

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: P417751

Luminaire Tested: **VHB-1824-W-UNV-L850-CD-U-LEVEL2**

Issue Date: 11/17/2020

Test Information

Test Method: LM-79-08
Report Number: P417751
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-LEVEL2
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: 22775.1 lumens
Efficiency: N/A
Efficacy: 143.9 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

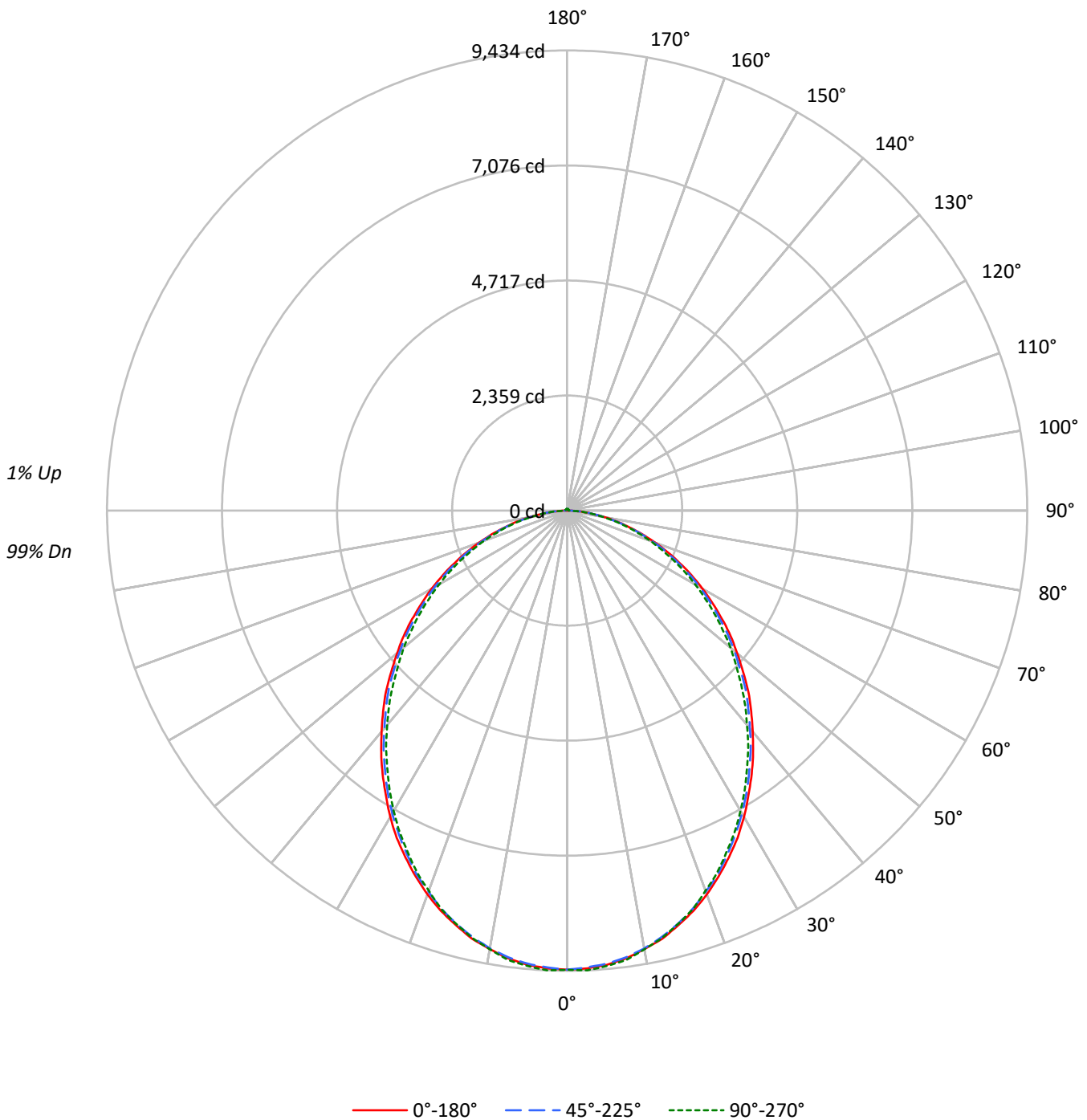
Input Watts (W): 158.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	57891	57891	57891
5°	57717	57570	57864
10°	57022	56911	57037
15°	56046	55857	55887
20°	54825	54429	54282
25°	53232	52758	52444
30°	51507	50918	50505
35°	49515	48874	48286
40°	47513	46780	46057
45°	45719	44998	43874
50°	43500	42831	41833
55°	41580	40677	39571
60°	39430	38556	37301
65°	37110	36212	34918
70°	34385	33746	32574
75°	31324	30904	29832
80°	28007	27543	26576
85°	23755	23755	23176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	884.9	3.9
10°-20°	2471.9	10.9
20°-30°	3581.5	15.7
30°-40°	4073.7	17.9
40°-50°	3972.4	17.4
50°-60°	3391.3	14.9
60°-70°	2462.0	10.8
70°-80°	1374.7	6.0
80°-90°	386.0	1.7
90°-100°	27.4	0.1
100°-110°	27.1	0.1
110°-120°	26.6	0.1
120°-130°	25.5	0.1
130°-140°	24.2	0.1
140°-150°	20.8	0.1
150°-160°	14.6	0.1
160°-170°	8.0	0.0
170°-180°	2.4	0.0
0°-30°	6938.4	30.5
0°-40°	11012.1	48.4
0°-60°	18375.7	80.7
0°-90°	22598.5	99.2
90°-120°	81.2	0.4
90°-150°	151.7	0.7
90°-180°	177.0	0.8
0°-180°	22775.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9412	9412	9412	9412	9412	
5°	9348	9327	9324	9356	9372	885
15°	8802	8786	8772	8771	8777	2480
25°	7844	7816	7774	7745	7728	3611
35°	6594	6573	6509	6448	6431	4124
45°	5256	5206	5173	5077	5044	4044
55°	3877	3861	3793	3714	3690	3468
65°	2550	2531	2488	2430	2399	2529
75°	1318	1325	1300	1268	1255	1409
85°	337	344	337	327	328	368
90°	24	26	31	37	34	28
95°	11	18	26	31	32	11
105°	20	20	25	31	33	21
115°	24	24	26	30	32	23
125°	25	27	27	31	31	23
135°	28	31	32	32	32	22
145°	27	32	34	37	37	17
155°	26	28	33	34	34	12
165°	21	25	28	32	32	6
175°	24	24	25	26	27	2
180°	24	24	24	24	24	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9412.0	9412.0	9412.0	9412.0	9412.0
2.5°	9393.0	9368.1	9372.8	9403.7	9434.5
5°	9348.0	9326.6	9324.2	9356.2	9371.7
7.5°	9260.2	9237.7	9236.5	9273.3	9291.1
10°	9129.8	9123.9	9112.1	9137.0	9132.2
12.5°	8993.5	8960.3	8954.4	8974.6	8975.7
