

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: RKS180928008-10

Luminaire Tested: **LHB-36-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: RKS180928008-10
Test Lab: BAY AREA COMPLIANCE LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: LHB-36-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

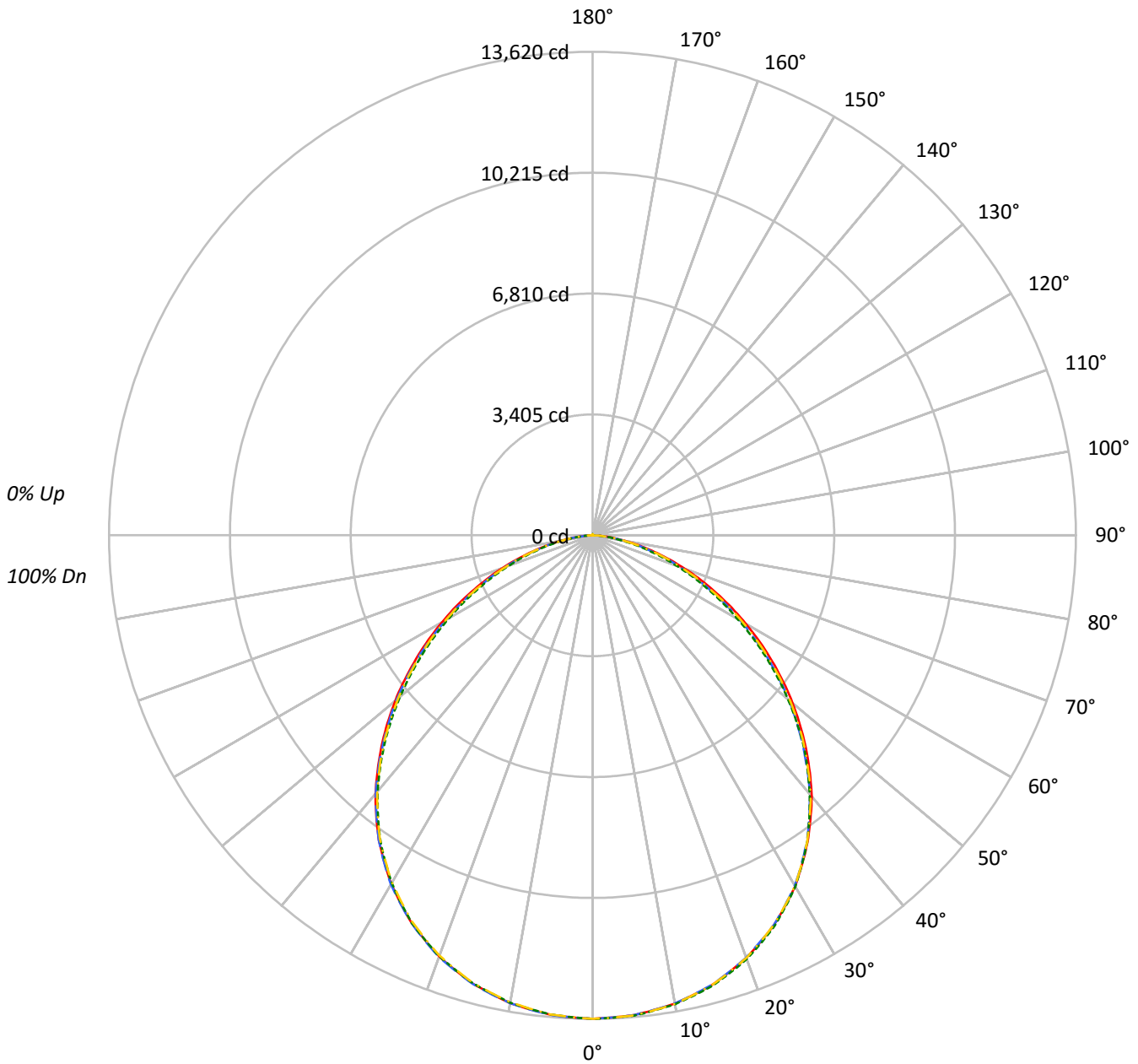
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34848.0 lumens
Efficiency: N/A
Efficacy: 130.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.33
Luminous Opening: Rectangular (W 0.99' x L: 3.76' x H: 0')
CIE Type: Direct

