

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: P417750

Luminaire Tested: **VHB-1824-W-UNV-L850-CD-U-LEVEL1**

Issue Date: 11/17/2020

Test Information

Test Method: LM-79-08
Report Number: P417750
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-L850-CD-U-LEVEL1
Description: VHB LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18771.3 lumens
Efficiency: N/A
Efficacy: 149.6 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

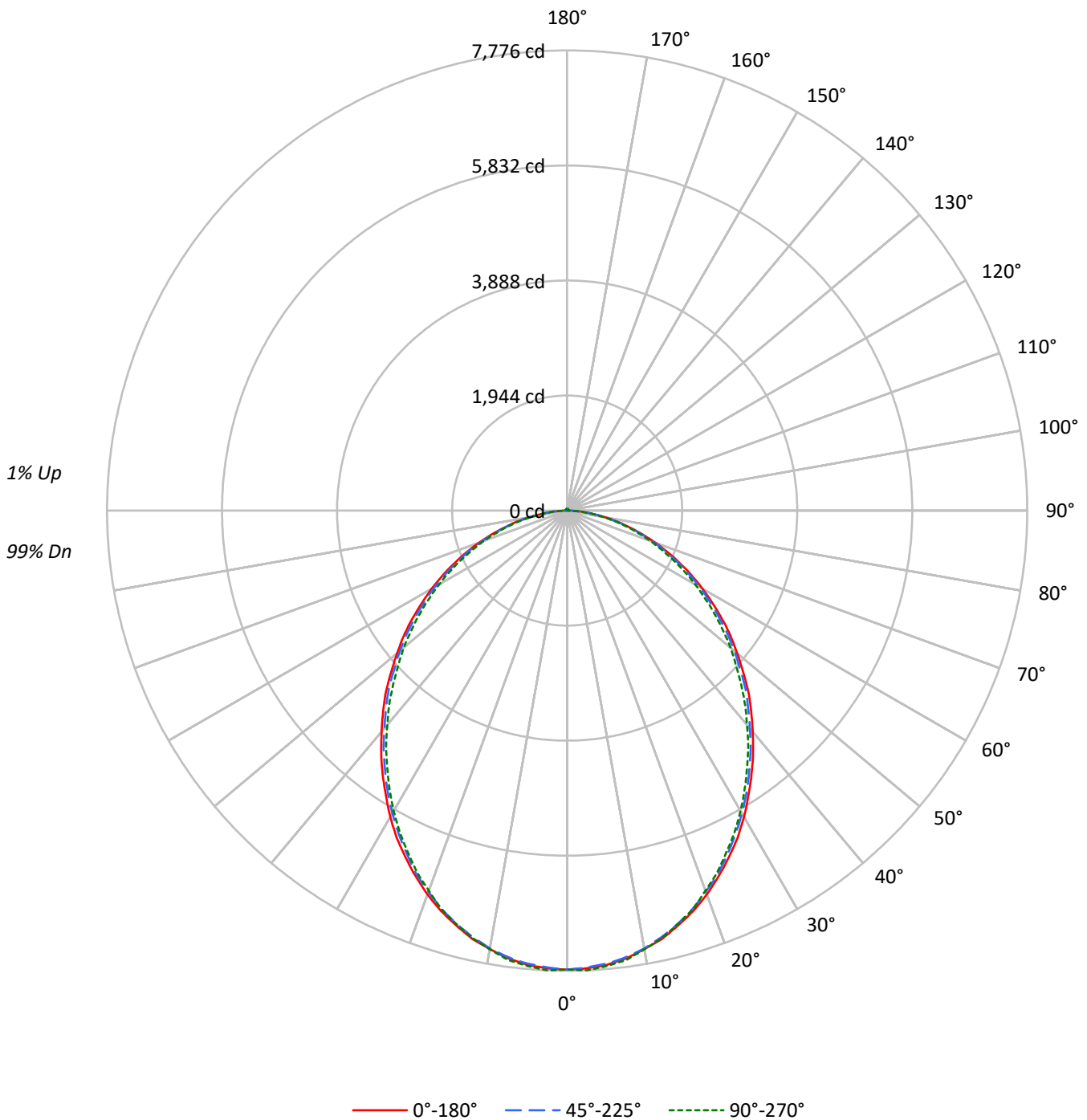
Input Watts (W): 125.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	47714	47714	47714
5°	47570	47450	47691
10°	46997	46906	47010
15°	46193	46038	46063
20°	45187	44860	44739
25°	43874	43483	43224
30°	42453	41967	41627
35°	40810	40282	39798
40°	39160	38556	37960
45°	37682	37087	36161
50°	35853	35301	34479
55°	34270	33526	32615
60°	32498	31777	30744
65°	30585	29846	28779
70°	28341	27814	26846
75°	25818	25471	24587
80°	23084	22701	21904
85°	19584	19584	19097



