

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: P860028

Luminaire Tested: **SPHB-24SE-N-L835-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: P860028
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-L835-CD
Description: 24000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens
and, 3500K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

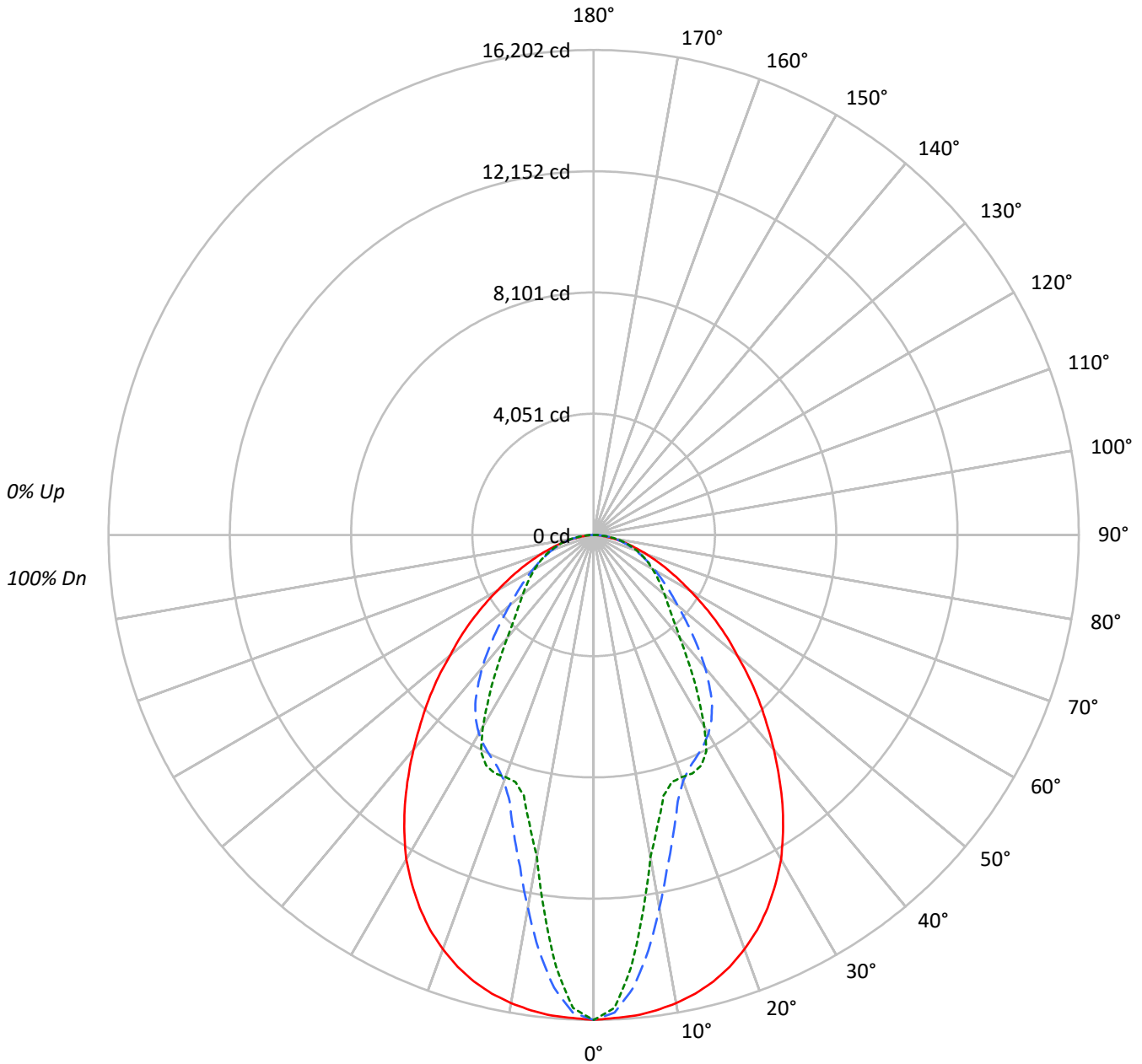
Lumens per Lamp: N/A
Luminaire Lumens: 23745.0 lumens
Efficiency: N/A
Efficacy: 149.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P860028

