

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: P470141

Luminaire Tested: **VHB2-12-N-UNV-L850-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470141  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-12-N-UNV-L850-CD-U  
Description: VHB2 LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11883.7 lumens  
Efficiency: N/A  
Efficacy: 146.0 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.75 / 0.88  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

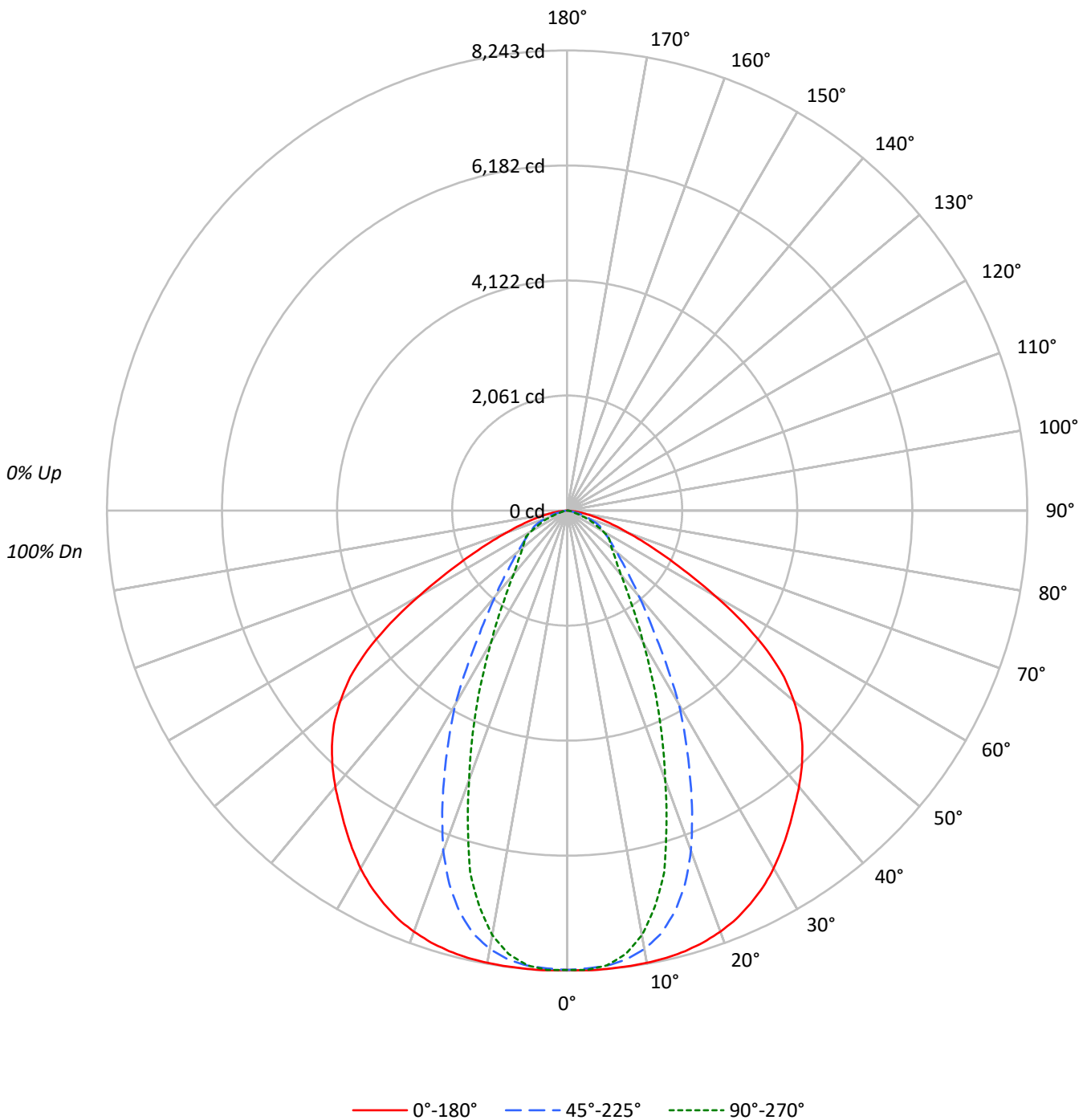
Input Watts (W): 81.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	102	102	102	100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	46
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42
9	65	53	46	41	63	52	45	41	51	45	40	50	44	40	49	44	40	38
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36

