

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: P860040

Luminaire Tested: **SPHB-24SE-W-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: P860040
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-L935-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Wide Lens
and, 3500K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

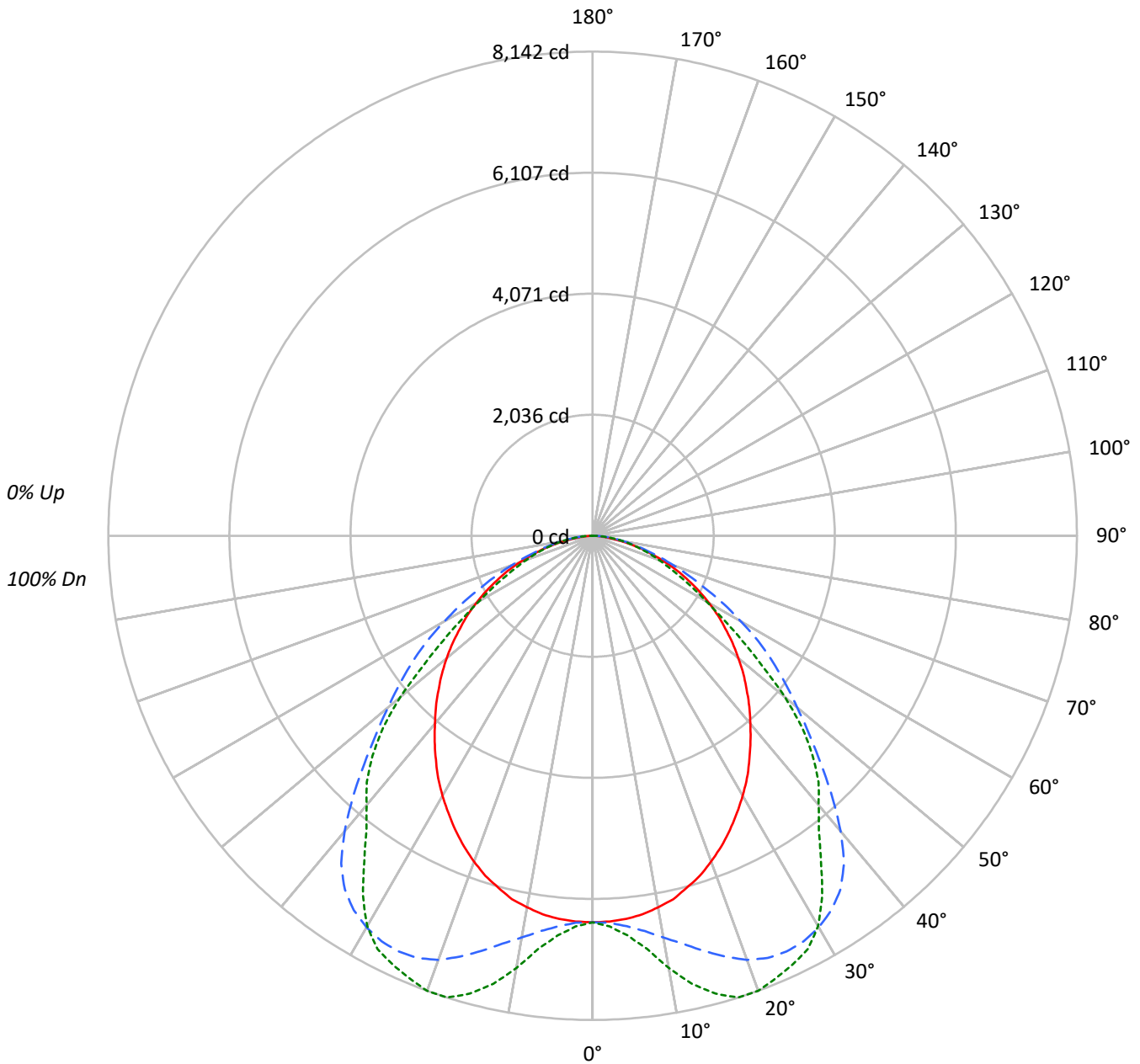
Lumens per Lamp: N/A
Luminaire Lumens: 20450.0 lumens
Efficiency: N/A
Efficacy: 128.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.5 / 1.51
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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°	50694	50694	50694
5°	50640	51595	52818
10°	50239	54318	58435
15°	49454	58362	64367
20°	48384	63003	67581
25°	46987	66402	68467
30°	45458	68480	68282
35°	43752	69168	63714
40°	41989	66044	60179
45°	40400	59865	57738
50°	38826	54433	51186
55°	37050	50292	41653
60°	35218	44837	34304
65°	32793	38527	29744
70°	29834	32895	26901
75°	25619	27605	24664
80°	20024	23681	22877
85°	13540	20091	18856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	638.1	3.1
10°-20°	2023.4	9.9
20°-30°	3311.4	16.2
30°-40°	4039.7	19.8
40°-50°	4000.9	19.6
50°-60°	3199.4	15.6
60°-70°	1995.9	9.8
70°-80°	977.9	4.8
80°-90°	256.5	1.3
90°-100°	6.8	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°	5973.0	29.2
0°-40°	10012.7	49.0
0°-60°	17213.0	84.2
0°-90°	20443.2	100.0
90°-120°	6.8	0.0
90°-150°	6.8	0.0
90°-180°	7.0	0.0
0°-180°	20450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6499	6499	6499	6499	6499	
5°	6468	6496	6590	6704	6746	614
15°	6124	6481	7227	7803	7971	1727
25°	5460	6384	7716	7939	7956	2512
35°	4595	6140	7264	6876	6691	2874
45°	3662	5690	5427	5245	5234	2829
