

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: P417754

Luminaire Tested: **VHB-1824-W-UNV-L935-CD-U-LEVEL1**

Issue Date: 11/17/2020

Test Information

Test Method: LM-79-08
Report Number: P417754
Test Lab: INNOVATION CENTER(G3)
Issue Date: 11/17/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: VHB-1824-W-UNV-L935-CD-U-LEVEL1
Description: VHB LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16143.2 lumens
Efficiency: N/A
Efficacy: 128.6 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

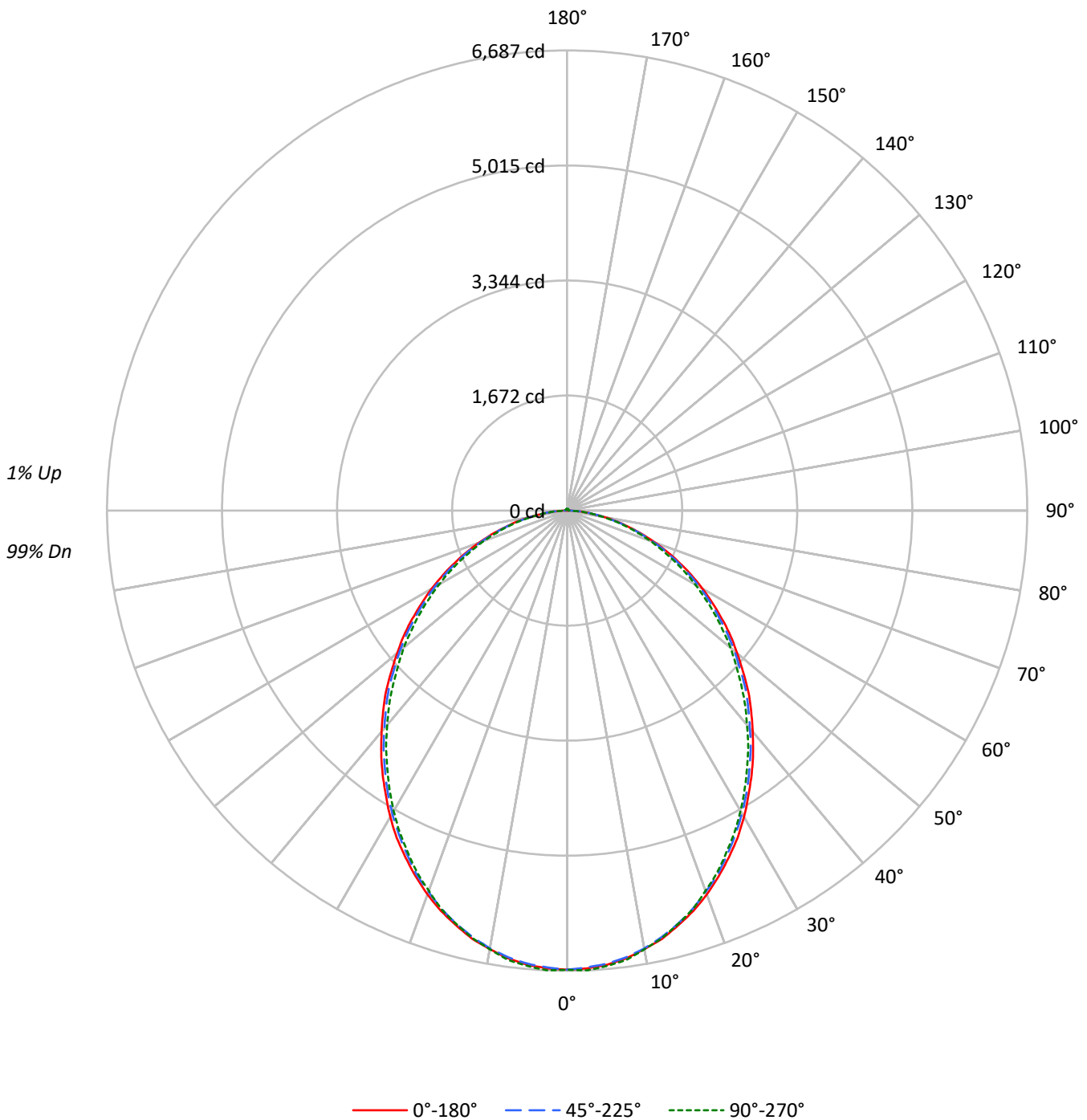
Input Watts (W): 125.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P417754

