

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: P417695

Luminaire Tested: **VHB-1824-N-UNV-L735-CD-U-LEVEL2**

Issue Date: 11/17/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P417695  
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-L735-CD-U-LEVEL2  
Description: VHB LED HIGH BAY LUMINAIRE WITH NARROW DISTRIBUTION LENS  
Light Source: 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23674.0 lumens  
Efficiency: N/A  
Efficacy: 149.6 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

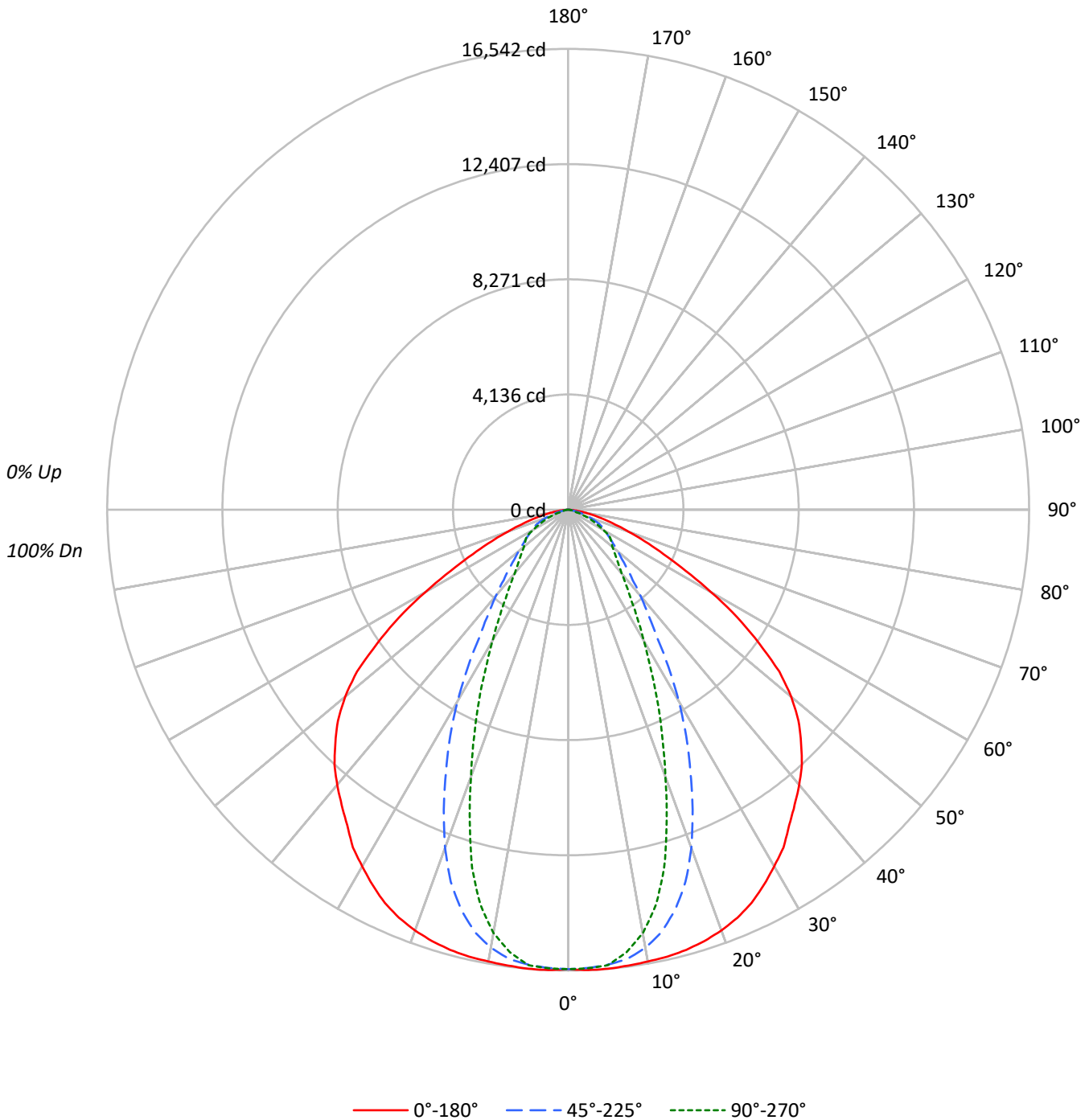
Input Watts (W): 158.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P417695

