

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: P860041

Luminaire Tested: **SPHB-24SE-W-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: P860041
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-24SE-W-L940-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens and, 4000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

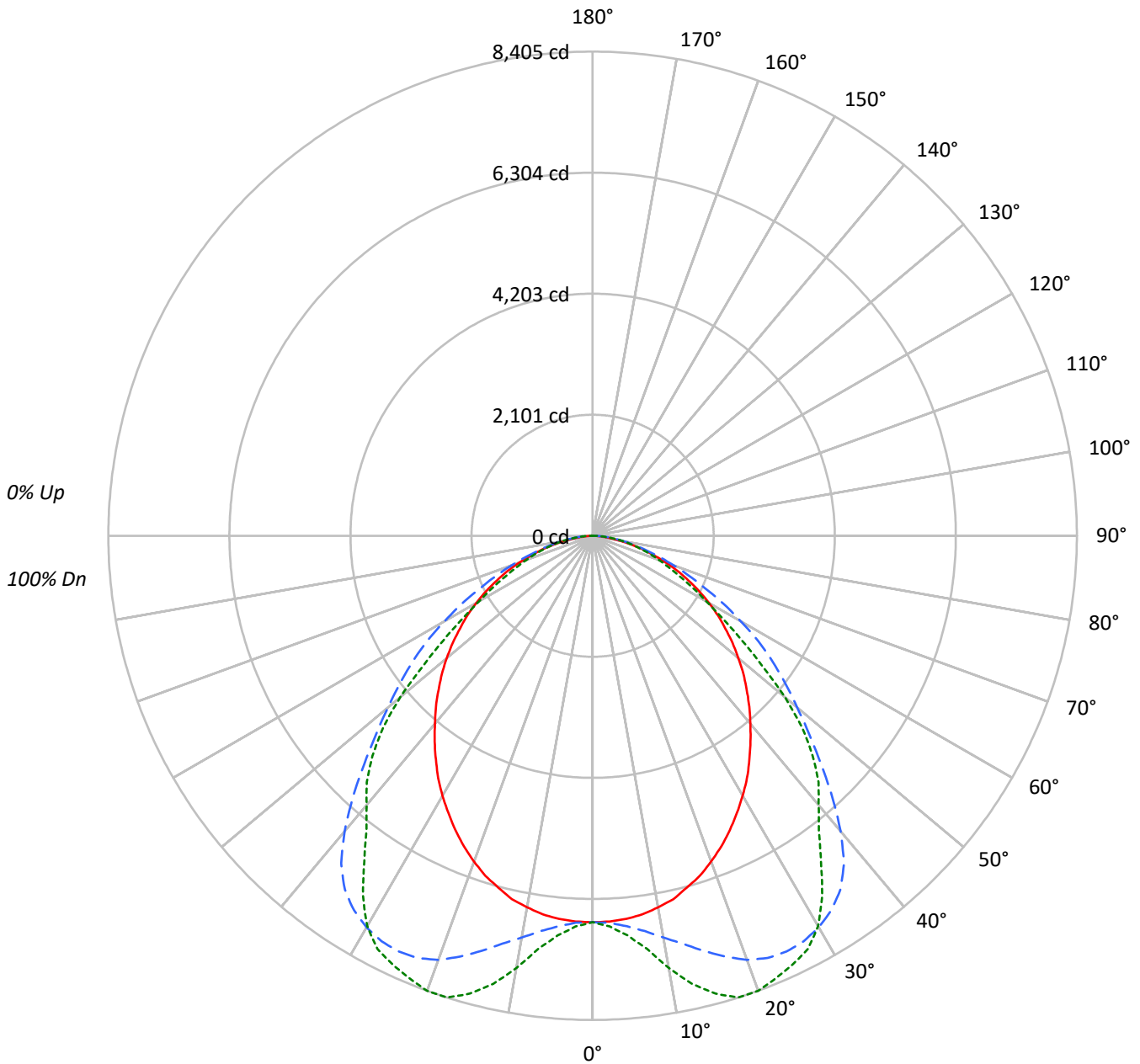
Lumens per Lamp: N/A
Luminaire Lumens: 21110.0 lumens
Efficiency: N/A
Efficacy: 133.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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									
RC	80									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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85																			
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72																			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62																			
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53																			
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	52	48	46																			
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40																			
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36																			
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32																			
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	29																			
10	54	41	33	28	53	40	33	28	39	33	28	39	32	28	38	32	28	26																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	52331	52331	52331
5°	52274	53260	54522
10°	51860	56071	60321
15°	51050	60246	66444
20°	49945	65036	69763
25°	48503	68546	70677
30°	46924	70690	70486
35°	45164	71400	65771
40°	43344	68175	62122
45°	41704	61797	59602
50°	40079	56190	52837
55°	38247	51916	42997
60°	36354	46285	35410
65°	33851	39771	30704
70°	30797	33955	27770
75°	26448	28497	25459
80°	20671	24444	23613
85°	13979	20745	19465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	658.7	3.1
10°-20°	2088.7	9.9
20°-30°	3418.3	16.2
30°-40°	4170.1	19.8
40°-50°	4130.0	19.6
50°-60°	3302.7	15.6
60°-70°	2060.3	9.8
70°-80°	1009.5	4.8
80°-90°	264.8	1.3
90°-100°	7.0	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°	6165.7	29.2