15°	8801.5	8786.1	8771.9	8770.7	8776.6
17.5°	8604.7	8571.5	8563.2	8558.5	8570.3
20°	8375.9	8339.2	8315.5	8310.7	8293.0
22.5°	8116.3	8093.8	8071.3	8032.2	8035.7
25°	7843.7	7816.4	7773.8	7745.3	7727.5
27.5°	7565.1	7522.5	7477.4	7451.3	7435.9
30°	7252.2	7226.1	7169.2	7120.6	7111.1
32.5°	6920.3	6902.5	6845.6	6802.9	6774.5
35°	6594.3	6573.0	6509.0	6448.5	6430.7
37.5°	6262.4	6236.3	6181.8	6128.4	6098.8
40°	5917.4	5898.5	5826.2	5762.2	5736.1
42.5°	5584.4	5559.5	5494.3	5416.0	5400.6
45°	5256.0	5206.2	5173.0	5077.0	5043.8
47.5°	4892.1	4879.0	4807.9	4730.9	4694.1
50°	4546.0	4537.7	4476.0	4389.5	4371.7
52.5°	4228.3	4195.1	4138.2	4059.9	4019.6
55°	3877.4	3860.8	3793.2	3713.8	3690.1
57.5°	3533.6	3533.6	3461.3	3393.8	3353.5
60°	3205.3	3185.1	3134.2	3069.0	3032.2
62.5°	2874.6	2858.0	2814.1	2748.9	2715.7
65°	2549.8	2530.8	2488.1	2430.0	2399.2
67.5°	2239.2	2216.7	2189.4	2113.5	2093.4
70°	1912.0	1907.3	1876.5	1824.3	1811.3
72.5°	1618.1	1613.3	1577.7	1531.5	1517.3
75°	1318.1	1325.3	1300.4	1268.4	1255.3
77.5°	1057.4	1050.3	1026.5	1007.6	985.1
80°	790.7	788.3	777.6	751.5	750.3
82.5°	546.5	555.9	547.6	528.7	521.6
85°	336.6	343.8	336.6	327.2	328.4
87.5°	150.5	152.9	144.6	130.4	120.9
90°	23.7	26.1	30.8	36.7	34.4
92.5°	8.3	17.8	26.1	30.8	32.0
95°	10.7	17.8	26.1	30.8	32.0
97.5°	15.4	17.8	26.1	30.8	33.2
100°	17.8	19.0	26.1	30.8	33.2
102.5°	19.0	19.0	26.1	30.8	33.2
105°	20.2	20.2	24.9	30.8	33.2
107.5°	21.3	20.2	24.9	30.8	33.2
110°	21.3	21.3	24.9	30.8	32.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	22.5	22.5	26.1	29.6	32.0
115°	23.7	23.7	26.1	29.6	32.0
117.5°	23.7	24.9	26.1	30.8	32.0
120°	24.9	26.1	26.1	30.8	30.8
122.5°	24.9	27.3	27.3	30.8	30.8
125°	24.9	27.3	27.3	30.8	30.8
127.5°	26.1	28.4	27.3	30.8	30.8
130°	27.3	28.4	29.6	30.8	30.8
132.5°	27.3	29.6	30.8	32.0	30.8
135°	28.4	30.8	32.0	32.0	32.0
137.5°	29.6	30.8	33.2	33.2	33.2
140°	29.6	32.0	33.2	34.4	34.4
142.5°	27.3	32.0	33.2	35.6	35.6
145°	27.3	32.0	34.4	36.7	36.7
147.5°	26.1	30.8	33.2	36.7	36.7
150°	26.1	29.6	33.2	35.6	35.6
152.5°	27.3	28.4	33.2	34.4	35.6
155°	26.1	28.4	33.2	34.4	34.4
157.5°	24.9	27.3	32.0	34.4	35.6
160°	23.7	27.3	30.8	34.4	34.4
162.5°	22.5	26.1	29.6	33.2	34.4
165°	21.3	24.9	28.4	32.0	32.0
167.5°	21.3	24.9	27.3	29.6	30.8
170°	22.5	23.7	26.1	27.3	28.4
172.5°	23.7	23.7	26.1	26.1	26.1
175°	23.7	23.7	24.9	26.1	27.3
177.5°	24.9	23.7	23.7	26.1	26.1
180°	23.7	23.7	23.7	23.7	23.7

(END OF REPORT)