

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: P295494

Luminaire Tested: **BMK-18-MCL-UNV-L735-CD-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P295494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-18-MCL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR LENS
Light Source: (528) 70 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19657.0 lumens
Efficiency: N/A
Efficacy: 172.7 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

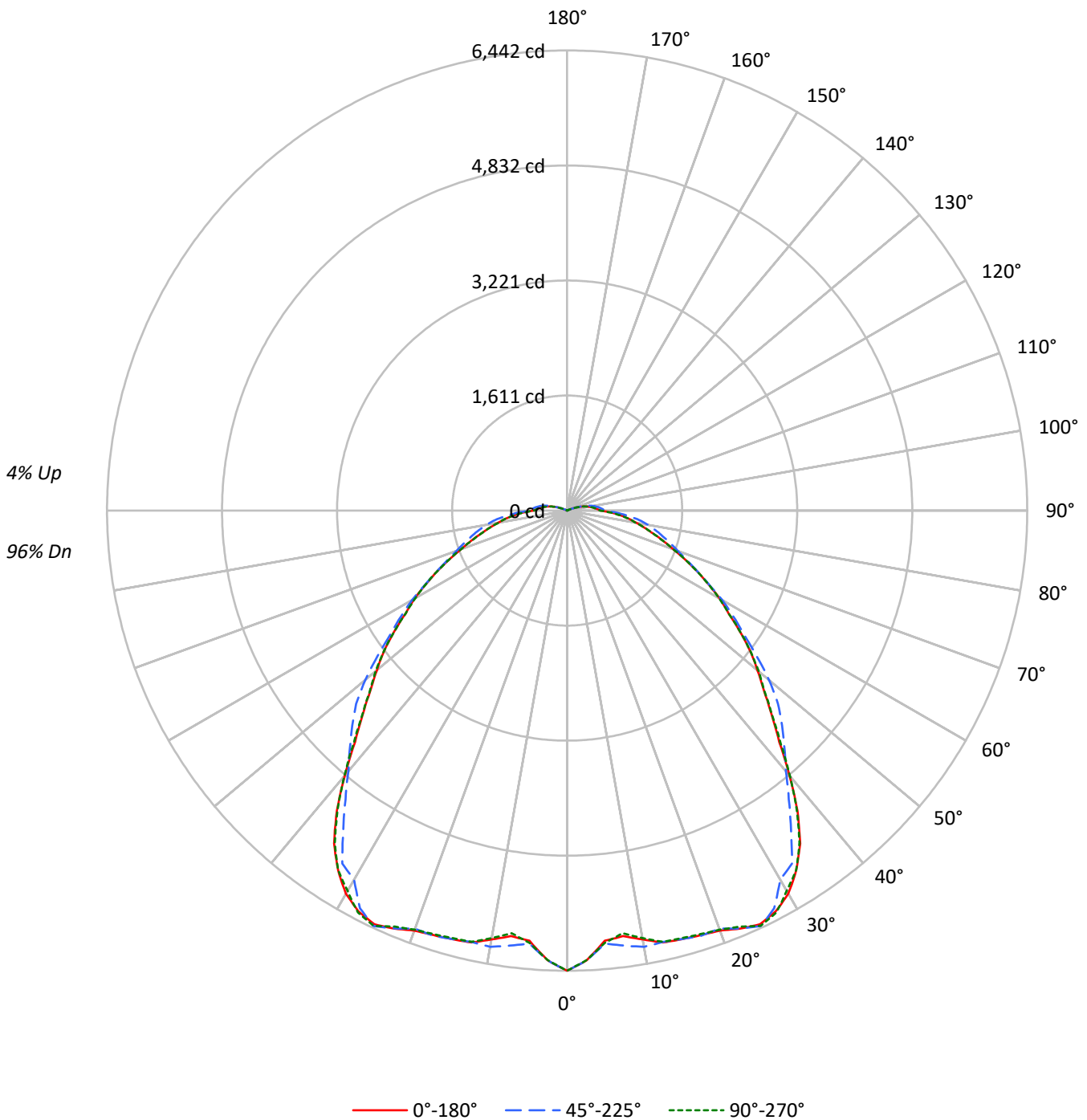
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	49658	49658	49658
5°	46295	46591	46507
10°	46731	47541	46592
15°	48048	48030	47920
20°	49194	48958	49076
25°	51489	51705	51667
30°	51581	49678	51194
35°	49412	47454	49248
40°	44318	43582	44390
45°	39440	41421	39555
50°	36524	38734	36731
55°	33932	34656	33959
60°	31530	32013	31399
65°	29120	29200	29096
70°	26777	27930	26872
75°	25636	28546	25718
80°	25944	30474	25714
85°	27815	32121	27695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.1	3.0
10°-20°	1763.8	9.0
20°-30°	2914.6	14.8
30°-40°	3468.9	17.6
40°-50°	3235.3	16.5
50°-60°	2696.0	13.7
60°-70°	2017.1	10.3
70°-80°	1400.5	7.1
80°-90°	848.8	4.3
90°-100°	454.2	2.3
100°-110°	236.1	1.2
110°-120°	35.9	0.2
120°-130°	0.6	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	5263.5	26.8
0°-40°	8732.5	44.4
0°-60°	14663.8	74.6
0°-90°	18930.3	96.3
90°-120°	726.1	3.7
90°-150°	726.7	3.7
90°-180°	727.0	3.7
0°-180°	19657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6442	6442	6442	6442	6442	
5°	6045	6090	6084	6075	6072	581
15°	6213	6255	6210	6241	6196	1760
25°	6390	6387	6417	6399	6412	2924
35°	5689	5596	5464	5599	5670	3513
45°	4049	4193	4253	4200	4061	3150
55°	2955	3002	3018	3004	2957	2647
65°	2005	2028	2010	2027	2003	1987
75°	1244	1315	1385	1318	1248	1332
85°	744	765	859	765	740	656
90°	470	501	526	498	463	271
95°	386	412	460	409	390	303
105°	217	221	247	218	218	227
115°	20	24	31	24	21	35
125°	0	0	0	0	0	1
