

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: P417743

Luminaire Tested: **VHB-1824-W-UNV-L835-CD-U-LEVEL2**

Issue Date: 11/17/2020

Test Information

Test Method: LM-79-08
Report Number: P417743
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-L835-CD-U-LEVEL2
Description: VHB LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22319.6 lumens
Efficiency: N/A
Efficacy: 141.0 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

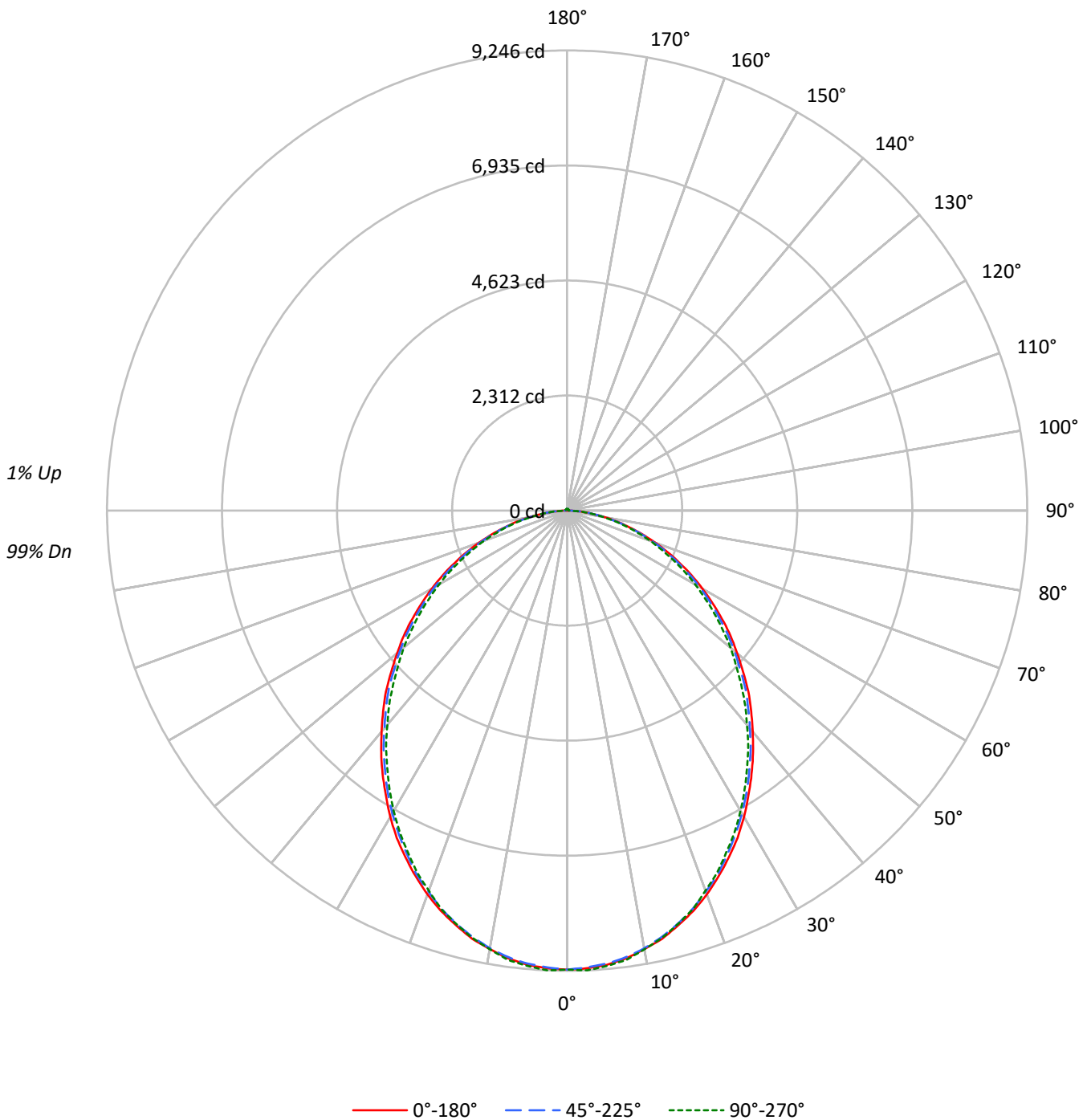
Input Watts (W): 158.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	56733	56733	56733
5°	56563	56419	56706
10°	55881	55773	55896
15°	54925	54740	54770
20°	53728	53341	53196
25°	52168	51703	51395
30°	50477	49899	49495
35°	48524	47897	47321
40°	46563	45844	45136
45°	44805	44098	42996
50°	42630	41974	40996
55°	40747	39864	38780
60°	38642	37784	36555
65°	36368	35489	34219
70°	33698	33070	31921
75°	30699	30286	29235
80°	27444	26994	26045
85°	23282	23282	22710



