

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: P860156

Luminaire Tested: **SPHB-48HE-M-L850-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: P860156
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-48HE-M-L850-CD
Description: 48000 Lumen High Efficacy Select Pro High Bay with Medium Lens and,
5000K 80CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

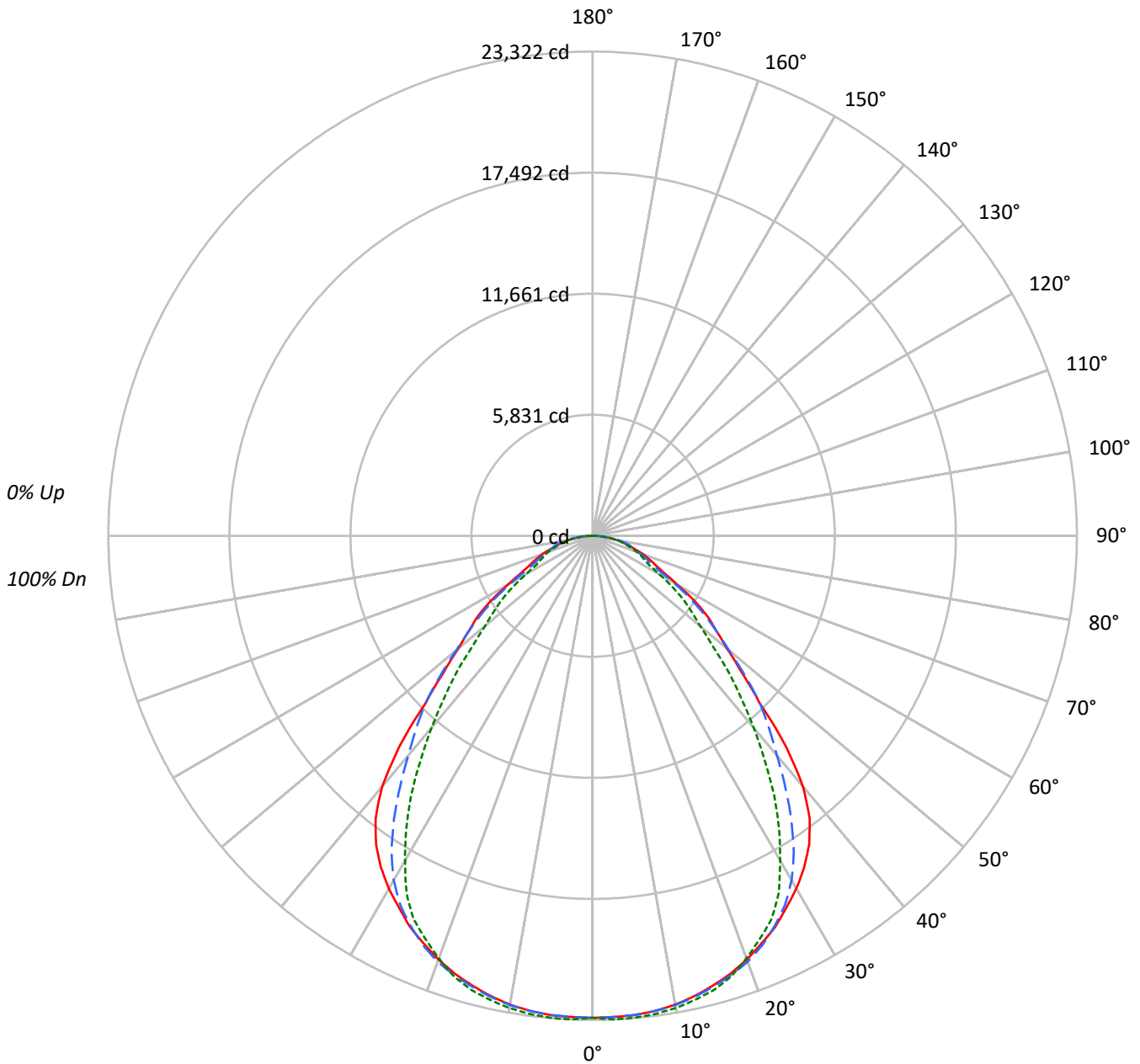
Lumens per Lamp: N/A
Luminaire Lumens: 48192.0 lumens
Efficiency: N/A
Efficacy: 167.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.16 / 1.22
Luminous Opening: Rectangular (W 1' x L: 3.38' x H: 0')
CIE Type: Direct

Input Watts (W): 288.6
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					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	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°	73940	73940	73940
5°	74085	74066	74487
10°	74149	74229	74684
15°	73933	74125	74640
20°	73610	73984	73392
25°	73072	72868	71630
30°	72147	70447	66427
35°	70632	64811	59204
40°	65548	57363	50145
45°	51139	51277	41498
50°	41767	42359	33514
55°	37422	36010	29448
60°	29958	28359	23561
65°	25106	22983	20837
70°	23836	21898	21214
75°	21627	23248	20460
80°	21734	23755	21565
85°	18909	22154	18014



