

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: RKS180522019-10

Luminaire Tested: **LHB-18-UNV-L840-CD-U**

Issue Date: 3/3/2020

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-41-14
Report Number: RKS180522019-10
Test Lab: BAY AREA COMPLIANCE LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: LHB-18-UNV-L840-CD-U
Description: High Bay Luminaires for Commercial and Industrial Buildings
Light Source: -
Ballast/Driver: -

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

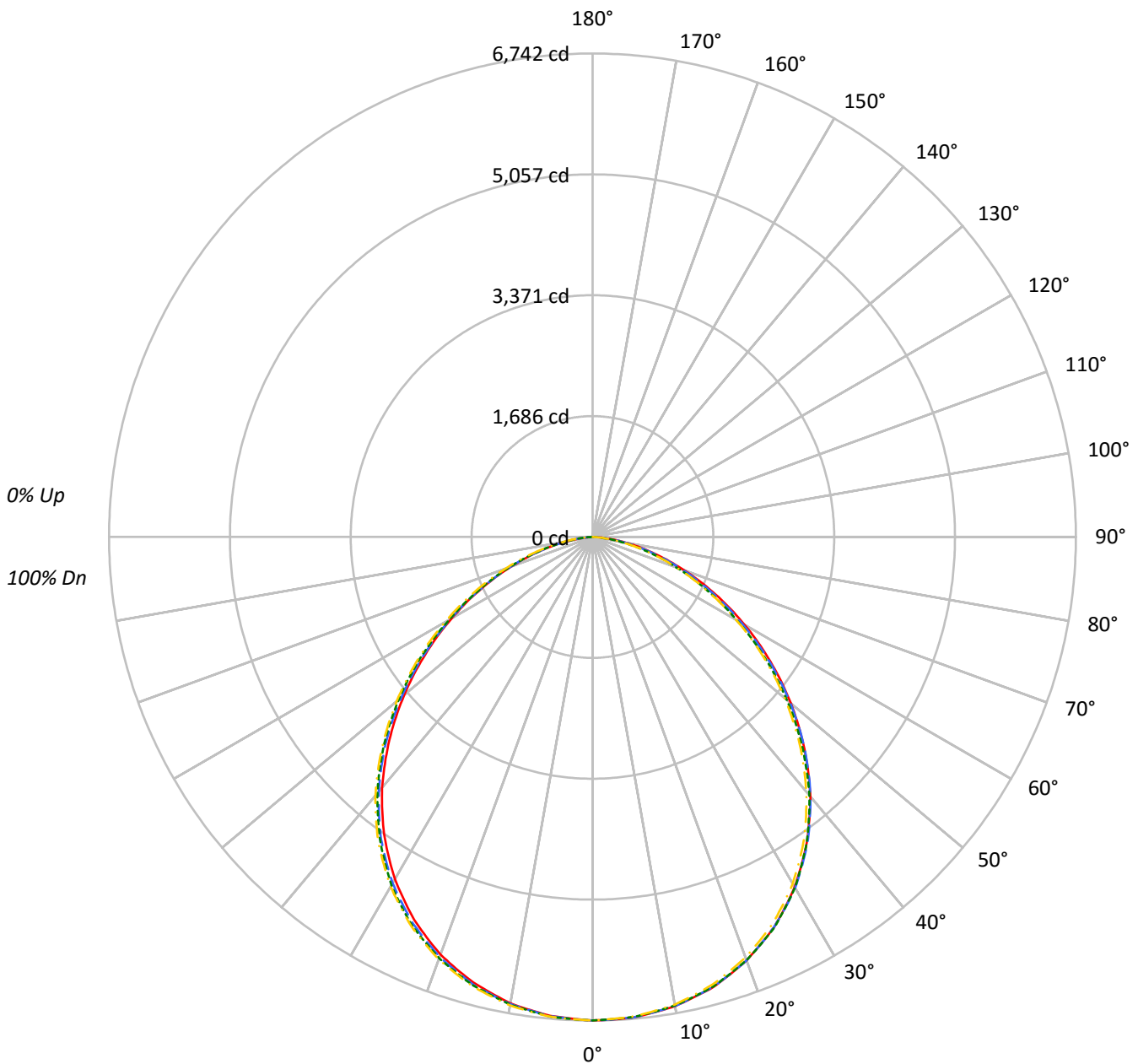
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17075.0 lumens
Efficiency: N/A
Efficacy: 128.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.24 / 1.32
Luminous Opening: Rectangular (W 0.99' x L: 1.92' x H: 0')
CIE Type: Direct

Input Watts (W): 132.66
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



— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°



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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	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	88	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	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	38215	38215	38215	38215
5°	38255	38213	38136	38196
10°	38234	38180	38005	38097
15°	38145	38096	37733	37952
20°	37905	37884	37378	37706
25°	37524	37563	36825	37327
30°	36914	36955	36075	36701
35°	36051	36047	35053	35745
40°	34992	34832	33781	34544
45°	33532	33177	32110	33006
50°	31868	31235	30226	31119
55°	29948	28982	28069	28852
60°	27768	26394	25639	26152
65°	25393	23711	22970	23310
70°	22593	20706	19890	20442
75°	19593	17530	16525	17035
80°	16028	13590	12281	12698
85°	11577	8637	6231	7441



