

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: P859992

Luminaire Tested: **SPHB-24HE-M-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: P859992
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-24HE-M-L835-CD
Description: 24000 Lumen High Efficacy Select Pro High Bay with Medium Lens and, 3500K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

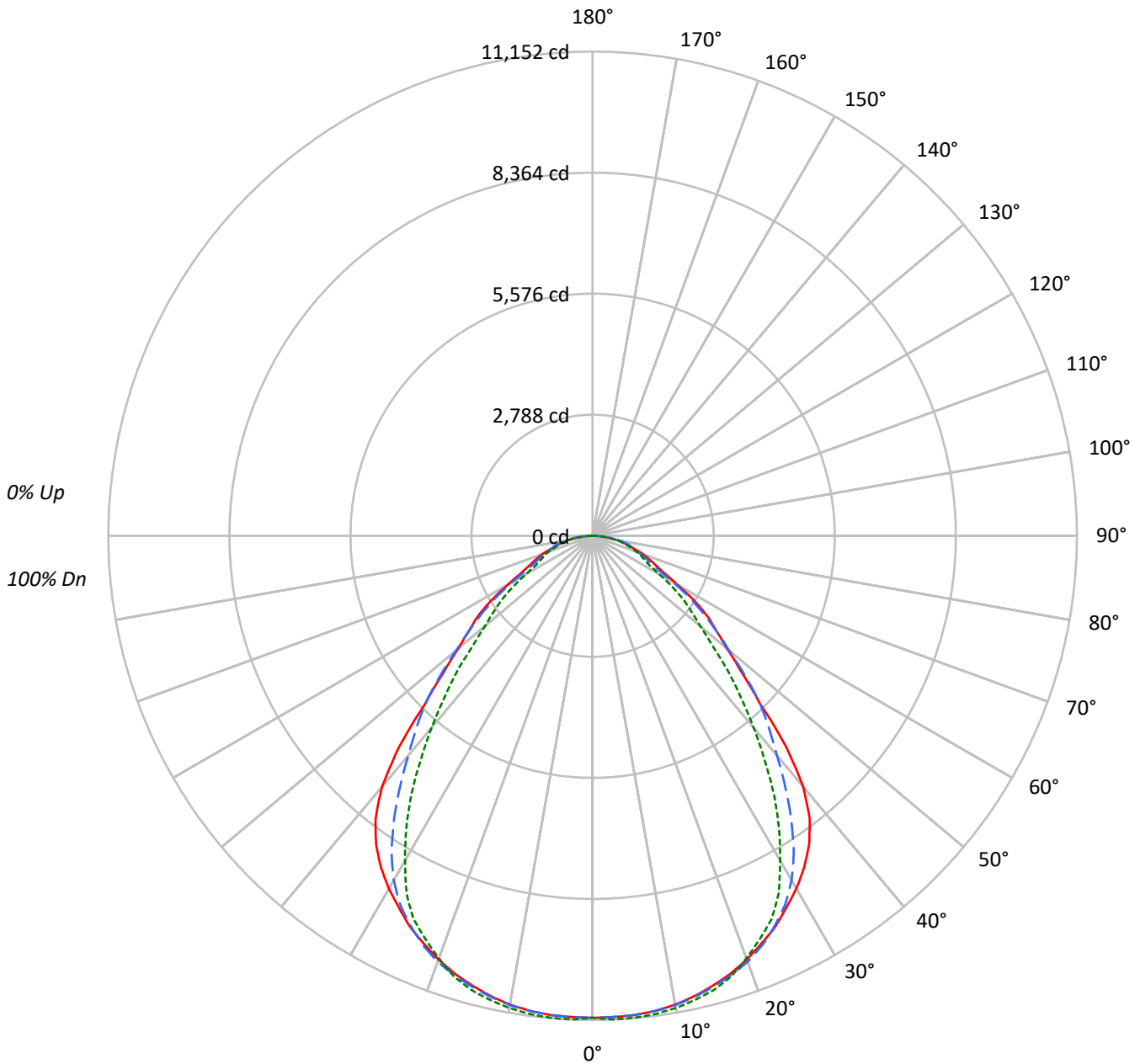
Lumens per Lamp: N/A
Luminaire Lumens: 23045.0 lumens
Efficiency: N/A
Efficacy: 157.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 146
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°	86600	86600	86600
5°	86770	86747	87240
10°	86846	86938	87472
15°	86592	86817	87420
20°	86214	86652	85959
25°	85583	85344	83895
30°	84500	82508	77801
35°	82726	75908	69341
40°	76772	67185	58730
45°	59895	60056	48604
50°	48918	49611	39252
55°	43829	42177	34489
60°	35087	33215	27595
65°	29404	26918	24405
70°	27918	25647	24847
75°	25330	27228	23962
80°	25455	27822	25257
85°	22150	25944	21103



