

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: P860016

Luminaire Tested: **SPHB-24SE-M-L735-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: P860016  
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-24SE-M-L735-CD  
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens  
and, 3500K 70CRI LEDs  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

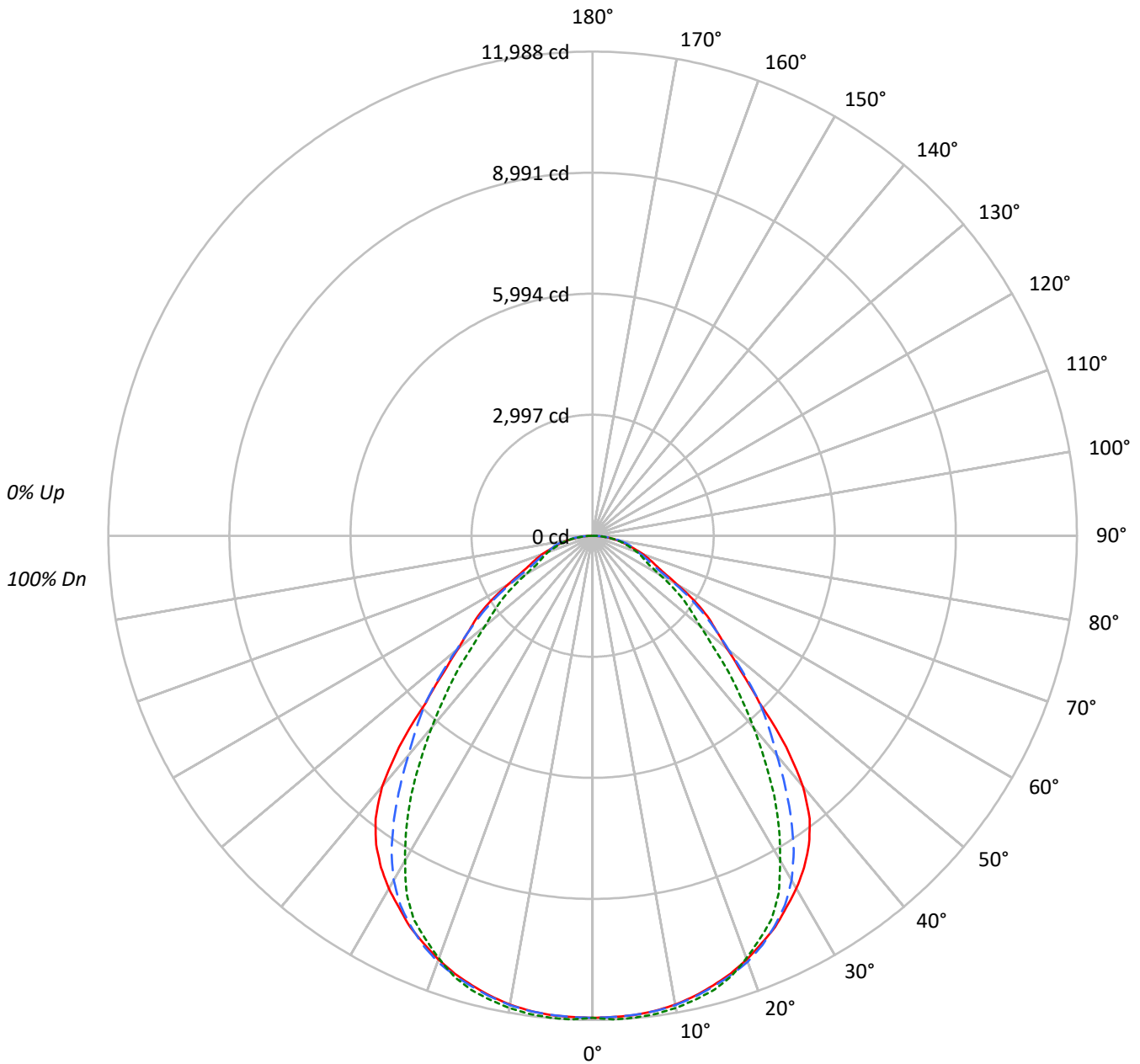
Lumens per Lamp: N/A  
Luminaire Lumens: 24771.0 lumens  
Efficiency: N/A  
Efficacy: 156.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22  
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')  
CIE Type: Direct

