

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: P411986

Luminaire Tested: **LHB-12-UNV-L840-CD-U**

Issue Date: 09/28/2020

Test Information

Test Method: LM-79-08
Report Number: P411986
Test Lab: BAY AREA COMPLIANCE LABS
Issue Date: 09/28/2020
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
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (RKS180522018-10)
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12389.8 lumens
Efficiency: N/A
Efficacy: 142.6 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

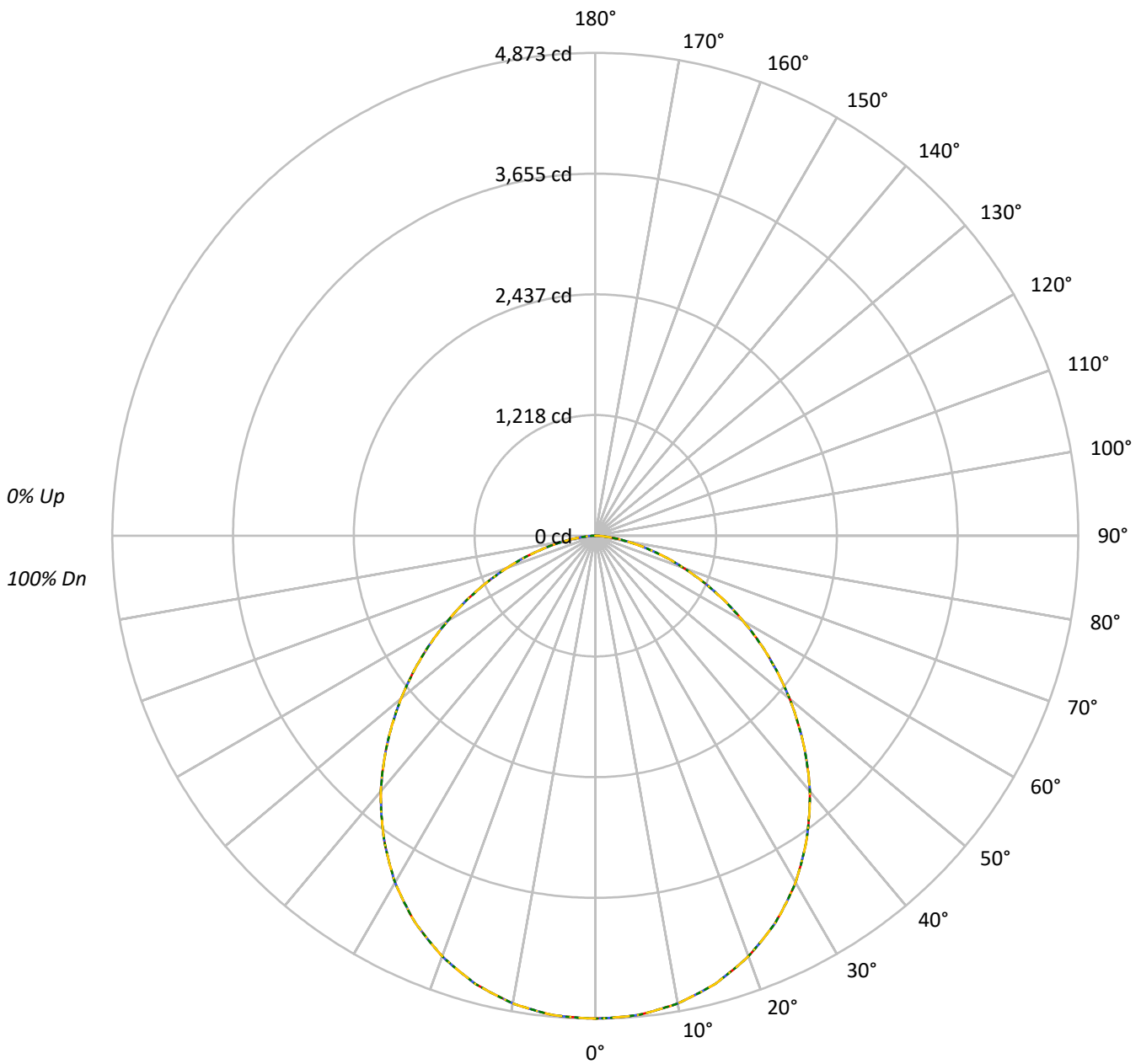
Input Watts (W): 86.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