CATALOG NUMBER: VHB-1824-W-UNV-L935-CD-U-LEVEL1

Luminous Intensity Polar Plot





TEST NUMBER: P417754

CATALOG NUMBER: VHB-1824-W-UNV-L935-CD-U-LEVEL1

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	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°	41034	41034	41034
5°	40910	40806	41015
10°	40418	40339	40428
15°	39726	39592	39614
20°	38861	38580	38476
25°	37732	37395	37173
30°	36509	36091	35799
35°	35097	34642	34226
40°	33678	33159	32645
45°	32406	31895	31098
50°	30833	30359	29651
55°	29472	28832	28049
60°	27948	27328	26440
65°	26303	25667	24751
70°	24373	23920	23089
75°	22203	21904	21146
80°	19850	19524	18840
85°	16839	16839	16422



TEST NUMBER: P417754

CATALOG NUMBER: VHB-1824-W-UNV-L935-CD-U-LEVEL1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	627.2	3.9
10°-20°	1752.1	10.9
20°-30°	2538.6	15.7
30°-40°	2887.5	17.9
40°-50°	2815.6	17.4
50°-60°	2403.8	14.9
60°-70°	1745.1	10.8
70°-80°	974.4	6.0
80°-90°	273.6	1.7
90°-100°	19.4	0.1
100°-110°	19.2	0.1
110°-120°	18.9	0.1
120°-130°	18.1	0.1
130°-140°	17.1	0.1
140°-150°	14.7	0.1
150°-160°	10.3	0.1
160°-170°	5.7	0.0
170°-180°	1.7	0.0
0°-30°	4918.0	30.5
0°-40°	7805.5	48.4
0°-60°	13024.9	80.7
0°-90°	16018.1	99.2
90°-120°	57.5	0.4
90°-150°	107.4	0.7
90°-180°	125.0	0.8
0°-180°	16143.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6671	6671	6671	6671	6671	
5°	6626	6611	6609	6632	6643	628
15°	6239	6228	6218	6217	6221	1758
25°	5560	5540	5510	5490	5477	2560
35°	4674	4659	4614	4571	4558	2923
45°	3726	3690	3667	3599	3575	2867
55°	2748	2737	2689	2632	2616	2458
65°	1807	1794	1764	1722	1701	1792
75°	934	939	922	899	890	999
85°	239	244	239	232	233	261
90°	17	18	22	26	24	20
95°	8	13	18	22	23	8
105°	14	14	18	22	24	15
115°	17	17	18	21	23	16
125°	18	19	19	22	22	16
135°	20	22	23	23	23	16
145°	19	23	24	26	26	12
155°	18	20	24	24	24	8
165°	15	18	20	23	23	4
175°	17	17	18	18	19	2
180°	17	17	17	17	17	