CATALOG NUMBER: SPHB-24SE-N-L835-CD

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°	126371	126371	126371
5°	126225	118904	113277
10°	125794	100225	86403
15°	124747	83198	72811
20°	122234	72523	71476
25°	118306	70170	73151
30°	112713	69045	66572
35°	104653	65611	55166
40°	95297	58901	45552
45°	86022	51109	39989
50°	75914	44440	37447
55°	67363	40081	36045
60°	57730	37065	35310
65°	49970	34834	35131
70°	42763	33510	35091
75°	35896	32542	34778
80°	27391	31447	34057
85°	17935	27895	26231



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1381.3	5.8
10°-20°	3171.7	13.4
20°-30°	4286.4	18.1
30°-40°	4511.2	19.0
40°-50°	3827.9	16.1
50°-60°	2965.3	12.5
60°-70°	2065.2	8.7
70°-80°	1182.6	5.0
80°-90°	344.1	1.4
90°-100°	9.2	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°	8839.5	37.2
0°-40°	13350.7	56.2
0°-60°	20143.9	84.8
0°-90°	23735.8	100.0
90°-120°	9.2	0.0
90°-150°	9.2	0.0
90°-180°	9.0	0.0
0°-180°	23745.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16202	16202	16202	16202	16202	
5°	16121	15826	15186	14604	14468	###
15°	15448	13112	10303	9274	9017	4347
25°	13746	9711	8153	8390	8500	6310
35°	10991	7468	6890	6224	5794	6851
45°	7798	5608	4633	3807	3625	6006
55°	4954	3777	2947	2679	2651	4429
65°	2708	2216	1887	1887	1904	2704
75°	1191	1059	1080	1148	1154	1270
85°	200	260	312	293	293	255
90°	1	24	46	58	61	11
95°	1	4	7	7	6	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: P860028

CATALOG NUMBER: SPHB-24SE-N-L835-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16201.6	16201.6	16201.6	16201.6	16201.6
2.5°	16154.6	16101.4	15971.6	15887.5	15821.9
5°	16121.2	15825.6	15186.2	14603.6	14467.5
7.5°	16021.0	15371.7	14005.0	12927.7	12655.5
10°	15882.5	14719.9	12654.3	11304.9	10909.1
12.5°	15698.2	14023.5	11360.6	10089.1	9894.9
15°	15448.4	13111.9	10303.0	9274.0	9016.7
17.5°	15124.3	12169.5	9327.2	8732.2	8660.5
20°	14726.1	11304.9	8737.2	8534.3	8611.0
22.5°	14278.3	10465.1	8394.6	8479.9	8623.4
25°	13746.5	9710.6	8153.4	8389.6	8499.7
27.5°	13149.1	9029.1	7932.0	8148.4	8148.4
30°	12514.5	8461.4	7666.1	7646.3	7391.5
32.5°	11773.7	7979.0	7318.5	6926.4	6547.9
35°	10990.7	7468.2	6890.5	6223.9	5793.5
37.5°	10169.5	6993.2	6348.8	5469.4	5068.7
40°	9359.3	6524.4	5784.8	4791.6	4473.7
42.5°	8552.9	6047.0	5197.3	4242.4	3991.3
45°	7798.4	5607.9	4633.3	3807.1	3625.2
47.5°	7031.5	5141.6	4112.6	3457.0	3330.9
50°	6256.0	4669.1	3662.3	3178.7	3086.0
52.5°	5603.0	4228.8	3280.2	2915.3	2859.6
55°	4953.6	3777.4	2947.4	2679.0	2650.6
57.5°	4309.2	3356.8	2643.2	2462.6	2456.4
60°	3700.7	2963.5	2376.0	2277.1	2263.5
62.5°	3182.4	2572.7	2122.5	2075.5	2081.6
65°	2707.5	2216.5	1887.4	1887.4	1903.5
67.5°	2267.2	1888.7	1672.2	1700.7	1722.9
70°	1875.1	1591.8	1469.4	1518.9	1538.7
72.5°	1504.0	1316.0	1275.2	1329.6	1345.7
75°	1191.1	1058.8	1079.8	1147.8	1154.0
77.5°	883.1	833.6	888.1	962.3	975.9
80°	609.8	614.7	700.1	752.0	758.2
82.5°	393.3	429.2	524.4	551.6	541.7
85°	200.4	259.7	311.7	293.1	293.1
87.5°	76.7	112.6	132.3	155.8	164.5
90°	1.2	23.5	45.8	58.1	60.6
92.5°	1.2	6.2	9.9	11.1	9.9
95°	1.2	3.7	7.4	7.4	6.2
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



TEST NUMBER: P860028

CATALOG NUMBER: SPHB-24SE-N-L835-CD

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)