

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: P411994

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

Issue Date: 09/28/2020

Test Information

Test Method: LM-79-08
Report Number: P411994
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 (RKS180330001-10)
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13249.0 lumens
Efficiency: N/A
Efficacy: 152.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.4
Luminous Opening: Rectangular (W 0.99' x L: 1.92' x H: 0')
CIE Type: Direct

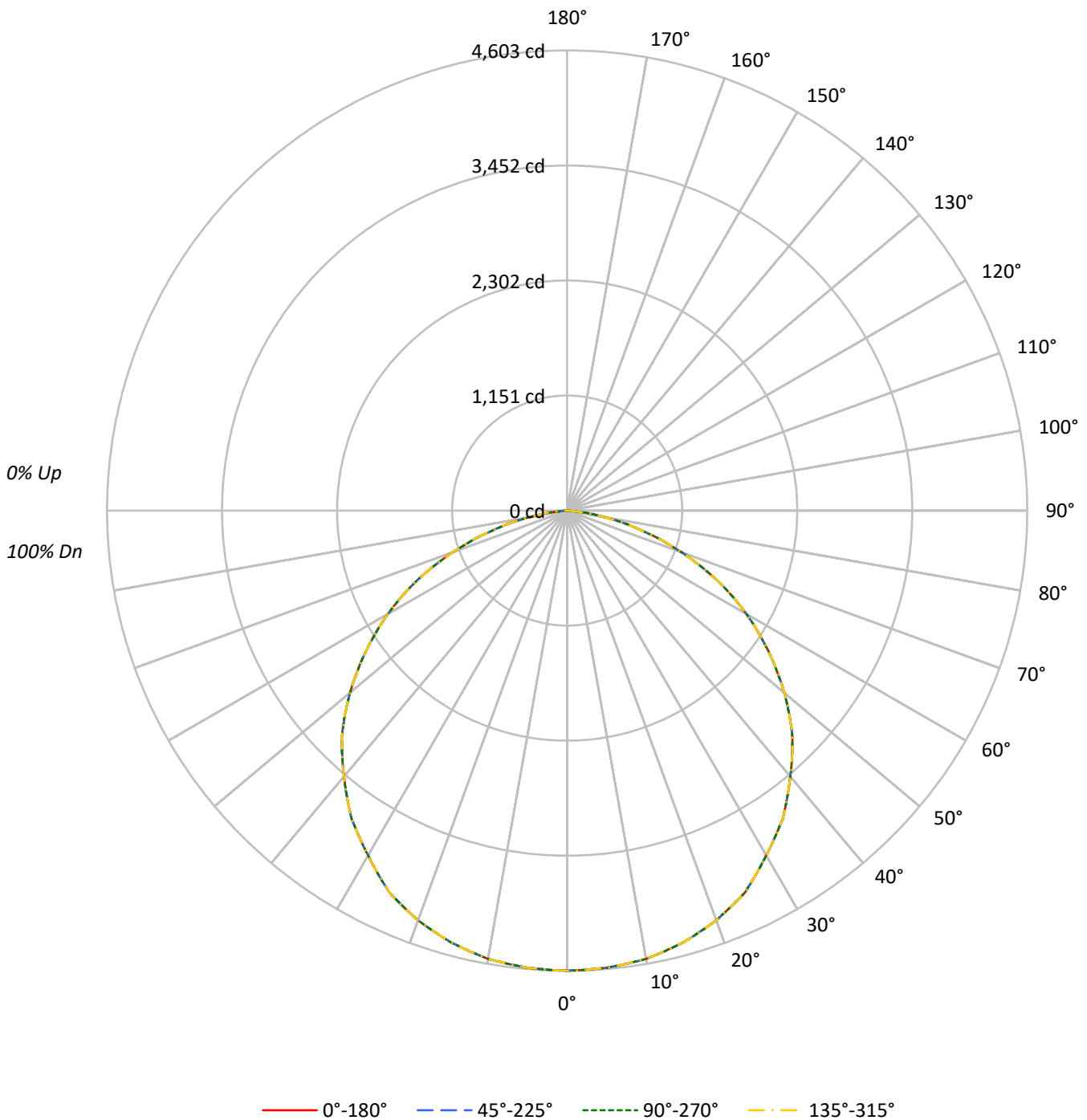
Input Watts (W): 86.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	62	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	47	41	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34
8	61	47	38	33	59	46	38	33	45	38	32	44	37	32	43	36	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	26094	26094	26094	26094
5°	26114	26114	26114	26114
10°	26212	26212	26212	26212
15°	26258	26258	26258	26258
20°	26309	26309	26309	26309
25°	26348	26348	26348	26348
30°	26069	26069	26069	26069
35°	26022	26022	26022	26022
40°	25704	25704	25704	25704
45°	25547	25547	25547	25547
50°	25019	25019	25019	25019
55°	24330	24330	24330	24330
60°	23493	23493	23493	23493
65°	22278	22278	22278	22278
70°	20086	20086	20086	20086
75°	17081	17081	17081	17081
80°	12656	12656	12656	12656
85°	4878	4878	4878	4878



