

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: P860022

Luminaire Tested: **SPHB-24SE-M-L935-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: P860022
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-L935-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 3500K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

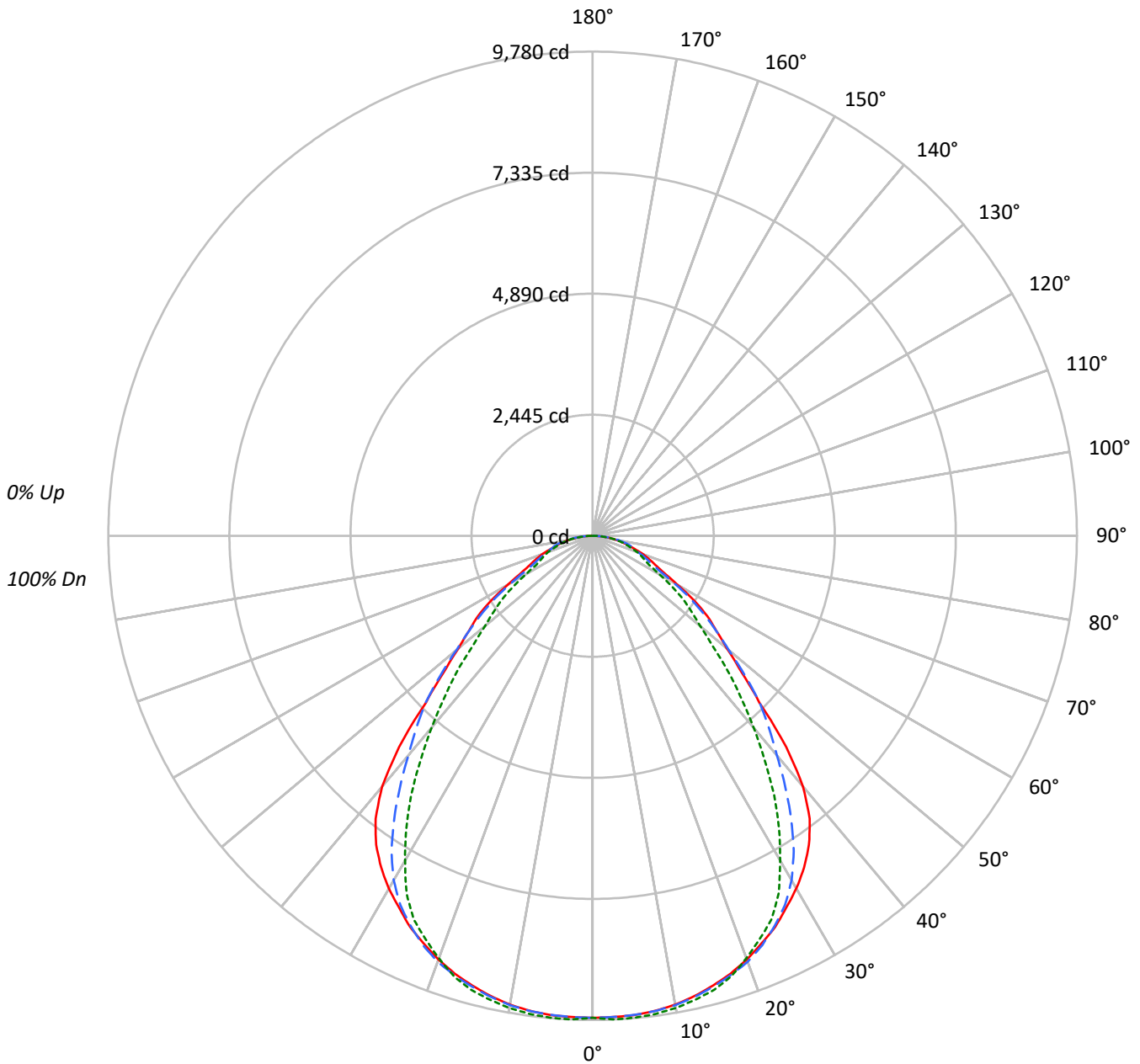
Lumens per Lamp: N/A
Luminaire Lumens: 20208.0 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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									
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	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°	75939	75939	75939
5°	76089	76068	76500
10°	76154	76236	76704
15°	75932	76130	76658
20°	75600	75984	75377
25°	75048	74838	73567
30°	74097	72352	68222
35°	72542	66563	60804
40°	67321	58914	51501
45°	52521	52663	42621
50°	42896	43504	34420
55°	38433	36985	30244
60°	30768	29125	24199
65°	25785	23604	21400
70°	24482	22491	21786
75°	22214	23877	21014
80°	22320	24399	22149
85°	19420	22749	18498



