

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: RKS180522020-10

Luminaire Tested: **LHB-24-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: RKS180522020-10
Test Lab: BAY AREA COMPLIANCE LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: LHB-24-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

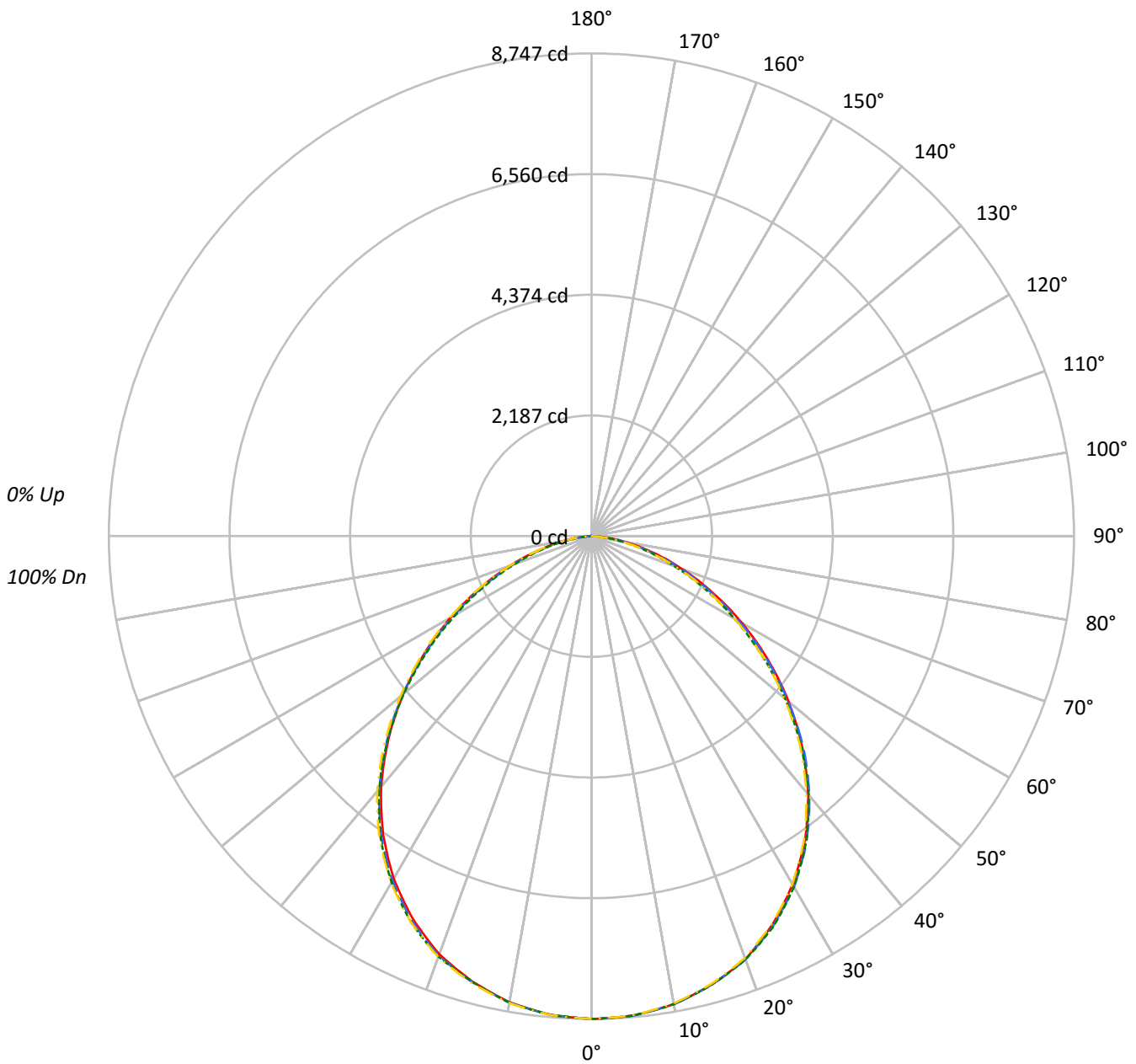
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22012.9 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.32
Luminous Opening: Rectangular (W 0.99' x L: 1.92' x H: 0')
CIE Type: Direct

Input Watts (W): 172.79
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	78	75	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	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	50	60	54	49	58	53	49	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	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	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	29	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	49583	49583	49583	49583
5°	49610	49617	49520	49521
10°	49557	49564	49348	49403
15°	49377	49388	49001	49029
20°	49214	49248	48629	48918
25°	48563	48814	47870	48339
30°	47719	48049	46896	47431
35°	46653	46912	45559	46133
40°	45251	45324	43881	44310
45°	43341	43056	41710	41886
50°	41150	40397	39256	39089
55°	38622	37316	36440	35830
60°	35748	33965	33302	32081
65°	32509	30524	29864	28521
70°	29147	26642	25973	24471
75°	25511	22638	21720	19961
80°	21124	17928	16531	14412
85°	16533	11993	9307	7688



