

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: RKS180522018-10

Luminaire Tested: **LHB-12-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: RKSB180522018-10
Test Lab: BAY AREA COMPLIANCE LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: LHB-12-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

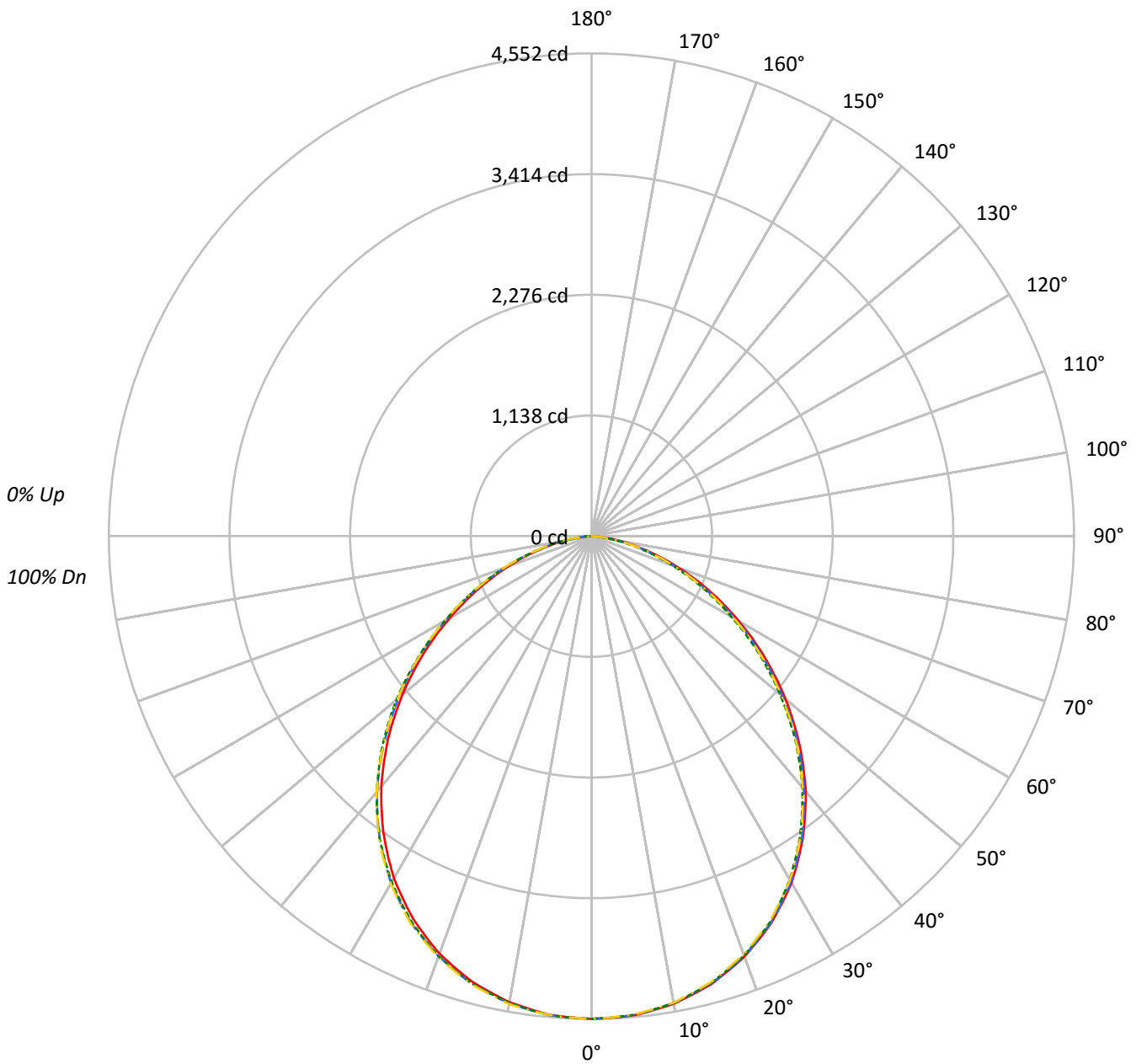
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11455.4 lumens
Efficiency: N/A
Efficacy: 130.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.32
Luminous Opening: Rectangular (W 0.99' x L: 1.92' x H: 0')
CIE Type: Direct

Input Watts (W): 87.7
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	86
2	100	93	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	75	69	65	72	68	64	62
4	84	73	64	58	82	72	64	58	69	62	57	67	61	56	65	60	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	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	32
9	58	45	37	32	57	44	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	25803	25803	25803	25803
5°	25815	25788	25779	25803
10°	25773	25725	25684	25720
15°	25660	25599	25523	25624
20°	25452	25388	25274	25426
25°	25150	25040	24901	25103
30°	24709	24482	24385	24659
35°	24055	23765	23670	24102
40°	23275	22896	22816	23317
45°	22240	21803	21759	22333
50°	21066	20468	20515	21164
55°	19750	19030	19111	19693
60°	18212	17337	17443	18105
65°	16570	15582	15721	16448
70°	14568	13504	13736	14464
75°	12293	11203	11481	12195
80°	9526	8207	8553	9320
85°	5762	3577	3727	5021



