

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: P470184

Luminaire Tested: **VHB2-24-W-UNV-L840-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470184  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-24-W-UNV-L840-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

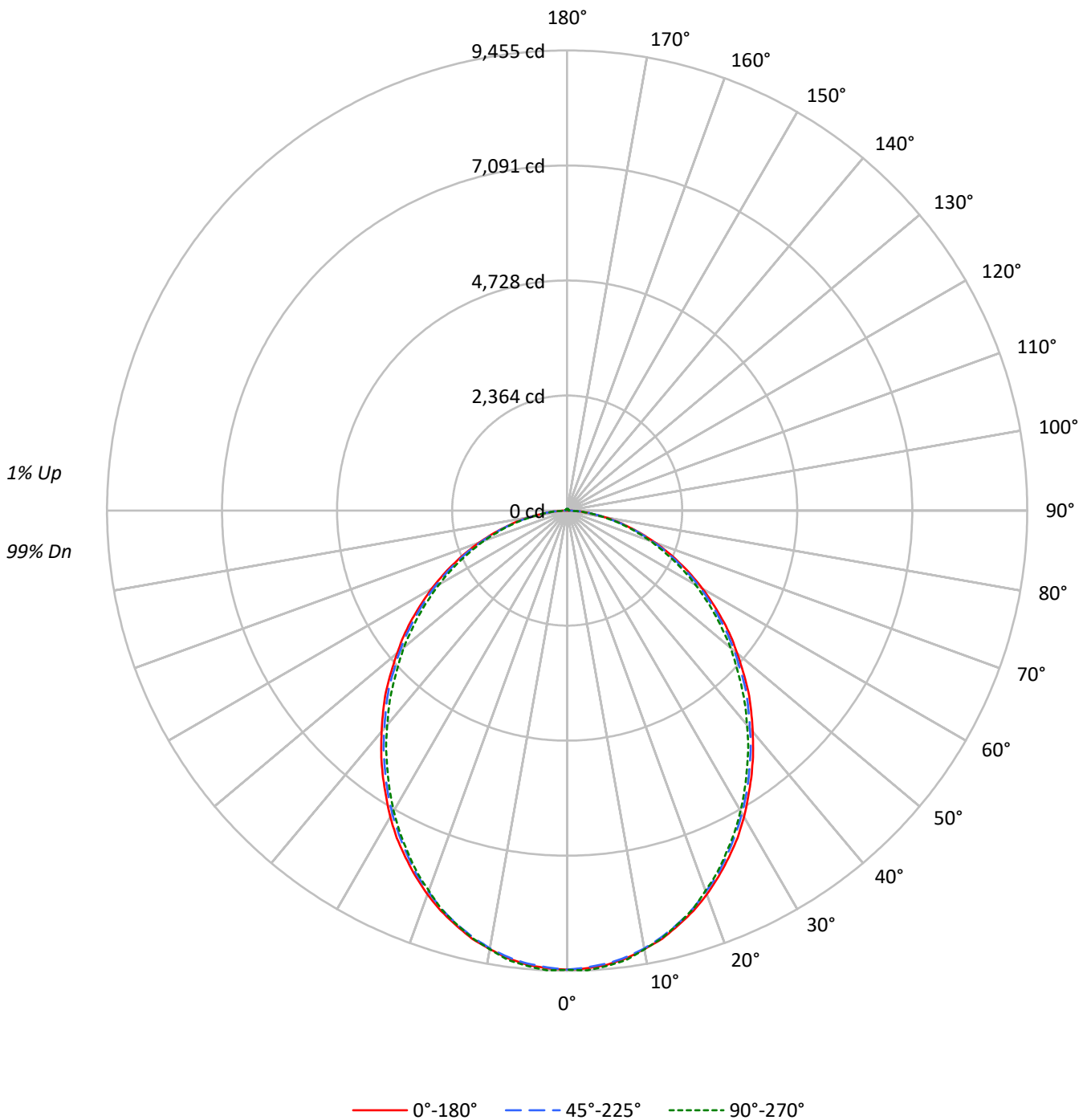
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22825.2 lumens  
Efficiency: N/A  
Efficacy: 143.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 159.2  
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: 24 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	101	101	101	99
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	92	85	79	97	90	84	78	86	81	76	83	78	75	79	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	73	68	64	71	66	62	60
4	84	72	63	57	81	71	63	57	68	61	56	66	60	55	63	58	54	52
5	77	65	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	46	42	40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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