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	827.8	3.8
10°-20°	2368.2	10.8
20°-30°	3563.1	16.2
30°-40°	4184.9	19.0
40°-50°	4097.3	18.6
50°-60°	3364.9	15.3
60°-70°	2259.8	10.3
70°-80°	1105.8	5.0
80°-90°	241.2	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°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	6759.0	30.7
0°-40°	10943.9	49.7
0°-60°	18406.1	83.6
0°-90°	22012.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22012.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	8747	8747	8747	8747	8747	
5°	8718	8720	8703	8703	8718	829
15°	8414	8416	8350	8355	8414	2376
25°	7764	7805	7654	7729	7764	3575
35°	6742	6779	6584	6667	6742	4211
45°	5406	5371	5203	5225	5406	4169
55°	3908	3776	3687	3626	3908	3496
65°	2424	2276	2226	2126	2424	2415
75°	1165	1034	992	911	1165	1249
85°	254	184	143	118	254	297
90°	0	0	0	0	0	35
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: RKS180522020-10
 CATALOG NUMBER: LHB-24-UNV-L840-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1
5°	8718.4	8718.0	8721.0	8718.4	8719.7	8716.7	8713.2	8709.6	8702.7	8701.7	8703.2
10°	8609.6	8612.2	8613.5	8612.2	8610.9	8608.0	8596.8	8590.3	8573.3	8572.1	8578.0
15°	8413.8	8419.9	8418.9	8417.9	8415.7	8411.3	8398.7	8383.4	8349.8	8353.1	8364.0
20°	8158.3	8158.8	8163.4	8171.0	8164.0	8157.5	8130.4	8114.7	8061.3	8070.0	8089.7
25°	7764.4	7775.9	7791.6	7803.0	7804.6	7783.2	7747.4	7715.9	7653.6	7671.1	7696.2
30°	7290.4	7320.6	7340.6	7352.0	7340.8	7328.6	7281.0	7232.6	7164.6	7182.7	7213.0
35°	6741.7	6760.7	6792.7	6799.2	6779.1	6768.8	6717.3	6665.3	6583.6	6596.8	6638.0
40°	6115.2	6132.1	6146.4	6139.8	6125.1	6102.9	6059.7	6023.9	5930.1	5942.1	5977.3
45°	5406.4	5435.0	5435.8	5410.5	5370.9	5365.9	5341.1	5302.9	5203.0	5224.0	5241.6
50°	4666.2	4674.2	4653.8	4630.4	4580.8	4569.1	4555.4	4555.2	4451.4	4461.5	4461.3
55°	3908.0	3915.3	3870.9	3834.7	3775.8	3775.4	3774.8	3792.1	3687.2	3689.7	3652.5
60°	3153.2	3149.5	3095.0	3050.8	2995.9	2993.1	3005.9	3033.4	2937.4	2921.5	2886.0
65°	2423.7	2431.1	2374.6	2310.1	2275.7	2273.2	2289.3	2308.7	2226.5	2222.1	2167.4
70°	1758.6	1748.3	1705.2	1646.7	1607.5	1604.4	1630.0	1647.2	1567.1	1555.4	1519.7
75°	1164.8	1151.4	1099.8	1067.2	1033.6	1025.9	1033.2	1055.2	991.7	981.2	944.4
80°	647.1	638.6	604.8	576.4	549.2	540.6	541.9	555.9	506.4	497.8	465.8
85°	254.2	250.7	226.4	204.1	184.4	177.5	178.1	184.8	143.1	143.6	125.9
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	6.7
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°	8747.1	8747.1	8747.1	8747.1	8747.1	8747.1
5°	8703.6	8702.8	8704.9	8706.5	8710.3	8718.4
10°	8582.5	8582.9	8583.7	8589.1	8592.6	8609.6
15°	8367.6	8354.6	8369.8	8382.6	8382.4	8413.8
20°	8101.5	8109.3	8111.9	8115.0	8108.6	8158.3
25°	7719.3	7728.6	7727.6	7728.3	7720.2	7764.4
30°	7239.4	7246.3	7264.9	7257.5	7244.9	7290.4
35°	6666.6	6666.6	6687.8	6694.2	6689.1	6741.7
40°	5990.7	5988.0	6014.9	6041.0	6048.0	6115.2
45°	5223.4	5224.9	5271.0	5300.9	5327.0	5406.4
50°	4431.0	4432.5	4478.3	4527.0	4576.3	4666.2
55°	3626.9	3625.5	3661.0	3739.6	3808.8	3908.0
60°	2851.5	2829.7	2885.4	2973.4	3055.8	3153.2
65°	2132.7	2126.4	2164.9	2249.7	2336.8	2423.7
70°	1476.3	1476.5	1519.0	1581.1	1664.9	1758.6
75°	913.4	911.4	950.0	1005.0	1075.3	1164.8
80°	446.9	441.5	470.4	518.8	581.3	647.1
85°	117.4	118.2	130.6	160.6	199.2	254.2
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)