CATALOG NUMBER: VHB-1824-N-UNV-L735-CD-U-LEVEL2

### Luminous Intensity Polar Plot





TEST NUMBER: P417695

CATALOG NUMBER: VHB-1824-N-UNV-L735-CD-U-LEVEL2

**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°	101447	101447	101447
5°	102136	101226	101337
10°	102861	99707	96370
15°	104153	94566	84766
20°	105207	84592	66719
25°	105691	70394	51411
30°	104983	56341	38486
35°	103784	41448	29460
40°	103530	32346	23961
45°	102798	26025	21244
50°	100014	22180	19813
55°	89657	19951	19992
60°	72855	18757	17985
65°	54957	18182	14621
70°	41684	15070	10001
75°	31548	11329	5359
80°	22783	5582	4403
85°	14651	4792	3705



TEST NUMBER: P417695

CATALOG NUMBER: VHB-1824-N-UNV-L735-CD-U-LEVEL2

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1551.9	6.6
10°-20°	4124.3	17.4
20°-30°	5045.4	21.3
30°-40°	4526.7	19.1
40°-50°	3509.7	14.8
50°-60°	2605.0	11.0
60°-70°	1571.2	6.6
70°-80°	626.7	2.6
80°-90°	113.1	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°	10721.6	45.3
0°-40°	15248.3	64.4
0°-60°	21363.0	90.2
0°-90°	23674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23674.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16493	16493	16493	16493	16493	
5°	16542	16438	16395	16347	16413	###
15°	16356	15909	14851	13746	13312	4622
25°	15573	13856	10372	8229	7575	7163
35°	13822	10158	5520	4217	3924	8675
45°	11818	5337	2992	2505	2442	9095
55°	8361	2852	1860	1798	1864	7428
65°	3776	1582	1249	1066	1005	3852
75°	1328	770	477	251	226	1455
85°	208	86	68	58	52	273
90°	0	0	0	0	0	



TEST NUMBER: P417695

CATALOG NUMBER: VHB-1824-N-UNV-L735-CD-U-LEVEL2

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	16493.4	16493.4	16493.4	16493.4	16493.4
2.5°	16540.8	16442.2	16466.5	16466.5	16471.6
5°	16542.1	16438.3	16394.7	16347.3	16412.7
7.5°	16504.9	16384.5	16264.1	16062.9	16020.6
10°	16469.1	16293.5	15964.2	15578.5	15429.9
12.5°	16433.2	16165.4	15520.9	14791.8	14535.5
15°	16356.3	15909.1	14850.7	13746.2	13311.8
17.5°	16237.1	15547.8	14006.3	12416.2	11748.6
20°	16073.1	15099.3	12923.6	10928.5	10193.1
22.5°	15857.9	14566.3	11661.5	9506.3	8824.6
25°	15573.4	13856.4	10372.4	8228.8	7575.3
27.5°	15195.4	13062.0	9162.9	7037.1	6387.5
30°	14781.5	12202.2	7932.8	5909.5	5418.8
32.5°	14375.4	11265.5	6696.3	4961.3	4610.3
35°	13821.8	10158.5	5520.0	4216.9	3923.5
37.5°	13351.6	8965.5	4678.2	3631.3	3419.9
40°	12894.1	7698.3	4028.5	3175.2	2984.2
42.5°	12412.3	6443.9	3427.6	2786.9	2674.2
45°	11817.8	5336.8	2991.9	2505.0	2442.2
47.5°	11206.6	4519.3	2594.7	2292.3	2243.6
50°	10451.9	3828.6	2317.9	2082.2	2070.6
52.5°	9547.3	3287.9	2063.0	1925.9	1950.2
55°	8360.7	2852.3	1860.5	1797.7	1864.3
57.5°	7199.9	2466.6	1681.1	1700.3	1756.7
60°	5922.4	2120.6	1524.8	1558.1	1462.0
62.5°	4747.4	1841.3	1389.0	1294.2	1214.7
65°	3776.1	1582.5	1249.3	1066.1	1004.6
67.5°	2971.4	1349.3	1054.5	872.6	795.7
70°	2317.9	1137.8	838.0	679.1	556.1
72.5°	1768.2	950.8	663.7	411.3	329.3
75°	1327.5	770.1	476.7	251.1	225.5
77.5°	950.8	577.9	278.1	183.2	173.0
80°	643.2	378.0	157.6	134.5	124.3
82.5°	401.1	208.9	107.6	94.8	88.4
85°	207.6	85.8	67.9	57.7	52.5
87.5°	73.0	38.4	30.8	24.3	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)