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2207.6	4.6
10°-20°	6349.1	13.2
20°-30°	9478.1	19.7
30°-40°	10342.3	21.5
40°-50°	8460.5	17.6
50°-60°	5562.7	11.5
60°-70°	3191.5	6.6
70°-80°	1934.0	4.0
80°-90°	649.4	1.3
90°-100°	16.9	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°	18034.9	37.4
0°-40°	28377.1	58.9
0°-60°	42400.3	88.0
0°-90°	48175.1	100.0
90°-120°	16.9	0.0
90°-150°	16.9	0.0
90°-180°	17.0	0.0
0°-180°	48192.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23218	23218	23218	23218	23218	
5°	23175	23138	23169	23264	23301	###
15°	22425	22422	22483	22627	22639	6330
25°	20796	20845	20738	20486	20385	9567
35°	18168	17758	16671	15535	15229	11260
45°	11355	12203	11386	10050	9214	9013
55°	6740	6556	6486	5573	5304	5936
65°	3332	3283	3050	2967	2765	3406
75°	1758	1902	1889	1813	1663	1902
85°	518	588	606	530	493	561
90°	3	43	86	101	107	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°	23218.0	23218.0	23218.0	23218.0	<i>23218.0</i>
2.5°	<i>23202.7</i>	<i>23169.0</i>	<i>23199.6</i>	<i>23294.5</i>	<i>23322.1</i>
5°	23175.1	23138.4	23169.0	23263.9	<i>23300.7</i>
7.5°	23080.2	23058.8	23089.4	23184.3	<i>23230.2</i>
10°	22930.1	22905.6	22954.6	23037.3	<i>23095.5</i>
12.5°	22706.6	22697.4	22743.3	22862.8	<i>22887.3</i>
15°	22424.9	22421.8	22483.1	22627.0	<i>22639.2</i>
17.5°	22106.4	22103.3	22179.9	22274.8	<i>22241.1</i>
20°	21720.6	21742.0	21830.8	21742.0	<i>21656.2</i>
22.5°	21258.2	21325.5	21347.0	21068.3	<i>21025.4</i>
25°	20795.8	20844.7	20737.6	20486.5	<i>20385.4</i>
27.5°	20198.6	20256.8	20057.7	19699.5	<i>19411.6</i>
30°	19619.8	19564.7	19157.4	18465.4	<i>18064.2</i>
32.5°	18955.3	18759.4	18027.5	17072.1	<i>16707.6</i>
35°	18168.3	17758.0	16670.9	15534.8	<i>15228.6</i>
37.5°	17173.1	16422.9	15234.7	14049.6	<i>13587.2</i>
40°	15767.5	14900.9	13798.5	12573.6	<i>12062.2</i>
42.5°	13798.5	13477.0	12564.4	11186.4	<i>10577.0</i>
45°	11354.8	12203.1	11385.5	10050.3	<i>9214.3</i>
47.5°	9719.6	10898.6	9915.6	8951.0	<i>7799.6</i>
50°	8430.4	9241.9	8549.8	7680.1	<i>6764.5</i>
52.5°	7499.5	7744.4	7465.8	6510.3	<i>5989.8</i>
55°	6740.0	6556.3	6485.8	5573.3	<i>5303.8</i>
57.5°	5796.8	5695.8	5515.1	4859.8	<i>4504.6</i>
60°	4703.6	4918.0	4452.5	4265.7	<i>3699.2</i>
62.5°	3864.6	4075.9	3576.7	3564.5	<i>3092.9</i>
65°	3331.7	3282.7	3050.0	2967.3	<i>2765.2</i>
67.5°	2948.9	2795.8	2716.2	2609.0	<i>2538.6</i>
70°	2560.0	2495.7	2351.8	2373.2	<i>2278.3</i>
72.5°	2134.4	2217.1	2073.1	2113.0	<i>1941.5</i>
75°	1757.7	1901.7	1889.4	1812.9	<i>1662.8</i>
77.5°	1448.4	1601.6	1629.1	1558.7	<i>1436.2</i>
80°	1185.1	1289.2	1295.3	1252.5	<i>1175.9</i>
82.5°	869.7	930.9	976.9	903.4	<i>854.4</i>
85°	517.5	588.0	606.3	529.8	<i>493.0</i>
87.5°	168.4	235.8	263.4	272.5	<i>275.6</i>
90°	3.1	42.9	85.7	101.1	<i>107.2</i>
92.5°	3.1	12.2	18.4	27.6	<i>30.6</i>
95°	3.1	6.1	9.2	9.2	<i>6.1</i>
97.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
100°	0.0	0.0	0.0	0.0	<i>0.0</i>
102.5°	0.0	0.0	0.0	0.0	<i>0.0</i>
105°	0.0	0.0	0.0	0.0	<i>0.0</i>



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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)