Input Watts (W): 158.6  
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°	93086	93086	93086
5°	93269	93244	93774
10°	93350	93450	94023
15°	93078	93319	93967
20°	92671	93142	92396
25°	91994	91736	90178
30°	90829	88689	83627
35°	88922	81593	74534
40°	82522	72217	63130
45°	64381	64554	52244
50°	52583	53328	42192
55°	47112	45336	37073
60°	37716	35702	29662
65°	31606	28934	26232
70°	30010	27567	26708
75°	27228	29269	25758
80°	27360	29906	27148
85°	23805	27895	22678



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1134.7	4.6
10°-20°	3263.5	13.2
20°-30°	4871.8	19.7
30°-40°	5316.0	21.5
40°-50°	4348.7	17.6
50°-60°	2859.3	11.5
60°-70°	1640.4	6.6
70°-80°	994.1	4.0
80°-90°	333.8	1.3
90°-100°	8.7	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°	9270.0	37.4
0°-40°	14586.0	58.9
0°-60°	21794.0	88.0
0°-90°	24762.3	100.0
90°-120°	8.7	0.0
90°-150°	8.7	0.0
90°-180°	9.0	0.0
0°-180°	24771.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11934	11934	11934	11934	11934	
5°	11912	11893	11909	11958	11977	###
15°	11526	11525	11556	11630	11637	3253
25°	10689	10714	10659	10530	10478	4917
35°	9339	9128	8569	7985	7828	5788
45°	5836	6272	5852	5166	4736	4633
55°	3464	3370	3334	2865	2726	3051
65°	1712	1687	1568	1525	1421	1751
75°	904	978	971	932	855	978
85°	266	302	312	272	253	288
90°	2	22	44	52	55	13
95°	2	3	5	5	3	1
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°	11934.2	11934.2	11934.2	11934.2	11934.2
2.5°	11926.3	11909.0	11924.8	11973.5	11987.7
5°	11912.2	11893.3	11909.0	11957.8	11976.7
7.5°	11863.4	11852.3	11868.1	11916.9	11940.5
10°	11786.2	11773.6	11798.8	11841.3	11871.2
12.5°	11671.3	11666.6	11690.2	11751.6	11764.2
15°	11526.5	11525.0	11556.4	11630.4	11636.7
17.5°	11362.8	11361.3	11400.6	11449.4	11432.1
20°	11164.5	11175.5	11221.2	11175.5	11131.4
22.5°	10926.8	10961.5	10972.5	10829.2	10807.2
25°	10689.2	10714.3	10659.2	10530.2	10478.2
27.5°	10382.2	10412.1	10309.8	10125.7	9977.7
30°	10084.7	10056.4	9847.1	9491.3	9285.1
32.5°	9743.2	9642.4	9266.2	8775.1	8587.8
35°	9338.6	9127.7	8568.9	7985.0	7827.6
37.5°	8827.1	8441.5	7830.7	7221.6	6983.9
40°	8104.6	7659.2	7092.5	6462.9	6200.1
42.5°	7092.5	6927.2	6458.2	5749.9	5436.7
45°	5836.5	6272.5	5852.2	5165.9	4736.2
47.5°	4995.9	5601.9	5096.7	4600.9	4009.0
50°	4333.3	4750.4	4394.7	3947.6	3477.0
52.5°	3854.8	3980.7	3837.5	3346.4	3078.8
55°	3464.4	3370.0	3333.8	2864.7	2726.2
57.5°	2979.6	2927.7	2834.8	2498.0	2315.4
60°	2417.7	2527.9	2288.6	2192.6	1901.4
62.5°	1986.4	2095.0	1838.5	1832.2	1589.8
65°	1712.5	1687.3	1567.7	1525.2	1421.3
67.5°	1515.8	1437.1	1396.2	1341.1	1304.9
70°	1315.9	1282.8	1208.8	1219.9	1171.1
72.5°	1097.1	1139.6	1065.6	1086.1	997.9
75°	903.5	977.5	971.2	931.8	854.7
77.5°	744.5	823.2	837.4	801.2	738.2
80°	609.1	662.7	665.8	643.8	604.4
82.5°	447.0	478.5	502.1	464.3	439.2
85°	266.0	302.2	311.7	272.3	253.4
87.5°	86.6	121.2	135.4	140.1	141.7
90°	1.6	22.0	44.1	51.9	55.1
92.5°	1.6	6.3	9.4	14.2	15.7
95°	1.6	3.1	4.7	4.7	3.1
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)