Input Watts (W): 266.87
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	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	85	79	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	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	78	65	56	50	75	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	54	48	43	53	47	43	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	39426	39426	39426	39426
5°	39409	39454	39393	39370
10°	39368	39418	39323	39280
15°	39258	39340	39156	39124
20°	39032	39142	38893	38883
25°	38674	38780	38500	38469
30°	38171	38200	37902	37804
35°	37323	37261	37069	36875
40°	36329	35984	35938	35583
45°	34851	34473	34409	33890
50°	33166	32407	32679	31861
55°	31195	30042	30610	29539
60°	28898	27353	28303	26969
65°	26422	24566	25744	24208
70°	23494	21456	22741	21143
75°	20200	18099	19264	17829
80°	16221	14129	15109	13885
85°	10983	8881	9638	8612



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1288.8	3.7
10°-20°	3690.3	10.6
20°-30°	5560.1	16.0
30°-40°	6559.8	18.8
40°-50°	6473.5	18.6
50°-60°	5380.4	15.4
60°-70°	3661.2	10.5
70°-80°	1817.9	5.2
80°-90°	398.6	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°	2.4	0.0
150°-160°	6.8	0.0
160°-170°	6.0	0.0
170°-180°	2.1	0.0
0°-30°	10539.2	30.2
0°-40°	17099.1	49.1
0°-60°	28953.0	83.1
0°-90°	34830.7	100.0
90°-120°	0.0	0.0
90°-150°	2.4	0.0
90°-180°	17.0	0.0
0°-180°	34848.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	13620	13620	13620	13620	13620	
5°	13563	13578	13557	13550	13563	###
15°	13101	13128	13066	13056	13101	3696
25°	12109	12142	12054	12045	12109	5577
35°	10562	10545	10490	10436	10562	6603
45°	8514	8421	8406	8279	8514	6565
55°	6181	5953	6066	5853	6181	5528
65°	3858	3587	3759	3534	3858	3831
75°	1806	1618	1722	1594	1806	1941
85°	331	267	290	259	331	422
90°	0	0	0	0	0	45
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	2
155°	14	14	12	10	14	7
165°	18	18	14	23	18	5
175°	21	31	15	28	21	2
180°	0	0	0	0	0	