TEST NUMBER: P417754

CATALOG NUMBER: VHB-1824-W-UNV-L935-CD-U-LEVEL1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6671.3	6671.3	6671.3	6671.3	6671.3
2.5°	6657.9	6640.2	6643.6	6665.4	6687.3
5°	6625.9	6610.8	6609.1	6631.8	6642.8
7.5°	6563.8	6547.8	6547.0	6573.0	6585.6
10°	6471.3	6467.1	6458.7	6476.4	6473.0
12.5°	6374.7	6351.2	6347.0	6361.3	6362.1
15°	6238.6	6227.7	6217.6	6216.8	6221.0
17.5°	6099.1	6075.6	6069.7	6066.4	6074.8
20°	5937.0	5910.9	5894.1	5890.8	5878.2
22.5°	5753.0	5737.0	5721.0	5693.3	5695.8
25°	5559.7	5540.4	5510.1	5490.0	5477.4
27.5°	5362.3	5332.0	5300.1	5281.6	5270.7
30°	5140.4	5122.0	5081.6	5047.2	5040.5
32.5°	4905.2	4892.6	4852.3	4822.0	4801.8
35°	4674.1	4659.0	4613.6	4570.8	4558.2
37.5°	4438.9	4420.4	4381.7	4343.9	4322.9
40°	4194.4	4180.9	4129.7	4084.3	4065.8
42.5°	3958.3	3940.6	3894.4	3838.9	3828.0
45°	3725.5	3690.2	3666.7	3598.6	3575.1
47.5°	3467.6	3458.3	3407.9	3353.3	3327.3
50°	3222.2	3216.3	3172.7	3111.3	3098.7
52.5°	2997.1	2973.5	2933.2	2877.7	2849.2
55°	2748.3	2736.6	2688.7	2632.4	2615.6
57.5°	2504.7	2504.7	2453.4	2405.5	2377.0
60°	2271.9	2257.7	2221.5	2175.3	2149.3
62.5°	2037.5	2025.8	1994.7	1948.5	1924.9
65°	1807.3	1793.9	1763.6	1722.4	1700.6
67.5°	1587.2	1571.2	1551.9	1498.1	1483.8
70°	1355.3	1351.9	1330.1	1293.1	1283.9
72.5°	1146.9	1143.5	1118.3	1085.6	1075.5
75°	934.3	939.4	921.7	899.0	889.8
77.5°	749.5	744.4	727.6	714.2	698.2
80°	560.4	558.7	551.2	532.7	531.9
82.5°	387.3	394.1	388.2	374.7	369.7
85°	238.6	243.7	238.6	231.9	232.7
87.5°	106.7	108.4	102.5	92.4	85.7
90°	16.8	18.5	21.8	26.0	24.4
92.5°	5.9	12.6	18.5	21.8	22.7
95°	7.6	12.6	18.5	21.8	22.7
97.5°	10.9	12.6	18.5	21.8	23.5
100°	12.6	13.4	18.5	21.8	23.5
102.5°	13.4	13.4	18.5	21.8	23.5
105°	14.3	14.3	17.6	21.8	23.5
107.5°	15.1	14.3	17.6	21.8	23.5
110°	15.1	15.1	17.6	21.8	22.7



TEST NUMBER: P417754

CATALOG NUMBER: VHB-1824-W-UNV-L935-CD-U-LEVEL1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	16.0	16.0	18.5	21.0	22.7
115°	16.8	16.8	18.5	21.0	22.7
117.5°	16.8	17.6	18.5	21.8	22.7
120°	17.6	18.5	18.5	21.8	21.8
122.5°	17.6	19.3	19.3	21.8	21.8
125°	17.6	19.3	19.3	21.8	21.8
127.5°	18.5	20.2	19.3	21.8	21.8
130°	19.3	20.2	21.0	21.8	21.8
132.5°	19.3	21.0	21.8	22.7	21.8
135°	20.2	21.8	22.7	22.7	22.7
137.5°	21.0	21.8	23.5	23.5	23.5
140°	21.0	22.7	23.5	24.4	24.4
142.5°	19.3	22.7	23.5	25.2	25.2
145°	19.3	22.7	24.4	26.0	26.0
147.5°	18.5	21.8	23.5	26.0	26.0
150°	18.5	21.0	23.5	25.2	25.2
152.5°	19.3	20.2	23.5	24.4	25.2
155°	18.5	20.2	23.5	24.4	24.4
157.5°	17.6	19.3	22.7	24.4	25.2
160°	16.8	19.3	21.8	24.4	24.4
162.5°	16.0	18.5	21.0	23.5	24.4
165°	15.1	17.6	20.2	22.7	22.7
167.5°	15.1	17.6	19.3	21.0	21.8
170°	16.0	16.8	18.5	19.3	20.2
172.5°	16.8	16.8	18.5	18.5	18.5
175°	16.8	16.8	17.6	18.5	19.3
177.5°	17.6	16.8	16.8	18.5	18.5
180°	16.8	16.8	16.8	16.8	16.8

(END OF REPORT)