0% Up
100% Dn

— 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	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					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	38	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	34	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	27625	27625	27625	27625
5°	27638	27638	27638	27638
10°	27593	27593	27593	27593
15°	27472	27472	27472	27472
20°	27249	27249	27249	27249
25°	26926	26926	26926	26926
30°	26454	26454	26454	26454
35°	25754	25754	25754	25754
40°	24918	24918	24918	24918
45°	23811	23811	23811	23811
50°	22554	22554	22554	22554
55°	21144	21144	21144	21144
60°	19498	19498	19498	19498
65°	17740	17740	17740	17740
70°	15598	15598	15598	15598
75°	13161	13161	13161	13161
80°	10198	10198	10198	10198
85°	6172	6172	6172	6172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.6	3.7
10°-20°	1320.1	10.7
20°-30°	1981.6	16.0
30°-40°	2326.0	18.8
40°-50°	2290.4	18.5
50°-60°	1913.4	15.4
60°-70°	1312.8	10.6
70°-80°	647.4	5.2
80°-90°	136.7	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°	3763.2	30.4
0°-40°	6089.2	49.1
0°-60°	10293.0	83.1
0°-90°	12389.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12389.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4873	4873	4873	4873	4873	
5°	4857	4857	4857	4857	4857	462
15°	4681	4681	4681	4681	4681	1320
25°	4305	4305	4305	4305	4305	1982
35°	3722	3722	3722	3722	3722	2326
45°	2970	2970	2970	2970	2970	2290
55°	2140	2140	2140	2140	2140	1913
65°	1323	1323	1323	1323	1323	1313
75°	601	601	601	601	601	647
85°	95	95	95	95	95	130
90°	0	0	0	0	0	13
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4
5°	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1
10°	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7
15°	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2
20°	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2
25°	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0
30°	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6
35°	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7
40°	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4
45°	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2
50°	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5
55°	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5
60°	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8
65°	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6
70°	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1
75°	600.9	600.9	600.9	600.9	600.9	600.9	600.9	600.9	600.9	600.9	600.9
80°	312.4	312.4	312.4	312.4	312.4	312.4	312.4	312.4	312.4	312.4	312.4
85°	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9
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	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°	4873.4	4873.4	4873.4	4873.4	4873.4	4873.4
5°	4857.1	4857.1	4857.1	4857.1	4857.1	4857.1
10°	4793.7	4793.7	4793.7	4793.7	4793.7	4793.7
15°	4681.2	4681.2	4681.2	4681.2	4681.2	4681.2
20°	4517.2	4517.2	4517.2	4517.2	4517.2	4517.2
25°	4305.0	4305.0	4305.0	4305.0	4305.0	4305.0
30°	4041.6	4041.6	4041.6	4041.6	4041.6	4041.6
35°	3721.7	3721.7	3721.7	3721.7	3721.7	3721.7
40°	3367.4	3367.4	3367.4	3367.4	3367.4	3367.4
45°	2970.2	2970.2	2970.2	2970.2	2970.2	2970.2
50°	2557.5	2557.5	2557.5	2557.5	2557.5	2557.5
55°	2139.5	2139.5	2139.5	2139.5	2139.5	2139.5
60°	1719.8	1719.8	1719.8	1719.8	1719.8	1719.8
65°	1322.6	1322.6	1322.6	1322.6	1322.6	1322.6
70°	941.1	941.1	941.1	941.1	941.1	941.1
75°	600.9	600.9	600.9	600.9	600.9	600.9
80°	312.4	312.4	312.4	312.4	312.4	312.4
85°	94.9	94.9	94.9	94.9	94.9	94.9
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)