

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: P470188

Luminaire Tested: **VHB2-18-W-UNV-L850-CD-U**

Issue Date: 01/20/2021

Test Information

Test Method: LM-79-08
Report Number: P470188
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: VHB2-18-W-UNV-L850-CD-U
Description: VHB2 LED HIGH BAY LUMINAIRE WITH WIDE DISTRIBUTION LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

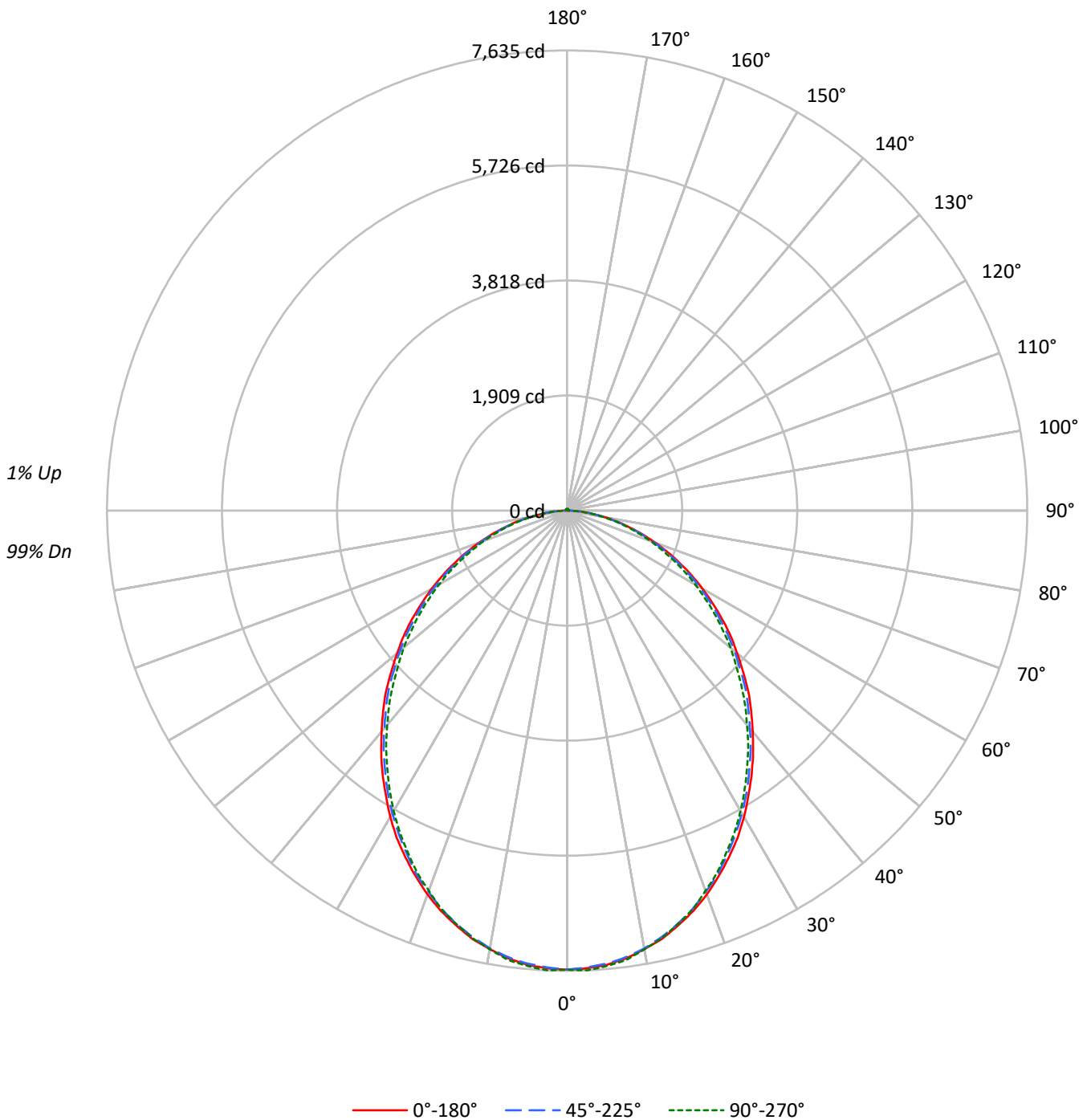
Lumens per Lamp: N/A
Luminaire Lumens: 18431.2 lumens
Efficiency: N/A
Efficacy: 150.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.25
Luminous Opening: Rectangular (W 1.17' x L: 1.5' x H: 0')
CIE Type: Direct