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6441.5	6441.5	6441.5	6441.5	6441.5
2.5°	6301.9	6307.4	6301.1	6284.6	6296.4
5°	6044.9	6089.8	6083.5	6074.9	6072.5
7.5°	6007.8	6075.6	6143.4	6069.3	5966.8
10°	6095.4	6163.2	6201.0	6157.6	6077.2
12.5°	6193.9	6190.8	6186.8	6183.7	6183.7
15°	6212.8	6255.4	6210.5	6241.2	6196.3
17.5°	6230.2	6260.9	6241.2	6256.2	6216.8
20°	6257.0	6288.5	6227.0	6273.5	6242.0
22.5°	6333.5	6356.3	6331.1	6354.0	6304.3
25°	6390.2	6387.1	6417.0	6398.9	6412.3
27.5°	6324.8	6305.1	6278.3	6272.0	6343.7
30°	6193.9	6088.3	5965.3	6065.4	6147.4
32.5°	5970.8	5976.3	5858.8	5983.4	5967.6
35°	5689.3	5596.3	5463.8	5599.4	5670.4
37.5°	5295.1	5224.9	5098.0	5224.1	5279.3
40°	4844.9	4856.7	4764.5	4854.4	4852.8
42.5°	4393.9	4509.8	4500.4	4490.9	4427.8
45°	4049.4	4192.9	4252.8	4200.0	4061.2
47.5°	3738.7	3939.0	4005.2	3940.6	3747.4
50°	3478.6	3611.0	3689.1	3610.2	3498.3
52.5°	3230.2	3276.7	3341.4	3290.9	3234.1
55°	2955.0	3001.6	3018.1	3003.9	2957.4
57.5°	2681.4	2754.8	2757.9	2749.3	2679.9
60°	2467.8	2497.7	2505.6	2508.0	2457.5
62.5°	2222.6	2263.6	2235.2	2263.6	2228.1
65°	2005.0	2027.8	2010.5	2027.1	2003.4
67.5°	1781.1	1844.1	1816.5	1841.0	1786.6
70°	1577.6	1658.1	1645.5	1659.6	1583.2
72.5°	1410.5	1481.5	1510.6	1475.9	1403.4
75°	1244.1	1315.1	1385.3	1317.5	1248.1
77.5°	1112.5	1166.1	1265.4	1170.8	1110.9
80°	980.0	1029.7	1151.1	1025.7	971.3
82.5°	872.8	895.7	1017.9	900.4	868.1
85°	743.5	764.8	858.6	764.8	740.3
87.5°	611.0	626.8	689.1	634.7	602.4
90°	469.9	501.4	525.9	497.5	462.8
92.5°	429.7	452.6	495.1	448.6	426.5
95°	386.3	411.6	460.4	409.2	390.3
97.5°	354.0	366.6	414.7	365.8	351.6
100°	313.8	326.4	375.3	322.5	309.1
102.5°	267.3	274.4	319.3	276.7	268.1
105°	216.8	220.8	246.8	218.4	218.4
107.5°	161.6	159.3	167.9	156.9	160.8
110°	104.1	97.0	104.9	97.0	105.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	56.8	51.2	61.5	52.0	56.0
115°	20.5	23.7	30.7	24.4	21.3
117.5°	5.5	9.5	11.0	9.5	5.5
120°	4.7	5.5	4.7	5.5	4.7
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)