

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: P860033

Luminaire Tested: **SPHB-24SE-N-L950-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: P860033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-24SE-N-L950-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 5000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

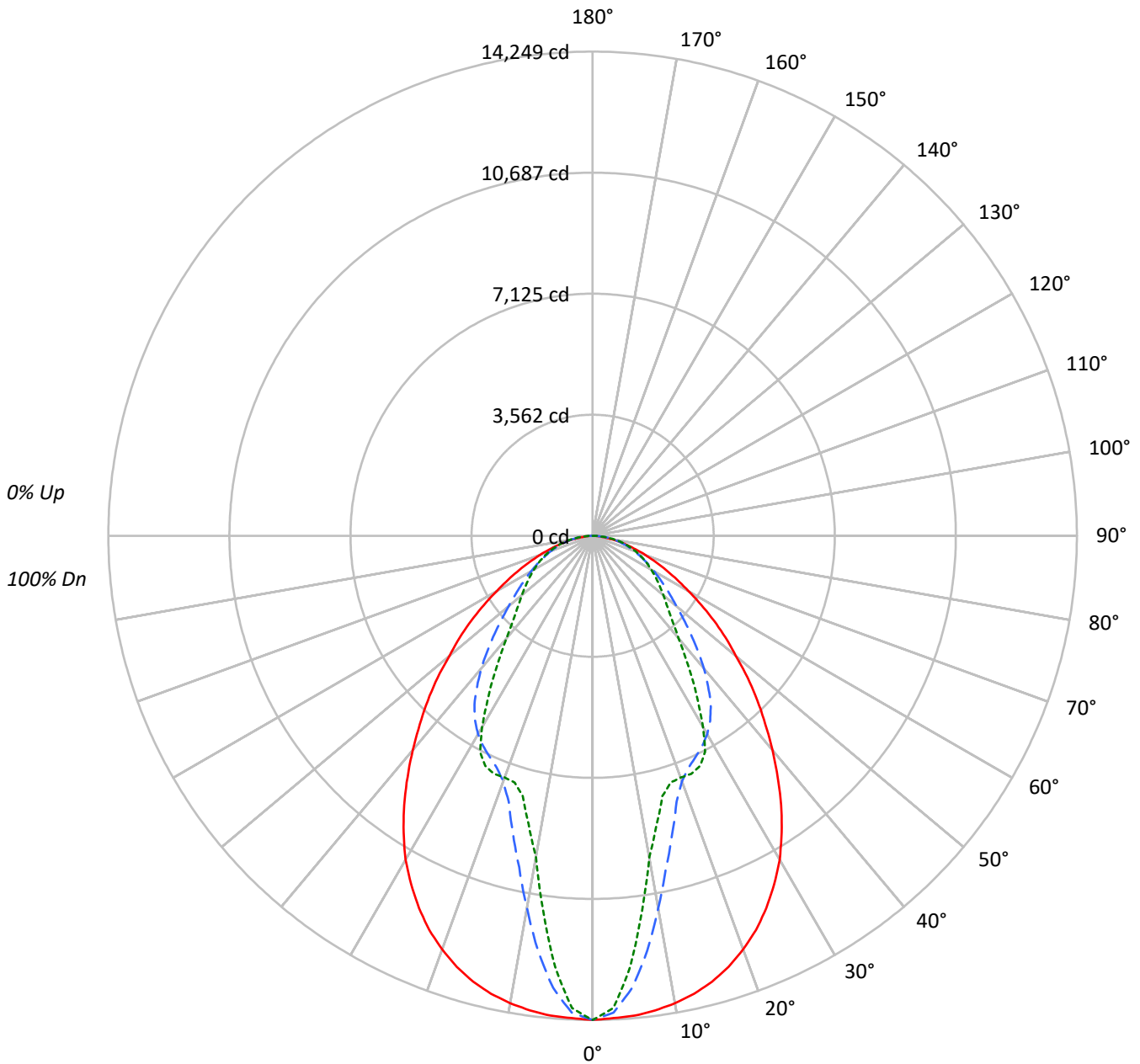
Lumens per Lamp: N/A
Luminaire Lumens: 20883.0 lumens
Efficiency: N/A
Efficacy: 131.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 158.6
Input Voltage (V): NR
Input Current (A_{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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86								
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74								
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64								
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56								
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50								
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40								
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34								
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	111140	111140	111140
5°	111011	104572	99624
10°	110632	88145	75989
15°	109711	73170	64035
20°	107501	63782	62861
25°	104046	61712	64334
30°	99128	60723	58548
35°	92039	57703	48516
40°	83811	51801	40061
45°	75655	44948	35169
50°	66764	39084	32933
55°	59244	35251	31700
60°	50771	32598	31053
65°	43948	30637	30898
70°	37609	29472	30860
75°	31568	28618	30586
80°	24090	27656	29951
85°	15769	24530	23072



