

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: P859861

Luminaire Tested: **SPHB-12SE-M-L940-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: P859861  
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-L940-CD  
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens  
and, 4000K 90CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

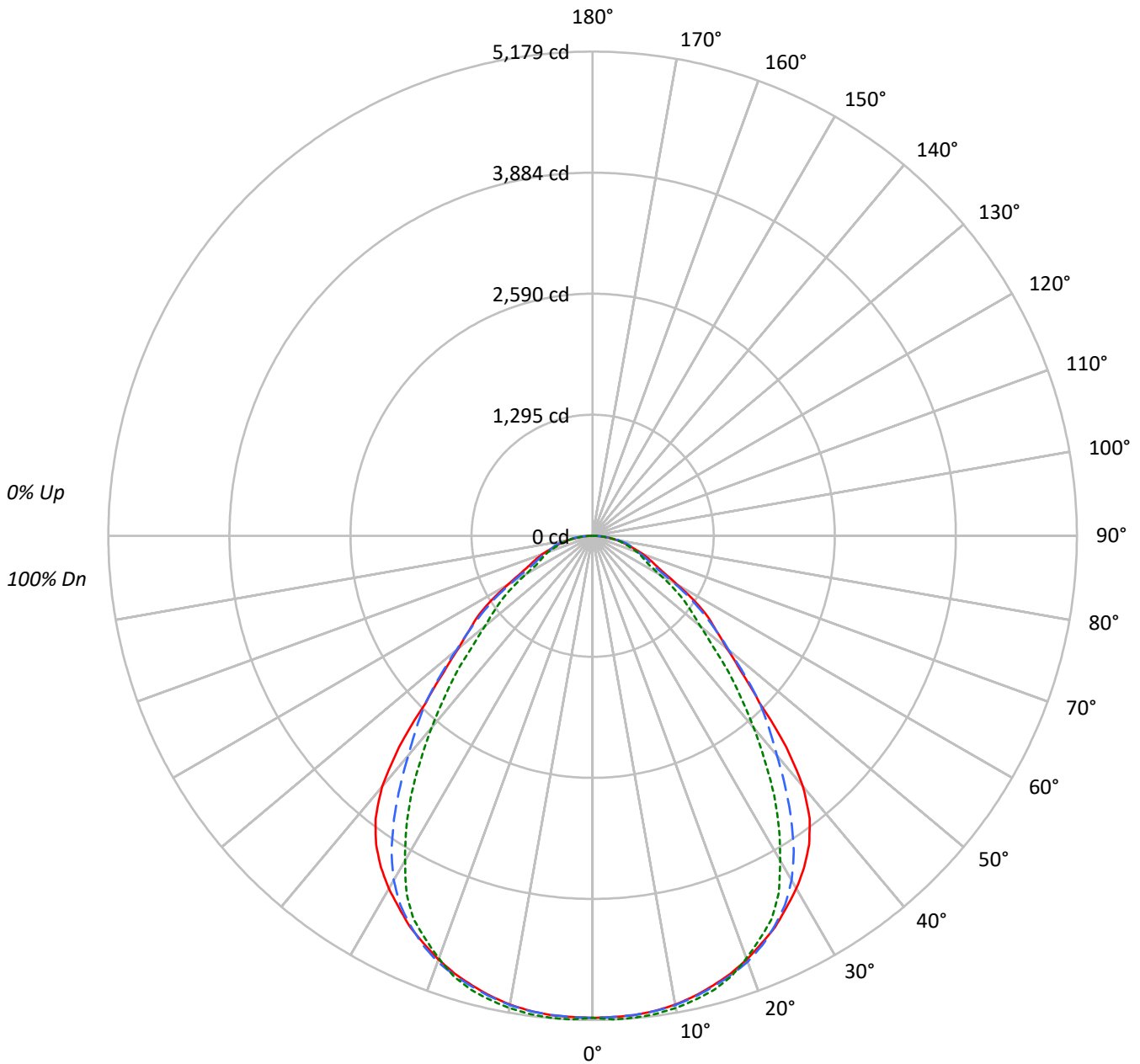
Lumens per Lamp: N/A  
Luminaire Lumens: 10702.0 lumens  
Efficiency: N/A  
Efficacy: 140.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 76.3  
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°	40216	40216	40216
5°	40296	40285	40514
10°	40331	40374	40621
15°	40213	40317	40598
20°	40038	40241	39919
25°	39745	39634	38961
30°	39242	38317	36130
35°	38417	35251	32201
40°	35653	31200	27275
45°	27815	27890	22571
50°	22717	23040	18229
55°	20355	19586	16017
60°	16294	15425	12815
65°	13656	12500	11334
70°	12965	11911	11537
75°	11762	12645	11129
80°	11822	12923	11728
85°	10283	12046	9800