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1055.7	4.6
10°-20°	3036.1	13.2
20°-30°	4532.4	19.7
30°-40°	4945.6	21.5
40°-50°	4045.7	17.6
50°-60°	2660.1	11.5
60°-70°	1526.1	6.6
70°-80°	924.8	4.0
80°-90°	310.5	1.3
90°-100°	8.1	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°	8624.1	37.4
0°-40°	13569.7	58.9
0°-60°	20275.5	88.0
0°-90°	23036.9	100.0
90°-120°	8.1	0.0
90°-150°	8.1	0.0
90°-180°	8.0	0.0
0°-180°	23045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11103	11103	11103	11103	11103	
5°	11082	11065	11079	11125	11142	###
15°	10723	10722	10751	10820	10826	3027
25°	9944	9968	9916	9796	9748	4575
35°	8688	8492	7972	7429	7282	5385
45°	5430	5835	5444	4806	4406	4310
55°	3223	3135	3102	2665	2536	2839
65°	1593	1570	1458	1419	1322	1629
75°	840	909	904	867	795	910
85°	248	281	290	253	236	268
90°	2	20	41	48	51	12
95°	2	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°	11102.6	11102.6	11102.6	11102.6	11102.6
2.5°	11095.3	11079.2	11093.9	11139.3	11152.4
5°	11082.1	11064.6	11079.2	11124.6	11142.2
7.5°	11036.7	11026.5	11041.1	11086.5	11108.5
10°	10965.0	10953.3	10976.7	11016.2	11044.1
12.5°	10858.1	10853.7	10875.7	10932.8	10944.5
15°	10723.4	10721.9	10751.2	10820.0	10825.9
17.5°	10571.1	10569.6	10606.2	10651.6	10635.5
20°	10386.6	10396.8	10439.3	10396.8	10355.8
22.5°	10165.5	10197.7	10207.9	10074.7	10054.2
25°	9944.3	9967.8	9916.5	9796.5	9748.1
27.5°	9658.8	9686.6	9591.4	9420.1	9282.5
30°	9382.0	9355.7	9160.9	8830.0	8638.2
32.5°	9064.3	8970.6	8620.6	8163.7	7989.5
35°	8687.9	8491.7	7971.9	7428.6	7282.2
37.5°	8212.0	7853.3	7285.1	6718.4	6497.3
40°	7539.9	7125.5	6598.3	6012.6	5768.0
42.5°	6598.3	6444.6	6008.2	5349.2	5057.8
45°	5429.8	5835.4	5444.4	4806.0	4406.2
47.5°	4647.8	5211.6	4741.5	4280.3	3729.7
50°	4031.3	4419.4	4088.4	3672.6	3234.7
52.5°	3586.2	3703.3	3570.1	3113.2	2864.3
55°	3223.0	3135.2	3101.5	2665.1	2536.2
57.5°	2772.0	2723.7	2637.3	2323.9	2154.0
60°	2249.2	2351.7	2129.2	2039.8	1768.9
62.5°	1848.0	1949.0	1710.4	1704.5	1479.0
65°	1593.2	1569.8	1458.5	1418.9	1322.3
67.5°	1410.2	1336.9	1298.9	1247.6	1213.9
70°	1224.2	1193.4	1124.6	1134.9	1089.5
72.5°	1020.6	1060.2	991.4	1010.4	928.4
75°	840.5	909.4	903.5	866.9	795.1
77.5°	692.6	765.9	779.0	745.4	686.8
80°	566.7	616.5	619.4	598.9	562.3
82.5°	415.9	445.2	467.1	432.0	408.6
85°	247.5	281.2	289.9	253.3	235.8
87.5°	80.5	112.8	125.9	130.3	131.8
90°	1.5	20.5	41.0	48.3	51.3
92.5°	1.5	5.9	8.8	13.2	14.6
95°	1.5	2.9	4.4	4.4	2.9
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)