Input Watts (W): 122.3
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: P470188
CATALOG NUMBER: VHB2-18-W-UNV-L850-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P470188

CATALOG NUMBER: VHB2-18-W-UNV-L850-CD-U

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°	46849	46849	46849
5°	46708	46591	46827
10°	46146	46056	46159
15°	45356	45204	45228
20°	44368	44048	43929
25°	43080	42695	42442
30°	41684	41206	40872
35°	40071	39552	39077
40°	38451	37858	37273
45°	36999	36416	35506
50°	35203	34662	33854
55°	33650	32919	32024
60°	31909	31202	30187
65°	30032	29306	28258
70°	27828	27310	26361
75°	25350	25010	24143
80°	22666	22290	21508
85°	19224	19224	18751



TEST NUMBER: P470188

CATALOG NUMBER: VHB2-18-W-UNV-L850-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	716.2	3.9
10°-20°	2000.4	10.9
20°-30°	2898.5	15.7
30°-40°	3296.7	17.9
40°-50°	3214.7	17.4
50°-60°	2744.5	14.9
60°-70°	1992.5	10.8
70°-80°	1112.5	6.0
80°-90°	312.4	1.7
90°-100°	22.2	0.1
100°-110°	21.9	0.1
110°-120°	21.6	0.1
120°-130°	20.7	0.1
130°-140°	19.6	0.1
140°-150°	16.8	0.1
150°-160°	11.8	0.1
160°-170°	6.5	0.0
170°-180°	1.9	0.0
0°-30°	5615.0	30.5
0°-40°	8911.8	48.4
0°-60°	14871.0	80.7
0°-90°	18288.3	99.2
90°-120°	65.6	0.4
90°-150°	122.7	0.7
90°-180°	143.0	0.8
0°-180°	18431.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7617	7617	7617	7617	7617	
5°	7565	7548	7546	7572	7584	716
15°	7123	7110	7099	7098	7103	2007
25°	6348	6326	6291	6268	6254	2923
35°	5337	5319	5268	5219	5204	3337
45°	4254	4213	4186	4109	4082	3273
55°	3138	3124	3070	3006	2986	2807
65°	2064	2048	2014	1967	1942	2046
75°	1067	1072	1052	1026	1016	1140
85°	272	278	272	265	266	298
90°	19	21	25	30	28	23
95°	9	14	21	25	26	9
105°	16	16	20	25	27	17
115°	19	19	21	24	26	19
125°	20	22	22	25	25	18
135°	23	25	26	26	26	18
145°	22	26	28	30	30	14
155°	21	23	27	28	28	10
165°	17	20	23	26	26	5
175°	19	19	20	21	22	2
180°	19	19	19	19	19	



