

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: P411987

Luminaire Tested: **LHB-18-UNV-L840-CD-U**

Issue Date: 09/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P411987  
Test Lab: BAY AREA COMPLIANCE LABS  
Issue Date: 09/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: LHB-18-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: 18499.8 lumens  
Efficiency: N/A  
Efficacy: 139.9 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

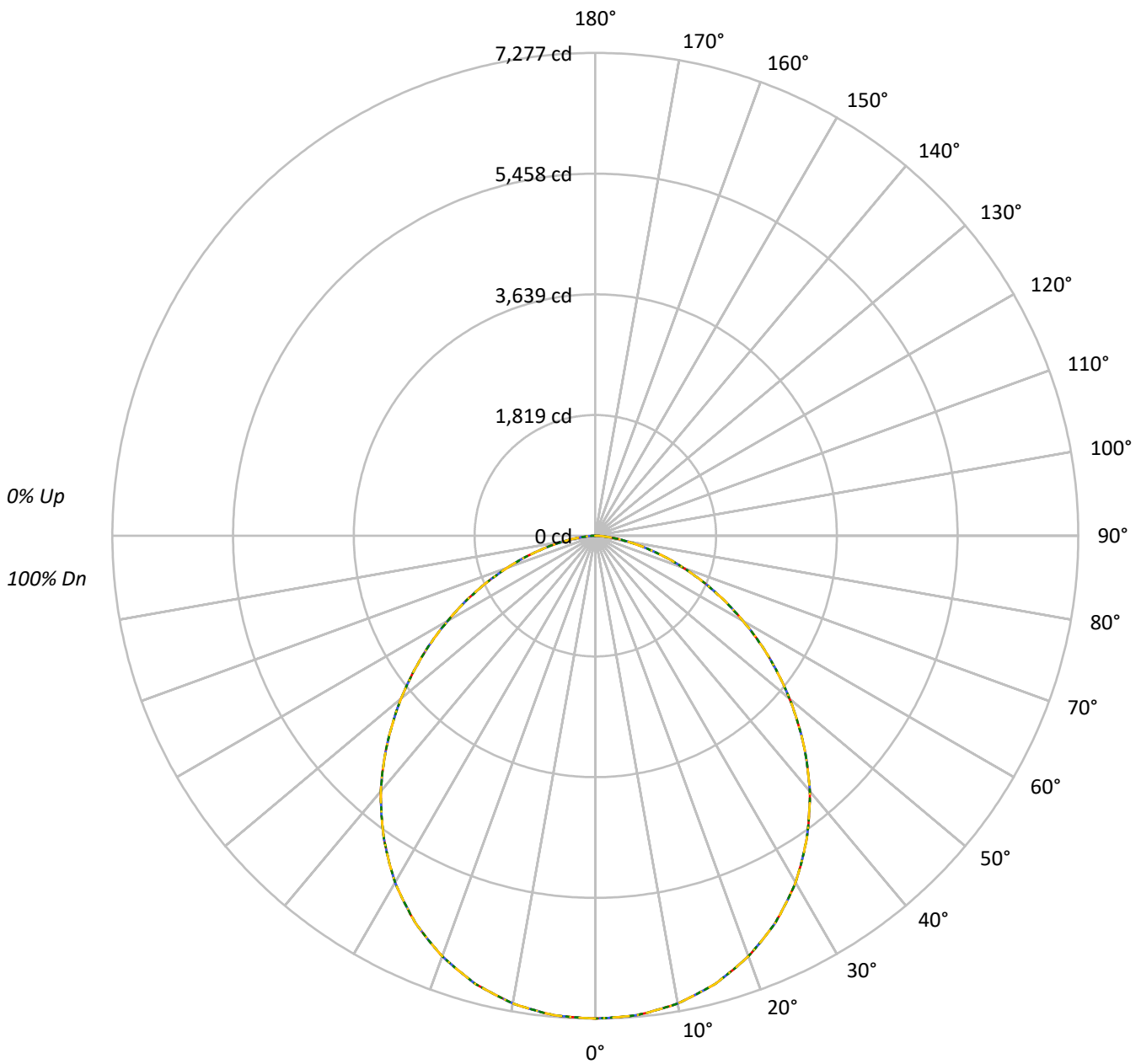
Input Watts (W): 132.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	87	85
2	100	92	86	80	98	90	85	80	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		67	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	41
7	67	53	45	39	65	53	45	39	51	44	38		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35		46	39	34		44	39	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	34	28	40	33	28		39	33	28		38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	41248	41248	41248	41248
5°	41268	41268	41268	41268
10°	41199	41199	41199	41199
15°	41020	41020	41020	41020
20°	40687	40687	40687	40687
25°	40204	40204	40204	40204
30°	39499	39499	39499	39499
35°	38455	38455	38455	38455
40°	37206	37206	37206	37206
45°	35553	35553	35553	35553
50°	33676	33676	33676	33676
55°	31572	31572	31572	31572
60°	29113	29113	29113	29113
65°	26489	26489	26489	26489
70°	23288	23288	23288	23288
75°	19652	19652	19652	19652
80°	15228	15228	15228	15228
85°	9210	9210	9210	9210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	689.2	3.7
10°-20°	1971.1	10.7
20°-30°	2958.7	16.0
30°-40°	3473.0	18.8
40°-50°	3419.9	18.5
50°-60°	2856.9	15.4
60°-70°	1960.2	10.6
70°-80°	966.7	5.2
80°-90°	204.0	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°	5619.1	30.4
0°-40°	9092.0	49.1
0°-60°	15368.8	83.1
0°-90°	18499.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18499.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	7277	7277	7277	7277	7277	
5°	7252	7252	7252	7252	7252	689
15°	6990	6990	6990	6990	6990	1971
25°	6428	6428	6428	6428	6428	2959
35°	5557	5557	5557	5557	5557	3473
45°	4435	4435	4435	4435	4435	3420
55°	3195	3195	3195	3195	3195	2857
