

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: P417699

Luminaire Tested: **VHB-1824-N-UNV-L740-CD-U-LEVEL2**

Issue Date: 11/17/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P417699  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 11/17/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VHB-1824-N-UNV-L740-CD-U-LEVEL2  
Description: VHB LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS  
Light Source: 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23897.4 lumens  
Efficiency: N/A  
Efficacy: 151.0 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 0.74 / 0.88  
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')  
CIE Type: Direct

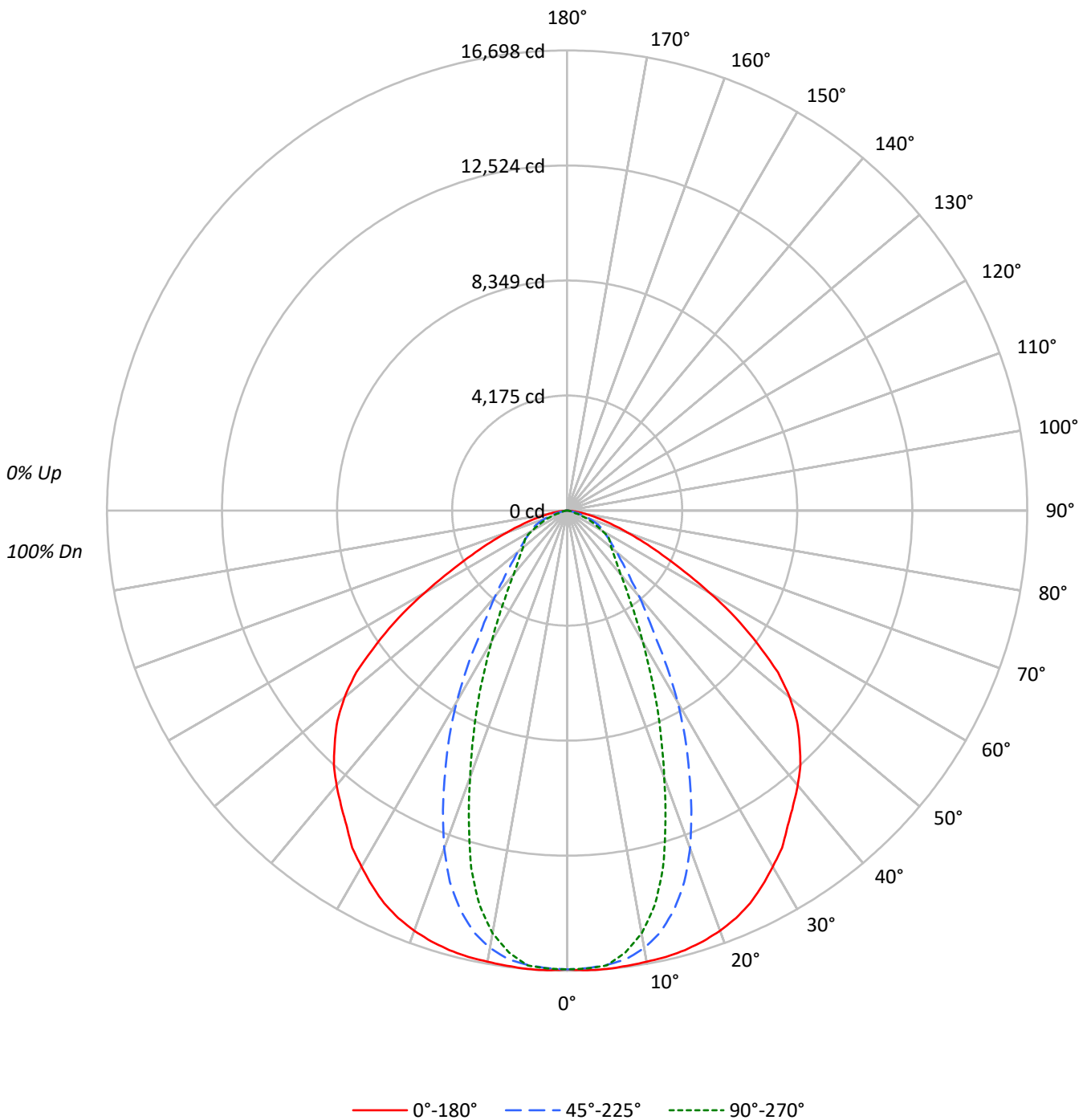
Input Watts (W): 158.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	66	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	61	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°	102405	102405	102405
5°	103099	102181	102292
10°	103831	100648	97280
15°	105136	95458	85566
20°	106200	85390	67348
25°	106688	71058	51895
30°	105974	56873	38849
35°	104763	41839	29738
40°	104508	32651	24187
45°	103767	26271	21444
50°	100957	22389	20001
55°	90503	20140	20181
60°	73541	18935	18155
65°	55476	18354	14758
70°	42078	15212	10094
75°	31845	11436	5409
80°	22999	5635	4445
85°	14785	4841	3740



