

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: P860023

Luminaire Tested: **SPHB-24SE-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: P860023
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-L940-CD
Description: 24000 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

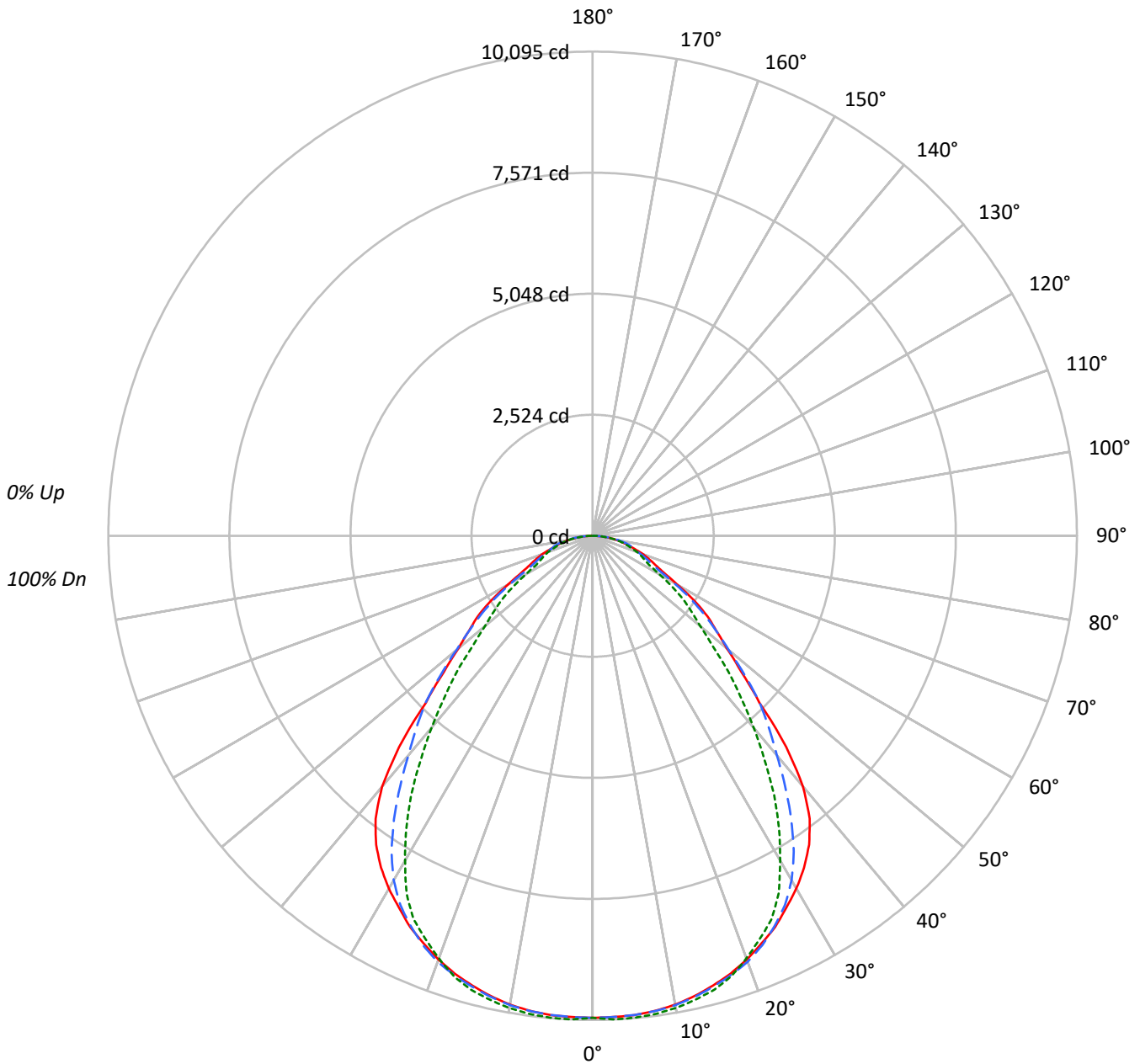
Lumens per Lamp: N/A
Luminaire Lumens: 20860.0 lumens
Efficiency: N/A
Efficacy: 131.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 158.6
Input Voltage (V): NR
Input Current (A_{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°	78389	78389	78389
5°	78543	78522	78968
10°	78612	78696	79178
15°	78382	78585	79131
20°	78040	78436	77808
25°	77469	77253	75941
30°	76488	74685	70423
35°	74883	68711	62766
40°	69493	60815	53163
45°	54216	54362	43995
50°	44280	44908	35530
55°	39673	38177	31220
60°	31761	30066	24979
65°	26616	24366	22090
70°	25271	23216	22491
75°	22928	24646	21689
80°	23043	25186	22863
85°	20047	23483	19098



