

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: P860181

Luminaire Tested: **SPHB-48SE-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: P860181
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-48SE-M-L835-CD
Description: 48000 Lumen Standard Efficacy Select Pro High Bay with Medium Lens
and, 3500K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

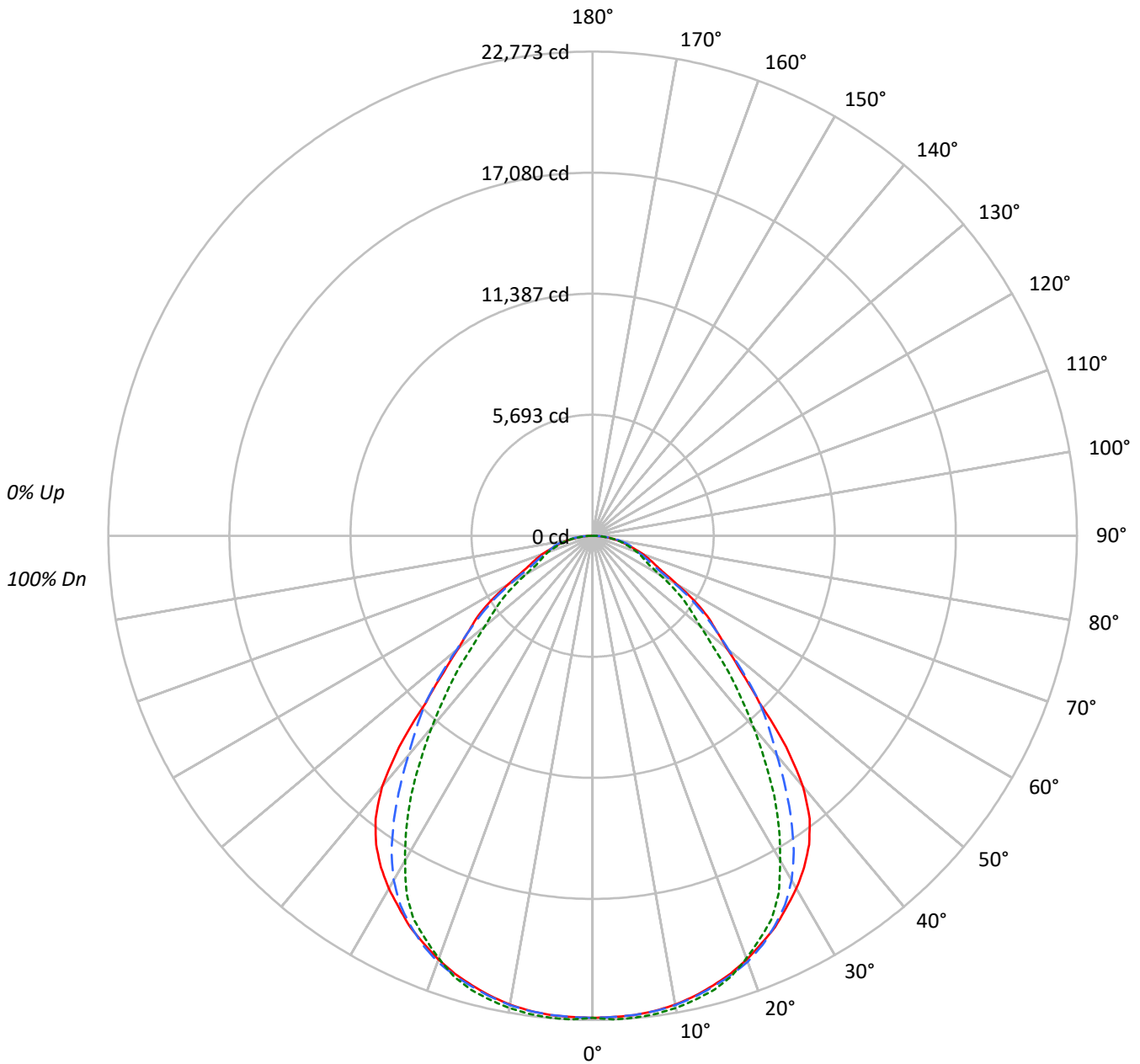
Lumens per Lamp: N/A
Luminaire Lumens: 47058.0 lumens
Efficiency: N/A
Efficacy: 154.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 304.9
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46					46			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41					41			
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	72200	72200	72200
5°	72342	72323	72734
10°	72405	72482	72927
15°	72194	72381	72884
20°	71878	72243	71666
25°	71353	71153	69945
30°	70449	68789	64864
35°	68970	63286	57810
40°	64006	56013	48965
45°	49935	50070	40522
50°	40784	41362	32725
55°	36541	35163	28755
60°	29253	27691	23007
65°	24515	22442	20346
70°	23276	21383	20714
75°	21119	22700	19979
80°	21222	23197	21057
85°	18463	21635	17590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2155.7	4.6
10°-20°	6199.7	13.2
20°-30°	9255.1	19.7
30°-40°	10098.9	21.5
40°-50°	8261.4	17.6
50°-60°	5431.8	11.5
60°-70°	3116.4	6.6
70°-80°	1888.4	4.0
80°-90°	634.1	1.3
90°-100°	16.5	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°	17610.5	37.4
0°-40°	27709.4	58.9
0°-60°	41402.6	88.0
0°-90°	47041.5	100.0
90°-120°	16.5	0.0
90°-150°	16.5	0.0
90°-180°	16.0	0.0
0°-180°	47058.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	22672	22672	22672	22672	22672	
5°	22630	22594	22624	22716	22752	###
15°	21897	21894	21954	22094	22106	6181
25°	20306	20354	20250	20004	19906	9342
35°	17741	17340	16279	15169	14870	10995
45°	11088	11916	11118	9814	8998	8801