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	430.7	3.8
10°-20°	1230.9	10.7
20°-30°	1846.3	16.1
30°-40°	2163.9	18.9
40°-50°	2124.6	18.5
50°-60°	1761.2	15.4
60°-70°	1196.9	10.4
70°-80°	583.9	5.1
80°-90°	116.9	1.0
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°	3507.9	30.6
0°-40°	5671.8	49.5
0°-60°	9557.6	83.4
0°-90°	11455.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11455.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4552	4552	4552	4552	4552	
5°	4537	4532	4530	4535	4537	431
15°	4372	4362	4349	4366	4372	1233
25°	4021	4003	3981	4014	4021	1851
35°	3476	3434	3420	3483	3476	2173
45°	2774	2720	2714	2786	2774	2139
55°	1998	1926	1934	1993	1998	1787
65°	1235	1162	1172	1226	1235	1226
75°	561	512	524	557	561	605
85°	89	55	57	77	89	122
90°	0	0	0	0	0	12
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: RKS180522018-10
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0
5°	4536.8	4532.1	4533.8	4532.4	4532.0	4527.9	4529.6	4531.1	4530.4	4533.0	4534.3
10°	4477.5	4474.5	4470.4	4469.9	4469.3	4465.3	4466.2	4467.1	4462.1	4468.1	4472.8
15°	4372.5	4367.7	4364.9	4363.0	4362.0	4353.6	4353.8	4357.6	4349.1	4362.4	4367.9
20°	4219.3	4213.3	4213.6	4207.0	4208.6	4202.8	4196.1	4203.0	4189.7	4207.4	4215.1
25°	4021.1	4009.6	4014.8	4012.7	4003.4	4003.0	3994.5	3997.0	3981.3	4001.6	4024.7
30°	3775.0	3761.3	3765.2	3758.2	3740.3	3745.3	3743.6	3742.1	3725.5	3753.4	3778.4
35°	3476.2	3471.2	3462.9	3461.0	3434.3	3449.5	3440.6	3441.2	3420.5	3449.1	3482.0
40°	3145.3	3134.0	3118.1	3128.9	3094.2	3106.4	3099.3	3105.6	3083.3	3111.3	3147.2
45°	2774.3	2766.4	2749.1	2752.9	2719.7	2738.3	2728.2	2734.8	2714.3	2743.5	2767.5
50°	2388.8	2370.7	2354.3	2357.9	2321.0	2345.3	2340.4	2348.4	2326.3	2343.4	2373.6
55°	1998.4	1974.6	1961.9	1955.8	1925.6	1938.2	1944.8	1957.2	1933.8	1947.6	1976.2
60°	1606.4	1588.6	1570.0	1556.8	1529.2	1544.0	1553.3	1567.3	1538.6	1560.0	1586.6
65°	1235.4	1214.2	1192.3	1187.2	1161.7	1171.2	1181.8	1204.0	1172.1	1195.9	1214.3
70°	879.0	867.9	843.5	833.1	814.8	826.8	838.7	851.7	828.8	852.6	860.6
75°	561.3	547.8	531.7	523.1	511.5	517.2	529.1	544.1	524.2	532.6	549.2
80°	291.8	285.9	275.6	264.5	251.4	257.8	270.3	278.6	262.0	273.0	286.0
85°	88.6	84.6	74.4	67.3	55.0	64.1	78.1	80.4	57.3	77.2	83.4
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°	4552.0	4552.0	4552.0	4552.0	4552.0	4552.0
5°	4537.1	4534.6	4536.7	4532.8	4533.5	4536.8
10°	4480.2	4468.4	4476.1	4480.5	4471.6	4477.5
15°	4375.2	4366.4	4374.7	4372.7	4367.6	4372.5
20°	4231.1	4215.0	4229.4	4224.6	4214.4	4219.3
25°	4034.0	4013.6	4036.1	4031.0	4010.6	4021.1
30°	3791.3	3767.4	3792.2	3784.0	3766.4	3775.0
35°	3495.4	3483.0	3502.5	3490.9	3468.2	3476.2
40°	3161.6	3151.0	3168.1	3152.4	3130.2	3145.3
45°	2798.0	2785.8	2797.5	2775.0	2766.1	2774.3
50°	2408.1	2399.9	2405.6	2388.9	2377.1	2388.8
55°	2007.5	1992.6	2006.1	1986.0	1982.3	1998.4
60°	1605.6	1597.0	1611.1	1600.9	1584.1	1606.4
65°	1238.4	1226.3	1233.8	1223.0	1214.1	1235.4
70°	879.4	872.7	878.0	876.8	869.0	879.0
75°	563.5	556.8	561.3	559.4	552.3	561.3
80°	285.8	285.5	288.2	290.4	282.3	291.8
85°	83.0	77.2	85.9	87.1	79.9	88.6
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)