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	955.6	4.6
10°-20°	2748.2	13.2
20°-30°	4102.6	19.7
30°-40°	4476.7	21.5
40°-50°	3662.1	17.6
50°-60°	2407.8	11.5
60°-70°	1381.4	6.6
70°-80°	837.1	4.0
80°-90°	281.1	1.3
90°-100°	7.3	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°	7806.4	37.4
0°-40°	12283.1	58.9
0°-60°	18353.1	88.0
0°-90°	20852.7	100.0
90°-120°	7.3	0.0
90°-150°	7.3	0.0
90°-180°	7.0	0.0
0°-180°	20860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10050	10050	10050	10050	10050	
5°	10031	10016	10029	10070	10086	954
15°	9707	9705	9732	9794	9799	2740
25°	9002	9023	8976	8868	8824	4141
35°	7864	7687	7216	6724	6592	4874
45°	4915	5282	4928	4350	3988	3901
55°	2917	2838	2807	2412	2296	2569
65°	1442	1421	1320	1284	1197	1474
75°	761	823	818	785	720	823
85°	224	254	262	229	213	243
90°	1	19	37	44	46	11
95°	1	3	4	4	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°	10050.0	10050.0	10050.0	10050.0	10050.0
2.5°	10043.3	10028.7	10042.0	10083.1	10095.0
5°	10031.4	10015.5	10028.7	10069.8	10085.7
7.5°	9990.3	9981.0	9994.3	10035.4	10055.3
10°	9925.4	9914.8	9936.0	9971.7	9996.9
12.5°	9828.6	9824.6	9844.5	9896.2	9906.8
15°	9706.6	9705.3	9731.8	9794.1	9799.4
17.5°	9568.8	9567.5	9600.6	9641.7	9627.1
20°	9401.8	9411.1	9449.5	9411.1	9373.9
22.5°	9201.6	9230.8	9240.1	9119.5	9100.9
25°	9001.5	9022.7	8976.3	8867.6	8823.9
27.5°	8743.0	8768.2	8682.0	8527.0	8402.4
30°	8492.5	8468.6	8292.3	7992.8	7819.1
32.5°	8204.9	8120.0	7803.2	7389.7	7231.9
35°	7864.2	7686.6	7216.0	6724.3	6591.7
37.5°	7433.4	7108.7	6594.4	6081.4	5881.3
40°	6825.0	6449.9	5972.7	5442.5	5221.2
42.5°	5972.7	5833.5	5438.5	4842.1	4578.3
45°	4915.0	5282.1	4928.2	4350.3	3988.4
47.5°	4207.1	4717.5	4292.0	3874.4	3376.1
50°	3649.1	4000.4	3700.8	3324.4	2928.0
52.5°	3246.2	3352.2	3231.6	2818.0	2592.7
55°	2917.4	2837.9	2807.4	2412.4	2295.8
57.5°	2509.2	2465.4	2387.2	2103.6	1949.8
60°	2036.0	2128.8	1927.3	1846.4	1601.2
62.5°	1672.8	1764.2	1548.2	1542.9	1338.8
65°	1442.1	1420.9	1320.2	1284.4	1196.9
67.5°	1276.5	1210.2	1175.7	1129.3	1098.8
70°	1108.1	1080.3	1018.0	1027.3	986.2
72.5°	923.9	959.7	897.4	914.6	840.4
75°	760.8	823.1	817.8	784.7	719.7
77.5°	627.0	693.2	705.2	674.7	621.7
80°	513.0	558.0	560.7	542.1	509.0
82.5°	376.4	403.0	422.8	391.0	369.8
85°	224.0	254.5	262.4	229.3	213.4
87.5°	72.9	102.1	114.0	118.0	119.3
90°	1.3	18.6	37.1	43.7	46.4
92.5°	1.3	5.3	8.0	11.9	13.3
95°	1.3	2.7	4.0	4.0	2.7
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)