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	867.2	3.9
10°-20°	2422.5	10.9
20°-30°	3509.9	15.7
30°-40°	3992.2	17.9
40°-50°	3892.9	17.4
50°-60°	3323.5	14.9
60°-70°	2412.8	10.8
70°-80°	1347.2	6.0
80°-90°	378.3	1.7
90°-100°	26.9	0.1
100°-110°	26.6	0.1
110°-120°	26.1	0.1
120°-130°	25.0	0.1
130°-140°	23.7	0.1
140°-150°	20.4	0.1
150°-160°	14.3	0.1
160°-170°	7.9	0.0
170°-180°	2.4	0.0
0°-30°	6799.6	30.5
0°-40°	10791.8	48.4
0°-60°	18008.2	80.7
0°-90°	22146.5	99.2
90°-120°	79.6	0.4
90°-150°	148.7	0.7
90°-180°	173.0	0.8
0°-180°	22319.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9224	9224	9224	9224	9224	
5°	9161	9140	9138	9169	9184	868
15°	8626	8610	8596	8595	8601	2431
25°	7687	7660	7618	7590	7573	3539
35°	6462	6442	6379	6320	6302	4041
45°	5151	5102	5070	4976	4943	3963
55°	3800	3784	3717	3640	3616	3399
65°	2499	2480	2438	2381	2351	2478
75°	1292	1299	1274	1243	1230	1381
85°	330	337	330	321	322	361
90°	23	26	30	36	34	28
95°	10	17	26	30	31	10
105°	20	20	24	30	32	21
115°	23	23	26	29	31	23
125°	24	27	27	30	30	22
135°	28	30	31	31	31	22
145°	27	31	34	36	36	17
155°	26	28	32	34	34	12
165°	21	24	28	31	31	6
175°	23	23	24	26	27	2
180°	23	23	23	23	23	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9223.7	9223.7	9223.7	9223.7	9223.7
2.5°	9205.1	9180.7	9185.4	9215.6	9245.8
5°	9161.0	9140.1	9137.8	9169.1	9184.2
7.5°	9075.0	9053.0	9051.8	9087.8	9105.2
10°	8947.2	8941.4	8929.8	8954.2	8949.6
12.5°	8813.7	8781.1	8775.3	8795.1	8796.2
15°	8625.5	8610.4	8596.4	8595.3	8601.1
17.5°	8432.6	8400.1	8392.0	8387.3	8398.9
20°	8208.4	8172.4	8149.2	8144.5	8127.1
22.5°	7954.0	7931.9	7909.9	7871.5	7875.0
25°	7686.8	7660.1	7618.3	7590.4	7573.0
27.5°	7413.8	7372.0	7327.9	7302.3	7287.2
30°	7107.1	7081.6	7025.8	6978.2	6968.9
32.5°	6781.9	6764.5	6708.7	6666.9	6639.0
35°	6462.4	6441.5	6378.8	6319.5	6302.1
37.5°	6137.1	6111.6	6058.2	6005.9	5976.8
40°	5799.1	5780.5	5709.6	5646.9	5621.4
42.5°	5472.7	5448.3	5384.4	5307.7	5292.6
45°	5150.9	5102.1	5069.6	4975.5	4942.9
47.5°	4794.2	4781.5	4711.8	4636.3	4600.2
50°	4455.0	4446.9	4386.5	4301.7	4284.3
52.5°	4143.7	4111.2	4055.4	3978.7	3939.2
55°	3799.8	3783.6	3717.4	3639.5	3616.3
57.5°	3463.0	3463.0	3392.1	3325.9	3286.4
60°	3141.2	3121.4	3071.5	3007.6	2971.6
62.5°	2817.1	2800.8	2757.8	2693.9	2661.4
65°	2498.8	2480.2	2438.4	2381.4	2351.2
67.5°	2194.4	2172.3	2145.6	2071.3	2051.5
70°	1873.8	1869.1	1838.9	1787.8	1775.0
72.5°	1585.7	1581.0	1546.2	1500.9	1486.9
75°	1291.8	1298.8	1274.4	1243.0	1230.2
77.5°	1036.2	1029.2	1006.0	987.4	965.4
80°	774.8	772.5	762.1	736.5	735.3
82.5°	535.5	544.8	536.7	518.1	511.1
85°	329.9	336.9	329.9	320.6	321.8
87.5°	147.5	149.9	141.7	127.8	118.5
90°	23.2	25.6	30.2	36.0	33.7
92.5°	8.1	17.4	25.6	30.2	31.4
95°	10.5	17.4	25.6	30.2	31.4
97.5°	15.1	17.4	25.6	30.2	32.5
100°	17.4	18.6	25.6	30.2	32.5
102.5°	18.6	18.6	25.6	30.2	32.5
105°	19.7	19.7	24.4	30.2	32.5
107.5°	20.9	19.7	24.4	30.2	32.5
110°	20.9	20.9	24.4	30.2	31.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	22.1	22.1	25.6	29.0	31.4
115°	23.2	23.2	25.6	29.0	31.4
117.5°	23.2	24.4	25.6	30.2	31.4
120°	24.4	25.6	25.6	30.2	30.2
122.5°	24.4	26.7	26.7	30.2	30.2
125°	24.4	26.7	26.7	30.2	30.2
127.5°	25.6	27.9	26.7	30.2	30.2
130°	26.7	27.9	29.0	30.2	30.2
132.5°	26.7	29.0	30.2	31.4	30.2
135°	27.9	30.2	31.4	31.4	31.4
137.5°	29.0	30.2	32.5	32.5	32.5
140°	29.0	31.4	32.5	33.7	33.7
142.5°	26.7	31.4	32.5	34.9	34.9
145°	26.7	31.4	33.7	36.0	36.0
147.5°	25.6	30.2	32.5	36.0	36.0
150°	25.6	29.0	32.5	34.9	34.9
152.5°	26.7	27.9	32.5	33.7	34.9
155°	25.6	27.9	32.5	33.7	33.7
157.5°	24.4	26.7	31.4	33.7	34.9
160°	23.2	26.7	30.2	33.7	33.7
162.5°	22.1	25.6	29.0	32.5	33.7
165°	20.9	24.4	27.9	31.4	31.4
167.5°	20.9	24.4	26.7	29.0	30.2
170°	22.1	23.2	25.6	26.7	27.9
172.5°	23.2	23.2	25.6	25.6	25.6
175°	23.2	23.2	24.4	25.6	26.7
177.5°	24.4	23.2	23.2	25.6	25.6
180°	23.2	23.2	23.2	23.2	23.2

(END OF REPORT)