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	638.0	3.7
10°-20°	1825.6	10.7
20°-30°	2745.5	16.1
30°-40°	3228.6	18.9
40°-50°	3174.4	18.6
50°-60°	2626.4	15.4
60°-70°	1776.4	10.4
70°-80°	873.2	5.1
80°-90°	187.0	1.1
90°-100°	0.0	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°	5209.0	30.5
0°-40°	8437.7	49.4
0°-60°	14238.5	83.4
0°-90°	17075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17075.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	6742	6742	6742	6742	6742	
5°	6723	6716	6702	6713	6723	639
15°	6500	6492	6430	6467	6500	1833
25°	5999	6006	5888	5968	5999	2761
35°	5210	5209	5065	5166	5210	3256
45°	4183	4139	4005	4117	4183	3225
55°	3030	2933	2840	2919	3030	2711
65°	1893	1768	1712	1738	1893	1880
75°	895	800	754	778	895	961
85°	178	133	96	114	178	218
90°	0	0	0	0	0	24
95°	0	0	0	0	0	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: RKS180522019-10
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5
5°	6723.0	6719.6	6721.9	6718.1	6715.5	6713.2	6708.5	6706.6	6702.1	6702.4	6707.7
10°	6642.5	6637.8	6639.5	6633.8	6633.0	6622.5	6619.5	6613.8	6602.6	6605.0	6610.5
15°	6499.9	6489.3	6495.6	6485.0	6491.6	6469.4	6462.5	6452.4	6429.8	6442.2	6456.2
20°	6283.6	6279.1	6284.0	6277.3	6280.1	6256.8	6237.9	6224.2	6196.2	6211.3	6231.1
25°	5999.4	5990.6	5998.9	5992.1	6005.7	5965.0	5948.3	5928.9	5887.7	5904.4	5936.7
30°	5639.6	5632.8	5652.4	5641.5	5645.8	5607.9	5583.6	5557.6	5511.5	5538.6	5573.4
35°	5209.7	5213.1	5224.9	5210.7	5209.1	5172.6	5145.7	5116.4	5065.4	5092.9	5141.2
40°	4728.8	4722.8	4731.7	4726.4	4707.2	4665.0	4640.0	4628.1	4565.2	4588.4	4636.9
45°	4182.9	4189.7	4187.3	4165.9	4138.6	4112.1	4086.5	4073.2	4005.4	4039.5	4082.7
50°	3613.7	3606.4	3603.8	3579.2	3541.9	3510.1	3501.6	3494.4	3427.5	3458.3	3476.3
55°	3030.3	3022.6	2998.0	2974.4	2932.6	2907.2	2906.8	2911.9	2840.2	2865.6	2873.2
60°	2449.3	2438.3	2404.6	2373.5	2328.1	2308.7	2316.2	2329.5	2261.5	2271.0	2283.9
65°	1893.2	1883.5	1845.3	1808.0	1767.8	1753.5	1755.7	1771.6	1712.5	1719.7	1726.3
70°	1363.2	1365.0	1333.3	1284.1	1249.3	1245.9	1249.3	1261.1	1200.1	1220.7	1210.9
75°	894.6	886.5	866.1	830.3	800.4	780.4	792.9	801.8	754.5	767.0	761.9
80°	491.0	483.5	473.2	440.3	416.3	403.4	409.1	413.5	376.2	377.1	384.1
85°	178.0	178.3	164.2	149.5	132.8	122.6	128.2	127.0	95.8	96.2	102.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	6741.5	6741.5	6741.5	6741.5	6741.5	6741.5
5°	6713.9	6712.6	6714.9	6715.7	6716.2	6723.0
10°	6620.8	6618.6	6626.7	6632.8	6626.7	6642.5
15°	6465.2	6467.0	6480.4	6481.8	6479.8	6499.9
20°	6249.0	6250.6	6269.5	6268.2	6262.9	6283.6
25°	5960.4	5968.0	5984.0	5986.3	5973.1	5999.4
30°	5598.2	5607.0	5636.2	5629.2	5610.0	5639.6
35°	5166.0	5165.5	5200.1	5204.2	5176.5	5209.7
40°	4659.5	4668.3	4697.8	4709.8	4687.2	4728.8
45°	4094.1	4117.2	4147.6	4149.7	4147.0	4182.9
50°	3503.0	3528.7	3546.7	3563.6	3572.5	3613.7
55°	2896.4	2919.4	2938.9	2965.1	2982.0	3030.3
60°	2303.7	2306.8	2341.9	2376.7	2389.1	2449.3
65°	1740.7	1737.9	1776.6	1812.7	1840.3	1893.2
70°	1219.2	1233.4	1262.4	1292.3	1319.2	1363.2
75°	763.4	777.8	801.3	830.9	853.1	894.6
80°	386.5	389.0	411.0	435.6	461.3	491.0
85°	108.9	114.4	124.1	140.6	157.9	178.0
90°	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)