55°	6581	6402	6333	5442	5179	5796
65°	3253	3206	2978	2898	2700	3326
75°	1716	1857	1845	1770	1624	1858
85°	505	574	592	517	481	548
90°	3	42	84	99	105	24
95°	3	6	9	9	6	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°	22671.7	22671.7	22671.7	22671.7	22671.7
2.5°	22656.7	22623.8	22653.7	22746.4	22773.3
5°	22629.8	22593.9	22623.8	22716.5	22752.4
7.5°	22537.1	22516.2	22546.1	22638.8	22683.6
10°	22390.6	22366.7	22414.5	22495.2	22552.0
12.5°	22172.3	22163.3	22208.2	22324.8	22348.7
15°	21897.2	21894.2	21954.0	22094.5	22106.5
17.5°	21586.2	21583.2	21658.0	21750.7	21717.8
20°	21209.4	21230.4	21317.1	21230.4	21146.7
22.5°	20757.9	20823.7	20844.6	20572.5	20530.7
25°	20306.4	20354.3	20249.6	20004.4	19905.7
27.5°	19723.3	19780.1	19585.8	19235.9	18954.8
30°	19158.2	19104.4	18706.7	18030.9	17639.2
32.5°	18509.3	18317.9	17603.3	16670.3	16314.5
35°	17740.8	17340.1	16278.6	15169.3	14870.2
37.5°	16769.0	16036.4	14876.2	13719.0	13267.5
40°	15396.5	14550.3	13473.8	12277.7	11778.4
42.5°	13473.8	13159.8	12268.8	10923.2	10328.1
45°	11087.6	11915.9	11117.5	9813.8	8997.5
47.5°	9490.9	10642.1	9682.2	8740.3	7616.0
50°	8232.0	9024.4	8348.6	7499.4	6605.3
52.5°	7323.0	7562.2	7290.1	6357.2	5848.8
55°	6581.4	6402.0	6333.2	5442.2	5179.0
57.5°	5660.4	5561.8	5385.3	4745.4	4398.6
60°	4592.9	4802.3	4347.7	4165.3	3612.2
62.5°	3773.6	3979.9	3492.5	3480.6	3020.1
65°	3253.3	3205.5	2978.2	2897.5	2700.1
67.5°	2879.6	2730.0	2652.3	2547.6	2478.9
70°	2499.8	2437.0	2296.5	2317.4	2224.7
72.5°	2084.2	2164.9	2024.4	2063.2	1895.8
75°	1716.4	1856.9	1844.9	1770.2	1623.7
77.5°	1414.4	1563.9	1590.8	1522.0	1402.4
80°	1157.2	1258.9	1264.9	1223.0	1148.2
82.5°	849.2	909.0	953.9	882.1	834.3
85°	505.3	574.1	592.1	517.3	481.4
87.5°	164.5	230.2	257.2	266.1	269.1
90°	3.0	41.9	83.7	98.7	104.7
92.5°	3.0	12.0	17.9	26.9	29.9
95°	3.0	6.0	9.0	9.0	6.0
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)