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1566.5	6.6
10°-20°	4163.3	17.4
20°-30°	5093.0	21.3
30°-40°	4569.4	19.1
40°-50°	3542.8	14.8
50°-60°	2629.5	11.0
60°-70°	1586.0	6.6
70°-80°	632.6	2.6
80°-90°	114.2	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°	10822.7	45.3
0°-40°	15392.2	64.4
0°-60°	21564.5	90.2
0°-90°	23897.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23897.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16649	16649	16649	16649	16649	
5°	16698	16593	16549	16502	16568	###
15°	16511	16059	14991	13876	13437	4665
25°	15720	13987	10470	8306	7647	7231
35°	13952	10254	5572	4257	3960	8756
45°	11929	5387	3020	2529	2465	9181
55°	8440	2879	1878	1815	1882	7498
65°	3812	1597	1261	1076	1014	3889
75°	1340	777	481	254	228	1469
85°	210	87	69	58	53	275
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	16649.0	16649.0	16649.0	16649.0	16649.0
2.5°	16696.9	16597.3	16621.8	16621.8	16627.0
5°	16698.2	16593.4	16549.4	16501.6	16567.5
7.5°	16660.6	16539.1	16417.5	16214.4	16171.7
10°	16624.4	16447.2	16114.8	15725.5	15575.5
12.5°	16588.2	16317.9	15667.3	14931.3	14672.6
15°	16510.6	16059.2	14990.8	13875.9	13437.4
17.5°	16390.3	15694.5	14138.5	12533.3	11859.4
20°	16224.8	15241.8	13045.5	11031.6	10289.2
22.5°	16007.5	14703.7	11771.5	9595.9	8907.8
25°	15720.3	13987.1	10470.3	8306.4	7646.7
27.5°	15338.8	13185.2	9249.3	7103.5	6447.7
30°	14921.0	12317.3	8007.6	5965.3	5469.9
32.5°	14511.0	11371.8	6759.5	5008.2	4653.8
35°	13952.2	10254.3	5572.1	4256.7	3960.5
37.5°	13477.5	9050.1	4722.3	3665.6	3452.2
40°	13015.8	7770.9	4066.5	3205.1	3012.4
42.5°	12529.4	6504.7	3459.9	2813.2	2699.4
45°	11929.3	5387.1	3020.2	2528.7	2465.3
47.5°	11312.3	4561.9	2619.2	2313.9	2264.8
50°	10550.5	3864.8	2339.8	2101.8	2090.2
52.5°	9637.3	3318.9	2082.4	1944.0	1968.6
55°	8439.6	2879.2	1878.1	1814.7	1881.9
57.5°	7267.8	2489.8	1697.0	1716.4	1773.3
60°	5978.2	2140.6	1539.2	1572.8	1475.8
62.5°	4792.2	1858.7	1402.1	1306.4	1226.2
65°	3811.7	1597.4	1261.1	1076.1	1014.0
67.5°	2999.5	1362.0	1064.5	880.8	803.2
70°	2339.8	1148.6	845.9	685.5	561.3
72.5°	1784.9	959.7	670.0	415.2	332.4
75°	1340.0	777.4	481.2	253.5	227.6
77.5°	959.7	583.3	280.7	185.0	174.6
80°	649.3	381.6	159.1	135.8	125.5
82.5°	404.8	210.8	108.6	95.7	89.2
85°	209.5	86.7	68.6	58.2	53.0
87.5°	73.7	38.8	31.0	24.6	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)