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.0	3.3
10°-20°	1263.7	9.5
20°-30°	1936.4	14.6
30°-40°	2347.2	17.7
40°-50°	2450.4	18.5
50°-60°	2200.2	16.6
60°-70°	1634.9	12.3
70°-80°	833.0	6.3
80°-90°	146.3	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°	3637.1	27.5
0°-40°	5984.2	45.2
0°-60°	10634.8	80.3
0°-90°	13249.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13249.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4603	4603	4603	4603	4603	
5°	4589	4589	4589	4589	4589	437
15°	4474	4474	4474	4474	4474	1264
25°	4213	4213	4213	4213	4213	1936
35°	3760	3760	3760	3760	3760	2347
45°	3187	3187	3187	3187	3187	2450
55°	2462	2462	2462	2462	2462	2200
65°	1661	1661	1661	1661	1661	1635
75°	780	780	780	780	780	833
85°	75	75	75	75	75	141
90°	0	0	0	0	0	10
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: P411994

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2
5°	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2
10°	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8
15°	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3
20°	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3
25°	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6
30°	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7
35°	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4
40°	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6
45°	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8
50°	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0
55°	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8
60°	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2
65°	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9
70°	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9
75°	779.9	779.9	779.9	779.9	779.9	779.9	779.9	779.9	779.9	779.9	779.9
80°	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7
85°	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
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°	4603.2	4603.2	4603.2	4603.2	4603.2	4603.2
5°	4589.2	4589.2	4589.2	4589.2	4589.2	4589.2
10°	4553.8	4553.8	4553.8	4553.8	4553.8	4553.8
15°	4474.3	4474.3	4474.3	4474.3	4474.3	4474.3
20°	4361.3	4361.3	4361.3	4361.3	4361.3	4361.3
25°	4212.6	4212.6	4212.6	4212.6	4212.6	4212.6
30°	3982.7	3982.7	3982.7	3982.7	3982.7	3982.7
35°	3760.4	3760.4	3760.4	3760.4	3760.4	3760.4
40°	3473.6	3473.6	3473.6	3473.6	3473.6	3473.6
45°	3186.8	3186.8	3186.8	3186.8	3186.8	3186.8
50°	2837.0	2837.0	2837.0	2837.0	2837.0	2837.0
55°	2461.8	2461.8	2461.8	2461.8	2461.8	2461.8
60°	2072.2	2072.2	2072.2	2072.2	2072.2	2072.2
65°	1660.9	1660.9	1660.9	1660.9	1660.9	1660.9
70°	1211.9	1211.9	1211.9	1211.9	1211.9	1211.9
75°	779.9	779.9	779.9	779.9	779.9	779.9
80°	387.7	387.7	387.7	387.7	387.7	387.7
85°	75.0	75.0	75.0	75.0	75.0	75.0
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)