742.9	5748.6	5772.1	5748.6	5725.9
22.5°	5620.7	5638.5	5644.2	5570.5	5559.1
25°	5498.4	5511.4	5483.0	5416.6	5389.9
27.5°	5340.5	5355.9	5303.3	5208.6	5132.4
30°	5187.5	5172.9	5065.2	4882.3	4776.2
32.5°	5011.8	4960.0	4766.5	4513.9	4417.5
35°	4803.7	4695.2	4407.8	4107.4	4026.4
37.5°	4540.6	4342.2	4028.1	3714.7	3592.5
40°	4168.9	3939.8	3648.3	3324.5	3189.3
42.5°	3648.3	3563.3	3322.0	2957.7	2796.6
45°	3002.2	3226.5	3010.3	2657.3	2436.3
47.5°	2569.9	2881.6	2621.7	2366.6	2062.2
50°	2229.0	2443.6	2260.6	2030.6	1788.5
52.5°	1982.9	2047.6	1974.0	1721.3	1583.7
55°	1782.1	1733.5	1714.9	1473.6	1402.3
57.5°	1532.7	1506.0	1458.2	1284.9	1191.0
60°	1243.6	1300.3	1177.2	1127.9	978.1
62.5°	1021.8	1077.7	945.7	942.4	817.8
65°	880.9	868.0	806.4	784.6	731.1
67.5°	779.7	739.2	718.2	689.8	671.2
70°	676.9	659.9	621.8	627.5	602.4
72.5°	564.3	586.2	548.1	558.7	513.3
75°	464.7	502.8	499.6	479.3	439.6
77.5°	383.0	423.5	430.7	412.1	379.7
80°	313.3	340.9	342.5	331.2	310.9
82.5°	229.9	246.1	258.3	238.9	225.9
85°	136.8	155.5	160.3	140.1	130.4
87.5°	44.5	62.3	69.6	72.1	72.9
90°	0.8	11.3	22.7	26.7	28.3
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)