55°	2724	4369	3698	3341	3063	2441
65°	1777	2451	2088	1731	1612	1762
75°	850	1041	916	839	818	902
85°	151	215	224	213	211	187
90°	1	22	40	50	52	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°	6499.3	6499.3	6499.3	6499.3	6499.3
2.5°	6492.8	6490.4	6514.0	6557.1	6576.6
5°	6467.6	6496.1	6589.6	6704.3	6745.8
7.5°	6422.0	6498.5	6705.1	6915.8	7005.3
10°	6343.1	6500.1	6858.1	7229.9	7377.9
12.5°	6261.8	6494.4	7028.1	7554.5	7716.4
15°	6124.3	6480.6	7227.4	7802.6	7971.0
17.5°	5996.6	6464.3	7419.4	8013.3	8141.0
20°	5829.0	6440.7	7590.3	8077.6	8141.8
22.5°	5653.2	6422.0	7684.6	8034.5	8054.0
25°	5459.6	6383.8	7715.5	7939.3	7955.5
27.5°	5253.0	6349.6	7686.3	7821.3	7835.1
30°	5047.2	6287.8	7603.3	7637.4	7581.3
32.5°	4831.6	6226.0	7469.0	7315.3	7184.3
35°	4594.8	6139.7	7264.0	6876.0	6691.3
37.5°	4361.4	6056.8	6944.3	6384.6	6245.5
40°	4123.8	5954.2	6486.3	5925.8	5910.3
42.5°	3899.3	5843.6	5968.1	5568.6	5620.7
45°	3662.5	5689.8	5427.1	5244.8	5234.3
47.5°	3438.0	5477.5	4934.9	4886.9	4778.7
50°	3199.6	5184.6	4485.8	4440.3	4218.2
52.5°	2966.1	4811.2	4084.7	3913.9	3590.1
55°	2724.5	4368.7	3698.3	3341.2	3063.0
57.5°	2500.0	3882.2	3305.4	2842.5	2592.7
60°	2257.6	3389.2	2874.2	2404.8	2199.0
62.5°	2020.0	2903.5	2483.7	2032.2	1895.5
65°	1776.8	2451.2	2087.5	1731.2	1611.6
67.5°	1544.1	2059.9	1745.0	1459.5	1379.8
70°	1308.2	1671.0	1442.4	1226.0	1179.6
72.5°	1064.9	1335.0	1166.6	1034.8	999.8
75°	850.1	1041.3	916.0	838.8	818.4
77.5°	632.9	774.5	715.9	670.4	664.7
80°	445.8	558.9	527.2	518.2	509.3
82.5°	284.7	365.3	375.0	369.3	362.8
85°	151.3	214.8	224.5	213.1	210.7
87.5°	61.0	93.6	100.9	111.5	114.7
90°	0.8	22.0	39.9	50.4	52.1
92.5°	0.8	4.9	5.7	5.7	4.9
95°	0.8	3.3	3.3	2.4	1.6
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)