TEST NUMBER: RKS180928008-10
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5
5°	13563.1	13558.5	13563.8	13560.7	13578.4	13572.2	13570.8	13571.7	13557.4	13561.8	13562.4
10°	13393.8	13384.4	13388.2	13378.1	13410.8	13402.8	13401.3	13400.3	13378.5	13384.7	13381.8
15°	13100.6	13088.2	13092.7	13079.9	13127.8	13106.9	13100.4	13108.3	13066.4	13079.9	13076.6
20°	12671.3	12664.6	12657.2	12643.1	12707.0	12688.7	12670.2	12683.8	12626.1	12648.6	12642.4
25°	12108.9	12109.6	12103.2	12077.4	12142.2	12125.4	12099.4	12121.1	12054.4	12075.9	12058.2
30°	11420.3	11391.8	11396.8	11347.8	11428.9	11426.8	11403.7	11416.9	11339.9	11353.5	11356.8
35°	10562.3	10557.0	10531.2	10489.3	10544.6	10563.9	10543.0	10552.9	10490.3	10491.6	10492.2
40°	9614.4	9591.4	9528.6	9494.3	9523.0	9561.4	9564.2	9588.2	9510.9	9512.7	9497.0
45°	8513.5	8506.1	8386.3	8383.0	8421.3	8414.5	8448.7	8510.7	8405.6	8426.7	8356.8
50°	7365.1	7333.7	7228.0	7174.9	7196.5	7252.4	7283.6	7348.7	7256.8	7278.4	7198.7
55°	6181.4	6143.7	6017.9	5953.3	5953.0	6004.4	6080.8	6152.9	6065.6	6074.6	5984.6
60°	4991.8	4949.3	4819.2	4742.6	4724.8	4783.0	4882.0	4958.7	4888.9	4864.3	4766.5
65°	3857.7	3814.0	3673.9	3609.6	3586.7	3643.6	3728.6	3828.0	3758.7	3732.2	3634.3
70°	2776.0	2732.6	2639.1	2555.4	2535.2	2599.1	2682.6	2756.4	2687.0	2679.6	2595.8
75°	1806.2	1772.1	1705.7	1638.8	1618.3	1650.0	1737.4	1797.1	1722.5	1719.7	1664.0
80°	973.1	948.6	888.4	859.8	847.6	866.9	926.8	965.6	906.4	894.2	864.3
85°	330.7	320.5	291.8	274.2	267.4	273.5	307.6	332.5	290.2	297.5	274.0
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	12.0	7.7	0.0	0.0	0.0	7.0	11.6	0.0	0.0	0.0
150°	13.6	15.0	14.1	8.8	0.0	10.5	12.8	16.9	0.0	7.3	0.0
155°	14.3	15.7	21.5	17.6	13.6	14.5	19.5	21.3	12.0	14.0	15.1
160°	17.6	20.7	22.2	16.2	21.8	14.5	15.4	25.6	10.0	15.0	19.1
165°	17.9	19.7	22.8	20.6	18.4	21.6	25.2	18.3	13.6	18.7	18.8
170°	22.9	24.0	27.5	25.7	23.4	26.4	25.5	23.9	18.3	20.0	25.2
175°	21.2	24.7	27.5	24.3	31.3	27.0	29.6	25.2	14.9	21.0	26.9
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°	13620.5	13620.5	13620.5	13620.5	13620.5	13620.5
5°	13561.4	13549.5	13550.9	13546.7	13551.1	13563.1
10°	13375.7	13363.9	13366.3	13352.9	13367.7	13393.8
15°	13064.3	13055.7	13054.8	13045.0	13050.5	13100.6
20°	12627.2	12622.8	12613.9	12599.1	12610.4	12671.3
25°	12048.0	12044.7	12031.4	12011.1	12028.4	12108.9
30°	11329.9	11310.6	11325.0	11290.8	11312.2	11420.3
35°	10457.6	10435.5	10438.5	10439.3	10462.2	10562.3
40°	9446.6	9417.0	9431.6	9437.3	9483.3	9614.4
45°	8318.7	8278.9	8340.4	8319.1	8364.2	8513.5
50°	7104.2	7075.2	7126.2	7141.5	7211.2	7365.1
55°	5881.0	5853.4	5903.9	5941.1	6018.0	6181.4
60°	4687.8	4658.6	4681.3	4760.8	4843.4	4991.8
65°	3561.2	3534.4	3549.6	3634.9	3717.7	3857.7
70°	2518.9	2498.2	2529.8	2602.7	2652.1	2776.0
75°	1611.1	1594.2	1616.2	1672.2	1704.1	1806.2
80°	839.2	833.0	830.8	863.3	892.2	973.1
85°	264.1	259.3	262.0	278.4	294.6	330.7
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	7.7	8.3	0.0
150°	6.8	0.0	10.8	10.7	14.3	13.6
155°	14.2	9.9	16.9	15.1	19.6	14.3
160°	18.9	18.4	26.4	22.2	23.2	17.6
165°	25.7	23.1	25.7	25.9	22.2	17.9
170°	27.0	20.7	27.4	26.9	25.9	22.9
175°	29.1	27.9	30.1	22.2	26.2	21.2
180°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)