	0°	45°	90°
0°	58018	58018	58018
5°	57844	57697	57990
10°	57147	57036	57162
15°	56169	55980	56010
20°	54945	54549	54401
25°	53349	52873	52559
30°	51620	51030	50616
35°	49624	48981	48392
40°	47617	46883	46158
45°	45820	45097	43970
50°	43595	42924	41924
55°	41671	40767	39658
60°	39516	38639	37383
65°	37191	36292	34995
70°	34460	33820	32644
75°	31393	30970	29899
80°	28068	27604	26637
85°	23811	23811	23225



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	886.9	3.9
10°-20°	2477.3	10.9
20°-30°	3589.4	15.7
30°-40°	4082.7	17.9
40°-50°	3981.1	17.4
50°-60°	3398.8	14.9
60°-70°	2467.4	10.8
70°-80°	1377.7	6.0
80°-90°	386.9	1.7
90°-100°	27.5	0.1
100°-110°	27.2	0.1
110°-120°	26.7	0.1
120°-130°	25.6	0.1
130°-140°	24.2	0.1
140°-150°	20.9	0.1
150°-160°	14.6	0.1
160°-170°	8.0	0.0
170°-180°	2.4	0.0
0°-30°	6953.6	30.5
0°-40°	11036.2	48.4
0°-60°	18416.1	80.7
0°-90°	22648.1	99.2
90°-120°	81.3	0.4
90°-150°	152.0	0.7
90°-180°	177.0	0.8
0°-180°	22825.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9433	9433	9433	9433	9433	
5°	9368	9347	9345	9377	9392	887
15°	8821	8805	8791	8790	8796	2486
25°	7861	7834	7791	7762	7744	3619
35°	6609	6587	6523	6463	6445	4133
45°	5268	5218	5184	5088	5055	4053
55°	3886	3869	3802	3722	3698	3476
65°	2555	2536	2494	2435	2404	2534
75°	1321	1328	1303	1271	1258	1412
85°	337	344	337	328	329	369
90°	24	26	31	37	34	28
95°	11	18	26	31	32	11
105°	20	20	25	31	33	21
115°	24	24	26	30	32	23
125°	25	27	27	31	31	23
135°	28	31	32	32	32	22
145°	27	32	34	37	37	17
155°	26	28	33	34	34	12
165°	21	25	28	32	32	6
175°	24	24	25	26	27	2
180°	24	24	24	24	24	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	9432.6	9432.6	9432.6	9432.6	9432.6
2.5°	9413.6	9388.7	9393.4	9424.3	9455.2
5°	9368.5	9347.1	9344.7	9376.8	9392.2
7.5°	9280.6	9258.0	9256.8	9293.6	9311.4
10°	9149.9	9143.9	9132.1	9157.0	9152.3
12.5°	9013.3	8980.0	8974.1	8994.3	8995.4
15°	8820.8	8805.4	8791.1	8789.9	8795.9
17.5°	8623.6	8590.3	8582.0	8577.3	8589.2
20°	8394.3	8357.5	8333.7	8329.0	8311.2
22.5°	8134.2	8111.6	8089.0	8049.8	8053.4
25°	7860.9	7833.6	7790.8	7762.3	7744.5
27.5°	7581.7	7539.0	7493.8	7467.7	7452.2
30°	7268.1	7242.0	7185.0	7136.2	7126.7
