

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: P470144

Luminaire Tested: **VHB2-24-N-UNV-L850-CD-U**

Issue Date: 01/20/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P470144  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB2-24-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**

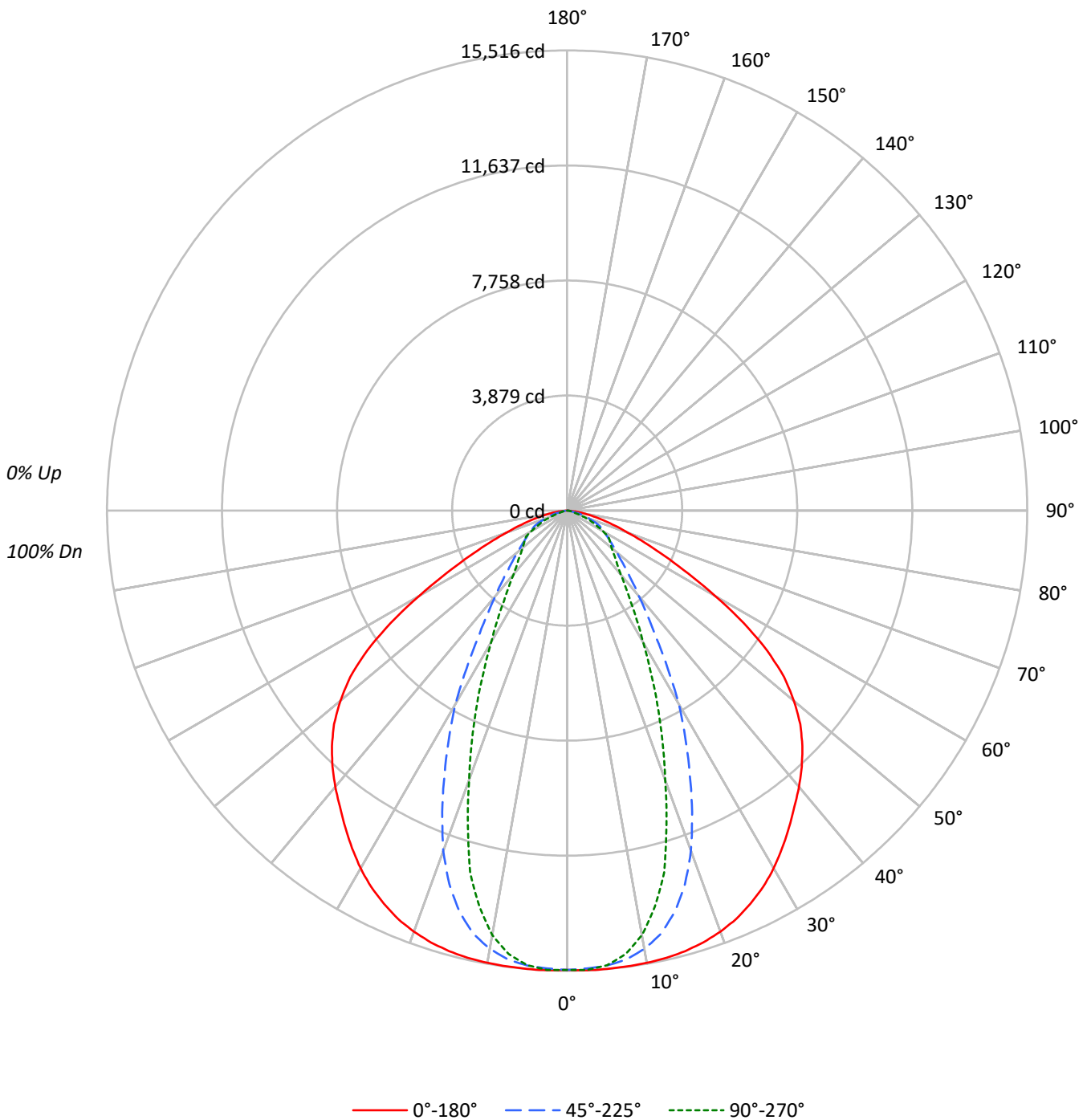
Lumens per Lamp: N/A  
Luminaire Lumens: 22368.5 lumens  
Efficiency: N/A  
Efficacy: 140.5 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.75 / 0.88  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 159.2  
Input Voltage (V): 120  
Input Current (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	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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89					89			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78					78			
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55					55			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	46					46			
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42					42			
9	65	53	46	41	63	52	45	41	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36					36			