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1214.8	5.8
10°-20°	2789.4	13.4
20°-30°	3769.8	18.1
30°-40°	3967.5	19.0
40°-50°	3366.6	16.1
50°-60°	2607.9	12.5
60°-70°	1816.3	8.7
70°-80°	1040.1	5.0
80°-90°	302.7	1.4
90°-100°	8.1	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°	7774.0	37.2
0°-40°	11741.5	56.2
0°-60°	17715.9	84.8
0°-90°	20874.9	100.0
90°-120°	8.1	0.0
90°-150°	8.1	0.0
90°-180°	8.0	0.0
0°-180°	20883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14249	14249	14249	14249	14249	
5°	14178	13918	13356	12843	12724	###
15°	13586	11532	9061	8156	7930	3823
25°	12090	8540	7171	7378	7475	5550
35°	9666	6568	6060	5474	5095	6025
45°	6858	4932	4075	3348	3188	5282
55°	4357	3322	2592	2356	2331	3895
65°	2381	1949	1660	1660	1674	2379
75°	1048	931	950	1010	1015	1117
85°	176	228	274	258	258	224
90°	1	21	40	51	53	10
95°	1	3	6	6	5	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: P860033

CATALOG NUMBER: SPHB-24SE-N-L950-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	14248.8	14248.8	14248.8	14248.8	14248.8
2.5°	14207.5	14160.7	14046.5	13972.5	13914.9
5°	14178.1	13918.1	13355.8	12843.4	12723.8
7.5°	14090.0	13518.9	12316.9	11369.5	11130.2
10°	13968.2	12945.7	11129.1	9942.3	9594.2
12.5°	13806.1	12333.3	9991.3	8873.0	8702.2
15°	13586.4	11531.6	9061.2	8156.2	7929.9
17.5°	13301.4	10702.7	8203.0	7679.7	7616.6
20°	12951.1	9942.3	7684.1	7505.7	7573.1
22.5°	12557.3	9203.7	7382.8	7457.8	7584.0
25°	12089.6	8540.2	7170.6	7378.4	7475.2
27.5°	11564.2	7940.8	6975.9	7166.3	7166.3
30°	11006.2	7441.5	6742.1	6724.7	6500.6
32.5°	10354.6	7017.3	6436.4	6091.6	5758.7
35°	9666.0	6568.0	6060.0	5473.7	5095.2
37.5°	8943.7	6150.3	5583.6	4810.2	4457.7
40°	8231.2	5738.0	5087.5	4214.1	3934.5
42.5°	7522.0	5318.2	4570.9	3731.1	3510.3
45°	6858.5	4932.0	4074.8	3348.2	3188.3
47.5°	6184.0	4521.9	3616.9	3040.3	2929.4
50°	5502.0	4106.4	3220.9	2795.6	2714.0
52.5°	4927.6	3719.1	2884.8	2563.9	2514.9
55°	4356.6	3322.1	2592.2	2356.1	2331.1
57.5°	3789.8	2952.2	2324.6	2165.8	2160.3
60°	3254.6	2606.3	2089.6	2002.6	1990.6
62.5°	2798.9	2262.6	1866.6	1825.3	1830.7
65°	2381.2	1949.3	1660.0	1660.0	1674.1
67.5°	1993.9	1661.0	1470.7	1495.7	1515.3
70°	1649.1	1400.0	1292.3	1335.8	1353.2
72.5°	1322.7	1157.4	1121.5	1169.4	1183.5
75°	1047.5	931.1	949.6	1009.5	1014.9
77.5°	776.7	733.2	781.0	846.3	858.3
80°	536.3	540.6	615.7	661.4	666.8
82.5°	345.9	377.5	461.2	485.1	476.4
85°	176.2	228.4	274.1	257.8	257.8
87.5°	67.4	99.0	116.4	137.1	144.7
90°	1.1	20.7	40.2	51.1	53.3
92.5°	1.1	5.4	8.7	9.8	8.7
95°	1.1	3.3	6.5	6.5	5.4
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)