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	925.7	4.6
10°-20°	2662.3	13.2
20°-30°	3974.4	19.7
30°-40°	4336.7	21.5
40°-50°	3547.6	17.6
50°-60°	2332.6	11.5
60°-70°	1338.3	6.6
70°-80°	811.0	4.0
80°-90°	272.3	1.3
90°-100°	7.1	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°	7562.4	37.4
0°-40°	11899.2	58.9
0°-60°	17779.4	88.0
0°-90°	20200.9	100.0
90°-120°	7.1	0.0
90°-150°	7.1	0.0
90°-180°	7.0	0.0
0°-180°	20208.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9736	9736	9736	9736	9736	
5°	9718	9702	9715	9755	9770	924
15°	9403	9402	9428	9488	9493	2654
25°	8720	8741	8696	8590	8548	4012
35°	7618	7446	6990	6514	6386	4722
45°	4761	5117	4774	4214	3864	3779
55°	2826	2749	2720	2337	2224	2489
65°	1397	1376	1279	1244	1160	1428
75°	737	797	792	760	697	798
85°	217	246	254	222	207	235
90°	1	18	36	42	45	10
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°	9735.8	9735.8	9735.8	9735.8	9735.8
2.5°	9729.4	9715.3	9728.1	9767.9	9779.5
5°	9717.9	9702.4	9715.3	9755.1	9770.5
7.5°	9678.0	9669.1	9681.9	9721.7	9741.0
10°	9615.1	9604.9	9625.4	9660.1	9684.5
12.5°	9521.4	9517.5	9536.8	9586.9	9597.2
15°	9403.3	9402.0	9427.7	9488.0	9493.1
17.5°	9269.7	9268.4	9300.5	9340.3	9326.2
20°	9107.9	9116.9	9154.1	9116.9	9081.0
22.5°	8914.0	8942.3	8951.3	8834.4	8816.4
25°	8720.1	8740.7	8695.7	8590.4	8548.1
27.5°	8469.7	8494.1	8410.7	8260.4	8139.7
30°	8227.0	8203.9	8033.2	7743.0	7574.7
32.5°	7948.4	7866.2	7559.3	7158.7	7005.9
35°	7618.4	7446.3	6990.5	6514.1	6385.7
37.5°	7201.1	6886.5	6388.3	5891.3	5697.4
40°	6611.7	6248.3	5786.0	5272.4	5058.0
42.5°	5786.0	5651.2	5268.5	4690.7	4435.2
45°	4761.3	5117.0	4774.2	4214.3	3863.8
47.5°	4075.6	4570.0	4157.8	3753.3	3270.5
50°	3535.0	3875.3	3585.1	3220.5	2836.5
52.5°	3144.7	3247.4	3130.6	2729.9	2511.6
55°	2826.2	2749.2	2719.7	2337.0	2224.0
57.5°	2430.7	2388.4	2312.6	2037.8	1888.9
60°	1972.3	2062.2	1867.0	1788.7	1551.2
62.5°	1620.5	1709.1	1499.8	1494.7	1296.9
65°	1397.1	1376.5	1278.9	1244.3	1159.5
67.5°	1236.6	1172.4	1139.0	1094.0	1064.5
70°	1073.5	1046.5	986.2	995.2	955.3
72.5°	895.0	929.7	869.3	886.0	814.1
75°	737.1	797.4	792.3	760.2	697.3
77.5°	607.4	671.6	683.1	653.6	602.2
80°	496.9	540.6	543.2	525.2	493.1
82.5°	364.7	390.4	409.6	378.8	358.3
85°	217.0	246.5	254.2	222.1	206.7
87.5°	70.6	98.9	110.4	114.3	115.6
90°	1.3	18.0	36.0	42.4	44.9
92.5°	1.3	5.1	7.7	11.6	12.8
95°	1.3	2.6	3.9	3.9	2.6
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)