TEST NUMBER: P470188

CATALOG NUMBER: VHB2-18-W-UNV-L850-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7616.8	7616.8	7616.8	7616.8	7616.8
2.5°	7601.5	7581.4	7585.2	7610.1	7635.1
5°	7565.0	7547.8	7545.9	7571.8	7584.2
7.5°	7494.1	7475.8	7474.9	7504.6	7519.0
10°	7388.5	7383.7	7374.1	7394.3	7390.5
12.5°	7278.2	7251.4	7246.6	7262.9	7263.8
15°	7122.8	7110.3	7098.8	7097.9	7102.7
17.5°	6963.6	6936.7	6930.0	6926.1	6935.7
20°	6778.4	6748.7	6729.5	6725.7	6711.3
22.5°	6568.3	6550.1	6531.9	6500.2	6503.1
25°	6347.7	6325.6	6291.1	6268.1	6253.7
27.5°	6122.3	6087.7	6051.3	6030.2	6017.7
30°	5869.0	5847.9	5801.8	5762.5	5754.8
32.5°	5600.4	5586.0	5540.0	5505.4	5482.4
35°	5336.6	5319.3	5267.5	5218.6	5204.2
37.5°	5068.0	5046.9	5002.8	4959.6	4935.6
40°	4788.8	4773.5	4715.0	4663.2	4642.1
42.5°	4519.3	4499.1	4446.4	4383.0	4370.6
45°	4253.5	4213.2	4186.4	4108.7	4081.8
47.5°	3959.0	3948.5	3890.9	3828.6	3798.8
50°	3678.9	3672.2	3622.3	3552.3	3537.9
52.5°	3421.8	3395.0	3348.9	3285.6	3253.0
55°	3137.9	3124.4	3069.8	3005.5	2986.3
57.5°	2859.7	2859.7	2801.2	2746.5	2713.9
60°	2593.9	2577.6	2536.4	2483.6	2453.9
62.5°	2326.3	2312.9	2277.4	2224.6	2197.8
65°	2063.5	2048.1	2013.6	1966.6	1941.6
67.5°	1812.1	1793.9	1771.8	1710.4	1694.1
70°	1547.4	1543.5	1518.6	1476.4	1465.8
72.5°	1309.4	1305.6	1276.8	1239.4	1227.9
75°	1066.7	1072.5	1052.4	1026.5	1015.9
77.5°	855.7	849.9	830.8	815.4	797.2
80°	639.9	637.9	629.3	608.2	607.2
82.5°	442.2	449.9	443.2	427.8	422.1
85°	272.4	278.2	272.4	264.8	265.7
87.5°	121.8	123.7	117.0	105.5	97.8
90°	19.2	21.1	24.9	29.7	27.8
92.5°	6.7	14.4	21.1	24.9	25.9
95°	8.6	14.4	21.1	24.9	25.9
97.5°	12.5	14.4	21.1	24.9	26.9
100°	14.4	15.3	21.1	24.9	26.9
102.5°	15.3	15.3	21.1	24.9	26.9
105°	16.3	16.3	20.1	24.9	26.9
107.5°	17.3	16.3	20.1	24.9	26.9
110°	17.3	17.3	20.1	24.9	25.9



TEST NUMBER: P470188

CATALOG NUMBER: VHB2-18-W-UNV-L850-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	18.2	18.2	21.1	24.0	25.9
115°	19.2	19.2	21.1	24.0	25.9
117.5°	19.2	20.1	21.1	24.9	25.9
120°	20.1	21.1	21.1	24.9	24.9
122.5°	20.1	22.1	22.1	24.9	24.9
125°	20.1	22.1	22.1	24.9	24.9
127.5°	21.1	23.0	22.1	24.9	24.9
130°	22.1	23.0	24.0	24.9	24.9
132.5°	22.1	24.0	24.9	25.9	24.9
135°	23.0	24.9	25.9	25.9	25.9
137.5°	24.0	24.9	26.9	26.9	26.9
140°	24.0	25.9	26.9	27.8	27.8
142.5°	22.1	25.9	26.9	28.8	28.8
145°	22.1	25.9	27.8	29.7	29.7
147.5°	21.1	24.9	26.9	29.7	29.7
150°	21.1	24.0	26.9	28.8	28.8
152.5°	22.1	23.0	26.9	27.8	28.8
155°	21.1	23.0	26.9	27.8	27.8
157.5°	20.1	22.1	25.9	27.8	28.8
160°	19.2	22.1	24.9	27.8	27.8
162.5°	18.2	21.1	24.0	26.9	27.8
165°	17.3	20.1	23.0	25.9	25.9
167.5°	17.3	20.1	22.1	24.0	24.9
170°	18.2	19.2	21.1	22.1	23.0
172.5°	19.2	19.2	21.1	21.1	21.1
175°	19.2	19.2	20.1	21.1	22.1
177.5°	20.1	19.2	19.2	21.1	21.1
180°	19.2	19.2	19.2	19.2	19.2

(END OF REPORT)