0°-40°	10335.8	49.0
0°-60°	17768.5	84.2
0°-90°	21103.0	100.0
90°-120°	7.0	0.0
90°-150°	7.0	0.0
90°-180°	7.0	0.0
0°-180°	21110.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6709	6709	6709	6709	6709	
5°	6676	6706	6802	6921	6964	633
15°	6322	6690	7461	8054	8228	1782
25°	5636	6590	7965	8196	8212	2593
35°	4743	6338	7498	7098	6907	2967
45°	3781	5874	5602	5414	5403	2920
55°	2812	4510	3818	3449	3162	2520
65°	1834	2530	2155	1787	1664	1819
75°	878	1075	946	866	845	932
85°	156	222	232	220	218	193
90°	1	23	41	52	54	9
95°	1	3	3	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°	6709.1	6709.1	6709.1	6709.1	6709.1
2.5°	6702.4	6699.8	6724.2	6768.7	6788.9
5°	6676.3	6705.7	6802.3	6920.7	6963.5
7.5°	6629.3	6708.2	6921.5	7139.0	7231.4
10°	6547.8	6709.9	7079.4	7463.2	7616.0
12.5°	6463.9	6704.0	7254.9	7798.3	7965.4
15°	6321.9	6689.8	7460.7	8054.4	8228.3
17.5°	6190.1	6673.0	7658.9	8271.9	8403.8
20°	6017.1	6648.6	7835.2	8338.3	8404.6
22.5°	5835.7	6629.3	7932.6	8293.8	8313.9
25°	5635.8	6589.8	7964.6	8195.5	8212.3
27.5°	5422.5	6554.6	7934.3	8073.7	8088.0
30°	5210.0	6490.7	7848.7	7883.9	7826.0
32.5°	4987.5	6426.9	7710.1	7551.4	7416.2
35°	4743.1	6337.9	7498.5	7097.9	6907.3
37.5°	4502.1	6252.2	7168.4	6590.7	6447.1
40°	4256.9	6146.4	6695.6	6117.0	6101.1
42.5°	4025.1	6032.2	6160.7	5748.4	5802.1
45°	3780.7	5873.5	5602.2	5414.1	5403.2
47.5°	3548.9	5654.3	5094.2	5044.6	4932.9
50°	3302.9	5352.0	4630.6	4583.6	4354.3
52.5°	3061.9	4966.5	4216.6	4040.2	3706.0
55°	2812.5	4509.7	3817.7	3449.0	3161.8
57.5°	2580.7	4007.5	3412.1	2934.2	2676.4
60°	2330.4	3498.6	2967.0	2482.4	2269.9
62.5°	2085.2	2997.2	2563.9	2097.8	1956.7
65°	1834.1	2530.3	2154.9	1787.1	1663.6
67.5°	1593.9	2126.3	1801.3	1506.6	1424.3
70°	1350.4	1724.9	1488.9	1265.6	1217.7
72.5°	1099.3	1378.1	1204.3	1068.2	1032.1
75°	877.6	1074.9	945.6	865.8	844.8
77.5°	653.4	799.5	739.0	692.0	686.1
80°	460.2	576.9	544.2	534.9	525.7
82.5°	293.9	377.1	387.1	381.3	374.5
85°	156.2	221.7	231.8	220.0	217.5
87.5°	63.0	96.6	104.1	115.1	118.4
90°	0.8	22.7	41.1	52.1	53.7
92.5°	0.8	5.0	5.9	5.9	5.0
95°	0.8	3.4	3.4	2.5	1.7
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)