65°	1975	1975	1975	1975	1975	1960
75°	897	897	897	897	897	967
85°	142	142	142	142	142	194
90°	0	0	0	0	0	19
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°	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7
5°	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4
10°	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6
15°	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8
20°	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8
25°	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0
30°	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6
35°	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0
40°	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0
45°	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9
50°	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7
55°	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6
60°	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9
65°	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9
70°	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1
75°	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3
80°	466.5	466.5	466.5	466.5	466.5	466.5	466.5	466.5	466.5	466.5	466.5
85°	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6
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°	7276.7	7276.7	7276.7	7276.7	7276.7	7276.7
5°	7252.4	7252.4	7252.4	7252.4	7252.4	7252.4
10°	7157.6	7157.6	7157.6	7157.6	7157.6	7157.6
15°	6989.8	6989.8	6989.8	6989.8	6989.8	6989.8
20°	6744.8	6744.8	6744.8	6744.8	6744.8	6744.8
25°	6428.0	6428.0	6428.0	6428.0	6428.0	6428.0
30°	6034.6	6034.6	6034.6	6034.6	6034.6	6034.6
35°	5557.0	5557.0	5557.0	5557.0	5557.0	5557.0
40°	5028.0	5028.0	5028.0	5028.0	5028.0	5028.0
45°	4434.9	4434.9	4434.9	4434.9	4434.9	4434.9
50°	3818.7	3818.7	3818.7	3818.7	3818.7	3818.7
55°	3194.6	3194.6	3194.6	3194.6	3194.6	3194.6
60°	2567.9	2567.9	2567.9	2567.9	2567.9	2567.9
65°	1974.9	1974.9	1974.9	1974.9	1974.9	1974.9
70°	1405.1	1405.1	1405.1	1405.1	1405.1	1405.1
75°	897.3	897.3	897.3	897.3	897.3	897.3
80°	466.5	466.5	466.5	466.5	466.5	466.5
85°	141.6	141.6	141.6	141.6	141.6	141.6
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)