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	490.2	4.6
10°-20°	1409.9	13.2
20°-30°	2104.8	19.7
30°-40°	2296.7	21.5
40°-50°	1878.8	17.6
50°-60°	1235.3	11.5
60°-70°	708.7	6.6
70°-80°	429.5	4.0
80°-90°	144.2	1.3
90°-100°	3.7	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°	4005.0	37.4
0°-40°	6301.7	58.9
0°-60°	9415.8	88.0
0°-90°	10698.2	100.0
90°-120°	3.7	0.0
90°-150°	3.7	0.0
90°-180°	4.0	0.0
0°-180°	10702.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5156	5156	5156	5156	5156	
5°	5146	5138	5145	5166	5174	489
15°	4980	4979	4993	5025	5028	1406
25°	4618	4629	4605	4549	4527	2125
35°	4035	3944	3702	3450	3382	2501
45°	2522	2710	2528	2232	2046	2002
55°	1497	1456	1440	1238	1178	1318
65°	740	729	677	659	614	756
75°	390	422	420	403	369	422
85°	115	131	135	118	110	125
90°	1	10	19	22	24	5
95°	1	1	2	2	1	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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CATALOG NUMBER: SPHB-12SE-M-L940-CD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5156.0	5156.0	5156.0	5156.0	5156.0
2.5°	5152.6	5145.1	5151.9	5173.0	5179.1
5°	5146.5	5138.3	5145.1	5166.2	5174.4
7.5°	5125.4	5120.7	5127.5	5148.5	5158.7
10°	5092.1	5086.7	5097.5	5115.9	5128.8
12.5°	5042.5	5040.4	5050.6	5077.1	5082.6
15°	4979.9	4979.2	4992.8	5024.8	5027.5
17.5°	4909.2	4908.5	4925.5	4946.6	4939.1
20°	4823.5	4828.2	4848.0	4828.2	4809.2
22.5°	4720.8	4735.8	4740.5	4678.6	4669.1
25°	4618.1	4629.0	4605.2	4549.4	4527.0
27.5°	4485.5	4498.4	4454.2	4374.7	4310.7
30°	4357.0	4344.7	4254.3	4100.6	4011.5
32.5°	4209.4	4165.9	4003.4	3791.2	3710.3
35°	4034.6	3943.5	3702.1	3449.8	3381.8
37.5°	3813.6	3647.0	3383.2	3120.0	3017.3
40°	3501.5	3309.0	3064.2	2792.2	2678.7
42.5°	3064.2	2992.8	2790.2	2484.2	2348.8
45°	2521.6	2709.9	2528.4	2231.9	2046.2
47.5°	2158.4	2420.2	2202.0	1987.7	1732.0
50°	1872.1	2052.3	1898.7	1705.5	1502.2
52.5°	1665.4	1719.8	1657.9	1445.8	1330.1
55°	1496.8	1456.0	1440.3	1237.7	1177.8
57.5°	1287.3	1264.9	1224.7	1079.2	1000.3
60°	1044.5	1092.1	988.8	947.3	821.5
62.5°	858.2	905.1	794.3	791.6	686.8
65°	739.9	729.0	677.3	659.0	614.1
67.5°	654.9	620.9	603.2	579.4	563.7
70°	568.5	554.2	522.3	527.0	505.9
72.5°	474.0	492.3	460.4	469.2	431.1
75°	390.3	422.3	419.6	402.6	369.3
77.5°	321.7	355.7	361.8	346.1	318.9
80°	263.2	286.3	287.7	278.1	261.1
82.5°	193.1	206.7	216.9	200.6	189.7
85°	114.9	130.6	134.6	117.6	109.5
87.5°	37.4	52.4	58.5	60.5	61.2
90°	0.7	9.5	19.0	22.4	23.8
92.5°	0.7	2.7	4.1	6.1	6.8
95°	0.7	1.4	2.0	2.0	1.4
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)