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

	0°	45°	90°
0°	95262	95262	95262
5°	95791	95091	95018
10°	96706	93733	90779
15°	97926	89232	80449
20°	98897	79911	63248
25°	99249	66352	48805
30°	98933	53425	36339
35°	97953	39299	27875
40°	97651	30175	22587
45°	97570	24384	20062
50°	95542	20928	18723
55°	88316	18733	18765
60°	70802	17688	17126
65°	52600	17254	13841
70°	39458	14189	9400
75°	29732	10744	5100
80°	21610	5246	4293
85°	13889	4488	3437



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1459.3	6.5
10°-20°	3888.5	17.4
20°-30°	4763.4	21.3
30°-40°	4277.8	19.1
40°-50°	3314.3	14.8
50°-60°	2480.1	11.1
60°-70°	1488.0	6.7
70°-80°	590.1	2.6
80°-90°	107.0	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
0°-30°	10111.1	45.2
0°-40°	14389.0	64.3
0°-60°	20183.3	90.2
0°-90°	22368.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22368.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	15488	15488	15488	15488	15488	
5°	15514	15446	15401	15397	15389	###
15°	15378	14975	14013	12977	12634	4345
25°	14624	13093	9777	7817	7191	6737
35°	13045	9647	5234	4012	3712	8171
45°	11217	5026	2803	2363	2306	8624
55°	8236	2667	1747	1692	1750	7228
65°	3614	1481	1186	1007	951	3702
75°	1251	723	452	238	215	1379
85°	197	78	64	55	49	261
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	15487.7	15487.7	15487.7	15487.7	15487.7
2.5°	15515.5	15458.9	15450.9	15489.7	15500.6
5°	15514.5	15445.9	15401.2	15397.3	15389.3
7.5°	15501.6	15411.2	15267.1	15152.8	15085.2
10°	15483.7	15324.7	15007.7	14678.8	14534.7
12.5°	15449.9	15189.6	14611.2	13978.3	13674.2
15°	15378.4	14974.9	14013.0	12976.6	12633.8
17.5°	15268.1	14653.0	13209.1	11710.7	11135.3
20°	15109.1	14246.6	12208.5	10382.1	9662.7
22.5°	14904.4	13722.9	11003.2	8961.1	8378.8
25°	14624.2	13092.9	9776.9	7817.4	7191.3
27.5°	14311.2	12384.4	8620.3	6619.0	6071.5
30°	13929.6	11522.9	7522.2	5569.6	5116.5
32.5°	13495.3	10635.5	6313.9	4677.3	4363.3
35°	13045.2	9646.8	5233.8	4011.5	3712.4
37.5°	12584.1	8524.9	4418.9	3440.2	3224.5
40°	12161.8	7273.8	3758.1	2985.1	2813.1
42.5°	11708.7	6099.3	3249.4	2621.4	2516.0
45°	11216.8	5026.1	2803.2	2363.0	2306.4
47.5°	10661.3	4240.1	2455.4	2165.3	2112.6
50°	9984.6	3601.1	2187.1	1959.6	1956.6
52.5°	9224.4	3099.3	1948.6	1810.5	1836.3
55°	8235.7	2667.1	1746.9	1692.3	1749.9
57.5°	7060.2	2314.3	1582.0	1600.8	1646.5
60°	5755.5	1996.3	1437.9	1453.8	1392.2
62.5°	4601.8	1718.1	1307.7	1224.2	1145.7
65°	3614.1	1480.6	1185.5	1006.6	951.0
67.5°	2818.1	1261.0	992.7	825.8	756.2
70°	2194.1	1071.2	789.0	633.0	522.7
72.5°	1676.4	891.3	622.1	388.5	295.1
75°	1251.1	723.4	452.1	237.5	214.6
77.5°	908.2	541.6	252.4	173.9	162.0
80°	610.1	365.7	148.1	127.2	121.2
82.5°	388.5	191.8	102.4	89.4	82.5
85°	196.8	78.5	63.6	54.7	48.7
87.5°	68.6	37.8	28.8	22.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)