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	729.4	3.9
10°-20°	2037.3	10.9
20°-30°	2951.9	15.7
30°-40°	3357.6	17.9
40°-50°	3274.0	17.4
50°-60°	2795.1	14.9
60°-70°	2029.2	10.8
70°-80°	1133.0	6.0
80°-90°	318.1	1.7
90°-100°	22.6	0.1
100°-110°	22.3	0.1
110°-120°	22.0	0.1
120°-130°	21.1	0.1
130°-140°	19.9	0.1
140°-150°	17.2	0.1
150°-160°	12.0	0.1
160°-170°	6.6	0.0
170°-180°	2.0	0.0
0°-30°	5718.6	30.5
0°-40°	9076.2	48.4
0°-60°	15145.3	80.7
0°-90°	18625.7	99.2
90°-120°	66.9	0.4
90°-150°	125.0	0.7
90°-180°	146.0	0.8
0°-180°	18771.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7757	7757	7757	7757	7757	
5°	7705	7687	7685	7711	7724	730
15°	7254	7242	7230	7229	7234	2044
25°	6465	6442	6407	6384	6369	2976
35°	5435	5417	5365	5315	5300	3399
45°	4332	4291	4264	4184	4157	3333
55°	3196	3182	3126	3061	3041	2858
65°	2102	2086	2051	2003	1977	2084
75°	1086	1092	1072	1045	1035	1162
85°	278	283	278	270	271	303
90°	20	22	25	30	28	23
95°	9	15	22	25	26	9
105°	17	17	20	25	27	17
115°	20	20	22	24	26	19
125°	20	22	22	25	25	19
135°	23	25	26	26	26	18
145°	22	26	28	30	30	14
155°	22	23	27	28	28	10
165°	18	20	23	26	26	5
175°	20	20	20	22	22	2
180°	20	20	20	20	20	



TEST NUMBER: P417750

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7757.3	7757.3	7757.3	7757.3	7757.3
2.5°	7741.7	7721.2	7725.1	7750.5	7775.9
5°	7704.6	7687.0	7685.1	7711.4	7724.1
7.5°	7632.3	7613.7	7612.8	7643.0	7657.7
10°	7524.8	7519.9	7510.2	7530.7	7526.8
12.5°	7412.5	7385.1	7380.2	7396.8	7397.8
15°	7254.2	7241.5	7229.8	7228.8	7233.7
17.5°	7092.0	7064.7	7057.8	7053.9	7063.7
20°	6903.5	6873.2	6853.6	6849.7	6835.1
22.5°	6689.5	6670.9	6652.4	6620.1	6623.1
25°	6464.8	6442.3	6407.1	6383.7	6369.0
27.5°	6235.2	6200.0	6162.9	6141.4	6128.7
30°	5977.3	5955.8	5908.9	5868.8	5861.0
32.5°	5703.7	5689.0	5642.2	5607.0	5583.5
35°	5435.0	5417.4	5364.7	5314.9	5300.2
37.5°	5161.5	5140.0	5095.0	5051.1	5026.6
40°	4877.2	4861.5	4801.9	4749.2	4727.7
42.5°	4602.6	4582.1	4528.4	4463.9	4451.2
45°	4332.0	4291.0	4263.6	4184.5	4157.1
47.5°	4032.1	4021.3	3962.7	3899.2	3868.9
50°	3746.8	3739.9	3689.1	3617.8	3603.2
52.5°	3484.9	3457.6	3410.7	3346.2	3313.0
55°	3195.8	3182.1	3126.4	3060.9	3041.4
57.5°	2912.4	2912.4	2852.8	2797.1	2763.9
60°	2641.8	2625.2	2583.2	2529.4	2499.2
62.5°	2369.2	2355.5	2319.4	2265.7	2238.3
65°	2101.5	2085.9	2050.7	2002.8	1977.4
67.5°	1845.5	1827.0	1804.5	1742.0	1725.4
70°	1575.9	1572.0	1546.6	1503.6	1492.8
72.5°	1333.6	1329.7	1300.4	1262.3	1250.6
75°	1086.4	1092.3	1071.8	1045.4	1034.6
77.5°	871.5	865.6	846.1	830.4	811.9
80°	651.7	649.7	640.9	619.4	618.4
82.5°	450.4	458.2	451.4	435.7	429.9
85°	277.5	283.3	277.5	269.7	270.6
87.5°	124.1	126.0	119.2	107.5	99.7
90°	19.5	21.5	25.4	30.3	28.3
92.5°	6.8	14.7	21.5	25.4	26.4
95°	8.8	14.7	21.5	25.4	26.4
97.5°	12.7	14.7	21.5	25.4	27.4
100°	14.7	15.6	21.5	25.4	27.4
102.5°	15.6	15.6	21.5	25.4	27.4
105°	16.6	16.6	20.5	25.4	27.4
107.5°	17.6	16.6	20.5	25.4	27.4
110°	17.6	17.6	20.5	25.4	26.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	18.6	18.6	21.5	24.4	26.4
115°	19.5	19.5	21.5	24.4	26.4
117.5°	19.5	20.5	21.5	25.4	26.4
120°	20.5	21.5	21.5	25.4	25.4
122.5°	20.5	22.5	22.5	25.4	25.4
125°	20.5	22.5	22.5	25.4	25.4
127.5°	21.5	23.4	22.5	25.4	25.4
130°	22.5	23.4	24.4	25.4	25.4
132.5°	22.5	24.4	25.4	26.4	25.4
135°	23.4	25.4	26.4	26.4	26.4
137.5°	24.4	25.4	27.4	27.4	27.4
140°	24.4	26.4	27.4	28.3	28.3
142.5°	22.5	26.4	27.4	29.3	29.3
145°	22.5	26.4	28.3	30.3	30.3
147.5°	21.5	25.4	27.4	30.3	30.3
150°	21.5	24.4	27.4	29.3	29.3
152.5°	22.5	23.4	27.4	28.3	29.3
155°	21.5	23.4	27.4	28.3	28.3
157.5°	20.5	22.5	26.4	28.3	29.3
160°	19.5	22.5	25.4	28.3	28.3
162.5°	18.6	21.5	24.4	27.4	28.3
165°	17.6	20.5	23.4	26.4	26.4
167.5°	17.6	20.5	22.5	24.4	25.4
170°	18.6	19.5	21.5	22.5	23.4
172.5°	19.5	19.5	21.5	21.5	21.5
175°	19.5	19.5	20.5	21.5	22.5
177.5°	20.5	19.5	19.5	21.5	21.5
180°	19.5	19.5	19.5	19.5	19.5

(END OF REPORT)