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

	0°	45°	90°
0°	50610	50610	50610
5°	50891	50519	50480
10°	51377	49798	48228
15°	52025	47406	42740
20°	52541	42454	33602
25°	52728	35251	25929
30°	52560	28384	19306
35°	52039	20879	14809
40°	51879	16031	12000
45°	51836	12955	10658
50°	50758	11119	9947
55°	46920	9953	9970
60°	37615	9397	9098
65°	27944	9166	7353
70°	20962	7539	4994
75°	15796	5708	2709
80°	11480	2788	2281
85°	7375	2385	1828



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	775.3	6.5
10°-20°	2065.8	17.4
20°-30°	2530.6	21.3
30°-40°	2272.7	19.1
40°-50°	1760.8	14.8
50°-60°	1317.6	11.1
60°-70°	790.5	6.7
70°-80°	313.5	2.6
80°-90°	56.9	0.5
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
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0°-30°	5371.8	45.2
0°-40°	7644.4	64.3
0°-60°	10722.8	90.2
0°-90°	11883.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11883.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8228	8228	8228	8228	8228	
5°	8242	8206	8182	8180	8176	786
15°	8170	7956	7445	6894	6712	2309
25°	7769	6956	5194	4153	3821	3579
35°	6930	5125	2781	2131	1972	4341
45°	5959	2670	1489	1255	1225	4582
55°	4375	1417	928	899	930	3840
65°	1920	787	630	535	505	1967
75°	665	384	240	126	114	733
85°	104	42	34	29	26	138
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8228.2	8228.2	8228.2	8228.2	8228.2
2.5°	8242.9	8212.8	8208.6	8229.2	8235.0
5°	8242.4	8206.0	8182.2	8180.1	8175.9
7.5°	8235.5	8187.5	8111.0	8050.2	8014.3
10°	8226.0	8141.6	7973.2	7798.4	7721.9
12.5°	8208.1	8069.8	7762.5	7426.2	7264.7
15°	8170.1	7955.7	7444.7	6894.1	6712.0
17.5°	8111.5	7784.7	7017.6	6221.5	5915.9
20°	8027.0	7568.8	6486.0	5515.7	5133.5
22.5°	7918.3	7290.6	5845.7	4760.8	4451.4
25°	7769.4	6955.9	5194.2	4153.1	3820.6
27.5°	7603.1	6579.5	4579.7	3516.5	3225.6
30°	7400.4	6121.8	3996.4	2959.0	2718.3
32.5°	7169.7	5650.3	3354.4	2484.9	2318.1
35°	6930.5	5125.0	2780.6	2131.2	1972.3
37.5°	6685.6	4529.0	2347.7	1827.7	1713.1
40°	6461.2	3864.4	1996.6	1585.9	1494.5
42.5°	6220.5	3240.4	1726.3	1392.7	1336.7
45°	5959.2	2670.2	1489.3	1255.4	1225.3
47.5°	5664.1	2252.6	1304.5	1150.3	1122.4
50°	5304.5	1913.2	1162.0	1041.1	1039.5
52.5°	4900.7	1646.6	1035.3	961.9	975.6
55°	4375.4	1416.9	928.1	899.0	929.7
57.5°	3750.9	1229.5	840.4	850.5	874.8
60°	3057.7	1060.6	763.9	772.3	739.6
62.5°	2444.8	912.8	694.7	650.4	608.7
65°	1920.0	786.6	629.8	534.8	505.2
67.5°	1497.2	669.9	527.4	438.7	401.7
70°	1165.6	569.1	419.2	336.3	277.7
72.5°	890.6	473.5	330.5	206.4	156.8
75°	664.7	384.3	240.2	126.2	114.0
77.5°	482.5	287.7	134.1	92.4	86.1
80°	324.1	194.3	78.7	67.6	64.4
82.5°	206.4	101.9	54.4	47.5	43.8
85°	104.5	41.7	33.8	29.0	25.9
87.5°	36.4	20.1	15.3	12.1	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)