32.5°	6935.5	6917.7	6860.6	6817.9	6789.4
35°	6608.8	6587.4	6523.2	6462.7	6444.8
37.5°	6276.1	6250.0	6195.4	6141.9	6112.2
40°	5930.4	5911.4	5839.0	5774.8	5748.7
42.5°	5596.6	5571.7	5506.3	5427.9	5412.5
45°	5267.5	5217.6	5184.4	5088.2	5054.9
47.5°	4902.8	4889.8	4818.5	4741.3	4704.4
50°	4555.9	4547.6	4485.8	4399.1	4381.3
52.5°	4237.6	4204.3	4147.3	4068.9	4028.5
55°	3885.9	3869.3	3801.6	3722.0	3698.2
57.5°	3541.4	3541.4	3468.9	3401.2	3360.8
60°	3212.3	3192.1	3141.0	3075.7	3038.9
62.5°	2880.9	2864.2	2820.3	2754.9	2721.7
65°	2555.4	2536.4	2493.6	2435.4	2404.5
67.5°	2244.1	2221.5	2194.2	2118.2	2098.0
70°	1916.2	1911.5	1880.6	1828.3	1815.2
72.5°	1621.6	1616.9	1581.2	1534.9	1520.6
75°	1321.0	1328.2	1303.2	1271.1	1258.1
77.5°	1059.7	1052.6	1028.8	1009.8	987.2
80°	792.4	790.0	779.3	753.2	752.0
82.5°	547.7	557.2	548.9	529.8	522.7
85°	337.4	344.5	337.4	327.9	329.1
87.5°	150.9	153.3	144.9	130.7	121.2
90°	23.8	26.1	30.9	36.8	34.5
92.5°	8.3	17.8	26.1	30.9	32.1
95°	10.7	17.8	26.1	30.9	32.1
97.5°	15.4	17.8	26.1	30.9	33.3
100°	17.8	19.0	26.1	30.9	33.3
102.5°	19.0	19.0	26.1	30.9	33.3
105°	20.2	20.2	24.9	30.9	33.3
107.5°	21.4	20.2	24.9	30.9	33.3
110°	21.4	21.4	24.9	30.9	32.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	22.6	22.6	26.1	29.7	32.1
115°	23.8	23.8	26.1	29.7	32.1
117.5°	23.8	24.9	26.1	30.9	32.1
120°	24.9	26.1	26.1	30.9	30.9
122.5°	24.9	27.3	27.3	30.9	30.9
125°	24.9	27.3	27.3	30.9	30.9
127.5°	26.1	28.5	27.3	30.9	30.9
130°	27.3	28.5	29.7	30.9	30.9
132.5°	27.3	29.7	30.9	32.1	30.9
135°	28.5	30.9	32.1	32.1	32.1
137.5°	29.7	30.9	33.3	33.3	33.3
140°	29.7	32.1	33.3	34.5	34.5
142.5°	27.3	32.1	33.3	35.6	35.6
145°	27.3	32.1	34.5	36.8	36.8
147.5°	26.1	30.9	33.3	36.8	36.8
150°	26.1	29.7	33.3	35.6	35.6
152.5°	27.3	28.5	33.3	34.5	35.6
155°	26.1	28.5	33.3	34.5	34.5
157.5°	24.9	27.3	32.1	34.5	35.6
160°	23.8	27.3	30.9	34.5	34.5
162.5°	22.6	26.1	29.7	33.3	34.5
165°	21.4	24.9	28.5	32.1	32.1
167.5°	21.4	24.9	27.3	29.7	30.9
170°	22.6	23.8	26.1	27.3	28.5
172.5°	23.8	23.8	26.1	26.1	26.1
175°	23.8	23.8	24.9	26.1	27.3
177.5°	24.9	23.8	23.8	26.1	26.1
180°	23.8	23.8	23.8	23.8	23.8

(END OF REPORT)